RF Test Report

For

Applicant Name:	Shenzhen WEIYIKE Technology Co.,Ltd
Address:	Room503, NO.4, Maojinghua SOHO Yi Luan Building, Xixiang, Rood, NO.230, Baoan, District, ShenZhen, P.R.China.
EUT Name:	Automobile Data Recorder
Brand Name:	N/A
Model Number:	V7
Series Model Number:	V7PRO, V7PULS, V7MATE

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:	
Test Standards:	47 CFR Part 15.247
Test Conclusion:	Pass
FCC ID:	2BCEY-V7
Test Date:	2023-02-22 to 2023-07-21
Date of Issue:	2023-07-21
Prepared By:	elma.yang / Project Engineer
Date:	2023-07-21
Approved By:	Ryan.CJ / EMC Manager
Date:	2023-07-21

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Revision History		
Version	Issue Date	Revisions Content
R_V0	2023-07-21	Original
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BTF Testing Lab (Shenzhen) Co., Ltd.
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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.
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2 Product Information

2.1 Application Information

Company Name:	Shenzhen WEIYIKE Technology Co.,Ltd
Address:	Room503, NO.4, Maojinghua SOHO Yi Luan Building, Xixiang, Rood, NO.230, Baoan, District, ShenZhen, P.R.China.

2.2 Manufacturer Information

Company Name:	Shenzhen WEIYIKE Technology Co.,Ltd
Address:	Room503, NO.4, Maojinghua SOHO Yi Luan Building, Xixiang, Rood, NO.230, Baoan, District, ShenZhen, P.R.China.

2.3 Factory Information

Company Name:	Shenzhen WEIYIKE Technology Co.,Ltd
Address:	Room503, NO.4, Maojinghua SOHO Yi Luan Building, Xixiang, Rood, NO.230, Baoan, District, ShenZhen, P.R.China.

2.4 General Description of Equipment under Test (EUT)

EUT Name:	Automobile Data Recorder
Test Model Number:	V7

2.5 Technical Information

Power Supply:	DC12V from car-Battery
Power Adaptor:	/
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:	PCB ANT
Antenna Gain#:	0dBi

Note:

#: The antenna gain provided by the applicant, and the laboratory will not be responsible for the accumulated calculation results which covers the information provided by the applicant.

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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

Measurement	Value
Occupied Channel Bandwidth	69 KHz
RF output power, conducted	0.87 dB
Power Spectral Density, conducted	0.69 dB
Unwanted Emissions, conducted	0.94 dB
All emissions, radiated(<1GHz)	4.12 dB
All emissions, radiated(>1GHz)	4.16 dB
Temperature	0.82 °C
Humidity	4.1 %

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)	N/A
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

Note: N/A –not applicable to this device.

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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	Schwarz Beck	VTSD 9561-F	00953	2022-11-24	2023-11-23
Coaxial Switcher	Schwarz Beck	CX210	CX210	2022-11-24	2023-11-23
V-LISN	Schwarz Beck	NSLK 8127	01073	2022-11-24	2023-11-23
LISN	AFJ	LS16/110VAC	16010020076	2023-02-23	2024-02-22
EMI Receiver	R & S	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 COMMNUNICATION TESTER	R & S	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 COMMNUNICATION TESTER	R & S	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	/	/	/

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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 COMMNUNICATION TESTER	R & S	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 COMMNUNICATION TESTER	R & S	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	2022-03-26	2023-03-25
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	Schwarz Beck	BBHA9170	01157	2021-11-28	2023-11-27
EMI TEST RECEIVER	R & S	ESCI7	101032	2022-11-24	2023-11-23
SIGNAL ANALYZER	R & S	FSQ40	100010	2022-11-24	2023-11-23

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POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Broadband Preamplilifier	Schwarz Beck	BBV9718D	00008	2022-03-26	2023-03-25
Horn Antenna	Schwarz Beck	BBHA9120D	2597	2022-05-22	2024-05-21
EZ_EMC	Frad	FA-03A2 RE+	/	/	/
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Log periodic antenna	Schwarz Beck	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	2022-03-26	2023-03-25
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	R & S	ESCI7	101032	2022-11-24	2023-11-23
SIGNAL ANALYZER	R & S	FSQ40	100010	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Broadband Preamplilifier	Schwarzbeck	BBV9718D	00008	2022-03-26	2023-03-25
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	2022-03-26	2023-03-25
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	SKET	PCI-GPIB	/	/	/

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CONTROLLER					
Horn Antenna	Schwarzbeck	BBHA9170	01157	2021-11-28	2023-11-27
EMI TEST RECEIVER	R & S	ESCI7	101032	2022-11-24	2023-11-23
SIGNAL ANALYZER	R & S	FSQ40	100010	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Broadband Preamplilifier	Schwarzbeck	BBV9718D	00008	2022-03-26	2023-03-25
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

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4.2 Test Auxiliary Equipment

The EUT was tested as an independent device.

4.3 Test Modes

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

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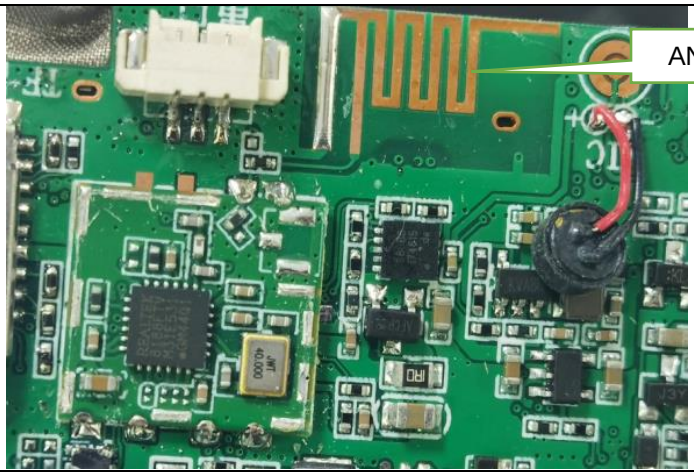
5 Evaluation Results (Evaluation)

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)

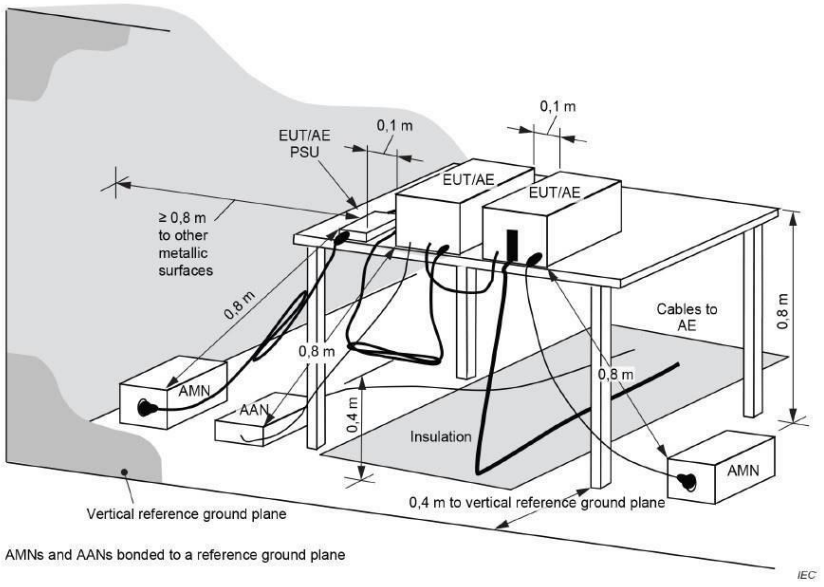
6.1 Conducted Emission at AC power line

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 μH/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 (dBμV): 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:	24.8 °C
Humidity:	52.5 %
Atmospheric Pressure:	1010 mbar

6.1.2 Test Setup Diagram:



6.1.3 Test Data:

N/A (not applicable to this device which powered by car-battery-DC12V)

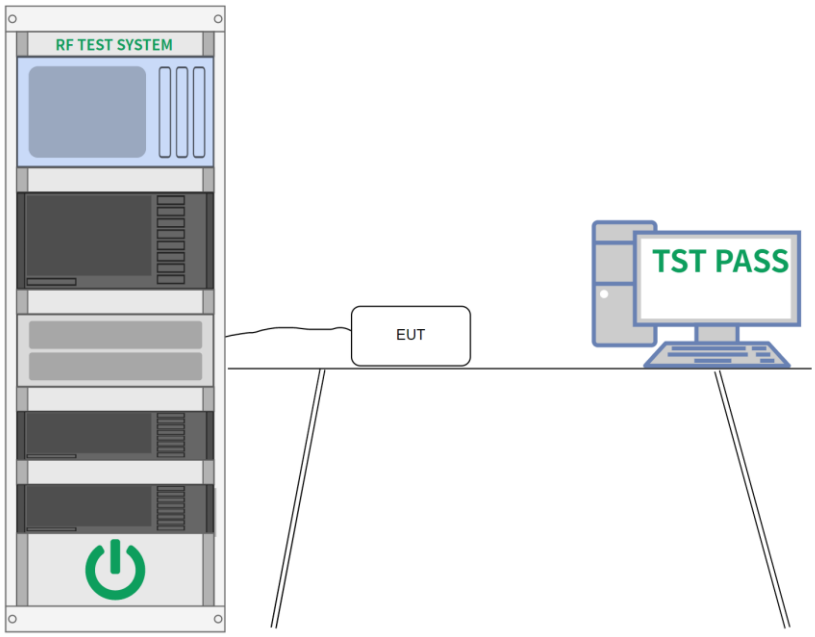
6.2 Occupied Bandwidth

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 >= [3 × 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:	23.6 °C
Humidity:	52.9 %
Atmospheric Pressure:	1010 mbar

6.2.2 Test Setup Diagram:



6.2.3 Test Data:

Please Refer to Appendix for Details.

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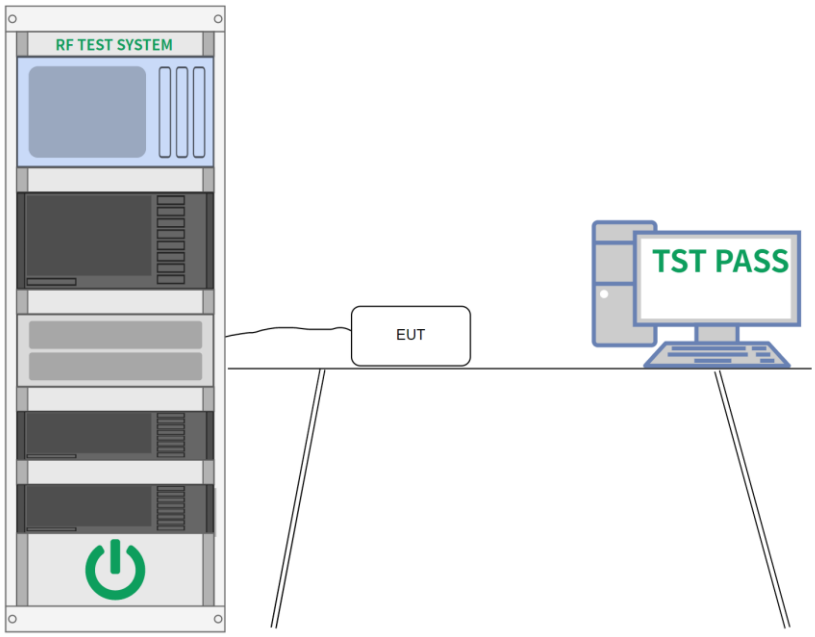
6.3 Maximum Conducted Output Power

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:	23.6 °C
Humidity:	52.9 %
Atmospheric Pressure:	1010 mbar

6.3.2 Test Setup Diagram:



6.3.3 Test Data:

Please Refer to Appendix for Details.

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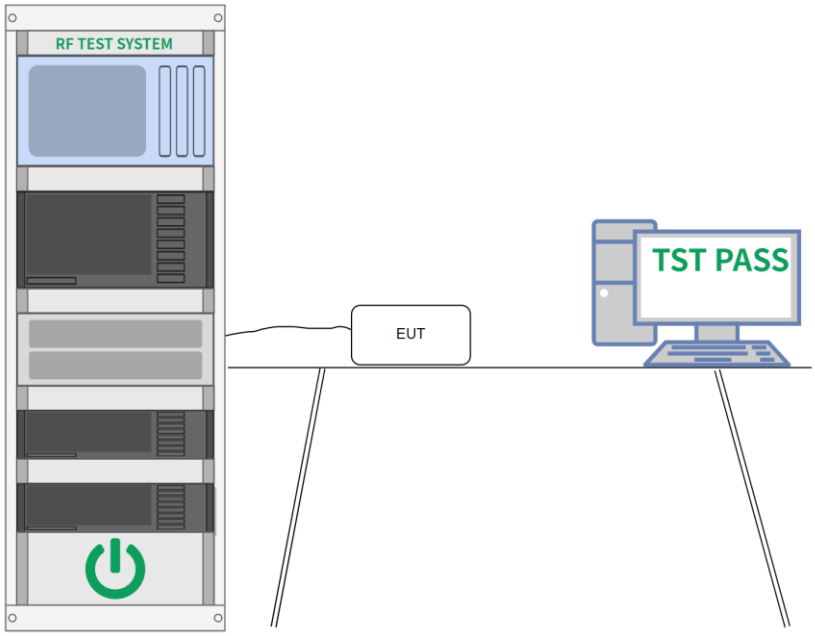
6.4 Power Spectral Density

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:	23.6 °C
Humidity:	52.9 %
Atmospheric Pressure:	1010 mbar

6.4.2 Test Setup Diagram:



6.4.3 Test Data:

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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:	23.6 °C
Humidity:	52.9 %
Atmospheric Pressure:	1010 mbar

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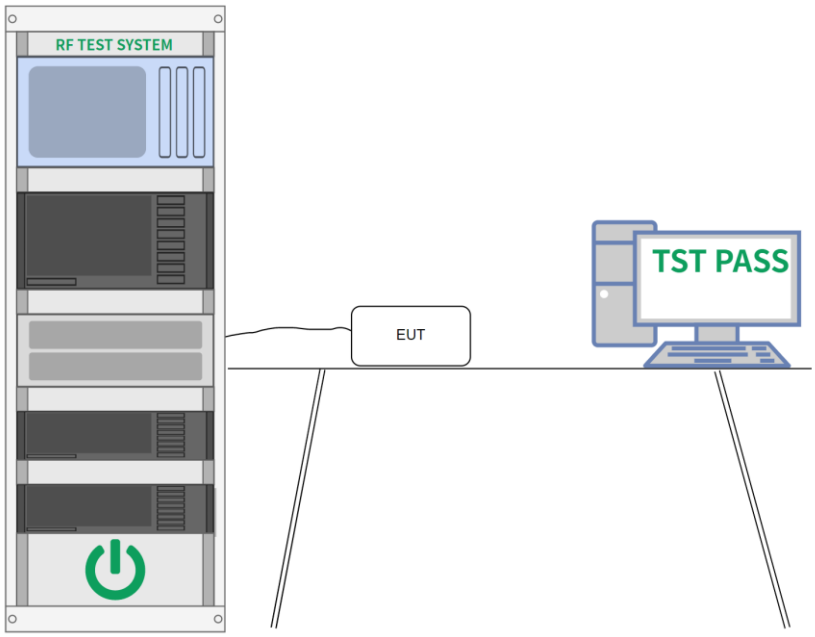
6.5.2 Test Setup Diagram:



6.5.3 Test Data:

Please Refer to Appendix for Details.

6.6 Band edge emissions (Radiated)

<table>
<tr><td>Test Requirement:</td><td>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)).`</td></tr>
<tr><td>Test Method:</td><td>Radiated emissions tests</td></tr>
<tr><td>Test Limit:</td><td>
<table>
<tr><td>Frequency (MHz)</td><td>Field strength (microvolts/meter)</td><td>Measurement distance (meters)</td></tr>
<tr><td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr>
<tr><td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr>
<tr><td>1.705-30.0</td><td>30</td><td>30</td></tr>
<tr><td>30-88</td><td>100 **</td><td>3</td></tr>
<tr><td>88-216</td><td>150 **</td><td>3</td></tr>
<tr><td>216-960</td><td>200 **</td><td>3</td></tr>
<tr><td>Above 960</td><td>500</td><td>3</td></tr>
</table>
** 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.
</td></tr>
<tr><td>Procedure:</td><td>ANSI C63.10-2013 section 6.6.4</td></tr>
</table>

6.6.1 E.U.T. Operation:

Operating Environment:	
Temperature:	25.8 °C
Humidity:	51.2 %
Atmospheric Pressure:	1010 mbar

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6.6.2 Test Data:

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / 802.11b-CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	66.35	-30.59	35.76	74.00	-38.24	peak	P
2	2390.000	67.11	-30.49	36.62	74.00	-37.38	peak	P
3	2400.000	68.51	-30.48	38.03	74.00	-35.97	peak	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / 802.11b-CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	66.57	-30.59	35.98	74.00	-38.02	peak	P
2	2390.000	67.37	-30.49	36.88	74.00	-37.12	peak	P
3	2400.000	68.18	-30.48	37.70	74.00	-36.30	peak	P

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / 802.11b-CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2483.500	70.37	-30.39	39.98	74.00	-34.02	peak	P
2	2500.000	63.10	-30.37	32.73	74.00	-41.27	peak	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 /802.11b- CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2483.500	68.34	-30.39	37.95	74.00	-36.05	peak	P
2	2500.000	64.93	-30.37	34.56	74.00	-39.44	peak	P

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TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / 802.11g-CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	67.81	-30.59	37.22	74.00	-36.78	peak	P
2	2390.000	65.12	-30.49	34.63	74.00	-39.37	peak	P
3	2400.000	67.50	-30.48	37.02	74.00	-36.98	peak	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / 802.11g-CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	66.59	-30.59	36.00	74.00	-38.00	peak	P
2	2390.000	66.94	-30.49	36.45	74.00	-37.55	peak	P
3	2400.000	67.20	-30.48	36.72	74.00	-37.28	peak	P

TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 /802.11g- CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2483.500	70.20	-30.39	39.81	74.00	-34.19	peak	P
2	2500.000	63.34	-30.37	32.97	74.00	-41.03	peak	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / 802.11g-CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2483.500	68.74	-30.39	38.35	74.00	-35.65	peak	P
2	2500.000	64.42	-30.37	34.05	74.00	-39.95	peak	P

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TM3 / Polarization: Horizontal / Band: 2.4G / BW: 20 / 802.11n-CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	65.10	-30.59	34.51	74.00	-39.49	peak	P
2	2390.000	67.49	-30.49	37.00	74.00	-37.00	peak	P
3	2400.000	67.84	-30.48	37.36	74.00	-36.64	peak	P

TM3 / Polarization: Vertical / Band: 2.4G / BW: 20 / 802.11n-CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	67.72	-30.59	37.13	74.00	-36.87	peak	P
2	2390.000	66.86	-30.49	36.37	74.00	-37.63	peak	P
3	2400.000	70.81	-30.48	40.33	74.00	-33.67	peak	P

TM3 / Polarization: Horizontal / Band: 2.4G / BW: 20 / 802.11n-CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2483.500	70.11	-30.39	39.72	74.00	-34.28	peak	P
2	2500.000	64.58	-30.37	34.21	74.00	-39.79	peak	P

TM3 / Polarization: Vertical / Band: 2.4G / BW: 20 / 802.11n-CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2483.500	69.53	-30.39	39.14	74.00	-34.86	peak	P
2	2500.000	63.83	-30.37	33.46	74.00	-40.54	peak	P

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TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / 802.11n -CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	66.83	-30.59	36.24	74.00	-37.76	peak	P
2	2390.000	67.40	-30.49	36.91	74.00	-37.09	peak	P
3	2400.000	70.13	-30.48	39.65	74.00	-34.35	peak	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / 802.11n -CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	66.88	-30.59	36.29	74.00	-37.71	peak	P
2	2390.000	65.43	-30.49	34.94	74.00	-39.06	peak	P
3	2400.000	69.11	-30.48	38.63	74.00	-35.37	peak	P

TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / 802.11n -CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2483.500	70.61	-30.39	40.22	74.00	-33.78	peak	P
2	2500.000	64.10	-30.37	33.73	74.00	-40.27	peak	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / 802.11n -CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2483.500	68.14	-30.39	37.75	74.00	-36.25	peak	P
2	2500.000	63.61	-30.37	33.24	74.00	-40.76	peak	P

Remark:
1.Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
2.Mesurement Level = Reading level + Correct Factor, Over=Limit- Mesurement
Correction Factor= Antenna Factor + Cable loss – Pre-amplifier

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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:	25.8 °C
Humidity:	51.2 %
Atmospheric Pressure:	1010 mbar

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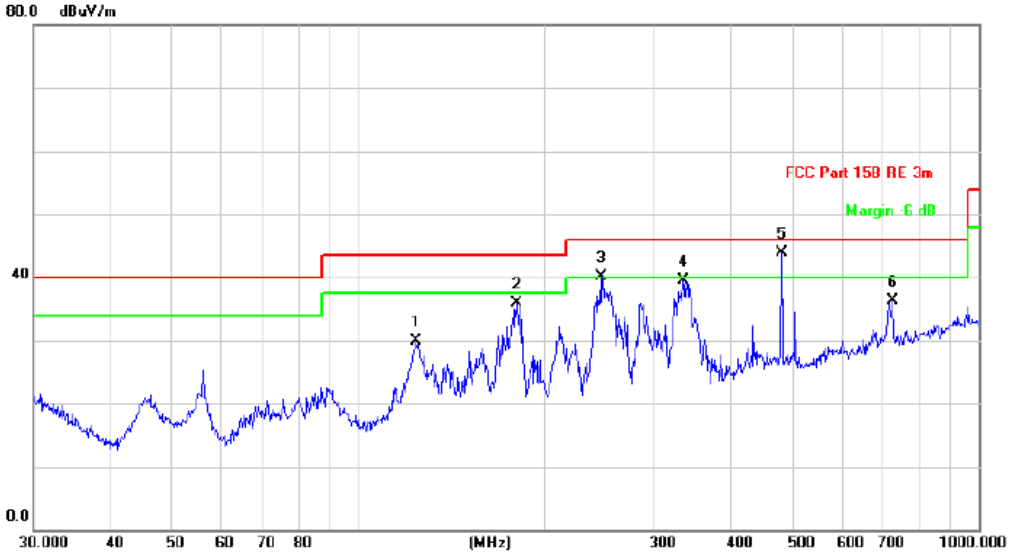
6.7.2 Test Data:

Note: All the mode have been tested, and only the worst case of 802.11b mode are in the report
TM4 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		124.1330	33.44	-3.61	29.83	43.50	-13.67	QP	100	108	
2		180.0165	41.17	-5.29	35.88	43.50	-7.62	QP	100	285	
3	!	245.9509	44.60	-4.56	40.04	46.00	-5.96	QP	100	267	
4		333.6867	41.38	-1.81	39.57	46.00	-6.43	QP	100	32	
5	*	480.5276	41.91	1.95	43.86	46.00	-2.14	QP	100	352	
6		726.8052	30.76	5.64	36.40	46.00	-9.60	QP	100	87	

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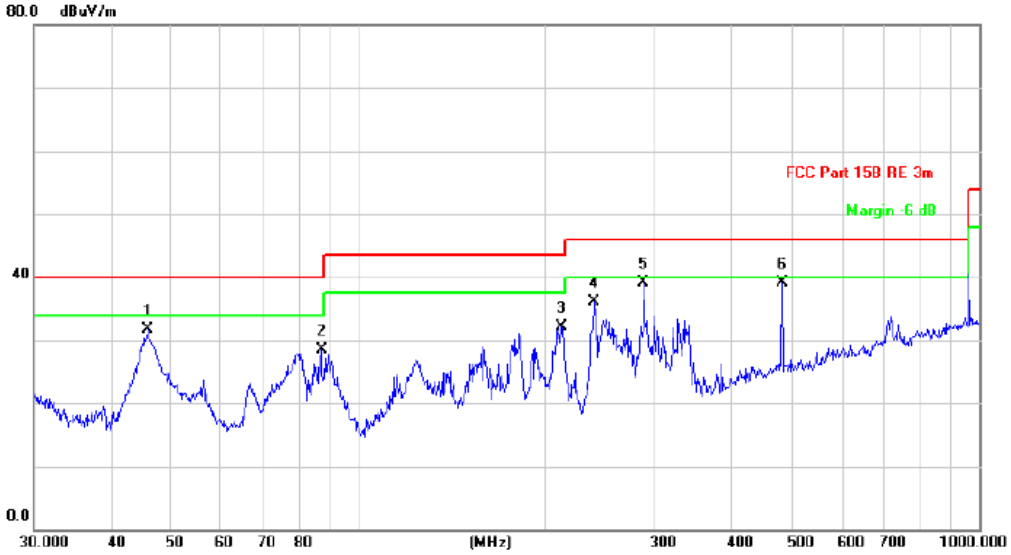
TM4 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		45.8553	38.06	-6.27	31.79	40.00	-8.21	QP	100	100	
2		87.1117	37.72	-9.24	28.48	40.00	-11.52	QP	100	351	
3		212.2695	36.88	-4.73	32.15	43.50	-11.35	QP	100	329	
4		239.1473	40.81	-4.78	36.03	46.00	-9.97	QP	100	317	
5	*	287.9904	41.44	-2.28	39.16	46.00	-6.84	QP	100	45	
6		480.5276	36.70	2.46	39.16	46.00	-6.84	QP	100	92	

Remark: Margin = Limit – Level
Correction Factor= Antenna Factor + Cable loss – Pre-amplifier
Level=Test receiver reading + correction factor

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6.8 Emissions in restricted frequency bands (above 1GHz)

<table>
<tr><td>Test Requirement:</td><td>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)).`</td></tr>
<tr><td>Test Method:</td><td>Radiated emissions tests</td></tr>
<tr><td>Test Limit:</td><td>
<table>
<tr><th>Frequency (MHz)</th><th>Field strength (microvolts/meter)</th><th>Measurement distance (meters)</th></tr>
<tr><td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr>
<tr><td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr>
<tr><td>1.705-30.0</td><td>30</td><td>30</td></tr>
<tr><td>30-88</td><td>100 **</td><td>3</td></tr>
<tr><td>88-216</td><td>150 **</td><td>3</td></tr>
<tr><td>216-960</td><td>200 **</td><td>3</td></tr>
<tr><td>Above 960</td><td>500</td><td>3</td></tr>
</table>
** 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.
</td></tr>
<tr><td>Procedure:</td><td>ANSI C63.10-2013 section 6.6.4</td></tr>
</table>

6.8.1 E.U.T. Operation:

Operating Environment:	
Temperature:	25.8 °C
Humidity:	51.2 %
Atmospheric Pressure:	1010 mbar

only record the worst mode.

