

# TEST REPORT

Report No.: BCTC2302042278-4E

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Applicant: SHENZHEN NST INDUSTRY AND TRADE CO., LTD

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Product Name: 17.3 inch laptop

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Model/Type  
reference: M17

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Tested Date: 2023-02-20 to 2023-05-05

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Issued Date: 2023-05-05

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**Shenzhen BCTC Testing Co., Ltd.**



# FCC ID: 2AAMS-SGINM17

Product Name: 17.3 inch laptop  
Trademark: N/A  
Model/Type reference: M17  
M173CH, M17Pro  
Prepared For: SHENZHEN NST INDUSTRY AND TRADE CO., LTD  
Address: 3-4/F, Bldg 1, Hongbang Intelligent Technology Park, No.30 Cuibao Road, Baolong Street, Longgang District, Shenzhen China  
Manufacturer: SHENZHEN NST INDUSTRY AND TRADE CO., LTD  
Address: 3-4/F, Bldg 1, Hongbang Intelligent Technology Park, No.30 Cuibao Road, Baolong Street, Longgang District, Shenzhen China  
Prepared By: 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  
Sample Received Date: 2023-02-20  
Sample tested Date: 2023-02-20 to 2023-05-05  
Issue Date: 2023-05-05  
Report No.: BCTC2302042278-4E  
FCC Part15 15.407  
ANSI C63.10-2013  
Test Standards: 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

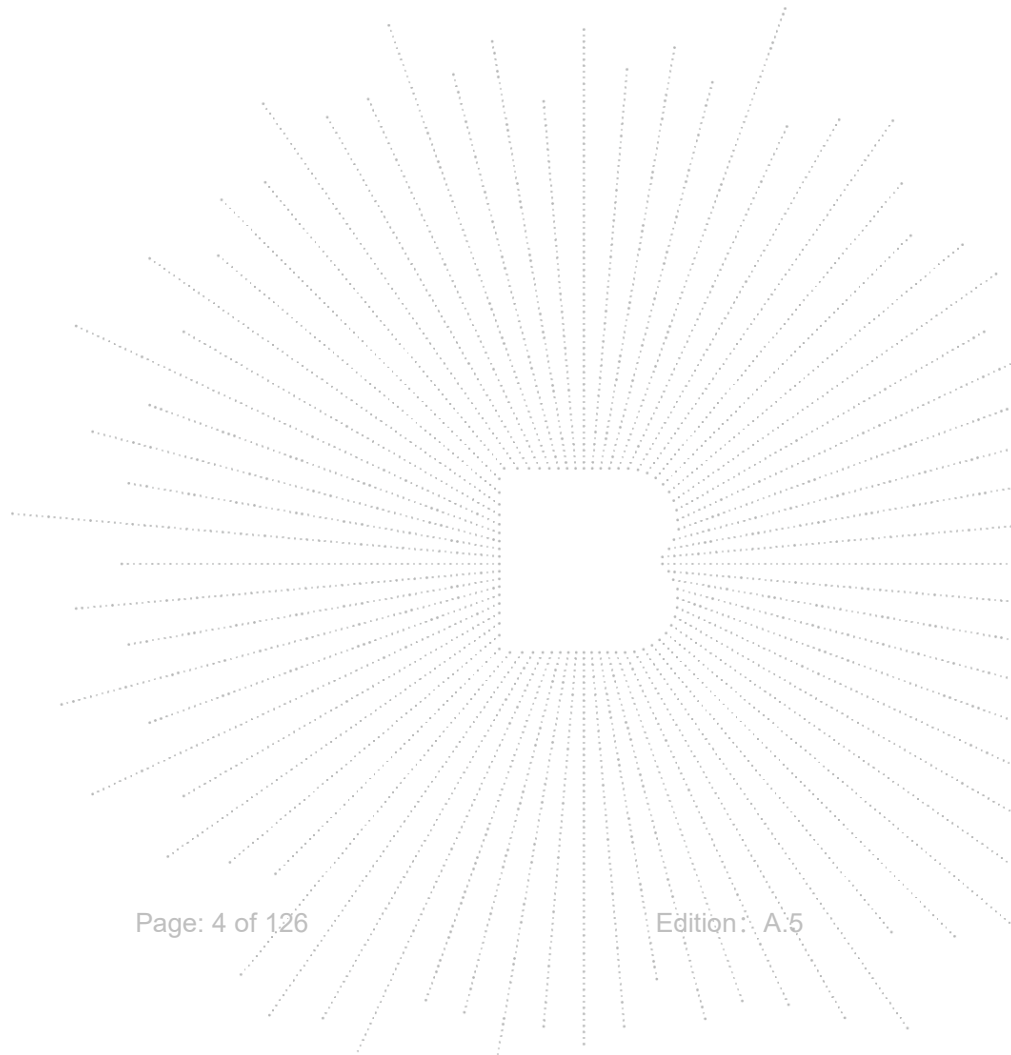
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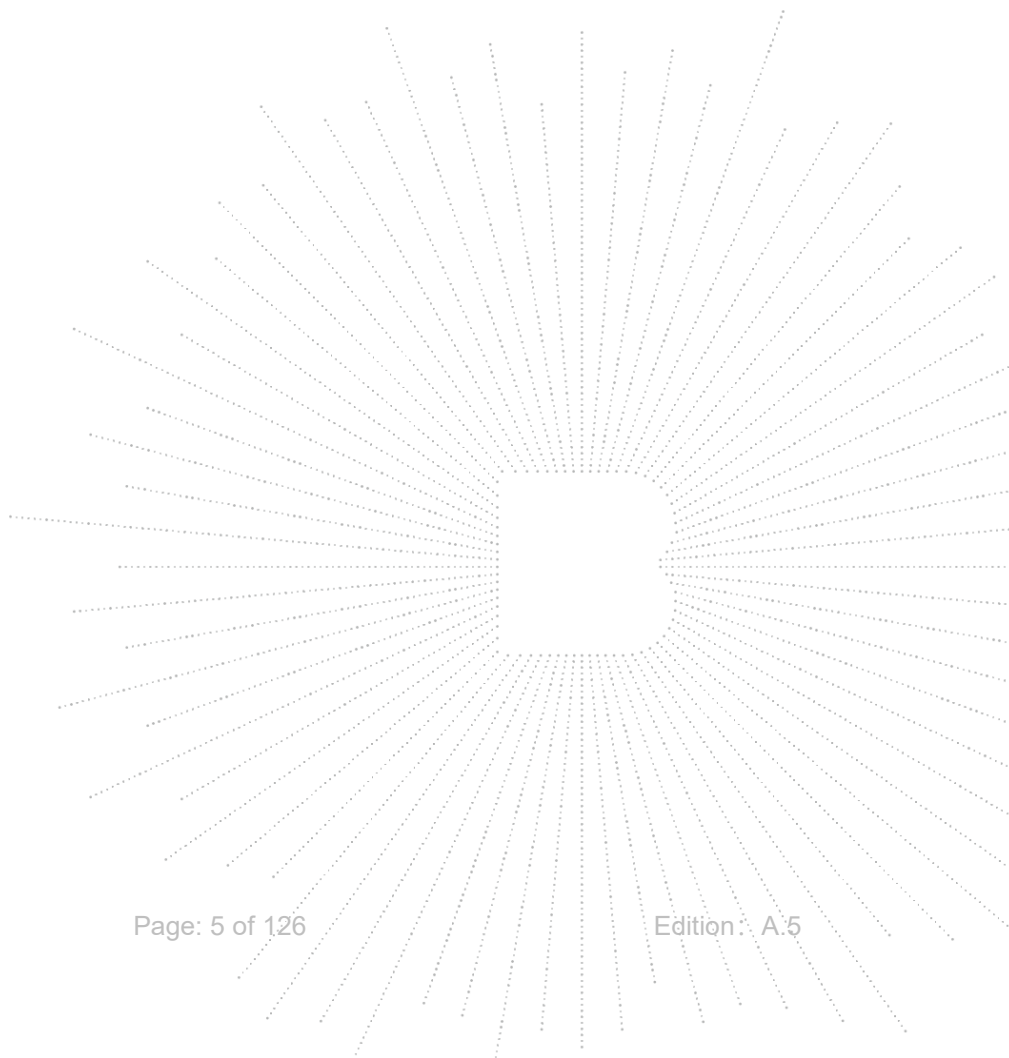
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(Note: N/A Means Not Applicable)



**1. Version**

<b>Report No.</b>	<b>Issue Date</b>	<b>Description</b>	<b>Approved</b>
BCTC2302042278-4E	2023-05-05	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

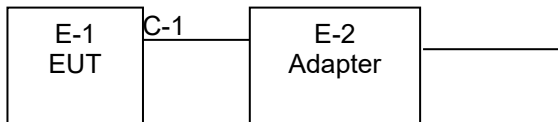
Model/Type reference:	M17 M173CH, M17Pro
Model differences:	All the model are the same circuit and RF module, except model names.
Hardware Version:	X133GRX20
Software Version:	NSD-BI-173-X133GRX200-GN50A-101-B
IEEE 802.11 WLAN Mode Supported:	802.11a/n/ac(20MHz channel bandwidth) 802.11n/ac(40MHz channel 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: 2.29 dBi, Antenna B: 2.94 dBi
Ratings:	DC 12V from adapter/DC 7.6V from battery
Adapter:	MODEL: JZB024-1202000UX INOUT:100-240V~50/60Hz 1.0A OUTPUT:12.0V ===2.0A 24.0W



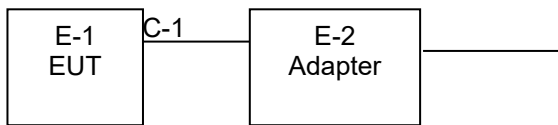
## 4.2 Test Setup Configuration

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	0.3M	DC cable unshielded

Notes:

- All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 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	2.29	N/A
B	N/A	N/A	Internal antenna	2.94	N/A

EUT has two Internal antennas with Max antenna A gain GANT 2.29dBi and antenna B gain 2.94dBi on every antenna, CDD device with one spatial streams, 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,  
 $\text{Array Gain} = 10\log(\text{NANT}/\text{NSS})\text{dB} = 10\log(2/1) = 3.01 \text{ dBi}$ ,  
 So the directional gain for PSD is 5.95 dBi

2)For power measurements,  
 The Array gain=0 for  $\text{NANT} \leq 4$ ,  
 So the directional gain for Power measurements is 2.94 dBi

**Directional gain may be calculated by using the formulas applicable to equal gain antennas with  $G_{\text{ANT}}$  set equal to the gain of the antenna having the highest gain.**

## 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

FCC Designation Number: CN1212

ISED Registered No.: 23583

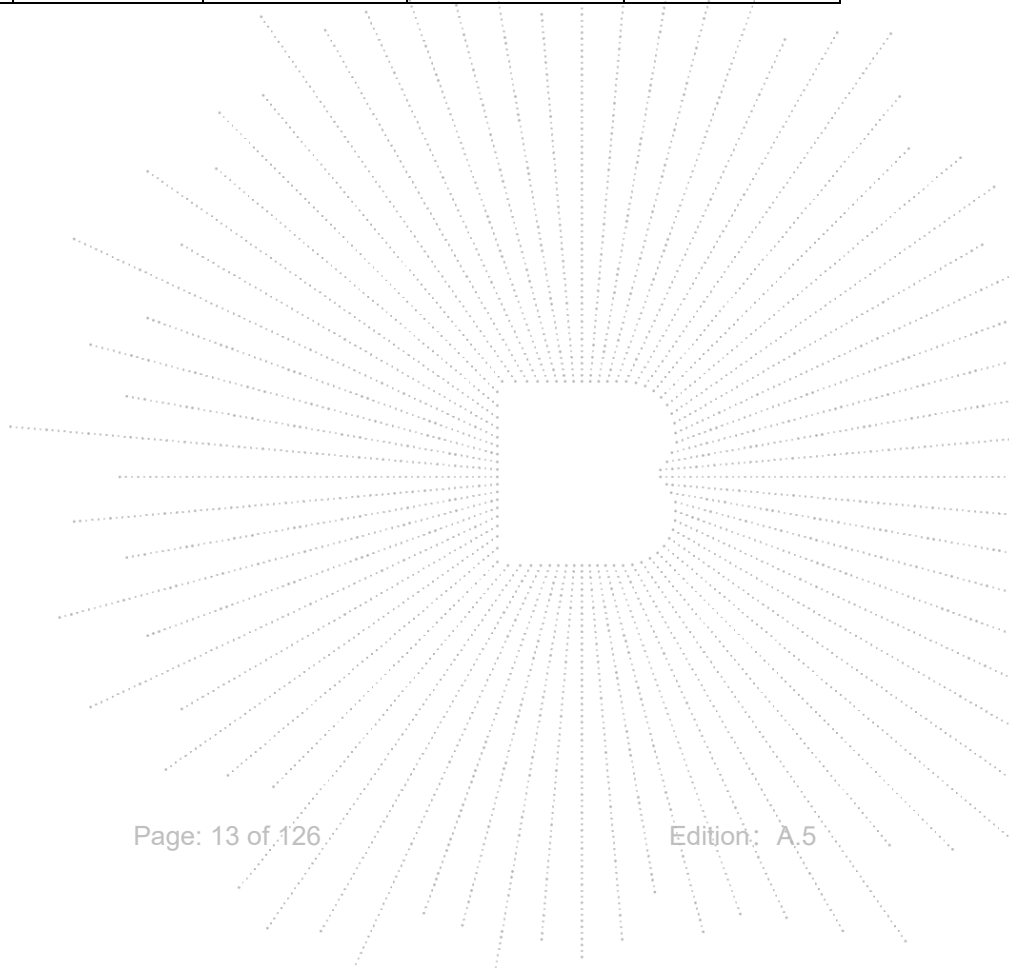
ISED CAB identifier: CN0017

### 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

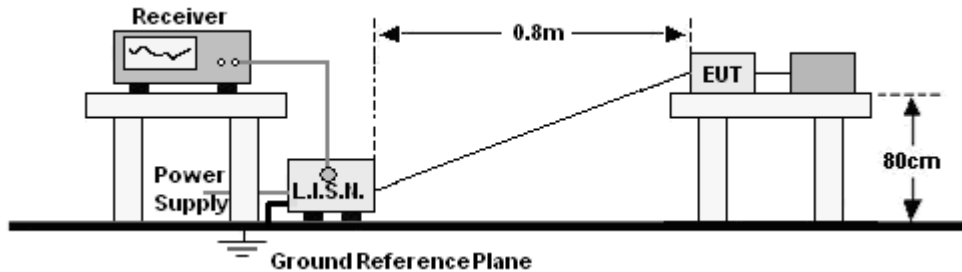
RF Conducted Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Power Metter	Keysight	E4419	\	May 24, 2022	May 23, 2023
Power Sensor (AV)	Keysight	E9300A	\	May 24, 2022	May 23, 2023
Signal Analyzer20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 24, 2022	May 23, 2023
Spectrum Analyzer9kHz-40GHz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

<b>Radiated Emissions Test (966 Chamber01)</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model#</b>	<b>Serial#</b>	<b>Last Cal.</b>	<b>Next Cal.</b>
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(18GH z-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.

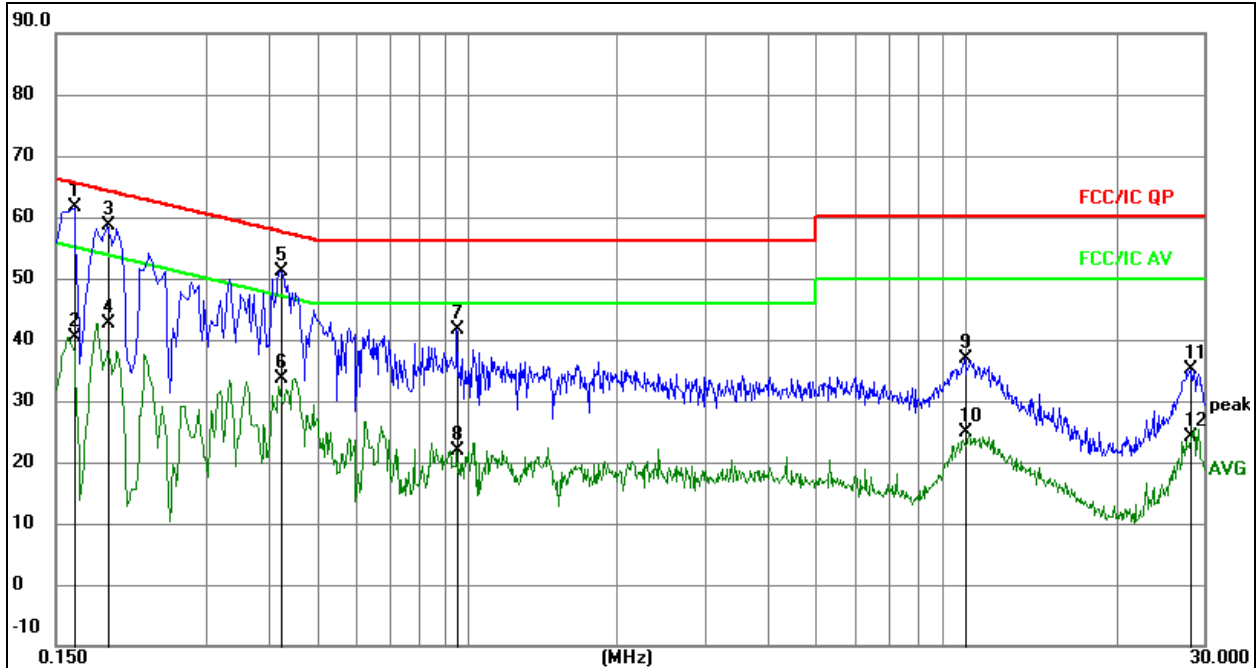
### 6.4 EUT operating Conditions

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	Phase :	L
Test Mode:	Mode 4	Test Voltage :	AC 120V/60Hz



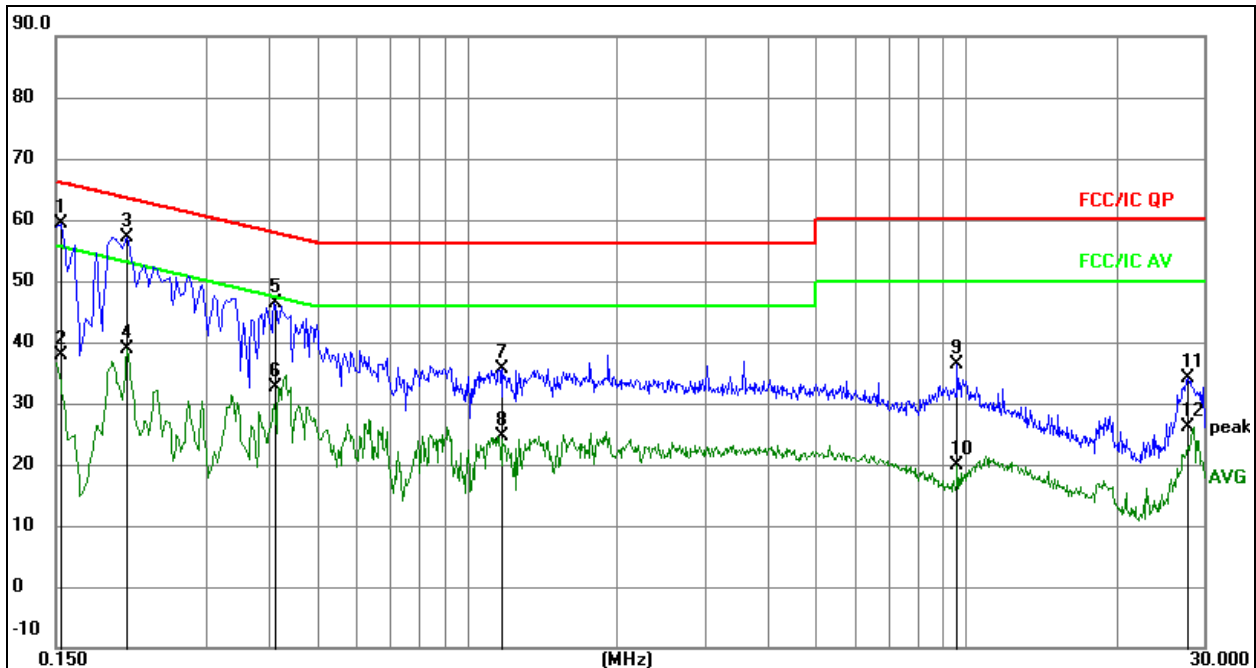
**Remark:**

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. MHz	Reading Level	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1	*	0.1635	41.91	19.71	61.62	65.28	-3.66	QP
2		0.1635	20.62	19.71	40.33	55.28	-14.95	AVG
3		0.1905	38.91	19.78	58.69	64.01	-5.32	QP
4		0.1905	22.94	19.78	42.72	54.01	-11.29	AVG
5		0.4245	31.47	19.74	51.21	57.36	-6.15	QP
6		0.4245	13.86	19.74	33.60	47.36	-13.76	AVG
7		0.9555	21.83	19.76	41.59	56.00	-14.41	QP
8		0.9555	2.16	19.76	21.92	46.00	-24.08	AVG
9		9.9645	16.67	20.28	36.95	60.00	-23.05	QP
10		9.9645	4.51	20.28	24.79	50.00	-25.21	AVG
11		28.2885	14.63	20.53	35.16	60.00	-24.84	QP
12		28.2885	3.65	20.53	24.18	50.00	-25.82	AVG



Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Phase :	N
Test Mode:	Mode 4	Test Voltage :	AC 120V/60Hz


**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

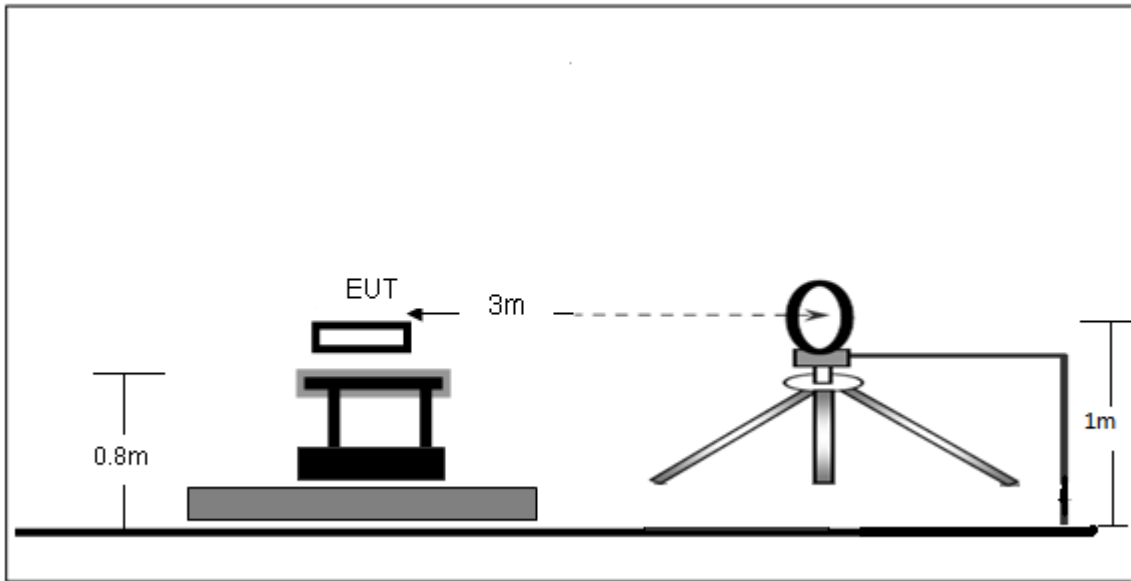
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz		dB	dBuV	dBuV	dB	
1		0.1539	39.68	19.68	59.36	65.79	-6.43	QP
2		0.1539	18.10	19.68	37.78	55.79	-18.01	AVG
3	*	0.2083	37.41	19.80	57.21	63.27	-6.06	QP
4		0.2083	19.13	19.80	38.93	53.27	-14.34	AVG
5		0.4105	26.52	19.74	46.26	57.64	-11.38	QP
6		0.4105	12.99	19.74	32.73	47.64	-14.91	AVG
7		1.1781	15.95	19.78	35.73	56.00	-20.27	QP
8		1.1781	4.84	19.78	24.62	46.00	-21.38	AVG
9		9.6028	16.11	20.27	36.38	60.00	-23.62	QP
10		9.6028	-0.31	20.27	19.96	50.00	-30.04	AVG
11		27.8552	13.62	20.53	34.15	60.00	-25.85	QP
12		27.8552	5.72	20.53	26.25	50.00	-23.75	AVG



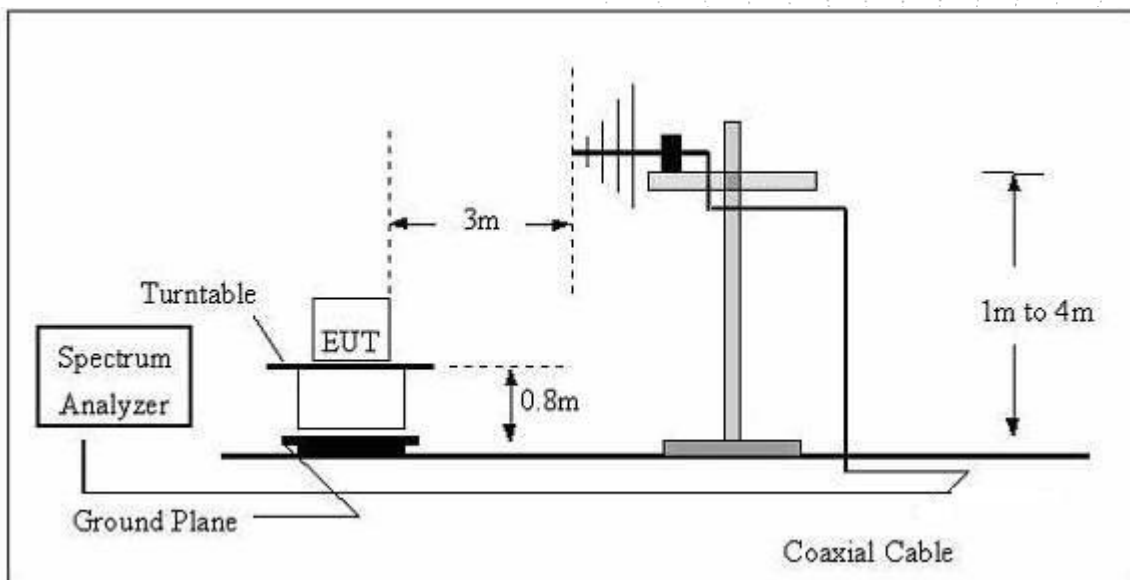
## 7. Radiated Emissions

### 7.1 Block Diagram Of Test Setup

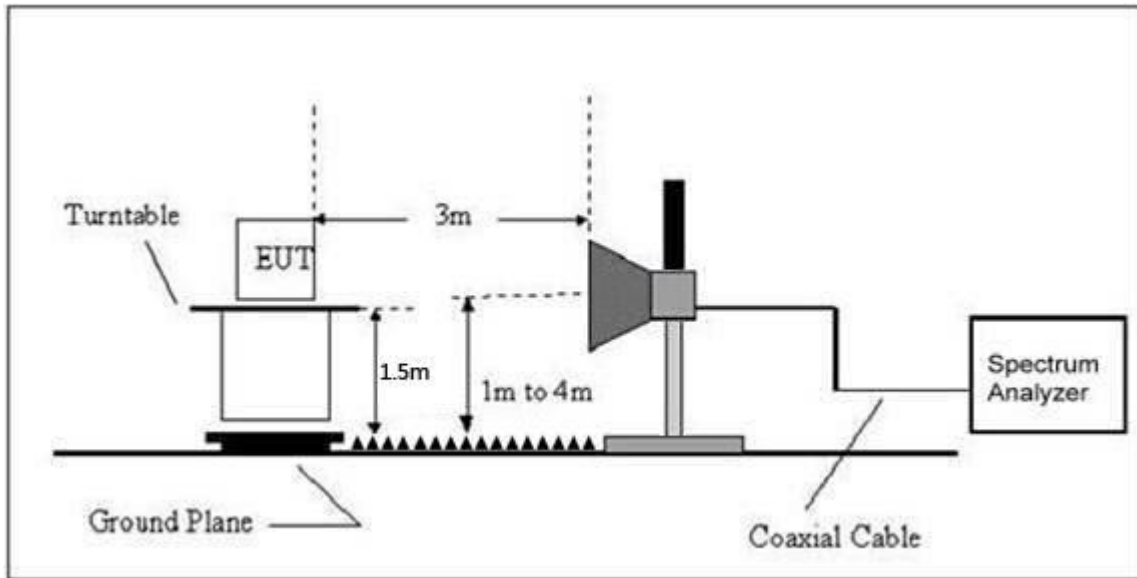
(A) Radiated Emission Test-Up Frequency Below 30MHz



