

Analysis Report

The Equipment under test (EUT) is a 2.4GHz Bluetooth 4.0 transceiver for a RC Robot (Bo) which is powered by a 3.7V internal rechargeable battery pack. After pairing with iPad/Android device, the Robot can be controlled to run forward, backward, turn left/ right directions and any motions. Also, the sound effect can be generated and the LED can be light up. The EUT can be communicated with Yana via infra red for game playing. The internal rechargeable battery shall be charged via mini USB port.

Antenna Type: Internal antenna

Antenna Gain: 2.2dBi

Maximum production tolerance: -20 to +4dBm.

According to the KDB 447498:

Based on the Maximum allowed radiated power of production tolerance was +6.2dBm (i.e. 4dBm + Ant. Gain) in frequency 2.4GHz, thus;

Maximum radiated power (EIRP) is 4.14mW (i.e. +6.2dBm), thus;

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 2.5mW.

The SAR Exclusion Threshold Level:

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

$= 3.0 * 5 / \sqrt{2.480} \text{ mW}$

$= 9.53 \text{ mW}$

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.