

TEST REPORT

Report No.: BCTC2406360847-3E

Applicant: Shenzhen Whale Vision Technology Co., Ltd

Product Name: Smart Camera

Test Model: JS-R05

Tested Date: 2024-06-06 to 2024-07-25

Issued Date: 2024-08-01

Shenzhen BCTC Testing Co., Ltd.

FCC ID: 2AW24JS-R05

Product Name: Smart Camera

Trademark: N/A

Model/Type Ref.: JS-R05,JS-D01,JS-D02,JS-R06,JS-R07,JS-R08,JS-R09,JS-B01S,JS-B02S,JS-B03S,JS-B04S,JS-B05S,JS-CB2,JS-CB3,JS-CB4,JS-CB5,JS-CB6,JS-CB7,JS-CB8,JS-P169,JS-P170,JS-P170S,JS-P180,127157,JS-DXX,JS-RXX,JS-B0XX,JS-P1XX,(XX can be 01-99)

Prepared For: Shenzhen Whale Vision Technology Co., Ltd

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Manufacturer: Shenzhen Whale Vision Technology Co., Ltd

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Sample Received Date: 2024-06-06

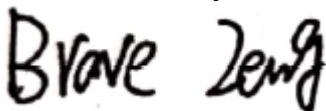
Sample tested Date: 2024-06-06 to 2024-07-25

Report No.: BCTC2406360847-3E

Test Standards: FCC Part15 15.407
ANSI C63.10-2013
KDB 662911 D01 v02r01
KDB 789033 D02 v02r01

Test Results: PASS

Tested by:



Brave Zeng/ Project Handler

Approved by:



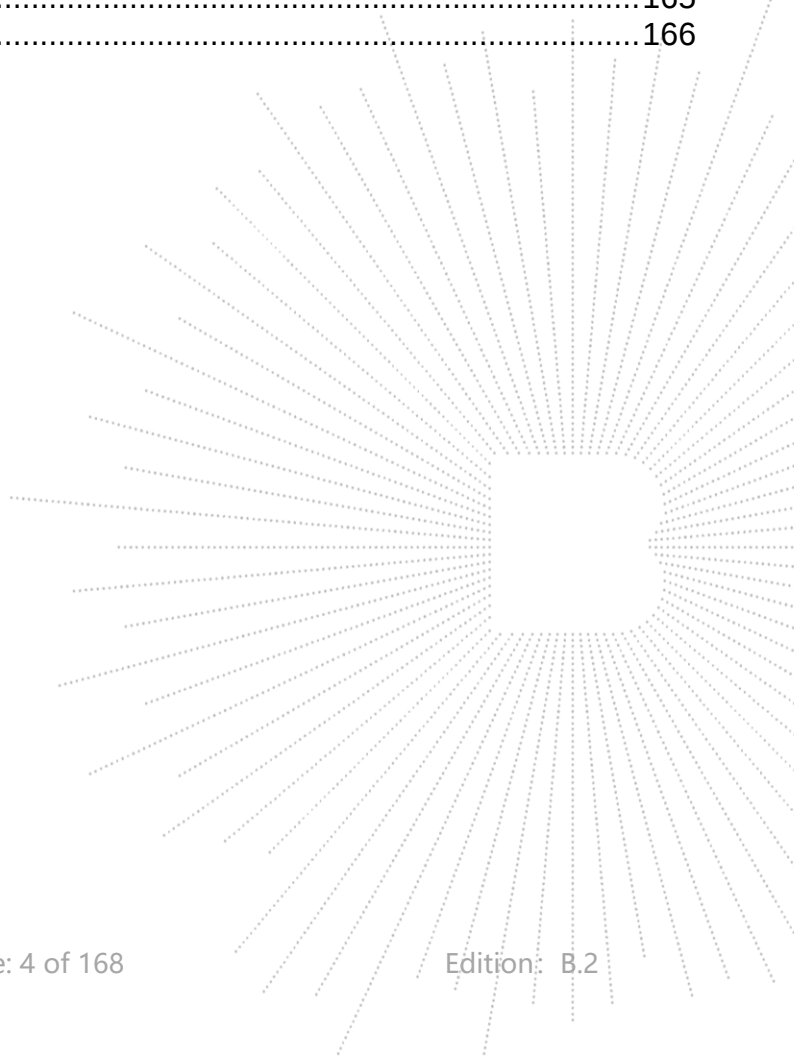
Zero Zhou/Reviewer

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1. Version

Report No.	Issue Date	Description	Approved
BCTC2406360847-3E	2024-08-01	Original	Valid

2. Test Summary

The Product has been tested according to the following specifications:

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

3. Measurement Uncertainty

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

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

4. Product Information and Test Setup

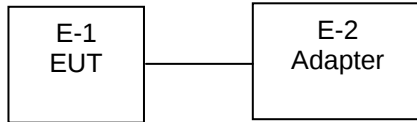
4.1 Product Information

Model/Type Ref.:	JS-R05,JS-D01,JS-D02,JS-R06,JS-R07,JS-R08,JS-R09,JS-B01S,JS-B02S,JS-B03S,JS-B04S,JS-B05S,JS-CB2,JS-CB3,JS-CB4,JS-CB5,JS-CB6,JS-CB7,JS-CB8,JS-P169,JS-P170,JS-P170S,JS-P180,127157,JS-DXX,JS-RXX,JS-B0XX,JS-P1XX,(XX can be 01-99)
Model differences:	The following models of units we produce are identical in electrical, mechanical and physical structure; The difference is only in the model name, we finally have JS-R05 as test model.
Hardware Version:	N/A
Software Version:	N/A
IEEE 802.11 WLAN Mode Supported	☒ 802.11a ☒ 802.11n(20MHz channel bandwidth) ☒ 802.11n(40MHz channel bandwidth) ☒ 802.11ac(20MHz channel bandwidth) ☒ 802.11ac(40MHz channel bandwidth) ☒ 802.11ac(80MHz channel bandwidth) ☒ 802.11ax(20MHz channel bandwidth) ☒ 802.11ax(40MHz channel bandwidth) ☒ 802.11ax(80MHz channel bandwidth)
Operation Frequency:	5180-5240MHz for 802.11a/n/ac(HT20)/ax(HE20); 5190-5230MHz for 802.11n/ac(HT40)/ax(HE40); 5210MHz for 802.11 ac/ax80; 5745-5825 MHz for 802.11a/n/ac(HT20)/ax(HE20); 5755-5795 MHz for 802.11n/ac(HT40)/ax(HE40); 5775MHz for 802.11 ac/ax80
Data Rate	☒ 802.11a:54/48/36/24/18/12/9/6Mbps ☒ 802.11n:up to 300 Mbps ☒ 802.11ac:up to 867 Mbps ☒ 802.11ax:up to 1201 Mbps
Type of Modulation:	☒ OFDM with BPSK/QPSK/16QAM/64QAM for 802.11a/n ☒ OFDM with BPSK/QPSK/16QAM/64QAM/256QAM for 802.11ac ☒ OFDMA with 1024QAM for 802.11AX HE
Transmit Power:	WIFI5.1G:7.06dBm WIFI5.8G: 11.36dBm
Antenna installation:	Internal antenna
Antenna Gain:	2.71 dBi
Remark:	The antenna gain of the product comes from the antenna report provided by the customer, and the test data is affected by the customer information.
Power supply:	Input: AC 100-240V,50/60Hz Output: DC 5V/1A
Battery:	DC 3.7 V, 9000 mAh

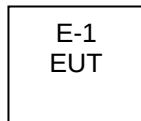
4.2 Test Setup Configuration

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

Conducted Emission:



Radiated Spurious Emission:



4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Smart Camera	N/A	JS-R05	N/A	EUT
E-2	Adapter	N/A	N/A	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note
C-1	N/A	N/A	N/A	N/A

Notes:

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

4.4 Channel List

Frequency and Channel list for 802.11a/n/ac/ax(20 MHz) (5180-5240MHz):

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

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

802.11ac/ax (80MHz) Carrier Frequency Channel	
Channel	Frequency (MHz)
42	5210

Frequency and Channel list for 802.11a/n/ac/ax(20 MHz) (5745-5825MHz):

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

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

802.11ac/ax 80MHz Carrier Frequency Channel	
Channel	Frequency (MHz)
155	5775

4.5 Test Mode

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

Pretest Mode	Description
Mode 1	802.11a / n/ ac/ ax 20 CH36/ CH40/ CH 48 802.11a /n/ ac/ax 20 CH149/ CH157/ CH 165
Mode 2	802.11n/ ac/ ax40 CH38/ CH 46 802.11n/ ac/ax40 CH 151 / CH 159
Mode 3	802.11 ac/ax80 CH 42/CH 155
Mode 4	Link Mode

4.6 Table Of Parameters Of Text Software Setting

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

Test software Version	CMD		
Parameters	DEF	DEF	DEF

5. Test Facility And Test Instrument Used

5.1 Test Facility

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

FCC Test Firm Registration Number: 712850

A2LA certificate registration number is: CN1212

ISED Registered No.: 23583

ISED CAB identifier: CN0017

5.2 Test Instrument Used

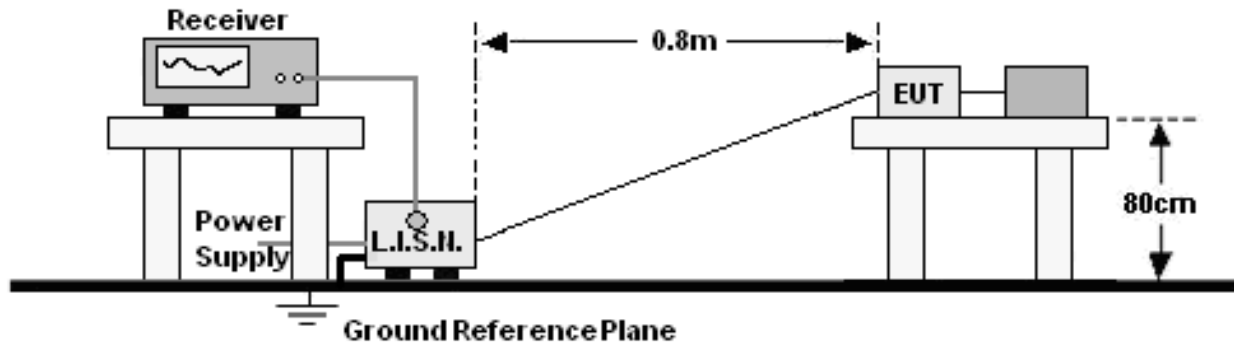
Conducted Emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESR3	102075	May 16, 2024	May 15, 2025
LISN	R&S	ENV216	101375	May 16, 2024	May 15, 2025
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Pulse limiter	Schwarzbeck	VTSD 9561-F	01323	May 16, 2024	May 15, 2025

RF Conducted Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Power meter	Keysight	E4419	\	May 16, 2024	May 15, 2025
Power Sensor (AV)	Keysight	E9300A	\	May 16, 2024	May 15, 2025
Signal Analyzer 20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 16, 2024	May 15, 2025
Spectrum Analyzer 9kHz-40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025

Radiated Emissions Test (966 Chamber)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	May 16, 2024	May 15, 2025
Receiver	R&S	ESR3	102075	May 16, 2024	May 15, 2025
Receiver	R&S	ESRP	101154	May 16, 2024	May 15, 2025
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 16, 2024	May 15, 2025
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 21, 2024	May 20, 2025
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 21, 2024	May 20, 2025
Amplifier	SKET	LAPA_01G1 8G-45dB	SK2021040901	May 16, 2024	May 15, 2025
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 21, 2024	May 20, 2025
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 16, 2024	May 15, 2025
Horn Antenn(18GHz-40GHz)	Schwarzbeck	BBHA9170	00822	May 21, 2024	May 20, 2025
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

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

Notes:

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

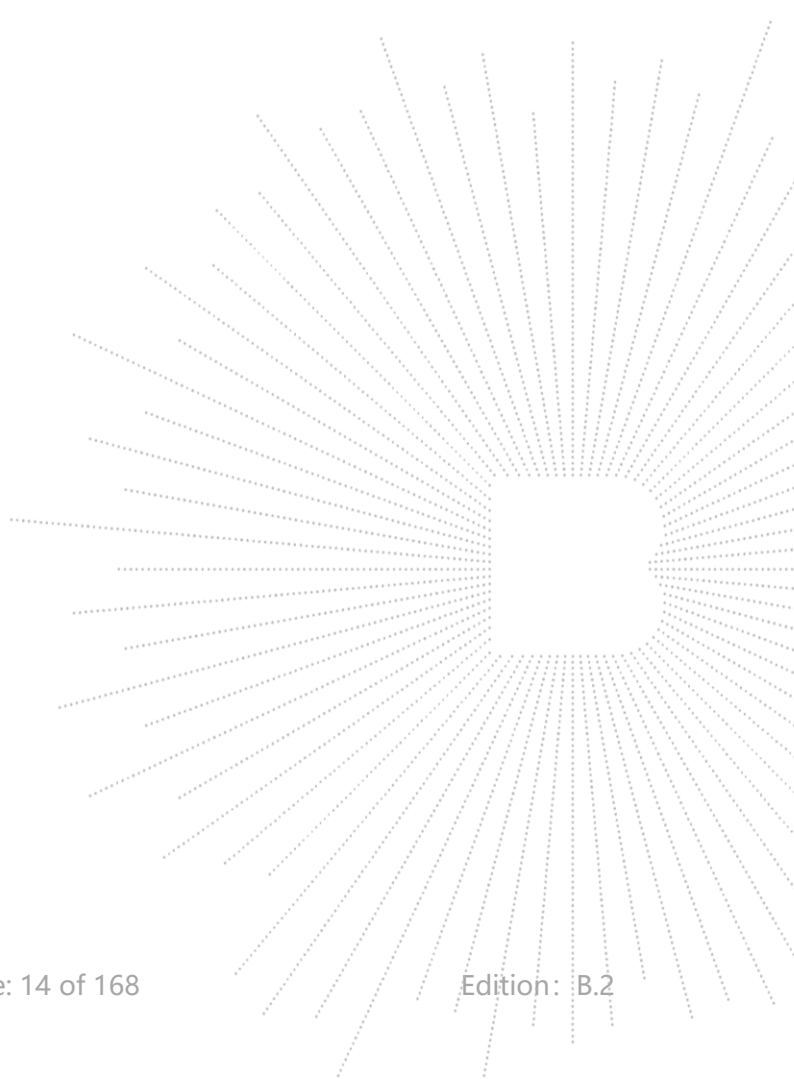
6.3 Test Procedure

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

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

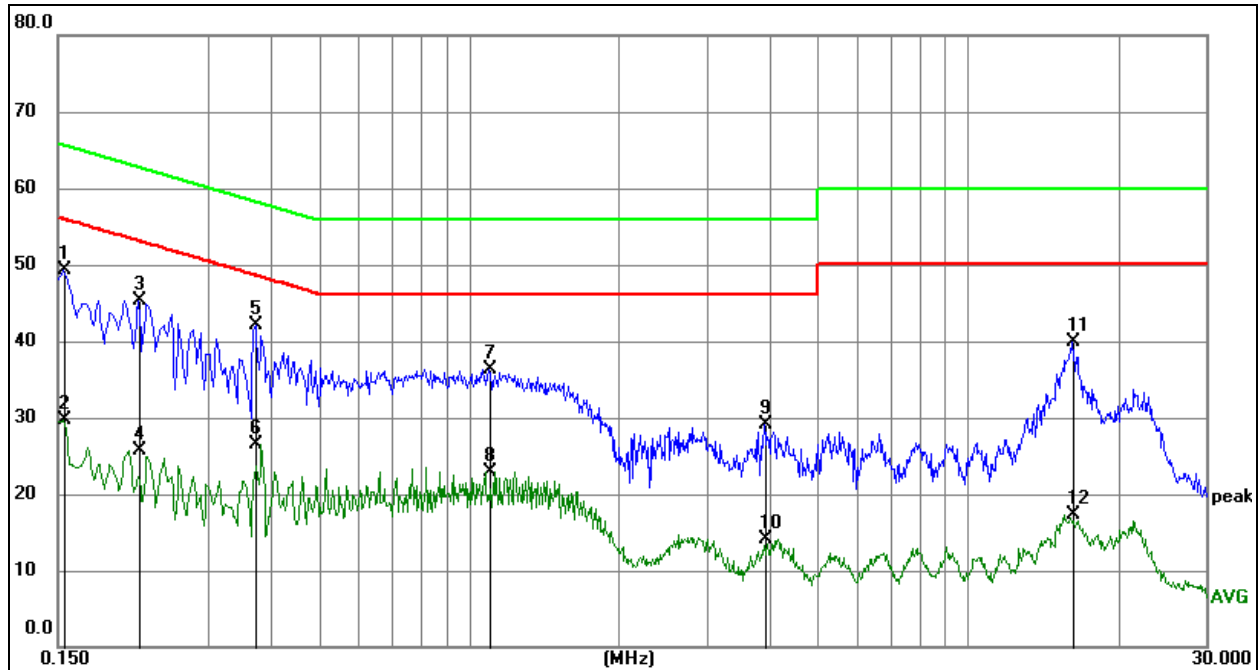
6.4 EUT Operating Conditions

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



6.5 Test Result

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

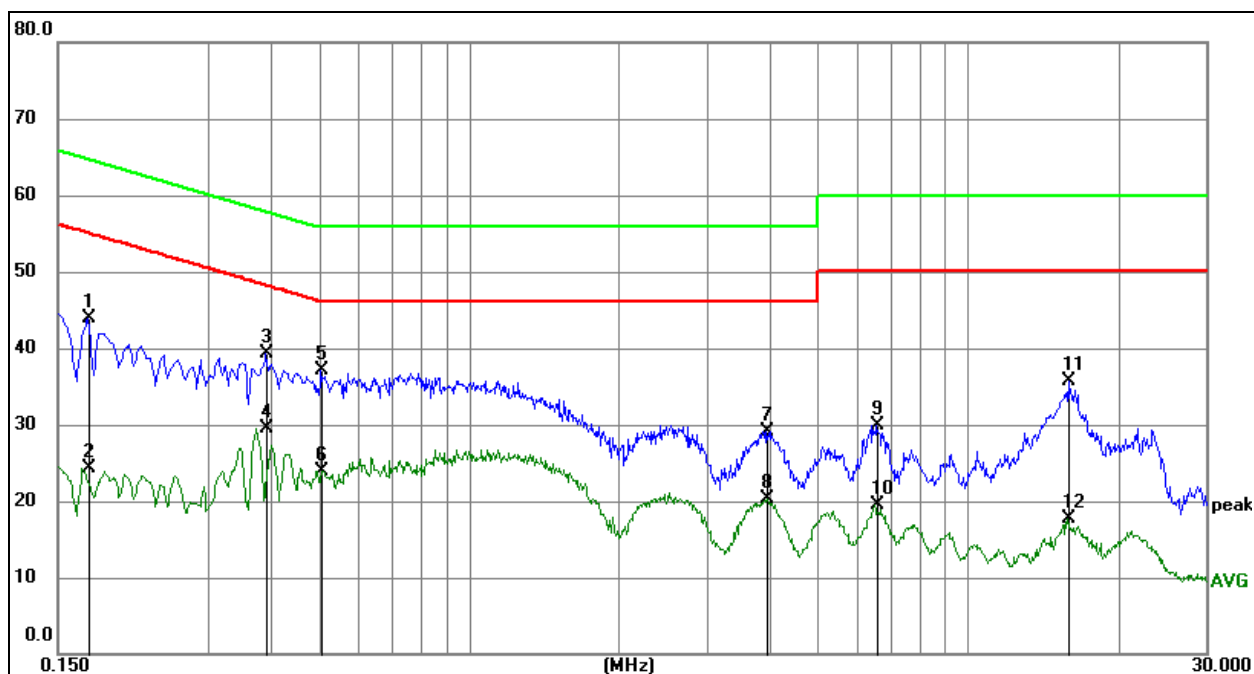


Remark:

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

No. Mk.	Freq. MHz	Reading Level dB	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.1545	39.16	10.18	49.34	55.75	-6.41	QP	
2	0.1545	19.51	10.18	29.69	65.75	-36.06	AVG	
3	0.2175	35.06	10.19	45.25	52.91	-7.66	QP	
4	0.2175	15.52	10.19	25.71	62.91	-37.20	AVG	
5 *	0.3750	31.85	10.18	42.03	48.39	-6.36	QP	
6	0.3750	16.23	10.18	26.41	58.39	-31.98	AVG	
7	1.0995	26.08	10.20	36.28	46.00	-9.72	QP	
8	1.0995	12.78	10.20	22.98	56.00	-33.02	AVG	
9	3.9165	18.87	10.24	29.11	46.00	-16.89	QP	
10	3.9165	3.83	10.24	14.07	56.00	-41.93	AVG	
11	16.1880	29.39	10.48	39.87	50.00	-10.13	QP	
12	16.1880	6.73	10.48	17.21	60.00	-42.79	AVG	

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



Remark:

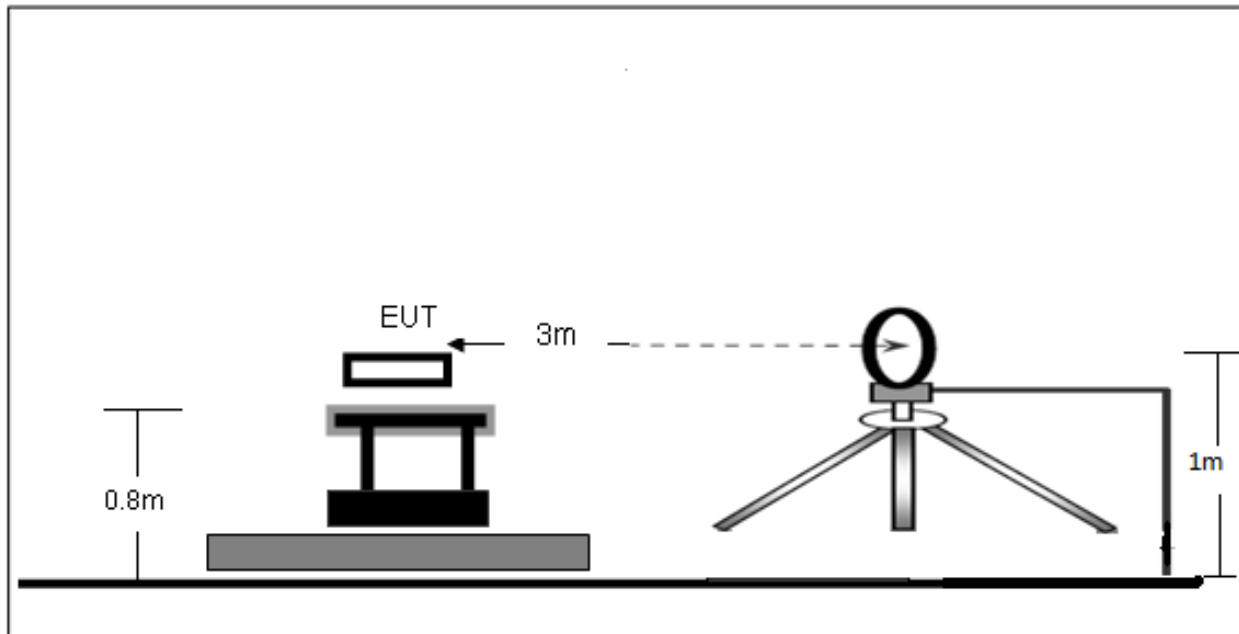
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No. Mk.	Freq. MHz	Reading Level dB	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.1725	33.78	10.18	43.96	54.84	-10.88	QP	
2	0.1725	14.18	10.18	24.36	64.84	-40.48	AVG	
3 *	0.3930	29.07	10.18	39.25	48.00	-8.75	QP	
4	0.3930	19.38	10.18	29.56	58.00	-28.44	AVG	
5	0.5055	26.92	10.19	37.11	46.00	-8.89	QP	
6	0.5055	13.76	10.19	23.95	56.00	-32.05	AVG	
7	3.9525	18.83	10.24	29.07	46.00	-16.93	QP	
8	3.9525	10.04	10.24	20.28	56.00	-35.72	AVG	
9	6.5670	19.58	10.33	29.91	50.00	-20.09	QP	
10	6.5670	9.08	10.33	19.41	60.00	-40.59	AVG	
11	15.8865	25.30	10.48	35.78	50.00	-14.22	QP	
12	15.8865	7.20	10.48	17.68	60.00	-42.32	AVG	

