TEST REPORT

Application No.:	SZCR2604001657ME
Applicant:	Greater Goods, LLC
Address of Applicant:	4427 Chouteau Ave. St. Louis, Missouri, 63110 United States
Manufacturer:	Guangdong Welland Technology Co., Ltd
Address of Manufacturer:	No. 7 Minke East Road, Minying Science & Technology Park, Shiqi, Zhongshan, Guangdong, China
Factory:	Guangdong Welland Technology Co., Ltd
Address of Factory:	No. 7 Minke East Road, Minying Science & Technology Park, Shiqi, Zhongshan, Guangdong, China
Equipment Under Test (EUT):	
EUT Name:	Body Fat Scale
Model No.:	0053, 0063 ♣
♣	Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
FCC ID:	2ADUL0053
Standard(s) :	47 CFR Part 15, Subpart C 15.247
Date of Receipt:	2026-04-21
Date of Test:	2026-04-22 to 2026-05-28
Date of Issue:	2026-05-28
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu
EMC Laboratory Manager

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Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
01		2026-05-28		Original

Authorized for issue by:				
		Edison Li **Edison Li/Project Engineer**		
		Eric Fu **Eric Fu/Reviewer**		

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2 Test Summary

Radio Spectrum Technical Requirement				
Item	**Standard**	**Method**	**Requirement**	**Result**
Antenna Requirement	47 CFR Part 15, Subpart C 15.247	N/A	47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)	Pass

Radio Spectrum Matter Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2020) Section 6.10.5 & 11.12	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Radiated Spurious Emissions Below 1GHz		ANSI C63.10 (2020) Section 6.4,6.5	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Radiated Spurious Emissions Above 1GHz		ANSI C63.10 (2020) Section 6.6 & 11.12	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Maximum Conducted Output Power		ANSI C63.10 (2020) Section 11.9.1	47 CFR Part 15, Subpart C 15.247(b)(3)	Pass
Minimum 6dB Bandwidth		ANSI C63.10 (2020) Section 11.8.1	47 CFR Part 15, Subpart C 15.247a(2)	Pass
Power Spectral Density		ANSI C63.10 (2020) Section 11.10.3	47 CFR Part 15, Subpart C 15.247(e)	Pass
Conducted Band Edges Measurement		ANSI C63.10 (2020) Section 6.10.4	47 CFR Part 15, Subpart C 15.247(d)	Pass
Conducted Spurious Emissions		ANSI C63.10 (2020) Section 11.11	47 CFR Part 15, Subpart C 15.247(d)	Pass

Remark:

Model No.: 0053, 0063

Only the model 0053 was tested. According to the declaration from the applicant, the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only difference on model No. and appearance and.

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4 General Information

4.1 Details of E.U.T.

Power supply:	DC 6V(DC 1.5V 4*1.5V AAA battery)
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V5.1
Modulation Type:	GFSK
Number of Channels:	40
Channel Spacing:	2MHz
Data rate:	1Mbps, 2Mbps
Antenna Type:	PCB Antenna
Antenna Gain:	-1.17dBi

Remark:The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
RF Cable	SGS	N/A(cable loss:0.8dB)	N/A
The EUT has been tested as an independent unit.			

4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Radiated Emissions which fall in the restricted bands	± 6.0dB (Below 1GHz);± 4.6dB (Above 1GHz)
Radiated Spurious Emissions Below 1GHz	± 6.0dB for 3m; ± 5.0dB for 10m
Radiated Spurious Emissions Above 1GHz	± 4.6dB (1-18GHz);± 4.8dB (18-40GHz)
Maximum Conducted Output Power	± 0.4dB
Minimum 6dB Bandwidth	± 0.3%
Power Spectral Density	± 0.4dB
Conducted Band Edges Measurement	± 2.7dB
Conducted Spurious Emissions	± 2.7dB

Remark:

The U_{lab} (lab Uncertainty) is less than $U_{cispr/ETSI}$ (CISPR/ETSI Uncertainty), so the test results

– compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;

– non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

– the measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

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4.4 Test Location

All tests were performed at:

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Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI (Member No. 1937)

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC –Designation Number: CN1336

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

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5 Equipment List

Radiated Emissions which fall in the restricted bands					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
3m Fully-Anechoic Chamber	AUDIX	N/A	SEM001-02	2025-05-07	2028-05-06
Signal Analyzer	Rohde & Schwarz	FSV40	SEM008-04	2026-02-02	2027-02-01
Horn Antenna	Rohde&Schwarz	HF907	SEM003-07	2025-07-22	2026-07-21
Microwave system amplifier	Agilent	83017A	SEM005-25	2025-09-10	2026-09-09
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2025-07-05	2026-07-04

Radiated Spurious Emissions Below 1GHz					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Loop Antenna	ETS-Lindgren	6502	SEM003-08	2025-11-17	2027-11-16
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2023-06-19	2026-06-18
MXE EMI Receiver	Agilent Technologies	N9038A	SEM004-15	2025-07-25	2026-07-24
BiConiLog Antenna	ETS-LINDGREN	3142C	SEM003-01	2025-08-29	2027-08-28
Pre-Amplifier	Agilent Technologies	8447D	SEM005-01	2026-02-02	2027-02-01
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2025-07-05	2026-07-04

Radiated Spurious Emissions Above 1GHz					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
3m Fully-Anechoic Chamber	AUDIX	N/A	SEM001-02	2025-05-07	2028-05-06
Signal Analyzer	Rohde & Schwarz	FSV40	SEM008-04	2026-02-02	2027-02-01
Horn Antenna	Rohde&Schwarz	HF907	SEM003-07	2025-07-22	2026-07-21
Microwave system amplifier	Agilent	83017A	SEM005-25	2025-09-10	2026-09-09
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2025-07-05	2026-07-04
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	SEM003-15	2025-07-22	2027-07-21
Pre-Amplifier	TST PASS	LNA180400G40	SEM005-39	2025-05-22	2026-05-21

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RF Conducted Test					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Power Sensor	TST PASS	TSPS2023R	SEM009-26	2026-02-04	2027-02-03
Power Sensor	KEYSIGHT	U2021XA	SEM009-16	2026-02-04	2027-02-03
DC Power Supply	Chroma	62012P-80-60	SEM011-11	2025-07-24	2026-07-23
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-19	2026-02-03	2027-02-02
Measurement Software	TST PASS	TST PASS V2.0	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-01	2025-07-05	2026-07-04
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2026-02-02	2027-02-01

General used equipment					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Humidity/ Temperature Indicator	deli	8838	SEM002-32	2025-07-23	2026-07-22
Humidity/ Temperature Indicator	deli	8838	SEM002-33	2025-07-23	2026-07-22
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2026-02-14	2027-02-13

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6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)

6.1.2 Conclusion

Standard Requirement:

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, 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 (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is -1.17 dBi.

Antenna location: Refer to internal photo.

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7 Radio Spectrum Matter Test Results

7.1 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209
Test Method: ANSI C63.10 (2020) Section 6.10.5 & 11.12
Measurement Distance: 3m
Test Engineer: Tommy Luo
Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3
Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.		

7.1.1 E.U.T. Operation

Operating Environment:
Temperature: 21.3 °C Humidity: 50.5 % RH Atmospheric Pressure: 1015 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode_Keep the EUT in continuously transmitting mode with GFSK modulation.

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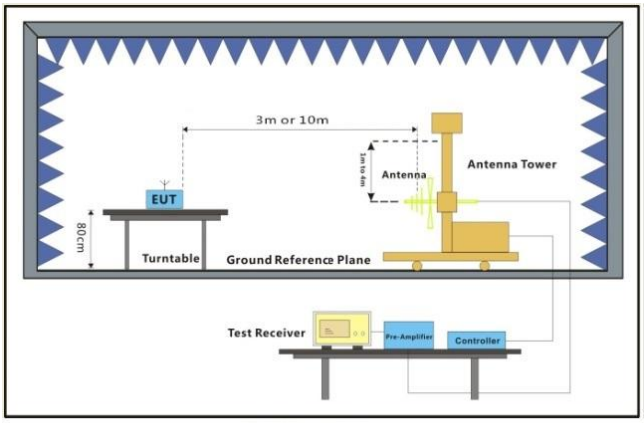
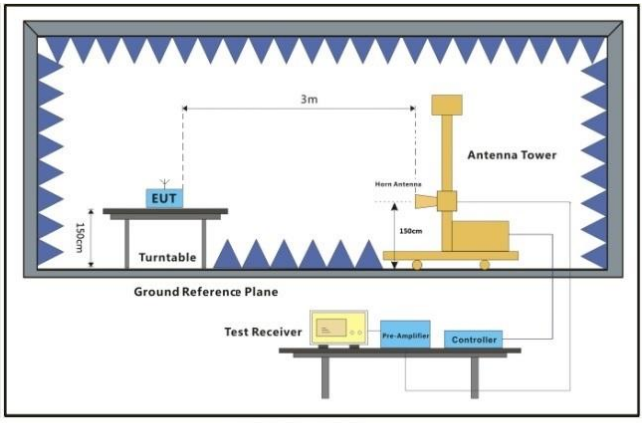
7.1.3 Test Setup Diagram



30MHz-1GHz



Above 1GHz

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7.1.4 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

h. Test the EUT in the lowest channel, the middle channel, the Highest channel.

i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

j. Repeat above procedures until all frequencies measured was complete.

Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

Remark 3: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for Peak detection (PK) and Average detection (AV) at frequency above 1GHz.

Remark 4:For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geqslant$1/T (Duty cycle$<$98%) or 10Hz (Duty cycle$\geqslant$98%) for Average detection (AV) at frequency above 1GHz.

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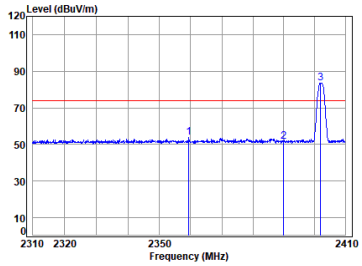
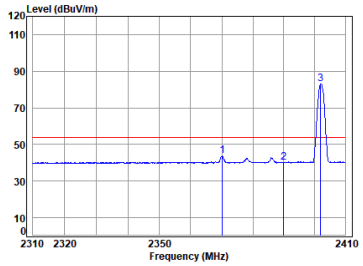
BLE_1M_TX_CH_00_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01657ME
Mode : 2402 Band edge
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	2359.470	16.09	28.62	32.83	41.80	53.68	74.00	-20.32	Peak	0.00
2	2390.000	16.13	28.68	32.80	39.56	51.57	74.00	-22.43	Peak	0.00
3 p	2402.000	16.15	28.72	32.79	71.46	83.54	74.00	9.54	Peak	0.00

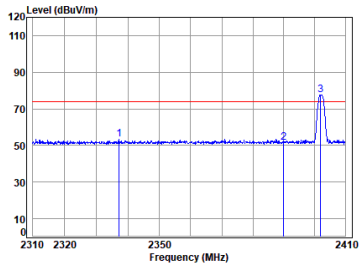
BLE_1M_TX_CH_00_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01657ME
Mode : 2402 Band edge
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	2370.194	16.10	28.64	32.82	31.67	43.59	54.00	-10.41	Average	0.00
2	2390.000	16.13	28.68	32.80	28.01	40.02	54.00	-13.98	Average	0.00
3 q	2402.000	16.15	28.72	32.79	71.18	83.26	54.00	29.26	Average	0.00

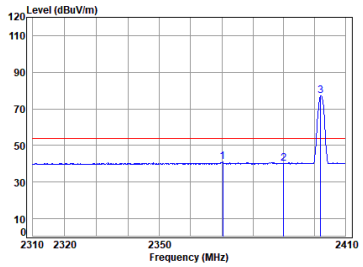
BLE_1M_TX_CH_00_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01657ME
Mode : 2402 Band edge
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	2337.178	16.05	28.55	32.85	41.61	53.36	74.00	-20.64	Peak	0.00
2	2390.000	16.13	28.68	32.80	39.33	51.34	74.00	-22.66	Peak	0.00
3 p	2402.000	16.15	28.72	32.79	65.52	77.60	74.00	3.60	Peak	0.00

BLE_1M_TX_CH_00_Vertical-Avg



Site : chamber
Condition: 3m VERTICAL
Job No : 01657ME
Mode : 2402 Band edge
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	2370.294	16.10	28.64	32.82	29.08	41.00	54.00	-13.00	Average	0.00
2	2390.000	16.13	28.68	32.80	27.99	40.00	54.00	-14.00	Average	0.00
3 q	2402.000	16.15	28.72	32.79	65.12	77.20	54.00	23.20	Average	0.00

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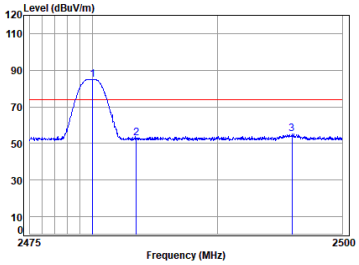
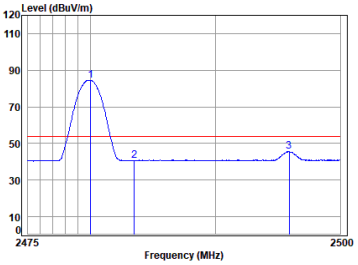
BLE_1M_TX_CH_39_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01657ME
Mode : 2480 Band edge
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 p	2480.000	16.27	29.16	32.72	72.35	85.06	74.00	11.06	Peak	0.00
2	2483.500	16.28	29.17	32.72	40.11	52.84	74.00	-21.16	Peak	0.00
3	2495.958	16.29	29.19	32.71	42.36	55.13	74.00	-18.87	Peak	0.00

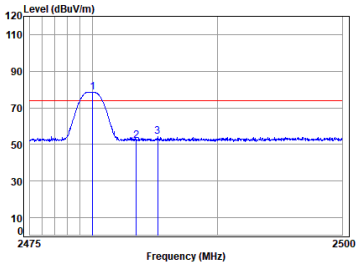
BLE_1M_TX_CH_39_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01657ME
Mode : 2480 Band edge
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 q	2480.000	16.27	29.16	32.72	71.92	84.63	54.00	30.63	Average	0.00
2	2483.500	16.28	29.17	32.72	28.00	40.73	54.00	-13.27	Average	0.00
3	2495.883	16.29	29.19	32.71	32.95	45.72	54.00	-8.28	Average	0.00

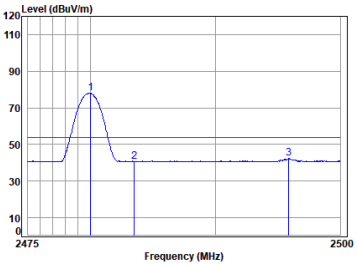
BLE_1M_TX_CH_39_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01657ME
Mode : 2480 Band edge
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 p	2480.000	16.27	29.16	32.72	65.87	78.58	74.00	4.58	Peak	0.00
2	2483.500	16.28	29.17	32.72	39.49	52.22	74.00	-21.78	Peak	0.00
3	2485.195	16.28	29.17	32.72	41.57	54.30	74.00	-19.70	Peak	0.00

BLE_1M_TX_CH_39_Vertical-Avg



Site : chamber
Condition: 3m VERTICAL
Job No : 01657ME
Mode : 2480 Band edge
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 q	2480.000	16.27	29.16	32.72	65.32	78.03	54.00	24.03	Average	0.00
2	2483.500	16.28	29.17	32.72	27.77	40.50	54.00	-13.50	Average	0.00
3	2495.858	16.29	29.19	32.71	29.51	42.28	54.00	-11.72	Average	0.00

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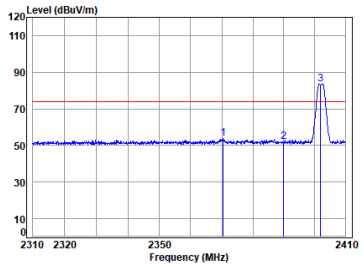
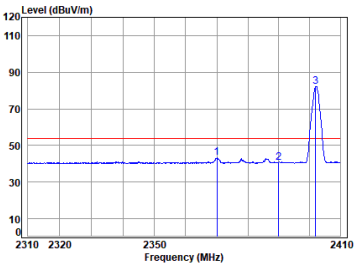


Site : chamber
Condition: 3m HORIZONTAL
Job No : 01657ME
Mode : 2402 Band edge
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	2370.495	16.10	28.64	32.82	41.80	53.72	74.00	-20.28	Peak	0.00
2	2390.000	16.13	28.68	32.80	39.83	51.84	74.00	-22.16	Peak	0.00
3 p	2402.000	16.15	28.72	32.79	71.44	83.52	74.00	9.52	Peak	0.00

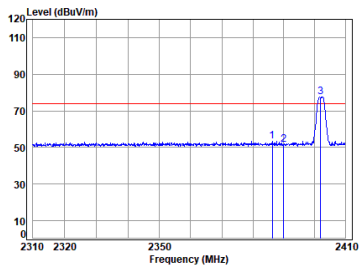
BLE_2M_TX_CH_00_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01657ME
Mode : 2402 Band edge
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	2370.093	16.10	28.64	32.82	31.55	43.47	54.00	-10.53	Average	0.00
2	2390.000	16.13	28.68	32.80	28.44	40.45	54.00	-13.55	Average	0.00
3 q	2402.000	16.15	28.72	32.79	70.27	82.35	54.00	28.35	Average	0.00

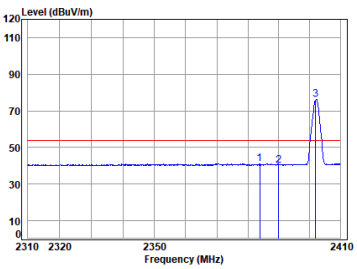
BLE_2M_TX_CH_00_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01657ME
Mode : 2402 Band edge
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	2386.320	16.13	28.67	32.81	41.49	53.48	74.00	-20.52	Peak	0.00
2	2390.000	16.13	28.68	32.80	39.77	51.78	74.00	-22.22	Peak	0.00
3 p	2402.000	16.15	28.72	32.79	65.53	77.61	74.00	3.61	Peak	0.00

BLE_2M_TX_CH_00_Vertical-Avg



Site : chamber
Condition: 3m VERTICAL
Job No : 01657ME
Mode : 2402 Band edge
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	2383.793	16.13	28.67	32.81	29.27	41.26	54.00	-12.74	Average	0.00
2	2390.000	16.13	28.68	32.80	28.33	40.34	54.00	-13.66	Average	0.00
3 q	2402.000	16.15	28.72	32.79	64.20	76.28	54.00	22.28	Average	0.00

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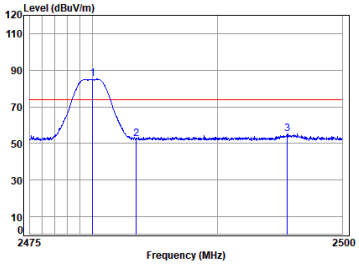
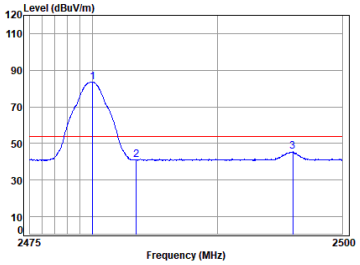
BLE_2M_TX_CH_39_Horizontal-Peak




```
Site     : chamber
Condition: 3m HORIZONTAL
Job No   : 01657ME
Mode     : 2480 Band edge
         : BLE
             Cable    Ant Preamp   Read          Limit   Over              Aux
        Freq  Loss Factor Factor  Level  Level  Line  Limit Remark      Factor
         MHz    dB   dB/m    dB  dBuV  dBuV/m dBuV/m    dB                dB

1 p 2480.000 16.27 29.16 32.72 72.40  85.11  74.00  11.11 Peak          0.00
2   2483.500 16.28 29.17 32.72 39.89  52.62  74.00 -21.38 Peak          0.00
3   2495.607 16.29 29.19 32.71 42.32  55.09  74.00 -18.91 Peak          0.00
```

