

Analysis Report

The Equipment Under Test (EUT), is a portable 2.4GHz Transceiver (Controller Unit) for a RC car. The operation frequency range is between 2411MHz and 2472MHz with 21 channels, where 2457MHz is the pairing channel.

2411	2443
2413	2445
2420	2451
2422	2453
2424	2455
2426	2457
2428	2461
2435	2468
2437	2470
2439	2472
2441	

The EUT is powered by 2 x 1.5 V AAA batteries. 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 dBμV/m at 3m

Maximum allowed production tolerance: +/- 3dB

According to the KDB 447498:

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

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

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

Conducted Power = 3.366mW.

The SAR Exclusion Threshold Level:

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

$$= 3.0 * 5 / \sqrt{2.472} \text{ mW}$$

$$= 9.540 \text{ mW}$$

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.