

## Analysis Report

The Equipment Under Test (EUT), is a portable 2.4GHz Transceiver (Car Unit) for a RC car. The sample supplied operated on 69 channels, normally at 2407 - 2475MHz. The channels are separated with 1MHz spacing.

The EUT is powered by 4 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 82.1dB $\mu$ V/m at 3m  
Maximum allowed production tolerance: +/- 3dB

According to the KDB 447498:

Based on the maximum field strength of production tolerance was 85.1dB $\mu$ V/m at 3m in frequency 2.407GHz.

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

The worst case of SAR Exclusion Threshold Level:  
=  $3.0 * (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}}$   
=  $3.0 * 5 / \sqrt{2.483.5}$  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 105dB $\mu$ V/m @3m

Since maximum average field strength plus production tolerance  $\leq$  105dB $\mu$ V/m @3m and antenna gain is  $\geq$  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.