AI-Driven Discovery of Physics-Native Quantum Information Units
Version 1.1 — December 2025

Abstract

This document presents Version 1.1 of the research concept proposing that quantum information units may naturally emerge from the symmetry, degeneracy, or low-energy structure of physical Hamiltonians.

The goal is to explore whether modern AI systems can identify such physics-native information units, potentially reducing the overhead associated with conventional, engineered qubits. This version strengthens the conceptual motivation, provides examples of relevant Hamiltonians, adds related work context, and expands the system architecture description.

1. Introduction

Contemporary qubit designs rely on engineered logical abstractions that impose large physical-to-logical overheads. Recent improvements in error-correcting codes and decoding strategies suggest that these overheads may reflect not intrinsic physical limitations, but rather a mismatch between the abstractions we impose and the information-preserving structures present in the underlying physics.

Motivated by Feynman's original intuition—that computation should follow the natural structure of quantum mechanics—this work explores whether stable, low-noise information-bearing subspaces can be discovered using AI-assisted analysis of Hamiltonian landscapes.

2. Conceptual Motivation

The central question is whether nature offers information encodings that differ from the qubit model. Rather than defining computational units a priori, we examine whether physics-native encodings arise from:

• symmetry-protected subspaces

• degenerate manifolds

• conserved quantities

• low-energy basins shaped by the Hamiltonian

These structures may exhibit stability without relying on heavy error correction, and could serve as alternative

information units aligned with the system's physical dynamics.

3.Mathematically Elegant vs. Physically Natural Representations

In many areas of quantum computing, the mathematical representation of computation
is valued for its elegance: clean tensor products, well-defined gate sets,
and compact algebraic descriptions. However, physical systems do not necessarily
organize information according to our preferred mathematical structures.

A circuit may look "beautiful" on paper — composed of symmetric patterns of
Hadamard, phase, and controlled operations — yet remain physically fragile
because the underlying interactions break these imposed symmetries.
Conversely, a physically stable structure may appear mathematically irregular
or cumbersome, but derives its resilience precisely from the native dynamics
of the Hamiltonian.

This tension suggests that mathematical elegance is not a reliable proxy
for physical suitability. Physics may preserve information in subspaces
that do not resemble qubits, that lack clean algebraic decompositions,
or that arise from accidental or non-obvious symmetries.
Such structures are often overlooked because they do not match
the engineered abstractions commonly used in qubit architectures.

Identifying these physically natural encodings — even when they do not align
with standard quantum gate formalisms — may be essential if we wish to develop
quantum information units that are stable for reasons intrinsic to the system,
rather than enforced through heavy error correction.

4. Example Hamiltonians

To ground the idea, Version 1.1 introduces three illustrative Hamiltonians:

1. Transverse Field Ising Model:

$$H = -J \sum \sigma^z_i \sigma^z_{i+1} - h \sum \sigma^x_i$$

Known for symmetry-breaking and stable subspace behavior.

2. Kitaev Chain:

Supports Majorana zero modes and topological degeneracy, a candidate for physics-native
encoding.

3. Heisenberg XXZ Model:

Exhibits conservation laws and symmetry structures that influence stability.

These examples serve as potential landscapes for AI-assisted discovery of stable subspaces.

4.1 Emergent Subspace Structure in Random Hamiltonians

Physics-Native Subspace Discovery – Qiskit Prototype v0.1b

4.1.1. Background and Objective

In this document I document the first concrete prototype implementation of the ideas outlined in my whitepaper on physics-native quantum information units.

The central central question is whether small, low-dimensional subspaces with intrinsic stability can emerge directly from the Hamiltonian, without imposing the qubit abstraction a priori. In particular, I explore whether random, Pauli-structured Hamiltonians already contain nearly degenerate energy subspaces that could serve as 'physics-native' information units.

The goal of this first experiment is not to prove superiority over conventional qubits, but simply to demonstrate that:

1. A small Qiskit-based engine can scan a family of Hamiltonians.

2. It can automatically identify near-degenerate eigenvalue pairs.

3. The corresponding eigenstates show non-trivial structure in the computational basis.

This document describes the code, shows the raw output from one seed scan, and outlines possible next steps.

4.1.2. Method: Qiskit Prototype v0.1b

4.1.2.1 Hamiltonian Construction

The Hamiltonians used in this prototype are defined on two qubits and expressed as linear combinations of Pauli strings using Qiskit's SparsePauliOp.

Each Hamiltonian H is constructed as:

$$H = \Sigma\, c_k\, P_k$$

where each P_k is a tensor product of single-qubit Pauli operators chosen from {I, X, Z}, and $c_k \in \mathbb{R}$ are random coefficients drawn from a uniform distribution in [-1, 1].

Identity-only strings (e.g., 'II') are excluded, since they merely shift the overall energy and carry no structural information.

4.1.2.2 Eigenvalue Analysis and Near-Degeneracy Criterion

For each Hamiltonian, the full 4×4 matrix representation is obtained via hamiltonian_op.to_matrix().

I then compute its eigenvalues and eigenvectors using numpy.linalg.eigh. This yields:

$H |\psi_i\rangle = E_i |\psi_i\rangle$ for i = 0, 1, 2, 3.

To identify potentially 'stable' or structurally interesting subspaces, I define a near-degeneracy criterion:

$|E_i - E_j| < \varepsilon$

with $\varepsilon = 0.05$. Any pair (i,j) satisfying this condition is reported as a candidate two-dimensional subspace.

4.1.2.3 Implementation Details

The prototype is implemented in Python using Qiskit. The core functions are:

– build_random_hamiltonian_sparse(...)

– find_near_degenerate_pairs(...)

– print_statevector(...)

– and a simple main loop scanning seeds 0–49.

Insert full code here as needed.

4.1.3. Experimental Run and Output (Seed Scan 0–49)

For this first documented run, I scanned seeds from 0 to 49 with:

– n_qubits = 2

– num_terms = 4

– tolerance = 0.05

The program reported several seeds with near-degenerate eigenvalue pairs. Insert selected example outputs here (e.g., seeds 0, 23, 31).

4.1.4. Interpretation of Results

The seed scan confirms that even in a small, randomised family of 2-qubit Hamiltonians built from {I, X, Z}, near-degenerate energy levels appear frequently.

In many cases (e.g., seeds 0, 2, 9, 14, 26, 30, 31, 34), the spectrum exhibits exact or near-exact two-fold degeneracies at both the lowest and highest energy levels. The corresponding eigenstates are not arbitrary; they show recognizable structure in the computational basis.

This suggests that certain Hamiltonians naturally carve out two-dimensional subspaces that are energetically isolated and internally structured.

4.1.5. Proposed Next Steps

1. Systematic logging: Store all Hamiltonians and their near-degenerate pairs in CSV format.

2. Backend Integration: Use Qiskit Estimator on simulators and real IBM Quantum hardware.

3. Scaling to 3 qubits.

4. Noise and stability tests.

Physics-Native Subspace Discovery – Qiskit Prototype v0.3

4.2.1. Background and Objective

This section extends earlier versions using identical structure.

4.2.2. Method: Qiskit Prototype v0.3

4.2.2.1 Hamiltonian Construction

Same method extended to 8 qubits.

4.2.2.2 Eigenvalue Analysis and Near-Degeneracy Criterion

Tolerance unchanged; matrix dimension increased.

4.2.2.3 Implementation Details

Structure identical to v0.1b and v0.2.

4.2.2.4 Code Listing (v0.3)

```python
import numpy as np
from qiskit.quantum_info import SparsePauliOp, Statevector


# ------------------------------------------------------------
# 1. Byg en simpel "legetøjs-Hamiltonian" i Qiskit-format
# ------------------------------------------------------------

def build_random_hamiltonian_sparse(n_qubits=2, num_terms=4, seed=None):
    """
    Returnerer en lille tilfældig Hamiltonian som SparsePauliOp.
    Vi bruger kun I, X, Z for at holde det simpelt.
    """
    rng = np.random.default_rng(seed)

    pauli_letters = ["I", "X", "Z"]
    pauli_terms = []

    for _ in range(num_terms):
        # Byg fx "ZX", "IZ", "XI" osv.
        label = "".join(rng.choice(pauli_letters) for _ in range(n_qubits))

        # Undgå ren identitet "II"
        if set(label) == {"I"}:
            continue

        coeff = rng.uniform(-1.0, 1.0)
        pauli_terms.append((label, coeff))
```

```python
    # Hvis alt blev filtreret væk:
    if not pauli_terms:
        pauli_terms = [("Z" + "I"*(n_qubits-1), 1.0)]

    labels = [p for p, c in pauli_terms]
    coeffs = [c for p, c in pauli_terms]
    H = SparsePauliOp.from_list(list(zip(labels, coeffs)))
    return H



# -----------------------------------------------------------
# 2. Find eigenvalues/eigenvectors + near-degenerate pairs
# -----------------------------------------------------------

def find_near_degenerate_pairs(hamiltonian_op, tolerance=0.05):
    """
    Finder par af egenværdier, der ligger tæt på hinanden (|Ei - Ej| < tolerance).
    Returnerer (evals, evecs, pairs) hvor pairs er liste af (i, j, Ei, Ej).
    """
    H_mat = hamiltonian_op.to_matrix()
    evals, evecs = np.linalg.eigh(H_mat)

    pairs = []
    for i in range(len(evals)):
        for j in range(i + 1, len(evals)):
            if abs(evals[i] - evals[j]) < tolerance:
                pairs.append((i, j, evals[i], evals[j]))

    return evals, evecs, pairs



# -----------------------------------------------------------
# 3. Helper: vis eigenstates i basis |00>, |01>, ...
# -----------------------------------------------------------

def print_statevector(evec, n_qubits=2, max_terms=4):
    """
    Viser de største amplituder i en eigenvektor.
    """
    sv = Statevector(evec).data  # numpy-array

    idx_sorted = np.argsort(-np.abs(sv))
```

```python
    print("  Dominant basis-states:")
    shown = 0
    for idx in idx_sorted:
        amp = sv[idx]
        if np.abs(amp) < 1e-3:
            continue

        bitstring = format(idx, f"0{n_qubits}b")
        print(f"    |{bitstring}> : amplitude {amp:.3f}")
        shown += 1
        if shown >= max_terms:
            break


# ----------------------------------------------------------
# 4. MAIN – seed-scan
# ----------------------------------------------------------

if __name__ == "__main__":
    n_qubits = 2
    num_terms = 4
    tolerance = 0.05
    max_seed = 50  # prøv seeds 0..49

    print(f"Scanner {max_seed} tilfældige Hamiltonians for near-degenerate par...")
    found_any = False

    for seed in range(max_seed):
        H = build_random_hamiltonian_sparse(
            n_qubits=n_qubits,
            num_terms=num_terms,
            seed=seed
        )
        evals, evecs, pairs = find_near_degenerate_pairs(H, tolerance=tolerance)

        if pairs:
            found_any = True
            print("\n=====================================")
            print(f"Seed {seed} gav near-degenerate par")
            print("Hamiltonian:")
            print(H)
            print("Eigenvalues:")
            for i, ev in enumerate(evals):
```

```
        print(f"  {i}: {ev:.4f}")


    print("\nCandidate near-degenerate pairs:")
    for (i, j, ei, ej) in pairs:
        print(f"  Pair ({i}, {j}) with energies {ei:.4f}, {ej:.4f}")
        print("   State", i)
        print_statevector(evecs[:, i], n_qubits=n_qubits)
        print("   State", j)
        print_statevector(evecs[:, j], n_qubits=n_qubits)
        print()

  if not found_any:
    print("\nIngen near-degenerate par fundet for nogen seeds "
        f"med tolerance = {tolerance}. "
        "Du kan prøve at øge tolerance lidt (fx 0.1).")
```

4.2.3. Experimental Run and Output (v0.3)

4.2.3.1 Raw Output (Part 1)
 amplitude 0.249+0.000j
   |00010101> : amplitude -0.249+0.000j
  State 123
 Dominant basis-states:
   |10101011> : amplitude 0.190+0.000j
   |01111111> : amplitude 0.190+0.000j
   |10111001> : amplitude 0.190+0.000j
   |01101101> : amplitude -0.190+0.000j

  Pair (100, 124) with energies -0.7149, -0.7149
   State 100
 Dominant basis-states:
   |00000111> : amplitude -0.249+0.000j
   |11000001> : amplitude -0.249+0.000j
   |11010011> : amplitude 0.249+0.000j
   |00010101> : amplitude -0.249+0.000j
  State 124
 Dominant basis-states:
   |11110100> : amplitude 0.147+0.000j
   |00110010> : amplitude 0.147+0.000j
   |11100110> : amplitude -0.147+0.000j
   |00100000> : amplitude 0.147+0.000j

  Pair (100, 125) with energies -0.7149, -0.7149

State 100
Dominant basis-states:
 |00000111> : amplitude -0.249+0.000j
 |11000001> : amplitude -0.249+0.000j
 |11010011> : amplitude 0.249+0.000j
 |00010101> : amplitude -0.249+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (100, 126) with energies -0.7149, -0.7149
 State 100
Dominant basis-states:
 |00000111> : amplitude -0.249+0.000j
 |11000001> : amplitude -0.249+0.000j
 |11010011> : amplitude 0.249+0.000j
 |00010101> : amplitude -0.249+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (100, 127) with energies -0.7149, -0.7149
 State 100
Dominant basis-states:
 |00000111> : amplitude -0.249+0.000j
 |11000001> : amplitude -0.249+0.000j
 |11010011> : amplitude 0.249+0.000j
 |00010101> : amplitude -0.249+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (101, 102) with energies -0.7149, -0.7149
 State 101

Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j

Pair (101, 103) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j

Pair (101, 104) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j

Pair (101, 105) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:

|00110000> : amplitude 0.250+0.000j
|11110110> : amplitude 0.250+0.000j
|11100100> : amplitude 0.250+0.000j
|00100010> : amplitude -0.250+0.000j
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j

Pair (101, 106) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 106
Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j
 |10011000> : amplitude 0.159+0.000j
 |01011110> : amplitude -0.159+0.000j

Pair (101, 107) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j

Pair (101, 108) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j

|11110110> : amplitude 0.250+0.000j
|11100100> : amplitude 0.250+0.000j
|00100010> : amplitude -0.250+0.000j
 State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j

Pair (101, 109) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j

Pair (101, 110) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j

Pair (101, 111) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j

|11100100> : amplitude 0.250+0.000j
|00100010> : amplitude -0.250+0.000j
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j

Pair (101, 112) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j

Pair (101, 113) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j

Pair (101, 114) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j

|00100010> : amplitude -0.250+0.000j
 State 114
Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j

Pair (101, 115) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j

Pair (101, 116) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j

Pair (101, 117) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j

State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j

Pair (101, 118) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j

Pair (101, 119) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j

Pair (101, 120) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 120

Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j

Pair (101, 121) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j

Pair (101, 122) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (101, 123) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 123
Dominant basis-states:

|10101011> : amplitude 0.190+0.000j
|01111111> : amplitude 0.190+0.000j
|10111001> : amplitude 0.190+0.000j
|01101101> : amplitude -0.190+0.000j

Pair (101, 124) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (101, 125) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (101, 126) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j

|00000110> : amplitude -0.283+0.000j
|11010010> : amplitude 0.283+0.000j
|00010100> : amplitude 0.283+0.000j

Pair (101, 127) with energies -0.7149, -0.7149
 State 101
Dominant basis-states:
 |00110000> : amplitude 0.250+0.000j
 |11110110> : amplitude 0.250+0.000j
 |11100100> : amplitude 0.250+0.000j
 |00100010> : amplitude -0.250+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (102, 103) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j

Pair (102, 104) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j

|01010001> : amplitude 0.145+0.000j
|10010111> : amplitude -0.145+0.000j

Pair (102, 105) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j

Pair (102, 106) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 106
Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j
 |10011000> : amplitude 0.159+0.000j
 |01011110> : amplitude -0.159+0.000j

Pair (102, 107) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j

|01000000> : amplitude -0.173+0.000j

Pair (102, 108) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j

Pair (102, 109) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j

Pair (102, 110) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j

Pair (102, 111) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j

Pair (102, 112) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j

Pair (102, 113) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j

Pair (102, 114) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 114
Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j

Pair (102, 115) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j

Pair (102, 116) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j

Pair (102, 117) with energies -0.7149, -0.7149

State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j

Pair (102, 118) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j

Pair (102, 119) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j

Pair (102, 120) with energies -0.7149, -0.7149
 State 102

Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j

Pair (102, 121) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j

Pair (102, 122) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (102, 123) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:

|01011111> : amplitude -0.193+0.000j
|10001011> : amplitude 0.193+0.000j
|01001101> : amplitude -0.193+0.000j
|10011001> : amplitude -0.193+0.000j
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j

Pair (102, 124) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (102, 125) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (102, 126) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j

|10001011> : amplitude 0.193+0.000j
|01001101> : amplitude -0.193+0.000j
|10011001> : amplitude -0.193+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (102, 127) with energies -0.7149, -0.7149
 State 102
Dominant basis-states:
 |01011111> : amplitude -0.193+0.000j
 |10001011> : amplitude 0.193+0.000j
 |01001101> : amplitude -0.193+0.000j
 |10011001> : amplitude -0.193+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (103, 104) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j

Pair (103, 105) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j

|10001100> : amplitude 0.181+0.000j
|01001010> : amplitude 0.181+0.000j
State 105
Dominant basis-states:
|10011000> : amplitude 0.144+0.000j
|01011110> : amplitude -0.144+0.000j
|10001010> : amplitude 0.144+0.000j
|01001100> : amplitude 0.144+0.000j

Pair (103, 106) with energies -0.7149, -0.7149
State 103
Dominant basis-states:
|01011000> : amplitude -0.181+0.000j
|10011110> : amplitude 0.181+0.000j
|10001100> : amplitude 0.181+0.000j
|01001010> : amplitude 0.181+0.000j
State 106
Dominant basis-states:
|10001010> : amplitude 0.159+0.000j
|01001100> : amplitude 0.159+0.000j
|10011000> : amplitude 0.159+0.000j
|01011110> : amplitude -0.159+0.000j

Pair (103, 107) with energies -0.7149, -0.7149
State 103
Dominant basis-states:
|01011000> : amplitude -0.181+0.000j
|10011110> : amplitude 0.181+0.000j
|10001100> : amplitude 0.181+0.000j
|01001010> : amplitude 0.181+0.000j
State 107
Dominant basis-states:
|01010010> : amplitude -0.173+0.000j
|10010100> : amplitude -0.173+0.000j
|10000110> : amplitude 0.173+0.000j
|01000000> : amplitude -0.173+0.000j

Pair (103, 108) with energies -0.7149, -0.7149
State 103
Dominant basis-states:
|01011000> : amplitude -0.181+0.000j
|10011110> : amplitude 0.181+0.000j
|10001100> : amplitude 0.181+0.000j

|01001010> : amplitude 0.181+0.000j
 State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j

Pair (103, 109) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j

Pair (103, 110) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j

Pair (103, 111) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j

State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j

Pair (103, 112) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j

Pair (103, 113) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j

Pair (103, 114) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 114

Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j

Pair (103, 115) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j

Pair (103, 116) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j

Pair (103, 117) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 117
Dominant basis-states:

|10001000> : amplitude 0.201+0.000j
|01001110> : amplitude 0.201+0.000j
|10011010> : amplitude -0.201+0.000j
|01011100> : amplitude 0.201+0.000j

Pair (103, 118) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j

Pair (103, 119) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j

Pair (103, 120) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j

|10011100> : amplitude -0.157+0.000j
|01001000> : amplitude 0.157+0.000j
|10001110> : amplitude 0.157+0.000j

Pair (103, 121) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j

Pair (103, 122) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (103, 123) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j

|10111001> : amplitude 0.190+0.000j
|01101101> : amplitude -0.190+0.000j

Pair (103, 124) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (103, 125) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (103, 126) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j

|00010100> : amplitude 0.283+0.000j

Pair (103, 127) with energies -0.7149, -0.7149
 State 103
Dominant basis-states:
 |01011000> : amplitude -0.181+0.000j
 |10011110> : amplitude 0.181+0.000j
 |10001100> : amplitude 0.181+0.000j
 |01001010> : amplitude 0.181+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (104, 105) with energies -0.7149, -0.7149
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j

Pair (104, 106) with energies -0.7149, -0.7149
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
 State 106
Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j
 |10011000> : amplitude 0.159+0.000j
 |01011110> : amplitude -0.159+0.000j

Pair (104, 107) with energies -0.7149, -0.7149
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j

Pair (104, 108) with energies -0.7149, -0.7149
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
 State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j

Pair (104, 109) with energies -0.7149, -0.7149
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j

Pair (104, 110) with energies -0.7149, -0.7149
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j

Pair (104, 111) with energies -0.7149, -0.7149
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j

Pair (104, 112) with energies -0.7149, -0.7149
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j

Pair (104, 113) with energies -0.7149, -0.7149

State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j

Pair (104, 114) with energies -0.7149, -0.7149
State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
State 114
Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j

Pair (104, 115) with energies -0.7149, -0.7149
State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j

Pair (104, 116) with energies -0.7149, -0.7149
State 104

Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j

Pair (104, 117) with energies -0.7149, -0.7149
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
 State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j

Pair (104, 118) with energies -0.7149, -0.7149
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j

Pair (104, 119) with energies -0.7149, -0.7149
 State 104
Dominant basis-states:

|10000101> : amplitude 0.145+0.000j
|01000011> : amplitude 0.145+0.000j
|01010001> : amplitude 0.145+0.000j
|10010111> : amplitude -0.145+0.000j
State 119
Dominant basis-states:
|01000001> : amplitude 0.160+0.000j
|10000111> : amplitude 0.160+0.000j
|01010011> : amplitude -0.160+0.000j
|10010101> : amplitude 0.160+0.000j

Pair (104, 120) with energies -0.7149, -0.7149
State 104
Dominant basis-states:
|10000101> : amplitude 0.145+0.000j
|01000011> : amplitude 0.145+0.000j
|01010001> : amplitude 0.145+0.000j
|10010111> : amplitude -0.145+0.000j
State 120
Dominant basis-states:
|01011010> : amplitude 0.157+0.000j
|10011100> : amplitude -0.157+0.000j
|01001000> : amplitude 0.157+0.000j
|10001110> : amplitude 0.157+0.000j

Pair (104, 121) with energies -0.7149, -0.7149
State 104
Dominant basis-states:
|10000101> : amplitude 0.145+0.000j
|01000011> : amplitude 0.145+0.000j
|01010001> : amplitude 0.145+0.000j
|10010111> : amplitude -0.145+0.000j
State 121
Dominant basis-states:
|10011011> : amplitude -0.208+0.000j
|01011101> : amplitude -0.208+0.000j
|10001001> : amplitude -0.208+0.000j
|01001111> : amplitude 0.208+0.000j

Pair (104, 122) with energies -0.7149, -0.7149
State 104
Dominant basis-states:
|10000101> : amplitude 0.145+0.000j

|01000011> : amplitude 0.145+0.000j
|01010001> : amplitude 0.145+0.000j
|10010111> : amplitude -0.145+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (104, 123) with energies -0.7149, -0.7149
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j

Pair (104, 124) with energies -0.7149, -0.7149
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (104, 125) with energies -0.7149, -0.7149
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j

|01010001> : amplitude 0.145+0.000j
|10010111> : amplitude -0.145+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (104, 126) with energies -0.7149, -0.7149
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (104, 127) with energies -0.7149, -0.7149
 State 104
Dominant basis-states:
 |10000101> : amplitude 0.145+0.000j
 |01000011> : amplitude 0.145+0.000j
 |01010001> : amplitude 0.145+0.000j
 |10010111> : amplitude -0.145+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (105, 106) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j

|01001100> : amplitude 0.144+0.000j
 State 106
Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j
 |10011000> : amplitude 0.159+0.000j
 |01011110> : amplitude -0.159+0.000j

Pair (105, 107) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j

Pair (105, 108) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j

Pair (105, 109) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j

State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j

Pair (105, 110) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j

Pair (105, 111) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j

Pair (105, 112) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 112

Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j

Pair (105, 113) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j

Pair (105, 114) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 114
Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j

Pair (105, 115) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 115
Dominant basis-states:

|01011011> : amplitude -0.216+0.000j
|10011101> : amplitude -0.216+0.000j
|10001111> : amplitude -0.216+0.000j
|01001001> : amplitude 0.216+0.000j

Pair (105, 116) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j

Pair (105, 117) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j

Pair (105, 118) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j

|10101110> : amplitude 0.219+0.000j
|01111010> : amplitude -0.219+0.000j
|10111100> : amplitude 0.219+0.000j

Pair (105, 119) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j

Pair (105, 120) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j

Pair (105, 121) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j

|10001001> : amplitude -0.208+0.000j
|01001111> : amplitude 0.208+0.000j

Pair (105, 122) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (105, 123) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j

Pair (105, 124) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j

|00100000> : amplitude 0.147+0.000j

Pair (105, 125) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (105, 126) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (105, 127) with energies -0.7149, -0.7149
 State 105
Dominant basis-states:
 |10011000> : amplitude 0.144+0.000j
 |01011110> : amplitude -0.144+0.000j
 |10001010> : amplitude 0.144+0.000j
 |01001100> : amplitude 0.144+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (106, 107) with energies -0.7149, -0.7149
 State 106
Dominant basis-states:
  |10001010> : amplitude 0.159+0.000j
  |01001100> : amplitude 0.159+0.000j
  |10011000> : amplitude 0.159+0.000j
  |01011110> : amplitude -0.159+0.000j
 State 107
Dominant basis-states:
  |01010010> : amplitude -0.173+0.000j
  |10010100> : amplitude -0.173+0.000j
  |10000110> : amplitude 0.173+0.000j
  |01000000> : amplitude -0.173+0.000j

Pair (106, 108) with energies -0.7149, -0.7149
 State 106
Dominant basis-states:
  |10001010> : amplitude 0.159+0.000j
  |01001100> : amplitude 0.159+0.000j
  |10011000> : amplitude 0.159+0.000j
  |01011110> : amplitude -0.159+0.000j
 State 108
Dominant basis-states:
  |00010011> : amplitude -0.150+0.000j
  |00000001> : amplitude -0.150+0.000j
  |11010101> : amplitude 0.150+0.000j
  |11000111> : amplitude -0.150+0.000j

Pair (106, 109) with energies -0.7149, -0.7149
 State 106
Dominant basis-states:
  |10001010> : amplitude 0.159+0.000j
  |01001100> : amplitude 0.159+0.000j
  |10011000> : amplitude 0.159+0.000j
  |01011110> : amplitude -0.159+0.000j
 State 109
Dominant basis-states:
  |00101001> : amplitude -0.167+0.000j
  |00111011> : amplitude 0.167+0.000j
  |11111101> : amplitude 0.167+0.000j
  |11101111> : amplitude 0.167+0.000j

Pair (106, 110) with energies -0.7149, -0.7149
 State 106
Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j
 |10011000> : amplitude 0.159+0.000j
 |01011110> : amplitude -0.159+0.000j
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j

Pair (106, 111) with energies -0.7149, -0.7149
 State 106
Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j
 |10011000> : amplitude 0.159+0.000j
 |01011110> : amplitude -0.159+0.000j
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j

Pair (106, 112) with energies -0.7149, -0.7149
 State 106
Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j
 |10011000> : amplitude 0.159+0.000j
 |01011110> : amplitude -0.159+0.000j
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j

Pair (106, 113) with energies -0.7149, -0.7149

State 106
Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j
 |10011000> : amplitude 0.159+0.000j
 |01011110> : amplitude -0.159+0.000j
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j

Pair (106, 114) with energies -0.7149, -0.7149
 State 106
Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j
 |10011000> : amplitude 0.159+0.000j
 |01011110> : amplitude -0.159+0.000j
 State 114
Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j

Pair (106, 115) with energies -0.7149, -0.7149
 State 106
Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j
 |10011000> : amplitude 0.159+0.000j
 |01011110> : amplitude -0.159+0.000j
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j

Pair (106, 116) with energies -0.7149, -0.7149
 State 106

Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j
 |10011000> : amplitude 0.159+0.000j
 |01011110> : amplitude -0.159+0.000j
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j

Pair (106, 117) with energies -0.7149, -0.7149
 State 106
Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j
 |10011000> : amplitude 0.159+0.000j
 |01011110> : amplitude -0.159+0.000j
 State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j

Pair (106, 118) with energies -0.7149, -0.7149
 State 106
Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j
 |10011000> : amplitude 0.159+0.000j
 |01011110> : amplitude -0.159+0.000j
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j

Pair (106, 119) with energies -0.7149, -0.7149
 State 106
Dominant basis-states:

|10001010> : amplitude 0.159+0.000j
|01001100> : amplitude 0.159+0.000j
|10011000> : amplitude 0.159+0.000j
|01011110> : amplitude -0.159+0.000j
State 119
Dominant basis-states:
|01000001> : amplitude 0.160+0.000j
|10000111> : amplitude 0.160+0.000j
|01010011> : amplitude -0.160+0.000j
|10010101> : amplitude 0.160+0.000j

Pair (106, 120) with energies -0.7149, -0.7149
State 106
Dominant basis-states:
|10001010> : amplitude 0.159+0.000j
|01001100> : amplitude 0.159+0.000j
|10011000> : amplitude 0.159+0.000j
|01011110> : amplitude -0.159+0.000j
State 120
Dominant basis-states:
|01011010> : amplitude 0.157+0.000j
|10011100> : amplitude -0.157+0.000j
|01001000> : amplitude 0.157+0.000j
|10001110> : amplitude 0.157+0.000j

Pair (106, 121) with energies -0.7149, -0.7149
State 106
Dominant basis-states:
|10001010> : amplitude 0.159+0.000j
|01001100> : amplitude 0.159+0.000j
|10011000> : amplitude 0.159+0.000j
|01011110> : amplitude -0.159+0.000j
State 121
Dominant basis-states:
|10011011> : amplitude -0.208+0.000j
|01011101> : amplitude -0.208+0.000j
|10001001> : amplitude -0.208+0.000j
|01001111> : amplitude 0.208+0.000j

Pair (106, 122) with energies -0.7149, -0.7149
State 106
Dominant basis-states:
|10001010> : amplitude 0.159+0.000j

|01001100> : amplitude 0.159+0.000j
|10011000> : amplitude 0.159+0.000j
|01011110> : amplitude -0.159+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (106, 123) with energies -0.7149, -0.7149
 State 106
Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j
 |10011000> : amplitude 0.159+0.000j
 |01011110> : amplitude -0.159+0.000j
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j

Pair (106, 124) with energies -0.7149, -0.7149
 State 106
Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j
 |10011000> : amplitude 0.159+0.000j
 |01011110> : amplitude -0.159+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (106, 125) with energies -0.7149, -0.7149
 State 106
Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j

|10011000> : amplitude 0.159+0.000j
|01011110> : amplitude -0.159+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (106, 126) with energies -0.7149, -0.7149
 State 106
Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j
 |10011000> : amplitude 0.159+0.000j
 |01011110> : amplitude -0.159+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (106, 127) with energies -0.7149, -0.7149
 State 106
Dominant basis-states:
 |10001010> : amplitude 0.159+0.000j
 |01001100> : amplitude 0.159+0.000j
 |10011000> : amplitude 0.159+0.000j
 |01011110> : amplitude -0.159+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (107, 108) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j

|01000000> : amplitude -0.173+0.000j
 State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j

Pair (107, 109) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j

Pair (107, 110) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j

Pair (107, 111) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j

State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j

Pair (107, 112) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j

Pair (107, 113) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j

Pair (107, 114) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 114

Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j

Pair (107, 115) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j

Pair (107, 116) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j

Pair (107, 117) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 117
Dominant basis-states:

|10001000> : amplitude 0.201+0.000j
|01001110> : amplitude 0.201+0.000j
|10011010> : amplitude -0.201+0.000j
|01011100> : amplitude 0.201+0.000j

Pair (107, 118) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j

Pair (107, 119) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j

Pair (107, 120) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j

|10011100> : amplitude -0.157+0.000j
|01001000> : amplitude 0.157+0.000j
|10001110> : amplitude 0.157+0.000j

Pair (107, 121) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j

Pair (107, 122) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (107, 123) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j

|10111001> : amplitude 0.190+0.000j
|01101101> : amplitude -0.190+0.000j

Pair (107, 124) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (107, 125) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (107, 126) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j

|00010100> : amplitude 0.283+0.000j

Pair (107, 127) with energies -0.7149, -0.7149
 State 107
Dominant basis-states:
 |01010010> : amplitude -0.173+0.000j
 |10010100> : amplitude -0.173+0.000j
 |10000110> : amplitude 0.173+0.000j
 |01000000> : amplitude -0.173+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (108, 109) with energies -0.7149, -0.7149
 State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j

Pair (108, 110) with energies -0.7149, -0.7149
 State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j

Pair (108, 111) with energies -0.7149, -0.7149
 State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j

Pair (108, 112) with energies -0.7149, -0.7149
 State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j

Pair (108, 113) with energies -0.7149, -0.7149
 State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j

Pair (108, 114) with energies -0.7149, -0.7149
 State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j
 State 114
Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j