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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	4824.420	68.69	-28.84	39.85	74.00	-34.15	peak	P
2	7236.745	69.19	-24.87	44.32	74.00	-29.68	peak	P
3	9650.497	68.51	-23.83	44.68	74.00	-29.32	peak	P
4	12064.749	68.92	-21.55	47.37	74.00	-26.63	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	4826.732	70.60	-28.84	41.76	74.00	-32.24	peak	P
2	7239.629	70.37	-24.87	45.50	74.00	-28.50	peak	P
3	9650.121	68.30	-23.83	44.47	74.00	-29.53	peak	P
4	12060.595	68.13	-21.55	46.58	74.00	-27.42	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	4925.450	70.13	-27.34	42.79	74.00	-31.21	peak	P
2	7389.890	68.11	-24.94	43.17	74.00	-30.83	peak	P
3	9848.324	70.68	-23.46	47.22	74.00	-26.78	peak	P
4	12314.205	70.13	-21.48	48.65	74.00	-25.35	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	4928.227	70.95	-27.34	43.61	74.00	-30.39	peak	P
2	7387.393	70.07	-24.94	45.13	74.00	-28.87	peak	P
3	9848.574	68.70	-23.46	45.24	74.00	-28.76	peak	P
4	12312.759	70.15	-21.48	48.67	74.00	-25.33	peak	P

Remark:
1.Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
2.Mesurement Level = Reading level + Correct Factor, Over=Limit- Mesurement
Correction Factor= Antenna Factor + Cable loss – Pre-amplifier

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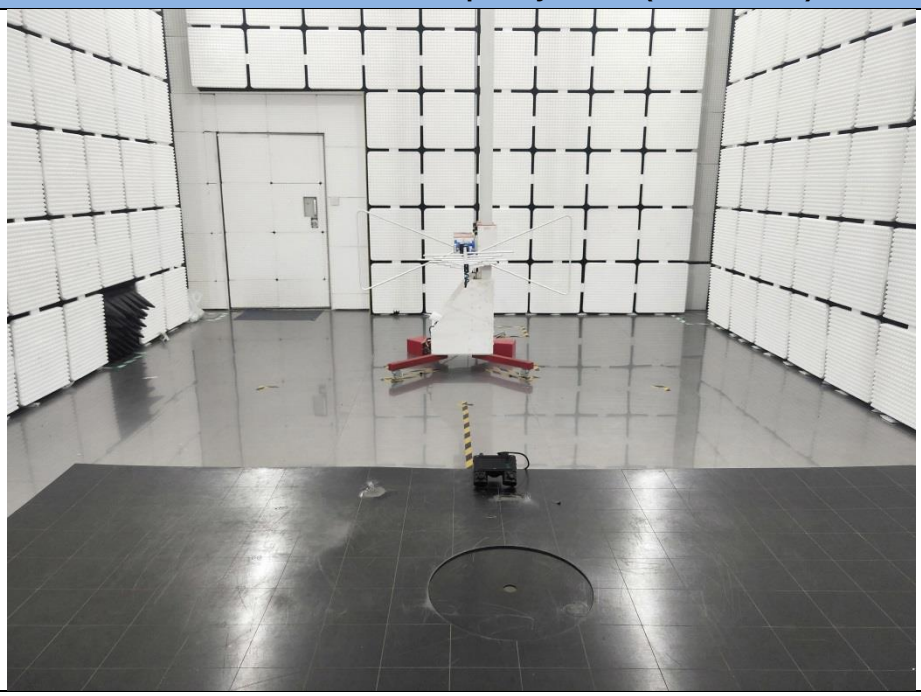
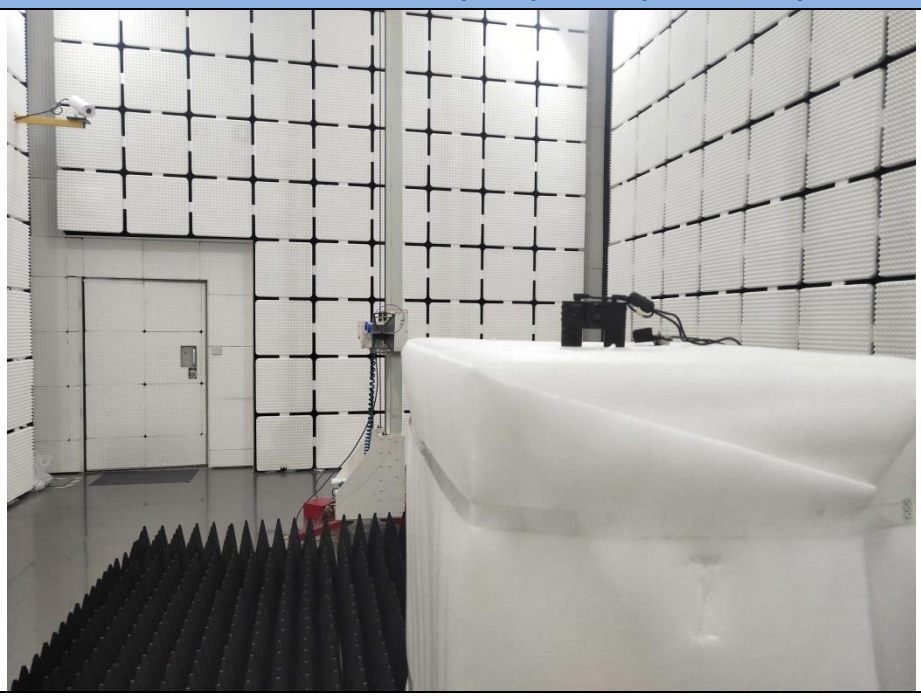
7 Test Setup Photos

Emissions in restricted frequency bands (above 1GHz)


Emissions in restricted frequency bands (below 1GHz)


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8 EUT Constructional Details (EUT Photos)

External photos

POWER

POWER

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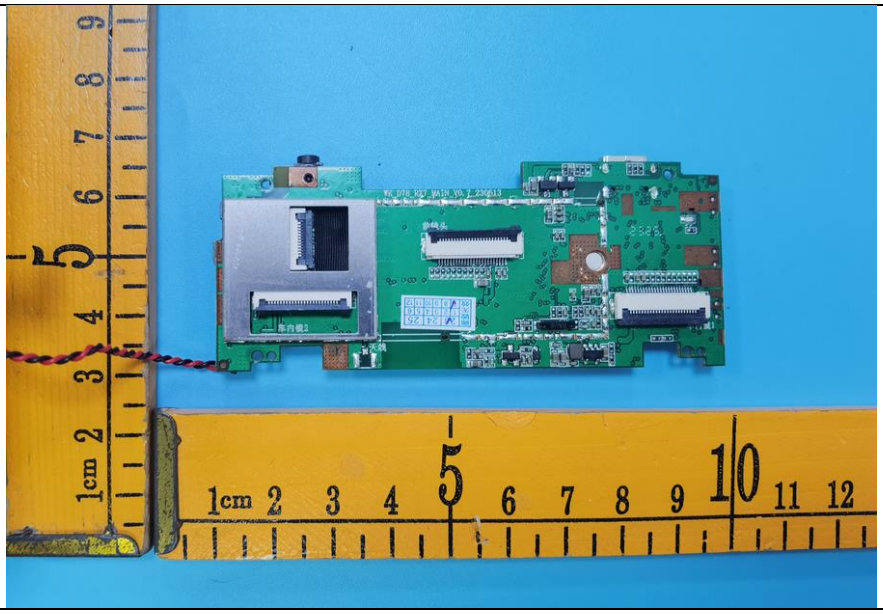
Internal photos


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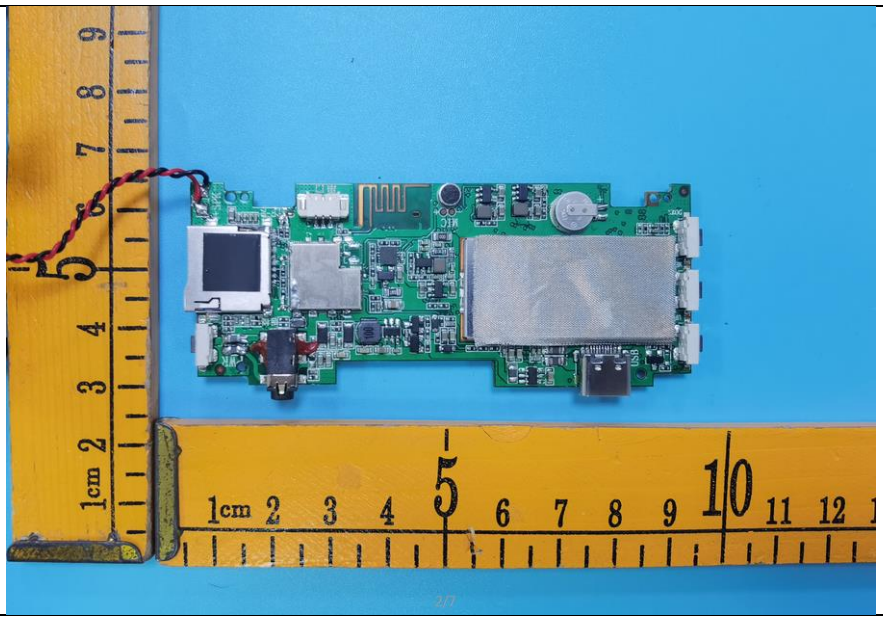
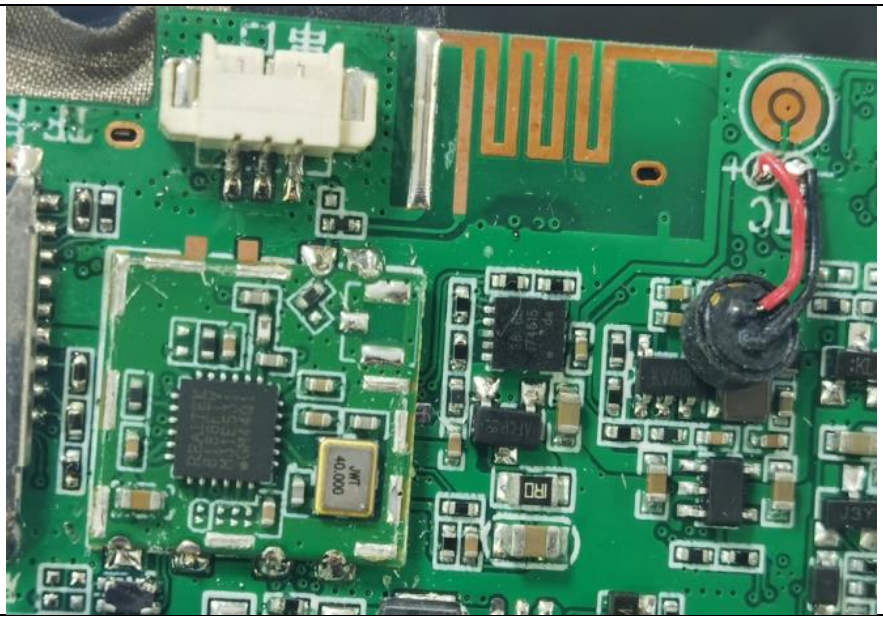
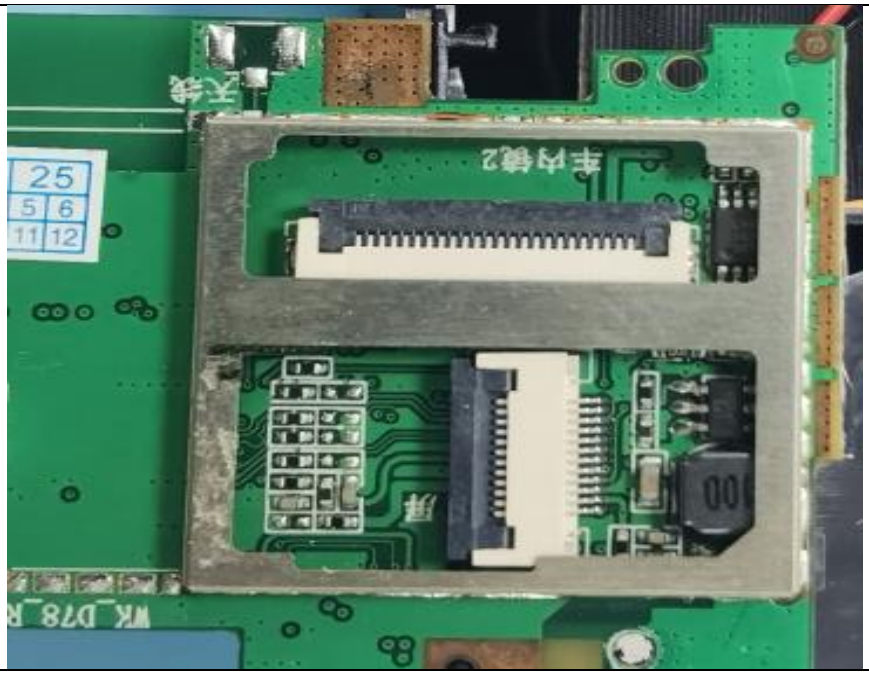




SSC8826G
AU30993B
2314F
ARM
USB


25
5 6
11 12

Appendix

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1. Bandwidth

1.1 OBW

1.1.1 Test Result

Condition	Antenna	Modulation	Frequency (MHz)	99%%BW(MHz)
NVNT	ANT1	802.11b	2412.00	13.873
NVNT	ANT1	802.11b	2437.00	13.610
NVNT	ANT1	802.11b	2462.00	13.135
NVNT	ANT1	802.11g	2412.00	17.153
NVNT	ANT1	802.11g	2437.00	17.091
NVNT	ANT1	802.11g	2462.00	16.836
NVNT	ANT1	802.11n(HT20)	2412.00	18.490
NVNT	ANT1	802.11n(HT20)	2437.00	18.212
NVNT	ANT1	802.11n(HT20)	2462.00	17.831
NVNT	ANT1	802.11n(HT40)	2422.00	36.588
NVNT	ANT1	802.11n(HT40)	2437.00	36.860
NVNT	ANT1	802.11n(HT40)	2452.00	36.587

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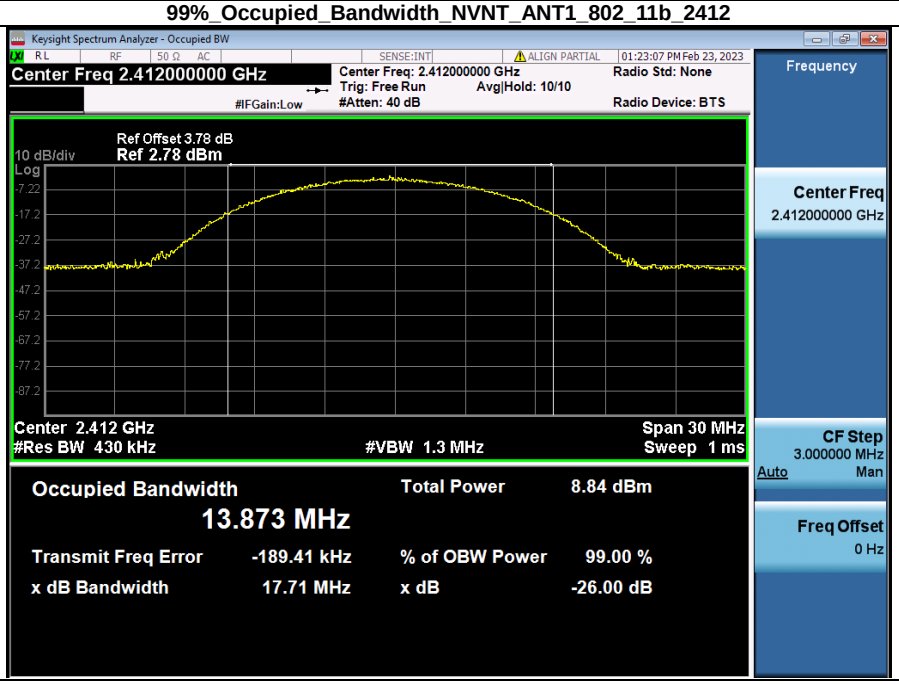
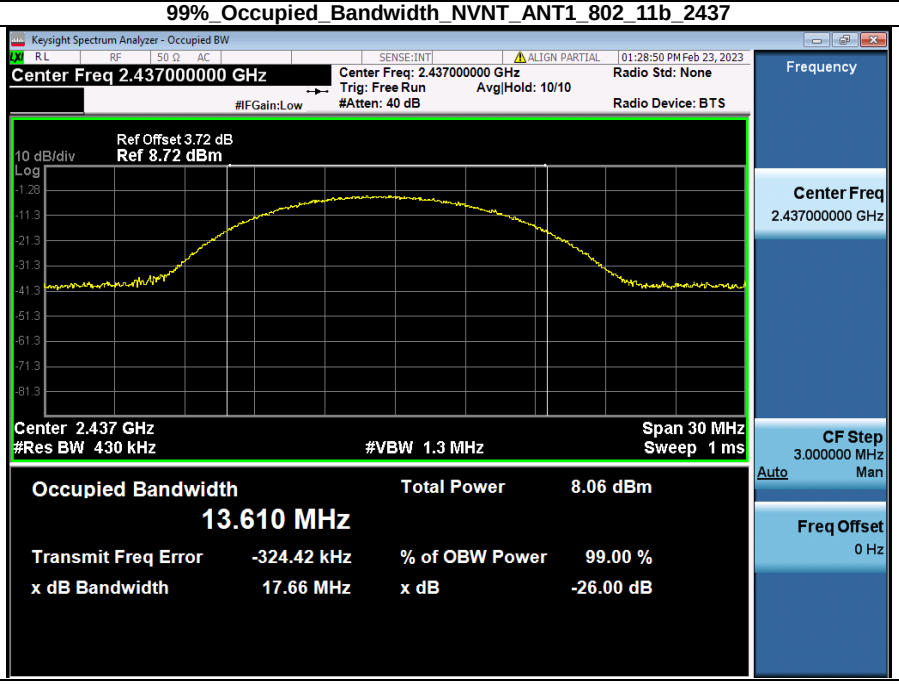
1.1.2 Test Graph