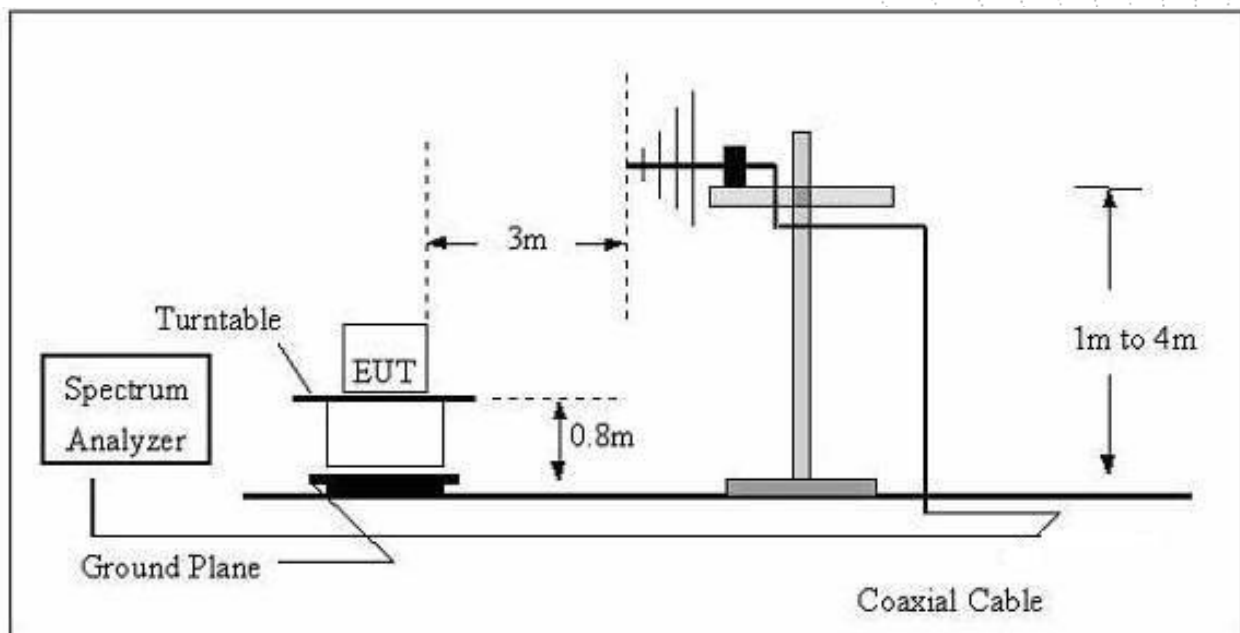
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

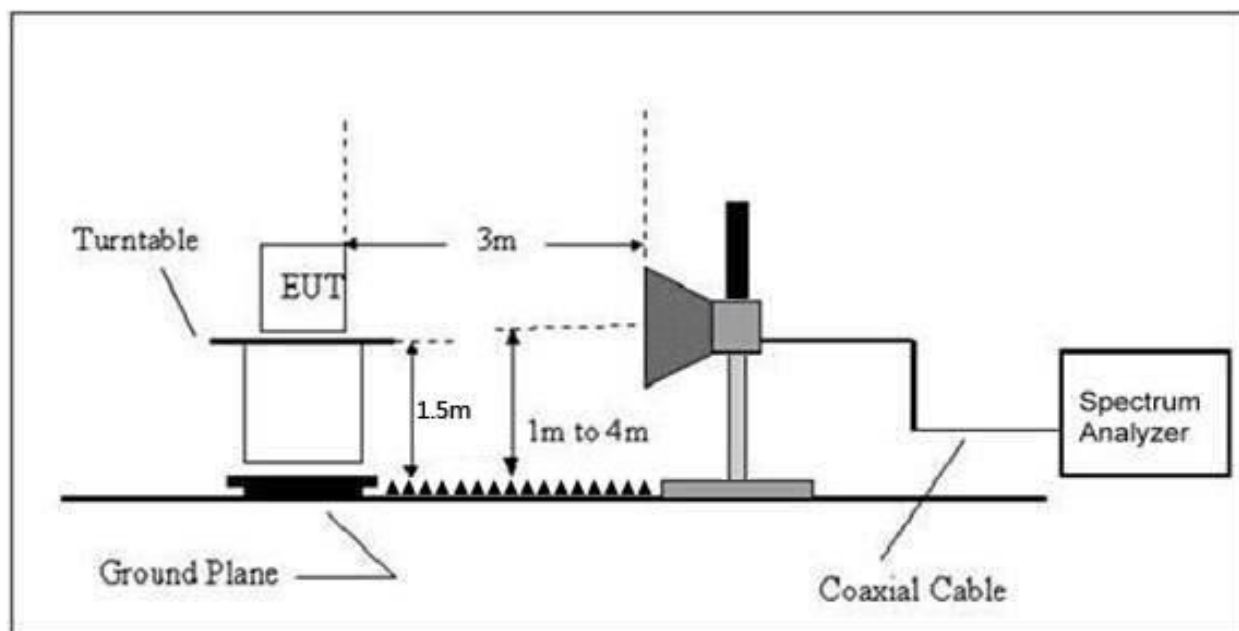
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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



7.2 Limit

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

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

Limits Of Radiated Emission Measurement (Above 1000MHz)

Frequency (MHz)	Limit (dBuV/m) (at 3M)	
	Peak	Average
Above 1000	74	54

Notes:

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

7.3 Test Procedure

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

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

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

Use the following spectrum analyzer settings:

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

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

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

Note:

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

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

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

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

7.4 EUT Operating Conditions

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

7.5 Test Result

Below 30MHz

Temperature:	26°C	Relative Humidity:	24%
Pressure:	101 kPa	Test Voltage:	DC 3.7V
Test Mode:	Mode 4	Polarization:	--

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

Note:

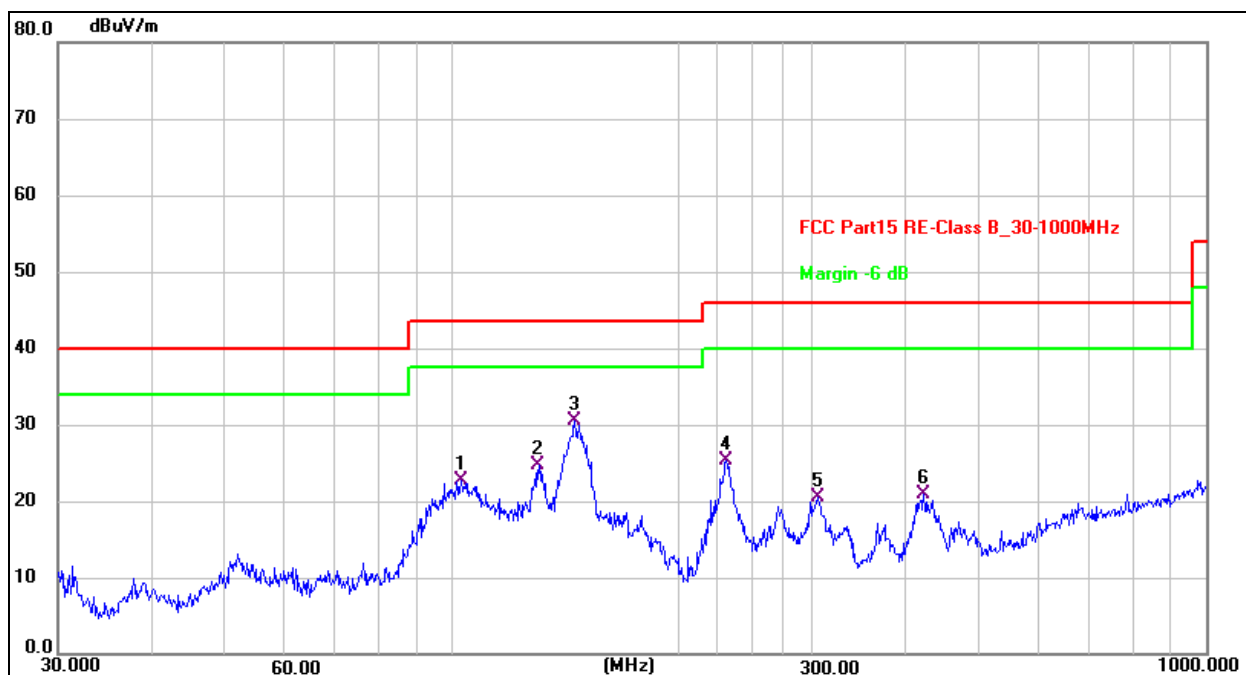
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

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

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

Between 30MHz – 1GHz

Temperature:	24 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	DC 3.7V
Test Mode:	Mode 4	Polarization :	Horizontal

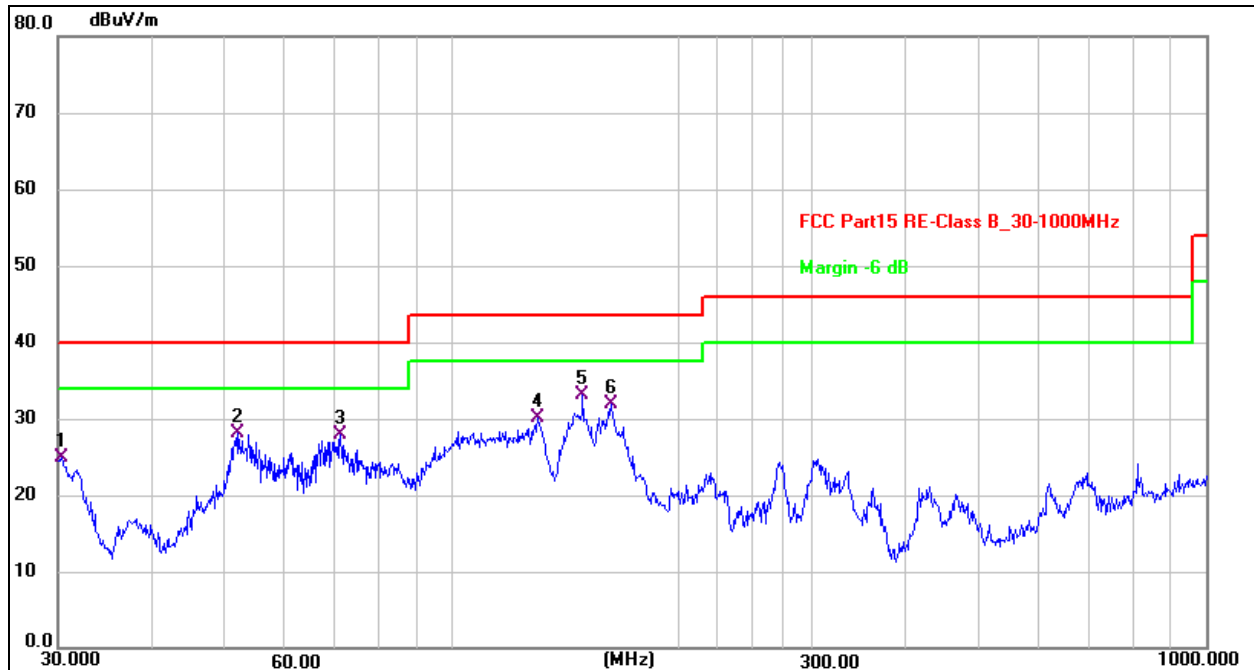


Remark:

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

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	102.7192	43.44	-20.67	22.77	43.50	-20.73	QP
2	130.3789	43.26	-18.54	24.72	43.50	-18.78	QP
3 *	145.3506	48.09	-17.51	30.58	43.50	-12.92	QP
4	230.9068	45.14	-19.80	25.34	46.00	-20.66	QP
5	305.6800	37.22	-16.71	20.51	46.00	-25.49	QP
6	422.0577	34.41	-13.52	20.89	46.00	-25.11	QP

Temperature:	24 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	DC 3.7V
Test Mode:	Mode 4	Polarization :	Vertical



Remark:

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

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	30.3173	42.40	-17.45	24.95	40.00	-15.05	QP
2	52.0251	45.34	-17.18	28.16	40.00	-11.84	QP
3	71.0803	47.09	-19.21	27.88	40.00	-12.12	QP
4	129.9226	48.60	-18.58	30.02	43.50	-13.48	QP
5 *	148.9625	50.50	-17.35	33.15	43.50	-10.35	QP
6	162.6106	49.15	-17.17	31.98	43.50	-11.52	QP

Test Mode :	TX(5.1G) - 802.11a
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G							
Vertical	4434.013	70.54	-20.73	49.81	68.2	-18.39	Pk
Vertical	4434.013	59.62	-20.73	38.89	54	-15.11	AV
Vertical	10360.001	64.16	-9.36	54.80	68.2	-13.40	Pk
Vertical	10360.001	49.31	-9.36	39.95	54	-14.05	AV
Vertical	15540.141	63.70	-7.84	55.86	74	-18.14	Pk
Vertical	15540.141	49.07	-7.84	41.23	54	-12.77	AV
Horizontal	4434.105	73.84	-20.73	53.11	68.2	-15.09	Pk
Horizontal	4434.105	59.57	-20.73	38.84	54	-15.16	AV
Horizontal	10360.070	61.87	-9.36	52.51	68.2	-15.69	Pk
Horizontal	10360.070	49.49	-9.36	40.13	54	-13.87	AV
Horizontal	15540.133	61.84	-7.84	54.00	74	-20.00	Pk
Horizontal	15540.133	49.74	-7.84	41.90	54	-12.10	AV
middle Channel (5200 MHz)-Above 1G							
Vertical	4592.169	72.90	-20.42	52.49	74	-21.51	Pk
Vertical	4592.169	59.02	-20.42	38.60	54	-15.40	AV
Vertical	10400.151	60.93	-9.30	51.63	68.2	-16.57	Pk
Vertical	10400.151	49.57	-9.30	40.27	54	-13.73	AV
Vertical	15600.143	62.19	-7.82	54.37	74	-19.63	Pk
Vertical	15600.143	49.70	-7.82	41.88	54	-12.12	AV
Horizontal	4592.189	72.13	-20.42	51.71	74	-22.29	Pk
Horizontal	4592.189	59.43	-20.42	39.02	54	-14.98	AV
Horizontal	10400.157	64.56	-9.30	55.26	68.2	-12.94	Pk
Horizontal	10400.157	49.91	-9.30	40.61	54	-13.39	AV
Horizontal	15600.110	63.18	-7.82	55.36	74	-18.64	Pk
Horizontal	15600.110	49.45	-7.82	41.63	54	-12.37	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.007	74.91	-20.12	54.79	74	-19.21	Pk
Vertical	4739.007	59.70	-20.12	39.58	54	-14.42	AV
Vertical	10480.106	60.85	-9.18	51.67	68.2	-16.53	Pk
Vertical	10480.106	49.43	-9.18	40.25	54	-13.75	AV
Vertical	15720.080	64.15	-7.78	56.37	74	-17.63	Pk
Vertical	15720.080	49.84	-7.78	42.06	54	-11.94	AV
Horizontal	4739.022	70.43	-20.12	50.31	74	-23.69	Pk
Horizontal	4739.022	59.60	-20.12	39.48	54	-14.52	AV
Horizontal	10480.077	61.03	-9.18	51.85	68.2	-16.35	Pk
Horizontal	10480.077	49.59	-9.18	40.41	54	-13.59	AV
Horizontal	15720.098	64.36	-7.78	56.58	74	-17.42	Pk
Horizontal	15720.098	49.70	-7.78	41.92	54	-12.08	AV

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

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

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

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

Test Mode :	TX(5.1G) - 802.11n-HT20
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Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure- ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G							
Vertical	4434.121	73.63	-20.73	52.90	68.2	-15.30	Pk
Vertical	4434.121	59.69	-20.73	38.96	54	-15.04	AV
Vertical	10360.179	62.18	-9.36	52.82	68.2	-15.38	Pk
Vertical	10360.179	49.27	-9.36	39.91	54	-14.09	AV
Vertical	15540.058	60.42	-7.84	52.58	74	-21.42	Pk
Vertical	15540.058	49.25	-7.84	41.41	54	-12.59	AV
Horizontal	4434.017	71.31	-20.73	50.58	68.2	-17.62	Pk
Horizontal	4434.017	59.91	-20.73	39.18	54	-14.82	AV
Horizontal	10360.153	62.13	-9.36	52.77	68.2	-15.43	Pk
Horizontal	10360.153	49.47	-9.36	40.11	54	-13.89	AV
Horizontal	15540.088	60.29	-7.84	52.45	74	-21.55	Pk
Horizontal	15540.088	49.44	-7.84	41.60	54	-12.40	AV
middle Channel (5200 MHz)-Above 1G							
Vertical	4592.064	72.36	-20.42	51.95	74	-22.05	Pk
Vertical	4592.064	59.79	-20.42	39.38	54	-14.62	AV
Vertical	10400.096	61.72	-9.30	52.42	68.2	-15.78	Pk
Vertical	10400.096	49.40	-9.30	40.10	54	-13.90	AV
Vertical	15600.140	64.10	-7.82	56.28	74	-17.72	Pk
Vertical	15600.140	49.64	-7.82	41.82	54	-12.18	AV
Horizontal	4592.024	74.64	-20.42	54.22	74	-19.78	Pk
Horizontal	4592.024	59.35	-20.42	38.94	54	-15.06	AV
Horizontal	10400.133	63.37	-9.30	54.07	68.2	-14.13	Pk
Horizontal	10400.133	49.67	-9.30	40.37	54	-13.63	AV
Horizontal	15600.117	62.05	-7.82	54.23	74	-19.77	Pk
Horizontal	15600.117	49.27	-7.82	41.45	54	-12.55	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.180	74.10	-20.12	53.98	74	-20.02	Pk
Vertical	4739.180	59.90	-20.12	39.77	54	-14.23	AV
Vertical	10480.121	60.19	-9.18	51.01	68.2	-17.19	Pk
Vertical	10480.121	49.66	-9.18	40.48	54	-13.52	AV
Vertical	15720.200	60.33	-7.78	52.55	74	-21.45	Pk
Vertical	15720.200	49.76	-7.78	41.98	54	-12.02	AV
Horizontal	4739.101	70.53	-20.12	50.40	74	-23.60	Pk
Horizontal	4739.101	59.63	-20.12	39.51	54	-14.49	AV
Horizontal	10480.097	60.74	-9.18	51.56	68.2	-16.64	Pk
Horizontal	10480.097	49.84	-9.18	40.66	54	-13.34	AV
Horizontal	15720.183	61.69	-7.78	53.91	74	-20.09	Pk
Horizontal	15720.183	49.03	-7.78	41.25	54	-12.75	AV

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

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

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

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

Test Mode :	TX(5.1G) - 802.11n-HT40
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5190 MHz)-Above 1G							
Vertical	4434.043	73.69	-20.73	52.96	68.2	-15.24	Pk
Vertical	4434.043	59.34	-20.73	38.61	54	-15.39	AV
Vertical	10380.136	60.97	-9.33	51.64	68.2	-16.56	Pk
Vertical	10380.136	49.66	-9.33	40.33	54	-13.67	AV
Vertical	15570.132	62.52	-7.83	54.69	74	-19.31	Pk
Vertical	15570.132	49.78	-7.83	41.95	54	-12.05	AV
Horizontal	4434.052	71.00	-20.73	50.27	74	-23.73	Pk
Horizontal	4434.052	59.33	-20.73	38.60	54	-15.40	AV
Horizontal	10380.100	64.60	-9.33	55.27	68.2	-12.93	Pk
Horizontal	10380.100	49.35	-9.33	40.02	54	-13.98	AV
Horizontal	15570.115	62.32	-7.83	54.49	74	-19.51	Pk
Horizontal	15570.115	49.65	-7.83	41.82	54	-12.18	AV
High Channel (5230 MHz)-Above 1G							
Vertical	4739.063	71.56	-20.12	51.43	68.2	-16.77	Pk
Vertical	4739.063	59.39	-20.12	39.27	54	-14.73	AV
Vertical	10460.183	61.08	-9.21	51.87	68.2	-16.33	Pk
Vertical	10460.183	49.19	-9.21	39.98	54	-14.02	AV
Vertical	15690.050	62.24	-7.79	54.45	74	-19.55	Pk
Vertical	15690.050	49.12	-7.79	41.33	54	-12.67	AV
Horizontal	4739.177	70.94	-20.12	50.81	68.2	-17.39	Pk
Horizontal	4739.177	59.65	-20.12	39.53	54	-14.47	AV
Horizontal	10460.171	64.80	-9.21	55.59	68.2	-12.61	Pk
Horizontal	10460.171	49.39	-9.21	40.18	54	-13.82	AV
Horizontal	15690.177	63.82	-7.79	56.03	74	-17.97	Pk
Horizontal	15690.177	49.73	-7.79	41.94	54	-12.06	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.1G) - 802.11ac-HT20
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G							
Vertical	4434.122	74.99	-20.73	54.25	68.2	-13.95	Pk
Vertical	4434.122	59.04	-20.73	38.31	54	-15.69	AV
Vertical	10360.026	63.03	-9.36	53.67	68.2	-14.53	Pk
Vertical	10360.026	49.31	-9.36	39.95	54	-14.05	AV
Vertical	15540.091	64.08	-7.84	56.24	74	-17.76	Pk
Vertical	15540.091	49.82	-7.84	41.98	54	-12.02	AV
Horizontal	4434.090	71.34	-20.73	50.61	68.2	-17.59	Pk
Horizontal	4434.090	59.38	-20.73	38.64	54	-15.36	AV
Horizontal	10360.079	60.17	-9.36	50.81	68.2	-17.39	Pk
Horizontal	10360.079	49.79	-9.36	40.43	54	-13.57	AV
Horizontal	15540.103	60.48	-7.84	52.64	74	-21.36	Pk
Horizontal	15540.103	49.74	-7.84	41.90	54	-12.10	AV
middle Channel (5200 MHz)-Above 1G							
Vertical	4592.104	73.75	-20.42	53.34	74	-20.66	Pk
Vertical	4592.104	59.82	-20.42	39.41	54	-14.59	AV
Vertical	10400.037	63.35	-9.30	54.05	68.2	-14.15	Pk
Vertical	10400.037	49.52	-9.30	40.22	54	-13.78	AV
Vertical	15600.075	63.67	-7.82	55.85	74	-18.15	Pk
Vertical	15600.075	49.15	-7.82	41.33	54	-12.67	AV
Horizontal	4592.196	74.44	-20.42	54.02	74	-19.98	Pk
Horizontal	4592.196	59.31	-20.42	38.89	54	-15.11	AV
Horizontal	10400.055	61.55	-9.30	52.25	68.2	-15.95	Pk
Horizontal	10400.055	49.61	-9.30	40.31	54	-13.69	AV
Horizontal	15600.069	61.40	-7.82	53.58	74	-20.42	Pk
Horizontal	15600.069	49.95	-7.82	42.13	54	-11.87	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.032	74.25	-20.12	54.13	74	-19.87	Pk
Vertical	4739.032	59.87	-20.12	39.75	54	-14.25	AV
Vertical	10480.110	60.74	-9.18	51.56	68.2	-16.64	Pk
Vertical	10480.110	49.34	-9.18	40.16	54	-13.84	AV
Vertical	15720.103	61.04	-7.78	53.26	74	-20.74	Pk
Vertical	15720.103	49.26	-7.78	41.48	54	-12.52	AV
Horizontal	4739.121	73.18	-20.12	53.06	74	-20.94	Pk
Horizontal	4739.121	59.82	-20.12	39.69	54	-14.31	AV
Horizontal	10480.050	60.27	-9.18	51.09	68.2	-17.11	Pk
Horizontal	10480.050	49.50	-9.18	40.32	54	-13.68	AV
Horizontal	15720.108	64.98	-7.78	57.20	74	-16.80	Pk
Horizontal	15720.108	49.02	-7.78	41.24	54	-12.76	AV

