



FCC TEST REPORT

FCC ID: 2BPEF-MOTICSCOPE1

On Behalf of

Motic China Group Co., Ltd.

Biological Microscope

Model No.: MoticScope 1

Prepared for : Motic China Group Co., Ltd.
Address : No.810 Fangshan Nan Road, XiangAn, Xiamen 361100, P.R. China

Prepared By : Shenzhen PSI Testing Co., Ltd.
Address : 1-2/F., Building 5, Yudafu Industrial Park, No.10, Xingye West Road,
Shajing Subdistrict, Bao'an District, Shenzhen, Guangdong, China

Report Number : psi2602048-C01-R07
Date of Receipt : March 4, 2026
Date of Test : March 5, 2026– April 21, 2026
Date of Report : April 22, 2026
Version Number : V0

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TEST REPORT DECLARATION

Applicant : Motic China Group Co., Ltd.
Address : No.810 Fangshan Nan Road, XiangAn, Xiamen 361100, P.R. China
Manufacturer : Motic China Group Co., Ltd.
Address : No.810 Fangshan Nan Road, XiangAn, Xiamen 361100, P.R. China
EUT Description : Biological Microscope
(A) Model No. : MoticScope 1
(B) Trademark : **Motic**

Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247

ANSI C63.10-2020+COR.1-2023

Test Result: PASS

The device described above is tested by Shenzhen PSI Testing Co., Ltd. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The test results are contained in this test report and Shenzhen PSI Testing Co., Ltd. is assumed full responsibility for the accuracy and completeness of test. Also, this report shows that the EUT is technically compliant with the FCC Part 15C requirements.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen PSI Testing Co., Ltd.

Tested by (name + signature).....:

Jensen Wang
Test Engineer



Approved by (name + signature).....:

Simple Guan
Project Manager



Date of issue.....:

April 22, 2026

Revision History

Revision	Issue Date	Revisions	Revised By
V0	April 22, 2026	Initial released Issue	Jensen Wang

1. Summary Of Standards And Results

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Test Item	Standards Paragraph	Result
Conducted Emission	FCC Part 15: 15.207 ANSI C63.10-2020+COR.1-2023	P
6dB Bandwidth	FCC PART 15:15.247(a)(2), ANSI C63.10-2020+COR.1-2023	P
Output Power	FCC Part 15: 15.247(b)(3), ANSI C63.10-2020+COR.1-2023	P
Radiated Spurious Emission	FCC Part 15: 15.209 FCC Part 15: 15.247(d), ANSI C63.10-2020+COR.1-2023	P
Conducted Spurious & Band Edge Emission	FCC Part 15: 15.247(d), ANSI C63.10-2020+COR.1-2023	P
Power Spectral Density	FCC PART 15:15.247(e), ANSI C63.10-2020+COR.1-2023	P
Radiated Band Edge Emission	FCC Part 15: 15.247(d), ANSI C63.10-2020+COR.1-2023	P
Antenna Requirement	FCC Part 15: 15.203	P
Note: 1. P is an abbreviation for Pass. 2. F is an abbreviation for Fail. 3. N/A is an abbreviation for Not Applicable. 4. Conclusion determination rules of this report: Unless there are clear provisions on measurement uncertainty in the standard or customer requirements, decision by actual test data without considering measurement uncertainty. 5. Measurement method usage KDB 558074 D01 15.247 Meas Guidance v05r02.		

2. General Information

2.1. Description of Device (EUT)

Product Name : Biological Microscope
 Model : MoticScope 1
 Diff : N/A
 Test Voltage : AC 120V

Radio technology : 2.4G WiFi

Operation frequency : 2412MHz-2462MHz for IEEE 802.11 b, g, n/HT20
 2422MHz-2452MHz for IEEE 802.11 n/HT40

Channel No. : 802.11b/802.11g/802.11n(HT20): 11CH
 802.11(HT40): 7CH

Modulation type : IEEE 802.11b: DSSS(CCK,DQPSK,DBPSK)
 IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK)
 IEEE 802.11n:OFDM(64QAM, 16QAM, QPSK, BPSK)

Antenna Type : Internal antenna 1, Maximum Gain is -2.7dBi.
 Internal antenna 2, Maximum Gain is -2.2dBi.

PMN : N/A

HVIN : N/A

Software version : N/A

Hardware version/FVIN : N/A

Note : Antenna information is provided by applicant.
 Testing lab is not responsible for the accuracy of the information.

2.2. Accessories of Device (EUT)

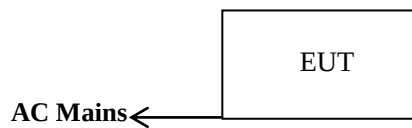
Accessories 1 : Power Supply
 Manufacturer : Shenzhen Yingyuan Electronics Co., Ltd.
 Model : ICP30A-120-2500
 Ratings : OUTPUT: AC 100-240V, 50/60Hz, 0.8A
 INPUT: DC 12V, 2.5A

2.3. Tested Supporting System Details

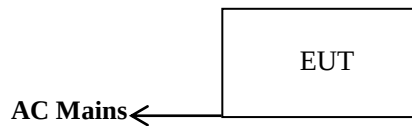
No.	Description	Manufacturer	Model	Serial Number
1	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A

2.4. Block Diagram of Connection Between EUT and Simulators

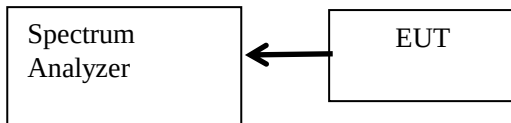
Spurious Emission



Power Line Conducted Emission



RF



2.5. Test Mode Description

Keeping TX			
Mode	Data rate (Mbps)	Channel	Frequency(MHz)
IEEE 802.11 b	1	Low :CH1	2412
	1	Middle: CH6	2437
	1	High: CH11	2462
IEEE 802.11 g	6	Low :CH1	2412
	6	Middle: CH6	2437
	6	High: CH11	2462
IEEE 802.11 n/HT20	6.5	Low :CH1	2412
	6.5	Middle: CH6	2437
	6.5	High: CH11	2462
IEEE 802.11n HT40	13.5	Low :CH3	2422
	13.5	Middle: CH6	2437
	13.5	High: CH9	2452
Note: According exploratory test, EUT will have maximum output power in those data rate. So those data rate were used for all test.			

Channel list:					
For IEEE 802.11b, g, n/HT20					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
CH1	2412	CH5	2432	CH9	2452
CH2	2417	CH6	2437	CH10	2457
CH3	2422	CH7	2442	CH11	2462
CH4	2427	CH8	2447		
For IEEE 802.11n/HT40					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
CH3	2422	CH7	2442		
CH4	2427	CH8	2447		
CH5	2432	CH9	2452		
CH6	2437				

2.6. Software test version and power setting information

Software testing version	RTLBTAPP.exe		
Mode	The client 's preset testing software is used to control the operation of EUT in continuous transmission mode and select the testing channel, wireless mode:		
Power level setup by client			
Mode	Channel	Frequency (MHz)	Soft Set
IEEE 802.11b/g/n20	Low :CH1	2412	TX level is set as defaults
	Middle: CH6	2437	TX level is set as defaults
	High: CH11	2462	TX level is set as defaults
IEEE 802.11 n40	Low :CH3	2422	TX level is set as defaults
	Middle: CH6	2437	TX level is set as defaults
	High: CH9	2452	TX level is set as defaults

2.7. Test Conditions

Items	Required	Actual
Temperature range:	15-35℃	26℃
Humidity range:	25-75%	54%
Pressure range:	86-106kPa	101kPa

2.8. Test Facility

Shenzhen PSI Testing Co., Ltd.

1-2/F., Building 5, Yudafu Industrial Park, No.10, Xingye West Road, Shajing Subdistrict, Bao'an District, Shenzhen, Guangdong, China

September 13, 2023 File on Federal Communication Commission

Registration Number: 916281

2.9. Measurement Uncertainty

(95% confidence levels, k=2)

Item	Uncertainty
Power Line Conducted Emissions Test	2.13dB
Radiation Emission test in 3m chamber(below 30MHz)	4.07dB
Radiation Emission test in 3m chamber(30MHz to 1GHz)	4.51dB
Radiation Emission test in 3m chamber(1GHz to 18GHz)	5.07dB
Radiation Emission test in 3m chamber(18GHz to 40GHz)	5.21dB
Radio Frequency	48.24KHz
Conducted RF Power	0.41dB
Power Spectral Density	0.39 dB
Occupied-Bandwidth	968Hz
Duty Cycle	1%
Conducted-Spurious Emission	1.26dB

2.10.Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Firmware Version	Last Cal.	Cal. Interval
1.	9*6*6 anechoic chamber	SKET	9*6*6	N/A	/	2025.12.18	3 Year
2.	Test Receiver	Rohde&Schwarz	ESCI 7	101032/003	4.42 SP3	2025.12.18	1 Year
3.	L.I.S.N.#1	Rohde&Schwarz	ENV 216	102282	/	2025.12.18	1 Year
4.	L.I.S.N.#2	EMCO	3810-2	00094944	/	2025.12.18	1 Year
5.	Loop Antenna	Schwarz beck	FMZB 1519B	00128	/	2025.01.02	2 Year
6.	Bilog Antenna	Schwarz beck	VULB 9168	01448	/	2025.01.02	2 Year
7.	Spectrum Analyzer	Rohde&Schwarz	FSV40-N	101648	3.70	2025.12.18	1 Year
8.	Horn Antenna	Schwarz beck	BBHA 9120 D	02706	/	2025.01.02	2 Year
9.	Amplifier	SKET	LNPA_0118 G-50	SK20220329 01	/	2025.12.18	1 Year
10.	Horn Antenna	Schwarz beck	BBHA 9170	00946	/	2024.12.31	2 Year
11.	Amplifier	SKET	LNPA_1840 G-50	SK20190403 02	/	2025.12.18	1 Year
12.	RF Power Probe	Rohde&Schwarz	NRP-Z11	1138.3004.0 2-1111533-F Z	/	2025.12.18	1 Year
13.	RF Sensor Unit	Tachoy	TR1029-2	20220428P0 08	/	2025.12.18	1 Year
14.	Spectrum Analyzer	Agilent	N9020A	MY51281067	A.14.03	2025.12.18	1 Year
15.	Temp. & Humid Chamber	Auchno	9606	/	/	2025.12.18	1 Year
16.	Regulated DC Power Supply	Xinouhua	ADC120V10 A	2022112516 38	/	2025.12.18	1 Year
17.	Cable	SKET	Cable-RE-1	#02/#03	/	2025.12.18	1 Year
18.	Cable	SKET	Cable-RE-2	#01	/	2025.12.18	1 Year
19.	Cable	SKET	Cable-RE-3	#04	/	2025.12.18	1 Year
20.	Cable	SKET	Cable-CE-1	A-E-24	/	2025.12.18	1 Year
21.	6dB Attenuator	Schwarzbeck	DGA 9552N 6dB	CK4186	/	2025.12.18	1 Year
22.	Power meter	Agilent	E4419B	GB40202121	/	2025.12.18	1 Year
23.	Comprehensive Test Instrument	Rohde&Schwarz	CMW 500	145266	/	2025.12.18	1 Year
For Test Software Information							
Item	Software Name	Manufacturer		Version			
RE	EZ EMC	Farad		PSI-3A1			
CE	EZ EMC	Farad		PSI-3A1			
RF	RTS	TACHOY		V1.0.0			

3. Spurious Emission

3.1. Test Limits

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

Note: The peak limit is 20 dB higher than the average limit

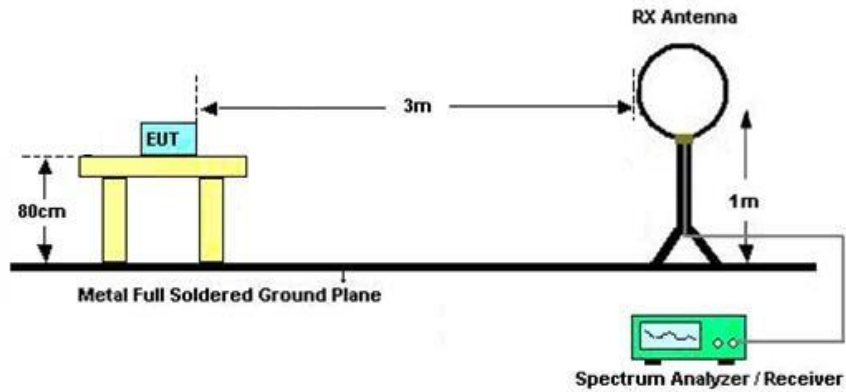
All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

15.205 Restricted frequency band

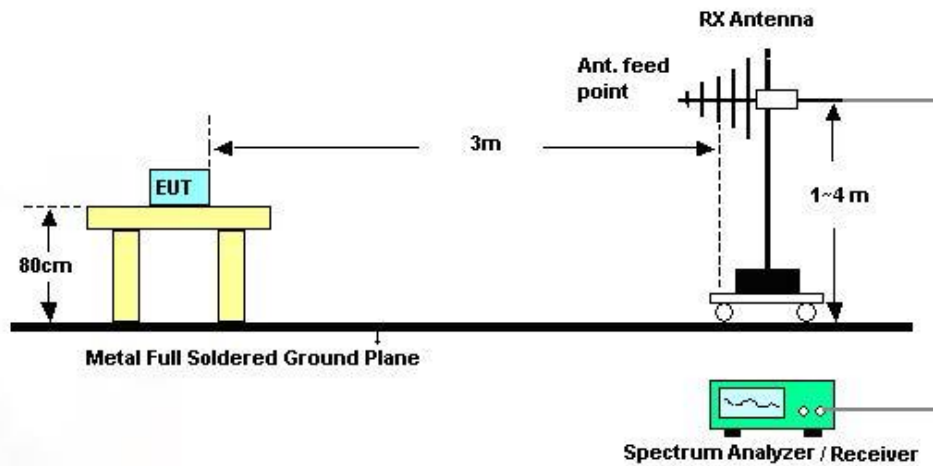
MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)

3.2. Block Diagram of Test setup

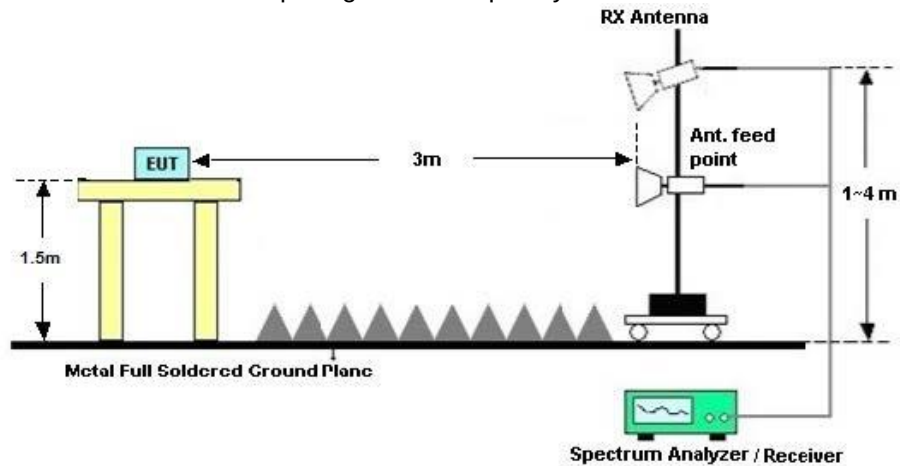
(1) In 3m Anechoic Chamber Test Setup Diagram for below 30MHz



(2) In 3m Anechoic Chamber Test Setup Diagram for below 1GHz



(3) In 3m Anechoic Chamber Test Setup Diagram for frequency above 1GHz



3.3. Test Procedure

- (1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber.
- (2) Setup EUT and simulator
- (3) Test antenna was located 3m from the EUT on an adjustable mast. Below pre-scan procedure was first performed in order to find prominent radiated emissions.
 - (a) Change work frequency or channel of device if practicable.
 - (b) Change modulation type of device if practicable.
 - (c) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions
- (4) Spectrum frequency from 9KHz to 25GHz (tenth harmonic of fundamental frequency) was investigated
- (5) For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10:2013 on Radiated Emission test.
- (6) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1MHz, VBW is set at 3MHz for Peak measure; RBW is set at 1MHz, VBW is set at 10Hz for Average measure.

Test setup information:

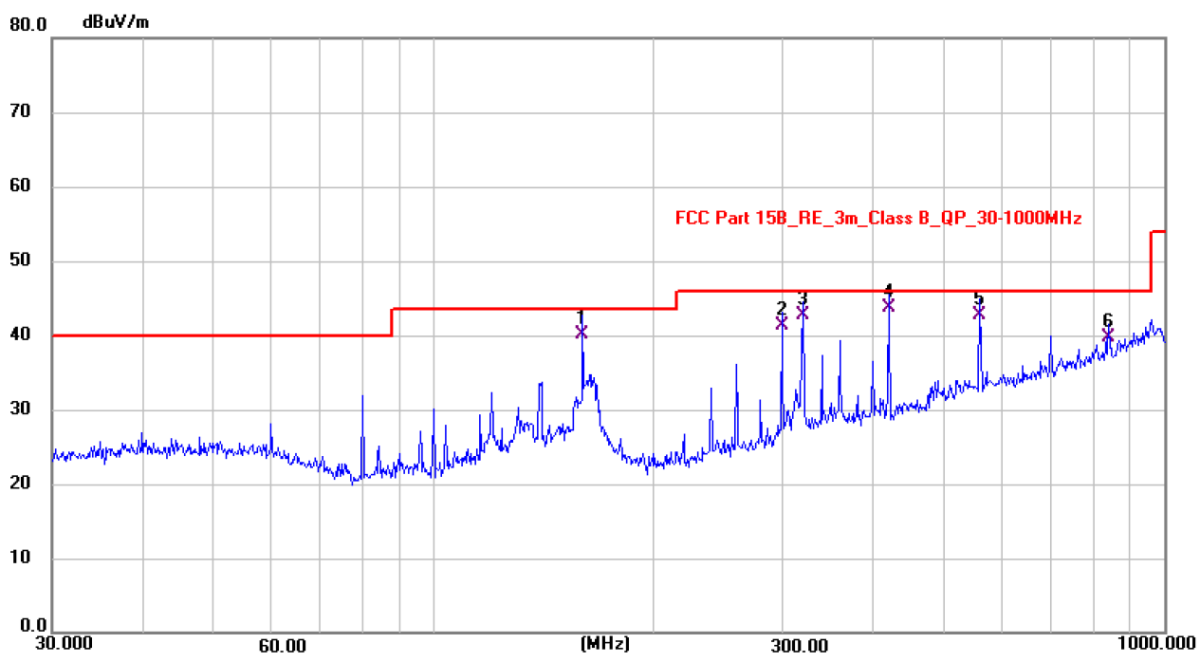
9KHz~150KHz	RBW200Hz	VBW1KHz
150KHz~30MHz	RBW9KHz	VBW 30KHz
30MHZ~1GHz	RBW120KHz	VBW 300KHz
Above1GHz	RBW1MHz	VBW 3MHz

3.4. Test Results

We have scanned from 9kHz to the 10th harmonic of the EUT's highest frequency.
Detailed information please see the following page.

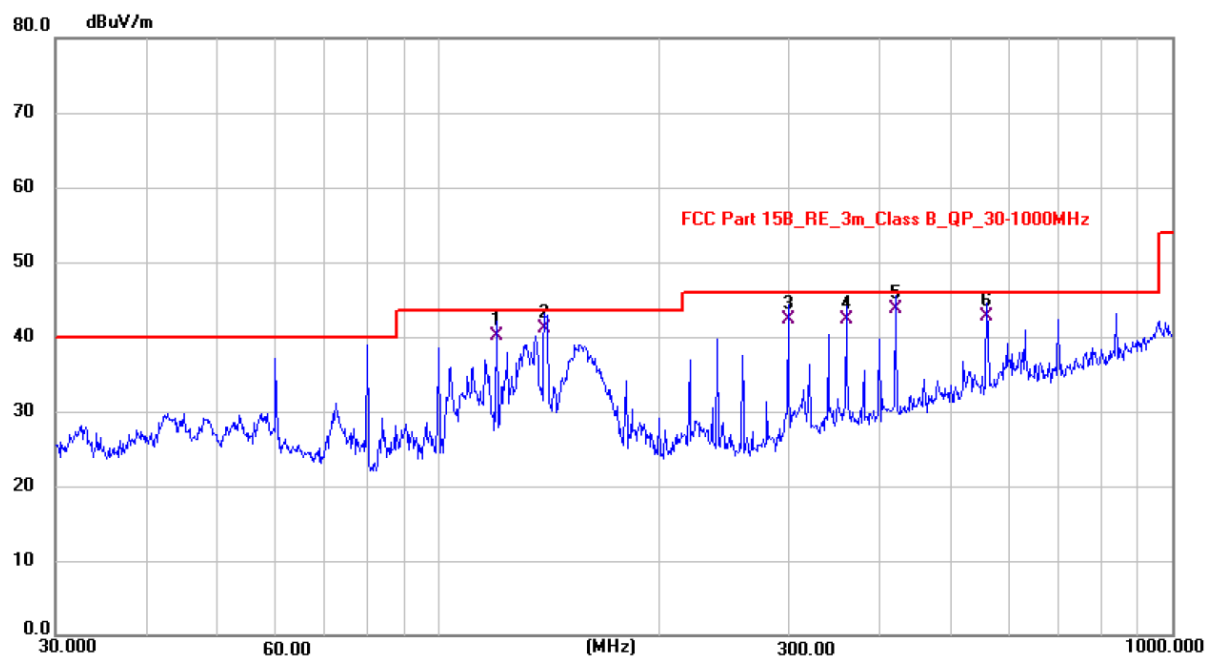
From 9KHz to 30MHz:	
Test Date : 2026.04.13	Temperature : 26℃
Test Engineer : Jensen Wang	Humidity : 54%
Test Mode : IEEE 802.11b mode	
Test Voltage : AC 120V/60Hz	
Test Results : PASS	
Note:	The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

From 30MHz to 1000MHz:	
Test Date : 2026.04.13	Temperature : 26℃
Test Engineer : Jensen Wang	Humidity : 54%
Test Mode : IEEE 802.11b mode	
Test voltage : AC 120V/60Hz	
Test Results : PASS	
Note:	1. The test results are listed in next pages. 2. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector and quasi-peak detector need not be carried out. 3. All modes have been tested, and only worst data of IEEE 802.11b mode, Channel 2412MHz was listed in this report.

Polarization: Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	159.9946	24.85	15.17	40.02	43.50	-3.48	QP
2	299.9725	26.23	15.09	41.32	46.00	-4.68	QP
3	320.0772	26.89	15.72	42.61	46.00	-3.39	QP
4 *	420.3960	25.39	18.28	43.67	46.00	-2.33	QP
5	560.2015	21.38	21.25	42.63	46.00	-3.37	QP
6	840.2860	14.24	25.49	39.73	46.00	-6.27	QP

Level = Reading + Factor Margin = Level - Limit

Polarization: Vertical

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	120.0133	26.90	13.16	40.06	43.50	-3.44	QP
2	139.6670	26.66	14.45	41.11	43.50	-2.39	QP
3	299.9725	27.26	15.09	42.35	46.00	-3.65	QP
4	360.1318	25.49	16.77	42.26	46.00	-3.74	QP
5 *	419.8435	25.47	18.26	43.73	46.00	-2.27	QP
6	560.2015	21.50	21.25	42.75	46.00	-3.25	QP

Level = Reading + Factor Margin = Level - Limit

From 1GHz to 25GHz:	
Test Date : 2026.04.13	Temperature : 26℃
Test Engineer : Jensen Wang	Humidity : 54%
Test Mode : WIFI mode	
Test voltage : AC 120V/60Hz	
Test Results : PASS	
Note:	1. The test results are listed in next pages. 2. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector and quasi-peak detector need not be carried out. 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out. 4. Except for mode b/g, other modes test the MIMO status. The test result of SISO mode reflects the worst data between antenna 1 and antenna 2.

Test Mode : IEEE 802.11b TX Low								
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	4824	V	58.07	-13.25	44.82	74.00	-29.18	Peak
2	4824	V	48.56	-13.25	35.31	54.00	-18.69	Avg
3	7236	--	--	--	--	--	--	--
4	9648	--	--	--	--	--	--	--
5	4824	H	57.47	-13.25	44.22	74.00	-29.78	Peak
6	4824	H	46.30	-13.25	33.05	54.00	-20.95	Avg
7	7236	--	--	--	--	--	--	--
8	9648	--	--	--	--	--	--	--
Test Mode : IEEE 802.11b TX Mid								
1	4874	V	59.38	-12.98	46.40	74.00	-27.60	Peak
2	4874	V	48.58	-12.98	35.60	54.00	-18.40	Avg
3	7311	--	--	--	--	--	--	--
4	9748	--	--	--	--	--	--	--
5	4874	H	57.52	-12.98	44.54	74.00	-29.46	Peak
6	4874	H	46.53	-12.98	33.55	54.00	-20.45	Avg
7	7311	--	--	--	--	--	--	--
8	9748	--	--	--	--	--	--	--
Test Mode : IEEE 802.11b TX High								
1	4924	V	58.27	-12.70	45.57	74.00	-28.43	Peak
2	4924	V	46.91	-12.70	34.21	54.00	-19.79	Avg
3	7386	--	--	--	--	--	--	--
4	9848	--	--	--	--	--	--	--
5	4924	H	57.04	-12.70	44.34	74.00	-29.66	Peak
6	4924	H	46.35	-12.70	33.65	54.00	-20.35	Avg
7	7386	--	--	--	--	--	--	--
8	9848	--	--	--	--	--	--	--
Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor, Margin= Result-Limit.								

