FCC TEST REPORT

FCC ID: 2BUKI-K300

On Behalf of

Shenzhen Wanboyi Technology Co., LTD

Childrens Video Walkie-Talkie

Model No.: K300, K500,K600,K800,K2,K3,K5,K6,K8

Prepared for	:	Shenzhen Wanboyi Technology Co., LTD
Address	:	RM 405, 4th Floor, Block 6, Danzhutou Enlai Industrial Zone, Longgang Dist, Shenzhen China

Prepared By	:	Shenzhen PSI Testing Co., Ltd.
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Date of Receipt	:	Jan.07, 2026
Date of Test	:	Jan.07, 2026-Jan.15, 2026
Date of Report	:	Jan.16, 2026
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TEST REPORT DECLARATION

Applicant	:	Shenzhen Wanboyi Technology Co., LTD
Address	:	RM 405, 4th Floor, Block 6, Danzhutou Enlai Industrial Zone, Longgang Dist, Shenzhen China
Manufacturer	:	Shenzhen Wanboyi Technology Co., LTD
Address	:	RM 405, 4th Floor, Block 6, Danzhutou Enlai Industrial Zone, Longgang Dist, Shenzhen China
EUT Description	:	Childrens Video Walkie-Talkie
		(A) Model No. : K300,K500,K600,K800,K2,K3,K5,K6,K8
		(B) Trademark : N/A

Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247

ANSI C63.10-2020

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).....…..:	Felix Pang Test Engineer	Felix Pang
Approved by (name + signature)…....:	Simple Guan Project Manager	Simple Guan
Date of issue……..:	Jan.16, 2026	

Revision History

Revision	Issue Date	Revisions	Revised By
V0	Jan.16, 2026	Initial released Issue	Felix Pang

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: 15.207ANSI C63.10-2020	P
6dB Bandwidth	FCC PART 15:15.247(a)(2), ANSI C63.10-2020	P
Output Power	FCC Part 15: 15.247(b)(3), ANSI C63.10-2020	P
Radiated Spurious Emission	FCC Part 15: 15.209 FCC Part 15: 15.247(d), ANSI C63.10-2020	P
Conducted Spurious & Band Edge Emission	FCC Part 15: 15.247(d), ANSI C63.10-2020	P
Power Spectral Density	FCC PART 15:15.247(e), ANSI C63.10-2020	P
Radiated Band Edge Emission	FCC Part 15: 15.247(d), ANSI C63.10-2020	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	:	Childrens Video Walkie-Talkie
Model	:	K300,K500,K600,K800,K2,K3,K5,K6,K8
Diff	:	All the model are the same circuit and RF module, except the model names and color
Test Voltage	:	DC 5V from adapter
Radio technology	:	2.4G WiFi
Operation frequency	:	2412MHz-2462MHz for IEEE 802.11 b, g, n/HT20
Channel No.	:	802.11b/802.11g/802.11n(HT20): 11CH
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	:	Integrated antenna, maximum gain is 2.62dBi.
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 : N/A

Manufacturer : N/A

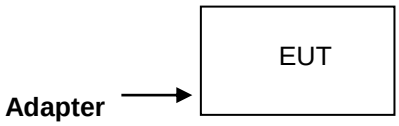
Model : N/A

Rating : N/A

2.3. Tested Supporting System Details

No.	Description	Manufacturer	Model	Serial Number
1	Adapter	Xiaomi	MDY-11-EM	N/A

2.4. Block Diagram of Connection Between EUT and Simulators



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
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		

2.6. Software test version and power setting information

Software testing version	WIFI Test Tool.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 value.
	Middle: CH6	2437	TX level is set as defaults value.
	High: CH11	2462	TX level is set as defaults value.

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	/	2025.12.19	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	ENV216	102282	/	2025.12.18	1 Year
4.	L.I.S.N.#2	RFT	NNB111	13835240	/	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	FSV-40N	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	LAPA_01G18G-45dB	SK2022032901	/	2025.12.18	1 Year
10.	Horn Antenna	Schwarz beck	BBHA 9170	00946	/	2024.12.31	2 Year
11.	Amplifier	SKET	LNPA_0118G-45	SK2020010801	/	2025.12.18	1 Year
12.	RF Power Probe	Rohde&Schwarz	NRP-Z11	1138.3004.02-1111533-Fz	/	2025.12.18	1 Year
13.	RF Sensor Unit	Tachoy	TR1029-2	20220428P008	/	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	ADC120V10A	202211251638	/	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

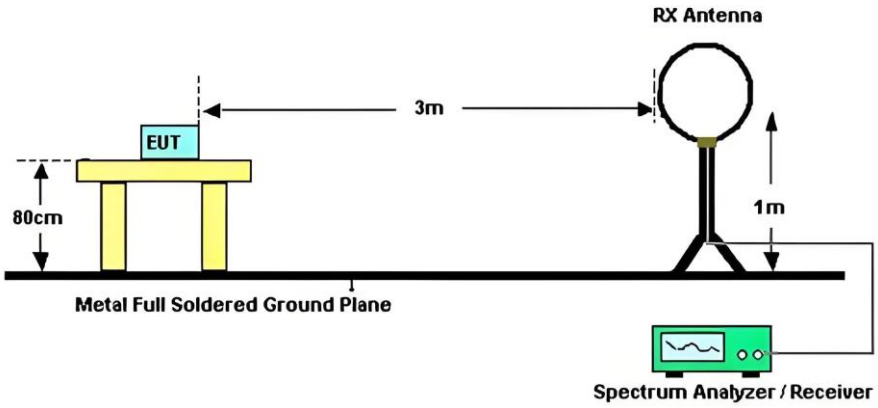
All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

15.205 Restricted frequency band

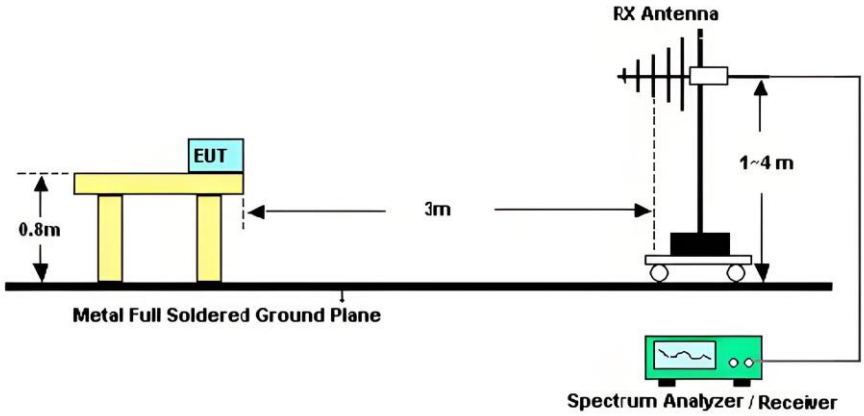
MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 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

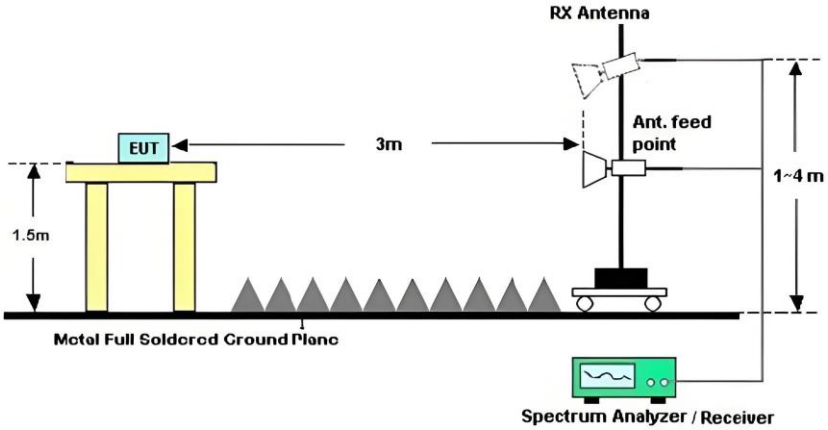
a. In 3m Anechoic Chamber Test Setup Diagram for below 30MHz



b. In 3m Anechoic Chamber Test Setup Diagram for below 1GHz



c. 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 C63.10-2020 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

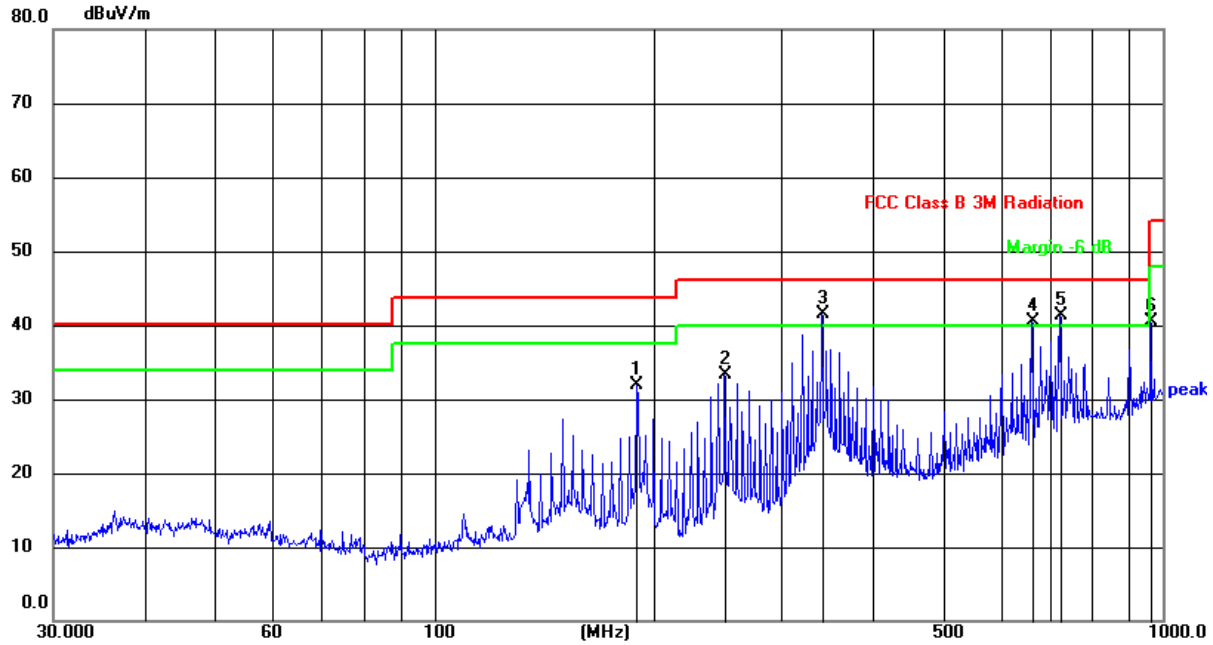
3.4. Test Results

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	:	2026.01.09	Temperature	:	21.7℃
Test Engineer	:	Felix Pang	Humidity	:	35%
Test Mode	:	IEEE 802.11b mode			
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	:	2026.01.09	Temperature	:	21.7℃
Test Engineer	:	Felix Pang	Humidity	:	35%
Test Mode	:	IEEE 802.11b mode			
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.				

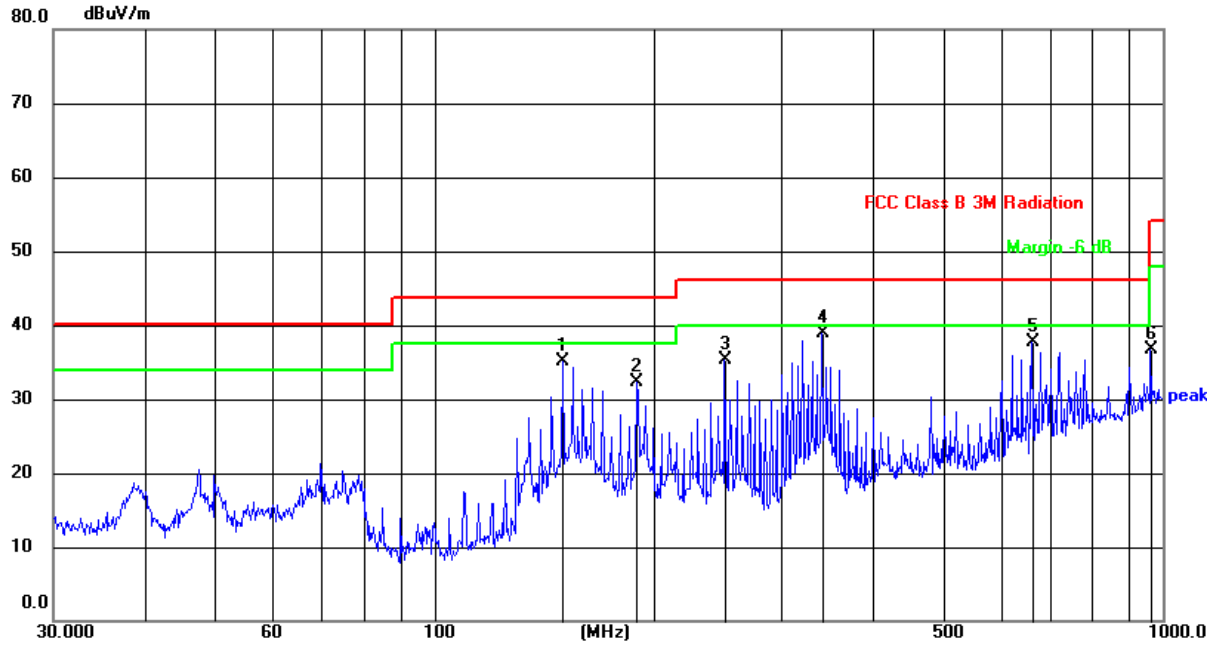
Polarization: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	189.7385	54.91	-23.09	31.82	43.50	-11.68	QP
2	250.3012	55.48	-22.25	33.23	46.00	-12.77	QP
3	340.7817	60.92	-19.37	41.55	46.00	-4.45	QP
4	661.1505	50.59	-10.18	40.41	46.00	-5.59	QP
5	721.7259	50.05	-8.68	41.37	46.00	-4.63	QP
6	962.1623	44.28	-3.70	40.58	54.00	-13.42	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	150.0108	55.65	-20.50	35.15	43.50	-8.35	QP
2	189.7385	55.31	-23.09	32.22	43.50	-11.28	QP
3	250.3012	57.46	-22.25	35.21	46.00	-10.79	QP
4	340.7817	58.19	-19.37	38.82	46.00	-7.18	QP
5	661.1505	47.90	-10.18	37.72	46.00	-8.28	QP
6	962.1623	40.40	-3.70	36.70	54.00	-17.30	QP

Level = Reading + Factor Margin = Level - Limit

From 1GHz to 25GHz:					
Test Date	:	2026.01.09	Temperature	:	21.7℃
Test Engineer	:	Felix Pang	Humidity	:	35%
Test Mode	:	WiFi mode			
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.				

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	52.43	-13.18	39.25	74.00	-34.75	Peak
2	4824	V	45.47	-13.18	32.29	54.00	-21.71	Avg
3	7236	--	--	--	--	--	--	--
4	9648	--	--	--	--	--	--	--
5	4824	H	51.02	-13.18	37.84	74.00	-36.17	Peak
6	4824	H	43.14	-13.18	29.96	54.00	-24.04	Avg
7	7236	--	--	--	--	--	--	--
8	9648	--	--	--	--	--	--	--
Test Mode : IEEE 802.11b TX Mid								
1	4874	V	53.47	-13.00	40.47	74.00	-33.53	Peak
2	4874	V	45.68	-13.00	32.68	54.00	-21.32	Avg
3	7311	--	--	--	--	--	--	--
4	9748	--	--	--	--	--	--	--
5	4874	H	50.07	-13.00	37.07	74.00	-36.94	Peak
6	4874	H	42.41	-13.00	29.41	54.00	-24.59	Avg
7	7311	--	--	--	--	--	--	--
8	9748	--	--	--	--	--	--	--
Test Mode : IEEE 802.11b TX High								
1	4924	V	52.54	-12.83	39.71	74.00	-34.29	Peak
2	4924	V	44.49	-12.83	31.66	54.00	-22.34	Avg
3	7386	--	--	--	--	--	--	--
4	9848	--	--	--	--	--	--	--
5	4924	H	51.36	-12.83	38.53	74.00	-35.47	Peak
6	4924	H	41.97	-12.83	29.14	54.00	-24.86	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	51.59	-13.18	38.41	74.00	-35.59	Peak
2	4824	V	43.13	-13.18	29.95	54.00	-24.05	Avg
3	7236	--	--	--	--	--	--	--
4	9648	--	--	--	--	--	--	--
5	4824	H	50.85	-13.18	37.67	74.00	-36.33	Peak
6	4824	H	41.62	-13.18	28.44	54.00	-25.56	Avg
7	7236	--	--	--	--	--	--	--
8	9648	--	--	--	--	--	--	--
Test Mode : IEEE 802.11g TX Mid								
1	4874	V	52.03	-13.00	39.03	74.00	-34.97	Peak
2	4874	V	42.82	-13.00	29.82	54.00	-24.18	Avg
3	7311	--	--	--	--	--	--	--
4	9748	--	--	--	--	--	--	--
5	4874	H	51.00	-13.00	38.00	74.00	-36.00	Peak
6	4874	H	42.87	-13.00	29.87	54.00	-24.13	Avg
7	7311	--	--	--	--	--	--	--
8	9748	--	--	--	--	--	--	--
Test Mode : IEEE 802.11g TX High								
1	4924	V	52.61	-12.83	39.78	74.00	-34.22	Peak
2	4924	V	44.28	-12.83	31.45	54.00	-22.55	Avg
3	7386	--	--	--	--	--	--	--
4	9848	--	--	--	--	--	--	--
5	4924	H	52.11	-12.83	39.28	74.00	-34.72	Peak
6	4924	H	41.42	-12.83	28.59	54.00	-25.41	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	52.76	-13.18	39.58	74.00	-34.42	Peak
2	4824	V	45.27	-13.18	32.09	54.00	-21.91	Avg
3	7236	--	--	--	--	--	--	--
4	9648	--	--	--	--	--	--	--
5	4824	H	50.04	-13.18	36.86	74.00	-37.14	Peak
6	4824	H	42.43	-13.18	29.25	54.00	-24.75	Avg
7	7236	--	--	--	--	--	--	--
8	9648	--	--	--	--	--	--	--
Test Mode : IEEE 802.11n/HT20 TX Mid								
1	4874	V	52.48	-13.00	39.48	74.00	-34.52	Peak
2	4874	V	44.88	-13.00	31.88	54.00	-22.12	Avg
3	7311	--	--	--	--	--	--	--
4	9748	--	--	--	--	--	--	--
5	4874	H	50.27	-13.00	37.27	74.00	-36.73	Peak
6	4874	H	42.86	-13.00	29.86	54.00	-24.14	Avg
7	7311	--	--	--	--	--	--	--
8	9748	--	--	--	--	--	--	--
Test Mode : IEEE 802.11n/HT20 TX High								
1	4924	V	54.17	-12.83	41.34	74.00	-32.66	Peak
2	4924	V	45.11	-12.83	32.28	54.00	-21.72	Avg
3	7386	--	--	--	--	--	--	--
4	9848	--	--	--	--	--	--	--
5	4924	H	51.92	-12.83	39.09	74.00	-34.91	Peak
6	4924	H	42.90	-12.83	30.07	54.00	-23.93	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.							

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

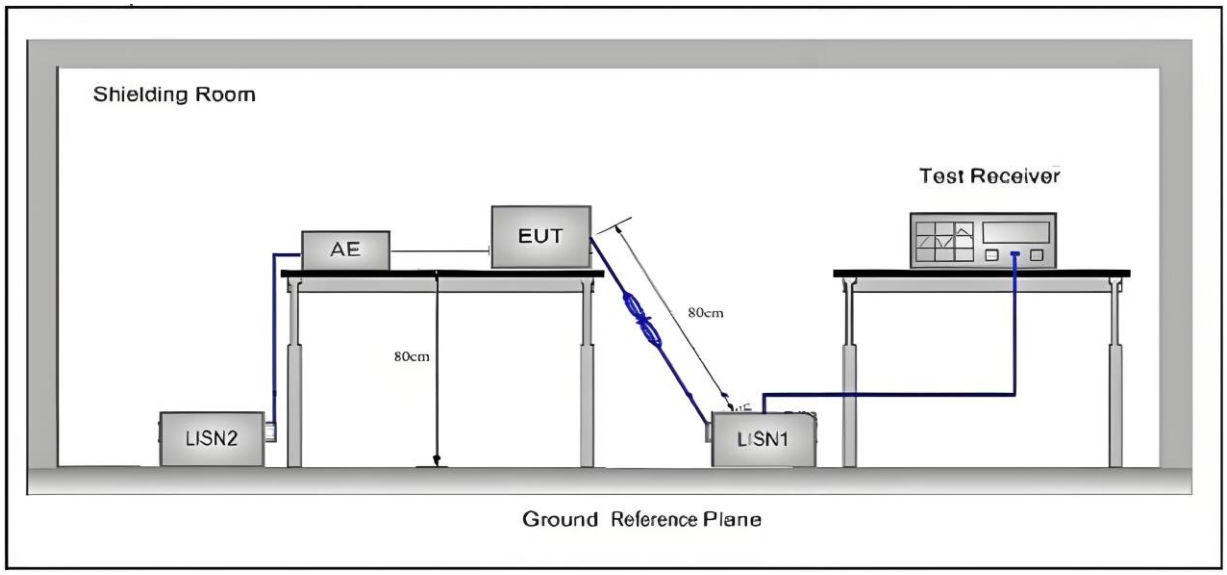
Notes: 1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.
3. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

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 on Conducted Emission Measurement.

