

# FCC TEST REPORT

## FCC ID: 2AGPP-SKWB9V1

**Report Number**..... : ZKT-230417L2732-02

Date of Test..... : Apr. 14, 2023-- Apr. 26, 2023

Date of issue ..... : Apr. 26, 2023

Total number of pages ..... : 209

Test Result ..... : PASS

**Testing Laboratory**..... : **Shenzhen ZKT Technology Co., Ltd.**

Address ..... : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

**Applicant's name** ..... : SamKnows Limited

Address ..... : 94 New Bond Street,London,W1S 1SJ

**Manufacturer's name** ..... : SamKnows Limited

Address ..... : 94 New Bond Street,London,W1S 1SJ

**Test specification:**

Standard ..... : FCC CFR Title 47 Part 15 Subpart E Section 15.407  
ANSI C63.10:2013

Test procedure..... : KDB 789033 D02 General U-NII Test Procedures New Rules v01r02

Non-standard test method ..... : N/A

**Test Report Form No.** ..... : TRF-EL-110\_V0

**Test Report Form(s) Originator** .... : ZKT Testing

**Master TRF** ..... : Dated: 2020-01-06

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

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**Product name**..... : SamKnows Whitebox

Trademark ..... : SamKnows

Model/Type reference ..... : Whitebox 9+

Ratings..... : DC12.0V-2A from adapter

**Testing procedure and testing location:**

**Testing Laboratory** ..... : **Shenzhen ZKT Technology Co., Ltd.**

**Address** ..... : 1/F, No. 101, Building B, No. 6, Tangwei Community  
Industrial Avenue, Fuhai Street, Bao'an District,  
Shenzhen, China

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**Tested by (name + signature)** ..... : **Alen He** 

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**Reviewer (name + signature)** ..... : **Joe Liu** 

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**Approved (name + signature)** ..... : **Lake Xie**  

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**1. VERSION**

Report No.	Version	Description	Approved
ZKT-230417L2732-02	Rev.01	Initial issue of report	Apr. 26, 2023

## 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.407) , Subpart C			
Standard Section	Test Item	Result	Remark
15.203/15.247 (c)	Antenna requirement	PASS	
15.207	AC Power Line Conducted Emission	PASS	
15.407 (a) (b)	Spurious Radiated Emissions and Band Edge	PASS	
15.407 (e) /15.403(i)	6 dB bandwidth, 26dB Emission Bandwidth& 99% Occupied Bandwidth	PASS	
15.407 (a)	Power Spectral Density	PASS	
15.407 (a)(1)(2)(3)	Maximum conducted output power	PASS	
15.407 (g)	Frequency Stability	PASS	

NOTE:

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

### 2.1 TEST FACILITY

Shenzhen ZKT Technology Co., Ltd.

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

FCC Test Firm Registration Number: 692225

Designation Number: CN1299

IC Registered No.: 27033

### 2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95 %

No.	Item	Uncertainty
1	3m camber radiated spurious emissions(30MHz-1GHz)	U=4.3dB
2	3m camber radiated spurious emissions(1GHz-18GHz)	U=4.5dB
3	3m camber radiated spurious emissions(18GHz-40GHz)	U=3.34dB
4	Conducted adjacent channel power	U=1.38 dB
5	Conducted output power uncertainty above 1GHz	U=1.576 dB
6	Conducted output power uncertainty below 1GHz	U=1.28dB
7	Humidity	U=5.3%
8	Temperature	U=0.59℃
9	radiated disturbance (30MHz-1GHz)	U=4.8dB
10	radiated disturbance (1GHz-6GHz)	U=4.9dB
11	radiated disturbance (6GHz-18GHz)	U=5.0dB

### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

Product Name:	SamKnows Whitebox	
Model No.:	Whitebox 9+	
Model List:	N/A	
Hardware Version:	V1.0	
Software Version:	V1.0	
Sample(s) Status:	Engineer sample	
IEEE802.11 WLAN mode supported	802.11a/n/ac/ax(20MHz channel bandwidth) 802.11n/ac/ax(40MHz channel bandwidth) 802.11 ac/ax (80MHz channel bandwidth)	
Date rate	802.11 ax: MCS0-MCS15 802.11ac:MCS0-MCS11 802.11n: MCS0-MCS7 802.11a: 6.5-54Mbps	
Modulation	OFDM/OFDMA	
U-NII-1	Frequency Range	802.11a/n/ac/ax(20MHz) : 5180-5240MHz 802.11n/ac/ax(40MHz) : 5190-5230MHz 802.11 ac/ ax(80MHzW) : 5210MHz
U-NII-1	Channels	802.11 a/n/ac/ax (20MHz): 4 802.11 ac /n/ax (40MHz): 2 802.11 ac/ax (80MHz): 1
U-NII-3	Frequency Range	802.11 a/n/ac/ax(20MHz) : 5745-5825 MHz 802.11 n/ac/ax (40MHz): 5755-5795 MHz 802.11 ac/ax (80MHz): 5775 MHz
U-NII-3	Channels	802.11 a/n/ac/ax(20MHz) : 5 802.11 n/ac/ax (40MHz): 2 802.11 ac/ax (80MHz): 1
Antenna Type:	External Antenna	
Antenna gain:	WIFI ANT1 &ANT2& ANT3& ANT4: 5.57dBi; MIMO Gain: 11.59dBi	
Power supply:	DC12.0V-2A from adapter	

Note: MIMO Gain= $10 \cdot \log[(10^{G1/20} + 10^{G2/20} + \dots)^2 / N_{ant}]$ , so MIMO Gain is 11.59dBi > 6dBi

U-NII-1		U-NII-3	
CH.	Frequency (MHz)	CH.	Frequency (MHz)
36	5180	149	5745
40	5200	...	...
44	5220	157	5785
48	5240	...	...
		165	5825

802.11a/n/ac(20MHz) Frequency / Channel Operations

U-NII-1		U-NII-3	
CH.	Frequency (MHz)	CH.	Frequency (MHz)
38	5190	151	5755
46	5230	159	5795

802.11n /ac(40MHz BW) Frequency / Channel Operations

U-NII-1		U-NII-3	
CH.	Frequency (MHz)	CH.	Frequency (MHz)
42	5210	155	5775

802.11ac (80MHz BW) Frequency / Channel Operations

## 3.2 DESCRIPTION OF TEST MODES

Worst Case Configuration: transmitting both 2.4GHz mode and 5GHz mode

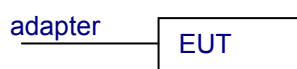
Description	5 GHz Emission
Antenna	MIMO
Channel	165
Operating Frequency (MHz)	802.11n20
Data Rate (Mbps)	OFDM/MCS9
Mode	U-NII-3 - 5745MHz

## 3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

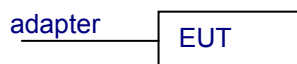
Conducted Emission



Radiated Emission



Conducted Spurious



## 3.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
1	adapter	Shenzhen SOY Technology Co.,Ltd.	MODEL:SOY-1200200US-063 INPUT:100-240~50/60Hz 0.75A OUTPUT:12.0V-2A 24W	/	FCC SDOC
2					
3					

Item	Shielded Type	Ferrite Core	Length	Note

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in [Length] column.



## 3.5EQUIPMENTS LIST FOR ALL TEST ITEMS

## Radiation Test equipment

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

## Conduction Test equipment

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

## 4. EMC EMISSION TEST

### 4.1 CONDUCTED EMISSION MEASUREMENT

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

#### 4.1.1 POWER LINE CONDUCTED EMISSION LIMITS

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

Note:

(1) \*Decreases with the logarithm of the frequency.

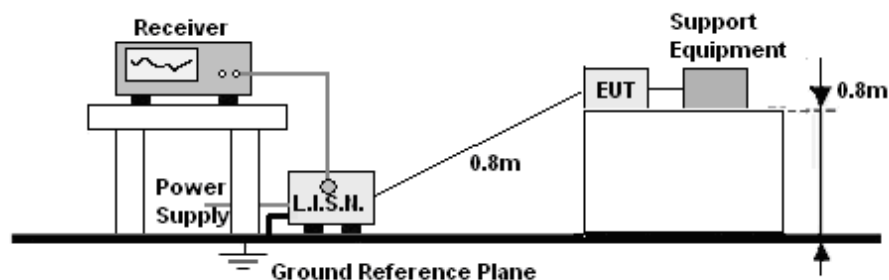
#### 4.1.2 TEST PROCEDURE

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

#### 4.1.3 DEVIATION FROM TEST STANDARD

No deviation

#### 4.1.4 TEST SETUP



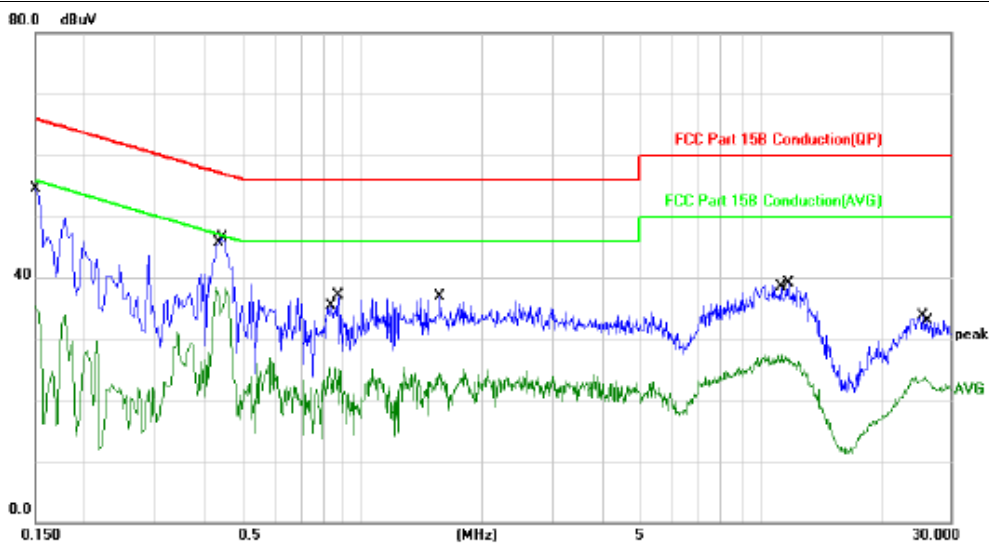
#### 4.1.5 EUT OPERATING CONDITIONS

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

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

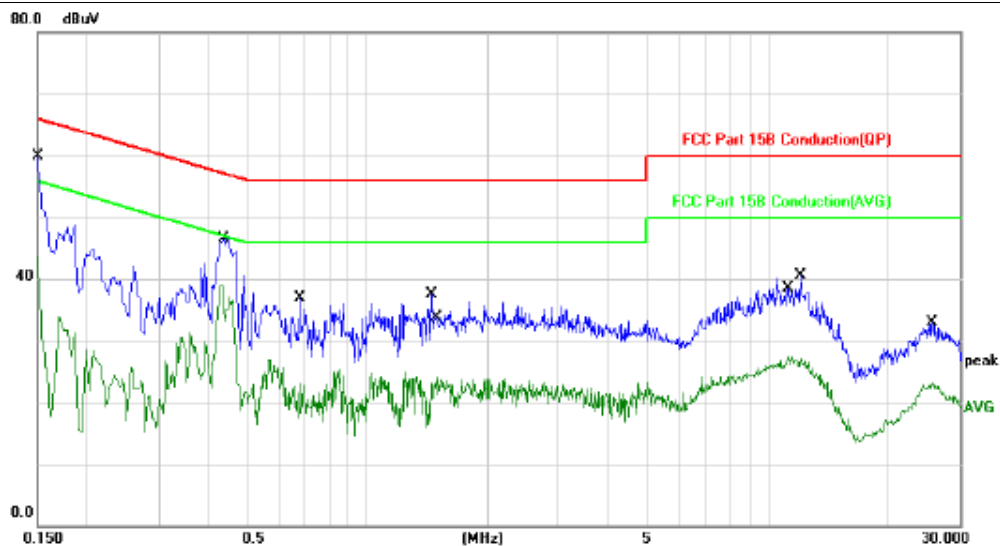
#### 4.1.6 TEST RESULTS

Temperature :	26°C	Relative Humidity:	54%
Pressure :	101kPa	Phase :	L
Test Voltage :	AC 120V/60Hz		



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.1499	44.65	9.75	54.40	66.00	-11.60	QP	
2	0.1499	25.46	9.75	35.21	56.00	-20.79	AVG	
3 *	0.4261	28.71	9.86	38.57	47.33	-8.76	AVG	
4	0.4421	36.59	9.86	46.45	57.02	-10.57	QP	
5	0.8301	15.53	9.80	25.33	46.00	-20.67	AVG	
6	0.8661	27.25	9.79	37.04	56.00	-18.96	QP	
7	1.5461	14.55	9.69	24.24	46.00	-21.76	AVG	
8	1.5661	27.25	9.68	36.93	56.00	-19.07	QP	
9	11.3741	17.67	9.77	27.44	50.00	-22.56	AVG	
10	11.7621	29.26	9.76	39.02	60.00	-20.98	QP	
11	25.7261	24.35	9.45	33.80	60.00	-26.20	QP	
12	26.0261	14.27	9.45	23.72	50.00	-26.28	AVG	

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



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV	Limit dBuV	Over dB	Detector	Comment
1 *	0.1499	50.16	9.75	59.91	66.00	-6.09	QP	
2	0.1499	33.89	9.75	43.64	56.00	-12.36	AVG	
3	0.4341	29.07	9.86	38.93	47.17	-8.24	AVG	
4	0.4381	36.74	9.86	46.60	57.10	-10.50	QP	
5	0.6781	27.04	9.82	36.86	56.00	-19.14	QP	
6	0.6781	13.38	9.82	23.20	46.00	-22.80	AVG	
7	1.4421	27.79	9.70	37.49	56.00	-18.51	QP	
8	1.4941	14.42	9.69	24.11	46.00	-21.89	AVG	
9	11.2341	17.59	9.77	27.36	50.00	-22.64	AVG	
10	11.9981	30.83	9.76	40.59	60.00	-19.41	QP	
11	25.6141	23.40	9.45	32.85	60.00	-27.15	QP	
12	25.6141	13.88	9.45	23.33	50.00	-26.67	AVG	

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Measurement Level = Reading level + Correct Factor
4. The test data shows only the worst case- MIMO (5.8G-802.11n20 Low channel)

## 4.2 RADIATED EMISSION MEASUREMENT

### 4.2.1 RADIATED EMISSION LIMITS

1. Radiated emissions from 9 kHz to 25 GHz were measured according to the methods defines in ANSI C63.10-2013. The EUT was placed above the ground plane, 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz. The interface cable sand equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.
2. For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of  $-27$  dBm/MHz.
3. For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of  $-27$  dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of  $-27$  dBm/MHz in the 5150-5250 MHz band.
4. For transmitters operating in the 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz band shall not exceed an EIRP of  $-27$  dBm/MHz.
5. KDB789033v02r01G)2)c) As specified in 15.407(b), emissions above 1000MHz that are outside of the restricted bands are subject to a peak emission limit of  $-27$  dBm/MHz (or  $-17$  dBm/MHz as specified in 15.407(b)(4)). However, an out-of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the  $-27$  dBm/MHz or  $-17$  dBm/MHz peak emission limit.

According to §15.209(a), except as provided else where in this Sub part, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequencies (MHz)	Field Strength (microrvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

## LIMITS OF RADIATED EMISSION MEASUREMENT

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	68.2	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

#### 4.2.2 TEST PROCEDURE

Below 1GHz test procedure as below:

- a. The EUT was placed on the top of a rotating table 0.1 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

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

Note:

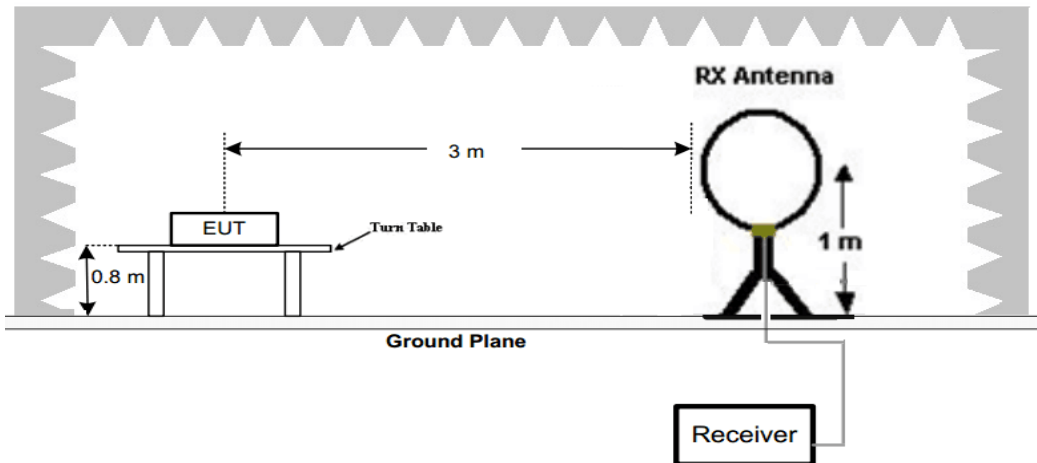
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

#### 4.2.3 DEVIATION FROM TEST STANDARD

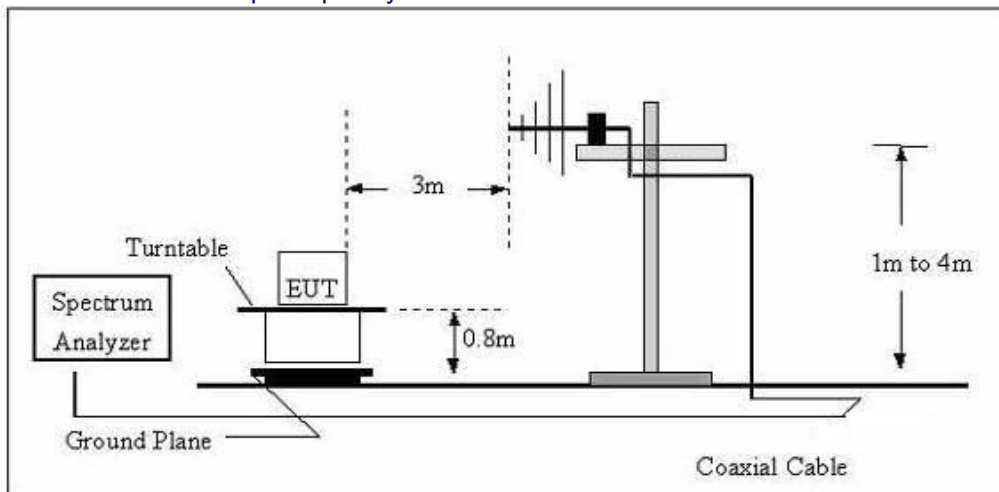
No deviation

#### 4.2.4 TEST SETUP

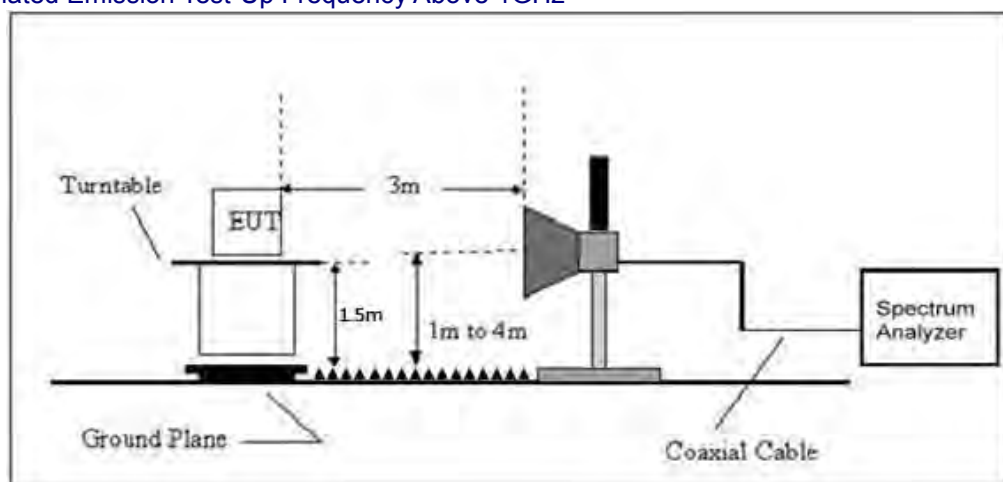
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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



4.2.5 EUT OPERATING CONDITIONS

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

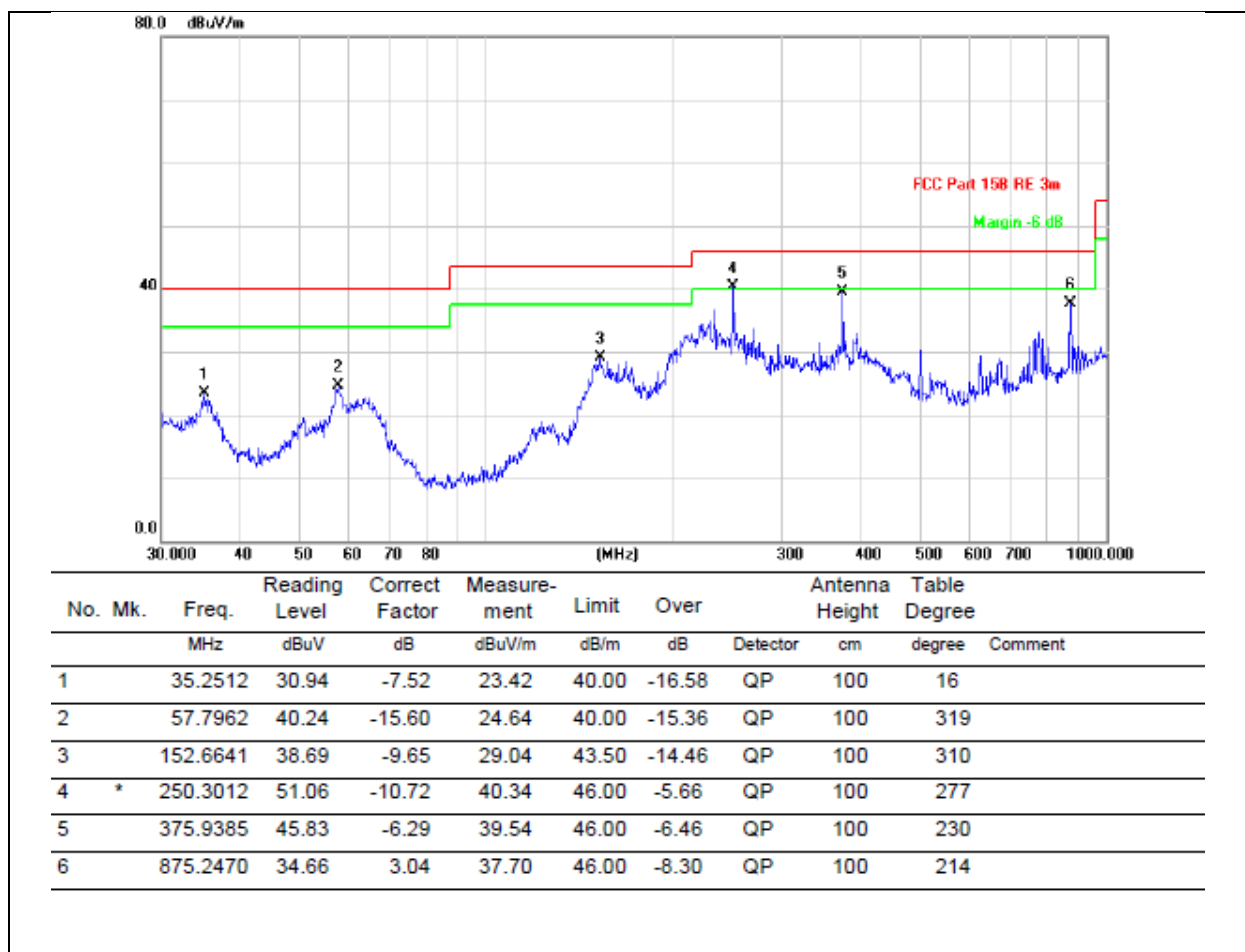
#### 4.2.6 TEST RESULTS

Between 9KHz – 30MHz

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

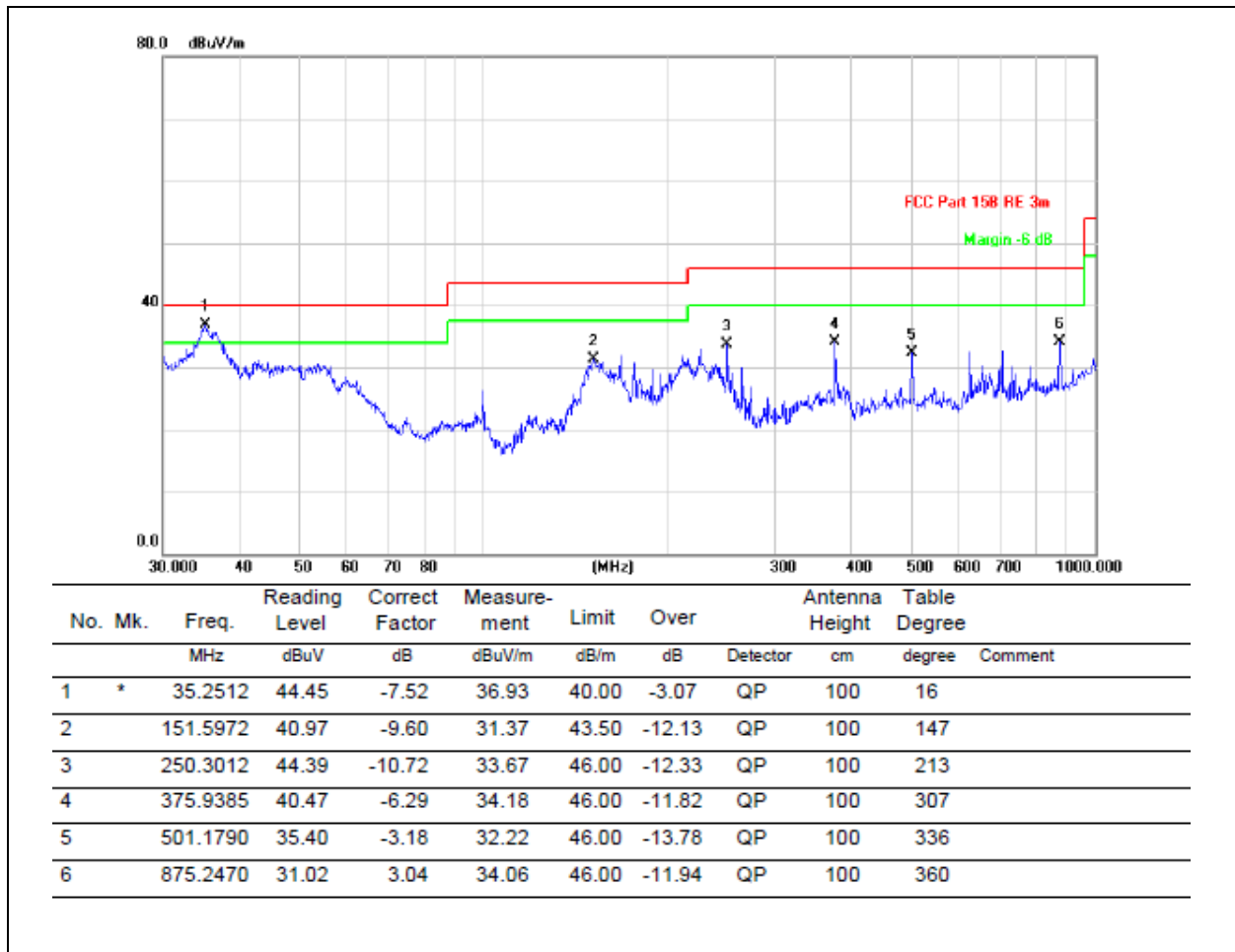
Between 30MHz – 1GHz

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz		





Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz		



No.	Mk.	Freq. (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measurement (dBuV/m)	Limit (dB/m)	Over (dB)	Antenna Height (cm)	Table Degree	Comment
1	*	35.2512	44.45	-7.52	36.93	40.00	-3.07	QP	100	16
2		151.5972	40.97	-9.60	31.37	43.50	-12.13	QP	100	147
3		250.3012	44.39	-10.72	33.67	46.00	-12.33	QP	100	213
4		375.9385	40.47	-6.29	34.18	46.00	-11.82	QP	100	307
5		501.1790	35.40	-3.18	32.22	46.00	-13.78	QP	100	336
6		875.2470	31.02	3.04	34.06	46.00	-11.94	QP	100	360

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. The test data shows only the worst case- MIMO (5.8G-802.11n20 high channel)

## ANT4-802.11a

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel:5180MHz									
V	10360	49.27	30.55	5.77	24.66	49.15	68.2	-19.05	PK
V	15540	48.01	30.33	6.32	24.55	48.55	68.2	-19.65	PK
V	20720	51.62	30.85	7.45	24.69	52.91	68.2	-15.29	PK
H	10360	46.66	30.55	5.77	24.66	46.54	68.2	-21.66	PK
H	15540	47.91	30.33	6.32	24.55	48.45	68.2	-19.75	PK
H	20720	49.82	30.85	7.45	24.69	51.11	68.2	-17.09	PK

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Middle Channel:5200MHz									
V	10400	47.86	30.55	5.77	24.66	47.74	68.2	-20.46	PK
V	15600	49.14	30.33	6.32	24.55	49.68	68.2	-18.52	PK
V	20800	49.14	30.85	7.45	24.69	50.43	68.2	-17.77	PK
H	10400	46.69	30.55	5.77	24.66	46.57	68.2	-21.63	PK
H	15600	47.97	30.33	6.32	24.55	48.51	68.2	-19.69	PK
H	20800	48.98	30.85	7.45	24.69	50.27	68.2	-17.93	PK

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5240MHz									
V	10480	48.48	30.55	5.77	24.66	48.36	68.2	-19.84	PK
V	15720	47.86	30.33	6.32	24.55	48.40	68.2	-19.80	PK
V	20960	50.51	30.85	7.45	24.69	51.80	68.2	-16.40	PK
H	10480	47.37	30.55	5.77	24.66	47.25	68.2	-20.95	PK
H	15720	46.82	30.33	6.32	24.55	47.36	68.2	-20.84	PK
H	20960	51.18	30.85	7.45	24.69	52.47	68.2	-15.73	PK

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5745MHz									
V	11490	48.96	30.55	5.77	24.66	48.84	68.2	-19.36	PK
V	17235	47.96	30.33	6.32	24.55	48.50	68.2	-19.70	PK
V	22980	49.58	30.85	7.45	24.69	50.87	68.2	-17.33	PK
H	11490	47.38	30.55	5.77	24.66	47.26	68.2	-20.94	PK
H	17235	47.78	30.33	6.32	24.55	48.32	68.2	-19.88	PK
H	22980	51.09	30.85	7.45	24.69	52.38	68.2	-15.82	PK

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5785MHz									
V	11570	48.89	30.55	5.77	24.66	48.77	68.2	-19.43	PK
V	17355	48.03	30.33	6.32	24.55	48.57	68.2	-19.63	PK
V	23140	51.18	30.85	7.45	24.69	52.47	68.2	-15.73	PK
H	11570	48.54	30.55	5.77	24.66	48.42	68.2	-19.78	PK
H	17355	47.00	30.33	6.32	24.55	47.54	68.2	-20.66	PK
H	23140	49.14	30.85	7.45	24.69	50.43	68.2	-17.77	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5825MHz									
V	11650	48.26	30.55	5.77	24.66	48.14	68.2	-20.06	PK
V	17475	48.07	30.33	6.32	24.55	48.61	68.2	-19.59	PK
V	23300	49.89	30.85	7.45	24.69	51.18	68.2	-17.02	PK
H	11650	48.54	30.55	5.77	24.66	48.42	68.2	-19.78	PK
H	17475	47.04	30.33	6.32	24.55	47.58	68.2	-20.62	PK
H	23300	48.79	30.85	7.45	24.69	50.08	68.2	-18.12	PK

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Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel:5180MHz									
V	10360	47.48	30.55	5.77	24.66	47.36	68.2	-20.84	PK
V	15540	48.99	30.33	6.32	24.55	49.53	68.2	-18.67	PK
V	20720	49.11	30.85	7.45	24.69	50.40	68.2	-17.80	PK
H	10360	47.15	30.55	5.77	24.66	47.03	68.2	-21.17	PK
H	15540	47.89	30.33	6.32	24.55	48.43	68.2	-19.77	PK
H	20720	49.07	30.85	7.45	24.69	50.36	68.2	-17.84	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Middle Channel:5200MHz									
V	10400	48.71	30.55	5.77	24.66	48.59	68.2	-19.61	PK
V	15600	48.32	30.33	6.32	24.55	48.86	68.2	-19.34	PK
V	20800	51.71	30.85	7.45	24.69	53.00	68.2	-15.20	PK
H	10400	46.75	30.55	5.77	24.66	46.63	68.2	-21.57	PK
H	15600	47.86	30.33	6.32	24.55	48.40	68.2	-19.80	PK
H	20800	49.34	30.85	7.45	24.69	50.63	68.2	-17.57	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5240MHz									
V	10480	47.32	30.55	5.77	24.66	47.20	68.2	-21	PK
V	15720	48.87	30.33	6.32	24.55	49.41	68.2	-18.79	PK
V	20960	49.86	30.85	7.45	24.69	51.15	68.2	-17.05	PK
H	10480	48.41	30.55	5.77	24.66	48.29	68.2	-19.91	PK
H	15720	47.21	30.33	6.32	24.55	47.75	68.2	-20.45	PK
H	20960	51.47	30.85	7.45	24.69	52.76	68.2	-15.44	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5745MHz									
V	11490	48.08	30.55	5.77	24.66	47.96	68.2	-20.24	PK
V	17235	49.42	30.33	6.32	24.55	49.96	68.2	-18.24	PK
V	22980	51.67	30.85	7.45	24.69	52.96	68.2	-15.24	PK
H	11490	47.82	30.55	5.77	24.66	47.70	68.2	-20.5	PK
H	17235	47.32	30.33	6.32	24.55	47.86	68.2	-20.34	PK
H	22980	50.67	30.85	7.45	24.69	51.96	68.2	-16.24	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5785MHz									
V	11570	47.25	30.55	5.77	24.66	47.13	68.2	-21.07	PK
V	17355	48.13	30.33	6.32	24.55	48.67	68.2	-19.53	PK
V	23140	48.87	30.85	7.45	24.69	50.16	68.2	-18.04	PK
H	11570	47.39	30.55	5.77	24.66	47.27	68.2	-20.93	PK
H	17355	47.14	30.33	6.32	24.55	47.68	68.2	-20.52	PK
H	23140	50.35	30.85	7.45	24.69	51.64	68.2	-16.56	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5825MHz									
V	11650	49.76	30.55	5.77	24.66	49.64	68.2	-18.56	PK
V	17475	48.60	30.33	6.32	24.55	49.14	68.2	-19.06	PK
V	23300	49.44	30.85	7.45	24.69	50.73	68.2	-17.47	PK
H	11650	47.85	30.55	5.77	24.66	47.73	68.2	-20.47	PK
H	17475	47.95	30.33	6.32	24.55	48.49	68.2	-19.71	PK
H	23300	50.15	30.85	7.45	24.69	51.44	68.2	-16.76	PK

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Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel:5190MHz									
V	10360	49.11	30.55	5.77	24.66	48.99	68.2	-19.21	PK
V	15540	48.91	30.33	6.32	24.55	49.45	68.2	-18.75	PK
V	20720	48.92	30.85	7.45	24.69	50.21	68.2	-17.99	PK
H	10360	47.03	30.55	5.77	24.66	46.91	68.2	-21.29	PK
H	15540	48.19	30.33	6.32	24.55	48.73	68.2	-19.47	PK
H	20720	50.13	30.85	7.45	24.69	51.42	68.2	-16.78	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Middle Channel:5230MHz									
V	10460	47.41	30.55	5.77	24.66	47.29	68.2	-20.91	PK
V	15690	49.26	30.33	6.32	24.55	49.80	68.2	-18.4	PK
V	20920	49.42	30.85	7.45	24.69	50.71	68.2	-17.49	PK
H	10460	46.94	30.55	5.77	24.66	46.82	68.2	-21.38	PK
H	15690	47.23	30.33	6.32	24.55	47.77	68.2	-20.43	PK
H	20920	51.19	30.85	7.45	24.69	52.48	68.2	-15.72	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5755MHz									
V	11510	48.17	30.55	5.77	24.66	48.05	68.2	-20.15	PK
V	17265	48.84	30.33	6.32	24.55	49.38	68.2	-18.82	PK
V	23020	51.37	30.85	7.45	24.69	52.66	68.2	-15.54	PK
H	11510	46.02	30.55	5.77	24.66	45.90	68.2	-22.3	PK
H	17265	48.42	30.33	6.32	24.55	48.96	68.2	-19.24	PK
H	23020	50.55	30.85	7.45	24.69	51.84	68.2	-16.36	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5795MHz									
V	11590	47.23	30.55	5.77	24.66	47.11	68.2	-21.09	PK
V	17385	49.48	30.33	6.32	24.55	50.02	68.2	-18.18	PK
V	23180	50.91	30.85	7.45	24.69	52.20	68.2	-16	PK
H	11590	48.43	30.55	5.77	24.66	48.31	68.2	-19.89	PK
H	17385	48.20	30.33	6.32	24.55	48.74	68.2	-19.46	PK
H	23180	51.16	30.85	7.45	24.69	52.45	68.2	-15.75	PK