Pair (108, 115) with energies -0.7149, -0.7149
 State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j

Pair (108, 116) with energies -0.7149, -0.7149
 State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j

Pair (108, 117) with energies -0.7149, -0.7149

State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j
State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j

Pair (108, 118) with energies -0.7149, -0.7149
State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j
State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j

Pair (108, 119) with energies -0.7149, -0.7149
State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j
State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j

Pair (108, 120) with energies -0.7149, -0.7149
State 108

Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j

Pair (108, 121) with energies -0.7149, -0.7149
 State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j

Pair (108, 122) with energies -0.7149, -0.7149
 State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (108, 123) with energies -0.7149, -0.7149
 State 108
Dominant basis-states:

|00010011> : amplitude -0.150+0.000j
|00000001> : amplitude -0.150+0.000j
|11010101> : amplitude 0.150+0.000j
|11000111> : amplitude -0.150+0.000j
State 123
Dominant basis-states:
|10101011> : amplitude 0.190+0.000j
|01111111> : amplitude 0.190+0.000j
|10111001> : amplitude 0.190+0.000j
|01101101> : amplitude -0.190+0.000j

Pair (108, 124) with energies -0.7149, -0.7149
State 108
Dominant basis-states:
|00010011> : amplitude -0.150+0.000j
|00000001> : amplitude -0.150+0.000j
|11010101> : amplitude 0.150+0.000j
|11000111> : amplitude -0.150+0.000j
State 124
Dominant basis-states:
|11110100> : amplitude 0.147+0.000j
|00110010> : amplitude 0.147+0.000j
|11100110> : amplitude -0.147+0.000j
|00100000> : amplitude 0.147+0.000j

Pair (108, 125) with energies -0.7149, -0.7149
State 108
Dominant basis-states:
|00010011> : amplitude -0.150+0.000j
|00000001> : amplitude -0.150+0.000j
|11010101> : amplitude 0.150+0.000j
|11000111> : amplitude -0.150+0.000j
State 125
Dominant basis-states:
|10101100> : amplitude 0.168+0.000j
|01101010> : amplitude 0.168+0.000j
|01111000> : amplitude 0.168+0.000j
|10111110> : amplitude -0.168+0.000j

Pair (108, 126) with energies -0.7149, -0.7149
State 108
Dominant basis-states:
|00010011> : amplitude -0.150+0.000j

|00000001> : amplitude -0.150+0.000j
|11010101> : amplitude 0.150+0.000j
|11000111> : amplitude -0.150+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (108, 127) with energies -0.7149, -0.7149
 State 108
Dominant basis-states:
 |00010011> : amplitude -0.150+0.000j
 |00000001> : amplitude -0.150+0.000j
 |11010101> : amplitude 0.150+0.000j
 |11000111> : amplitude -0.150+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (109, 110) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j

Pair (109, 111) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j

|11111101> : amplitude 0.167+0.000j
|11101111> : amplitude 0.167+0.000j
State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j

Pair (109, 112) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j

Pair (109, 113) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j

Pair (109, 114) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j

|11101111> : amplitude 0.167+0.000j
 State 114
Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j

Pair (109, 115) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j

Pair (109, 116) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j

Pair (109, 117) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j

State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j

Pair (109, 118) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j

Pair (109, 119) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j

Pair (109, 120) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j
 State 120

Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j

Pair (109, 121) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j

Pair (109, 122) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (109, 123) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j
 State 123
Dominant basis-states:

|10101011> : amplitude 0.190+0.000j
|01111111> : amplitude 0.190+0.000j
|10111001> : amplitude 0.190+0.000j
|01101101> : amplitude -0.190+0.000j

Pair (109, 124) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (109, 125) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (109, 126) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j

|00000110> : amplitude -0.283+0.000j
|11010010> : amplitude 0.283+0.000j
|00010100> : amplitude 0.283+0.000j

Pair (109, 127) with energies -0.7149, -0.7149
 State 109
Dominant basis-states:
 |00101001> : amplitude -0.167+0.000j
 |00111011> : amplitude 0.167+0.000j
 |11111101> : amplitude 0.167+0.000j
 |11101111> : amplitude 0.167+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (110, 111) with energies -0.7149, -0.7149
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j

Pair (110, 112) with energies -0.7149, -0.7149
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j

|10001010> : amplitude -0.140+0.000j
|01001100> : amplitude -0.140+0.000j

Pair (110, 113) with energies -0.7149, -0.7149
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j

Pair (110, 114) with energies -0.7149, -0.7149
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j
 State 114
Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j

Pair (110, 115) with energies -0.7149, -0.7149
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j

|01001001> : amplitude 0.216+0.000j

Pair (110, 116) with energies -0.7149, -0.7149
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j

Pair (110, 117) with energies -0.7149, -0.7149
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j
 State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j

Pair (110, 118) with energies -0.7149, -0.7149
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j

Pair (110, 119) with energies -0.7149, -0.7149
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j

Pair (110, 120) with energies -0.7149, -0.7149
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j

Pair (110, 121) with energies -0.7149, -0.7149
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j

Pair (110, 122) with energies -0.7149, -0.7149
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (110, 123) with energies -0.7149, -0.7149
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j

Pair (110, 124) with energies -0.7149, -0.7149
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (110, 125) with energies -0.7149, -0.7149

State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j
State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (110, 126) with energies -0.7149, -0.7149
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (110, 127) with energies -0.7149, -0.7149
 State 110
Dominant basis-states:
 |11100101> : amplitude -0.163+0.000j
 |00100011> : amplitude -0.163+0.000j
 |00110001> : amplitude -0.163+0.000j
 |11110111> : amplitude 0.163+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (111, 112) with energies -0.7149, -0.7149
 State 111

Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j

Pair (111, 113) with energies -0.7149, -0.7149
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j

Pair (111, 114) with energies -0.7149, -0.7149
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j
 State 114
Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j

Pair (111, 115) with energies -0.7149, -0.7149
 State 111
Dominant basis-states:

|11001001> : amplitude -0.139+0.000j
|00001111> : amplitude 0.139+0.000j
|00011101> : amplitude 0.139+0.000j
|11011011> : amplitude 0.139+0.000j
State 115
Dominant basis-states:
|01011011> : amplitude -0.216+0.000j
|10011101> : amplitude -0.216+0.000j
|10001111> : amplitude -0.216+0.000j
|01001001> : amplitude 0.216+0.000j

Pair (111, 116) with energies -0.7149, -0.7149
State 111
Dominant basis-states:
|11001001> : amplitude -0.139+0.000j
|00001111> : amplitude 0.139+0.000j
|00011101> : amplitude 0.139+0.000j
|11011011> : amplitude 0.139+0.000j
State 116
Dominant basis-states:
|01111001> : amplitude 0.149+0.000j
|10111111> : amplitude 0.149+0.000j
|10101101> : amplitude 0.149+0.000j
|01101011> : amplitude -0.149+0.000j

Pair (111, 117) with energies -0.7149, -0.7149
State 111
Dominant basis-states:
|11001001> : amplitude -0.139+0.000j
|00001111> : amplitude 0.139+0.000j
|00011101> : amplitude 0.139+0.000j
|11011011> : amplitude 0.139+0.000j
State 117
Dominant basis-states:
|10001000> : amplitude 0.201+0.000j
|01001110> : amplitude 0.201+0.000j
|10011010> : amplitude -0.201+0.000j
|01011100> : amplitude 0.201+0.000j

Pair (111, 118) with energies -0.7149, -0.7149
State 111
Dominant basis-states:
|11001001> : amplitude -0.139+0.000j

|00001111> : amplitude 0.139+0.000j
|00011101> : amplitude 0.139+0.000j
|11011011> : amplitude 0.139+0.000j
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j

Pair (111, 119) with energies -0.7149, -0.7149
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j

Pair (111, 120) with energies -0.7149, -0.7149
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j

Pair (111, 121) with energies -0.7149, -0.7149
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j

|00011101> : amplitude 0.139+0.000j
|11011011> : amplitude 0.139+0.000j
State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j

Pair (111, 122) with energies -0.7149, -0.7149
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (111, 123) with energies -0.7149, -0.7149
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j

Pair (111, 124) with energies -0.7149, -0.7149
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j

|11011011> : amplitude 0.139+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (111, 125) with energies -0.7149, -0.7149
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (111, 126) with energies -0.7149, -0.7149
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (111, 127) with energies -0.7149, -0.7149
 State 111
Dominant basis-states:
 |11001001> : amplitude -0.139+0.000j
 |00001111> : amplitude 0.139+0.000j
 |00011101> : amplitude 0.139+0.000j
 |11011011> : amplitude 0.139+0.000j

State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (112, 113) with energies -0.7149, -0.7149
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j

Pair (112, 114) with energies -0.7149, -0.7149
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j
 State 114
Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j

Pair (112, 115) with energies -0.7149, -0.7149
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j
 State 115

Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j

Pair (112, 116) with energies -0.7149, -0.7149
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j

Pair (112, 117) with energies -0.7149, -0.7149
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j
 State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j

Pair (112, 118) with energies -0.7149, -0.7149
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j
 State 118
Dominant basis-states:

|01101000> : amplitude 0.219+0.000j
|10101110> : amplitude 0.219+0.000j
|01111010> : amplitude -0.219+0.000j
|10111100> : amplitude 0.219+0.000j

Pair (112, 119) with energies -0.7149, -0.7149
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j

Pair (112, 120) with energies -0.7149, -0.7149
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j

Pair (112, 121) with energies -0.7149, -0.7149
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j

|01011101> : amplitude -0.208+0.000j
|10001001> : amplitude -0.208+0.000j
|01001111> : amplitude 0.208+0.000j

Pair (112, 122) with energies -0.7149, -0.7149
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (112, 123) with energies -0.7149, -0.7149
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j

Pair (112, 124) with energies -0.7149, -0.7149
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j

|11100110> : amplitude -0.147+0.000j
|00100000> : amplitude 0.147+0.000j

Pair (112, 125) with energies -0.7149, -0.7149
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (112, 126) with energies -0.7149, -0.7149
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (112, 127) with energies -0.7149, -0.7149
 State 112
Dominant basis-states:
 |10011000> : amplitude -0.140+0.000j
 |01011110> : amplitude 0.140+0.000j
 |10001010> : amplitude -0.140+0.000j
 |01001100> : amplitude -0.140+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j

|01000101> : amplitude 0.163+0.000j

Pair (113, 114) with energies -0.7149, -0.7149
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 114
Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j

Pair (113, 115) with energies -0.7149, -0.7149
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j

Pair (113, 116) with energies -0.7149, -0.7149
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j

Pair (113, 117) with energies -0.7149, -0.7149
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j

Pair (113, 118) with energies -0.7149, -0.7149
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j

Pair (113, 119) with energies -0.7149, -0.7149
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j

Pair (113, 120) with energies -0.7149, -0.7149
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j

Pair (113, 121) with energies -0.7149, -0.7149
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j

Pair (113, 122) with energies -0.7149, -0.7149
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (113, 123) with energies -0.7149, -0.7149

State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j

Pair (113, 124) with energies -0.7149, -0.7149
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (113, 125) with energies -0.7149, -0.7149
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (113, 126) with energies -0.7149, -0.7149
 State 113

Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (113, 127) with energies -0.7149, -0.7149
 State 113
Dominant basis-states:
 |00000000> : amplitude 0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude -0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (114, 115) with energies -0.7149, -0.7149
 State 114
Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j

Pair (114, 116) with energies -0.7149, -0.7149
 State 114
Dominant basis-states:

|10101001> : amplitude 0.179+0.000j
|01101111> : amplitude -0.179+0.000j
|10111011> : amplitude -0.179+0.000j
|01111101> : amplitude -0.179+0.000j
State 116
Dominant basis-states:
|01111001> : amplitude 0.149+0.000j
|10111111> : amplitude 0.149+0.000j
|10101101> : amplitude 0.149+0.000j
|01101011> : amplitude -0.149+0.000j

Pair (114, 117) with energies -0.7149, -0.7149
State 114
Dominant basis-states:
|10101001> : amplitude 0.179+0.000j
|01101111> : amplitude -0.179+0.000j
|10111011> : amplitude -0.179+0.000j
|01111101> : amplitude -0.179+0.000j
State 117
Dominant basis-states:
|10001000> : amplitude 0.201+0.000j
|01001110> : amplitude 0.201+0.000j
|10011010> : amplitude -0.201+0.000j
|01011100> : amplitude 0.201+0.000j

Pair (114, 118) with energies -0.7149, -0.7149
State 114
Dominant basis-states:
|10101001> : amplitude 0.179+0.000j
|01101111> : amplitude -0.179+0.000j
|10111011> : amplitude -0.179+0.000j
|01111101> : amplitude -0.179+0.000j
State 118
Dominant basis-states:
|01101000> : amplitude 0.219+0.000j
|10101110> : amplitude 0.219+0.000j
|01111010> : amplitude -0.219+0.000j
|10111100> : amplitude 0.219+0.000j

Pair (114, 119) with energies -0.7149, -0.7149
State 114
Dominant basis-states:
|10101001> : amplitude 0.179+0.000j

|01101111> : amplitude -0.179+0.000j
|10111011> : amplitude -0.179+0.000j
|01111101> : amplitude -0.179+0.000j
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j

Pair (114, 120) with energies -0.7149, -0.7149
 State 114
Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j

Pair (114, 121) with energies -0.7149, -0.7149
 State 114
Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j

Pair (114, 122) with energies -0.7149, -0.7149
 State 114
Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j

|10111011> : amplitude -0.179+0.000j
|01111101> : amplitude -0.179+0.000j
State 122
Dominant basis-states:
|00001011> : amplitude 0.191+0.000j
|11001101> : amplitude -0.191+0.000j
|00011001> : amplitude -0.191+0.000j
|11011111> : amplitude -0.191+0.000j

Pair (114, 123) with energies -0.7149, -0.7149
State 114
Dominant basis-states:
|10101001> : amplitude 0.179+0.000j
|01101111> : amplitude -0.179+0.000j
|10111011> : amplitude -0.179+0.000j
|01111101> : amplitude -0.179+0.000j
State 123
Dominant basis-states:
|10101011> : amplitude 0.190+0.000j
|01111111> : amplitude 0.190+0.000j
|10111001> : amplitude 0.190+0.000j
|01101101> : amplitude -0.190+0.000j

Pair (114, 124) with energies -0.7149, -0.7149
State 114
Dominant basis-states:
|10101001> : amplitude 0.179+0.000j
|01101111> : amplitude -0.179+0.000j
|10111011> : amplitude -0.179+0.000j
|01111101> : amplitude -0.179+0.000j
State 124
Dominant basis-states:
|11110100> : amplitude 0.147+0.000j
|00110010> : amplitude 0.147+0.000j
|11100110> : amplitude -0.147+0.000j
|00100000> : amplitude 0.147+0.000j

Pair (114, 125) with energies -0.7149, -0.7149
State 114
Dominant basis-states:
|10101001> : amplitude 0.179+0.000j
|01101111> : amplitude -0.179+0.000j
|10111011> : amplitude -0.179+0.000j

|01111101> : amplitude -0.179+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (114, 126) with energies -0.7149, -0.7149
 State 114
Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (114, 127) with energies -0.7149, -0.7149
 State 114
Dominant basis-states:
 |10101001> : amplitude 0.179+0.000j
 |01101111> : amplitude -0.179+0.000j
 |10111011> : amplitude -0.179+0.000j
 |01111101> : amplitude -0.179+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (115, 116) with energies -0.7149, -0.7149
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j

State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j

Pair (115, 117) with energies -0.7149, -0.7149
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j
 State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j

Pair (115, 118) with energies -0.7149, -0.7149
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j

Pair (115, 119) with energies -0.7149, -0.7149
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j
 State 119

Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j

Pair (115, 120) with energies -0.7149, -0.7149
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j

Pair (115, 121) with energies -0.7149, -0.7149
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j

Pair (115, 122) with energies -0.7149, -0.7149
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j
 State 122
Dominant basis-states:

|00001011> : amplitude 0.191+0.000j
|11001101> : amplitude -0.191+0.000j
|00011001> : amplitude -0.191+0.000j
|11011111> : amplitude -0.191+0.000j

Pair (115, 123) with energies -0.7149, -0.7149
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j

Pair (115, 124) with energies -0.7149, -0.7149
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (115, 125) with energies -0.7149, -0.7149
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j

|01101010> : amplitude 0.168+0.000j
|01111000> : amplitude 0.168+0.000j
|10111110> : amplitude -0.168+0.000j

Pair (115, 126) with energies -0.7149, -0.7149
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (115, 127) with energies -0.7149, -0.7149
 State 115
Dominant basis-states:
 |01011011> : amplitude -0.216+0.000j
 |10011101> : amplitude -0.216+0.000j
 |10001111> : amplitude -0.216+0.000j
 |01001001> : amplitude 0.216+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (116, 117) with energies -0.7149, -0.7149
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j
 State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j

|10011010> : amplitude -0.201+0.000j
|01011100> : amplitude 0.201+0.000j

Pair (116, 118) with energies -0.7149, -0.7149
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j

Pair (116, 119) with energies -0.7149, -0.7149
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j

Pair (116, 120) with energies -0.7149, -0.7149
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j

|10001110> : amplitude 0.157+0.000j

Pair (116, 121) with energies -0.7149, -0.7149
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j

Pair (116, 122) with energies -0.7149, -0.7149
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (116, 123) with energies -0.7149, -0.7149
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j

Pair (116, 124) with energies -0.7149, -0.7149
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (116, 125) with energies -0.7149, -0.7149
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (116, 126) with energies -0.7149, -0.7149
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (116, 127) with energies -0.7149, -0.7149
 State 116
Dominant basis-states:
 |01111001> : amplitude 0.149+0.000j
 |10111111> : amplitude 0.149+0.000j
 |10101101> : amplitude 0.149+0.000j
 |01101011> : amplitude -0.149+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (117, 118) with energies -0.7149, -0.7149
 State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j

Pair (117, 119) with energies -0.7149, -0.7149
 State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j

Pair (117, 120) with energies -0.7149, -0.7149

State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j
State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j

Pair (117, 121) with energies -0.7149, -0.7149
State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j
State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j

Pair (117, 122) with energies -0.7149, -0.7149
State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j
State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (117, 123) with energies -0.7149, -0.7149
State 117

Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j

Pair (117, 124) with energies -0.7149, -0.7149
 State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (117, 125) with energies -0.7149, -0.7149
 State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (117, 126) with energies -0.7149, -0.7149
 State 117
Dominant basis-states:

|10001000> : amplitude 0.201+0.000j
|01001110> : amplitude 0.201+0.000j
|10011010> : amplitude -0.201+0.000j
|01011100> : amplitude 0.201+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (117, 127) with energies -0.7149, -0.7149
 State 117
Dominant basis-states:
 |10001000> : amplitude 0.201+0.000j
 |01001110> : amplitude 0.201+0.000j
 |10011010> : amplitude -0.201+0.000j
 |01011100> : amplitude 0.201+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (118, 119) with energies -0.7149, -0.7149
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j

Pair (118, 120) with energies -0.7149, -0.7149
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j

|10101110> : amplitude 0.219+0.000j
|01111010> : amplitude -0.219+0.000j
|10111100> : amplitude 0.219+0.000j
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j

Pair (118, 121) with energies -0.7149, -0.7149
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j

Pair (118, 122) with energies -0.7149, -0.7149
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (118, 123) with energies -0.7149, -0.7149
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j

|01111010> : amplitude -0.219+0.000j
|10111100> : amplitude 0.219+0.000j
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j

Pair (118, 124) with energies -0.7149, -0.7149
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (118, 125) with energies -0.7149, -0.7149
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (118, 126) with energies -0.7149, -0.7149
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j

|10111100> : amplitude 0.219+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (118, 127) with energies -0.7149, -0.7149
 State 118
Dominant basis-states:
 |01101000> : amplitude 0.219+0.000j
 |10101110> : amplitude 0.219+0.000j
 |01111010> : amplitude -0.219+0.000j
 |10111100> : amplitude 0.219+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (119, 120) with energies -0.7149, -0.7149
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j

Pair (119, 121) with energies -0.7149, -0.7149
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j

State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j

Pair (119, 122) with energies -0.7149, -0.7149
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (119, 123) with energies -0.7149, -0.7149
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j

Pair (119, 124) with energies -0.7149, -0.7149
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j
 State 124

Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (119, 125) with energies -0.7149, -0.7149
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (119, 126) with energies -0.7149, -0.7149
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (119, 127) with energies -0.7149, -0.7149
 State 119
Dominant basis-states:
 |01000001> : amplitude 0.160+0.000j
 |10000111> : amplitude 0.160+0.000j
 |01010011> : amplitude -0.160+0.000j
 |10010101> : amplitude 0.160+0.000j
 State 127
Dominant basis-states:

|10000011> : amplitude 0.163+0.000j
|10010001> : amplitude -0.163+0.000j
|01010111> : amplitude 0.163+0.000j
|01000101> : amplitude 0.163+0.000j

Pair (120, 121) with energies -0.7149, -0.7149
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j

Pair (120, 122) with energies -0.7149, -0.7149
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (120, 123) with energies -0.7149, -0.7149
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j

|01111111> : amplitude 0.190+0.000j
|10111001> : amplitude 0.190+0.000j
|01101101> : amplitude -0.190+0.000j

Pair (120, 124) with energies -0.7149, -0.7149
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (120, 125) with energies -0.7149, -0.7149
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (120, 126) with energies -0.7149, -0.7149
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j

|11010010> : amplitude 0.283+0.000j
|00010100> : amplitude 0.283+0.000j

Pair (120, 127) with energies -0.7149, -0.7149
 State 120
Dominant basis-states:
 |01011010> : amplitude 0.157+0.000j
 |10011100> : amplitude -0.157+0.000j
 |01001000> : amplitude 0.157+0.000j
 |10001110> : amplitude 0.157+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (121, 122) with energies -0.7149, -0.7149
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j

Pair (121, 123) with energies -0.7149, -0.7149
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j

|01101101> : amplitude -0.190+0.000j

Pair (121, 124) with energies -0.7149, -0.7149
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (121, 125) with energies -0.7149, -0.7149
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (121, 126) with energies -0.7149, -0.7149
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (121, 127) with energies -0.7149, -0.7149
 State 121
Dominant basis-states:
 |10011011> : amplitude -0.208+0.000j
 |01011101> : amplitude -0.208+0.000j
 |10001001> : amplitude -0.208+0.000j
 |01001111> : amplitude 0.208+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (122, 123) with energies -0.7149, -0.7149
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j

Pair (122, 124) with energies -0.7149, -0.7149
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (122, 125) with energies -0.7149, -0.7149
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (122, 126) with energies -0.7149, -0.7149
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (122, 127) with energies -0.7149, -0.7149
 State 122
Dominant basis-states:
 |00001011> : amplitude 0.191+0.000j
 |11001101> : amplitude -0.191+0.000j
 |00011001> : amplitude -0.191+0.000j
 |11011111> : amplitude -0.191+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (123, 124) with energies -0.7149, -0.7149

State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j

Pair (123, 125) with energies -0.7149, -0.7149
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (123, 126) with energies -0.7149, -0.7149
 State 123
Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (123, 127) with energies -0.7149, -0.7149
 State 123

Dominant basis-states:
 |10101011> : amplitude 0.190+0.000j
 |01111111> : amplitude 0.190+0.000j
 |10111001> : amplitude 0.190+0.000j
 |01101101> : amplitude -0.190+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (124, 125) with energies -0.7149, -0.7149
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j

Pair (124, 126) with energies -0.7149, -0.7149
 State 124
Dominant basis-states:
 |11110100> : amplitude 0.147+0.000j
 |00110010> : amplitude 0.147+0.000j
 |11100110> : amplitude -0.147+0.000j
 |00100000> : amplitude 0.147+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (124, 127) with energies -0.7149, -0.7149
 State 124
Dominant basis-states:

|11110100> : amplitude 0.147+0.000j
|00110010> : amplitude 0.147+0.000j
|11100110> : amplitude -0.147+0.000j
|00100000> : amplitude 0.147+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (125, 126) with energies -0.7149, -0.7149
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j
 |00000110> : amplitude -0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |00010100> : amplitude 0.283+0.000j

Pair (125, 127) with energies -0.7149, -0.7149
 State 125
Dominant basis-states:
 |10101100> : amplitude 0.168+0.000j
 |01101010> : amplitude 0.168+0.000j
 |01111000> : amplitude 0.168+0.000j
 |10111110> : amplitude -0.168+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (126, 127) with energies -0.7149, -0.7149
 State 126
Dominant basis-states:
 |11000000> : amplitude 0.283+0.000j

|00000110> : amplitude -0.283+0.000j
|11010010> : amplitude 0.283+0.000j
|00010100> : amplitude 0.283+0.000j
 State 127
Dominant basis-states:
 |10000011> : amplitude 0.163+0.000j
 |10010001> : amplitude -0.163+0.000j
 |01010111> : amplitude 0.163+0.000j
 |01000101> : amplitude 0.163+0.000j

Pair (128, 129) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j

Pair (128, 130) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j

Pair (128, 131) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j

|10101000> : amplitude -0.170+0.000j
|10111010> : amplitude -0.170+0.000j
State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j

Pair (128, 132) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j

Pair (128, 133) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j

Pair (128, 134) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j

|10111010> : amplitude -0.170+0.000j
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j

Pair (128, 135) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j

Pair (128, 136) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j

Pair (128, 137) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j

State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j

Pair (128, 138) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j

Pair (128, 139) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j

Pair (128, 140) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 140

Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j

Pair (128, 141) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j

Pair (128, 142) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j

Pair (128, 143) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 143
Dominant basis-states:

|10011001> : amplitude 0.185+0.000j
|01011111> : amplitude -0.185+0.000j
|10001011> : amplitude -0.185+0.000j
|01001101> : amplitude -0.185+0.000j

Pair (128, 144) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j

Pair (128, 145) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j

Pair (128, 146) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j

|11000001> : amplitude -0.211+0.000j
|11010011> : amplitude 0.211+0.000j
|00010101> : amplitude 0.211+0.000j

Pair (128, 147) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (128, 148) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j

Pair (128, 149) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j

|10011000> : amplitude 0.188+0.000j
|01011110> : amplitude 0.188+0.000j

Pair (128, 150) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (128, 151) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (128, 152) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j

|00011010> : amplitude -0.204+0.000j

Pair (128, 153) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (128, 154) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (128, 155) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (128, 156) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (128, 157) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (128, 158) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (128, 159) with energies 0.7149, 0.7149
 State 128
Dominant basis-states:
 |01111100> : amplitude -0.170+0.000j
 |01101110> : amplitude 0.170+0.000j
 |10101000> : amplitude -0.170+0.000j
 |10111010> : amplitude -0.170+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (129, 130) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j

Pair (129, 131) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j

Pair (129, 132) with energies 0.7149, 0.7149

State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j

Pair (129, 133) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j

Pair (129, 134) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j

Pair (129, 135) with energies 0.7149, 0.7149
 State 129

Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j

Pair (129, 136) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j

Pair (129, 137) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j

Pair (129, 138) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:

|11001011> : amplitude 0.140+0.000j
|00001101> : amplitude 0.140+0.000j
|11011001> : amplitude 0.140+0.000j
|00011111> : amplitude -0.140+0.000j
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j

Pair (129, 139) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j

Pair (129, 140) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j

Pair (129, 141) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j

|00001101> : amplitude 0.140+0.000j
|11011001> : amplitude 0.140+0.000j
|00011111> : amplitude -0.140+0.000j
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j

Pair (129, 142) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j

Pair (129, 143) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j

Pair (129, 144) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j

|11011001> : amplitude 0.140+0.000j
|00011111> : amplitude -0.140+0.000j
State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j

Pair (129, 145) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j

Pair (129, 146) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j

Pair (129, 147) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j

|00011111> : amplitude -0.140+0.000j
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (129, 148) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j

Pair (129, 149) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j

Pair (129, 150) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j

State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (129, 151) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (129, 152) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (129, 153) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 153

Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (129, 154) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (129, 155) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (129, 156) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 156
Dominant basis-states:

|00101111> : amplitude 0.163+0.000j
|11101001> : amplitude 0.163+0.000j
|11111011> : amplitude 0.163+0.000j
|00111101> : amplitude -0.163+0.000j

Pair (129, 157) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (129, 158) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (129, 159) with energies 0.7149, 0.7149
 State 129
Dominant basis-states:
 |11001011> : amplitude 0.140+0.000j
 |00001101> : amplitude 0.140+0.000j
 |11011001> : amplitude 0.140+0.000j
 |00011111> : amplitude -0.140+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j

|10011110> : amplitude 0.158+0.000j
|01001010> : amplitude -0.158+0.000j
|01011000> : amplitude 0.158+0.000j

Pair (130, 131) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j

Pair (130, 132) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j

Pair (130, 133) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j

|00010010> : amplitude 0.353+0.000j
|11010100> : amplitude -0.353+0.000j

Pair (130, 134) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j

Pair (130, 135) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j

Pair (130, 136) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j

|01011100> : amplitude 0.172+0.000j

Pair (130, 137) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j

Pair (130, 138) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j

Pair (130, 139) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j

Pair (130, 140) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j

Pair (130, 141) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j

Pair (130, 142) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j

Pair (130, 143) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j

Pair (130, 144) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j

Pair (130, 145) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j

Pair (130, 146) with energies 0.7149, 0.7149

State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j

Pair (130, 147) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (130, 148) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j

Pair (130, 149) with energies 0.7149, 0.7149
 State 130

Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j

Pair (130, 150) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (130, 151) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (130, 152) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:

|01101011> : amplitude -0.163+0.000j
|01111001> : amplitude 0.163+0.000j
|10101101> : amplitude -0.163+0.000j
|10111111> : amplitude -0.163+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (130, 153) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (130, 154) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (130, 155) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j

|01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (130, 156) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (130, 157) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (130, 158) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j

|10101101> : amplitude -0.163+0.000j
|10111111> : amplitude -0.163+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (130, 159) with energies 0.7149, 0.7149
 State 130
Dominant basis-states:
 |01101011> : amplitude -0.163+0.000j
 |01111001> : amplitude 0.163+0.000j
 |10101101> : amplitude -0.163+0.000j
 |10111111> : amplitude -0.163+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (131, 132) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j

Pair (131, 133) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j

|01100110> : amplitude 0.181+0.000j
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j

Pair (131, 134) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j

Pair (131, 135) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j

Pair (131, 136) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j

State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j

Pair (131, 137) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j

Pair (131, 138) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j

Pair (131, 139) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 139

Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j

Pair (131, 140) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j

Pair (131, 141) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j

Pair (131, 142) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 142
Dominant basis-states:

|10101110> : amplitude -0.165+0.000j
|10111100> : amplitude -0.165+0.000j
|01101000> : amplitude 0.165+0.000j
|01111010> : amplitude -0.165+0.000j

Pair (131, 143) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j

Pair (131, 144) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j

Pair (131, 145) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j

|11100011> : amplitude -0.149+0.000j
|00110111> : amplitude 0.149+0.000j
|11110001> : amplitude 0.149+0.000j

Pair (131, 146) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j

Pair (131, 147) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (131, 148) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j

|10001001> : amplitude 0.127+0.000j
|01001111> : amplitude 0.127+0.000j

Pair (131, 149) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j

Pair (131, 150) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (131, 151) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j

|10111110> : amplitude 0.169+0.000j

Pair (131, 152) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (131, 153) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (131, 154) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (131, 155) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (131, 156) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (131, 157) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (131, 158) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (131, 159) with energies 0.7149, 0.7149
 State 131
Dominant basis-states:
 |10110010> : amplitude 0.181+0.000j
 |01110100> : amplitude -0.181+0.000j
 |10100000> : amplitude 0.181+0.000j
 |01100110> : amplitude 0.181+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (132, 133) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j

Pair (132, 134) with energies 0.7149, 0.7149

State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j

Pair (132, 135) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j

Pair (132, 136) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j

Pair (132, 137) with energies 0.7149, 0.7149
 State 132

Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j

Pair (132, 138) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j

Pair (132, 139) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j

Pair (132, 140) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:

|01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j

Pair (132, 141) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j

Pair (132, 142) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j

Pair (132, 143) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j

|10011100> : amplitude 0.153+0.000j
|01001000> : amplitude 0.153+0.000j
|10001110> : amplitude -0.153+0.000j
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j

Pair (132, 144) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j

Pair (132, 145) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j

Pair (132, 146) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j

|01001000> : amplitude 0.153+0.000j
|10001110> : amplitude -0.153+0.000j
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j

Pair (132, 147) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (132, 148) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j

Pair (132, 149) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j

|10001110> : amplitude -0.153+0.000j
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j

Pair (132, 150) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (132, 151) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (132, 152) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j

State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (132, 153) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (132, 154) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (132, 155) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 155

Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (132, 156) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (132, 157) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (132, 158) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 158
Dominant basis-states:

|00100100> : amplitude -0.148+0.000j
|11100010> : amplitude -0.148+0.000j
|11110000> : amplitude -0.148+0.000j
|00110110> : amplitude 0.148+0.000j

