



# RF Test Report

For

**Applicant Name:**

**TECHNOSOURCE HK LIMITED**

Address:

2F, Building B, Sulandscape Industrial park, Shiyan Town, Bao'an District, Shenzhen China

EUT Name:

3G Tablet

Brand Name:

ADVANCE

Model Number:

PR6173

## Issued By

**Company Name:**

**BTF Testing Lab (Shenzhen) Co., Ltd.**

Address:

F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

Report Number:

BTF230324R00702

Test Standards:

47 CFR Part 15.247

Test Conclusion:

Pass

FCC ID:

2AV3BPR6173

Test Date:

2023-03-24 to 2023-04-02

Date of Issue:

2023-04-02

Prepared By:

Chris Liu / Project Engineer  
2023-04-02  
  


Date:

2023-04-02

Approved By:

Ryan.CJ / EMC Manager  
2023-04-02

*Note: All the test results in this report only related to the testing samples. Which can be duplicated completely for the legal use with approval of applicant; it shall not be reproduced except in full without the written approval of BTF Testing Lab (Shenzhen) Co., Ltd., All the objections should be raised within thirty days from the date of issue. To validate the report, you can contact us.*



Test Report Number: BTF230324R00702

Revision History		
Version	Issue Date	Revisions Content
R_V0	2023-04-02	Original
<i>Note: Once the revision has been made, then previous versions reports are invalid.</i>		

## Table of Contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>5</b>
1.1	Identification of Testing Laboratory .....	5
1.2	Identification of the Responsible Testing Location .....	5
1.3	Announcement .....	5
<b>2</b>	<b>PRODUCT INFORMATION.....</b>	<b>6</b>
2.1	Application Information .....	6
2.2	Manufacturer Information .....	6
2.3	Factory Information .....	6
2.4	General Description of Equipment under Test (EUT) .....	6
2.5	Technical Information .....	6
<b>3</b>	<b>SUMMARY OF TEST RESULTS .....</b>	<b>7</b>
3.1	Test Standards .....	7
3.2	Uncertainty of Test .....	7
3.3	Summary of Test Result .....	7
<b>4</b>	<b>TEST CONFIGURATION .....</b>	<b>8</b>
4.1	Test Equipment List .....	8
4.2	Test Auxiliary Equipment .....	12
4.3	Test Modes .....	12
<b>5</b>	<b>EVALUATION RESULTS (EVALUATION).....</b>	<b>13</b>
5.1	Antenna requirement .....	13
5.1.1	Conclusion: .....	13
<b>6</b>	<b>RADIO SPECTRUM MATTER TEST RESULTS (RF).....</b>	<b>14</b>
6.1	Conducted Emission at AC power line .....	14
6.1.1	E.U.T. Operation: .....	14
6.1.2	Test Setup Diagram: .....	14
6.1.3	Test Data: .....	15
6.2	Occupied Bandwidth .....	17
6.2.1	E.U.T. Operation: .....	17
6.2.2	Test Setup Diagram: .....	17
6.2.3	Test Data: .....	17
6.3	Maximum Conducted Output Power .....	18
6.3.1	E.U.T. Operation: .....	18
6.3.2	Test Setup Diagram: .....	19
6.3.3	Test Data: .....	19
6.4	Power Spectral Density .....	20
6.4.1	E.U.T. Operation: .....	20
6.4.2	Test Setup Diagram: .....	20
6.4.3	Test Data: .....	20
6.5	Emissions in non-restricted frequency bands.....	21
6.5.1	E.U.T. Operation: .....	21
6.5.2	Test Setup Diagram: .....	22
6.5.3	Test Data: .....	22
6.6	Band edge emissions (Radiated) .....	23
6.6.1	E.U.T. Operation: .....	23
6.6.2	Test Data: .....	24
6.7	Emissions in restricted frequency bands (below 1GHz).....	26
6.7.1	E.U.T. Operation: .....	26

6.7.2	Test Data: .....	27
<b>6.8</b>	<b>Emissions in restricted frequency bands (above 1GHz) .....</b>	<b>39</b>
6.8.1	E.U.T. Operation: .....	39
6.8.2	Test Data: .....	40
<b>7</b>	<b>TEST SETUP PHOTOS .....</b>	<b>43</b>
<b>8</b>	<b>EUT CONSTRUCTIONAL DETAILS (EUT PHOTOS) .....</b>	<b>45</b>
<b>APPENDIX</b>	<b>.....</b>	<b>46</b>

## 1 Introduction

### 1.1 Identification of Testing Laboratory

Company Name:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Phone Number:	+86-0755-23146130
Fax Number:	+86-0755-23146130

### 1.2 Identification of the Responsible Testing Location

Company Name:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Phone Number:	+86-0755-23146130
Fax Number:	+86-0755-23146130
FCC Registration Number:	518915
Designation Number:	CN1330

### 1.3 Announcement

- (1) The test report reference to the report template version v0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) This document may not be altered or revised in any way unless done so by BTF and all revisions are duly noted in the revisions section.
- (5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (6) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

## 2 Product Information

### 2.1 Application Information

Company Name:	TECHNOSOURCE HK LIMITED
Address:	2F, Building B, Sulandscape Industrial park, Shiyan Town, Bao'an District, Shenzhen China

### 2.2 Manufacturer Information

Company Name:	TECHNOSOURCE HK LIMITED
Address:	2F, Building B, Sulandscape Industrial park, Shiyan Town, Bao'an District, Shenzhen China

### 2.3 Factory Information

Company Name:	TECHNOSOURCE HK LIMITED
Address:	2F, Building B, Sulandscape Industrial park, Shiyan Town, Bao'an District, Shenzhen China

### 2.4 General Description of Equipment under Test (EUT)

EUT Name:	3G Tablet
Test Model Number:	PR6173

### 2.5 Technical Information

Power Supply:	DC 5V From Adaptor
Operation Frequency:	2402MHz to 2480MHz
Number of Channels:	40
Modulation Type:	GFSK
Antenna Type:	PIFA ANT
Antenna Gain:	2dBi

### 3 Summary of Test Results

#### 3.1 Test Standards

The tests were performed according to following standards:

**47 CFR Part 15.247:** Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz

#### 3.2 Uncertainty of Test

Item	Measurement Uncertainty
Conducted Emission (150 kHz-30 MHz)	±2.64dB

The following measurement 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.

#### 3.3 Summary of Test Result

Item	Standard	Requirement	Result
Antenna requirement	47 CFR Part 15.247	Part 15.203	Pass
Conducted Emission at AC power line	47 CFR Part 15.247	47 CFR 15.207(a)	Pass
Occupied Bandwidth	47 CFR Part 15.247	47 CFR 15.247(a)(2)	Pass
Maximum Conducted Output Power	47 CFR Part 15.247	47 CFR 15.247(b)(3)	Pass
Power Spectral Density	47 CFR Part 15.247	47 CFR 15.247(e)	Pass
Emissions in non-restricted frequency bands	47 CFR Part 15.247	47 CFR 15.247(d)	Pass
Band edge emissions (Radiated)	47 CFR Part 15.247	47 CFR 15.247(d)	Pass
Emissions in restricted frequency bands (below 1GHz)	47 CFR Part 15.247	47 CFR 15.247(d)	Pass
Emissions in restricted frequency bands (above 1GHz)	47 CFR Part 15.247	47 CFR 15.247(d)	Pass

## 4 Test Configuration

### 4.1 Test Equipment List

Conducted Emission at AC power line					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Pulse Limiter	SCHWARZBECK	VTSD 9561-F	00953	2022-11-24	2023-11-23
Coaxial Switcher	SCHWARZBECK	CX210	CX210	2022-11-24	2023-11-23
V-LISN	SCHWARZBECK	NSLK 8127	01073	2022-11-24	2023-11-23
LISN	AFJ	LS16/110VAC	16010020076	2023-02-23	2024-02-22
EMI Receiver	ROHDE&SCHWA RZ	ESCI3	101422	2022-11-24	2023-11-23

Occupied Bandwidth					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
RFTest software	/	V1.00	/	/	/
RF Control Unit	Techy	TR1029-1	/	2022-11-24	2023-11-23
RF Sensor Unit	Techy	TR1029-2	/	2022-11-24	2023-11-23
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2022-11-24	2023-11-23
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2022-11-24	2023-11-23
WIDEBAND RADIO COMMUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2022-11-24	2023-11-23
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2022-11-24	2023-11-23

Maximum Conducted Output Power					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
RFTest software	/	V1.00	/	/	/
RF Control Unit	Techy	TR1029-1	/	2022-11-24	2023-11-23
RF Sensor Unit	Techy	TR1029-2	/	2022-11-24	2023-11-23
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2022-11-24	2023-11-23
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2022-11-24	2023-11-23
WIDEBAND RADIO COMMUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2022-11-24	2023-11-23
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2022-11-24	2023-11-23

Power Spectral Density					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
RFTest software	/	V1.00	/	/	/

RF Control Unit	Techy	TR1029-1	/	2022-11-24	2023-11-23
RF Sensor Unit	Techy	TR1029-2	/	2022-11-24	2023-11-23
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2022-11-24	2023-11-23
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2022-11-24	2023-11-23
WIDEBAND RADIO COMMUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2022-11-24	2023-11-23
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2022-11-24	2023-11-23

**Emissions in non-restricted frequency bands**

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
RFTest software	/	V1.00	/	/	/
RF Control Unit	Techy	TR1029-1	/	2022-11-24	2023-11-23
RF Sensor Unit	Techy	TR1029-2	/	2022-11-24	2023-11-23
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2022-11-24	2023-11-23
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2022-11-24	2023-11-23
WIDEBAND RADIO COMMUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2022-11-24	2023-11-23
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2022-11-24	2023-11-23

**Band edge emissions (Radiated)**

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Coaxial cable Multiflex 141	Schwarzbeck	N/SMA 0.5m	517386	2023-03-24	2024-03-23
Preamplifier	SCHWARZBECK	BBV9744	00246	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-1 0m	21101566	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-10m	21101570	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-1 m	21101568	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-1m	21101576	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-2.5m	21101573	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Horn Antenna	SCHWARZBECK	BBHA9170	01157	2021-11-28	2023-11-27
EMI TEST RECEIVER	ROHDE&SCHWARTZ	ESCI7	101032	2022-11-24	2023-11-23
SIGNAL ANALYZER	ROHDE&SCHWARTZ	FSQ40	100010	2022-11-24	2023-11-23

POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Broadband Preamplifier	SCHWARZBECK	BBV9718D	00008	2023-03-24	2024-03-23
Horn Antenna	SCHWARZBECK	BBHA9120D	2597	2022-05-22	2024-05-21
EZ EMC	Frad	FA-03A2 RE+	/	/	/
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Log periodic antenna	SCHWARZBECK	VULB 9168	01328	2021-11-28	2023-11-27

<b>Emissions in restricted frequency bands (below 1GHz)</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No</b>	<b>Inventory No</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
Coaxial cable Multiflex 141	Schwarzbeck	N/SMA 0.5m	517386	2023-03-24	2024-03-23
Preamplifier	SCHWARZBECK	BBV9744	00246	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-1 0m	21101566	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-10m	21101570	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-1 m	21101568	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-1m	21101576	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-2.5m	21101573	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Horn Antenna	SCHWARZBECK	BBHA9170	01157	2021-11-28	2023-11-27
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI7	101032	2022-11-24	2023-11-23
SIGNAL ANALYZER	ROHDE&SCHWARZ	FSQ40	100010	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Broadband Preamplifier	SCHWARZBECK	BBV9718D	00008	2023-03-24	2024-03-23
Horn Antenna	SCHWARZBECK	BBHA9120D	2597	2022-05-22	2024-05-21
EZ EMC	Frad	FA-03A2 RE+	/	/	/
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Log periodic antenna	SCHWARZBECK	VULB 9168	01328	2021-11-28	2023-11-27

<b>Emissions in restricted frequency bands (above 1GHz)</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No</b>	<b>Inventory No</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
Coaxial cable Multiflex 141	Schwarzbeck	N/SMA 0.5m	517386	2023-03-24	2024-03-23
Preamplifier	SCHWARZBECK	BBV9744	00246	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-1 0m	21101566	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-10m	21101570	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-1 m	21101568	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-1m	21101576	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-2.5m	21101573	2022-11-24	2023-11-23



POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Horn Antenna	SCHWARZBECK	BBHA9170	01157	2021-11-28	2023-11-27
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI7	101032	2022-11-24	2023-11-23
SIGNAL ANALYZER	ROHDE&SCHWARZ	FSQ40	100010	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Broadband Preamplifier	SCHWARZBECK	BBV9718D	00008	2023-03-24	2024-03-23
Horn Antenna	SCHWARZBECK	BBHA9120D	2597	2022-05-22	2024-05-21
EZ_EMC	Frad	FA-03A2 RE+	/	/	/
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Log periodic antenna	SCHWARZBECK	VULB 9168	01328	2021-11-28	2023-11-27

## 4.2 Test Auxiliary Equipment

Title	Manufacturer	Model No.	Serial No.
USB Cable	/	/	0.4m
Adapter	Huawei	HW-059200CHQ	/

## 4.3 Test Modes

No.	Test Modes	Description
TM1	TX mode	Keep the EUT connect to AC power line and works in continuously transmitting mode with GFSK modulation.

## 5 Evaluation Results (Evaluation)

### 5.1 Antenna requirement

Test 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 shall be considered sufficient to comply with the provisions of this section.
-------------------	--

#### 5.1.1 Conclusion:



## 6 Radio Spectrum Matter Test Results (RF)

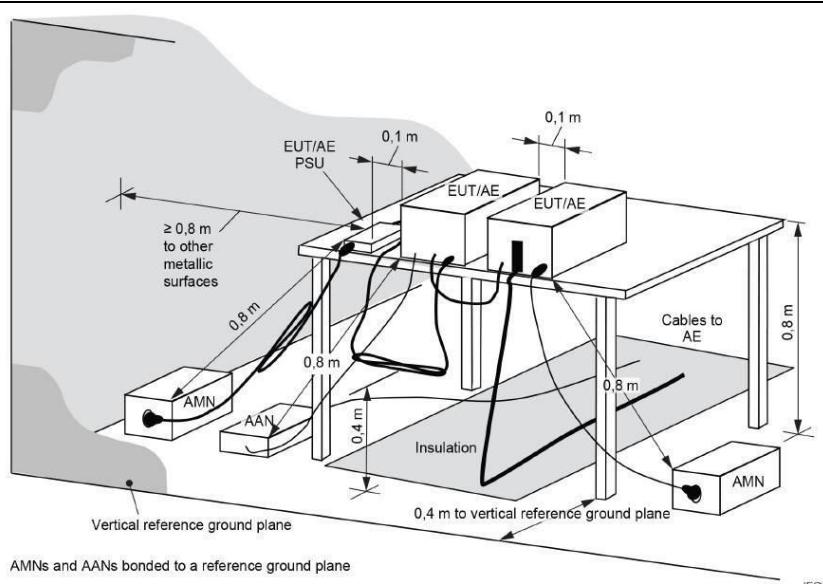
## 6.1 Conducted Emission at AC power line

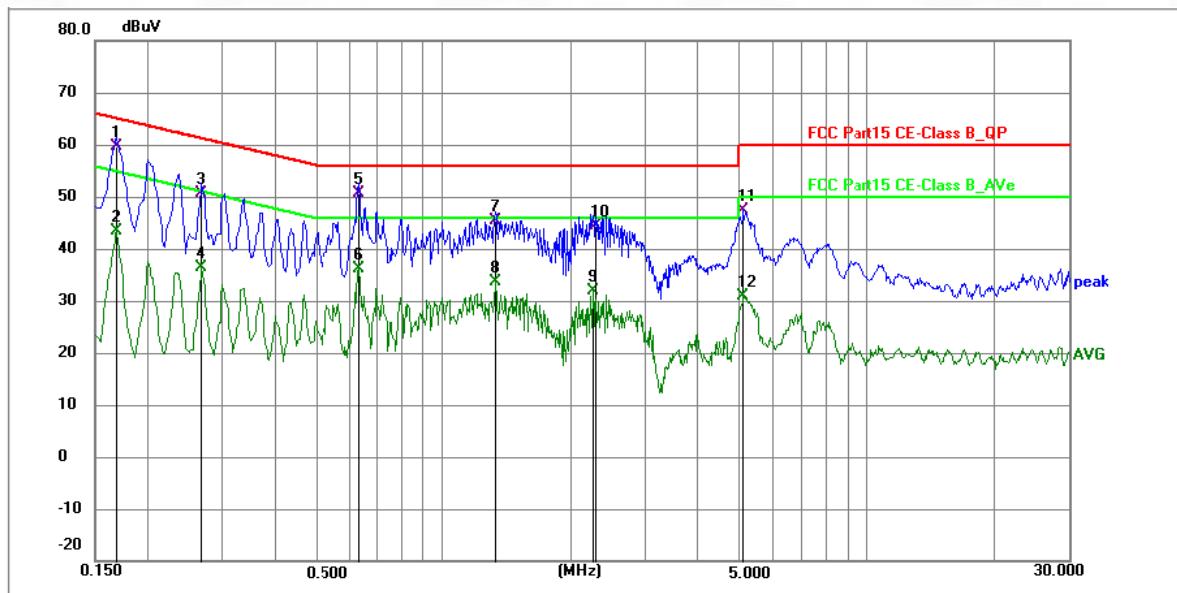
Test Requirement:	Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 $\mu$ H/50 ohms line impedance stabilization network (LISN).															
Test Method:	Refer to ANSI C63.10-2013 section 6.2, standard test method for ac power-line conducted emissions from unlicensed wireless devices															
Test Limit:	<table border="1"> <thead> <tr> <th data-bbox="433 568 830 610">Frequency of emission (MHz)</th><th colspan="2" data-bbox="830 568 1287 610">Conducted limit (dB<math>\mu</math>V)</th></tr> <tr> <th data-bbox="433 610 830 613"></th><th data-bbox="830 610 1095 613">Quasi-peak</th><th data-bbox="1095 610 1287 613">Average</th></tr> </thead> <tbody> <tr> <td data-bbox="433 613 830 655">0.15-0.5</td><td data-bbox="830 613 1095 655">66 to 56*</td><td data-bbox="1095 613 1287 655">56 to 46*</td></tr> <tr> <td data-bbox="433 655 830 667">0.5-5</td><td data-bbox="830 655 1095 667">56</td><td data-bbox="1095 655 1287 667">46</td></tr> <tr> <td data-bbox="433 667 830 678">5-30</td><td data-bbox="830 667 1095 678">60</td><td data-bbox="1095 667 1287 678">50</td></tr> </tbody> </table>	Frequency of emission (MHz)	Conducted limit (dB $\mu$ V)			Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency of emission (MHz)	Conducted limit (dB $\mu$ V)															
	Quasi-peak	Average														
0.15-0.5	66 to 56*	56 to 46*														
0.5-5	56	46														
5-30	60	50														

### 6.1.1 E.U.T. Operation:

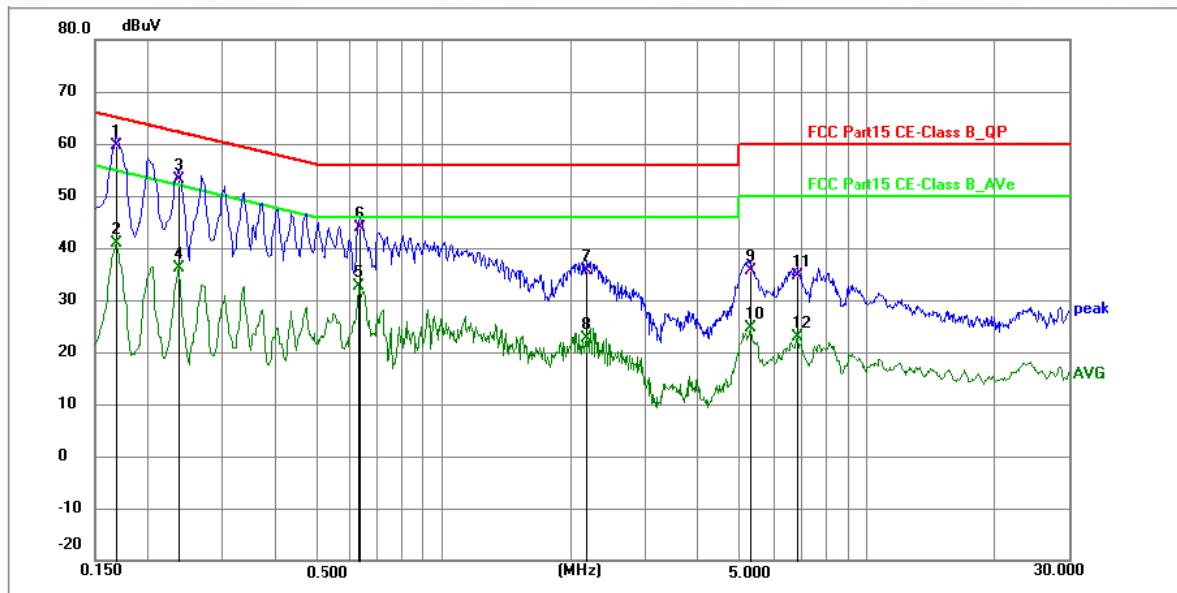
Operating Environment:	
Temperature:	22.9 °C
Humidity:	51.1 %
Atmospheric Pressure:	1010 mbar

### 6.1.2 Test Setup Diagram:



**6.1.3 Test Data:**
**TM1 / Line: Line / Band: 2.4G / BW: 2 / CH: M**


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1680	49.09	10.55	59.64	65.06	-5.42	QP	P	
2	0.1680	32.72	10.55	43.27	55.06	-11.79	AVG	P	
3	0.2670	39.98	10.63	50.61	61.21	-10.60	QP	P	
4	0.2670	25.82	10.63	36.45	51.21	-14.76	AVG	P	
5 *	0.6314	40.01	10.69	50.70	56.00	-5.30	QP	P	
6	0.6314	25.51	10.69	36.20	46.00	-9.80	AVG	P	
7	1.3290	34.57	10.75	45.32	56.00	-10.68	QP	P	
8	1.3290	22.99	10.75	33.74	46.00	-12.26	AVG	P	
9	2.2604	22.49	9.39	31.88	46.00	-14.12	AVG	P	
10	2.2964	35.15	9.21	44.36	56.00	-11.64	QP	P	
11	5.1044	36.69	10.69	47.38	60.00	-12.62	QP	P	
12	5.1044	20.17	10.69	30.86	50.00	-19.14	AVG	P	

