

Complete Statistical Analysis Report

Filename: unemployment_rate_by_age_groups.csv

Number of permutations: 10

Number of bootstrap samples: 10

Row bootstrap sample fraction: 90.0%

Column bootstrap sample fraction: 90.0%

Number of perturbations: 10

Scale factor for perturbations: 0.1

Skip columns: 5

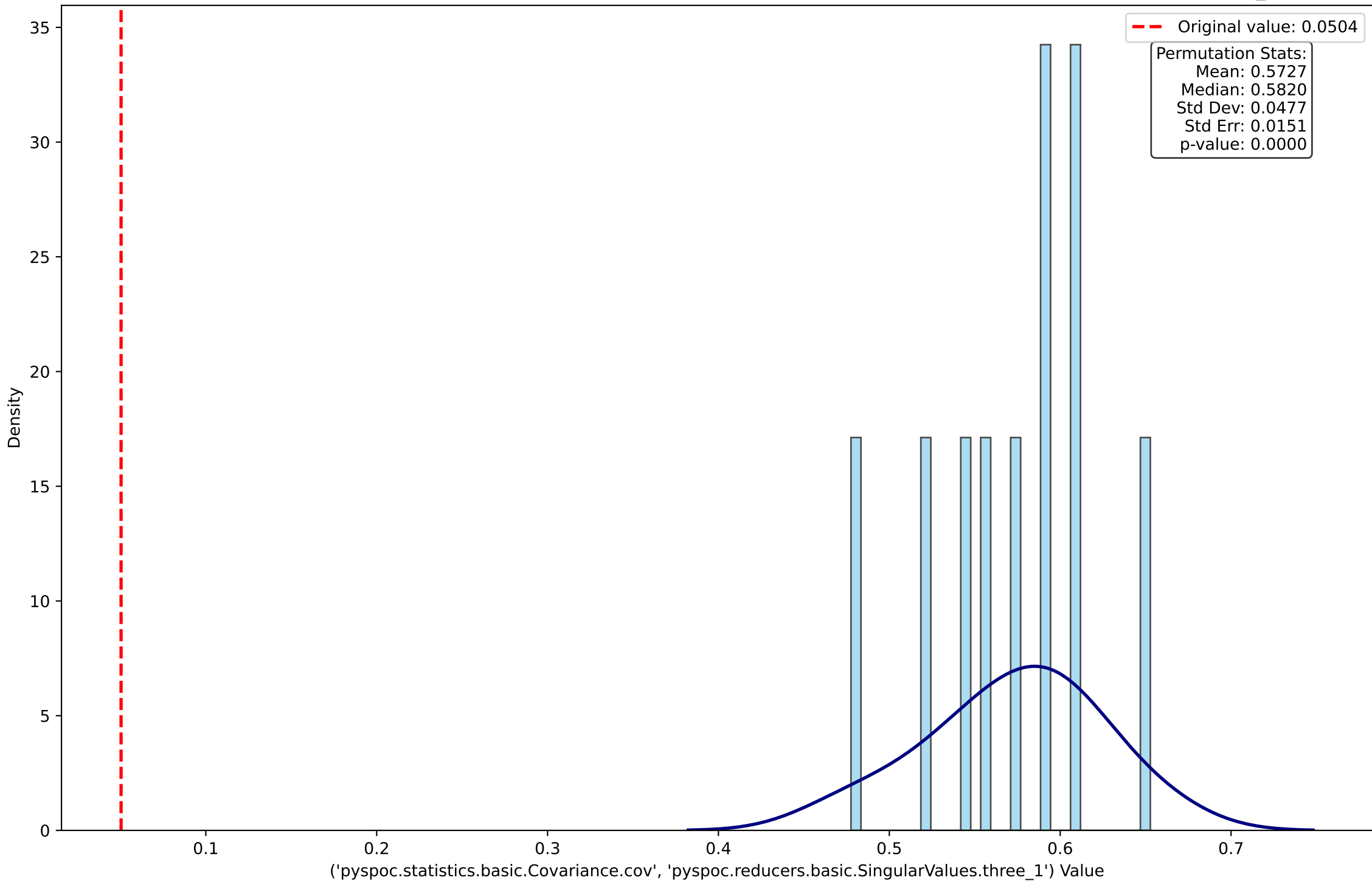
Normalization: z-score

Random seed: 42

Analysis Methods:

- Permutation Test: Tests statistical significance
- Row Bootstrap: Tests robustness to sample variation
- Column Bootstrap: Tests robustness to feature selection

Permutation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three_1')



Permutation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three_2')

Original value: 0.0107

Permutation Stats:
Mean: 0.2600
Median: 0.2585
Std Dev: 0.0149
Std Err: 0.0047
p-value: 0.0000

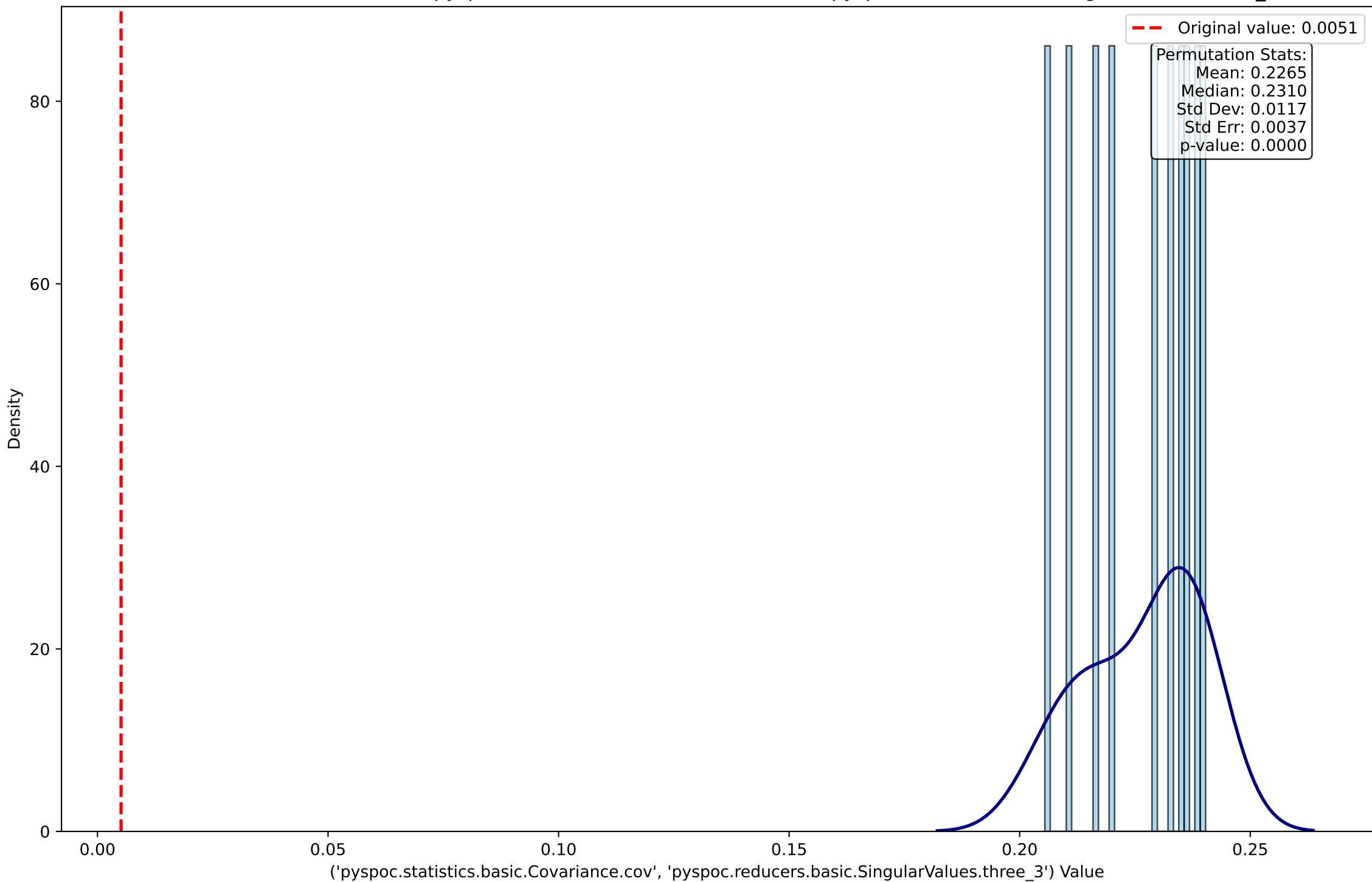
Density

('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three_2') Value

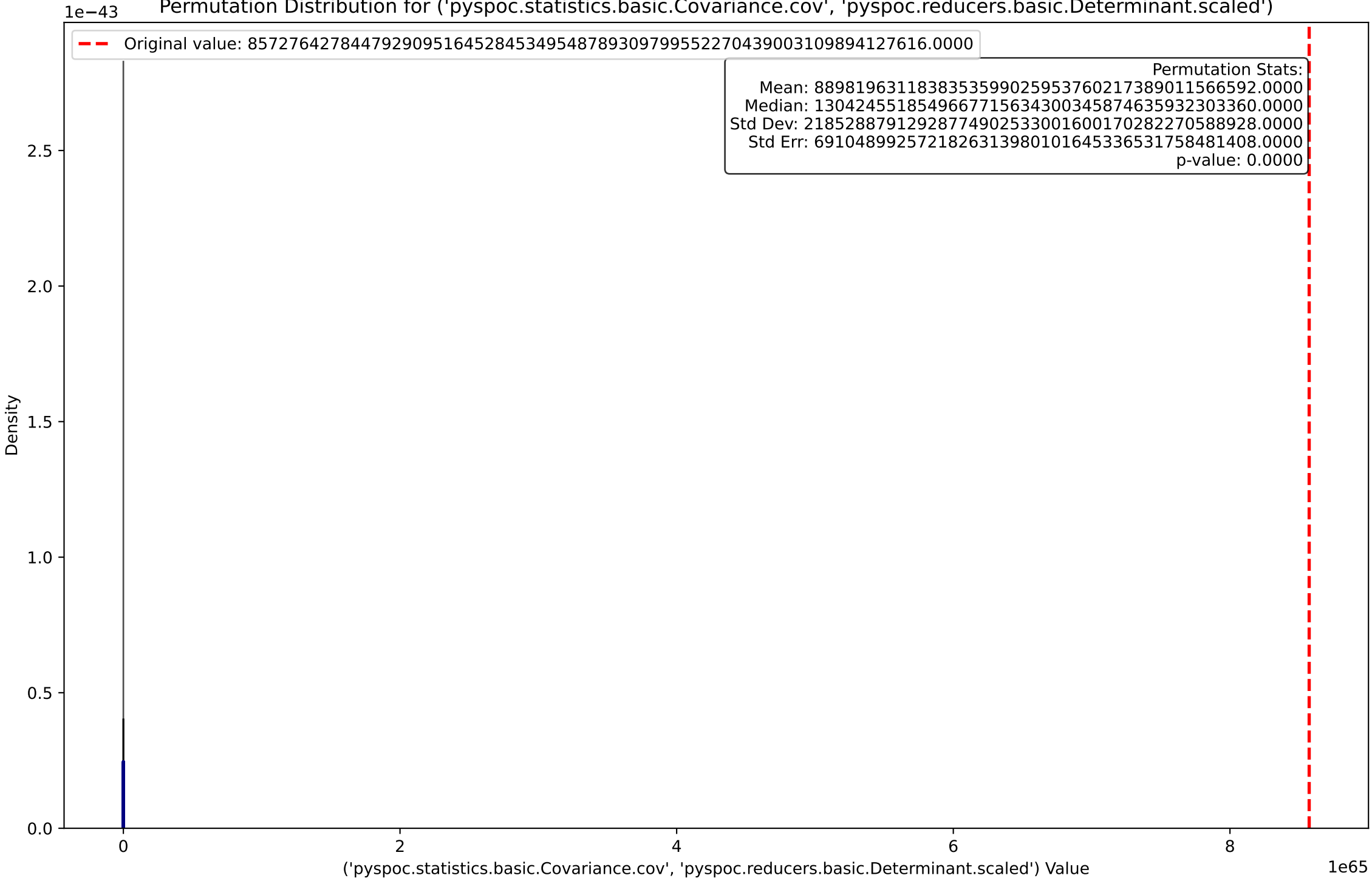
120
100
80
60
40
20
0

0.00 0.05 0.10 0.15 0.20 0.25 0.30

Permutation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three_3')



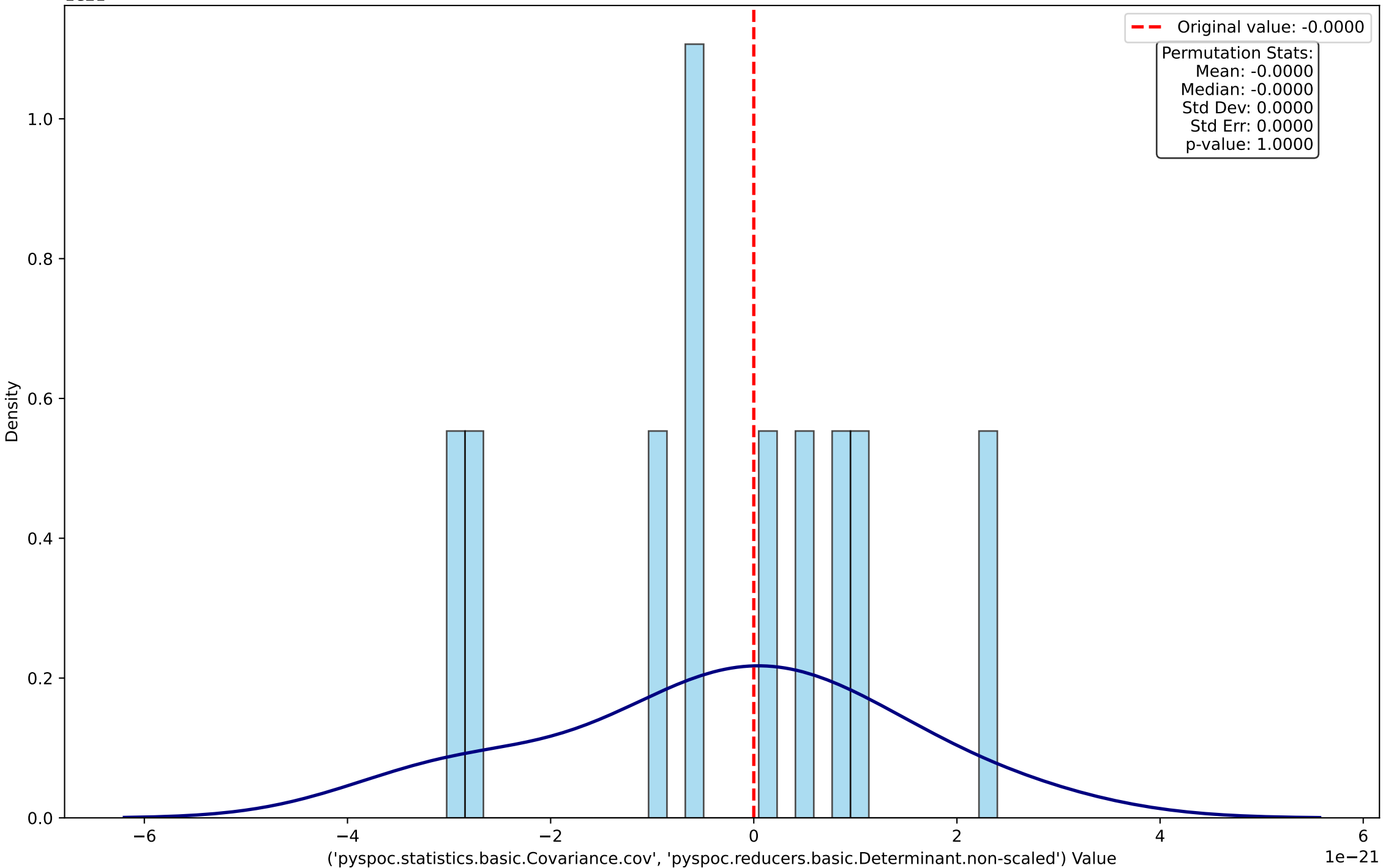
Permutation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.Determinant.scaled')



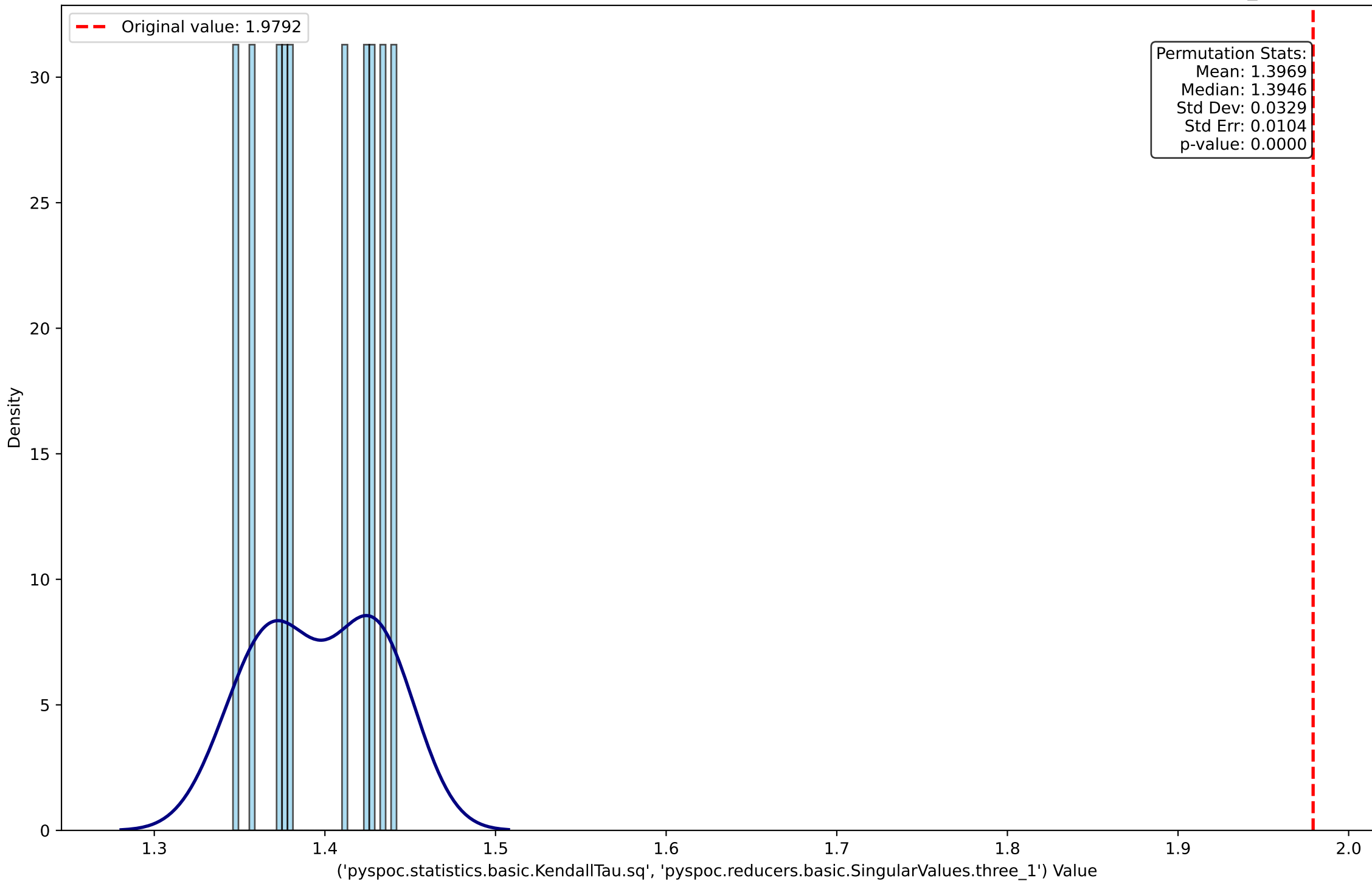
Original value: 857276427844792909516452845349548789309799552270439003109894127616.0000