The bandwidth of test receiver is set at 9 kHz.

4.3. Test Setup



4.4. Test Results

Test Date	:	2026.01.09	Temperature	:	20.1℃
Test Engineer	:	Felix Pang	Humidity	:	30%
Test Mode	:	WIFI mode			
Test Results	:	**PASS**			

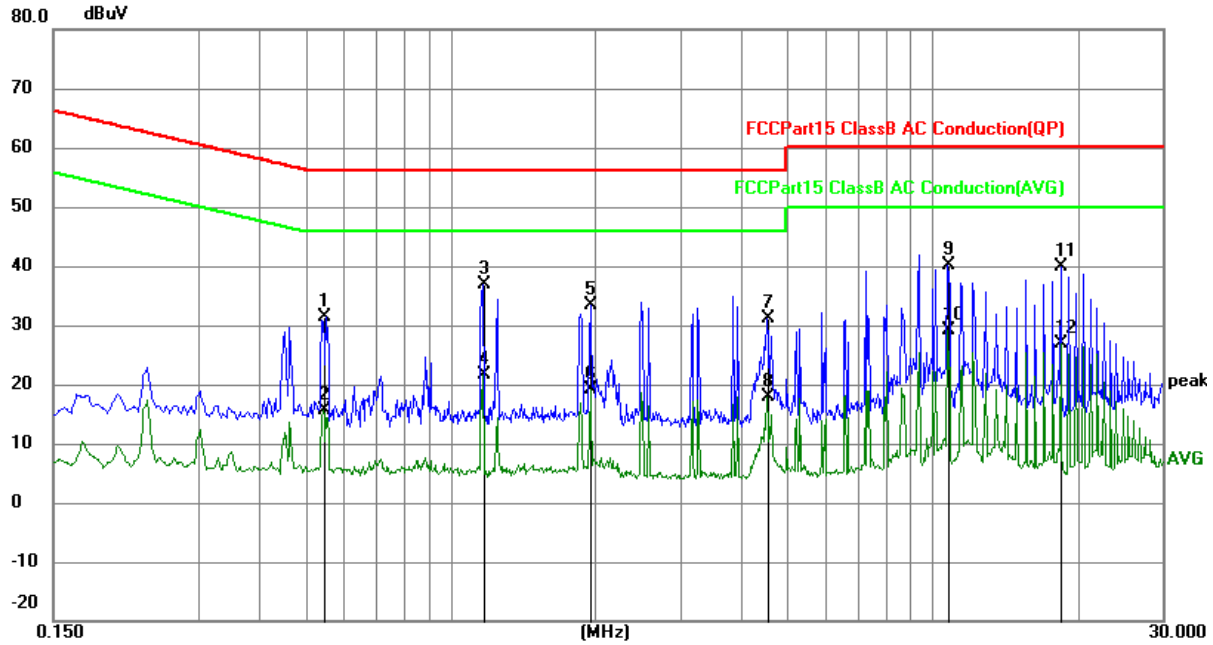
Note: 1. The test results are listed in next pages.

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 (AC 120V/ 60Hz) was listed in this report.

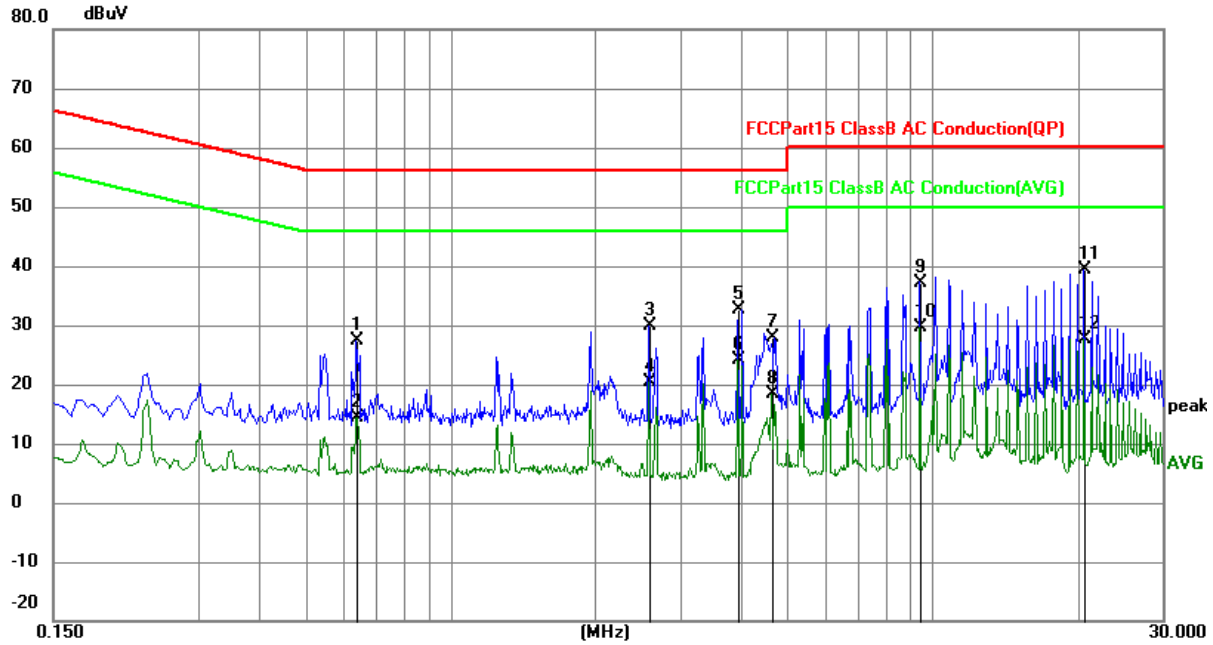
Polarization: L



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.5459	21.44	9.94	31.38	56.00	-24.62	QP
2	0.5459	5.80	9.94	15.74	46.00	-30.26	AVG
3	1.1669	27.00	9.94	36.94	56.00	-19.06	QP
4	1.1669	11.64	9.94	21.58	46.00	-24.42	AVG
5	1.9544	23.47	9.85	33.32	56.00	-22.68	QP
6	1.9544	9.24	9.85	19.09	46.00	-26.91	AVG
7	4.5465	21.41	9.84	31.25	56.00	-24.75	QP
8	4.5465	8.00	9.84	17.84	46.00	-28.16	AVG
9	10.7520	30.27	9.82	40.09	60.00	-19.91	QP
10	10.7520	19.26	9.82	29.08	50.00	-20.92	AVG
11	18.4875	30.26	9.70	39.96	60.00	-20.04	QP
12	18.4875	17.13	9.70	26.83	50.00	-23.17	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	0.6405	17.46	9.94	27.40	56.00	-28.60	QP
2	0.6405	4.36	9.94	14.30	46.00	-31.70	AVG
3	2.5935	20.10	9.85	29.95	56.00	-26.05	QP
4	2.5935	10.47	9.85	20.32	46.00	-25.68	AVG
5	3.9525	22.78	9.84	32.62	56.00	-23.38	QP
6	3.9525	14.32	9.84	24.16	46.00	-21.84	AVG
7	4.6320	18.12	9.84	27.96	56.00	-28.04	QP
8	4.6320	8.42	9.84	18.26	46.00	-27.74	AVG
9	9.4425	27.42	9.83	37.25	60.00	-22.75	QP
10	9.4425	19.69	9.83	29.52	50.00	-20.48	AVG
11	20.6924	29.82	9.66	39.48	60.00	-20.52	QP
12	20.6924	18.04	9.66	27.70	50.00	-22.30	AVG

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

5. Out-of-band Emissions

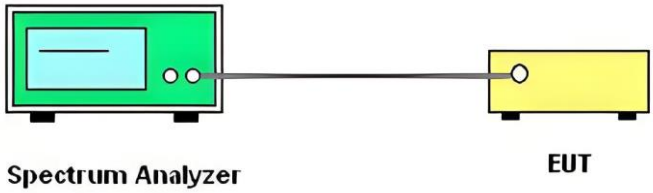
5.1. Test Limits

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 Section 11.11.1, Section 11.11.2, Section 11.11.3
Connect the transmitter ouput to spectrum analvzer using a low loss RF cable, and set the spectrum analvzerto RBW=100 kHz, VBW= 300 kHz, peak detector, and max hold. Measurements utilizing these setting aremade of the in-band reference level, bandedge and out-of-band emissions.

5.3. Test Setup



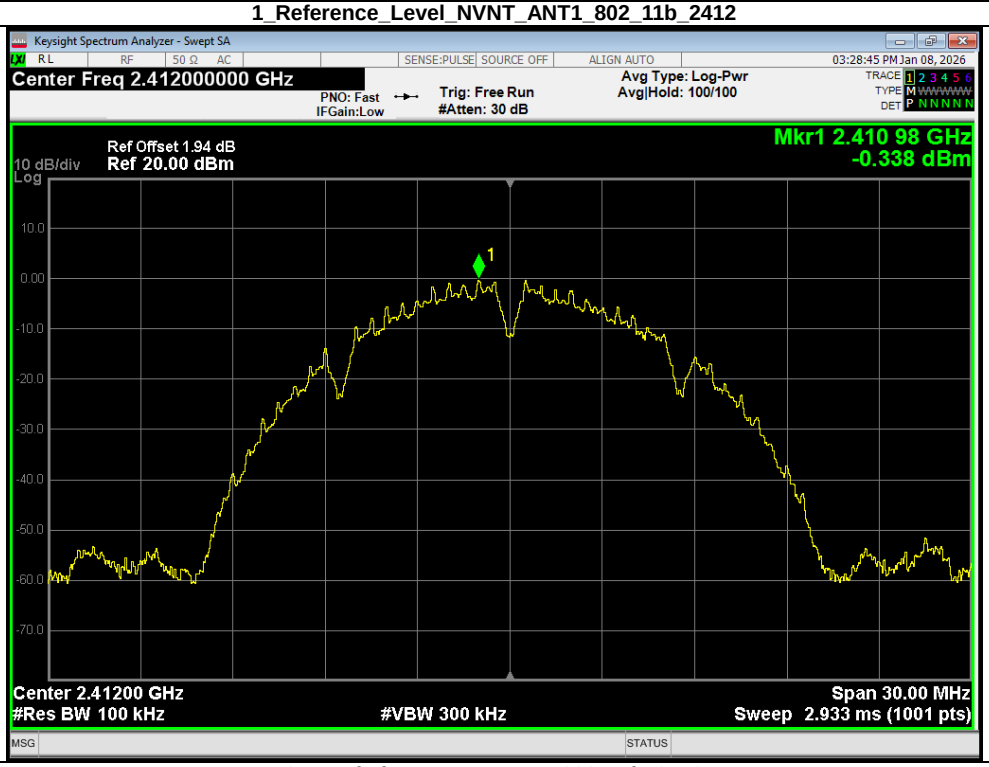
5.4. Test Results

PASS.

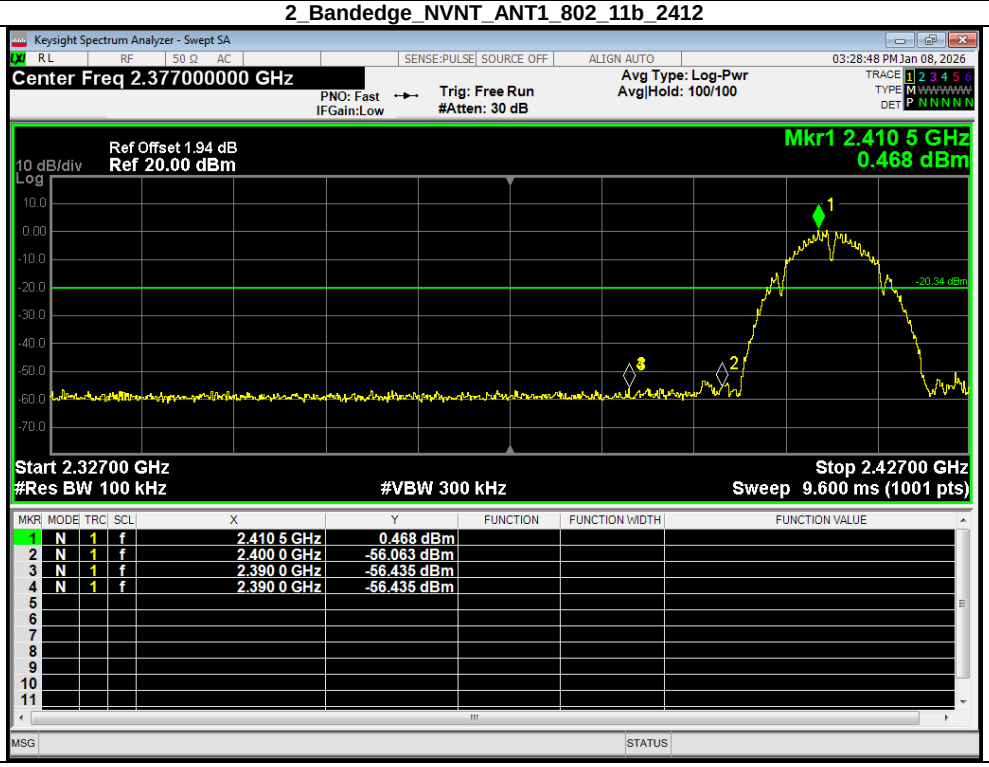
The test results are listed in next pages.

Band Edge: Pass.

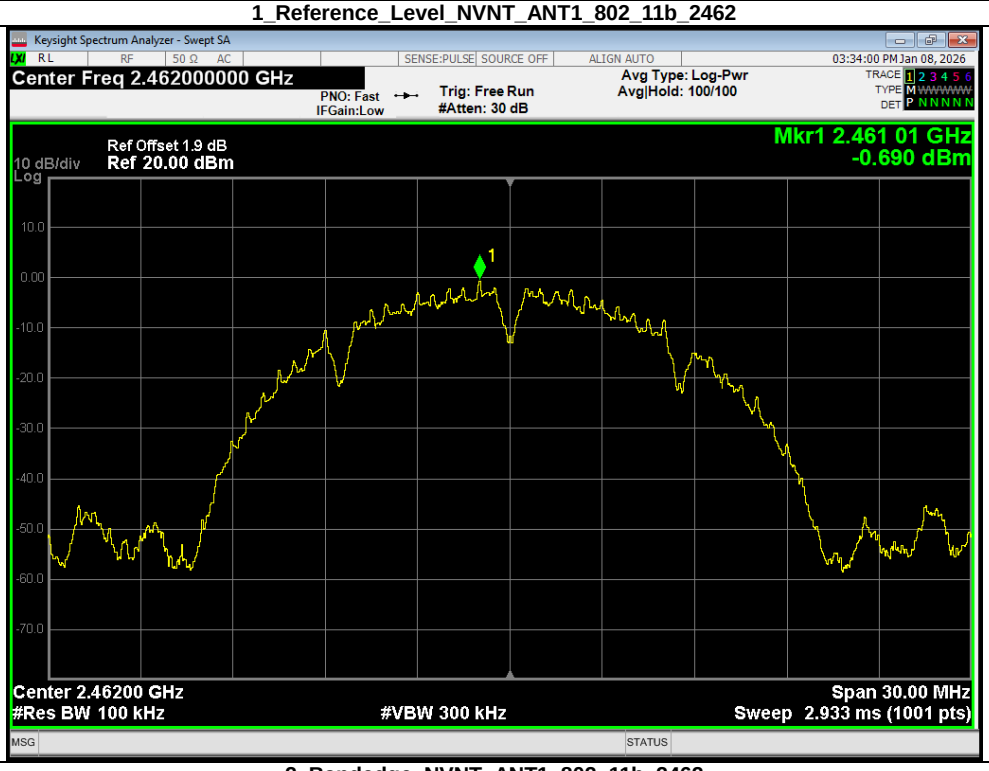
1_Reference_Level_NVNT_ANT1_802_11b_2412



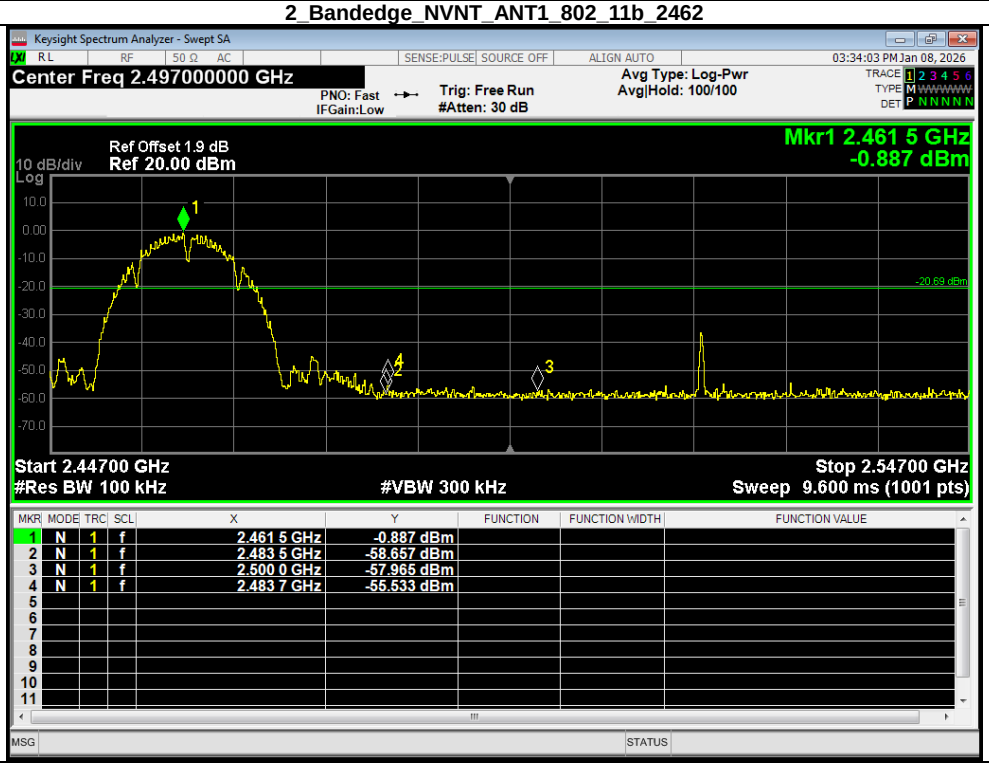
2_Bandedge_NVNT_ANT1_802_11b_2412



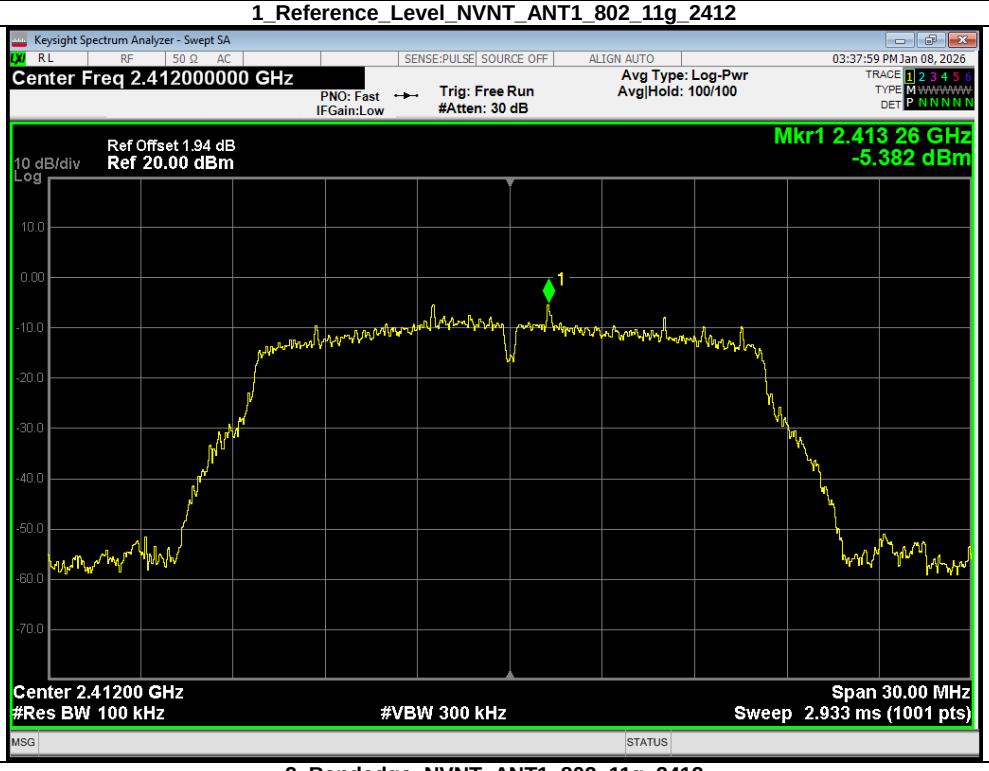
1_Reference_Level_NVNT_ANT1_802_11b_2462



