

# FCC TEST REPORT

## FCC ID: 2A3KR-KST102SA

**Report Number**..... : ZKT-221027L7940-04

Date of Test..... : Oct. 18, 2023 -- Oct. 31, 2023

Date of issue..... : Oct. 31, 2023

Total number of pages..... : 117

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** ..... : SHENZHEN KINSTONE D&T DEVELOP CO. LTD.

Address ..... : 5th Floor, Building A2, Xinjianxing Technology Industrial Park, Fengxin Road, Guangming District

**Manufacturer's name** ..... : SHENZHEN KINSTONE D&T DEVELOP CO. LTD.

Address ..... : 5th Floor, Building A2, Xinjianxing Technology Industrial Park, Fengxin Road, Guangming District

**Test specification:**

Standard..... : FCC CFR Title 47 Part 15 Subpart E Section 15.407  
ANSI C63.10:2013  
KDB 789033 D02 V01r02

Test procedure..... : /

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.

This report shall not be reproduced except in full, without the written approval of ZKT, this document may be altered or revised by ZKT, personal only, and shall be noted in the revision of the document.

**Product name**..... : Tablet

Trademark ..... : kinstone

Model/Type reference..... : KST102SA\_ROW

Ratings..... : DC 5V/2.4A from adapter

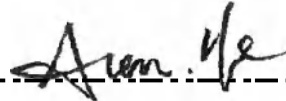
**Testing procedure and testing location:**

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

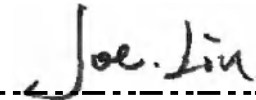
**Address**.....: 1/F, No. 101, Building B, No. 6, Tangwei Community  
Industrial Avenue, Fuhai Street, Bao'an District,  
Shenzhen, China

---

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



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



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



Table of Contents

	Page
<b>1. VERSION .....</b>	<b>5</b>
<b>2. SUMMARY OF TEST RESULTS .....</b>	<b>6</b>
2.1 TEST FACILITY .....	7
2.2 MEASUREMENT UNCERTAINTY .....	7
<b>3. GENERAL INFORMATION .....</b>	<b>8</b>
3.1 GENERAL DESCRIPTION OF EUT .....	8
3.2 DESCRIPTION OF TEST MODES .....	9
3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED .....	9
3.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE) .....	9
3.5EQUIPMENTS LIST FOR ALL TEST ITEMS .....	11
<b>4. EMC EMISSION TEST .....</b>	<b>12</b>
4.1 CONDUCTED EMISSION MEASUREMENT .....	12
4.1.1 POWER LINE CONDUCTED EMISSION LIMITS .....	12
4.1.2 TEST PROCEDURE .....	12
4.1.3 DEVIATION FROM TEST STANDARD .....	12
4.1.4 TEST SETUP .....	13
4.1.5 EUT OPERATING CONDITIONS .....	13
4.1.6 TEST RESULT .....	14
4.2 RADIATED EMISSION MEASUREMENT .....	16
4.2.1 RADIATED EMISSION LIMITS .....	16
4.2.2 TEST PROCEDURE .....	17
4.2.3 DEVIATION FROM TEST STANDARD .....	17
4.2.4 TEST SETUP .....	17
4.2.5 EUT OPERATING CONDITIONS .....	18
4.2.6 TEST RESULTS .....	19
<b>5.POWER SPECTRAL DENSITY TEST .....</b>	<b>31</b>
5.1 APPLIED PROCEDURES / LIMIT .....	31
5.2 TEST PROCEDURE .....	31
5.3 DEVIATION FROM STANDARD .....	31
5.4 TEST SETUP .....	31
5.5 EUT OPERATION CONDITIONS .....	32
5.6 TEST RESULT .....	32
<b>6. -26 DB &amp; 6DBM EMISSION BANDWIDTH .....</b>	<b>33</b>
6.1 APPLIED PROCEDURES / LIMIT .....	33
6.2 TEST PROCEDURE .....	33
6.3 DEVIATION FROM STANDARD .....	33
6.4 TEST SETUP .....	33
6.5 EUT OPERATION CONDITIONS .....	33

6.6 TEST RESULT .....	33
7. OUTPUT POWER TEST .....	34
7.1 APPLIED PROCEDURES/LIMIT .....	34
7.2 DEVIATION FROM STANDARD .....	34
7.3 TEST SETUP .....	34
7.4 EUT OPERATION CONDITIONS .....	34
8. OUT OF BAND EDGE EMISSION .....	35
8.1 TEST PROCEDURE .....	35
8.2 DEVIATION FROM STANDARD .....	35
8.3 TEST SETUP .....	35
8.4 EUT OPERATION CONDITIONS .....	35
8.5 TEST RESULTS .....	35
9. FREQUENCY STABILITY MEASUREMENT .....	36
9.4 TEST RESULT .....	36
10.ANTENNA REQUIREMENT .....	45
11.APPENDIX1---5.1GWIFI .....	46
12.APPENDIX1---5.8GWIFI .....	77
12. TEST SETUP PHOTO .....	117
13. EUT CONSTRUCTIONAL DETAILS .....	117

**1. VERSION**

Report No.	Version	Description	Approved
ZKT-221027L7940-04	Rev.01	Initial issue of report	Oct. 31, 2023

## 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247) , Subpart C			
Standard Section	Test Item	Result	Remark
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.	tem	ncertainty
1	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
2	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.5dB
3	3m chamber Radiated spurious emission(18GHz-40GHz)	U=3.34dB
4	Conducted Adjacent channel power	U=1.38dB
5	Conducted output power uncertainty Above 1G	U=1.576dB
6	Conducted output power uncertainty below 1G	U=1.28dB
7	humidity uncertainty	U=5.3%
8	Temperature uncertainty	U=0.59°C
9	Radiated disturbance(30MHz-1000MHz)	U=4.8dB
10	Radiated disturbance(1GHz-6GHz)	U=4.9dB
11	Radiated disturbance(1GHz-18GHz)	U=5.0dB

### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

Product Name:	Tablet			
Model No.:	KST102SA_ROW			
Serial No.:	N/A			
Model difference:	N/A			
Hardware Version:	V0.1			
Software Version:	V1.0			
Sample(s) Status:	Engineer sample			
	IEEE802.11 WLAN mode supported	802.11a/n/ac(20MHz channel bandwidth) 802.11n/ac(40MHz channel bandwidth) 802.11 ac (80MHz channel bandwidth)		
	Date rate	802.11ac:MCS0-MCS9 802.11n: MCS0-MCS7 802.11a: 6.5-54Mbps		
	Modulation	OFDM/OFDMA		
	U-NII-1	Frequency Range	802.11a/n/ac(20MHz) : 5180-5240MHz 802.11n/ac(40MHz) : 5190-5230MHz 802.11 ac (80MHz) : 5210MHz	
		Channels	802.11 a/n/ac (20MHz): 4 802.11 ac /n (40MHz): 2 802.11 ac (80MHz): 1	
	U-NII-3	Frequency Range	802.11 a/n/ac(20MHz) : 5745-5825 MHz 802.11 n/ac (40MHz): 5755-5795 MHz 802.11 ac (80MHz): 5775 MHz	
Channels		802.11 a/n/ac(20MHz) : 5 802.11 n/ac (40MHz): 2 802.11 ac (80MHz): 1		
Antenna Type:	PIFA antenna			
Antenna gain:	-3.32dBi			
Power supply:	DC 5V/2.4A from adapter			

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

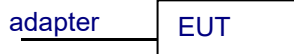
## 3.2 DESCRIPTION OF TEST MODES

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

Description	5 GHz Emission
Antenna	MIMO
Channel	149
Operating Frequency (MHz)	802.11ac
Data Rate (Mbps)	OFDM/MCS11
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	PC	HP	HP40		Provide by lab
2	adapter	SHENZHEN FUJIA APPLIANCE CO.,LTD.	FJ-SW126G1501500N	/	SDOC

--	--	--	--	--	--

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	MWRP Power Meter Test system	MW	MW100-RPCB	N/A	Oct. 22, 2022	Oct. 21, 2023
16	D.C. Power Supply	LongWei	TPR-6405D	N/A	\	\
17	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	\	\
18	RF Software	MW	MTS8310	V2.0.0.0	\	\
19	Turntable	MF	MF-7802BS	N/A	\	\
20	Antenna tower	MF	MF-7802BS	N/A	\	\

## Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	LISN	R&S	ENV216	101471	Oct. 22, 2022	Oct. 21, 2023
2	LISN	CYBERTEK	EM5040 A	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.

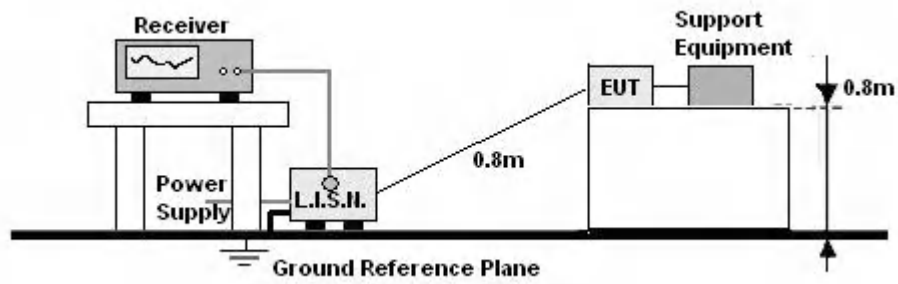
#### 4.1.2 TEST PROCEDURE

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



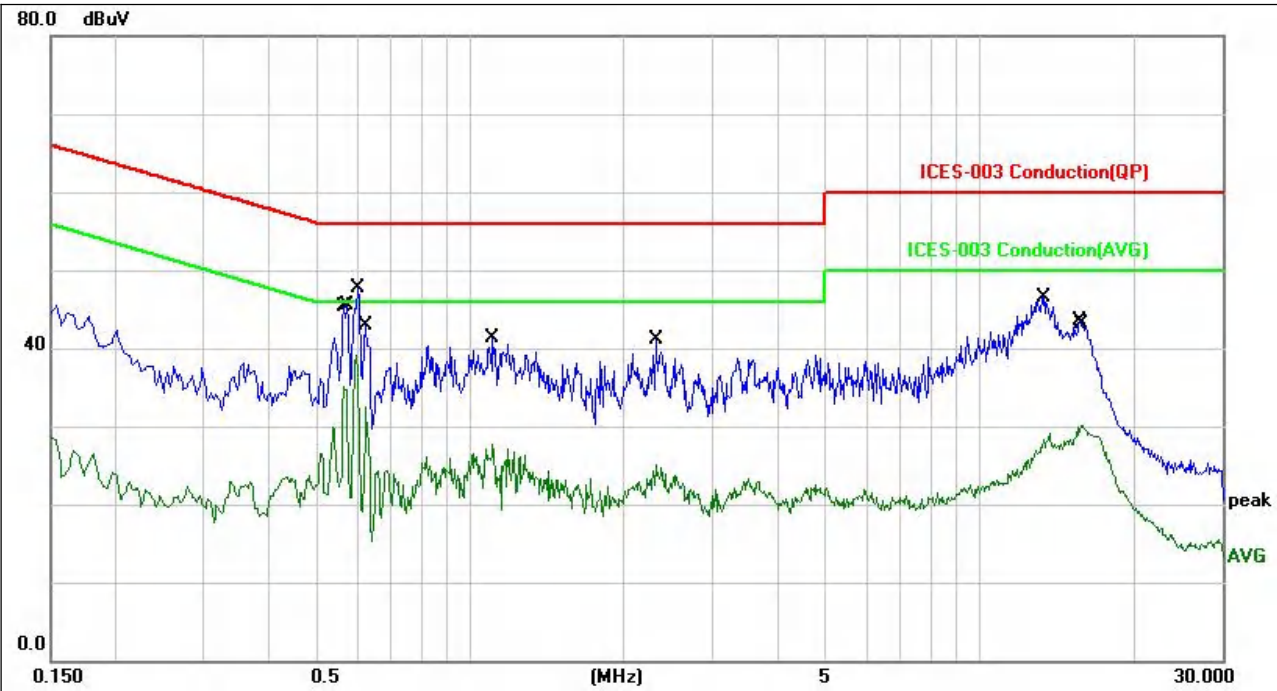
#### 4.1.5 EUT OPERATING CONDITIONS

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 RESULT

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



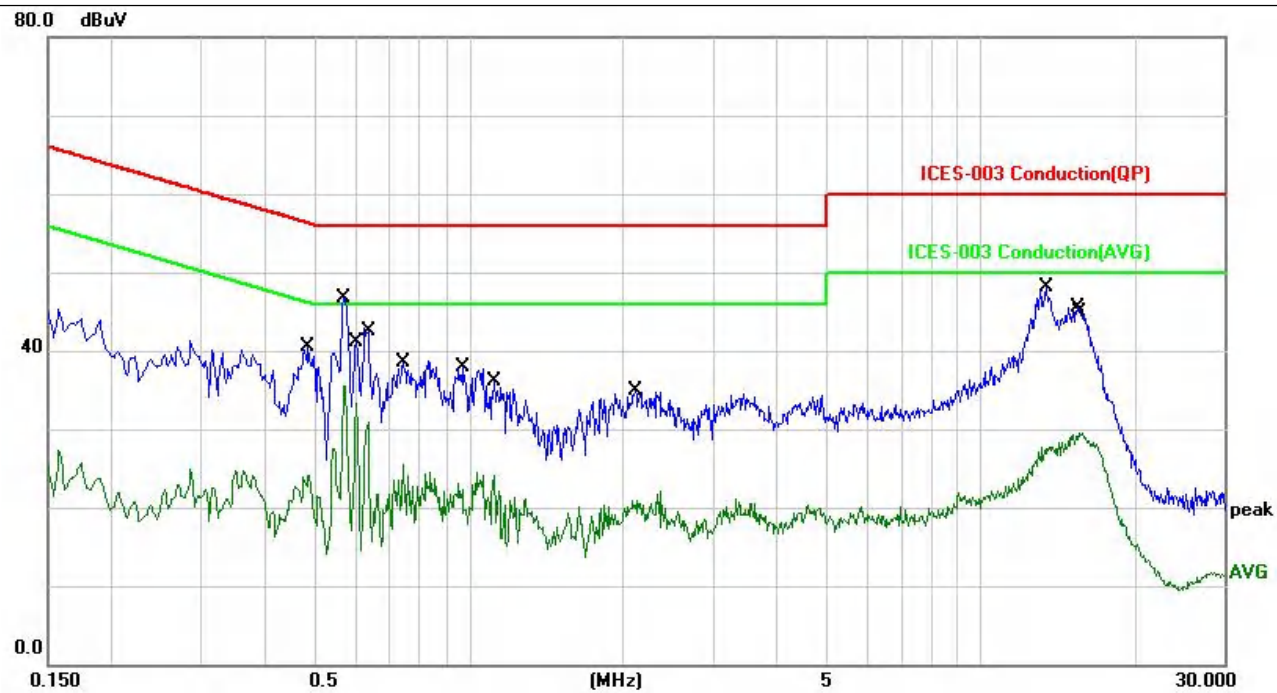
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.5660	24.80	10.21	35.01	46.00	-10.99	AVG	
2	0.5740	35.29	10.21	45.50	56.00	-10.50	QP	
3 *	0.5980	28.98	10.21	39.19	46.00	-6.81	AVG	
4	0.6020	37.55	10.21	47.76	56.00	-8.24	QP	
5	0.6260	22.27	10.21	32.48	46.00	-13.52	AVG	
6	1.1100	31.16	10.16	41.32	56.00	-14.68	QP	
7	1.1100	17.44	10.16	27.60	46.00	-18.40	AVG	
8	2.3140	31.11	10.01	41.12	56.00	-14.88	QP	
9	2.3140	14.98	10.01	24.99	46.00	-21.01	AVG	
10	13.3740	36.52	9.97	46.49	60.00	-13.51	QP	
11	15.7780	33.53	9.87	43.40	60.00	-16.60	QP	
12	15.8860	20.29	9.87	30.16	50.00	-19.84	AVG	

\*:Maximum data    x:Over limit    !:over margin

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

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	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.4860	30.37	10.20	40.57	56.24	-15.67	QP	
2	*	0.5700	36.51	10.21	46.72	56.00	-9.28	QP	
3		0.5700	25.34	10.21	35.55	46.00	-10.45	AVG	
4		0.6020	23.00	10.21	33.21	46.00	-12.79	AVG	
5		0.6340	20.64	10.21	30.85	46.00	-15.15	AVG	
6		0.7460	15.27	10.21	25.48	46.00	-20.52	AVG	
7		0.9700	27.82	10.17	37.99	56.00	-18.01	QP	
8		1.1180	13.94	10.16	24.10	46.00	-21.90	AVG	
9		2.1140	24.84	10.03	34.87	56.00	-21.13	QP	
10		13.4259	38.13	9.97	48.10	60.00	-11.90	QP	
11		15.5379	35.71	9.88	45.59	60.00	-14.41	QP	
12		15.8299	19.62	9.87	29.49	50.00	-20.51	AVG	

\*:Maximum data    x:Over limit    !:over margin

**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

## 4.2 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 and 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 5650-5725 MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725 MHz band shall not exceed an EIRP of  $-27$  dBm/MHz.
5. KDB789033v02r01G)2)c) As specified in 15.407(b), emissions above 1000 MHz that are out side 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 elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

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

### LIMITS OF RADIATED EMISSION MEASUREMENT



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

Notes:

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

#### 4.2.2 TEST PROCEDURE

Below 1GHz test procedure as below:

- a. The EUT was placed on the top of a rotating table 0.1 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 from 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:

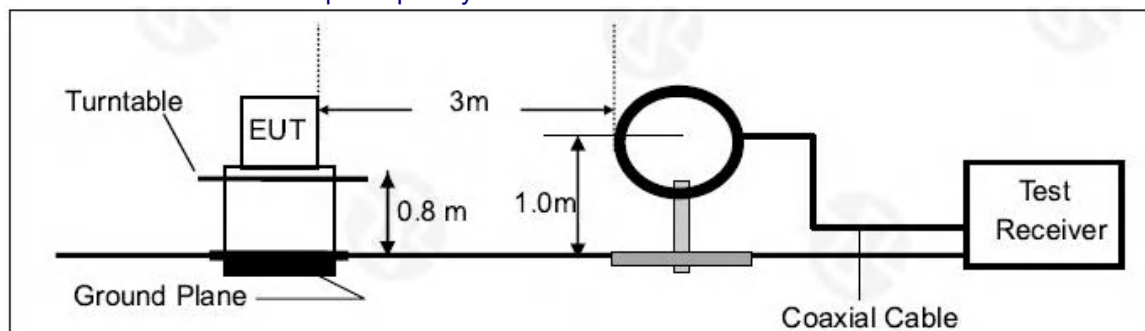
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

#### 4.2.3 DEVIATION FROM TEST STANDARD

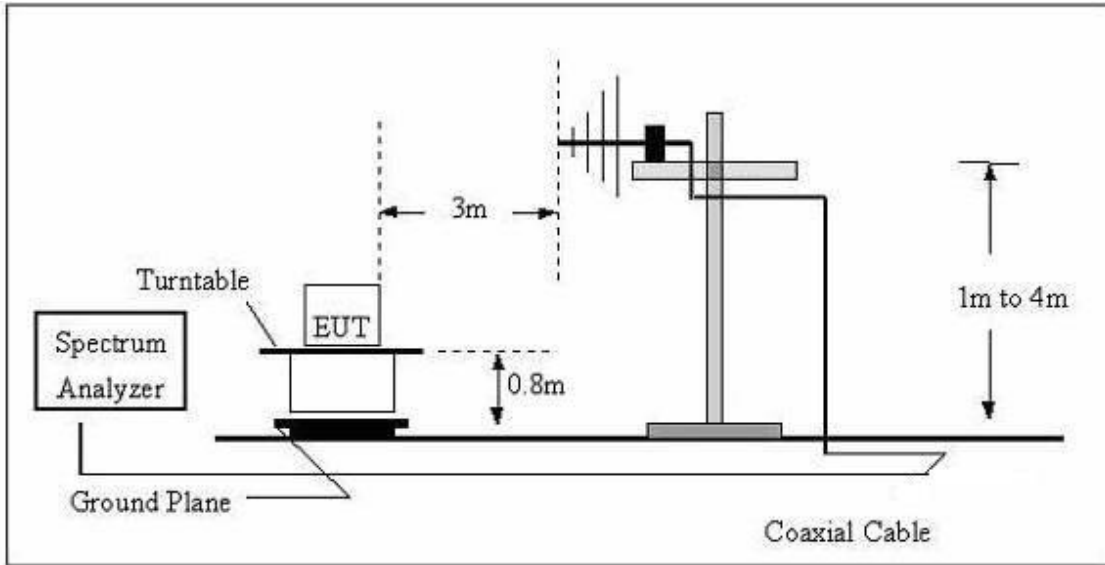
No deviation

#### 4.2.4 TEST SETUP

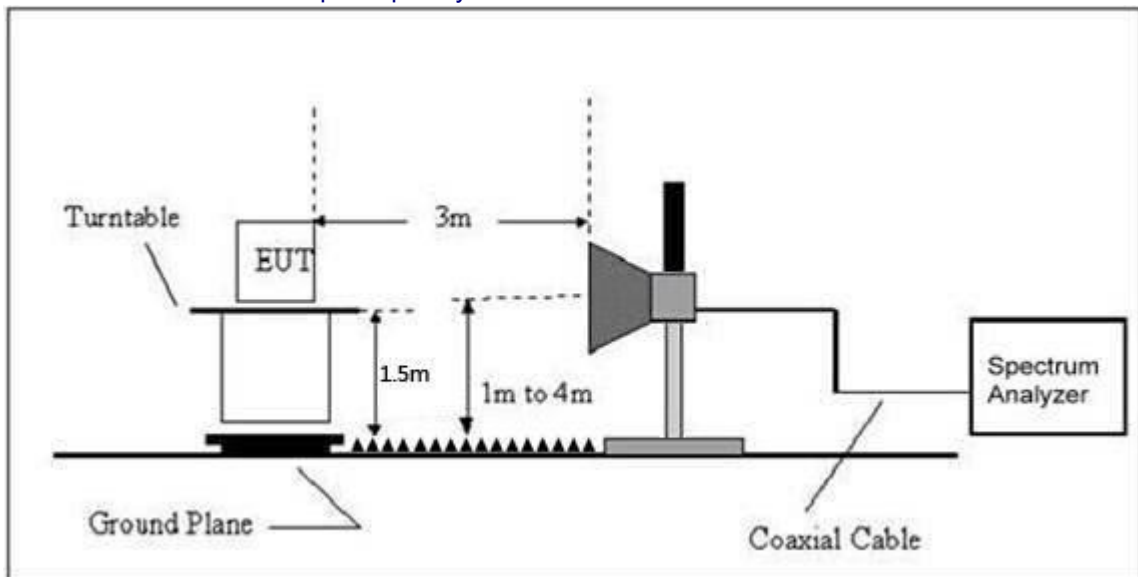
(A) Radiated Emission Test-Up Frequency Below 30MHz



(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.

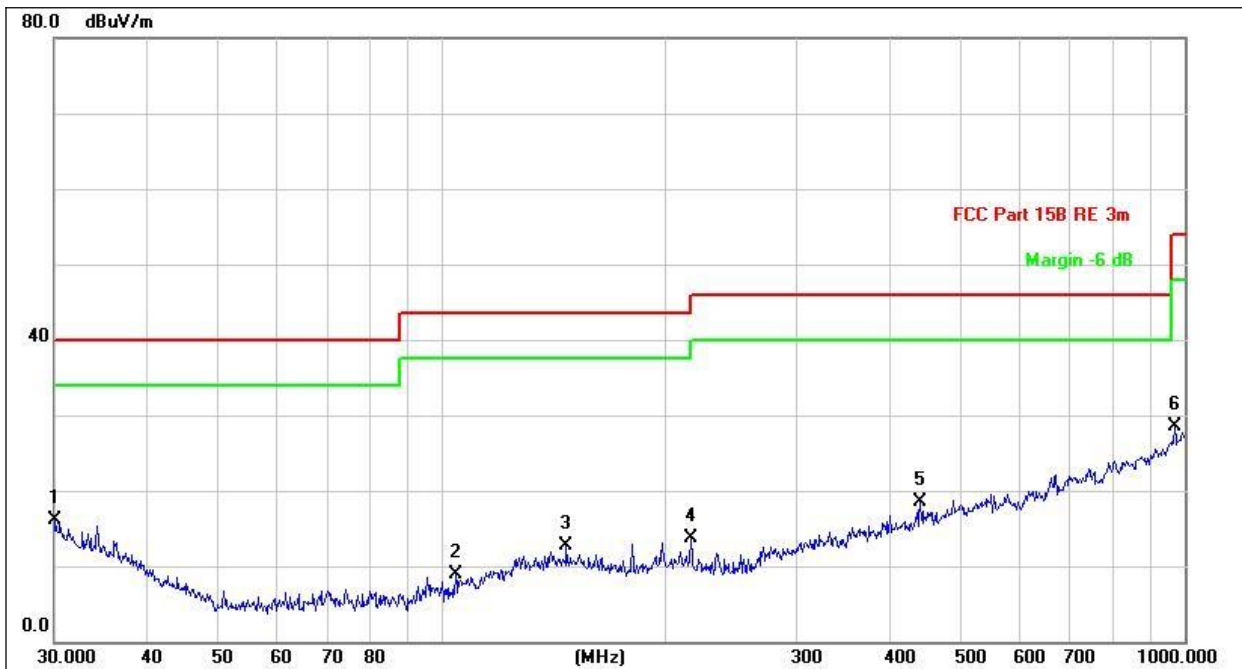
4.2.6 TEST RESULTS

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.

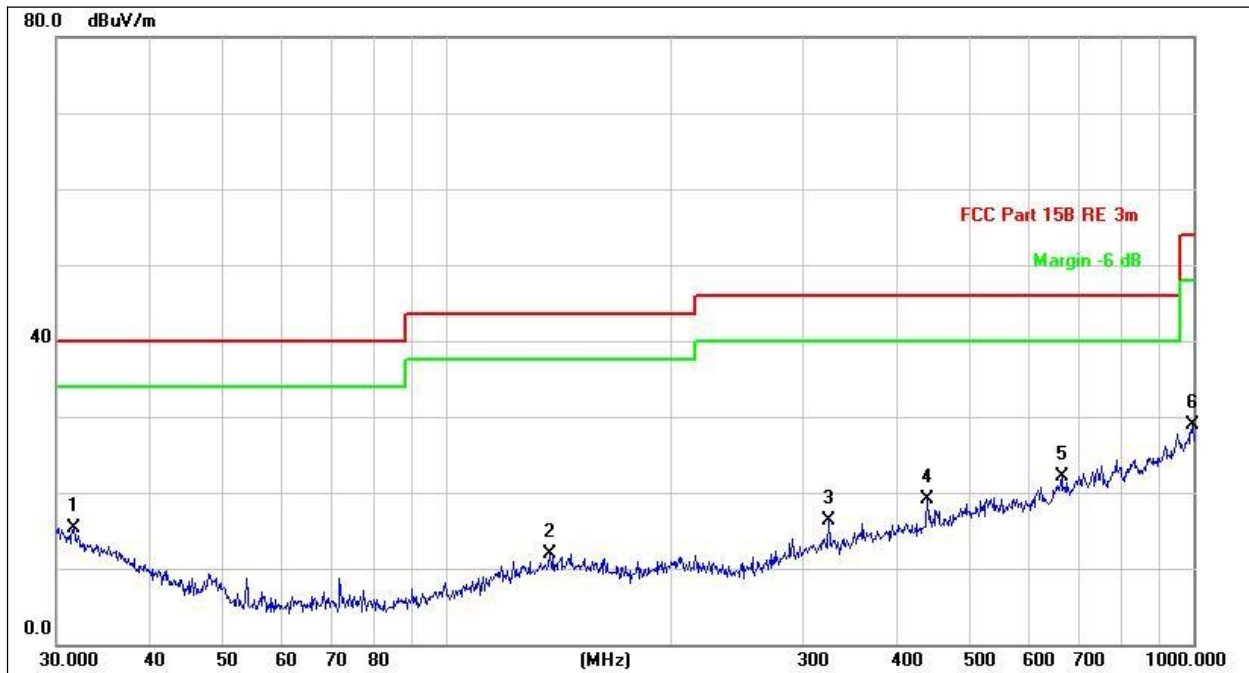
Between 30MHz – 1GHz

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



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	30.1054	20.77	-4.65	16.12	40.00	-23.88	QP 100	0	
2		104.1701	22.11	-13.18	8.93	43.50	-34.57	QP 100	0	
3		146.8877	22.44	-9.65	12.79	43.50	-30.71	QP 100	0	
4		216.0240	23.93	-10.24	13.69	46.00	-32.31	QP 100	0	
5		440.1963	23.22	-4.73	18.49	46.00	-27.51	QP 100	0	
6		968.9338	23.12	5.40	28.52	54.00	-25.48	QP 100	0	

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/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1		31.6202	20.75	-5.49	15.26	40.00	-24.74	QP	100	360	
2		137.4202	21.97	-10.00	11.97	43.50	-31.53	QP	100	360	
3		324.4561	23.89	-7.49	16.40	46.00	-29.60	QP	100	360	
4		440.1963	23.88	-4.73	19.15	46.00	-26.85	QP	100	360	
5	*	665.8035	22.69	-0.51	22.18	46.00	-23.82	QP	100	360	
6		996.4996	22.74	6.16	28.90	54.00	-25.10	QP	100	360	

## ANT1-802.11a

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
Low Channel:5180MHz									
V	10360	49.10	30.55	5.77	24.66	48.98	74.00	-25.02	PK
V	10360	35.38	30.55	5.77	24.66	35.26	54.00	-18.74	AV
V	15540	49.01	30.33	6.32	24.55	49.55	74.00	-24.45	PK
V	15540	39.38	30.33	6.32	24.55	39.92	54.00	-14.08	AV
V	20720	51.27	30.85	7.45	24.69	52.56	74.00	-21.44	PK
V	20720	39.83	30.85	7.45	24.69	41.12	54.00	-12.88	AV
H	10360	48.53	30.55	5.77	24.66	48.41	74.00	-25.59	PK
H	10360	39.65	30.55	5.77	24.66	39.53	54.00	-14.47	AV
H	15540	47.70	30.33	6.32	24.55	48.24	74.00	-25.76	PK
H	15540	40.44	30.33	6.32	24.55	40.98	54.00	-13.02	AV
H	20720	51.05	30.85	7.45	24.69	52.34	74.00	-21.66	PK
H	20720	40.96	30.85	7.45	24.69	42.25	54.00	-11.75	AV

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
Middle Channel:5200MHz									
V	10400	48.46	30.55	5.77	24.66	48.34	74.00	-25.66	PK
V	10400	35.11	30.55	5.77	24.66	34.99	54.00	-19.01	AV
V	15600	47.90	30.33	6.32	24.55	48.44	74.00	-25.56	PK
V	15600	39.85	30.33	6.32	24.55	40.39	54.00	-13.61	AV
V	20800	48.83	30.85	7.45	24.69	50.12	74.00	-23.88	PK
V	20800	40.50	30.85	7.45	24.69	41.79	54.00	-12.21	AV
H	10400	46.18	30.55	5.77	24.66	46.06	74.00	-27.94	PK
H	10400	40.39	30.55	5.77	24.66	40.27	54.00	-13.73	AV
H	15600	46.96	30.33	6.32	24.55	47.50	74.00	-26.50	PK
H	15600	40.19	30.33	6.32	24.55	40.73	54.00	-13.27	AV
H	20800	51.72	30.85	7.45	24.69	53.01	74.00	-20.99	PK
H	20800	41.64	30.85	7.45	24.69	42.93	54.00	-11.07	AV

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:5240MHz									
V	10480	48.19	30.55	5.77	24.66	48.07	74.00	-25.93	PK
V	10480	36.03	30.55	5.77	24.66	35.91	54.00	-18.09	AV
V	15720	49.41	30.33	6.32	24.55	49.95	74.00	-24.05	PK
V	15720	38.78	30.33	6.32	24.55	39.32	54.00	-14.68	AV
V	20960	51.10	30.85	7.45	24.69	52.39	74.00	-21.61	PK
V	20960	38.93	30.85	7.45	24.69	40.22	54.00	-13.78	AV
H	10480	47.48	30.55	5.77	24.66	47.36	74.00	-26.64	PK
H	10480	40.44	30.55	5.77	24.66	40.32	54.00	-13.68	AV
H	15720	47.37	30.33	6.32	24.55	47.91	74.00	-26.09	PK
H	15720	41.65	30.33	6.32	24.55	42.19	54.00	-11.81	AV
H	20960	49.34	30.85	7.45	24.69	50.63	74.00	-23.37	PK
H	20960	40.28	30.85	7.45	24.69	41.57	54.00	-12.43	AV

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:5745MHz									
V	11490	47.45	30.55	5.77	24.66	47.33	74.00	-26.67	PK
V	11490	35.32	30.55	5.77	24.66	35.20	54.00	-18.80	AV
V	17235	48.26	30.33	6.32	24.55	48.80	74.00	-25.20	PK
V	17235	39.26	30.33	6.32	24.55	39.80	54.00	-14.20	AV
V	22980	50.50	30.85	7.45	24.69	51.79	74.00	-22.21	PK
V	22980	40.10	30.85	7.45	24.69	41.39	54.00	-12.61	AV
H	11490	47.07	30.55	5.77	24.66	46.95	74.00	-27.05	PK
H	11490	39.16	30.55	5.77	24.66	39.04	54.00	-14.96	AV
H	17235	47.62	30.33	6.32	24.55	48.16	74.00	-25.84	PK
H	17235	39.38	30.33	6.32	24.55	39.92	54.00	-14.08	AV
H	22980	50.33	30.85	7.45	24.69	51.62	74.00	-22.38	PK
H	22980	40.86	30.85	7.45	24.69	42.15	54.00	-11.85	AV

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:5785MHz									
V	11570	47.18	30.55	5.77	24.66	47.06	74.00	-26.94	PK
V	11570	35.27	30.55	5.77	24.66	35.15	54.00	-18.85	AV
V	17355	48.10	30.33	6.32	24.55	48.64	74.00	-25.36	PK
V	17355	41.15	30.33	6.32	24.55	41.69	54.00	-12.31	AV
V	23140	51.74	30.85	7.45	24.69	53.03	74.00	-20.97	PK
V	23140	40.59	30.85	7.45	24.69	41.88	54.00	-12.12	AV
H	11570	47.78	30.55	5.77	24.66	47.66	74.00	-26.34	PK
H	11570	39.87	30.55	5.77	24.66	39.75	54.00	-14.25	AV
H	17355	47.91	30.33	6.32	24.55	48.45	74.00	-25.55	PK
H	17355	39.27	30.33	6.32	24.55	39.81	54.00	-14.19	AV
H	23140	51.09	30.85	7.45	24.69	52.38	74.00	-21.62	PK
H	23140	41.41	30.85	7.45	24.69	42.70	54.00	-11.30	AV

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:5825MHz									
V	11650	48.23	30.55	5.77	24.66	48.11	74.00	-25.89	PK
V	11650	35.45	30.55	5.77	24.66	35.33	54.00	-18.67	AV
V	17475	49.34	30.33	6.32	24.55	49.88	74.00	-24.12	PK
V	17475	40.26	30.33	6.32	24.55	40.80	54.00	-13.20	AV
V	23300	49.69	30.85	7.45	24.69	50.98	74.00	-23.02	PK
V	23300	40.85	30.85	7.45	24.69	42.14	54.00	-11.86	AV
H	11650	47.79	30.55	5.77	24.66	47.67	74.00	-26.33	PK
H	11650	38.96	30.55	5.77	24.66	38.84	54.00	-15.16	AV
H	17475	48.34	30.33	6.32	24.55	48.88	74.00	-25.12	PK
H	17475	41.32	30.33	6.32	24.55	41.86	54.00	-12.14	AV
H	23300	50.67	30.85	7.45	24.69	51.96	74.00	-22.04	PK
H	23300	38.82	30.85	7.45	24.69	40.11	54.00	-13.89	AV

