

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a RC Car operating at 2.4G Band. The EUT can be powered by DC 4.5V (3 x 1.5V AA batteries). For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna.

Antenna Gain: 2dBi.

The normal radiated output power (e.i.r.p) is: 5.0dBm (tolerance: +/- 3dB).

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

Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 102.4dB μ V/m at 3m in the frequency 2432MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 7.17dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 101.8dB μ V/m at 3m in the frequency 2463MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 6.57dBm
which is within the production variation.

The maximum conducted output power specified is 8.0dBm = 6.310mW

The source- based time-averaging conducted output power
=6.310mW

The SAR Exclusion Threshold Level:

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

= $3.0 \cdot 5 / \text{sqrt}(2.463)$ 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.