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Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel:5180MHz									
V	10360	48.15	30.55	5.77	24.66	48.03	68.2	-20.17	PK
V	15540	47.87	30.33	6.32	24.55	48.41	68.2	-19.79	PK
V	20720	49.25	30.85	7.45	24.69	50.54	68.2	-17.66	PK
H	10360	47.12	30.55	5.77	24.66	47.00	68.2	-21.2	PK
H	15540	46.88	30.33	6.32	24.55	47.42	68.2	-20.78	PK
H	20720	50.04	30.85	7.45	24.69	51.33	68.2	-16.87	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Middle Channel:5200MHz									
V	10400	47.29	30.55	5.77	24.66	47.17	68.2	-21.03	PK
V	15600	48.64	30.33	6.32	24.55	49.18	68.2	-19.02	PK
V	20800	51.45	30.85	7.45	24.69	52.74	68.2	-15.46	PK
H	10400	46.42	30.55	5.77	24.66	46.30	68.2	-21.9	PK
H	15600	47.99	30.33	6.32	24.55	48.53	68.2	-19.67	PK
H	20800	50.98	30.85	7.45	24.69	52.27	68.2	-15.93	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5240MHz									
V	10480	49.14	30.55	5.77	24.66	49.02	68.2	-19.18	PK
V	15720	49.52	30.33	6.32	24.55	50.06	68.2	-18.14	PK
V	20960	49.22	30.85	7.45	24.69	50.51	68.2	-17.69	PK
H	10480	47.31	30.55	5.77	24.66	47.19	68.2	-21.01	PK
H	15720	47.95	30.33	6.32	24.55	48.49	68.2	-19.71	PK
H	20960	51.53	30.85	7.45	24.69	52.82	68.2	-15.38	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5745MHz									
V	11490	49.58	30.55	5.77	24.66	49.46	68.2	-18.74	PK
V	17235	48.39	30.33	6.32	24.55	48.93	68.2	-19.27	PK
V	22980	51.73	30.85	7.45	24.69	53.02	68.2	-15.18	PK
H	11490	47.42	30.55	5.77	24.66	47.30	68.2	-20.9	PK
H	17235	47.49	30.33	6.32	24.55	48.03	68.2	-20.17	PK
H	22980	49.11	30.85	7.45	24.69	50.40	68.2	-17.8	PK

Polar (H/V)	Frequency	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5785MHz									
V	11570	47.83	30.55	5.77	24.66	47.71	68.2	-20.49	PK
V	17355	48.51	30.33	6.32	24.55	49.05	68.2	-19.15	PK
V	23140	48.85	30.85	7.45	24.69	50.14	68.2	-18.06	PK
H	11570	45.83	30.55	5.77	24.66	45.71	68.2	-22.49	PK
H	17355	47.04	30.33	6.32	24.55	47.58	68.2	-20.62	PK
H	23140	48.99	30.85	7.45	24.69	50.28	68.2	-17.92	PK

Polar (H/V)	Frequency	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5825MHz									
V	11650	49.00	30.55	5.77	24.66	48.88	68.2	-19.32	PK
V	17475	49.67	30.33	6.32	24.55	50.21	68.2	-17.99	PK
V	23300	51.68	30.85	7.45	24.69	52.97	68.2	-15.23	PK
H	11650	47.33	30.55	5.77	24.66	47.21	68.2	-20.99	PK
H	17475	48.57	30.33	6.32	24.55	49.11	68.2	-19.09	PK
H	23300	51.25	30.85	7.45	24.69	52.54	68.2	-15.66	PK

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Polar (H/V)	Frequency	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel:5190MHz									
V	10360	47.05	30.55	5.77	24.66	46.93	68.2	-21.27	PK
V	15540	49.62	30.33	6.32	24.55	50.16	68.2	-18.04	PK
V	20720	49.05	30.85	7.45	24.69	50.34	68.2	-17.86	PK
H	10360	47.43	30.55	5.77	24.66	47.31	68.2	-20.89	PK
H	15540	47.87	30.33	6.32	24.55	48.41	68.2	-19.79	PK
H	20720	51.26	30.85	7.45	24.69	52.55	68.2	-15.65	PK

Polar (H/V)	Frequency	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Middle Channel:5230MHz									
V	10460	47.41	30.55	5.77	24.66	47.29	68.2	-20.91	PK
V	15690	48.84	30.33	6.32	24.55	49.38	68.2	-18.82	PK
V	20920	51.35	30.85	7.45	24.69	52.64	68.2	-15.56	PK
H	10460	47.42	30.55	5.77	24.66	47.30	68.2	-20.9	PK
H	15690	46.92	30.33	6.32	24.55	47.46	68.2	-20.74	PK
H	20920	49.46	30.85	7.45	24.69	50.75	68.2	-17.45	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amp lifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5755MHz									
V	11510	49.18	30.55	5.77	24.66	49.06	68.2	-19.14	PK
V	17265	47.98	30.33	6.32	24.55	48.52	68.2	-19.68	PK
V	23020	51.50	30.85	7.45	24.69	52.79	68.2	-15.41	PK
H	11510	48.67	30.55	5.77	24.66	48.55	68.2	-19.65	PK

H	17265	48.36	30.33	6.32	24.55	48.90	68.2	-19.3	PK
H	23020	48.89	30.85	7.45	24.69	50.18	68.2	-18.02	PK

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amp lifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
High Channel:5795MHz									
V	11510	48.94	30.55	5.77	24.66	48.82	68.2	-19.38	PK
V	17265	48.08	30.33	6.32	24.55	48.62	68.2	-19.58	PK
V	23020	50.52	30.85	7.45	24.69	51.81	68.2	-16.39	PK
H	11510	45.99	30.55	5.77	24.66	45.87	68.2	-22.33	PK
H	17265	48.07	30.33	6.32	24.55	48.61	68.2	-19.59	PK
H	23020	51.41	30.85	7.45	24.69	52.70	68.2	-15.5	PK

## ANT4-802.11ac80

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amp lifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
5210MHz									
V	10420	49.30	30.55	5.77	24.66	49.18	68.2	-19.02	PK
V	15630	49.07	30.33	6.32	24.55	49.61	68.2	-18.59	PK
V	20840	51.31	30.85	7.45	24.69	52.60	68.2	-15.6	PK
H	10420	48.46	30.55	5.77	24.66	48.34	68.2	-19.86	PK
H	15630	48.65	30.33	6.32	24.55	49.19	68.2	-19.01	PK
H	20840	51.68	30.85	7.45	24.69	52.97	68.2	-15.23	PK

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-ampli fier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
High Channel:5775MHz									
V	11550	49.14	30.55	5.77	24.66	49.02	68.2	-19.18	PK
V	17325	49.61	30.33	6.32	24.55	50.15	68.2	-18.05	PK
V	23100	51.59	30.85	7.45	24.69	52.88	68.2	-15.32	PK
H	11550	46.08	30.55	5.77	24.66	45.96	68.2	-22.24	PK
H	17325	47.75	30.33	6.32	24.55	48.29	68.2	-19.91	PK
H	23100	49.45	30.85	7.45	24.69	50.74	68.2	-17.46	PK

## ANT4-802.11ax20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-ampli fier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel:5180MHz									
V	10360	49.31	30.55	5.77	24.66	49.19	68.2	-19.01	PK
V	15540	48.78	30.33	6.32	24.55	49.32	68.2	-18.88	PK
V	20720	50.81	30.85	7.45	24.69	52.10	68.2	-16.1	PK
H	10360	48.35	30.55	5.77	24.66	48.23	68.2	-19.97	PK
H	15540	48.61	30.33	6.32	24.55	49.15	68.2	-19.05	PK
H	20720	49.21	30.85	7.45	24.69	50.50	68.2	-17.7	PK

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-ampli fier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Middle Channel:5200MHz									

V	10400	48.71	30.55	5.77	24.66	48.59	68.2	-19.61	PK
V	15600	48.58	30.33	6.32	24.55	49.12	68.2	-19.08	PK
V	20800	50.30	30.85	7.45	24.69	51.59	68.2	-16.61	PK
H	10400	46.39	30.55	5.77	24.66	46.27	68.2	-21.93	PK
H	15600	47.83	30.33	6.32	24.55	48.37	68.2	-19.83	PK
H	20800	51.54	30.85	7.45	24.69	52.83	68.2	-15.37	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5240MHz									
V	10480	47.74	30.55	5.77	24.66	47.62	68.2	-20.58	PK
V	15720	49.73	30.33	6.32	24.55	50.27	68.2	-17.93	PK
V	20960	49.69	30.85	7.45	24.69	50.98	68.2	-17.22	PK
H	10480	46.62	30.55	5.77	24.66	46.50	68.2	-21.7	PK
H	15720	48.54	30.33	6.32	24.55	49.08	68.2	-19.12	PK
H	20960	49.64	30.85	7.45	24.69	50.93	68.2	-17.27	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5745MHz									
V	11490	48.59	30.55	5.77	24.66	48.47	68.2	-19.73	PK
V	17235	48.09	30.33	6.32	24.55	48.63	68.2	-19.57	PK
V	22980	49.29	30.85	7.45	24.69	50.58	68.2	-17.62	PK
H	11490	45.82	30.55	5.77	24.66	45.70	68.2	-22.5	PK
H	17235	46.86	30.33	6.32	24.55	47.40	68.2	-20.8	PK
H	22980	49.55	30.85	7.45	24.69	50.84	68.2	-17.36	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5785MHz									
V	11570	47.54	30.55	5.77	24.66	47.42	68.2	-20.78	PK
V	17355	48.20	30.33	6.32	24.55	48.74	68.2	-19.46	PK
V	23140	50.23	30.85	7.45	24.69	51.52	68.2	-16.68	PK
H	11570	47.72	30.55	5.77	24.66	47.60	68.2	-20.6	PK
H	17355	47.14	30.33	6.32	24.55	47.68	68.2	-20.52	PK
H	23140	49.25	30.85	7.45	24.69	50.54	68.2	-17.66	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5825MHz									
V	11650	48.64	30.55	5.77	24.66	48.52	68.2	-19.68	PK
V	17475	48.09	30.33	6.32	24.55	48.63	68.2	-19.57	PK
V	23300	49.55	30.85	7.45	24.69	50.84	68.2	-17.36	PK
H	11650	47.27	30.55	5.77	24.66	47.15	68.2	-21.05	PK
H	17475	48.55	30.33	6.32	24.55	49.09	68.2	-19.11	PK
H	23300	48.79	30.85	7.45	24.69	50.08	68.2	-18.12	PK



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Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel:5190MHz									
V	10360	48.05	30.55	5.77	24.66	47.93	68.2	-20.27	PK
V	15540	49.00	30.33	6.32	24.55	49.54	68.2	-18.66	PK
V	20720	48.76	30.85	7.45	24.69	50.05	68.2	-18.15	PK
H	10360	46.40	30.55	5.77	24.66	46.28	68.2	-21.92	PK
H	15540	46.93	30.33	6.32	24.55	47.47	68.2	-20.73	PK
H	20720	49.58	30.85	7.45	24.69	50.87	68.2	-17.33	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Middle Channel:5230MHz									
V	10460	47.86	30.55	5.77	24.66	47.74	68.2	-20.46	PK
V	15690	47.95	30.33	6.32	24.55	48.49	68.2	-19.71	PK
V	20920	51.27	30.85	7.45	24.69	52.56	68.2	-15.64	PK
H	10460	46.64	30.55	5.77	24.66	46.52	68.2	-21.68	PK
H	15690	48.28	30.33	6.32	24.55	48.82	68.2	-19.38	PK
H	20920	48.87	30.85	7.45	24.69	50.16	68.2	-18.04	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5755MHz									
V	11510	49.64	30.55	5.77	24.66	49.52	68.2	-18.68	PK
V	17265	48.19	30.33	6.32	24.55	48.73	68.2	-19.47	PK
V	23020	51.75	30.85	7.45	24.69	53.04	68.2	-15.16	PK
H	11510	46.57	30.55	5.77	24.66	46.45	68.2	-21.75	PK
H	17265	48.64	30.33	6.32	24.55	49.18	68.2	-19.02	PK
H	23020	49.11	30.85	7.45	24.69	50.40	68.2	-17.8	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5795MHz									
V	11510	49.36	30.55	5.77	24.66	49.24	68.2	-18.96	PK
V	17265	48.67	30.33	6.32	24.55	49.21	68.2	-18.99	PK
V	23020	49.12	30.85	7.45	24.69	50.41	68.2	-17.79	PK
H	11510	45.85	30.55	5.77	24.66	45.73	68.2	-22.47	PK
H	17265	47.04	30.33	6.32	24.55	47.58	68.2	-20.62	PK
H	23020	50.28	30.85	7.45	24.69	51.57	68.2	-16.63	PK

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Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
5210MHz									
V	10420	49.56	30.55	5.77	24.66	49.44	68.2	-18.76	PK
V	15630	48.94	30.33	6.32	24.55	49.48	68.2	-18.72	PK
V	20840	49.80	30.85	7.45	24.69	51.09	68.2	-17.11	PK
H	10420	47.08	30.55	5.77	24.66	46.96	68.2	-21.24	PK

H	15630	46.80	30.33	6.32	24.55	47.34	68.2	-20.86	PK
H	20840	50.54	30.85	7.45	24.69	51.83	68.2	-16.37	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5775MHz									
V	11550	46.96	30.55	5.77	24.66	46.84	68.2	-21.36	PK
V	17325	47.90	30.33	6.32	24.55	48.44	68.2	-19.76	PK
V	23100	51.00	30.85	7.45	24.69	52.29	68.2	-15.91	PK
H	11550	48.34	30.55	5.77	24.66	48.22	68.2	-19.98	PK
H	17325	47.26	30.33	6.32	24.55	47.80	68.2	-20.4	PK
H	23100	51.17	30.85	7.45	24.69	52.46	68.2	-15.74	PK

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Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel:5180MHz									
V	10360	48.10	30.55	5.77	24.66	47.98	68.2	-20.2	PK
V	15540	48.59	30.33	6.32	24.55	49.13	68.2	-18.87	PK
V	20720	51.30	30.85	7.45	24.69	52.59	68.2	-16.8	PK
H	10360	46.93	30.55	5.77	24.66	46.81	68.2	-21	PK
H	15540	47.84	30.33	6.32	24.55	48.38	68.2	-19.41	PK
H	20720	49.44	30.85	7.45	24.69	50.73	68.2	-17.14	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Middle Channel:5200MHz									
V	10400	48.12	30.55	5.77	24.66	48.00	68.2	-20.2	PK
V	15600	48.79	30.33	6.32	24.55	49.33	68.2	-18.87	PK
V	20800	50.11	30.85	7.45	24.69	51.40	68.2	-16.8	PK
H	10400	47.32	30.55	5.77	24.66	47.20	68.2	-21	PK
H	15600	48.25	30.33	6.32	24.55	48.79	68.2	-19.41	PK
H	20800	49.77	30.85	7.45	24.69	51.06	68.2	-17.14	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5240MHz									
V	10480	48.84	30.55	5.77	24.66	48.72	68.2	-19.48	PK
V	15720	48.27	30.33	6.32	24.55	48.81	68.2	-19.39	PK
V	20960	49.04	30.85	7.45	24.69	50.33	68.2	-17.87	PK
H	10480	47.87	30.55	5.77	24.66	47.75	68.2	-20.45	PK
H	15720	48.68	30.33	6.32	24.55	49.22	68.2	-18.98	PK
H	20960	50.65	30.85	7.45	24.69	51.94	68.2	-16.26	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5745MHz									
V	11490	49.19	30.55	5.77	24.66	49.07	68.2	-19.13	PK
V	17235	49.23	30.33	6.32	24.55	49.77	68.2	-18.43	PK

V	22980	50.79	30.85	7.45	24.69	52.08	68.2	-16.12	PK
H	11490	46.61	30.55	5.77	24.66	46.49	68.2	-21.71	PK
H	17235	47.01	30.33	6.32	24.55	47.55	68.2	-20.65	PK
H	22980	50.37	30.85	7.45	24.69	51.66	68.2	-16.54	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5785MHz									
V	11570	46.93	30.55	5.77	24.66	46.81	68.2	-21.39	PK
V	17355	48.06	30.33	6.32	24.55	48.60	68.2	-19.6	PK
V	23140	48.89	30.85	7.45	24.69	50.18	68.2	-18.02	PK
H	11570	45.94	30.55	5.77	24.66	45.82	68.2	-22.38	PK
H	17355	48.56	30.33	6.32	24.55	49.10	68.2	-19.1	PK
H	23140	48.81	30.85	7.45	24.69	50.10	68.2	-18.1	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5825MHz									
V	11650	47.55	30.55	5.77	24.66	47.43	68.2	-20.77	PK
V	17475	49.26	30.33	6.32	24.55	49.80	68.2	-18.4	PK
V	23300	49.98	30.85	7.45	24.69	51.27	68.2	-16.93	PK
H	11650	48.74	30.55	5.77	24.66	48.62	68.2	-19.58	PK
H	17475	46.93	30.33	6.32	24.55	47.47	68.2	-20.73	PK
H	23300	49.80	30.85	7.45	24.69	51.09	68.2	-17.11	PK

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Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel:5190MHz									
V	10360	47.06	30.55	5.77	24.66	46.94	68.2	-21.26	PK
V	15540	49.11	30.33	6.32	24.55	49.65	68.2	-18.55	PK
V	20720	50.77	30.85	7.45	24.69	52.06	68.2	-16.14	PK
H	10360	47.95	30.55	5.77	24.66	47.83	68.2	-20.37	PK
H	15540	48.28	30.33	6.32	24.55	48.82	68.2	-19.38	PK
H	20720	48.95	30.85	7.45	24.69	50.24	68.2	-17.96	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Middle Channel:5230MHz									
V	10460	48.08	30.55	5.77	24.66	47.96	68.2	-20.24	PK
V	15690	49.56	30.33	6.32	24.55	50.10	68.2	-18.1	PK
V	20920	50.87	30.85	7.45	24.69	52.16	68.2	-16.04	PK
H	10460	46.95	30.55	5.77	24.66	46.83	68.2	-21.37	PK
H	15690	48.17	30.33	6.32	24.55	48.71	68.2	-19.49	PK
H	20920	49.01	30.85	7.45	24.69	50.30	68.2	-17.9	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	

High Channel:5755MHz									
V	11510	47.03	30.55	5.77	24.66	46.91	68.2	-21.29	PK
V	17265	49.58	30.33	6.32	24.55	50.12	68.2	-18.08	PK
V	23020	49.97	30.85	7.45	24.69	51.26	68.2	-16.94	PK
H	11510	45.87	30.55	5.77	24.66	45.75	68.2	-22.45	PK
H	17265	47.94	30.33	6.32	24.55	48.48	68.2	-19.72	PK
H	23020	49.92	30.85	7.45	24.69	51.21	68.2	-16.99	PK

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
High Channel:5795MHz									
V	11590	49.43	30.55	5.77	24.66	49.31	68.2	-18.89	PK
V	17385	48.37	30.33	6.32	24.55	48.91	68.2	-19.29	PK
V	23180	49.49	30.85	7.45	24.69	50.78	68.2	-17.42	PK
H	11590	47.59	30.55	5.77	24.66	47.47	68.2	-20.73	PK
H	17385	47.12	30.33	6.32	24.55	47.66	68.2	-20.54	PK
H	23180	50.36	30.85	7.45	24.69	51.65	68.2	-16.55	PK

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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel:5180MHz									
V	10360	48.71	30.55	5.77	24.66	48.59	68.2	-19.61	PK
V	15540	48.37	30.33	6.32	24.55	48.91	68.2	-19.29	PK
V	20720	48.82	30.85	7.45	24.69	50.11	68.2	-18.09	PK
H	10360	47.85	30.55	5.77	24.66	47.73	68.2	-20.47	PK
H	15540	48.36	30.33	6.32	24.55	48.90	68.2	-19.3	PK
H	20720	51.24	30.85	7.45	24.69	52.53	68.2	-15.67	PK

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Middle Channel:5200MHz									
V	10400	47.32	30.55	5.77	24.66	47.20	68.2	-21	PK
V	15600	48.32	30.33	6.32	24.55	48.86	68.2	-19.34	PK
V	20800	50.50	30.85	7.45	24.69	51.79	68.2	-16.41	PK
H	10400	47.16	30.55	5.77	24.66	47.04	68.2	-21.16	PK
H	15600	47.38	30.33	6.32	24.55	47.92	68.2	-20.28	PK
H	20800	49.24	30.85	7.45	24.69	50.53	68.2	-17.67	PK

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
High Channel:5240MHz									
V	10480	49.30	30.55	5.77	24.66	49.18	68.2	-19.02	PK
V	15720	48.26	30.33	6.32	24.55	48.80	68.2	-19.4	PK
V	20960	50.54	30.85	7.45	24.69	51.83	68.2	-16.37	PK
H	10480	47.96	30.55	5.77	24.66	47.84	68.2	-20.36	PK
H	15720	46.88	30.33	6.32	24.55	47.42	68.2	-20.78	PK
H	20960	49.75	30.85	7.45	24.69	51.04	68.2	-17.16	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5745MHz									
V	11490	48.11	30.55	5.77	24.66	47.99	68.2	-20.21	PK
V	17235	49.53	30.33	6.32	24.55	50.07	68.2	-18.13	PK
V	22980	50.65	30.85	7.45	24.69	51.94	68.2	-16.26	PK
H	11490	46.30	30.55	5.77	24.66	46.18	68.2	-22.02	PK
H	17235	48.11	30.33	6.32	24.55	48.65	68.2	-19.55	PK
H	22980	48.90	30.85	7.45	24.69	50.19	68.2	-18.01	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5785MHz									
V	11570	49.51	30.55	5.77	24.66	49.39	68.2	-18.81	PK
V	17355	48.87	30.33	6.32	24.55	49.41	68.2	-18.79	PK
V	23140	50.90	30.85	7.45	24.69	52.19	68.2	-16.01	PK
H	11570	46.26	30.55	5.77	24.66	46.14	68.2	-22.06	PK
H	17355	48.45	30.33	6.32	24.55	48.99	68.2	-19.21	PK
H	23140	49.85	30.85	7.45	24.69	51.14	68.2	-17.06	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5825MHz									
V	11650	47.74	30.55	5.77	24.66	47.62	68.2	-20.58	PK
V	17475	49.48	30.33	6.32	24.55	50.02	68.2	-18.18	PK
V	23300	48.93	30.85	7.45	24.69	50.22	68.2	-17.98	PK
H	11650	48.48	30.55	5.77	24.66	48.36	68.2	-19.84	PK
H	17475	46.88	30.33	6.32	24.55	47.42	68.2	-20.78	PK
H	23300	49.50	30.85	7.45	24.69	50.79	68.2	-17.41	PK

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Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel:5190MHz									
V	10360	47.57	30.55	5.77	24.66	47.45	68.2	-20.75	PK
V	15540	48.06	30.33	6.32	24.55	48.60	68.2	-19.6	PK
V	20720	51.12	30.85	7.45	24.69	52.41	68.2	-15.79	PK
H	10360	45.92	30.55	5.77	24.66	45.80	68.2	-22.4	PK
H	15540	47.79	30.33	6.32	24.55	48.33	68.2	-19.87	PK
H	20720	49.76	30.85	7.45	24.69	51.05	68.2	-17.15	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Middle Channel:5230MHz									
V	10460	48.38	30.55	5.77	24.66	48.26	68.2	-19.94	PK
V	15690	49.69	30.33	6.32	24.55	50.23	68.2	-17.97	PK
V	20920	51.20	30.85	7.45	24.69	52.49	68.2	-15.71	PK
H	10460	46.53	30.55	5.77	24.66	46.41	68.2	-21.79	PK
H	15690	48.47	30.33	6.32	24.55	49.01	68.2	-19.19	PK

H	20920	51.06	30.85	7.45	24.69	52.35	68.2	-15.85	PK
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Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5755MHz									
V	11510	47.94	30.55	5.77	24.66	47.82	68.2	-20.38	PK
V	17265	48.09	30.33	6.32	24.55	48.63	68.2	-19.57	PK
V	23020	50.60	30.85	7.45	24.69	51.89	68.2	-16.31	PK
H	11510	47.52	30.55	5.77	24.66	47.40	68.2	-20.8	PK
H	17265	47.10	30.33	6.32	24.55	47.64	68.2	-20.56	PK
H	23020	49.67	30.85	7.45	24.69	50.96	68.2	-17.24	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5795MHz									
V	11510	48.90	30.55	5.77	24.66	48.78	68.2	-19.42	PK
V	17265	48.80	30.33	6.32	24.55	49.34	68.2	-18.86	PK
V	23020	51.22	30.85	7.45	24.69	52.51	68.2	-15.69	PK
H	11510	46.89	30.55	5.77	24.66	46.77	68.2	-21.43	PK
H	17265	48.24	30.33	6.32	24.55	48.78	68.2	-19.42	PK
H	23020	50.74	30.85	7.45	24.69	52.03	68.2	-16.17	PK

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Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
5210MHz									
V	10420	49.53	30.55	5.77	24.66	49.41	68.2	-18.79	PK
V	15630	47.99	30.33	6.32	24.55	48.53	68.2	-19.67	PK
V	20840	49.07	30.85	7.45	24.69	50.36	68.2	-17.84	PK
H	10420	47.30	30.55	5.77	24.66	47.18	68.2	-21.02	PK
H	15630	47.64	30.33	6.32	24.55	48.18	68.2	-20.02	PK
H	20840	49.50	30.85	7.45	24.69	50.79	68.2	-17.41	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5775MHz									
V	11550	48.36	30.55	5.77	24.66	48.24	68.2	-19.96	PK
V	17325	48.67	30.33	6.32	24.55	49.21	68.2	-18.99	PK
V	23100	49.56	30.85	7.45	24.69	50.85	68.2	-17.35	PK
H	11550	48.32	30.55	5.77	24.66	48.20	68.2	-20	PK
H	17325	47.84	30.33	6.32	24.55	48.38	68.2	-19.82	PK
H	23100	49.57	30.85	7.45	24.69	50.86	68.2	-17.34	PK

## MIMO-802.11ax20

Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel:5180MHz									
V	10360	49.45	30.55	5.77	24.66	49.33	68.2	-18.87	PK
V	15540	48.47	30.33	6.32	24.55	49.01	68.2	-19.19	PK
V	20720	49.88	30.85	7.45	24.69	51.17	68.2	-17.03	PK
H	10360	48.12	30.55	5.77	24.66	48.00	68.2	-20.2	PK

H	15540	47.32	30.33	6.32	24.55	47.86	68.2	-20.34	PK
H	20720	50.64	30.85	7.45	24.69	51.93	68.2	-16.27	PK

Polar (H/V)	Frequency	Meter Reading	Pre-amp lifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Middle Channel:5200MHz									
V	10400	49.07	30.55	5.77	24.66	48.95	68.2	-19.25	PK
V	15600	48.99	30.33	6.32	24.55	49.53	68.2	-18.67	PK
V	20800	50.82	30.85	7.45	24.69	52.11	68.2	-16.09	PK
H	10400	46.29	30.55	5.77	24.66	46.17	68.2	-22.03	PK
H	15600	48.13	30.33	6.32	24.55	48.67	68.2	-19.53	PK
H	20800	50.96	30.85	7.45	24.69	52.25	68.2	-15.95	PK

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5240MHz									
V	10480	47.60	30.55	5.77	24.66	47.48	68.2	-20.72	PK
V	15720	48.26	30.33	6.32	24.55	48.80	68.2	-19.4	PK
V	20960	51.69	30.85	7.45	24.69	52.98	68.2	-15.22	PK
H	10480	45.94	30.55	5.77	24.66	45.82	68.2	-22.38	PK
H	15720	47.80	30.33	6.32	24.55	48.34	68.2	-19.86	PK
H	20960	51.25	30.85	7.45	24.69	52.54	68.2	-15.66	PK

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5745MHz									
V	11490	48.68	30.55	5.77	24.66	48.56	68.2	-19.64	PK
V	17235	49.61	30.33	6.32	24.55	50.15	68.2	-18.05	PK
V	22980	50.32	30.85	7.45	24.69	51.61	68.2	-16.59	PK
H	11490	48.71	30.55	5.77	24.66	48.59	68.2	-19.61	PK
H	17235	48.33	30.33	6.32	24.55	48.87	68.2	-19.33	PK
H	22980	51.32	30.85	7.45	24.69	52.61	68.2	-15.59	PK

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5785MHz									
V	11570	49.57	30.55	5.77	24.66	49.45	68.2	-18.75	PK
V	17355	48.71	30.33	6.32	24.55	49.25	68.2	-18.95	PK
V	23140	51.28	30.85	7.45	24.69	52.57	68.2	-15.63	PK
H	11570	47.13	30.55	5.77	24.66	47.01	68.2	-21.19	PK
H	17355	48.48	30.33	6.32	24.55	49.02	68.2	-19.18	PK
H	23140	49.17	30.85	7.45	24.69	50.46	68.2	-17.74	PK

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5825MHz									
V	11650	49.12	30.55	5.77	24.66	49.00	68.2	-19.2	PK
V	17475	49.74	30.33	6.32	24.55	50.28	68.2	-17.92	PK

V	23300	50.45	30.85	7.45	24.69	51.74	68.2	-16.46	PK
H	11650	47.14	30.55	5.77	24.66	47.02	68.2	-21.18	PK
H	17475	48.07	30.33	6.32	24.55	48.61	68.2	-19.59	PK
H	23300	49.82	30.85	7.45	24.69	51.11	68.2	-17.09	PK

## MIMO-802.11ax40

Polar (H/V)	Frequency	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel:5190MHz									
V	10360	49.29	30.55	5.77	24.66	49.17	68.2	-19.03	PK
V	15540	48.18	30.33	6.32	24.55	48.72	68.2	-19.48	PK
V	20720	49.36	30.85	7.45	24.69	50.65	68.2	-17.55	PK
H	10360	45.95	30.55	5.77	24.66	45.83	68.2	-22.37	PK
H	15540	47.59	30.33	6.32	24.55	48.13	68.2	-20.07	PK
H	20720	50.82	30.85	7.45	24.69	52.11	68.2	-16.09	PK

Polar (H/V)	Freque ncy	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Middle Channel:5230MHz									
V	10460	48.17	30.55	5.77	24.66	48.05	68.2	-20.15	PK
V	15690	48.46	30.33	6.32	24.55	49.00	68.2	-19.2	PK
V	20920	49.82	30.85	7.45	24.69	51.11	68.2	-17.09	PK
H	10460	46.72	30.55	5.77	24.66	46.60	68.2	-21.6	PK
H	15690	47.59	30.33	6.32	24.55	48.13	68.2	-20.07	PK
H	20920	51.74	30.85	7.45	24.69	53.03	68.2	-15.17	PK

Polar (H/V)	Frequency	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5755MHz									
V	11510	47.69	30.55	5.77	24.66	47.57	68.2	-20.63	PK
V	17265	49.27	30.33	6.32	24.55	49.81	68.2	-18.39	PK
V	23020	49.75	30.85	7.45	24.69	51.04	68.2	-17.16	PK
H	11510	47.02	30.55	5.77	24.66	46.90	68.2	-21.3	PK
H	17265	47.51	30.33	6.32	24.55	48.05	68.2	-20.15	PK
H	23020	51.41	30.85	7.45	24.69	52.70	68.2	-15.5	PK

Polar (H/V)	Frequency	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5795MHz									
V	11510	48.53	30.55	5.77	24.66	48.41	68.2	-19.79	PK
V	17265	49.16	30.33	6.32	24.55	49.70	68.2	-18.5	PK
V	23020	48.94	30.85	7.45	24.69	50.23	68.2	-17.97	PK
H	11510	46.93	30.55	5.77	24.66	46.81	68.2	-21.39	PK
H	17265	48.71	30.33	6.32	24.55	49.25	68.2	-18.95	PK
H	23020	50.58	30.85	7.45	24.69	51.87	68.2	-16.33	PK



## MIMO-802.11ax80

Polar (H/V)	Frequency	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
5210MHz									
V	10420	47.64	30.55	5.77	24.66	47.52	68.2	-20.68	PK
V	15630	49.36	30.33	6.32	24.55	49.90	68.2	-18.3	PK
V	20840	51.11	30.85	7.45	24.69	52.40	68.2	-15.8	PK
H	10420	47.84	30.55	5.77	24.66	47.72	68.2	-20.48	PK
H	15630	48.37	30.33	6.32	24.55	48.91	68.2	-19.29	PK
H	20840	49.61	30.85	7.45	24.69	50.90	68.2	-17.3	PK

Polar (H/V)	Frequency	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Dete ctor Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5775MHz									
V	11550	48.14	30.55	5.77	24.66	48.02	68.2	-20.18	PK
V	17325	48.66	30.33	6.32	24.55	49.20	68.2	-19	PK
V	23100	49.12	30.85	7.45	24.69	50.41	68.2	-17.79	PK
H	11550	46.00	30.55	5.77	24.66	45.88	68.2	-22.32	PK
H	17325	47.02	30.33	6.32	24.55	47.56	68.2	-20.64	PK
H	23100	49.42	30.85	7.45	24.69	50.71	68.2	-17.49	PK

Remark: 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,

Margin= Emission Level - Limit

2. If peak below the average limit, the average emission was no test.

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

4. The test data shows only the worst case.

## 5. POWER SPECTRAL DENSITY TEST

Test Requirement:	FCC 47 CFR Part 15 Subpart E Section 15.407 (a)
Test Method:	KDB 789033 D02 v02r01

### 5.1 APPLIED PROCEDURES / LIMIT

For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, 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.

For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, 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.

LIMIT:	U-NII-1	17DBM/MHZ
	U-NII-3	30DBM/500KHZ

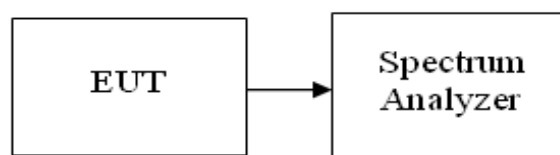
### 5.2 TEST PROCEDURE

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

### 5.3 DEVIATION FROM STANDARD

No deviation.

### 5.4 TEST SETUP



#### 5.5 EUT OPERATION CONDITIONS

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

#### 5.6 TEST RESULT

PASS: PLEASE REFER TO APPENDIX: APPENDIX1 FOR DETAILS

**6. -26 DB & 6DBM EMISSION BANDWIDTH**

Test Requirement:	Part 15 Subpart C Section 15.407 (e)
Test Method:	KDB 789033 D02 v02r01

**6.1 APPLIED PROCEDURES / LIMIT**

FCC Part15.407 (e)		
Bandwidth		
Limit	U-NII-1	N/A
	U-NII-3	≥ 500 kHz

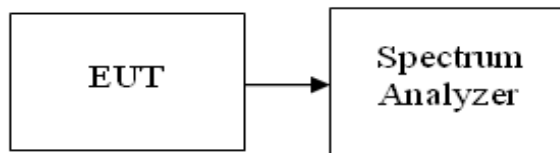
**6.2 TEST PROCEDURE**

Place the EUT on the table and set it in the transmitting mode.  
Remove the antenna from the EUT and then connect a low-loss RF cable from the antenna port to the spectrum analyzer.  
Set the spectrum analyzers RBW = approximately 1% of the emission bandwidth, VBW >RBW, Detector = Peak, Span>26dB bandwidth, and Sweep = auto ,Trace mode = max hold.  
Measure the maximum width of the emission that is 26dB 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%.  
Repeat until all the rest channels were investigated.

**6.3 DEVIATION FROM STANDARD**

No deviation.

**6.4 TEST SETUP**



**6.5 EUT OPERATION CONDITIONS**

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

**6.6 TEST RESULT**

PASS: PLEASE REFER TO APPENDIX: APPENDIX1 FOR DETAILS

## 7. OUTPUT POWER TEST

Test Requirement:	15.407 (a)(1)(2)(3)
Test Method:	KDB 789033 D02 v02r01

### 7.1 APPLIED PROCEDURES/LIMIT

For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi.

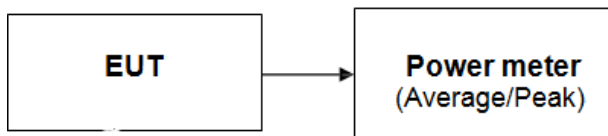
For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

Test Item	Band	Limit	Result
Max conducted output power	U-NII-1	1 W / 30dbm	Pass
Max conducted output power	U-NII-3	1 W / 30dbm	Pass

### 7.2 DEVIATION FROM STANDARD

No deviation.

### 7.3 TEST SETUP



### 7.4 EUT OPERATION CONDITIONS

PASS: PLEASE REFER TO APPENDIX: APPENDIX1 FOR DETAILS

## 8. OUT OF BAND EDGE EMISSION

Test Requirement:	15.407 (b)
Test Method:	KDB 789033 D02 v02r01

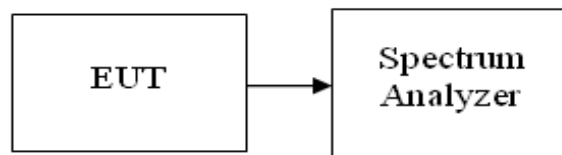
### 8.1 TEST PROCEDURE

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

### 8.2 DEVIATION FROM STANDARD

No deviation.

