

Analysis Report

The Equipment Under Test (EUT) is a 2.4GHz Transceiver (Controller Unit) for a RC helicopter operating at 2402 to 2477.5MHz with 0.5MHz channel spacing. The EUT is powered by 4 X 1.5V AA batteries. After switch on the EUT and paired with plane, the plane can be controlled to fly forward, backward, turning left/right direction and transform by the controller. Also, the EUT has charging cable to charge the internal battery inside the Plane Unit.

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 95.8dB 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 98.8dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS * D)^2 * 1000 / 30] = 2.276mW$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 2.276mW.

The SAR Exclusion Threshold Level:

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

= $3.0 * 5 / \text{sqrt}(2.4775)$ 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.