

Analysis Report

The Equipment Under Test (EUT) is a 2.4GHz Bluetooth 4.1 LED Mirror with Bluetooth Speaker. The EUT is powered by 120VAC 60Hz. The Bluetooth 4.1 module (BLE function is disable) in the EUT is operating in the frequency range from 2402MHz to 2480MHz (79 channels with 1MHz channel spacing). The EUT can be connected with a Bluetooth Device for music playing and hand free function.

Antenna Type: Internal antenna

Antenna Gain: 0dBi

The production tolerance range is from 100dBμV/m to 103.5 dBμV/m at 3m

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 103.5dBμV/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30]$ = 6.716mW

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

Conducted Power = 6.716mW.

The SAR Exclusion Threshold Level:

$$\begin{aligned} &= 3.0 * (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}} \\ &= 3.0 * 5 / \sqrt{2.480} \text{ mW} \\ &= 9.52 \text{ mW} \end{aligned}$$

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.