Permutation Stats:
Mean: 8898196311838353599025953760217389011566592.0000
Median: 1304245518549667715634300345874635932303360.0000
Std Dev: 21852887912928774902533001600170282270588928.0000
Std Err: 6910489925721826313980101645336531758481408.0000
p-value: 0.0000

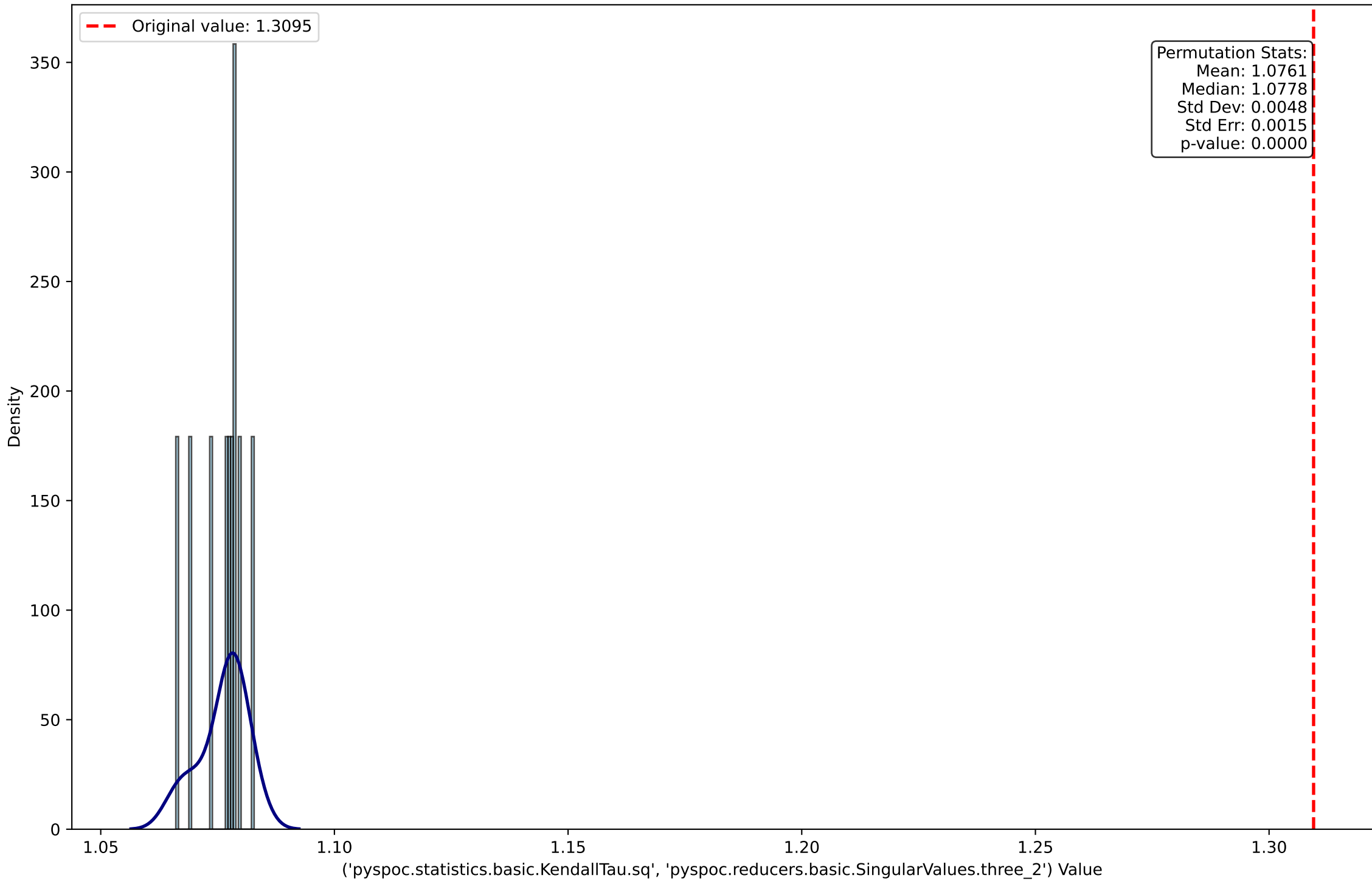
Permutation Distribution for ('pypoc.statistics.basic.Covariance.cov', 'pypoc.reducers.basic.Determinant.non-scaled')



Permutation Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three_1')



Permutation Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three_2')



Permutation Distribution for ('pypoc.statistics.basic.KendallTau.sq', 'pypoc.reducers.basic.SingularValues.three_3')

Original value: 0.9962

Permutation Stats:
 Mean: 1.0133
 Median: 1.0087
 Std Dev: 0.0122
 Std Err: 0.0039
 p-value: 0.2000

Density

140
120
100
80
60
40
20
0

0.98

1.00

1.02

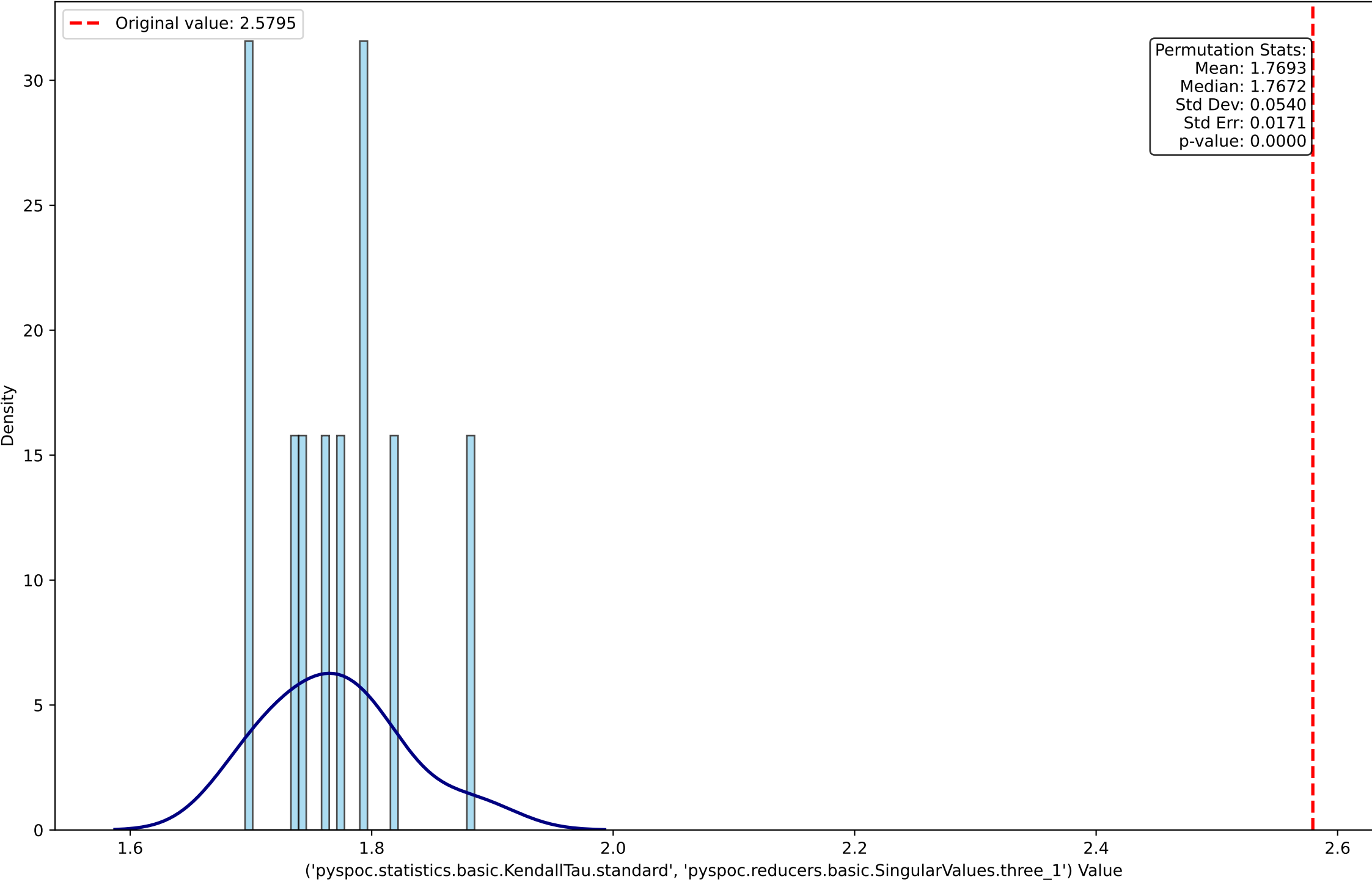
1.04

1.06

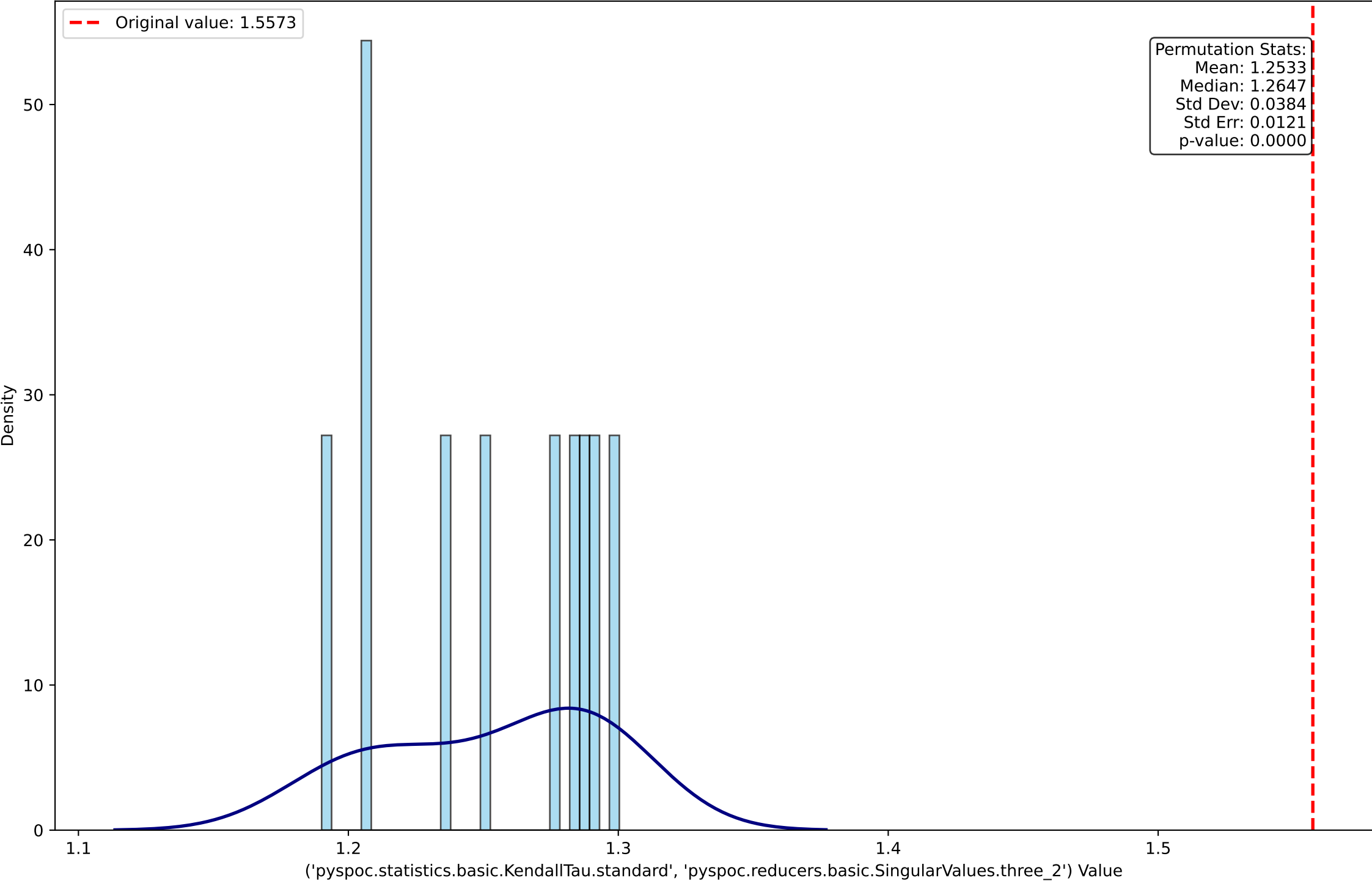
('pypoc.statistics.basic.KendallTau.sq', 'pypoc.reducers.basic.SingularValues.three_3') Value



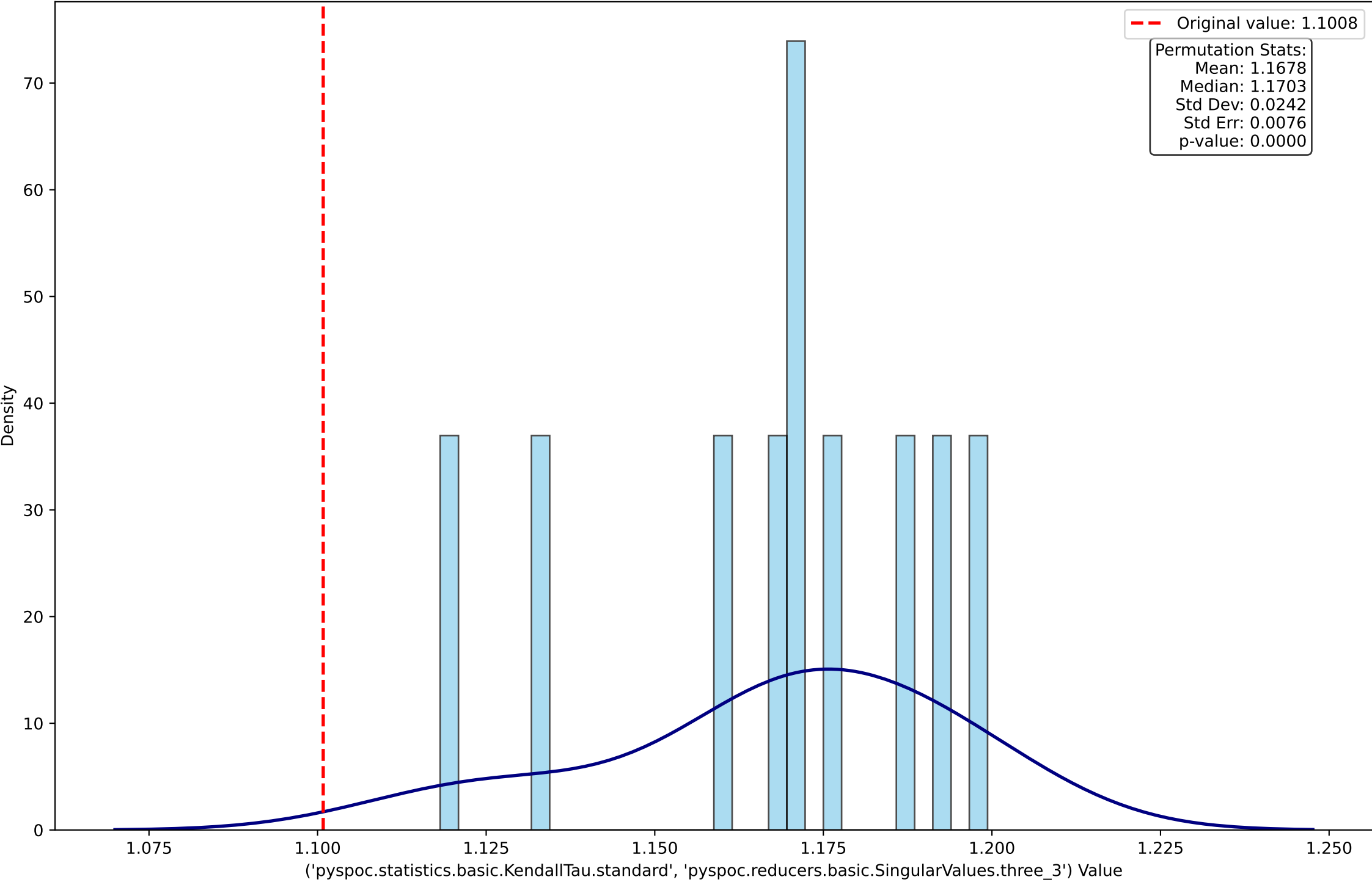
Permutation Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three_1')



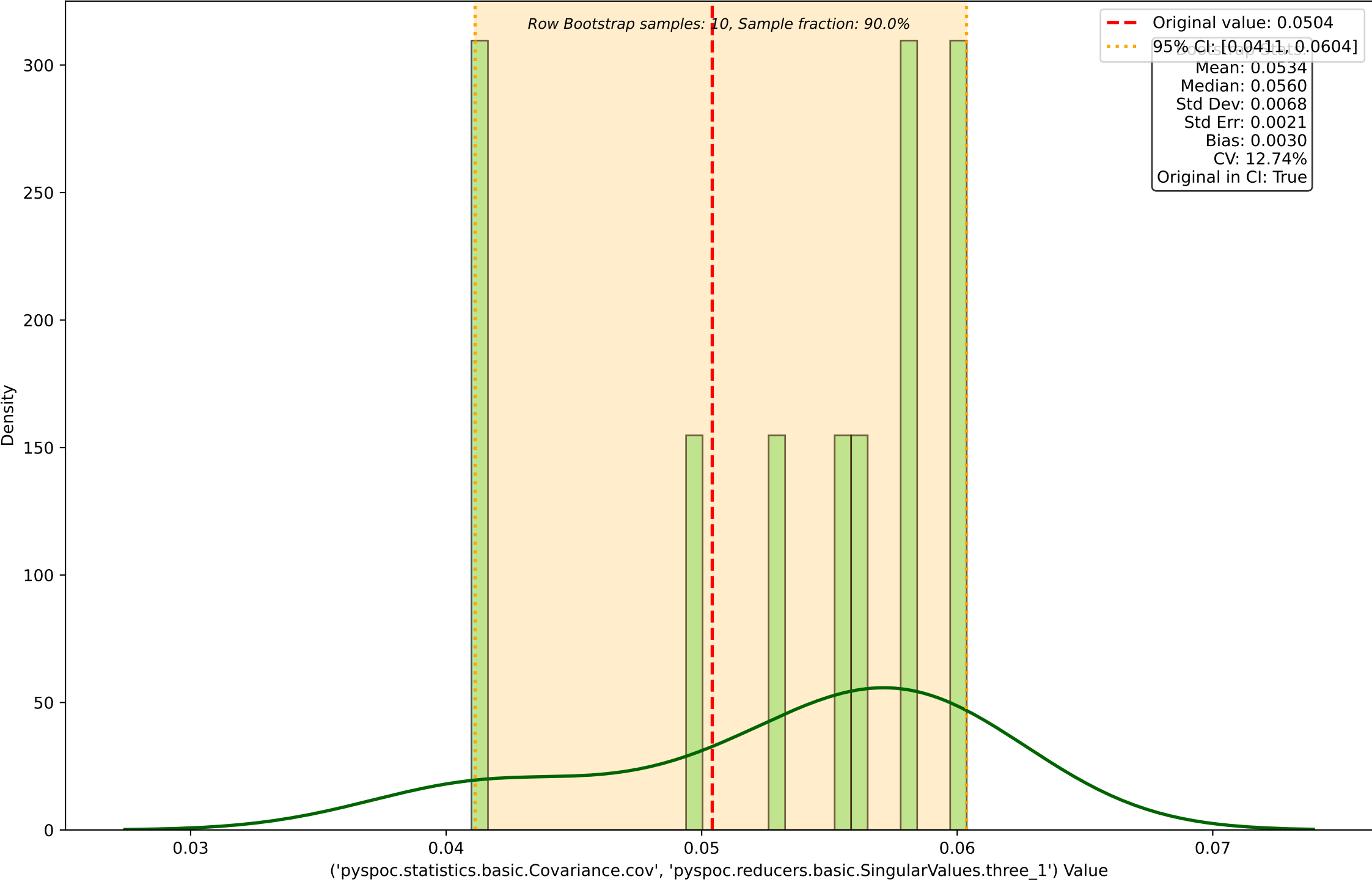
Permutation Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three_2')