2_Bandedge_NVNT_ANT1_802_11b_2462



1_Reference_Level_NVNT_ANT1_802_11g_2412



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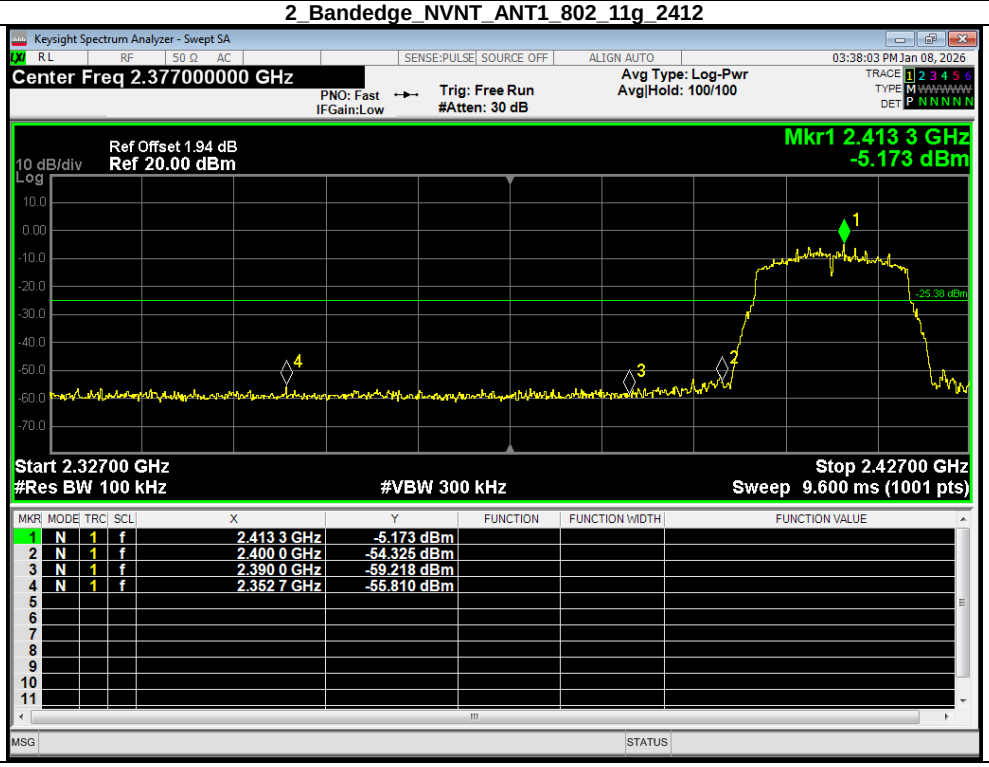

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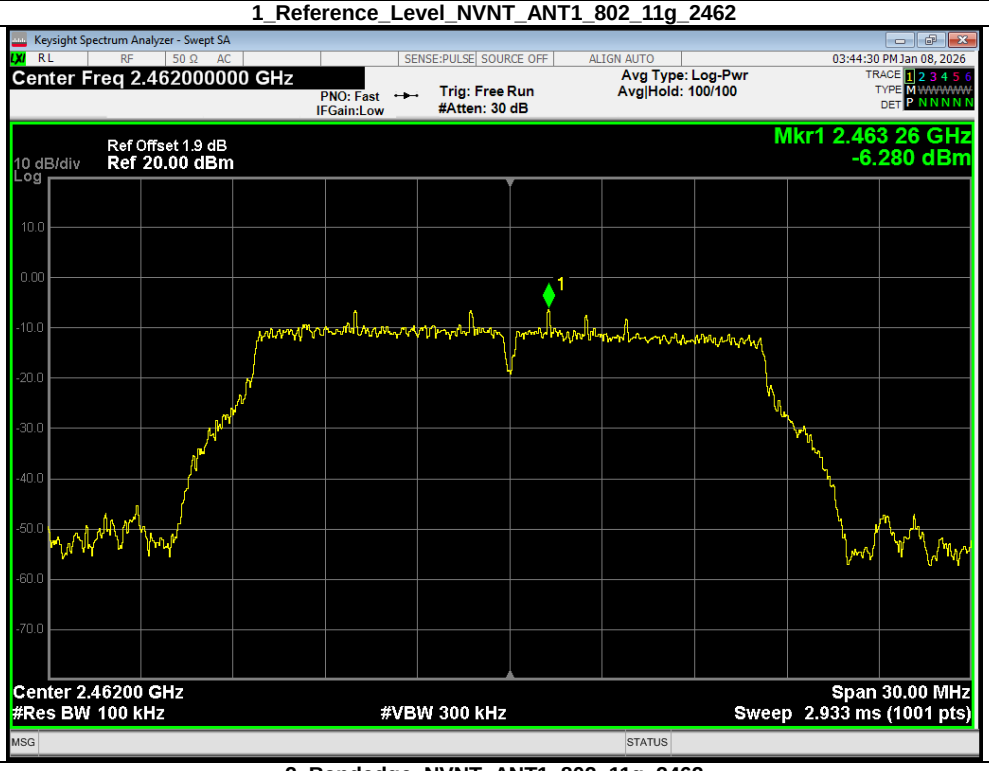
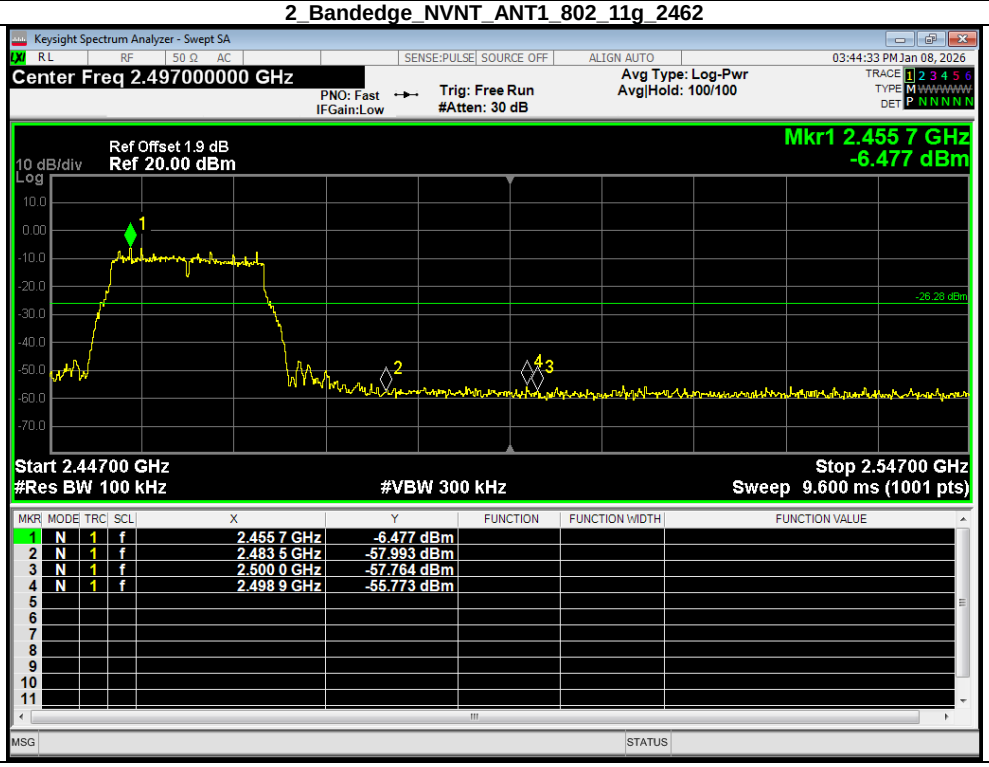
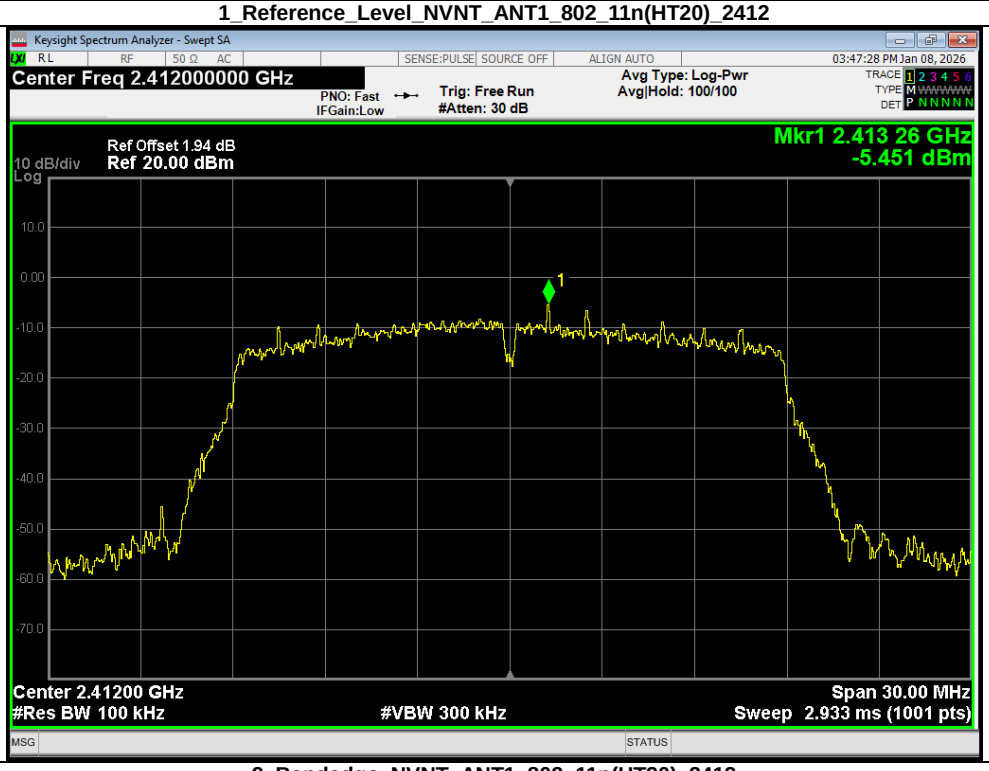


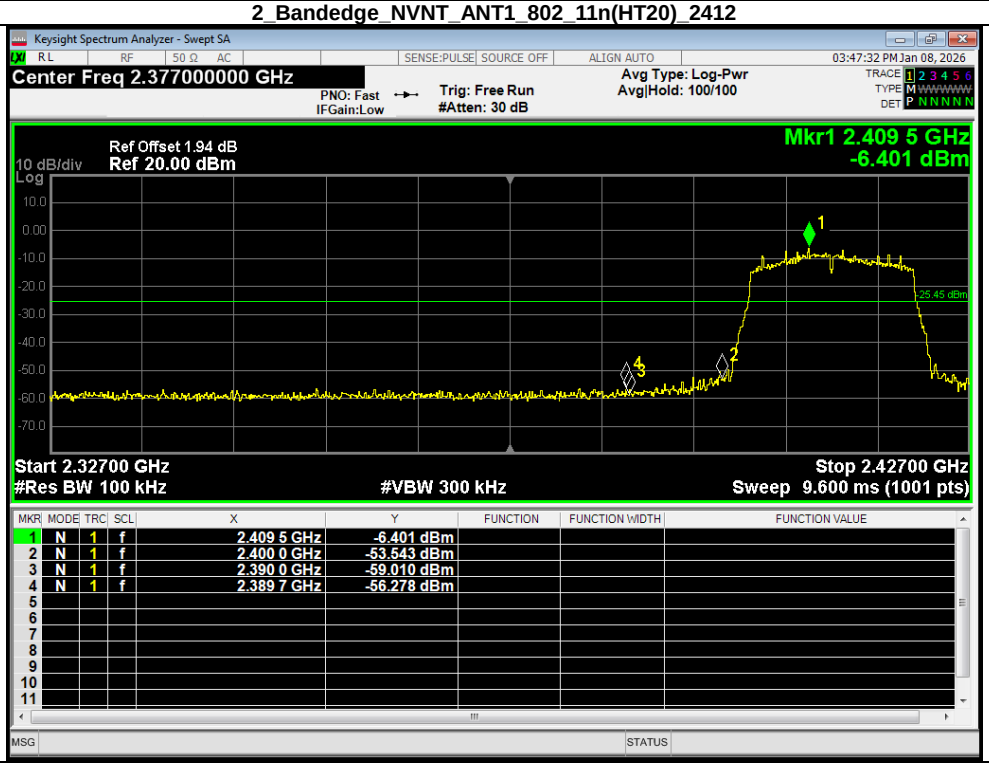
2_Bandedge_NVNT_ANT1_802_11g_2462



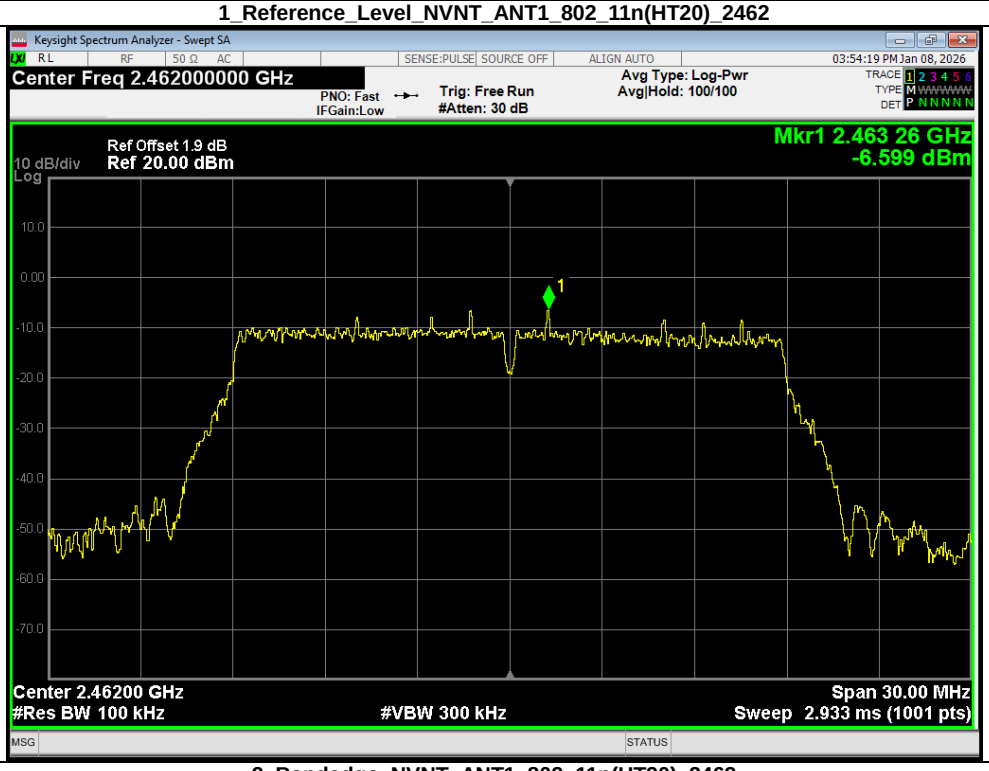
1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2412



2_Bandedge_NVNT_ANT1_802_11n(HT20)_2412



1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2462



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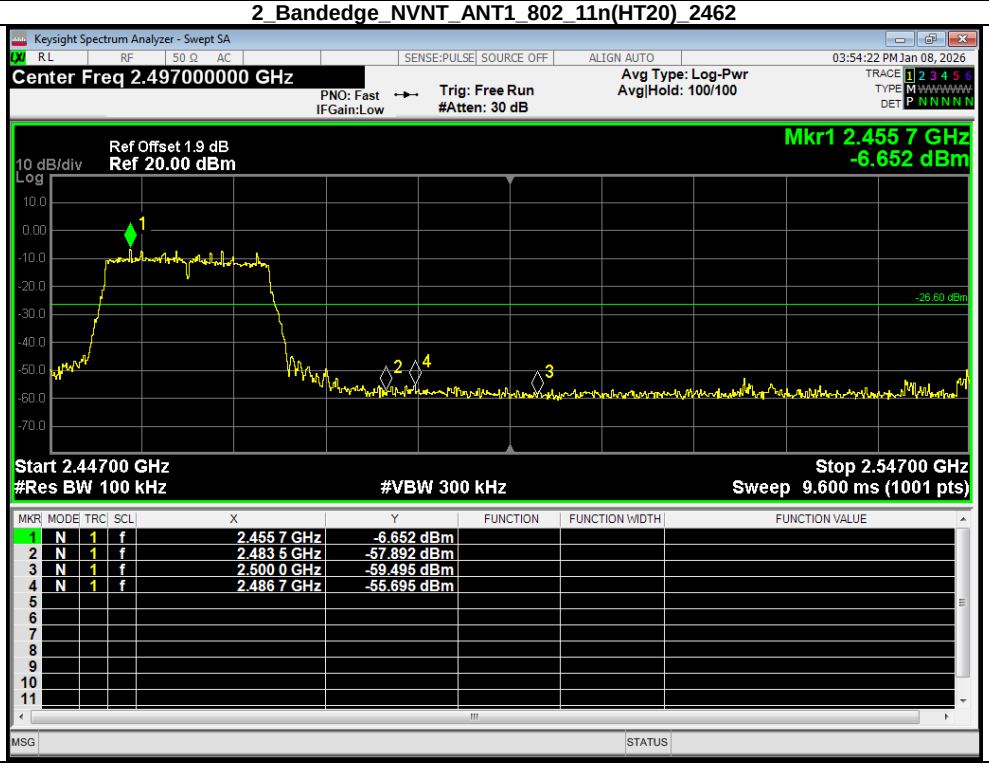
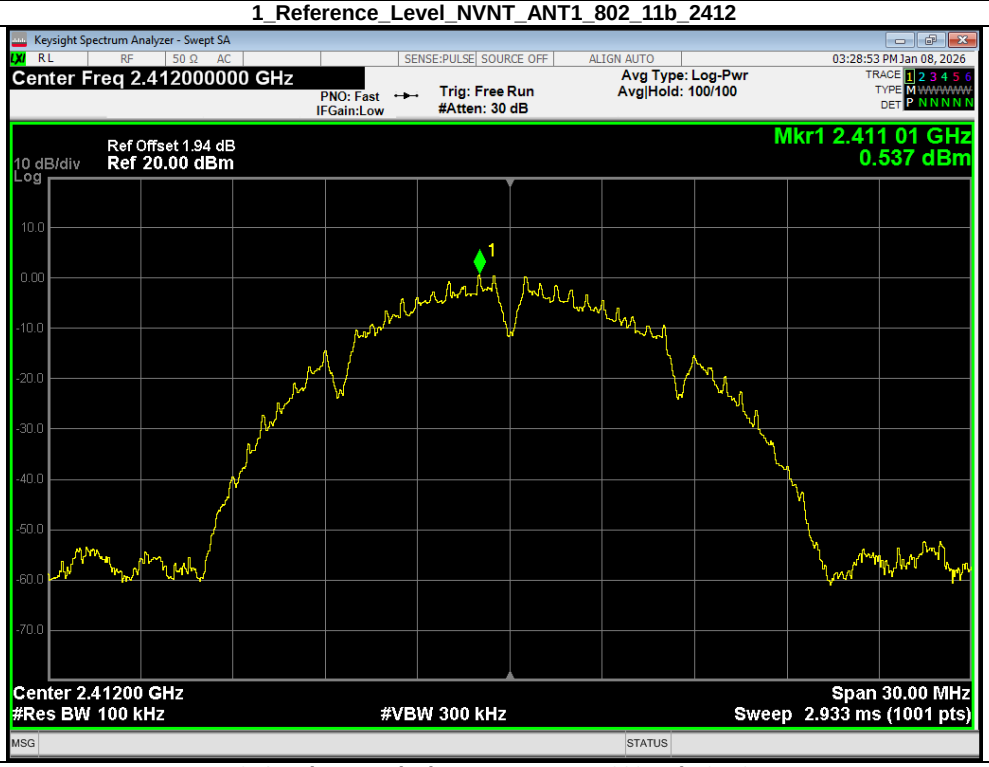
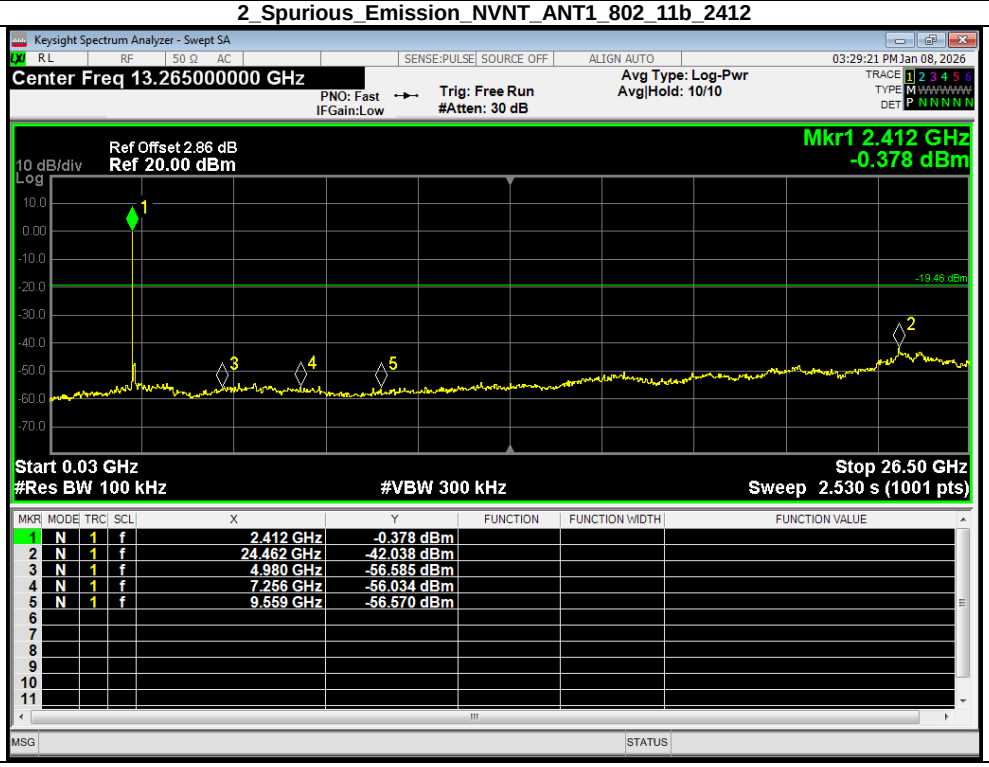


Conducted spurious emission: Pass.

