

Analysis Report

Report No.: 16051173HKG-001

The Equipment Under Test (EUT) is a 2.4GHz transceiver (i.e. Controller) for a RC car. The EUT is powered by 3.0V (1.5V X 2) 'AAA' batteries. It is designed to operate at 2410 to 2475 MHz with 1MHz channel spacing. It has 2 function keys used to control the RC car moving forward and backward.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 83.8dB μ V/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 86.8dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS^2 * D) / 30] = 0.144\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain
So;

Conducted Power = 0.144mW.

The SAR Exclusion Threshold Level:

$$\begin{aligned} &= 3.0 * (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}} \\ &= 3.0 * 5 / \sqrt{2.480} \text{ mW} \\ &= 9.53 \text{ mW} \end{aligned}$$

Since the above conducted output power is well below the SAR Exclusion threshold level, so the EUT is considered to comply with SAR requirement without testing.