

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is an Flybar 12v Bumper Car operating at 2.4G Band. The EUT can be powered by DC 12.0V (2 x 6.0V rechargeable battery). And the RF function will be shut down and it can't transmit RF signals while charging. 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: -14.0dBm (tolerance: +/- 3dB).

The normal conducted output power is -14.0dBm (tolerance: +/- 3dB).

Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 81.2dB μ V/m at 3m in the frequency 2470MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -14.03dBm

which is within the production variation.

The Minimum peak radiated emission for the EUT is 79.3dB μ V/m at 3m in the frequency 2420MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -15.93dBm

which is within the production variation.

The maximum conducted output power specified is -11.0dBm= 0.079mW

The source- based time-averaging conducted output power
=0.079mW

The SAR Exclusion Threshold Level:

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

= $3.0 \cdot 5 / \sqrt{2.470}$ mW

= 9.54 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.