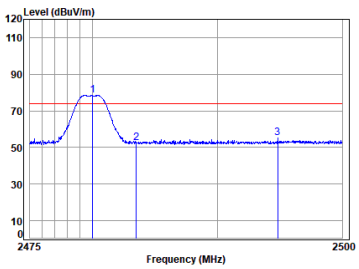
BLE_2M_TX_CH_39_Horizontal-Avg




```
Site     : chamber
Condition: 3m HORIZONTAL
Job No   : 01657ME
Mode     : 2480 Band edge
         : BLE
             Cable    Ant Preamp   Read          Limit   Over              Aux
        Freq  Loss Factor Factor  Level  Level  Line  Limit Remark      Factor
         MHz    dB   dB/m    dB  dBuV  dBuV/m dBuV/m    dB                dB

1 q 2480.000 16.27 29.16 32.72 70.89  83.60  54.00  29.60 Average       0.00
2   2483.500 16.28 29.17 32.72 28.30  41.03  54.00 -12.97 Average       0.00
3   2496.033 16.29 29.19 32.71 32.65  45.42  54.00  -8.58 Average       0.00
```

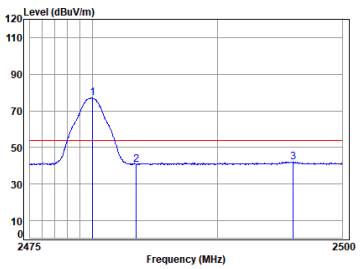
BLE_2M_TX_CH_39_Vertical-Peak




```
Site     : chamber
Condition: 3m VERTICAL
Job No   : 01657ME
Mode     : 2480 Band edge
         : BLE
             Cable    Ant Preamp   Read          Limit   Over              Aux
        Freq  Loss Factor Factor  Level  Level  Line  Limit Remark      Factor
         MHz    dB   dB/m    dB  dBuV  dBuV/m dBuV/m    dB                dB

1 p 2480.000 16.27 29.16 32.72 65.82  78.53  74.00   4.53 Peak          0.00
2   2483.500 16.28 29.17 32.72 39.95  52.68  74.00 -21.32 Peak          0.00
3   2494.804 16.29 29.19 32.71 42.24  55.01  74.00 -18.99 Peak          0.00
```

BLE_2M_TX_CH_39_Vertical-Avg




```
Site     : chamber
Condition: 3m VERTICAL
Job No   : 01657ME
Mode     : 2480 Band edge
         : BLE
             Cable    Ant Preamp   Read          Limit   Over              Aux
        Freq  Loss Factor Factor  Level  Level  Line  Limit Remark      Factor
         MHz    dB   dB/m    dB  dBuV  dBuV/m dBuV/m    dB                dB

1 q 2480.000 16.27 29.16 32.72 64.25  76.96  54.00  22.96 Average       0.00
2   2483.500 16.28 29.17 32.72 28.04  40.77  54.00 -13.23 Average       0.00
3   2496.058 16.29 29.19 32.71 29.39  42.16  54.00 -11.84 Average       0.00
```

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7.2 Radiated Spurious Emissions Below 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209
Test Method: ANSI C63.10 (2020) Section 6.4,6.5
Measurement Distance: 3m
Test Engineer: Mason Wu
Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
960-1000	500	3

Note

1: The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

2. At frequencies below 1GHz, measurements may be performed at a distance different to specified in the regulations.

Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor+ Aux Factor (if applicable)

The aux factor needs to be added when measurements are performed at a distance other than the limit distance provided.

EX. Below 30MHz, Aux Factor = 40 dB/decade of distance, the aux factor is 40log(3/300) = -80dB (for 3m test distance).

EX. Above 30MHz, Aux Factor = 20 dB/decade of distance, the aux factor is 20log(10/3) = 10.46dB (for 10m test distance).

7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 23.4 °C Humidity: 42.5 % RH Atmospheric Pressure: 1020 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode_Keep the EUT in continuously transmitting mode with GFSK modulation.

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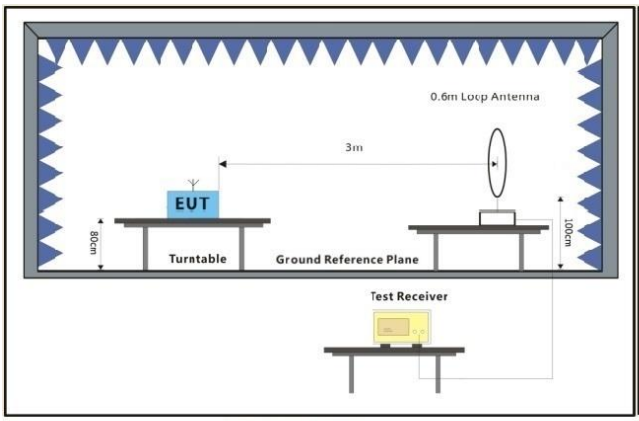
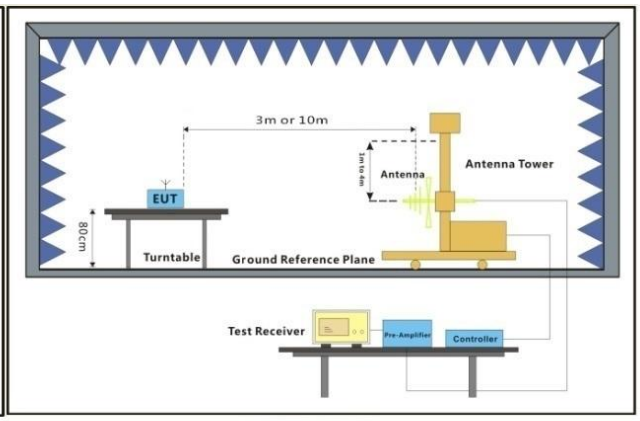
7.2.3 Test Setup Diagram



Below 30MHz



30MHz-1GHz

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7.2.4 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8m above the ground at a semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3m or 10m away from the interference-receiving antenna, which was mounted on the variable-height antenna tower.

c. The antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1m to 4m (for the test frequency of below 30MHz, the antenna was tuned to heights 1m) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using quasi-peak method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel, the middle channel, the Highest channel.

h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. At frequencies below 1GHz, measurements may be performed at a distance different to specified in the regulations.

Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor+ Aux Factor (if applicable)

The aux factor needs to be added when measurements are performed at a distance other than the limit distance provided.

EX. Below 30MHz, Aux Factor = 40 dB/decade of distance, the aux factor is 40log(3/300) = -80dB (for 3m test distance).

EX. Above 30MHz, Aux Factor = 20 dB/decade of distance, the aux factor is 20log(10/3) = 10.46dB (for 10m test distance).

2. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

3. The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the worst-case test curve is displayed.

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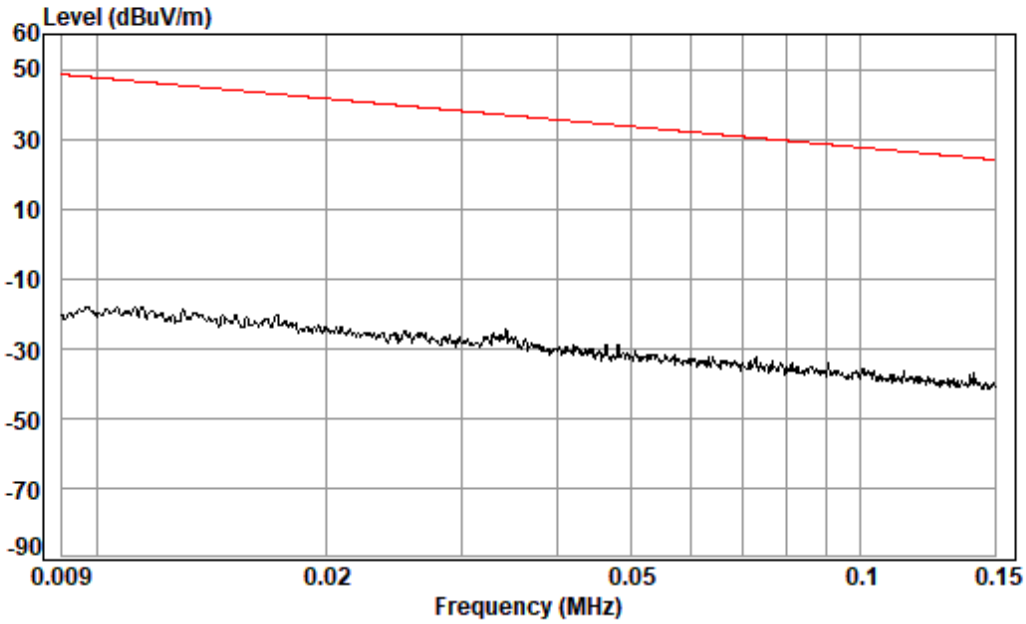

Condition: 3m
Job No. : 01657ME
Test Mode: 01
: coaxial

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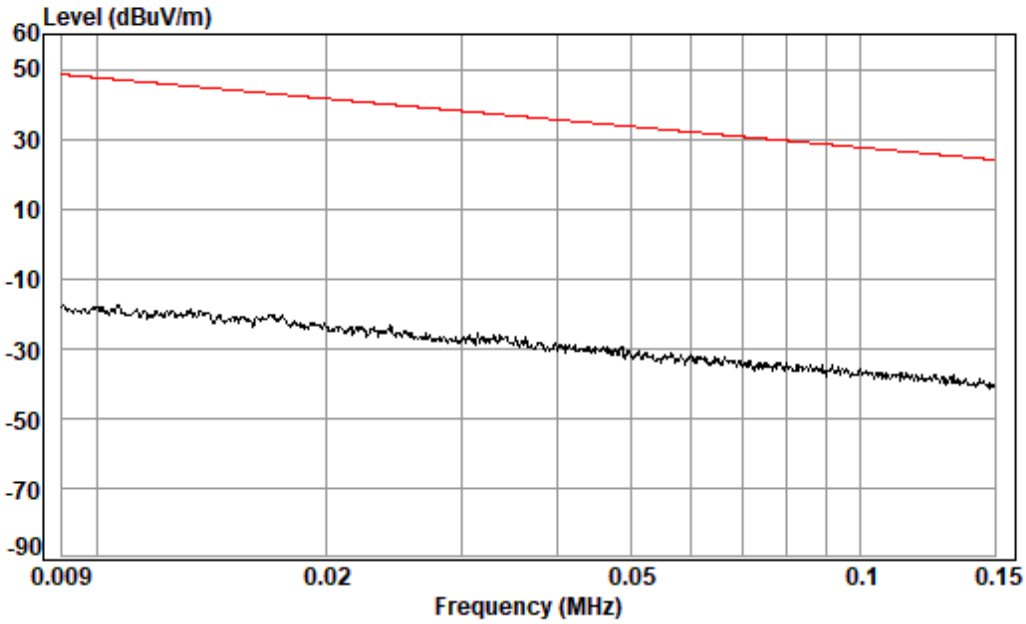

Condition: 3m
Job No. : 01657ME
Test Mode: 01
: coplanar

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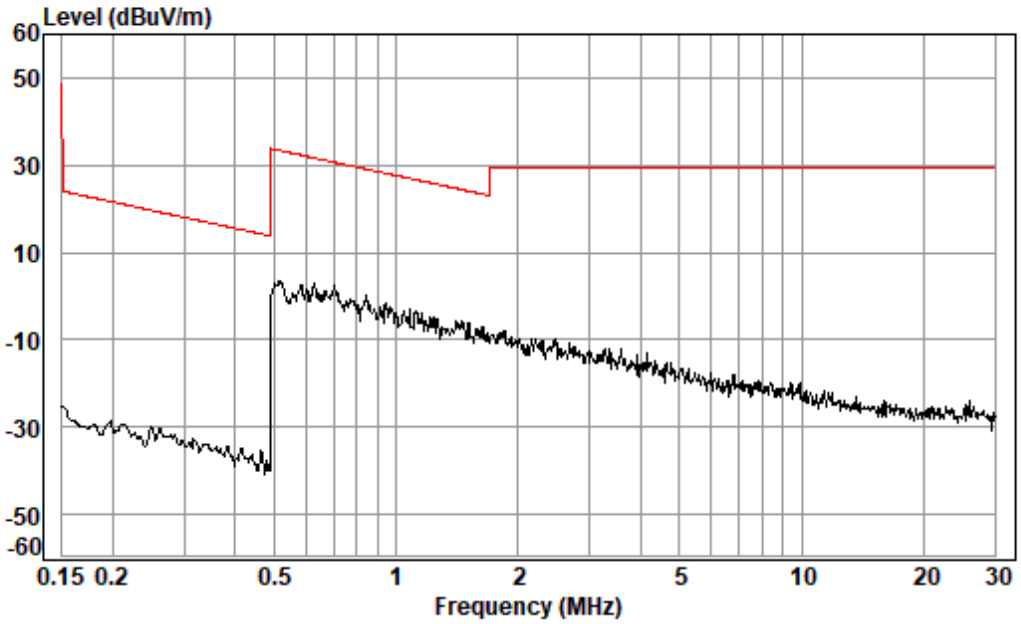

Condition: 3m
Job No. : 01657ME
Test Mode: 01
: coaxial

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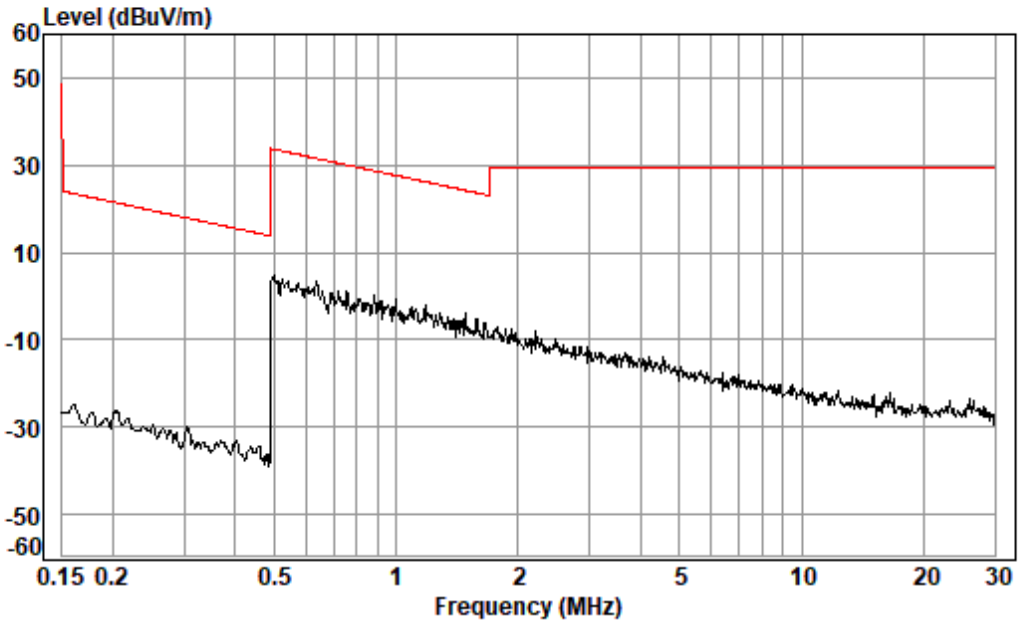

Condition: 3m
Job No. : 01657ME
Test Mode: 01
: coplanar

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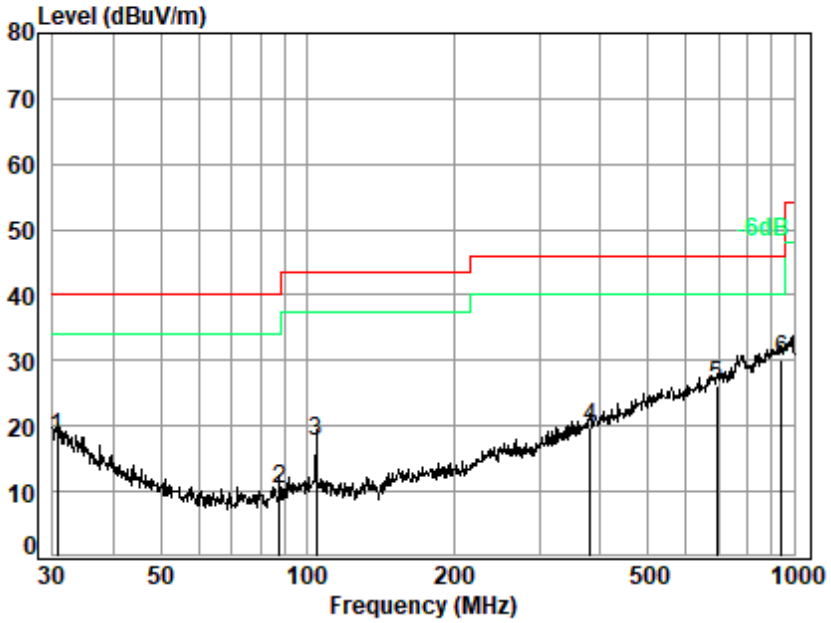
Test Mode: 01; Polarity: Horizontal



Site : chamber
Condition: 3m HORIZONTAL
Job No. : 01657ME
Test Mode: 01

	Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB	
1	30.638	21.12	0.75	27.65	24.06	18.28	40.00	-21.72	QP
2	87.725	11.56	1.16	27.61	25.38	10.49	40.00	-29.51	QP
3	104.170	12.48	1.25	27.61	31.44	17.56	43.50	-25.94	QP
4	381.249	20.43	2.43	27.71	24.75	19.90	46.00	-26.10	QP
5	694.417	25.78	3.39	27.85	24.75	26.07	46.00	-19.93	QP
6 q	942.131	29.01	4.06	26.72	23.87	30.22	46.00	-15.78	QP

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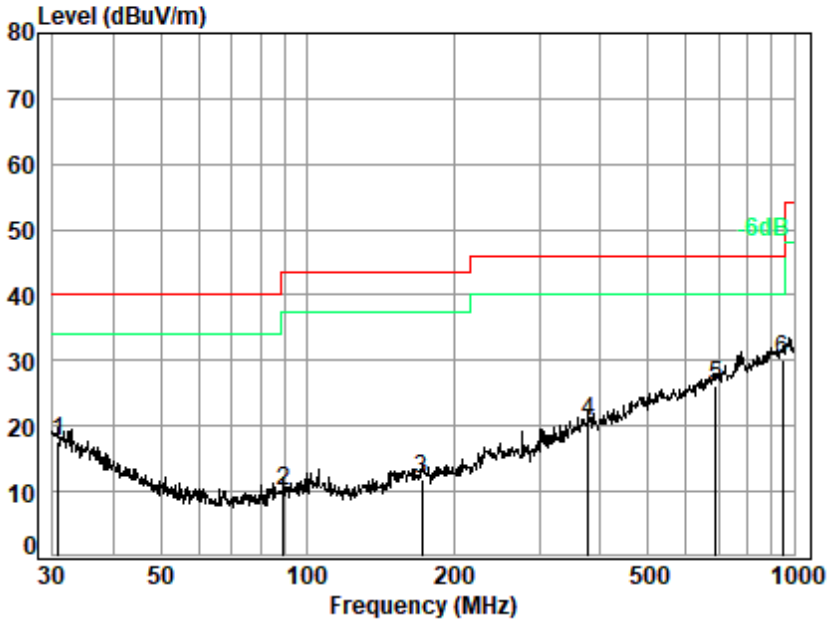
Test Mode: 01; Polarity: Vertical



Site : chamber
Condition: 3m VERTICAL
Job No. : 01657ME
Test Mode: 01

	Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB	
1	30.745	21.07	0.75	27.65	23.61	17.78	40.00	-22.22	QP
2	89.276	11.72	1.17	27.60	24.88	10.17	43.50	-33.33	QP
3	171.995	14.18	1.60	27.76	23.87	11.89	43.50	-31.61	QP
4	378.584	20.46	2.42	27.70	25.40	20.58	46.00	-25.42	QP
5	691.987	25.72	3.39	27.85	24.80	26.06	46.00	-19.94	QP
6 q	945.440	29.06	4.07	26.70	23.79	30.22	46.00	-15.78	QP

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7.3 Radiated Spurious Emissions Above 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209
Test Method: ANSI C63.10 (2020) Section 6.6 & 11.12
Measurement Distance: 3m
Test Engineer: Tommy Luo
Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
Above 1000	500	3

Note:

At Above 18GHz, measurements may be performed at a distance shorter than that specified in the regulations

Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor+ Aux Factor (if applicable)

The aux factor needs to be added when measurements are performed at a distance other than the limit distance provided.

