

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a True Wireless Earbuds with Bluetooth 5.3 EDR function operating in 2402-2480MHz. The EUT is powered by DC 3.7V rechargeable battery. Once the earbuds are plugged in the charging case, the earbuds automatically shut down, the Bluetooth function will be disabled. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna

Modulation Type: GFSK, p/4-DQPSK, 8DPSK

Antenna Gain: 1.75dBi Max

The nominal radiated output power (e.i.r.p) specified: 0.0dBm (+/-4dB)

The nominal conducted output power specified: -1.75 dBm (+/-4dB)

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 95.5 dBμV/m at 3m in the frequency 2402MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 0.27dBm

which is within the production variation.

The minimum peak radiated emission for the EUT is 92.6 dBμV/m at 3m in the frequency 2480MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -2.63dBm

which is within the production variation.

The maximum conducted output power specified is 2.25dBm = 1.68 mW

The source- based time-averaging conducted output power

= 1.68 * Duty factor mW (where Duty Factor ≤ 1)

= 1.68 mW

The SAR Exclusion Threshold Level:

$$P_{th}(mW) = ERP_{20cm} * (d/20cm)^X \quad (X = -\log_{10} \left(\frac{60}{ERP_{20cm} \sqrt{f}} \right))$$

$$= 3060 * (0.5/20)^{1.9} \text{ mW}$$

$$= 2.72 \text{ mW}$$

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, per 447498 and §1.1307(b)(3)(i)(A), the EUT is considered to comply with SAR requirement without testing and no evaluation is required.