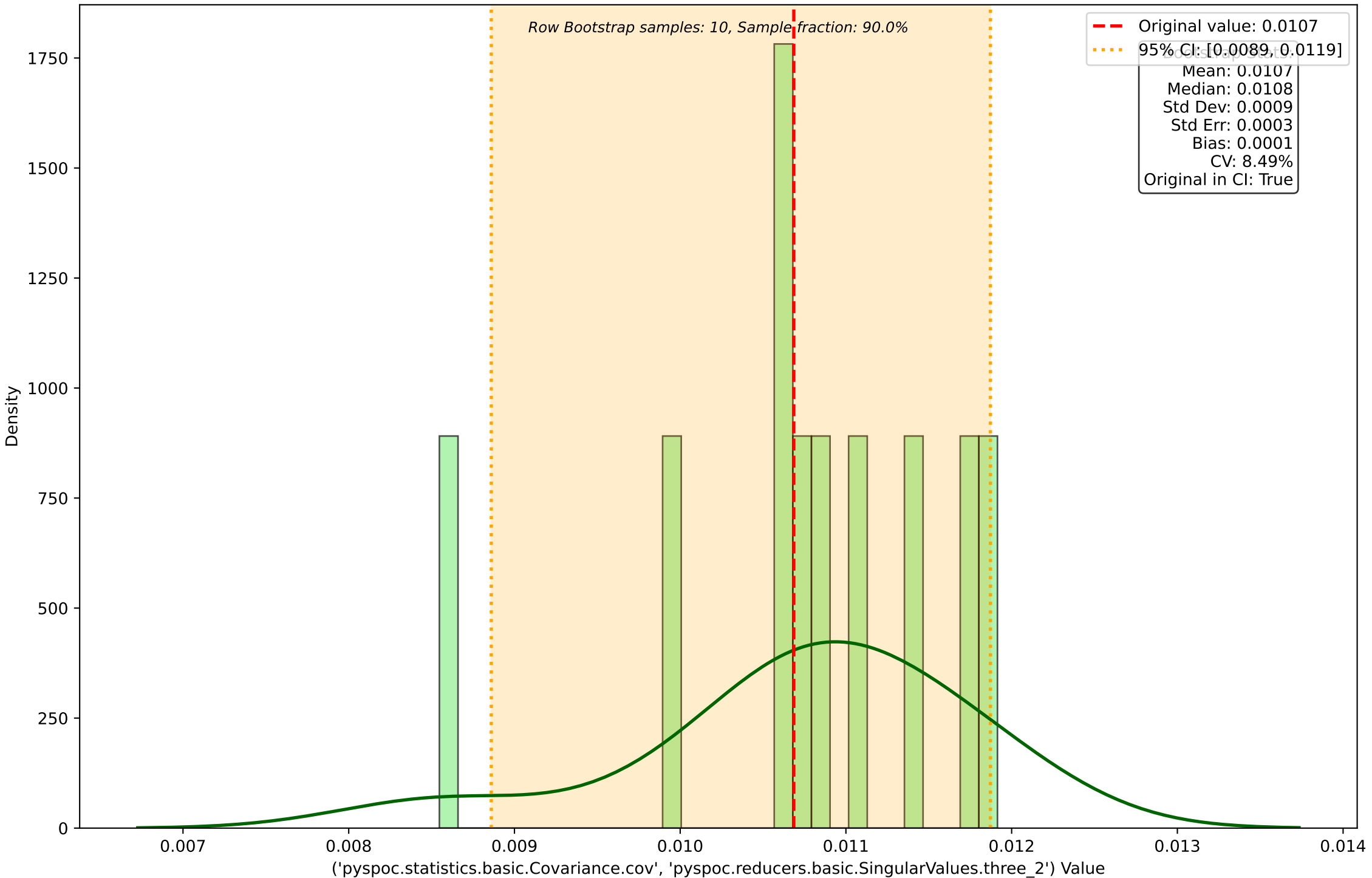
Permutation Distribution for ('pypoc.statistics.basic.KendallTau.standard', 'pypoc.reducers.basic.SingularValues.three_3')



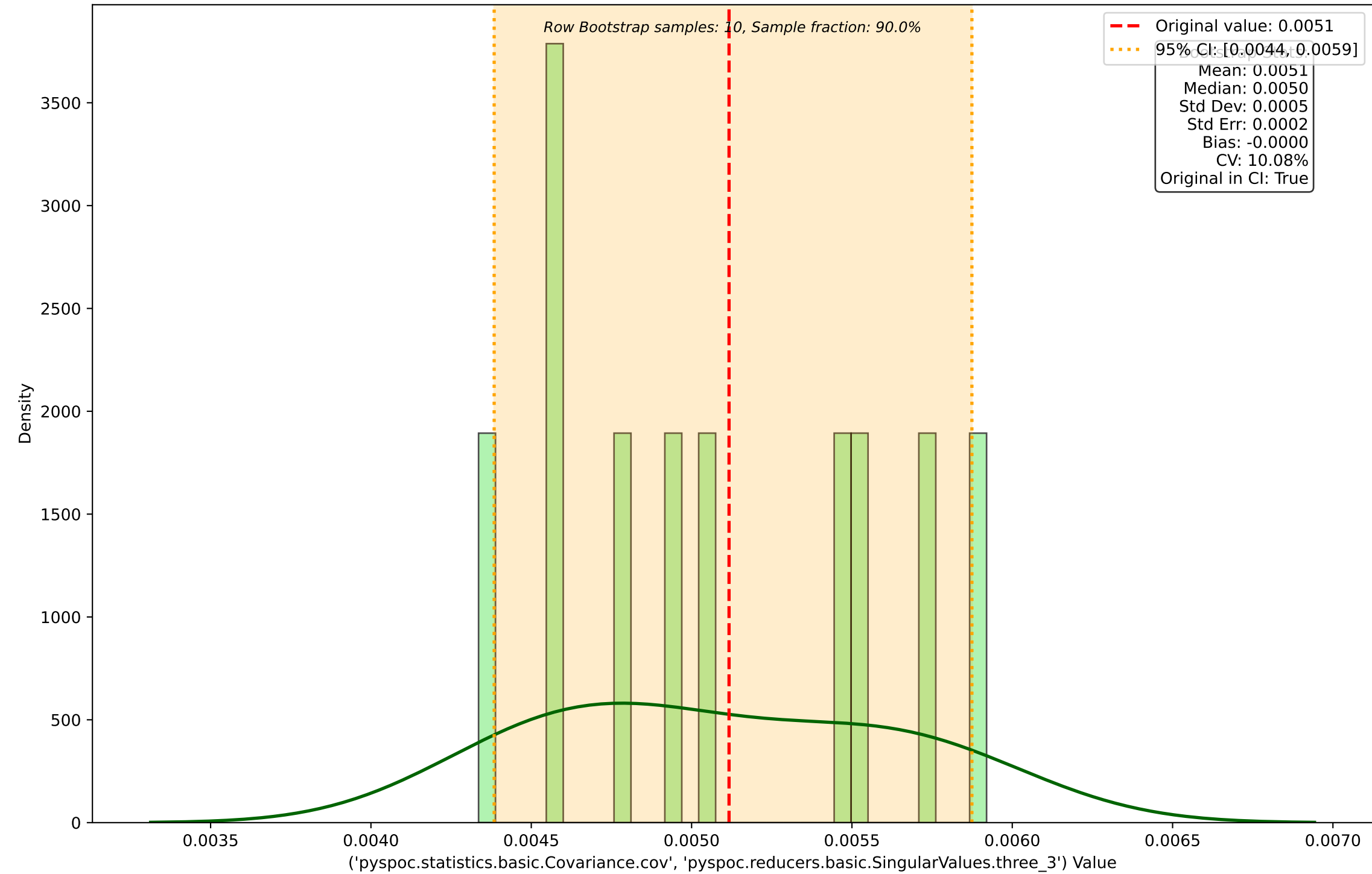
Row Bootstrap Distribution for ('pypoc.statistics.basic.Covariance.cov', 'pypoc.reducers.basic.SingularValues.three_1')



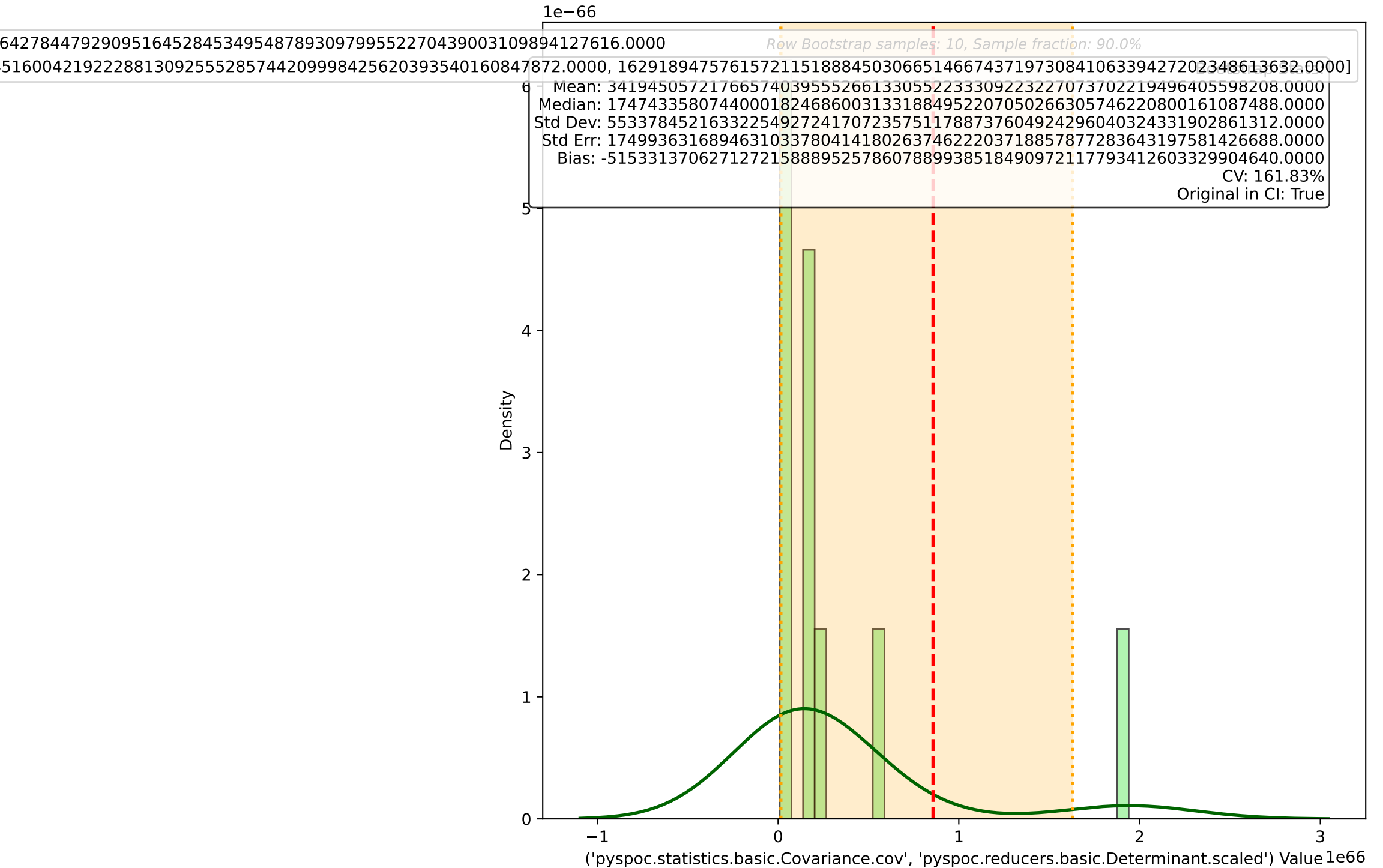
Row Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three_2')

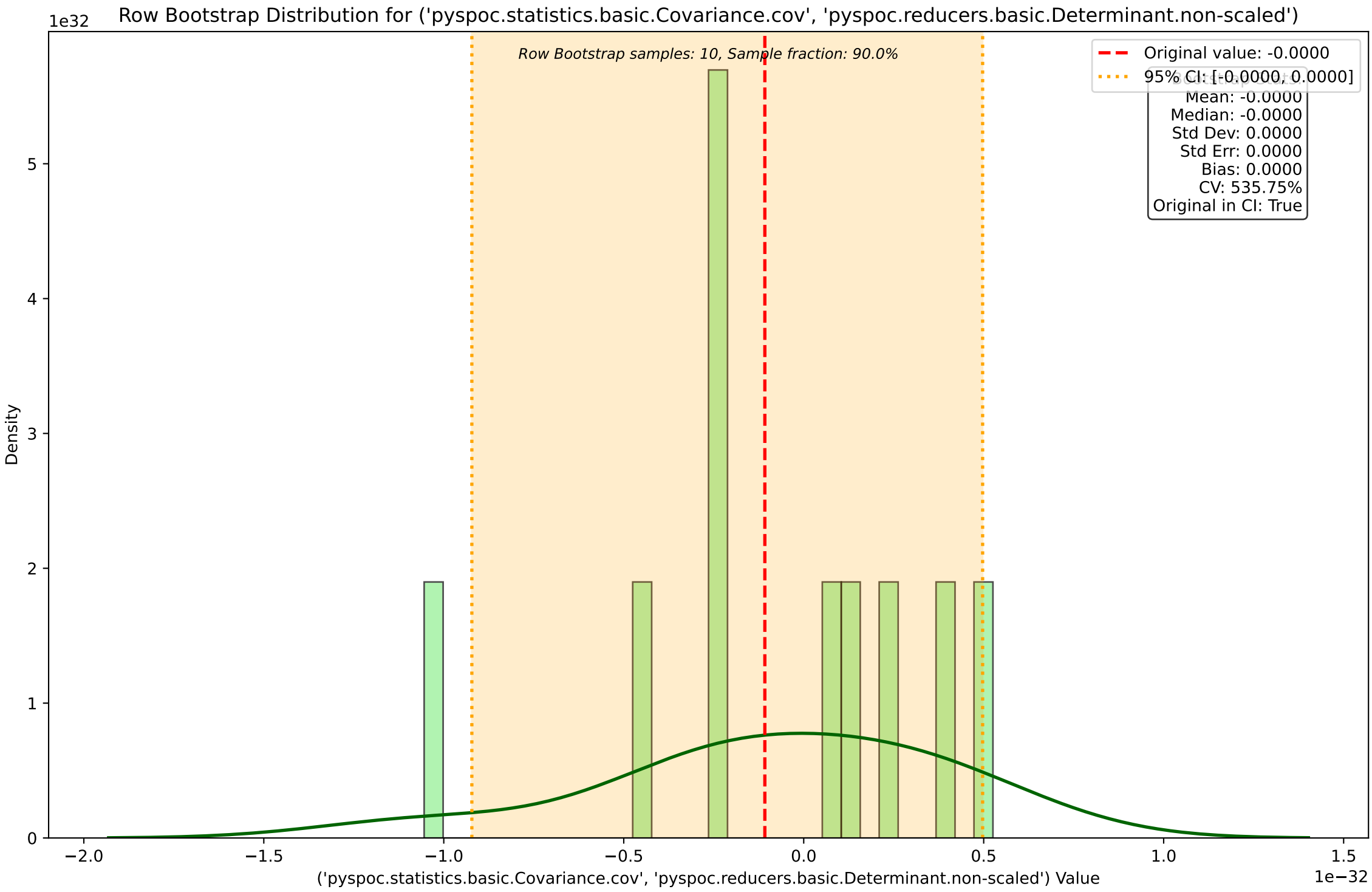


Row Bootstrap Distribution for ('pypoc.statistics.basic.Covariance.cov', 'pypoc.reducers.basic.SingularValues.three_3')

