

# INTERTEK TESTING SERVICES

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## Analysis Report

The equipment under test (EUT) is a portable transmitter for a Toy RC Robot Jr operating at 49.850 MHz which is controlled by a LC Oscillator. The EUT is powered by a 9.0V AF22 size battery.

For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna

Antenna Gain: 0dBi

The nominal conducted output power specified: -28.00dBm (+/- 3dB)

The nominal radiated output power (e.r.p) specified: -30.15dBm (+/- 3dB)

Modulation Type: Pulse modulation

According to the KDB 447498:

The worst-case peak radiated emission for the EUT is 66.5dB $\mu$ V/m at 3m in the frequency 49.850MHz

The EIRP = [(FS\*D) ^2 / 30] mW = -28.73dBm

The ERP = EIRP – 2.15 = -30.88 dBm

which is within the production variation.

The maximum conducted output power specified is -25dBm = 0.003mW

The source- based time-averaging conducted output power

= 0.003 \* Duty Cycle mW= 0.0015 mW < 0.002 mW

The SAR Exclusion Threshold Level for 49.850MHz when the minimum test separation distance is < 50mm:

= 474 \* [1 + log(100/f(MHz))]/2

=308.7mW

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 = 3.42 ms

Effective period of the cycle = 1.68 ms

DC = 1.68 ms / 3.42 ms = 0.4912 or 49.12%

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FCC ID: TB7DXTOYS9636149D