FCC TEST REPORT
FCC ID:2BA8I-GAS-501F

Report Number.....:	ZKT-230508L3293-01
Date of Test.....:	Mar 28, 2023 to May 8, 2023
Date of issue.....:	May 8, 2023
Total number of pages..... :	68
Test Result..... :	PASS
Testing Laboratory.....:	**Shenzhen ZKT Technology Co., Ltd.**
Address .....:	1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China
Applicant's name .....:	Guangdong Grasse Environmental Technology Co.,Ltd.
Address .....:	No 670,GuangCong Five road, Zhongluotan Town,Baiyun District,Guangzhou
Manufacturer's name .....:	Guangdong Grasse Environmental Technology Co.,Ltd.
Address .....:	No 670,GuangCong Five road, Zhongluotan Town,Baiyun District,Guangzhou
Test specification:	
Standard.....:	FCC CFR Title 47 Part 15 Subpart C Section 15.247
Test procedure.....:	ANSI C63.10:2013 KDB558074 D0115.247 Meas Guidance v 05r02
Non-standard test method .....:	N/A
Test Report Form No.....:	TRF-EL-110_V0
Test Report Form(s) Originator.....:	ZKT Testing
Master TRF .....:	Dated: 2020-01-06

This device described above has been tested by ZKT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
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Product name.....:	Scent Machine
Trademark .....:	格迩斯

Model/Type reference..... :	GAS-501F、GAS-100、GAS-100B、GAS-100F、GAS-100H、GAS-100HF、GAS-101、GAS-101B、GAS-101H、GAS-101F、GAS-101HF、HZ-1201、HZ-1202、HZ-1203、GAS-200、GAS-200B、GAS-200H、GAS-200F、GAS-200HF、GAS-201、GAS-201B、GAS-201H、GAS-201F、GAS-201HF、GAS-300、GAS-300B、GAS-300H、GAS-300F、GAS-300HF、GAS-301、GAS-301B、GAS-301H、GAS-301F、GAS-301HF、GAS-500、GAS-500B、GAS-500H、GAS-500F、GAS-500HF、GAS-501、GAS-501B、GAS-501H、GAS-501F、GAS-501HF、GAM-1000、GAM-1000H、GAM-1000F、GAM-1000HF、GAM-1001、GAM-1001H、GAM-1001F、GAM-1001HF、GAM-1500、GAM-1500H、GAM-1500F、GAM-1500HF、GAM-1501、GAM-1501H、GAM-1501F、GAM-1501HF、GAM-2000、GAM-2000H、GAM-2000HF、GAM-2001、GAM-2001H、GAM-2001F、GAM-2001HF、GAM-3000、GAM-3000H、GAM-3000HF
Ratings..... :	DC 12V/1A from adapter

Testing procedure and testing location:

Testing Laboratory.....:	**Shenzhen ZKT Technology Co., Ltd.**
Address.....:	1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China
Tested by (name + signature).....:	Alen He
Reviewer (name + signature).....:	Joe Liu
Approved (name + signature).....:	Lake Xie

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1. VERSION

Report No.	Version	Description	Approved
ZKT-230508L3293-01	Rev.01	Initial issue of report	May 8, 2023

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247) , Subpart C			
Standard Section	Test Item	Result	Remark
FCC part 15.203/15.247 (c)	Antenna requirement	PASS	
FCC part 15.207	AC Power Line Conducted Emission	PASS	
FCC part 15.247 (b)(3)	Conducted Peak Output Power	PASS	
FCC part 15.247 (a)(2)	Channel Bandwidth	PASS	
FCC part 15.247 (e)	Power Spectral Density	PASS	
FCC part 15.247(d)	Band Edge	PASS	
FCC part 15.205/15.209	Spurious Emission	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

2.1 TEST FACILITY

Shenzhen ZKT Technology Co., Ltd.
Add. : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

FCC Test Firm Registration Number: 692225
Designation Number: CN1299
IC Registered No.: 27033

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %。

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF power conducted	±0.16dB
3	Spurious emissions conducted	±0.21dB
4	All emissions radiated(<1G)	±4.68dB
5	All emissions radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Product Name:	Scent Machine
Model No.:	GAS-501F
Serial No.:	GAS-100、GAS-100B、GAS-100F、GAS-100H、GAS-100HF、GAS-101、GAS-101B、GAS-101H、GAS-101F、GAS-101HF、HZ-1201、HZ-1202、HZ-1203、GAS-200、GAS-200B、GAS-200H、GAS-200F、GAS-200HF、GAS-201、GAS-201B、GAS-201H、GAS-201F、GAS-201HF、GAS-300、GAS-300B、GAS-300H、GAS-300F、GAS-300HF、GAS-301、GAS-301B、GAS-301H、GAS-301F、GAS-301HF、GAS-500、GAS-500B、GAS-500H、GAS-500F、GAS-500HF、GAS-501、GAS-501B、GAS-501H、GAS-501F、GAS-501HF、GAM-1000、GAM-1000H、GAM-1000F、GAM-1000HF、GAM-1001、GAM-1001H、GAM-1001F、GAM-1001HF、GAM-1500、GAM-1500H、GAM-1500F、GAM-1500HF、GAM-1501、GAM-1501H、GAM-1501F、GAM-1501HF、GAM-2000、GAM-2000H、GAM-2000HF、GAM-2001、GAM-2001H、GAM-2001F、GAM-2001HF、GAM-3000、GAM-3000H、GAM-3000HF
Model difference:	The product has many models, only the model name is different, and the other parts such as the circuit principle, pcb and electrical structure are the same.
Hardware Version:	V1.0
Software Version:	V1.0
Sample(s) Status:	Engineer sample
Frequency range:	802.11b/802.11g /802.11n(HT20): 2412MHz -2462MHz 802.11n(HT40): 2422MHz -2452MHz
Channel numbers:	802.11b/802.11g /802.11n(HT20):11 802.11n(HT40):7
Channel separation:	5MHz
Modulation technology:	802.11b: Direct Sequence Spread Spectrum(DSSS) 802.11g/802.11n(H20)/802.11n(HT40): Orthogonal Frequency Division Multiplexing(OFDM)
Antenna Type:	PCB antenna
Antenna gain:	0dBi
Power supply:	DC 12V/1A from adapter
Power Adaptor:	AC/DC ADAPTER MODEL:KDP-AM120100N INPUT:100-240V~50/60Hz 0.5A Max OUTPUT:12V--1A 12W

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

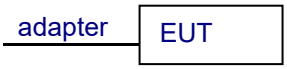
Note:
In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Test channel	**Frequency (MHz)**
	802.11b/802.11g /802.11n(HT20)
Lowest channel	2412MHz
Middle channel	2437MHz
Highest channel	2462MHz

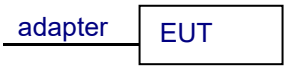
Test channel	**Frequency (MHz)**
	802.11n(HT40)
Lowest channel	2422MHz
Middle channel	2437MHz
Highest channel	2452MHz

3.2 Test Setup Configuration

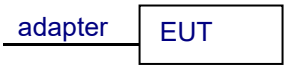
Conducted Emission



Radiated Emission



Conducted Spurious



3.3 Support Equipment

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
1	AC Adapter	KINGDRIVE	KDP-AM120100N	N/A	N/A

Item	Shielded Type	Ferrite Core	Length	Note
/	/	/	/	/

Note:

(1) The support equipment was authorized by Declaration of Confirmation.

(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

3.4 Test Mode

Transmitting mode	Keep the EUT in continuously transmitting mode.
Remark: During the test, the duty cycle >98%, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.	

3.5EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	9020A	MY55370835	Oct. 18, 2022	Oct. 17, 2023
2	Spectrum Analyzer (1GHz-40GHz)	R&S	FSQ	100363	Oct. 17, 2022	Oct. 16, 2023
3	EMI Test Receiver (9kHz-7GHz)	R&S	ESCI7	101169	Oct. 18, 2022	Oct. 17, 2023
4	Bilog Antenna (30MHz-1500MHz)	Schwarzbeck	VULB9168	N/A	Oct. 17, 2022	Oct. 16, 2023
5	Horn Antenna (1GHz-18GHz)	Agilent	AH-118	071145	Oct. 17, 2022	Oct. 16, 2023
6	Loop Antenna	TESEQ	HLA6121	58357	Oct. 17, 2022	Oct. 16, 2023
7	Amplifier (30-1000MHz)	EM Electronics	EM330 Amplifier	060747	Oct. 17, 2022	Oct. 16, 2023
8	Amplifier (1GHz-26.5GHz)	Agilent	8449B	3008A00315	Oct. 18, 2022	Oct. 17, 2023
9	RF cables1 (9kHz-30MHz)	N/A	9kHz-30MHz	N/A	Oct. 18, 2022	Oct. 17, 2023
10	RF cables2 (30MHz-1GHz)	N/A	30MHz-1GHz	N/A	Oct. 18, 2022	Oct. 17, 2023
11	RF cables3 (1GHz-40GHz)	N/A	1GHz-40GHz	N/A	Oct. 18, 2022	Oct. 17, 2023
12	ESG Signal Generator	Agilent	E4421B	N/A	Oct. 18, 2022	Oct. 17, 2023
13	Signal Generator	Agilent	N5182A	N/A	Oct. 22, 2022	Oct. 21, 2023
14	Magnetic Field Probe Tester	Narda	ELT-400	0-0344	Oct. 17, 2022	Oct. 16, 2023
15	MWRF Power Meter Test system	MW	MW100-RPCB	N/A	Oct. 22, 2022	Oct. 21, 2023
16	Power sensor	KEYSIGHT	U200H	MY51190005	Oct. 22, 2022	Oct. 21, 2023
17	D.C. Power Supply	LongWei	TPR-6405D	N/A	\	\
18	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	\	\
19	RF Software	MW	MTS8310	V2.0.0.0	\	\
20	Turntable	MF	MF-7802BS	N/A	\	\
21	Antenna tower	MF	MF-7802BS	N/A	\	\

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	LISN	R&S	ENV216	101471	Oct. 22, 2022	Oct. 21, 2023
2	LISN	CYBERTEK	EM5040A	E1850400149	Oct. 22, 2022	Oct. 21, 2023
3	Test Cable	N/A	C01	N/A	Oct. 18, 2022	Oct. 17, 2023
4	Test Cable	N/A	C02	N/A	Oct. 18, 2022	Oct. 17, 2023
5	EMI Test Receiver	R&S	ESCI3	101393	Oct. 17, 2022	Oct. 16, 2023
6	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	\	\

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10:2013
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto

4.1.1 POWER LINE CONDUCTED EMISSION LIMITS

FREQUENCY (MHz)	Limit (dBuV)		Standard
	Quasi-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:
(1) *Decreases with the logarithm of the frequency.

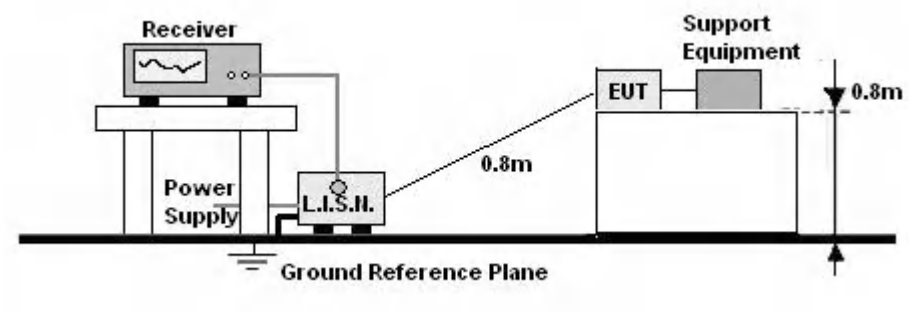
4.1.2 TEST PROCEDURE

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system; a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10:2013.
2. Support equipment, if needed, was placed as per ANSI C63.10:2013
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10:2013.
4. The adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5. All support equipments received AC power from a second LISN, if any.
6. The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.e.
8 For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation

4.1.4 TEST SETUP



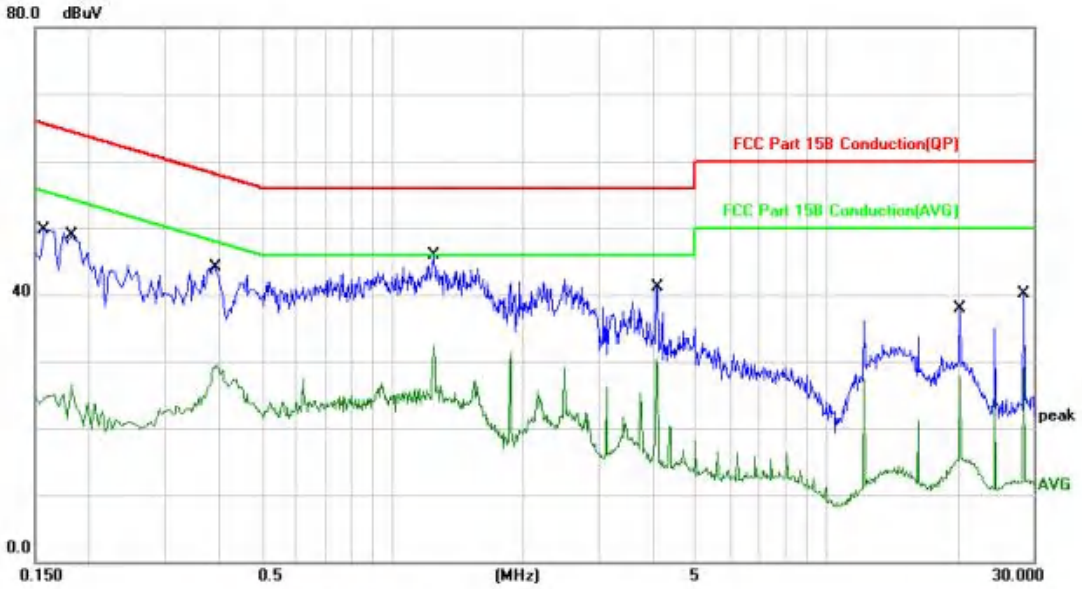
4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

We pretest AC 120V and AC 240V, the worst voltage was AC 120V and the data recording in the report.

4.1.6 TEST RESULT

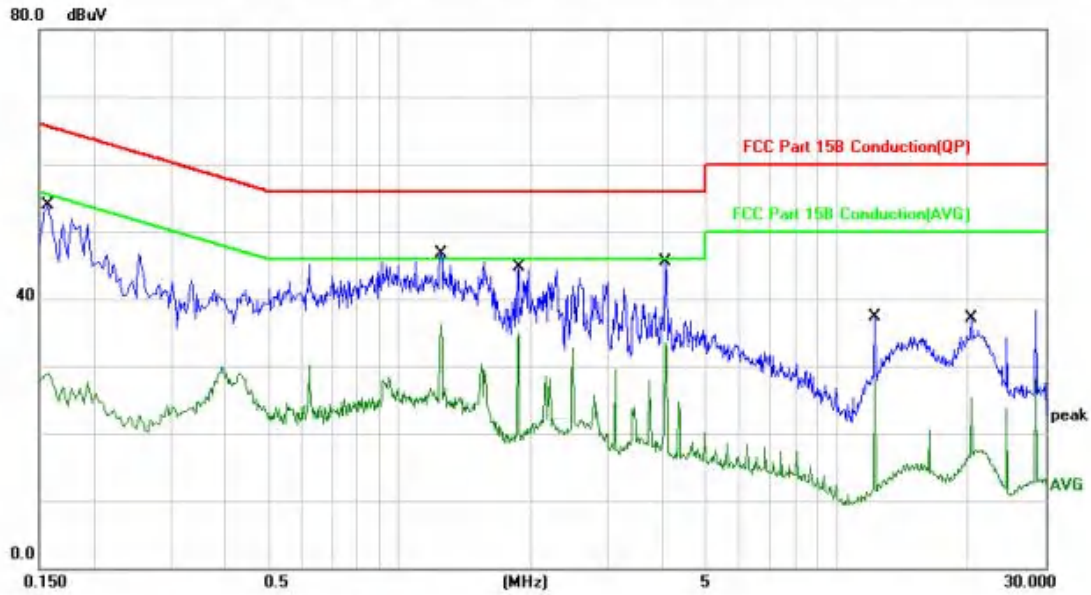
Temperature :	26℃	Relative Humidity:	54%
Pressure :	101kPa	Phase	L
Test Voltage :	AC 120V/60Hz	Test Mode	802.11b-middle channel



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1580	39.70	10.06	49.76	65.56	-15.80	QP	
2		0.1819	16.47	10.07	26.54	54.39	-27.85	AVG	
3		0.3899	33.94	10.20	44.14	58.06	-13.92	QP	
4		0.3940	19.25	10.20	29.45	47.98	-18.53	AVG	
5	*	1.2460	35.72	10.14	45.86	56.00	-10.14	QP	
6		1.2460	22.22	10.14	32.36	46.00	-13.64	AVG	
7		4.0700	20.55	9.82	30.37	46.00	-15.63	AVG	
8		4.0739	31.33	9.82	41.15	56.00	-14.85	QP	
9		20.3580	28.15	9.79	37.94	60.00	-22.06	QP	
10		20.3580	17.89	9.79	27.68	50.00	-22.32	AVG	
11		28.4980	30.29	9.79	40.08	60.00	-19.92	QP	
12		28.4980	19.28	9.79	29.07	50.00	-20.93	AVG	

Notes:
1.An initial pre-scan was performed on the line and neutral lines with peak detector.
2.Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3.Mesurement Level = Reading level + Correct Factor
4.The test data shows only the worst case

Temperature :	26℃	Relative Humidity:	54%
Pressure :	101kPa	Phase :	N
Test Voltage :	AC 120V/60Hz	Test Mode	802.11b-middle channel



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1580	43.78	10.06	53.84	65.56	-11.72	QP	
2		0.1580	18.92	10.06	28.98	55.56	-26.58	AVG	
3	*	1.2460	36.56	10.14	46.70	56.00	-9.30	QP	
4		1.2460	26.05	10.14	36.19	46.00	-9.81	AVG	
5		1.8700	34.70	10.06	44.76	56.00	-11.24	QP	
6		1.8700	24.82	10.06	34.88	46.00	-11.12	AVG	
7		4.0700	35.66	9.82	45.48	56.00	-10.52	QP	
8		4.0700	23.73	9.82	33.55	46.00	-12.45	AVG	
9		12.2140	27.33	9.98	37.31	60.00	-22.69	QP	
10		12.2140	18.17	9.98	28.15	50.00	-21.85	AVG	
11		20.3580	27.36	9.79	37.15	60.00	-22.85	QP	
12		20.3580	15.52	9.79	25.31	50.00	-24.69	AVG	

Notes:
1.An initial pre-scan was performed on the line and neutral lines with peak detector.
2.Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3.Mesurement Level = Reading level + Correct Factor
4.The test data shows only the worst case

4.2 RADIATED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.209
Test Method:	ANSI C63.10:2013
Test Frequency Range:	9kHz to 25GHz
Test site:	Measurement Distance: 3m
Receiver setup:	

Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

4.2.1 RADIATED EMISSION LIMITS

Frequencies (MHz)	Field Strength (micorvolts/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

LIMITS OF RADIATED EMISSION MEASUREMENT

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

4.2.2 TEST PROCEDURE

Below 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoiccamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of avariable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum valueof the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned toheights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could bestopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dBmargin would be re-tested one by one using peak, quasi-peak or average method as specified and then reportedin a data sheet.