EX. Above 18GHz, Aux Factor = 20 dB/decade of distance, the aux factor is 20log(1/3) = -9.54dB (for 1m test distance).

7.3.1 E.U.T. Operation

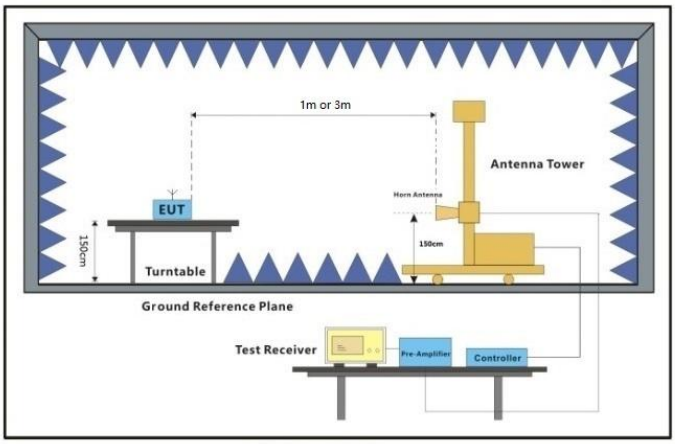
Operating Environment:

Temperature: 21.3 °C Humidity: 50.5 % RH Atmospheric Pressure: 1015 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode_Keep the EUT in continuously transmitting mode with GFSK modulation.

7.3.3 Test Setup Diagram



Above 1GHz

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7.3.4 Measurement Procedure and Data

a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5m above the ground at a 3m fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3m away from the interference-receiving antenna from 1GHz to 18GHz, and 1m away from the interference-receiving antenna above 18GHz.

b. The interference-receiving antenna was mounted on the variable-height antenna tower, with its boresight facing the EUT throughout the test.

c. The antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1m to 4m and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. Test the EUT in the lowest channel, the middle channel, the Highest channel.

g. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

h. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Scan from 1GHz to 10th harmonic of the highest frequency or 40 GHz, whichever is lower.

2. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

3. For the frequency above 18GHz, testing had been executed under all test modes, only the worst-case test curve is displayed in the report.

4. For devices with multiple operating modes, measurements on the middle channel is used to determine the worst-case mode(s).

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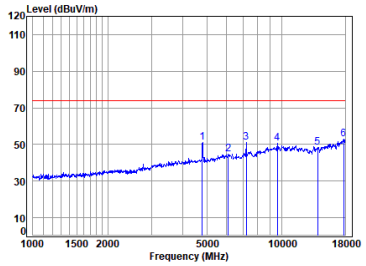
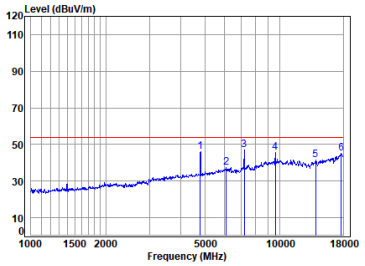
BLE_1M_TX_CH_00_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01657ME
Mode : 2402 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	4804.000	7.41	33.75	54.19	63.94	50.91	74.00	-23.09	Peak	0.00
2	6106.616	8.92	35.80	53.29	53.46	44.89	74.00	-29.11	Peak	0.00
3	7206.000	8.50	36.25	53.33	59.83	51.25	74.00	-22.75	Peak	0.00
4	9608.000	10.74	37.90	53.20	55.08	50.52	74.00	-23.48	Peak	0.00
5	13957.530	10.97	39.53	53.90	51.89	48.49	74.00	-25.51	Peak	0.00
6	p17741.740	11.35	43.97	52.58	50.29	53.03	74.00	-20.97	Peak	0.00

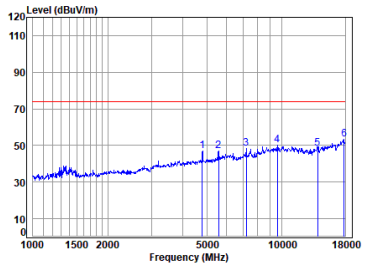
BLE_1M_TX_CH_00_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01657ME
Mode : 2402 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	4804.000	7.41	33.75	54.19	59.31	46.28	54.00	-7.72	Average	0.00
2	6106.616	8.92	35.80	53.29	46.00	37.43	54.00	-16.57	Average	0.00
3	q 7206.000	8.50	36.25	53.33	55.59	47.01	54.00	-6.99	Average	0.00
4	9608.000	10.74	37.90	53.20	50.33	45.77	54.00	-8.23	Average	0.00
5	13957.530	10.97	39.53	53.90	44.76	41.36	54.00	-12.64	Average	0.00
6	17690.530	11.32	44.21	52.59	42.36	45.30	54.00	-8.70	Average	0.00

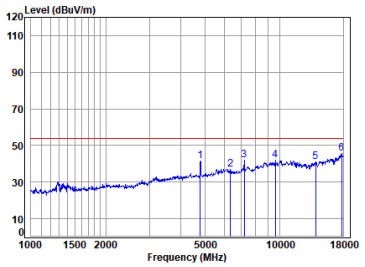
BLE_1M_TX_CH_00_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01657ME
Mode : 2402 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	4804.000	7.41	33.75	54.19	60.16	47.13	74.00	-26.87	Peak	0.00
2	5583.251	8.29	35.00	53.62	57.55	47.22	74.00	-26.78	Peak	0.00
3	7206.000	8.50	36.25	53.33	56.84	48.26	74.00	-25.74	Peak	0.00
4	9608.000	10.74	37.90	53.20	54.88	50.32	74.00	-23.68	Peak	0.00
5	13957.530	10.97	39.53	53.90	51.84	48.44	74.00	-25.56	Peak	0.00
6	p17793.090	11.38	43.56	52.56	50.79	53.17	74.00	-20.83	Peak	0.00

BLE_1M_TX_CH_00_Vertical-Avg



Site : chamber
Condition: 3m VERTICAL
Job No : 01657ME
Mode : 2402 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	4804.000	7.41	33.75	54.19	54.72	41.69	54.00	-12.31	Average	0.00
2	6340.436	8.90	35.46	53.26	46.08	37.18	54.00	-16.82	Average	0.00
3	7206.000	8.50	36.25	53.33	50.53	41.95	54.00	-12.05	Average	0.00
4	9608.000	10.74	37.90	53.20	46.64	42.08	54.00	-11.92	Average	0.00
5	13957.530	10.97	39.53	53.90	44.45	41.05	54.00	-12.95	Average	0.00
6	q17741.740	11.35	43.97	52.58	42.70	45.44	54.00	-8.56	Average	0.00

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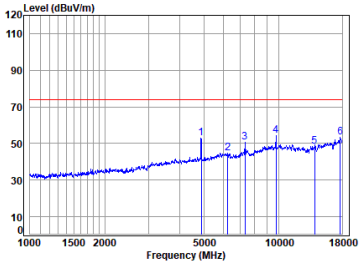
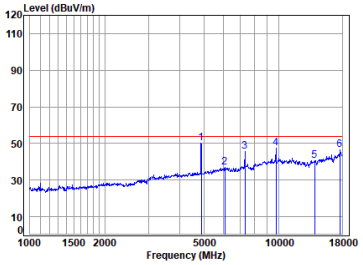
BLE_1M_TX_CH_19_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01657ME
Mode : 2440 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	4880.000	7.47	34.24	54.15	65.43	52.99	74.00	-21.01	Peak	0.00
2	6249.464	8.90	35.50	53.27	53.64	44.77	74.00	-29.23	Peak	0.00
3	7320.000	8.46	36.00	53.40	59.49	50.55	74.00	-23.45	Peak	0.00
4 p	9760.000	10.69	37.74	53.08	58.80	54.15	74.00	-19.85	Peak	0.00
5	13957.530	10.97	39.53	53.90	51.80	48.40	74.00	-25.60	Peak	0.00
6	17690.530	11.32	44.21	52.59	50.23	53.17	74.00	-20.83	Peak	0.00

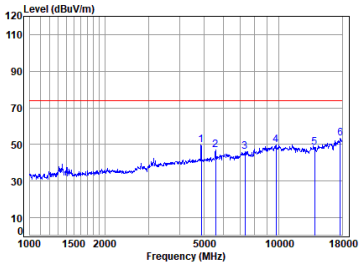
BLE_1M_TX_CH_19_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01657ME
Mode : 2440 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 q	4880.000	7.47	34.24	54.15	62.61	50.17	54.00	-3.83	Average	0.00
2	6071.417	8.92	35.57	53.29	45.63	36.83	54.00	-17.17	Average	0.00
3	7320.000	8.46	36.00	53.40	54.75	45.81	54.00	-8.19	Average	0.00
4	9760.000	10.69	37.74	53.08	52.15	47.50	54.00	-6.50	Average	0.00
5	13957.530	10.97	39.53	53.90	44.00	40.60	54.00	-13.40	Average	0.00
6	17639.470	11.28	43.70	52.61	44.29	46.66	54.00	-7.34	Average	0.00

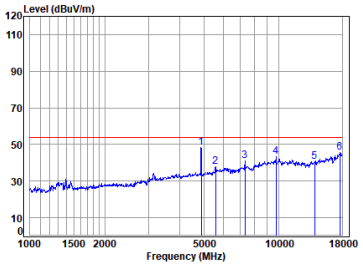
BLE_1M_TX_CH_19_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01657ME
Mode : 2440 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	4880.000	7.47	34.24	54.15	62.18	49.74	74.00	-24.26	Peak	0.00
2	5583.251	8.29	35.00	53.62	57.31	46.98	74.00	-27.02	Peak	0.00
3	7320.000	8.46	36.00	53.40	55.23	46.29	74.00	-27.71	Peak	0.00
4	9760.000	10.69	37.74	53.08	54.59	49.94	74.00	-24.06	Peak	0.00
5	13957.530	10.97	39.53	53.90	51.55	48.15	74.00	-25.85	Peak	0.00
6 p	17690.530	11.32	44.21	52.59	50.32	53.26	74.00	-20.74	Peak	0.00

BLE_1M_TX_CH_19_Vertical-Avg



Site : chamber
Condition: 3m VERTICAL
Job No : 01657ME
Mode : 2440 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 q	4880.000	7.47	34.24	54.15	60.60	48.16	54.00	-5.84	Average	0.00
2	5583.251	8.29	35.00	53.62	48.04	37.71	54.00	-16.29	Average	0.00
3	7320.000	8.46	36.00	53.40	50.11	41.17	54.00	-12.83	Average	0.00
4	9760.000	10.69	37.74	53.08	48.15	43.50	54.00	-10.50	Average	0.00
5	13957.530	10.97	39.53	53.90	44.23	40.83	54.00	-13.17	Average	0.00
6	17639.470	11.28	43.70	52.61	43.06	45.43	54.00	-8.57	Average	0.00

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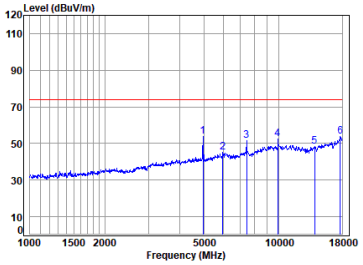
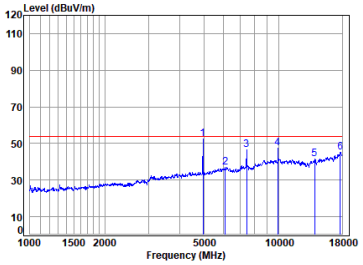
BLE_1M_TX_CH_39_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01657ME
Mode : 2480 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	p 4960.000	7.53	34.06	54.12	66.50	53.97	74.00	-20.03	Peak	0.00
2	5967.033	8.88	35.00	53.32	54.52	45.08	74.00	-28.92	Peak	0.00
3	7440.000	8.43	36.30	53.47	60.40	51.66	74.00	-22.34	Peak	0.00
4	9920.000	10.64	37.68	52.96	57.02	52.38	74.00	-21.62	Peak	0.00
5	13957.530	10.97	39.53	53.90	51.66	48.26	74.00	-25.74	Peak	0.00
6	17690.530	11.32	44.21	52.59	50.89	53.83	74.00	-20.17	Peak	0.00

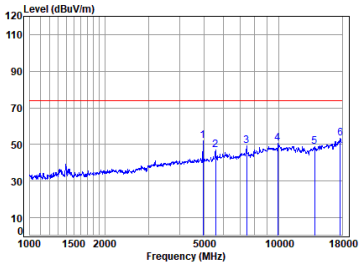
BLE_1M_TX_CH_39_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01657ME
Mode : 2480 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	q 4960.000	7.53	34.06	54.12	64.95	52.42	54.00	-1.58	Average	0.00
2	6088.991	8.92	35.71	53.29	45.84	37.18	54.00	-16.82	Average	0.00
3	7440.000	8.43	36.30	53.47	55.15	46.41	54.00	-7.59	Average	0.00
4	9920.000	10.64	37.68	52.96	51.97	47.33	54.00	-6.67	Average	0.00
5	13957.530	10.97	39.53	53.90	44.72	41.32	54.00	-12.68	Average	0.00
6	17690.530	11.32	44.21	52.59	42.30	45.24	54.00	-8.76	Average	0.00

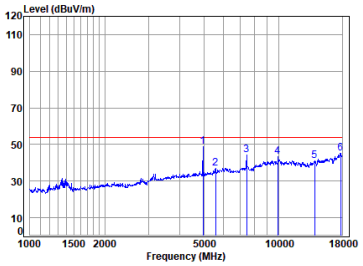
BLE_1M_TX_CH_39_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01657ME
Mode : 2480 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	4960.000	7.53	34.06	54.12	64.47	51.94	74.00	-22.06	Peak	0.00
2	5583.251	8.29	35.00	53.62	57.46	47.13	74.00	-26.87	Peak	0.00
3	7440.000	8.43	36.30	53.47	57.92	49.18	74.00	-24.82	Peak	0.00
4	9920.000	10.64	37.68	52.96	55.48	50.84	74.00	-23.16	Peak	0.00
5	13957.530	10.97	39.53	53.90	52.10	48.70	74.00	-25.30	Peak	0.00
6	p17690.530	11.32	44.21	52.59	50.57	53.51	74.00	-20.49	Peak	0.00

BLE_1M_TX_CH_39_Vertical-Avg



Site : chamber
Condition: 3m VERTICAL
Job No : 01657ME
Mode : 2480 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	q 4960.000	7.53	34.06	54.12	61.22	48.69	54.00	-5.31	Average	0.00
2	5583.251	8.29	35.00	53.62	47.43	37.10	54.00	-16.90	Average	0.00
3	7440.000	8.43	36.30	53.47	52.85	44.11	54.00	-9.89	Average	0.00
4	9920.000	10.64	37.68	52.96	47.93	43.29	54.00	-10.71	Average	0.00
5	13957.530	10.97	39.53	53.90	44.33	40.93	54.00	-13.07	Average	0.00
6	17741.740	11.35	43.97	52.58	42.62	45.36	54.00	-8.64	Average	0.00

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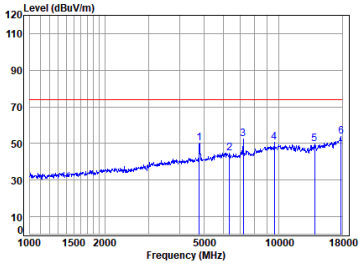
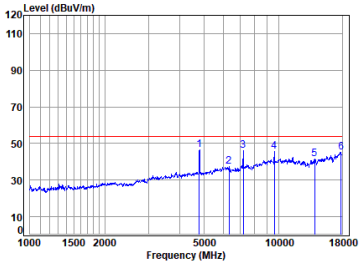
BLE_2M_TX_CH_00_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01657ME
Mode : 2402 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	4804.000	7.41	33.75	54.19	63.27	50.24	74.00	-23.76	Peak	0.00
2	6340.436	8.90	35.46	53.26	53.82	44.92	74.00	-29.08	Peak	0.00
3	7206.000	8.50	36.25	53.33	60.92	52.34	74.00	-21.66	Peak	0.00
4	9608.000	10.74	37.90	53.20	55.25	50.69	74.00	-23.31	Peak	0.00
5	13957.530	10.97	39.53	53.90	53.23	49.83	74.00	-24.17	Peak	0.00
6	p17793.090	11.38	43.56	52.56	51.60	53.98	74.00	-20.02	Peak	0.00

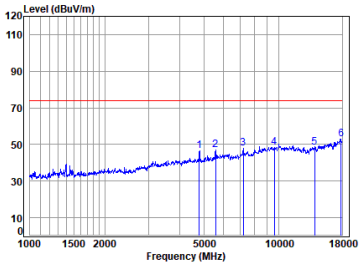
BLE_2M_TX_CH_00_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01657ME
Mode : 2402 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	q 4804.000	7.41	33.75	54.19	59.75	46.72	54.00	-7.28	Average	0.00
2	6322.136	8.90	35.39	53.27	46.31	37.33	54.00	-16.67	Average	0.00
3	7206.000	8.50	36.25	53.33	54.78	46.20	54.00	-7.80	Average	0.00
4	9608.000	10.74	37.90	53.20	50.15	45.59	54.00	-8.41	Average	0.00
5	13957.530	10.97	39.53	53.90	44.74	41.34	54.00	-12.66	Average	0.00
6	17793.090	11.38	43.56	52.56	42.83	45.21	54.00	-8.79	Average	0.00