99%_Occupied_Bandwidth_NVNT_ANT1_802_11b_2412



99%_Occupied_Bandwidth_NVNT_ANT1_802_11b_2437



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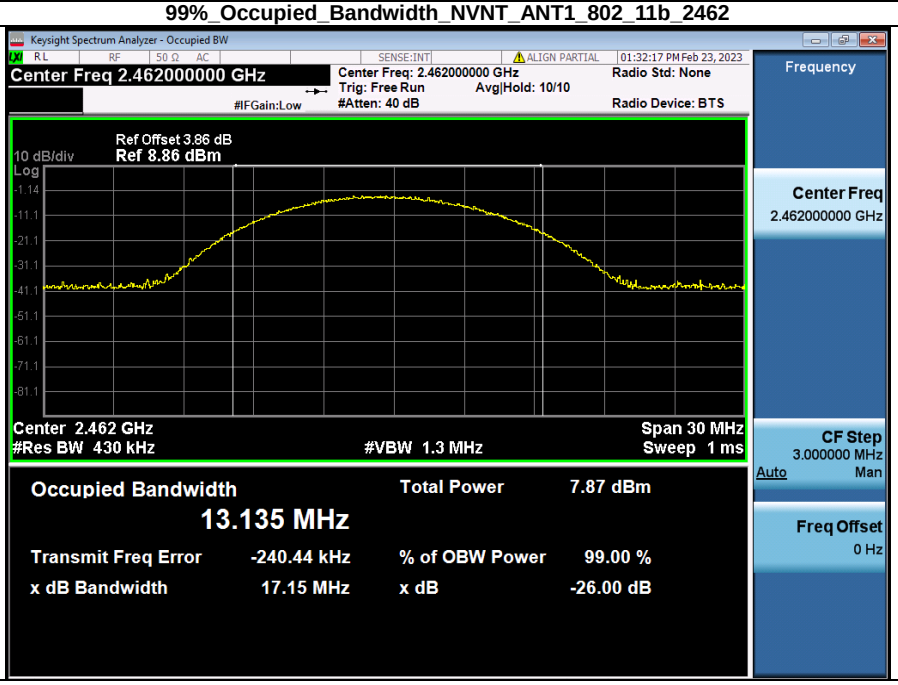
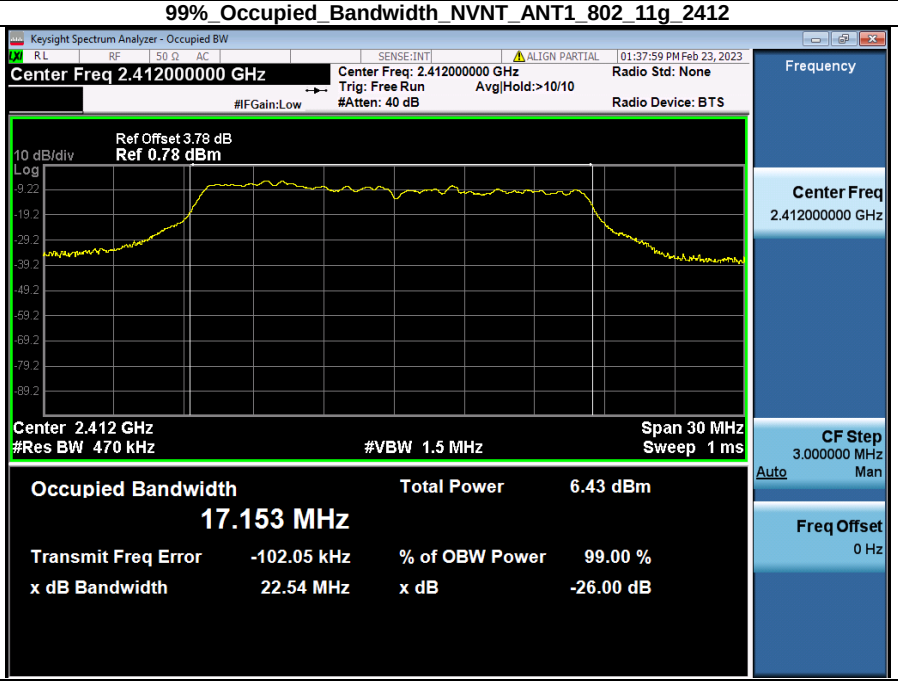
99%_Occupied_Bandwidth_NVNT_ANT1_802_11b_2462


99%_Occupied_Bandwidth_NVNT_ANT1_802_11g_2412


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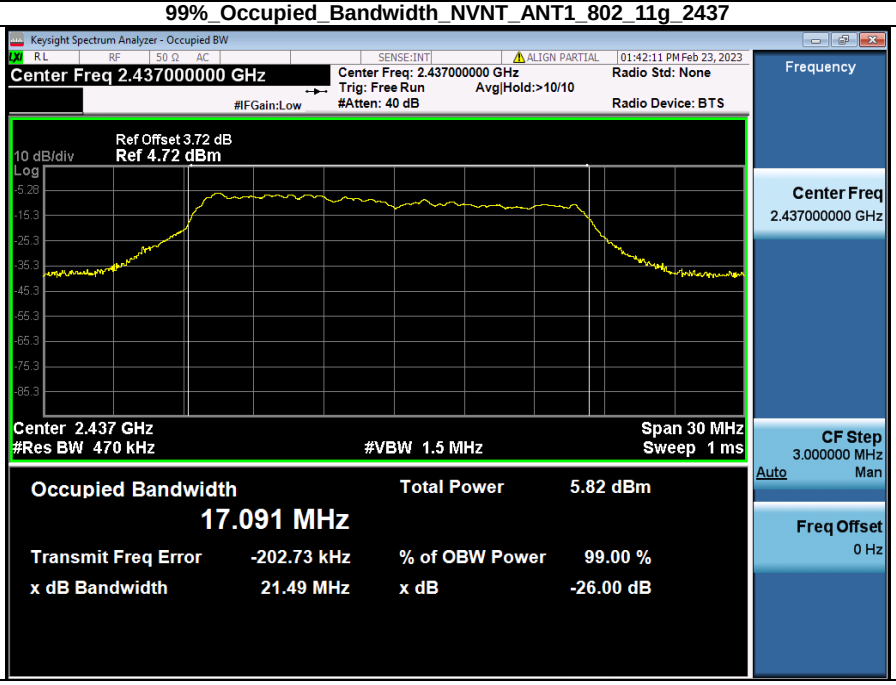
99%_Occupied_Bandwidth_NVNT_ANT1_802_11g_2437


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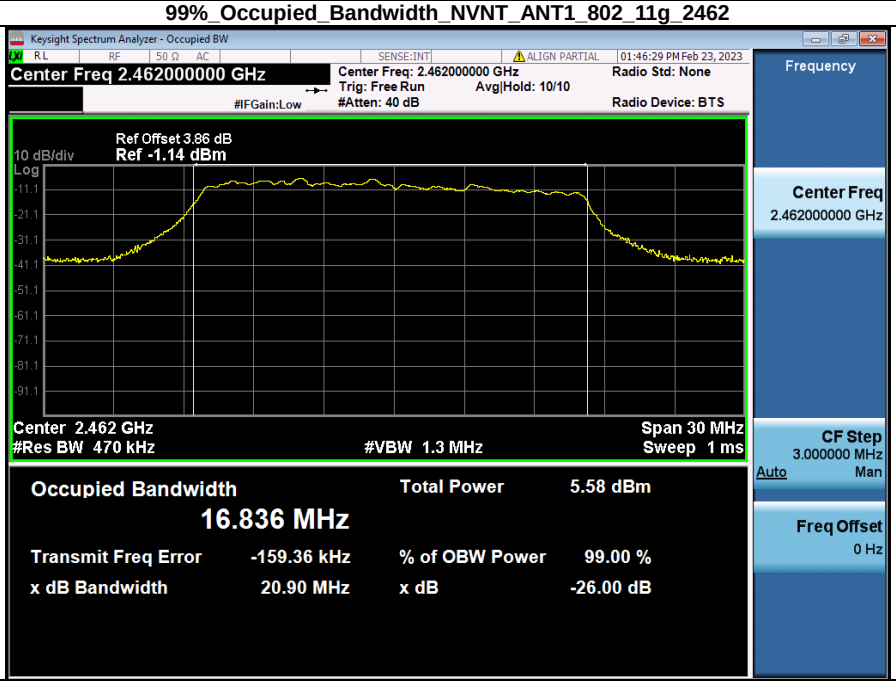

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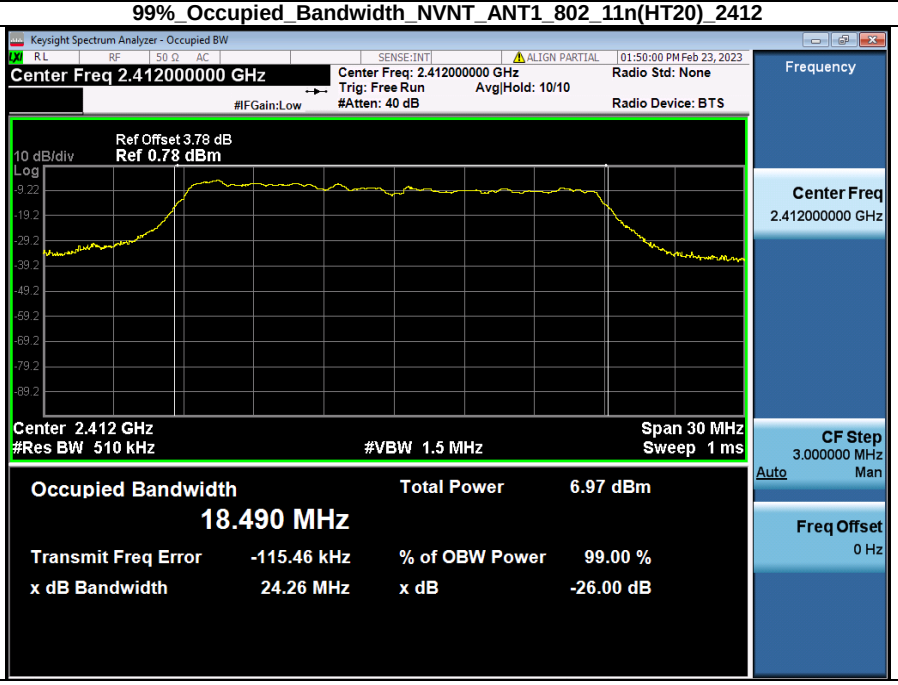
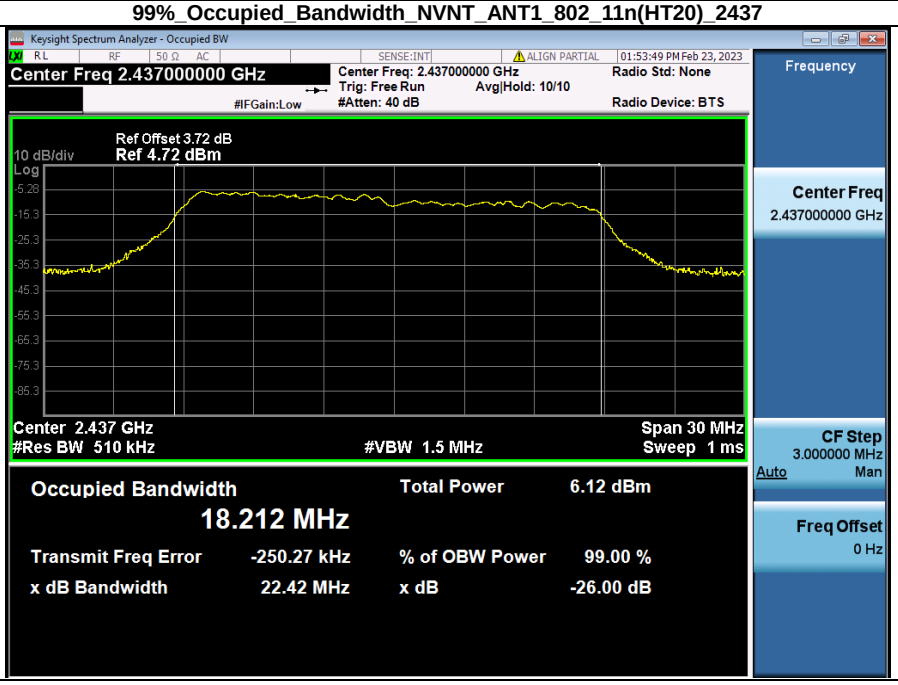
99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT20)_2412



99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT20)_2437



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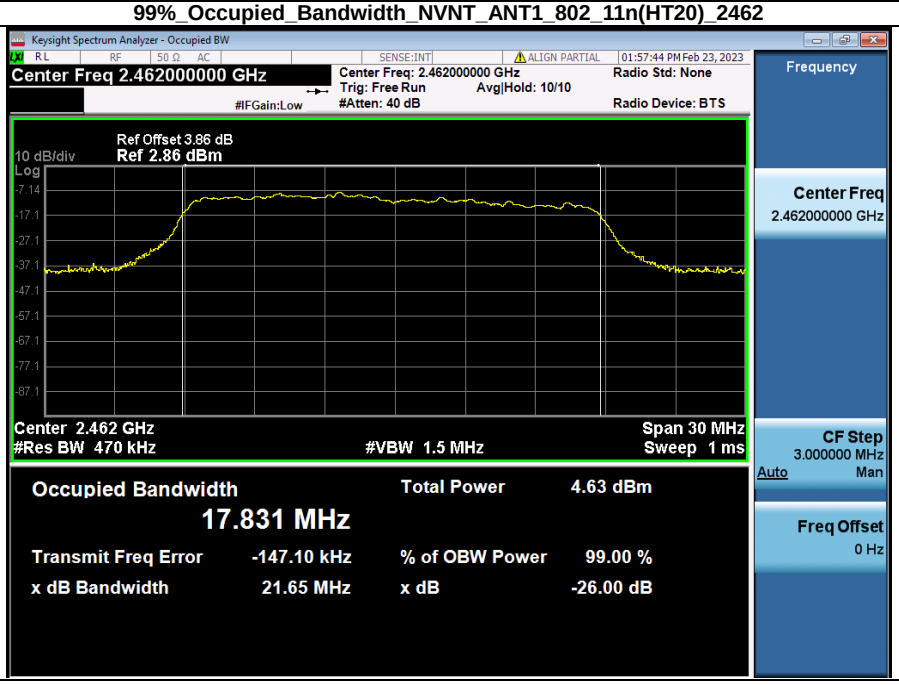
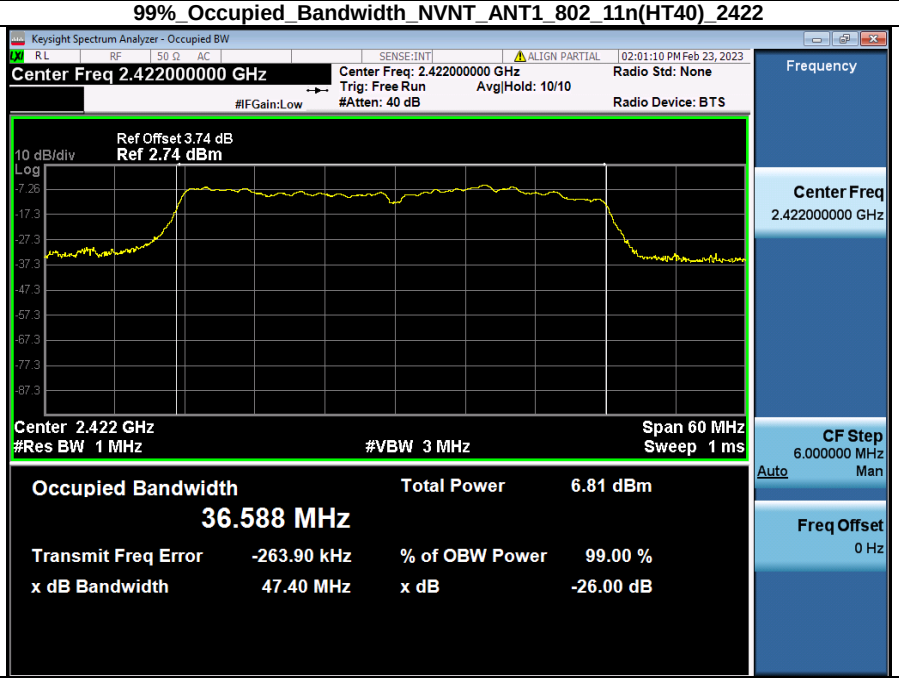
99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT20)_2462



99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT40)_2422



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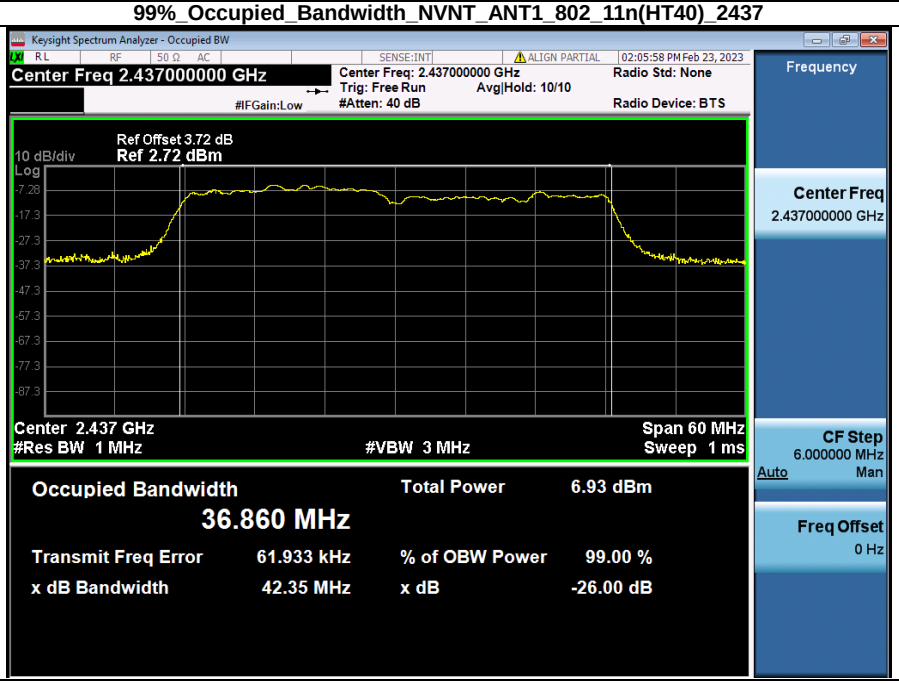
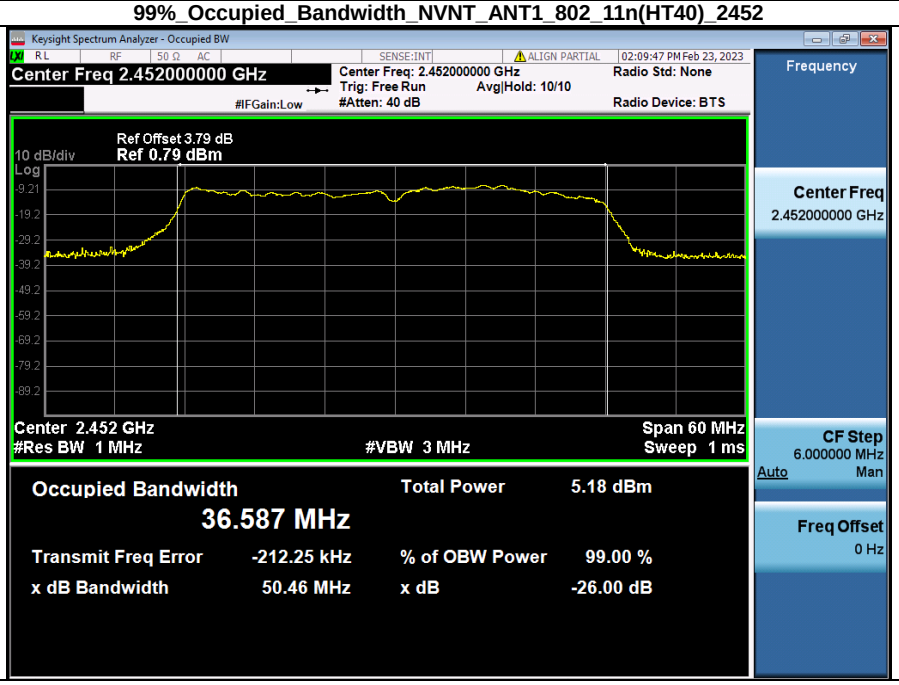
99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT40)_2437


99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT40)_2452


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2.2 6dB BW

2.2.1 Test Result

Condition	Antenna	Modulation	Frequency (MHz)	-6dB BW(MHz)	limit(kHz)	Result
NVNT	ANT1	802.11b	2412.00	9.25	500	Pass
NVNT	ANT1	802.11b	2437.00	8.70	500	Pass
NVNT	ANT1	802.11b	2462.00	8.37	500	Pass
NVNT	ANT1	802.11g	2412.00	15.81	500	Pass
NVNT	ANT1	802.11g	2437.00	15.81	500	Pass
NVNT	ANT1	802.11g	2462.00	15.78	500	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	16.40	500	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	16.41	500	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	16.41	500	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	35.76	500	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	35.21	500	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	35.73	500	Pass

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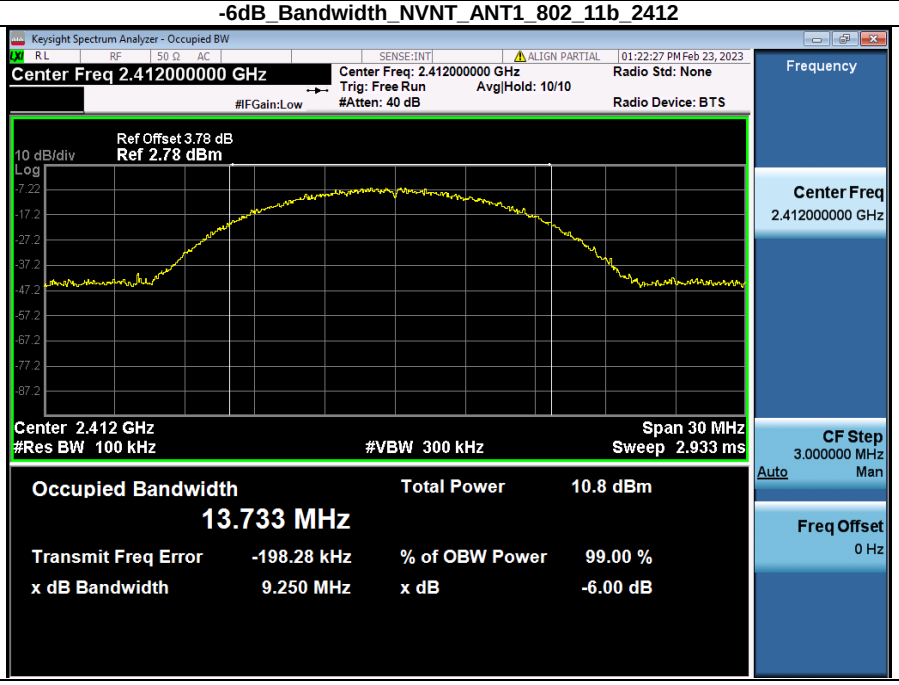
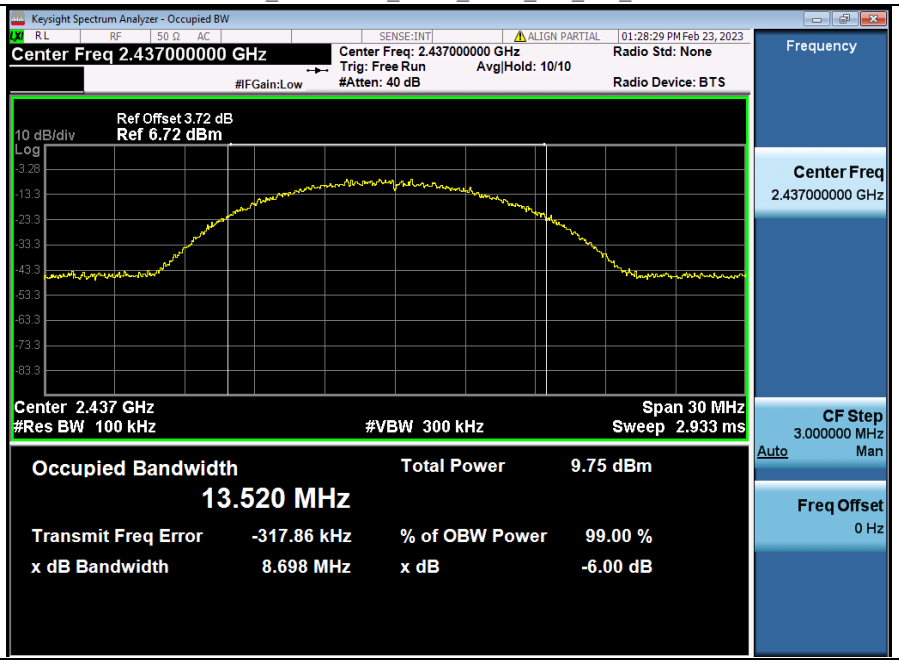
2.2.2 Test Graph