(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 :	AC 120V/60Hz
Test Mode:	Mode 4	Polarization :	---

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

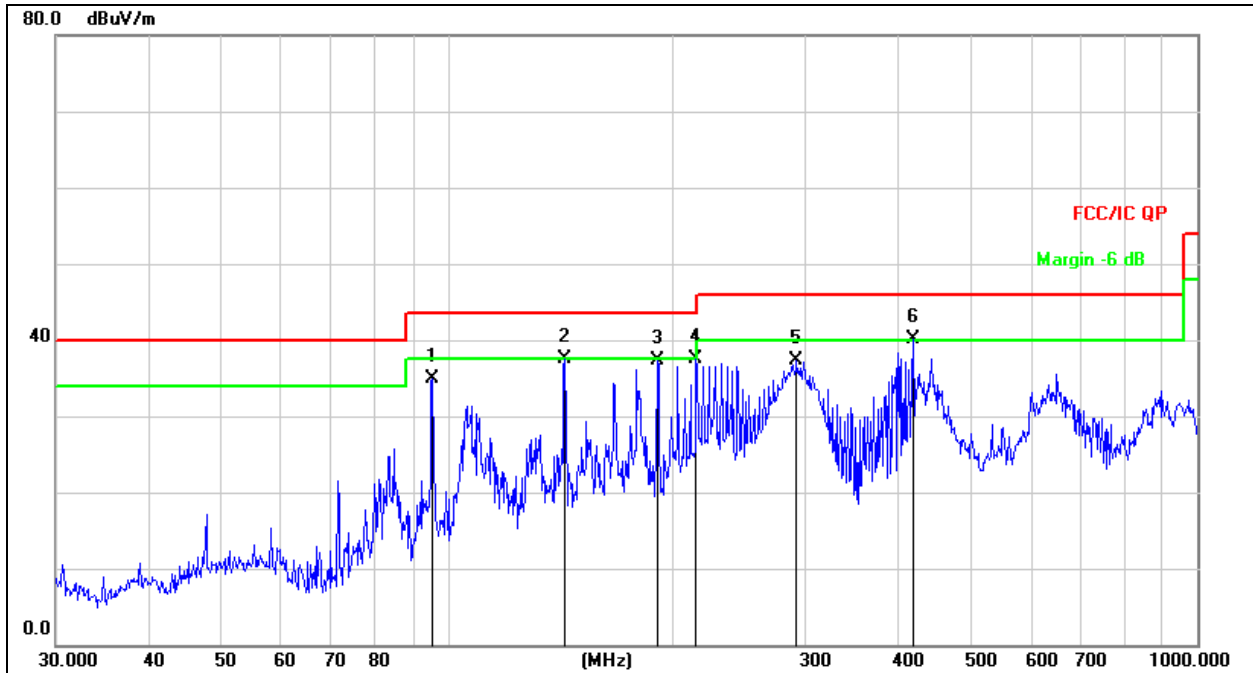
**Note:**

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.

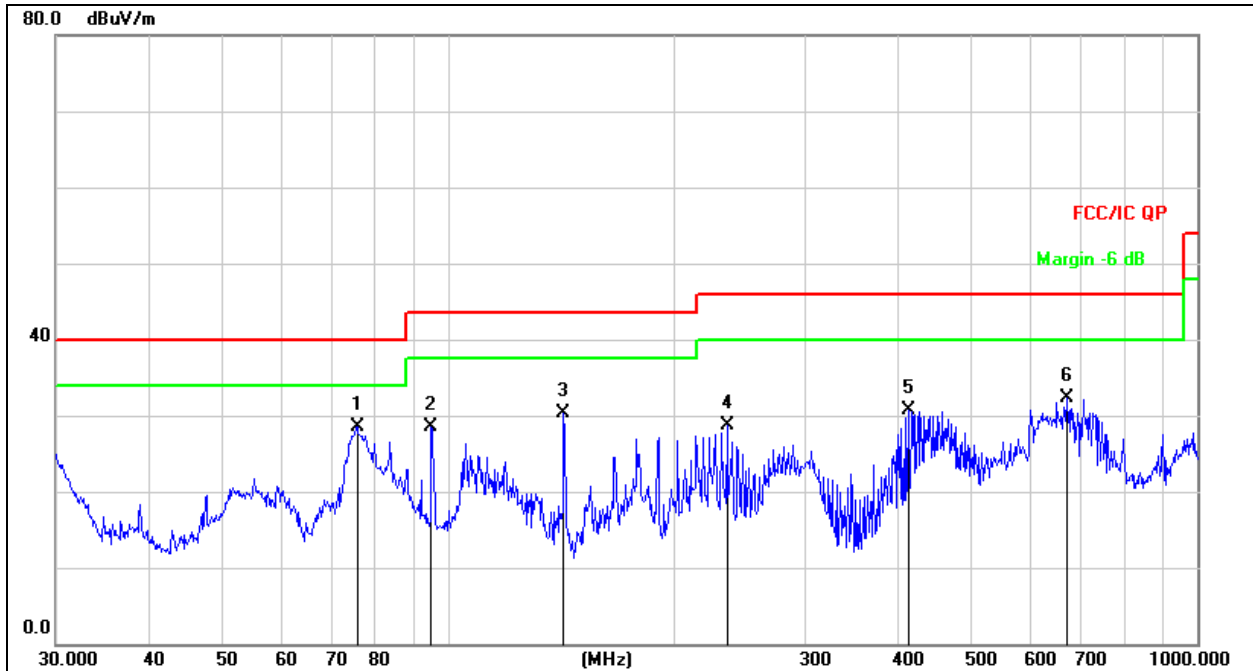
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Horizontal
Test Mode:	Mode 4	Test Voltage :	AC 120V/60Hz


**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	Detector
		MHz	dBuV	dB	dBuV/m	dB/m	dB	
1		95.4270	53.42	-18.43	34.99	43.50	-8.51	QP
2		143.3261	58.02	-20.61	37.41	43.50	-6.09	QP
3		190.4050	55.36	-18.08	37.28	43.50	-6.22	QP
4	!	214.5143	54.45	-16.92	37.53	43.50	-5.97	QP
5		292.0583	52.11	-14.78	37.33	46.00	-8.67	QP
6	*	417.6411	52.16	-11.96	40.20	46.00	-5.80	QP

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



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	*	75.7114	49.44	-20.87	28.57	40.00	-11.43	QP
2		95.0930	46.94	-18.48	28.46	43.50	-15.04	QP
3		142.8243	50.81	-20.58	30.23	43.50	-13.27	QP
4		235.8164	44.97	-16.27	28.70	46.00	-17.30	QP
5		411.8240	42.79	-12.04	30.75	46.00	-15.25	QP
6		670.4893	39.76	-7.49	32.27	46.00	-13.73	QP

Test Mode:	TX(5.1G) - 802.11a
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Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
<b>Low Channel (5180 MHz)-Above 1G</b>									
V	4434.041	62.93	5.94	35.40	44.00	60.27	68.2	-7.93	PK
V	4434.041	43.72	5.94	35.40	44.00	41.06	54	-12.94	AV
V	10360.070	61.75	8.46	39.75	44.50	65.46	68.2	-2.74	PK
V	10360.070	43.07	8.46	39.75	44.50	46.78	54	-7.22	AV
V	15540.199	64.21	10.12	38.80	44.10	69.03	74	-4.97	PK
V	15540.199	43.16	10.12	38.80	42.70	49.38	54	-4.62	AV
H	4434.037	64.70	5.94	35.18	44.00	61.82	68.2	-6.38	PK
H	4434.037	43.35	5.94	35.18	44.00	40.47	54	-13.53	AV
H	10360.123	53.19	8.46	38.71	44.50	55.86	68.2	-12.34	PK
H	10360.123	43.92	8.46	38.71	44.50	46.59	54	-7.41	AV
H	15540.121	52.56	10.12	38.38	44.10	56.96	74	-17.04	PK
H	15540.121	41.38	10.12	38.38	44.10	45.78	54	-8.22	AV
<b>Middle Channel (5200 MHz)-Above 1G</b>									
V	4592.058	63.13	6.48	36.35	44.05	61.91	74	-12.09	PK
V	4592.058	43.61	6.48	36.35	44.05	42.39	54	-11.61	AV
V	10400.159	60.27	8.47	37.88	44.51	62.11	68.2	-6.09	PK
V	10400.159	43.34	8.47	37.88	44.51	45.18	54	-8.82	AV
V	15600.175	60.25	10.12	38.80	44.10	65.07	74	-8.93	PK
V	15600.175	43.24	10.12	38.80	42.70	49.46	54	-4.54	AV
H	4592.175	62.53	6.48	36.37	44.05	61.33	74	-12.67	PK
H	4592.175	43.45	6.48	36.37	44.05	42.25	54	-11.75	AV
H	10400.126	51.92	8.47	38.64	44.50	54.53	68.2	-13.67	PK
H	10400.126	42.96	8.47	38.64	44.50	45.57	54	-8.43	AV
H	15600.050	51.26	10.12	38.38	44.10	55.66	74	-18.34	PK
H	15600.050	42.20	10.12	38.38	44.10	46.60	54	-7.40	AV
<b>High Channel (5240 MHz)-Above 1G</b>									
V	4739.085	64.26	7.10	37.24	43.50	65.10	74	-8.90	PK
V	4739.085	43.96	7.10	37.24	43.50	44.80	54	-9.20	AV
V	10480.019	63.33	8.46	37.68	44.50	64.97	68.2	-3.23	PK
V	10480.019	43.42	8.46	37.68	44.50	45.06	54	-8.94	AV
V	15720.038	61.25	10.12	38.80	44.10	66.07	74	-7.93	PK
V	15720.038	43.63	10.12	38.80	42.70	49.85	54	-4.15	AV
H	4739.113	63.75	7.10	37.24	43.50	64.59	74	-9.41	PK
H	4739.113	43.84	7.10	37.24	43.50	44.68	54	-9.32	AV
H	10480.112	52.83	8.46	38.57	44.50	55.36	68.2	-12.84	PK
H	10480.112	43.56	8.46	38.57	44.50	46.09	54	-7.91	AV
H	15720.018	53.46	10.12	38.38	44.10	57.86	74	-16.14	PK
H	15720.018	44.02	10.12	38.38	44.10	48.42	54	-5.58	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	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
<b>Low Channel (5180 MHz)-Above 1G</b>									
V	4434.171	60.05	5.94	35.40	44.00	57.39	68.2	-10.81	PK
V	4434.171	43.43	5.94	35.40	44.00	40.77	54	-13.23	AV
V	10360.053	61.90	8.46	39.75	44.50	65.61	68.2	-2.59	PK
V	10360.053	43.18	8.46	39.75	44.50	46.89	54	-7.11	AV
V	15540.017	63.40	10.12	38.80	44.10	68.22	74	-5.78	PK
V	15540.017	43.86	10.12	38.80	42.70	50.08	54	-3.92	AV
H	4434.089	62.12	5.94	35.18	44.00	59.24	68.2	-8.96	PK
H	4434.089	43.76	5.94	35.18	44.00	40.88	54	-13.12	AV
H	10360.052	51.67	8.46	38.71	44.50	54.34	68.2	-13.86	PK
H	10360.052	43.81	8.46	38.71	44.50	46.48	54	-7.52	AV
H	15540.051	51.60	10.12	38.38	44.10	56.00	74	-18.00	PK
H	15540.051	41.88	10.12	38.38	44.10	46.28	54	-7.72	AV
<b>Middle Channel (5200 MHz)-Above 1G</b>									
V	4592.157	60.97	6.48	36.35	44.05	59.75	74	-14.25	PK
V	4592.157	43.44	6.48	36.35	44.05	42.22	54	-11.78	AV
V	10400.017	61.30	8.47	37.88	44.51	63.14	68.2	-5.06	PK
V	10400.017	43.66	8.47	37.88	44.51	45.50	54	-8.50	AV
V	15600.140	64.34	10.12	38.80	44.10	69.16	74	-4.84	PK
V	15600.140	43.32	10.12	38.80	42.70	49.54	54	-4.46	AV
H	4592.037	60.59	6.48	36.37	44.05	59.39	74	-14.61	PK
H	4592.037	43.12	6.48	36.37	44.05	41.92	54	-12.08	AV
H	10400.185	50.92	8.47	38.64	44.50	53.53	68.2	-14.67	PK
H	10400.185	40.76	8.47	38.64	44.50	43.37	54	-10.63	AV
H	15600.146	52.21	10.12	38.38	44.10	56.61	74	-17.39	PK
H	15600.146	44.59	10.12	38.38	44.10	48.99	54	-5.01	AV
<b>High Channel (5240 MHz)-Above 1G</b>									
V	4739.075	63.00	7.10	37.24	43.50	63.84	74	-10.16	PK
V	4739.075	43.13	7.10	37.24	43.50	43.97	54	-10.03	AV
V	10480.069	60.30	8.46	37.68	44.50	61.94	68.2	-6.26	PK
V	10480.069	43.03	8.46	37.68	44.50	44.67	54	-9.33	AV
V	15720.048	60.81	10.12	38.80	44.10	65.63	74	-8.37	PK
V	15720.048	43.14	10.12	38.80	42.70	49.36	54	-4.64	AV
H	4739.137	64.49	7.10	37.24	43.50	65.33	74	-8.67	PK
H	4739.137	43.62	7.10	37.24	43.50	44.46	54	-9.54	AV
H	10480.034	52.52	8.46	38.57	44.50	55.05	68.2	-13.15	PK
H	10480.034	40.62	8.46	38.57	44.50	43.15	54	-10.85	AV
H	15720.104	53.97	10.12	38.38	44.10	58.37	74	-15.63	PK
H	15720.104	40.02	10.12	38.38	44.10	44.42	54	-9.58	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	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
<b>Low Channel (5190 MHz)-Above 1G</b>									
V	4434.171	62.33	5.94	35.40	44.00	59.67	68.2	-8.53	PK
V	4434.171	43.24	5.94	35.40	44.00	40.58	54	-13.42	AV
V	10380.168	60.70	8.46	39.75	44.50	64.41	68.2	-3.79	PK
V	10380.168	43.41	8.46	39.75	44.50	47.12	54	-6.88	AV
V	15570.063	60.18	10.12	38.80	44.10	65.00	74	-9.00	PK
V	15570.063	43.71	10.12	38.80	42.70	49.93	54	-4.07	AV
H	4434.103	61.10	5.94	35.18	44.00	58.22	74	-15.78	PK
H	4434.103	43.96	5.94	35.18	44.00	41.08	54	-12.92	AV
H	10380.083	54.38	8.46	38.71	44.50	57.05	68.2	-11.15	PK
H	10380.083	43.52	8.46	38.71	44.50	46.19	54	-7.81	AV
H	15570.075	50.99	10.12	38.38	44.10	55.39	74	-18.61	PK
H	15570.075	40.12	10.12	38.38	44.10	44.52	54	-9.48	AV
<b>High Channel (5230 MHz)-Above 1G</b>									
V	4739.157	62.27	6.48	36.35	44.05	61.05	68.2	-7.15	PK
V	4739.157	43.20	6.48	36.35	44.05	41.98	54	-12.02	AV
V	10460.113	60.12	8.47	37.88	44.51	61.96	68.2	-6.24	PK
V	10460.113	43.43	8.47	37.88	44.51	45.27	54	-8.73	AV
V	15690.042	60.82	10.12	38.80	44.10	65.64	74	-8.36	PK
V	15690.042	43.85	10.12	38.80	42.70	50.07	54	-3.93	AV
H	4739.182	61.34	6.48	36.37	44.05	60.14	68.2	-8.06	PK
H	4739.182	43.72	6.48	36.37	44.05	42.52	54	-11.48	AV
H	10460.122	52.36	8.47	38.64	44.50	54.97	68.2	-13.23	PK
H	10460.122	40.88	8.47	38.64	44.50	43.49	54	-10.51	AV
H	15690.111	50.63	10.12	38.38	44.10	55.03	74	-18.97	PK
H	15690.111	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(5.1G) - 802.11ac-HT20
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Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
<b>Low Channel (5180 MHz)-Above 1G</b>									
V	4434.155	63.80	5.94	35.40	44.00	61.14	68.2	-7.06	PK
V	4434.155	43.62	5.94	35.40	44.00	40.96	54	-13.04	AV
V	10360.053	60.95	8.46	39.75	44.50	64.66	68.2	-3.54	PK
V	10360.053	43.99	8.46	39.75	44.50	47.70	54	-6.30	AV
V	15540.166	60.70	10.12	38.80	44.10	65.52	74	-8.48	PK
V	15540.166	43.25	10.12	38.80	42.70	49.47	54	-4.53	AV
H	4434.198	61.58	5.94	35.18	44.00	58.70	68.2	-9.50	PK
H	4434.198	43.15	5.94	35.18	44.00	40.27	54	-13.73	AV
H	10360.158	54.34	8.46	38.71	44.50	57.01	68.2	-11.19	PK
H	10360.158	43.66	8.46	38.71	44.50	46.33	54	-7.67	AV
H	15540.166	53.84	10.12	38.38	44.10	58.24	74	-15.76	PK
H	15540.166	43.92	10.12	38.38	44.10	48.32	54	-5.68	AV
<b>Middle Channel (5200 MHz)-Above 1G</b>									
V	4592.140	63.30	6.48	36.35	44.05	62.08	74	-11.92	PK
V	4592.140	43.65	6.48	36.35	44.05	42.43	54	-11.57	AV
V	10400.089	64.57	8.47	37.88	44.51	66.41	68.2	-1.79	PK
V	10400.089	43.36	8.47	37.88	44.51	45.20	54	-8.80	AV
V	15600.022	63.85	10.12	38.80	44.10	68.67	74	-5.33	PK
V	15600.022	43.92	10.12	38.80	42.70	50.14	54	-3.86	AV
H	4592.112	62.80	6.48	36.37	44.05	61.60	74	-12.40	PK
H	4592.112	43.48	6.48	36.37	44.05	42.28	54	-11.72	AV
H	10400.183	51.98	8.47	38.64	44.50	54.59	68.2	-13.61	PK
H	10400.183	42.57	8.47	38.64	44.50	45.18	54	-8.82	AV
H	15600.068	52.62	10.12	38.38	44.10	57.02	74	-16.98	PK
H	15600.068	44.04	10.12	38.38	44.10	48.44	54	-5.56	AV
<b>High Channel (5240 MHz)-Above 1G</b>									
V	4739.035	63.85	7.10	37.24	43.50	64.69	74	-9.31	PK
V	4739.035	43.12	7.10	37.24	43.50	43.96	54	-10.04	AV
V	10480.193	64.39	8.46	37.68	44.50	66.03	68.2	-2.17	PK
V	10480.193	43.71	8.46	37.68	44.50	45.35	54	-8.65	AV
V	15720.160	62.15	10.12	38.80	44.10	66.97	74	-7.03	PK
V	15720.160	43.81	10.12	38.80	42.70	50.03	54	-3.97	AV
H	4739.179	61.65	7.10	37.24	43.50	62.49	74	-11.51	PK
H	4739.179	43.49	7.10	37.24	43.50	44.33	54	-9.67	AV
H	10480.108	52.56	8.46	38.57	44.50	55.09	68.2	-13.11	PK
H	10480.108	42.67	8.46	38.57	44.50	45.20	54	-8.80	AV
H	15720.151	54.38	10.12	38.38	44.10	58.78	74	-15.22	PK
H	15720.151	42.45	10.12	38.38	44.10	46.85	54	-7.15	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	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
<b>Low Channel (5190 MHz)-Above 1G</b>									
V	4434.131	62.98	5.94	35.40	44.00	60.32	68.2	-7.88	PK
V	4434.131	43.76	5.94	35.40	44.00	41.10	54	-12.90	AV
V	10380.121	60.41	8.46	39.75	44.50	64.12	68.2	-4.08	PK
V	10380.121	43.74	8.46	39.75	44.50	47.45	54	-6.55	AV
V	15570.141	61.27	10.12	38.80	44.10	66.09	74	-7.91	PK
V	15570.141	43.96	10.12	38.80	42.70	50.18	54	-3.82	AV
H	4434.088	62.28	5.94	35.18	44.00	59.40	74	-14.60	PK
H	4434.088	43.94	5.94	35.18	44.00	41.06	54	-12.94	AV
H	10380.092	54.40	8.46	38.71	44.50	57.07	68.2	-11.13	PK
H	10380.092	40.29	8.46	38.71	44.50	42.96	54	-11.04	AV
H	15570.138	51.60	10.12	38.38	44.10	56.00	74	-18.00	PK
H	15570.138	43.68	10.12	38.38	44.10	48.08	54	-5.92	AV
<b>High Channel (5230 MHz)-Above 1G</b>									
V	4739.025	62.95	6.48	36.35	44.05	61.73	68.2	-6.47	PK
V	4739.025	43.07	6.48	36.35	44.05	41.85	54	-12.15	AV
V	10460.182	60.85	8.47	37.88	44.51	62.69	68.2	-5.51	PK
V	10460.182	43.89	8.47	37.88	44.51	45.73	54	-8.27	AV
V	15690.189	61.71	10.12	38.80	44.10	66.53	74	-7.47	PK
V	15690.189	43.10	10.12	38.80	42.70	49.32	54	-4.68	AV
H	4739.086	60.49	6.48	36.37	44.05	59.29	68.2	-8.91	PK
H	4739.086	43.45	6.48	36.37	44.05	42.25	54	-11.75	AV
H	10460.175	53.14	8.47	38.64	44.50	55.75	68.2	-12.45	PK
H	10460.175	41.97	8.47	38.64	44.50	44.58	54	-9.42	AV
H	15690.001	51.42	10.12	38.38	44.10	55.82	74	-18.18	PK
H	15690.001	41.64	10.12	38.38	44.10	46.04	54	-7.96	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).

