



RF Test Report

For

Applicant Name: Shenzhen Eview GPS Technology
Address: Rm 201, building1-A, Nankechuang yuangu, Dalang, Longhua District, Shenzhen China.
EUT Name: Personal Safety Watch
Brand Name: N/A
Model Number: EV-06X

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: BTFSZ230307R00103
Test Standards: 47 CFR Part 15.247
Test Conclusion: Pass
FCC ID: 2AUMJEV-06X
Test Date: 2023-03-07 to 2023-04-18
Date of Issue: 2023-04-18

Prepared By:

Chris Liu

Chris Liu / Project Engineer
2023-04-18

Date:

Approved By:

Ryan.CJ

Ryan.CJ / EMC Manager
2023-04-18

Date:

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Test Report Number: BTFSZ230307R00103

Revision History		
Version	Issue Date	Revisions Content
R_V0	2023-04-18	Original
Note: Once the revision has been made, then previous versions reports are invalid.		

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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:	Shenzhen Eview GPS Technology
Address:	Rm 201,building1-A,Nankechuang yuangu,Dalang, Longhua District,Shenzhen China.

2.2 Manufacturer Information

Company Name:	Shenzhen Eview GPS Technology
Address:	Rm 201,building1-A,Nankechuang yuangu,Dalang, Longhua District,Shenzhen China.

2.3 Factory Information

Company Name:	Shenzhen Eview GPS Technology
Address:	Rm 201,building1-A,Nankechuang yuangu,Dalang, Longhua District,Shenzhen China.

2.4 General Description of Equipment under Test (EUT)

EUT Name:	Personal Safety Watch
Test Model Number:	EV-06X

2.5 Technical Information

Power Supply:	DC 3.8V from battery
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz; 802.11n(HT40): 2422MHz to 2452MHz
Number of Channels:	802.11b/g/n(HT20): 11 Channels; 802.11n(HT40): 7 Channels
Modulation Type:	802.11b: DSSS(CCK, DQPSK, DBPSK); 802.11g: OFDM(BPSK, QPSK, 16QAM, 64QAM); 802.11n(HT20 and HT40): OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type:	LDS PIFA Antenna
Antenna Gain:	-2.66

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&SCHWARZ	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-SMAM-10m	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-SMAM-1m	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

Emissions in restricted frequency bands (below 1GHz)

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-10m	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-1m	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

Emissions in restricted frequency bands (above 1GHz)

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-10m	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-1m	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.
Adapter	Huawei	HW-059200CHQ	/

4.3 Test Modes

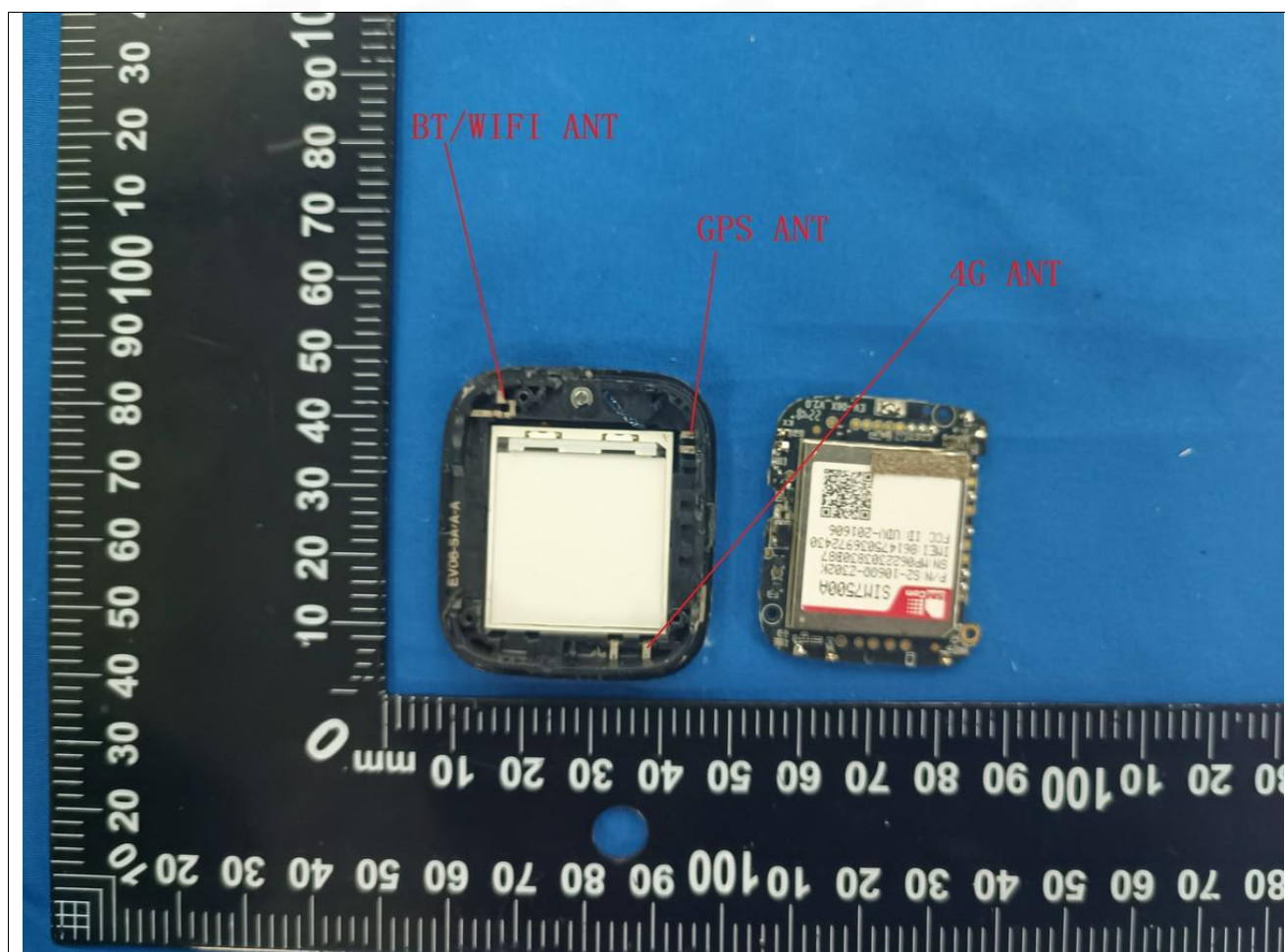
No.	Test Modes	Description
TM1	802.11b mode	Keep the EUT in 802.11b transmitting mode.
TM2	802.11g mode	Keep the EUT in 802.11g transmitting mode.
TM3	802.11n(HT20) mode	Keep the EUT in 802.11n(HT20) transmitting mode.
TM4	802.11n(HT40) mode	Keep the EUT in 802.11n(HT40) transmitting mode.

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.
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5.1.1 Conclusion:



6 Radio Spectrum Matter Test Results (RF)

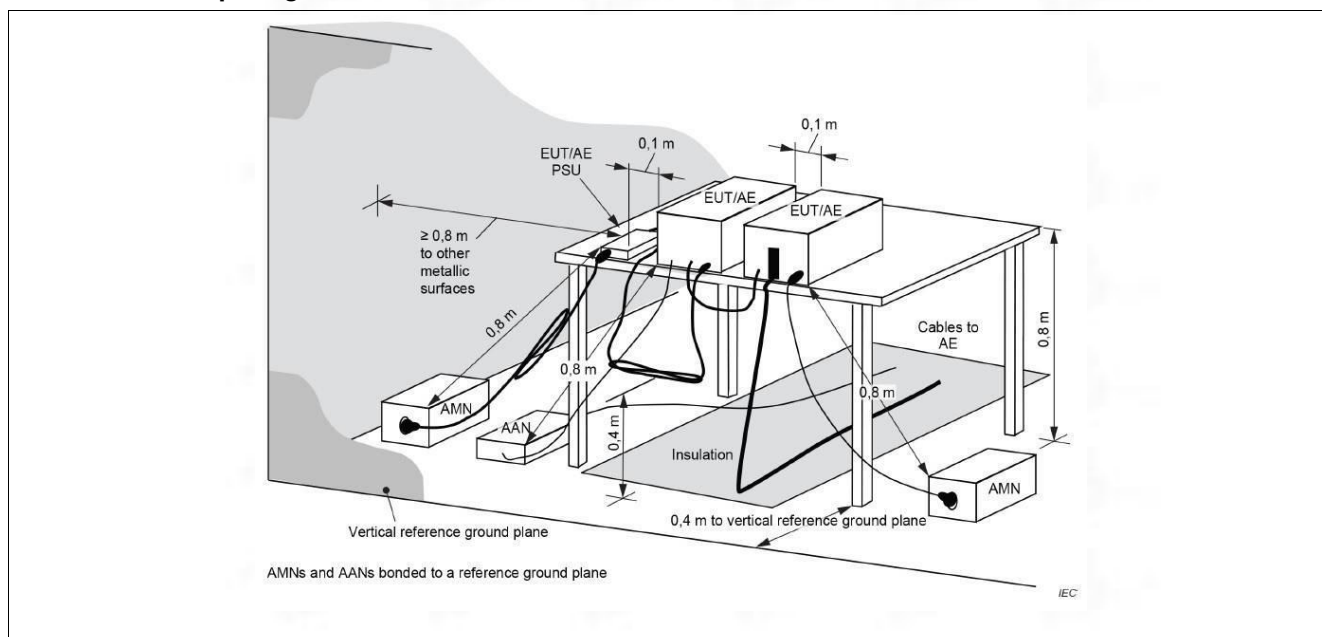
6.1 Conducted Emission at AC power line

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 μ 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:	Frequency of emission (MHz)	Conducted limit (dB μ V)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
*Decreases with the logarithm of the frequency.			

6.1.1 E.U.T. Operation:

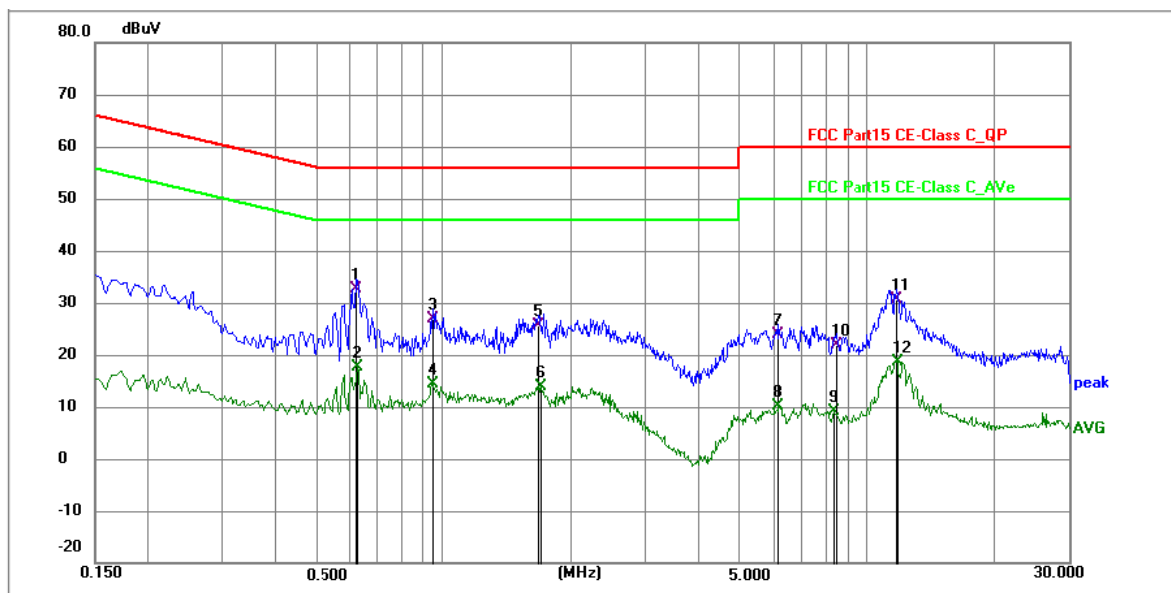
Operating Environment:	
Temperature:	25.7 °C
Humidity:	46.5 %
Atmospheric Pressure:	1010 mbar

6.1.2 Test Setup Diagram:



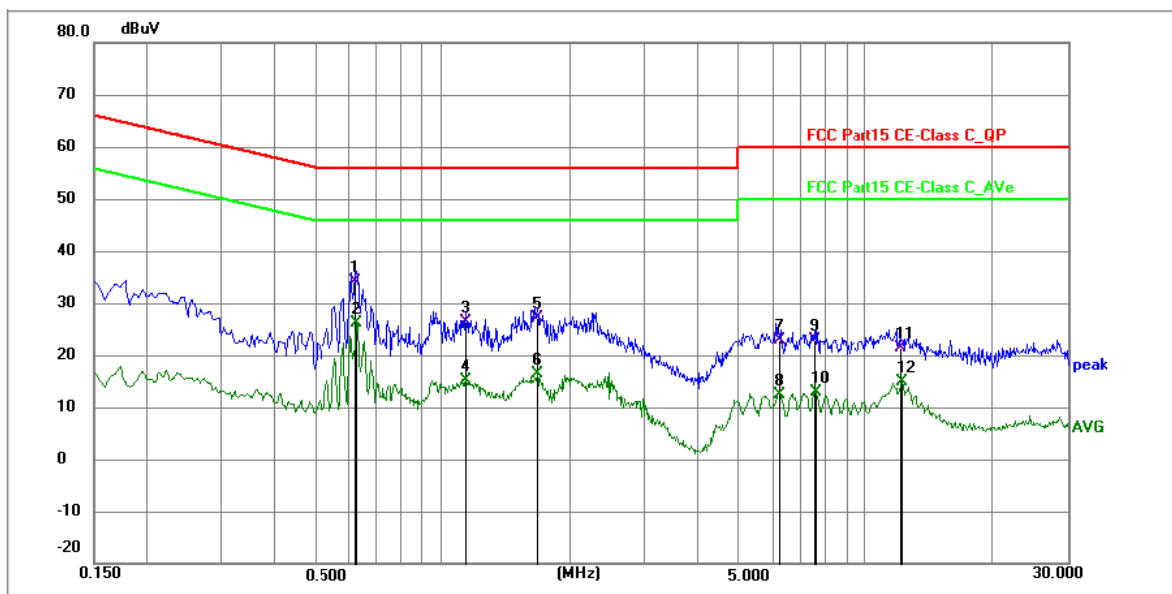
6.1.3 Test Data:

TM1 / Line: Line / Band: 2.4G / BW: 20 / CH: M



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1 *	0.6225	22.04	10.68	32.72	56.00	-23.28	QP	P	
2	0.6270	6.86	10.68	17.54	46.00	-28.46	AVG	P	
3	0.9465	16.22	10.77	26.99	56.00	-29.01	QP	P	
4	0.9465	3.66	10.77	14.43	46.00	-31.57	AVG	P	
5	1.6800	14.80	10.72	25.52	56.00	-30.48	QP	P	
6	1.7023	3.06	10.72	13.78	46.00	-32.22	AVG	P	
7	6.1573	13.06	10.72	23.78	60.00	-36.22	QP	P	
8	6.1573	-0.69	10.72	10.03	50.00	-39.97	AVG	P	
9	8.3445	-1.73	10.83	9.10	50.00	-40.90	AVG	P	
10	8.4435	11.16	10.84	22.00	60.00	-38.00	QP	P	
11	11.8003	19.63	10.94	30.57	60.00	-29.43	QP	P	
12	11.8185	7.69	10.94	18.63	50.00	-31.37	AVG	P	

TM1 / Line: Neutral / Band: 2.4G / BW: 20 / CH: M



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.6225	23.42	10.68	34.10	56.00	-21.90	QP	P	
2 *	0.6270	15.51	10.68	26.19	46.00	-19.81	AVG	P	
3	1.1353	15.65	10.77	26.42	56.00	-29.58	QP	P	
4	1.1353	4.24	10.77	15.01	46.00	-30.99	AVG	P	
5	1.6800	16.37	10.72	27.09	56.00	-28.91	QP	P	
6	1.6800	5.59	10.72	16.31	46.00	-29.69	AVG	P	
7	6.2609	12.24	10.72	22.96	60.00	-37.04	QP	P	
8	6.2609	1.71	10.72	12.43	50.00	-37.57	AVG	P	
9	7.5613	12.16	10.78	22.94	60.00	-37.06	QP	P	
10	7.5884	2.16	10.78	12.94	50.00	-37.06	AVG	P	
11	12.0884	10.42	10.90	21.32	60.00	-38.68	QP	P	
12	12.2055	3.92	10.89	14.81	50.00	-35.19	AVG	P	

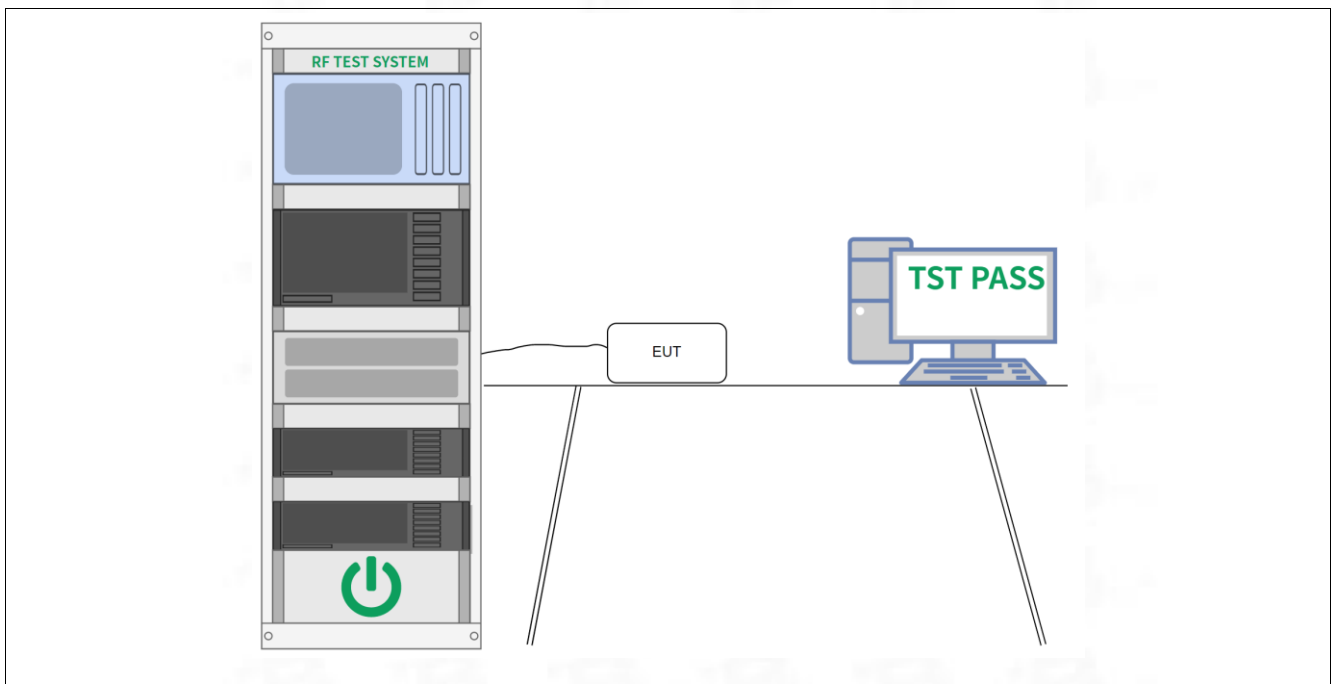
6.2 Occupied Bandwidth

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:	a) Set RBW = 100 kHz. b) Set the VBW $\geq [3 \times \text{RBW}]$. c) Detector = peak. d) Trace mode = max hold. e) Sweep = auto couple. f) Allow the trace to stabilize. 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.

6.2.1 E.U.T. Operation:

Operating Environment:	
Temperature:	24.3 °C
Humidity:	49.8 %
Atmospheric Pressure:	1010 mbar

6.2.2 Test Setup Diagram:



6.2.3 Test Data:

Please Refer to Appendix for Details.