-6dB_Bandwidth_NVNT_ANT1_802_11b_2412



-6dB_Bandwidth_NVNT_ANT1_802_11b_2437



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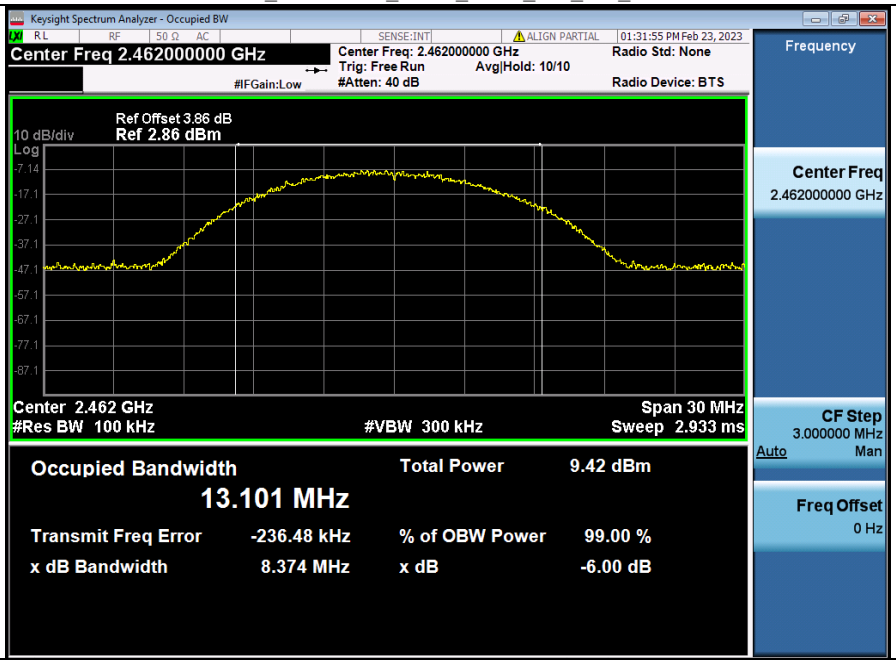
-6dB_Bandwidth_NVNT_ANT1_802_11b_2462


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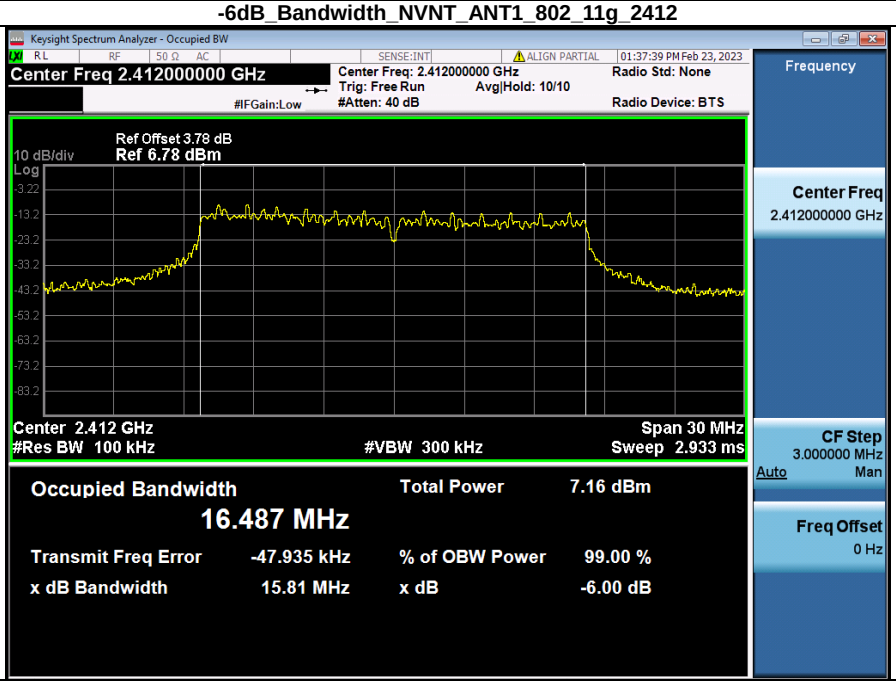

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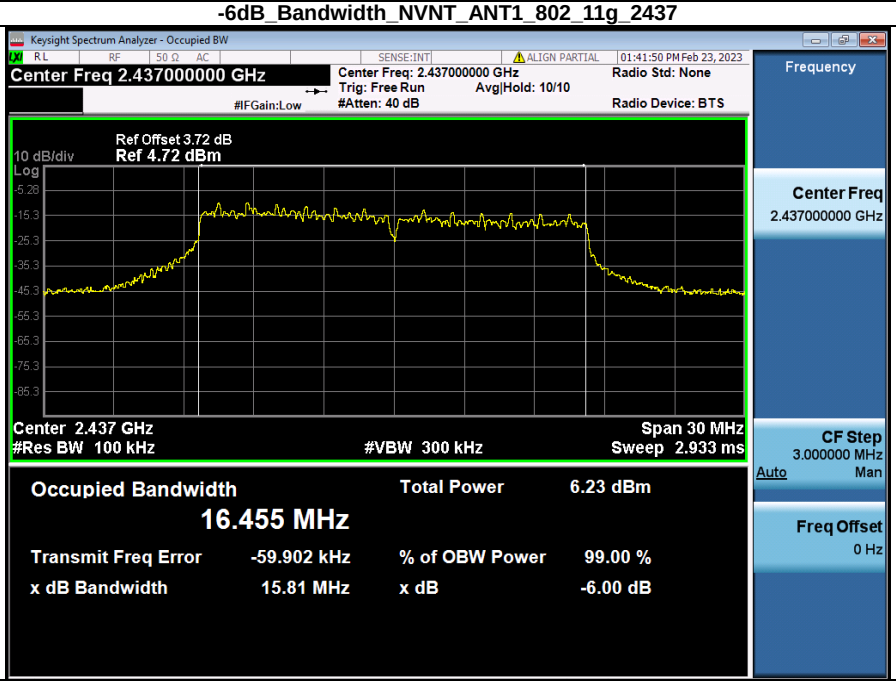
-6dB_Bandwidth_NVNT_ANT1_802_11g_2437


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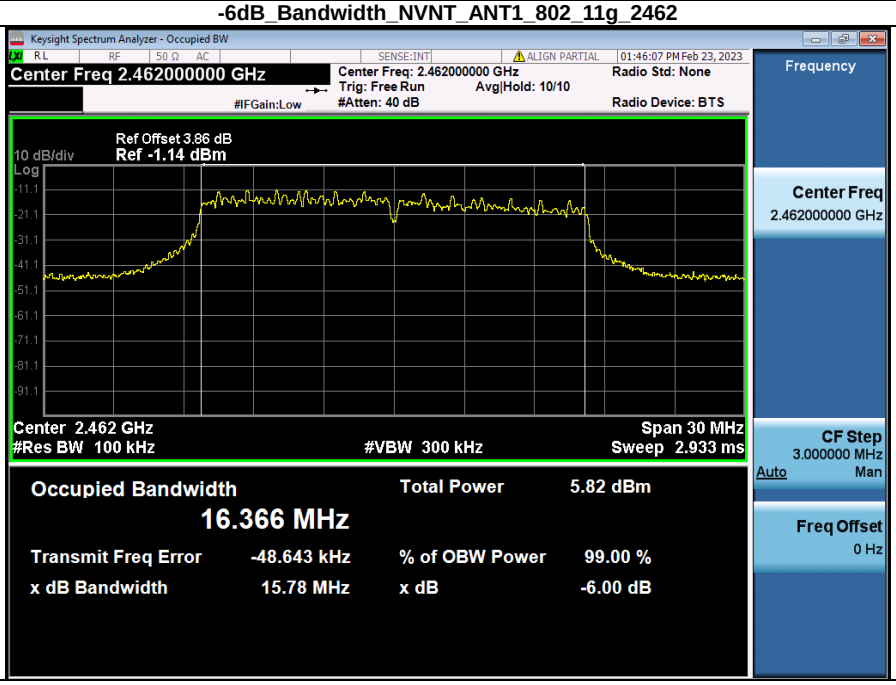

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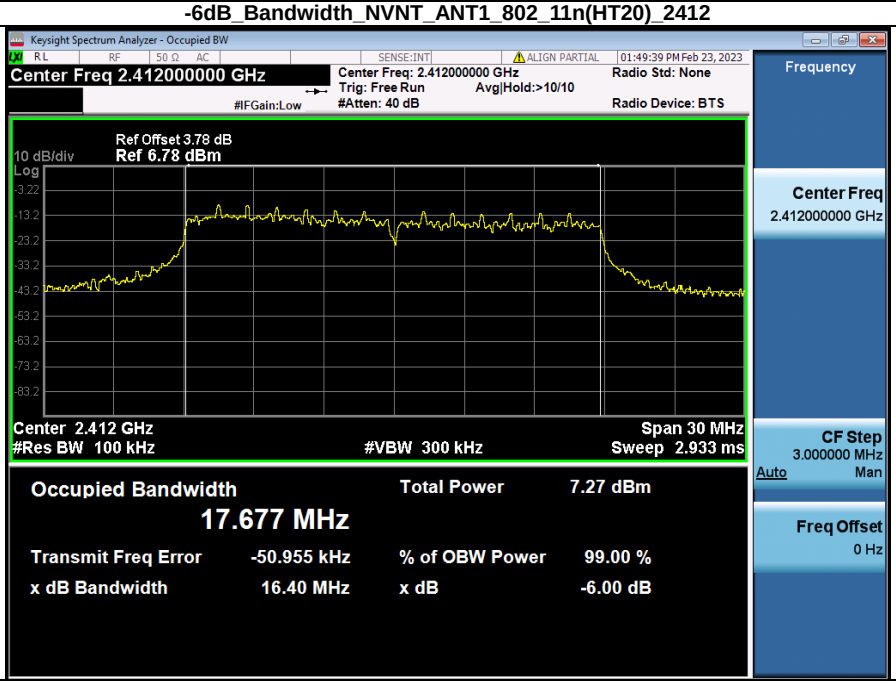
-6dB_Bandwidth_NVNT_ANT1_802_11n(HT20)_2412



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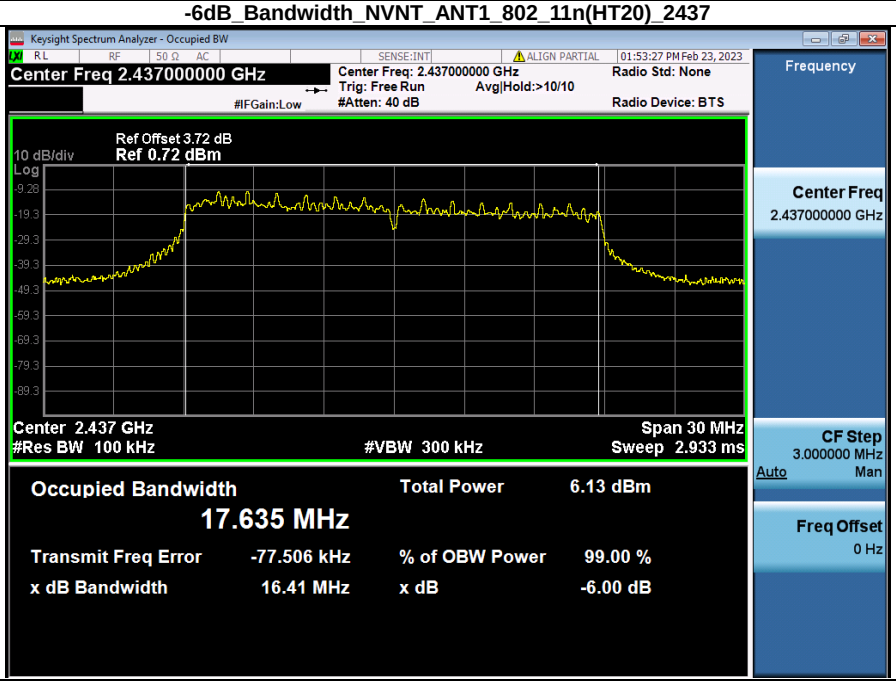

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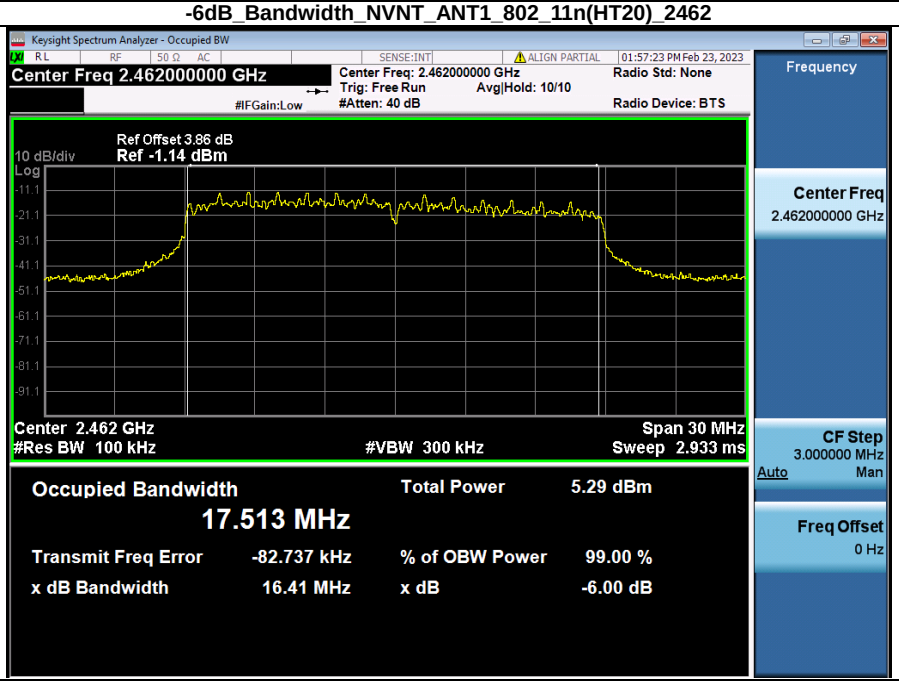
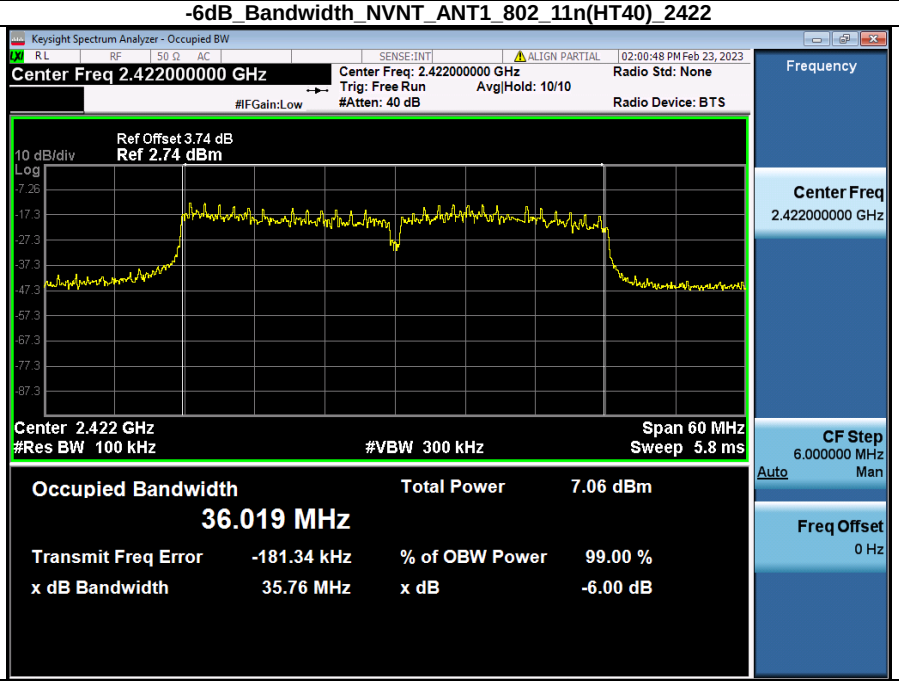
-6dB_Bandwidth_NVNT_ANT1_802_11n(HT20)_2462


-6dB_Bandwidth_NVNT_ANT1_802_11n(HT40)_2422


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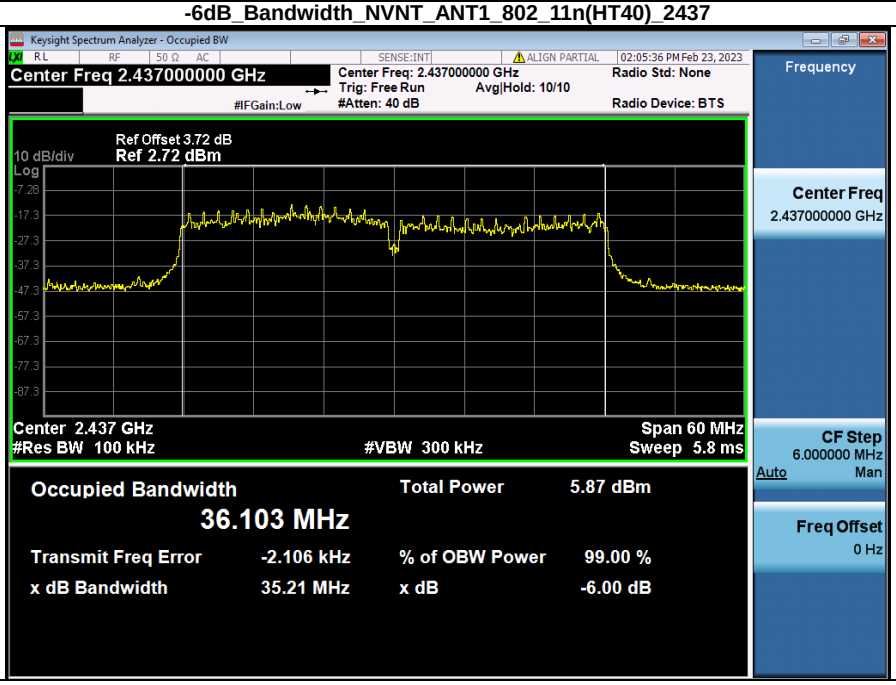
-6dB_Bandwidth_NVNT_ANT1_802_11n(HT40)_2437


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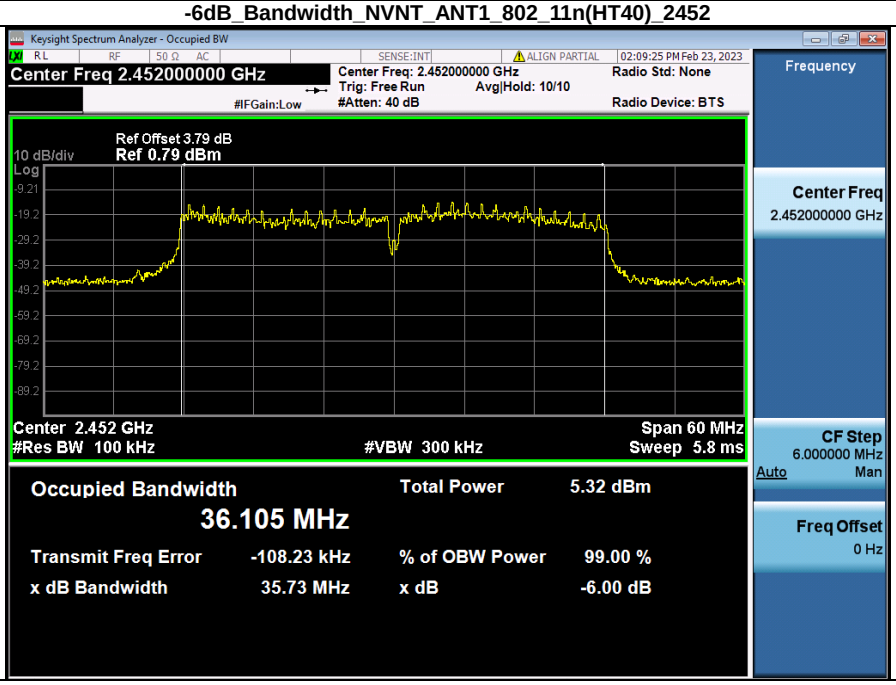

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3. Maximum Conducted Output Power

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	9.84	<=30	Pass
		2437	8.11	<=30	Pass
		2462	8.44	<=30	Pass
802.11g	SISO	2412	9.32	<=30	Pass
		2437	8.19	<=30	Pass
		2462	7.10	<=30	Pass
802.11n (HT20)	SISO	2412	9.31	<=30	Pass
		2437	7.97	<=30	Pass
		2462	6.70	<=30	Pass
802.11n (HT40)	SISO	2422	9.16	<=30	Pass
		2437	8.26	<=30	Pass
		2452	6.43	<=30	Pass
Note1: Antenna Gain: Ant1: 0dBi;					

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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	-21.64	<=8	Pass
		2437	-22.63	<=8	Pass
		2462	-22.70	<=8	Pass
802.11g	SISO	2412	-25.65	<=8	Pass
		2437	-26.76	<=8	Pass
		2462	-28.24	<=8	Pass
802.11n (HT20)	SISO	2412	-25.68	<=8	Pass
		2437	-23.28	<=8	Pass
		2462	-28.22	<=8	Pass
802.11n (HT40)	SISO	2422	-27.66	<=8	Pass
		2437	-26.10	<=8	Pass
		2452	-30.02	<=8	Pass
Note1: Antenna Gain: Ant1: 0dBi;					

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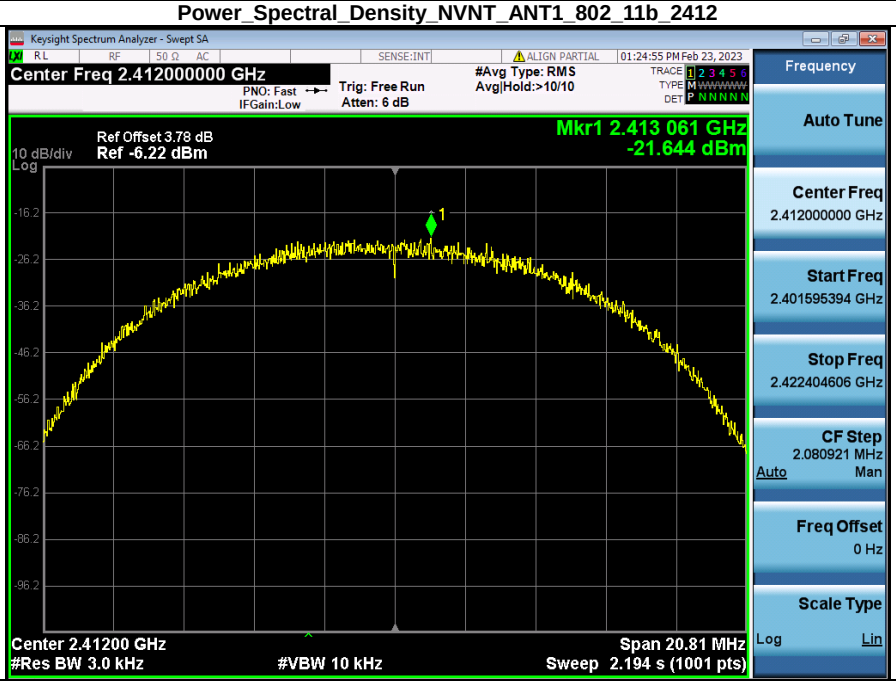
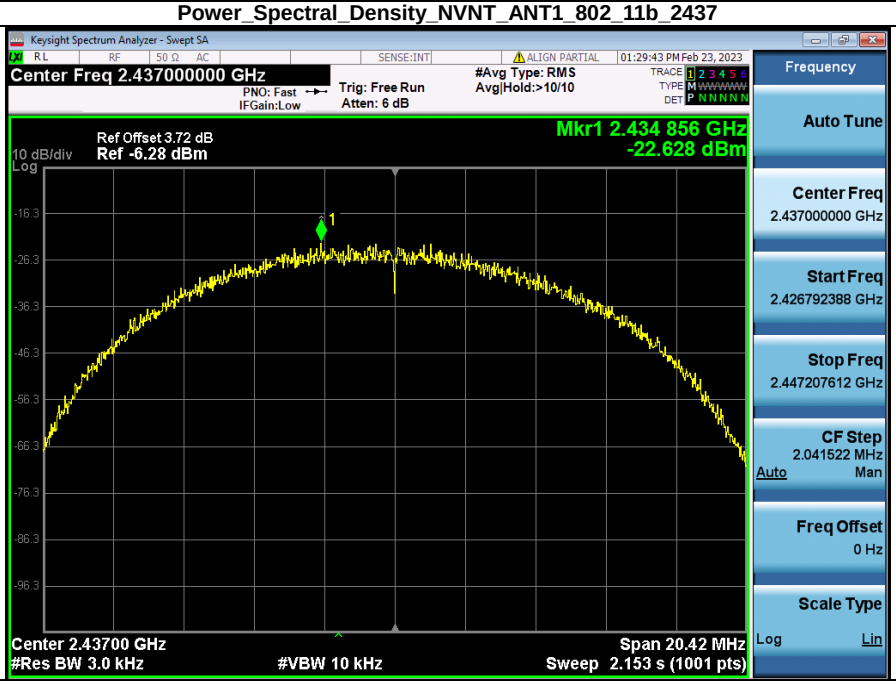
4.1.2 Test Graph