### 8.3 TEST SETUP



### 8.4 EUT OPERATION CONDITIONS

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

### 8.5 TEST RESULTS

PASS: PLEASE REFER TO APPENDIX: APPENDIX1 FOR DETAILS

## 9. FREQUENCY STABILITY MEASUREMENT

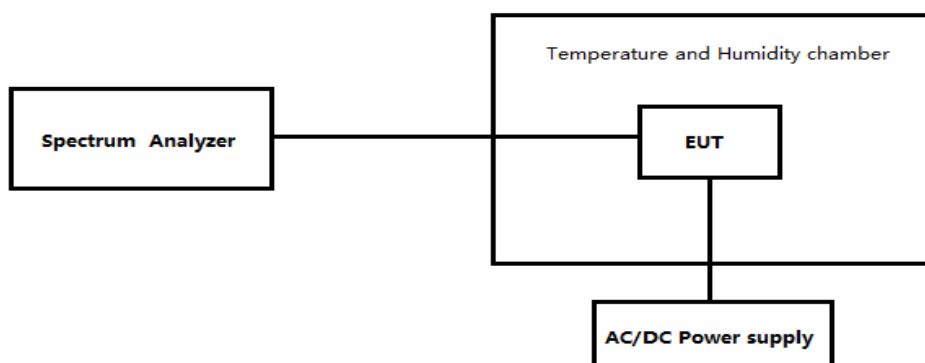
### 9.1 LIMIT

According to §15.407(g), Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

### 9.2 TESTPROCEDURE

1. To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
2. The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
3. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

### 9.3 TESTCONFIGURATION



### 9.4 TEST RESULT

Note: Only the test results of the worst channel are displayed

ANT1 -802.11ac(VHT20) -5180MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	-52	-0.010
40	120	-68	-0.0130
30	120	-43	-0.0083
20	120	-61	-0.0116
10	120	-58	-0.0112
0	120	-52	-0.0101
-10	120	-62	-0.0120
-20	120	-46	-0.0088
-30	120	-40	-0.0078

ANT1-802.11ac(VHT20)-5240 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	-62	-0.012
40	120	-71	-0.0137
30	120	-87	-0.0168
20	120	-76	-0.0146
10	120	-99	-0.0191
0	120	-80	-0.0154
-10	120	-75	-0.0144
-20	120	-88	-0.0169
-30	120	-89	-0.0171

ANT1-802.11ax(HE20)-5180 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	-95	-0.0182
40	120	-79	-0.0152
30	120	-80	-0.0154
20	120	-84	-0.0162
10	120	-98	-0.0189
0	120	-92	-0.0178
-10	120	-99	-0.0190
-20	120	-87	-0.0167
-30	120	-95	-0.0182

ANT1-802.11ax(HE80)-5210 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	96	0.018
40	120	-86	-0.0166
30	120	-95	-0.0183
20	120	-91	-0.0175
10	120	-88	-0.0170
0	120	-83	-0.0159
-10	120	-70	-0.0135
-20	120	-88	-0.0170
-30	120	-79	-0.0152

ANT2-802.11a-5200 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	-59	-0.0113
40	120	-54	-0.0104
30	120	-47	-0.0090
20	120	-57	-0.0109
10	120	-69	-0.0133
0	120	-48	-0.0092
-10	120	-49	-0.0094
-20	120	-66	-0.0127
-30	120	-47	-0.0089

ANT2-802.11ax(HE20)-5180 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	-68	-0.013
40	120	-52	-0.0100
30	120	-54	-0.0103
20	120	-60	-0.0115
10	120	-64	-0.0124
0	120	-40	-0.0077



-10	120	-47	-0.0090
-20	120	-53	-0.0103
-30	120	-45	-0.0086

ANT2-802.11ax(HE20)-5200 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	-88	-0.017
40	120	-92	-0.0177
30	120	-99	-0.0191
20	120	-97	-0.0187
10	120	-89	-0.0171
0	120	-71	-0.0136
-10	120	-92	-0.0177
-20	120	-76	-0.0145
-30	120	-79	-0.0151

ANT2-802.11ax(HE40)-5230 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	-56	-0.011
40	120		
30	120		
20	120		
10	120		
0	120		
-10	120		
-20	120		
-30	120		

ANT2-802.11ac(VHT80)-5210 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	84	0.016
40	120	-65	-0.0124
30	120	-54	-0.0103
20	120	-53	-0.0102
10	120	-61	-0.0118
0	120	-66	-0.0126
-10	120	-64	-0.0124
-20	120	-40	-0.0077
-30	120	-60	-0.0114

ANT3-802.11ax(HE20)-5180 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	-62	-0.012
40	120	-74	-0.0142
30	120	-80	-0.0154
20	120	-80	-0.0154
10	120	-80	-0.0155
0	120	-89	-0.0171
-10	120	-89	-0.0171
-20	120	-76	-0.0146
-30	120	-71	-0.0137

ANT3-802.11ac(VHT40)-5190 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	76	0.015

40	120	-78	-0.0149
30	120	-86	-0.0165
20	120	-82	-0.0158
10	120	-80	-0.0153
0	120	-88	-0.0170
-10	120	-81	-0.0155
-20	120	-95	-0.0183
-30	120	-82	-0.0159

ANT3-802.11ac(VHT80) -5210 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	132	0.025
40	120	-83	-0.0143
30	120	-65	-0.0112
20	120	-78	-0.0134
10	120	-62	-0.0107
0	120	-69	-0.0119
-10	120	-79	-0.0136
-20	120	-83	-0.0142
-30	120	-64	-0.0109

ANT4-802.11ax(HE20)-5180 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	-78	-0.015
40	120	-75	-0.0145
30	120	-95	-0.0182
20	120	-77	-0.0147
10	120	-82	-0.0157
0	120	-86	-0.0165
-10	120	-88	-0.0169
-20	120	-72	-0.0138
-30	120	-70	-0.0136

ANT1-802.11a-5825 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	-56	-0.010
40	120	-53	-0.0102
30	120	-57	-0.0110
20	120	-55	-0.0105
10	120	-57	-0.0110
0	120	-57	-0.0110
-10	120	-48	-0.0091
-20	120	-59	-0.0114
-30	120	-48	-0.0091

ANT1 -802.11ac(VHT20)-5785 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	-58	-0.010
40	120	-83	-0.0143
30	120	-65	-0.0112
20	120	-78	-0.0134
10	120	-62	-0.0107
0	120	-69	-0.0119
-10	120	-79	-0.0136
-20	120	-83	-0.0142
-30	120	-64	-0.0109

ANT1-802.11ax(HE20)-5825 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	-98	-0.017
40	120	-95	-0.0182
30	120	-77	-0.0147
20	120	-82	-0.0157
10	120	-86	-0.0165
0	120	-88	-0.0169
-10	120	-72	-0.0138
-20	120	-70	-0.0136
-30	120	-79	-0.0153

ANT2-802.11ax(HE20)-5745 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	-62	-0.011
40	120	-78	-0.0134
30	120	-64	-0.0110
20	120	-68	-0.0117
10	120	-64	-0.0109
0	120	-67	-0.0116
-10	120	-80	-0.0137
-20	120	-73	-0.0126
-30	120	-65	-0.0111

ANT2802.11ax(HE20) 5825.00

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	-66	-0.011
40	120	-80	-0.0154
30	120	-97	-0.0187
20	120	-80	-0.0154
10	120	-90	-0.0174
0	120	-88	-0.0168
-10	120	-91	-0.0175
-20	120	-85	-0.0163
-30	120	-87	-0.0168

ANT3-802.11ac(VHT20)-5745 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	-52	-0.009
40	120	-47	-0.0091
30	120	-64	-0.0122
20	120	-56	-0.0107
10	120	-41	-0.0078
0	120	-69	-0.0131
-10	120	-69	-0.0132
-20	120	-51	-0.0098
-30	120	-62	-0.0120

ANT4-802.11a-5745 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	-46	-0.008
40	120	-51	-0.0097
30	120	-49	-0.0094
20	120	-60	-0.0115

10	120	-56	-0.0107
0	120	-56	-0.0108
-10	120	-59	-0.0113
-20	120	-58	-0.0111
-30	120	-53	-0.0102

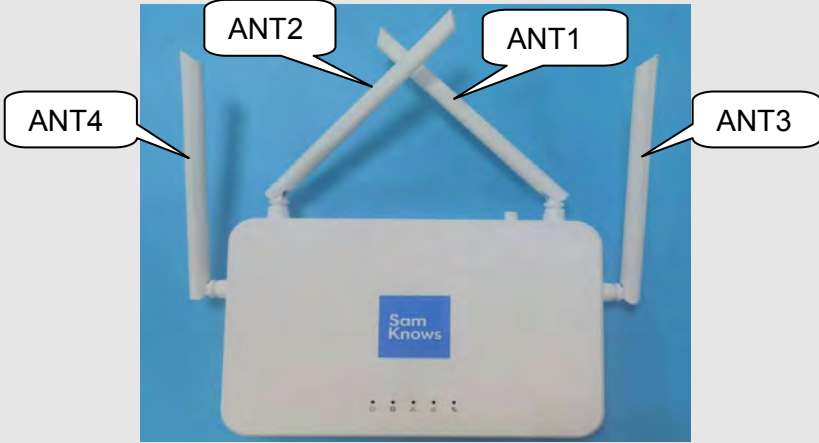
## ANT4--802.11ax(HE20)-5745 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	-68	-0.012
40	120	-67	-0.0115
30	120	-75	-0.0128
20	120	-89	-0.0153
10	120	-65	-0.0111
0	120	-62	-0.0106
-10	120	-62	-0.0106
-20	120	-67	-0.0114
-30	120	-64	-0.0109

## ANT4-802.11ac(VHT80)-5775 MHz

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	84	0.015
40	120	-87	-0.0168
30	120	-71	-0.0136
20	120	-89	-0.0170
10	120	-96	-0.0184
0	120	-93	-0.0178
-10	120	-97	-0.0187
-20	120	-86	-0.0166
-30	120	-74	-0.0142

## 10.ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203 /247(c)
<p>For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247, if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.</p> <p>Refer to statement below for compliance.</p> <p>The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.</p>	
<p>The antenna is external antenna, the best case ANT1&amp;ANT2 &amp; ANT3&amp; ANT4 gain is 5.57dBi;, reference to the below photo for details</p> 	

## 11.APPENDIX1---5.2GWIFI

## 1. -26DB AND 99% EMISSION BANDWIDTH

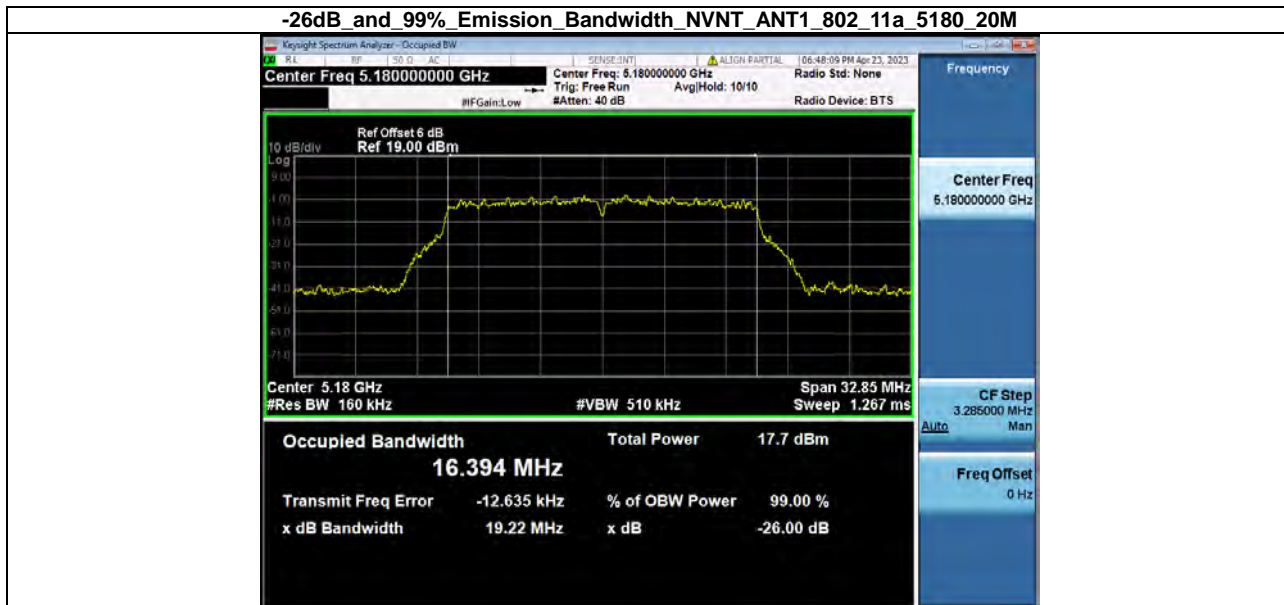
Condition	Antenna	Modulation	Frequency(MHz)	-26dB_Emission_Bandwidth(MHz)	Occupied Bandwidth(MHz)
NVNT	ANT1	802.11a	5180.00	19.22	16.39
NVNT	ANT1	802.11a	5200.00	19.31	16.39
NVNT	ANT1	802.11a	5240.00	19.28	16.41
NVNT	ANT1	802.11n(HT20)	5180.00	19.84	17.64
NVNT	ANT1	802.11n(HT20)	5200.00	19.74	17.60
NVNT	ANT1	802.11n(HT20)	5240.00	19.92	17.63
NVNT	ANT1	802.11ac(VHT20)	5180.00	19.95	17.59
NVNT	ANT1	802.11ac(VHT20)	5200.00	19.95	17.63
NVNT	ANT1	802.11ac(VHT20)	5240.00	19.96	17.65
NVNT	ANT1	802.11ax(HE20)	5180.00	23.85	19.00
NVNT	ANT1	802.11ax(HE20)	5200.00	24.84	18.98
NVNT	ANT1	802.11ax(HE20)	5240.00	19.83	18.86
NVNT	ANT1	802.11n(HT40)	5190.00	39.69	36.07
NVNT	ANT1	802.11n(HT40)	5230.00	39.16	35.87
NVNT	ANT1	802.11ac(VHT40)	5190.00	39.81	35.95
NVNT	ANT1	802.11ac(VHT40)	5230.00	39.62	35.87
NVNT	ANT1	802.11ax(HE40)	5190.00	39.38	37.50
NVNT	ANT1	802.11ax(HE40)	5230.00	39.44	37.44
NVNT	ANT1	802.11ac(VHT80)	5210.00	79.83	75.05
NVNT	ANT1	802.11ax(HE80)	5210.00	79.77	76.28

Condition	Antenna	Modulation	Frequency(MHz)	-26dB_Emission_Bandwidth(MHz)	Occupied Bandwidth(MHz)
NVNT	ANT2	802.11a	5180.00	19.24	16.41
NVNT	ANT2	802.11a	5200.00	19.10	16.44
NVNT	ANT2	802.11a	5240.00	19.31	16.43
NVNT	ANT2	802.11n(HT20)	5180.00	19.76	17.59
NVNT	ANT2	802.11n(HT20)	5200.00	19.84	17.60
NVNT	ANT2	802.11n(HT20)	5240.00	19.87	17.62
NVNT	ANT2	802.11ac(VHT20)	5180.00	20.09	17.63
NVNT	ANT2	802.11ac(VHT20)	5200.00	20.03	17.65
NVNT	ANT2	802.11ac(VHT20)	5240.00	20.13	17.67
NVNT	ANT2	802.11ax(HE20)	5180.00	30.37	19.03
NVNT	ANT2	802.11ax(HE20)	5200.00	23.85	19.08
NVNT	ANT2	802.11ax(HE20)	5240.00	19.74	18.86
NVNT	ANT2	802.11n(HT40)	5190.00	39.72	35.86
NVNT	ANT2	802.11n(HT40)	5230.00	39.40	35.82
NVNT	ANT2	802.11ac(VHT40)	5190.00	39.68	36.02
NVNT	ANT2	802.11ac(VHT40)	5230.00	39.46	35.91
NVNT	ANT2	802.11ax(HE40)	5190.00	39.29	37.60
NVNT	ANT2	802.11ax(HE40)	5230.00	39.36	37.47
NVNT	ANT2	802.11ac(VHT80)	5210.00	79.07	75.31
NVNT	ANT2	802.11ax(HE80)	5210.00	79.64	76.69

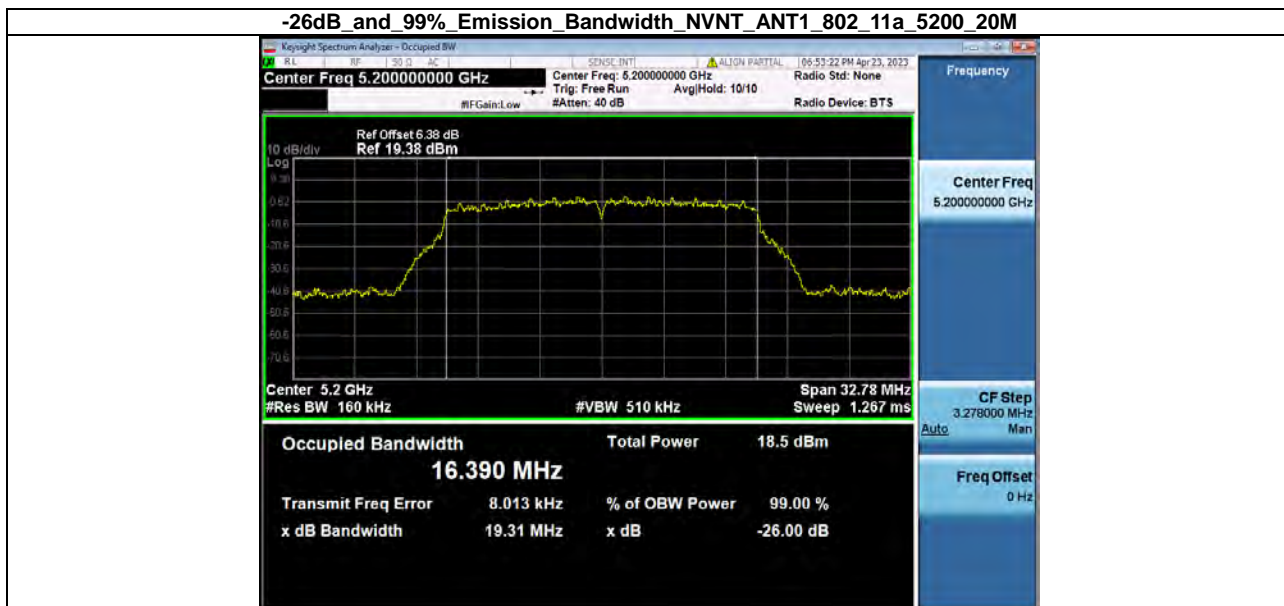
Condition	Antenna	Modulation	Frequency(MHz)	-26dB_Emission_Bandwidth(MHz)	Occupied Bandwidth(MHz)
NVNT	ANT3	802.11a	5180.00	19.24	16.38
NVNT	ANT3	802.11a	5200.00	19.31	16.38
NVNT	ANT3	802.11a	5240.00	19.29	16.39
NVNT	ANT3	802.11n(HT20)	5180.00	19.73	17.58
NVNT	ANT3	802.11n(HT20)	5200.00	19.93	17.63
NVNT	ANT3	802.11n(HT20)	5240.00	19.98	17.60
NVNT	ANT3	802.11ac(VHT20)	5180.00	19.79	17.54
NVNT	ANT3	802.11ac(VHT20)	5200.00	19.77	17.58
NVNT	ANT3	802.11ac(VHT20)	5240.00	19.61	17.54
NVNT	ANT3	802.11ax(HE20)	5180.00	23.87	18.96
NVNT	ANT3	802.11ax(HE20)	5200.00	28.67	19.06
NVNT	ANT3	802.11ax(HE20)	5240.00	19.76	18.87
NVNT	ANT3	802.11n(HT40)	5190.00	39.93	35.83
NVNT	ANT3	802.11n(HT40)	5230.00	39.18	35.83
NVNT	ANT3	802.11ac(VHT40)	5190.00	39.85	35.95
NVNT	ANT3	802.11ac(VHT40)	5230.00	39.65	35.80
NVNT	ANT3	802.11ax(HE40)	5190.00	39.37	37.43
NVNT	ANT3	802.11ax(HE40)	5230.00	39.47	37.45
NVNT	ANT3	802.11ac(VHT80)	5210.00	78.84	74.78
NVNT	ANT3	802.11ax(HE80)	5210.00	79.76	76.23

Condition	Antenna	Modulation	Frequency(MHz)	-26dB_Emission_Bandwidth(MHz)	Occupied Bandwidth(MHz)
NVNT	ANT4	802.11a	5180.00	19.24	16.37
NVNT	ANT4	802.11a	5200.00	19.09	16.39
NVNT	ANT4	802.11a	5240.00	19.43	16.42
NVNT	ANT4	802.11n(HT20)	5180.00	20.03	17.60
NVNT	ANT4	802.11n(HT20)	5200.00	19.97	17.61
NVNT	ANT4	802.11n(HT20)	5240.00	20.02	17.65
NVNT	ANT4	802.11ac(VHT20)	5180.00	19.89	17.55
NVNT	ANT4	802.11ac(VHT20)	5200.00	19.77	17.62
NVNT	ANT4	802.11ac(VHT20)	5240.00	19.69	17.60
NVNT	ANT4	802.11ax(HE20)	5180.00	22.51	19.01
NVNT	ANT4	802.11ax(HE20)	5200.00	23.64	19.02
NVNT	ANT4	802.11ax(HE20)	5240.00	19.79	18.91
NVNT	ANT4	802.11n(HT40)	5190.00	39.79	35.97
NVNT	ANT4	802.11n(HT40)	5230.00	38.94	35.88
NVNT	ANT4	802.11ac(VHT40)	5190.00	39.28	35.86
NVNT	ANT4	802.11ac(VHT40)	5230.00	39.26	35.91
NVNT	ANT4	802.11ax(HE40)	5190.00	39.30	37.57
NVNT	ANT4	802.11ax(HE40)	5230.00	39.44	37.36
NVNT	ANT4	802.11ac(VHT80)	5210.00	79.36	75.05
NVNT	ANT4	802.11ax(HE80)	5210.00	79.85	76.55

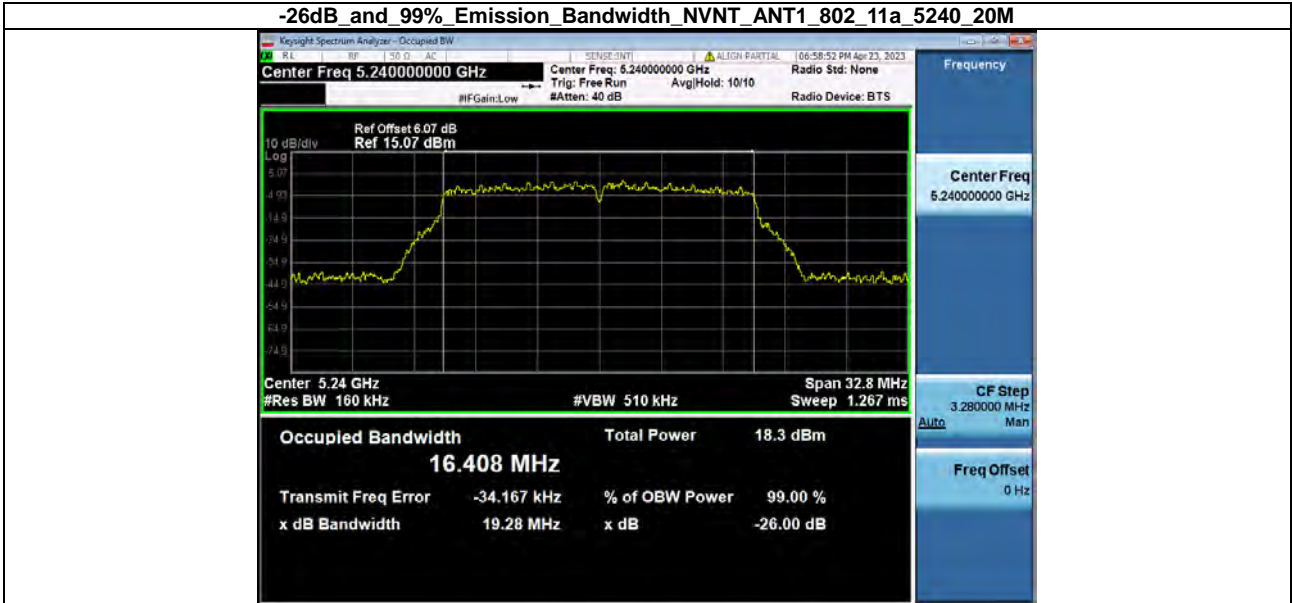
-26dB and 99% Emission Bandwidth NVNT ANT1 802\_11a\_5180\_20M



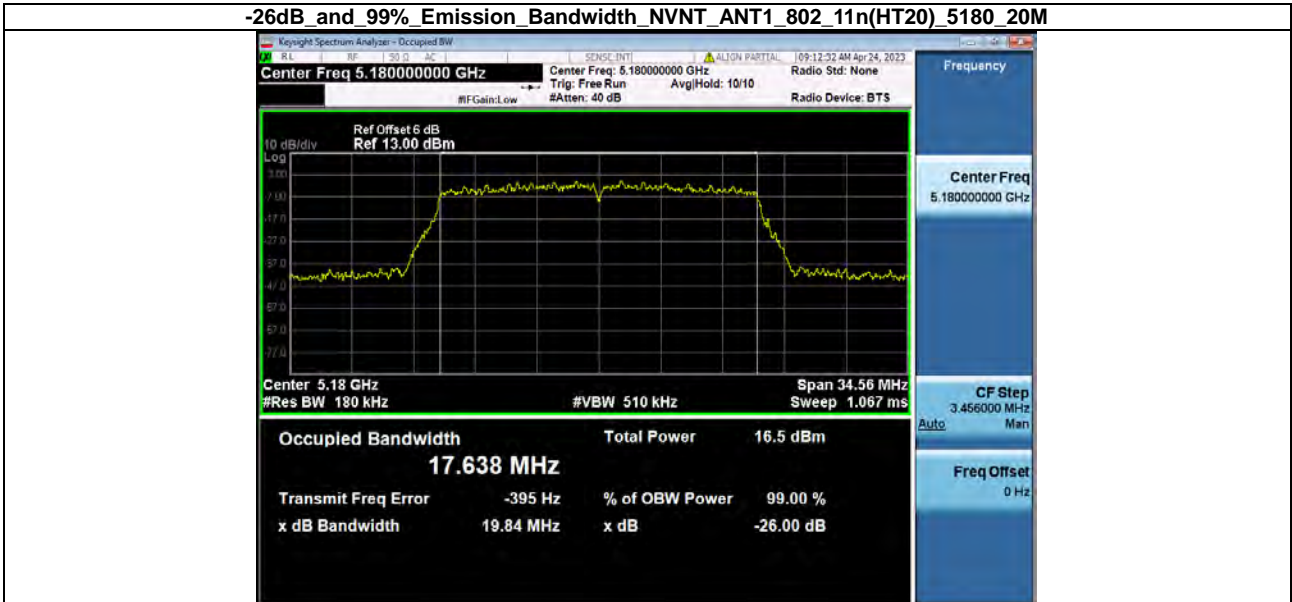
-26dB and 99% Emission Bandwidth NVNT ANT1 802\_11a\_5200\_20M



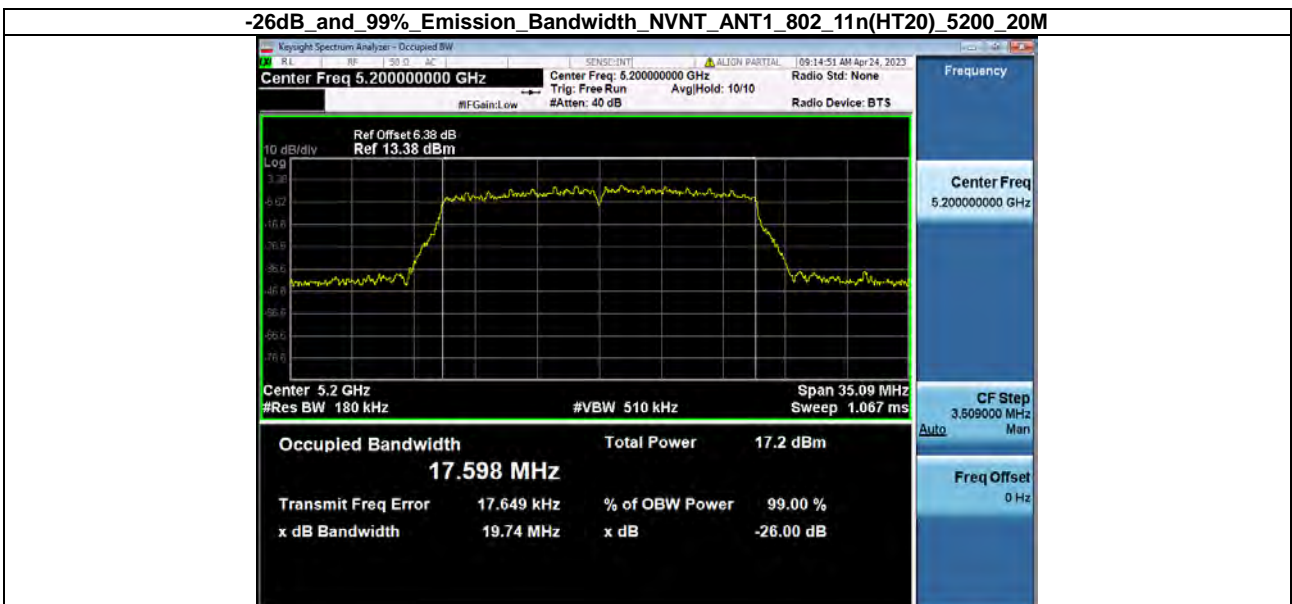
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT1\_802\_11a\_5240\_20M**



**-26dB and 99% Emission Bandwidth\_NVNT\_ANT1\_802\_11n(HT20)\_5180\_20M**

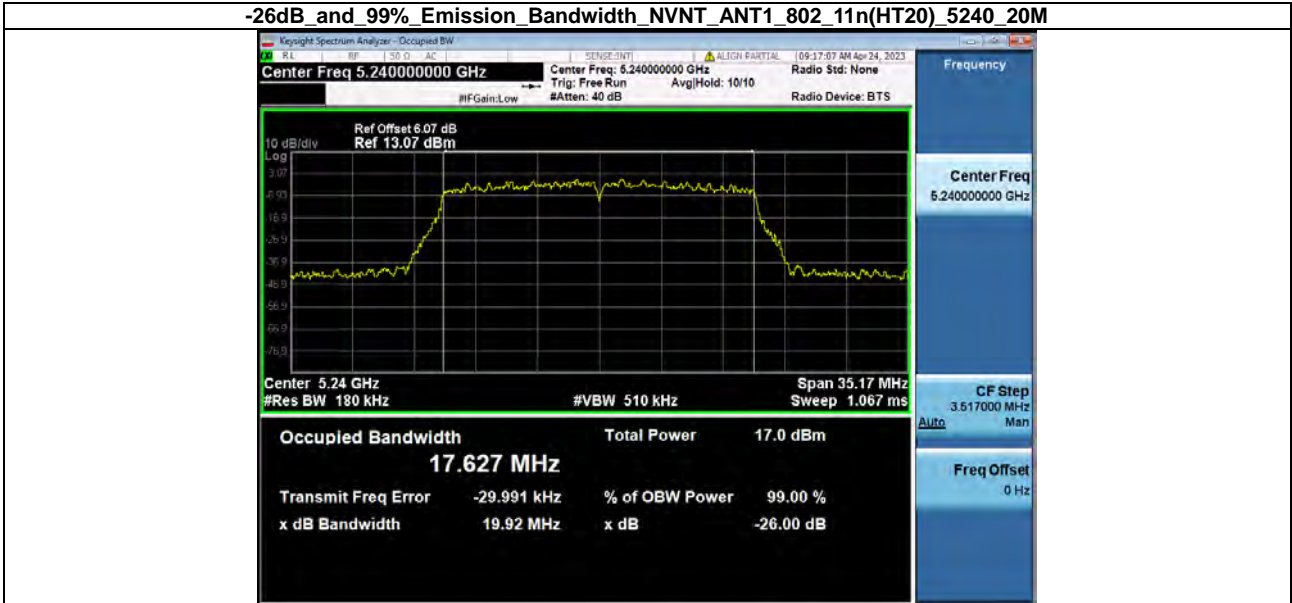


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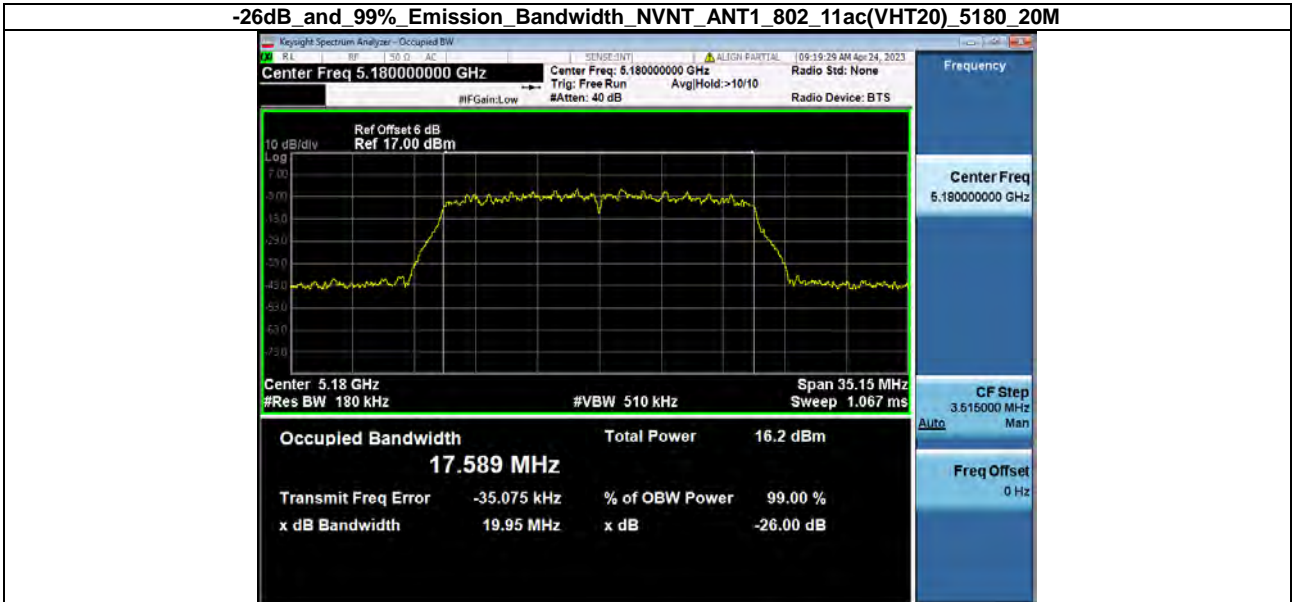




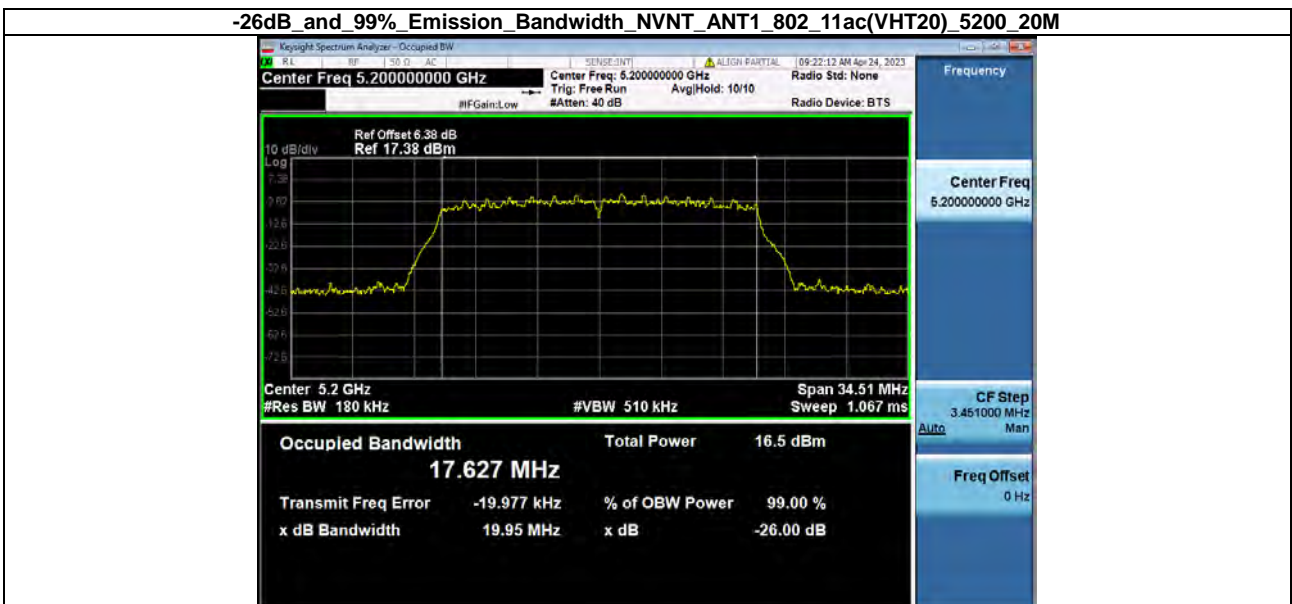
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT1\_802\_11n(HT20)\_5240\_20M**



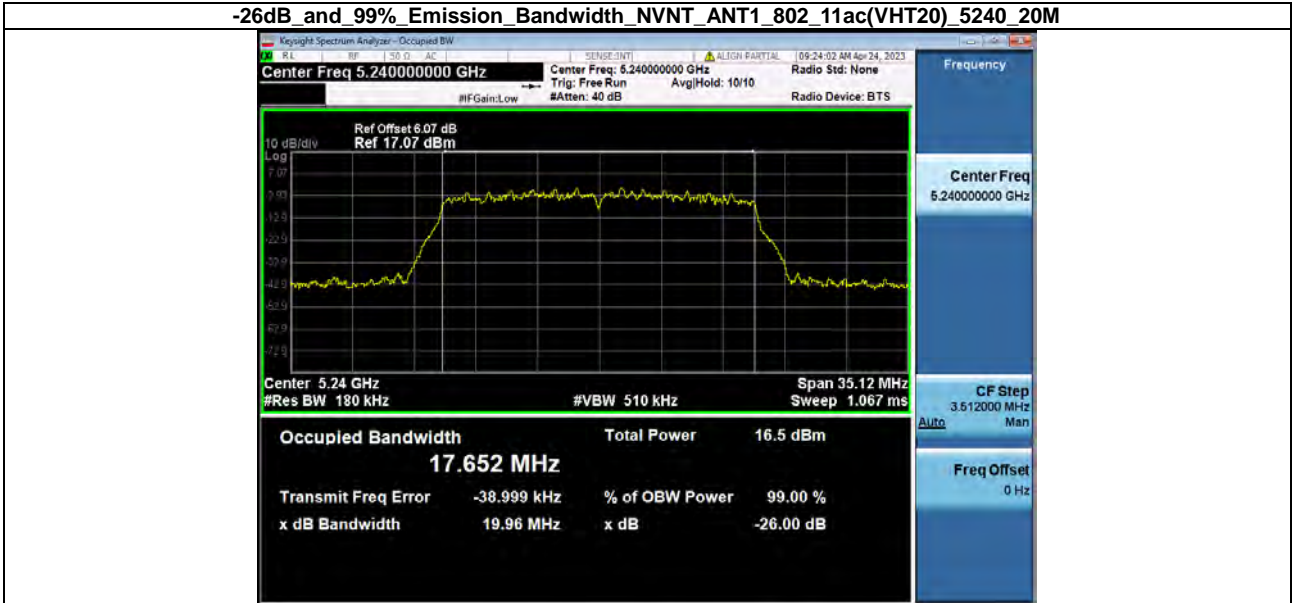
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT1\_802\_11ac(VHT20)\_5180\_20M**



