

# Analysis Report

The Equipment Under Test (EUT), is a portable 2.4GHz Transmitter (Controller Unit) for a RC car. The operation frequency range is between 2405MHz and 2475MHz with 71 channels. The channels are separated by 1 MHz channel spacing.

The EUT is powered by 1 x 9.0V alkaline battery.

After switch on the EUT, the car will be moved forward or backward, turned left or right based on the switches pressed in the controller.

**Antenna Type: Internal, Integral**

**Antenna Type: Internal antenna**

**Antenna Gain: 0dBi**

**Nominal rated field strength is 97.5 dB $\mu$ V/m at 3m**

**Maximum allowed production tolerance: +/- 3dB**

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 100.5dB $\mu$ V/m at 3m in frequency 0.027145GHz, thus;

The EIRP =  $[(FS \cdot D)^2 \cdot 1000 / 30] = 3.366\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain  
So;

Conducted Power = 3.366mW.

The SAR Exclusion Threshold Level:

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

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

= 9.535 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.