

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a DMX racer operating at 2.4G Band. The EUT can be powered by DC 3.0V (2 x 1.5V AAA batteries). For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna.

Antenna Gain: 0dBi.

The normal radiated output power (e.i.r.p) is: 3.0dBm (tolerance: +/- 3dB).

The normal conducted output power is 3.0dBm (tolerance: +/- 3dB).

Modulation Type: GFSK.

According to the KDB 447498 V06:

The Maximum peak radiated emission for the EUT is 100.8dBμV/m at 3m in the frequency 2423MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 5.57dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 97.4dBμV/m at 3m in the frequency 2463MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 2.17dBm
which is within the production variation.

The maximum conducted output power specified is 6dBm = 3.981mW

The source- based time-averaging conducted output power
= 3.981mW

The SAR Exclusion Threshold Level:

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

= $3.0 \cdot 5 / \sqrt{2.463}$ mW

= 9.56 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.