## ANT1-802.11n20

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
Low Channel:5180MHz									
V	10360	48.40	30.55	5.77	24.66	48.28	74.00	-25.72	PK
V	10360	34.98	30.55	5.77	24.66	34.86	54.00	-19.14	AV
V	15540	49.58	30.33	6.32	24.55	50.12	74.00	-23.88	PK
V	15540	40.07	30.33	6.32	24.55	40.61	54.00	-13.39	AV
V	20720	51.19	30.85	7.45	24.69	52.48	74.00	-21.52	PK
V	20720	39.65	30.85	7.45	24.69	40.94	54.00	-13.06	AV
H	10360	48.29	30.55	5.77	24.66	48.17	74.00	-25.83	PK
H	10360	39.79	30.55	5.77	24.66	39.67	54.00	-14.33	AV
H	15540	47.84	30.33	6.32	24.55	48.38	74.00	-25.62	PK
H	15540	41.40	30.33	6.32	24.55	41.94	54.00	-12.06	AV
H	20720	51.63	30.85	7.45	24.69	52.92	74.00	-21.08	PK
H	20720	40.54	30.85	7.45	24.69	41.83	54.00	-12.17	AV

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
Middle Channel:5200MHz									
V	10400	49.51	30.55	5.77	24.66	49.39	74.00	-24.61	PK
V	10400	36.14	30.55	5.77	24.66	36.02	54.00	-17.98	AV
V	15600	49.59	30.33	6.32	24.55	50.13	74.00	-23.87	PK
V	15600	38.85	30.33	6.32	24.55	39.39	54.00	-14.61	AV
V	20800	51.12	30.85	7.45	24.69	52.41	74.00	-21.59	PK
V	20800	39.71	30.85	7.45	24.69	41.00	54.00	-13.00	AV
H	10400	48.29	30.55	5.77	24.66	48.17	74.00	-25.83	PK
H	10400	38.98	30.55	5.77	24.66	38.86	54.00	-15.14	AV
H	15600	48.38	30.33	6.32	24.55	48.92	74.00	-25.08	PK
H	15600	40.44	30.33	6.32	24.55	40.98	54.00	-13.02	AV
H	20800	50.67	30.85	7.45	24.69	51.96	74.00	-22.04	PK
H	20800	39.85	30.85	7.45	24.69	41.14	54.00	-12.86	AV

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
High Channel:5240MHz									
V	10480	46.90	30.55	5.77	24.66	46.78	74.00	-27.22	PK
V	10480	35.65	30.55	5.77	24.66	35.53	54.00	-18.47	AV
V	15720	47.90	30.33	6.32	24.55	48.44	74.00	-25.56	PK
V	15720	40.85	30.33	6.32	24.55	41.39	54.00	-12.61	AV
V	20960	50.59	30.85	7.45	24.69	51.88	74.00	-22.12	PK
V	20960	41.35	30.85	7.45	24.69	42.64	54.00	-11.36	AV
H	10480	47.17	30.55	5.77	24.66	47.05	74.00	-26.95	PK
H	10480	39.05	30.55	5.77	24.66	38.93	54.00	-15.07	AV
H	15720	48.09	30.33	6.32	24.55	48.63	74.00	-25.37	PK
H	15720	41.08	30.33	6.32	24.55	41.62	54.00	-12.38	AV
H	20960	50.46	30.85	7.45	24.69	51.75	74.00	-22.25	PK
H	20960	40.01	30.85	7.45	24.69	41.30	54.00	-12.70	AV

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:5745MHz									
V	11490	49.34	30.55	5.77	24.66	49.22	74.00	-24.78	PK
V	11490	35.27	30.55	5.77	24.66	35.15	54.00	-18.85	AV
V	17235	48.84	30.33	6.32	24.55	49.38	74.00	-24.62	PK
V	17235	39.65	30.33	6.32	24.55	40.19	54.00	-13.81	AV
V	22980	50.30	30.85	7.45	24.69	51.59	74.00	-22.41	PK
V	22980	39.51	30.85	7.45	24.69	40.80	54.00	-13.20	AV
H	11490	47.81	30.55	5.77	24.66	47.69	74.00	-26.31	PK
H	11490	40.14	30.55	5.77	24.66	40.02	54.00	-13.98	AV
H	17235	46.92	30.33	6.32	24.55	47.46	74.00	-26.54	PK
H	17235	40.02	30.33	6.32	24.55	40.56	54.00	-13.44	AV
H	22980	51.22	30.85	7.45	24.69	52.51	74.00	-21.49	PK
H	22980	41.03	30.85	7.45	24.69	42.32	54.00	-11.68	AV

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:5785MHz									
V	11570	46.93	30.55	5.77	24.66	46.81	74.00	-27.19	PK
V	11570	35.20	30.55	5.77	24.66	35.08	54.00	-18.92	AV
V	17355	48.33	30.33	6.32	24.55	48.87	74.00	-25.13	PK
V	17355	41.42	30.33	6.32	24.55	41.96	54.00	-12.04	AV
V	23140	50.76	30.85	7.45	24.69	52.05	74.00	-21.95	PK
V	23140	38.92	30.85	7.45	24.69	40.21	54.00	-13.79	AV
H	11570	47.48	30.55	5.77	24.66	47.36	74.00	-26.64	PK
H	11570	38.14	30.55	5.77	24.66	38.02	54.00	-15.98	AV
H	17355	48.27	30.33	6.32	24.55	48.81	74.00	-25.19	PK
H	17355	41.39	30.33	6.32	24.55	41.93	54.00	-12.07	AV
H	23140	51.64	30.85	7.45	24.69	52.93	74.00	-21.07	PK
H	23140	40.28	30.85	7.45	24.69	41.57	54.00	-12.43	AV

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:5825MHz									
V	11650	49.70	30.55	5.77	24.66	49.58	74.00	-24.42	PK
V	11650	36.39	30.55	5.77	24.66	36.27	54.00	-17.73	AV
V	17475	48.64	30.33	6.32	24.55	49.18	74.00	-24.82	PK
V	17475	41.04	30.33	6.32	24.55	41.58	54.00	-12.42	AV
V	23300	51.40	30.85	7.45	24.69	52.69	74.00	-21.31	PK
V	23300	39.21	30.85	7.45	24.69	40.50	54.00	-13.50	AV
H	11650	47.41	30.55	5.77	24.66	47.29	74.00	-26.71	PK
H	11650	39.36	30.55	5.77	24.66	39.24	54.00	-14.76	AV
H	17475	48.14	30.33	6.32	24.55	48.68	74.00	-25.32	PK
H	17475	40.31	30.33	6.32	24.55	40.85	54.00	-13.15	AV
H	23300	50.25	30.85	7.45	24.69	51.54	74.00	-22.46	PK
H	23300	41.13	30.85	7.45	24.69	42.42	54.00	-11.58	AV



## ANT1-802.11n40

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	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	49.45	30.55	5.77	24.66	49.33	74.00	-24.67	PK
V	10360	35.24	30.55	5.77	24.66	35.12	54.00	-18.88	AV
V	15540	48.01	30.33	6.32	24.55	48.55	74.00	-25.45	PK
V	15540	41.24	30.33	6.32	24.55	41.78	54.00	-12.22	AV
V	20720	49.37	30.85	7.45	24.69	50.66	74.00	-23.34	PK
V	20720	40.16	30.85	7.45	24.69	41.45	54.00	-12.55	AV
H	10360	48.59	30.55	5.77	24.66	48.47	74.00	-25.53	PK
H	10360	39.84	30.55	5.77	24.66	39.72	54.00	-14.28	AV
H	15540	47.41	30.33	6.32	24.55	47.95	74.00	-26.05	PK
H	15540	41.56	30.33	6.32	24.55	42.10	54.00	-11.90	AV
H	20720	49.53	30.85	7.45	24.69	50.82	74.00	-23.18	PK
H	20720	41.46	30.85	7.45	24.69	42.75	54.00	-11.25	AV

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	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	49.00	30.55	5.77	24.66	48.88	74.00	-25.12	PK
V	10460	36.57	30.55	5.77	24.66	36.45	54.00	-17.55	AV
V	15690	48.28	30.33	6.32	24.55	48.82	74.00	-25.18	PK
V	15690	40.91	30.33	6.32	24.55	41.45	54.00	-12.55	AV
V	20920	49.62	30.85	7.45	24.69	50.91	74.00	-23.09	PK
V	20920	41.65	30.85	7.45	24.69	42.94	54.00	-11.06	AV
H	10460	46.71	30.55	5.77	24.66	46.59	74.00	-27.41	PK
H	10460	40.12	30.55	5.77	24.66	40.00	54.00	-14.00	AV
H	15690	46.93	30.33	6.32	24.55	47.47	74.00	-26.53	PK
H	15690	40.79	30.33	6.32	24.55	41.33	54.00	-12.67	AV
H	20920	51.04	30.85	7.45	24.69	52.33	74.00	-21.67	PK
H	20920	39.21	30.85	7.45	24.69	40.50	54.00	-13.50	AV

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	49.33	30.55	5.77	24.66	49.21	74.00	-24.79	PK
V	11510	33.77	30.55	5.77	24.66	33.65	54.00	-20.35	AV
V	17265	49.15	30.33	6.32	24.55	49.69	74.00	-24.31	PK
V	17265	39.07	30.33	6.32	24.55	39.61	54.00	-14.39	AV
V	23020	49.70	30.85	7.45	24.69	50.99	74.00	-23.01	PK
V	23020	40.10	30.85	7.45	24.69	41.39	54.00	-12.61	AV
H	11510	48.58	30.55	5.77	24.66	48.46	74.00	-25.54	PK
H	11510	39.63	30.55	5.77	24.66	39.51	54.00	-14.49	AV
H	17265	47.29	30.33	6.32	24.55	47.83	74.00	-26.17	PK
H	17265	41.27	30.33	6.32	24.55	41.81	54.00	-12.19	AV
H	23020	50.53	30.85	7.45	24.69	51.82	74.00	-22.18	PK
H	23020	41.00	30.85	7.45	24.69	42.29	54.00	-11.71	AV

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	11590	49.50	30.55	5.77	24.66	49.38	74.00	-24.62	PK
V	11590	34.88	30.55	5.77	24.66	34.76	54.00	-19.24	AV
V	17385	49.60	30.33	6.32	24.55	50.14	74.00	-23.86	PK
V	17385	39.58	30.33	6.32	24.55	40.12	54.00	-13.88	AV
V	23180	50.28	30.85	7.45	24.69	51.57	74.00	-22.43	PK
V	23180	39.25	30.85	7.45	24.69	40.54	54.00	-13.46	AV
H	11590	46.23	30.55	5.77	24.66	46.11	74.00	-27.89	PK
H	11590	39.19	30.55	5.77	24.66	39.07	54.00	-14.93	AV
H	17385	48.37	30.33	6.32	24.55	48.91	74.00	-25.09	PK
H	17385	40.34	30.33	6.32	24.55	40.88	54.00	-13.12	AV
H	23180	50.31	30.85	7.45	24.69	51.60	74.00	-22.40	PK
H	23180	39.74	30.85	7.45	24.69	41.03	54.00	-12.97	AV

## Remark:

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

## ANT1--802.11ac20

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
Low Channel:5180MHz									
V	10360	48.37	30.55	5.77	24.66	48.25	74.00	-25.75	PK
V	10360	34.10	30.55	5.77	24.66	33.98	54.00	-20.02	AV
V	15540	47.82	30.33	6.32	24.55	48.36	74.00	-25.64	PK
V	15540	40.31	30.33	6.32	24.55	40.85	54.00	-13.15	AV
V	20720	50.23	30.85	7.45	24.69	51.52	74.00	-22.48	PK
V	20720	40.85	30.85	7.45	24.69	42.14	54.00	-11.86	AV
H	10360	47.87	30.55	5.77	24.66	47.75	74.00	-26.25	PK
H	10360	38.10	30.55	5.77	24.66	37.98	54.00	-16.02	AV
H	15540	47.47	30.33	6.32	24.55	48.01	74.00	-25.99	PK
H	15540	40.95	30.33	6.32	24.55	41.49	54.00	-12.51	AV
H	20720	50.92	30.85	7.45	24.69	52.21	74.00	-21.79	PK
H	20720	40.23	30.85	7.45	24.69	41.52	54.00	-12.48	AV

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
Middle Channel:5200MHz									
V	10400	48.79	30.55	5.77	24.66	48.67	74.00	-25.33	PK
V	10400	36.51	30.55	5.77	24.66	36.39	54.00	-17.61	AV
V	15600	48.60	30.33	6.32	24.55	49.14	74.00	-24.86	PK
V	15600	40.35	30.33	6.32	24.55	40.89	54.00	-13.11	AV
V	20800	49.72	30.85	7.45	24.69	51.01	74.00	-22.99	PK
V	20800	39.47	30.85	7.45	24.69	40.76	54.00	-13.24	AV
H	10400	45.80	30.55	5.77	24.66	45.68	74.00	-28.32	PK
H	10400	37.98	30.55	5.77	24.66	37.86	54.00	-16.14	AV
H	15600	47.16	30.33	6.32	24.55	47.70	74.00	-26.30	PK
H	15600	40.91	30.33	6.32	24.55	41.45	54.00	-12.55	AV
H	20800	49.64	30.85	7.45	24.69	50.93	74.00	-23.07	PK
H	20800	40.07	30.85	7.45	24.69	41.36	54.00	-12.64	AV

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
High Channel:5240MHz									
V	10480	47.85	30.55	5.77	24.66	47.73	74.00	-26.27	PK
V	10480	34.66	30.55	5.77	24.66	34.54	54.00	-19.46	AV
V	15720	49.55	30.33	6.32	24.55	50.09	74.00	-23.91	PK
V	15720	40.87	30.33	6.32	24.55	41.41	54.00	-12.59	AV
V	20960	51.74	30.85	7.45	24.69	53.03	74.00	-20.97	PK
V	20960	40.32	30.85	7.45	24.69	41.61	54.00	-12.39	AV
H	10480	48.30	30.55	5.77	24.66	48.18	74.00	-25.82	PK
H	10480	39.71	30.55	5.77	24.66	39.59	54.00	-14.41	AV
H	15720	47.27	30.33	6.32	24.55	47.81	74.00	-26.19	PK
H	15720	39.12	30.33	6.32	24.55	39.66	54.00	-14.34	AV
H	20960	50.31	30.85	7.45	24.69	51.60	74.00	-22.40	PK
H	20960	38.84	30.85	7.45	24.69	40.13	54.00	-13.87	AV

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:5745MHz									
V	11490	48.67	30.55	5.77	24.66	48.55	74.00	-25.45	PK
V	11490	33.88	30.55	5.77	24.66	33.76	54.00	-20.24	AV
V	17235	48.79	30.33	6.32	24.55	49.33	74.00	-24.67	PK
V	17235	40.59	30.33	6.32	24.55	41.13	54.00	-12.87	AV
V	22980	51.57	30.85	7.45	24.69	52.86	74.00	-21.14	PK
V	22980	41.20	30.85	7.45	24.69	42.49	54.00	-11.51	AV
H	11490	48.41	30.55	5.77	24.66	48.29	74.00	-25.71	PK
H	11490	39.28	30.55	5.77	24.66	39.16	54.00	-14.84	AV
H	17235	46.88	30.33	6.32	24.55	47.42	74.00	-26.58	PK
H	17235	39.33	30.33	6.32	24.55	39.87	54.00	-14.13	AV
H	22980	50.52	30.85	7.45	24.69	51.81	74.00	-22.19	PK
H	22980	41.72	30.85	7.45	24.69	43.01	54.00	-10.99	AV

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:5785MHz									
V	11570	48.43	30.55	5.77	24.66	48.31	74.00	-25.69	PK
V	11570	35.84	30.55	5.77	24.66	35.72	54.00	-18.28	AV
V	17355	48.67	30.33	6.32	24.55	49.21	74.00	-24.79	PK
V	17355	39.42	30.33	6.32	24.55	39.96	54.00	-14.04	AV
V	23140	50.18	30.85	7.45	24.69	51.47	74.00	-22.53	PK
V	23140	39.94	30.85	7.45	24.69	41.23	54.00	-12.77	AV
H	11570	47.49	30.55	5.77	24.66	47.37	74.00	-26.63	PK
H	11570	39.61	30.55	5.77	24.66	39.49	54.00	-14.51	AV
H	17355	47.91	30.33	6.32	24.55	48.45	74.00	-25.55	PK
H	17355	40.01	30.33	6.32	24.55	40.55	54.00	-13.45	AV
H	23140	49.46	30.85	7.45	24.69	50.75	74.00	-23.25	PK
H	23140	40.11	30.85	7.45	24.69	41.40	54.00	-12.60	AV

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:5825MHz									
V	11650	48.64	30.55	5.77	24.66	48.52	74.00	-25.48	PK
V	11650	35.20	30.55	5.77	24.66	35.08	54.00	-18.92	AV
V	17475	48.72	30.33	6.32	24.55	49.26	74.00	-24.74	PK
V	17475	39.61	30.33	6.32	24.55	40.15	54.00	-13.85	AV
V	23300	50.02	30.85	7.45	24.69	51.31	74.00	-22.69	PK
V	23300	40.28	30.85	7.45	24.69	41.57	54.00	-12.43	AV
H	11650	48.50	30.55	5.77	24.66	48.38	74.00	-25.62	PK
H	11650	40.36	30.55	5.77	24.66	40.24	54.00	-13.76	AV
H	17475	47.91	30.33	6.32	24.55	48.45	74.00	-25.55	PK
H	17475	39.67	30.33	6.32	24.55	40.21	54.00	-13.79	AV
H	23300	49.09	30.85	7.45	24.69	50.38	74.00	-23.62	PK
H	23300	41.09	30.85	7.45	24.69	42.38	54.00	-11.62	AV

## ANT1-802.11ac40

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)	
Low Channel:5190MHz									
V	10360	48.29	30.55	5.77	24.66	48.17	74.00	-25.83	PK
V	10360	36.32	30.55	5.77	24.66	36.20	54.00	-17.80	AV
V	15540	49.40	30.33	6.32	24.55	49.94	74.00	-24.06	PK
V	15540	41.49	30.33	6.32	24.55	42.03	54.00	-11.97	AV
V	20720	51.72	30.85	7.45	24.69	53.01	74.00	-20.99	PK
V	20720	39.51	30.85	7.45	24.69	40.80	54.00	-13.20	AV
H	10360	46.60	30.55	5.77	24.66	46.48	74.00	-27.52	PK
H	10360	39.00	30.55	5.77	24.66	38.88	54.00	-15.12	AV
H	15540	47.44	30.33	6.32	24.55	47.98	74.00	-26.02	PK
H	15540	41.74	30.33	6.32	24.55	42.28	54.00	-11.72	AV
H	20720	50.95	30.85	7.45	24.69	52.24	74.00	-21.76	PK
H	20720	40.60	30.85	7.45	24.69	41.89	54.00	-12.11	AV

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)	
Middle Channel:5230MHz									
V	10460	49.45	30.55	5.77	24.66	49.33	74.00	-24.67	PK
V	10460	35.98	30.55	5.77	24.66	35.86	54.00	-18.14	AV
V	15690	49.03	30.33	6.32	24.55	49.57	74.00	-24.43	PK
V	15690	39.13	30.33	6.32	24.55	39.67	54.00	-14.33	AV
V	20920	50.30	30.85	7.45	24.69	51.59	74.00	-22.41	PK
V	20920	41.59	30.85	7.45	24.69	42.88	54.00	-11.12	AV
H	10460	48.27	30.55	5.77	24.66	48.15	74.00	-25.85	PK
H	10460	38.49	30.55	5.77	24.66	38.37	54.00	-15.63	AV
H	15690	46.99	30.33	6.32	24.55	47.53	74.00	-26.47	PK
H	15690	41.67	30.33	6.32	24.55	42.21	54.00	-11.79	AV
H	20920	48.79	30.85	7.45	24.69	50.08	74.00	-23.92	PK
H	20920	38.92	30.85	7.45	24.69	40.21	54.00	-13.79	AV

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	48.45	30.55	5.77	24.66	48.33	74.00	-25.67	PK
V	11510	36.54	30.55	5.77	24.66	36.42	54.00	-17.58	AV
V	17265	49.23	30.33	6.32	24.55	49.77	74.00	-24.23	PK
V	17265	39.68	30.33	6.32	24.55	40.22	54.00	-13.78	AV
V	23020	49.48	30.85	7.45	24.69	50.77	74.00	-23.23	PK
V	23020	41.17	30.85	7.45	24.69	42.46	54.00	-11.54	AV
H	11510	46.61	30.55	5.77	24.66	46.49	74.00	-27.51	PK
H	11510	40.40	30.55	5.77	24.66	40.28	54.00	-13.72	AV
H	17265	46.96	30.33	6.32	24.55	47.50	74.00	-26.50	PK
H	17265	41.51	30.33	6.32	24.55	42.05	54.00	-11.95	AV
H	23020	49.72	30.85	7.45	24.69	51.01	74.00	-22.99	PK
H	23020	40.95	30.85	7.45	24.69	42.24	54.00	-11.76	AV

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	49.15	30.55	5.77	24.66	49.03	74.00	-24.97	PK
V	11510	36.04	30.55	5.77	24.66	35.92	54.00	-18.08	AV
V	17265	49.00	30.33	6.32	24.55	49.54	74.00	-24.46	PK
V	17265	39.88	30.33	6.32	24.55	40.42	54.00	-13.58	AV
V	23020	50.67	30.85	7.45	24.69	51.96	74.00	-22.04	PK
V	23020	40.32	30.85	7.45	24.69	41.61	54.00	-12.39	AV
H	11510	46.49	30.55	5.77	24.66	46.37	74.00	-27.63	PK
H	11510	39.21	30.55	5.77	24.66	39.09	54.00	-14.91	AV
H	17265	48.23	30.33	6.32	24.55	48.77	74.00	-25.23	PK
H	17265	41.25	30.33	6.32	24.55	41.79	54.00	-12.21	AV
H	23020	50.34	30.85	7.45	24.69	51.63	74.00	-22.37	PK
H	23020	40.48	30.85	7.45	24.69	41.77	54.00	-12.23	AV

## ANT1-802.11ac80

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	47.82	30.55	5.77	24.66	47.70	74.00	-26.30	PK
V	10420	33.77	30.55	5.77	24.66	33.65	54.00	-20.35	AV
V	15630	47.93	30.33	6.32	24.55	48.47	74.00	-25.53	PK
V	15630	41.63	30.33	6.32	24.55	42.17	54.00	-11.83	AV
V	20840	50.14	30.85	7.45	24.69	51.43	74.00	-22.57	PK
V	20840	40.86	30.85	7.45	24.69	42.15	54.00	-11.85	AV
H	10420	46.23	30.55	5.77	24.66	46.11	74.00	-27.89	PK
H	10420	37.79	30.55	5.77	24.66	37.67	54.00	-16.33	AV
H	15630	47.70	30.33	6.32	24.55	48.24	74.00	-25.76	PK
H	15630	39.10	30.33	6.32	24.55	39.64	54.00	-14.36	AV
H	20840	51.38	30.85	7.45	24.69	52.67	74.00	-21.33	PK
H	20840	39.54	30.85	7.45	24.69	40.83	54.00	-13.17	AV

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:5775MHz									
V	11550	47.07	30.55	5.77	24.66	46.95	74.00	-27.05	PK
V	11550	36.59	30.55	5.77	24.66	36.47	54.00	-17.53	AV
V	17325	48.25	30.33	6.32	24.55	48.79	74.00	-25.21	PK
V	17325	39.77	30.33	6.32	24.55	40.31	54.00	-13.69	AV
V	23100	49.37	30.85	7.45	24.69	50.66	74.00	-23.34	PK
V	23100	41.75	30.85	7.45	24.69	43.04	54.00	-10.96	AV
H	11550	45.79	30.55	5.77	24.66	45.67	74.00	-28.33	PK
H	11550	39.98	30.55	5.77	24.66	39.86	54.00	-14.14	AV
H	17325	47.12	30.33	6.32	24.55	47.66	74.00	-26.34	PK
H	17325	40.47	30.33	6.32	24.55	41.01	54.00	-12.99	AV
H	23100	51.41	30.85	7.45	24.69	52.70	74.00	-21.30	PK
H	23100	41.50	30.85	7.45	24.69	42.79	54.00	-11.21	AV

**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 client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.850 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.

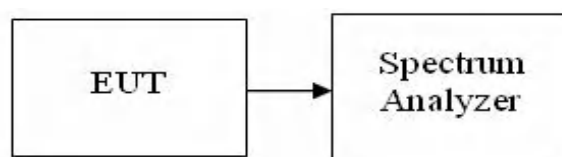
LIMIT:	U-NII-1	11DBM/MHZ
	U-NII-3	30DBM/500KHZ

**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	$\geq 500$ 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.

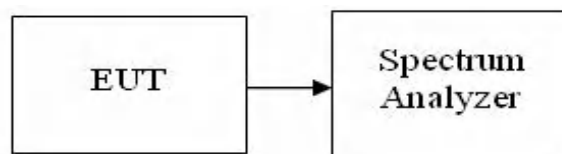
Measure the maximum width of the emission that is 26dB down from the maximum of the emission.

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 client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

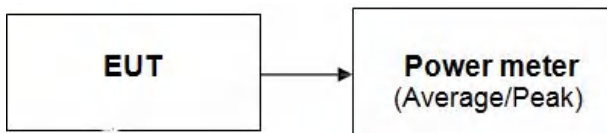
For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum 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.

Test Item	Band	Limit	Result
Max conducted output power	U-NII-1	0.25W / 23.98dbm	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

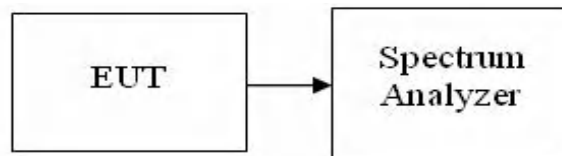
### 8.1 TEST PROCEDURE

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

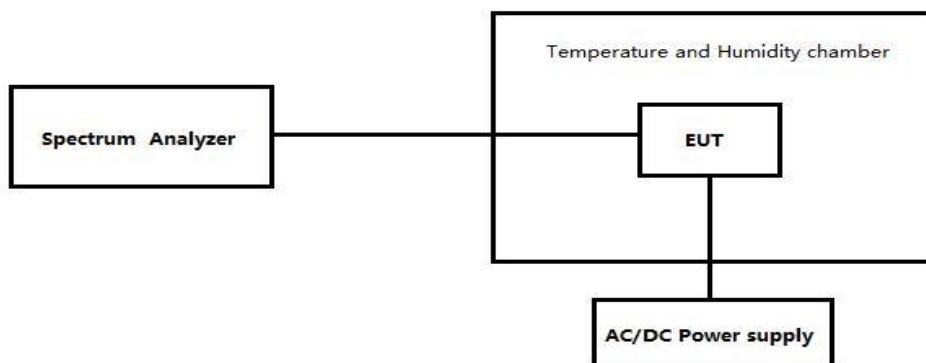
### 9.1 LIMIT

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

## ANT1-802.11a- CH36

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	68	0.0118
40	120	65	0.0113
30	120	57	0.0099
20	120	84	0.0145
10	120	14	0.0024
0	120	29	0.0050
-10	120	58	0.0100
-20	120	57	0.0099
-30	120	69	0.0119

## ANT1-802.11a-CH48

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	48	0.0083
40	120	68	0.0118
30	120	51	0.0088
20	120	74	0.0128
10	120	28	0.0048
0	120	19	0.0033
-10	120	85	0.0147
-20	120	58	0.0100
-30	120	65	0.0113

## ANT1-802.11a-CH149

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	65	0.0113
40	120	68	0.0118
30	120	54	0.0094
20	120	65	0.0113
10	120	81	0.0140
0	120	54	0.0094
-10	120	68	0.0118
-20	120	62	0.0107
-30	120	57	0.0099

ANT1-802.11a-CH165

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	45	0.0078
40	120	68	0.0118
30	120	52	0.0090
20	120	75	0.0130
10	120	48	0.0083
0	120	65	0.0113
-10	120	45	0.0078
-20	120	63	0.0109
-30	120	25	0.0043

ANT1-802.11n20-CH36

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	57	0.0099
40	120	65	0.0113
30	120	58	0.0100
20	120	42	0.0073
10	120	87	0.0151
0	120	69	0.0119
-10	120	85	0.0147
-20	120	42	0.0073
-30	120	68	0.0118

ANT1-802.11n20-CH48

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	84	0.0145
40	120	58	0.0100
30	120	65	0.0113
20	120	47	0.0081
10	120	75	0.0130
0	120	42	0.0073
-10	120	85	0.0147
-20	120	68	0.0118

-30	120	45	0.0078
-----	-----	----	--------

## ANT1-802.11n20-CH149

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	58	0.0100
40	120	65	0.0113
30	120	57	0.0099
20	120	48	0.0083
10	120	52	0.0090
0	120	69	0.0119
-10	120	38	0.0066
-20	120	58	0.0100
-30	120	90	0.0156

## ANT1-802.11n20-CH165

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	65	0.0113
40	120	64	0.0111
30	120	58	0.0100
20	120	59	0.0102
10	120	57	0.0099
0	120	68	0.0118
-10	120	74	0.0128
-20	120	68	0.0118
-30	120	58	0.0100

## ANT1-802.11n40-CH38

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	68	0.0118
40	120	57	0.0099
30	120	71	0.0123
20	120	63	0.0109
10	120	58	0.0100
0	120	54	0.0094
-10	120	86	0.0149

-20	120	59	0.0102
-30	120	54	0.0094

## ANT1-802.11n40-CH46

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	47	0.0081
40	120	65	0.0113
30	120	58	0.0100
20	120	84	0.0145
10	120	64	0.0111
0	120	59	0.0102
-10	120	54	0.0094
-20	120	52	0.0090
-30	120	55	0.0095

## ANT1-802.11n40-CH151

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	65	0.0113
40	120	55	0.0095
30	120	47	0.0081
20	120	58	0.0100
10	120	49	0.0085
0	120	46	0.0080
-10	120	74	0.0128
-20	120	58	0.0100
-30	120	69	0.0119

## ANT1-802.11n40-CH159

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	58	0.0100
40	120	57	0.0099
30	120	46	0.0080
20	120	56	0.0097
10	120	59	0.0102
0	120	54	0.0094



-10	120	74	0.0128
-20	120	69	0.0119
-30	120	76	0.0132

ANT1-802.11ac20-CH36

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	68	0.0118
40	120	54	0.0094
30	120	56	0.0097
20	120	54	0.0094
10	120	59	0.0102
0	120	54	0.0094
-10	120	47	0.0081
-20	120	46	0.0080
-30	120	84	0.0145

ANT1-802.11ac20-CH48

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	68	0.0118
40	120	47	0.0081
30	120	75	0.0130
20	120	92	0.0159
10	120	68	0.0118
0	120	45	0.0078
-10	120	84	0.0145
-20	120	63	0.0109
-30	120	68	0.0131

ANT1-802.11ac20-CH149

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	85	0.0147
40	120	76	0.0132
30	120	59	0.0102
20	120	76	0.0132
10	120	68	0.0118

0	120	49	0.0085
-10	120	85	0.0147
-20	120	68	0.0118
-30	120	88	0.0152

ANT1-802.11ac20-CH165

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	44	0.0075
40	120	40	0.0069
30	120	38	0.0066
20	120	38	0.0066
10	120	45	0.0078
0	120	34	0.0059
-10	120	36	0.0063
-20	120	40	0.0069
-30	120	38	0.0066

ANT1-802.11ac40-CH38

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	48	0.0083
40	120	36	0.0062
30	120	47	0.0081
20	120	45	0.0079
10	120	45	0.0078
0	120	46	0.0080
-10	120	36	0.0063
-20	120	46	0.0080
-30	120	47	0.0082

ANT1-802.11ac40-CH46

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	46	0.0080
40	120	40	0.0069
30	120	40	0.0070
20	120	45	0.0078
10	120	42	0.0072

0	120	35	0.0060
-10	120	48	0.0084
-20	120	46	0.0080
-30	120	48	0.0083

ANT1-802.11ac40-CH151

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	40	0.0070
40	120	40	0.0070
30	120	46	0.0080
20	120	40	0.0070
10	120	49	0.0085
0	120	34	0.0060
-10	120	36	0.0063
-20	120	44	0.0076
-30	120	46	0.0080

ANT1-802.11ac40-CH159

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	38	0.0066
40	120	47	0.0082
30	120	43	0.0075
20	120	35	0.0060
10	120	46	0.0079
0	120	42	0.0073
-10	120	44	0.0077
-20	120	38	0.0066
-30	120	38	0.0066

ANT1-802.11ac80-CH42

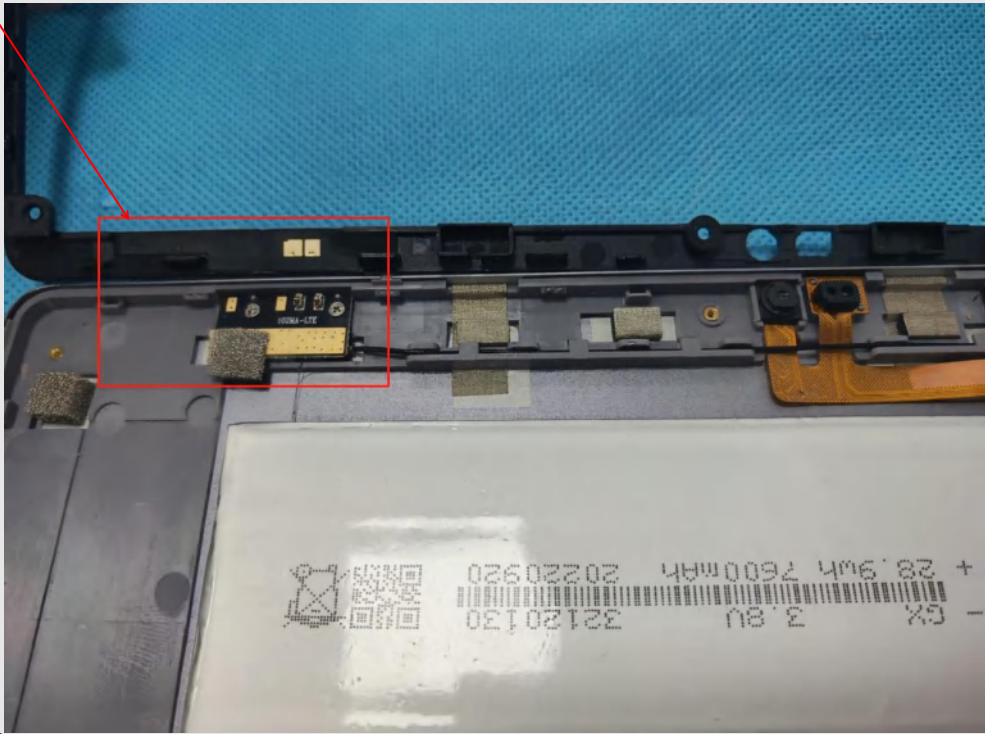
Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	44	0.0076
40	120	38	0.0067
30	120	49	0.0084
20	120	48	0.0083
10	120	35	0.0060

0	120	42	0.0072
-10	120	39	0.0067
-20	120	47	0.0081
-30	120	41	0.0071

## ANT1-802.11ac80-CH155

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		Freq.Dev(Hz)	(ppm)
50	120	38	0.0067
40	120	48	0.0084
30	120	47	0.0081
20	120	39	0.0067
10	120	42	0.0072
0	120	46	0.0079
-10	120	46	0.0080
-20	120	45	0.0078
-30	120	37	0.0063