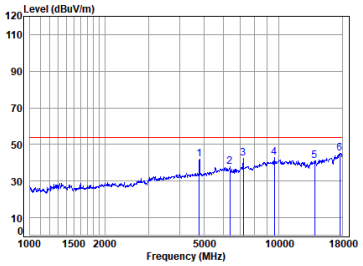
BLE_2M_TX_CH_00_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01657ME
Mode : 2402 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	4804.000	7.41	33.75	54.19	59.69	46.66	74.00	-27.34	Peak	0.00
2	5583.251	8.29	35.00	53.62	57.47	47.14	74.00	-26.86	Peak	0.00
3	7206.000	8.50	36.25	53.33	56.61	48.03	74.00	-25.97	Peak	0.00
4	9608.000	10.74	37.90	53.20	52.97	48.41	74.00	-25.59	Peak	0.00
5	13957.530	10.97	39.53	53.90	51.77	48.37	74.00	-25.63	Peak	0.00
6	p17844.590	11.41	43.54	52.55	50.42	52.82	74.00	-21.18	Peak	0.00

BLE_2M_TX_CH_00_Vertical-Avg



Site : chamber
Condition: 3m VERTICAL
Job No : 01657ME
Mode : 2402 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	4804.000	7.41	33.75	54.19	54.84	41.81	54.00	-12.19	Average	0.00
2	6358.789	8.89	35.39	53.26	46.63	37.65	54.00	-16.35	Average	0.00
3	7206.000	8.50	36.25	53.33	51.11	42.53	54.00	-11.47	Average	0.00
4	9608.000	10.74	37.90	53.20	47.37	42.81	54.00	-11.19	Average	0.00
5	13957.530	10.97	39.53	53.90	44.53	41.13	54.00	-12.87	Average	0.00
6	q17639.470	11.28	43.70	52.61	42.95	45.32	54.00	-8.68	Average	0.00

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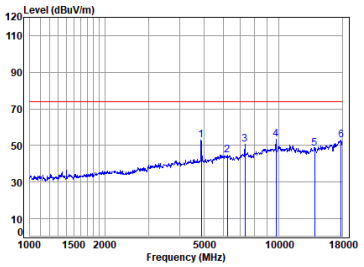
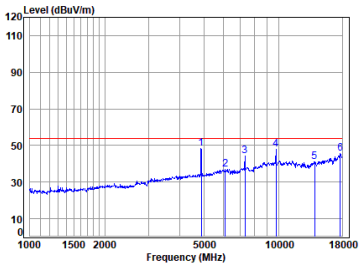
BLE_2M_TX_CH_19_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01657ME
Mode : 2440 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	4880.000	7.47	34.24	54.15	65.52	53.08	74.00	-20.92	Peak	0.00
2	6213.441	8.91	35.57	53.28	53.74	44.94	74.00	-29.06	Peak	0.00
3	7320.000	8.46	36.00	53.40	59.79	50.85	74.00	-23.15	Peak	0.00
4	p 9760.000	10.69	37.74	53.08	57.98	53.33	74.00	-20.67	Peak	0.00
5	13957.530	10.97	39.53	53.90	51.84	48.44	74.00	-25.56	Peak	0.00
6	17844.590	11.41	43.54	52.55	50.63	53.03	74.00	-20.97	Peak	0.00

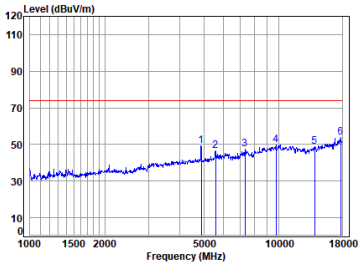
BLE_2M_TX_CH_19_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01657ME
Mode : 2440 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	q 4880.000	7.47	34.24	54.15	60.63	48.19	54.00	-5.81	Average	0.00
2	6088.991	8.92	35.71	53.29	45.81	37.15	54.00	-16.85	Average	0.00
3	7320.000	8.46	36.00	53.40	53.24	44.30	54.00	-9.70	Average	0.00
4	9760.000	10.69	37.74	53.08	52.67	48.02	54.00	-5.98	Average	0.00
5	13957.530	10.97	39.53	53.90	44.38	40.98	54.00	-13.02	Average	0.00
6	17690.530	11.32	44.21	52.59	42.63	45.57	54.00	-8.43	Average	0.00

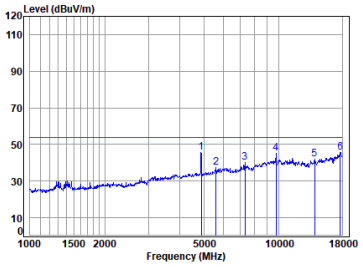
BLE_2M_TX_CH_19_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01657ME
Mode : 2440 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	4880.000	7.47	34.24	54.15	61.67	49.23	74.00	-24.77	Peak	0.00
2	5583.251	8.29	35.00	53.62	57.09	46.76	74.00	-27.24	Peak	0.00
3	7320.000	8.46	36.00	53.40	56.26	47.32	74.00	-26.68	Peak	0.00
4	9760.000	10.69	37.74	53.08	54.57	49.92	74.00	-24.08	Peak	0.00
5	13957.530	10.97	39.53	53.90	52.06	48.66	74.00	-25.34	Peak	0.00
6	p17741.740	11.35	43.97	52.58	50.97	53.71	74.00	-20.29	Peak	0.00

BLE_2M_TX_CH_19_Vertical-Avg



Site : chamber
Condition: 3m VERTICAL
Job No : 01657ME
Mode : 2440 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	4880.000	7.47	34.24	54.15	58.18	45.74	54.00	-8.26	Average	0.00
2	5599.412	8.32	35.10	53.60	47.39	37.21	54.00	-16.79	Average	0.00
3	7320.000	8.46	36.00	53.40	48.95	40.01	54.00	-13.99	Average	0.00
4	9760.000	10.69	37.74	53.08	49.81	45.16	54.00	-8.84	Average	0.00
5	13957.530	10.97	39.53	53.90	45.46	42.06	54.00	-11.94	Average	0.00
6	q17690.530	11.32	44.21	52.59	42.90	45.84	54.00	-8.16	Average	0.00

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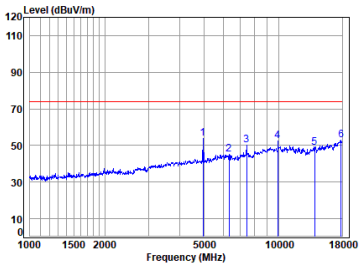
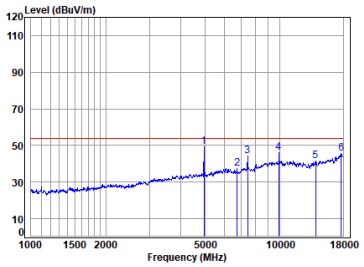
BLE_2M_TX_CH_39_Horizontal-Peak



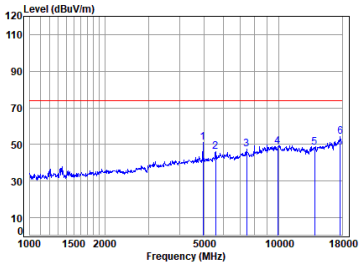

```
Site     : chamber
Condition: 3m HORIZONTAL
Job No   : 01657ME
Mode     : 2480 TX RSE
         : BLE
          Freq  Cable Loss  Ant Factor  Preamp Factor  Read Level  Level  Limit Line  Over Limit  Remark  Aux Factor
           MHz      dB        dB/m          dB          dBuV     dBuV/m   dBuV/m       dB                    dB
1 p  4960.000    7.53      34.06         54.12         66.33    53.80    74.00     -20.20  Peak             0.00
2    6322.136    8.90      35.39         53.27         54.14    45.16    74.00     -28.84  Peak             0.00
3    7440.000    8.43      36.30         53.47         59.02    50.28    74.00     -23.72  Peak             0.00
4    9920.000   10.64      37.68         52.96         57.17    52.53    74.00     -21.47  Peak             0.00
5   13957.530   10.97      39.53         53.90         52.25    48.85    74.00     -25.15  Peak             0.00
6   17793.090   11.38      43.56         52.56         50.34    52.72    74.00     -21.28  Peak             0.00
```

BLE_2M_TX_CH_39_Horizontal-Avg



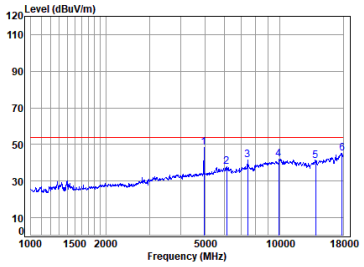

```
Site     : chamber
Condition: 3m HORIZONTAL
Job No   : 01657ME
Mode     : 2480 TX RSE
         : BLE
          Freq  Cable Loss  Ant Factor  Preamp Factor  Read Level  Level  Limit Line  Over Limit  Remark  Aux Factor
           MHz      dB        dB/m          dB          dBuV     dBuV/m   dBuV/m       dB                    dB
1 q  4960.000    7.53      34.06         54.12         61.74    49.21    54.00      -4.79  Average          0.00
2    6737.207    8.73      35.30         53.22         46.53    37.34    54.00     -16.66  Average          0.00
3    7440.000    8.43      36.30         53.47         52.93    44.19    54.00      -9.81  Average          0.00
4    9920.000   10.64      37.68         52.96         50.94    46.30    54.00      -7.70  Average          0.00
5   13957.530   10.97      39.53         53.90         44.90    41.50    54.00     -12.50  Average          0.00
6   17690.530   11.32      44.21         52.59         42.87    45.81    54.00      -8.19  Average          0.00
```

BLE_2M_TX_CH_39_Vertical-Peak




```
Site     : chamber
Condition: 3m VERTICAL
Job No   : 01657ME
Mode     : 2480 TX RSE
         : BLE
          Freq  Cable Loss  Ant Factor  Preamp Factor  Read Level  Level  Limit Line  Over Limit  Remark  Aux Factor
           MHz      dB        dB/m          dB          dBuV     dBuV/m   dBuV/m       dB                    dB
1    4960.000    7.53      34.06         54.12         63.77    51.24    74.00     -22.76  Peak             0.00
2    5583.251    8.29      35.00         53.62         56.46    46.13    74.00     -27.87  Peak             0.00
3    7440.000    8.43      36.30         53.47         56.24    47.50    74.00     -26.50  Peak             0.00
4    9920.000   10.64      37.68         52.96         53.69    49.05    74.00     -24.95  Peak             0.00
5   13957.530   10.97      39.53         53.90         51.54    48.14    74.00     -25.86  Peak             0.00
6 p 17690.530   11.32      44.21         52.59         51.45    54.39    74.00     -19.61  Peak             0.00
```

BLE_2M_TX_CH_39_Vertical-Avg




```
Site     : chamber
Condition: 3m VERTICAL
Job No   : 01657ME
Mode     : 2480 TX RSE
         : BLE
          Freq  Cable Loss  Ant Factor  Preamp Factor  Read Level  Level  Limit Line  Over Limit  Remark  Aux Factor
           MHz      dB        dB/m          dB          dBuV     dBuV/m   dBuV/m       dB                    dB
1 q  4960.000    7.53      34.06         54.12         60.76    48.23    54.00      -5.77  Average          0.00
2    6124.292    8.92      35.80         53.29         46.43    37.86    54.00     -16.14  Average          0.00
3    7440.000    8.43      36.30         53.47         50.08    41.34    54.00     -12.66  Average          0.00
4    9920.000   10.64      37.68         52.96         46.72    42.08    54.00     -11.92  Average          0.00
5   13957.530   10.97      39.53         53.90         44.35    40.95    54.00     -13.05  Average          0.00
6   17793.090   11.38      43.56         52.56         42.68    45.06    54.00      -8.94  Average          0.00
```

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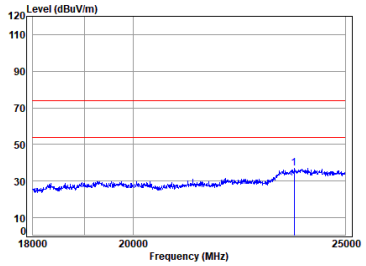
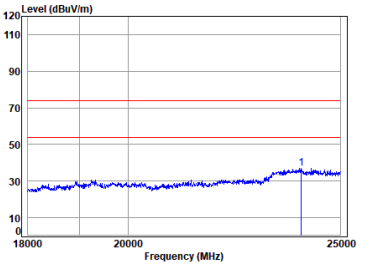
BLE_1M_TX_CH_19_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01657ME
Mode : 2440 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	p23696.550	6.77	38.84	50.34	51.13	36.86	74.00	-37.14	Peak	-9.54

BLE_1M_TX_CH_19_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01657ME
Mode : 2440 TX RSE
: BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	p23994.220	6.78	39.00	50.40	51.31	37.15	74.00	-36.85	Peak	-9.54

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7.4 Maximum Conducted Output Power

Test Requirement 47 CFR Part 15, Subpart C 15.247(b)(3)
Test Method: ANSI C63.10 (2020) Section 11.9.1
Test Engineer: Mingli Hu
Limit:

Frequency range(MHz)	Output power of the intentional radiator(watt)
902-928	1 for ≥50 hopping channels
	0.25 for 25≤ hopping channels <50
	1 for digital modulation
2400-2483.5	1 for ≥75 non-overlapping hopping channels
	0.125 for all other frequency hopping systems
	1 for digital modulation
5725-5850	1 for frequency hopping systems and digital modulation

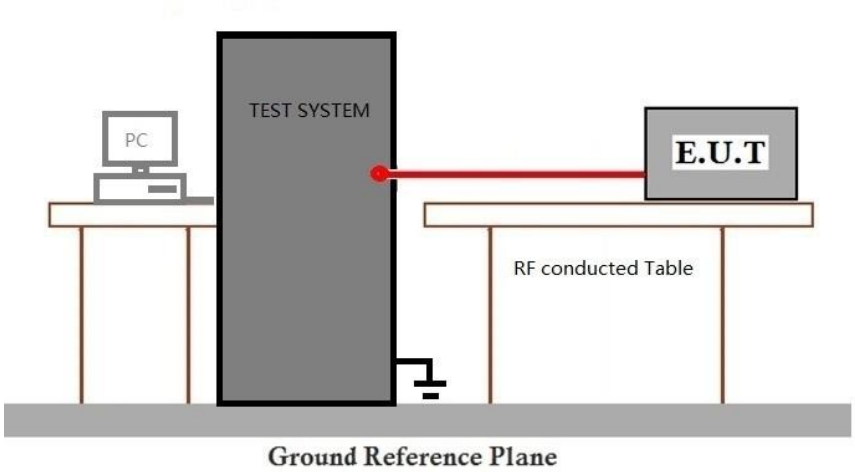
7.4.1 E.U.T. Operation

Operating Environment:
Temperature: 21.3 °C Humidity: 50.5 % RH Atmospheric Pressure: 1015 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode_Keep the EUT in continuously transmitting mode with GFSK modulation.

7.4.3 Test Setup Diagram



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7.4.4 Measurement Procedure and Data

Note: Since the verify power the same operating range bandwidth and smaller power can be covered by the higher power.

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7.5 Minimum 6dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.247a(2)
Test Method: ANSI C63.10 (2020) Section 11.8.1
Test Engineer: Mingli Hu
Limit: ≥500 kHz

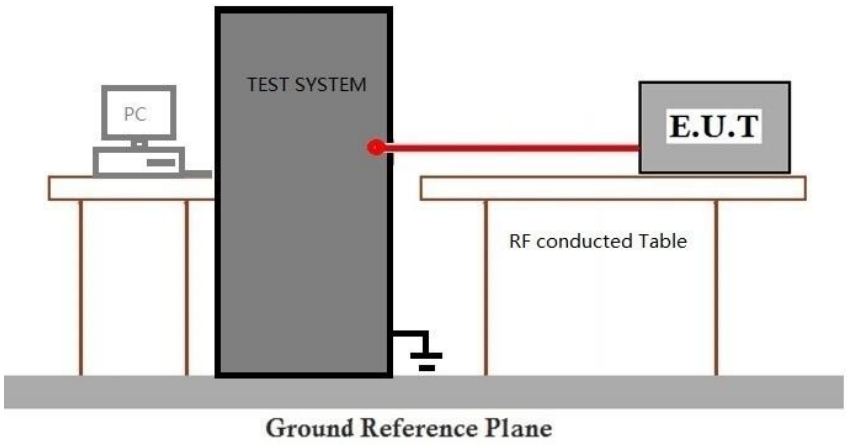
7.5.1 E.U.T. Operation

Operating Environment:
Temperature: 21.3 °C Humidity: 50.5 % RH Atmospheric Pressure: 1015 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode_Keep the EUT in continuously transmitting mode with GFSK modulation.

7.5.3 Test Setup Diagram



7.5.4 Measurement Procedure and Data

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7.6 Power Spectral Density

Test Requirement	47 CFR Part 15, Subpart C 15.247(e)
Test Method:	ANSI C63.10 (2020) Section 11.10.3
Test Engineer:	Mingli Hu
Limit:	≤8dBm in any 3 kHz band during any time interval of continuous transmission

7.6.1 E.U.T. Operation

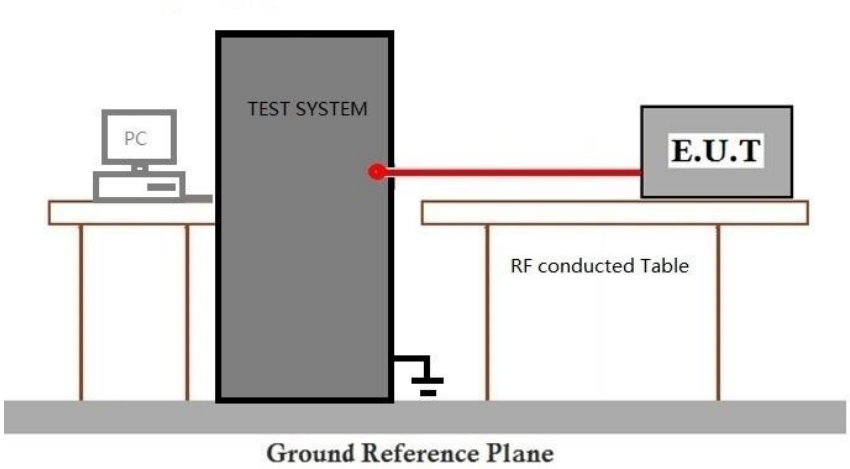
Operating Environment:

Temperature: 21.3 °C Humidity: 50.5 % RH Atmospheric Pressure: 1015 mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode_Keep the EUT in continuously transmitting mode with GFSK modulation.

7.6.3 Test Setup Diagram



7.6.4 Measurement Procedure and Data

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7.7 Conducted Band Edges Measurement

Test Requirement 47 CFR Part 15, Subpart C 15.247(d)
Test Method: ANSI C63.10 (2020) Section 6.10.4
Test Engineer: Mingli Hu
Limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c).