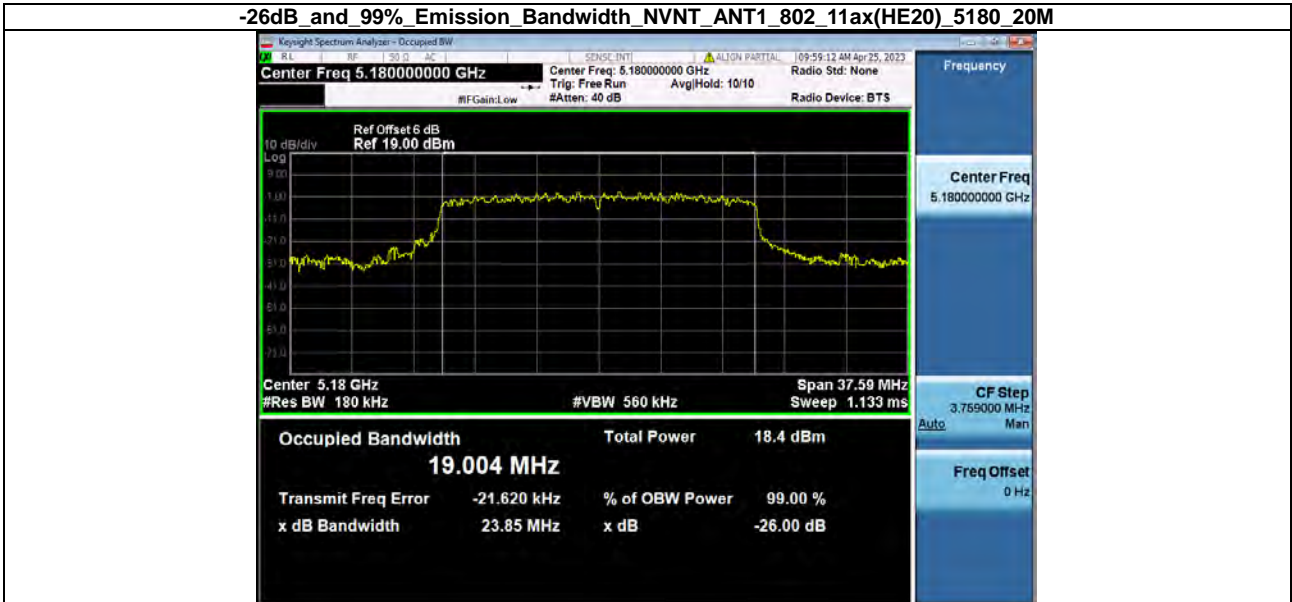
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT1\_802\_11ac(VHT20)\_5200\_20M**



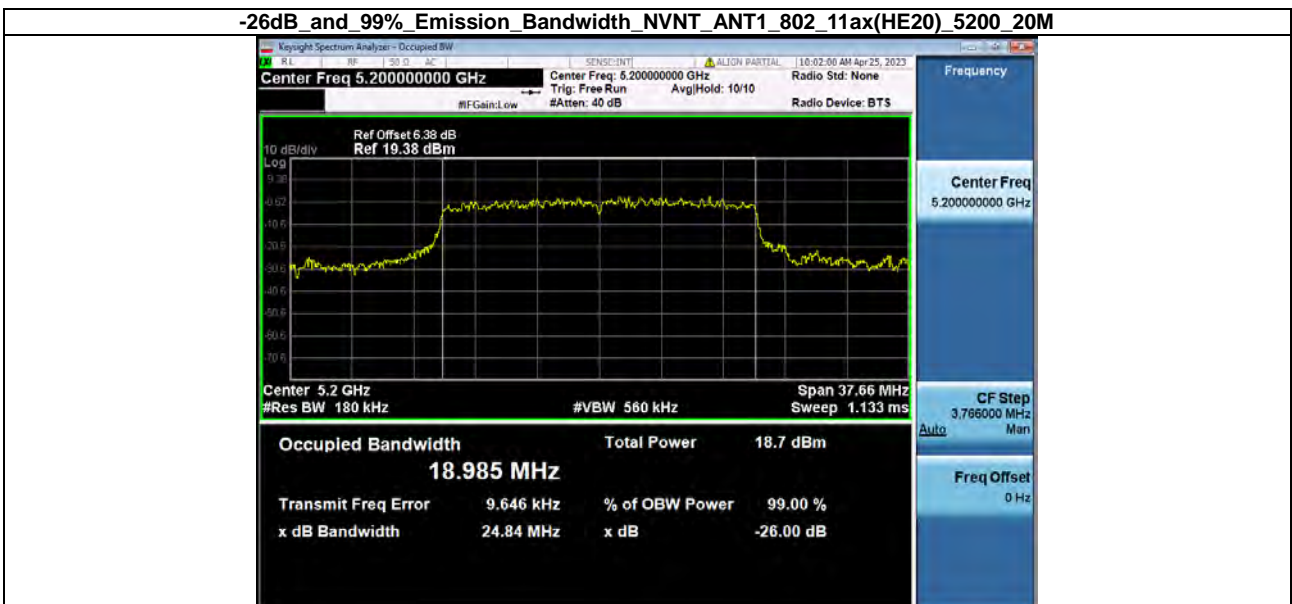
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT1\_802\_11ac(VHT20)\_5240\_20M**



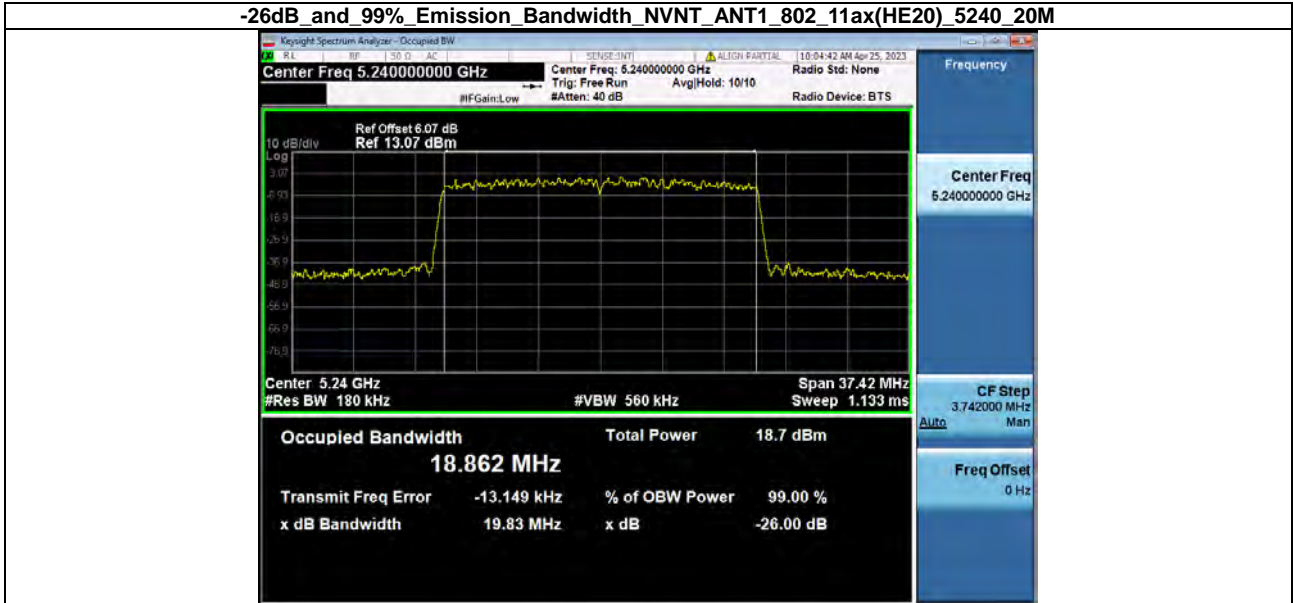
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT1\_802\_11ax(HE20)\_5180\_20M**



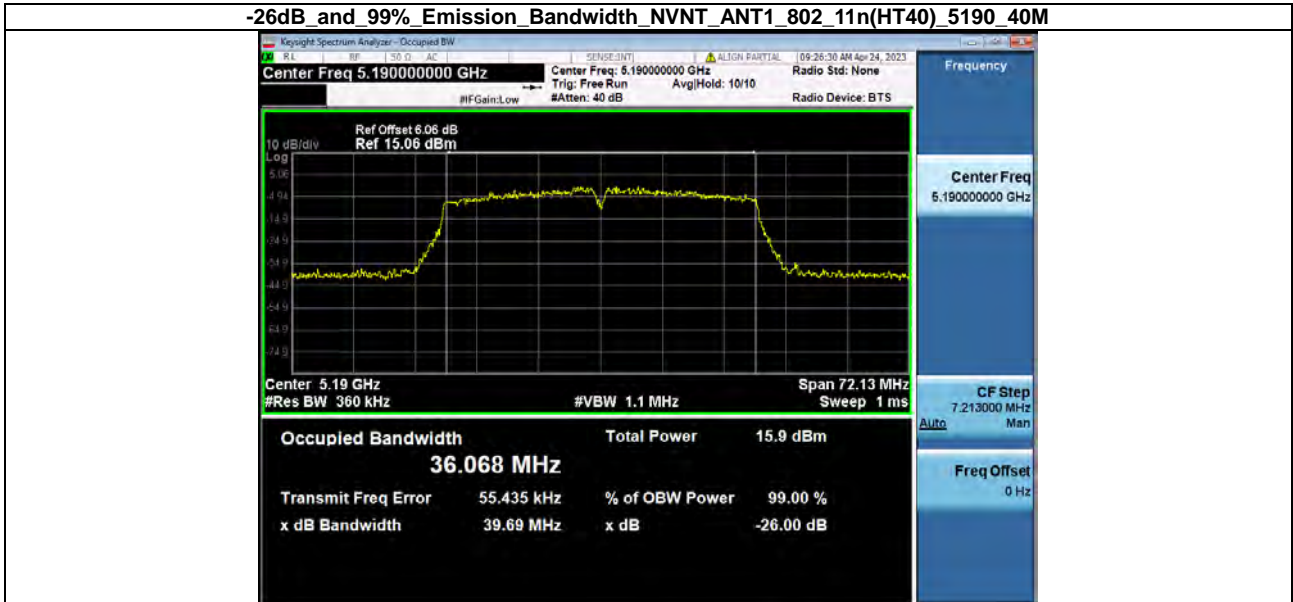
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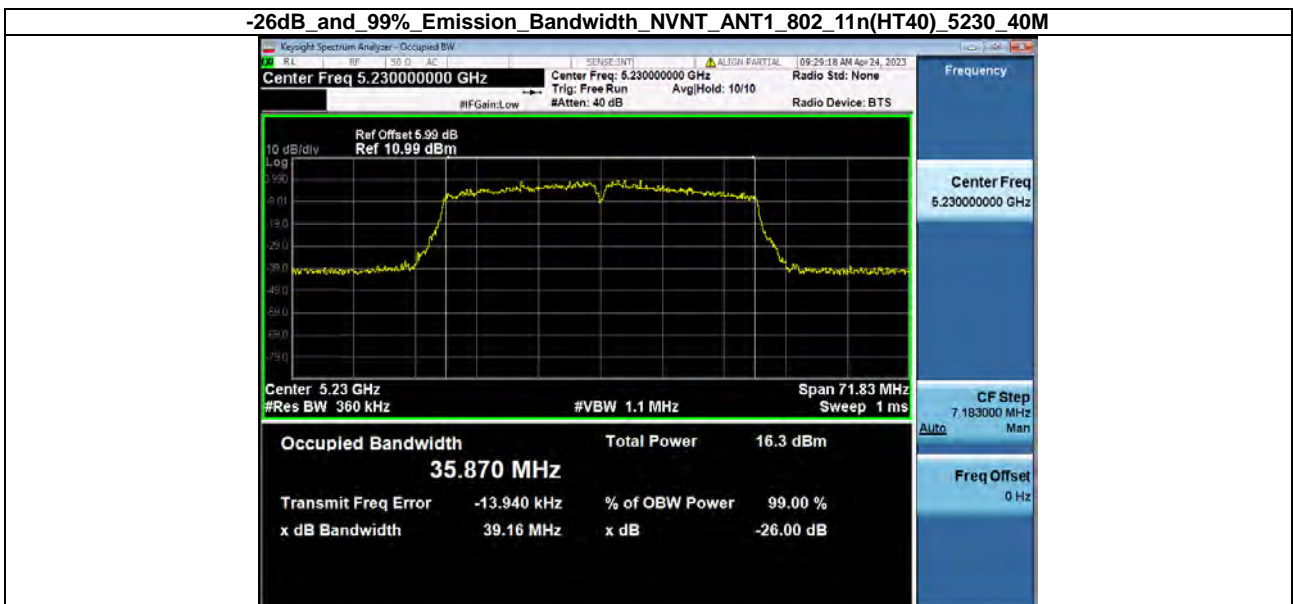
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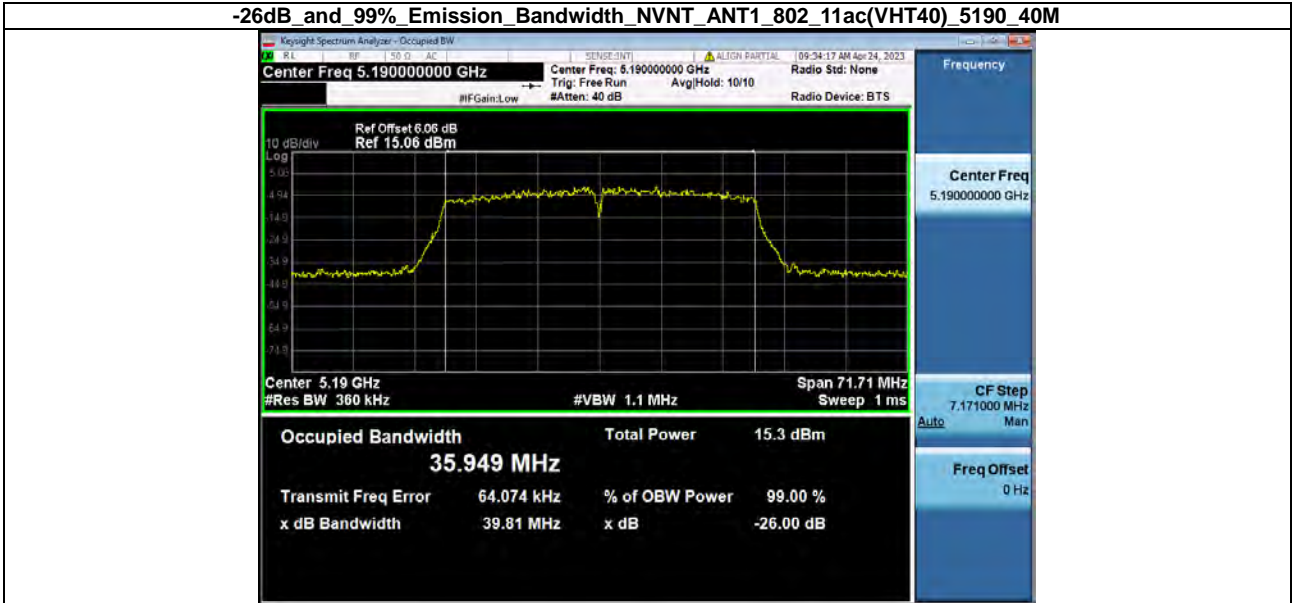
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT1\_802\_11n(HT40)\_5190\_40M**



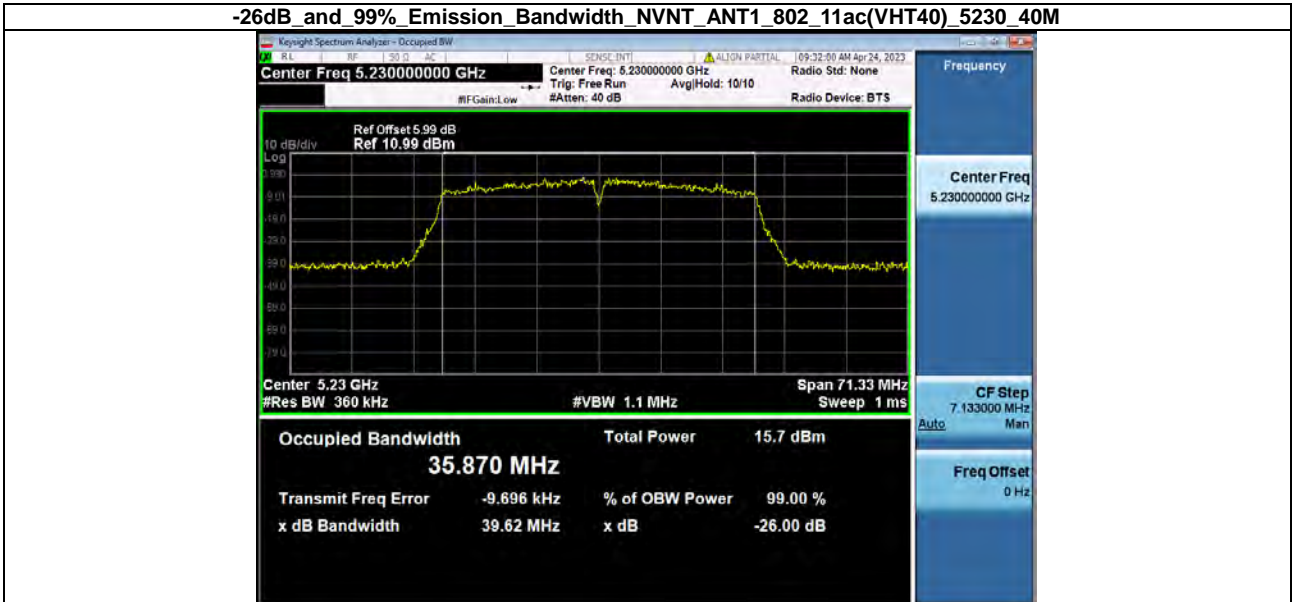
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT1\_802\_11n(HT40)\_5230\_40M**



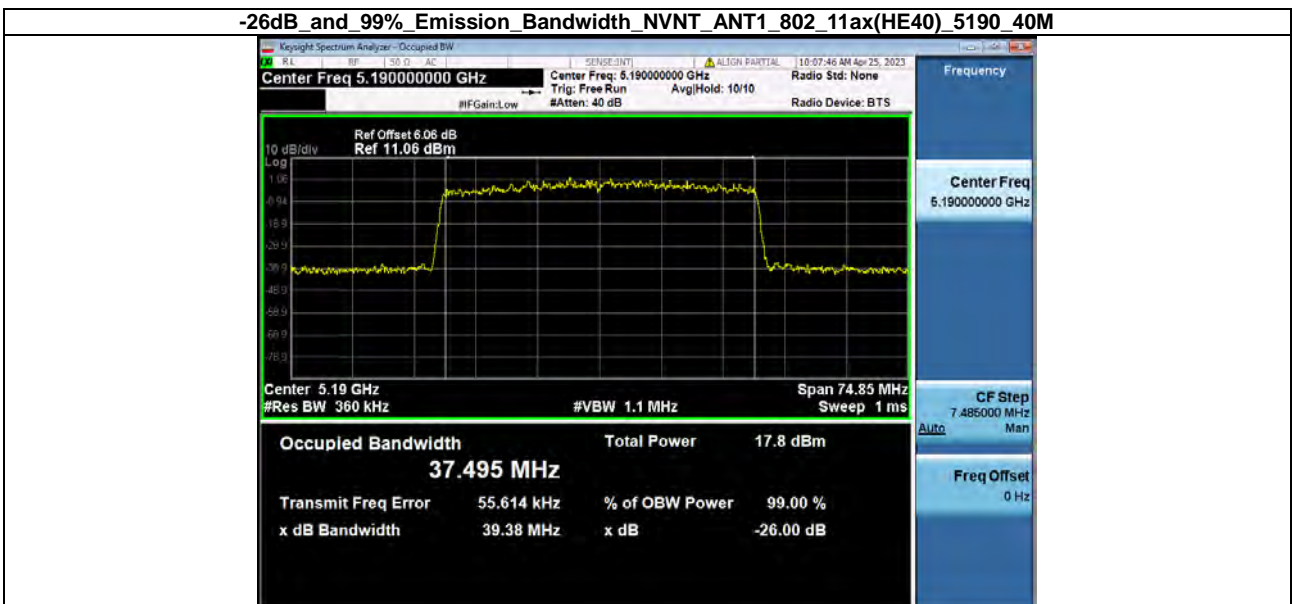
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT1\_802\_11ac(VHT40)\_5190\_40M**



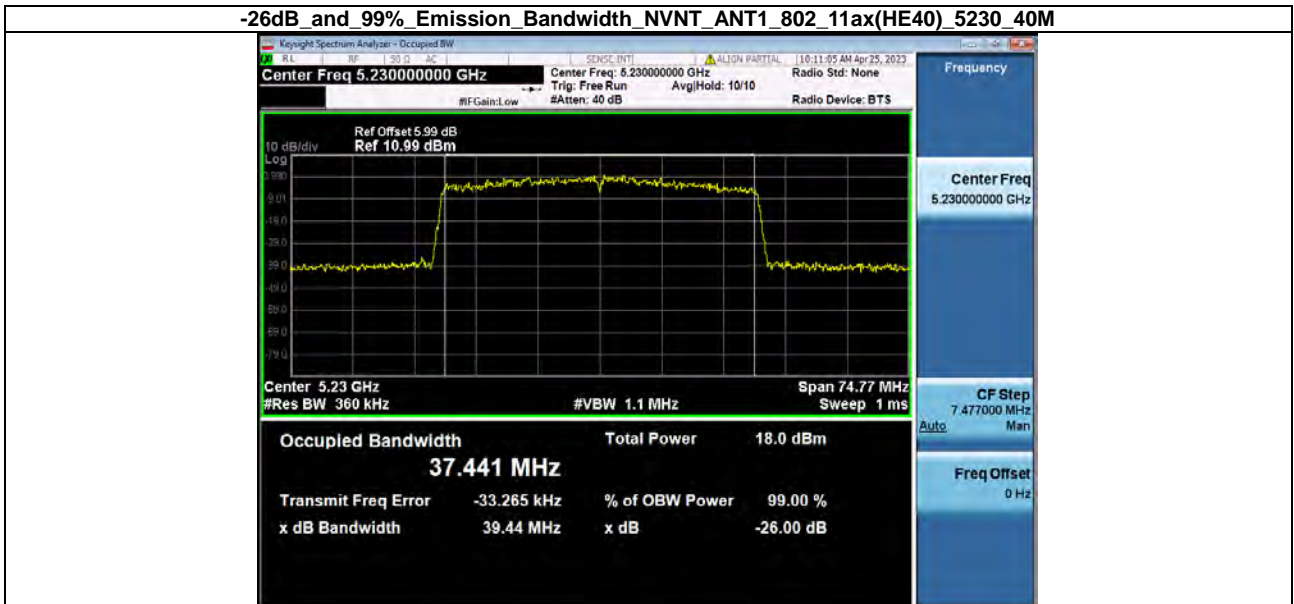
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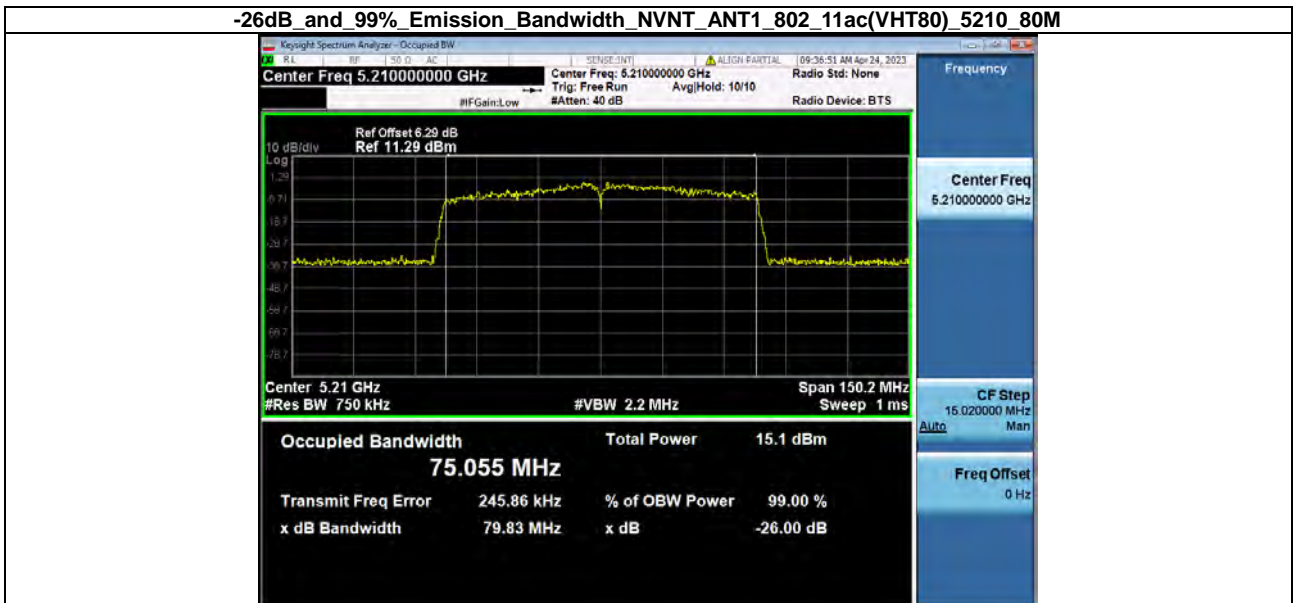
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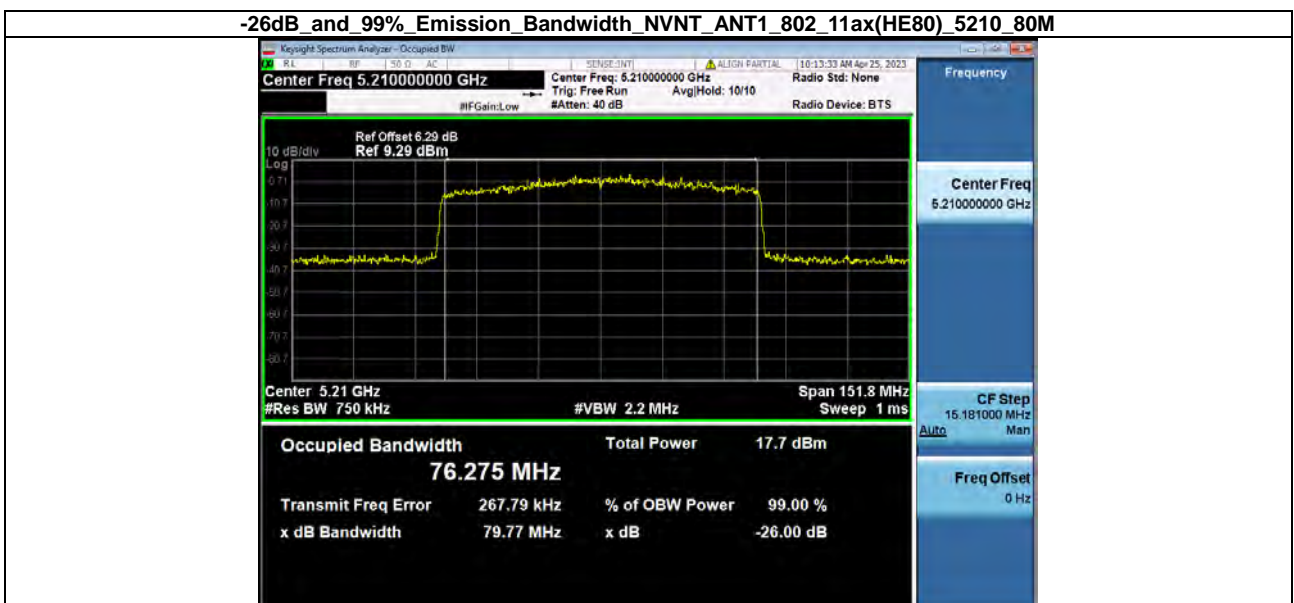
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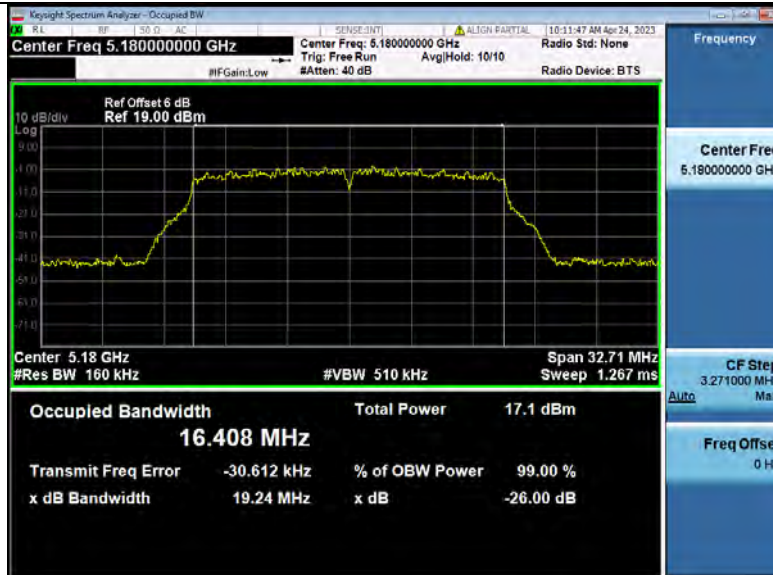
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT1\_802\_11ac(VHT80)\_5210\_80M**



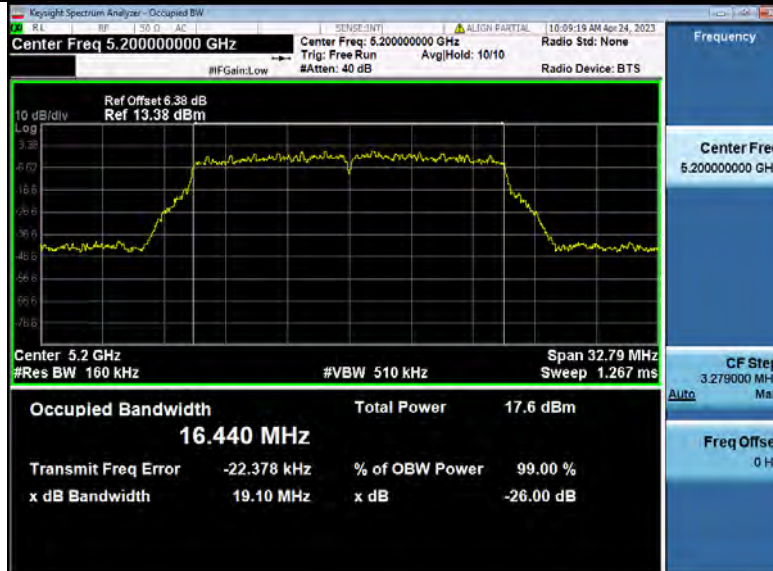
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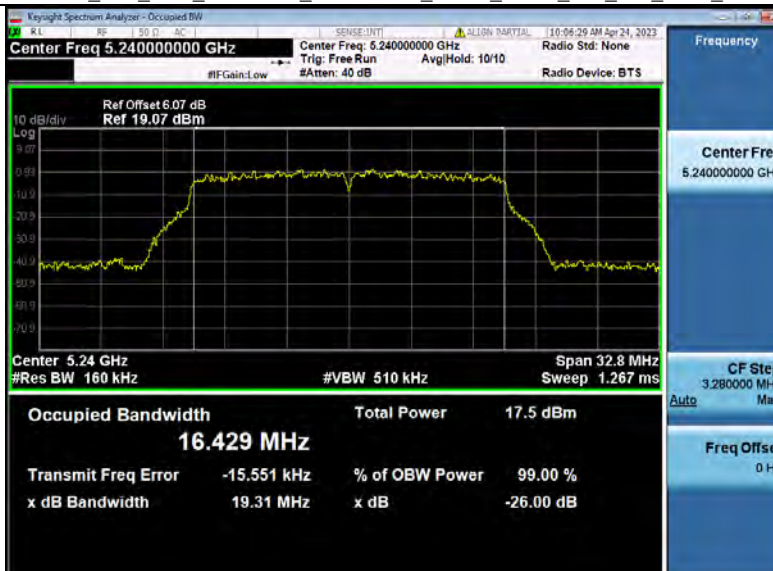
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT2\_802\_11a\_5180\_20M**



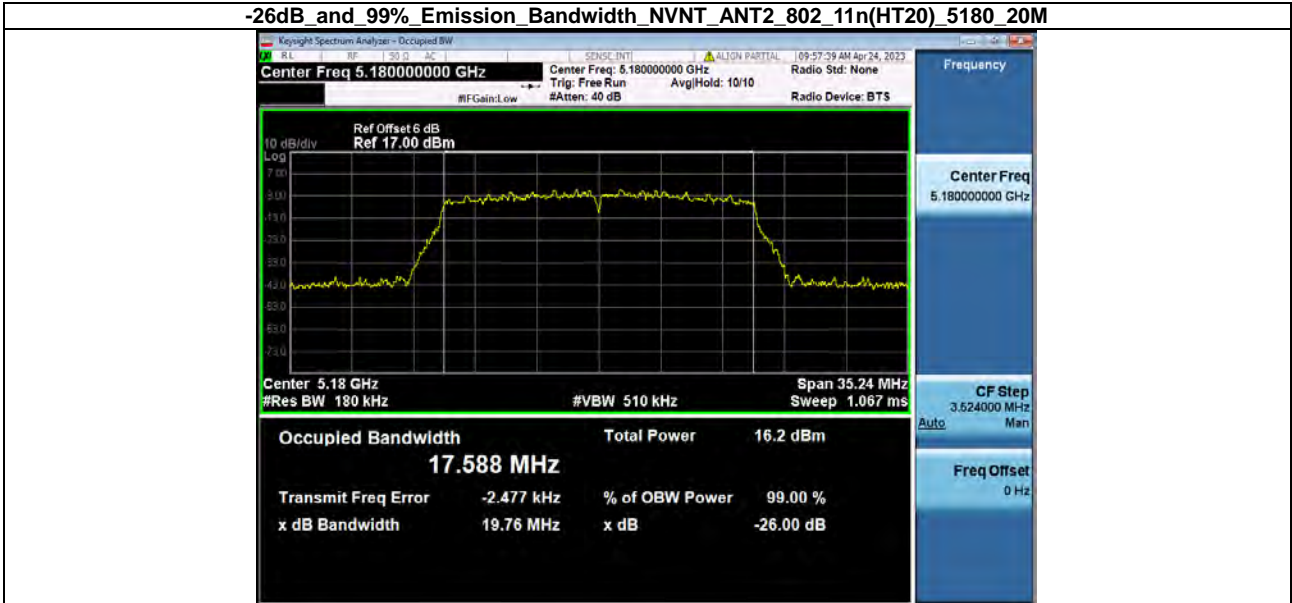
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT2\_802\_11a\_5200\_20M**



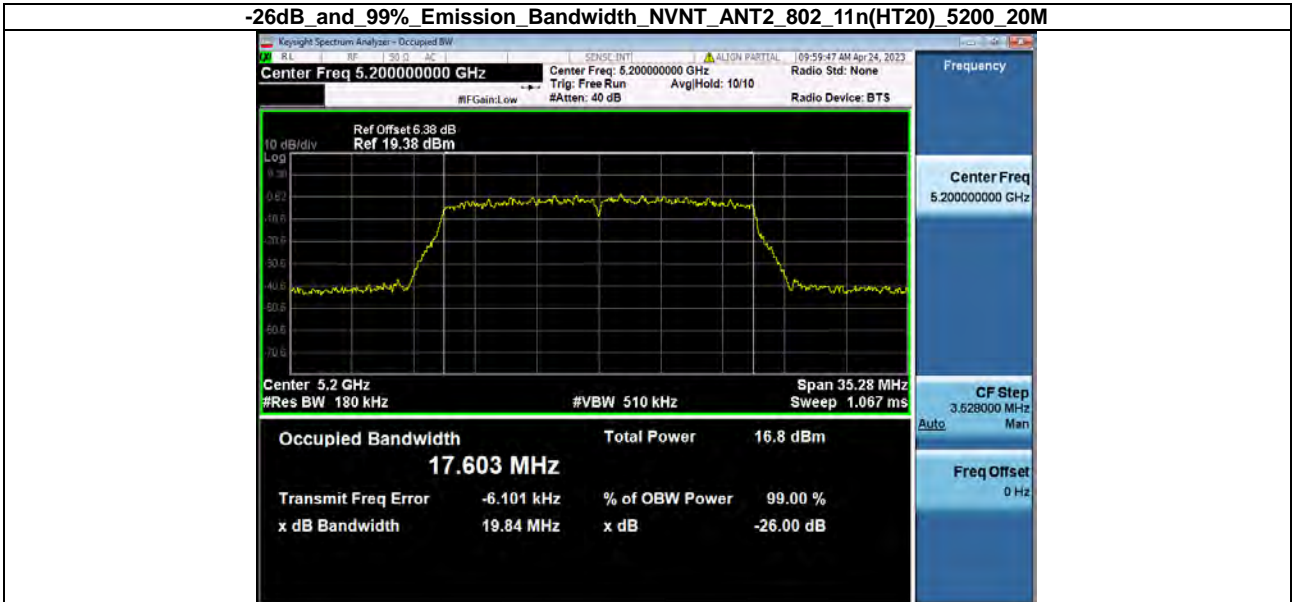
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT2\_802\_11a\_5240\_20M**



