RF MEASUREMENT REPORT

FCC ID:	BRWBLH08701
Applicant:	Horizon Hobby, LLC
Product:	Inductrix RTF
Model No.:	BLH08701
Brand Name:	Blade
FCC Classification:	Digital Transmission System (DTS)
FCC Rule Part(s):	Part 15 Subpart C (Section 15.247)
Result:	Complies
Received Date:	2023-02-10
Test Date:	2023-02-10 ~ 2023-02-14

Reviewed By: Vincent Yu

Approved By: Robin Wu

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.

Revision History

Report No.	Version	Description	Issue Date	Note
2302RSU001-U1	V01	Initial Report	2023-03-30	Valid

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1. General Information

1.1. Applicant

Horizon Hobby, LLC

2904 Research Road, Champaign, IL, 61822

1.2. Manufacturer

Horizon Hobby, LLC

2904 Research Road, Champaign, IL, 61822

1.3. Testing Facility

☒	**Test Site – MRT Suzhou Laboratory**				
	Laboratory Location (Suzhou - Wuzhong)				
	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China				
	Laboratory Location (Suzhou - SIP)				
	4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China				
	Laboratory Accreditations				
	A2LA: 3628.01		CNAS: L10551		
	FCC: CN1166		ISED: CN0001		
	VCCI:	☐R-20025	☐G-20034	☐C-20020	☐T-20020
		☐R-20141	☐G-20134	☐C-20103	☐T-20104
☐	**Test Site – MRT Shenzhen Laboratory**				
	Laboratory Location (Shenzhen)				
	1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China				
	Laboratory Accreditations				
	A2LA: 3628.02		CNAS: L10551		
	FCC: CN1284		ISED: CN0105		
☐	**Test Site – MRT Taiwan Laboratory**				
	Laboratory Location (Taiwan)				
	No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)				
	Laboratory Accreditations				
	TAF: L3261-190725				
	FCC: 291082, TW3261		ISED: TW3261		

1.4. Product Information

Product Name	Inductrix RTF
Model No.	BLH08701
Sample No.	20230214Sample#07 for Radiated; 20230214Sample#08 for Conducted
Power Type	Li-Polymer Battery (3.7Vdc)
Note: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification under Test

Frequency Range	2405 ~ 2475 MHz
Channel Number	15
Type of Modulation	GFSK
Data Rate	500kbps
Antenna Type	Monopole Antenna
Antenna Gain	2.11 dBi

1.6. Working Frequencies

Channel	Frequency	Channel	Frequency	Channel	Frequency
11	2405 MHz	12	2410 MHz	13	2415 MHz
14	2420 MHz	15	2425 MHz	16	2430 MHz
17	2435 MHz	18	2440 MHz	19	2445 MHz
20	2450 MHz	21	2455 MHz	22	2460 MHz
23	2465 MHz	24	2470 MHz	25	2475 MHz

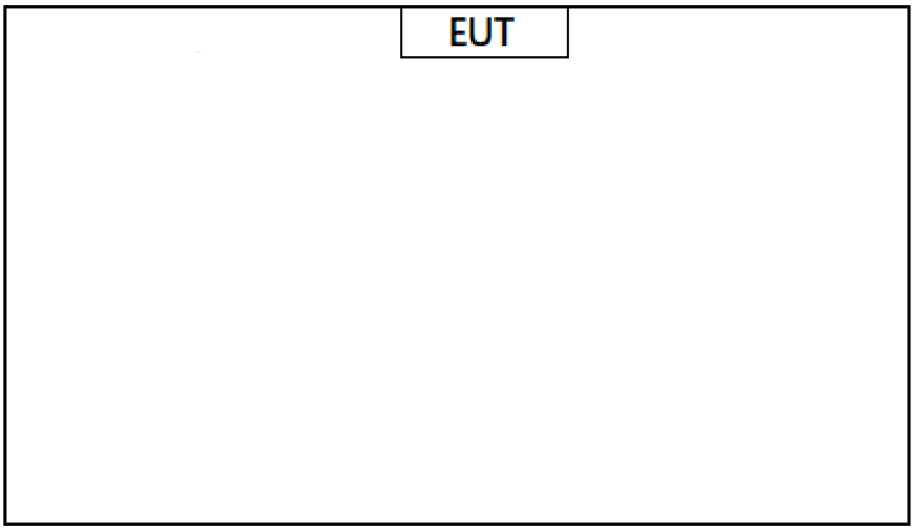
2. Test Configuration

2.1. Test Mode

Mode 1: Transmit at 2405MHz
Mode 2: Transmit at 2440MHz
Mode 3: Transmit at 2475MHz

2.2. Test System Connection Diagram

The device was tested per the guidance ANSI C63.10: 2013 was used to reference the appropriate EUT setup for radiated emissions testing.

Connection Diagram – Radiated Emission testing


2.3. Test Software

The test utility software used during testing was “Firmware Programmer”, and the version was 0.0.13.

2.4. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15.247
- KDB 558074 D01v05r02
- ANSI C63.10-2013

2.5. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20 ~ 75%RH

3. Antenna Requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section."

- The antenna of the device is **permanently attached.**
- There are no provisions for connection to an external antenna.

Conclusion:

The unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2023-09-29	WZ-AC2
TRILOG Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2023-05-20	WZ-AC2
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06171	1 year	2023-10-13	WZ-AC2
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06597	1 year	2023-11-05	WZ-AC2
Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2023-05-08	WZ-AC2
Preamplifier	EMCI	EMC184045SE	MRTSUE06640	1 year	2024-01-12	WZ-AC2
EMI Test Receiver	Agilent	N9038A	MRTSUE06125	1 year	2023-06-04	WZ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11038	1 year	2023-11-01	WZ-AC2
Thermohygrometer	Mingle	ETH529	MRTSUE06170	1 year	2023-11-27	WZ-AC2
Anechoic Chamber	RIKEN	WZ-AC2	MRTSUE06213	1 year	2023-04-21	WZ-AC2
USB Power Sensor	Keysight	U2021XA	MRTSUE06446	1 year	2023-06-04	WZ-SR4
Signal Analyzer	Keysight	N9010B	MRTSUE07027	1 year	2023-11-25	WZ-SR4
Attenuator	MVE	MVE2213	MRTSUE11087	1 year	2023-06-09	WZ-SR4
Shielding Room	HUAMING	WZ-SR4	MRTSUE06441	N/A	N/A	WZ-SR4

Software	Version	Function
EMI Software	V3.0.0	EMI Test Software
Controller_MF 7802	1.02	RE Antenna & Turntable
BenchVue Power Meter	2018.1	Power

5. Decision Rules and Measurement Uncertainty

5.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.2. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Radiated Disturbance
Measurement Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): Horizontal: 30MHz~300MHz: 5.04dB 300MHz~1GHz: 4.95dB 1GHz~40GHz: 6.40dB Vertical: 30MHz~300MHz: 5.24dB 300MHz~1GHz: 6.03dB 1GHz~40GHz: 6.40dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.78dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.13dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.15dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.28%

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.247(a)(2)	6dB Bandwidth	Conducted	Pass
15.247(b)(3)	Output Power		Pass
15.247(e)	Power Spectral Density		Pass
15.247(d)	Band Edge / Out-of-Band Emissions		Pass
15.205 15.209	General Field Strength (Restricted Bands and Radiated Emission)	Radiated	Pass
15.207	AC Conducted Emissions 150kHz - 30MHz	Line Conducted	N/A

Notes:

1. The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
2. For radiated emission tests, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.
3. “N/A” means this item is not applicable, and the details refer to relevant section.

6.2. 6dB Bandwidth Measurement

6.2.1. Test Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

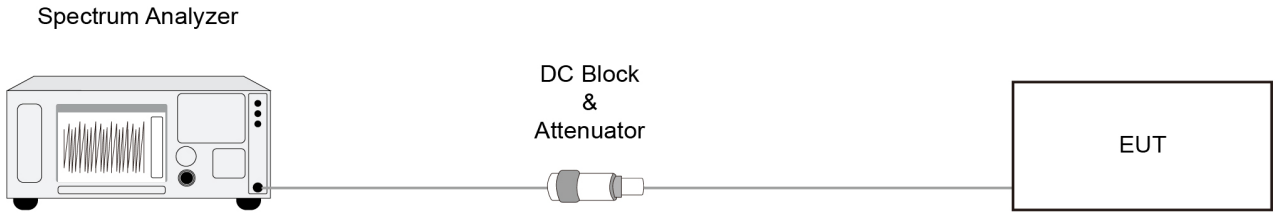
6.2.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.8

6.2.3. Test Setting

1. The Spectrum's automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to X = 6. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. Set RBW = 100 kHz
3. VBW ≥ 3 × RBW
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace to stabilize

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.2.

