

Analysis Report

The Equipment Under Test (EUT) is a portable 2.4GHz Transceiver (Controller Unit) for a RC car operating at the frequency of 2410, 2414, 2428, 2434, 2440, 2455, 2461 and 2477 MHz.

The EUT is powered by 2* 1.5V AA battery. After switching on the EUT and being paired with car, the car can be controlled to move forward/backward and turn left/ right by the controller.

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 89.2dB 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 92.2dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS * D)^2 * 1000 / 30] = 0.498\text{mw}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.498mW.

The SAR Exclusion Threshold Level:

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

= $3.0 * 5 / \text{sqrt}(2.475)$ 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.