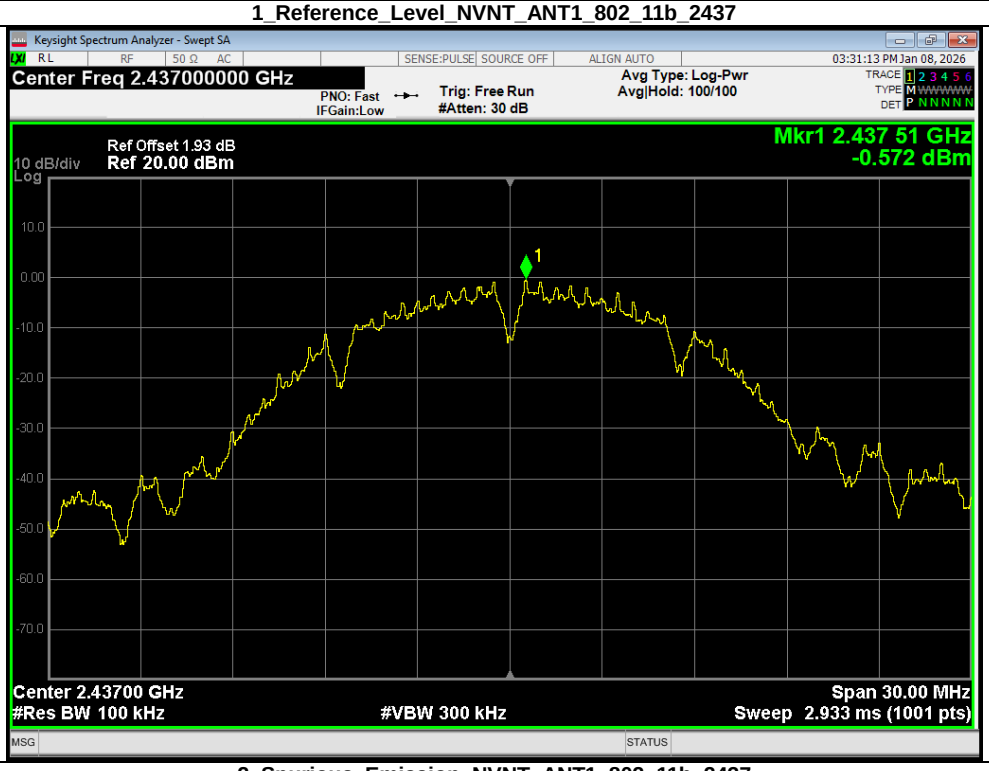
1_Reference_Level_NVNT_ANT1_802_11b_2412



2_Spurious_Emission_NVNT_ANT1_802_11b_2412



1_Reference_Level_NVNT_ANT1_802_11b_2437



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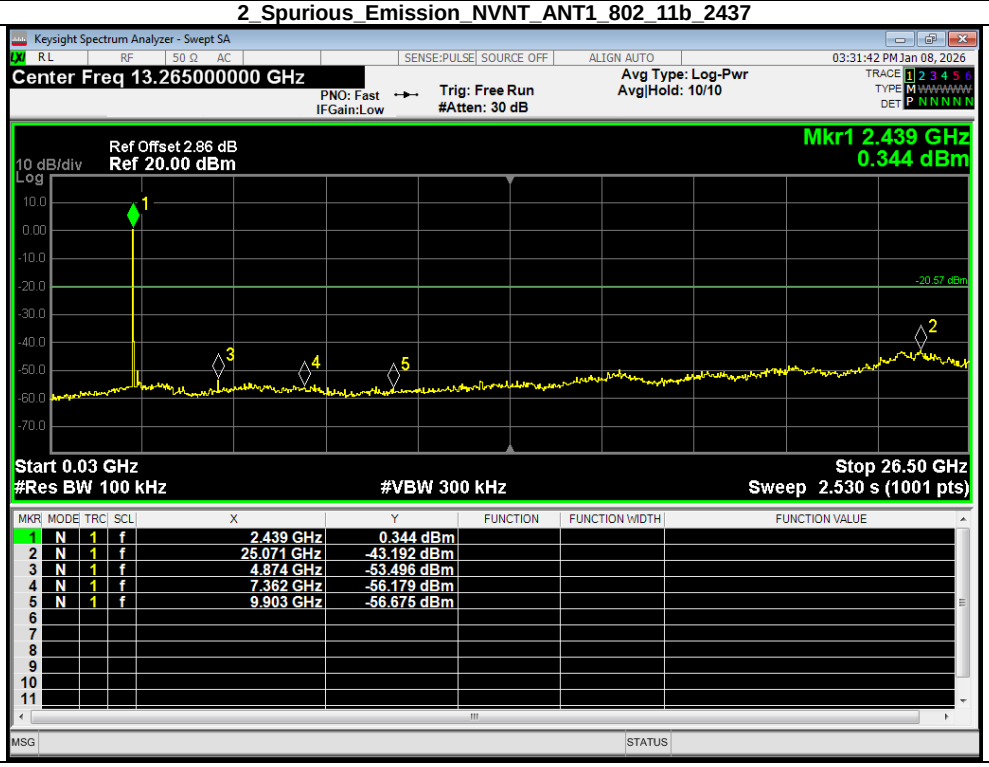
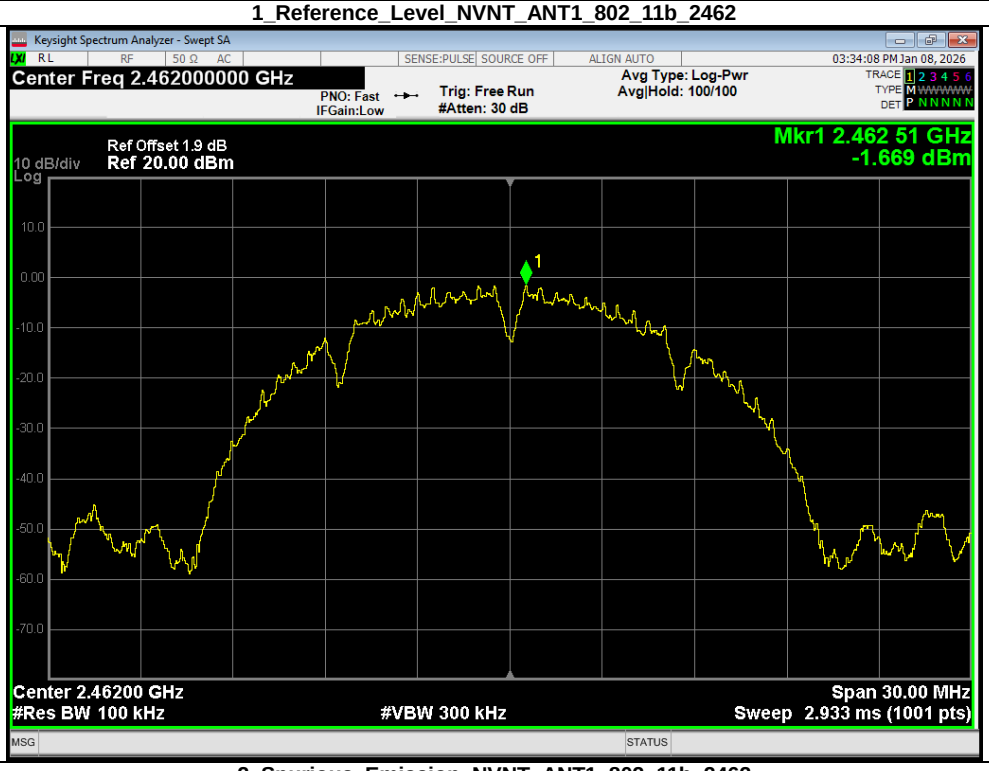
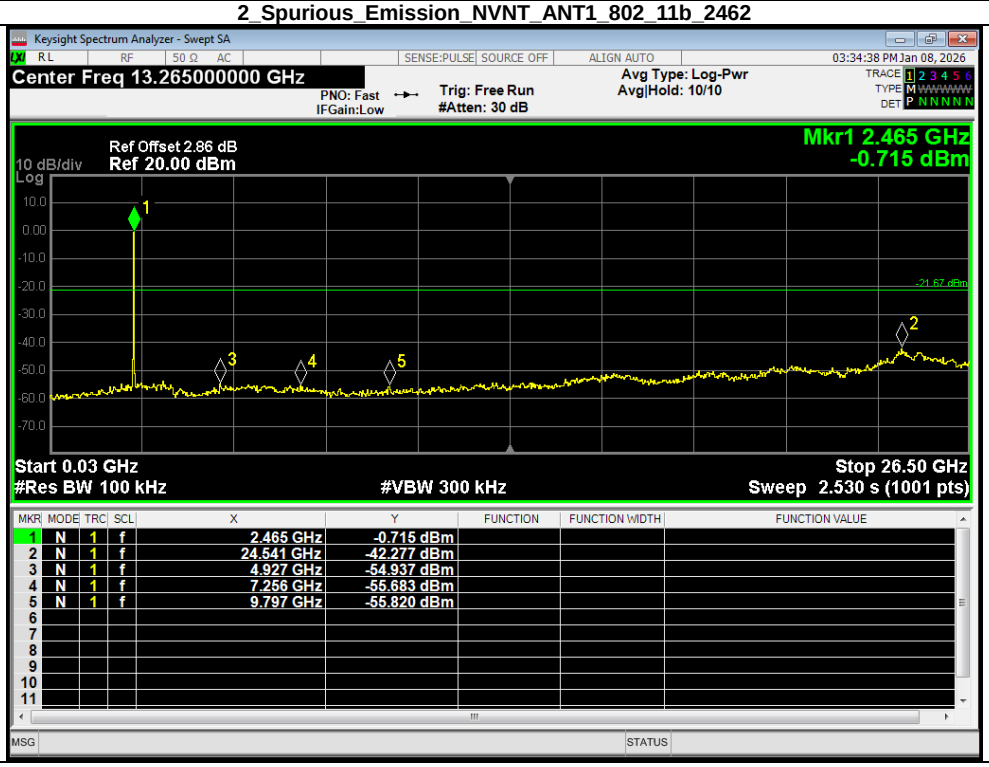


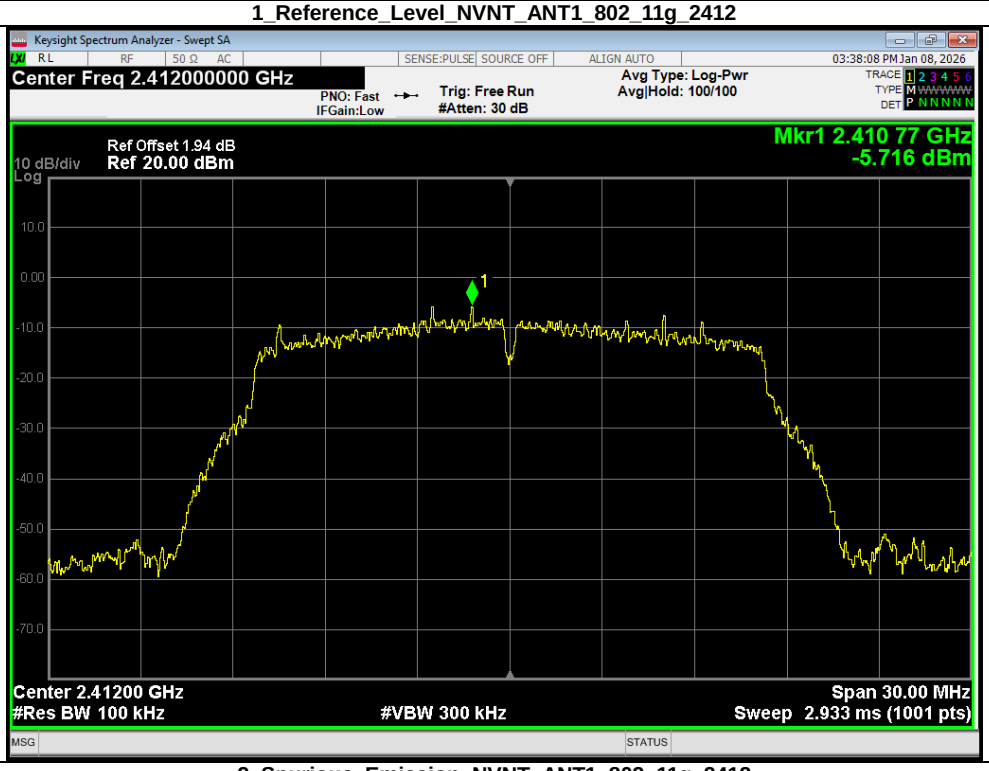
1_Reference_Level_NVNT_ANT1_802_11b_2462



2_Spurious_Emission_NVNT_ANT1_802_11b_2462



1_Reference_Level_NVNT_ANT1_802_11g_2412



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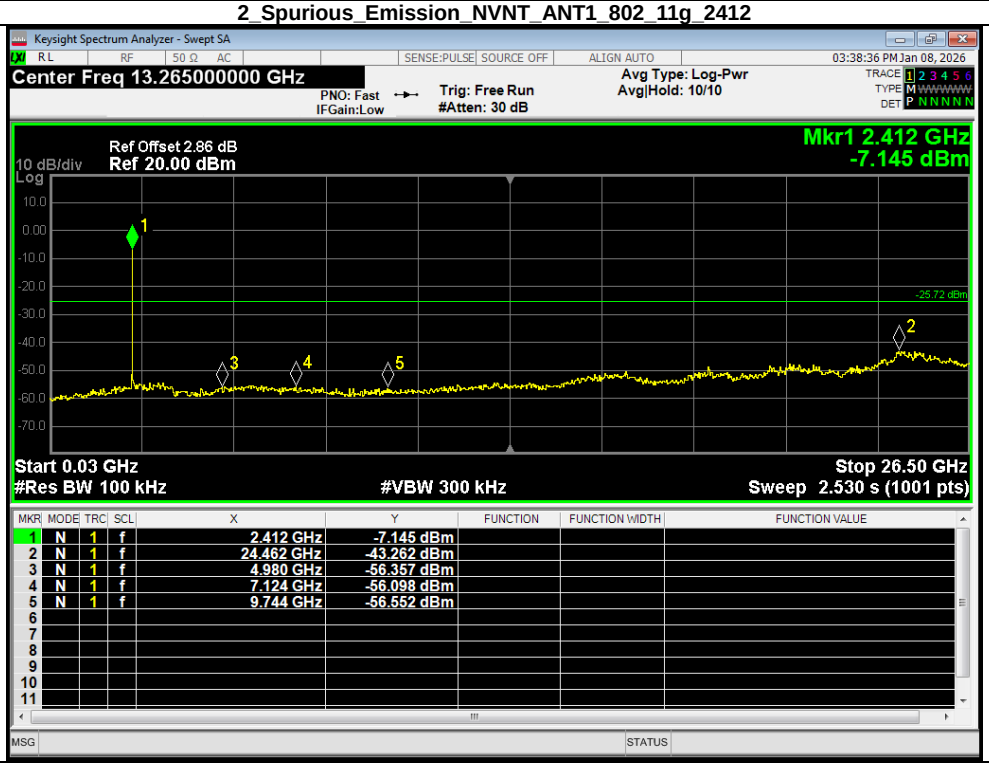

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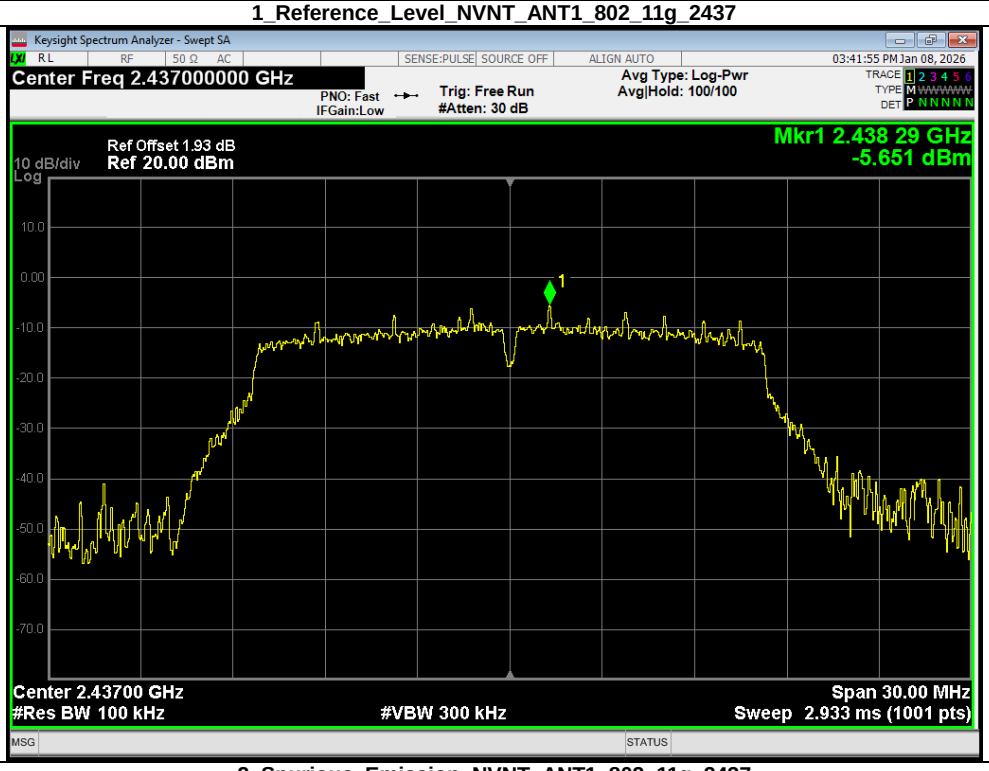

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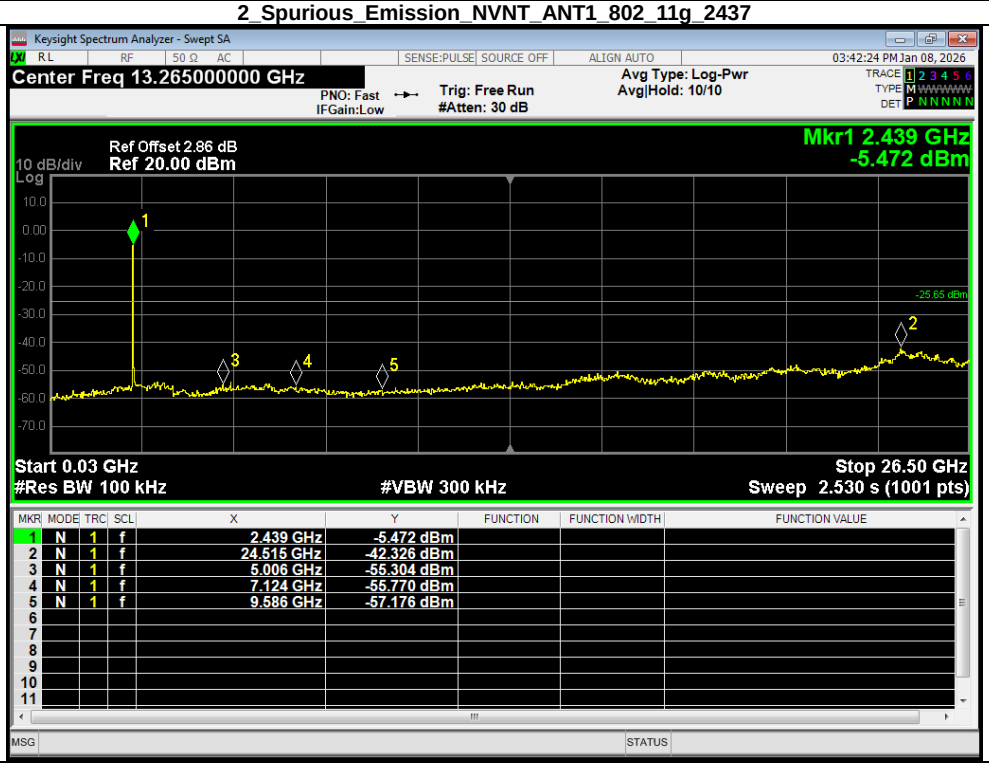