**TM1 / Line: Neutral / Band: 2.4G / BW: 2 / CH: M**


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1 *	0.1680	49.06	10.55	59.61	65.06	-5.45	QP	P	
2	0.1680	30.34	10.55	40.89	55.06	-14.17	AVG	P	
3	0.2354	42.54	10.63	53.17	62.26	-9.09	QP	P	
4	0.2354	25.49	10.63	36.12	52.26	-16.14	AVG	P	
5	0.6314	21.95	10.69	32.64	46.00	-13.36	AVG	P	
6	0.6360	33.18	10.69	43.87	56.00	-12.13	QP	P	
7	2.1884	25.87	9.75	35.62	56.00	-20.38	QP	P	
8	2.1884	12.86	9.75	22.61	46.00	-23.39	AVG	P	
9	5.2800	24.94	10.70	35.64	60.00	-24.36	QP	P	
10	5.2800	13.89	10.70	24.59	50.00	-25.41	AVG	P	
11	6.8190	23.95	10.74	34.69	60.00	-25.31	QP	P	
12	6.8190	12.07	10.74	22.81	50.00	-27.19	AVG	P	

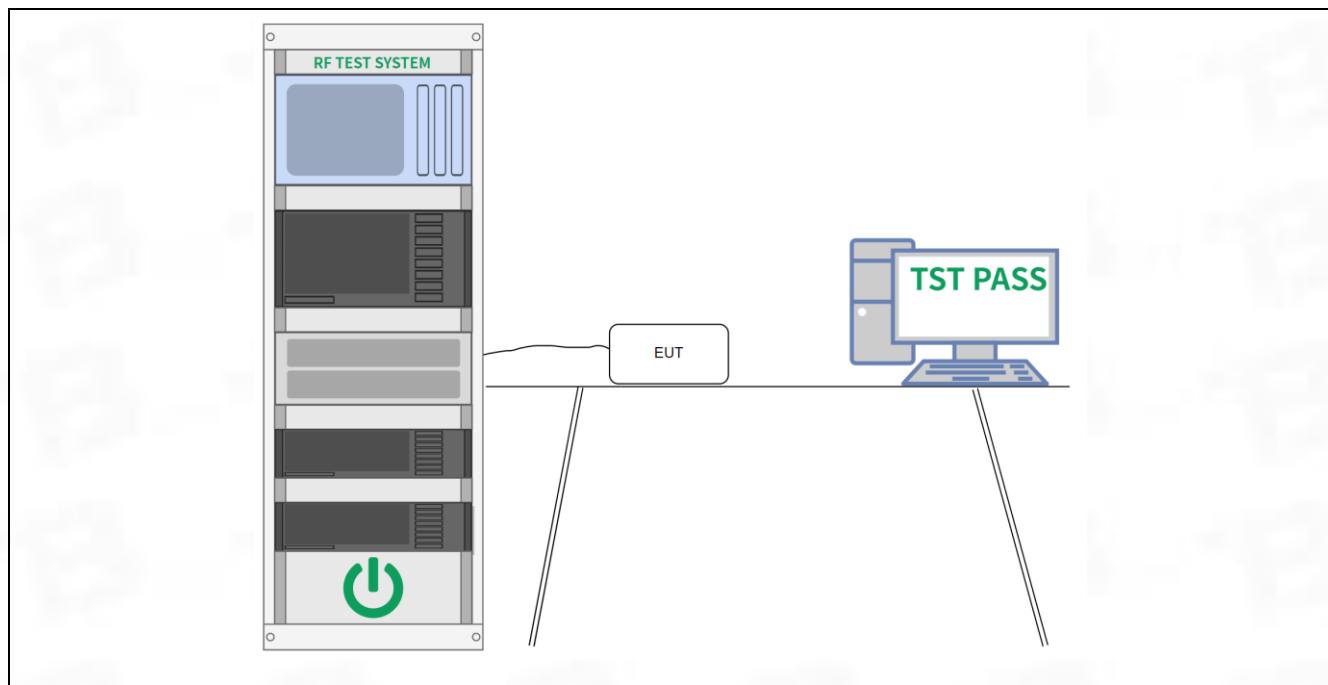
## 6.2 Occupied Bandwidth

Test Requirement:	Systems using digital modulation techniques may operate in the 902-928 MHz, and 2400-2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.
Test Method:	DTS bandwidth
Test Limit:	Section (a)(2), Systems using digital modulation techniques may operate in the 902-928 MHz, and 2400-2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.
Procedure:	<p>a) Set RBW = 100 kHz.</p> <p>b) Set the VBW <math>\geq [3 \times \text{RBW}]</math>.</p> <p>c) Detector = peak.</p> <p>d) Trace mode = max hold.</p> <p>e) Sweep = auto couple.</p> <p>f) Allow the trace to stabilize.</p> <p>g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.</p>

### 6.2.1 E.U.T. Operation:

Operating Environment:	
Temperature:	22.9 °C
Humidity:	51.1 %
Atmospheric Pressure:	1010 mbar

### 6.2.2 Test Setup Diagram:



### 6.2.3 Test Data:

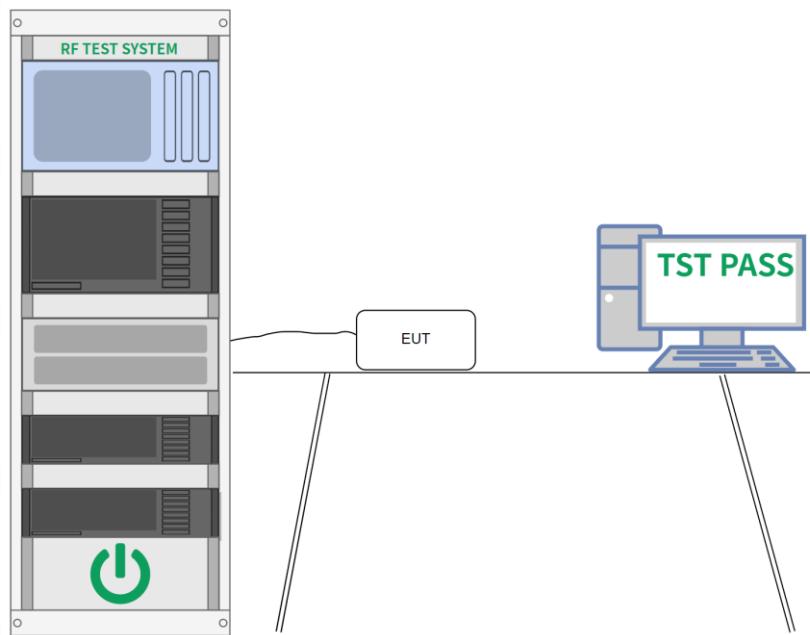
Please Refer to Appendix for Details.

### 6.3 Maximum Conducted Output Power

Test Requirement:	For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.
Test Method:	Maximum peak conducted output power
Test Limit:	For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.
Procedure:	ANSI C63.10-2013, section 11.9.1 Maximum peak conducted output power

#### 6.3.1 E.U.T. Operation:

Operating Environment:	
Temperature:	22.9 °C
Humidity:	51.1 %
Atmospheric Pressure:	1010 mbar

**6.3.2 Test Setup Diagram:****6.3.3 Test Data:**

Please Refer to Appendix for Details.

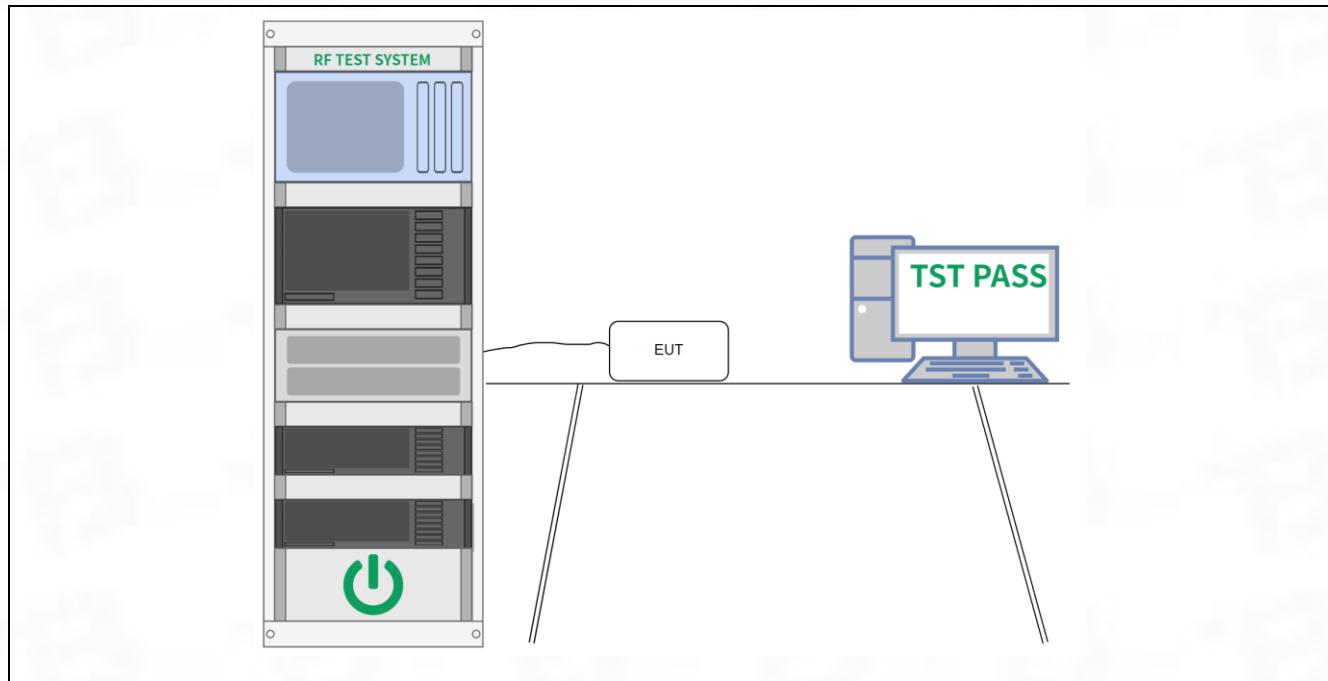
## 6.4 Power Spectral Density

Test Requirement:	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.
Test Method:	Maximum power spectral density level in the fundamental emission
Test Limit:	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

### 6.4.1 E.U.T. Operation:

Operating Environment:	
Temperature:	22.9 °C
Humidity:	51.1 %
Atmospheric Pressure:	1010 mbar

### 6.4.2 Test Setup Diagram:



### 6.4.3 Test Data:

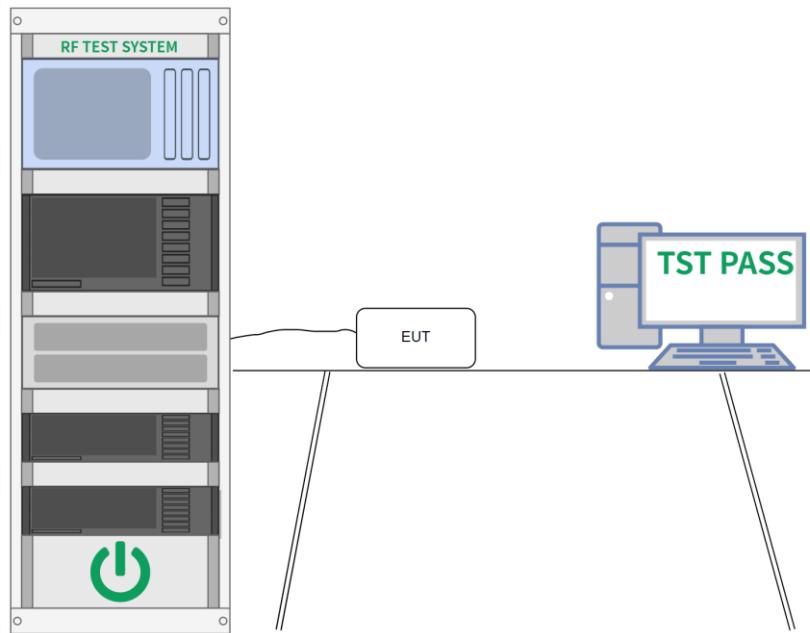
Please Refer to Appendix for Details.

## 6.5 Emissions in non-restricted frequency bands

Test Requirement:	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.
Test Method:	Emissions in nonrestricted frequency bands
Test 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.
Procedure:	ANSI C63.10-2013 Section 11.11.1, Section 11.11.2, Section 11.11.3

### 6.5.1 E.U.T. Operation:

Operating Environment:	
Temperature:	22.9 °C
Humidity:	51.1 %
Atmospheric Pressure:	1010 mbar

**6.5.2 Test Setup Diagram:****6.5.3 Test Data:**

Please Refer to Appendix for Details.

## 6.6 Band edge emissions (Radiated)

Test Requirement:	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)).		
Test Method:	Radiated emissions tests		
Test 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
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.			
Procedure:	ANSI C63.10-2013 section 6.6.4		

### 6.6.1 E.U.T. Operation:

Operating Environment:	
Temperature:	22.9 °C
Humidity:	51.1 %
Atmospheric Pressure:	1010 mbar

**6.6.2 Test Data:**
**TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: L**

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	67.93	-30.59	37.34	74.00	-36.66	peak	P
2	2390.000	68.56	-30.49	38.07	74.00	-35.93	peak	P
3 *	2400.000	75.45	-30.48	44.97	74.00	-29.03	peak	P

**TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: L**

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	68.40	-30.59	37.81	74.00	-36.19	peak	P
2	2390.000	68.55	-30.49	38.06	74.00	-35.94	peak	P
3 *	2400.000	79.06	-30.48	48.58	74.00	-25.42	peak	P

**TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: H**

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	76.17	-30.39	45.78	74.00	-28.22	peak	P
2	2500.000	68.13	-30.37	37.76	74.00	-36.24	peak	P

**TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: H**

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	78.13	-30.39	47.74	74.00	-26.26	peak	P
2	2500.000	68.13	-30.37	37.76	74.00	-36.24	peak	P

**TM1 / Polarization: Horizontal / Band: 2.4G / BW: 2 / CH: L**

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	67.80	-30.59	37.21	74.00	-36.79	peak	P
2	2390.000	69.24	-30.49	38.75	74.00	-35.25	peak	P
3 *	2400.000	79.90	-30.48	49.42	74.00	-24.58	peak	P

**TM1 / Polarization: Vertical / Band: 2.4G / BW: 2 / CH: L**

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	68.63	-30.59	38.04	74.00	-35.96	peak	P
2	2390.000	69.24	-30.49	38.75	74.00	-35.25	peak	P
3 *	2400.000	79.12	-30.48	48.64	74.00	-25.36	peak	P

**TM1 / Polarization: Horizontal / Band: 2.4G / BW: 2 / CH: H**

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	72.88	-30.39	42.49	74.00	-31.51	peak	P
2	2500.000	67.85	-30.37	37.48	74.00	-36.52	peak	P

**TM1 / Polarization: Vertical / Band: 2.4G / BW: 2 / CH: H**

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	76.25	-30.39	45.86	74.00	-28.14	peak	P
2	2500.000	68.25	-30.37	37.88	74.00	-36.12	peak	P

## 6.7 Emissions in restricted frequency bands (below 1GHz)

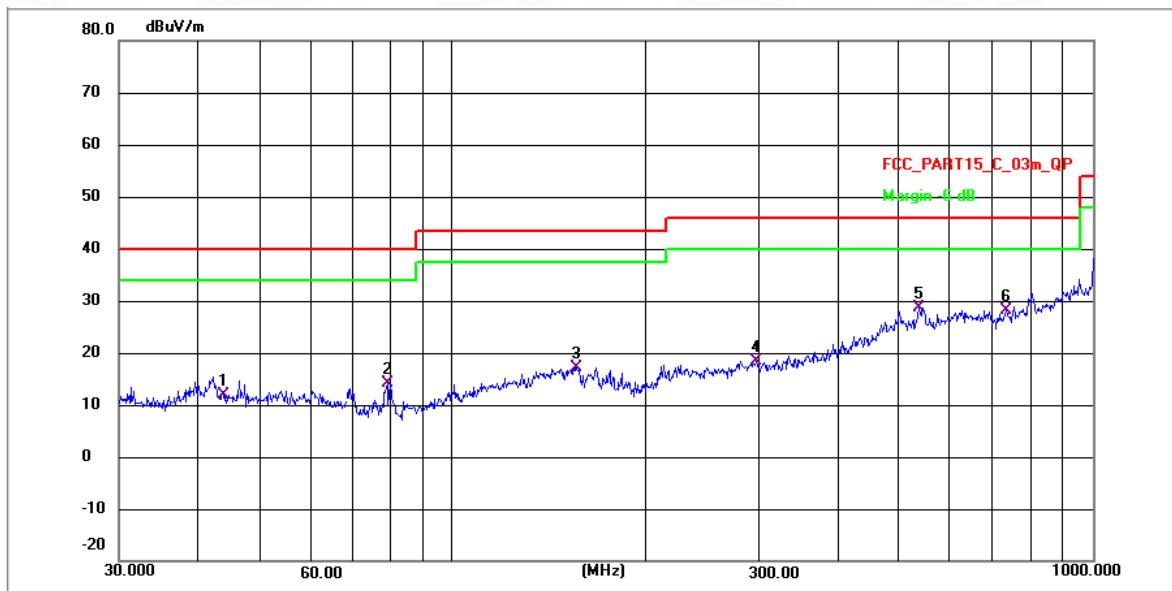
Test Requirement:	In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).		
Test Method:	Radiated emissions tests		
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	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
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.			
Procedure:	ANSI C63.10-2013 section 6.6.4		

### 6.7.1 E.U.T. Operation:

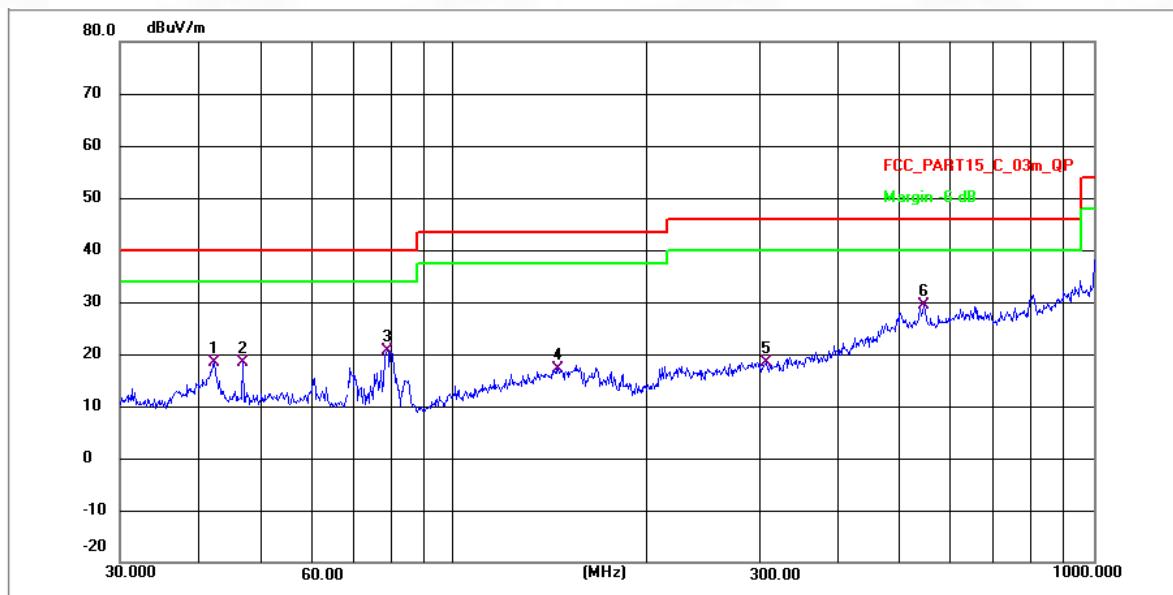
Operating Environment:	
Temperature:	22.9 °C
Humidity:	51.1 %
Atmospheric Pressure:	1010 mbar

### 6.7.2 Test Data:

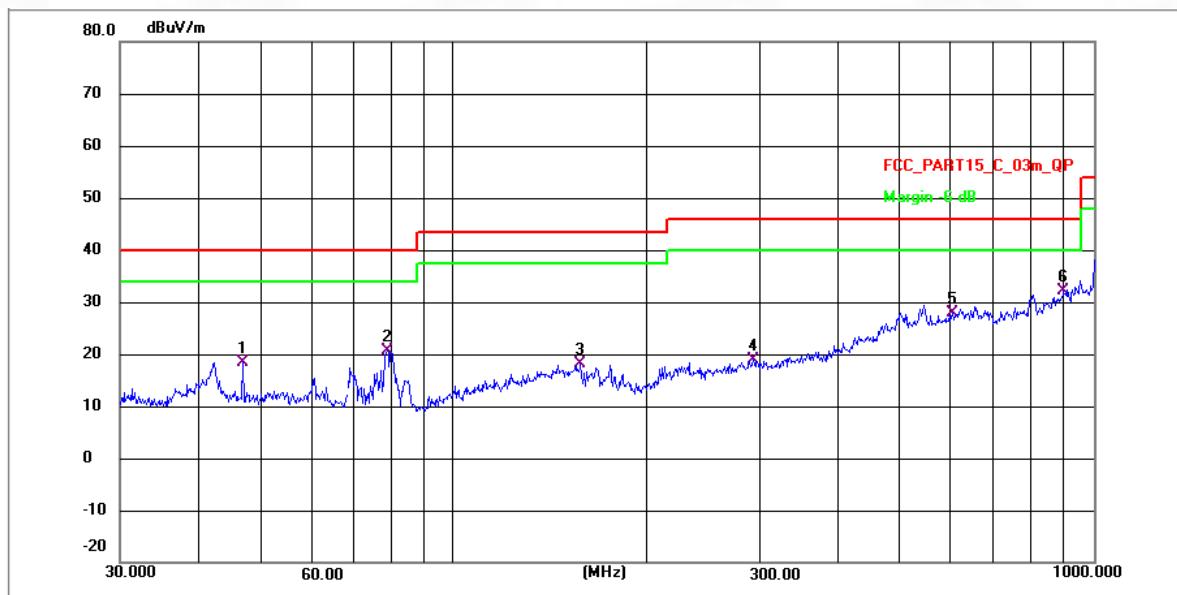
TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: L