6.3. Output Power Measurement

6.3.1. Test Limit

The maximum output power shall be less 1 Watt (30dBm).

The conducted output power limit specified in paragraph FCC Part 15.247(b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs FCC Part 15.247(b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.3.2. Test Procedure

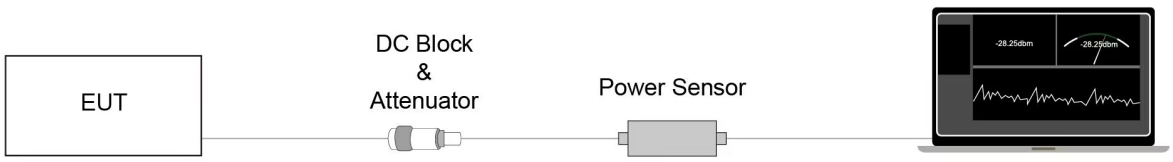
ANSI C63.10 - 2013 - Section 11.9.1.3

6.3.3. Test Setting

Peak Power Measurement

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

6.3.4. Test Setup



6.3.5. Test Result

Refer to Appendix A.3.

6.4. Power Spectral Density Measurement

6.4.1. Test Limit

The maximum permissible power spectral density is 8dBm in any 3 kHz band.

The same method of determining the conducted output power shall be used to determine the power spectral density.

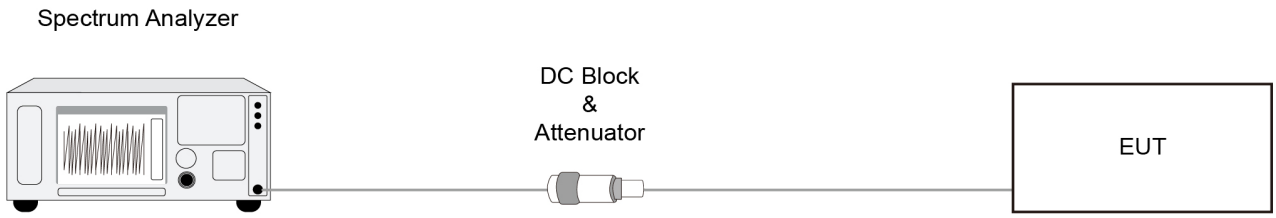
6.4.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.10.2

6.4.3. Test Setting

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. RBW = 3 kHz.
4. VBW = 10 kHz.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.4.

6.5. Conducted Band Edge and Out-of-Band Emissions Measurement

6.5.1. Test Limit

The limit for out-of-band spurious emissions at the band edge is 20dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100 kHz bandwidth per the PSD procedure.

6.5.2. Test Procedure

ANSI C63.10-2013 - Section 11.11

6.5.3. Test Settitng

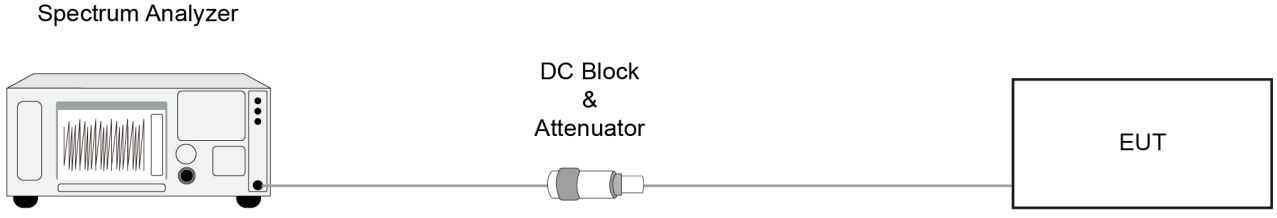
Reference level measurement

1. Set instrument center frequency to DTS channel center frequency
2. Set the span to ≥ 1.5 times the DTS bandwidth
3. Set the RBW = 100 kHz
4. Set the VBW ≥ 3 x RBW
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Allow trace to fully stabilize

Emission level measurement

1. Set the center frequency and span to encompass frequency range to be measured
2. RBW = 100kHz
3. VBW = 300kHz
4. Detector = Peak
5. Trace mode = max hold
6. Sweep time = auto couple
7. The trace was allowed to stabilize

6.5.4. Test Setup



6.5.5. Test Result

Refer to Appendix A.5.

6.6. Radiated Spurious Emission Measurement

6.6.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.6.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.11 & 11.12

ANSI C63.10 - 2013 - Section 7.5

ANSI C63.10 - 2013 - Section 6.3 (General Requirements)

ANSI C63.10 - 2013 - Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 - 2013 - Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10 - 2013 - Section 6.6 (Standard test method above 1GHz)

6.6.3. Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000MHz	1MHz

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Peak Measurements above 1GHz

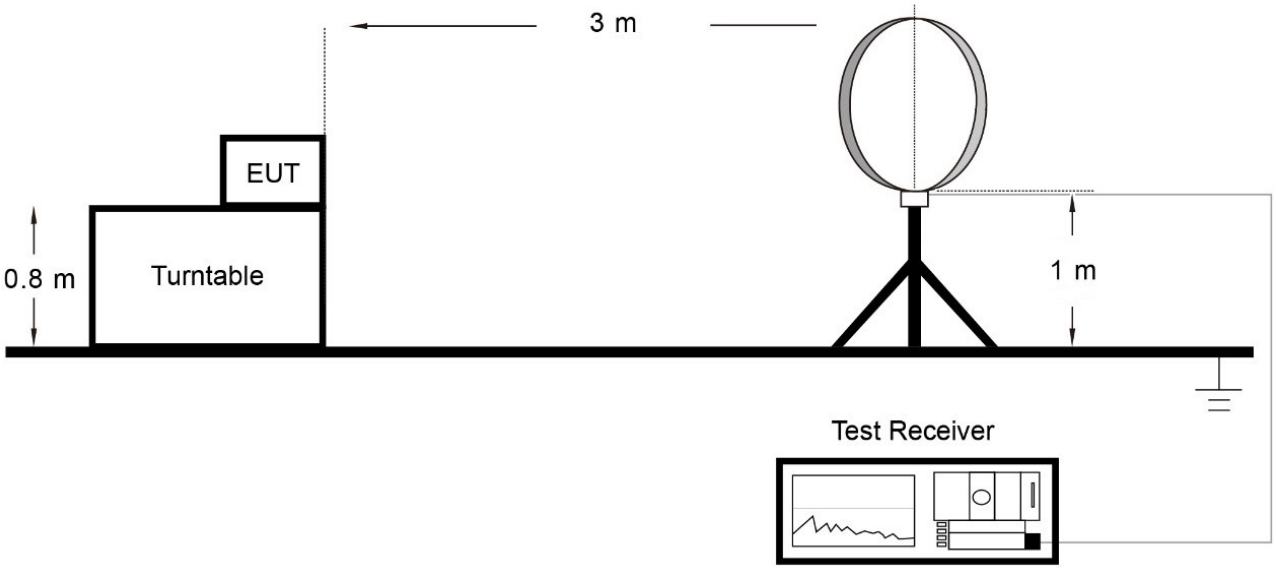
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurement of pulsed emissions

