

TEST REPORT

Report No.: BCTC2307939313-4E

Applicant:

SHENZHEN YUNJI INTELLIGENT TECHNOLOGY
CO.,LTD

Product Name:

Smart Phone

Model/Type
reference:

WP30 Pro

Tested Date:

2023-07-26 to 2023-09-20

Issued Date:

2023-09-21

Shenzhen BCTC Testing Co., Ltd.



FCC ID: 2ANMU-WP30SPUT

Product Name: Smart Phone
Trademark: OUKITEL
Model/Type reference: WP30 Pro
WP30, WP30 S, WP30 Ultra, WP30 TITAN
Prepared For: SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD
Address: A2 2F BUILDING ENET NEW INDUSTRIAL PARK, DAFU INDUSTRIAL ZONE,
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Manufacturer: SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD
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Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Sample Received Date: 2023-07-26
Sample tested Date: 2023-07-26 to 2023-09-20
Issue Date: 2023-09-21
Report No.: BCTC2307939313-4E
FCC Part15 15.407
Test Standards: ANSI C63.10-2013
KDB 662911 D01 v02r01
KDB 789033 D02 v02r01
Test Results: PASS

Tested by:



Lei Chen/Project Handler

Approved by:



Zero Zhou/Reviewer

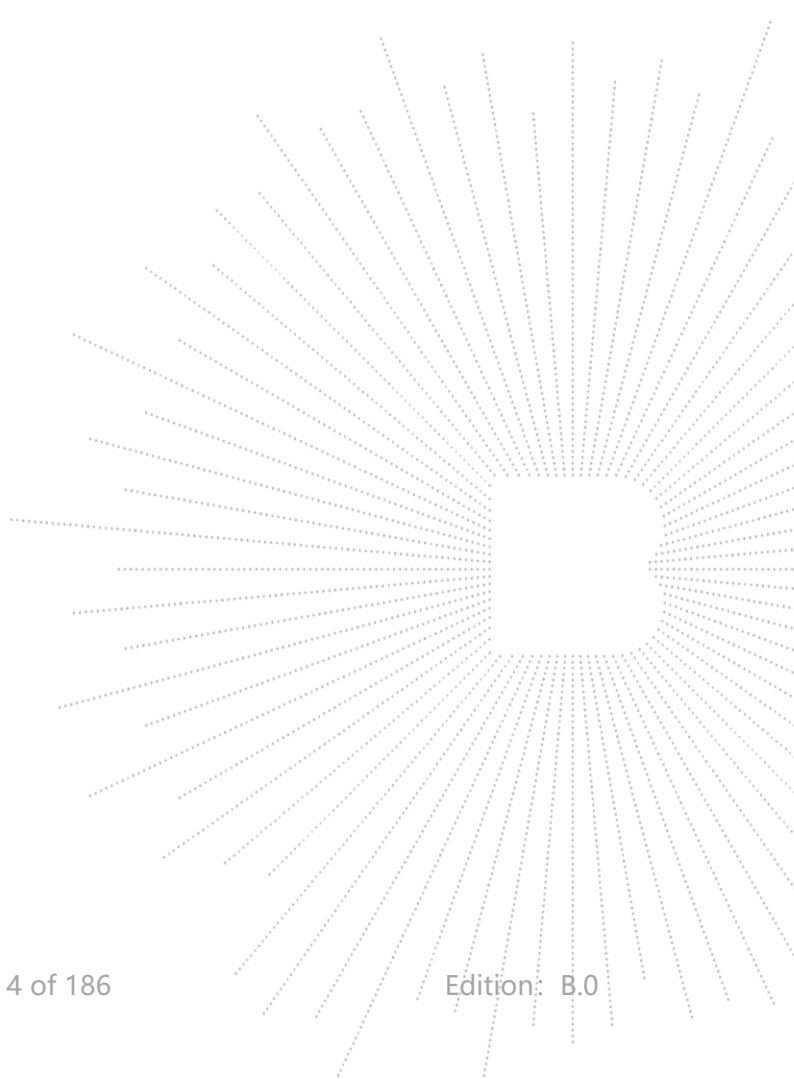
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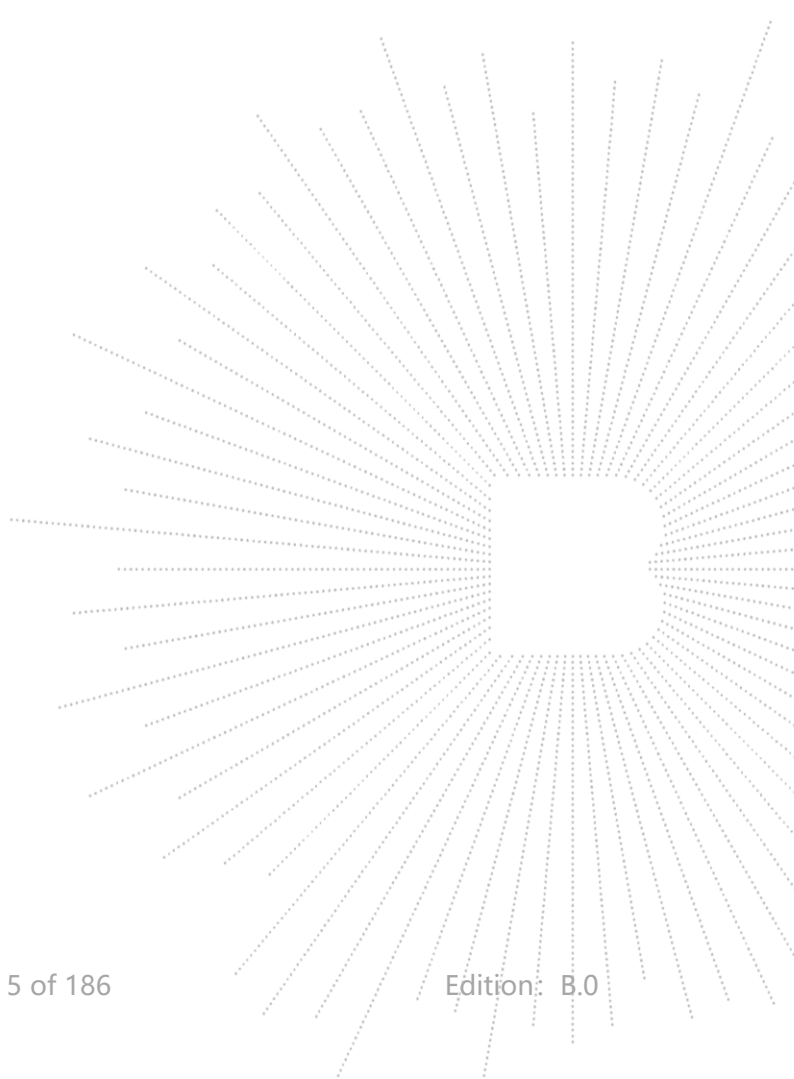
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(Note: N/A Means Not Applicable)