Above 1GHz test procedure as below:

g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber andchange form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre).
h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel

Note:

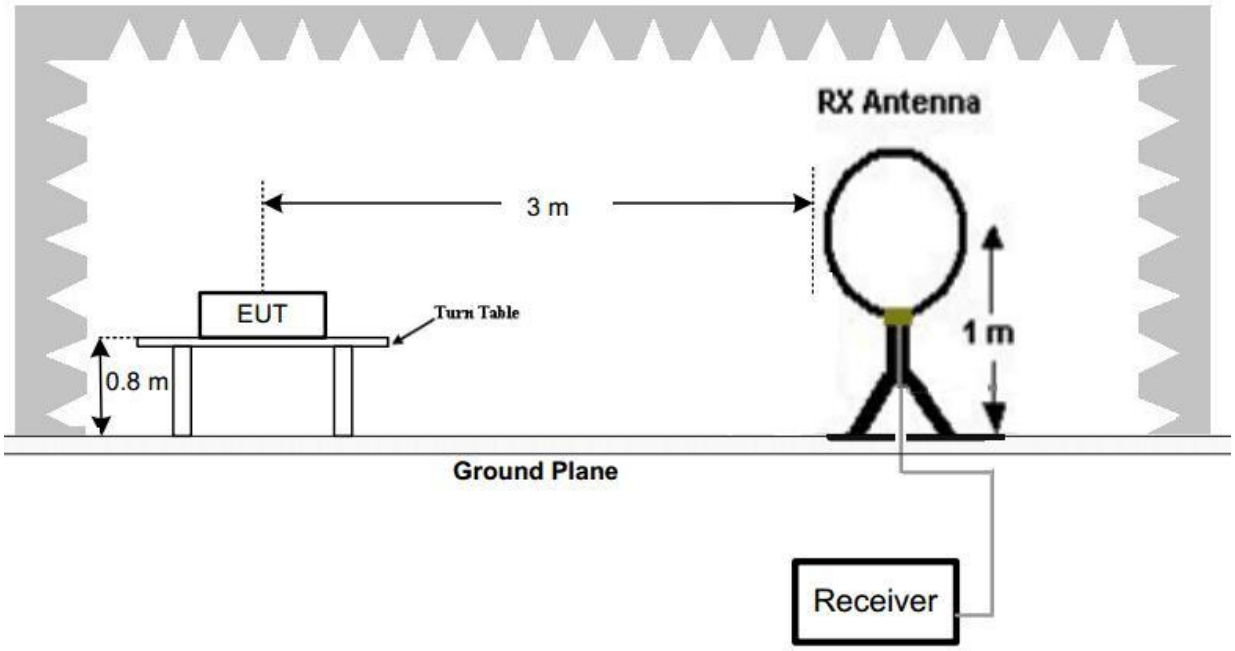
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

4.2.3 DEVIATION FROM TEST STANDARD

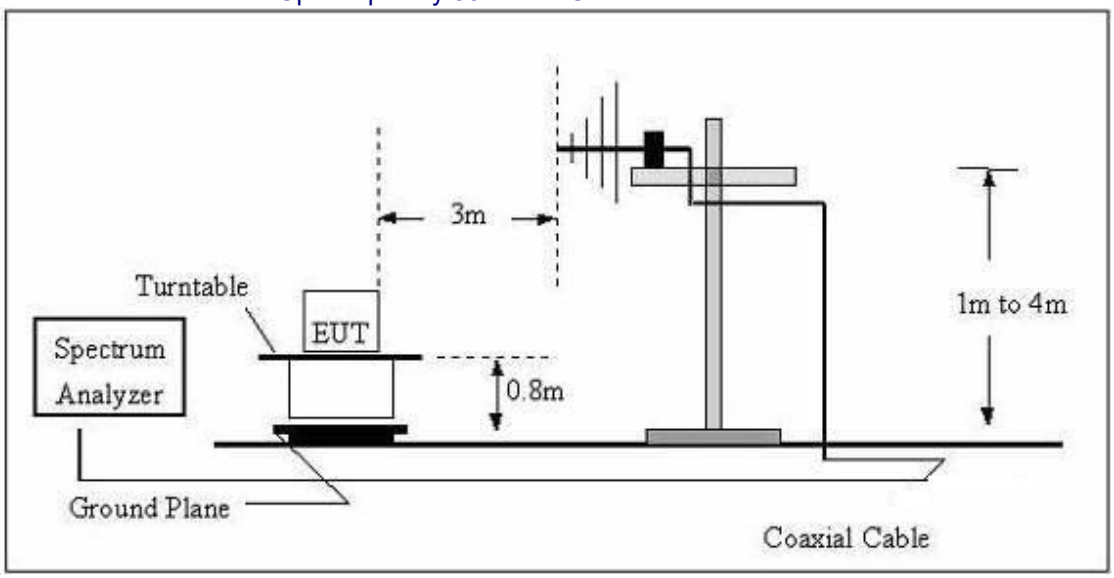
No deviation

4.2.4 TEST SETUP

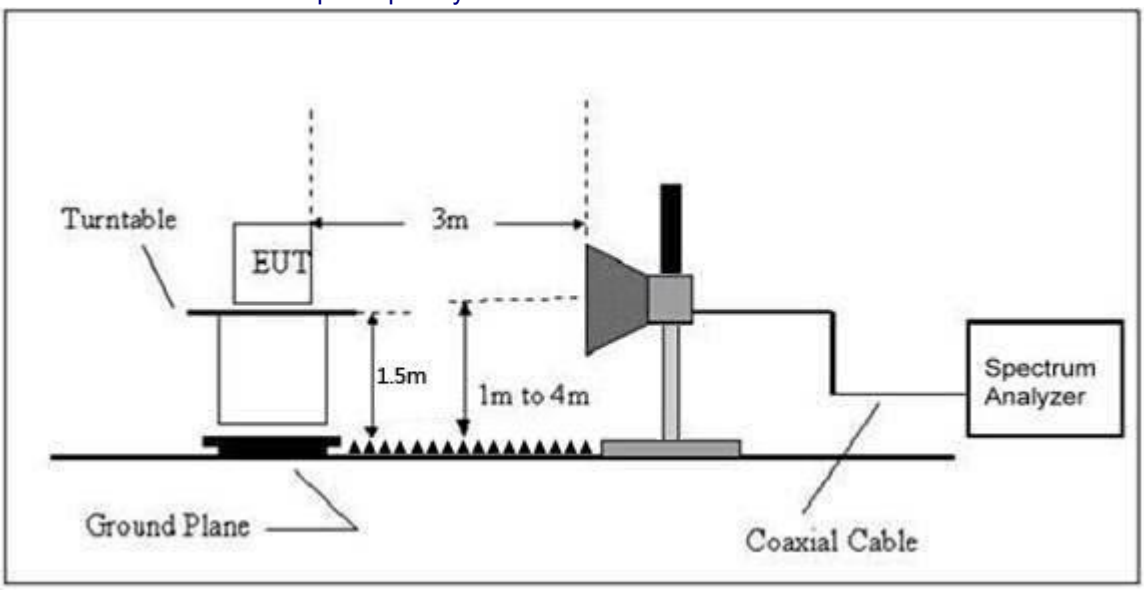
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



4.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

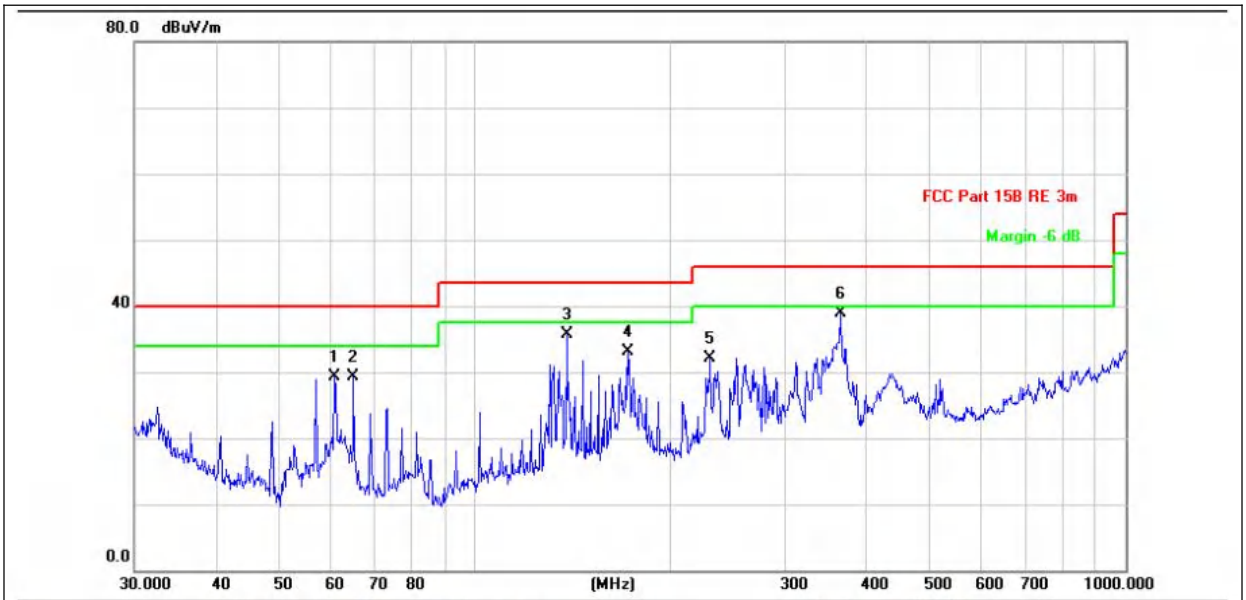
4.2.6 TEST RESULTS

Between 9KHz – 30MHz

The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) & RSS-Gen 6.13, the test result no need to reported.

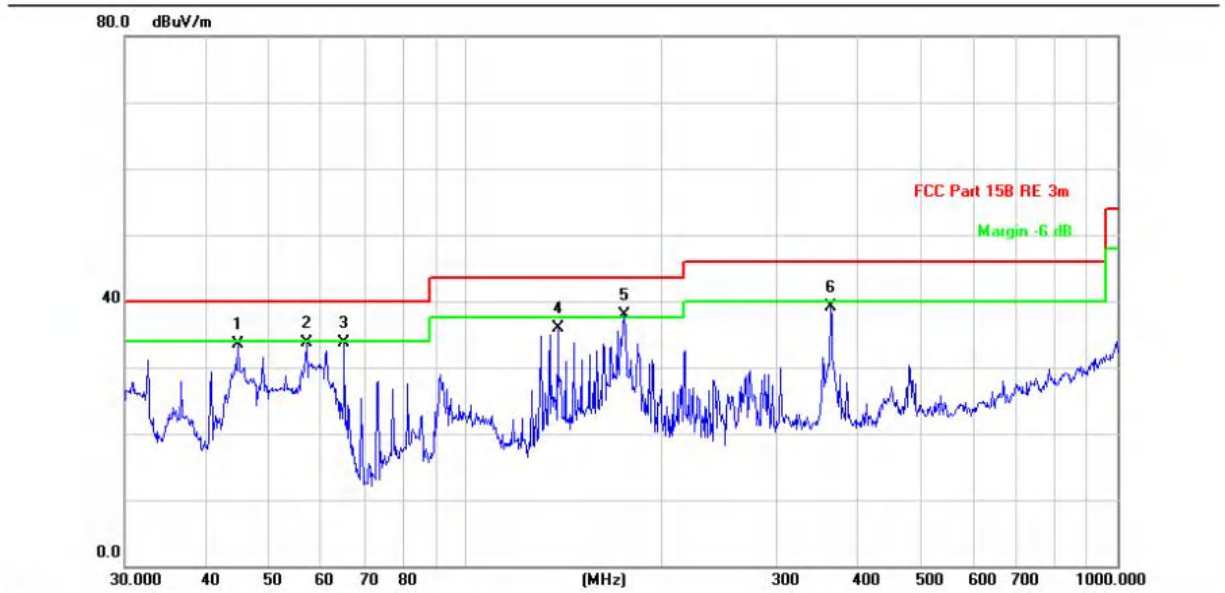
Between 30MHz – 1GHz

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz	Test Mode	802.11b-middle channel



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		60.9176	38.83	-9.57	29.26	40.00	-10.74	QP	100	157	
2		65.1145	38.69	-9.36	29.33	40.00	-10.67	QP	100	248	
3		138.3873	39.51	-3.89	35.62	43.50	-7.88	QP	100	39	
4		171.9945	37.37	-4.36	33.01	43.50	-10.49	QP	100	279	
5		230.0985	36.45	-4.28	32.17	46.00	-13.83	QP	100	248	
6	*	364.2595	39.36	-0.50	38.86	46.00	-7.14	QP	100	101	

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz	Test Mode	802.11b-middle channel



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		44.7433	40.30	-6.71	33.59	40.00	-6.41	QP	100	254	
2		56.9911	43.31	-9.59	33.72	40.00	-6.28	QP	100	168	
3		65.1145	43.15	-9.36	33.79	40.00	-6.21	QP	100	98	
4		138.3873	39.79	-3.89	35.90	43.50	-7.60	QP	100	178	
5	*	175.0367	42.47	-4.48	37.99	43.50	-5.51	QP	100	351	
6		362.9844	39.72	-0.54	39.18	46.00	-6.82	QP	100	254	

Remarks:
1.Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2.The emission levels of other frequencies are very lower than the limit and not show in test report.
3.The test data shows only the worst case

1GHz~25GHz

802.11b

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel:2412MHz									
V	4824	54.78	30.55	5.77	24.66	54.66	74.00	-19.34	PK
V	4824	40.19	30.55	5.77	24.66	40.07	54.00	-13.93	AV
V	7236	53.37	30.33	6.32	24.55	53.91	74.00	-20.09	PK
V	7236	40.79	30.33	6.32	24.55	41.33	54.00	-12.67	AV
V	9648	50.42	30.85	7.45	24.69	51.71	74.00	-22.29	PK
V	9648	36.85	30.85	7.45	24.69	38.14	54.00	-15.86	AV
H	4824	56.13	30.55	5.77	24.66	56.01	74.00	-17.99	PK
H	4824	39.87	30.55	5.77	24.66	39.75	54.00	-14.25	AV
H	7236	54.20	30.33	6.32	24.55	54.74	74.00	-19.26	PK
H	7236	38.94	30.33	6.32	24.55	39.48	54.00	-14.52	AV
H	9648	50.14	30.85	7.45	24.69	51.43	74.00	-22.57	PK
H	9648	39.07	30.85	7.45	24.69	40.36	54.00	-13.64	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Middle Channel:2437MHz									
V	4874	56.57	30.55	5.77	24.66	56.45	74.00	-17.55	PK
V	4874	42.02	30.55	5.77	24.66	41.90	54.00	-12.10	AV
V	7311	54.55	30.33	6.32	24.55	55.09	74.00	-18.91	PK
V	7311	40.49	30.33	6.32	24.55	41.03	54.00	-12.97	AV
V	9748	49.89	30.85	7.45	24.69	51.18	74.00	-22.82	PK
V	9748	38.07	30.85	7.45	24.69	39.36	54.00	-14.64	AV
H	4874	54.85	30.55	5.77	24.66	54.73	74.00	-19.27	PK
H	4874	42.14	30.55	5.77	24.66	42.02	54.00	-11.98	AV
H	7311	54.59	30.33	6.32	24.55	55.13	74.00	-18.87	PK
H	7311	40.45	30.33	6.32	24.55	40.99	54.00	-13.01	AV
H	9748	49.88	30.85	7.45	24.69	51.17	74.00	-22.83	PK
H	9748	37.75	30.85	7.45	24.69	39.04	54.00	-14.96	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
High Channel:2462MHz									
V	4924	53.78	30.55	5.77	24.66	53.66	74.00	-20.34	PK
V	4924	41.34	30.55	5.77	24.66	41.22	54.00	-12.78	AV
V	7386	53.78	30.33	6.32	24.55	54.32	74.00	-19.68	PK
V	7386	41.44	30.33	6.32	24.55	41.98	54.00	-12.02	AV
V	9848	50.21	30.85	7.45	24.69	51.50	74.00	-22.50	PK
V	9848	37.66	30.85	7.45	24.69	38.95	54.00	-15.05	AV
H	4924	54.24	30.55	5.77	24.66	54.12	74.00	-19.88	PK
H	4924	41.38	30.55	5.77	24.66	41.26	54.00	-12.74	AV
H	7386	53.04	30.33	6.32	24.55	53.58	74.00	-20.42	PK
H	7386	41.64	30.33	6.32	24.55	42.18	54.00	-11.82	AV
H	9848	51.38	30.85	7.45	24.69	52.67	74.00	-21.33	PK
H	9848	37.35	30.85	7.45	24.69	38.64	54.00	-15.36	AV

Remark:
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
4.During the test, pre-scan the 802.11b/g/n mode, and found the 802.11b mode which it is worse case.

5.RADIATED BAND EMISSIONMEASUREMENT

5.1 TEST REQUIREMENT:

Test Requirement:	FCC Part15 C Section 15.209 and 15.205
Test Method:	ANSI C63.10: 2013
Test Frequency Range:	All of the restrict bands were tested, only the worst band's (2310MHz to 2500MHz) data was showed.
Test site:	Measurement Distance: 3m
Receiver setup:	

Frequency	Detector	RBW	VBW	Value
Above 1GHz	Peak	1MHz	3MHz	Peak
	Average	1MHz	3MHz	Average

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

5.2 TEST PROCEDURE

Above 1GHz test procedure as below:

a. 1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could bestopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dBmargin would be re-tested one by one using peak, quasi-peak or average method as specified and then reportedin a data sheet.

g. Test the EUT in the lowest channel,the Highest channel

Note:

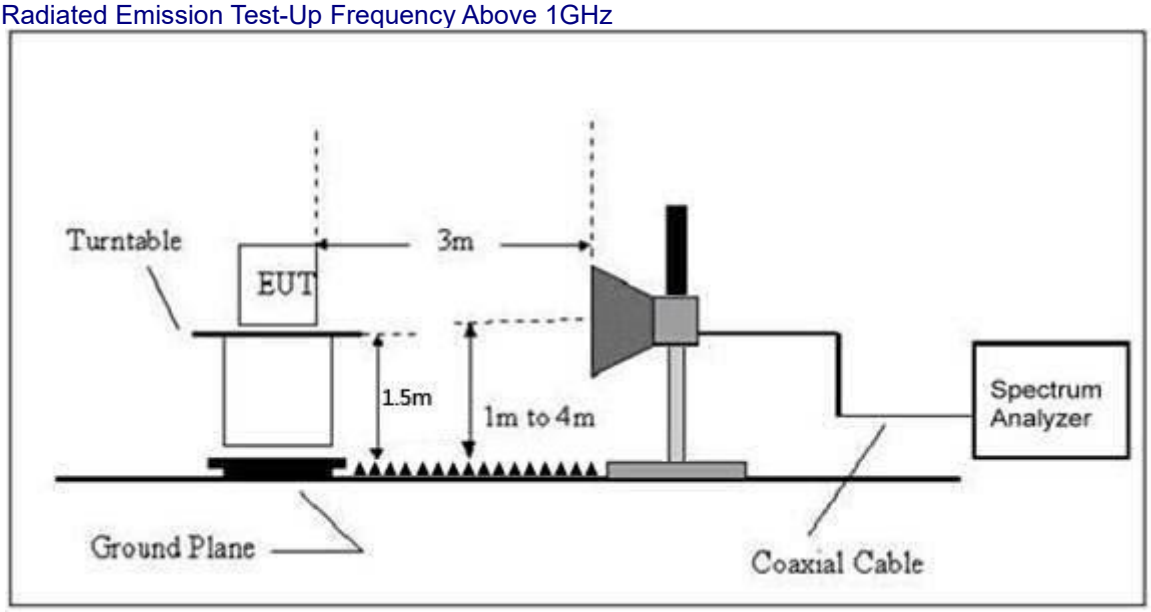
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

5.3 DEVIATION FROM TEST STANDARD

No deviation

5.4 TEST SETUP

Radiated Emission Test-Up Frequency Above 1GHz



5.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

5.6 TEST RESULT

	Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
802.11b	Low Channel 2412MHz										
	H	2390.00	54.46	30.22	4.85	23.98	53.07	74	-20.93	PK	PASS
	H	2390.00	37.17	30.22	4.85	23.98	35.78	54	-18.22	AV	PASS
	H	2400.00	52.36	30.22	4.85	23.98	50.97	74	-23.03	PK	PASS
	H	2400.00	39.48	30.22	4.85	23.98	38.09	54	-15.91	AV	PASS
	V	2390.00	51.99	30.22	4.85	23.98	50.60	74	-23.40	PK	PASS
	V	2390.00	42.14	30.22	4.85	23.98	40.75	54	-13.25	AV	PASS
	V	2400.00	50.98	30.22	4.85	23.98	49.59	74	-24.41	PK	PASS
	V	2400.00	39.27	30.22	4.85	23.98	37.88	54	-16.12	AV	PASS
	High Channel 2462MHz										
	H	2483.50	50.07	30.22	4.85	23.98	48.68	74	-25.32	PK	PASS
	H	2485.50	33.94	30.22	4.85	23.98	32.55	54	-21.45	AV	PASS
	H	2500.00	52.36	30.22	4.85	23.98	50.97	74	-23.03	PK	PASS
	H	2500.00	34.41	30.22	4.85	23.98	33.02	54	-20.98	AV	PASS
	V	2483.50	51.97	30.22	4.85	23.98	50.58	74	-23.42	PK	PASS
	V	2485.50	38.81	30.22	4.85	23.98	37.42	54	-16.58	AV	PASS
	V	2500.00	57.52	30.22	4.85	23.98	56.13	74	-17.87	PK	PASS
	V	2500.00	43.33	30.22	4.85	23.98	41.94	54	-12.06	AV	PASS

	Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
802.11g	Low Channel 2412MHz										
	H	2390.00	48.88	30.22	4.85	23.98	47.49	74	-26.51	PK	PASS
	H	2390.00	36.62	30.22	4.85	23.98	35.23	54	-18.77	AV	PASS
	H	2400.00	47.85	30.22	4.85	23.98	46.46	74	-27.54	PK	PASS
	H	2400.00	40.58	30.22	4.85	23.98	39.19	54	-14.81	AV	PASS
	V	2390.00	53.04	30.22	4.85	23.98	51.65	74	-22.35	PK	PASS
	V	2390.00	39.90	30.22	4.85	23.98	38.51	54	-15.49	AV	PASS
	V	2400.00	53.90	30.22	4.85	23.98	52.51	74	-21.49	PK	PASS
	V	2400.00	42.92	30.22	4.85	23.98	41.53	54	-12.47	AV	PASS
	High Channel 2462MHz										
	H	2483.50	56.32	30.22	4.85	23.98	54.93	74	-19.07	PK	PASS
	H	2485.50	36.14	30.22	4.85	23.98	34.75	54	-19.25	AV	PASS
	H	2500.00	52.27	30.22	4.85	23.98	50.88	74	-23.12	PK	PASS
	H	2500.00	40.01	30.22	4.85	23.98	38.62	54	-15.38	AV	PASS
	V	2483.50	50.34	30.22	4.85	23.98	48.95	74	-25.05	PK	PASS
	V	2485.50	40.52	30.22	4.85	23.98	39.13	54	-14.87	AV	PASS
	V	2500.00	51.23	30.22	4.85	23.98	49.84	74	-24.16	PK	PASS
	V	2500.00	37.44	30.22	4.85	23.98	36.05	54	-17.95	AV	PASS

	Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
802.11 n20	Low Channel 2412MHz										
	H	2390.00	53.62	30.22	4.85	23.98	52.23	74	-21.77	PK	PASS
	H	2390.00	37.36	30.22	4.85	23.98	35.97	54	-18.03	AV	PASS
	H	2400.00	54.20	30.22	4.85	23.98	52.81	74	-21.19	PK	PASS
	H	2400.00	39.96	30.22	4.85	23.98	38.57	54	-15.43	AV	PASS
	V	2390.00	53.34	30.22	4.85	23.98	51.95	74	-22.05	PK	PASS
	V	2390.00	40.48	30.22	4.85	23.98	39.09	54	-14.91	AV	PASS
	V	2400.00	51.51	30.22	4.85	23.98	50.12	74	-23.88	PK	PASS
	V	2400.00	38.35	30.22	4.85	23.98	36.96	54	-17.04	AV	PASS
	High Channel 2462MHz										
	H	2483.50	50.21	30.22	4.85	23.98	48.82	74	-25.18	PK	PASS
	H	2485.50	35.13	30.22	4.85	23.98	33.74	54	-20.26	AV	PASS
	H	2500.00	54.19	30.22	4.85	23.98	52.80	74	-21.20	PK	PASS
	H	2500.00	37.64	30.22	4.85	23.98	36.25	54	-17.75	AV	PASS
	V	2483.50	54.20	30.22	4.85	23.98	52.81	74	-21.19	PK	PASS
	V	2485.50	39.95	30.22	4.85	23.98	38.56	54	-15.44	AV	PASS
	V	2500.00	55.82	30.22	4.85	23.98	54.43	74	-19.57	PK	PASS
	V	2500.00	39.08	30.22	4.85	23.98	37.69	54	-16.31	AV	PASS

	Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
802.11 n40	Low Channel 2422MHz										
	H	2390.00	56.70	30.22	4.85	23.98	55.31	74	-18.69	PK	PASS
	H	2390.00	36.90	30.22	4.85	23.98	35.51	54	-18.49	AV	PASS
	H	2400.00	53.70	30.22	4.85	23.98	52.31	74	-21.69	PK	PASS
	H	2400.00	39.10	30.22	4.85	23.98	37.71	54	-16.29	AV	PASS
	V	2390.00	52.90	30.22	4.85	23.98	51.51	74	-22.49	PK	PASS
	V	2390.00	41.22	30.22	4.85	23.98	39.83	54	-14.17	AV	PASS
	V	2400.00	53.03	30.22	4.85	23.98	51.64	74	-22.36	PK	PASS
	V	2400.00	39.05	30.22	4.85	23.98	37.66	54	-16.34	AV	PASS
	High Channel 2452MHz										
	H	2483.50	47.25	30.22	4.85	23.98	45.86	74	-28.14	PK	PASS
	H	2485.50	36.23	30.22	4.85	23.98	34.84	54	-19.16	AV	PASS
	H	2500.00	49.63	30.22	4.85	23.98	48.24	74	-25.76	PK	PASS
	H	2500.00	39.76	30.22	4.85	23.98	38.37	54	-15.63	AV	PASS
	V	2483.50	58.53	30.22	4.85	23.98	57.14	74	-16.86	PK	PASS
	V	2485.50	38.54	30.22	4.85	23.98	37.15	54	-16.85	AV	PASS
	V	2500.00	59.31	30.22	4.85	23.98	57.92	74	-16.08	PK	PASS
	V	2500.00	42.80	30.22	4.85	23.98	41.41	54	-12.59	AV	PASS

Remark:
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

6.POWER SPECTRAL DENSITY TEST

Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	KDB558074 D0115.247 Meas Guidance v 05r02

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247	Power Spectral Density	8dBm/3kHz	2400-2483.5	PASS

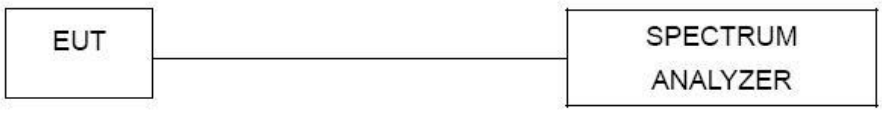
6.2 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

6.6 TEST RESULT

PASS: PLEASE REFER TO APPENDIX: APPENDIX1 FOR DETAILS

7. CHANNEL BANDWIDTH

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	KDB558074 D0115.247 Meas Guidance v05r02

7.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

7.2 TEST PROCEDURE

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 xRBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP

7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

7.6 TEST RESULT

PASS: PLEASE REFER TO APPENDIX: APPENDIX1 FOR DETAILS

8. OUTPUT POWER TEST

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	KDB558074 D0115.247 Meas Guidance v05r02

8.1 APPLIED PROCEDURES/LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

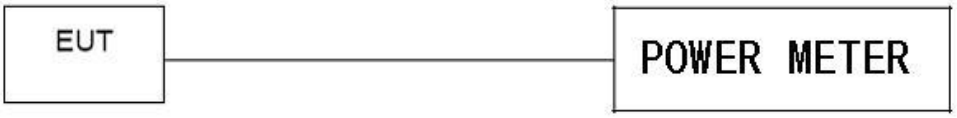
8.2 TEST PROCEDURE

a. The EUT was directly connected to the Power meter

8.3 DEVIATION FROM STANDARD

No deviation.

8.4 TEST SETUP



8.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

8.6 TEST RESULT

PASS: PLEASE REFER TO APPENDIX: APPENDIX1 FOR DETAILS

9. CONDUCTED BAND EDGE AND SPURIOUS EMISSION

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	KDB558074 D0115.247 Meas Guidance v05r02

9.1 APPLICABLE STANDARD

in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, 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 in15.209(a).

9.2 TEST PROCEDURE

Using the following spectrum analyzer setting:

A) Set the RBW = 100KHz.
B) Set the VBW = 300KHz.
C) Sweep time = auto couple.
D) Detector function = peak.
E) Trace mode = max hold.
F) Allow trace to fully stabilize.

9.3 DEVIATION FROM STANDARD

No deviation.

9.4 TEST SETUP

9.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

9.6 TEST RESULTS

PASS: PLEASE REFER TO APPENDIX: APPENDIX1 FOR DETAILS

10. ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203 /247(c)

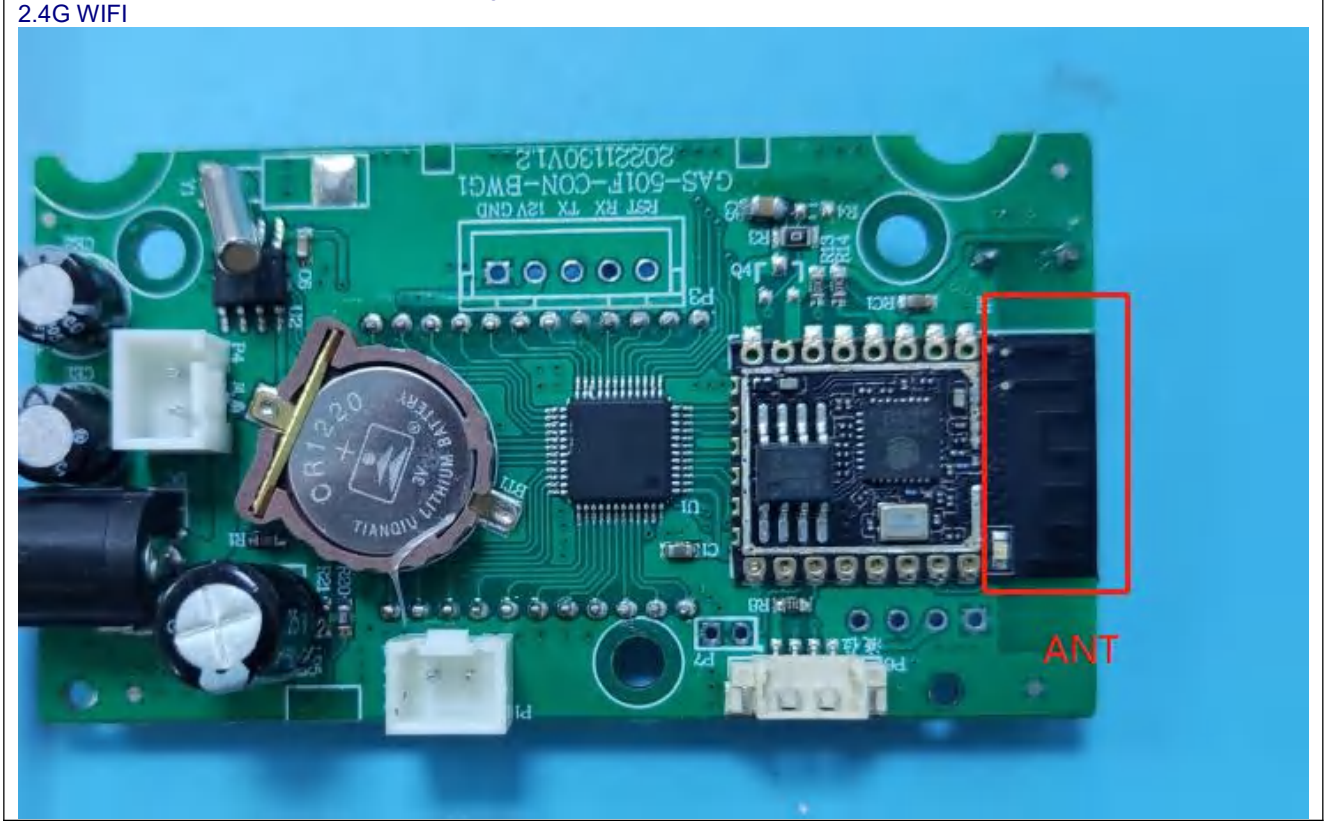
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247, if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

Refer to statement below for compliance.

The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

Antenna Connected Construction

The antenna is PCB antenna, the best case gain of the antennas are 0dBi, reference to the below photo for detailsANT for 2.4G WIFI

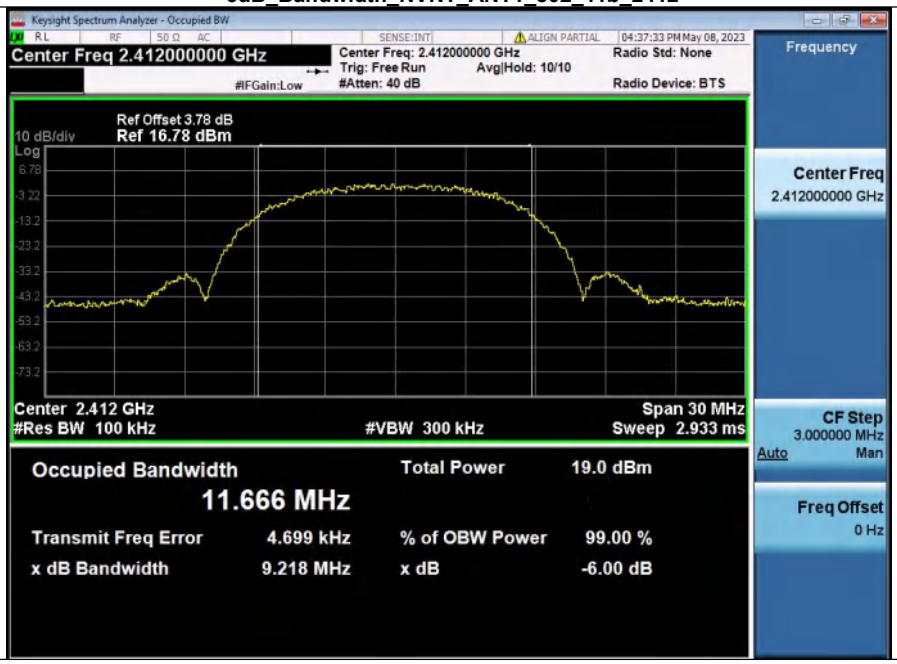


11. APPENDIX1

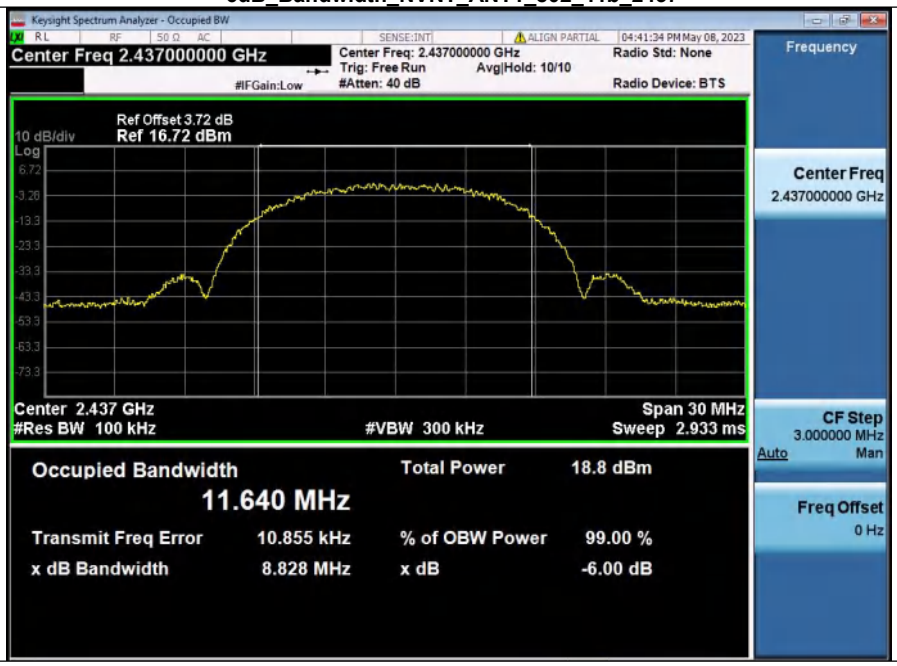
11.1. -6DB BANDWIDTH

Condition	Antenna	Modulation	Frequency (MHz)	-6dB BW(MHz)	limit(kHz)	Result
NVNT	ANT1	802.11b	2412.00	9.22	500	Pass
NVNT	ANT1	802.11b	2437.00	8.83	500	Pass
NVNT	ANT1	802.11b	2462.00	9.10	500	Pass
NVNT	ANT1	802.11g	2412.00	16.50	500	Pass
NVNT	ANT1	802.11g	2437.00	16.47	500	Pass
NVNT	ANT1	802.11g	2462.00	16.46	500	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	17.59	500	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	17.58	500	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	17.59	500	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	36.45	500	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	36.17	500	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	36.29	500	Pass

