FCC 47 CFR PART 15 SUBPART C

TEST REPORT

FOR

Templus Smart Thermometer

Model : TS01

Trade Name : Ecare

Issued to

Ebiologic Technology Co.,Ltd.

9F., No.33, Ln. 3, Sec. 1, Zhongzheng E. Rd., Tamsui Dist., New Taipei City 25147, Taiwan

Issued by

WH Technology Corp.

EMC Test Site	Xizhi Office and Lab	7F., No.262, Sec. 3, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)
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1. GENERAL INFORMATION

Applicant	:	**Ebiologic Technology Co.,Ltd.**
Address	:	**9F., No.33, Ln. 3, Sec. 1, Zhongzheng E. Rd., Tamsui Dist., New Taipei City 25147, Taiwan**
Manufacturer	:	**Ebiologic Technology Co.,Ltd.**
Address	:	**9F., No.33, Ln. 3, Sec. 1, Zhongzheng E. Rd., Tamsui Dist., New Taipei City 25147, Taiwan**
EUT	:	**Templus Smart Thermometer**
Model Name	:	**TS01**
Model Differences	:	**N/A**

Is here with confirmed to comply with the requirements set out in the FCC Rules and Regulations Part 15 Subpart C and the measurement procedures were according to ANSI C63.10:2013. The said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

FCC part 15 subpart C

Receipt Date : 06/18/2020

Final Test Date : 08/10/2020

Tested By:

Aug. 10, 2020
Date

Bing Zhang / Project Engineer

Reviewed by:

Aug. 10, 2020
Date

Bell Wei / Manager

Designation Number: TW2954

1.1 DESCRIPTION OF THE TESTED SAMPLES

EUT Name	:	Templus Smart Thermometer
Model Number	:	TS01
FCC ID	:	2AZOE-TS01
Receipt Date	:	06/18/2020
Input Voltage	:	DC 3V
Power From	:	☑Inside ☐Outside ☑Battery ☐PC ☐AC Power Source ☐DC Power Source ☐Support Unit PC
Operate Frequency	:	Refer to the channel list as described below (2402～2480MHz)
Modulation Technique	:	GFSK
Number of Channels	:	40
Channel spacing	:	☐N/A ☑ 2 MHz
Operating Mode	:	☐Simplex ☑Half Duplex
Antenna Type	:	Ceramic Chip Antenna
Antenna gain	:	5.22 dBi

Channel	Frequency(MHz)	Channel	Frequency(MHz)
00	2402	20	2442
01	2404	21	2444
02	2406	22	2446
03	2408	23	2448
04	2410	24	2450
05	2412	25	2452
06	2414	26	2454
07	2416	27	2456
08	2418	28	2458
09	2420	29	2460
10	2422	30	2462
11	2424	31	2464
12	2426	32	2466
13	2428	33	2468
14	2430	34	2470
15	2432	35	2472
16	2434	36	2474
17	2436	37	2476
18	2438	38	2478
19	2440	39	2480

1.2 SUMMARY OF TEST RESULTS

FCC Rule	Description of Test	Result
15.203	Antenna Requirements	Pass
15.249	Fundamental/ Harmonics	Pass
15.205	Band Edge	Pass
15.209	Radiated Emission	Pass
15.207	Conducted Emission	N/A
15.215	20dB bandwidth test	Pass

2. TEST METHODOLOGY

All testing as described bellowed were performed in accordance with ANSI C63.10:2013 and FCC CFR 47 Part 15 Subpart C.

2.1 GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on a wood table, which is at 0.8 m above ground plane acceding to clause 15.207 and requirements of ANSI C63.10:2013. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz are using CISPR Quasi-Peak / Average detectors.

Radiated Emissions

The EUT is a placed on a turn table, which is 0.8 m above ground plane. The turntable was rotated through 360 degrees to determine the position of maximum emission level. The EUT is placed at 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

2.2 FCC PART 15.205 RESTRICTED BANDS OF OPERATIONS

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
10.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])
13.36 - 13.41			

1 Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
2 Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

2.3 DESCRIPTION OF TEST MODES

The EUT was tested under following modes:

Modes:

1. **Continuous transmitting**

Channels:

1. **2.402 GHz (**Lowest Channel**)**
2. **2.440 GHz (**Middle Channel**)**
3. **2.480 GHz (**Highest Channel**)**

2.4 DESCRIPTION OF THE SUPPORT EQUIPMENTS

Setup Diagram

See test photographs attached in appendix for the actual connections between EUT and support equipment.

Support Equipment

Peripherals Devices:

OUTSIDE SUPPORT EQUIPMENT							
No.	Equipment	Model	Serial No.	FCC ID	Trade name	Data Cable	Power Cord
1	Notebook	N16P7	NXVGKTA001751042C17200	R33142	Acer	N/A	Unshielded 1.8m

Note: All the above equipment /cable were placed in worse case position to maximize emission signals during emission test.

Grounding: Grounding was in accordance with the manufacturer's requirement and conditions for the intended use.

3. TEST AND MEASUREMENT EQUIPMENT

3.1 CALIBRATION

The measuring equipment utilized to perform the tests documented in the report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

3.2 EQUIPMENT

The following list contains measurement equipment used for testing. The equipment conforms to the requirement of CISPR 16-1, ANSI C63.2 and. Other required standards.

Calibration of all test and measurement, including any accessories that may effect such calibration, is checked frequently to ensure the accuracy. Adjustments are made and correction factors are applied in accordance with the instructions contained in the respective.

Tablelist of Test and Measurement Equipment

Conducted emission				
Instrument	Manufacturer	Model No.	Serial No.	Cali Due Date
EMI Test Receiver	R&S	ESHS30	838550/003	2021/08/12
Spectrum Analyzer	R&S	FSP7	830180/009	2021/08/14
Two-Line V-Network	EMCO	3810/2NM	9801-1849	2021/08/07
Test Cable	EMCI	EMCCFD300-BM-BM-3000	180618	2021/08/11
Measurement Software	AUDIX	e3	V9.160707	N/A
Radiated emission Below 1GHz				
Instrument	Manufacturer	Model No.	Serial No.	Cali Due Date
Bilog antenna	Chase	CBL6111A	1546	2021/07/30
LOOP Antenna	EMCO	6507	9301-1298	2021/01/08
Pre-amplifier	Anritsu	MH648A	M15180	2021/08/11
Cable	EMCI	EMCCFD400-NM-NM-7000	180617	2021/08/11
Cable	Marvelous Microwave	260260.F141	120A	2021/08/11
Receiver	R&S	ESCI3	101131	2021/09/08
Measurement Software	AUDIX	e3	V9.160707	N/A
Radiated emission Above 1GHz				

