

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a Sound Machine Wireless 2 inch with BT 4.2 BR+EDR function operating in 2402-2480MHz. The EUT is powered by DC 3.7V by rechargeable battery or Input DC 5V, 1A via USB port by AC/DC adapter or PC. The USB port only use for charging purpose. For more detail information pls. refer to the user manual.

Modulation Type: GFSK, $\pi/4$ -DQPSK
Bluetooth Version: 4.2 (Single Mode BR+EDR)

Antenna Type: Integral antenna.
Antenna Gain: -0.58dBi.
The nominal conducted output power specified: -2dBm (+/-2dB).
The nominal radiated output power (e.i.r.p) specified: -2.58dBm (+/- 2dB).

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 93.99dB μ V/m at 3m in the frequency 2402MHz
The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -1.24dBm
which is within the production variation.

The minimum peak radiated emission for the EUT is 91.18dB μ V/m at 3m in the frequency 2480MHz
The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -4.05dBm
which is within the production variation.

The maximum conducted output power specified is 0dBm = 1mW
The source-based time-averaging conducted output power
= 1 * Duty factor mW (where Duty Factor \leq 1)
= 1 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.