1. Version

Report No.	Issue Date	Description	Approved
BCTC2307939313-4E	2023-09-21	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)(1) 15.407 (b)(4) 15.407 (b)(8)	PASS
2	Conducted Emission	15.207	PASS
3	26 dB and 99% Emission Bandwidth	15.407 (a)(12) 15.1049	PASS
4	Minimum 6 dB bandwidth	15.407(e)	PASS
5	Maximum Conducted Output Power	15.407 (a)(1) 15.407 (a)(3)	PASS
6	Band Edge	2.1051, 15.407(b)(1) 15.407(b)(4)	PASS
7	Power Spectral Density	15.407 (a)(1) 15.407 (a)(3)	PASS
8	Spurious Emissions at Antenna Terminals	2.1051, 15.407(b)	PASS
9	Antenna Requirement	15.203	PASS

Note: The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure.

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

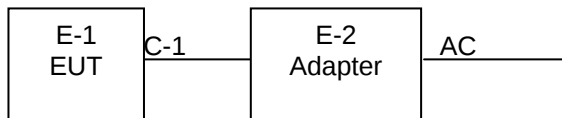
4.1 Product Information

Model/Type reference:	WP30 Pro WP30, WP30 S, WP30 Ultra, WP30 TITAN
Model differences:	All the model are the same circuit and RF module, except model names and appearance of the color.
Hardware Version:	M159-MUB-V2
Software Version:	OUKITEL_WP30_Pro_V09_20230804
IEEE 802.11 WLAN Mode Supported	802.11a/n/ac/ax(20MHz channel bandwidth) 802.11n/ac/ax(40MHz channel bandwidth) 802.11ac/ax(80MHz channel bandwidth)
Operation Frequency:	5180-5240MHz for 802.11a/n(HT20)/ax(HT20); 5190-5230MHz for 802.11n(HT40)/ax(HT40); 5210MHz for 802.11 ac(HT80)/ax(HT80); 5745-5825 MHz for 802.11a/ n(HT20)/ax(HT20); 5755-5795 MHz for 802.11 n(HT40)/ax(HT40); 5775MHz for 802.11 ac(HT80)/ax(HT80);
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
Number Of Channel	4 channels for 802.11a/n20/ax20 in the 5180-5240MHz band ; 2 channels for 802.11 n40/ax40 in the 5190-5230MHz band ; 1 channels for 802.11 ac80/ax80 in the 5210MHz band ; 5 channels for 802.11a/n20/ax20 in the 5745-5825MHz band ; 2 channels for 802.11 n40/ax40 in the 5755-5795MHz band ; 1 channels for 802.11 ac80/ax80 in the 5775MHz band
Antenna installation:	Internal antenna
Antenna Gain:	5.1G: -0.41 dBi 5.8G: -0.15 dBi
Ratings:	DC 9V from adapter
Battery:	DC 7.74V,5500mAh/42.57Wh Model: HJ-PD120W-US Input: 100-240V- 50/60Hz 1.8A Output: 5.0V  3.0A 15.0W OR 9.0V  3.0A 27.0W OR 12.0V  3.0A 36.0W OR 15.0V  3.0A 45.0W OR 20.0V  5.0A 100.0W MAX PPS: 3.6V-20.0V  6.0A 120W MAX
Adapter Information:	

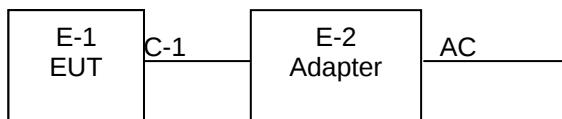
4.2 Test Setup Configuration

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

Conducted Emission:



Radiated Spurious Emission



4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Smart Phone	OUKITEL	WP30 Pro	N/A	EUT
E-2	Adapter	N/A	HJ-PD120W-US	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	1M	DC cable unshielded

Notes:

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

4.4 Channel List

5.1G

802.11a/n/ac(20MHz)/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(40MHz)/ax(40MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	-	-	-	-	-	-
46	5230	-	-	-	-	-	-

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

5.8G

802.11a/n/ac(20 MHz)/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 (40MHz)/ax (40MHz) Carrier Frequency Channel					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795	-	-

802.11ac (80MHz)/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 20/ax 20 CH36/ CH40/ CH 48 802.11a /n/ ac 20/ax 20 CH149/ CH157/ CH 165
Mode 2	802.11n/ ac40/ax 40 CH38/ CH 46 802.11n/ ac40/ax 40 CH 151 / CH 159
Mode 3	802.11 ac80/ax 80 CH 42/CH 155
Mode 4	Link Mode

Note:

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

4.6 Table Of Parameters Of Text Software Setting

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

Test software Version	CMD		
Parameters	DEF	DEF	DEF

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

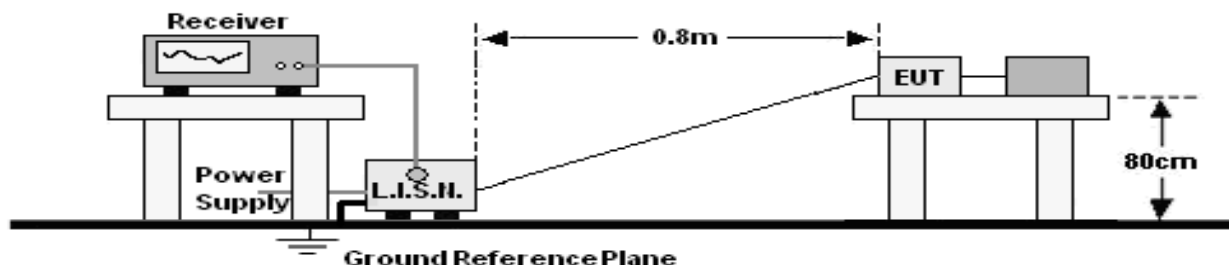
Conducted Emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESR3	102075	May 15, 2023	May 14, 2024
LISN	R&S	ENV216	101375	May 15, 2023	May 14, 2024
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Attenuator	\	10dB DC-6GHz	1650	May 15, 2023	May 14, 2024

RF Conducted Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Power Metter	Keysight	E4419	\	May 15, 2023	May 14, 2024
Power Sensor (AV)	Keysight	E9300A	\	May 15, 2023	May 14, 2024
Signal Analyzer20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 15, 2023	May 14, 2024
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 15, 2023	May 14, 2024
Communication test set	R&S	CMW500	126173	Nov. 08, 2022	Nov. 07, 2023
Radio frequency control box	MAIWEI	MW200-RFC B	\	\	\
Software	MAIWEI	MTS 8200	\	\	\

Radiated Emissions Test (966 Chamber01)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	May 15, 2023	May 14, 2026
Receiver	R&S	ESR3	102075	May 15, 2023	May 14, 2024
Receiver	R&S	ESRP	101154	May 15, 2023	May 14, 2024
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 15, 2023	May 14, 2024
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 29, 2023	May 28, 2024
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 31, 2023	May 30, 2024
Amplifier	SKET	LAPA_01G18 G-45dB	\	May 15, 2023	May 14, 2024
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 31, 2023	May 30, 2024
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 15, 2023	May 14, 2024
Horn Antenna(18G Hz-40GHz)	Schwarzbeck	BBHA9170	00822	May 31, 2023	May 30, 2024
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 15, 2023	May 14, 2024
Communication test set	R&S	CMW500	126173	Nov. 08, 2022	Nov. 07, 2023
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

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

Notes:

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

6.3 Test Procedure

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

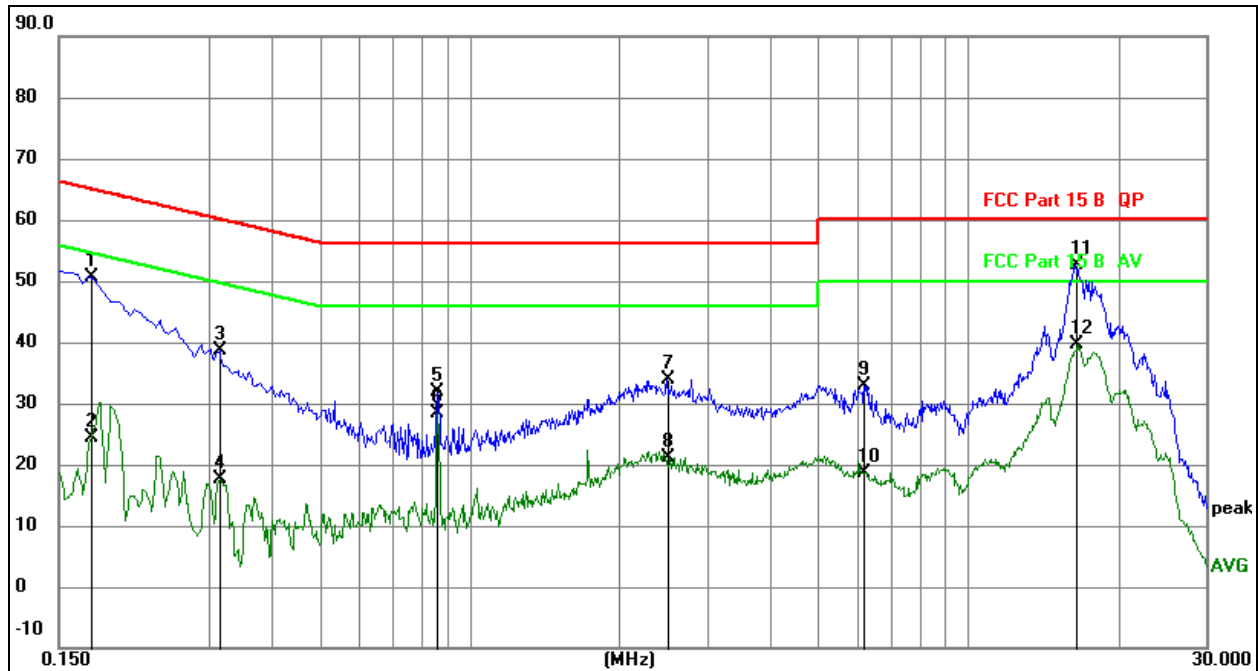
- The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak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

