

Analysis Report

The Equipment Under Test (EUT), is a portable 2.4GHz Transceiver (Car Unit) for a RC car. The sample supplied operated on 18 channels, normally at 2407 - 2478MHz. The channel table is shown below.

2407	2408	2409	2410	2411
2412	2413	2414	2417	2470
2471	2472	2473	2474	2475
2476	2477	2478		

The EUT is powered by 5 x 1.5V AA batteries. After switch 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 92.3dB μ V/m at 3m
Maximum allowed production tolerance: +/- 3dB

According to the KDB 447498:

Based on the maximum average field strength of production tolerance was 95.3dB μ V/m at 3m in frequency 2.470GHz.

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 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.483.5) mW
= 9.52 mW

According to the KDB 412172 D01:
EIRP = [(FS*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.