

Analysis Report

Report No.: 14030152HKG-001

The Equipment Under Test (EUT) is a portable 2.4GHz transceiver (i.e. Controller) for a RC plane. The EUT is powered by 9V (1.5V X 6) 'AA' batteries. It is designed to operate frequency hopping systems in the 2413-2475 MHz with 1MHz channel spacing. It has 2 joysticks, 2 function keys, On/OFF/charge switch, a mode selection switch and a charging connector. 2 joysticks are used to control the RC plane moving forward and turning left and right directions. 2 function keys are used to control the RC plane trimming on L-trim and Rtrim adjustment. The mode selection switch is used to select between Ground Mode and Flight Mode of the plane. To charge the internal battery in the plane, plug the charging connector into the charging jack on the plane to start the charge process. Also, The EUT can be powered by USB cable for charging the plane.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 100.0dB 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 103.0dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 5.986\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 5.986mW.

The SAR Exclusion Threshold Level:

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

= $3.0 \cdot 5 / \text{sqrt}(2.475) \text{ mW}$

= 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.