Power_Spectral_Density_NVNT_ANT1_802_11b_2412



Power_Spectral_Density_NVNT_ANT1_802_11b_2437



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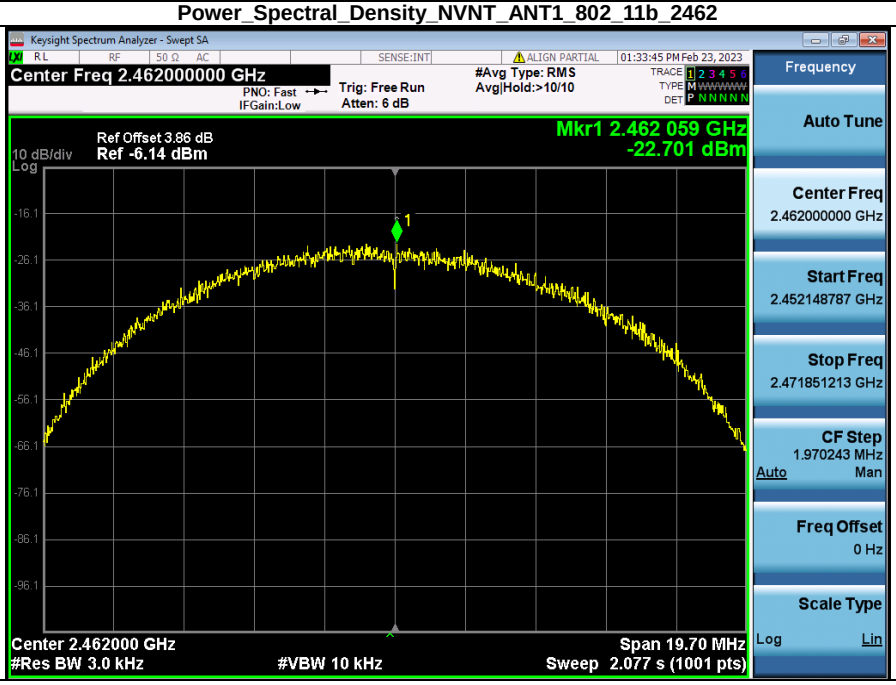
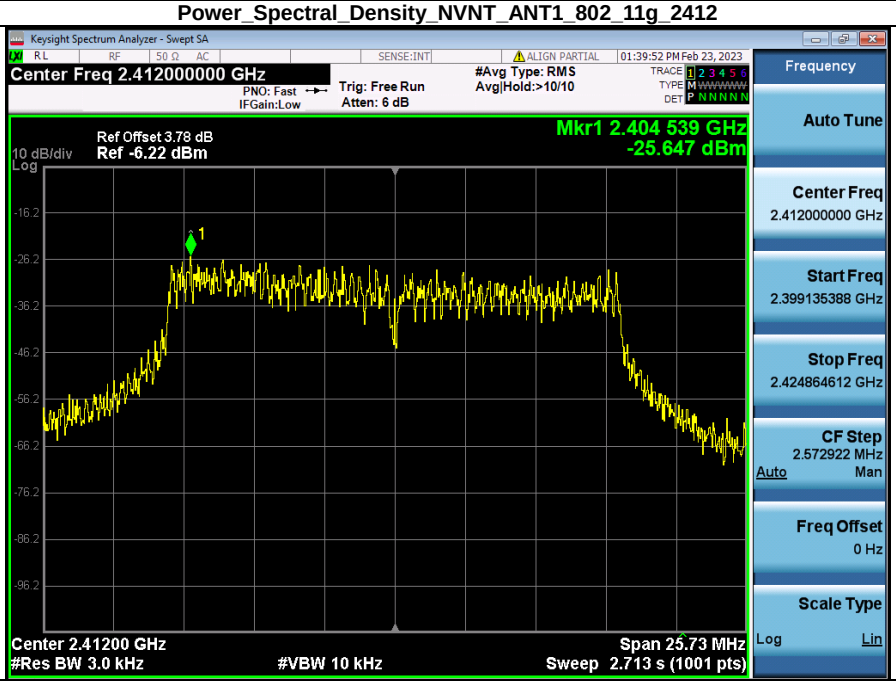
Power_Spectral_Density_NVNT_ANT1_802_11b_2462


Power_Spectral_Density_NVNT_ANT1_802_11g_2412


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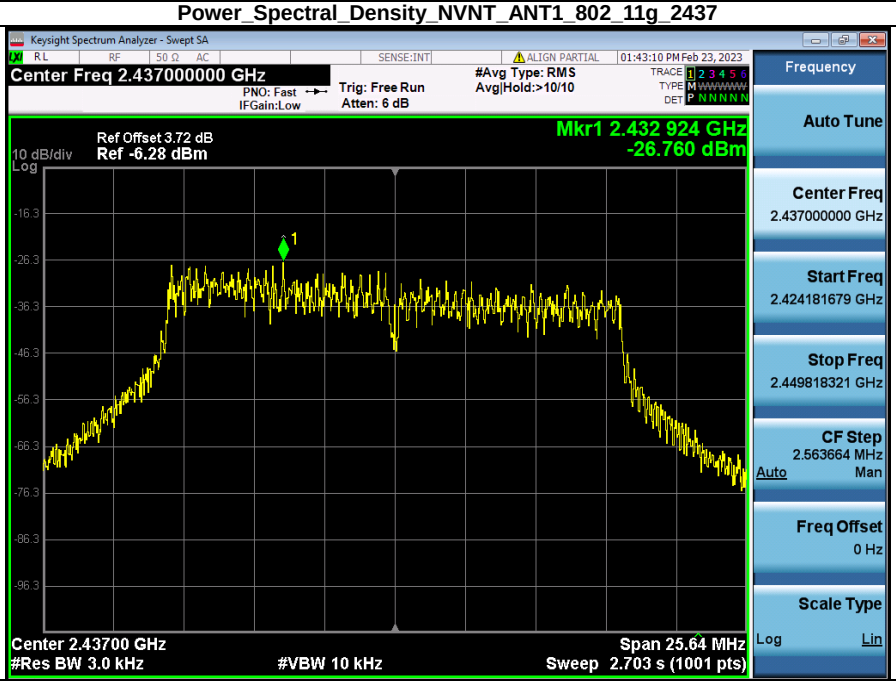
Power_Spectral_Density_NVNT_ANT1_802_11g_2437


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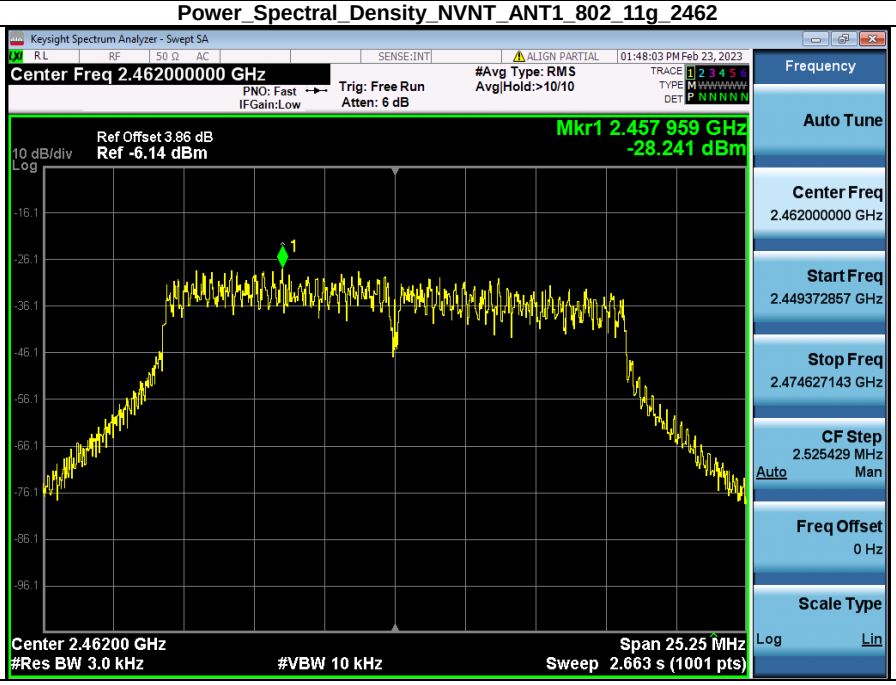

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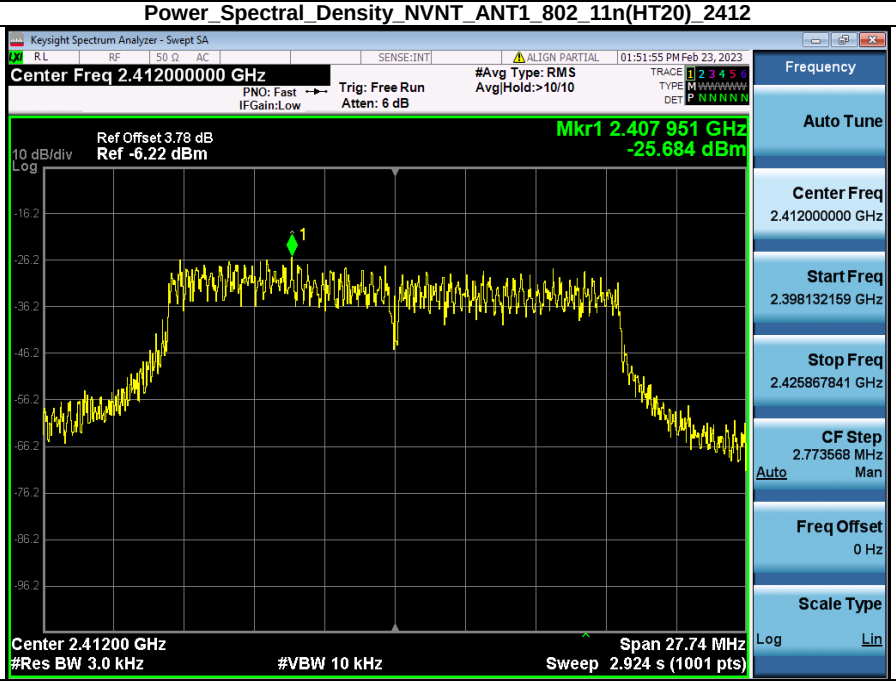
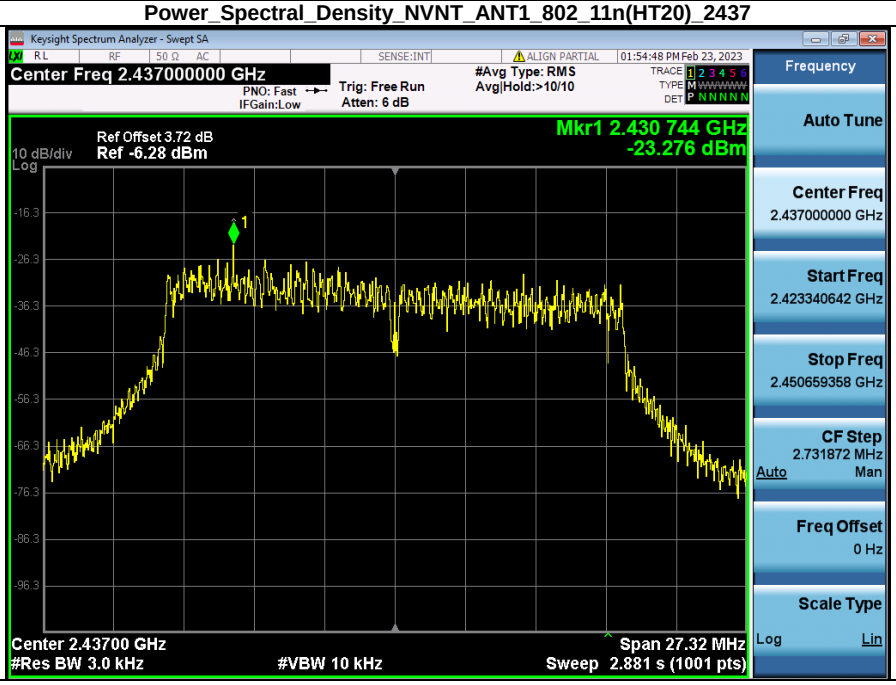
Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_2412


Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_2437


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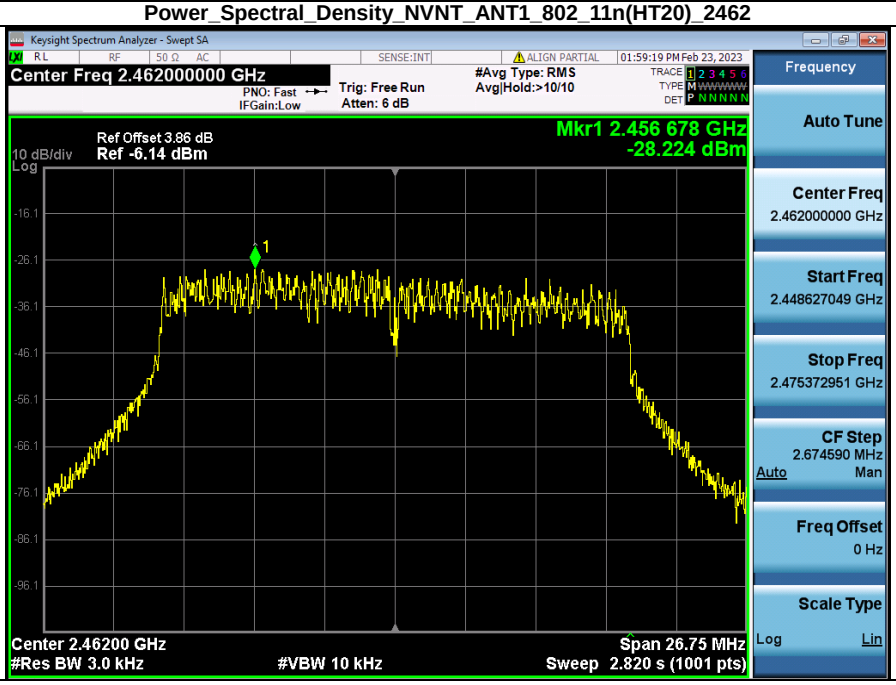
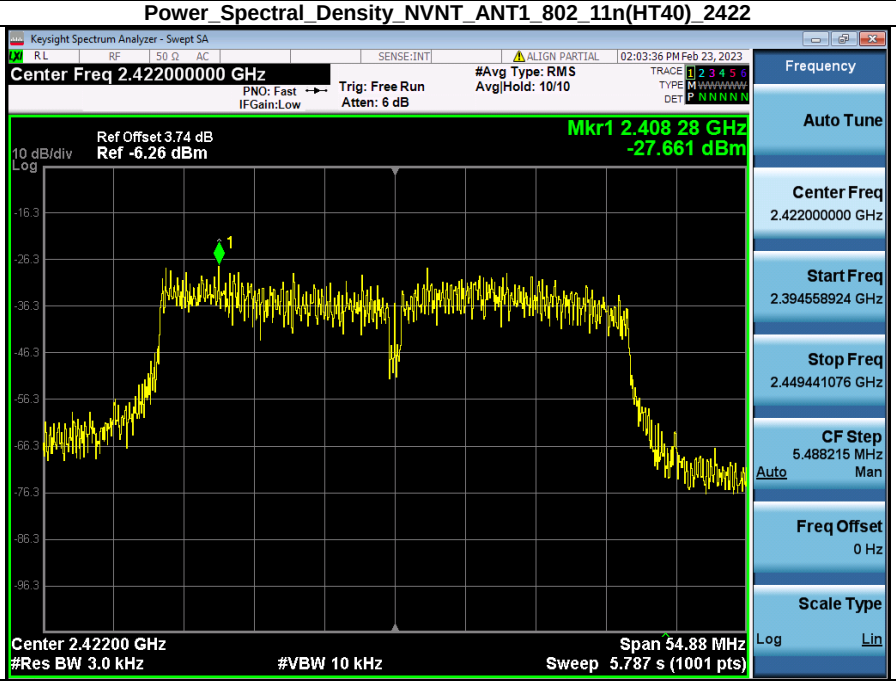
Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_2462


Power_Spectral_Density_NVNT_ANT1_802_11n(HT40)_2422


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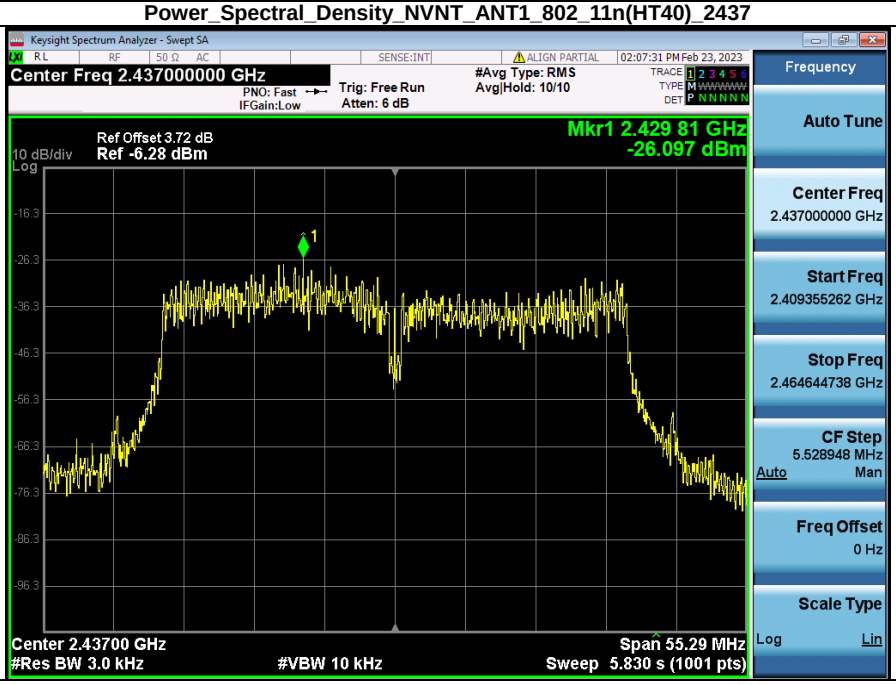
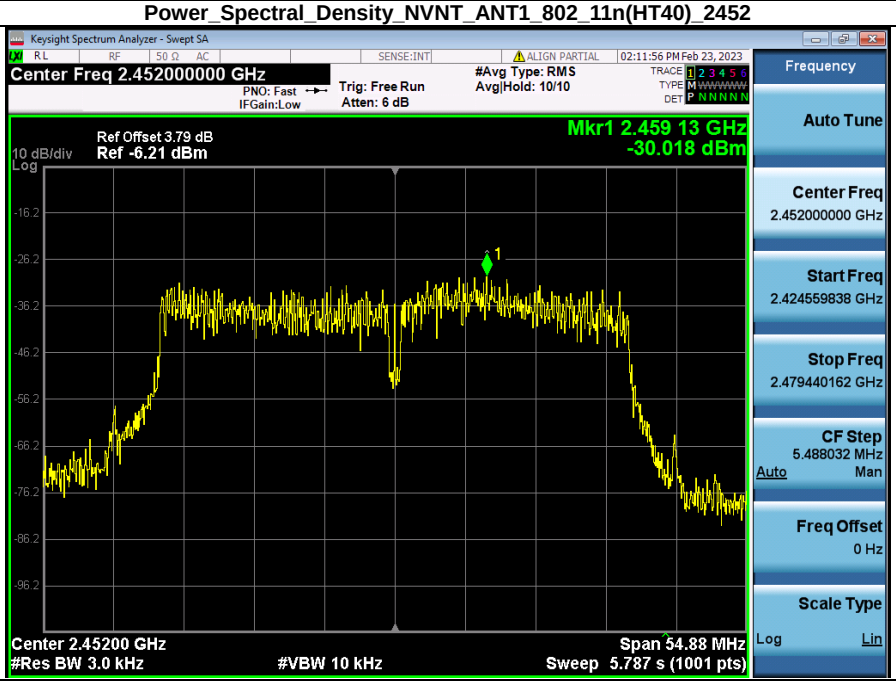
Power_Spectral_Density_NVNT_ANT1_802_11n(HT40)_2437


Power_Spectral_Density_NVNT_ANT1_802_11n(HT40)_2452


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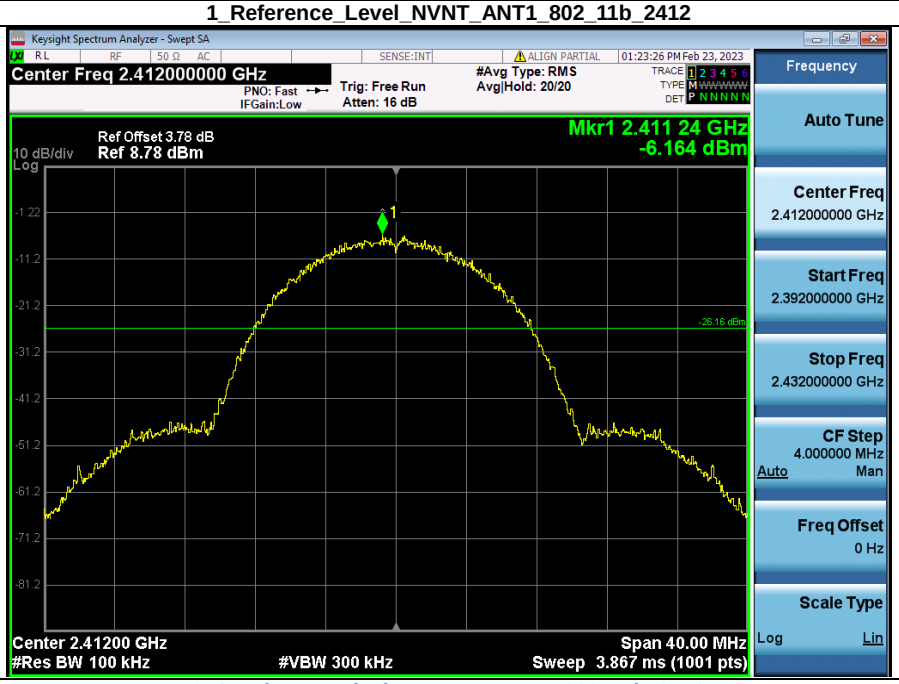
5. CSE

