

## INTERTEK TESTING SERVICES

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### RF Exposure

The equipment under test (EUT) is a Metal Racer Asst 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: 4.0dBm (tolerance: +/- 3dB).

The normal peak conducted output power is 4.0dBm (tolerance: +/- 3dB).

Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 101.5dB $\mu$ V/m at 3m in the frequency 2467MHz

The EIRP = [(FS\*D) ^2 / 30] mW = 6.27dBm

which is within the production variation.

The Minimum peak radiated emission for the EUT is 101.1dB $\mu$ V/m at 3m in the frequency 2408MHz

The EIRP = [(FS\*D) ^2 / 30] mW = 5.87dBm

which is within the production variation.

The maximum conducted output power specified is 7dBm= 5.012mW

The source- based time-averaging conducted output power =5.012\* Duty cycle mW <5.012 mW(Duty cycle <100%)

The SAR Exclusion Threshold Level:

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

= 3.0 \* 5 / sqrt (2.467) mW

= 9.55 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 = 12.1159ms

Effective period of the cycle = 0.9855ms

DC =0.9855ms / 12.1159ms =0.0813 or 8.13%