Test Mode : IEEE 802.11g TX Low								
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	4824	V	59.07	-13.18	45.89	74.00	-28.11	Peak
2	4824	V	47.54	-13.18	34.36	54.00	-19.64	Avg
3	7236	--	--	--	--	--	--	--
4	9648	--	--	--	--	--	--	--
5	4824	H	56.10	-13.18	42.92	74.00	-31.08	Peak
6	4824	H	45.18	-13.18	32.00	54.00	-22.00	Avg
7	7236	--	--	--	--	--	--	--
8	9648	--	--	--	--	--	--	--
Test Mode : IEEE 802.11g TX Mid								
1	4874	V	59.63	-13.00	46.63	74.00	-27.37	Peak
2	4874	V	48.89	-13.00	35.89	54.00	-18.11	Avg
3	7311	--	--	--	--	--	--	--
4	9748	--	--	--	--	--	--	--
5	4874	H	55.28	-13.00	42.28	74.00	-31.72	Peak
6	4874	H	46.92	-13.00	33.92	54.00	-20.08	Avg
7	7311	--	--	--	--	--	--	--
8	9748	--	--	--	--	--	--	--
Test Mode : IEEE 802.11g TX High								
1	4924	V	60.01	-12.83	47.18	74.00	-26.82	Peak
2	4924	V	47.06	-12.83	34.23	54.00	-19.77	Avg
3	7386	--	--	--	--	--	--	--
4	9848	--	--	--	--	--	--	--
5	4924	H	58.20	-12.83	45.37	74.00	-28.63	Peak
6	4924	H	47.26	-12.83	34.43	54.00	-19.57	Avg
7	7386	--	--	--	--	--	--	--
8	9848	--	--	--	--	--	--	--
Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor, Margin= Result-Limit.								

Test Mode : IEEE 802.11n/HT20 TX Low								
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	4824	V	57.64	-13.18	44.46	74.00	-29.54	Peak
2	4824	V	50.49	-13.18	37.31	54.00	-16.69	Avg
3	7236	--	--	--	--	--	--	--
4	9648	--	--	--	--	--	--	--
5	4824	H	54.96	-13.18	41.78	74.00	-32.22	Peak
6	4824	H	47.43	-13.18	34.25	54.00	-19.75	Avg
7	7236	--	--	--	--	--	--	--
8	9648	--	--	--	--	--	--	--
Test Mode : IEEE 802.11n/HT20 TX Mid								
1	4874	V	60.20	-13.00	47.20	74.00	-26.80	Peak
2	4874	V	49.97	-13.00	36.97	54.00	-17.03	Avg
3	7311	--	--	--	--	--	--	--
4	9748	--	--	--	--	--	--	--
5	4874	H	57.39	-13.00	44.39	74.00	-29.61	Peak
6	4874	H	48.13	-13.00	35.13	54.00	-18.87	Avg
7	7311	--	--	--	--	--	--	--
8	9748	--	--	--	--	--	--	--
Test Mode : IEEE 802.11n/HT20 TX High								
1	4924	V	58.00	-12.83	45.17	74.00	-28.83	Peak
2	4924	V	48.99	-12.83	36.16	54.00	-17.84	Avg
3	7386	--	--	--	--	--	--	--
4	9848	--	--	--	--	--	--	--
5	4924	H	54.99	-12.83	42.16	74.00	-31.84	Peak
6	4924	H	48.33	-12.83	35.50	54.00	-18.50	Avg
7	7386	--	--	--	--	--	--	--
8	9848	--	--	--	--	--	--	--
Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor, Margin= Result-Limit.								

Test Mode : IEEE 802.11n/HT40 TX Low								
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	4844	V	58.22	-13.11	45.11	74.00	-28.89	Peak
2	4844	V	47.56	-13.11	34.45	54.00	-19.55	Avg
3	7266	--	--	--	--	--	--	--
4	9688	--	--	--	--	--	--	--
5	4844	H	56.76	-13.11	43.65	74.00	-30.35	Peak
6	4844	H	46.97	-13.11	33.86	54.00	-20.14	Avg
7	7266	--	--	--	--	--	--	--
8	9688	--	--	--	--	--	--	--
Test Mode : IEEE 802.11n/HT40 TX Mid								
1	4874	V	60.07	-13.00	47.07	74.00	-26.93	Peak
2	4874	V	47.11	-13.00	34.11	54.00	-19.89	Avg
3	7311	--	--	--	--	--	--	--
4	9748	--	--	--	--	--	--	--
5	4874	H	54.96	-13.00	41.96	74.00	-32.04	Peak
6	4874	H	48.02	-13.00	35.02	54.00	-18.98	Avg
7	7311	--	--	--	--	--	--	--
8	9748	--	--	--	--	--	--	--
Test Mode : IEEE 802.11n/HT40 TX High								
1	4904	V	56.65	-12.90	43.75	74.00	-30.25	Peak
2	4904	V	47.34	-12.90	34.44	54.00	-19.56	Avg
3	7356	--	--	--	--	--	--	--
4	9808	--	--	--	--	--	--	--
5	4904	H	57.85	-12.90	44.95	74.00	-29.05	Peak
6	4904	H	47.49	-12.90	34.59	54.00	-19.41	Avg
7	7356	--	--	--	--	--	--	--
8	9808	--	--	--	--	--	--	--
Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor, Margin= Result-Limit.								

4. Power Line Conducted Emission

4.1. Test Limits

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 -0.50	66 -56*	56 - 46*
0.50 -5.00	56	46
5.00 -30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

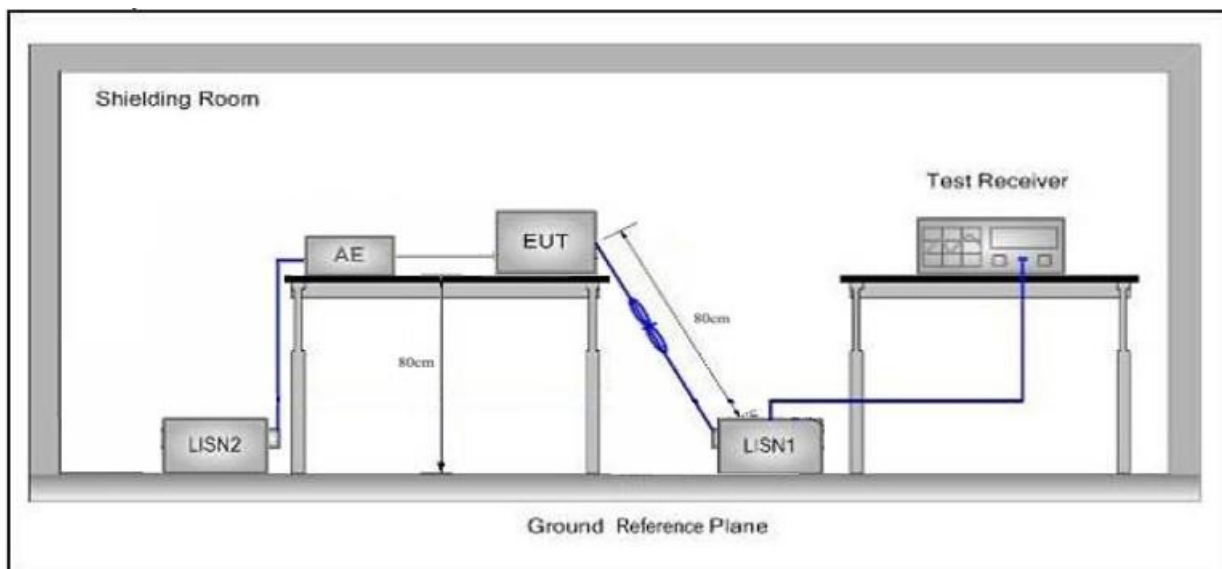
3. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

4.2. Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10-2020+COR.1-2023 on Conducted Emission Measurement.

The bandwidth of test receiver is set at 9 kHz.

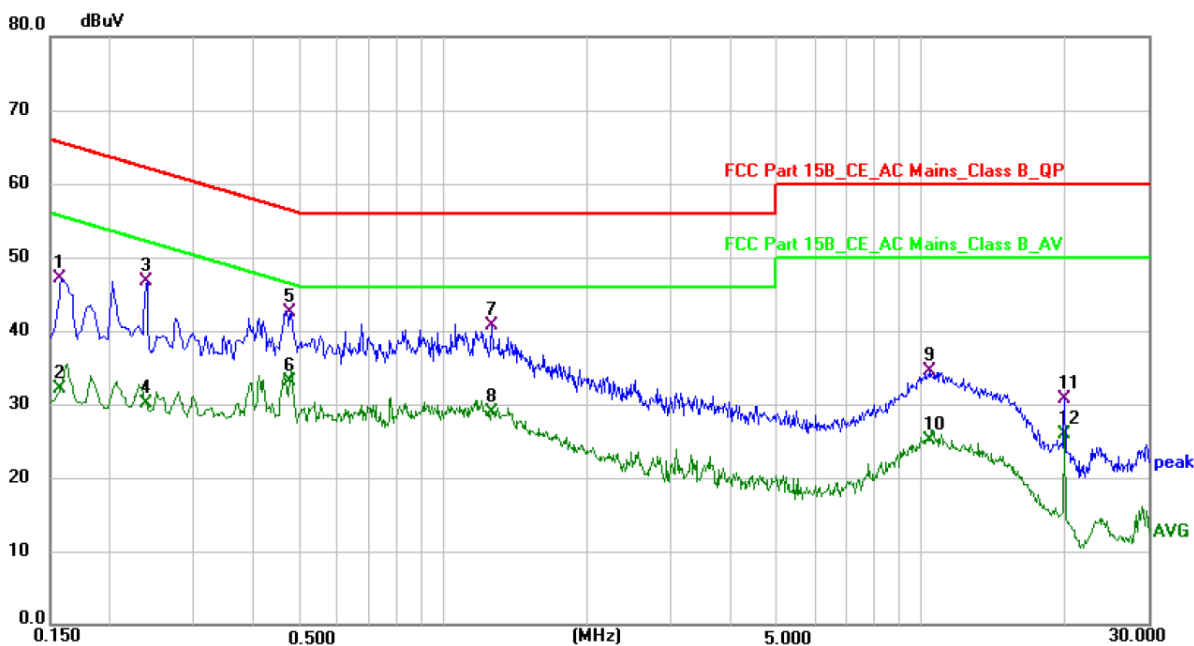
4.3. Test Setup



4.4. Test Results

Test Date	: 2026.04.13	Temperature	: 26℃
Test Engineer	: Jensen Wang	Humidity	: 54%
Test Mode	: WIFI mode		
Test Voltage	: AC 120V/60Hz		
Test Results	: PASS		
Note:	1. The test results are listed in next pages.		
	2. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector and quasi-peak detector need not be carried out.		
	3. If the limits for the measurement with the average detector are met when using a receiver with a quasi-peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.		
	4. All modes have been tested, and only worst data of b mode, Channel 2412MHz was listed in this report.		

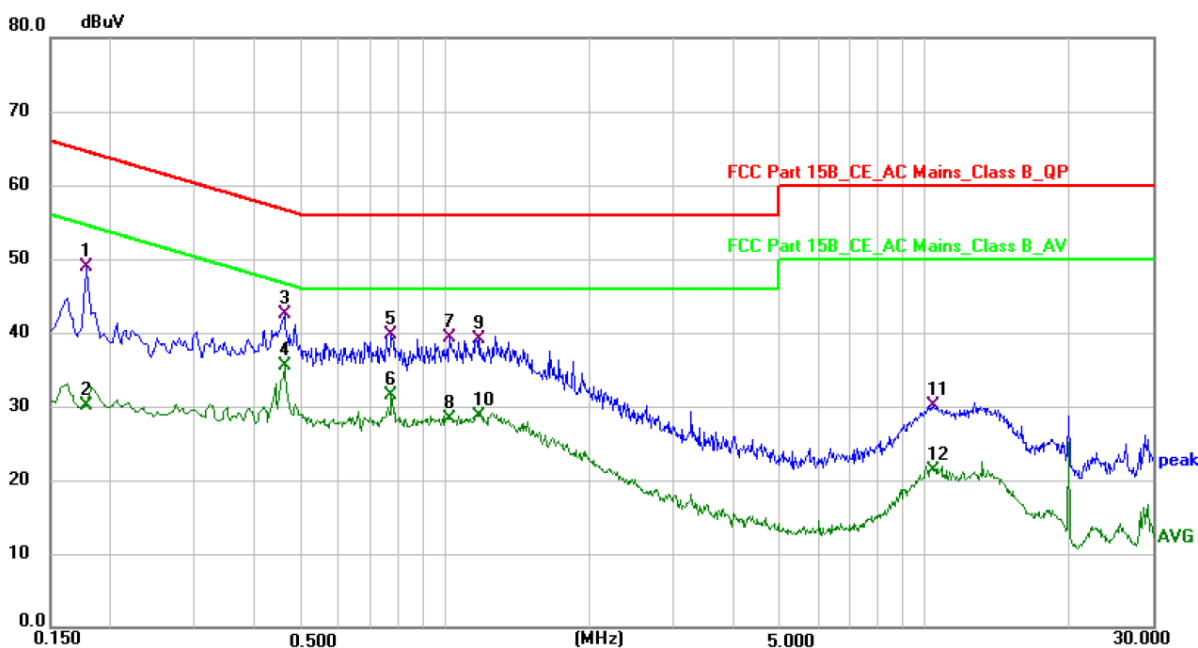
Polarization: L



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1580	37.55	9.65	47.20	65.57	-18.37	QP
2	0.1580	22.48	9.65	32.13	55.57	-23.44	AVG
3	0.2380	37.29	9.40	46.69	62.17	-15.48	QP
4	0.2380	20.62	9.40	30.02	52.17	-22.15	AVG
5	0.4780	32.97	9.63	42.60	56.37	-13.77	QP
6 *	0.4780	23.51	9.63	33.14	46.37	-13.23	AVG
7	1.2660	30.95	9.83	40.78	56.00	-15.22	QP
8	1.2660	19.10	9.83	28.93	46.00	-17.07	AVG
9	10.5060	24.93	9.62	34.55	60.00	-25.45	QP
10	10.5060	15.50	9.62	25.12	50.00	-24.88	AVG
11	20.0020	21.20	9.60	30.80	60.00	-29.20	QP
12	20.0020	16.28	9.60	25.88	50.00	-24.12	AVG

Note: Level = Reading + Factor Margin = Level - Limit

Polarization: N



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1780	39.40	9.49	48.89	64.58	-15.69	QP
2	0.1780	20.60	9.49	30.09	54.58	-24.49	AVG
3	0.4620	32.96	9.59	42.55	56.66	-14.11	QP
4 *	0.4620	25.87	9.59	35.46	46.66	-11.20	AVG
5	0.7740	29.84	9.83	39.67	56.00	-16.33	QP
6	0.7740	21.76	9.83	31.59	46.00	-14.41	AVG
7	1.0260	29.67	9.59	39.26	56.00	-16.74	QP
8	1.0260	18.63	9.59	28.22	46.00	-17.78	AVG
9	1.1820	29.47	9.56	39.03	56.00	-16.97	QP
10	1.1820	19.05	9.56	28.61	46.00	-17.39	AVG
11	10.4460	20.72	9.41	30.13	60.00	-29.87	QP
12	10.4460	11.93	9.41	21.34	50.00	-28.66	AVG

Note: Level = Reading + Factor Margin = Level - Limit

5. Out-of-band Emissions

5.1. Test Limits

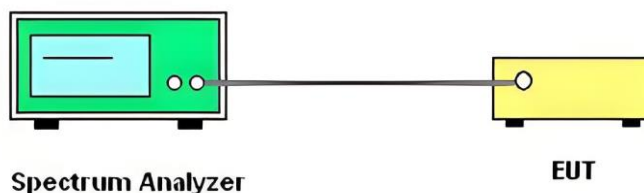
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the 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.

5.2. Test Procedure

ANSI C63.10-2020+COR.1-2023 Section 11.11.1, Section 11.11.2, Section 11.11.3

Connect the transmitter output to spectrum analyzer using a low loss RF cable, and set the spectrum analyzer to RBW=100 kHz, VBW= 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, band edge and out-of-band emissions.

5.3. Test Setup



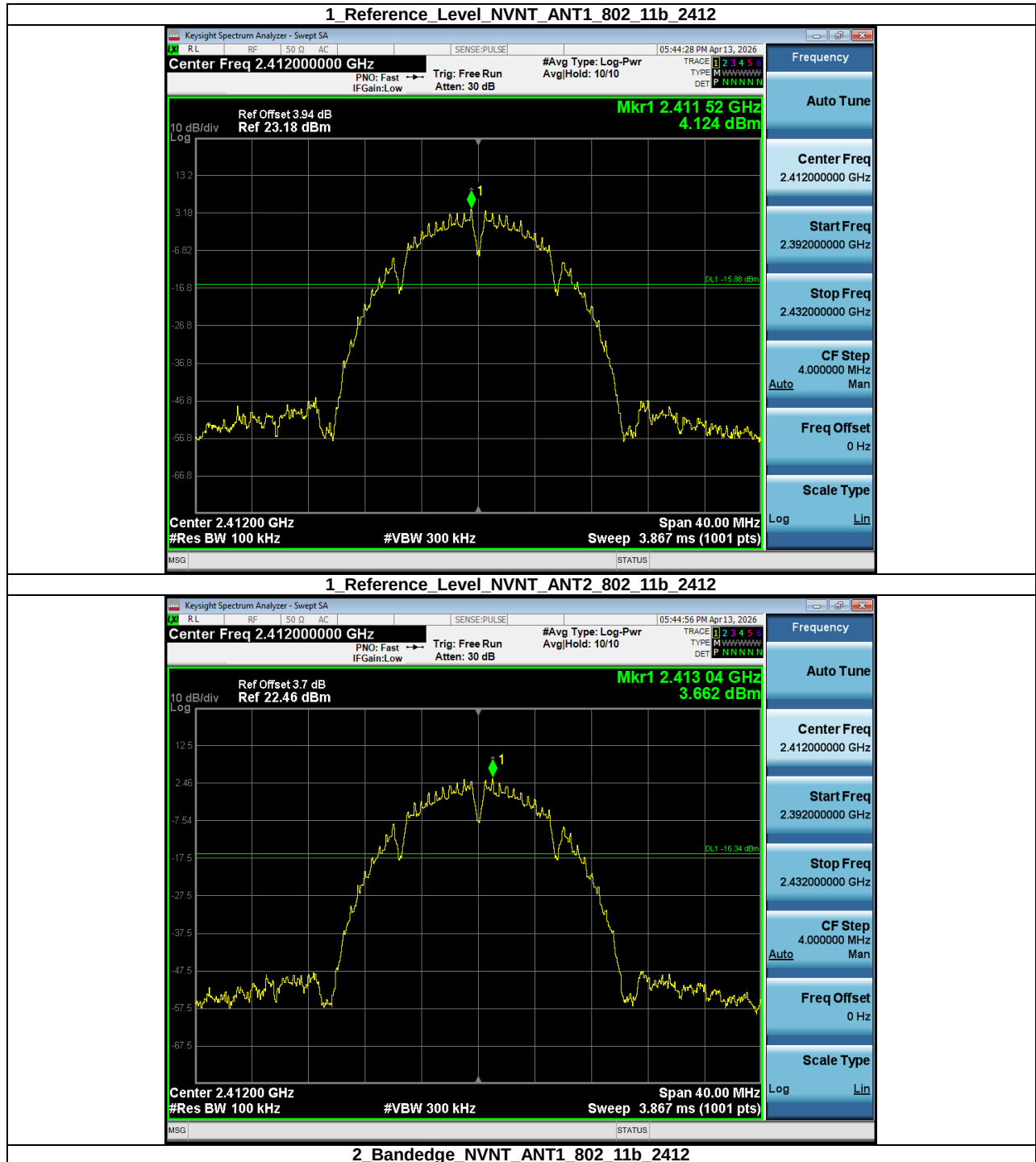
5.4. Test Results

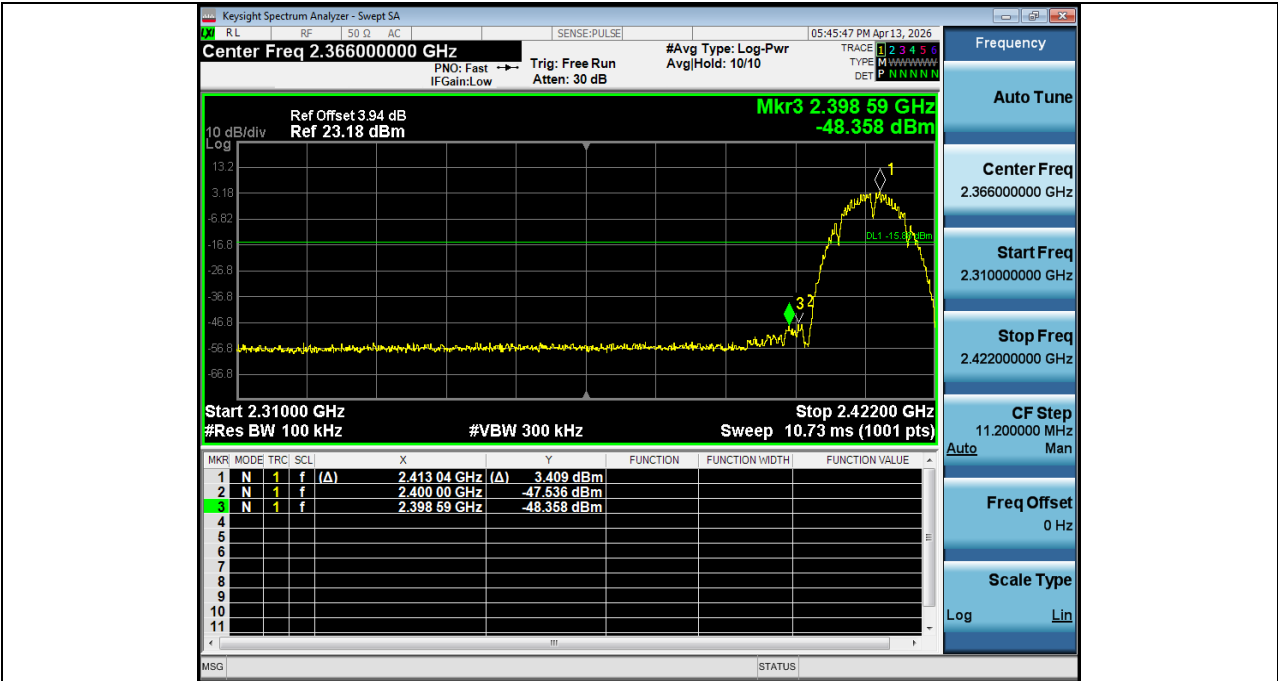
PASS.

The test results are listed in next pages.