Instrument	Manufacturer	Model No.	Serial No.	Cali Due Date
Horn antenna	ETS LINDGREN	3117	00114397	2021/04/08
Horn antenna	com-power	AH-826	81000	2021/09/16
Horn antenna	Schwarzbeck	BBHA9170	#687	2021/06/21
Pre-amplifier	EMCI	EMC051845	980108	2020/12/19
Pre-amplifier	MITEQ	JS4-18002600-30-5A	808329	2021/09/04
Pre-amplifier	EMC INSTRUMENT	EMC264035SE	980288	2021/05/06
RF CABLE	SUCOFLEX	104PEA	27348/4PEA	2021/06/10
RF CABLE	AGILENT	EMC102-KM-KM-3000	160101	2021/08/18
RF CABLE	AGILENT	EMC102-KM-KM-600	160102	2021/08/18
Spectrum Analyzer	R&S	FSP7	830180/006	2021/04/23
Spectrum Analyzer	ADVANTEST	R3182	150900201	2021/02/19
Measurement Software	AUDIX	e3	V9.160707	N/A

- **CALIBRATION INTERVAL OF INSTRUMENTS LISTED ABOVE IS ONE YEAR**

4. SECTION 15.203 ANTENNA REQUIREMENTS

4.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

4.2 ANTENNA CONSTRUCTION AND DIRECTIONAL GAIN: MEET FCC 47 CFR SECTION 15.203 REQUIREMENT.

BT:

Antenna Type: Ceramic Chip Antenna

Antenna Gain: 5.22 dBi

5. SECTION 15.249 REQUIREMENTS (FUNDAMENTAL/ HARMONICS)

5.1 TEST SETUP

Refer to paragraph 6.1.

5.2 LIMIT

Fundamental Frequency (MHz)	Field Strength of Fundamental (dBμV/m at 3-meter)	Detector
902 - 928 2400 – 2483 5725 - 5875	114	Peak
902 - 928 2400 – 2483 5725 - 5875	94	AV

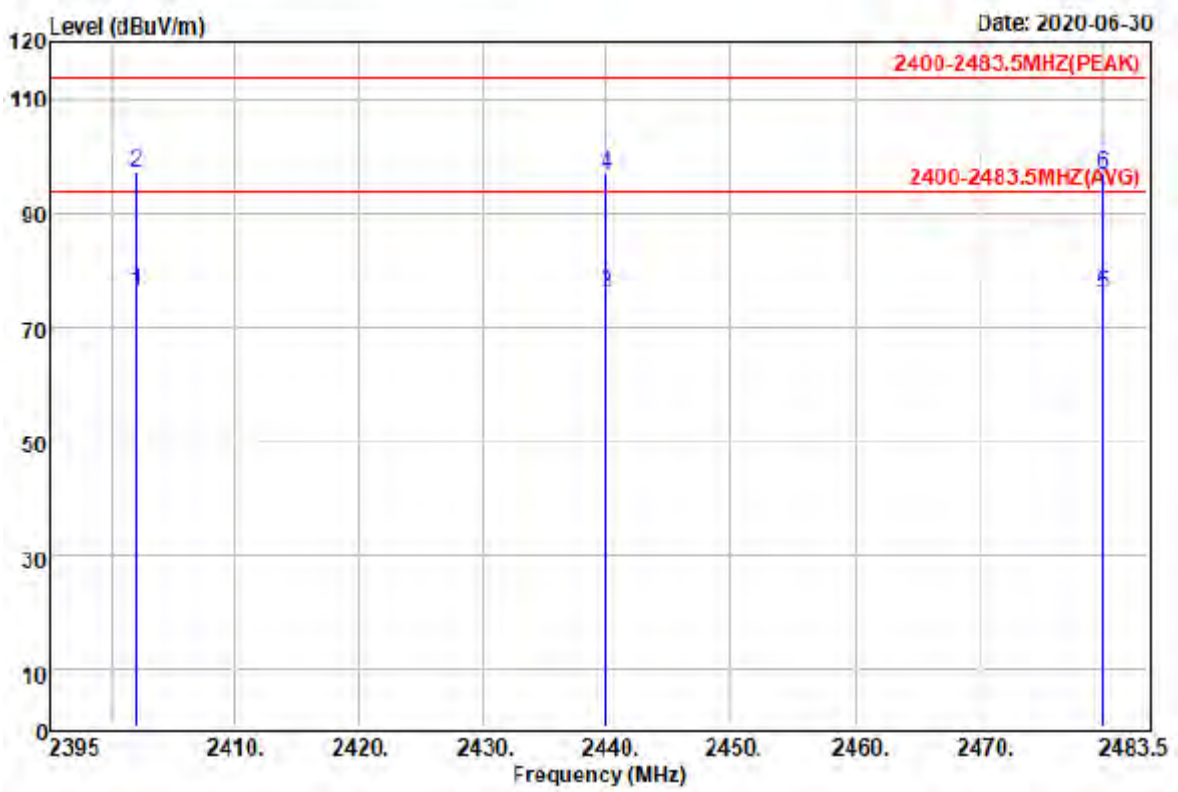
Fundamental Frequency (MHz)	Field Strength of Harmonics (dBμV/m at 3-meter)	Detector
902 - 928 2400 – 2483 5725 - 5875	74	Peak
902 - 928 2400 – 2483 5725 - 5875	54	AV

5.3 RESULT: PASSED

5.4 TEST DATA

Fundamental

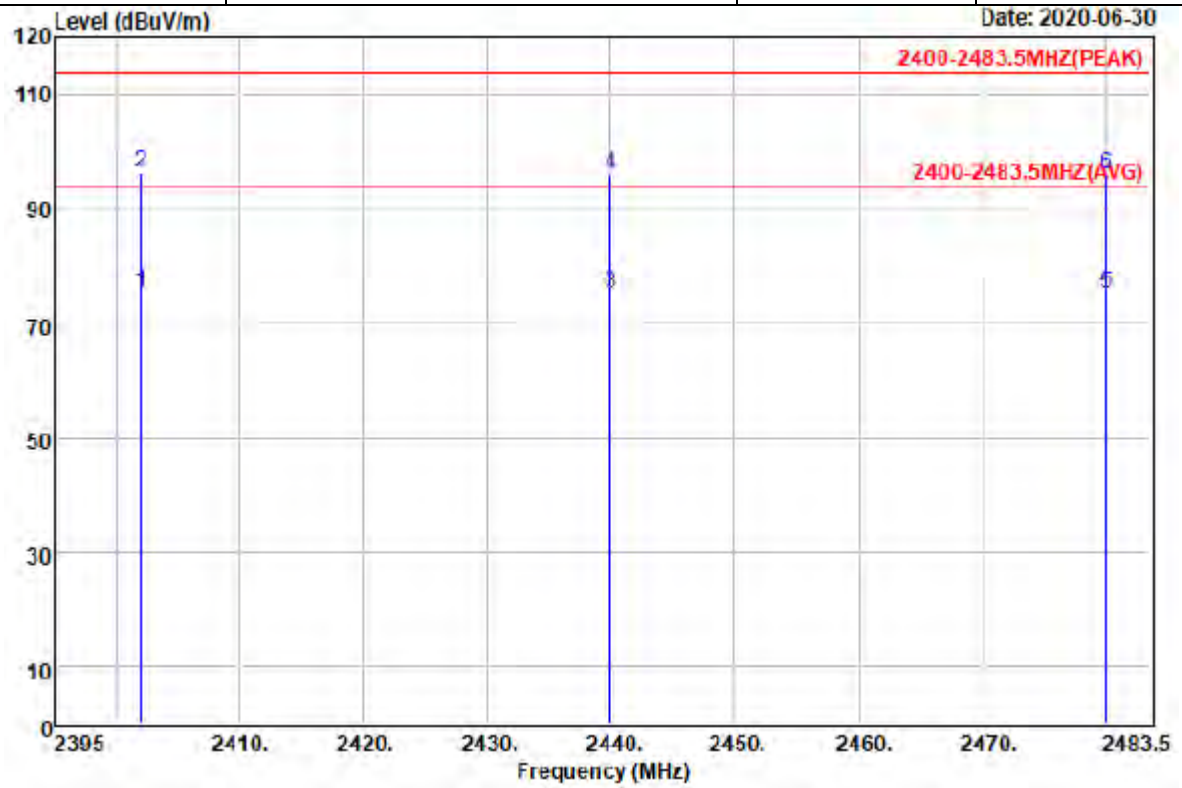
Power	:	DC 3V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	TX-LO 2402-MI 2440-HI 2480 MHz	Temperature	:	35 ℃
Memo	:	Ceramic Chip Antenna	Humidity	:	60 %



