

# INTERTEK TESTING SERVICES

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## Analysis Report

The equipment under test (EUT) is a transmitter for an Stunt Tumbler RC - Red (27Mhz) operating at 27.145 MHz which is controlled by a crystal. The EUT is powered by two 1.5 V AA batteries. For more detail information pls. refer to the user manual.

Antenna Type: dedicated antenna

Antenna Gain: 0dBi

Modulation Type: Pulse modulation

The nominal conducted output power specified: -35.0dBm (+/- 3dB)

The nominal radiated output power (e.r.p) specified: -37.15dBm (+/- 3dB)

According to the KDB 447498:

The worst-case peak radiated emission for the EUT is 59.2dBuV/m at 3m in the frequency 27.145MHz

The EIRP =  $[(FS \cdot D)^2 / 30]$  mW = -36.03dBm

The ERP = EIRP - 2.15 = -38.18dBm

which is within the production variation.

The maximum conducted output power specified is -32.0dBm = 0.0006mW

The source-based time-averaging conducted output power = 0.0006 \* Duty Cycle mW < 0.0006mW (Duty Cycle < 100%)

Since the source-based time-averaging conducted output power is well below the SAR low threshold level of 1mW, so the EUT is considered to comply with SAR requirement without testing.

### Transmitter Duty Cycle Calculation

The duration of one cycle = 18.1884ms

Effective period of the cycle = 1.5217ms x 4 + 0.5072ms x 10 = 11.1588ms

DC = 11.1588ms / 18.1884ms = 0.6135 or 61.35%

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