### 10.ANTENNA REQUIREMENT

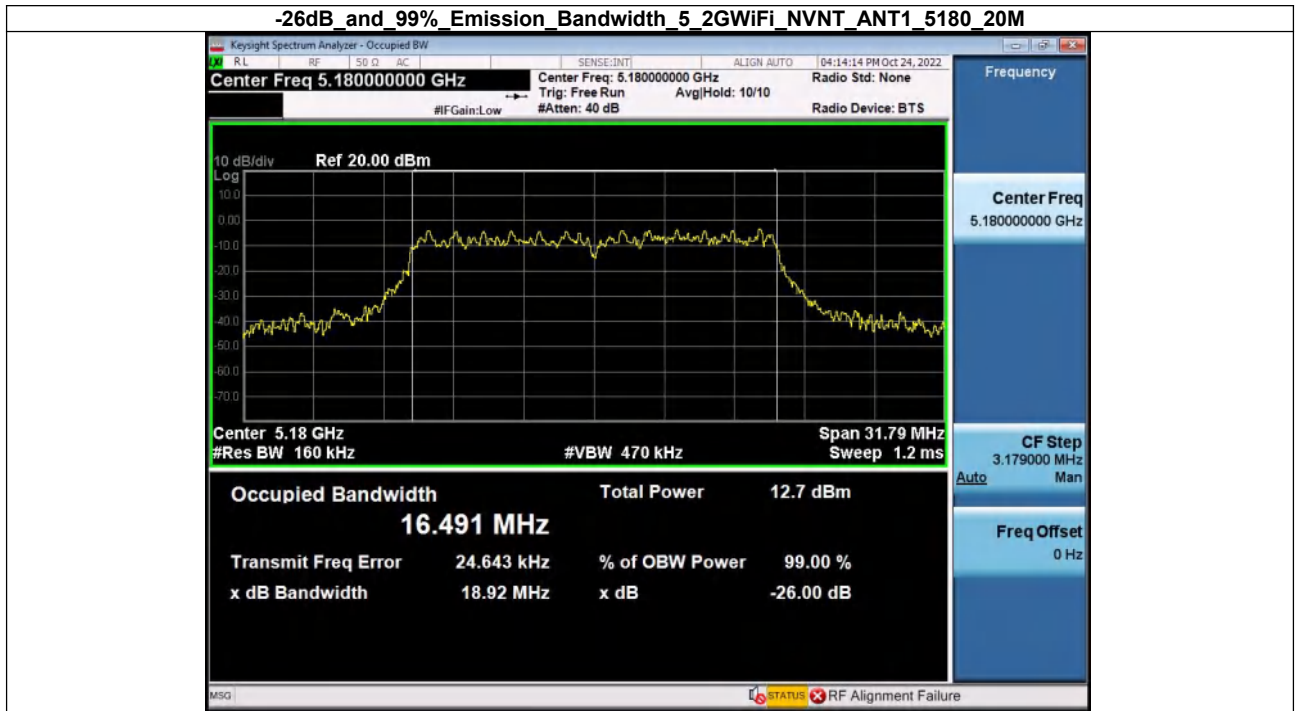
Standard requirement:	FCC Part15 C Section 15.203 /247(c)
<p>For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR 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>EUT Antenna: The antenna is PIFA antenna, the best case gain of the antennas are -3.32dBi, reference to the below photo for details ANT for 5.1/5.8G WIFI</p> 	

**11.APPENDIX1---5.1GWIFI**

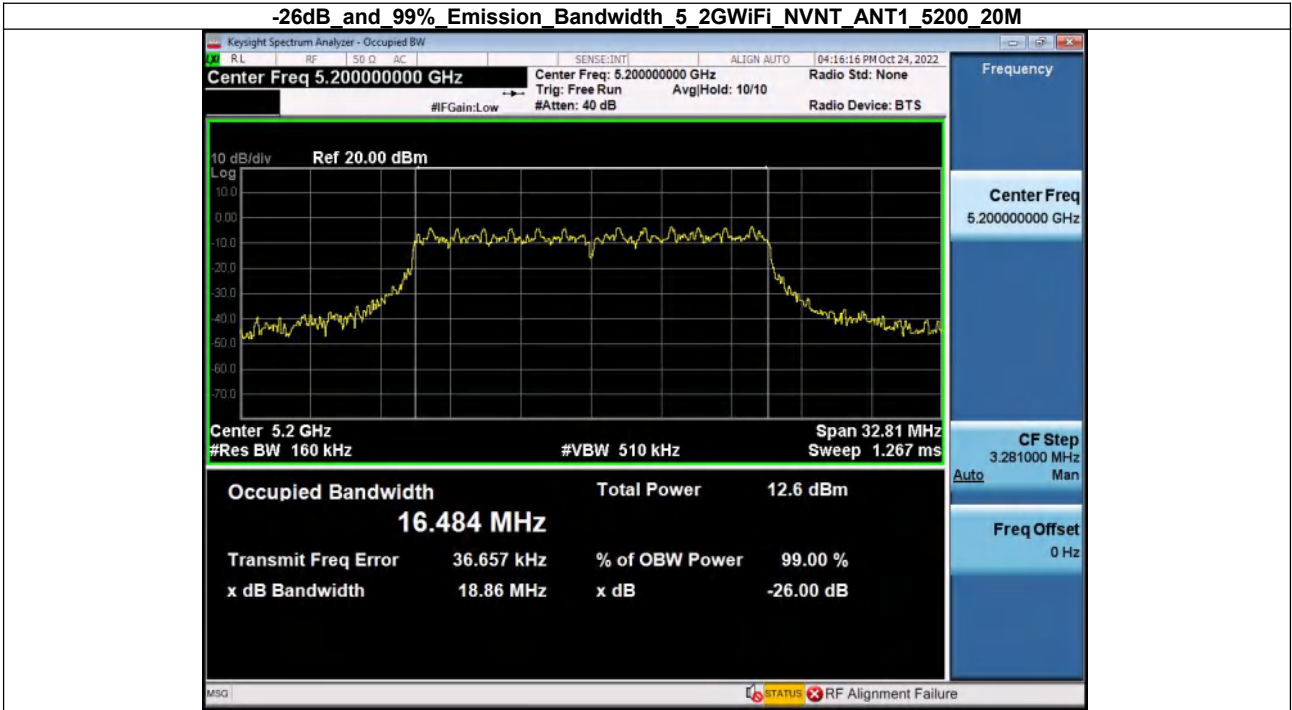
**1. -26dB and 99% Emission Bandwidth**

Condition	Antenna	Modulation	Frequency(MHz)	-26dB_Emission_Bandwidth(MHz)	Occupied Bandwidth(MHz)
NVNT	ANT1	802.11a	5180.00	18.92	16.49
NVNT	ANT1	802.11a	5200.00	18.86	16.48
NVNT	ANT1	802.11a	5240.00	18.67	16.44
NVNT	ANT1	802.11n(HT20)	5180.00	19.42	17.56
NVNT	ANT1	802.11n(HT20)	5200.00	19.44	17.58
NVNT	ANT1	802.11n(HT20)	5240.00	19.18	17.54
NVNT	ANT1	802.11ac(VHT20)	5180.00	21.44	17.62
NVNT	ANT1	802.11ac(VHT20)	5200.00	19.16	17.56
NVNT	ANT1	802.11ac(VHT20)	5240.00	19.06	17.53
NVNT	ANT1	802.11n(HT40)	5190.00	39.14	36.27
NVNT	ANT1	802.11n(HT40)	5230.00	39.06	36.17
NVNT	ANT1	802.11ac(VHT40)	5190.00	47.28	36.35
NVNT	ANT1	802.11ac(VHT40)	5230.00	42.36	36.42
NVNT	ANT1	802.11ac(VHT80)	5210.00	105.43	75.67

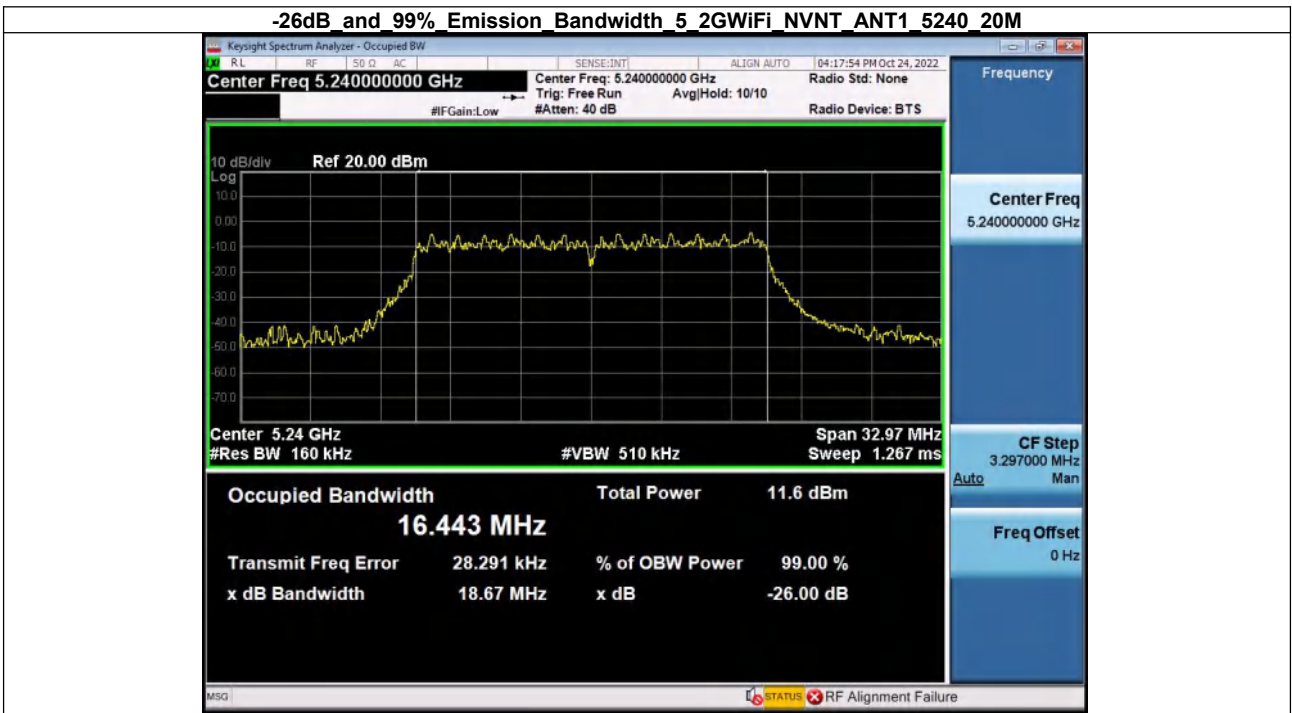
**-26dB and 99% Emission Bandwidth 5 2GWiFi NVNT ANT1 5180 20M**



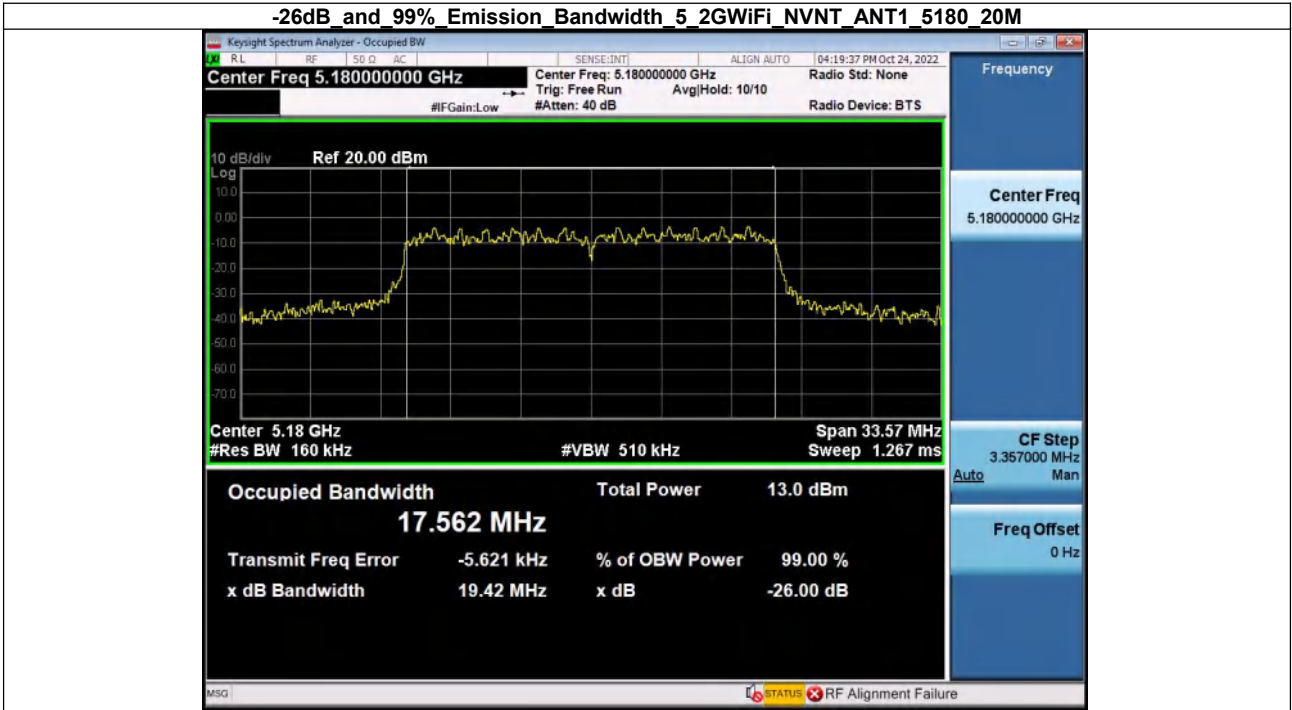
**-26dB and 99% Emission Bandwidth 5\_2GWiFi NVNT ANT1\_5200\_20M**



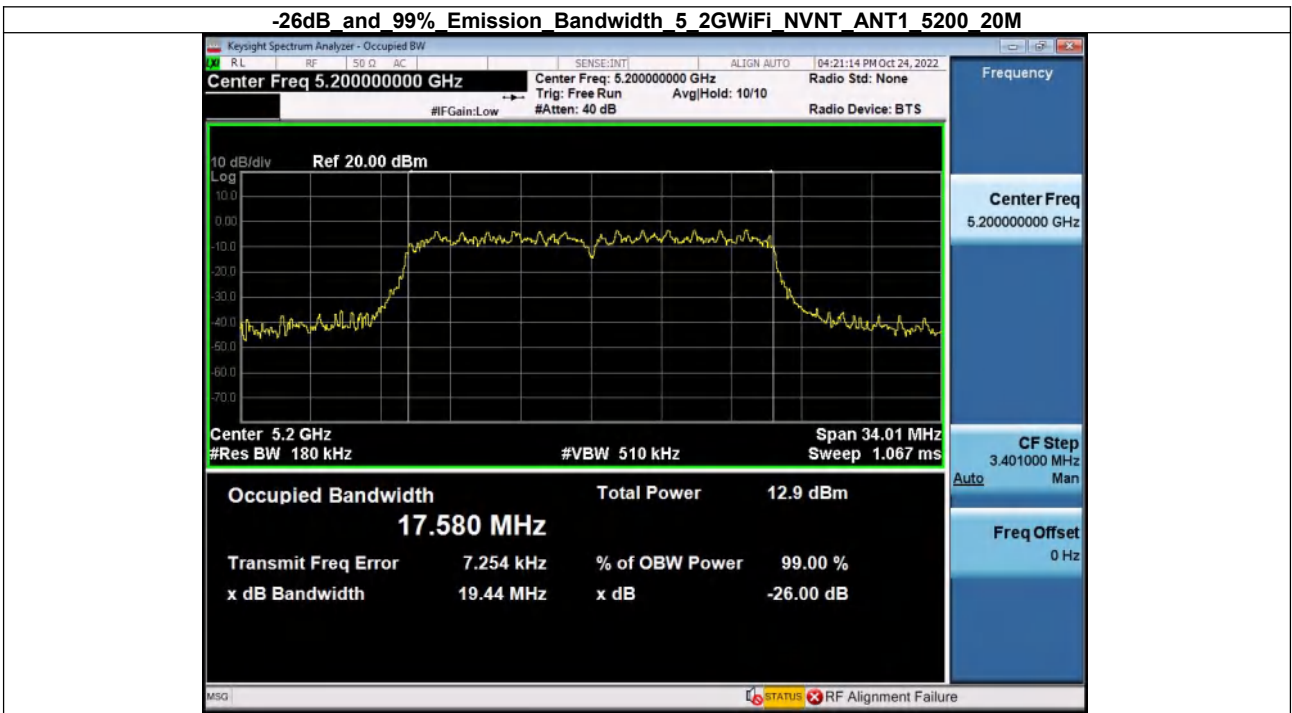
**-26dB and 99% Emission Bandwidth 5\_2GWiFi NVNT ANT1\_5240\_20M**



**-26dB and 99% Emission Bandwidth 5\_2WiFi NVNT ANT1\_5180\_20M**

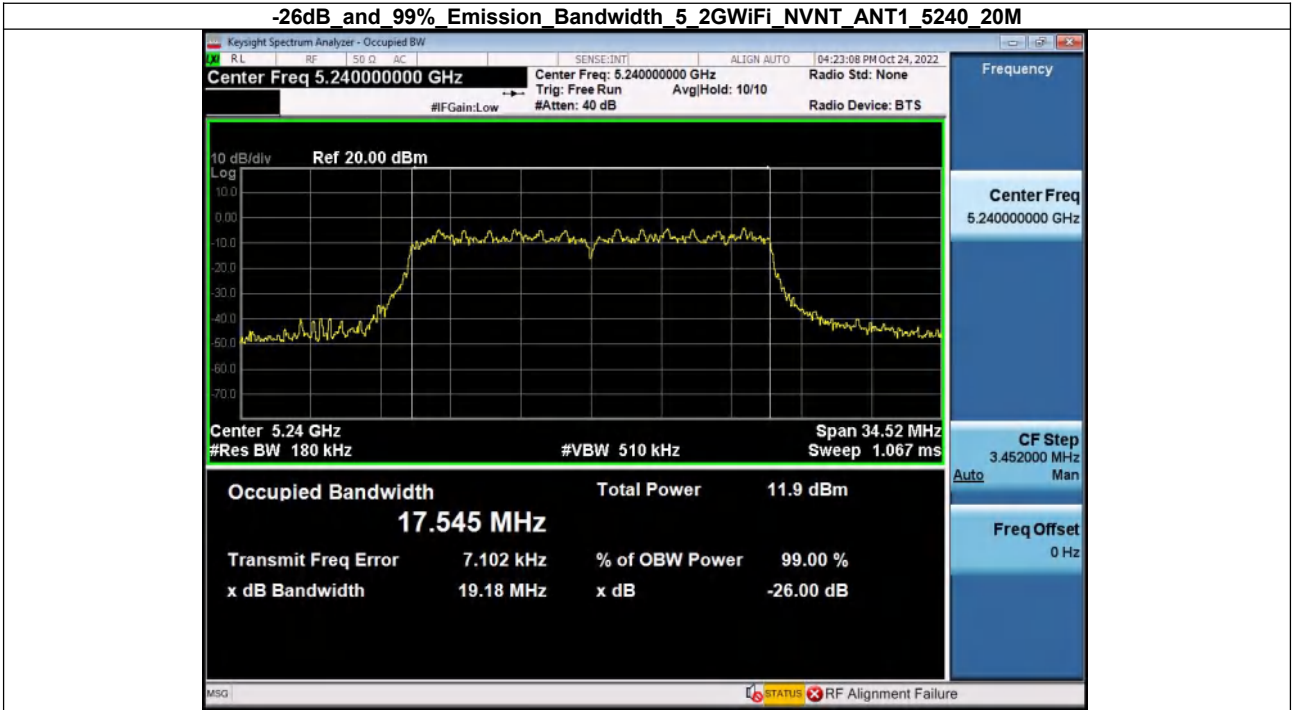


**-26dB and 99% Emission Bandwidth 5\_2WiFi NVNT ANT1\_5200\_20M**

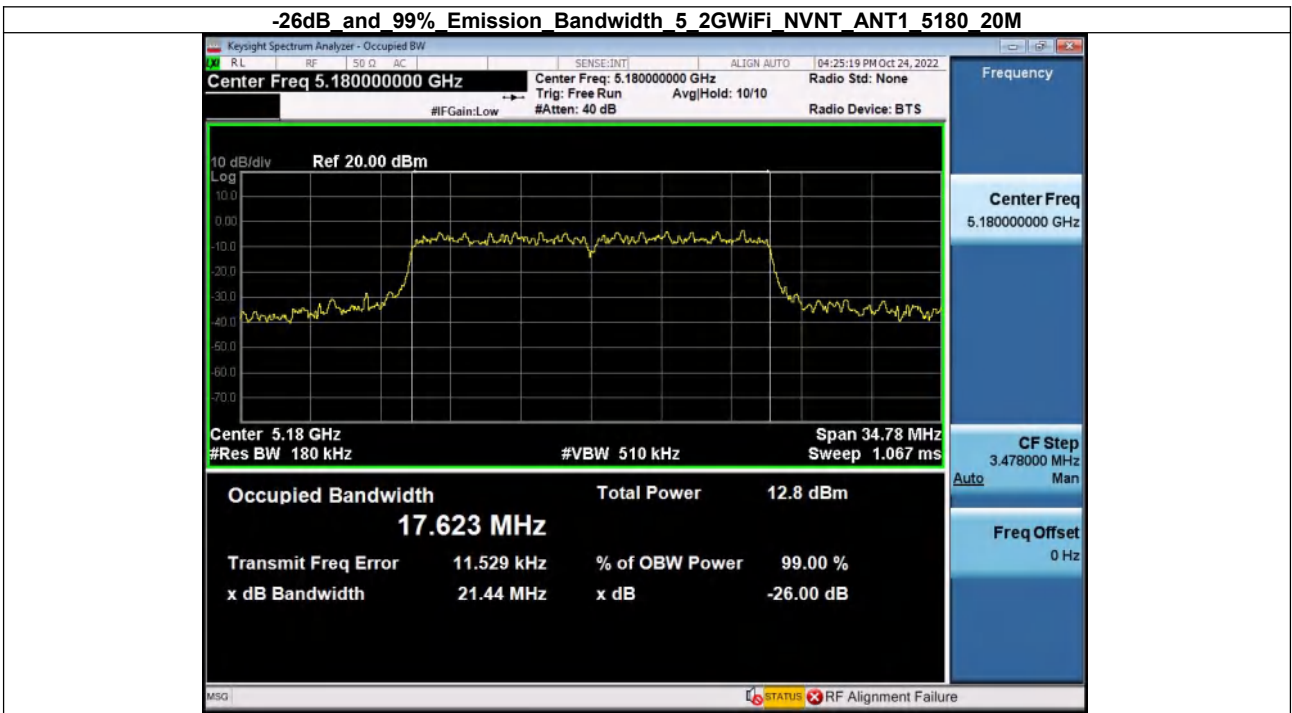




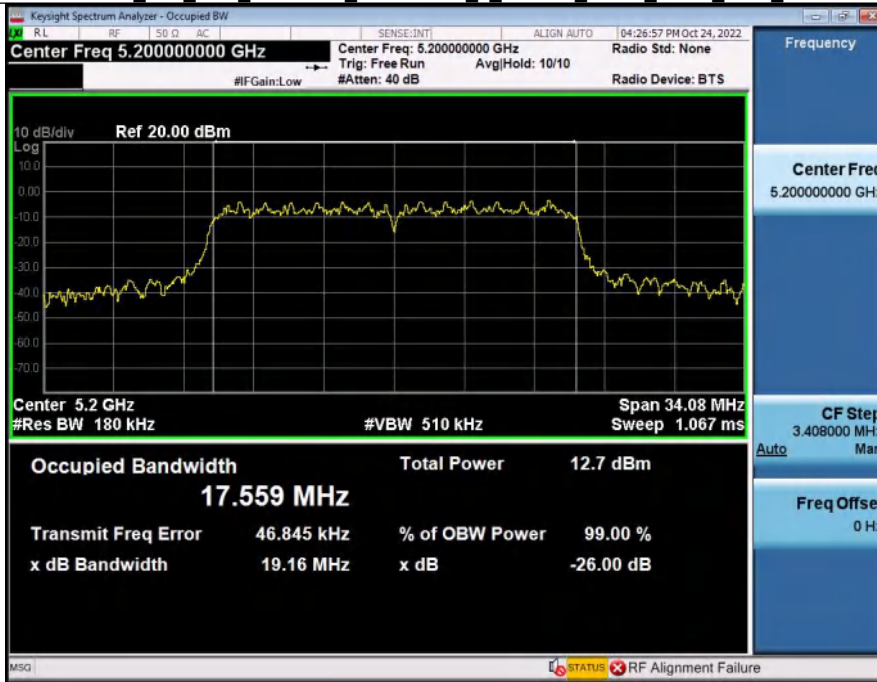
**-26dB and 99% Emission Bandwidth 5\_2WiFi NVNT ANT1\_5240\_20M**



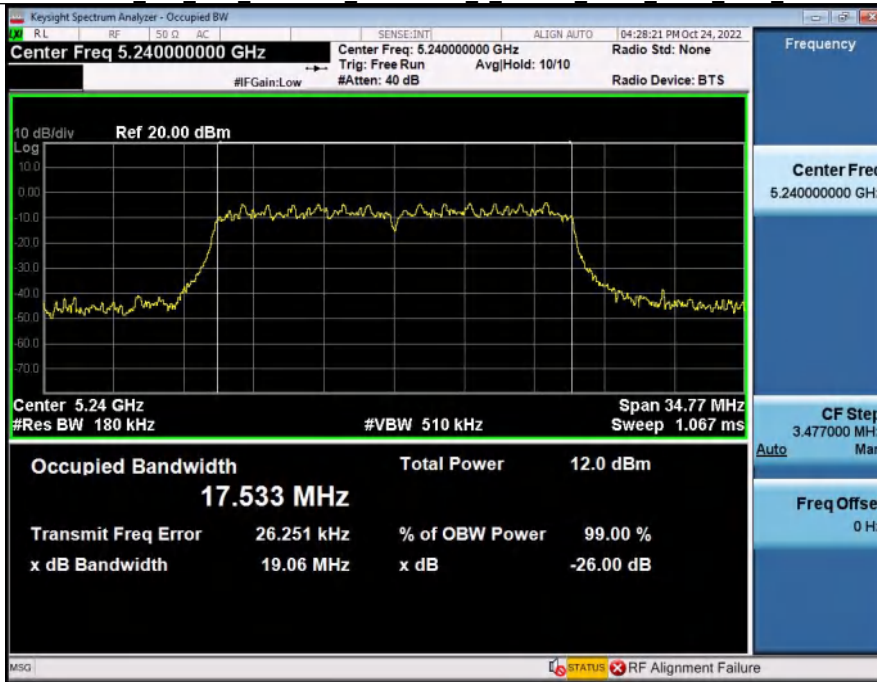
**-26dB and 99% Emission Bandwidth 5\_2WiFi NVNT ANT1\_5180\_20M**



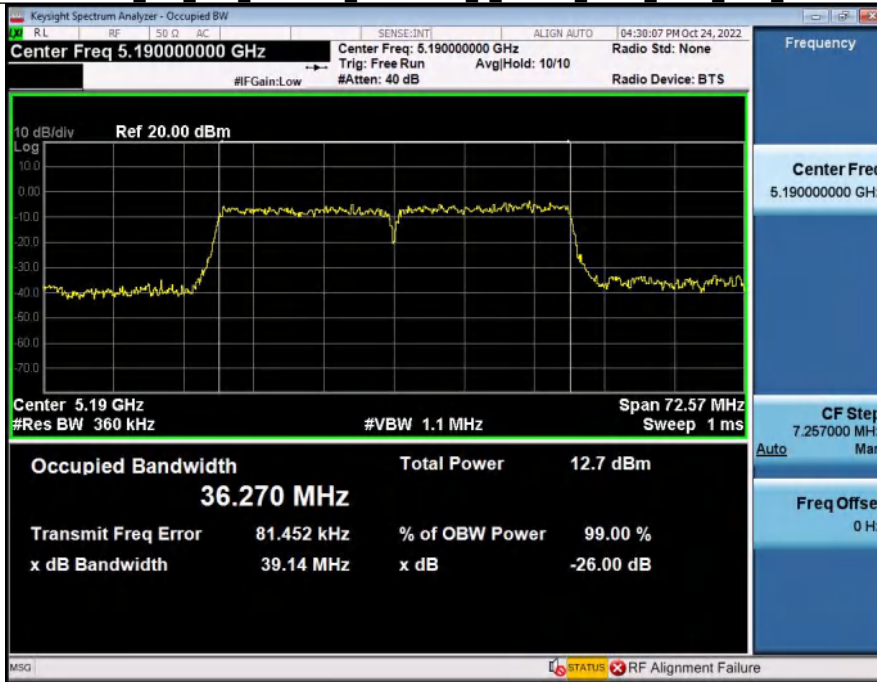
**-26dB and 99% Emission Bandwidth 5\_2WiFi NVNT ANT1\_5200\_20M**



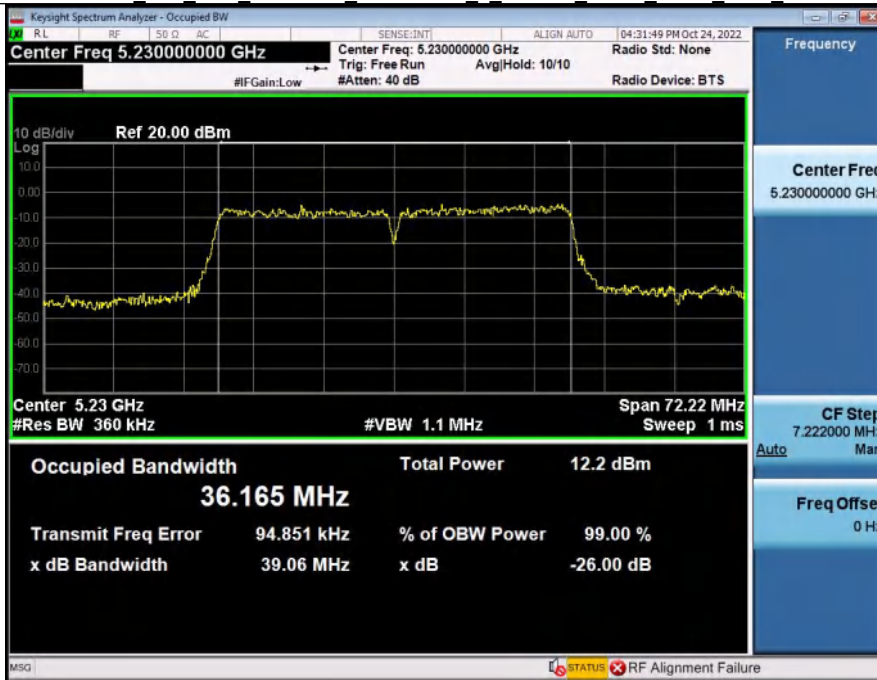
**-26dB and 99% Emission Bandwidth 5\_2WiFi NVNT ANT1\_5240\_20M**



**-26dB and 99% Emission Bandwidth 5\_2WiFi NVNT ANT1\_5190\_40M**



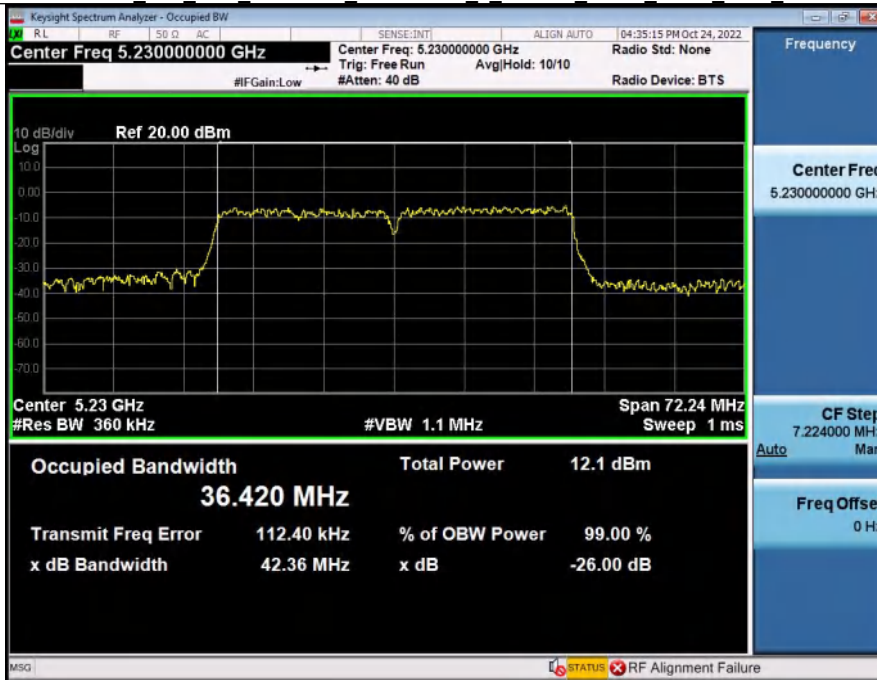
**-26dB and 99% Emission Bandwidth 5\_2WiFi NVNT ANT1\_5230\_40M**



**-26dB and 99% Emission Bandwidth 5\_2WiFi NVNT ANT1\_5190\_40M**



**-26dB and 99% Emission Bandwidth 5\_2WiFi NVNT ANT1\_5230\_40M**



**-26dB and 99% Emission Bandwidth 5\_2GWiFi NVNT\_ANT1\_5210\_80M**

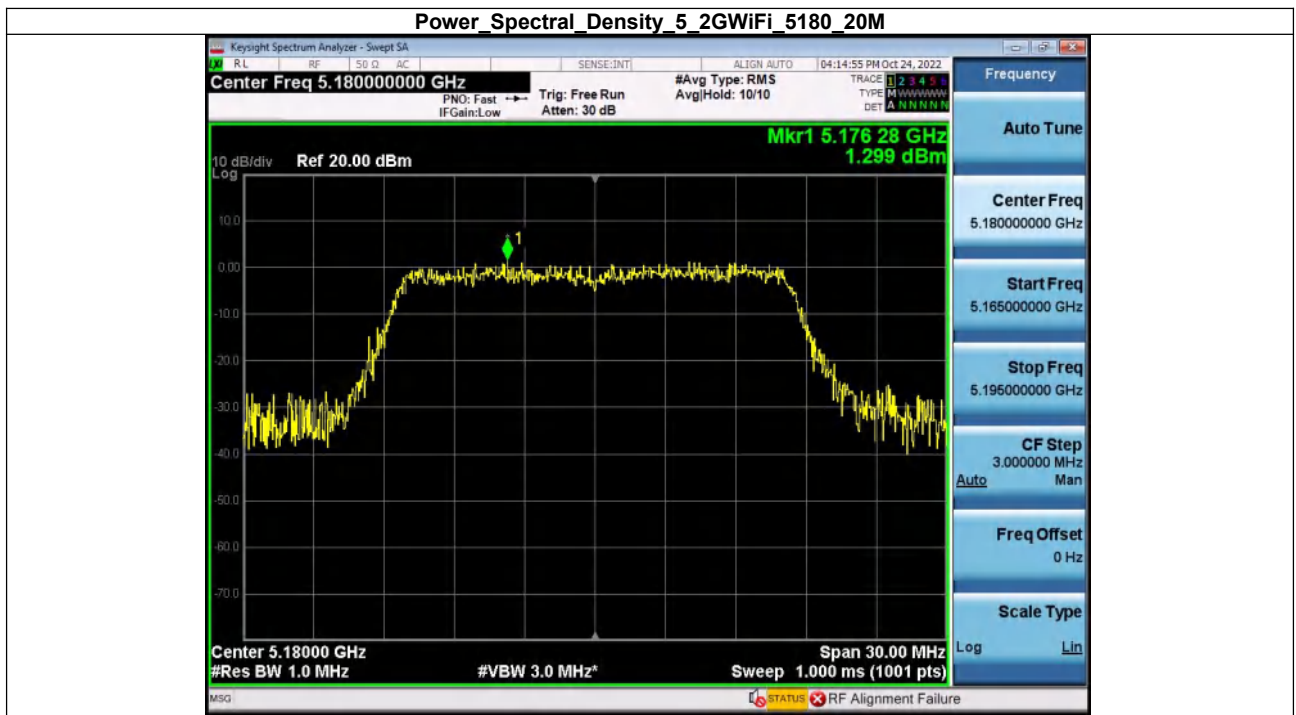


## 3. Maximum Conducted Output Power

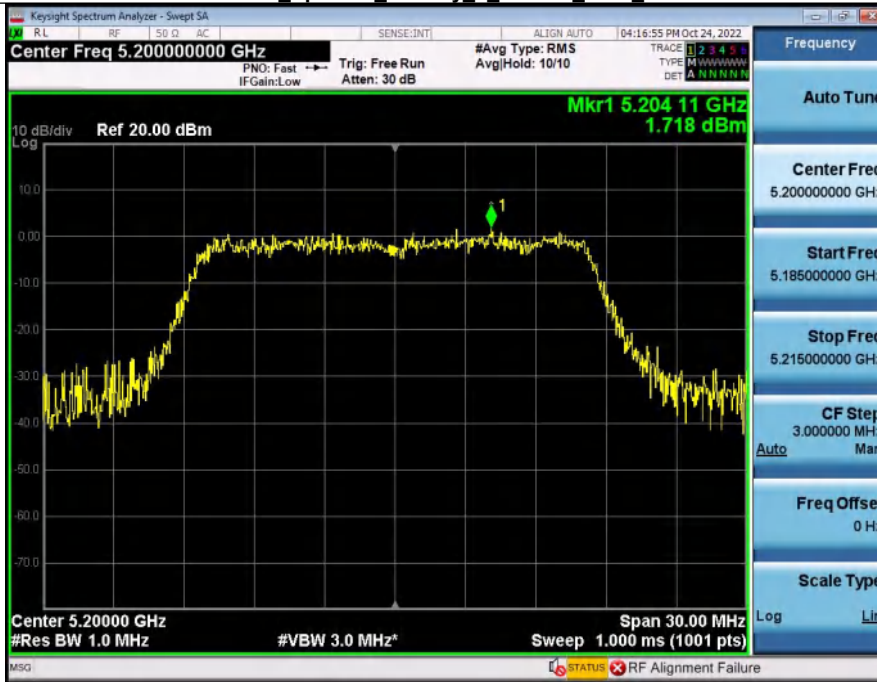
Condition	Antenna	Modulation	Frequency (MHz)	Conducted Power(dBm)	Duty factor(dB)	Total Power(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	5180.00	10.98	0.76	11.74	24	Pass
NVNT	ANT1	802.11a	5200.00	10.89	0.87	11.76	24	Pass
NVNT	ANT1	802.11a	5240.00	9.97	0.89	10.86	24	Pass
NVNT	ANT1	802.11n(HT20)	5180.00	11.39	0.67	12.06	24	Pass
NVNT	ANT1	802.11n(HT20)	5200.00	10.99	0.60	11.59	24	Pass
NVNT	ANT1	802.11n(HT20)	5240.00	10.40	0.60	11.00	24	Pass
NVNT	ANT1	802.11ac(VHT20)	5180.00	11.46	0.00	11.46	24	Pass
NVNT	ANT1	802.11ac(VHT20)	5200.00	11.30	0.56	11.86	24	Pass
NVNT	ANT1	802.11ac(VHT20)	5240.00	10.55	0.59	11.14	24	Pass
NVNT	ANT1	802.11n(HT40)	5190.00	11.67	0.69	12.36	24	Pass
NVNT	ANT1	802.11n(HT40)	5230.00	11.08	0.69	11.77	24	Pass
NVNT	ANT1	802.11ac(VHT40)	5190.00	11.75	0.78	12.53	24	Pass
NVNT	ANT1	802.11ac(VHT40)	5230.00	11.18	0.62	11.80	24	Pass
NVNT	ANT1	802.11ac(VHT80)	5210.00	11.07	0.73	11.80	24	Pass

