

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a TRUE WIRELESS SPEAKER with Bluetooth 5.0 (Single Mode BDR/EDR) function operating in 2402-2480MHz. The EUT is powered by DC 3.7V by rechargeable battery and charged by DC 5V through adaptor. Once a 3.5mm audio jack is inserted into the Aux in port, the device will automatically be switched to Aux-in function. For more detail information pls. refer to the user manual.

Modulation Type: GFSK, $\pi/4$ -DQPSK and 8-DPSK

Bluetooth Version: 5.0 (Single Mode BDR/EDR)

Antenna Type: Integral antenna.

Antenna Gain: -0.58dBi Max

The nominal conducted output power specified: -4.42dBm (+/-3dB).

The nominal radiated output power (e.i.r.p) specified: -5dBm (+/- 3dB).

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 88.4dB μ V/m at 3m in the frequency 2441MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -6.83dBm

which is within the production variation.

The minimum peak radiated emission for the EUT is 87.7dB μ V/m at 3m in the frequency 2402MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -7.53dBm

which is within the production variation.

The maximum conducted output power specified is -1.42dBm = 0.7mW

The source- based time-averaging conducted output power

= $0.7 \cdot \text{Duty factor}$ mW (where Duty Factor ≤ 1)

= 0.7mW

The SAR Exclusion Threshold Level:

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

= $3.0 \cdot 5 / \sqrt{2.480}$ mW

= 9.53 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.