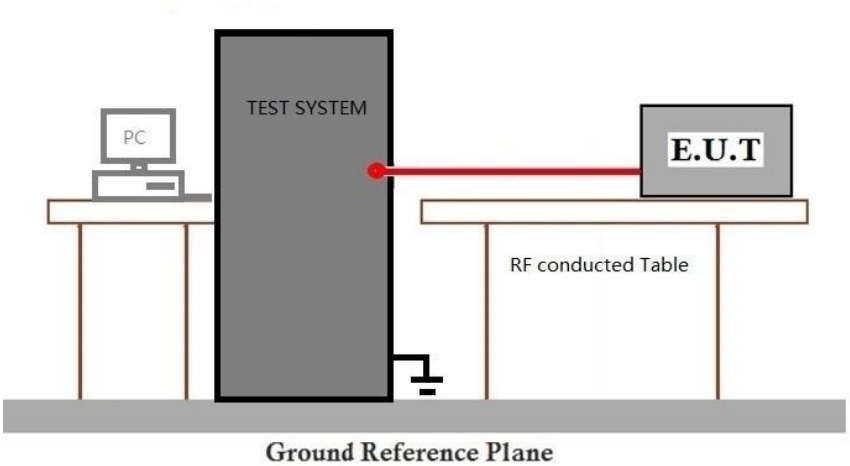
7.7.1 E.U.T. Operation

Operating Environment:
Temperature: 21.3 °C Humidity: 50.5 % RH Atmospheric Pressure: 1015 mbar

7.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode_Keep the EUT in continuously transmitting mode with GFSK modulation.

7.7.3 Test Setup Diagram



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7.7.4 Measurement Procedure and Data

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7.8 Conducted Spurious Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.247(d)
Test Method: ANSI C63.10 (2020) Section 11.11
Test Engineer: Mingli Hu
Limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c).

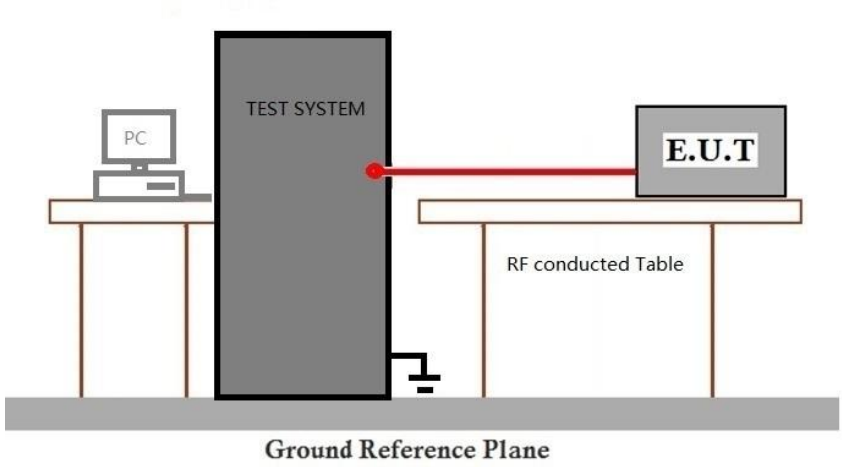
7.8.1 E.U.T. Operation

Operating Environment:
Temperature: 21.3 °C Humidity: 50.5 % RH Atmospheric Pressure: 1015 mbar

7.8.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode_Keep the EUT in continuously transmitting mode with GFSK modulation.

7.8.3 Test Setup Diagram



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7.8.4 Measurement Procedure and Data

Please Refer to Appendix for Details

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8 Test Setup Photo

Refer to Appendix - Test Setup Photo for SZCR2604001657ME

9 EUT Constructional Details (EUT Photos)

Refer to Appendix_Photographs of EUT Constructional Details for SZCR2604001657ME

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10 Appendix

1. Duty Cycle

1.1 Test Result

1.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
1M	SISO	2402	2.189	2.272	96.35	0.16	0.07
		2440	2.190	2.273	96.35	0.16	0.10
		2480	2.190	2.272	96.39	0.16	0.07
2M	SISO	2402	1.119	1.201	93.17	0.31	0.10
		2440	1.119	1.202	93.09	0.31	0.06
		2480	1.119	1.201	93.17	0.31	0.10

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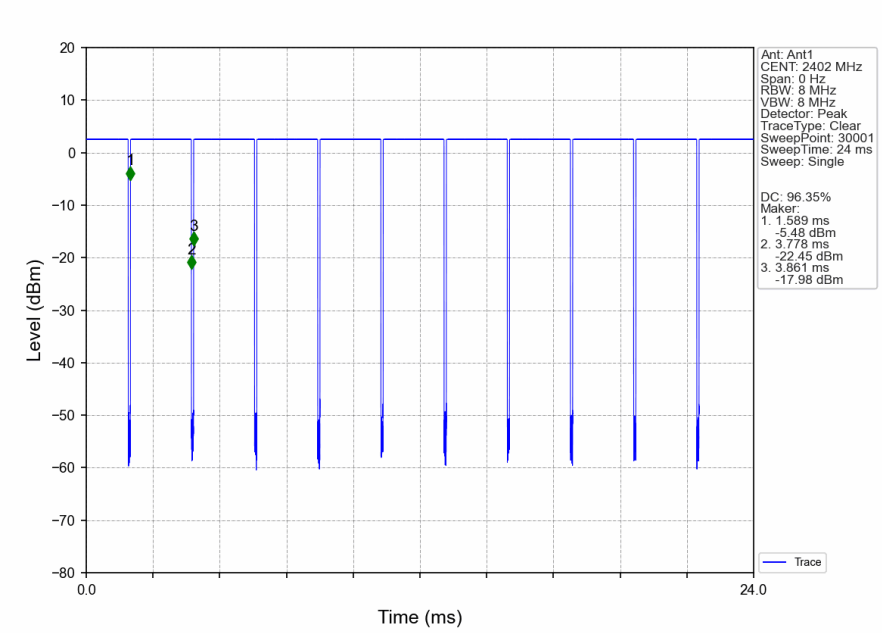
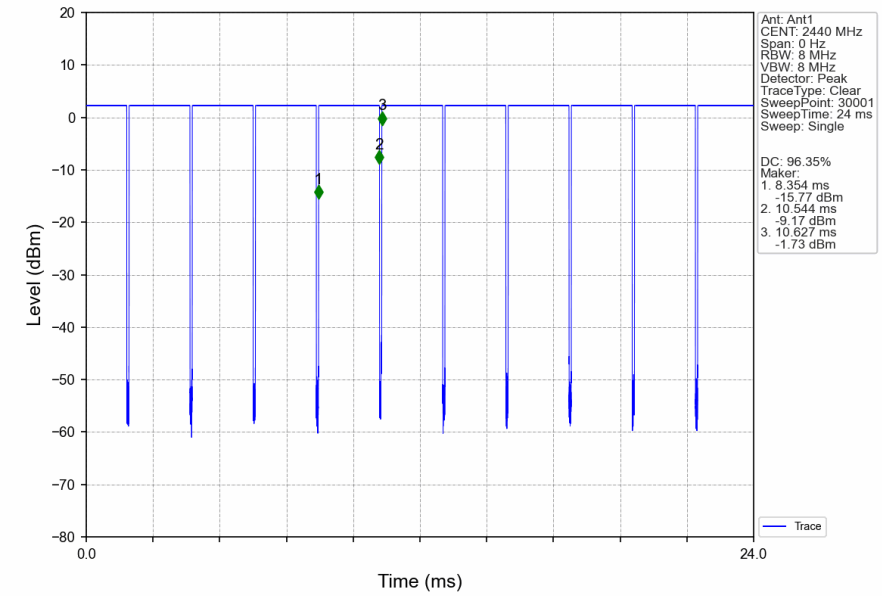
1.2 Test Graph

1.2.1 Ant1

1M_LCH_2402MHz_Ant1_NTNV

1M_MCH_2440MHz_Ant1_NTNV


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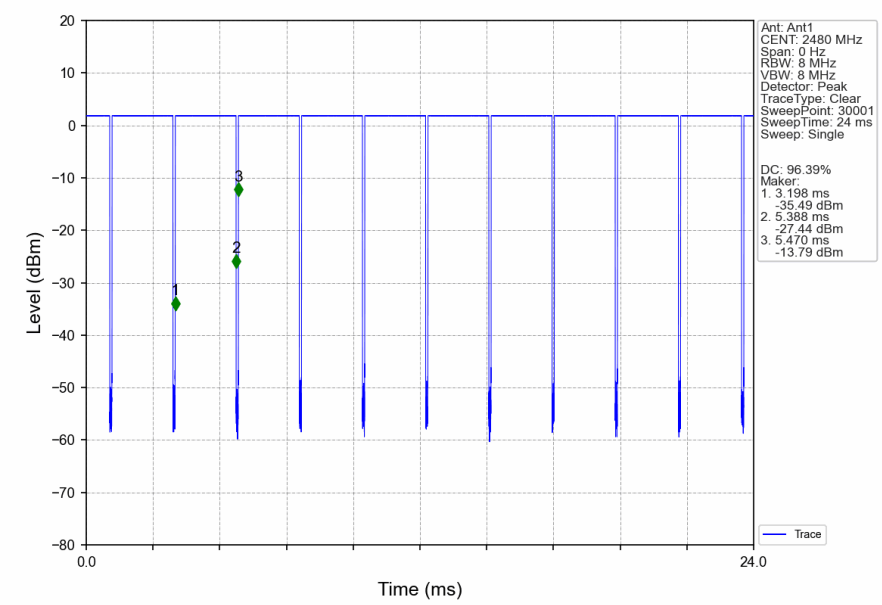
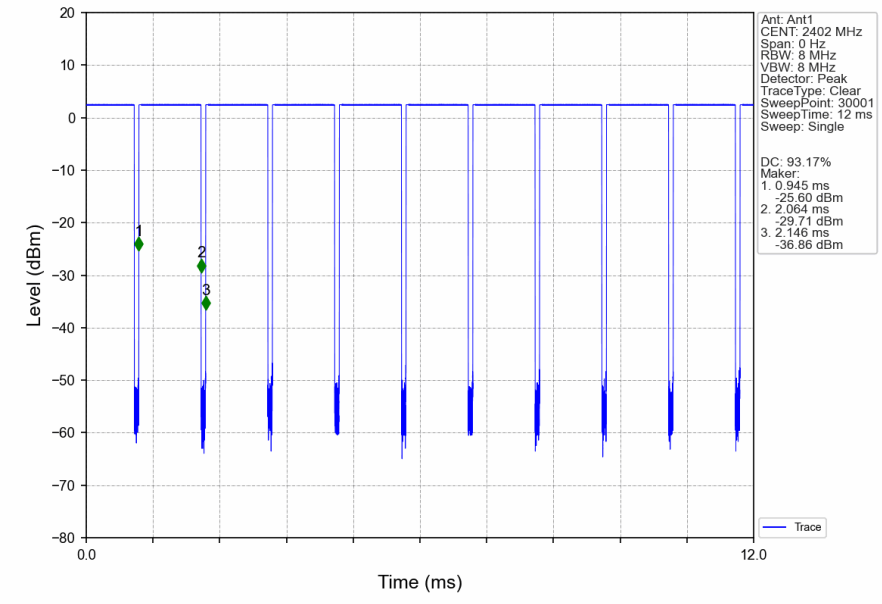
1M_HCH_2480MHz_Ant1_NTNV



2M_LCH_2402MHz_Ant1_NTNV



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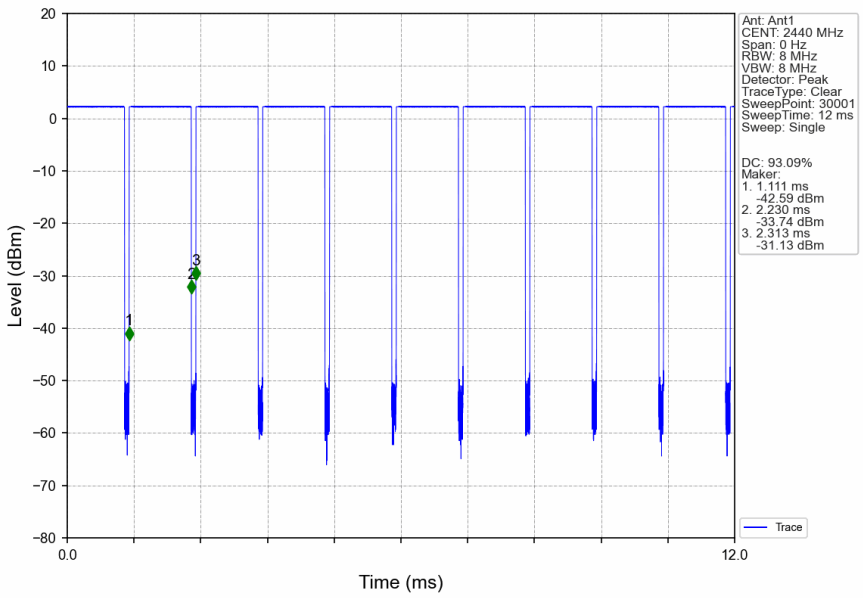
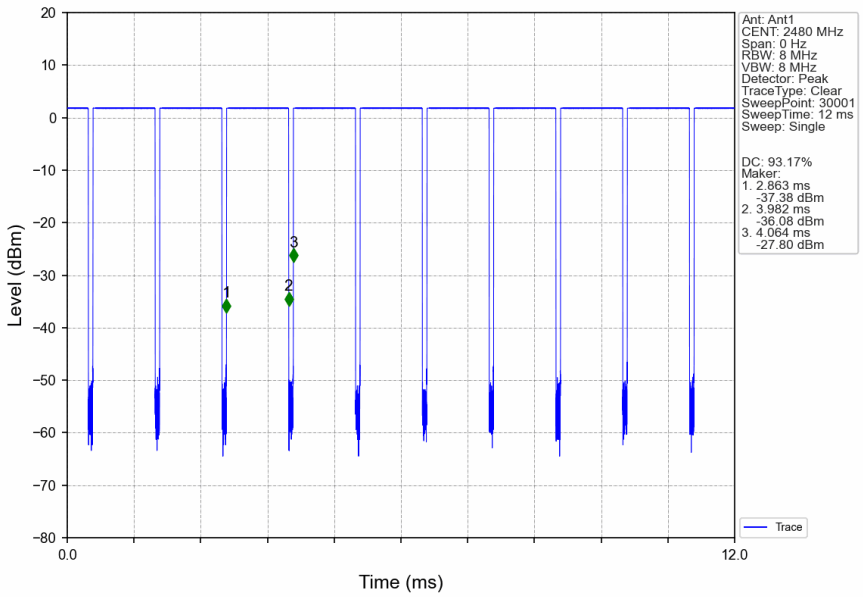
2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



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2. Bandwidth

2.1 Test Result

2.1.1 OBW(Report only)

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	1.017	/	Pass
		2440	1	1.013	/	Pass
		2480	1	1.013	/	Pass
2M	SISO	2402	1	2.011	/	Pass
		2440	1	2.015	/	Pass
		2480	1	2.016	/	Pass

2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	0.691	>=0.5	Pass
		2440	1	0.691	>=0.5	Pass
		2480	1	0.690	>=0.5	Pass
2M	SISO	2402	1	1.197	>=0.5	Pass
		2440	1	1.194	>=0.5	Pass
		2480	1	1.199	>=0.5	Pass

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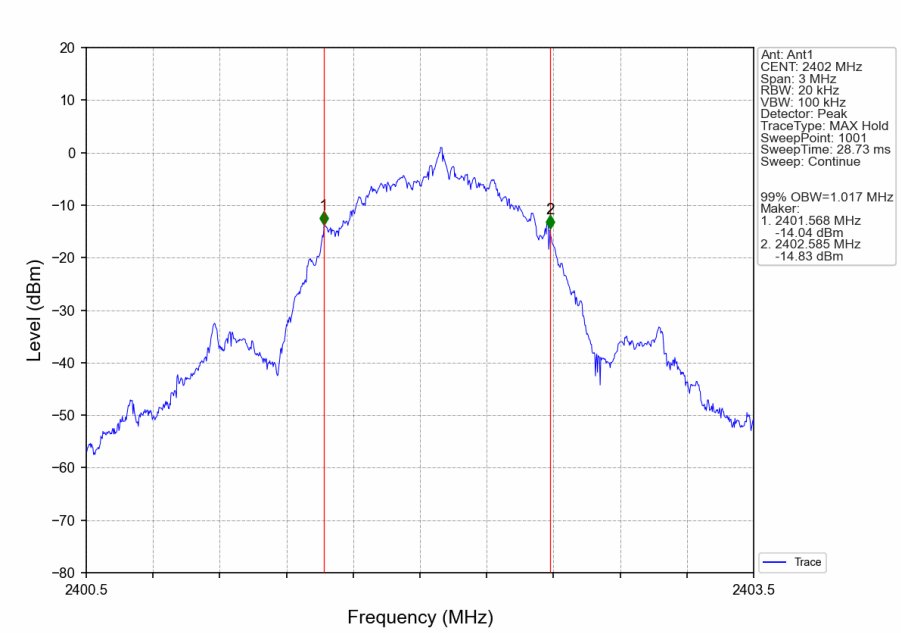
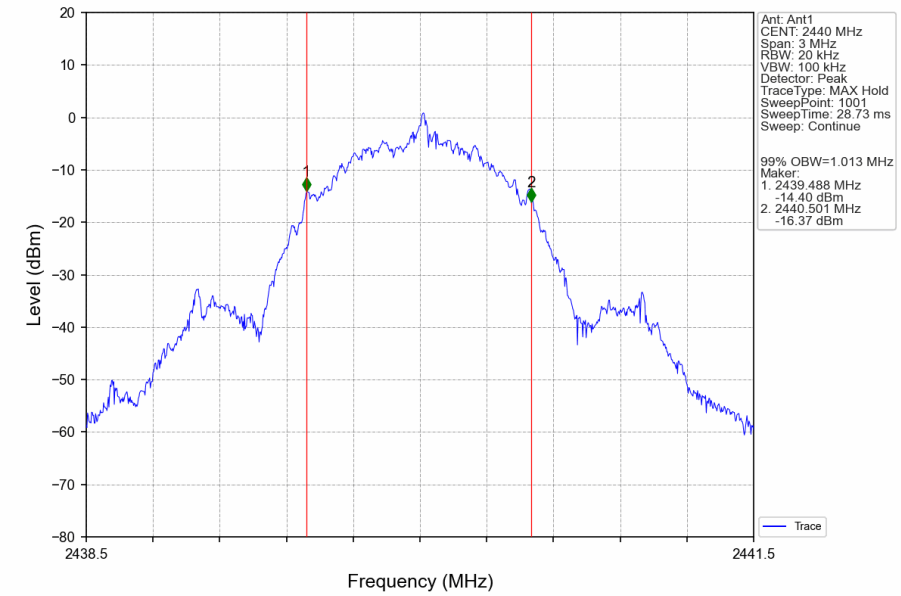
2.2 Test Graph