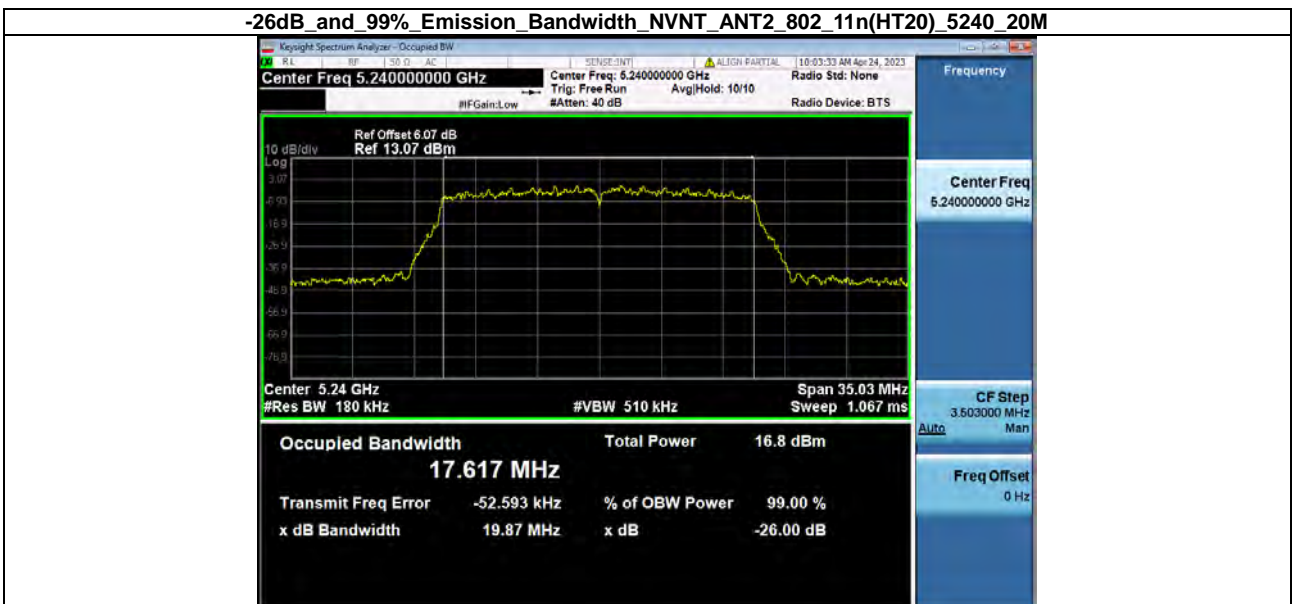
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT2\_802\_11n(HT20)\_5180\_20M**



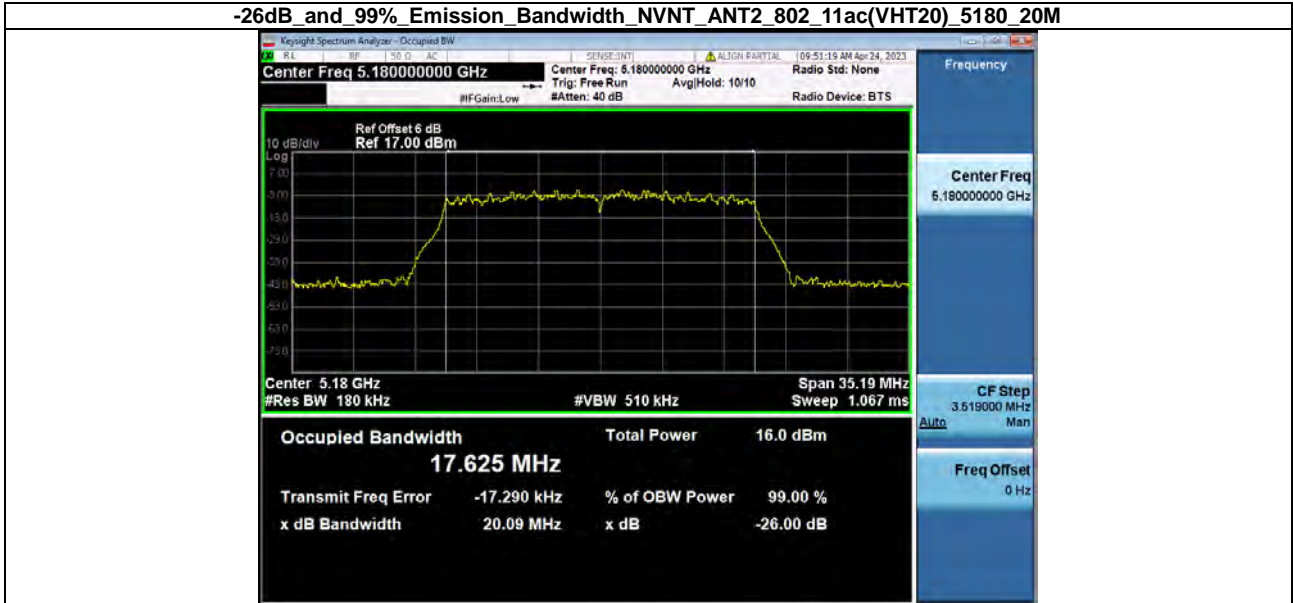
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT2\_802\_11n(HT20)\_5200\_20M**



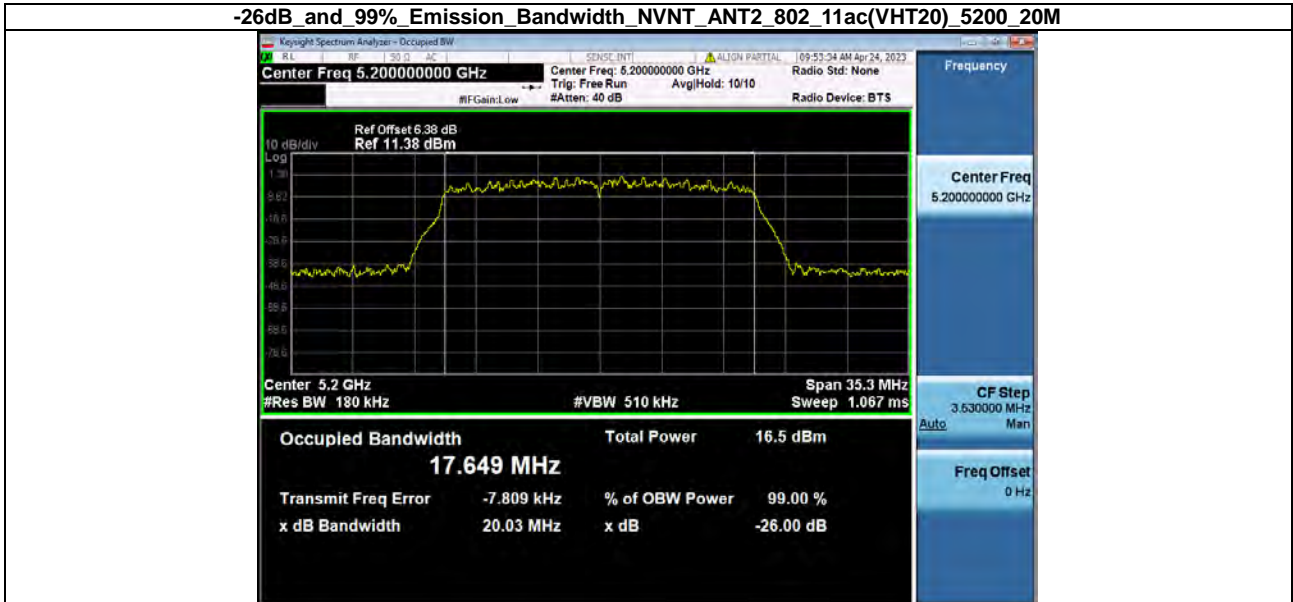
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT2\_802\_11n(HT20)\_5240\_20M**



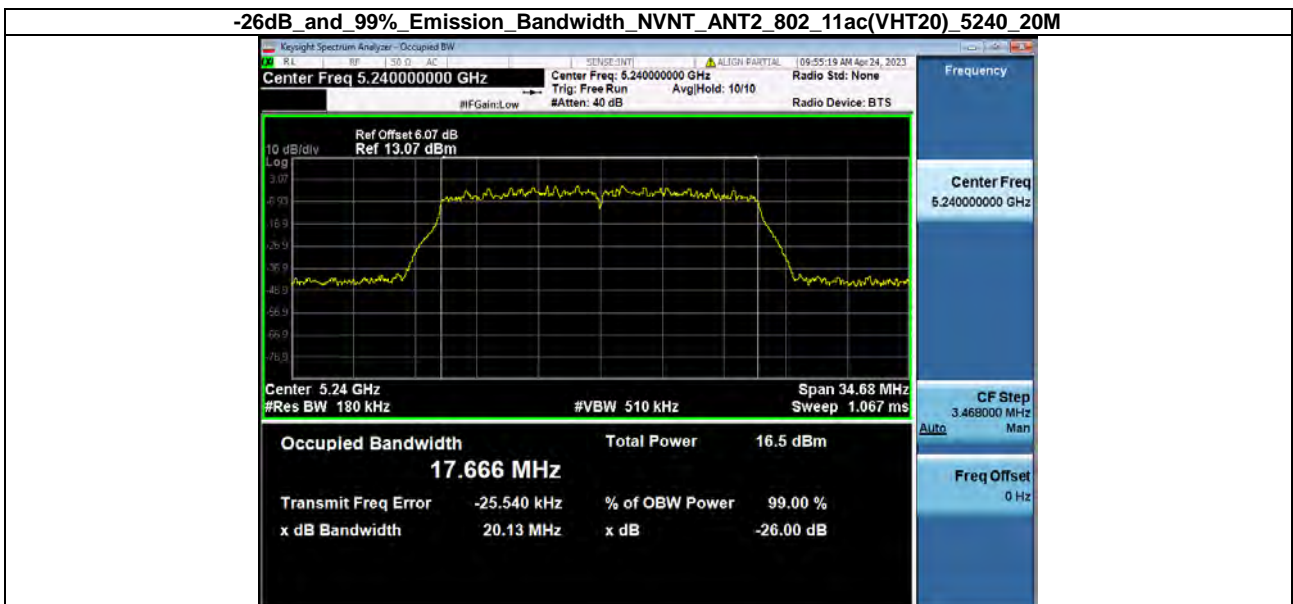
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT2\_802\_11ac(VHT20) 5180\_20M**



**-26dB and 99% Emission Bandwidth\_NVNT\_ANT2\_802\_11ac(VHT20) 5200\_20M**

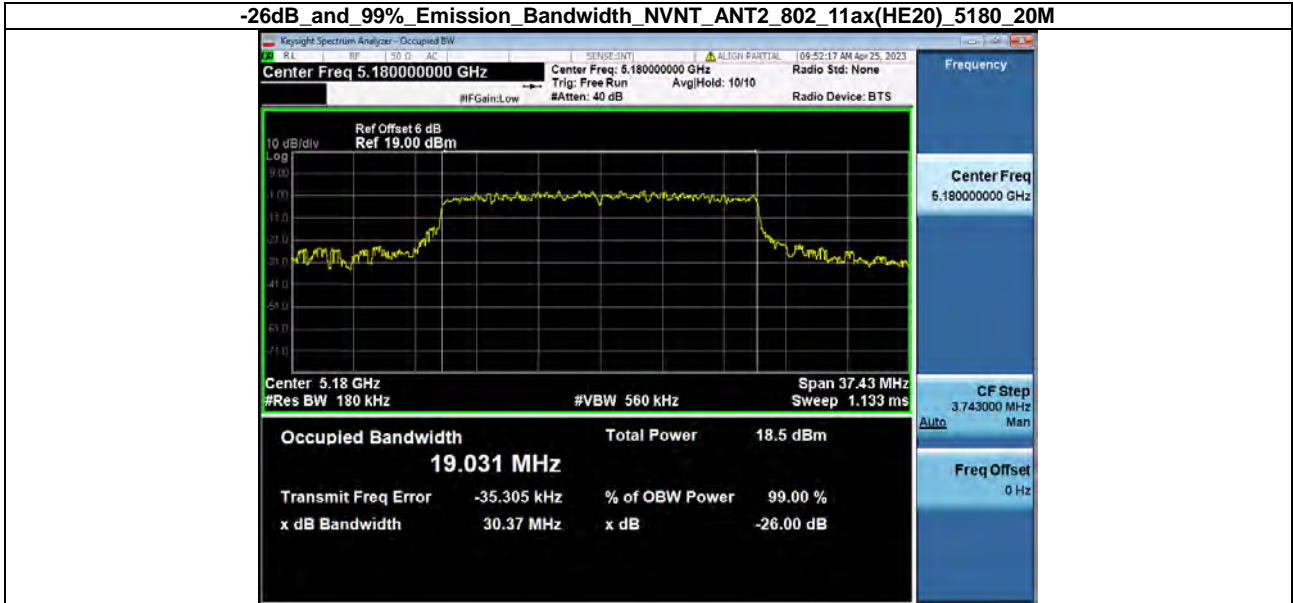


**-26dB and 99% Emission Bandwidth\_NVNT\_ANT2\_802\_11ac(VHT20) 5240\_20M**

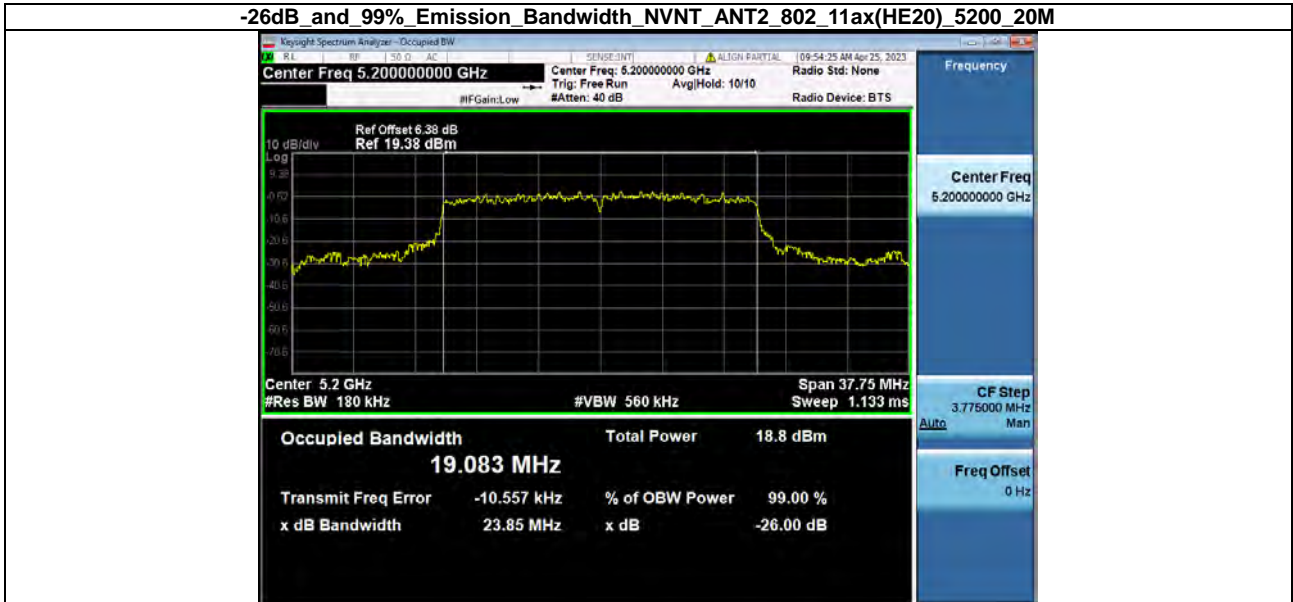




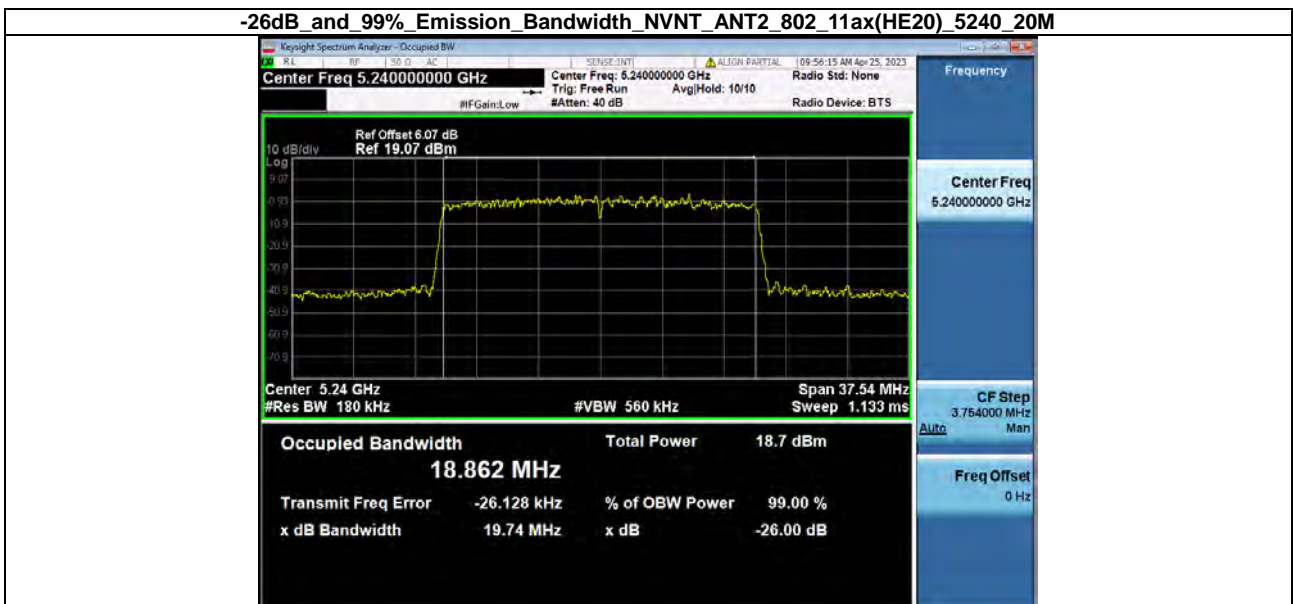
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT2\_802\_11ax(HE20)\_5180\_20M**



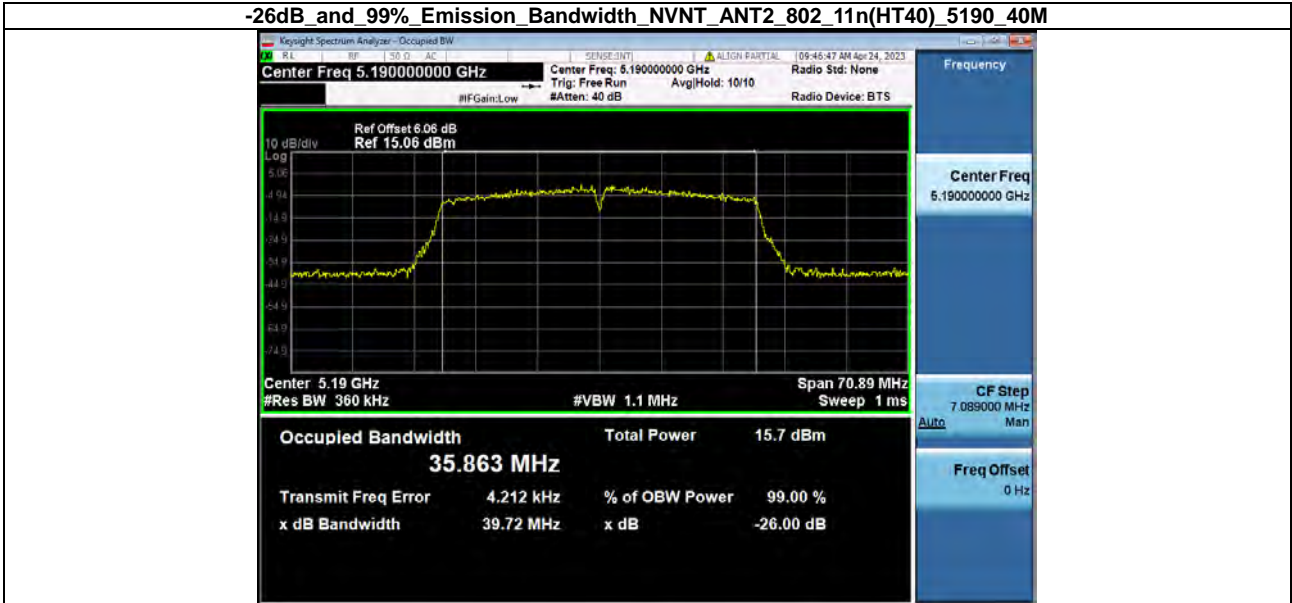
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT2\_802\_11ax(HE20)\_5200\_20M**



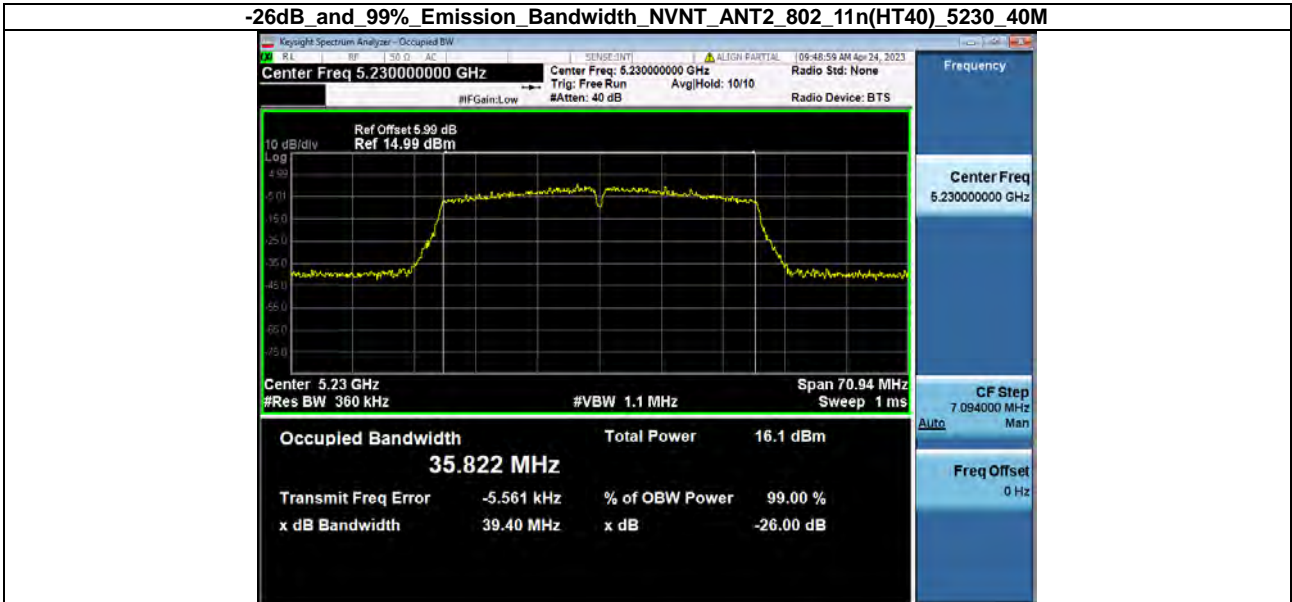
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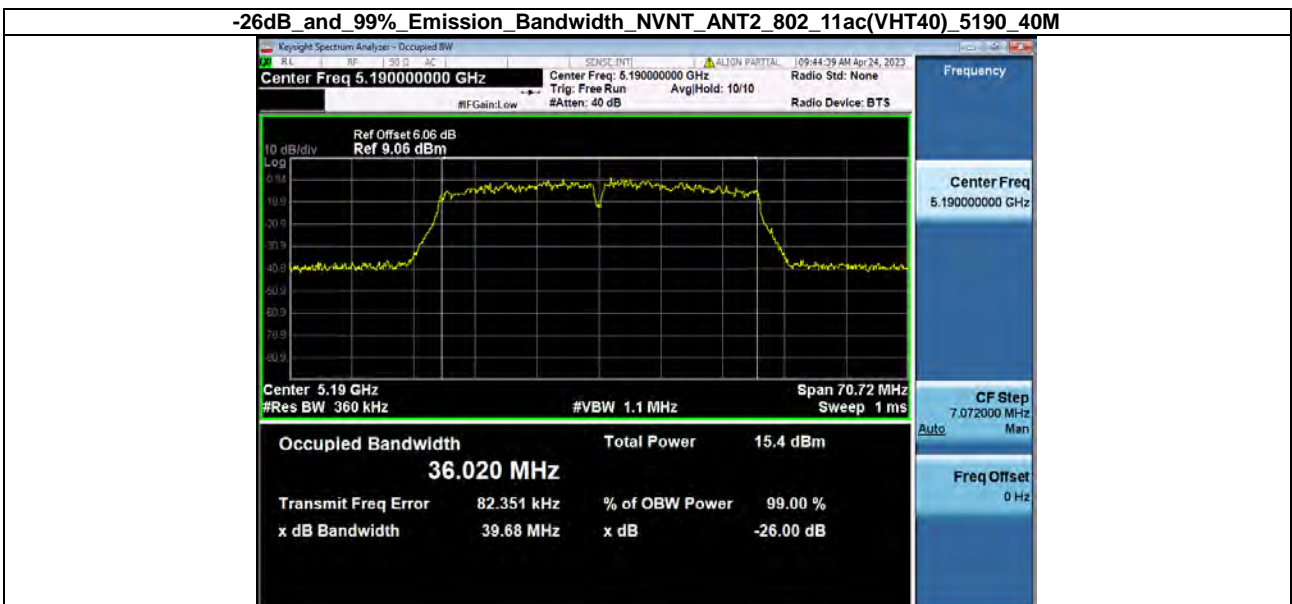
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT2\_802\_11n(HT40)\_5190\_40M**



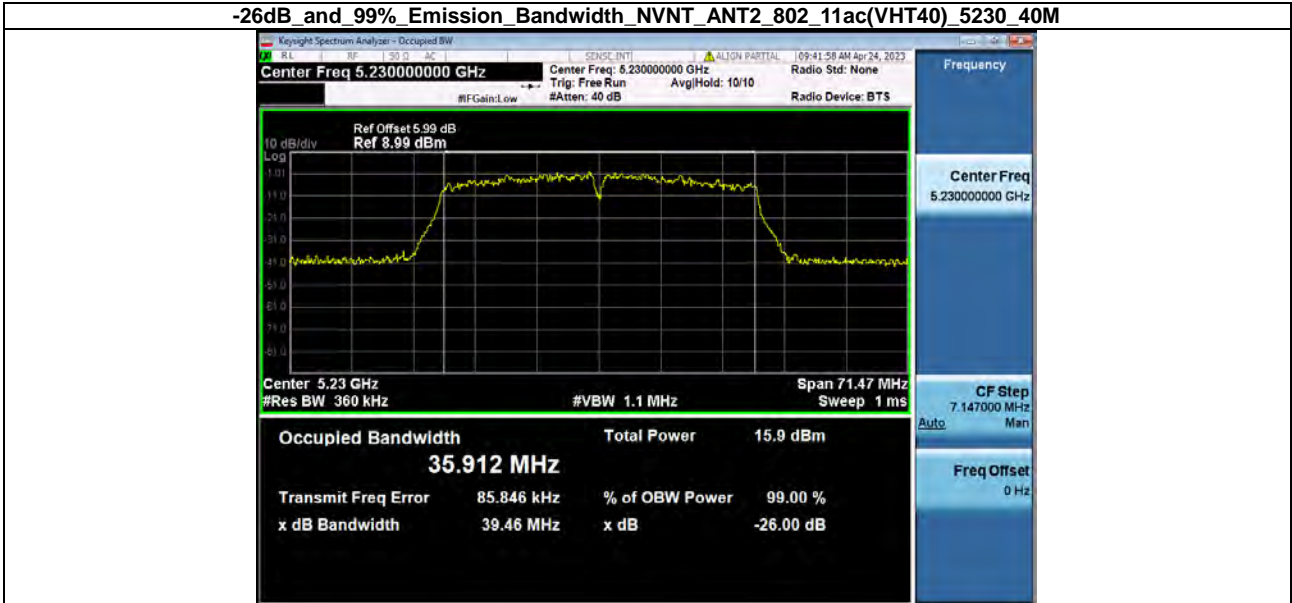
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT2\_802\_11n(HT40)\_5230\_40M**



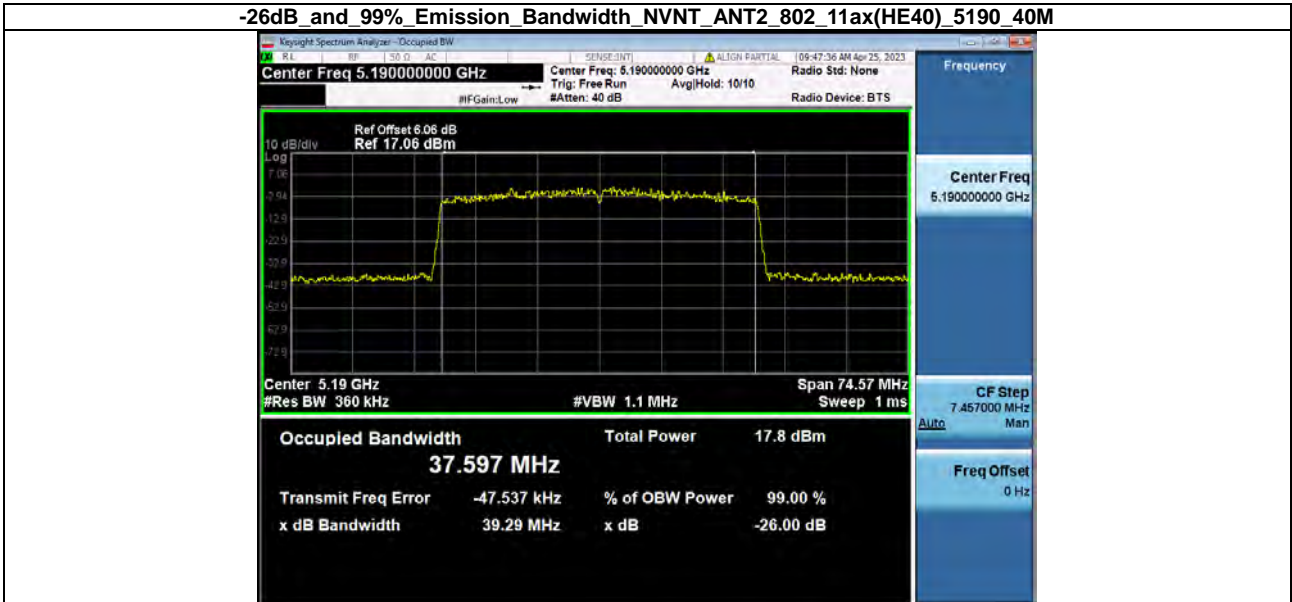
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT2\_802\_11ac(VHT40)\_5190\_40M**



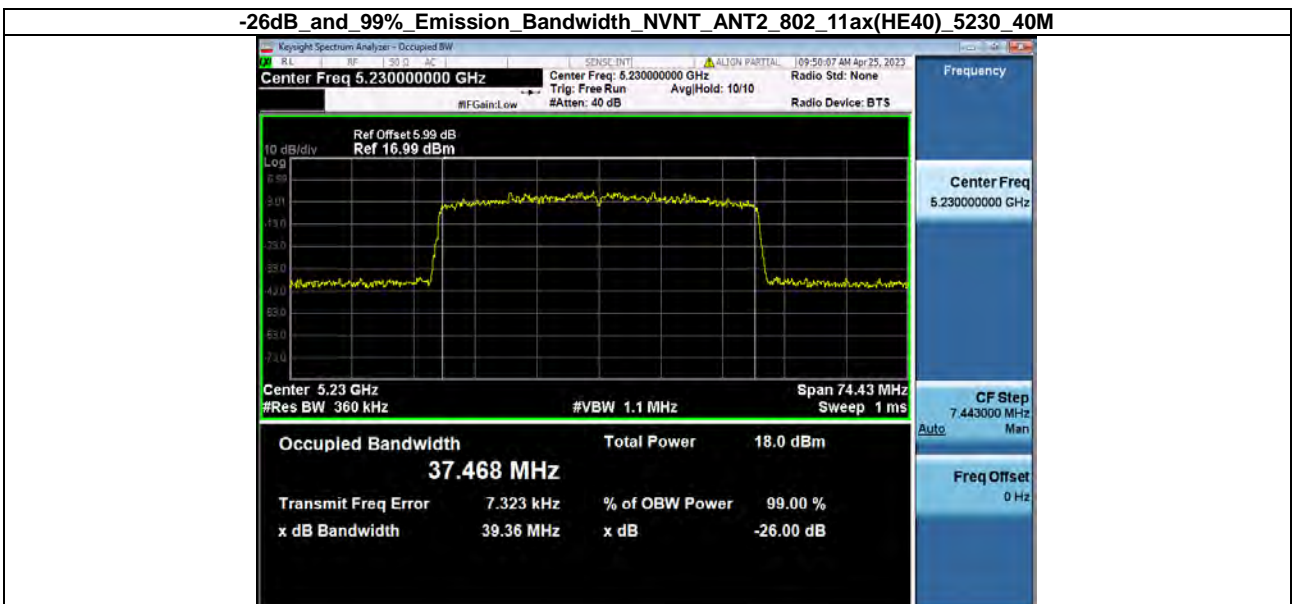
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT2\_802\_11ac(VHT40)\_5230\_40M**



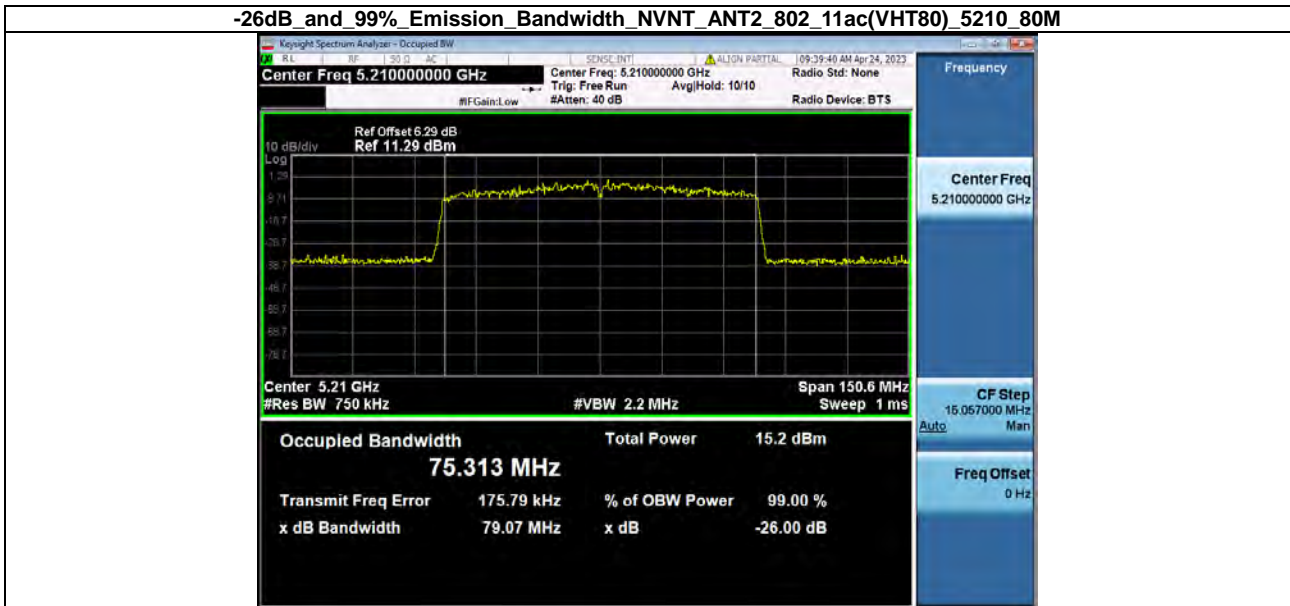
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT2\_802\_11ax(HE40)\_5190\_40M**



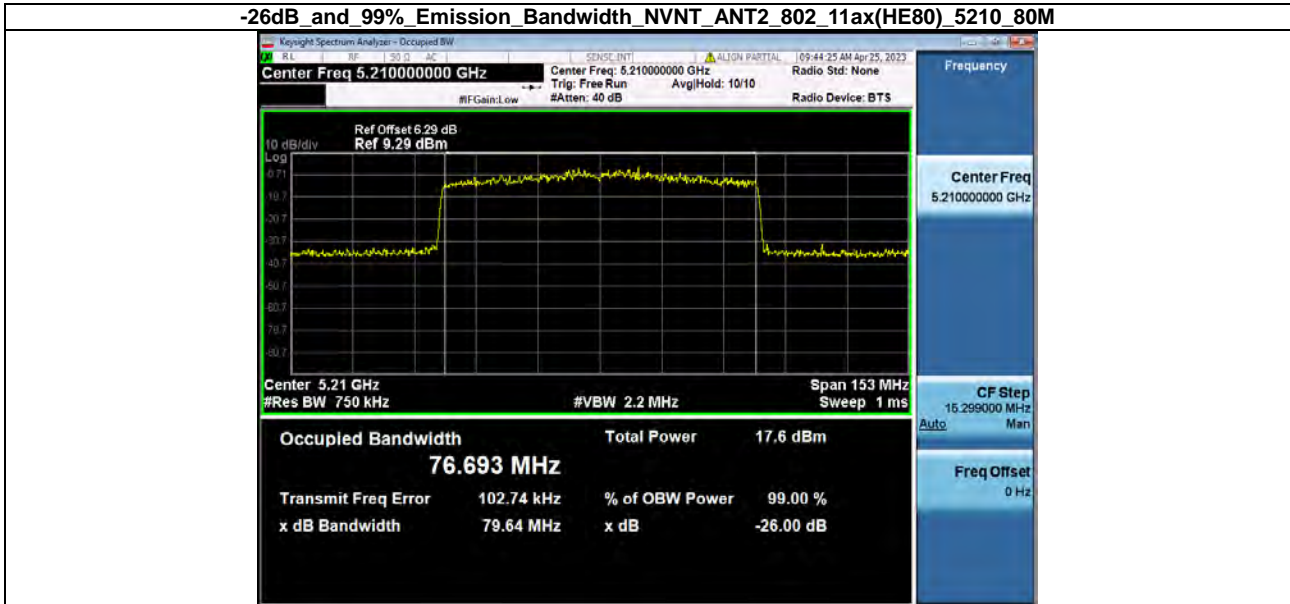
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT2\_802\_11ax(HE40)\_5230\_40M**