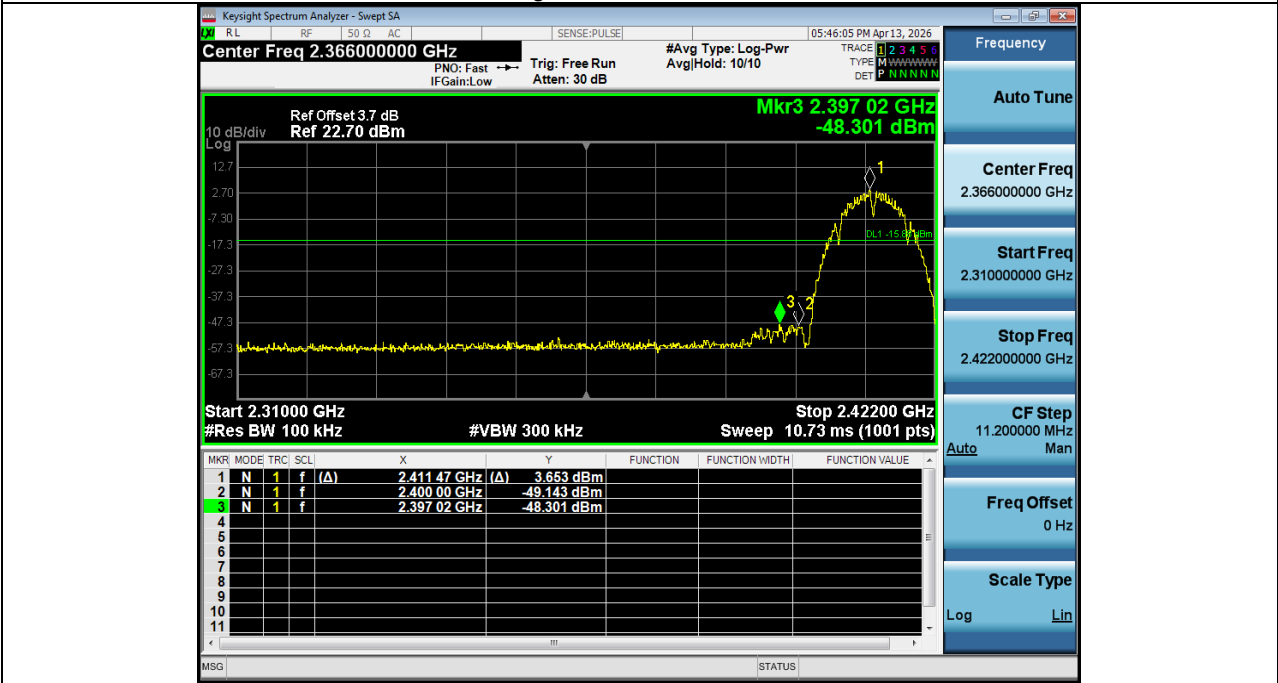
Band Edge: Pass

Condition	Antenna	Modulation	TX_Frequency (MHz)	Max. Mark_freq(MHz)	Ref_level(dBm)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	2398.592	4.124	-48.358	-15.876	Pass
NVNT	ANT2	802.11b	2412.00	2397.024	4.124	-48.301	-15.876	Pass
NVNT	ANT1	802.11b	2462.00	2491.264	4.331	-53.302	-15.669	Pass
NVNT	ANT2	802.11b	2462.00	2490.016	4.331	-53.664	-15.669	Pass
NVNT	ANT1	802.11g	2412.00	2399.712	-0.803	-43.969	-20.803	Pass
NVNT	ANT2	802.11g	2412.00	2399.936	-0.803	-43.628	-20.803	Pass
NVNT	ANT1	802.11g	2462.00	2485.888	-2.017	-55.401	-22.017	Pass
NVNT	ANT2	802.11g	2462.00	2483.584	-2.017	-56.028	-22.017	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	2399.936	-3.939	-47.969	-23.939	Pass
NVNT	ANT2	802.11n(HT20)	2412.00	2399.824	-3.939	-46.406	-23.939	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	2486.896	-3.782	-59.423	-23.782	Pass
NVNT	ANT2	802.11n(HT20)	2462.00	2491.984	-3.782	-58.873	-23.782	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	2399.892	-6.103	-42.160	-26.103	Pass
NVNT	ANT2	802.11n(HT40)	2422.00	2399.628	-6.103	-43.020	-26.103	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	2485.720	-6.661	-56.467	-26.661	Pass
NVNT	ANT2	802.11n(HT40)	2452.00	2485.788	-6.661	-53.748	-26.661	Pass

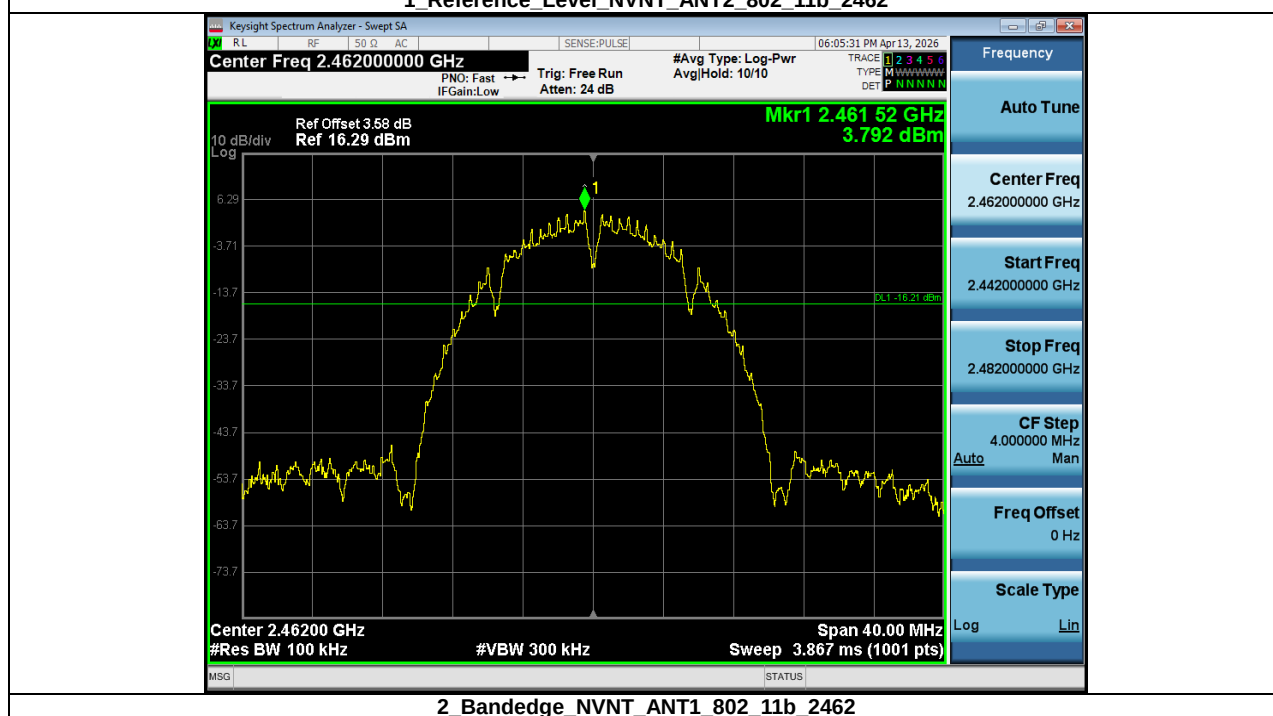
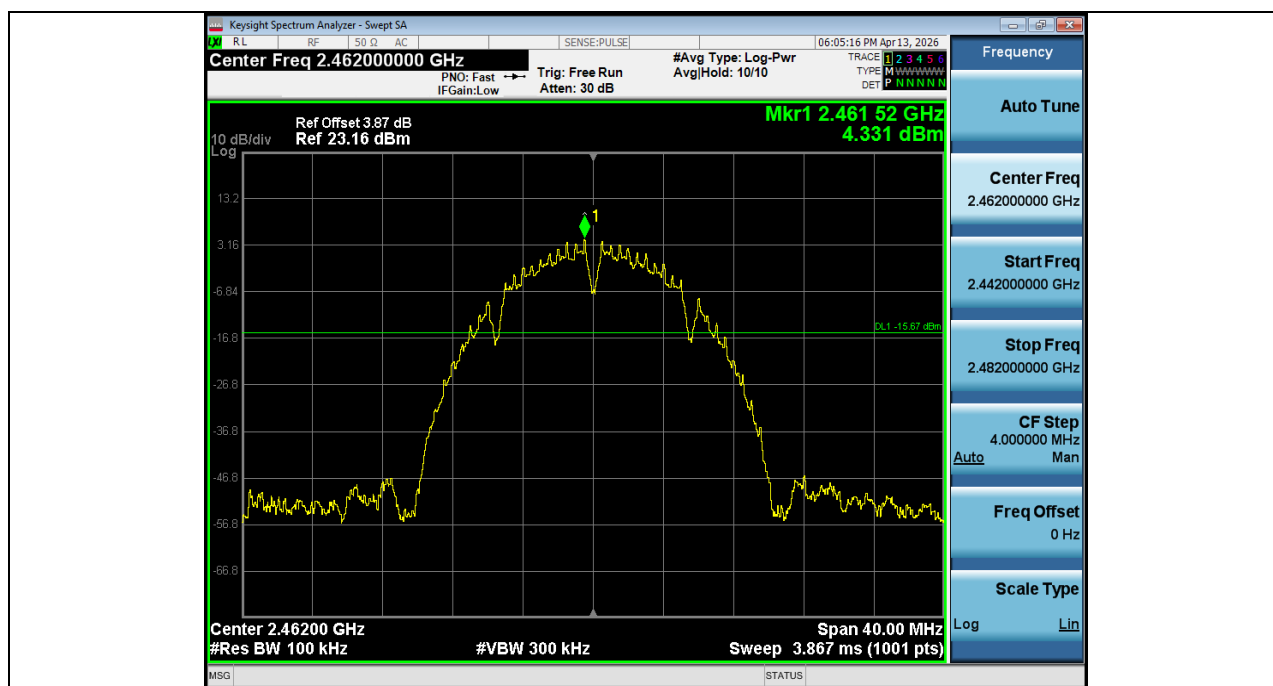




2. Bandedge NVNT_ANT2_802_11b_2412

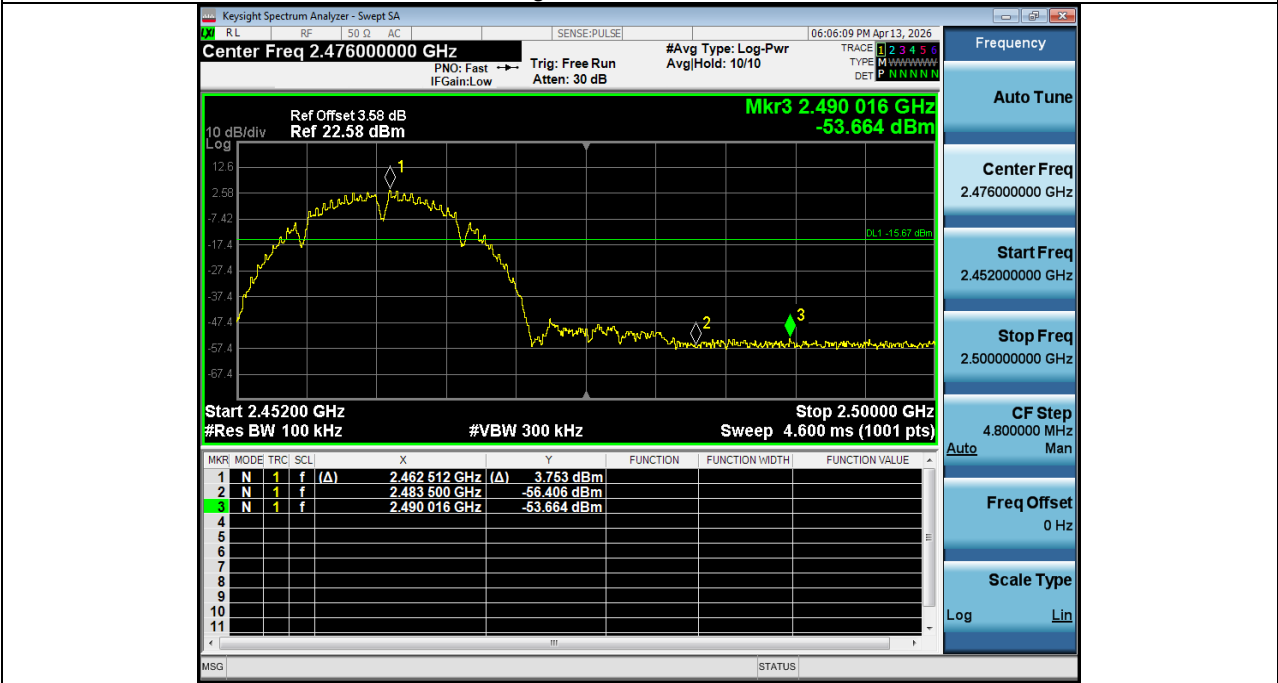


1. Reference Level NVNT_ANT1_802_11b_2462

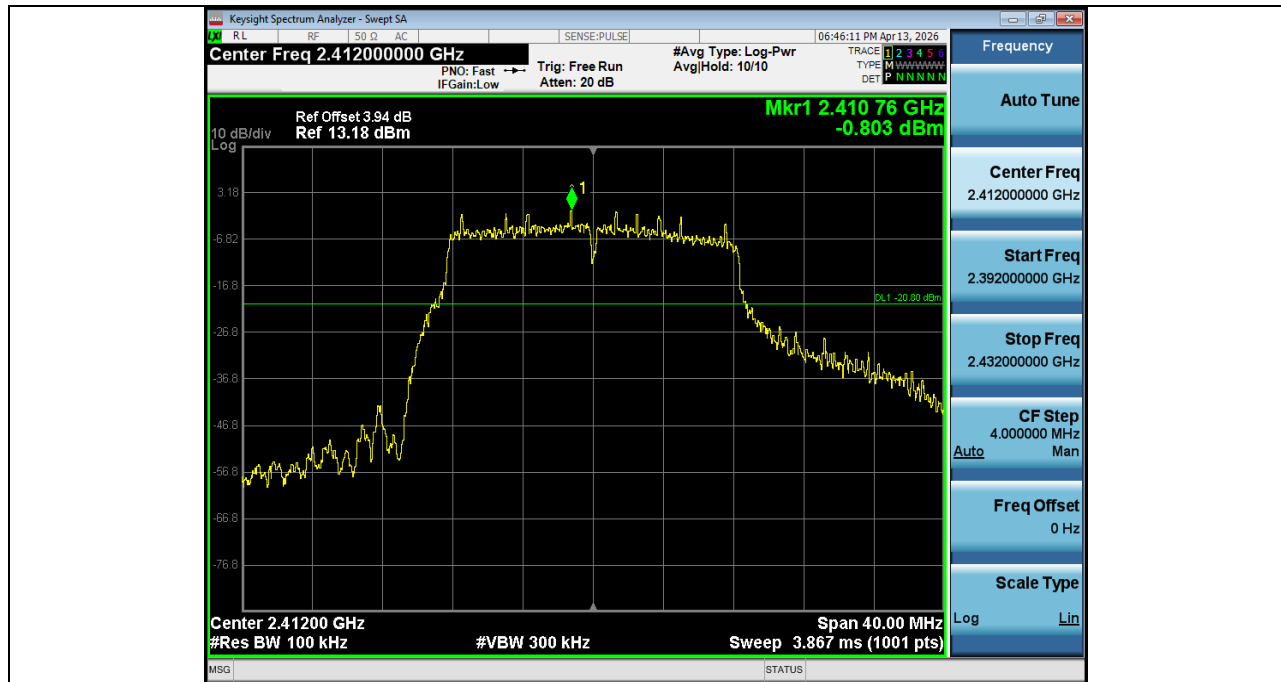




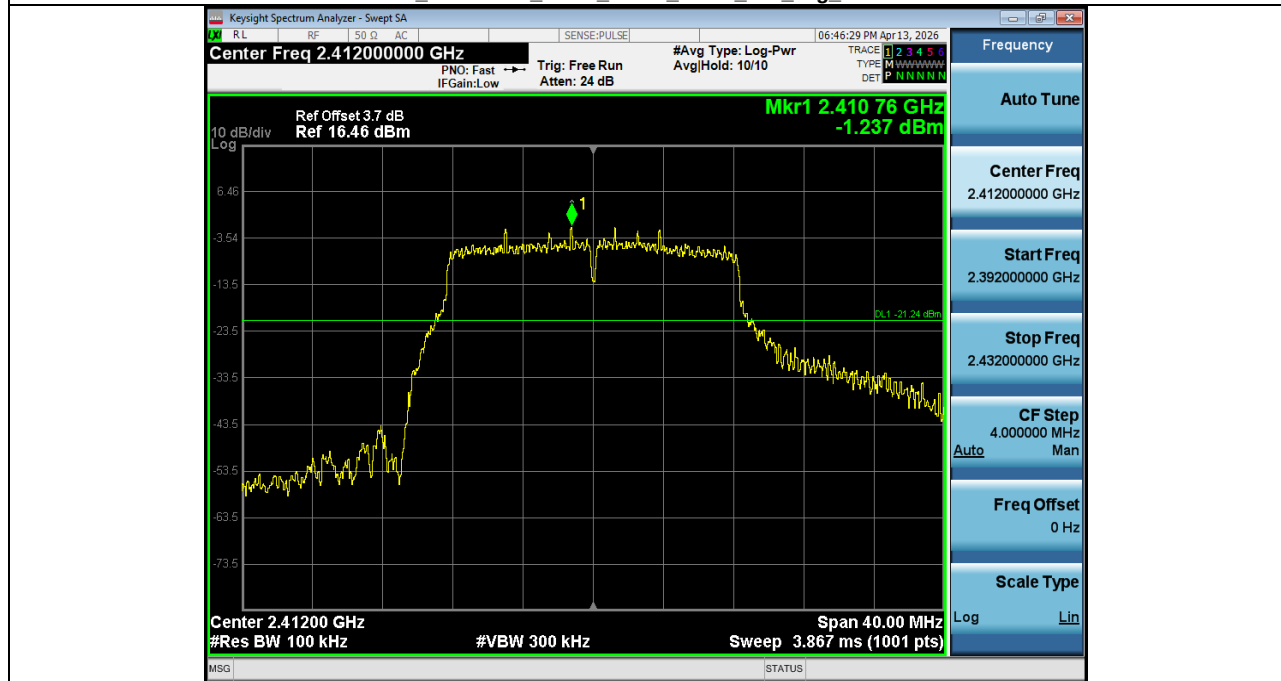
2. Bandedge NVNT_ANT2_802_11b_2462



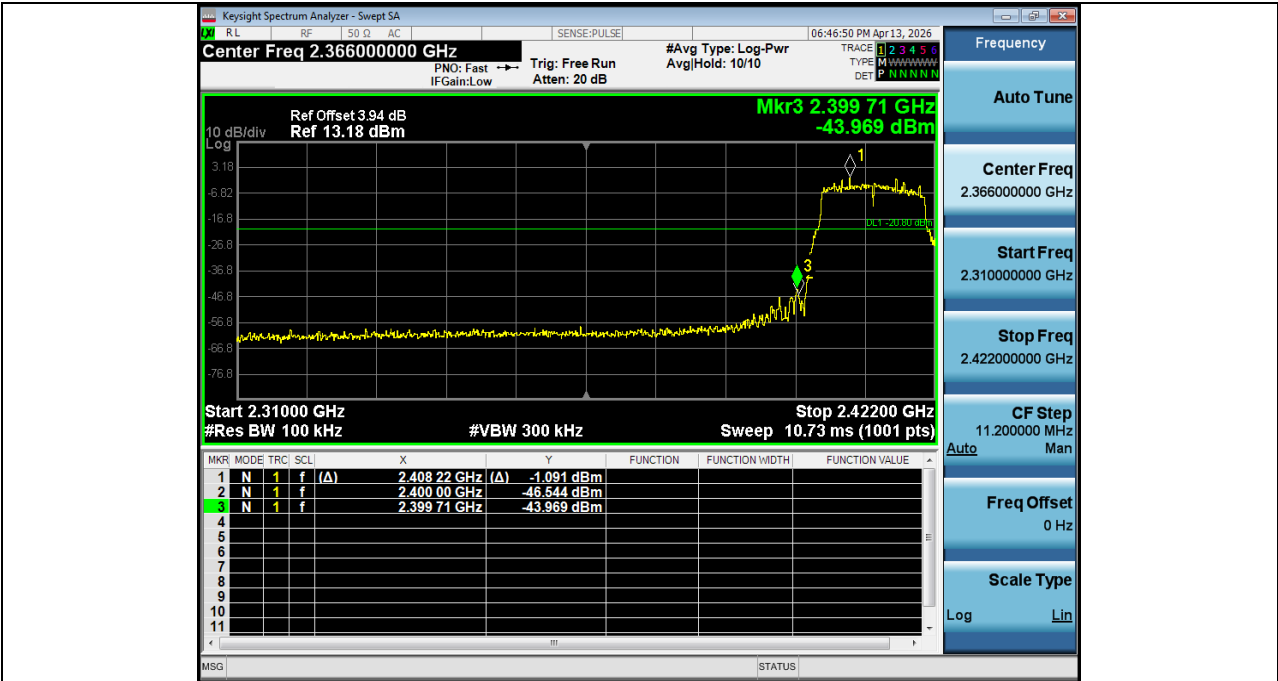
1. Reference Level NVNT_ANT1_802_11g_2412



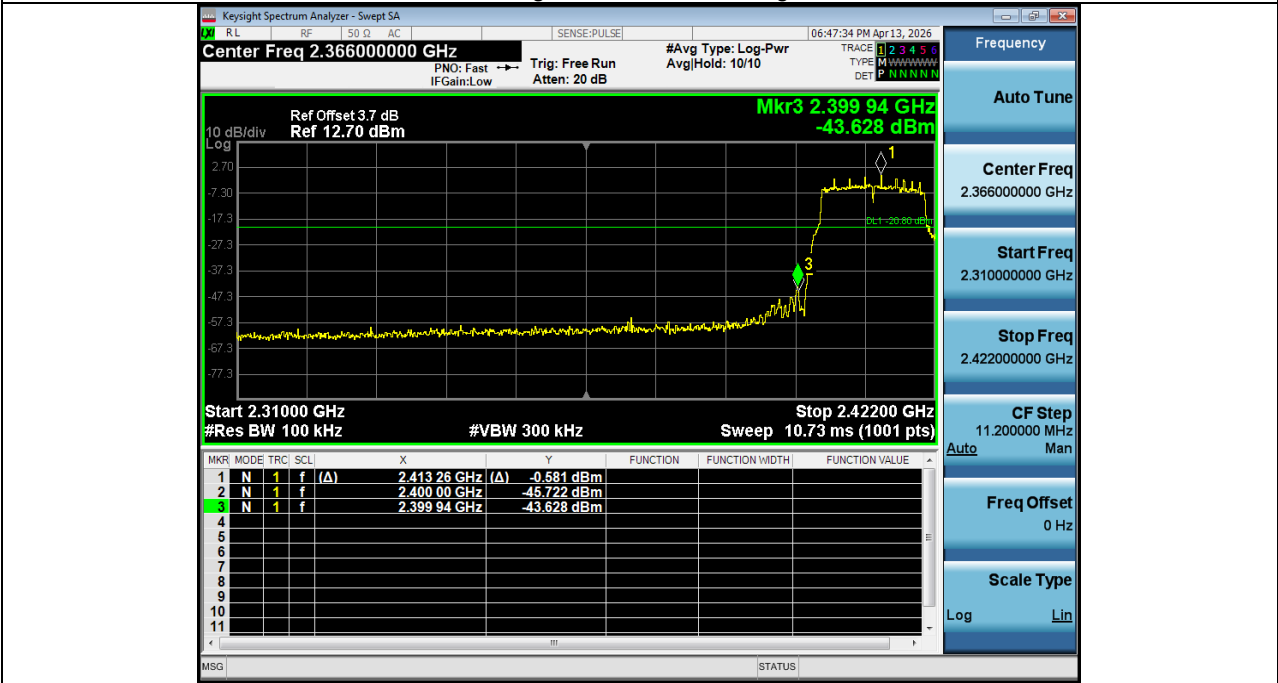
1. Reference Level NVNT_ANT2_802_11g_2412



