

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a WIRELESS EARPHONES with BT 5.0 EDR function operating in 2402-2480MHz. The EUT is powered by DC 3.7V by rechargeable battery. The EUT cannot transmit during charging. 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: -1.42dBi Max

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

The nominal radiated output power (e.i.r.p) specified: 1.58dBm (+/- 3dB).

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 98.9dB μ V/m at 3m in the frequency 2441MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 3.67dBm

which is within the production variation.

The minimum peak radiated emission for the EUT is 96.6dB μ V/m at 3m in the frequency 2480MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 1.37dBm

which is within the production variation.

The maximum conducted output power specified is 6dBm = 4mW

The source- based time-averaging conducted output power

= 4 * Duty factor mW (where Duty Factor ≤ 1)

= 4mW

The SAR Exclusion Threshold Level:

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

= $3.0 * 5 / \text{sqrt} (2.480)$ 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.