Analysis Report

Report No.: 14100282HKG-001

The Equipment Under Test (EUT) is a Hue Tone Luminaries. The EUT can operate while connected and controlled by a Zigbee Remote (Provided by Applicant) via Zigbee radio link. The EUT can only support Zigbee. The Zigbee portion occupies frequency range of 2405MHz to 2480MHz (15 channels with channel spacing of 5MHz). The EUT is powered by 120VAC 60Hz.

Antenna Type: Internal integral antenna
Antenna Gain: -1.8dBi
Nominal rated field strength: 100dBμV/m at 3m
Maximum allowed field strength of production tolerance: +/- 5dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 105dBμV/m at 3m in frequency 2.4GHz, thus;

Duty cycle = 0.068.

The EIRP = [(FS*D) ^2*1000 / 30] = 0.650mW

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

Conducted Power = 0.982mW.

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