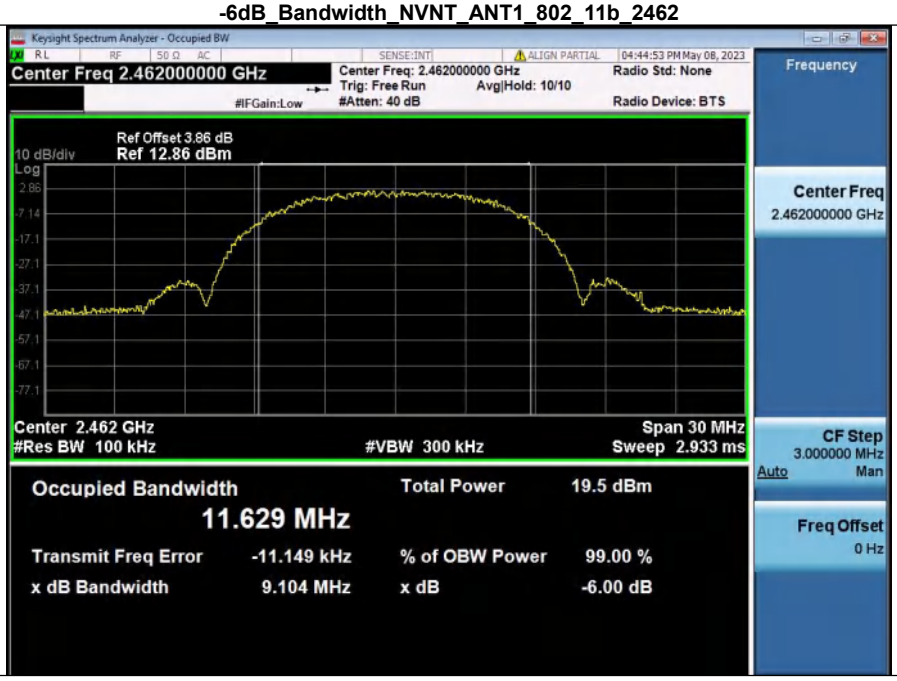
-6dB_Bandwidth_NVNT_ANT1_802_11b_2412



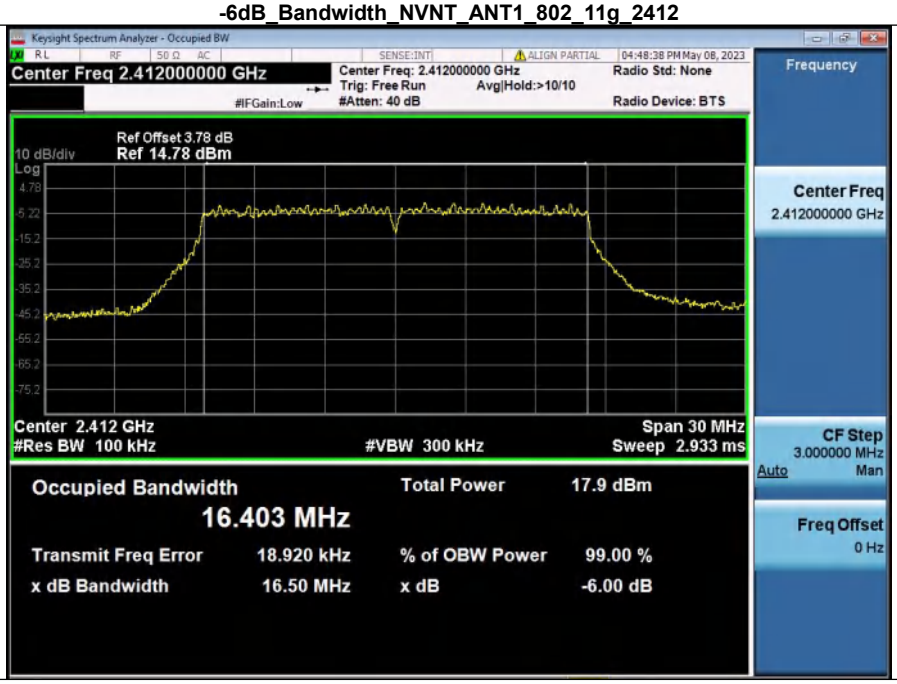
-6dB_Bandwidth_NVNT_ANT1_802_11b_2437



-6dB_Bandwidth_NVNT_ANT1_802_11b_2462



-6dB_Bandwidth_NVNT_ANT1_802_11g_2412



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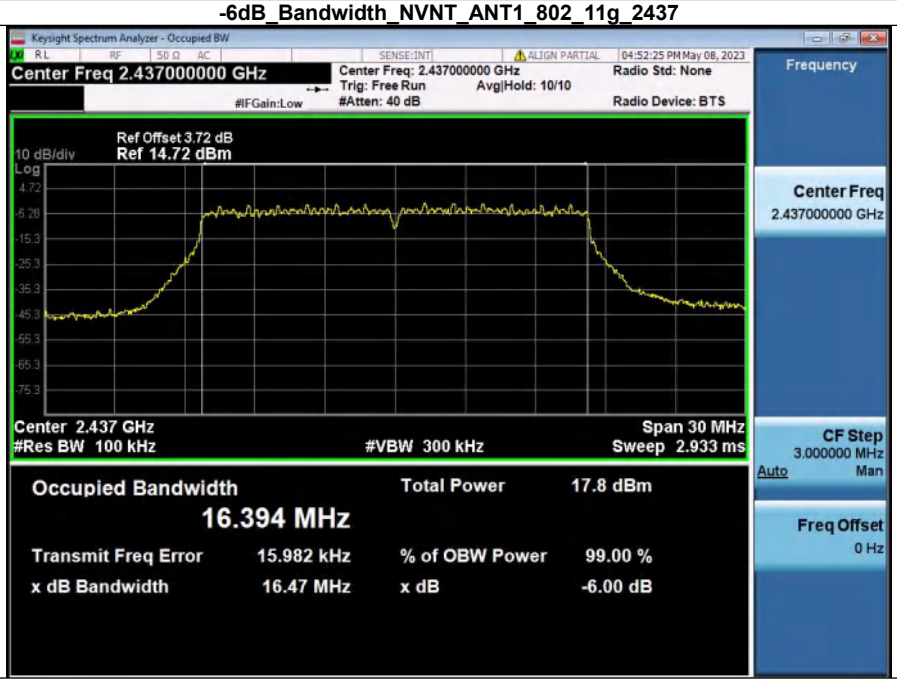
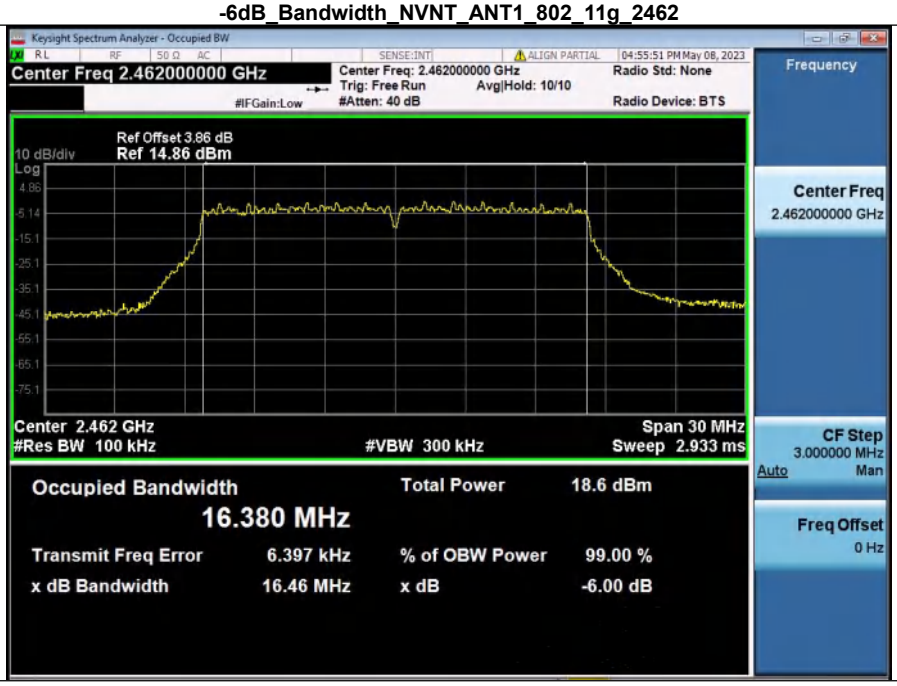
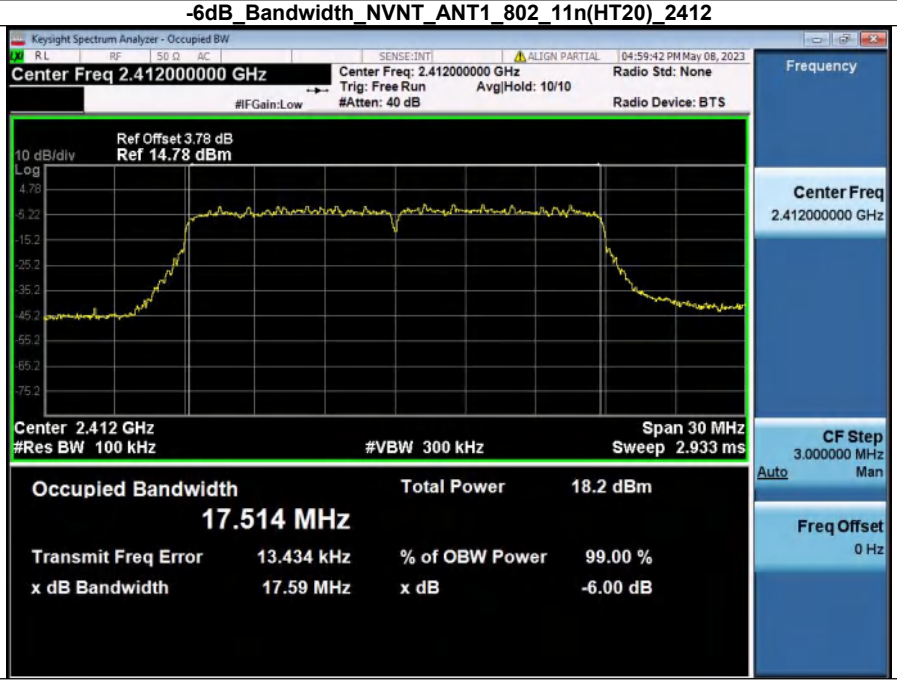


-6dB_Bandwidth_NVNT_ANT1_802_11g_2462



-6dB_Bandwidth_NVNT_ANT1_802_11n(HT20)_2412



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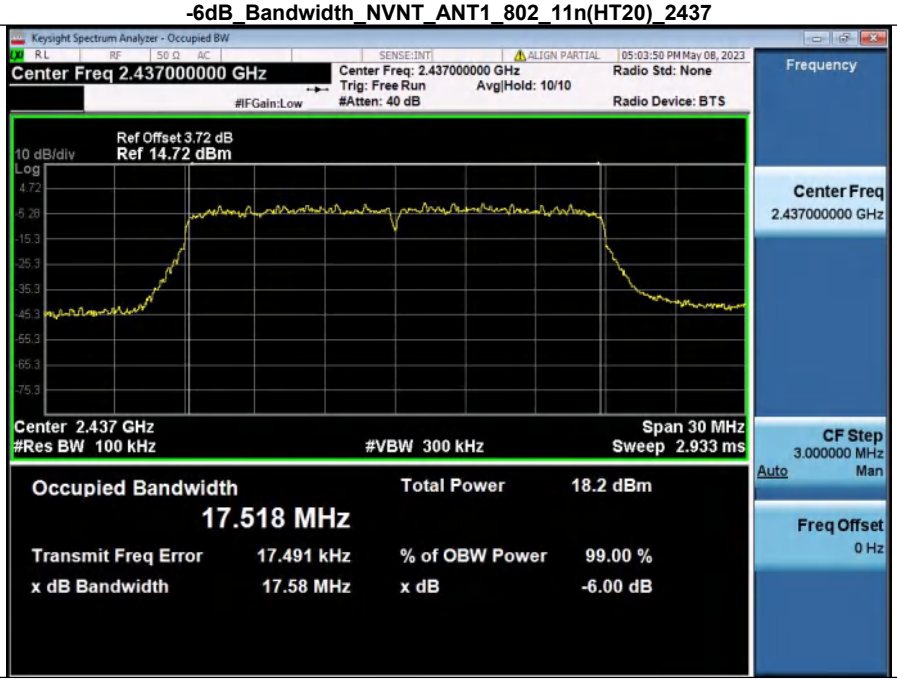
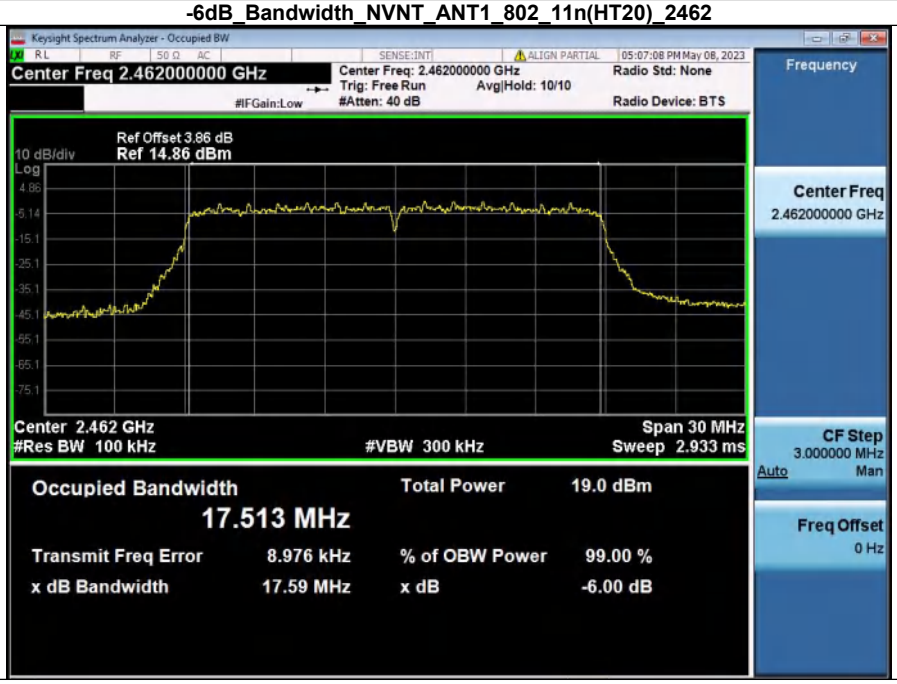
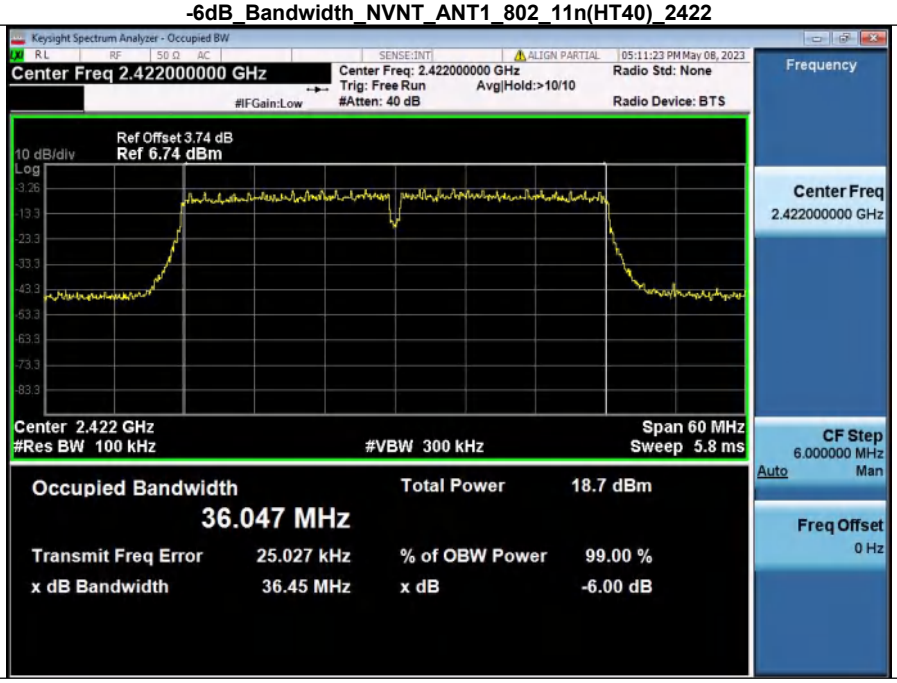


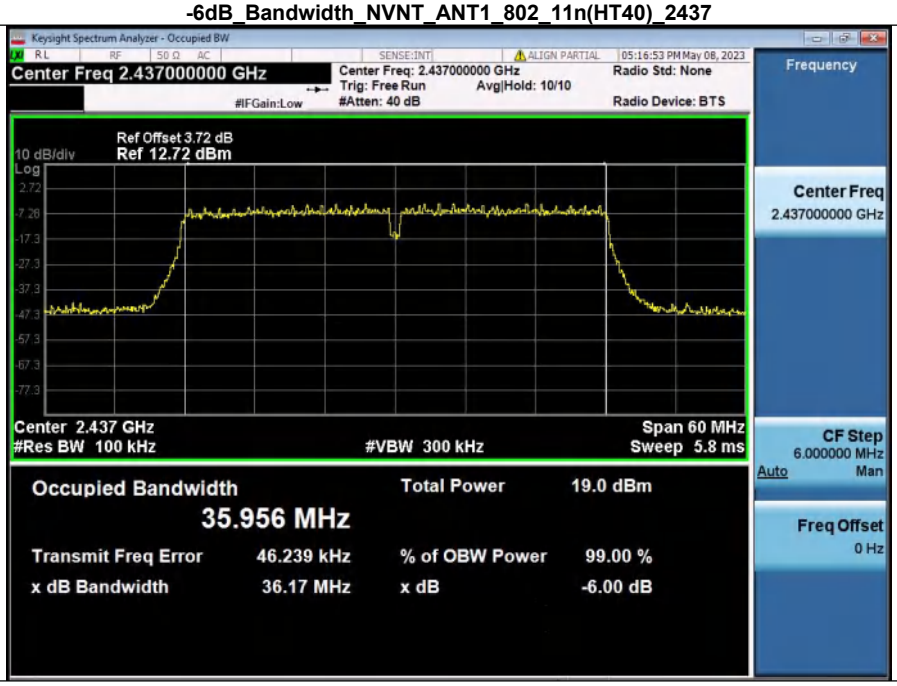
-6dB_Bandwidth_NVNT_ANT1_802_11n(HT20)_2462



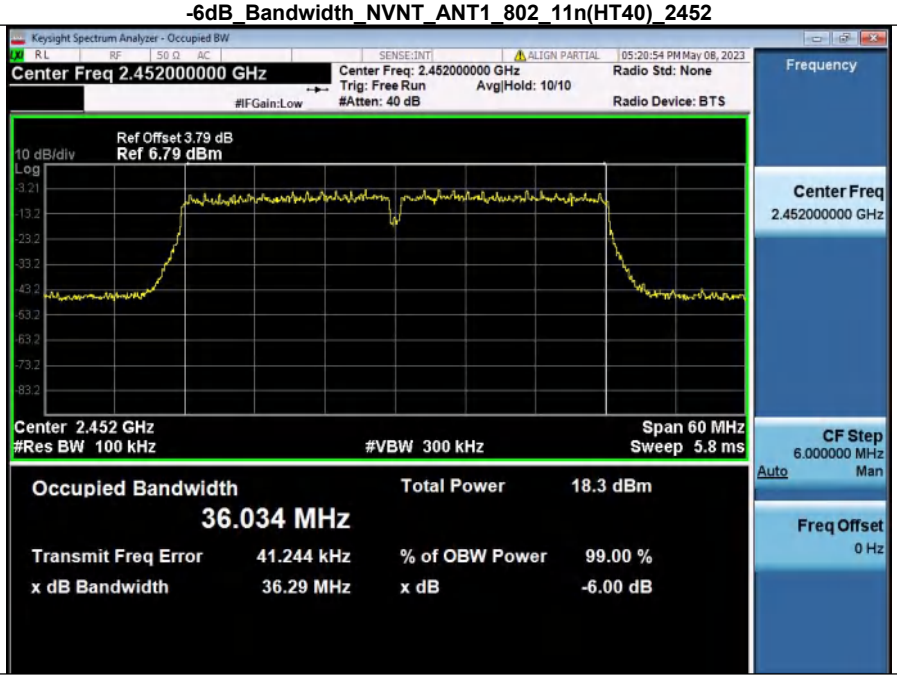
-6dB_Bandwidth_NVNT_ANT1_802_11n(HT40)_2422



-6dB_Bandwidth_NVNT_ANT1_802_11n(HT40)_2437



-6dB_Bandwidth_NVNT_ANT1_802_11n(HT40)_2452



11.2. BANDEDGE

Condition	Antenna	Modulation	TX_Frequency (MHz)	Max. Mark_frequency(MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	2399.94	-49.57	-17.00	Pass
NVNT	ANT1	802.11b	2462.00	2483.54	-54.79	-17.75	Pass
NVNT	ANT1	802.11g	2412.00	2399.49	-44.43	-20.87	Pass
NVNT	ANT1	802.11g	2462.00	2484.02	-47.26	-20.21	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	2398.14	-46.30	-20.99	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	2483.73	-46.70	-20.11	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	2399.76	-48.83	-23.25	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	2485.04	-49.45	-23.67	Pass

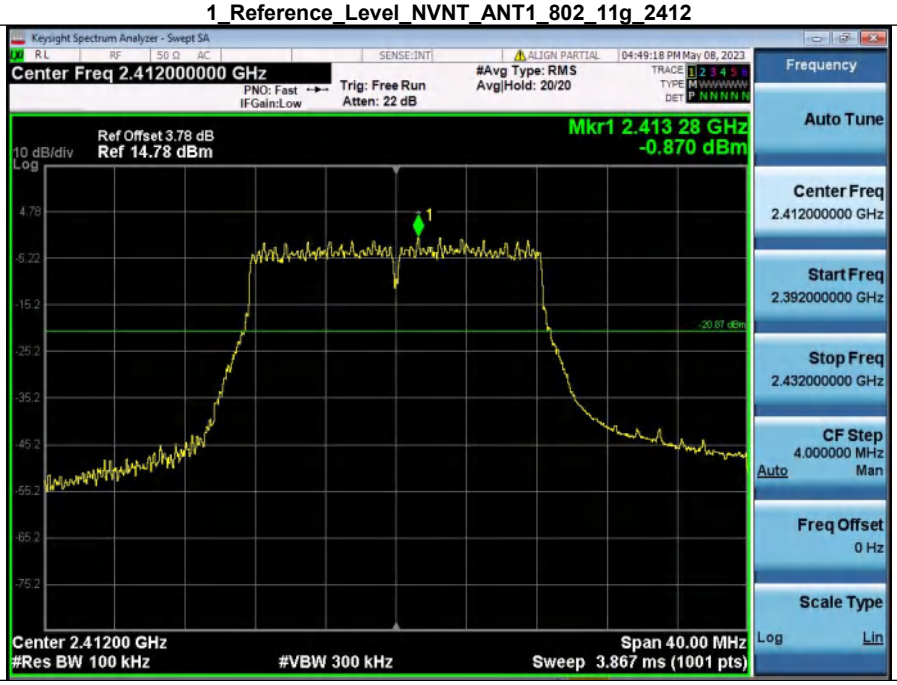
1_Reference_Level_NVNT_ANT1_802_11b_2412

2_Bandedge_NVNT_ANT1_802_11b_2412

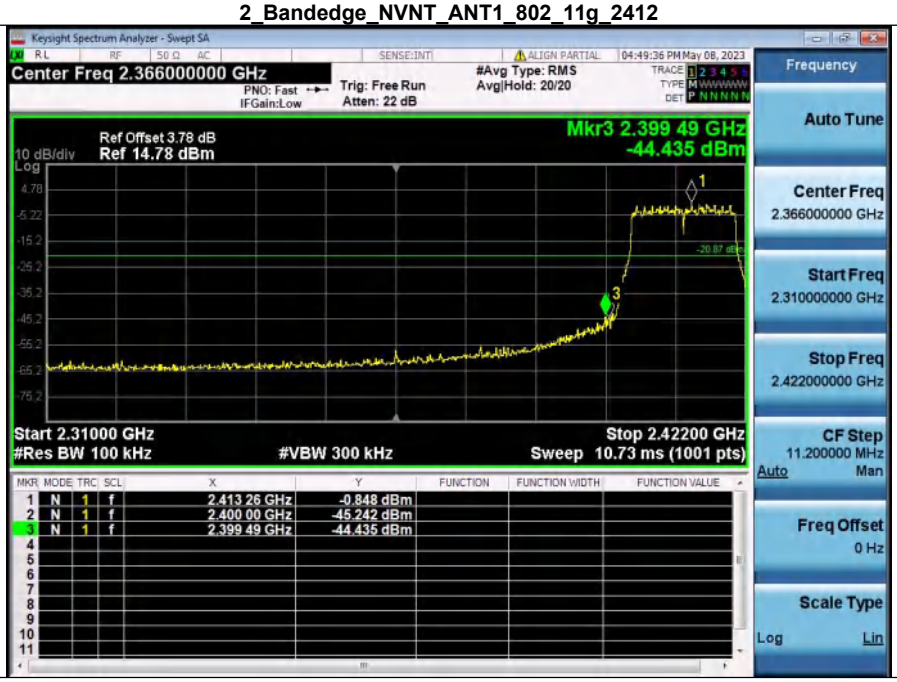
1_Reference_Level_NVNT_ANT1_802_11b_2462

2_Bandedge_NVNT_ANT1_802_11b_2462

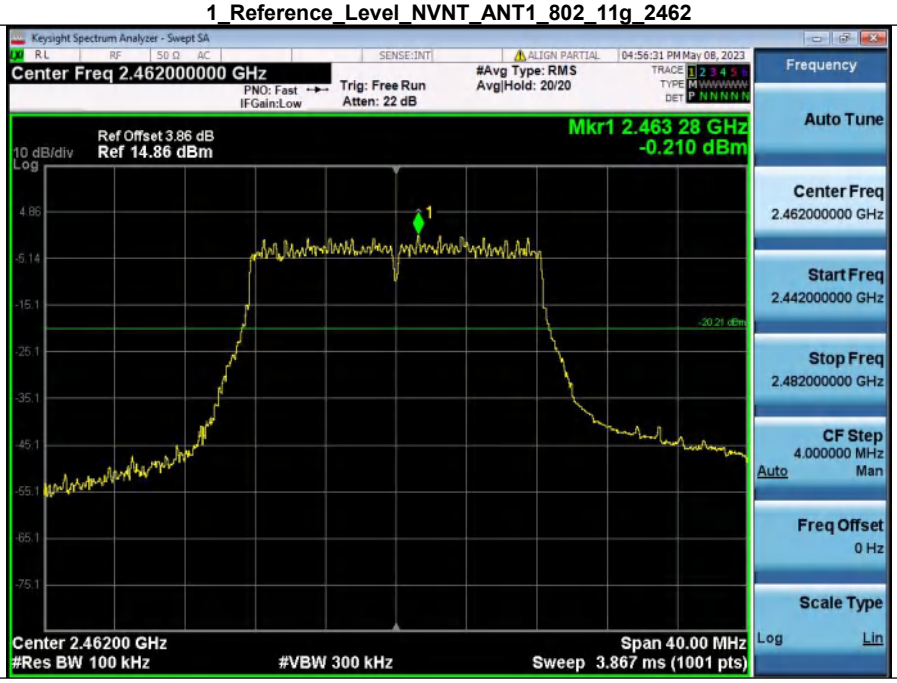
1_Reference_Level_NVNT_ANT1_802_11g_2412



