

Analysis Report

Report No.: 19031258HKG-001

The Equipment Under Test (EUT), is a portable 2.4GHz pure Transmitter (Controller Unit) for a RC car. The sample supplied operated on 8 channels, normally at 2408 - 2467 MHz. The channel table is shown below.

2408	2414	2428	2434
2440	2455	2461	2467

The EUT is powered by 2 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

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Antenna Gain: 0dBi

Nominal rated field strength: 93.7dBμV/m at 3m

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

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 96.7dBμV/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:

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

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

$= 9.52 \text{ mW}$

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 maximum field strength plus production tolerance $\leq 105\text{dBuV/m}$ at 3m and antenna gain is $\geq 0.0\text{dBi}$, 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.