

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a Bluetooth Low Energy Device with Bluetooth function. The EUT was powered by DC 3V button battery. For more detail information pls. refer to the user manual.

Modulation Type: GFSK

Bluetooth Version: 4.0 BLE Mode

Antenna Type: Integral antenna.

Antenna Gain: 5dBi.

The nominal conducted output power specified: -5dBm (+/-4dB).

The nominal radiated output power (e.i.r.p) specified: 0dBm (+/- 4dB)

According to the KDB 447498:

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

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

The minimum peak radiated emission for the EUT is 92.8dB μ V/m at 3m in the frequency 2402MHz.

The EIRP = $[(FS^*D)^2 / 30]$ mW = -2.43dBm
which is within the production variation.

The maximum conducted output power specified is -1.0dBm = 0.79mW

The source- based time-averaging conducted output power

= 0.79 * Duty factor mW (where Duty Factor ≤ 1)

= 0.79 mW

The SAR Exclusion Threshold Level:

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

= $3.0 * 5 / \text{sqrt}(2.480)$ 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.