

Analysis Report

The Equipment Under Test (EUT) is a 2.4GHz Transmitter (Controller Unit) operating at a frequency range of 2418-2467MHz with 1MHz channel spacing. The EUT is powered by 2*1.5V AA battery. After switch on the EUT and paired with the 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: 102.8 dB μ V/m at 3m

Maximum allowed field strength of production tolerance: 96.8 dB μ V/m - 102.8 dB μ V/m

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 102.8dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 5.716 \text{ mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 5.716 mW.

The SAR Exclusion Threshold Level:

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

= $3.0 \cdot 5 / \text{sqrt}(2.467) \text{ mW}$

= 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.