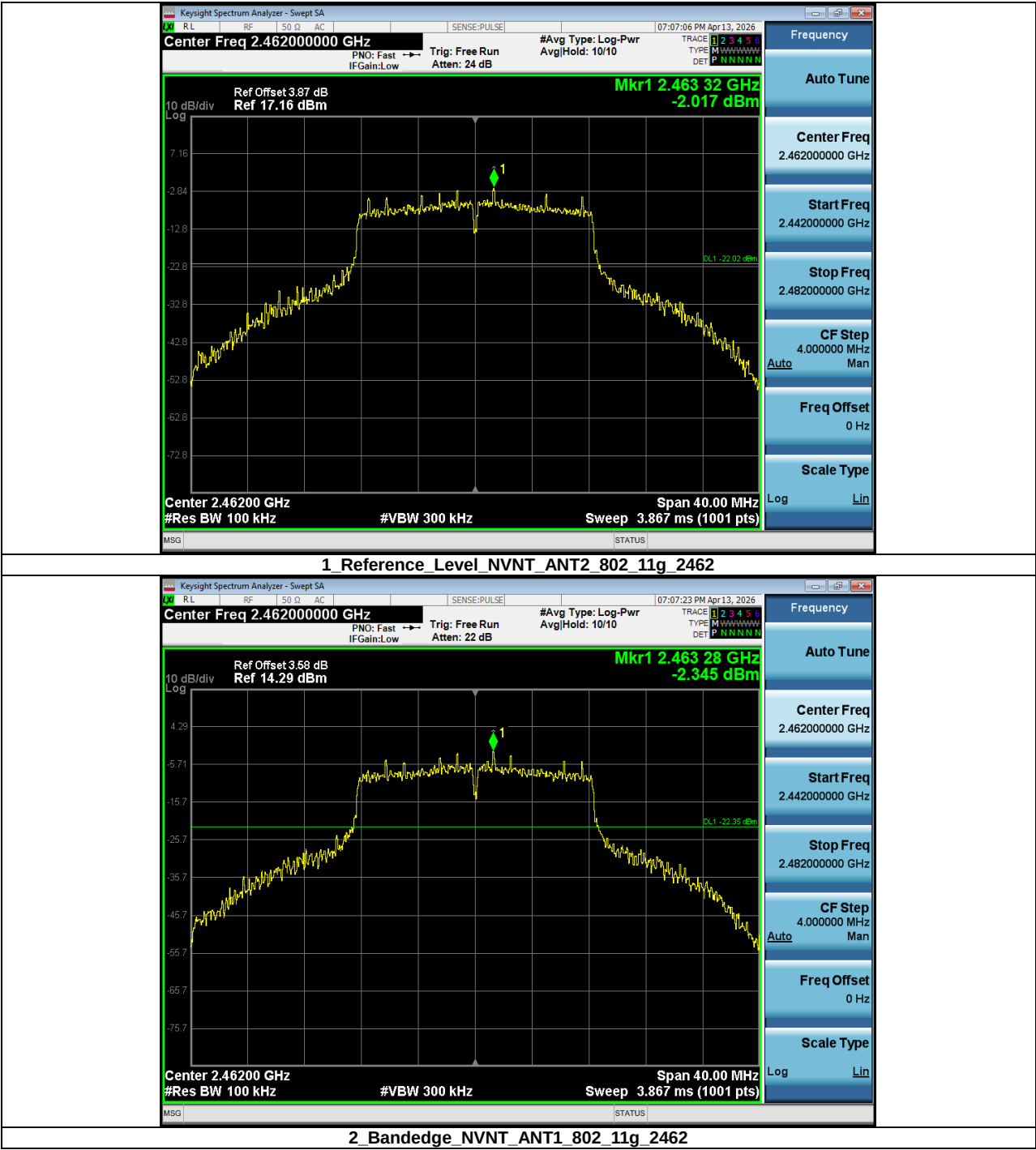
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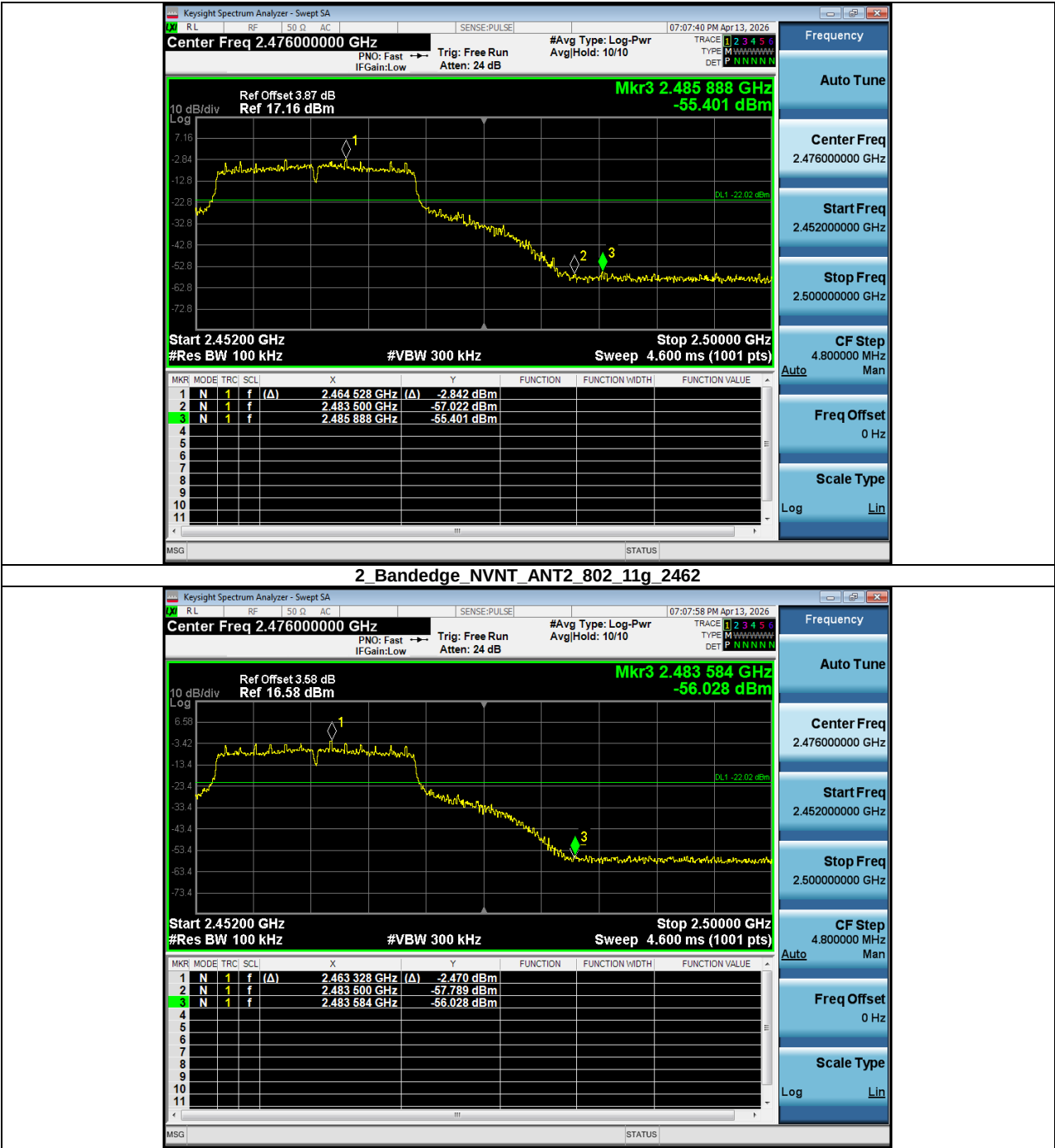


2. Bandedge NVNT_ANT2_802_11g_2412

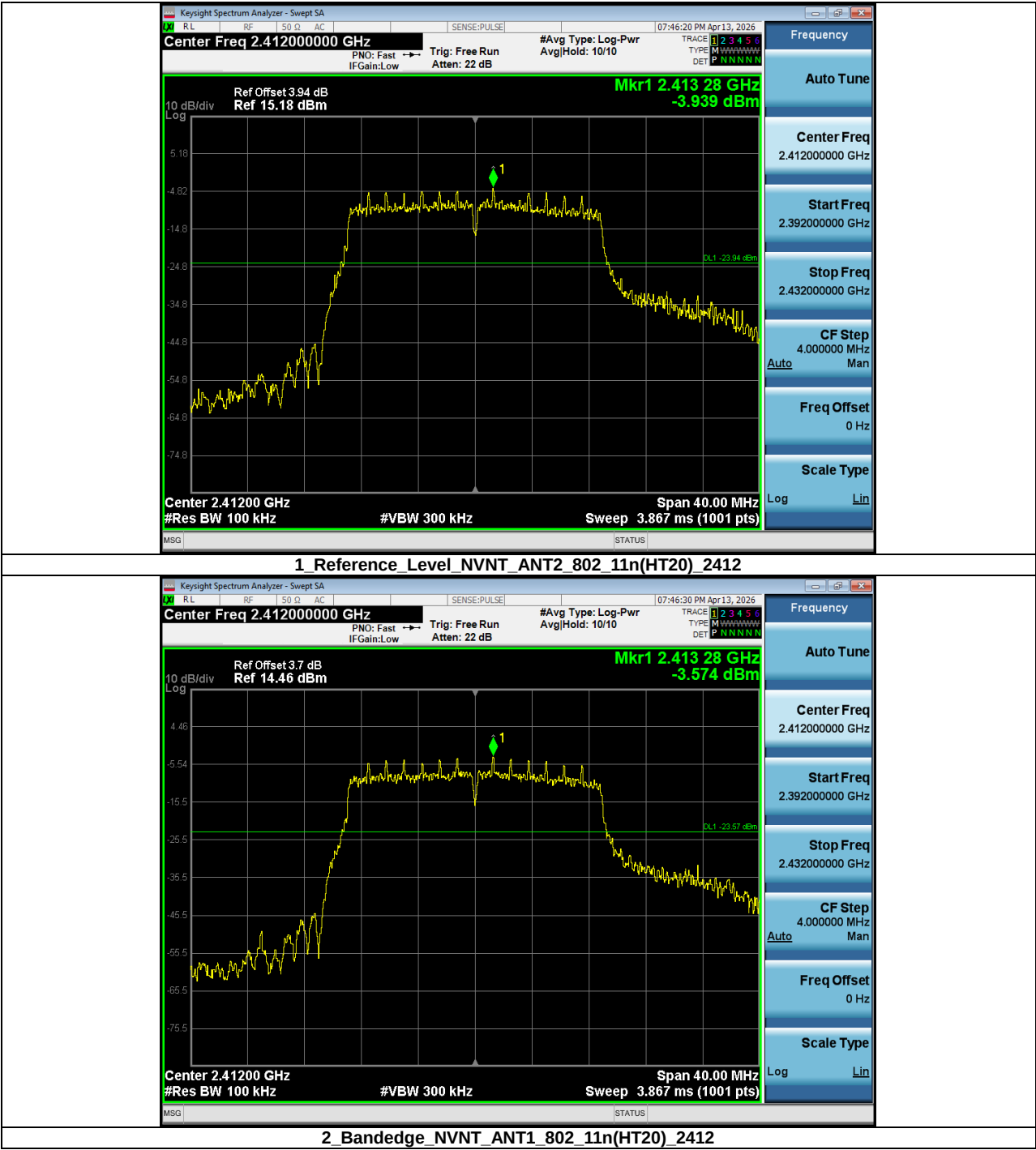


1. Reference Level NVNT_ANT1_802_11g_2462

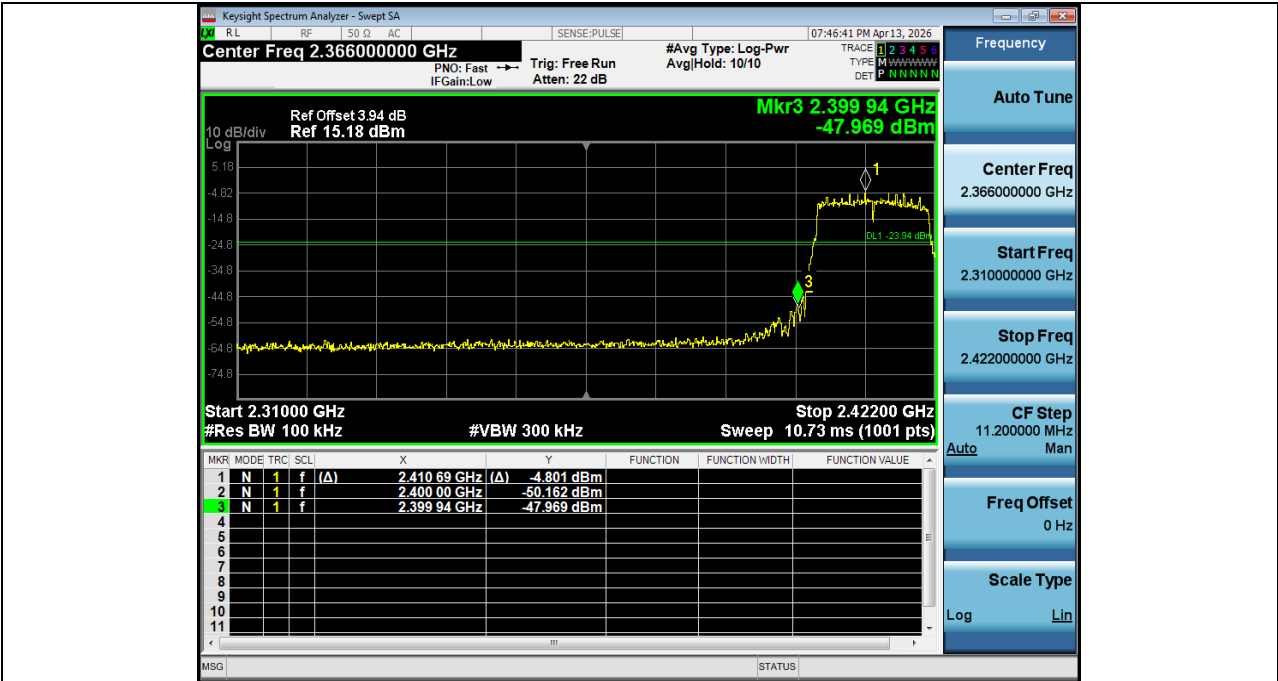




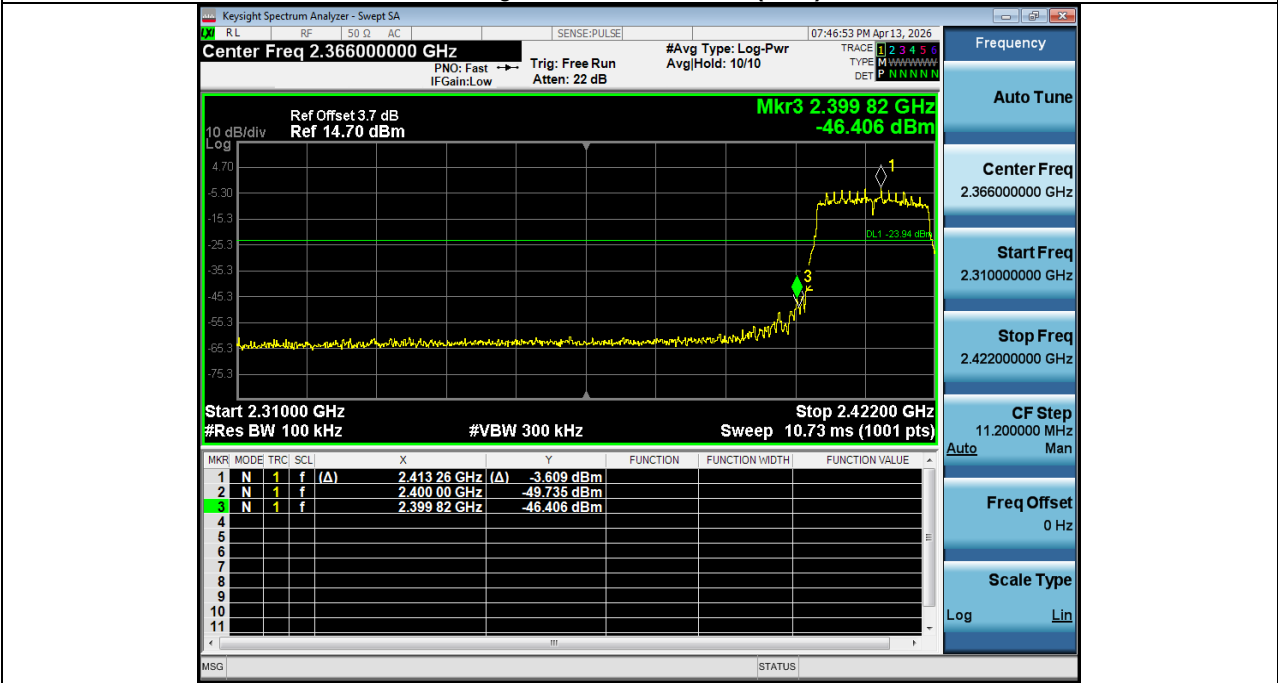
1 Reference Level NVNT_ANT1_802_11n(HT20)_2412