Remarks : 1.Result=Read Value+Factor
: 2.Factor=Antenna Factor-Cable loss-
: Amplifier Factor

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	2402.000	86.58	-10.26	76.32	94.00	-17.68	Average
2 @	2402.000	107.55	-10.26	97.29	114.00	-16.71	Peak
3	2440.000	85.99	-9.98	76.01	94.00	-17.99	Average
4	2440.000	106.93	-9.98	96.95	114.00	-17.05	Peak
5	2480.000	85.77	-9.80	75.97	94.00	-18.03	Average
6	2480.000	106.71	-9.80	96.91	114.00	-17.09	Peak

Power	:	DC 3V	Pol/Phase	:	VERTICAL
Test Mode 1	:	TX-LO 2402-MI 2440-HI 2480 MHz	Temperature	:	35 ℃
Memo	:	Ceramic Chip Antenna	Humidity	:	60 %

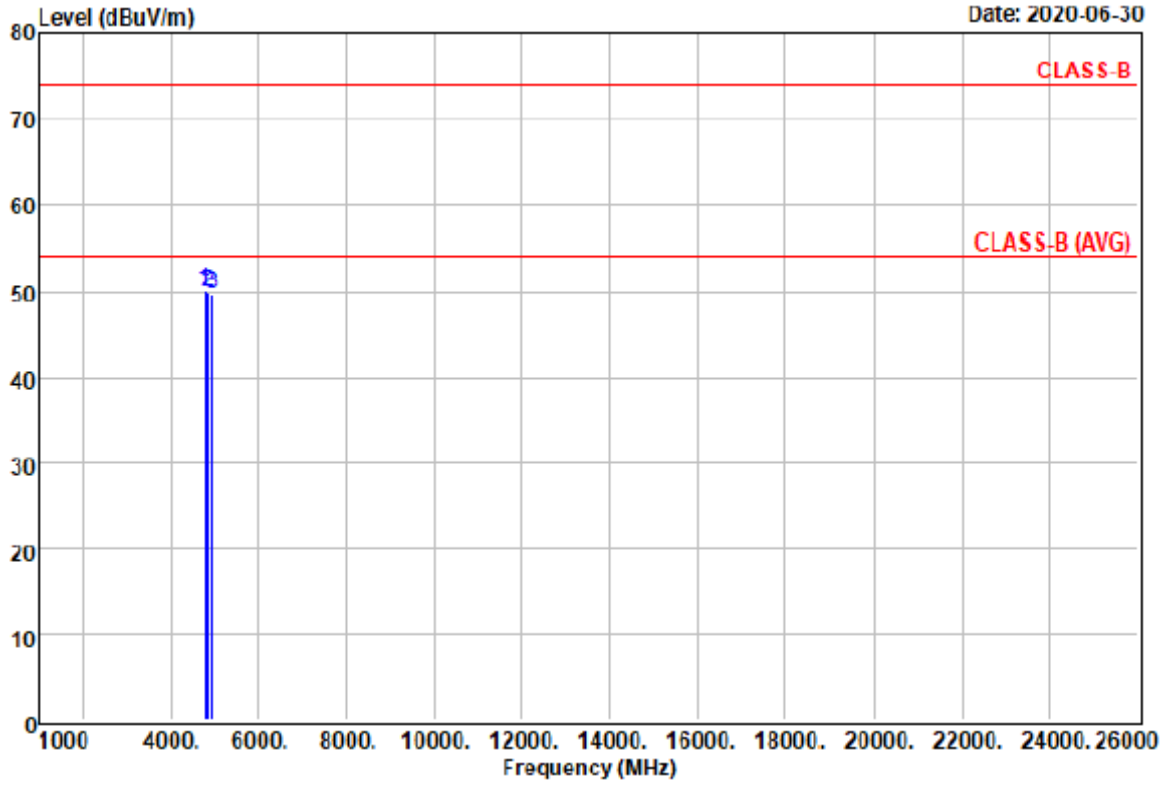


Remarks : 1.Result=Read Value+Factor
: 2.Factor=Antenna Factor-Cable loss-
: Amplifier Factor

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	2402.000	85.66	-10.26	75.40	94.00	-18.60	Average
2 @	2402.000	106.59	-10.26	96.33	114.00	-17.67	Peak
3	2440.000	85.09	-9.98	75.11	94.00	-18.89	Average
4	2440.000	106.01	-9.98	96.03	114.00	-17.97	Peak
5	2480.000	84.83	-9.80	75.03	94.00	-18.97	Average
6	2480.000	105.78	-9.80	95.98	114.00	-18.02	Peak