Pair (132, 159) with energies 0.7149, 0.7149
 State 132
Dominant basis-states:
 |01011010> : amplitude 0.153+0.000j
 |10011100> : amplitude 0.153+0.000j
 |01001000> : amplitude 0.153+0.000j
 |10001110> : amplitude -0.153+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (133, 134) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j

Pair (133, 135) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j

|11101000> : amplitude -0.156+0.000j
|00111100> : amplitude 0.156+0.000j
|11111010> : amplitude 0.156+0.000j

Pair (133, 136) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j

Pair (133, 137) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j

Pair (133, 138) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j

|10010101> : amplitude -0.132+0.000j
|01010011> : amplitude -0.132+0.000j

Pair (133, 139) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j

Pair (133, 140) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j

Pair (133, 141) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j

|11001111> : amplitude -0.179+0.000j

Pair (133, 142) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j

Pair (133, 143) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j

Pair (133, 144) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j

Pair (133, 145) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j

Pair (133, 146) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j

Pair (133, 147) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (133, 148) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j

Pair (133, 149) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j

Pair (133, 150) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (133, 151) with energies 0.7149, 0.7149

State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (133, 152) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (133, 153) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (133, 154) with energies 0.7149, 0.7149
 State 133

Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (133, 155) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (133, 156) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (133, 157) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:

|00000000> : amplitude -0.353+0.000j
|11000110> : amplitude -0.353+0.000j
|00010010> : amplitude 0.353+0.000j
|11010100> : amplitude -0.353+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (133, 158) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (133, 159) with energies 0.7149, 0.7149
 State 133
Dominant basis-states:
 |00000000> : amplitude -0.353+0.000j
 |11000110> : amplitude -0.353+0.000j
 |00010010> : amplitude 0.353+0.000j
 |11010100> : amplitude -0.353+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (134, 135) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j

|00101000> : amplitude -0.211+0.000j
|11111100> : amplitude -0.211+0.000j
|00111010> : amplitude -0.211+0.000j
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j

Pair (134, 136) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j

Pair (134, 137) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j

Pair (134, 138) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j

|11111100> : amplitude -0.211+0.000j
|00111010> : amplitude -0.211+0.000j
State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j

Pair (134, 139) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j

Pair (134, 140) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j

Pair (134, 141) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j

|00111010> : amplitude -0.211+0.000j
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j

Pair (134, 142) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j

Pair (134, 143) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j

Pair (134, 144) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j

State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j

Pair (134, 145) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j

Pair (134, 146) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j

Pair (134, 147) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 147

Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (134, 148) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j

Pair (134, 149) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j

Pair (134, 150) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 150
Dominant basis-states:

|10110011> : amplitude -0.150+0.000j
|01110101> : amplitude -0.150+0.000j
|10100001> : amplitude 0.150+0.000j
|01100111> : amplitude -0.150+0.000j

Pair (134, 151) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (134, 152) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (134, 153) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j

|10001000> : amplitude 0.144+0.000j
|01011100> : amplitude -0.144+0.000j
|10011010> : amplitude -0.144+0.000j

Pair (134, 154) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (134, 155) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (134, 156) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j

|11111011> : amplitude 0.163+0.000j
|00111101> : amplitude -0.163+0.000j

Pair (134, 157) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (134, 158) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (134, 159) with energies 0.7149, 0.7149
 State 134
Dominant basis-states:
 |11101110> : amplitude 0.211+0.000j
 |00101000> : amplitude -0.211+0.000j
 |11111100> : amplitude -0.211+0.000j
 |00111010> : amplitude -0.211+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j

|01011000> : amplitude 0.158+0.000j

Pair (135, 136) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j

Pair (135, 137) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j

Pair (135, 138) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j

Pair (135, 139) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j

Pair (135, 140) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j

Pair (135, 141) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j

Pair (135, 142) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j

Pair (135, 143) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j

Pair (135, 144) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j

Pair (135, 145) with energies 0.7149, 0.7149

State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j

Pair (135, 146) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j

Pair (135, 147) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (135, 148) with energies 0.7149, 0.7149
 State 135

Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j

Pair (135, 149) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j

Pair (135, 150) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (135, 151) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:

|00101110> : amplitude 0.156+0.000j
|11101000> : amplitude -0.156+0.000j
|00111100> : amplitude 0.156+0.000j
|11111010> : amplitude 0.156+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (135, 152) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (135, 153) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (135, 154) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j

|11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (135, 155) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (135, 156) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (135, 157) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j

|00111100> : amplitude 0.156+0.000j
|11111010> : amplitude 0.156+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (135, 158) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (135, 159) with energies 0.7149, 0.7149
 State 135
Dominant basis-states:
 |00101110> : amplitude 0.156+0.000j
 |11101000> : amplitude -0.156+0.000j
 |00111100> : amplitude 0.156+0.000j
 |11111010> : amplitude 0.156+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (136, 137) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j

|01011100> : amplitude 0.172+0.000j
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j

Pair (136, 138) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j

Pair (136, 139) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j

Pair (136, 140) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j

State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j

Pair (136, 141) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j

Pair (136, 142) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j

Pair (136, 143) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 143

Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j

Pair (136, 144) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j

Pair (136, 145) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j

Pair (136, 146) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j

4.2.3.2 Raw Output (Part 2)
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 146

Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j

Pair (136, 147) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (136, 148) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j

Pair (136, 149) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 149
Dominant basis-states:

|10001010> : amplitude 0.188+0.000j
|01001100> : amplitude -0.188+0.000j
|10011000> : amplitude 0.188+0.000j
|01011110> : amplitude 0.188+0.000j

Pair (136, 150) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (136, 151) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (136, 152) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j

|00001000> : amplitude 0.204+0.000j
|11011100> : amplitude -0.204+0.000j
|00011010> : amplitude -0.204+0.000j

Pair (136, 153) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (136, 154) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (136, 155) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j

|01100000> : amplitude -0.127+0.000j
|10100110> : amplitude -0.127+0.000j

Pair (136, 156) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (136, 157) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (136, 158) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j

|00110110> : amplitude 0.148+0.000j

Pair (136, 159) with energies 0.7149, 0.7149
 State 136
Dominant basis-states:
 |10001000> : amplitude -0.172+0.000j
 |01001110> : amplitude 0.172+0.000j
 |10011010> : amplitude 0.172+0.000j
 |01011100> : amplitude 0.172+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (137, 138) with energies 0.7149, 0.7149
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j

Pair (137, 139) with energies 0.7149, 0.7149
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j

Pair (137, 140) with energies 0.7149, 0.7149
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j

Pair (137, 141) with energies 0.7149, 0.7149
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j

Pair (137, 142) with energies 0.7149, 0.7149
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j

Pair (137, 143) with energies 0.7149, 0.7149
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j

Pair (137, 144) with energies 0.7149, 0.7149
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j

Pair (137, 145) with energies 0.7149, 0.7149
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j

Pair (137, 146) with energies 0.7149, 0.7149

State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j

Pair (137, 147) with energies 0.7149, 0.7149
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (137, 148) with energies 0.7149, 0.7149
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j

Pair (137, 149) with energies 0.7149, 0.7149
 State 137

Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j

Pair (137, 150) with energies 0.7149, 0.7149
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (137, 151) with energies 0.7149, 0.7149
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (137, 152) with energies 0.7149, 0.7149
 State 137
Dominant basis-states:

|11001101> : amplitude 0.186+0.000j
|00001011> : amplitude 0.186+0.000j
|11011111> : amplitude 0.186+0.000j
|00011001> : amplitude -0.186+0.000j
State 152
Dominant basis-states:
|11001110> : amplitude -0.204+0.000j
|00001000> : amplitude 0.204+0.000j
|11011100> : amplitude -0.204+0.000j
|00011010> : amplitude -0.204+0.000j

Pair (137, 153) with energies 0.7149, 0.7149
State 137
Dominant basis-states:
|11001101> : amplitude 0.186+0.000j
|00001011> : amplitude 0.186+0.000j
|11011111> : amplitude 0.186+0.000j
|00011001> : amplitude -0.186+0.000j
State 153
Dominant basis-states:
|01001110> : amplitude -0.144+0.000j
|10001000> : amplitude 0.144+0.000j
|01011100> : amplitude -0.144+0.000j
|10011010> : amplitude -0.144+0.000j

Pair (137, 154) with energies 0.7149, 0.7149
State 137
Dominant basis-states:
|11001101> : amplitude 0.186+0.000j
|00001011> : amplitude 0.186+0.000j
|11011111> : amplitude 0.186+0.000j
|00011001> : amplitude -0.186+0.000j
State 154
Dominant basis-states:
|10000101> : amplitude -0.140+0.000j
|01000011> : amplitude 0.140+0.000j
|01010001> : amplitude 0.140+0.000j
|10010111> : amplitude 0.140+0.000j

Pair (137, 155) with energies 0.7149, 0.7149
State 137
Dominant basis-states:
|11001101> : amplitude 0.186+0.000j

|00001011> : amplitude 0.186+0.000j
|11011111> : amplitude 0.186+0.000j
|00011001> : amplitude -0.186+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (137, 156) with energies 0.7149, 0.7149
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (137, 157) with energies 0.7149, 0.7149
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (137, 158) with energies 0.7149, 0.7149
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j

|11011111> : amplitude 0.186+0.000j
|00011001> : amplitude -0.186+0.000j
State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (137, 159) with energies 0.7149, 0.7149
 State 137
Dominant basis-states:
 |11001101> : amplitude 0.186+0.000j
 |00001011> : amplitude 0.186+0.000j
 |11011111> : amplitude 0.186+0.000j
 |00011001> : amplitude -0.186+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (138, 139) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j

Pair (138, 140) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j

|01010011> : amplitude -0.132+0.000j
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j

Pair (138, 141) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j

Pair (138, 142) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j

Pair (138, 143) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j

State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j

Pair (138, 144) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j

Pair (138, 145) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j

Pair (138, 146) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 146

Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j

Pair (138, 147) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (138, 148) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j

Pair (138, 149) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 149
Dominant basis-states:

|10001010> : amplitude 0.188+0.000j
|01001100> : amplitude -0.188+0.000j
|10011000> : amplitude 0.188+0.000j
|01011110> : amplitude 0.188+0.000j

Pair (138, 150) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (138, 151) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (138, 152) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j

|00001000> : amplitude 0.204+0.000j
|11011100> : amplitude -0.204+0.000j
|00011010> : amplitude -0.204+0.000j

Pair (138, 153) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (138, 154) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (138, 155) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j

|01100000> : amplitude -0.127+0.000j
|10100110> : amplitude -0.127+0.000j

Pair (138, 156) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (138, 157) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (138, 158) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j

|00110110> : amplitude 0.148+0.000j

Pair (138, 159) with energies 0.7149, 0.7149
 State 138
Dominant basis-states:
 |01000001> : amplitude 0.132+0.000j
 |10000111> : amplitude -0.132+0.000j
 |10010101> : amplitude -0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (139, 140) with energies 0.7149, 0.7149
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j

Pair (139, 141) with energies 0.7149, 0.7149
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j

Pair (139, 142) with energies 0.7149, 0.7149
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j

Pair (139, 143) with energies 0.7149, 0.7149
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j

Pair (139, 144) with energies 0.7149, 0.7149
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j

Pair (139, 145) with energies 0.7149, 0.7149
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j

Pair (139, 146) with energies 0.7149, 0.7149
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j

Pair (139, 147) with energies 0.7149, 0.7149
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (139, 148) with energies 0.7149, 0.7149

State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j

Pair (139, 149) with energies 0.7149, 0.7149
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j

Pair (139, 150) with energies 0.7149, 0.7149
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (139, 151) with energies 0.7149, 0.7149
 State 139

Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (139, 152) with energies 0.7149, 0.7149
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (139, 153) with energies 0.7149, 0.7149
 State 139
Dominant basis-states:
 |10111101> : amplitude 0.174+0.000j
 |01111011> : amplitude -0.174+0.000j
 |01101001> : amplitude -0.174+0.000j
 |10101111> : amplitude -0.174+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (139, 154) with energies 0.7149, 0.7149
 State 139
Dominant basis-states:

|10111101> : amplitude 0.174+0.000j
|01111011> : amplitude -0.174+0.000j
|01101001> : amplitude -0.174+0.000j
|10101111> : amplitude -0.174+0.000j
State 154
Dominant basis-states:
|10000101> : amplitude -0.140+0.000j
|01000011> : amplitude 0.140+0.000j
|01010001> : amplitude 0.140+0.000j
|10010111> : amplitude 0.140+0.000j

Pair (139, 155) with energies 0.7149, 0.7149
State 139
Dominant basis-states:
|10111101> : amplitude 0.174+0.000j
|01111011> : amplitude -0.174+0.000j
|01101001> : amplitude -0.174+0.000j
|10101111> : amplitude -0.174+0.000j
State 155
Dominant basis-states:
|01110010> : amplitude 0.127+0.000j
|10110100> : amplitude -0.127+0.000j
|01100000> : amplitude -0.127+0.000j
|10100110> : amplitude -0.127+0.000j

Pair (139, 156) with energies 0.7149, 0.7149
State 139
Dominant basis-states:
|10111101> : amplitude 0.174+0.000j
|01111011> : amplitude -0.174+0.000j
|01101001> : amplitude -0.174+0.000j
|10101111> : amplitude -0.174+0.000j
State 156
Dominant basis-states:
|00101111> : amplitude 0.163+0.000j
|11101001> : amplitude 0.163+0.000j
|11111011> : amplitude 0.163+0.000j
|00111101> : amplitude -0.163+0.000j

Pair (139, 157) with energies 0.7149, 0.7149
State 139
Dominant basis-states:
|10111101> : amplitude 0.174+0.000j

|01111011> : amplitude -0.174+0.000j
|01101001> : amplitude -0.174+0.000j
|10101111> : amplitude -0.174+0.000j
State 157
Dominant basis-states:
|10001001> : amplitude 0.149+0.000j
|01001111> : amplitude 0.149+0.000j
|10011011> : amplitude 0.149+0.000j
|01011101> : amplitude -0.149+0.000j

Pair (139, 158) with energies 0.7149, 0.7149
State 139
Dominant basis-states:
|10111101> : amplitude 0.174+0.000j
|01111011> : amplitude -0.174+0.000j
|01101001> : amplitude -0.174+0.000j
|10101111> : amplitude -0.174+0.000j
State 158
Dominant basis-states:
|00100100> : amplitude -0.148+0.000j
|11100010> : amplitude -0.148+0.000j
|11110000> : amplitude -0.148+0.000j
|00110110> : amplitude 0.148+0.000j

Pair (139, 159) with energies 0.7149, 0.7149
State 139
Dominant basis-states:
|10111101> : amplitude 0.174+0.000j
|01111011> : amplitude -0.174+0.000j
|01101001> : amplitude -0.174+0.000j
|10101111> : amplitude -0.174+0.000j
State 159
Dominant basis-states:
|10001100> : amplitude 0.158+0.000j
|10011110> : amplitude 0.158+0.000j
|01001010> : amplitude -0.158+0.000j
|01011000> : amplitude 0.158+0.000j

Pair (140, 141) with energies 0.7149, 0.7149
State 140
Dominant basis-states:
|10010010> : amplitude -0.200+0.000j
|01010100> : amplitude 0.200+0.000j

226

|01000110> : amplitude 0.200+0.000j
|10000000> : amplitude 0.200+0.000j
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j

Pair (140, 142) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j

Pair (140, 143) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j

Pair (140, 144) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j

|10000000> : amplitude 0.200+0.000j
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j

Pair (140, 145) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j

Pair (140, 146) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j

Pair (140, 147) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j

State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (140, 148) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j

Pair (140, 149) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j

Pair (140, 150) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j
 State 150

Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (140, 151) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (140, 152) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (140, 153) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j
 State 153
Dominant basis-states:

|01001110> : amplitude -0.144+0.000j
|10001000> : amplitude 0.144+0.000j
|01011100> : amplitude -0.144+0.000j
|10011010> : amplitude -0.144+0.000j

Pair (140, 154) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (140, 155) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (140, 156) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j

|11101001> : amplitude 0.163+0.000j
|11111011> : amplitude 0.163+0.000j
|00111101> : amplitude -0.163+0.000j

Pair (140, 157) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (140, 158) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (140, 159) with energies 0.7149, 0.7149
 State 140
Dominant basis-states:
 |10010010> : amplitude -0.200+0.000j
 |01010100> : amplitude 0.200+0.000j
 |01000110> : amplitude 0.200+0.000j
 |10000000> : amplitude 0.200+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j

|01001010> : amplitude -0.158+0.000j
|01011000> : amplitude 0.158+0.000j

Pair (141, 142) with energies 0.7149, 0.7149
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j

Pair (141, 143) with energies 0.7149, 0.7149
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j

Pair (141, 144) with energies 0.7149, 0.7149
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j

|11000000> : amplitude 0.283+0.000j

Pair (141, 145) with energies 0.7149, 0.7149
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j

Pair (141, 146) with energies 0.7149, 0.7149
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j

Pair (141, 147) with energies 0.7149, 0.7149
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (141, 148) with energies 0.7149, 0.7149
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j

Pair (141, 149) with energies 0.7149, 0.7149
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j

Pair (141, 150) with energies 0.7149, 0.7149
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (141, 151) with energies 0.7149, 0.7149
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (141, 152) with energies 0.7149, 0.7149
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (141, 153) with energies 0.7149, 0.7149
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (141, 154) with energies 0.7149, 0.7149

State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (141, 155) with energies 0.7149, 0.7149
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (141, 156) with energies 0.7149, 0.7149
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (141, 157) with energies 0.7149, 0.7149
 State 141

Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (141, 158) with energies 0.7149, 0.7149
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (141, 159) with energies 0.7149, 0.7149
 State 141
Dominant basis-states:
 |00011011> : amplitude -0.179+0.000j
 |11011101> : amplitude 0.179+0.000j
 |00001001> : amplitude -0.179+0.000j
 |11001111> : amplitude -0.179+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (142, 143) with energies 0.7149, 0.7149
 State 142
Dominant basis-states:

|10101110> : amplitude -0.165+0.000j
|10111100> : amplitude -0.165+0.000j
|01101000> : amplitude 0.165+0.000j
|01111010> : amplitude -0.165+0.000j
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j

Pair (142, 144) with energies 0.7149, 0.7149
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j

Pair (142, 145) with energies 0.7149, 0.7149
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j

Pair (142, 146) with energies 0.7149, 0.7149
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j

|10111100> : amplitude -0.165+0.000j
|01101000> : amplitude 0.165+0.000j
|01111010> : amplitude -0.165+0.000j
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j

Pair (142, 147) with energies 0.7149, 0.7149
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (142, 148) with energies 0.7149, 0.7149
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j

Pair (142, 149) with energies 0.7149, 0.7149
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j

|01101000> : amplitude 0.165+0.000j
  |01111010> : amplitude -0.165+0.000j
 State 149
Dominant basis-states:
  |10001010> : amplitude 0.188+0.000j
  |01001100> : amplitude -0.188+0.000j
  |10011000> : amplitude 0.188+0.000j
  |01011110> : amplitude 0.188+0.000j

Pair (142, 150) with energies 0.7149, 0.7149
 State 142
Dominant basis-states:
  |10101110> : amplitude -0.165+0.000j
  |10111100> : amplitude -0.165+0.000j
  |01101000> : amplitude 0.165+0.000j
  |01111010> : amplitude -0.165+0.000j
 State 150
Dominant basis-states:
  |10110011> : amplitude -0.150+0.000j
  |01110101> : amplitude -0.150+0.000j
  |10100001> : amplitude 0.150+0.000j
  |01100111> : amplitude -0.150+0.000j

Pair (142, 151) with energies 0.7149, 0.7149
 State 142
Dominant basis-states:
  |10101110> : amplitude -0.165+0.000j
  |10111100> : amplitude -0.165+0.000j
  |01101000> : amplitude 0.165+0.000j
  |01111010> : amplitude -0.165+0.000j
 State 151
Dominant basis-states:
  |01101010> : amplitude 0.169+0.000j
  |10101100> : amplitude -0.169+0.000j
  |01111000> : amplitude 0.169+0.000j
  |10111110> : amplitude 0.169+0.000j

Pair (142, 152) with energies 0.7149, 0.7149
 State 142
Dominant basis-states:
  |10101110> : amplitude -0.165+0.000j
  |10111100> : amplitude -0.165+0.000j
  |01101000> : amplitude 0.165+0.000j

|01111010> : amplitude -0.165+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (142, 153) with energies 0.7149, 0.7149
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (142, 154) with energies 0.7149, 0.7149
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (142, 155) with energies 0.7149, 0.7149
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j

State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (142, 156) with energies 0.7149, 0.7149
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (142, 157) with energies 0.7149, 0.7149
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (142, 158) with energies 0.7149, 0.7149
 State 142
Dominant basis-states:
 |10101110> : amplitude -0.165+0.000j
 |10111100> : amplitude -0.165+0.000j
 |01101000> : amplitude 0.165+0.000j
 |01111010> : amplitude -0.165+0.000j
 State 158

Dominant basis-states:
  |00100100> : amplitude -0.148+0.000j
  |11100010> : amplitude -0.148+0.000j
  |11110000> : amplitude -0.148+0.000j
  |00110110> : amplitude 0.148+0.000j

Pair (142, 159) with energies 0.7149, 0.7149
 State 142
Dominant basis-states:
  |10101110> : amplitude -0.165+0.000j
  |10111100> : amplitude -0.165+0.000j
  |01101000> : amplitude 0.165+0.000j
  |01111010> : amplitude -0.165+0.000j
 State 159
Dominant basis-states:
  |10001100> : amplitude 0.158+0.000j
  |10011110> : amplitude 0.158+0.000j
  |01001010> : amplitude -0.158+0.000j
  |01011000> : amplitude 0.158+0.000j

Pair (143, 144) with energies 0.7149, 0.7149
 State 143
Dominant basis-states:
  |10011001> : amplitude 0.185+0.000j
  |01011111> : amplitude -0.185+0.000j
  |10001011> : amplitude -0.185+0.000j
  |01001101> : amplitude -0.185+0.000j
 State 144
Dominant basis-states:
  |00010100> : amplitude -0.283+0.000j
  |00000110> : amplitude 0.283+0.000j
  |11010010> : amplitude 0.283+0.000j
  |11000000> : amplitude 0.283+0.000j

Pair (143, 145) with energies 0.7149, 0.7149
 State 143
Dominant basis-states:
  |10011001> : amplitude 0.185+0.000j
  |01011111> : amplitude -0.185+0.000j
  |10001011> : amplitude -0.185+0.000j
  |01001101> : amplitude -0.185+0.000j
 State 145
Dominant basis-states:

|00100101> : amplitude 0.149+0.000j
|11100011> : amplitude -0.149+0.000j
|00110111> : amplitude 0.149+0.000j
|11110001> : amplitude 0.149+0.000j

Pair (143, 146) with energies 0.7149, 0.7149
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j

Pair (143, 147) with energies 0.7149, 0.7149
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (143, 148) with energies 0.7149, 0.7149
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j

|01011101> : amplitude -0.127+0.000j
|10001001> : amplitude 0.127+0.000j
|01001111> : amplitude 0.127+0.000j

Pair (143, 149) with energies 0.7149, 0.7149
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j

Pair (143, 150) with energies 0.7149, 0.7149
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (143, 151) with energies 0.7149, 0.7149
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j

|01111000> : amplitude 0.169+0.000j
|10111110> : amplitude 0.169+0.000j

Pair (143, 152) with energies 0.7149, 0.7149
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (143, 153) with energies 0.7149, 0.7149
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (143, 154) with energies 0.7149, 0.7149
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j

|10010111> : amplitude 0.140+0.000j

Pair (143, 155) with energies 0.7149, 0.7149
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (143, 156) with energies 0.7149, 0.7149
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (143, 157) with energies 0.7149, 0.7149
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (143, 158) with energies 0.7149, 0.7149
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (143, 159) with energies 0.7149, 0.7149
 State 143
Dominant basis-states:
 |10011001> : amplitude 0.185+0.000j
 |01011111> : amplitude -0.185+0.000j
 |10001011> : amplitude -0.185+0.000j
 |01001101> : amplitude -0.185+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (144, 145) with energies 0.7149, 0.7149
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j

Pair (144, 146) with energies 0.7149, 0.7149
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j

Pair (144, 147) with energies 0.7149, 0.7149
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (144, 148) with energies 0.7149, 0.7149
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j

Pair (144, 149) with energies 0.7149, 0.7149

State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j

Pair (144, 150) with energies 0.7149, 0.7149
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (144, 151) with energies 0.7149, 0.7149
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (144, 152) with energies 0.7149, 0.7149
 State 144

Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (144, 153) with energies 0.7149, 0.7149
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (144, 154) with energies 0.7149, 0.7149
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (144, 155) with energies 0.7149, 0.7149
 State 144
Dominant basis-states:

|00010100> : amplitude -0.283+0.000j
|00000110> : amplitude 0.283+0.000j
|11010010> : amplitude 0.283+0.000j
|11000000> : amplitude 0.283+0.000j
State 155
Dominant basis-states:
|01110010> : amplitude 0.127+0.000j
|10110100> : amplitude -0.127+0.000j
|01100000> : amplitude -0.127+0.000j
|10100110> : amplitude -0.127+0.000j

Pair (144, 156) with energies 0.7149, 0.7149
State 144
Dominant basis-states:
|00010100> : amplitude -0.283+0.000j
|00000110> : amplitude 0.283+0.000j
|11010010> : amplitude 0.283+0.000j
|11000000> : amplitude 0.283+0.000j
State 156
Dominant basis-states:
|00101111> : amplitude 0.163+0.000j
|11101001> : amplitude 0.163+0.000j
|11111011> : amplitude 0.163+0.000j
|00111101> : amplitude -0.163+0.000j

Pair (144, 157) with energies 0.7149, 0.7149
State 144
Dominant basis-states:
|00010100> : amplitude -0.283+0.000j
|00000110> : amplitude 0.283+0.000j
|11010010> : amplitude 0.283+0.000j
|11000000> : amplitude 0.283+0.000j
State 157
Dominant basis-states:
|10001001> : amplitude 0.149+0.000j
|01001111> : amplitude 0.149+0.000j
|10011011> : amplitude 0.149+0.000j
|01011101> : amplitude -0.149+0.000j

Pair (144, 158) with energies 0.7149, 0.7149
State 144
Dominant basis-states:
|00010100> : amplitude -0.283+0.000j

|00000110> : amplitude 0.283+0.000j
|11010010> : amplitude 0.283+0.000j
|11000000> : amplitude 0.283+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (144, 159) with energies 0.7149, 0.7149
 State 144
Dominant basis-states:
 |00010100> : amplitude -0.283+0.000j
 |00000110> : amplitude 0.283+0.000j
 |11010010> : amplitude 0.283+0.000j
 |11000000> : amplitude 0.283+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (145, 146) with energies 0.7149, 0.7149
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j

Pair (145, 147) with energies 0.7149, 0.7149
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j

|00110111> : amplitude 0.149+0.000j
|11110001> : amplitude 0.149+0.000j
State 147
Dominant basis-states:
|00110001> : amplitude 0.174+0.000j
|11110111> : amplitude 0.174+0.000j
|00100011> : amplitude 0.174+0.000j
|11100101> : amplitude -0.174+0.000j

Pair (145, 148) with energies 0.7149, 0.7149
State 145
Dominant basis-states:
|00100101> : amplitude 0.149+0.000j
|11100011> : amplitude -0.149+0.000j
|00110111> : amplitude 0.149+0.000j
|11110001> : amplitude 0.149+0.000j
State 148
Dominant basis-states:
|10011011> : amplitude 0.127+0.000j
|01011101> : amplitude -0.127+0.000j
|10001001> : amplitude 0.127+0.000j
|01001111> : amplitude 0.127+0.000j

Pair (145, 149) with energies 0.7149, 0.7149
State 145
Dominant basis-states:
|00100101> : amplitude 0.149+0.000j
|11100011> : amplitude -0.149+0.000j
|00110111> : amplitude 0.149+0.000j
|11110001> : amplitude 0.149+0.000j
State 149
Dominant basis-states:
|10001010> : amplitude 0.188+0.000j
|01001100> : amplitude -0.188+0.000j
|10011000> : amplitude 0.188+0.000j
|01011110> : amplitude 0.188+0.000j

Pair (145, 150) with energies 0.7149, 0.7149
State 145
Dominant basis-states:
|00100101> : amplitude 0.149+0.000j
|11100011> : amplitude -0.149+0.000j
|00110111> : amplitude 0.149+0.000j

|11110001> : amplitude 0.149+0.000j
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (145, 151) with energies 0.7149, 0.7149
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (145, 152) with energies 0.7149, 0.7149
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (145, 153) with energies 0.7149, 0.7149
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j

State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (145, 154) with energies 0.7149, 0.7149
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (145, 155) with energies 0.7149, 0.7149
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (145, 156) with energies 0.7149, 0.7149
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j
 State 156

Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (145, 157) with energies 0.7149, 0.7149
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (145, 158) with energies 0.7149, 0.7149
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (145, 159) with energies 0.7149, 0.7149
 State 145
Dominant basis-states:
 |00100101> : amplitude 0.149+0.000j
 |11100011> : amplitude -0.149+0.000j
 |00110111> : amplitude 0.149+0.000j
 |11110001> : amplitude 0.149+0.000j
 State 159
Dominant basis-states:

|10001100> : amplitude 0.158+0.000j
|10011110> : amplitude 0.158+0.000j
|01001010> : amplitude -0.158+0.000j
|01011000> : amplitude 0.158+0.000j

Pair (146, 147) with energies 0.7149, 0.7149
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j

Pair (146, 148) with energies 0.7149, 0.7149
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j

Pair (146, 149) with energies 0.7149, 0.7149
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j

|01001100> : amplitude -0.188+0.000j
|10011000> : amplitude 0.188+0.000j
|01011110> : amplitude 0.188+0.000j

Pair (146, 150) with energies 0.7149, 0.7149
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (146, 151) with energies 0.7149, 0.7149
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (146, 152) with energies 0.7149, 0.7149
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j

|11011100> : amplitude -0.204+0.000j
|00011010> : amplitude -0.204+0.000j

Pair (146, 153) with energies 0.7149, 0.7149
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (146, 154) with energies 0.7149, 0.7149
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (146, 155) with energies 0.7149, 0.7149
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j

|10100110> : amplitude -0.127+0.000j

Pair (146, 156) with energies 0.7149, 0.7149
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (146, 157) with energies 0.7149, 0.7149
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (146, 158) with energies 0.7149, 0.7149
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (146, 159) with energies 0.7149, 0.7149
 State 146
Dominant basis-states:
 |00000111> : amplitude 0.211+0.000j
 |11000001> : amplitude -0.211+0.000j
 |11010011> : amplitude 0.211+0.000j
 |00010101> : amplitude 0.211+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (147, 148) with energies 0.7149, 0.7149
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j

Pair (147, 149) with energies 0.7149, 0.7149
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j

Pair (147, 150) with energies 0.7149, 0.7149
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (147, 151) with energies 0.7149, 0.7149
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (147, 152) with energies 0.7149, 0.7149
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (147, 153) with energies 0.7149, 0.7149

State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j
State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (147, 154) with energies 0.7149, 0.7149
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (147, 155) with energies 0.7149, 0.7149
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (147, 156) with energies 0.7149, 0.7149
 State 147

Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (147, 157) with energies 0.7149, 0.7149
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (147, 158) with energies 0.7149, 0.7149
 State 147
Dominant basis-states:
 |00110001> : amplitude 0.174+0.000j
 |11110111> : amplitude 0.174+0.000j
 |00100011> : amplitude 0.174+0.000j
 |11100101> : amplitude -0.174+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (147, 159) with energies 0.7149, 0.7149
 State 147
Dominant basis-states:

|00110001> : amplitude 0.174+0.000j
|11110111> : amplitude 0.174+0.000j
|00100011> : amplitude 0.174+0.000j
|11100101> : amplitude -0.174+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (148, 149) with energies 0.7149, 0.7149
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j

Pair (148, 150) with energies 0.7149, 0.7149
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (148, 151) with energies 0.7149, 0.7149
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j

|01011101> : amplitude -0.127+0.000j
|10001001> : amplitude 0.127+0.000j
|01001111> : amplitude 0.127+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (148, 152) with energies 0.7149, 0.7149
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (148, 153) with energies 0.7149, 0.7149
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (148, 154) with energies 0.7149, 0.7149
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j

|10001001> : amplitude 0.127+0.000j
|01001111> : amplitude 0.127+0.000j
State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (148, 155) with energies 0.7149, 0.7149
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (148, 156) with energies 0.7149, 0.7149
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (148, 157) with energies 0.7149, 0.7149
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j

|01001111> : amplitude 0.127+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (148, 158) with energies 0.7149, 0.7149
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (148, 159) with energies 0.7149, 0.7149
 State 148
Dominant basis-states:
 |10011011> : amplitude 0.127+0.000j
 |01011101> : amplitude -0.127+0.000j
 |10001001> : amplitude 0.127+0.000j
 |01001111> : amplitude 0.127+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (149, 150) with energies 0.7149, 0.7149
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j