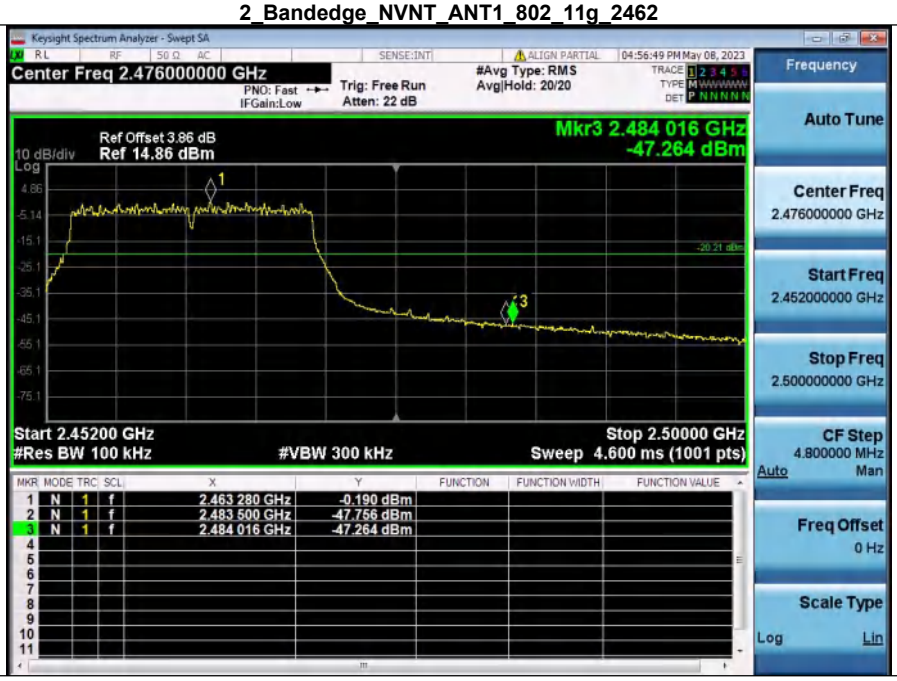
2_Bandedge_NVNT_ANT1_802_11g_2412



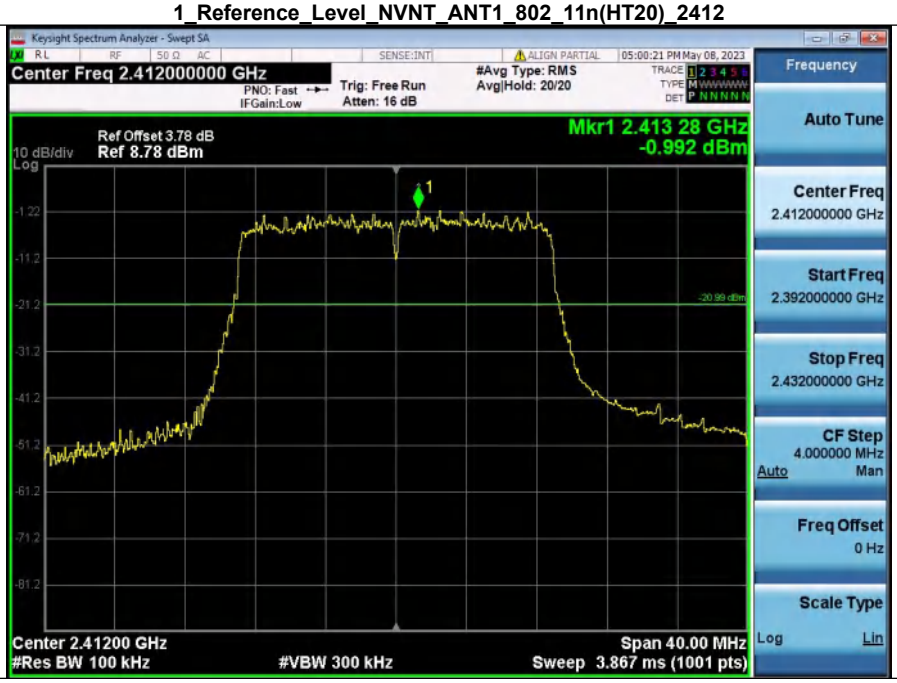
1_Reference_Level_NVNT_ANT1_802_11g_2462



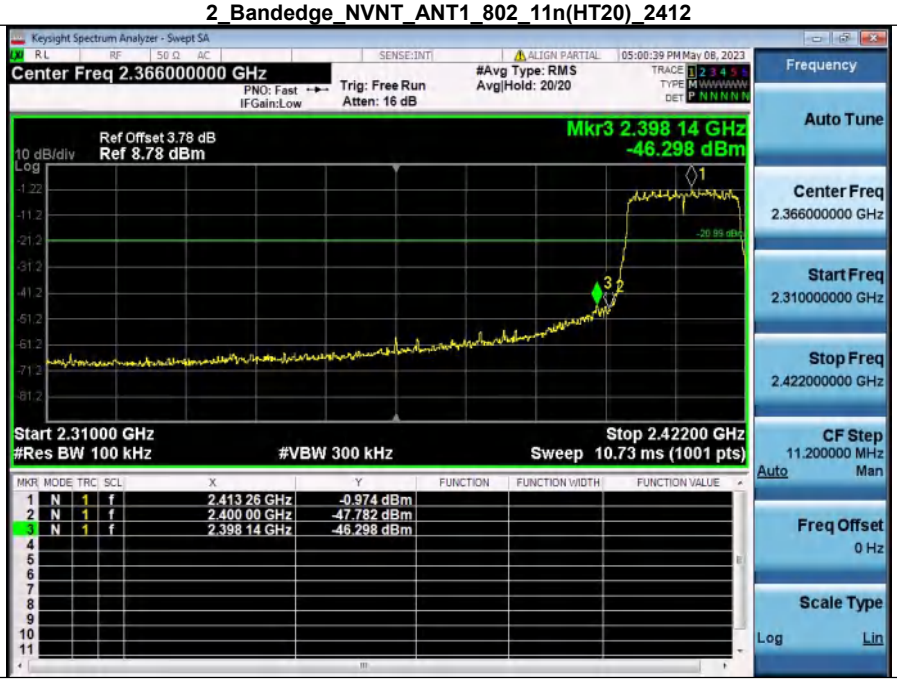
2_Bandedge_NVNT_ANT1_802_11g_2462



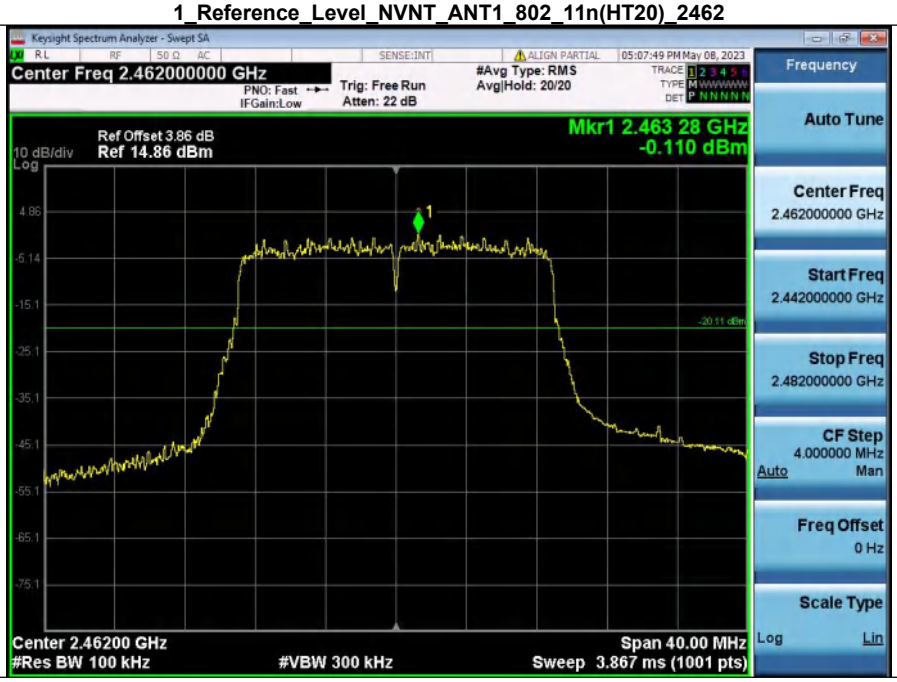
1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2412



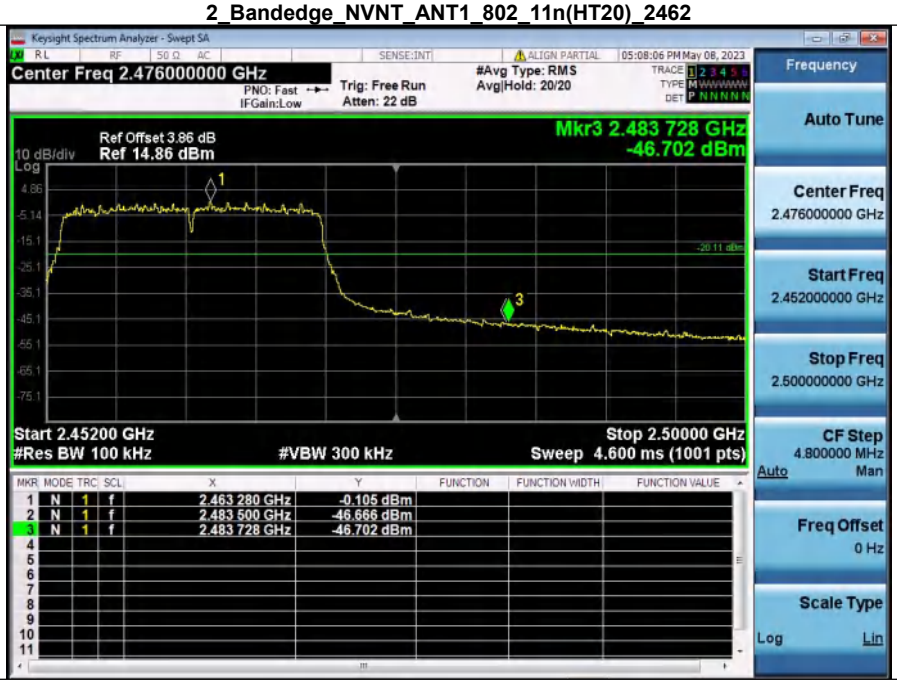
2_Bandedge_NVNT_ANT1_802_11n(HT20)_2412



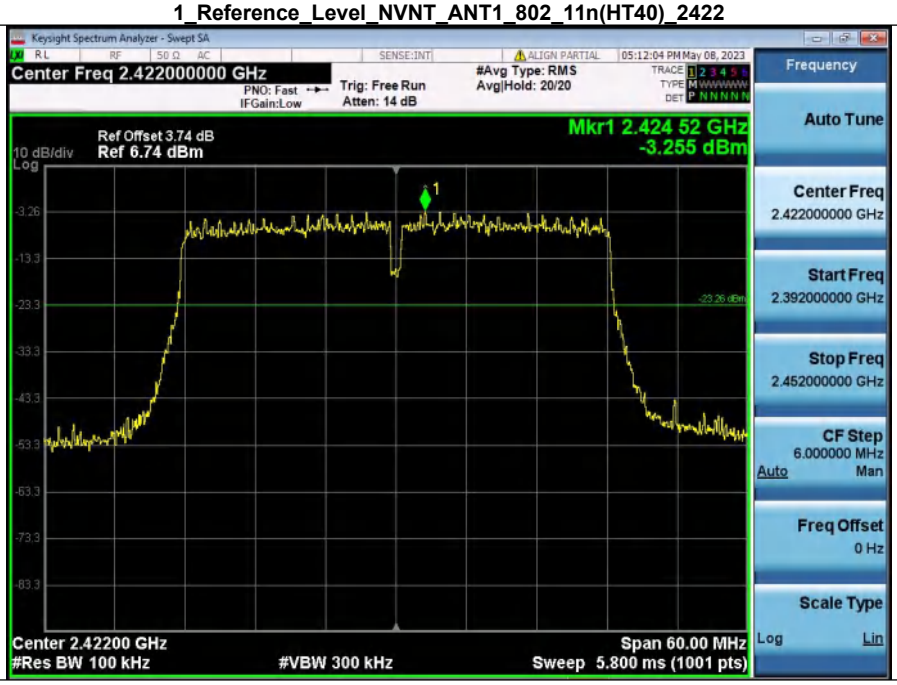
1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2462



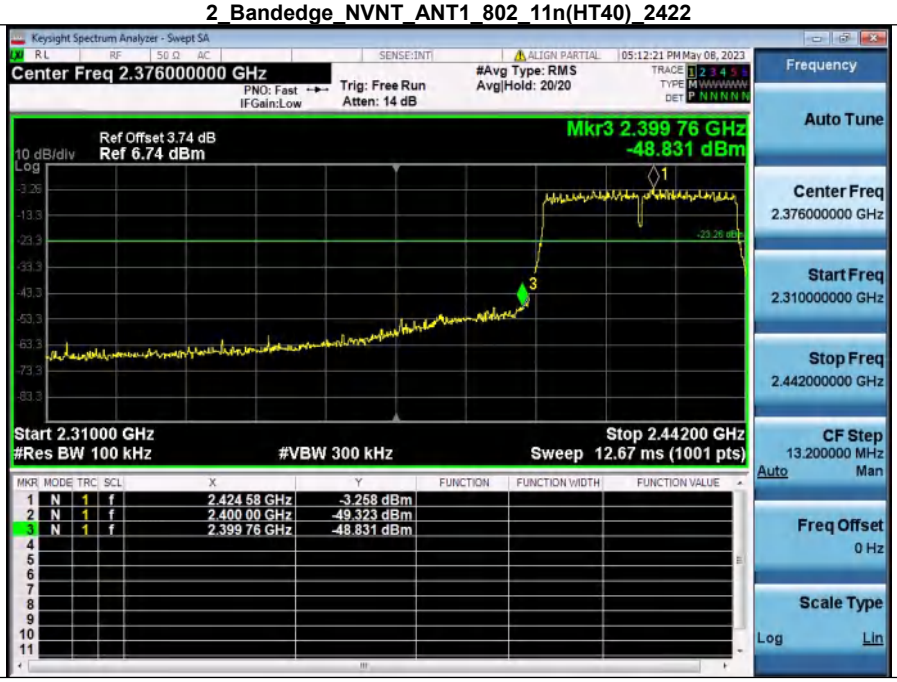
2_Bandedge_NVNT_ANT1_802_11n(HT20)_2462



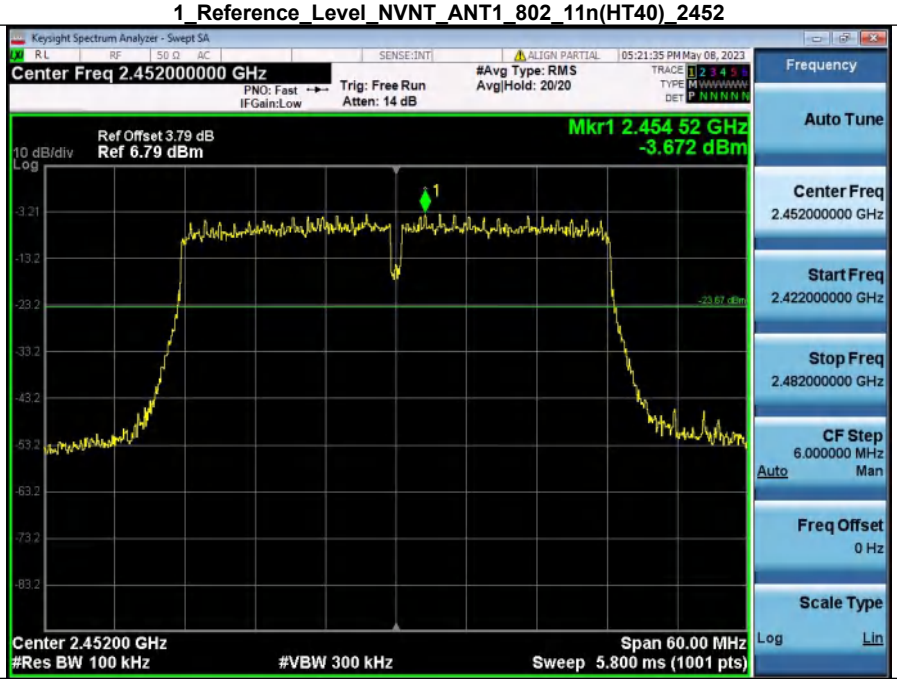
1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2422



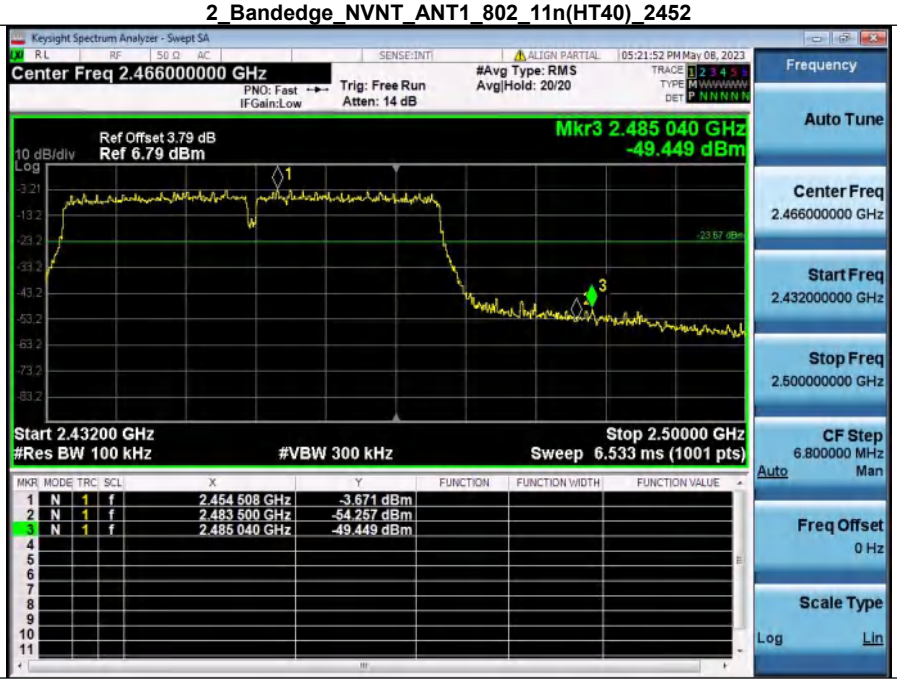
2_Bandedge_NVNT_ANT1_802_11n(HT40)_2422



1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2452



2_Bandedge_NVNT_ANT1_802_11n(HT40)_2452



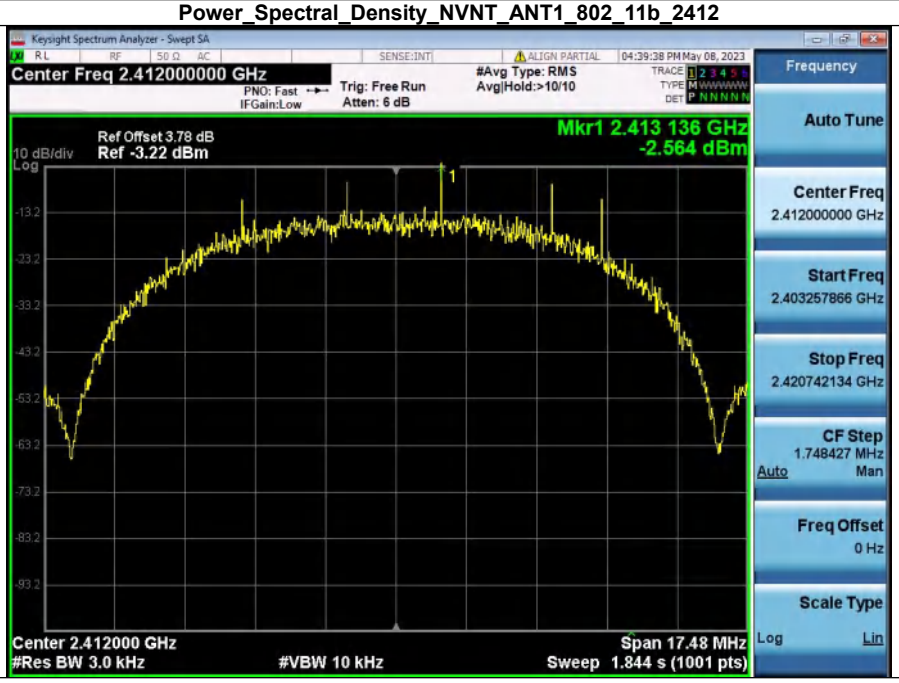
11.3. MAX. OUTPUT POWER

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	16.57	N/A	16.57	30	Pass
NVNT	ANT1	802.11b	2437.00	Peak	16.57	N/A	16.57	30	Pass
NVNT	ANT1	802.11b	2462.00	Peak	16.78	N/A	16.78	30	Pass
NVNT	ANT1	802.11g	2412.00	Peak	13.57	N/A	13.57	30	Pass
NVNT	ANT1	802.11g	2437.00	Peak	13.48	N/A	13.48	30	Pass
NVNT	ANT1	802.11g	2462.00	Peak	13.87	N/A	13.87	30	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	Peak	12.65	N/A	12.65	30	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	Peak	12.57	N/A	12.57	30	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	Peak	12.64	N/A	12.64	30	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	Peak	10.57	N/A	10.57	30	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	Peak	10.67	N/A	10.67	30	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	Peak	10.49	N/A	10.49	30	Pass

