

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a BLUETOOTH SPORT EARBUDS with Bluetooth function. The EUT was powered by two DC 3.7V, 0.28Wh rechargeable battery which can be charged by USB port (DC 5V). For more detail information pls. refer to the user manual.

Modulation Type: GFSK for BT 4.0 BLE and GFSK, $\pi/4$ DQPSK, 8DPSK for BT 3.0+HS.
Bluetooth Version: 4.0 and 3.0+HS.

Antenna Type: Integral antenna.

Antenna Gain: 0dBi.

The nominal conducted output power specified: -3.0dBm (+/-6dB).

The nominal radiated output power (e.i.r.p) specified: -3.0dBm (+/- 6dB)

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 97.9dB μ V/m at 3m in the frequency 2440MHz of BT 4.0 BLE

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 2.7dBm
which is within the production variation.

The minimum peak radiated emission for the EUT is 96.5dB μ V/m at 3m in the frequency 2402MHz of BT 3.0+HS

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 1.3dBm
which is within the production variation.

The maximum conducted output power specified is 3.0dBm = 2mW

The source- based time-averaging conducted output power
= 2 * Duty factor mW (where Duty Factor \leq 1)
= 2 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.