

TEST REPORT

Report No.: BCTC2302239634-2E

Applicant: Panda Wireless, Inc.

Product Name: Panda Wireless AC1200 Dual Band Wireless AC
USB Adapter

Model/Type
reference: PAU0C

Tested Date: 2023-02-02 to 2023-02-08

Issued Date: 2023-02-08

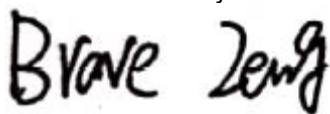
Shenzhen BCTC Testing Co., Ltd.



FCC ID: 2ADUTLPAU0C

Product Name: Panda Wireless AC1200 Dual Band Wireless AC USB Adapter
Trademark: Panda Wireless
Model/Type reference: PAU0C
IGU0C
Prepared For: Panda Wireless, Inc.
Address: 15559 Union Ave., Suite 300, Los Gatos, CA95032, USA
Manufacturer: Panda Wireless, Inc.
Address: 15559 Union Ave., Suite 300, Los Gatos, CA95032, USA
Prepared By: Shenzhen BCTC Testing Co., Ltd.
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Sample Received Date: 2023-02-02
Sample tested Date: 2023-02-02 to 2023-02-08
Issue Date: 2023-02-08
Report No.: BCTC2302239634-2E
FCC Part15 15.407
Test Standards: ANSI C63.10-2013
KDB 662911 D01 v02r01
KDB 789033 D02 v02r01
Test Results: PASS
Remark: This is WIFI-5GHz band radio test report.

Tested by:



Brave Zeng/ Project Handler

Approved by:



Zero Zhou/Reviewer

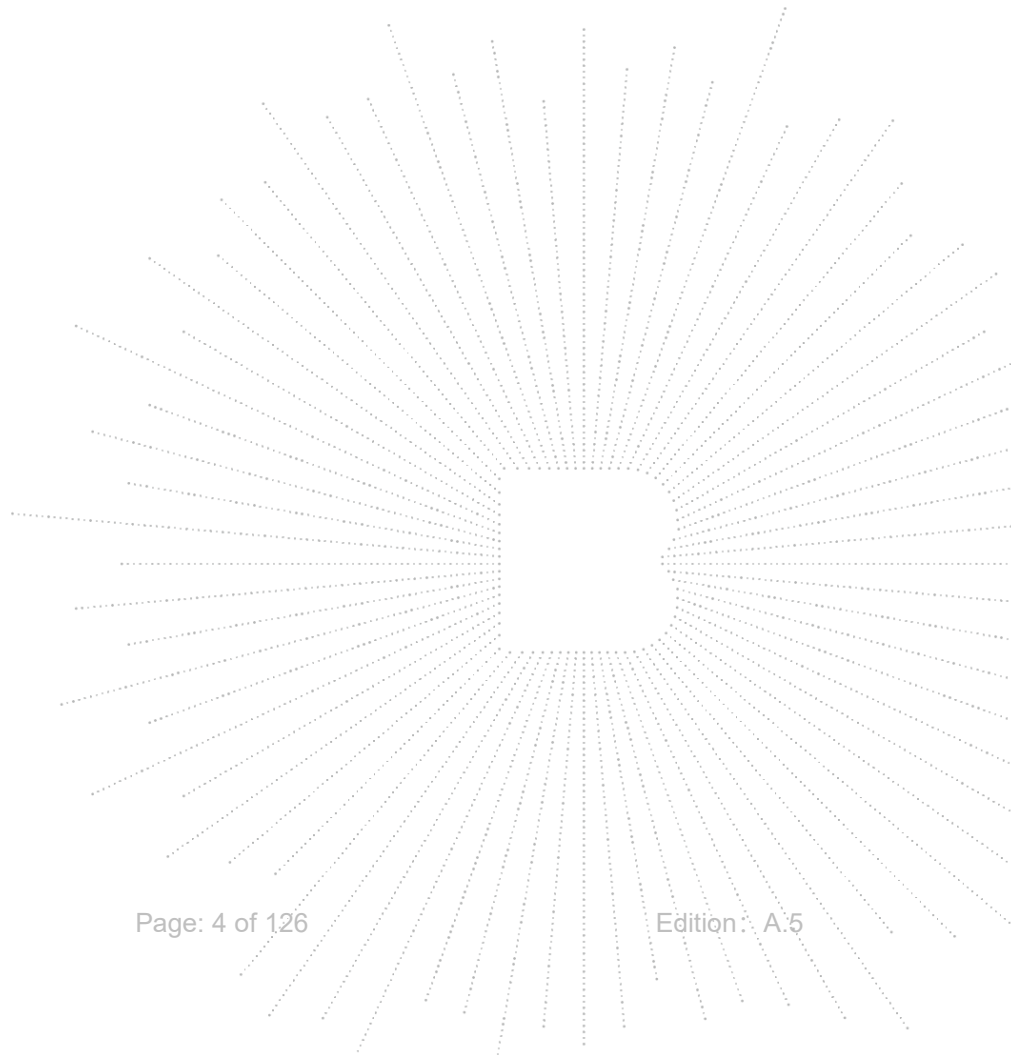
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Table Of Content

Test Report Declaration	Page
1. Version	5
2. Test Summary	6
3. Measurement Uncertainty	7
4. Product Information And Test Setup	8
4.1 Product Information	8
4.2 Test Setup Configuration	9
4.3 Support Equipment	9
4.4 Channel List	10
4.5 Test Mode	11
4.6 Table Of Parameters Of Text Software Setting	11
4.7 Antenna	11
5. Test Facility And Test Instrument Used	12
5.1 Test Facility	12
5.2 Test Instrument Used	12
6. Conducted Emissions	14
6.1 Block Diagram Of Test Setup	14
6.2 Limit	14
6.3 Test procedure	14
6.4 EUT operating Conditions	14
6.5 Test Result	15
7. Radiated Emissions	17
7.1 Block Diagram Of Test Setup	17
7.2 Limit	18
7.3 Test procedure	19
7.4 EUT operating Conditions	20
7.5 Test Result	20
8. Power Spectral Density Test	35
8.1 Block Diagram Of Test Setup	35
8.2 Limit	35
8.3 Test procedure	36
8.4 EUT operating Conditions	36
8.5 Test Result	37
9. 26dB & 6dB & 99% Emission Bandwidth	52
9.1 Block Diagram Of Test Setup	52
9.2 Limit	52
9.3 Test procedure	52
9.4 EUT operating Conditions	53
9.5 Test Result	53
10. Maximum Conducted Output Power	83
10.1 Block Diagram Of Test Setup	83
10.2 Limit	83
10.3 Test procedure	83
10.4 EUT operating Conditions	84
10.5 Test Result	85
11. Out Of Band Emissions	87

11.1	Block Diagram Of Test Setup.....	87
11.2	Limit	87
11.3	Test procedure	87
11.4	EUT operating Conditions	87
11.5	Test Result.....	88
12.	Spurious RF Conducted Emissions.....	100
12.1	Block Diagram Of Test Setup.....	100
12.2	Limit	100
12.3	Test procedure	100
12.4	Test Result.....	100
13.	Frequency Stability Measurement.....	115
13.1	Block Diagram Of Test Setup.....	115
13.2	Limit	115
13.3	Test procedure	115
13.4	Test Result.....	116
14.	Antenna Requirement	122
14.1	Limit	122
14.2	Test Antenna.....	122
15.	EUT Photographs.....	123
16.	EUT Test Setup Photographs.....	124

(Note: N/A Means Not Applicable)



1. Version

Report No.	Issue Date	Description	Approved
BCTC2302239634-2E	2023-02-08	Original	Valid

2. Test Summary

The Product has been tested according to the following specifications:

1	Test Parameter	Clause No.	Results
1	Spurious Radiated Emissions	15.209(a), 15.407 (b)(1) 15.407 (b)(4) 15.407 (b)(8)	PASS
2	Conducted Emission	15.207	PASS
3	26 dB and 99% Emission Bandwidth	15.407 (a)(12) 15.1049	PASS
4	Minimum 6 dB bandwidth	15.407(e)	PASS
5	Maximum Conducted Output Power	15.407 (a)(1) 15.407 (a)(3)	PASS
6	Band Edge	2.1051, 15.407(b)(1) 15.407(b)(4)	PASS
7	Power Spectral Density	15.407 (a)(1) 15.407 (a)(3)	PASS
8	Spurious Emissions at Antenna Terminals	2.1051, 15.407(b)	PASS
9	Antenna Requirement	15.203	PASS

3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
2	3m chamber Radiated spurious emission(9KHz-30MHz)	U=3.7dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=3.34dB
5	Conducted Emission (150kHz-30MHz)	U=3.20dB
6	Conducted Adjacent channel power	U=1.38dB
7	Conducted output power uncertainty Above 1G	U=1.576dB
8	Conducted output power uncertainty below 1G	U=1.28dB
9	humidity uncertainty	U=5.3%
10	Temperature uncertainty	U=0.59°C

4. Product Information And Test Setup

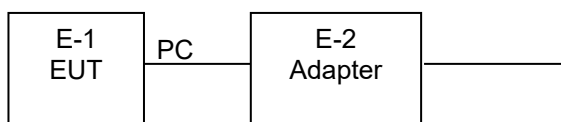
4.1 Product Information

Model/Type reference:	PAU0C IGU0C
Model differences:	All the model are the same circuit and RF module, except model names.
Hardware Version:	PW-PAU0C-LG-V1.1
Software Version:	IS_Setup_ICS_011916_1.5.39.173
IEEE 802.11 WLAN Mode Supported:	802.11a/n/ac(20MHz channel bandwidth) 802.11n/ac(40MHz channel bandwidth) 802.11ac(80MHz channel bandwidth)
Operation Frequency:	5180-5240MHz for 802.11a/n(HT20)/ac20; 5190-5230MHz for 802.11n(HT40)/ac40; 5210MHz for 802.11 ac80; 5745-5825 MHz for 802.11a/n(HT20)/ac20; 5755-5795 MHz for 802.11a/n(HT40)/ac40; 5775MHz for 802.11 ac80;
Data Rate:	802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(HT20/HT40):MCS0-MCS15; 802.11ac(VHT20): NSS1, MCS0-MCS8 802.11ac(VHT40/VHT80):NSS1, MCS0-MCS
Type of Modulation:	OFDM with BPSK/QPSK/16QAM/64QAM/256QAM for 802.11a/n/ac;
Number Of Channel:	4 channels for 802.11a/n20 in the 5180-5240MHz band ; 2 channels for 802.11 n40 in the 5190-5230MHz band ; 1 channels for 802.11 ac80 in the 5210MHz band ; 5 channels for 802.11a/n20 in the 5745-5825MHz band ; 2 channels for 802.11 n40 in the 5755-5795MHz band ; 1 channels for 802.11 ac80 in the 5775MHz band ;
Antenna installation:	Internal antenna*2
Antenna Gain:	WiFi (5GHz): Antenna A&B: 2.73 dBi
Ratings:	DC 5V from PC
Remark:	The antenna gain of the product is provided by the customer, and the test data is affected by the customer information

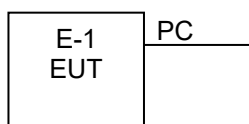
4.2 Test Setup Configuration

See test photographs attached in *EUT TEST SETUP PHOTOGRAPHS* for the actual connections between Product and support equipment.

Conducted Emission:



Radiated Spurious Emission



4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-2	Adapter	N/A	BCTC001	N/A	Auxiliary
	PC	N/A	N/A	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
C-1	N/A	N/A	3M	DC cable unshielded

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Channel List

Frequency and Channel list for 802.11a/n /ac (5180-5240MHz):

802.11a/n/ac(20MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220	40	5200	48	5240

802.11n/ac(40MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230	-	-	-	-

802.11ac (80MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
42	5210	-	-	-	-	-	-

Frequency and Channel list for 802.11a/n /ac (5745-5825MHz):

802.11a/n/ac(20MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	153	5765	157	5785	161	5805
165	5825	-	-	-	-	-	-

802.11n/ac(40MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795	-	-	-	-

802.11ac (80MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
155	5775	-	-	-	-	-	-

4.5 Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	802.11a / n/ ac 20 CH36/ CH40/ CH 48 802.11a /n/ ac 20 CH149/ CH157/ CH 165
Mode 2	802.11n/ ac40 CH38/ CH 46 802.11n/ ac40 CH 151 / CH 159
Mode 3	802.11 ac80 CH 42/CH 155
Mode 4	Link Mode

Note: The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.

4.6 Table Of Parameters Of Text Software Setting

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters

Test software Version	CMD		
Parameters	DEF	DEF	DEF

4.7 Antenna

Table for Internal antenna

Ant.	Brand	Model Name	Antenna Type	Gain (dBi)	NOTE
A	N/A	N/A	Internal antenna	2.73	N/A
B	N/A	N/A	Internal antenna	2.73	N/A

EUT has two Internal antennas with Max gain GANT 2.73dBi on every antenna, also can operat with one spatial streams according to KDB662911 D01 v02r01,
Directional gain= GANT + Array Gain, where Array Gain is as follows.

1)For power spectral density(PSD) measurements,
Array Gain= $10\log(NANT/NSS)$ dB= $10\log(2/1)$ =3.01 dBi,
So the directional gain for PSD is 5.74 dBi

2)For power measurements,
The Array gain=0 for $NANT \leq 4$,
So the directional gain for Power measurements is 2.73dBi

5. Test Facility And Test Instrument Used

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address:1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

FCC Test Firm Registration Number: 712850

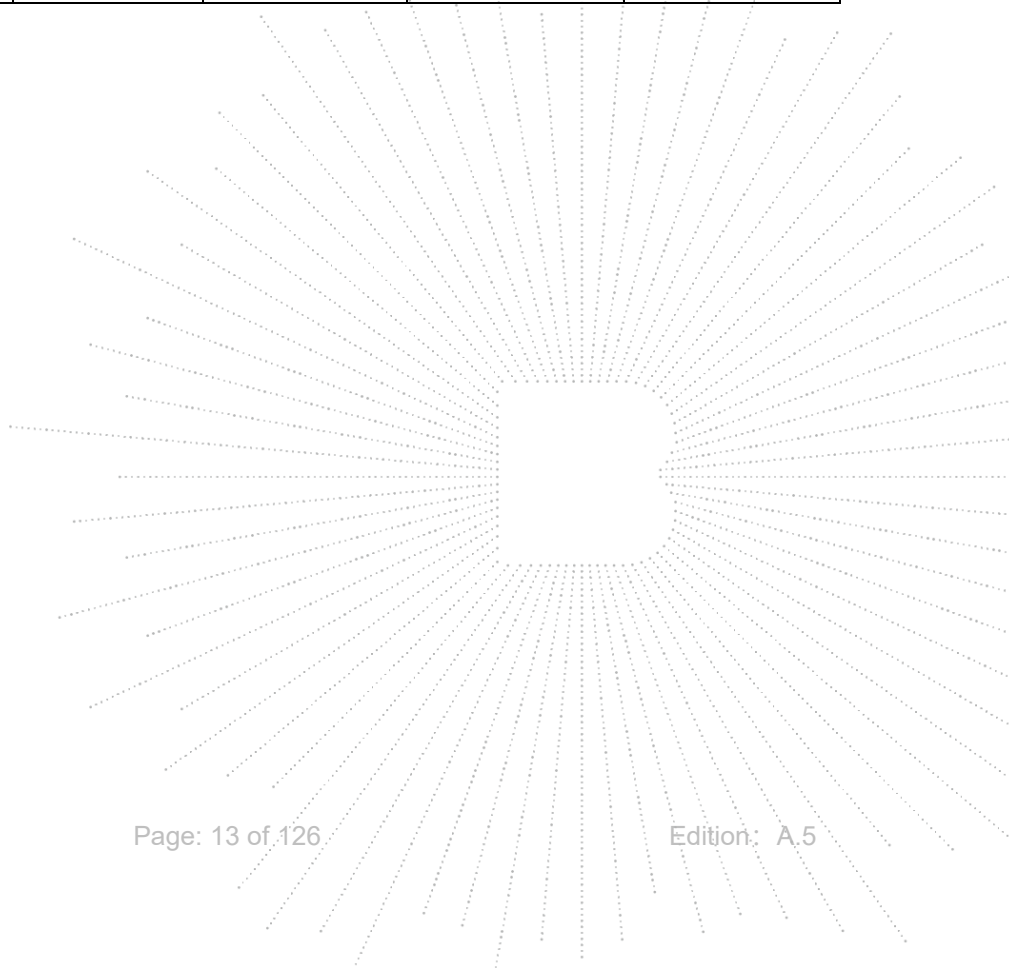
IC Registered No.: 23583

5.2 Test Instrument Used

Conducted Emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESR3	102075	May 24, 2022	May 23, 2023
LISN	R&S	ENV216	101375	May 24, 2022	May 23, 2023
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Attenuator	\	10dB C-6GHz	1650	May 24, 2022	May 23, 2023

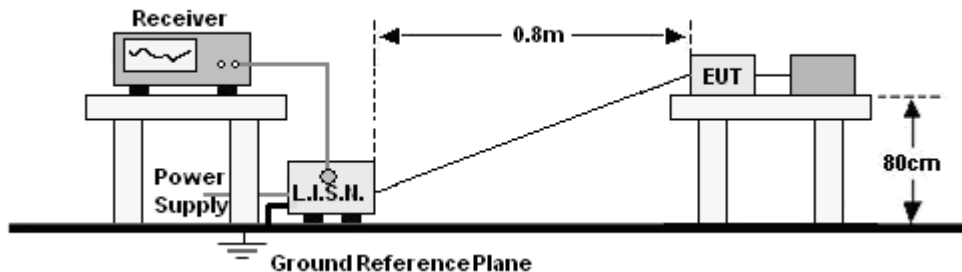
RF Conducted Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Power Metter	Keysight	E4419	\	May 24, 2022	May 23, 2023
Power Sensor (AV)	Keysight	E9300A	\	May 24, 2022	May 23, 2023
Signal Analyzer20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 24, 2022	May 23, 2023
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 24, 2022	May 23, 2023
Radio frequency control box	MAIWEI	MW100-RFC B	\	\	\
Software	MAIWEI	MTS 8310	\	\	\

Radiated Emissions Test (966 Chamber01)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	Jun. 06. 2020	Jun. 05, 2023
Receiver	R&S	ESR3	102075	May 24, 2022	May 23, 2023
Receiver	R&S	ESRP	101154	May 24, 2022	May 23, 2023
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 24, 2022	May 23, 2023
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 26, 2022	May 25, 2023
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 26, 2022	May 25, 2023
Amplifier	SKET	LAPA_01G18 G-45dB	\	May 24, 2022	May 23, 2023
Horn Antenna	Schwarzbeck	BBHA9120D	1541	Jun. 06, 2022	Jun. 05, 2023
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 26, 2022	May 25, 2023
Horn Antenn(18GHz-40GHz)	Schwarzbeck	BBHA9170	00822	Jun. 06, 2022	Jun. 05, 2023
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 24, 2022	May 23, 2023
Software	Frad	EZ-EMC	FA-03A2 RE	\	\



6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

Frequency (MHz)	Limit (dBuV)	
	Quas-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Notes:

- *Decreasing linearly with logarithm of frequency.
- The lower limit shall apply at the transition frequencies.

6.3 Test procedure

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

- The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
- For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

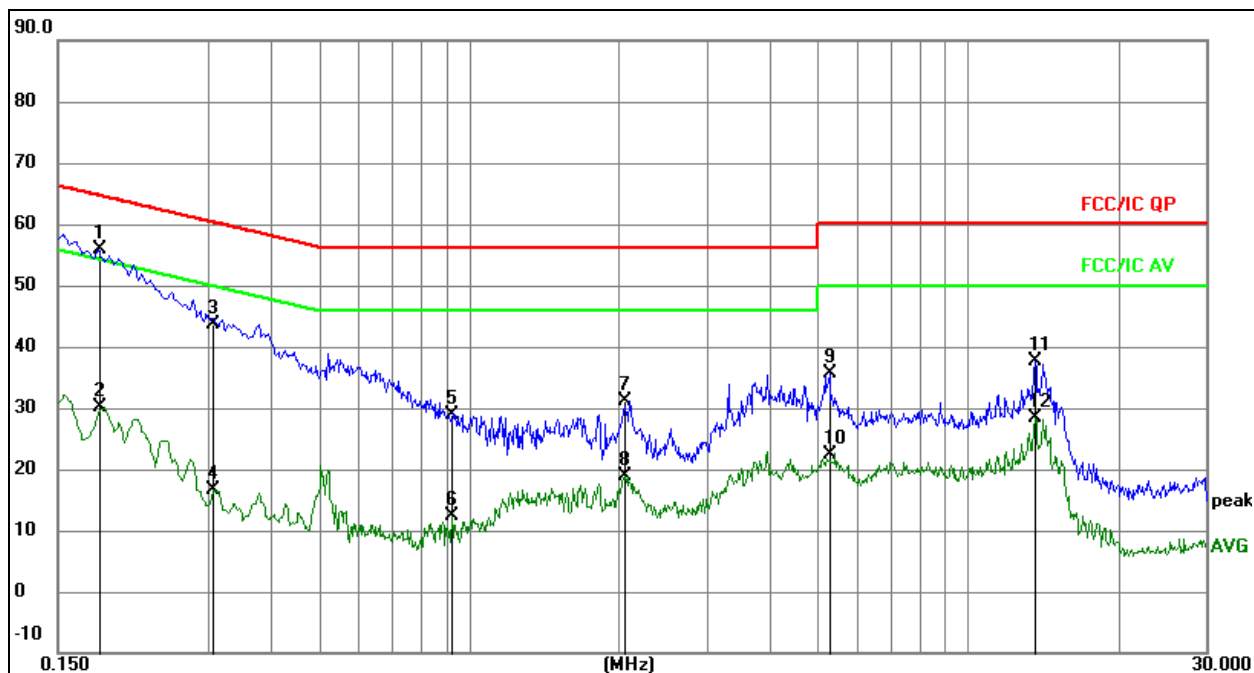
6.4 EUT operating Conditions

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.

6.5 Test Result

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	AC120V/60Hz
Test Mode:	Mode 4	Polarization :	L

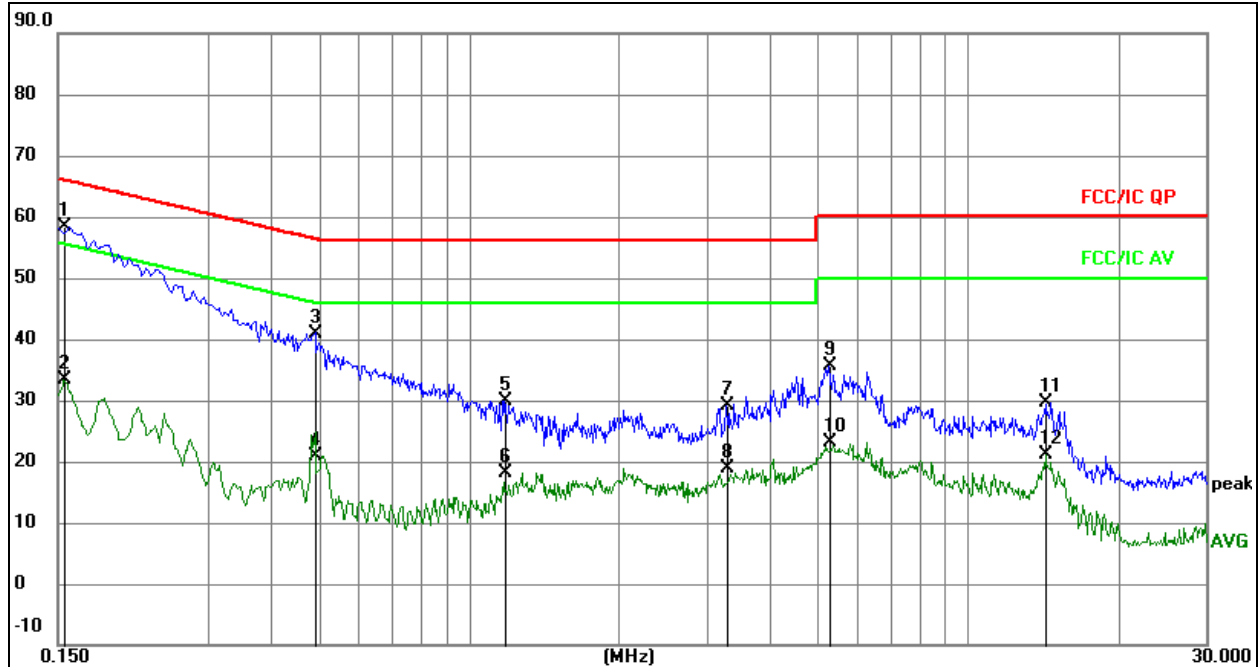


Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1	*	0.1806	36.02	19.75	55.77	64.46	-8.69	QP
2		0.1806	10.48	19.75	30.23	54.46	-24.23	AVG
3		0.3067	23.88	19.77	43.65	60.06	-16.41	QP
4		0.3067	-3.10	19.77	16.67	50.06	-33.39	AVG
5		0.9233	9.03	19.75	28.78	56.00	-27.22	QP
6		0.9233	-7.49	19.75	12.26	46.00	-33.74	AVG
7		2.0549	11.29	19.89	31.18	56.00	-24.82	QP
8		2.0549	-0.95	19.89	18.94	46.00	-27.06	AVG
9		5.2770	15.62	20.13	35.75	60.00	-24.25	QP
10		5.2770	2.37	20.13	22.50	50.00	-27.50	AVG
11		13.6228	17.35	20.28	37.63	60.00	-22.37	QP
12		13.6228	7.99	20.28	28.27	50.00	-21.73	AVG

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	AC120V/60Hz
Test Mode:	Mode 4	Polarization :	N


Remark:

