

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a Game Augmented Reality Blaster with Bluetooth function operating at 2.4G Band. The EUT can be powered by DC3.0V (2 x 1.5V AA batteries). For more detail information pls. refer to the user manual.

Bluetooth Version: 4.0 BLE (single mode)

Antenna Type: Integral antenna.

Antenna Gain: 0dBi.

The normal radiated output power (e.i.r.p) is: -31.0dBm (tolerance: +/- 3dB).

The normal conducted output power is -31.0dBm (tolerance: +/- 3dB).

Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 64.3dBμV/m at 3m in the frequency 2402MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -30.93dBm

which is within the production variation.

The Minimum peak radiated emission for the EUT is 63.0dBμV/m at 3m in the frequency 2440MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -32.23dBm

which is within the production variation.

The maximum conducted output power specified is -28dBm = 0.0016mW

The source- based time-averaging conducted output power

= 0.0016 * Duty cycle mW = 0.0016 mW (Duty cycle ≤ 100%)

= 0.0016 mW

The SAR Exclusion Threshold Level:

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

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