

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a MINI SPEAKER with Bluetooth function. The EUT was powered by USB operated which can through AC/DC adaptor or Power Bank or PC. For more detail information pls. refer to the user manual.

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

Bluetooth Version: 2.1 with EDR.

Antenna Type: Integral antenna.

Antenna Gain: 2.0dBi.

The nominal conducted output power specified: 0dBm +/-3dB.

The nominal radiated output power (e.i.r.p) specified: 2dBm (+/- 3dB)

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 98.7dB μ V/m at 3m in the frequency 2402MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 3.47dBm
which is within the production variation.

The minimum peak radiated emission for the EUT is 95.9dB μ V/m at 3m in the frequency 2480MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 0.67dBm
which is within the production variation.

The maximum conducted output power specified is 5.0dBm = 3.2mW

The source- based time-averaging conducted output power
= $3.2 \cdot \text{Duty cycle}$ mW (where Duty cycle ≤ 1)
= 3.2 mW

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
= 9.5 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.