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

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

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

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

Test Mode:	TX(5.1G) - 802.11ac-HT40
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5190 MHz)-Above 1G							
Vertical	4434.192	71.16	-20.73	50.43	68.2	-17.77	Pk
Vertical	4434.192	59.25	-20.73	38.52	54	-15.48	AV
Vertical	10380.046	60.20	-9.33	50.87	68.2	-17.33	Pk
Vertical	10380.046	49.58	-9.33	40.25	54	-13.75	AV
Vertical	15570.003	62.51	-7.83	54.68	74	-19.32	Pk
Vertical	15570.003	49.34	-7.83	41.51	54	-12.49	AV
Horizontal	4434.155	74.91	-20.73	54.17	74	-19.83	Pk
Horizontal	4434.155	59.99	-20.73	39.26	54	-14.74	AV
Horizontal	10380.029	62.68	-9.33	53.35	68.2	-14.85	Pk
Horizontal	10380.029	49.73	-9.33	40.40	54	-13.60	AV
Horizontal	15570.031	63.79	-7.83	55.96	74	-18.04	Pk
Horizontal	15570.031	49.53	-7.83	41.70	54	-12.30	AV
middle Channel (5230 MHz)-Above 1G							
Vertical	4739.181	70.89	-20.12	50.76	68.2	-17.44	Pk
Vertical	4739.181	59.91	-20.12	39.79	54	-14.21	AV
Vertical	10460.013	64.03	-9.21	54.82	68.2	-13.38	Pk
Vertical	10460.013	49.82	-9.21	40.61	54	-13.39	AV
Vertical	15690.043	61.35	-7.79	53.56	74	-20.44	Pk
Vertical	15690.043	49.99	-7.79	42.20	54	-11.80	AV
Horizontal	4739.006	70.51	-20.12	50.39	68.2	-17.81	Pk
Horizontal	4739.006	59.53	-20.12	39.41	54	-14.59	AV
Horizontal	10460.049	63.47	-9.21	54.26	68.2	-13.94	Pk
Horizontal	10460.049	49.61	-9.21	40.40	54	-13.60	AV
Horizontal	15690.165	62.87	-7.79	55.08	74	-18.92	Pk
Horizontal	15690.165	49.81	-7.79	42.02	54	-11.98	AV

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

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

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

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

Test Mode:	TX(5.1G) - 802.11ac-HT80
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
(5210 MHz)-Above 1G							
Vertical	4434.061	73.32	-20.73	52.59	68.2	-15.61	Pk
Vertical	4434.061	59.60	-20.73	38.87	54	-15.13	AV
Vertical	10420.109	64.21	-9.27	54.94	68.2	-13.26	Pk
Vertical	10420.109	49.93	-9.27	40.66	54	-13.34	AV
Vertical	15630.031	62.28	-7.81	54.47	74	-19.53	Pk
Vertical	15630.031	49.62	-7.81	41.81	54	-12.19	AV
Horizontal	4434.136	70.52	-20.73	49.79	68.2	-18.41	Pk
Horizontal	4434.136	59.94	-20.73	39.21	54	-14.79	AV
Horizontal	10420.137	62.14	-9.27	52.87	68.2	-15.33	Pk
Horizontal	10420.137	49.34	-9.27	40.07	54	-13.93	AV
Horizontal	15630.002	62.92	-7.81	55.11	74	-18.89	Pk
Horizontal	15630.002	49.95	-7.81	42.14	54	-11.86	AV

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

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

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

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

Test Mode:	TX(5.1G) - 802.11ax-HE20
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G							
Vertical	4434.099	72.67	-20.73	51.94	68.2	-16.26	Pk
Vertical	4434.099	59.36	-20.73	38.63	54	-15.37	AV
Vertical	10360.167	63.91	-9.36	54.55	68.2	-13.65	Pk
Vertical	10360.167	49.17	-9.36	39.81	54	-14.19	AV
Vertical	15540.015	60.80	-7.84	52.96	74	-21.04	Pk
Vertical	15540.015	49.09	-7.84	41.25	54	-12.75	AV
Horizontal	4434.056	71.09	-20.73	50.36	68.2	-17.84	Pk
Horizontal	4434.056	59.12	-20.73	38.39	54	-15.61	AV
Horizontal	10360.032	63.46	-9.36	54.10	68.2	-14.10	Pk
Horizontal	10360.032	49.23	-9.36	39.87	54	-14.13	AV
Horizontal	15540.174	64.09	-7.84	56.25	74	-17.75	Pk
Horizontal	15540.174	49.23	-7.84	41.39	54	-12.61	AV
middle Channel (5200 MHz)-Above 1G							
Vertical	4592.033	71.58	-20.42	51.17	74	-22.83	Pk
Vertical	4592.033	59.64	-20.42	39.22	54	-14.78	AV
Vertical	10400.122	60.37	-9.30	51.07	68.2	-17.13	Pk
Vertical	10400.122	49.30	-9.30	40.00	54	-14.00	AV
Vertical	15600.153	61.97	-7.82	54.15	74	-19.85	Pk
Vertical	15600.153	49.47	-7.82	41.65	54	-12.35	AV
Horizontal	4592.100	71.81	-20.42	51.39	74	-22.61	Pk
Horizontal	4592.100	59.27	-20.42	38.85	54	-15.15	AV
Horizontal	10400.124	63.96	-9.30	54.66	68.2	-13.54	Pk
Horizontal	10400.124	49.94	-9.30	40.64	54	-13.36	AV
Horizontal	15600.117	60.16	-7.82	52.34	74	-21.66	Pk
Horizontal	15600.117	49.74	-7.82	41.92	54	-12.08	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.148	72.53	-20.12	52.41	74	-21.59	Pk
Vertical	4739.148	59.02	-20.12	38.90	54	-15.10	AV
Vertical	10480.076	61.86	-9.18	52.68	68.2	-15.52	Pk
Vertical	10480.076	49.90	-9.18	40.72	54	-13.28	AV
Vertical	15720.089	60.84	-7.78	53.06	74	-20.94	Pk
Vertical	15720.089	49.76	-7.78	41.98	54	-12.02	AV
Horizontal	4739.069	73.88	-20.12	53.76	74	-20.24	Pk
Horizontal	4739.069	59.31	-20.12	39.18	54	-14.82	AV
Horizontal	10480.197	64.29	-9.18	55.11	68.2	-13.09	Pk
Horizontal	10480.197	49.03	-9.18	39.85	54	-14.15	AV
Horizontal	15720.127	63.37	-7.78	55.59	74	-18.41	Pk
Horizontal	15720.127	49.26	-7.78	41.48	54	-12.52	AV

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

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

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

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

Test Mode:	TX(5.1G) - 802.11ax-HE40
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5190 MHz)-Above 1G							
Vertical	4434.082	71.49	-20.73	50.76	68.2	-17.44	Pk
Vertical	4434.082	59.46	-20.73	38.73	54	-15.27	AV
Vertical	10380.162	60.75	-9.33	51.42	68.2	-16.78	Pk
Vertical	10380.162	49.59	-9.33	40.26	54	-13.74	AV
Vertical	15570.060	62.51	-7.83	54.68	74	-19.32	Pk
Vertical	15570.060	49.95	-7.83	42.12	54	-11.88	AV
Horizontal	4434.029	70.31	-20.73	49.58	74	-24.42	Pk
Horizontal	4434.029	59.54	-20.73	38.80	54	-15.20	AV
Horizontal	10380.175	63.02	-9.33	53.69	68.2	-14.51	Pk
Horizontal	10380.175	49.05	-9.33	39.72	54	-14.28	AV
Horizontal	15570.187	63.67	-7.83	55.84	74	-18.16	Pk
Horizontal	15570.187	49.93	-7.83	42.10	54	-11.90	AV
High Channel (5230 MHz)-Above 1G							
Vertical	4739.078	73.16	-20.12	53.03	68.2	-15.17	Pk
Vertical	4739.078	59.88	-20.12	39.76	54	-14.24	AV
Vertical	10460.108	61.02	-9.21	51.81	68.2	-16.39	Pk
Vertical	10460.108	49.08	-9.21	39.87	54	-14.13	AV
Vertical	15690.089	62.37	-7.79	54.58	74	-19.42	Pk
Vertical	15690.089	49.62	-7.79	41.83	54	-12.17	AV
Horizontal	4739.042	74.31	-20.12	54.19	68.2	-14.01	Pk
Horizontal	4739.042	59.32	-20.12	39.20	54	-14.80	AV
Horizontal	10460.059	62.11	-9.21	52.90	68.2	-15.30	Pk
Horizontal	10460.059	49.57	-9.21	40.36	54	-13.64	AV
Horizontal	15690.006	64.36	-7.79	56.57	74	-17.43	Pk
Horizontal	15690.006	49.82	-7.79	42.03	54	-11.97	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.1G) - 802.11ax-HE80
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
(5210 MHz)-Above 1G							
Vertical	4434.145	73.65	-20.73	52.92	68.2	-15.28	Pk
Vertical	4434.145	59.67	-20.73	38.94	54	-15.06	AV
Vertical	10420.047	61.57	-9.27	52.30	68.2	-15.90	Pk
Vertical	10420.047	49.39	-9.27	40.12	54	-13.88	AV
Vertical	15630.048	61.89	-7.81	54.08	74	-19.92	Pk
Vertical	15630.048	49.22	-7.81	41.41	54	-12.59	AV
Horizontal	4434.036	71.38	-20.73	50.65	68.2	-17.55	Pk
Horizontal	4434.036	59.60	-20.73	38.86	54	-15.14	AV
Horizontal	10420.131	60.96	-9.27	51.69	68.2	-16.51	Pk
Horizontal	10420.131	49.08	-9.27	39.81	54	-14.19	AV
Horizontal	15630.004	61.69	-7.81	53.88	74	-20.12	Pk
Horizontal	15630.004	49.48	-7.81	41.67	54	-12.33	AV

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

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

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

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

- ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
- All the modes 802.11a/n/ac has been tested and the worst result 802.11n20 recorded as below:

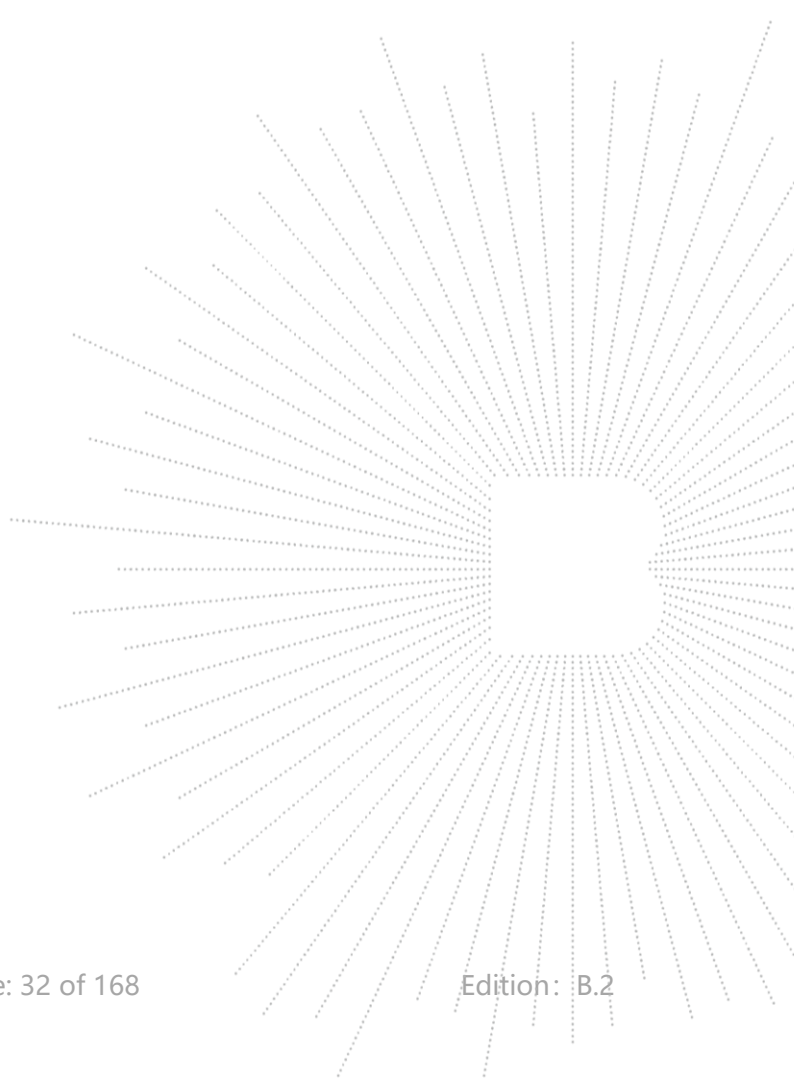
Test mode: 802.11n20 Frequency(MHz): 5180

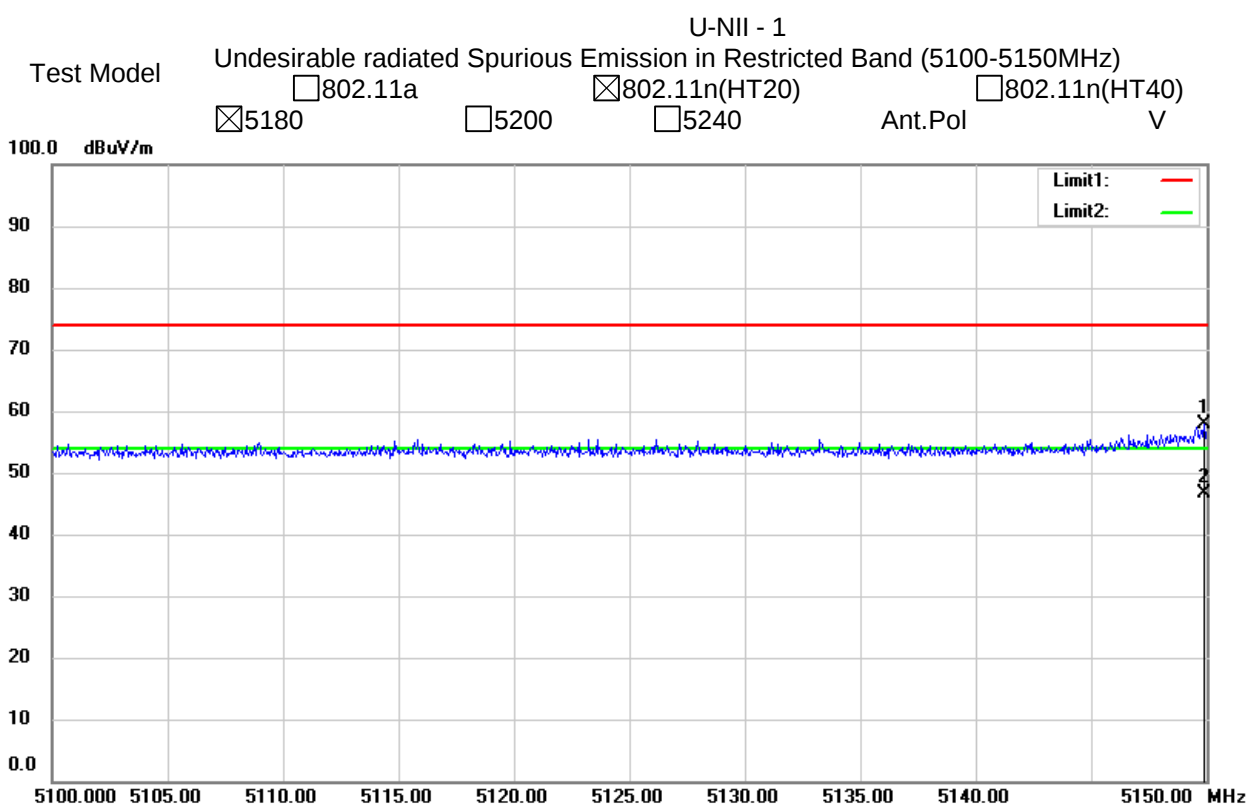
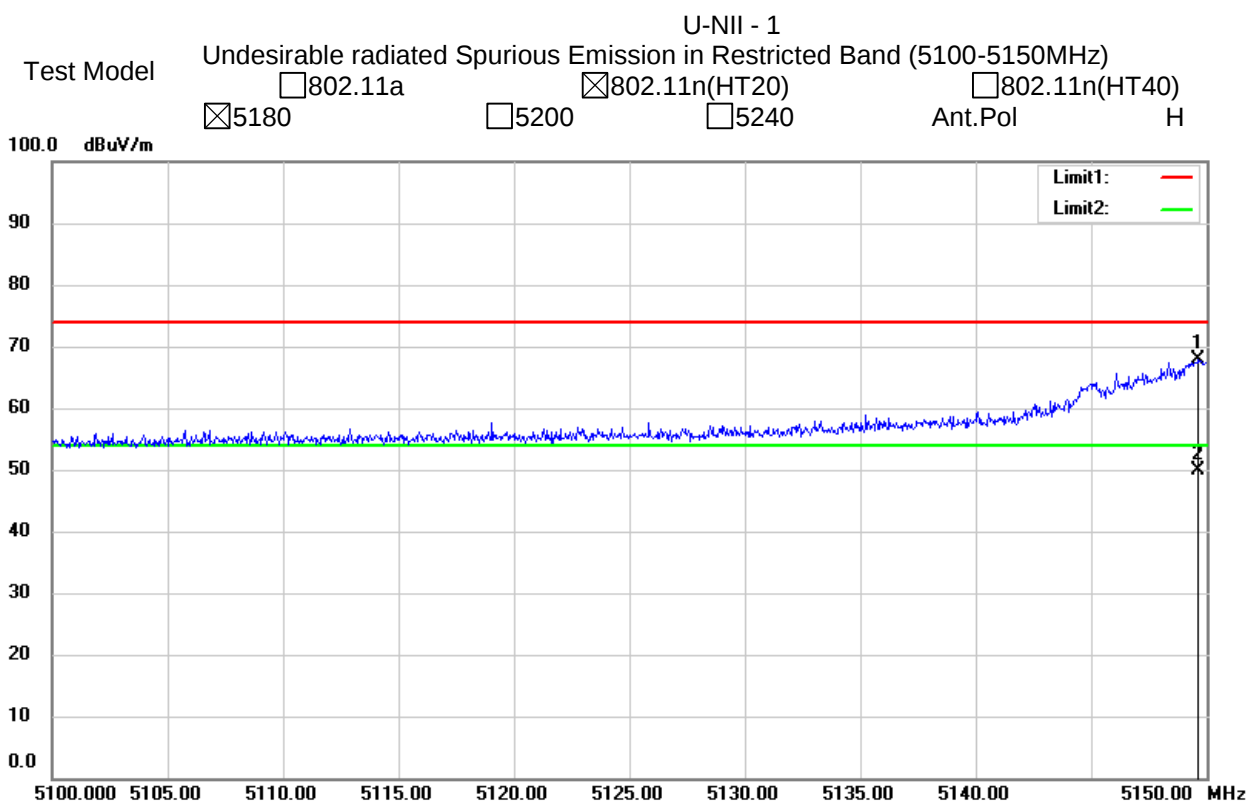
Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)
5149.650	H	67.78	74	59.76	54
5149.925	V	57.96	74	46.51	54

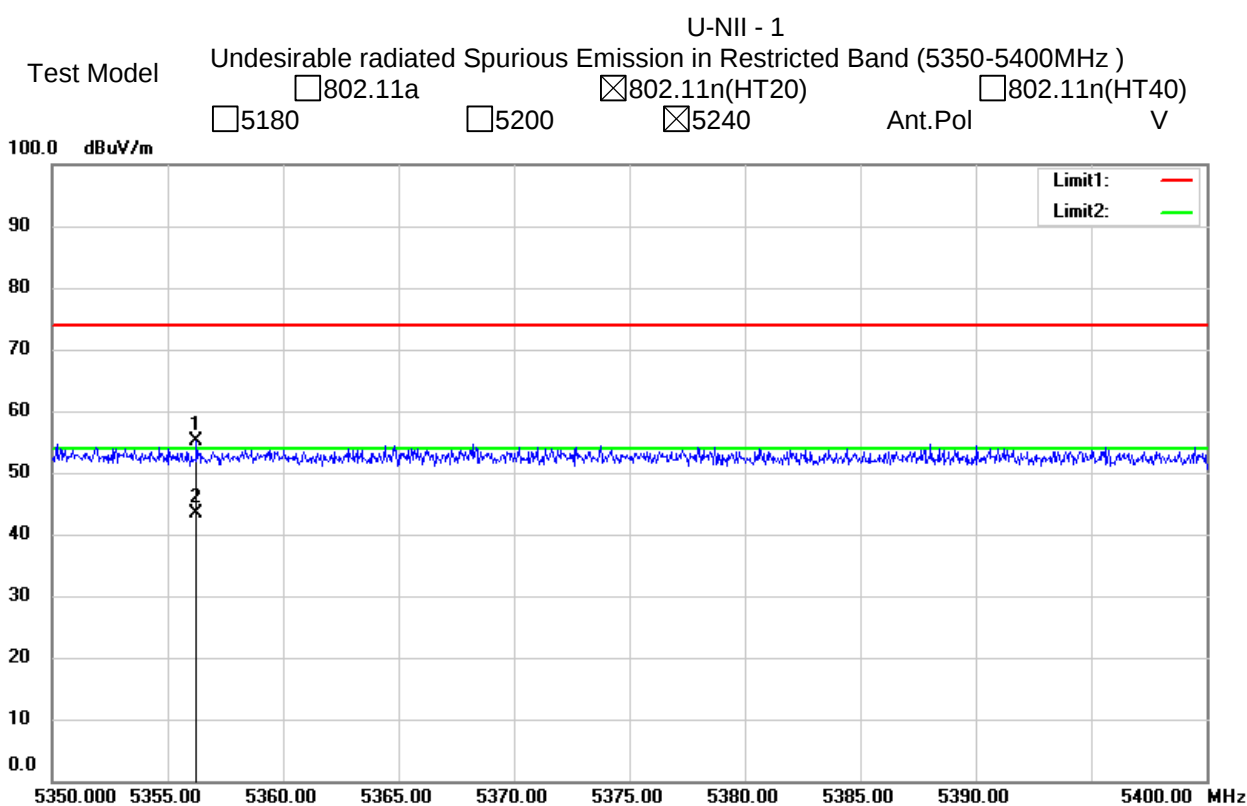
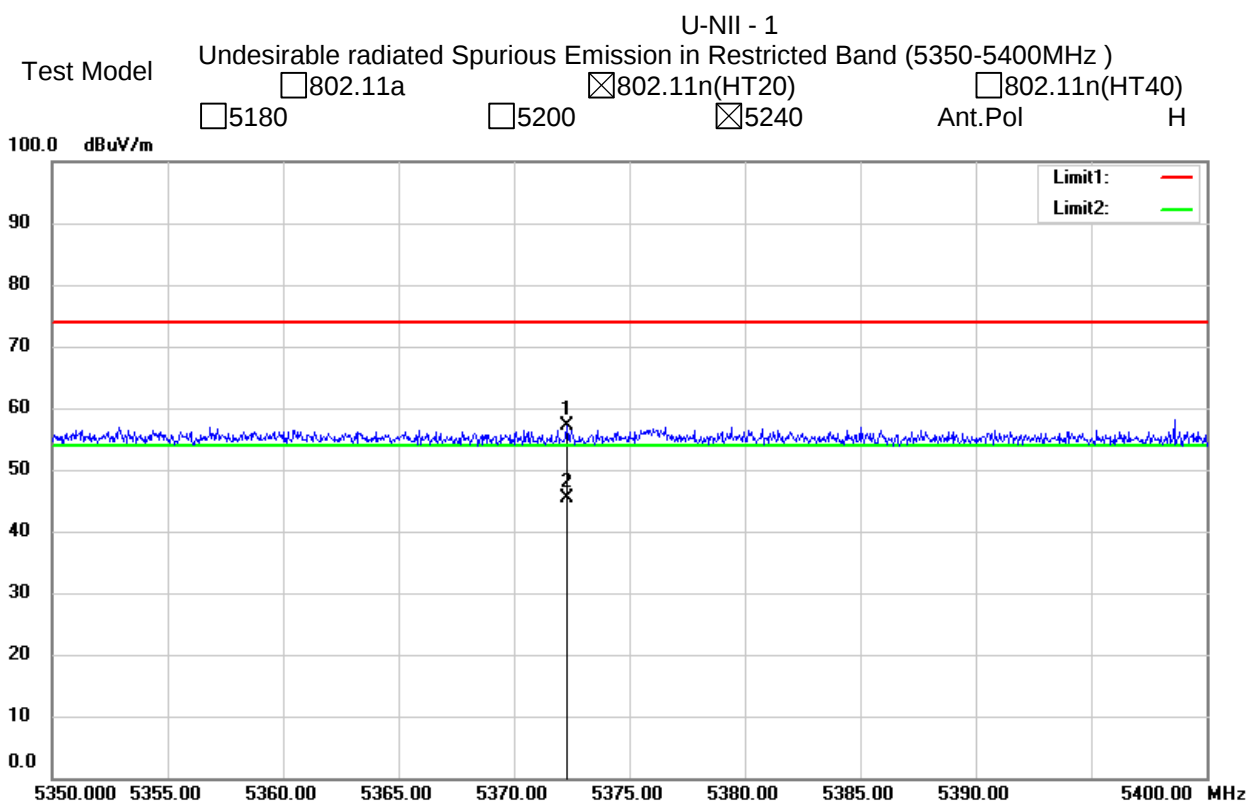
Test mode: 802.11n20 Frequency(MHz): 5240

Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)
5372.313	H	57.04	74	45.36	54
5356.294	V	55.02	74	43.29	54

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor.
(3) Correct Factor= Ant_F + Cab_L - Preamp







Test Mode:	TX(5.8G) - 802.11a
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5745 MHz)-Above 1G							
Vertical	4679.091	72.99	-20.24	52.75	74	-21.25	Pk
Vertical	4679.091	59.75	-20.24	39.51	54	-14.49	AV
Vertical	11490.043	64.40	-8.79	55.61	68.2	-12.59	Pk
Vertical	11490.043	49.39	-8.79	40.60	54	-13.40	AV
Vertical	17235.188	55.90	-3.18	52.72	68.2	-15.48	Pk
Vertical	17235.188	44.34	-3.18	41.16	54	-12.84	AV
Horizontal	4679.081	72.28	-20.73	51.55	74	-22.45	Pk
Horizontal	4679.081	59.70	-20.73	38.97	54	-15.03	AV
Horizontal	11490.043	60.10	-8.79	51.31	68.2	-16.89	Pk
Horizontal	11490.043	49.88	-8.79	41.09	54	-12.91	AV
Horizontal	17235.143	55.18	-3.18	52.00	68.2	-16.20	Pk
Horizontal	17235.143	44.90	-3.18	41.72	54	-12.28	AV
middle Channel (5785 MHz)-Above 1G							
Vertical	4592.104	70.94	-20.42	50.52	74	-23.48	Pk
Vertical	4592.104	59.32	-20.42	38.91	54	-15.09	AV
Vertical	11570.073	63.37	-8.86	54.51	68.2	-13.69	Pk
Vertical	11570.073	49.77	-8.86	40.91	54	-13.09	AV
Vertical	17355.051	55.17	-2.52	52.65	68.2	-15.55	Pk
Vertical	17355.051	44.28	-2.52	41.76	54	-12.24	AV
Horizontal	4592.169	74.30	-20.42	53.88	74	-20.12	Pk
Horizontal	4592.169	59.16	-20.42	38.74	54	-15.26	AV
Horizontal	11570.051	64.47	-8.86	55.61	68.2	-12.59	Pk
Horizontal	11570.051	49.49	-8.86	40.63	54	-13.37	AV
Horizontal	17355.114	56.67	-2.52	54.15	68.2	-14.05	Pk
Horizontal	17355.114	44.57	-2.52	42.05	54	-11.95	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.152	72.05	-18.93	53.11	68.2	-15.09	Pk
Vertical	6039.152	59.44	-18.93	40.51	54	-13.49	AV
Vertical	11650.094	64.50	-8.92	55.58	74	-18.42	Pk
Vertical	11650.094	49.14	-8.92	40.22	54	-13.78	AV
Vertical	17475.144	58.42	-1.86	56.56	68.2	-11.64	Pk
Vertical	17475.144	44.47	-1.86	42.61	54	-11.39	AV
Horizontal	6039.129	74.59	-18.93	55.66	68.2	-12.54	Pk
Horizontal	6039.129	59.97	-18.93	41.03	54	-12.97	AV
Horizontal	11650.008	61.31	-8.92	52.39	74	-21.61	Pk
Horizontal	11650.008	49.94	-8.92	41.02	54	-12.98	AV
Horizontal	17475.148	57.42	-1.86	55.56	68.2	-12.64	Pk
Horizontal	17475.148	44.09	-1.86	42.23	54	-11.77	AV

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

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

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

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

Test Mode: TX(5.8G) - 802.11n-HT20

Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5745 MHz)-Above 1G							
Vertical	4679.138	73.45	-20.24	53.20	74	-20.80	Pk
Vertical	4679.138	59.60	-20.24	39.36	54	-14.64	AV
Vertical	11490.021	64.62	-8.79	55.83	68.2	-12.37	Pk
Vertical	11490.021	49.22	-8.79	40.43	54	-13.57	AV
Vertical	17235.120	57.11	-3.18	53.93	68.2	-14.27	Pk
Vertical	17235.120	44.63	-3.18	41.45	54	-12.55	AV
Horizontal	4679.038	71.79	-20.24	51.55	74	-22.45	Pk
Horizontal	4679.038	59.25	-20.24	39.00	54	-15.00	AV
Horizontal	11490.199	64.50	-8.79	55.71	68.2	-12.49	Pk
Horizontal	11490.199	49.41	-8.79	40.62	54	-13.38	AV
Horizontal	17235.165	58.34	-3.18	55.16	68.2	-13.04	Pk
Horizontal	17235.165	44.12	-3.18	40.94	54	-13.06	AV
middle Channel (5785 MHz)-Above 1G							
Vertical	4592.176	72.07	-20.42	51.66	74	-22.34	Pk
Vertical	4592.176	59.06	-20.42	38.64	54	-15.36	AV
Vertical	11570.064	61.90	-8.86	53.04	68.2	-15.16	Pk
Vertical	11570.064	49.25	-8.86	40.39	54	-13.61	AV
Vertical	17355.036	56.77	-2.52	54.25	68.2	-13.95	Pk
Vertical	17355.036	44.14	-2.52	41.62	54	-12.38	AV
Horizontal	4592.001	74.96	-20.42	54.55	74	-19.45	Pk
Horizontal	4592.001	59.12	-20.42	38.70	54	-15.30	AV
Horizontal	11570.181	64.67	-8.86	55.81	68.2	-12.39	Pk
Horizontal	11570.181	49.98	-8.86	41.12	54	-12.88	AV
Horizontal	17355.179	57.67	-2.52	55.15	68.2	-13.05	Pk
Horizontal	17355.179	44.94	-2.52	42.42	54	-11.58	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.003	74.56	-18.93	55.63	68.2	-12.57	Pk
Vertical	6039.003	59.99	-18.93	41.05	54	-12.95	AV
Vertical	11650.190	63.39	-8.92	54.47	74	-19.53	Pk
Vertical	11650.190	49.27	-8.92	40.35	54	-13.65	AV
Vertical	17475.056	56.48	-1.86	54.62	68.2	-13.58	Pk
Vertical	17475.056	44.22	-1.86	42.36	54	-11.64	AV
Horizontal	6039.143	70.72	-18.93	51.79	68.2	-16.41	Pk
Horizontal	6039.143	59.58	-18.93	40.65	54	-13.35	AV
Horizontal	11650.191	62.92	-8.92	54.00	74	-20.00	Pk
Horizontal	11650.191	49.67	-8.92	40.75	54	-13.25	AV
Horizontal	17475.107	59.71	-1.86	57.85	68.2	-10.35	Pk
Horizontal	17475.107	44.21	-1.86	42.35	54	-11.65	AV

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

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

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

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

Test Mode: TX(5.8G) - 802.11n-HT40

Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5755 MHz)-Above 1G							
Vertical	4679.193	73.18	-20.24	52.94	74	-21.06	AV
Vertical	4679.193	59.77	-20.24	39.53	54	-14.47	Pk
Vertical	11510.097	60.90	-8.81	52.09	74	-21.91	AV
Vertical	11510.097	49.00	-8.81	40.19	54	-13.81	Pk
Vertical	17265.040	59.55	-3.01	56.54	68.2	-11.66	AV
Vertical	17265.040	44.04	-3.01	41.03	54	-12.97	Pk
Horizontal	4679.043	73.77	-20.24	53.53	74	-20.47	AV
Horizontal	4679.043	59.56	-20.24	39.31	54	-14.69	Pk
Horizontal	11510.064	64.73	-8.81	55.92	74	-18.08	AV
Horizontal	11510.064	49.43	-8.81	40.62	54	-13.38	Pk
Horizontal	17265.117	59.88	-3.01	56.87	68.2	-11.33	AV
Horizontal	17265.117	44.01	-3.01	41.00	54	-13.00	AV
middle Channel (5795 MHz)-Above 1G							
Vertical	6039.151	72.41	-18.93	53.48	68.2	-14.72	Pk
Vertical	6039.151	59.60	-18.93	40.67	54	-13.33	AV
Vertical	11590.005	60.22	-8.87	51.35	74	-22.65	Pk
Vertical	11590.005	49.68	-8.87	40.81	54	-13.19	AV
Vertical	17385.186	57.33	-2.35	54.98	68.2	-13.22	Pk
Vertical	17385.186	44.67	-2.35	42.32	54	-11.68	AV
Horizontal	6039.122	71.33	-18.93	52.40	68.2	-15.80	Pk
Horizontal	6039.122	59.62	-18.93	40.69	54	-13.31	AV
Horizontal	11590.112	61.68	-8.87	52.81	74	-21.19	Pk
Horizontal	11590.112	49.02	-8.87	40.15	54	-13.85	AV
Horizontal	17385.086	57.99	-2.35	55.64	68.2	-12.56	Pk
Horizontal	17385.086	44.35	-2.35	42.00	54	-12.00	AV

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

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

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

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

Test Mode: TX(5.8G) - 802.11ac-HT20

Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5745 MHz)-Above 1G							
Vertical	4679.094	71.24	-20.24	51.00	74	-23.00	Pk
Vertical	4679.094	59.65	-20.24	39.40	54	-14.60	AV
Vertical	11490.185	60.32	-8.79	51.53	68.2	-16.67	Pk
Vertical	11490.185	49.22	-8.79	40.43	54	-13.57	AV
Vertical	17235.111	59.69	-3.18	56.51	68.2	-11.69	Pk
Vertical	17235.111	44.49	-3.18	41.31	54	-12.69	AV
Horizontal	4679.068	70.26	-20.24	50.01	74	-23.99	Pk
Horizontal	4679.068	59.45	-20.24	39.20	54	-14.80	AV
Horizontal	11490.138	63.14	-8.79	54.35	68.2	-13.85	Pk
Horizontal	11490.138	50.00	-8.79	41.21	54	-12.79	AV
Horizontal	17235.098	59.44	-3.18	56.26	68.2	-11.94	Pk
Horizontal	17235.098	44.12	-3.18	40.94	54	-13.06	AV
middle Channel (5785 MHz)-Above 1G							
Vertical	4592.092	70.47	-20.42	50.06	74	-23.94	Pk
Vertical	4592.092	59.60	-20.42	39.18	54	-14.82	AV
Vertical	11570.106	62.43	-8.86	53.57	68.2	-14.63	Pk
Vertical	11570.106	49.36	-8.86	40.50	54	-13.50	AV
Vertical	17355.105	56.64	-2.52	54.12	68.2	-14.08	Pk
Vertical	17355.105	44.99	-2.52	42.47	54	-11.53	AV
Horizontal	4592.143	72.82	-20.42	52.40	74	-21.60	Pk
Horizontal	4592.143	59.48	-20.42	39.07	54	-14.93	AV
Horizontal	11570.040	62.06	-8.86	53.20	68.2	-15.00	Pk
Horizontal	11570.040	49.22	-8.86	40.36	54	-13.64	AV
Horizontal	17355.040	55.43	-2.52	52.91	68.2	-15.29	Pk
Horizontal	17355.040	44.28	-2.52	41.76	54	-12.24	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.126	72.25	-18.93	53.32	68.2	-14.88	Pk
Vertical	6039.126	59.59	-18.93	40.66	54	-13.34	AV
Vertical	11650.189	61.47	-8.92	52.55	74	-21.45	Pk
Vertical	11650.189	49.97	-8.92	41.05	54	-12.95	AV
Vertical	17475.117	59.66	-1.86	57.80	68.2	-10.40	Pk
Vertical	17475.117	44.92	-1.86	43.06	54	-10.94	AV
Horizontal	6039.125	70.02	-18.93	51.09	68.2	-17.11	Pk
Horizontal	6039.125	59.03	-18.93	40.10	54	-13.90	AV
Horizontal	11650.020	63.02	-8.92	54.10	74	-19.90	Pk
Horizontal	11650.020	49.01	-8.92	40.09	54	-13.91	AV
Horizontal	17475.073	58.51	-1.86	56.65	68.2	-11.55	Pk
Horizontal	17475.073	44.70	-1.86	42.84	54	-11.16	AV

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

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

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

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

Test Mode: TX(5.8G) - 802.11ac-HT40

Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5755 MHz)-Above 1G							
Vertical	4679.114	74.39	-20.24	54.15	74	-19.85	AV
Vertical	4679.114	59.40	-20.24	39.16	54	-14.84	Pk
Vertical	11510.084	64.30	-8.81	55.49	74	-18.51	AV
Vertical	11510.084	49.80	-8.81	40.99	54	-13.01	Pk
Vertical	17265.015	59.86	-3.01	56.85	68.2	-11.35	AV
Vertical	17265.015	44.05	-3.01	41.04	54	-12.96	Pk
Horizontal	4679.057	72.67	-20.24	52.43	74	-21.57	AV
Horizontal	4679.057	59.38	-20.24	39.14	54	-14.86	Pk
Horizontal	11510.128	64.01	-8.81	55.20	74	-18.80	AV
Horizontal	11510.128	49.24	-8.81	40.43	54	-13.57	Pk
Horizontal	17265.045	57.86	-3.01	54.85	68.2	-13.35	AV
Horizontal	17265.045	44.55	-3.01	41.54	54	-12.46	AV
middle Channel (5795 MHz)-Above 1G							
Vertical	6039.176	73.30	-18.93	54.37	68.2	-13.83	Pk
Vertical	6039.176	59.16	-18.93	40.23	54	-13.77	AV
Vertical	11590.019	62.81	-8.87	53.94	74	-20.06	Pk
Vertical	11590.019	49.32	-8.87	40.45	54	-13.55	AV
Vertical	17385.064	58.18	-2.35	55.83	68.2	-12.37	Pk
Vertical	17385.064	44.39	-2.35	42.04	54	-11.96	AV
Horizontal	6039.134	74.65	-18.93	55.72	68.2	-12.48	Pk
Horizontal	6039.134	59.94	-18.93	41.00	54	-13.00	AV
Horizontal	11590.173	64.39	-8.87	55.52	74	-18.48	Pk
Horizontal	11590.173	49.77	-8.87	40.90	54	-13.10	AV
Horizontal	17385.043	56.42	-2.35	54.07	68.2	-14.13	Pk
Horizontal	17385.043	44.06	-2.35	41.71	54	-12.29	AV

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

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

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

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

Test Mode:	TX(5.8G) - 802.11ac-HT80
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
(5775 MHz)-Above 1G							
Vertical	4679.074	74.34	-20.24	54.10	74	-19.90	Pk
Vertical	4679.074	59.65	-20.24	39.41	54	-14.59	AV
Vertical	11550.108	64.50	-8.84	55.66	74	-18.34	Pk
Vertical	11550.108	49.27	-8.84	40.43	54	-13.57	AV
Vertical	17325.093	59.51	-2.68	56.83	68.2	-11.37	Pk
Vertical	17325.093	44.05	-2.68	41.37	54	-12.63	AV
Horizontal	4679.138	74.97	-20.24	54.73	74	-19.27	Pk
Horizontal	4679.138	59.87	-20.24	39.63	54	-14.37	AV
Horizontal	11550.188	64.99	-8.84	56.15	74	-17.85	Pk
Horizontal	11550.188	49.09	-8.84	40.25	54	-13.75	AV
Horizontal	17325.185	57.86	-2.68	55.18	68.2	-13.02	Pk
Horizontal	17325.185	44.67	-2.68	41.99	54	-12.01	AV

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

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

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

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

Test Mode: TX(5.8G) - 802.11ax-HE20

Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5745 MHz)-Above 1G							
Vertical	4679.006	73.28	-20.24	53.04	74	-20.96	Pk
Vertical	4679.006	59.67	-20.24	39.43	54	-14.57	AV
Vertical	11490.029	62.68	-8.79	53.89	68.2	-14.31	Pk
Vertical	11490.029	49.53	-8.79	40.74	54	-13.26	AV
Vertical	17235.118	57.39	-3.18	54.21	68.2	-13.99	Pk
Vertical	17235.118	44.58	-3.18	41.40	54	-12.60	AV
Horizontal	4679.092	70.89	-20.24	50.65	74	-23.35	Pk
Horizontal	4679.092	59.92	-20.24	39.68	54	-14.32	AV
Horizontal	11490.130	60.92	-8.79	52.13	68.2	-16.07	Pk
Horizontal	11490.130	49.18	-8.79	40.39	54	-13.61	AV
Horizontal	17235.019	59.24	-3.18	56.06	68.2	-12.14	Pk
Horizontal	17235.019	44.33	-3.18	41.15	54	-12.85	AV
middle Channel (5785 MHz)-Above 1G							
Vertical	4592.014	72.90	-20.42	52.48	74	-21.52	Pk
Vertical	4592.014	59.21	-20.42	38.79	54	-15.21	AV
Vertical	11570.043	62.24	-8.86	53.38	68.2	-14.82	Pk
Vertical	11570.043	49.66	-8.86	40.80	54	-13.20	AV
Vertical	17355.187	56.37	-2.52	53.85	68.2	-14.35	Pk
Vertical	17355.187	44.30	-2.52	41.78	54	-12.22	AV
Horizontal	4592.039	74.77	-20.42	54.35	74	-19.65	Pk
Horizontal	4592.039	59.77	-20.42	39.35	54	-14.65	AV
Horizontal	11570.101	63.80	-8.86	54.94	68.2	-13.26	Pk
Horizontal	11570.101	49.24	-8.86	40.38	54	-13.62	AV
Horizontal	17355.135	56.44	-2.52	53.92	68.2	-14.28	Pk
Horizontal	17355.135	44.88	-2.52	42.36	54	-11.64	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.157	72.36	-18.93	53.42	68.2	-14.78	Pk
Vertical	6039.157	59.72	-18.93	40.79	54	-13.21	AV
Vertical	11650.177	60.62	-8.92	51.70	74	-22.30	Pk
Vertical	11650.177	49.58	-8.92	40.66	54	-13.34	AV
Vertical	17475.182	55.04	-1.86	53.18	68.2	-15.02	Pk
Vertical	17475.182	44.11	-1.86	42.25	54	-11.75	AV
Horizontal	6039.005	73.82	-18.93	54.89	68.2	-13.31	Pk
Horizontal	6039.005	59.28	-18.93	40.34	54	-13.66	AV
Horizontal	11650.092	62.19	-8.92	53.27	74	-20.73	Pk
Horizontal	11650.092	49.79	-8.92	40.87	54	-13.13	AV
Horizontal	17475.084	59.84	-1.86	57.98	68.2	-10.22	Pk
Horizontal	17475.084	44.64	-1.86	42.78	54	-11.22	AV

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

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

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

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

Test Mode: TX(5.8G) - 802.11ax-HE40

Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5755 MHz)-Above 1G							
Vertical	4679.085	71.73	-20.24	51.49	74	-22.51	AV
Vertical	4679.085	59.56	-20.24	39.32	54	-14.68	Pk
Vertical	11510.024	63.00	-8.81	54.19	74	-19.81	AV
Vertical	11510.024	49.85	-8.81	41.04	54	-12.96	Pk
Vertical	17265.104	59.67	-3.01	56.66	68.2	-11.54	AV
Vertical	17265.104	44.83	-3.01	41.82	54	-12.18	Pk
Horizontal	4679.185	71.48	-20.24	51.24	74	-22.76	AV
Horizontal	4679.185	59.73	-20.24	39.49	54	-14.51	Pk
Horizontal	11510.074	61.92	-8.81	53.11	74	-20.89	AV
Horizontal	11510.074	49.86	-8.81	41.05	54	-12.95	Pk
Horizontal	17265.031	57.10	-3.01	54.09	68.2	-14.11	AV
Horizontal	17265.031	44.48	-3.01	41.47	54	-12.53	AV
middle Channel (5795 MHz)-Above 1G							
Vertical	6039.103	70.74	-18.93	51.81	68.2	-16.39	Pk
Vertical	6039.103	59.38	-18.93	40.45	54	-13.55	AV
Vertical	11590.064	63.11	-8.87	54.24	74	-19.76	Pk
Vertical	11590.064	49.48	-8.87	40.61	54	-13.39	AV
Vertical	17385.118	57.52	-2.35	55.17	68.2	-13.03	Pk
Vertical	17385.118	44.38	-2.35	42.03	54	-11.97	AV
Horizontal	6039.070	70.17	-18.93	51.24	68.2	-16.96	Pk
Horizontal	6039.070	59.33	-18.93	40.40	54	-13.60	AV
Horizontal	11590.102	64.90	-8.87	56.03	74	-17.97	Pk
Horizontal	11590.102	49.29	-8.87	40.42	54	-13.58	AV
Horizontal	17385.147	58.45	-2.35	56.10	68.2	-12.10	Pk
Horizontal	17385.147	44.50	-2.35	42.15	54	-11.85	AV

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

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

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

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

Test Mode:	TX(5.8G) - 802.11ax-HE80
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
(5775 MHz)-Above 1G							
Vertical	4679.060	73.00	-20.24	52.76	74	-21.24	Pk
Vertical	4679.060	59.27	-20.24	39.03	54	-14.97	AV
Vertical	11550.191	62.12	-8.84	53.28	74	-20.72	Pk
Vertical	11550.191	49.84	-8.84	41.00	54	-13.00	AV
Vertical	17325.053	58.29	-2.68	55.61	68.2	-12.59	Pk
Vertical	17325.053	44.44	-2.68	41.76	54	-12.24	AV
Horizontal	4679.082	70.79	-20.24	50.55	74	-23.45	Pk
Horizontal	4679.082	59.13	-20.24	38.89	54	-15.11	AV
Horizontal	11550.129	62.16	-8.84	53.32	74	-20.68	Pk
Horizontal	11550.129	49.30	-8.84	40.46	54	-13.54	AV
Horizontal	17325.131	56.97	-2.68	54.29	68.2	-13.91	Pk
Horizontal	17325.131	44.32	-2.68	41.64	54	-12.36	AV