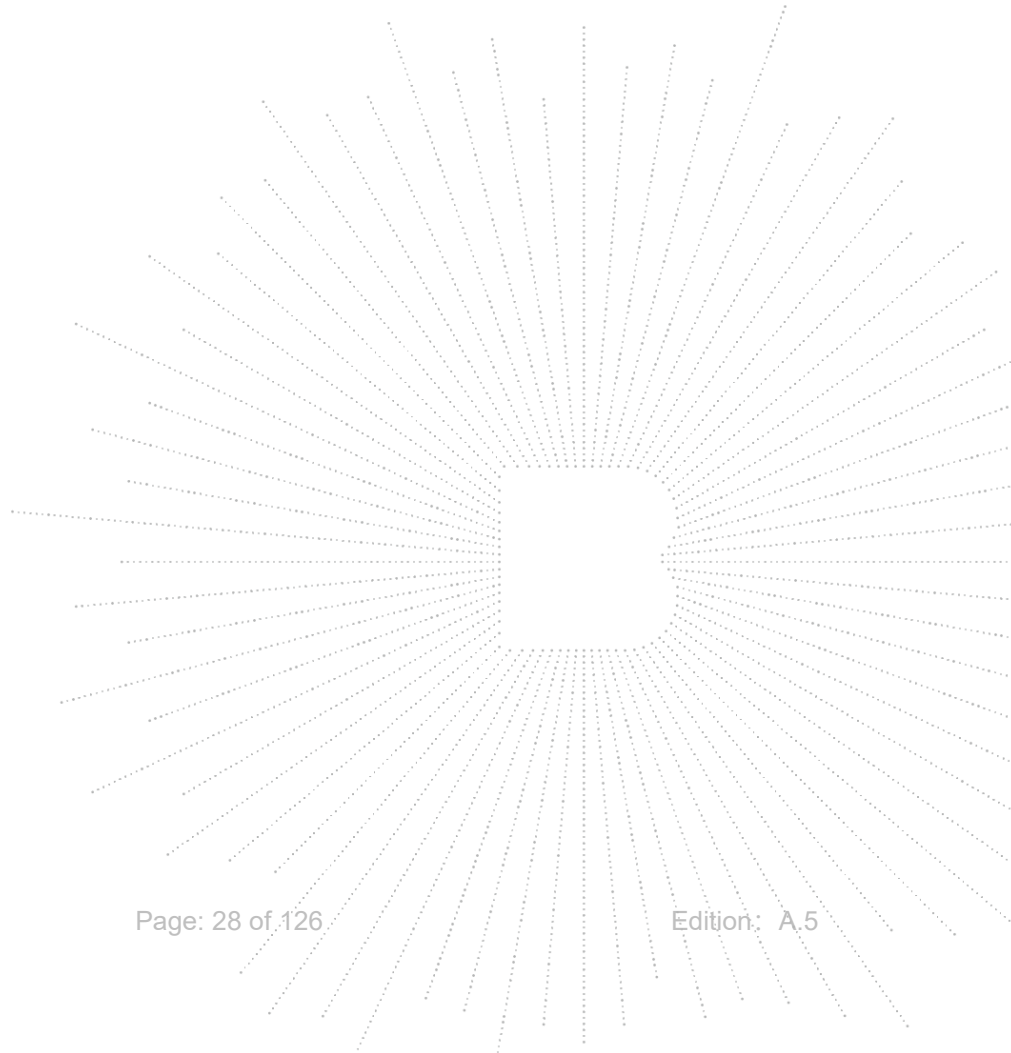
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11ac-HT80
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Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
<b>(5210 MHz)-Above 1G</b>									
V	4434.166	63.92	5.94	35.40	44.00	61.26	68.2	-6.94	PK
V	4434.166	43.94	5.94	35.40	44.00	41.28	54	-12.72	AV
V	10420.085	61.93	8.46	39.75	44.50	65.64	68.2	-2.56	PK
V	10420.085	43.78	8.46	39.75	44.50	47.49	54	-6.51	AV
V	15630.191	60.65	10.12	38.80	44.10	65.47	74	-8.53	PK
V	15630.191	43.60	10.12	38.80	42.70	49.82	54	-4.18	AV
H	4434.145	62.19	5.94	35.18	44.00	59.31	68.2	-8.89	PK
H	4434.145	43.34	5.94	35.18	44.00	40.46	54	-13.54	AV
H	10420.054	51.20	8.46	38.71	44.50	53.87	68.2	-14.33	PK
H	10420.054	40.54	8.46	38.71	44.50	43.21	54	-10.79	AV
H	15630.093	53.99	10.12	38.38	44.10	58.39	74	-15.61	PK
H	15630.093	41.40	10.12	38.38	44.10	45.80	54	-8.20	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	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
<b>Low Channel (5745 MHz)-Above 1G</b>									
V	4679.085	55.08	5.94	35.40	44.00	52.42	74	-21.58	PK
V	4679.085	43.57	5.94	35.40	44.00	40.91	54	-13.09	AV
V	11490.196	56.95	8.46	39.75	44.50	60.66	68.2	-7.54	PK
V	11490.196	43.70	8.46	39.75	44.50	47.41	54	-6.59	AV
V	17235.169	59.92	10.12	38.80	44.10	64.74	68.2	-3.46	PK
V	17235.169	43.98	10.12	38.80	42.70	50.20	54	-3.80	AV
H	4679.048	57.29	5.94	35.18	44.00	54.41	74	-19.59	PK
H	4679.048	44.00	5.94	35.18	44.00	41.12	54	-12.88	AV
H	11490.060	51.55	8.46	38.71	44.50	54.22	68.2	-13.98	PK
H	11490.060	42.96	8.46	38.71	44.50	45.63	54	-8.37	AV
H	17235.069	53.60	10.12	38.38	44.10	58.00	68.2	-10.20	PK
H	17235.069	41.79	10.12	38.38	44.10	46.19	54	-7.81	AV
<b>Middle Channel (5785 MHz)-Above 1G</b>									
V	4592.103	54.01	6.48	36.35	44.05	52.79	74	-21.21	PK
V	4592.103	43.58	6.48	36.35	44.05	42.36	54	-11.64	AV
V	11570.198	57.19	8.47	37.88	44.51	59.03	68.2	-9.17	PK
V	11570.198	43.29	8.47	37.88	44.51	45.13	54	-8.87	AV
V	17355.183	59.45	10.12	38.80	44.10	64.27	68.2	-3.93	PK
V	17355.183	39.54	10.12	38.80	42.70	45.76	54	-8.24	AV
H	4592.189	55.66	6.48	36.37	44.05	54.46	74	-19.54	PK
H	4592.189	43.77	6.48	36.37	44.05	42.57	54	-11.43	AV
H	11570.022	51.07	8.47	38.64	44.50	53.68	68.2	-14.52	PK
H	11570.022	44.69	8.47	38.64	44.50	47.30	54	-6.70	AV
H	17355.106	53.68	10.12	38.38	44.10	58.08	68.2	-10.12	PK
H	17355.106	40.44	10.12	38.38	44.10	44.84	54	-9.16	AV
<b>High Channel (5825 MHz)-Above 1G</b>									
V	6039.016	57.36	7.10	37.24	43.50	58.20	68.2	-10.00	PK
V	6039.016	43.99	7.10	37.24	43.50	44.83	54	-9.17	AV
V	11650.027	62.02	8.46	37.68	44.50	63.66	74	-10.34	PK
V	11650.027	43.14	8.46	37.68	44.50	44.78	54	-9.22	AV
V	17475.066	53.48	10.12	38.80	44.10	58.30	68.2	-9.90	PK
V	17475.066	43.78	10.12	38.80	42.70	50.00	54	-4.00	AV
H	6039.145	55.46	7.10	37.24	43.50	56.30	68.2	-11.90	PK
H	6039.145	43.19	7.10	37.24	43.50	44.03	54	-9.97	AV
H	11650.056	51.21	8.46	38.57	44.50	53.74	74	-20.26	PK
H	11650.056	44.19	8.46	38.57	44.50	46.72	54	-7.28	AV
H	17475.180	50.26	10.12	38.38	44.10	54.66	68.2	-13.54	PK
H	17475.180	41.77	10.12	38.38	44.10	46.17	54	-7.83	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	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
<b>Low Channel (5745 MHz)-Above 1G</b>									
V	4679.098	56.97	5.94	35.40	44.00	54.31	74	-19.69	PK
V	4679.098	43.75	5.94	35.40	44.00	41.09	54	-12.91	AV
V	11490.062	54.15	8.46	39.75	44.50	57.86	68.2	-10.34	PK
V	11490.062	43.28	8.46	39.75	44.50	46.99	54	-7.01	AV
V	17235.146	61.73	10.12	38.80	44.10	66.55	68.2	-1.65	PK
V	17235.146	43.88	10.12	38.80	42.70	50.10	54	-3.90	AV
H	4679.148	57.05	5.94	35.18	44.00	54.17	74	-19.83	PK
H	4679.148	44.00	5.94	35.18	44.00	41.12	54	-12.88	AV
H	11490.047	51.42	8.46	38.71	44.50	54.09	68.2	-14.11	PK
H	11490.047	44.16	8.46	38.71	44.50	46.83	54	-7.17	AV
H	17235.135	53.99	10.12	38.38	44.10	58.39	68.2	-9.81	PK
H	17235.135	41.73	10.12	38.38	44.10	46.13	54	-7.87	AV
<b>Middle Channel (5785 MHz)-Above 1G</b>									
V	4592.012	62.48	6.48	36.35	44.05	61.26	74	-12.74	PK
V	4592.012	43.83	6.48	36.35	44.05	42.61	54	-11.39	AV
V	11570.170	56.99	8.47	37.88	44.51	58.83	68.2	-9.37	PK
V	11570.170	43.95	8.47	37.88	44.51	45.79	54	-8.21	AV
V	17355.128	59.17	10.12	38.80	44.10	63.99	68.2	-4.21	PK
V	17355.128	43.18	10.12	38.80	42.70	49.40	54	-4.60	AV
H	4592.087	57.74	6.48	36.37	44.05	56.54	74	-17.46	PK
H	4592.087	43.41	6.48	36.37	44.05	42.21	54	-11.79	AV
H	11570.157	52.29	8.47	38.64	44.50	54.90	68.2	-13.30	PK
H	11570.157	42.04	8.47	38.64	44.50	44.65	54	-9.35	AV
H	17355.014	52.27	10.12	38.38	44.10	56.67	68.2	-11.53	PK
H	17355.014	41.91	10.12	38.38	44.10	46.31	54	-7.69	AV
<b>High Channel (5825 MHz)-Above 1G</b>									
V	6039.015	57.64	7.10	37.24	43.50	58.48	68.2	-9.72	PK
V	6039.015	43.84	7.10	37.24	43.50	44.68	54	-9.32	AV
V	11650.194	58.20	8.46	37.68	44.50	59.84	74	-14.16	PK
V	11650.194	43.79	8.46	37.68	44.50	45.43	54	-8.57	AV
V	17475.198	57.04	10.12	38.80	44.10	61.86	68.2	-6.34	PK
V	17475.198	43.95	10.12	38.80	42.70	50.17	54	-3.83	AV
H	6039.028	59.80	7.10	37.24	43.50	60.64	68.2	-7.56	PK
H	6039.028	43.47	7.10	37.24	43.50	44.31	54	-9.69	AV
H	11650.183	51.37	8.46	38.57	44.50	53.90	74	-20.10	PK
H	11650.183	43.07	8.46	38.57	44.50	45.60	54	-8.40	AV
H	17475.177	52.98	10.12	38.38	44.10	57.38	68.2	-10.82	PK
H	17475.177	41.47	10.12	38.38	44.10	45.87	54	-8.13	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	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
<b>Low Channel (5755 MHz)-Above 1G</b>									
V	4679.111	57.46	5.94	35.40	44.00	54.80	74	-19.20	PK
V	4679.111	43.96	5.94	35.40	44.00	41.30	54	-12.70	AV
V	11510.148	56.52	8.46	39.75	44.50	60.23	74	-13.77	PK
V	11510.148	43.17	8.46	39.75	44.50	46.88	54	-7.12	AV
V	17265.011	57.68	10.12	38.80	44.10	62.50	68.2	-5.70	PK
V	17265.011	2.00	10.12	38.80	42.70	8.22	54	-45.78	AV
H	4679.130	59.37	5.94	35.18	44.00	56.49	74	-17.51	PK
H	4679.130	43.03	5.94	35.18	44.00	40.15	54	-13.85	AV
H	11510.166	54.44	8.46	38.71	44.50	57.11	74	-16.89	PK
H	11510.166	43.57	8.46	38.71	44.50	46.24	54	-7.76	AV
H	17265.166	54.84	10.12	38.38	44.10	59.24	68.2	-8.96	PK
H	17265.166	44.27	10.12	38.38	44.10	48.67	54	-5.33	AV
<b>High Channel (5795 MHz)-Above 1G</b>									
V	6039.120	60.95	6.48	36.35	44.05	59.73	68.2	-8.47	PK
V	6039.120	43.74	6.48	36.35	44.05	42.52	54	-11.48	AV
V	11590.109	59.82	8.47	37.88	44.51	61.66	74	-12.34	PK
V	11590.109	43.83	8.47	37.88	44.51	45.67	54	-8.33	AV
V	17385.137	55.55	10.12	38.80	44.10	60.37	68.2	-7.83	PK
V	17385.137	41.22	10.12	38.80	42.70	47.44	54	-6.56	AV
H	6039.173	56.98	6.48	36.37	44.05	55.78	68.2	-12.42	PK
H	6039.173	43.94	6.48	36.37	44.05	42.74	54	-11.26	AV
H	11590.147	53.67	8.47	38.64	44.50	56.28	74	-17.72	PK
H	11590.147	41.67	8.47	38.64	44.50	44.28	54	-9.72	AV
H	17385.008	51.62	10.12	38.38	44.10	56.02	68.2	-12.18	PK
H	17385.008	43.11	10.12	38.38	44.10	47.51	54	-6.49	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	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
<b>Low Channel (5745 MHz)-Above 1G</b>									
V	4679.172	59.40	5.94	35.40	44.00	56.74	74	-17.26	PK
V	4679.172	43.42	5.94	35.40	44.00	40.76	54	-13.24	AV
V	11490.165	56.12	8.46	39.75	44.50	59.83	68.2	-8.37	PK
V	11490.165	43.75	8.46	39.75	44.50	47.46	54	-6.54	AV
V	17235.195	60.97	10.12	38.80	44.10	65.79	68.2	-2.41	PK
V	17235.195	43.03	10.12	38.80	42.70	49.25	54	-4.75	AV
H	4679.076	56.46	5.94	35.18	44.00	53.58	74	-20.42	PK
H	4679.076	43.94	5.94	35.18	44.00	41.06	54	-12.94	AV
H	11490.041	50.10	8.46	38.71	44.50	52.77	68.2	-15.43	PK
H	11490.041	43.29	8.46	38.71	44.50	45.96	54	-8.04	AV
H	17235.096	53.78	10.12	38.38	44.10	58.18	68.2	-10.02	PK
H	17235.096	41.30	10.12	38.38	44.10	45.70	54	-8.30	AV
<b>Middle Channel (5785 MHz)-Above 1G</b>									
V	4592.025	62.74	6.48	36.35	44.05	61.52	74	-12.48	PK
V	4592.025	43.11	6.48	36.35	44.05	41.89	54	-12.11	AV
V	11570.062	57.33	8.47	37.88	44.51	59.17	68.2	-9.03	PK
V	11570.062	43.59	8.47	37.88	44.51	45.43	54	-8.57	AV
V	17355.128	60.26	10.12	38.80	44.10	65.08	68.2	-3.12	PK
V	17355.128	43.62	10.12	38.80	42.70	49.84	54	-4.16	AV
H	4592.054	56.92	6.48	36.37	44.05	55.72	74	-18.28	PK
H	4592.054	43.49	6.48	36.37	44.05	42.29	54	-11.71	AV
H	11570.059	50.83	8.47	38.64	44.50	53.44	68.2	-14.76	PK
H	11570.059	40.90	8.47	38.64	44.50	43.51	54	-10.49	AV
H	17355.065	52.77	10.12	38.38	44.10	57.17	68.2	-11.03	PK
H	17355.065	43.31	10.12	38.38	44.10	47.71	54	-6.29	AV
<b>High Channel (5825 MHz)-Above 1G</b>									
V	6039.114	57.06	7.10	37.24	43.50	57.90	68.2	-10.30	PK
V	6039.114	43.67	7.10	37.24	43.50	44.51	54	-9.49	AV
V	11650.126	57.79	8.46	37.68	44.50	59.43	74	-14.57	PK
V	11650.126	43.74	8.46	37.68	44.50	45.38	54	-8.62	AV
V	17475.045	59.80	10.12	38.80	44.10	64.62	68.2	-3.58	PK
V	17475.045	43.10	10.12	38.80	42.70	49.32	54	-4.68	AV
H	6039.009	57.21	7.10	37.24	43.50	58.05	68.2	-10.15	PK
H	6039.009	43.13	7.10	37.24	43.50	43.97	54	-10.03	AV
H	11650.026	51.15	8.46	38.57	44.50	53.68	74	-20.32	PK
H	11650.026	44.72	8.46	38.57	44.50	47.25	54	-6.75	AV
H	17475.089	53.25	10.12	38.38	44.10	57.65	68.2	-10.55	PK
H	17475.089	44.87	10.12	38.38	44.10	49.27	54	-4.73	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) - 802.11ac-HT40
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Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
<b>Low Channel (5755 MHz)-Above 1G</b>									
V	4679.037	56.27	5.94	35.40	44.00	53.61	74	-20.39	PK
V	4679.037	43.24	5.94	35.40	44.00	40.58	54	-13.42	AV
V	11510.055	56.68	8.46	39.75	44.50	60.39	74	-13.61	PK
V	11510.055	43.87	8.46	39.75	44.50	47.58	54	-6.42	AV
V	17265.171	59.70	10.12	38.80	44.10	64.52	68.2	-3.68	PK
V	17265.171	2.00	10.12	38.80	42.70	8.22	54	-45.78	AV
H	4679.001	57.80	5.94	35.18	44.00	54.92	74	-19.08	PK
H	4679.001	43.55	5.94	35.18	44.00	40.67	54	-13.33	AV
H	11510.095	50.37	8.46	38.71	44.50	53.04	74	-20.96	PK
H	11510.095	41.53	8.46	38.71	44.50	44.20	54	-9.80	AV
H	17265.109	51.02	10.12	38.38	44.10	55.42	68.2	-12.78	PK
H	17265.109	40.98	10.12	38.38	44.10	45.38	54	-8.62	AV
<b>High Channel (5795 MHz)-Above 1G</b>									
V	6039.064	59.74	6.48	36.35	44.05	58.52	68.2	-9.68	PK
V	6039.064	43.45	6.48	36.35	44.05	42.23	54	-11.77	AV
V	11590.024	58.94	8.47	37.88	44.51	60.78	74	-13.22	PK
V	11590.024	43.52	8.47	37.88	44.51	45.36	54	-8.64	AV
V	17385.034	55.34	10.12	38.80	44.10	60.16	68.2	-8.04	PK
V	17385.034	41.58	10.12	38.80	42.70	47.80	54	-6.20	AV
H	6039.047	58.40	6.48	36.37	44.05	57.20	68.2	-11.00	PK
H	6039.047	43.95	6.48	36.37	44.05	42.75	54	-11.25	AV
H	11590.083	52.56	8.47	38.64	44.50	55.17	74	-18.83	PK
H	11590.083	40.35	8.47	38.64	44.50	42.96	54	-11.04	AV
H	17385.055	54.93	10.12	38.38	44.10	59.33	68.2	-8.87	PK
H	17385.055	40.99	10.12	38.38	44.10	45.39	54	-8.61	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).

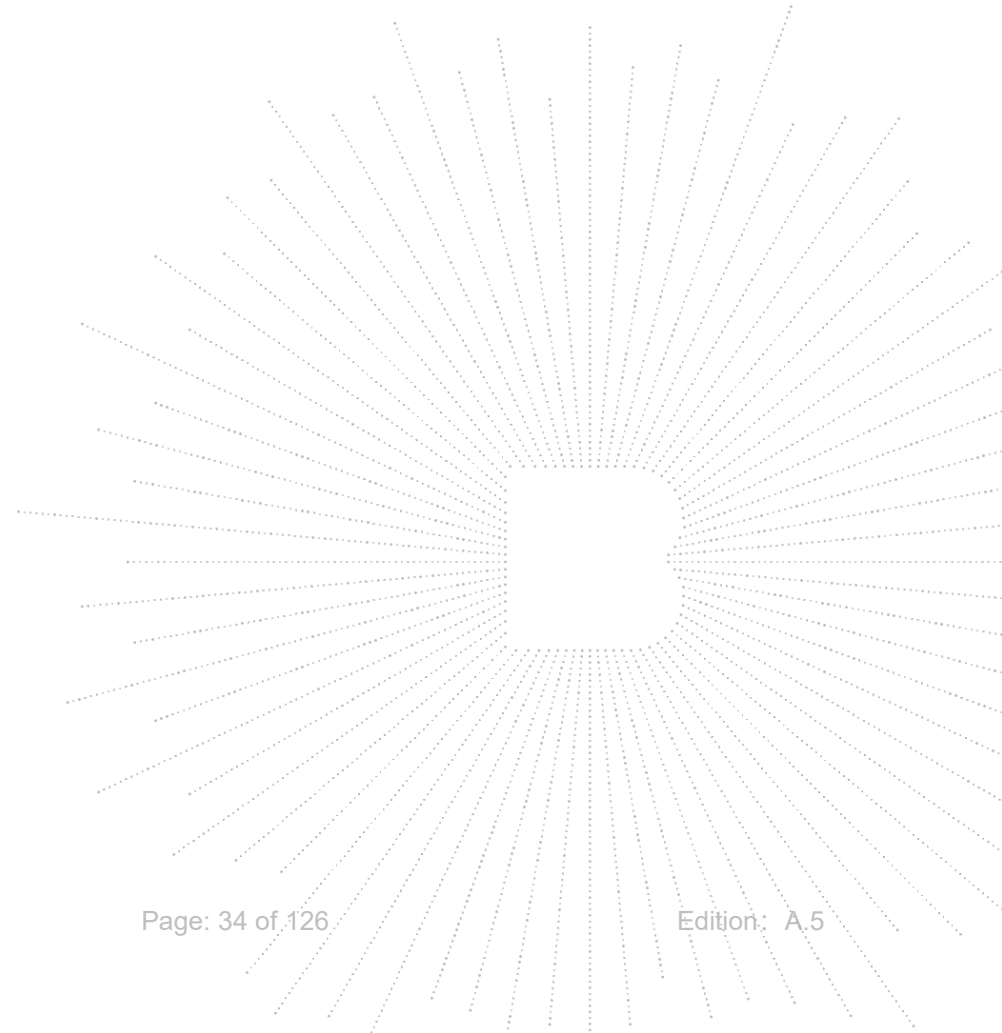
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode is MIMO Mode.

Test Mode:	TX(5.8G) - 802.11ac-HT80
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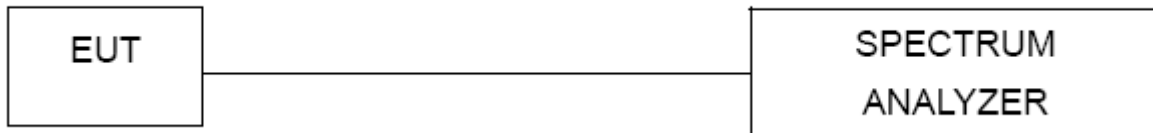
Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
<b>(5775 MHz)-Above 1G</b>									
V	4679.104	56.06	5.94	35.40	44.00	53.40	74	-20.60	PK
V	4679.104	43.47	5.94	35.40	44.00	40.81	54	-13.19	AV
V	11550.186	58.35	8.46	39.75	44.50	62.06	74	-11.94	PK
V	11550.186	43.16	8.46	39.75	44.50	46.87	54	-7.13	AV
V	17325.128	58.54	10.12	38.80	44.10	63.36	68.2	-4.84	PK
V	17325.128	41.38	10.12	38.80	42.70	47.60	54	-6.40	AV
H	4679.107	57.84	5.94	35.18	44.00	54.96	74	-19.04	PK
H	4679.107	43.41	5.94	35.18	44.00	40.53	54	-13.47	AV
H	11550.174	53.22	8.46	38.71	44.50	55.89	74	-18.11	PK
H	11550.174	40.43	8.46	38.71	44.50	43.10	54	-10.90	AV
H	17325.174	54.25	10.12	38.38	44.10	58.65	68.2	-9.55	PK
H	17325.174	43.69	10.12	38.38	44.10	48.09	54	-5.91	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

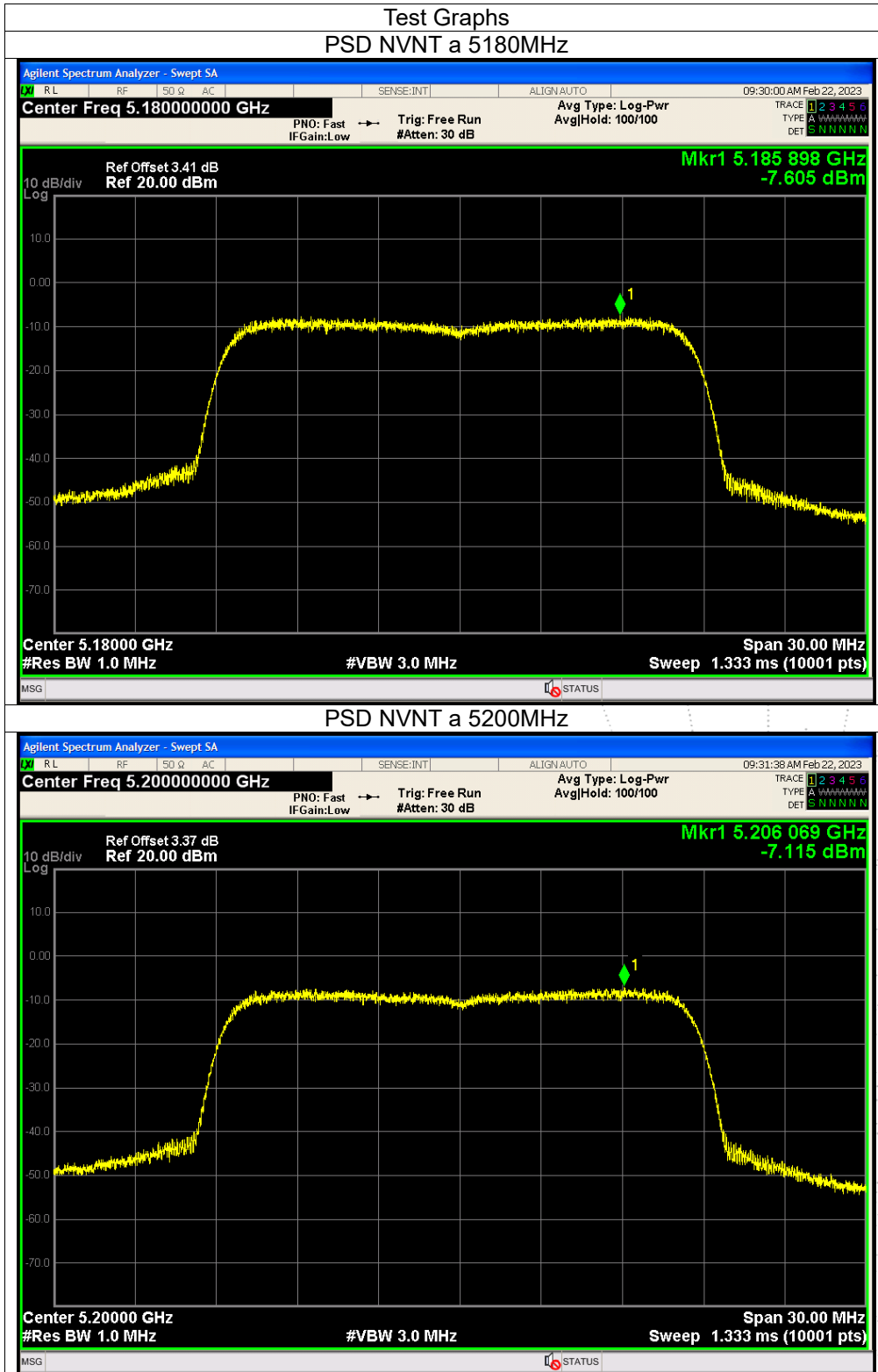
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	(5180-5240MHz); (5745-5825MHz)		