6.4 EUT Operating Conditions

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

6.5 Test Result

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

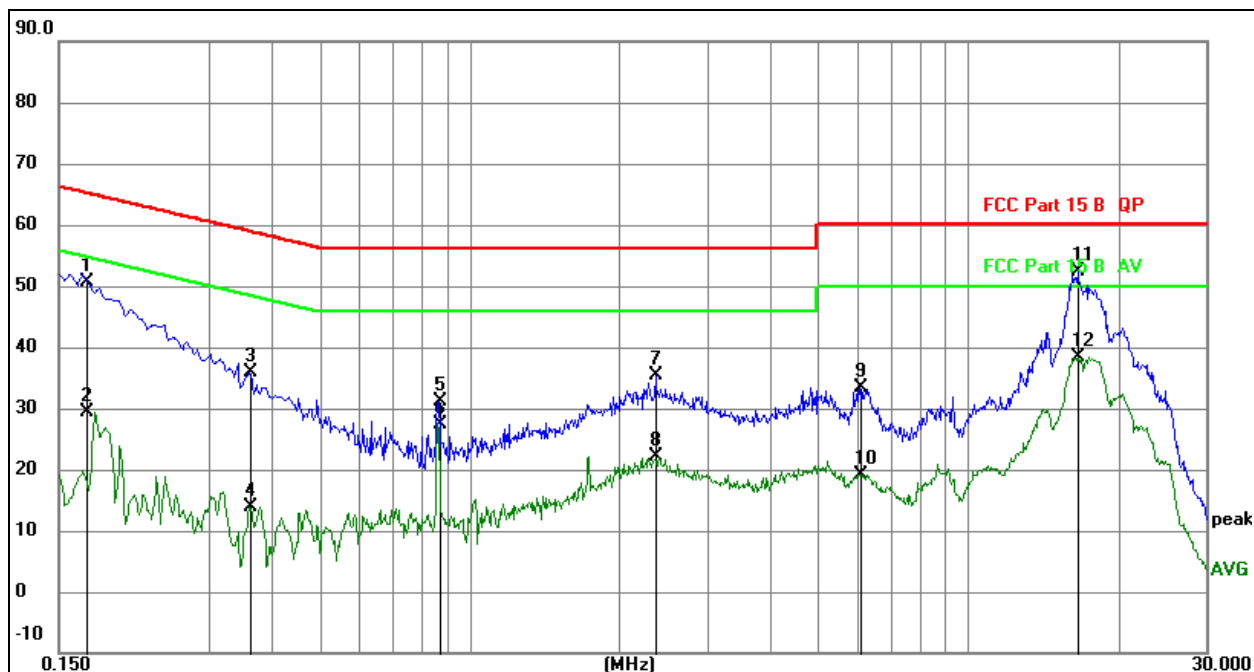


Remark:

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

No.	Mk.	Freq. MHz	Reading Level	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1731	41.18	9.56	50.74	64.81	-14.07	QP
2		0.1731	14.84	9.56	24.40	54.81	-30.41	AVG
3		0.3149	28.95	9.61	38.56	59.84	-21.28	QP
4		0.3149	8.11	9.61	17.72	49.84	-32.12	AVG
5		0.8618	22.13	9.68	31.81	56.00	-24.19	QP
6		0.8618	18.68	9.68	28.36	46.00	-17.64	AVG
7		2.4868	24.00	9.76	33.76	56.00	-22.24	QP
8		2.4868	11.48	9.76	21.24	46.00	-24.76	AVG
9		6.1860	23.15	9.77	32.92	60.00	-27.08	QP
10		6.1860	8.91	9.77	18.68	50.00	-31.32	AVG
11	*	16.3985	42.87	9.69	52.56	60.00	-7.44	QP
12		16.3985	29.94	9.69	39.63	50.00	-10.37	AVG