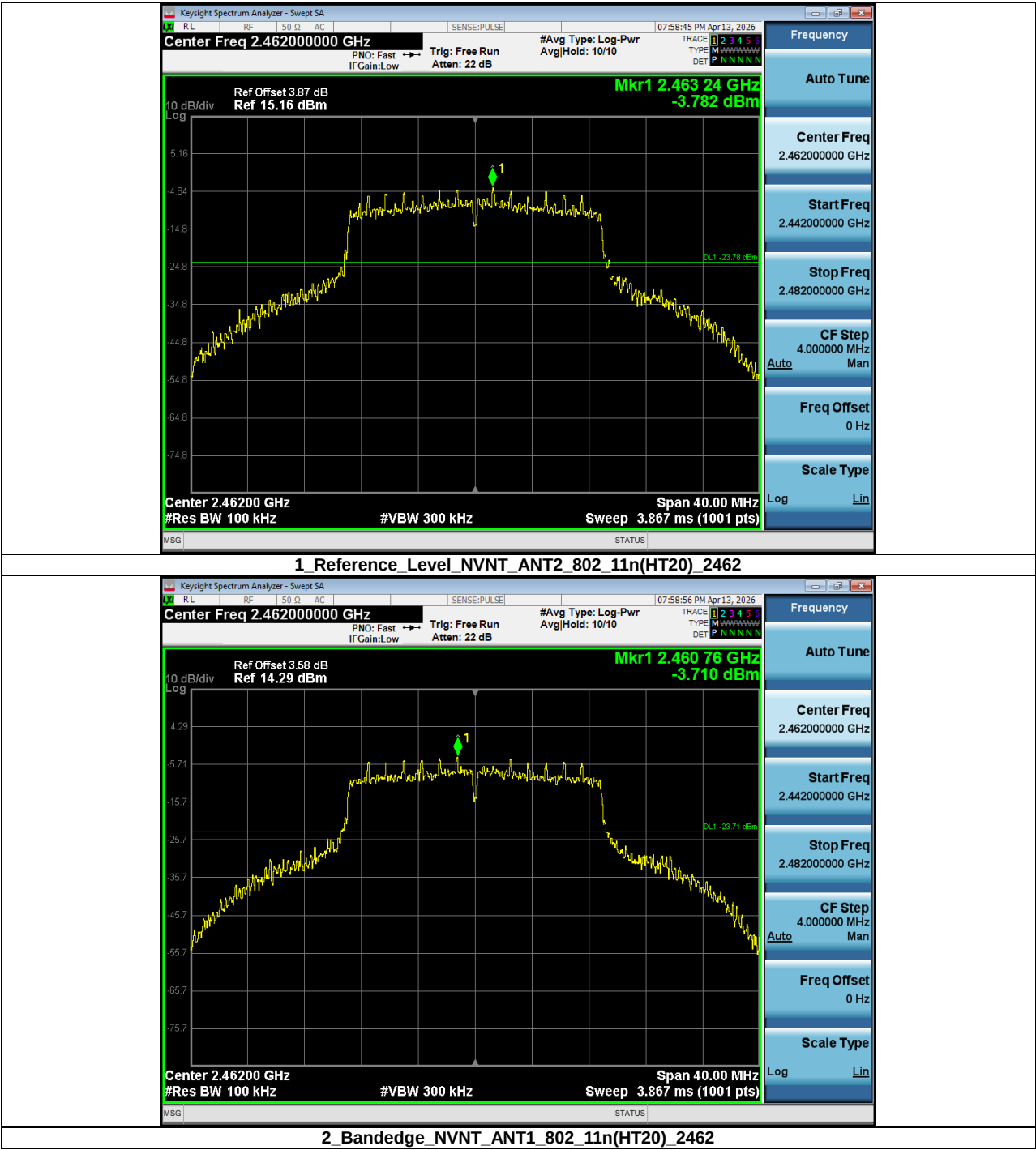
2_Bandedge_NVNT_ANT1_802_11n(HT20)_2412



2. Bandedge NVNT_ANT2_802_11n(HT20)_2412



1. Reference Level NVNT_ANT1_802_11n(HT20)_2462



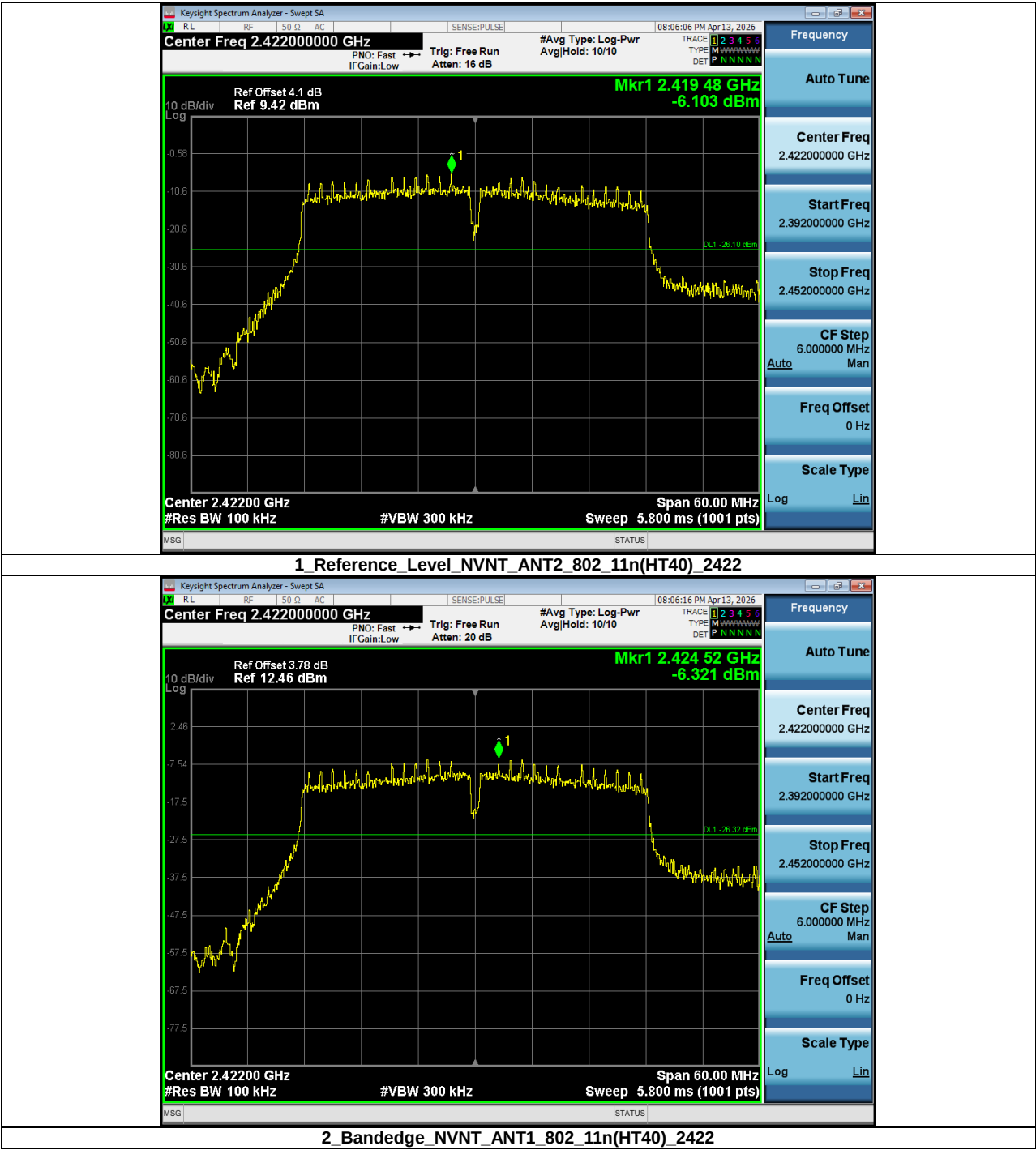
2 Bandedge_NVNT_ANT1_802_11n(HT20)_2462

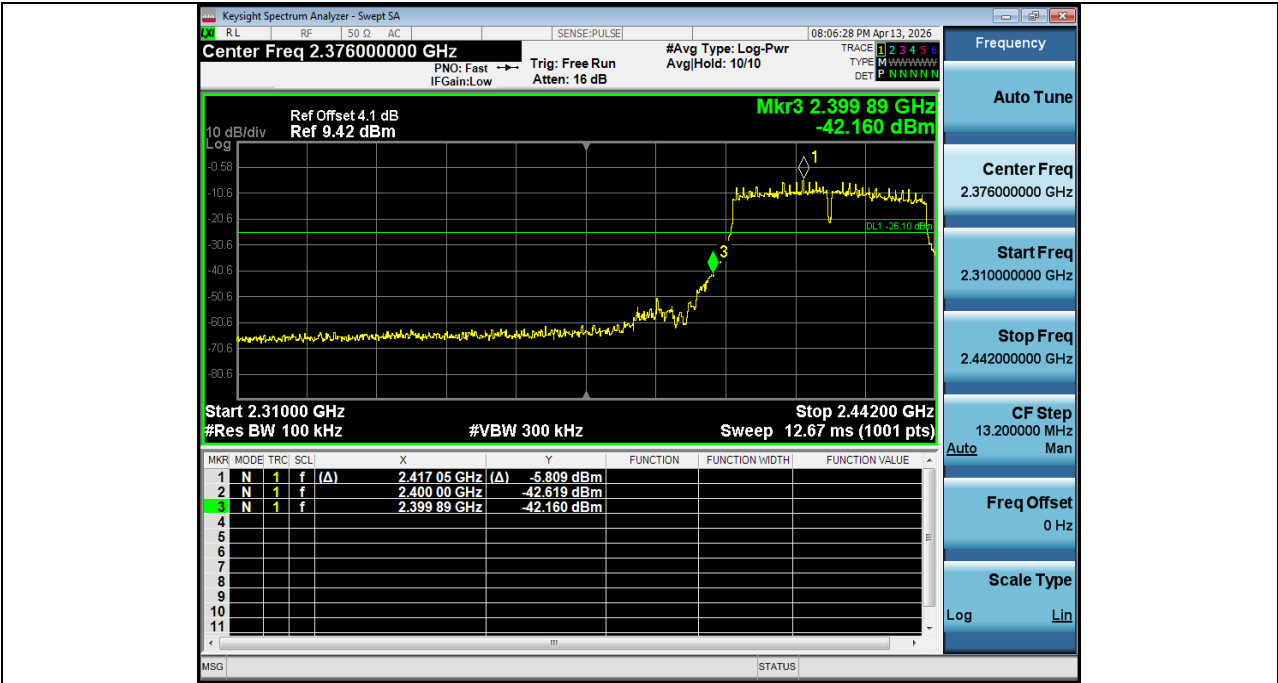


2. Bandedge NVNT_ANT2_802_11n(HT20)_2462

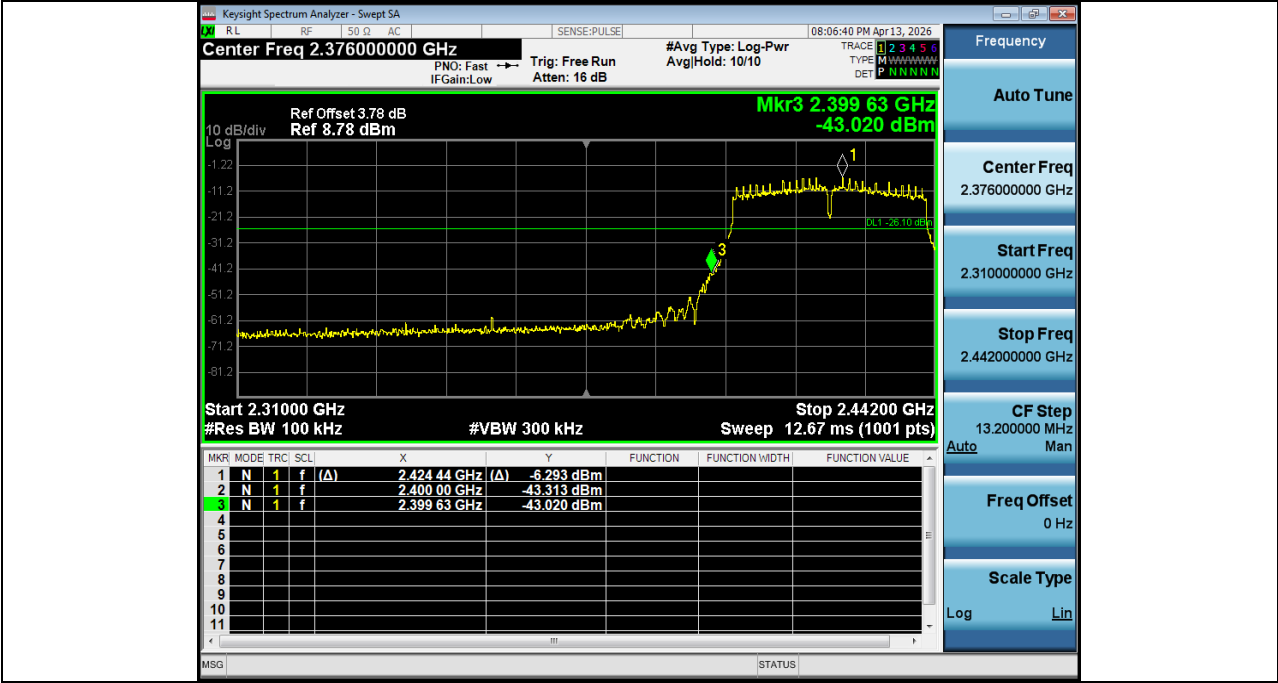


1. Reference Level NVNT_ANT1_802_11n(HT40)_2422



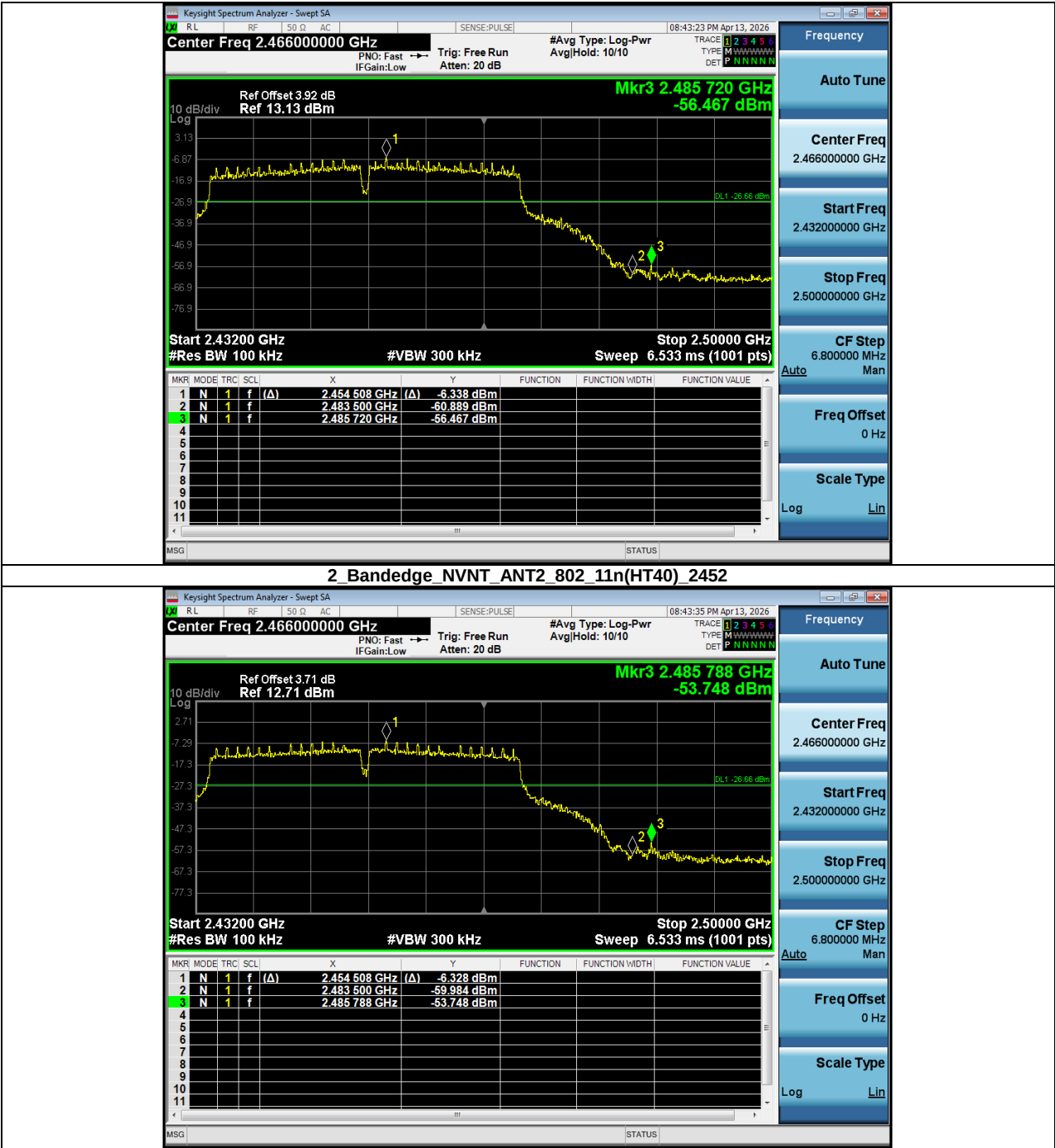


2. Bandedge NVNT_ANT2_802_11n(HT40)_2422



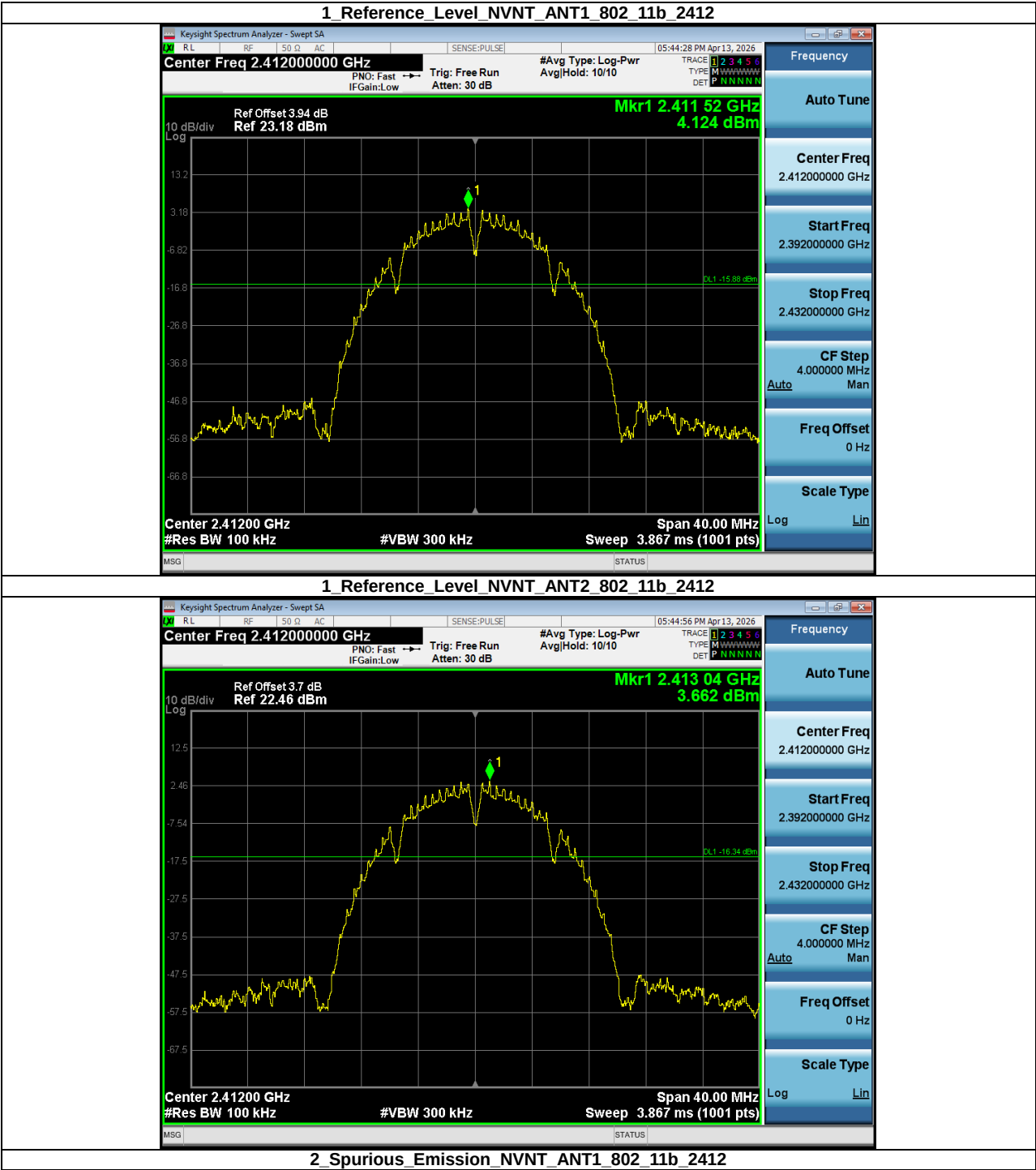
1. Reference Level NVNT_ANT1_802_11n(HT40)_2452

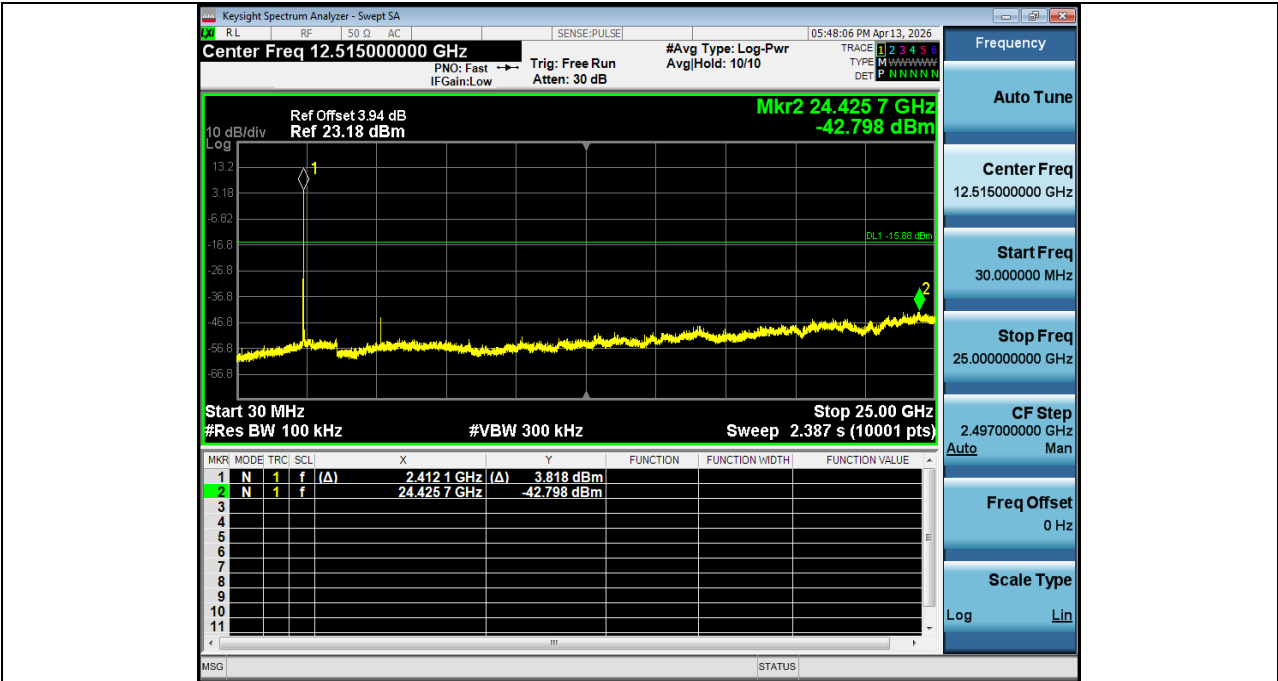




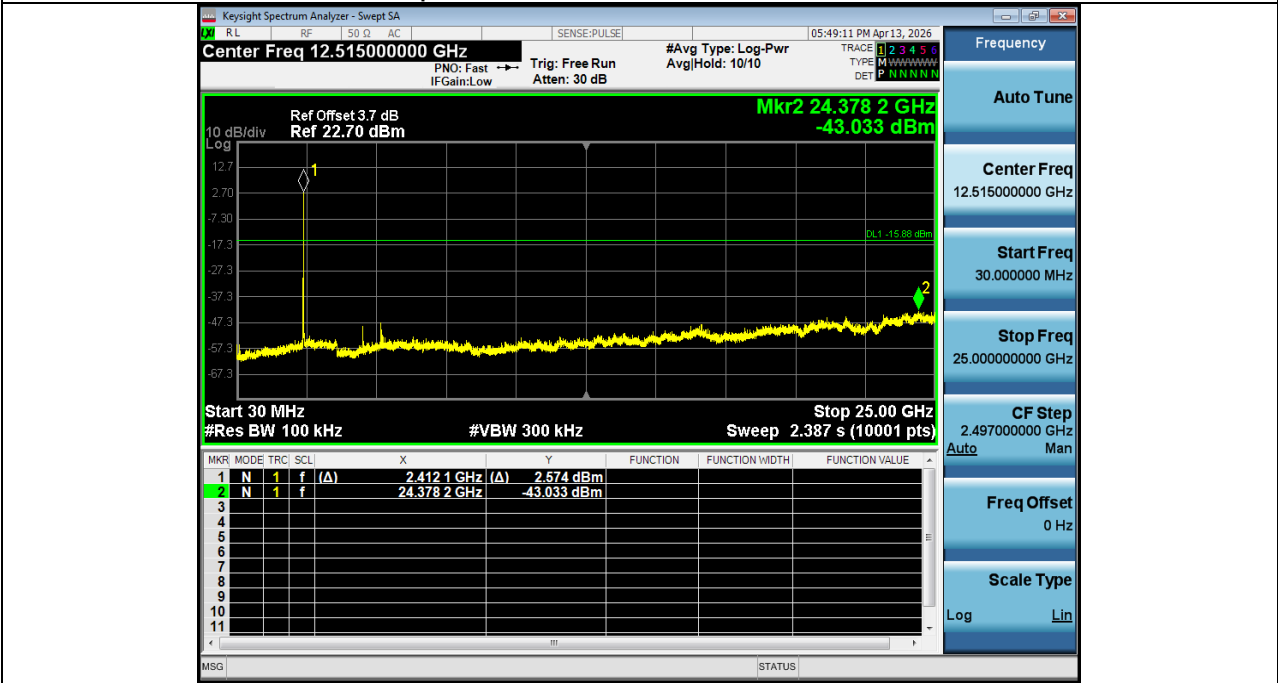
Conducted spurious emission: Pass

Condition	Antenna	Modulation	TX_Frequency (MHz)	Max. Mark_freq(MHz)	Ref_level(dBm)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	24425.690	4.124	-42.798	-15.876	Pass
NVNT	ANT2	802.11b	2412.00	24378.247	4.124	-43.033	-15.876	Pass
NVNT	ANT1	802.11b	2437.00	24797.743	4.194	-49.188	-15.806	Pass
NVNT	ANT2	802.11b	2437.00	23958.751	4.194	-49.188	-15.806	Pass
NVNT	ANT1	802.11b	2462.00	24590.492	4.331	-42.738	-15.669	Pass
NVNT	ANT2	802.11b	2462.00	24637.935	4.331	-43.243	-15.669	Pass
NVNT	ANT1	802.11g	2412.00	24395.726	-0.803	-52.532	-20.803	Pass
NVNT	ANT2	802.11g	2412.00	24548.043	-0.803	-53.178	-20.803	Pass
NVNT	ANT1	802.11g	2437.00	24400.720	-2.888	-54.259	-22.888	Pass
NVNT	ANT2	802.11g	2437.00	24338.295	-2.888	-54.933	-22.888	Pass
NVNT	ANT1	802.11g	2462.00	24378.247	-2.017	-49.074	-22.017	Pass
NVNT	ANT2	802.11g	2462.00	24625.450	-2.017	-49.200	-22.017	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	24410.708	-3.939	-50.747	-23.939	Pass
NVNT	ANT2	802.11n(HT20)	2412.00	23836.398	-3.939	-51.545	-23.939	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	24635.438	-3.232	-54.752	-23.232	Pass
NVNT	ANT2	802.11n(HT20)	2437.00	24348.283	-3.232	-55.454	-23.232	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	24390.732	-3.782	-50.549	-23.782	Pass
NVNT	ANT2	802.11n(HT20)	2462.00	24340.792	-3.782	-50.929	-23.782	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	24573.013	-6.103	-56.529	-26.103	Pass
NVNT	ANT2	802.11n(HT40)	2422.00	32.497	-6.103	-57.122	-26.103	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	24687.875	-6.230	-52.310	-26.230	Pass
NVNT	ANT2	802.11n(HT40)	2437.00	24355.774	-6.230	-53.148	-26.230	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	24008.691	-6.661	-52.284	-26.661	Pass
NVNT	ANT2	802.11n(HT40)	2452.00	24445.666	-6.661	-53.502	-26.661	Pass

