

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a Jambrites – Monkey with Bluetooth function operating at 2.4G Band. The EUT can be powered by DC 3.7V(1 x 3.7V rechargeable battery). For more detail information pls. refer to the user manual.

Bluetooth Version: 4.2 (single mode)

Antenna Type: Integral antenna.

Antenna Gain: 0dBi.

The normal radiated output power (e.i.r.p) is: -15.0dBm (tolerance: +/- 3dB).

The normal conducted output power is -15.0dBm (tolerance: +/- 3dB).

Modulation Type: GFSK, $\pi/4$ -DQPSK, 8-DPSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 79.4 dB μ V/m at 3m in the frequency 2441MHz

The EIRP = $[(FS^*D)^2 / 30] \text{ mW} = -15.83 \text{ dBm}$

which is within the production variation.

The Minimum peak radiated emission for the EUT is 78.8 dB μ V/m at 3m in the frequency 2480MHz

The EIRP = $[(FS^*D)^2 / 30] \text{ mW} = -16.43 \text{ dBm}$

which is within the production variation.

The maximum conducted output power specified is -12dBm= 0.063mW

The source- based time-averaging conducted output power

= $0.063 * \text{Duty cycle mW} < 0.063 \text{ mW} (\text{Duty cycle} < 100\%)$

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.