Harmonics

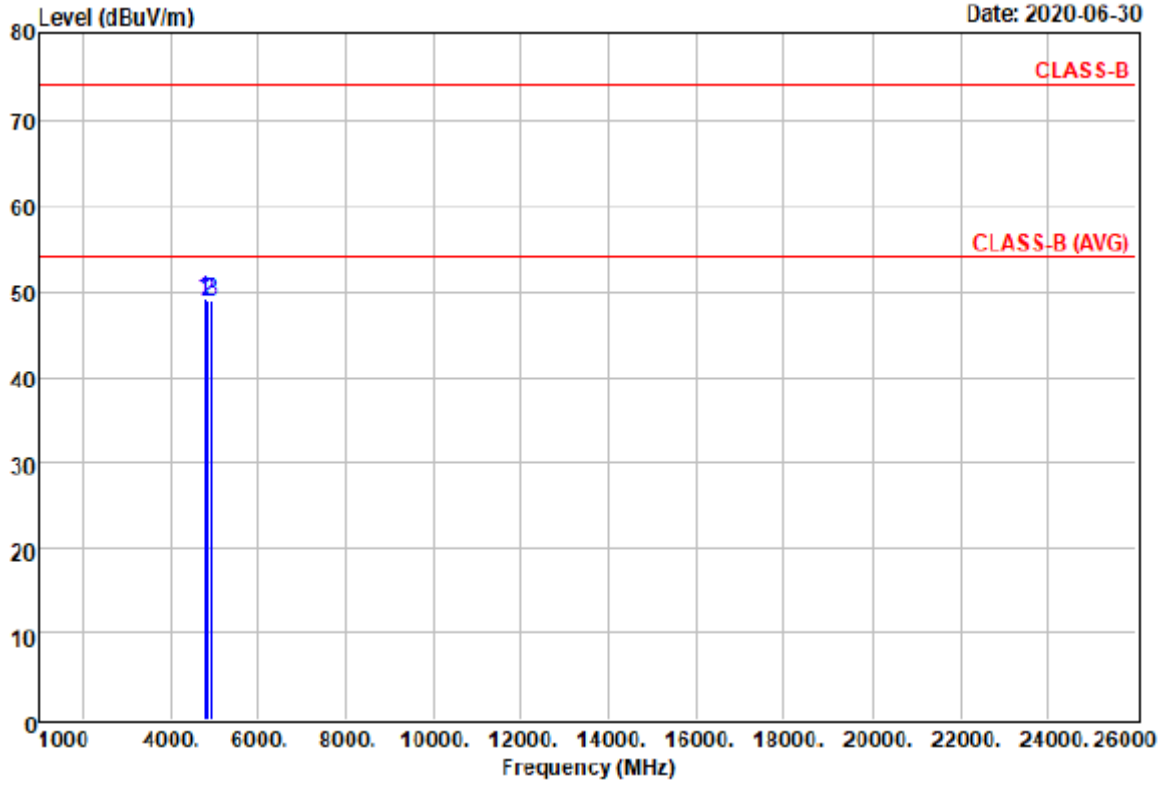
Power	:	DC 3V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	TX-LO 2402-MI 2440-HI 2480 MHz	Temperature	:	35 ℃
Memo	:	Ceramic Chip Antenna	Humidity	:	60 %



Remarks : 1.Result=Read Value+Factor
: 2.Factor=Antenna Factor-Cable loss-
: Amplifier Factor

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1 @	4804.000	55.63	-5.50	50.13	74.00	-23.87	Peak
2	4880.000	54.99	-5.03	49.96	74.00	-24.04	Peak
3	4960.000	54.24	-4.46	49.78	74.00	-24.22	Peak

Power	:	DC 3V	Pol/Phase	:	VERTICAL
Test Mode 1	:	TX-LO 2402-MI 2440-HI 2480 MHz	Temperature	:	35 ℃
Memo	:	Ceramic Chip Antenna	Humidity	:	60 %



Remarks : 1.Result=Read Value+Factor
: 2.Factor=Antenna Factor-Cable loss-
: Amplifier Factor

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1 @	4804.000	54.65	-5.50	49.15	74.00	-24.85	Peak
2	4880.000	54.02	-5.03	48.99	74.00	-25.01	Peak
3	4960.000	53.26	-4.46	48.80	74.00	-25.20	Peak

Note:
1. Emission level = Reading level + Correction factor
2. Correction factor : Antenna factor, Cable loss, Pre-Amp, etc.
3. All emissions as described above were determining by rotating the EUT through three orthogonal axes to maximizing the emissions if the EUT belongs to hand-held or body-worn devices.
4. Measurements above 1000 MHz, Peak detector setting: use a 1 MHz RBW, a 3 MHz VBW.
5. Measurements above 1000 MHz, Average detector setting: 1 MHz RBW with 10 Hz VBW
6. Peak detector measurement data will represent the worst case results.
7. "---" denotes the data which is not available.

6. SECTION 15.205 REQUIREMENTS (BAND EDGE)

6.1 TEST SETUP

Refer to paragraph 6.1.

6.2 LIMIT

Restricted Bands:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])
13.36 - 13.41			

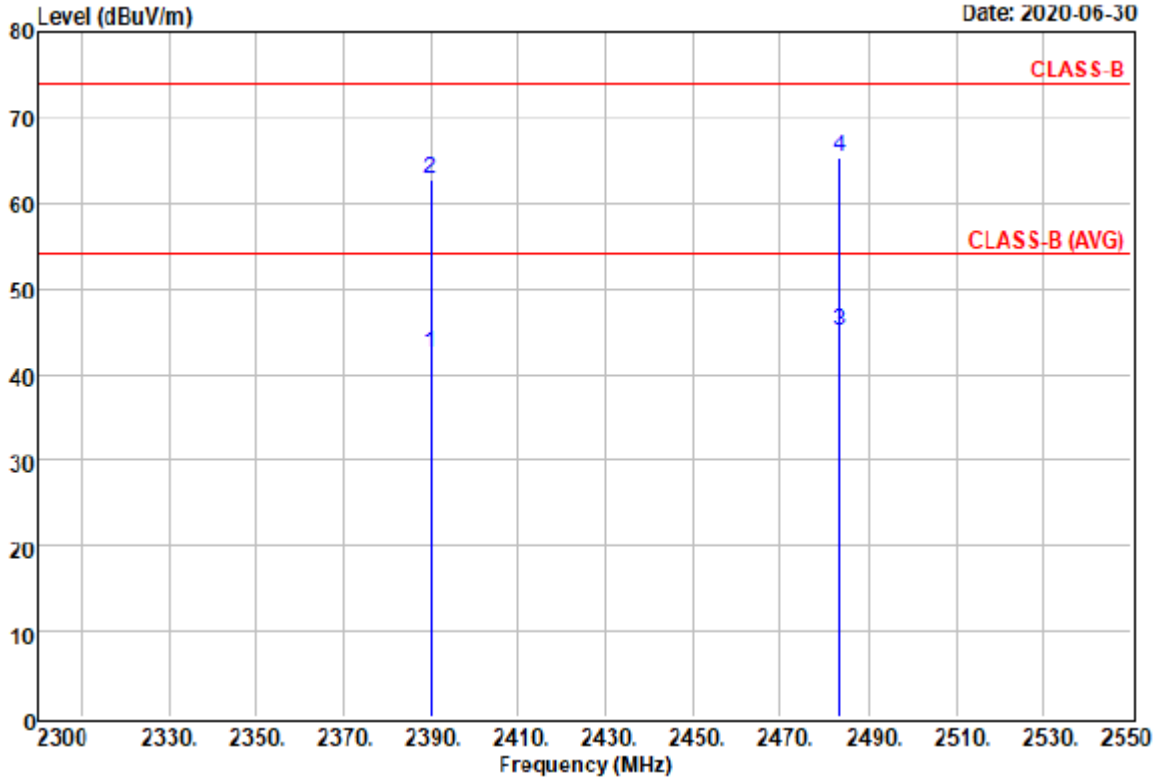
Operation within the bands:
902 - 928 MHz, 2400 - 2483.5 MHz, 5725 - 5875 MHz, and 24.0 - 24.25 GHz.