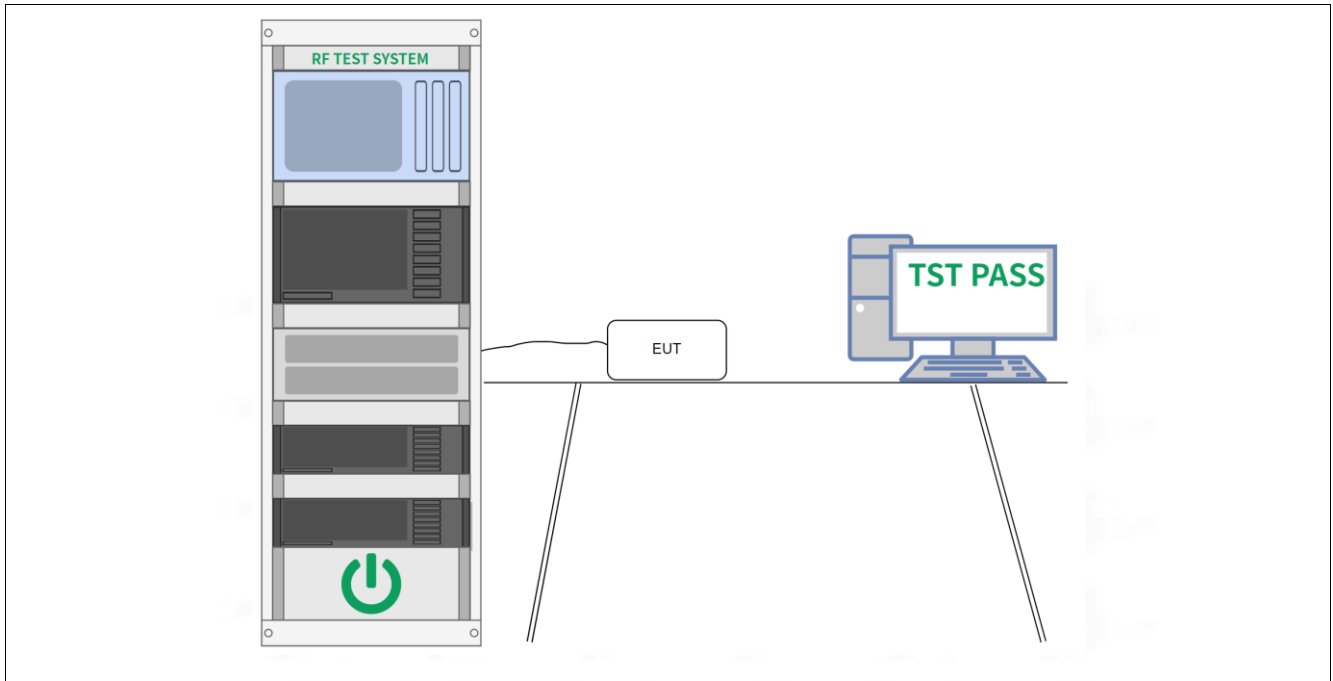
6.3 Maximum Conducted Output Power

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:	24.3 °C
Humidity:	49.8 %
Atmospheric Pressure:	1010 mbar

6.3.2 Test Setup Diagram:



6.3.3 Test Data:

Please Refer to Appendix for Details.

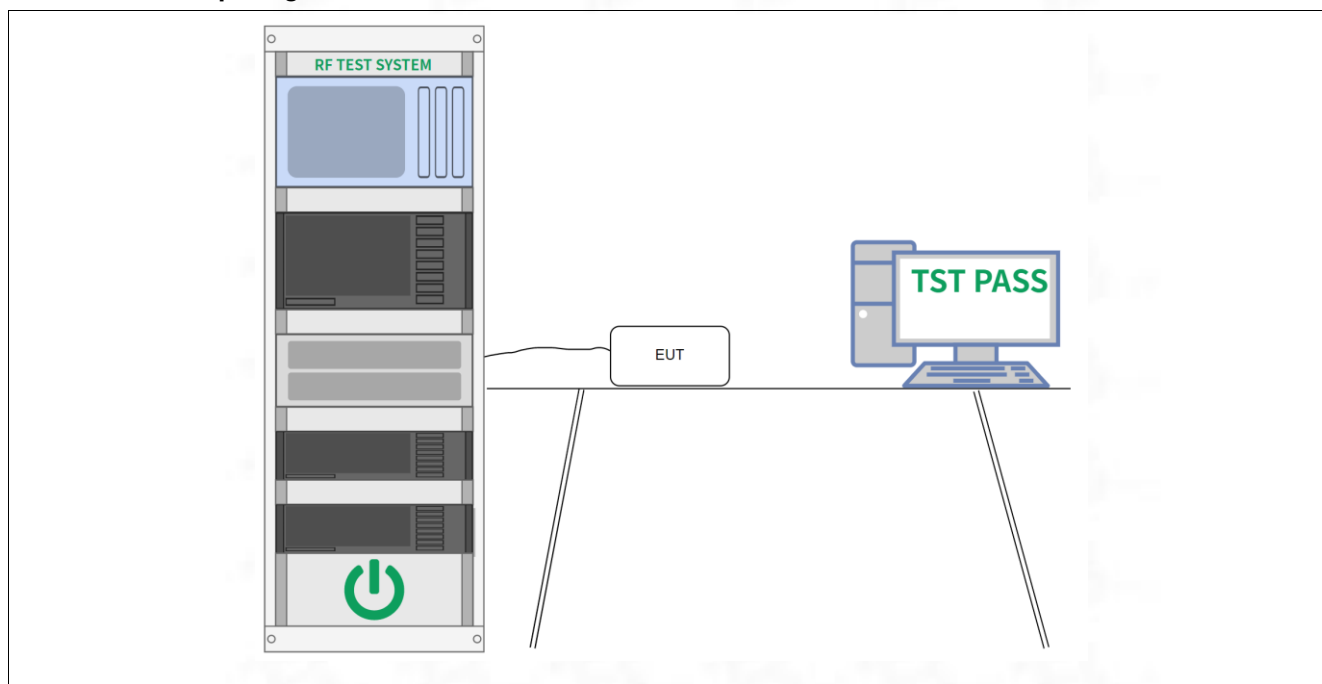
6.4 Power Spectral Density

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:	24.3 °C
Humidity:	49.8 %
Atmospheric Pressure:	1010 mbar

6.4.2 Test Setup Diagram:



6.4.3 Test Data:

Please Refer to Appendix for Details.

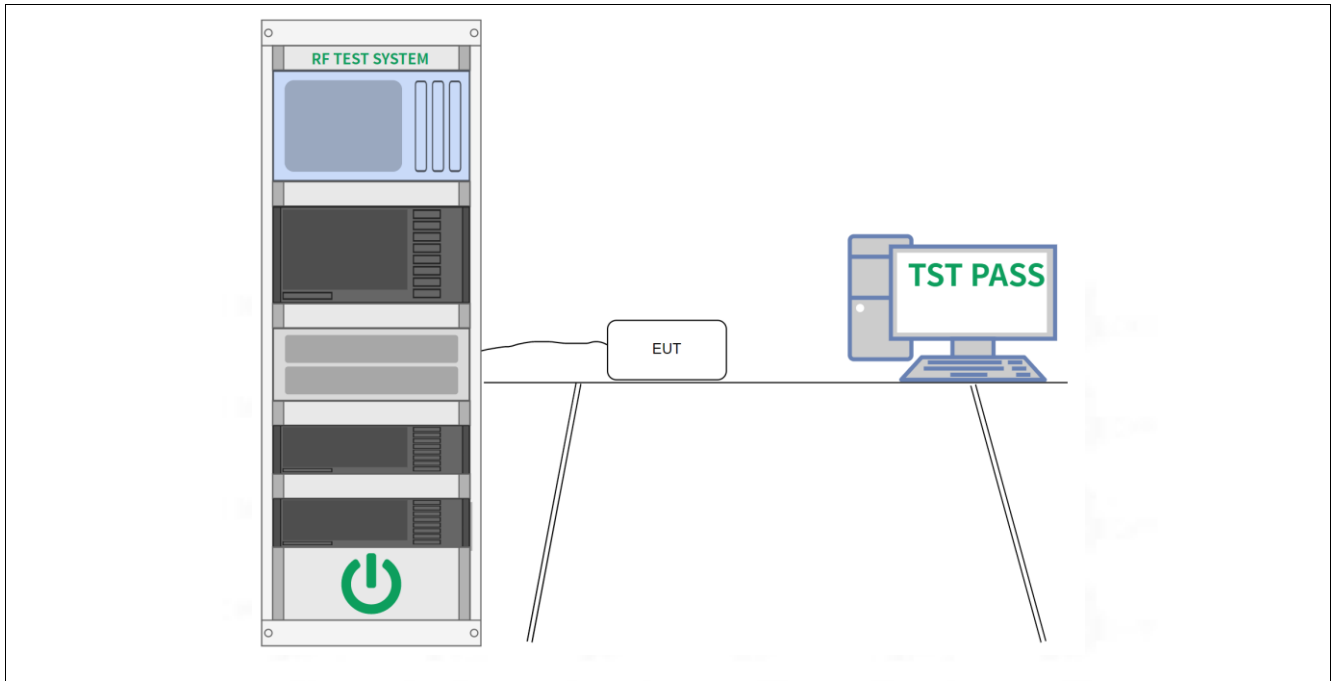
6.5 Emissions in non-restricted frequency bands

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:	24.3 °C
Humidity:	49.8 %
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:	23.1 °C
Humidity:	51.2 %
Atmospheric Pressure:	1010 mbar

6.6.2 Test Data:

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	68.22	-30.59	37.63	74.00	-36.37	peak	P
2	2390.000	68.64	-30.49	38.15	74.00	-35.85	peak	P
3 *	2400.000	76.53	-30.48	46.05	74.00	-27.95	peak	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	70.22	-30.59	39.63	74.00	-34.37	peak	P
2	2390.000	69.41	-30.49	38.92	74.00	-35.08	peak	P
3 *	2400.000	77.03	-30.48	46.55	74.00	-27.45	peak	P

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	71.22	-30.59	40.63	74.00	-33.37	peak	P
2	2390.000	71.41	-30.49	40.92	74.00	-33.08	peak	P
3 *	2400.000	77.03	-30.48	46.55	74.00	-27.45	peak	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	68.18	-30.59	37.59	74.00	-36.41	peak	P
2	2390.000	65.91	-30.49	35.42	74.00	-38.58	peak	P
3 *	2400.000	75.03	-30.48	44.55	74.00	-29.45	peak	P

TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	70.68	-30.59	40.09	74.00	-33.91	peak	P
2	2390.000	72.48	-30.49	41.99	74.00	-32.01	peak	P
3 *	2400.000	76.53	-30.48	46.05	74.00	-27.95	peak	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	70.68	-30.59	40.09	74.00	-33.91	peak	P
2	2390.000	74.48	-30.49	43.99	74.00	-30.01	peak	P
3 *	2400.000	76.03	-30.48	45.55	74.00	-28.45	peak	P

TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	75.34	-30.39	44.95	74.00	-29.05	peak	P
2	2500.000	71.75	-30.37	41.38	74.00	-32.62	peak	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	73.34	-30.39	42.95	74.00	-31.05	peak	P
2	2500.000	68.75	-30.37	38.38	74.00	-35.62	peak	P

TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	73.98	-30.39	43.59	74.00	-30.41	peak	P
2	2500.000	70.04	-30.37	39.67	74.00	-34.33	peak	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	75.48	-30.39	45.09	74.00	-28.91	peak	P
2	2500.000	68.54	-30.37	38.17	74.00	-35.83	peak	P

TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	76.60	-30.39	46.21	74.00	-27.79	peak	P
2	2500.000	69.39	-30.37	39.02	74.00	-34.98	peak	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	72.60	-30.39	42.21	74.00	-31.79	peak	P
2	2500.000	71.39	-30.37	41.02	74.00	-32.98	peak	P

6.7 Emissions in restricted frequency bands (below 1GHz)

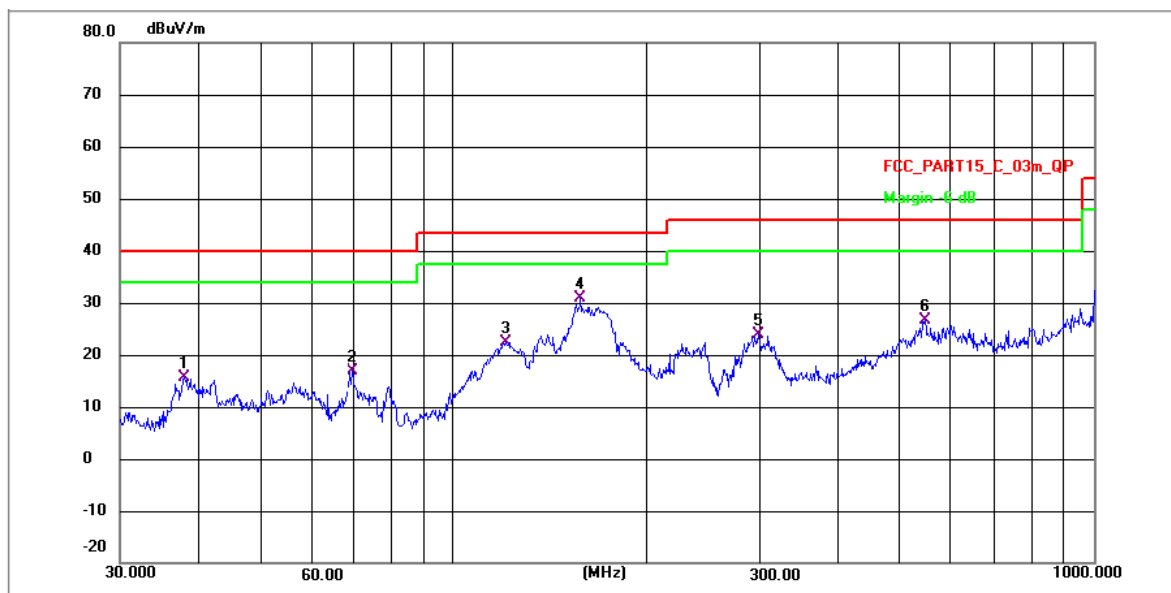
Test Requirement:	In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).`		
Test Method:	Radiated emissions tests		
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	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:	23.1 °C
Humidity:	51.2 %
Atmospheric Pressure:	1010 mbar

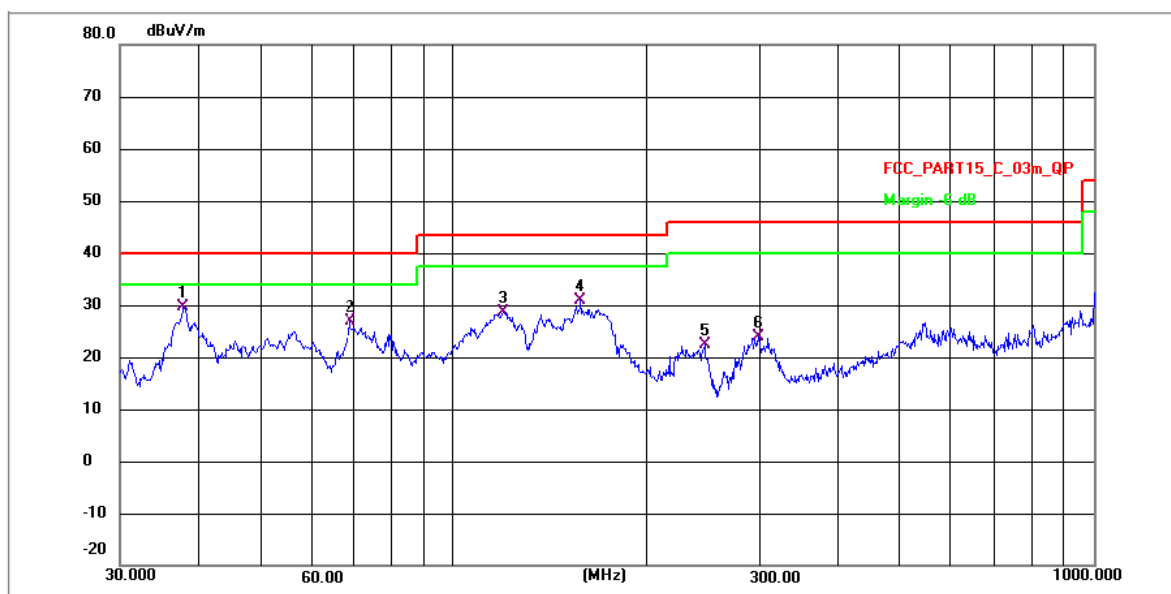
6.7.2 Test Data:

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L



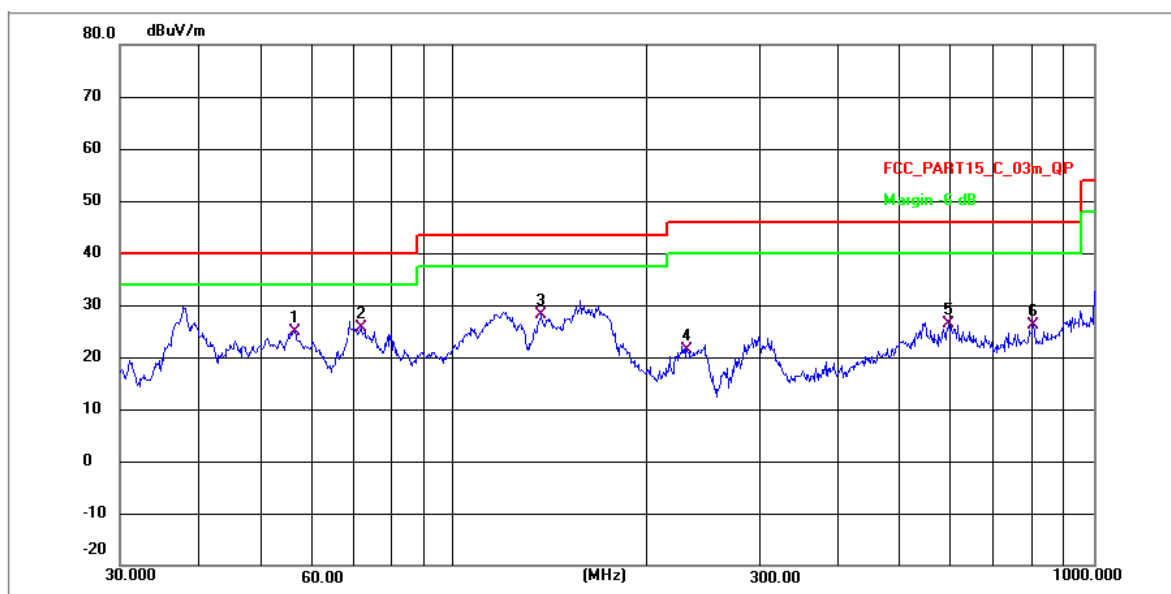
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	37.8785	34.01	-18.43	15.58	40.00	-24.42	QP	P
2	69.4785	34.96	-18.11	16.85	40.00	-23.15	QP	P
3	120.9109	50.43	-28.04	22.39	43.50	-21.11	QP	P
4 *	157.8354	58.71	-27.71	31.00	43.50	-12.50	QP	P
5	298.2681	49.20	-25.44	23.76	46.00	-22.24	QP	P
6	546.1393	48.14	-21.62	26.52	46.00	-19.48	QP	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L



