

Analysis Report

The Equipment Under Test (EUT) is a 2.4GHz Bluetooth 4.0 Wearable Baby Monitor (Sensor) for a 2.4GHz Bluetooth 4.0 and 2.4GHz Wifi transmitter set of Smart Charger. The EUT is powered by 3.7VDC rechargeable battery.

For Bluetooth 4.0 of wearable sensor, the EUT occupies a frequency range from 2402MHz to 2480MHz (40 channels with channel spacing of 2MHz).

The EUT firstly pair with Smart Charger through Bluetooth. The EUT can be track the heartbeat, motion and sleep position of the Baby. The Battery of EUT can be charged by Smart Charger (wireless).

Antenna Type: Internal antenna

Antenna Gain: 0Bi

Nominal rated field strength: 81.8dB 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 84.8dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS * D)^2 * 1000 / 30] = 0.091\text{mw}$

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

Conducted Power = 0.091mW.

The SAR Exclusion Threshold Level:
= $3.0 * (\text{min. test separation distance, mm}) / \text{sqrt}(\text{freq. in GHz}) = 3.0 * 5 / \text{sqrt}(2.480) \text{ mW}$
= 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.