2.2.1 OBW

1M_LCH_2402MHz_Ant1_NTNV



1M_MCH_2440MHz_Ant1_NTNV



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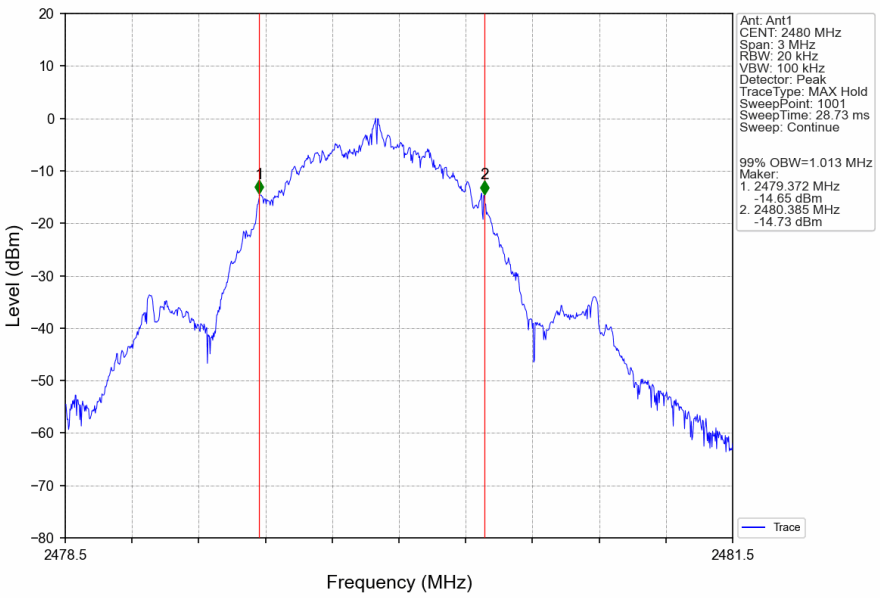
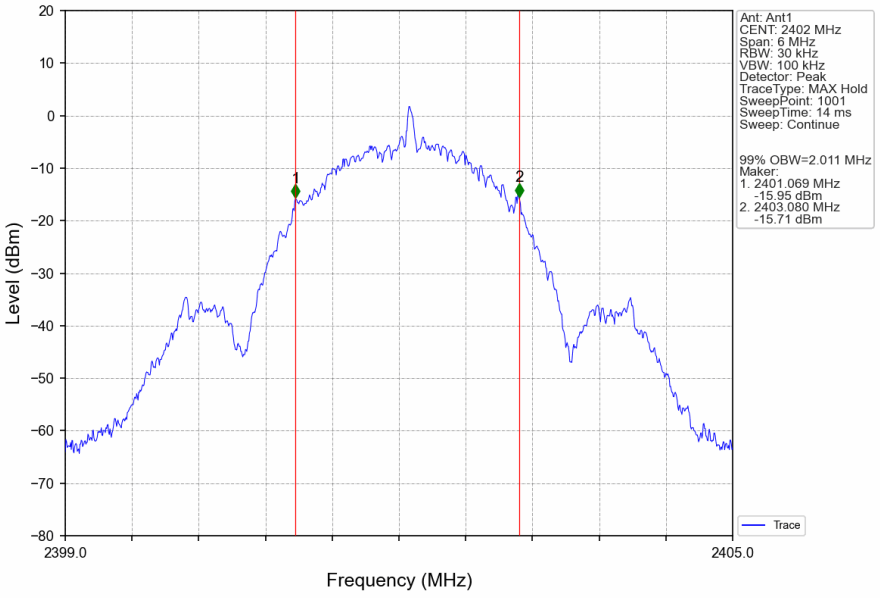
1M_HCH_2480MHz_Ant1_NTNV



2M_LCH_2402MHz_Ant1_NTNV



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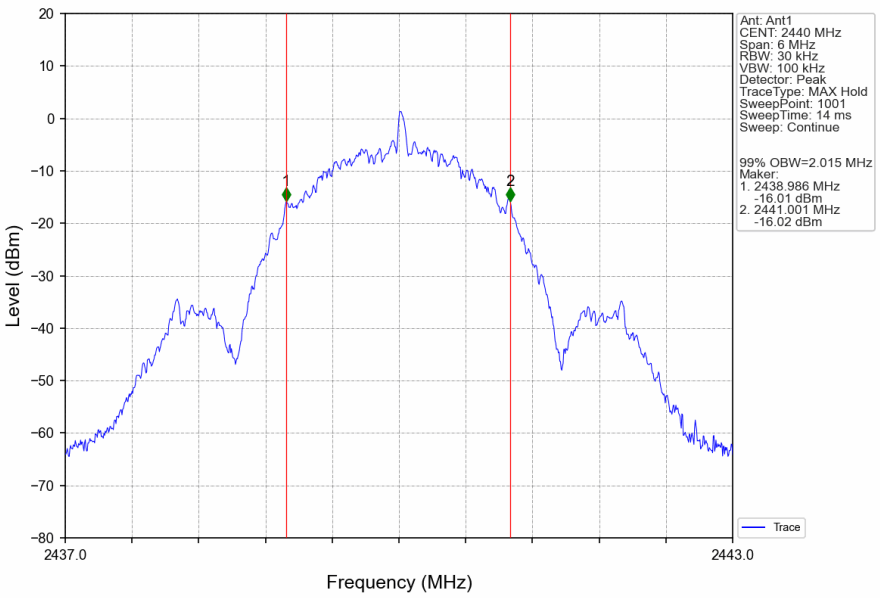
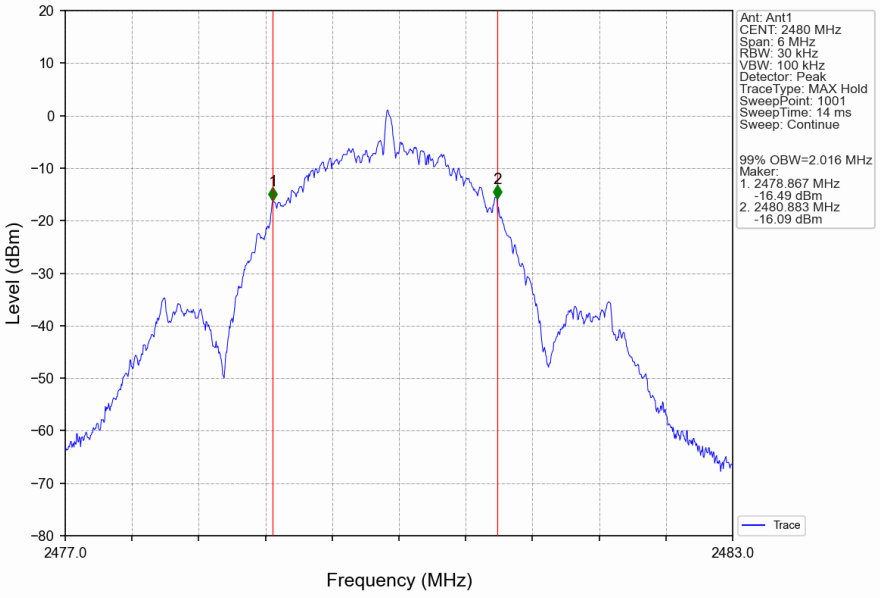


2M_HCH_2480MHz_Ant1_NTNV



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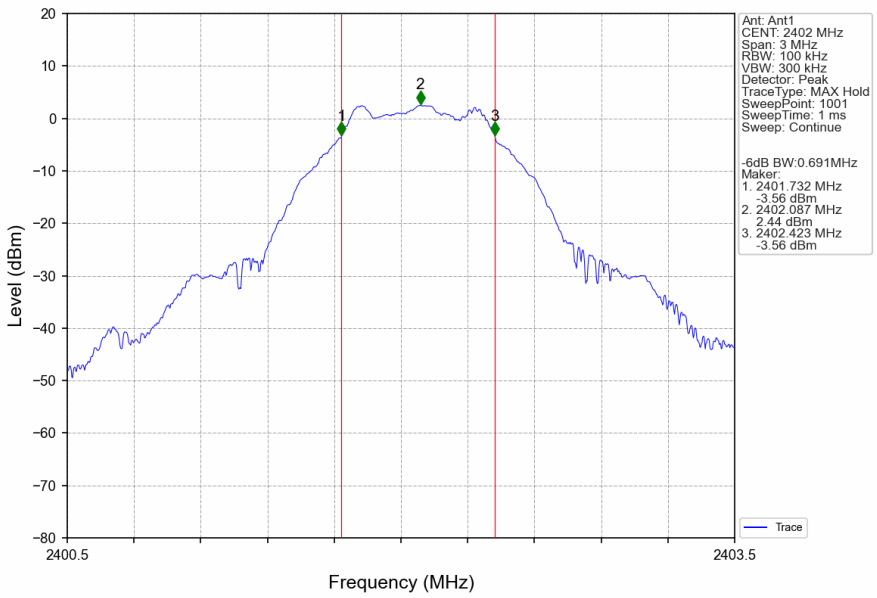
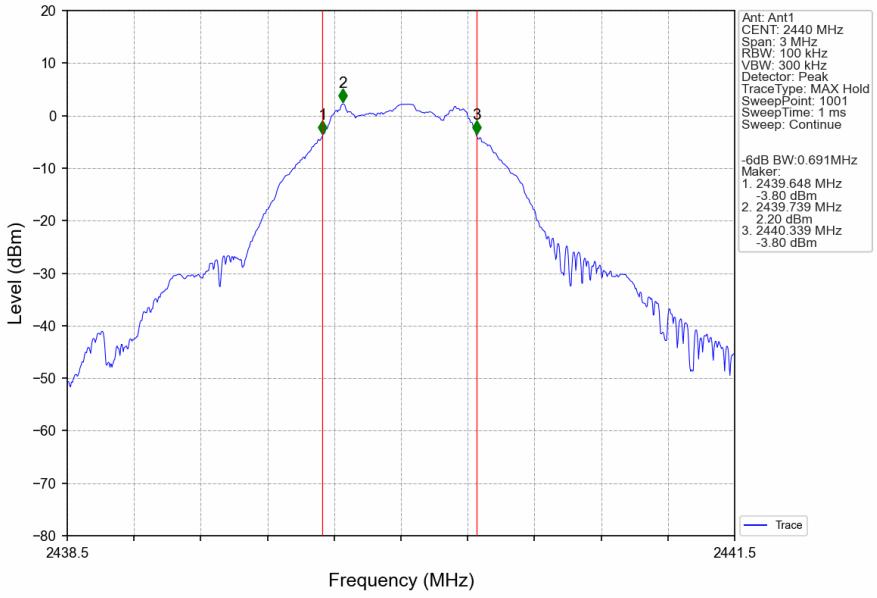
2.2.2 6dB BW

1M_LCH_2402MHz_Ant1_NTNV



1M_MCH_2440MHz_Ant1_NTNV



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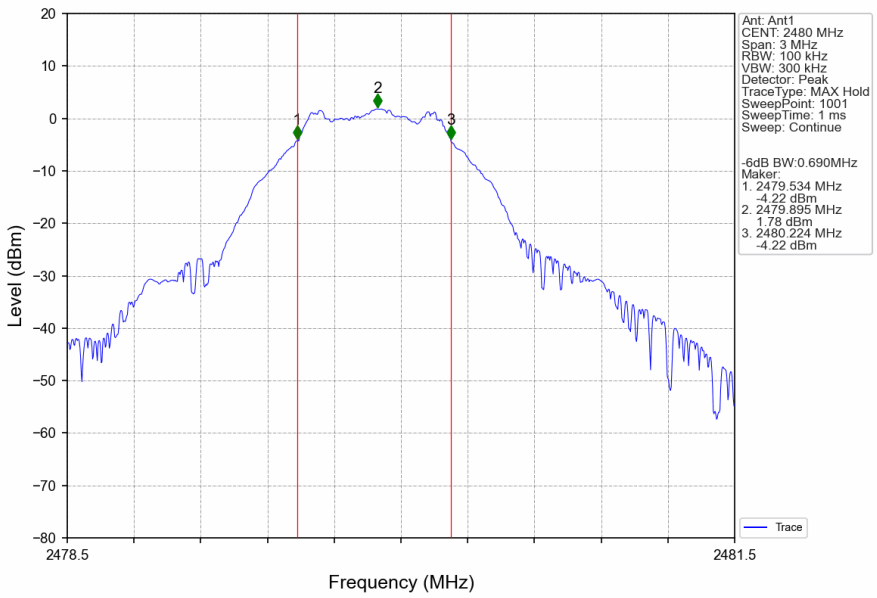
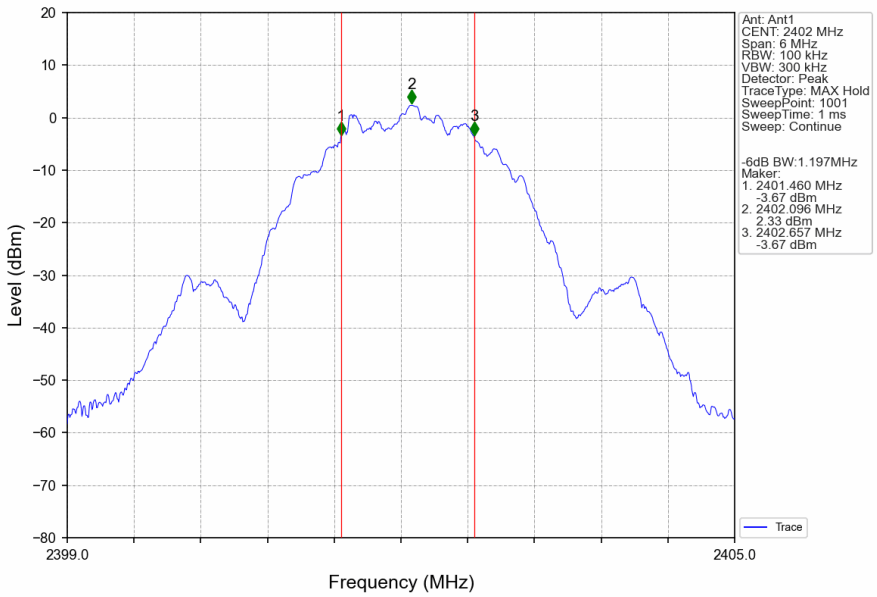
1M_HCH_2480MHz_Ant1_NTNV



2M_LCH_2402MHz_Ant1_NTNV



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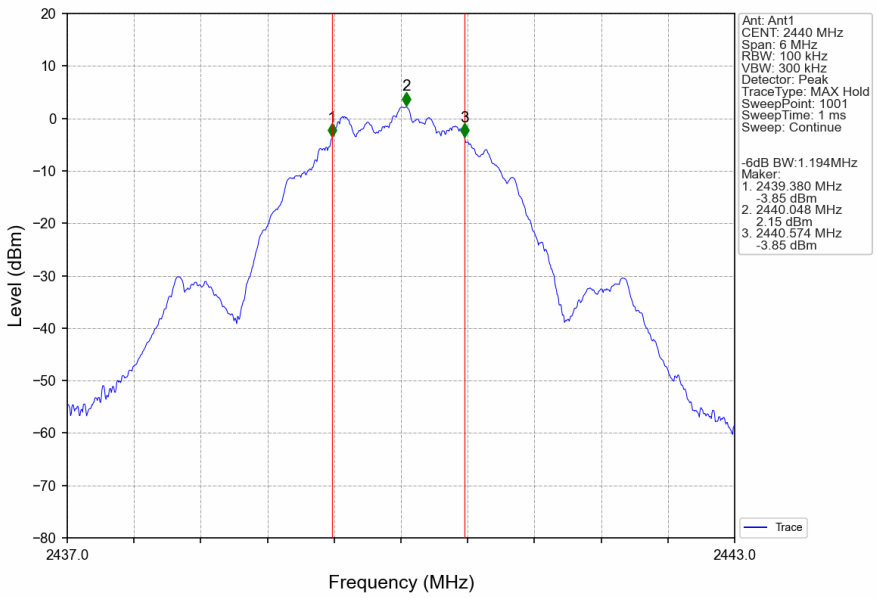
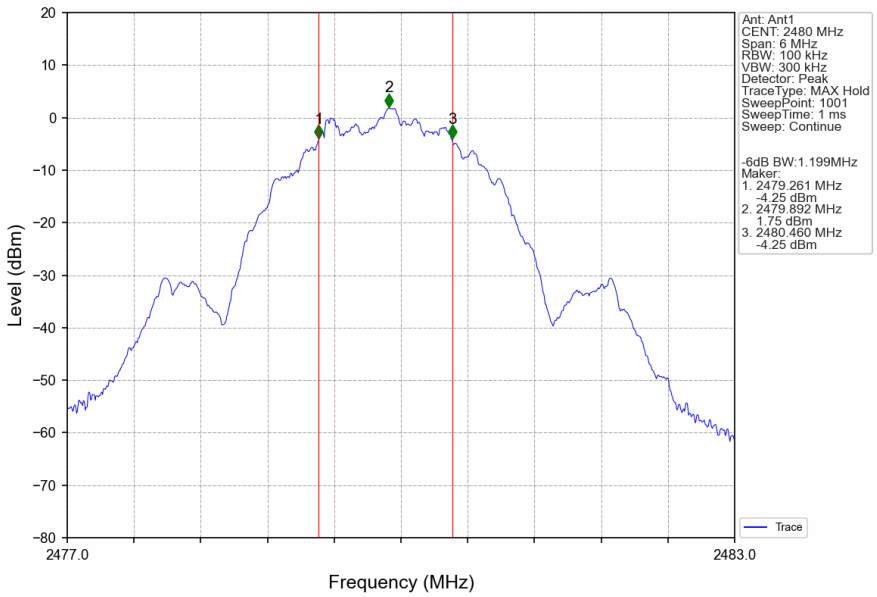
2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



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3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	2.51	<=30	Pass
		2440	2.27	<=30	Pass
		2480	1.87	<=30	Pass
2M	SISO	2402	2.45	<=30	Pass
		2440	2.22	<=30	Pass
		2480	1.82	<=30	Pass

4. Maximum Power Spectral Density

4.1 Test Result

4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit(dBm/3kHz)	
1M	SISO	2402	-10.21dBm/3kHz	<=8	Pass
		2440	-10.48dBm/3kHz	<=8	Pass
		2480	-11.10dBm/3kHz	<=8	Pass
2M	SISO	2402	-10.37dBm/3kHz	<=8	Pass
		2440	-10.51dBm/3kHz	<=8	Pass
		2480	-11.62dBm/3kHz	<=8	Pass