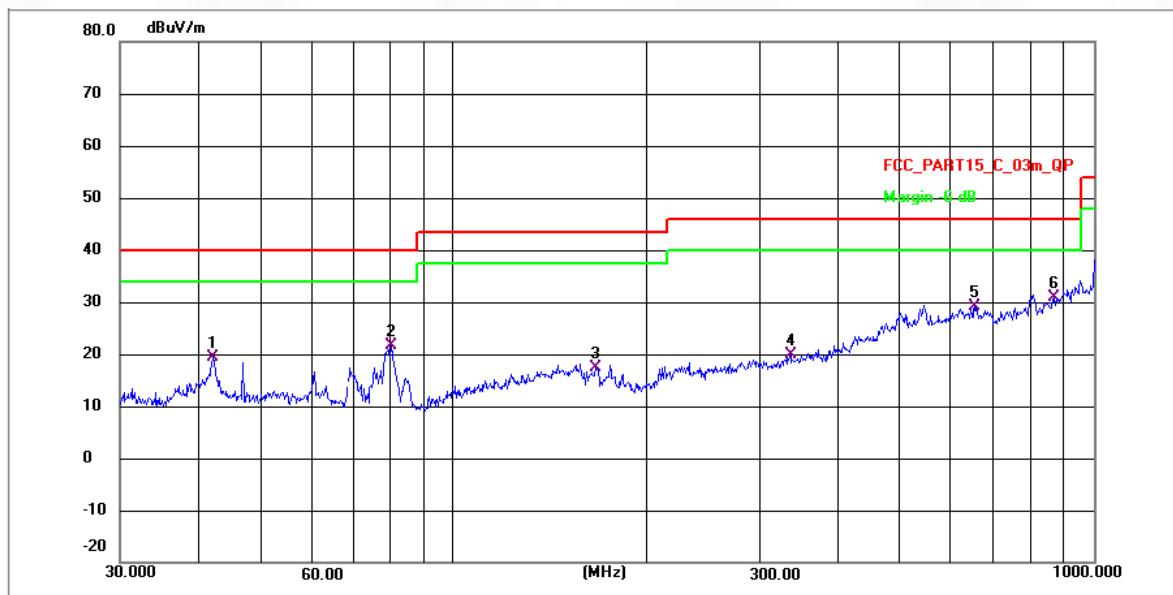
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	43.8120	30.14	-18.36	11.78	40.00	-28.22	QP	P
2	79.1038	32.19	-18.03	14.16	40.00	-25.84	QP	P
3	156.1837	44.92	-27.73	17.19	43.50	-26.31	QP	P
4	297.2241	43.81	-25.45	18.36	46.00	-27.64	QP	P
5 *	537.5891	50.26	-21.53	28.73	46.00	-17.27	QP	P
6	733.2047	51.97	-23.79	28.18	46.00	-17.82	QP	P

**TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: L**


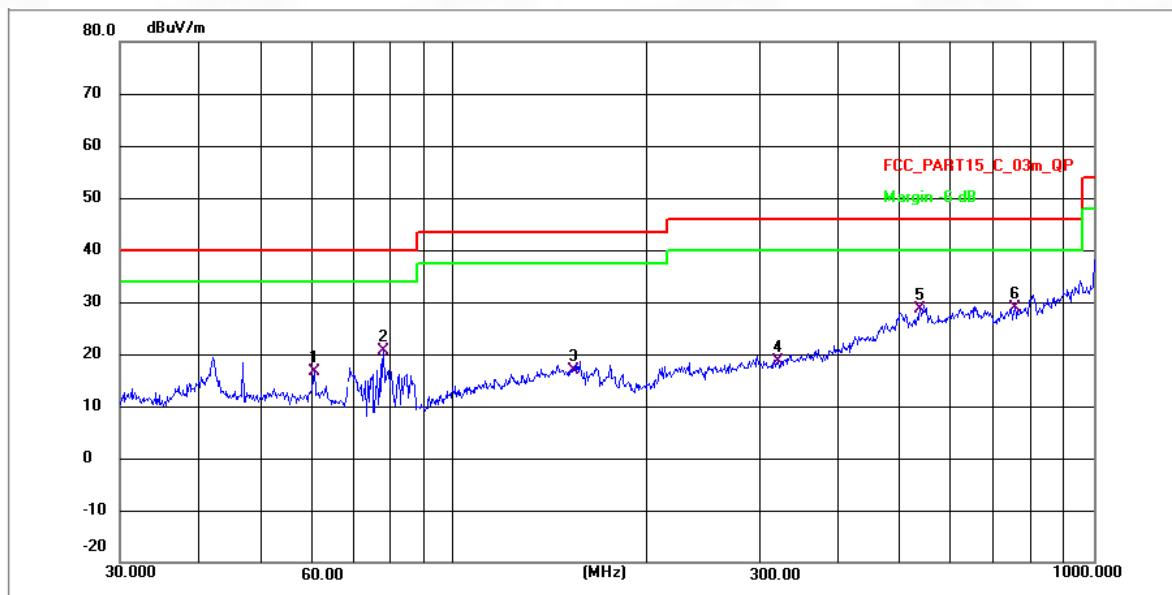
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	42.1542	38.89	-20.49	18.40	40.00	-21.60	QP	P
2	46.8303	38.82	-20.39	18.43	40.00	-21.57	QP	P
3	78.8269	40.50	-19.84	20.66	40.00	-19.34	QP	P
4	145.3506	44.96	-27.82	17.14	43.50	-26.36	QP	P
5	307.2920	43.78	-25.37	18.41	46.00	-27.59	QP	P
6 *	545.1826	50.94	-21.61	29.33	46.00	-16.67	QP	P

**TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: M**


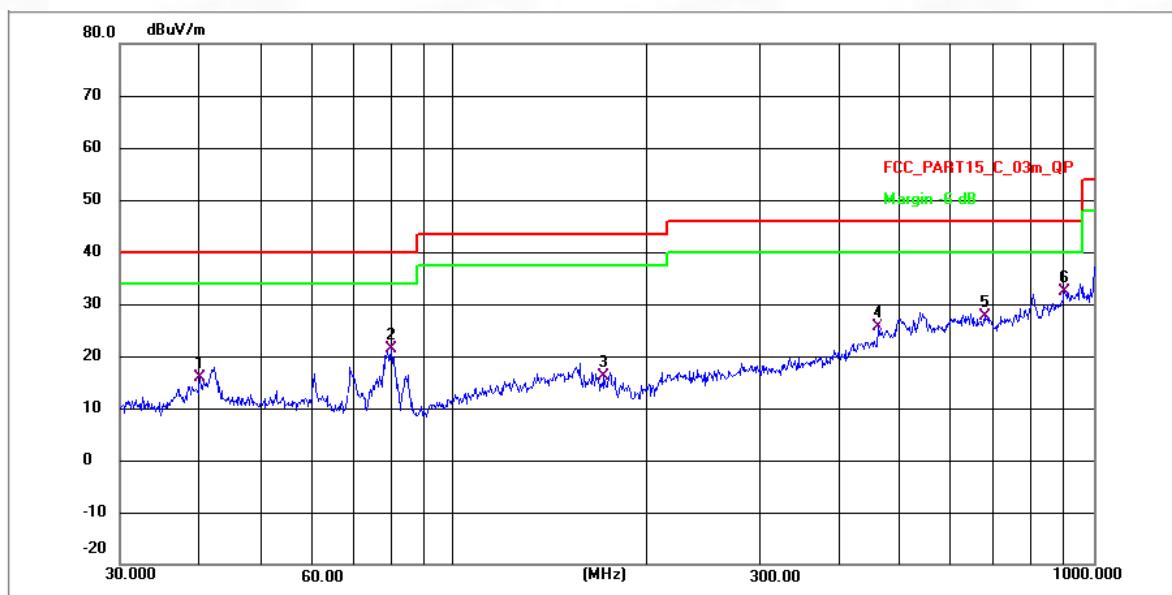
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	46.8303	36.74	-18.31	18.43	40.00	-21.57	QP	P
2	78.8269	38.69	-18.03	20.66	40.00	-19.34	QP	P
3	157.5588	45.81	-27.71	18.10	43.50	-25.40	QP	P
4	293.5985	44.26	-25.48	18.78	46.00	-27.22	QP	P
5	603.5392	50.03	-22.24	27.79	46.00	-18.21	QP	P
6 *	896.9965	54.30	-22.13	32.17	46.00	-13.83	QP	P

**TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: M**


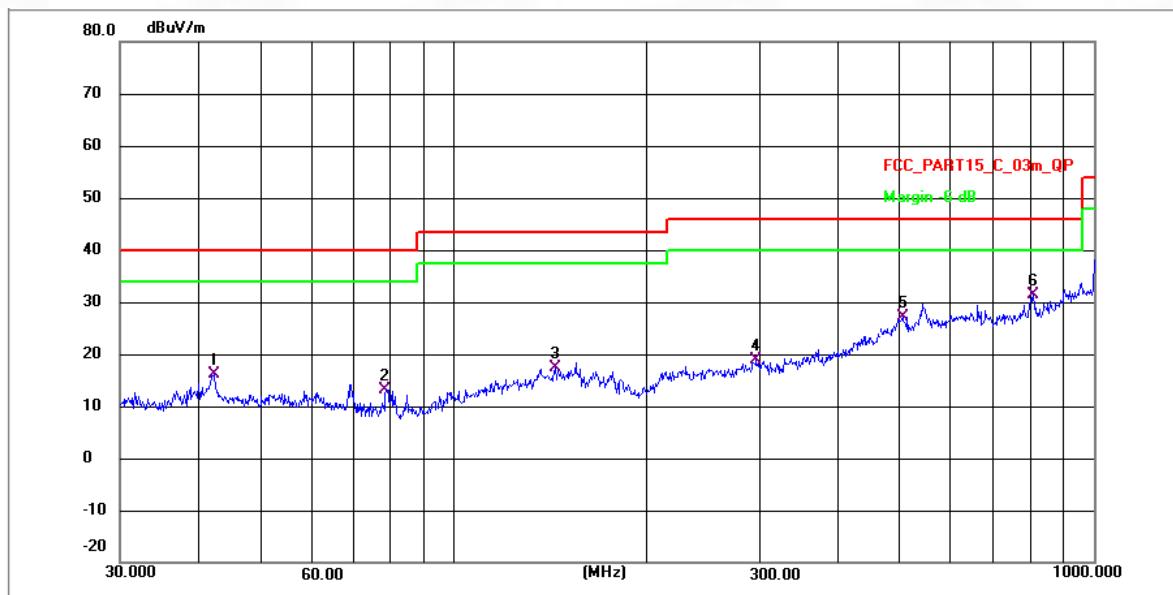
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	42.0066	39.83	-20.49	19.34	40.00	-20.66	QP	P
2	80.0806	41.45	-19.81	21.64	40.00	-18.36	QP	P
3	166.0680	44.93	-27.64	17.29	43.50	-26.21	QP	P
4	335.4465	45.07	-25.14	19.93	46.00	-26.07	QP	P
5	653.0858	52.06	-22.86	29.20	46.00	-16.80	QP	P
6 *	867.6077	53.45	-22.61	30.84	46.00	-15.16	QP	P

**TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: H**


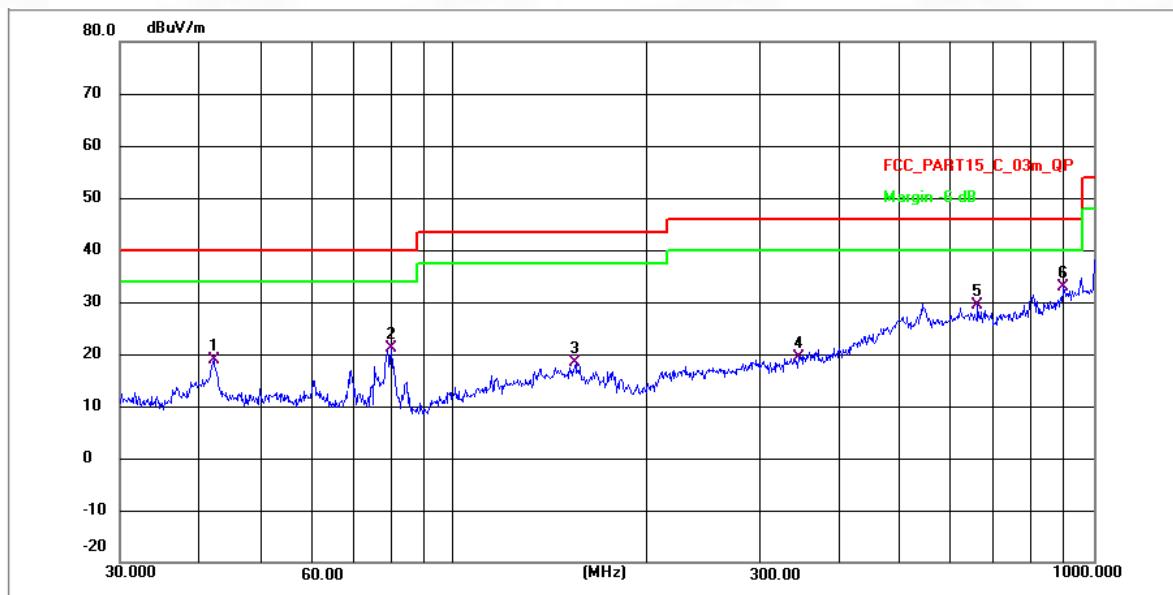
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	60.2801	34.72	-18.19	16.53	40.00	-23.47	QP	P
2	77.8654	38.75	-18.03	20.72	40.00	-19.28	QP	P
3	154.0083	44.71	-27.74	16.97	43.50	-26.53	QP	P
4	320.4984	44.01	-25.27	18.74	46.00	-27.26	QP	P
5	537.5891	50.26	-21.53	28.73	46.00	-17.27	QP	P
6 *	754.0641	52.76	-23.94	28.82	46.00	-17.18	QP	P

**TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: H**


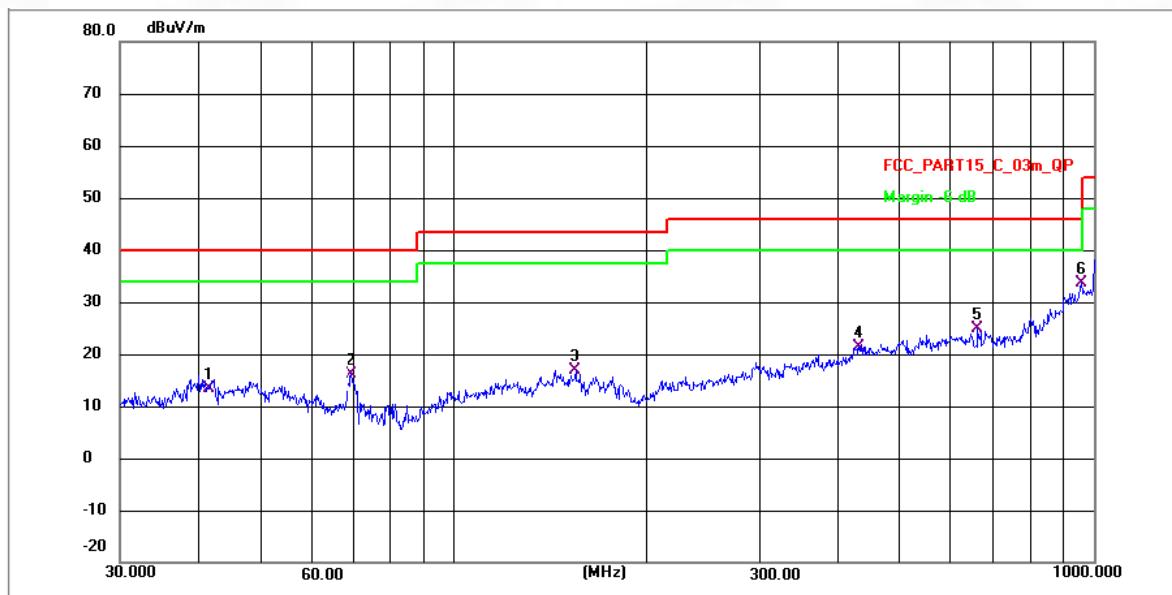
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	40.0644	36.43	-20.53	15.90	40.00	-24.10	QP	P
2	79.9402	41.31	-19.82	21.49	40.00	-18.51	QP	P
3	171.6933	43.77	-27.59	16.18	43.50	-27.32	QP	P
4	459.1144	47.64	-22.07	25.57	46.00	-20.43	QP	P
5	675.2080	50.83	-23.14	27.69	46.00	-18.31	QP	P
6 *	900.1474	54.46	-22.08	32.38	46.00	-13.62	QP	P

**TM1 / Polarization: Horizontal / Band: 2.4G / BW: 2 / CH: L**


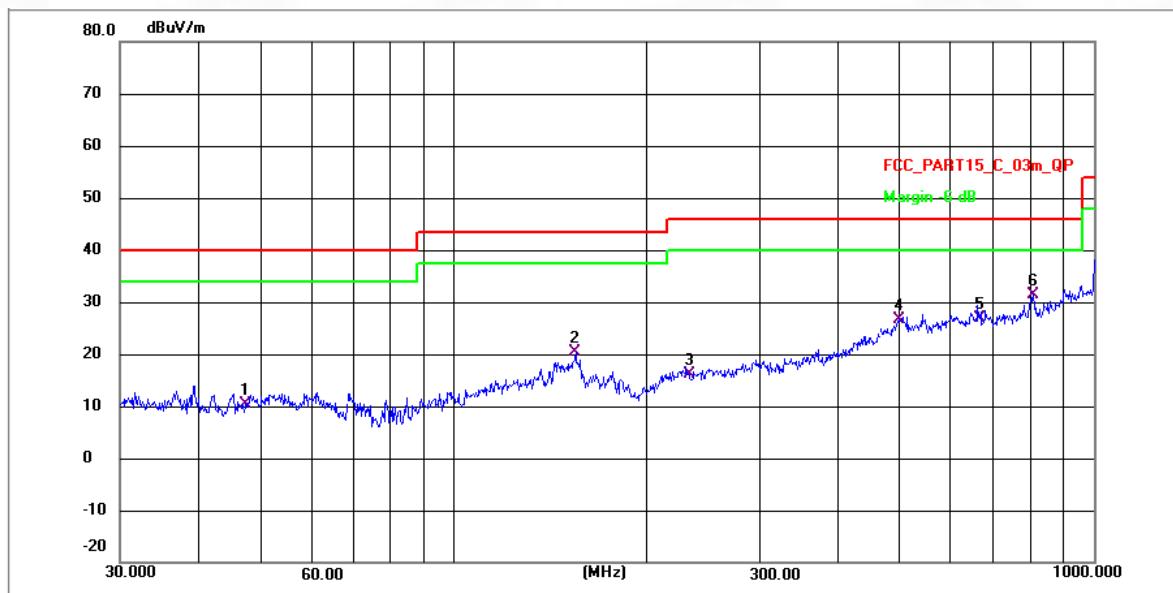
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	42.2281	34.61	-18.38	16.23	40.00	-23.77	QP	P
2	78.5509	31.26	-18.03	13.23	40.00	-26.77	QP	P
3	144.3348	45.26	-27.83	17.43	43.50	-26.07	QP	P
4	296.7034	44.39	-25.45	18.94	46.00	-27.06	QP	P
5	503.8221	48.23	-21.18	27.05	46.00	-18.95	QP	P
6 *	804.6028	54.95	-23.64	31.31	46.00	-14.69	QP	P

**TM1 / Polarization: Vertical / Band: 2.4G / BW: 2 / CH: L**


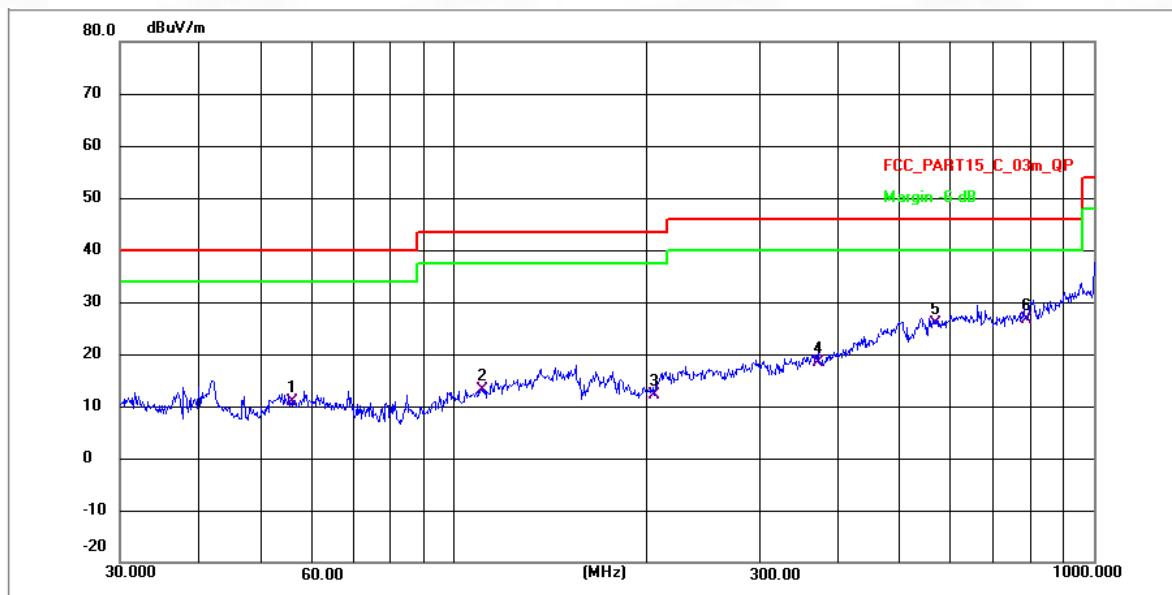
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	42.1542	39.29	-20.49	18.80	40.00	-21.20	QP	P
2	79.8003	41.00	-19.82	21.18	40.00	-18.82	QP	P
3	154.8204	46.10	-27.74	18.36	43.50	-25.14	QP	P
4	344.9898	44.48	-25.07	19.41	46.00	-26.59	QP	P
5	658.8362	52.26	-22.93	29.33	46.00	-16.67	QP	P
6 *	898.5706	54.94	-22.11	32.83	46.00	-13.17	QP	P

