

# Analysis Report

Report No.: 14120076HKG-001

The Equipment Under Test (EUT) is a CD Radio Boombox that can accept audio sources including CD, FM Tuner, analog line-in, USB flash drive and Bluetooth devices. The Bluetooth module in the EUT is operating in the frequency range from 2402MHz to 2480MHz (79 channels with 1MHz channel spacing). The EUT contains another USB port (for 5V DC charging purpose only). The EUT is powered by 120VAC and/or 9VDC (6 x size "C" batteries).

Antenna Type: Internal integral (PCB trace)

Antenna Gain: 0dBi

Nominal rated field strength: 100.6dB $\mu$ 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 103.6dB $\mu$ V/m at 3m in frequency 2.4GHz, thus;

The EIRP =  $[(FS \cdot D)^2 \cdot 1000 / 30] = 6.87\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 6.87mW.

The conducted source-based time-averaged output power

$$= (6.87 \cdot 5/6) \text{ mW}$$

$$= 5.73 \text{ mW}$$

The SAR Exclusion Threshold Level:

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

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

$$= 9.53 \text{ mW}$$

Since the above conducted source-based time-averaged output power is well below the SAR Exclusion threshold level, so the EUT is considered to comply with SAR requirement without testing.