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

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

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

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

8. Power Spectral Density Test

8.1 Block Diagram Of Test Setup



8.2 Limit

For the band 5.15-5.25 GHz,

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

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

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

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

For the band 5.725-5.85 GHz

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

8.3 Test Procedure

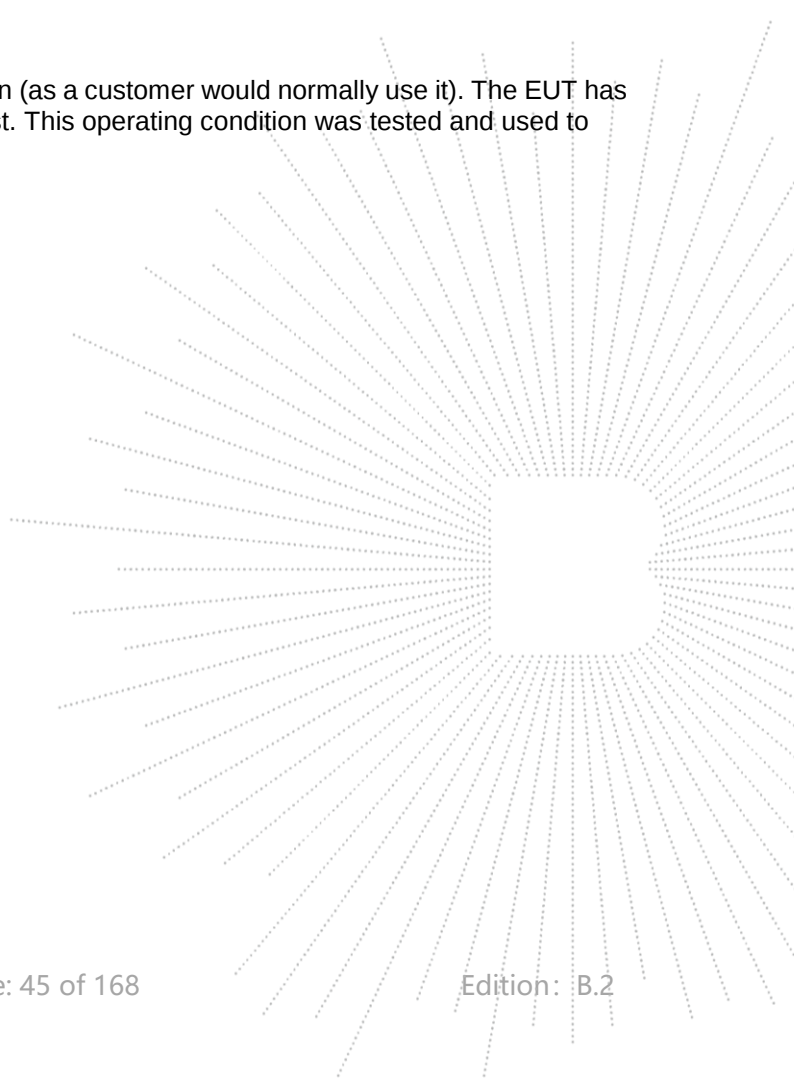
For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of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

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

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

8.4 EUT Operating Conditions

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

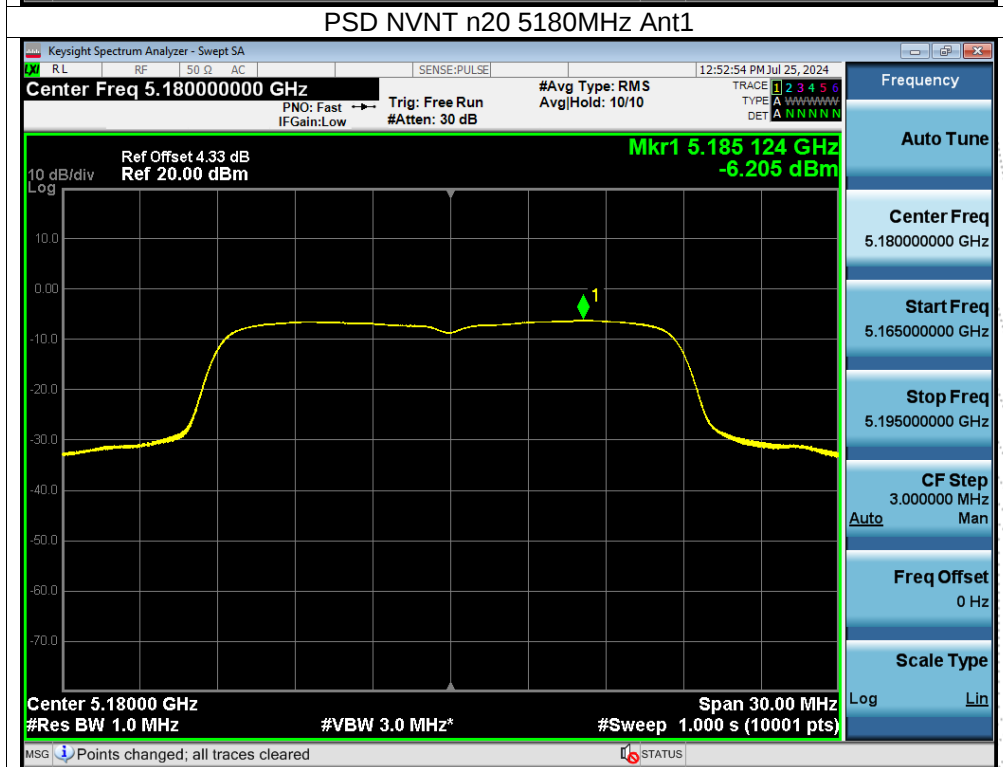
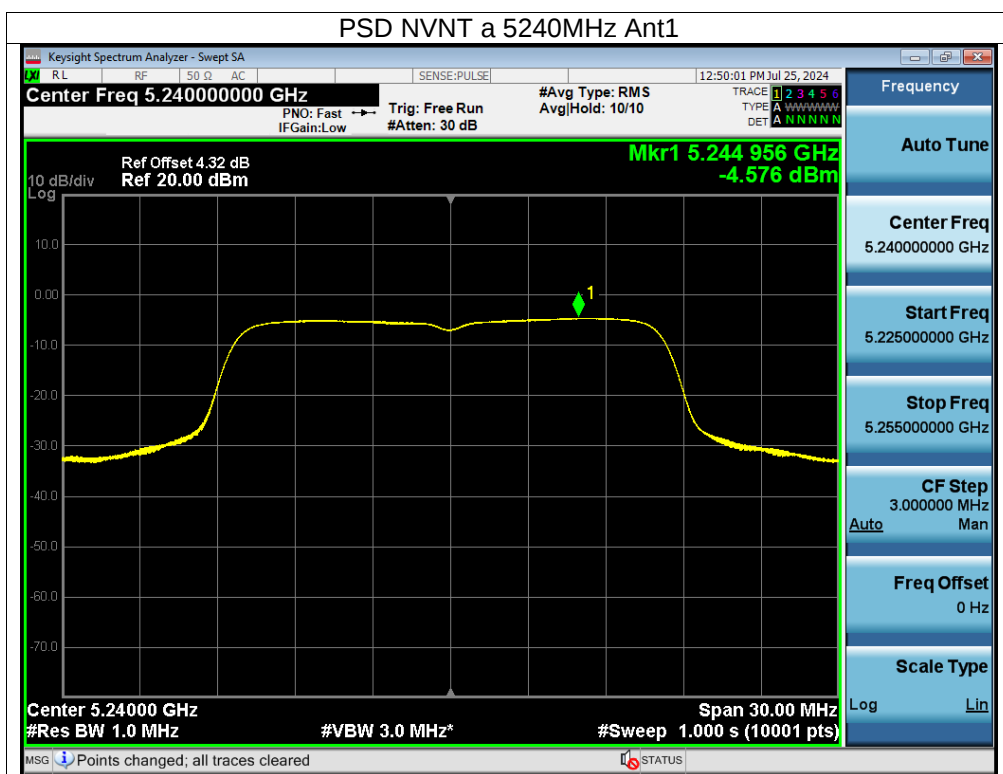


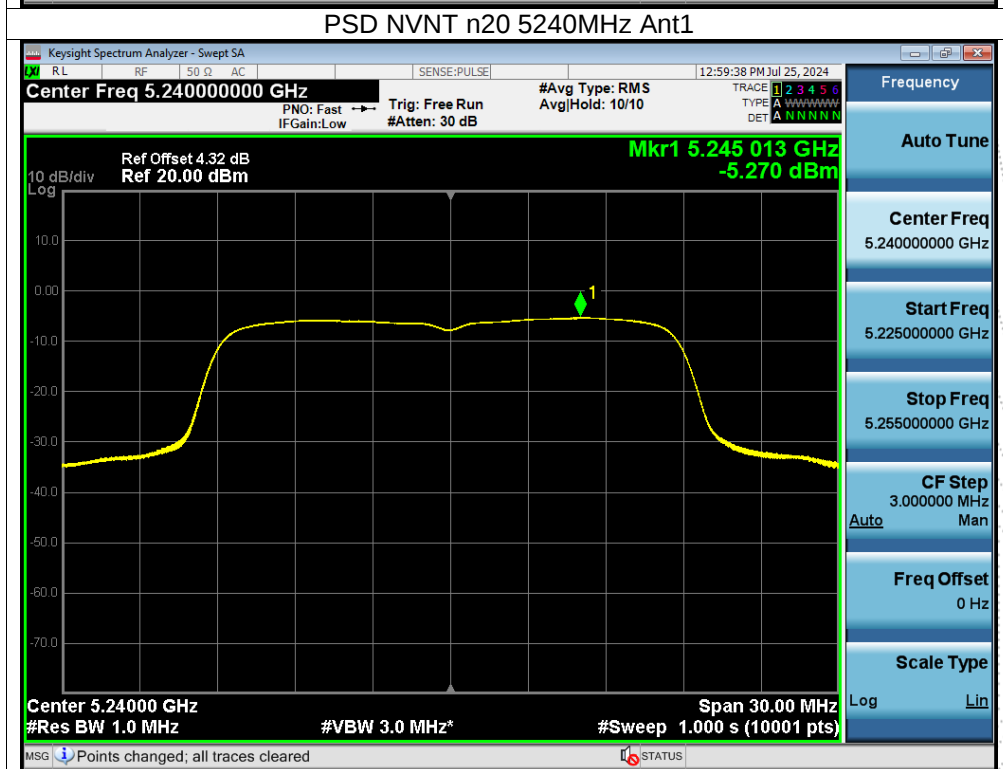
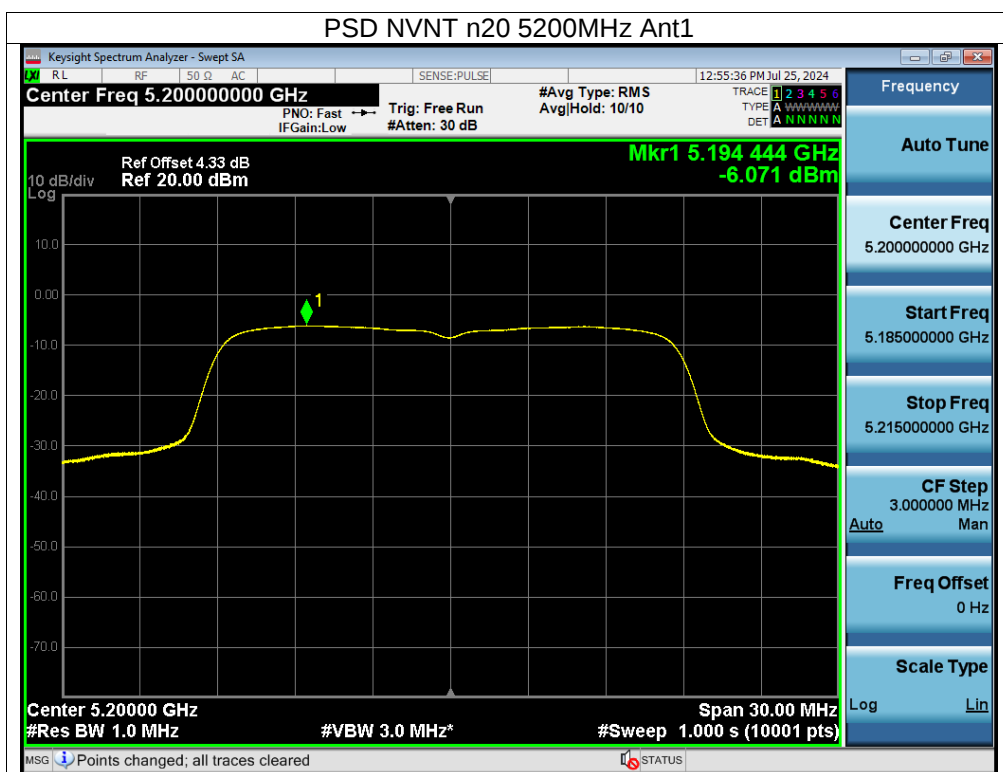
8.5 Test Result

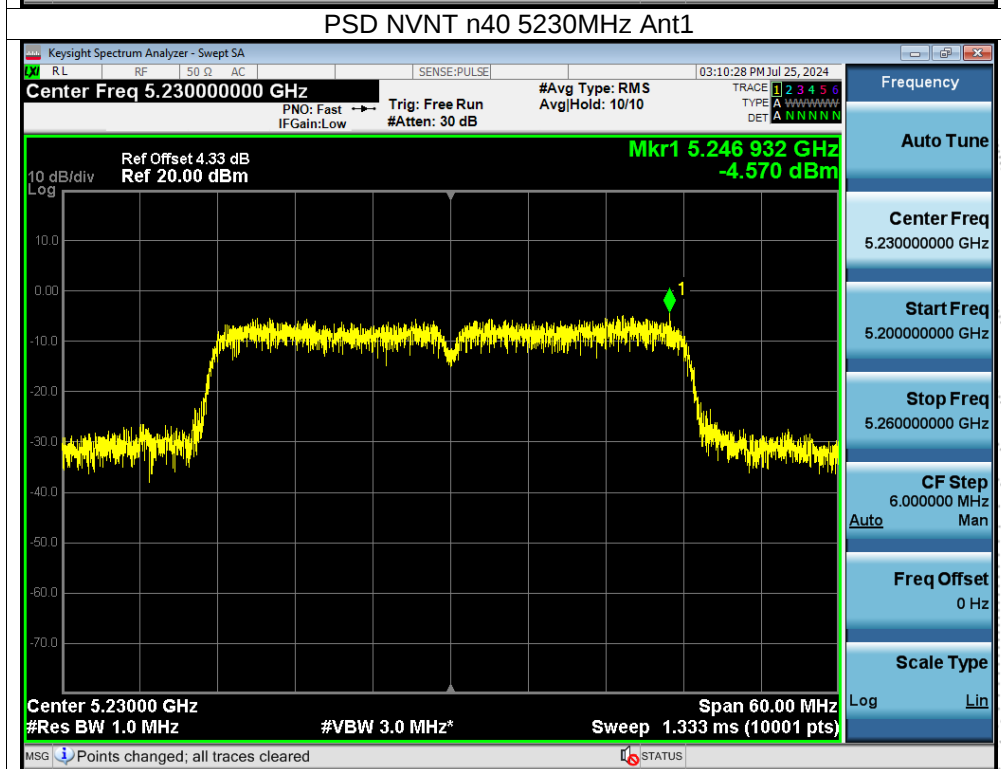
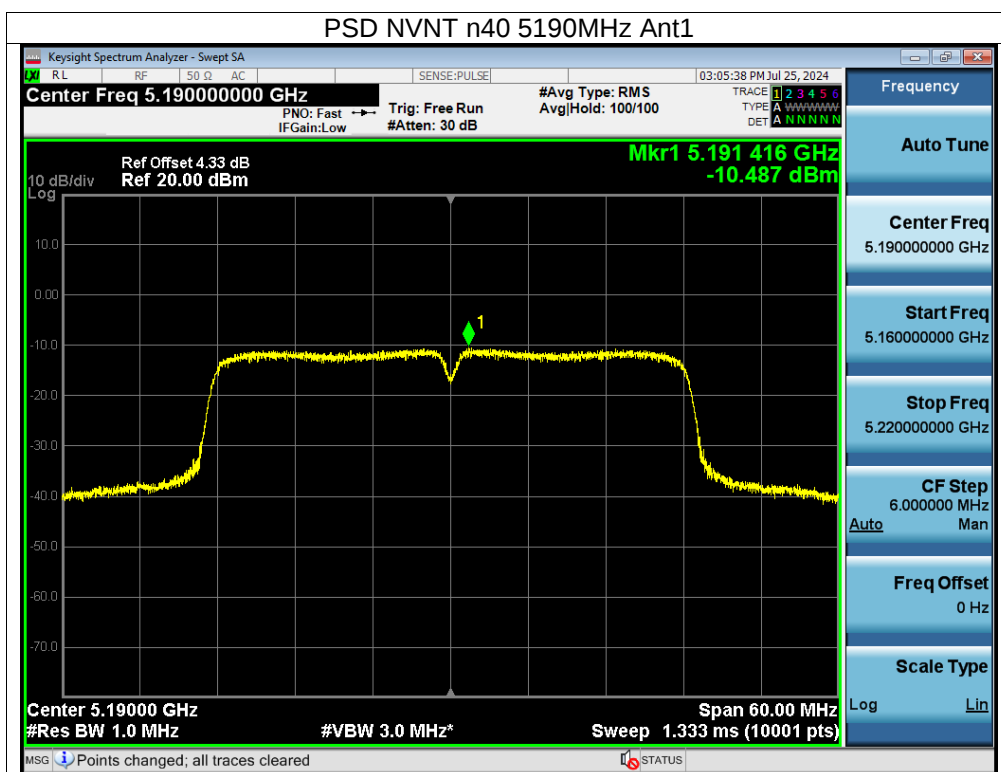
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 3.7V
Test Mode:	(5180-5240MHz)		

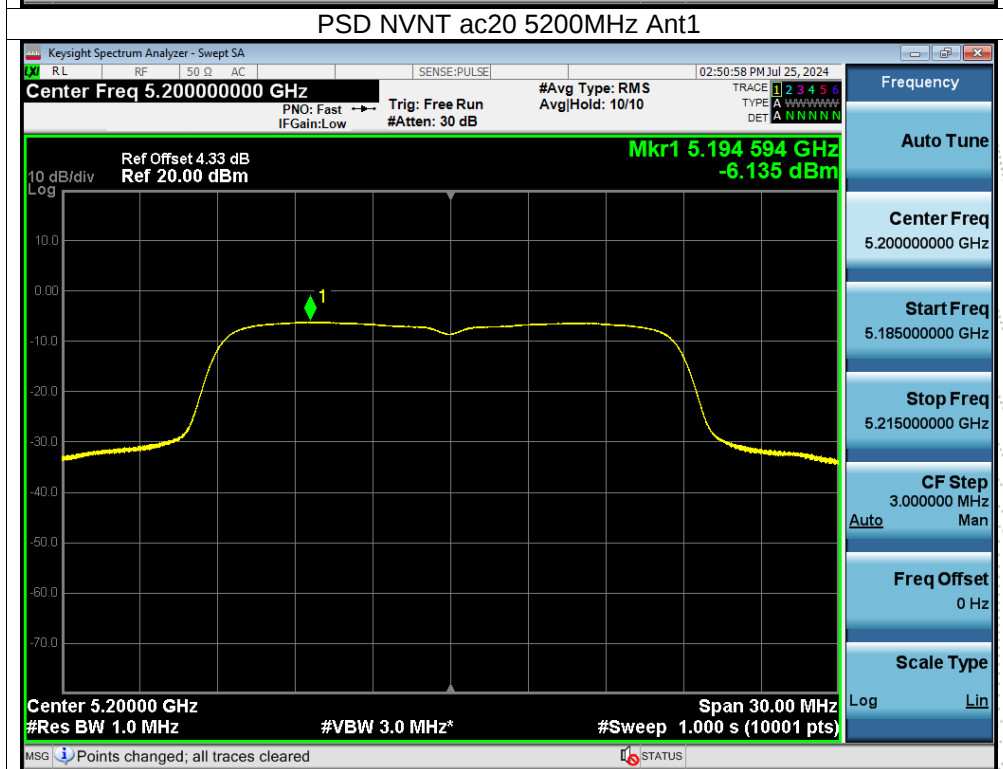
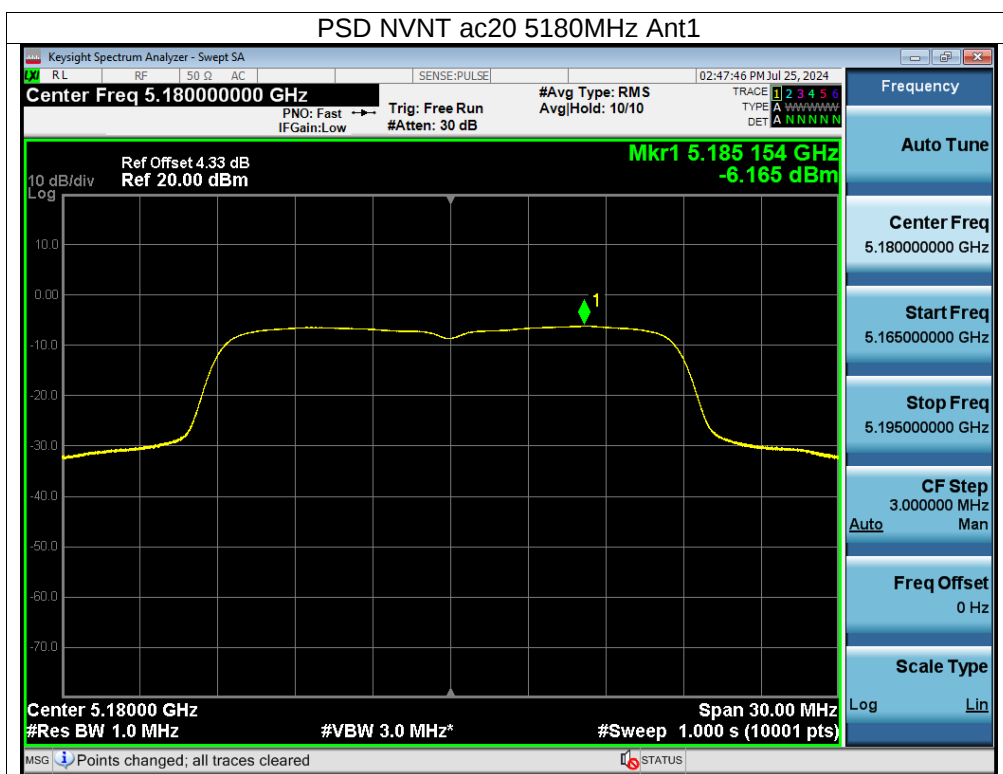
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5180	-5.38	11	Pass
NVNT	a	5200	-5.45	11	Pass
NVNT	a	5240	-4.58	11	Pass
NVNT	n20	5180	-6.21	11	Pass
NVNT	n20	5200	-6.07	11	Pass
NVNT	n20	5240	-5.27	11	Pass
NVNT	n40	5190	-10.49	11	Pass
NVNT	n40	5230	-4.57	11	Pass
NVNT	ac20	5180	-6.17	11	Pass
NVNT	ac20	5200	-6.14	11	Pass
NVNT	ac20	5240	-5.23	11	Pass
NVNT	ac40	5190	-10.7	11	Pass
NVNT	ac40	5230	-6.44	11	Pass
NVNT	ac80	5210	-15.28	11	Pass
NVNT	ax20	5180	-5.23	11	Pass
NVNT	ax20	5200	-5.25	11	Pass
NVNT	ax20	5240	-4.15	11	Pass
NVNT	ax40	5190	-10.55	11	Pass
NVNT	ax40	5230	-6.43	11	Pass
NVNT	ax80	5210	-15.31	11	Pass

