

INTERTEK TESTING SERVICES

Analysis Report

The equipment under test (EUT) is a Bluetooth Speaker with Bluetooth function operating in 2402-2480MHz. The EUT is powered by DC 3.7V rechargeable battery which can be charged by USB port. For more detail information pls. refer to the user manual.

Bluetooth Version: V5.0 Double Module
Modulation Type: GFSK, $\pi/4$ -DQPSK, 8-DPSK
Antenna Type: PCB antenna (Gain: 0 dBi)

The nominal conducted output power specified (EDR): 0.1dBm (Tolerance: +/-3.0dBm)

The nominal conducted output power specified (BLE): 2.47dBm (Tolerance: +/-3.0dBm)

According to the KDB 447498:

The maximum conducted emission for the EUT is 95.3dBuV/m (0.07dBm) for at the frequency 2.441GHz(EDR mode) which is within the production variation.

The minimum conducted emission for the EUT is 93.1dBuV/m(-2.13dBm) at the frequency 2.402GHz(EDR mode) which is within the production variation

The maximum conducted emission for the EUT is 97.7dBuV/m (2.47dBm) for at the frequency 2.480GHz(BLE mode) which is within the production variation.

The minimum conducted emission for the EUT is 95.1dBuV/m(-0.13dBm) at the frequency 2.402GHz(BLE mode) which is within the production variation

The maximum conducted output power specified is 5.47dBm = 3.52mW
The source- based time-averaging conducted output power
= 3.52 * Duty cycle mW <= 3.52 mW (Duty Cycle<=100%)

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The SAR Exclusion Threshold Level:

$$= 3.0 * (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}}$$

$$= 3.0 * 5 / \sqrt{2.480} \text{ mW}$$

$$= 9.53 \text{ mW}$$

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.