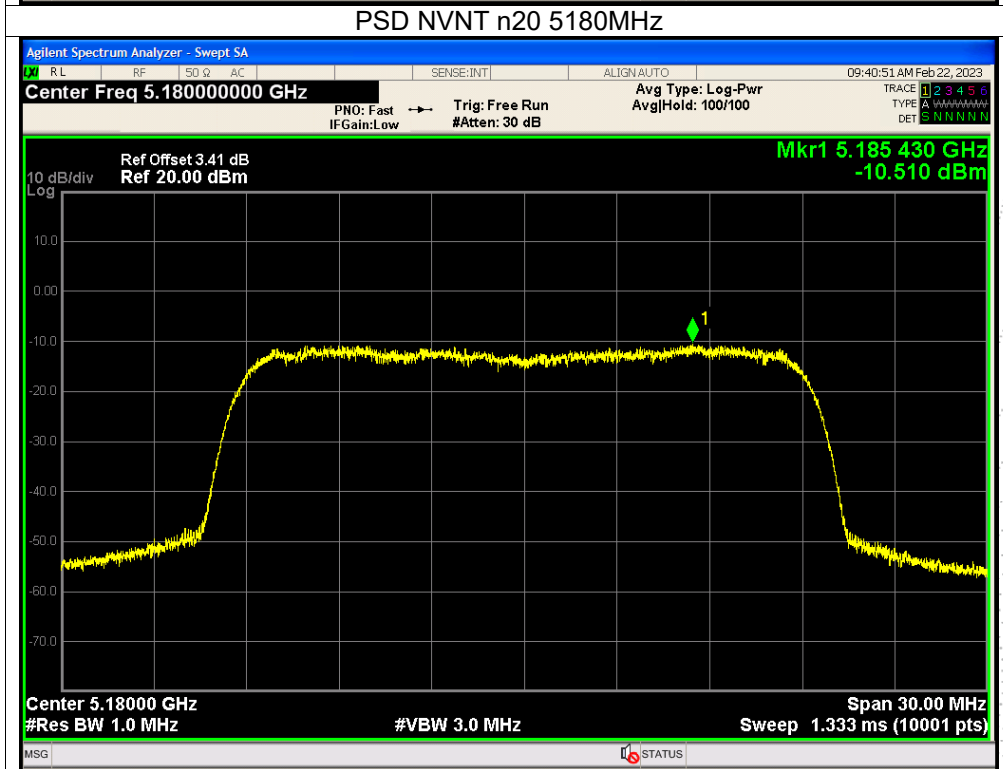
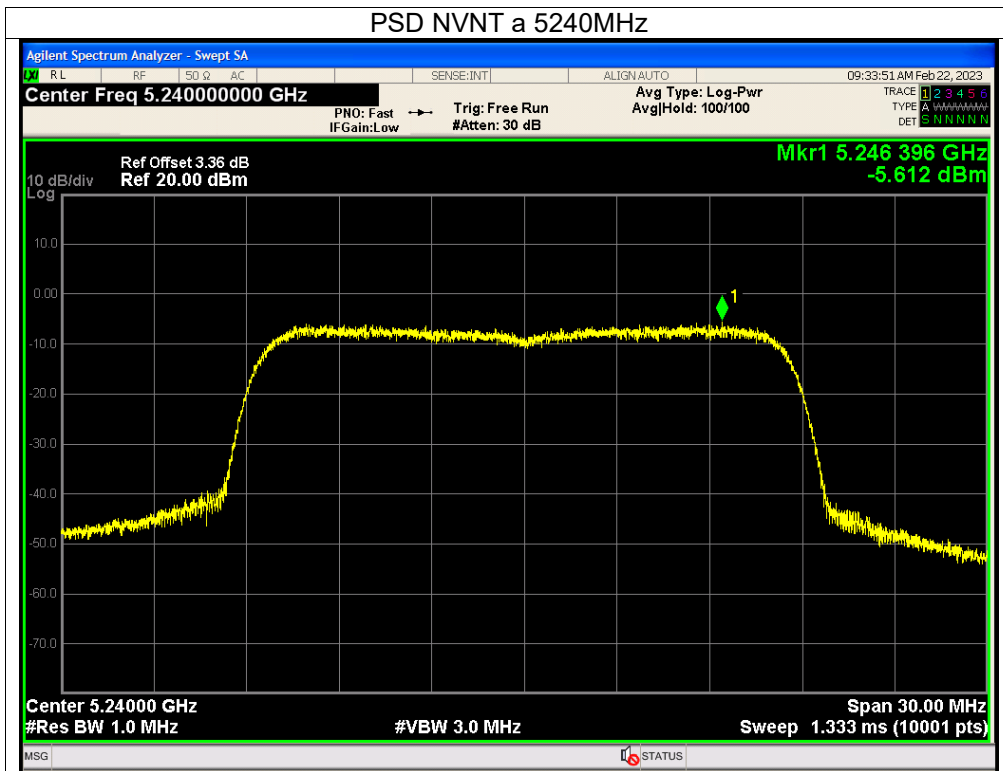
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/MHz)		Total (dBm/MHz)	Limit (dBm/MHz)	Verdict
			Ant A	Ant B			
NVNT	a	5180	-7.61	-7.36	/	11	Pass
NVNT	a	5200	-7.12	-6.40	/	11	Pass
NVNT	a	5240	-5.61	-6.02	/	11	Pass
NVNT	n20	5180	-10.51	-10.71	-7.60	11	Pass
NVNT	n20	5200	-10.28	-10.62	-7.44	11	Pass
NVNT	n20	5240	-9.45	-9.92	-6.67	11	Pass
NVNT	n40	5190	-14.84	-14.35	-11.58	11	Pass
NVNT	n40	5230	-14.14	-13.42	-10.75	11	Pass
NVNT	ac20	5180	-10.59	-9.92	-7.23	11	Pass
NVNT	ac20	5200	-10.79	-9.88	-7.30	11	Pass
NVNT	ac20	5240	-9.66	-8.85	-6.23	11	Pass
NVNT	ac40	5190	-15.70	-13.20	-11.26	11	Pass
NVNT	ac40	5230	-14.30	-13.31	-10.77	11	Pass
NVNT	ac80	5210	-15.99	-16.00	-12.98	11	Pass

Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/500KHz)		Total (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
			Ant A	Ant B			
NVNT	a	5745	-11.32	-12.39	/	30	Pass
NVNT	a	5785	-10.29	-11.44	/	30	Pass
NVNT	a	5825	-9.44	-11.36	/	30	Pass
NVNT	n20	5745	-15.72	-14.18	-11.87	30	Pass
NVNT	n20	5785	-14.91	-13.90	-11.37	30	Pass
NVNT	n20	5825	-13.55	-13.50	-10.51	30	Pass
NVNT	n40	5755	-18.61	-17.68	-15.11	30	Pass
NVNT	n40	5795	-17.50	-16.77	-14.11	30	Pass
NVNT	ac20	5745	-15.72	-14.94	-12.30	30	Pass
NVNT	ac20	5785	-15.29	-13.84	-11.49	30	Pass
NVNT	ac20	5825	-14.19	-13.60	-10.87	30	Pass
NVNT	ac40	5755	-18.73	-17.92	-15.30	30	Pass
NVNT	ac40	5795	-17.36	-16.85	-14.09	30	Pass
NVNT	ac80	5775	-19.45	-19.70	-16.56	30	Pass

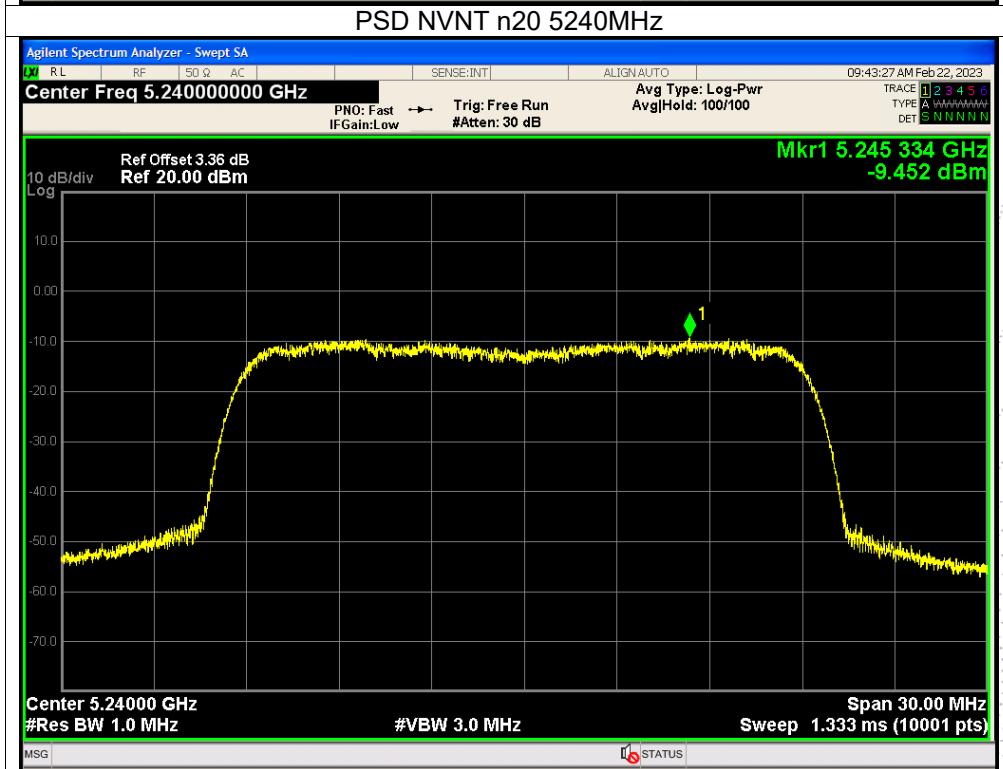
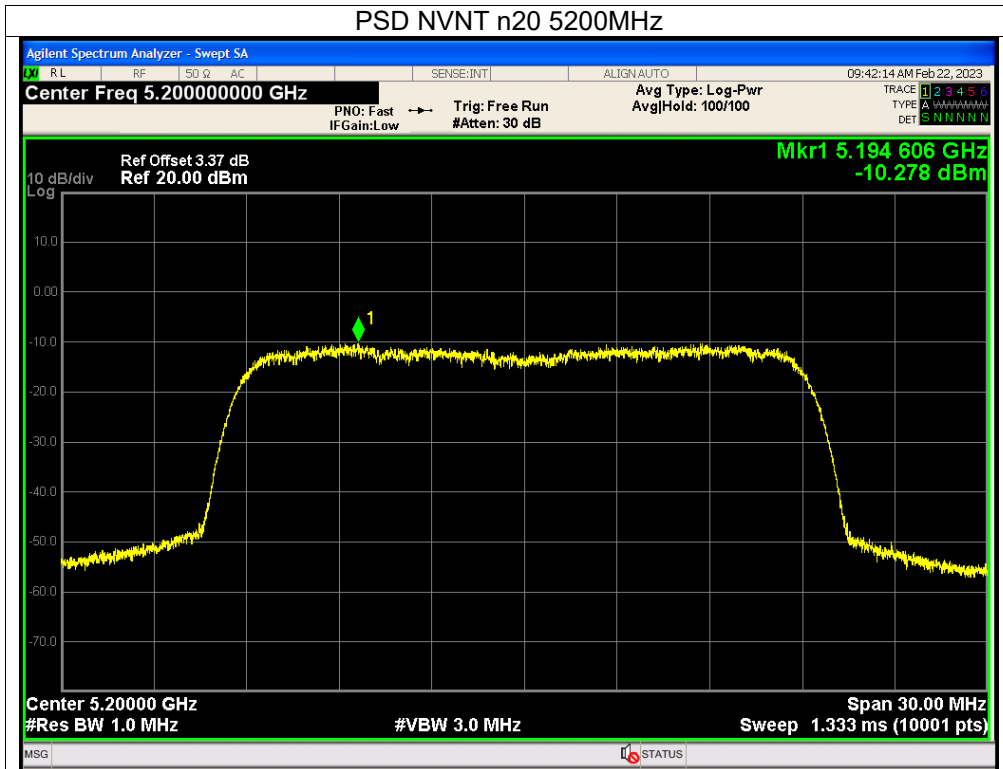
**U-NII-1**

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

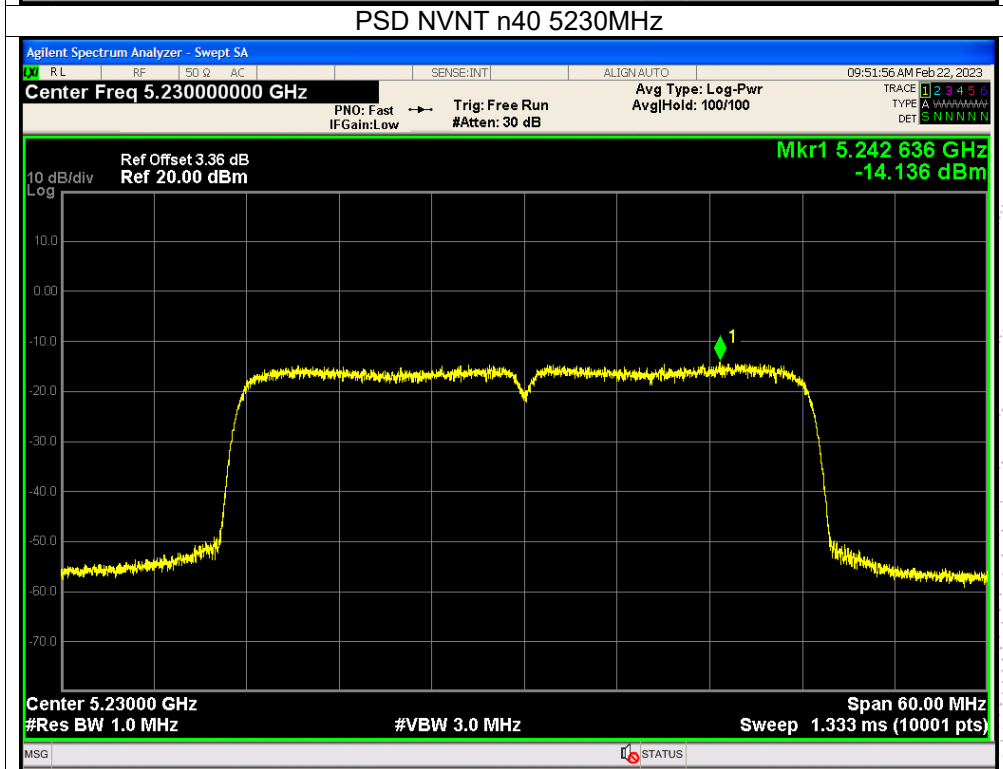
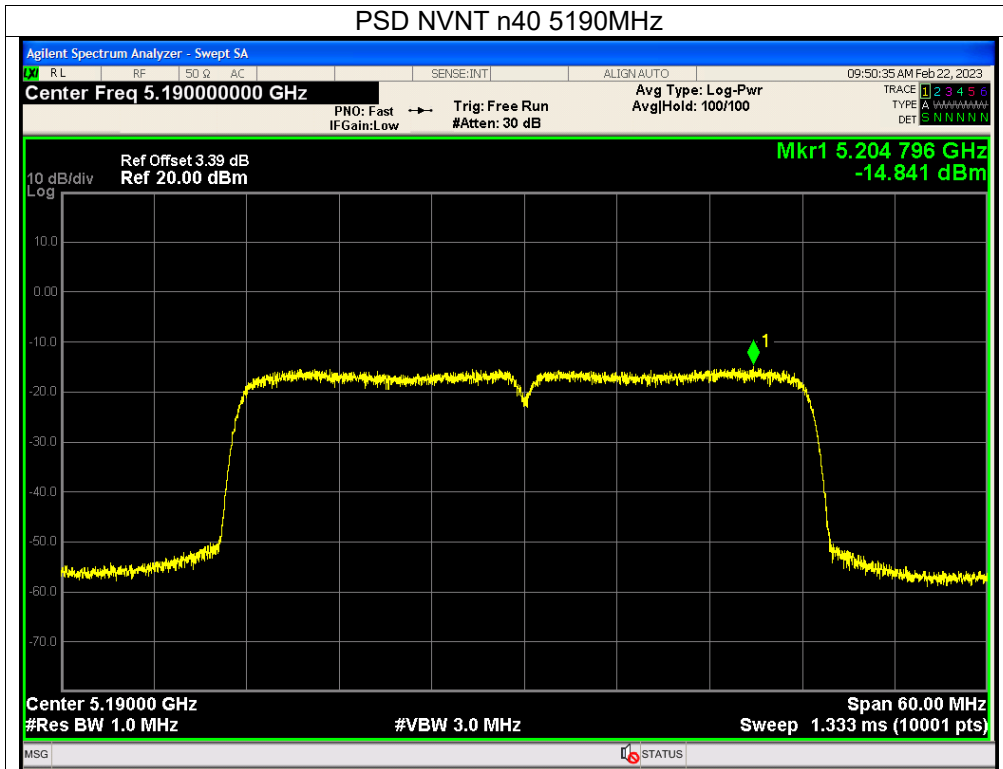


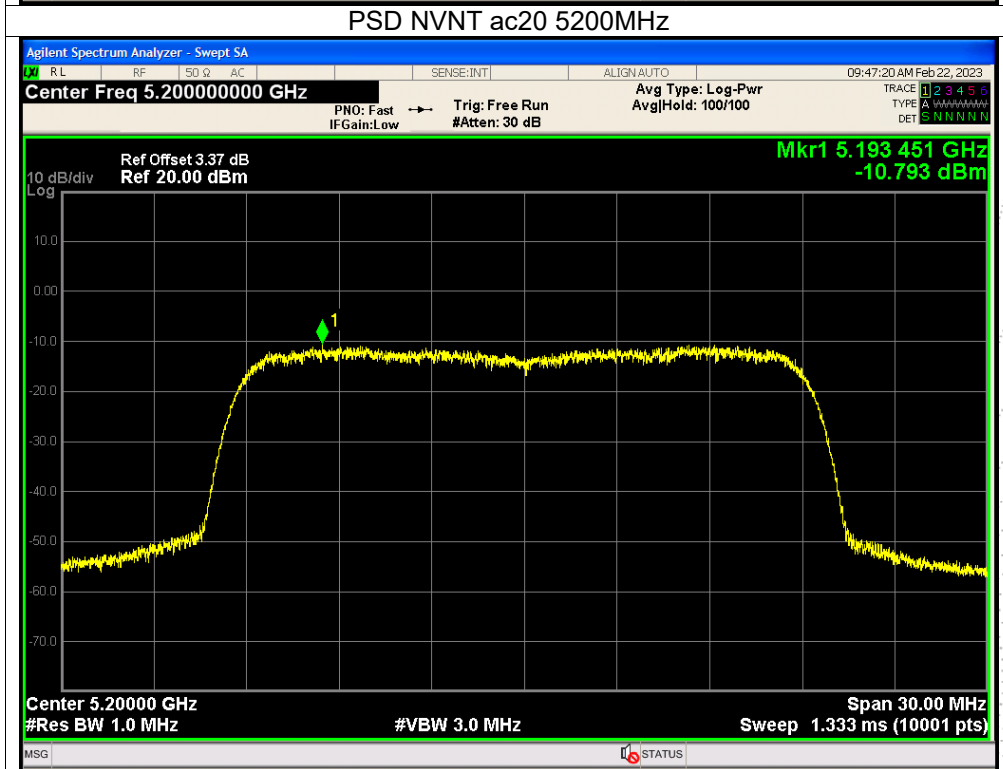
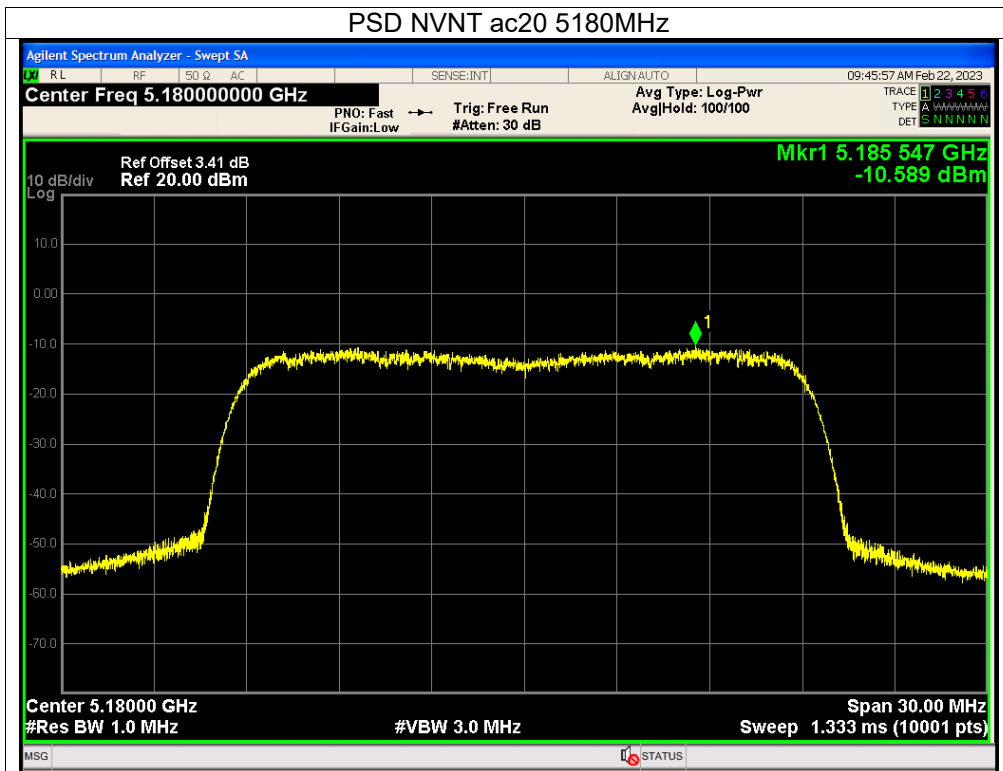


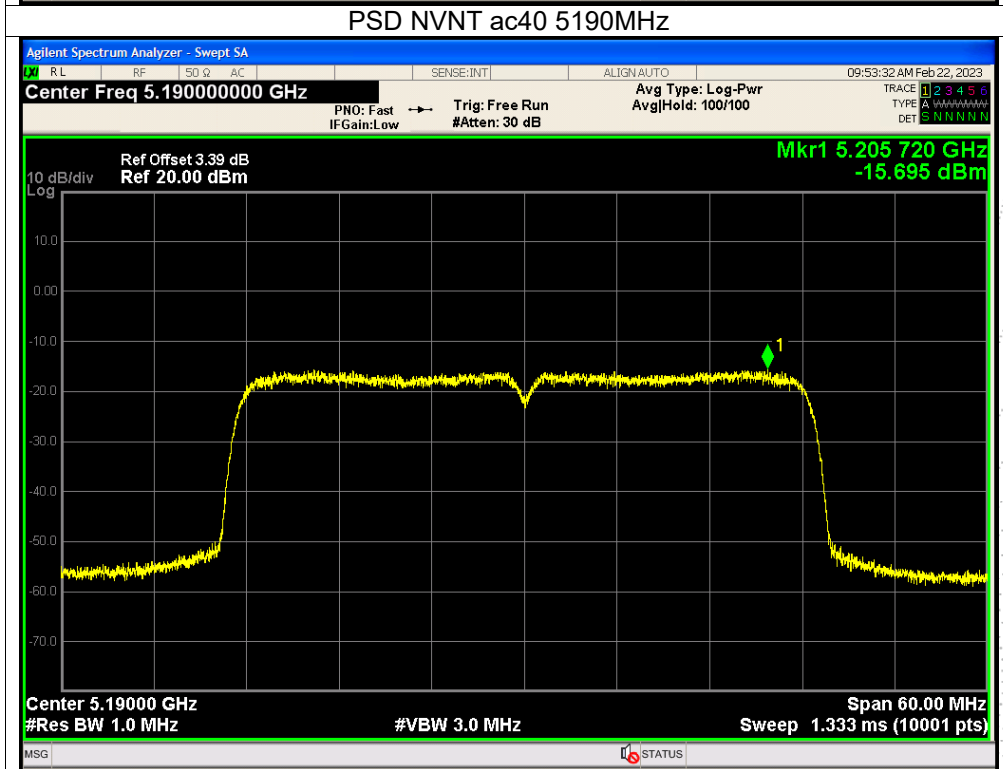
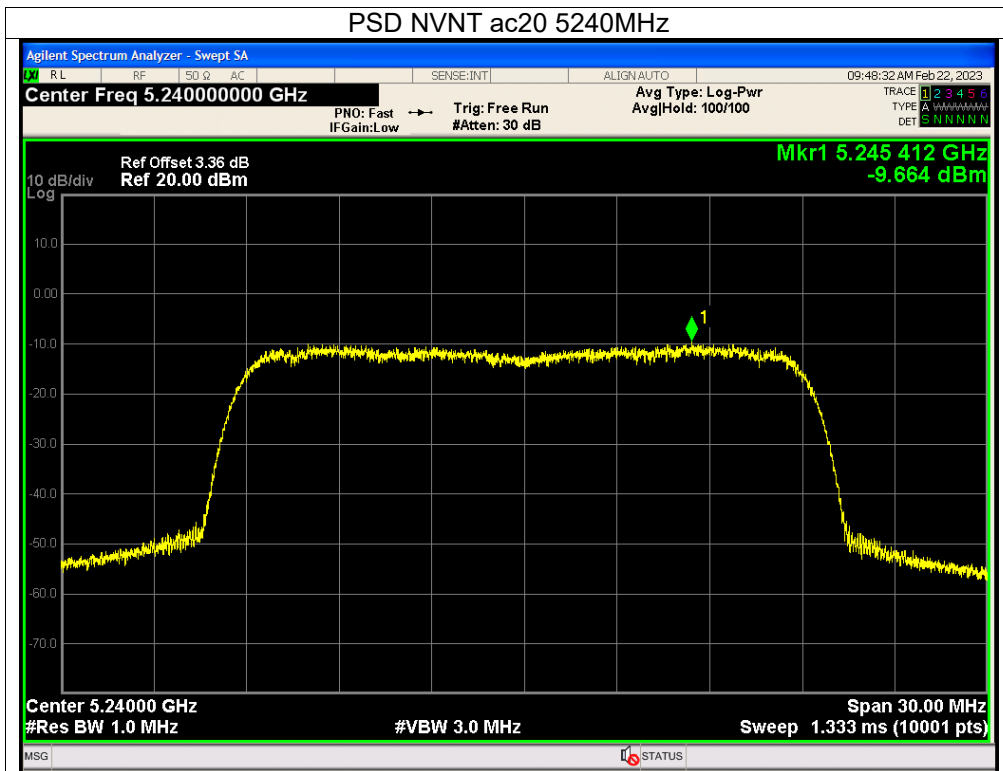