4. Power Spectral Density

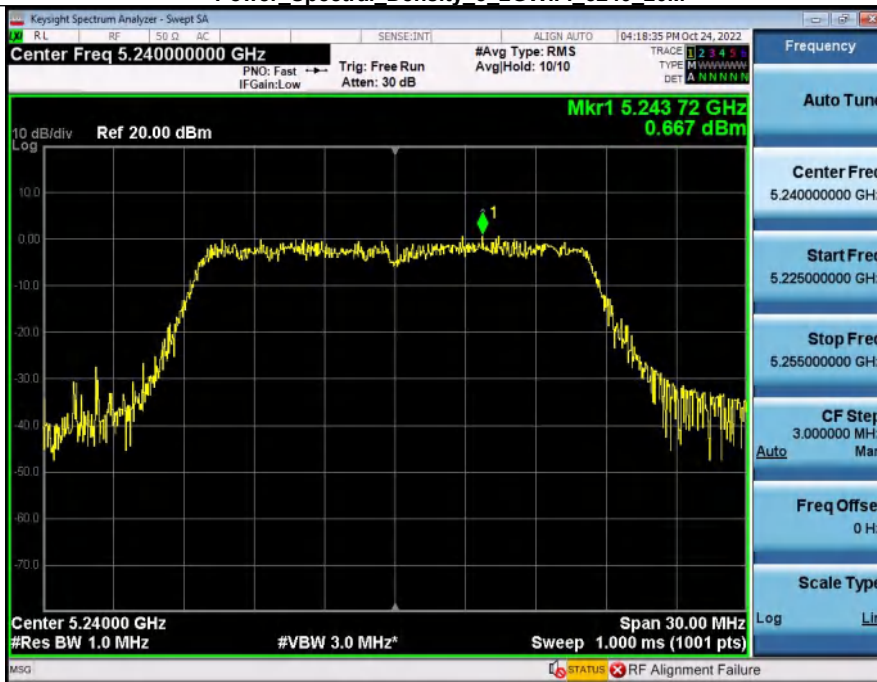
Condition	Antenna	Modulation	Frequency (MHz)	PSD(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	5180.00	1.299	11	Pass
NVNT	ANT1	802.11a	5200.00	1.718	11	Pass
NVNT	ANT1	802.11a	5240.00	0.667	11	Pass
NVNT	ANT1	802.11n(HT20)	5180.00	1.492	11	Pass
NVNT	ANT1	802.11n(HT20)	5200.00	2.134	11	Pass
NVNT	ANT1	802.11n(HT20)	5240.00	0.953	11	Pass
NVNT	ANT1	802.11ac(VHT20)	5180.00	2.618	11	Pass
NVNT	ANT1	802.11ac(VHT20)	5200.00	1.274	11	Pass
NVNT	ANT1	802.11ac(VHT20)	5240.00	1.343	11	Pass
NVNT	ANT1	802.11n(HT40)	5190.00	-0.854	11	Pass
NVNT	ANT1	802.11n(HT40)	5230.00	-1.383	11	Pass
NVNT	ANT1	802.11ac(VHT40)	5190.00	-0.959	11	Pass
NVNT	ANT1	802.11ac(VHT40)	5230.00	-2.059	11	Pass
NVNT	ANT1	802.11ac(VHT80)	5210.00	-4.864	11	Pass



### Power Spectral Density 5\_2WiFi 5200\_20M

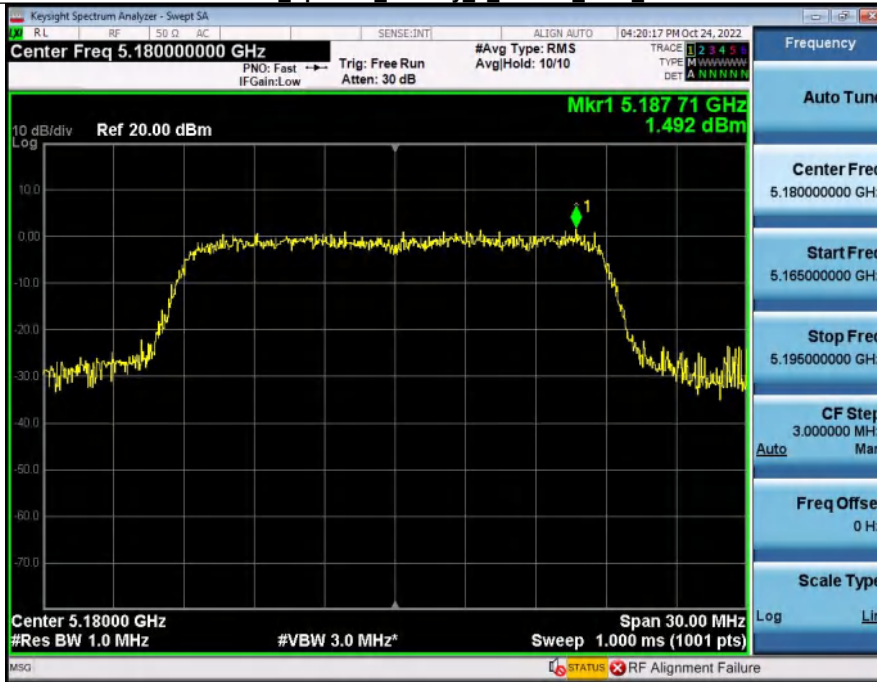


### Power Spectral Density 5\_2WiFi 5240\_20M





### Power Spectral Density 5\_2WiFi 5180\_20M



### Power Spectral Density 5\_2WiFi 5200\_20M



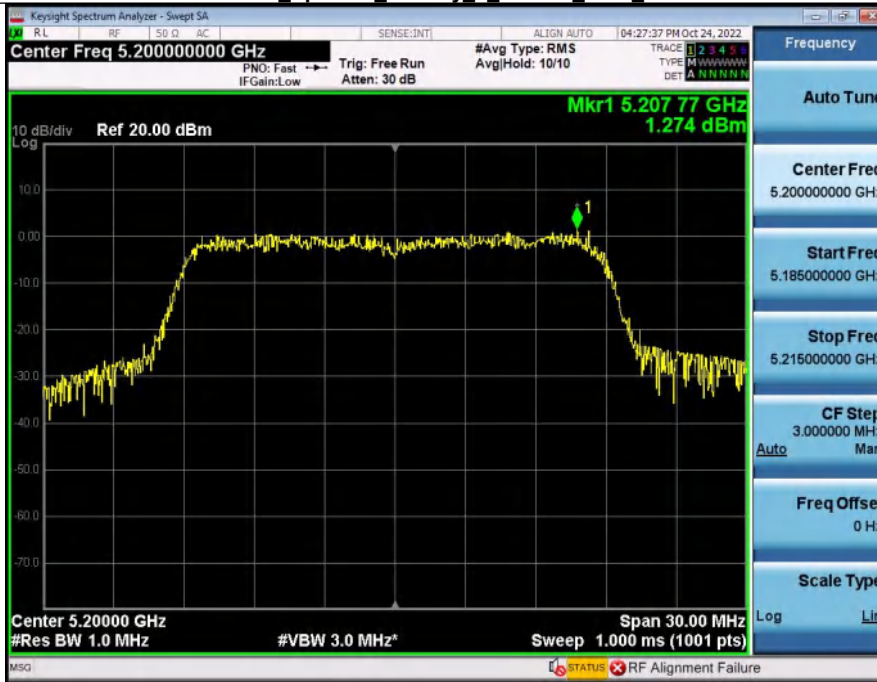
### Power Spectral Density 5\_2WiFi 5240\_20M



### Power Spectral Density 5\_2WiFi 5180\_20M



### Power Spectral Density 5\_2GWiFi 5200\_20M



### Power Spectral Density 5\_2GWiFi 5240\_20M



### Power Spectral Density 5\_2GWiFi 5190\_40M



### Power Spectral Density 5\_2GWiFi 5230\_40M



### Power Spectral Density 5\_2WiFi 5190\_40M



### Power Spectral Density 5\_2WiFi 5230\_40M

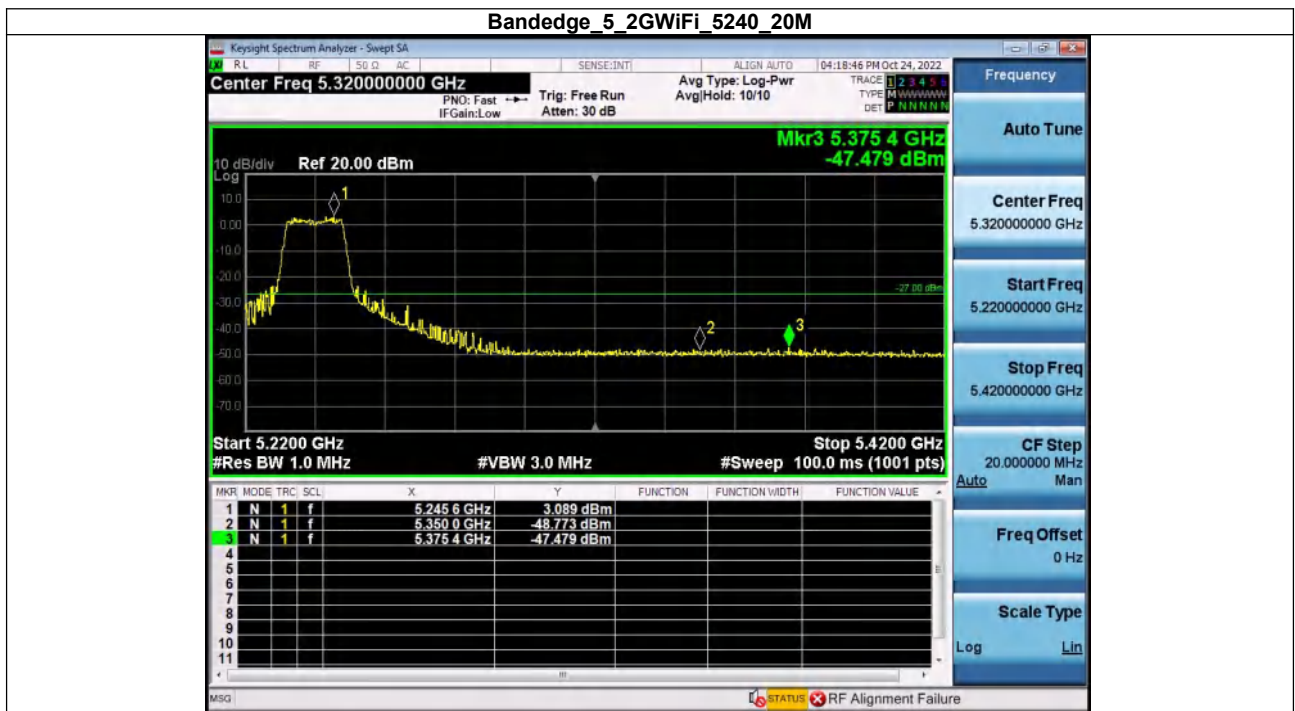
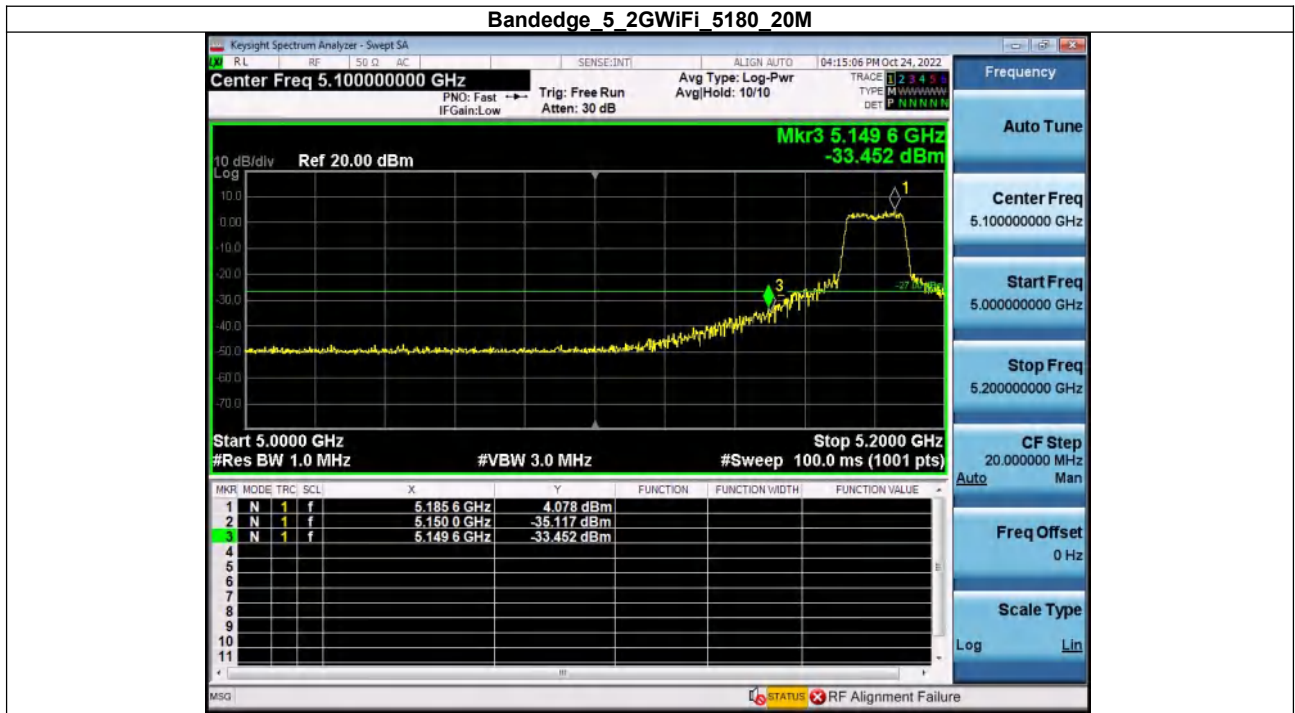


Power Spectral Density 5\_2GWiFi 5210\_80M



5. Bandedge

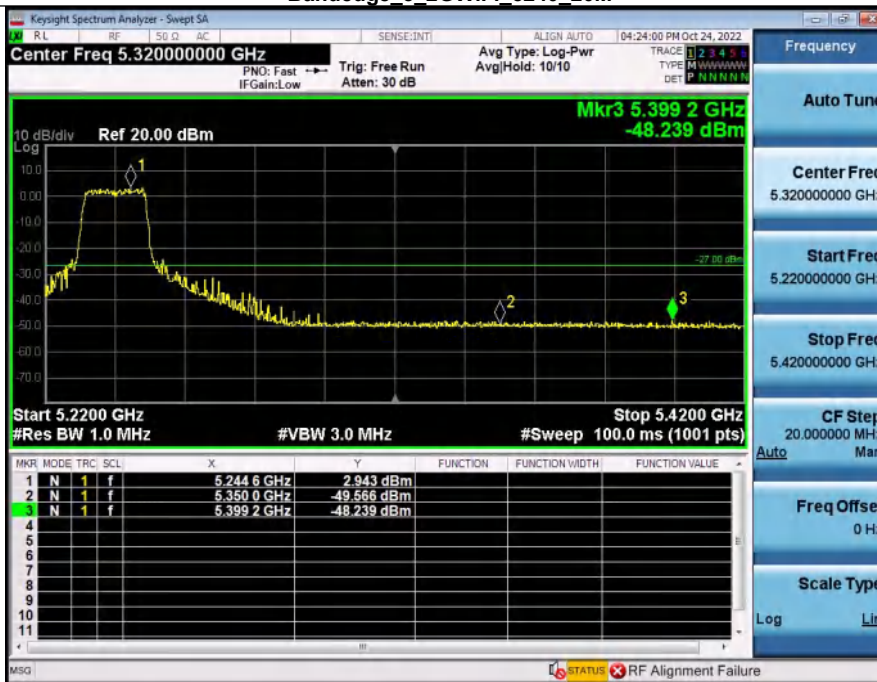
Condition	Antenna	Modulation	Max. Mark Frequency(MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	5149.60	-33.45	-27	Pass
NVNT	ANT1	802.11a	5375.40	-47.48	-27	Pass
NVNT	ANT1	802.11n(HT20)	5148.40	-29.58	-27	Pass
NVNT	ANT1	802.11n(HT20)	5399.20	-48.24	-27	Pass
NVNT	ANT1	802.11ac(VHT20)	5146.00	-30.82	-27	Pass
NVNT	ANT1	802.11ac(VHT20)	5381.80	-47.25	-27	Pass
NVNT	ANT1	802.11n(HT40)	5148.06	-29.60	-27	Pass
NVNT	ANT1	802.11n(HT40)	5386.40	-47.90	-27	Pass
NVNT	ANT1	802.11ac(VHT40)	5149.60	-29.08	-27	Pass
NVNT	ANT1	802.11ac(VHT40)	5360.80	-48.21	-27	Pass
NVNT	ANT1	802.11ac(VHT80)	5149.94	-29.29	-27	Pass
NVNT	ANT1	802.11ac(VHT80)	5351.96	-42.51	-27	Pass



**Bandedge\_5\_2GWiFi\_5180\_20M**



**Bandedge\_5\_2GWiFi\_5240\_20M**





**Bandedge 5 2GWiFi\_5180\_20M**



**Bandedge 5 2GWiFi\_5240\_20M**



**Bandedge 5 2GWiFi 5190 40M**



**Bandedge 5 2GWiFi 5230 40M**



**Bandedge 5 2GWiFi 5190 40M**



**Bandedge 5 2GWiFi 5230 40M**



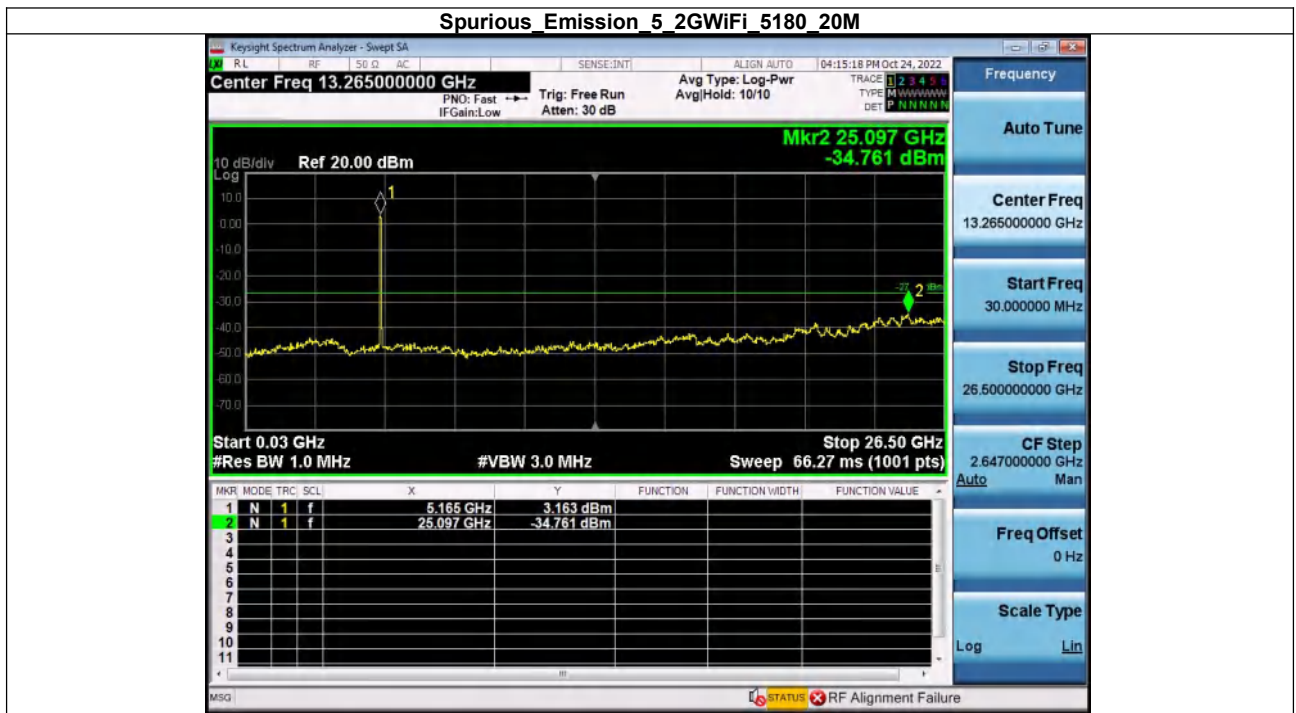
**Bandedge\_5\_2GWiFi\_5210\_80M**



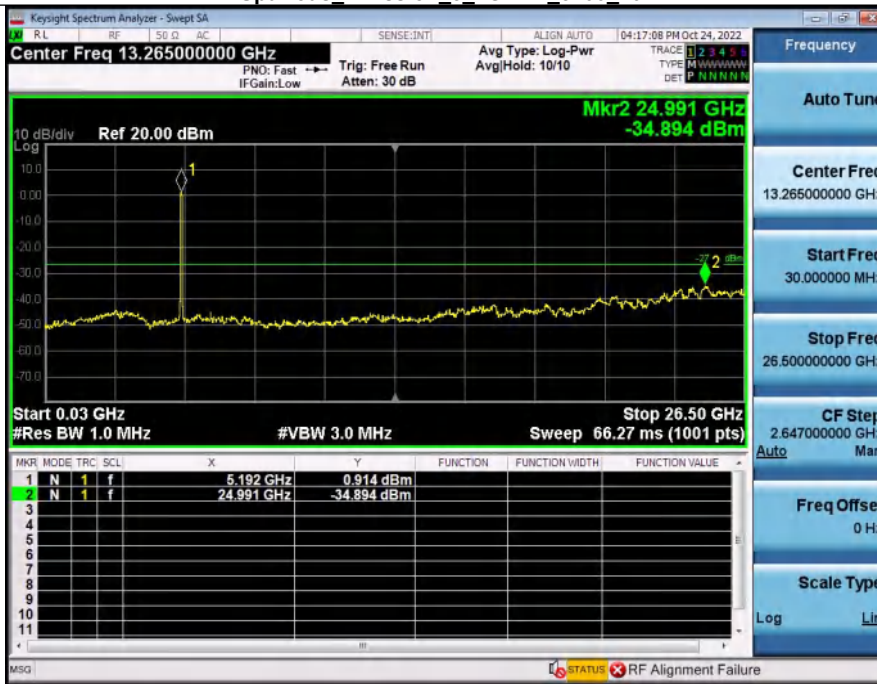
STATUS RF Alignment Failure

6. Spurious Emission

Condition	Antenna	Modulation	Max. Mark Frequency(MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	25097.09	-34.76	-27	Pass
NVNT	ANT1	802.11a	24991.21	-34.89	-27	Pass
NVNT	ANT1	802.11a	25097.09	-35.19	-27	Pass
NVNT	ANT1	802.11n(HT20)	24541.22	-35.91	-27	Pass
NVNT	ANT1	802.11n(HT20)	24938.27	-35.20	-27	Pass
NVNT	ANT1	802.11n(HT20)	24911.80	-35.38	-27	Pass
NVNT	ANT1	802.11ac(VHT20)	25017.68	-34.03	-27	Pass
NVNT	ANT1	802.11ac(VHT20)	24964.74	-34.03	-27	Pass
NVNT	ANT1	802.11ac(VHT20)	25017.68	-35.42	-27	Pass
NVNT	ANT1	802.11n(HT40)	24964.74	-34.72	-27	Pass
NVNT	ANT1	802.11n(HT40)	24567.69	-35.21	-27	Pass
NVNT	ANT1	802.11ac(VHT40)	24938.27	-35.37	-27	Pass
NVNT	ANT1	802.11ac(VHT40)	25097.09	-35.17	-27	Pass
NVNT	ANT1	802.11ac(VHT80)	25017.68	-34.56	-27	Pass



