

Analysis Report

Report No.: 14060626HKG-001R1

The equipment under test (EUT) is a portable Bluetooth Smart Pen. The EUT equipped with a micro-USB, an audio interface and contains a Bluetooth 4.0 BLE module. The Bluetooth 4.0 BLE module in the EUT is operating in the frequency range from 2402MHz to 2480MHz (40 channels with 2MHz channel spacing). The EUT is powered by 3.0 VDC (2 X 1.5V AAA batteries). For i-Game mode, the EUT can be wireless connected with corresponding Bluetooth enabled device for game playing.

Antenna Type: Internal integral antenna

Antenna Gain: -6dBi

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 93.2 dB μ V/m at 3m in frequency 2.4GHz, thus;

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

Conducted power = Radiated Power (EIRP) – Antenna Gain
= 4dBm

So;

Conducted Power = 2.5mW.

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

= 9.53 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.