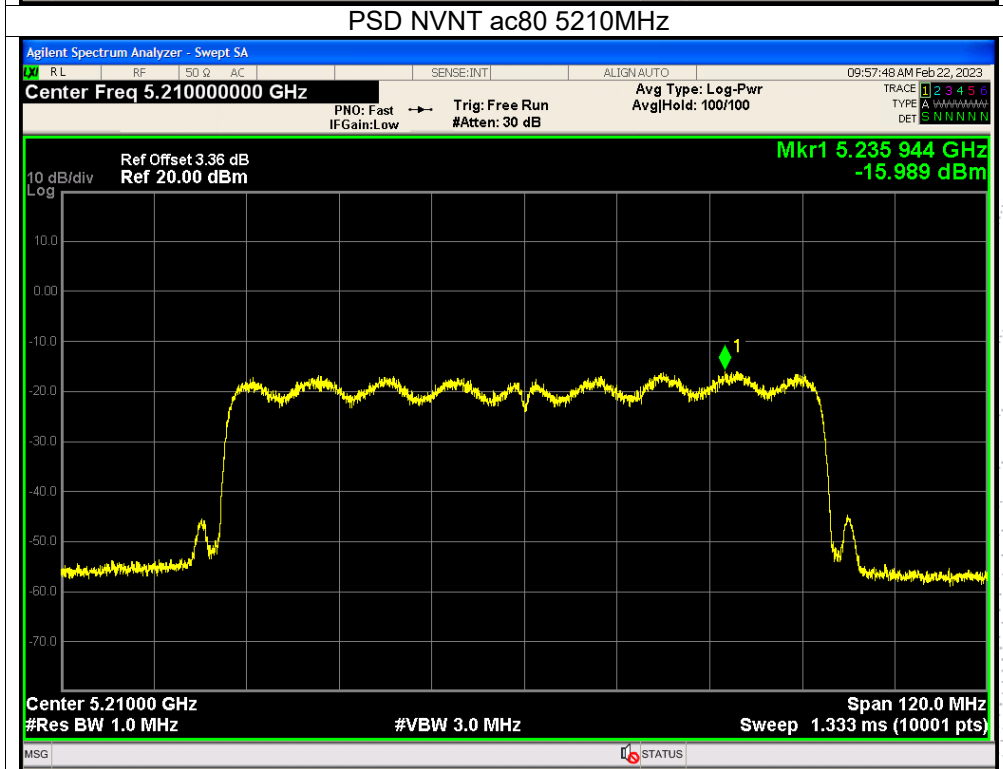
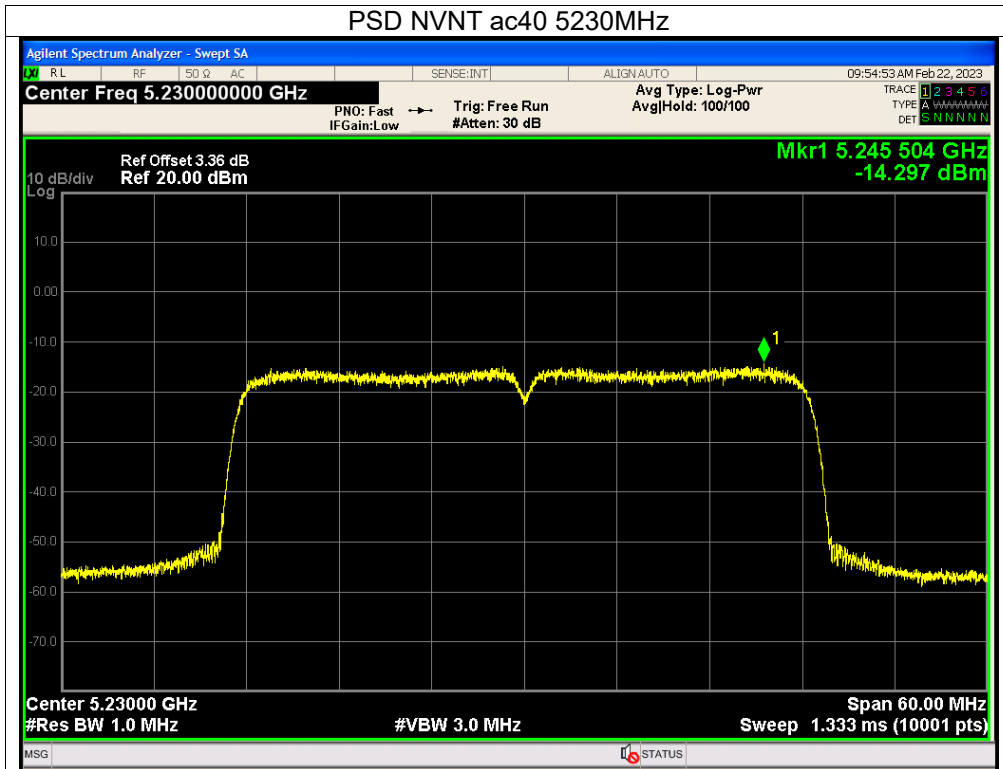








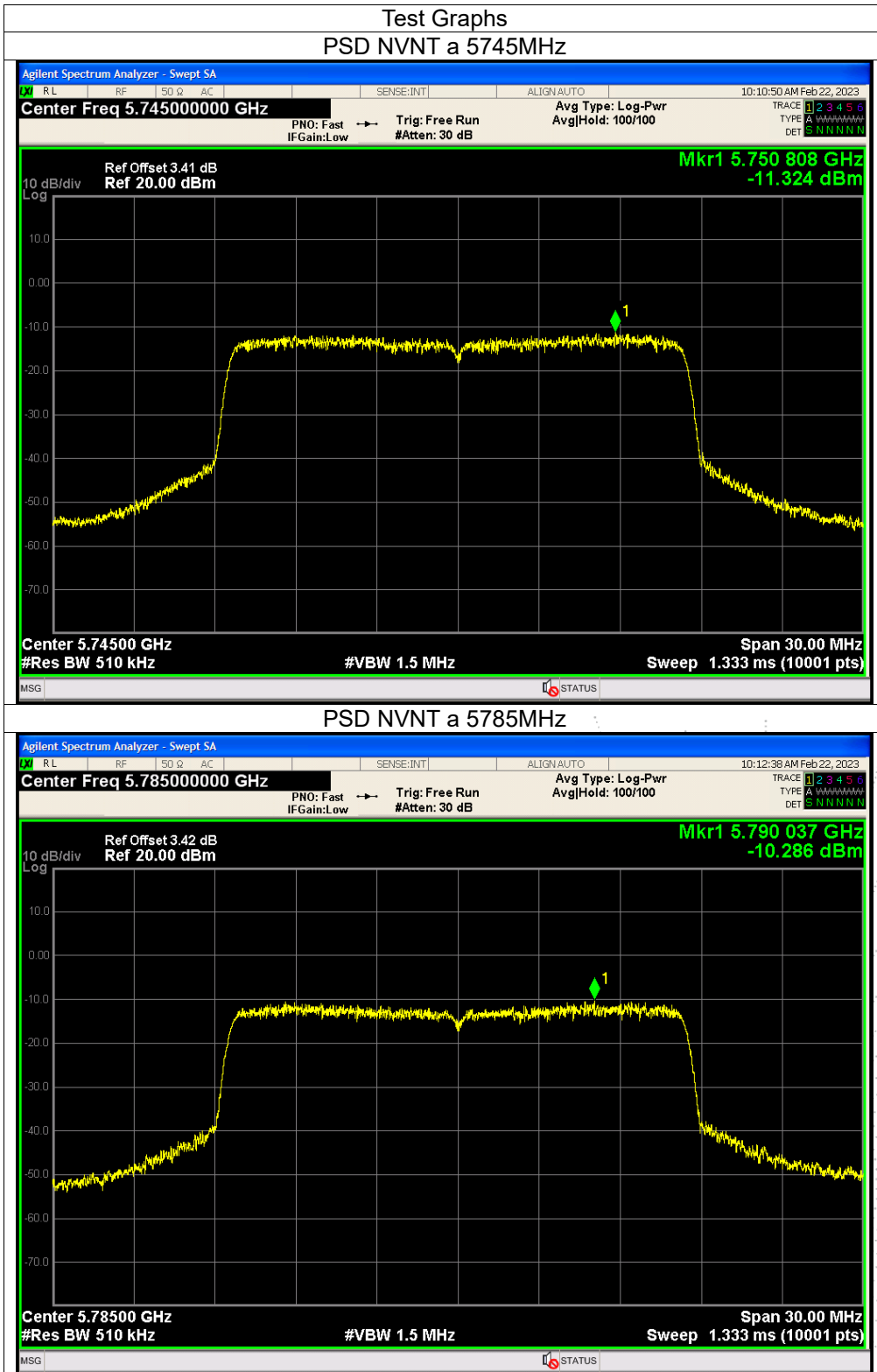


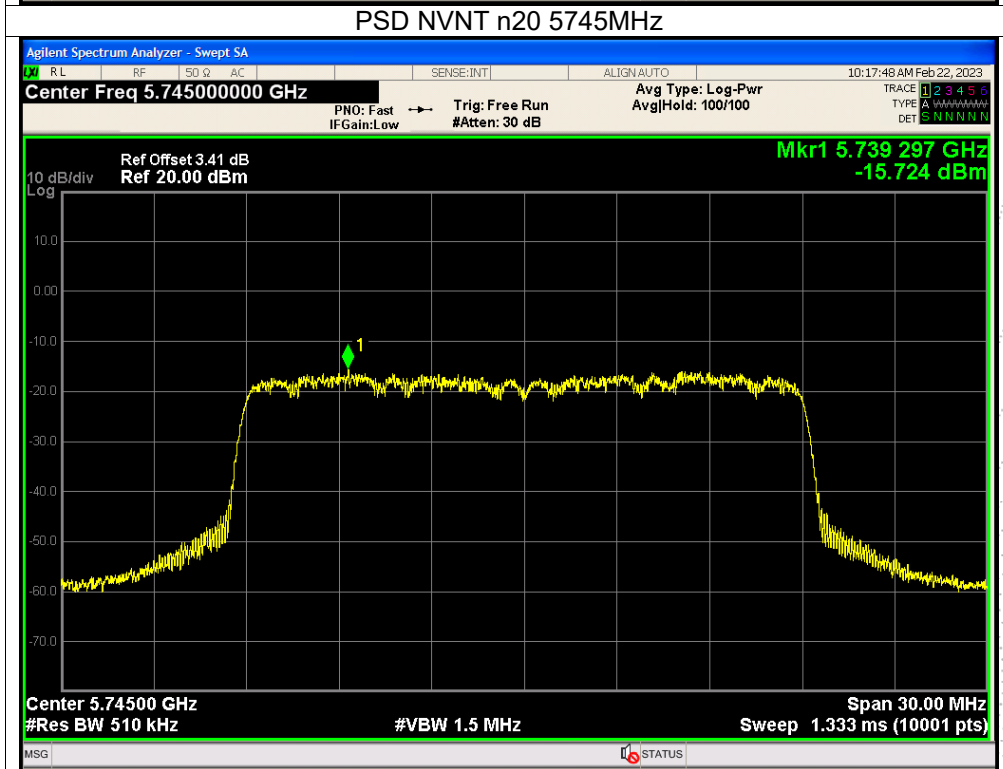
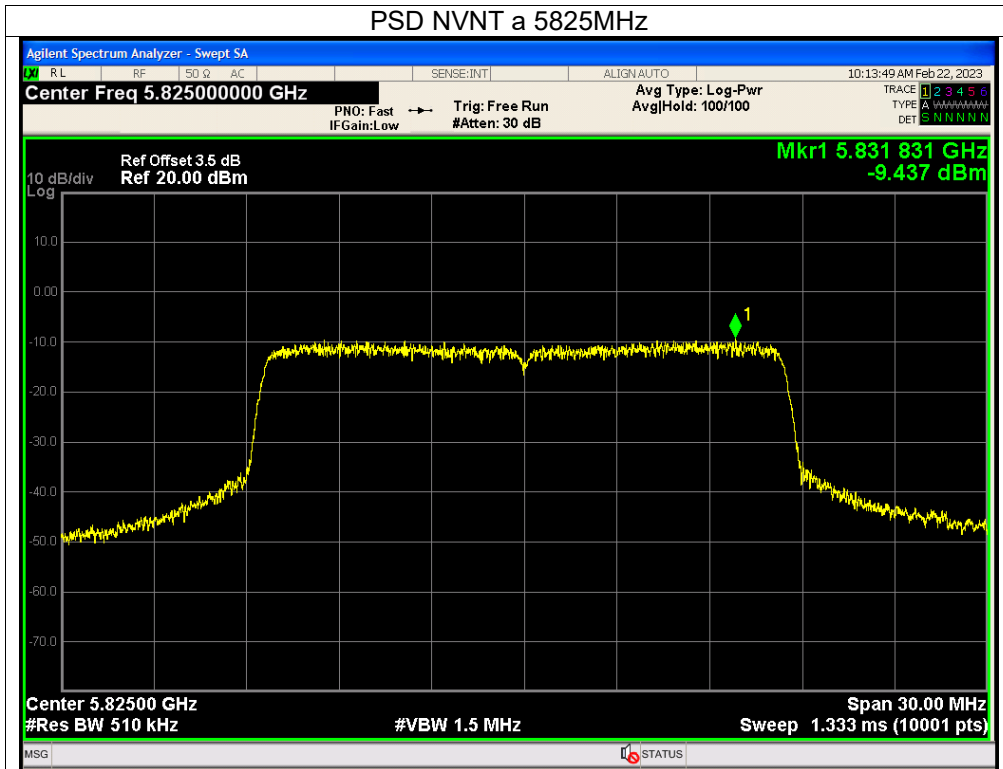


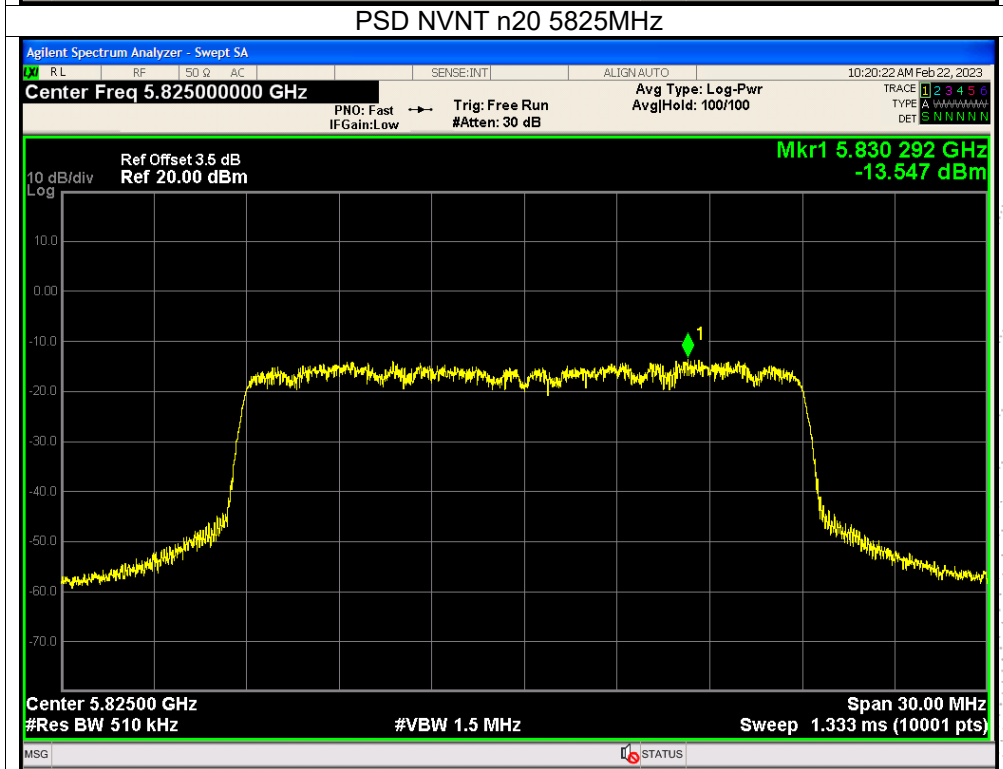
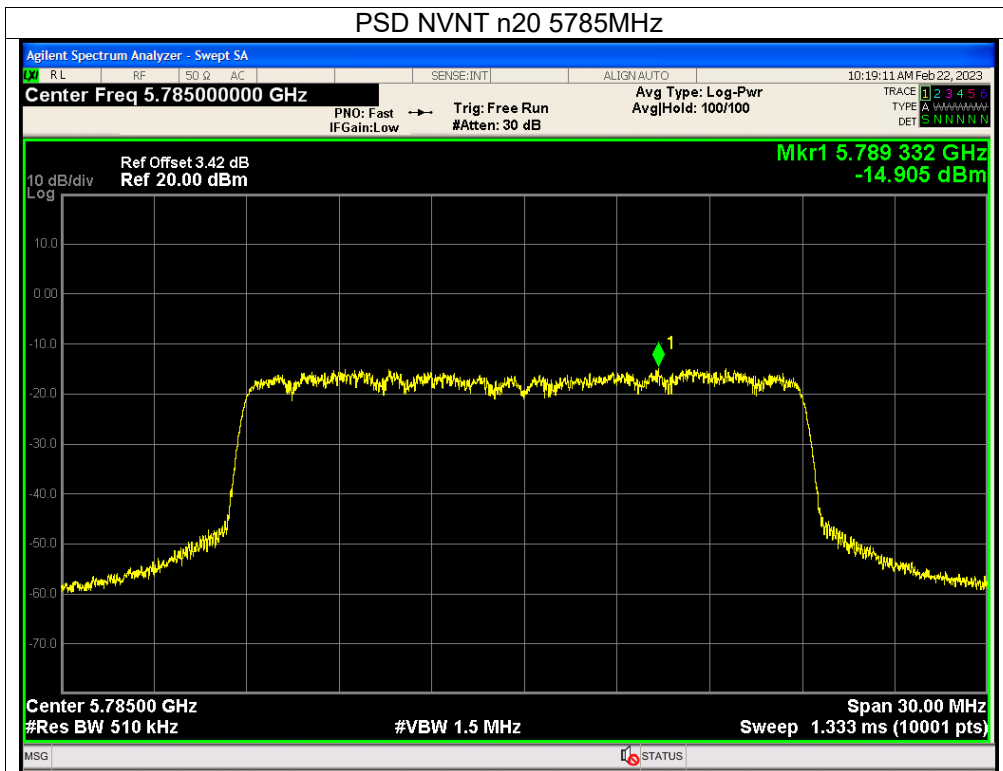


U-NII-3

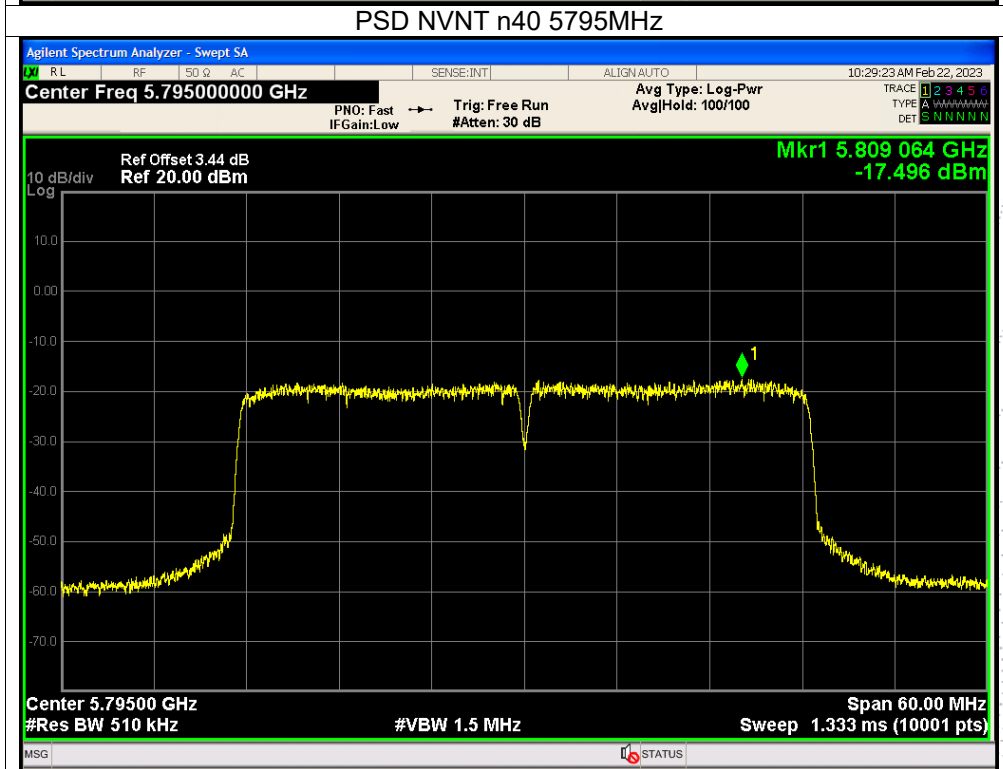
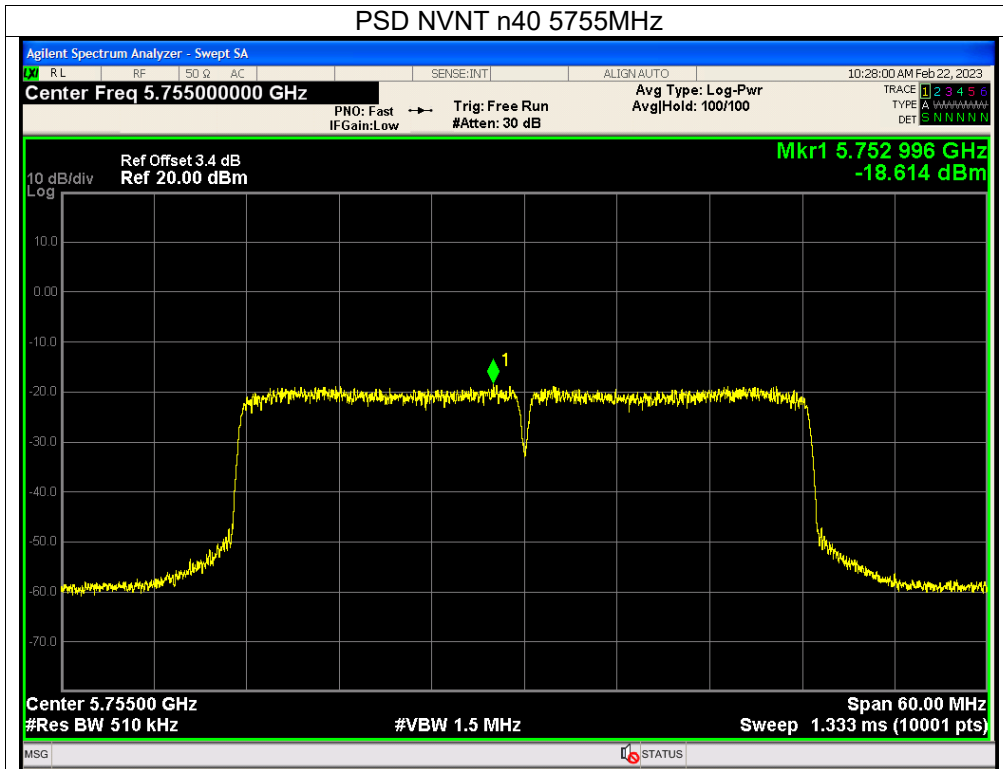
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot.

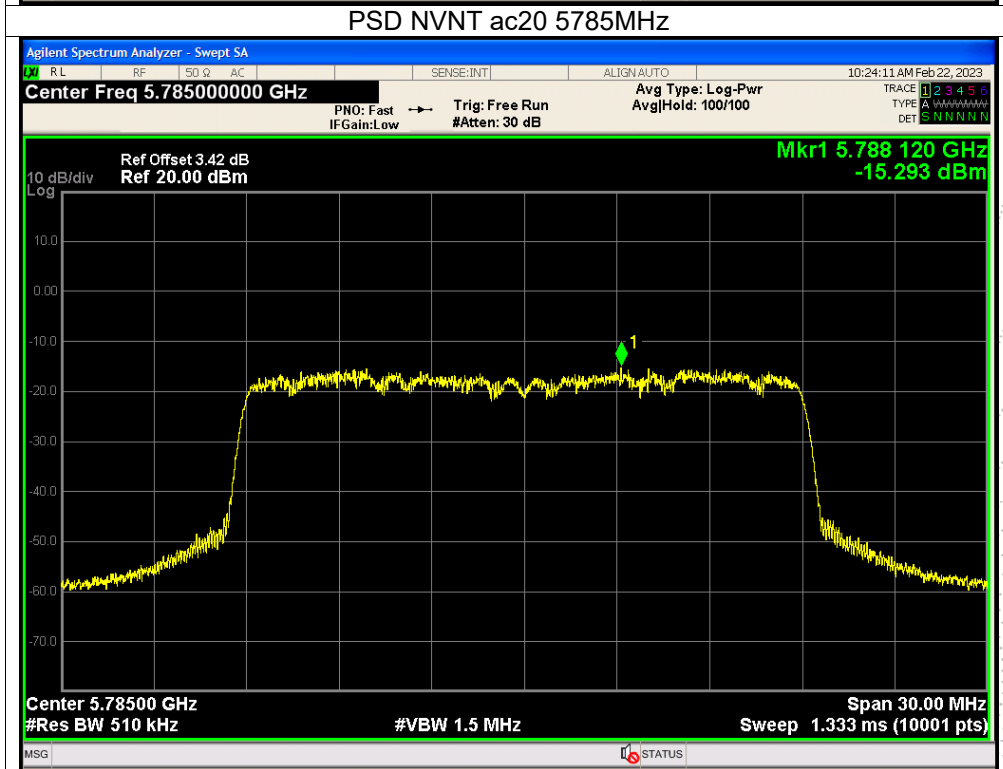
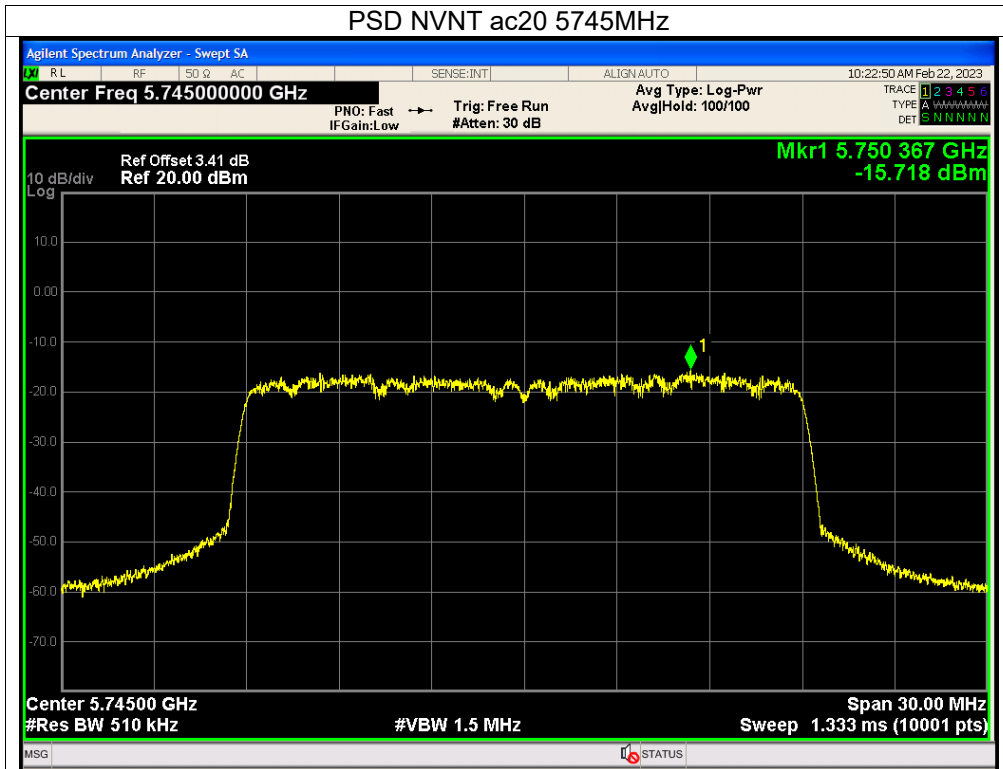