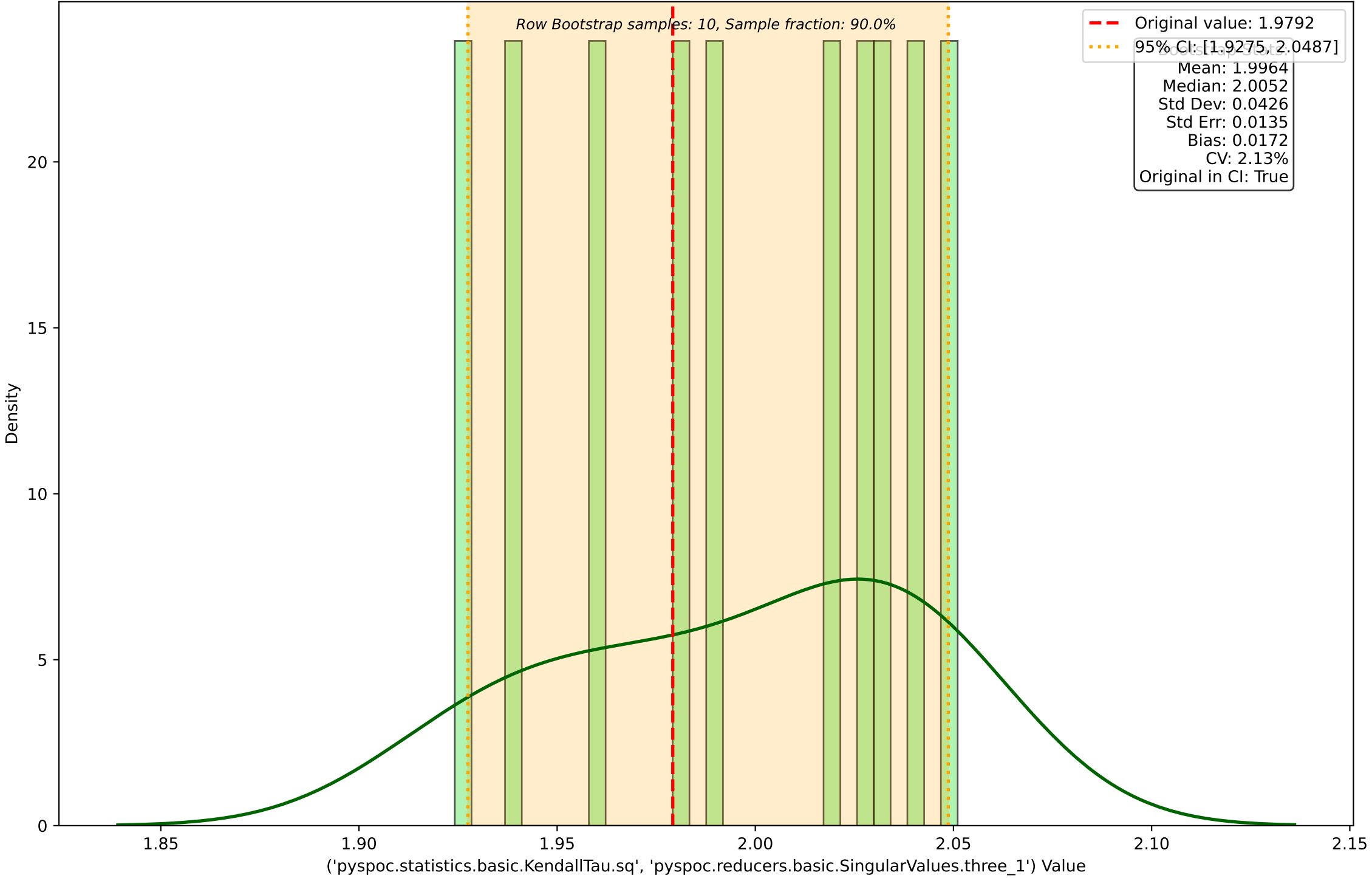


Row Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.Determinant.scaled')

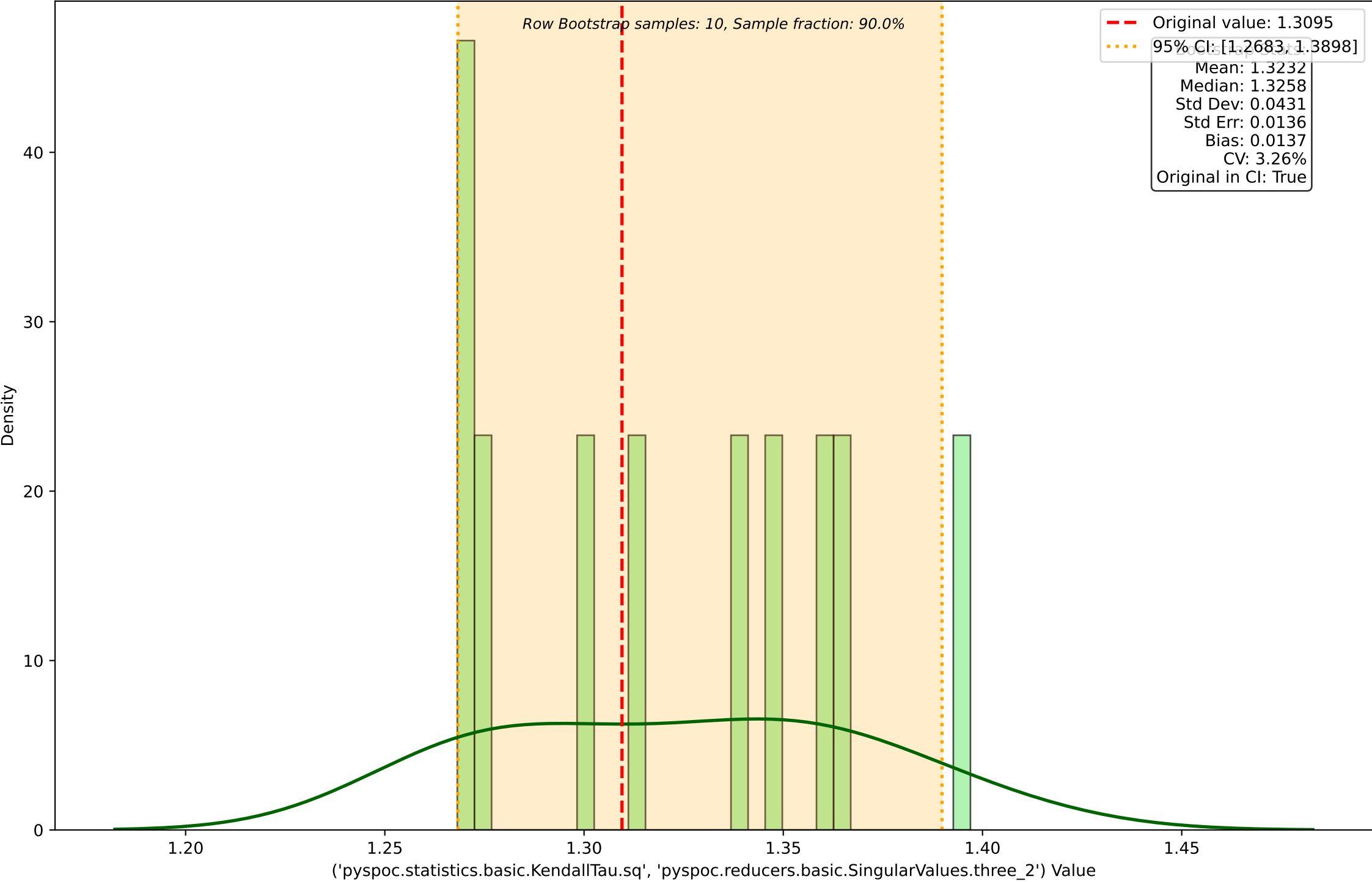




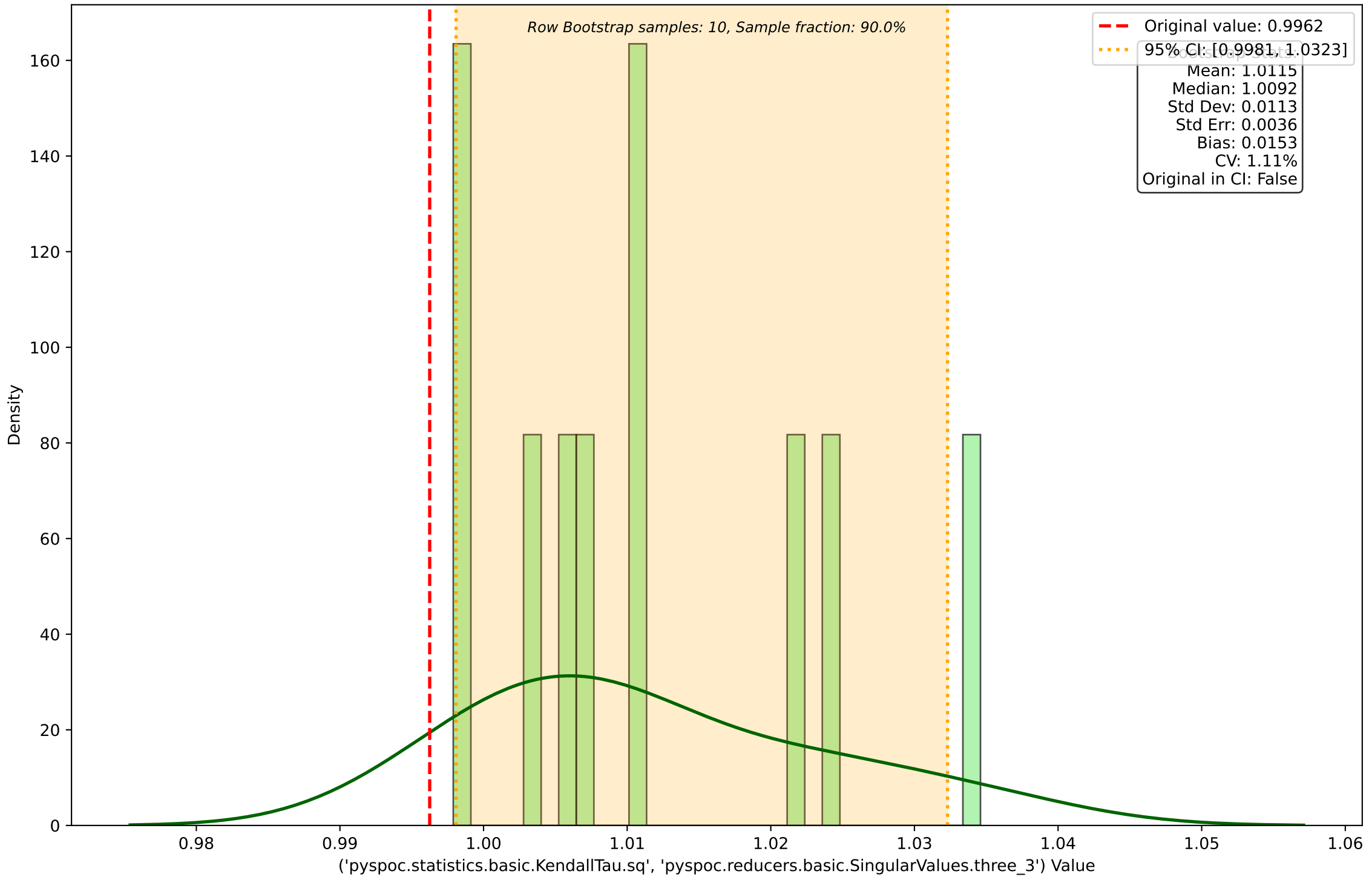
Row Bootstrap Distribution for ('pypoc.statistics.basic.KendallTau.sq', 'pypoc.reducers.basic.SingularValues.three_1')



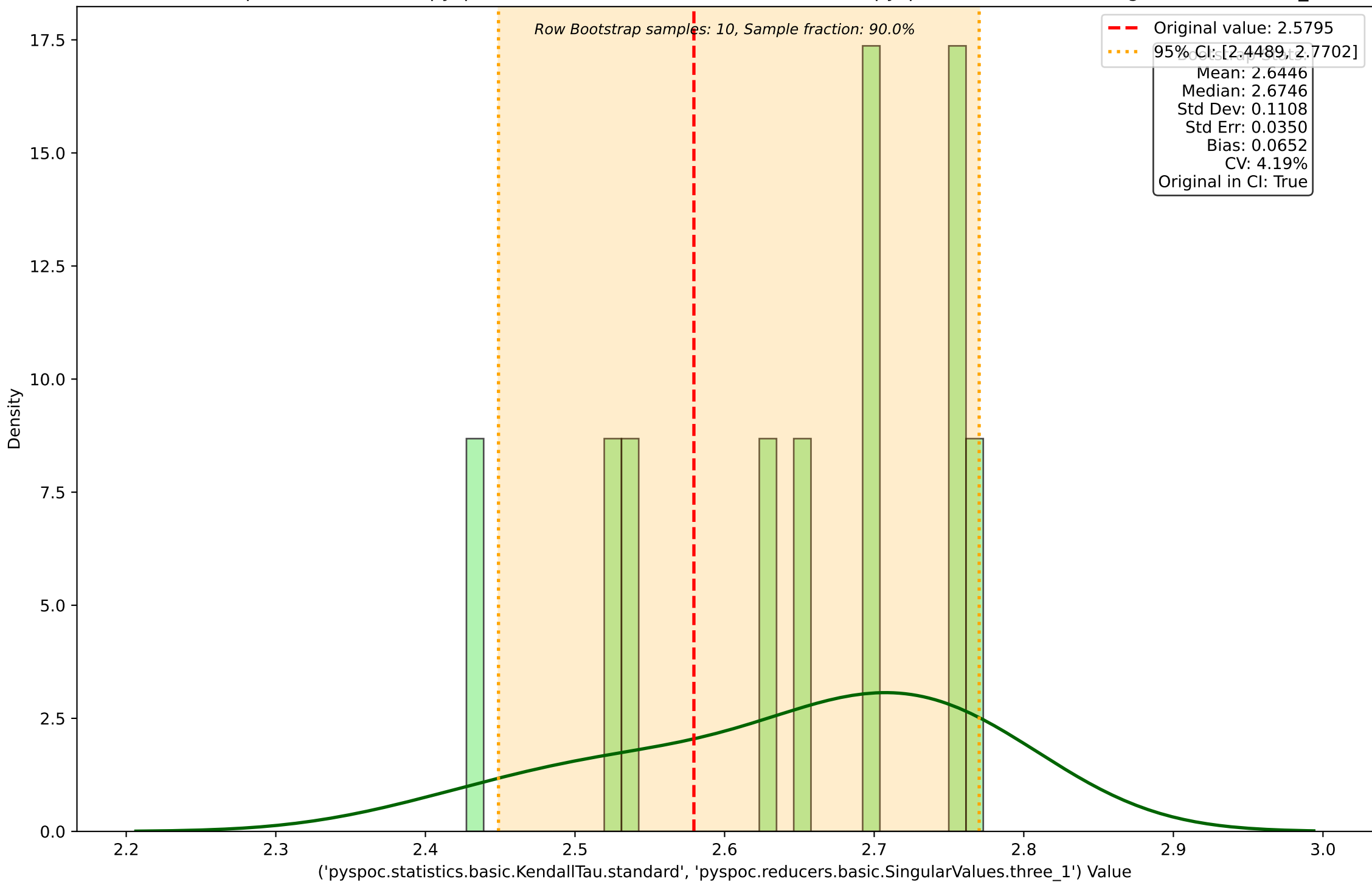
Row Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three_2')



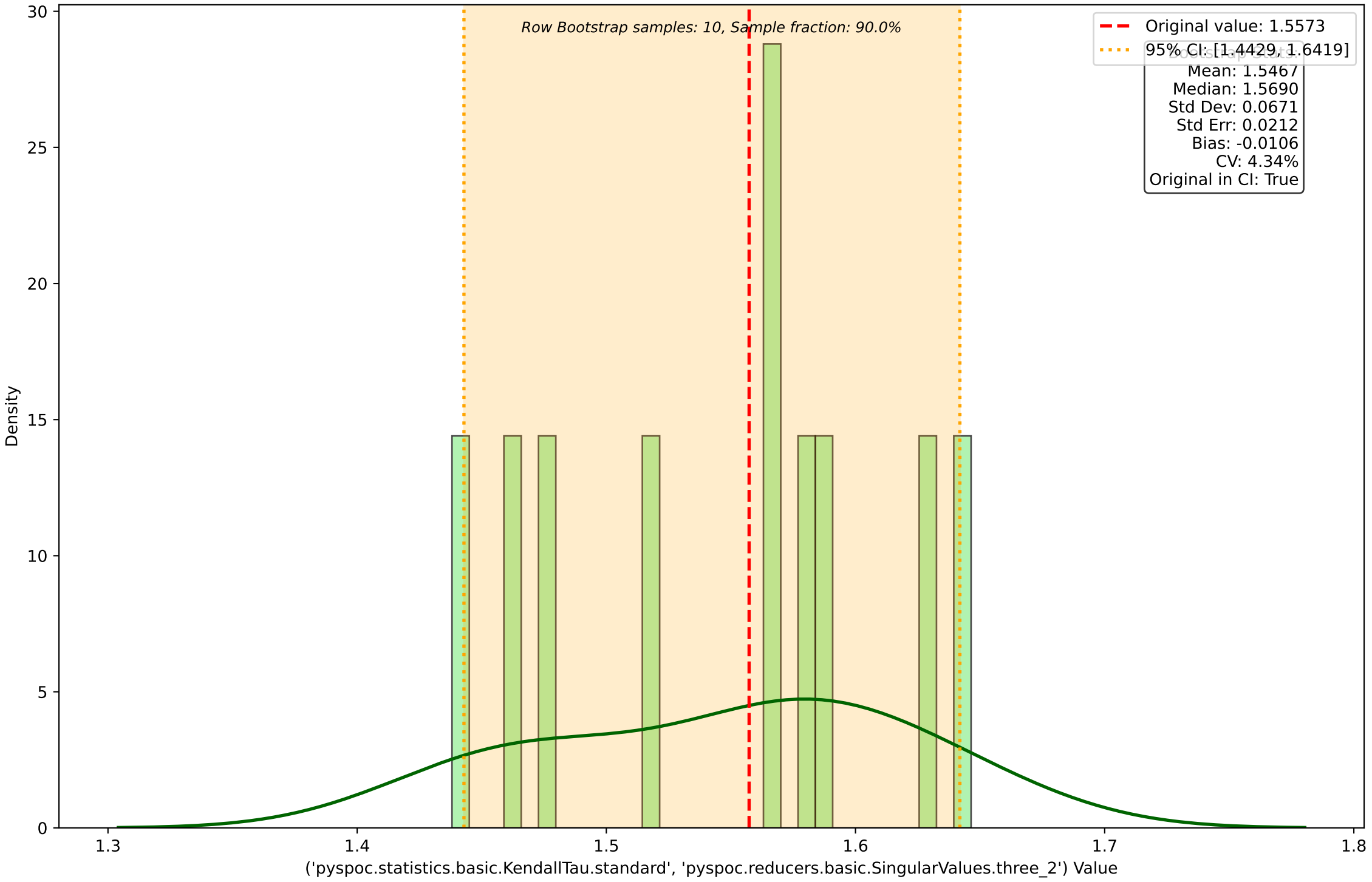
Row Bootstrap Distribution for ('pypoc.statistics.basic.KendallTau.sq', 'pypoc.reducers.basic.SingularValues.three_3')



