

Analysis Report

The Equipment Under Test (EUT) is a 2.4GHz transceiver (i.e. Car). The EUT is powered by DC 6.0V (4X1.5V "AA" size batteries). The operating frequency are 2402 to 2480MHz (2MHz channel spacing). After pairing with controller (iTouch with related app called R.E.V.), the EUT can be controlled to run forward, backward, left and right. There are also a light, a speaker and IR sensor on the EUT, which can be controlled by the controller.

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 85.8 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 88.8 dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS * D)^2 * 1000 / 30] = 0.228\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.228mW.

The SAR Exclusion Threshold Level:

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

= $3.0 * 5 / \text{sqrt}(2.480)$ 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.