

Analysis Report

The Equipment Under Test (EUT), is a portable 2.4GHz Transmitter (Controller Unit) for a RC car. The operation frequency range is between 2405MHz and 2475MHz with 71 channels. The channels are separated by 1 MHz channel spacing.

The EUT is powered by 1 x 9.0V alkaline battery.

After switch on the EUT, the car will be moved forward or backward, turned left or right based on the switches pressed in the controller.

Antenna Type: Internal, Integral

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength is 97.5 dB μ V/m at 3m

Maximum allowed production tolerance: +/- 3dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 100.5dB μ V/m at 3m in frequency 0.027145GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 3.366\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain
So;

Conducted Power = 3.366mW.

The SAR Exclusion Threshold Level:

$= 3.0 \cdot (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}}$

$= 3.0 \cdot 5 / \sqrt{2.475} \text{ mW}$

$= 9.535 \text{ mW}$

Since the above conducted output power is well below the SAR Exclusion threshold level, so the EUT is considered to comply with SAR requirement without testing.