

Analysis Report

The Equipment Under Test (EUT) is a portable 2.4GHz Transceiver (Car Unit) for a RC Controller from 2414MHz, 2423MHz, 2452MHz and 2467MHz. The EUT is powered by 4X 1.5V AA batteries. After switch on the EUT and paired with controller, the EUT can be controlled to move forward, backward, turning left/right direction by the controller.

Antenna Type: Internal integral antenna
Antenna Gain: 0dBi
Nominal rated field strength: 76.2dB 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 79.2dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS * D)^2 * 1000 / 30] = 0.025mW$

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

Conducted Power = 0.025mW.

The SAR Exclusion Threshold Level:
= $3.0 * (\text{min. test separation distance, mm}) / \text{sqrt}(\text{freq. in GHz}) = 3.0 * 5 / \text{sqrt}(2.467) mW$
= 9.55 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.