



Maximum Permissible Exposure Evaluation

FCC ID: 2A8TU-TH11

1. General Information about EUT

1.1 Client Information

Applicant	:	Shenzhen Forever Young Technology Co.,Ltd
Address	:	2/F, No B2 Bldg, Fuyuan Industrial Park, Fu yong Town, Bao'an District, Shenzhen, China
Manufacturer	:	Shenzhen Forever Young Technology Co.,Ltd
Address	:	2/F, No B2 Bldg, Fuyuan Industrial Park, Fu yong Town, Bao'an District, Shenzhen, China

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	WiFi Temperature&Humidity Sensor	
Models No.	:	TH11, TH11Y, TH13, TH13Y, TH13Pro, TH13Plus, TH01Pro, TH02Pro, TH03Pro, T08, T01, T13, TH17Y, TH17, T17	
Model Different	:	All these models are identical in the same PCB, layout and electrical circuit, The only difference is appearance.	
Brand Name	:	Zitech	
Sample ID	:	HC-C-202405-0207-01-01	
Product Description	:	Operation Frequency:	Bluetooth LE: 2402MHz~2480MHz 802.11b/g/n(HT20)/n(HT40): 2412MHz~2462MHz
Power Rating	:	DC 3V(LR03-1.5V/AAA*2)	
Software Version	:	V5.12.0	
Hardware Version	:	V2.1.8	
Remark	:	N/A	

1.3 Antenna Information

Band	Antenna Type	Antenna Gain(dBi)
Bluetooth LE	PCB	1.37
2.4G Wi-Fi		
Remark: The above antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.		

2. Method of Measurement for FCC

1. EUT Operation Condition:

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

2. Exposure Evaluation:

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S=(PG)/4\pi R^2$$

Where

S: power density

P: power input to the antenna

G: power gain of the antenna in the direction of interest relative to an isotropic radiator.

R: distance to the center of radiation of the antenna

Simultaneous transmission MPE Considerations

According to KDB447498: All transmitters and antennas in the host must be either evaluated for MPE compliance, by measurement or computational modeling, or qualify for the standalone MPE test exclusion in section 7.1. Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modeled or measured field strengths or power density, is ≤ 1.0 .

This means that:

$$\sum \text{ of MPE ratios } \leq 1.0$$



3. Test Result:

Worst MPE Result							
Test Mode	Fre. (MHz)	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	Max. ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm ²) [S]
BLE	2402	6.46	6±1	7	1.37	20	0.0014
	2440	5.37	5±1	6	1.37	20	0.0011
	2480	4.18	4±1	5	1.37	20	0.0009
2.4G b	2412	19.46	19±1	20	1.37	20	0.0273
	2437	19.24	19±1	20	1.37	20	0.0273
	2462	17.77	18±1	19	1.37	20	0.0217
2.4G g	2412	15.28	15±1	16	1.37	20	0.0109
	2437	15.01	15±1	16	1.37	20	0.0109
	2462	14.50	15±1	16	1.37	20	0.0109
2.4G n20	2412	14.75	14±1	15	1.37	20	0.0086
	2437	14.37	14±1	15	1.37	20	0.0086
	2462	13.80	14±1	15	1.37	20	0.0086
2.4G n40	2422	12.77	12±1	13	1.37	20	0.0054
	2437	12.29	12±1	13	1.37	20	0.0054
	2452	11.63	12±1	13	1.37	20	0.0054

4. Conclusion:

As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),

Limits for General Population/ Uncontrolled Exposure

Frequency Range (MHz)	Power density (mW/ cm ²)
300-1,500	F/1500
1,500-100,000	1.0

For: 2402~2480MHz&2412~2462MHz

MPE limit S: 1mW/ cm²

The MPE is calculated as **0.0273mW / cm² < limit 1mW / cm²**.

So, RF exposure limit warning or SAR test are not required.

The EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47 CFR2.1091 (b). The RF Exposure Information page from the manual is included here for reference.

-----END OF THE REPORT-----