5.1 Test Result

Condition	Antenna	Modulation	TX_Frequency (MHz)	Max. Mark_frequency(MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	1727.96	-59.46	-26.16	Pass
NVNT	ANT1	802.11b	2437.00	1745.44	-60.00	-28.49	Pass
NVNT	ANT1	802.11b	2462.00	1747.94	-55.22	-27.27	Pass
NVNT	ANT1	802.11g	2412.00	24550.54	-65.66	-28.88	Pass
NVNT	ANT1	802.11g	2437.00	1747.94	-63.19	-30.99	Pass
NVNT	ANT1	802.11g	2462.00	24470.64	-65.51	-31.25	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	24957.55	-65.49	-28.94	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	1725.46	-60.90	-30.10	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	24543.05	-65.35	-32.50	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	24543.05	-65.69	-32.18	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	24942.57	-61.50	-32.51	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	24612.97	-65.38	-34.18	Pass

5.2 Test Graph

1_Reference_Level_NVNT_ANT1_802_11b_2412



2_Spurious_Emission_NVNT_ANT1_802_11b_2412

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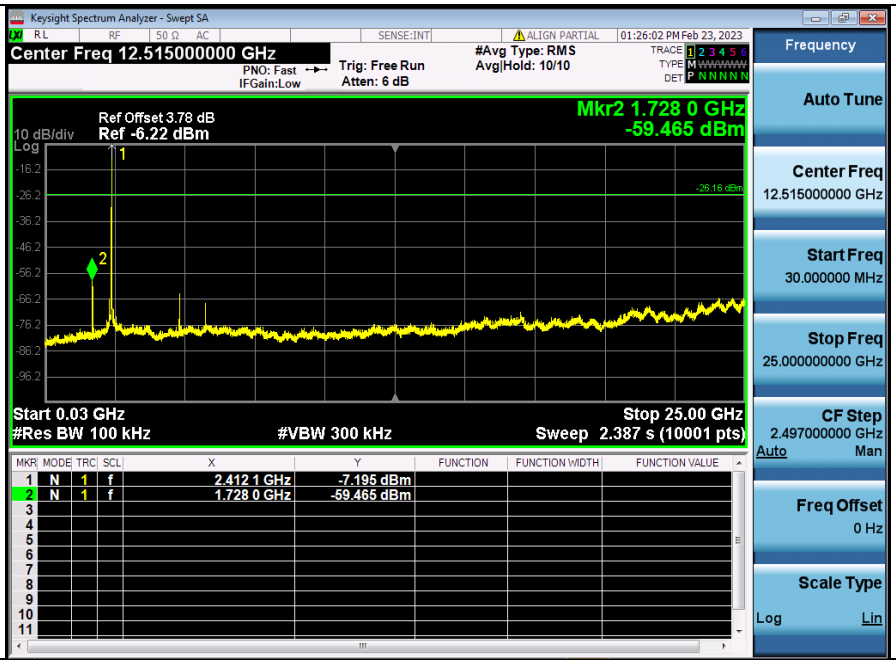
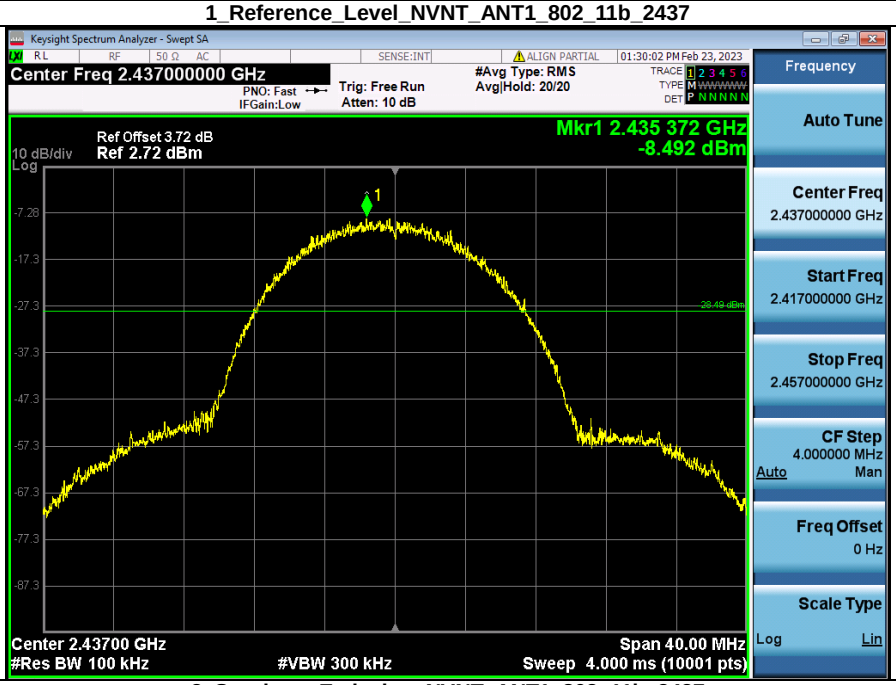


1_Reference_Level_NVNT_ANT1_802_11b_2437



2_Spurious_Emission_NVNT_ANT1_802_11b_2437

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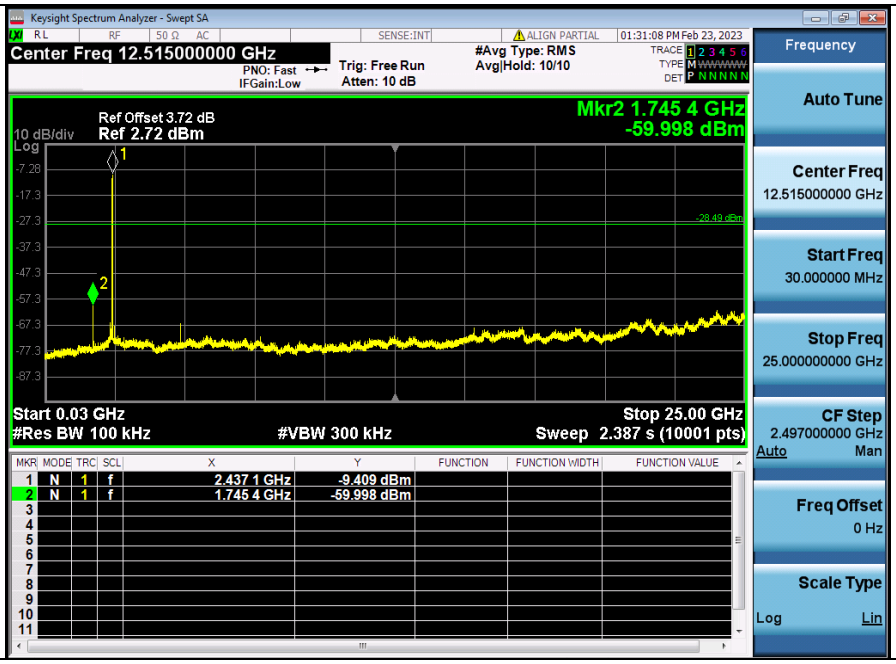
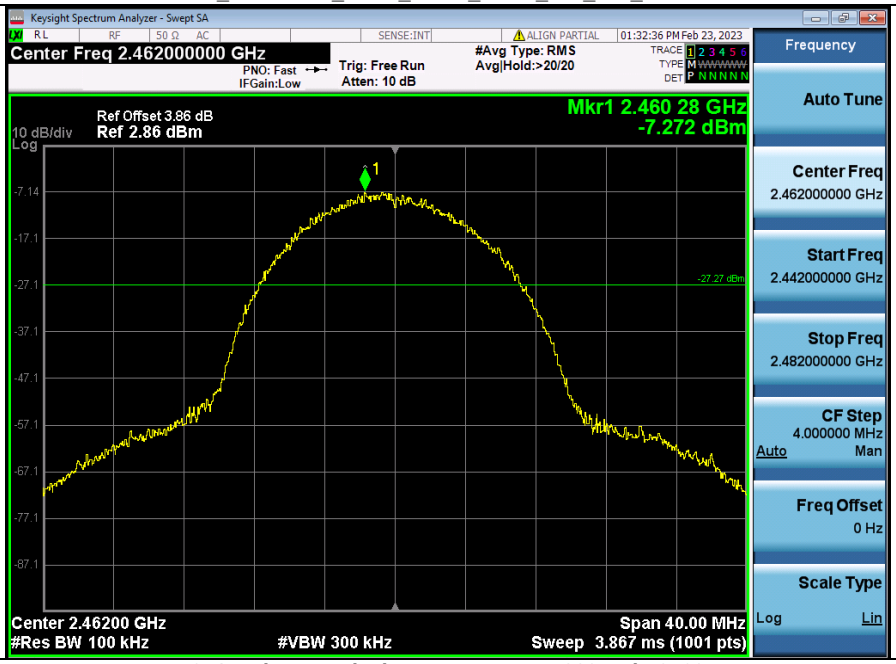


1_Reference_Level_NVNT_ANT1_802_11b_2462



2_Spurious_Emission_NVNT_ANT1_802_11b_2462

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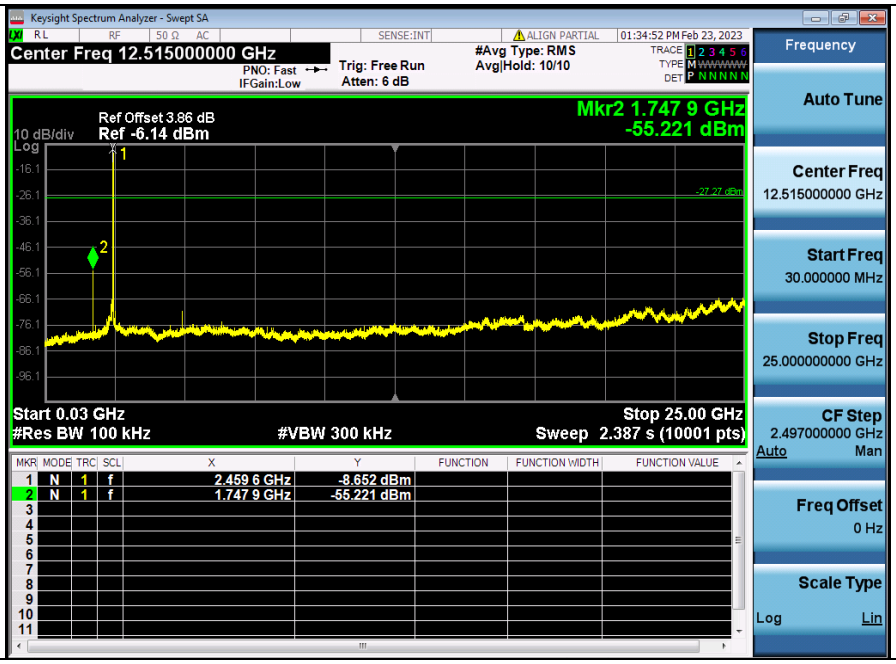
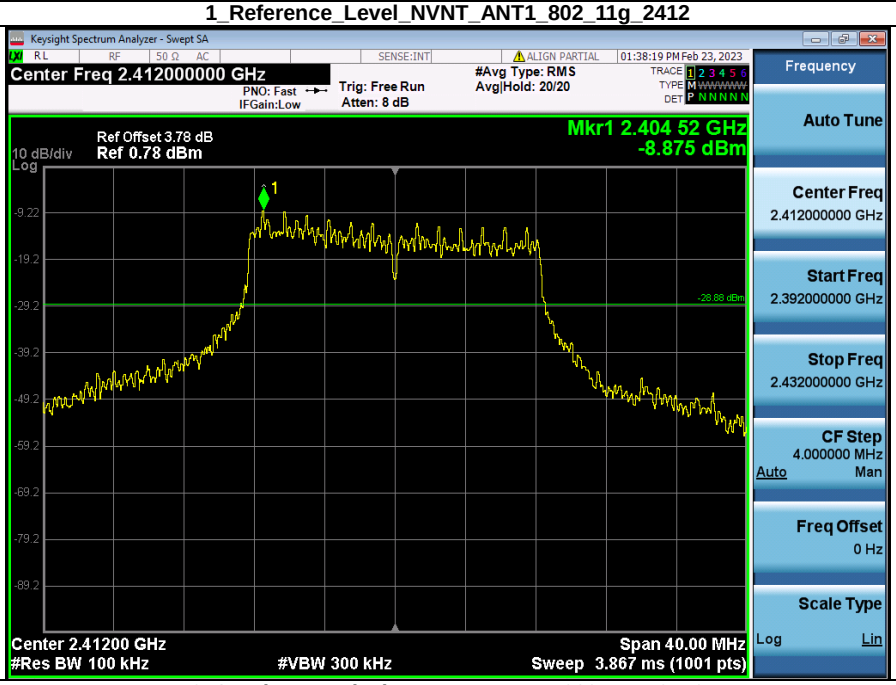


1_Reference_Level_NVNT_ANT1_802_11g_2412



2_Spurious_Emission_NVNT_ANT1_802_11g_2412

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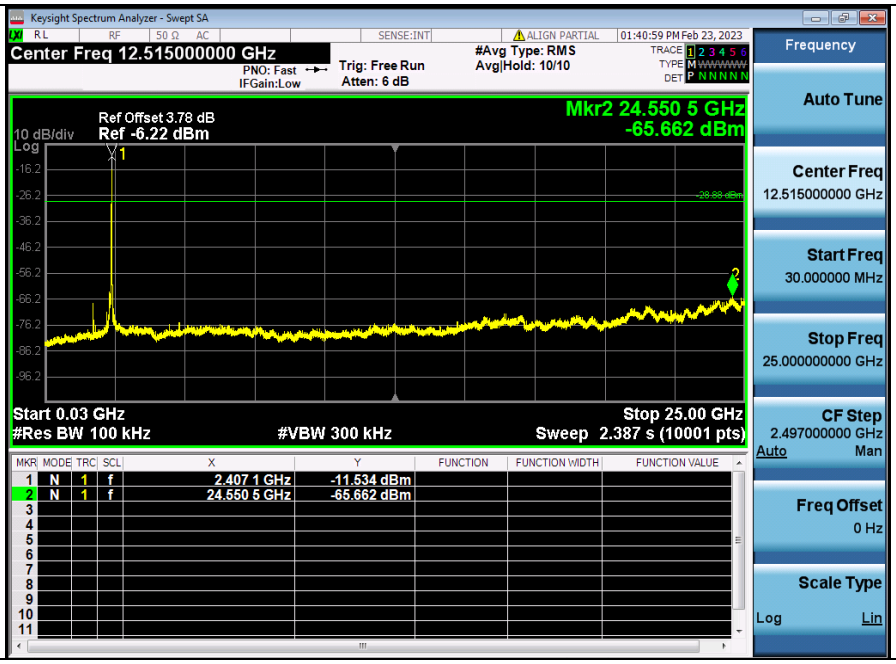
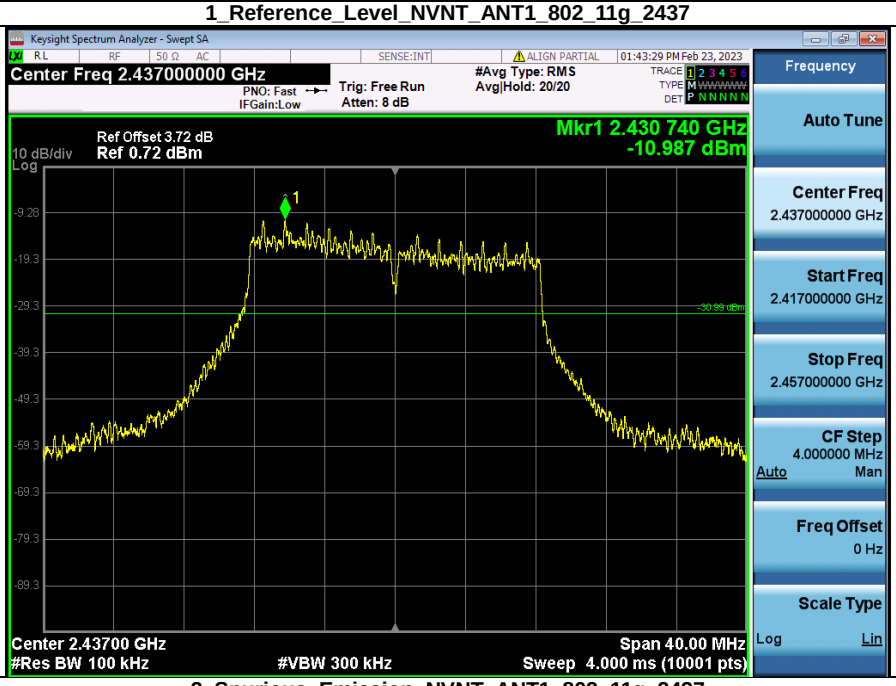


1_Reference_Level_NVNT_ANT1_802_11g_2437



2_Spurious_Emission_NVNT_ANT1_802_11g_2437

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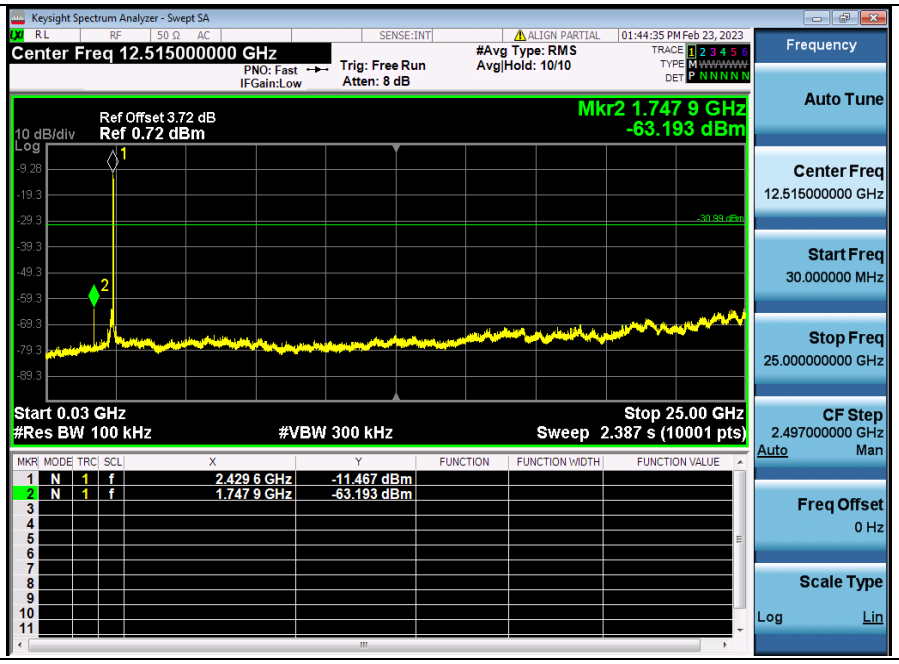
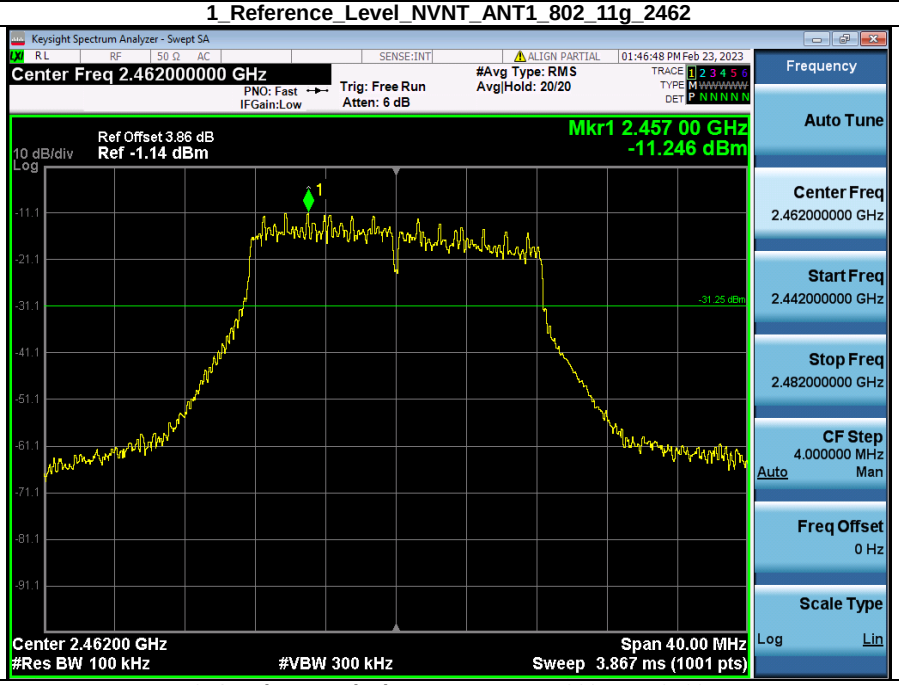


1_Reference_Level_NVNT_ANT1_802_11g_2462



2_Spurious_Emission_NVNT_ANT1_802_11g_2462

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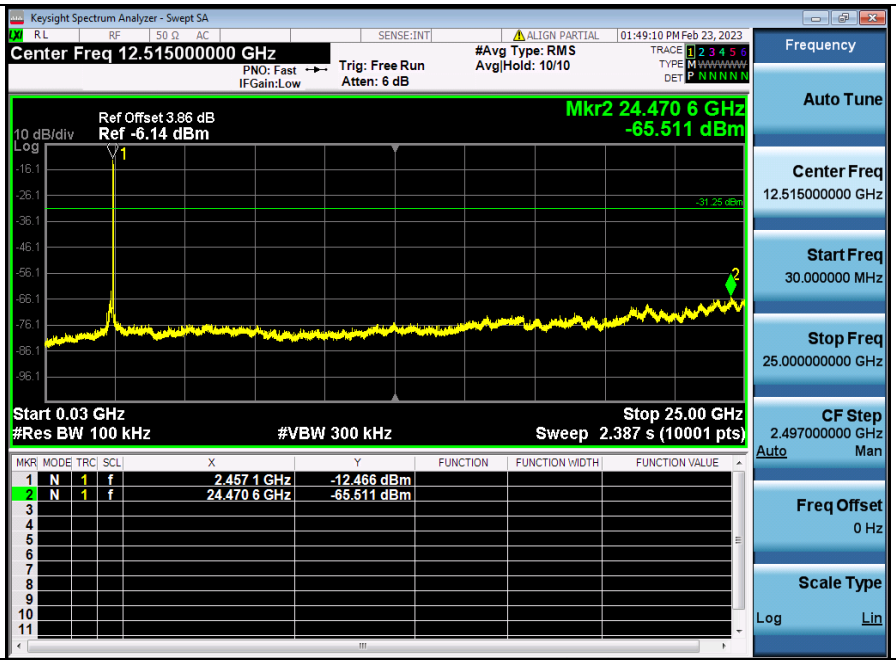
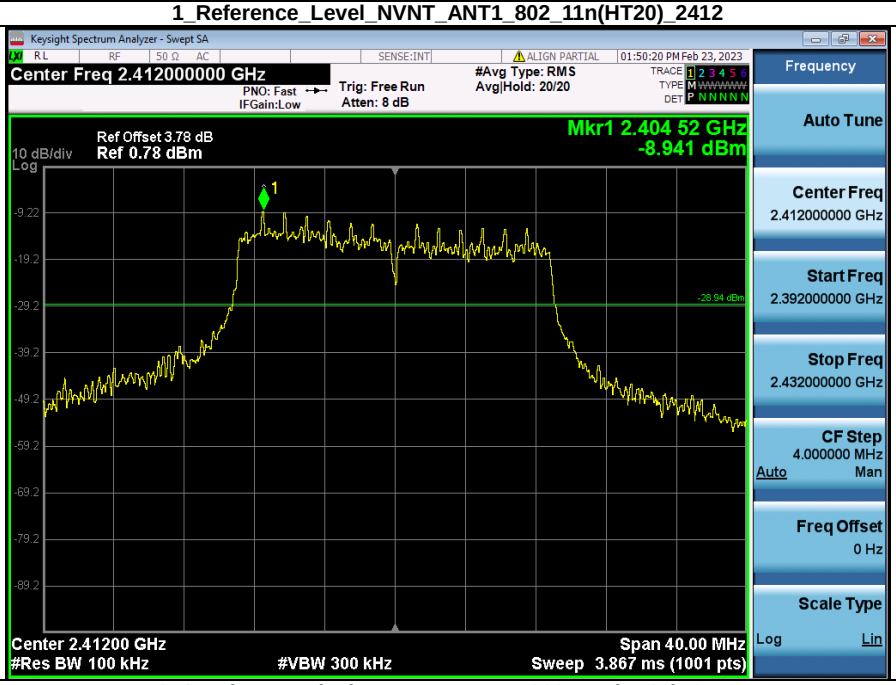