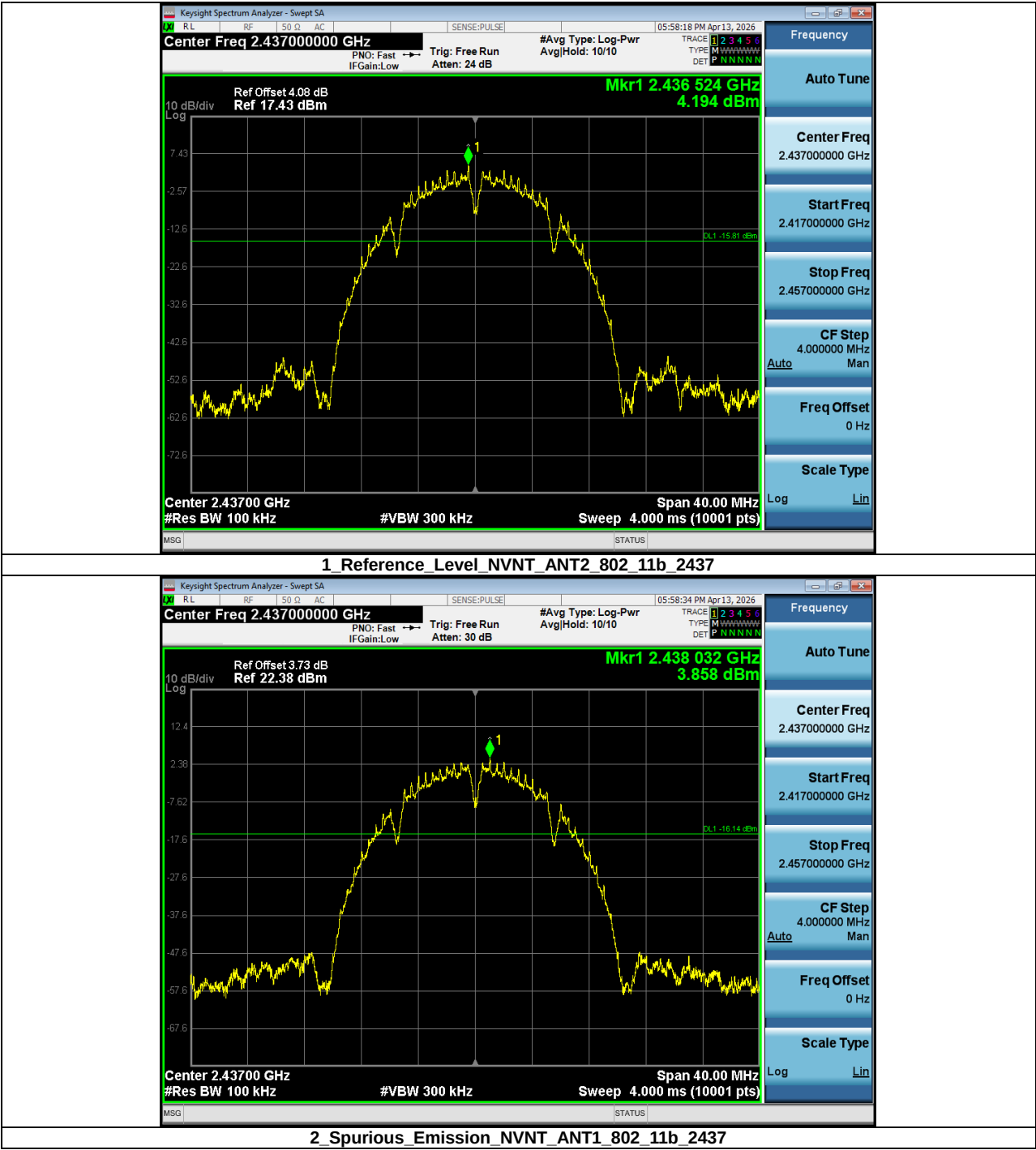


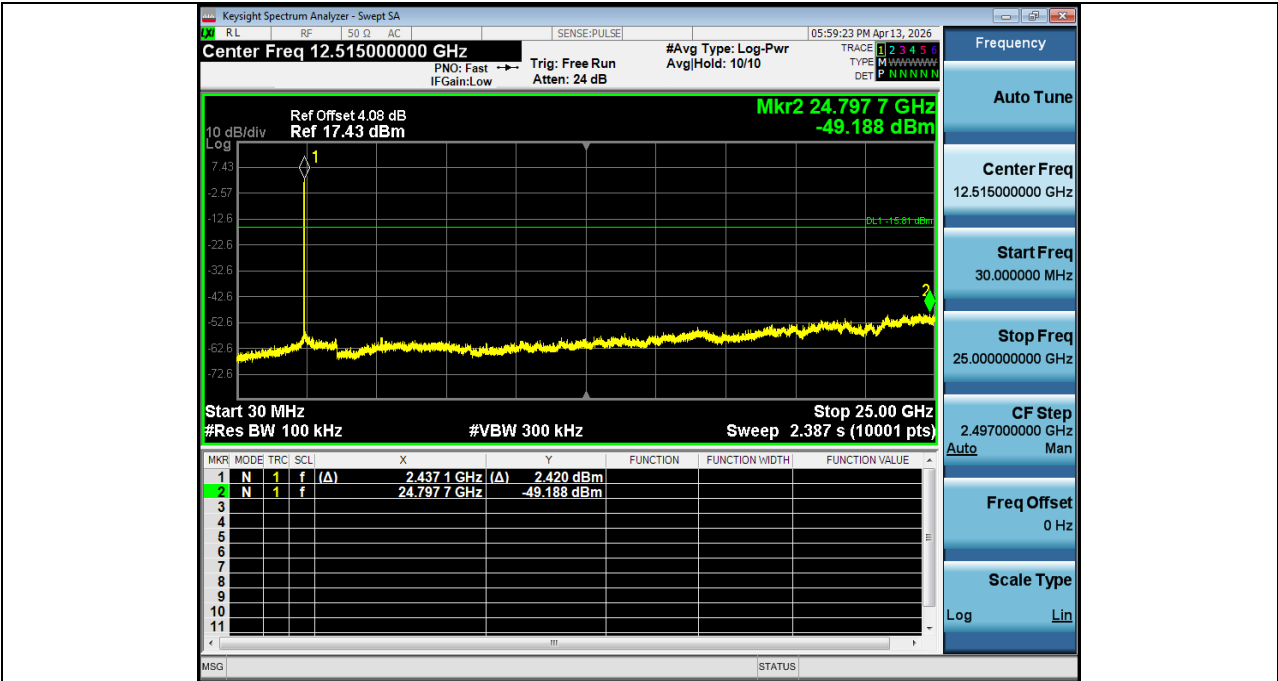


2. Spurious Emission NVNT_ANT2_802_11b_2412

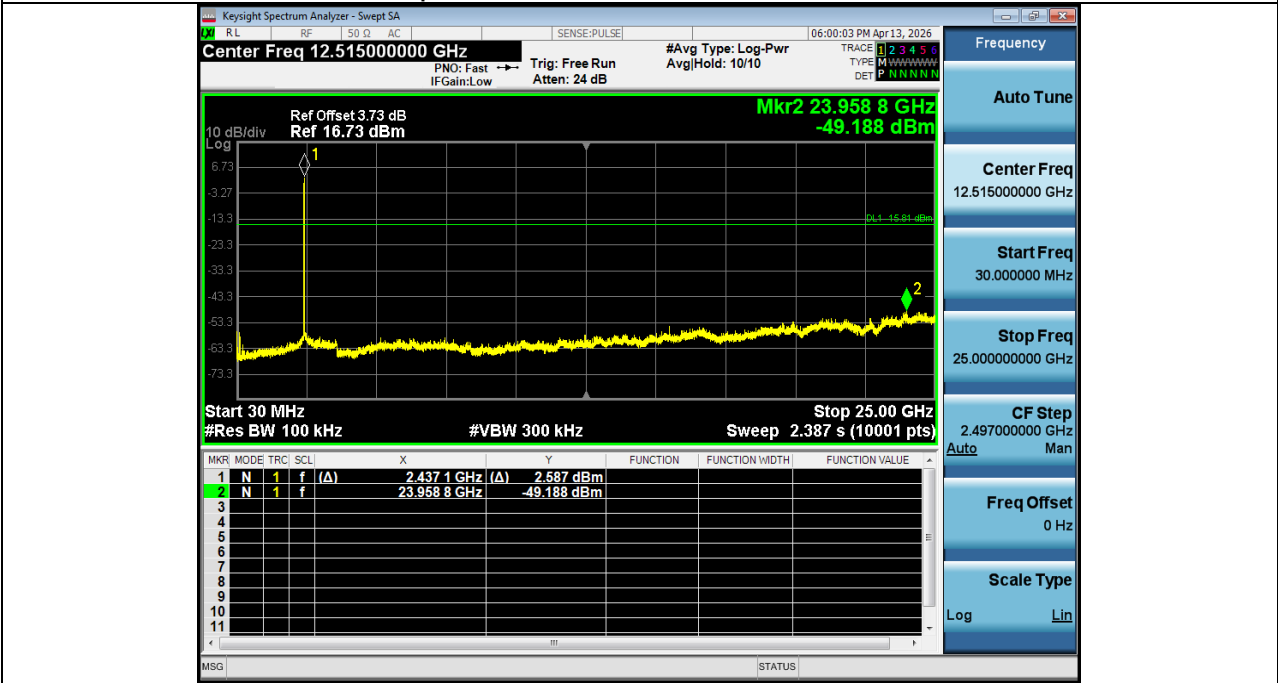


1. Reference Level NVNT_ANT1_802_11b_2437

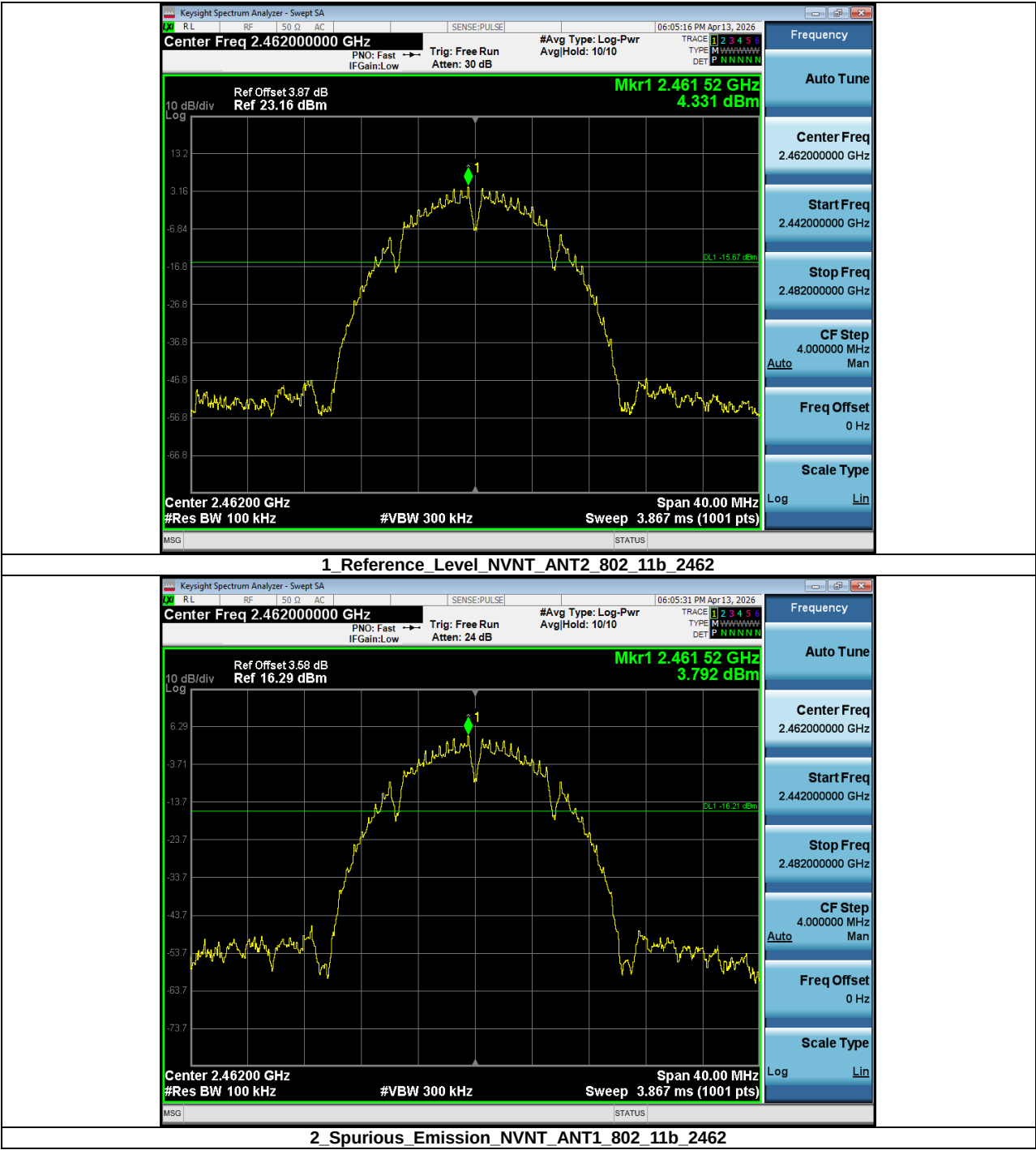


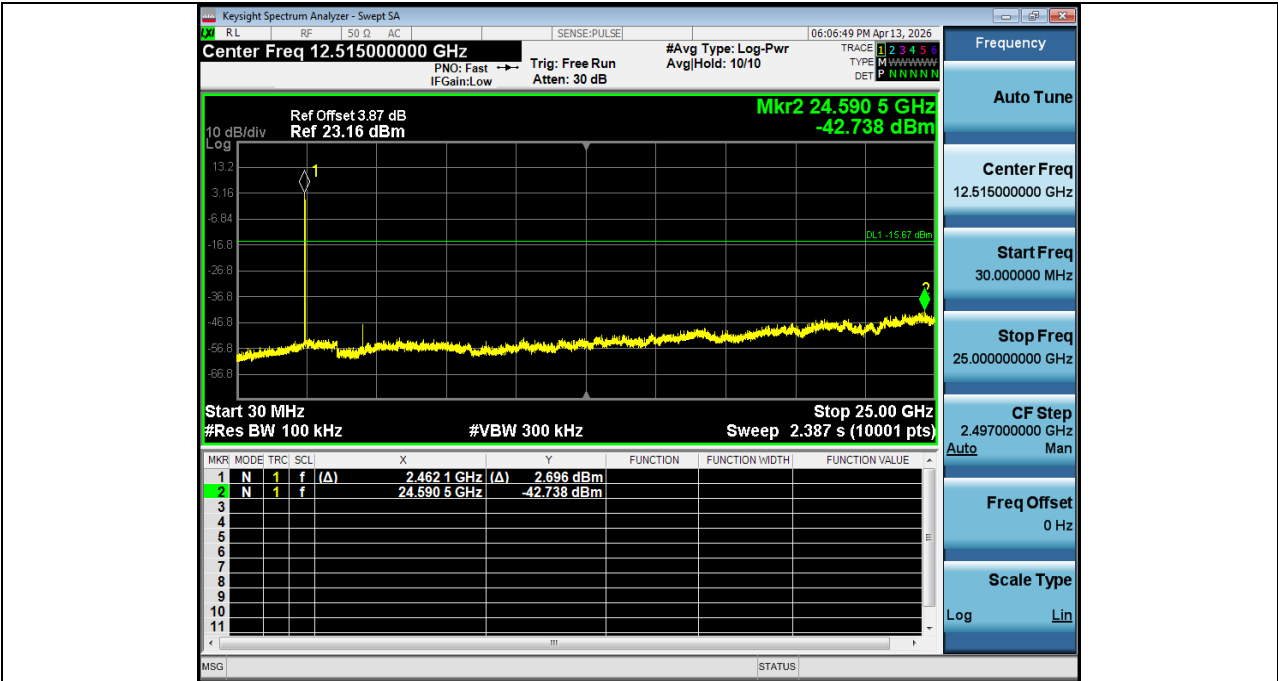


2. Spurious Emission NVNT_ANT2_802_11b_2437

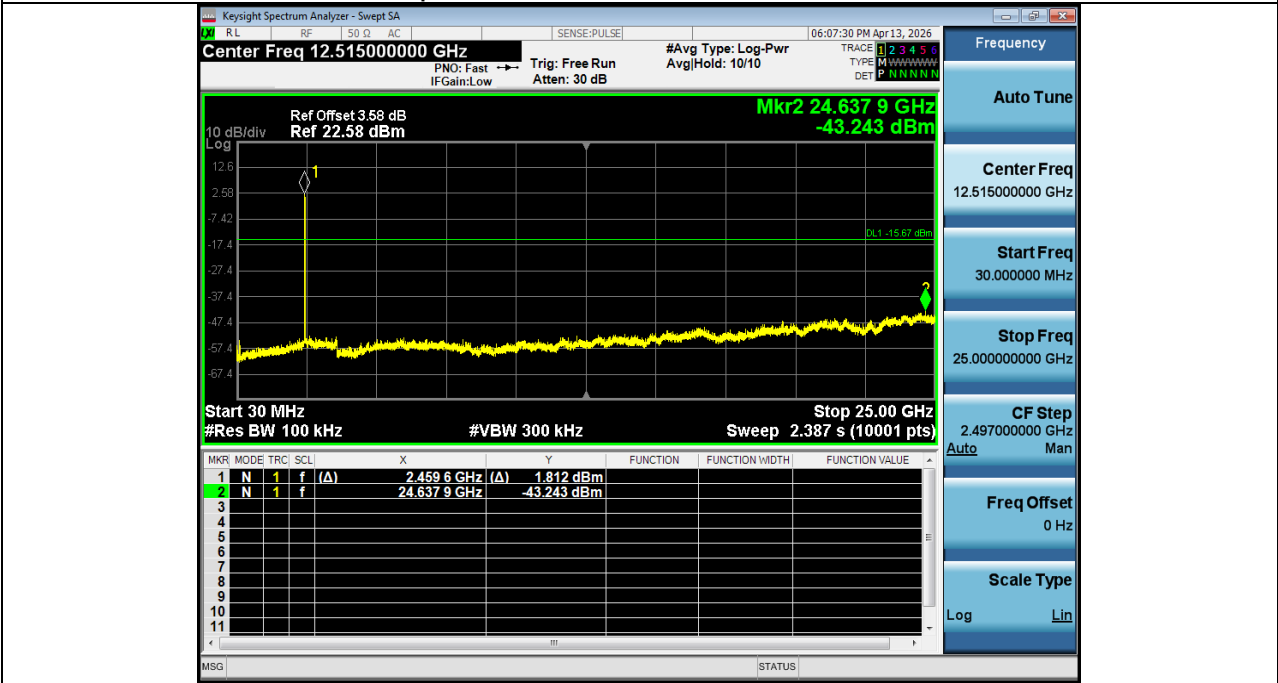


1. Reference Level NVNT_ANT1_802_11b_2462

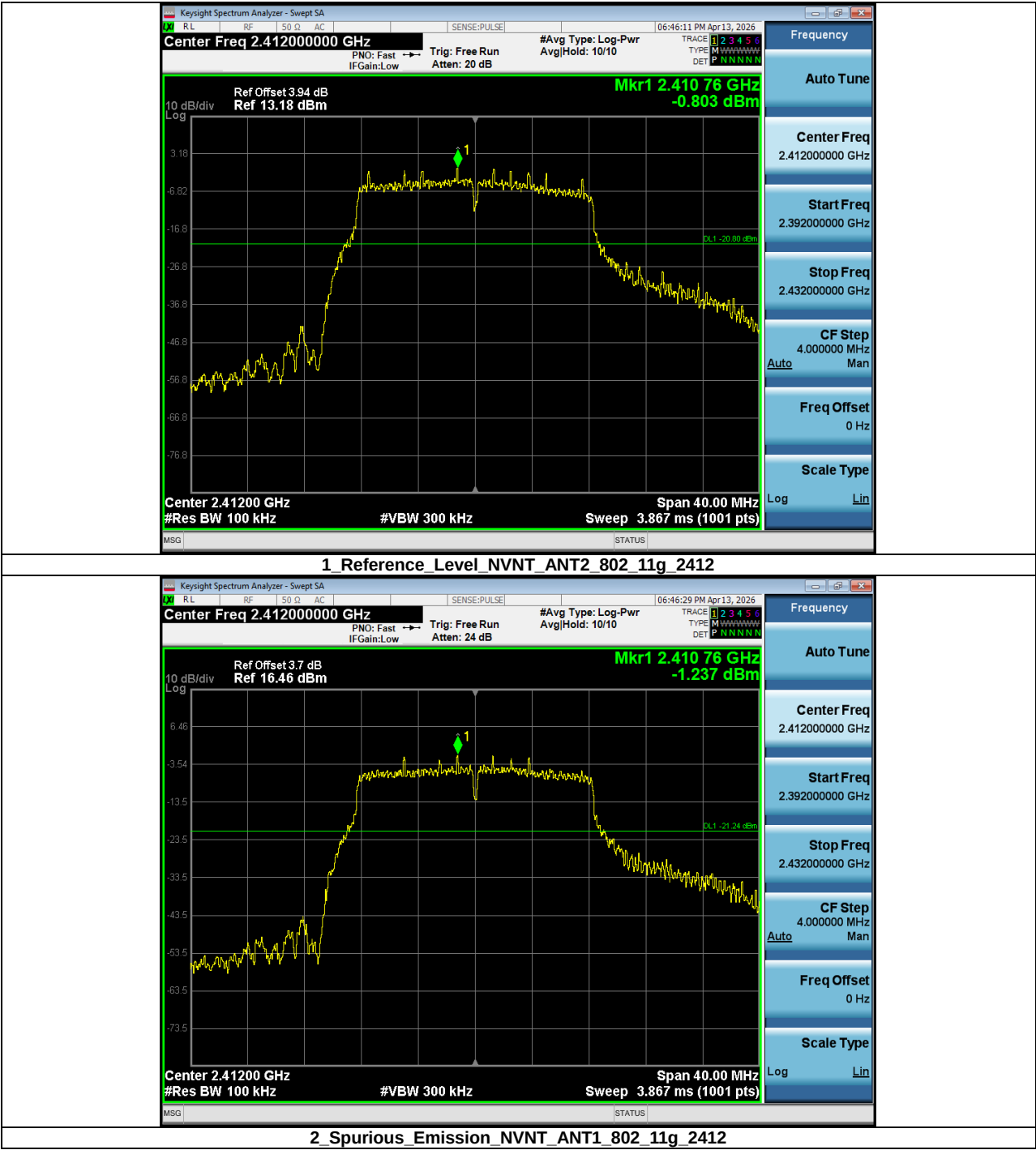


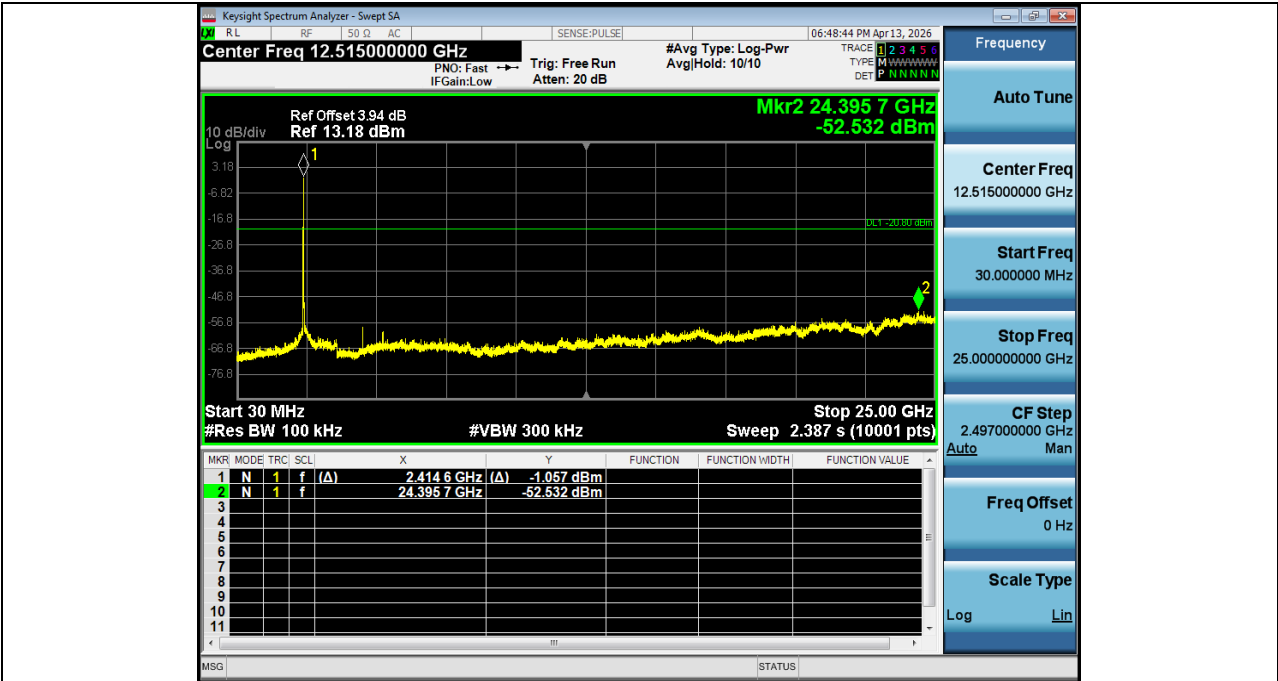


2. Spurious Emission NVNT_ANT2_802_11b_2462

