

# INTERTEK TESTING SERVICES

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## Analysis Report

The equipment under test (EUT) is a portable transmitter for a 1:24 Licensed R/C Vehicles operating at 27.145 MHz which is controlled by a crystal. The EUT is powered by two 1.5V AA size batteries. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna

Antenna Gain: 0dBi

The nominal conducted output power specified: -16.00dBm (+/- 3dB)

The nominal radiated output power (e.r.p) specified: -18.15dBm (+/- 3dB)

Modulation Type: Pulse modulation

According to the KDB 447498:

The worst-case peak radiated emission for the EUT is 78.4dB $\mu$ V/m at 3m in the frequency 27.145MHz

The EIRP = [(FS\*D) ^2 / 30] mW= -16.83dBm

The ERP = EIRP – 2.15 = -18.98 dBm

which is within the production variation.

The maximum conducted output power specified is -13dBm = 0.05 mW

The source- based time-averaging conducted output power

= 0.05 \* Duty Cycle mW= 0.03 mW

The SAR Exclusion Threshold Level for 27.145MHz when the minimum test separation distance is < 50mm:

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

= 371.2 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 duration of one cycle = 16.68ms

Effective period of the cycle = 1.32msx 4 + 480 $\mu$ s x 10 = 10.08ms

DC = 10.08ms / 16.68ms = 0.6043 or 60.43%