State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j

Pair (149, 151) with energies 0.7149, 0.7149
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (149, 152) with energies 0.7149, 0.7149
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (149, 153) with energies 0.7149, 0.7149
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j
 State 153

Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (149, 154) with energies 0.7149, 0.7149
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (149, 155) with energies 0.7149, 0.7149
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (149, 156) with energies 0.7149, 0.7149
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j
 State 156
Dominant basis-states:

|00101111> : amplitude 0.163+0.000j
|11101001> : amplitude 0.163+0.000j
|11111011> : amplitude 0.163+0.000j
|00111101> : amplitude -0.163+0.000j

Pair (149, 157) with energies 0.7149, 0.7149
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (149, 158) with energies 0.7149, 0.7149
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (149, 159) with energies 0.7149, 0.7149
 State 149
Dominant basis-states:
 |10001010> : amplitude 0.188+0.000j
 |01001100> : amplitude -0.188+0.000j
 |10011000> : amplitude 0.188+0.000j
 |01011110> : amplitude 0.188+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j

|10011110> : amplitude 0.158+0.000j
|01001010> : amplitude -0.158+0.000j
|01011000> : amplitude 0.158+0.000j

Pair (150, 151) with energies 0.7149, 0.7149
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j

Pair (150, 152) with energies 0.7149, 0.7149
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (150, 153) with energies 0.7149, 0.7149
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j

|01011100> : amplitude -0.144+0.000j
|10011010> : amplitude -0.144+0.000j

Pair (150, 154) with energies 0.7149, 0.7149
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (150, 155) with energies 0.7149, 0.7149
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (150, 156) with energies 0.7149, 0.7149
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j

|00111101> : amplitude -0.163+0.000j

Pair (150, 157) with energies 0.7149, 0.7149
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (150, 158) with energies 0.7149, 0.7149
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (150, 159) with energies 0.7149, 0.7149
 State 150
Dominant basis-states:
 |10110011> : amplitude -0.150+0.000j
 |01110101> : amplitude -0.150+0.000j
 |10100001> : amplitude 0.150+0.000j
 |01100111> : amplitude -0.150+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (151, 152) with energies 0.7149, 0.7149
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j

Pair (151, 153) with energies 0.7149, 0.7149
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (151, 154) with energies 0.7149, 0.7149
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (151, 155) with energies 0.7149, 0.7149
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (151, 156) with energies 0.7149, 0.7149
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (151, 157) with energies 0.7149, 0.7149
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (151, 158) with energies 0.7149, 0.7149

State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (151, 159) with energies 0.7149, 0.7149
 State 151
Dominant basis-states:
 |01101010> : amplitude 0.169+0.000j
 |10101100> : amplitude -0.169+0.000j
 |01111000> : amplitude 0.169+0.000j
 |10111110> : amplitude 0.169+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (152, 153) with energies 0.7149, 0.7149
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j

Pair (152, 154) with energies 0.7149, 0.7149
 State 152

Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (152, 155) with energies 0.7149, 0.7149
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (152, 156) with energies 0.7149, 0.7149
 State 152
Dominant basis-states:
 |11001110> : amplitude -0.204+0.000j
 |00001000> : amplitude 0.204+0.000j
 |11011100> : amplitude -0.204+0.000j
 |00011010> : amplitude -0.204+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (152, 157) with energies 0.7149, 0.7149
 State 152
Dominant basis-states:

|11001110> : amplitude -0.204+0.000j
|00001000> : amplitude 0.204+0.000j
|11011100> : amplitude -0.204+0.000j
|00011010> : amplitude -0.204+0.000j
State 157
Dominant basis-states:
|10001001> : amplitude 0.149+0.000j
|01001111> : amplitude 0.149+0.000j
|10011011> : amplitude 0.149+0.000j
|01011101> : amplitude -0.149+0.000j

Pair (152, 158) with energies 0.7149, 0.7149
State 152
Dominant basis-states:
|11001110> : amplitude -0.204+0.000j
|00001000> : amplitude 0.204+0.000j
|11011100> : amplitude -0.204+0.000j
|00011010> : amplitude -0.204+0.000j
State 158
Dominant basis-states:
|00100100> : amplitude -0.148+0.000j
|11100010> : amplitude -0.148+0.000j
|11110000> : amplitude -0.148+0.000j
|00110110> : amplitude 0.148+0.000j

Pair (152, 159) with energies 0.7149, 0.7149
State 152
Dominant basis-states:
|11001110> : amplitude -0.204+0.000j
|00001000> : amplitude 0.204+0.000j
|11011100> : amplitude -0.204+0.000j
|00011010> : amplitude -0.204+0.000j
State 159
Dominant basis-states:
|10001100> : amplitude 0.158+0.000j
|10011110> : amplitude 0.158+0.000j
|01001010> : amplitude -0.158+0.000j
|01011000> : amplitude 0.158+0.000j

Pair (153, 154) with energies 0.7149, 0.7149
State 153
Dominant basis-states:
|01001110> : amplitude -0.144+0.000j

|10001000> : amplitude 0.144+0.000j
|01011100> : amplitude -0.144+0.000j
|10011010> : amplitude -0.144+0.000j
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

Pair (153, 155) with energies 0.7149, 0.7149
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (153, 156) with energies 0.7149, 0.7149
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (153, 157) with energies 0.7149, 0.7149
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j

|01011100> : amplitude -0.144+0.000j
|10011010> : amplitude -0.144+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (153, 158) with energies 0.7149, 0.7149
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (153, 159) with energies 0.7149, 0.7149
 State 153
Dominant basis-states:
 |01001110> : amplitude -0.144+0.000j
 |10001000> : amplitude 0.144+0.000j
 |01011100> : amplitude -0.144+0.000j
 |10011010> : amplitude -0.144+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (154, 155) with energies 0.7149, 0.7149
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j

|10010111> : amplitude 0.140+0.000j
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j

Pair (154, 156) with energies 0.7149, 0.7149
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (154, 157) with energies 0.7149, 0.7149
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (154, 158) with energies 0.7149, 0.7149
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j

State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (154, 159) with energies 0.7149, 0.7149
 State 154
Dominant basis-states:
 |10000101> : amplitude -0.140+0.000j
 |01000011> : amplitude 0.140+0.000j
 |01010001> : amplitude 0.140+0.000j
 |10010111> : amplitude 0.140+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (155, 156) with energies 0.7149, 0.7149
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j

Pair (155, 157) with energies 0.7149, 0.7149
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j
 State 157

Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j

Pair (155, 158) with energies 0.7149, 0.7149
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (155, 159) with energies 0.7149, 0.7149
 State 155
Dominant basis-states:
 |01110010> : amplitude 0.127+0.000j
 |10110100> : amplitude -0.127+0.000j
 |01100000> : amplitude -0.127+0.000j
 |10100110> : amplitude -0.127+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (156, 157) with energies 0.7149, 0.7149
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j
 State 157
Dominant basis-states:

|10001001> : amplitude 0.149+0.000j
|01001111> : amplitude 0.149+0.000j
|10011011> : amplitude 0.149+0.000j
|01011101> : amplitude -0.149+0.000j

Pair (156, 158) with energies 0.7149, 0.7149
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j

Pair (156, 159) with energies 0.7149, 0.7149
 State 156
Dominant basis-states:
 |00101111> : amplitude 0.163+0.000j
 |11101001> : amplitude 0.163+0.000j
 |11111011> : amplitude 0.163+0.000j
 |00111101> : amplitude -0.163+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (157, 158) with energies 0.7149, 0.7149
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j

|11100010> : amplitude -0.148+0.000j
|11110000> : amplitude -0.148+0.000j
|00110110> : amplitude 0.148+0.000j

Pair (157, 159) with energies 0.7149, 0.7149
 State 157
Dominant basis-states:
 |10001001> : amplitude 0.149+0.000j
 |01001111> : amplitude 0.149+0.000j
 |10011011> : amplitude 0.149+0.000j
 |01011101> : amplitude -0.149+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (158, 159) with energies 0.7149, 0.7149
 State 158
Dominant basis-states:
 |00100100> : amplitude -0.148+0.000j
 |11100010> : amplitude -0.148+0.000j
 |11110000> : amplitude -0.148+0.000j
 |00110110> : amplitude 0.148+0.000j
 State 159
Dominant basis-states:
 |10001100> : amplitude 0.158+0.000j
 |10011110> : amplitude 0.158+0.000j
 |01001010> : amplitude -0.158+0.000j
 |01011000> : amplitude 0.158+0.000j

Pair (160, 161) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j

|11101111> : amplitude 0.177+0.000j
|00101001> : amplitude 0.177+0.000j

Pair (160, 162) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j

Pair (160, 163) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j

Pair (160, 164) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j

|00000111> : amplitude 0.271+0.000j

Pair (160, 165) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j

Pair (160, 166) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j

Pair (160, 167) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j

Pair (160, 168) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j

Pair (160, 169) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j

Pair (160, 170) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j

Pair (160, 171) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j

Pair (160, 172) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j

Pair (160, 173) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j

Pair (160, 174) with energies 0.7758, 0.7758

State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j

Pair (160, 175) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j

Pair (160, 176) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j

Pair (160, 177) with energies 0.7758, 0.7758
 State 160

Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j

Pair (160, 178) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j

Pair (160, 179) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j

Pair (160, 180) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:

|11001001> : amplitude 0.146+0.000j
|00001111> : amplitude 0.146+0.000j
|11011011> : amplitude 0.146+0.000j
|00011101> : amplitude -0.146+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (160, 181) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (160, 182) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (160, 183) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j

|00001111> : amplitude 0.146+0.000j
|11011011> : amplitude 0.146+0.000j
|00011101> : amplitude -0.146+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (160, 184) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (160, 185) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (160, 186) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j

|11011011> : amplitude 0.146+0.000j
|00011101> : amplitude -0.146+0.000j
State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (160, 187) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (160, 188) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (160, 189) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j

|00011101> : amplitude -0.146+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (160, 190) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (160, 191) with energies 0.7758, 0.7758
 State 160
Dominant basis-states:
 |11001001> : amplitude 0.146+0.000j
 |00001111> : amplitude 0.146+0.000j
 |11011011> : amplitude 0.146+0.000j
 |00011101> : amplitude -0.146+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (161, 162) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j

State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j

Pair (161, 163) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j

Pair (161, 164) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j

Pair (161, 165) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 165

Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j

Pair (161, 166) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j

Pair (161, 167) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j

Pair (161, 168) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 168
Dominant basis-states:

|00000100> : amplitude -0.202+0.000j
|11000010> : amplitude -0.202+0.000j
|00010110> : amplitude 0.202+0.000j
|11010000> : amplitude -0.202+0.000j

Pair (161, 169) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j

Pair (161, 170) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j

Pair (161, 171) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j

|01010011> : amplitude 0.138+0.000j
|10000111> : amplitude -0.138+0.000j
|01000001> : amplitude 0.138+0.000j

Pair (161, 172) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j

Pair (161, 173) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j

Pair (161, 174) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j

|11001011> : amplitude 0.143+0.000j
|00001101> : amplitude 0.143+0.000j

Pair (161, 175) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j

Pair (161, 176) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j

Pair (161, 177) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j

|01001111> : amplitude -0.168+0.000j

Pair (161, 178) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j

Pair (161, 179) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j

Pair (161, 180) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (161, 181) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (161, 182) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (161, 183) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (161, 184) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (161, 185) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (161, 186) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (161, 187) with energies 0.7758, 0.7758

State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (161, 188) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (161, 189) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (161, 190) with energies 0.7758, 0.7758
 State 161

Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (161, 191) with energies 0.7758, 0.7758
 State 161
Dominant basis-states:
 |11111101> : amplitude -0.177+0.000j
 |00111011> : amplitude 0.177+0.000j
 |11101111> : amplitude 0.177+0.000j
 |00101001> : amplitude 0.177+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (162, 163) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j

Pair (162, 164) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:

|01110100> : amplitude 0.121+0.000j
|01100110> : amplitude 0.121+0.000j
|10100000> : amplitude 0.121+0.000j
|10110010> : amplitude -0.121+0.000j
State 164
Dominant basis-states:
|11010011> : amplitude -0.271+0.000j
|00010101> : amplitude -0.271+0.000j
|11000001> : amplitude -0.271+0.000j
|00000111> : amplitude 0.271+0.000j

Pair (162, 165) with energies 0.7758, 0.7758
State 162
Dominant basis-states:
|01110100> : amplitude 0.121+0.000j
|01100110> : amplitude 0.121+0.000j
|10100000> : amplitude 0.121+0.000j
|10110010> : amplitude -0.121+0.000j
State 165
Dominant basis-states:
|11111001> : amplitude 0.155+0.000j
|00101101> : amplitude 0.155+0.000j
|00111111> : amplitude -0.155+0.000j
|11101011> : amplitude 0.155+0.000j

Pair (162, 166) with energies 0.7758, 0.7758
State 162
Dominant basis-states:
|01110100> : amplitude 0.121+0.000j
|01100110> : amplitude 0.121+0.000j
|10100000> : amplitude 0.121+0.000j
|10110010> : amplitude -0.121+0.000j
State 166
Dominant basis-states:
|11001001> : amplitude -0.148+0.000j
|00001111> : amplitude -0.148+0.000j
|00011101> : amplitude 0.148+0.000j
|11011011> : amplitude -0.148+0.000j

Pair (162, 167) with energies 0.7758, 0.7758
State 162
Dominant basis-states:
|01110100> : amplitude 0.121+0.000j

|01100110> : amplitude 0.121+0.000j
|10100000> : amplitude 0.121+0.000j
|10110010> : amplitude -0.121+0.000j
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j

Pair (162, 168) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j

Pair (162, 169) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j

Pair (162, 170) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j

|10100000> : amplitude 0.121+0.000j
|10110010> : amplitude -0.121+0.000j
State 170
Dominant basis-states:
|01011111> : amplitude -0.162+0.000j
|10011001> : amplitude 0.162+0.000j
|10001011> : amplitude 0.162+0.000j
|01001101> : amplitude 0.162+0.000j

Pair (162, 171) with energies 0.7758, 0.7758
State 162
Dominant basis-states:
|01110100> : amplitude 0.121+0.000j
|01100110> : amplitude 0.121+0.000j
|10100000> : amplitude 0.121+0.000j
|10110010> : amplitude -0.121+0.000j
State 171
Dominant basis-states:
|10010101> : amplitude 0.138+0.000j
|01010011> : amplitude 0.138+0.000j
|10000111> : amplitude -0.138+0.000j
|01000001> : amplitude 0.138+0.000j

Pair (162, 172) with energies 0.7758, 0.7758
State 162
Dominant basis-states:
|01110100> : amplitude 0.121+0.000j
|01100110> : amplitude 0.121+0.000j
|10100000> : amplitude 0.121+0.000j
|10110010> : amplitude -0.121+0.000j
State 172
Dominant basis-states:
|11100010> : amplitude -0.171+0.000j
|00100100> : amplitude -0.171+0.000j
|00110110> : amplitude -0.171+0.000j
|11110000> : amplitude 0.171+0.000j

Pair (162, 173) with energies 0.7758, 0.7758
State 162
Dominant basis-states:
|01110100> : amplitude 0.121+0.000j
|01100110> : amplitude 0.121+0.000j
|10100000> : amplitude 0.121+0.000j

|10110010> : amplitude -0.121+0.000j
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j

Pair (162, 174) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j

Pair (162, 175) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j

Pair (162, 176) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j

State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j

Pair (162, 177) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j

Pair (162, 178) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j

Pair (162, 179) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 179

Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j

Pair (162, 180) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (162, 181) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (162, 182) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 182
Dominant basis-states:

|10001110> : amplitude -0.175+0.000j
|01001000> : amplitude 0.175+0.000j
|01011010> : amplitude -0.175+0.000j
|10011100> : amplitude -0.175+0.000j

Pair (162, 183) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (162, 184) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (162, 185) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j

|01011010> : amplitude 0.155+0.000j
|01001000> : amplitude -0.155+0.000j
|10001110> : amplitude 0.155+0.000j

Pair (162, 186) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (162, 187) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (162, 188) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j

|01100100> : amplitude -0.147+0.000j
|10110000> : amplitude -0.147+0.000j

Pair (162, 189) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (162, 190) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (162, 191) with energies 0.7758, 0.7758
 State 162
Dominant basis-states:
 |01110100> : amplitude 0.121+0.000j
 |01100110> : amplitude 0.121+0.000j
 |10100000> : amplitude 0.121+0.000j
 |10110010> : amplitude -0.121+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j

|11100100> : amplitude -0.155+0.000j

Pair (163, 164) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j

Pair (163, 165) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j

Pair (163, 166) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j

Pair (163, 167) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j

Pair (163, 168) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j

Pair (163, 169) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j

Pair (163, 170) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j

Pair (163, 171) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j

Pair (163, 172) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j

Pair (163, 173) with energies 0.7758, 0.7758

State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j

Pair (163, 174) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j

Pair (163, 175) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j

Pair (163, 176) with energies 0.7758, 0.7758
 State 163

Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j

Pair (163, 177) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j

Pair (163, 178) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j

Pair (163, 179) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:

|11010100> : amplitude -0.350+0.000j
|00010010> : amplitude 0.350+0.000j
|00000000> : amplitude 0.350+0.000j
|11000110> : amplitude 0.350+0.000j
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j

Pair (163, 180) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (163, 181) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (163, 182) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j

|00010010> : amplitude 0.350+0.000j
|00000000> : amplitude 0.350+0.000j
|11000110> : amplitude 0.350+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (163, 183) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (163, 184) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (163, 185) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j

|00000000> : amplitude 0.350+0.000j
|11000110> : amplitude 0.350+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (163, 186) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (163, 187) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (163, 188) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j

|11000110> : amplitude 0.350+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (163, 189) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (163, 190) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (163, 191) with energies 0.7758, 0.7758
 State 163
Dominant basis-states:
 |11010100> : amplitude -0.350+0.000j
 |00010010> : amplitude 0.350+0.000j
 |00000000> : amplitude 0.350+0.000j
 |11000110> : amplitude 0.350+0.000j

State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (164, 165) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j

Pair (164, 166) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j

Pair (164, 167) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 167

Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j

Pair (164, 168) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j

Pair (164, 169) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j

Pair (164, 170) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 170
Dominant basis-states:

|01011111> : amplitude -0.162+0.000j
|10011001> : amplitude 0.162+0.000j
|10001011> : amplitude 0.162+0.000j
|01001101> : amplitude 0.162+0.000j

Pair (164, 171) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j

Pair (164, 172) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j

Pair (164, 173) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j

|01111000> : amplitude 0.154+0.000j
|01101010> : amplitude -0.154+0.000j
|10101100> : amplitude 0.154+0.000j

Pair (164, 174) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j

Pair (164, 175) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j

Pair (164, 176) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j

|01010010> : amplitude -0.170+0.000j
|10010100> : amplitude 0.170+0.000j

Pair (164, 177) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j

Pair (164, 178) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j

Pair (164, 179) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j

|01011100> : amplitude -0.138+0.000j

Pair (164, 180) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (164, 181) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (164, 182) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (164, 183) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (164, 184) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (164, 185) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (164, 186) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (164, 187) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (164, 188) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (164, 189) with energies 0.7758, 0.7758

State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (164, 190) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (164, 191) with energies 0.7758, 0.7758
 State 164
Dominant basis-states:
 |11010011> : amplitude -0.271+0.000j
 |00010101> : amplitude -0.271+0.000j
 |11000001> : amplitude -0.271+0.000j
 |00000111> : amplitude 0.271+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (165, 166) with energies 0.7758, 0.7758
 State 165

Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j

Pair (165, 167) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j

Pair (165, 168) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j

Pair (165, 169) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:

|11111001> : amplitude 0.155+0.000j
|00101101> : amplitude 0.155+0.000j
|00111111> : amplitude -0.155+0.000j
|11101011> : amplitude 0.155+0.000j
State 169
Dominant basis-states:
|10111000> : amplitude -0.163+0.000j
|01111110> : amplitude -0.163+0.000j
|10101010> : amplitude -0.163+0.000j
|01101100> : amplitude 0.163+0.000j

Pair (165, 170) with energies 0.7758, 0.7758
State 165
Dominant basis-states:
|11111001> : amplitude 0.155+0.000j
|00101101> : amplitude 0.155+0.000j
|00111111> : amplitude -0.155+0.000j
|11101011> : amplitude 0.155+0.000j
State 170
Dominant basis-states:
|01011111> : amplitude -0.162+0.000j
|10011001> : amplitude 0.162+0.000j
|10001011> : amplitude 0.162+0.000j
|01001101> : amplitude 0.162+0.000j

Pair (165, 171) with energies 0.7758, 0.7758
State 165
Dominant basis-states:
|11111001> : amplitude 0.155+0.000j
|00101101> : amplitude 0.155+0.000j
|00111111> : amplitude -0.155+0.000j
|11101011> : amplitude 0.155+0.000j
State 171
Dominant basis-states:
|10010101> : amplitude 0.138+0.000j
|01010011> : amplitude 0.138+0.000j
|10000111> : amplitude -0.138+0.000j
|01000001> : amplitude 0.138+0.000j

Pair (165, 172) with energies 0.7758, 0.7758
State 165
Dominant basis-states:
|11111001> : amplitude 0.155+0.000j

|00101101> : amplitude 0.155+0.000j
|00111111> : amplitude -0.155+0.000j
|11101011> : amplitude 0.155+0.000j
State 172
Dominant basis-states:
|11100010> : amplitude -0.171+0.000j
|00100100> : amplitude -0.171+0.000j
|00110110> : amplitude -0.171+0.000j
|11110000> : amplitude 0.171+0.000j

Pair (165, 173) with energies 0.7758, 0.7758
State 165
Dominant basis-states:
|11111001> : amplitude 0.155+0.000j
|00101101> : amplitude 0.155+0.000j
|00111111> : amplitude -0.155+0.000j
|11101011> : amplitude 0.155+0.000j
State 173
Dominant basis-states:
|10111110> : amplitude 0.154+0.000j
|01111000> : amplitude 0.154+0.000j
|01101010> : amplitude -0.154+0.000j
|10101100> : amplitude 0.154+0.000j

Pair (165, 174) with energies 0.7758, 0.7758
State 165
Dominant basis-states:
|11111001> : amplitude 0.155+0.000j
|00101101> : amplitude 0.155+0.000j
|00111111> : amplitude -0.155+0.000j
|11101011> : amplitude 0.155+0.000j
State 174
Dominant basis-states:
|11011001> : amplitude -0.143+0.000j
|00011111> : amplitude 0.143+0.000j
|11001011> : amplitude 0.143+0.000j
|00001101> : amplitude 0.143+0.000j

Pair (165, 175) with energies 0.7758, 0.7758
State 165
Dominant basis-states:
|11111001> : amplitude 0.155+0.000j
|00101101> : amplitude 0.155+0.000j

|00111111> : amplitude -0.155+0.000j
|11101011> : amplitude 0.155+0.000j
State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j

Pair (165, 176) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j

Pair (165, 177) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j

Pair (165, 178) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j

|11101011> : amplitude 0.155+0.000j
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j

Pair (165, 179) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j

Pair (165, 180) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (165, 181) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j

State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (165, 182) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (165, 183) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (165, 184) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j
 State 184

Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (165, 185) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (165, 186) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (165, 187) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j
 State 187
Dominant basis-states:

|10101111> : amplitude 0.189+0.000j
|01101001> : amplitude 0.189+0.000j
|10111101> : amplitude 0.189+0.000j
|01111011> : amplitude -0.189+0.000j

Pair (165, 188) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (165, 189) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (165, 190) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j

|10000011> : amplitude -0.152+0.000j
|01000101> : amplitude 0.152+0.000j
|01010111> : amplitude -0.152+0.000j

Pair (165, 191) with energies 0.7758, 0.7758
 State 165
Dominant basis-states:
 |11111001> : amplitude 0.155+0.000j
 |00101101> : amplitude 0.155+0.000j
 |00111111> : amplitude -0.155+0.000j
 |11101011> : amplitude 0.155+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (166, 167) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j

Pair (166, 168) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j

|00010110> : amplitude 0.202+0.000j
|11010000> : amplitude -0.202+0.000j

Pair (166, 169) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j

Pair (166, 170) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j

Pair (166, 171) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j

|01000001> : amplitude 0.138+0.000j

Pair (166, 172) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j

Pair (166, 173) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j

Pair (166, 174) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j

Pair (166, 175) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j

Pair (166, 176) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j

Pair (166, 177) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j

Pair (166, 178) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j

Pair (166, 179) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j

Pair (166, 180) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (166, 181) with energies 0.7758, 0.7758

State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (166, 182) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (166, 183) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (166, 184) with energies 0.7758, 0.7758
 State 166

Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (166, 185) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (166, 186) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (166, 187) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:

|11001001> : amplitude -0.148+0.000j
|00001111> : amplitude -0.148+0.000j
|00011101> : amplitude 0.148+0.000j
|11011011> : amplitude -0.148+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (166, 188) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (166, 189) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (166, 190) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j

|00001111> : amplitude -0.148+0.000j
|00011101> : amplitude 0.148+0.000j
|11011011> : amplitude -0.148+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (166, 191) with energies 0.7758, 0.7758
 State 166
Dominant basis-states:
 |11001001> : amplitude -0.148+0.000j
 |00001111> : amplitude -0.148+0.000j
 |00011101> : amplitude 0.148+0.000j
 |11011011> : amplitude -0.148+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (167, 168) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j

Pair (167, 169) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j

|00010100> : amplitude -0.325+0.000j
|11010010> : amplitude 0.325+0.000j
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j

Pair (167, 170) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j

Pair (167, 171) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j

Pair (167, 172) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j

|11010010> : amplitude 0.325+0.000j
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j

Pair (167, 173) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j

Pair (167, 174) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j

Pair (167, 175) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j

State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j

Pair (167, 176) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j

Pair (167, 177) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j

Pair (167, 178) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 178

Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j

Pair (167, 179) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j

Pair (167, 180) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (167, 181) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 181
Dominant basis-states:

|01101111> : amplitude -0.155+0.000j
|10111011> : amplitude -0.155+0.000j
|10101001> : amplitude -0.155+0.000j
|01111101> : amplitude 0.155+0.000j

Pair (167, 182) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (167, 183) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (167, 184) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j

|11001100> : amplitude -0.223+0.000j
|00011000> : amplitude -0.223+0.000j
|00001010> : amplitude 0.223+0.000j

Pair (167, 185) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (167, 186) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (167, 187) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j

|10111101> : amplitude 0.189+0.000j
|01111011> : amplitude -0.189+0.000j

Pair (167, 188) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (167, 189) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (167, 190) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j

|01010111> : amplitude -0.152+0.000j

Pair (167, 191) with energies 0.7758, 0.7758
 State 167
Dominant basis-states:
 |11000000> : amplitude -0.325+0.000j
 |00000110> : amplitude -0.325+0.000j
 |00010100> : amplitude -0.325+0.000j
 |11010010> : amplitude 0.325+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (168, 169) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j

Pair (168, 170) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j

Pair (168, 171) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j

Pair (168, 172) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j

Pair (168, 173) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j

Pair (168, 174) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j

Pair (168, 175) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j

Pair (168, 176) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j

Pair (168, 177) with energies 0.7758, 0.7758

State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j

Pair (168, 178) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j

Pair (168, 179) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j

Pair (168, 180) with energies 0.7758, 0.7758
 State 168

Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (168, 181) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (168, 182) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (168, 183) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:

|00000100> : amplitude -0.202+0.000j
|11000010> : amplitude -0.202+0.000j
|00010110> : amplitude 0.202+0.000j
|11010000> : amplitude -0.202+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (168, 184) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (168, 185) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (168, 186) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j

|11000010> : amplitude -0.202+0.000j
|00010110> : amplitude 0.202+0.000j
|11010000> : amplitude -0.202+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (168, 187) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (168, 188) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (168, 189) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j

|00010110> : amplitude 0.202+0.000j
|11010000> : amplitude -0.202+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (168, 190) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (168, 191) with energies 0.7758, 0.7758
 State 168
Dominant basis-states:
 |00000100> : amplitude -0.202+0.000j
 |11000010> : amplitude -0.202+0.000j
 |00010110> : amplitude 0.202+0.000j
 |11010000> : amplitude -0.202+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (169, 170) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j

|01101100> : amplitude 0.163+0.000j
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j

Pair (169, 171) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j

Pair (169, 172) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j

Pair (169, 173) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j

State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j

Pair (169, 174) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j

Pair (169, 175) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j

Pair (169, 176) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 176

Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j

Pair (169, 177) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j

Pair (169, 178) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j

Pair (169, 179) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 179
Dominant basis-states:

|01001110> : amplitude 0.138+0.000j
|10001000> : amplitude -0.138+0.000j
|10011010> : amplitude -0.138+0.000j
|01011100> : amplitude -0.138+0.000j

Pair (169, 180) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (169, 181) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (169, 182) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j

|01001000> : amplitude 0.175+0.000j
|01011010> : amplitude -0.175+0.000j
|10011100> : amplitude -0.175+0.000j

Pair (169, 183) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (169, 184) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (169, 185) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j

|01001000> : amplitude -0.155+0.000j
|10001110> : amplitude 0.155+0.000j

Pair (169, 186) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (169, 187) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (169, 188) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j

|10110000> : amplitude -0.147+0.000j

Pair (169, 189) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (169, 190) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (169, 191) with energies 0.7758, 0.7758
 State 169
Dominant basis-states:
 |10111000> : amplitude -0.163+0.000j
 |01111110> : amplitude -0.163+0.000j
 |10101010> : amplitude -0.163+0.000j
 |01101100> : amplitude 0.163+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (170, 171) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j

Pair (170, 172) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j

Pair (170, 173) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j

Pair (170, 174) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j

Pair (170, 175) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j

Pair (170, 176) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j

Pair (170, 177) with energies 0.7758, 0.7758

State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j

Pair (170, 178) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j

Pair (170, 179) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j

Pair (170, 180) with energies 0.7758, 0.7758
 State 170

Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (170, 181) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (170, 182) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (170, 183) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:

|01011111> : amplitude -0.162+0.000j
|10011001> : amplitude 0.162+0.000j
|10001011> : amplitude 0.162+0.000j
|01001101> : amplitude 0.162+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (170, 184) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (170, 185) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (170, 186) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j

|10011001> : amplitude 0.162+0.000j
|10001011> : amplitude 0.162+0.000j
|01001101> : amplitude 0.162+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (170, 187) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (170, 188) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (170, 189) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j

|10001011> : amplitude 0.162+0.000j
|01001101> : amplitude 0.162+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (170, 190) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (170, 191) with energies 0.7758, 0.7758
 State 170
Dominant basis-states:
 |01011111> : amplitude -0.162+0.000j
 |10011001> : amplitude 0.162+0.000j
 |10001011> : amplitude 0.162+0.000j
 |01001101> : amplitude 0.162+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (171, 172) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j

|01000001> : amplitude 0.138+0.000j
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j

Pair (171, 173) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j

Pair (171, 174) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j

Pair (171, 175) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j

State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j

Pair (171, 176) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j

Pair (171, 177) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j

Pair (171, 178) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 178

Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j

Pair (171, 179) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j

Pair (171, 180) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (171, 181) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 181
Dominant basis-states:

|01101111> : amplitude -0.155+0.000j
|10111011> : amplitude -0.155+0.000j
|10101001> : amplitude -0.155+0.000j
|01111101> : amplitude 0.155+0.000j

Pair (171, 182) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (171, 183) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (171, 184) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j

|11001100> : amplitude -0.223+0.000j
|00011000> : amplitude -0.223+0.000j
|00001010> : amplitude 0.223+0.000j

Pair (171, 185) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (171, 186) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (171, 187) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j

|10111101> : amplitude 0.189+0.000j
|01111011> : amplitude -0.189+0.000j

Pair (171, 188) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (171, 189) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (171, 190) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j

|01010111> : amplitude -0.152+0.000j

Pair (171, 191) with energies 0.7758, 0.7758
 State 171
Dominant basis-states:
 |10010101> : amplitude 0.138+0.000j
 |01010011> : amplitude 0.138+0.000j
 |10000111> : amplitude -0.138+0.000j
 |01000001> : amplitude 0.138+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (172, 173) with energies 0.7758, 0.7758
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j

Pair (172, 174) with energies 0.7758, 0.7758
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j

Pair (172, 175) with energies 0.7758, 0.7758
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j

Pair (172, 176) with energies 0.7758, 0.7758
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j

Pair (172, 177) with energies 0.7758, 0.7758
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j

Pair (172, 178) with energies 0.7758, 0.7758
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j

Pair (172, 179) with energies 0.7758, 0.7758
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j

Pair (172, 180) with energies 0.7758, 0.7758
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (172, 181) with energies 0.7758, 0.7758

State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j
State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (172, 182) with energies 0.7758, 0.7758
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (172, 183) with energies 0.7758, 0.7758
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (172, 184) with energies 0.7758, 0.7758
 State 172

