

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a BLUETOOTH PILL SPEAKER with BT 5.0 EDR function operating in 2402-2480MHz. The EUT is powered by DC 3.7V by rechargeable battery or DC 5V from USB port. 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 EDR)

Antenna Type: Integral antenna.

Antenna Gain: -0.68dBi Max

The nominal conducted output power specified: -3.32dBm (+/-3dB).

The nominal radiated output power (e.i.r.p) specified: -4dBm (+/- 3dB).

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 93.0dB μ V/m at 3m in the frequency 2402MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -2.23dBm
which is within the production variation.

The minimum peak radiated emission for the EUT is 88.5dB μ V/m at 3m in the frequency 2480MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -6.73dBm
which is within the production variation.

The maximum conducted output power specified is -0.32dBm = 0.9mW

The source-based time-averaging conducted output power

= 0.9 * Duty factor mW (where Duty Factor \leq 1)

= 0.9 mW

The SAR Exclusion Threshold Level:

= 3.0 * (min. test separation distance, mm) / sqrt (freq. in GHz)

= 3.0 * 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.