

Analysis Report

The Equipment Under Test (EUT), is a portable 2.4GHz Transmitter (Controller Unit) for a RC car. The sample supplied operated on 68 channels, normally at 2408 - 2475MHz. The channels are separated with 1MHz spacing.

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 96.4dBμV/m at 3m (Peak)

Maximum allowed production tolerance: +/- 3dB

According to the KDB 447498:

Based on the maximum field strength of production tolerance was 99.4dBμV/m at 3m in frequency 2.408GHz.

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

The worst case of SAR Exclusion Threshold Level:

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

= $3.0 * 5 / \text{sqrt (2.4835) mW}$

= 9.52mW

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.