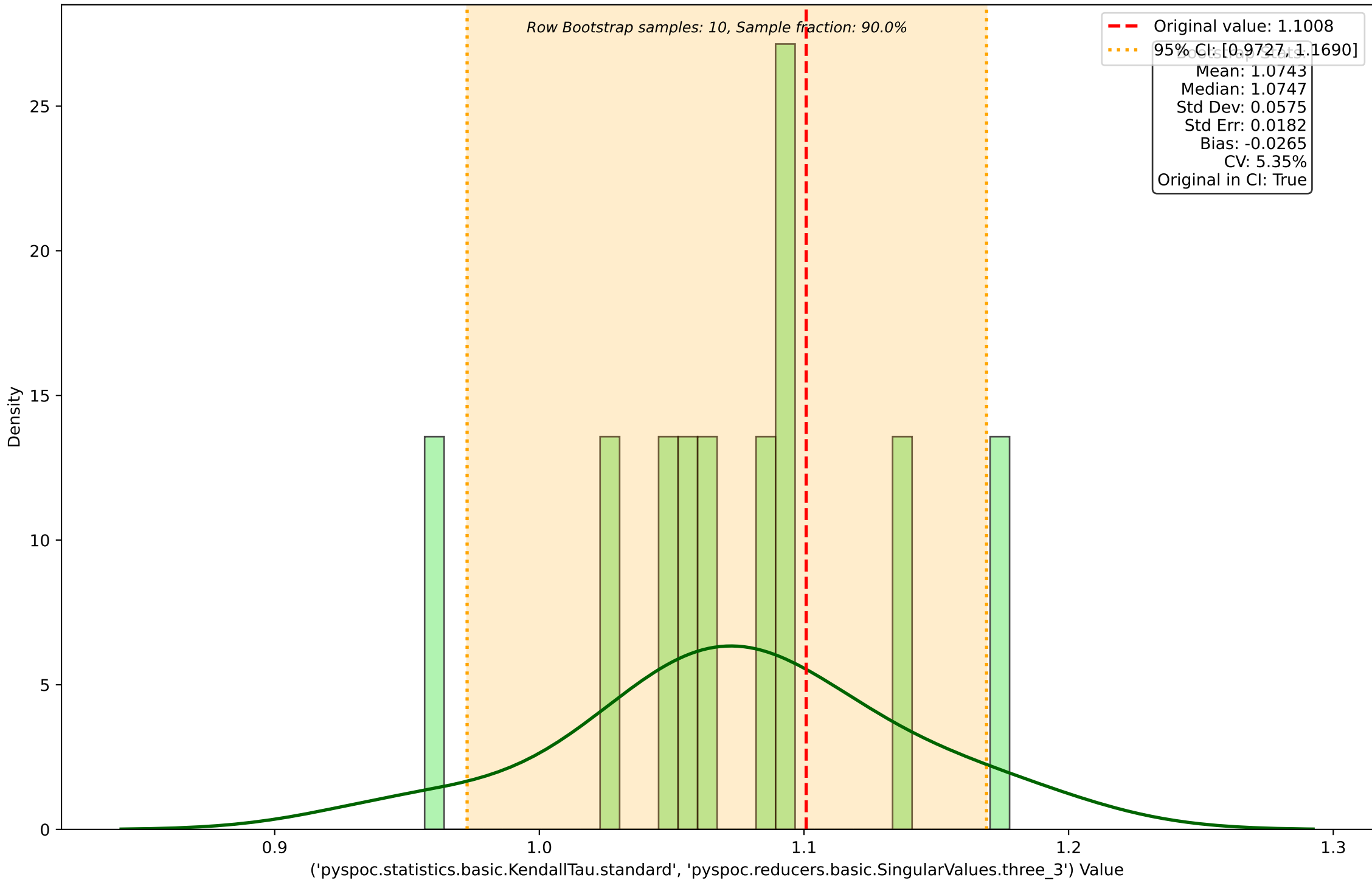
Row Bootstrap Distribution for ('pypoc.statistics.basic.KendallTau.standard', 'pypoc.reducers.basic.SingularValues.three_1')



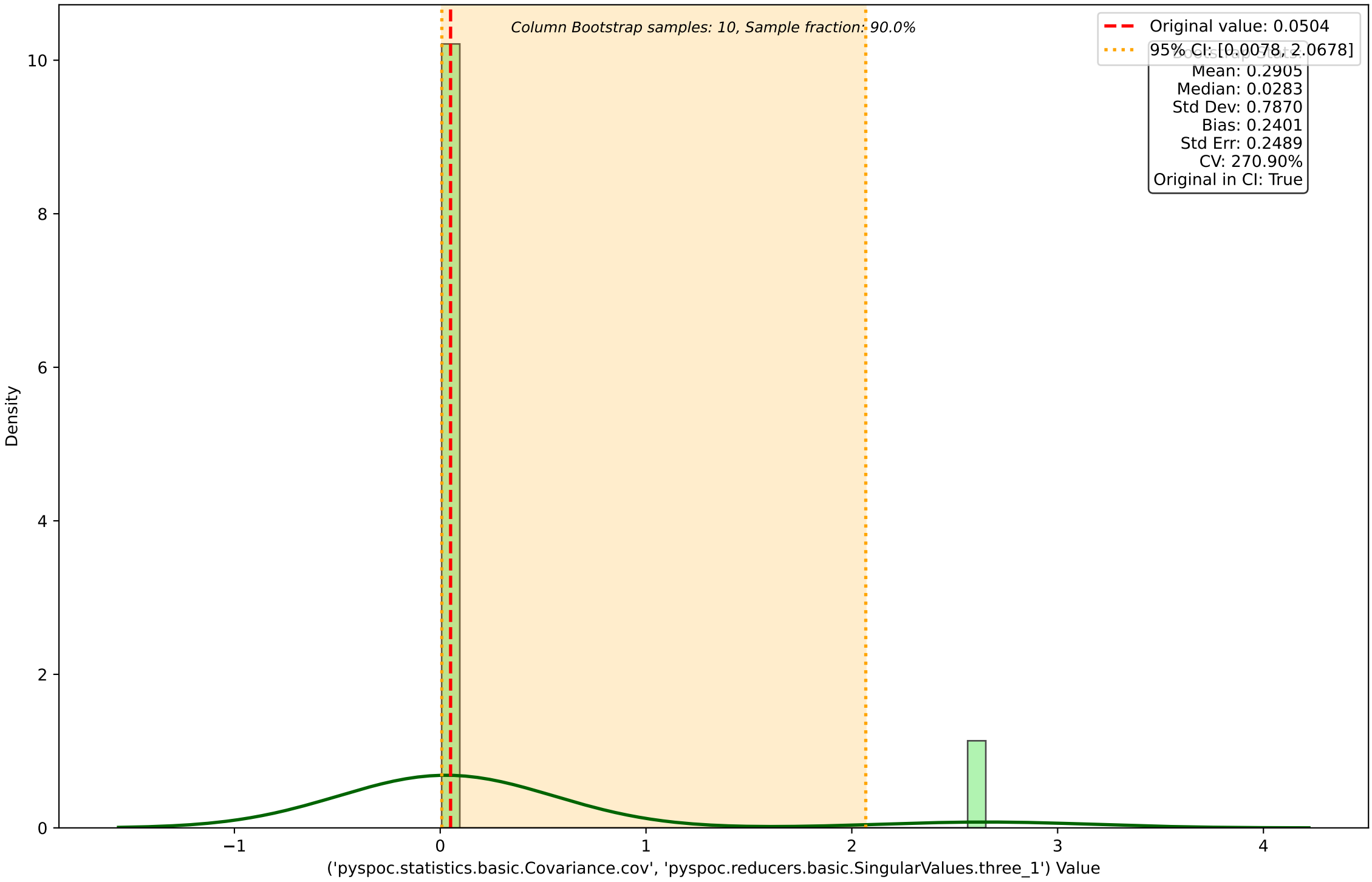
Row Bootstrap Distribution for ('pypoc.statistics.basic.KendallTau.standard', 'pypoc.reducers.basic.SingularValues.three_2')



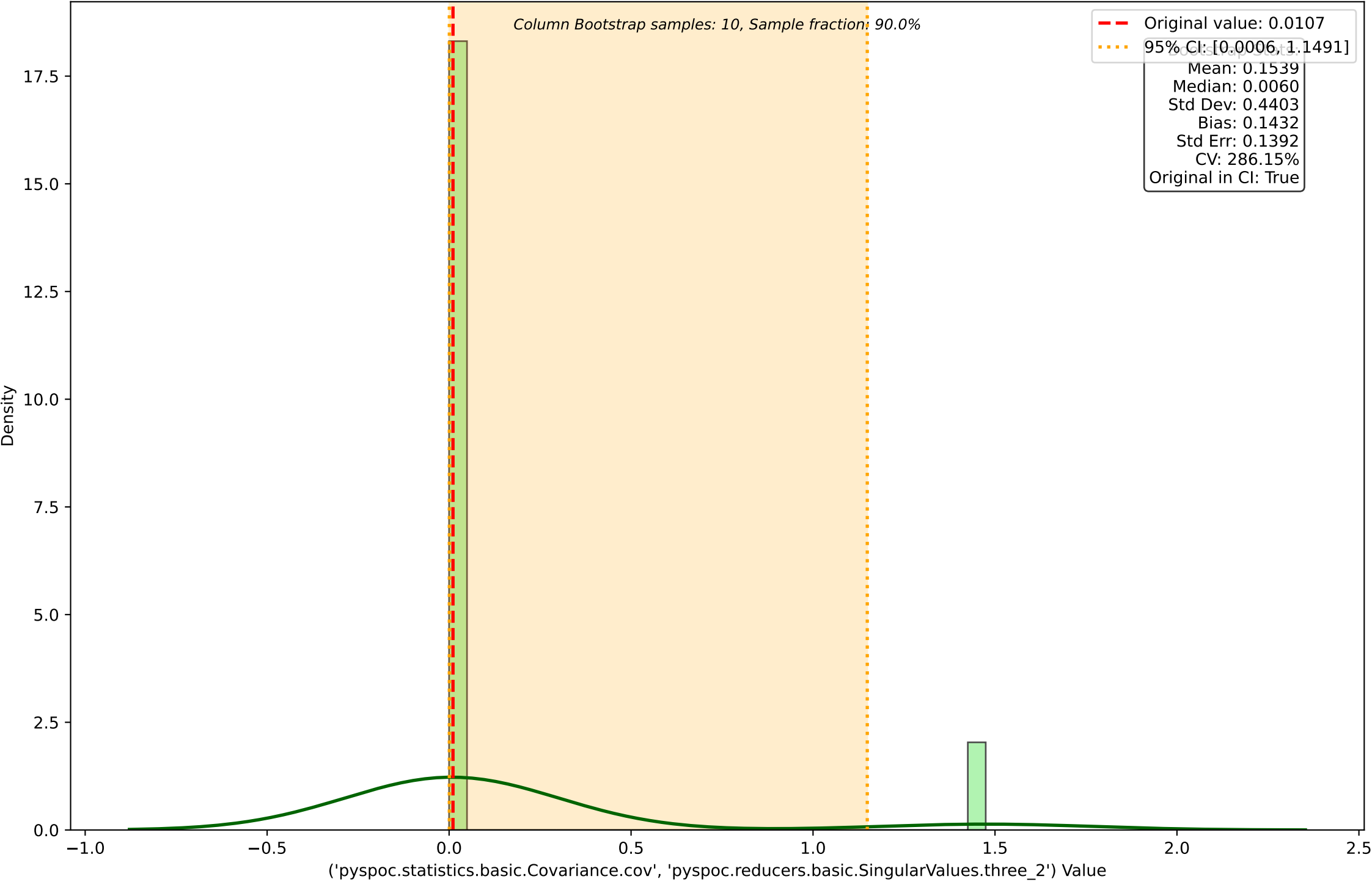
Row Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three_3')



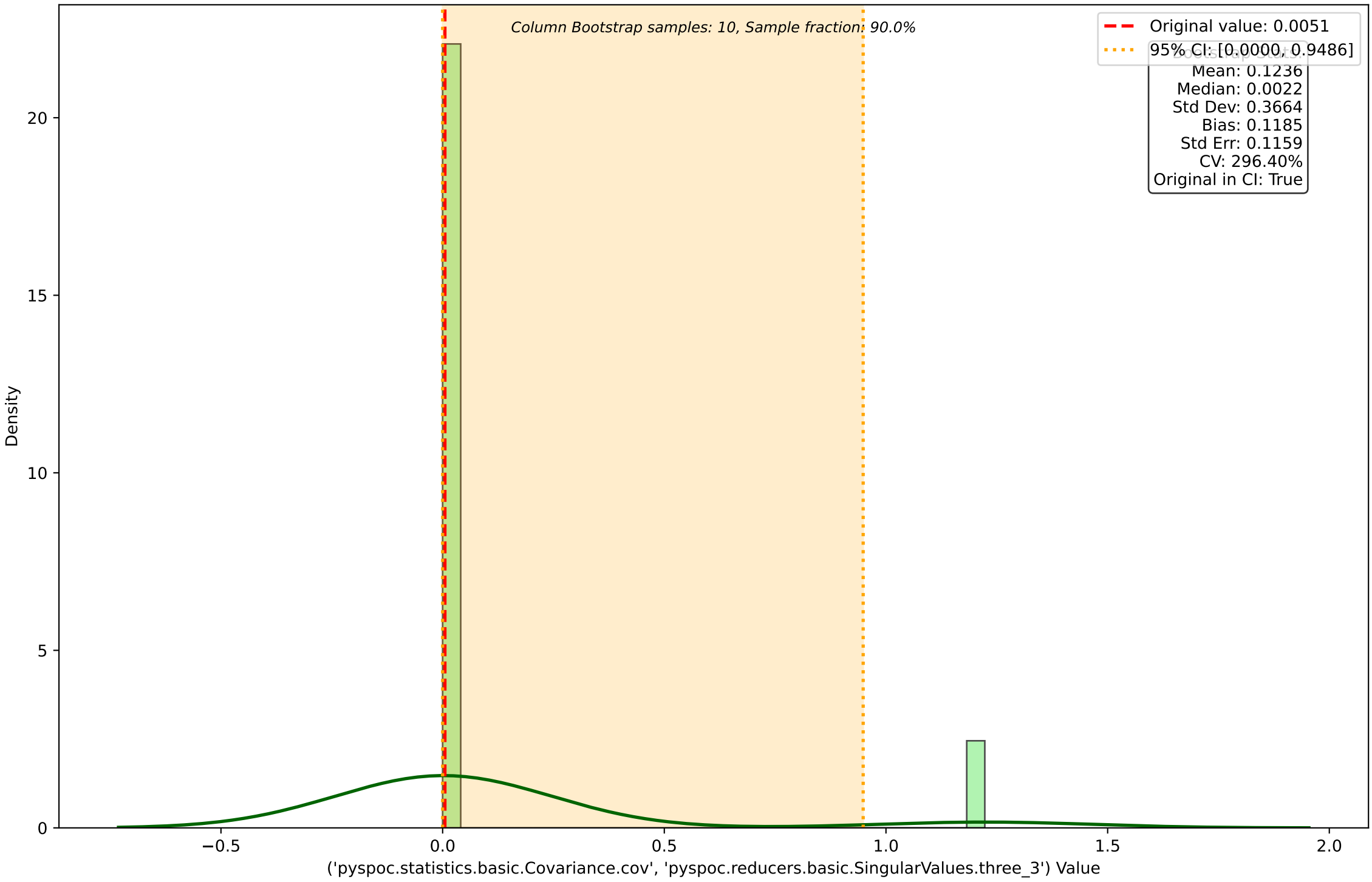
Column Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three_1')



Column Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three_2')



Column Bootstrap Distribution for ('pypoc.statistics.basic.Covariance.cov', 'pypoc.reducers.basic.SingularValues.three_3')



1e49 Column Bootstrap Distribution for ('pypoc.statistics.basic.Covariance.cov', 'pypoc.reducers.basic.Determinant.non-scaled')

Column Bootstrap samples: 10, Sample fraction: 90.0%

Bootstrap Stats:
Mean: -0.0000
Median: 0.0000
Std Dev: 0.0000
Bias: 0.0000
Std Err: 0.0000
CV: 303.03%
Original in CI: False

Density

0.0

0.5

1.0

1.5

2.0

-1.0

-0.8

-0.6

-0.4

-0.2

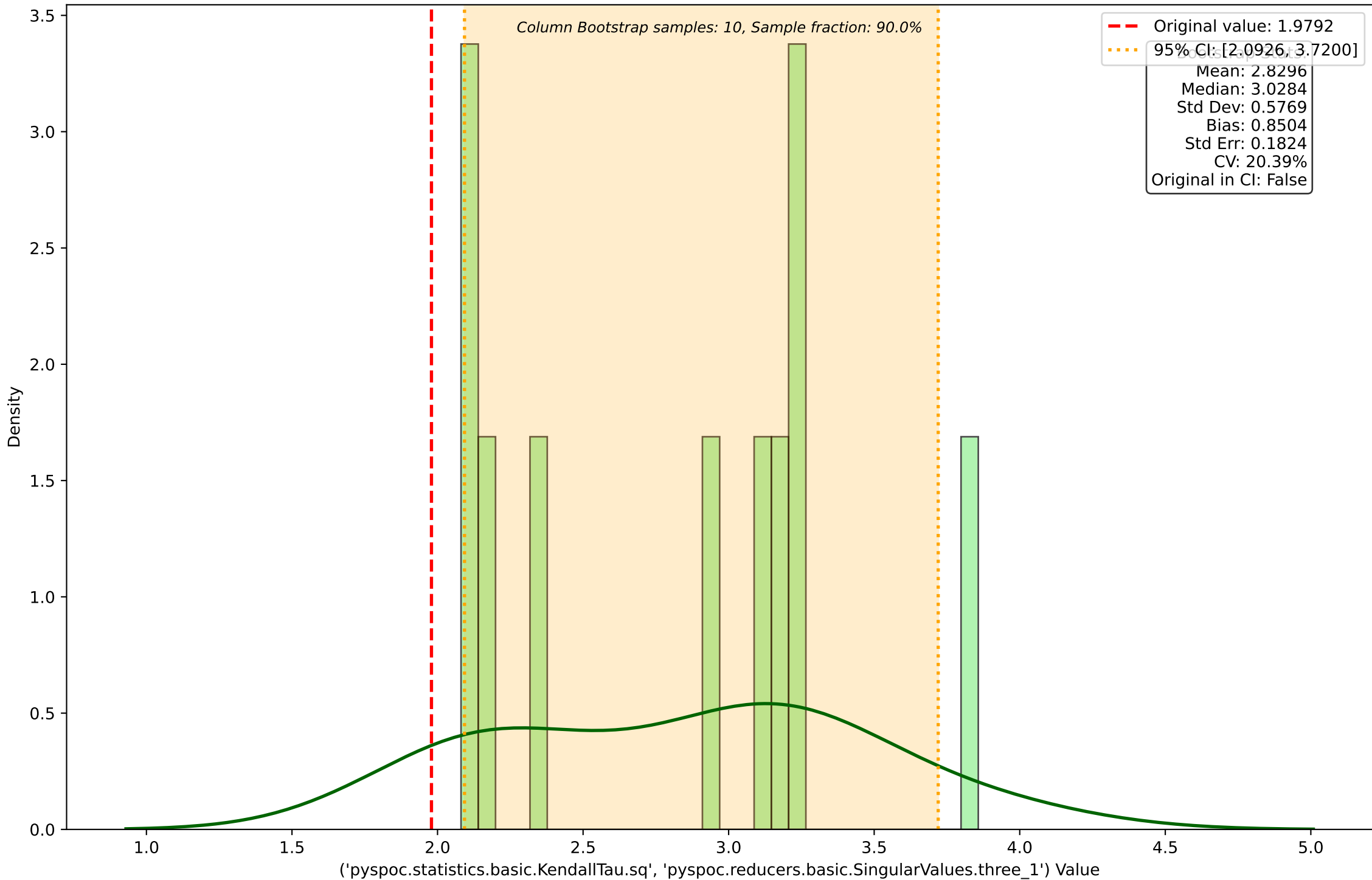
0.0

('pypoc.statistics.basic.Covariance.cov', 'pypoc.reducers.basic.Determinant.non-scaled') Value