**TM1 / Polarization: Horizontal / Band: 2.4G / BW: 2 / CH: M**


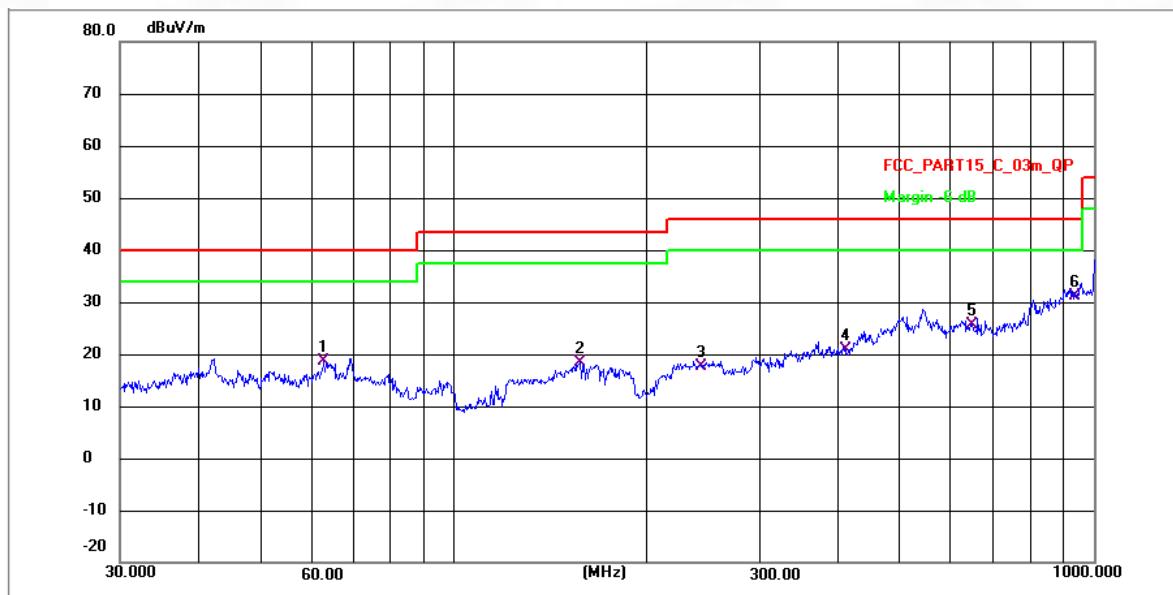
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	41.2764	31.84	-18.38	13.46	40.00	-26.54	QP	P
2	69.3568	34.23	-18.11	16.12	40.00	-23.88	QP	P
3	154.8204	44.60	-27.74	16.86	43.50	-26.64	QP	P
4	428.0192	44.66	-23.32	21.34	46.00	-24.66	QP	P
5	658.8360	47.76	-22.93	24.83	46.00	-21.17	QP	P
6 *	957.1145	55.47	-21.73	33.74	46.00	-12.26	QP	P

**TM1 / Polarization: Vertical / Band: 2.4G / BW: 2 / CH: M**


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	47.3253	28.74	-18.31	10.43	40.00	-29.57	QP	P
2	154.8204	48.10	-27.74	20.36	43.50	-23.14	QP	P
3	233.3486	42.02	-26.00	16.02	46.00	-29.98	QP	P
4	496.8045	47.95	-21.21	26.74	46.00	-19.26	QP	P
5	665.8034	49.96	-23.02	26.94	46.00	-19.06	QP	P
6 *	804.6027	54.95	-23.64	31.31	46.00	-14.69	QP	P

**TM1 / Polarization: Horizontal / Band: 2.4G / BW: 2 / CH: H**


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	55.9025	29.17	-18.22	10.95	40.00	-29.05	QP	P
2	111.1517	41.22	-28.13	13.09	43.50	-30.41	QP	P
3	205.3146	39.29	-27.10	12.19	43.50	-31.31	QP	P
4	371.3528	43.31	-24.86	18.45	46.00	-27.55	QP	P
5	567.6163	47.69	-21.85	25.84	46.00	-20.16	QP	P
6 *	789.2335	50.33	-23.77	26.56	46.00	-19.44	QP	P

**TM1 / Polarization: Vertical / Band: 2.4G / BW: 2 / CH: H**


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	62.5410	36.82	-18.17	18.65	40.00	-21.35	QP	P
2	157.2828	46.20	-27.72	18.48	43.50	-25.02	QP	P
3	243.3771	43.49	-25.91	17.58	46.00	-28.42	QP	P
4	409.6634	45.10	-24.17	20.93	46.00	-25.07	QP	P
5	647.3854	48.35	-22.79	25.56	46.00	-20.44	QP	P
6 *	937.1880	52.89	-21.86	31.03	46.00	-14.97	QP	P

## 6.8 Emissions in restricted frequency bands (above 1GHz)

Test Requirement:	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)).		
Test Method:	Radiated emissions tests		
Test 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
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.			
Procedure:	ANSI C63.10-2013 section 6.6.4		

### 6.8.1 E.U.T. Operation:

Operating Environment:	
Temperature:	22.9 °C
Humidity:	51.1 %
Atmospheric Pressure:	1010 mbar

**6.8.2 Test Data:**
**TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: L**

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2107.950	70.27	-30.81	39.46	74.00	-34.54	peak	P
2	4721.515	65.70	-28.16	37.54	74.00	-36.46	peak	P
3	6406.755	68.89	-25.37	43.52	74.00	-30.48	peak	P
4	7086.750	69.66	-24.90	44.76	74.00	-29.24	peak	P
5 *	9155.125	72.93	-23.97	48.96	74.00	-25.04	peak	P
6	12476.821	66.94	-21.64	45.30	74.00	-28.70	peak	P

**TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: L**

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2107.950	73.27	-30.81	42.46	74.00	-31.54	peak	P
2	4461.470	66.99	-28.80	38.19	74.00	-35.81	peak	P
3	7726.446	69.33	-25.12	44.21	74.00	-29.79	peak	P
4	9716.791	63.57	-23.67	39.90	74.00	-34.10	peak	P
5	11864.849	64.88	-22.42	42.46	74.00	-31.54	peak	P
6 *	15164.736	69.58	-20.76	48.82	74.00	-25.18	peak	P

**TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: M**

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2254.801	70.75	-30.65	40.10	74.00	-33.90	peak	P
2	4124.151	64.78	-28.94	35.84	74.00	-38.16	peak	P
3	5357.186	62.99	-27.07	35.92	74.00	-38.08	peak	P
4	7086.750	64.16	-24.90	39.26	74.00	-34.74	peak	P
5	10217.970	69.54	-24.39	45.15	74.00	-28.85	peak	P
6 *	15709.023	68.37	-21.54	46.83	74.00	-27.17	peak	P

**TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: M**

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2322.937	69.35	-30.57	38.78	74.00	-35.22	peak	P
2	3571.264	59.46	-29.04	30.42	74.00	-43.58	peak	P
3	5496.784	56.67	-26.95	29.72	74.00	-44.28	peak	P
4	7447.968	62.59	-24.80	37.79	74.00	-36.21	peak	P
5	10315.897	64.46	-24.44	40.02	74.00	-33.98	peak	P
6 *	13567.719	67.71	-20.98	46.73	74.00	-27.27	peak	P

**TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: H**

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2020.847	68.86	-30.91	37.95	74.00	-36.05	peak	P
2	2727.914	72.74	-29.98	42.76	74.00	-31.24	peak	P
3	3681.310	69.87	-29.04	40.83	74.00	-33.17	peak	P
4 *	9967.111	68.95	-24.21	44.74	74.00	-29.26	peak	P
5	14054.687	63.17	-21.10	42.07	74.00	-31.93	peak	P
6	16528.824	63.18	-19.13	44.05	74.00	-29.95	peak	P

**TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: H**

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2332.356	69.99	-30.56	39.43	74.00	-34.57	peak	P
2	5982.575	62.70	-25.38	37.32	74.00	-36.68	peak	P
3	7994.512	65.81	-25.52	40.29	74.00	-33.71	peak	P
4 *	10575.535	71.77	-24.35	47.42	74.00	-26.58	peak	P
5	13427.275	65.76	-21.02	44.74	74.00	-29.26	peak	P
6	16716.199	59.77	-18.80	40.97	74.00	-33.03	peak	P

**TM1 / Polarization: Horizontal / Band: 2.4G / BW: 2 / CH: L**

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2114.663	68.93	-30.80	38.13	74.00	-35.87	peak	P
2	3059.602	65.18	-29.46	35.72	74.00	-38.28	peak	P
3	4636.317	65.93	-28.40	37.53	74.00	-36.47	peak	P
4 *	7428.618	71.38	-24.80	46.58	74.00	-27.42	peak	P
5	12241.064	63.18	-21.91	41.27	74.00	-32.73	peak	P
6	15896.290	62.50	-21.57	40.93	74.00	-33.07	peak	P

**TM1 / Polarization: Vertical / Band: 2.4G / BW: 2 / CH: L**

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2130.614	74.23	-30.79	43.44	74.00	-30.56	peak	P
2	3458.506	67.10	-29.09	38.01	74.00	-35.99	peak	P
3	6327.621	67.02	-25.36	41.66	74.00	-32.34	peak	P
4 *	10732.583	72.56	-24.02	48.54	74.00	-25.46	peak	P
5	13941.401	68.27	-21.08	47.19	74.00	-26.81	peak	P
6	17492.235	63.11	-16.35	46.76	74.00	-27.24	peak	P



## TM1 / Polarization: Horizontal / Band: 2.4G / BW: 2 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2107.950	72.27	-30.81	41.46	74.00	-32.54	peak	P
2	2879.415	70.86	-29.72	41.14	74.00	-32.86	peak	P
3	5140.275	62.53	-27.25	35.28	74.00	-38.72	peak	P
4	7358.100	64.37	-24.82	39.55	74.00	-34.45	peak	P
5 *	11644.020	69.09	-22.82	46.27	74.00	-27.73	peak	P
6	16202.446	64.78	-20.62	44.16	74.00	-29.84	peak	P

## TM1 / Polarization: Vertical / Band: 2.4G / BW: 2 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2136.781	72.02	-30.78	41.24	74.00	-32.76	peak	P
2	3614.882	69.02	-29.04	39.98	74.00	-34.02	peak	P
3	6115.447	68.77	-25.35	43.42	74.00	-30.58	peak	P
4	8832.810	69.58	-24.65	44.93	74.00	-29.07	peak	P
5 *	11968.178	69.73	-22.25	47.48	74.00	-26.52	peak	P
6	15546.413	66.96	-21.51	45.45	74.00	-28.55	peak	P

## TM1 / Polarization: Horizontal / Band: 2.4G / BW: 2 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2250.894	71.58	-30.65	40.93	74.00	-33.07	peak	P
2	3322.310	70.10	-29.22	40.88	74.00	-33.12	peak	P
3	6229.626	67.53	-25.35	42.18	74.00	-31.82	peak	P
4	10004.632	69.70	-24.29	45.41	74.00	-28.59	peak	P
5 *	11728.463	70.43	-22.67	47.76	74.00	-26.24	peak	P
6	13606.992	67.95	-20.99	46.96	74.00	-27.04	peak	P

## TM1 / Polarization: Vertical / Band: 2.4G / BW: 2 / CH: H

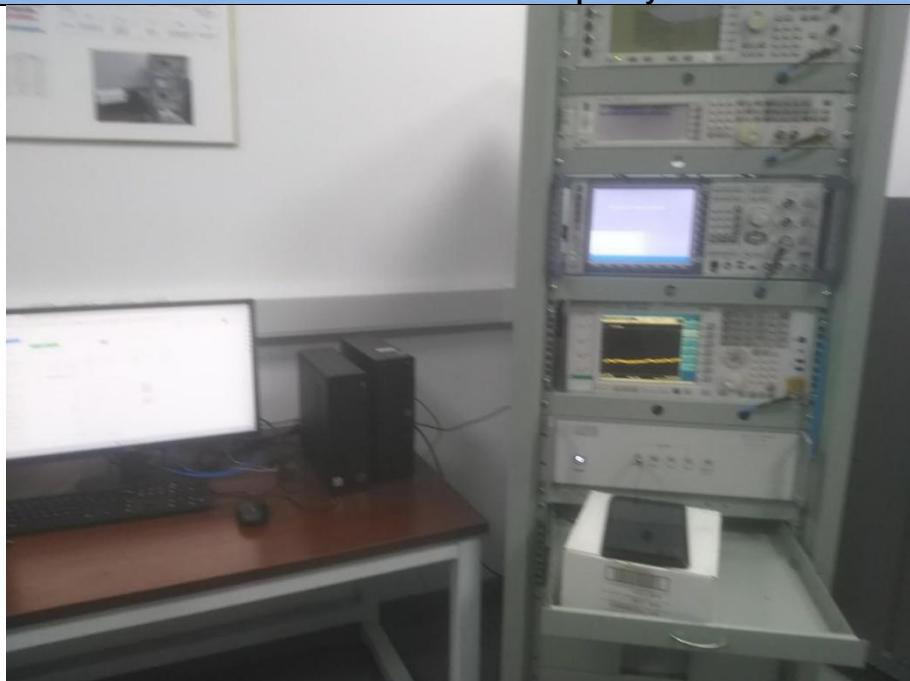
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2375.902	68.22	-30.51	37.71	74.00	-36.29	peak	P
2	4630.960	63.90	-28.41	35.49	74.00	-38.51	peak	P
3	6122.522	65.29	-25.34	39.95	74.00	-34.05	peak	P
4	8267.099	69.24	-25.42	43.82	74.00	-30.18	peak	P
5 *	12361.953	69.79	-21.78	48.01	74.00	-25.99	peak	P
6	15928.485	68.83	-21.58	47.25	74.00	-26.75	peak	P

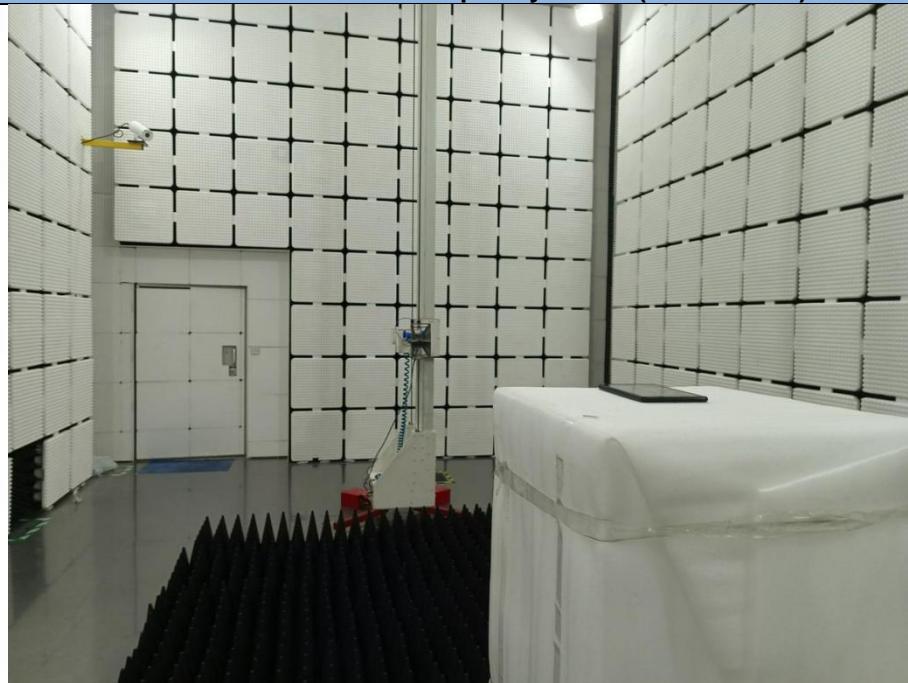
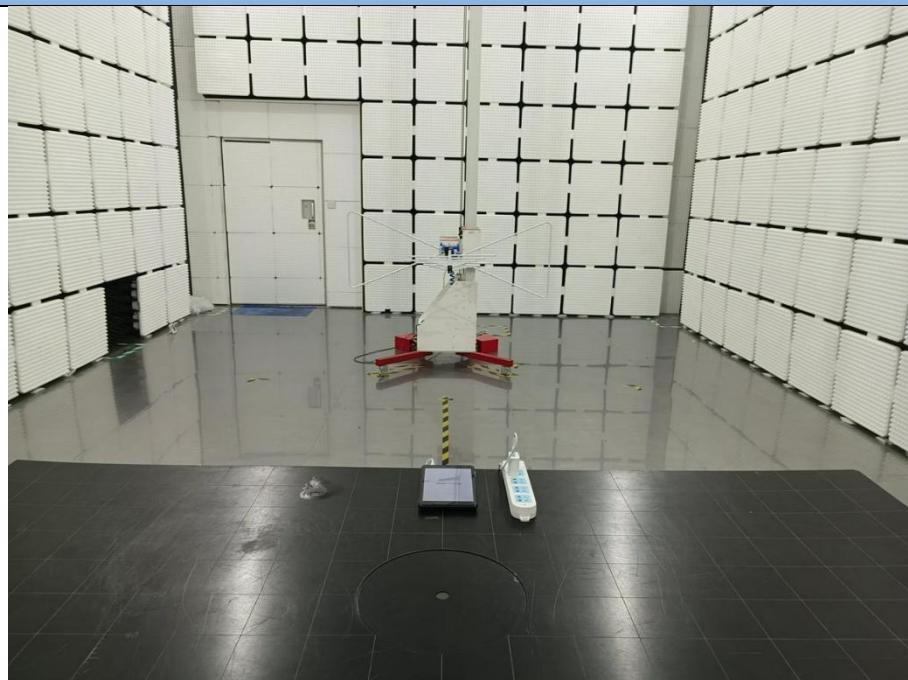
## 7 Test Setup Photos

Conducted Emission at AC power line



Occupied Bandwidth  
Maximum Conducted Output Power  
Power Spectral Density  
Emissions in non-restricted frequency bands



**Band edge emissions (Radiated)  
Emissions in restricted frequency bands (above 1GHz)****Emissions in restricted frequency bands (below 1GHz)**

## 8 EUT Constructional Details (EUT Photos)

Please refer to the report No.BTF230324R00701.