Frequency (Hz)	Field Strength (μV/m at 3-meter)	Field Strength (dBμV/m at 3-meter)
1.705-30	30 (at 30-meter)	49.5
30-88	100	40
88-216	150	43
216-960	200	46
Above 960	500	54

6.3 RESULT: PASSED

6.4 TEST DATA

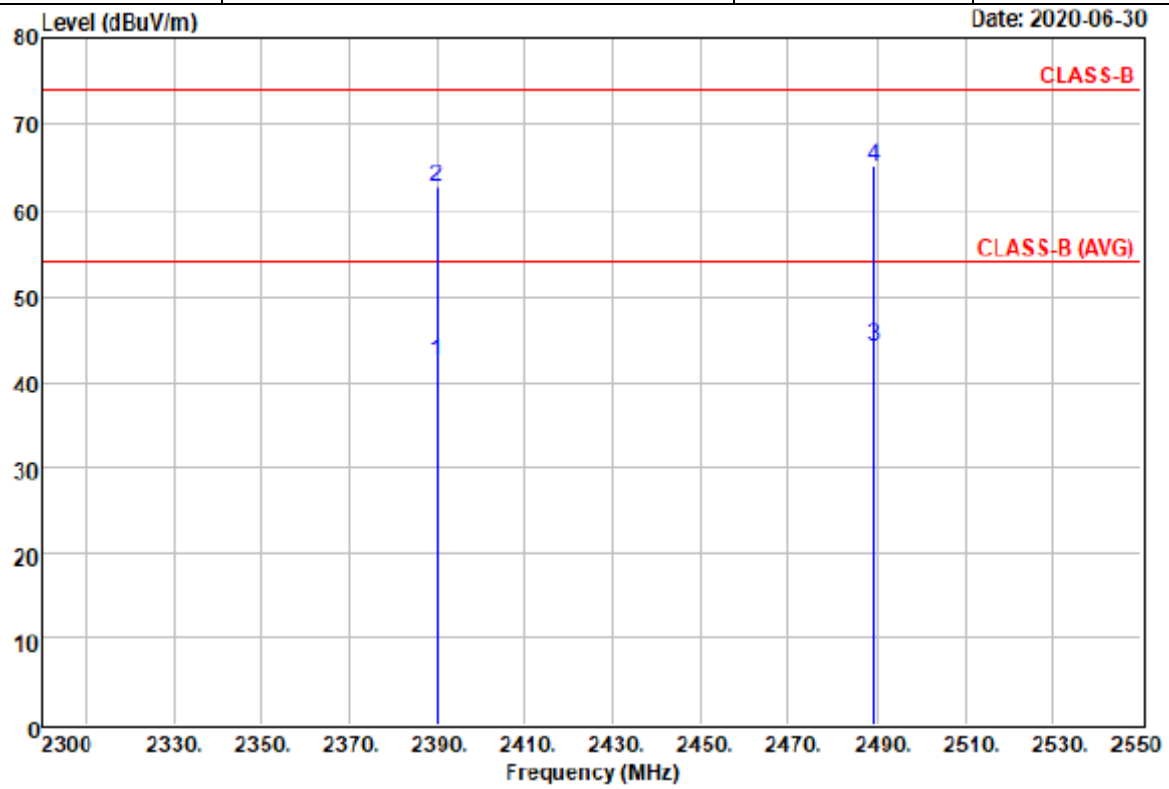
Power	:	DC 3V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	CH LO & HI –Restricted Bands	Temperature	:	35 ℃
Memo	:	Ceramic Chip Antenna	Humidity	:	60 %



Remarks : 1.Result=Read Value+Factor
: 2.Factor=Antenna Factor-Cable loss-
: Amplifier Factor

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	2390.000	52.80	-10.29	42.51	54.00	-11.49	Average
2	2390.000	73.16	-10.29	62.87	74.00	-11.13	Peak
3	2483.500	54.80	-9.79	45.01	54.00	-8.99	Average
4 @	2483.500	75.11	-9.79	65.32	74.00	-8.68	Peak

Power	:	DC 3V	Pol/Phase	:	VERTICAL
Test Mode 1	:	CH LO & HI –Restricted Bands	Temperature	:	35 ℃
Memo	:	Ceramic Chip Antenna	Humidity	:	60 %



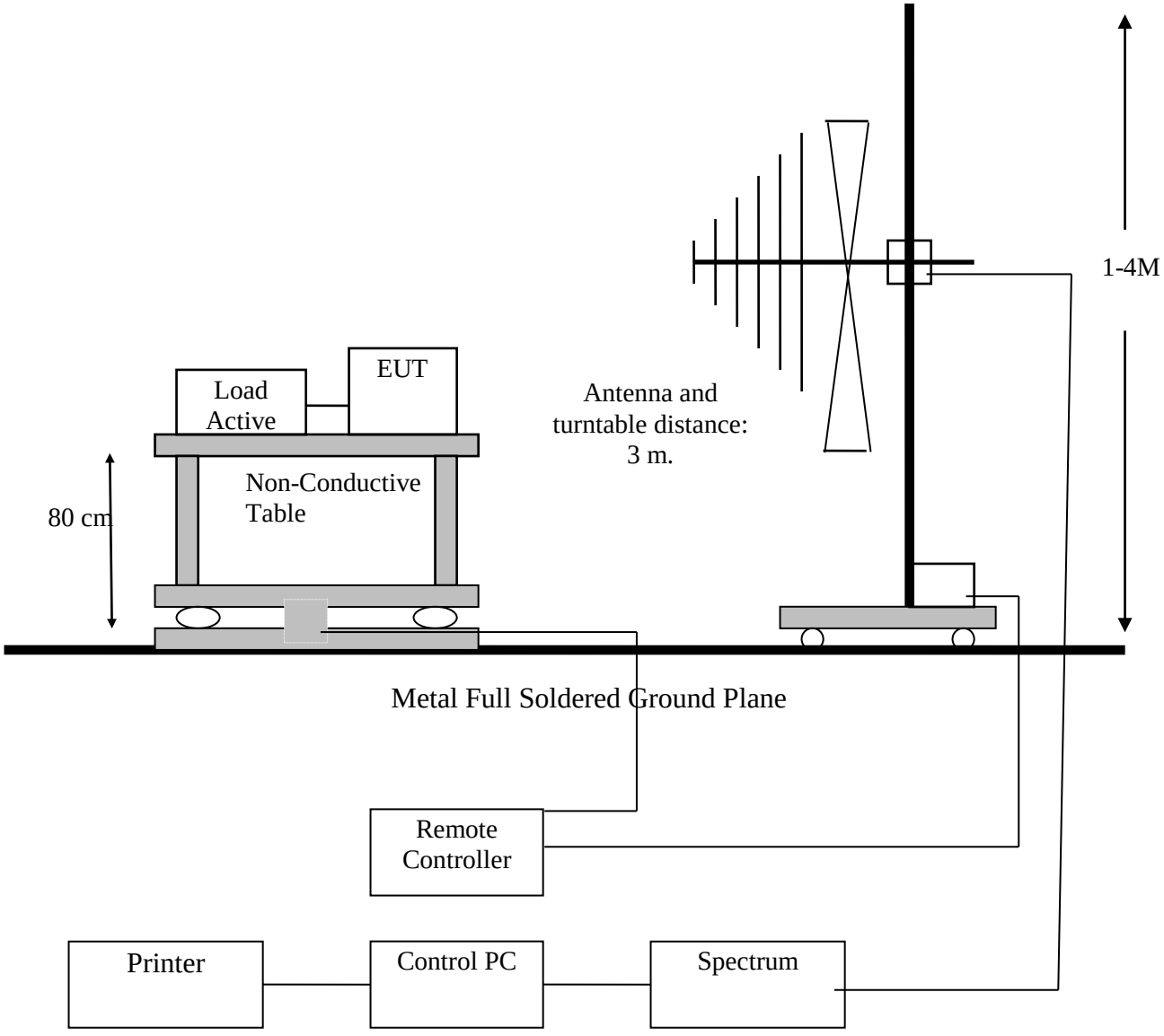
Remarks : 1.Result=Read Value+Factor
: 2.Factor=Antenna Factor-Cable loss-
: Amplifier Factor