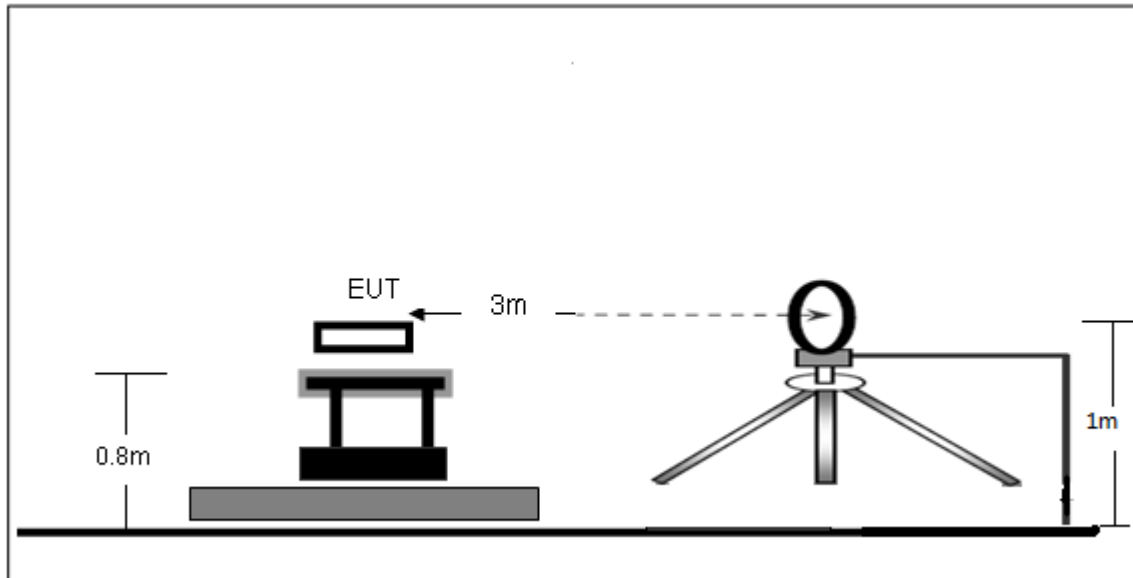
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1	*	0.1545	38.59	19.68	58.27	65.75	-7.48	QP
2		0.1545	13.69	19.68	33.37	55.75	-22.38	AVG
3		0.4920	21.28	19.72	41.00	56.13	-15.13	QP
4		0.4920	1.28	19.72	21.00	46.13	-25.13	AVG
5		1.1805	10.03	19.78	29.81	56.00	-26.19	QP
6		1.1805	-1.65	19.78	18.13	46.00	-27.87	AVG
7		3.2910	8.99	20.02	29.01	56.00	-26.99	QP
8		3.2910	-1.05	20.02	18.97	46.00	-27.03	AVG
9		5.2619	15.38	20.13	35.51	60.00	-24.49	QP
10		5.2619	2.98	20.13	23.11	50.00	-26.89	AVG
11		14.3070	9.28	20.28	29.56	60.00	-30.44	QP
12		14.3070	0.88	20.28	21.16	50.00	-28.84	AVG

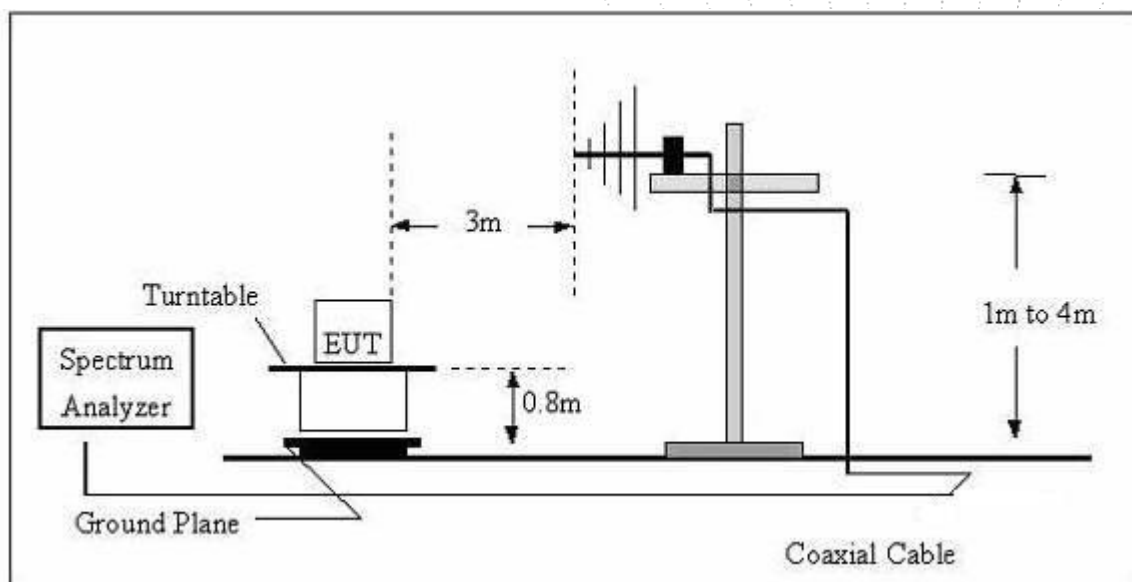
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

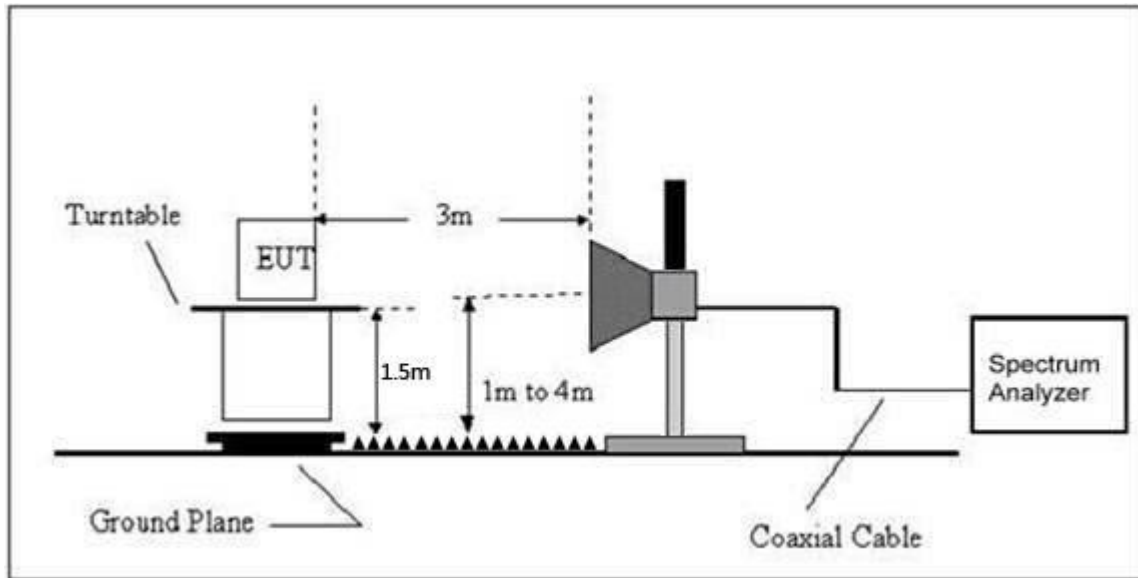
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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



7.2 Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequency (MHz)	Field Strength uV/m	Distance (m)	Field Strength Limit at 3m Distance	
			uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	$10000 * 2400/F(\text{kHz})$	$20\log(2400/F(\text{kHz})) + 80$
0.490 ~ 1.705	24000/F(kHz)	30	$100 * 24000/F(\text{kHz})$	$20\log(24000/F(\text{kHz})) + 40$
1.705 ~ 30	30	30	$100 * 30$	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

Limits Of Radiated Emission Measurement (Above 1000MHz)

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).

7.3 Test procedure

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10-2013. The test distance is 3m. The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 and CAN/CSA-CEI/IEC CISPR 22.

This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205.

It must be performed with the highest gain of each type of antenna proposed for use with the EUT.

Use the following spectrum analyzer settings:

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

- The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

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

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	10 Hz

Note: for the frequency ranges below 30 MHz, a narrower RBW is used for these ranges but the measured value should add a RBW correction factor (RBWCF) where $RBWCF [dB] = 10 \cdot \lg(100 [kHz] / \text{narrower RBW} [kHz])$. , the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

7.4 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.

7.5 Test Result

Below 30MHz

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	DC 5V
Test Mode:	Mode 4	Polarization :	---

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

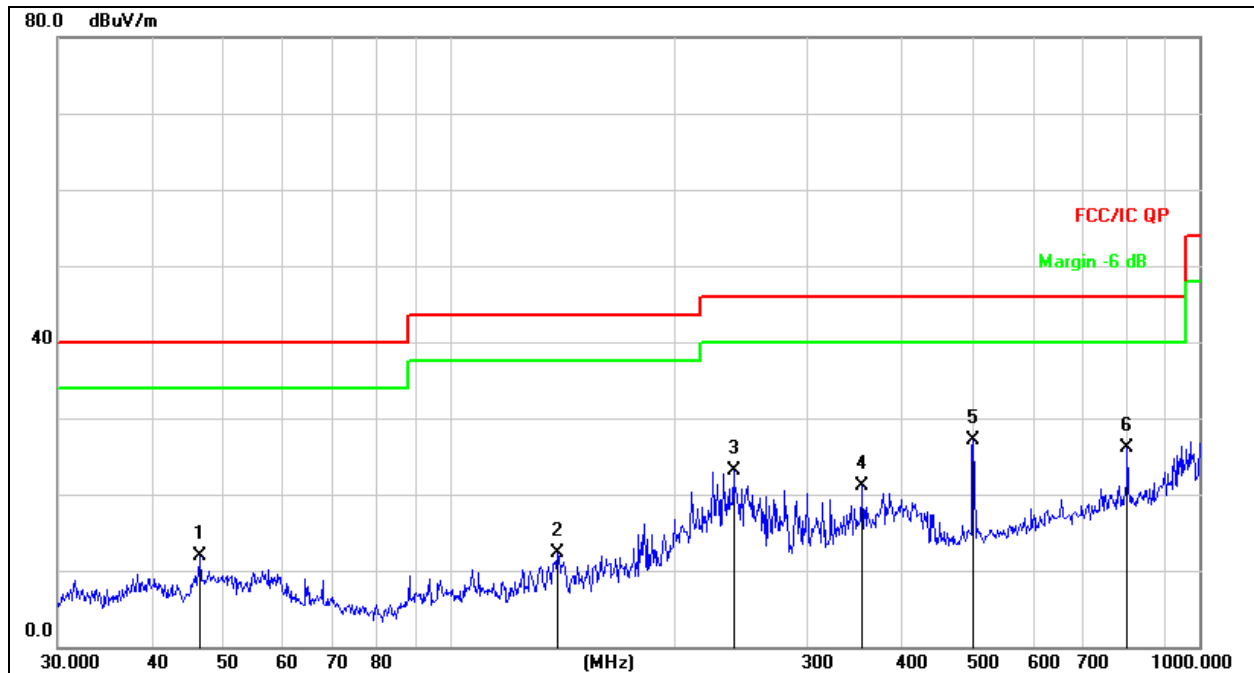
Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log (\text{specific distance/test distance})(\text{dB})$;

Limit line = specific limits(dBuv) + distance extrapolation factor.

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	DC 5V
Test Mode:	Mode 4	Polarization :	Horizontal

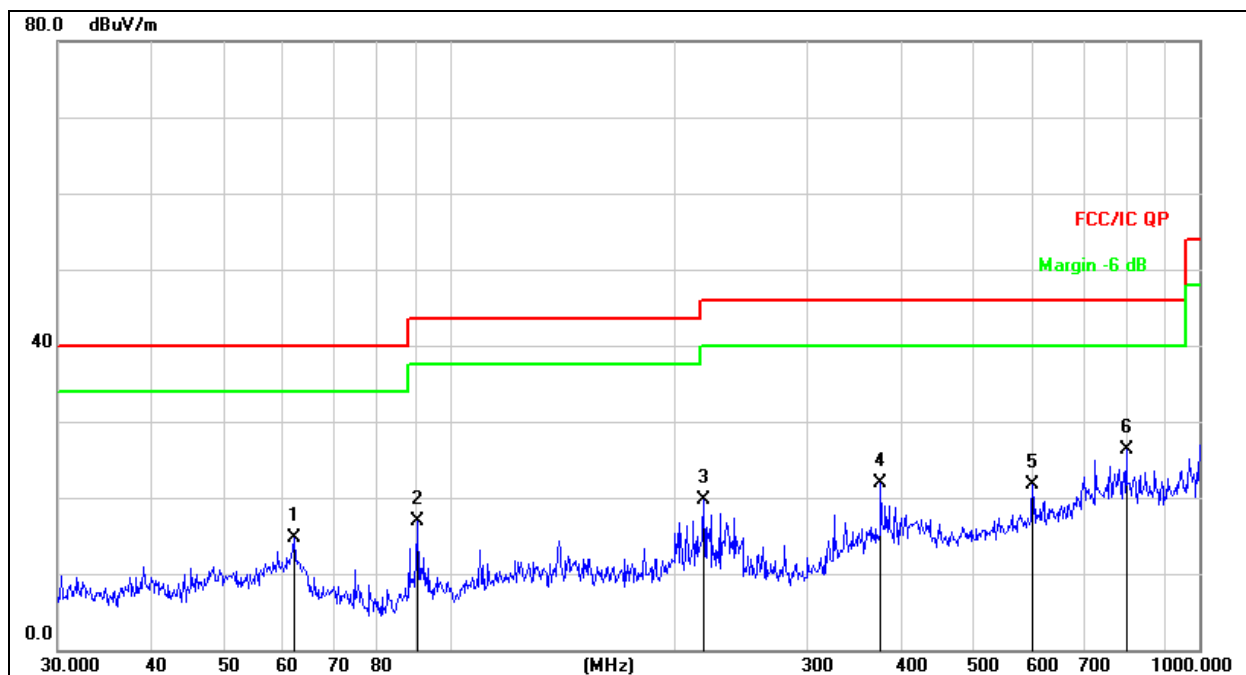


Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement = Reading Level + Correct Factor
3. Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		46.5030	27.89	-15.99	11.90	40.00	-28.10	QP
2		139.3613	32.63	-20.35	12.28	43.50	-31.22	QP
3		239.1473	39.33	-16.16	23.17	46.00	-22.83	QP
4		355.4273	33.89	-12.73	21.16	46.00	-24.84	QP
5	*	499.4247	37.27	-10.26	27.01	46.00	-18.99	QP
6		801.7863	31.56	-5.55	26.01	46.00	-19.99	QP

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	DC 5V
Test Mode:	Mode 4	Polarization :	Vertical



Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement = Reading Level + Correct Factor
3. Over = Measurement - Limit

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector
1		61.9951	32.33	-17.66	14.67	40.00	-25.33	QP
2		90.5374	36.15	-19.15	17.00	43.50	-26.50	QP
3		218.3085	36.58	-16.81	19.77	46.00	-26.23	QP
4		375.9385	34.49	-12.49	22.00	46.00	-24.00	QP
5		599.3212	30.16	-8.42	21.74	46.00	-24.26	QP
6	*	798.9797	31.85	-5.59	26.26	46.00	-19.74	QP

Test Mode:	TX(5.1G) - 802.11a
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G									
V	4434.172	61.13	5.94	35.40	44.00	58.47	68.2	-9.73	PK
V	4434.172	43.63	5.94	35.40	44.00	40.97	54	-13.03	AV
V	10360.009	61.58	8.46	39.75	44.50	65.29	68.2	-2.91	PK
V	10360.009	43.78	8.46	39.75	44.50	47.49	54	-6.51	AV
V	15540.130	64.76	10.12	38.80	44.10	69.58	74	-4.42	PK
V	15540.130	43.56	10.12	38.80	42.70	49.78	54	-4.22	AV
H	4434.084	63.13	5.94	35.18	44.00	60.25	68.2	-7.95	PK
H	4434.084	43.35	5.94	35.18	44.00	40.47	54	-13.53	AV
H	10360.165	54.70	8.46	38.71	44.50	57.37	68.2	-10.83	PK
H	10360.165	43.31	8.46	38.71	44.50	45.98	54	-8.02	AV
H	15540.133	52.15	10.12	38.38	44.10	56.55	74	-17.45	PK
H	15540.133	44.14	10.12	38.38	44.10	48.54	54	-5.46	AV
Middle Channel (5200 MHz)-Above 1G									
V	4592.113	63.18	6.48	36.35	44.05	61.96	74	-12.04	PK
V	4592.113	43.02	6.48	36.35	44.05	41.80	54	-12.20	AV
V	10400.042	61.47	8.47	37.88	44.51	63.31	68.2	-4.89	PK
V	10400.042	43.98	8.47	37.88	44.51	45.82	54	-8.18	AV
V	15600.052	60.72	10.12	38.80	44.10	65.54	74	-8.46	PK
V	15600.052	43.24	10.12	38.80	42.70	49.46	54	-4.54	AV
H	4592.003	63.68	6.48	36.37	44.05	62.48	74	-11.52	PK
H	4592.003	43.18	6.48	36.37	44.05	41.98	54	-12.02	AV
H	10400.076	50.89	8.47	38.64	44.50	53.50	68.2	-14.70	PK
H	10400.076	40.70	8.47	38.64	44.50	43.31	54	-10.69	AV
H	15600.054	51.96	10.12	38.38	44.10	56.36	74	-17.64	PK
H	15600.054	42.52	10.12	38.38	44.10	46.92	54	-7.08	AV
High Channel (5240 MHz)-Above 1G									
V	4739.156	63.73	7.10	37.24	43.50	64.57	74	-9.43	PK
V	4739.156	43.13	7.10	37.24	43.50	43.97	54	-10.03	AV
V	10480.101	63.61	8.46	37.68	44.50	65.25	68.2	-2.95	PK
V	10480.101	43.08	8.46	37.68	44.50	44.72	54	-9.28	AV
V	15720.082	60.97	10.12	38.80	44.10	65.79	74	-8.21	PK
V	15720.082	43.88	10.12	38.80	42.70	50.10	54	-3.90	AV
H	4739.119	63.56	7.10	37.24	43.50	64.40	74	-9.60	PK
H	4739.119	43.83	7.10	37.24	43.50	44.67	54	-9.33	AV
H	10480.093	52.20	8.46	38.57	44.50	54.73	68.2	-13.47	PK
H	10480.093	41.23	8.46	38.57	44.50	43.76	54	-10.24	AV
H	15720.175	52.95	10.12	38.38	44.10	57.35	74	-16.65	PK
H	15720.175	40.19	10.12	38.38	44.10	44.59	54	-9.41	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

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

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

The worst case is Antenna A.

Test Mode:	TX(5.1G) - 802.11n-HT20
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G									
V	4434.069	62.18	5.94	35.40	44.00	59.52	68.2	-8.68	PK
V	4434.069	43.82	5.94	35.40	44.00	41.16	54	-12.84	AV
V	10360.043	63.35	8.46	39.75	44.50	67.06	68.2	-1.14	PK
V	10360.043	43.68	8.46	39.75	44.50	47.39	54	-6.61	AV
V	15540.138	63.83	10.12	38.80	44.10	68.65	74	-5.35	PK
V	15540.138	43.43	10.12	38.80	42.70	49.65	54	-4.35	AV
H	4434.048	63.59	5.94	35.18	44.00	60.71	68.2	-7.49	PK
H	4434.048	43.61	5.94	35.18	44.00	40.73	54	-13.27	AV
H	10360.103	50.79	8.46	38.71	44.50	53.46	68.2	-14.74	PK
H	10360.103	42.17	8.46	38.71	44.50	44.84	54	-9.16	AV
H	15540.004	53.03	10.12	38.38	44.10	57.43	74	-16.57	PK
H	15540.004	43.26	10.12	38.38	44.10	47.66	54	-6.34	AV
Middle Channel (5200 MHz)-Above 1G									
V	4592.180	61.72	6.48	36.35	44.05	60.50	74	-13.50	PK
V	4592.180	43.63	6.48	36.35	44.05	42.41	54	-11.59	AV
V	10400.115	63.57	8.47	37.88	44.51	65.41	68.2	-2.79	PK
V	10400.115	43.18	8.47	37.88	44.51	45.02	54	-8.98	AV
V	15600.126	64.59	10.12	38.80	44.10	69.41	74	-4.59	PK
V	15600.126	43.42	10.12	38.80	42.70	49.64	54	-4.36	AV
H	4592.172	64.65	6.48	36.37	44.05	63.45	74	-10.55	PK
H	4592.172	43.52	6.48	36.37	44.05	42.32	54	-11.68	AV
H	10400.123	52.35	8.47	38.64	44.50	54.96	68.2	-13.24	PK
H	10400.123	41.61	8.47	38.64	44.50	44.22	54	-9.78	AV
H	15600.139	51.62	10.12	38.38	44.10	56.02	74	-17.98	PK
H	15600.139	42.12	10.12	38.38	44.10	46.52	54	-7.48	AV
High Channel (5240 MHz)-Above 1G									
V	4739.018	62.64	7.10	37.24	43.50	63.48	74	-10.52	PK
V	4739.018	43.12	7.10	37.24	43.50	43.96	54	-10.04	AV
V	10480.191	63.24	8.46	37.68	44.50	64.88	68.2	-3.32	PK
V	10480.191	43.89	8.46	37.68	44.50	45.53	54	-8.47	AV
V	15720.161	60.69	10.12	38.80	44.10	65.51	74	-8.49	PK
V	15720.161	43.25	10.12	38.80	42.70	49.47	54	-4.53	AV
H	4739.017	63.24	7.10	37.24	43.50	64.08	74	-9.92	PK
H	4739.017	43.20	7.10	37.24	43.50	44.04	54	-9.96	AV
H	10480.038	53.51	8.46	38.57	44.50	56.04	68.2	-12.16	PK
H	10480.038	44.78	8.46	38.57	44.50	47.31	54	-6.69	AV
H	15720.080	51.37	10.12	38.38	44.10	55.77	74	-18.23	PK
H	15720.080	42.36	10.12	38.38	44.10	46.76	54	-7.24	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

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

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11n-HT40
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5190 MHz)-Above 1G									
V	4434.185	61.02	5.94	35.40	44.00	58.36	68.2	-9.84	PK
V	4434.185	43.10	5.94	35.40	44.00	40.44	54	-13.56	AV
V	10380.146	63.74	8.46	39.75	44.50	67.45	68.2	-0.75	PK
V	10380.146	43.52	8.46	39.75	44.50	47.23	54	-6.77	AV
V	15570.117	64.45	10.12	38.80	44.10	69.27	74	-4.73	PK
V	15570.117	43.26	10.12	38.80	42.70	49.48	54	-4.52	AV
H	4434.196	60.48	5.94	35.18	44.00	57.60	74	-16.40	PK
H	4434.196	43.56	5.94	35.18	44.00	40.68	54	-13.32	AV
H	10380.054	54.78	8.46	38.71	44.50	57.45	68.2	-10.75	PK
H	10380.054	44.83	8.46	38.71	44.50	47.50	54	-6.50	AV
H	15570.173	51.03	10.12	38.38	44.10	55.43	74	-18.57	PK
H	15570.173	42.99	10.12	38.38	44.10	47.39	54	-6.61	AV
High Channel (5230 MHz)-Above 1G									
V	4739.049	61.83	6.48	36.35	44.05	60.61	68.2	-7.59	PK
V	4739.049	43.25	6.48	36.35	44.05	42.03	54	-11.97	AV
V	10460.149	63.07	8.47	37.88	44.51	64.91	68.2	-3.29	PK
V	10460.149	43.58	8.47	37.88	44.51	45.42	54	-8.58	AV
V	15690.050	60.94	10.12	38.80	44.10	65.76	74	-8.24	PK
V	15690.050	43.49	10.12	38.80	42.70	49.71	54	-4.29	AV
H	4739.162	61.99	6.48	36.37	44.05	60.79	68.2	-7.41	PK
H	4739.162	43.23	6.48	36.37	44.05	42.03	54	-11.97	AV
H	10460.174	52.70	8.47	38.64	44.50	55.31	68.2	-12.89	PK
H	10460.174	43.78	8.47	38.64	44.50	46.39	54	-7.61	AV
H	15690.023	50.16	10.12	38.38	44.10	54.56	74	-19.44	PK
H	15690.023	40.10	10.12	38.38	44.10	44.50	54	-9.50	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

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

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11ac-HT20
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G									
V	4434.184	62.45	5.94	35.40	44.00	59.79	68.2	-8.41	PK
V	4434.184	43.04	5.94	35.40	44.00	40.38	54	-13.62	AV
V	10360.088	60.94	8.46	39.75	44.50	64.65	68.2	-3.55	PK
V	10360.088	43.36	8.46	39.75	44.50	47.07	54	-6.93	AV
V	15540.037	63.09	10.12	38.80	44.10	67.91	74	-6.09	PK
V	15540.037	43.19	10.12	38.80	42.70	49.41	54	-4.59	AV
H	4434.144	61.40	5.94	35.18	44.00	58.52	68.2	-9.68	PK
H	4434.144	43.37	5.94	35.18	44.00	40.49	54	-13.51	AV
H	10360.184	50.64	8.46	38.71	44.50	53.31	68.2	-14.89	PK
H	10360.184	45.00	8.46	38.71	44.50	47.67	54	-6.33	AV
H	15540.176	52.99	10.12	38.38	44.10	57.39	74	-16.61	PK
H	15540.176	42.66	10.12	38.38	44.10	47.06	54	-6.94	AV
Middle Channel (5200 MHz)-Above 1G									
V	4592.194	64.86	6.48	36.35	44.05	63.64	74	-10.36	PK
V	4592.194	43.38	6.48	36.35	44.05	42.16	54	-11.84	AV
V	10400.101	60.70	8.47	37.88	44.51	62.54	68.2	-5.66	PK
V	10400.101	43.49	8.47	37.88	44.51	45.33	54	-8.67	AV
V	15600.135	61.05	10.12	38.80	44.10	65.87	74	-8.13	PK
V	15600.135	43.45	10.12	38.80	42.70	49.67	54	-4.33	AV
H	4592.123	62.87	6.48	36.37	44.05	61.67	74	-12.33	PK
H	4592.123	43.01	6.48	36.37	44.05	41.81	54	-12.19	AV
H	10400.186	50.87	8.47	38.64	44.50	53.48	68.2	-14.72	PK
H	10400.186	40.89	8.47	38.64	44.50	43.50	54	-10.50	AV
H	15600.106	54.31	10.12	38.38	44.10	58.71	74	-15.29	PK
H	15600.106	42.18	10.12	38.38	44.10	46.58	54	-7.42	AV
High Channel (5240 MHz)-Above 1G									
V	4739.003	64.21	7.10	37.24	43.50	65.05	74	-8.95	PK
V	4739.003	43.31	7.10	37.24	43.50	44.15	54	-9.85	AV
V	10480.111	62.38	8.46	37.68	44.50	64.02	68.2	-4.18	PK
V	10480.111	43.77	8.46	37.68	44.50	45.41	54	-8.59	AV
V	15720.073	63.64	10.12	38.80	44.10	68.46	74	-5.54	PK
V	15720.073	43.87	10.12	38.80	42.70	50.09	54	-3.91	AV
H	4739.145	64.95	7.10	37.24	43.50	65.79	74	-8.21	PK
H	4739.145	43.42	7.10	37.24	43.50	44.26	54	-9.74	AV
H	10480.077	54.76	8.46	38.57	44.50	57.29	68.2	-10.91	PK
H	10480.077	40.12	8.46	38.57	44.50	42.65	54	-11.35	AV
H	15720.055	51.59	10.12	38.38	44.10	55.99	74	-18.01	PK
H	15720.055	44.43	10.12	38.38	44.10	48.83	54	-5.17	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

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

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11ac-HT40
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5190 MHz)-Above 1G									
V	4434.157	63.90	5.94	35.40	44.00	61.24	68.2	-6.96	PK
V	4434.157	43.08	5.94	35.40	44.00	40.42	54	-13.58	AV
V	10380.083	60.27	8.46	39.75	44.50	63.98	68.2	-4.22	PK
V	10380.083	43.35	8.46	39.75	44.50	47.06	54	-6.94	AV
V	15570.181	60.73	10.12	38.80	44.10	65.55	74	-8.45	PK
V	15570.181	43.04	10.12	38.80	42.70	49.26	54	-4.74	AV
H	4434.063	64.74	5.94	35.18	44.00	61.86	74	-12.14	PK
H	4434.063	43.60	5.94	35.18	44.00	40.72	54	-13.28	AV
H	10380.155	54.13	8.46	38.71	44.50	56.80	68.2	-11.40	PK
H	10380.155	41.28	8.46	38.71	44.50	43.95	54	-10.05	AV
H	15570.035	53.29	10.12	38.38	44.10	57.69	74	-16.31	PK
H	15570.035	40.21	10.12	38.38	44.10	44.61	54	-9.39	AV
High Channel (5230 MHz)-Above 1G									
V	4739.194	62.30	6.48	36.35	44.05	61.08	68.2	-7.12	PK
V	4739.194	43.84	6.48	36.35	44.05	42.62	54	-11.38	AV
V	10460.098	62.44	8.47	37.88	44.51	64.28	68.2	-3.92	PK
V	10460.098	43.64	8.47	37.88	44.51	45.48	54	-8.52	AV
V	15690.200	64.15	10.12	38.80	44.10	68.97	74	-5.03	PK
V	15690.200	43.09	10.12	38.80	42.70	49.31	54	-4.69	AV
H	4739.190	62.89	6.48	36.37	44.05	61.69	68.2	-6.51	PK
H	4739.190	43.19	6.48	36.37	44.05	41.99	54	-12.01	AV
H	10460.141	51.75	8.47	38.64	44.50	54.36	68.2	-13.84	PK
H	10460.141	41.99	8.47	38.64	44.50	44.60	54	-9.40	AV
H	15690.166	50.70	10.12	38.38	44.10	55.10	74	-18.90	PK
H	15690.166	42.96	10.12	38.38	44.10	47.36	54	-6.64	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

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

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11ac-HT80
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
(5210 MHz)-Above 1G									
V	4434.124	63.00	5.94	35.40	44.00	60.34	68.2	-7.86	PK
V	4434.124	43.78	5.94	35.40	44.00	41.12	54	-12.88	AV
V	10420.085	62.08	8.46	39.75	44.50	65.79	68.2	-2.41	PK
V	10420.085	43.42	8.46	39.75	44.50	47.13	54	-6.87	AV
V	15630.196	60.97	10.12	38.80	44.10	65.79	74	-8.21	PK
V	15630.196	43.18	10.12	38.80	42.70	49.40	54	-4.60	AV
H	4434.150	60.97	5.94	35.18	44.00	58.09	68.2	-10.11	PK
H	4434.150	43.87	5.94	35.18	44.00	40.99	54	-13.01	AV
H	10420.008	51.26	8.46	38.71	44.50	53.93	68.2	-14.27	PK
H	10420.008	43.02	8.46	38.71	44.50	45.69	54	-8.31	AV
H	15630.139	51.71	10.12	38.38	44.10	56.11	74	-17.89	PK
H	15630.139	44.00	10.12	38.38	44.10	48.40	54	-5.60	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

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

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode is MIMO Mode.

