

Analysis Report

The Equipment Under Test (EUT) is a portable 2.4GHz Transceiver (Controller Unit) for a RC Car operating at 2402MHz to 2480MHz with 1MHz channel spacing. The EUT is powered by 3 X 1.5V AAA batteries. After switch on the EUT and paired with car, the car can be controlled to move forward, backward and turn left/ right by the controller.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 98.2dBμV/m at 3m

Maximum allowed field strength of production tolerance: +/- 2dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 100.2dBμV/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30]$ = 3.141mW

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

Conducted Power = 3.141mW.

The SAR Exclusion Threshold Level:

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

= $3.0 \cdot 5 / \sqrt{2.480}$ 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.