1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2412



2_Spurious_Emission_NVNT_ANT1_802_11n(HT20)_2412

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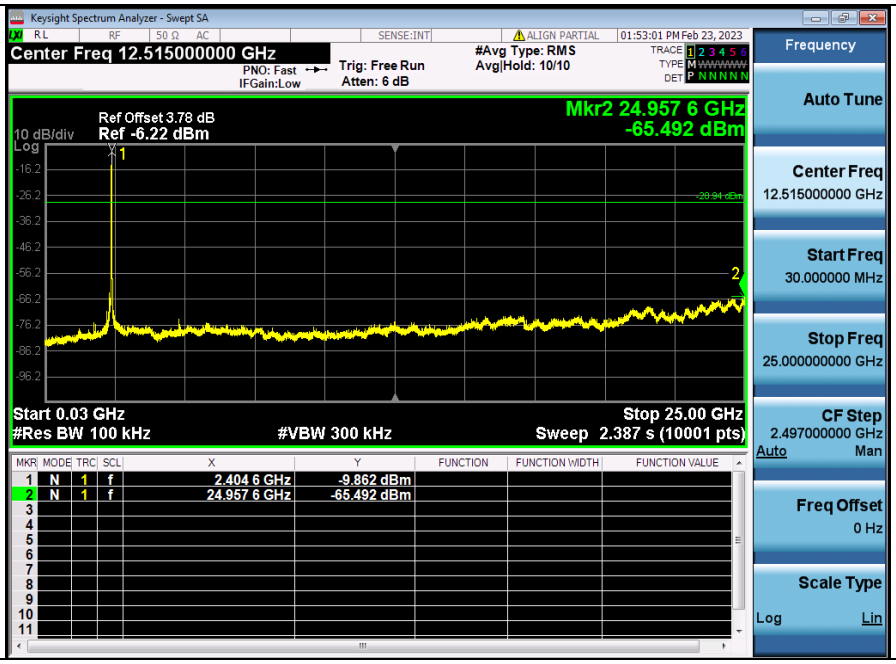

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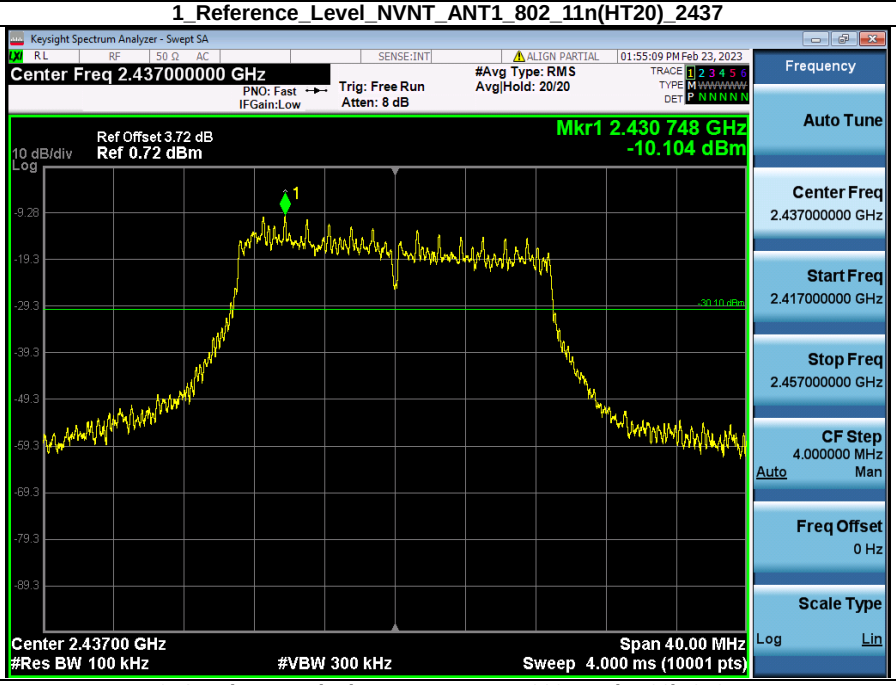

2_Spurious_Emission_NVNT_ANT1_802_11n(HT20)_2437

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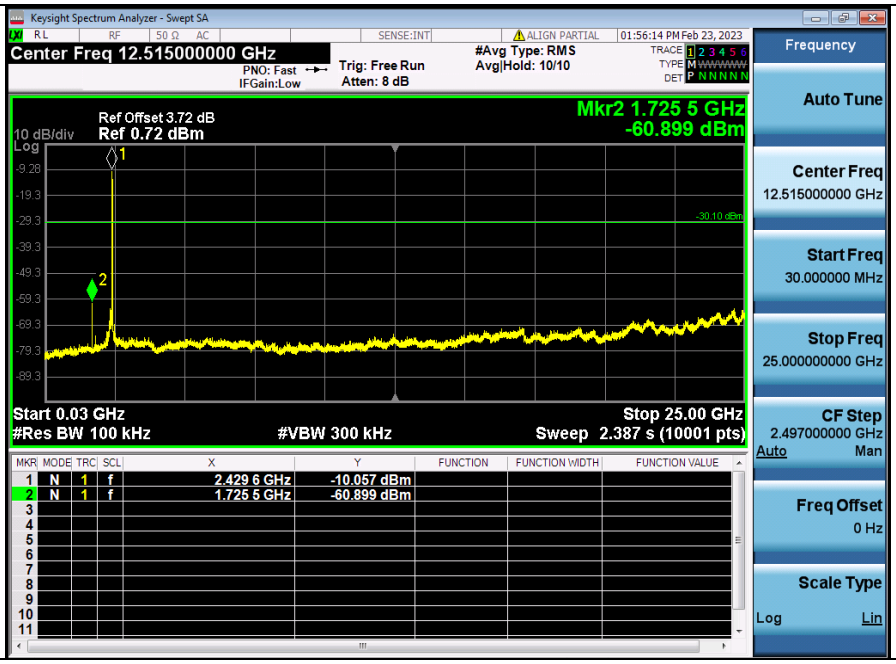

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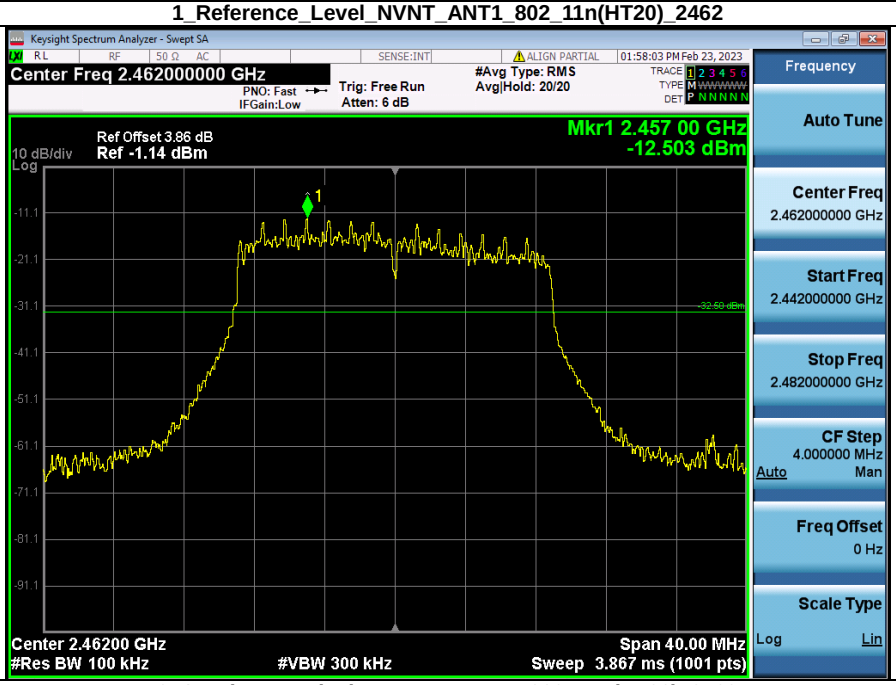

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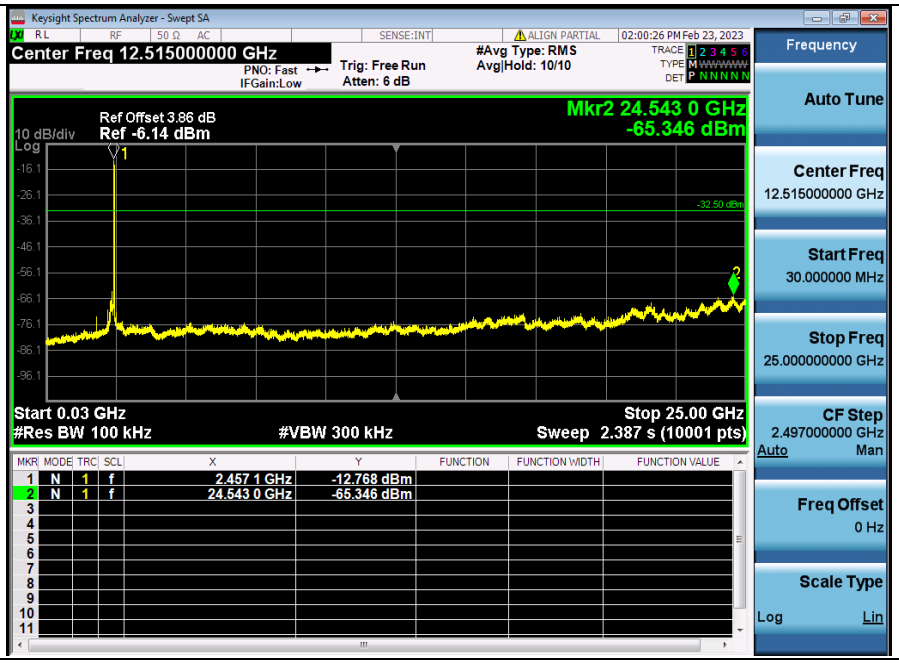
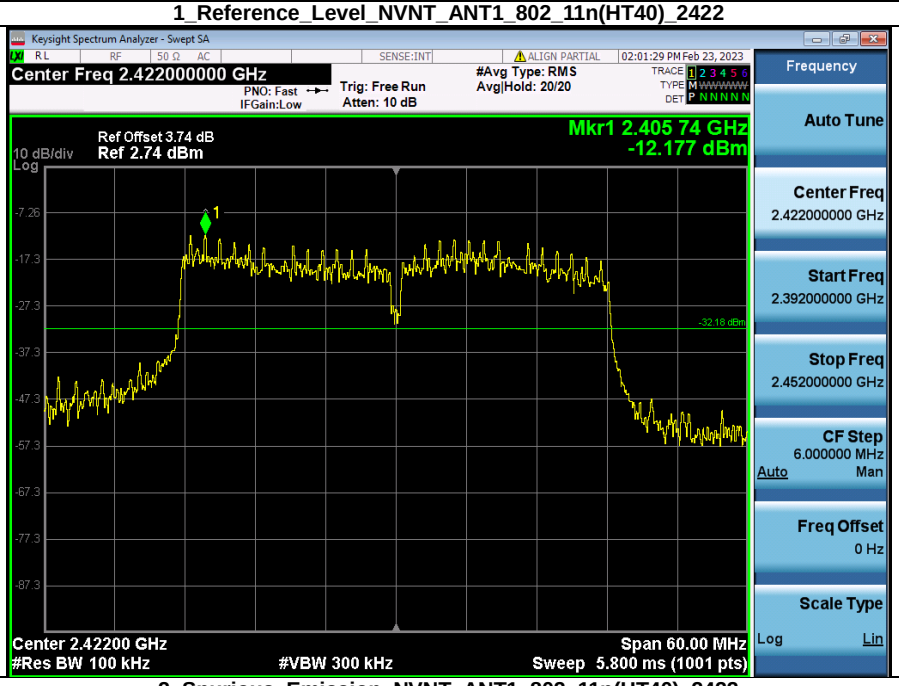


1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2422



2_Spurious_Emission_NVNT_ANT1_802_11n(HT40)_2422

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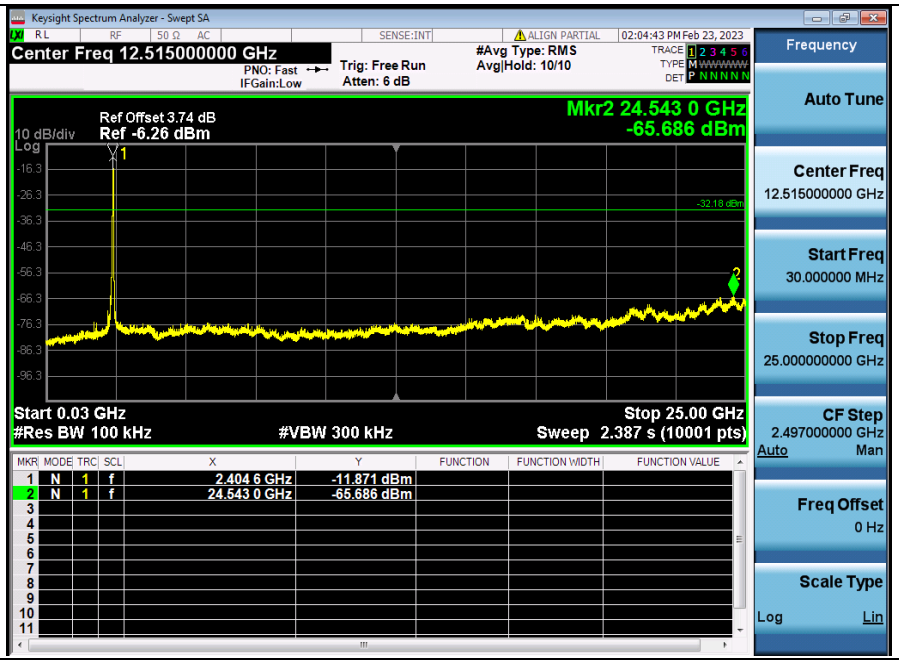
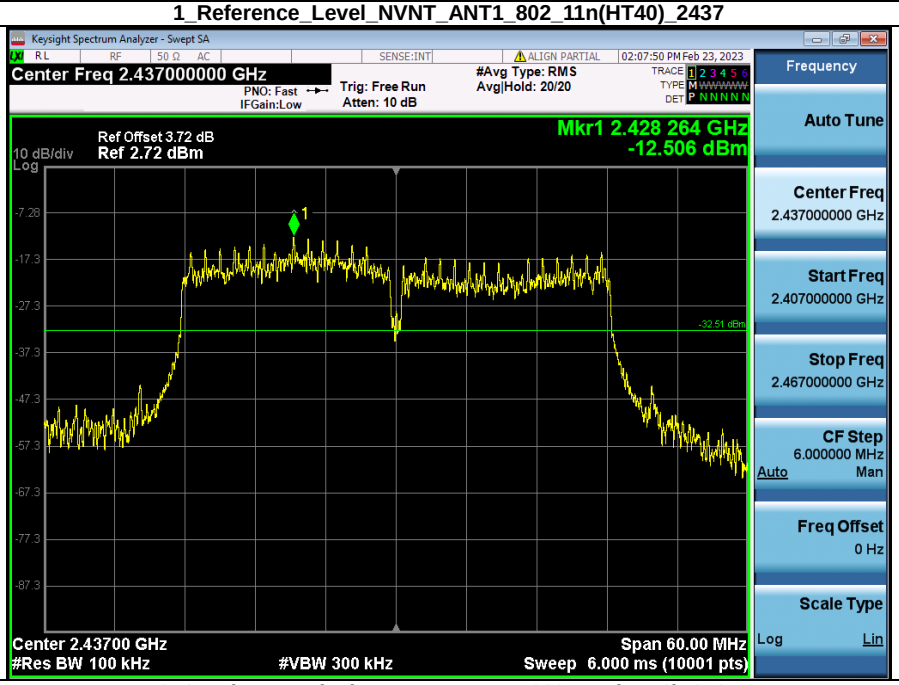


1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2437



2_Spurious_Emission_NVNT_ANT1_802_11n(HT40)_2437

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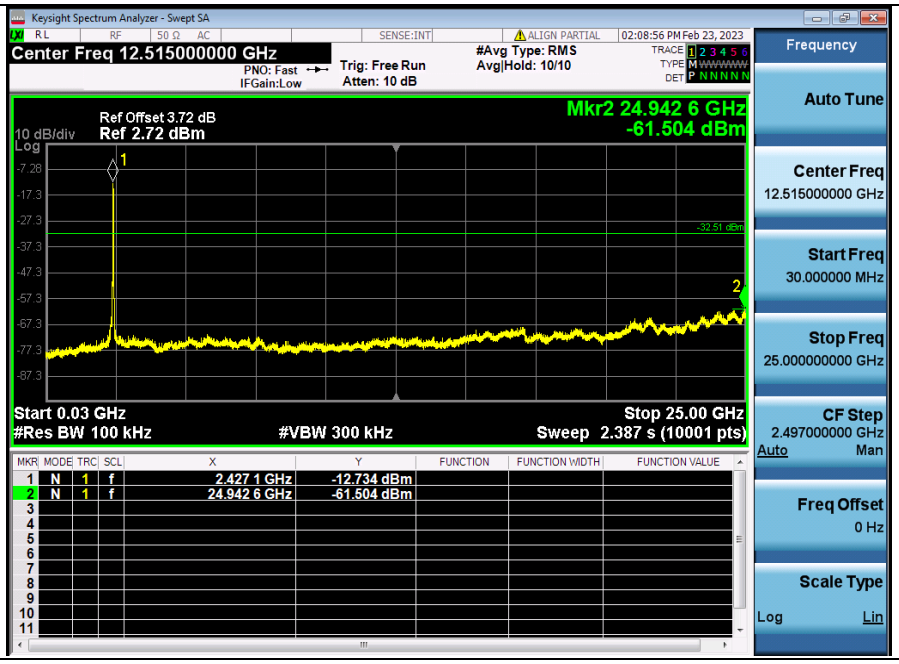
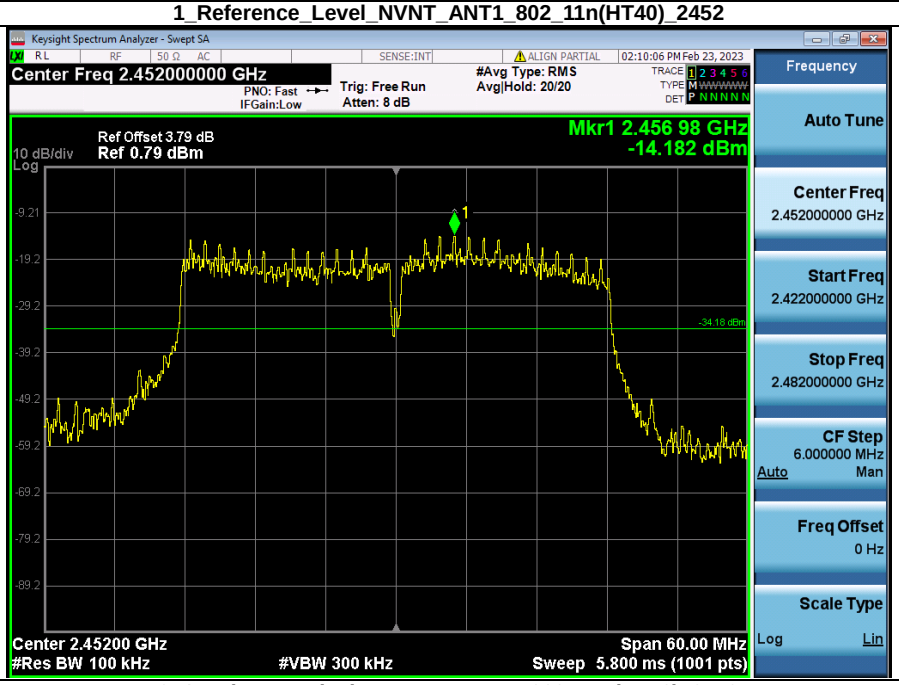


1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2452



2_Spurious_Emission_NVNT_ANT1_802_11n(HT40)_2452

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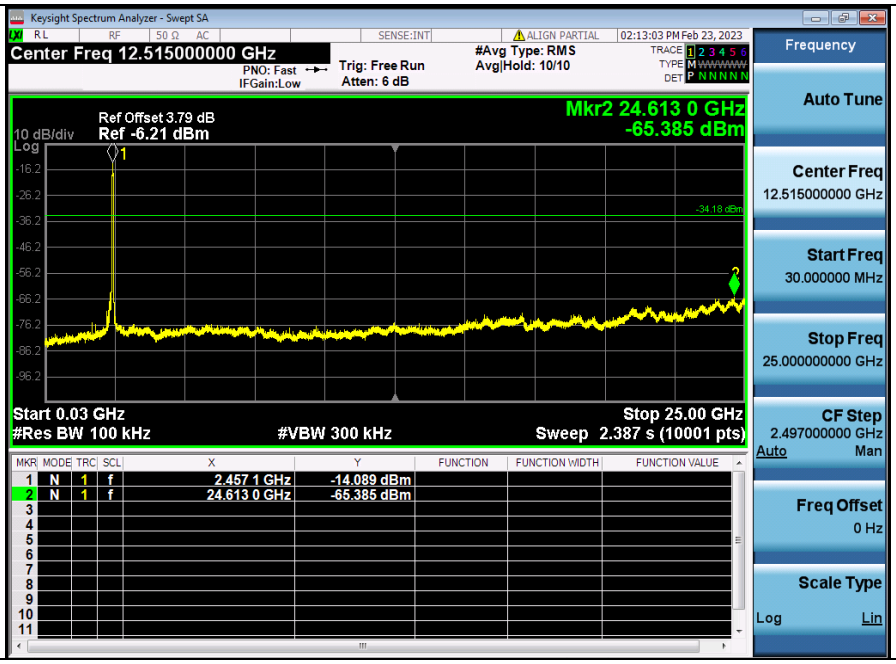

