

Analysis Report

Report No.: 14011073HKG-001

The equipment under test (EUT) is a portable keypad. The EUT equipped with a USB interface and contains a Bluetooth module. The Bluetooth module in the EUT is operating in the frequency range from 2402MHz to 2480MHz (79 channels with 1MHz channel spacing). The EUT is powered by USB 5.0VDC or / and 3.7 VDC (1 X 3.7V rechargeable battery). The EUT is using adaptive frequency hopping in the Bluetooth module. The USB interface of the EUT does not contain PC Connectivity which is for charging use only.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Production tolerance: -20dBm (Minimum) to -16dBm (Maximum)

According to the KDB 447498:

Based on the Maximum allowed radiated power of production tolerance was -16.0dBm in frequency 2.4GHz, thus;

Maximum radiated power (EIRP) is 0.025mW (i.e. -16.0dBm), thus;

The maximum conducted source-based time-averaging output power
= $0.025 \text{ mW} * 83\% = 0.021 \text{ mW}$.

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 mW

Since the above conducted source-based time-averaged output power is well below the SAR Exclusion threshold level, so the EUT is considered to comply with SAR requirement without testing.