

Analysis Report

Report No.: 13110894HKG-001

The Equipment Under Test (EUT) is a Air Cleaner, equipped with Bluetooth 4.0. The EUT operates in the frequency range 2402MHz to 2480MHz (40 channels with 2 MHz spacing). The EUT is powered by 120VAC. At the same time the power on LED (blue colour) on the panel of the unit will be lighted. It can be controlled by Smartphone via Bluetooth communication.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 89.4dB 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 92.4dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.521\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.521mW.

The SAR Exclusion Threshold Level:

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

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

= 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.