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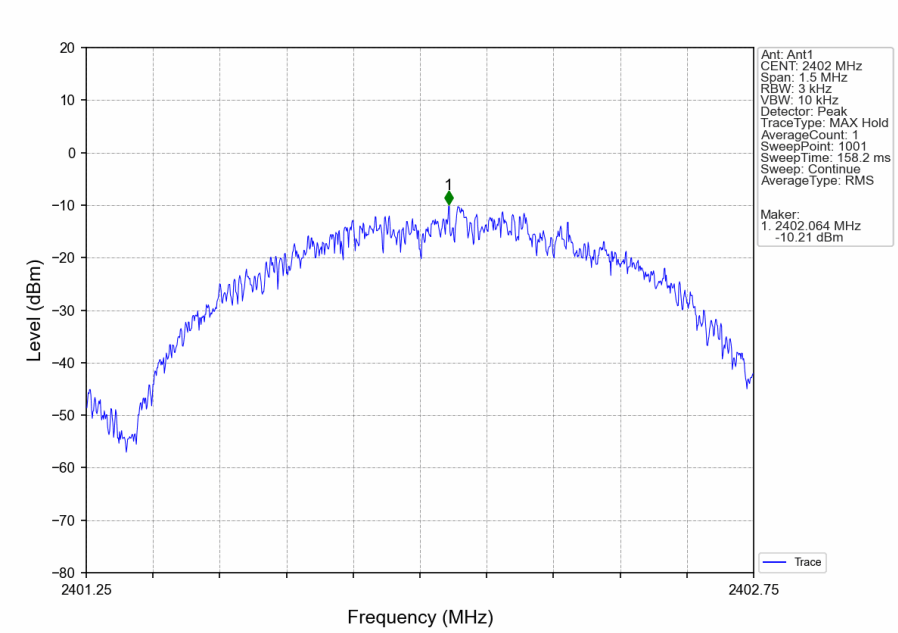
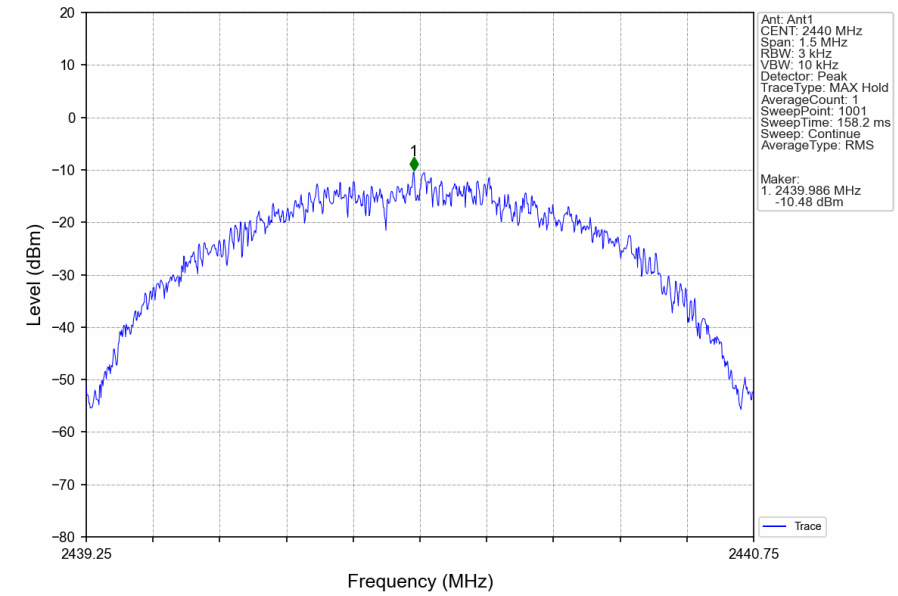
4.2 Test Graph

4.2.1 PSD

1M_LCH_2402MHz_Ant1_NTNV



1M_MCH_2440MHz_Ant1_NTNV



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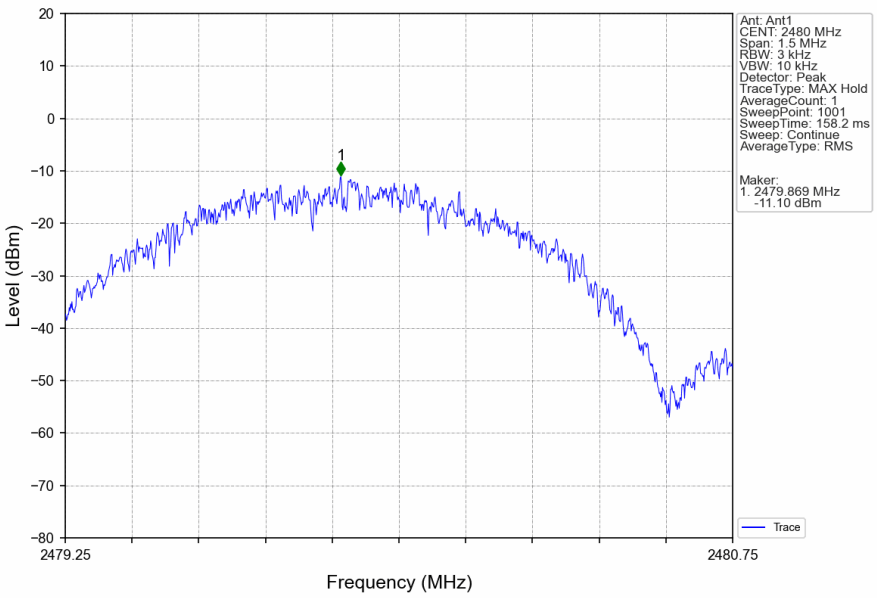
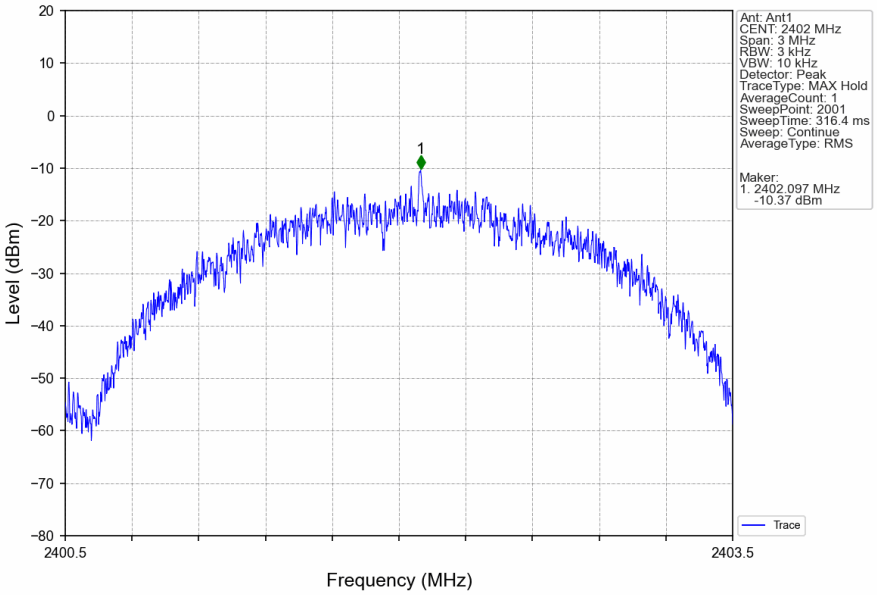
1M_HCH_2480MHz_Ant1_NTNV



2M_LCH_2402MHz_Ant1_NTNV



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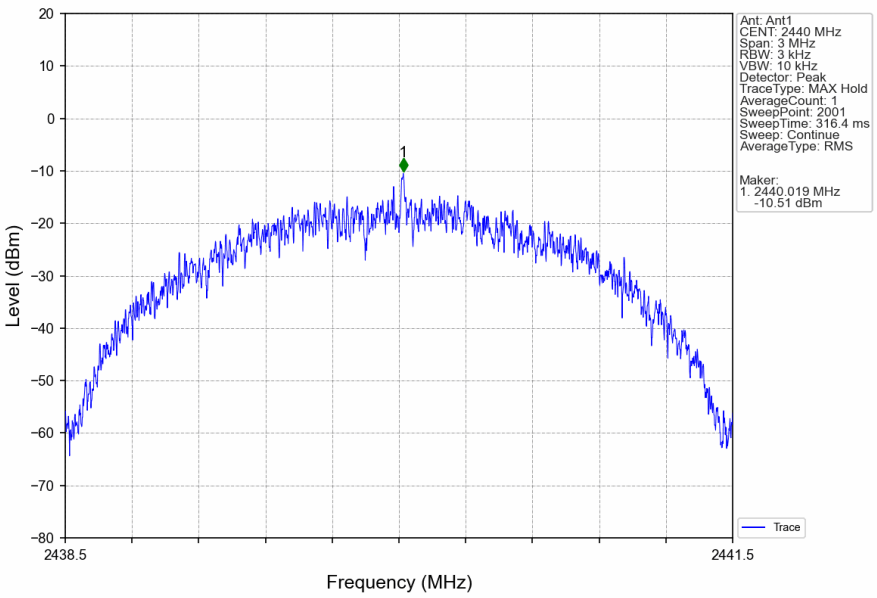
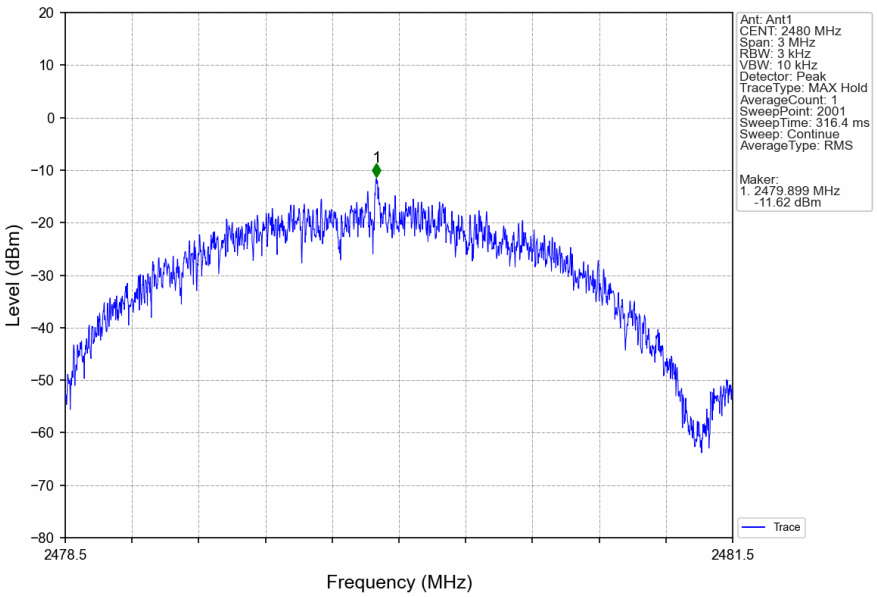
2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



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5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
1M	SISO	2402	1	2.43
		2440	1	2.20
		2480	1	1.80
2M	SISO	2402	1	2.38
		2440	1	2.14
		2480	1	1.74

5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
1M	SISO	2402	1	2.43	-17.57	Pass
		2440	1	2.43	-17.57	Pass
		2480	1	2.43	-17.57	Pass
2M	SISO	2402	1	2.38	-17.62	Pass
		2440	1	2.38	-17.62	Pass
		2480	1	2.38	-17.62	Pass

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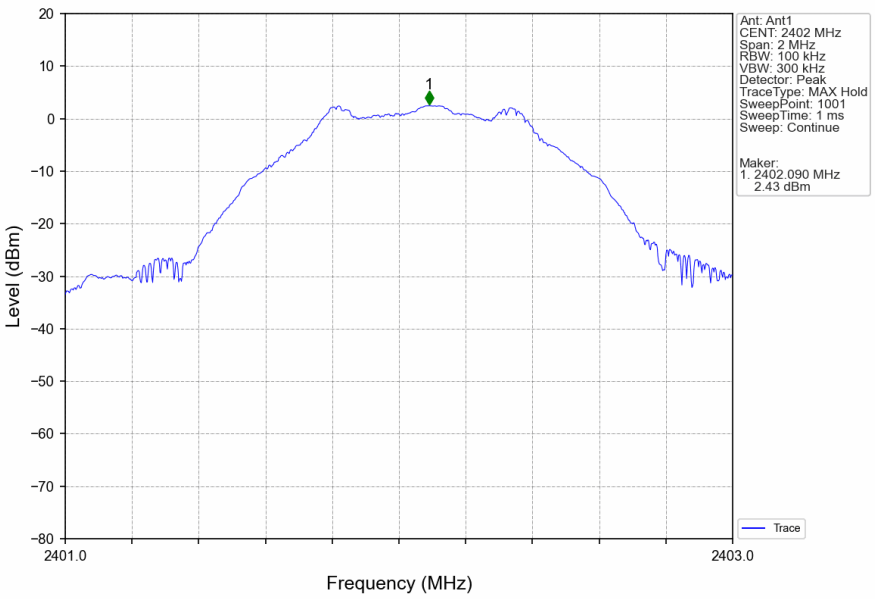
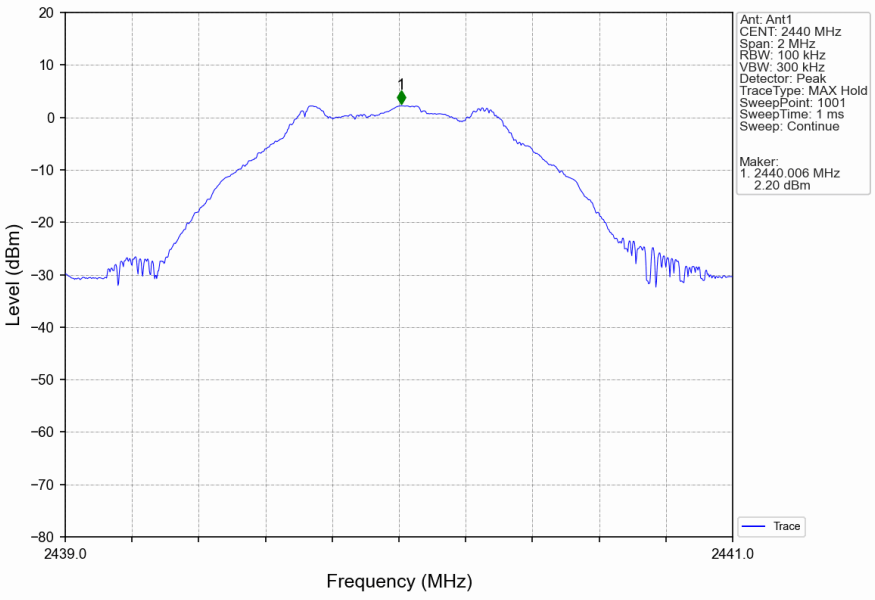
5.2 Test Graph

5.2.1 Ref

1M_LCH_2402MHz_Ant1_NTNV



1M_MCH_2440MHz_Ant1_NTNV



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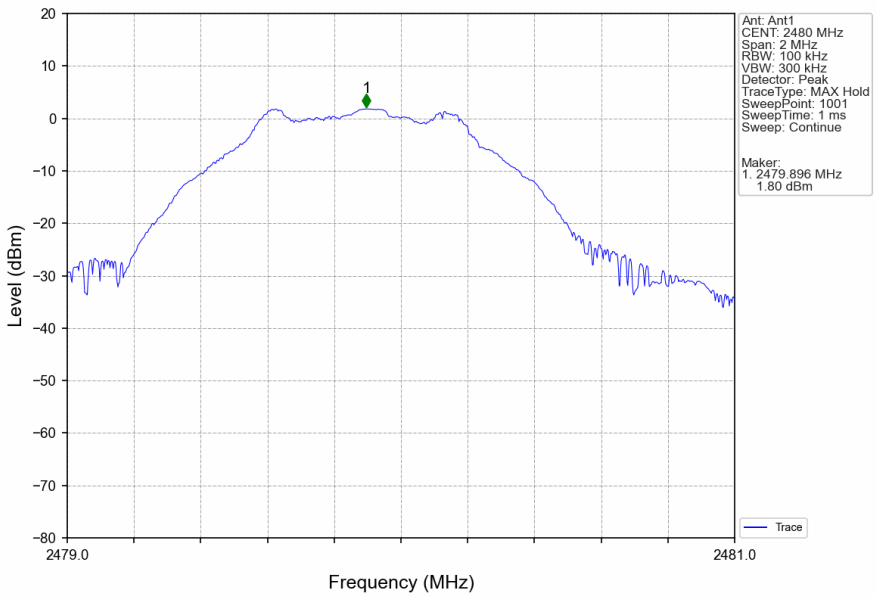
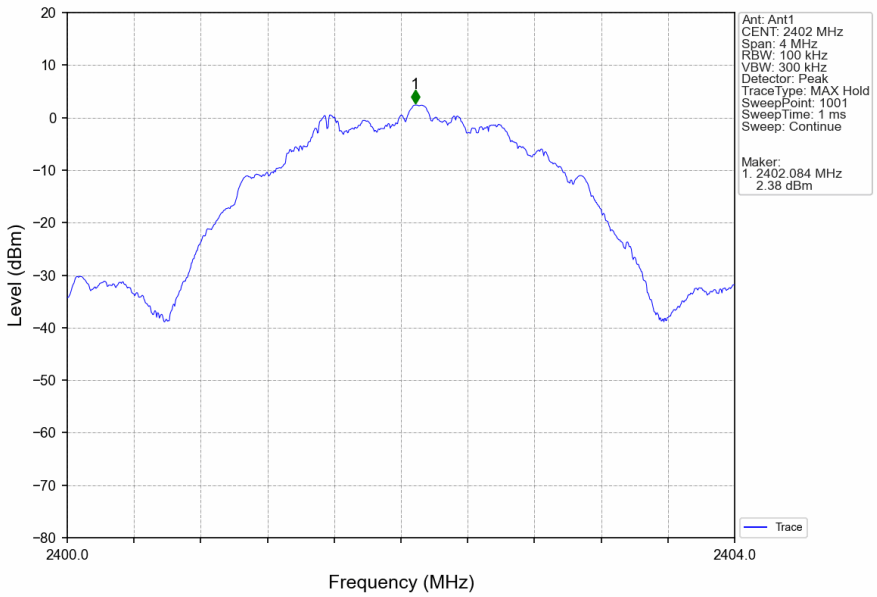
1M_HCH_2480MHz_Ant1_NTNV



2M_LCH_2402MHz_Ant1_NTNV



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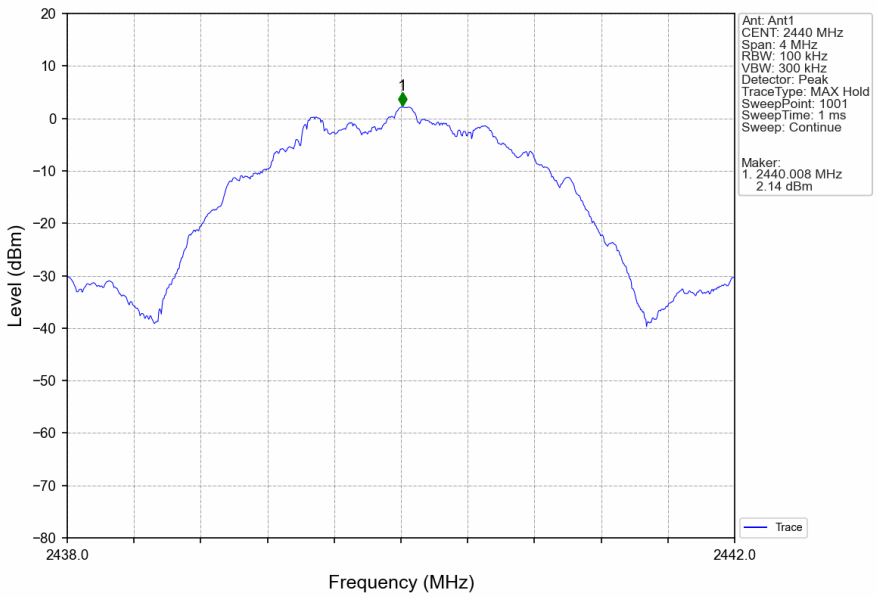
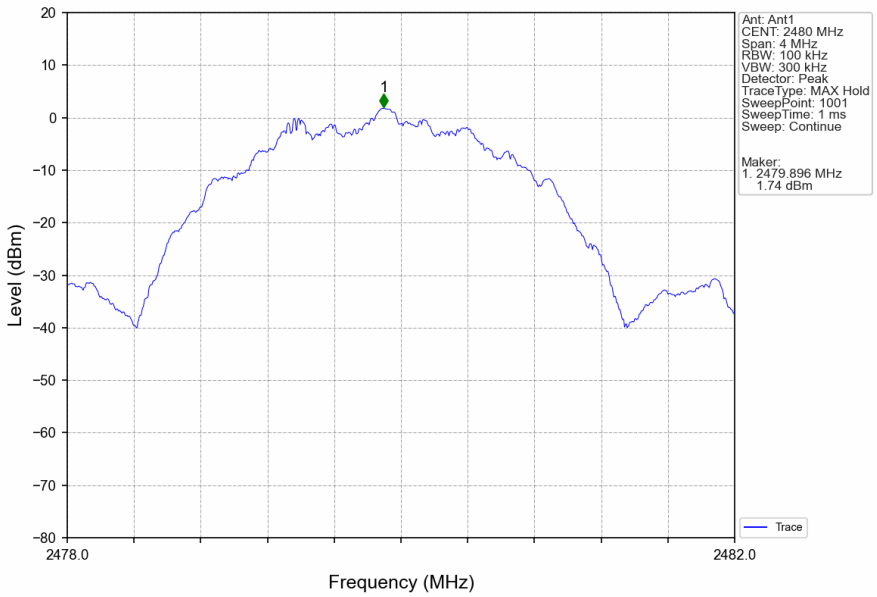
2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