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	2390.000	52.78	-10.29	42.49	54.00	-11.51	Average
2	2390.000	72.91	-10.29	62.62	74.00	-11.38	Peak
3	2489.200	53.93	-9.77	44.16	54.00	-9.84	Average
4 @	2489.200	74.85	-9.77	65.08	74.00	-8.92	Peak

Note:
1. Emission level = Reading level + Correction factor
2. Correction factor : Antenna factor, Cable loss, Pre-Amp, etc.
3. All emissions as described above were determining by rotating the EUT through three orthogonal axes to maximizing the emissions if the EUT belongs to hand-held or body-worn devices.
4. Measurements above 1000 MHz, Peak detector setting: use a 1 MHz RBW, a 3 MHz VBW.
5. Measurements above 1000 MHz, Average detector setting: 1 MHz RBW with 10 Hz VBW.
6. Peak detector measurement data will represent the worst case results.

7. SECTION 15.209 REQUIREMENTS (GENERAL RADIATED EMISSION)

7.1 TEST SETUP



7.2 LIMIT

The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in section 15.209 as below.

Frequency (MHz)	Field Strength (mV/m)	Measurement Distance (m)
1.705-30	30	30
30-88	100*	3
88-216	150*	3
216-960	200*	3
Above 960	500*	3

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.*
In the above emission table, the tighter limit applies at the band edges.

Frequency (Hz)	Field Strength (μV/m at 3-meter)	Field Strength (dBμV/m at 3-meter)
1.705-30	30 (at 30-meter)	49.5
30-88	100	40
88-216	150	43
216-960	200	46
Above 960	500	54

7.3 TEST PROCEDURE

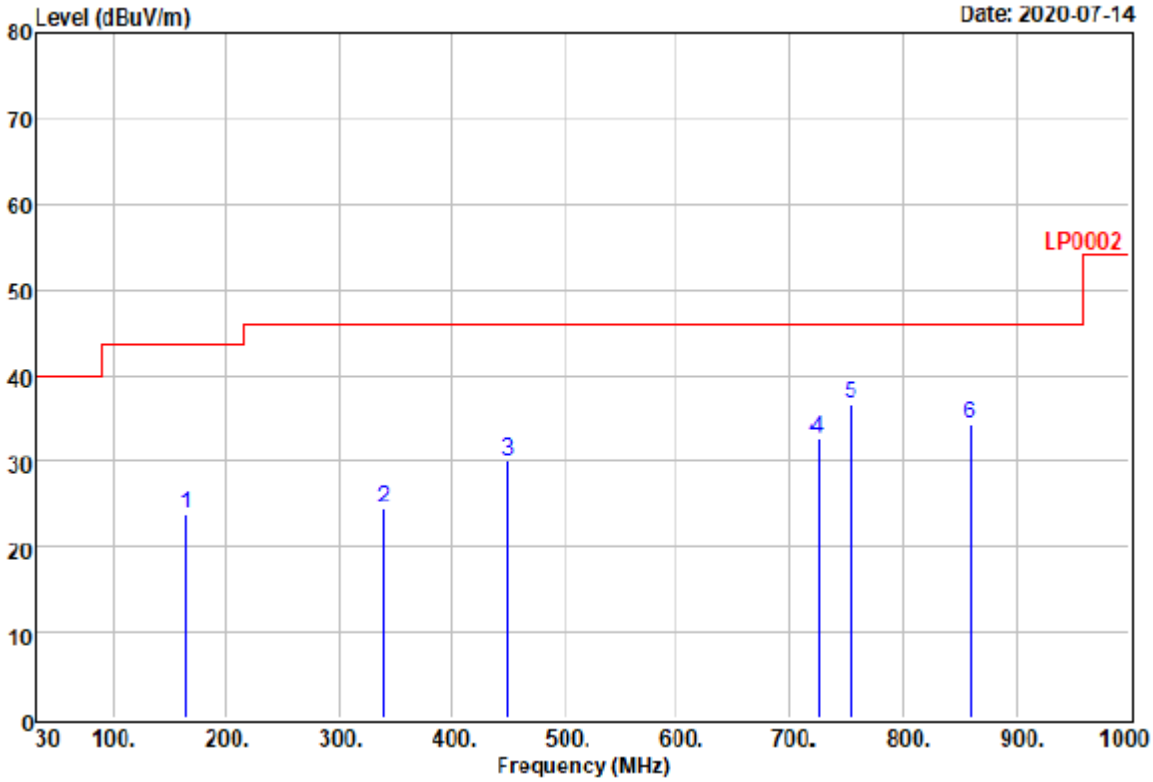
1. The EUT was placed on a turntable, which was 0.8m above ground plane.
2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
3. EUT was set at 3m away from the receiving antenna, which was varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was maximized by changing the polarization of receiving antenna, both horizontal and vertical.
6. Repeated above procedures until the measurements for all frequencies are completed.

7.4 RESULT: PASSED

7.5 TEST DATA

All frequencies not described in this test report and within the range of the general radiated emission limits are not detectable significantly. The table as below is representing worst emissions found.