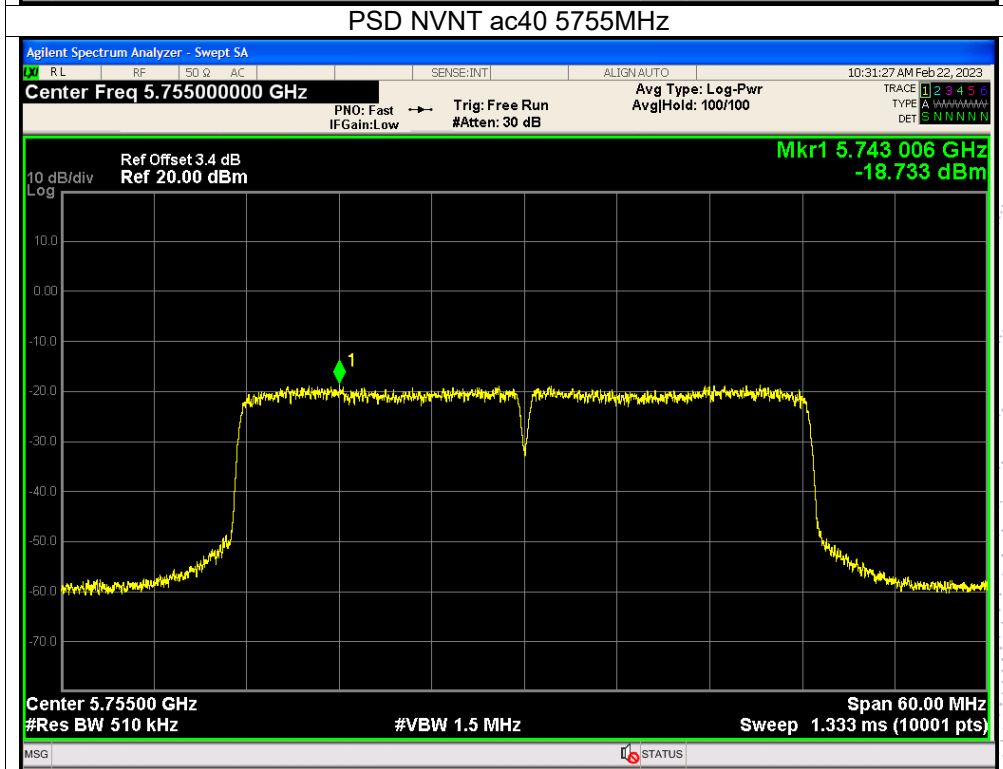
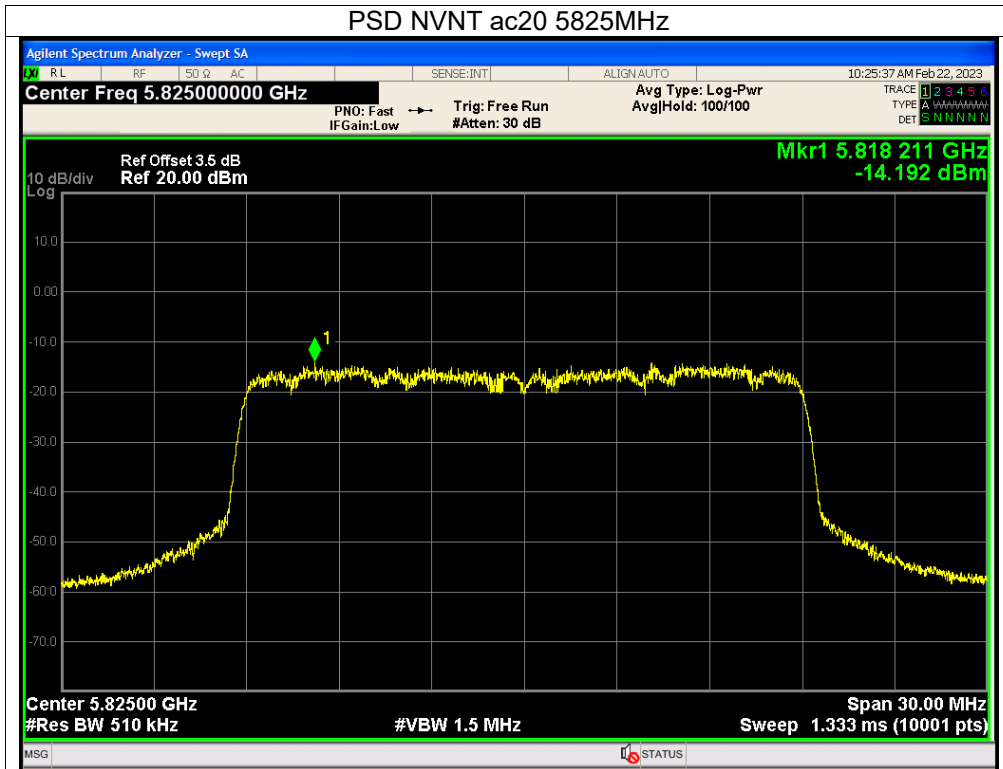


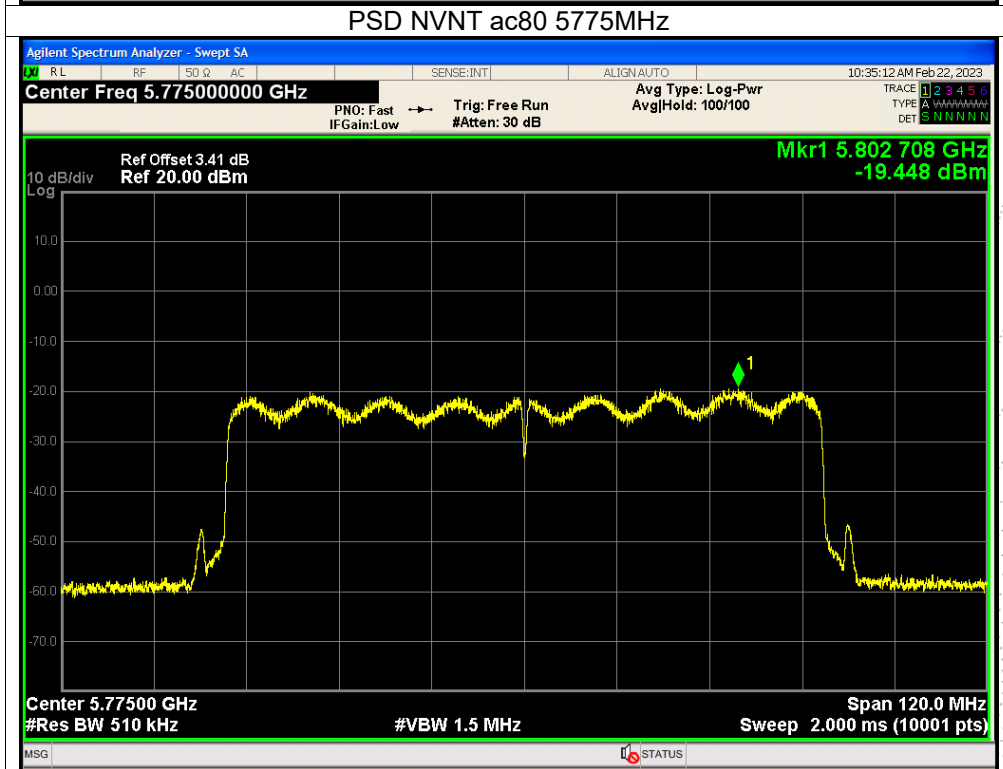
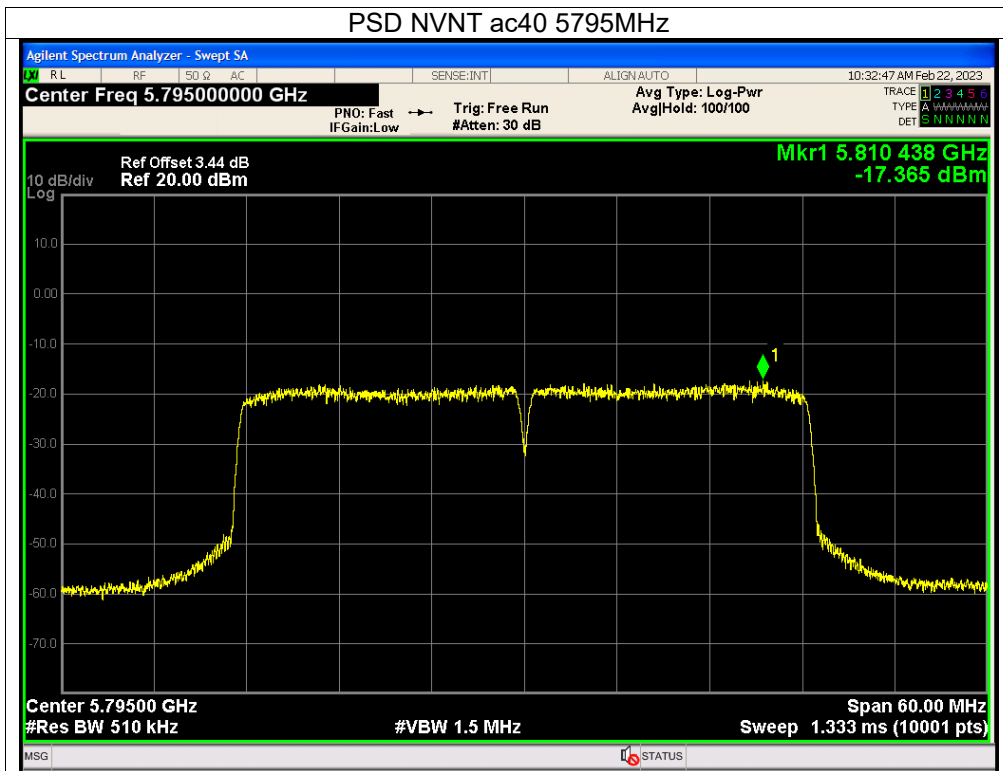






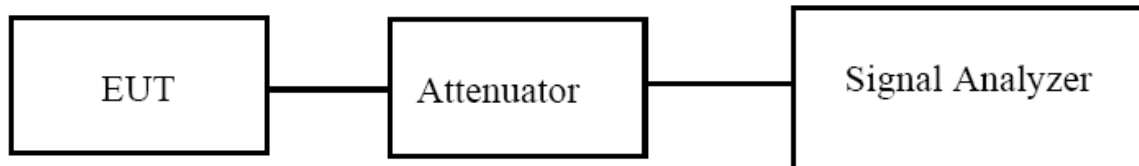






## 9. 26dB & 6dB & 99% Emission Bandwidth

### 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:	AC 120V/60Hz
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	20.661	20.874	/	Pass
NVNT	a	5200	20.779	20.730	/	Pass
NVNT	a	5240	20.539	20.799	/	Pass
NVNT	n20	5180	21.592	21.559	/	Pass
NVNT	n20	5200	21.351	21.550	/	Pass
NVNT	n20	5240	21.269	21.362	/	Pass
NVNT	n40	5190	43.241	43.915	/	Pass
NVNT	n40	5230	42.843	42.870	/	Pass
NVNT	ac20	5180	21.326	21.698	/	Pass
NVNT	ac20	5200	21.466	21.436	/	Pass
NVNT	ac20	5240	21.605	21.388	/	Pass
NVNT	ac40	5190	43.366	43.565	/	Pass
NVNT	ac40	5230	42.774	43.107	/	Pass
NVNT	ac80	5210	82.623	82.475	/	Pass

Condition	Mode	Frequency (MHz)	99% OBW (MHz)	
			Ant A	Ant B
NVNT	a	5180	16.549	16.551
NVNT	a	5200	16.527	16.561
NVNT	a	5240	16.512	16.532
NVNT	n20	5180	17.674	17.672
NVNT	n20	5200	17.669	17.672
NVNT	n20	5240	17.660	17.664
NVNT	n40	5190	36.205	36.178
NVNT	n40	5230	36.167	36.161
NVNT	ac20	5180	17.672	17.698
NVNT	ac20	5200	17.678	17.690
NVNT	ac20	5240	17.670	17.685
NVNT	ac40	5190	36.204	36.192
NVNT	ac40	5230	36.178	36.218
NVNT	ac80	5210	75.610	75.636

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	(5745-5825MHz)		

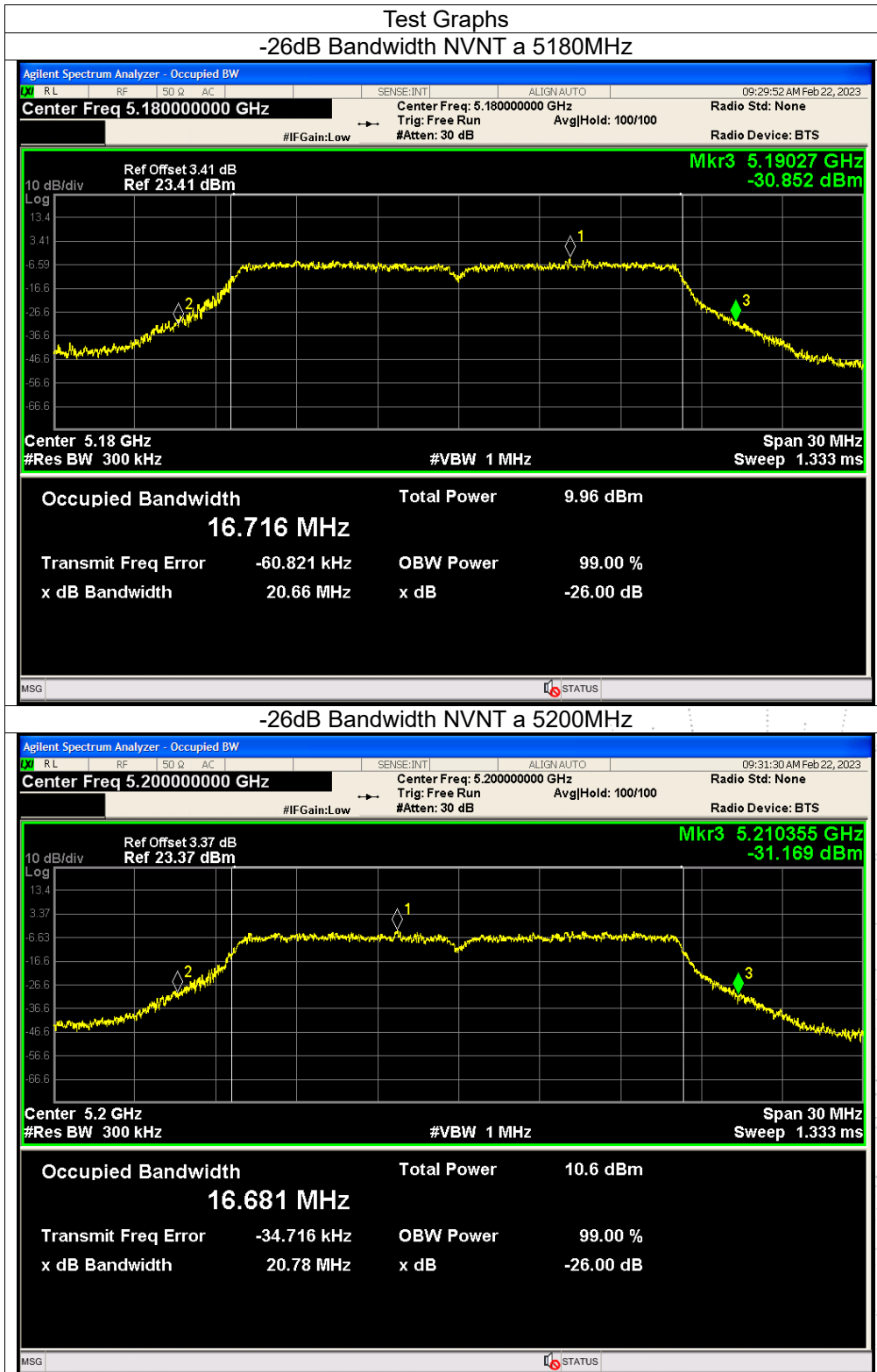
Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)		Limit -6 dB Bandwidth (MHz)	Verdict
			Ant A	Ant B		
NVNT	a	5745	16.526	16.524	0.5	Pass
NVNT	a	5785	16.561	16.527	0.5	Pass
NVNT	a	5825	16.519	16.523	0.5	Pass
NVNT	n20	5745	17.722	17.690	0.5	Pass
NVNT	n20	5785	17.719	17.638	0.5	Pass
NVNT	n20	5825	17.693	17.658	0.5	Pass
NVNT	n40	5755	36.448	36.458	0.5	Pass
NVNT	n40	5795	36.425	36.415	0.5	Pass
NVNT	ac20	5745	17.705	17.642	0.5	Pass
NVNT	ac20	5785	17.731	17.643	0.5	Pass
NVNT	ac20	5825	17.741	17.638	0.5	Pass
NVNT	ac40	5755	36.417	36.415	0.5	Pass
NVNT	ac40	5795	36.405	36.436	0.5	Pass
NVNT	ac80	5775	76.349	76.319	0.5	Pass

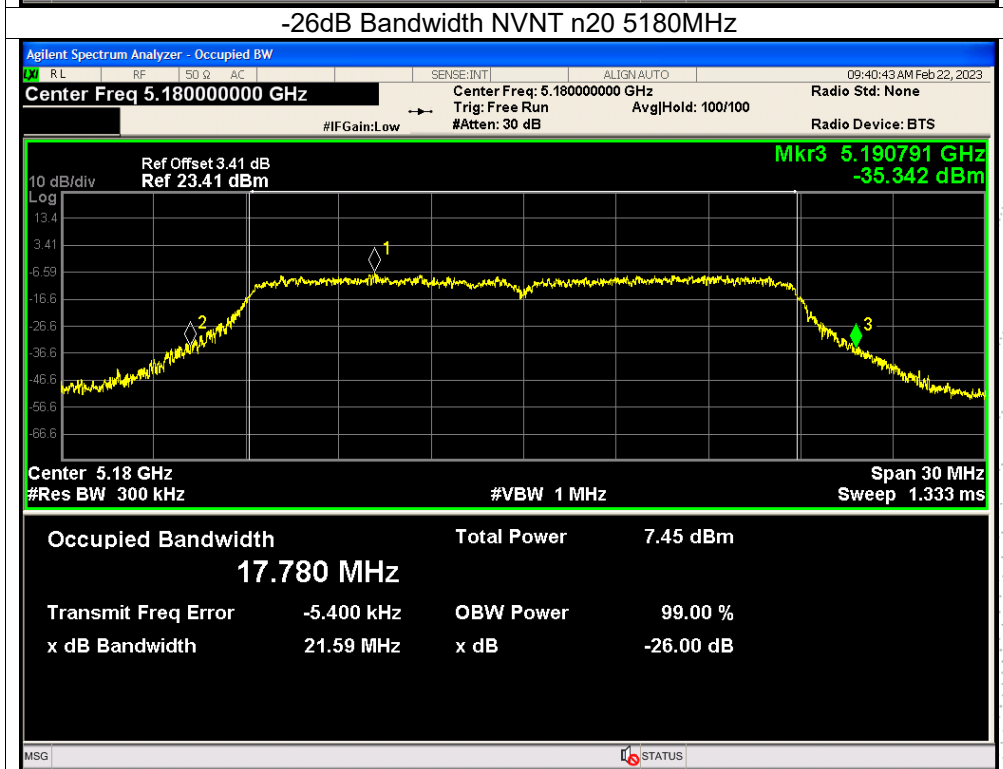
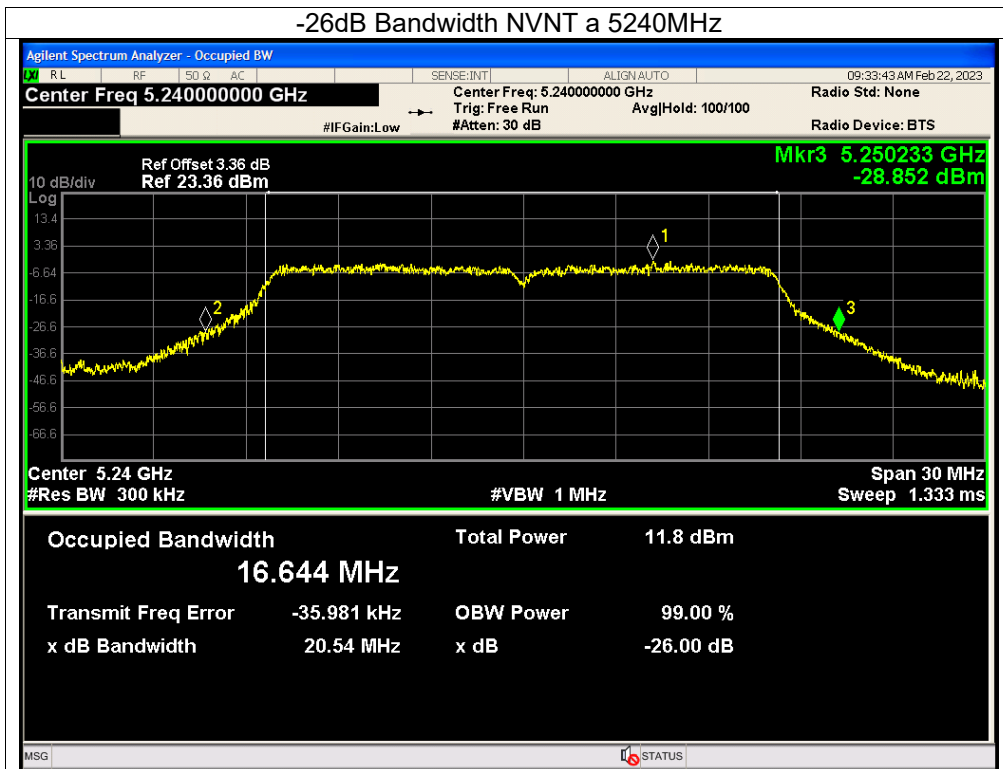
Condition	Mode	Frequency (MHz)	99% OBW (MHz)	
			Ant A	Ant B
NVNT	a	5745	16.543	16.544
NVNT	a	5785	16.585	16.550
NVNT	a	5825	16.613	16.535
NVNT	n20	5745	17.662	17.670
NVNT	n20	5785	17.707	17.680
NVNT	n20	5825	17.682	17.680
NVNT	n40	5755	36.216	36.265
NVNT	n40	5795	36.216	36.206
NVNT	ac20	5745	17.667	17.650
NVNT	ac20	5785	17.662	17.710
NVNT	ac20	5825	17.681	17.685
NVNT	ac40	5755	36.210	36.247
NVNT	ac40	5795	36.205	36.163
NVNT	ac80	5775	75.594	75.646

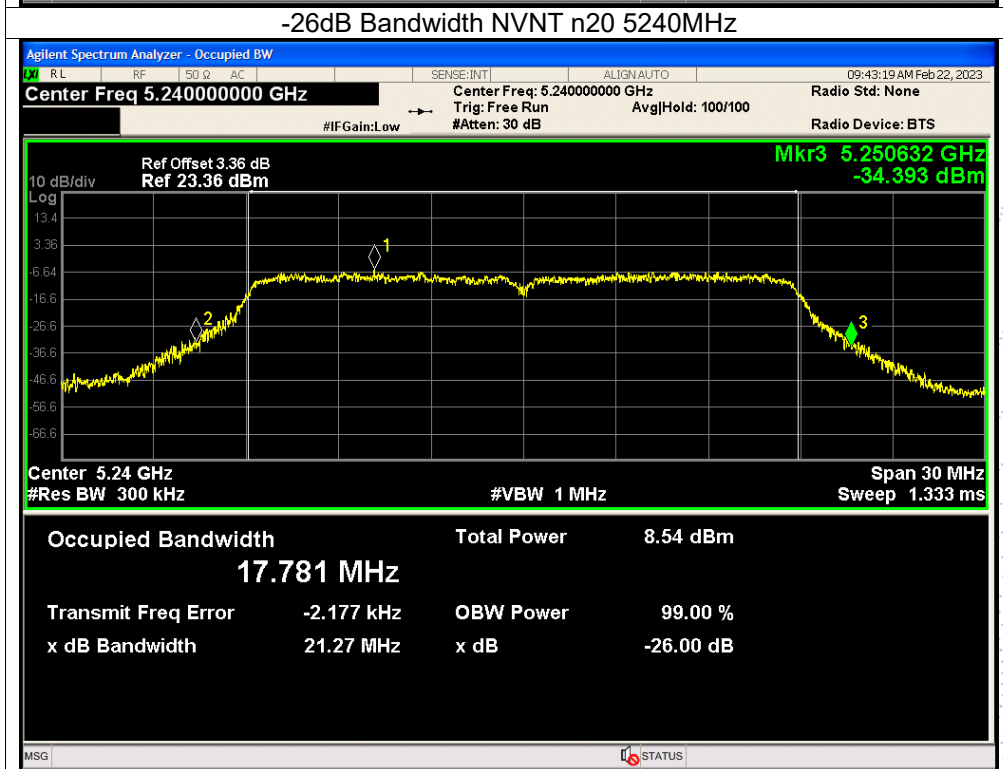
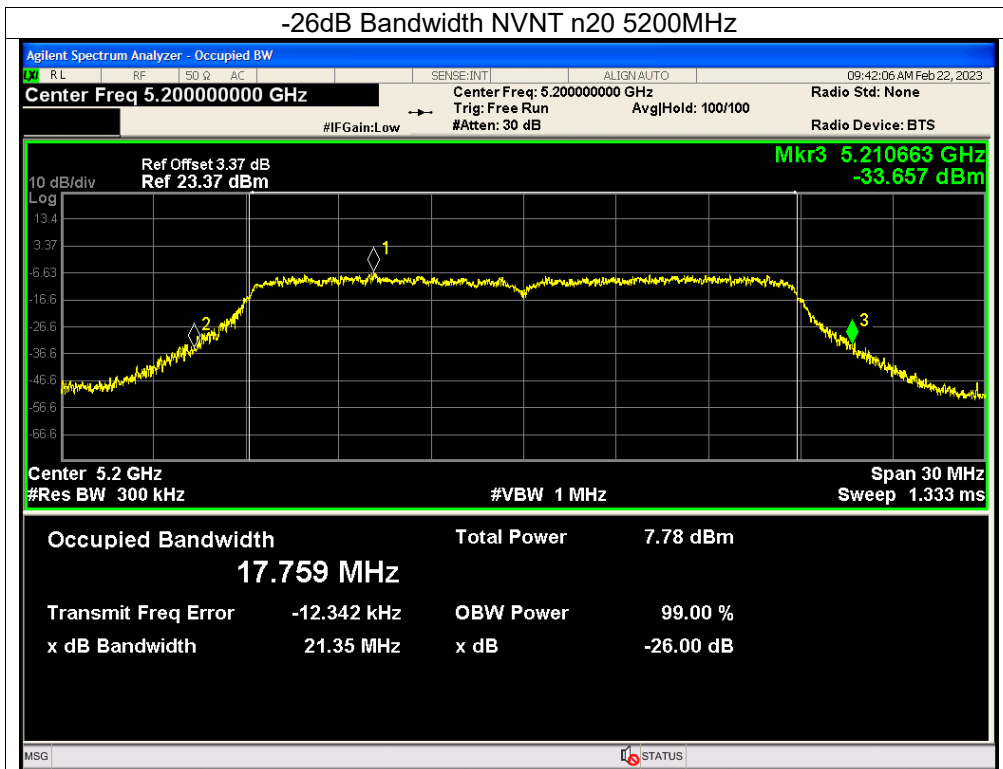


