

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a Toy RC Tornado 360 Spheric operating at 2.4G Band. The EUT can be powered by DC 3.0V (2 x 1.5V AA batteries). For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna.

Antenna Gain: 0dBi.

The normal peak radiated output power (e.i.r.p) is: -1.0dBm (tolerance: +/- 3dB).

The normal peak conducted output power is -1.0dBm (tolerance: +/- 3dB).

Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 95.6 dB μ V/m at 3m in the frequency 2418MHz

The EIRP = [(FS*D) ^2 / 30] mW = 0.37dBm

which is within the production variation.

The Minimum peak radiated emission for the EUT is 93.0dB μ V/m at 3m in the frequency 2462MHz

The EIRP = [(FS*D) ^2 / 30] mW = -2.23dBm

which is within the production variation.

The maximum conducted output power specified is 2dBm= 1.585mW

The source- based time-averaging conducted output power

=1.585* Duty cycle mW <1.585 mW(Duty cycle <100%)

The SAR Exclusion Threshold Level:

= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)

= 3.0 * 5 / sqrt (2.462) 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.

The duty cycle is simply the on-time divided by the period:

The duration of one cycle = 7.8696ms

Effective period of the cycle = 0.8621ms + 0.4348ms = 1.2969ms

DC =1.2969ms / 7.8696ms =0.1648 or 16.48%