INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a Toy RC Motorhead Closed Wheel 8inch With Titan Head And Mystery Head 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 radiated output power (e.i.r.p) is: -11.0dBm (tolerance: +/- 3dB).
The normal conducted output power is -11.0dBm (tolerance: +/- 3dB).
Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 84.1 dBµV/m at 3m in the frequency 2405MHz
The EIRP = [(FS*D) ^2 / 30] mW = -11.13dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 82.9 dBµV/m at 3m in the frequency 2475MHz
The EIRP = [(FS*D) ^2 / 30] mW = -12.33dBm
which is within the production variation.

The maximum conducted output power specified is -8dBm= 0.158mW
The source- based time-averaging conducted output power
=0.158* Duty cycle mW <0.158 mW(Duty cycle <100%)

The SAR Exclusion Threshold Level:
= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.475) mW
= 9.53 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 = 4.087ms
Effective period of the cycle = 173.9µs x 6 +0.8696µs=1.044ms
DC =1.044ms / 4.087ms =0.2554 or 25.54%

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