Spurious Emission 5 2GWiFi 5200 20M



Frequency

Auto Tune

Center Freq  
13.26500000 GHz

Start Freq  
30.000000 MHz

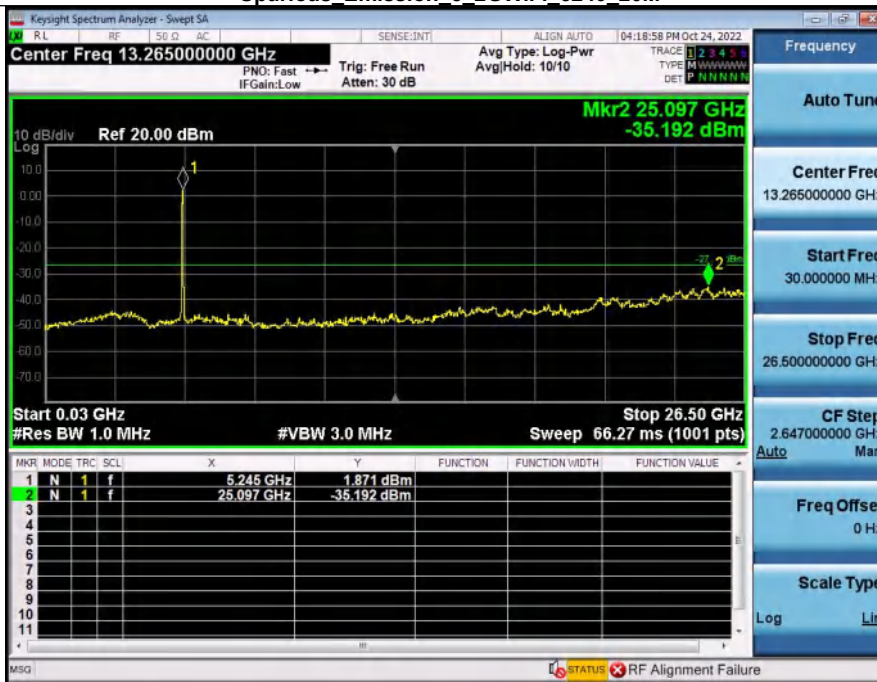
Stop Freq  
26.50000000 GHz

CF Step  
2.647000000 GHz  
Auto Man

Freq Offset  
0 Hz

Scale Type  
Log Lin

Spurious Emission 5 2GWiFi 5240 20M



Frequency

Auto Tune

Center Freq  
13.26500000 GHz

Start Freq  
30.000000 MHz

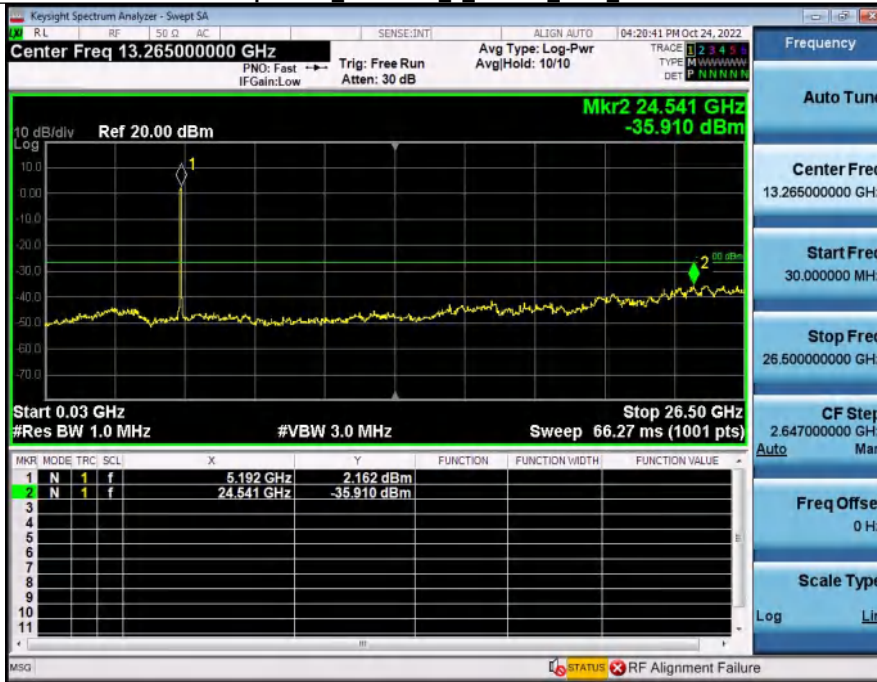
Stop Freq  
26.50000000 GHz

CF Step  
2.647000000 GHz  
Auto Man

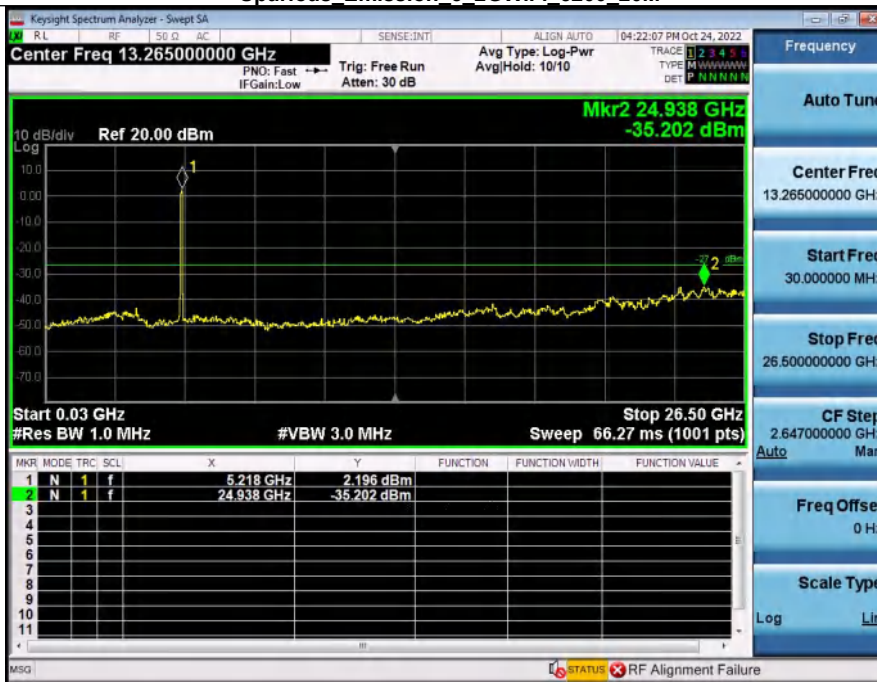
Freq Offset  
0 Hz

Scale Type  
Log Lin

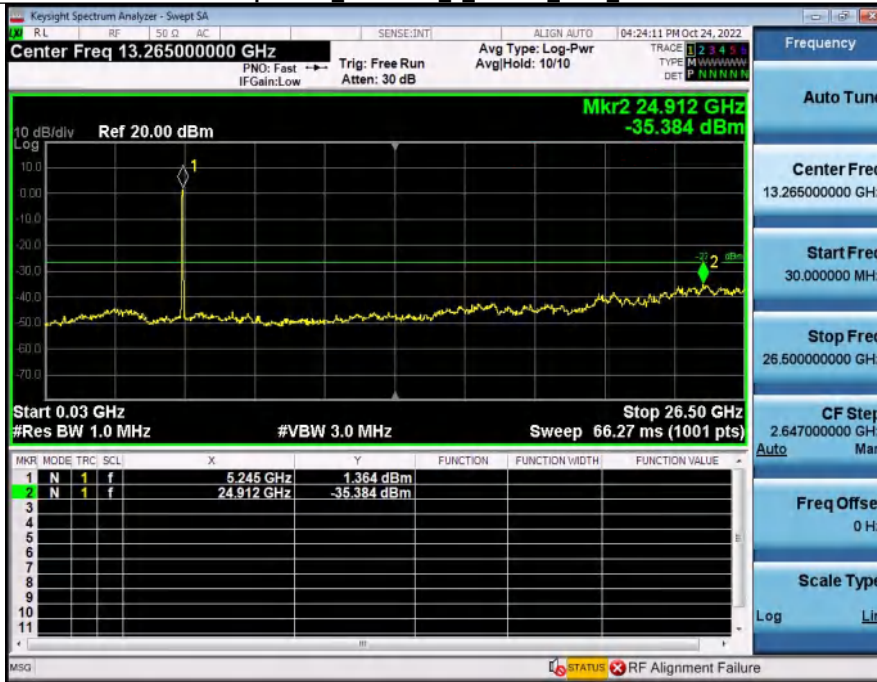
Spurious Emission 5 2GWiFi 5180 20M



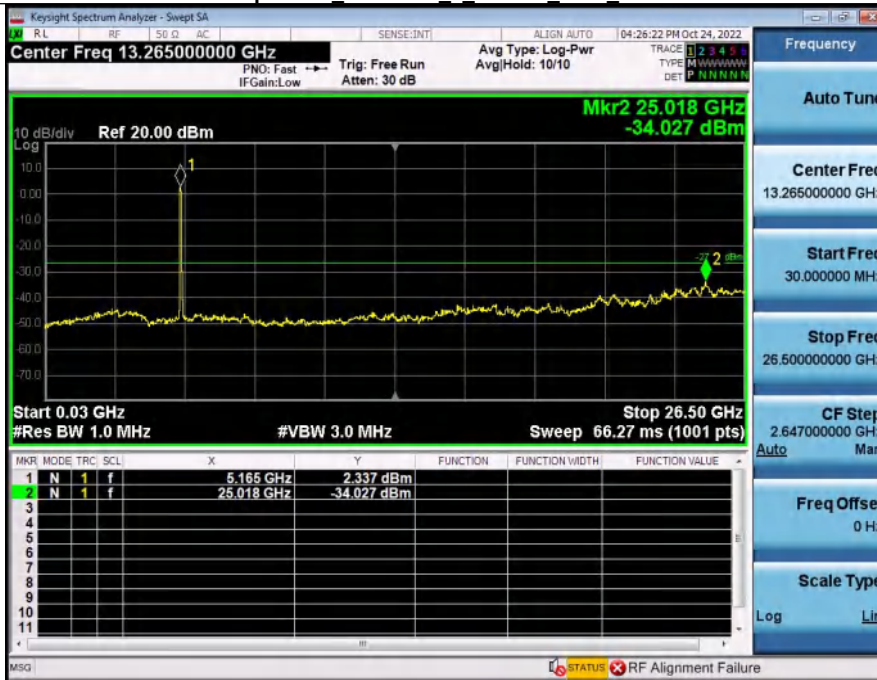
Spurious Emission 5 2GWiFi 5200 20M



Spurious Emission 5 2GWiFi 5240 20M

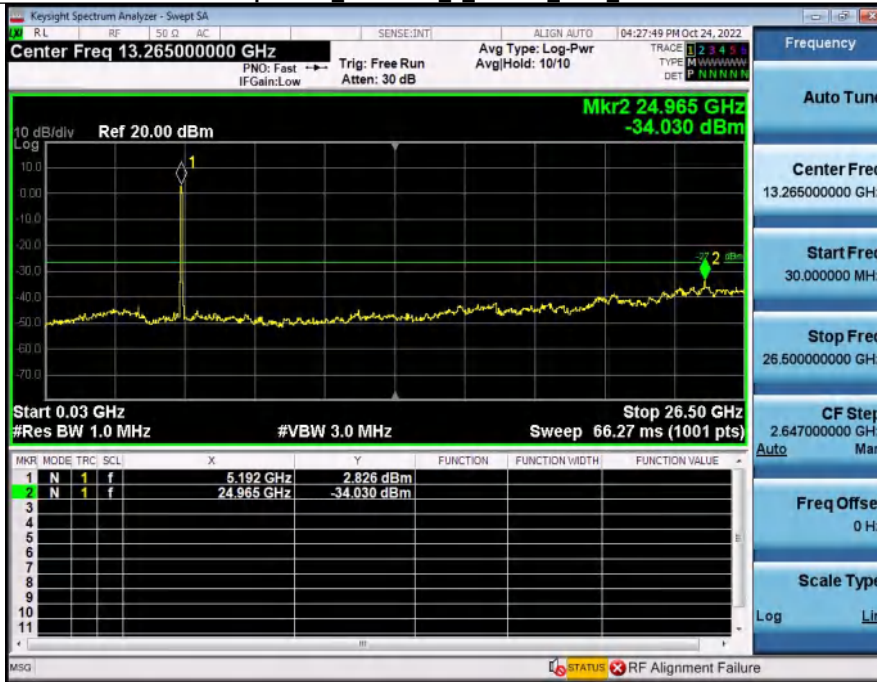


Spurious Emission 5 2GWiFi 5180 20M

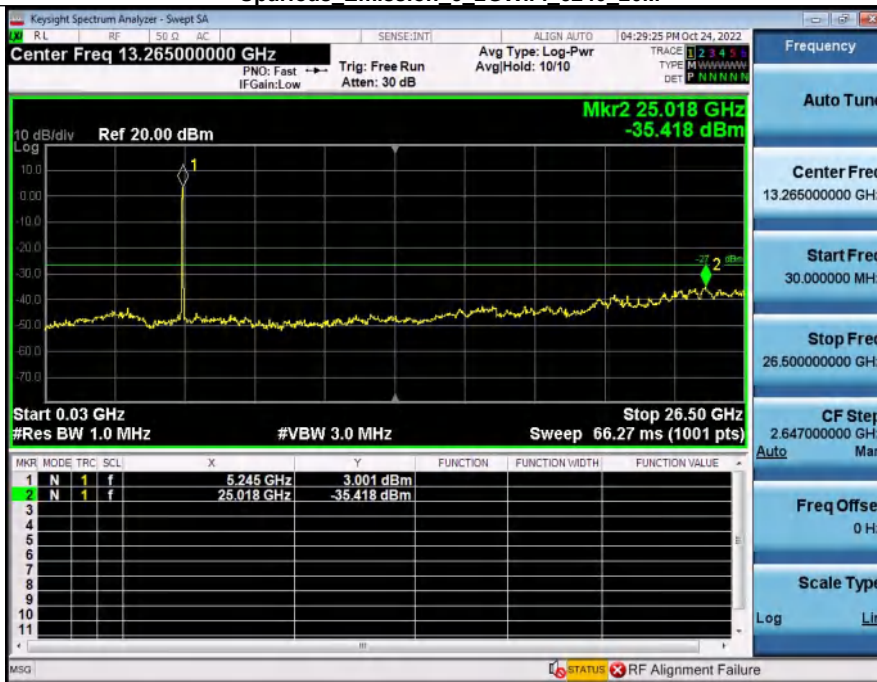




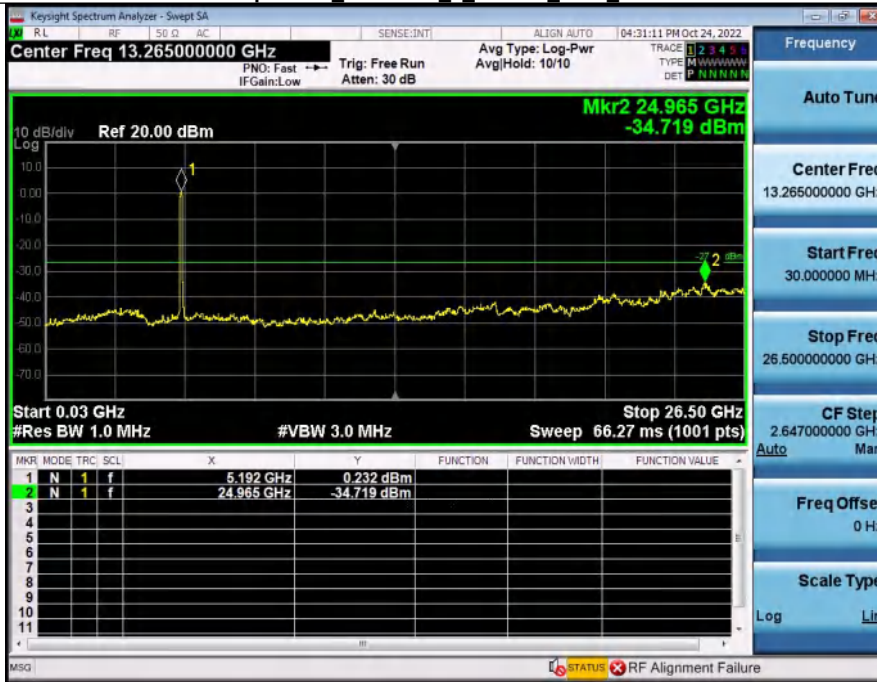
Spurious Emission 5 2GWiFi 5200 20M



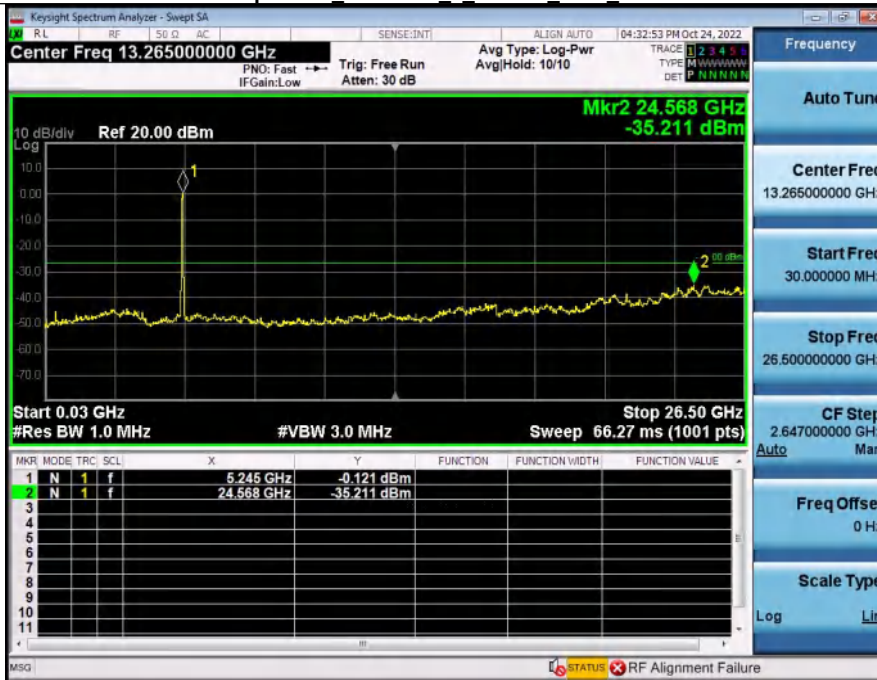
Spurious Emission 5 2GWiFi 5240 20M



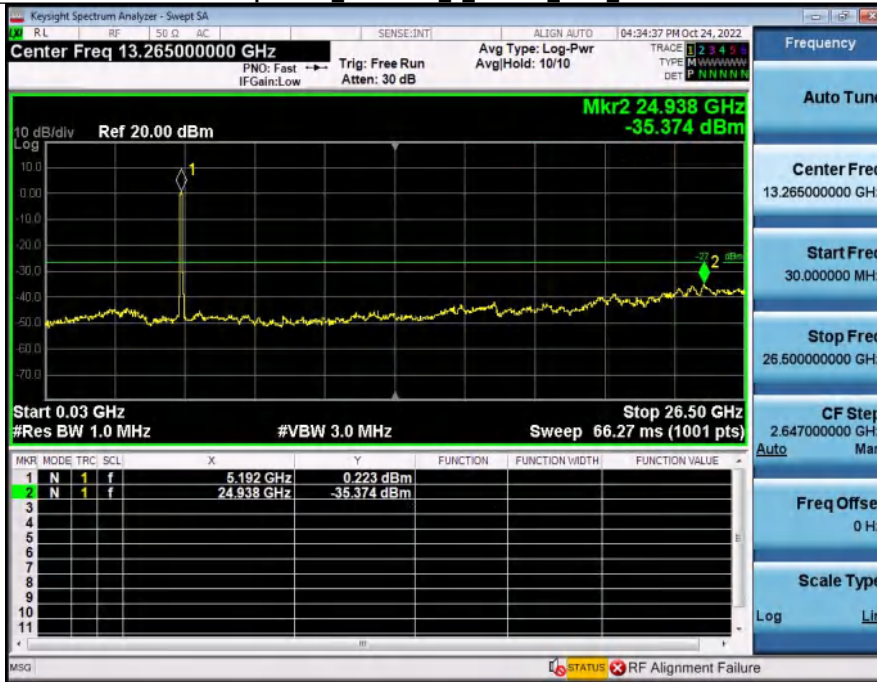
Spurious Emission 5 2GWiFi 5190 40M



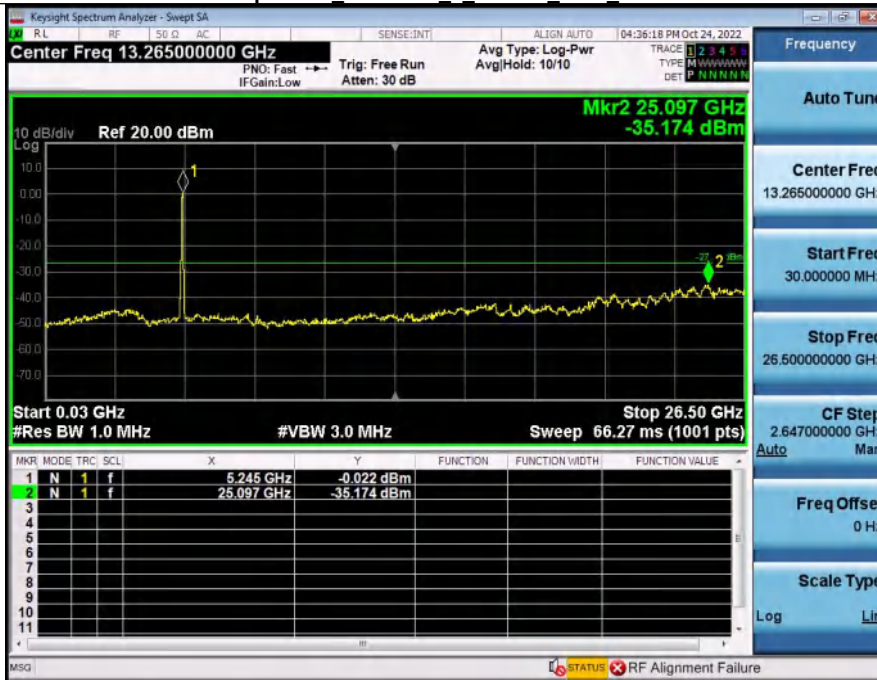
Spurious Emission 5 2GWiFi 5230 40M



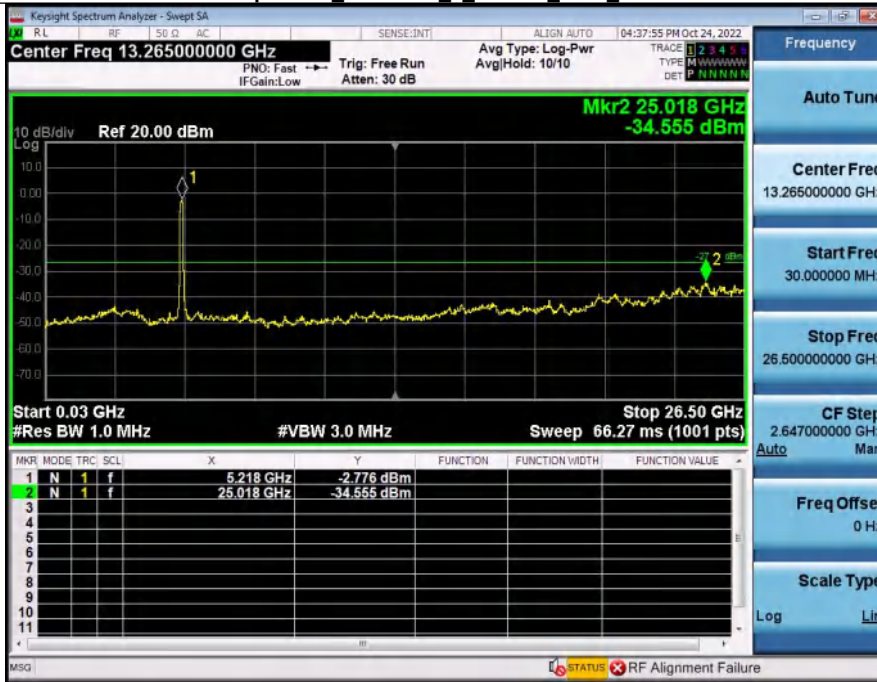
Spurious Emission 5 2GWiFi 5190 40M



Spurious Emission 5 2GWiFi 5230 40M



Spurious Emission 5 2GWiFi\_5210\_80M

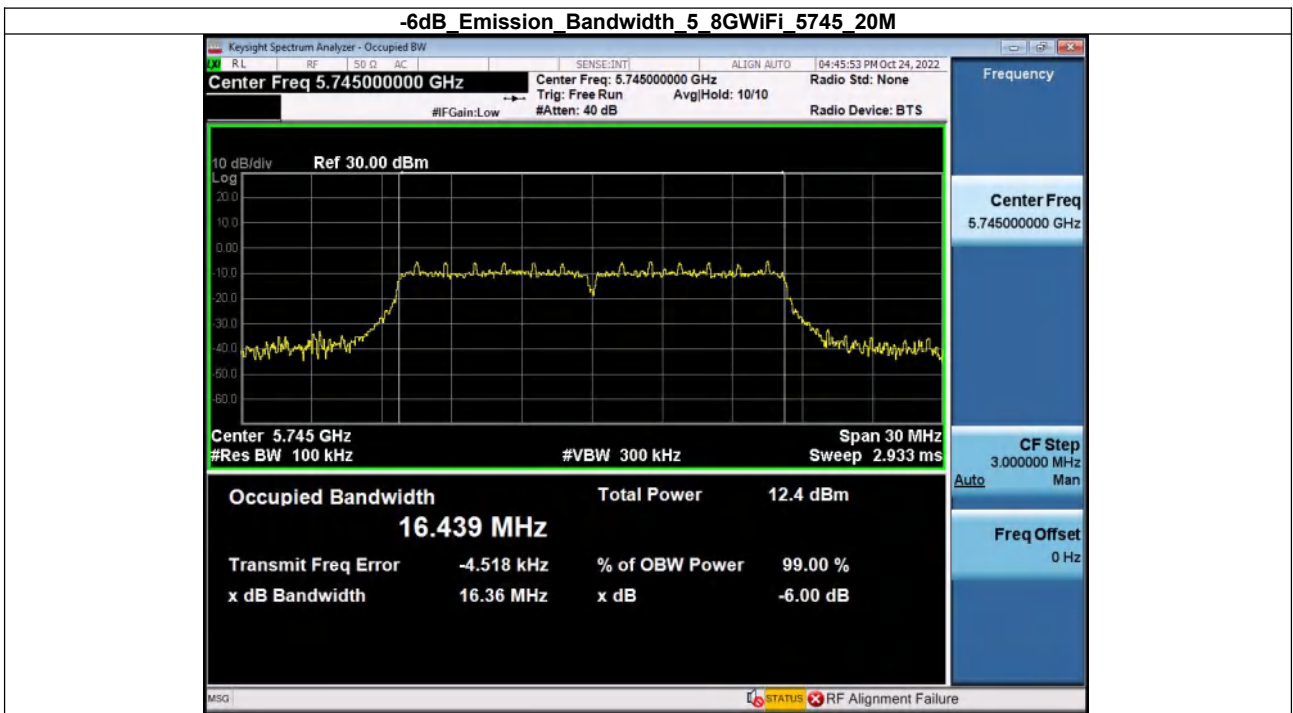


STATUS RF Alignment Failure

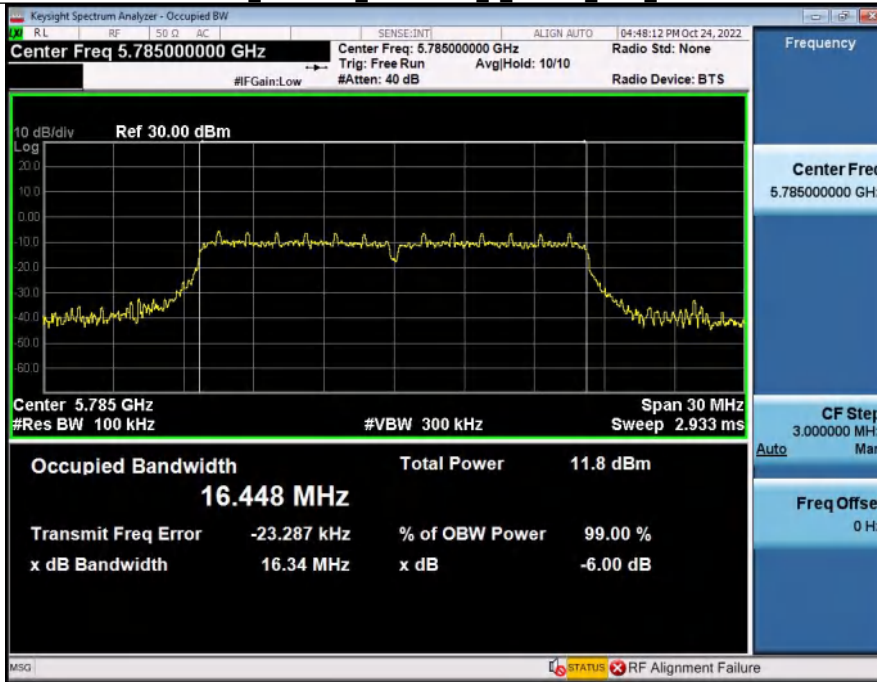
**12.APPENDIX1---5.8GWIFI**

**1. -6dB Emission Bandwidth**

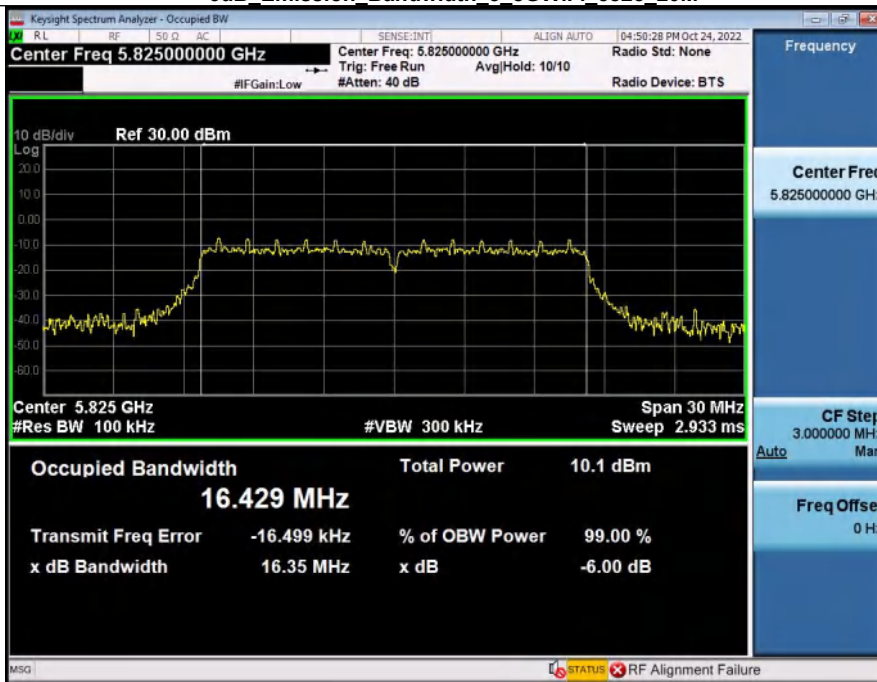
Condition	Antenna	Mode	Frequency(MHz)	-6dB_Emission_Bandwidth(MHz)	Limit(MHz)	Result
NVNT	ANT1	LCH	5745.00	16.363	0.500	Pass
NVNT	ANT1	MCH	5785.00	16.344	0.500	Pass
NVNT	ANT1	HCH	5825.00	16.355	0.500	Pass
NVNT	ANT1	LCH	5745.00	17.043	0.500	Pass
NVNT	ANT1	MCH	5785.00	17.337	0.500	Pass
NVNT	ANT1	HCH	5825.00	17.647	0.500	Pass
NVNT	ANT1	LCH	5745.00	17.297	0.500	Pass
NVNT	ANT1	MCH	5785.00	16.946	0.500	Pass
NVNT	ANT1	HCH	5825.00	16.963	0.500	Pass
NVNT	ANT1	LCH	5755.00	36.308	0.500	Pass
NVNT	ANT1	HCH	5795.00	35.798	0.500	Pass
NVNT	ANT1	LCH	5755.00	35.574	0.500	Pass
NVNT	ANT1	HCH	5795.00	35.586	0.500	Pass
NVNT	ANT1	MCH	5775.00	75.288	0.500	Pass



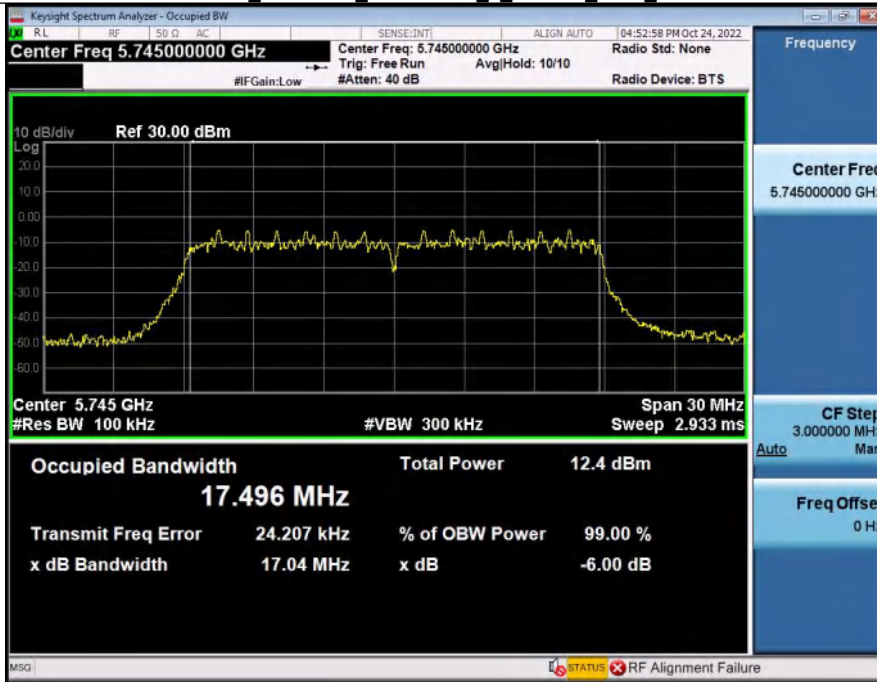
**-6dB Emission Bandwidth 5 8WiFi 5785 20M**



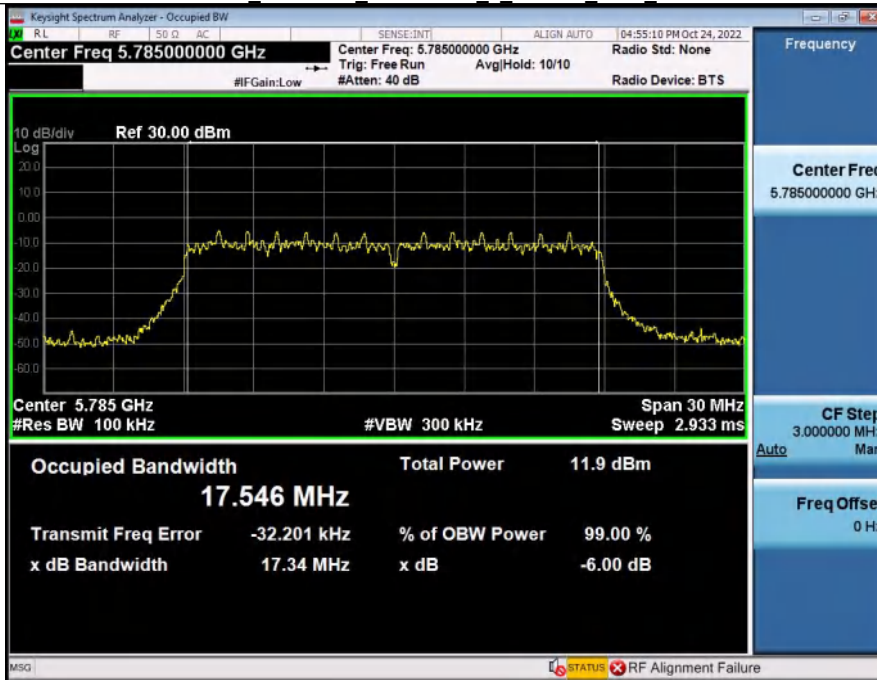
**-6dB Emission Bandwidth 5 8WiFi 5825 20M**



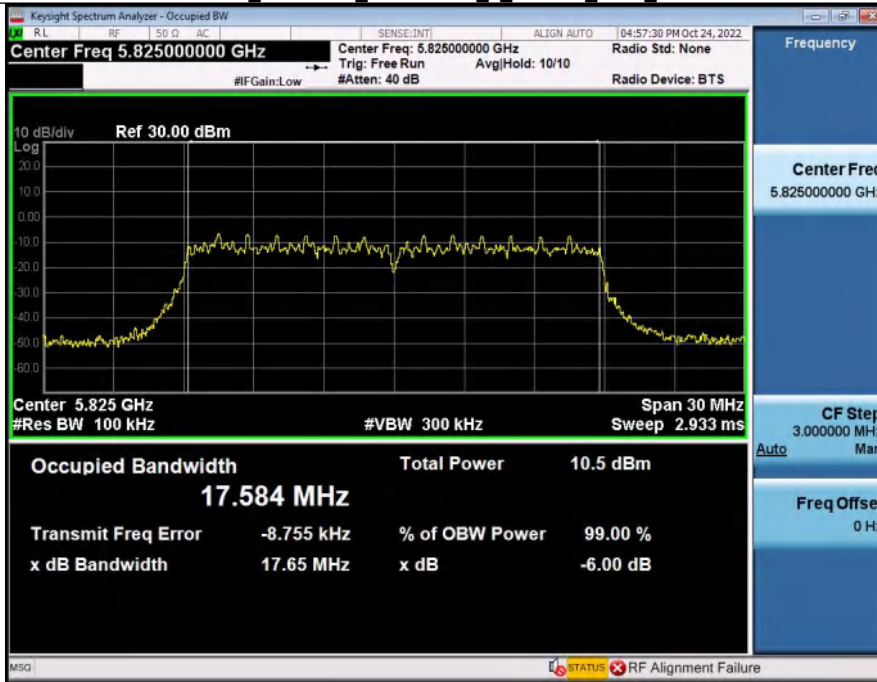
**-6dB Emission Bandwidth 5 8WiFi 5745 20M**



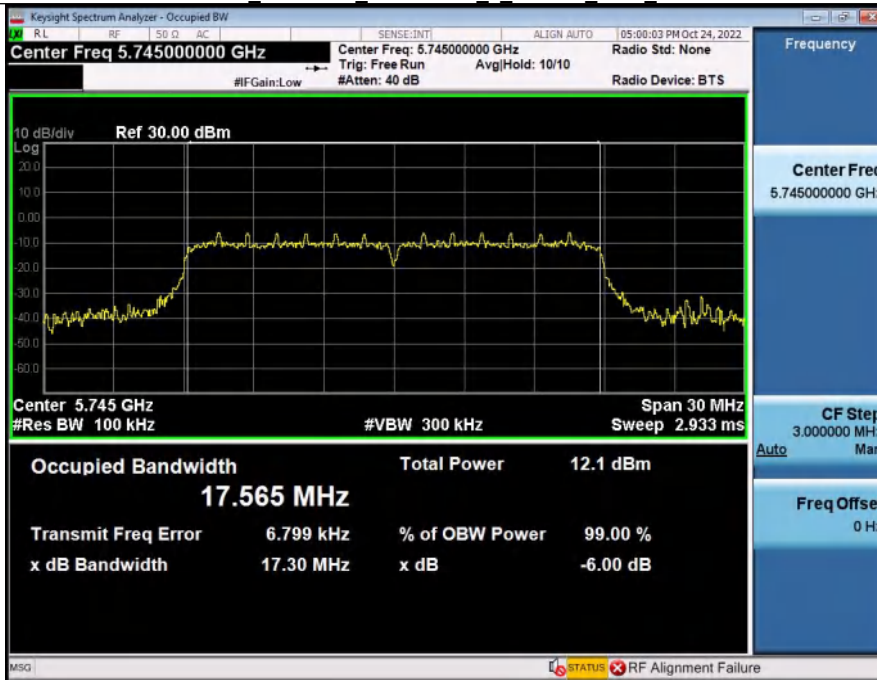
**-6dB Emission Bandwidth 5 8WiFi 5785 20M**



**-6dB Emission Bandwidth 5 8WiFi 5825 20M**

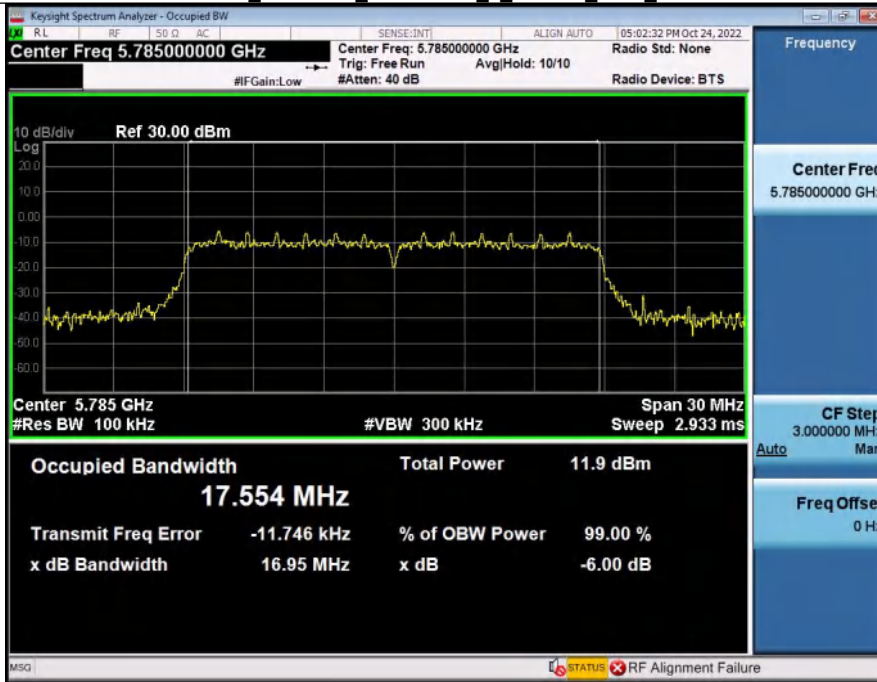


**-6dB Emission Bandwidth 5 8WiFi 5745 20M**

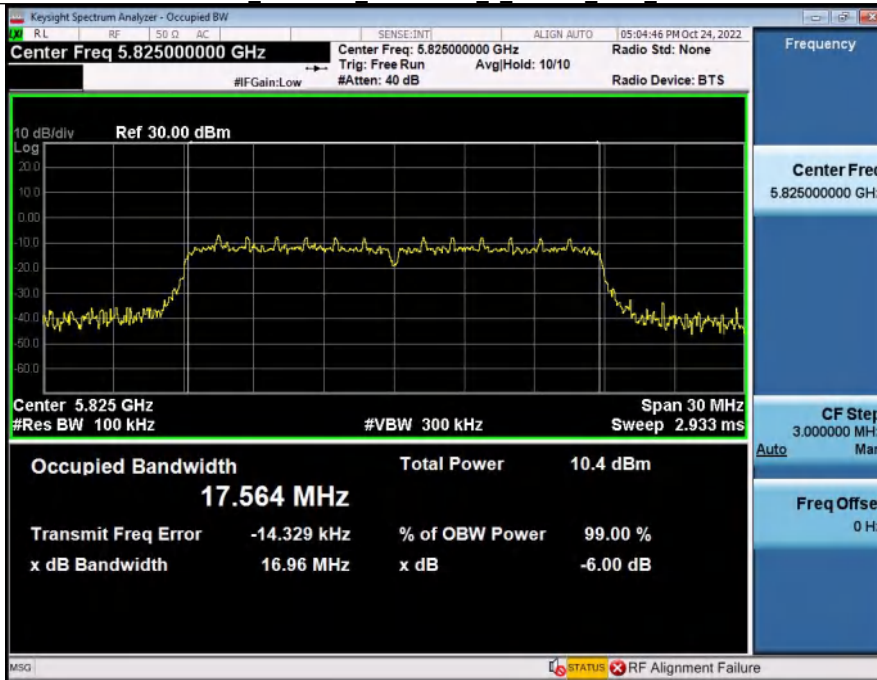




**-6dB Emission Bandwidth 5 8WiFi 5785 20M**



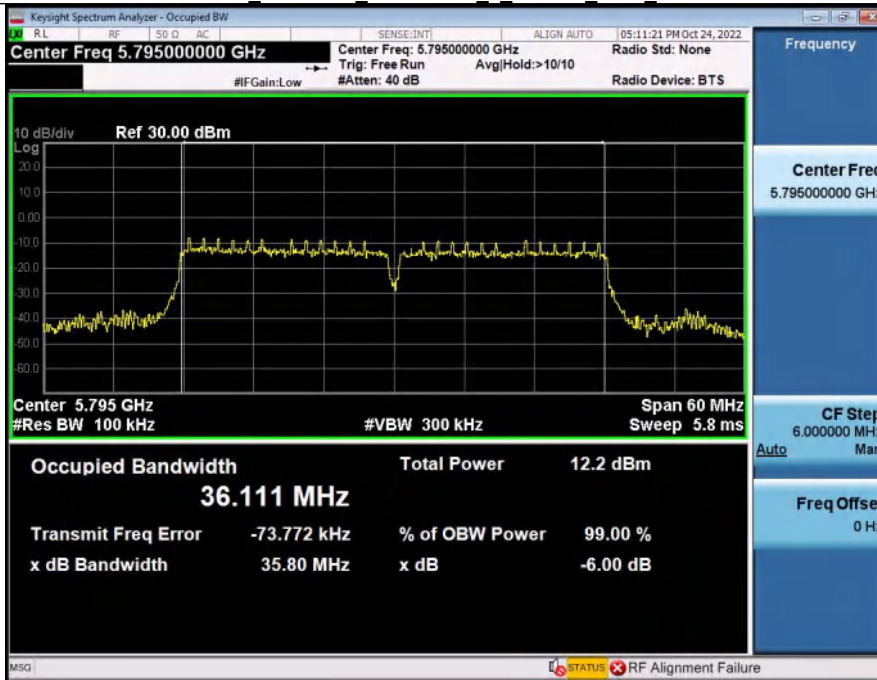
**-6dB Emission Bandwidth 5 8WiFi 5825 20M**



