

Analysis Report

The Equipment Under Test (EUT) is a 2.4GHz transceiver (i.e. Car) for a RC Car. The EUT is powered by 3 X1.5V AA batteries. The operating frequency range is from 2412MHz to 2468MHz (57 channels with 1MHz channel spacing). After pairing with the controller, the car can be controlled to run forward, backward and turn around.

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 90.4 dB 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 93.4dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS * D)^2 * 1000 / 30] = 0.656mW$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.656mW.

The SAR Exclusion Threshold Level:

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

= $3.0 * 5 / \text{sqrt}(2.468) \text{ mW}$

= 9.49 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.