

Analysis Report

Report No.: HK13020061-1

The equipment under test (EUT) is a portable 2.4GHz RF transceiver (Controller) for a corresponding RC Car which is operating at frequency range 2404MHz to 2479MHz with 1MHz channel spacing. The EUT is powered by 3 X1.5V AAA batteries. The EUT has a Steering wheel, Throttle Trigger, ON/OFF switch. After switched ON the EUT, the Throttle Trigger is used to control the car moving forward/backward motion. The Steering wheel is used to control the car turning left and right direction.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Production tolerance: +4dBm (Minimum) to +8dBm (Maximum)

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was +8dBm in frequency 2.4GHz, thus;

Maximum radiated power (EIRP) is 6.31mW (i.e. +8dBm), thus;

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 6.31mW.

The SAR Exclusion Threshold Level:

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

= $3.0 * 5 / \text{sqrt}(2.479)$ 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.