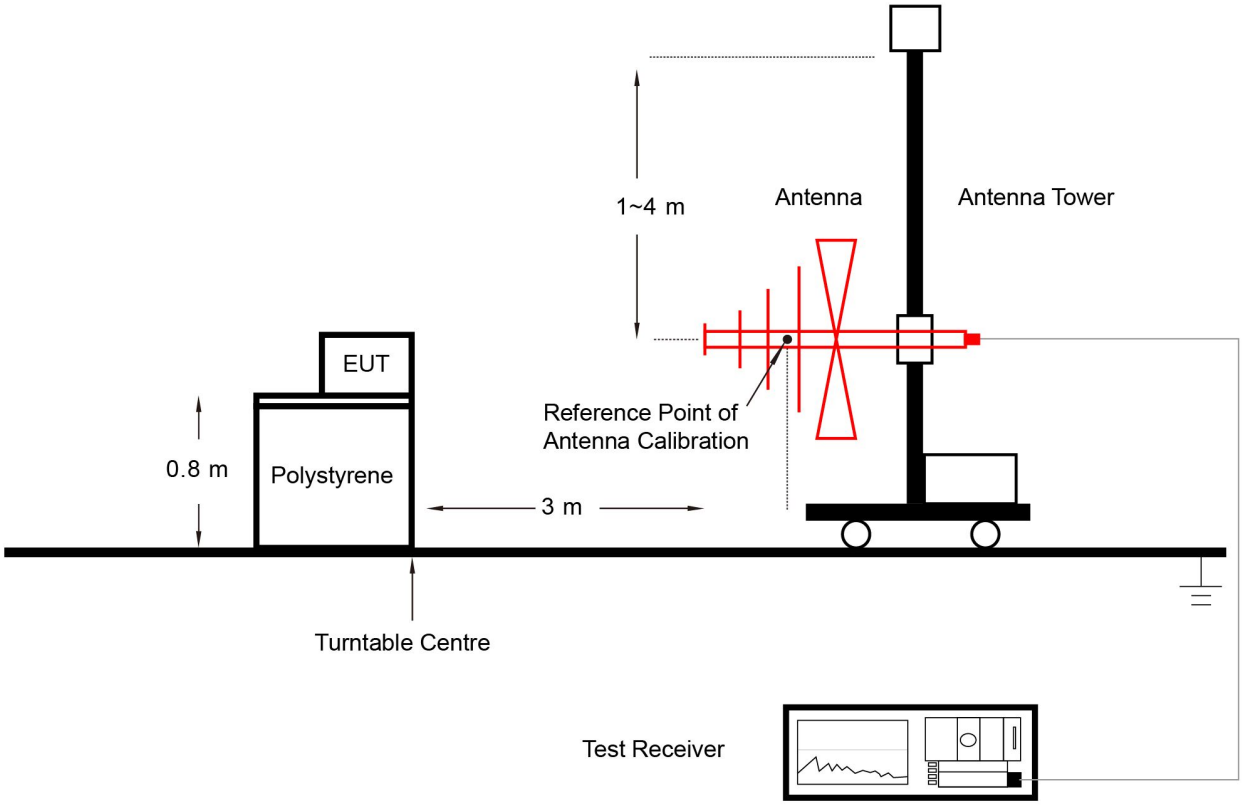
1. Make EUT is transmitting to obtain the “worst-case” pulse ON time.
2. Couple the final radio frequency output signal to the input of a spectrum analyzer.
3. Adjust the center frequency of the spectrum analyzer to the center of the RF signal.
4. Set the spectrum analyzer for ZERO SPAN.
5. Sweep time = 100ms
6. Set the TRIGGER on the spectrum analyzer to capture at least one period of the pulse train, including any blanking intervals.
7. Determine the total maximum pulse “ON time” (t_{ON}) over one period of the pulse train.
8. The duty cycle is then determined by dividing the total maximum “ON time” by the period of the pulse train (t_{ON}/100ms).
9. Determine the duty cycle correction factor. Duty Cycle Factor = 20*Log (Duty Cycle)
10. This correction factor may then be subtracted from the peak pulse amplitude (in dB) to find the average emission.

6.6.4. Test Setup

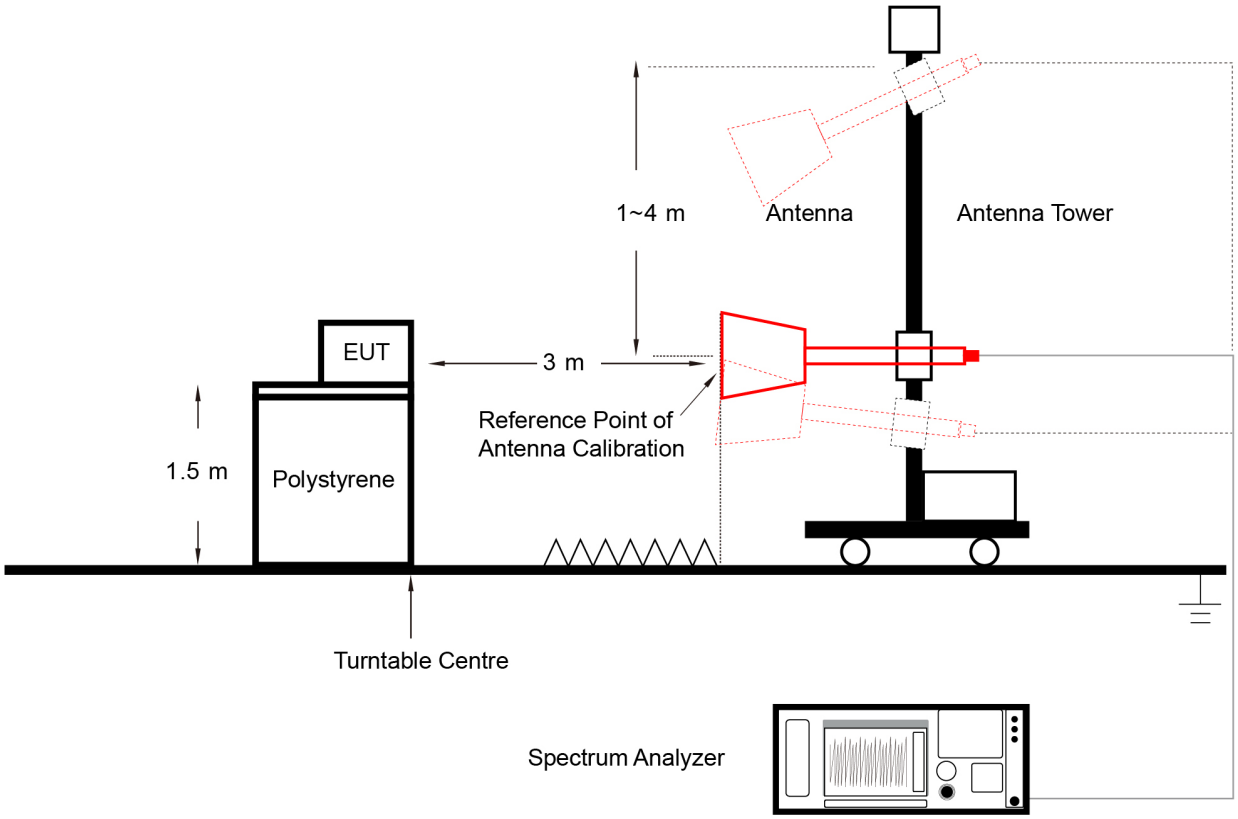
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.6.5. Test Result

Refer to Appendix A.6.

6.7. Radiated Restricted Band Edge Measurement

6.7.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (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	--	--	--

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.7.2. Test Procedure

ANSI C63.10-2013 Section 6.3 & 6.6 & 7.5 & 11.13

6.7.3. Test Setting

Peak Field Strength Measurements

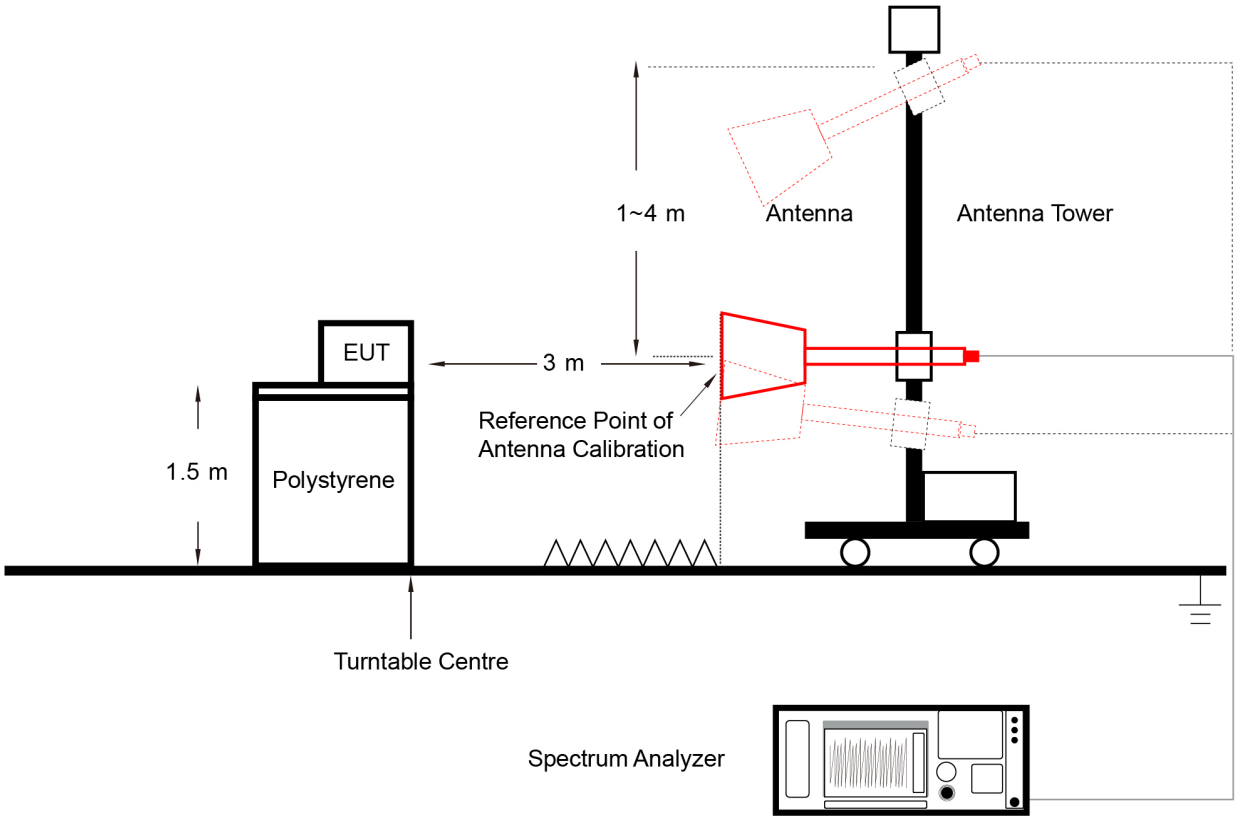
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurement of pulsed emissions