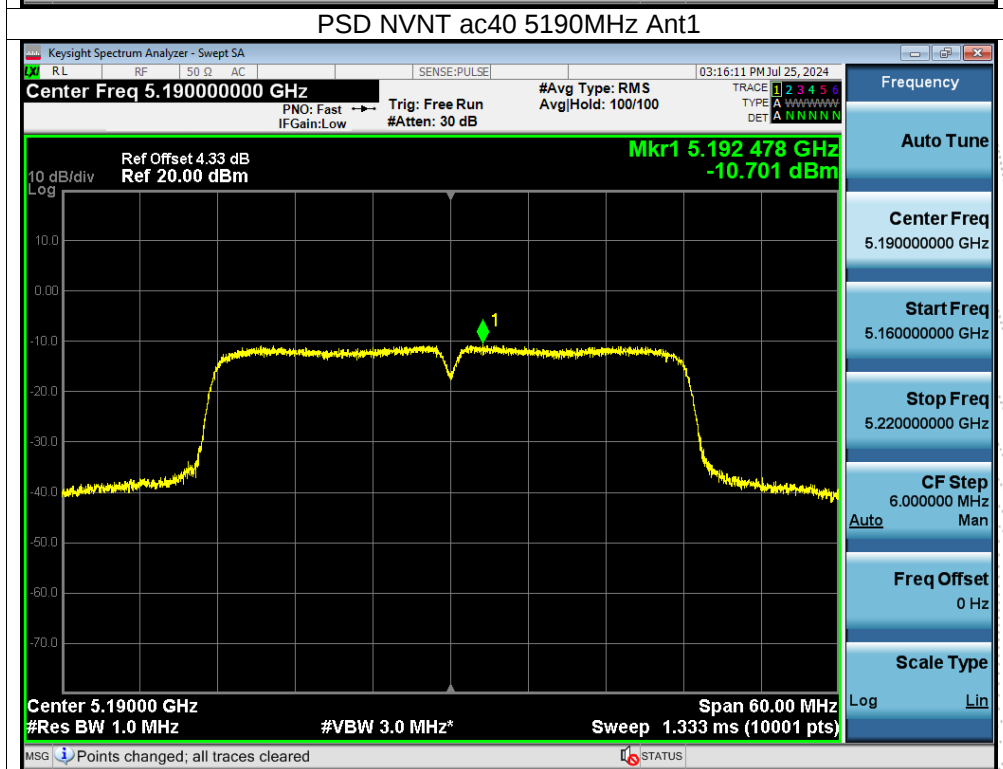
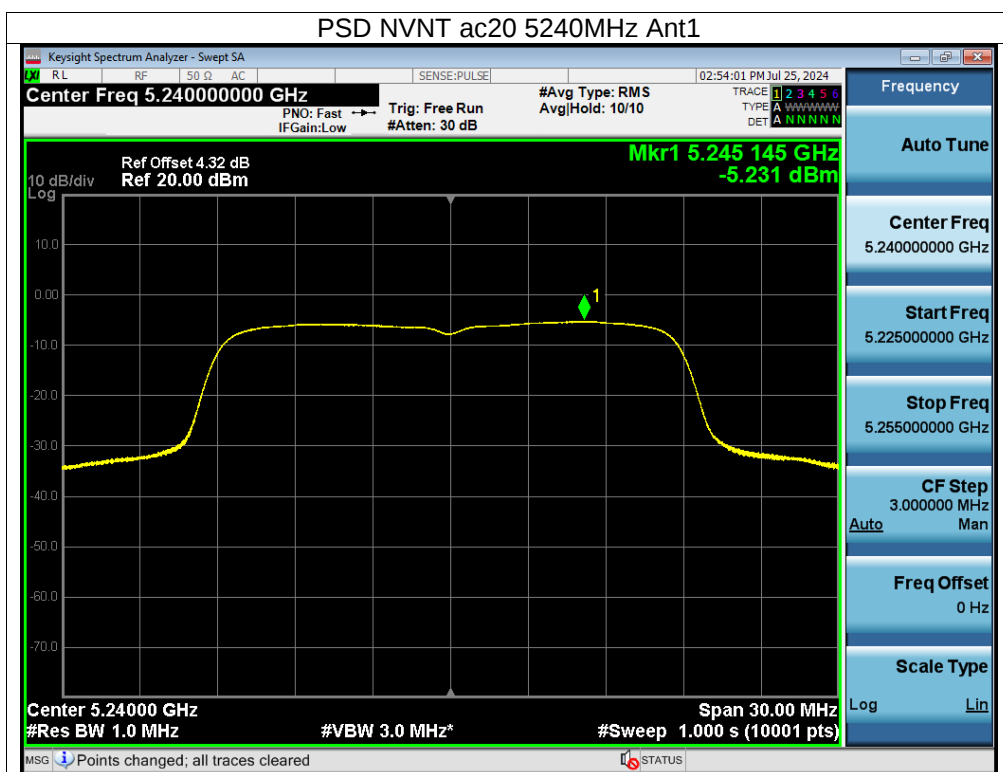


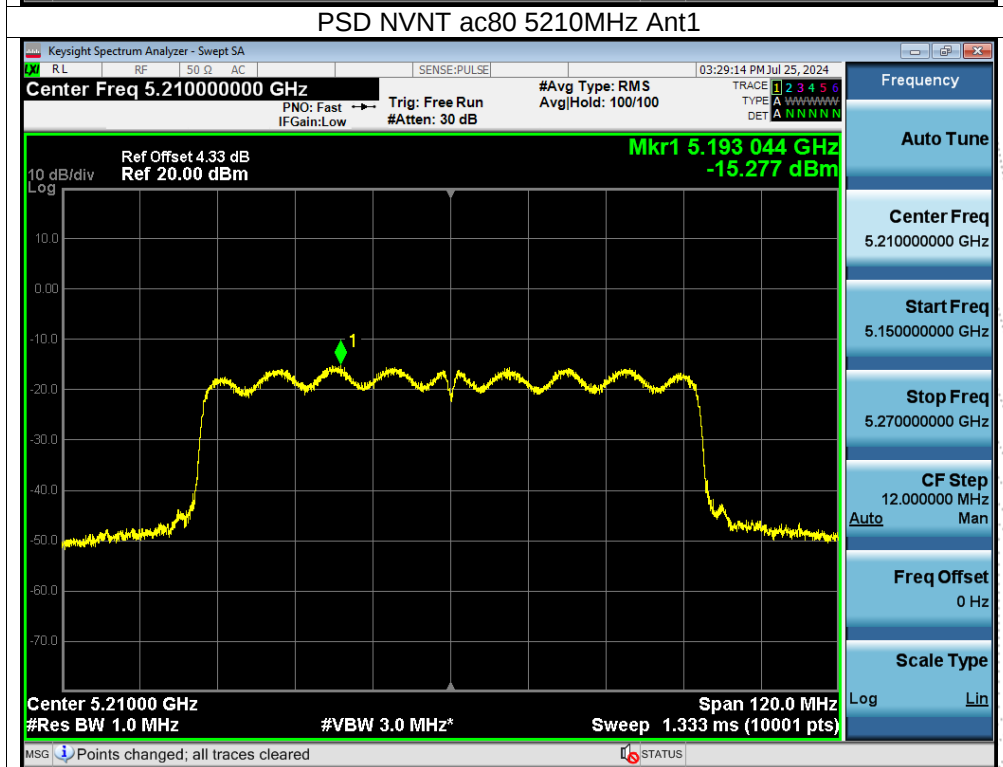
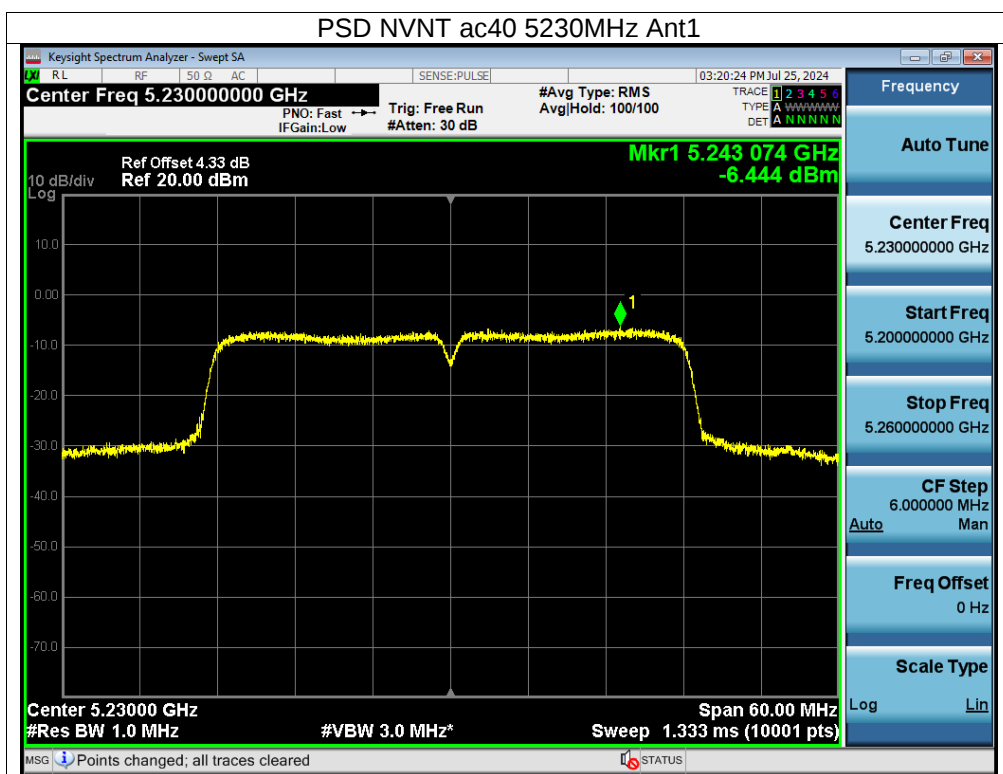


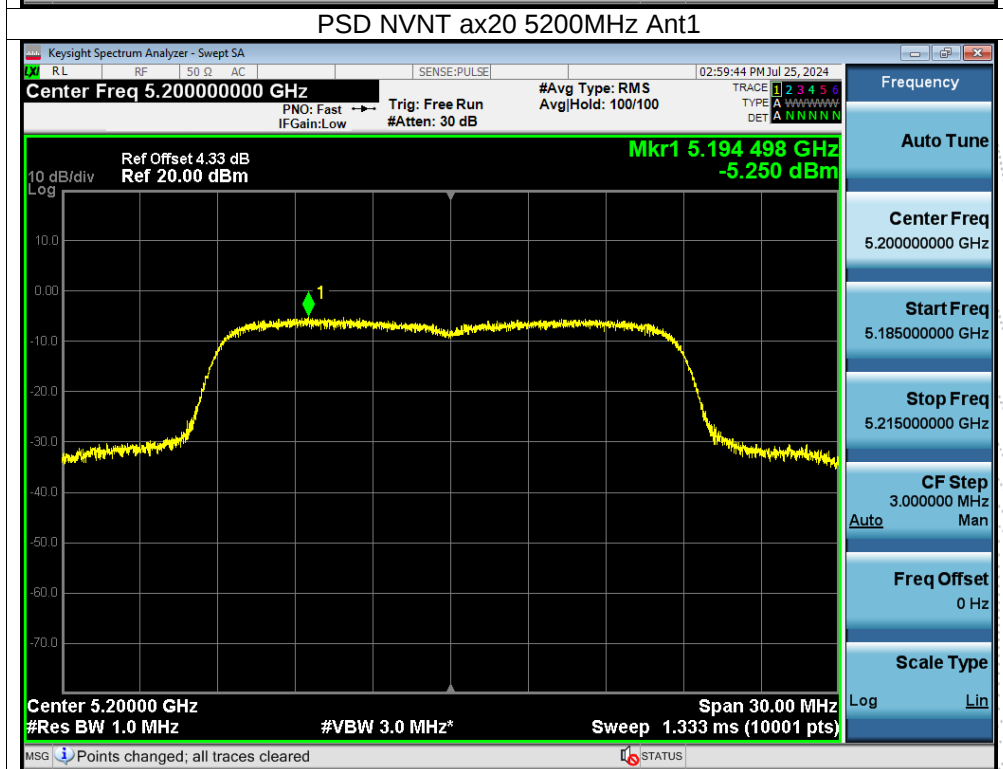
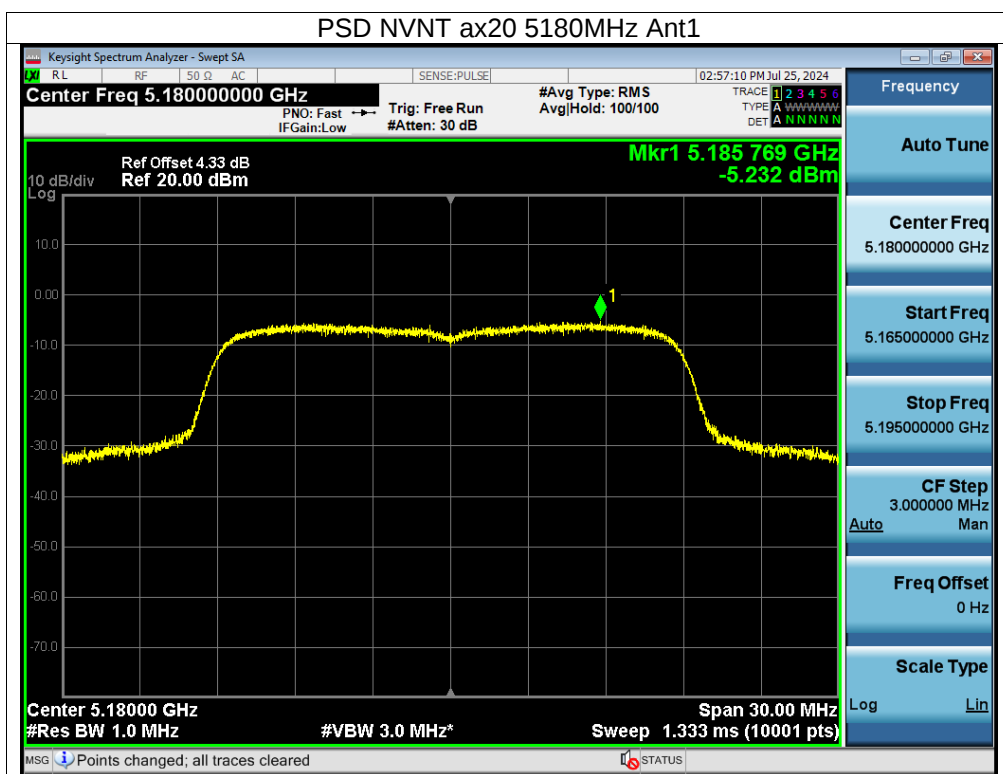


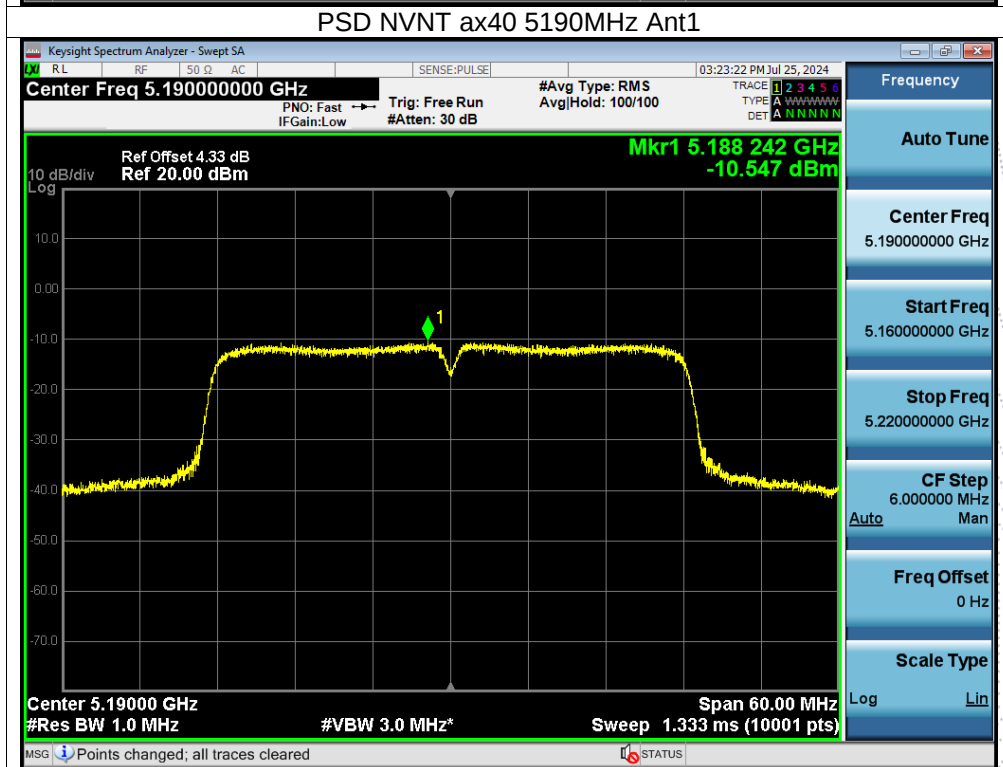
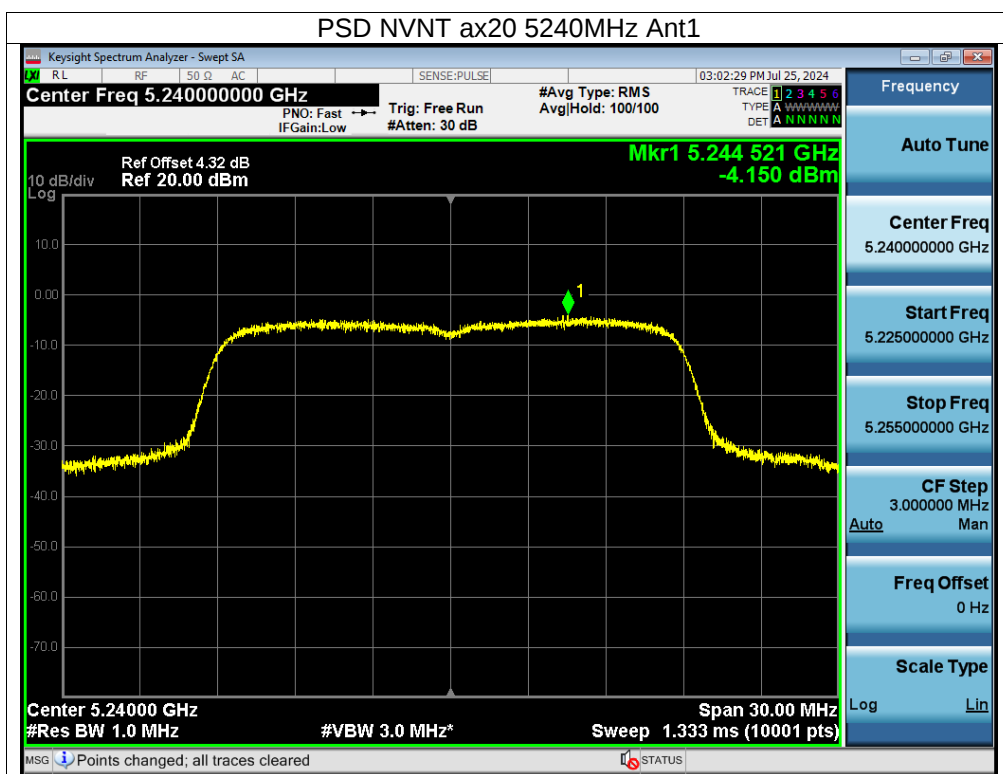


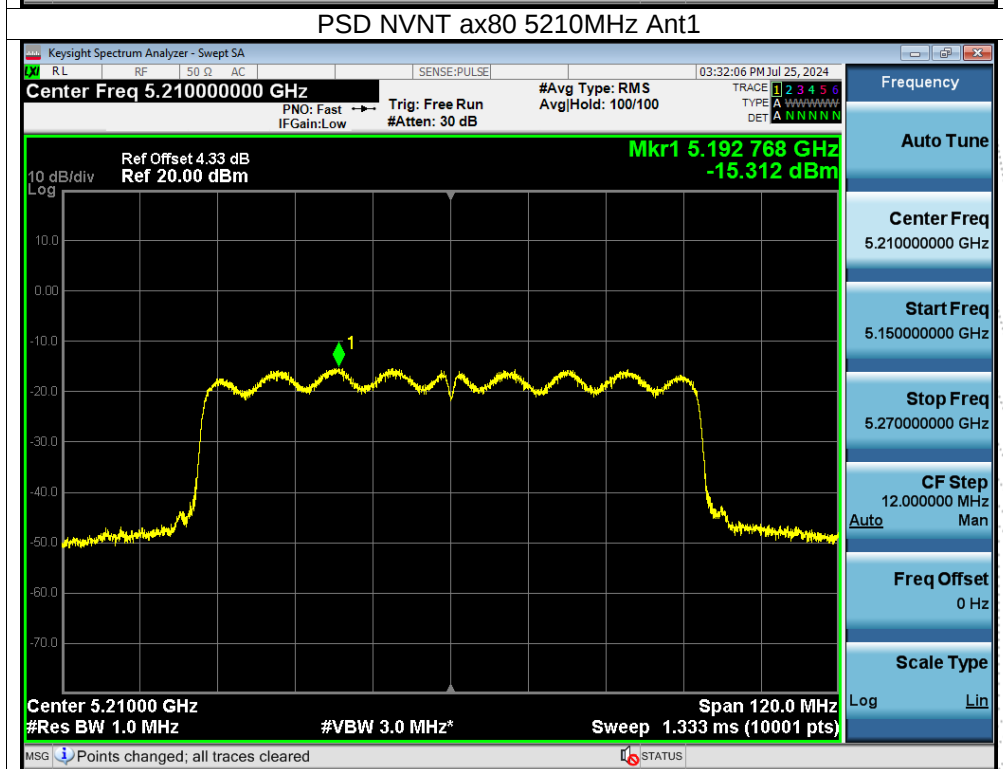
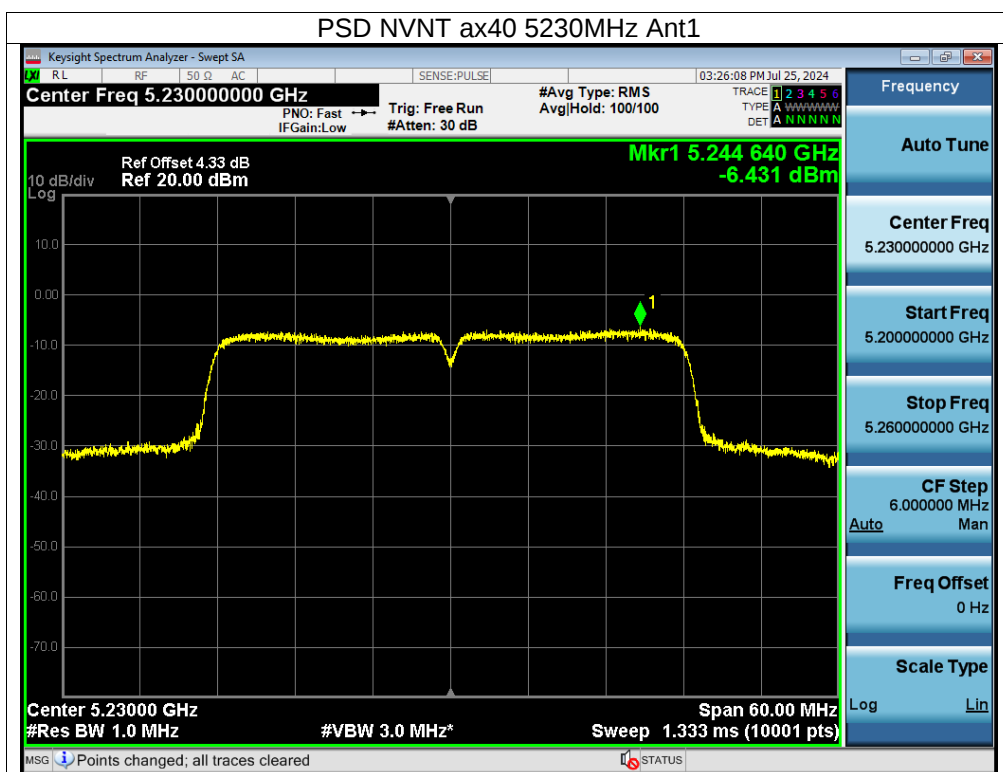