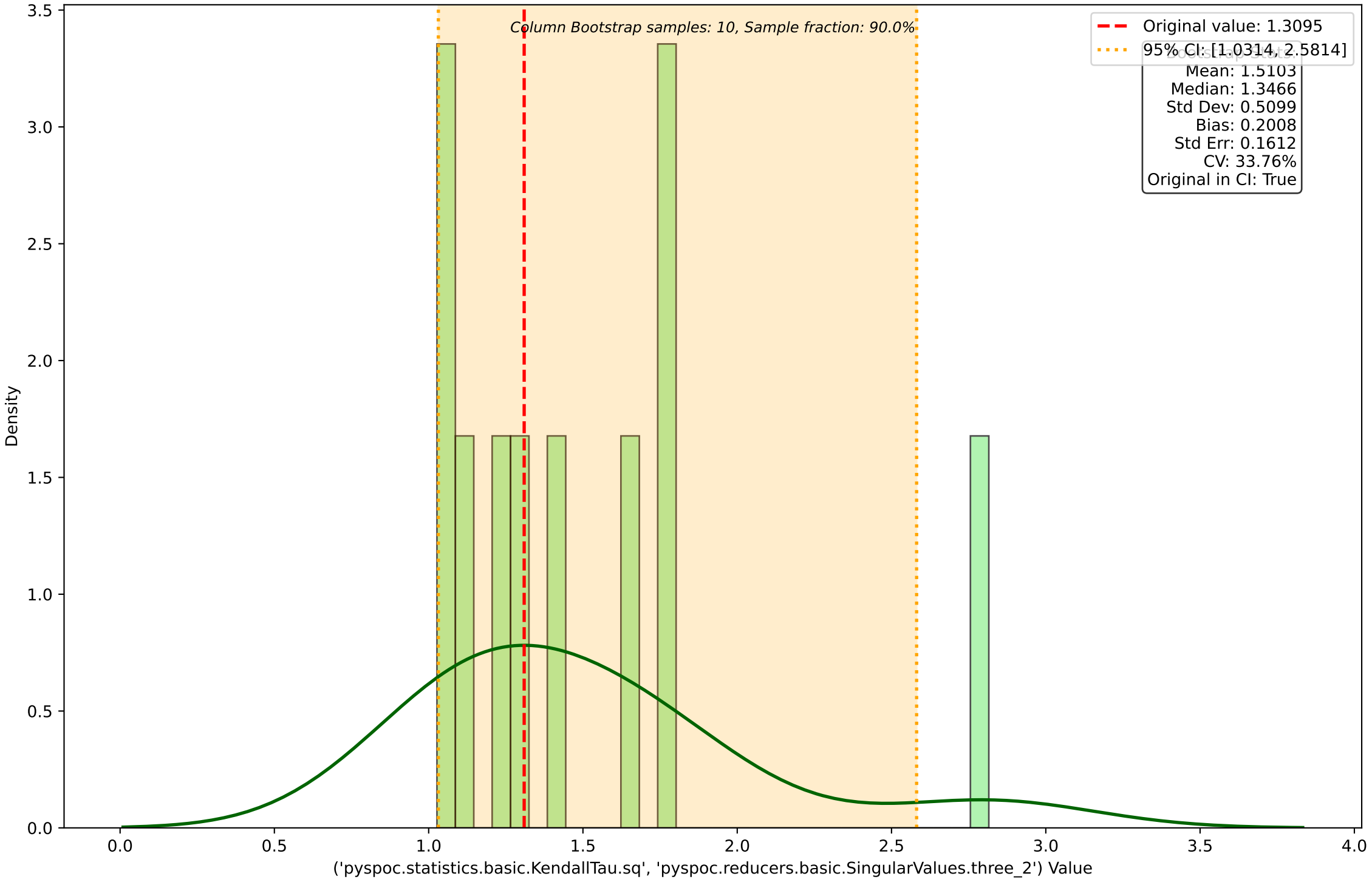
1e-33

Original value: -0.0000
95% CI: [-0.0000, 0.0000]

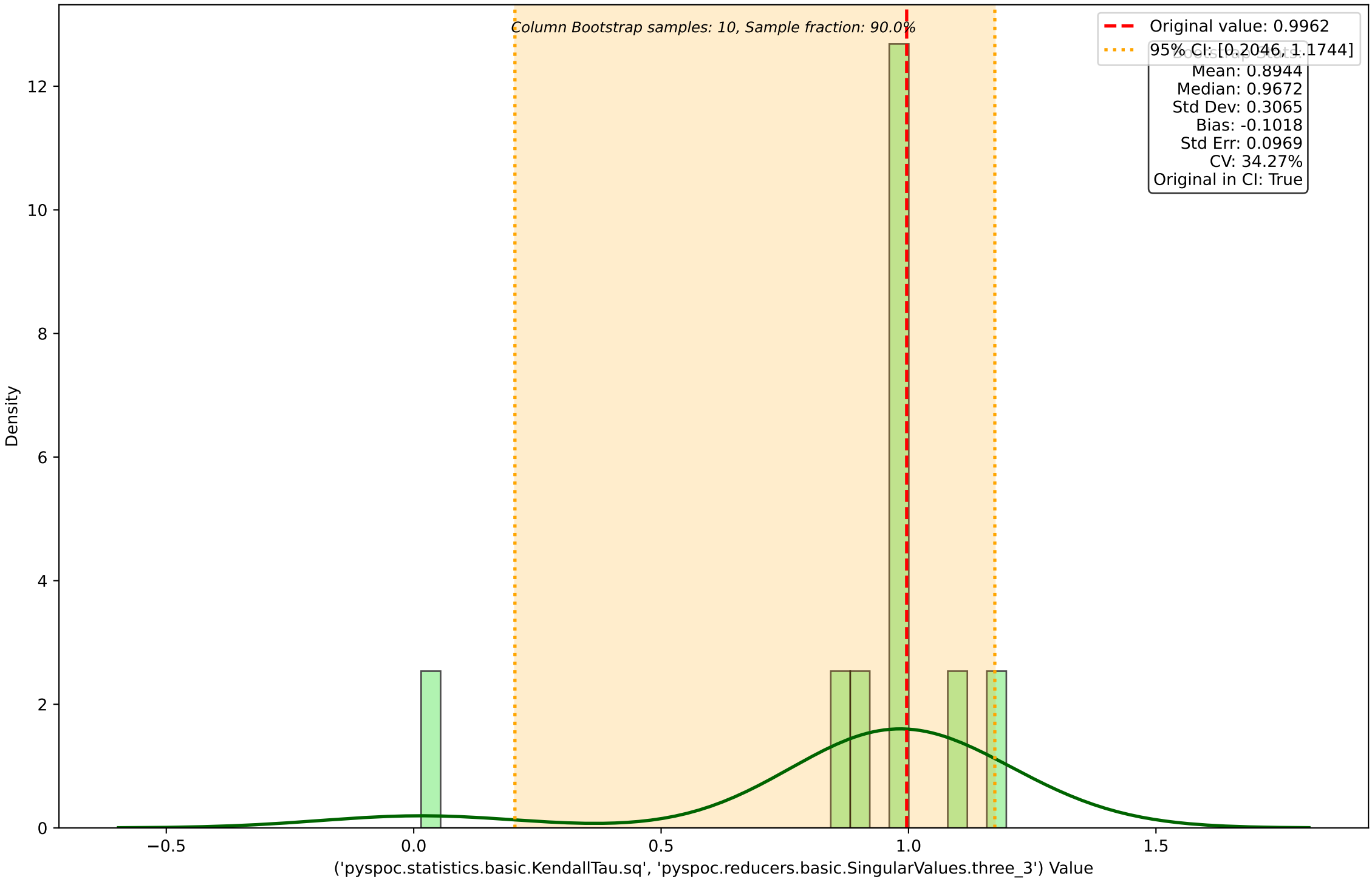
Column Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three_1')



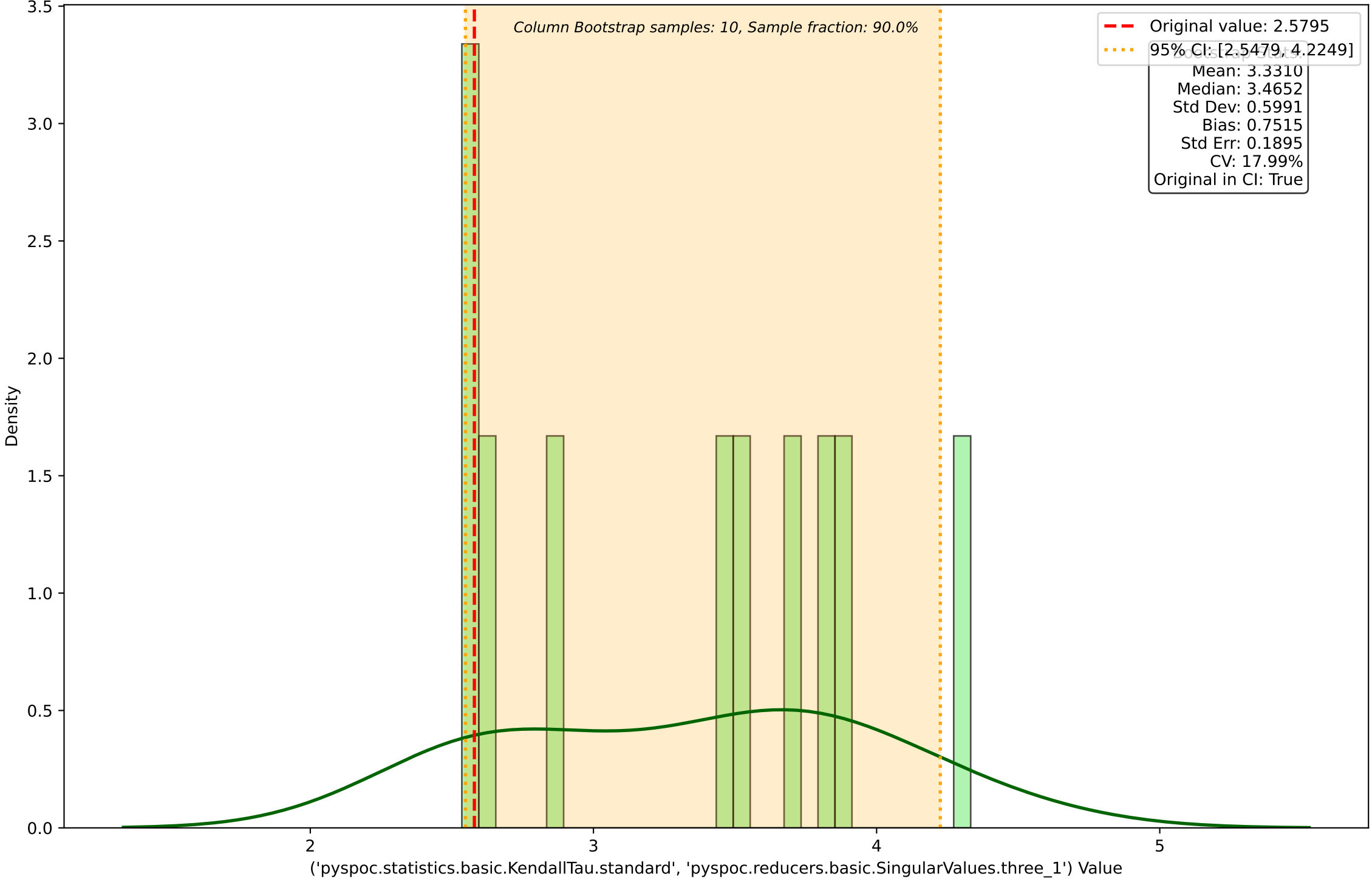
Column Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three_2')



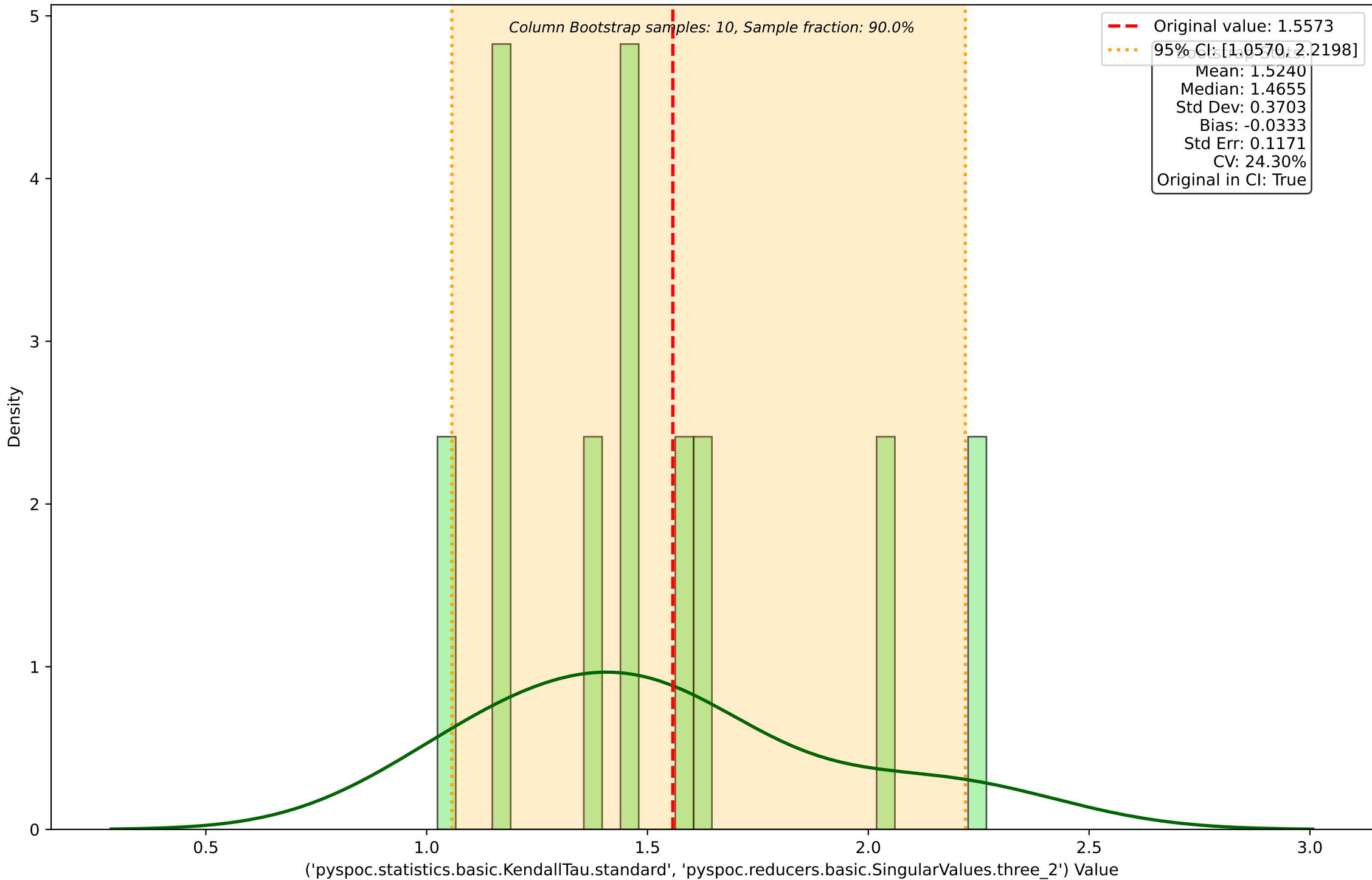
Column Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three_3')



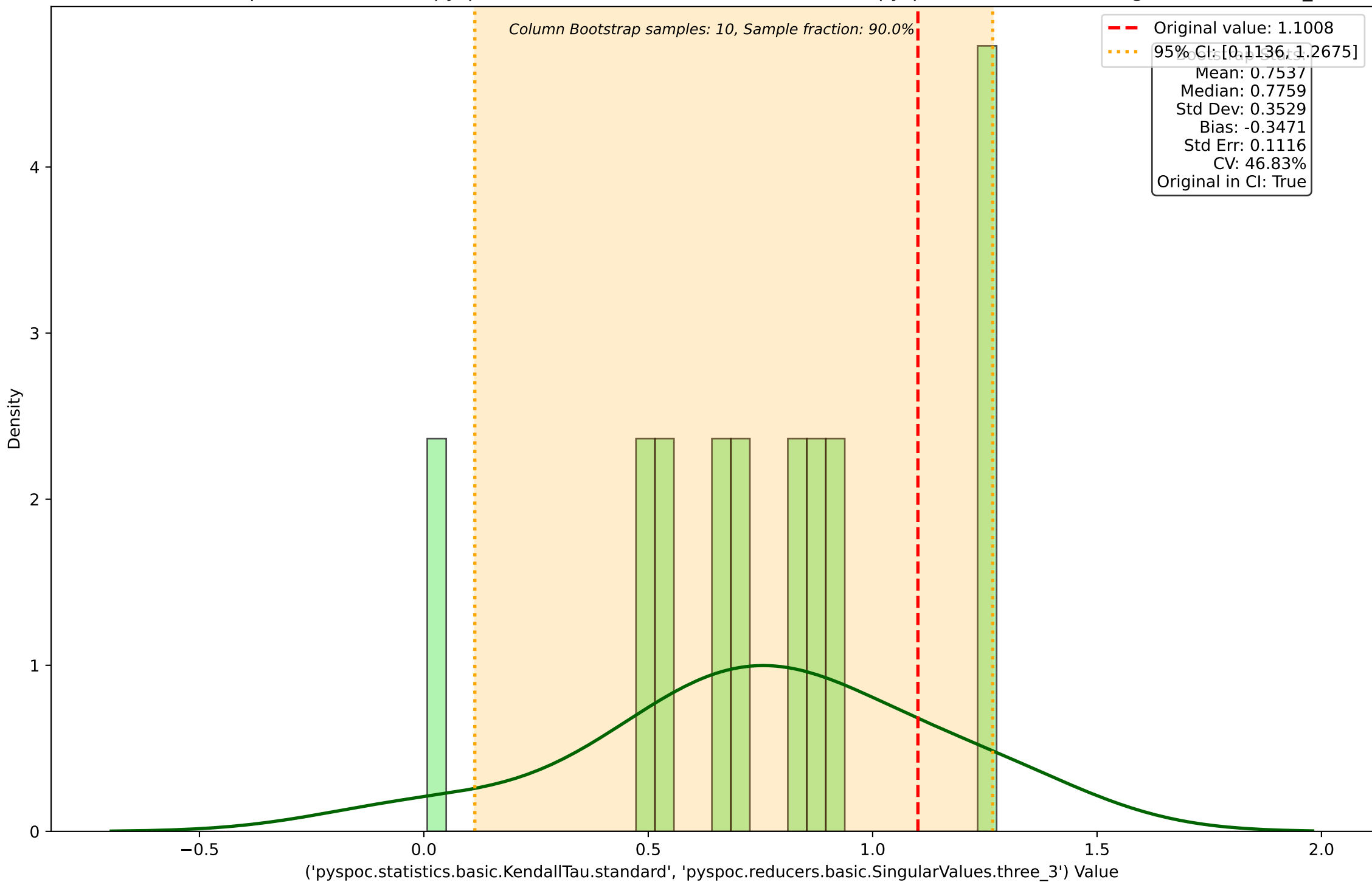
Column Bootstrap Distribution for ('pypoc.statistics.basic.KendallTau.standard', 'pypoc.reducers.basic.SingularValues.three_1')