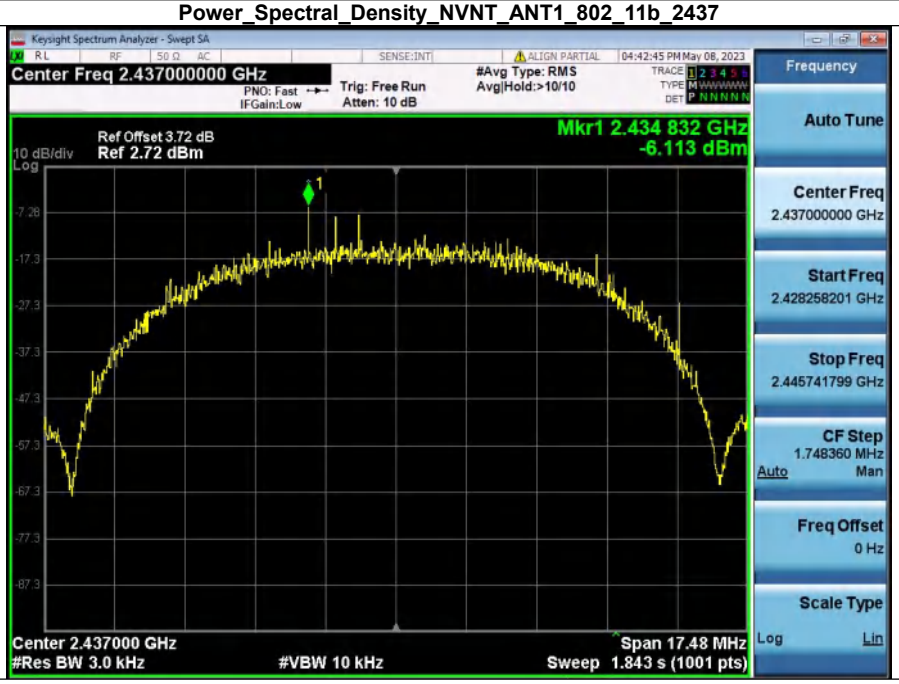
11.4. POWER SPECTRAL DENSITY

Condition	Antenna	Modulation	Frequency (MHz)	PSD(dBm/3kHz)	limit(dBm/3kHz)	Result
NVNT	ANT1	802.11b	2412.00	-2.56	8	Pass
NVNT	ANT1	802.11b	2437.00	-6.11	8	Pass
NVNT	ANT1	802.11b	2462.00	-11.57	8	Pass
NVNT	ANT1	802.11g	2412.00	-16.60	8	Pass
NVNT	ANT1	802.11g	2437.00	-15.99	8	Pass
NVNT	ANT1	802.11g	2462.00	-14.67	8	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	-16.25	8	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	-16.03	8	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	-15.53	8	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	-19.75	8	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	-18.63	8	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	-20.30	8	Pass

Power_Spectral_Density_NVNT_ANT1_802_11b_2412

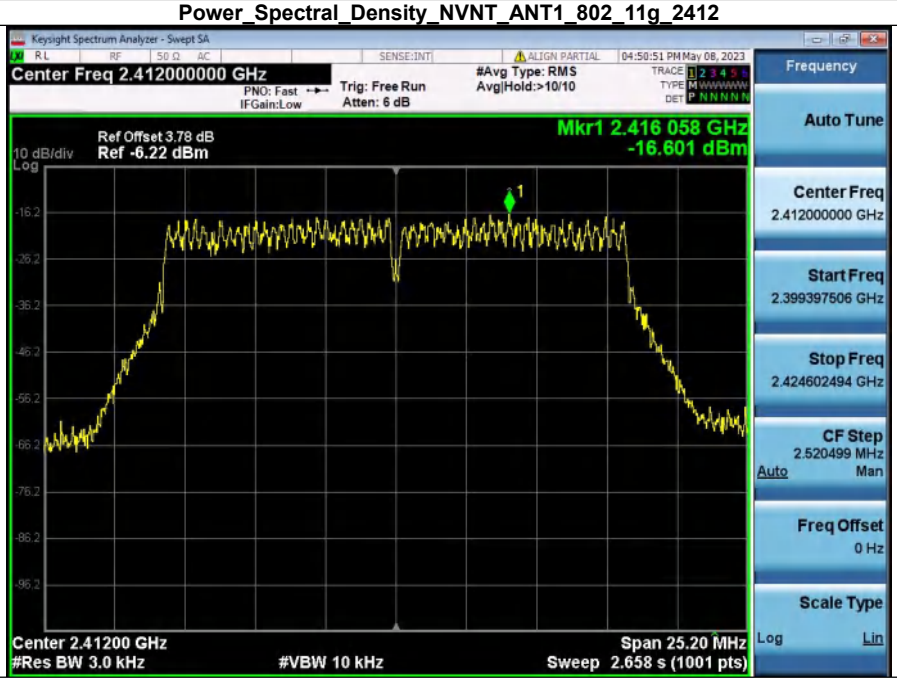


Power_Spectral_Density_NVNT_ANT1_802_11b_2437



Power_Spectral_Density_NVNT_ANT1_802_11b_2462

Power_Spectral_Density_NVNT_ANT1_802_11g_2412



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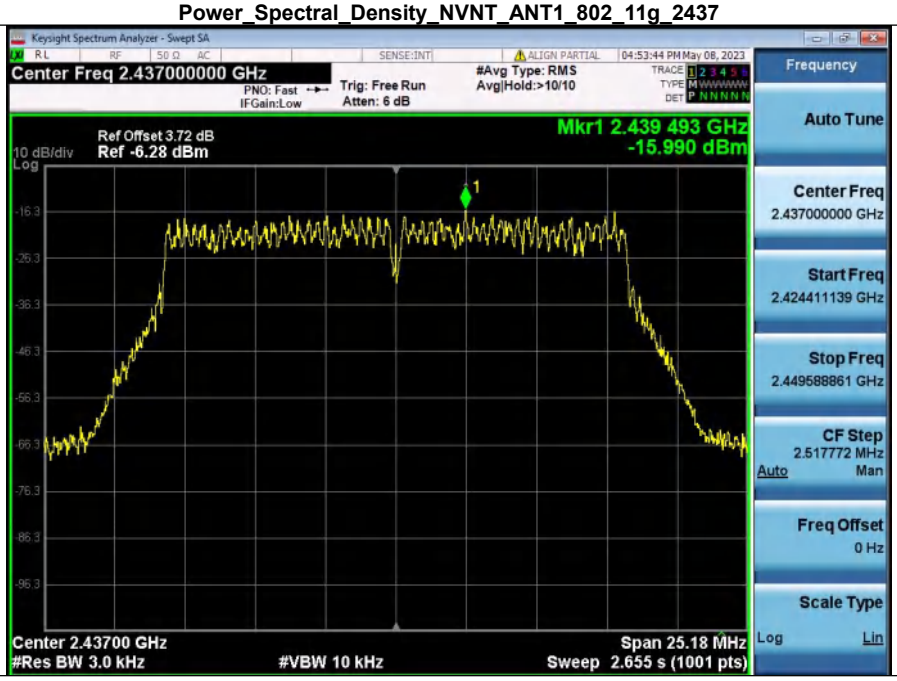

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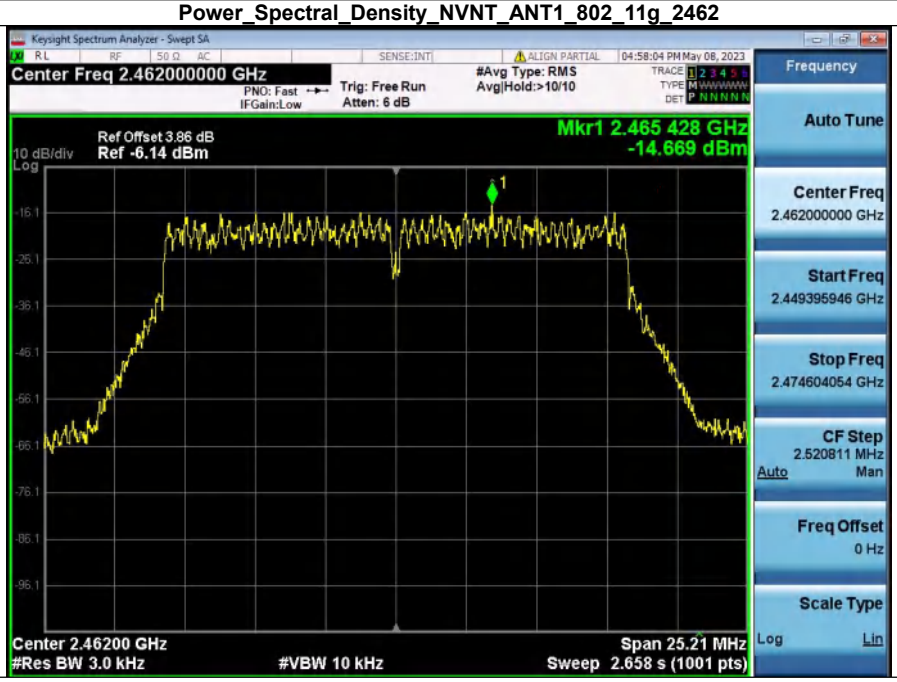
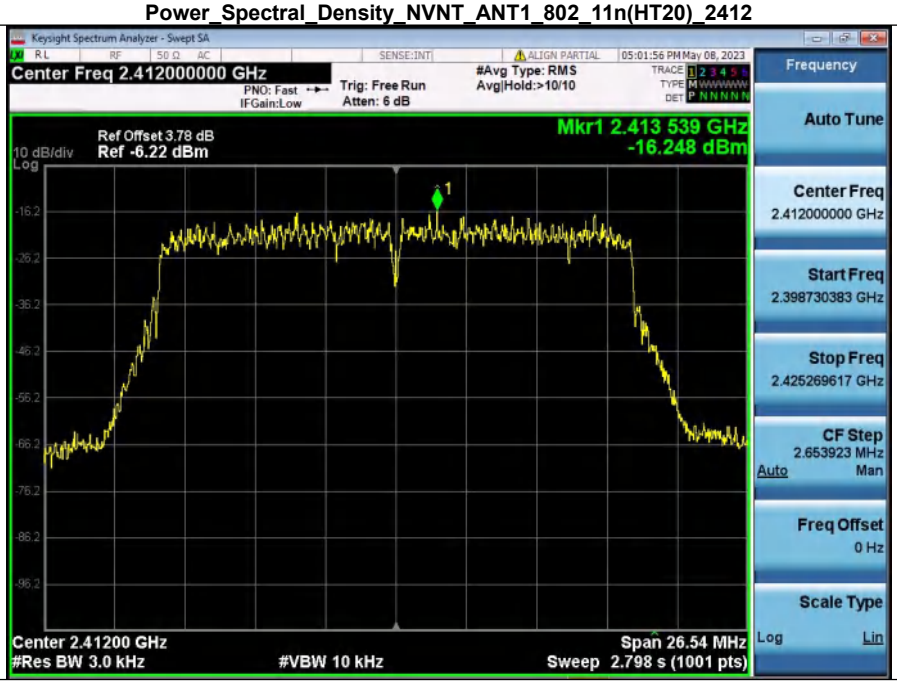


Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_2412



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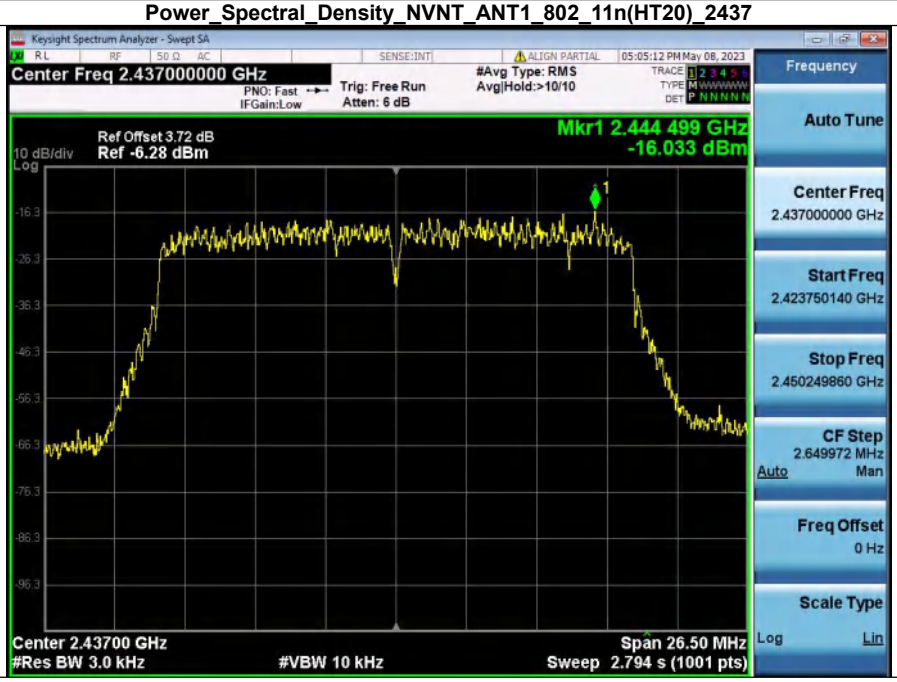

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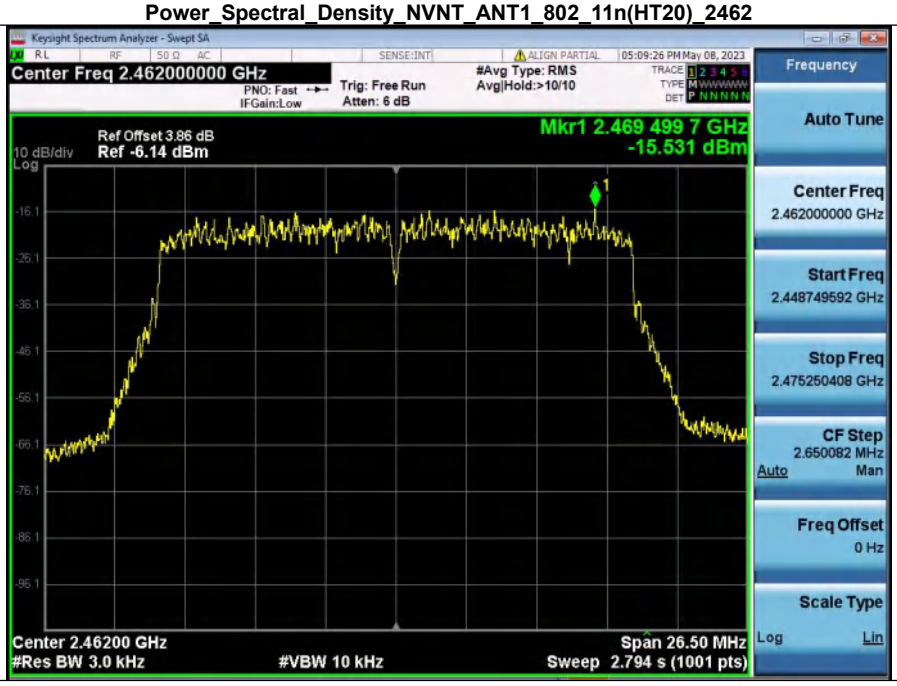

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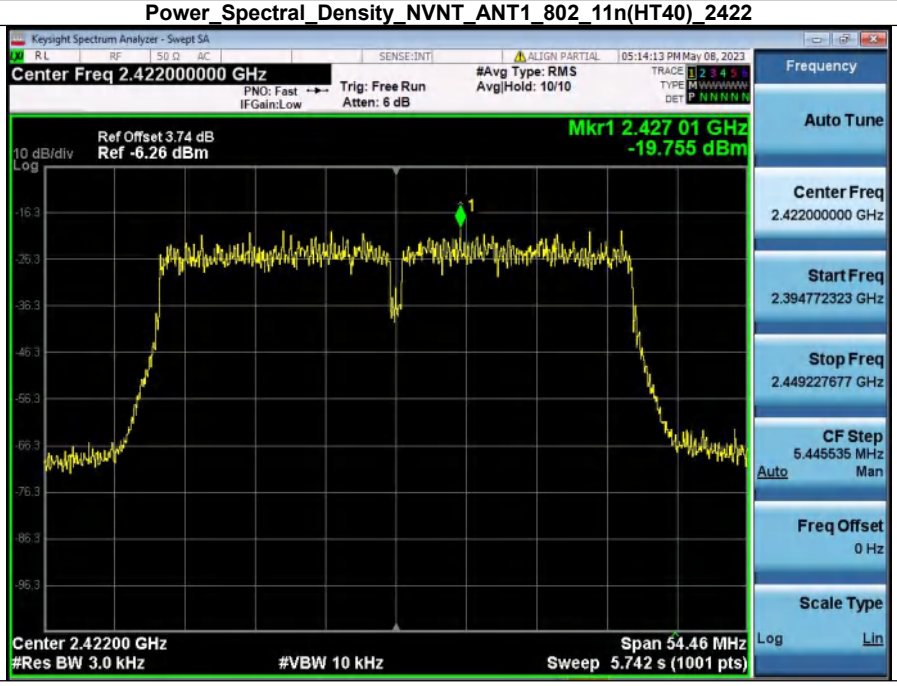

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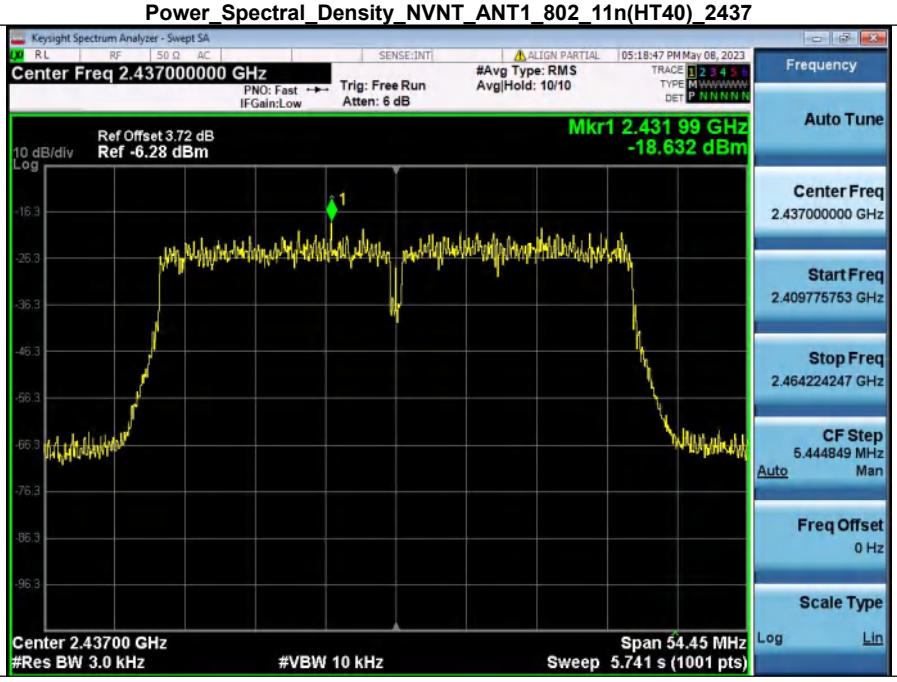