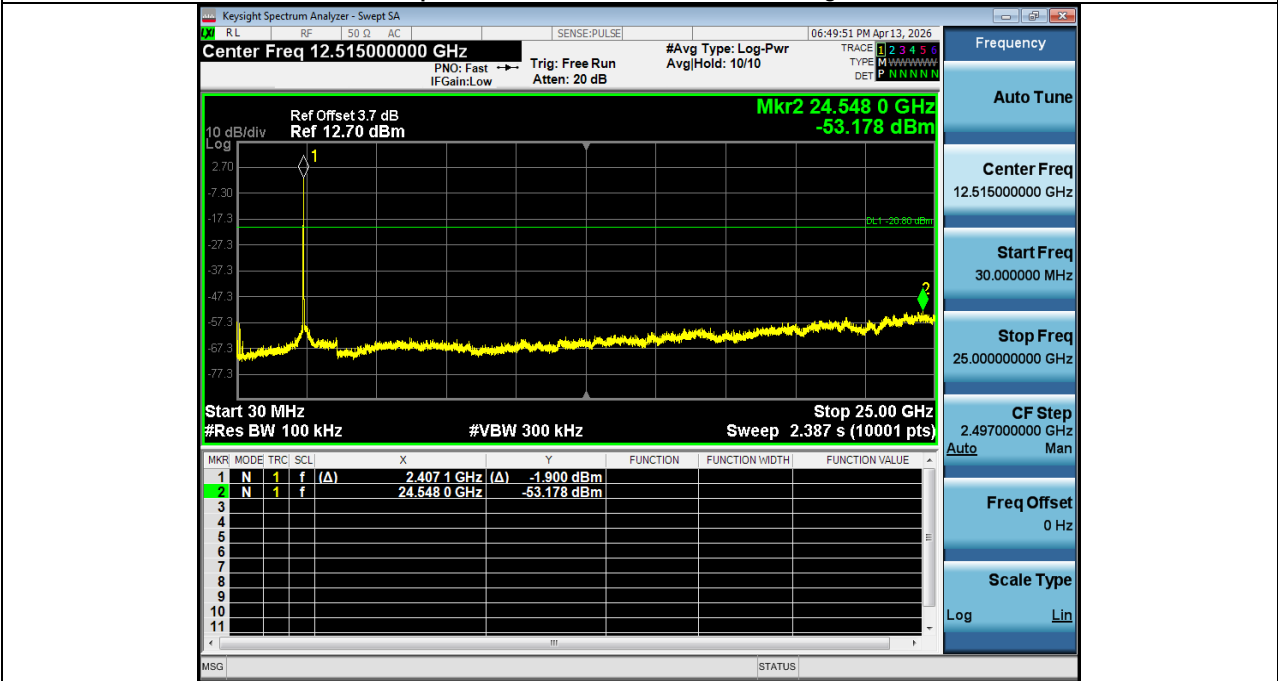


1. Reference Level NVNT_ANT1_802_11g_2412

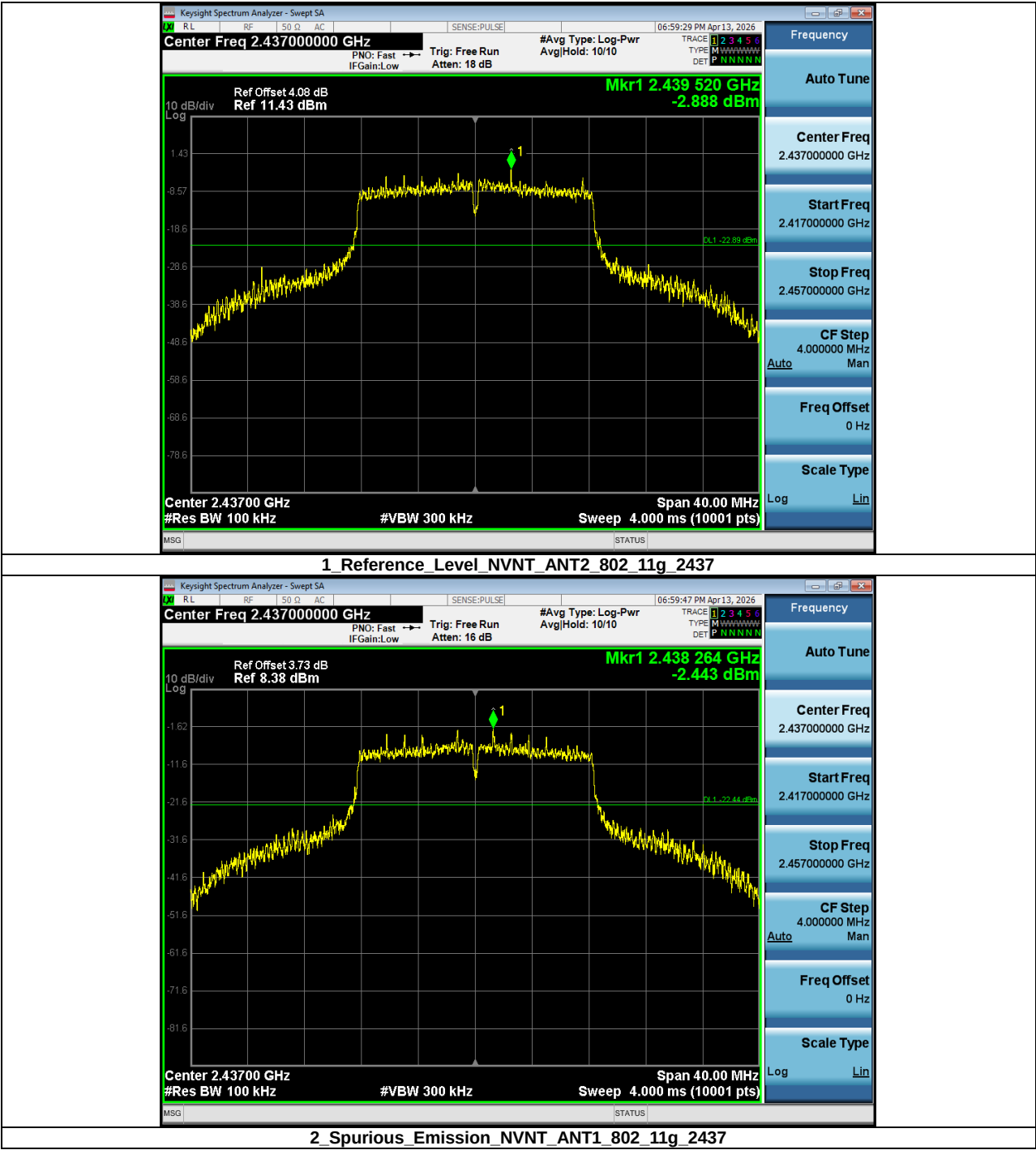


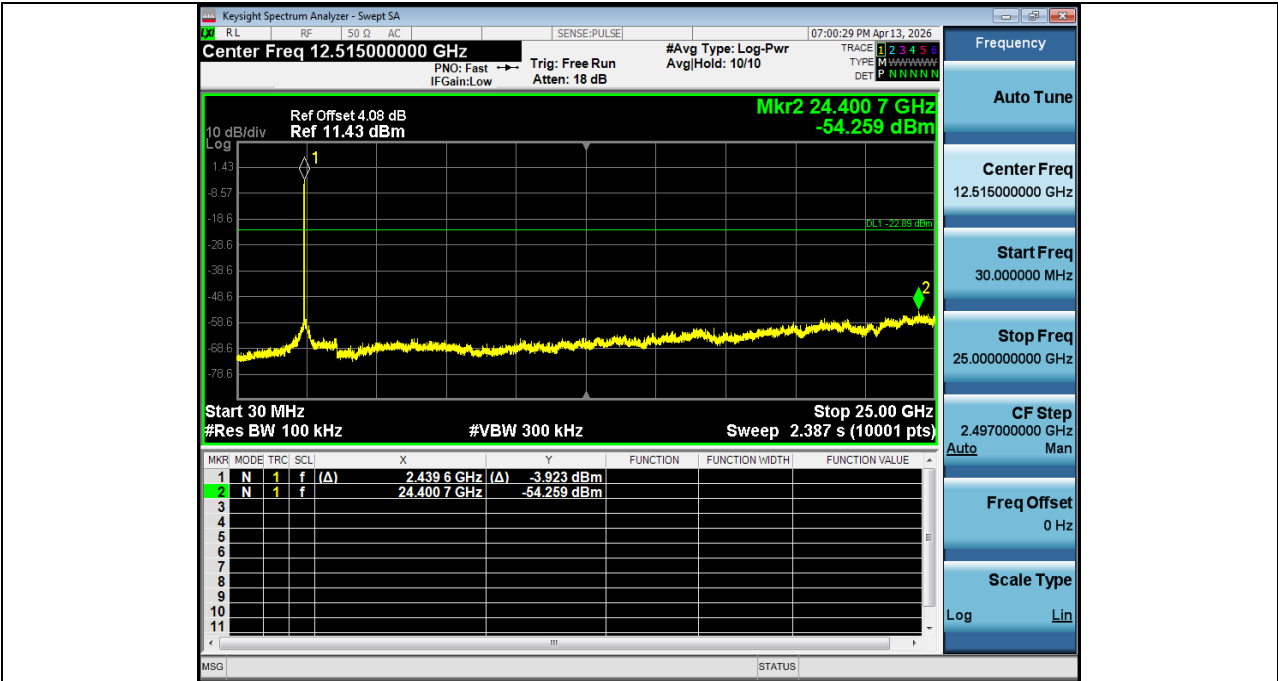


2. Spurious Emission NVNT_ANT2_802_11g_2412

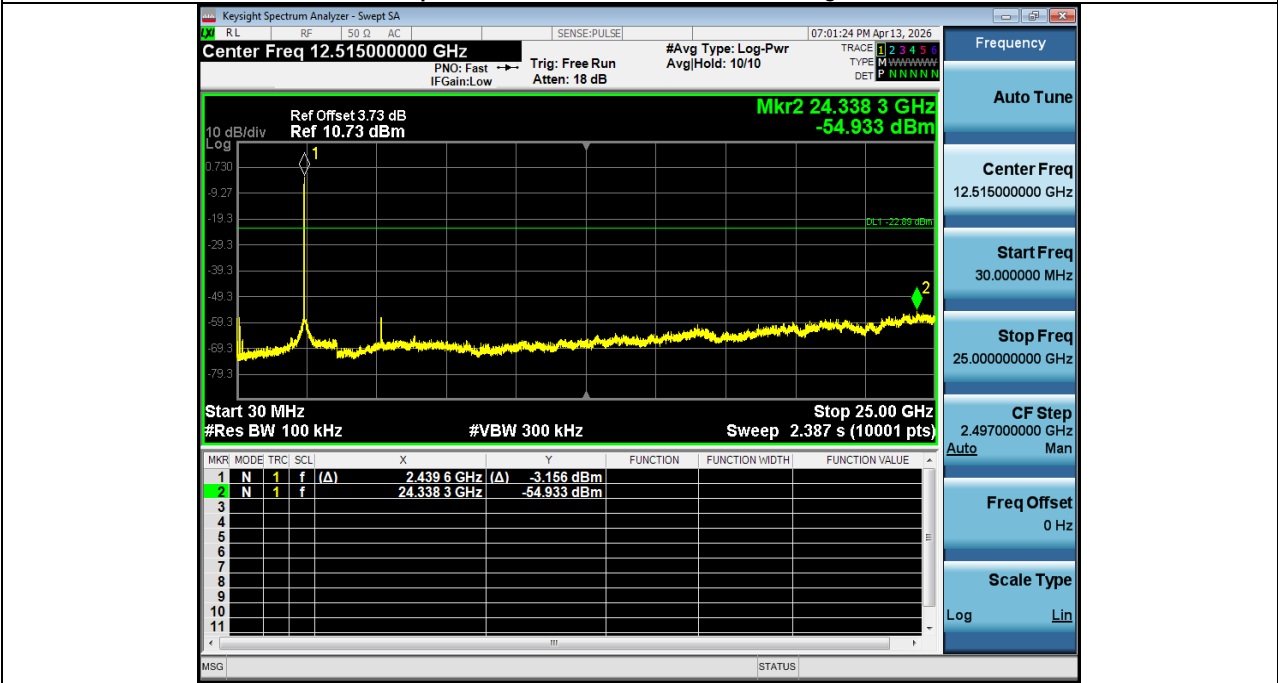


1. Reference Level NVNT_ANT1_802_11g_2437

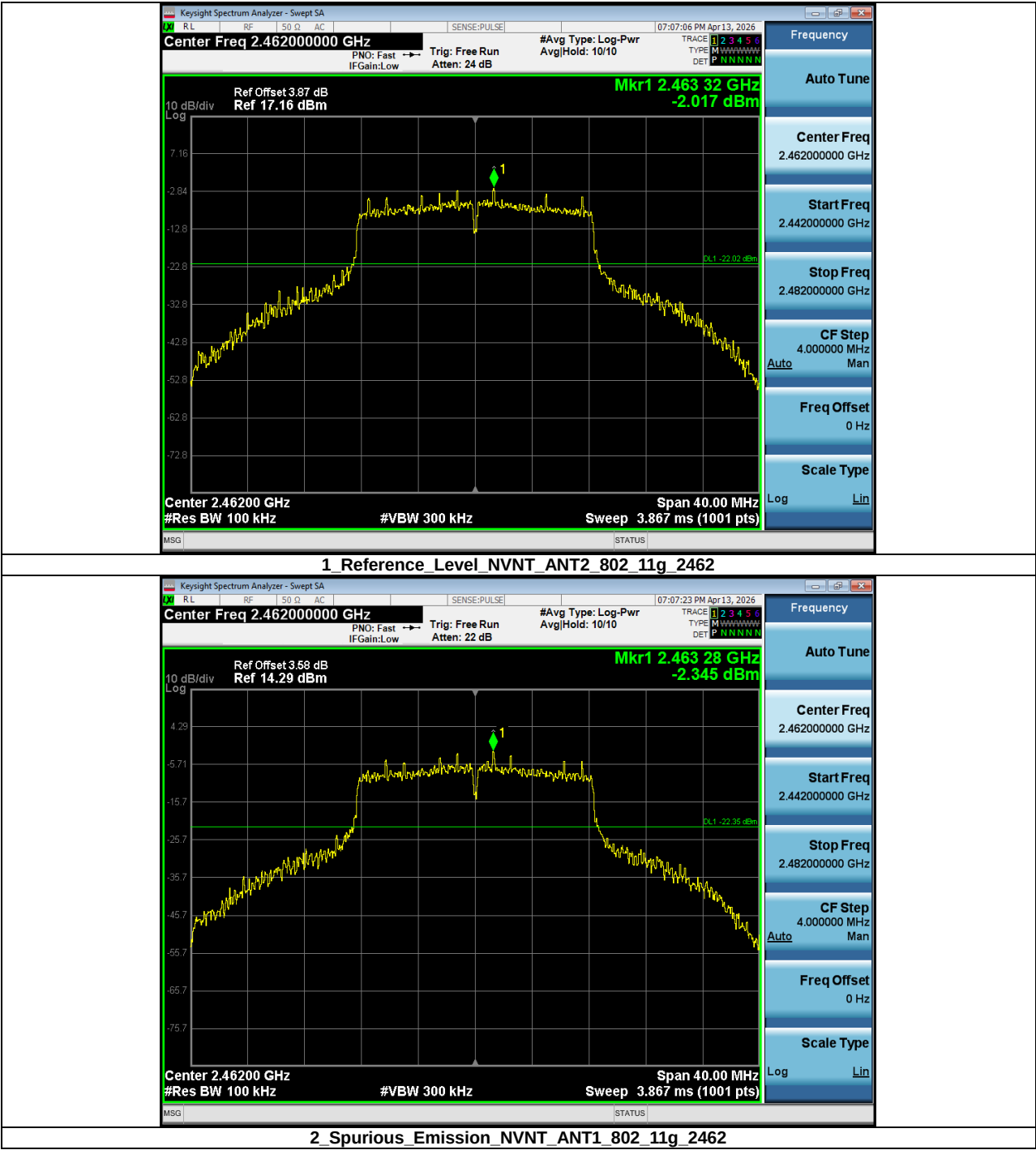


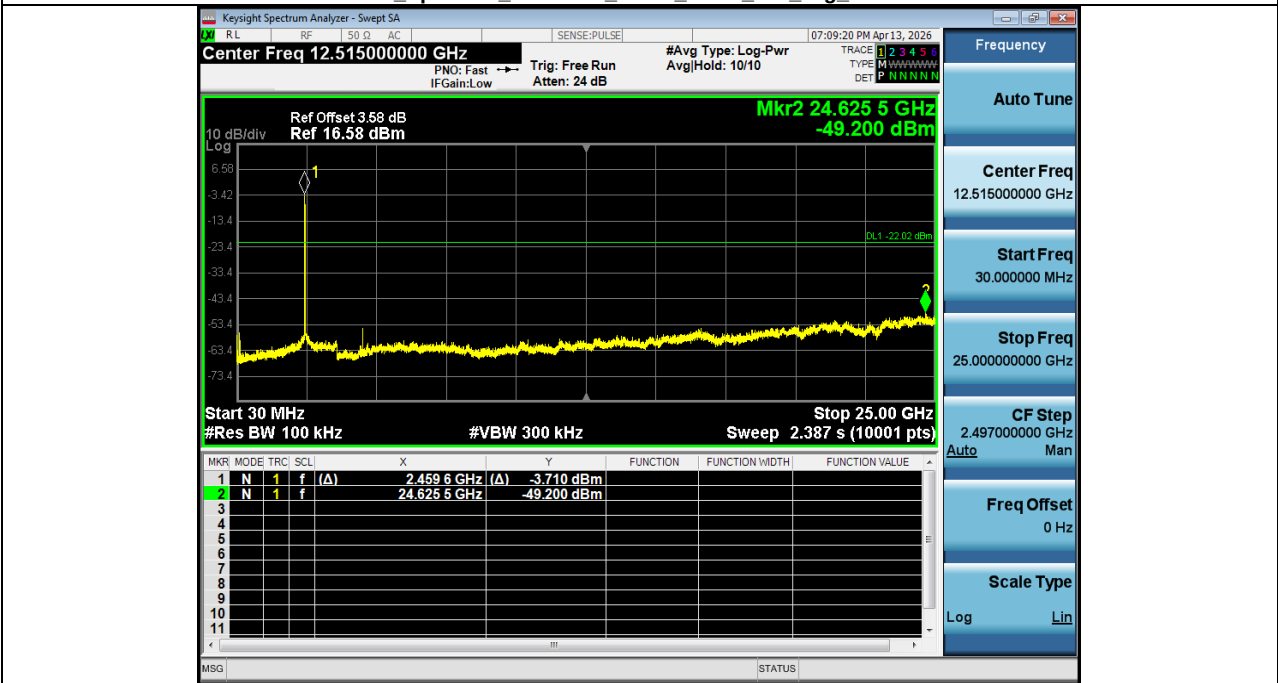
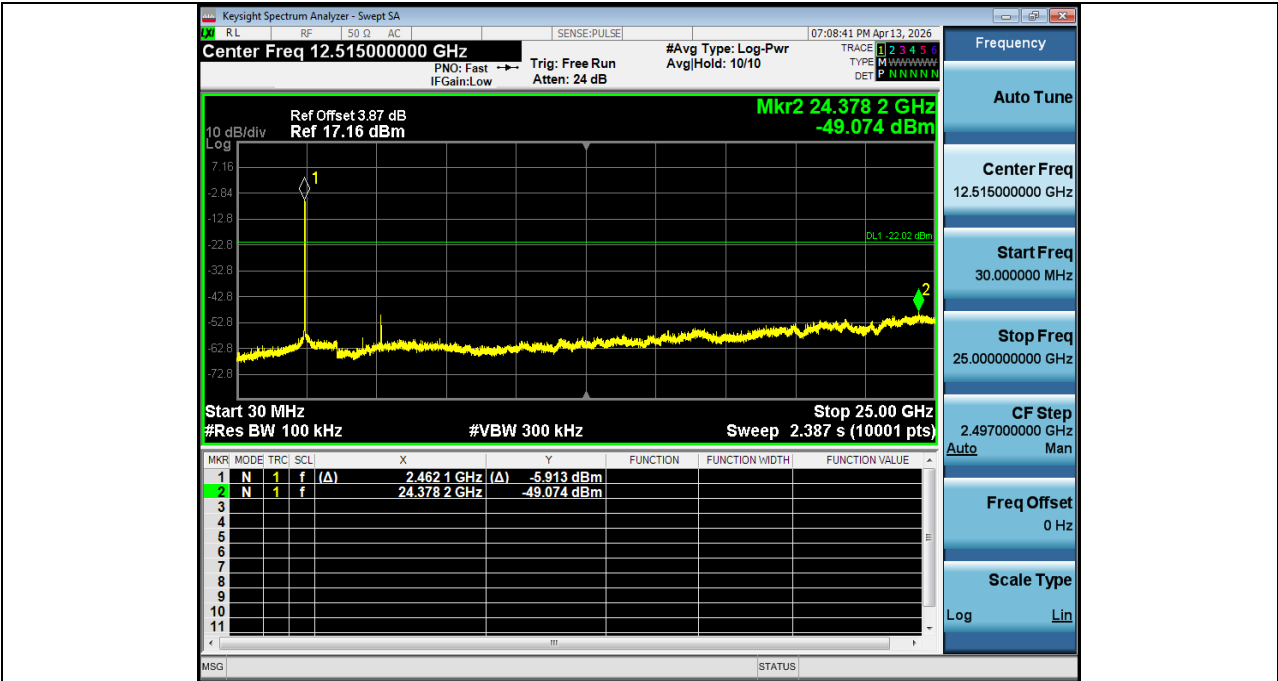


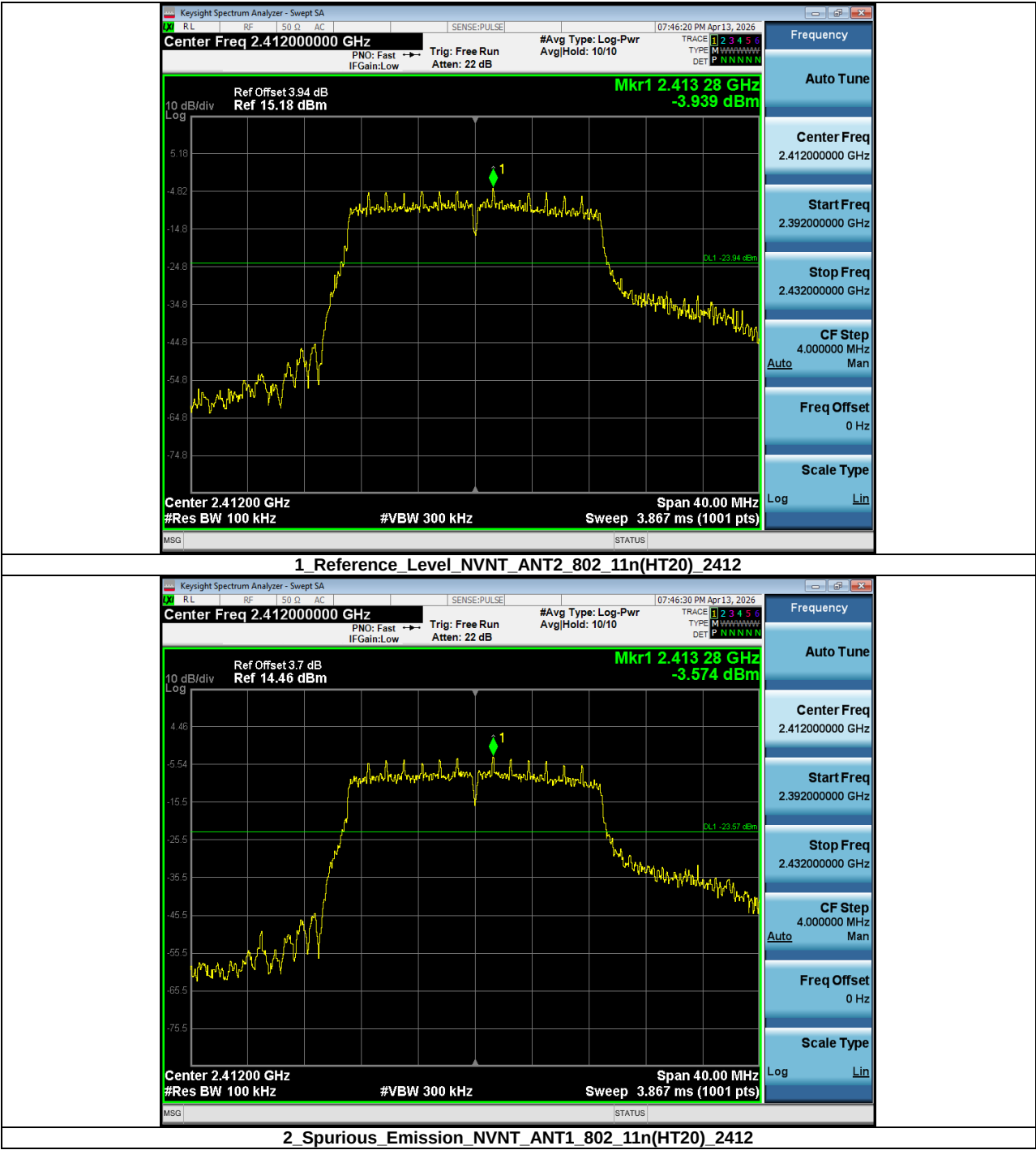
2. Spurious Emission NVNT_ANT2_802_11g_2437



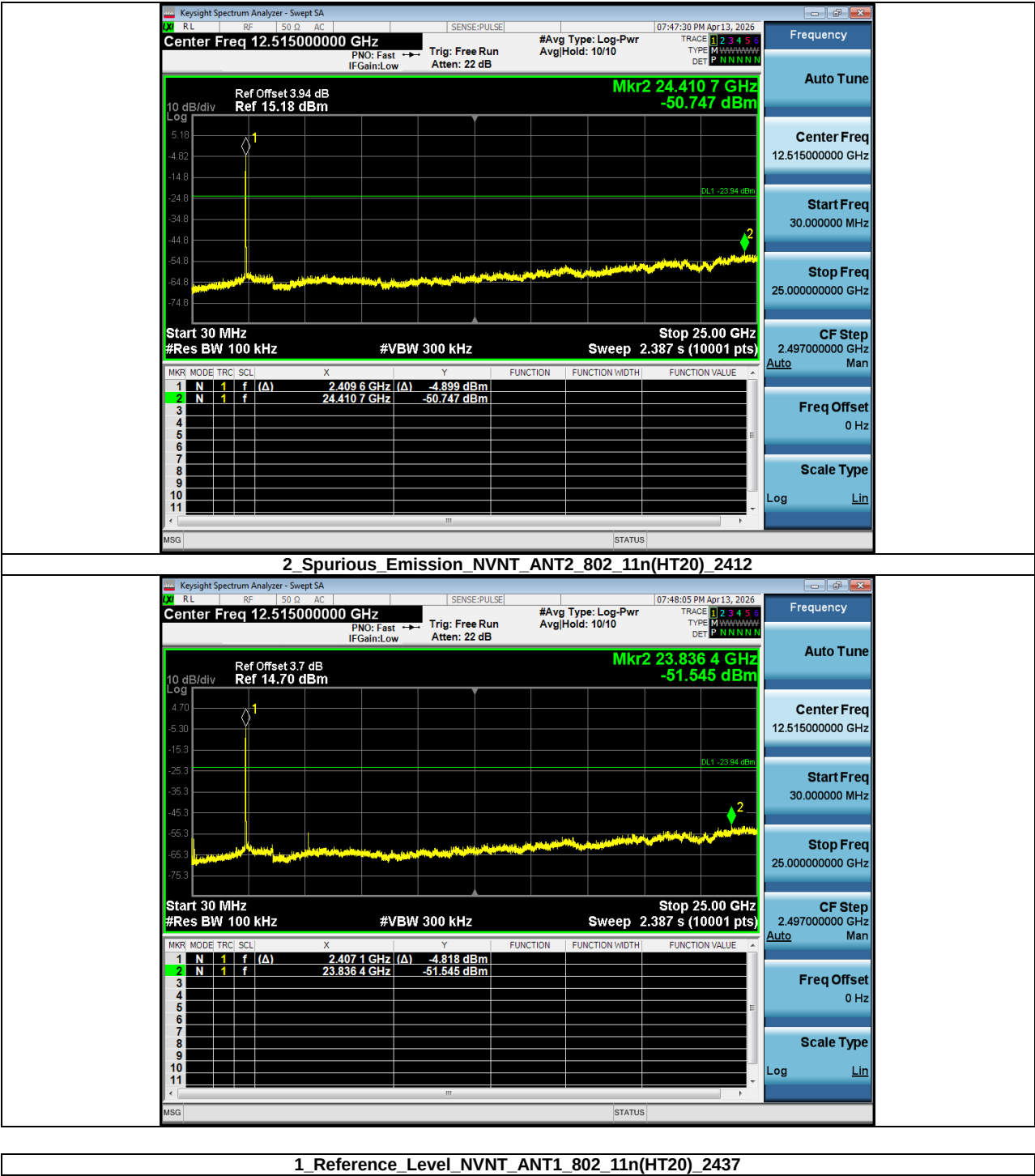
1. Reference Level NVNT_ANT1_802_11g_2462



