

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a Wireless Headphones With Noise Cancellation with Bluetooth 5.3(Dual Mode) function operating in 2402-2480MHz. The EUT is powered by DC 3.7V by rechargeable battery. For more detail information pls. refer to the user manual.

Bluetooth Version: 5.3 (Dual Mode)

Antenna Type: Integral antenna

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

Antenna Gain: -0.68dBi Max

The nominal radiated output power (e.i.r.p) specified: -2.68 dBm (+/-4dB)

The nominal conducted output power specified: -2.0 dBm (+/-4dB)

According to the KDB 447498 V07:

The maximum peak radiated emission for the EUT is 96.1 dB μ V/m at 3m in the frequency 2402MHz

The EIRP = [(FS*D) ^2 / 30] mW = 0.87dBm

which is within the production variation.

The minimum peak radiated emission for the EUT is 91.3 dB μ V/m at 3m in the frequency 2480MHz

The EIRP = [(FS*D) ^2 / 30] mW = -3.93dBm

which is within the production variation.

The maximum conducted output power specified is 2.0dBm = 1.585 mW

The maximum ERP specified is 2.0dBm - 2.15dB – 0.68dBi = -0.83 dBm = 0.826mW

The SAR Exclusion Threshold Level:

$$\begin{aligned} P_{th}(\text{mW}) &= ERP_{20\text{cm}} * (d/20\text{cm})^x \quad \left(X = -\log_{10} \left(\frac{60}{ERP_{20\text{cm}} \sqrt{f}} \right) \right) \\ &= 3060 * (0.5/20)^{1.9} \text{ mW} \\ &= 2.72 \text{ mW} \end{aligned}$$

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.