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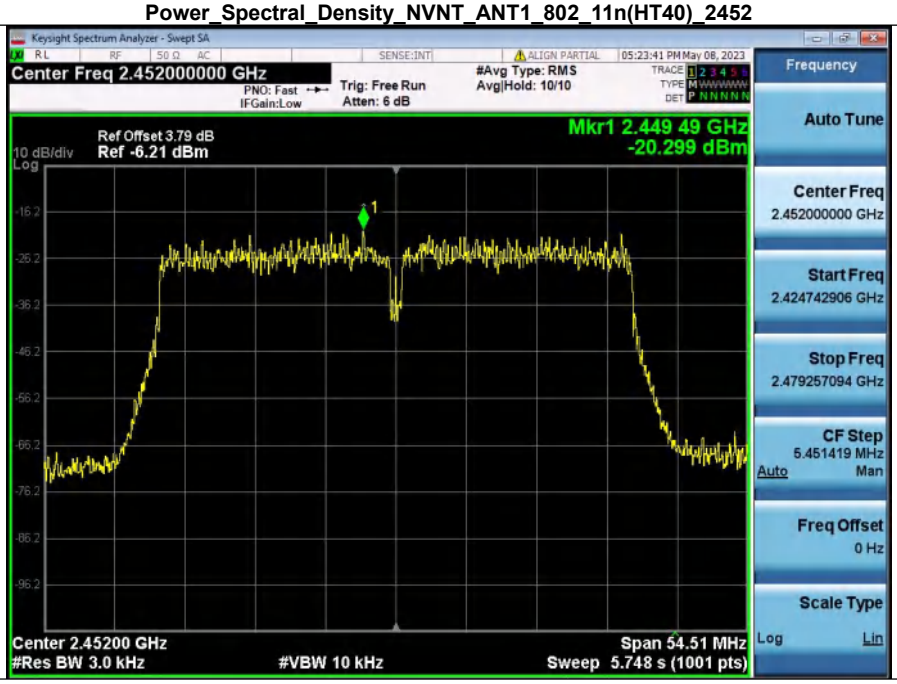
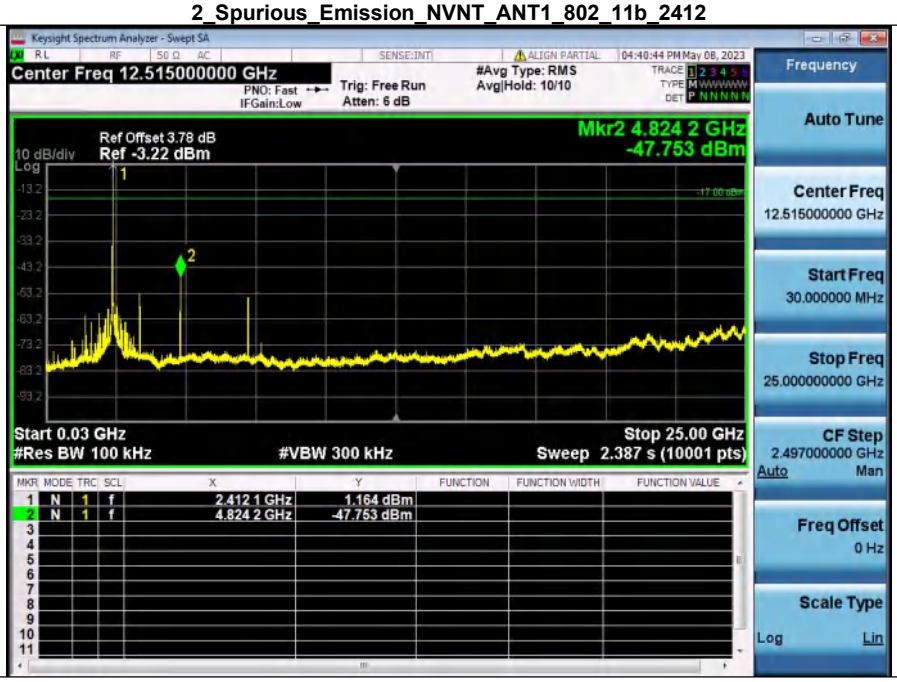


11.5. SPURIOUS EMISSION

Condition	Antenna	Modulation	TX_Frequency (MHz)	Max. Mark_frequency(MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	4824.24	-47.75	-17.00	Pass
NVNT	ANT1	802.11b	2437.00	24543.05	-47.83	-18.23	Pass
NVNT	ANT1	802.11b	2462.00	4924.12	-48.15	-17.75	Pass
NVNT	ANT1	802.11g	2412.00	3368.49	-56.54	-20.87	Pass
NVNT	ANT1	802.11g	2437.00	24533.06	-49.60	-20.87	Pass
NVNT	ANT1	802.11g	2462.00	2502.03	-55.07	-20.21	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	4824.24	-56.16	-20.99	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	24011.19	-49.40	-20.85	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	2502.03	-54.28	-20.11	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	4841.72	-55.73	-23.25	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	7323.74	-56.25	-23.18	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	7348.71	-57.65	-23.67	Pass

1_Reference_Level_NVNT_ANT1_802_11b_2412

2_Spurious_Emission_NVNT_ANT1_802_11b_2412



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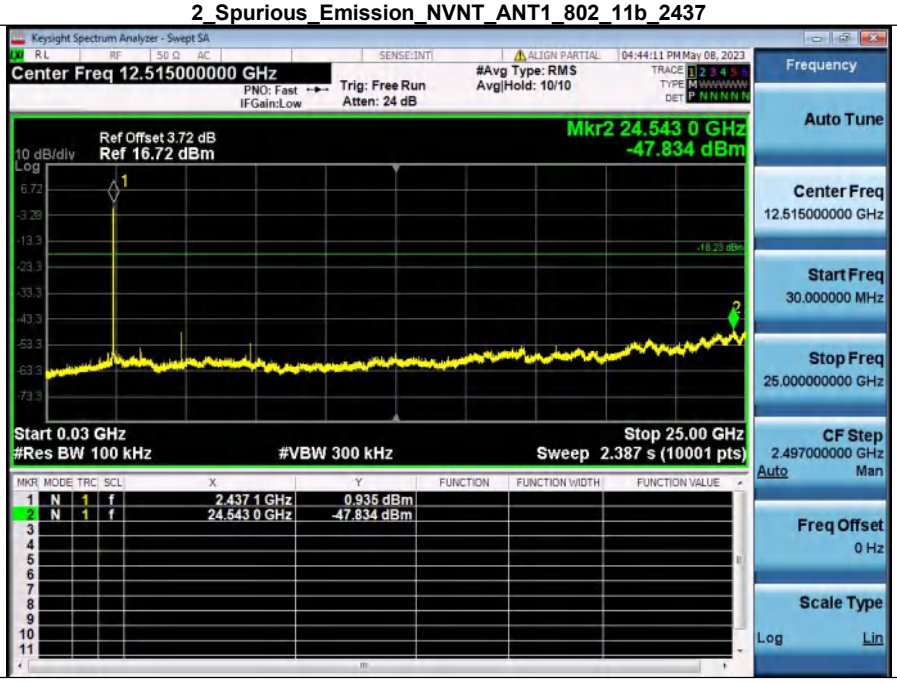

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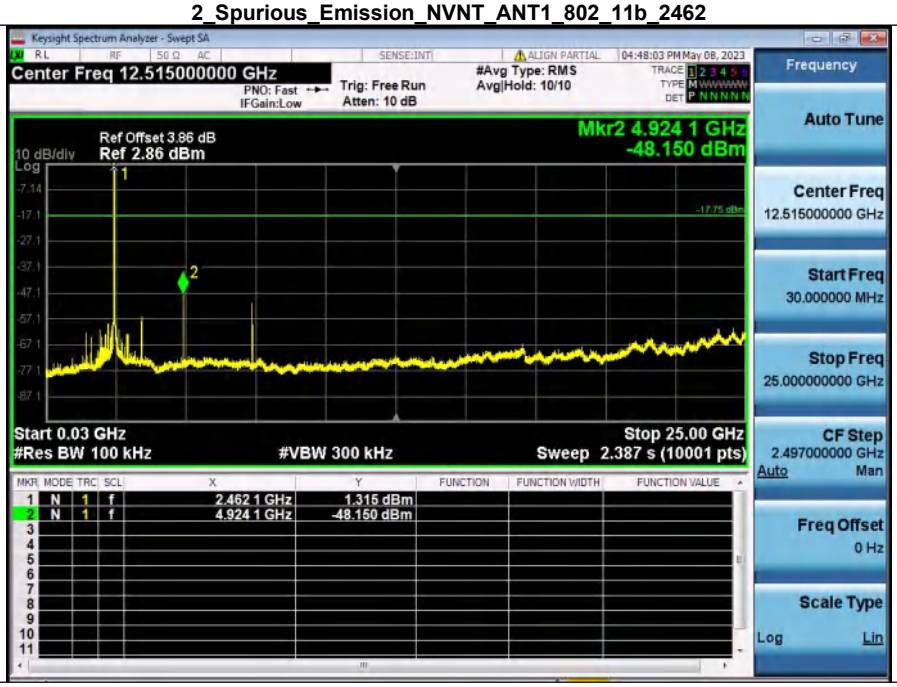

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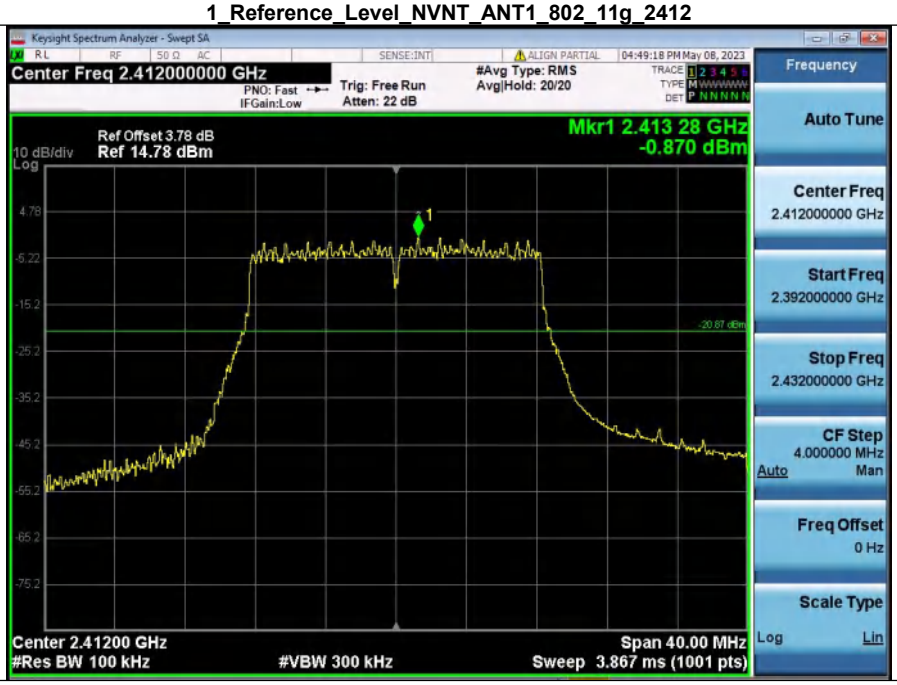

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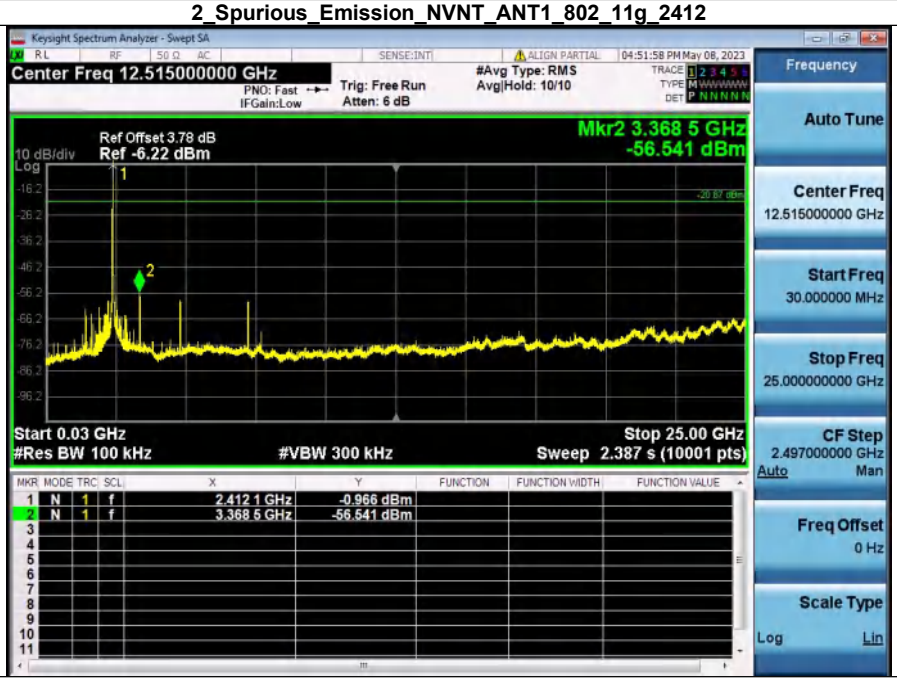

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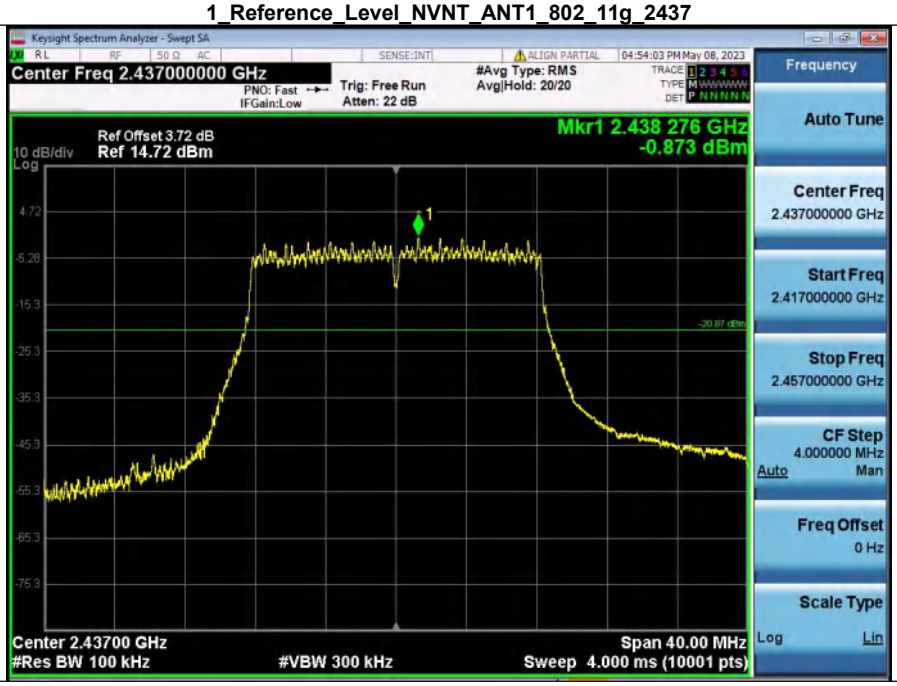

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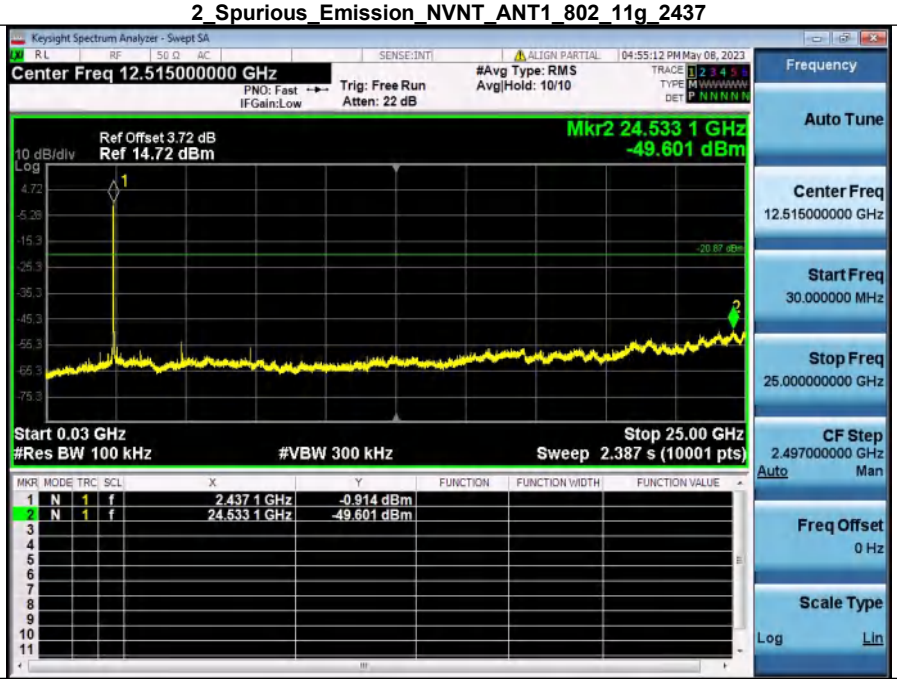

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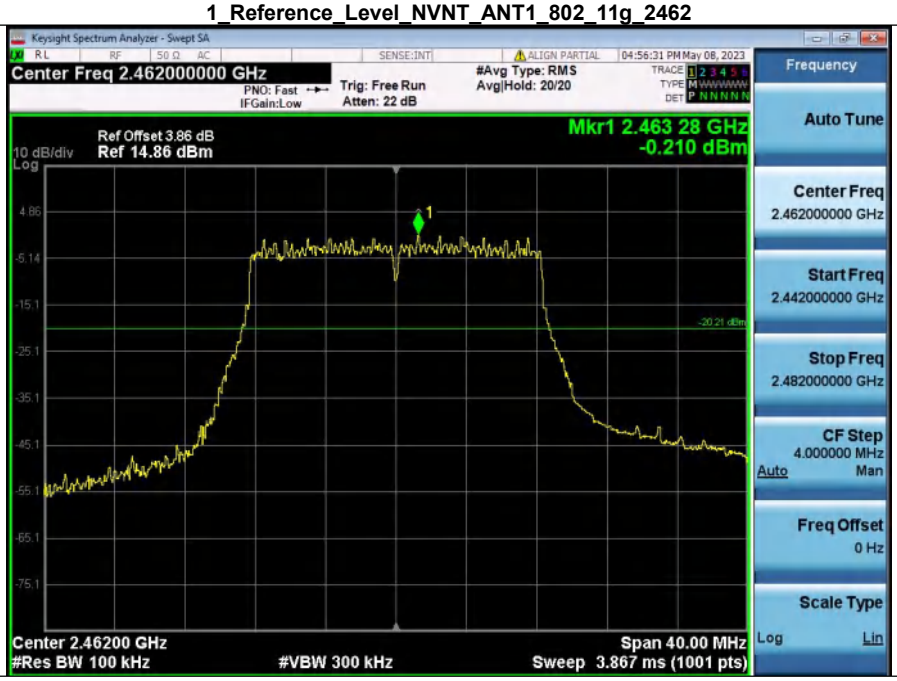

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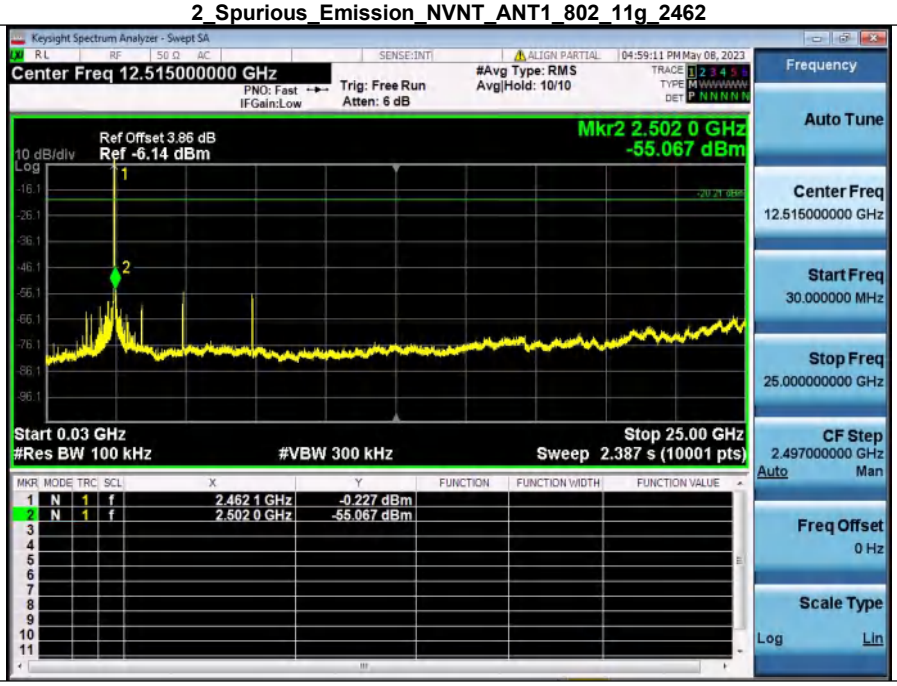
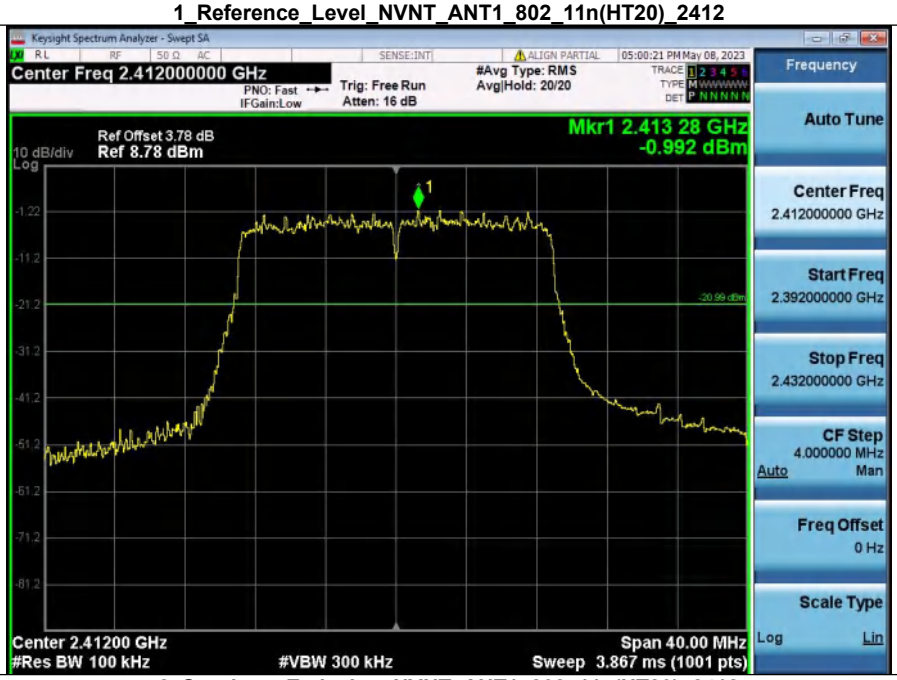