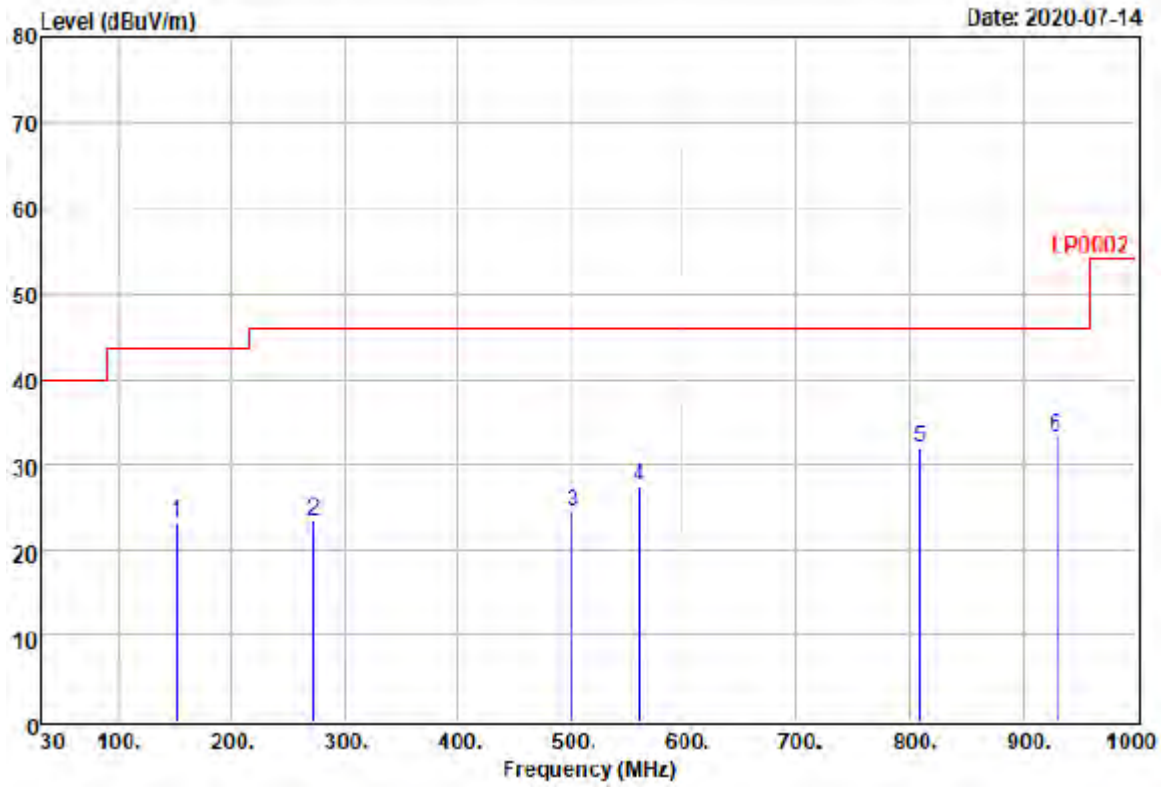
Power	:	DC 3V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	TX 2402 MHz	Temperature	:	35 ℃
Memo	:	Ceramic Chip Antenna	Humidity	:	60 %



Remarks : 1.Result=Read Value+Factor
: 2.Factor=Antenna Factor-Cable loss-
: Amplifier Factor

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	163.610	41.36	-17.60	23.76	43.50	-19.74	QP
2	339.760	37.18	-12.75	24.43	46.00	-21.57	QP
3	450.420	40.14	-10.16	29.98	46.00	-16.02	QP
4	724.510	38.44	-5.92	32.52	46.00	-13.48	QP
5 @	752.670	42.33	-5.68	36.65	46.00	-9.35	QP
6	859.530	37.77	-3.42	34.35	46.00	-11.65	QP

Power	:	DC 3V	Pol/Phase	:	VERTICAL
Test Mode 1	:	TX 2402 MHz	Temperature	:	35 ℃
Memo	:	Ceramic Chip Antenna	Humidity	:	60 %



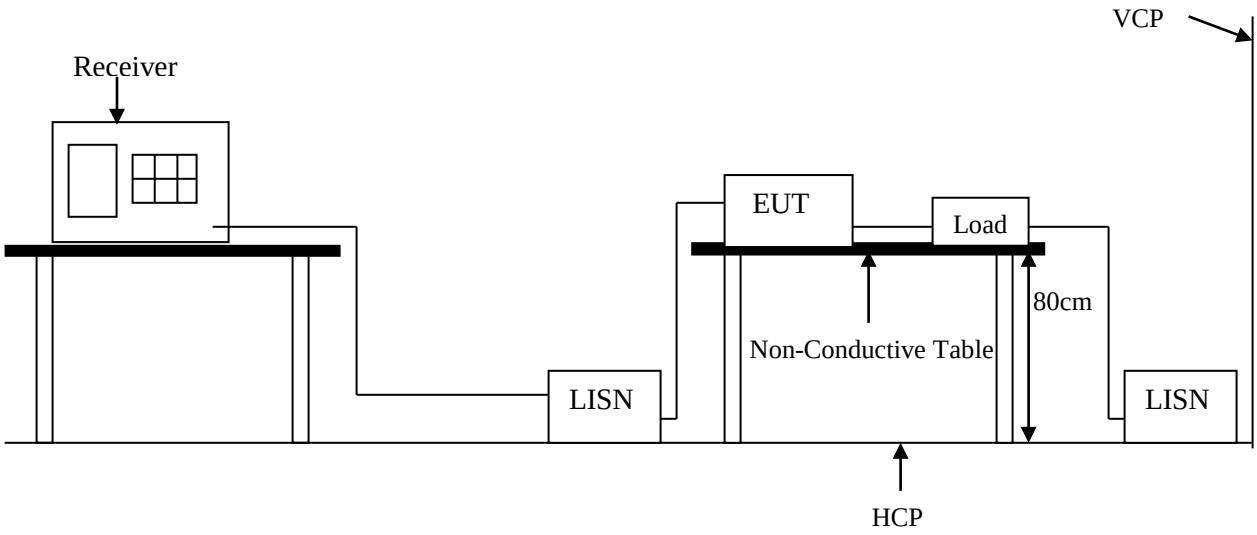
Remarks : 1.Result=Read Value+Factor
: 2.Factor=Antenna Factor-Cable loss-
: Amplifier Factor

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	152.060	39.10	-15.88	23.22	43.50	-20.28	QP
2	273.180	37.93	-14.46	23.47	46.00	-22.53	QP
3	502.790	33.64	-9.25	24.39	46.00	-21.61	QP
4	562.160	36.01	-8.48	27.53	46.00	-18.47	QP
5	808.040	36.55	-4.64	31.91	46.00	-14.09	QP
6 @	929.540	35.38	-2.19	33.19	46.00	-12.81	QP

Note:
1. Emission level = Reading level + Correction factor
2. Correction factor : Antenna factor, Cable loss, Pre-Amp, etc.
3. All emissions as described above were determining by rotating the EUT through three orthogonal axes to maximizing the emissions if the EUT belongs to hand-held or body-worn devices.
4. Measurements from 9 kHz to 150 kHz, Peak detector setting: 100 Hz RBW
5. Measurements from 150 kHz to 30MHz, Peak detector setting: 10 kHz RBW
6. Measurements from 30 MHz to 1000 MHz, Peak detector setting: 100 kHz RBW
7. Measurements from 9 kHz to 150 kHz, CISPR Quasi-Peak detector: 200 Hz RBW
8. Measurements from 150 kHz to 30MHz, CISPR Quasi-Peak detector: 9 kHz RBW
9. Measurements from 30 MHz to 1000 MHz, CISPR Quasi-Peak detector: 120 kHz RBW
10. Peak detector measurement data will represent the worst case results.

