

# Analysis Report

The Equipment Under Test (EUT), is a 2.4GHz Transceiver (RC car). The sample supplied operated on 46 channels, normally at 2420 - 2465MHz. The channel is separated by 1 MHz channel spacing.

The EUT is powered by 1 x 9.6V rechargeable battery. 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**

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**Antenna Gain: 0dBi**

**Nominal rated field strength (Peak): 89.8dB $\mu$ V/m at 3m**

**Nominal rated field strength (Average): 65.6dB $\mu$ V/m at 3m**

**Maximum allowed field strength of production tolerance: +/- 3dB**

According to the KDB 447498:

Based on the Average allowed field strength of production tolerance was 68.6dB $\mu$ V/m at 3m.

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

The worst case of SAR Exclusion Threshold Level:

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

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

$$= 9.52 \text{ mW}$$

According to the KDB 412172 D01:

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

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

Since average field strength plus production tolerance  $\leq$  105dBuV/m at 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.