

Analysis Report

Report No.: 19031210HKG-002

The Equipment Under Test (EUT), is a portable 2.4GHz Transceiver (RC plane). The operation frequency range is between 2412MHz and 2472MHz with 61 channels. The channel is separated by 1 MHz channel spacing.

The EUT is powered by 1 x 3.7V rechargeable battery. After switch on the EUT, the plane will be moved forward, backward, upward, downward, left and right based on the switches pressed in the controller.

Antenna Type: Internal, Integral

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Antenna Gain: 0dBi

Nominal rated field strength (Peak): 105.0dBμV/m at 3m

Nominal rated field strength (Average): 72.4dBμV/m at 3m

Maximum allowed field strength of production tolerance: +/- 3dB

According to the KDB 447498:

Based on the average allowed field strength of production tolerance was 75.4dBμV/m at 3m.

Thus, it below calculated field strength according to minimum SAR exclusion threshold level as follows:

The worst case of SAR Exclusion Threshold Level:

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

$= 3.0 * 5 / \text{sqrt}(2.483.5) \text{ mW}$

$= 9.52 \text{ mW}$

According to the KDB 412172 D01:

$\text{EIRP} = [(\text{FS} * \text{D})^2 * 1000 / 30]$

Calculated Field Strength for 9.52mW is 105dBuV/m at 3m

Since average field strength plus production tolerance $\leq 105\text{dBuV/m}$ at 3m and antenna gain is $\geq 0.0\text{dBi}$, it is concluded that maximum Conducted Power and Field Strength are well below the SAR Exclusion threshold level, so the EUT is considered to comply with SAR requirement without testing.