

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a Toy RC Stunt Mongoose LED operating at 2.4G Band. The EUT can be powered by DC 6.0V (4 x 1.5V AA batteries). For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna

Modulation Type: GFSK

Antenna Gain: 0dBi

The nominal conducted output power specified: 2.0 dBm (± 3 dB)

The nominal radiated output power (e.i.r.p) specified: 2.0 dBm (± 3 dB)

According to the KDB 447498 D04 Interim General RF Exposure Guidance v01 (D01 447498 General RF Exposure Guidance v07):

The Maximum peak radiated emission for the EUT is 100.2 dB μ V/m at 3m in the frequency 2442MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 4.97dBm

which is within the production variation.

The Minimum peak radiated emission for the EUT is 95.1 dB μ V/m at 3m in the frequency 2473MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -0.13dBm

which is within the production variation.

The maximum conducted output power specified is 5dBm= 3.162mW

The source- based time-averaging conducted output power
= $3.162 \cdot \text{Duty cycle}$ mW = $3.162 \cdot 0.0997$ mW = 0.3152514 mW

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

The duration of one cycle = 4.7971ms

Effective period of the cycle = 0.4783ms

Duty cycle = $0.4783\text{ms} / 4.7971\text{ms}$ = 0.0997 or 9.97%

The SAR Exclusion Threshold Level:

1-mW Test Exemption

Since max. power of the source-based time-averaging conducted output power and effective radiated power (ERP) is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.