1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2412



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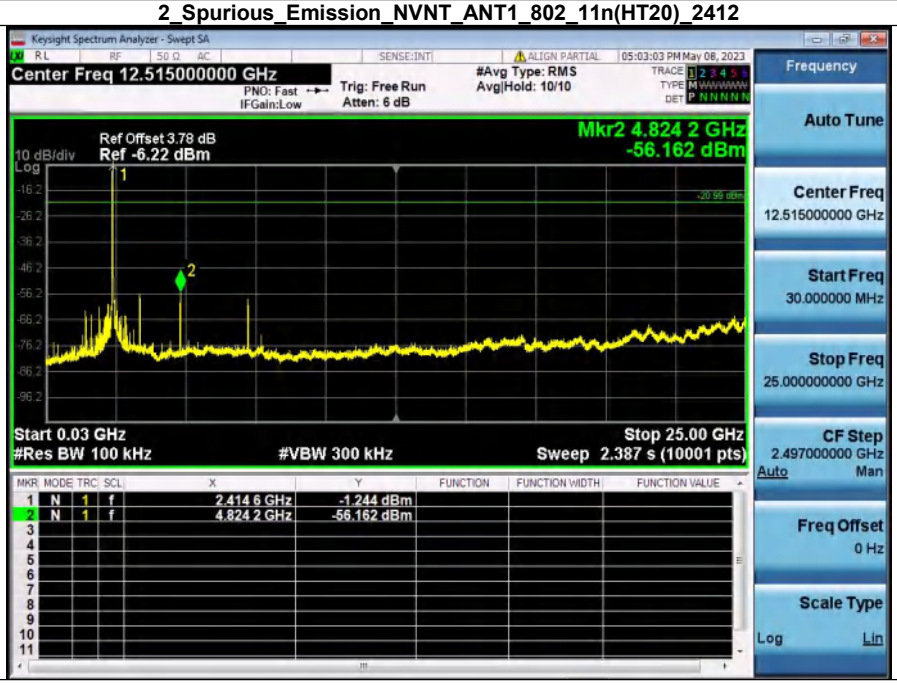

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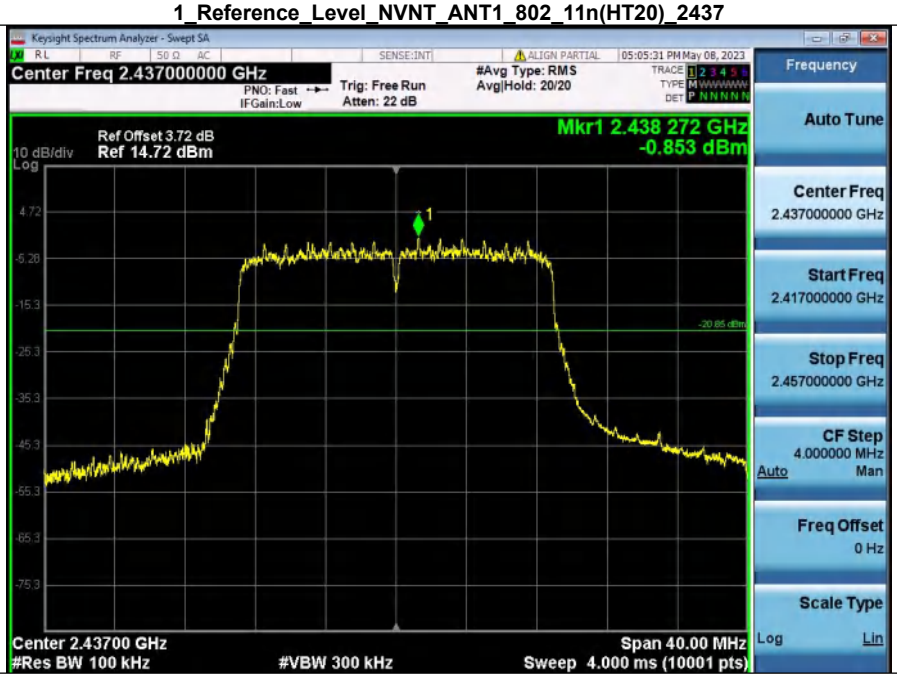

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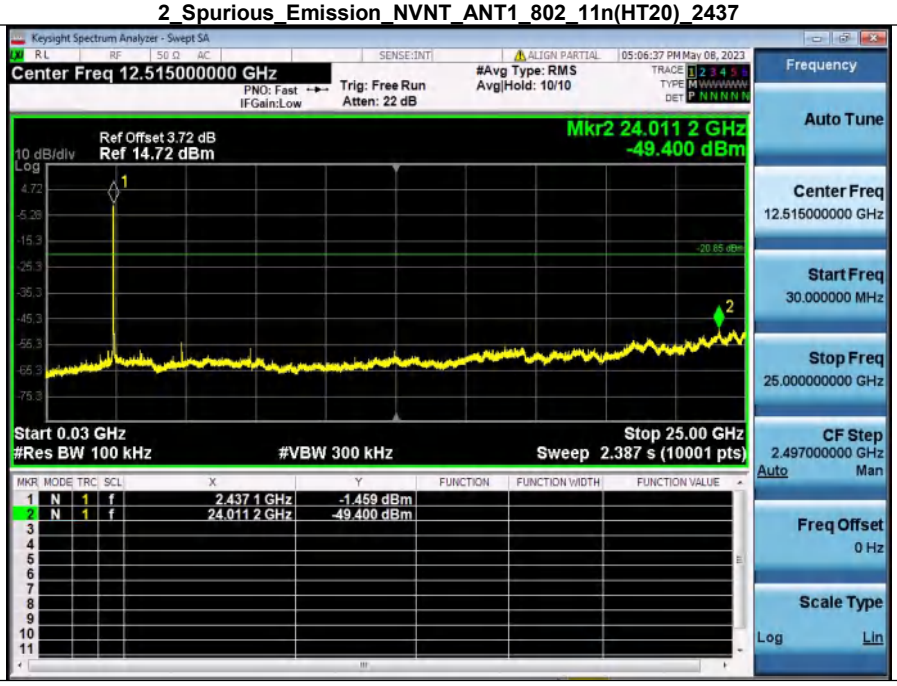

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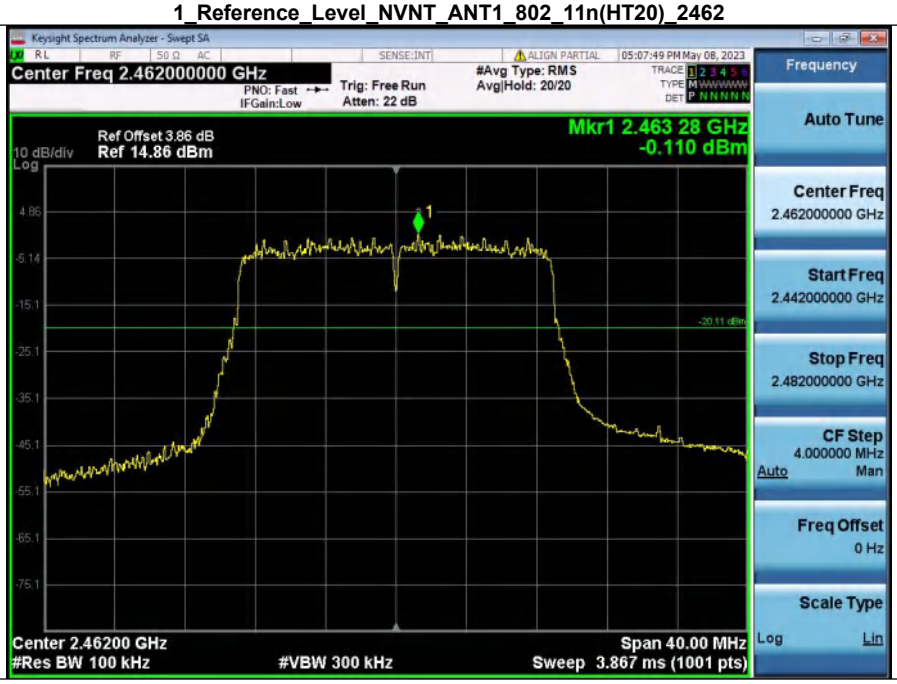

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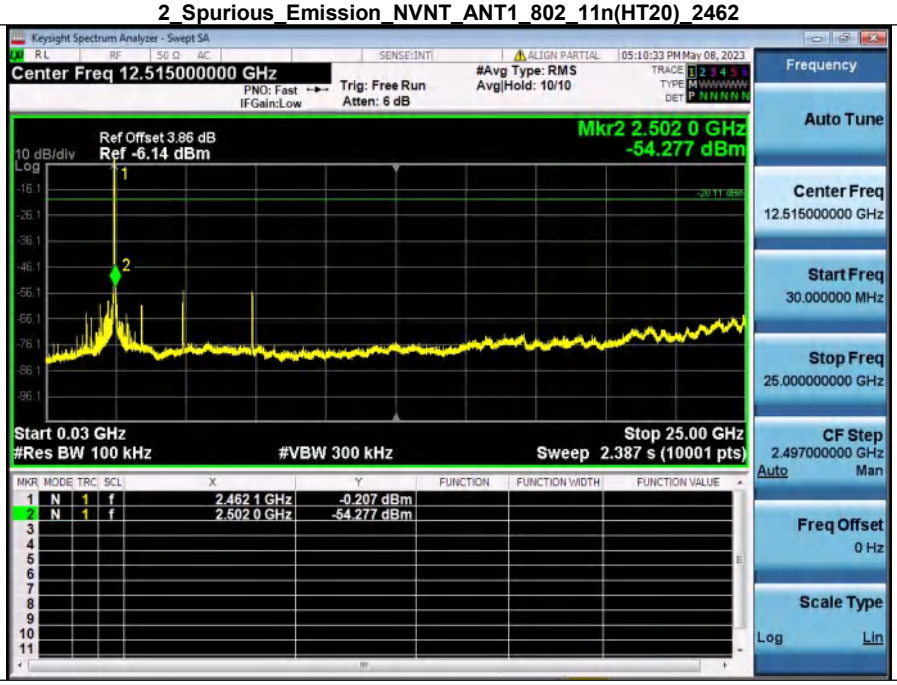

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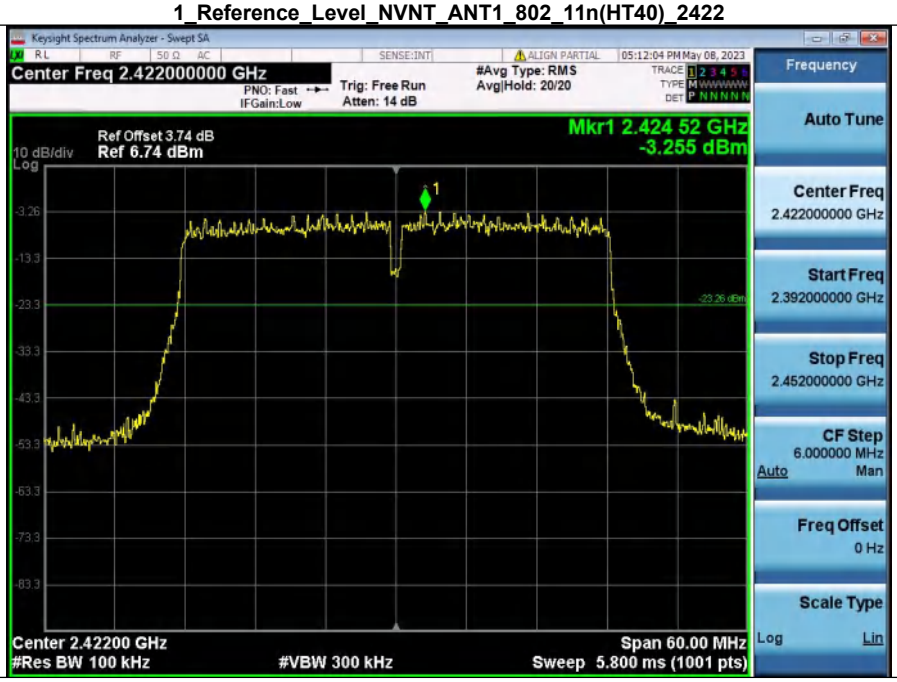

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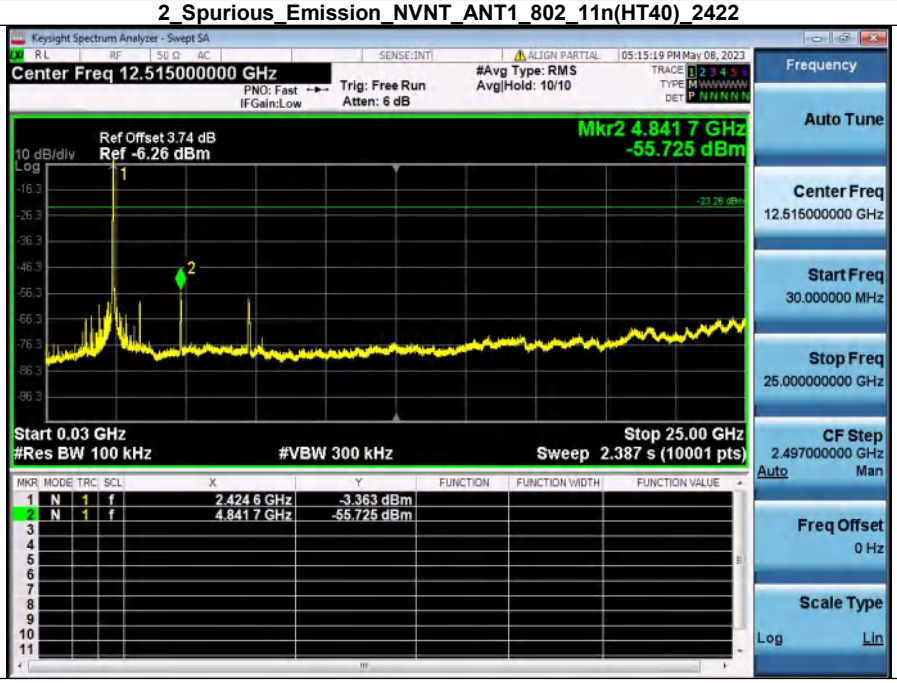

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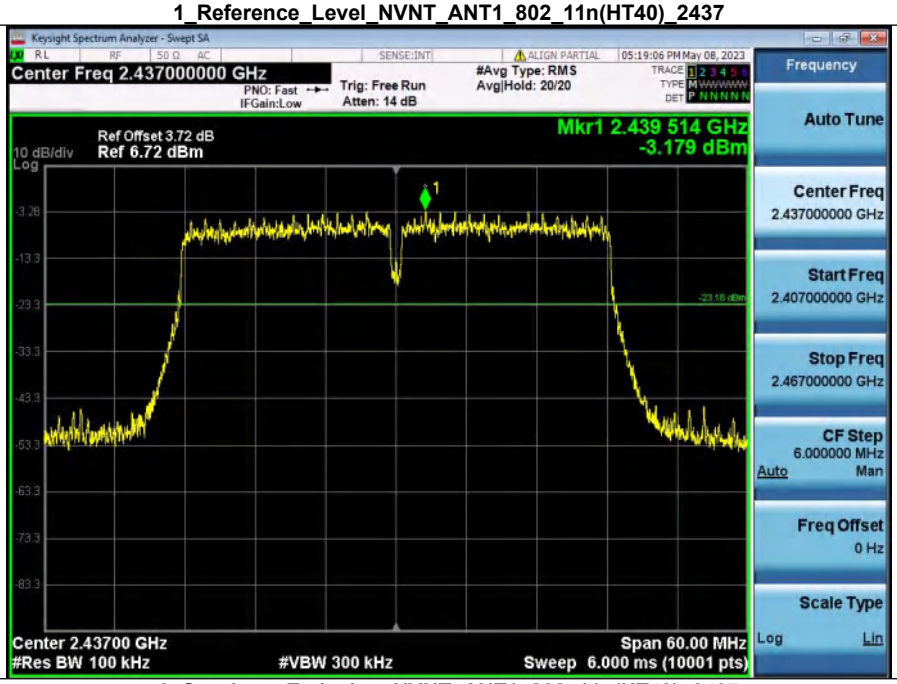

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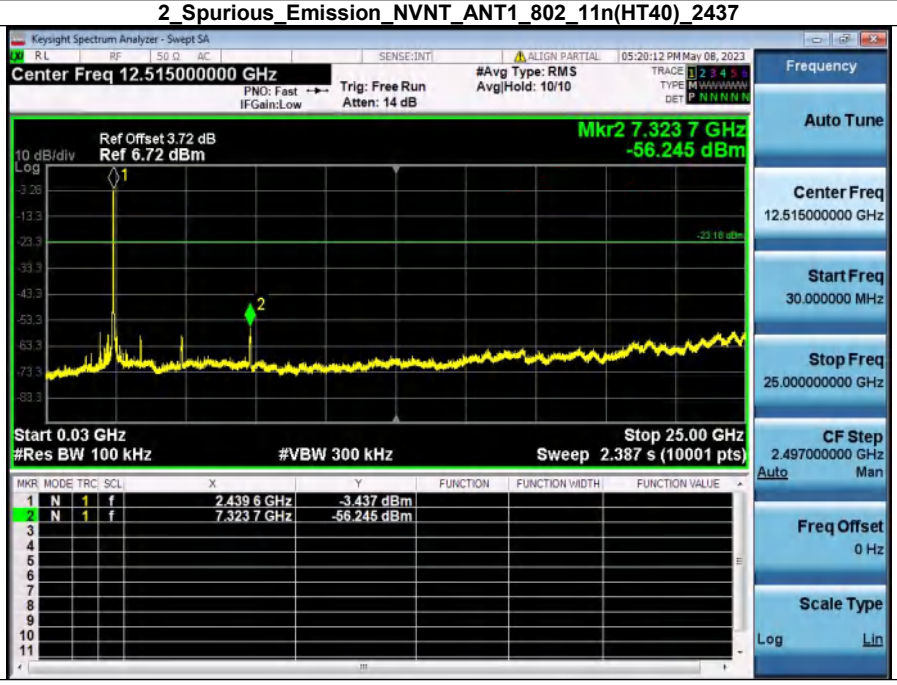

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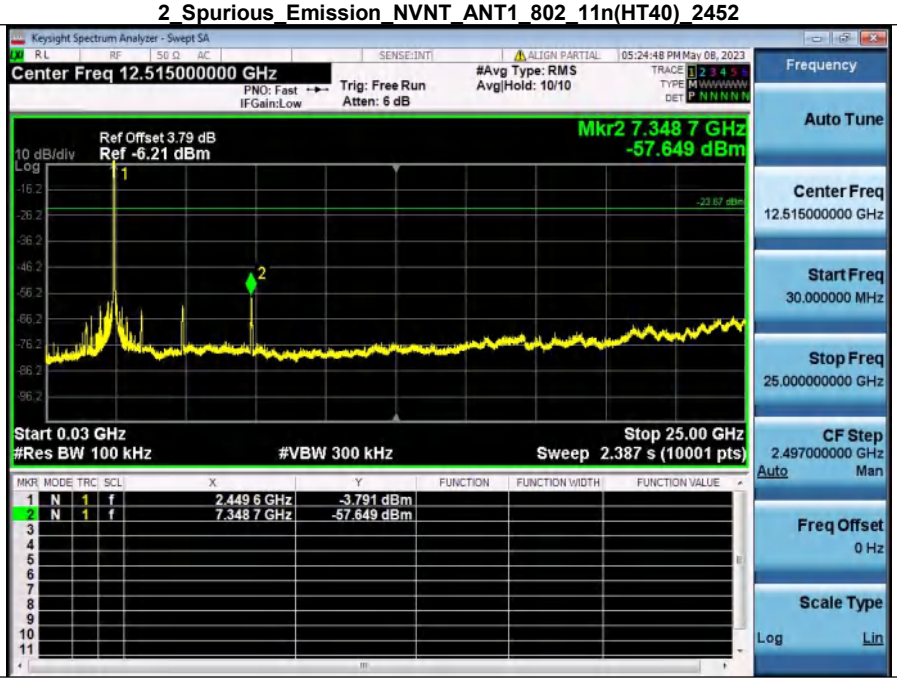
2_Spurious_Emission_NVNT_ANT1_802_11n(HT40)_2452



12. TEST SETUP PHOTO

Reference to the Test setup file for details.

13. EUT CONSTRUCTIONAL DETAILS

Reference to the external photos file and internal photos file for details.

※※※※※ END OF REPORT ※※※※※