

Analysis Report

Report No.: 13090838-HKG001

The Equipment Under Test (EUT) is a 2.4GHz Remote Thermo-Hygrometer, which is operating between 2402MHz and 2480MHz (40 channels with 2MHz channel spacing). The EUT is powered by 3.0VDC (2x 1.5VDC "AAA" Size batteries). The EUT has a pair of control button, temperature sensor, humidity sensor and a red LED indicator. It is required to press the pairing button to pair with the corresponding device, such as IOS device which installed with corresponding software. After pairing, the LED will stay lit and transmit the information of temperature and humidity.

Antenna Type: Internal integral (PCB Trace)

Antenna Gain: -3dBi

Nominal rated field strength: 93.9dBμV/m at 3m

Maximum allowed field strength of production tolerance: -3dm to +3 dBm

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 96.9dBμV/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 1.469\text{mW}$

Conducted power = Radiated Power (EIRP) - Antenna Gain

So;

Conducted Power = 2.951mW.

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 mWm

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.