

# INTERTEK TESTING SERVICES

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## RF Exposure

The equipment under test (EUT) is a Wireless earbuds with BT 5.0 BR+EDR function operating in 2402-2480MHz. The EUT is powered by DC 3.7V by rechargeable battery, and charging input 5Vdc via USB port. The USB port only use for charging purpose. The EUT can't transmit while charging. For more detail information pls. refer to the user manual.

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

Bluetooth Version: 5.0 (Single Mode BR+EDR)

Antenna Type: Integral antenna.

Antenna Gain: 0dBi.

The nominal conducted output power specified: -10dBm (+/-2.5dB).

The nominal radiated output power (e.i.r.p) specified: -10dBm (+/- 2.5dB).

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 84.04dB $\mu$ V/m at 3m in the frequency 2402MHz

The EIRP =  $[(FS \cdot D)^2 / 30]$  mW = -11.19dBm  
which is within the production variation.

The minimum peak radiated emission for the EUT is 83.13dB $\mu$ V/m at 3m in the frequency 2441MHz

The EIRP =  $[(FS \cdot D)^2 / 30]$  mW = -12.10dBm  
which is within the production variation.

The maximum conducted output power specified is -7.5dBm = 0.18mW

The source-based time-averaging conducted output power  
=  $0.18 \cdot \text{Duty factor}$  mW (where Duty Factor  $\leq 1$ )  
= 0.18 mW

The SAR Exclusion Threshold Level:

=  $3.0 \cdot (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}}$   
=  $3.0 \cdot 5 / \sqrt{2.480}$  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.