Test Mode:	TX(5.8G) - 802.11a
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.148	57.88	5.94	35.40	44.00	55.22	74	-18.78	PK
V	4679.148	43.32	5.94	35.40	44.00	40.66	54	-13.34	AV
V	11490.100	56.89	8.46	39.75	44.50	60.60	68.2	-7.60	PK
V	11490.100	43.69	8.46	39.75	44.50	47.40	54	-6.60	AV
V	17235.153	57.95	10.12	38.80	44.10	62.77	68.2	-5.43	PK
V	17235.153	43.28	10.12	38.80	42.70	49.50	54	-4.50	AV
H	4679.112	55.02	5.94	35.18	44.00	52.14	74	-21.86	PK
H	4679.112	43.83	5.94	35.18	44.00	40.95	54	-13.05	AV
H	11490.166	54.40	8.46	38.71	44.50	57.07	68.2	-11.13	PK
H	11490.166	40.79	8.46	38.71	44.50	43.46	54	-10.54	AV
H	17235.077	54.13	10.12	38.38	44.10	58.53	68.2	-9.67	PK
H	17235.077	41.53	10.12	38.38	44.10	45.93	54	-8.07	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.144	58.68	6.48	36.35	44.05	57.46	74	-16.54	PK
V	4592.144	43.06	6.48	36.35	44.05	41.84	54	-12.16	AV
V	11570.148	57.03	8.47	37.88	44.51	58.87	68.2	-9.33	PK
V	11570.148	43.88	8.47	37.88	44.51	45.72	54	-8.28	AV
V	17355.014	59.92	10.12	38.80	44.10	64.74	68.2	-3.46	PK
V	17355.014	39.10	10.12	38.80	42.70	45.32	54	-8.68	AV
H	4592.116	55.59	6.48	36.37	44.05	54.39	74	-19.61	PK
H	4592.116	43.56	6.48	36.37	44.05	42.36	54	-11.64	AV
H	11570.147	53.15	8.47	38.64	44.50	55.76	68.2	-12.44	PK
H	11570.147	44.46	8.47	38.64	44.50	47.07	54	-6.93	AV
H	17355.061	50.13	10.12	38.38	44.10	54.53	68.2	-13.67	PK
H	17355.061	41.24	10.12	38.38	44.10	45.64	54	-8.36	AV
High Channel (5825 MHz)-Above 1G									
V	6039.003	56.36	7.10	37.24	43.50	57.20	68.2	-11.00	PK
V	6039.003	43.27	7.10	37.24	43.50	44.11	54	-9.89	AV
V	11650.185	60.94	8.46	37.68	44.50	62.58	74	-11.42	PK
V	11650.185	43.21	8.46	37.68	44.50	44.85	54	-9.15	AV
V	17475.179	57.59	10.12	38.80	44.10	62.41	68.2	-5.79	PK
V	17475.179	43.56	10.12	38.80	42.70	49.78	54	-4.22	AV
H	6039.082	54.77	7.10	37.24	43.50	55.61	68.2	-12.59	PK
H	6039.082	43.03	7.10	37.24	43.50	43.87	54	-10.13	AV
H	11650.071	50.80	8.46	38.57	44.50	53.33	74	-20.67	PK
H	11650.071	40.34	8.46	38.57	44.50	42.87	54	-11.13	AV
H	17475.119	53.90	10.12	38.38	44.10	58.30	68.2	-9.90	PK
H	17475.119	41.08	10.12	38.38	44.10	45.48	54	-8.52	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

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

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

The worst case is Antenna B.

Test Mode:	TX(5.8G) - 802.11n-HT20
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.039	59.94	5.94	35.40	44.00	57.28	74	-16.72	PK
V	4679.039	43.16	5.94	35.40	44.00	40.50	54	-13.50	AV
V	11490.022	55.78	8.46	39.75	44.50	59.49	68.2	-8.71	PK
V	11490.022	43.08	8.46	39.75	44.50	46.79	54	-7.21	AV
V	17235.133	61.65	10.12	38.80	44.10	66.47	68.2	-1.73	PK
V	17235.133	43.09	10.12	38.80	42.70	49.31	54	-4.69	AV
H	4679.137	60.92	5.94	35.18	44.00	58.04	74	-15.96	PK
H	4679.137	43.53	5.94	35.18	44.00	40.65	54	-13.35	AV
H	11490.031	49.02	8.46	38.71	44.50	51.69	68.2	-16.51	PK
H	11490.031	40.98	8.46	38.71	44.50	43.65	54	-10.35	AV
H	17235.123	54.91	10.12	38.38	44.10	59.31	68.2	-8.89	PK
H	17235.123	41.99	10.12	38.38	44.10	46.39	54	-7.61	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.160	62.08	6.48	36.35	44.05	60.86	74	-13.14	PK
V	4592.160	43.80	6.48	36.35	44.05	42.58	54	-11.42	AV
V	11570.065	56.32	8.47	37.88	44.51	58.16	68.2	-10.04	PK
V	11570.065	43.02	8.47	37.88	44.51	44.86	54	-9.14	AV
V	17355.134	57.81	10.12	38.80	44.10	62.63	68.2	-5.57	PK
V	17355.134	43.76	10.12	38.80	42.70	49.98	54	-4.02	AV
H	4592.031	59.48	6.48	36.37	44.05	58.28	74	-15.72	PK
H	4592.031	43.89	6.48	36.37	44.05	42.69	54	-11.31	AV
H	11570.190	51.53	8.47	38.64	44.50	54.14	68.2	-14.06	PK
H	11570.190	43.92	8.47	38.64	44.50	46.53	54	-7.47	AV
H	17355.068	51.26	10.12	38.38	44.10	55.66	68.2	-12.54	PK
H	17355.068	43.62	10.12	38.38	44.10	48.02	54	-5.98	AV
High Channel (5825 MHz)-Above 1G									
V	6039.107	59.75	7.10	37.24	43.50	60.59	68.2	-7.61	PK
V	6039.107	43.30	7.10	37.24	43.50	44.14	54	-9.86	AV
V	11650.128	56.61	8.46	37.68	44.50	58.25	74	-15.75	PK
V	11650.128	43.22	8.46	37.68	44.50	44.86	54	-9.14	AV
V	17475.104	59.65	10.12	38.80	44.10	64.47	68.2	-3.73	PK
V	17475.104	43.38	10.12	38.80	42.70	49.60	54	-4.40	AV
H	6039.003	57.08	7.10	37.24	43.50	57.92	68.2	-10.28	PK
H	6039.003	43.86	7.10	37.24	43.50	44.70	54	-9.30	AV
H	11650.110	51.55	8.46	38.57	44.50	54.08	74	-19.92	PK
H	11650.110	41.18	8.46	38.57	44.50	43.71	54	-10.29	AV
H	17475.109	52.91	10.12	38.38	44.10	57.31	68.2	-10.89	PK
H	17475.109	42.87	10.12	38.38	44.10	47.27	54	-6.73	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

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

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode is MIMO Mode.

Test Mode:	TX(5.8G) - 802.11n-HT40
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5755 MHz)-Above 1G									
V	4679.108	57.15	5.94	35.40	44.00	54.49	74	-19.51	PK
V	4679.108	43.18	5.94	35.40	44.00	40.52	54	-13.48	AV
V	11510.005	56.18	8.46	39.75	44.50	59.89	74	-14.11	PK
V	11510.005	43.20	8.46	39.75	44.50	46.91	54	-7.09	AV
V	17265.078	59.53	10.12	38.80	44.10	64.35	68.2	-3.85	PK
V	17265.078	2.00	10.12	38.80	42.70	8.22	54	-45.78	AV
H	4679.120	58.44	5.94	35.18	44.00	55.56	74	-18.44	PK
H	4679.120	43.65	5.94	35.18	44.00	40.77	54	-13.23	AV
H	11510.196	50.78	8.46	38.71	44.50	53.45	74	-20.55	PK
H	11510.196	44.47	8.46	38.71	44.50	47.14	54	-6.86	AV
H	17265.066	50.66	10.12	38.38	44.10	55.06	68.2	-13.14	PK
H	17265.066	40.93	10.12	38.38	44.10	45.33	54	-8.67	AV
High Channel (5795 MHz)-Above 1G									
V	6039.125	56.88	6.48	36.35	44.05	55.66	68.2	-12.54	PK
V	6039.125	43.25	6.48	36.35	44.05	42.03	54	-11.97	AV
V	11590.143	59.71	8.47	37.88	44.51	61.55	74	-12.45	PK
V	11590.143	43.58	8.47	37.88	44.51	45.42	54	-8.58	AV
V	17385.044	55.27	10.12	38.80	44.10	60.09	68.2	-8.11	PK
V	17385.044	41.56	10.12	38.80	42.70	47.78	54	-6.22	AV
H	6039.015	57.69	6.48	36.37	44.05	56.49	68.2	-11.71	PK
H	6039.015	43.15	6.48	36.37	44.05	41.95	54	-12.05	AV
H	11590.021	51.55	8.47	38.64	44.50	54.16	74	-19.84	PK
H	11590.021	43.95	8.47	38.64	44.50	46.56	54	-7.44	AV
H	17385.092	54.87	10.12	38.38	44.10	59.27	68.2	-8.93	PK
H	17385.092	40.65	10.12	38.38	44.10	45.05	54	-8.95	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

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

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode is MIMO Mode.

Test Mode:	TX(5.8G) - 802.11ac-HT20
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.026	60.16	5.94	35.40	44.00	57.50	74	-16.50	PK
V	4679.026	43.44	5.94	35.40	44.00	40.78	54	-13.22	AV
V	11490.145	57.00	8.46	39.75	44.50	60.71	68.2	-7.49	PK
V	11490.145	43.81	8.46	39.75	44.50	47.52	54	-6.48	AV
V	17235.016	58.41	10.12	38.80	44.10	63.23	68.2	-4.97	PK
V	17235.016	43.45	10.12	38.80	42.70	49.67	54	-4.33	AV
H	4679.094	56.44	5.94	35.18	44.00	53.56	74	-20.44	PK
H	4679.094	43.73	5.94	35.18	44.00	40.85	54	-13.15	AV
H	11490.167	47.24	8.46	38.71	44.50	49.91	68.2	-18.29	PK
H	11490.167	40.39	8.46	38.71	44.50	43.06	54	-10.94	AV
H	17235.144	52.36	10.12	38.38	44.10	56.76	68.2	-11.44	PK
H	17235.144	44.00	10.12	38.38	44.10	48.40	54	-5.60	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.018	62.35	6.48	36.35	44.05	61.13	74	-12.87	PK
V	4592.018	43.18	6.48	36.35	44.05	41.96	54	-12.04	AV
V	11570.003	54.42	8.47	37.88	44.51	56.26	68.2	-11.94	PK
V	11570.003	43.16	8.47	37.88	44.51	45.00	54	-9.00	AV
V	17355.030	59.86	10.12	38.80	44.10	64.68	68.2	-3.52	PK
V	17355.030	43.56	10.12	38.80	42.70	49.78	54	-4.22	AV
H	4592.042	58.33	6.48	36.37	44.05	57.13	74	-16.87	PK
H	4592.042	43.29	6.48	36.37	44.05	42.09	54	-11.91	AV
H	11570.048	54.95	8.47	38.64	44.50	57.56	68.2	-10.64	PK
H	11570.048	43.77	8.47	38.64	44.50	46.38	54	-7.62	AV
H	17355.188	50.84	10.12	38.38	44.10	55.24	68.2	-12.96	PK
H	17355.188	40.92	10.12	38.38	44.10	45.32	54	-8.68	AV
High Channel (5825 MHz)-Above 1G									
V	6039.135	59.81	7.10	37.24	43.50	60.65	68.2	-7.55	PK
V	6039.135	43.45	7.10	37.24	43.50	44.29	54	-9.71	AV
V	11650.069	58.64	8.46	37.68	44.50	60.28	74	-13.72	PK
V	11650.069	43.56	8.46	37.68	44.50	45.20	54	-8.80	AV
V	17475.042	55.03	10.12	38.80	44.10	59.85	68.2	-8.35	PK
V	17475.042	43.24	10.12	38.80	42.70	49.46	54	-4.54	AV
H	6039.144	55.95	7.10	37.24	43.50	56.79	68.2	-11.41	PK
H	6039.144	43.21	7.10	37.24	43.50	44.05	54	-9.95	AV
H	11650.051	51.14	8.46	38.57	44.50	53.67	74	-20.33	PK
H	11650.051	40.81	8.46	38.57	44.50	43.34	54	-10.66	AV
H	17475.131	51.00	10.12	38.38	44.10	55.40	68.2	-12.80	PK
H	17475.131	40.56	10.12	38.38	44.10	44.96	54	-9.04	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

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

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode is MIMO Mode.

Test Mode:	TX(5.8G) - 802.11ac-HT40
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5755 MHz)-Above 1G									
V	4679.058	56.84	5.94	35.40	44.00	54.18	74	-19.82	PK
V	4679.058	43.42	5.94	35.40	44.00	40.76	54	-13.24	AV
V	11510.042	56.08	8.46	39.75	44.50	59.79	74	-14.21	PK
V	11510.042	43.82	8.46	39.75	44.50	47.53	54	-6.47	AV
V	17265.155	55.63	10.12	38.80	44.10	60.45	68.2	-7.75	PK
V	17265.155	2.00	10.12	38.80	42.70	8.22	54	-45.78	AV
H	4679.011	60.80	5.94	35.18	44.00	57.92	74	-16.08	PK
H	4679.011	43.46	5.94	35.18	44.00	40.58	54	-13.42	AV
H	11510.088	50.49	8.46	38.71	44.50	53.16	74	-20.84	PK
H	11510.088	40.32	8.46	38.71	44.50	42.99	54	-11.01	AV
H	17265.187	53.74	10.12	38.38	44.10	58.14	68.2	-10.06	PK
H	17265.187	43.46	10.12	38.38	44.10	47.86	54	-6.14	AV
High Channel (5795 MHz)-Above 1G									
V	6039.093	56.18	6.48	36.35	44.05	54.96	68.2	-13.24	PK
V	6039.093	43.67	6.48	36.35	44.05	42.45	54	-11.55	AV
V	11590.156	58.89	8.47	37.88	44.51	60.73	74	-13.27	PK
V	11590.156	43.26	8.47	37.88	44.51	45.10	54	-8.90	AV
V	17385.119	55.96	10.12	38.80	44.10	60.78	68.2	-7.42	PK
V	17385.119	41.95	10.12	38.80	42.70	48.17	54	-5.83	AV
H	6039.086	57.35	6.48	36.37	44.05	56.15	68.2	-12.05	PK
H	6039.086	43.64	6.48	36.37	44.05	42.44	54	-11.56	AV
H	11590.146	52.37	8.47	38.64	44.50	54.98	74	-19.02	PK
H	11590.146	43.64	8.47	38.64	44.50	46.25	54	-7.75	AV
H	17385.161	51.68	10.12	38.38	44.10	56.08	68.2	-12.12	PK
H	17385.161	42.00	10.12	38.38	44.10	46.40	54	-7.60	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

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

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode is MIMO Mode.

Test Mode:	TX(5.8G) - 802.11ac-HT80
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
(5775 MHz)-Above 1G									
V	4679.022	59.77	5.94	35.40	44.00	57.11	74	-16.89	PK
V	4679.022	43.70	5.94	35.40	44.00	41.04	54	-12.96	AV
V	11550.049	59.13	8.46	39.75	44.50	62.84	74	-11.16	PK
V	11550.049	42.19	8.46	39.75	44.50	45.90	54	-8.10	AV
V	17325.109	60.29	10.12	38.80	44.10	65.11	68.2	-3.09	PK
V	17325.109	41.52	10.12	38.80	42.70	47.74	54	-6.26	AV
H	4679.115	59.73	5.94	35.18	44.00	56.85	74	-17.15	PK
H	4679.115	43.84	5.94	35.18	44.00	40.96	54	-13.04	AV
H	11550.049	50.05	8.46	38.71	44.50	52.72	74	-21.28	PK
H	11550.049	40.08	8.46	38.71	44.50	42.75	54	-11.25	AV
H	17325.195	53.81	10.12	38.38	44.10	58.21	68.2	-9.99	PK
H	17325.195	43.88	10.12	38.38	44.10	48.28	54	-5.72	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

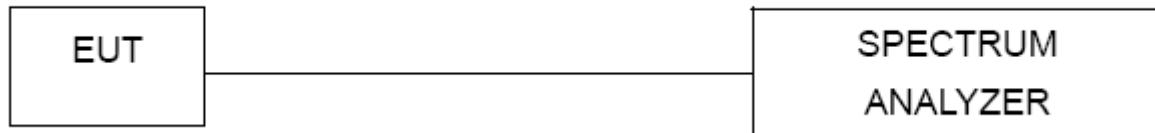
Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode is MIMO Mode.

8. Power Spectral Density Test

8.1 Block Diagram Of Test Setup



8.2 Limit

For the band 5.15-5.25 GHz,

(i) For an outdoor Wifi Repeater operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor Wifi Repeater operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point Wifi Repeaters operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz

(3) For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

8.3 Test procedure

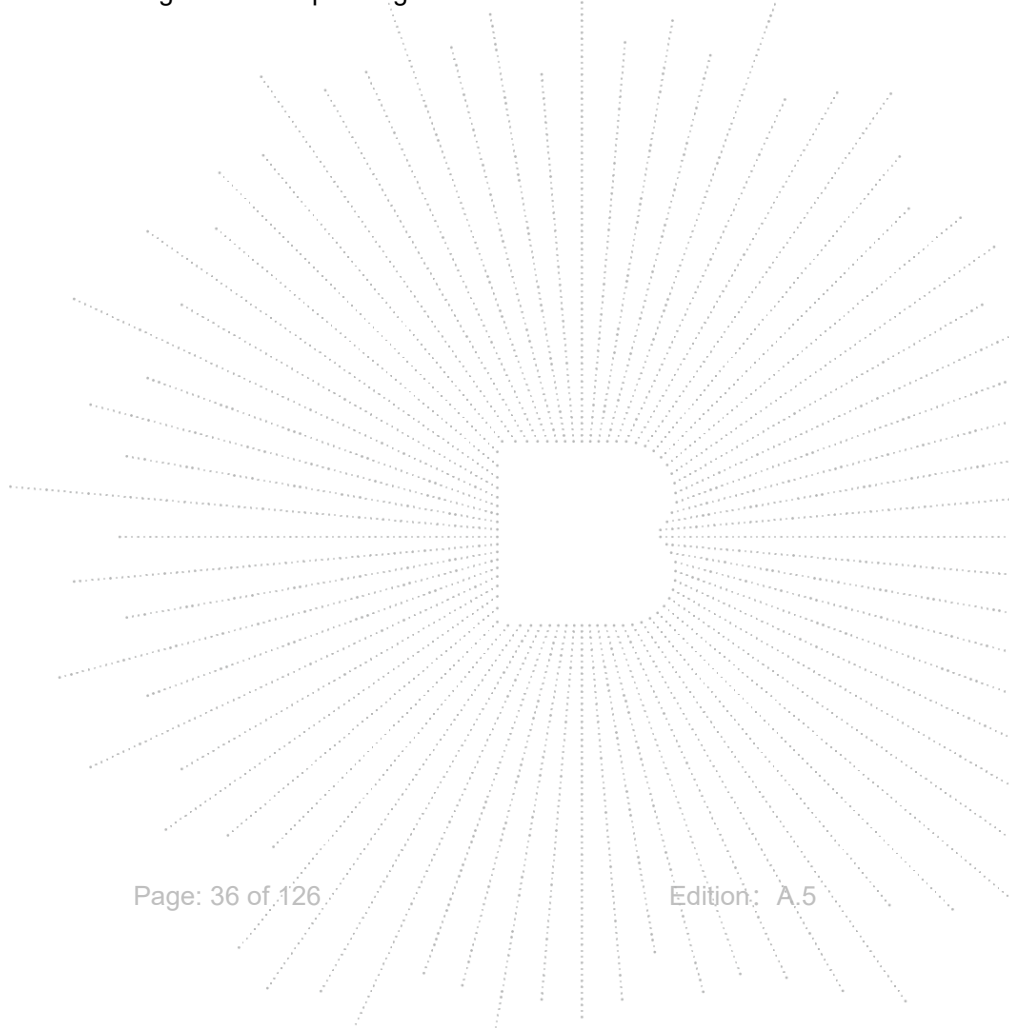
For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

- a) Set $RBW \geq 1/T$, where T is defined in section II.B.I.a).
- b) Set $VBW \geq 3$ RBW.
- c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/RBW)$ to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
- d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add $10\log(1\text{MHz}/RBW)$ to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
- e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections 5.c) and 5.d) above, since RBW=100 KHz is available on nearly all spectrum analyzers.

8.4 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.



