

Analysis Report

Report No.: 15040307HKG-001

The Equipment Under Test (EUT) is a 2.4GHz Bluetooth 4.0 transceiver (Repulsor Gear), which is operating at 2402MHz to 2480MHz (40 channels with 2MHz channel spacing). The EUT is powered by 6VDC (4 X 1.5V "AA" batteries). The EUT has a power ON/OFF switch and a LED. When the EUT is switched ON, the LED will be on. The EUT can connect to the iPad via Bluetooth and there is an App can control the EUT. Two Repulsor Gear can also be linked to enter the "battle" mode.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 92.7dB μ V/m at 3m

Maximum allowed field strength of production tolerance: +3dB / - 3dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 95.7dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 1.115\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 1.115mW

The SAR Exclusion Threshold Level:

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

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

= 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.