

# Analysis Report

The Equipment Under Test (EUT) is a 2.4GHz Transceiver (Controller Unit) for a RC helicopter operating at 2412, 2442 and 2470MHz. The EUT is powered by 4 X 1.5V AA batteries. After switch on the EUT and paired with helicopter, the helicopter can be controlled to fly forward, backward, turning left/right direction and rolling by the controller. Also, the corresponding controller has a charging circuitry, the EUT can be charged by the controller.

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 94.6dB $\mu$ 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 97.6dB $\mu$ V/m at 3m in frequency 2.4GHz, thus;

The EIRP =  $[(FS * D)^2 * 1000 / 30] = 1.726mW$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 1.726mW.

The SAR Exclusion Threshold Level:

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

=  $3.0 * 5 / \text{sqrt}(2.470)$  mW

= 9.54 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.