

Analysis Report

The Equipment Under Test (EUT) is a Wireless Speaker. It can accept audio signal from analog input source (3.5mm phone jack aux-in) and wireless Bluetooth device. The audio signal is amplified and fed to the built-in passive loudspeakers. The EUT is powered by 3.6V internal rechargeable battery and/or 5VDC (USB port). The USB ports is for charging internal battery only without PC data transfer function.

2.4GHz Bluetooth Module:

Modulation Type: GFSK

Antenna Type: Integral, Internal (PCB Trace)

Frequency Range: 2402MHz - 2480MHz, 1MHz channel spacing, 79 channels

EIRP range is -4 dBm to 4 dBm

Antenna gain is 0dBi

According to the KDB 447498:

$$\begin{aligned}\text{Conducted power} &= \text{Radiated Power (EIRP)} - \text{Antenna Gain} \\ &= 4 \text{ dBm} - 0 \text{ dBi} = 4 \text{ dBm}\end{aligned}$$

Conducted Power = 2.5 mW.

The SAR Exclusion Threshold Level:

$$\begin{aligned}&= 3.0 * (\text{min. test separation distance, mm}) / \text{sqrt(freq. in GHz)} \\ &= 3.0 * 5 / \text{sqrt (2.480)} \text{ mW} \\ &= 9.53 \text{ mW}\end{aligned}$$

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.