8.5 Test Result

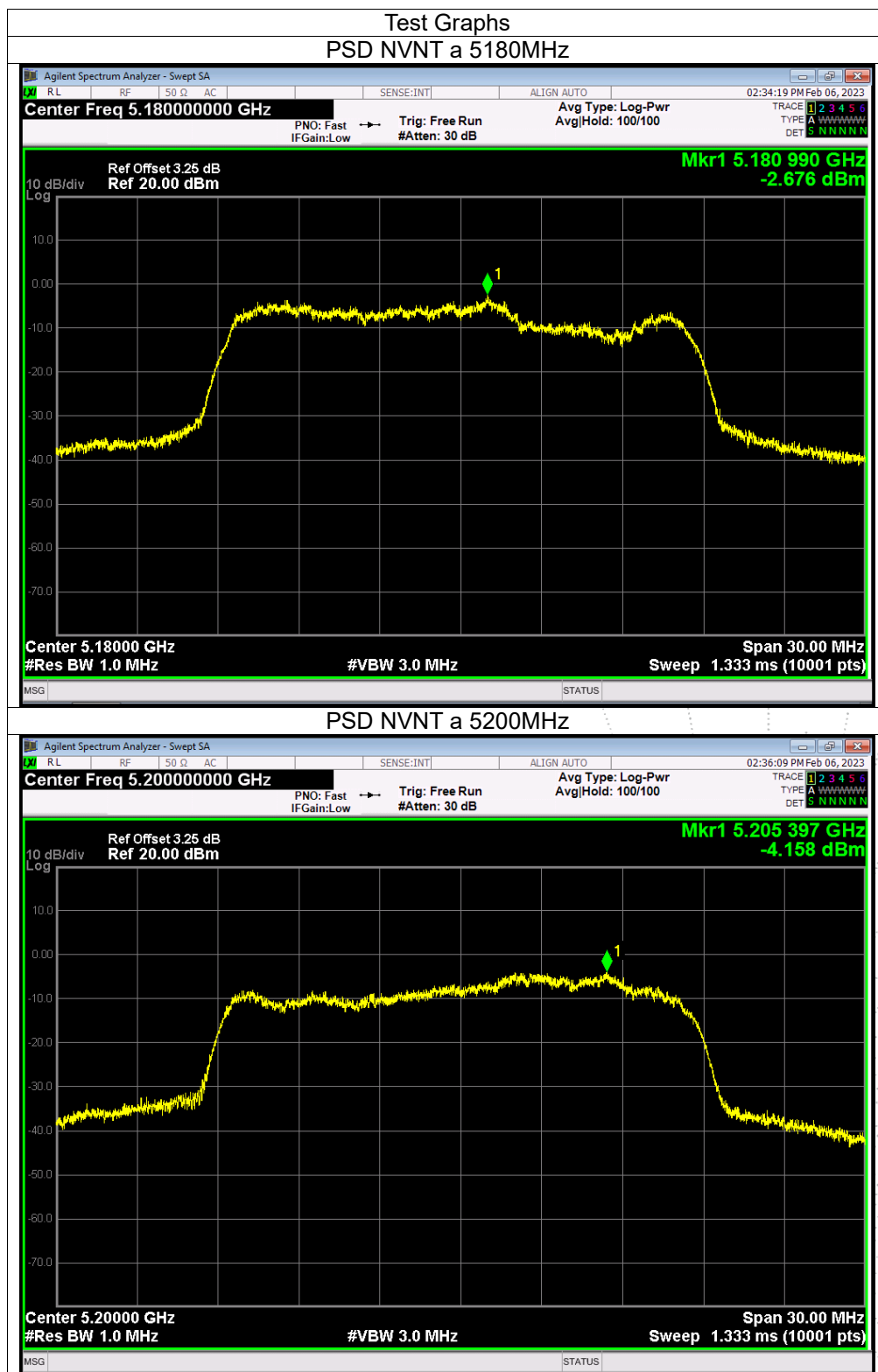
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 5V
Test Mode:	(5180-5240MHz); (5745-5825MHz)		

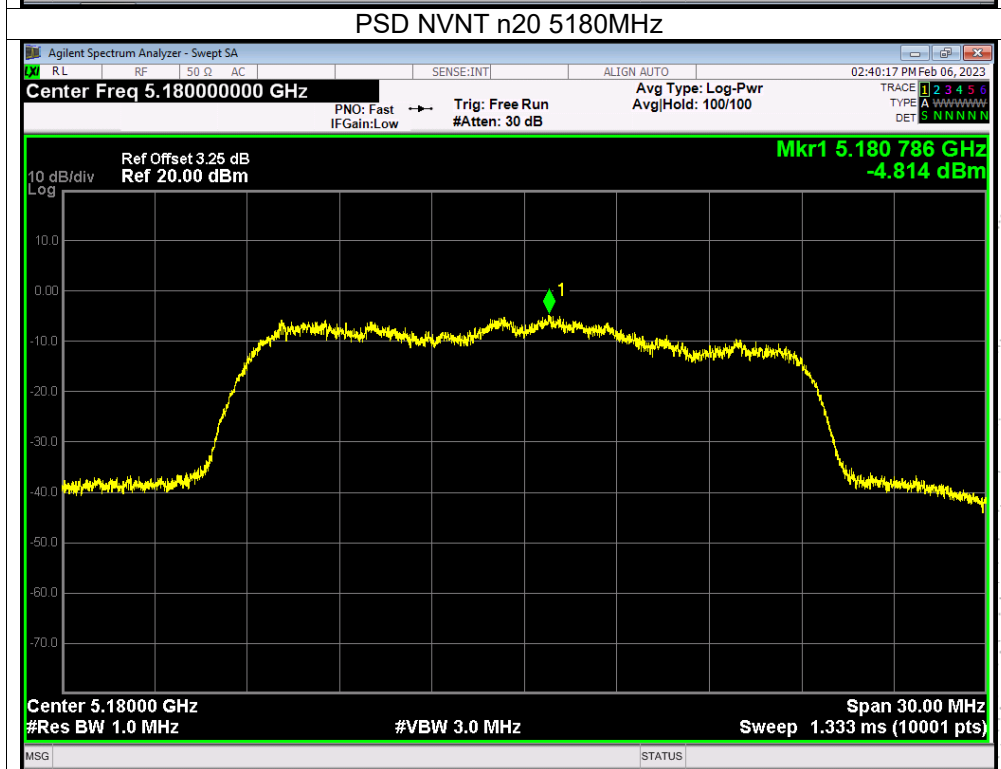
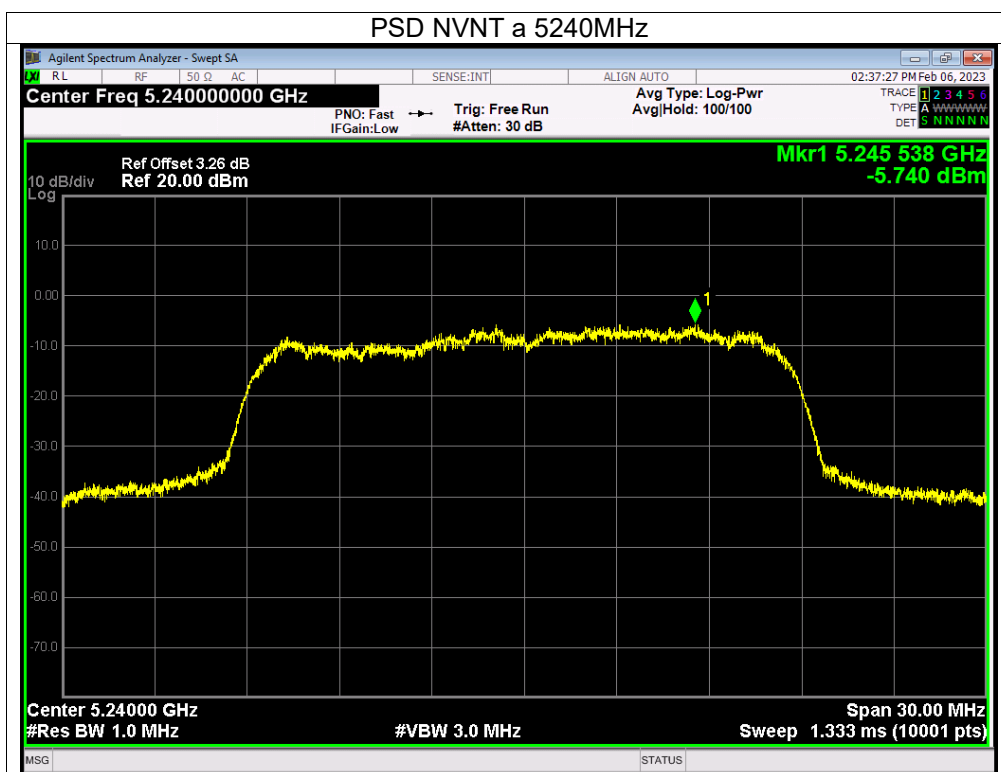
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/MHz)		Total (dBm/MHz)	Limit (dBm/MHz)	Verdict
			Ant A	Ant B			
NVNT	a	5180	-2.68	-4.77	/	11	Pass
NVNT	a	5200	-4.16	-2.83	/	11	Pass
NVNT	a	5240	-5.74	-5.31	/	11	Pass
NVNT	n20	5180	-4.81	-4.82	-1.80	11	Pass
NVNT	n20	5200	-5.65	-3.78	-1.60	11	Pass
NVNT	n20	5240	-5.45	-4.86	-2.13	11	Pass
NVNT	n40	5190	-14.06	-13.20	-10.60	11	Pass
NVNT	n40	5230	-14.64	-14.08	-11.34	11	Pass
NVNT	ac20	5180	-5.20	-5.16	-2.17	11	Pass
NVNT	ac20	5200	-6.21	-5.90	-3.04	11	Pass
NVNT	ac20	5240	-5.39	-4.89	-2.12	11	Pass
NVNT	ac40	5190	-9.33	-13.42	-7.90	11	Pass
NVNT	ac40	5230	-11.30	-12.36	-8.79	11	Pass
NVNT	ac80	5210	-21.83	-23.60	-19.62	11	Pass

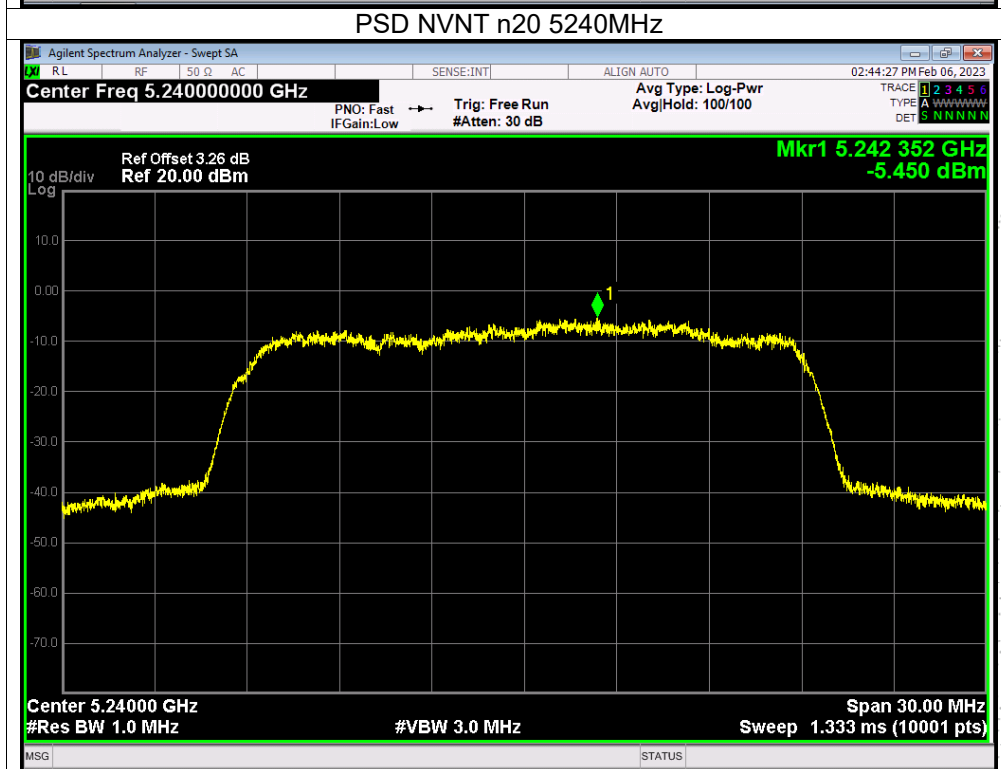
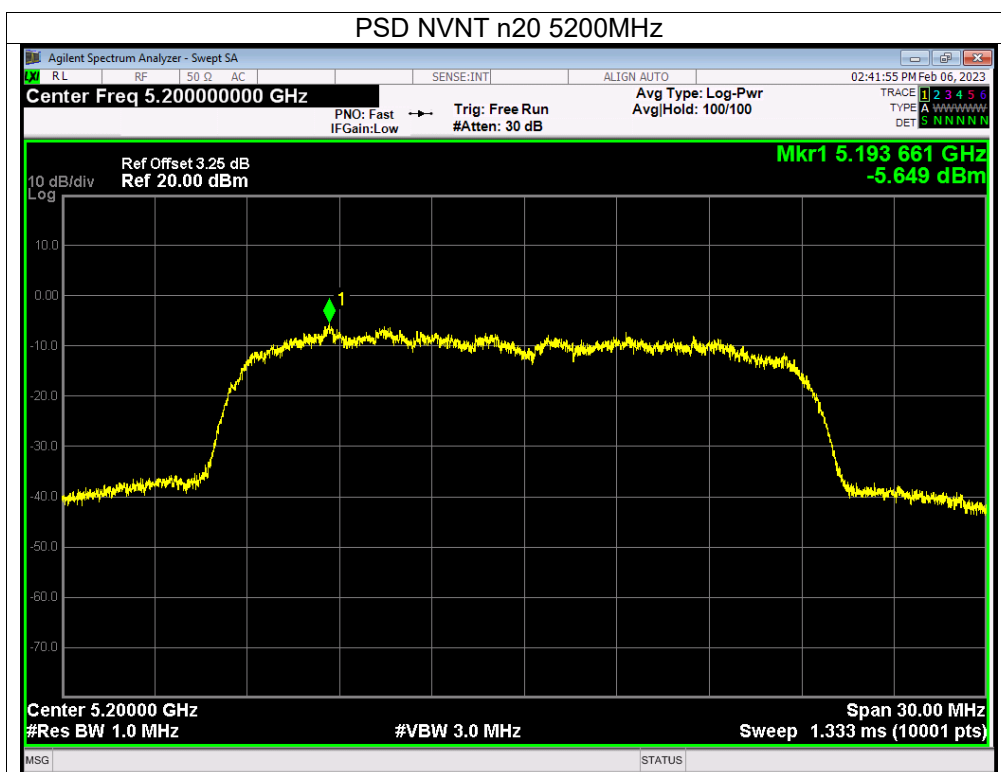
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/500KHz)		Total (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
			Ant A	Ant B			
NVNT	a	5745	-7.67	-5.68	/	30	Pass
NVNT	a	5785	-5.88	-6.07	/	30	Pass
NVNT	a	5825	-6.17	-6.13	/	30	Pass
NVNT	n20	5745	-9.18	-9.69	-6.42	30	Pass
NVNT	n20	5785	-8.87	-7.12	-4.90	30	Pass
NVNT	n20	5825	-7.74	-8.74	-5.20	30	Pass
NVNT	n40	5755	-17.65	-17.02	-14.31	30	Pass
NVNT	n40	5795	-17.06	-16.06	-13.52	30	Pass
NVNT	ac20	5745	-7.81	-8.98	-5.35	30	Pass
NVNT	ac20	5785	-8.00	-9.10	-5.50	30	Pass
NVNT	ac20	5825	-8.05	-8.56	-5.29	30	Pass
NVNT	ac40	5755	-14.65	-14.82	-11.72	30	Pass
NVNT	ac40	5795	-16.61	-15.77	-13.16	30	Pass
NVNT	ac80	5775	-27.19	-25.81	-23.44	30	Pass

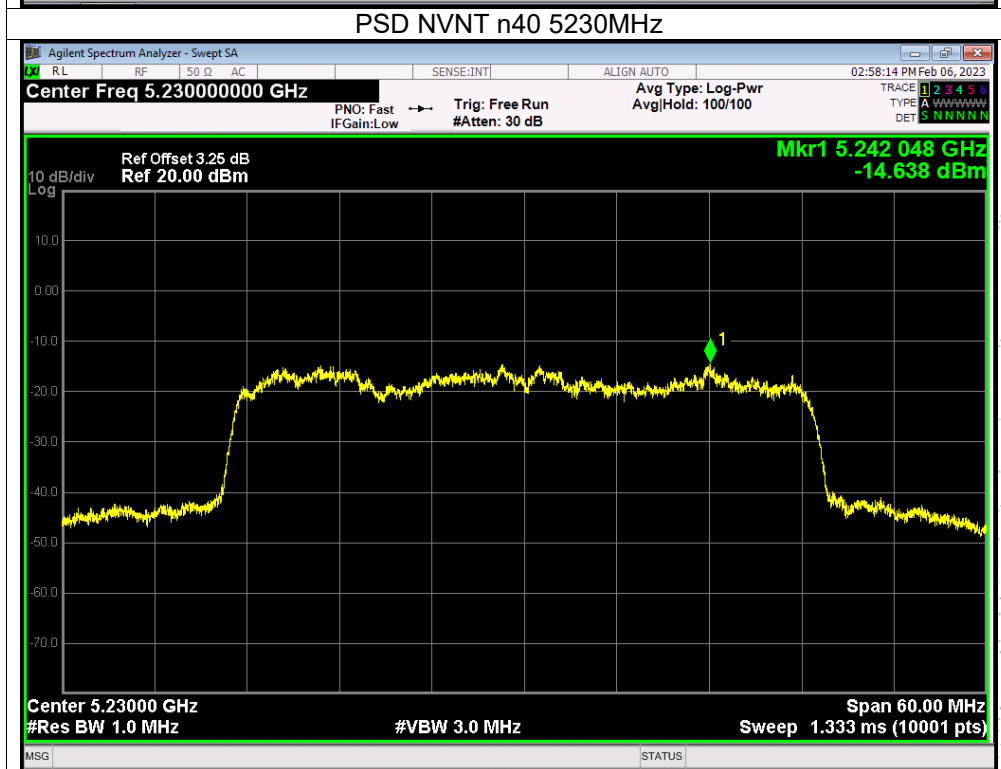
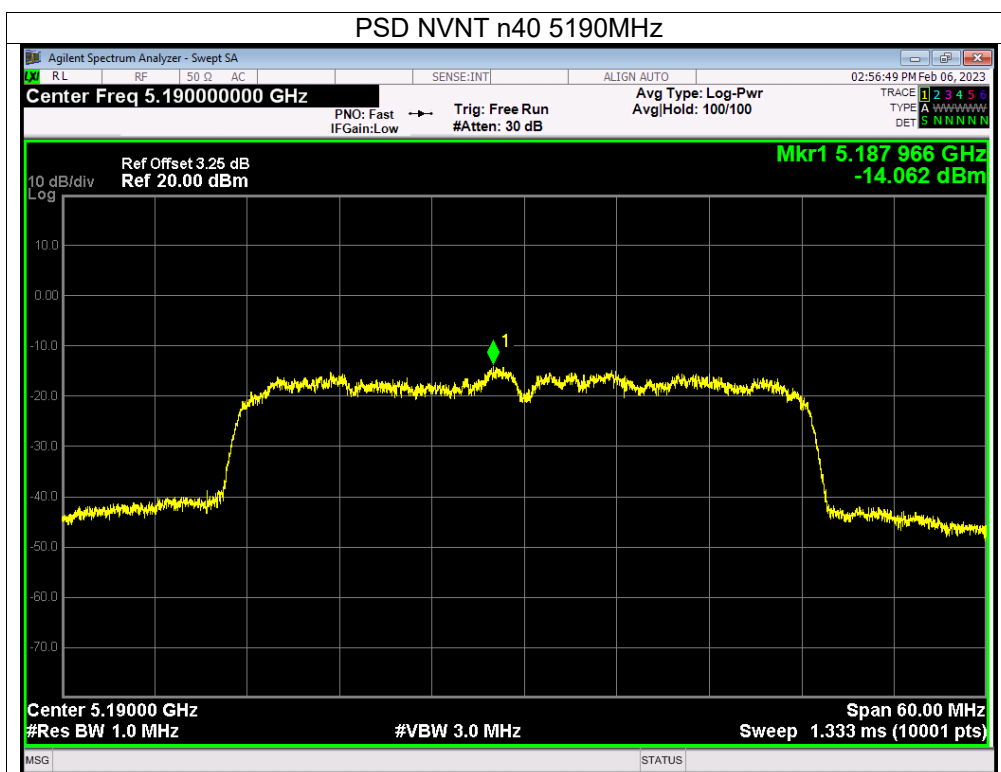
U-NII-1

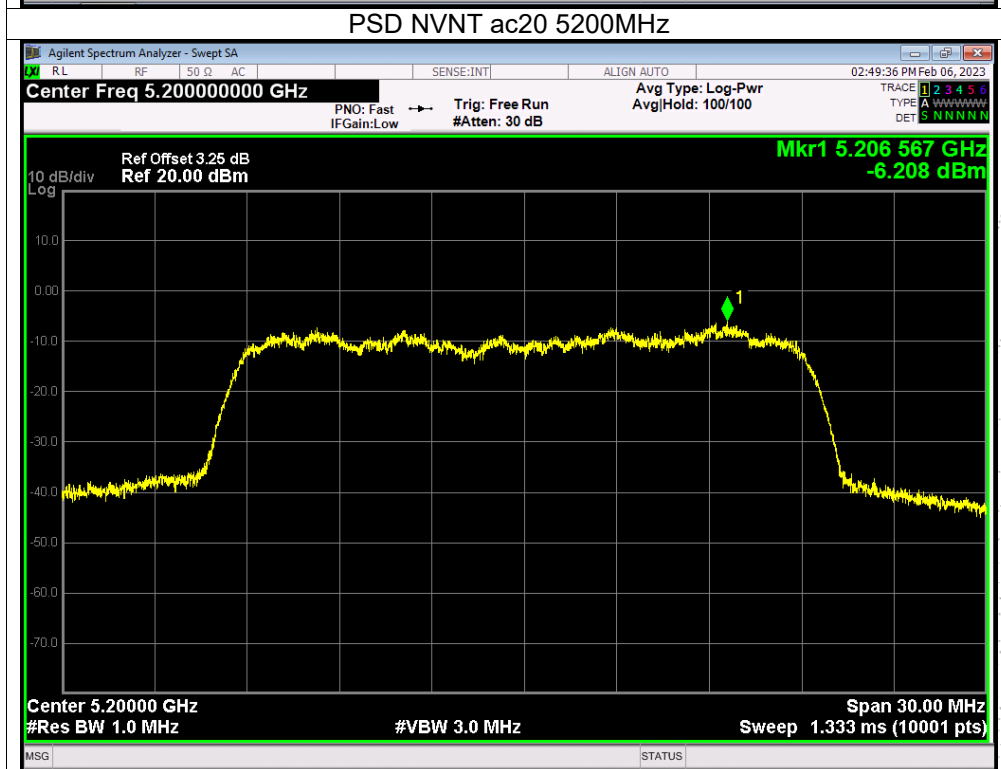
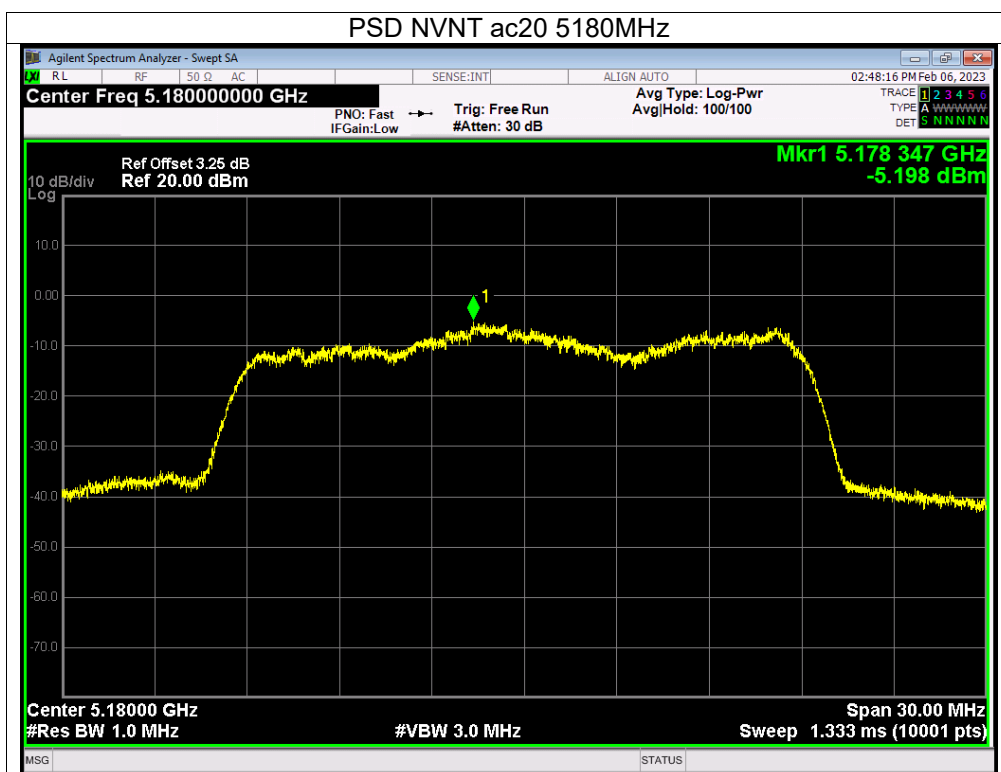
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot.

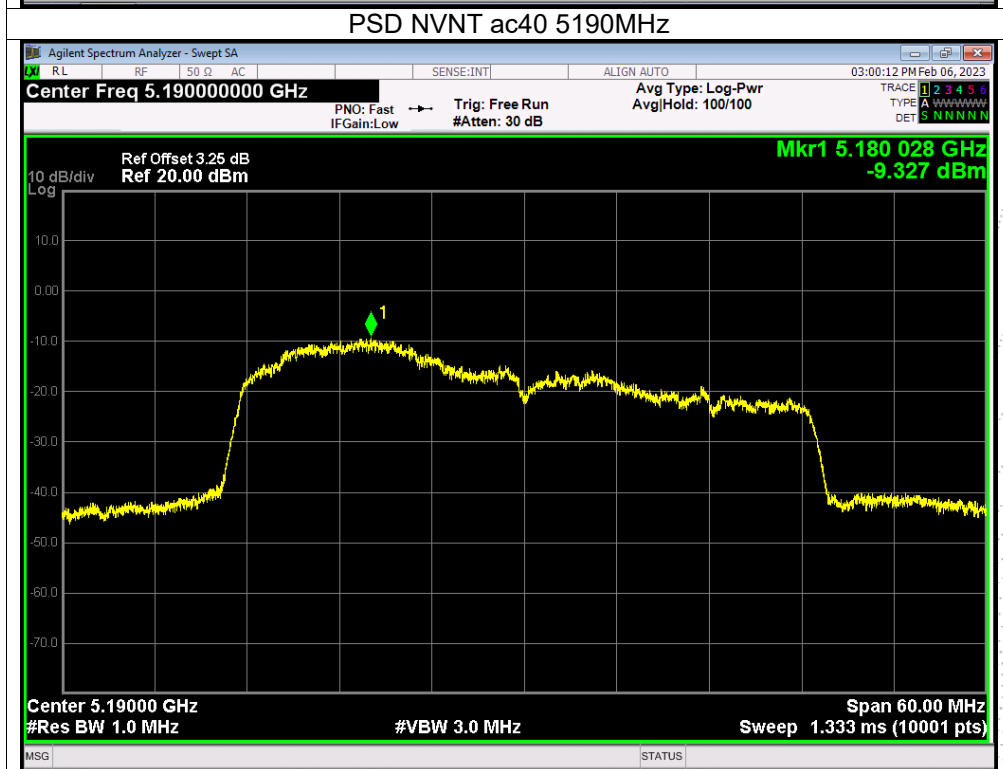
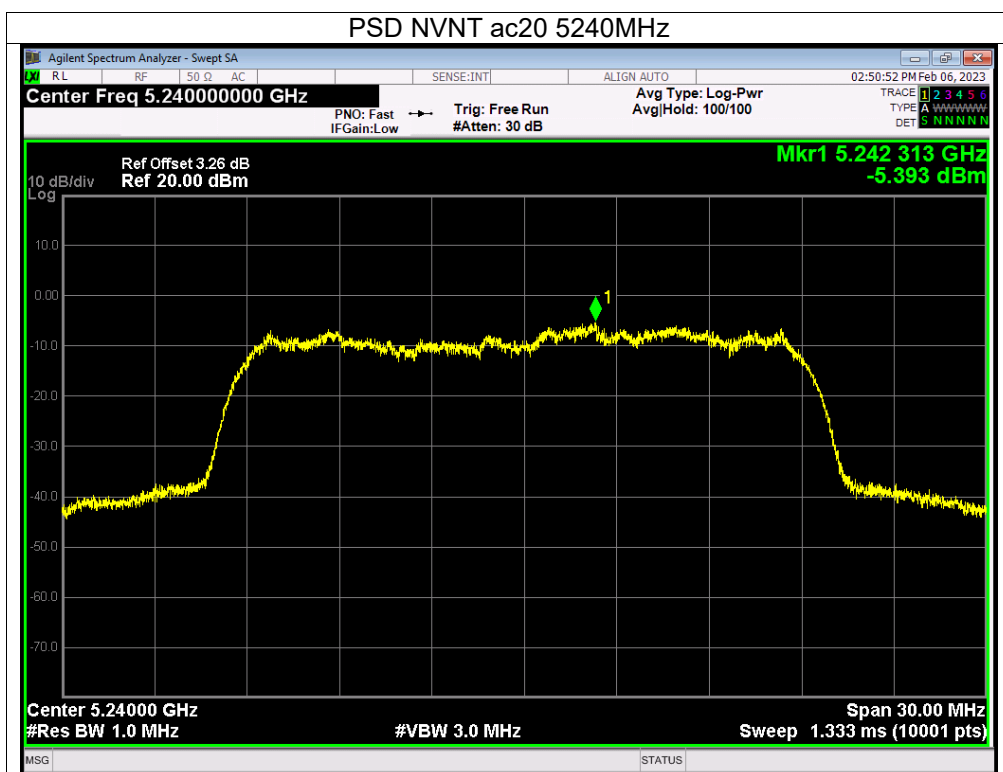


