

# Analysis Report

The Equipment Under Test (EUT) is a portable 2.4GHz Transceiver (Controller Unit) for a RC Plane operating at 2411.2MHz to 2465.2MHz with 1MHz channel spacing. The EUT is powered by 6 X 1.5V AA batteries. After switch on the EUT and paired with helicopter, the Plane can be controlled to fly forward, backward, turning left/right direction and rolling by the controller. Also, the EUT has a charging circuitry, the corresponding receiver can be charged by this controller.

Antenna Type: Internal integral antenna

Antenna Gain: 4dBi

Nominal rated field strength: 94.8dB $\mu$ 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 97.8dB $\mu$ V/m at 3m in frequency 2.4GHz, thus;

The EIRP =  $[(FS \cdot D)^2 \cdot 1000 / 30] = 1.808\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.72mW.

The SAR Exclusion Threshold Level:

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

=  $3.0 \cdot 5 / \sqrt{2.4652} \text{ mW}$

= 9.55 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.