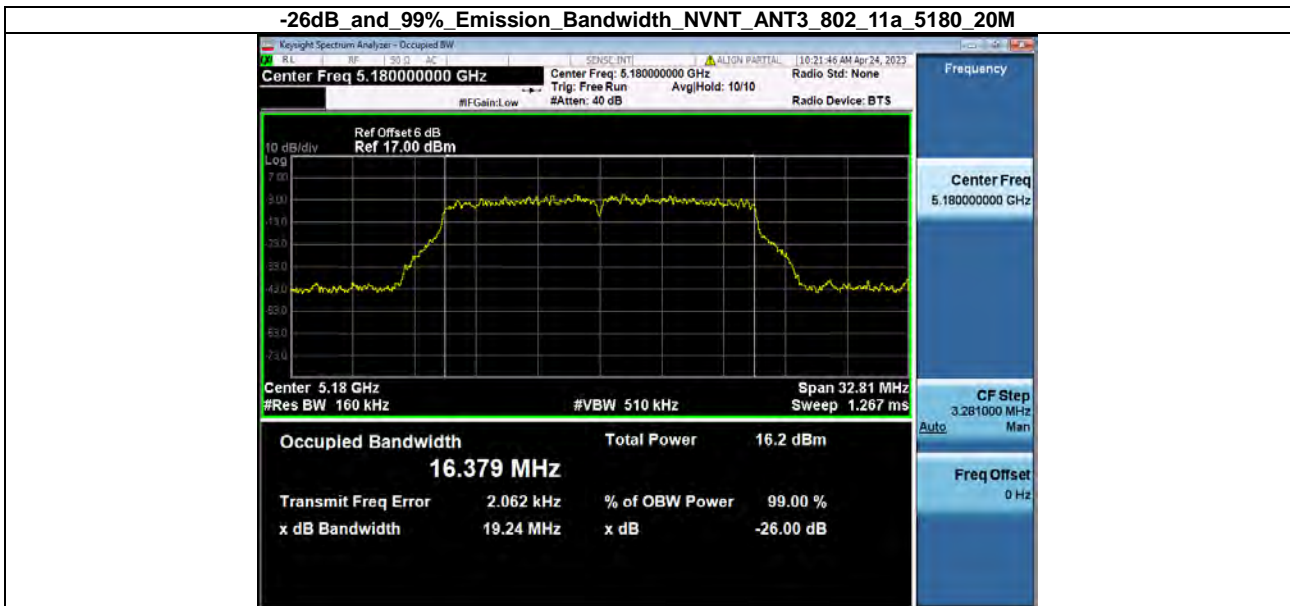
**-26dB and 99% Emission Bandwidth NVNT\_ANT2\_802\_11ac(VHT80)\_5210\_80M**



**-26dB and 99% Emission Bandwidth NVNT\_ANT2\_802\_11ax(HE80)\_5210\_80M**



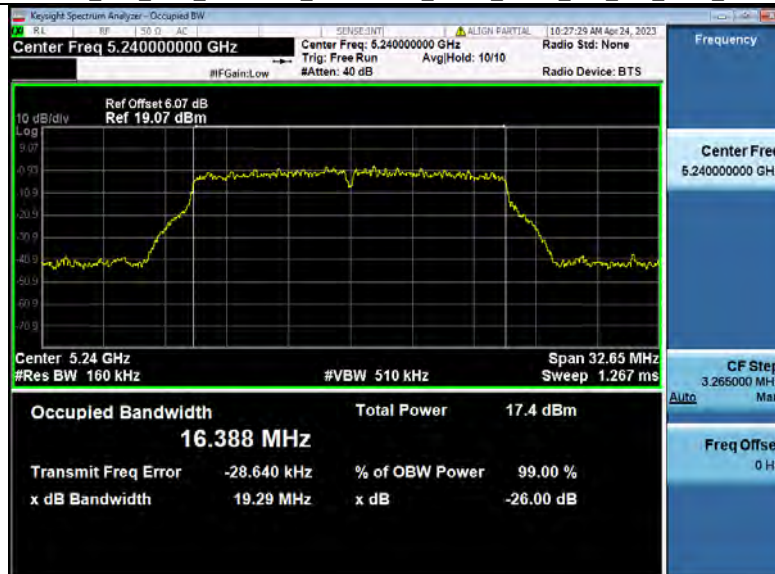
**-26dB and 99% Emission Bandwidth NVNT\_ANT3\_802\_11a\_5180\_20M**



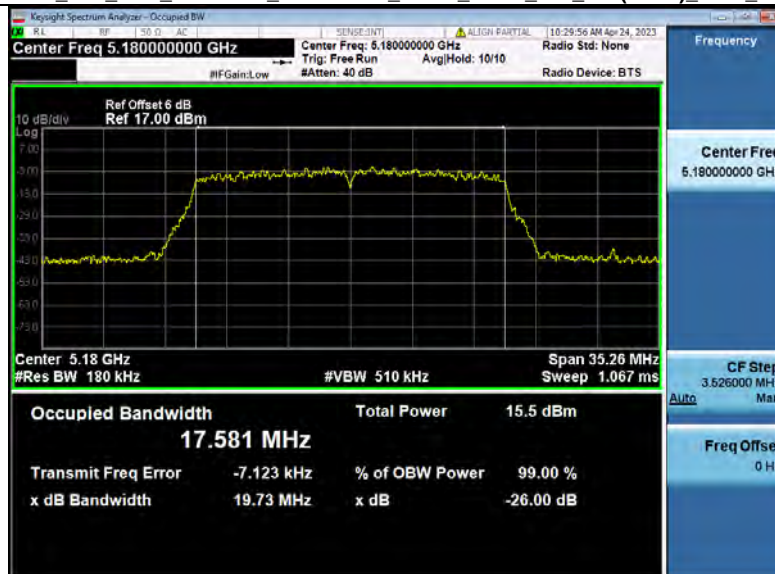
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11a\_5200\_20M**



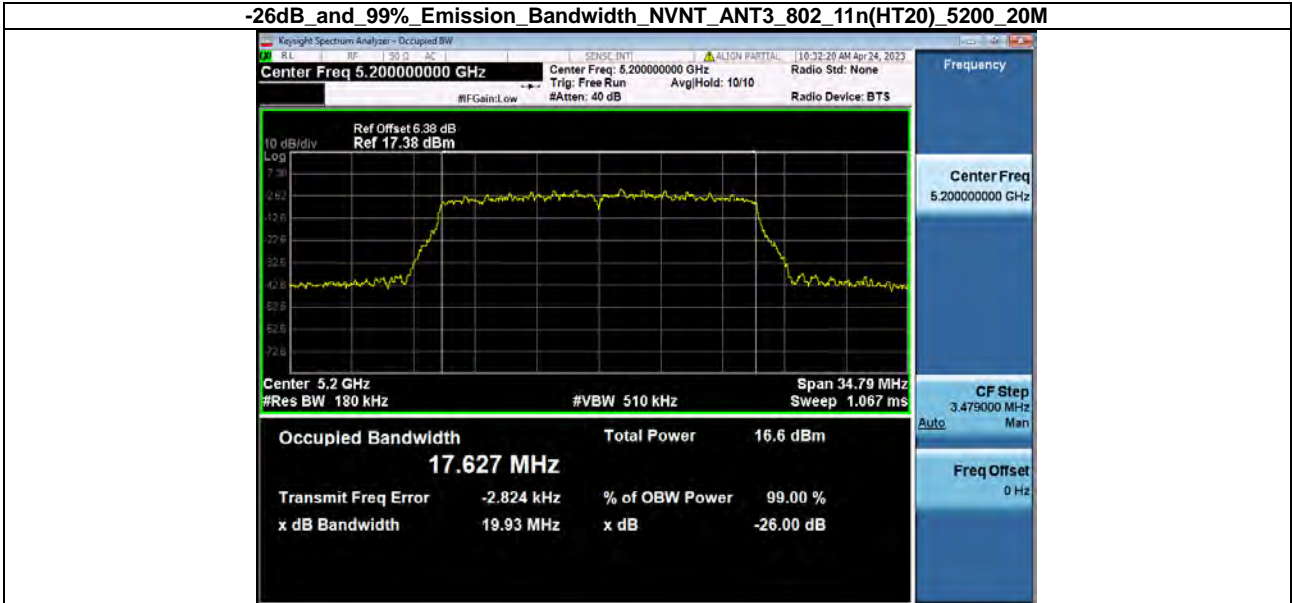
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11a\_5240\_20M**



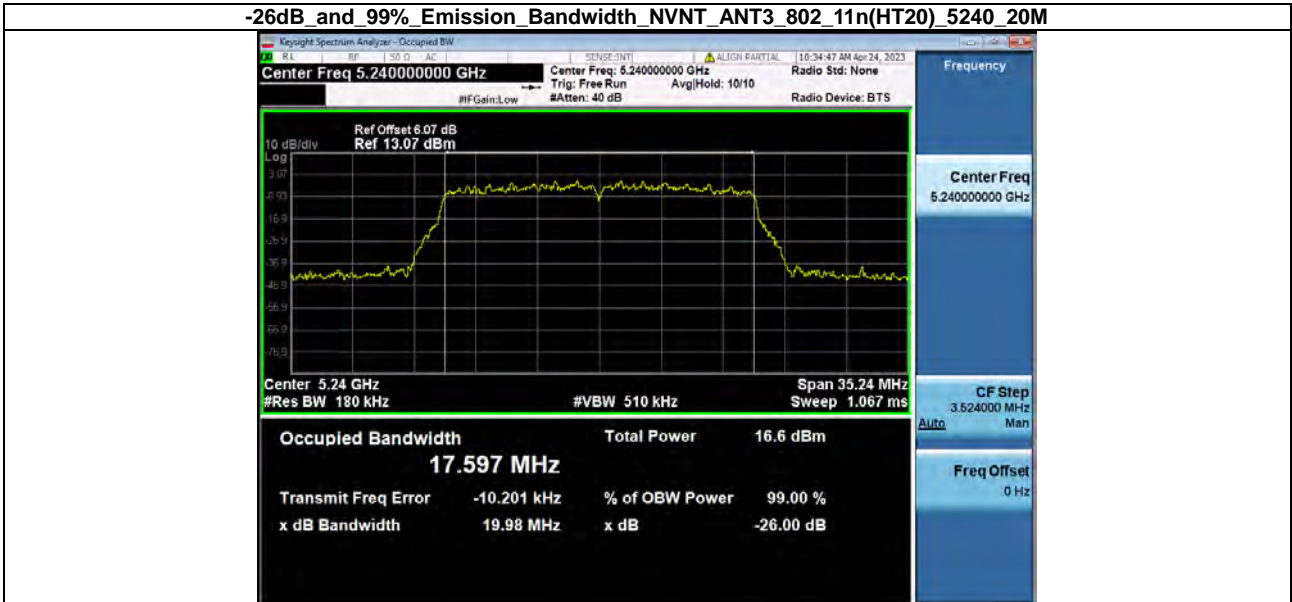
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11n(HT20)\_5180\_20M**



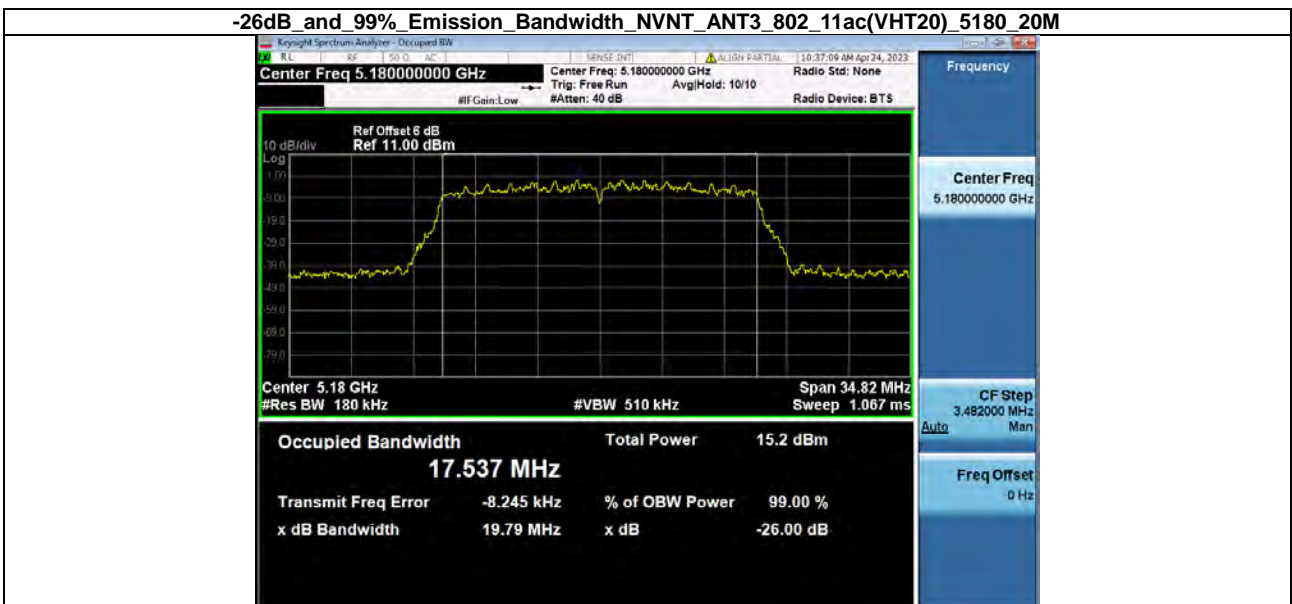
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11n(HT20)\_5200\_20M**



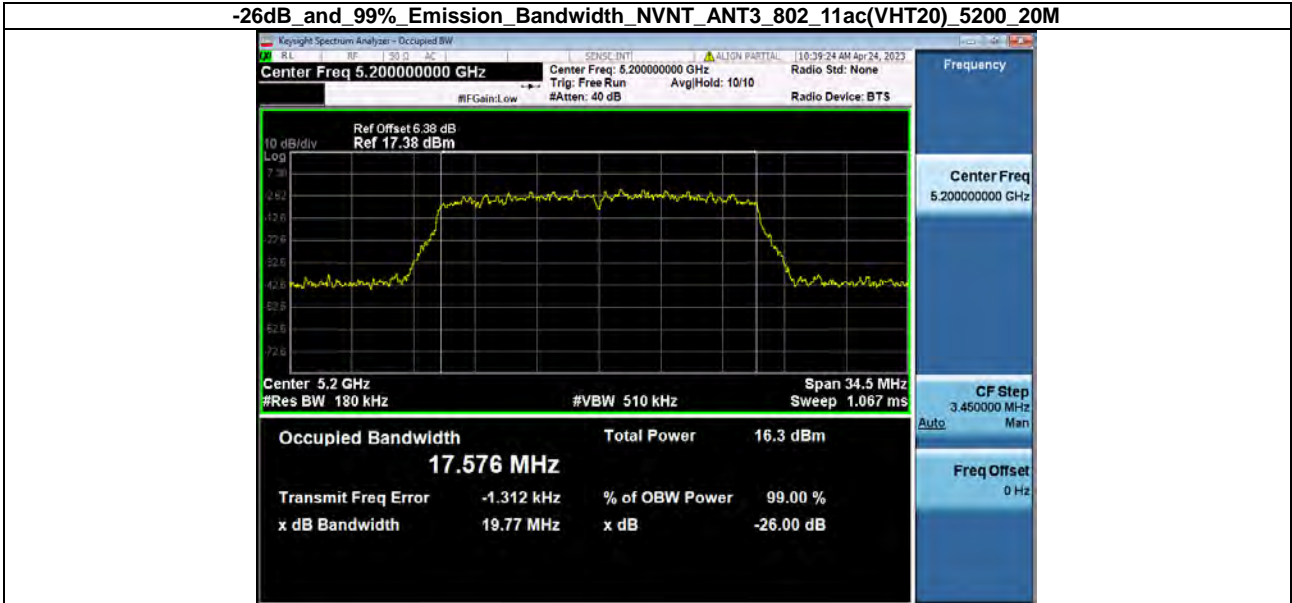
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11n(HT20)\_5240\_20M**



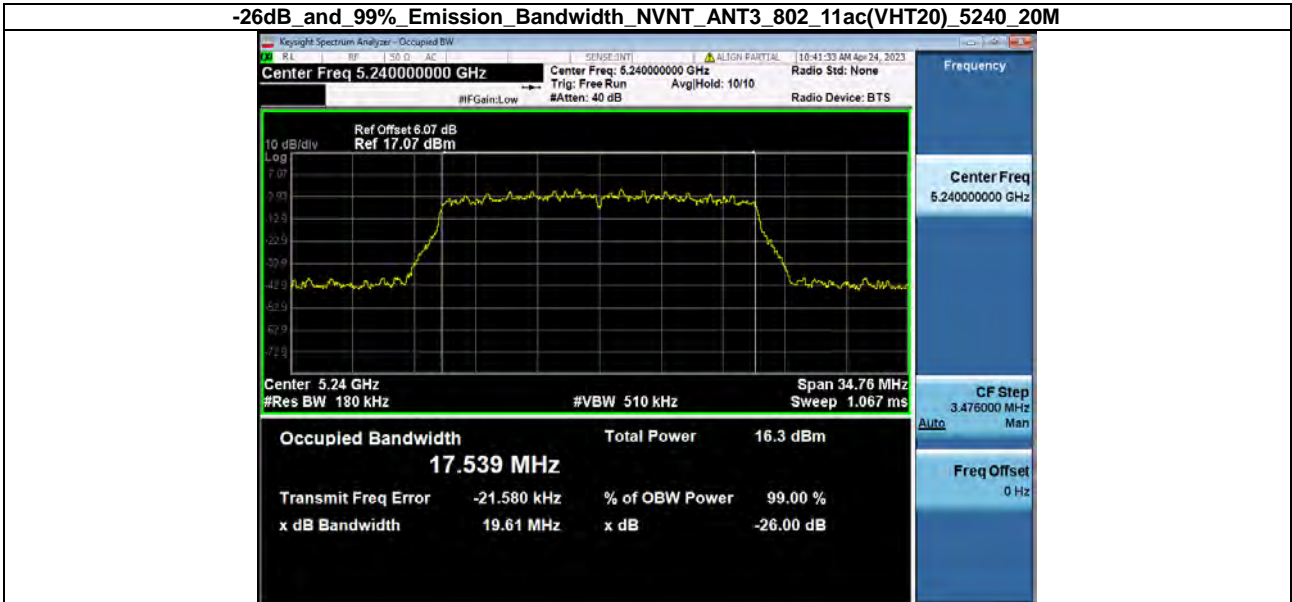
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11ac(VHT20)\_5180\_20M**



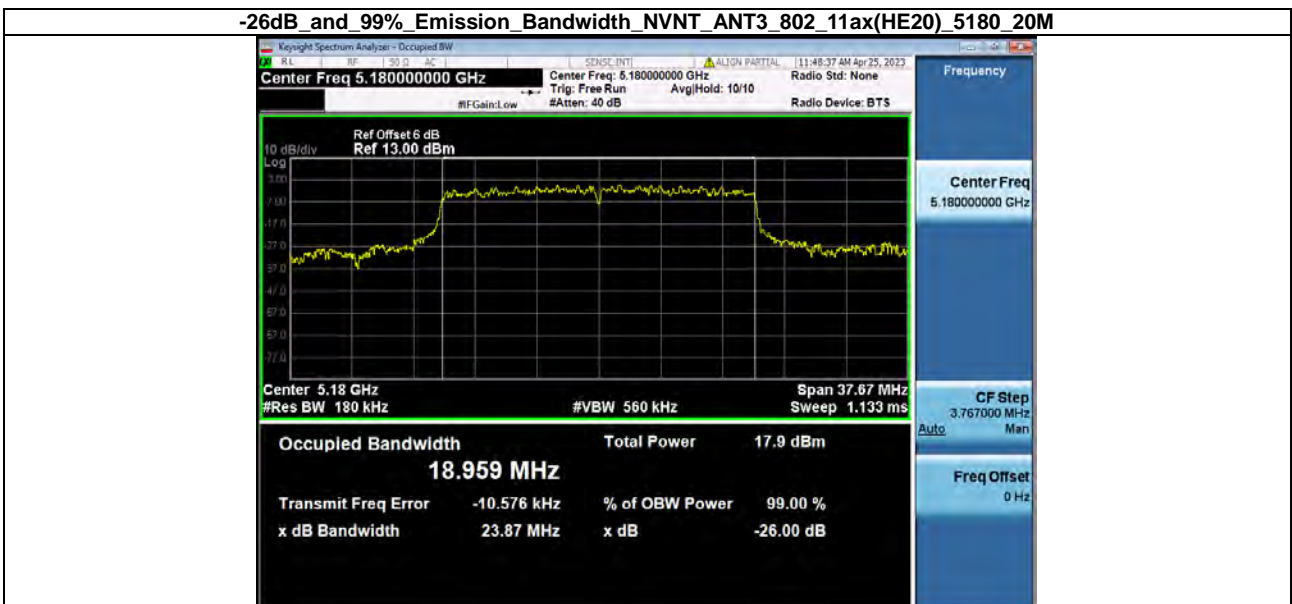
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11ac(VHT20)\_5200\_20M**



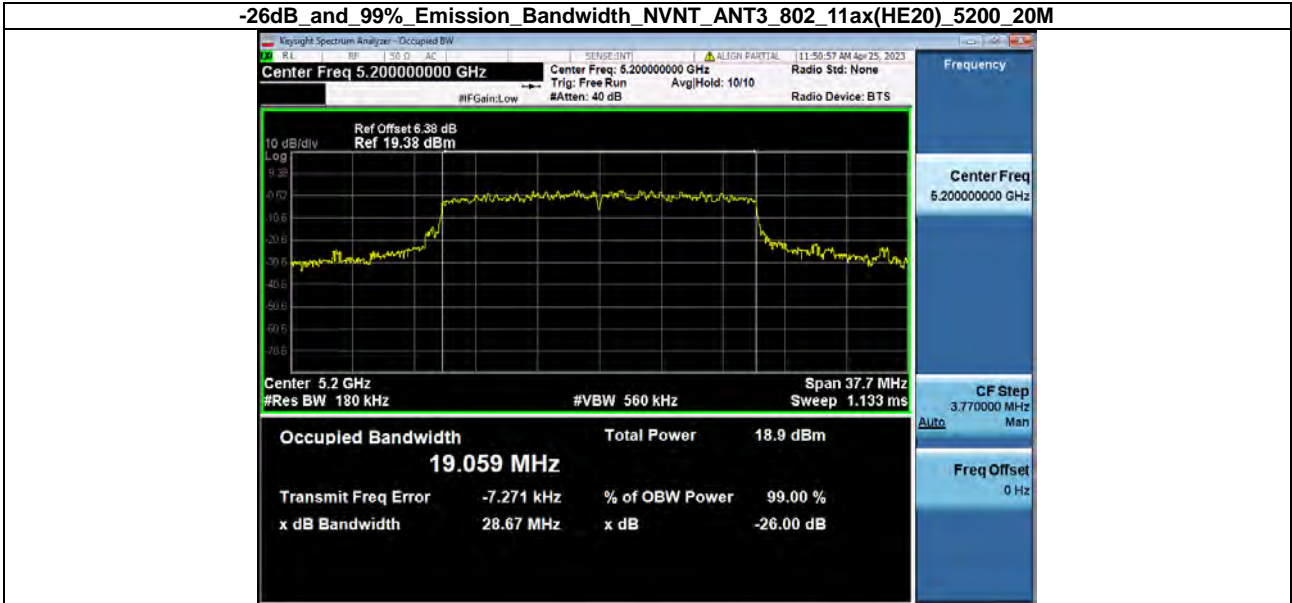
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11ac(VHT20)\_5240\_20M**



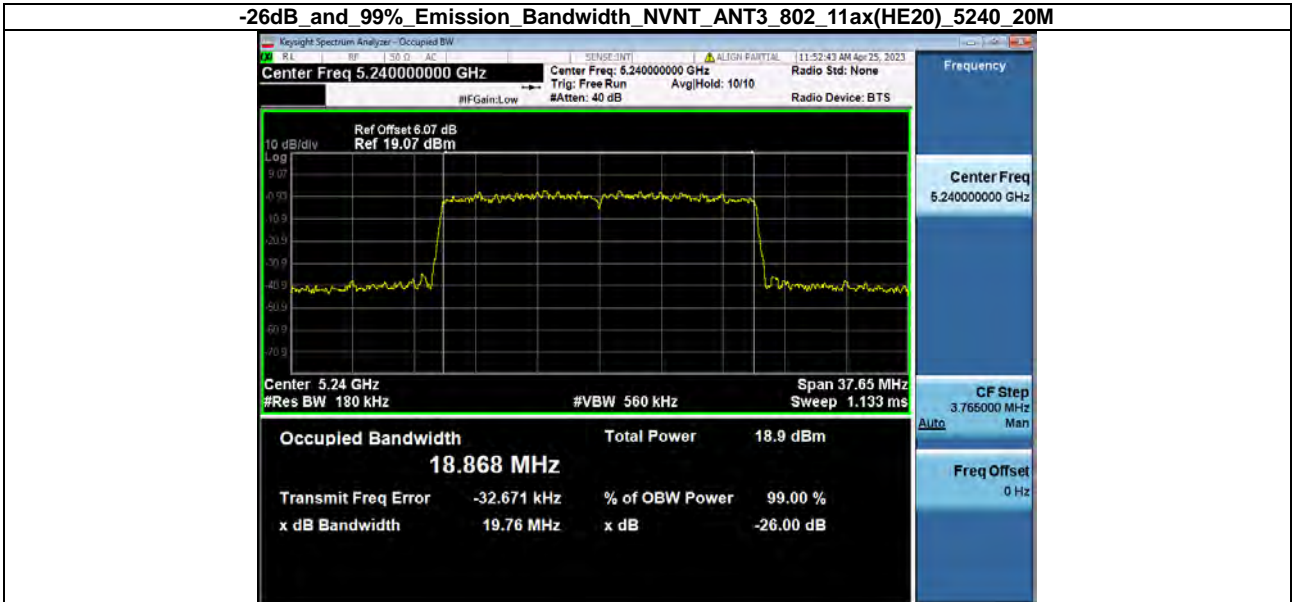
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11ax(HE20)\_5180\_20M**



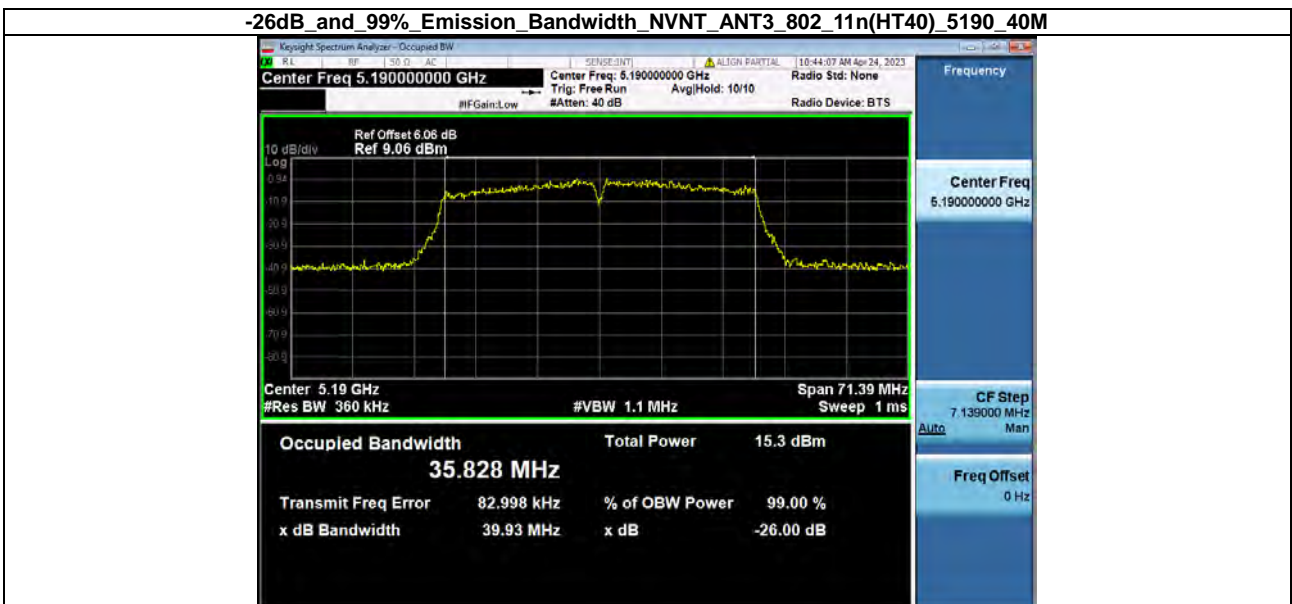
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11ax(HE20)\_5200\_20M**



**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11ax(HE20)\_5240\_20M**

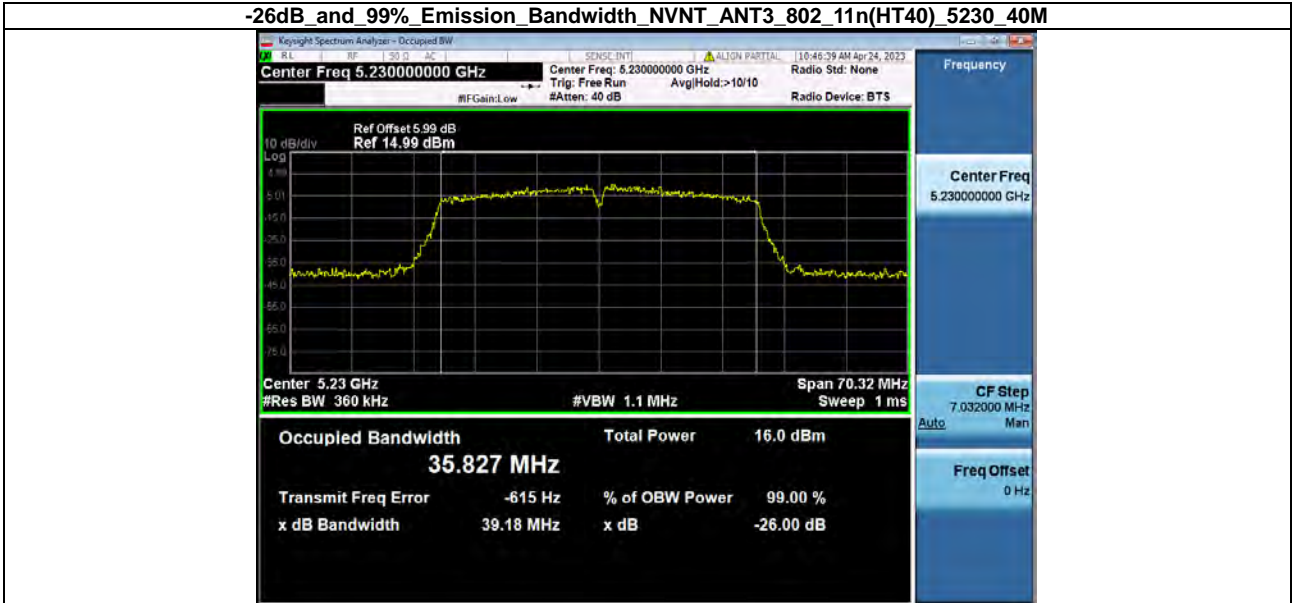


**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11n(HT40)\_5190\_40M**

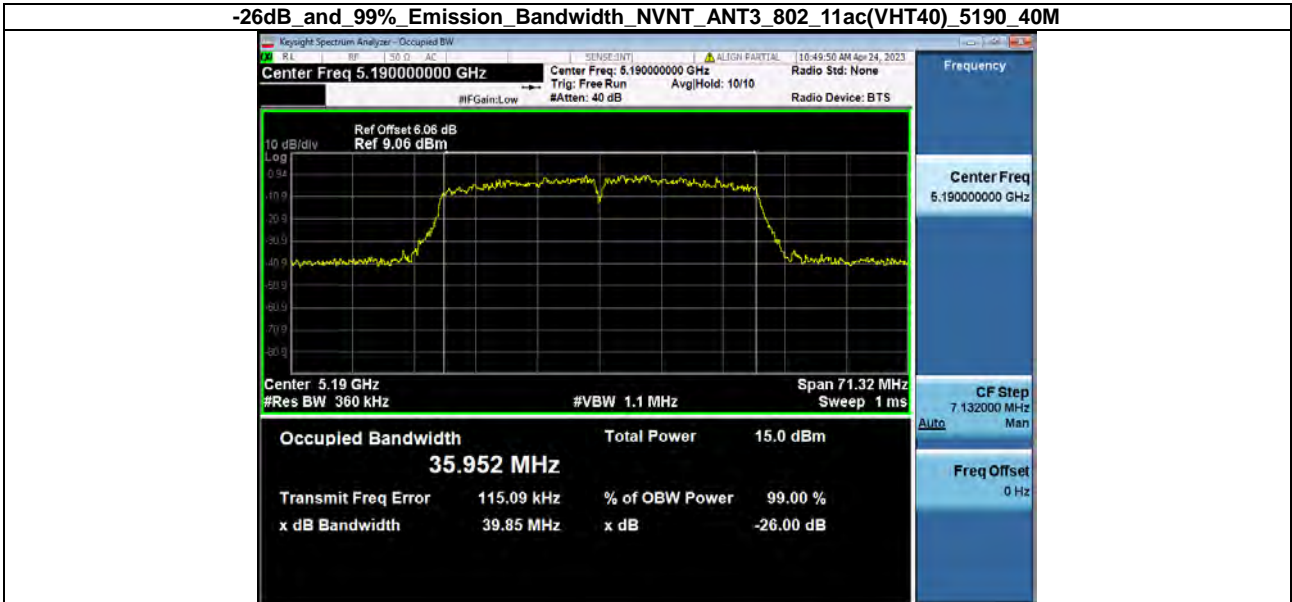




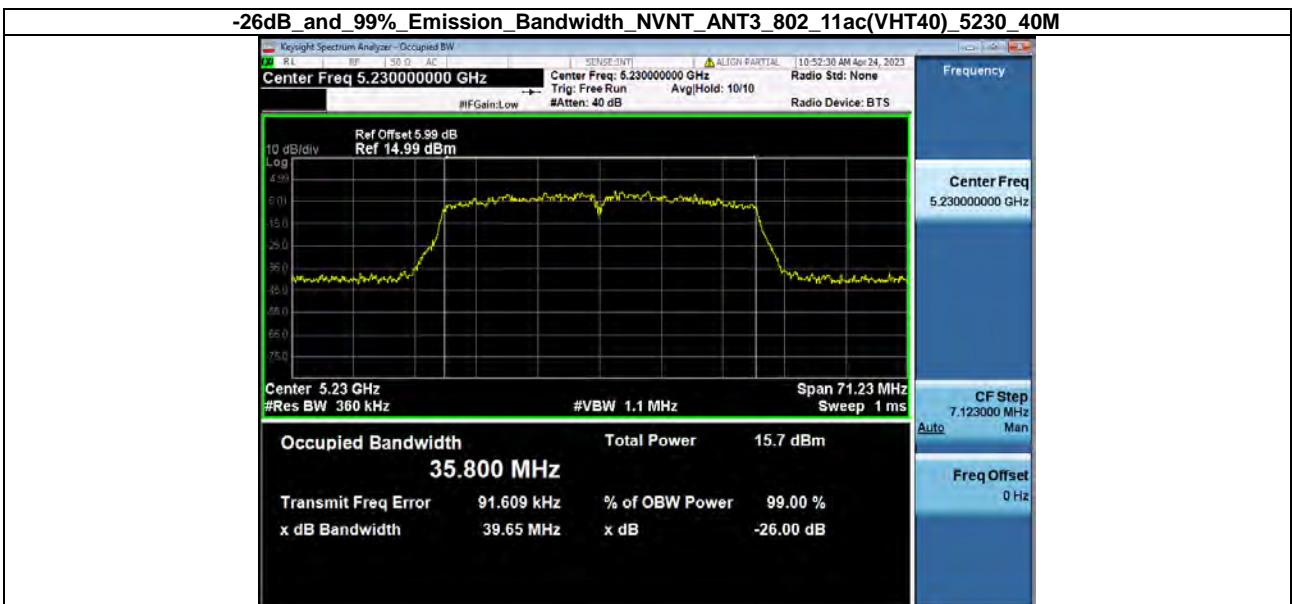
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11n(HT40)\_5230\_40M**



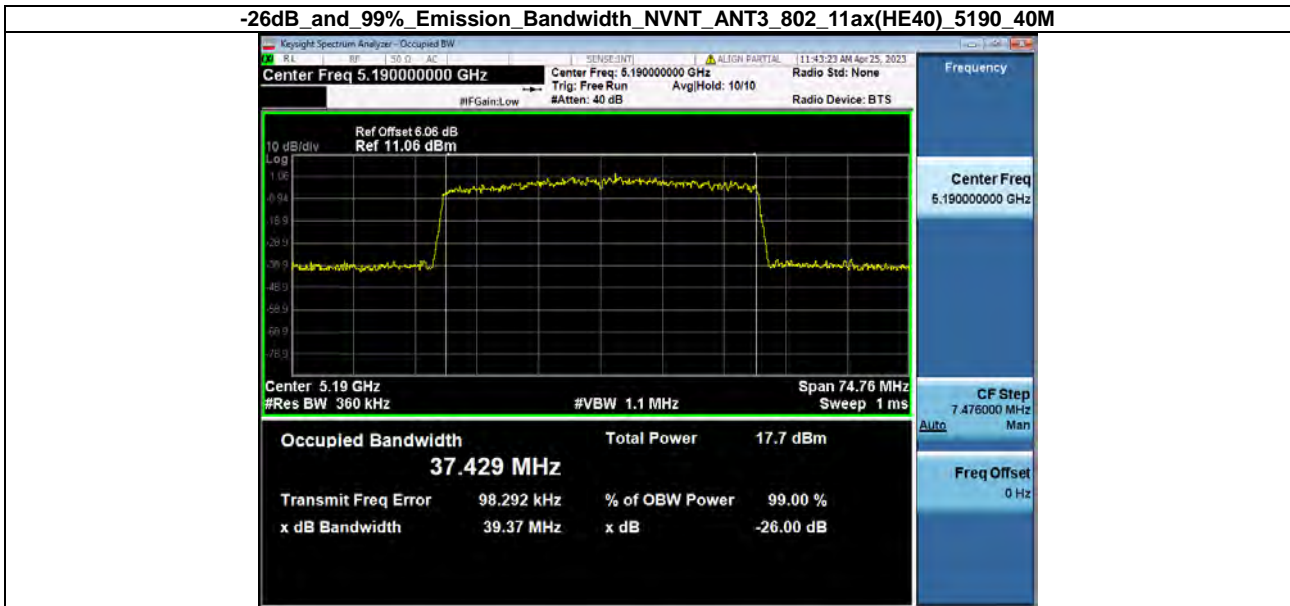
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11ac(VHT40)\_5190\_40M**



