

Analysis Report

The Equipment Under Test (EUT) is a portable 2.4GHz Transceiver (Car Unit) for a RC car operating at the frequency range of 2410, 2414, 2428, 2434, 2440, 2455, 2461 and 2477 MHz.

The EUT is powered by 6.4V Rechargeable battery. After switching on the EUT and being paired with controller, the car can be controlled to move forward/backward and turn left/ right by the controller.

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 91.6dB 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 94.6dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.865\text{mw}$

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

Conducted Power = 0.865mW.

The SAR Exclusion Threshold Level:

$= 3.0 \cdot (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}}$
 $= 3.0 \cdot 5 / \sqrt{2.477} \text{ mW}$
 $= 9.53 \text{ mW}$

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.