

INTERTEK TESTING SERVICES

RF Exposure

The Equipment under Test (EUT) is a Control unit for RC TOYS model: 3781 operating at 2.4GHz band. It is 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: -3.0dBm (tolerance: +/- 3dB).

The normal conducted output power is: -3.0dBm (tolerance: +/- 3dB).

Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 92.3dBμV/m at 3m in the frequency 2407MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -2.93dBm

which is within the production variation.

The Minimum peak radiated emission for the EUT is 89.8dBμV/m at 3m in the frequency 2477MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -5.43dBm

which is within the production variation.

The maximum conducted output power specified is 0dBm = 1.0mW

The source- based time-averaging conducted output power

= $1.0 \cdot \text{Duty Cycle}$ mW < 1.0mW (Duty Cycle<100%)

The SAR Exclusion Threshold Level:

= $3.0 \cdot (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}}$

= $3.0 \cdot 5 / \sqrt{(2.477)}$ mW

= 9.53mW

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 duration of one cycle= 12.3188ms

Effective period of the cycle = 0.13768ms x16 =2.20288ms

DC = 2.20288ms/12.3188ms = 0.1788 or 17.88%