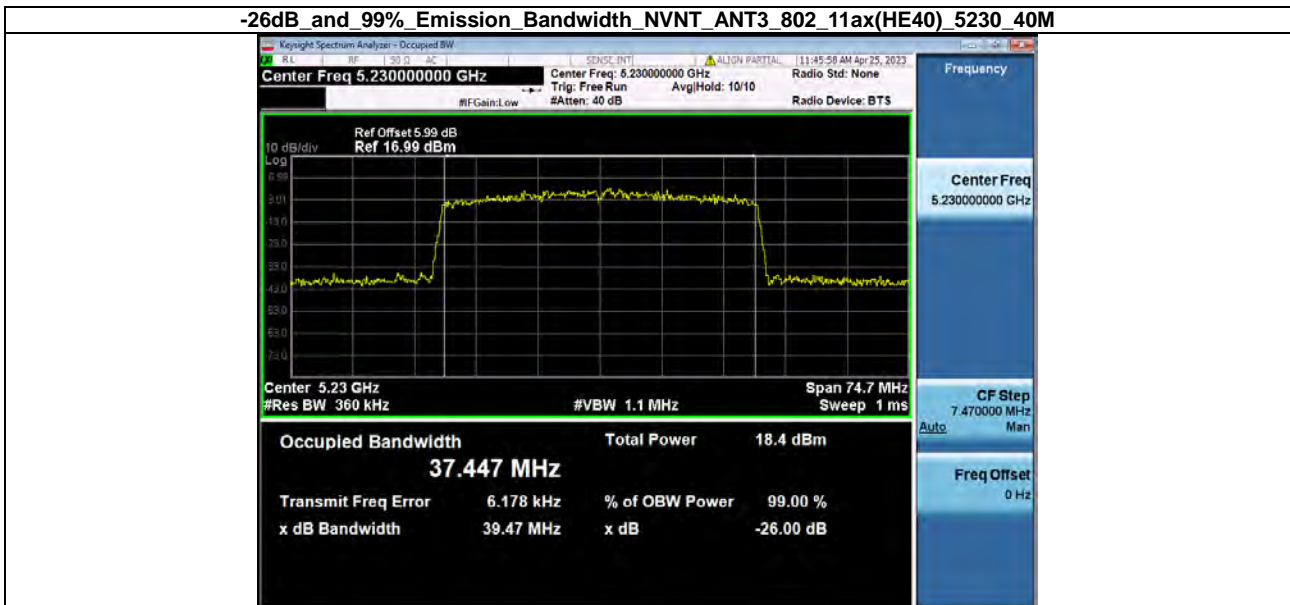
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11ac(VHT40)\_5230\_40M**



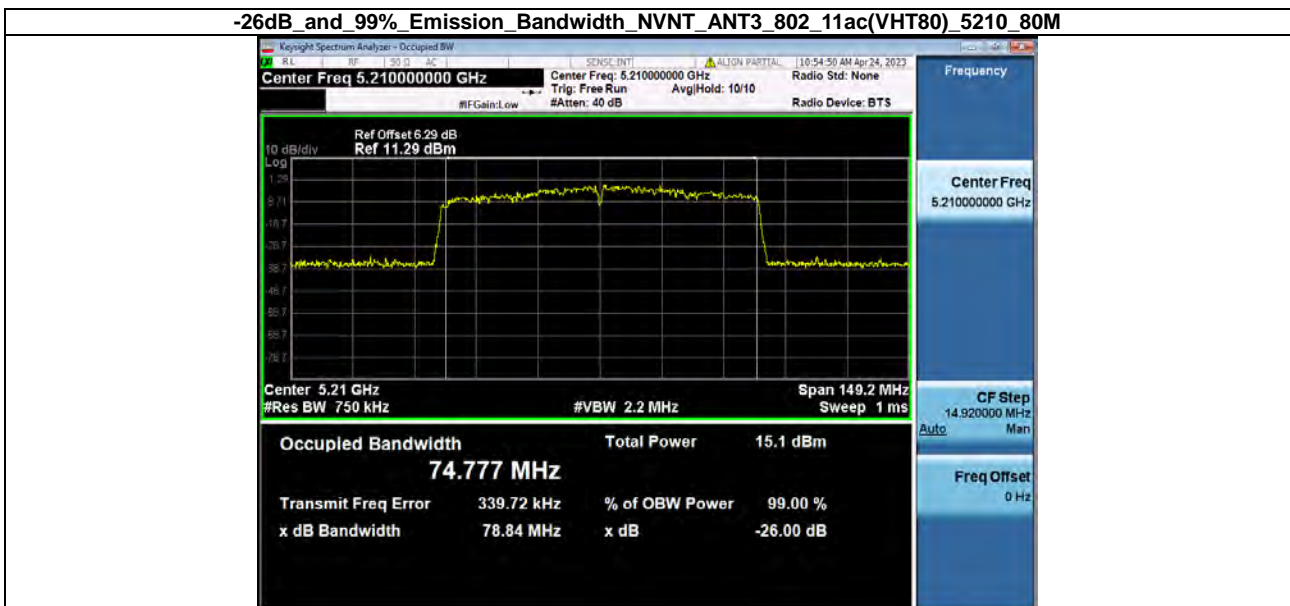
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11ax(HE40)\_5190\_40M**



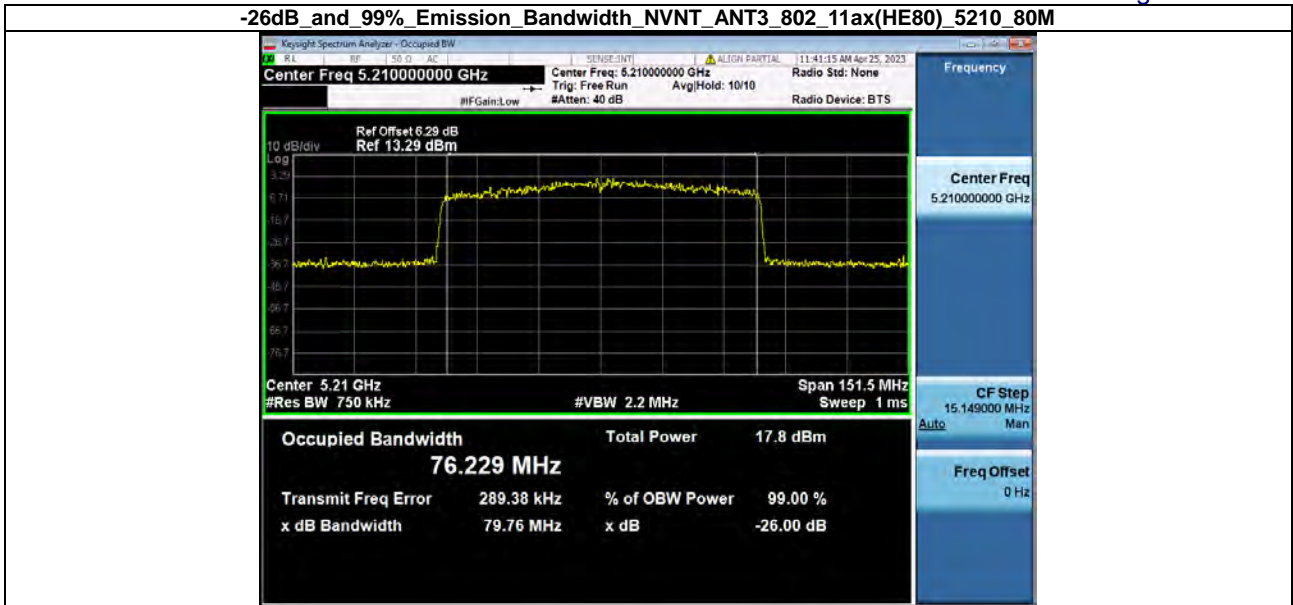
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11ax(HE40)\_5230\_40M**



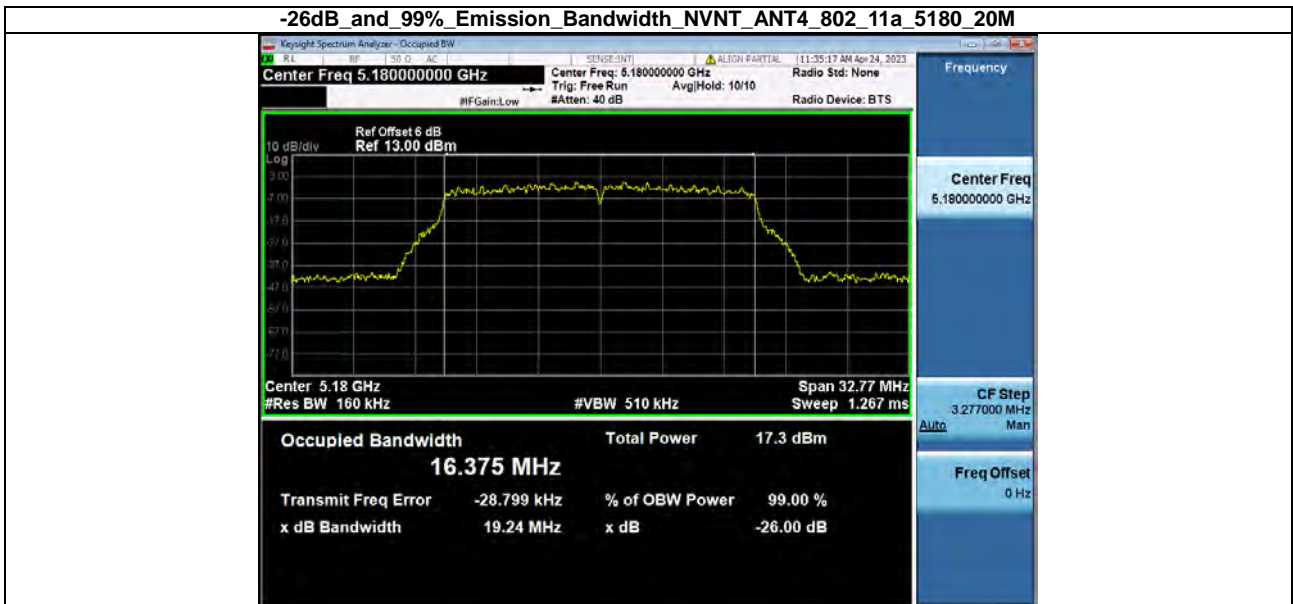
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT3\_802\_11ac(VHT80)\_5210\_80M**



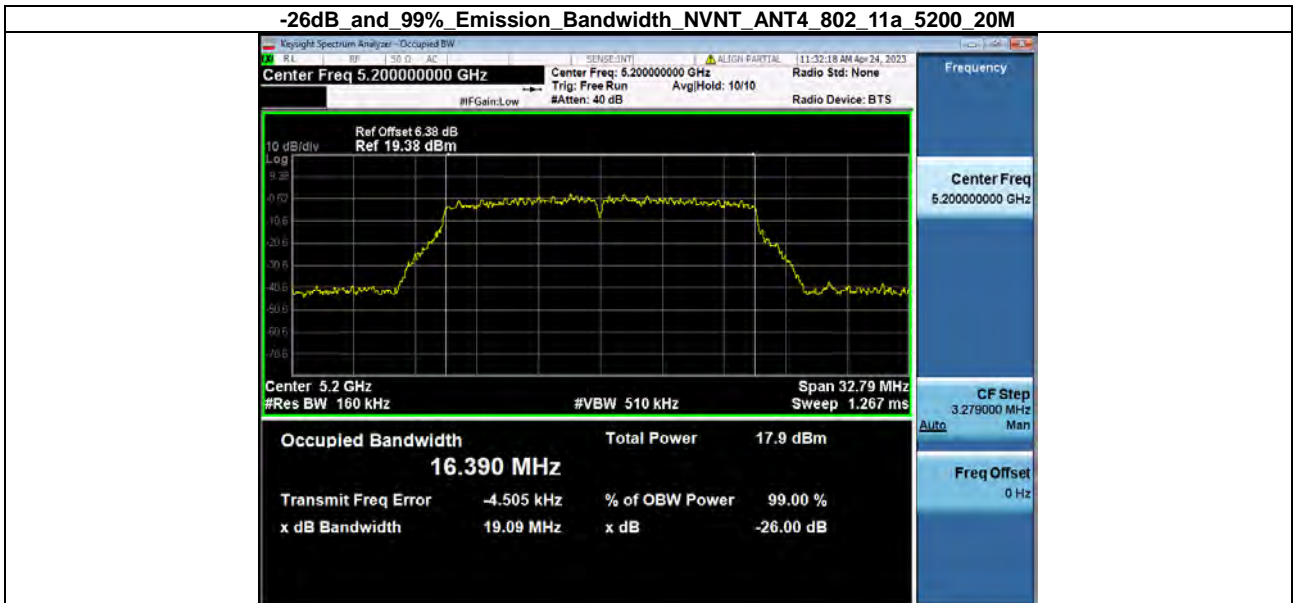
**-26dB and 99% Emission Bandwidth NVNT ANT3 802 11ax(HE80) 5210 80M**



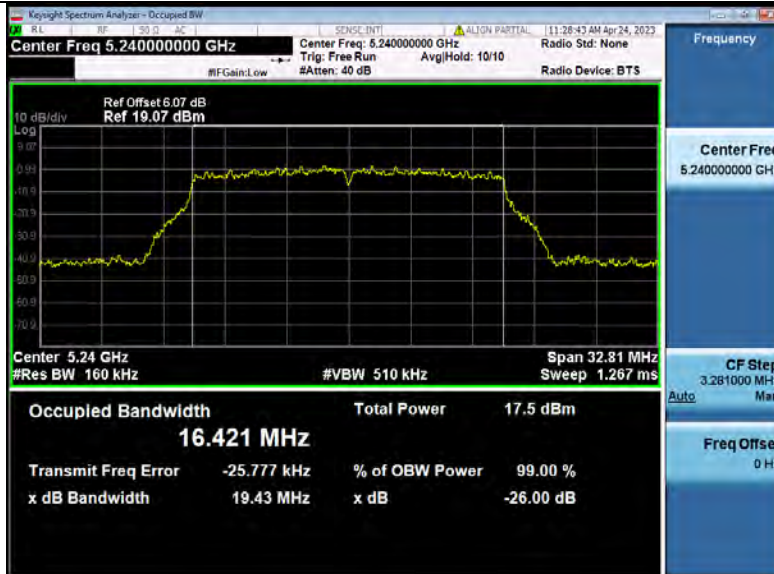
**-26dB and 99% Emission Bandwidth NVNT ANT4 802 11a 5180 20M**



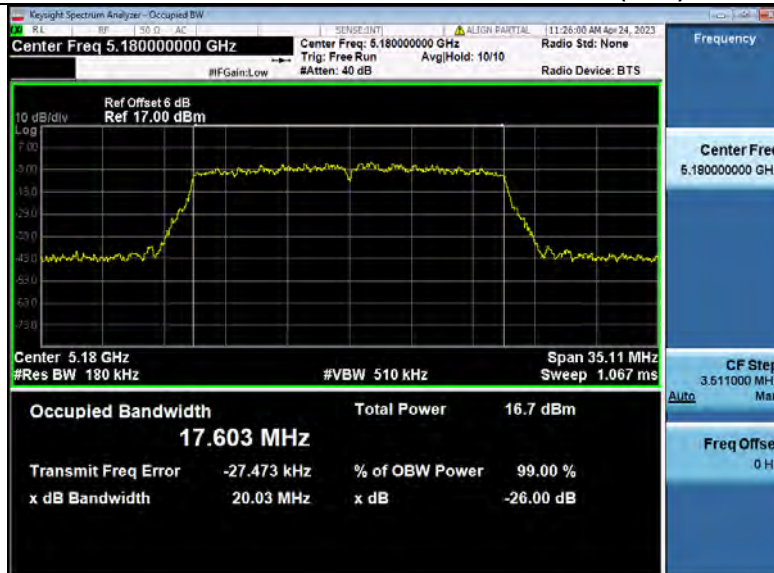
**-26dB and 99% Emission Bandwidth NVNT ANT4 802 11a 5200 20M**



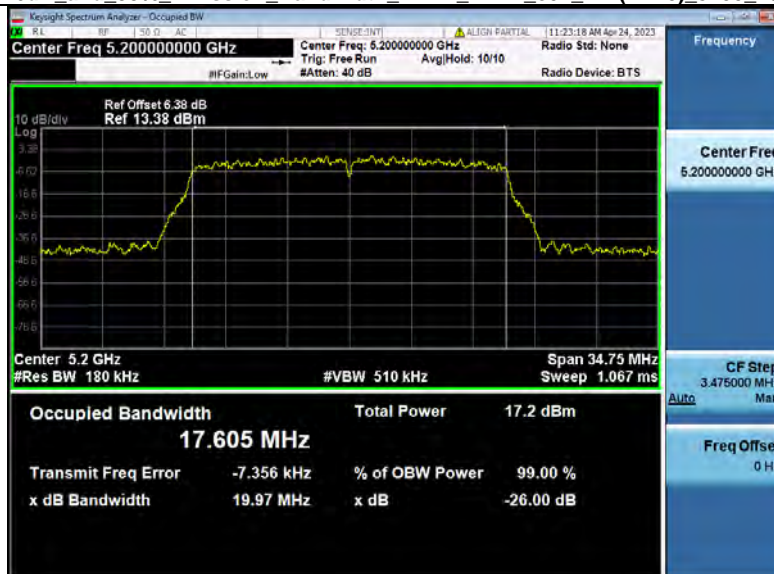
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT4\_802\_11a\_5240\_20M**



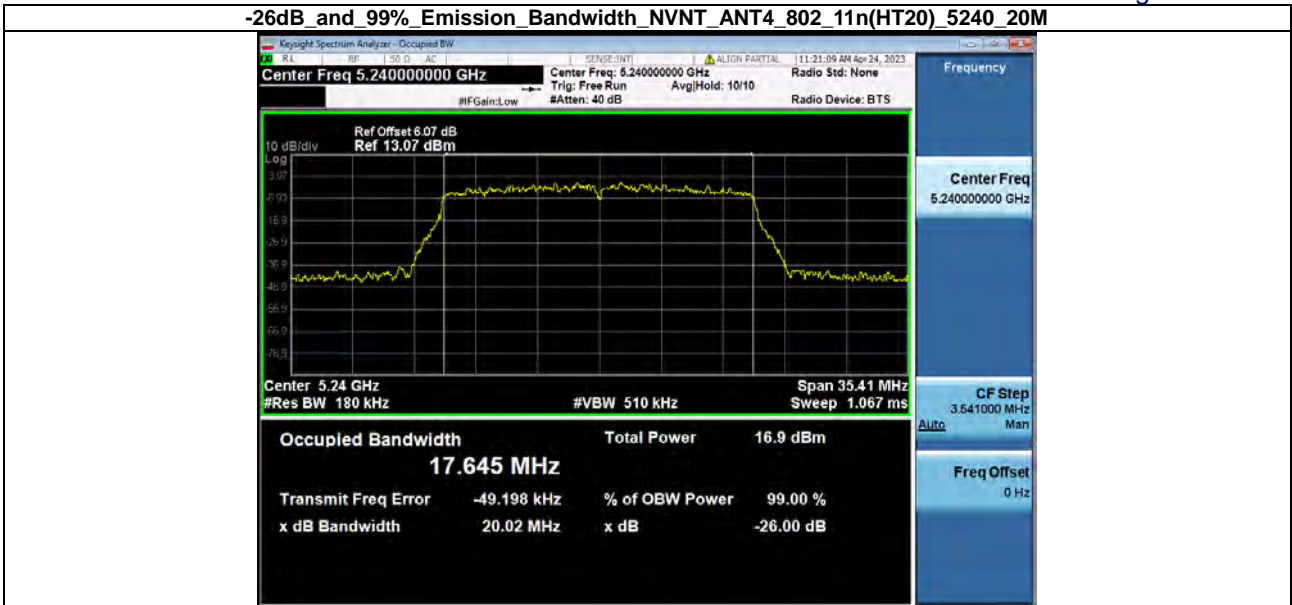
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT4\_802\_11n(HT20)\_5180\_20M**



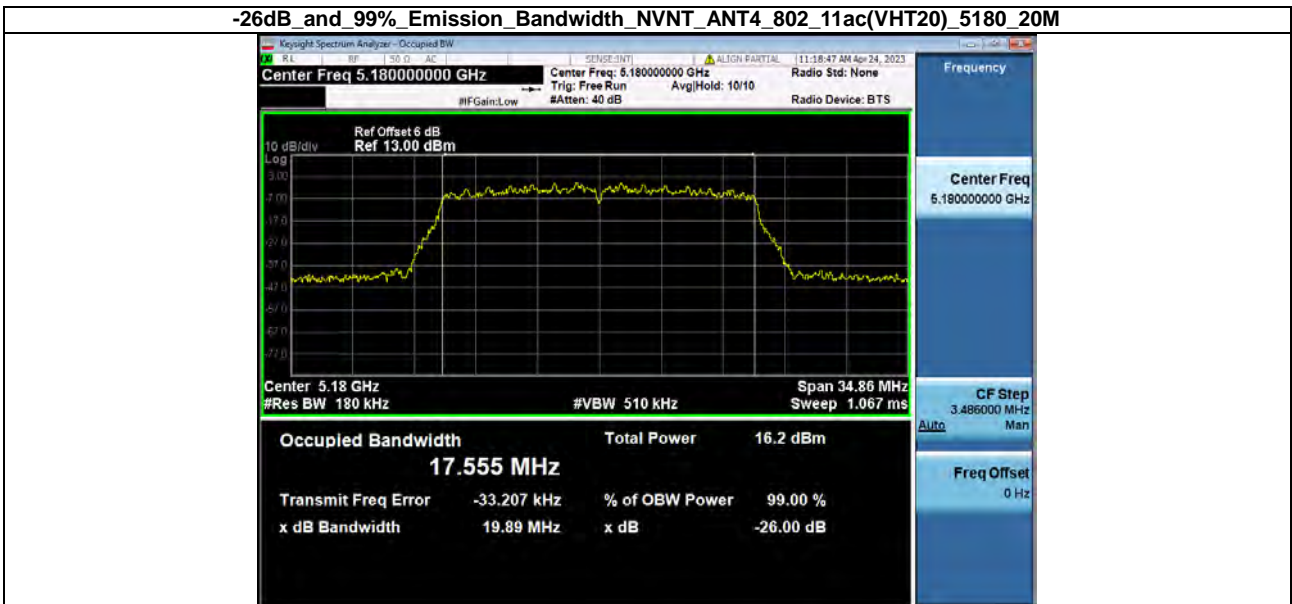
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT4\_802\_11n(HT20)\_5200\_20M**



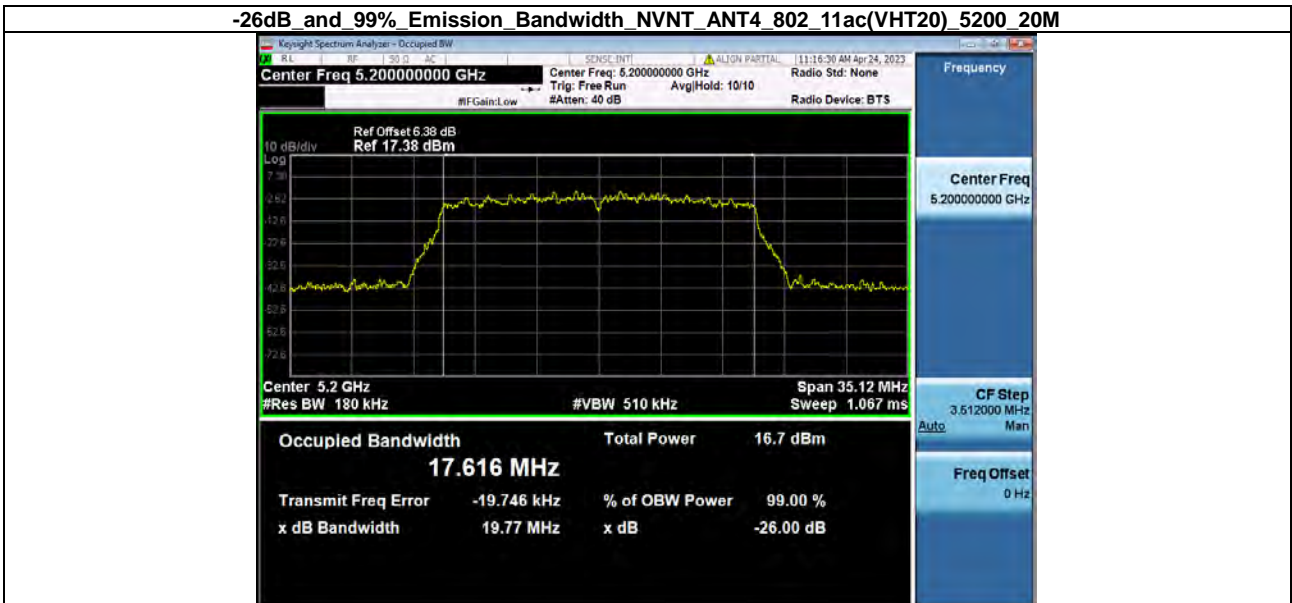
**-26dB and 99% Emission Bandwidth NVNT\_ANT4\_802\_11n(HT20)\_5240\_20M**



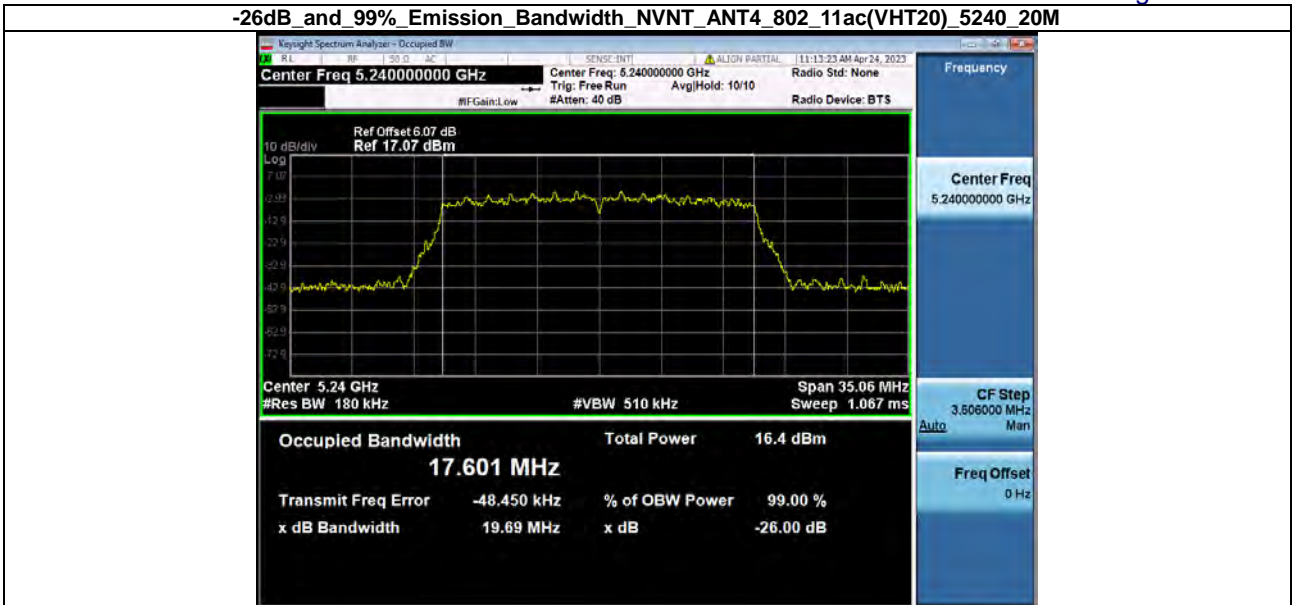
**-26dB and 99% Emission Bandwidth NVNT\_ANT4\_802\_11ac(VHT20)\_5180\_20M**



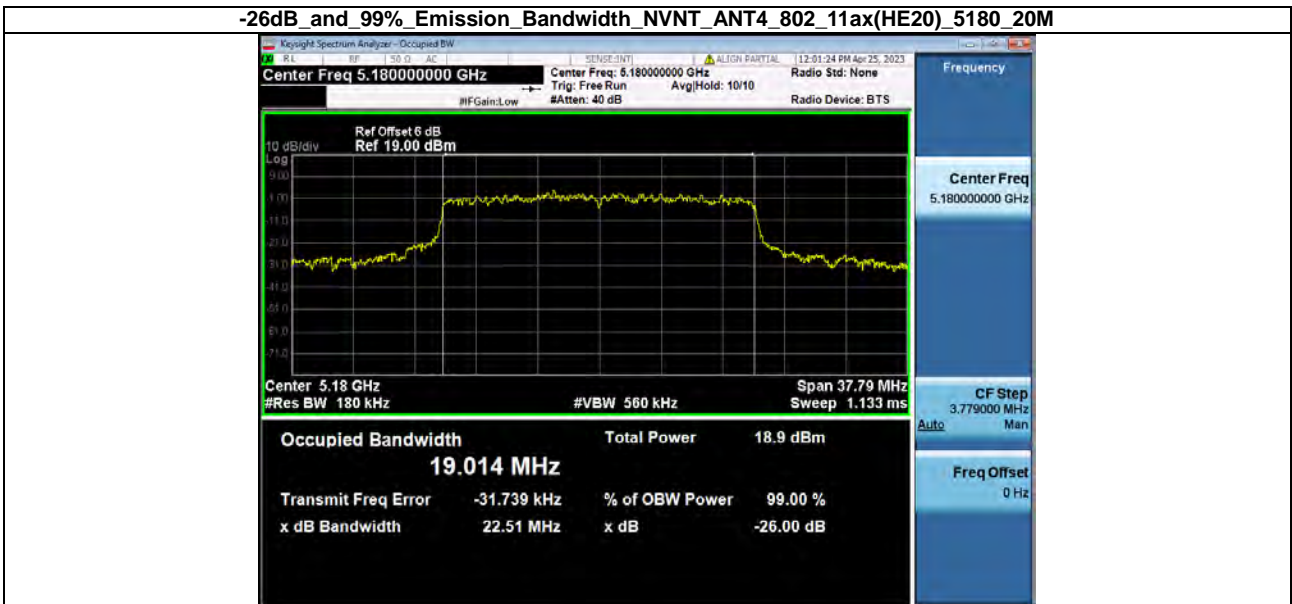
**-26dB and 99% Emission Bandwidth NVNT\_ANT4\_802\_11ac(VHT20)\_5200\_20M**



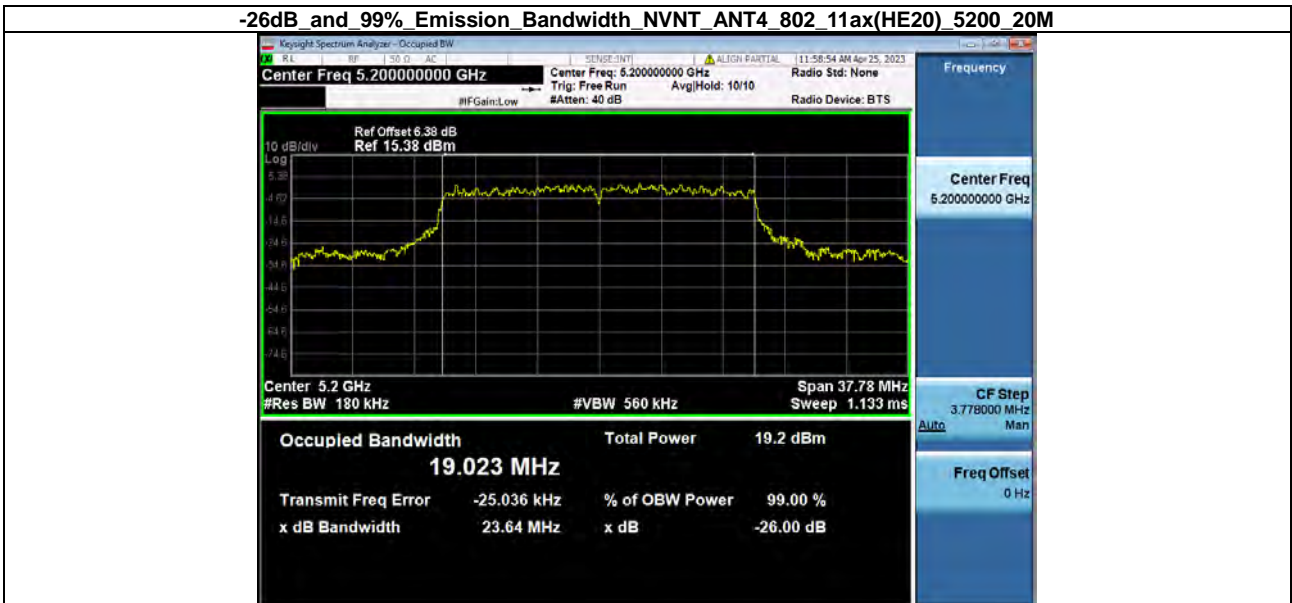
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT4\_802\_11ac(VHT20)\_5240\_20M**



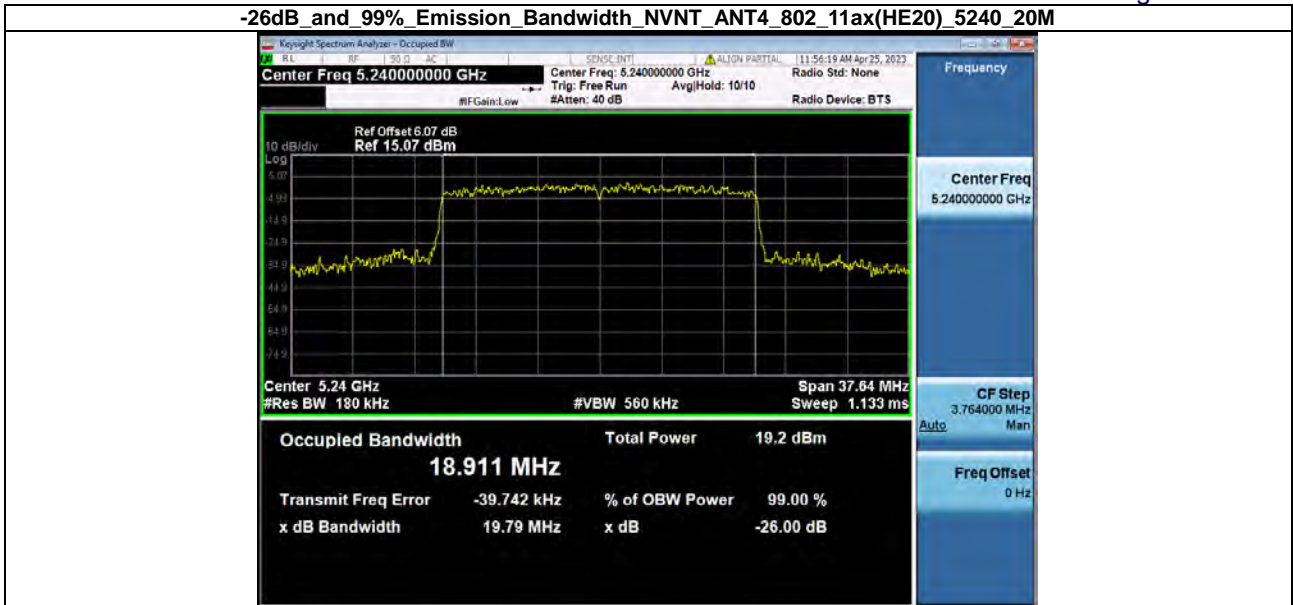
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT4\_802\_11ax(HE20)\_5180\_20M**



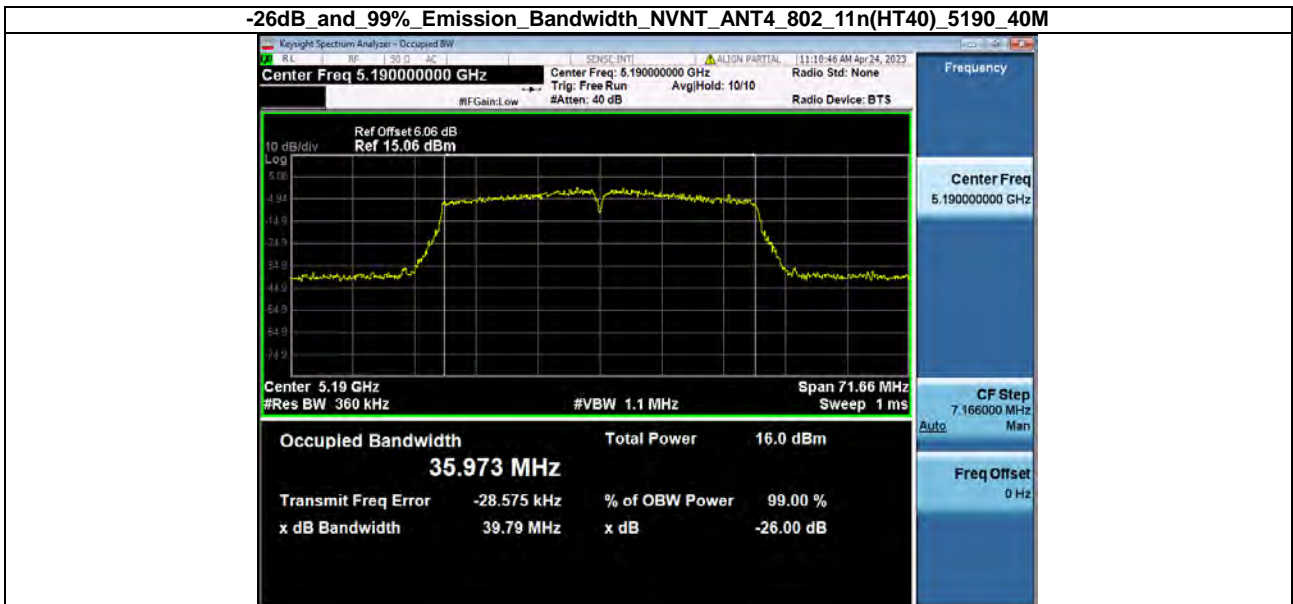
**-26dB and 99% Emission Bandwidth\_NVNT\_ANT4\_802\_11ax(HE20)\_5200\_20M**