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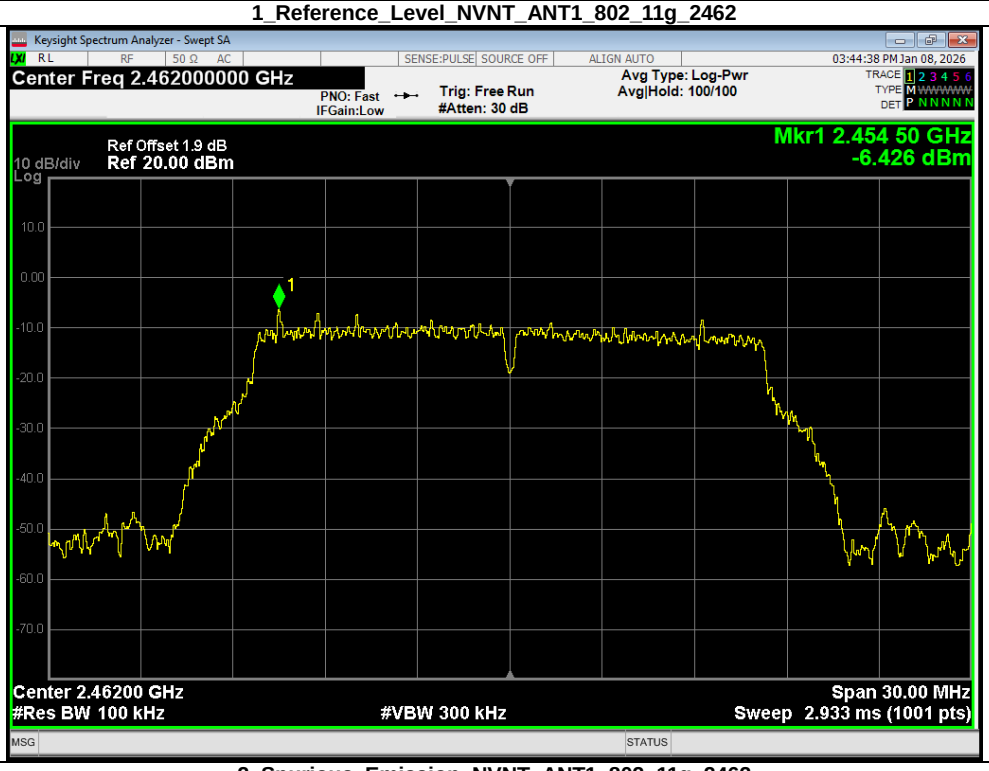

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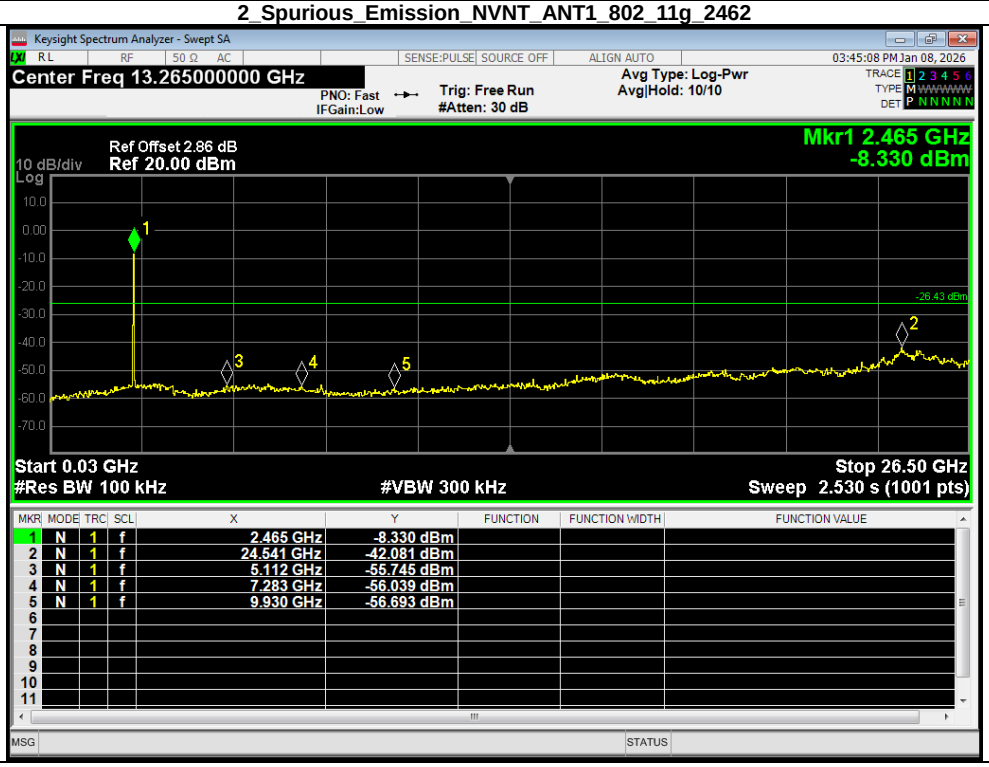
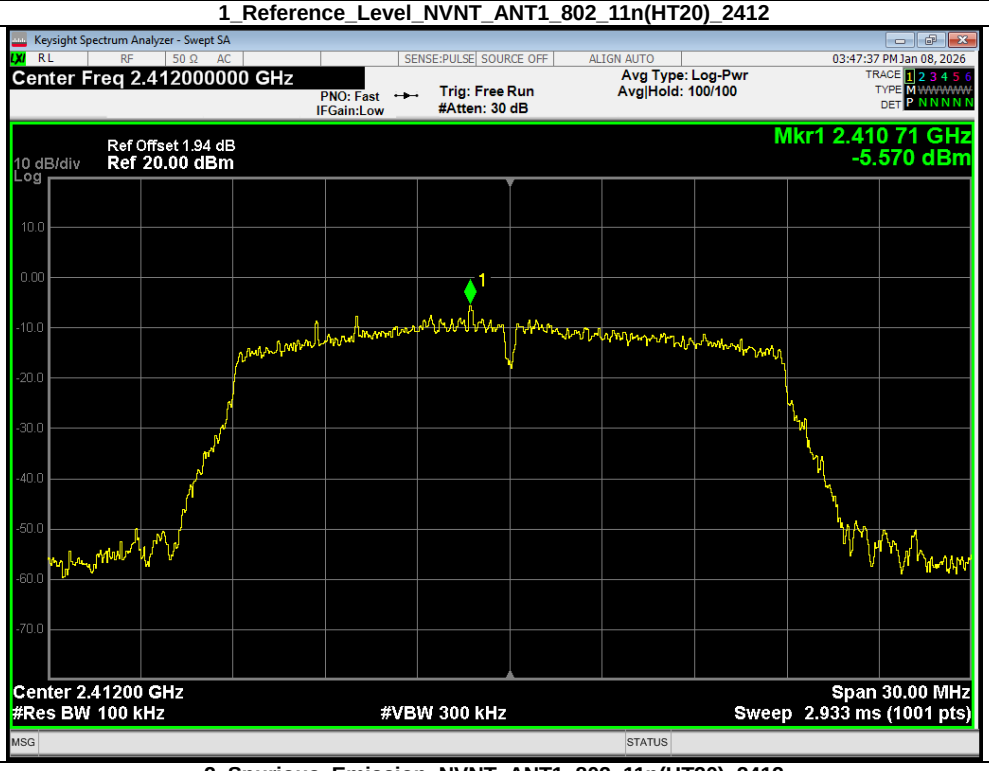
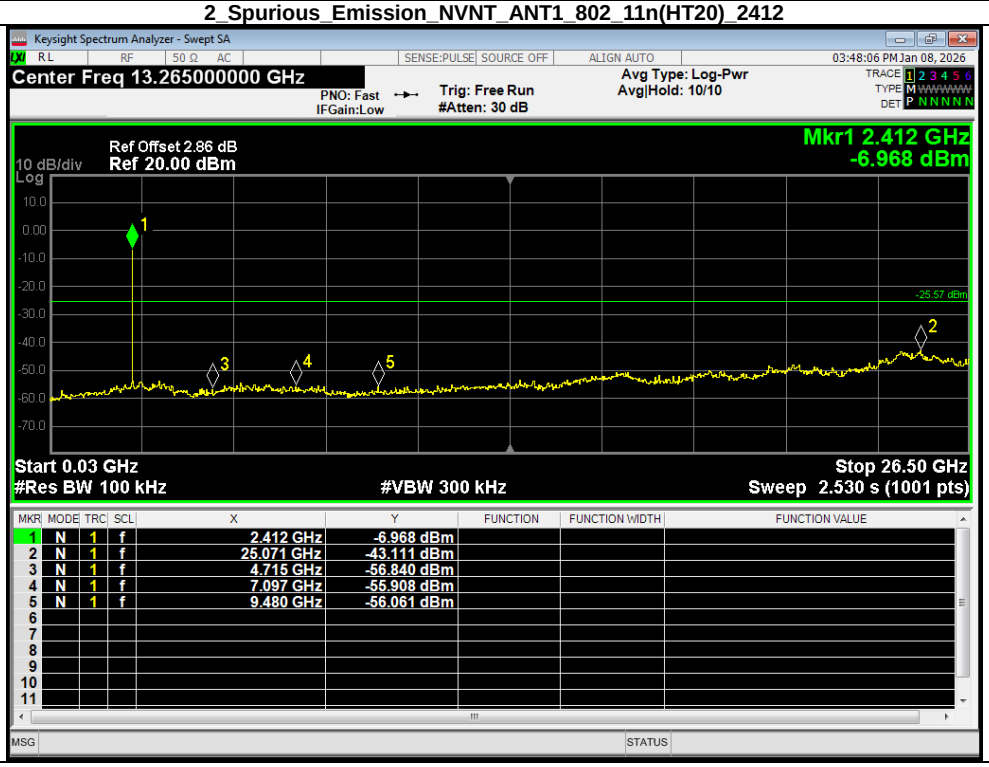


1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2412



2_Spurious_Emission_NVNT_ANT1_802_11n(HT20)_2412



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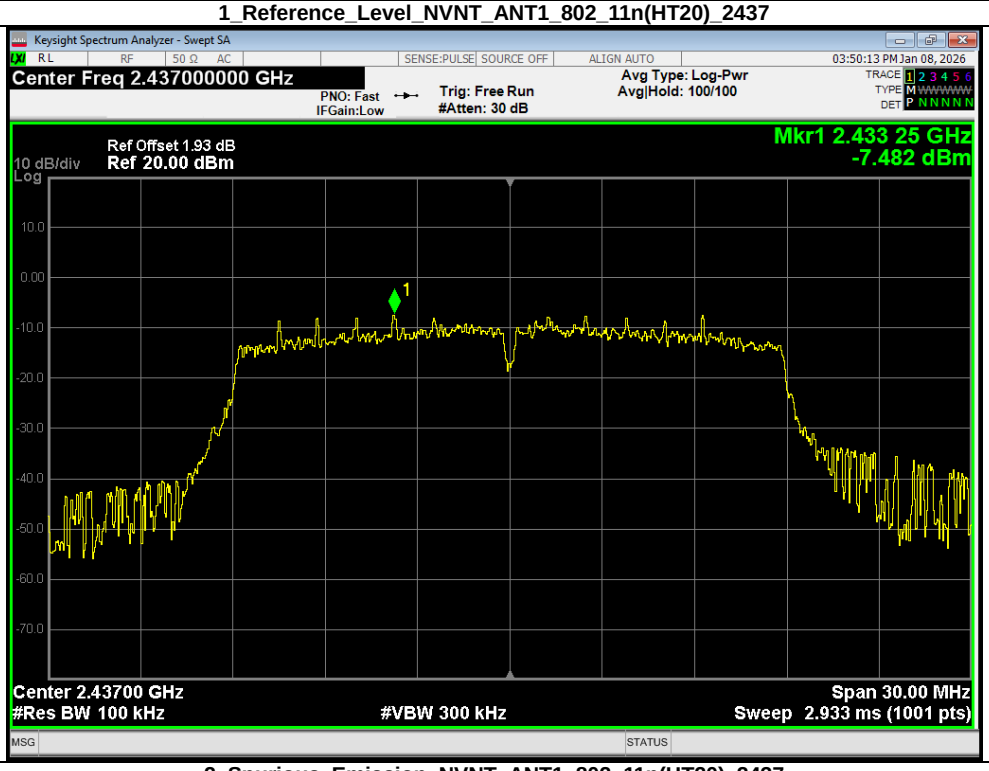
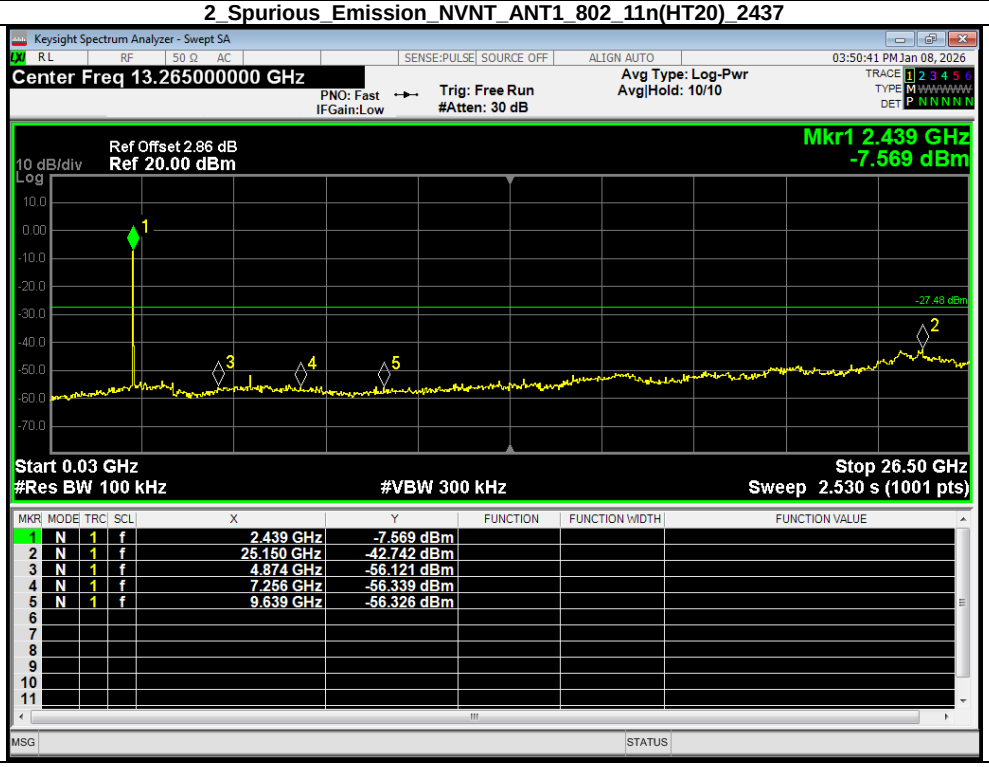
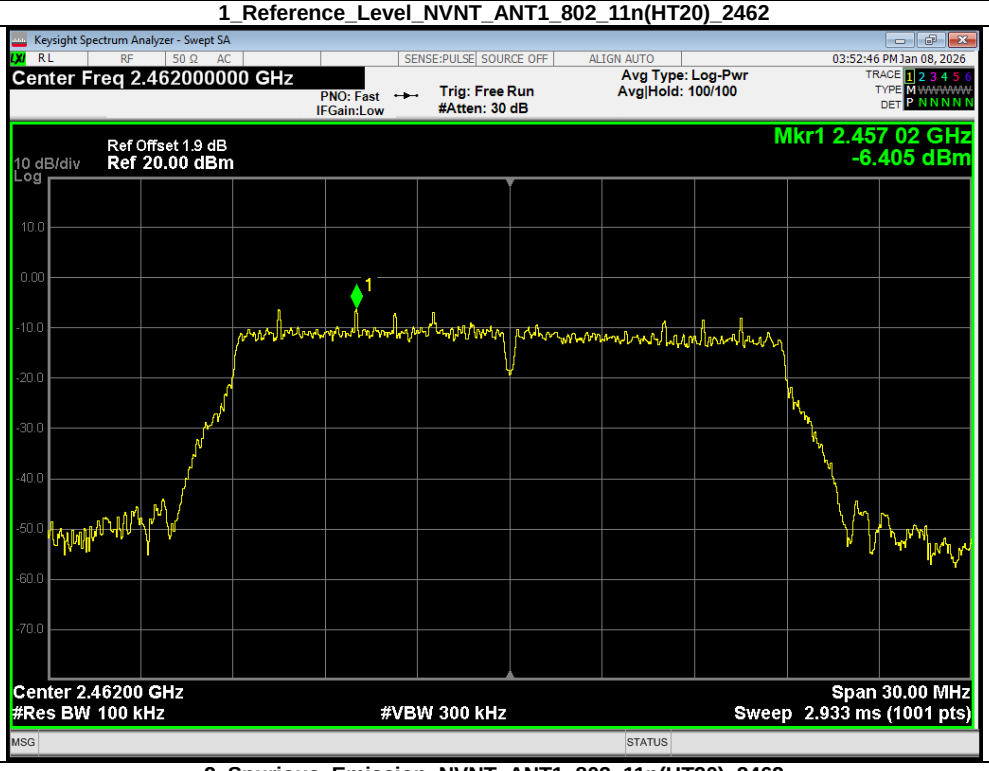


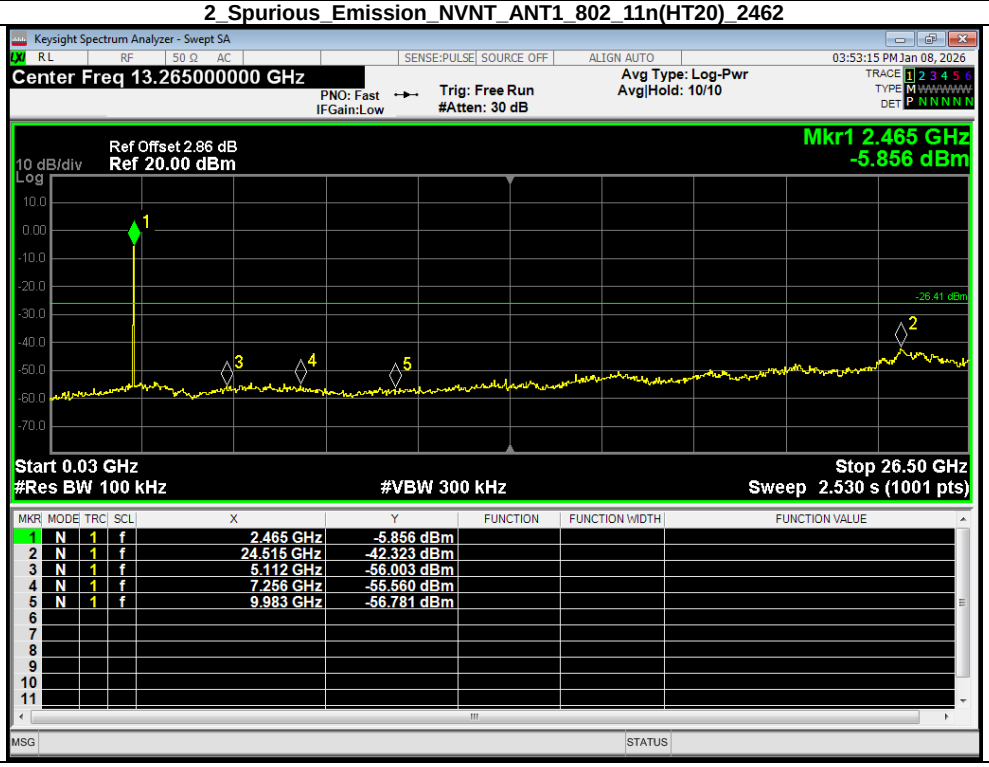
2_Spurious_Emission_NVNT_ANT1_802_11n(HT20)_2437



1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2462



2_Spurious_Emission_NVNT_ANT1_802_11n(HT20)_2462



6. Conducted Maximum Output Power

6.1. Test limits

Please refer FCC PART 15.247.

Regulation 15.247(b) The limit of Maximum Peak Output Power Measurement is 1 W(30dBm)

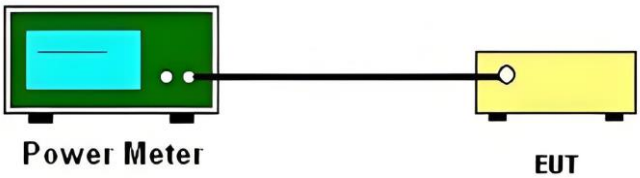
6.2. Test Procedure

Details see the KDB558074 D01 Meas Guidance v05r02

1. Place the EUT on the table and set it in transmitting mode.
2. Connected the EUT's antenna port to peak power meter by 20dB attenuator.
3. Measure out each mode and each bands peak output power of EUT.

Note: The cable loss and attenuator loss were offset into measure device as amplitude offset.