8. SECTION 15.207 REQUIREMENTS (POWERLINE CONDUCTED EMISSIONS)

8.1 TEST SETUP



8.2 LIMIT

Frequency range (MHz)	CLASS B	
	QP dB(uV)	Average dB(uV)
0.15-0.5	66 - 56 dBuV	56 - 46 dBuV
0.5-5.0	56 dBuV	46 dBuV
5.0-30.0	60 dBuV	50 dBuV

Remark: In the above table, the tighter limit applies at the band edges.

8.3 TEST PROCEDURE

The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). It provides a 50 ohm / 50 μH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50 ohm / 50 μH coupling impedance with 50 ohm termination. (Please refer to the block diagram of the test setup and photograph.)

Both sides of AC line are checked for the maximum conducted emission interference. In order to find the maximum emissions, the relating positions of equipment and all of the interference cables must be changed according to EN 55022 regulations: The measurement procedure on conducted emission interference.

The resolution bandwidth of the field strength meter is set at 9 KHz.

8.4 TEST SPECIFICATION

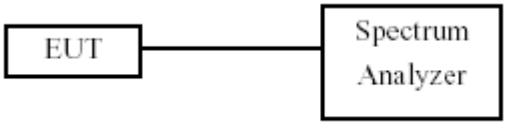
According to PART15.207

8.5 RESULT:

This test is not applicable.

9. SECTION 15.215 REQUIREMENT (20DB BANDWIDTH TEST)

9.1 TEST SETUP



9.2 TEST PROCEDURE

a. The transmitter output was connected to the spectrum analyzer.
b. Set RBW=30KHz and VBW=100KHz.
c. The 20 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20 dB.
d. The 20 dB Bandwidth was measured and recorded.

9.3 RESULT: PASSED

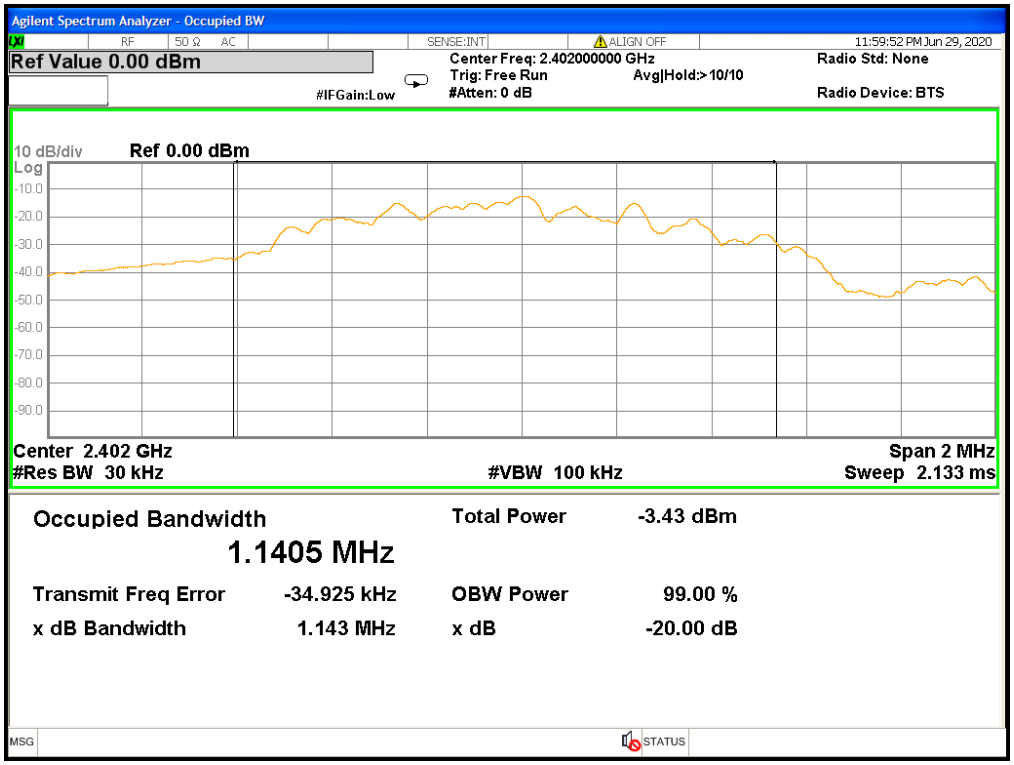
9.4 TEST DATA

Test Date: Jul. 29, 2020 Temperature: 25℃

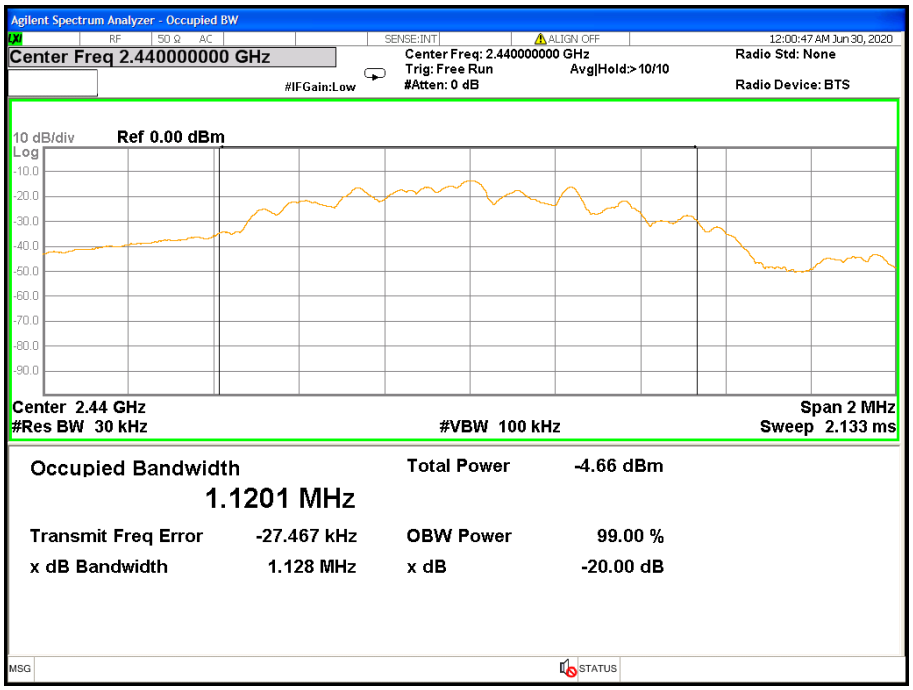
Atmospheric pressure: 1000 hPa Humidity: 42%

Modulation Standard	Channel	Frequency (MHz)
GFSK	00	2402MHz
GFSK	19	2440MHz
GFSK	39	2480MHz

Modulation Standard: GFSK
Channel: 00



Modulation Standard: GFSK
Channel: 19



Modulation Standard: GFSK
Channel: 39