

Analysis Report

The Equipment Under Test (EUT), is a portable 2.4GHz Transceiver (Controller Unit) for a RC car. The sample supplied operated on 25 channels, normally at 2407 - 2474MHz. The channels are shown in below table.

2407	2409	2411	2414	2417
2419	2421	2425	2433	2436
2438	2442	2445	2447	2448
2451	2455	2459	2462	2465
2467	2468	2470	2472	2474

The EUT is powered by 2 x 1.5V AA batteries. After switching on the EUT, the car will be moved forward or backward and turned left and right based on the switches pressed in the controller.

Antenna Type: Internal, Integral antenna

Antenna Gain: 0dBi

Nominal rated field strength is 98.2dBμV/m at 3m (Peak), 80.5dBμV/m at 3m (Average)

Maximum allowed production tolerance: +/- 3dB

According to the KDB 447498:

Based on the maximum average field strength of production tolerance was 83.5dBμV/m at 3m in frequency 2.447GHz.

Thus, it below calculated field strength according to minimum SAR exclusion threshold level as follows:

The worst case of SAR Exclusion Threshold Level:

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

= $3.0 * 5 / \sqrt{2.483.5} \text{ mW}$

= 9.52 mW

According to the KDB 412172 D01:

$\text{EIRP} = [(\text{FS} * \text{D})^2 * 1000 / 30]$

Calculated Field Strength for 9.52mW is 105dBuV/m @3m

Since maximum average field strength plus production tolerance < = 105dBuV/m @3m and antenna gain is > = 0.0dBi, it is concluded that maximum Conducted Power and

Field Strength are well below the SAR Exclusion threshold level, so the EUT is considered to comply with SAR requirement without testing.