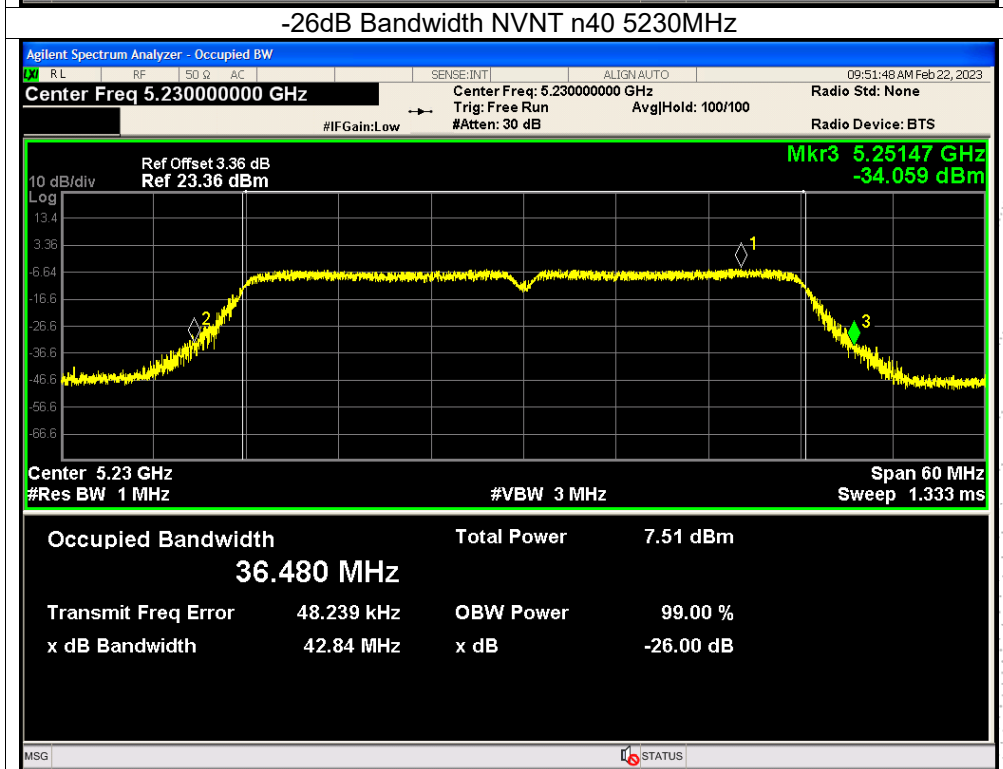
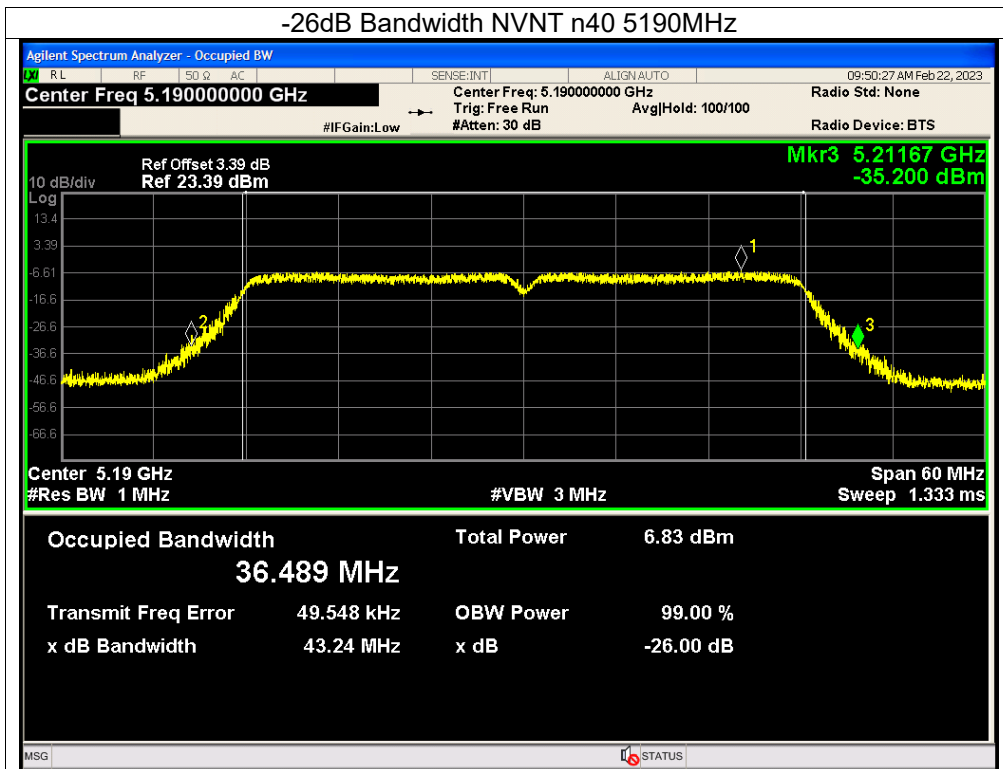
**U-NII-1**

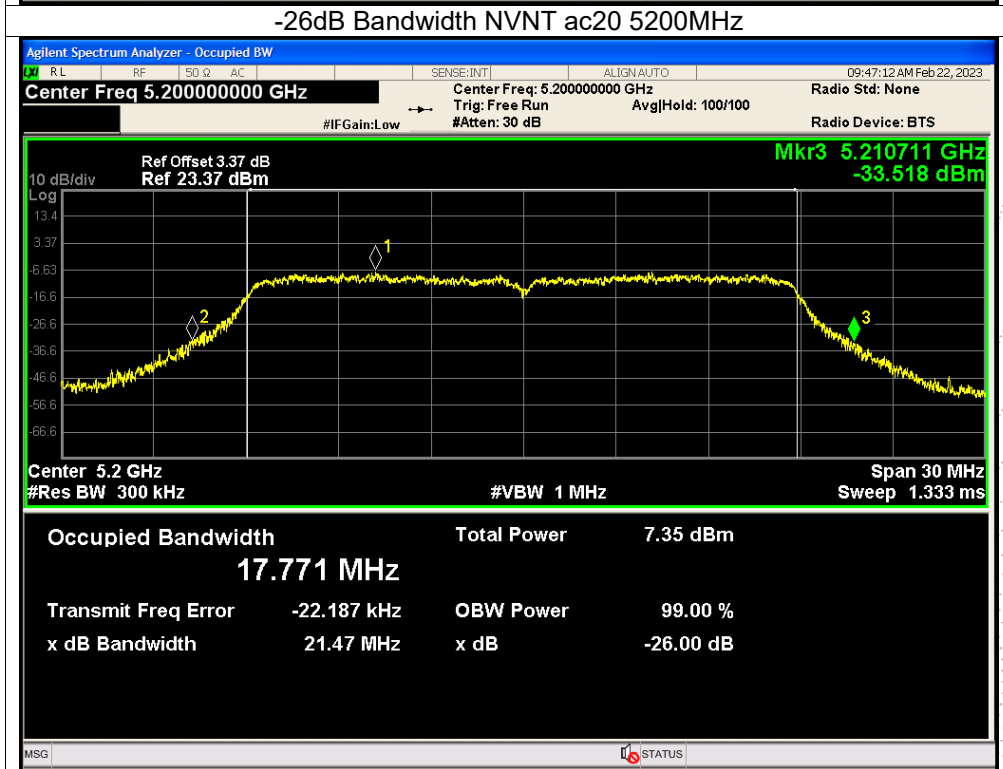
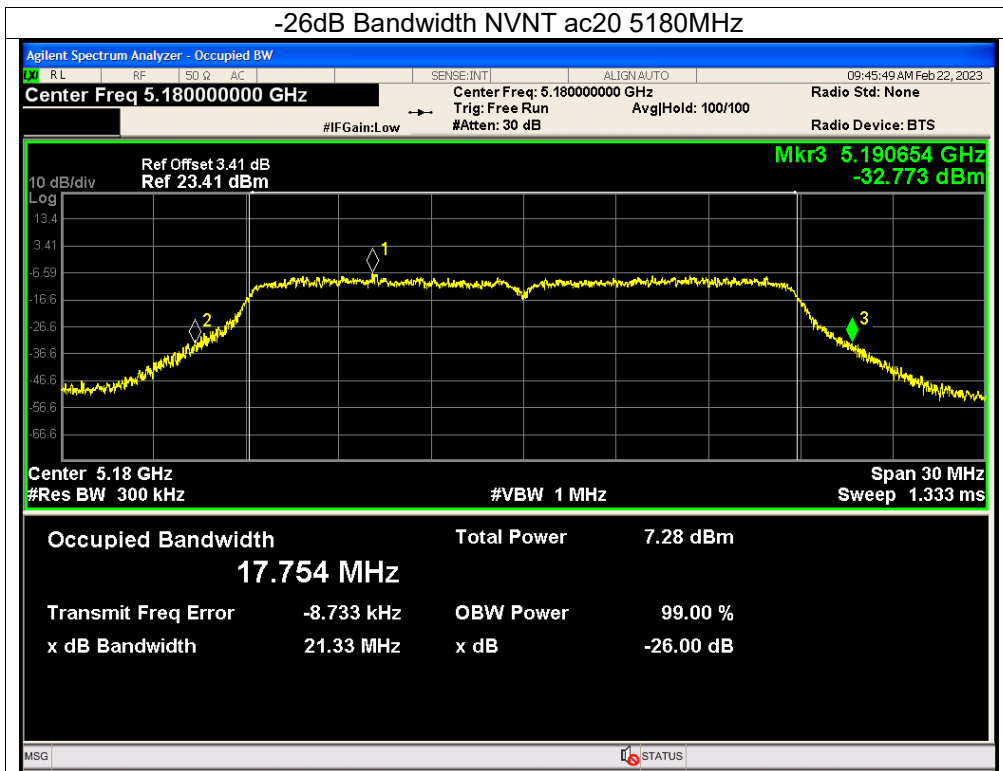
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot.

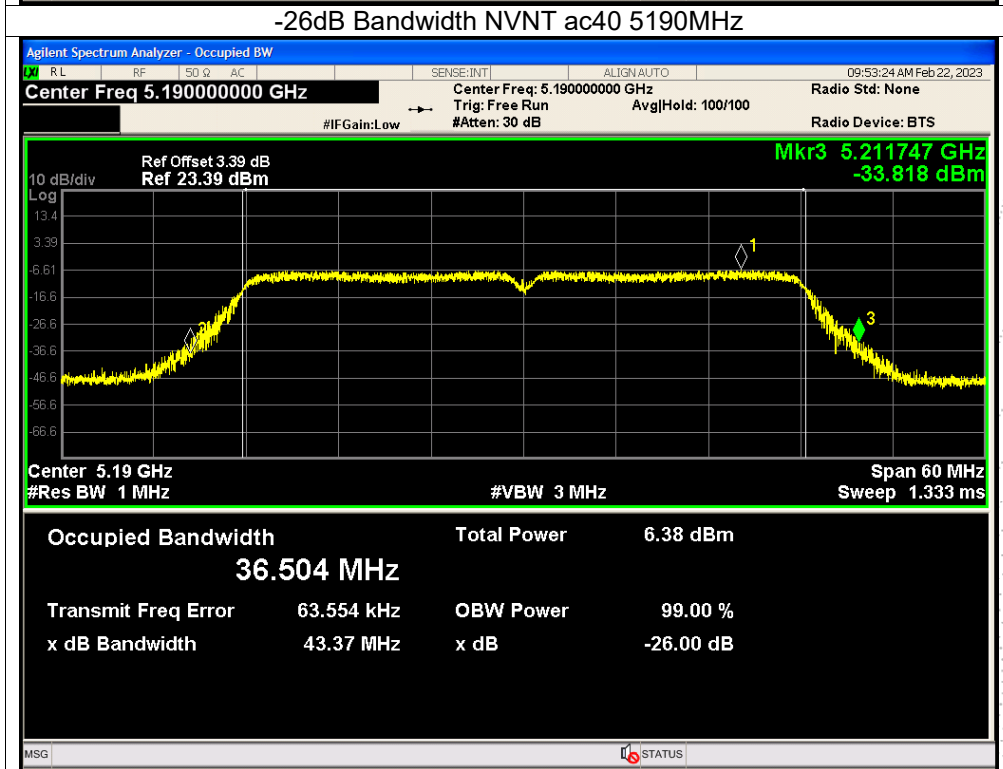
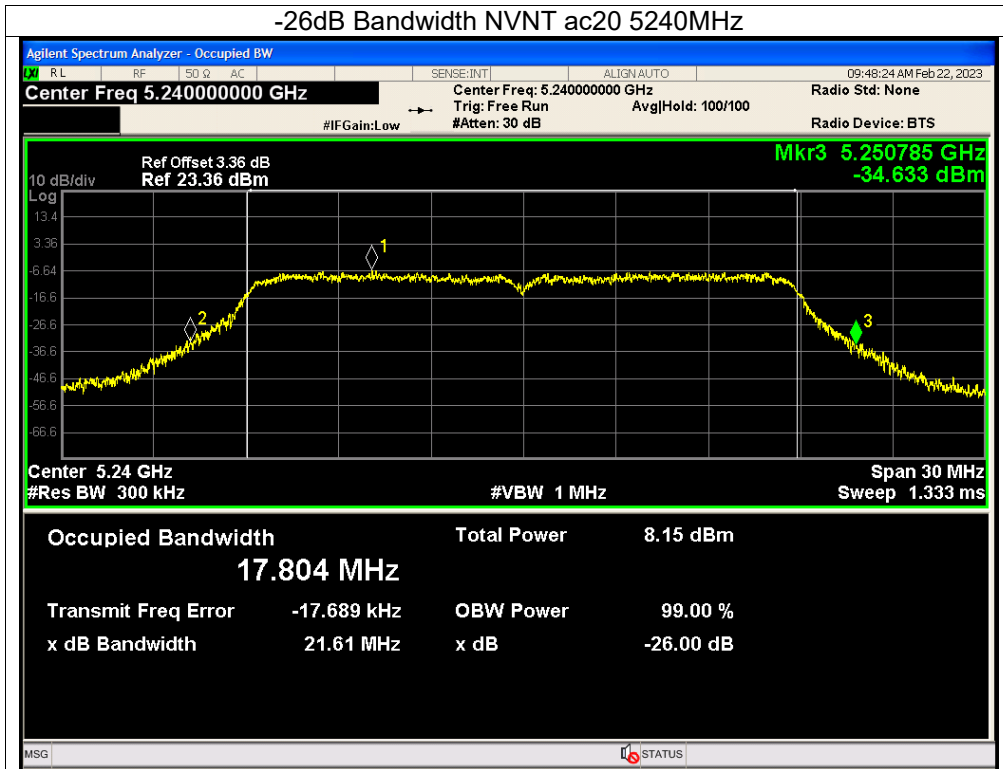


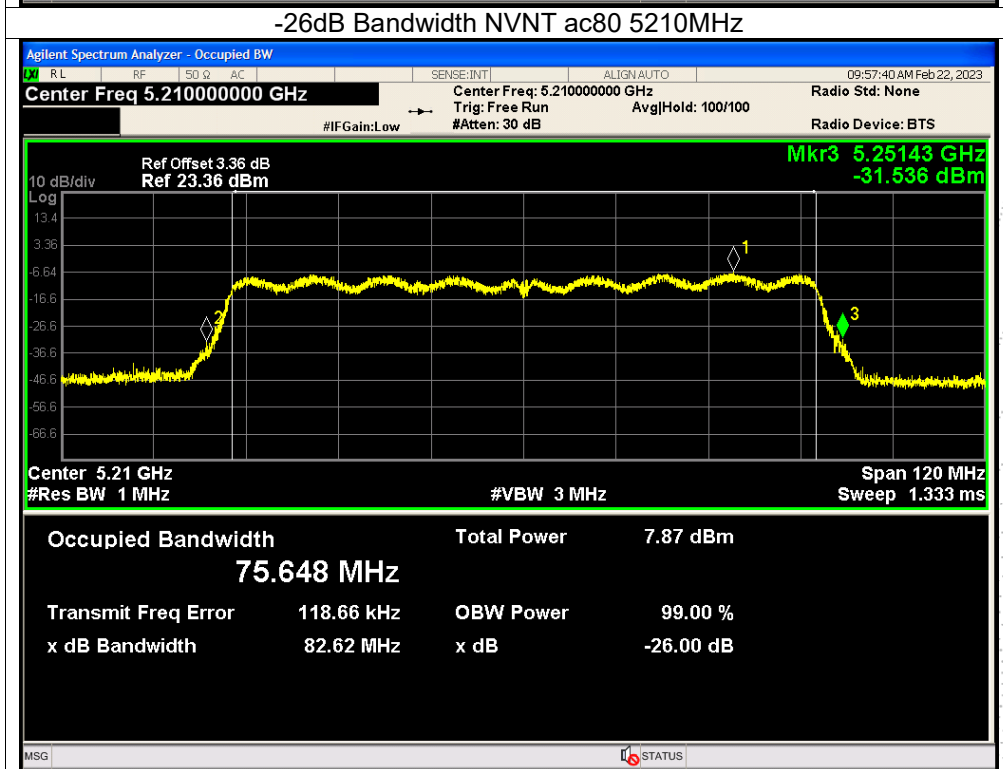
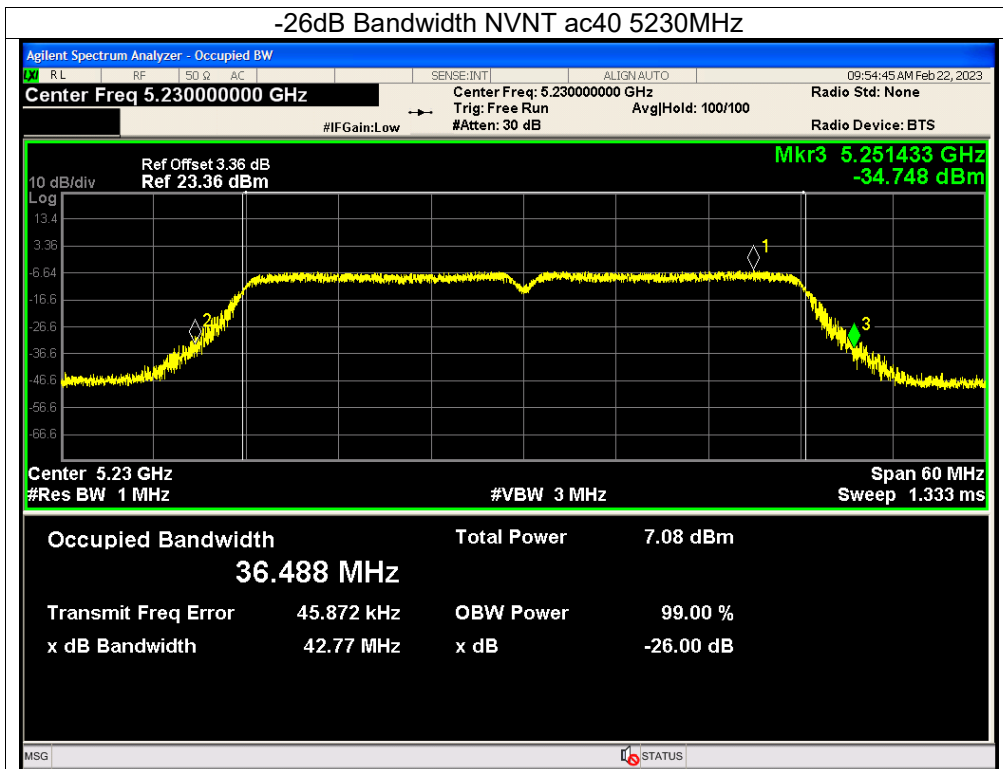




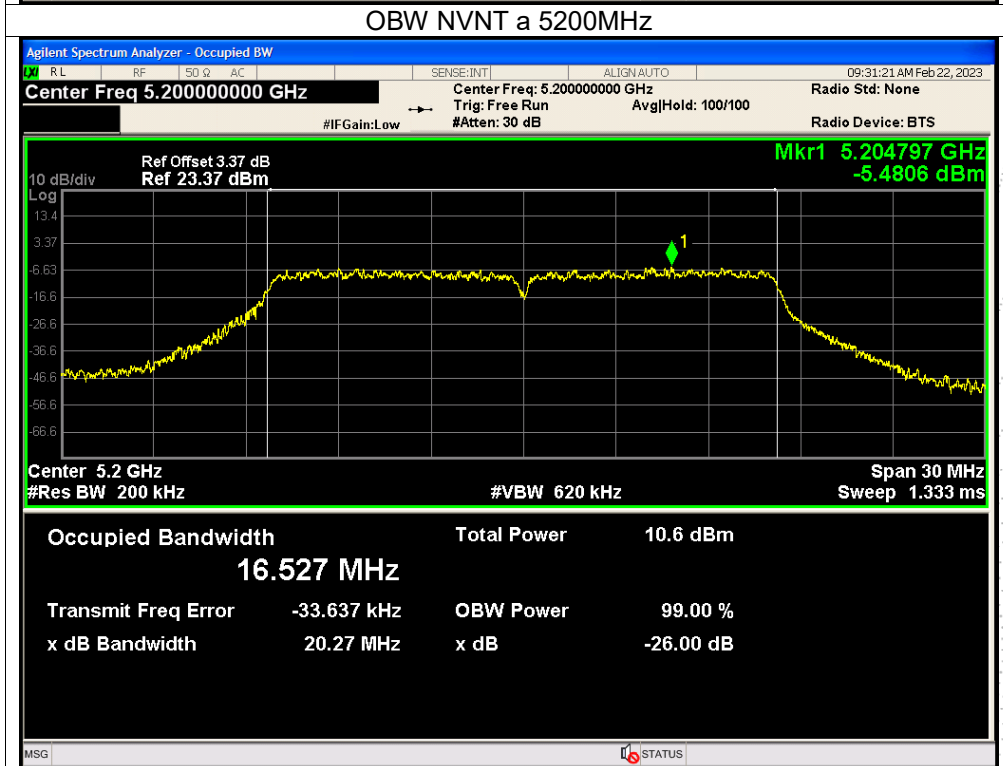
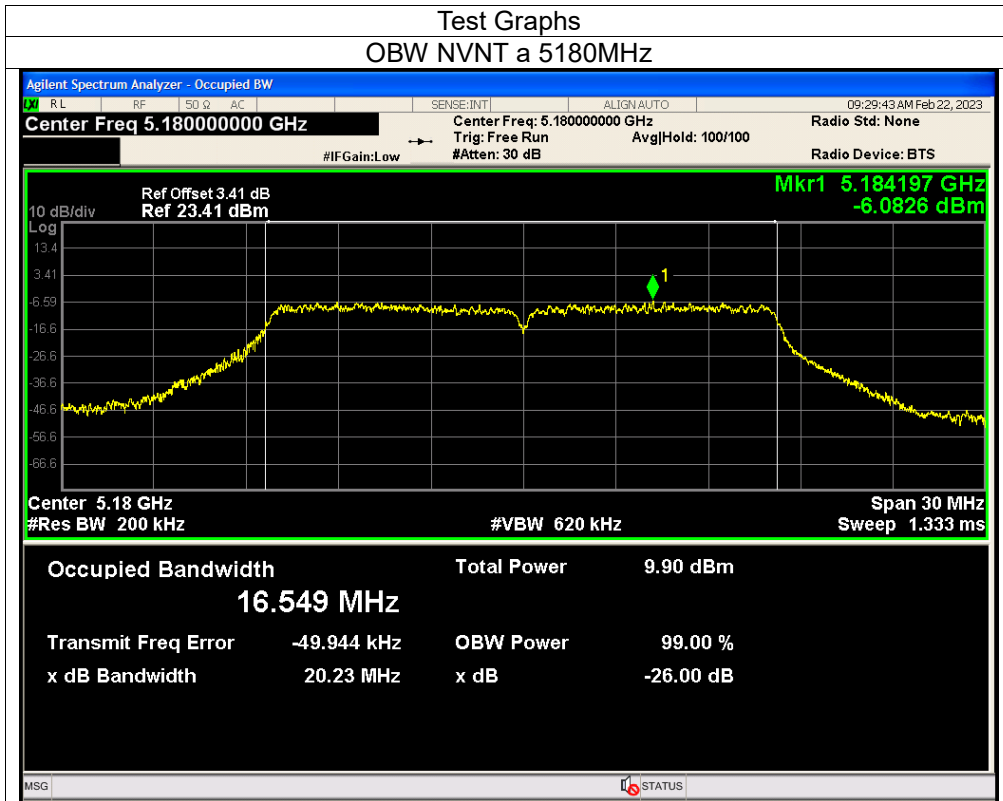


