

Analysis Report

Report No.: 18010323HKG-001

The Equipment Under Test (EUT) is a portable 2.4GHz Toy Car (Bluetooth 4.0) operating at the frequency range of 2402-2480MHz with 2 MHz channel spacing. It can be connected to the smartphone via Bluetooth and can be controlled to move forward/ backward/ left/ right. The EUT is powered by an internal rechargeable battery of 3.7VDC 250mAh.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 85.7dBμV/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 88.7dBμV/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30]$ = 0.465mW

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

Conducted Power = 0.222mW.

The SAR Exclusion Threshold Level:

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

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