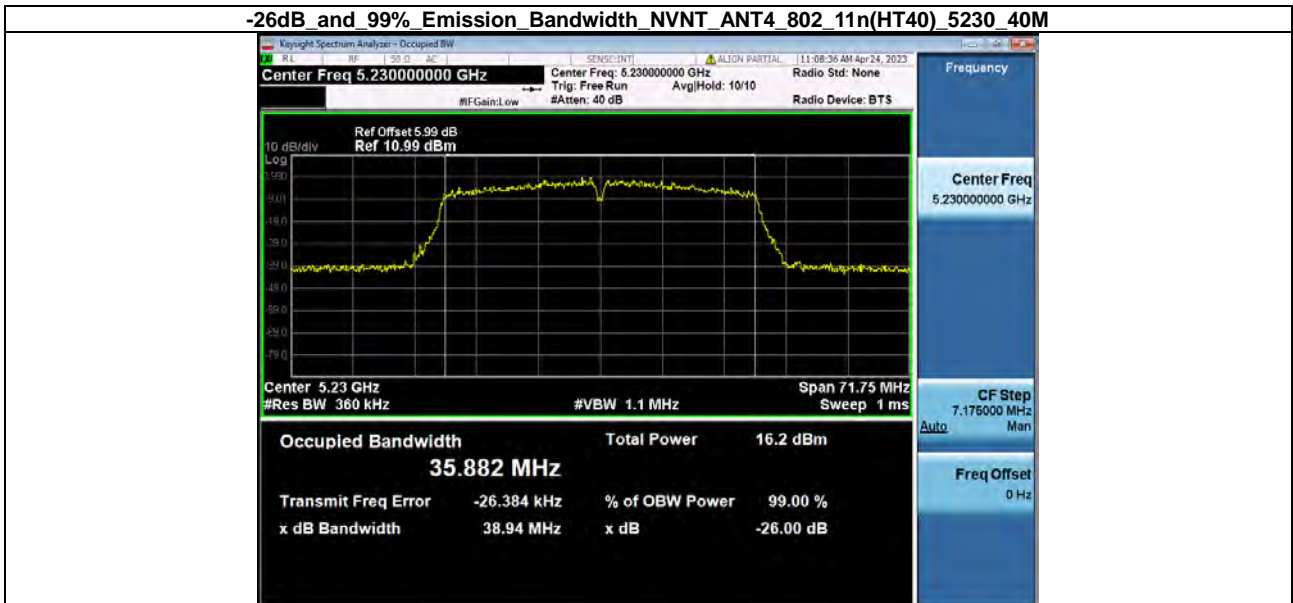
**-26dB and 99% Emission Bandwidth NVNT\_ANT4\_802\_11ax(HE20)\_5240\_20M**



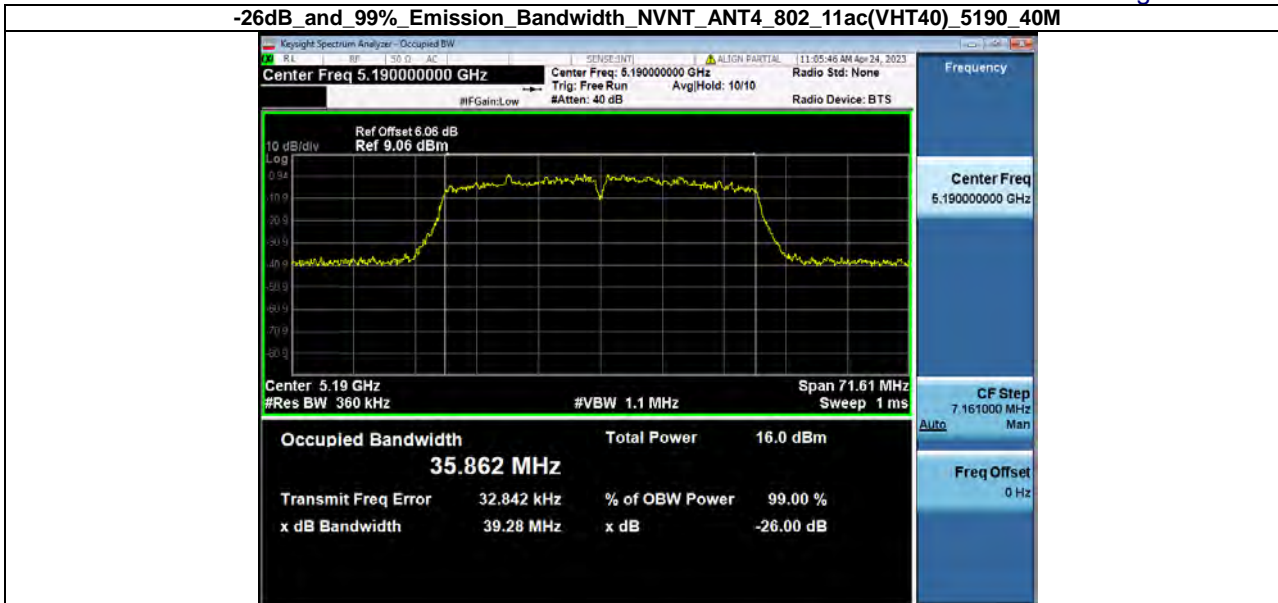
**-26dB and 99% Emission Bandwidth NVNT\_ANT4\_802\_11n(HT40)\_5190\_40M**



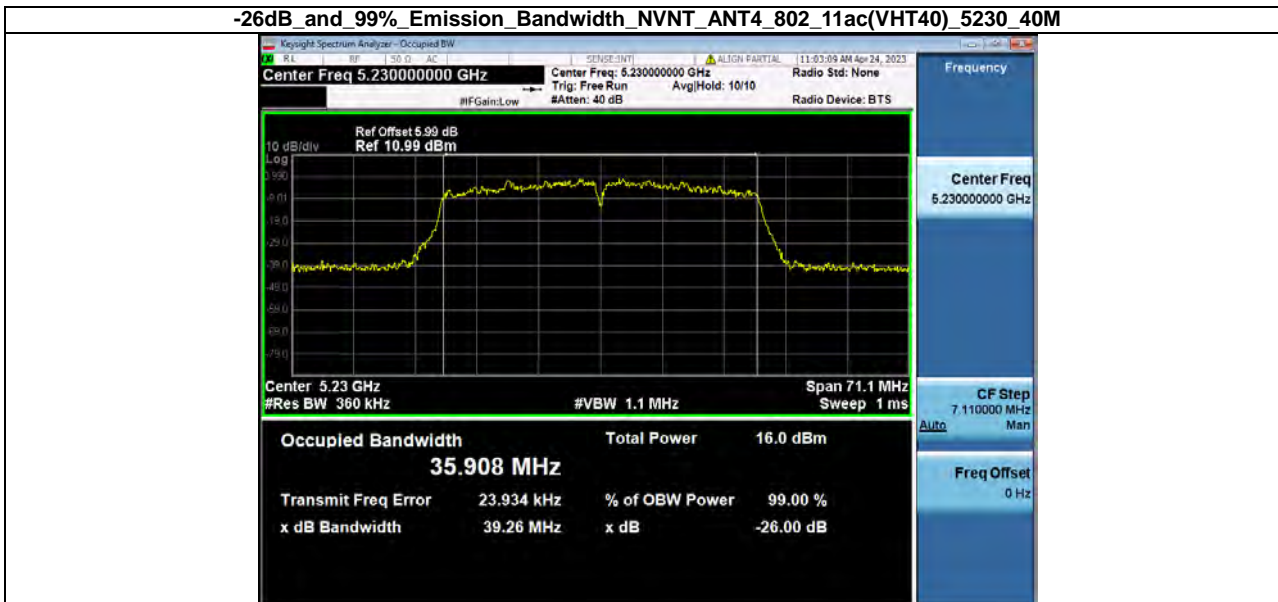
**-26dB and 99% Emission Bandwidth NVNT\_ANT4\_802\_11n(HT40)\_5230\_40M**



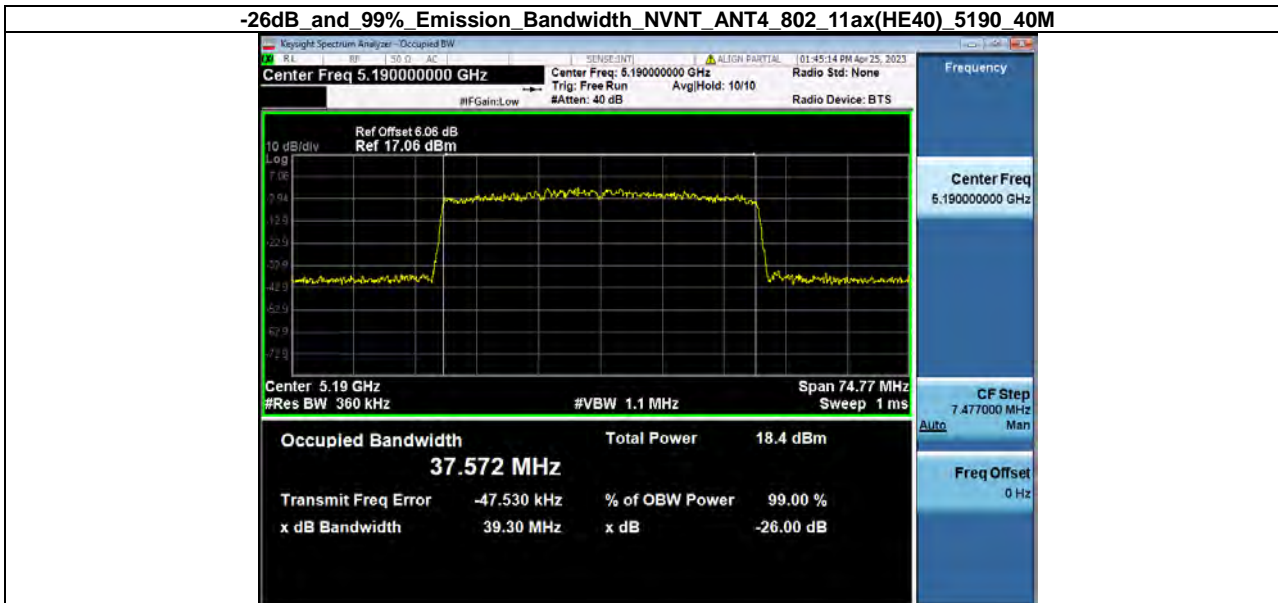
**-26dB and 99% Emission Bandwidth NVNT\_ANT4\_802\_11ac(VHT40) 5190\_40M**



**-26dB and 99% Emission Bandwidth NVNT\_ANT4\_802\_11ac(VHT40) 5230\_40M**

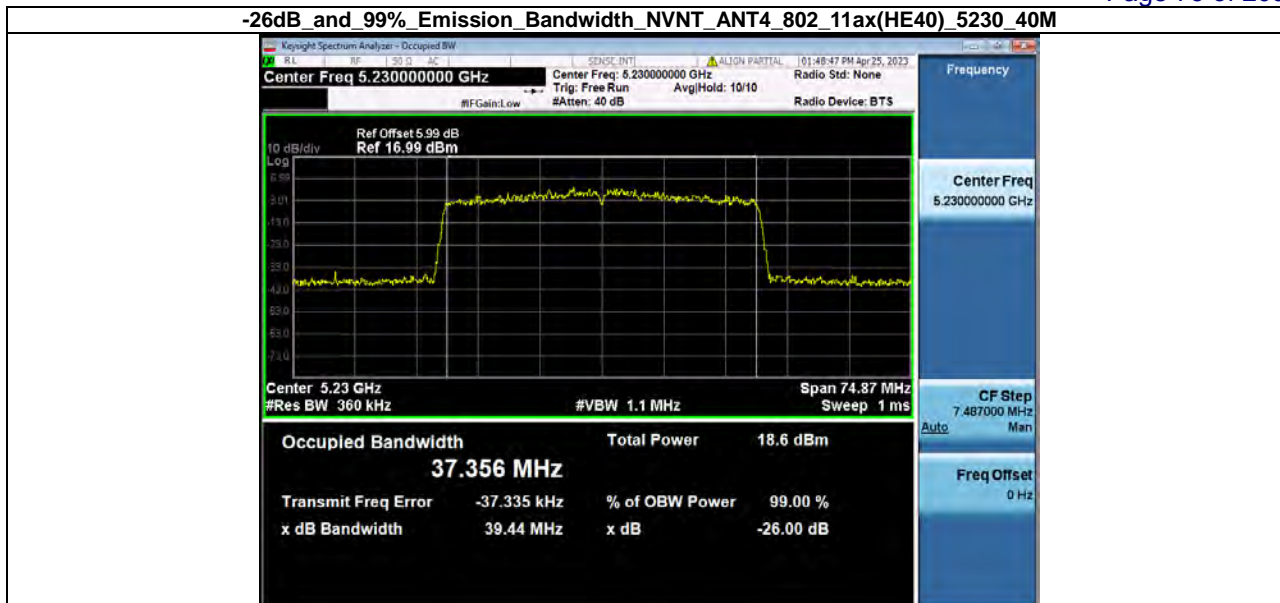


**-26dB and 99% Emission Bandwidth NVNT\_ANT4\_802\_11ax(HE40) 5190\_40M**

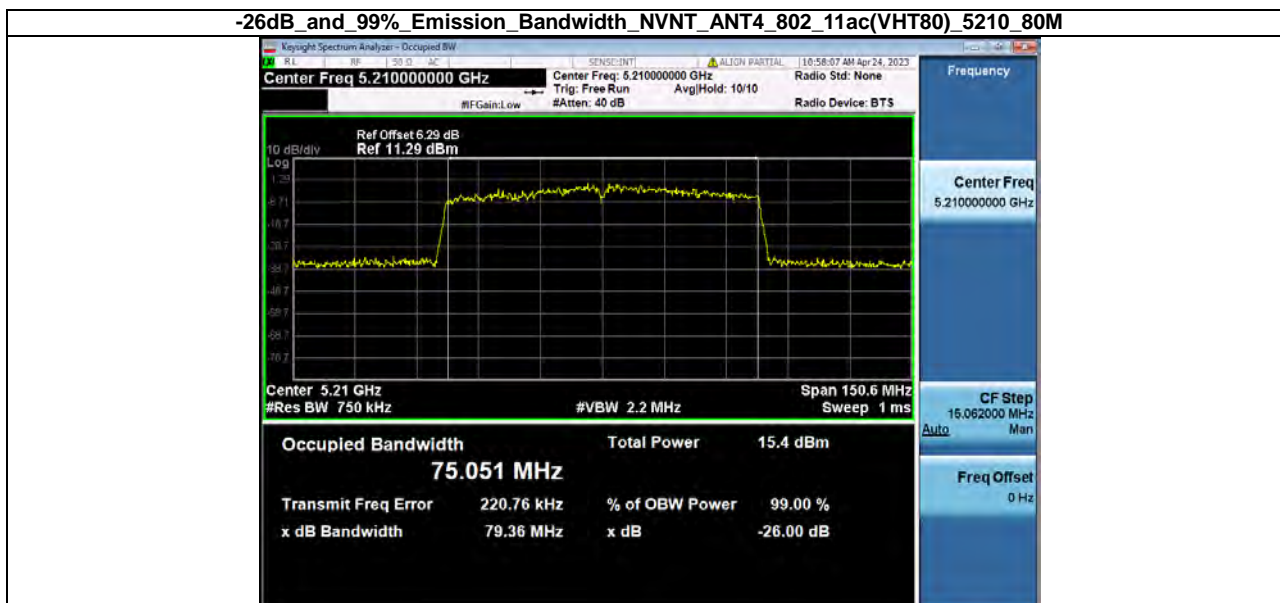




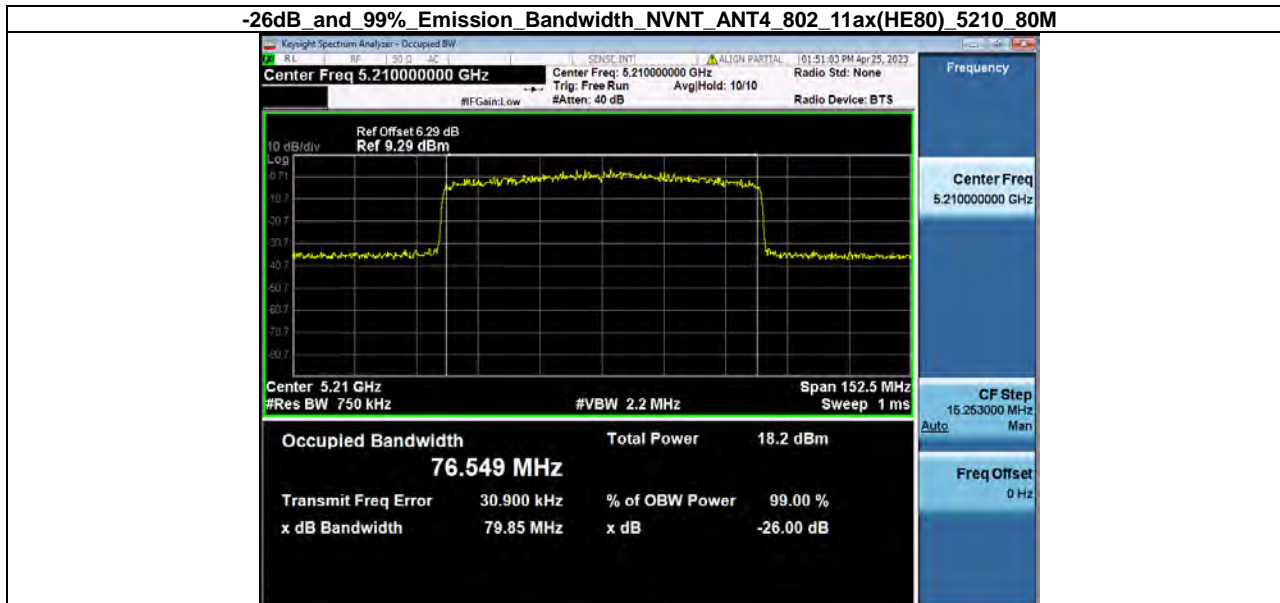
**-26dB and 99% Emission Bandwidth NVNT\_ANT4\_802\_11ax(HE40)\_5230\_40M**



**-26dB and 99% Emission Bandwidth NVNT\_ANT4\_802\_11ac(VHT80)\_5210\_80M**



**-26dB and 99% Emission Bandwidth NVNT\_ANT4\_802\_11ax(HE80)\_5210\_80M**



## 2. MAXIMUM CONDUCTED OUTPUT POWER

Condition	Antenna	Modulation	Frequency (MHz)	Conducted PK Power(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	5180.00	10.07	30.00	Pass
NVNT	ANT1	802.11a	5200.00	11.31	30.00	Pass
NVNT	ANT1	802.11a	5240.00	10.67	30.00	Pass
NVNT	ANT1	802.11n(HT20)	5180.00	9.08	30.00	Pass
NVNT	ANT1	802.11n(HT20)	5200.00	9.71	30.00	Pass
NVNT	ANT1	802.11n(HT20)	5240.00	9.55	30.00	Pass
NVNT	ANT1	802.11ac(VHT20)	5180.00	8.72	30.00	Pass
NVNT	ANT1	802.11ac(VHT20)	5200.00	9.20	30.00	Pass
NVNT	ANT1	802.11ac(VHT20)	5240.00	10.03	30.00	Pass
NVNT	ANT1	802.11ax(HE20)	5180.00	10.68	30.00	Pass
NVNT	ANT1	802.11ax(HE20)	5200.00	10.99	30.00	Pass
NVNT	ANT1	802.11ax(HE20)	5240.00	10.96	30.00	Pass
NVNT	ANT1	802.11n(HT40)	5190.00	8.31	30.00	Pass
NVNT	ANT1	802.11n(HT40)	5230.00	8.76	30.00	Pass
NVNT	ANT1	802.11ac(VHT40)	5190.00	7.94	30.00	Pass
NVNT	ANT1	802.11ac(VHT40)	5230.00	9.79	30.00	Pass
NVNT	ANT1	802.11ax(HE40)	5190.00	11.01	30.00	Pass
NVNT	ANT1	802.11ax(HE40)	5230.00	11.17	30.00	Pass
NVNT	ANT1	802.11ac(VHT80)	5210.00	7.62	30.00	Pass
NVNT	ANT1	802.11ax(HE80)	5210.00	10.11	30.00	Pass

Condition	Antenna	Modulation	Frequency (MHz)	Conducted PK Power(dBm)	limit(dBm)	Result
NVNT	ANT2	802.11a	5180.00	9.38	30.00	Pass
NVNT	ANT2	802.11a	5200.00	10.01	30.00	Pass
NVNT	ANT2	802.11a	5240.00	9.89	30.00	Pass
NVNT	ANT2	802.11n(HT20)	5180.00	8.77	30.00	Pass
NVNT	ANT2	802.11n(HT20)	5200.00	9.29	30.00	Pass
NVNT	ANT2	802.11n(HT20)	5240.00	9.31	30.00	Pass
NVNT	ANT2	802.11ac(VHT20)	5180.00	8.54	30.00	Pass
NVNT	ANT2	802.11ac(VHT20)	5200.00	9.05	30.00	Pass
NVNT	ANT2	802.11ac(VHT20)	5240.00	10.01	30.00	Pass
NVNT	ANT2	802.11ax(HE20)	5180.00	10.64	30.00	Pass
NVNT	ANT2	802.11ax(HE20)	5200.00	11.88	30.00	Pass
NVNT	ANT2	802.11ax(HE20)	5240.00	11.47	30.00	Pass
NVNT	ANT2	802.11n(HT40)	5190.00	8.97	30.00	Pass
NVNT	ANT2	802.11n(HT40)	5230.00	8.52	30.00	Pass
NVNT	ANT2	802.11ac(VHT40)	5190.00	8.01	30.00	Pass
NVNT	ANT2	802.11ac(VHT40)	5230.00	9.63	30.00	Pass
NVNT	ANT2	802.11ax(HE40)	5190.00	10.20	30.00	Pass
NVNT	ANT2	802.11ax(HE40)	5230.00	10.55	30.00	Pass
NVNT	ANT2	802.11ac(VHT80)	5210.00	8.04	30.00	Pass
NVNT	ANT2	802.11ax(HE80)	5210.00	9.44	30.00	Pass

Condition	Antenna	Modulation	Frequency (MHz)	Conducted PK Power(dBm)	limit(dBm)	Result
NVNT	ANT3	802.11a	5180.00	8.69	30.00	Pass
NVNT	ANT3	802.11a	5200.00	8.91	30.00	Pass
NVNT	ANT3	802.11a	5240.00	8.94	30.00	Pass
NVNT	ANT3	802.11n(HT20)	5180.00	7.04	30.00	Pass
NVNT	ANT3	802.11n(HT20)	5200.00	8.26	30.00	Pass
NVNT	ANT3	802.11n(HT20)	5240.00	8.31	30.00	Pass
NVNT	ANT3	802.11ac(VHT20)	5180.00	6.25	30.00	Pass
NVNT	ANT3	802.11ac(VHT20)	5200.00	7.45	30.00	Pass
NVNT	ANT3	802.11ac(VHT20)	5240.00	7.46	30.00	Pass
NVNT	ANT3	802.11ax(HE20)	5180.00	9.20	30.00	Pass
NVNT	ANT3	802.11ax(HE20)	5200.00	10.17	30.00	Pass
NVNT	ANT3	802.11ax(HE20)	5240.00	10.24	30.00	Pass
NVNT	ANT3	802.11n(HT40)	5190.00	6.37	30.00	Pass
NVNT	ANT3	802.11n(HT40)	5230.00	7.23	30.00	Pass
NVNT	ANT3	802.11ac(VHT40)	5190.00	5.99	30.00	Pass
NVNT	ANT3	802.11ac(VHT40)	5230.00	6.58	30.00	Pass
NVNT	ANT3	802.11ax(HE40)	5190.00	9.01	30.00	Pass
NVNT	ANT3	802.11ax(HE40)	5230.00	9.74	30.00	Pass
NVNT	ANT3	802.11ac(VHT80)	5210.00	5.54	30.00	Pass
NVNT	ANT3	802.11ax(HE80)	5210.00	8.94	30.00	Pass

Condition	Antenna	Modulation	Frequency (MHz)	Conducted PK Power(dBm)	limit(dBm)	Result
NVNT	ANT4	802.11a	5180.00	10.18	30.00	Pass
NVNT	ANT4	802.11a	5200.00	10.25	30.00	Pass
NVNT	ANT4	802.11a	5240.00	9.95	30.00	Pass
NVNT	ANT4	802.11n(HT20)	5180.00	9.71	30.00	Pass
NVNT	ANT4	802.11n(HT20)	5200.00	9.64	30.00	Pass
NVNT	ANT4	802.11n(HT20)	5240.00	9.37	30.00	Pass
NVNT	ANT4	802.11ac(VHT20)	5180.00	8.85	30.00	Pass
NVNT	ANT4	802.11ac(VHT20)	5200.00	9.31	30.00	Pass
NVNT	ANT4	802.11ac(VHT20)	5240.00	9.12	30.00	Pass
NVNT	ANT4	802.11ax(HE20)	5180.00	11.74	30.00	Pass
NVNT	ANT4	802.11ax(HE20)	5200.00	11.54	30.00	Pass
NVNT	ANT4	802.11ax(HE20)	5240.00	11.40	30.00	Pass
NVNT	ANT4	802.11n(HT40)	5190.00	9.20	30.00	Pass
NVNT	ANT4	802.11n(HT40)	5230.00	8.64	30.00	Pass
NVNT	ANT4	802.11ac(VHT40)	5190.00	9.57	30.00	Pass
NVNT	ANT4	802.11ac(VHT40)	5230.00	8.63	30.00	Pass
NVNT	ANT4	802.11ax(HE40)	5190.00	11.52	30.00	Pass
NVNT	ANT4	802.11ax(HE40)	5230.00	11.68	30.00	Pass
NVNT	ANT4	802.11ac(VHT80)	5210.00	7.68	30.00	Pass
NVNT	ANT4	802.11ax(HE80)	5210.00	11.13	30.00	Pass

Condition	Antenna	Modulation	Frequency (MHz)	MIMO -Conducted Power(dBm)	limit(dBm)	Result
NVNT	MIMO	802.11n(HT20)	5180.00	14.78	24.41	Pass
NVNT	MIMO	802.11n(HT20)	5200.00	15.28	24.41	Pass
NVNT	MIMO	802.11n(HT20)	5240.00	15.18	24.41	Pass
NVNT	MIMO	802.11ac(VHT20)	5180.00	14.23	24.41	Pass
NVNT	MIMO	802.11ac(VHT20)	5200.00	14.83	24.41	Pass
NVNT	MIMO	802.11ac(VHT20)	5240.00	15.29	24.41	Pass
NVNT	MIMO	802.11ax(HE20)	5180.00	16.68	24.41	Pass
NVNT	MIMO	802.11ax(HE20)	5200.00	17.21	24.41	Pass
NVNT	MIMO	802.11ax(HE20)	5240.00	17.06	24.41	Pass
NVNT	MIMO	802.11n(HT40)	5190.00	14.36	24.41	Pass
NVNT	MIMO	802.11n(HT40)	5230.00	14.35	24.41	Pass
NVNT	MIMO	802.11ac(VHT40)	5190.00	14.08	24.41	Pass
NVNT	MIMO	802.11ac(VHT40)	5230.00	14.85	24.41	Pass
NVNT	MIMO	802.11ax(HE40)	5190.00	16.56	24.41	Pass
NVNT	MIMO	802.11ax(HE40)	5230.00	16.86	24.41	Pass
NVNT	MIMO	802.11ac(VHT80)	5210.00	13.34	24.41	Pass
NVNT	MIMO	802.11ax(HE80)	5210.00	16.00	24.41	Pass

Note: MIMO limit=limit-(MIMO gain-6)=30-(11.59-6)=24.41dBm

## 3. POWER SPECTRAL DENSITY

Condition	Antenna	Modulation	Frequency (MHz)	PSD(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	5180.00	6.408	17.00	Pass
NVNT	ANT1	802.11a	5200.00	7.524	17.00	Pass
NVNT	ANT1	802.11a	5240.00	7.295	17.00	Pass
NVNT	ANT1	802.11n(HT20)	5180.00	5.263	17.00	Pass
NVNT	ANT1	802.11n(HT20)	5200.00	5.383	17.00	Pass
NVNT	ANT1	802.11n(HT20)	5240.00	5.562	17.00	Pass
NVNT	ANT1	802.11ac(VHT20)	5180.00	4.923	17.00	Pass
NVNT	ANT1	802.11ac(VHT20)	5200.00	5.084	17.00	Pass
NVNT	ANT1	802.11ac(VHT20)	5240.00	4.566	17.00	Pass
NVNT	ANT1	802.11ax(HE20)	5180.00	5.477	17.00	Pass
NVNT	ANT1	802.11ax(HE20)	5200.00	5.775	17.00	Pass
NVNT	ANT1	802.11ax(HE20)	5240.00	5.607	17.00	Pass
NVNT	ANT1	802.11n(HT40)	5190.00	2.171	17.00	Pass
NVNT	ANT1	802.11n(HT40)	5230.00	2.788	17.00	Pass
NVNT	ANT1	802.11ac(VHT40)	5190.00	2.745	17.00	Pass
NVNT	ANT1	802.11ac(VHT40)	5230.00	4.046	17.00	Pass
NVNT	ANT1	802.11ax(HE40)	5190.00	4.044	17.00	Pass
NVNT	ANT1	802.11ax(HE40)	5230.00	4.733	17.00	Pass
NVNT	ANT1	802.11ac(VHT80)	5210.00	-0.34	17.00	Pass
NVNT	ANT1	802.11ax(HE80)	5210.00	1.013	17.00	Pass

Condition	Antenna	Modulation	Frequency (MHz)	PSD(dBm)	limit(dBm)	Result
NVNT	ANT2	802.11a	5180.00	5.789	17.00	Pass
NVNT	ANT2	802.11a	5200.00	6.043	17.00	Pass
NVNT	ANT2	802.11a	5240.00	6.090	17.00	Pass
NVNT	ANT2	802.11n(HT20)	5180.00	5.296	17.00	Pass
NVNT	ANT2	802.11n(HT20)	5200.00	5.276	17.00	Pass
NVNT	ANT2	802.11n(HT20)	5240.00	5.385	17.00	Pass
NVNT	ANT2	802.11ac(VHT20)	5180.00	4.956	17.00	Pass
NVNT	ANT2	802.11ac(VHT20)	5200.00	5.551	17.00	Pass
NVNT	ANT2	802.11ac(VHT20)	5240.00	5.753	17.00	Pass
NVNT	ANT2	802.11ax(HE20)	5180.00	5.225	17.00	Pass
NVNT	ANT2	802.11ax(HE20)	5200.00	5.167	17.00	Pass
NVNT	ANT2	802.11ax(HE20)	5240.00	5.287	17.00	Pass
NVNT	ANT2	802.11n(HT40)	5190.00	1.745	17.00	Pass
NVNT	ANT2	802.11n(HT40)	5230.00	2.275	17.00	Pass
NVNT	ANT2	802.11ac(VHT40)	5190.00	1.885	17.00	Pass
NVNT	ANT2	802.11ac(VHT40)	5230.00	2.026	17.00	Pass
NVNT	ANT2	802.11ax(HE40)	5190.00	4.066	17.00	Pass
NVNT	ANT2	802.11ax(HE40)	5230.00	5.321	17.00	Pass
NVNT	ANT2	802.11ac(VHT80)	5210.00	-2.196	17.00	Pass
NVNT	ANT2	802.11ax(HE80)	5210.00	0.641	17.00	Pass

Condition	Antenna	Modulation	Frequency (MHz)	PSD(dBm)	limit(dBm)	Result
NVNT	ANT3	802.11a	5180.00	5.217	17.00	Pass
NVNT	ANT3	802.11a	5200.00	6.272	17.00	Pass
NVNT	ANT3	802.11a	5240.00	6.274	17.00	Pass
NVNT	ANT3	802.11n(HT20)	5180.00	4.173	17.00	Pass
NVNT	ANT3	802.11n(HT20)	5200.00	5.063	17.00	Pass
NVNT	ANT3	802.11n(HT20)	5240.00	5.374	17.00	Pass
NVNT	ANT3	802.11ac(VHT20)	5180.00	5.169	17.00	Pass
NVNT	ANT3	802.11ac(VHT20)	5200.00	5.14	17.00	Pass
NVNT	ANT3	802.11ac(VHT20)	5240.00	4.881	17.00	Pass
NVNT	ANT3	802.11ax(HE20)	5180.00	5.292	17.00	Pass
NVNT	ANT3	802.11ax(HE20)	5200.00	5.229	17.00	Pass
NVNT	ANT3	802.11ax(HE20)	5240.00	4.474	17.00	Pass
NVNT	ANT3	802.11n(HT40)	5190.00	2.41	17.00	Pass
NVNT	ANT3	802.11n(HT40)	5230.00	2.507	17.00	Pass
NVNT	ANT3	802.11ac(VHT40)	5190.00	1.577	17.00	Pass
NVNT	ANT3	802.11ac(VHT40)	5230.00	2.493	17.00	Pass
NVNT	ANT3	802.11ax(HE40)	5190.00	4.373	17.00	Pass
NVNT	ANT3	802.11ax(HE40)	5230.00	5.211	17.00	Pass
NVNT	ANT3	802.11ac(VHT80)	5210.00	-1.972	17.00	Pass
NVNT	ANT3	802.11ax(HE80)	5210.00	1.359	17.00	Pass

Condition	Antenna	Modulation	Frequency (MHz)	PSD(dBm)	limit(dBm)	Result
NVNT	ANT4	802.11a	5180.00	6.558	17.00	Pass
NVNT	ANT4	802.11a	5200.00	6.682	17.00	Pass
NVNT	ANT4	802.11a	5240.00	6.555	17.00	Pass

NVNT	ANT4	802.11n(HT20)	5180.00	5.257	17.00	Pass
NVNT	ANT4	802.11n(HT20)	5200.00	5.638	17.00	Pass
NVNT	ANT4	802.11n(HT20)	5240.00	5.047	17.00	Pass
NVNT	ANT4	802.11ac(VHT20)	5180.00	4.966	17.00	Pass
NVNT	ANT4	802.11ac(VHT20)	5200.00	5.557	17.00	Pass
NVNT	ANT4	802.11ac(VHT20)	5240.00	5.687	17.00	Pass
NVNT	ANT4	802.11ax(HE20)	5180.00	5.363	17.00	Pass
NVNT	ANT4	802.11ax(HE20)	5200.00	4.822	17.00	Pass
NVNT	ANT4	802.11ax(HE20)	5240.00	5.395	17.00	Pass
NVNT	ANT4	802.11n(HT40)	5190.00	2.251	17.00	Pass
NVNT	ANT4	802.11n(HT40)	5230.00	3.568	17.00	Pass
NVNT	ANT4	802.11ac(VHT40)	5190.00	2.343	17.00	Pass
NVNT	ANT4	802.11ac(VHT40)	5230.00	2.577	17.00	Pass
NVNT	ANT4	802.11ax(HE40)	5190.00	4.881	17.00	Pass
NVNT	ANT4	802.11ax(HE40)	5230.00	5.931	17.00	Pass
NVNT	ANT4	802.11ac(VHT80)	5210.00	-1.702	17.00	Pass
NVNT	ANT4	802.11ax(HE80)	5210.00	1.715	17.00	Pass

Condition	Antenna	Modulation	Frequency (MHz)	MIMO PSD (dBm/MHz)	limit(dBm)	Result
NVNT	MIMO	802.11n(HT20)	5180.00	11.04	11.41	Pass
NVNT	MIMO	802.11n(HT20)	5200.00	11.37	11.41	Pass
NVNT	MIMO	802.11n(HT20)	5240.00	11.37	11.41	Pass
NVNT	MIMO	802.11ac(VHT20)	5180.00	11.03	11.41	Pass
NVNT	MIMO	802.11ac(VHT20)	5200.00	11.36	11.41	Pass
NVNT	MIMO	802.11ac(VHT20)	5240.00	11.27	11.41	Pass
NVNT	MIMO	802.11ax(HE20)	5180.00	11.36	11.41	Pass
NVNT	MIMO	802.11ax(HE20)	5200.00	11.28	11.41	Pass
NVNT	MIMO	802.11ax(HE20)	5240.00	11.23	11.41	Pass
NVNT	MIMO	802.11n(HT40)	5190.00	8.17	11.41	Pass
NVNT	MIMO	802.11n(HT40)	5230.00	8.83	11.41	Pass
NVNT	MIMO	802.11ac(VHT40)	5190.00	8.18	11.41	Pass
NVNT	MIMO	802.11ac(VHT40)	5230.00	8.88	11.41	Pass
NVNT	MIMO	802.11ax(HE40)	5190.00	10.37	11.41	Pass
NVNT	MIMO	802.11ax(HE40)	5230.00	11.34	11.41	Pass
NVNT	MIMO	802.11ac(VHT80)	5210.00	4.53	11.41	Pass
NVNT	MIMO	802.11ax(HE80)	5210.00	7.22	11.41	Pass

Note: MIMO limit=limit-(MIMO gain-6)= 17-(11.59-6)=11.41 dBm/MHz