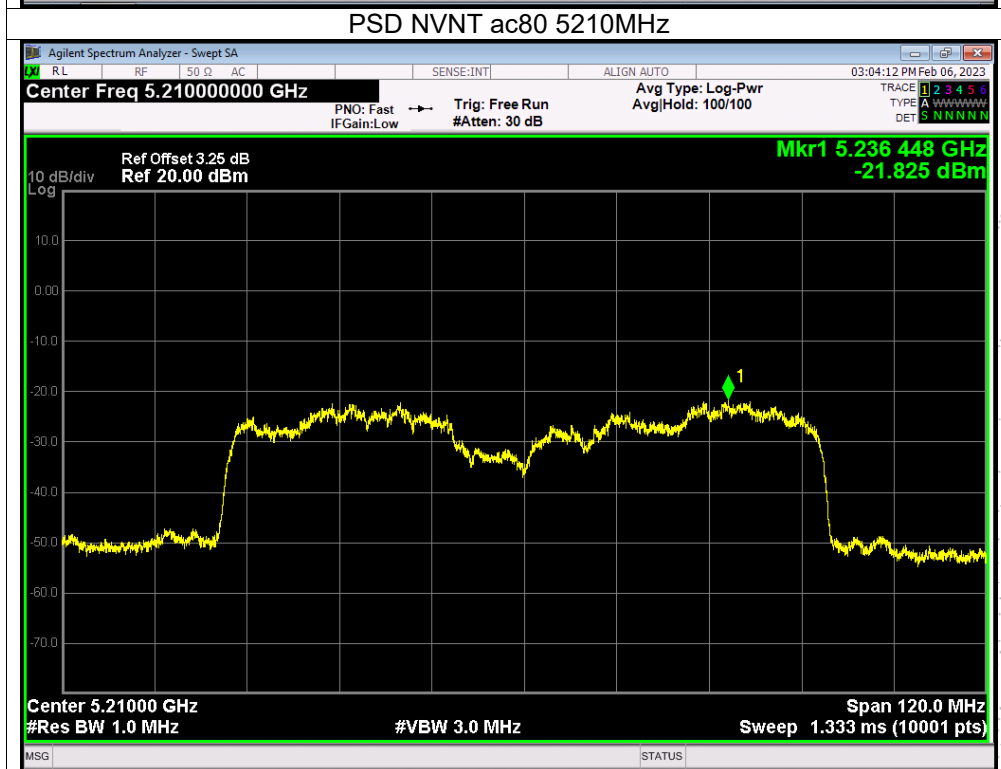
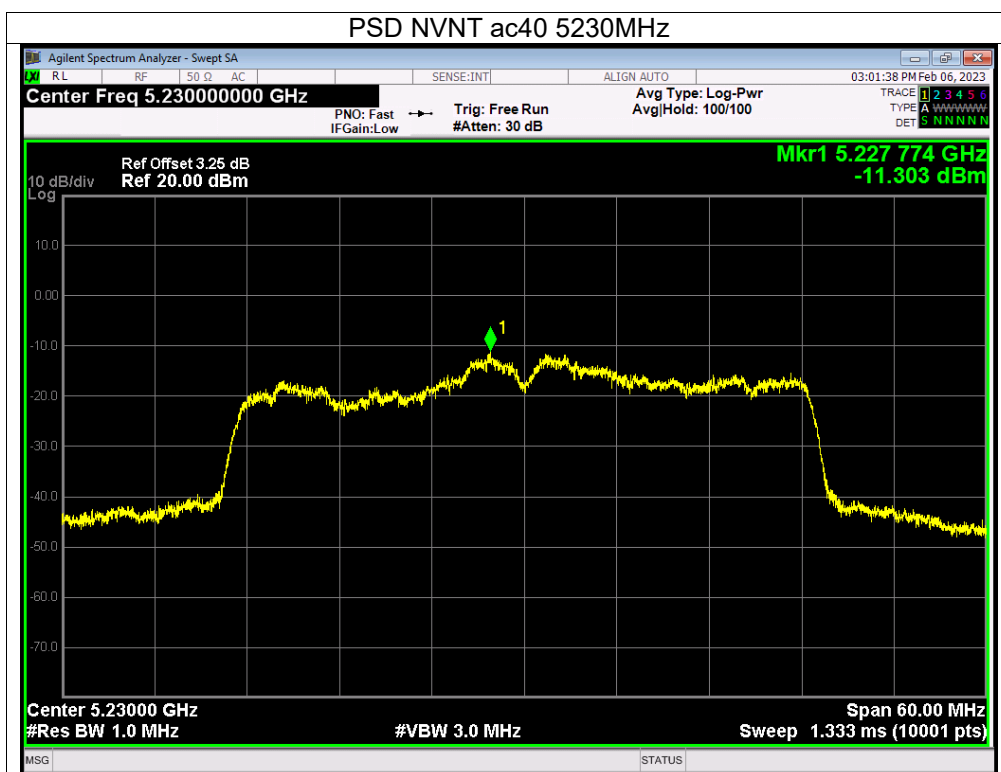






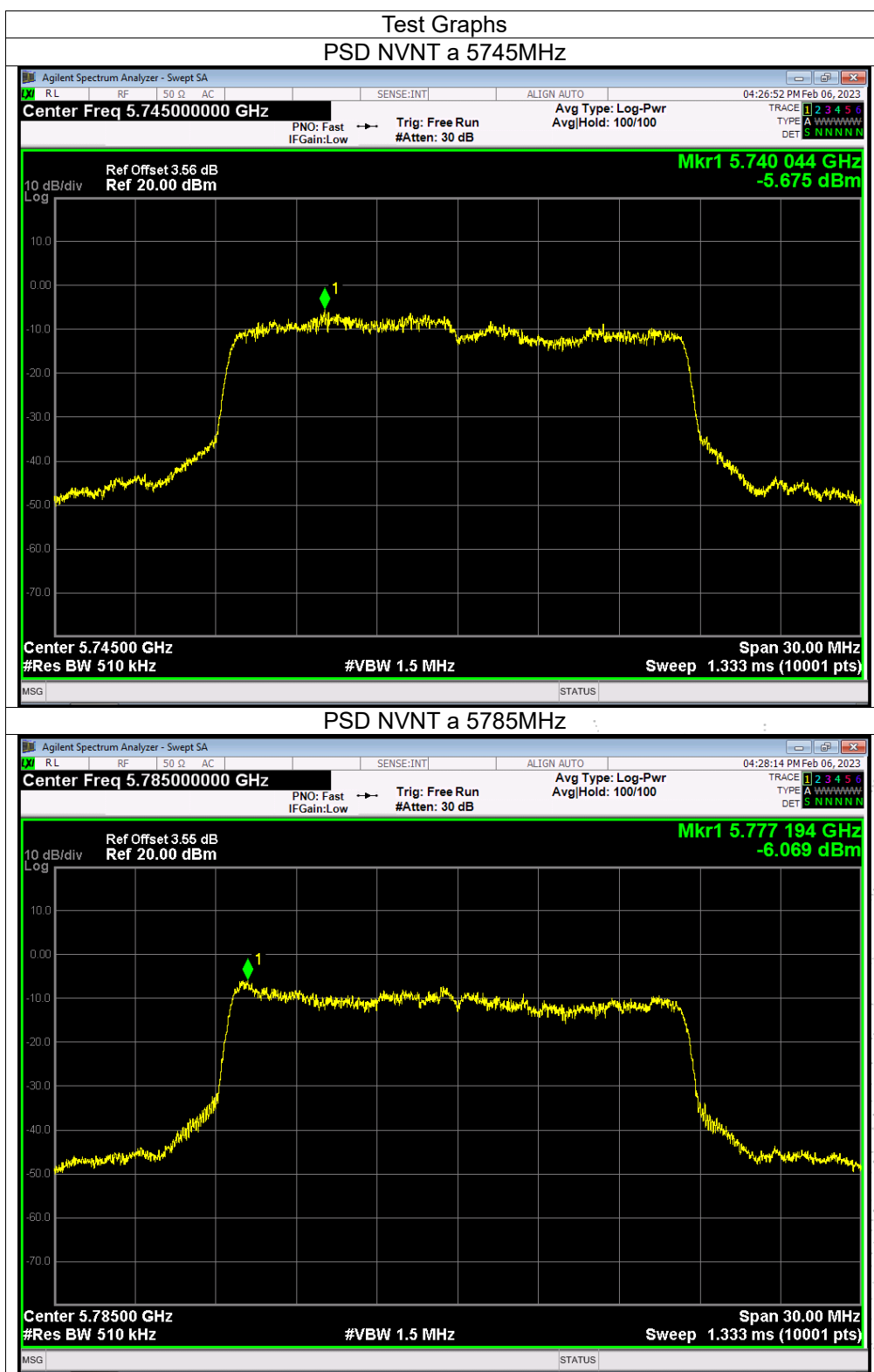


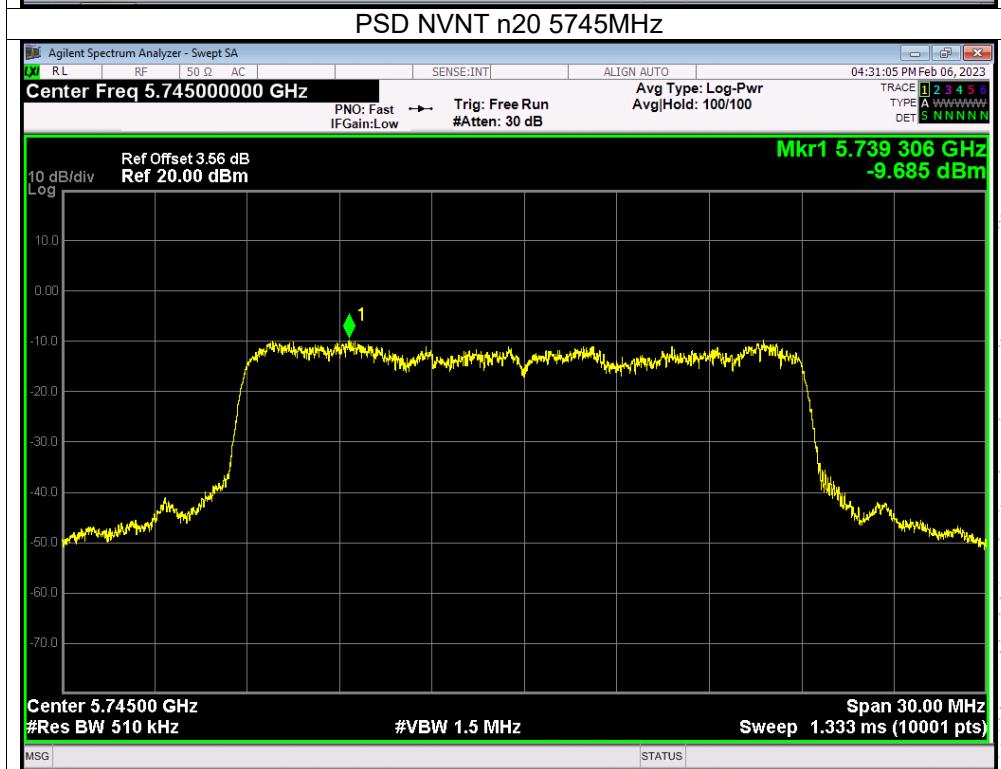
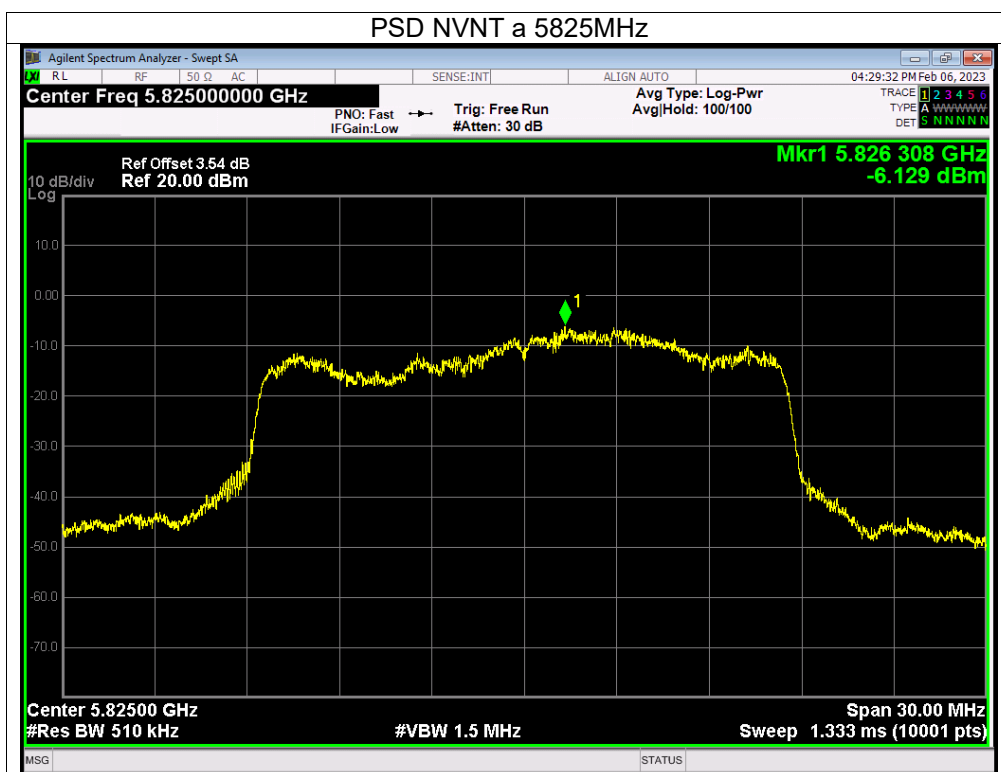


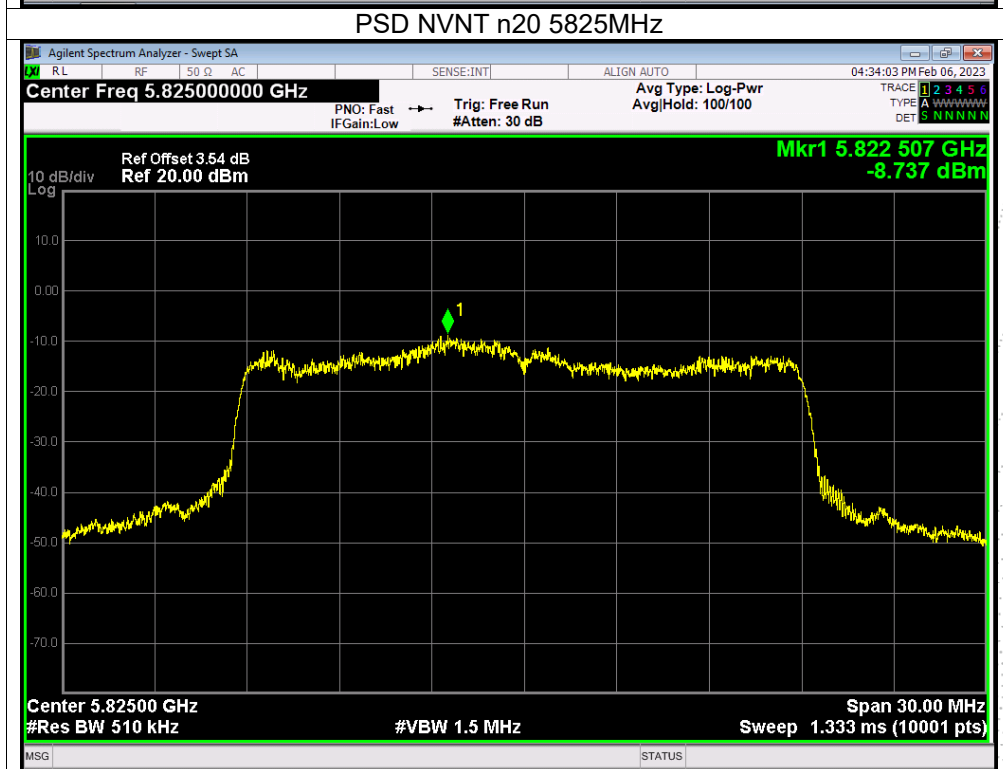
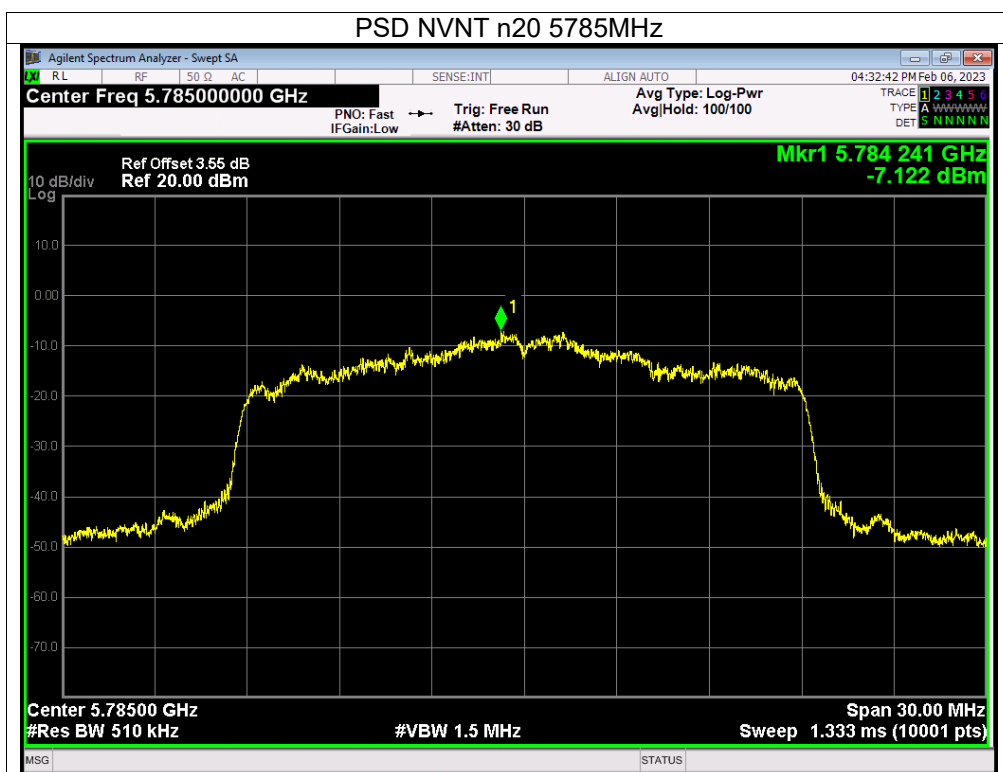


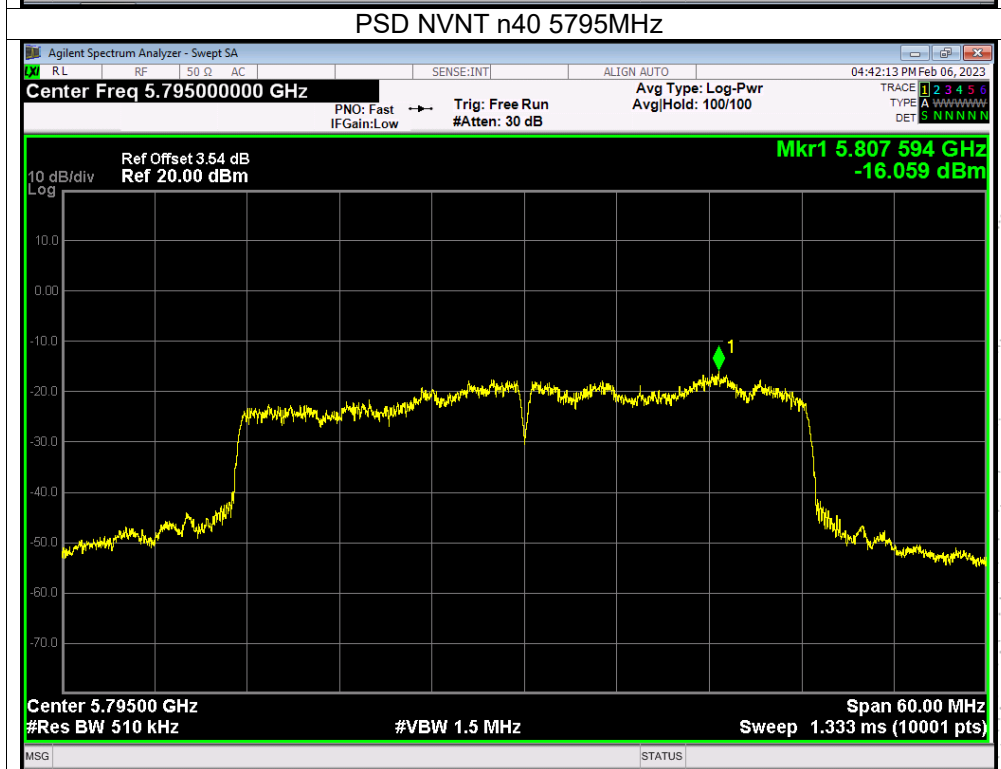
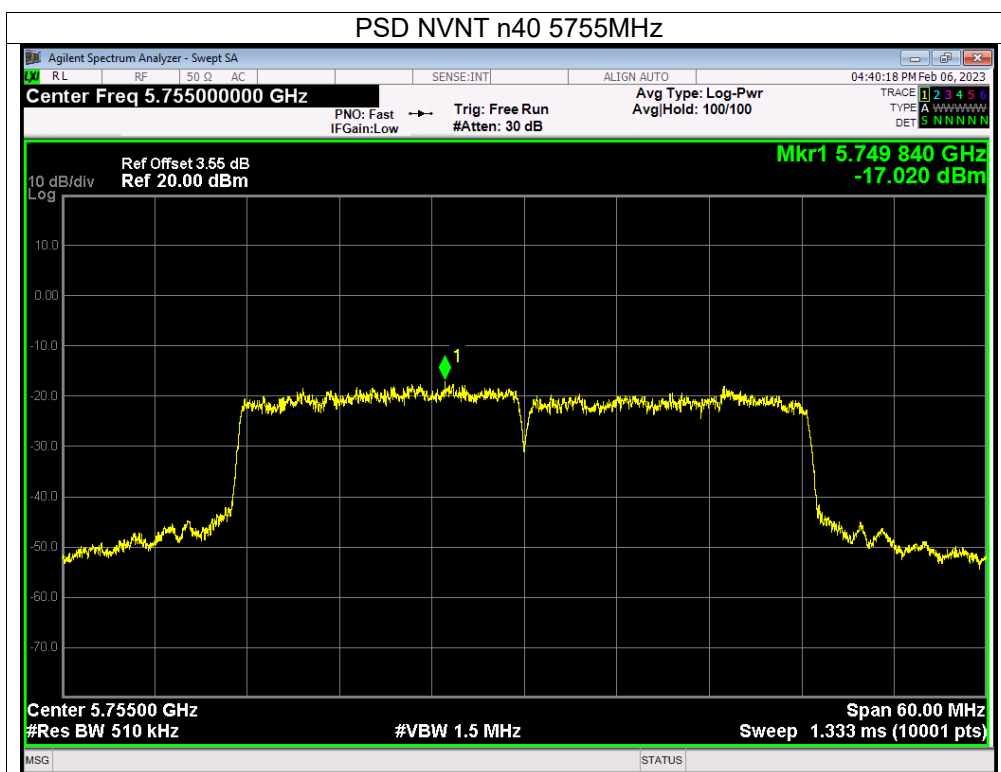
U-NII-3

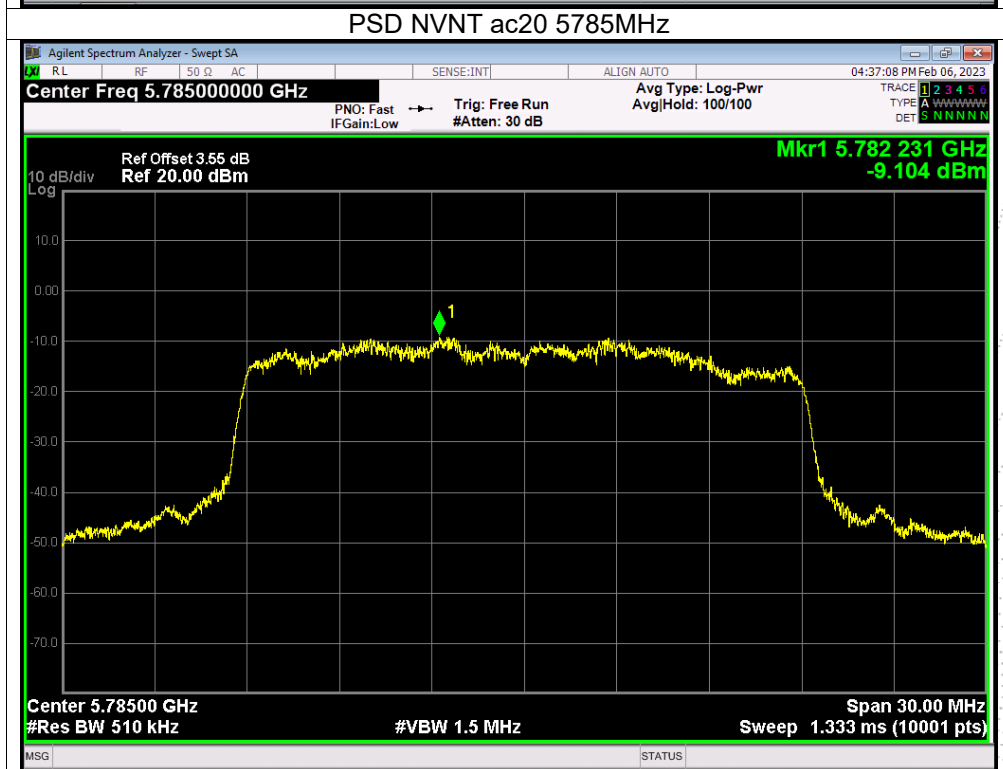
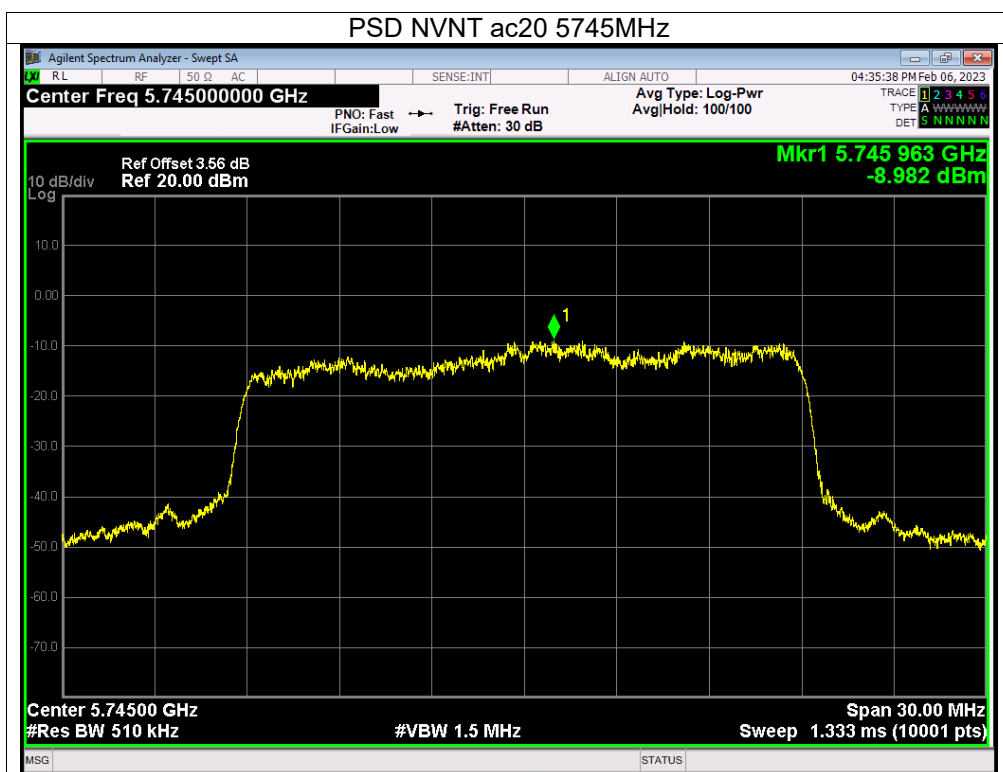
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