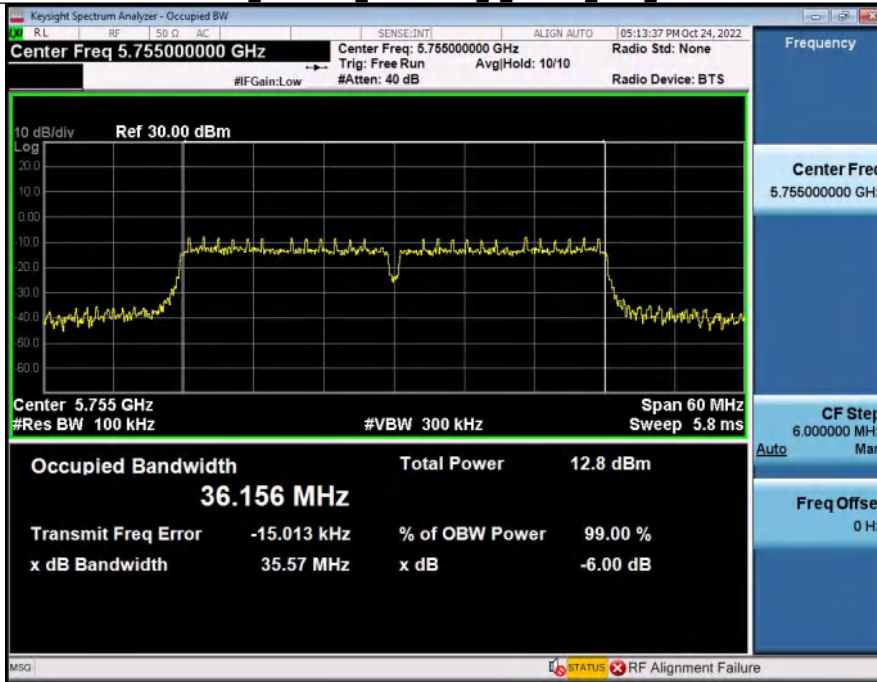
**-6dB Emission Bandwidth 5 8WiFi 5755 40M**



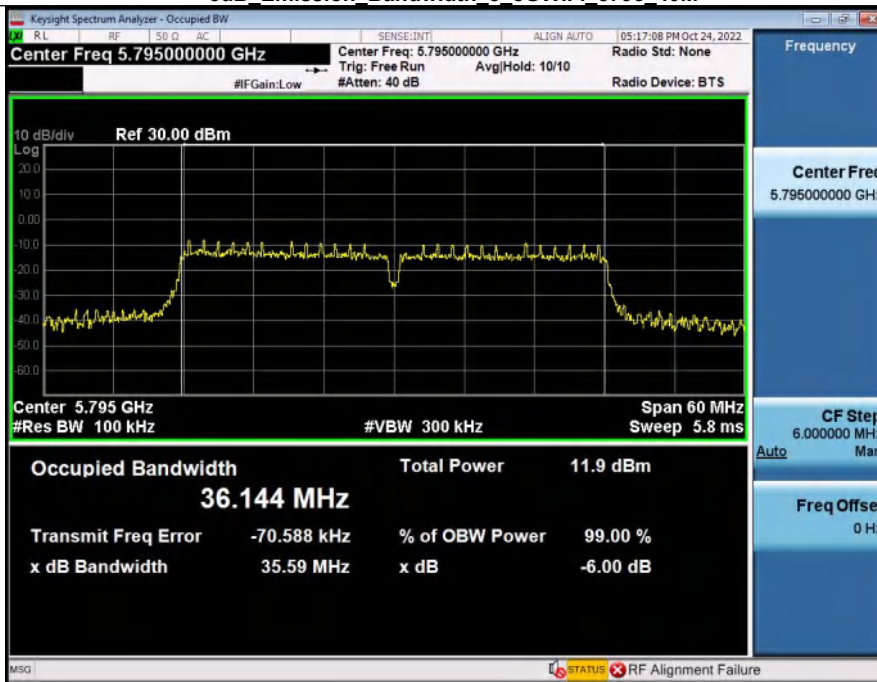
**-6dB Emission Bandwidth 5 8WiFi 5795 40M**



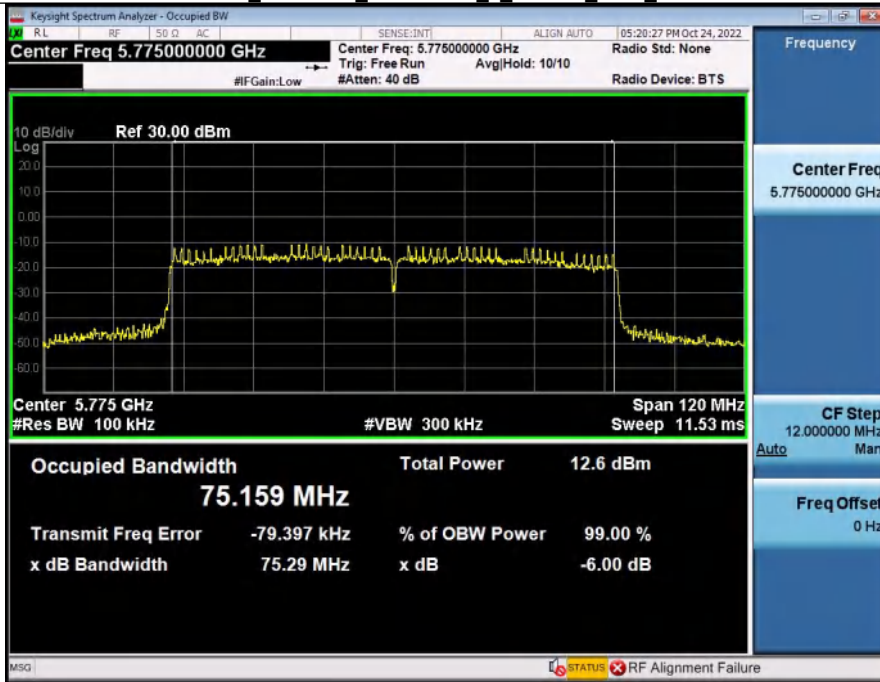
**-6dB Emission Bandwidth 5 8WiFi 5755 40M**



**-6dB Emission Bandwidth 5 8WiFi 5795 40M**

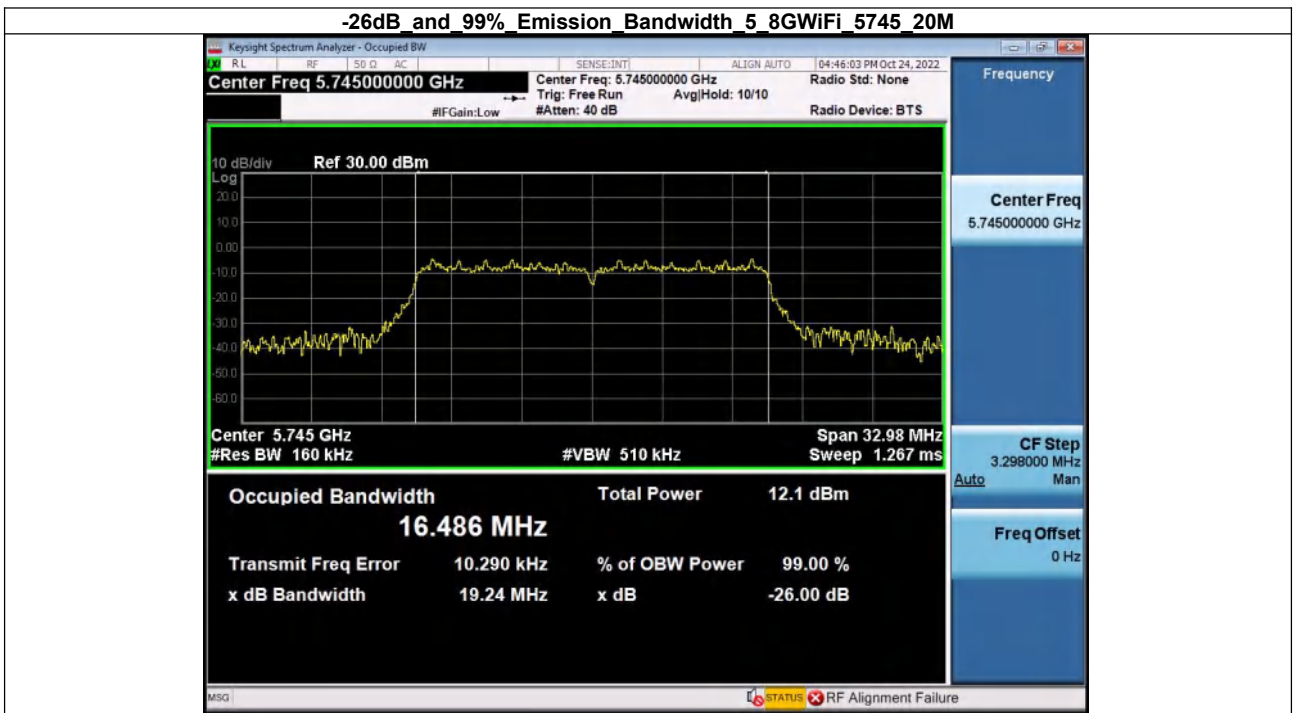


**-6dB Emission Bandwidth 5\_8WiFi 5775\_80M**

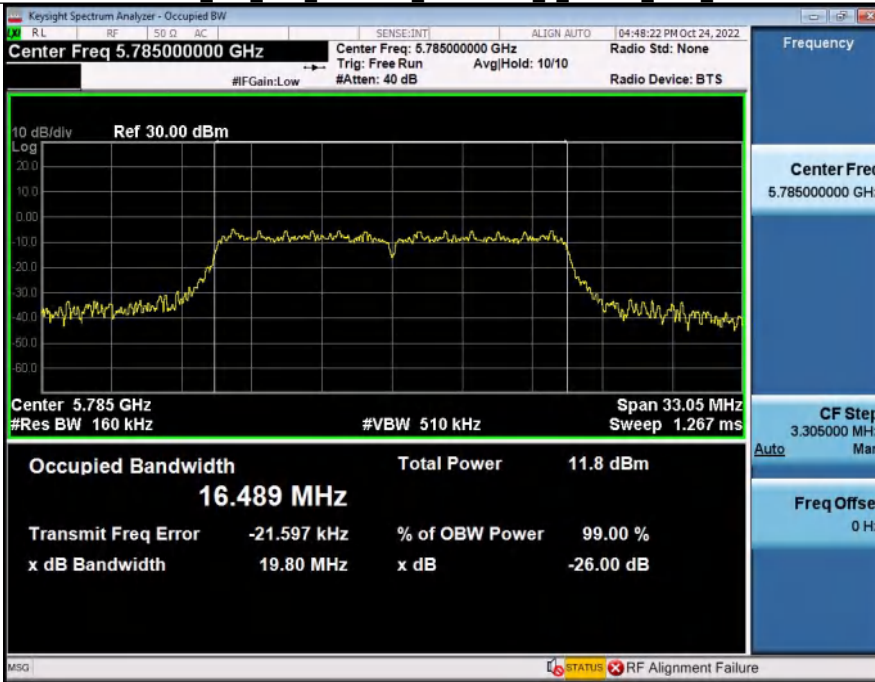


2. -26dB and 99% Emission Bandwidth

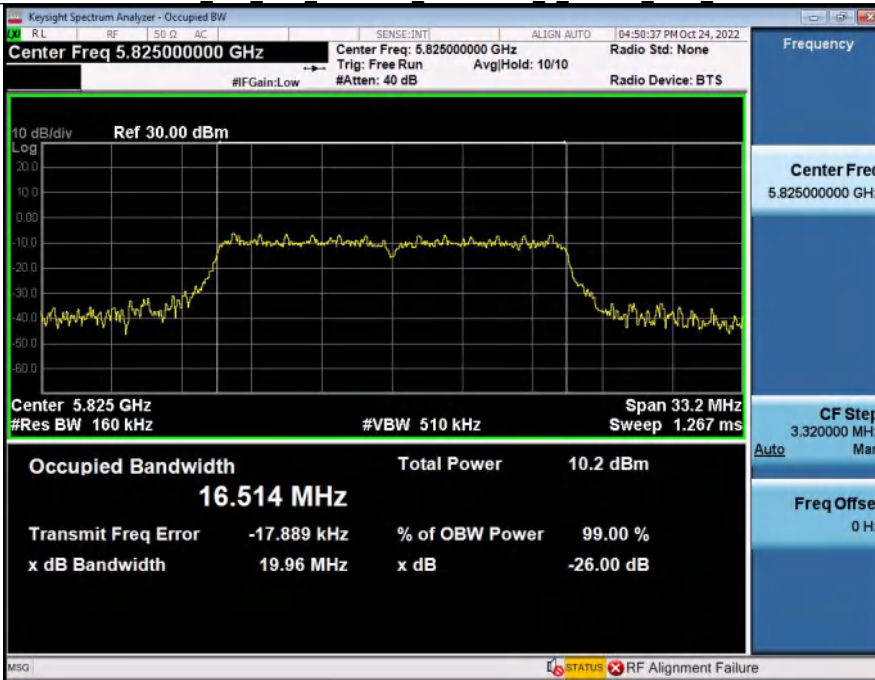
Condition	Antenna	Modulation	Frequency(MHz)	-26dB_Emission_Bandwidth(MHz)	Occupied Bandwidth(MHz)
NVNT	ANT1	802.11a	5745.00	19.24	16.49
NVNT	ANT1	802.11a	5785.00	19.80	16.49
NVNT	ANT1	802.11a	5825.00	19.96	16.51
NVNT	ANT1	802.11n(HT20)	5745.00	19.17	17.53
NVNT	ANT1	802.11n(HT20)	5785.00	19.02	17.54
NVNT	ANT1	802.11n(HT20)	5825.00	19.38	17.65
NVNT	ANT1	802.11ac(VHT20)	5745.00	22.31	17.61
NVNT	ANT1	802.11ac(VHT20)	5785.00	21.72	17.59
NVNT	ANT1	802.11ac(VHT20)	5825.00	23.47	17.59
NVNT	ANT1	802.11n(HT40)	5755.00	53.60	36.30
NVNT	ANT1	802.11n(HT40)	5795.00	48.92	36.30
NVNT	ANT1	802.11ac(VHT40)	5755.00	60.14	36.57
NVNT	ANT1	802.11ac(VHT40)	5795.00	55.64	36.59
NVNT	ANT1	802.11ac(VHT80)	5775.00	84.00	75.29



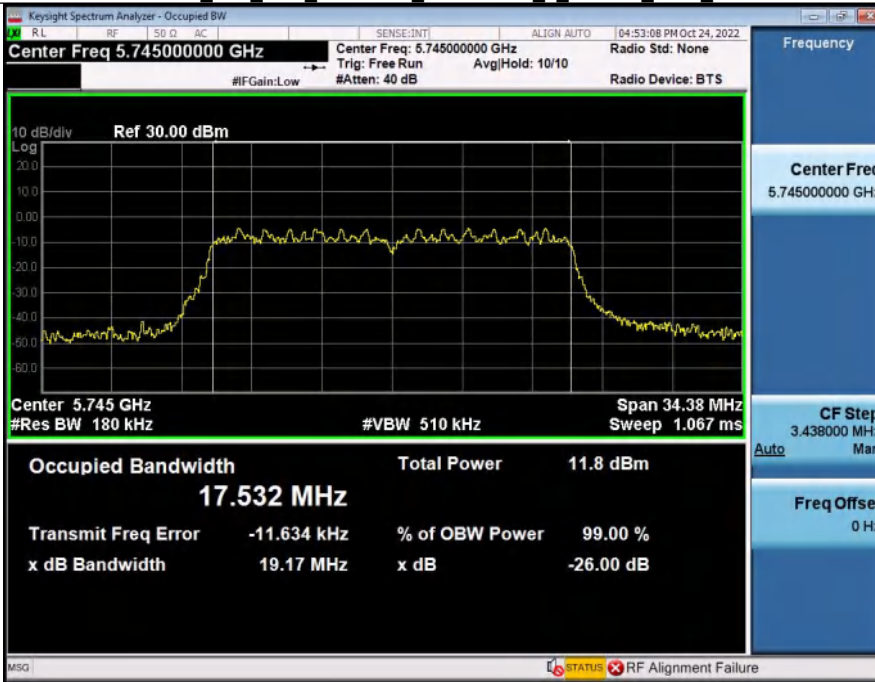
**-26dB and 99% Emission Bandwidth 5 8WiFi 5785 20M**



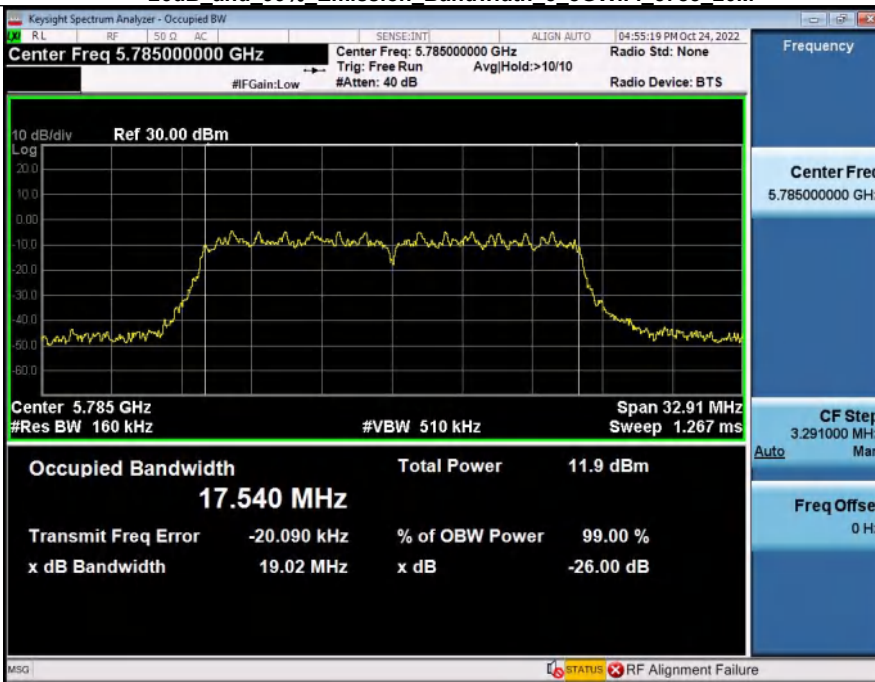
**-26dB and 99% Emission Bandwidth 5 8WiFi 5825 20M**



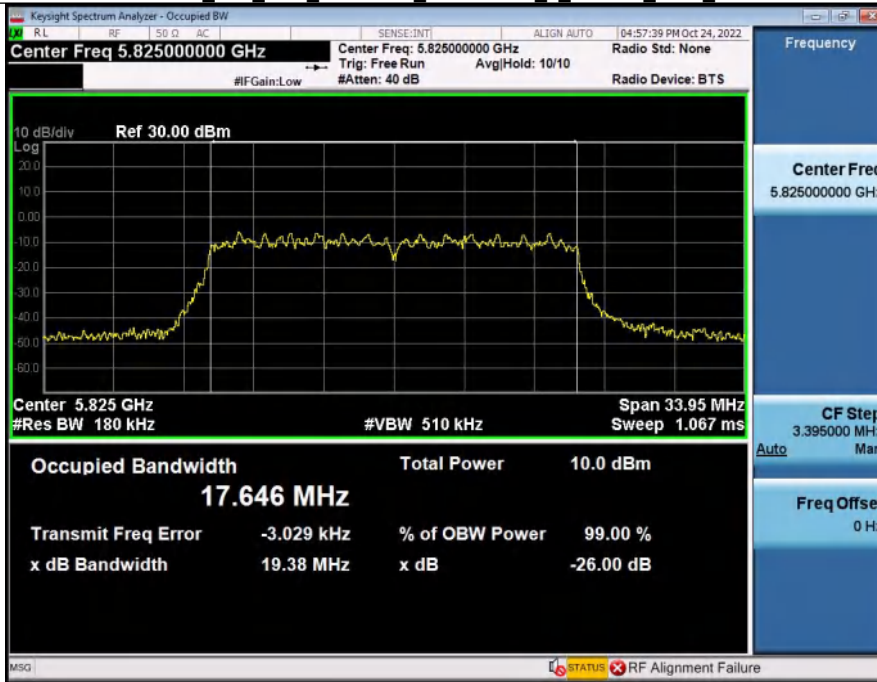
**-26dB and 99% Emission Bandwidth 5 8WiFi 5745 20M**



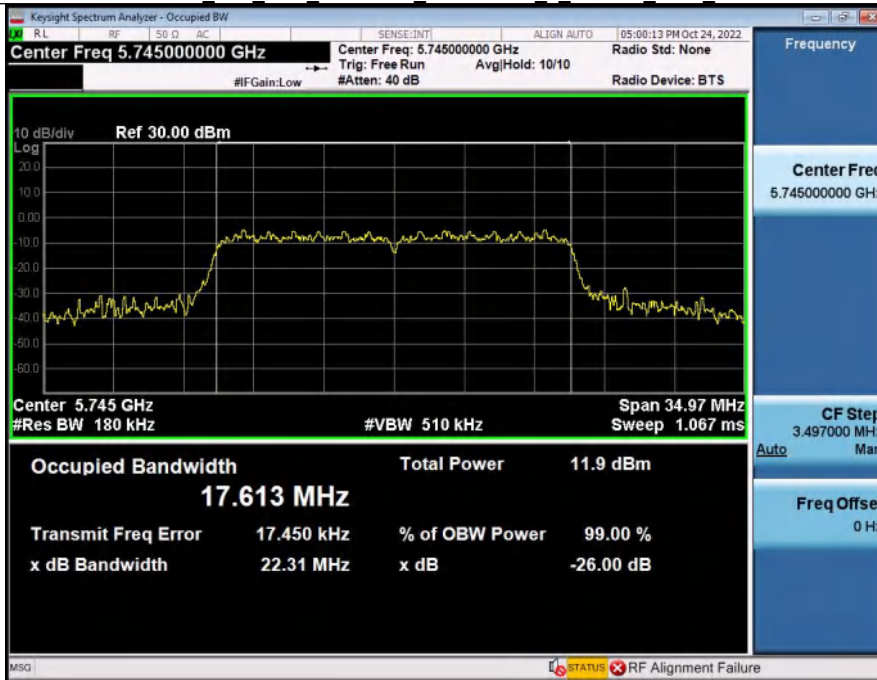
**-26dB and 99% Emission Bandwidth 5 8WiFi 5785 20M**



**-26dB and 99% Emission Bandwidth 5 8WiFi 5825 20M**

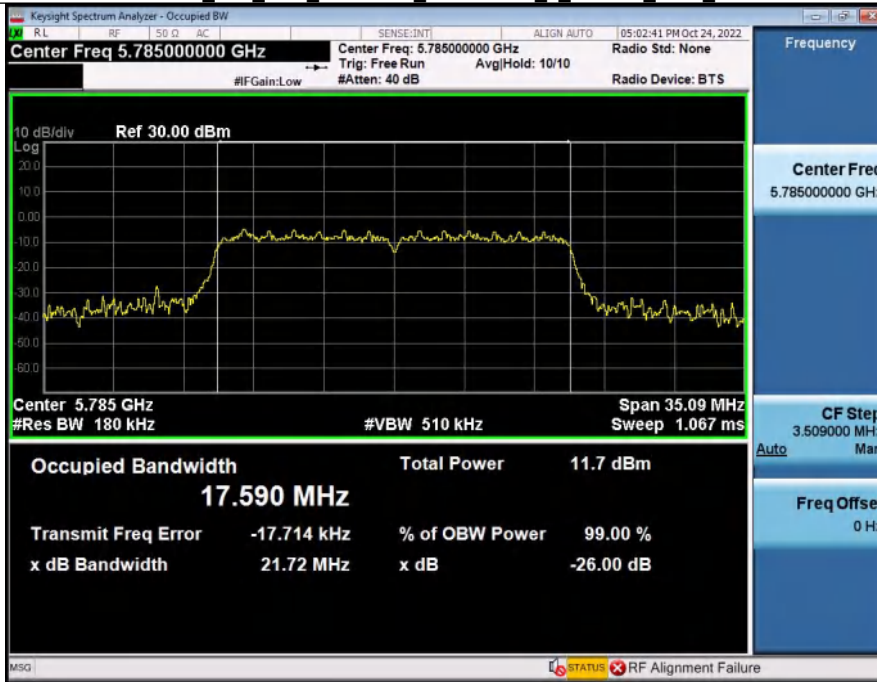


**-26dB and 99% Emission Bandwidth 5 8WiFi 5745 20M**

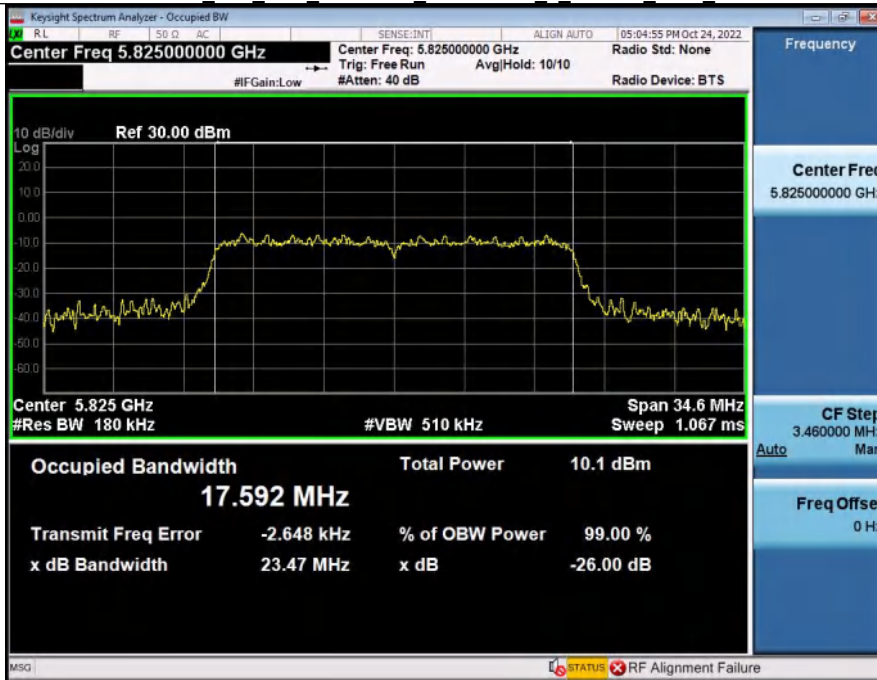




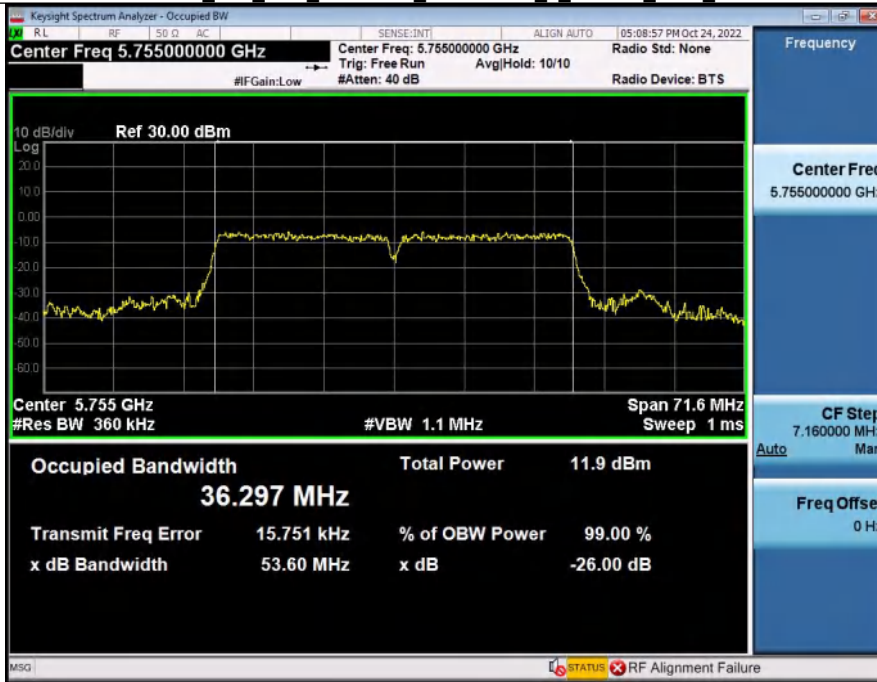
**-26dB and 99% Emission Bandwidth 5 8WiFi 5785 20M**



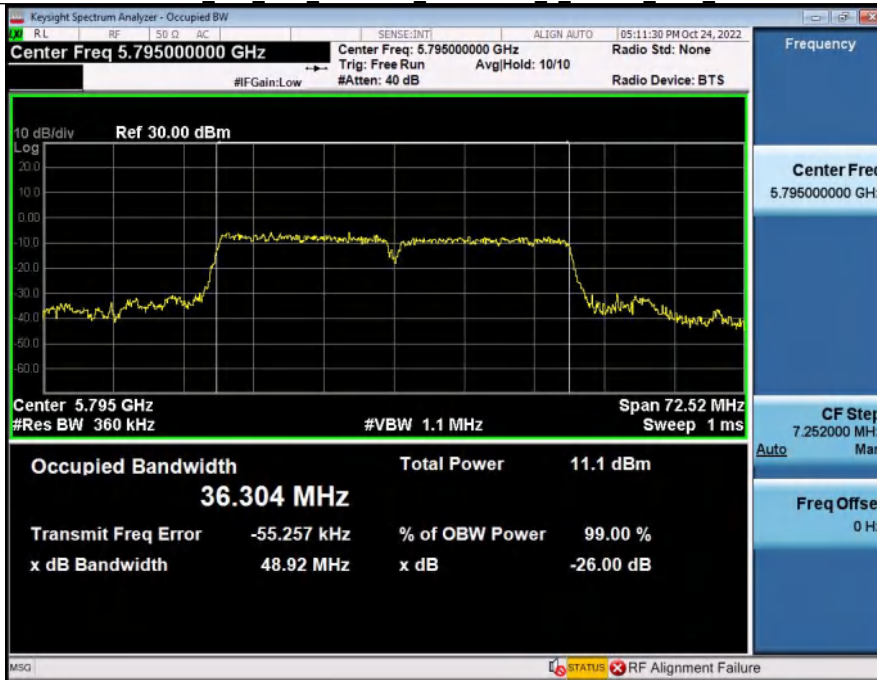
**-26dB and 99% Emission Bandwidth 5 8WiFi 5825 20M**



**-26dB and 99% Emission Bandwidth 5 8WiFi 5755 40M**



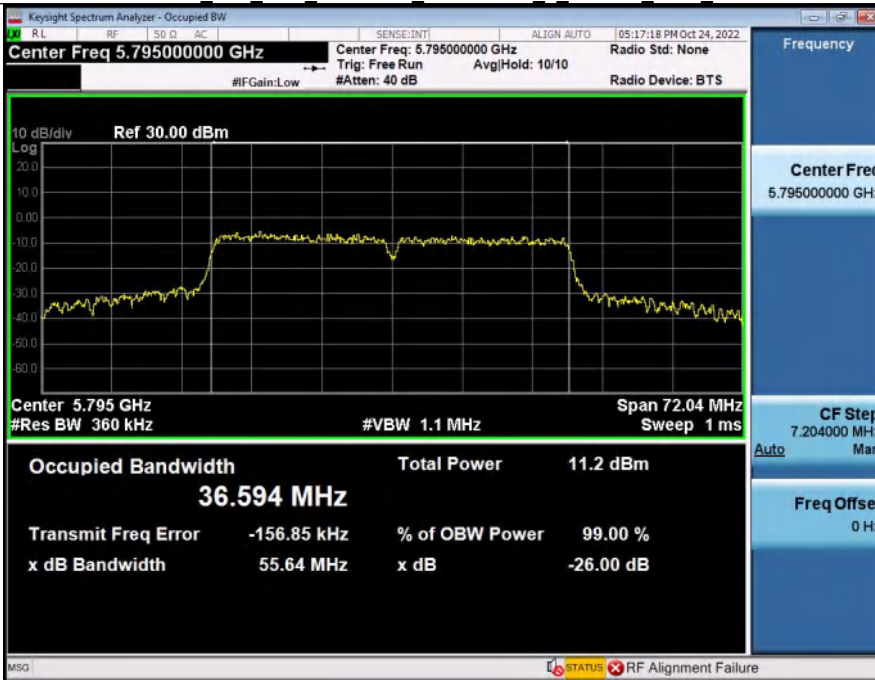
**-26dB and 99% Emission Bandwidth 5 8WiFi 5795 40M**



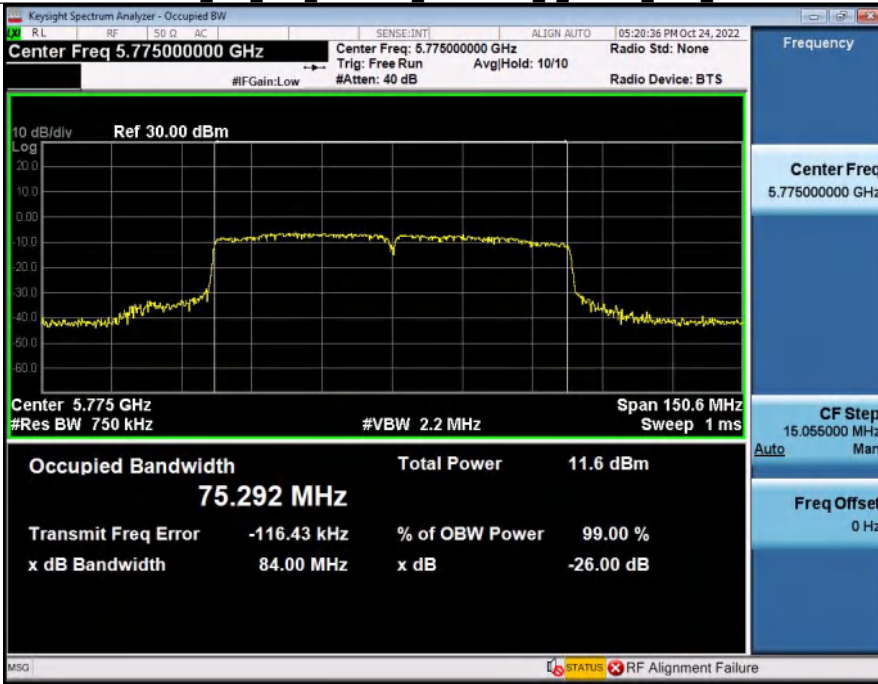
**-26dB and 99% Emission Bandwidth 5 8WiFi 5755 40M**