1. Make EUT is transmitting to obtain the “worst-case” pulse ON time.
2. Couple the final radio frequency output signal to the input of a spectrum analyzer.
3. Adjust the center frequency of the spectrum analyzer to the center of the RF signal.
4. Set the spectrum analyzer for ZERO SPAN.
5. Sweep time = 100ms
6. Set the TRIGGER on the spectrum analyzer to capture at least one period of the pulse train, including any blanking intervals.
7. Determine the total maximum pulse “ON time” (t_{ON}) over one period of the pulse train.

8. The duty cycle is then determined by dividing the total maximum “ON time” by the period of the pulse train (t_{ON}/100ms).
9. Determine the duty cycle correction factor. Duty Cycle Factor = 20*Log (Duty Cycle)
10. This correction factor may then be subtracted from the peak pulse amplitude (in dB) to find the average emission.

6.7.4. Test Setup



6.7.5. Test Result

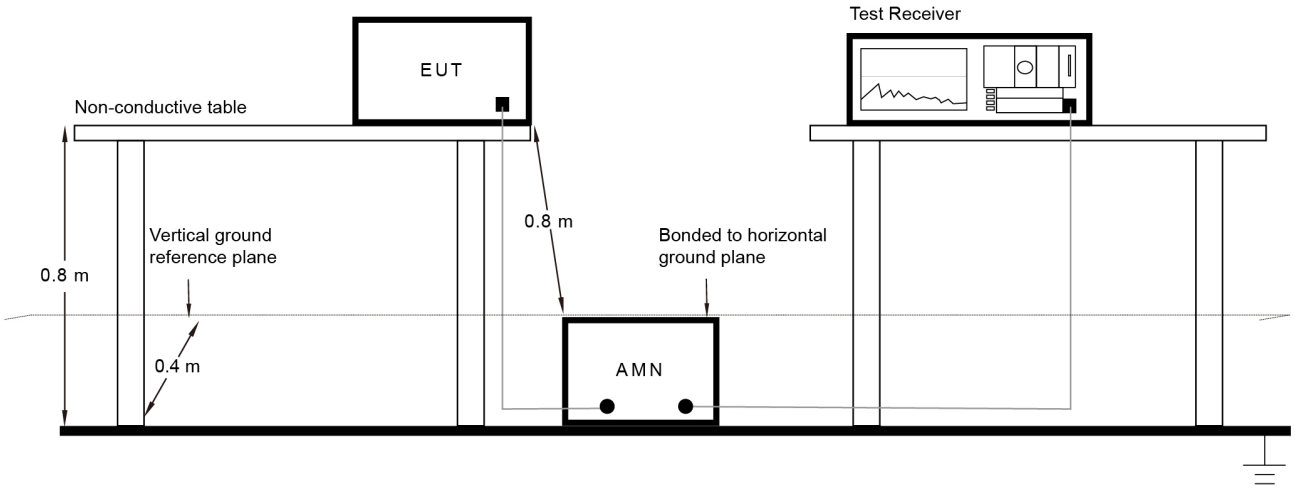
Refer to Appendix A.7.

6.8. AC Conducted Emissions Measurement

6.8.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50
Note 1: The lower limit shall apply at the transition frequencies. Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.		

6.8.2. Test Setup



6.8.3. Test Result

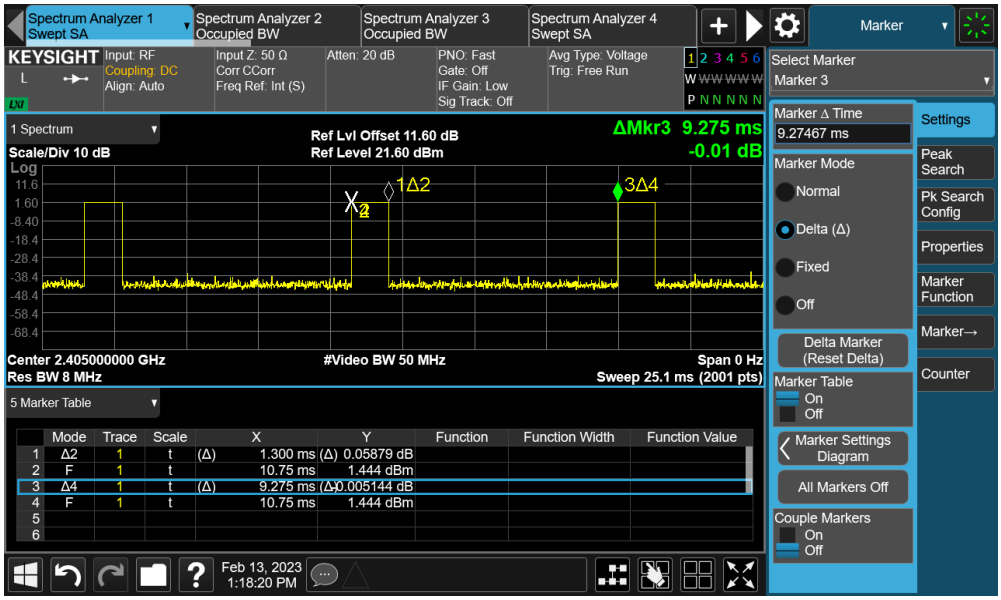
Refer to Appendix A.8.

Appendix A – Test Result

A.1 Duty Cycle & Duty Cycle Correction Factor Test Result

Test Site	WZ-SR4	Test Engineer	Lynn Yang
Test Date	2023-02-13		

Modulation	T (Transmission Duration)	Duty Cycle	Duty Cycle Correction Factor
GFSK	1.300ms	14.02%	-17.1 dB



Note: Duty Cycle Correction Factor = 20 * Log (Duty Cycle) = 20 * Log (0.1402) = -17.1 dB

A.2 6dB Bandwidth Test Result

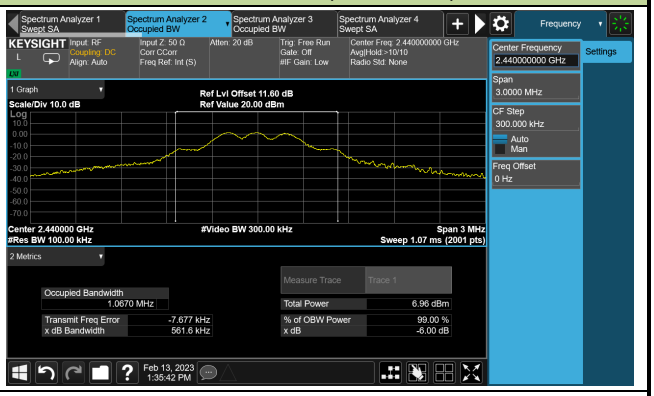
Test Site	WZ-SR4	Test Engineer	Lynn Yang
Test Date	2023-02-13		

Modulation	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
GFSK	11	2405	0.5582	≥ 0.5	Pass
GFSK	18	2440	0.5616	≥ 0.5	Pass
GFSK	25	2475	0.5678	≥ 0.5	Pass

802.15.4 6dB Bandwidth

Channel 11 (2405MHz)

Channel 18 (2440MHz)



Channel 25 (2475MHz)

A.3 Output Power Test Result

Test Site	WZ-SR4	Test Engineer	Lynn Yang
Test Date	2023-02-14		

Test Result of Peak Output Power

Modulation	Channel No.	Freq. (MHz)	Peak Power (dBm)	Limit (dBm)	Result
GFSK	11	2405	1.83	≤ 30.00	Pass
GFSK	18	2440	1.85	≤ 30.00	Pass
GFSK	25	2475	1.84	≤ 30.00	Pass