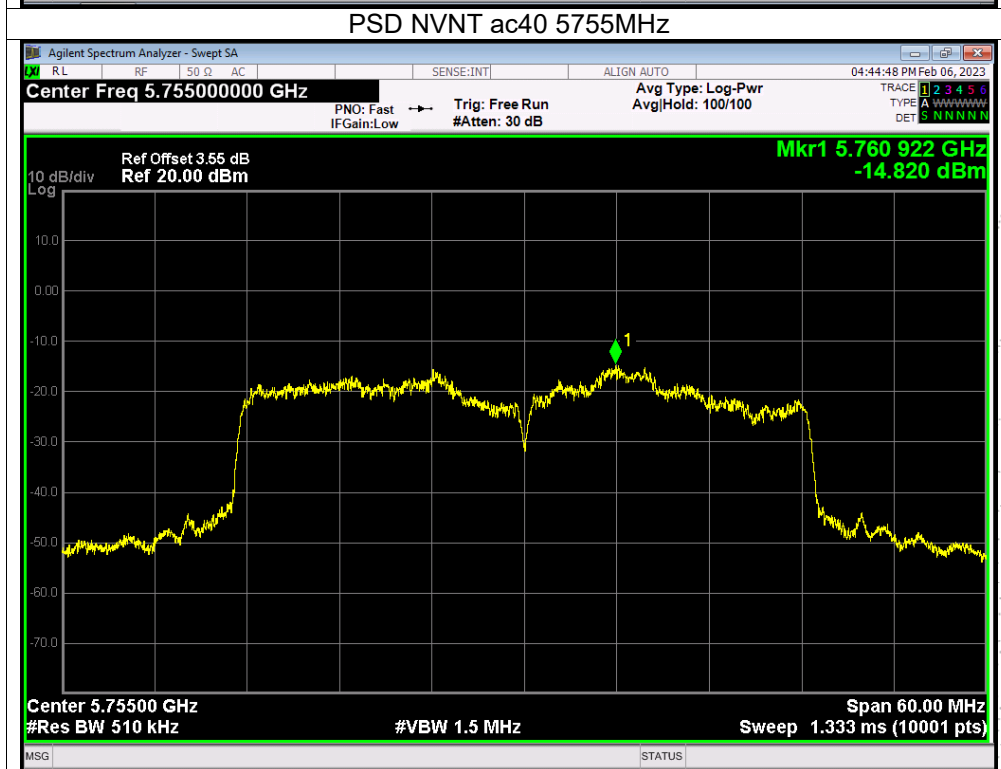
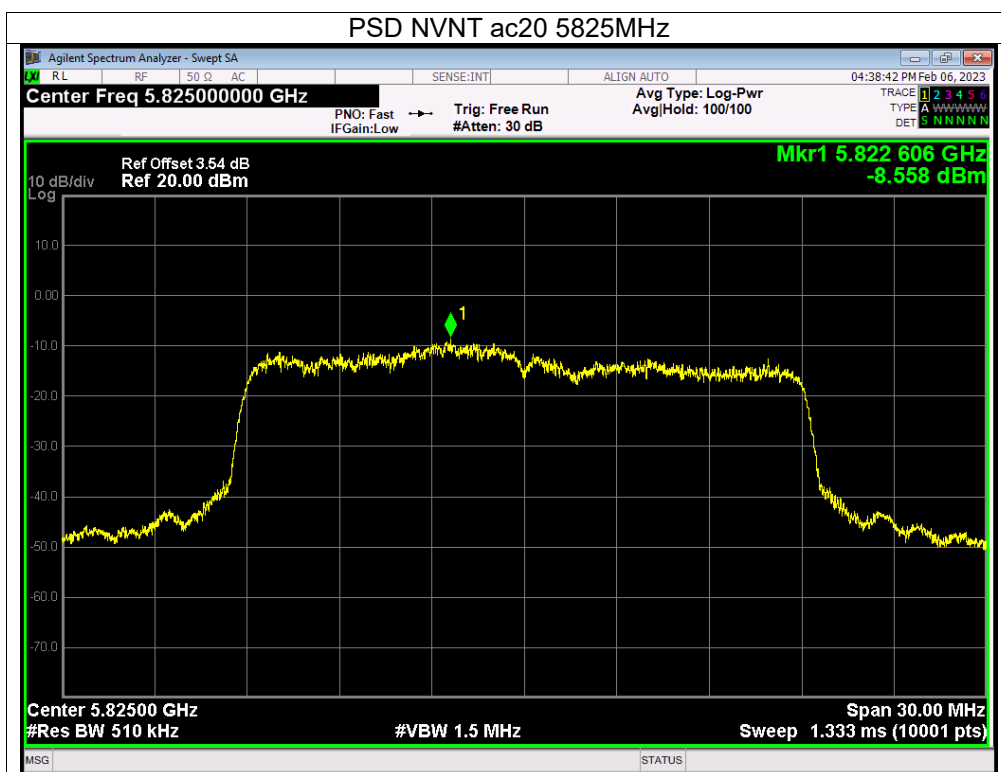


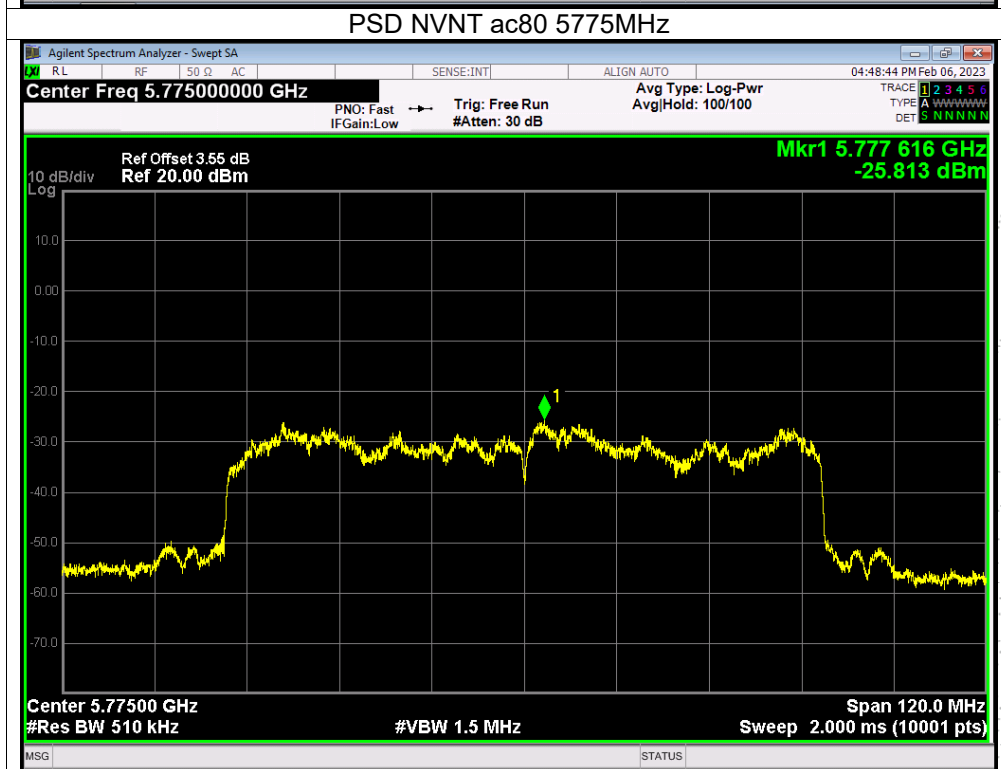
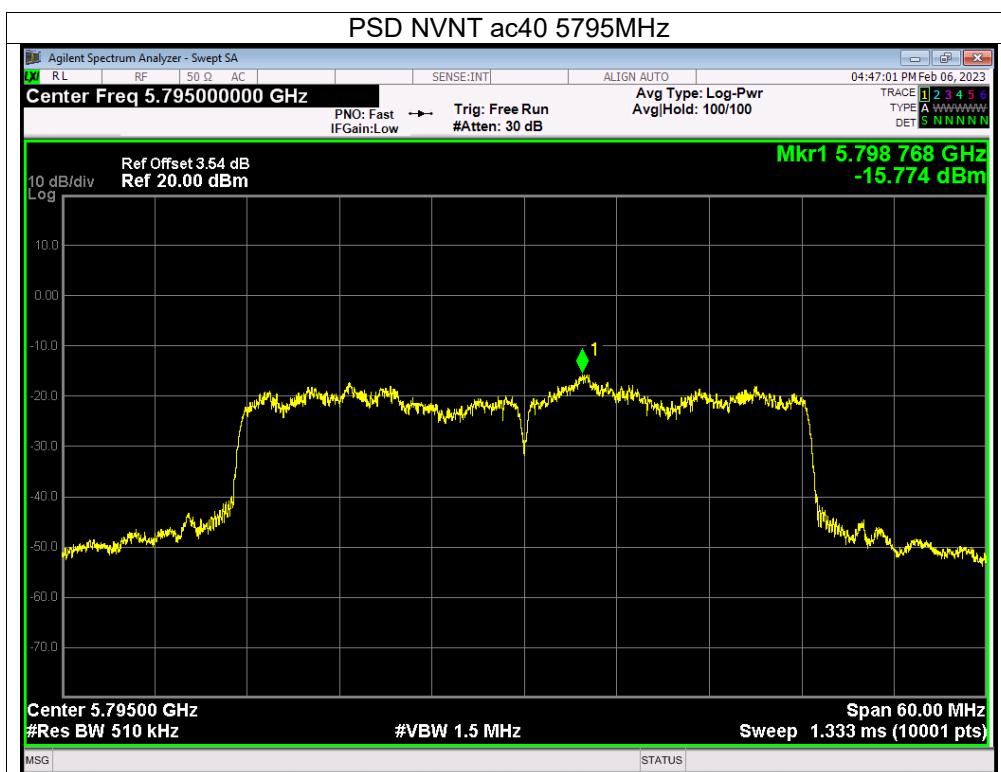






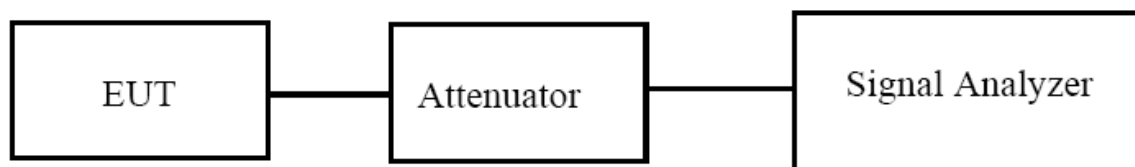






9. 26dB & 6dB & 99% Emission Bandwidth

9.1 Block Diagram Of Test Setup



9.2 Limit

The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.

9.3 Test procedure

a) Set RBW = approximately 1% of the emission bandwidth.

b) Set the VBW > RBW.

c) Detector = Peak.

d) Trace mode = max hold.

e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.

2. Set span = 1.5 times to 5.0 times the OBW.

3. Set RBW = 1 % to 5 % of the OBW

4. Set VBW $\geq 3 \cdot$ RBW

5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

6. Use the 99 % power bandwidth function of the instrument (if available).

7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

9.4 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.

9.5 Test Result

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 5V
Test Mode:	(5180-5240MHz)		

Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)		Limit -26 dB Bandwidth (MHz)	Verdict
			Ant A	Ant B		
NVNT	a	5180	20.569	19.621	/	Pass
NVNT	a	5200	21.835	19.814	/	Pass
NVNT	a	5240	20.518	19.960	/	Pass
NVNT	n20	5180	20.232	20.521	/	Pass
NVNT	n20	5200	20.284	20.244	/	Pass
NVNT	n20	5240	20.232	20.179	/	Pass
NVNT	n40	5190	41.694	41.689	/	Pass
NVNT	n40	5230	40.946	41.410	/	Pass
NVNT	ac20	5180	20.823	20.061	/	Pass
NVNT	ac20	5200	20.567	20.569	/	Pass
NVNT	ac20	5240	20.363	20.105	/	Pass
NVNT	ac40	5190	45.235	41.402	/	Pass
NVNT	ac40	5230	41.920	41.049	/	Pass
NVNT	ac80	5210	80.346	80.747	/	Pass

Condition	Mode	Frequency (MHz)	99% OBW (MHz)	
			Ant A	Ant B
NVNT	a	5180	16.557	16.514
NVNT	a	5200	16.559	16.538
NVNT	a	5240	16.516	16.534
NVNT	n20	5180	17.602	17.576
NVNT	n20	5200	17.593	17.580
NVNT	n20	5240	17.574	17.569
NVNT	n40	5190	36.041	36.066
NVNT	n40	5230	36.126	36.006
NVNT	ac20	5180	17.635	17.573
NVNT	ac20	5200	17.620	17.588
NVNT	ac20	5240	17.581	17.579
NVNT	ac40	5190	36.101	36.011
NVNT	ac40	5230	36.045	36.032
NVNT	ac80	5210	74.904	74.835

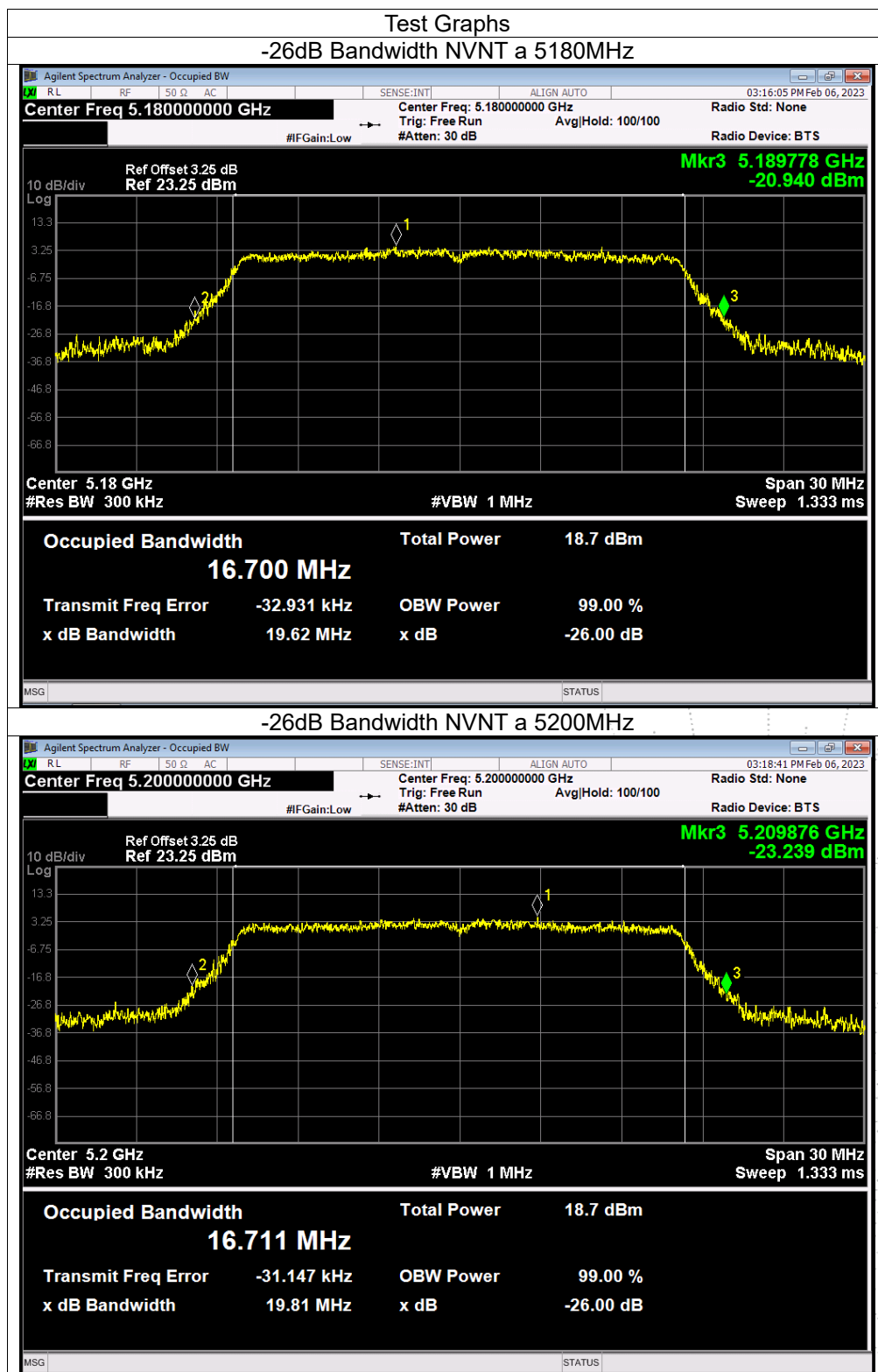
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 5V
Test Mode:	(5745-5825MHz)		

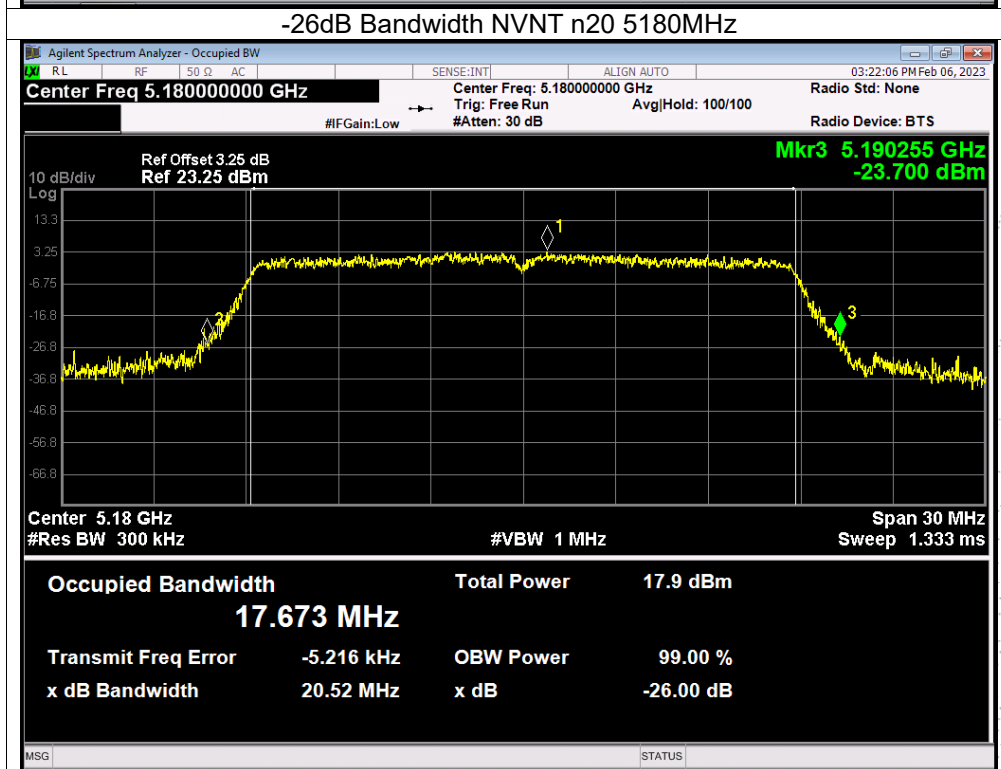
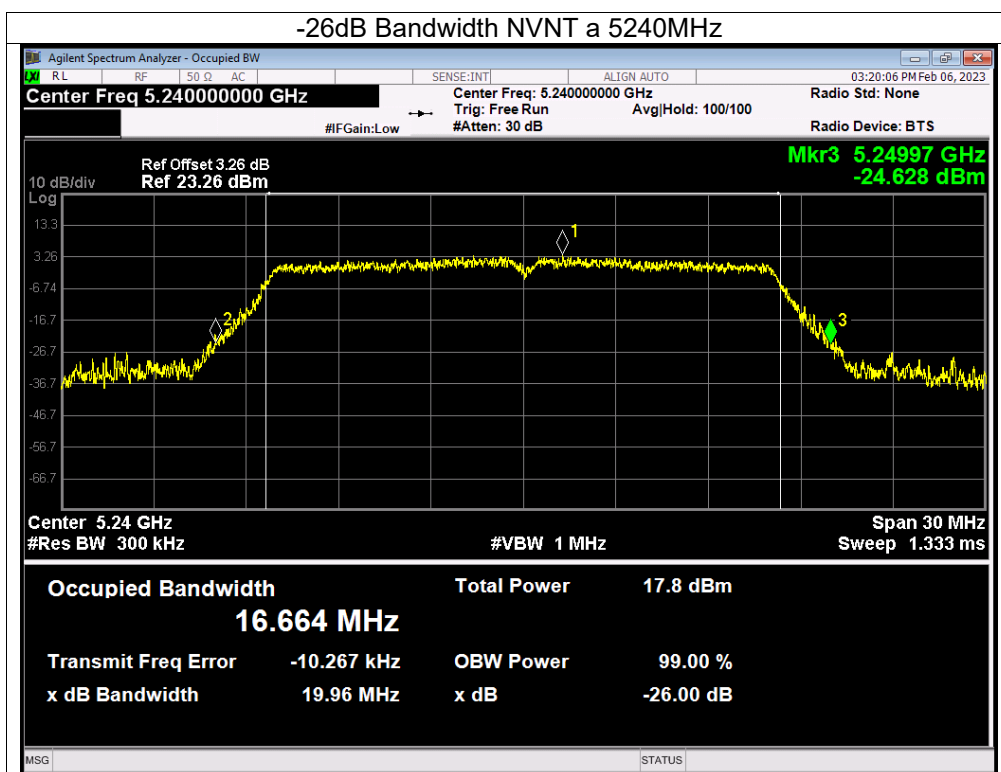
Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)		Limit -6 dB Bandwidth (MHz)	Verdict
			Ant A	Ant B		
NVNT	a	5745	15.367	15.438	0.5	Pass
NVNT	a	5785	16.341	16.316	0.5	Pass
NVNT	a	5825	15.927	16.388	0.5	Pass
NVNT	n20	5745	16.961	16.857	0.5	Pass
NVNT	n20	5785	17.056	17.148	0.5	Pass
NVNT	n20	5825	17.391	17.262	0.5	Pass
NVNT	n40	5755	35.045	35.051	0.5	Pass
NVNT	n40	5795	35.071	34.865	0.5	Pass
NVNT	ac20	5745	17.019	16.412	0.5	Pass
NVNT	ac20	5785	16.565	16.969	0.5	Pass
NVNT	ac20	5825	16.946	15.886	0.5	Pass
NVNT	ac40	5755	34.784	35.012	0.5	Pass
NVNT	ac40	5795	35.132	35.017	0.5	Pass
NVNT	ac80	5775	73.882	75.037	0.5	Pass

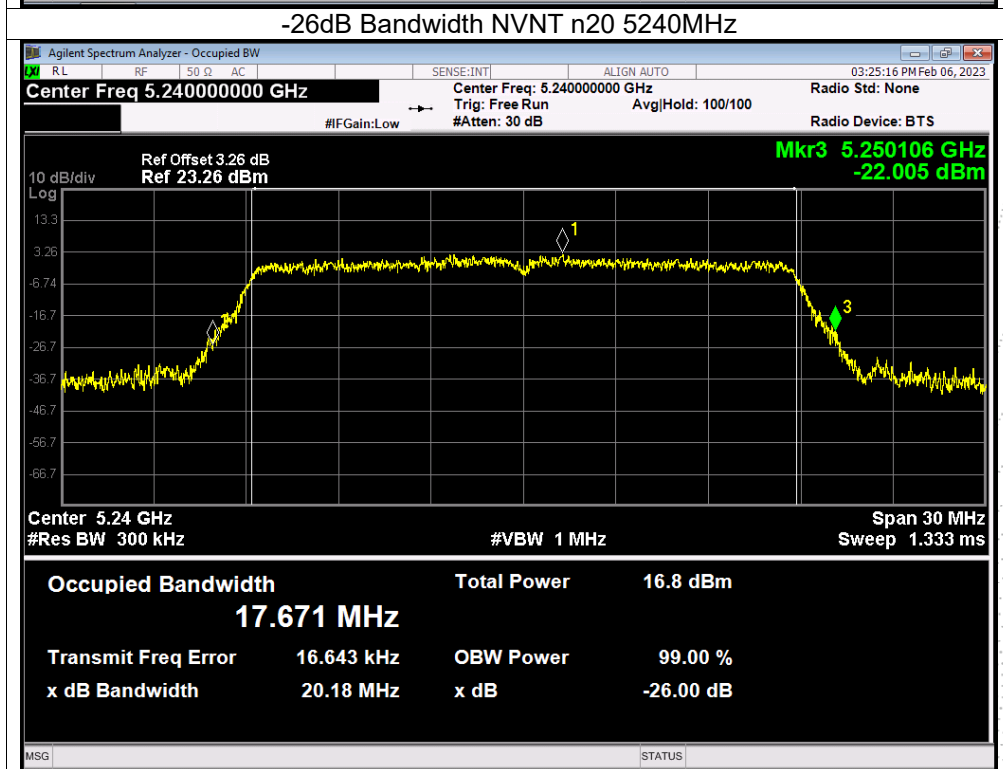
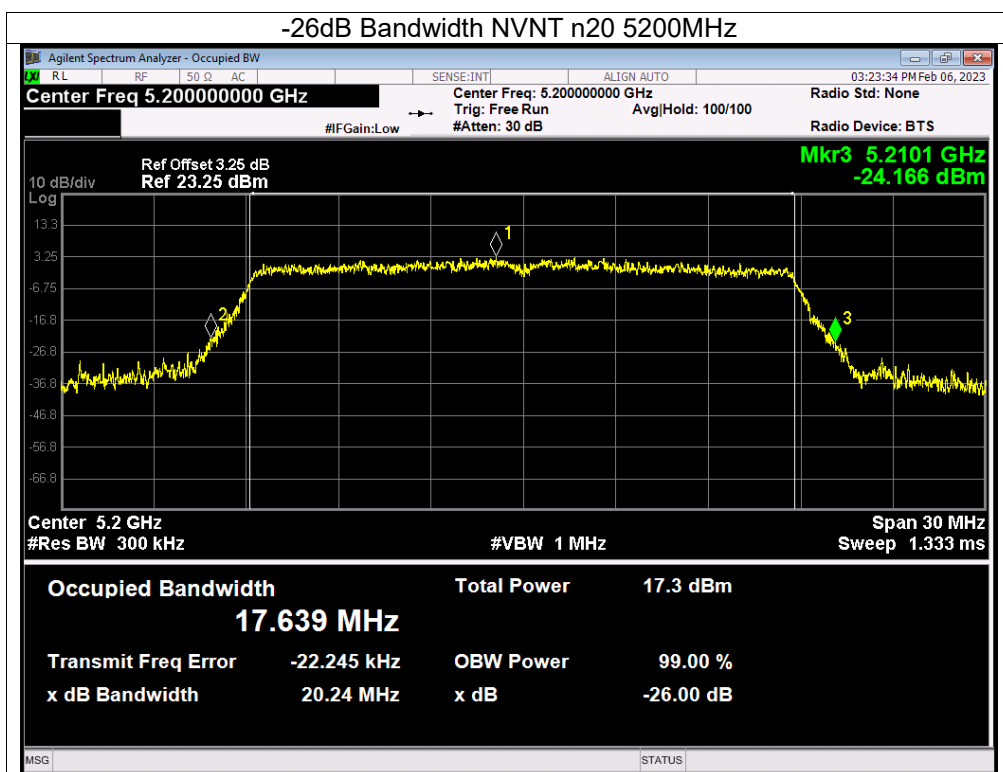
Condition	Mode	Frequency (MHz)	99% OBW (MHz)	
			Ant A	Ant B
NVNT	a	5745	16.549	16.499
NVNT	a	5785	16.564	16.522
NVNT	a	5825	16.487	16.529
NVNT	n20	5745	17.591	17.579
NVNT	n20	5785	17.580	17.596
NVNT	n20	5825	17.595	17.608
NVNT	n40	5755	36.025	35.993
NVNT	n40	5795	35.989	36.011
NVNT	ac20	5745	17.581	17.583
NVNT	ac20	5785	17.587	17.584
NVNT	ac20	5825	17.582	17.571
NVNT	ac40	5755	35.988	35.989
NVNT	ac40	5795	35.957	35.993
NVNT	ac80	5775	74.817	74.854