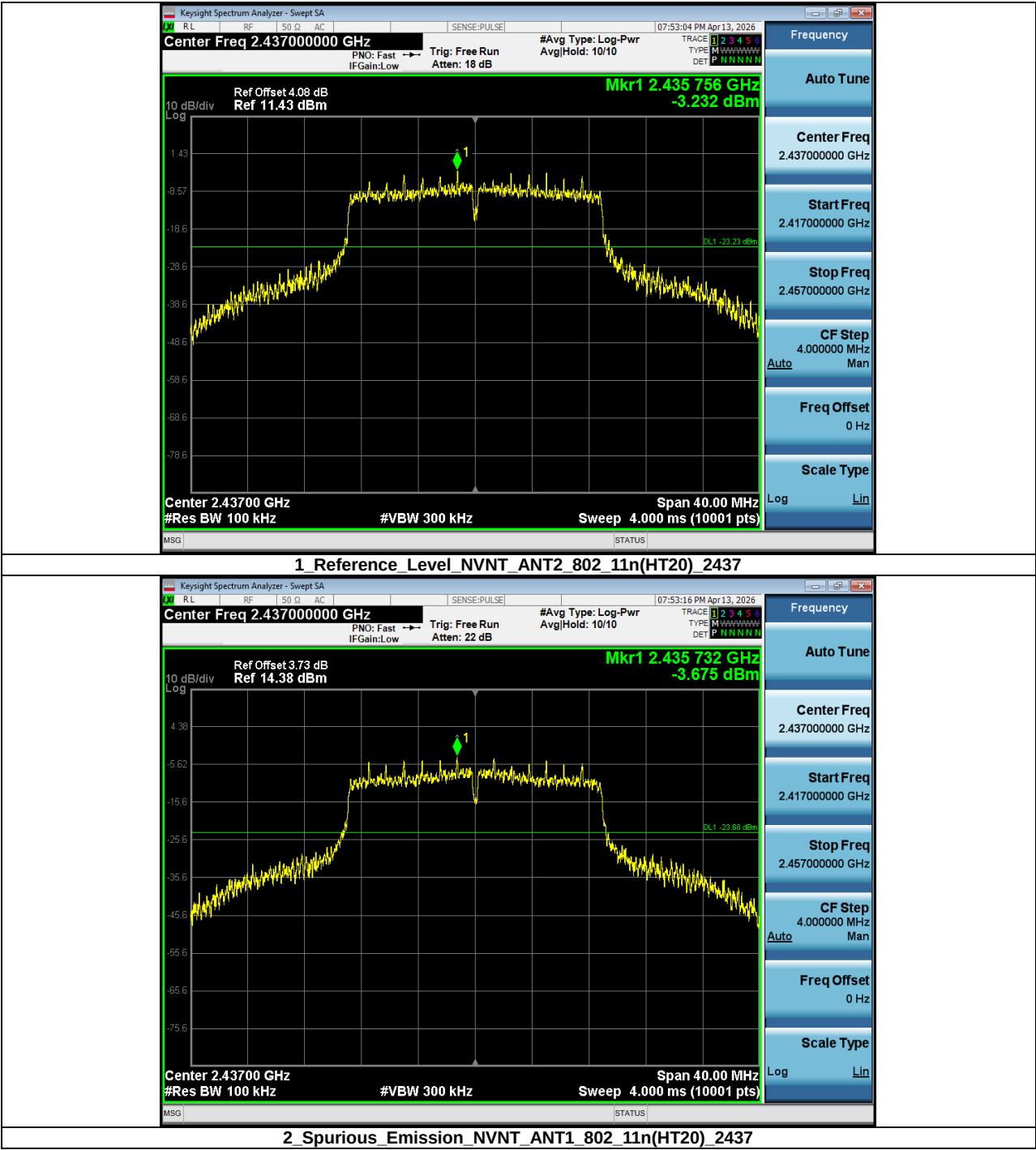


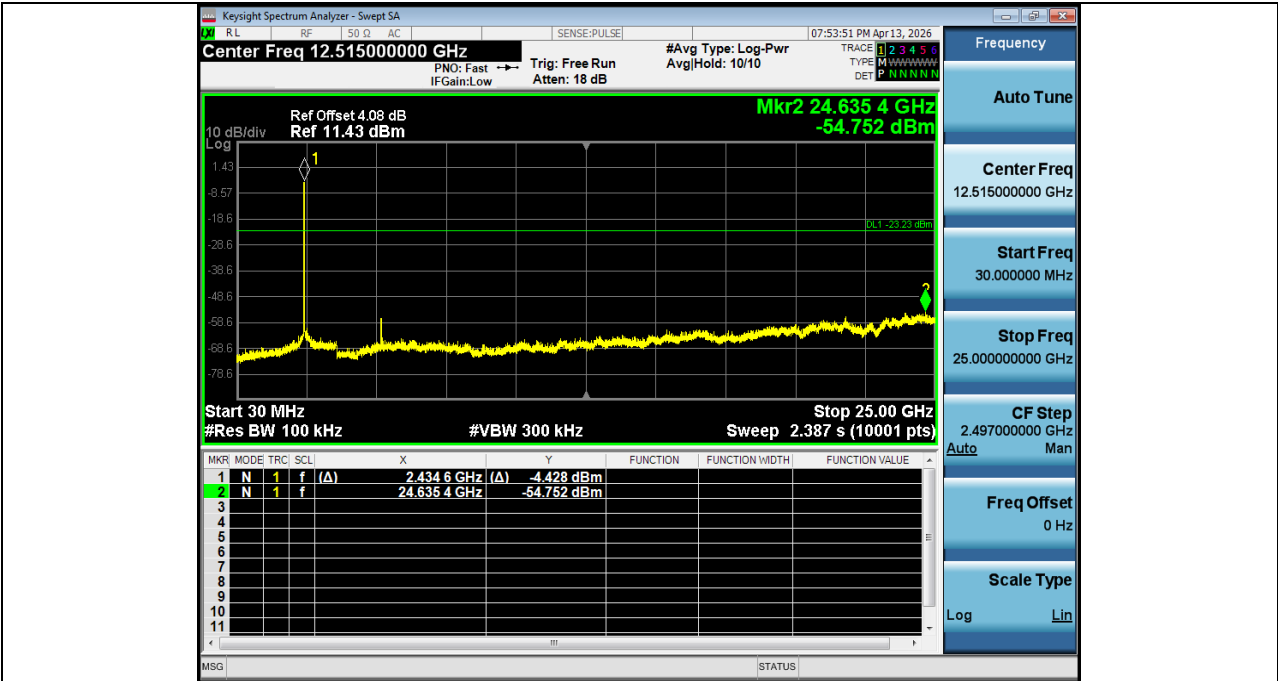


2 Spurious Emission NVNT_ANT1_802_11n(HT20)_2412

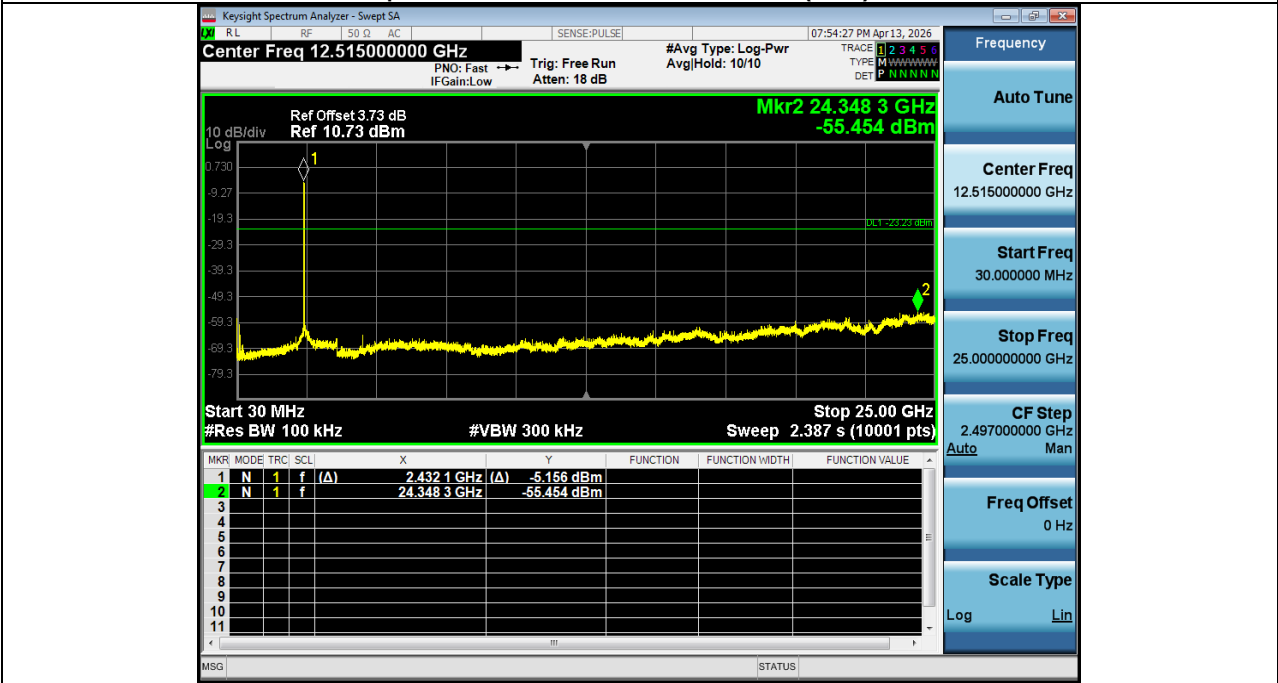


1 Reference Level NVNT_ANT1_802_11n(HT20)_2437

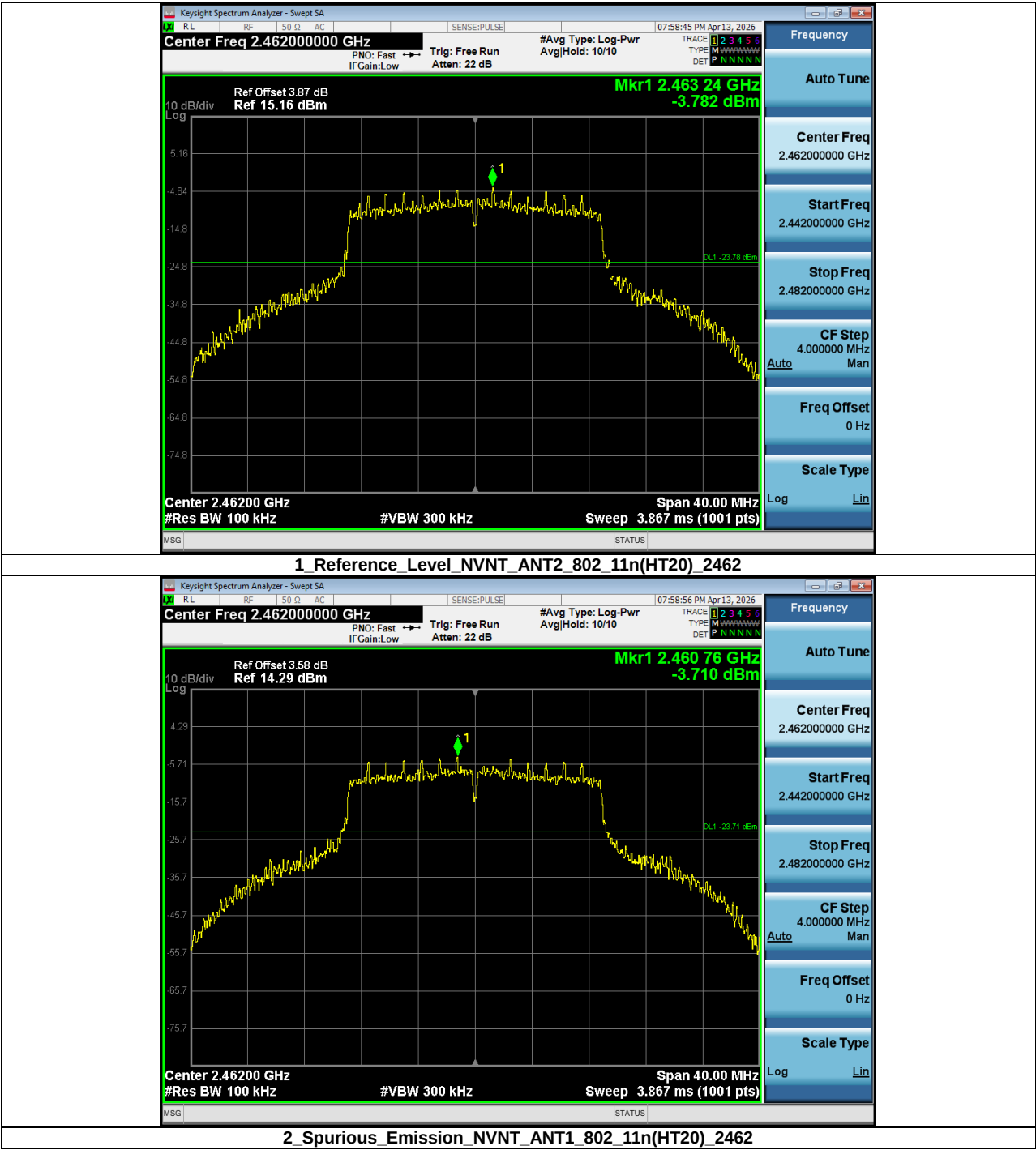


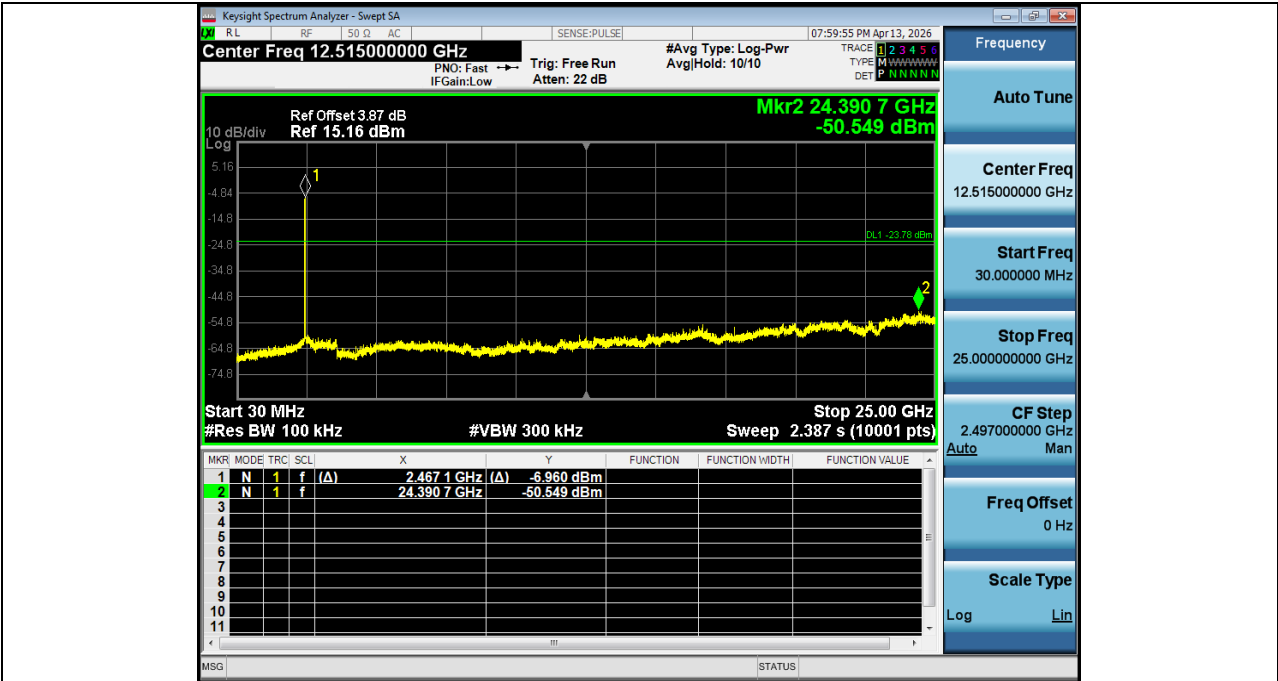


2. Spurious Emission NVNT_ANT2_802_11n(HT20)_2437

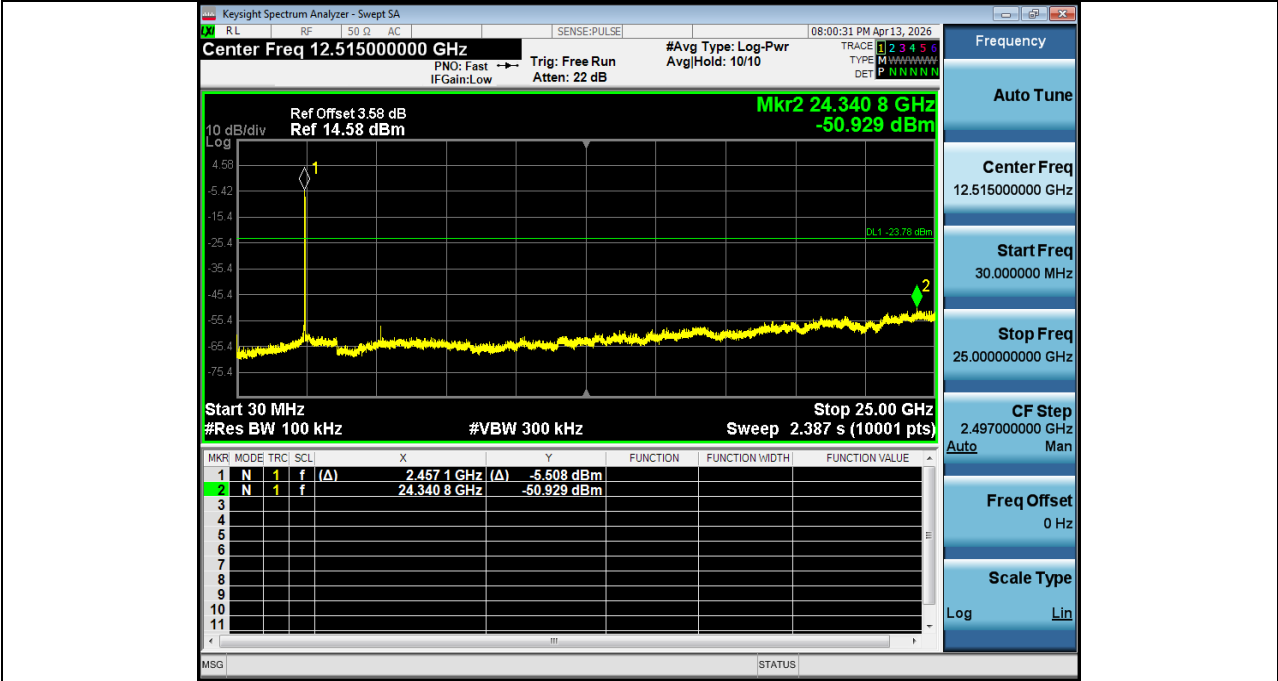


1. Reference Level NVNT_ANT1_802_11n(HT20)_2462

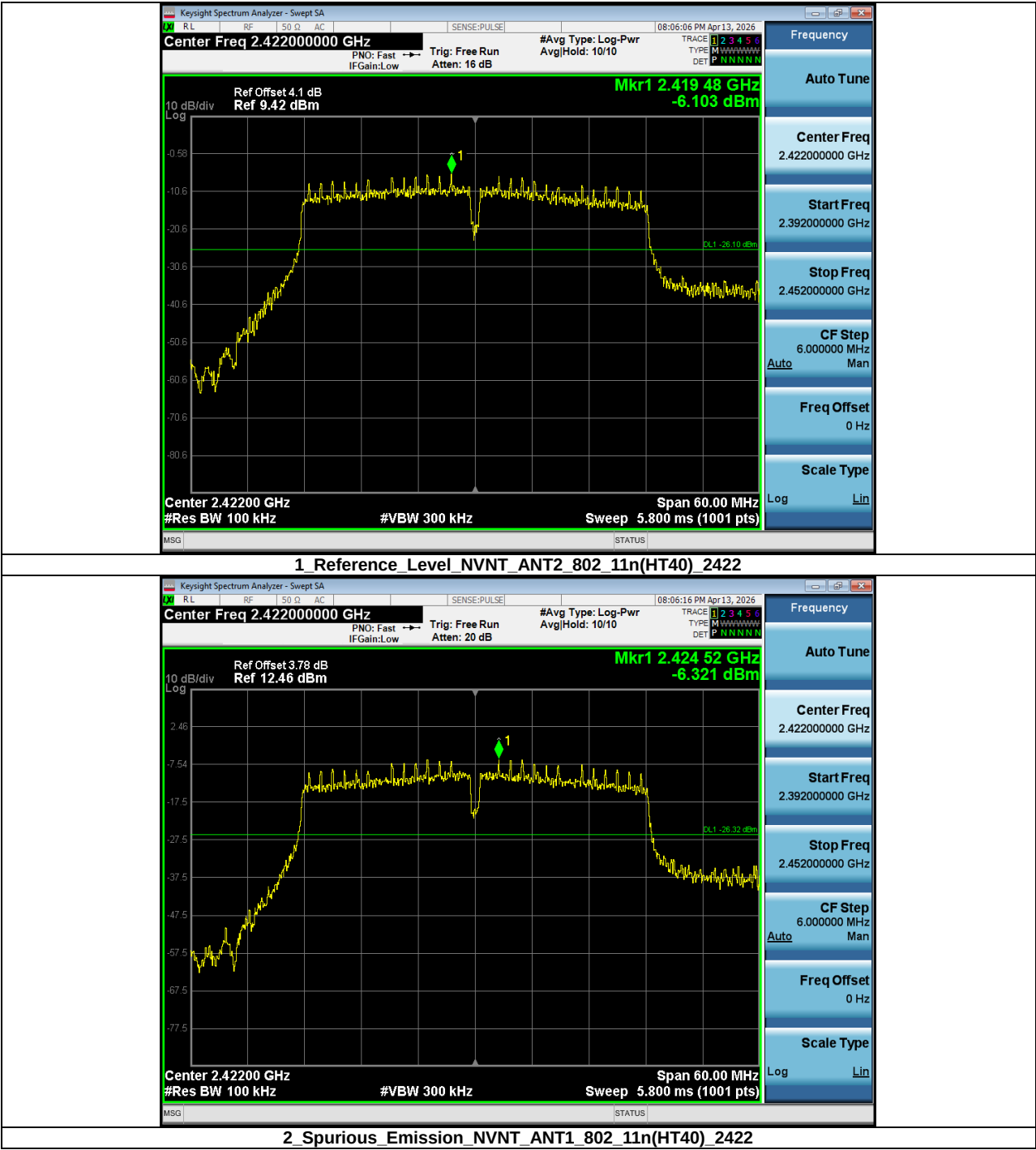


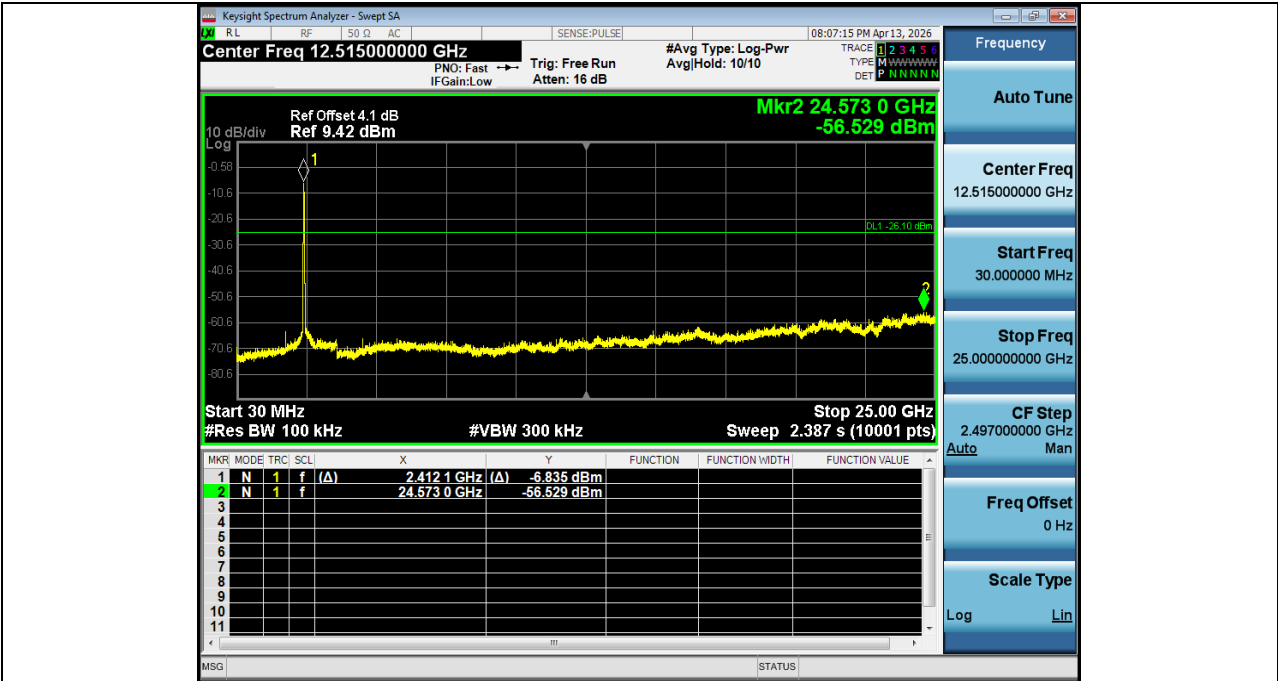


2. Spurious Emission NVNT_ANT2_802_11n(HT20)_2462

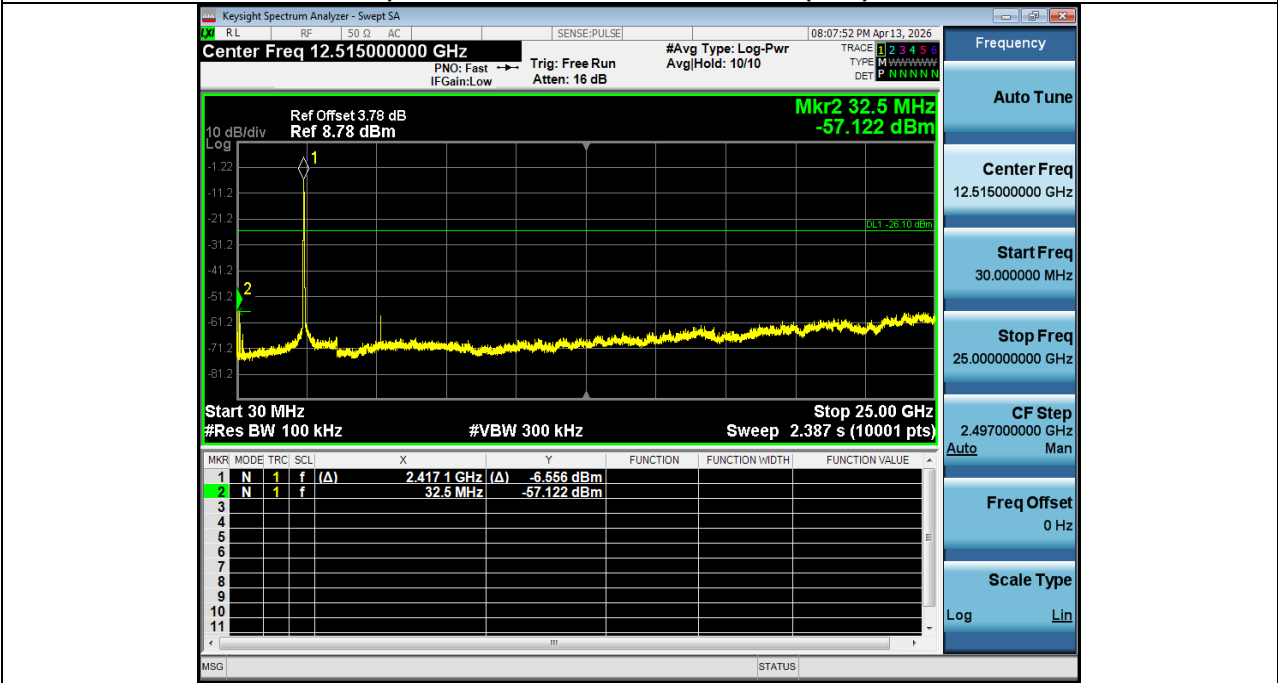


1 Reference Level NVNT_ANT1_802_11n(HT40)_2422





2. Spurious Emission NVNT_ANT2_802_11n(HT40)_2422



1 Reference Level NVNT_ANT1_802_11n(HT40)_2437