6.3. Test Setup



6.4. Test Results

Condition	Antenna	Modulation	Frequency (MHz)	Detector	Conducted Power(dBm)	Duty factor(dB)	Total Power(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	Peak	9.43	N/A	9.43	30	Pass
NVNT	ANT1	802.11b	2437.00	Peak	9.44	N/A	9.44	30	Pass
NVNT	ANT1	802.11b	2462.00	Peak	9.07	N/A	9.07	30	Pass
NVNT	ANT1	802.11g	2412.00	Peak	9.23	N/A	9.23	30	Pass
NVNT	ANT1	802.11g	2437.00	Peak	9.14	N/A	9.14	30	Pass
NVNT	ANT1	802.11g	2462.00	Peak	9.15	N/A	9.15	30	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	Peak	9.04	N/A	9.04	30	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	Peak	8.99	N/A	8.99	30	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	Peak	9.15	N/A	9.15	30	Pass

7. Peak Power Spectral Density

7.1. Test limits

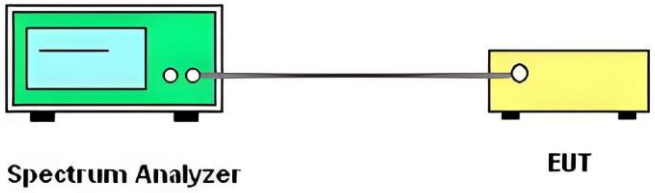
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of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

7.2. Test Procedure

Details see the KDB558074 D01 Meas Guidance v05r02

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW = 30kHz(Set the RBW to: 3 kHz≤RBW≤100 kHz.), VBW = 300kHz(Set the VBW≥3×RBW), span≥1.5×DTS bandwidth., detail see the test plot.
4. Record the max reading.
5. Repeat the above procedure until the measurements for all frequencies are completed.

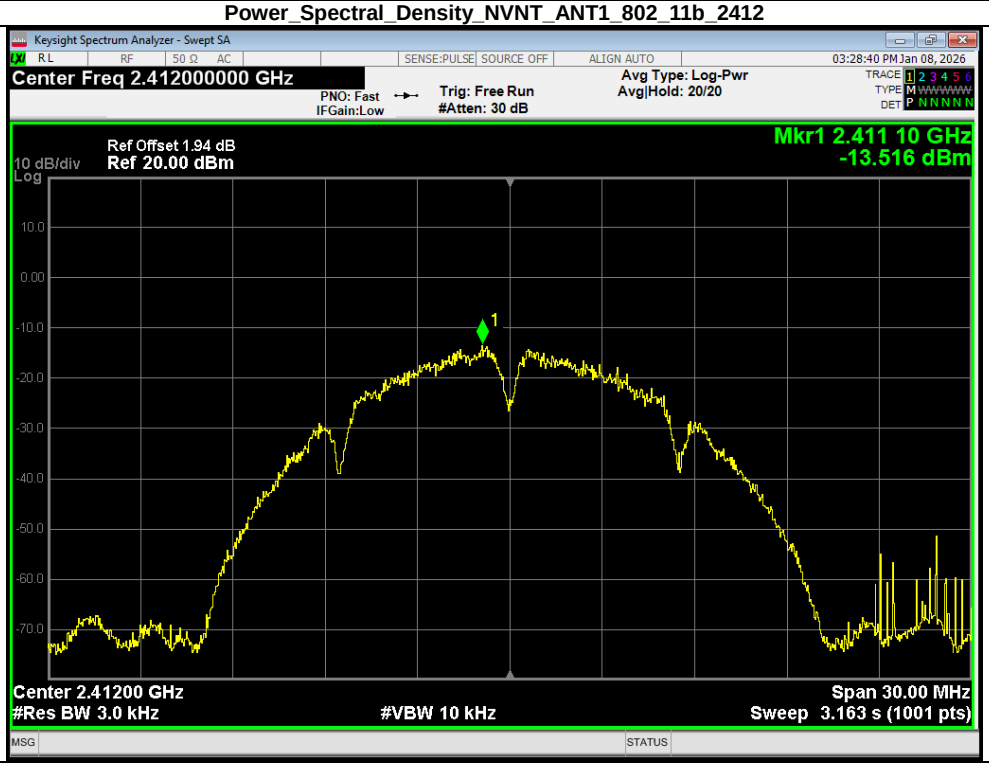
7.3. Test Setup



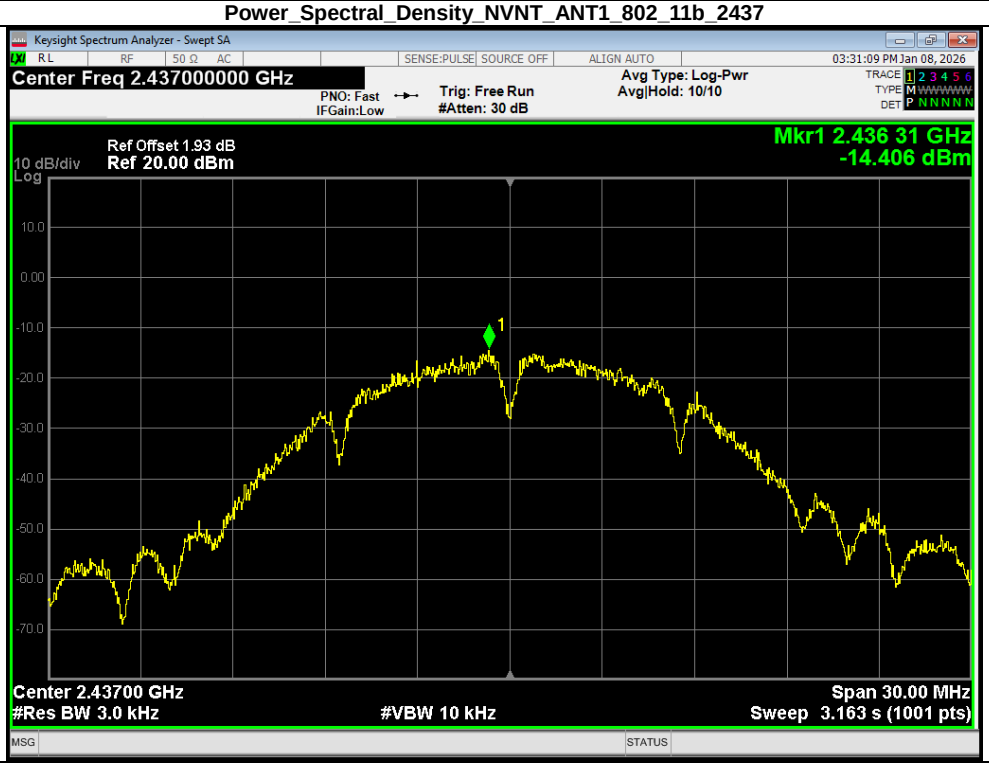
7.4. Test Results

Condition	Antenna	Modulation	Frequency (MHz)	SA_PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
NVNT	ANT1	802.11b	2412.00	-13.516	8	Pass
NVNT	ANT1	802.11b	2437.00	-14.406	8	Pass
NVNT	ANT1	802.11b	2462.00	-14.332	8	Pass
NVNT	ANT1	802.11g	2412.00	-18.741	8	Pass
NVNT	ANT1	802.11g	2437.00	-19.985	8	Pass
NVNT	ANT1	802.11g	2462.00	-19.648	8	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	-18.447	8	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	-20.519	8	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	-20.176	8	Pass

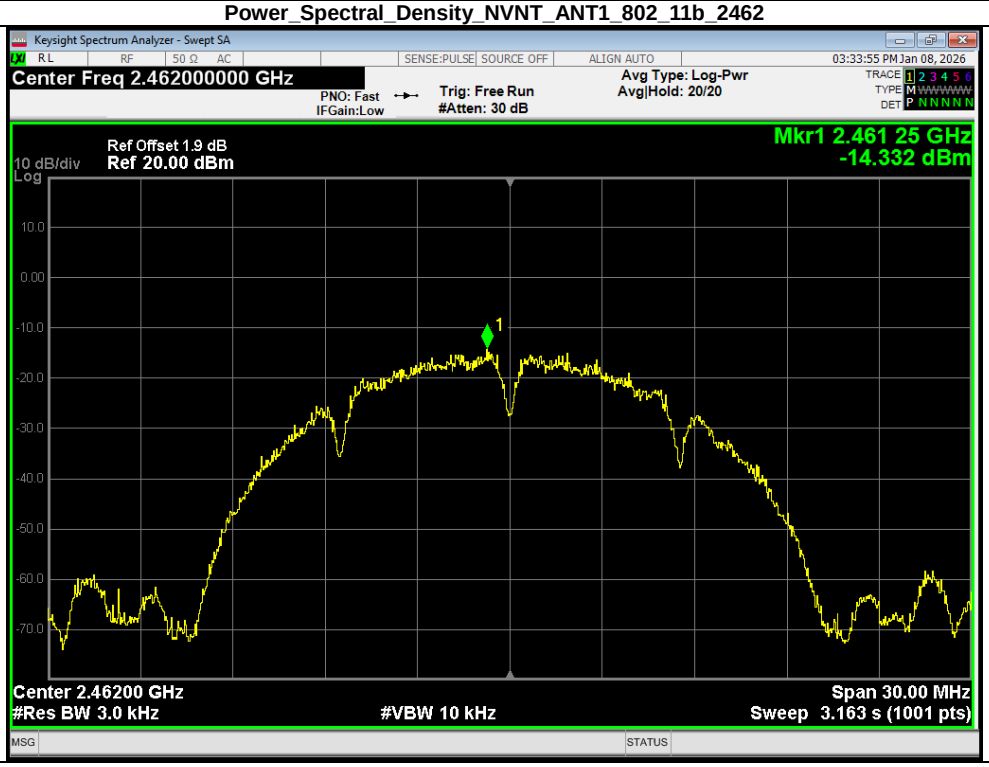
Power_Spectral_Density_NVNT_ANT1_802_11b_2412



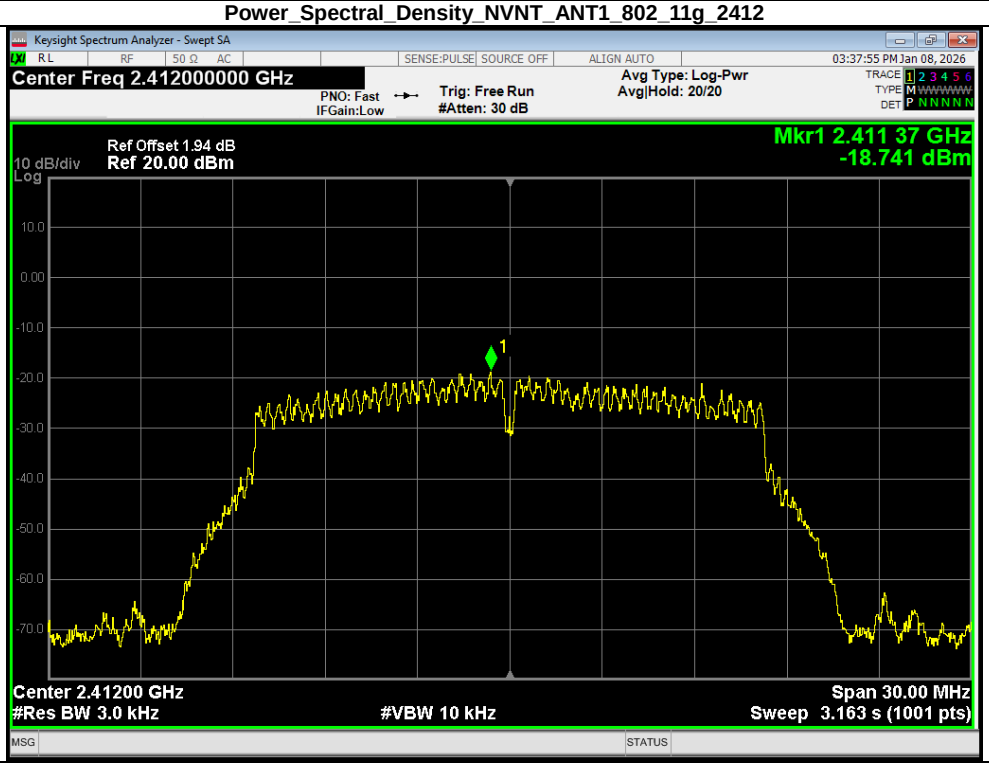
Power_Spectral_Density_NVNT_ANT1_802_11b_2437



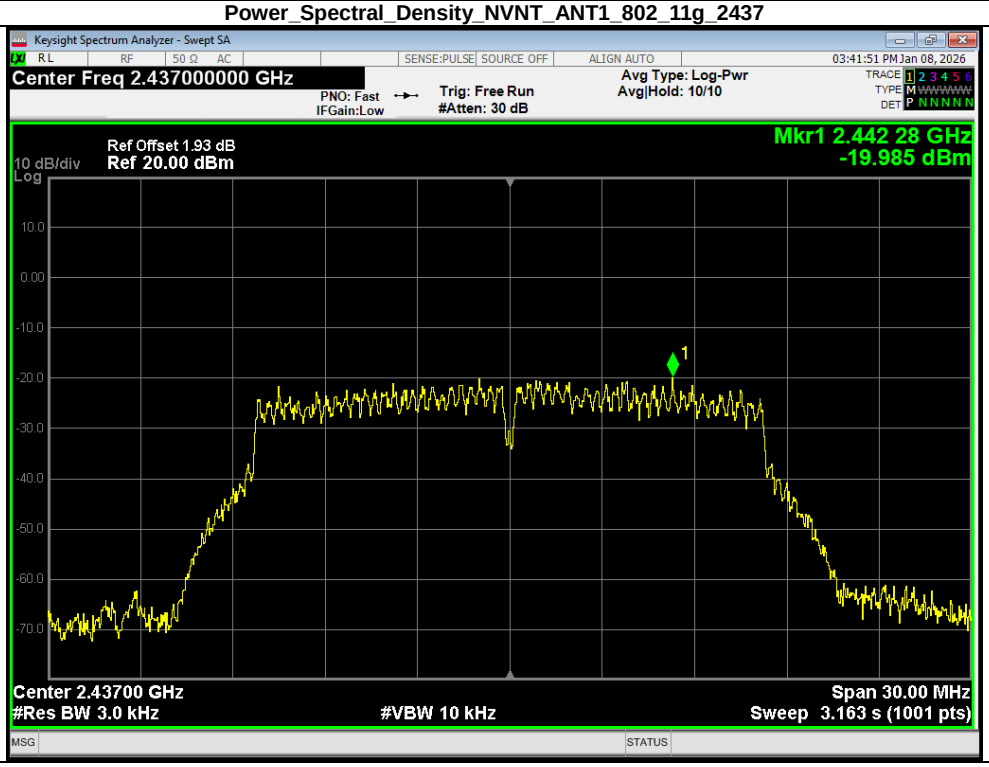
Power_Spectral_Density_NVNT_ANT1_802_11b_2462



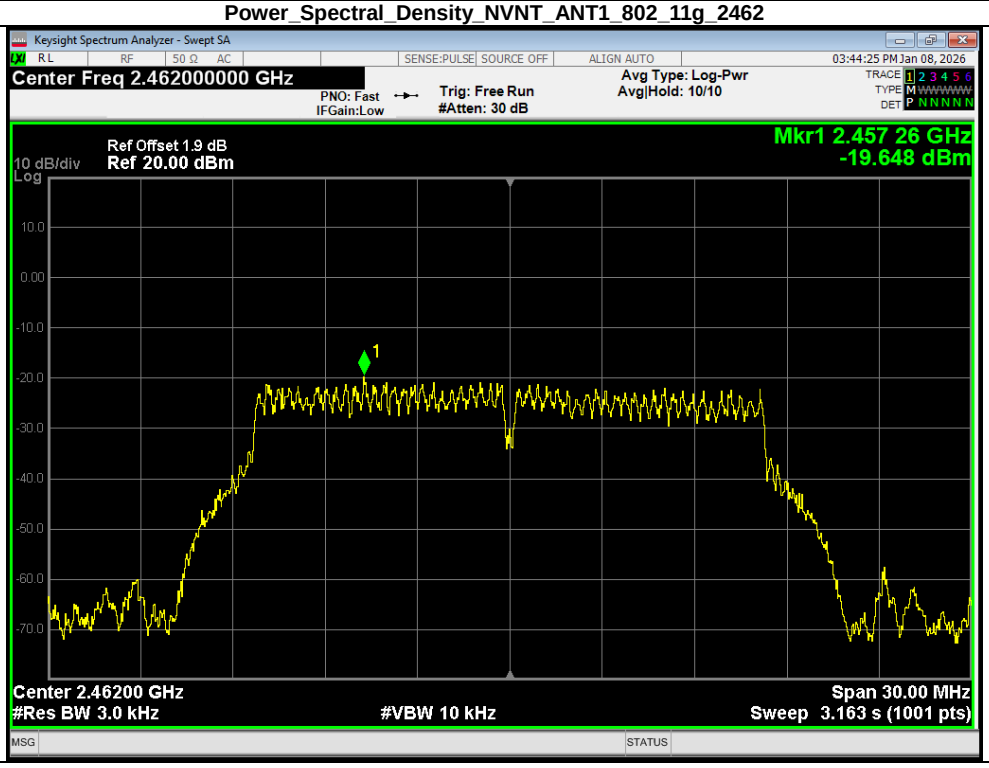
Power_Spectral_Density_NVNT_ANT1_802_11g_2412



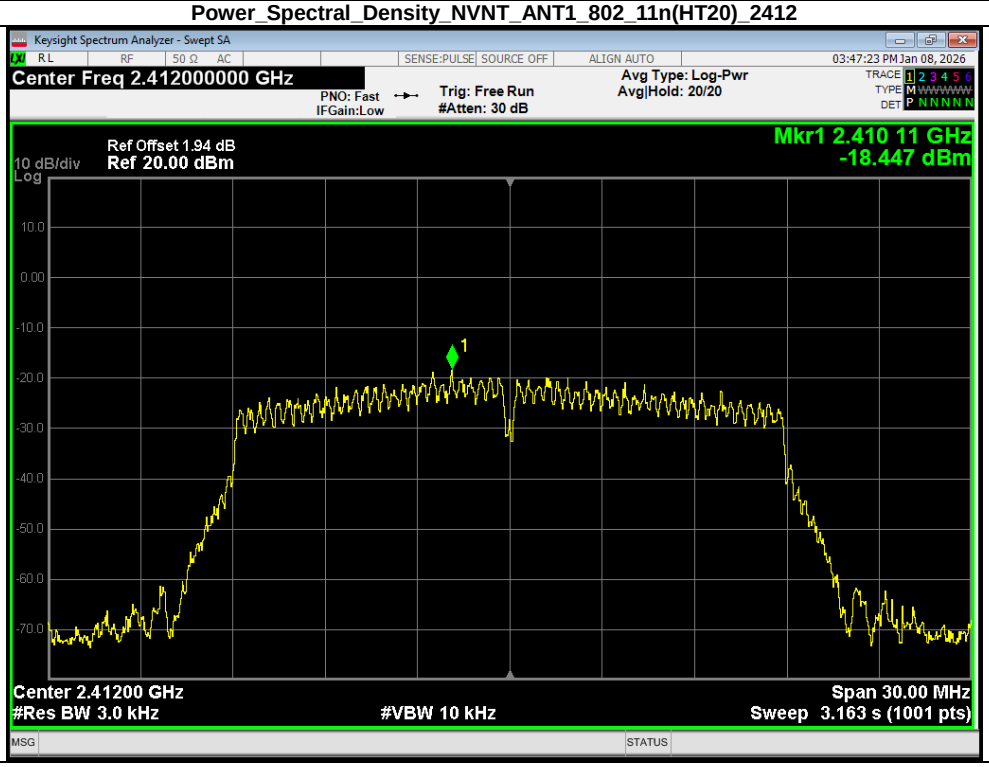
Power_Spectral_Density_NVNT_ANT1_802_11g_2437



