

# Analysis Report

Report No.: 16020832HKG-001

The Equipment Under Test (EUT) is a 2.4GHz Transceiver (Car Unit) controlled by controller operating at the frequency range of 2410-2475 MHz with a channel spacing of 1MHz. The EUT is powered by 7.2V rechargeable battery. After switch on the EUT and paired with the controller, the caterpillar (wheel) on the left/right can be controlled to roll forward and backward separately by the controller.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 90.0dB $\mu$ 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 93.0dB $\mu$ V/m at 3m in frequency 2.4GHz, thus;

The EIRP =  $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.599\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.599mW.

The SAR Exclusion Threshold Level:

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

=  $3.0 \cdot 5 / \text{sqrt}(2.480)$  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.