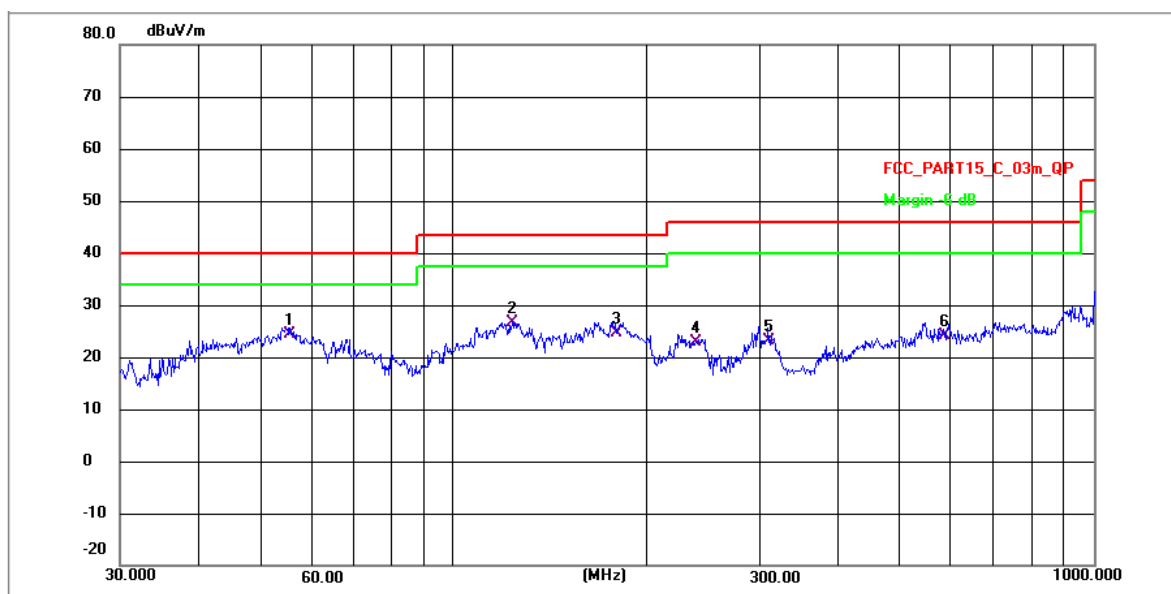
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	37.7459	50.20	-20.58	29.62	40.00	-10.38	QP	P
2	68.8721	46.88	-20.00	26.88	40.00	-13.12	QP	P
3	119.4361	56.77	-28.05	28.72	43.50	-14.78	QP	P
4	157.8354	58.71	-27.71	31.00	43.50	-12.50	QP	P
5	246.3825	48.16	-25.89	22.27	46.00	-23.73	QP	P
6	298.2681	49.20	-25.44	23.76	46.00	-22.24	QP	P

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: M



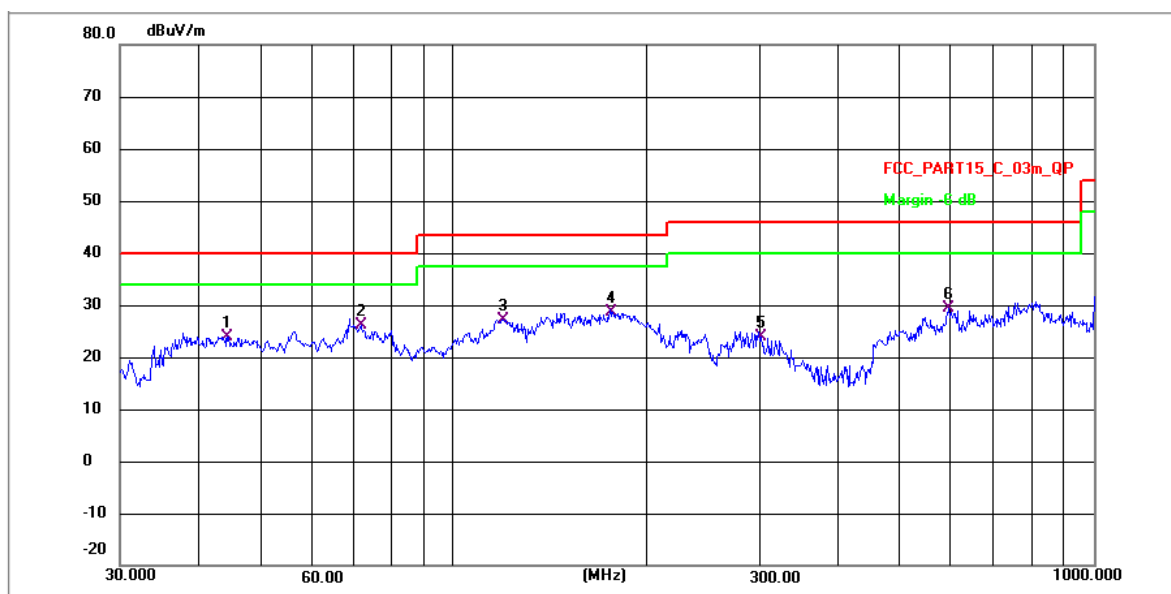
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	56.1974	43.13	-18.22	24.91	40.00	-15.09	QP	P
2 *	71.5806	43.63	-18.08	25.55	40.00	-14.45	QP	P
3	137.1795	56.08	-27.90	28.18	43.50	-15.32	QP	P
4	231.3120	47.51	-26.01	21.50	46.00	-24.50	QP	P
5	594.0904	48.54	-22.13	26.41	46.00	-19.59	QP	P
6	804.6028	49.77	-23.64	26.13	46.00	-19.87	QP	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: M



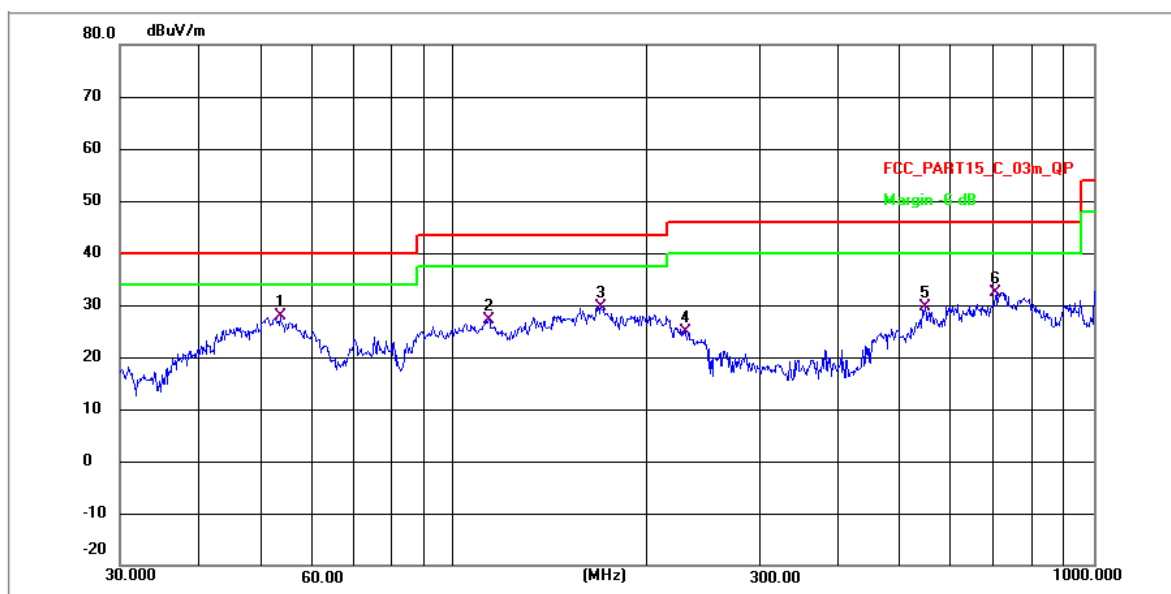
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	55.5119	44.56	-20.23	24.33	40.00	-15.67	QP	P
2	123.2655	54.69	-28.02	26.67	43.50	-16.83	QP	P
3	179.7011	52.12	-27.51	24.61	43.50	-18.89	QP	P
4	238.7284	48.87	-25.95	22.92	46.00	-23.08	QP	P
5	309.9977	48.36	-25.35	23.01	46.00	-22.99	QP	P
6	585.8157	46.17	-22.05	24.12	46.00	-21.88	QP	P

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H



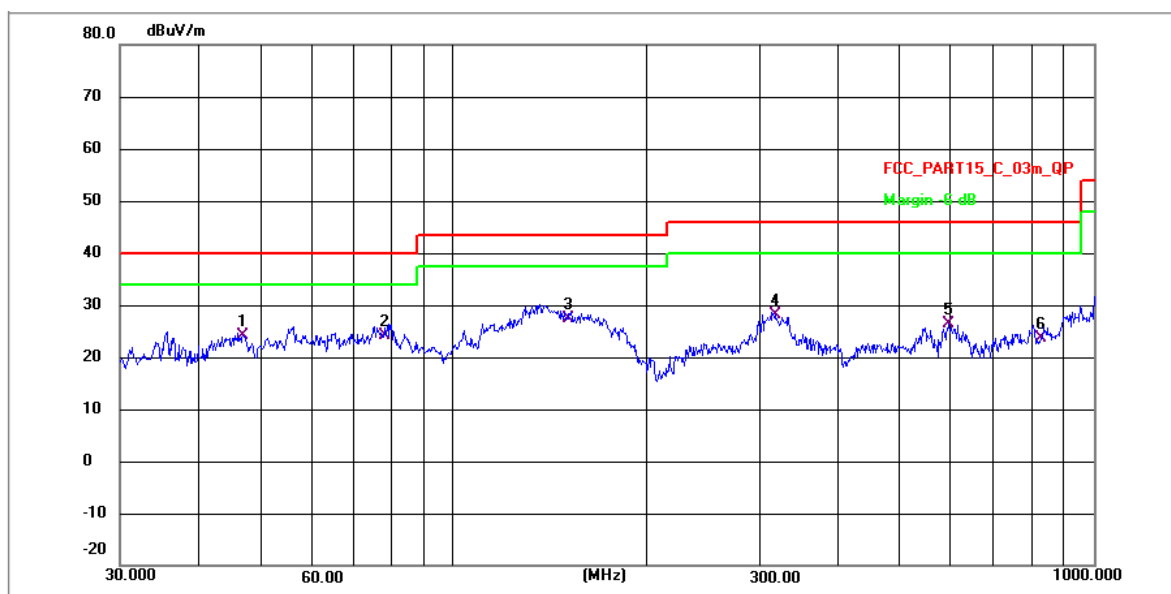
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	44.3528	42.25	-18.35	23.90	40.00	-16.10	QP	P
2 *	71.5806	44.13	-18.08	26.05	40.00	-13.95	QP	P
3	119.4361	55.27	-28.05	27.22	43.50	-16.28	QP	P
4	175.6516	56.25	-27.55	28.70	43.50	-14.80	QP	P
5	301.9513	49.35	-25.42	23.93	46.00	-22.07	QP	P
6	594.0904	51.54	-22.13	29.41	46.00	-16.59	QP	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H



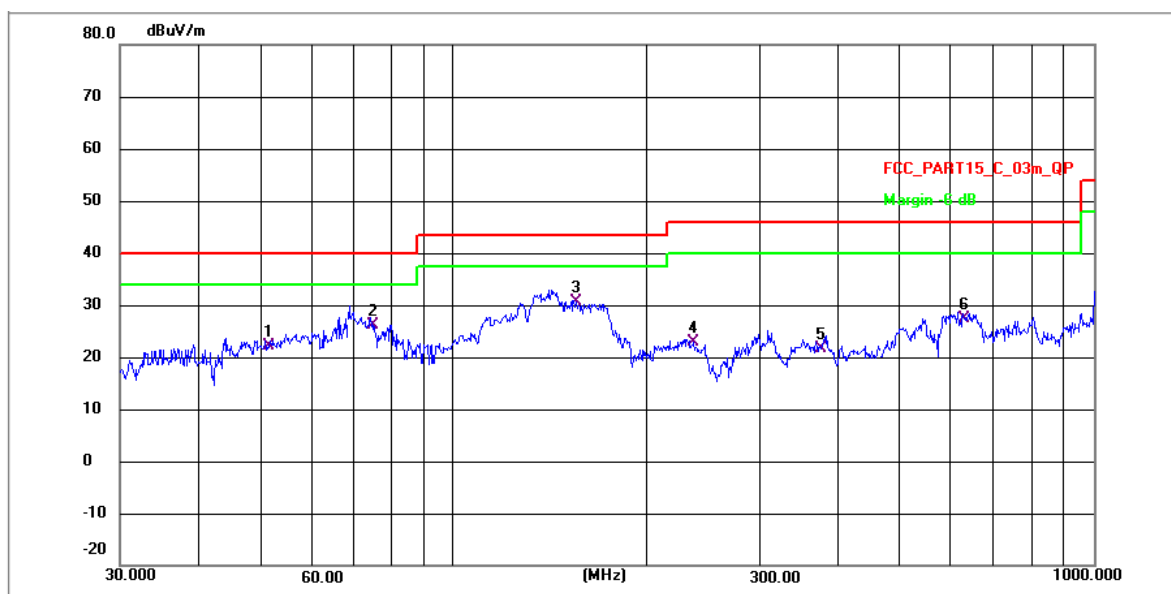
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	53.4115	48.15	-20.27	27.88	40.00	-12.12	QP	P
2	113.7143	55.34	-28.10	27.24	43.50	-16.26	QP	P
3	169.5990	57.16	-27.60	29.56	43.50	-13.94	QP	P
4	230.0985	50.86	-26.02	24.84	46.00	-21.16	QP	P
5	546.1393	51.14	-21.62	29.52	46.00	-16.48	QP	P
6	705.4619	55.85	-23.52	32.33	46.00	-13.67	QP	P

TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L



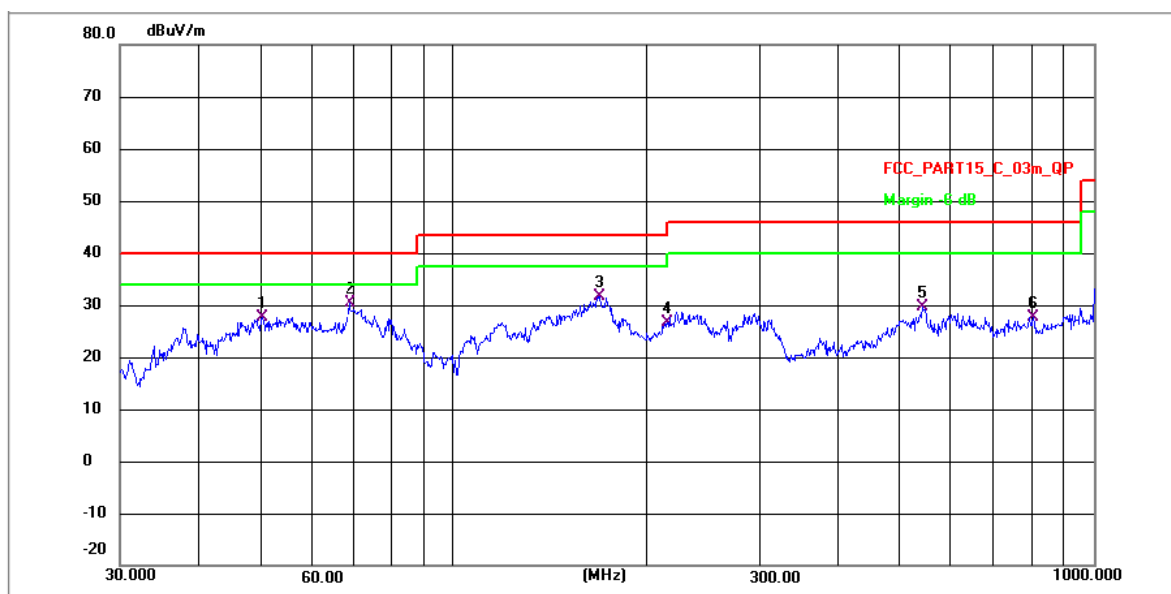
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	46.8303	42.35	-18.31	24.04	40.00	-15.96	QP	P
2 *	78.5509	42.24	-18.03	24.21	40.00	-15.79	QP	P
3	151.0666	55.17	-27.77	27.40	43.50	-16.10	QP	P
4	317.1445	53.35	-25.29	28.06	46.00	-17.94	QP	P
5	594.0904	48.54	-22.13	26.41	46.00	-19.59	QP	P
6	828.9455	46.98	-23.24	23.74	46.00	-22.26	QP	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L



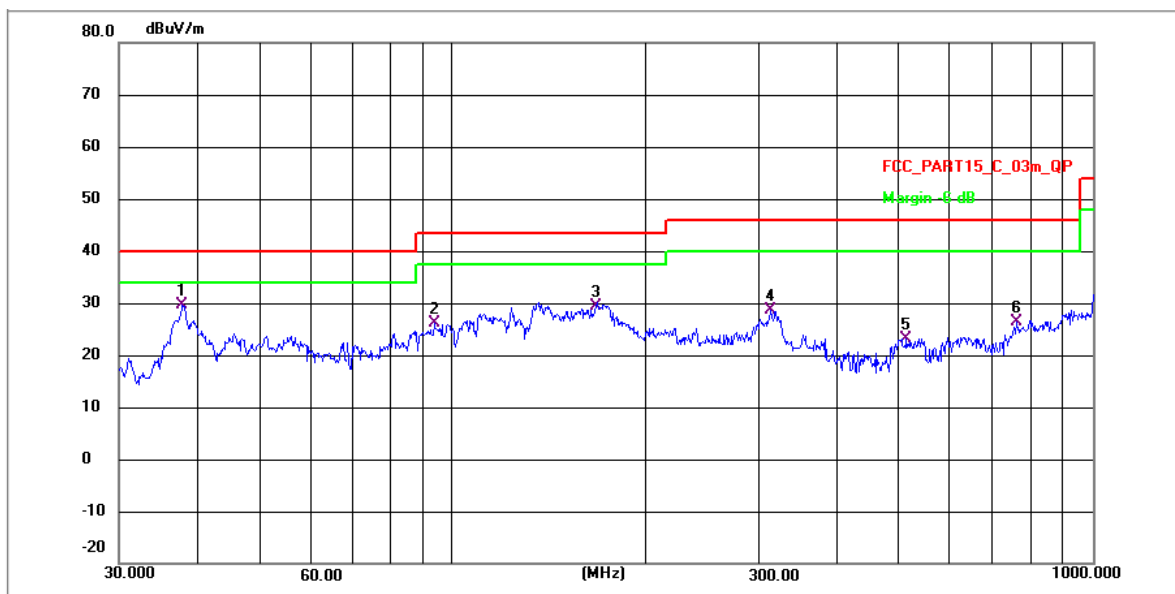
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	51.2106	42.37	-20.30	22.07	40.00	-17.93	QP	P
2	74.9191	46.12	-19.91	26.21	40.00	-13.79	QP	P
3 *	155.6370	58.39	-27.73	30.66	43.50	-12.84	QP	P
4	237.4760	48.96	-25.96	23.00	46.00	-23.00	QP	P
5	373.9663	46.55	-24.84	21.71	46.00	-24.29	QP	P
6	628.3745	49.97	-22.55	27.42	46.00	-18.58	QP	P

TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: M



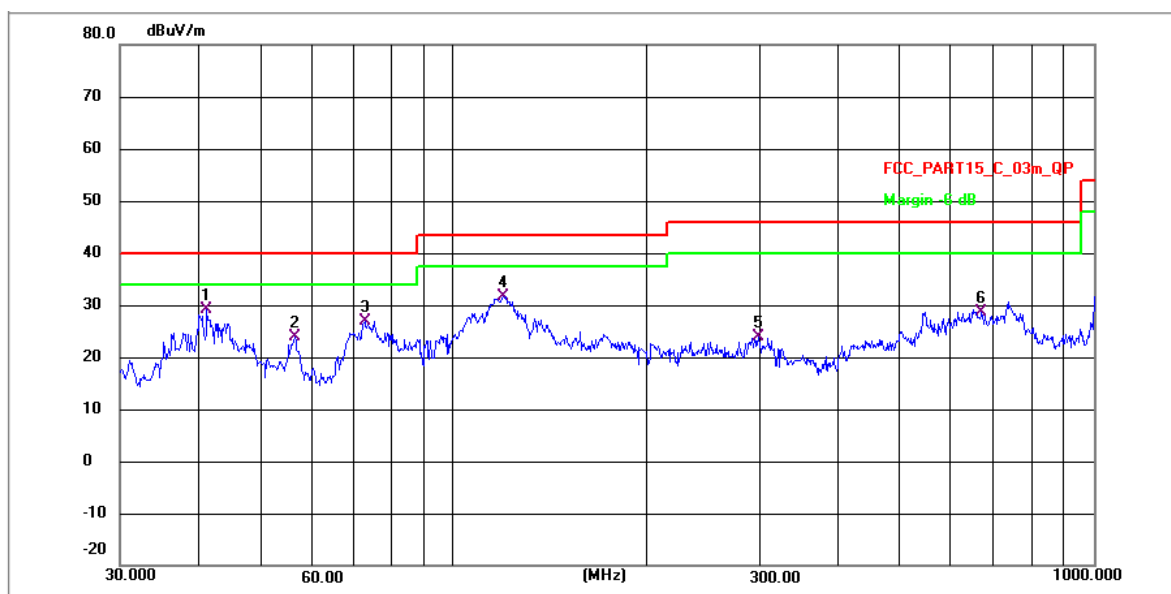
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	50.1445	45.95	-18.27	27.68	40.00	-12.32	QP	P
2 *	68.8721	48.49	-18.11	30.38	40.00	-9.62	QP	P
3	169.3019	59.23	-27.60	31.63	43.50	-11.87	QP	P
4	215.6456	53.23	-26.65	26.58	43.50	-16.92	QP	P
5	541.3725	51.22	-21.57	29.65	46.00	-16.35	QP	P
6	804.6028	51.27	-23.64	27.63	46.00	-18.37	QP	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: M



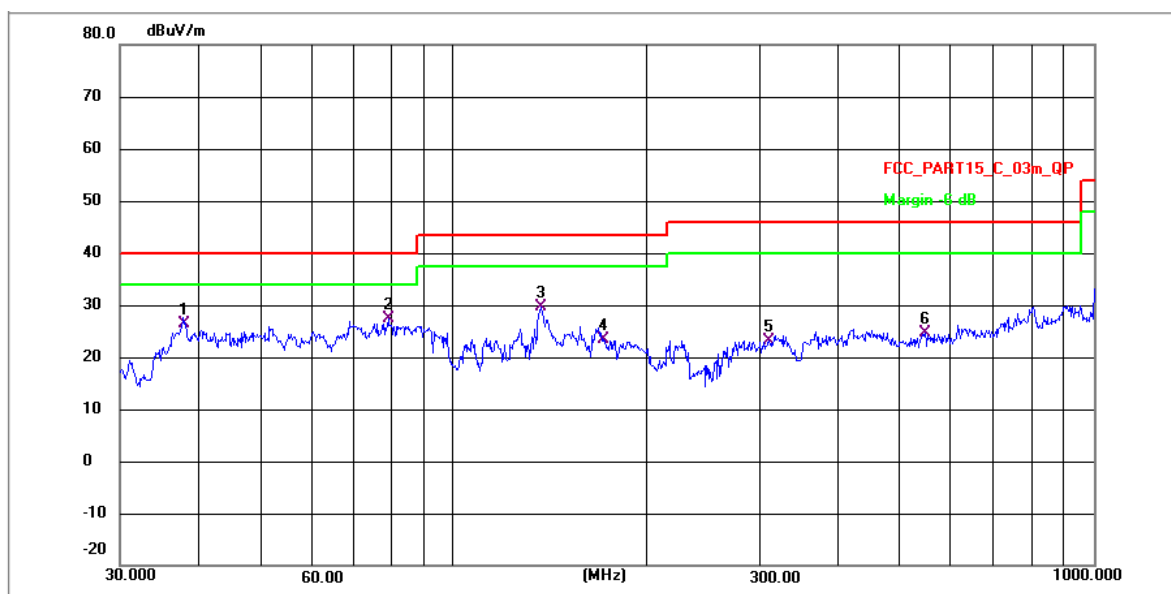
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	37.7459	50.20	-20.58	29.62	40.00	-10.38	QP	P
2	93.7685	55.36	-29.25	26.11	43.50	-17.39	QP	P
3	167.5302	56.88	-27.62	29.26	43.50	-14.24	QP	P
4	313.2760	53.94	-25.33	28.61	46.00	-17.39	QP	P
5	511.8352	44.42	-21.27	23.15	46.00	-22.85	QP	P
6	760.7036	50.21	-23.90	26.31	46.00	-19.69	QP	P

TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H



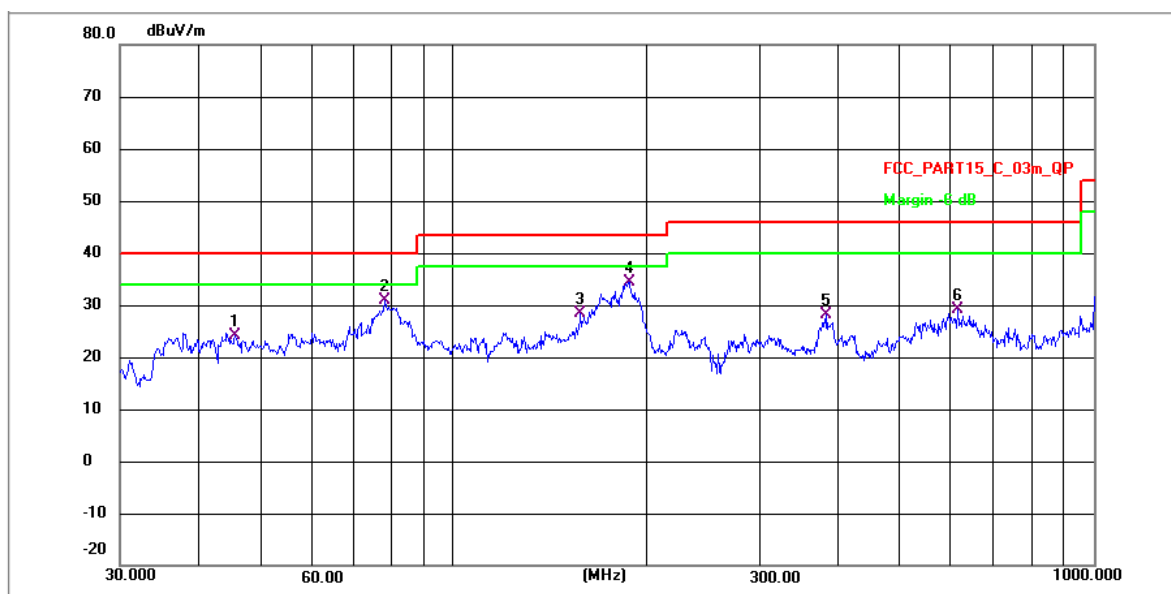
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	41.0600	47.41	-18.39	29.02	40.00	-10.98	QP	P
2	56.1974	42.13	-18.22	23.91	40.00	-16.09	QP	P
3	72.7190	44.92	-18.08	26.84	40.00	-13.16	QP	P
4	119.4361	59.77	-28.05	31.72	43.50	-11.78	QP	P
5	298.2681	49.20	-25.44	23.76	46.00	-22.24	QP	P
6	669.3147	51.73	-23.07	28.66	46.00	-17.34	QP	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H



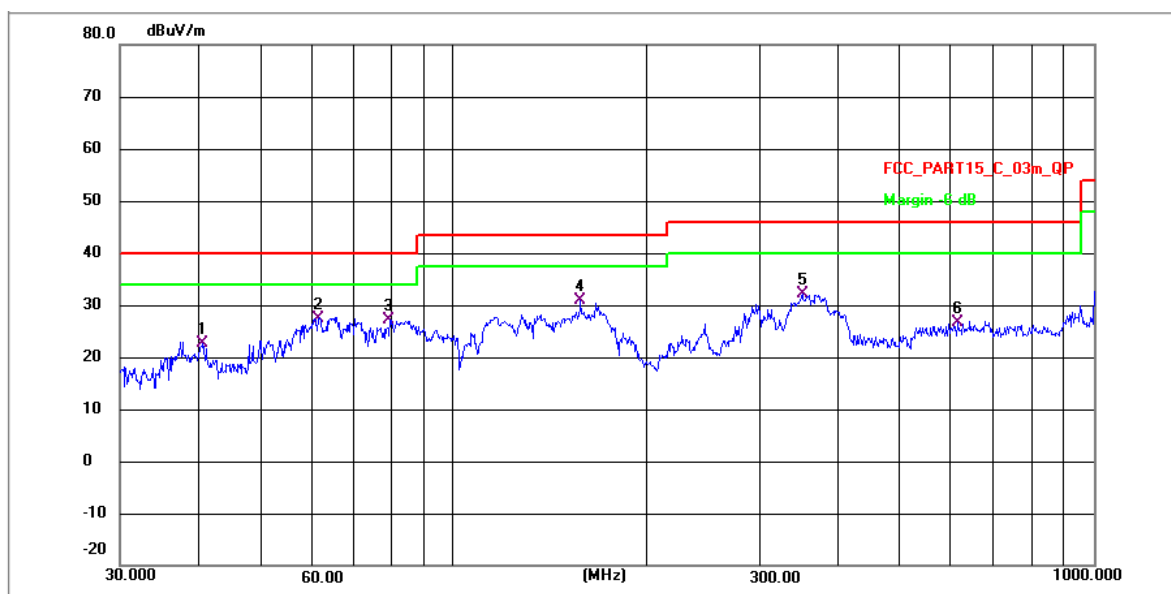
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	37.8121	47.02	-20.58	26.44	40.00	-13.56	QP	P
2 *	79.2426	47.20	-19.83	27.37	40.00	-12.63	QP	P
3	137.1795	57.58	-27.90	29.68	43.50	-13.82	QP	P
4	170.7926	51.01	-27.59	23.42	43.50	-20.08	QP	P
5	309.9977	48.36	-25.35	23.01	46.00	-22.99	QP	P
6	546.1393	46.14	-21.62	24.52	46.00	-21.48	QP	P

TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: L



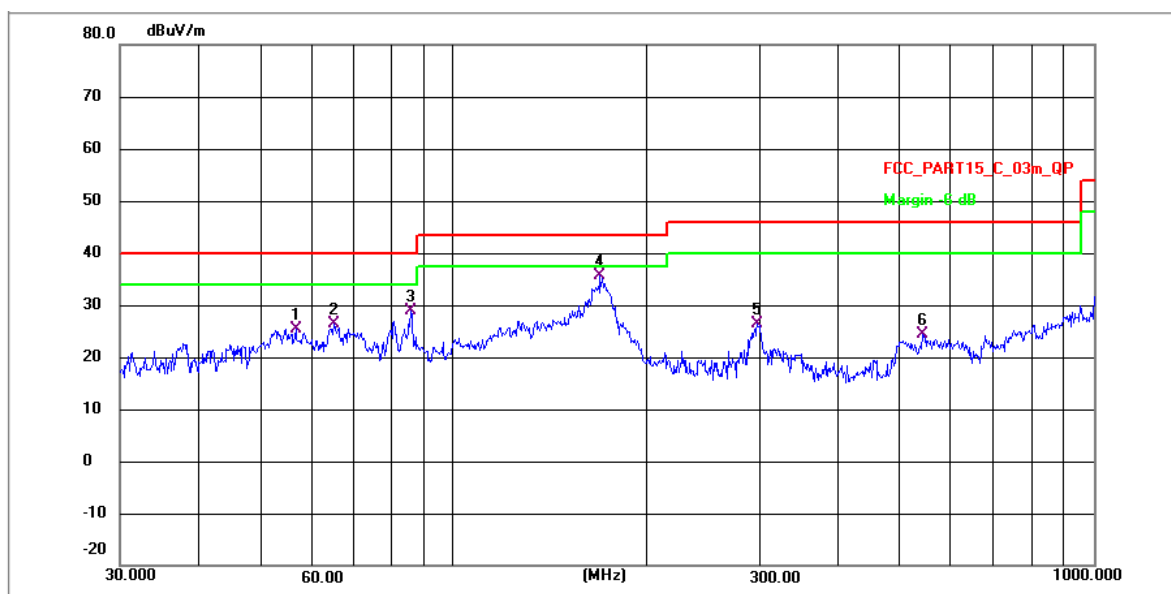
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	45.5348	42.39	-18.33	24.06	40.00	-15.94	QP	P
2	78.0020	48.79	-18.03	30.76	40.00	-9.24	QP	P
3	157.8354	56.21	-27.71	28.50	43.50	-15.00	QP	P
4 *	188.0825	61.90	-27.43	34.47	43.50	-9.03	QP	P
5	382.5879	52.78	-24.77	28.01	46.00	-17.99	QP	P
6	615.2920	51.60	-22.39	29.21	46.00	-16.79	QP	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: L



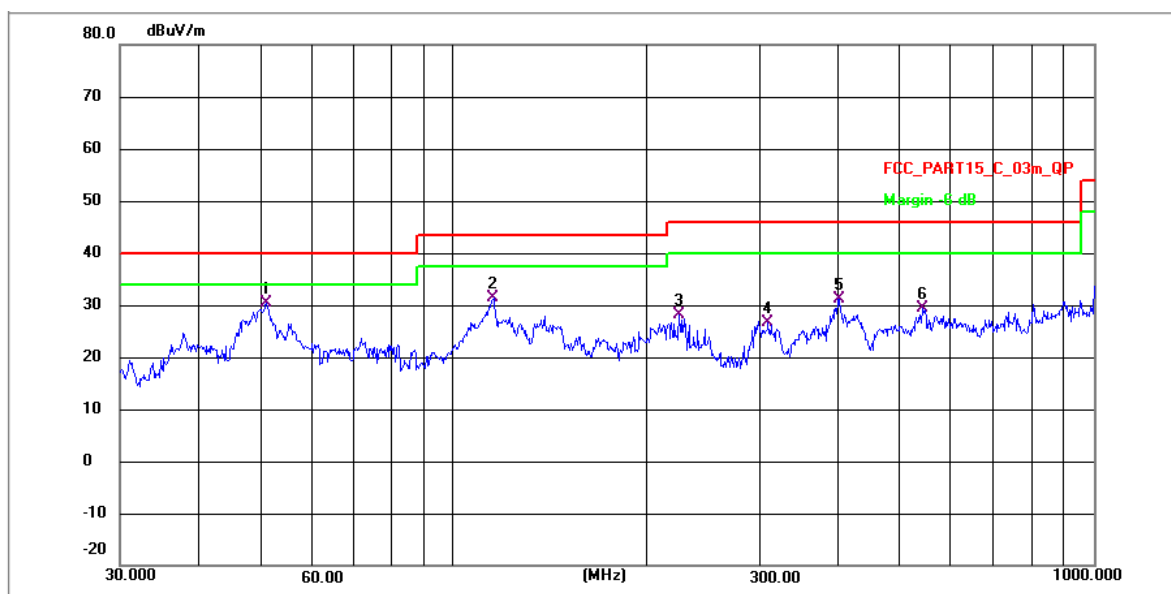
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	40.4172	43.12	-20.52	22.60	40.00	-17.40	QP	P
2	61.3463	47.58	-20.13	27.45	40.00	-12.55	QP	P
3	79.5209	47.02	-19.83	27.19	40.00	-12.81	QP	P
4 *	157.8354	58.71	-27.71	31.00	43.50	-12.50	QP	P
5	349.8628	57.13	-25.03	32.10	46.00	-13.90	QP	P
6	615.2920	49.10	-22.39	26.71	46.00	-19.29	QP	P

TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: M



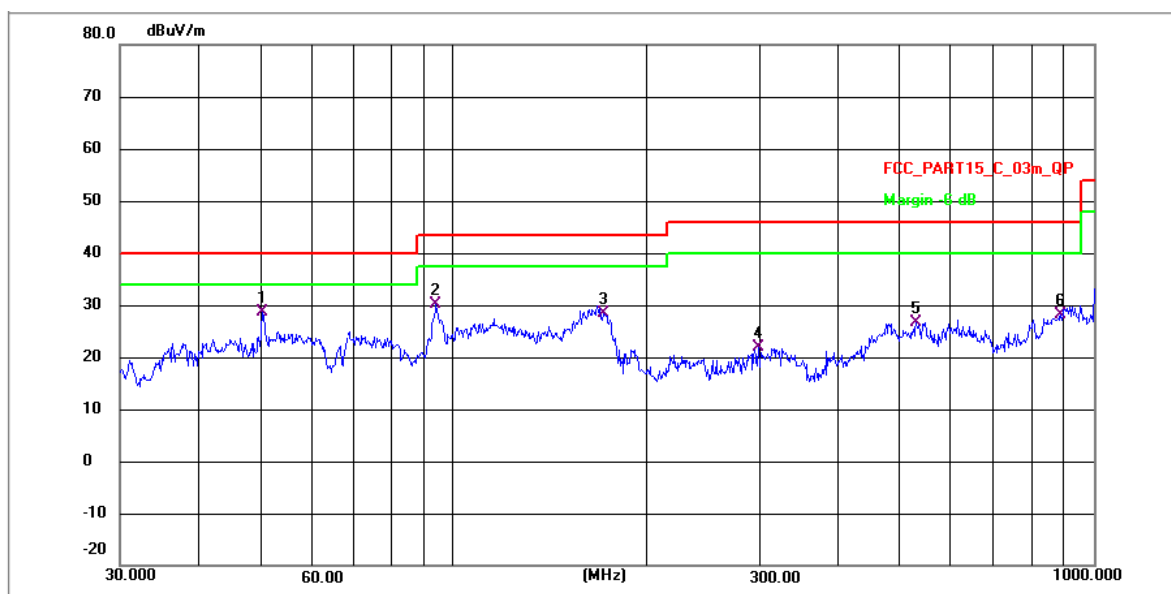
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	56.3948	43.61	-18.22	25.39	40.00	-14.61	QP	P
2	64.7728	44.44	-18.14	26.30	40.00	-13.70	QP	P
3	85.7479	59.41	-30.58	28.83	40.00	-11.17	QP	P
4 *	169.3019	63.23	-27.60	35.63	43.50	-7.87	QP	P
5	297.2241	51.93	-25.45	26.48	46.00	-19.52	QP	P
6	542.3225	45.84	-21.58	24.26	46.00	-21.74	QP	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: M



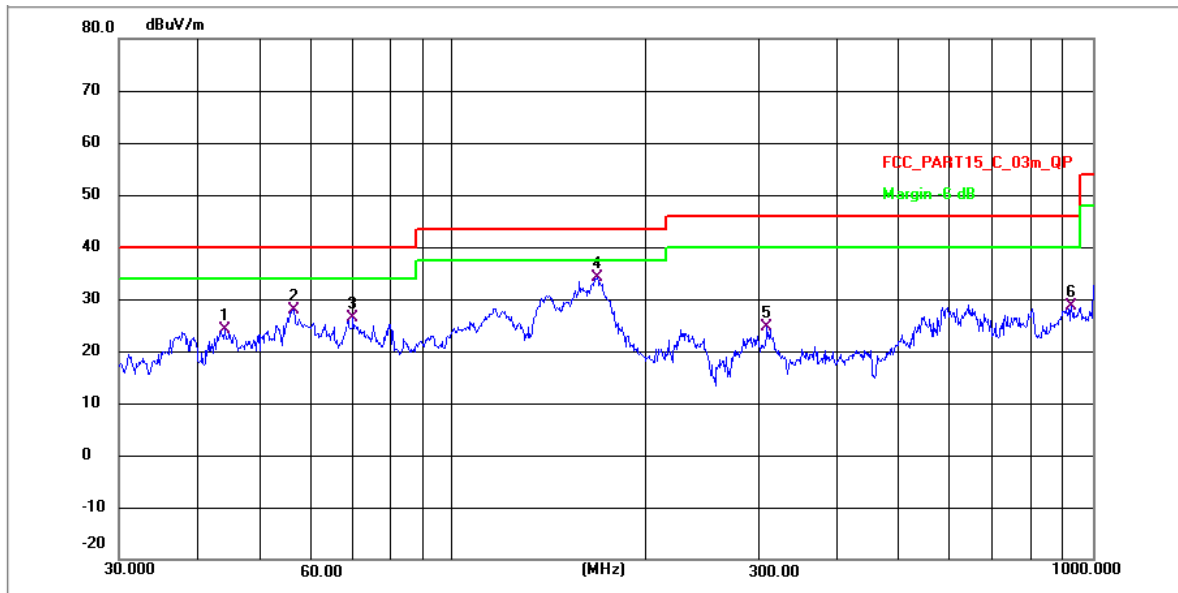
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	50.9420	50.76	-20.31	30.45	40.00	-9.55	QP	P
2	115.5229	59.47	-28.09	31.38	43.50	-12.12	QP	P
3	224.9133	54.50	-26.25	28.25	46.00	-17.75	QP	P
4	309.4547	52.00	-25.35	26.65	46.00	-19.35	QP	P
5	400.4319	55.76	-24.61	31.15	46.00	-14.85	QP	P
6	542.3225	50.84	-21.58	29.26	46.00	-16.74	QP	P

TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: H



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	50.1445	46.95	-18.27	28.68	40.00	-11.32	QP	P
2	93.9330	59.25	-29.23	30.02	43.50	-13.48	QP	P
3	170.7926	56.01	-27.59	28.42	43.50	-15.08	QP	P
4	298.2681	47.20	-25.44	21.76	46.00	-24.24	QP	P
5	528.2458	48.11	-21.43	26.68	46.00	-19.32	QP	P
6	890.7278	50.37	-22.23	28.14	46.00	-17.86	QP	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: H



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	43.8888	44.46	-20.44	24.02	40.00	-15.98	QP	P
2	56.1974	48.13	-20.22	27.91	40.00	-12.09	QP	P
3	69.9675	46.31	-19.99	26.32	40.00	-13.68	QP	P
4 *	168.1188	61.63	-27.61	34.02	43.50	-9.48	QP	P
5	309.4547	50.00	-25.35	24.65	46.00	-21.35	QP	P
6	929.0082	50.52	-21.90	28.62	46.00	-17.38	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:	23.1 °C
Humidity:	51.2 %
Atmospheric Pressure:	1010 mbar

6.8.2 Test Data:

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2110.999	68.56	-30.81	37.75	74.00	-36.25	peak	P
2	3987.015	62.79	-29.00	33.79	74.00	-40.21	peak	P
3	7041.830	64.52	-24.92	39.60	74.00	-34.40	peak	P
4	10769.873	63.78	-23.94	39.84	74.00	-34.16	peak	P
5	14788.154	62.97	-20.73	42.24	74.00	-31.76	peak	P
6 *	16716.199	66.92	-18.80	48.12	74.00	-25.88	peak	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2512.206	65.19	-30.35	34.84	74.00	-39.16	peak	P
2	4220.625	59.60	-28.90	30.70	74.00	-43.30	peak	P
3	6390.110	60.21	-25.37	34.84	74.00	-39.16	peak	P
4	9301.827	61.04	-23.64	37.40	74.00	-36.60	peak	P
5	13833.025	62.22	-21.05	41.17	74.00	-32.83	peak	P
6 *	16338.827	63.28	-19.96	43.32	74.00	-30.68	peak	P

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2531.889	71.50	-30.32	41.18	74.00	-32.82	peak	P
2	3681.310	63.61	-29.04	34.57	74.00	-39.43	peak	P
3	5439.885	60.80	-27.00	33.80	74.00	-40.20	peak	P
4	7895.767	64.22	-25.37	38.85	74.00	-35.15	peak	P
5	10639.922	64.44	-24.22	40.22	74.00	-33.78	peak	P
6 *	13857.036	64.86	-21.05	43.81	74.00	-30.19	peak	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3198.867	65.12	-29.33	35.79	74.00	-38.21	peak	P
2	4869.818	60.93	-27.74	33.19	74.00	-40.81	peak	P
3	7033.693	66.31	-24.92	41.39	74.00	-32.61	peak	P
4	8670.919	66.97	-24.98	41.99	74.00	-32.01	peak	P
5	11024.992	67.09	-23.42	43.67	74.00	-30.33	peak	P
6 *	14087.223	64.90	-21.11	43.79	74.00	-30.21	peak	P

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3020.064	64.90	-29.50	35.40	74.00	-38.60	peak	P
2	4085.001	63.50	-28.97	34.53	74.00	-39.47	peak	P
3	5773.621	63.12	-26.06	37.06	74.00	-36.94	peak	P
4	9344.944	65.82	-23.55	42.27	74.00	-31.73	peak	P
5 *	12909.701	66.60	-21.39	45.21	74.00	-28.79	peak	P
6	16338.827	62.78	-19.96	42.82	74.00	-31.18	peak	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2964.712	66.00	-29.58	36.42	74.00	-37.58	peak	P
2	4923.600	60.61	-27.59	33.02	74.00	-40.98	peak	P
3	6560.416	57.96	-25.32	32.64	74.00	-41.36	peak	P
4	8701.046	56.21	-24.92	31.29	74.00	-42.71	peak	P
5	11550.165	61.65	-22.98	38.67	74.00	-35.33	peak	P
6 *	16258.741	63.72	-20.34	43.38	74.00	-30.62	peak	P

TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3144.778	67.53	-29.38	38.15	74.00	-35.85	peak	P
2	4899.467	60.40	-27.65	32.75	74.00	-41.25	peak	P
3	6970.952	63.78	-24.96	38.82	74.00	-35.18	peak	P
4	9120.789	63.68	-24.04	39.64	74.00	-34.36	peak	P
5 *	12687.748	65.15	-21.51	43.64	74.00	-30.36	peak	P
6	15836.672	64.50	-21.56	42.94	74.00	-31.06	peak	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2931.480	67.86	-29.63	38.23	74.00	-35.77	peak	P
2	4858.571	63.49	-27.77	35.72	74.00	-38.28	peak	P
3	7650.888	65.47	-25.00	40.47	74.00	-33.53	peak	P
4	10265.333	66.19	-24.41	41.78	74.00	-32.22	peak	P
5 *	13384.651	64.62	-21.05	43.57	74.00	-30.43	peak	P
6	17127.020	60.20	-17.78	42.42	74.00	-31.58	peak	P

TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2424.463	70.53	-30.45	40.08	125.20	-85.12	peak	P
2	4289.496	61.11	-28.88	32.23	74.00	-41.77	peak	P
3	6244.047	62.14	-25.36	36.78	74.00	-37.22	peak	P
4	7999.135	65.12	-25.53	39.59	74.00	-34.41	peak	P
5	10679.976	64.33	-24.13	40.20	74.00	-33.80	peak	P
6 *	14370.993	64.62	-21.17	43.45	74.00	-30.55	peak	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2783.669	72.91	-29.89	43.02	74.00	-30.98	peak	P
2	3618.018	65.85	-29.04	36.81	74.00	-37.19	peak	P
3	5597.793	59.17	-26.64	32.53	74.00	-41.47	peak	P
4	7982.967	64.35	-25.51	38.84	74.00	-35.16	peak	P
5	10679.976	63.83	-24.13	39.70	74.00	-34.30	peak	P
6 *	13849.028	65.33	-21.05	44.28	74.00	-29.72	peak	P

TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2975.872	61.62	-29.55	32.07	74.00	-41.93	peak	P
2	4816.623	58.27	-27.89	30.38	74.00	-43.62	peak	P
3	7250.430	62.38	-24.85	37.53	74.00	-36.47	peak	P
4	9494.688	62.59	-23.21	39.38	74.00	-34.62	peak	P
5 *	12687.748	63.15	-21.51	41.64	74.00	-32.36	peak	P
6	15191.058	61.00	-20.82	40.18	74.00	-33.82	peak	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2388.986	75.17	-30.49	44.68	74.00	-29.32	peak	P
2	3517.990	65.92	-29.05	36.87	74.00	-37.13	peak	P
3	6353.277	59.23	-25.36	33.87	74.00	-40.13	peak	P
4	8794.598	61.82	-24.73	37.09	74.00	-36.91	peak	P
5	11024.992	65.09	-23.42	41.67	74.00	-32.33	peak	P
6	14079.082	65.61	-21.11	44.50	74.00	-29.50	peak	P

TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2232.105	70.58	-30.67	39.91	74.00	-34.09	peak	P
2	3670.685	61.26	-29.03	32.23	74.00	-41.77	peak	P
3	5454.054	62.03	-26.99	35.04	74.00	-38.96	peak	P
4	7326.267	63.84	-24.83	39.01	74.00	-34.99	peak	P
5	10658.390	66.09	-24.18	41.91	74.00	-32.09	peak	P
6 *	13423.394	66.83	-21.03	45.80	74.00	-28.20	peak	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2561.331	67.63	-30.27	37.36	74.00	-36.64	peak	P
2	3378.476	67.00	-29.16	37.84	74.00	-36.16	peak	P
3	5644.912	60.36	-26.48	33.88	74.00	-40.12	peak	P
4	8409.289	63.97	-25.36	38.61	74.00	-35.39	peak	P
5	12531.033	64.50	-21.60	42.90	74.00	-31.10	peak	P
6 *	14341.946	64.99	-21.17	43.82	74.00	-30.18	peak	P

TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2363.573	70.38	-30.52	39.86	74.00	-34.14	peak	P
2	3795.843	64.35	-29.03	35.32	74.00	-38.68	peak	P
3	6224.226	57.77	-25.35	32.42	74.00	-41.58	peak	P
4	8843.028	58.01	-24.63	33.38	74.00	-40.62	peak	P
5 *	11735.245	66.35	-22.66	43.69	74.00	-30.31	peak	P
6	14445.955	64.76	-21.19	43.57	74.00	-30.43	peak	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2519.478	70.05	-30.34	39.71	74.00	-34.29	peak	P
2	3427.655	64.08	-29.12	34.96	74.00	-39.04	peak	P
3	4334.363	65.15	-28.86	36.29	74.00	-37.71	peak	P
4	5861.054	61.07	-25.78	35.29	74.00	-38.71	peak	P
5	8365.651	63.51	-25.38	38.13	74.00	-35.87	peak	P
6 *	15012.098	63.28	-20.43	42.85	74.00	-31.15	peak	P

TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2519.478	70.55	-30.34	40.21	74.00	-33.79	peak	P
2	3228.591	67.47	-29.30	38.17	74.00	-35.83	peak	P
3	4532.961	59.00	-28.69	30.31	74.00	-43.69	peak	P
4	6224.226	59.27	-25.35	33.92	74.00	-40.08	peak	P
5	9711.176	59.52	-23.66	35.86	74.00	-38.14	peak	P
6 *	14445.955	62.26	-21.19	41.07	74.00	-32.93	peak	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2796.572	69.48	-29.86	39.62	74.00	-34.38	peak	P
2	3548.627	66.94	-29.05	37.89	74.00	-36.11	peak	P
3	5254.440	63.74	-27.16	36.58	74.00	-37.42	peak	P
4	7198.228	62.98	-24.87	38.11	74.00	-35.89	peak	P
5	10891.963	62.37	-23.67	38.70	74.00	-35.30	peak	P
6 *	14491.958	60.89	-21.20	39.69	74.00	-34.31	peak	P

7 Test Setup Photos

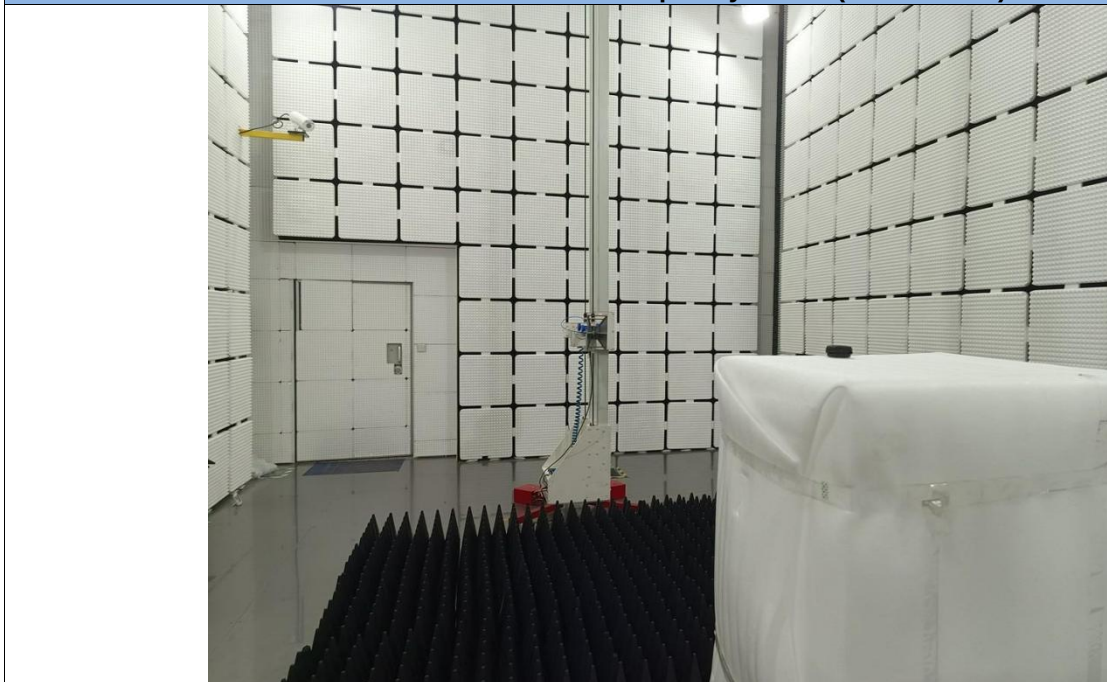
Conducted Emission at AC power line



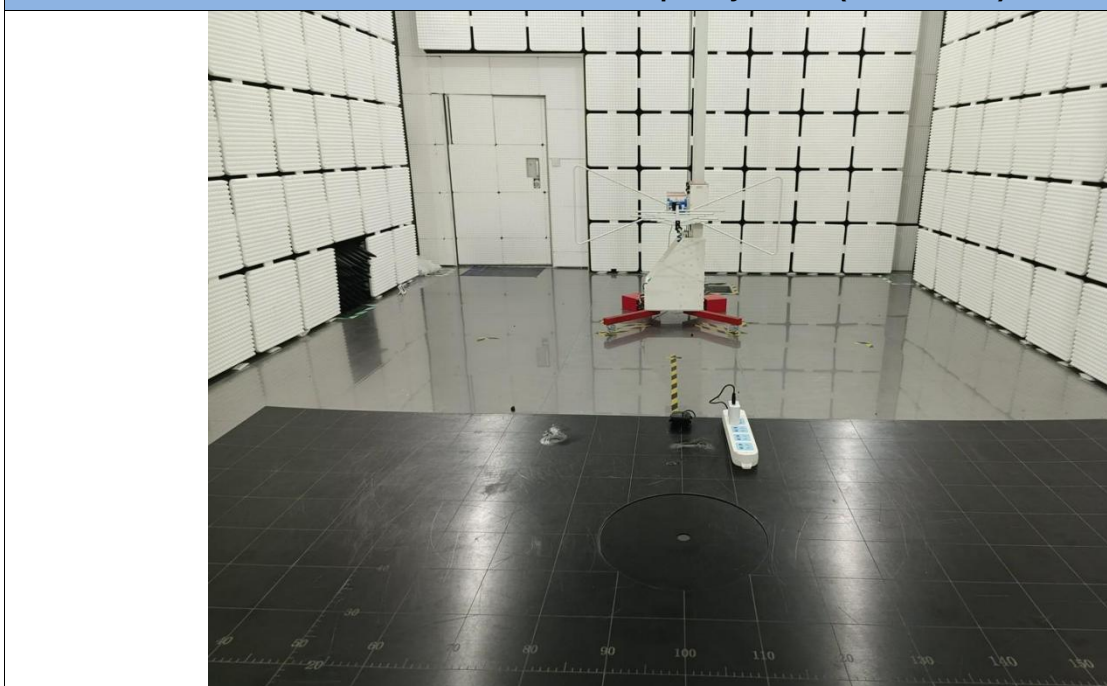
Occupied Bandwidth
Maximum Conducted Output Power
Power Spectral Density
Emissions in non-restricted frequency bands



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.BTFSZ230307R00101.



Appendix

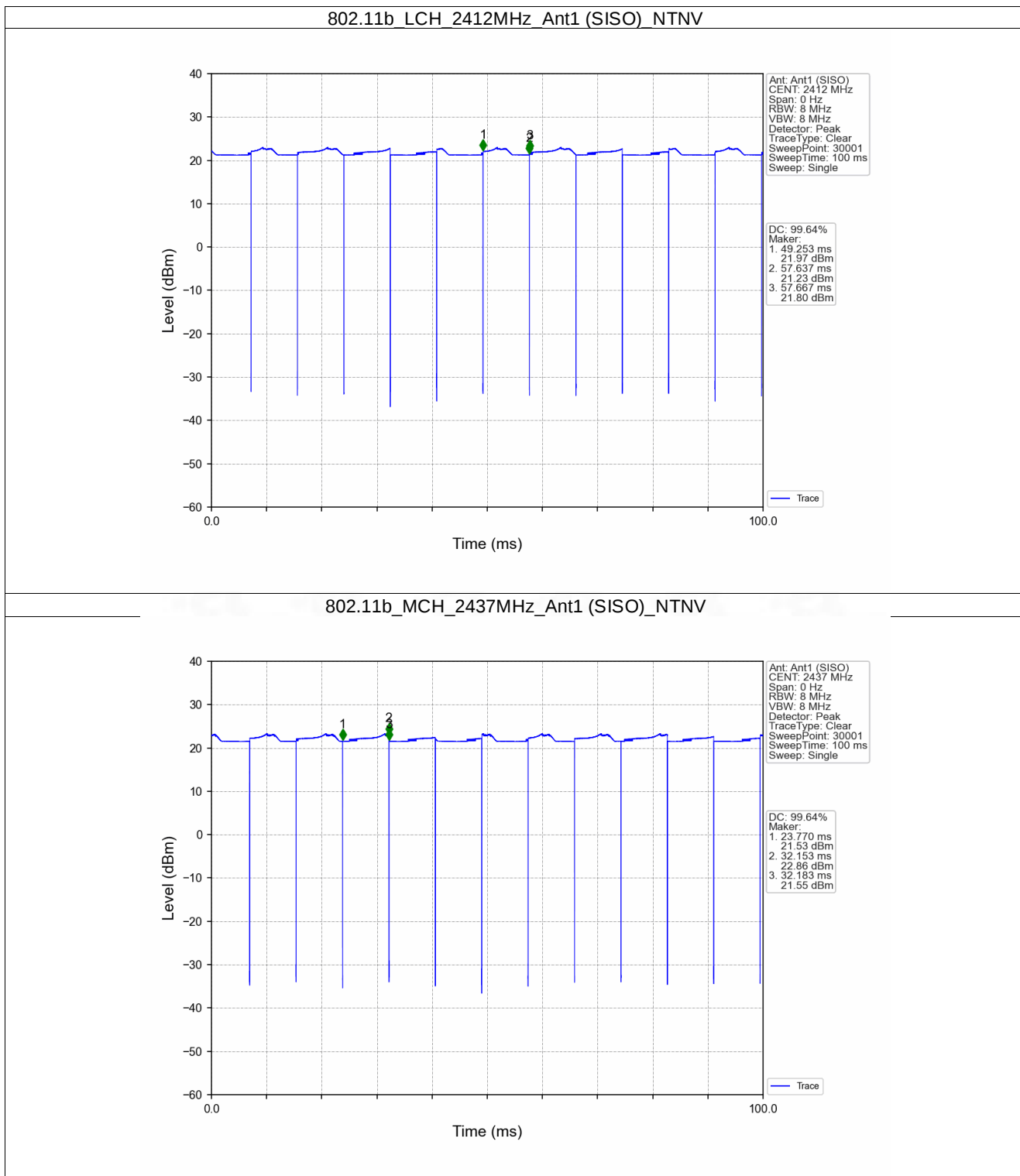
1. Duty Cycle

1.1 Ant1

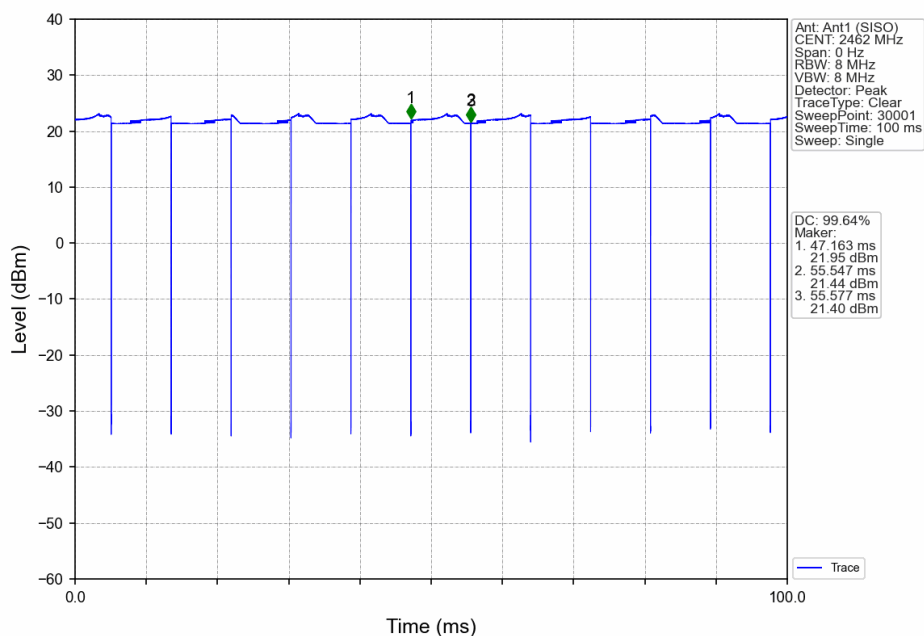
1.1.1 Test Result

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	8.384	8.414	99.64	0.02	0.04
		2437	8.383	8.413	99.64	0.02	0.04
		2462	8.384	8.414	99.64	0.02	0.04
802.11g	SISO	2412	1.394	1.428	97.62	0.10	0.03
		2437	1.394	1.428	97.62	0.10	0.03
		2462	1.394	1.428	97.62	0.10	0.03
802.11n (HT20)	SISO	2412	1.302	1.335	97.53	0.11	0.03
		2437	1.302	1.336	97.46	0.11	0.03
		2462	1.302	1.336	97.46	0.11	0.03

