

Analysis Report

The Equipment Under Test (EUT) is a 2.4GHz Transmitter for a RC Car operating at 2405 to 2475MHz with 1MHz channel spacing. The EUT is powered by 1 X 9.0V Alkaline battery. After switch on the EUT and paired with RC car, the RC car can be controlled to move forward, backward, turning left/ right direction by the controller.

Antenna Type: External integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 94.5dB μ V/m at 3m

Maximum allowed field strength of production tolerance: +/- 3dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 97.5dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 1.687\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 1.687mW.

The SAR Exclusion Threshold Level:

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

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

= 9.53 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.