Keysight Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 6 dB
#Avg Type: RMS
Avg|Hold: 10/10
02:13:03 PM Feb 23, 2023
Ref Offset 3.79 dB
10 dB/div
Log
Ref -6.21 dBm
Mkr2 24.613 0 GHz
-65.385 dBm
-34.18 dBm
Start 0.03 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.387 s (10001 pts)
1 N 1 f 2.457 1 GHz -14.089 dBm
2 N 1 f 24.613 0 GHz -65.385 dBm
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

6. Bandedge

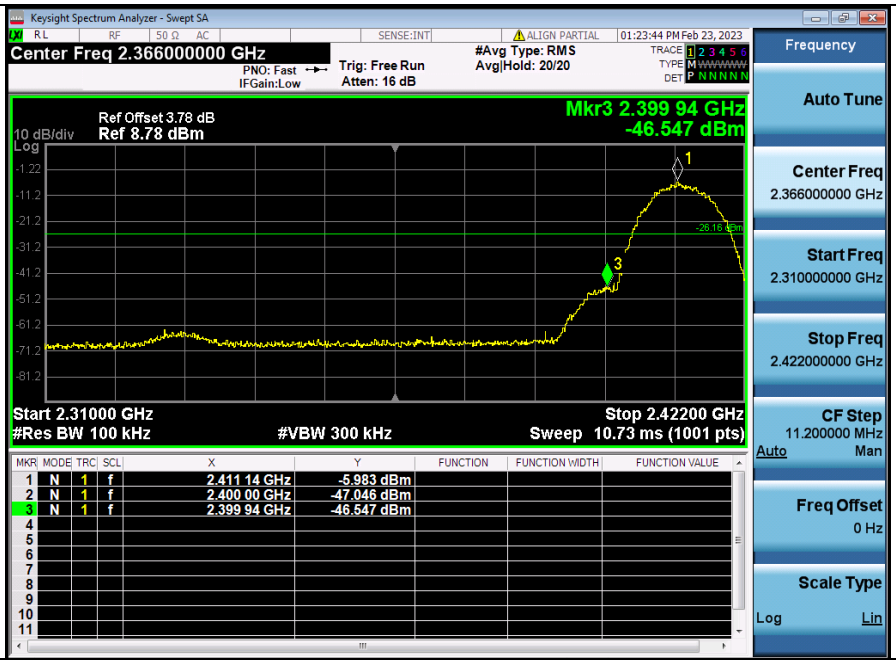
6.1 Test Result

Condition	Antenna	Modulation	TX_Frequency (MHz)	Max. Mark_frequency(MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	2399.94	-46.55	-26.16	Pass
NVNT	ANT1	802.11b	2462.00	2486.51	-69.73	-27.27	Pass
NVNT	ANT1	802.11g	2412.00	2398.82	-40.89	-28.88	Pass
NVNT	ANT1	802.11g	2462.00	2484.26	-67.40	-31.25	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	2399.82	-37.94	-28.94	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	2484.16	-65.88	-32.50	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	2393.29	-42.40	-32.18	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	2484.77	-54.02	-34.18	Pass

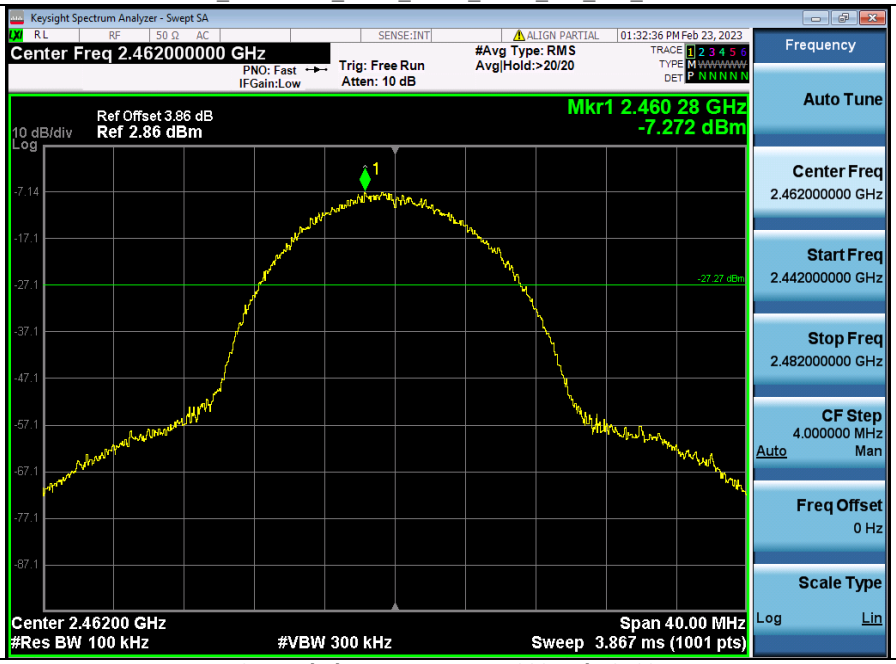
6.2 Test Graph

1_Reference_Level_NVNT_ANT1_802_11b_2412

2_Bandedge_NVNT_ANT1_802_11b_2412

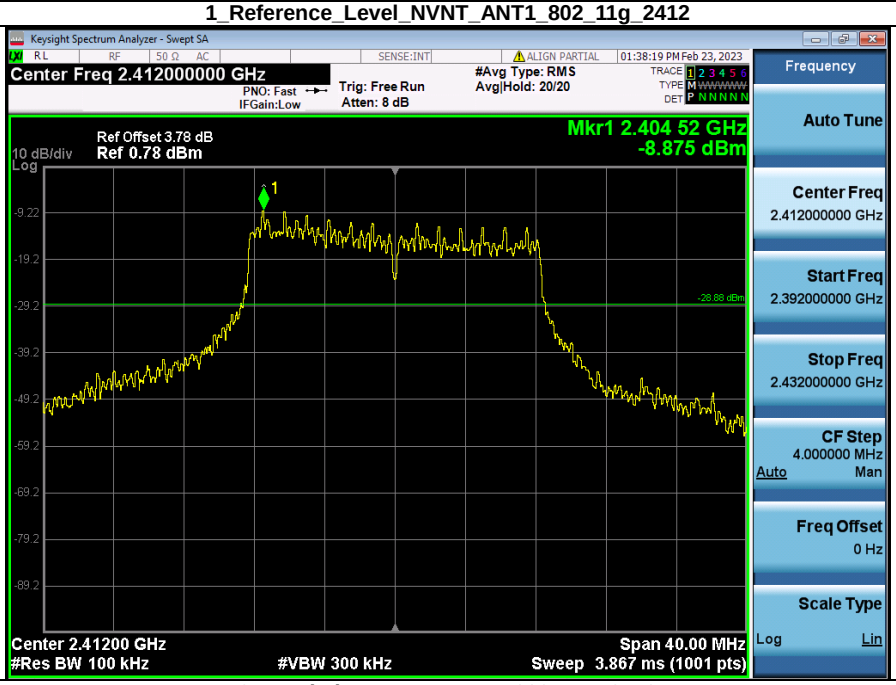


1_Reference_Level_NVNT_ANT1_802_11b_2462



2_Bandedge_NVNT_ANT1_802_11b_2462

1_Reference_Level_NVNT_ANT1_802_11g_2412



2_Bandedge_NVNT_ANT1_802_11g_2412

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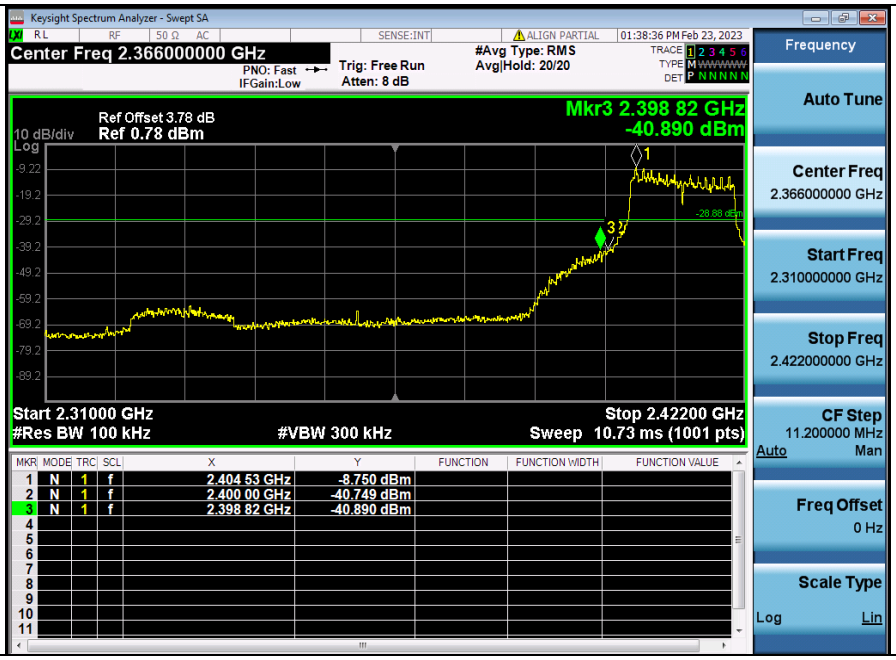
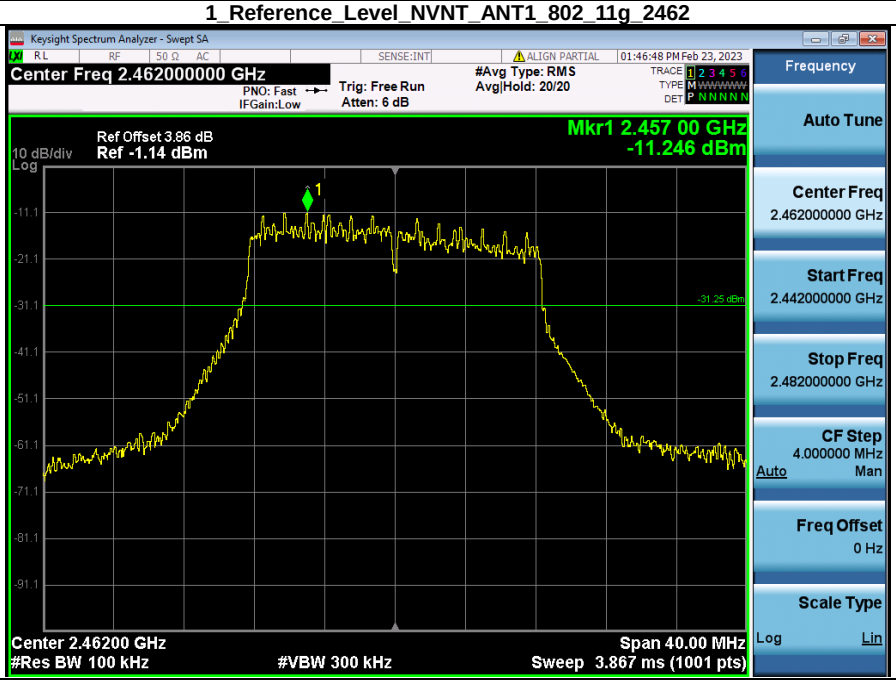
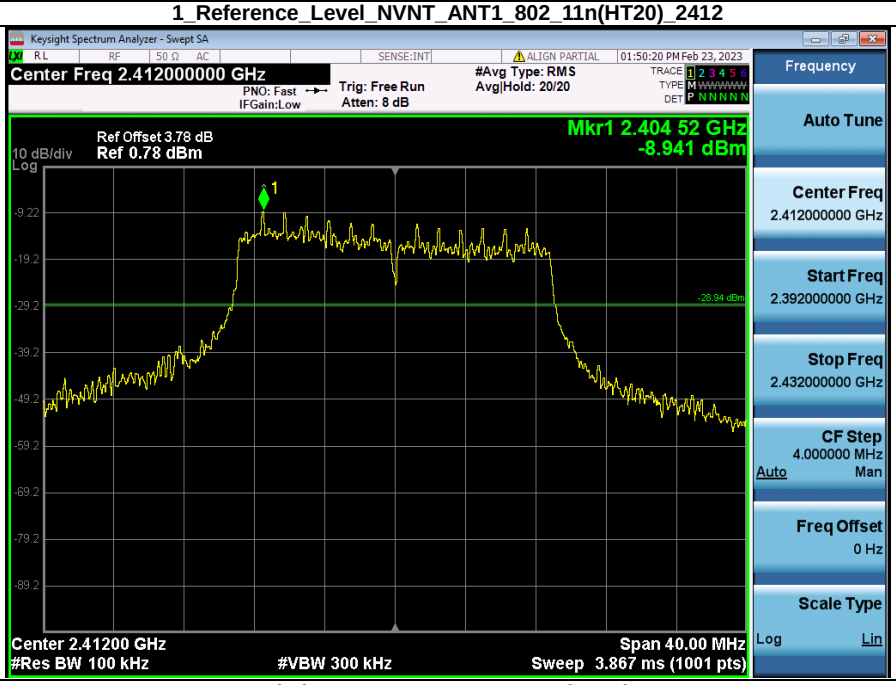


1_Reference_Level_NVNT_ANT1_802_11g_2462



2_Bandedge_NVNT_ANT1_802_11g_2462

1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2412



2_Bandedge_NVNT_ANT1_802_11n(HT20)_2412

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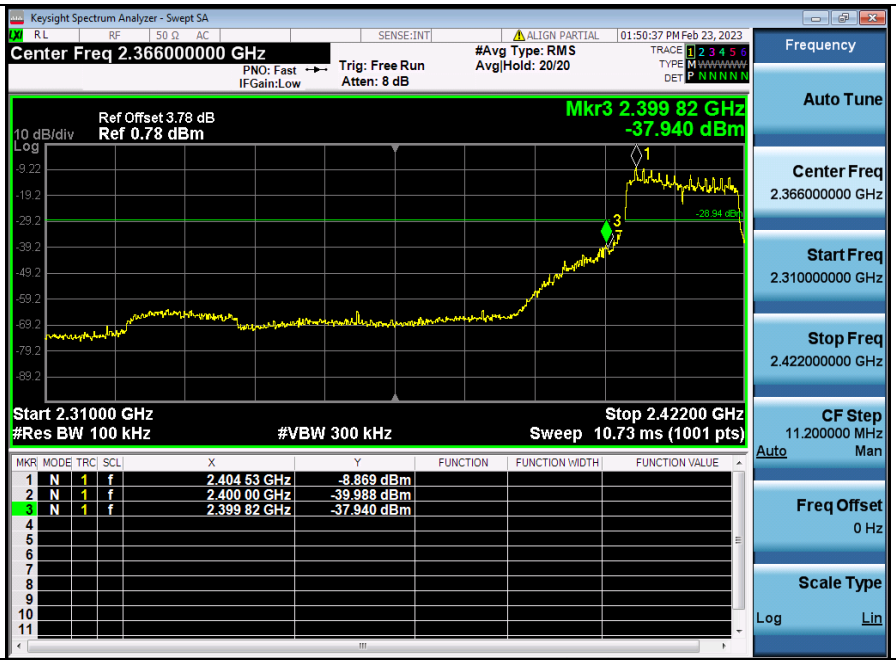
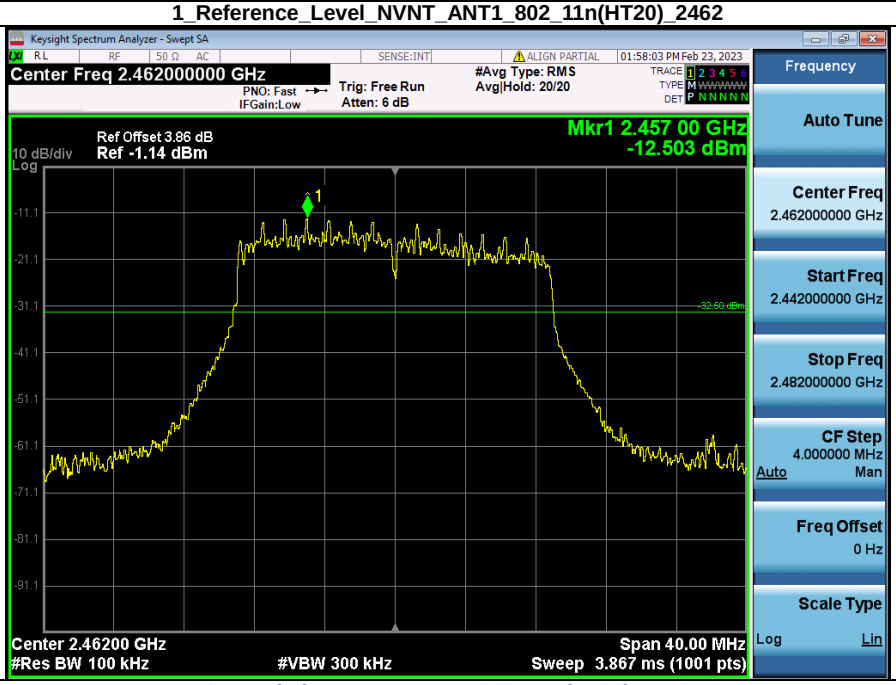


1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2462



2_Bandedge_NVNT_ANT1_802_11n(HT20)_2462

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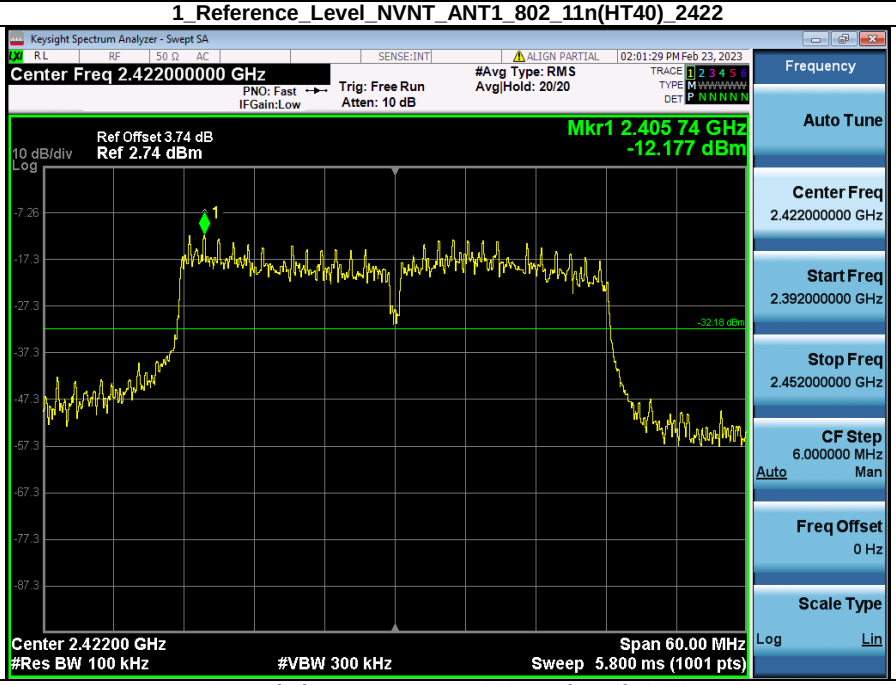
1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2422



2_Bandedge_NVNT_ANT1_802_11n(HT40)_2422

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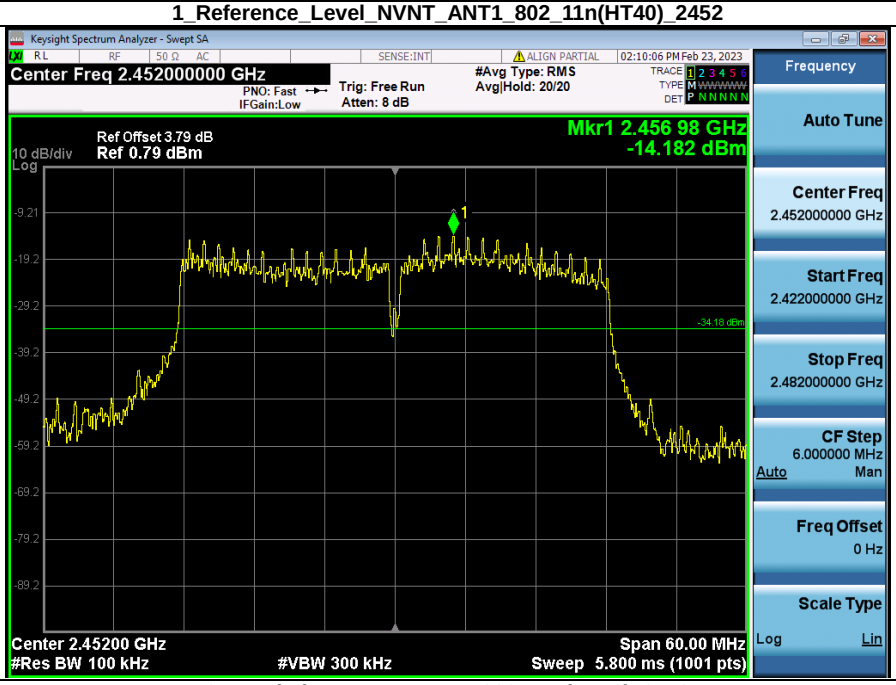
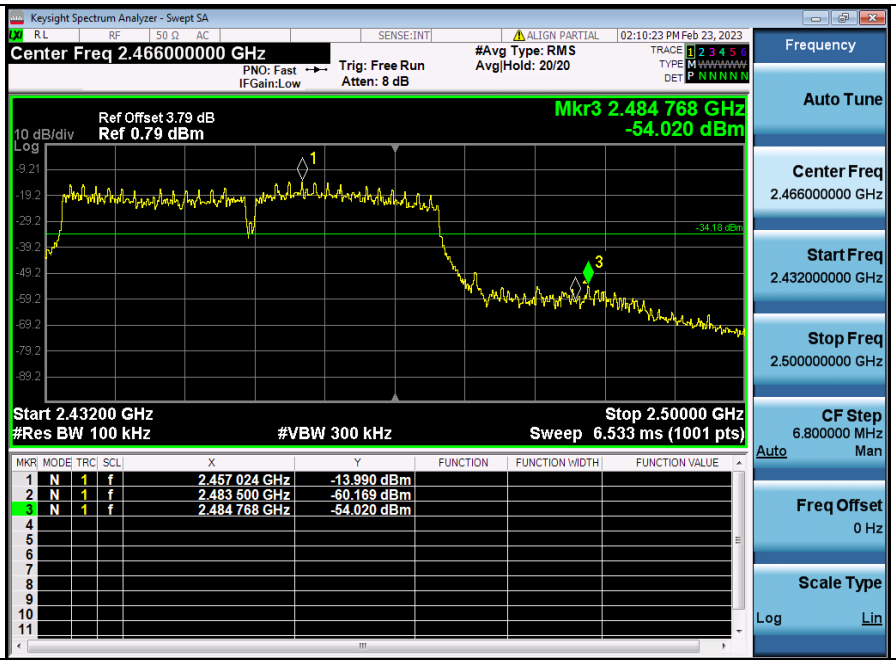
1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2452



2_Bandedge_NVNT_ANT1_802_11n(HT40)_2452



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