A.4 Power Spectral Density Test Result

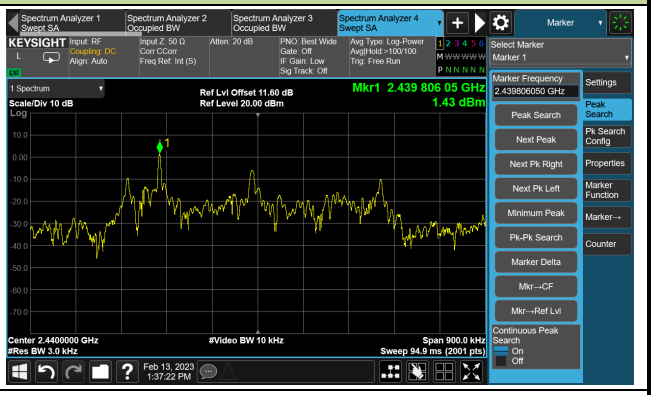
Test Site	WZ-SR4	Test Engineer	Lynn Yang
Test Date	2023-02-13		

Modulation	Channel No.	Frequency (MHz)	PK PSD (dBm / 3kHz)	Limit (dBm / 3kHz)	Result
GFSK	11	2405	1.45	≤ 8.00	Pass
GFSK	18	2440	1.43	≤ 8.00	Pass
GFSK	25	2475	1.45	≤ 8.00	Pass

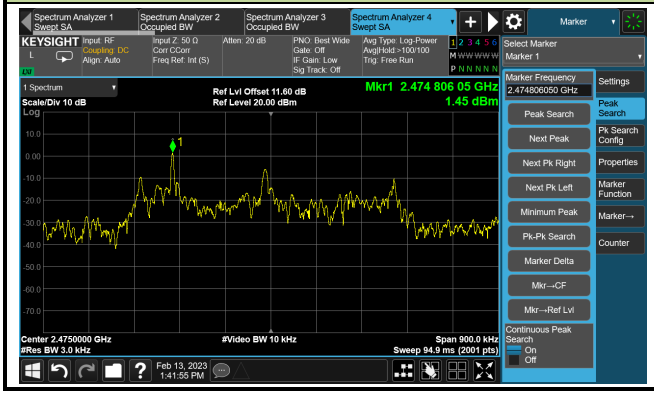
802.15.4 Power Density

Channel 11 (2405MHz)

Channel 18 (2440MHz)



Channel 25 (2475MHz)



A.5 Conducted Band Edge and Out-of-Band Emissions Test Result

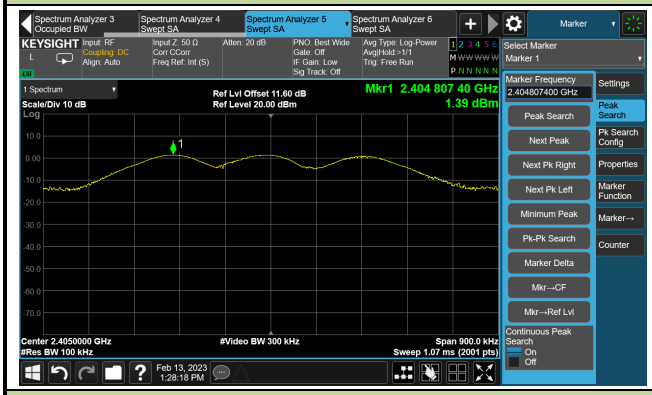
Test Site	WZ-SR4	Test Engineer	Lynn Yang
Test Date	2023-02-13		

Modulation	Channel No.	Frequency (MHz)	Limit (dBc)	Result
GFSK	11	2405	> 20	Pass
GFSK	18	2440	> 20	Pass
GFSK	25	2475	> 20	Pass

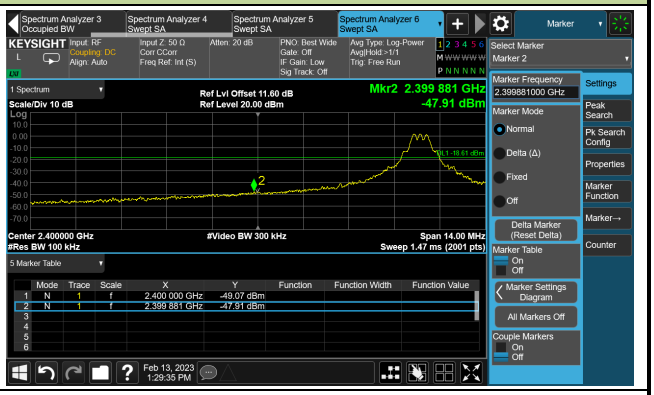
802.15.4 Out-of-Band Emissions

Channel 11 (2405MHz)

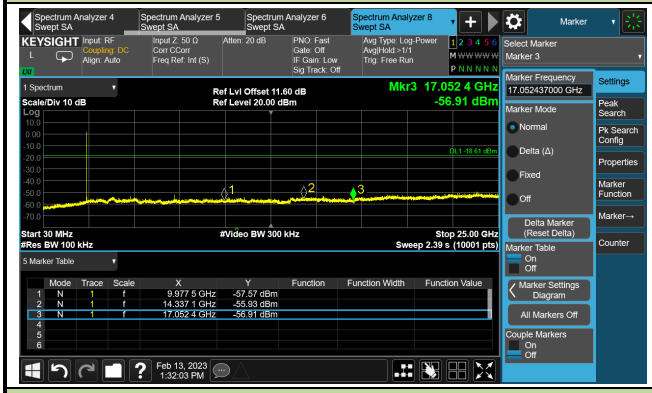
100kHz PSD Reference Level



Low Band Edge

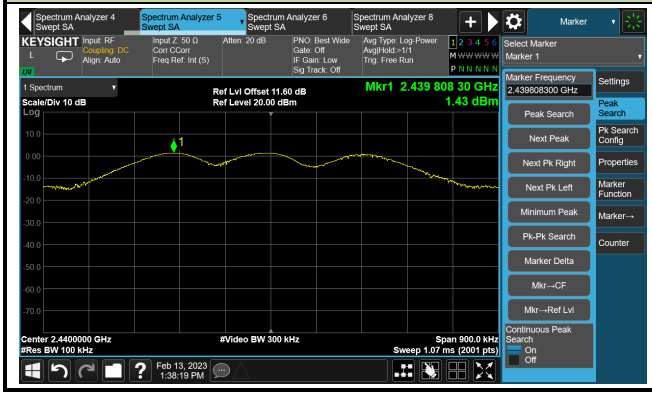


Spurious Emission

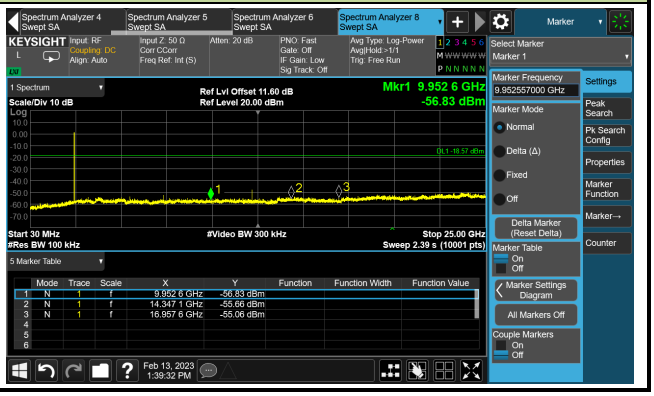


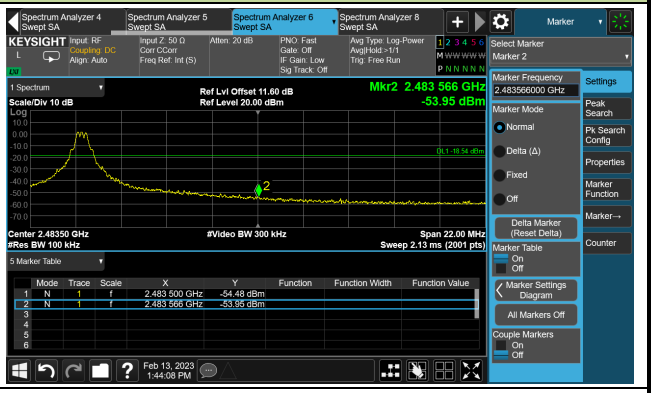
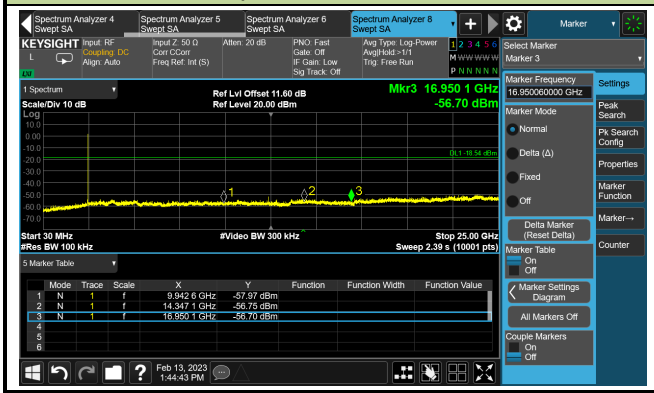
Channel 18 (2440MHz)

100kHz PSD Reference Level



Spurious Emission



Channel 25 (2475MHz)	
100kHz PSD Reference Level	High Band Edge
	
Spurious Emission	
	

A.6 Radiated Spurious Emission Test Result

Test Site	WZ-AC2	Test Engineer	Dick Shen
Test Date	2023-02-10		
Remark:	1. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report. 2. The average value is calculated by peak value and Duty Cycle Correction Factor.		

Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Duty Cycle Correction Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
11	4808.0	43.7	3.7	N/A	47.4	74.0	-26.6	PK	Horizontal
	4808.0	43.7	3.7	-17.1	30.3	54.0	-23.7	AV	Horizontal
	12024.5	42.8	17.1	N/A	59.9	74.0	-14.1	PK	Horizontal
	12024.5	42.8	17.1	-17.1	42.8	54.0	-11.2	AV	Horizontal
	15441.5	31.1	19.0	N/A	50.1	74.0	-23.9	PK	Horizontal
	15441.5	31.1	19.0	-17.1	33.0	54.0	-21.0	AV	Horizontal
	4808.0	50.7	3.7	N/A	54.4	74.0	-19.6	PK	Vertical
	4808.0	50.7	3.7	-17.1	37.3	54.0	-16.7	AV	Vertical
	12024.5	46.8	17.1	N/A	63.9	74.0	-10.1	PK	Vertical
	12024.5	46.8	17.1	-17.1	46.8	54.0	-7.2	AV	Vertical
	15807.0	32.1	18.1	N/A	50.2	74.0	-23.8	PK	Vertical
	15807.0	32.1	18.1	-17.1	33.1	54.0	-20.9	AV	Vertical
18	4876.0	42.9	3.7	N/A	46.6	74.0	-27.4	PK	Horizontal
	4876.0	42.9	3.7	-17.1	29.5	54.0	-24.5	AV	Horizontal
	7315.5	57.9	11.2	N/A	69.1	74.0	-4.9	PK	Horizontal
	7315.5	57.9	11.2	-17.1	52.0	54.0	-2.0	AV	Horizontal
	12203.0	42.4	17.6	N/A	60.0	74.0	-14.0	PK	Horizontal
	12203.0	42.4	17.6	-17.1	42.9	54.0	-11.1	AV	Horizontal
	4876.0	49.5	3.7	N/A	53.2	74.0	-20.8	PK	Vertical
	4876.0	49.5	3.7	-17.1	36.1	54.0	-17.9	AV	Vertical
	7315.5	45.7	11.2	N/A	56.9	74.0	-17.1	PK	Vertical
	7315.5	45.7	11.2	-17.1	39.8	54.0	-14.2	AV	Vertical
	12203.0	50.1	17.6	N/A	67.7	74.0	-6.3	PK	Vertical
	12203.0	50.1	17.6	-17.1	50.6	54.0	-3.4	AV	Vertical
25	4952.5	47.0	3.7	N/A	50.7	74.0	-23.3	PK	Horizontal
	4952.5	47.0	3.7	-17.1	33.6	54.0	-20.4	AV	Horizontal
	7426.0	55.8	11.9	N/A	67.7	74.0	-6.3	PK	Horizontal

	7426.0	55.8	11.9	-17.1	50.6	54.0	-3.4	AV	Horizontal
	12373.0	42.1	16.7	N/A	58.8	74.0	-15.2	PK	Horizontal
	12373.0	42.1	16.7	-17.1	41.7	54.0	-12.3	AV	Horizontal
	4952.5	50.2	3.7	N/A	53.9	74.0	-20.1	PK	Vertical
	4952.5	50.2	3.7	-17.1	36.8	54.0	-17.2	AV	Vertical
	7426.0	46.0	11.9	N/A	57.9	74.0	-16.1	PK	Vertical
	7426.0	46.0	11.9	-17.1	40.8	54.0	-13.2	AV	Vertical
	12373.0	50.0	16.7	N/A	66.7	74.0	-7.3	PK	Vertical
	12373.0	50.0	16.7	-17.1	49.6	54.0	-4.4	AV	Vertical

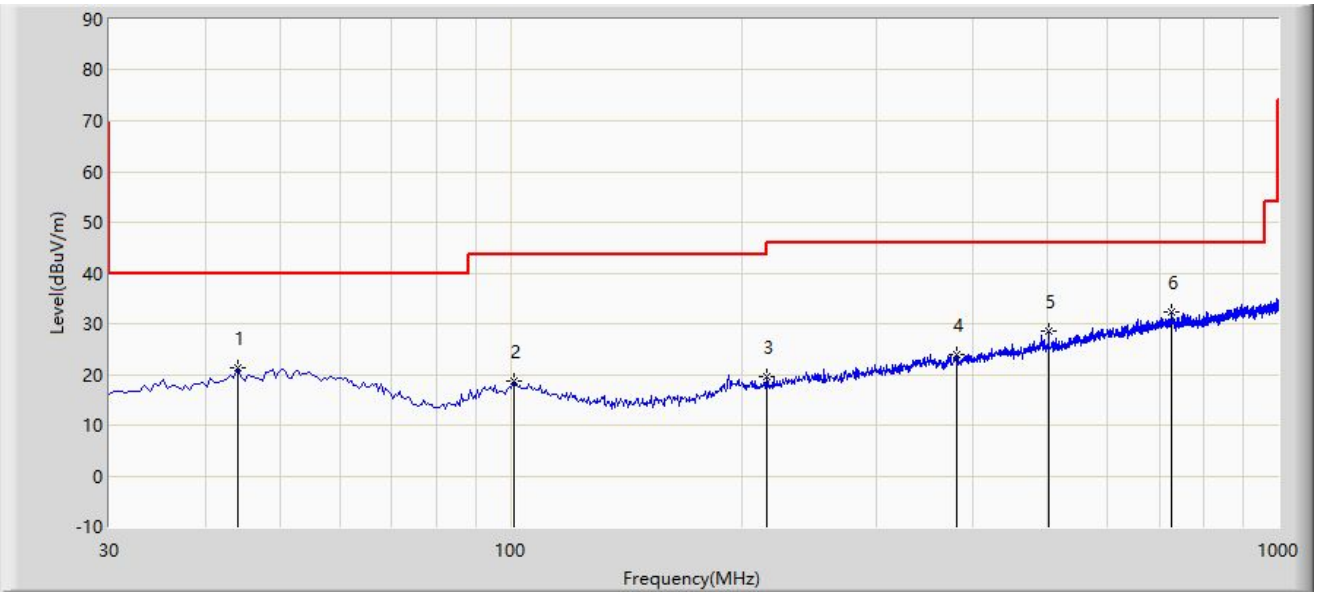
Note: PK Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor ((dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

AV Level (dBμV/m) = PK Level (dBμV/m) + Duty Cycle Correction Factor (dB)

The Result of Radiated Emission below 1GHz:

Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_Part15.209_RSE(3m)	Engineer: Dick Shen
Probe: VULB9162_30-7000MHz	Polarity: Horizontal
EUT: Inductrix RTF	Power: By Battery
Test Mode: Transmit at 2440MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		44.065	21.249	1.454	-18.751	40.000	19.796	PK
2		100.810	18.579	0.028	-24.921	43.500	18.551	PK
3		215.270	19.563	1.353	-23.937	43.500	18.210	PK
4		381.625	24.015	1.140	-21.985	46.000	22.875	PK
5		501.905	28.639	3.663	-17.361	46.000	24.976	PK
6	*	727.430	32.261	3.379	-13.739	46.000	28.882	PK

Note 1: " * ", means this data is the worst emission level.