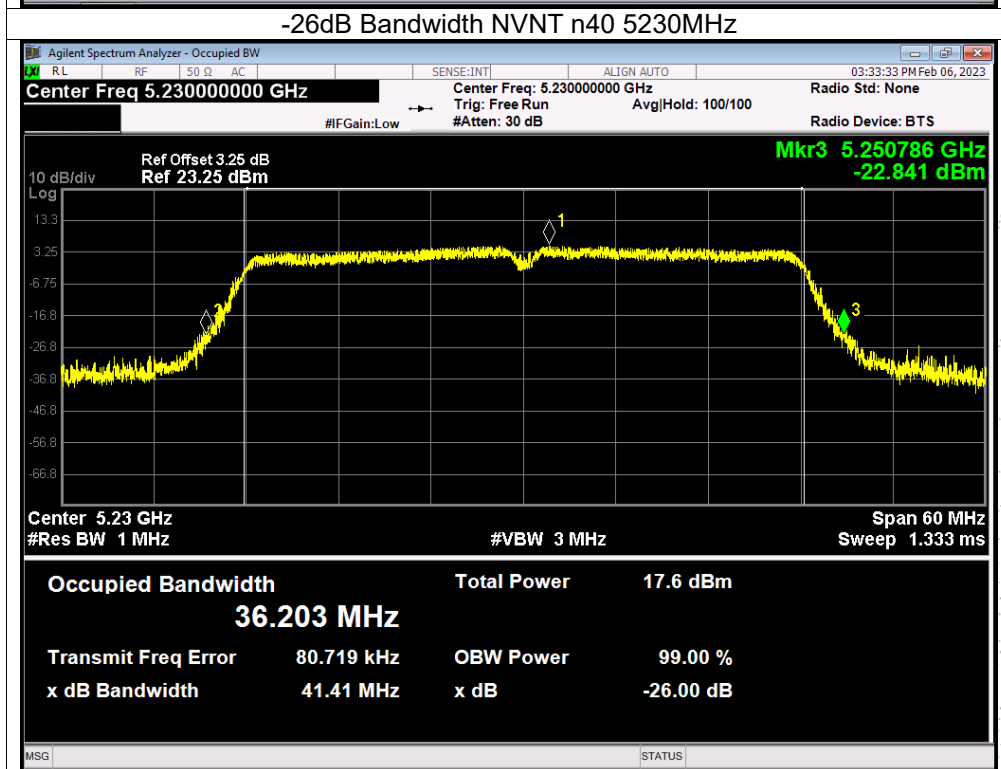
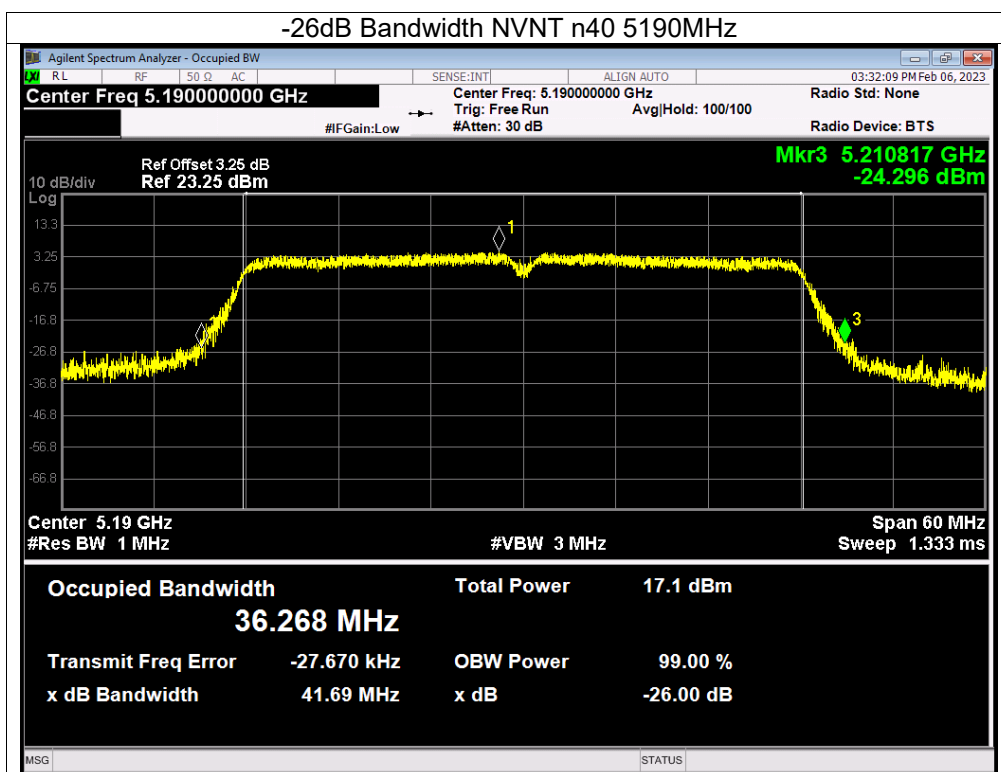
U-NII-1

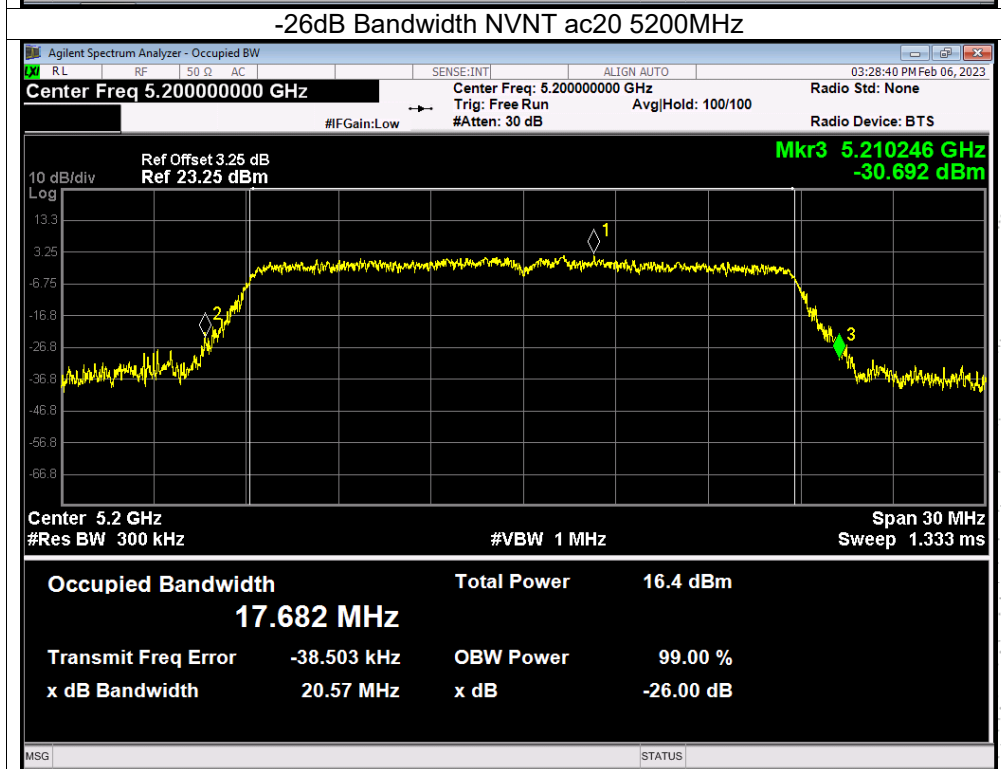
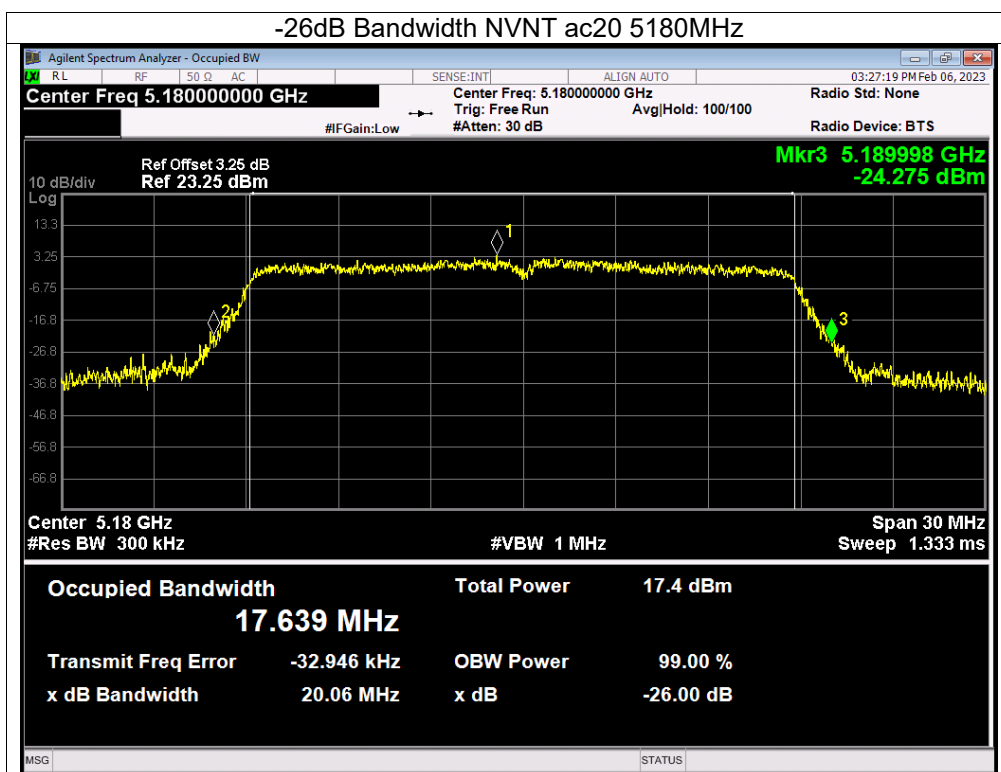
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

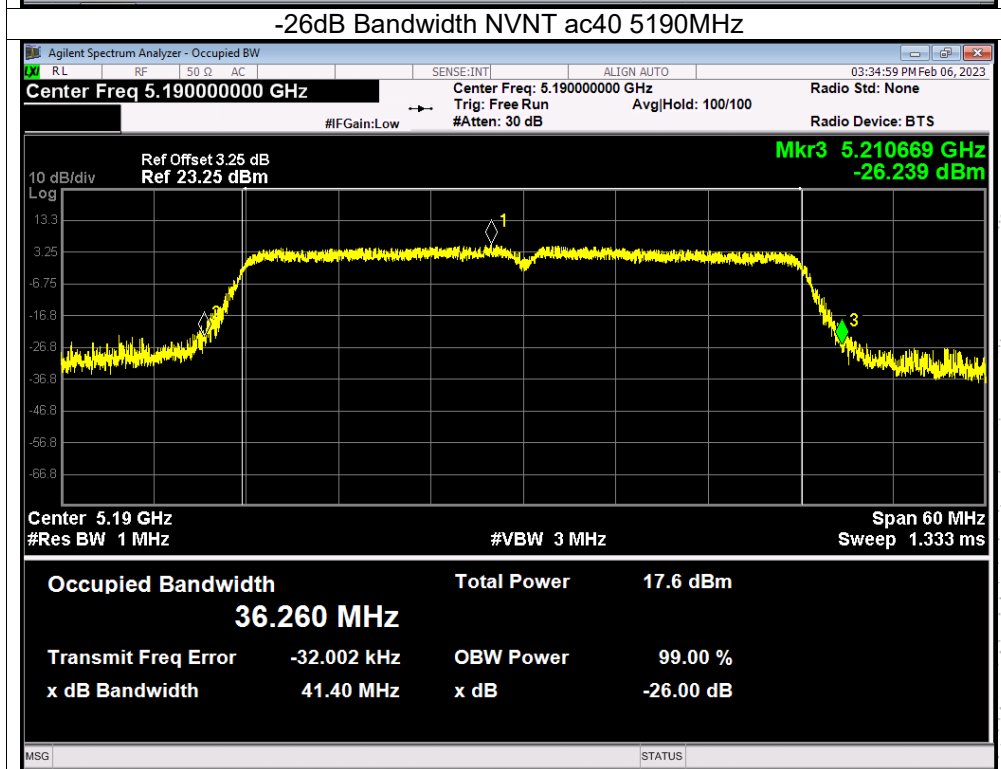
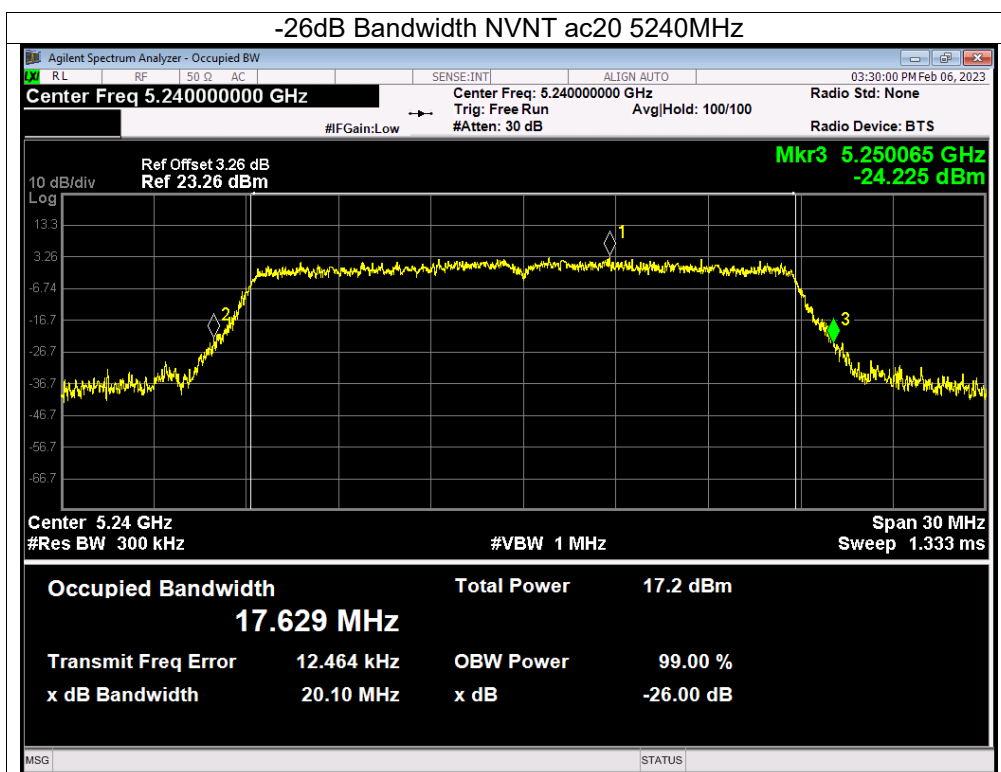


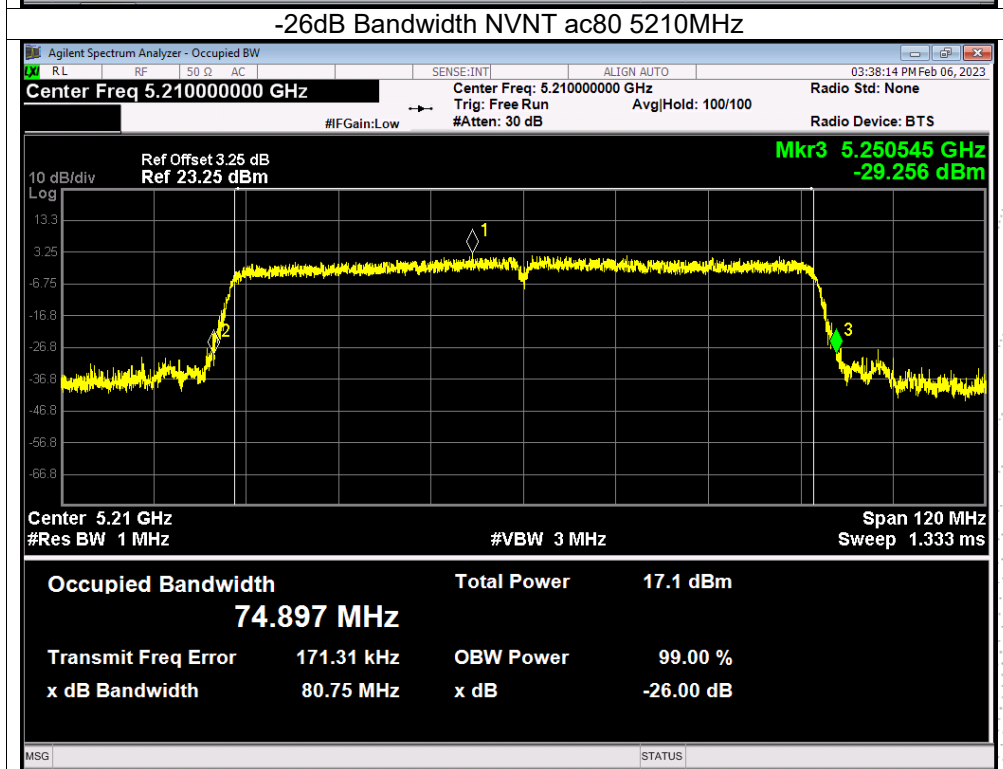
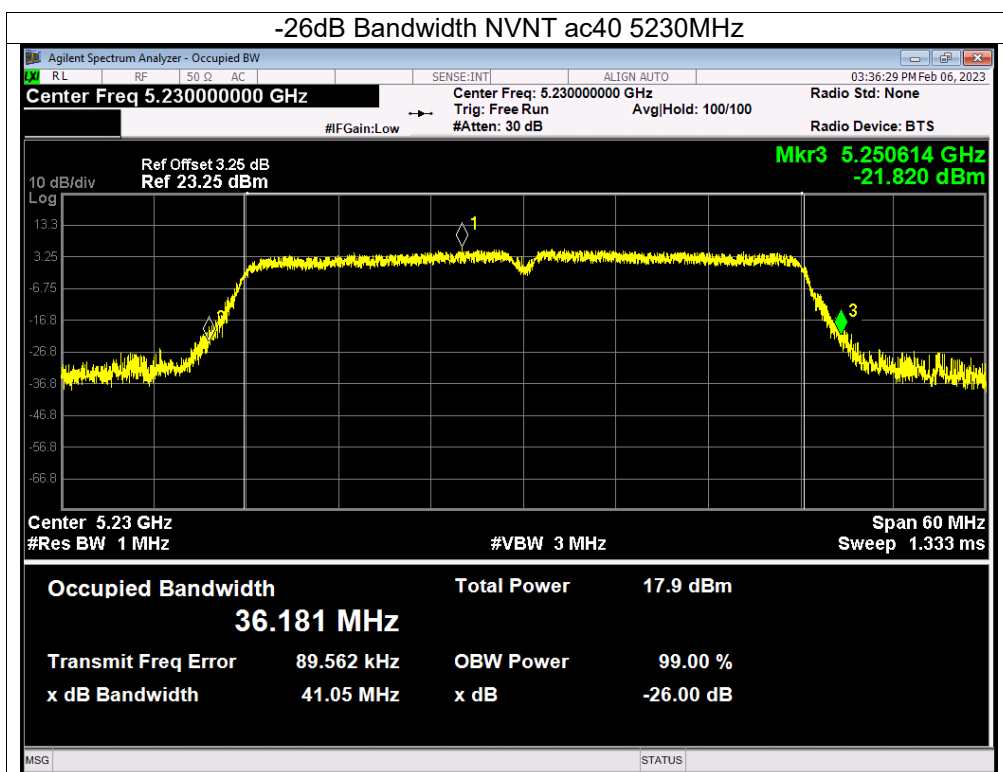


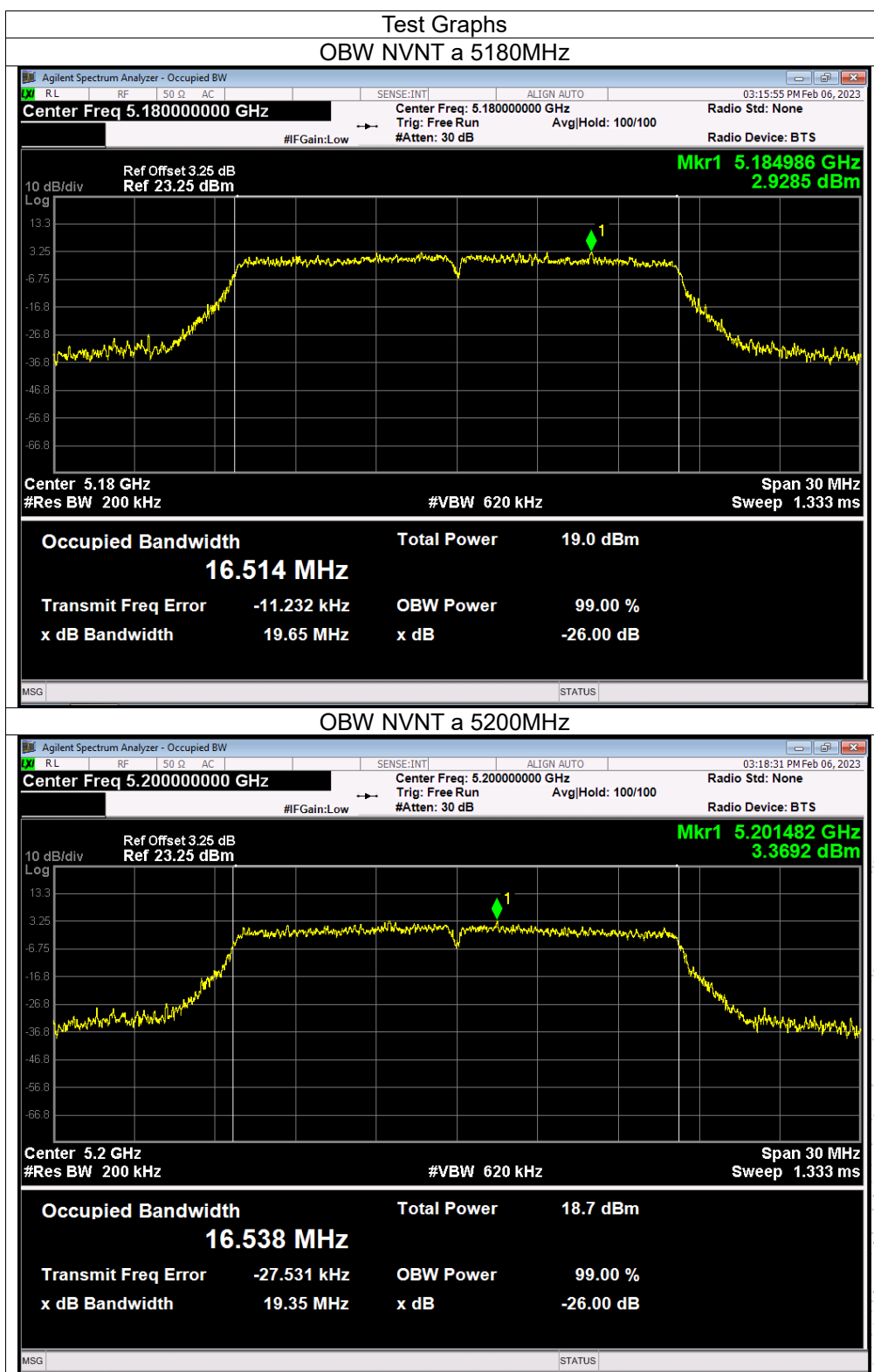


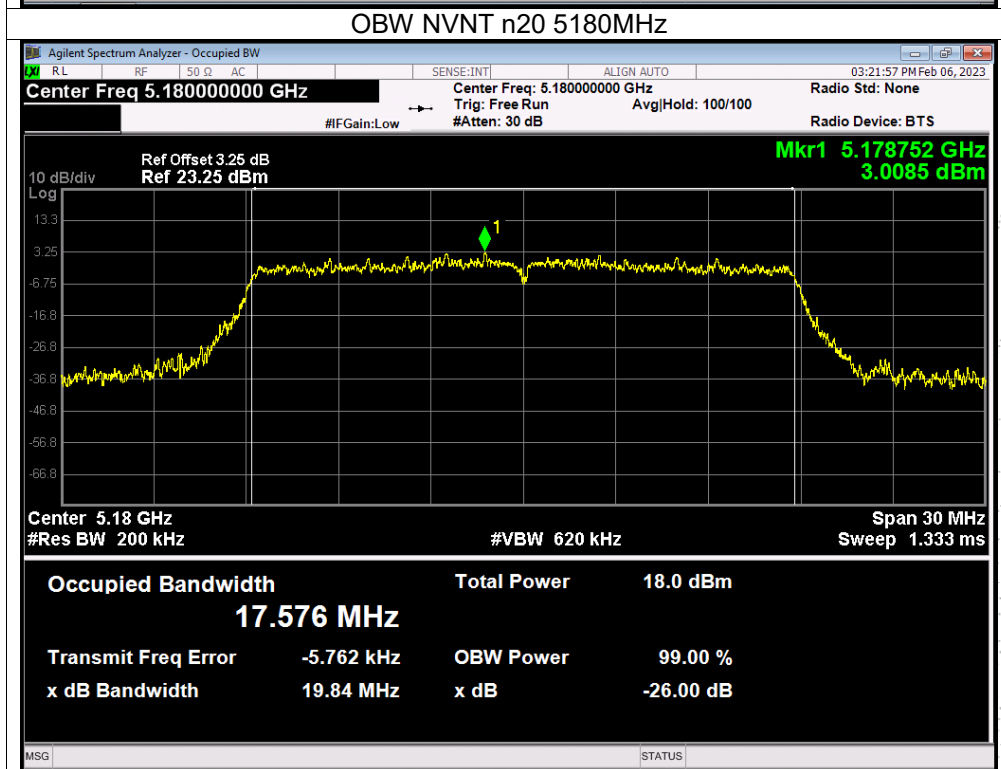
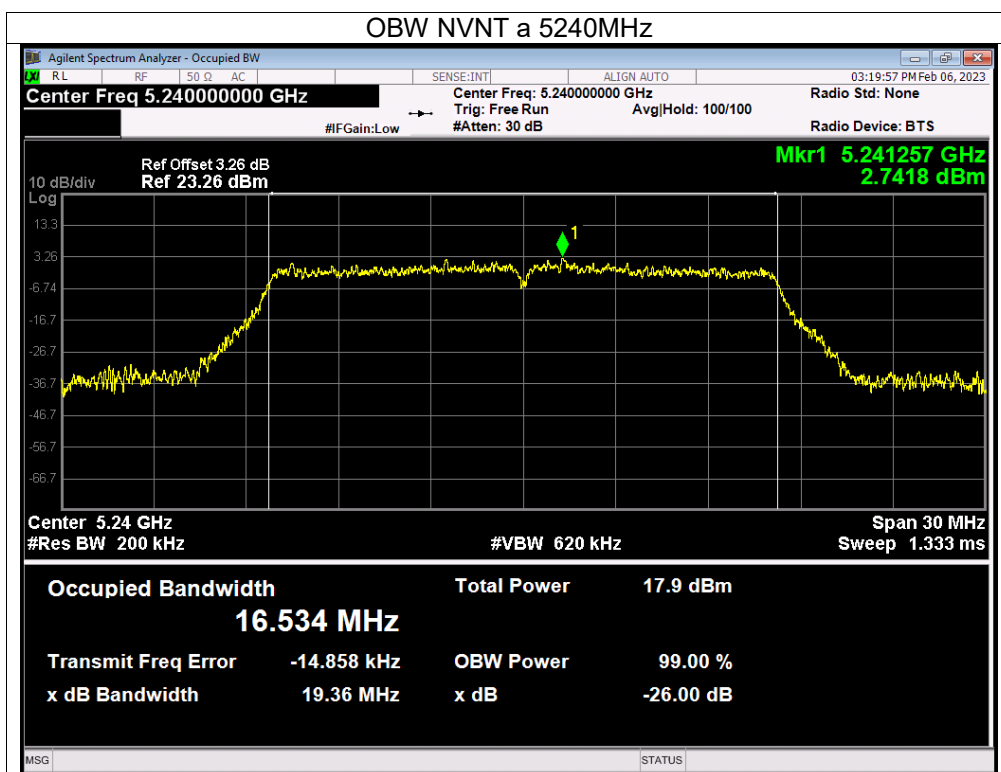


