Analysis Report

The equipment under test (EUT) is a portable transmitter for a 1:24 Licensed R/C Vehicles operating at 49.860 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: -18.83dBm (+/- 3dB)

The nominal radiated output power (e.r.p) specified: -20.98dBm (+/- 3dB)

Modulation Type: Pulse modulation

According to the KDB 447498:

> The worst-case peak radiated emission for the EUT is 76.4dBμV/m at 3m in the frequency 49.860MHz
> The EIRP = [(FS*D) ^2 / 30] mW = -18.83dBm
> The ERP = EIRP – 2.15 = -20.98 dBm
> which is within the production variation.
>
> The maximum conducted output power specified is -15.83dBm = 0.026mW
> The source- based time-averaging conducted output power
> = 0.026* Duty Cycle mW= 0.016 mW
>
> The SAR Exclusion Threshold Level for 49.860MHz when the minimum test separation distance is < 50mm:
> = 474 * [1 + log(100/f(MHz)]/2
> =308.6mW

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 = 17.04ms
Effective period of the cycle = 1.44ms x 4 + 480μs x 10 = 10.56ms
DC = 10.56ms / 17.04ms = 0.6197 or 61.97%