

## Analysis Report

The equipment under test (EUT) is a portable transmitter for a REMOTE CONTROL AIRPLANE operating at 27.145 MHz which is controlled by a crystal. The EUT is powered by six 1.5V AA size batteries. For more detail information pls. refer to the user manual.

Antenna Type: telescope antenna with unique antenna connector

Antenna Gain: 0dBi

The nominal conducted output power specified: -12dBm (+/- 3dB)

The nominal radiated output power (e.r.p) specified: -14.15dBm (+/- 3dB)

Modulation Type: Pulse modulation

According to the KDB 447498:

The worst-case peak radiated emission for the EUT is 83.5dB $\mu$ V/m at 3m in the frequency 27.145MHz

The EIRP = [(FS\*D) ^2 / 30] mW = -11.73dBm

The ERP = EIRP – 2.15 = -13.88 dBm

which is within the production variation.

The maximum conducted output power specified is -9dBm = 0.13mW

The source- based time-averaging conducted output power

= 0.13 \* Duty Cycle mW = 0.06 mW < 0.1mW

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.

### Transmitter Duty Cycle Calculation

The duration of one cycle = 85.2 ms

Effective period of the cycle = 2.0 ms x 1 + 0.6ms x 26 + 1.2ms x 16 = 36.8ms

DC = 36.8 ms / 85.2 ms = 0.432 or 43.2%