

## INTERTEK TESTING SERVICES

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### RF Exposure

The equipment under test (EUT) is a Toy RC Burnout Drifter operating at 2.4G Band. The EUT can be powered by DC 9.0V (6 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 95.8 dBμV/m at 3m in the frequency 2410MHz

The EIRP =  $[(FS \cdot D)^2 / 30]$  mW = 0.57dBm

which is within the production variation.

The Minimum peak radiated emission for the EUT is 93.3dBμV/m at 3m in the frequency 2470MHz

The EIRP =  $[(FS \cdot D)^2 / 30]$  mW = -1.93dBm

which is within the production variation.

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

The source- based time-averaging conducted output power  
=  $1.585 \cdot \text{Duty cycle}$  mW < 1.585 mW (Duty cycle < 100%)

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.

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

The duration of one cycle = 4.0580ms

Effective period of the cycle = 1.7971ms

DC =  $1.7971\text{ms} / 4.0580\text{ms}$  = 0.4429 or 44.29%