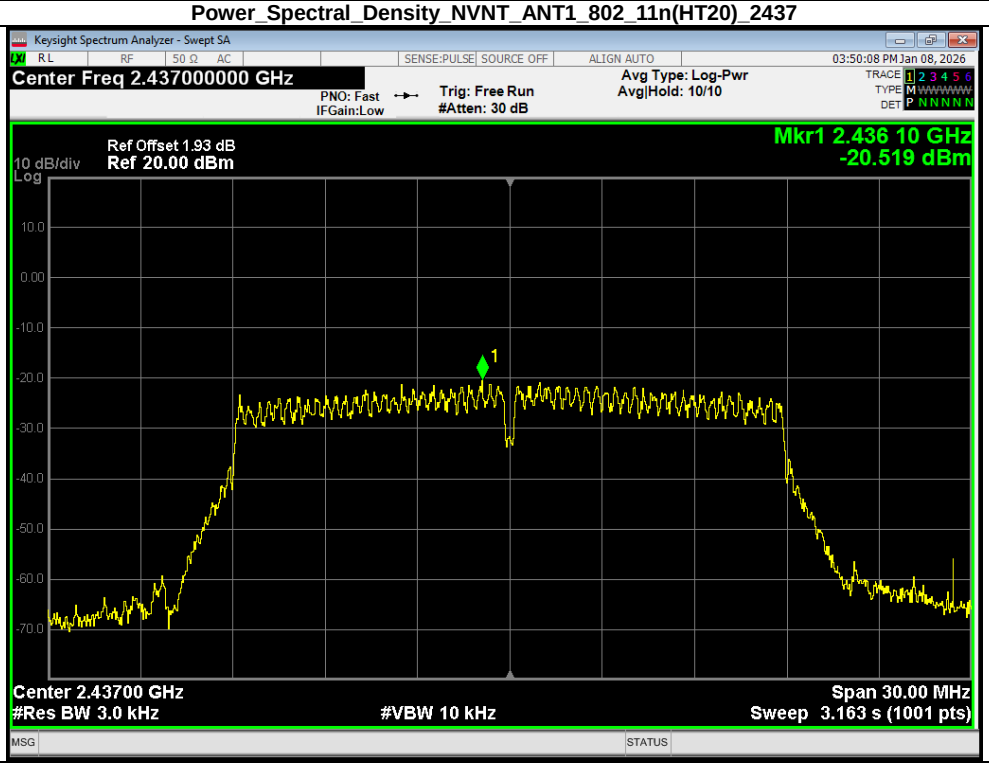
Power_Spectral_Density_NVNT_ANT1_802_11g_2462



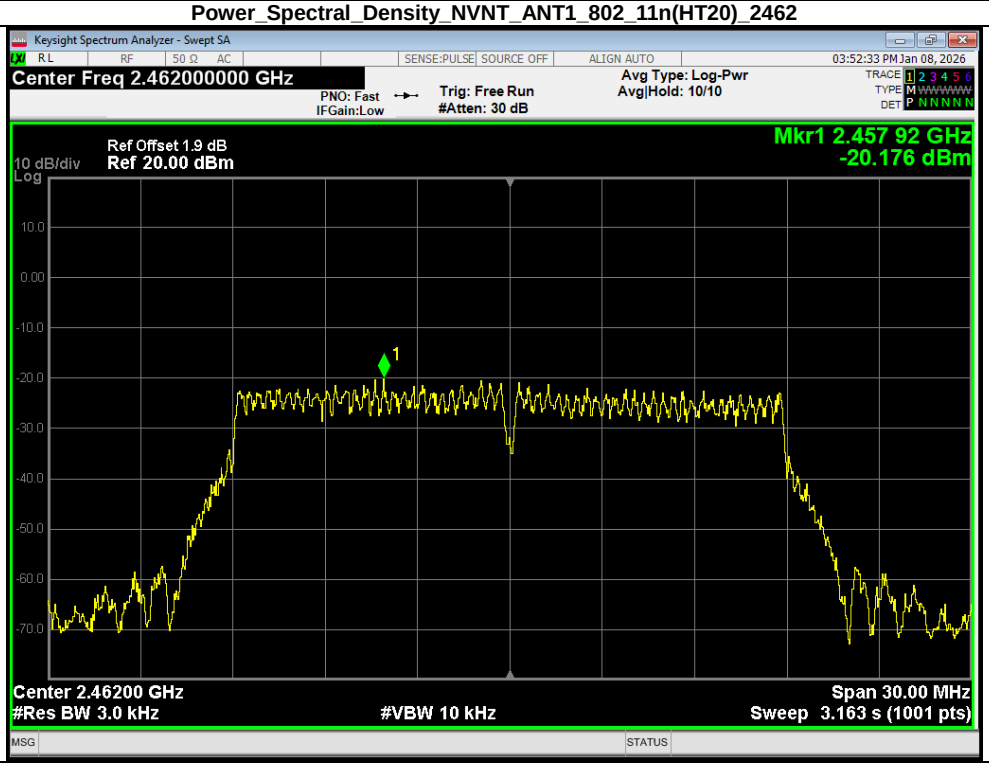
Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_2412



Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_2437



Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_2462



8. Occupied Bandwidth

8.1. Test limits

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

8.2. Test Procedure

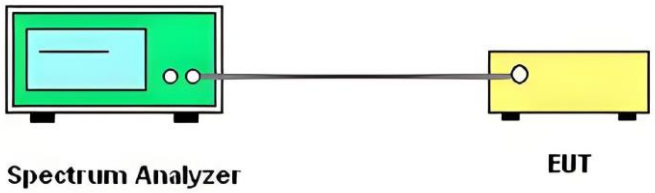
Details see the KDB558074 D01 Meas Guidance v05r02

a) The bandwidth is measured at an amplitude level reduced 6dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.

b) The test receiver set RBW =1-5%BW, VBW>3*RBW, Peak Detector, Sweep time set auto, detail see the test plot.

c) The test receiver set RBW =1-5%BW, VBW>3*RBW, Sweep time set auto, detail see the test plot for 99%Bandwidth.

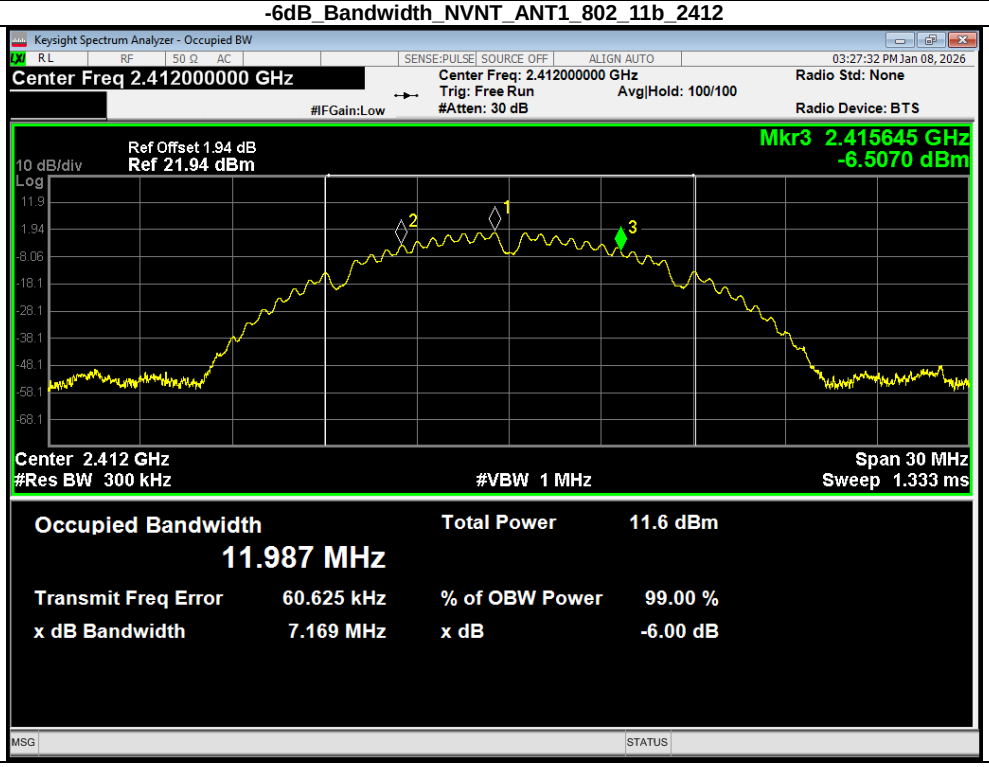
8.3. Test Setup



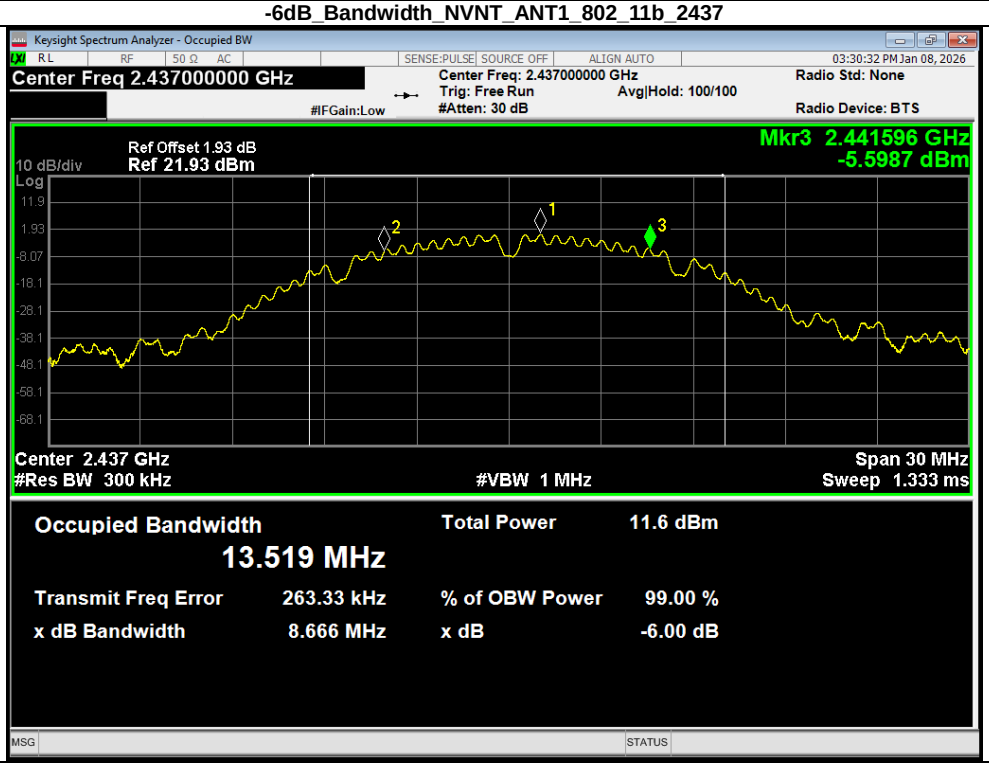
8.4. Test Results

Condition	Antenna	Modulation	Frequency (MHz)	-6dB BW(MHz)	limit(kHz)	Result
NVNT	ANT1	802.11b	2412.00	7.17	500	Pass
NVNT	ANT1	802.11b	2437.00	8.67	500	Pass
NVNT	ANT1	802.11b	2462.00	8.65	500	Pass
NVNT	ANT1	802.11g	2412.00	15.50	500	Pass
NVNT	ANT1	802.11g	2437.00	16.21	500	Pass
NVNT	ANT1	802.11g	2462.00	16.45	500	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	15.70	500	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	17.29	500	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	17.70	500	Pass