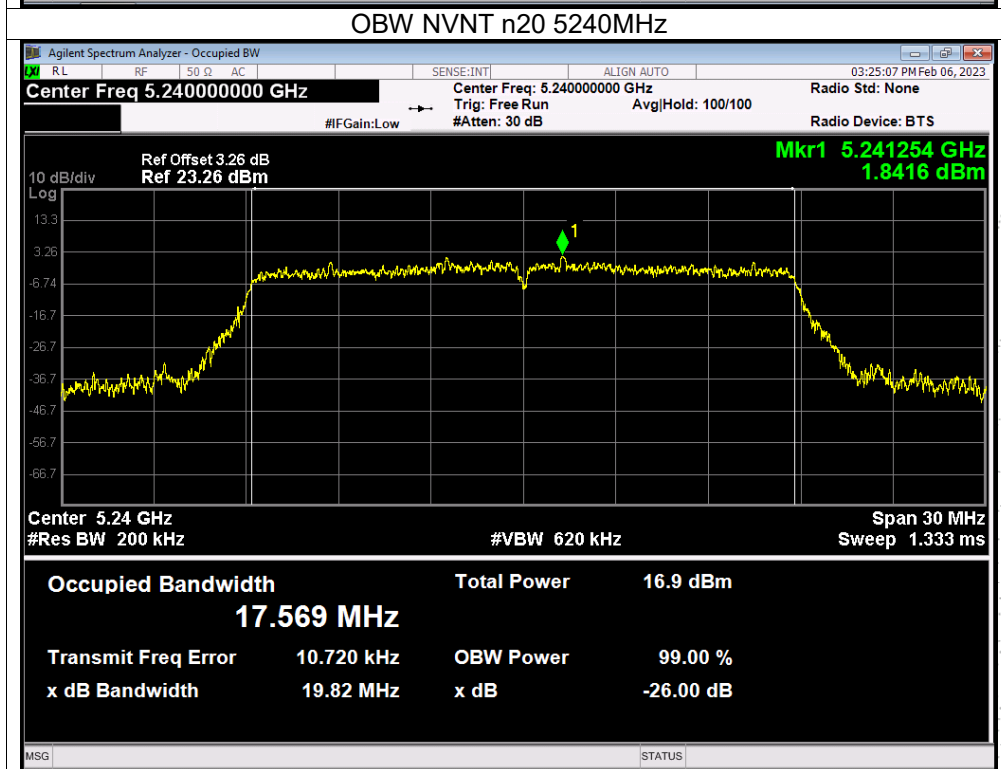
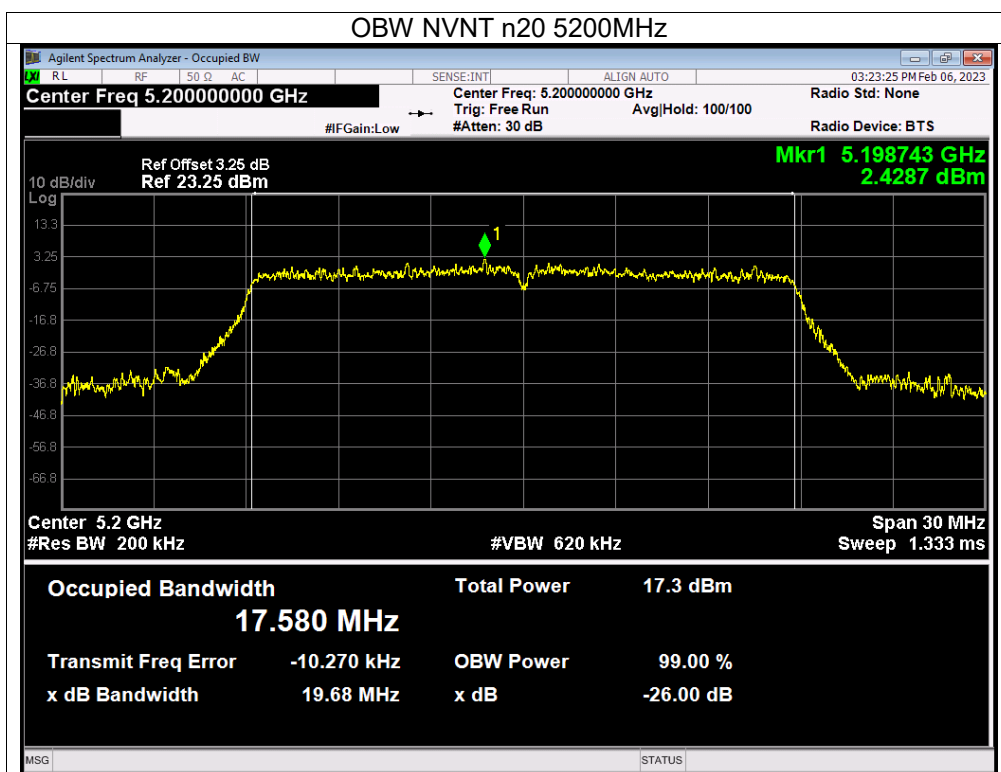


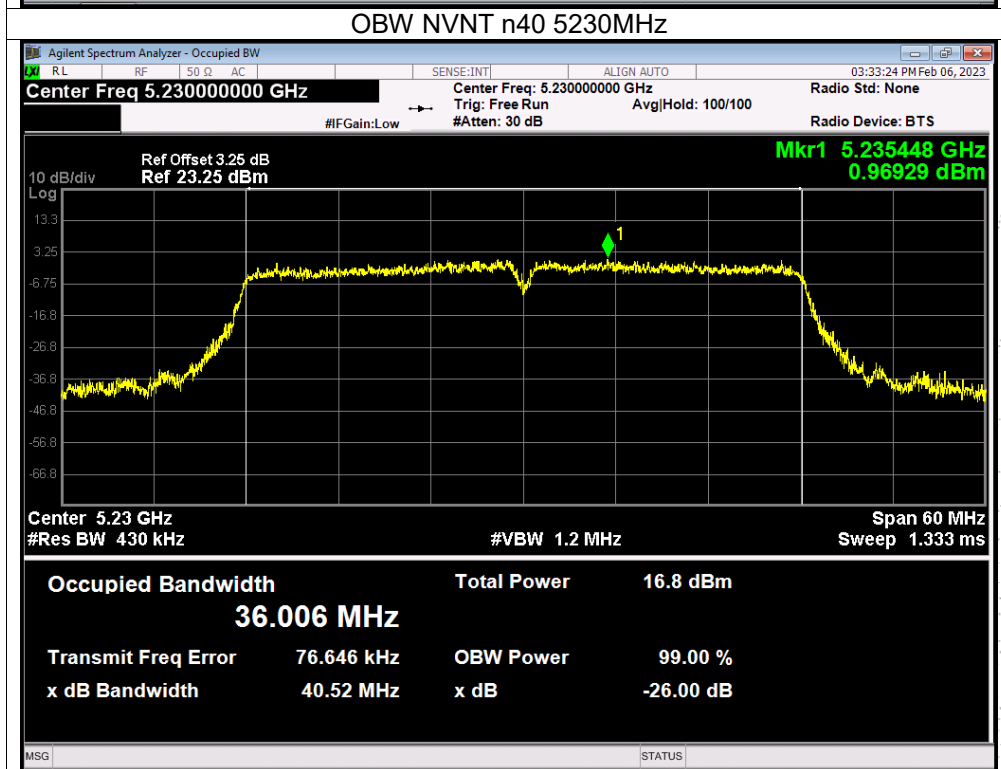
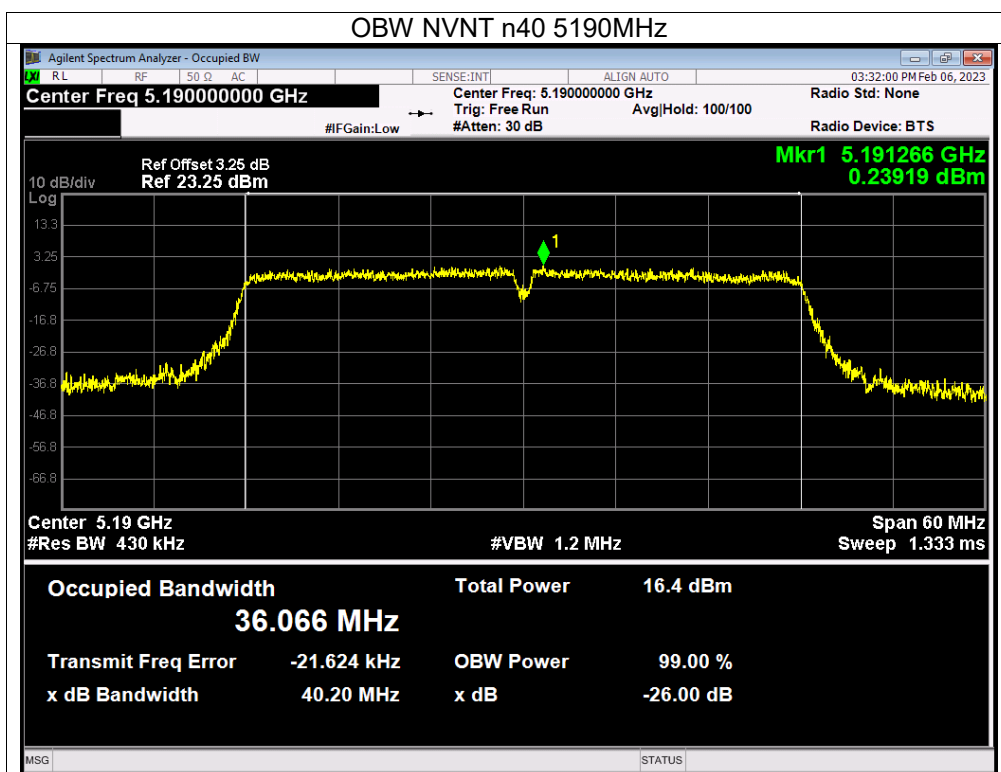


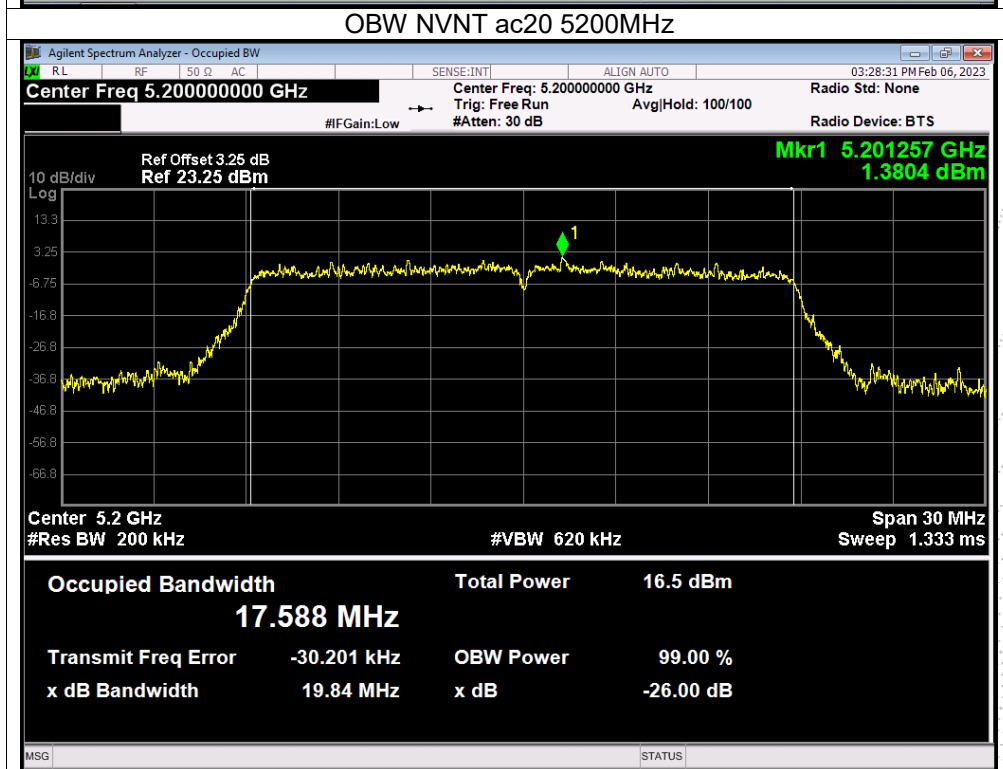
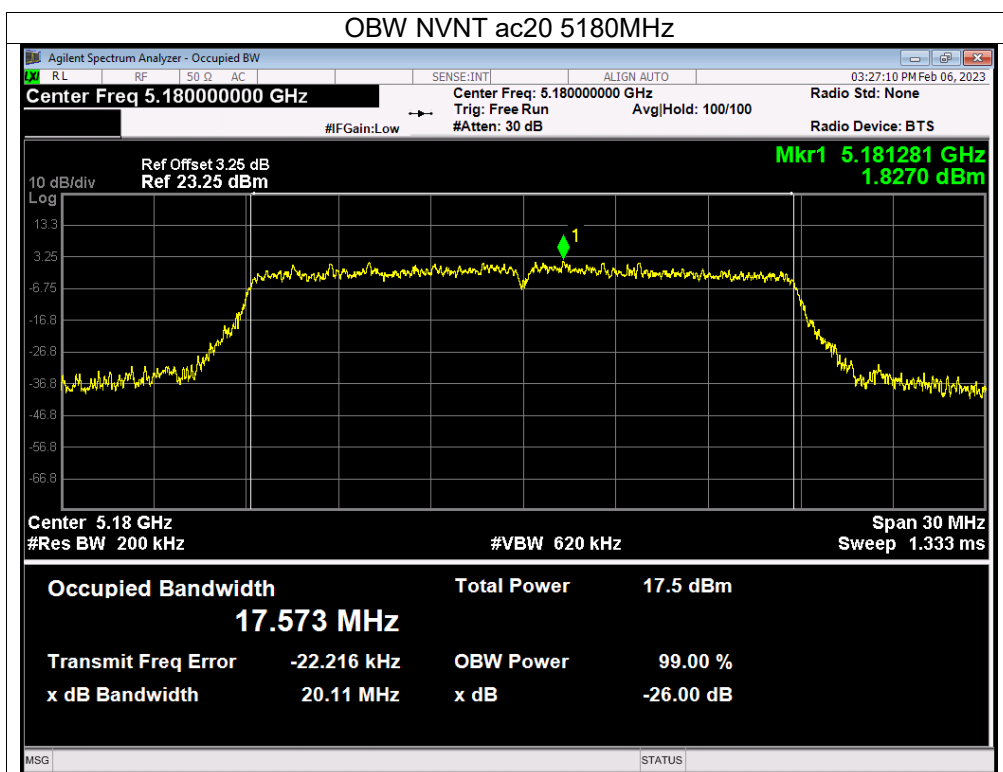


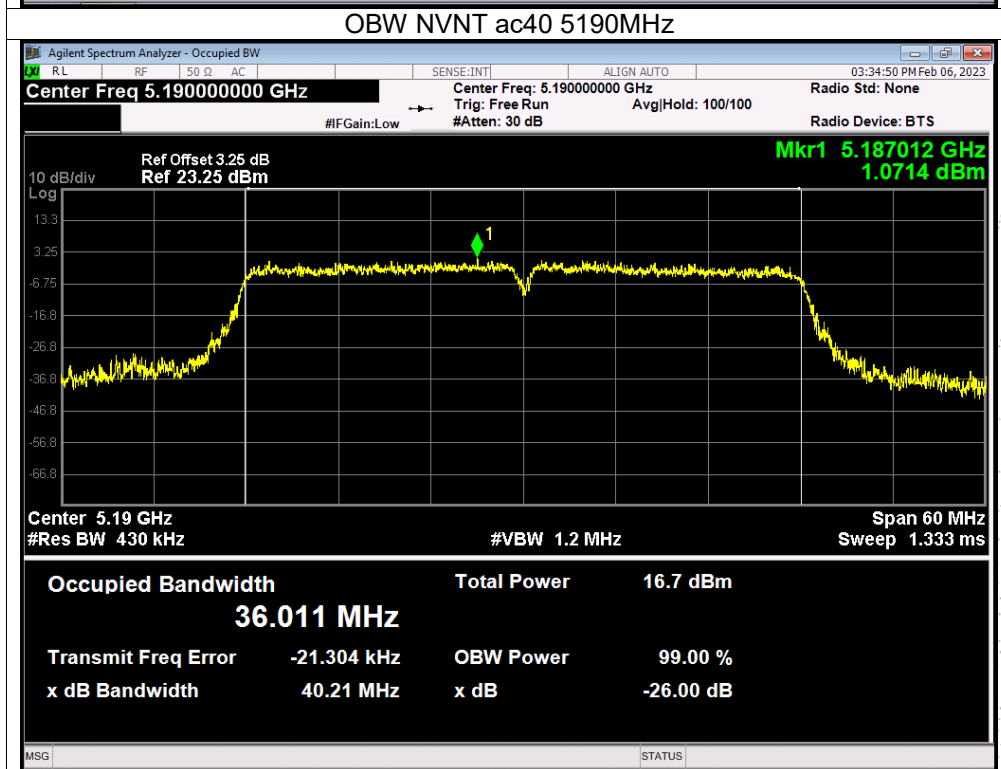
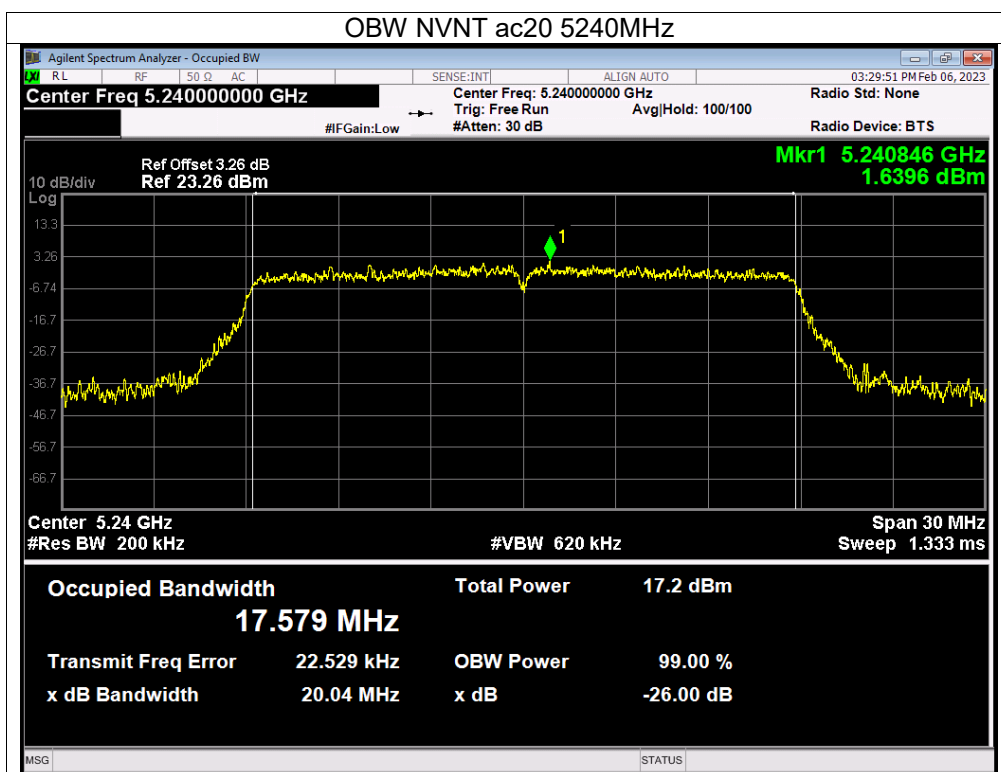


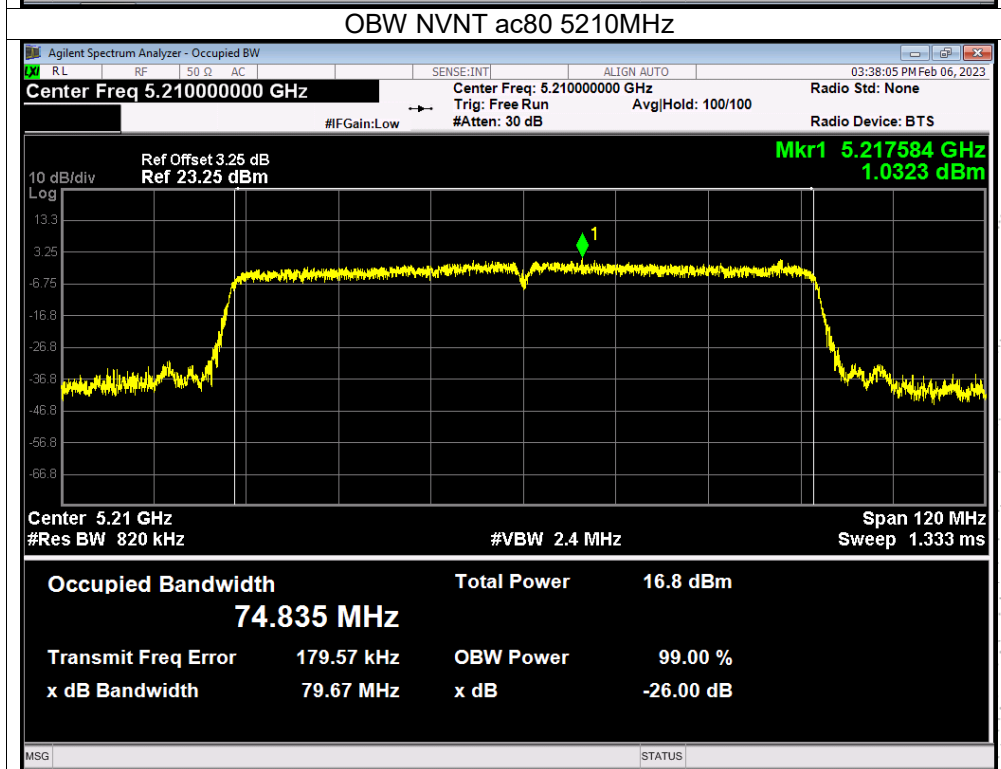
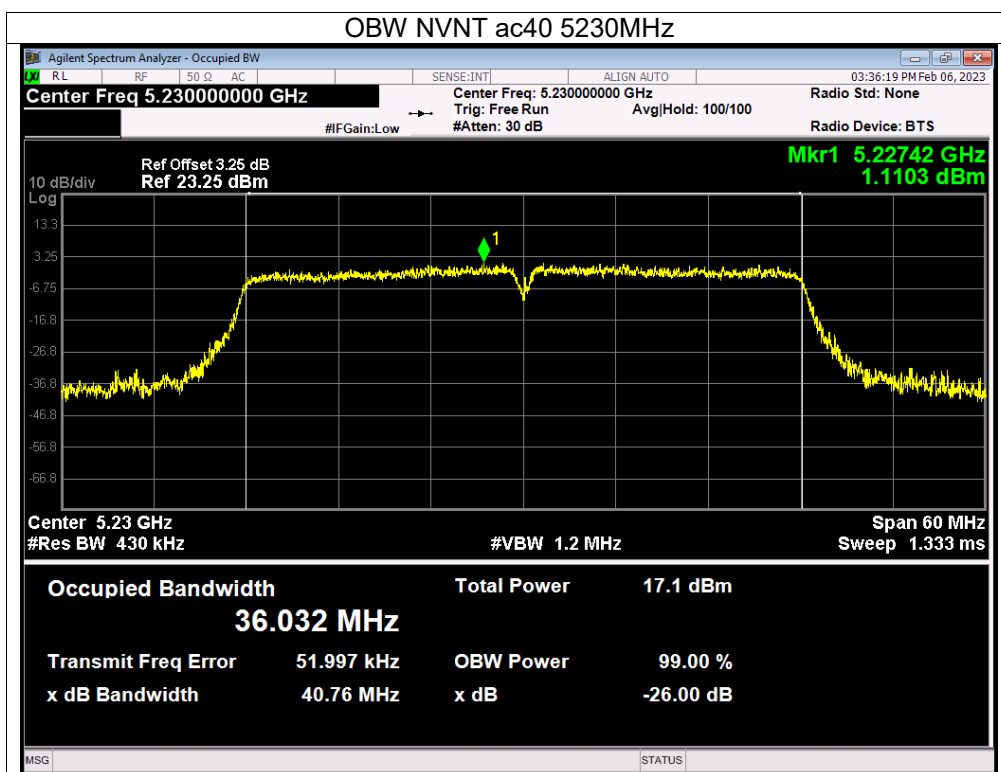












U-NII-3

Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

