

Analysis Report

The Equipment Under Test (EUT) is a 2.4GHz Bluetooth 4.0 pound. The EUT is powered by 4.5V (3 x 1.5V AA batteries). The Bluetooth 4.0 module in the EUT is operating in the frequency range from 2402MHz to 2480MHz(40 channels with channel spacing of 2MHz). The EUT contains four buttons (SET, BLUETOOTH, ON and OFF) and a display. The EUT can be connected with IOS/Android devices and after the App is installed, you can follow the instructions for making bake or drink.

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 97.6 dBμV/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 100.6dBμV/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 3.444\text{mW}$

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

Conducted Power = 3.444mW.

The SAR Exclusion Threshold Level:

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

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.