**-26dB and 99% Emission Bandwidth 5 8WiFi 5795 40M**



**-26dB and 99% Emission Bandwidth 5 8WiFi 5775 80M**

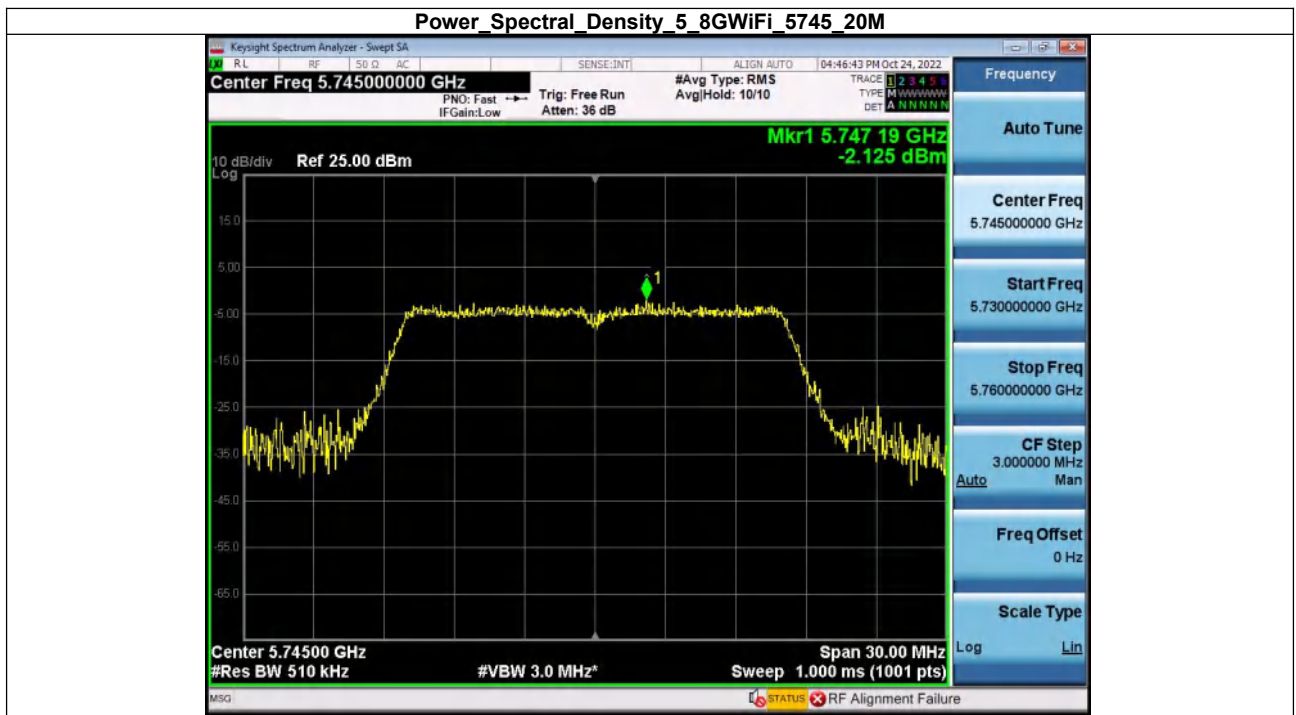


## 4. Maximum Conducted Output Power

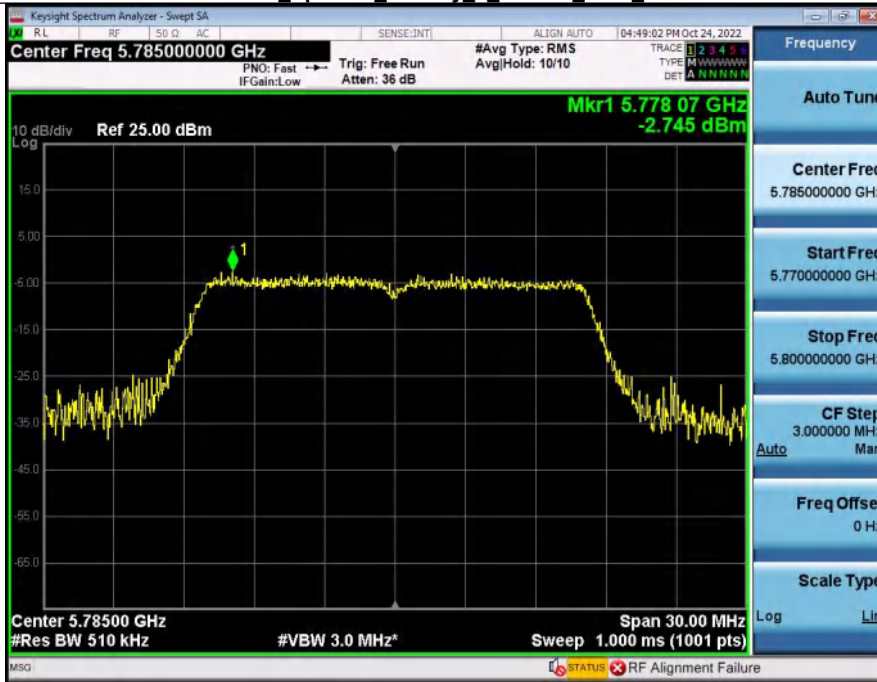
Condition	Antenna	Modulation	Frequency (MHz)	Conducted Power(dBm)	Duty factor(dB)	Total Power(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	5745.00	10.70	0.18	10.88	30	Pass
NVNT	ANT1	802.11a	5785.00	10.15	0.00	10.15	30	Pass
NVNT	ANT1	802.11a	5825.00	8.81	0.19	9.00	30	Pass
NVNT	ANT1	802.11n(HT20)	5745.00	10.71	0.61	11.32	30	Pass
NVNT	ANT1	802.11n(HT20)	5785.00	10.36	0.72	11.08	30	Pass
NVNT	ANT1	802.11n(HT20)	5825.00	8.65	0.66	9.31	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5745.00	10.26	0.00	10.26	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5785.00	10.16	0.17	10.33	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5825.00	8.65	0.19	8.84	30	Pass
NVNT	ANT1	802.11n(HT40)	5755.00	10.82	0.42	11.24	30	Pass
NVNT	ANT1	802.11n(HT40)	5795.00	10.12	0.35	10.47	30	Pass
NVNT	ANT1	802.11ac(VHT40)	5755.00	10.82	0.33	11.15	30	Pass
NVNT	ANT1	802.11ac(VHT40)	5795.00	10.07	0.40	10.47	30	Pass
NVNT	ANT1	802.11ac(VHT80)	5775.00	10.15	0.44	10.59	30	Pass

5. Power Spectral Density

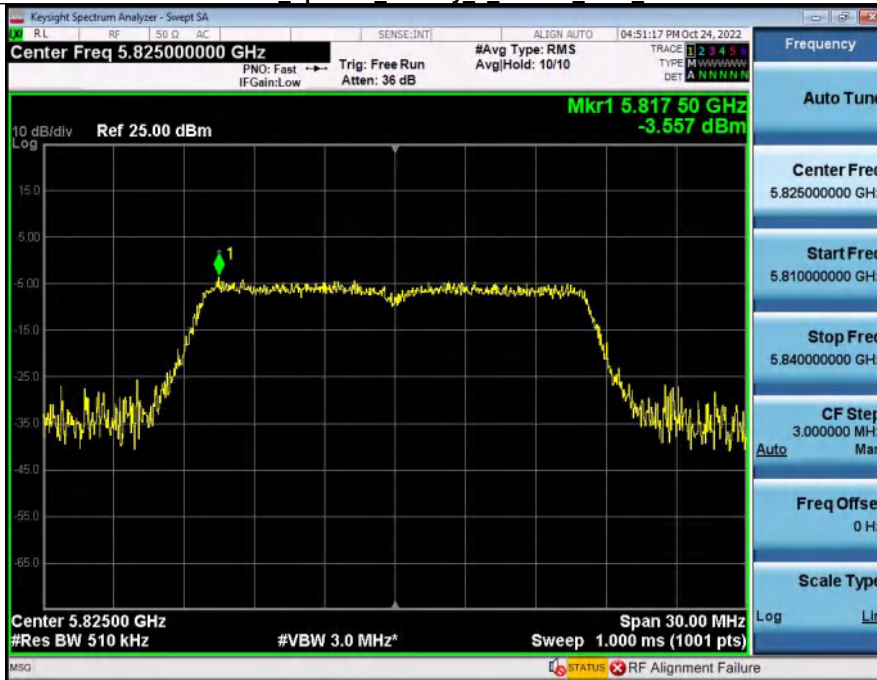
Condition	Antenna	Modulation	Frequency (MHz)	PSD_SA(dBm)	PSD(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	5745.00	-2.125	-2.211	30	Pass
NVNT	ANT1	802.11a	5785.00	-2.745	-2.831	30	Pass
NVNT	ANT1	802.11a	5825.00	-3.557	-3.643	30	Pass
NVNT	ANT1	802.11n(HT20)	5745.00	-0.416	-0.502	30	Pass
NVNT	ANT1	802.11n(HT20)	5785.00	-2.070	-2.156	30	Pass
NVNT	ANT1	802.11n(HT20)	5825.00	-3.164	-3.250	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5745.00	-2.805	-2.891	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5785.00	-2.939	-3.025	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5825.00	-3.654	-3.740	30	Pass
NVNT	ANT1	802.11n(HT40)	5755.00	-5.352	-5.438	30	Pass
NVNT	ANT1	802.11n(HT40)	5795.00	-5.928	-6.014	30	Pass
NVNT	ANT1	802.11ac(VHT40)	5755.00	-4.858	-4.944	30	Pass
NVNT	ANT1	802.11ac(VHT40)	5795.00	-4.789	-4.875	30	Pass
NVNT	ANT1	802.11ac(VHT80)	5775.00	-8.764	-8.850	30	Pass



### Power Spectral Density 5 8WiFi 5785 20M



### Power Spectral Density 5 8WiFi 5825 20M



### Power Spectral Density 5\_8WiFi 5745\_20M

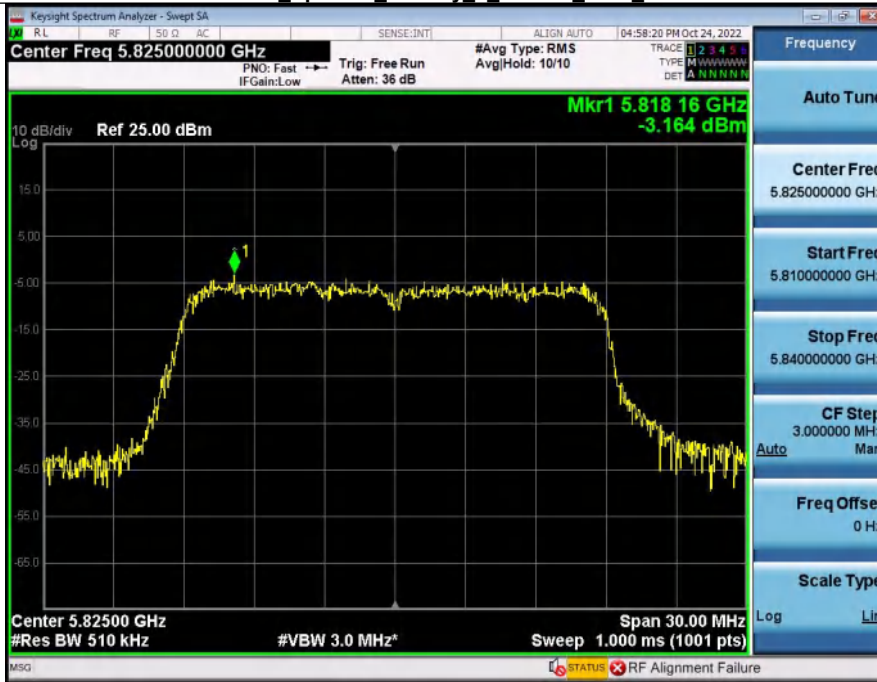


### Power Spectral Density 5\_8WiFi 5785\_20M





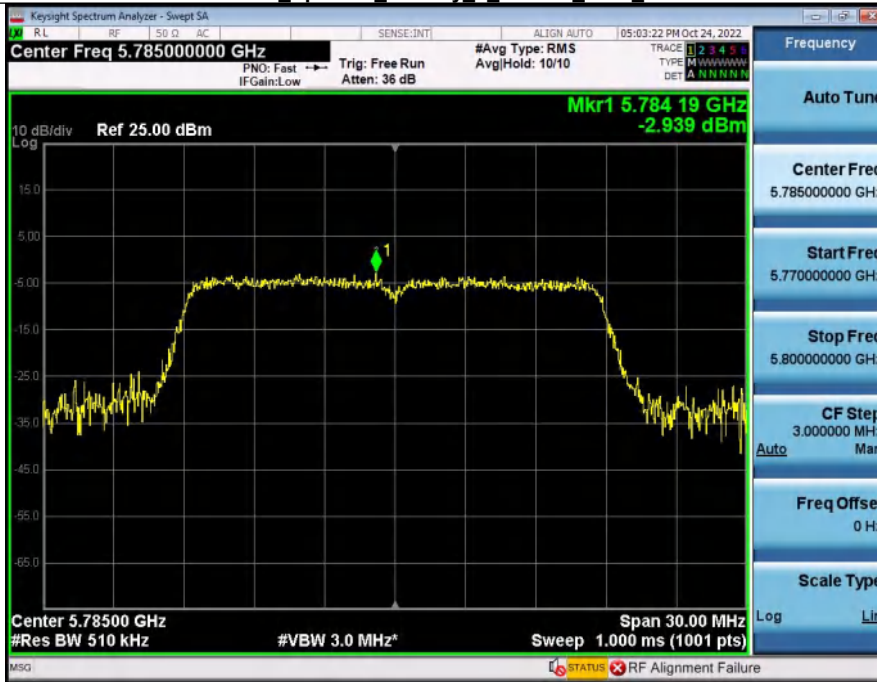
### Power Spectral Density 5 8WiFi 5825 20M



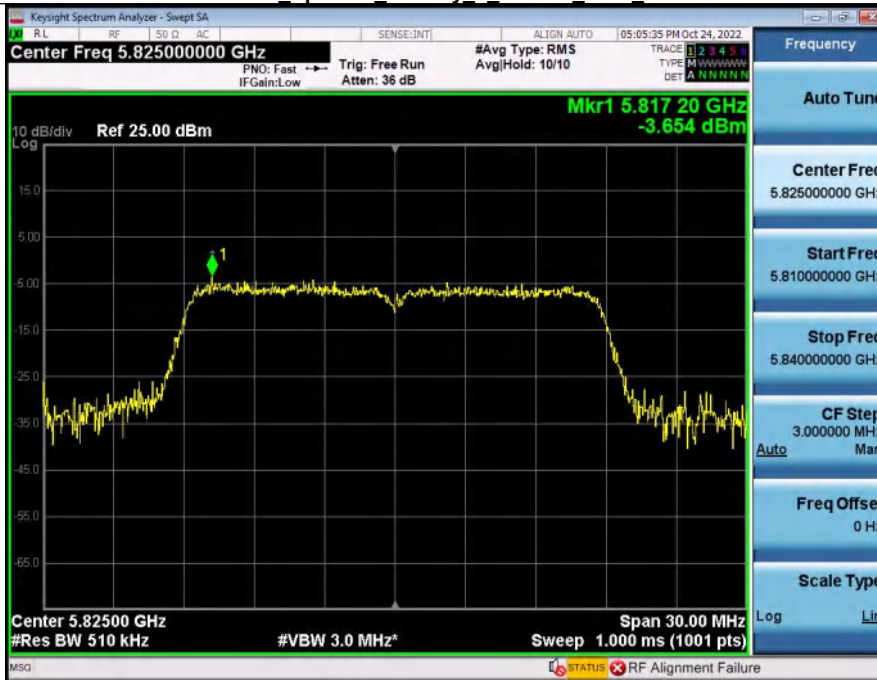
### Power Spectral Density 5 8WiFi 5745 20M



### Power Spectral Density 5 8WiFi 5785 20M



### Power Spectral Density 5 8WiFi 5825 20M

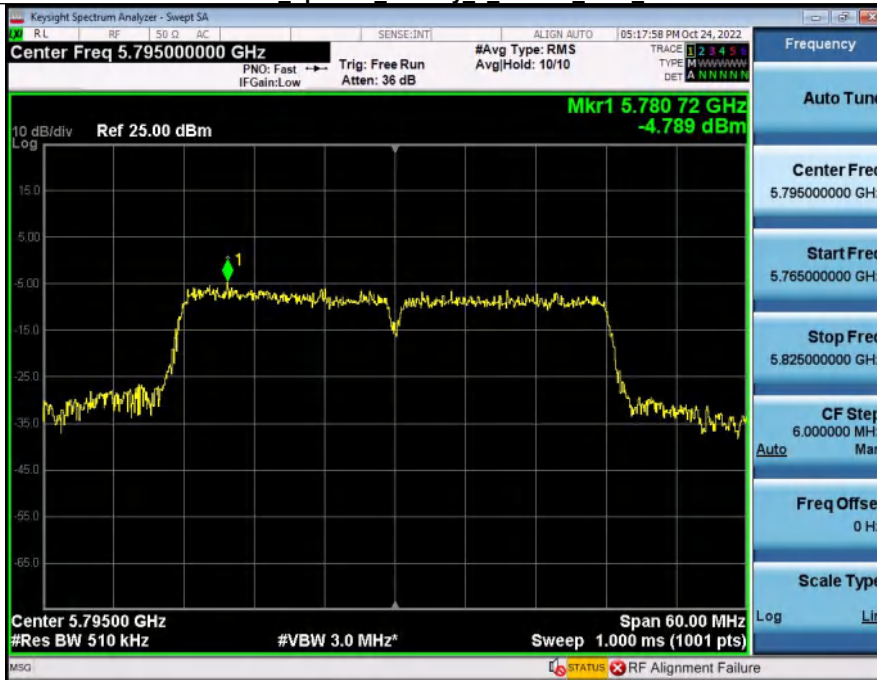




### Power Spectral Density 5 8WiFi 5755\_40M



### Power Spectral Density 5 8WiFi 5795\_40M



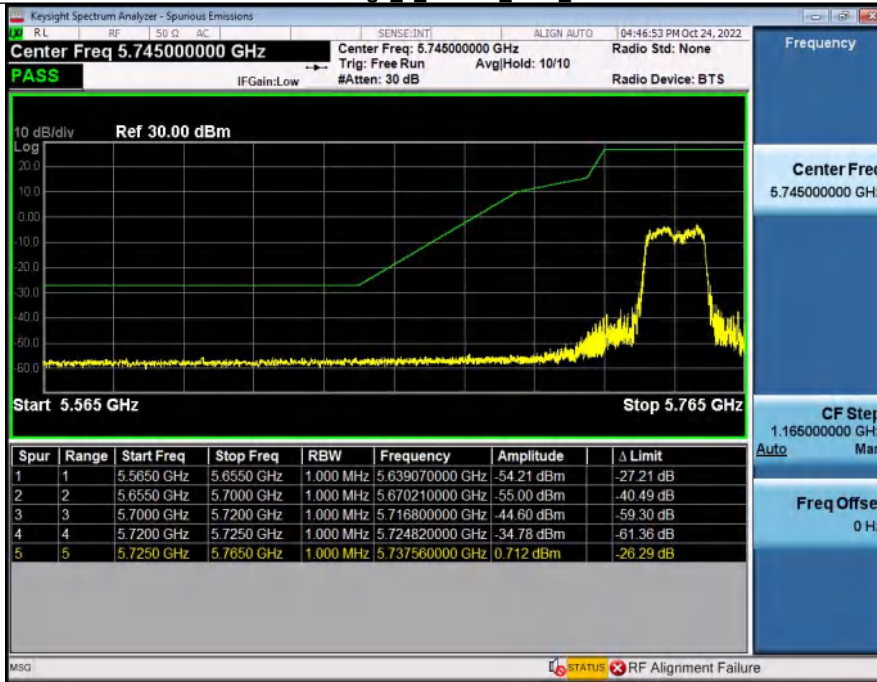
Power Spectral Density 5\_8WiFi 5775\_80M



## 6. Bandedge

Condition	Antenna	Modulation	Channel	Frequency Area(MHz)	Frequency(MHz)	Amplitude(dBm)	Limit(dBm)	Result
NVNT	ANT1	802.11a	LCH	5565-5655	5639.070	-54.21	-27.00	Pass
NVNT	ANT1	802.11a	LCH	5655-5700	5670.210	-55.00	-14.49	Pass
NVNT	ANT1	802.11a	LCH	5700-5720	5716.800	-44.60	14.70	Pass
NVNT	ANT1	802.11a	LCH	5720-5725	5724.820	-34.78	26.59	Pass
NVNT	ANT1	802.11a	HCH	5850-5855	5852.305	-46.31	21.74	Pass
NVNT	ANT1	802.11a	HCH	5855-5875	5855.520	-48.89	15.45	Pass
NVNT	ANT1	802.11a	HCH	5875-5920	5919.550	-54.67	-26.63	Pass
NVNT	ANT1	802.11a	HCH	5920-6005	6002.960	-49.62	-27.00	Pass
NVNT	ANT1	802.11n(HT20)	LCH	5565-5655	5635.200	-55.29	-27.00	Pass
NVNT	ANT1	802.11n(HT20)	LCH	5655-5700	5665.755	-55.02	-18.16	Pass
NVNT	ANT1	802.11n(HT20)	LCH	5700-5720	5711.780	-51.46	13.30	Pass
NVNT	ANT1	802.11n(HT20)	LCH	5720-5725	5722.760	-47.53	21.89	Pass
NVNT	ANT1	802.11n(HT20)	HCH	5850-5855	5853.155	-50.89	19.81	Pass
NVNT	ANT1	802.11n(HT20)	HCH	5855-5875	5867.720	-53.78	12.04	Pass
NVNT	ANT1	802.11n(HT20)	HCH	5875-5920	5915.005	-53.93	-22.89	Pass
NVNT	ANT1	802.11n(HT20)	HCH	5920-6005	5939.720	-51.01	-27.00	Pass
NVNT	ANT1	802.11ac(VHT20)	LCH	5565-5655	5649.690	-55.20	-27.00	Pass
NVNT	ANT1	802.11ac(VHT20)	LCH	5655-5700	5670.165	-54.67	-14.53	Pass
NVNT	ANT1	802.11ac(VHT20)	LCH	5700-5720	5711.740	-47.28	13.29	Pass
NVNT	ANT1	802.11ac(VHT20)	LCH	5720-5725	5722.940	-38.20	22.30	Pass
NVNT	ANT1	802.11ac(VHT20)	HCH	5850-5855	5853.875	-48.20	18.16	Pass
NVNT	ANT1	802.11ac(VHT20)	HCH	5855-5875	5861.240	-52.75	13.85	Pass
NVNT	ANT1	802.11ac(VHT20)	HCH	5875-5920	5910.325	-54.37	-19.04	Pass
NVNT	ANT1	802.11ac(VHT20)	HCH	5920-6005	5921.615	-49.68	-27.00	Pass
NVNT	ANT1	802.11n(HT40)	LCH	5595-5655	5648.880	-54.82	-27.00	Pass
NVNT	ANT1	802.11n(HT40)	LCH	5655-5700	5690.280	-54.00	2.01	Pass
NVNT	ANT1	802.11n(HT40)	LCH	5700-5720	5719.620	-38.48	15.49	Pass
NVNT	ANT1	802.11n(HT40)	LCH	5720-5725	5720.375	-37.27	16.45	Pass
NVNT	ANT1	802.11n(HT40)	HCH	5850-5855	5854.765	-53.93	16.14	Pass
NVNT	ANT1	802.11n(HT40)	HCH	5855-5875	5870.980	-54.15	11.13	Pass
NVNT	ANT1	802.11n(HT40)	HCH	5875-5920	5914.870	-54.04	-22.78	Pass
NVNT	ANT1	802.11n(HT40)	HCH	5920-5955	5925.495	-50.43	-27.00	Pass
NVNT	ANT1	802.11ac(VHT40)	LCH	5595-5655	5650.980	-55.06	-27.00	Pass
NVNT	ANT1	802.11ac(VHT40)	LCH	5655-5700	5691.405	-53.82	2.93	Pass
NVNT	ANT1	802.11ac(VHT40)	LCH	5700-5720	5717.720	-38.99	14.96	Pass
NVNT	ANT1	802.11ac(VHT40)	LCH	5720-5725	5720.695	-35.81	17.18	Pass
NVNT	ANT1	802.11ac(VHT40)	HCH	5850-5855	5854.105	-54.15	17.64	Pass
NVNT	ANT1	802.11ac(VHT40)	HCH	5855-5875	5871.480	-54.54	10.99	Pass
NVNT	ANT1	802.11ac(VHT40)	HCH	5875-5920	5903.035	-54.51	-13.05	Pass
NVNT	ANT1	802.11ac(VHT40)	HCH	5920-5955	5936.485	-50.59	-27.00	Pass
NVNT	ANT1	802.11ac(VHT80)	MCH	5650-5655	5652.445	-54.67	-27.00	Pass
NVNT	ANT1	802.11ac(VHT80)	MCH	5655-5700	5688.660	-51.51	0.68	Pass
NVNT	ANT1	802.11ac(VHT80)	MCH	5700-5720	5719.820	-43.09	15.55	Pass
NVNT	ANT1	802.11ac(VHT80)	MCH	5720-5725	5722.805	-40.61	22.00	Pass
NVNT	ANT1	802.11ac(VHT80)	MCH	5850-5855	5853.085	-52.94	19.97	Pass
NVNT	ANT1	802.11ac(VHT80)	MCH	5855-5875	5869.760	-53.60	11.47	Pass
NVNT	ANT1	802.11ac(VHT80)	MCH	5875-5920	5915.455	-54.57	-23.26	Pass
NVNT	ANT1	802.11ac(VHT80)	MCH	5920-5925	5920.810	-50.50	-27.00	Pass