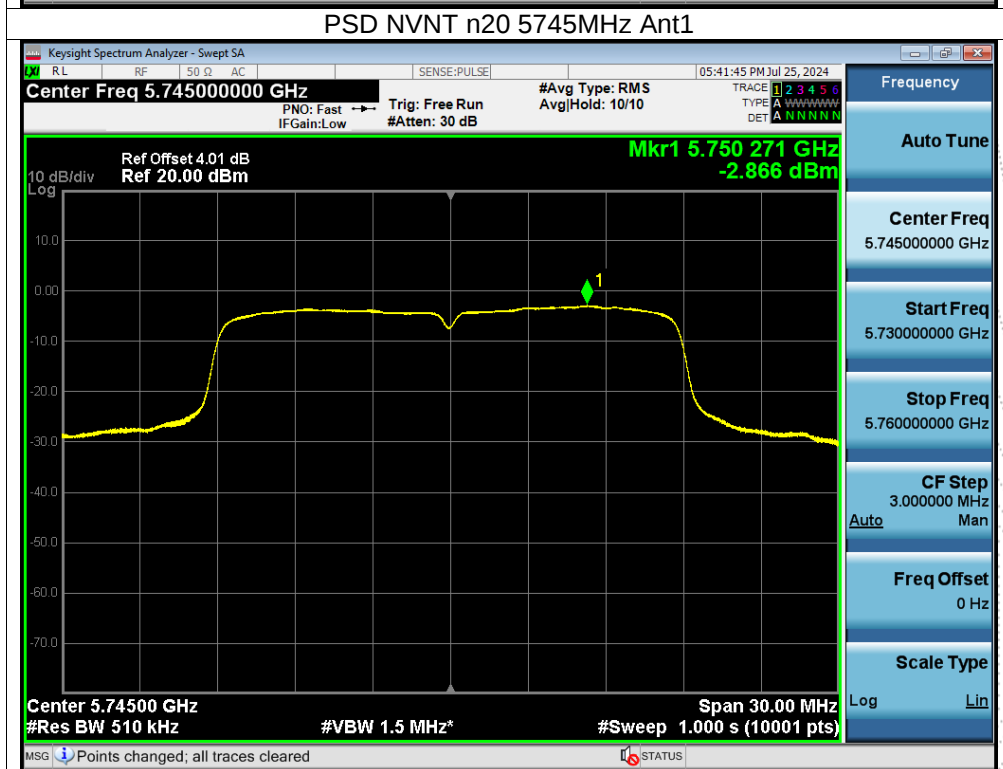
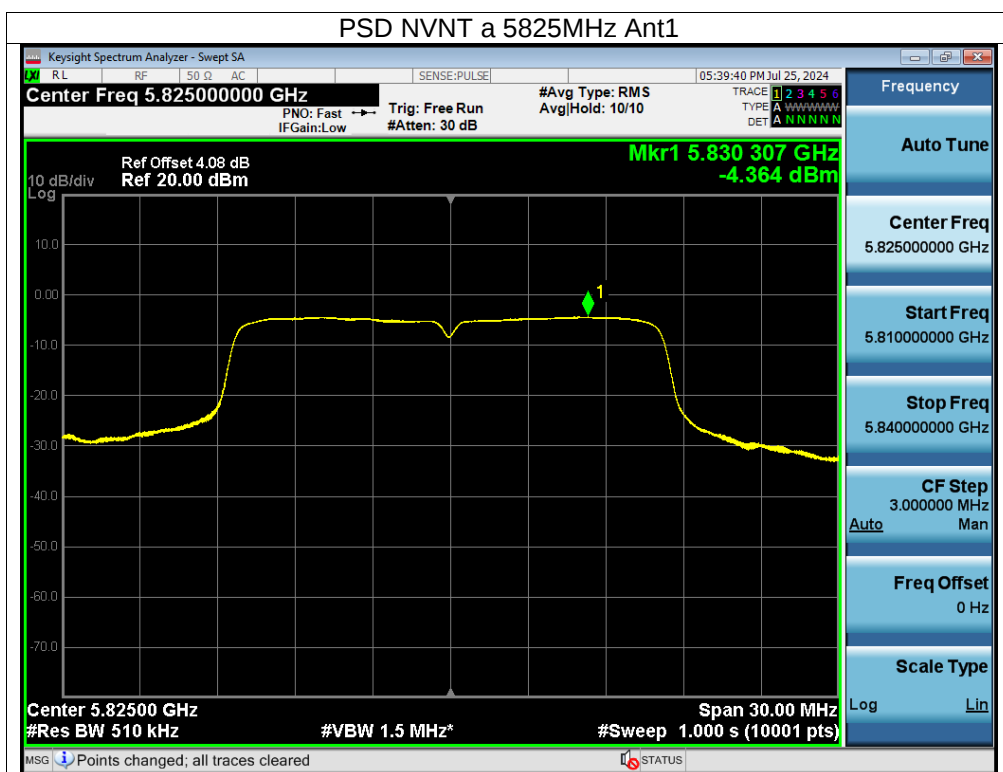


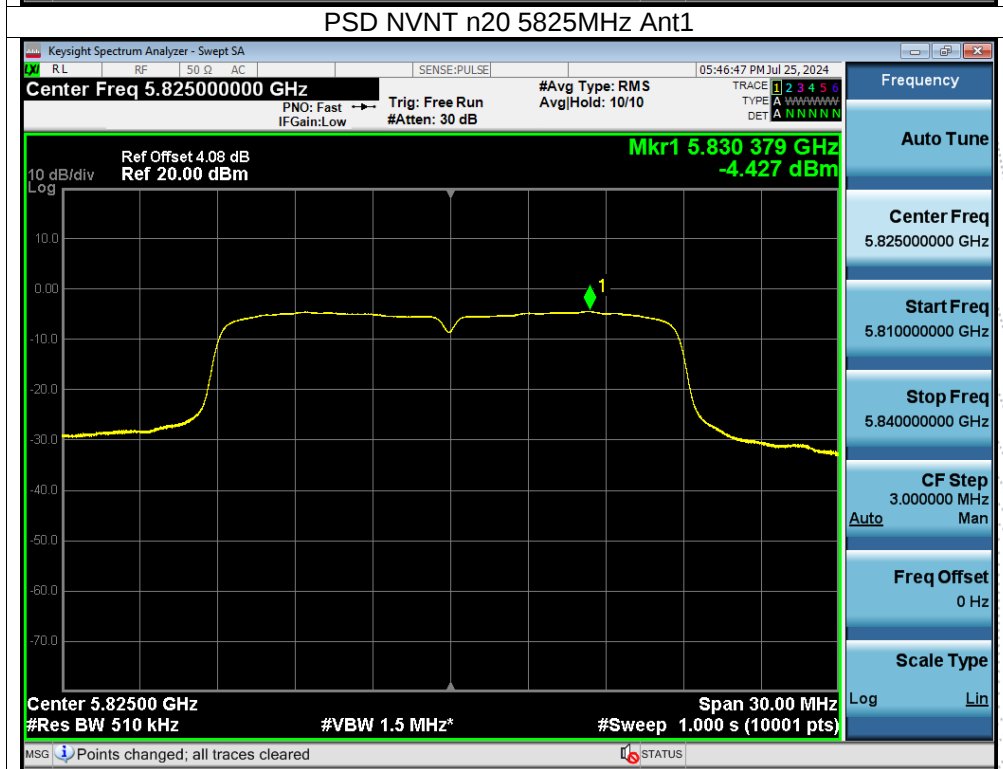
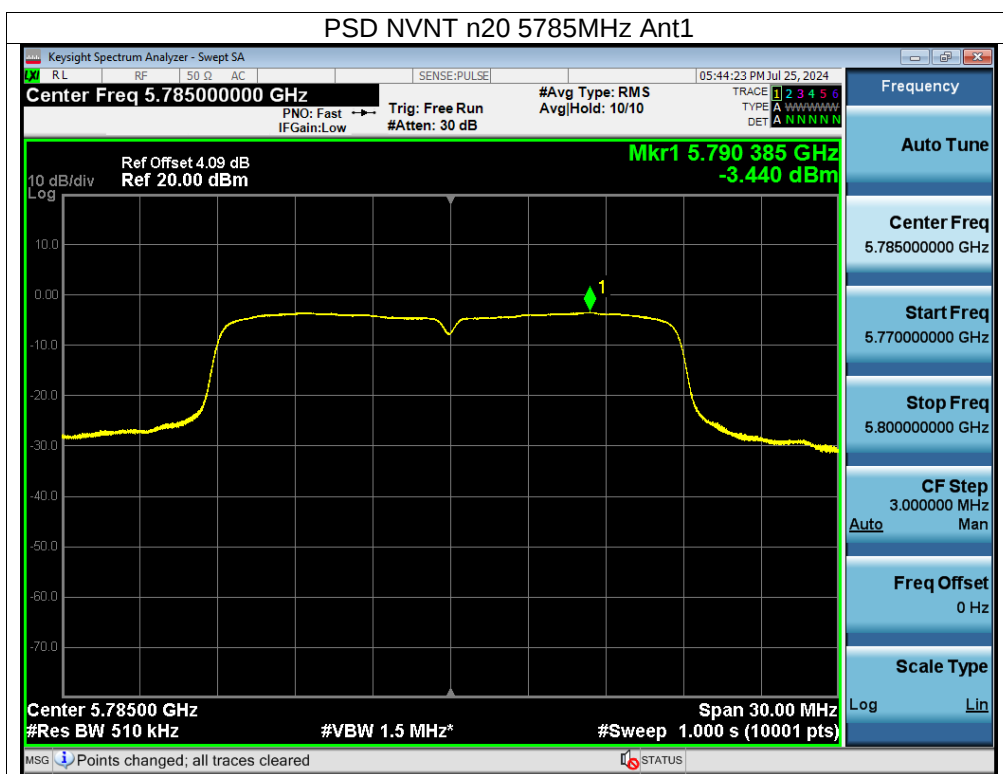


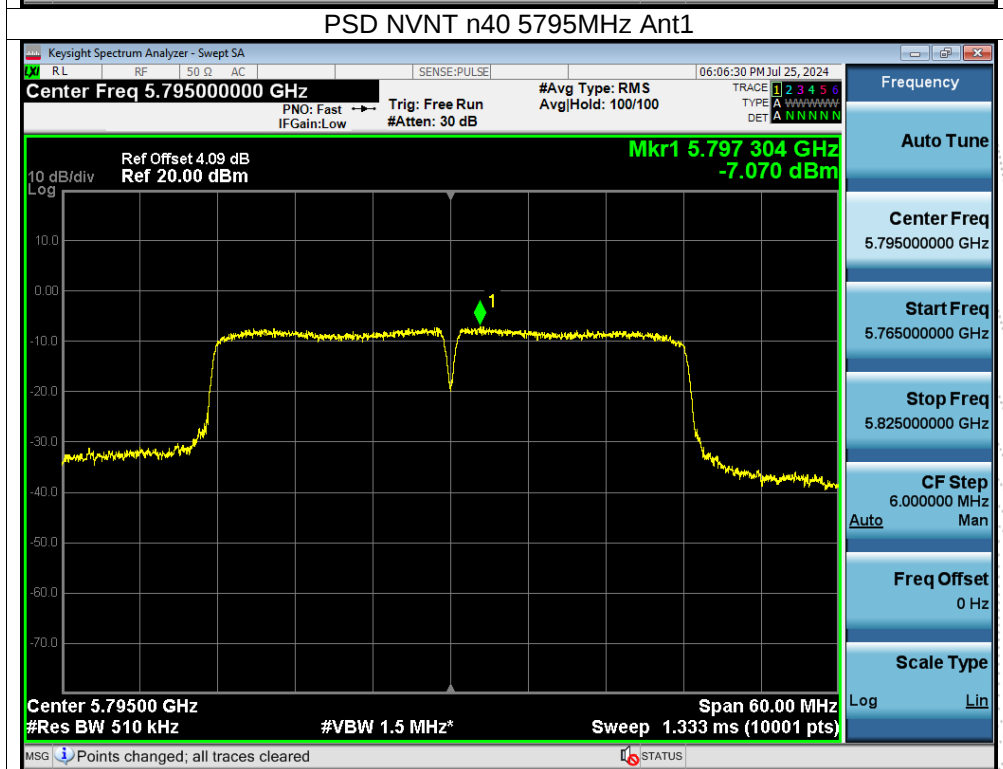
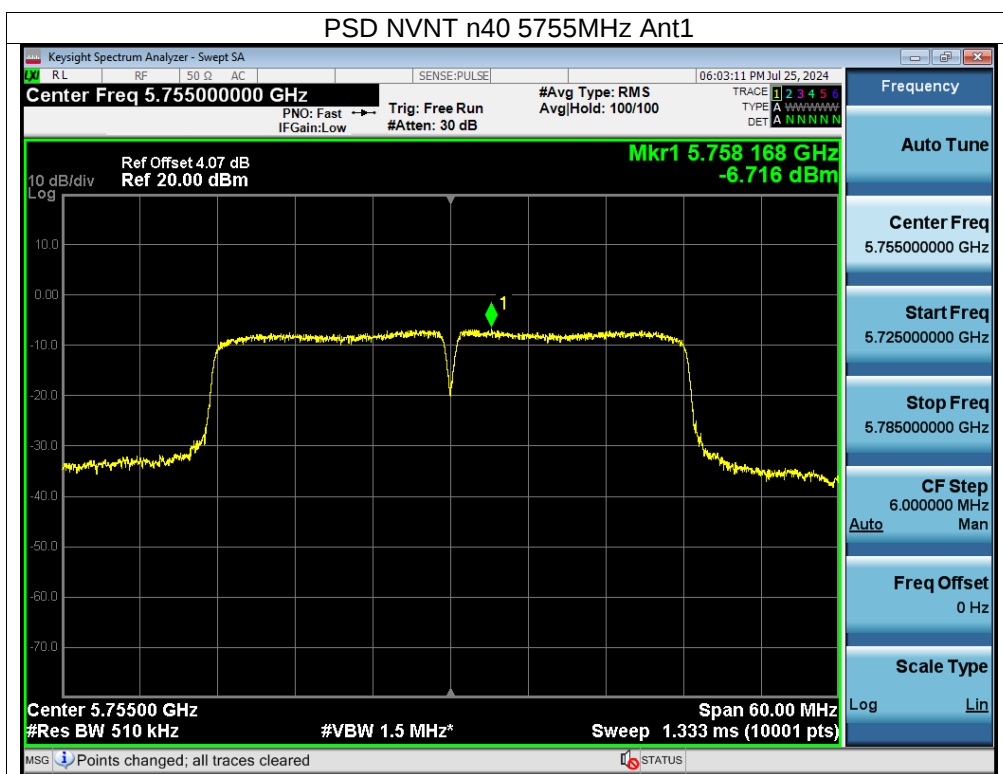
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 3.7V
Test Mode:	(5745-5825MHz)		

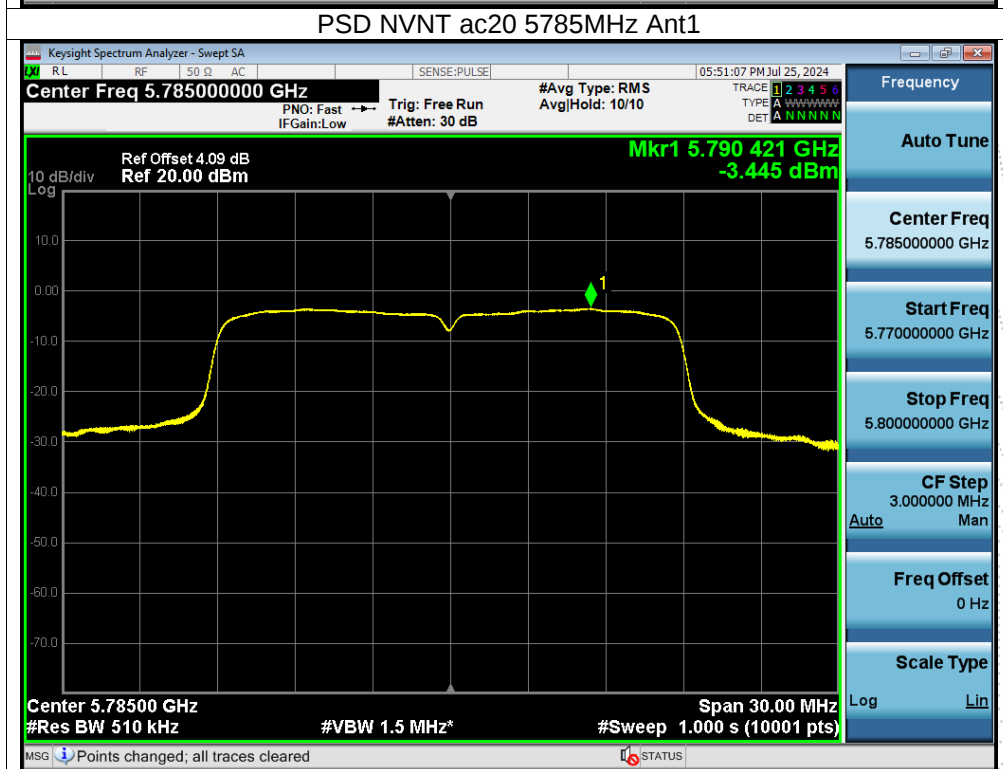
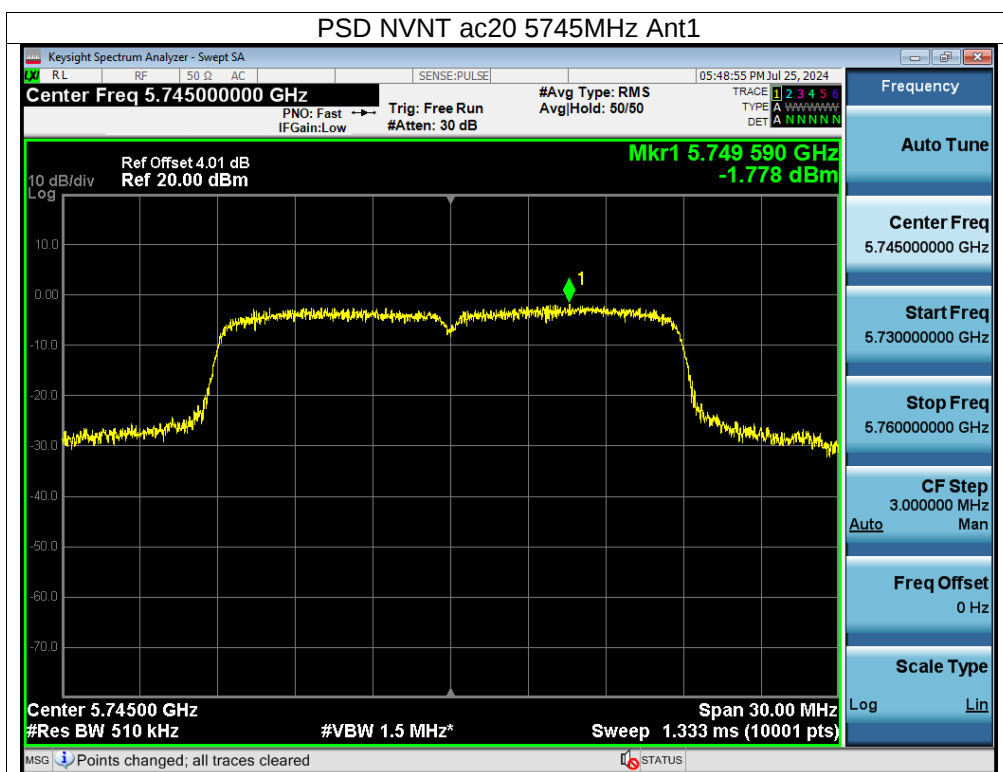
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5745	-2.73	30	Pass
NVNT	a	5785	-3.21	30	Pass
NVNT	a	5825	-4.36	30	Pass
NVNT	n20	5745	-2.87	30	Pass
NVNT	n20	5785	-3.44	30	Pass
NVNT	n20	5825	-4.43	30	Pass
NVNT	n40	5755	-6.72	30	Pass
NVNT	n40	5795	-7.07	30	Pass
NVNT	ac20	5745	-1.78	30	Pass
NVNT	ac20	5785	-3.45	30	Pass
NVNT	ac20	5825	-3.64	30	Pass
NVNT	ac40	5755	-4.69	30	Pass
NVNT	ac40	5795	-7.64	30	Pass
NVNT	ac80	5775	-10.29	30	Pass
NVNT	ax20	5745	-2.05	30	Pass
NVNT	ax20	5785	-2.44	30	Pass
NVNT	ax20	5825	-3.73	30	Pass
NVNT	ax40	5755	-7.32	30	Pass
NVNT	ax40	5795	-7.14	30	Pass
NVNT	ax80	5775	-10.09	30	Pass

