

## Analysis Report

The Equipment Under Test (EUT) is a portable BLE robot, which was designed to be operated at the frequency range of 2402-2480 MHz with 2 MHz channel spacing.

The EUT is powered by 3.6V rechargeable battery, after being paired with the mobile app, it could be controlled to move, adjust the colour of light and produce sound.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 95.4dB $\mu$ 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 98.4dB $\mu$ V/m at 3m in frequency 2.4GHz, thus;

$$\text{The EIRP} = [(FS^2 * D) / 30] = 2.075\text{mW}$$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 2.075mW.

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.