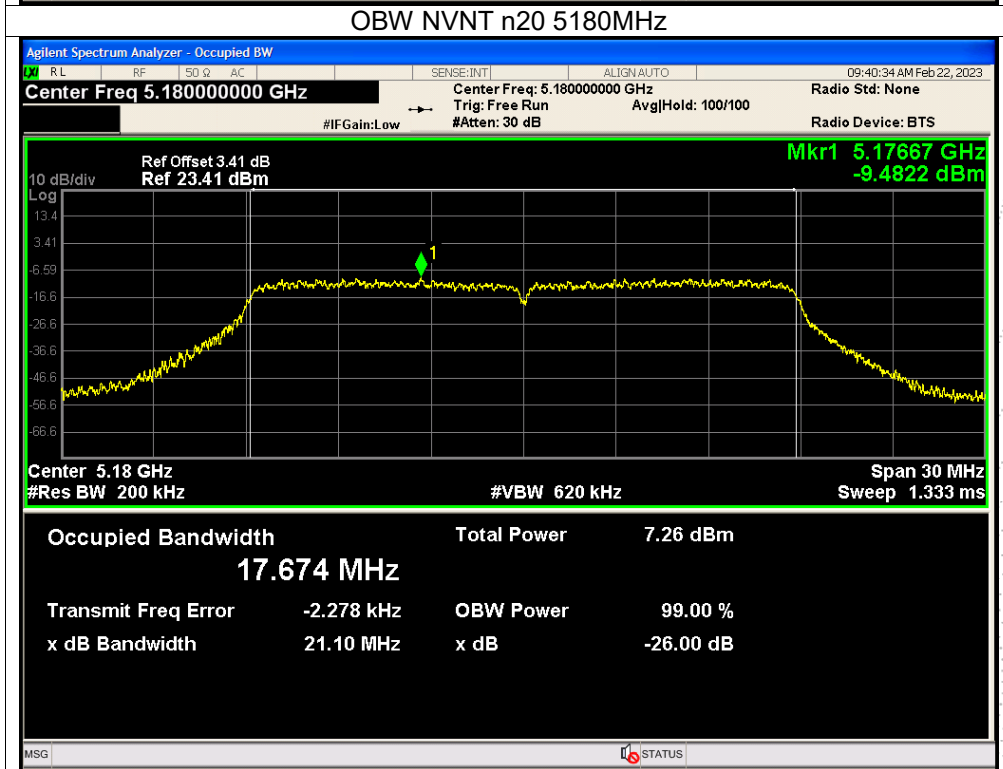
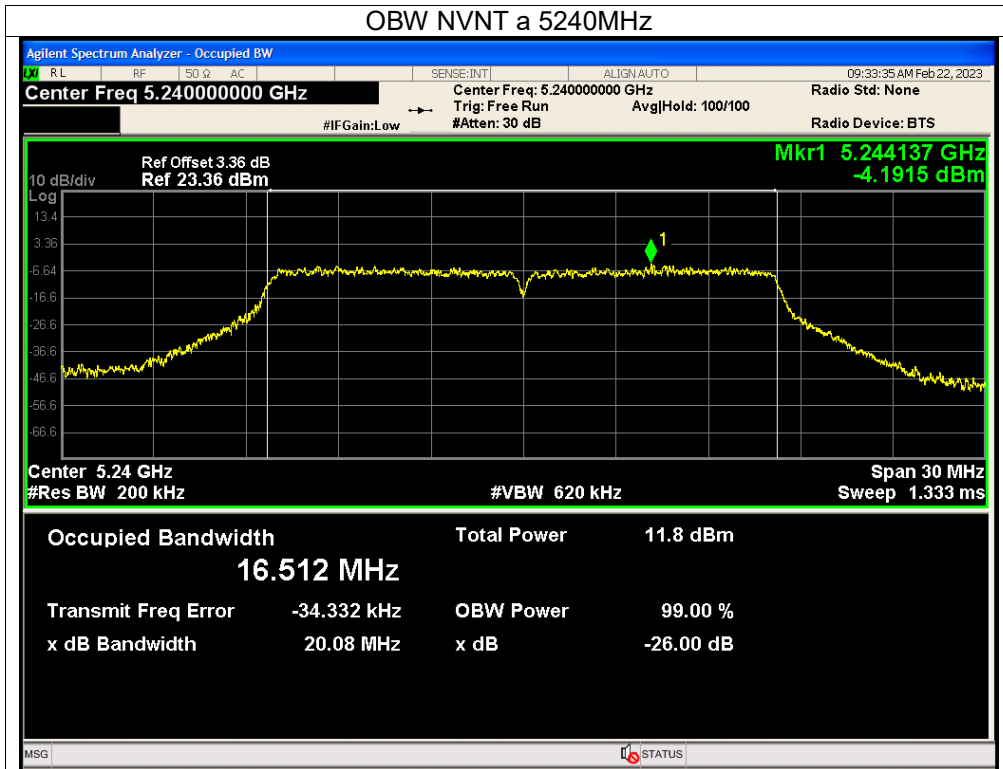


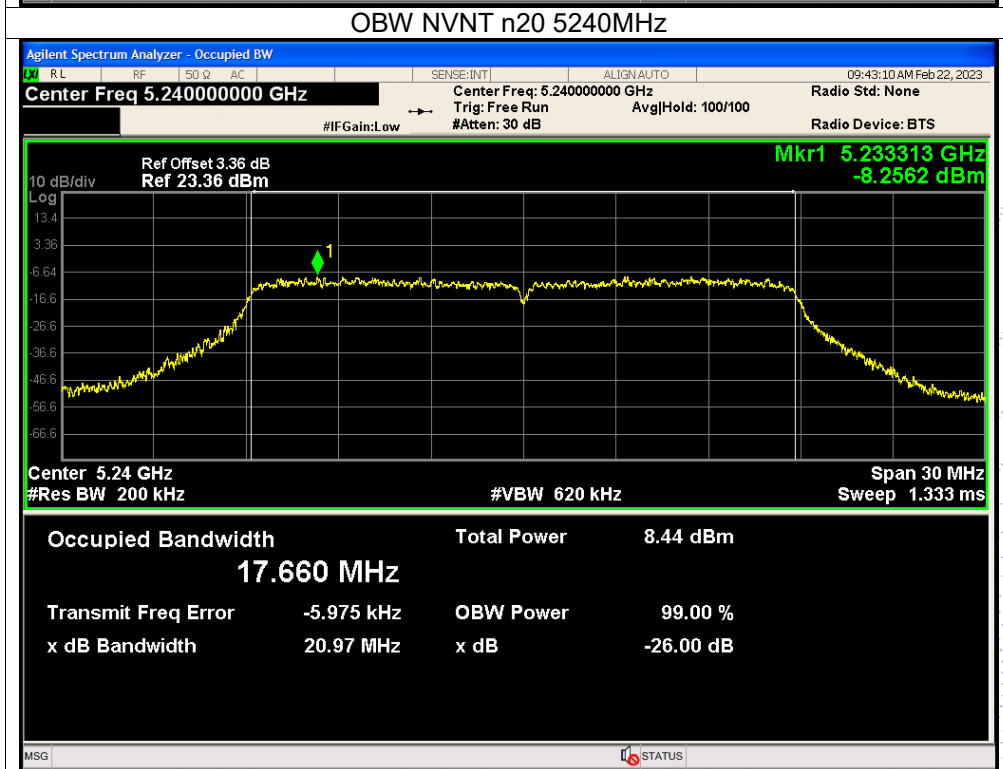
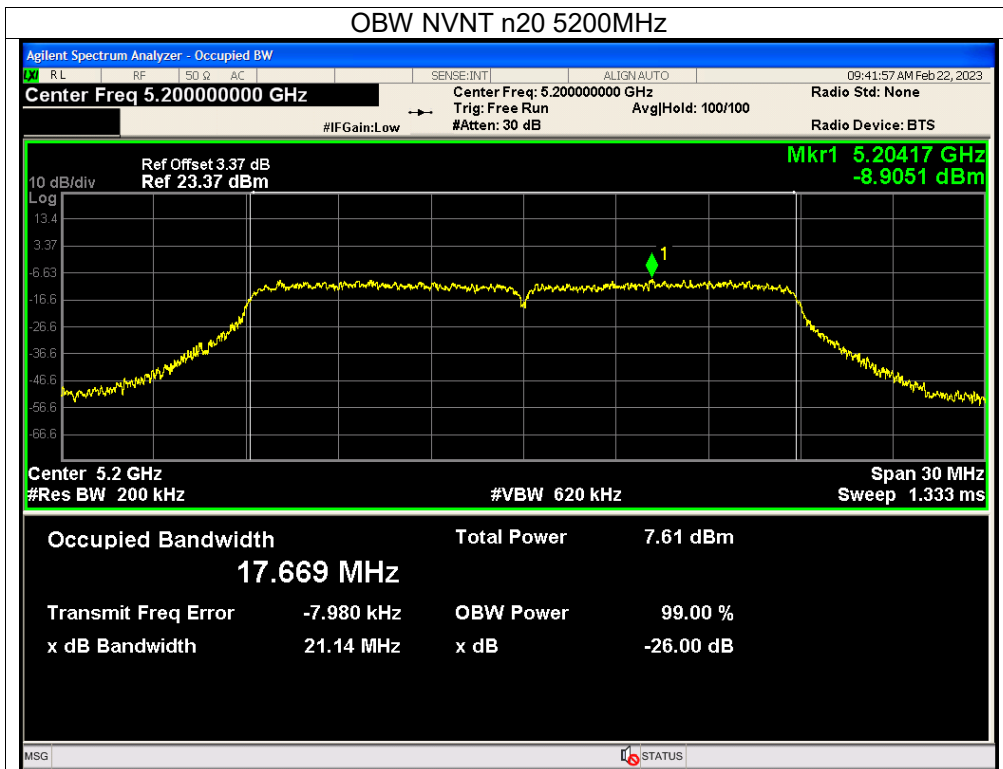


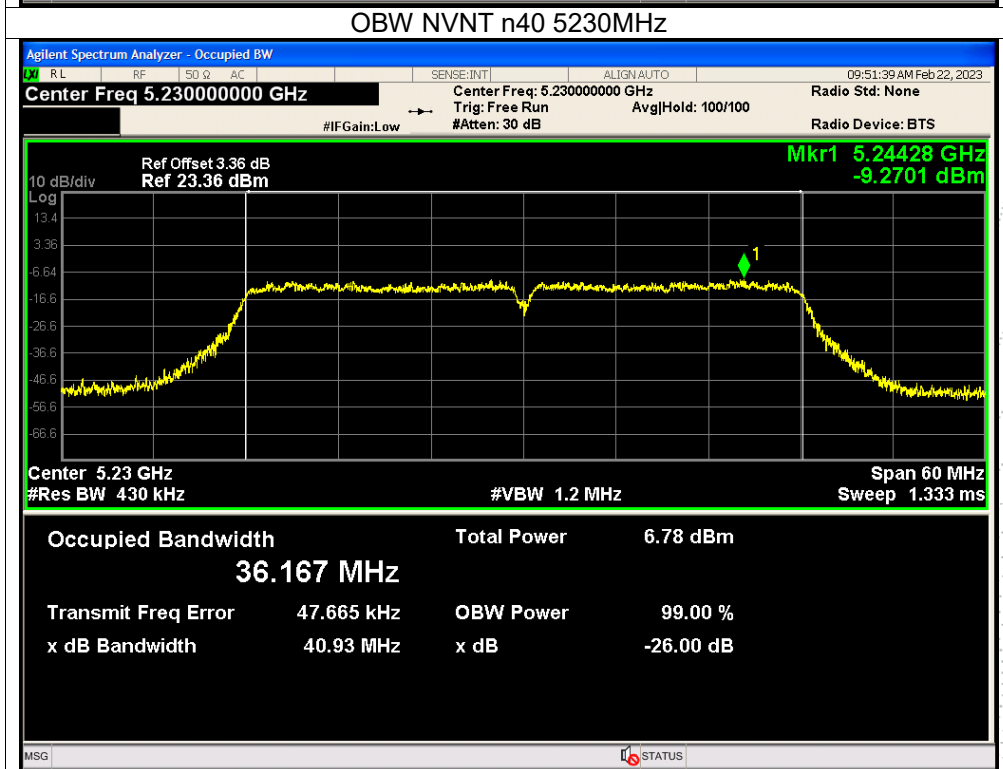
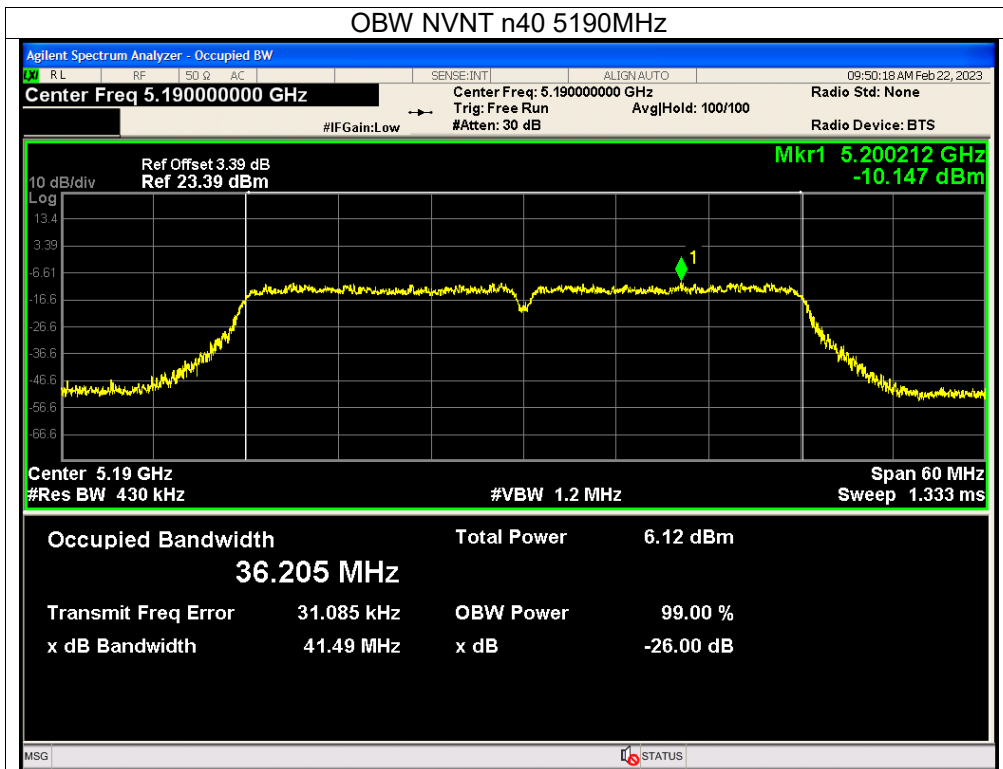


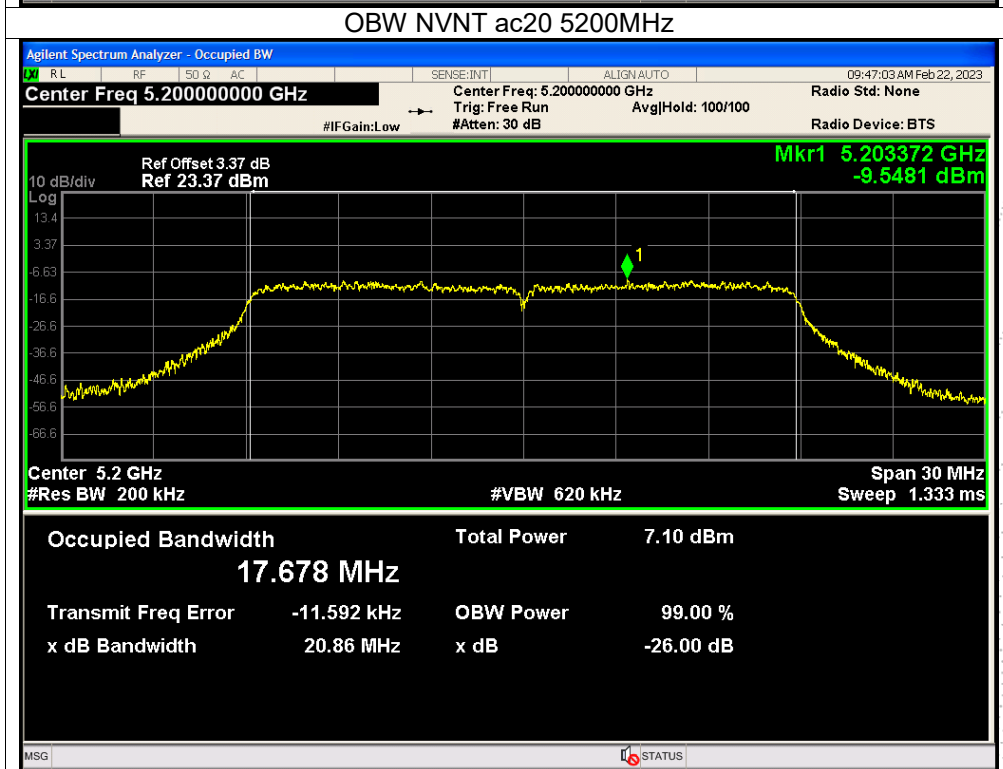
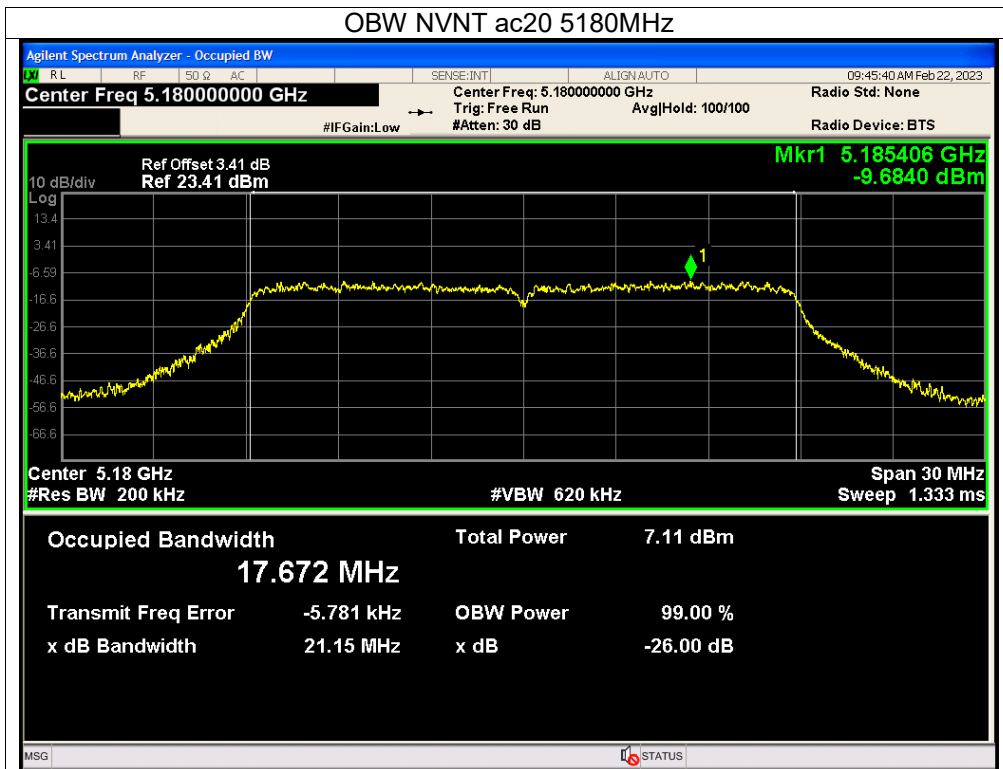


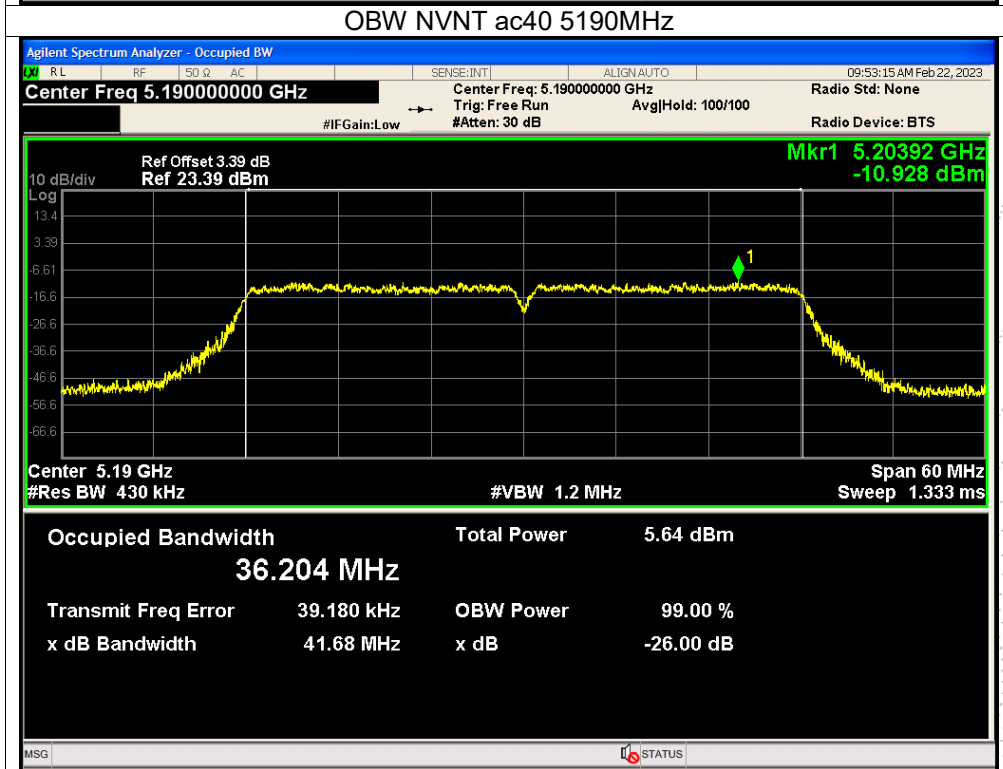
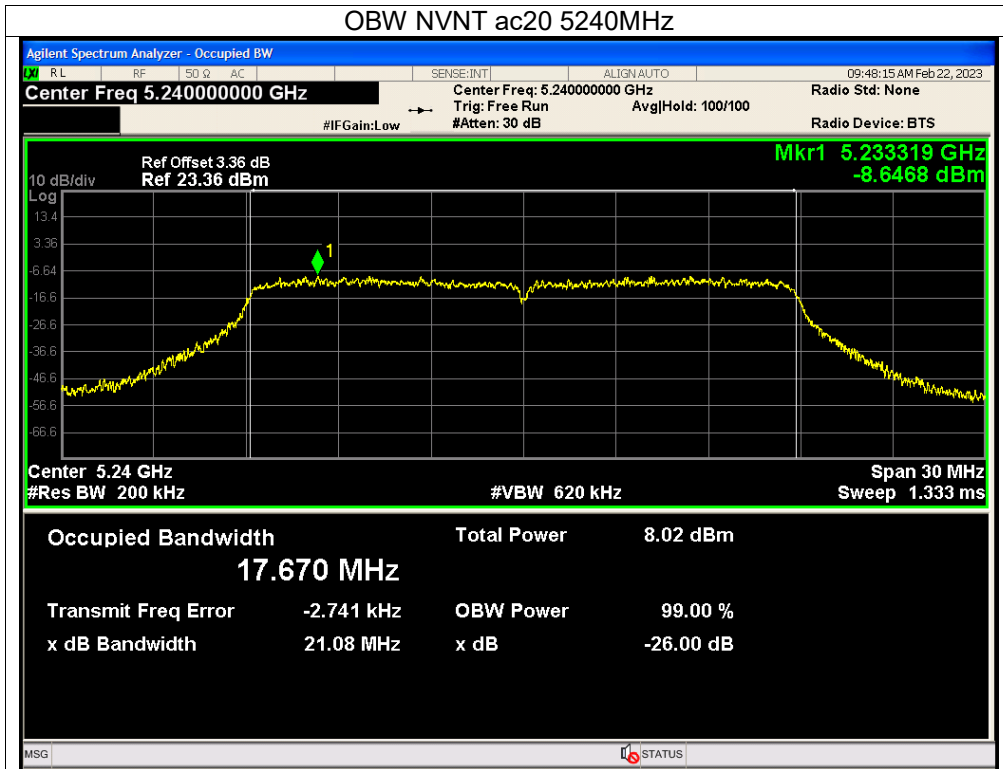


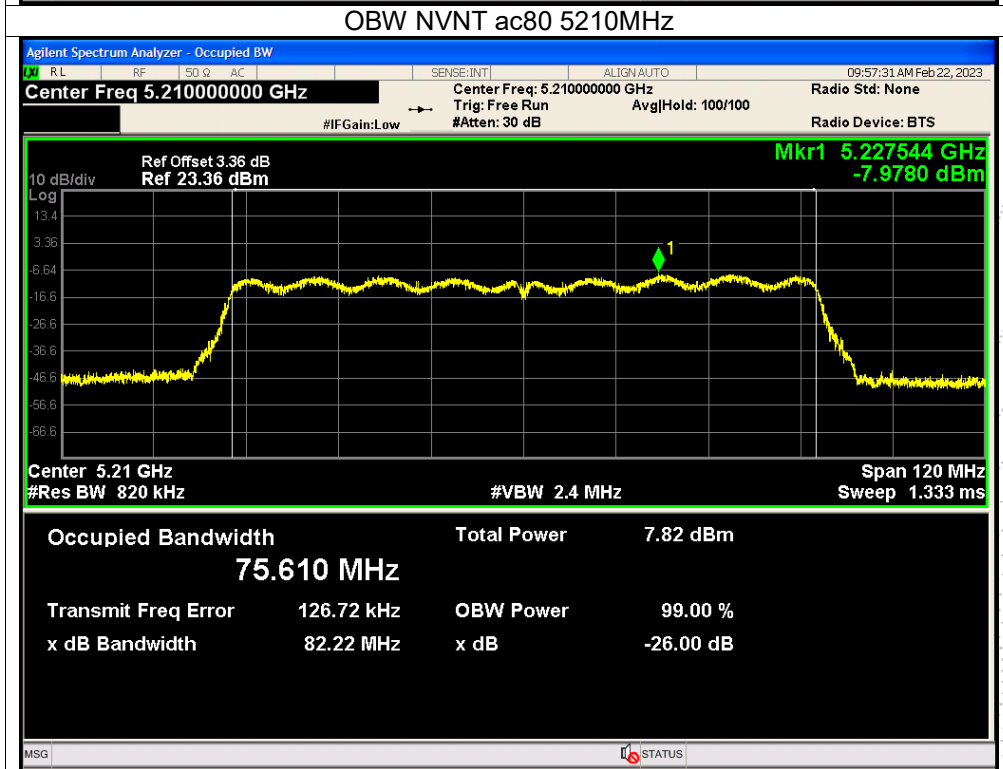
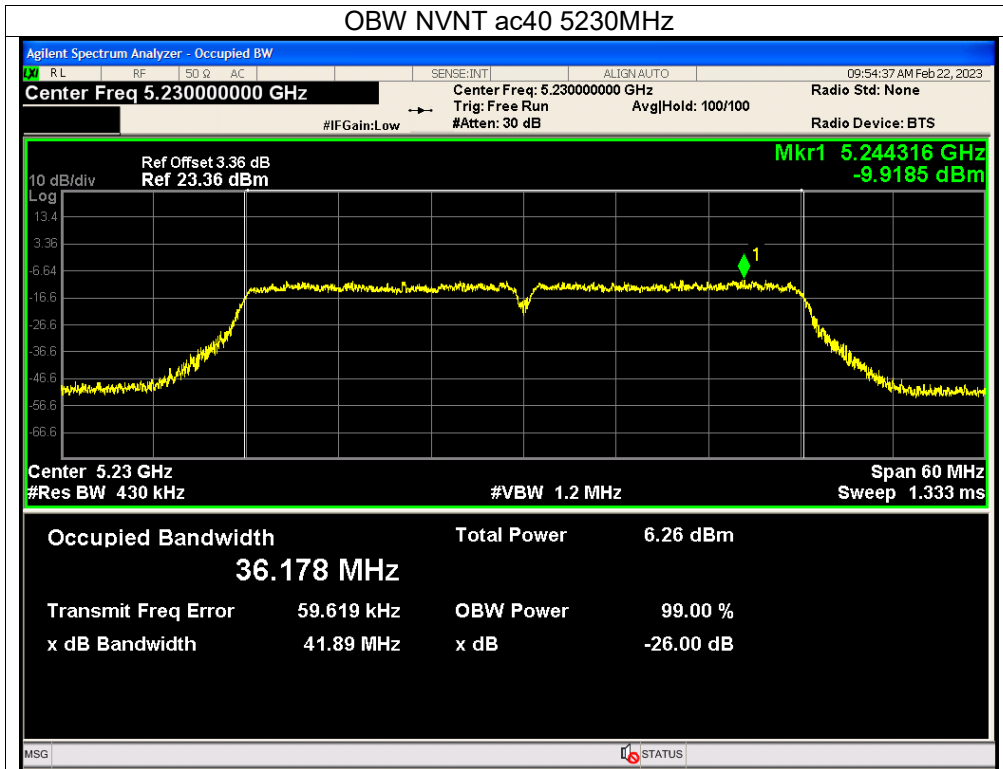














**U-NII-3**

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