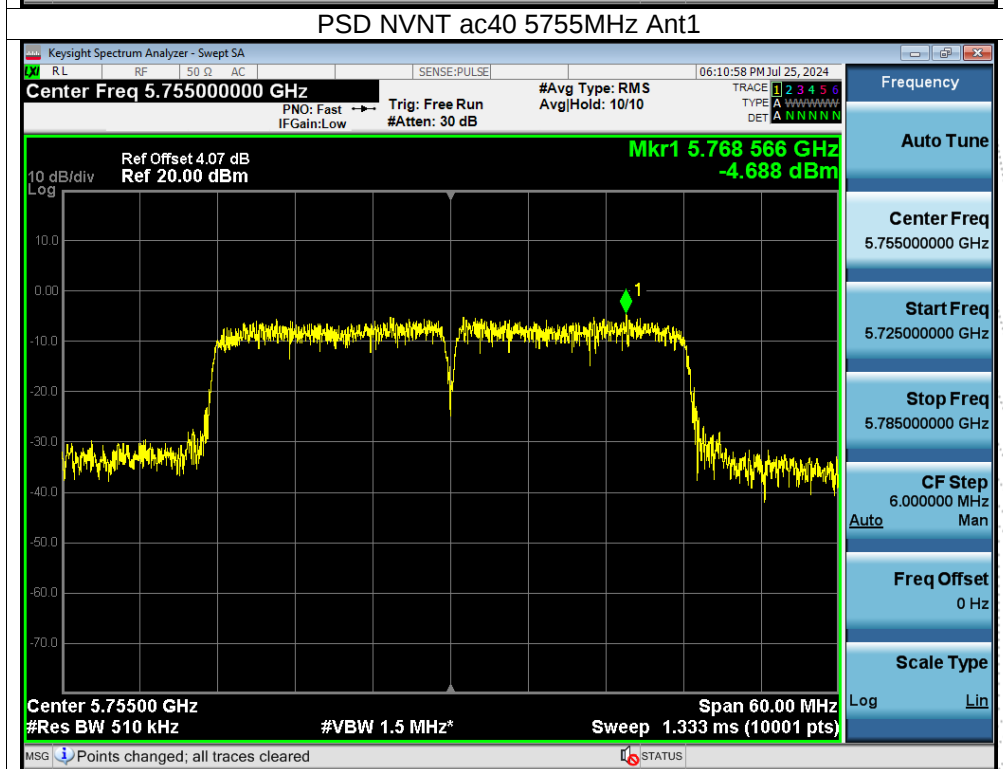
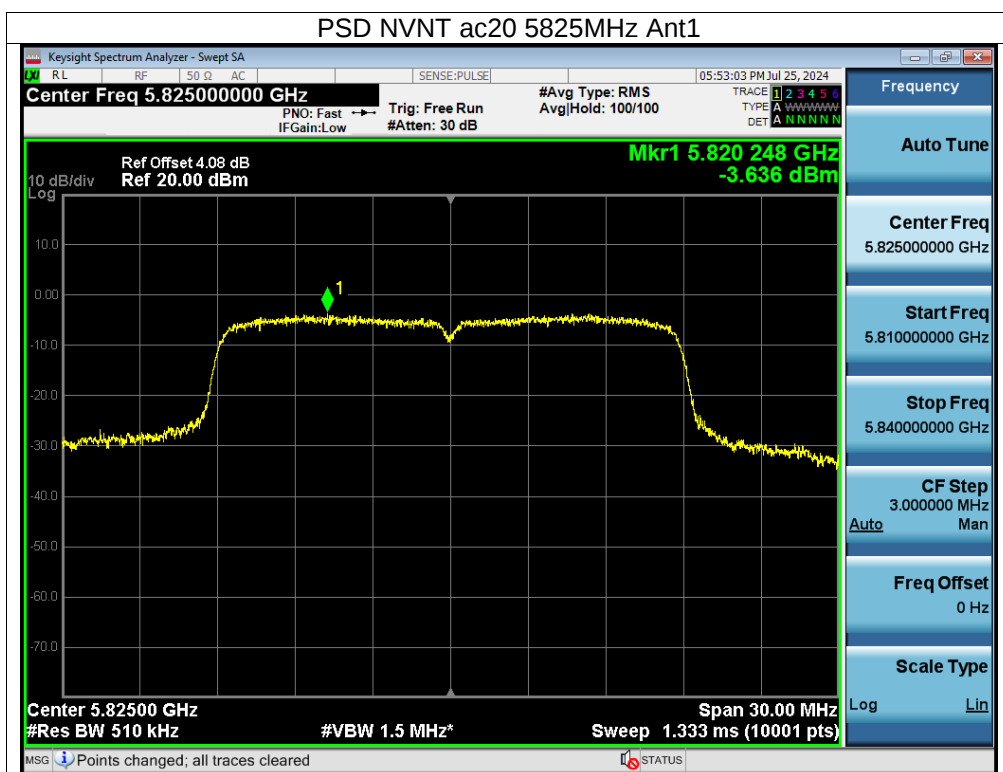


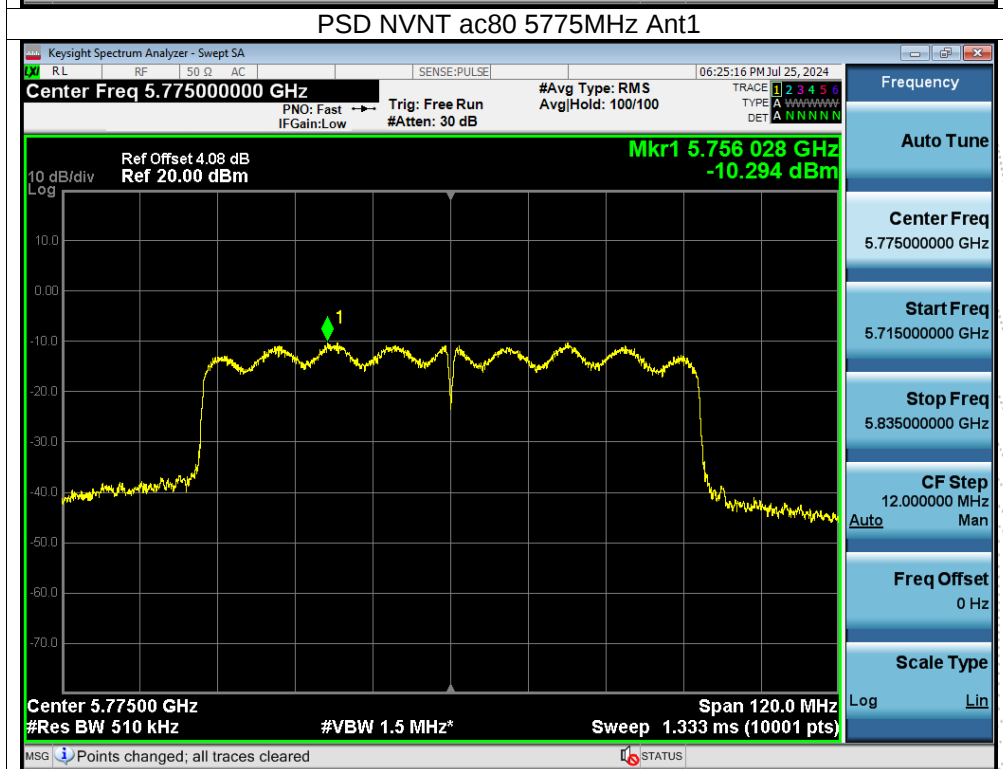
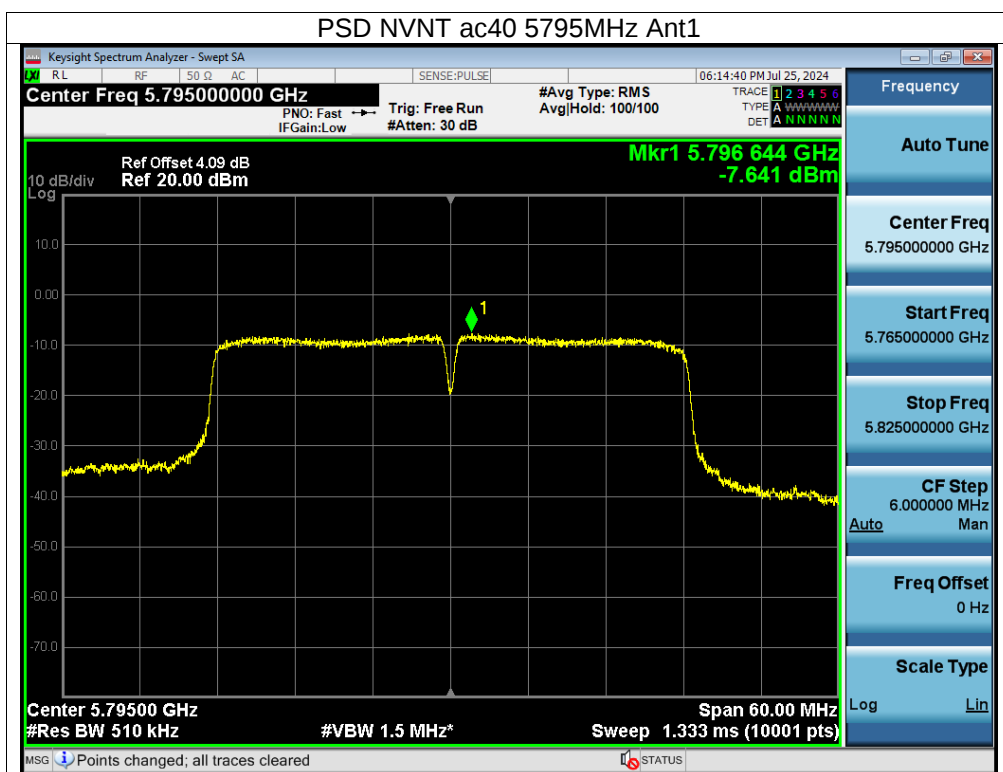


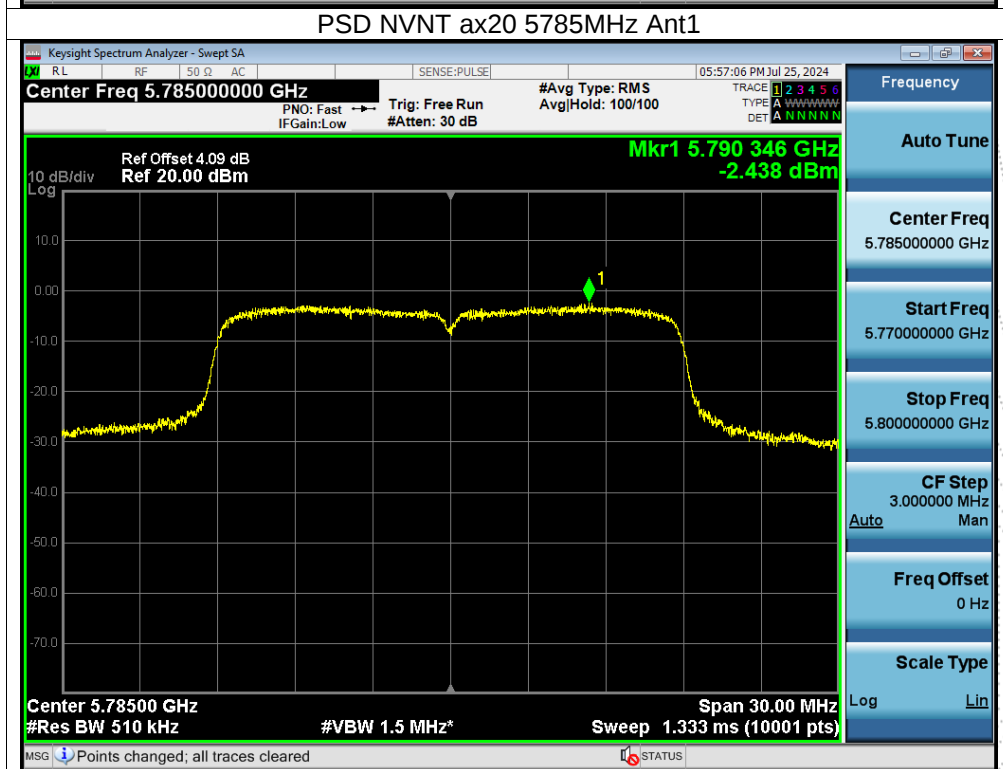
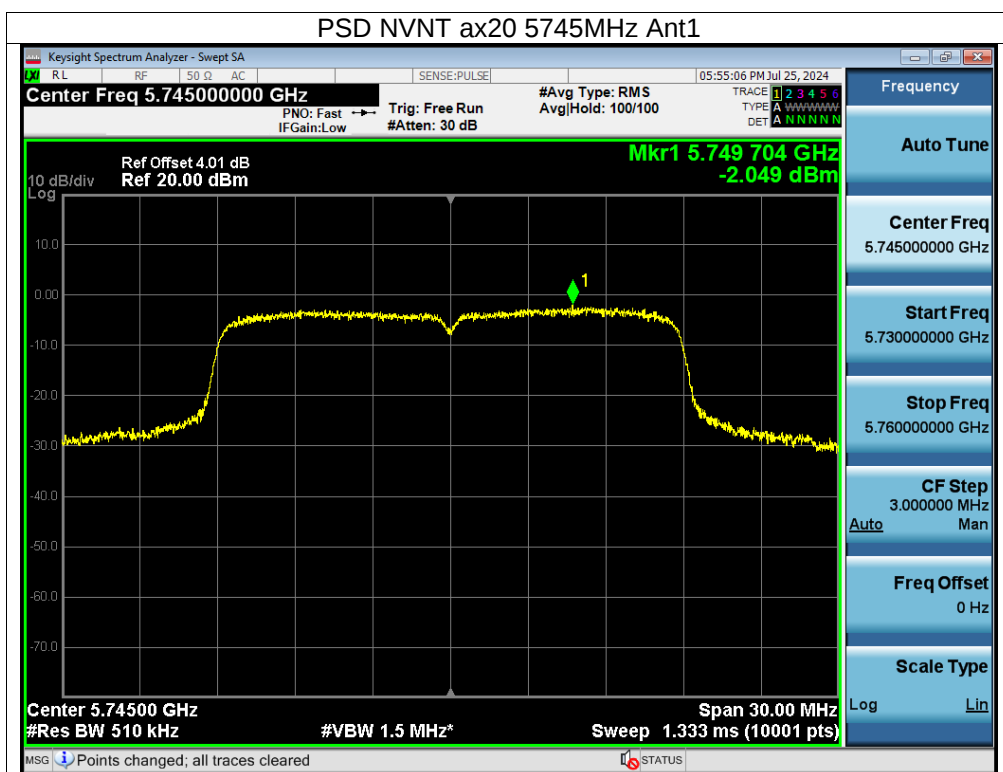


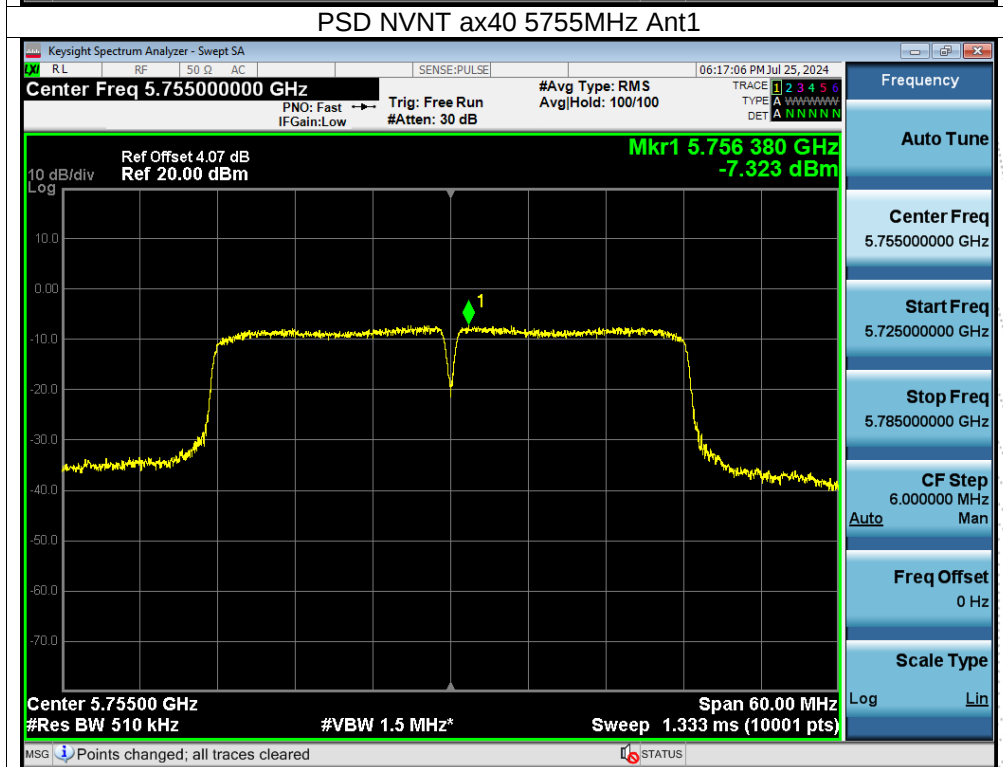
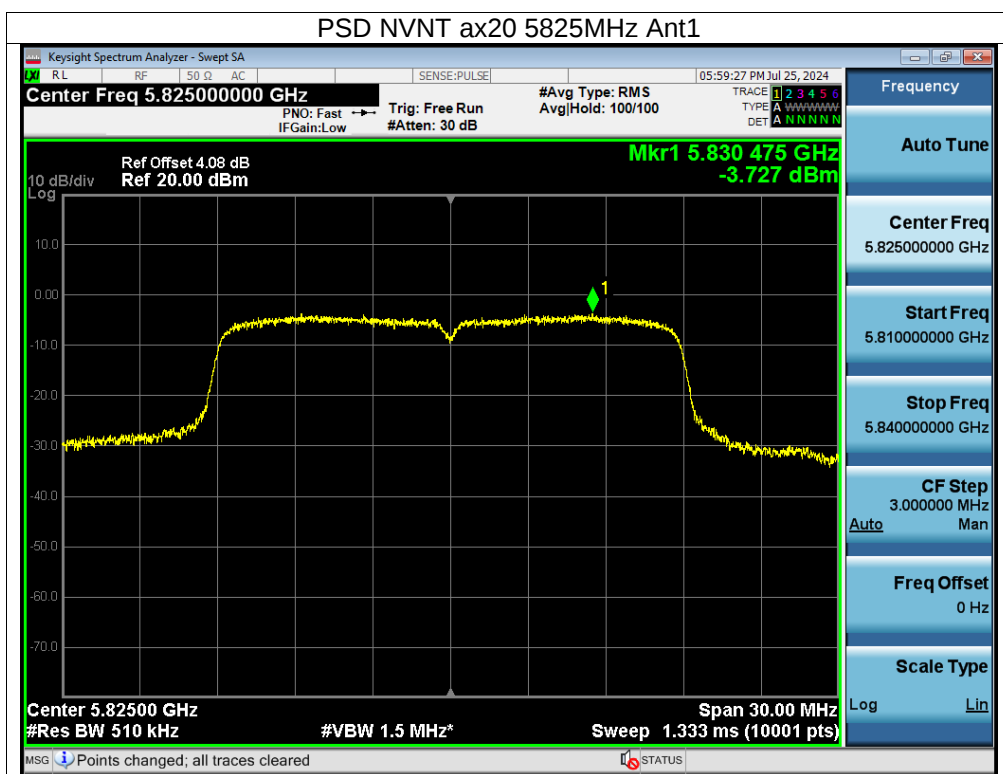


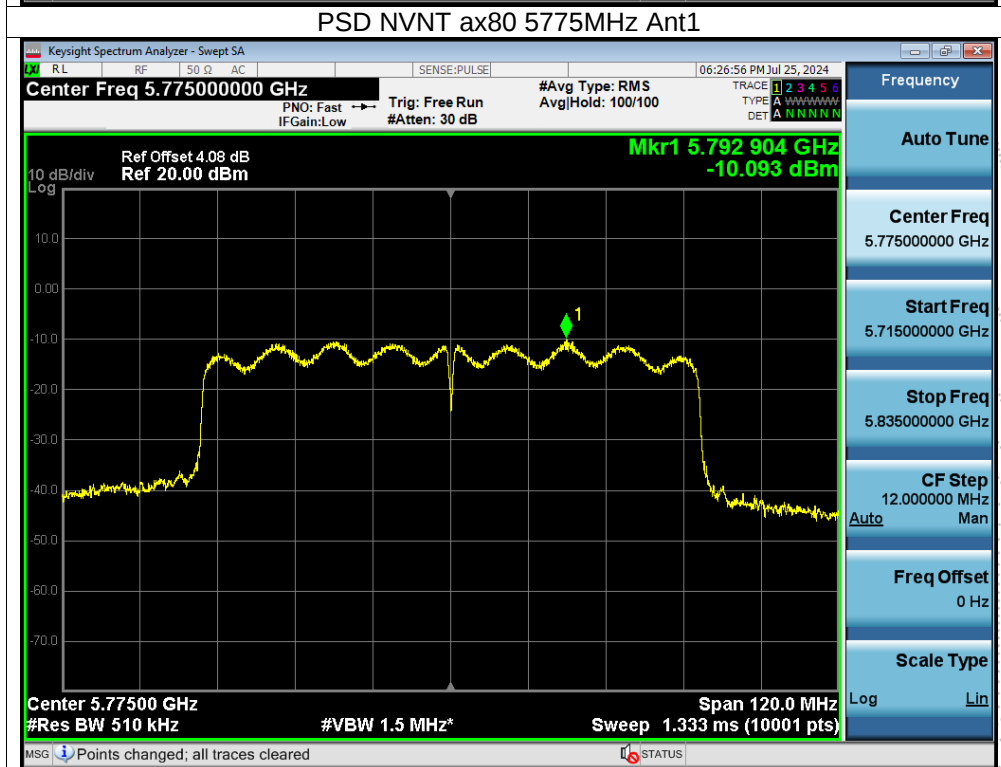
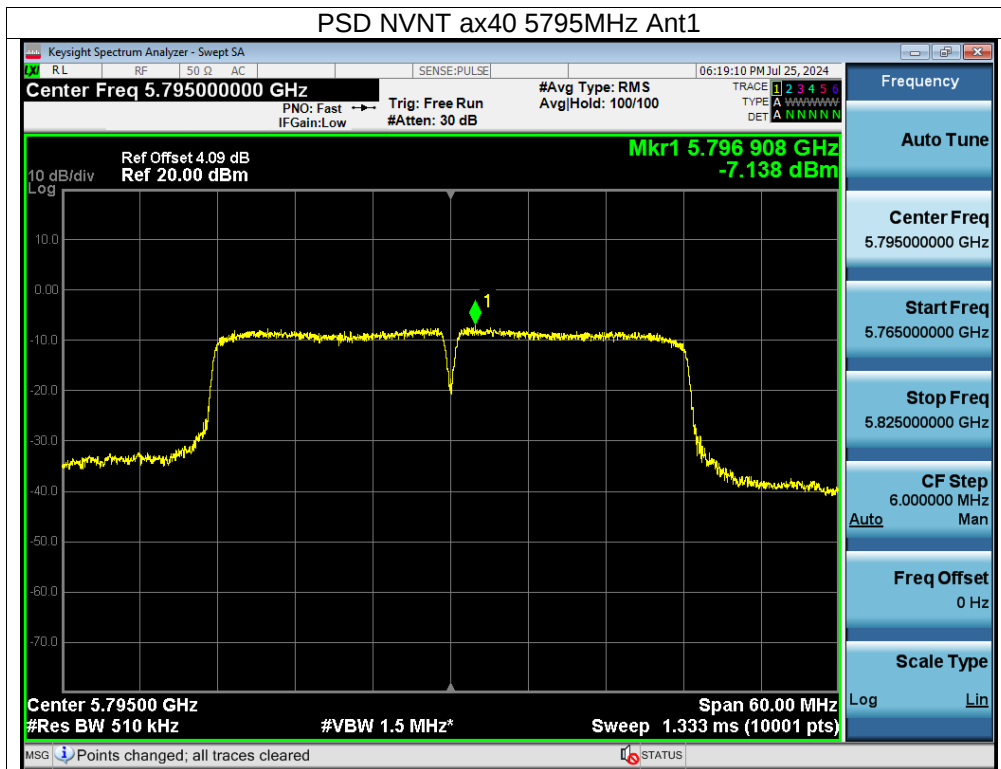






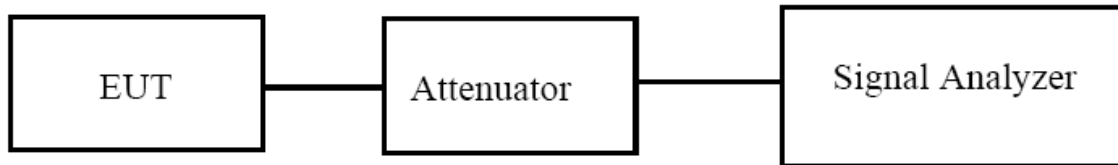






9. 26dB & 6dB & 99% Emission Bandwidth

9.1 Block Diagram Of Test Setup



9.2 Limit

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

9.3 Test Procedure

- a) Set RBW = approximately 1% of the emission bandwidth.
 - b) Set the VBW > RBW.
 - c) Detector = Peak.
 - d) Trace mode = max hold.
 - e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
- The following procedure shall be used for measuring (99 %) power bandwidth:
1. Set center frequency to the nominal EUT channel center frequency.
 2. Set span = 1.5 times to 5.0 times the OBW.
 3. Set RBW = 1 % to 5 % of the OBW
 4. Set VBW $\geq 3 \cdot$ RBW
 5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
 6. Use the 99 % power bandwidth function of the instrument (if available).
 7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

9.4 EUT Operating Conditions

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