

Analysis Report

The Equipment Under Test (EUT) is a 2.4GHz BT 4.0 BLE transceiver (Bluetooth Toy), which is operating from 2402MHz to 2480MHz with 2MHz channel spacing. The EUT is powered by 6.0VDC (4 x 1.5V AA batteries). After paired with a smart device which contains the Apps, the user can control the EUT.

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 86.1dB 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 89.1dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.244\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.244mW.

The SAR Exclusion Threshold Level:

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

= $3.0 \cdot 5 / \sqrt{2.480}$ mW

= 9.52 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.