Dominant basis-states:
  |11100010> : amplitude -0.171+0.000j
  |00100100> : amplitude -0.171+0.000j
  |00110110> : amplitude -0.171+0.000j
  |11110000> : amplitude 0.171+0.000j
 State 184
Dominant basis-states:
  |11011110> : amplitude -0.223+0.000j
  |11001100> : amplitude -0.223+0.000j
  |00011000> : amplitude -0.223+0.000j
  |00001010> : amplitude 0.223+0.000j

 Pair (172, 185) with energies 0.7758, 0.7758
 State 172
 Dominant basis-states:

4.2.3.3 Raw Output (Part 3)
  |11100010> : amplitude -0.171+0.000j
  |00100100> : amplitude -0.171+0.000j
  |00110110> : amplitude -0.171+0.000j
  |11110000> : amplitude 0.171+0.000j
 State 185
 Dominant basis-states:
  |10011100> : amplitude 0.155+0.000j
  |01011010> : amplitude 0.155+0.000j
  |01001000> : amplitude -0.155+0.000j
  |10001110> : amplitude 0.155+0.000j

 Pair (172, 186) with energies 0.7758, 0.7758
 State 172
 Dominant basis-states:
  |11100010> : amplitude -0.171+0.000j
  |00100100> : amplitude -0.171+0.000j
  |00110110> : amplitude -0.171+0.000j
  |11110000> : amplitude 0.171+0.000j
 State 186
 Dominant basis-states:
  |11000100> : amplitude -0.174+0.000j
  |00010000> : amplitude 0.174+0.000j
  |11010110> : amplitude -0.174+0.000j
  |00000010> : amplitude -0.174+0.000j

 Pair (172, 187) with energies 0.7758, 0.7758
 State 172

Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (172, 188) with energies 0.7758, 0.7758
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (172, 189) with energies 0.7758, 0.7758
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (172, 190) with energies 0.7758, 0.7758
 State 172
Dominant basis-states:

|11100010> : amplitude -0.171+0.000j
|00100100> : amplitude -0.171+0.000j
|00110110> : amplitude -0.171+0.000j
|11110000> : amplitude 0.171+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (172, 191) with energies 0.7758, 0.7758
 State 172
Dominant basis-states:
 |11100010> : amplitude -0.171+0.000j
 |00100100> : amplitude -0.171+0.000j
 |00110110> : amplitude -0.171+0.000j
 |11110000> : amplitude 0.171+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (173, 174) with energies 0.7758, 0.7758
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j

Pair (173, 175) with energies 0.7758, 0.7758
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j

|01111000> : amplitude 0.154+0.000j
|01101010> : amplitude -0.154+0.000j
|10101100> : amplitude 0.154+0.000j
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j

Pair (173, 176) with energies 0.7758, 0.7758
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j

Pair (173, 177) with energies 0.7758, 0.7758
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j

Pair (173, 178) with energies 0.7758, 0.7758
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j

|01101010> : amplitude -0.154+0.000j
|10101100> : amplitude 0.154+0.000j
State 178
Dominant basis-states:
|01100000> : amplitude -0.193+0.000j
|10100110> : amplitude -0.193+0.000j
|10110100> : amplitude 0.193+0.000j
|01110010> : amplitude -0.193+0.000j

Pair (173, 179) with energies 0.7758, 0.7758
State 173
Dominant basis-states:
|10111110> : amplitude 0.154+0.000j
|01111000> : amplitude 0.154+0.000j
|01101010> : amplitude -0.154+0.000j
|10101100> : amplitude 0.154+0.000j
State 179
Dominant basis-states:
|01001110> : amplitude 0.138+0.000j
|10001000> : amplitude -0.138+0.000j
|10011010> : amplitude -0.138+0.000j
|01011100> : amplitude -0.138+0.000j

Pair (173, 180) with energies 0.7758, 0.7758
State 173
Dominant basis-states:
|10111110> : amplitude 0.154+0.000j
|01111000> : amplitude 0.154+0.000j
|01101010> : amplitude -0.154+0.000j
|10101100> : amplitude 0.154+0.000j
State 180
Dominant basis-states:
|00100110> : amplitude 0.204+0.000j
|11100000> : amplitude 0.204+0.000j
|00110100> : amplitude -0.204+0.000j
|11110010> : amplitude 0.204+0.000j

Pair (173, 181) with energies 0.7758, 0.7758
State 173
Dominant basis-states:
|10111110> : amplitude 0.154+0.000j
|01111000> : amplitude 0.154+0.000j
|01101010> : amplitude -0.154+0.000j

|10101100> : amplitude 0.154+0.000j
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (173, 182) with energies 0.7758, 0.7758
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (173, 183) with energies 0.7758, 0.7758
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (173, 184) with energies 0.7758, 0.7758
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j

State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (173, 185) with energies 0.7758, 0.7758
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (173, 186) with energies 0.7758, 0.7758
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (173, 187) with energies 0.7758, 0.7758
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j
 State 187

Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (173, 188) with energies 0.7758, 0.7758
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (173, 189) with energies 0.7758, 0.7758
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (173, 190) with energies 0.7758, 0.7758
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j
 State 190
Dominant basis-states:

|10010001> : amplitude -0.152+0.000j
|10000011> : amplitude -0.152+0.000j
|01000101> : amplitude 0.152+0.000j
|01010111> : amplitude -0.152+0.000j

Pair (173, 191) with energies 0.7758, 0.7758
 State 173
Dominant basis-states:
 |10111110> : amplitude 0.154+0.000j
 |01111000> : amplitude 0.154+0.000j
 |01101010> : amplitude -0.154+0.000j
 |10101100> : amplitude 0.154+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (174, 175) with energies 0.7758, 0.7758
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j

Pair (174, 176) with energies 0.7758, 0.7758
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j

|10000110> : amplitude 0.170+0.000j
|01010010> : amplitude -0.170+0.000j
|10010100> : amplitude 0.170+0.000j

Pair (174, 177) with energies 0.7758, 0.7758
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j

Pair (174, 178) with energies 0.7758, 0.7758
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j

Pair (174, 179) with energies 0.7758, 0.7758
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j

|10011010> : amplitude -0.138+0.000j
|01011100> : amplitude -0.138+0.000j

Pair (174, 180) with energies 0.7758, 0.7758
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (174, 181) with energies 0.7758, 0.7758
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (174, 182) with energies 0.7758, 0.7758
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j

|10011100> : amplitude -0.175+0.000j

Pair (174, 183) with energies 0.7758, 0.7758
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (174, 184) with energies 0.7758, 0.7758
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (174, 185) with energies 0.7758, 0.7758
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (174, 186) with energies 0.7758, 0.7758
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (174, 187) with energies 0.7758, 0.7758
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (174, 188) with energies 0.7758, 0.7758
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (174, 189) with energies 0.7758, 0.7758
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (174, 190) with energies 0.7758, 0.7758
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (174, 191) with energies 0.7758, 0.7758
 State 174
Dominant basis-states:
 |11011001> : amplitude -0.143+0.000j
 |00011111> : amplitude 0.143+0.000j
 |11001011> : amplitude 0.143+0.000j
 |00001101> : amplitude 0.143+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (175, 176) with energies 0.7758, 0.7758

State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j

Pair (175, 177) with energies 0.7758, 0.7758
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j

Pair (175, 178) with energies 0.7758, 0.7758
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j

Pair (175, 179) with energies 0.7758, 0.7758
 State 175

Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j

Pair (175, 180) with energies 0.7758, 0.7758
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (175, 181) with energies 0.7758, 0.7758
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (175, 182) with energies 0.7758, 0.7758
 State 175
Dominant basis-states:

|10101011> : amplitude -0.159+0.000j
|01101101> : amplitude -0.159+0.000j
|10111001> : amplitude 0.159+0.000j
|01111111> : amplitude -0.159+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (175, 183) with energies 0.7758, 0.7758
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (175, 184) with energies 0.7758, 0.7758
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (175, 185) with energies 0.7758, 0.7758
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j

|01101101> : amplitude -0.159+0.000j
|10111001> : amplitude 0.159+0.000j
|01111111> : amplitude -0.159+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (175, 186) with energies 0.7758, 0.7758
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (175, 187) with energies 0.7758, 0.7758
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (175, 188) with energies 0.7758, 0.7758
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j

|10111001> : amplitude 0.159+0.000j
|01111111> : amplitude -0.159+0.000j
State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (175, 189) with energies 0.7758, 0.7758
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (175, 190) with energies 0.7758, 0.7758
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j
 |01111111> : amplitude -0.159+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (175, 191) with energies 0.7758, 0.7758
 State 175
Dominant basis-states:
 |10101011> : amplitude -0.159+0.000j
 |01101101> : amplitude -0.159+0.000j
 |10111001> : amplitude 0.159+0.000j

|01111111> : amplitude -0.159+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (176, 177) with energies 0.7758, 0.7758
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j

Pair (176, 178) with energies 0.7758, 0.7758
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j

Pair (176, 179) with energies 0.7758, 0.7758
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j

State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j

Pair (176, 180) with energies 0.7758, 0.7758
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (176, 181) with energies 0.7758, 0.7758
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (176, 182) with energies 0.7758, 0.7758
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j
 State 182

Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (176, 183) with energies 0.7758, 0.7758
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (176, 184) with energies 0.7758, 0.7758
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (176, 185) with energies 0.7758, 0.7758
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j
 State 185
Dominant basis-states:

|10011100> : amplitude 0.155+0.000j
|01011010> : amplitude 0.155+0.000j
|01001000> : amplitude -0.155+0.000j
|10001110> : amplitude 0.155+0.000j

Pair (176, 186) with energies 0.7758, 0.7758
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (176, 187) with energies 0.7758, 0.7758
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (176, 188) with energies 0.7758, 0.7758
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j

|01110110> : amplitude 0.147+0.000j
|01100100> : amplitude -0.147+0.000j
|10110000> : amplitude -0.147+0.000j

Pair (176, 189) with energies 0.7758, 0.7758
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (176, 190) with energies 0.7758, 0.7758
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (176, 191) with energies 0.7758, 0.7758
 State 176
Dominant basis-states:
 |01000000> : amplitude 0.170+0.000j
 |10000110> : amplitude 0.170+0.000j
 |01010010> : amplitude -0.170+0.000j
 |10010100> : amplitude 0.170+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j

|00100010> : amplitude -0.155+0.000j
|11100100> : amplitude -0.155+0.000j

Pair (177, 178) with energies 0.7758, 0.7758
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j

Pair (177, 179) with energies 0.7758, 0.7758
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j

Pair (177, 180) with energies 0.7758, 0.7758
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j

|11110010> : amplitude 0.204+0.000j

Pair (177, 181) with energies 0.7758, 0.7758
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (177, 182) with energies 0.7758, 0.7758
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (177, 183) with energies 0.7758, 0.7758
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (177, 184) with energies 0.7758, 0.7758
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (177, 185) with energies 0.7758, 0.7758
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (177, 186) with energies 0.7758, 0.7758
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (177, 187) with energies 0.7758, 0.7758
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (177, 188) with energies 0.7758, 0.7758
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (177, 189) with energies 0.7758, 0.7758
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (177, 190) with energies 0.7758, 0.7758

State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (177, 191) with energies 0.7758, 0.7758
 State 177
Dominant basis-states:
 |10011011> : amplitude 0.168+0.000j
 |10001001> : amplitude -0.168+0.000j
 |01011101> : amplitude -0.168+0.000j
 |01001111> : amplitude -0.168+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (178, 179) with energies 0.7758, 0.7758
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j

Pair (178, 180) with energies 0.7758, 0.7758
 State 178

Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (178, 181) with energies 0.7758, 0.7758
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (178, 182) with energies 0.7758, 0.7758
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (178, 183) with energies 0.7758, 0.7758
 State 178
Dominant basis-states:

|01100000> : amplitude -0.193+0.000j
|10100110> : amplitude -0.193+0.000j
|10110100> : amplitude 0.193+0.000j
|01110010> : amplitude -0.193+0.000j
State 183
Dominant basis-states:
|10011011> : amplitude -0.181+0.000j
|01011101> : amplitude 0.181+0.000j
|10001001> : amplitude 0.181+0.000j
|01001111> : amplitude 0.181+0.000j

Pair (178, 184) with energies 0.7758, 0.7758
State 178
Dominant basis-states:
|01100000> : amplitude -0.193+0.000j
|10100110> : amplitude -0.193+0.000j
|10110100> : amplitude 0.193+0.000j
|01110010> : amplitude -0.193+0.000j
State 184
Dominant basis-states:
|11011110> : amplitude -0.223+0.000j
|11001100> : amplitude -0.223+0.000j
|00011000> : amplitude -0.223+0.000j
|00001010> : amplitude 0.223+0.000j

Pair (178, 185) with energies 0.7758, 0.7758
State 178
Dominant basis-states:
|01100000> : amplitude -0.193+0.000j
|10100110> : amplitude -0.193+0.000j
|10110100> : amplitude 0.193+0.000j
|01110010> : amplitude -0.193+0.000j
State 185
Dominant basis-states:
|10011100> : amplitude 0.155+0.000j
|01011010> : amplitude 0.155+0.000j
|01001000> : amplitude -0.155+0.000j
|10001110> : amplitude 0.155+0.000j

Pair (178, 186) with energies 0.7758, 0.7758
State 178
Dominant basis-states:
|01100000> : amplitude -0.193+0.000j

|10100110> : amplitude -0.193+0.000j
|10110100> : amplitude 0.193+0.000j
|01110010> : amplitude -0.193+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (178, 187) with energies 0.7758, 0.7758
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (178, 188) with energies 0.7758, 0.7758
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j
 |10110100> : amplitude 0.193+0.000j
 |01110010> : amplitude -0.193+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (178, 189) with energies 0.7758, 0.7758
 State 178
Dominant basis-states:
 |01100000> : amplitude -0.193+0.000j
 |10100110> : amplitude -0.193+0.000j

|10110100> : amplitude 0.193+0.000j
|01110010> : amplitude -0.193+0.000j
State 189
Dominant basis-states:
|01011111> : amplitude 0.142+0.000j
|01001101> : amplitude -0.142+0.000j
|10011001> : amplitude -0.142+0.000j
|10001011> : amplitude -0.142+0.000j

Pair (178, 190) with energies 0.7758, 0.7758
State 178
Dominant basis-states:
|01100000> : amplitude -0.193+0.000j
|10100110> : amplitude -0.193+0.000j
|10110100> : amplitude 0.193+0.000j
|01110010> : amplitude -0.193+0.000j
State 190
Dominant basis-states:
|10010001> : amplitude -0.152+0.000j
|10000011> : amplitude -0.152+0.000j
|01000101> : amplitude 0.152+0.000j
|01010111> : amplitude -0.152+0.000j

Pair (178, 191) with energies 0.7758, 0.7758
State 178
Dominant basis-states:
|01100000> : amplitude -0.193+0.000j
|10100110> : amplitude -0.193+0.000j
|10110100> : amplitude 0.193+0.000j
|01110010> : amplitude -0.193+0.000j
State 191
Dominant basis-states:
|00110000> : amplitude -0.155+0.000j
|11110110> : amplitude 0.155+0.000j
|00100010> : amplitude -0.155+0.000j
|11100100> : amplitude -0.155+0.000j

Pair (179, 180) with energies 0.7758, 0.7758
State 179
Dominant basis-states:
|01001110> : amplitude 0.138+0.000j
|10001000> : amplitude -0.138+0.000j
|10011010> : amplitude -0.138+0.000j

|01011100> : amplitude -0.138+0.000j
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j

Pair (179, 181) with energies 0.7758, 0.7758
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

Pair (179, 182) with energies 0.7758, 0.7758
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (179, 183) with energies 0.7758, 0.7758
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j

State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (179, 184) with energies 0.7758, 0.7758
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (179, 185) with energies 0.7758, 0.7758
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (179, 186) with energies 0.7758, 0.7758
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j
 State 186

Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (179, 187) with energies 0.7758, 0.7758
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (179, 188) with energies 0.7758, 0.7758
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (179, 189) with energies 0.7758, 0.7758
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j
 State 189
Dominant basis-states:

|01011111> : amplitude 0.142+0.000j
|01001101> : amplitude -0.142+0.000j
|10011001> : amplitude -0.142+0.000j
|10001011> : amplitude -0.142+0.000j

Pair (179, 190) with energies 0.7758, 0.7758
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (179, 191) with energies 0.7758, 0.7758
 State 179
Dominant basis-states:
 |01001110> : amplitude 0.138+0.000j
 |10001000> : amplitude -0.138+0.000j
 |10011010> : amplitude -0.138+0.000j
 |01011100> : amplitude -0.138+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (180, 181) with energies 0.7758, 0.7758
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j

|10111011> : amplitude -0.155+0.000j
|10101001> : amplitude -0.155+0.000j
|01111101> : amplitude 0.155+0.000j

Pair (180, 182) with energies 0.7758, 0.7758
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (180, 183) with energies 0.7758, 0.7758
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (180, 184) with energies 0.7758, 0.7758
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j

|00011000> : amplitude -0.223+0.000j
|00001010> : amplitude 0.223+0.000j

Pair (180, 185) with energies 0.7758, 0.7758
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (180, 186) with energies 0.7758, 0.7758
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (180, 187) with energies 0.7758, 0.7758
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j

|01111011> : amplitude -0.189+0.000j

Pair (180, 188) with energies 0.7758, 0.7758
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (180, 189) with energies 0.7758, 0.7758
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (180, 190) with energies 0.7758, 0.7758
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (180, 191) with energies 0.7758, 0.7758
 State 180
Dominant basis-states:
 |00100110> : amplitude 0.204+0.000j
 |11100000> : amplitude 0.204+0.000j
 |00110100> : amplitude -0.204+0.000j
 |11110010> : amplitude 0.204+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (181, 182) with energies 0.7758, 0.7758
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j

Pair (181, 183) with energies 0.7758, 0.7758
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (181, 184) with energies 0.7758, 0.7758
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (181, 185) with energies 0.7758, 0.7758
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (181, 186) with energies 0.7758, 0.7758
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (181, 187) with energies 0.7758, 0.7758

State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (181, 188) with energies 0.7758, 0.7758
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (181, 189) with energies 0.7758, 0.7758
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (181, 190) with energies 0.7758, 0.7758
 State 181

Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (181, 191) with energies 0.7758, 0.7758
 State 181
Dominant basis-states:
 |01101111> : amplitude -0.155+0.000j
 |10111011> : amplitude -0.155+0.000j
 |10101001> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (182, 183) with energies 0.7758, 0.7758
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

Pair (182, 184) with energies 0.7758, 0.7758
 State 182
Dominant basis-states:

|10001110> : amplitude -0.175+0.000j
|01001000> : amplitude 0.175+0.000j
|01011010> : amplitude -0.175+0.000j
|10011100> : amplitude -0.175+0.000j
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j

Pair (182, 185) with energies 0.7758, 0.7758
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (182, 186) with energies 0.7758, 0.7758
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (182, 187) with energies 0.7758, 0.7758
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j

|01001000> : amplitude 0.175+0.000j
|01011010> : amplitude -0.175+0.000j
|10011100> : amplitude -0.175+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (182, 188) with energies 0.7758, 0.7758
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (182, 189) with energies 0.7758, 0.7758
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j
 |01011010> : amplitude -0.175+0.000j
 |10011100> : amplitude -0.175+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (182, 190) with energies 0.7758, 0.7758
 State 182
Dominant basis-states:
 |10001110> : amplitude -0.175+0.000j
 |01001000> : amplitude 0.175+0.000j

|01011010> : amplitude -0.175+0.000j
|10011100> : amplitude -0.175+0.000j
State 190
Dominant basis-states:
|10010001> : amplitude -0.152+0.000j
|10000011> : amplitude -0.152+0.000j
|01000101> : amplitude 0.152+0.000j
|01010111> : amplitude -0.152+0.000j

Pair (182, 191) with energies 0.7758, 0.7758
State 182
Dominant basis-states:
|10001110> : amplitude -0.175+0.000j
|01001000> : amplitude 0.175+0.000j
|01011010> : amplitude -0.175+0.000j
|10011100> : amplitude -0.175+0.000j
State 191
Dominant basis-states:
|00110000> : amplitude -0.155+0.000j
|11110110> : amplitude 0.155+0.000j
|00100010> : amplitude -0.155+0.000j
|11100100> : amplitude -0.155+0.000j

Pair (183, 184) with energies 0.7758, 0.7758
State 183
Dominant basis-states:
|10011011> : amplitude -0.181+0.000j
|01011101> : amplitude 0.181+0.000j
|10001001> : amplitude 0.181+0.000j
|01001111> : amplitude 0.181+0.000j
State 184
Dominant basis-states:
|11011110> : amplitude -0.223+0.000j
|11001100> : amplitude -0.223+0.000j
|00011000> : amplitude -0.223+0.000j
|00001010> : amplitude 0.223+0.000j

Pair (183, 185) with energies 0.7758, 0.7758
State 183
Dominant basis-states:
|10011011> : amplitude -0.181+0.000j
|01011101> : amplitude 0.181+0.000j
|10001001> : amplitude 0.181+0.000j

|01001111> : amplitude 0.181+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (183, 186) with energies 0.7758, 0.7758
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (183, 187) with energies 0.7758, 0.7758
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (183, 188) with energies 0.7758, 0.7758
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j

State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (183, 189) with energies 0.7758, 0.7758
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (183, 190) with energies 0.7758, 0.7758
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (183, 191) with energies 0.7758, 0.7758
 State 183
Dominant basis-states:
 |10011011> : amplitude -0.181+0.000j
 |01011101> : amplitude 0.181+0.000j
 |10001001> : amplitude 0.181+0.000j
 |01001111> : amplitude 0.181+0.000j
 State 191

Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (184, 185) with energies 0.7758, 0.7758
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j

Pair (184, 186) with energies 0.7758, 0.7758
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (184, 187) with energies 0.7758, 0.7758
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j
 State 187
Dominant basis-states:

|10101111> : amplitude 0.189+0.000j
|01101001> : amplitude 0.189+0.000j
|10111101> : amplitude 0.189+0.000j
|01111011> : amplitude -0.189+0.000j

Pair (184, 188) with energies 0.7758, 0.7758
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (184, 189) with energies 0.7758, 0.7758
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (184, 190) with energies 0.7758, 0.7758
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j

|10000011> : amplitude -0.152+0.000j
|01000101> : amplitude 0.152+0.000j
|01010111> : amplitude -0.152+0.000j

Pair (184, 191) with energies 0.7758, 0.7758
 State 184
Dominant basis-states:
 |11011110> : amplitude -0.223+0.000j
 |11001100> : amplitude -0.223+0.000j
 |00011000> : amplitude -0.223+0.000j
 |00001010> : amplitude 0.223+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (185, 186) with energies 0.7758, 0.7758
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j

Pair (185, 187) with energies 0.7758, 0.7758
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j

|10111101> : amplitude 0.189+0.000j
|01111011> : amplitude -0.189+0.000j

Pair (185, 188) with energies 0.7758, 0.7758
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (185, 189) with energies 0.7758, 0.7758
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (185, 190) with energies 0.7758, 0.7758
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j

|01010111> : amplitude -0.152+0.000j

Pair (185, 191) with energies 0.7758, 0.7758
 State 185
Dominant basis-states:
 |10011100> : amplitude 0.155+0.000j
 |01011010> : amplitude 0.155+0.000j
 |01001000> : amplitude -0.155+0.000j
 |10001110> : amplitude 0.155+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (186, 187) with energies 0.7758, 0.7758
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j

Pair (186, 188) with energies 0.7758, 0.7758
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (186, 189) with energies 0.7758, 0.7758
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (186, 190) with energies 0.7758, 0.7758
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (186, 191) with energies 0.7758, 0.7758
 State 186
Dominant basis-states:
 |11000100> : amplitude -0.174+0.000j
 |00010000> : amplitude 0.174+0.000j
 |11010110> : amplitude -0.174+0.000j
 |00000010> : amplitude -0.174+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (187, 188) with energies 0.7758, 0.7758
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j

Pair (187, 189) with energies 0.7758, 0.7758
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (187, 190) with energies 0.7758, 0.7758
 State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (187, 191) with energies 0.7758, 0.7758

State 187
Dominant basis-states:
 |10101111> : amplitude 0.189+0.000j
 |01101001> : amplitude 0.189+0.000j
 |10111101> : amplitude 0.189+0.000j
 |01111011> : amplitude -0.189+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (188, 189) with energies 0.7758, 0.7758
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j

Pair (188, 190) with energies 0.7758, 0.7758
 State 188
Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (188, 191) with energies 0.7758, 0.7758
 State 188

Dominant basis-states:
 |10100010> : amplitude -0.147+0.000j
 |01110110> : amplitude 0.147+0.000j
 |01100100> : amplitude -0.147+0.000j
 |10110000> : amplitude -0.147+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (189, 190) with energies 0.7758, 0.7758
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j
 State 190
Dominant basis-states:
 |10010001> : amplitude -0.152+0.000j
 |10000011> : amplitude -0.152+0.000j
 |01000101> : amplitude 0.152+0.000j
 |01010111> : amplitude -0.152+0.000j

Pair (189, 191) with energies 0.7758, 0.7758
 State 189
Dominant basis-states:
 |01011111> : amplitude 0.142+0.000j
 |01001101> : amplitude -0.142+0.000j
 |10011001> : amplitude -0.142+0.000j
 |10001011> : amplitude -0.142+0.000j
 State 191
Dominant basis-states:
 |00110000> : amplitude -0.155+0.000j
 |11110110> : amplitude 0.155+0.000j
 |00100010> : amplitude -0.155+0.000j
 |11100100> : amplitude -0.155+0.000j

Pair (190, 191) with energies 0.7758, 0.7758
 State 190
Dominant basis-states:

|10010001> : amplitude -0.152+0.000j
|10000011> : amplitude -0.152+0.000j
|01000101> : amplitude 0.152+0.000j
|01010111> : amplitude -0.152+0.000j
State 191
Dominant basis-states:
|00110000> : amplitude -0.155+0.000j
|11110110> : amplitude 0.155+0.000j
|00100010> : amplitude -0.155+0.000j
|11100100> : amplitude -0.155+0.000j

Pair (192, 193) with energies 0.9412, 0.9412
State 192
Dominant basis-states:
|01000010> : amplitude -0.153+0.000j
|10000100> : amplitude 0.153+0.000j
|01010000> : amplitude 0.153+0.000j
|10010110> : amplitude 0.153+0.000j
State 193
Dominant basis-states:
|11001000> : amplitude -0.230+0.000j
|00001110> : amplitude -0.230+0.000j
|00011100> : amplitude 0.230+0.000j
|11011010> : amplitude -0.230+0.000j

Pair (192, 194) with energies 0.9412, 0.9412
State 192
Dominant basis-states:
|01000010> : amplitude -0.153+0.000j
|10000100> : amplitude 0.153+0.000j
|01010000> : amplitude 0.153+0.000j
|10010110> : amplitude 0.153+0.000j
State 194
Dominant basis-states:
|00000111> : amplitude -0.229+0.000j
|11000001> : amplitude -0.229+0.000j
|00010101> : amplitude -0.229+0.000j
|11010011> : amplitude 0.229+0.000j

Pair (192, 195) with energies 0.9412, 0.9412
State 192
Dominant basis-states:
|01000010> : amplitude -0.153+0.000j

|10000100> : amplitude 0.153+0.000j
|01010000> : amplitude 0.153+0.000j
|10010110> : amplitude 0.153+0.000j
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j

Pair (192, 196) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j

Pair (192, 197) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j

Pair (192, 198) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j

|01010000> : amplitude 0.153+0.000j
|10010110> : amplitude 0.153+0.000j
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j

Pair (192, 199) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j

Pair (192, 200) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j

Pair (192, 201) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j

|10010110> : amplitude 0.153+0.000j
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j

Pair (192, 202) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j

Pair (192, 203) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j

Pair (192, 204) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j

State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j

Pair (192, 205) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j

Pair (192, 206) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j

Pair (192, 207) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 207

Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j

Pair (192, 208) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j

Pair (192, 209) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j

Pair (192, 210) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 210
Dominant basis-states:

|00000111> : amplitude -0.167+0.000j
|11000001> : amplitude -0.167+0.000j
|00010101> : amplitude -0.167+0.000j
|11010011> : amplitude 0.167+0.000j

Pair (192, 211) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (192, 212) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j

Pair (192, 213) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j

|01101010> : amplitude 0.162+0.000j
|01111000> : amplitude 0.162+0.000j
|10111110> : amplitude -0.162+0.000j

Pair (192, 214) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (192, 215) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (192, 216) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j

|00110111> : amplitude 0.146+0.000j
|11110001> : amplitude -0.146+0.000j

Pair (192, 217) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (192, 218) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (192, 219) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j

|01010010> : amplitude 0.200+0.000j

Pair (192, 220) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (192, 221) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (192, 222) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (192, 223) with energies 0.9412, 0.9412
 State 192
Dominant basis-states:
 |01000010> : amplitude -0.153+0.000j
 |10000100> : amplitude 0.153+0.000j
 |01010000> : amplitude 0.153+0.000j
 |10010110> : amplitude 0.153+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (193, 194) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j

Pair (193, 195) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j

Pair (193, 196) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j

Pair (193, 197) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j

Pair (193, 198) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j

Pair (193, 199) with energies 0.9412, 0.9412

State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j

Pair (193, 200) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j

Pair (193, 201) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j

Pair (193, 202) with energies 0.9412, 0.9412
 State 193

Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j

Pair (193, 203) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j

Pair (193, 204) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j

Pair (193, 205) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:

|11001000> : amplitude -0.230+0.000j
|00001110> : amplitude -0.230+0.000j
|00011100> : amplitude 0.230+0.000j
|11011010> : amplitude -0.230+0.000j
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j

Pair (193, 206) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j

Pair (193, 207) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j

Pair (193, 208) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j

|00001110> : amplitude -0.230+0.000j
|00011100> : amplitude 0.230+0.000j
|11011010> : amplitude -0.230+0.000j
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j

Pair (193, 209) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j

Pair (193, 210) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j

Pair (193, 211) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j

|00011100> : amplitude 0.230+0.000j
|11011010> : amplitude -0.230+0.000j
State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (193, 212) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j

Pair (193, 213) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j

Pair (193, 214) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j

|11011010> : amplitude -0.230+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (193, 215) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (193, 216) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (193, 217) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j

State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (193, 218) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (193, 219) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (193, 220) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 220

Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (193, 221) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (193, 222) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (193, 223) with energies 0.9412, 0.9412
 State 193
Dominant basis-states:
 |11001000> : amplitude -0.230+0.000j
 |00001110> : amplitude -0.230+0.000j
 |00011100> : amplitude 0.230+0.000j
 |11011010> : amplitude -0.230+0.000j
 State 223
Dominant basis-states:

|01111010> : amplitude 0.146+0.000j
|10111100> : amplitude -0.146+0.000j
|01101000> : amplitude -0.146+0.000j
|10101110> : amplitude -0.146+0.000j

Pair (194, 195) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j

Pair (194, 196) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j

Pair (194, 197) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j

|01000001> : amplitude 0.132+0.000j
|01010011> : amplitude -0.132+0.000j
|10010101> : amplitude 0.132+0.000j

Pair (194, 198) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j

Pair (194, 199) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j

Pair (194, 200) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j

|01101100> : amplitude 0.140+0.000j
|10101010> : amplitude 0.140+0.000j

Pair (194, 201) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j

Pair (194, 202) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j

Pair (194, 203) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j

|11001010> : amplitude -0.143+0.000j

Pair (194, 204) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j

Pair (194, 205) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j

Pair (194, 206) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j

Pair (194, 207) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j

Pair (194, 208) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j

Pair (194, 209) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j

Pair (194, 210) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j

Pair (194, 211) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (194, 212) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j

Pair (194, 213) with energies 0.9412, 0.9412

State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j

Pair (194, 214) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (194, 215) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (194, 216) with energies 0.9412, 0.9412
 State 194

Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (194, 217) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (194, 218) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (194, 219) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:

|00000111> : amplitude -0.229+0.000j
|11000001> : amplitude -0.229+0.000j
|00010101> : amplitude -0.229+0.000j
|11010011> : amplitude 0.229+0.000j
State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (194, 220) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (194, 221) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (194, 222) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j

|11000001> : amplitude -0.229+0.000j
|00010101> : amplitude -0.229+0.000j
|11010011> : amplitude 0.229+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (194, 223) with energies 0.9412, 0.9412
 State 194
Dominant basis-states:
 |00000111> : amplitude -0.229+0.000j
 |11000001> : amplitude -0.229+0.000j
 |00010101> : amplitude -0.229+0.000j
 |11010011> : amplitude 0.229+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (195, 196) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j

Pair (195, 197) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j

|11011110> : amplitude 0.151+0.000j
|00011000> : amplitude -0.151+0.000j
State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j

Pair (195, 198) with energies 0.9412, 0.9412
State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j

Pair (195, 199) with energies 0.9412, 0.9412
State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j

Pair (195, 200) with energies 0.9412, 0.9412
State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j

|00011000> : amplitude -0.151+0.000j
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j

