

# INTERTEK TESTING SERVICES

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## Analysis Report

The equipment under test (EUT) is a portable transmitter for a RC Monster Car operating at 27.145 MHz which is controlled by a crystal. The EUT is powered by a 9.0Vdc 6F22 battery. For more detail information pls. refer to the user manual.

Antenna 1: telescope antenna with unique antenna connector (Gain: 0dBi)

Antenna 2&3: Integral antenna with plastic enclosure(Gain: 0dBi)

Modulation Type: Pulse modulation

The nominal conducted output power specified: -43dBm (+/- 3dB)

The nominal radiated output power (e.r.p) specified: -45.15dBm (+/- 3dB)

According to the KDB 447498:

The maximum peak radiated emission for the EUT is 52.5dB $\mu$ V/m for Ant 1 at 3m in the frequency 27.146MHz

The EIRP = [(FS\*D) ^2 / 30] mW= -42.73dBm

The ERP = EIRP – 2.15 = -44.88dBm which is within the production variation.

The minimum peak radiated emission for the EUT is 52.1dB $\mu$ V/m at 3m in the frequency 27.146MHz

The EIRP = [(FS\*D) ^2 / 30] mW= -43.13dBm

The ERP = EIRP – 2.15 = -45.28dBm which is within the production variation.

The maximum conducted output power specified is -40.0dBm = 0.0001mW

The source- based time-averaging conducted output power  
= 0.0001 \* Duty Cycle mW < 0.1 mW (Duty Cycle<100%)

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.