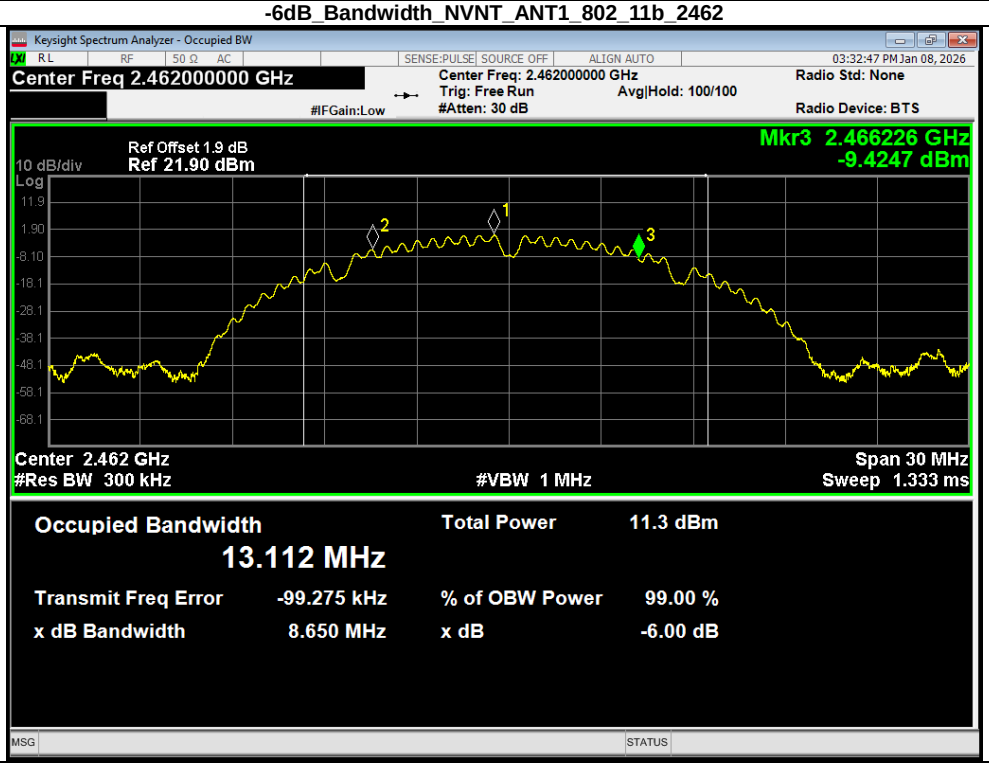
-6dB_Bandwidth_NVNT_ANT1_802_11b_2412



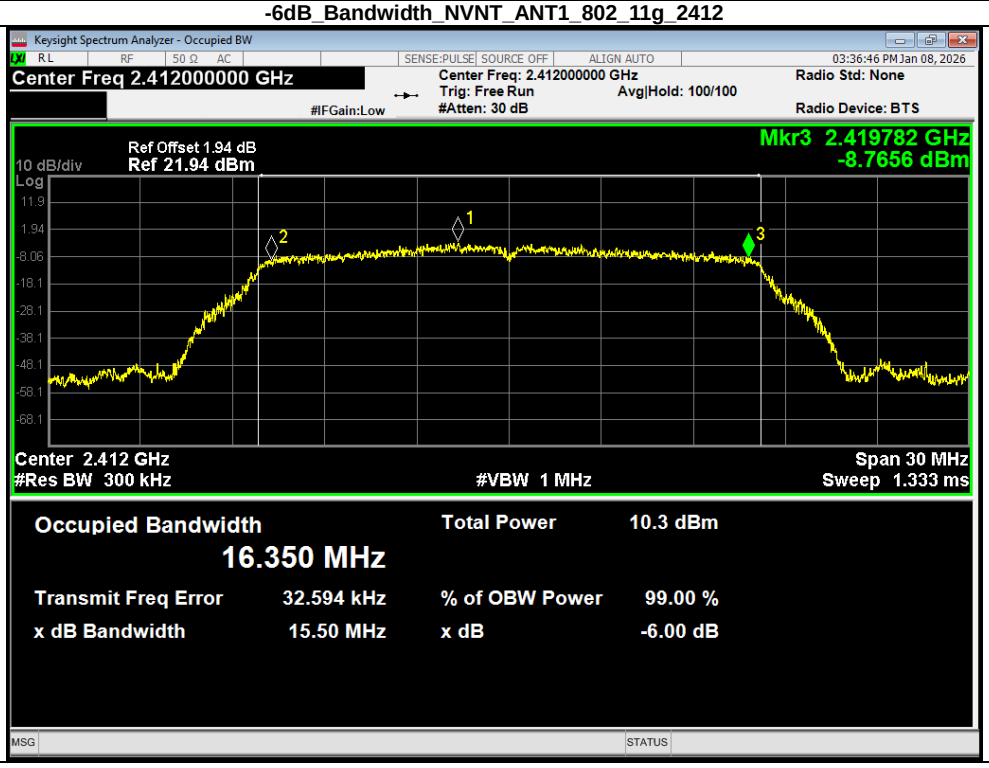
-6dB_Bandwidth_NVNT_ANT1_802_11b_2437



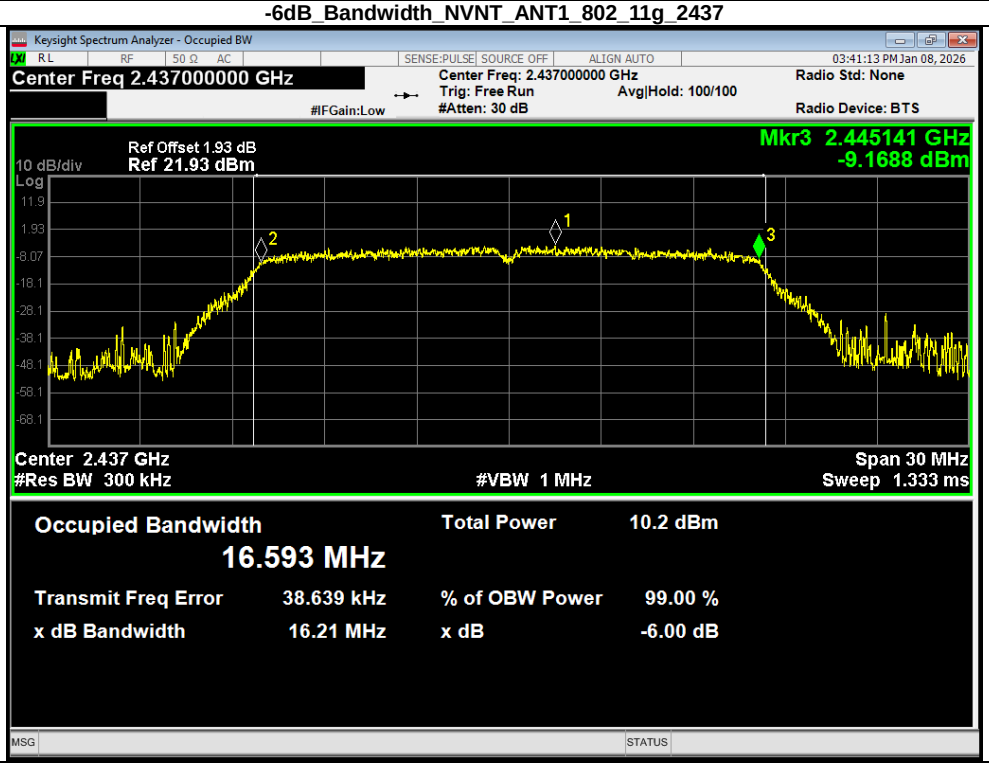
-6dB_Bandwidth_NVNT_ANT1_802_11b_2462



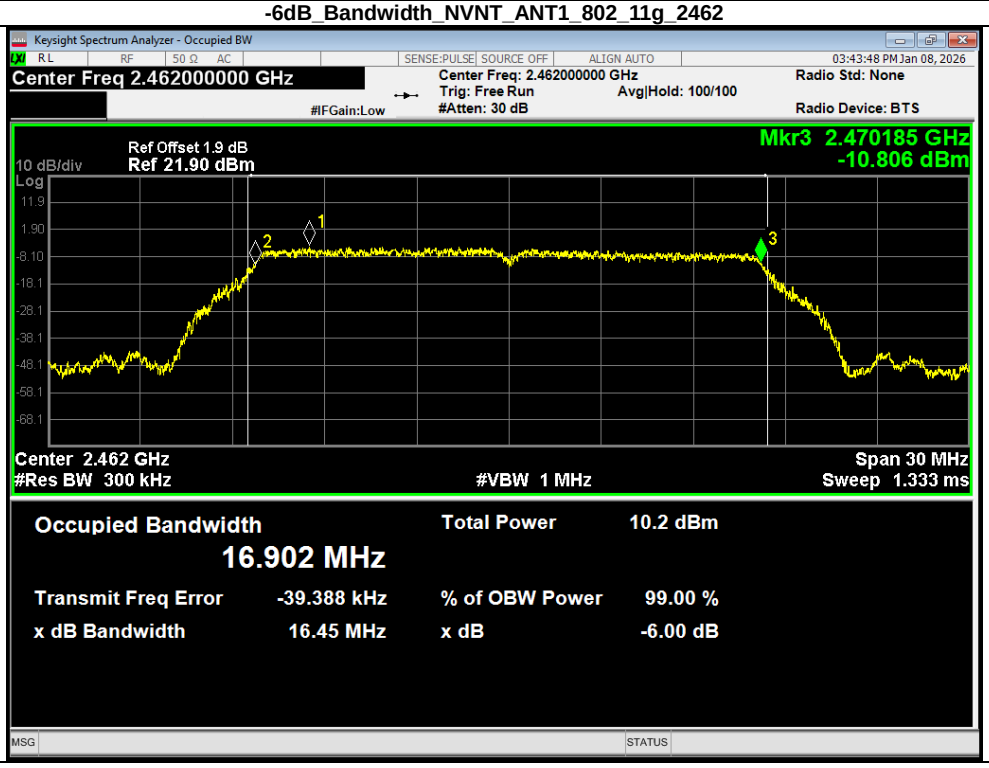
-6dB_Bandwidth_NVNT_ANT1_802_11g_2412



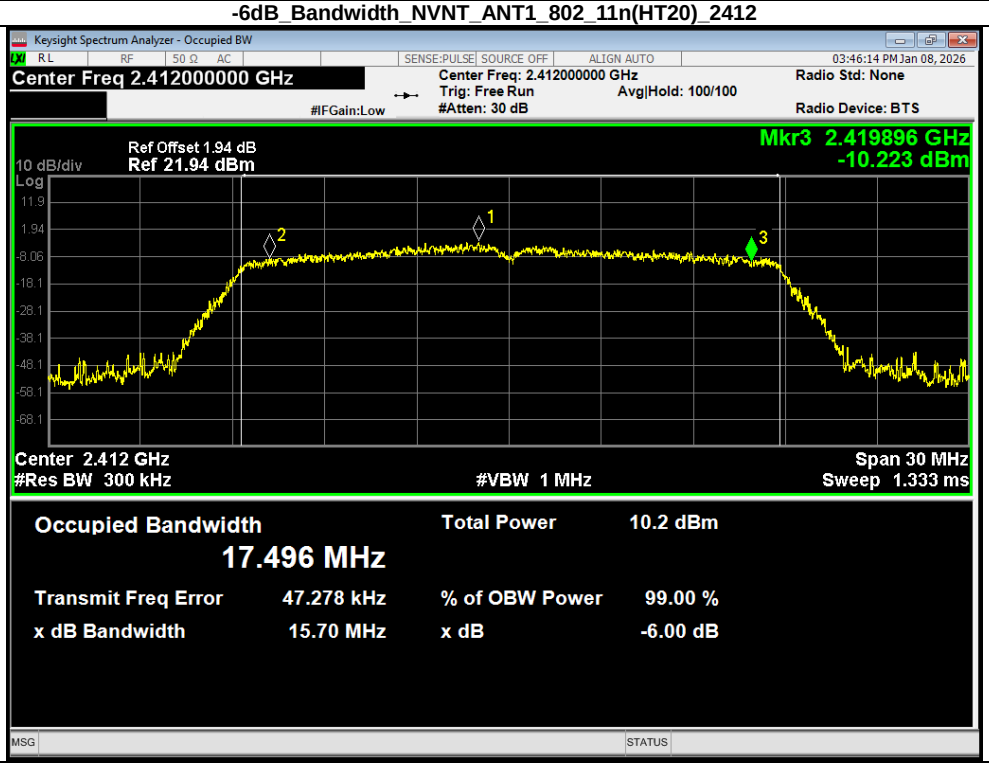
-6dB_Bandwidth_NVNT_ANT1_802_11g_2437



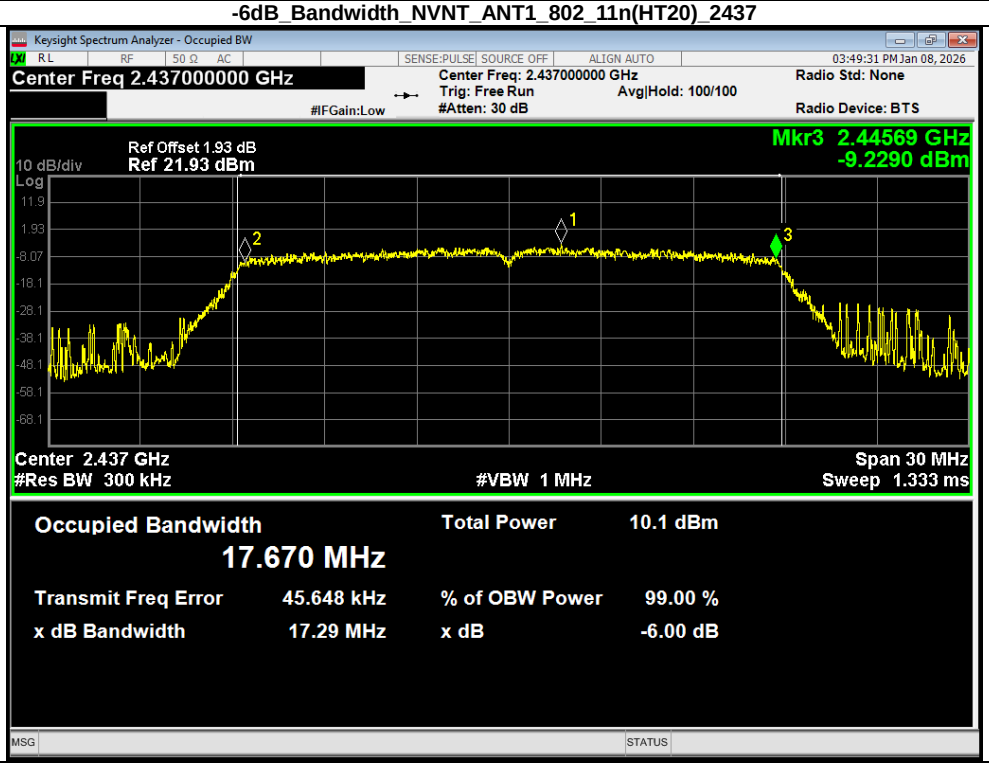
-6dB_Bandwidth_NVNT_ANT1_802_11g_2462



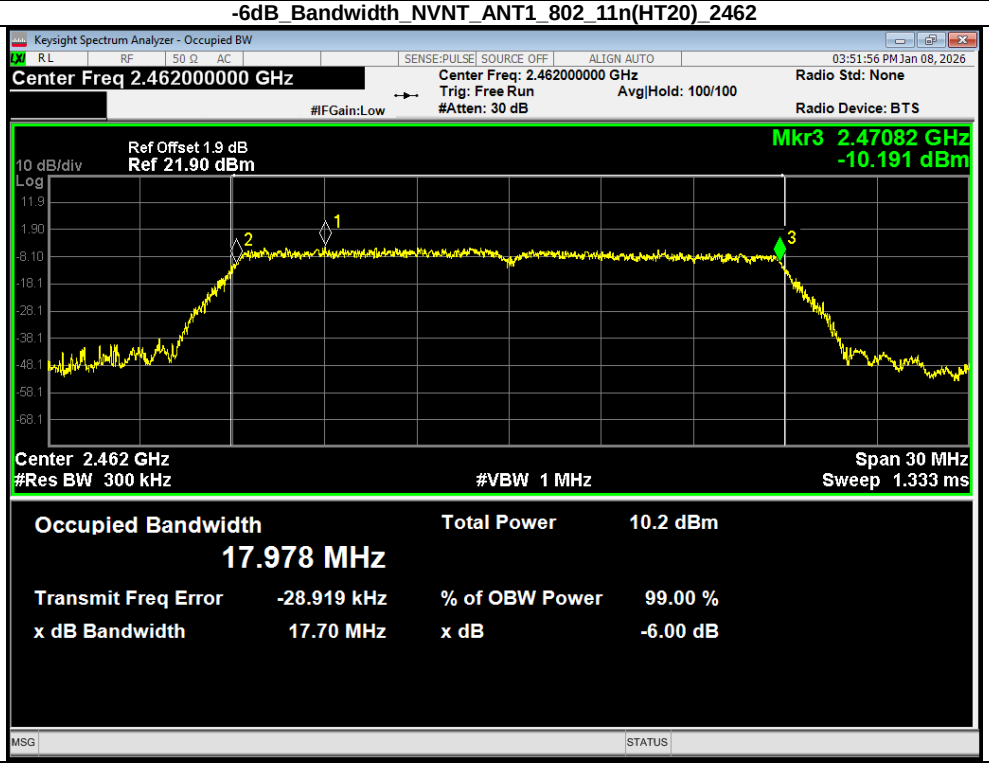
-6dB_Bandwidth_NVNT_ANT1_802_11n(HT20)_2412



-6dB_Bandwidth_NVNT_ANT1_802_11n(HT20)_2437



-6dB_Bandwidth_NVNT_ANT1_802_11n(HT20)_2462



9. Band Edge Test

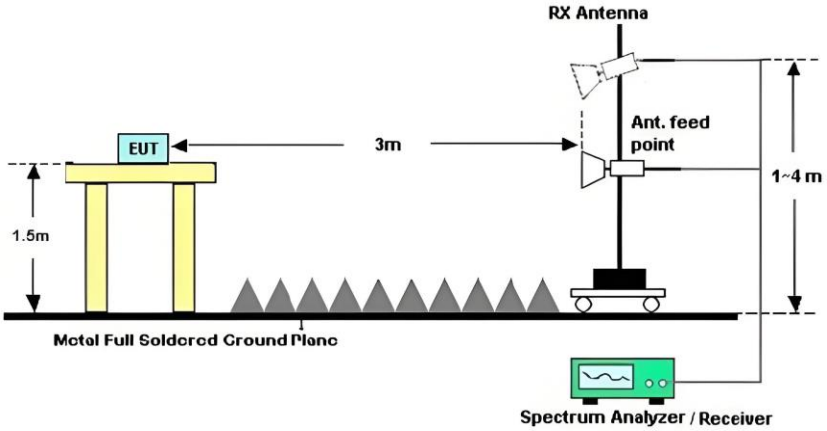
9.1. Test Limit

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)).`

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

9.2. Block Diagram of Test Setup



9.3. Test Procedure

ANSI C63.10-2020 section 6.10.5.2
All restriction band and non- restriction band have been tested, only worse case is reported.
Details see the KDB558074 D01 Meas Guidance v05r02

1. Put the EUT on a 1.5m high table, power on the EUT. Emissions were scanned and measured rotating the EUT to 360 degrees, Find the maximum Emission
2. Check the spurious emissions out of band.
3. RBW 1MHz, VBW 3MHz, peak detector for peak value, RBW 1MHz, VBW 10Hz, RMS detector for AV value.

9.4. Test Results

Test Date	:	2026.01.09			Temperature	:	21.7℃	
Test Engineer	:	Felix Pang			Humidity	:	35%	
Test Results	:	**PASS**						
Frequency Range	:	**2310MHz~2410MHz**						
Test Mode	:	IEEE 802.11b TX 2412MHz						
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	70.23	-20.45	49.78	74.00	-24.22	Peak
2	2390	H	--	-20.45	--	54.00	--	Avg
3	2400	H	74.82	-20.41	54.41	74.00	-19.59	Peak
4	2400	H	--	-20.41	--	54.00	--	Avg
1	2390	V	65.53	-21.62	43.91	74.00	-30.09	Peak
2	2390	V	--	-21.62	--	54.00	--	Avg
3	2400	V	74.31	-26.08	48.23	74.00	-25.77	Peak
4	2400	V	--	-26.08	--	54.00	--	Avg
Frequency Range	:	**2450MHz~2550MHz**						
Test Mode	:	IEEE 802.11b TX 2462MHz						
1	2483.5	H	75.44	-20.15	55.29	74.00	-18.71	Peak
2	2483.5	H	--	-20.15	--	54.00	--	Avg
1	2483.5	V	75.45	-20.15	55.30	74.00	-18.70	Peak
2	2483.5	V	--	-20.15	--	54.00	--	Avg

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.
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.

Frequency Range : **2310MHz~2410MHz**								
Test Mode : IEEE 802.11g TX 2412MHz								
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	70.79	-20.45	50.34	74.00	-23.66	Peak
2	2390	H	--	-20.45	--	54.00	--	Avg
3	2400	H	75.91	-20.41	55.50	74.00	-18.50	Peak
4	2400	H	--	-20.41	--	54.00	--	Avg
1	2390	V	71.65	-20.45	51.20	74.00	-22.80	Peak
2	2390	V	--	-20.45	--	54.00	--	Avg
3	2400	V	80.53	-20.41	60.12	74.00	-13.88	Peak
4	2400	V	--	-20.41	--	54.00	--	Avg
Frequency Range : **2450MHz~2550MHz**								
Test Mode : IEEE 802.11g TX 2462MHz								
1	2483.5	H	73.44	-20.15	53.29	74.00	-20.71	Peak
2	2483.5	H	--	-20.15	--	54.00	--	Avg
1	2483.5	V	77.13	-20.15	56.98	74.00	-17.02	Peak
2	2483.5	V	--	-20.15	--	54.00	--	Avg

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.
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.

Frequency Range : **2310MHz~2410MHz**								
Test Mode : IEEE 802.11n/HT20 TX 2412MHz								
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	71.49	-20.45	51.04	74.00	-22.96	Peak
2	2390	H	--	-20.45	--	54.00	--	Avg
3	2400	H	77.19	-20.41	56.78	74.00	-17.22	Peak
4	2400	H	--	-20.41	--	54.00	--	Avg
1	2390	V	79.29	-20.45	58.84	74.00	-15.16	Peak
2	2390	V	--	-20.45	--	54.00	--	Avg
3	2400	V	88.36	-20.41	67.95	74.00	-6.05	Peak
4	2400	V	--	-20.41	--	54.00	--	Avg
Frequency Range : **2450MHz~2550MHz**								
Test Mode : IEEE 802.11n/HT20 TX 2462MHz								
1	2483.5	H	77.80	-20.15	57.65	74.00	-16.35	Peak
2	2483.5	H	--	-20.15	--	54.00	--	Avg
1	2483.5	V	82.96	-20.15	62.81	74.00	-11.19	Peak
2	2483.5	V	--	-20.15	--	54.00	--	Avg

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.
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.

10. Antenna Requirement

10.1.Standard Requirement

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

10.2.Test Results

The EUT antenna is internal antenna. It complies with the standard requirement.

11. DUTY CYCLE

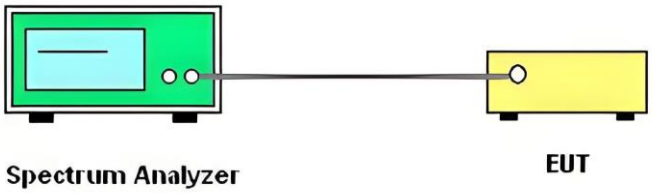
11.1.Test Limits

N/A

11.2.Test Procedure

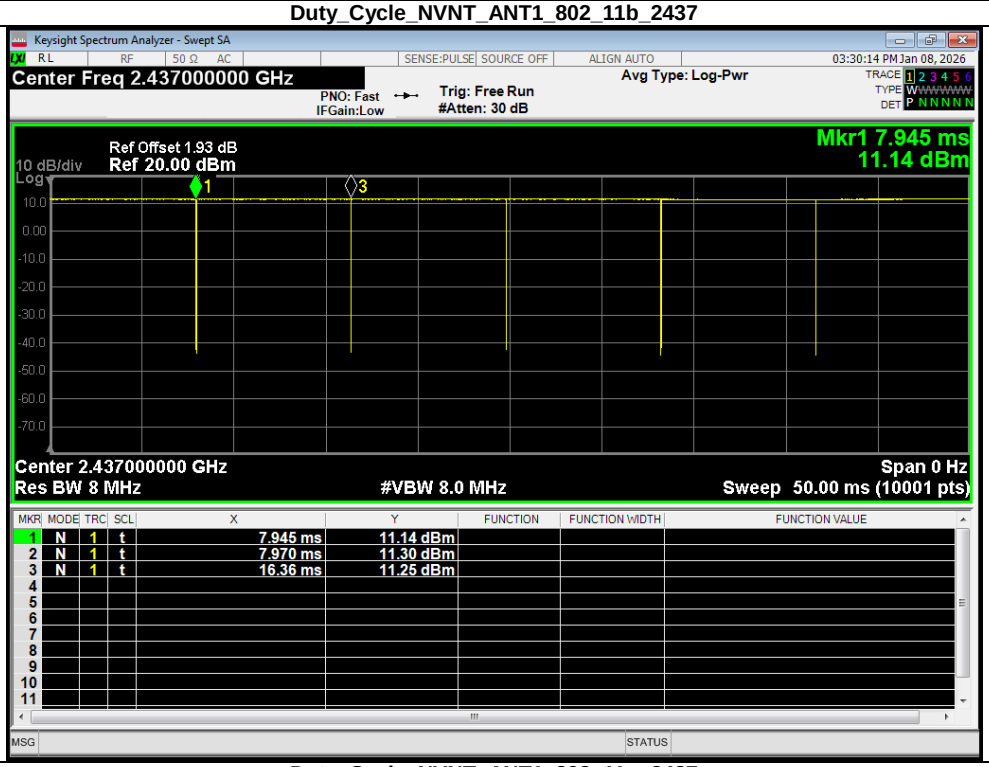
ANSI C63.10:2020 §11.6

11.3.Test Setup

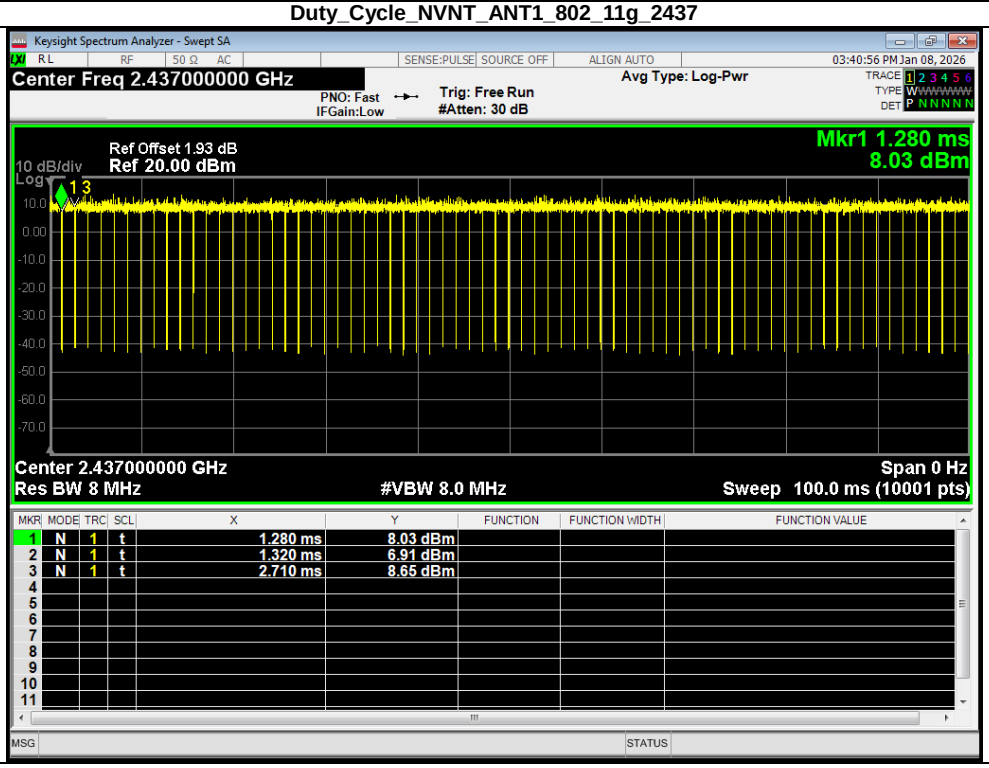


Condition	Antenna	Modulation	Frequency (MHz)	Duty cycle(%)	Duty factor(dB)
NVNT	ANT1	802.11b	2437.00	99.7	0.01
NVNT	ANT1	802.11g	2437.00	97.2	0.12
NVNT	ANT1	802.11n(HT20)	2437.00	97.01	0.13

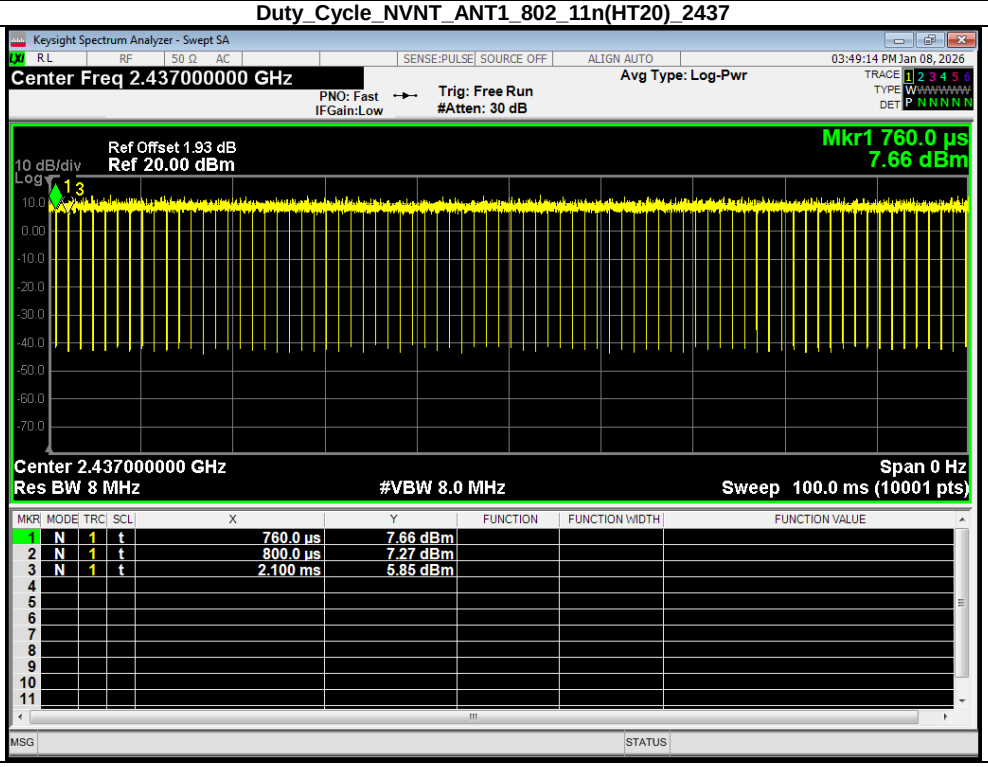
Duty_Cycle_NVNT_ANT1_802_11b_2437



Duty_Cycle_NVNT_ANT1_802_11g_2437



Duty_Cycle_NVNT_ANT1_802_11n(HT20)_2437



12. Photos of test setup

Reference to the **appendix I Test Setup Photo** for details.

13. Photos of EUT

Reference to the **appendix II external photos** and **appendix III internal photos** for details.

------ END OF REPORT------