

INTERTEK TESTING SERVICES

Analysis Report

The equipment under test (EUT) is a Bluetooth thermometer with Bluetooth 4.2 BLE function operating in 2402-2480MHz. The EUT is powered by (DC 1*1.5V AA battery for igniter, and DC 2*1.5V AA battery for Bluetooth controller). For more detail information pls. refer to the user manual.

BLE function:

Modulation Type: GFSK

Bluetooth Version: 4.2 BLE

Antenna Type: PCB Antenna

Antenna Gain: 0dBi

The nominal radiated output power specified: -7.9dBm (Tolerance: +/-1.2dB)

According to the KDB 447498:

The maximum radiated emission for the EUT is 88.5 dB μ V/m at 3m in the frequency 2.440GHz = $[(FS \cdot D)^2 / 30]$ mW
= -6.7 dBm which is within the production variation

The minimum radiated emission for the EUT is 86.4 dB μ V/m for at 3m in the frequency 2.480GHz = $[(FS \cdot D)^2 / 30]$ mW
= -8.8 dBm which is within the production variation

The maximum conducted output power specified is -6.7dBm = 0.214mW

The source- based time-averaging conducted output power
= 0.214 * Duty cycle mW \leq 0.214 mW (Duty Cycle \leq 100%)

The SAR Exclusion Threshold Level:

= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.480) mW
= 9.53 mW

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