# Appendix

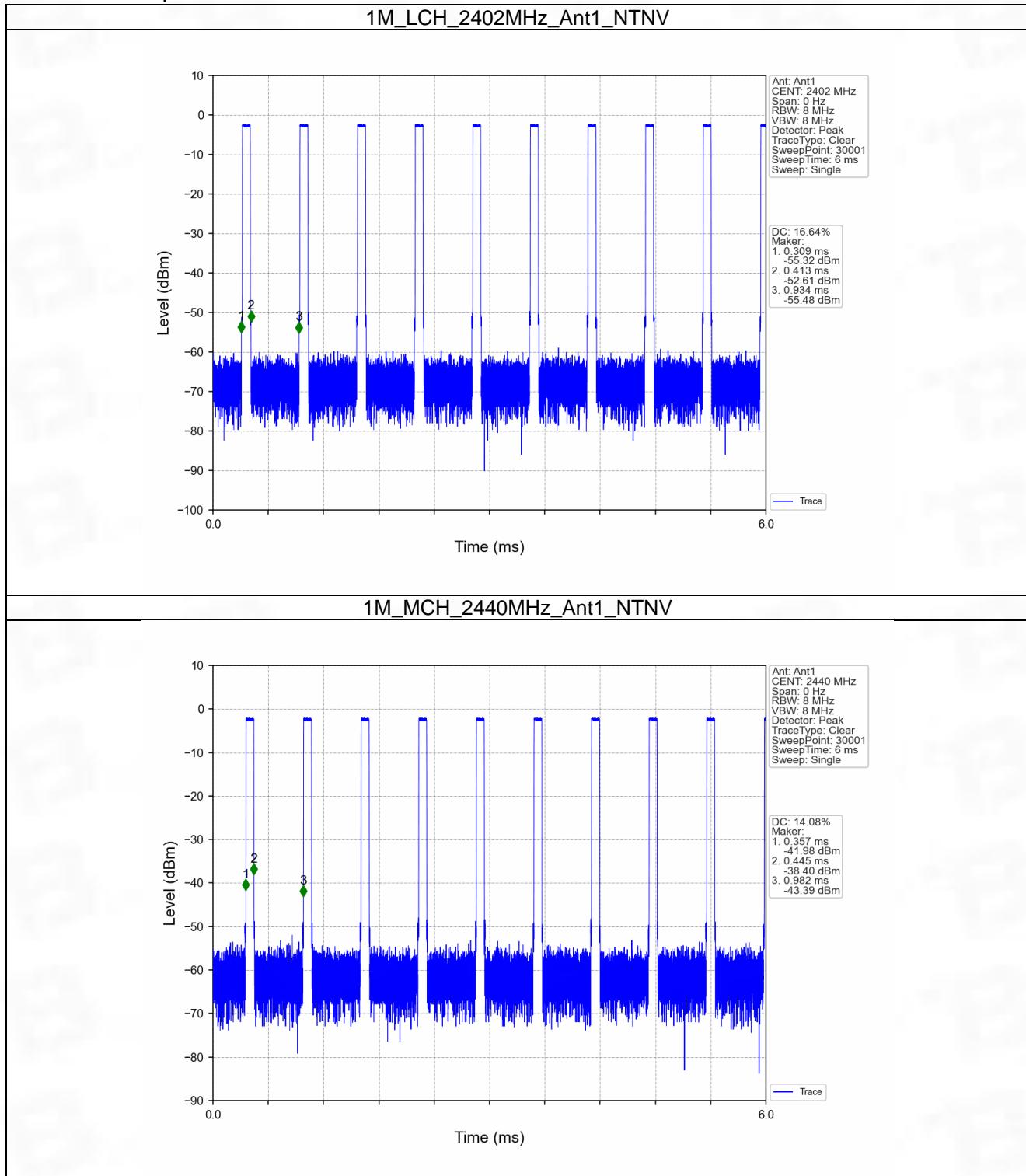
## 1. Duty Cycle

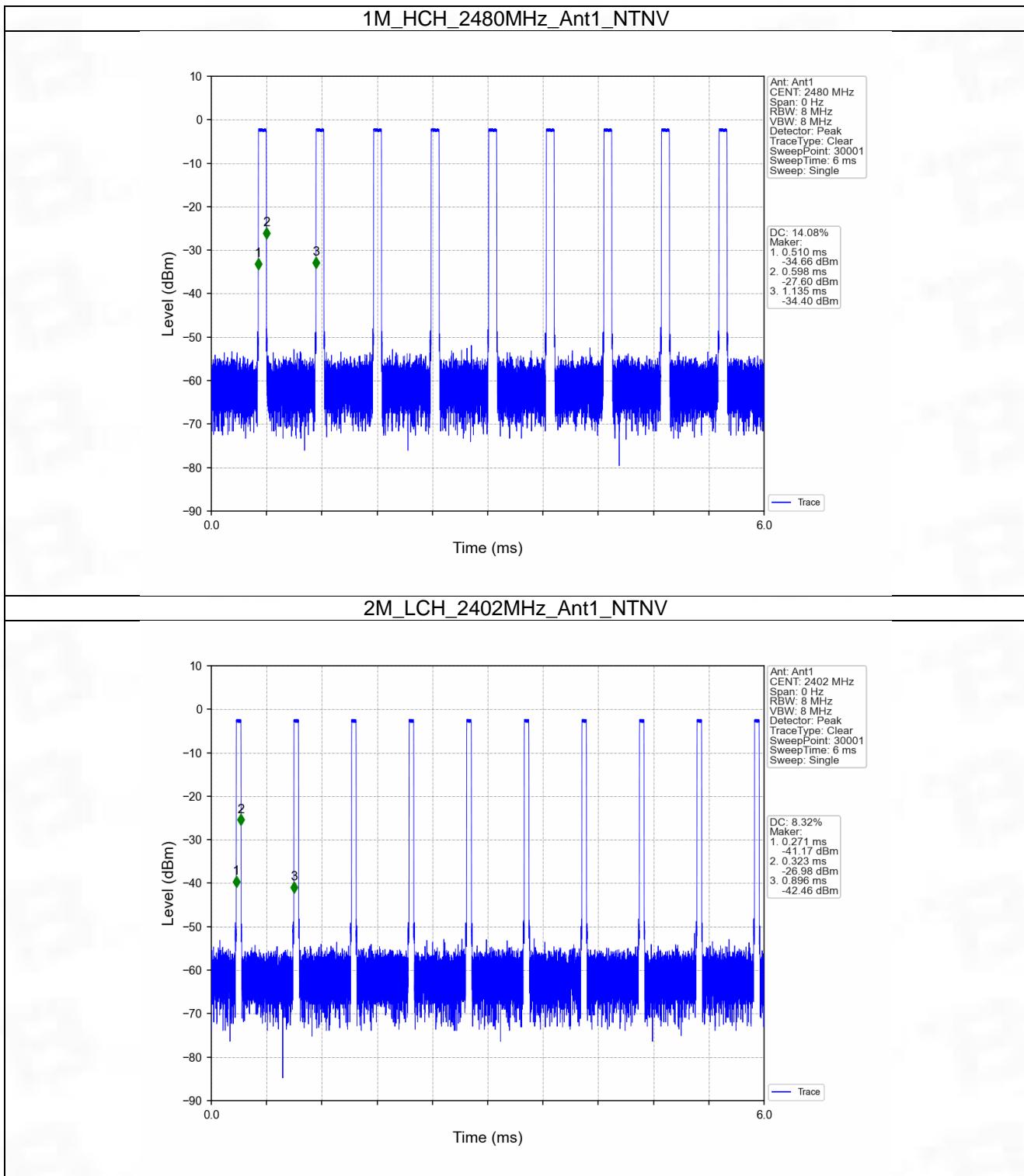
### 1.1 Ant1

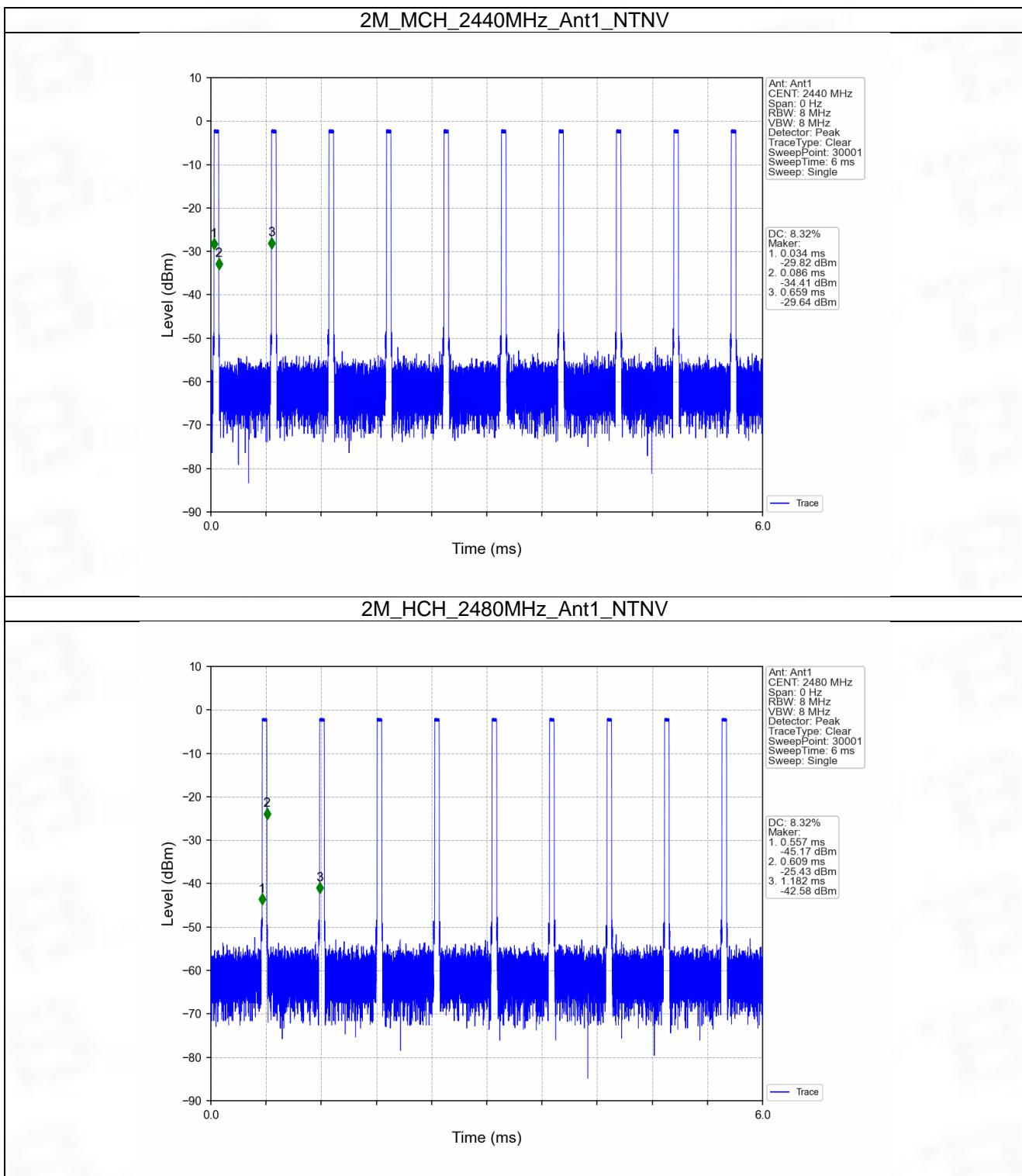
#### 1.1.1 Test Result

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
1M	SISO	2402	0.104	0.625	16.64	7.79	0.00
		2440	0.088	0.625	14.08	8.51	0.00
		2480	0.088	0.625	14.08	8.51	0.00
2M	SISO	2402	0.052	0.625	8.32	10.80	0.00
		2440	0.052	0.625	8.32	10.80	0.00
		2480	0.052	0.625	8.32	10.80	0.00

### 1.1.2 Test Graph







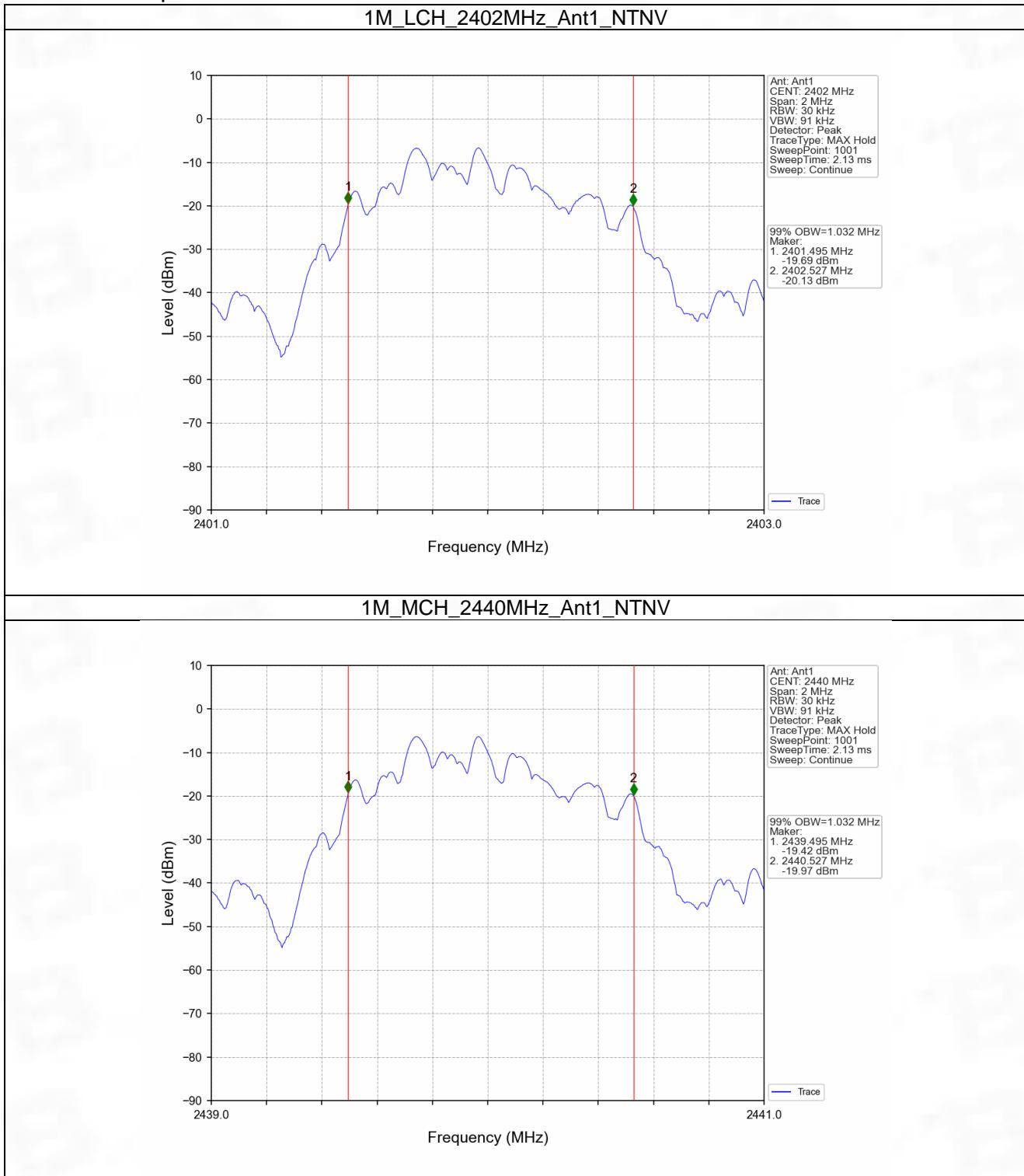
## 2. Bandwidth

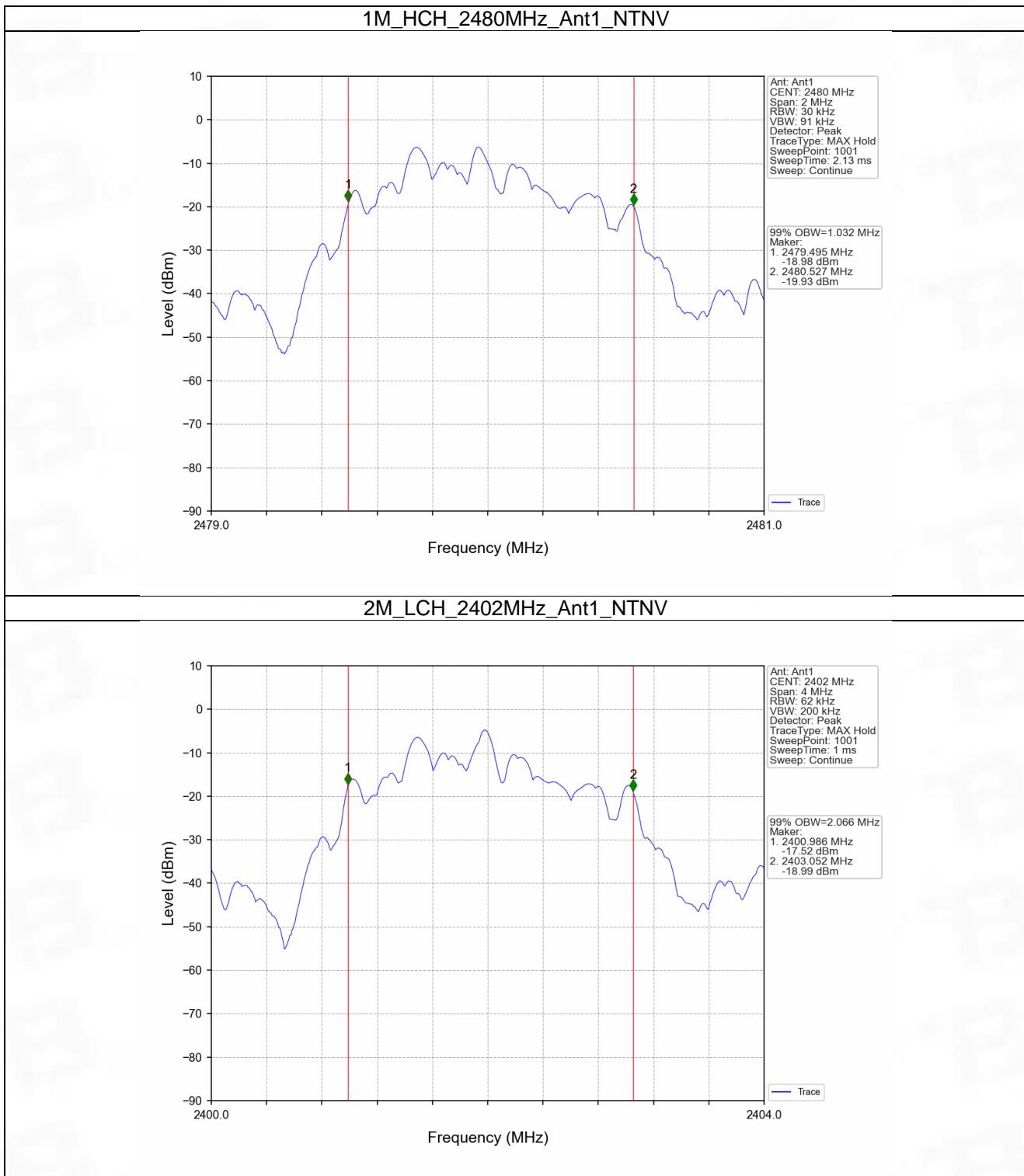
### 2.1 OBW

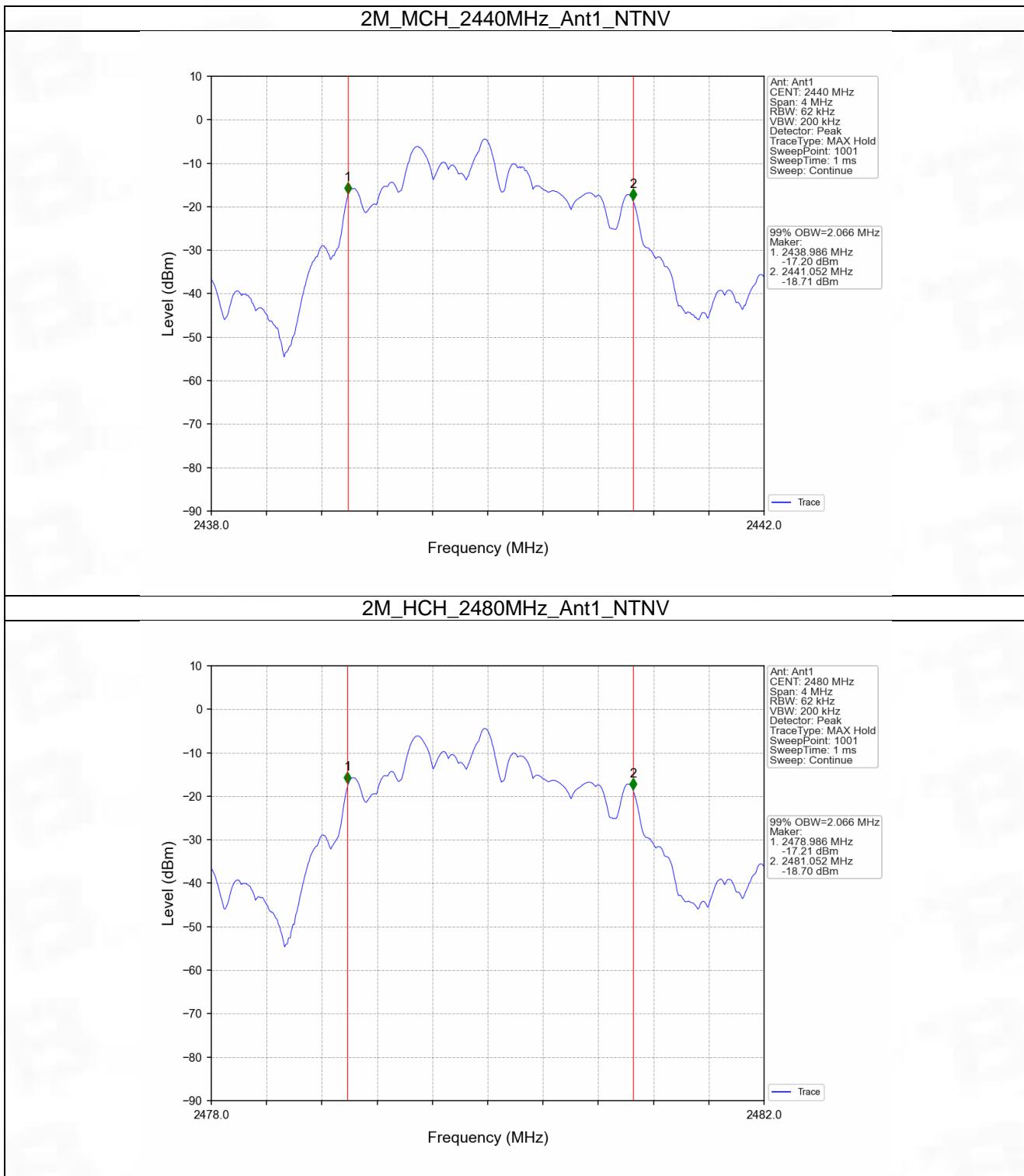
#### 2.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result		
1M	SISO	2402	1	1.032		Pass
		2440	1	1.032		Pass
		2480	1	1.032		Pass
2M	SISO	2402	1	2.066		Pass
		2440	1	2.066		Pass
		2480	1	2.066		Pass