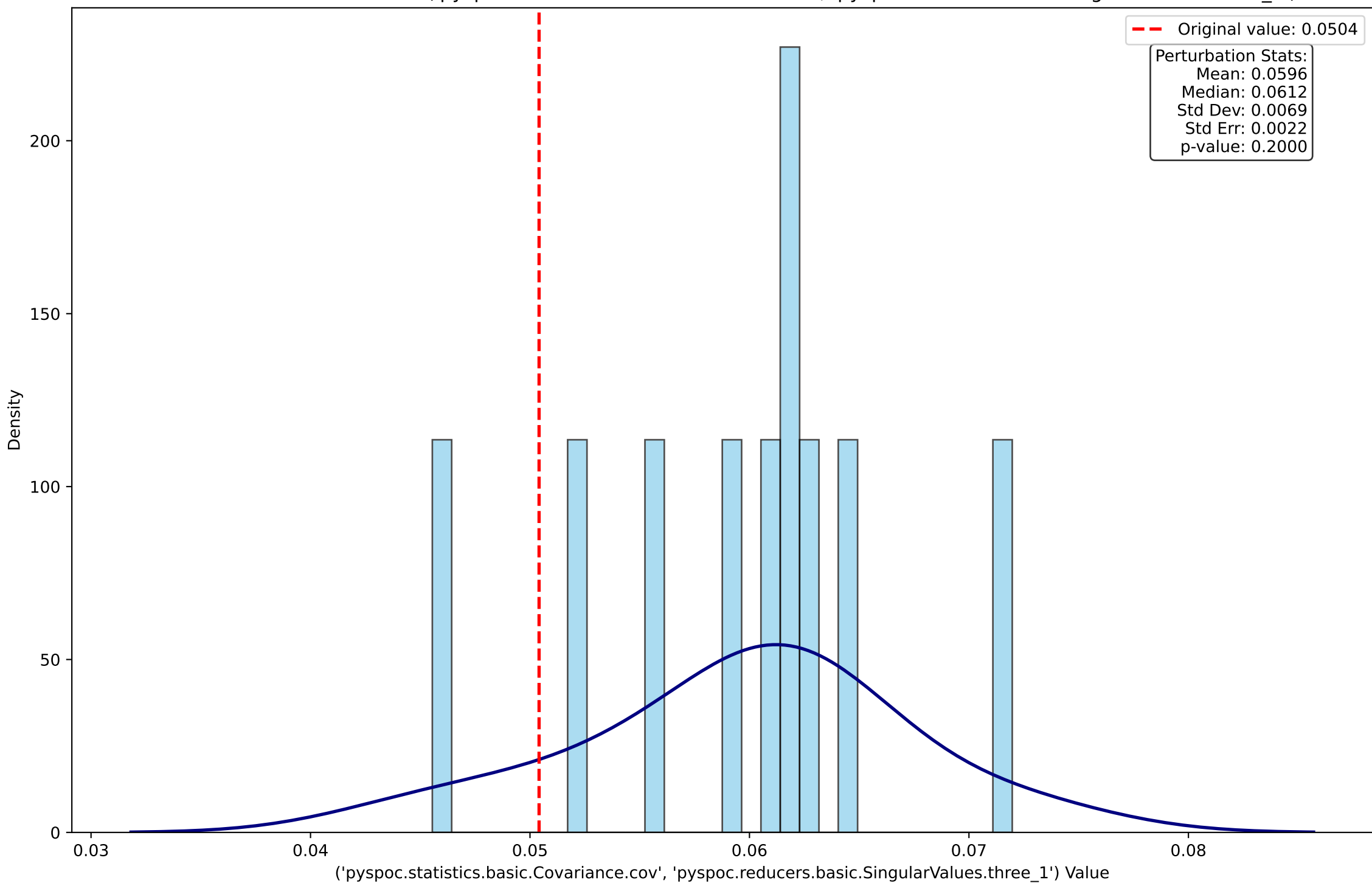
Column Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three_2')



Column Bootstrap Distribution for ('pypoc.statistics.basic.KendallTau.standard', 'pypoc.reducers.basic.SingularValues.three_3')



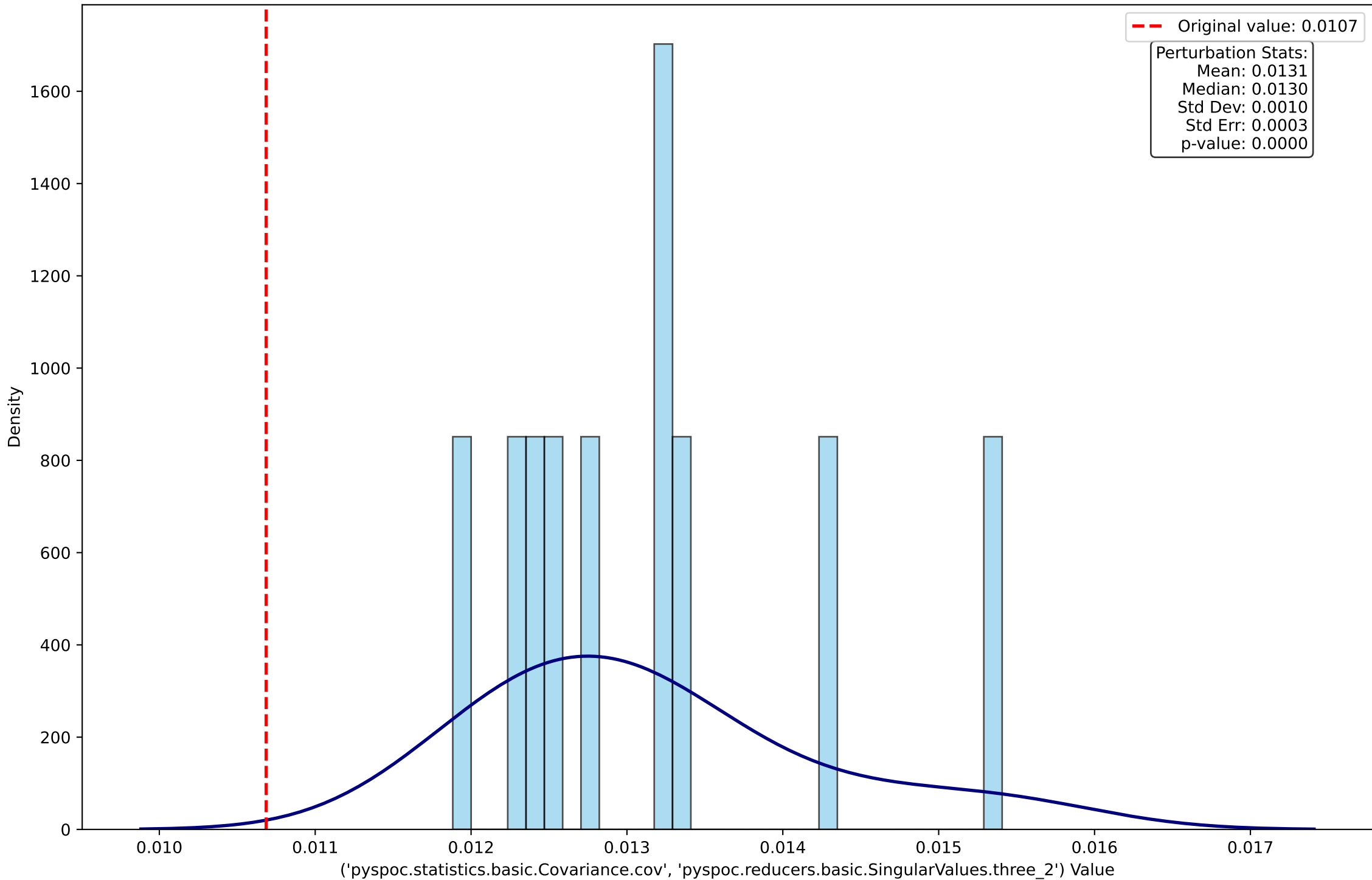
Perturbation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three_1')



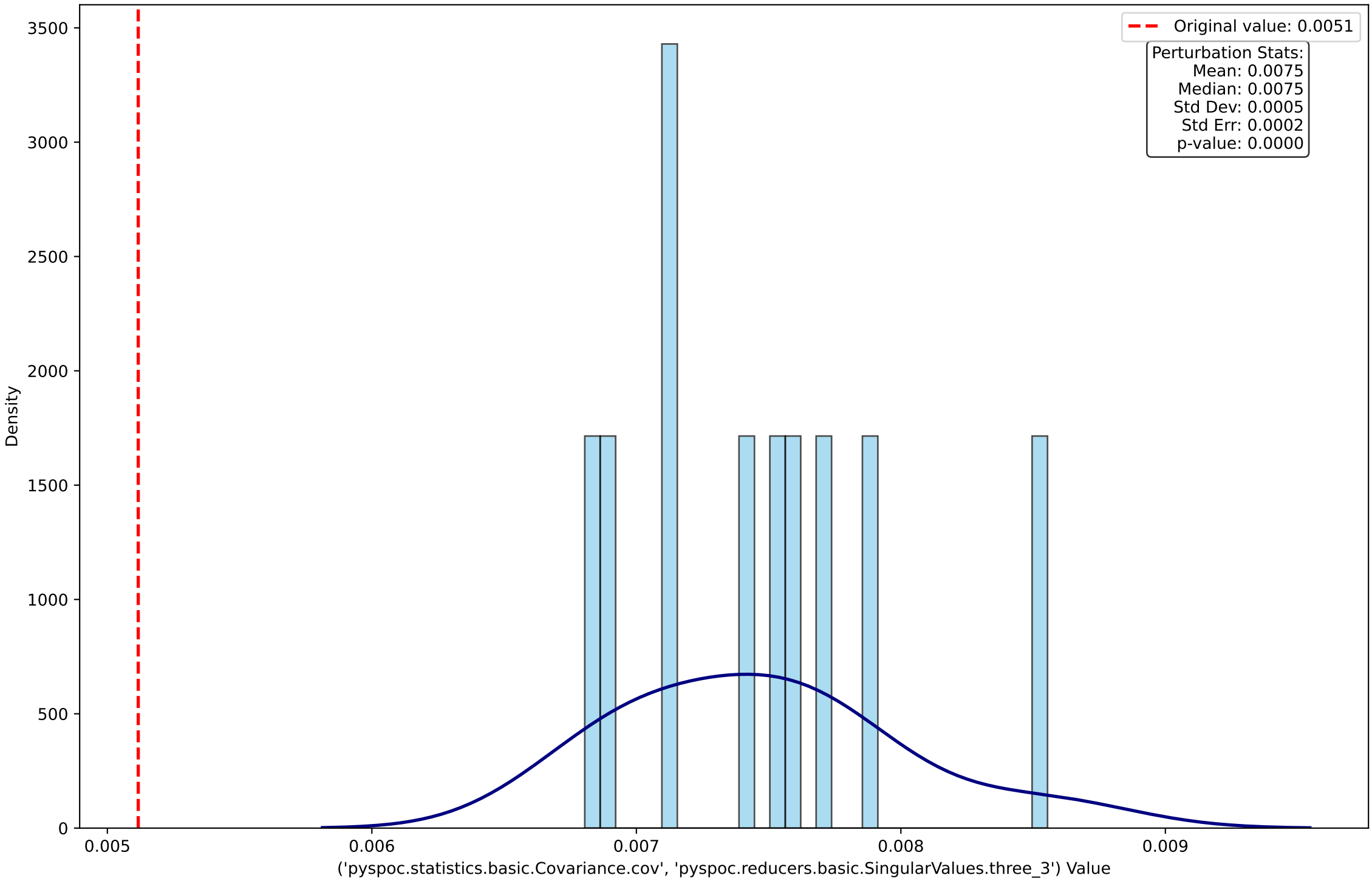
Perturbation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three_2')

Original value: 0.0107

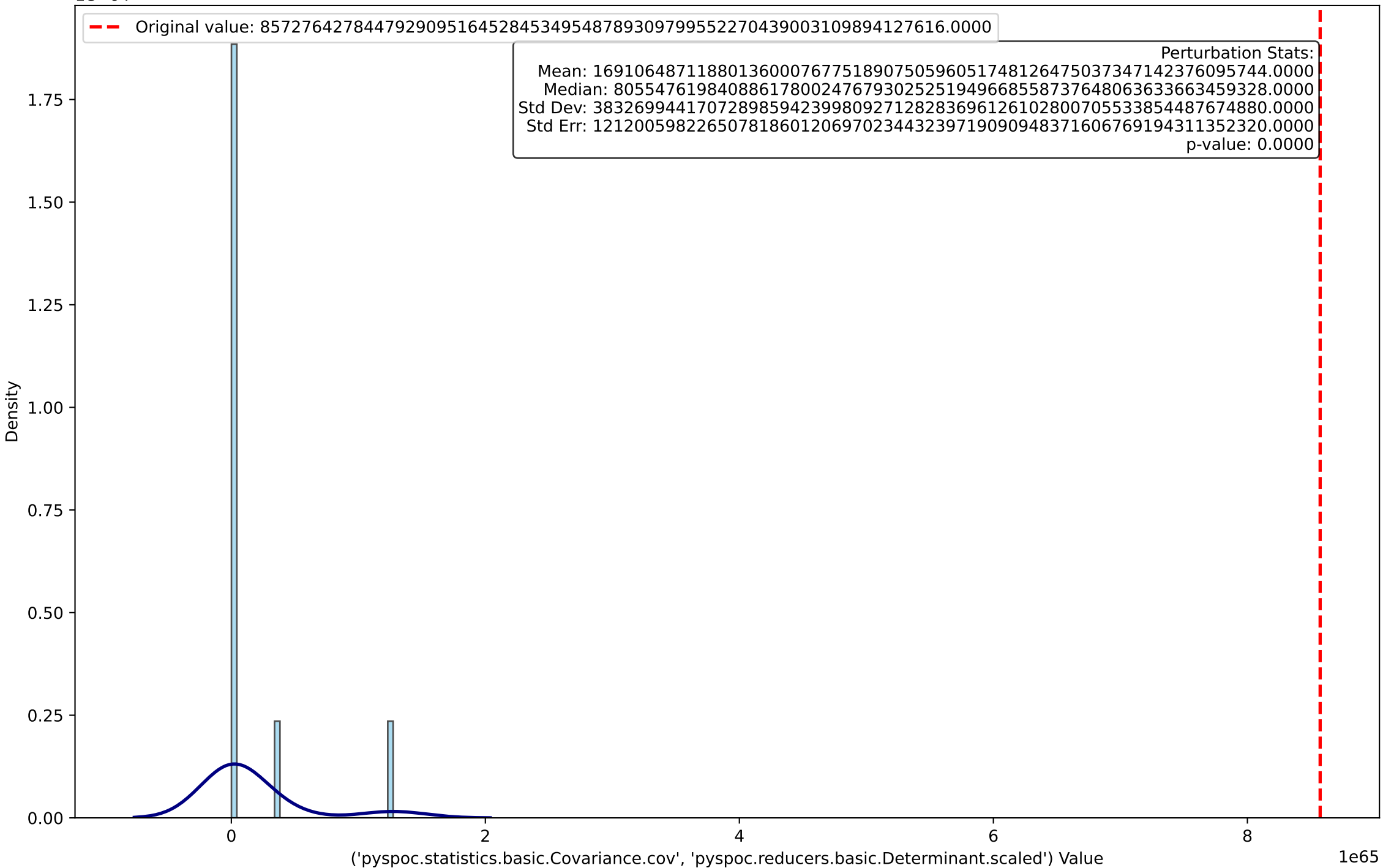
Perturbation Stats:
Mean: 0.0131
Median: 0.0130
Std Dev: 0.0010
Std Err: 0.0003
p-value: 0.0000



Perturbation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three_3')



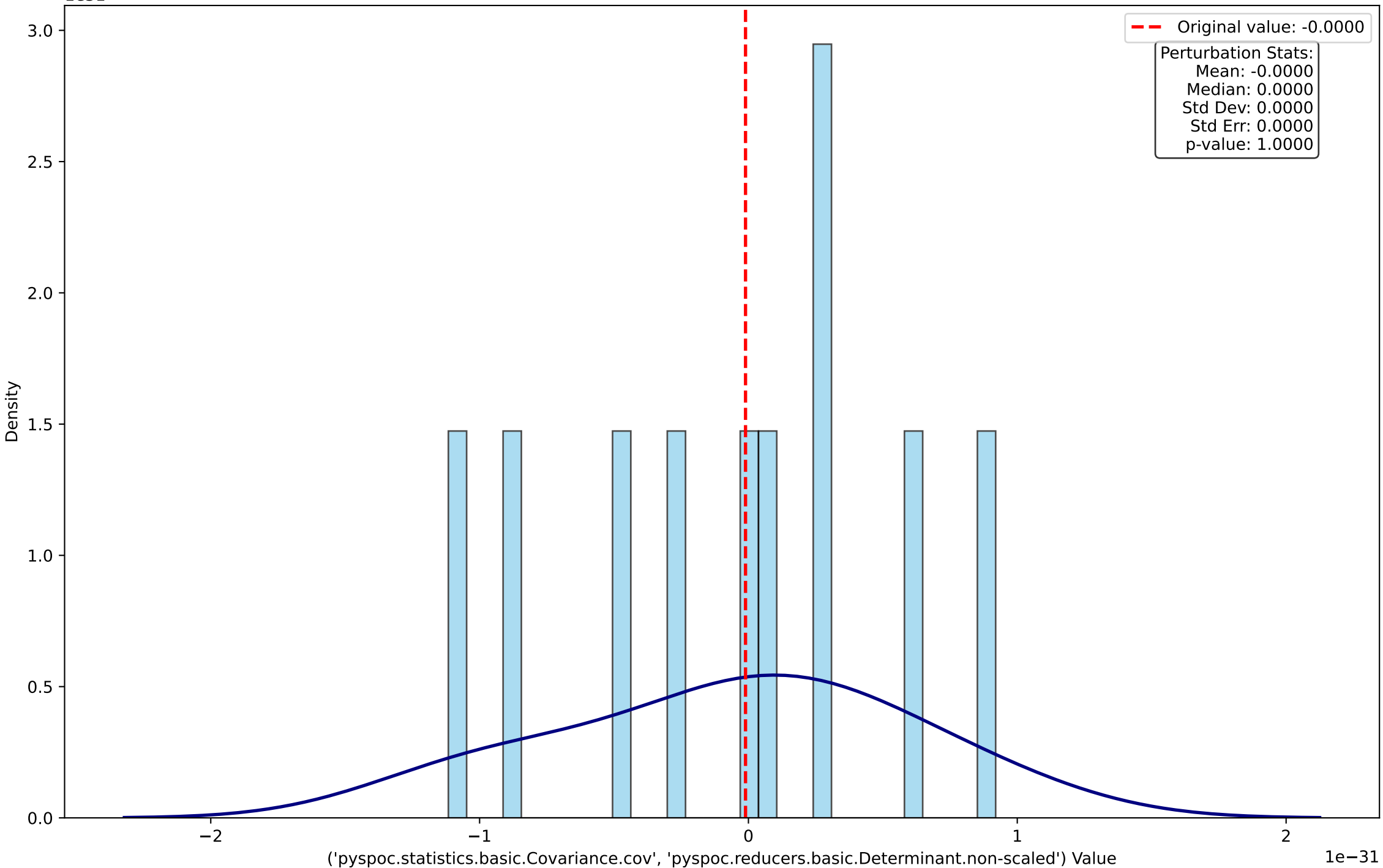
Perturbation Distribution for ('pypoc.statistics.basic.Covariance.cov', 'pypoc.reducers.basic.Determinant.scaled')