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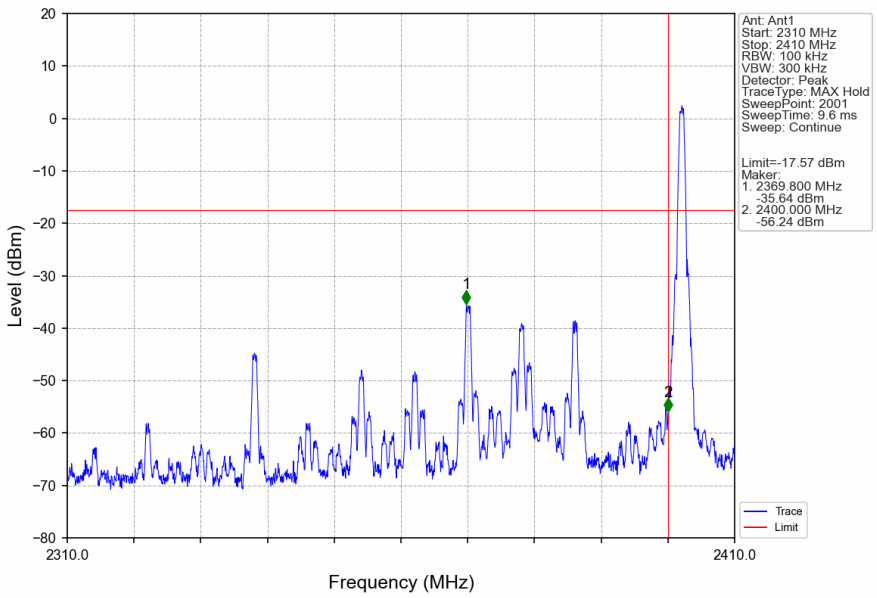
5.2.2 CSE

1M_LCH_2402MHz_Ant1_NTNV



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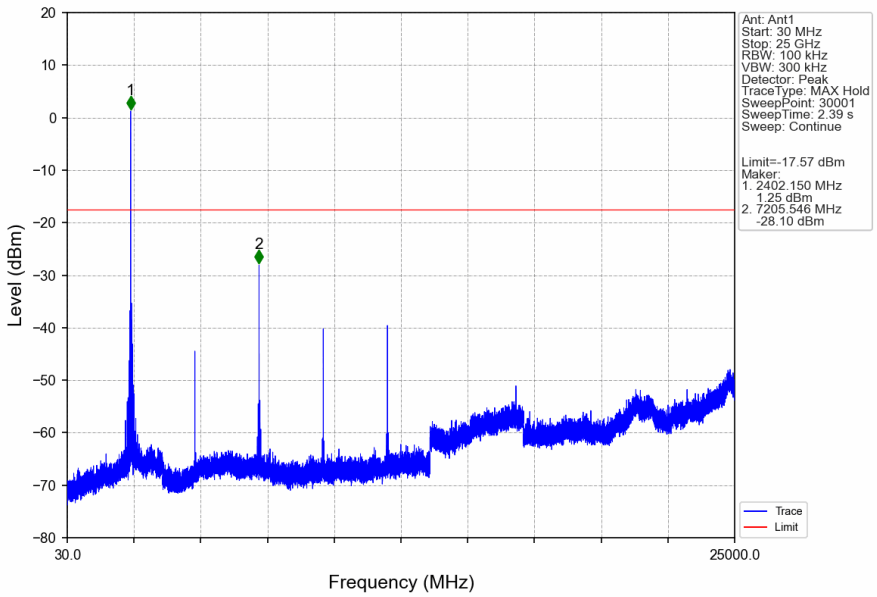

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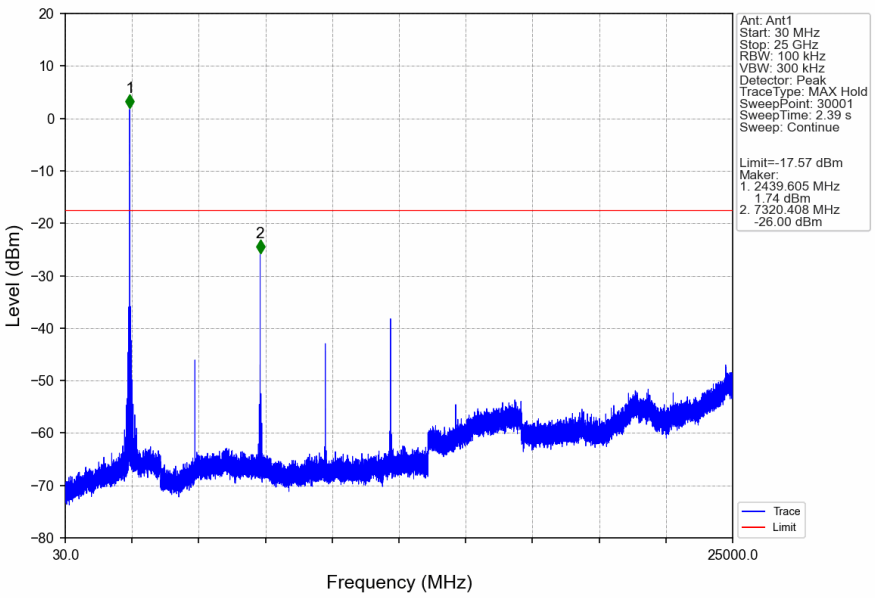
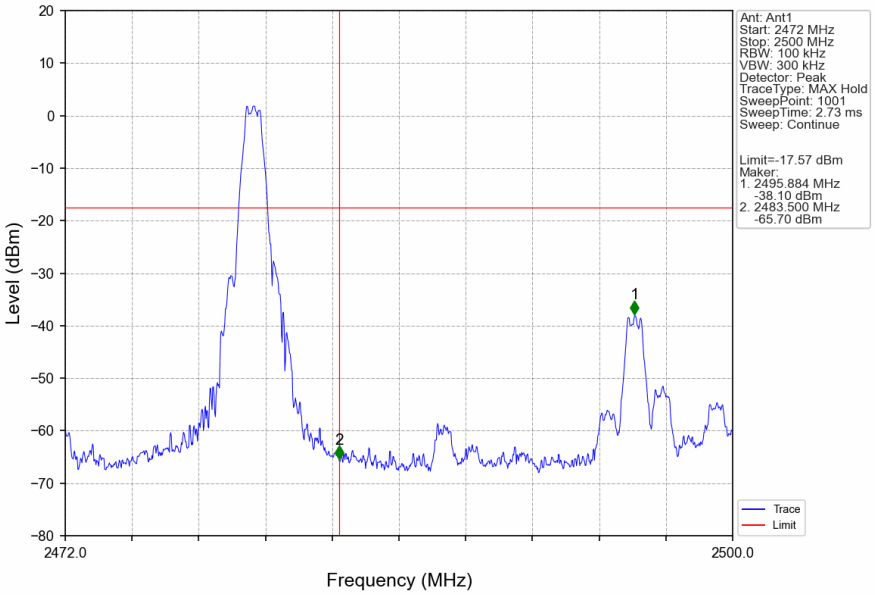
1M_MCH_2440MHz_Ant1_NTNV



1M_HCH_2480MHz_Ant1_NTNV



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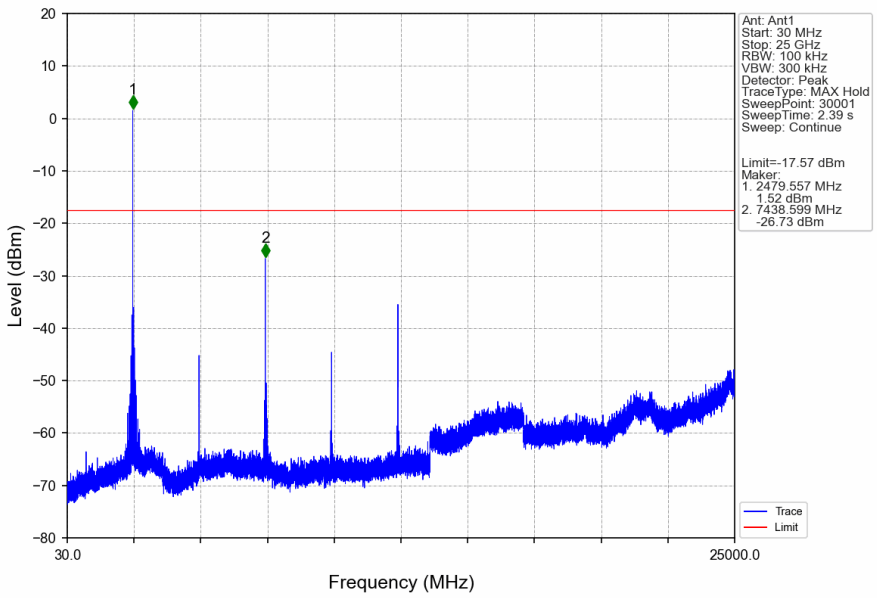
1M_HCH_2480MHz_Ant1_NTNV



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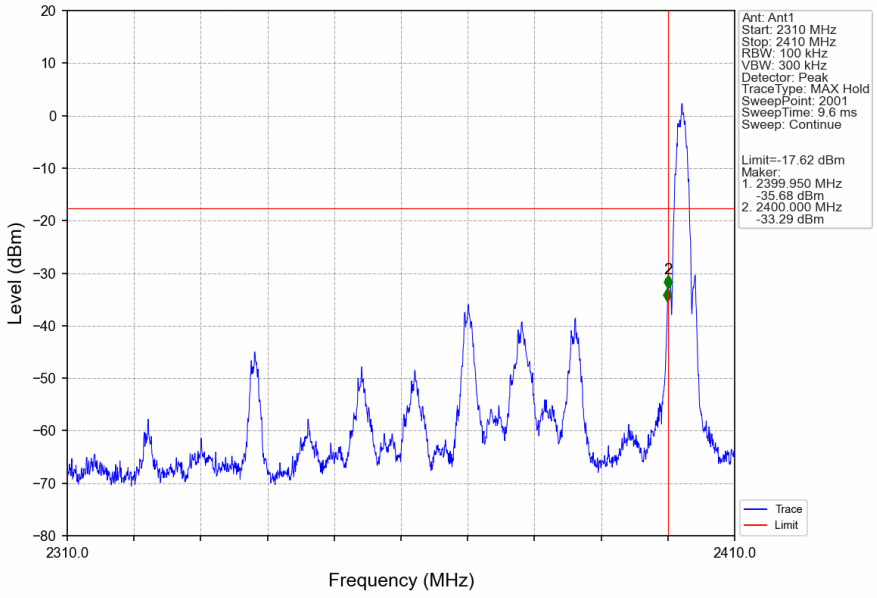

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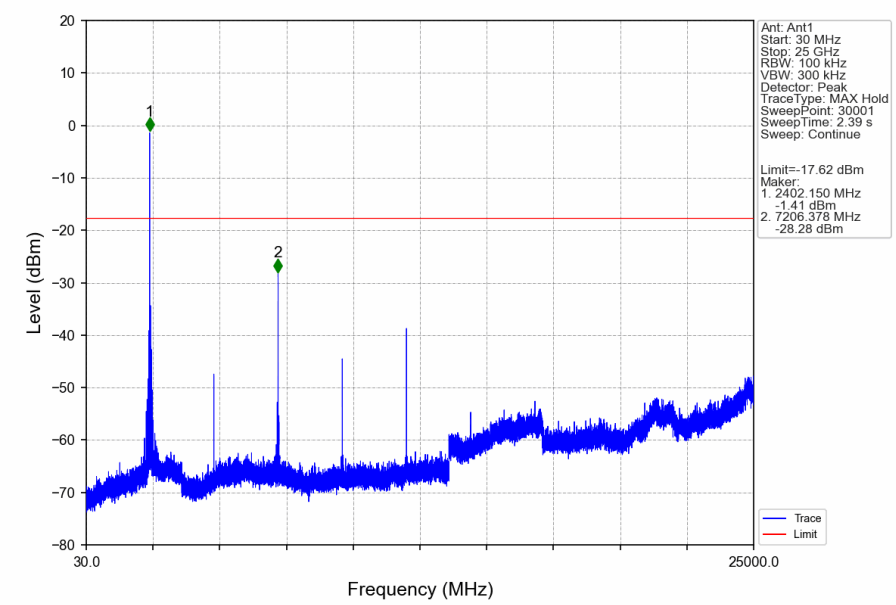
2M_LCH_2402MHz_Ant1_NTNV



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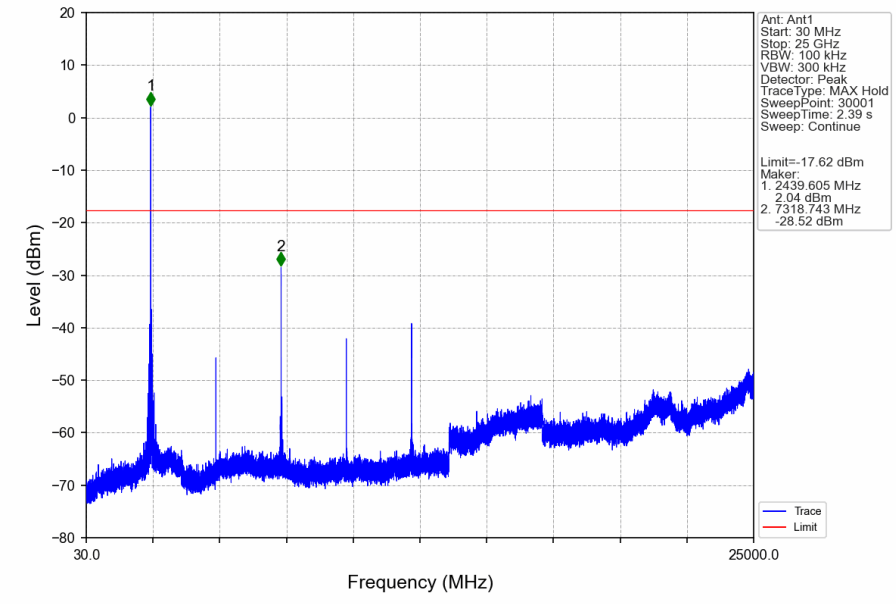

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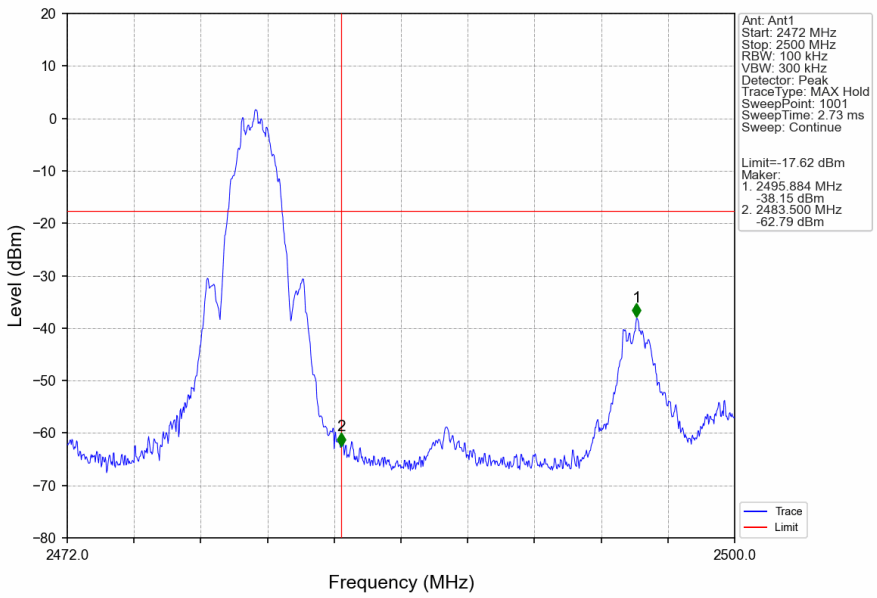
2M_HCH_2480MHz_Ant1_NTNV



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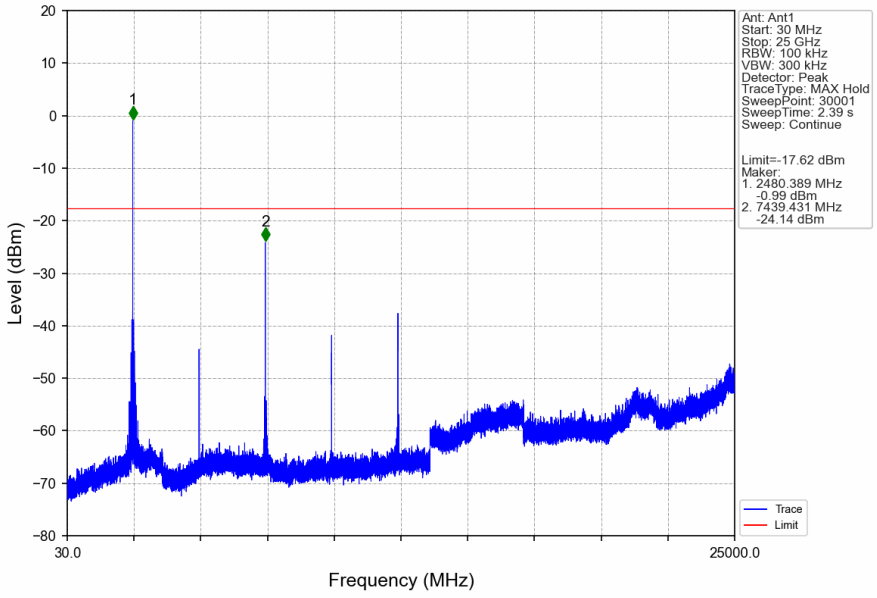

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