### 2.1.2 Test Graph





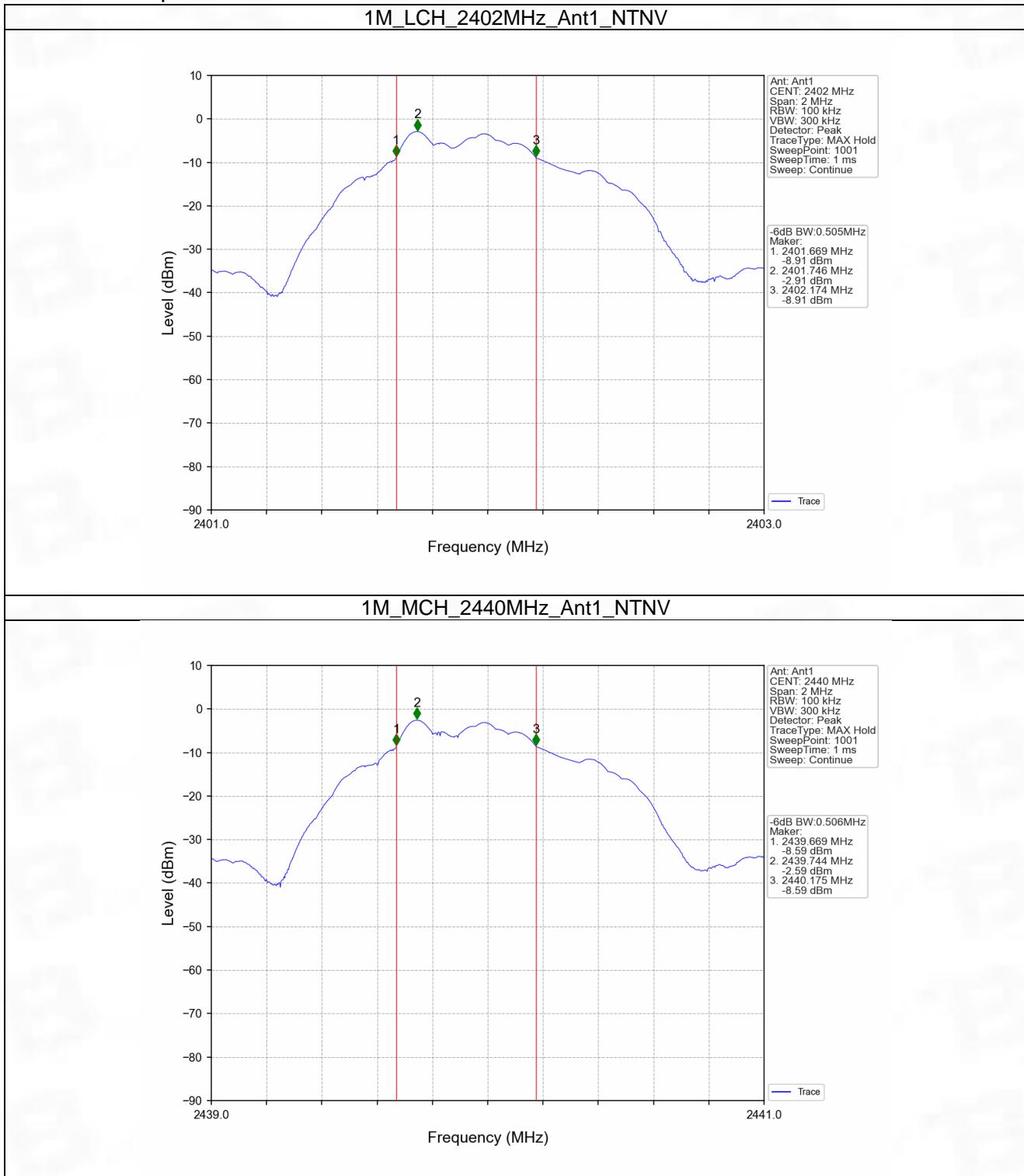


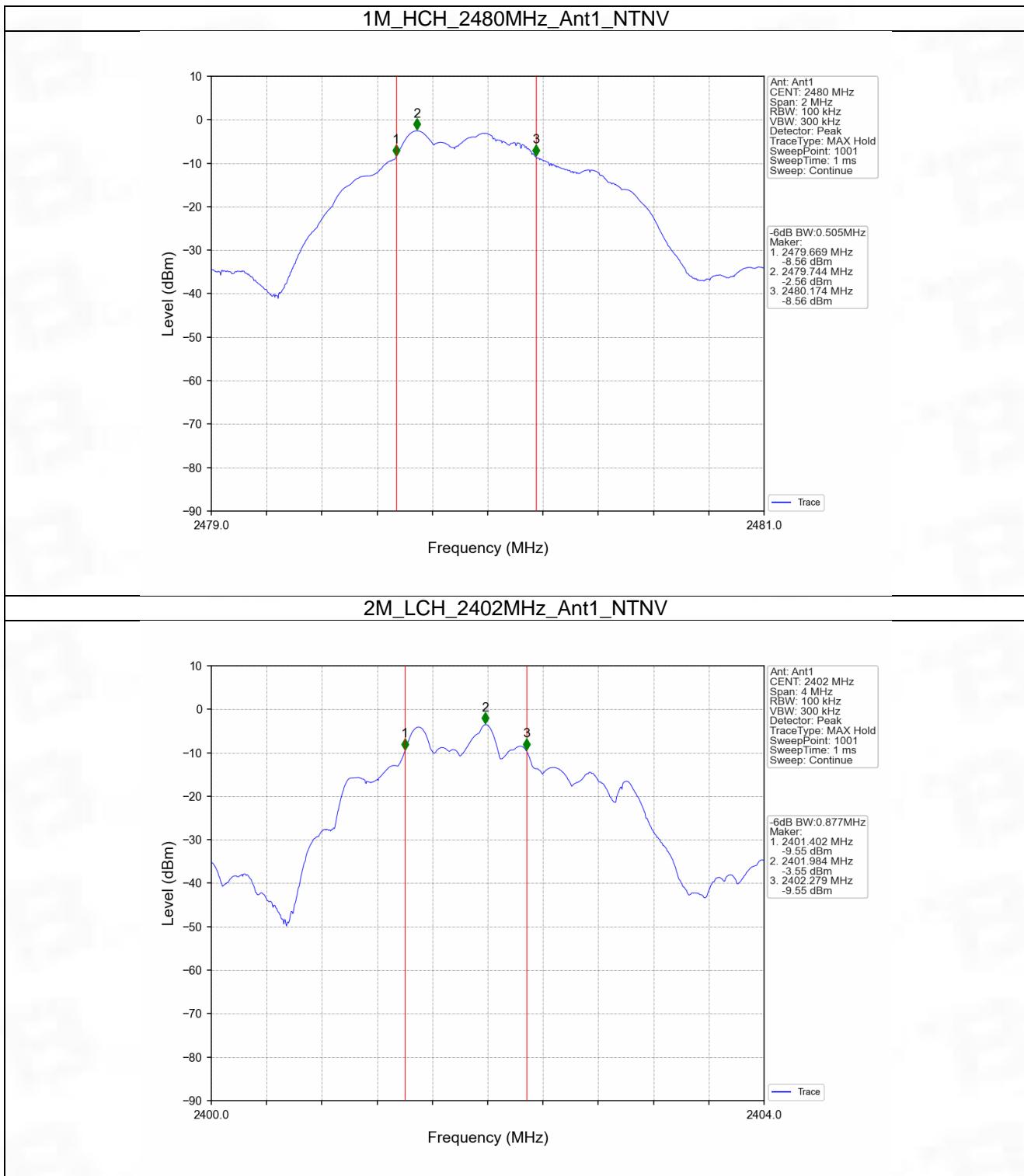
## 2.2 6dB BW

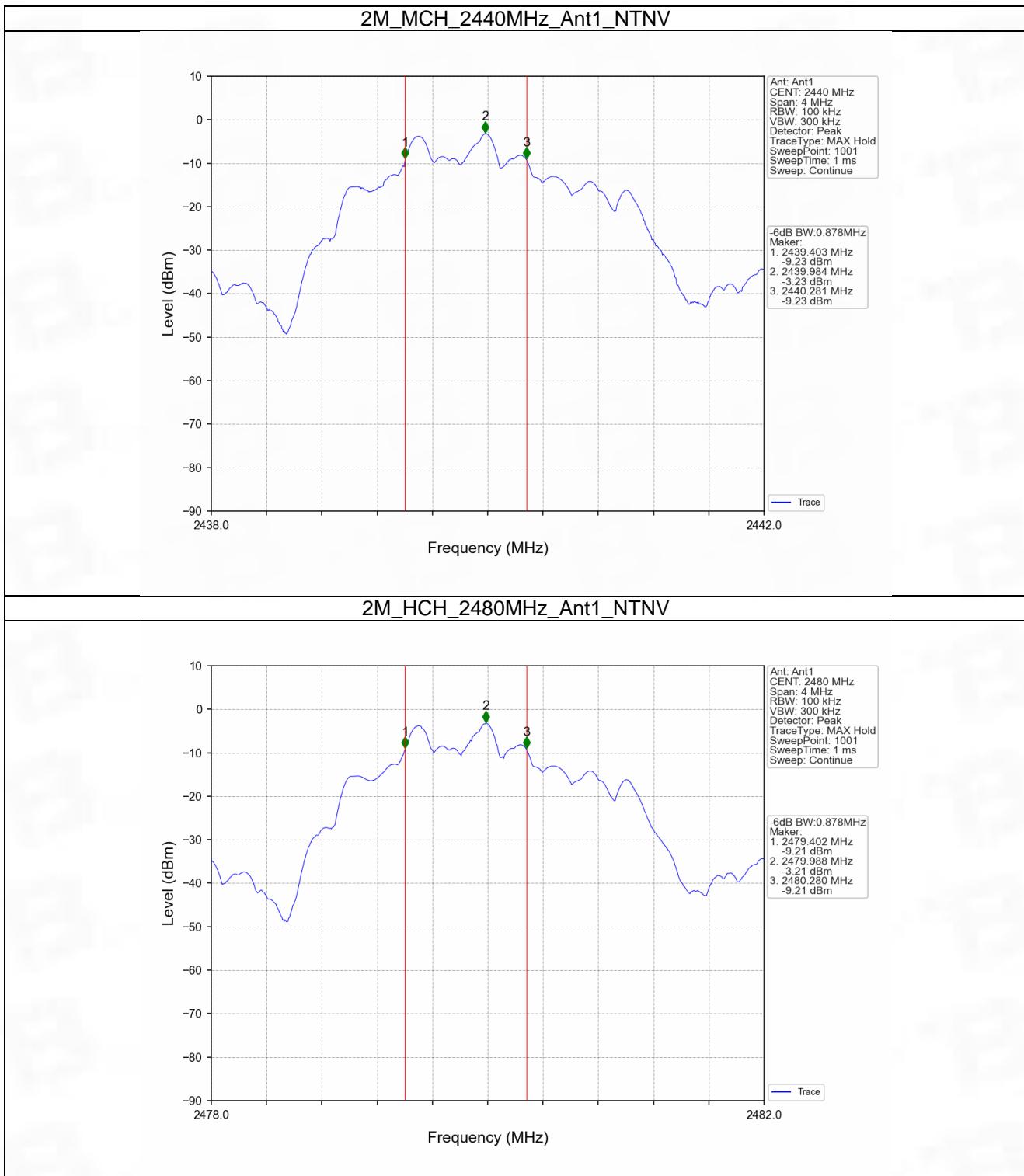
### 2.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	0.505	>=0.5	Pass
		2440	1	0.506	>=0.5	Pass
		2480	1	0.505	>=0.5	Pass
2M	SISO	2402	1	0.877	>=0.5	Pass
		2440	1	0.878	>=0.5	Pass
		2480	1	0.878	>=0.5	Pass

### 2.2.2 Test Graph







### 3. Maximum Conducted Output Power

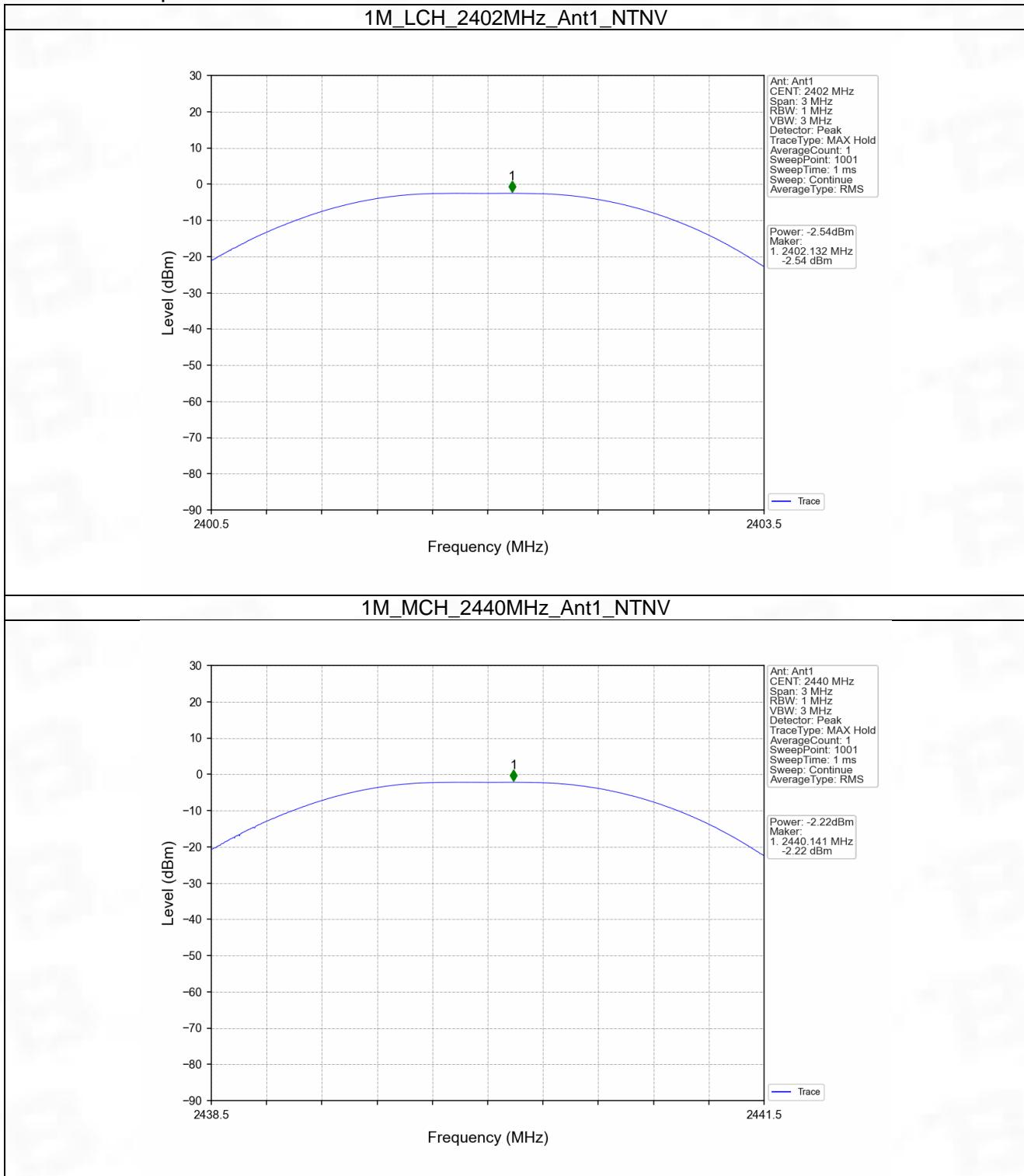
#### 3.1 Power

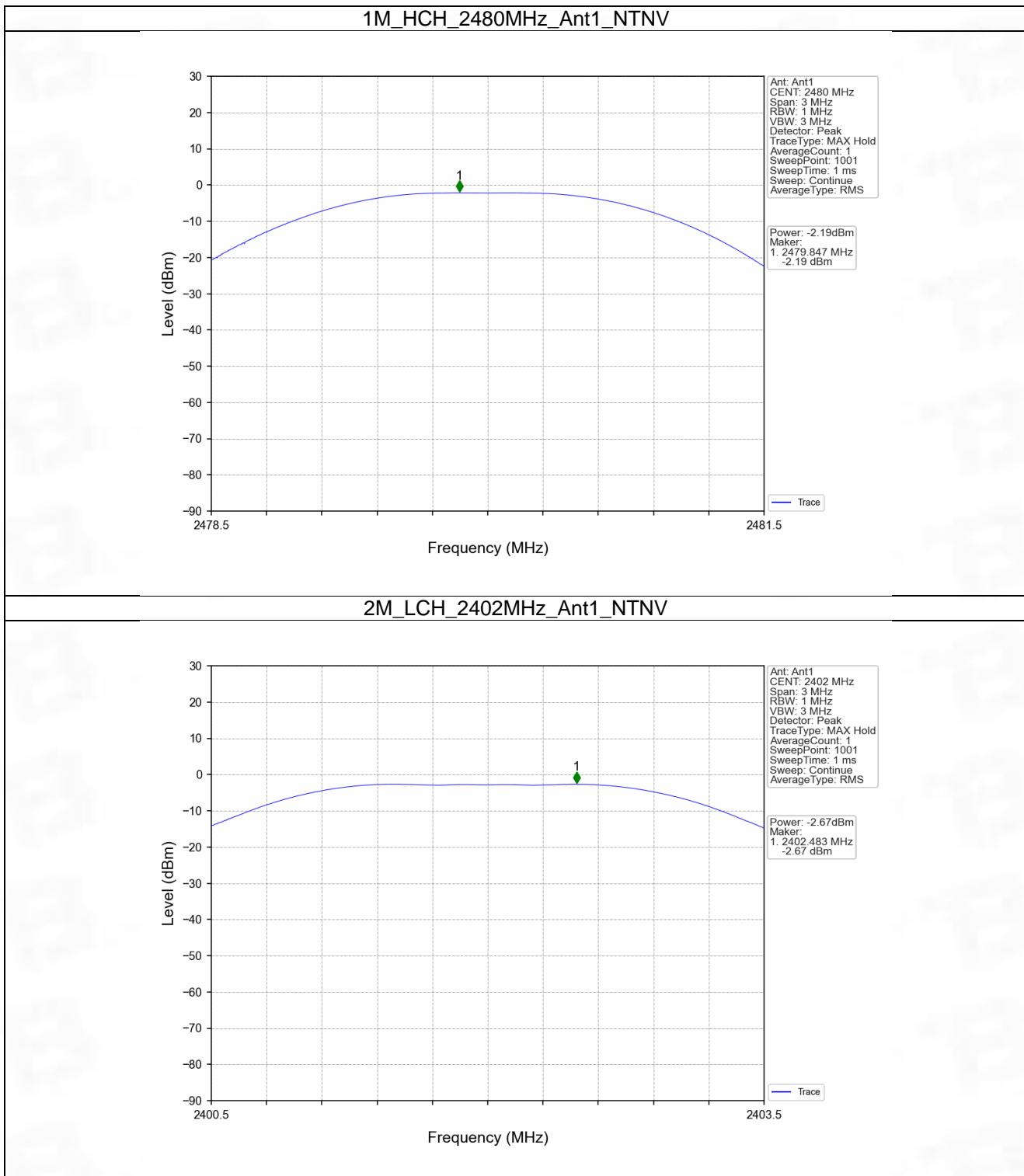
##### 3.1.1 Test Result

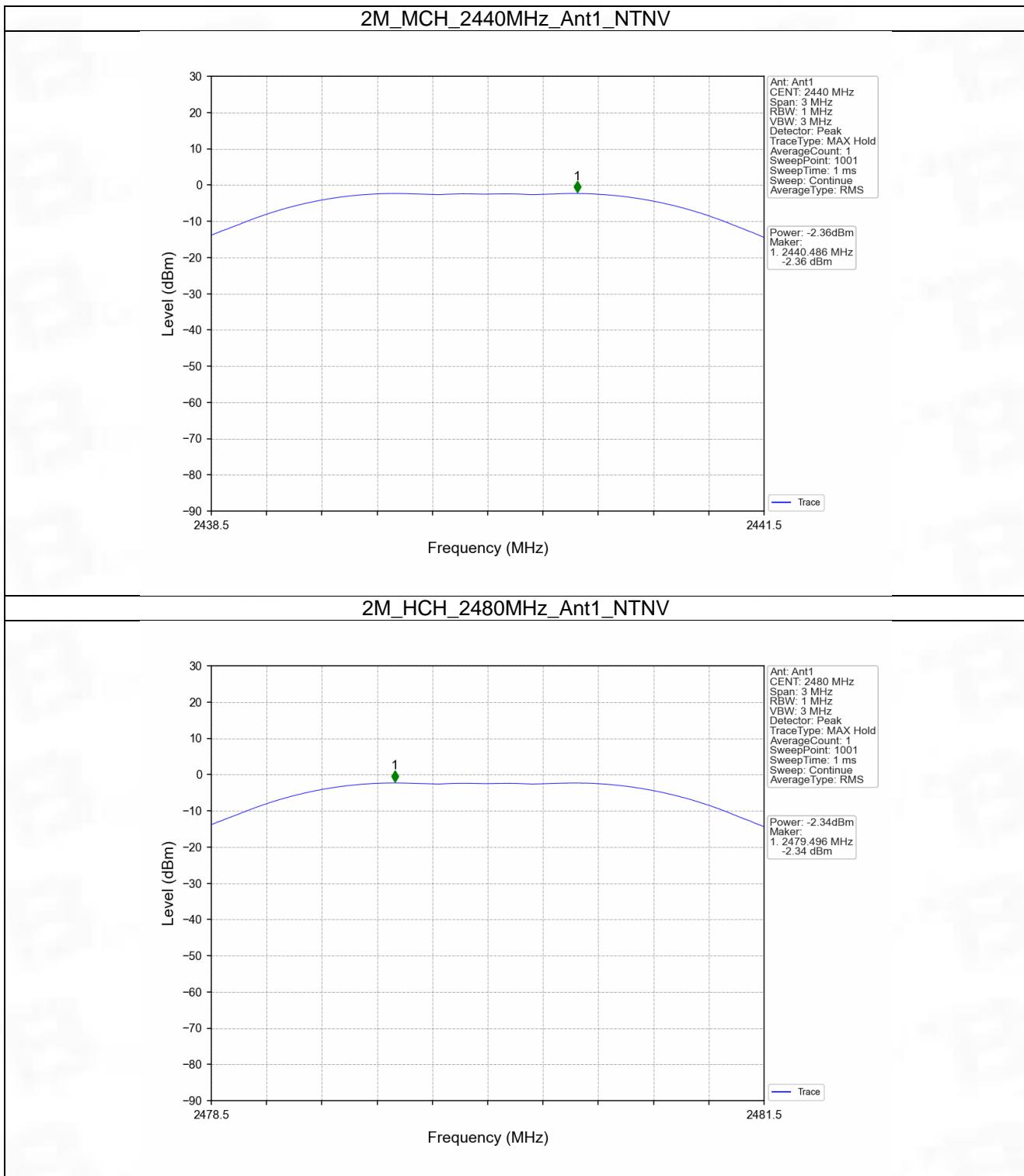
Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	-2.54	<=30	Pass
		2440	-2.22	<=30	Pass
		2480	-2.19	<=30	Pass
2M	SISO	2402	-2.67	<=30	Pass
		2440	-2.36	<=30	Pass
		2480	-2.34	<=30	Pass