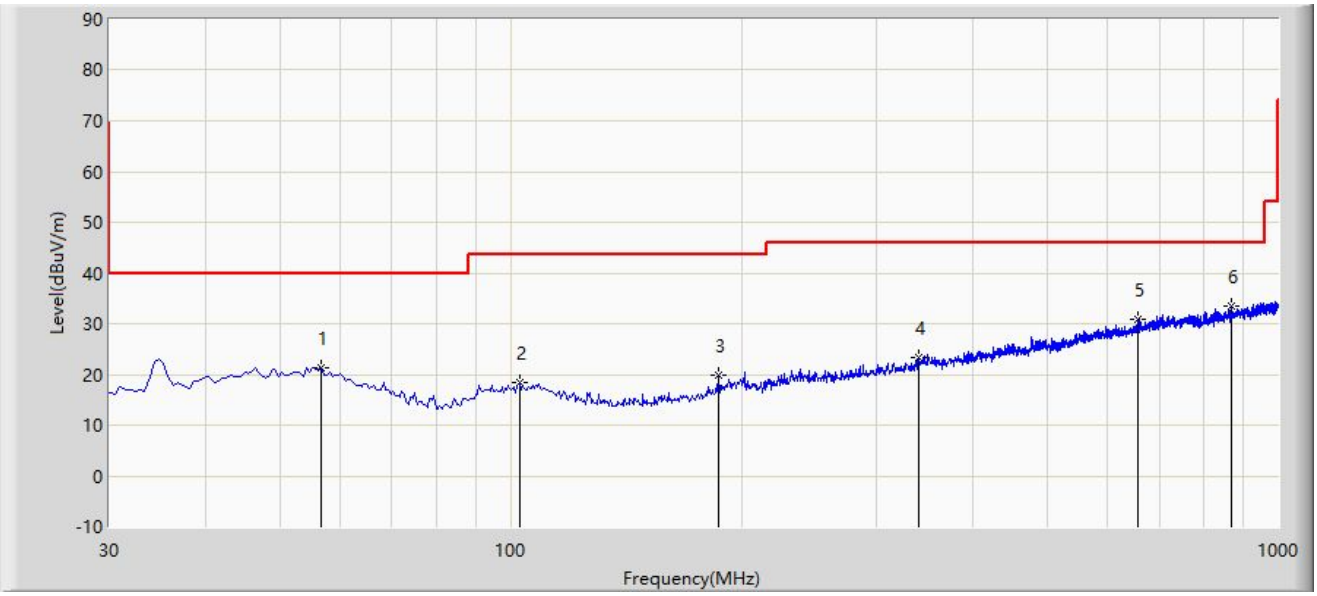
Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: Quasi-Peak measurement was not performed when peak measure level was lower than the quasi-peak limit.

Note 5: The amplitude of Radiated emissions (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_Part15.209_RSE(3m)	Engineer: Dick Shen
Probe: VULB9162_30-7000MHz	Polarity: Vertical
EUT: Inductrix RTF	Power: By Battery
Test Mode: Transmit at 2440MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		56.675	21.395	1.309	-18.605	40.000	20.085	PK
2		102.750	18.468	-0.122	-25.032	43.500	18.590	PK
3		186.655	19.874	2.421	-23.626	43.500	17.453	PK
4		339.915	23.455	1.261	-22.545	46.000	22.194	PK
5		656.620	30.908	3.128	-15.092	46.000	27.780	PK
6	*	870.990	33.510	2.731	-12.490	46.000	30.779	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

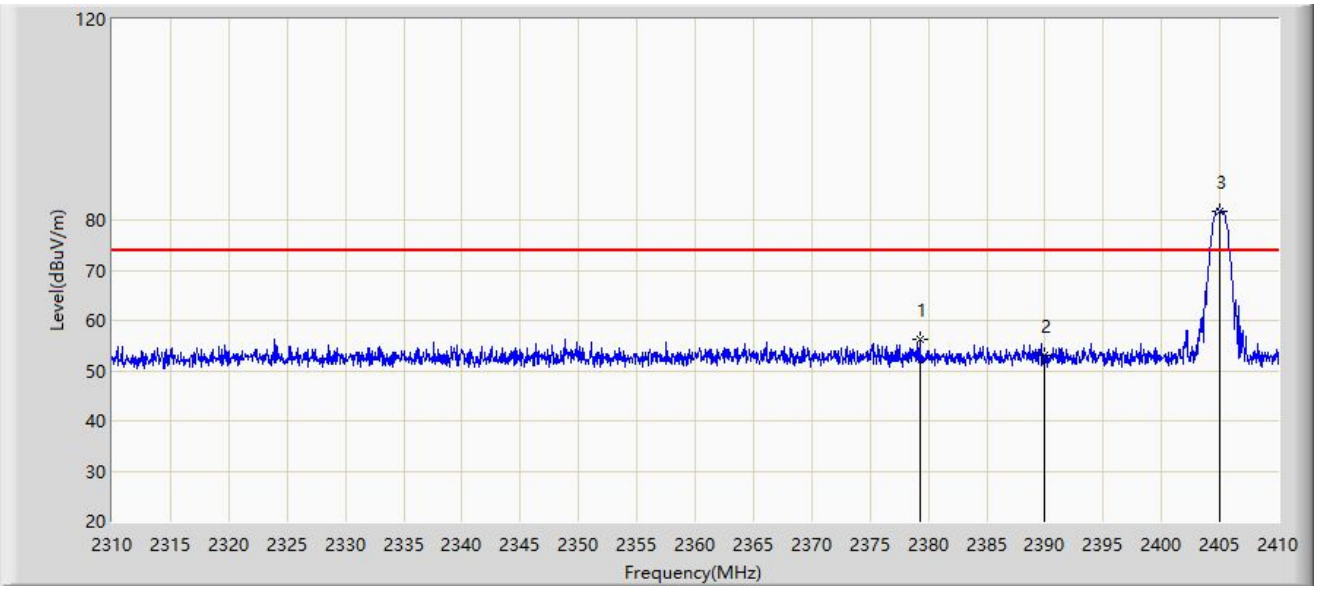
Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: Quasi-Peak measurement was not performed when peak measure level was lower than the quasi-peak limit.

Note 5: The amplitude of Radiated emissions (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

A.7 Radiated Restricted Band Edge Test Result

Site: WZ-AC2	Test Date: 2023-02-10
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: Inductrix RTF	Power: By Battery
Test Mode: Transmit at 2405MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Duty Cycle Correction Factor (dB)	Type
1		2379.250	56.347	24.621	-17.653	74.000	31.726	N/A	PK
	*	2379.250	39.247	24.621	-14.753	54.000	31.726	-17.100	AV
2		2390.000	53.112	21.424	-20.888	74.000	31.688	N/A	PK
		2390.000	36.012	21.424	-17.988	54.000	31.688	-17.100	AV
3		2404.950	81.713	50.073	N/A	N/A	31.640	N/A	PK

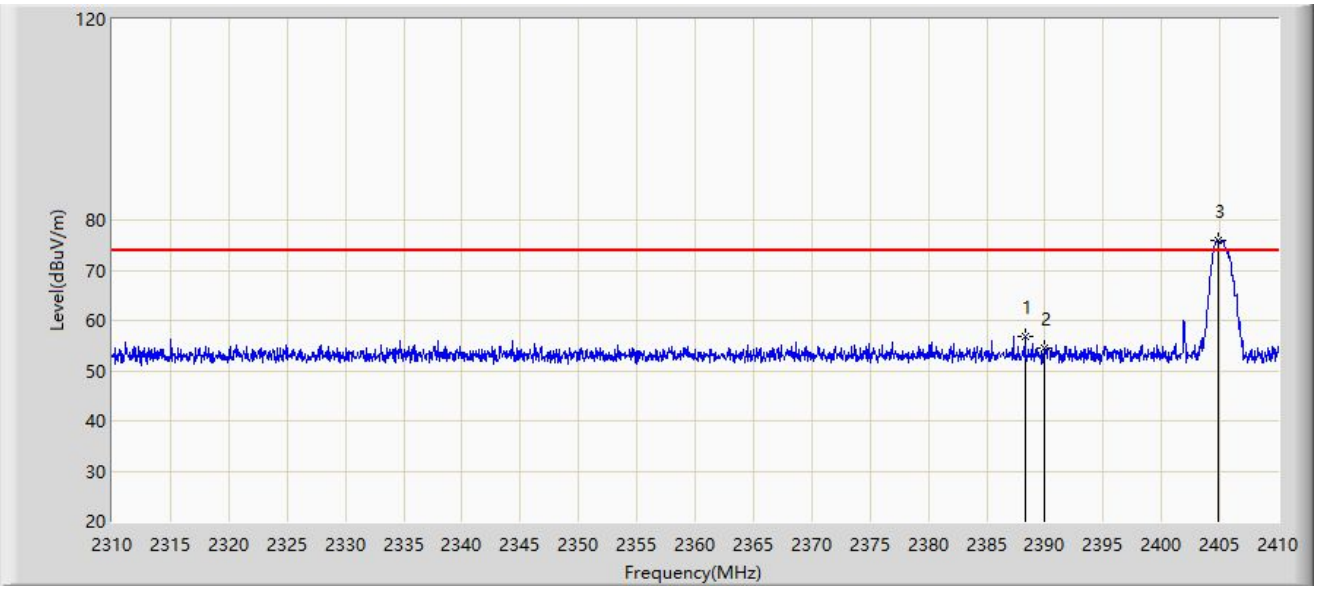
Note 1: " * ", means this data is the worst emission level.

