

# INTERTEK TESTING SERVICES

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## RF Exposure

The equipment under test (EUT) is a Wireless Party Speaker with Bluetooth 5.0 (Single Mode EDR) function operating in 2402-2480MHz. The EUT is powered by DC 3.7V by rechargeable battery and the Bluetooth function will be closed while 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: -0.58 dBi Max

The nominal conducted output power specified: -1.0dBm (+/- 2dB).

The nominal radiated output power (e.i.r.p) specified: -1.58dBm (+/- 2dB).

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 94.1dB $\mu$ V/m at 3m in the frequency 2480MHz

The EIRP =  $[(FS^*D)^2 / 30] \text{ mW} = -1.13\text{dBm}$   
which is within the production variation.

The minimum peak radiated emission for the EUT is 92.5dB $\mu$ V/m at 3m in the frequency 2402MHz

The EIRP =  $[(FS^*D)^2 / 30] \text{ mW} = -2.73\text{dBm}$   
which is within the production variation.

The maximum conducted output power specified is 1.0dBm = 1.259mW

The source- based time-averaging conducted output power  
=  $1.259 * \text{Duty factor mW}$  (where Duty Factor  $\leq 1$ )  
= 1.259mW

The SAR Exclusion Threshold Level:

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