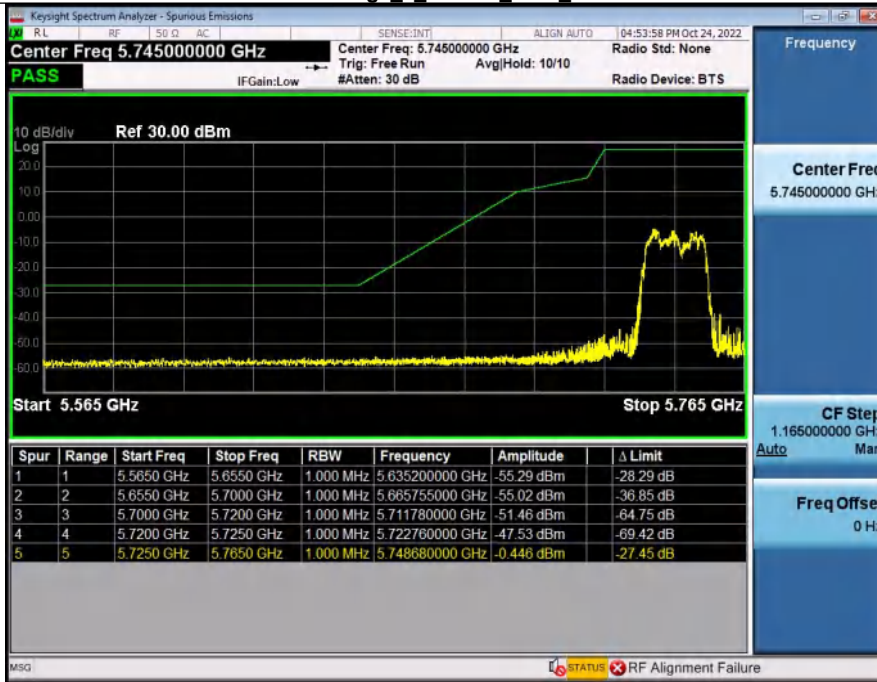
**Bandedge 5 8GWiFi 5745 20M**



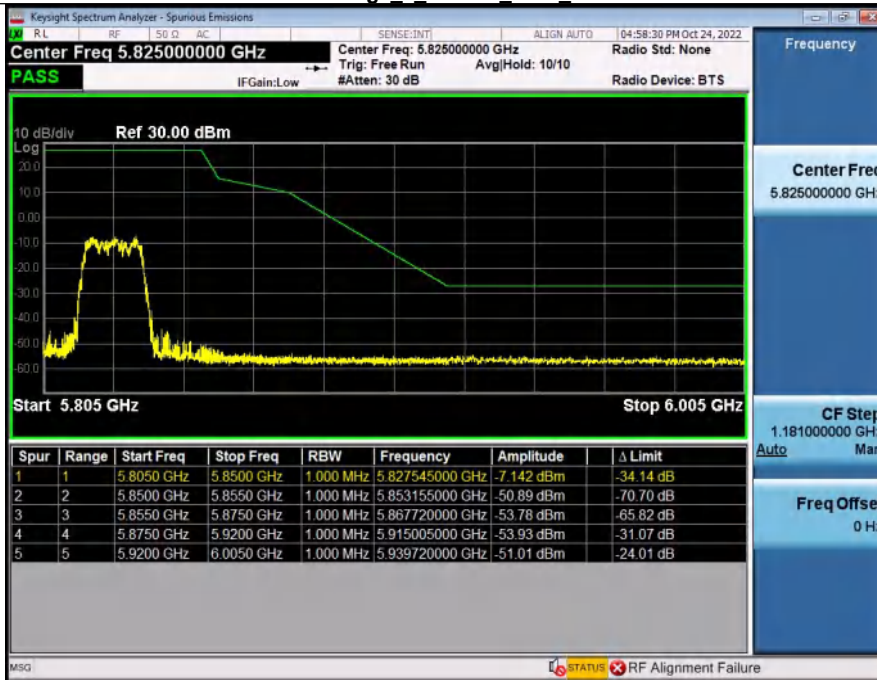
**Bandedge 5 8GWiFi 5825 20M**



**Bandedge 5 8GWiFi 5745 20M**

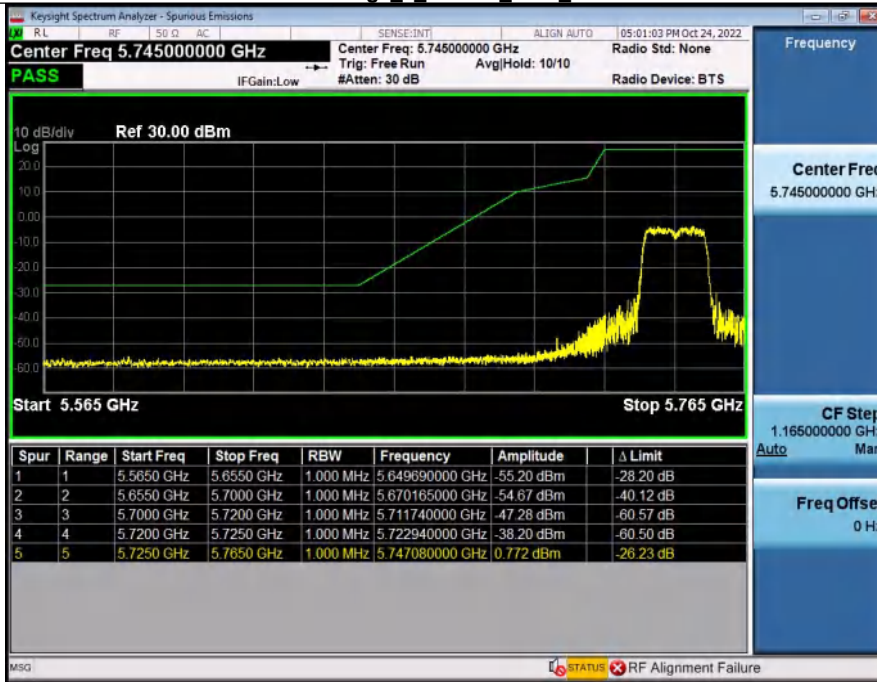


**Bandedge 5 8GWiFi 5825 20M**

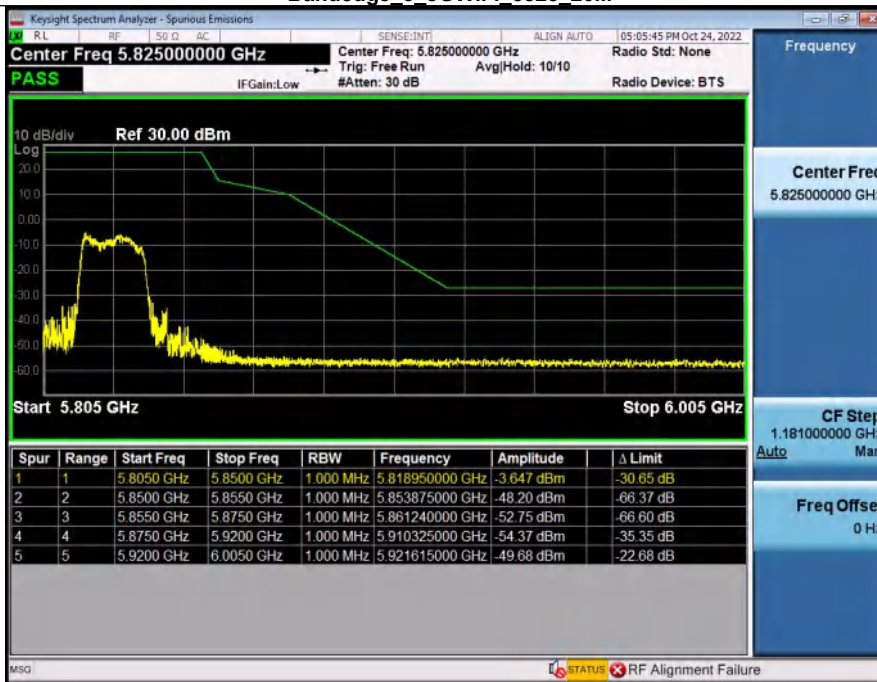




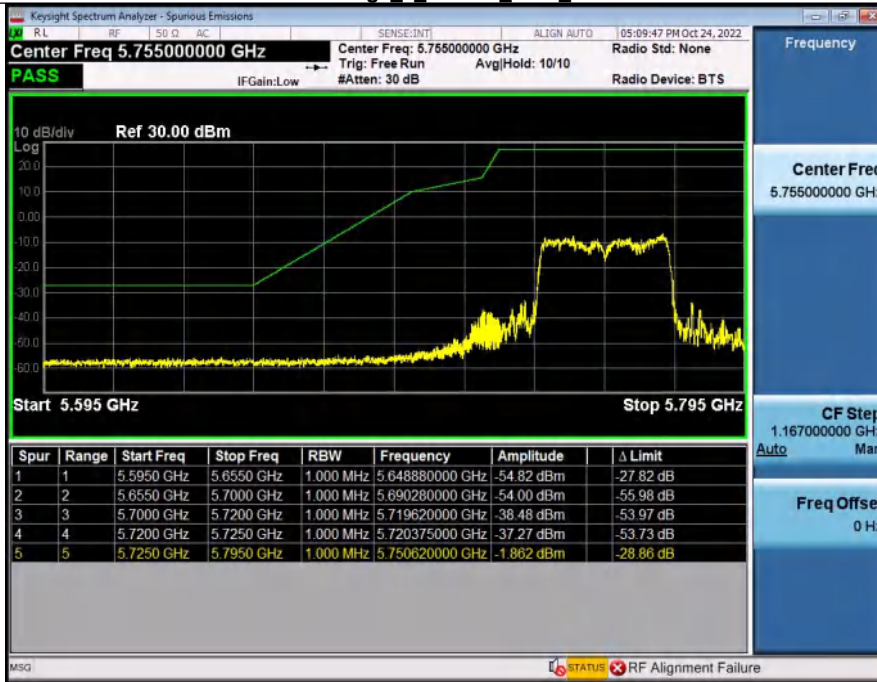
**Bandedge 5 8GWiFi 5745 20M**



**Bandedge 5 8GWiFi 5825 20M**



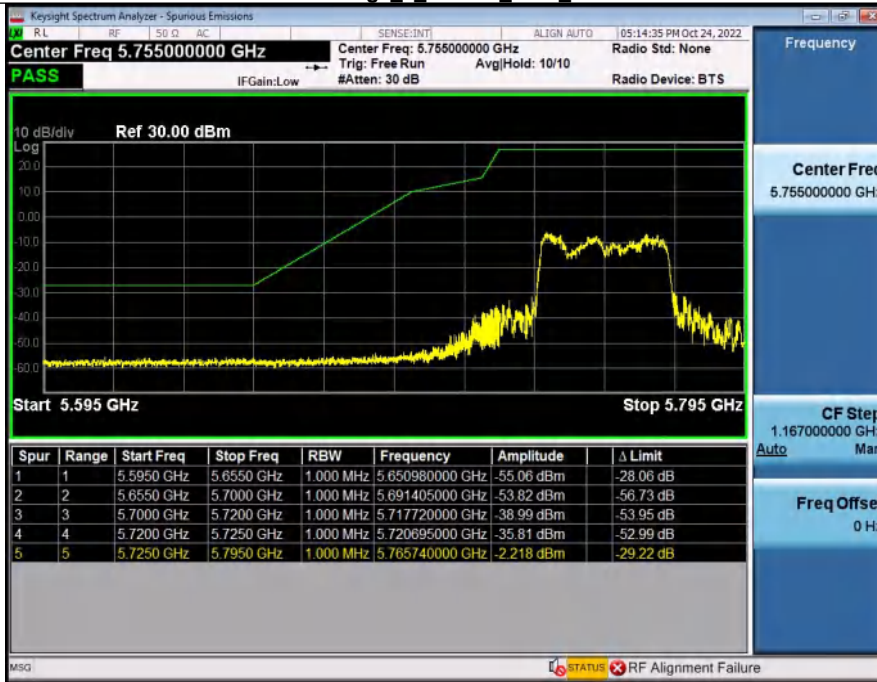
**Bandedge 5 8GWiFi 5755 40M**



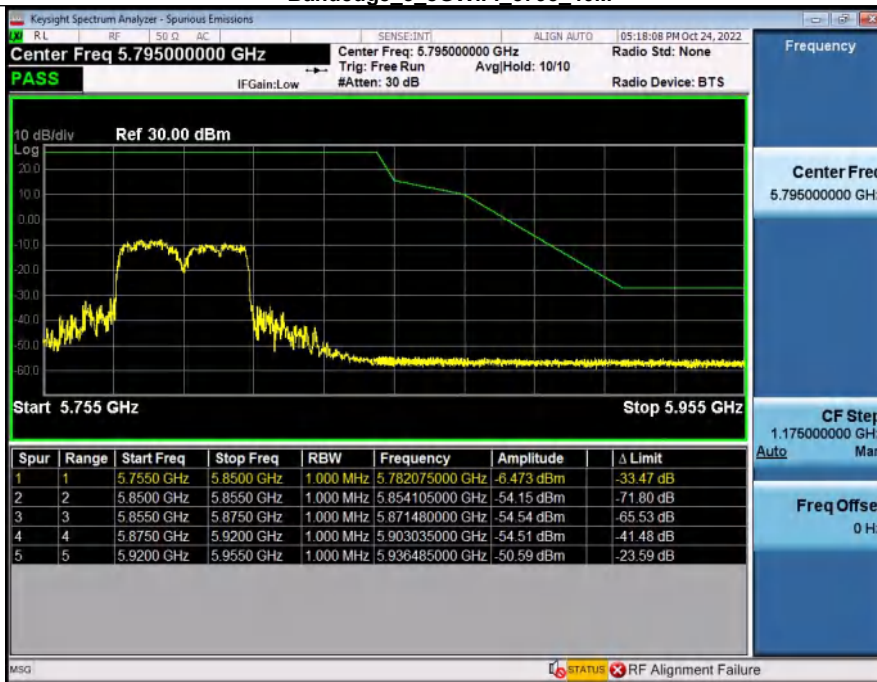
**Bandedge 5 8GWiFi 5795 40M**



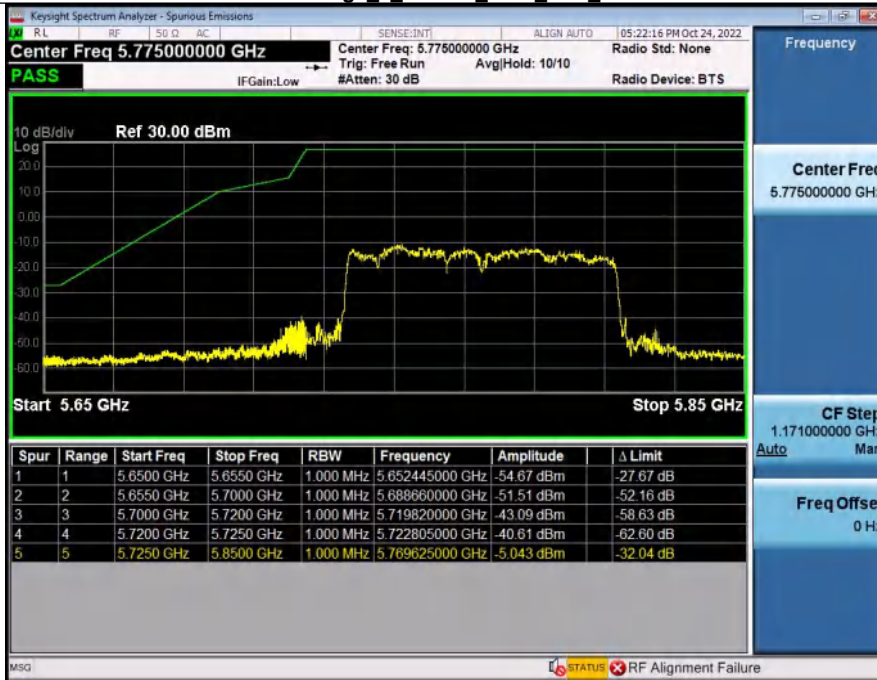
**Bandedge 5 8GWiFi 5755 40M**



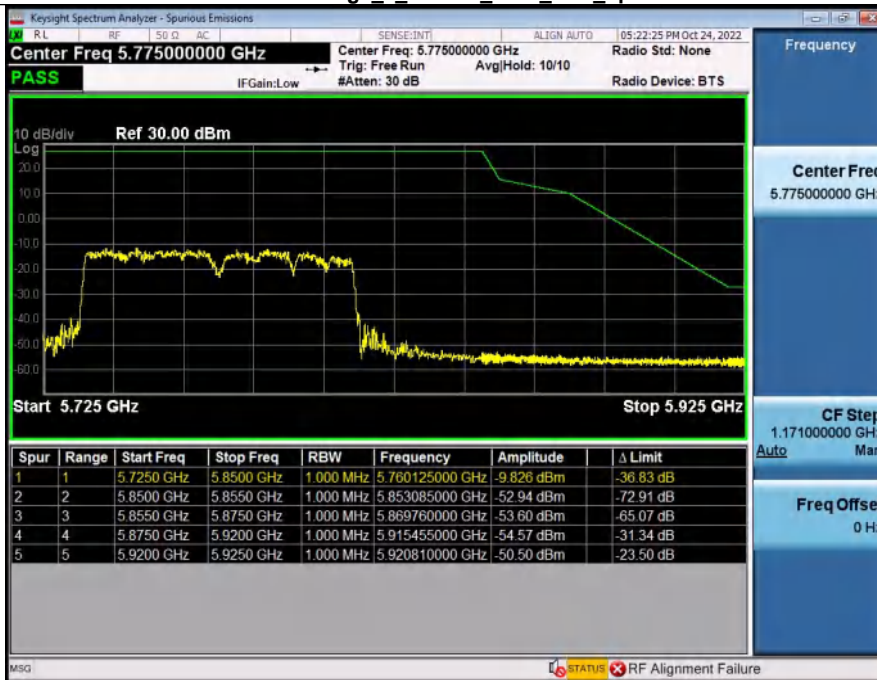
**Bandedge 5 8GWiFi 5795 40M**



**Bandedge\_5\_8WiFi\_5775\_80M\_low**

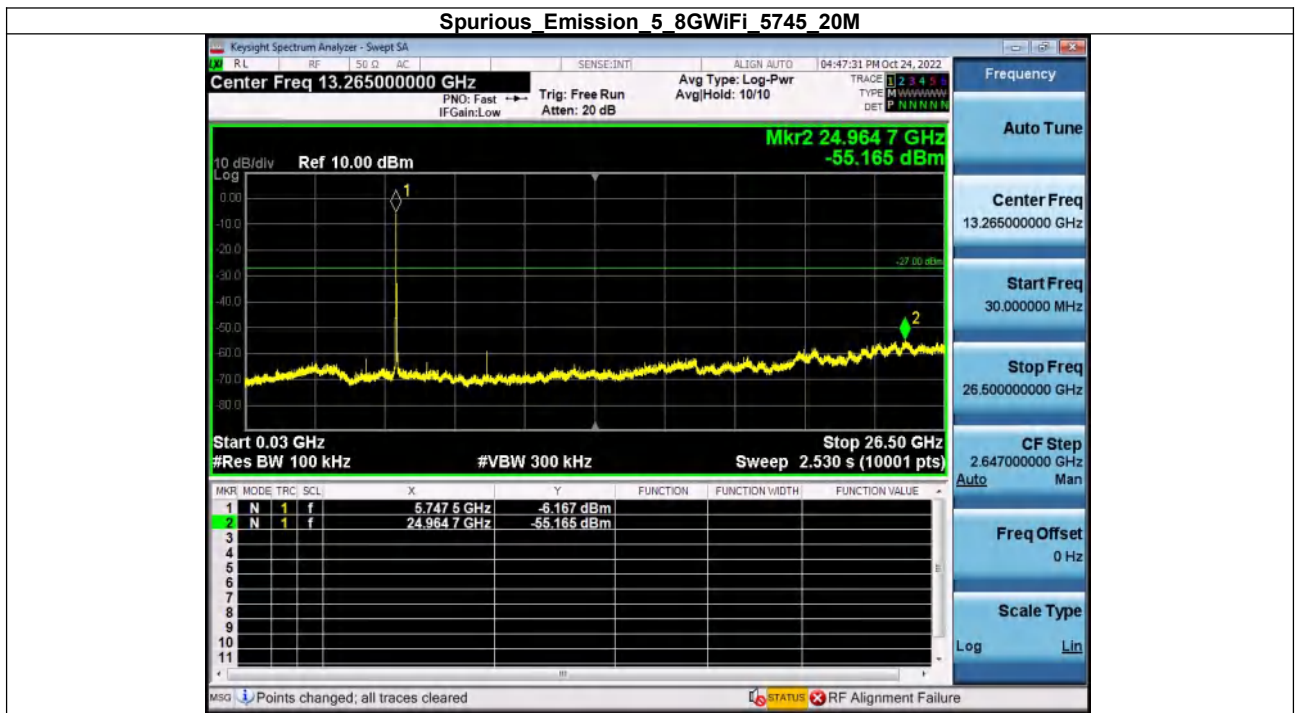


**Bandedge\_5\_8WiFi\_5775\_80M\_up**

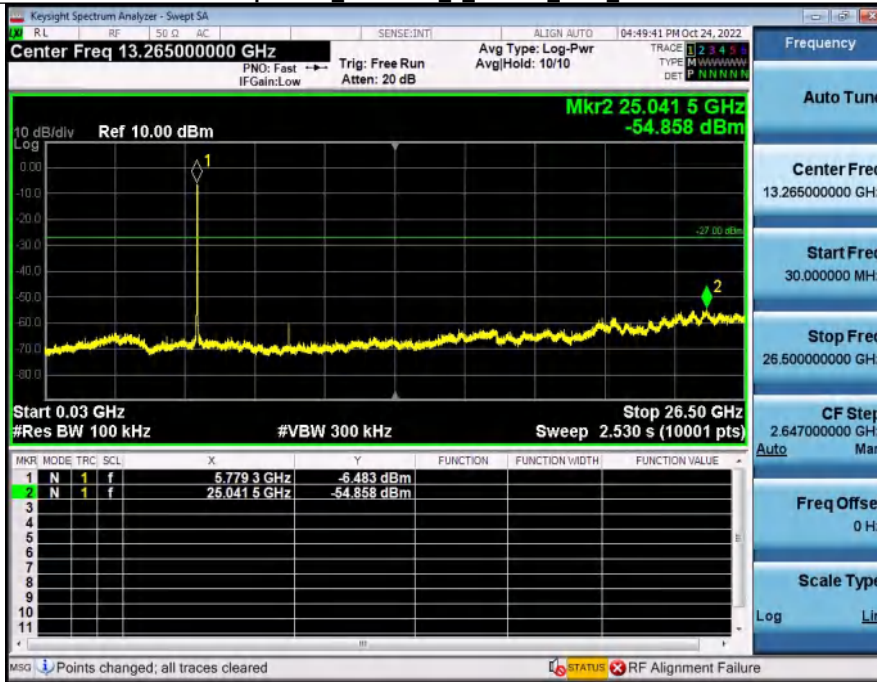


7. Spurious Emission

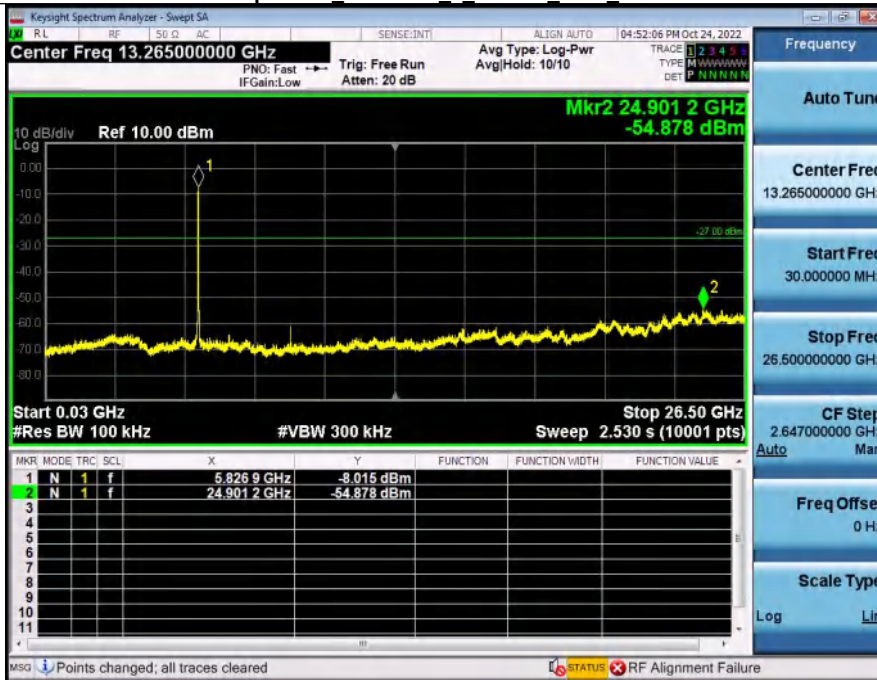
Condition	Antenna	Modulation	Max. Mark Frequency(MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	24964.74	-55.16	-27	Pass
NVNT	ANT1	802.11a	25041.50	-54.86	-27	Pass
NVNT	ANT1	802.11a	24901.21	-54.88	-27	Pass
NVNT	ANT1	802.11n(HT20)	24946.21	-55.13	-27	Pass
NVNT	ANT1	802.11n(HT20)	25078.56	-54.06	-27	Pass
NVNT	ANT1	802.11n(HT20)	24988.56	-54.64	-27	Pass
NVNT	ANT1	802.11ac(VHT20)	25057.38	-52.36	-27	Pass
NVNT	ANT1	802.11ac(VHT20)	25083.85	-54.99	-27	Pass
NVNT	ANT1	802.11ac(VHT20)	24983.27	-54.87	-27	Pass
NVNT	ANT1	802.11n(HT40)	25067.97	-54.84	-27	Pass
NVNT	ANT1	802.11n(HT40)	25062.68	-53.99	-27	Pass
NVNT	ANT1	802.11ac(VHT40)	24940.92	-53.76	-27	Pass
NVNT	ANT1	802.11ac(VHT40)	25107.68	-54.67	-27	Pass
NVNT	ANT1	802.11ac(VHT80)	25105.03	-54.51	-27	Pass



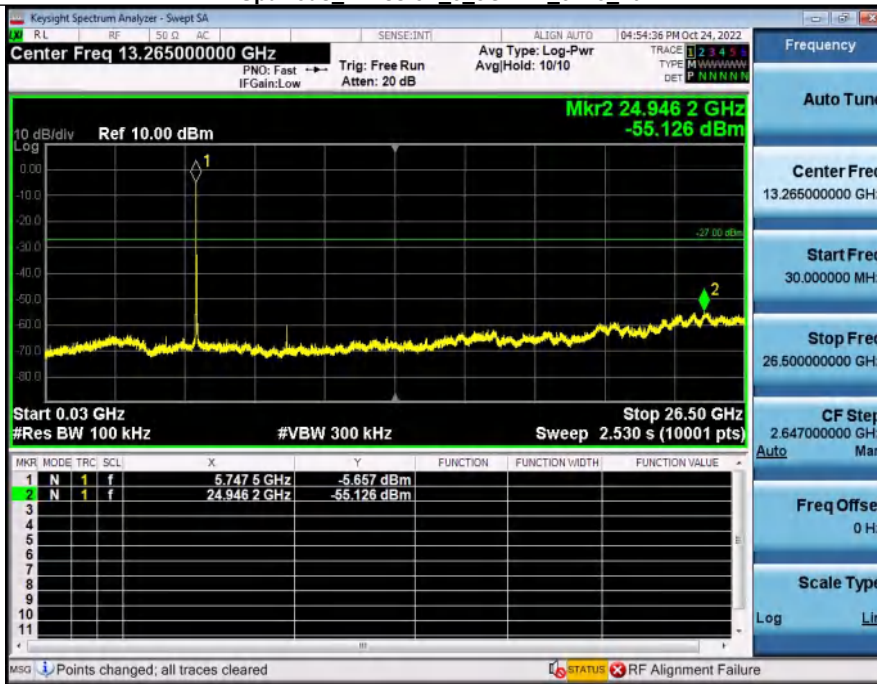
Spurious Emission 5 8WiFi 5785 20M



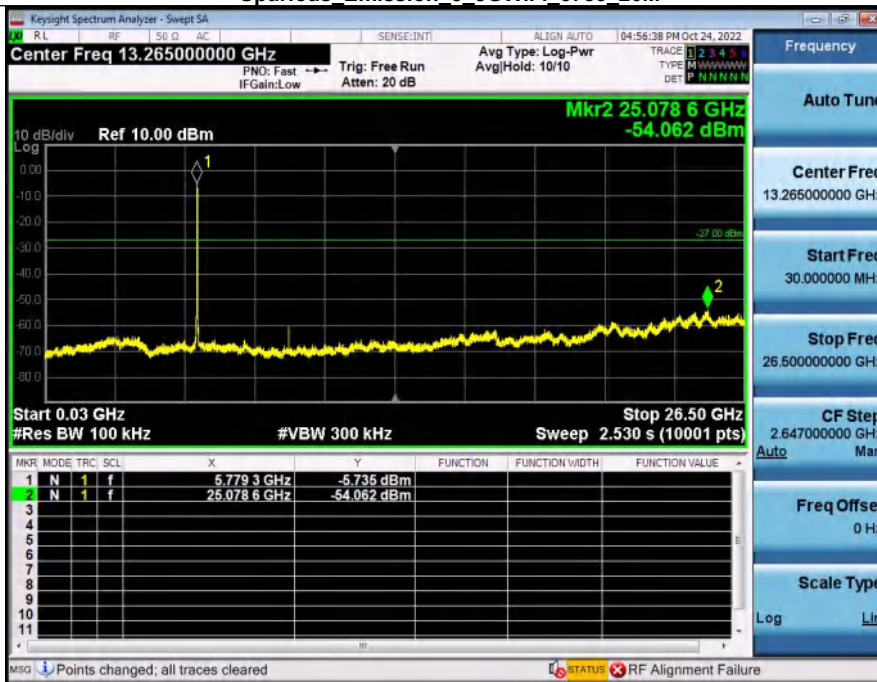
Spurious Emission 5 8WiFi 5825 20M



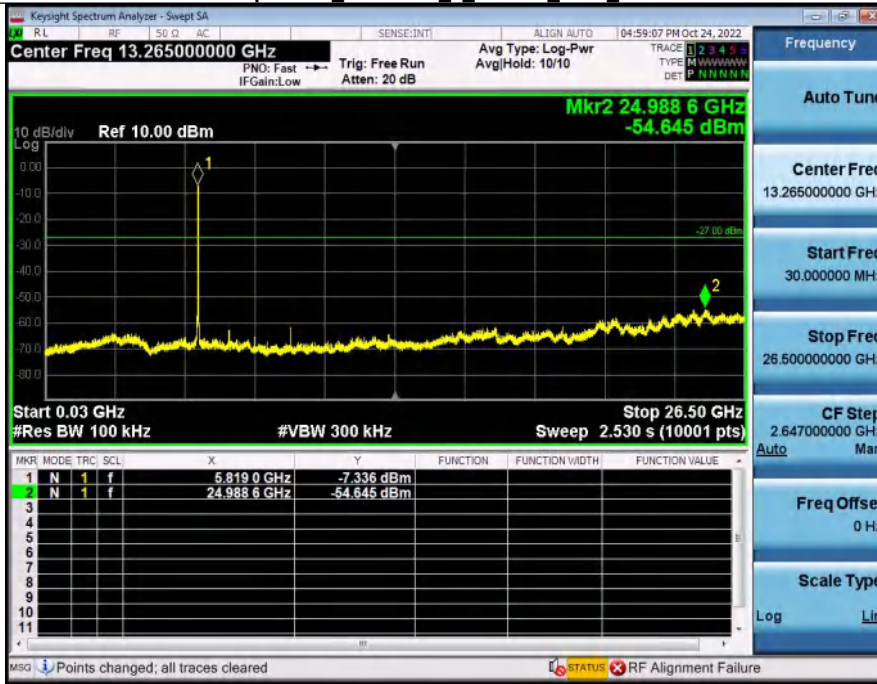
Spurious Emission 5 8WiFi 5745 20M



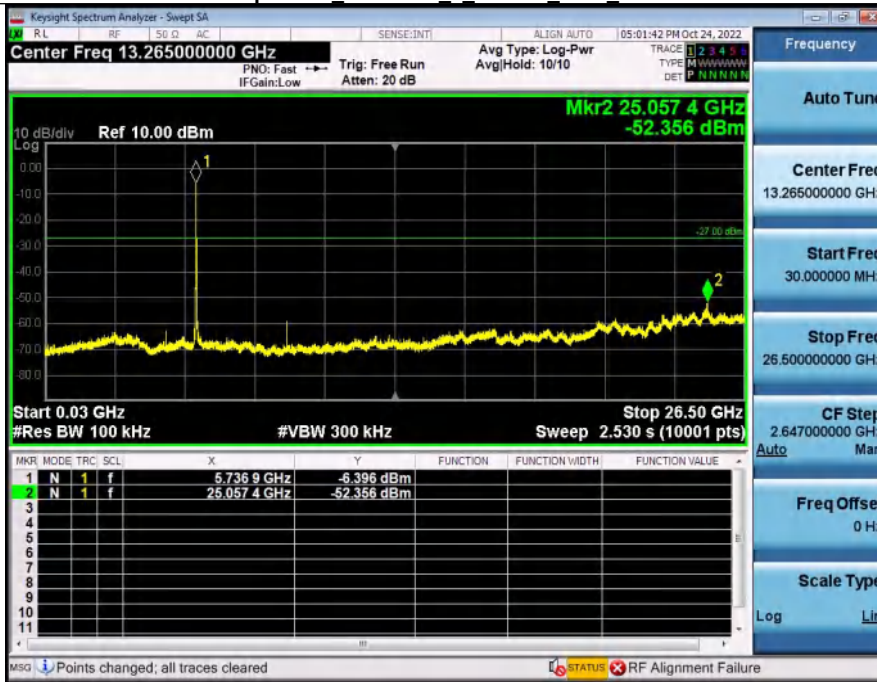
Spurious Emission 5 8WiFi 5785 20M



Spurious Emission 5 8WiFi 5825 20M

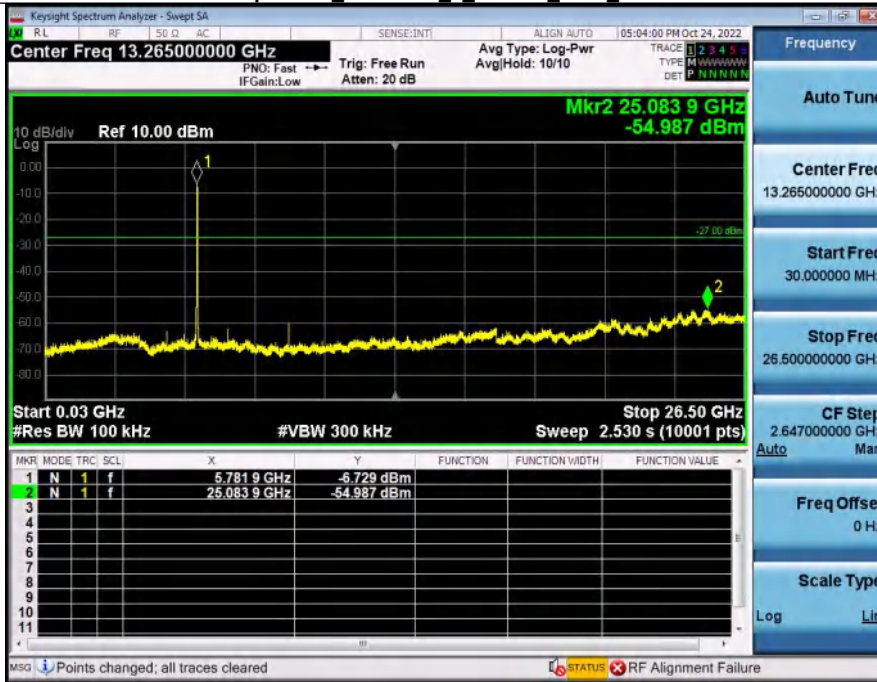


Spurious Emission 5 8WiFi 5745 20M

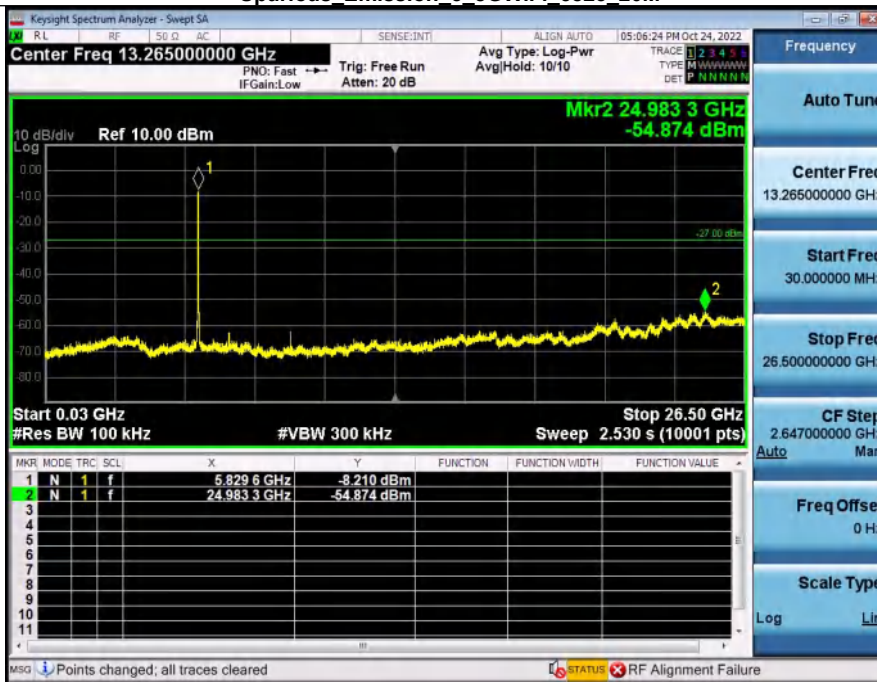




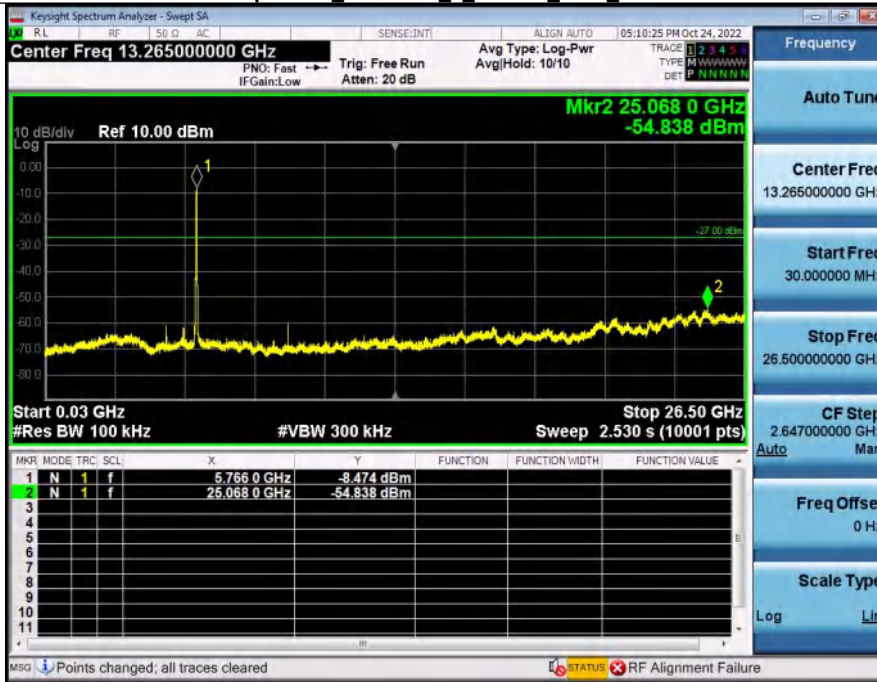
Spurious Emission 5 8WiFi 5785 20M



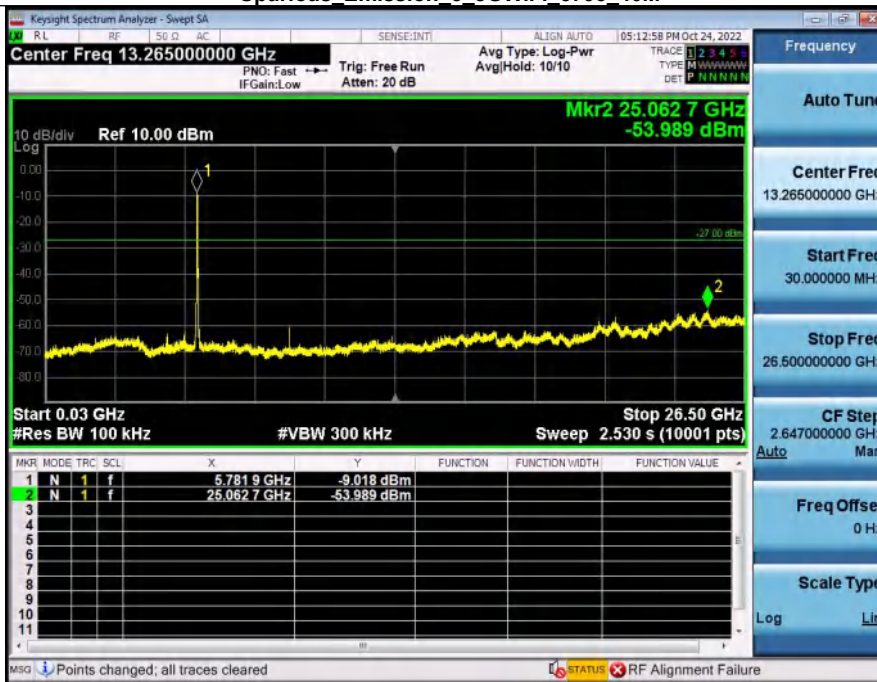
Spurious Emission 5 8WiFi 5825 20M



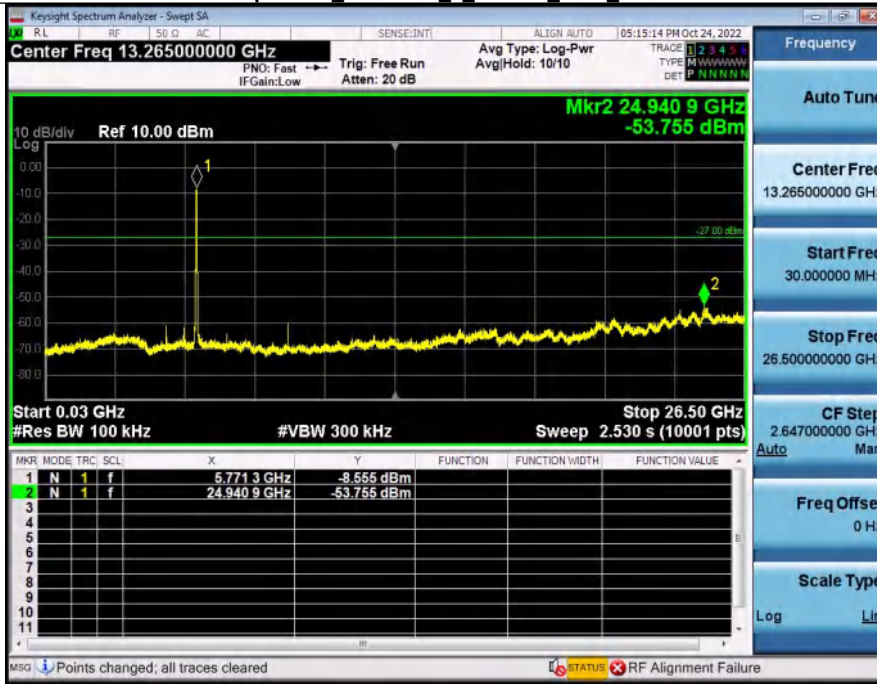
Spurious Emission 5 8WiFi 5755 40M



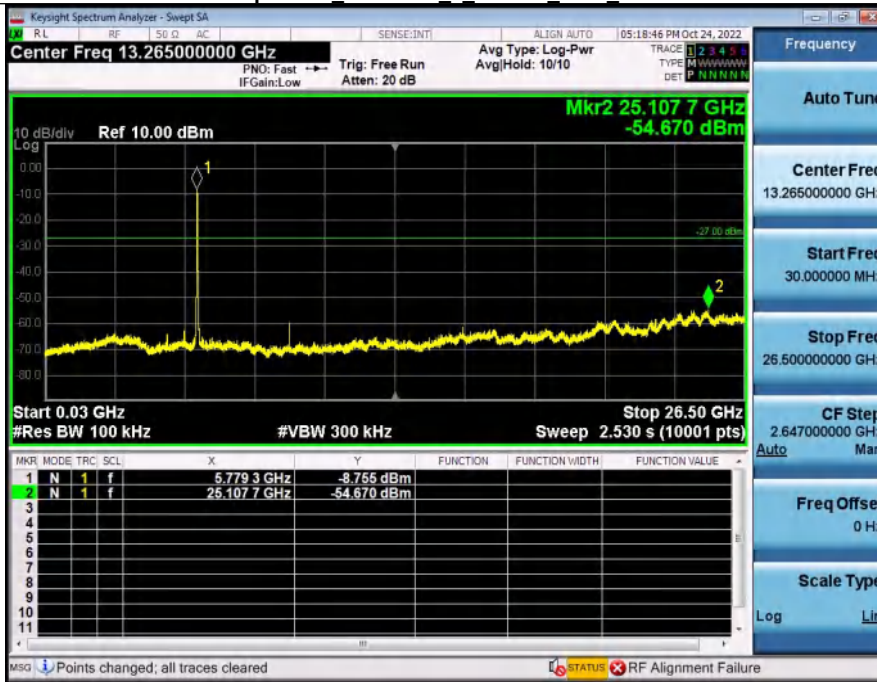
Spurious Emission 5 8WiFi 5795 40M



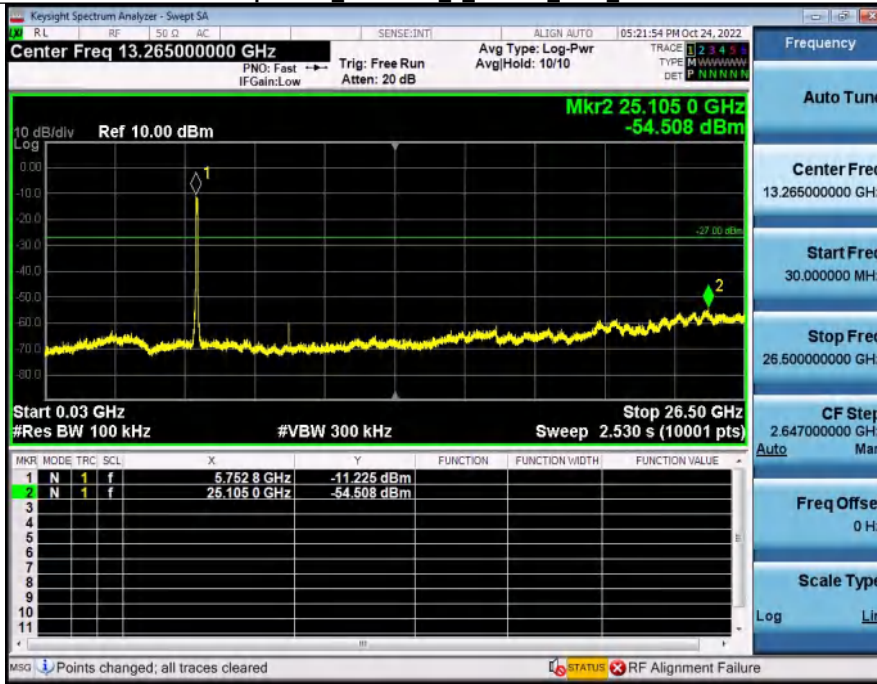
Spurious Emission 5 8WiFi 5755 40M



Spurious Emission 5 8WiFi 5795 40M



Spurious Emission\_5 8GWiFi\_5775\_80M



## **12. TEST SETUP PHOTO**

Reference to the test setup file for details.

## **13. EUT CONSTRUCTIONAL DETAILS**

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

**\*\*\*\*\* END OF REPORT \*\*\*\*\***