Note 2: PK Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: AV Level (dBuV/m) = PK Level (dBuV/m) + Duty Cycle Correction Factor (dB)

Site: WZ-AC2	Test Date: 2023-02-10
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: Inductrix RTF	Power: By Battery
Test Mode: Transmit at 2405MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Duty Cycle Correction Factor (dB)	Type
1		2388.300	56.885	25.189	-17.115	74.000	31.696	N/A	PK
	*	2388.300	39.785	25.189	-14.215	54.000	31.696	-17.100	AV
2		2390.000	54.537	22.849	-19.463	74.000	31.688	N/A	PK
		2390.000	37.437	22.849	-16.563	54.000	31.688	-17.100	AV
3		2404.800	75.977	44.337	N/A	N/A	31.640	N/A	PK

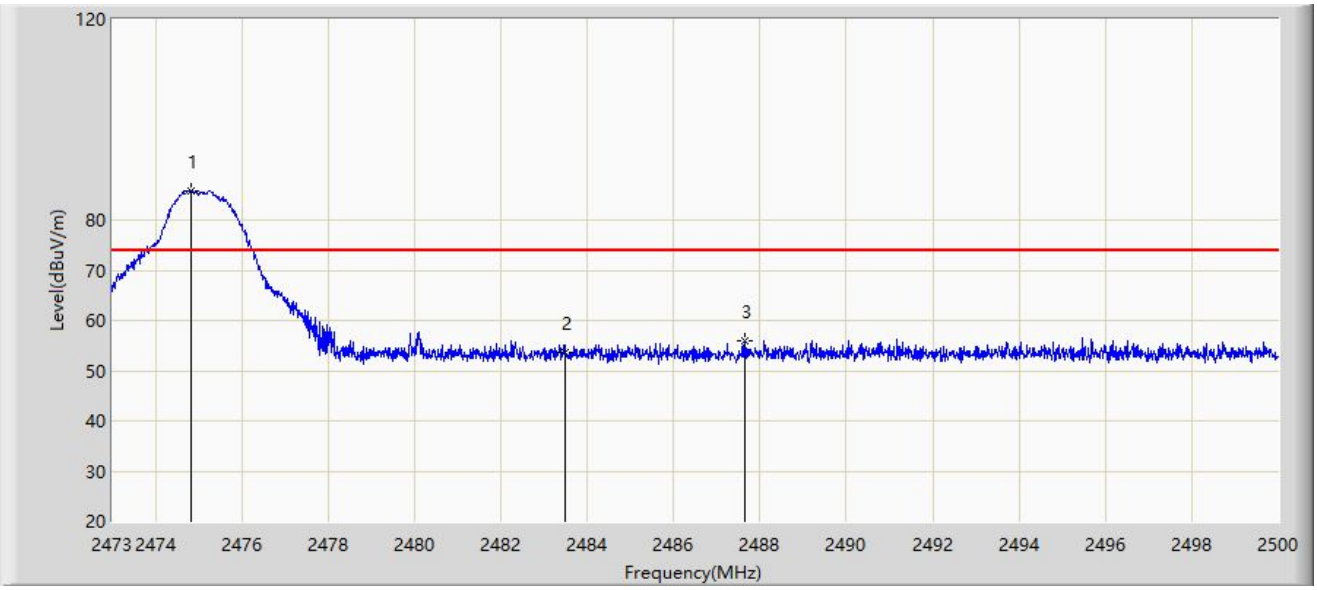
Note 1: " * ", means this data is the worst emission level.

Note 2: PK Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: AV Level (dBuV/m) = PK Level (dBuV/m) + Duty Cycle Correction Factor (dB)

Site: WZ-AC2	Test Date: 2023-02-10
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: Inductrix RTF	Power: By Battery
Test Mode: Transmit at 2475MHz	



No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Duty Cycle Correction Factor (dB)	Type
1		2474.836	85.749	54.190	N/A	N/A	31.559	N/A	PK
2		2483.500	53.619	22.050	-20.381	74.000	31.569	N/A	PK
		2483.500	36.519	22.050	-17.481	54.000	31.569	-17.100	AV
3		2487.661	55.908	24.332	-18.092	74.000	31.576	N/A	PK
	*	2487.661	38.808	24.332	-15.192	54.000	31.576	-17.100	AV

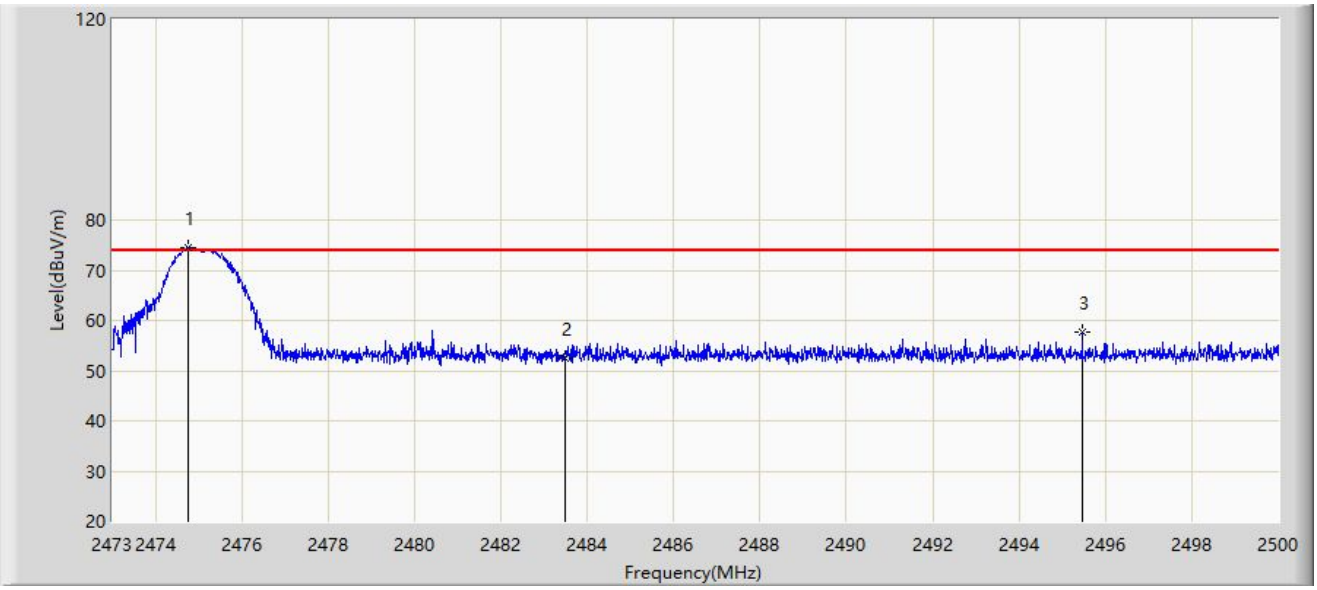
Note 1: " * ", means this data is the worst emission level.

Note 2: PK Level (dBµV/m) = Reading Level (dBµV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: AV Level (dBuV/m) = PK Level (dBuV/m) + Duty Cycle Correction Factor (dB)

Site: WZ-AC2	Test Date: 2023-02-10
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: Inductrix RTF	Power: By Battery
Test Mode: Transmit at 2475MHz	



No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Duty Cycle Correction Factor (dB)	Type
1		2474.755	74.542	42.983	N/A	N/A	31.559	N/A	PK
2		2483.500	52.582	21.013	-21.418	74.000	31.569	N/A	PK
		2483.500	35.482	21.013	-18.518	54.000	31.569	-17.100	AV
3		2495.464	57.577	25.982	-16.423	74.000	31.595	N/A	PK
	*	2495.464	40.477	25.982	-13.523	54.000	31.595	-17.100	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: PK Level (dBµV/m) = Reading Level (dBµV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: AV Level (dBuV/m) = PK Level (dBuV/m) + Duty Cycle Correction Factor (dB)

A.8 AC Conducted Emissions Test Result

The device is powered by battery, so this requirement is not applicable.

Appendix B – Test Setup Photograph

Refer to “2302RSU002-UT” file.

Appendix C – EUT Photograph

Refer to “2302RSU002-UE” file.

The End