

Analysis Report

Report No.: 17061439HKG-001

The Equipment Under Test (EUT) is a 2.4GHz Transceiver (Controller Unit) of a RC car operating at a frequency range of 2402-2480MHz with 1MHz channel spacing.

The EUT is powered by 1 x 9V batteries. After switching on the EUT and being paired with the car, the car can be controlled to move forward, backward and turn left/ right by the controller.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 89.3dB 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 92.3dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS^2 * D) / 30] = 0.509\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.509mW.

The SAR Exclusion Threshold Level:

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

= $3.0 * 5 / \sqrt{2.480} \text{ mW}$

= 9.53 mW

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.