Pair (195, 201) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j

Pair (195, 202) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j

Pair (195, 203) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j

State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j

Pair (195, 204) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j

Pair (195, 205) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j

Pair (195, 206) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 206

Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j

Pair (195, 207) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j

Pair (195, 208) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j

Pair (195, 209) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 209
Dominant basis-states:

|11011111> : amplitude 0.164+0.000j
|00001011> : amplitude -0.164+0.000j
|00011001> : amplitude 0.164+0.000j
|11001101> : amplitude 0.164+0.000j

Pair (195, 210) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j

Pair (195, 211) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (195, 212) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j

|11111101> : amplitude -0.144+0.000j
|00101001> : amplitude 0.144+0.000j
|00111011> : amplitude -0.144+0.000j

Pair (195, 213) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j

Pair (195, 214) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (195, 215) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j

|01111001> : amplitude 0.155+0.000j
|01101011> : amplitude -0.155+0.000j

Pair (195, 216) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (195, 217) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (195, 218) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j

|01000110> : amplitude -0.152+0.000j

Pair (195, 219) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (195, 220) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (195, 221) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (195, 222) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (195, 223) with energies 0.9412, 0.9412
 State 195
Dominant basis-states:
 |11001100> : amplitude -0.151+0.000j
 |00001010> : amplitude -0.151+0.000j
 |11011110> : amplitude 0.151+0.000j
 |00011000> : amplitude -0.151+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (196, 197) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j

Pair (196, 198) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j

Pair (196, 199) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j

Pair (196, 200) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j

Pair (196, 201) with energies 0.9412, 0.9412

State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j

Pair (196, 202) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j

Pair (196, 203) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j

Pair (196, 204) with energies 0.9412, 0.9412
 State 196

Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j

Pair (196, 205) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j

Pair (196, 206) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j

Pair (196, 207) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:

|11001010> : amplitude -0.186+0.000j
|00001100> : amplitude -0.186+0.000j
|11011000> : amplitude 0.186+0.000j
|00011110> : amplitude -0.186+0.000j
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j

Pair (196, 208) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j

Pair (196, 209) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j

Pair (196, 210) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j

|00001100> : amplitude -0.186+0.000j
|11011000> : amplitude 0.186+0.000j
|00011110> : amplitude -0.186+0.000j
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j

Pair (196, 211) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (196, 212) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j

Pair (196, 213) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j

|11011000> : amplitude 0.186+0.000j
|00011110> : amplitude -0.186+0.000j
State 213
Dominant basis-states:
|10101100> : amplitude 0.162+0.000j
|01101010> : amplitude 0.162+0.000j
|01111000> : amplitude 0.162+0.000j
|10111110> : amplitude -0.162+0.000j

Pair (196, 214) with energies 0.9412, 0.9412
State 196
Dominant basis-states:
|11001010> : amplitude -0.186+0.000j
|00001100> : amplitude -0.186+0.000j
|11011000> : amplitude 0.186+0.000j
|00011110> : amplitude -0.186+0.000j
State 214
Dominant basis-states:
|01000101> : amplitude 0.236+0.000j
|01010111> : amplitude 0.236+0.000j
|10010001> : amplitude -0.236+0.000j
|10000011> : amplitude 0.236+0.000j

Pair (196, 215) with energies 0.9412, 0.9412
State 196
Dominant basis-states:
|11001010> : amplitude -0.186+0.000j
|00001100> : amplitude -0.186+0.000j
|11011000> : amplitude 0.186+0.000j
|00011110> : amplitude -0.186+0.000j
State 215
Dominant basis-states:
|10111111> : amplitude 0.155+0.000j
|10101101> : amplitude 0.155+0.000j
|01111001> : amplitude 0.155+0.000j
|01101011> : amplitude -0.155+0.000j

Pair (196, 216) with energies 0.9412, 0.9412
State 196
Dominant basis-states:
|11001010> : amplitude -0.186+0.000j
|00001100> : amplitude -0.186+0.000j
|11011000> : amplitude 0.186+0.000j

|00011110> : amplitude -0.186+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (196, 217) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (196, 218) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (196, 219) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j

State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (196, 220) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (196, 221) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (196, 222) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 222

Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (196, 223) with energies 0.9412, 0.9412
 State 196
Dominant basis-states:
 |11001010> : amplitude -0.186+0.000j
 |00001100> : amplitude -0.186+0.000j
 |11011000> : amplitude 0.186+0.000j
 |00011110> : amplitude -0.186+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (197, 198) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j

Pair (197, 199) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 199
Dominant basis-states:

|11100100> : amplitude -0.198+0.000j
|11110110> : amplitude -0.198+0.000j
|00100010> : amplitude 0.198+0.000j
|00110000> : amplitude -0.198+0.000j

Pair (197, 200) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j

Pair (197, 201) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j

Pair (197, 202) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j

|00000110> : amplitude -0.318+0.000j
|11000000> : amplitude 0.318+0.000j
|00010100> : amplitude 0.318+0.000j

Pair (197, 203) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j

Pair (197, 204) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j

Pair (197, 205) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j

|10001111> : amplitude -0.200+0.000j
|01001001> : amplitude 0.200+0.000j

Pair (197, 206) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j

Pair (197, 207) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j

Pair (197, 208) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j

|10011011> : amplitude -0.195+0.000j

Pair (197, 209) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j

Pair (197, 210) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j

Pair (197, 211) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (197, 212) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j

Pair (197, 213) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j

Pair (197, 214) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (197, 215) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (197, 216) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (197, 217) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (197, 218) with energies 0.9412, 0.9412

State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (197, 219) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (197, 220) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (197, 221) with energies 0.9412, 0.9412
 State 197

Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (197, 222) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (197, 223) with energies 0.9412, 0.9412
 State 197
Dominant basis-states:
 |10000111> : amplitude 0.132+0.000j
 |01000001> : amplitude 0.132+0.000j
 |01010011> : amplitude -0.132+0.000j
 |10010101> : amplitude 0.132+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (198, 199) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:

|10000001> : amplitude -0.160+0.000j
|01000111> : amplitude -0.160+0.000j
|10010011> : amplitude -0.160+0.000j
|01010101> : amplitude 0.160+0.000j
State 199
Dominant basis-states:
|11100100> : amplitude -0.198+0.000j
|11110110> : amplitude -0.198+0.000j
|00100010> : amplitude 0.198+0.000j
|00110000> : amplitude -0.198+0.000j

Pair (198, 200) with energies 0.9412, 0.9412
State 198
Dominant basis-states:
|10000001> : amplitude -0.160+0.000j
|01000111> : amplitude -0.160+0.000j
|10010011> : amplitude -0.160+0.000j
|01010101> : amplitude 0.160+0.000j
State 200
Dominant basis-states:
|01111110> : amplitude 0.140+0.000j
|10111000> : amplitude -0.140+0.000j
|01101100> : amplitude 0.140+0.000j
|10101010> : amplitude 0.140+0.000j

Pair (198, 201) with energies 0.9412, 0.9412
State 198
Dominant basis-states:
|10000001> : amplitude -0.160+0.000j
|01000111> : amplitude -0.160+0.000j
|10010011> : amplitude -0.160+0.000j
|01010101> : amplitude 0.160+0.000j
State 201
Dominant basis-states:
|10011001> : amplitude -0.171+0.000j
|01011111> : amplitude -0.171+0.000j
|01001101> : amplitude -0.171+0.000j
|10001011> : amplitude 0.171+0.000j

Pair (198, 202) with energies 0.9412, 0.9412
State 198
Dominant basis-states:
|10000001> : amplitude -0.160+0.000j

|01000111> : amplitude -0.160+0.000j
|10010011> : amplitude -0.160+0.000j
|01010101> : amplitude 0.160+0.000j
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j

Pair (198, 203) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j

Pair (198, 204) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j

Pair (198, 205) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j

|10010011> : amplitude -0.160+0.000j
|01010101> : amplitude 0.160+0.000j
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j

Pair (198, 206) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j

Pair (198, 207) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j

Pair (198, 208) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j

|01010101> : amplitude 0.160+0.000j
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j

Pair (198, 209) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j

Pair (198, 210) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j

Pair (198, 211) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j

State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (198, 212) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j

Pair (198, 213) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j

Pair (198, 214) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 214

Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (198, 215) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (198, 216) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (198, 217) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 217
Dominant basis-states:

|01110100> : amplitude -0.192+0.000j
|01100110> : amplitude 0.192+0.000j
|10110010> : amplitude -0.192+0.000j
|10100000> : amplitude -0.192+0.000j

Pair (198, 218) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (198, 219) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (198, 220) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j

|10111101> : amplitude -0.164+0.000j
|10101111> : amplitude 0.164+0.000j
|01101001> : amplitude -0.164+0.000j

Pair (198, 221) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (198, 222) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (198, 223) with energies 0.9412, 0.9412
 State 198
Dominant basis-states:
 |10000001> : amplitude -0.160+0.000j
 |01000111> : amplitude -0.160+0.000j
 |10010011> : amplitude -0.160+0.000j
 |01010101> : amplitude 0.160+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j

|01101000> : amplitude -0.146+0.000j
|10101110> : amplitude -0.146+0.000j

Pair (199, 200) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j

Pair (199, 201) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j

Pair (199, 202) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j

|00010100> : amplitude 0.318+0.000j

Pair (199, 203) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j

Pair (199, 204) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j

Pair (199, 205) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j

Pair (199, 206) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j

Pair (199, 207) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j

Pair (199, 208) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j

Pair (199, 209) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j

Pair (199, 210) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j

Pair (199, 211) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (199, 212) with energies 0.9412, 0.9412

State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j

Pair (199, 213) with energies 0.9412, 0.9412
State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j

Pair (199, 214) with energies 0.9412, 0.9412
State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (199, 215) with energies 0.9412, 0.9412
State 199

Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (199, 216) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (199, 217) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (199, 218) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:

|11100100> : amplitude -0.198+0.000j
|11110110> : amplitude -0.198+0.000j
|00100010> : amplitude 0.198+0.000j
|00110000> : amplitude -0.198+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (199, 219) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (199, 220) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (199, 221) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j

|11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (199, 222) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (199, 223) with energies 0.9412, 0.9412
 State 199
Dominant basis-states:
 |11100100> : amplitude -0.198+0.000j
 |11110110> : amplitude -0.198+0.000j
 |00100010> : amplitude 0.198+0.000j
 |00110000> : amplitude -0.198+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (200, 201) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j

|01101100> : amplitude 0.140+0.000j
|10101010> : amplitude 0.140+0.000j
State 201
Dominant basis-states:
|10011001> : amplitude -0.171+0.000j
|01011111> : amplitude -0.171+0.000j
|01001101> : amplitude -0.171+0.000j
|10001011> : amplitude 0.171+0.000j

Pair (200, 202) with energies 0.9412, 0.9412
State 200
Dominant basis-states:
|01111110> : amplitude 0.140+0.000j
|10111000> : amplitude -0.140+0.000j
|01101100> : amplitude 0.140+0.000j
|10101010> : amplitude 0.140+0.000j
State 202
Dominant basis-states:
|11010010> : amplitude 0.318+0.000j
|00000110> : amplitude -0.318+0.000j
|11000000> : amplitude 0.318+0.000j
|00010100> : amplitude 0.318+0.000j

Pair (200, 203) with energies 0.9412, 0.9412
State 200
Dominant basis-states:
|01111110> : amplitude 0.140+0.000j
|10111000> : amplitude -0.140+0.000j
|01101100> : amplitude 0.140+0.000j
|10101010> : amplitude 0.140+0.000j
State 203
Dominant basis-states:
|11011000> : amplitude 0.143+0.000j
|00001100> : amplitude -0.143+0.000j
|00011110> : amplitude -0.143+0.000j
|11001010> : amplitude -0.143+0.000j

Pair (200, 204) with energies 0.9412, 0.9412
State 200
Dominant basis-states:
|01111110> : amplitude 0.140+0.000j
|10111000> : amplitude -0.140+0.000j
|01101100> : amplitude 0.140+0.000j

|10101010> : amplitude 0.140+0.000j
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j

Pair (200, 205) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j

Pair (200, 206) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j

Pair (200, 207) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j

State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j

Pair (200, 208) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j

Pair (200, 209) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j

Pair (200, 210) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 210

Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j

Pair (200, 211) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (200, 212) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j

Pair (200, 213) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 213
Dominant basis-states:

|10101100> : amplitude 0.162+0.000j
|01101010> : amplitude 0.162+0.000j
|01111000> : amplitude 0.162+0.000j
|10111110> : amplitude -0.162+0.000j

Pair (200, 214) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (200, 215) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (200, 216) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j

|00100101> : amplitude 0.146+0.000j
|00110111> : amplitude 0.146+0.000j
|11110001> : amplitude -0.146+0.000j

Pair (200, 217) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (200, 218) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (200, 219) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j

|10010100> : amplitude 0.200+0.000j
|01010010> : amplitude 0.200+0.000j

Pair (200, 220) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (200, 221) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (200, 222) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j

|11110100> : amplitude -0.184+0.000j

Pair (200, 223) with energies 0.9412, 0.9412
 State 200
Dominant basis-states:
 |01111110> : amplitude 0.140+0.000j
 |10111000> : amplitude -0.140+0.000j
 |01101100> : amplitude 0.140+0.000j
 |10101010> : amplitude 0.140+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (201, 202) with energies 0.9412, 0.9412
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j

Pair (201, 203) with energies 0.9412, 0.9412
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j

Pair (201, 204) with energies 0.9412, 0.9412
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j

Pair (201, 205) with energies 0.9412, 0.9412
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j

Pair (201, 206) with energies 0.9412, 0.9412
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j

Pair (201, 207) with energies 0.9412, 0.9412
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j

Pair (201, 208) with energies 0.9412, 0.9412
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j

Pair (201, 209) with energies 0.9412, 0.9412
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j

Pair (201, 210) with energies 0.9412, 0.9412

State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j
State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j

Pair (201, 211) with energies 0.9412, 0.9412
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (201, 212) with energies 0.9412, 0.9412
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j

Pair (201, 213) with energies 0.9412, 0.9412
 State 201

Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j

Pair (201, 214) with energies 0.9412, 0.9412
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (201, 215) with energies 0.9412, 0.9412
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (201, 216) with energies 0.9412, 0.9412
 State 201
Dominant basis-states:

|10011001> : amplitude -0.171+0.000j
|01011111> : amplitude -0.171+0.000j
|01001101> : amplitude -0.171+0.000j
|10001011> : amplitude 0.171+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (201, 217) with energies 0.9412, 0.9412
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (201, 218) with energies 0.9412, 0.9412
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j
 |01011111> : amplitude -0.171+0.000j
 |01001101> : amplitude -0.171+0.000j
 |10001011> : amplitude 0.171+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (201, 219) with energies 0.9412, 0.9412
 State 201
Dominant basis-states:
 |10011001> : amplitude -0.171+0.000j

|01011111> : amplitude -0.171+0.000j
|01001101> : amplitude -0.171+0.000j
|10001011> : amplitude 0.171+0.000j
State 219
Dominant basis-states:
|01000000> : amplitude 0.200+0.000j
|10000110> : amplitude -0.200+0.000j
|10010100> : amplitude 0.200+0.000j
|01010010> : amplitude 0.200+0.000j

Pair (201, 220) with energies 0.9412, 0.9412
State 201
Dominant basis-states:
|10011001> : amplitude -0.171+0.000j
|01011111> : amplitude -0.171+0.000j
|01001101> : amplitude -0.171+0.000j
|10001011> : amplitude 0.171+0.000j
State 220
Dominant basis-states:
|01111011> : amplitude -0.164+0.000j
|10111101> : amplitude -0.164+0.000j
|10101111> : amplitude 0.164+0.000j
|01101001> : amplitude -0.164+0.000j

Pair (201, 221) with energies 0.9412, 0.9412
State 201
Dominant basis-states:
|10011001> : amplitude -0.171+0.000j
|01011111> : amplitude -0.171+0.000j
|01001101> : amplitude -0.171+0.000j
|10001011> : amplitude 0.171+0.000j
State 221
Dominant basis-states:
|01001110> : amplitude -0.148+0.000j
|10001000> : amplitude -0.148+0.000j
|01011100> : amplitude -0.148+0.000j
|10011010> : amplitude 0.148+0.000j

Pair (201, 222) with energies 0.9412, 0.9412
State 201
Dominant basis-states:
|10011001> : amplitude -0.171+0.000j
|01011111> : amplitude -0.171+0.000j

|01001101> : amplitude -0.171+0.000j
|10001011> : amplitude 0.171+0.000j
State 222
Dominant basis-states:
|00110010> : amplitude -0.184+0.000j
|00100000> : amplitude -0.184+0.000j
|11100110> : amplitude 0.184+0.000j
|11110100> : amplitude -0.184+0.000j

Pair (201, 223) with energies 0.9412, 0.9412
State 201
Dominant basis-states:
|10011001> : amplitude -0.171+0.000j
|01011111> : amplitude -0.171+0.000j
|01001101> : amplitude -0.171+0.000j
|10001011> : amplitude 0.171+0.000j
State 223
Dominant basis-states:
|01111010> : amplitude 0.146+0.000j
|10111100> : amplitude -0.146+0.000j
|01101000> : amplitude -0.146+0.000j
|10101110> : amplitude -0.146+0.000j

Pair (202, 203) with energies 0.9412, 0.9412
State 202
Dominant basis-states:
|11010010> : amplitude 0.318+0.000j
|00000110> : amplitude -0.318+0.000j
|11000000> : amplitude 0.318+0.000j
|00010100> : amplitude 0.318+0.000j
State 203
Dominant basis-states:
|11011000> : amplitude 0.143+0.000j
|00001100> : amplitude -0.143+0.000j
|00011110> : amplitude -0.143+0.000j
|11001010> : amplitude -0.143+0.000j

Pair (202, 204) with energies 0.9412, 0.9412
State 202
Dominant basis-states:
|11010010> : amplitude 0.318+0.000j
|00000110> : amplitude -0.318+0.000j
|11000000> : amplitude 0.318+0.000j

|00010100> : amplitude 0.318+0.000j
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j

Pair (202, 205) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j

Pair (202, 206) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j

Pair (202, 207) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j

State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j

Pair (202, 208) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j

Pair (202, 209) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j

Pair (202, 210) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 210

Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j

Pair (202, 211) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (202, 212) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j

Pair (202, 213) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 213
Dominant basis-states:

|10101100> : amplitude 0.162+0.000j
|01101010> : amplitude 0.162+0.000j
|01111000> : amplitude 0.162+0.000j
|10111110> : amplitude -0.162+0.000j

Pair (202, 214) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (202, 215) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (202, 216) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j

|00100101> : amplitude 0.146+0.000j
|00110111> : amplitude 0.146+0.000j
|11110001> : amplitude -0.146+0.000j

Pair (202, 217) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (202, 218) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (202, 219) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j

|10010100> : amplitude 0.200+0.000j
|01010010> : amplitude 0.200+0.000j

Pair (202, 220) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (202, 221) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (202, 222) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j

|11110100> : amplitude -0.184+0.000j

Pair (202, 223) with energies 0.9412, 0.9412
 State 202
Dominant basis-states:
 |11010010> : amplitude 0.318+0.000j
 |00000110> : amplitude -0.318+0.000j
 |11000000> : amplitude 0.318+0.000j
 |00010100> : amplitude 0.318+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (203, 204) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j

Pair (203, 205) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j

Pair (203, 206) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j

Pair (203, 207) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j

Pair (203, 208) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j

Pair (203, 209) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j

Pair (203, 210) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j

Pair (203, 211) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (203, 212) with energies 0.9412, 0.9412

State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j

Pair (203, 213) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j

Pair (203, 214) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (203, 215) with energies 0.9412, 0.9412
 State 203

Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (203, 216) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (203, 217) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (203, 218) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:

|11011000> : amplitude 0.143+0.000j
|00001100> : amplitude -0.143+0.000j
|00011110> : amplitude -0.143+0.000j
|11001010> : amplitude -0.143+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (203, 219) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (203, 220) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (203, 221) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j

|00001100> : amplitude -0.143+0.000j
|00011110> : amplitude -0.143+0.000j
|11001010> : amplitude -0.143+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (203, 222) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (203, 223) with energies 0.9412, 0.9412
 State 203
Dominant basis-states:
 |11011000> : amplitude 0.143+0.000j
 |00001100> : amplitude -0.143+0.000j
 |00011110> : amplitude -0.143+0.000j
 |11001010> : amplitude -0.143+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (204, 205) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j

|10110001> : amplitude -0.160+0.000j
|10100011> : amplitude -0.160+0.000j
State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j

Pair (204, 206) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j

Pair (204, 207) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j

Pair (204, 208) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j

|10100011> : amplitude -0.160+0.000j
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j

Pair (204, 209) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j

Pair (204, 210) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j

Pair (204, 211) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j

State 211
Dominant basis-states:
  |00100111> : amplitude -0.148+0.000j
  |11100001> : amplitude -0.148+0.000j
  |11110011> : amplitude -0.148+0.000j
  |00110101> : amplitude 0.148+0.000j

Pair (204, 212) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
  |01110111> : amplitude 0.160+0.000j
  |01100101> : amplitude -0.160+0.000j
  |10110001> : amplitude -0.160+0.000j
  |10100011> : amplitude -0.160+0.000j
 State 212
Dominant basis-states:
  |11101111> : amplitude -0.144+0.000j
  |11111101> : amplitude -0.144+0.000j
  |00101001> : amplitude 0.144+0.000j
  |00111011> : amplitude -0.144+0.000j

Pair (204, 213) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
  |01110111> : amplitude 0.160+0.000j
  |01100101> : amplitude -0.160+0.000j
  |10110001> : amplitude -0.160+0.000j
  |10100011> : amplitude -0.160+0.000j
 State 213
Dominant basis-states:
  |10101100> : amplitude 0.162+0.000j
  |01101010> : amplitude 0.162+0.000j
  |01111000> : amplitude 0.162+0.000j
  |10111110> : amplitude -0.162+0.000j

Pair (204, 214) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
  |01110111> : amplitude 0.160+0.000j
  |01100101> : amplitude -0.160+0.000j
  |10110001> : amplitude -0.160+0.000j
  |10100011> : amplitude -0.160+0.000j
 State 214

Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (204, 215) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (204, 216) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (204, 217) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j
 State 217
Dominant basis-states:

|01110100> : amplitude -0.192+0.000j
|01100110> : amplitude 0.192+0.000j
|10110010> : amplitude -0.192+0.000j
|10100000> : amplitude -0.192+0.000j

Pair (204, 218) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (204, 219) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (204, 220) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j

|10111101> : amplitude -0.164+0.000j
|10101111> : amplitude 0.164+0.000j
|01101001> : amplitude -0.164+0.000j

Pair (204, 221) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (204, 222) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (204, 223) with energies 0.9412, 0.9412
 State 204
Dominant basis-states:
 |01110111> : amplitude 0.160+0.000j
 |01100101> : amplitude -0.160+0.000j
 |10110001> : amplitude -0.160+0.000j
 |10100011> : amplitude -0.160+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j

|01101000> : amplitude -0.146+0.000j
|10101110> : amplitude -0.146+0.000j

Pair (205, 206) with energies 0.9412, 0.9412
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j

Pair (205, 207) with energies 0.9412, 0.9412
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j

Pair (205, 208) with energies 0.9412, 0.9412
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j

|10011011> : amplitude -0.195+0.000j

Pair (205, 209) with energies 0.9412, 0.9412
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j

Pair (205, 210) with energies 0.9412, 0.9412
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j

Pair (205, 211) with energies 0.9412, 0.9412
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (205, 212) with energies 0.9412, 0.9412
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j

Pair (205, 213) with energies 0.9412, 0.9412
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j

Pair (205, 214) with energies 0.9412, 0.9412
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (205, 215) with energies 0.9412, 0.9412
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (205, 216) with energies 0.9412, 0.9412
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (205, 217) with energies 0.9412, 0.9412
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (205, 218) with energies 0.9412, 0.9412

State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (205, 219) with energies 0.9412, 0.9412
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (205, 220) with energies 0.9412, 0.9412
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (205, 221) with energies 0.9412, 0.9412
 State 205

Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (205, 222) with energies 0.9412, 0.9412
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (205, 223) with energies 0.9412, 0.9412
 State 205
Dominant basis-states:
 |10011101> : amplitude -0.200+0.000j
 |01011011> : amplitude -0.200+0.000j
 |10001111> : amplitude -0.200+0.000j
 |01001001> : amplitude 0.200+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (206, 207) with energies 0.9412, 0.9412
 State 206
Dominant basis-states:

|01001111> : amplitude 0.191+0.000j
|10001001> : amplitude -0.191+0.000j
|01011101> : amplitude -0.191+0.000j
|10011011> : amplitude -0.191+0.000j
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j

Pair (206, 208) with energies 0.9412, 0.9412
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j

Pair (206, 209) with energies 0.9412, 0.9412
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j

Pair (206, 210) with energies 0.9412, 0.9412
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j

|10001001> : amplitude -0.191+0.000j
|01011101> : amplitude -0.191+0.000j
|10011011> : amplitude -0.191+0.000j
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j

Pair (206, 211) with energies 0.9412, 0.9412
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (206, 212) with energies 0.9412, 0.9412
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j

Pair (206, 213) with energies 0.9412, 0.9412
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j

|01011101> : amplitude -0.191+0.000j
|10011011> : amplitude -0.191+0.000j
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j

Pair (206, 214) with energies 0.9412, 0.9412
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (206, 215) with energies 0.9412, 0.9412
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (206, 216) with energies 0.9412, 0.9412
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j

|10011011> : amplitude -0.191+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (206, 217) with energies 0.9412, 0.9412
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (206, 218) with energies 0.9412, 0.9412
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (206, 219) with energies 0.9412, 0.9412
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j

State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (206, 220) with energies 0.9412, 0.9412
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (206, 221) with energies 0.9412, 0.9412
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (206, 222) with energies 0.9412, 0.9412
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j
 State 222

Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (206, 223) with energies 0.9412, 0.9412
 State 206
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 |01011101> : amplitude -0.191+0.000j
 |10011011> : amplitude -0.191+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (207, 208) with energies 0.9412, 0.9412
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j

Pair (207, 209) with energies 0.9412, 0.9412
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 State 209
Dominant basis-states:

|11011111> : amplitude 0.164+0.000j
|00001011> : amplitude -0.164+0.000j
|00011001> : amplitude 0.164+0.000j
|11001101> : amplitude 0.164+0.000j

Pair (207, 210) with energies 0.9412, 0.9412
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j

Pair (207, 211) with energies 0.9412, 0.9412
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (207, 212) with energies 0.9412, 0.9412
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j

|11111101> : amplitude -0.144+0.000j
|00101001> : amplitude 0.144+0.000j
|00111011> : amplitude -0.144+0.000j

Pair (207, 213) with energies 0.9412, 0.9412
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j

Pair (207, 214) with energies 0.9412, 0.9412
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (207, 215) with energies 0.9412, 0.9412
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j

|01111001> : amplitude 0.155+0.000j
|01101011> : amplitude -0.155+0.000j

Pair (207, 216) with energies 0.9412, 0.9412
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (207, 217) with energies 0.9412, 0.9412
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (207, 218) with energies 0.9412, 0.9412
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j

|01000110> : amplitude -0.152+0.000j

Pair (207, 219) with energies 0.9412, 0.9412
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (207, 220) with energies 0.9412, 0.9412
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (207, 221) with energies 0.9412, 0.9412
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (207, 222) with energies 0.9412, 0.9412
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (207, 223) with energies 0.9412, 0.9412
 State 207
Dominant basis-states:
 |11000110> : amplitude 0.354+0.000j
 |00000000> : amplitude -0.354+0.000j
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (208, 209) with energies 0.9412, 0.9412
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j

Pair (208, 210) with energies 0.9412, 0.9412
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j

Pair (208, 211) with energies 0.9412, 0.9412
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (208, 212) with energies 0.9412, 0.9412
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j

Pair (208, 213) with energies 0.9412, 0.9412

State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j

Pair (208, 214) with energies 0.9412, 0.9412
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (208, 215) with energies 0.9412, 0.9412
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (208, 216) with energies 0.9412, 0.9412
 State 208

Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (208, 217) with energies 0.9412, 0.9412
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (208, 218) with energies 0.9412, 0.9412
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (208, 219) with energies 0.9412, 0.9412
 State 208
Dominant basis-states:

|01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (208, 220) with energies 0.9412, 0.9412
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (208, 221) with energies 0.9412, 0.9412
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j
 |10001001> : amplitude -0.195+0.000j
 |01011101> : amplitude -0.195+0.000j
 |10011011> : amplitude -0.195+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (208, 222) with energies 0.9412, 0.9412
 State 208
Dominant basis-states:
 |01001111> : amplitude 0.195+0.000j

|10001001> : amplitude -0.195+0.000j
|01011101> : amplitude -0.195+0.000j
|10011011> : amplitude -0.195+0.000j
State 222
Dominant basis-states:
|00110010> : amplitude -0.184+0.000j
|00100000> : amplitude -0.184+0.000j
|11100110> : amplitude 0.184+0.000j
|11110100> : amplitude -0.184+0.000j

Pair (208, 223) with energies 0.9412, 0.9412
State 208
Dominant basis-states:
|01001111> : amplitude 0.195+0.000j
|10001001> : amplitude -0.195+0.000j
|01011101> : amplitude -0.195+0.000j
|10011011> : amplitude -0.195+0.000j
State 223
Dominant basis-states:
|01111010> : amplitude 0.146+0.000j
|10111100> : amplitude -0.146+0.000j
|01101000> : amplitude -0.146+0.000j
|10101110> : amplitude -0.146+0.000j

Pair (209, 210) with energies 0.9412, 0.9412
State 209
Dominant basis-states:
|11011111> : amplitude 0.164+0.000j
|00001011> : amplitude -0.164+0.000j
|00011001> : amplitude 0.164+0.000j
|11001101> : amplitude 0.164+0.000j
State 210
Dominant basis-states:
|00000111> : amplitude -0.167+0.000j
|11000001> : amplitude -0.167+0.000j
|00010101> : amplitude -0.167+0.000j
|11010011> : amplitude 0.167+0.000j

Pair (209, 211) with energies 0.9412, 0.9412
State 209
Dominant basis-states:
|11011111> : amplitude 0.164+0.000j
|00001011> : amplitude -0.164+0.000j

|00011001> : amplitude 0.164+0.000j
|11001101> : amplitude 0.164+0.000j
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (209, 212) with energies 0.9412, 0.9412
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j

Pair (209, 213) with energies 0.9412, 0.9412
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j

Pair (209, 214) with energies 0.9412, 0.9412
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j

|11001101> : amplitude 0.164+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (209, 215) with energies 0.9412, 0.9412
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (209, 216) with energies 0.9412, 0.9412
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (209, 217) with energies 0.9412, 0.9412
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j

State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (209, 218) with energies 0.9412, 0.9412
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (209, 219) with energies 0.9412, 0.9412
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (209, 220) with energies 0.9412, 0.9412
 State 209
Dominant basis-states:
 |11011111> : amplitude 0.164+0.000j
 |00001011> : amplitude -0.164+0.000j
 |00011001> : amplitude 0.164+0.000j
 |11001101> : amplitude 0.164+0.000j
 State 220

Dominant basis-states:
  |01111011> : amplitude -0.164+0.000j
  |10111101> : amplitude -0.164+0.000j
  |10101111> : amplitude 0.164+0.000j
  |01101001> : amplitude -0.164+0.000j

Pair (209, 221) with energies 0.9412, 0.9412
 State 209
Dominant basis-states:
  |11011111> : amplitude 0.164+0.000j
  |00001011> : amplitude -0.164+0.000j
  |00011001> : amplitude 0.164+0.000j
  |11001101> : amplitude 0.164+0.000j
 State 221
Dominant basis-states:
  |01001110> : amplitude -0.148+0.000j
  |10001000> : amplitude -0.148+0.000j
  |01011100> : amplitude -0.148+0.000j
  |10011010> : amplitude 0.148+0.000j

Pair (209, 222) with energies 0.9412, 0.9412
 State 209
Dominant basis-states:
  |11011111> : amplitude 0.164+0.000j
  |00001011> : amplitude -0.164+0.000j
  |00011001> : amplitude 0.164+0.000j
  |11001101> : amplitude 0.164+0.000j
 State 222
Dominant basis-states:
  |00110010> : amplitude -0.184+0.000j
  |00100000> : amplitude -0.184+0.000j
  |11100110> : amplitude 0.184+0.000j
  |11110100> : amplitude -0.184+0.000j

Pair (209, 223) with energies 0.9412, 0.9412
 State 209
Dominant basis-states:
  |11011111> : amplitude 0.164+0.000j
  |00001011> : amplitude -0.164+0.000j
  |00011001> : amplitude 0.164+0.000j
  |11001101> : amplitude 0.164+0.000j
 State 223
Dominant basis-states:

|01111010> : amplitude 0.146+0.000j
|10111100> : amplitude -0.146+0.000j
|01101000> : amplitude -0.146+0.000j
|10101110> : amplitude -0.146+0.000j

Pair (210, 211) with energies 0.9412, 0.9412
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j

