

Analysis Report

Report No.: 17020518HKG-001

The Equipment Under Test (EUT) is a Bluetooth light bulb with speaker. The light bulb powered by 85~265V 50/60Hz AC power source can be controlled to change color and play sound by the app after being paired with the smart phone. The EUT supports both Bluetooth 2.1 and BLE.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 91.7dB 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 94.7dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.885\text{mW}$

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

Conducted Power = 0.885mW.

The SAR Exclusion Threshold Level:

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

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

= 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.