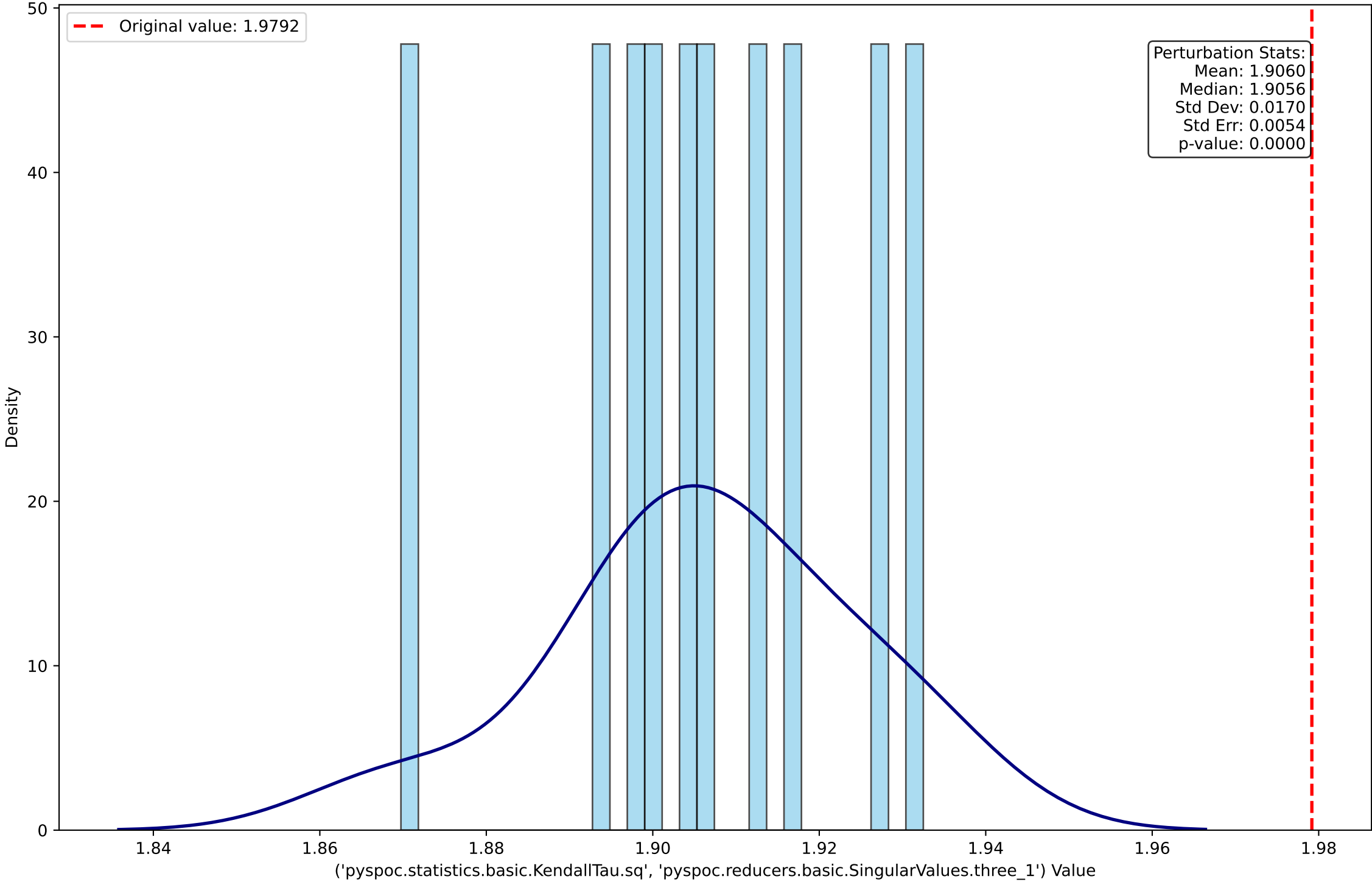
Perturbation Distribution for ('pypoc.statistics.basic.Covariance.cov', 'pypoc.reducers.basic.Determinant.non-scaled')

Original value: -0.0000

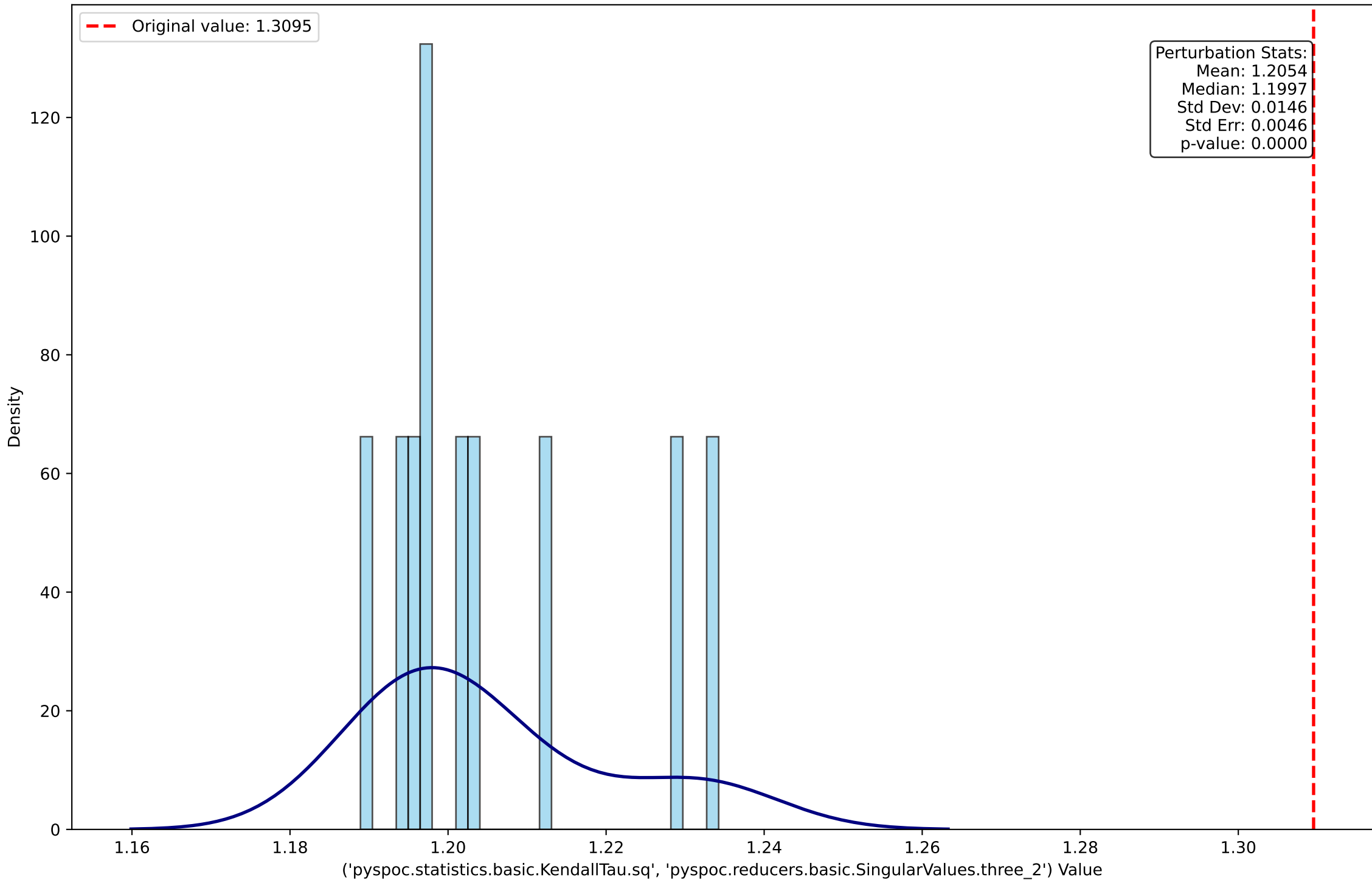
Perturbation Stats:
Mean: -0.0000
Median: 0.0000
Std Dev: 0.0000
Std Err: 0.0000
p-value: 1.0000



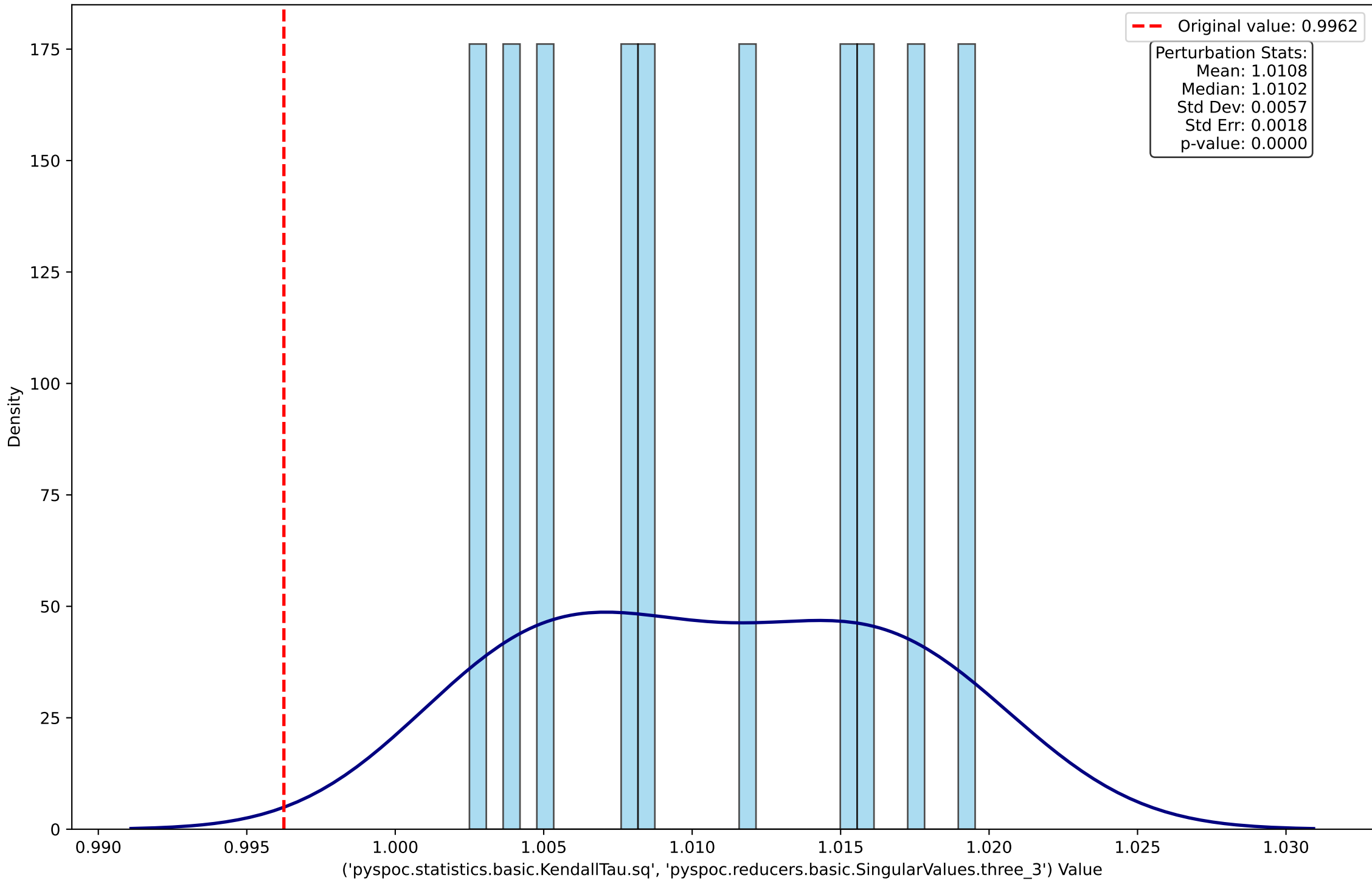
Perturbation Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three_1')



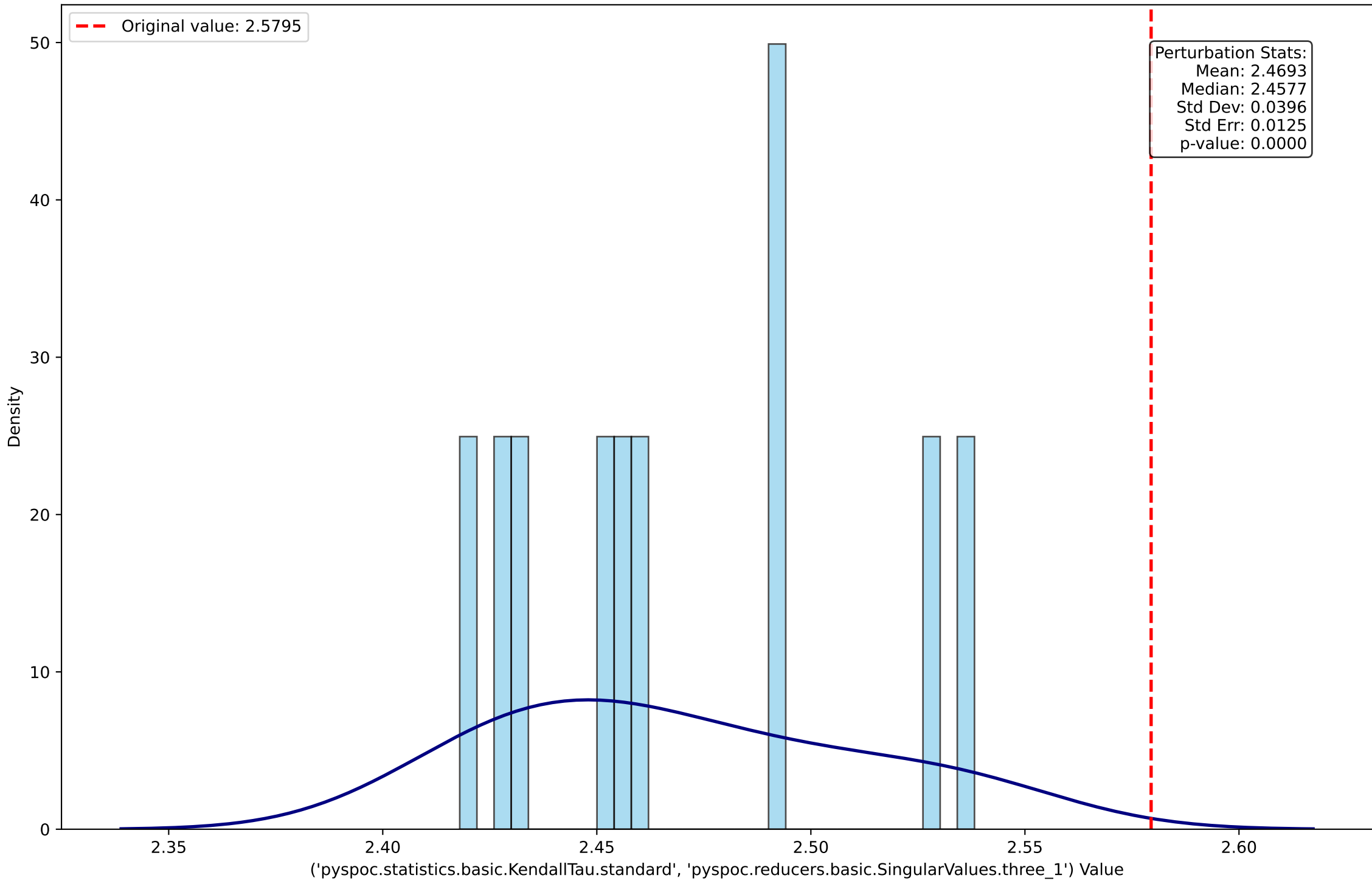
Perturbation Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three_2')



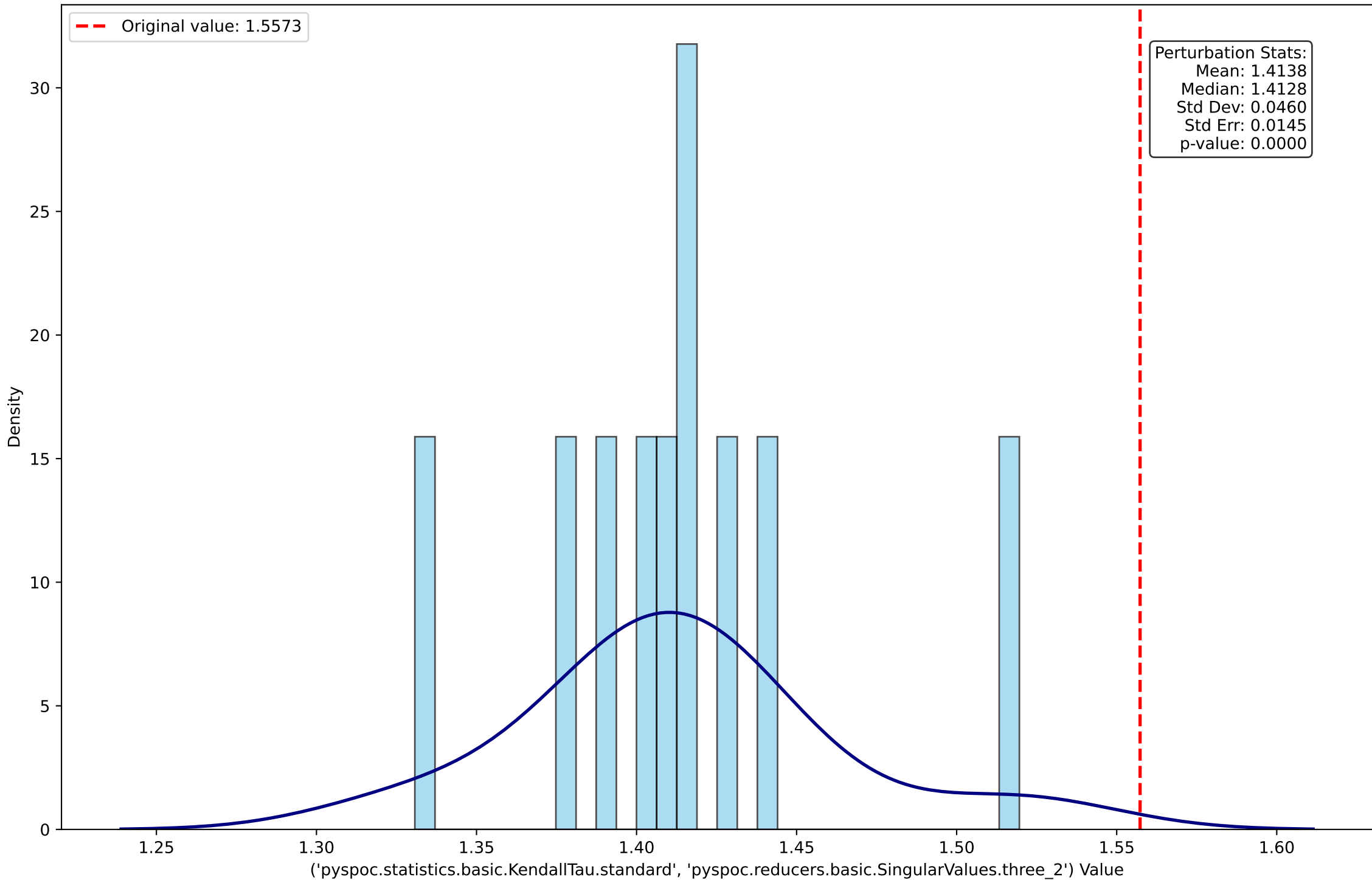
Perturbation Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three_3')



Perturbation Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three_1')



Perturbation Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three_2')



Perturbation Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three_3')

