Analysis Report

Report No.: 14061542HKG-001

The Equipment Under Test (EUT) is a Bluetooth Smart Switch. The EUT is using direct sequence spread spectrum for Bluetooth module. The Bluetooth can support Bluetooth 4.0 BLE only. The Bluetooth portion operates in frequency range from 2402MHz to 2480MHz. The EUT is powered by AC Mains (120VAC 15A 1800W max).

Module:
Modulation Type: GFSK
Antenna Type: Integral, Internal
Frequency Range: 2402MHz – 2480MHz,2MHz channel spacing, 40 channels.
Nominal field strength is 91.0dBμV/m @ 3m
Production Tolerance of field strength is +/- 3dB
Antenna gain is 0dBi
According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 94.0dBμV/m at 3m in frequency 2.4GHz, thus;

The EIRP = [(FS*D) ^2*1000 / 30] = 0.75mW

Conducted power = Radiated Power (EIRP) – Antenna Gain
So;

Conducted Power = 0.75mW

The SAR Exclusion Threshold Level:
= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.48) 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.