

Analysis Report

The Equipment Under Test (EUT) is a Bluetooth LE version Robot Spider operating from 2402-2480MHz with 2MHz channel spacing. The EUT is powered by 7.5V C size Alkaline batteries. After switch on the EUT and paired with smart device, the EUT can be controlled to move forward, backward, turn left/right.

Antenna Type: Internal antenna

Antenna Gain: 0Bi

Nominal rated field strength: 90.2dB 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 93.2dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.627\text{mw}$

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

Conducted Power = 0.627mW.

The SAR Exclusion Threshold Level:
= $3.0 \cdot (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}}$
= $3.0 \cdot 5 / \sqrt{2.475}$ 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.