Note1: Antenna Gain: Ant1: 2.00dBi;

### 3.1.2 Test Graph







## 4. Maximum Power Spectral Density

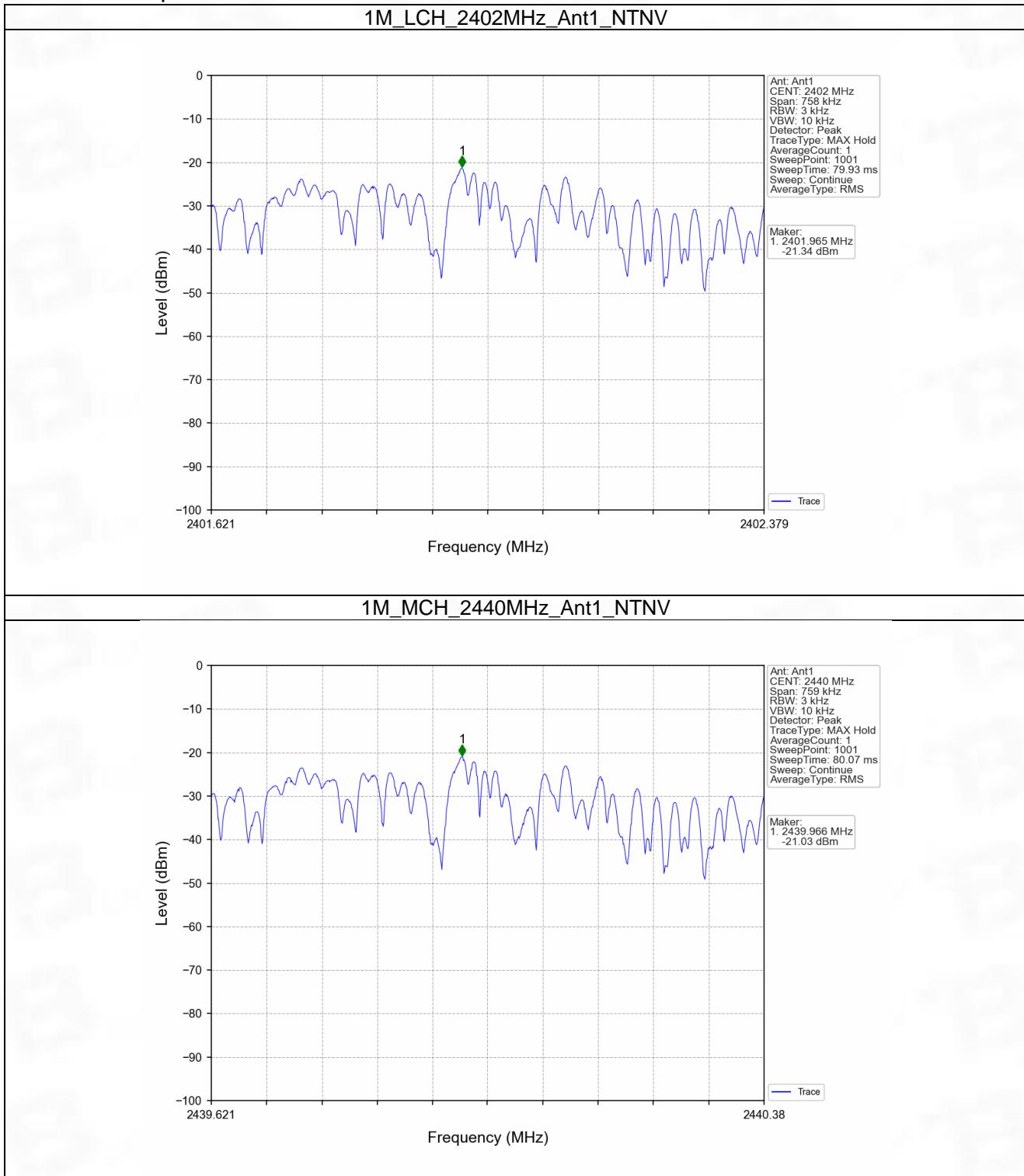
### 4.1 PSD

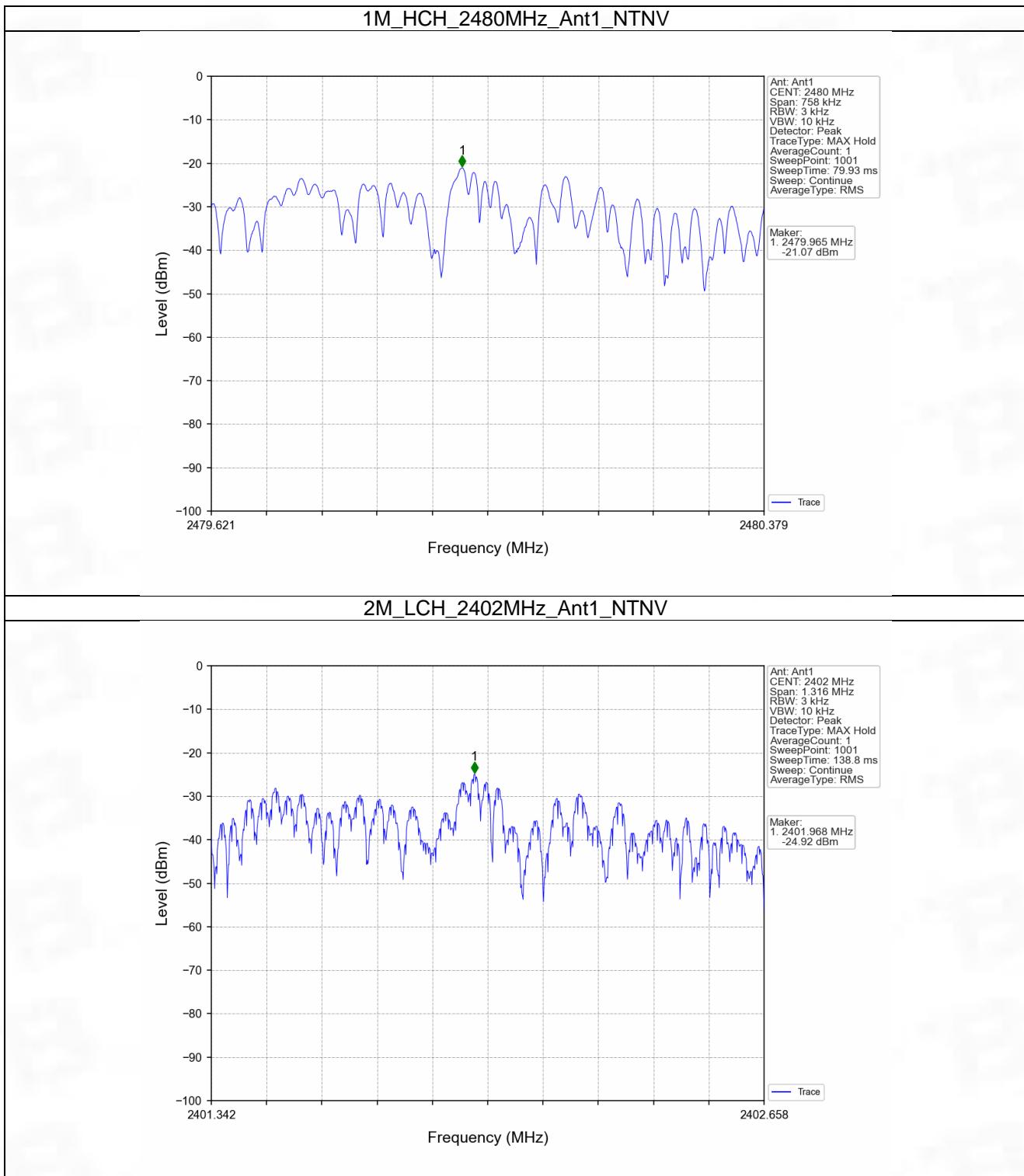
#### 4.1.1 Test Result

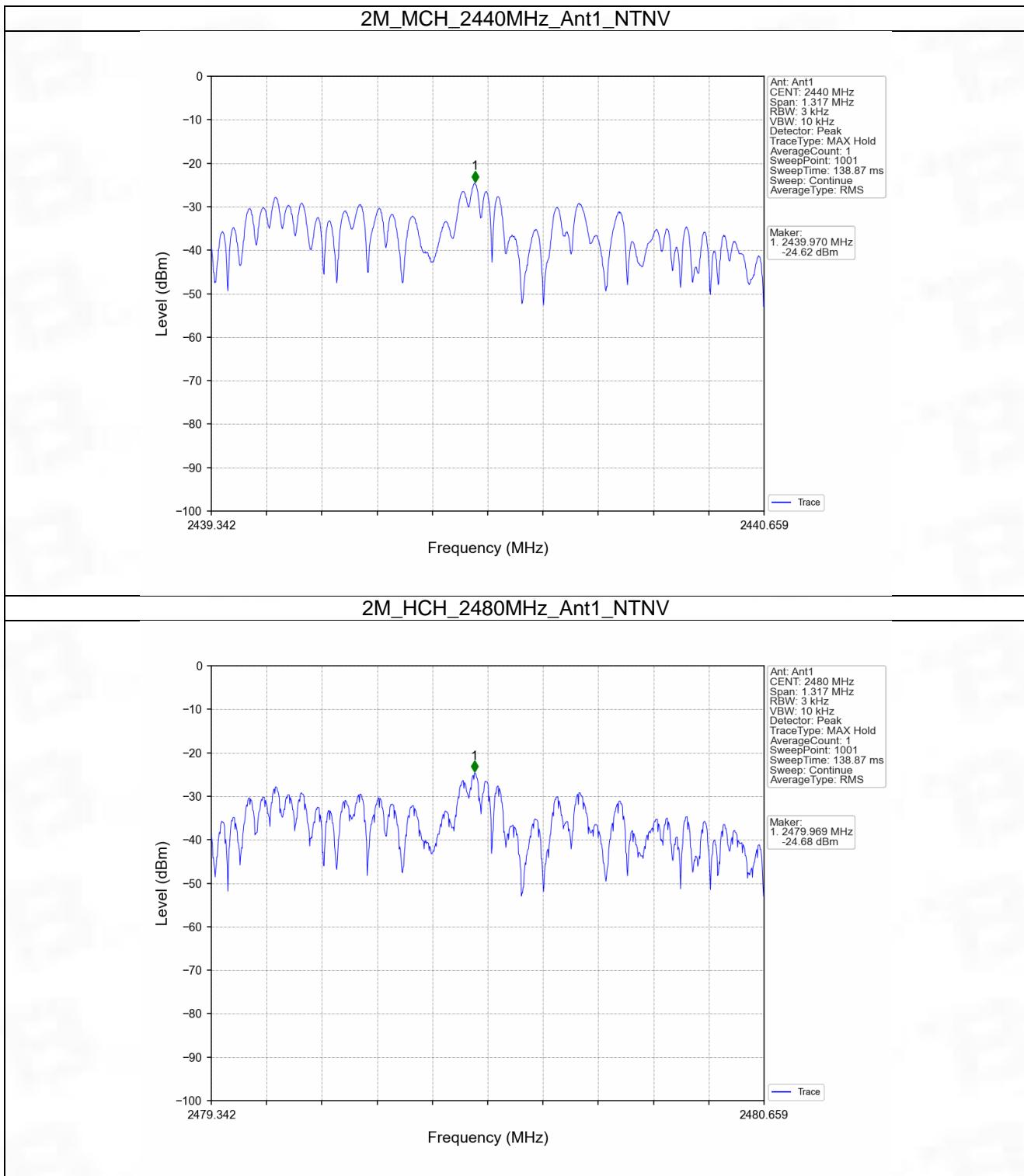
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
1M	SISO	2402	-21.34	<=8	Pass
		2440	-21.03	<=8	Pass
		2480	-21.07	<=8	Pass
2M	SISO	2402	-24.92	<=8	Pass
		2440	-24.62	<=8	Pass
		2480	-24.68	<=8	Pass

Note1: Antenna Gain: Ant1: 2.00dBi;

#### 4.1.2 Test Graph







## 5. Unwanted Emissions In Non-restricted Frequency Bands

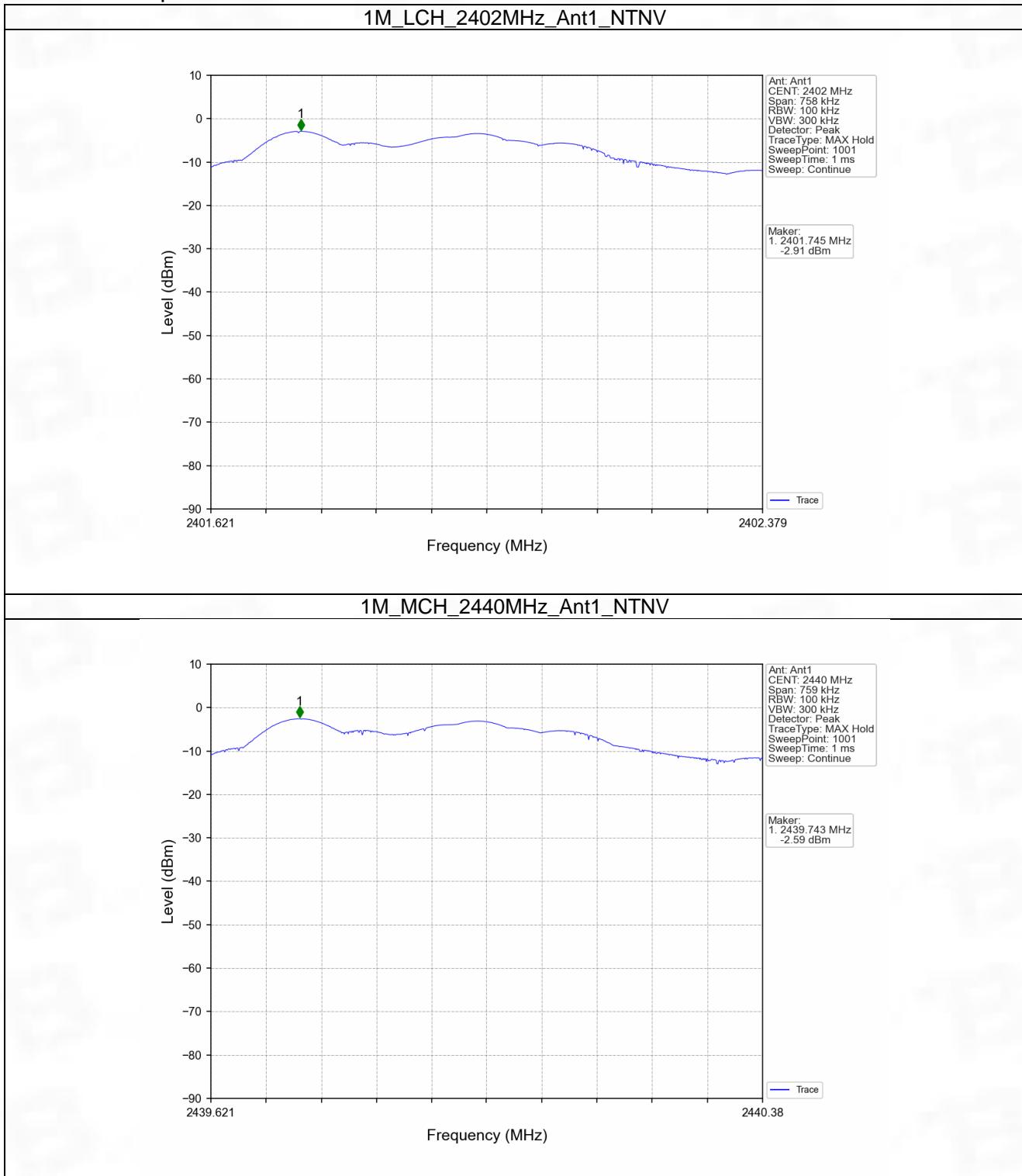
### 5.1 Ref

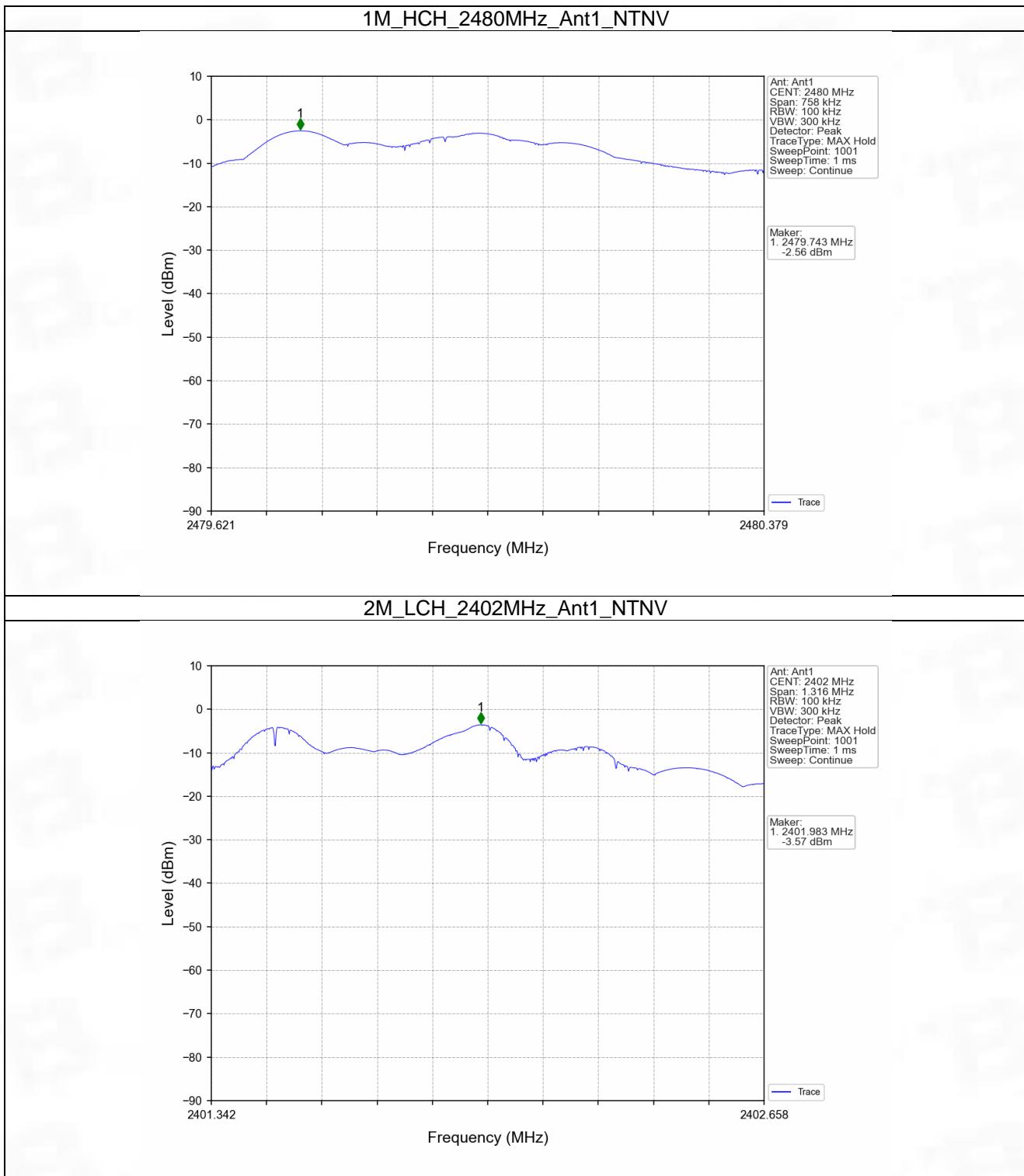
#### 5.1.1 Test Result

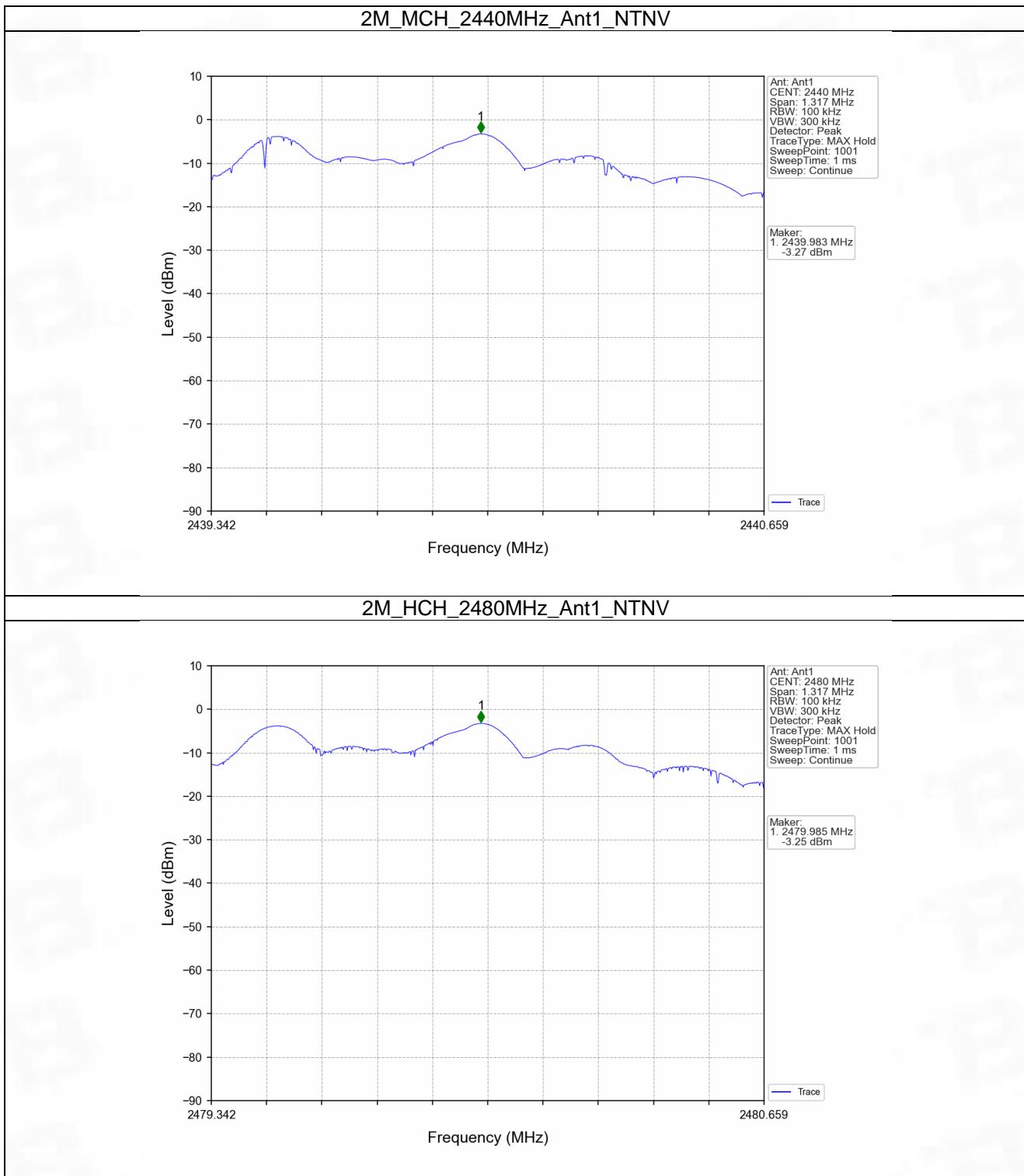
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
1M	SISO	2402	1	-2.91
		2440	1	-2.59
		2480	1	<b>-2.56</b>
2M	SISO	2402	1	-3.57
		2440	1	-3.27
		2480	1	<b>-3.25</b>