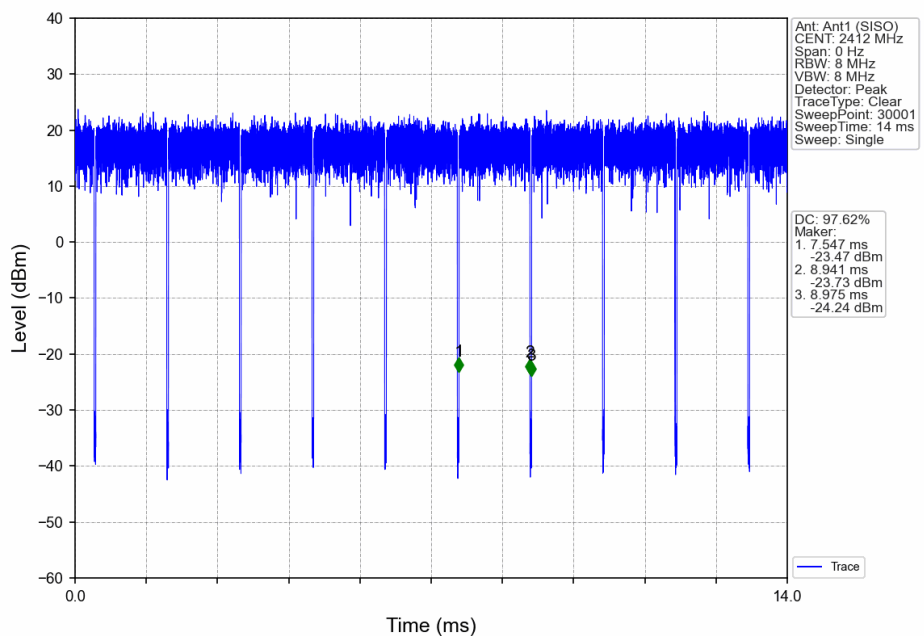
1.1.2 Test Graph



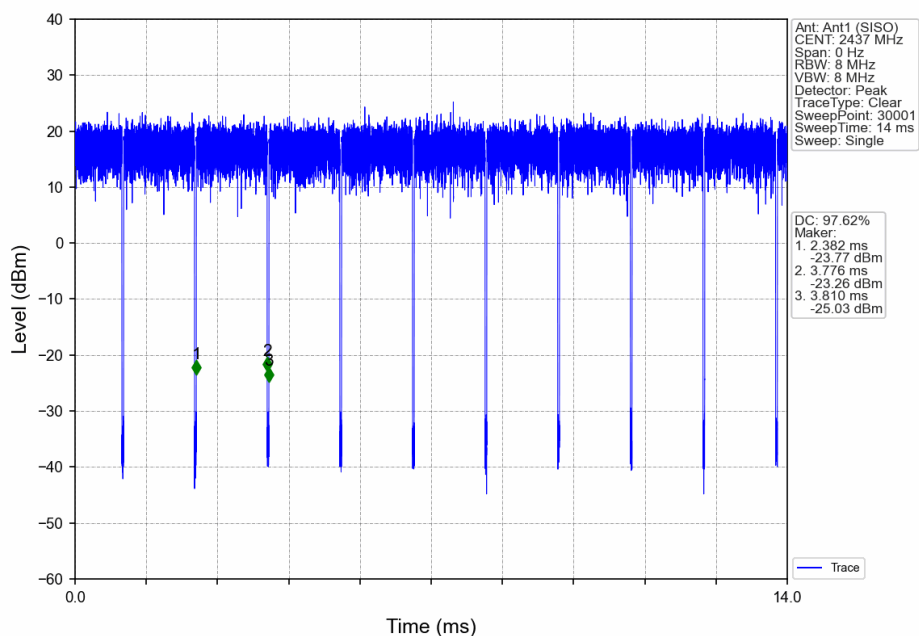
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



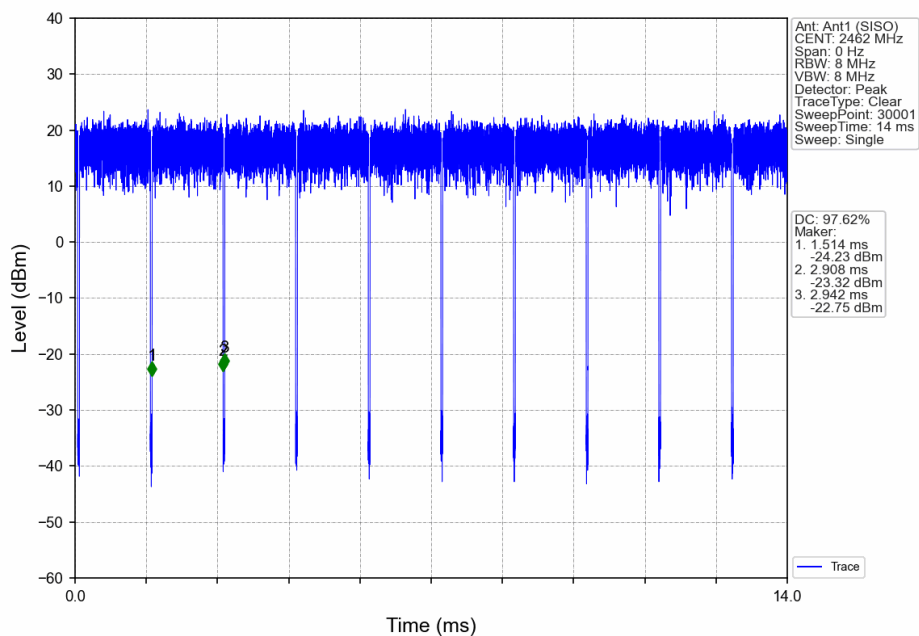
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



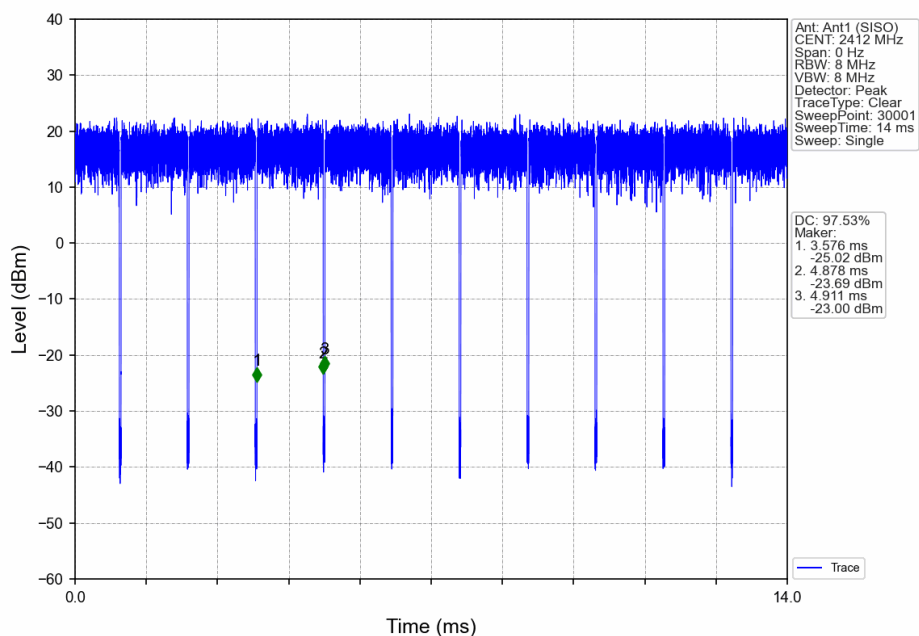
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



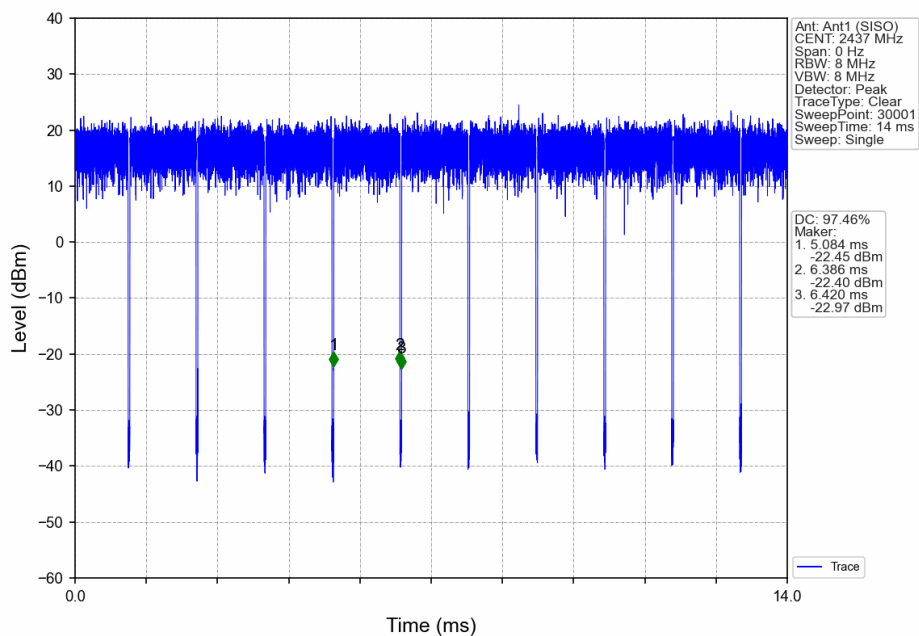
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

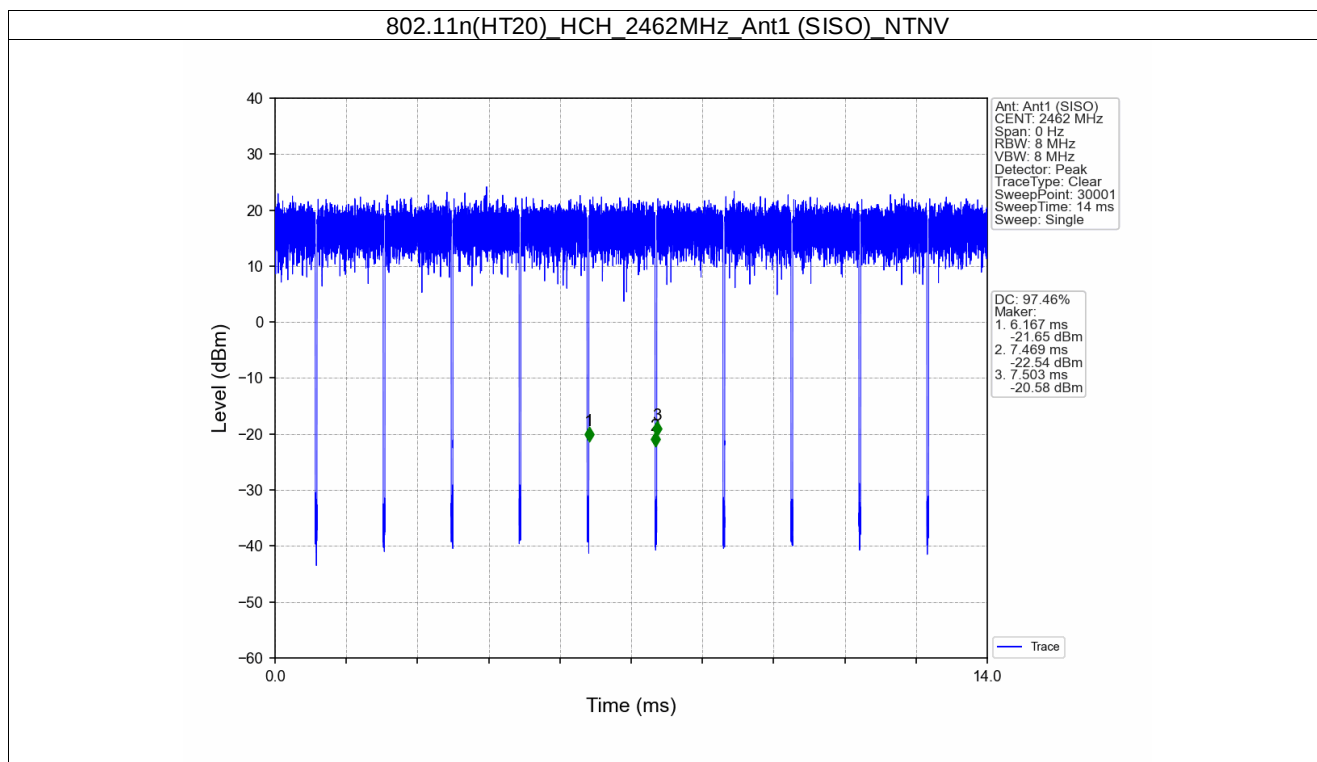


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV





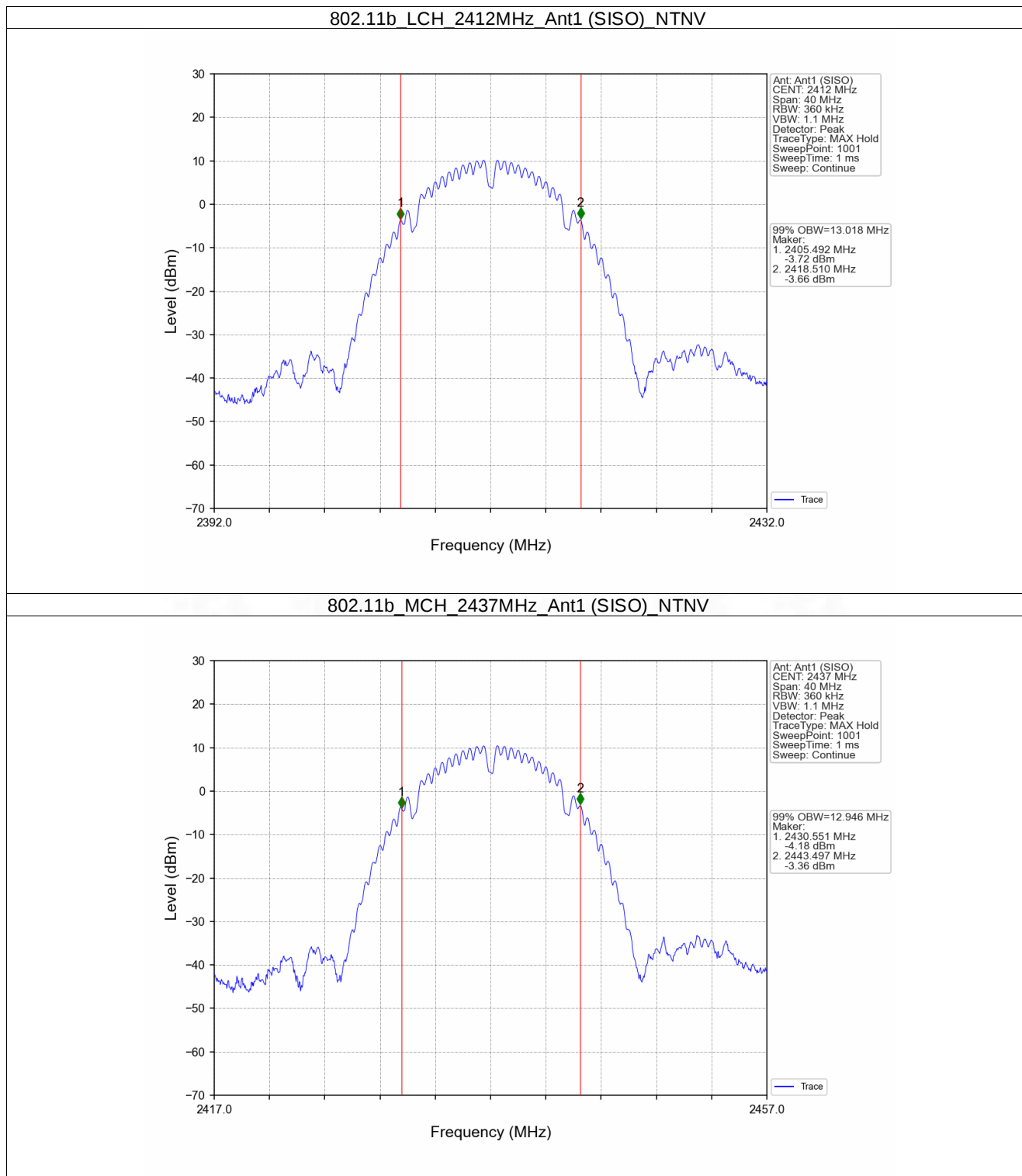
2. Bandwidth

2.1 OBW

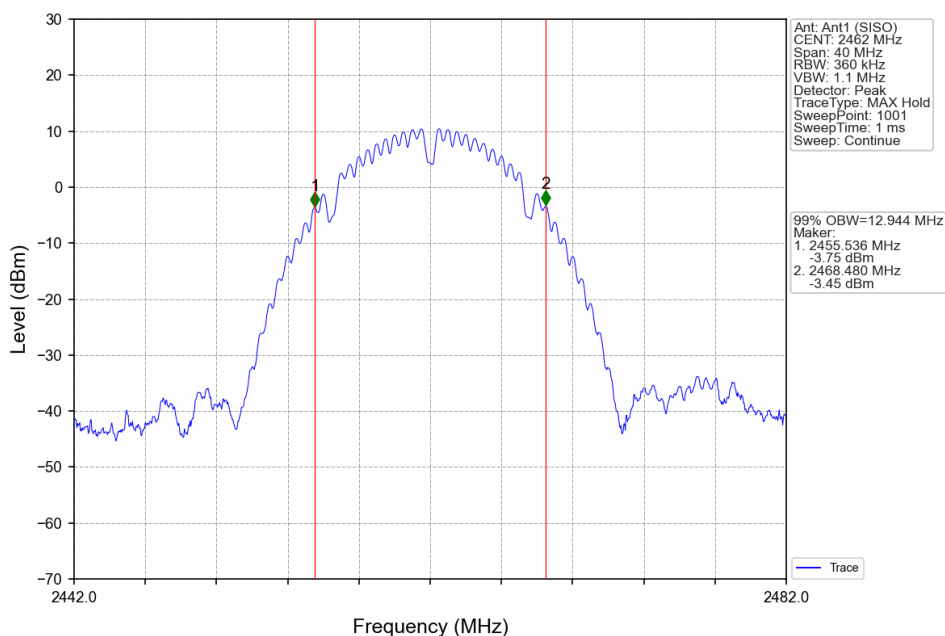
2.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)	Verdict
				Result	
802.11b	SISO	2412	1	13.018	Pass
		2437	1	12.946	Pass
		2462	1	12.944	Pass
802.11g	SISO	2412	1	17.540	Pass
		2437	1	17.581	Pass
		2462	1	17.642	Pass
802.11n (HT20)	SISO	2412	1	18.438	Pass
		2437	1	18.439	Pass
		2462	1	18.473	Pass