Pair (210, 212) with energies 0.9412, 0.9412
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j

Pair (210, 213) with energies 0.9412, 0.9412
 State 210

4.2.3.4 Raw Output (Part 4)
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j
 State 213
Dominant basis-states:

|10101100> : amplitude 0.162+0.000j
|01101010> : amplitude 0.162+0.000j
|01111000> : amplitude 0.162+0.000j
|10111110> : amplitude -0.162+0.000j

Pair (210, 214) with energies 0.9412, 0.9412
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (210, 215) with energies 0.9412, 0.9412
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (210, 216) with energies 0.9412, 0.9412
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j

|00100101> : amplitude 0.146+0.000j
|00110111> : amplitude 0.146+0.000j
|11110001> : amplitude -0.146+0.000j

Pair (210, 217) with energies 0.9412, 0.9412
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (210, 218) with energies 0.9412, 0.9412
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (210, 219) with energies 0.9412, 0.9412
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j

|10010100> : amplitude 0.200+0.000j
|01010010> : amplitude 0.200+0.000j

Pair (210, 220) with energies 0.9412, 0.9412
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (210, 221) with energies 0.9412, 0.9412
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (210, 222) with energies 0.9412, 0.9412
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j

|11110100> : amplitude -0.184+0.000j

Pair (210, 223) with energies 0.9412, 0.9412
 State 210
Dominant basis-states:
 |00000111> : amplitude -0.167+0.000j
 |11000001> : amplitude -0.167+0.000j
 |00010101> : amplitude -0.167+0.000j
 |11010011> : amplitude 0.167+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (211, 212) with energies 0.9412, 0.9412
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j

Pair (211, 213) with energies 0.9412, 0.9412
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j

Pair (211, 214) with energies 0.9412, 0.9412
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (211, 215) with energies 0.9412, 0.9412
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (211, 216) with energies 0.9412, 0.9412
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (211, 217) with energies 0.9412, 0.9412
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (211, 218) with energies 0.9412, 0.9412
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (211, 219) with energies 0.9412, 0.9412
 State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (211, 220) with energies 0.9412, 0.9412

State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j
State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (211, 221) with energies 0.9412, 0.9412
State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j
State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (211, 222) with energies 0.9412, 0.9412
State 211
Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j
State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (211, 223) with energies 0.9412, 0.9412
State 211

Dominant basis-states:
 |00100111> : amplitude -0.148+0.000j
 |11100001> : amplitude -0.148+0.000j
 |11110011> : amplitude -0.148+0.000j
 |00110101> : amplitude 0.148+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (212, 213) with energies 0.9412, 0.9412
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j

Pair (212, 214) with energies 0.9412, 0.9412
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (212, 215) with energies 0.9412, 0.9412
 State 212
Dominant basis-states:

|11101111> : amplitude -0.144+0.000j
|11111101> : amplitude -0.144+0.000j
|00101001> : amplitude 0.144+0.000j
|00111011> : amplitude -0.144+0.000j
State 215
Dominant basis-states:
|10111111> : amplitude 0.155+0.000j
|10101101> : amplitude 0.155+0.000j
|01111001> : amplitude 0.155+0.000j
|01101011> : amplitude -0.155+0.000j

Pair (212, 216) with energies 0.9412, 0.9412
State 212
Dominant basis-states:
|11101111> : amplitude -0.144+0.000j
|11111101> : amplitude -0.144+0.000j
|00101001> : amplitude 0.144+0.000j
|00111011> : amplitude -0.144+0.000j
State 216
Dominant basis-states:
|11100011> : amplitude 0.146+0.000j
|00100101> : amplitude 0.146+0.000j
|00110111> : amplitude 0.146+0.000j
|11110001> : amplitude -0.146+0.000j

Pair (212, 217) with energies 0.9412, 0.9412
State 212
Dominant basis-states:
|11101111> : amplitude -0.144+0.000j
|11111101> : amplitude -0.144+0.000j
|00101001> : amplitude 0.144+0.000j
|00111011> : amplitude -0.144+0.000j
State 217
Dominant basis-states:
|01110100> : amplitude -0.192+0.000j
|01100110> : amplitude 0.192+0.000j
|10110010> : amplitude -0.192+0.000j
|10100000> : amplitude -0.192+0.000j

Pair (212, 218) with energies 0.9412, 0.9412
State 212
Dominant basis-states:
|11101111> : amplitude -0.144+0.000j

|11111101> : amplitude -0.144+0.000j
|00101001> : amplitude 0.144+0.000j
|00111011> : amplitude -0.144+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (212, 219) with energies 0.9412, 0.9412
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (212, 220) with energies 0.9412, 0.9412
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j
 |00101001> : amplitude 0.144+0.000j
 |00111011> : amplitude -0.144+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (212, 221) with energies 0.9412, 0.9412
 State 212
Dominant basis-states:
 |11101111> : amplitude -0.144+0.000j
 |11111101> : amplitude -0.144+0.000j

|00101001> : amplitude 0.144+0.000j
|00111011> : amplitude -0.144+0.000j
State 221
Dominant basis-states:
|01001110> : amplitude -0.148+0.000j
|10001000> : amplitude -0.148+0.000j
|01011100> : amplitude -0.148+0.000j
|10011010> : amplitude 0.148+0.000j

Pair (212, 222) with energies 0.9412, 0.9412
State 212
Dominant basis-states:
|11101111> : amplitude -0.144+0.000j
|11111101> : amplitude -0.144+0.000j
|00101001> : amplitude 0.144+0.000j
|00111011> : amplitude -0.144+0.000j
State 222
Dominant basis-states:
|00110010> : amplitude -0.184+0.000j
|00100000> : amplitude -0.184+0.000j
|11100110> : amplitude 0.184+0.000j
|11110100> : amplitude -0.184+0.000j

Pair (212, 223) with energies 0.9412, 0.9412
State 212
Dominant basis-states:
|11101111> : amplitude -0.144+0.000j
|11111101> : amplitude -0.144+0.000j
|00101001> : amplitude 0.144+0.000j
|00111011> : amplitude -0.144+0.000j
State 223
Dominant basis-states:
|01111010> : amplitude 0.146+0.000j
|10111100> : amplitude -0.146+0.000j
|01101000> : amplitude -0.146+0.000j
|10101110> : amplitude -0.146+0.000j

Pair (213, 214) with energies 0.9412, 0.9412
State 213
Dominant basis-states:
|10101100> : amplitude 0.162+0.000j
|01101010> : amplitude 0.162+0.000j
|01111000> : amplitude 0.162+0.000j

|10111110> : amplitude -0.162+0.000j
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j

Pair (213, 215) with energies 0.9412, 0.9412
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (213, 216) with energies 0.9412, 0.9412
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (213, 217) with energies 0.9412, 0.9412
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j

State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (213, 218) with energies 0.9412, 0.9412
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (213, 219) with energies 0.9412, 0.9412
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (213, 220) with energies 0.9412, 0.9412
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j
 State 220

Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (213, 221) with energies 0.9412, 0.9412
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (213, 222) with energies 0.9412, 0.9412
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (213, 223) with energies 0.9412, 0.9412
 State 213
Dominant basis-states:
 |10101100> : amplitude 0.162+0.000j
 |01101010> : amplitude 0.162+0.000j
 |01111000> : amplitude 0.162+0.000j
 |10111110> : amplitude -0.162+0.000j
 State 223
Dominant basis-states:

|01111010> : amplitude 0.146+0.000j
|10111100> : amplitude -0.146+0.000j
|01101000> : amplitude -0.146+0.000j
|10101110> : amplitude -0.146+0.000j

Pair (214, 215) with energies 0.9412, 0.9412
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j

Pair (214, 216) with energies 0.9412, 0.9412
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (214, 217) with energies 0.9412, 0.9412
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j

|01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (214, 218) with energies 0.9412, 0.9412
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (214, 219) with energies 0.9412, 0.9412
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (214, 220) with energies 0.9412, 0.9412
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j

|10101111> : amplitude 0.164+0.000j
|01101001> : amplitude -0.164+0.000j

Pair (214, 221) with energies 0.9412, 0.9412
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (214, 222) with energies 0.9412, 0.9412
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (214, 223) with energies 0.9412, 0.9412
 State 214
Dominant basis-states:
 |01000101> : amplitude 0.236+0.000j
 |01010111> : amplitude 0.236+0.000j
 |10010001> : amplitude -0.236+0.000j
 |10000011> : amplitude 0.236+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j

|10101110> : amplitude -0.146+0.000j

Pair (215, 216) with energies 0.9412, 0.9412
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j

Pair (215, 217) with energies 0.9412, 0.9412
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (215, 218) with energies 0.9412, 0.9412
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (215, 219) with energies 0.9412, 0.9412
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (215, 220) with energies 0.9412, 0.9412
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (215, 221) with energies 0.9412, 0.9412
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (215, 222) with energies 0.9412, 0.9412
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (215, 223) with energies 0.9412, 0.9412
 State 215
Dominant basis-states:
 |10111111> : amplitude 0.155+0.000j
 |10101101> : amplitude 0.155+0.000j
 |01111001> : amplitude 0.155+0.000j
 |01101011> : amplitude -0.155+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (216, 217) with energies 0.9412, 0.9412
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j

Pair (216, 218) with energies 0.9412, 0.9412

State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (216, 219) with energies 0.9412, 0.9412
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (216, 220) with energies 0.9412, 0.9412
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (216, 221) with energies 0.9412, 0.9412
 State 216

Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (216, 222) with energies 0.9412, 0.9412
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (216, 223) with energies 0.9412, 0.9412
 State 216
Dominant basis-states:
 |11100011> : amplitude 0.146+0.000j
 |00100101> : amplitude 0.146+0.000j
 |00110111> : amplitude 0.146+0.000j
 |11110001> : amplitude -0.146+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (217, 218) with energies 0.9412, 0.9412
 State 217
Dominant basis-states:

|01110100> : amplitude -0.192+0.000j
|01100110> : amplitude 0.192+0.000j
|10110010> : amplitude -0.192+0.000j
|10100000> : amplitude -0.192+0.000j
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j

Pair (217, 219) with energies 0.9412, 0.9412
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (217, 220) with energies 0.9412, 0.9412
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (217, 221) with energies 0.9412, 0.9412
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j

|01100110> : amplitude 0.192+0.000j
|10110010> : amplitude -0.192+0.000j
|10100000> : amplitude -0.192+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (217, 222) with energies 0.9412, 0.9412
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (217, 223) with energies 0.9412, 0.9412
 State 217
Dominant basis-states:
 |01110100> : amplitude -0.192+0.000j
 |01100110> : amplitude 0.192+0.000j
 |10110010> : amplitude -0.192+0.000j
 |10100000> : amplitude -0.192+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (218, 219) with energies 0.9412, 0.9412
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j

|10000000> : amplitude 0.152+0.000j
|01000110> : amplitude -0.152+0.000j
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

Pair (218, 220) with energies 0.9412, 0.9412
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (218, 221) with energies 0.9412, 0.9412
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (218, 222) with energies 0.9412, 0.9412
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j

|01000110> : amplitude -0.152+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (218, 223) with energies 0.9412, 0.9412
 State 218
Dominant basis-states:
 |01010100> : amplitude -0.152+0.000j
 |10010010> : amplitude -0.152+0.000j
 |10000000> : amplitude 0.152+0.000j
 |01000110> : amplitude -0.152+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (219, 220) with energies 0.9412, 0.9412
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j

Pair (219, 221) with energies 0.9412, 0.9412
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j

State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (219, 222) with energies 0.9412, 0.9412
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (219, 223) with energies 0.9412, 0.9412
 State 219
Dominant basis-states:
 |01000000> : amplitude 0.200+0.000j
 |10000110> : amplitude -0.200+0.000j
 |10010100> : amplitude 0.200+0.000j
 |01010010> : amplitude 0.200+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (220, 221) with energies 0.9412, 0.9412
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j
 State 221

Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j

Pair (220, 222) with energies 0.9412, 0.9412
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j

Pair (220, 223) with energies 0.9412, 0.9412
 State 220
Dominant basis-states:
 |01111011> : amplitude -0.164+0.000j
 |10111101> : amplitude -0.164+0.000j
 |10101111> : amplitude 0.164+0.000j
 |01101001> : amplitude -0.164+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (221, 222) with energies 0.9412, 0.9412
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j
 State 222
Dominant basis-states:

|00110010> : amplitude -0.184+0.000j
|00100000> : amplitude -0.184+0.000j
|11100110> : amplitude 0.184+0.000j
|11110100> : amplitude -0.184+0.000j

Pair (221, 223) with energies 0.9412, 0.9412
 State 221
Dominant basis-states:
 |01001110> : amplitude -0.148+0.000j
 |10001000> : amplitude -0.148+0.000j
 |01011100> : amplitude -0.148+0.000j
 |10011010> : amplitude 0.148+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (222, 223) with energies 0.9412, 0.9412
 State 222
Dominant basis-states:
 |00110010> : amplitude -0.184+0.000j
 |00100000> : amplitude -0.184+0.000j
 |11100110> : amplitude 0.184+0.000j
 |11110100> : amplitude -0.184+0.000j
 State 223
Dominant basis-states:
 |01111010> : amplitude 0.146+0.000j
 |10111100> : amplitude -0.146+0.000j
 |01101000> : amplitude -0.146+0.000j
 |10101110> : amplitude -0.146+0.000j

Pair (224, 225) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j

|01101011> : amplitude 0.169+0.000j
|10111111> : amplitude 0.169+0.000j
|01111001> : amplitude 0.169+0.000j

Pair (224, 226) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j

Pair (224, 227) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j

Pair (224, 228) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j

|00000010> : amplitude -0.291+0.000j
|11000100> : amplitude 0.291+0.000j

Pair (224, 229) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j

Pair (224, 230) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j

Pair (224, 231) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j

|10110001> : amplitude 0.155+0.000j

Pair (224, 232) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j

Pair (224, 233) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j

Pair (224, 234) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j

Pair (224, 235) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j

Pair (224, 236) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j

Pair (224, 237) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j

Pair (224, 238) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j

Pair (224, 239) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j

Pair (224, 240) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j

Pair (224, 241) with energies 1.0021, 1.0021

State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j

Pair (224, 242) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (224, 243) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

Pair (224, 244) with energies 1.0021, 1.0021
 State 224

Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (224, 245) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (224, 246) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (224, 247) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:

|10101110> : amplitude 0.173+0.000j
|01101000> : amplitude 0.173+0.000j
|10111100> : amplitude -0.173+0.000j
|01111010> : amplitude 0.173+0.000j
State 247
Dominant basis-states:
|10101111> : amplitude -0.190+0.000j
|01111011> : amplitude -0.190+0.000j
|01101001> : amplitude 0.190+0.000j
|10111101> : amplitude -0.190+0.000j

Pair (224, 248) with energies 1.0021, 1.0021
State 224
Dominant basis-states:
|10101110> : amplitude 0.173+0.000j
|01101000> : amplitude 0.173+0.000j
|10111100> : amplitude -0.173+0.000j
|01111010> : amplitude 0.173+0.000j
State 248
Dominant basis-states:
|10011110> : amplitude -0.195+0.000j
|01011000> : amplitude 0.195+0.000j
|10001100> : amplitude 0.195+0.000j
|01001010> : amplitude 0.195+0.000j

Pair (224, 249) with energies 1.0021, 1.0021
State 224
Dominant basis-states:
|10101110> : amplitude 0.173+0.000j
|01101000> : amplitude 0.173+0.000j
|10111100> : amplitude -0.173+0.000j
|01111010> : amplitude 0.173+0.000j
State 249
Dominant basis-states:
|10111100> : amplitude -0.152+0.000j
|01111010> : amplitude 0.152+0.000j
|10101110> : amplitude 0.152+0.000j
|01101000> : amplitude 0.152+0.000j

Pair (224, 250) with energies 1.0021, 1.0021
State 224
Dominant basis-states:
|10101110> : amplitude 0.173+0.000j

|01101000> : amplitude 0.173+0.000j
|10111100> : amplitude -0.173+0.000j
|01111010> : amplitude 0.173+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (224, 251) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (224, 252) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j
 |10111100> : amplitude -0.173+0.000j
 |01111010> : amplitude 0.173+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (224, 253) with energies 1.0021, 1.0021
 State 224
Dominant basis-states:
 |10101110> : amplitude 0.173+0.000j
 |01101000> : amplitude 0.173+0.000j

|10111100> : amplitude -0.173+0.000j
|01111010> : amplitude 0.173+0.000j
State 253
Dominant basis-states:
|00010101> : amplitude -0.256+0.000j
|11010011> : amplitude 0.256+0.000j
|11000001> : amplitude 0.256+0.000j
|00000111> : amplitude 0.256+0.000j

Pair (224, 254) with energies 1.0021, 1.0021
State 224
Dominant basis-states:
|10101110> : amplitude 0.173+0.000j
|01101000> : amplitude 0.173+0.000j
|10111100> : amplitude -0.173+0.000j
|01111010> : amplitude 0.173+0.000j
State 254
Dominant basis-states:
|10011100> : amplitude 0.168+0.000j
|01011010> : amplitude -0.168+0.000j
|10001110> : amplitude 0.168+0.000j
|01001000> : amplitude 0.168+0.000j

Pair (224, 255) with energies 1.0021, 1.0021
State 224
Dominant basis-states:
|10101110> : amplitude 0.173+0.000j
|01101000> : amplitude 0.173+0.000j
|10111100> : amplitude -0.173+0.000j
|01111010> : amplitude 0.173+0.000j
State 255
Dominant basis-states:
|10101001> : amplitude 0.155+0.000j
|01101111> : amplitude -0.155+0.000j
|01111101> : amplitude 0.155+0.000j
|10111011> : amplitude 0.155+0.000j

Pair (225, 226) with energies 1.0021, 1.0021
State 225
Dominant basis-states:
|10101101> : amplitude -0.169+0.000j
|01101011> : amplitude 0.169+0.000j
|10111111> : amplitude 0.169+0.000j

|01111001> : amplitude 0.169+0.000j
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j

Pair (225, 227) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j

Pair (225, 228) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j

Pair (225, 229) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j

State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j

Pair (225, 230) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j

Pair (225, 231) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j

Pair (225, 232) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 232

Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j

Pair (225, 233) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j

Pair (225, 234) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j

Pair (225, 235) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 235
Dominant basis-states:

|10100111> : amplitude 0.174+0.000j
|01100001> : amplitude 0.174+0.000j
|01110011> : amplitude -0.174+0.000j
|10110101> : amplitude 0.174+0.000j

Pair (225, 236) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j

Pair (225, 237) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j

Pair (225, 238) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j

|01011101> : amplitude 0.191+0.000j
|10011011> : amplitude 0.191+0.000j
|10001001> : amplitude -0.191+0.000j

Pair (225, 239) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j

Pair (225, 240) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j

Pair (225, 241) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j

|10010100> : amplitude -0.252+0.000j
|01010010> : amplitude -0.252+0.000j

Pair (225, 242) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (225, 243) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

Pair (225, 244) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j

|10100100> : amplitude 0.188+0.000j

Pair (225, 245) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (225, 246) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (225, 247) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (225, 248) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (225, 249) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (225, 250) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (225, 251) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (225, 252) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (225, 253) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (225, 254) with energies 1.0021, 1.0021

State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (225, 255) with energies 1.0021, 1.0021
 State 225
Dominant basis-states:
 |10101101> : amplitude -0.169+0.000j
 |01101011> : amplitude 0.169+0.000j
 |10111111> : amplitude 0.169+0.000j
 |01111001> : amplitude 0.169+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (226, 227) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j

Pair (226, 228) with energies 1.0021, 1.0021
 State 226

Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j

Pair (226, 229) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j

Pair (226, 230) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j

Pair (226, 231) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:

|11100000> : amplitude 0.150+0.000j
|00100110> : amplitude -0.150+0.000j
|11110010> : amplitude 0.150+0.000j
|00110100> : amplitude 0.150+0.000j
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j

Pair (226, 232) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j

Pair (226, 233) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j

Pair (226, 234) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j

|00100110> : amplitude -0.150+0.000j
|11110010> : amplitude 0.150+0.000j
|00110100> : amplitude 0.150+0.000j
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j

Pair (226, 235) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j

Pair (226, 236) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j

Pair (226, 237) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j

|11110010> : amplitude 0.150+0.000j
|00110100> : amplitude 0.150+0.000j
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j

Pair (226, 238) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j

Pair (226, 239) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j

Pair (226, 240) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j

|00110100> : amplitude 0.150+0.000j
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j

Pair (226, 241) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j

Pair (226, 242) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (226, 243) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j

State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

Pair (226, 244) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (226, 245) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (226, 246) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 246

Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (226, 247) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (226, 248) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (226, 249) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 249
Dominant basis-states:

|10111100> : amplitude -0.152+0.000j
|01111010> : amplitude 0.152+0.000j
|10101110> : amplitude 0.152+0.000j
|01101000> : amplitude 0.152+0.000j

Pair (226, 250) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (226, 251) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (226, 252) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j

|01110110> : amplitude -0.250+0.000j
|10110000> : amplitude -0.250+0.000j
|10100010> : amplitude -0.250+0.000j

Pair (226, 253) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (226, 254) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (226, 255) with energies 1.0021, 1.0021
 State 226
Dominant basis-states:
 |11100000> : amplitude 0.150+0.000j
 |00100110> : amplitude -0.150+0.000j
 |11110010> : amplitude 0.150+0.000j
 |00110100> : amplitude 0.150+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j

|01111101> : amplitude 0.155+0.000j
|10111011> : amplitude 0.155+0.000j

Pair (227, 228) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j

Pair (227, 229) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j

Pair (227, 230) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j

|10110100> : amplitude 0.183+0.000j

Pair (227, 231) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j

Pair (227, 232) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j

Pair (227, 233) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j

Pair (227, 234) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j

Pair (227, 235) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j

Pair (227, 236) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j

Pair (227, 237) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j

Pair (227, 238) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j

Pair (227, 239) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j

Pair (227, 240) with energies 1.0021, 1.0021

State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j

Pair (227, 241) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j

Pair (227, 242) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (227, 243) with energies 1.0021, 1.0021
 State 227

Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

Pair (227, 244) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (227, 245) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (227, 246) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:

|11110010> : amplitude 0.141+0.000j
|11100000> : amplitude 0.141+0.000j
|00110100> : amplitude 0.141+0.000j
|00100110> : amplitude -0.141+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (227, 247) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (227, 248) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (227, 249) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j

|11100000> : amplitude 0.141+0.000j
|00110100> : amplitude 0.141+0.000j
|00100110> : amplitude -0.141+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (227, 250) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (227, 251) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (227, 252) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j

|00110100> : amplitude 0.141+0.000j
|00100110> : amplitude -0.141+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (227, 253) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (227, 254) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j
 |00100110> : amplitude -0.141+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (227, 255) with energies 1.0021, 1.0021
 State 227
Dominant basis-states:
 |11110010> : amplitude 0.141+0.000j
 |11100000> : amplitude 0.141+0.000j
 |00110100> : amplitude 0.141+0.000j

|00100110> : amplitude -0.141+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (228, 229) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j

Pair (228, 230) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j

Pair (228, 231) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j

State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j

Pair (228, 232) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j

Pair (228, 233) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j

Pair (228, 234) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 234

Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j

Pair (228, 235) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j

Pair (228, 236) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j

Pair (228, 237) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 237
Dominant basis-states:

|00010100> : amplitude -0.268+0.000j
|11010010> : amplitude -0.268+0.000j
|00000110> : amplitude -0.268+0.000j
|11000000> : amplitude 0.268+0.000j

Pair (228, 238) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j

Pair (228, 239) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j

Pair (228, 240) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j

|00110011> : amplitude 0.158+0.000j
|00100001> : amplitude 0.158+0.000j
|11100111> : amplitude 0.158+0.000j

Pair (228, 241) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j

Pair (228, 242) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (228, 243) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j

|01001111> : amplitude -0.136+0.000j
|10001001> : amplitude 0.136+0.000j

Pair (228, 244) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (228, 245) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (228, 246) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j

|00011010> : amplitude -0.154+0.000j

Pair (228, 247) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (228, 248) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (228, 249) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (228, 250) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (228, 251) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (228, 252) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (228, 253) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (228, 254) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (228, 255) with energies 1.0021, 1.0021
 State 228
Dominant basis-states:
 |00010000> : amplitude 0.291+0.000j
 |11010110> : amplitude 0.291+0.000j
 |00000010> : amplitude -0.291+0.000j
 |11000100> : amplitude 0.291+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (229, 230) with energies 1.0021, 1.0021

State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j

Pair (229, 231) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j

Pair (229, 232) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j

Pair (229, 233) with energies 1.0021, 1.0021
 State 229

Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j

Pair (229, 234) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j

Pair (229, 235) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j

Pair (229, 236) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:

|10011100> : amplitude -0.112+0.000j
|10001110> : amplitude -0.112+0.000j
|01011010> : amplitude 0.112+0.000j
|01001000> : amplitude -0.112+0.000j
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j

Pair (229, 237) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j

Pair (229, 238) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j

Pair (229, 239) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j

|10001110> : amplitude -0.112+0.000j
|01011010> : amplitude 0.112+0.000j
|01001000> : amplitude -0.112+0.000j
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j

Pair (229, 240) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j

Pair (229, 241) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j

Pair (229, 242) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j

|01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (229, 243) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

Pair (229, 244) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (229, 245) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j

|01001000> : amplitude -0.112+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (229, 246) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (229, 247) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (229, 248) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j

State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (229, 249) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (229, 250) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (229, 251) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 251

Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (229, 252) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (229, 253) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (229, 254) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 254
Dominant basis-states:

|10011100> : amplitude 0.168+0.000j
|01011010> : amplitude -0.168+0.000j
|10001110> : amplitude 0.168+0.000j
|01001000> : amplitude 0.168+0.000j

Pair (229, 255) with energies 1.0021, 1.0021
 State 229
Dominant basis-states:
 |10011100> : amplitude -0.112+0.000j
 |10001110> : amplitude -0.112+0.000j
 |01011010> : amplitude 0.112+0.000j
 |01001000> : amplitude -0.112+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (230, 231) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j

Pair (230, 232) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j

|00010110> : amplitude 0.173+0.000j
|00000100> : amplitude -0.173+0.000j
|11000010> : amplitude 0.173+0.000j

Pair (230, 233) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j

Pair (230, 234) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j

Pair (230, 235) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j

|01110011> : amplitude -0.174+0.000j
|10110101> : amplitude 0.174+0.000j

Pair (230, 236) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j

Pair (230, 237) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j

Pair (230, 238) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j

|10001001> : amplitude -0.191+0.000j

Pair (230, 239) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j

Pair (230, 240) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j

Pair (230, 241) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j

Pair (230, 242) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (230, 243) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

Pair (230, 244) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (230, 245) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (230, 246) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (230, 247) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (230, 248) with energies 1.0021, 1.0021

State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (230, 249) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (230, 250) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (230, 251) with energies 1.0021, 1.0021
 State 230

Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (230, 252) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (230, 253) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (230, 254) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:

|10100110> : amplitude -0.183+0.000j
|01100000> : amplitude 0.183+0.000j
|01110010> : amplitude 0.183+0.000j
|10110100> : amplitude 0.183+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (230, 255) with energies 1.0021, 1.0021
 State 230
Dominant basis-states:
 |10100110> : amplitude -0.183+0.000j
 |01100000> : amplitude 0.183+0.000j
 |01110010> : amplitude 0.183+0.000j
 |10110100> : amplitude 0.183+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (231, 232) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j

Pair (231, 233) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j

|01110111> : amplitude -0.155+0.000j
|10100011> : amplitude -0.155+0.000j
|10110001> : amplitude 0.155+0.000j
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j

Pair (231, 234) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j

Pair (231, 235) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j

Pair (231, 236) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j

|10100011> : amplitude -0.155+0.000j
|10110001> : amplitude 0.155+0.000j
State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j

Pair (231, 237) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j

Pair (231, 238) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j

Pair (231, 239) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j

|10110001> : amplitude 0.155+0.000j
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j

Pair (231, 240) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j

Pair (231, 241) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j

Pair (231, 242) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j

State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (231, 243) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

Pair (231, 244) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (231, 245) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 245

Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (231, 246) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (231, 247) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (231, 248) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 248
Dominant basis-states:

|10011110> : amplitude -0.195+0.000j
|01011000> : amplitude 0.195+0.000j
|10001100> : amplitude 0.195+0.000j
|01001010> : amplitude 0.195+0.000j

Pair (231, 249) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (231, 250) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (231, 251) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j

|11000001> : amplitude 0.120+0.000j
|00010101> : amplitude -0.120+0.000j
|11010011> : amplitude 0.120+0.000j

Pair (231, 252) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (231, 253) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (231, 254) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j

|10001110> : amplitude 0.168+0.000j
|01001000> : amplitude 0.168+0.000j

Pair (231, 255) with energies 1.0021, 1.0021
 State 231
Dominant basis-states:
 |01100101> : amplitude -0.155+0.000j
 |01110111> : amplitude -0.155+0.000j
 |10100011> : amplitude -0.155+0.000j
 |10110001> : amplitude 0.155+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (232, 233) with energies 1.0021, 1.0021
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j

Pair (232, 234) with energies 1.0021, 1.0021
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j

|00001110> : amplitude 0.134+0.000j

Pair (232, 235) with energies 1.0021, 1.0021
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j

Pair (232, 236) with energies 1.0021, 1.0021
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j

Pair (232, 237) with energies 1.0021, 1.0021
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j

Pair (232, 238) with energies 1.0021, 1.0021
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j

Pair (232, 239) with energies 1.0021, 1.0021
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j

Pair (232, 240) with energies 1.0021, 1.0021
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j

Pair (232, 241) with energies 1.0021, 1.0021
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j

Pair (232, 242) with energies 1.0021, 1.0021
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (232, 243) with energies 1.0021, 1.0021
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

Pair (232, 244) with energies 1.0021, 1.0021

State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j
State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (232, 245) with energies 1.0021, 1.0021
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (232, 246) with energies 1.0021, 1.0021
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (232, 247) with energies 1.0021, 1.0021
 State 232

Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (232, 248) with energies 1.0021, 1.0021
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (232, 249) with energies 1.0021, 1.0021
 State 232
Dominant basis-states:
 |11010000> : amplitude 0.173+0.000j
 |00010110> : amplitude 0.173+0.000j
 |00000100> : amplitude -0.173+0.000j
 |11000010> : amplitude 0.173+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (232, 250) with energies 1.0021, 1.0021
 State 232
Dominant basis-states:

|11010000> : amplitude 0.173+0.000j
|00010110> : amplitude 0.173+0.000j
|00000100> : amplitude -0.173+0.000j
|11000010> : amplitude 0.173+0.000j
State 250
Dominant basis-states:
|10101000> : amplitude 0.156+0.000j
|01101110> : amplitude 0.156+0.000j
|10111010> : amplitude -0.156+0.000j
|01111100> : amplitude 0.156+0.000j

Pair (232, 251) with energies 1.0021, 1.0021
State 232
Dominant basis-states:
|11010000> : amplitude 0.173+0.000j
|00010110> : amplitude 0.173+0.000j
|00000100> : amplitude -0.173+0.000j
|11000010> : amplitude 0.173+0.000j
State 251
Dominant basis-states:
|00000111> : amplitude 0.120+0.000j
|11000001> : amplitude 0.120+0.000j
|00010101> : amplitude -0.120+0.000j
|11010011> : amplitude 0.120+0.000j

Pair (232, 252) with energies 1.0021, 1.0021
State 232
Dominant basis-states:
|11010000> : amplitude 0.173+0.000j
|00010110> : amplitude 0.173+0.000j
|00000100> : amplitude -0.173+0.000j
|11000010> : amplitude 0.173+0.000j
State 252
Dominant basis-states:
|01100100> : amplitude 0.250+0.000j
|01110110> : amplitude -0.250+0.000j
|10110000> : amplitude -0.250+0.000j
|10100010> : amplitude -0.250+0.000j

Pair (232, 253) with energies 1.0021, 1.0021
State 232
Dominant basis-states:
|11010000> : amplitude 0.173+0.000j

|00010110> : amplitude 0.173+0.000j
|00000100> : amplitude -0.173+0.000j
|11000010> : amplitude 0.173+0.000j
State 253
Dominant basis-states:
|00010101> : amplitude -0.256+0.000j
|11010011> : amplitude 0.256+0.000j
|11000001> : amplitude 0.256+0.000j
|00000111> : amplitude 0.256+0.000j

Pair (232, 254) with energies 1.0021, 1.0021
State 232
Dominant basis-states:
|11010000> : amplitude 0.173+0.000j
|00010110> : amplitude 0.173+0.000j
|00000100> : amplitude -0.173+0.000j
|11000010> : amplitude 0.173+0.000j
State 254
Dominant basis-states:
|10011100> : amplitude 0.168+0.000j
|01011010> : amplitude -0.168+0.000j
|10001110> : amplitude 0.168+0.000j
|01001000> : amplitude 0.168+0.000j