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

### 5.1.2 Test Graph







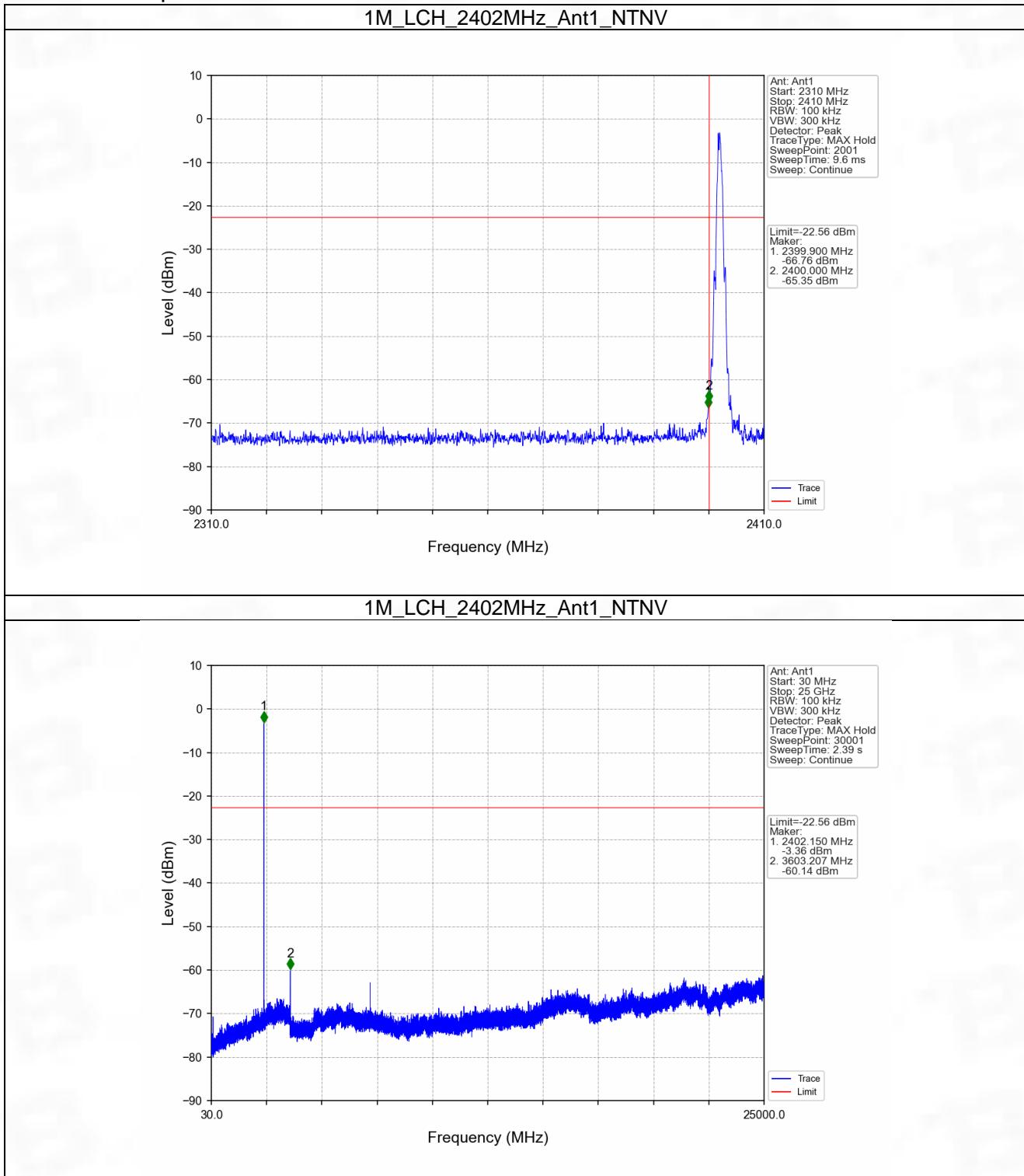
## 5.2 CSE

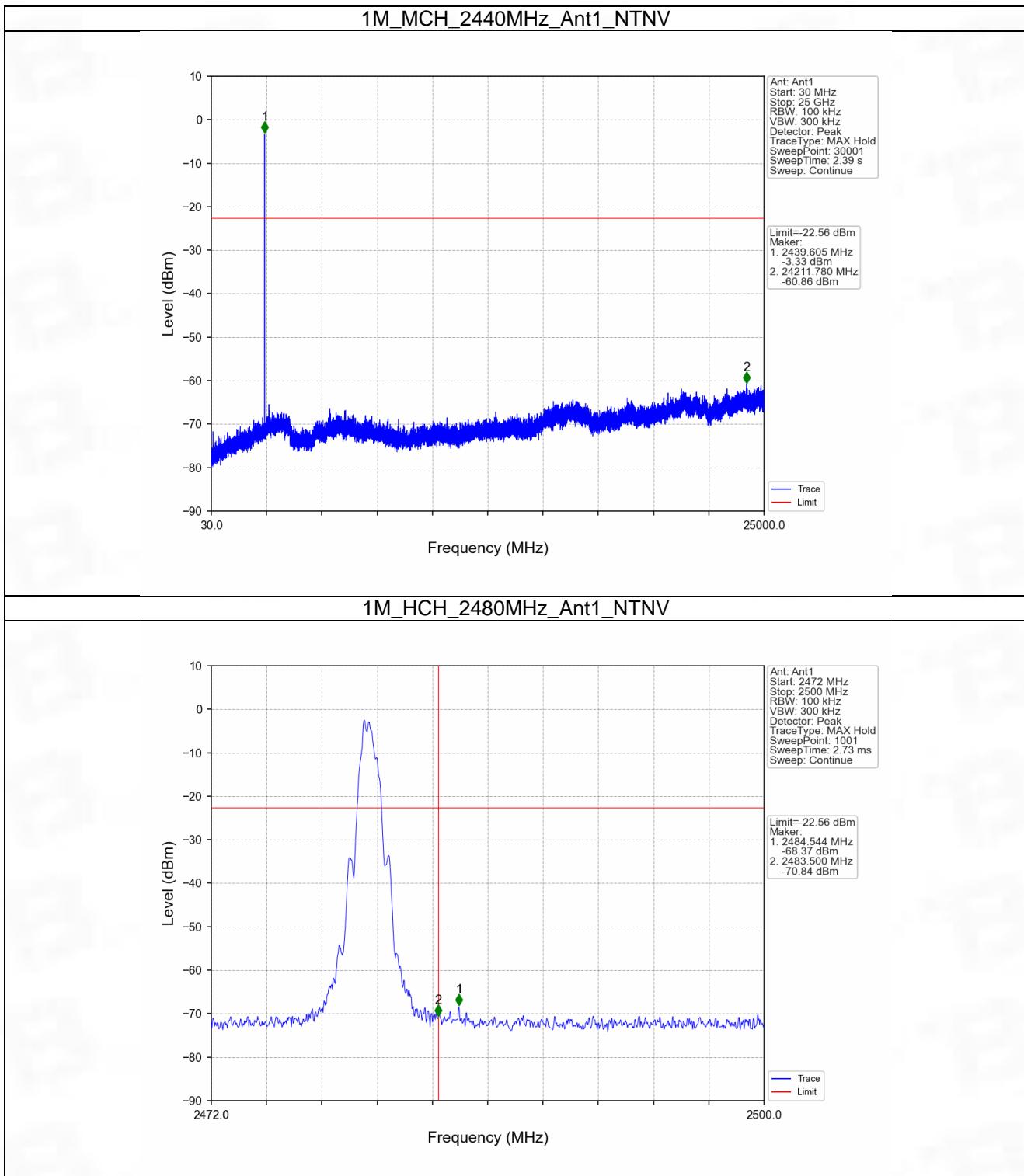
### 5.2.1 Test Result

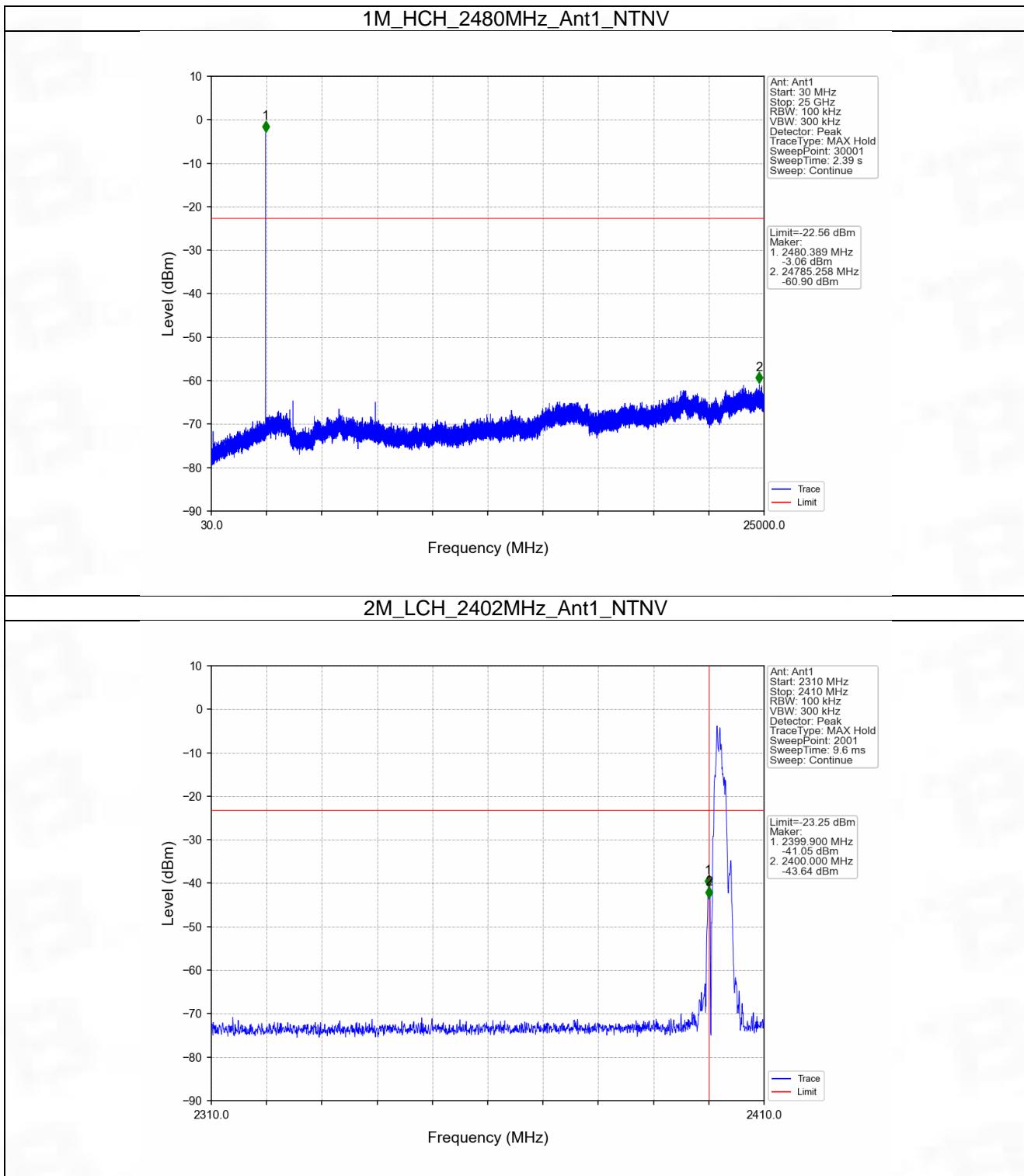
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
1M	SISO	2402	1	-2.56	-22.56	Pass
		2440	1	-2.56	-22.56	Pass
		2480	1	-2.56	-22.56	Pass
2M	SISO	2402	1	-3.25	-23.25	Pass
		2440	1	-3.25	-23.25	Pass
		2480	1	-3.25	-23.25	Pass

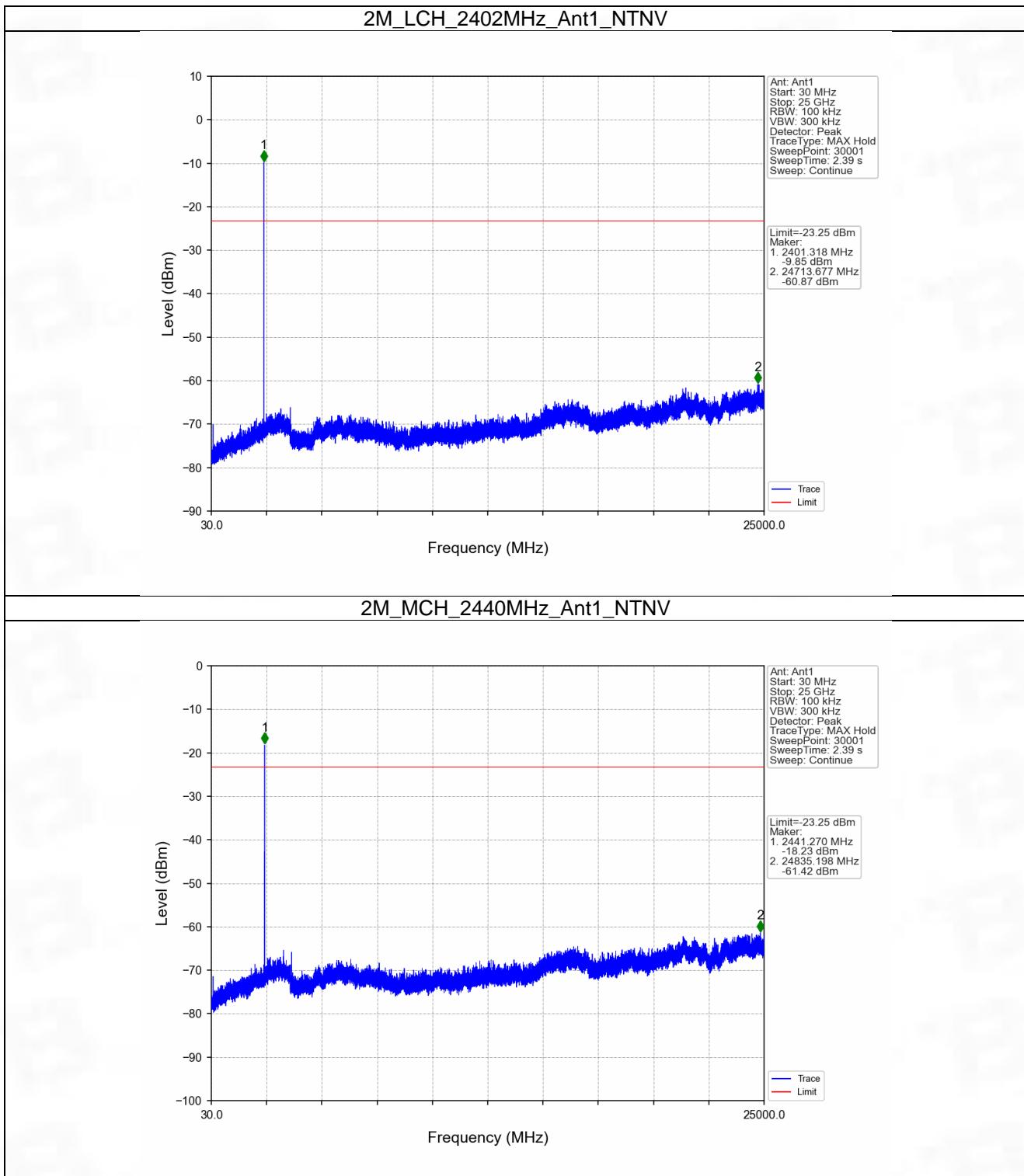
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

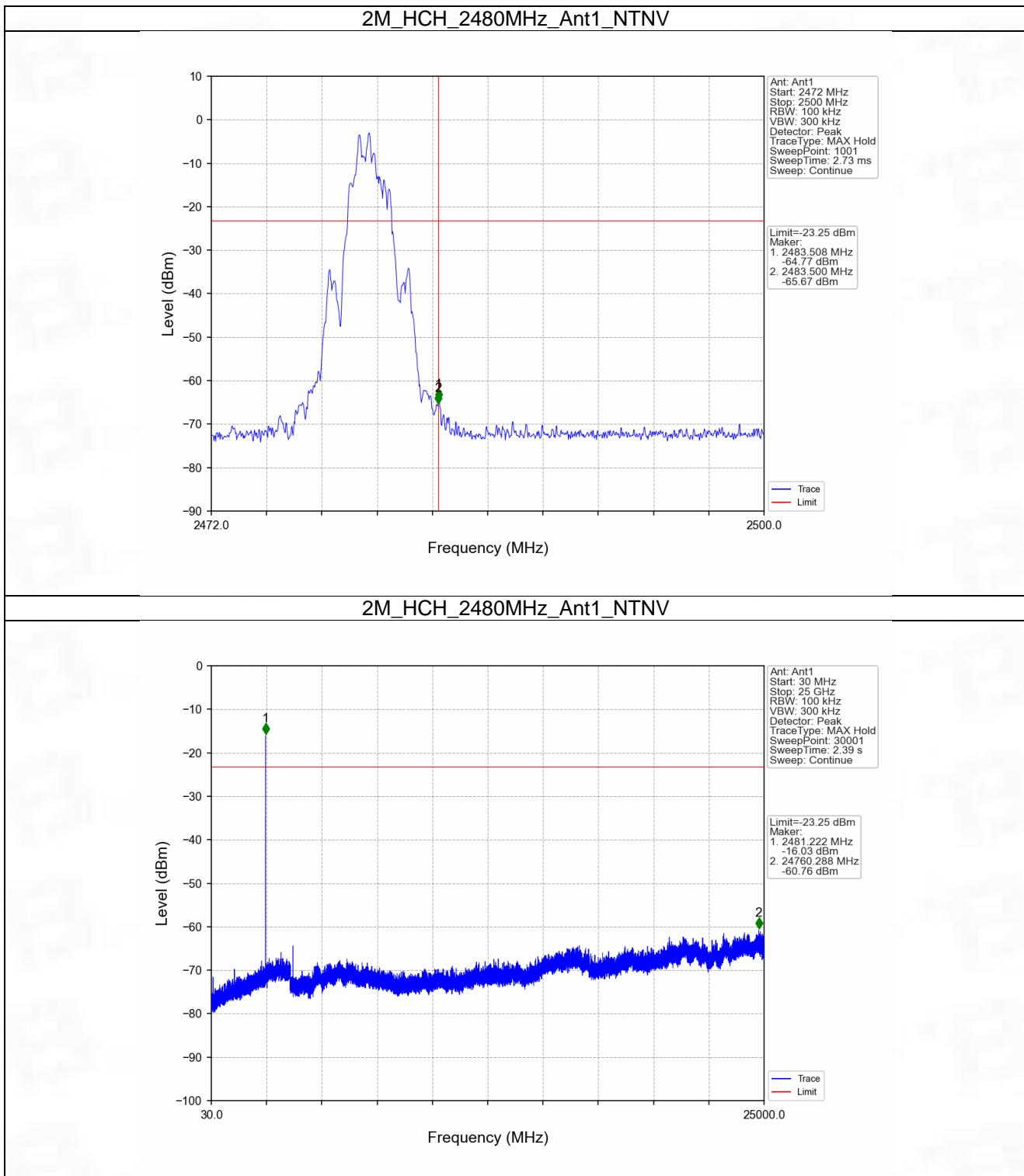
### 5.2.2 Test Graph











## 6. Form731

### 6.1 Form731

#### 6.1.1 Test Result

Lower Freq (MHz)	High Freq (MHz)	MAX Power (W)	MAX Power (dBm)
2402	2480	0.0006	-2.19



Test Report Number: BTF230324R00702



BTF Testing Lab (Shenzhen) Co., Ltd.

F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street,  
Bao'an District, Shenzhen, China

[www.btf-lab.com](http://www.btf-lab.com)

**-- END OF REPORT --**