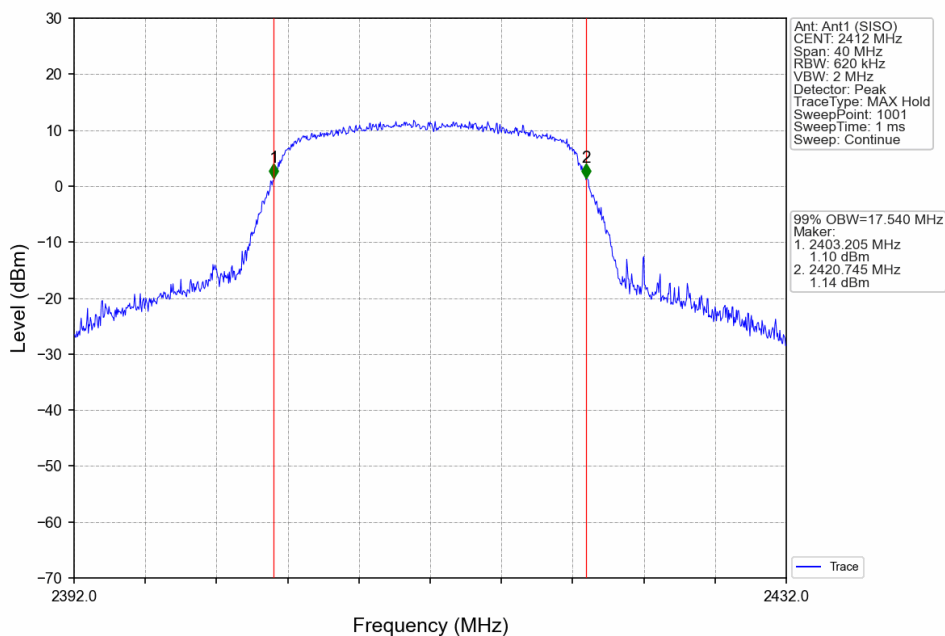
2.1.2 Test Graph



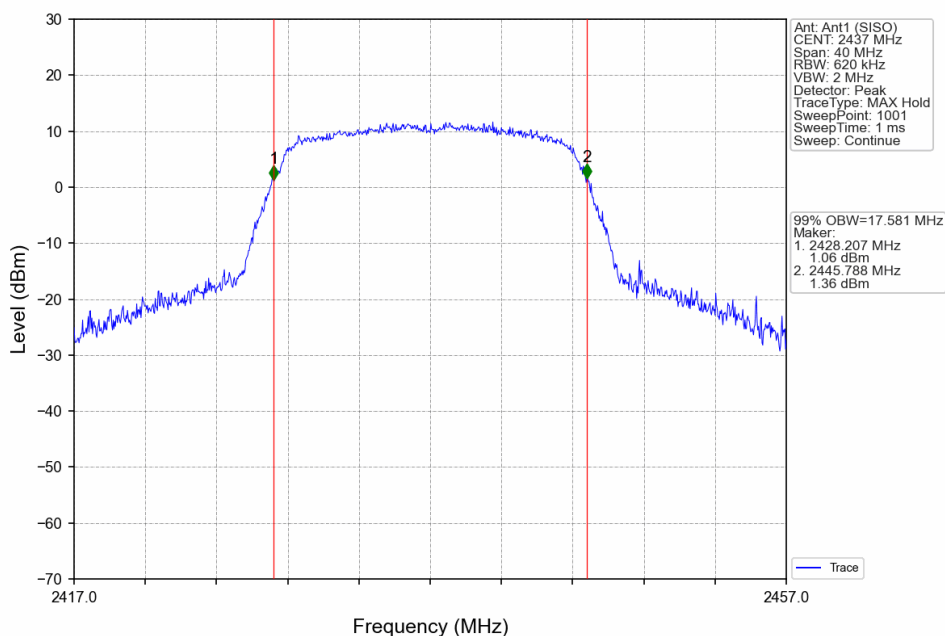
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



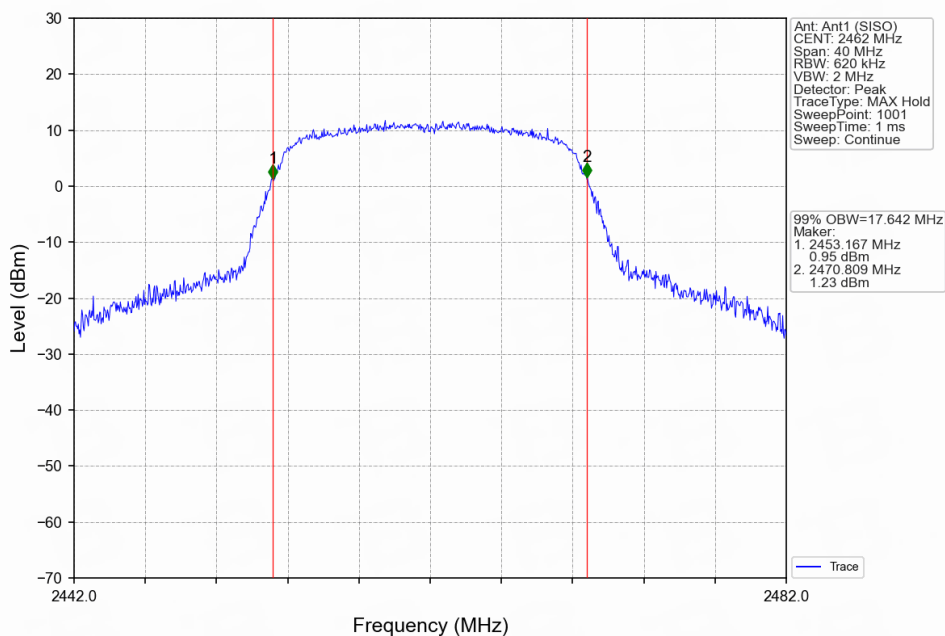
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



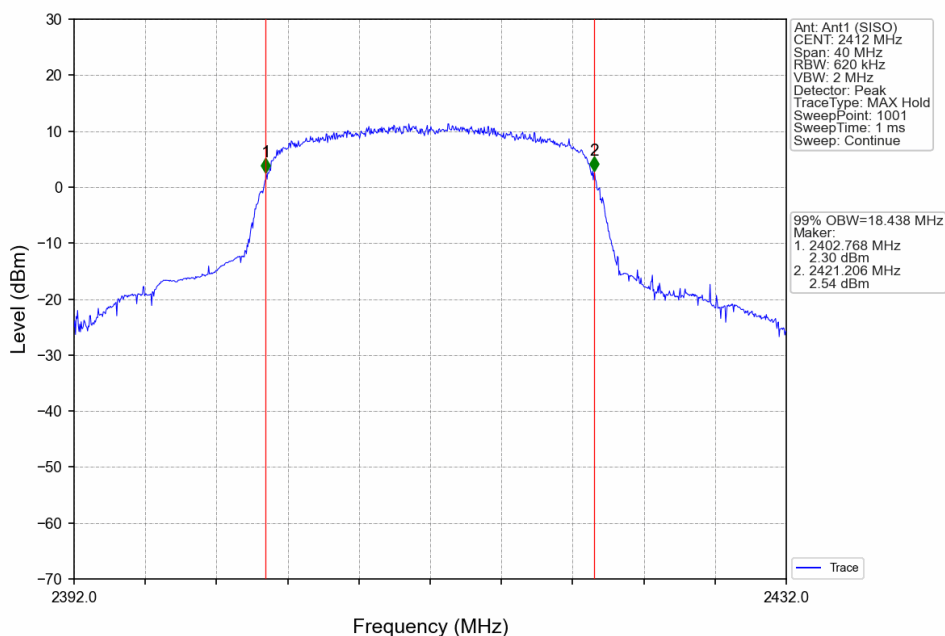
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



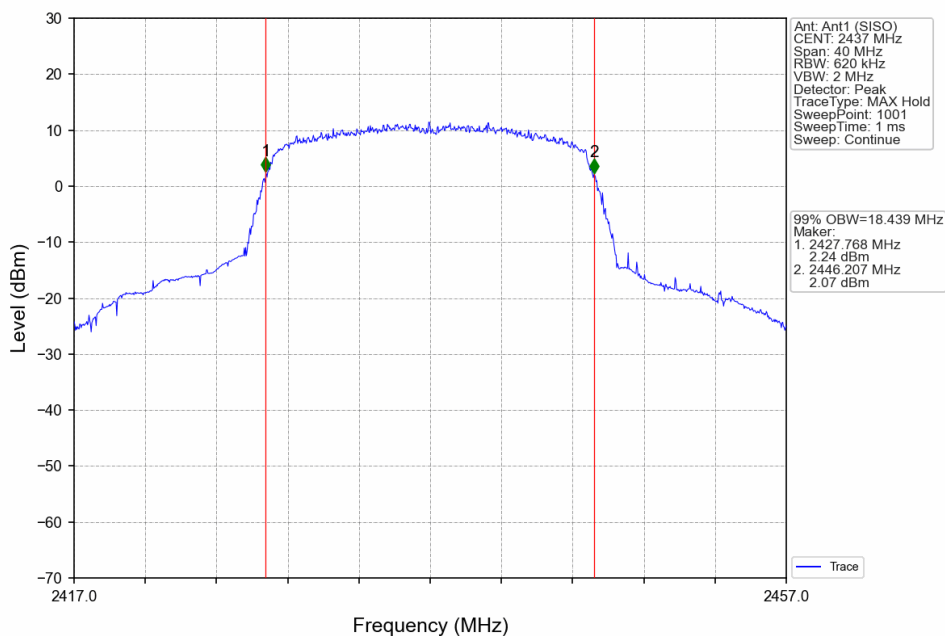
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

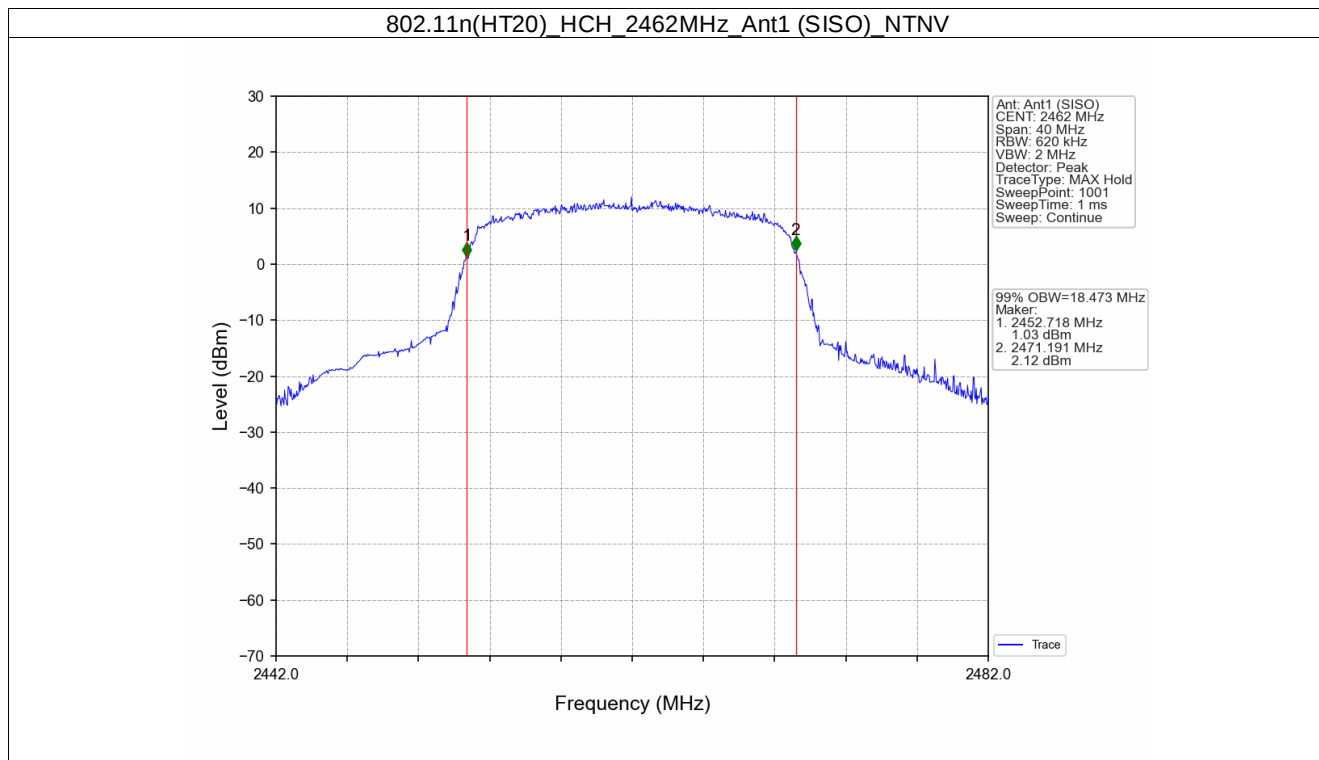


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



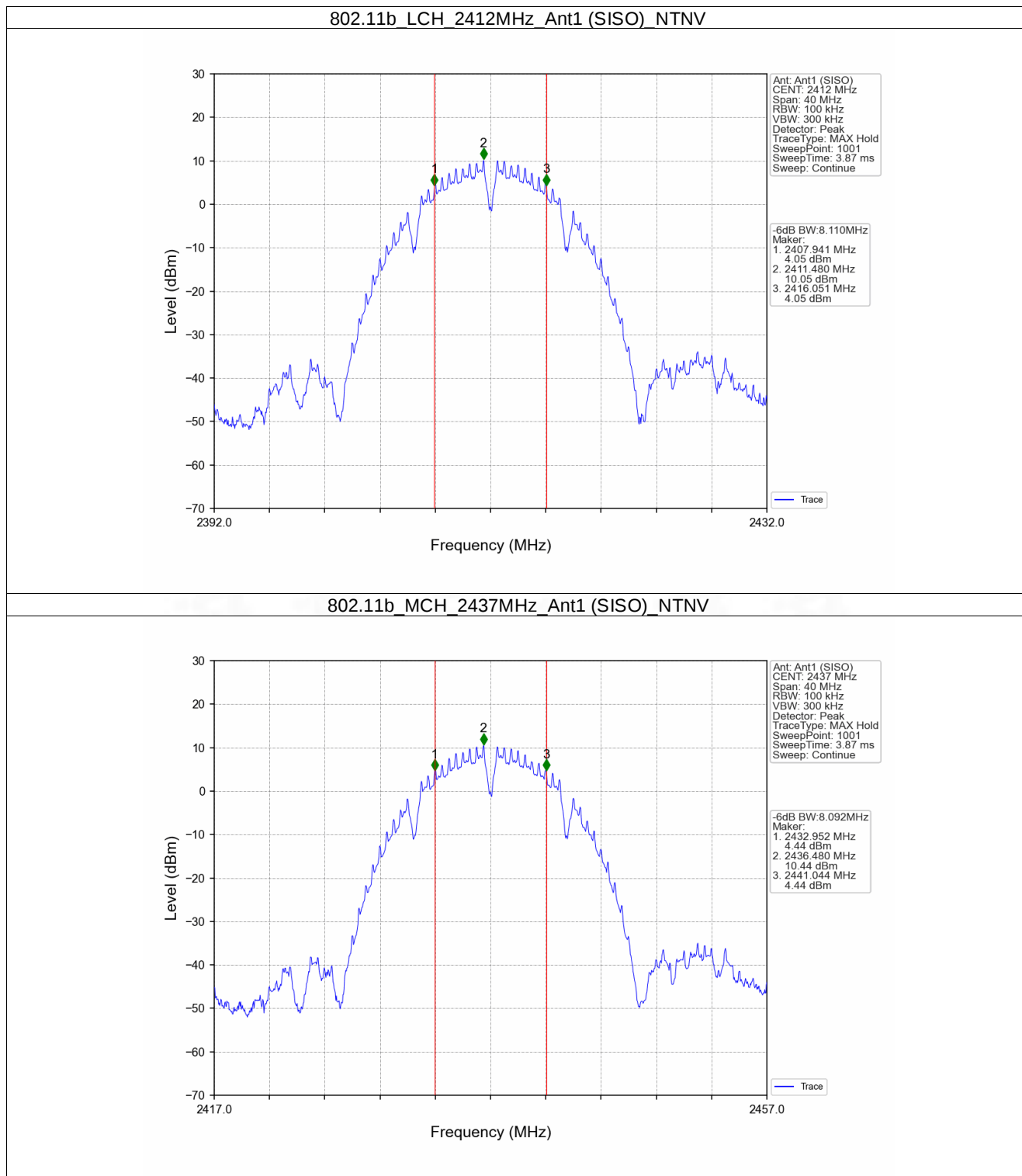


2.2 6dB BW

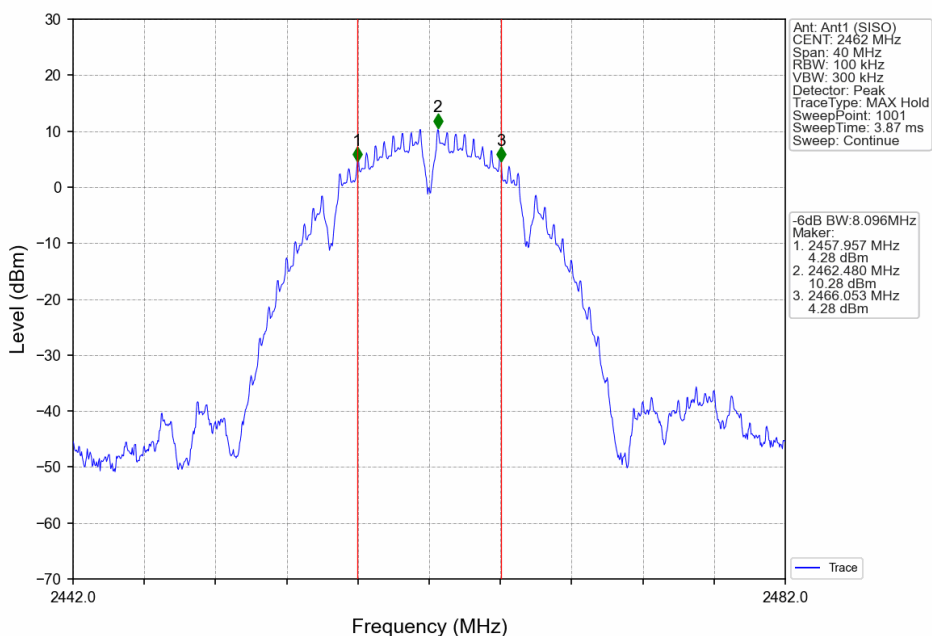
2.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	8.110	≥ 0.5	Pass
		2437	1	8.092	≥ 0.5	Pass
		2462	1	8.096	≥ 0.5	Pass
802.11g	SISO	2412	1	15.173	≥ 0.5	Pass
		2437	1	15.173	≥ 0.5	Pass
		2462	1	15.178	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	15.438	≥ 0.5	Pass
		2437	1	15.176	≥ 0.5	Pass
		2462	1	15.176	≥ 0.5	Pass