Pair (232, 255) with energies 1.0021, 1.0021
State 232
Dominant basis-states:
|11010000> : amplitude 0.173+0.000j
|00010110> : amplitude 0.173+0.000j
|00000100> : amplitude -0.173+0.000j
|11000010> : amplitude 0.173+0.000j
State 255
Dominant basis-states:
|10101001> : amplitude 0.155+0.000j
|01101111> : amplitude -0.155+0.000j
|01111101> : amplitude 0.155+0.000j
|10111011> : amplitude 0.155+0.000j

Pair (233, 234) with energies 1.0021, 1.0021
State 233
Dominant basis-states:
|11110000> : amplitude 0.136+0.000j
|00110110> : amplitude 0.136+0.000j

|11100010> : amplitude -0.136+0.000j
|00100100> : amplitude 0.136+0.000j
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j

Pair (233, 235) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j

Pair (233, 236) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j

Pair (233, 237) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j

|00100100> : amplitude 0.136+0.000j
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j

Pair (233, 238) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j

Pair (233, 239) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j

Pair (233, 240) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j

State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j

Pair (233, 241) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j

Pair (233, 242) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (233, 243) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 243

Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

Pair (233, 244) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (233, 245) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (233, 246) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 246
Dominant basis-states:

|11001110> : amplitude -0.154+0.000j
|00001000> : amplitude -0.154+0.000j
|11011100> : amplitude 0.154+0.000j
|00011010> : amplitude -0.154+0.000j

Pair (233, 247) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (233, 248) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (233, 249) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j

|01111010> : amplitude 0.152+0.000j
|10101110> : amplitude 0.152+0.000j
|01101000> : amplitude 0.152+0.000j

Pair (233, 250) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (233, 251) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (233, 252) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j

|10110000> : amplitude -0.250+0.000j
|10100010> : amplitude -0.250+0.000j

Pair (233, 253) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (233, 254) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (233, 255) with energies 1.0021, 1.0021
 State 233
Dominant basis-states:
 |11110000> : amplitude 0.136+0.000j
 |00110110> : amplitude 0.136+0.000j
 |11100010> : amplitude -0.136+0.000j
 |00100100> : amplitude 0.136+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j

|10111011> : amplitude 0.155+0.000j

Pair (234, 235) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j

Pair (234, 236) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j

Pair (234, 237) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j

Pair (234, 238) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j

Pair (234, 239) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j

Pair (234, 240) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j

Pair (234, 241) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j

Pair (234, 242) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (234, 243) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

Pair (234, 244) with energies 1.0021, 1.0021

State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (234, 245) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (234, 246) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (234, 247) with energies 1.0021, 1.0021
 State 234

Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (234, 248) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (234, 249) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (234, 250) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:

|11011010> : amplitude -0.134+0.000j
|00011100> : amplitude 0.134+0.000j
|11001000> : amplitude 0.134+0.000j
|00001110> : amplitude 0.134+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (234, 251) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (234, 252) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (234, 253) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j

|00011100> : amplitude 0.134+0.000j
|11001000> : amplitude 0.134+0.000j
|00001110> : amplitude 0.134+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (234, 254) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (234, 255) with energies 1.0021, 1.0021
 State 234
Dominant basis-states:
 |11011010> : amplitude -0.134+0.000j
 |00011100> : amplitude 0.134+0.000j
 |11001000> : amplitude 0.134+0.000j
 |00001110> : amplitude 0.134+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (235, 236) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j

|01110011> : amplitude -0.174+0.000j
|10110101> : amplitude 0.174+0.000j
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j

Pair (235, 237) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j

Pair (235, 238) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j

Pair (235, 239) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j

|10110101> : amplitude 0.174+0.000j
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j

Pair (235, 240) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j

Pair (235, 241) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j

Pair (235, 242) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j

State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (235, 243) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

Pair (235, 244) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (235, 245) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j
 State 245

Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (235, 246) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (235, 247) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (235, 248) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j
 State 248
Dominant basis-states:

|10011110> : amplitude -0.195+0.000j
|01011000> : amplitude 0.195+0.000j
|10001100> : amplitude 0.195+0.000j
|01001010> : amplitude 0.195+0.000j

Pair (235, 249) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (235, 250) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (235, 251) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j

|11000001> : amplitude 0.120+0.000j
|00010101> : amplitude -0.120+0.000j
|11010011> : amplitude 0.120+0.000j

Pair (235, 252) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (235, 253) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (235, 254) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j

|10001110> : amplitude 0.168+0.000j
|01001000> : amplitude 0.168+0.000j

Pair (235, 255) with energies 1.0021, 1.0021
 State 235
Dominant basis-states:
 |10100111> : amplitude 0.174+0.000j
 |01100001> : amplitude 0.174+0.000j
 |01110011> : amplitude -0.174+0.000j
 |10110101> : amplitude 0.174+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (236, 237) with energies 1.0021, 1.0021
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j

Pair (236, 238) with energies 1.0021, 1.0021
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j

|10001001> : amplitude -0.191+0.000j

Pair (236, 239) with energies 1.0021, 1.0021
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j

Pair (236, 240) with energies 1.0021, 1.0021
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j

Pair (236, 241) with energies 1.0021, 1.0021
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j

Pair (236, 242) with energies 1.0021, 1.0021
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (236, 243) with energies 1.0021, 1.0021
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

Pair (236, 244) with energies 1.0021, 1.0021
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (236, 245) with energies 1.0021, 1.0021
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (236, 246) with energies 1.0021, 1.0021
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (236, 247) with energies 1.0021, 1.0021
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (236, 248) with energies 1.0021, 1.0021

State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (236, 249) with energies 1.0021, 1.0021
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (236, 250) with energies 1.0021, 1.0021
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (236, 251) with energies 1.0021, 1.0021
 State 236

Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (236, 252) with energies 1.0021, 1.0021
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (236, 253) with energies 1.0021, 1.0021
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (236, 254) with energies 1.0021, 1.0021
 State 236
Dominant basis-states:

|00100000> : amplitude -0.214+0.000j
|11100110> : amplitude 0.214+0.000j
|00110010> : amplitude 0.214+0.000j
|11110100> : amplitude 0.214+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (236, 255) with energies 1.0021, 1.0021
 State 236
Dominant basis-states:
 |00100000> : amplitude -0.214+0.000j
 |11100110> : amplitude 0.214+0.000j
 |00110010> : amplitude 0.214+0.000j
 |11110100> : amplitude 0.214+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (237, 238) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j

Pair (237, 239) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j

|11010010> : amplitude -0.268+0.000j
|00000110> : amplitude -0.268+0.000j
|11000000> : amplitude 0.268+0.000j
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j

Pair (237, 240) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j

Pair (237, 241) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j

Pair (237, 242) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j

|00000110> : amplitude -0.268+0.000j
|11000000> : amplitude 0.268+0.000j
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (237, 243) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

Pair (237, 244) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (237, 245) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j

|11000000> : amplitude 0.268+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (237, 246) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (237, 247) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (237, 248) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j

State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (237, 249) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (237, 250) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (237, 251) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j
 State 251

Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (237, 252) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (237, 253) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (237, 254) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j
 State 254
Dominant basis-states:

|10011100> : amplitude 0.168+0.000j
|01011010> : amplitude -0.168+0.000j
|10001110> : amplitude 0.168+0.000j
|01001000> : amplitude 0.168+0.000j

Pair (237, 255) with energies 1.0021, 1.0021
 State 237
Dominant basis-states:
 |00010100> : amplitude -0.268+0.000j
 |11010010> : amplitude -0.268+0.000j
 |00000110> : amplitude -0.268+0.000j
 |11000000> : amplitude 0.268+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (238, 239) with energies 1.0021, 1.0021
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j

Pair (238, 240) with energies 1.0021, 1.0021
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j

|00110011> : amplitude 0.158+0.000j
|00100001> : amplitude 0.158+0.000j
|11100111> : amplitude 0.158+0.000j

Pair (238, 241) with energies 1.0021, 1.0021
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j

Pair (238, 242) with energies 1.0021, 1.0021
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (238, 243) with energies 1.0021, 1.0021
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j

|01001111> : amplitude -0.136+0.000j
|10001001> : amplitude 0.136+0.000j

Pair (238, 244) with energies 1.0021, 1.0021
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (238, 245) with energies 1.0021, 1.0021
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (238, 246) with energies 1.0021, 1.0021
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j

|00011010> : amplitude -0.154+0.000j

Pair (238, 247) with energies 1.0021, 1.0021
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (238, 248) with energies 1.0021, 1.0021
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (238, 249) with energies 1.0021, 1.0021
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (238, 250) with energies 1.0021, 1.0021
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (238, 251) with energies 1.0021, 1.0021
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (238, 252) with energies 1.0021, 1.0021
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (238, 253) with energies 1.0021, 1.0021
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (238, 254) with energies 1.0021, 1.0021
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (238, 255) with energies 1.0021, 1.0021
 State 238
Dominant basis-states:
 |01001111> : amplitude 0.191+0.000j
 |01011101> : amplitude 0.191+0.000j
 |10011011> : amplitude 0.191+0.000j
 |10001001> : amplitude -0.191+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (239, 240) with energies 1.0021, 1.0021

State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j

Pair (239, 241) with energies 1.0021, 1.0021
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j

Pair (239, 242) with energies 1.0021, 1.0021
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (239, 243) with energies 1.0021, 1.0021
 State 239

Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

Pair (239, 244) with energies 1.0021, 1.0021
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (239, 245) with energies 1.0021, 1.0021
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (239, 246) with energies 1.0021, 1.0021
 State 239
Dominant basis-states:

|10111111> : amplitude -0.175+0.000j
|01101011> : amplitude -0.175+0.000j
|10101101> : amplitude 0.175+0.000j
|01111001> : amplitude -0.175+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (239, 247) with energies 1.0021, 1.0021
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (239, 248) with energies 1.0021, 1.0021
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (239, 249) with energies 1.0021, 1.0021
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j

|01101011> : amplitude -0.175+0.000j
|10101101> : amplitude 0.175+0.000j
|01111001> : amplitude -0.175+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (239, 250) with energies 1.0021, 1.0021
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (239, 251) with energies 1.0021, 1.0021
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (239, 252) with energies 1.0021, 1.0021
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j

|10101101> : amplitude 0.175+0.000j
|01111001> : amplitude -0.175+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (239, 253) with energies 1.0021, 1.0021
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (239, 254) with energies 1.0021, 1.0021
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j
 |01111001> : amplitude -0.175+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (239, 255) with energies 1.0021, 1.0021
 State 239
Dominant basis-states:
 |10111111> : amplitude -0.175+0.000j
 |01101011> : amplitude -0.175+0.000j
 |10101101> : amplitude 0.175+0.000j

|01111001> : amplitude -0.175+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (240, 241) with energies 1.0021, 1.0021
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j

Pair (240, 242) with energies 1.0021, 1.0021
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (240, 243) with energies 1.0021, 1.0021
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j

State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

Pair (240, 244) with energies 1.0021, 1.0021
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (240, 245) with energies 1.0021, 1.0021
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (240, 246) with energies 1.0021, 1.0021
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j
 State 246

Dominant basis-states:
  |11001110> : amplitude -0.154+0.000j
  |00001000> : amplitude -0.154+0.000j
  |11011100> : amplitude 0.154+0.000j
  |00011010> : amplitude -0.154+0.000j

Pair (240, 247) with energies 1.0021, 1.0021
 State 240
Dominant basis-states:
  |11110101> : amplitude -0.158+0.000j
  |00110011> : amplitude 0.158+0.000j
  |00100001> : amplitude 0.158+0.000j
  |11100111> : amplitude 0.158+0.000j
 State 247
Dominant basis-states:
  |10101111> : amplitude -0.190+0.000j
  |01111011> : amplitude -0.190+0.000j
  |01101001> : amplitude 0.190+0.000j
  |10111101> : amplitude -0.190+0.000j

Pair (240, 248) with energies 1.0021, 1.0021
 State 240
Dominant basis-states:
  |11110101> : amplitude -0.158+0.000j
  |00110011> : amplitude 0.158+0.000j
  |00100001> : amplitude 0.158+0.000j
  |11100111> : amplitude 0.158+0.000j
 State 248
Dominant basis-states:
  |10011110> : amplitude -0.195+0.000j
  |01011000> : amplitude 0.195+0.000j
  |10001100> : amplitude 0.195+0.000j
  |01001010> : amplitude 0.195+0.000j

Pair (240, 249) with energies 1.0021, 1.0021
 State 240
Dominant basis-states:
  |11110101> : amplitude -0.158+0.000j
  |00110011> : amplitude 0.158+0.000j
  |00100001> : amplitude 0.158+0.000j
  |11100111> : amplitude 0.158+0.000j
 State 249
Dominant basis-states:

|10111100> : amplitude -0.152+0.000j
|01111010> : amplitude 0.152+0.000j
|10101110> : amplitude 0.152+0.000j
|01101000> : amplitude 0.152+0.000j

Pair (240, 250) with energies 1.0021, 1.0021
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (240, 251) with energies 1.0021, 1.0021
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (240, 252) with energies 1.0021, 1.0021
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j

|01110110> : amplitude -0.250+0.000j
|10110000> : amplitude -0.250+0.000j
|10100010> : amplitude -0.250+0.000j

Pair (240, 253) with energies 1.0021, 1.0021
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (240, 254) with energies 1.0021, 1.0021
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (240, 255) with energies 1.0021, 1.0021
 State 240
Dominant basis-states:
 |11110101> : amplitude -0.158+0.000j
 |00110011> : amplitude 0.158+0.000j
 |00100001> : amplitude 0.158+0.000j
 |11100111> : amplitude 0.158+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j

|01111101> : amplitude 0.155+0.000j
|10111011> : amplitude 0.155+0.000j

Pair (241, 242) with energies 1.0021, 1.0021
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j

Pair (241, 243) with energies 1.0021, 1.0021
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

Pair (241, 244) with energies 1.0021, 1.0021
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j

|10100100> : amplitude 0.188+0.000j

Pair (241, 245) with energies 1.0021, 1.0021
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (241, 246) with energies 1.0021, 1.0021
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (241, 247) with energies 1.0021, 1.0021
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (241, 248) with energies 1.0021, 1.0021
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (241, 249) with energies 1.0021, 1.0021
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (241, 250) with energies 1.0021, 1.0021
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (241, 251) with energies 1.0021, 1.0021
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (241, 252) with energies 1.0021, 1.0021
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (241, 253) with energies 1.0021, 1.0021
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (241, 254) with energies 1.0021, 1.0021

State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (241, 255) with energies 1.0021, 1.0021
 State 241
Dominant basis-states:
 |10000110> : amplitude -0.252+0.000j
 |01000000> : amplitude 0.252+0.000j
 |10010100> : amplitude -0.252+0.000j
 |01010010> : amplitude -0.252+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (242, 243) with energies 1.0021, 1.0021
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

Pair (242, 244) with energies 1.0021, 1.0021
 State 242

Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (242, 245) with energies 1.0021, 1.0021
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (242, 246) with energies 1.0021, 1.0021
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (242, 247) with energies 1.0021, 1.0021
 State 242
Dominant basis-states:

|11010100> : amplitude 0.354+0.000j
|00010010> : amplitude 0.354+0.000j
|11000110> : amplitude -0.354+0.000j
|00000000> : amplitude 0.354+0.000j
State 247
Dominant basis-states:
|10101111> : amplitude -0.190+0.000j
|01111011> : amplitude -0.190+0.000j
|01101001> : amplitude 0.190+0.000j
|10111101> : amplitude -0.190+0.000j

Pair (242, 248) with energies 1.0021, 1.0021
State 242
Dominant basis-states:
|11010100> : amplitude 0.354+0.000j
|00010010> : amplitude 0.354+0.000j
|11000110> : amplitude -0.354+0.000j
|00000000> : amplitude 0.354+0.000j
State 248
Dominant basis-states:
|10011110> : amplitude -0.195+0.000j
|01011000> : amplitude 0.195+0.000j
|10001100> : amplitude 0.195+0.000j
|01001010> : amplitude 0.195+0.000j

Pair (242, 249) with energies 1.0021, 1.0021
State 242
Dominant basis-states:
|11010100> : amplitude 0.354+0.000j
|00010010> : amplitude 0.354+0.000j
|11000110> : amplitude -0.354+0.000j
|00000000> : amplitude 0.354+0.000j
State 249
Dominant basis-states:
|10111100> : amplitude -0.152+0.000j
|01111010> : amplitude 0.152+0.000j
|10101110> : amplitude 0.152+0.000j
|01101000> : amplitude 0.152+0.000j

Pair (242, 250) with energies 1.0021, 1.0021
State 242
Dominant basis-states:
|11010100> : amplitude 0.354+0.000j

|00010010> : amplitude 0.354+0.000j
|11000110> : amplitude -0.354+0.000j
|00000000> : amplitude 0.354+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (242, 251) with energies 1.0021, 1.0021
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (242, 252) with energies 1.0021, 1.0021
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j
 |11000110> : amplitude -0.354+0.000j
 |00000000> : amplitude 0.354+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (242, 253) with energies 1.0021, 1.0021
 State 242
Dominant basis-states:
 |11010100> : amplitude 0.354+0.000j
 |00010010> : amplitude 0.354+0.000j

|11000110> : amplitude -0.354+0.000j
|00000000> : amplitude 0.354+0.000j
State 253
Dominant basis-states:
|00010101> : amplitude -0.256+0.000j
|11010011> : amplitude 0.256+0.000j
|11000001> : amplitude 0.256+0.000j
|00000111> : amplitude 0.256+0.000j

Pair (242, 254) with energies 1.0021, 1.0021
State 242
Dominant basis-states:
|11010100> : amplitude 0.354+0.000j
|00010010> : amplitude 0.354+0.000j
|11000110> : amplitude -0.354+0.000j
|00000000> : amplitude 0.354+0.000j
State 254
Dominant basis-states:
|10011100> : amplitude 0.168+0.000j
|01011010> : amplitude -0.168+0.000j
|10001110> : amplitude 0.168+0.000j
|01001000> : amplitude 0.168+0.000j

Pair (242, 255) with energies 1.0021, 1.0021
State 242
Dominant basis-states:
|11010100> : amplitude 0.354+0.000j
|00010010> : amplitude 0.354+0.000j
|11000110> : amplitude -0.354+0.000j
|00000000> : amplitude 0.354+0.000j
State 255
Dominant basis-states:
|10101001> : amplitude 0.155+0.000j
|01101111> : amplitude -0.155+0.000j
|01111101> : amplitude 0.155+0.000j
|10111011> : amplitude 0.155+0.000j

Pair (243, 244) with energies 1.0021, 1.0021
State 243
Dominant basis-states:
|01011101> : amplitude -0.136+0.000j
|10011011> : amplitude -0.136+0.000j
|01001111> : amplitude -0.136+0.000j

|10001001> : amplitude 0.136+0.000j
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j

Pair (243, 245) with energies 1.0021, 1.0021
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j

Pair (243, 246) with energies 1.0021, 1.0021
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (243, 247) with energies 1.0021, 1.0021
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j

State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (243, 248) with energies 1.0021, 1.0021
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (243, 249) with energies 1.0021, 1.0021
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (243, 250) with energies 1.0021, 1.0021
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j
 State 250

Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (243, 251) with energies 1.0021, 1.0021
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (243, 252) with energies 1.0021, 1.0021
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (243, 253) with energies 1.0021, 1.0021
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j
 State 253
Dominant basis-states:

|00010101> : amplitude -0.256+0.000j
|11010011> : amplitude 0.256+0.000j
|11000001> : amplitude 0.256+0.000j
|00000111> : amplitude 0.256+0.000j

Pair (243, 254) with energies 1.0021, 1.0021
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (243, 255) with energies 1.0021, 1.0021
 State 243
Dominant basis-states:
 |01011101> : amplitude -0.136+0.000j
 |10011011> : amplitude -0.136+0.000j
 |01001111> : amplitude -0.136+0.000j
 |10001001> : amplitude 0.136+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (244, 245) with energies 1.0021, 1.0021
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j

|01010111> : amplitude -0.130+0.000j
|10000011> : amplitude 0.130+0.000j
|01000101> : amplitude 0.130+0.000j

Pair (244, 246) with energies 1.0021, 1.0021
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (244, 247) with energies 1.0021, 1.0021
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (244, 248) with energies 1.0021, 1.0021
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j

|10001100> : amplitude 0.195+0.000j
|01001010> : amplitude 0.195+0.000j

Pair (244, 249) with energies 1.0021, 1.0021
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (244, 250) with energies 1.0021, 1.0021
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (244, 251) with energies 1.0021, 1.0021
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j

|11010011> : amplitude 0.120+0.000j

Pair (244, 252) with energies 1.0021, 1.0021
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (244, 253) with energies 1.0021, 1.0021
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (244, 254) with energies 1.0021, 1.0021
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (244, 255) with energies 1.0021, 1.0021
 State 244
Dominant basis-states:
 |10110110> : amplitude 0.188+0.000j
 |01110000> : amplitude 0.188+0.000j
 |01100010> : amplitude -0.188+0.000j
 |10100100> : amplitude 0.188+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (245, 246) with energies 1.0021, 1.0021
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j

Pair (245, 247) with energies 1.0021, 1.0021
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (245, 248) with energies 1.0021, 1.0021
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (245, 249) with energies 1.0021, 1.0021
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (245, 250) with energies 1.0021, 1.0021
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (245, 251) with energies 1.0021, 1.0021

State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j
State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (245, 252) with energies 1.0021, 1.0021
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (245, 253) with energies 1.0021, 1.0021
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (245, 254) with energies 1.0021, 1.0021
 State 245

Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (245, 255) with energies 1.0021, 1.0021
 State 245
Dominant basis-states:
 |10010001> : amplitude 0.130+0.000j
 |01010111> : amplitude -0.130+0.000j
 |10000011> : amplitude 0.130+0.000j
 |01000101> : amplitude 0.130+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (246, 247) with energies 1.0021, 1.0021
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

Pair (246, 248) with energies 1.0021, 1.0021
 State 246
Dominant basis-states:

|11001110> : amplitude -0.154+0.000j
|00001000> : amplitude -0.154+0.000j
|11011100> : amplitude 0.154+0.000j
|00011010> : amplitude -0.154+0.000j
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (246, 249) with energies 1.0021, 1.0021
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (246, 250) with energies 1.0021, 1.0021
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (246, 251) with energies 1.0021, 1.0021
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j

|00001000> : amplitude -0.154+0.000j
|11011100> : amplitude 0.154+0.000j
|00011010> : amplitude -0.154+0.000j
State 251
Dominant basis-states:
|00000111> : amplitude 0.120+0.000j
|11000001> : amplitude 0.120+0.000j
|00010101> : amplitude -0.120+0.000j
|11010011> : amplitude 0.120+0.000j

Pair (246, 252) with energies 1.0021, 1.0021
State 246
Dominant basis-states:
|11001110> : amplitude -0.154+0.000j
|00001000> : amplitude -0.154+0.000j
|11011100> : amplitude 0.154+0.000j
|00011010> : amplitude -0.154+0.000j
State 252
Dominant basis-states:
|01100100> : amplitude 0.250+0.000j
|01110110> : amplitude -0.250+0.000j
|10110000> : amplitude -0.250+0.000j
|10100010> : amplitude -0.250+0.000j

Pair (246, 253) with energies 1.0021, 1.0021
State 246
Dominant basis-states:
|11001110> : amplitude -0.154+0.000j
|00001000> : amplitude -0.154+0.000j
|11011100> : amplitude 0.154+0.000j
|00011010> : amplitude -0.154+0.000j
State 253
Dominant basis-states:
|00010101> : amplitude -0.256+0.000j
|11010011> : amplitude 0.256+0.000j
|11000001> : amplitude 0.256+0.000j
|00000111> : amplitude 0.256+0.000j

Pair (246, 254) with energies 1.0021, 1.0021
State 246
Dominant basis-states:
|11001110> : amplitude -0.154+0.000j
|00001000> : amplitude -0.154+0.000j

|11011100> : amplitude 0.154+0.000j
|00011010> : amplitude -0.154+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (246, 255) with energies 1.0021, 1.0021
 State 246
Dominant basis-states:
 |11001110> : amplitude -0.154+0.000j
 |00001000> : amplitude -0.154+0.000j
 |11011100> : amplitude 0.154+0.000j
 |00011010> : amplitude -0.154+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (247, 248) with energies 1.0021, 1.0021
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j

Pair (247, 249) with energies 1.0021, 1.0021
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j

|10111101> : amplitude -0.190+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (247, 250) with energies 1.0021, 1.0021
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (247, 251) with energies 1.0021, 1.0021
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (247, 252) with energies 1.0021, 1.0021
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j

State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (247, 253) with energies 1.0021, 1.0021
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (247, 254) with energies 1.0021, 1.0021
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (247, 255) with energies 1.0021, 1.0021
 State 247
Dominant basis-states:
 |10101111> : amplitude -0.190+0.000j
 |01111011> : amplitude -0.190+0.000j
 |01101001> : amplitude 0.190+0.000j
 |10111101> : amplitude -0.190+0.000j
 State 255

Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (248, 249) with energies 1.0021, 1.0021
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j

Pair (248, 250) with energies 1.0021, 1.0021
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (248, 251) with energies 1.0021, 1.0021
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j
 State 251
Dominant basis-states:

|00000111> : amplitude 0.120+0.000j
|11000001> : amplitude 0.120+0.000j
|00010101> : amplitude -0.120+0.000j
|11010011> : amplitude 0.120+0.000j

Pair (248, 252) with energies 1.0021, 1.0021
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (248, 253) with energies 1.0021, 1.0021
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (248, 254) with energies 1.0021, 1.0021
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j

|01011010> : amplitude -0.168+0.000j
|10001110> : amplitude 0.168+0.000j
|01001000> : amplitude 0.168+0.000j

Pair (248, 255) with energies 1.0021, 1.0021
 State 248
Dominant basis-states:
 |10011110> : amplitude -0.195+0.000j
 |01011000> : amplitude 0.195+0.000j
 |10001100> : amplitude 0.195+0.000j
 |01001010> : amplitude 0.195+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (249, 250) with energies 1.0021, 1.0021
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j

Pair (249, 251) with energies 1.0021, 1.0021
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j

|00010101> : amplitude -0.120+0.000j
|11010011> : amplitude 0.120+0.000j

Pair (249, 252) with energies 1.0021, 1.0021
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (249, 253) with energies 1.0021, 1.0021
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (249, 254) with energies 1.0021, 1.0021
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j

|01001000> : amplitude 0.168+0.000j

Pair (249, 255) with energies 1.0021, 1.0021
 State 249
Dominant basis-states:
 |10111100> : amplitude -0.152+0.000j
 |01111010> : amplitude 0.152+0.000j
 |10101110> : amplitude 0.152+0.000j
 |01101000> : amplitude 0.152+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (250, 251) with energies 1.0021, 1.0021
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j

Pair (250, 252) with energies 1.0021, 1.0021
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (250, 253) with energies 1.0021, 1.0021
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (250, 254) with energies 1.0021, 1.0021
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (250, 255) with energies 1.0021, 1.0021
 State 250
Dominant basis-states:
 |10101000> : amplitude 0.156+0.000j
 |01101110> : amplitude 0.156+0.000j
 |10111010> : amplitude -0.156+0.000j
 |01111100> : amplitude 0.156+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (251, 252) with energies 1.0021, 1.0021
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j
 State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j

Pair (251, 253) with energies 1.0021, 1.0021
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (251, 254) with energies 1.0021, 1.0021
 State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (251, 255) with energies 1.0021, 1.0021

State 251
Dominant basis-states:
 |00000111> : amplitude 0.120+0.000j
 |11000001> : amplitude 0.120+0.000j
 |00010101> : amplitude -0.120+0.000j
 |11010011> : amplitude 0.120+0.000j
State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (252, 253) with energies 1.0021, 1.0021
State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j
State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j

Pair (252, 254) with energies 1.0021, 1.0021
State 252
Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j
State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (252, 255) with energies 1.0021, 1.0021
State 252

Dominant basis-states:
 |01100100> : amplitude 0.250+0.000j
 |01110110> : amplitude -0.250+0.000j
 |10110000> : amplitude -0.250+0.000j
 |10100010> : amplitude -0.250+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (253, 254) with energies 1.0021, 1.0021
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j
 State 254
Dominant basis-states:
 |10011100> : amplitude 0.168+0.000j
 |01011010> : amplitude -0.168+0.000j
 |10001110> : amplitude 0.168+0.000j
 |01001000> : amplitude 0.168+0.000j

Pair (253, 255) with energies 1.0021, 1.0021
 State 253
Dominant basis-states:
 |00010101> : amplitude -0.256+0.000j
 |11010011> : amplitude 0.256+0.000j
 |11000001> : amplitude 0.256+0.000j
 |00000111> : amplitude 0.256+0.000j
 State 255
Dominant basis-states:
 |10101001> : amplitude 0.155+0.000j
 |01101111> : amplitude -0.155+0.000j
 |01111101> : amplitude 0.155+0.000j
 |10111011> : amplitude 0.155+0.000j

Pair (254, 255) with energies 1.0021, 1.0021
 State 254
Dominant basis-states:

```
|10011100> : amplitude 0.168+0.000j
|01011010> : amplitude -0.168+0.000j
|10001110> : amplitude 0.168+0.000j
|01001000> : amplitude 0.168+0.000j
State 255
Dominant basis-states:
|10101001> : amplitude 0.155+0.000j
|01101111> : amplitude -0.155+0.000j
|01111101> : amplitude 0.155+0.000j
|10111011> : amplitude 0.155+0.000j
```

4.2.3.5 Raw Output (Part 5)

Process finished with exit code 0

4.3 Interpretation of Results

Patterns observed across expanded Hilbert space.

4.5. Proposed Next Steps (toward v0.4)

Integration with backend; stability metrics.

5. System Architecture

The proposed pipeline consists of:

5.1 Hamiltonian Library

A structured set of analytic and synthetic Hamiltonians chosen for their symmetry and noise-relevant properties.

5.2 AI Discovery Engine

Neural architectures trained to detect approximate symmetries, conserved quantities, and low-decoherence regions.

5.3 Dynamics Simulator

Time evolution tools that assess stability under realistic noise models.

5.4 Stability Scoring

Metrics comparing candidate subspaces with standard qubits, emphasizing error resilience.

5.5 Realization Filter

A mapping from candidate encodings to feasible physical platforms (superconducting, trapped ions, photonics, etc.).

6. Related Work

This work aligns with emerging research in:

• quantum optimal control

• variational subspace discovery

• symmetry-protected quantum information (SPT phases)

• AI-assisted Hamiltonian learning

• topological computation

These areas suggest that alternative information encodings may be physically meaningful and computationally useful.

7. Limitations

This work remains conceptual. Key limitations include:

• absence of numerical results (future work)

• no guarantee that discovered subspaces will outperform qubits

• uncertainties in physical realizability

• potentially high computational cost in large Hamiltonian spaces

Nonetheless, the conceptual framework motivates further exploration.

8. Discussion and Outlook

If physics-native information units exist and can be systematically identified, the implications may include:

• reduced qubit overhead

• architectures aligned with underlying physical structure

• new pathways for error resilience

• a return to Feynman's intuition about computation following physics

Future work will extend the Hamiltonian library, develop prototype AI models, and perform stability tests.

8.1 Future Work Roadmap

The present whitepaper represents an initial exploration of physics-native information units emerging from Hamiltonian structure. Several directions now naturally follow from the numerical evidence and prototype implementations presented above:

(1) Expanded Hamiltonian Sampling

Future versions will extend the random-Hamiltonian scan from two-qubit systems to larger Hilbert spaces, enabling statistical characterization of how often degenerate and near-degenerate subspaces arise as a function of qubit count, coupling structure, and operator distribution.

(2) Subspace Stability Analysis

A next step is to evaluate the robustness of identified subspaces under perturbations, noise channels, and drift in Hamiltonian coefficients. This includes constructing projectors such as:

$$P = \sum_k |\psi_k\rangle\langle\psi_k|$$

and testing their invariance properties under decoherence models.

(3) Backend Validation on Real Quantum Hardware

The Qiskit prototype will be extended to execute selected Hamiltonians and projectors on cloud-accessible quantum processors. This will provide empirical insight into how physics-native subspaces behave under real device noise and calibration cycles.

(4) Operator-Algebraic Encoding Framework

The long-term goal is to explore whether the subspaces identified by the AI-assisted pipeline form the basis for stable logical units. This includes studying the algebra of operators acting within the subspaces and evaluating whether they support gate sets with low induced noise.

(5) Integration into the AI-First Architecture (Version 2.0)

The next major version of the system will integrate multi-qubit Hamiltonian sampling, degeneracy detection, projector synthesis, and backend evaluation into a unified pipeline capable of proposing, evaluating, and ranking candidate physics-native encodings.

To be continued in Version 1.2, where larger-qubit analyses, projector-based subspace encoding, and backend validation will be added.

References

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[2] Kitaev, A. (2001). Unpaired Majorana Fermions.

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[4] Feynman, R. P. (1982). Simulating Physics with Computers.

[5] Various authors on quantum optimal control and symmetry-protected subspaces.