

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a Bluetooth Wireless Boombox with Bluetooth 5.1 EDR function operating in 2402-2480MHz. The EUT is powered by DC 7.4V by battery which can be charged by DC 12V/1.5A through adapter input. For more detail information pls. refer to the user manual.

Bluetooth Version: 5.1 EDR mode

Antenna Type: Integral antenna

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

Antenna Gain: -0.58dBi Max

The nominal conducted output power specified: -11.42dBm (+/-2dB)

The nominal radiated output power (e.i.r.p) specified: -12dBm (+/-2dB)

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 85.1dB μ V/m at 3m in the frequency 2402MHz

The EIRP = [(FS*D) ^2 / 30] mW = -10.1dBm

which is within the production variation.

The minimum peak radiated emission for the EUT is 82.2dB μ V/m at 3m in the frequency 2480MHz

The EIRP = [(FS*D) ^2 / 30] mW = -13.0dBm

which is within the production variation.

The maximum conducted output power specified is -9.42 dBm = 0.11 mW

The source- based time-averaging conducted output power

= 0.11 * Duty factor mW (where Duty Factor \leq 1)

= 0.11 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.