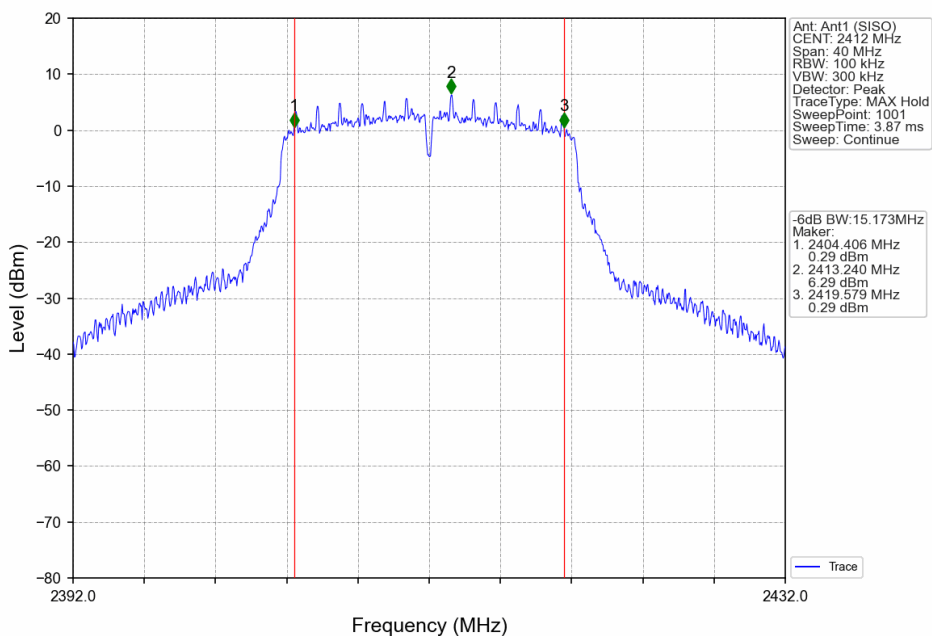
2.2.2 Test Graph



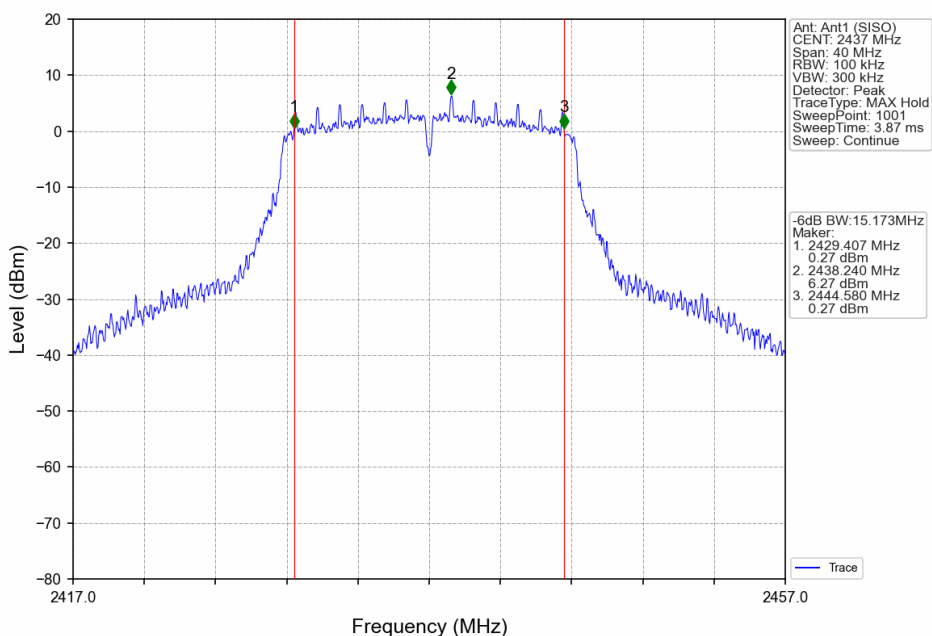
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



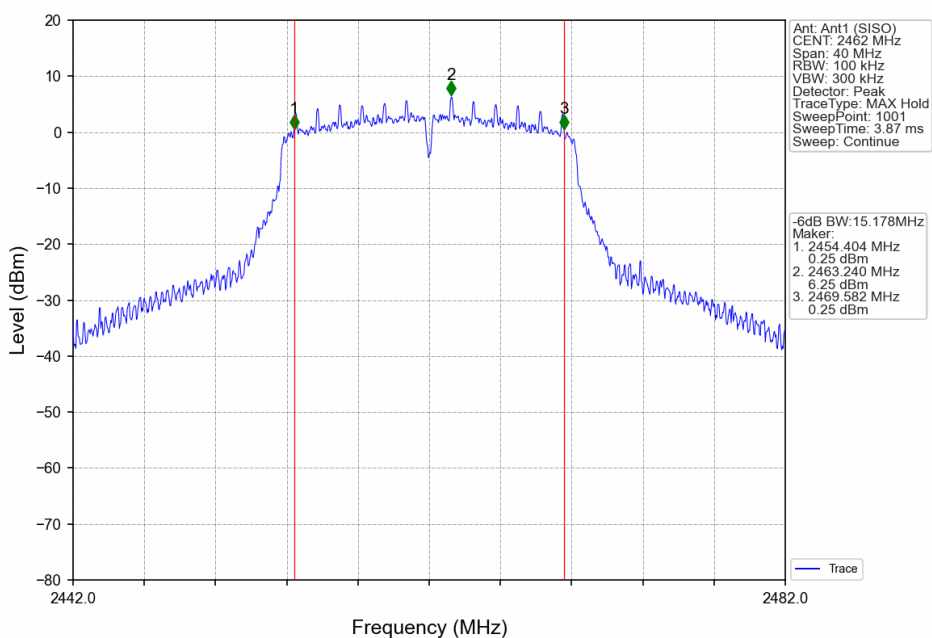
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



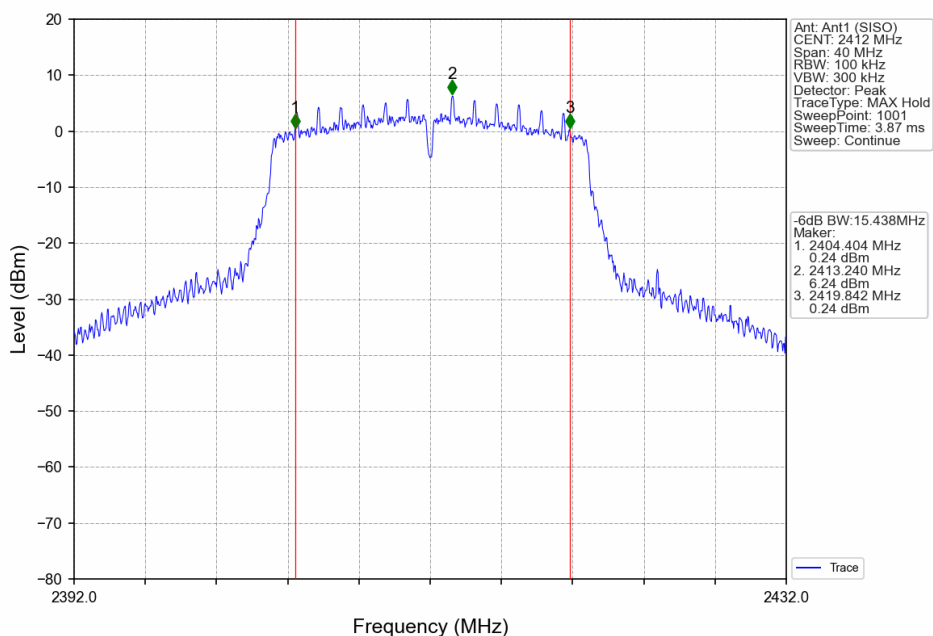
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



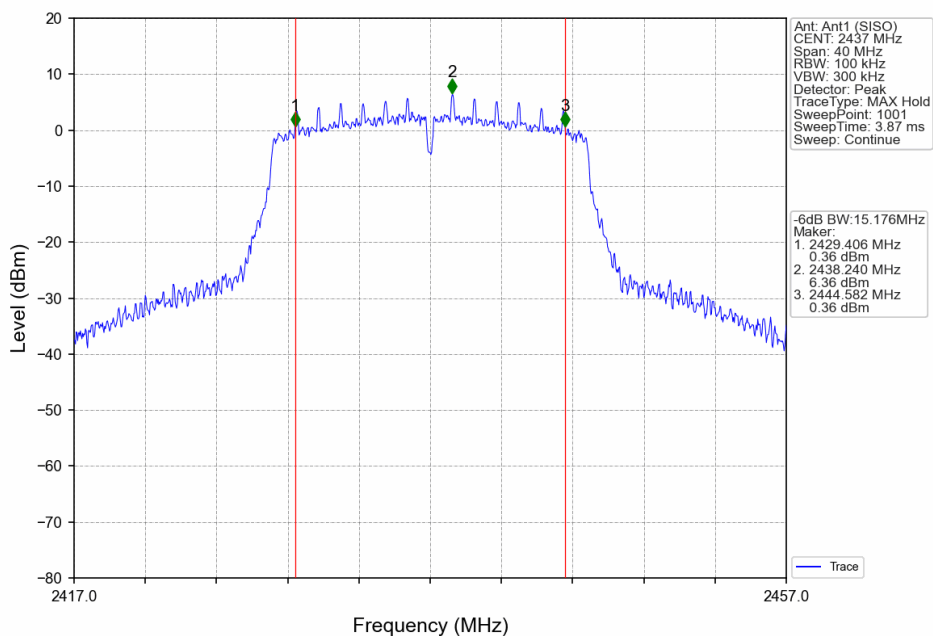
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

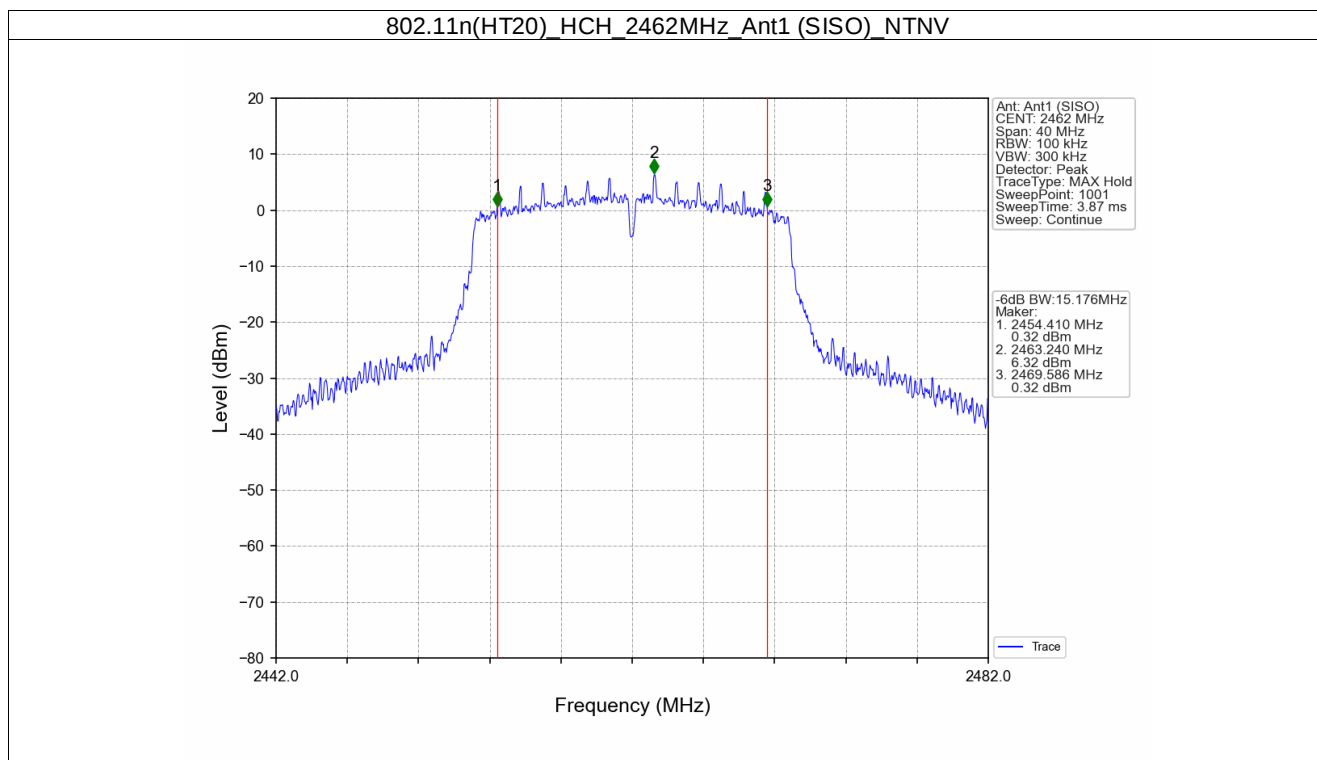


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV





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	
802.11b	SISO	2412	20.29	<=30	Pass
		2437	20.62	<=30	Pass
		2462	20.62	<=30	Pass
802.11g	SISO	2412	23.90	<=30	Pass
		2437	23.82	<=30	Pass
		2462	23.87	<=30	Pass
802.11n (HT20)	SISO	2412	23.69	<=30	Pass
		2437	23.74	<=30	Pass
		2462	23.67	<=30	Pass

Note1: Antenna Gain: Ant1: -2.66dBi;

4. Maximum Power Spectral Density

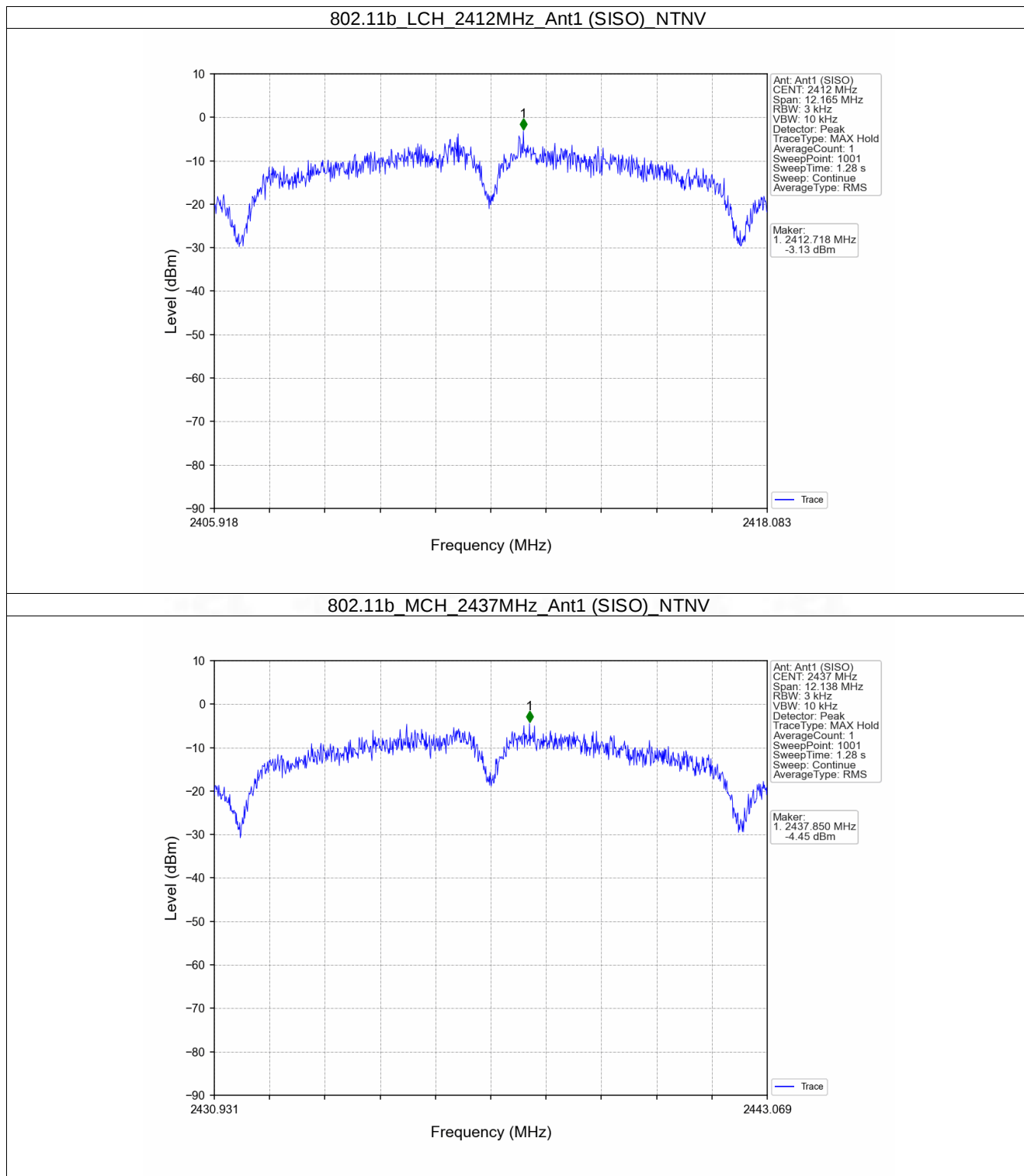
4.1 PSD

4.1.1 Test Result

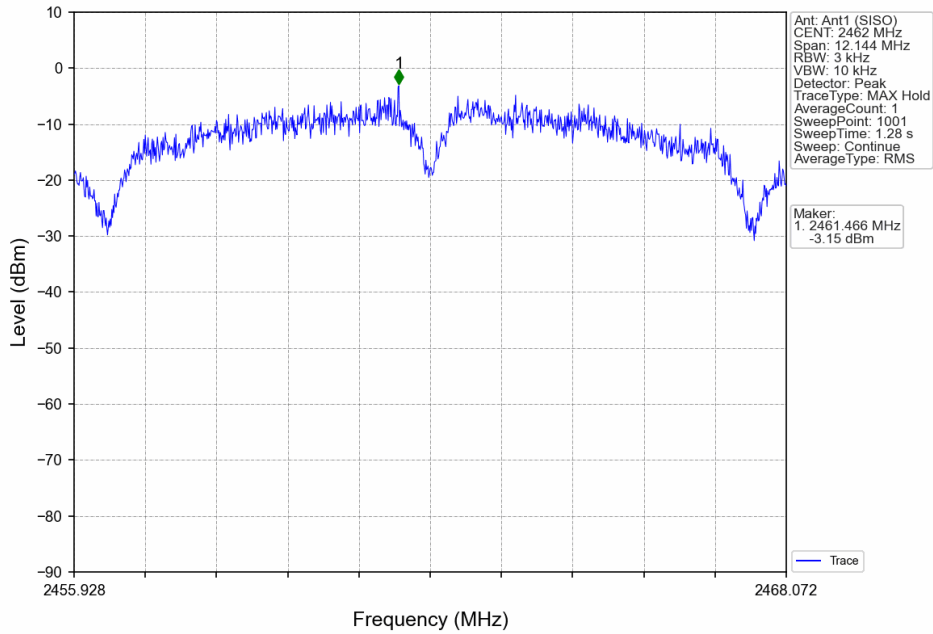
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-3.13	<=8	Pass
		2437	-4.45	<=8	Pass
		2462	-3.15	<=8	Pass
802.11g	SISO	2412	-8.78	<=8	Pass
		2437	-8.45	<=8	Pass
		2462	-9.08	<=8	Pass
802.11n (HT20)	SISO	2412	-8.78	<=8	Pass
		2437	-9.11	<=8	Pass
		2462	-8.62	<=8	Pass

Note1: Antenna Gain: Ant1: -2.66dBi;

4.1.2 Test Graph



802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