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



Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement=Reading Level+ Correct Factor
4. Over1 Measurement-Limit

No.	Mk.	Freq. MHz	Reading Level	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1712	41.09	9.55	50.64	64.90	-14.26	QP
2		0.1712	19.72	9.55	29.27	54.90	-25.63	AVG
3		0.3615	26.27	9.62	35.89	58.69	-22.80	QP
4		0.3615	4.27	9.62	13.89	48.69	-34.80	AVG
5		0.8700	21.37	9.68	31.05	56.00	-24.95	QP
6		0.8700	17.82	9.68	27.50	46.00	-18.50	AVG
7		2.3640	25.53	9.75	35.28	56.00	-20.72	QP
8		2.3640	12.49	9.75	22.24	46.00	-23.76	AVG
9		6.0720	23.58	9.77	33.35	60.00	-26.65	QP
10		6.0720	9.41	9.77	19.18	50.00	-30.82	AVG
11	*	16.5840	42.60	9.70	52.30	60.00	-7.70	QP
12		16.5840	28.78	9.70	38.48	50.00	-11.52	AVG

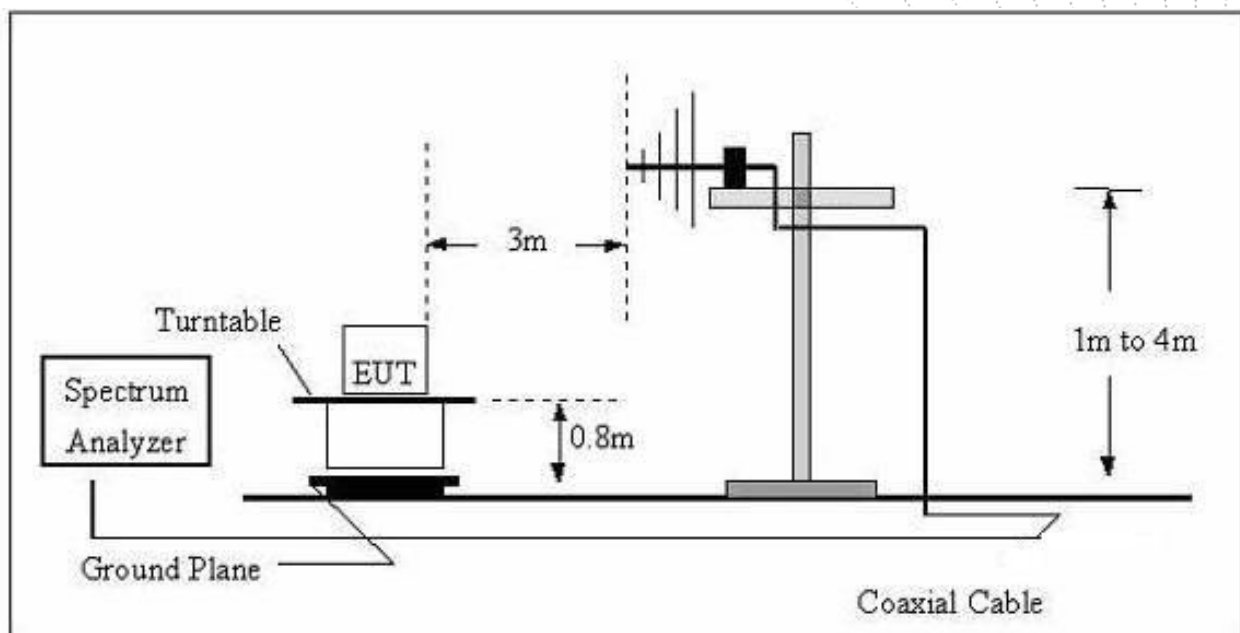
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

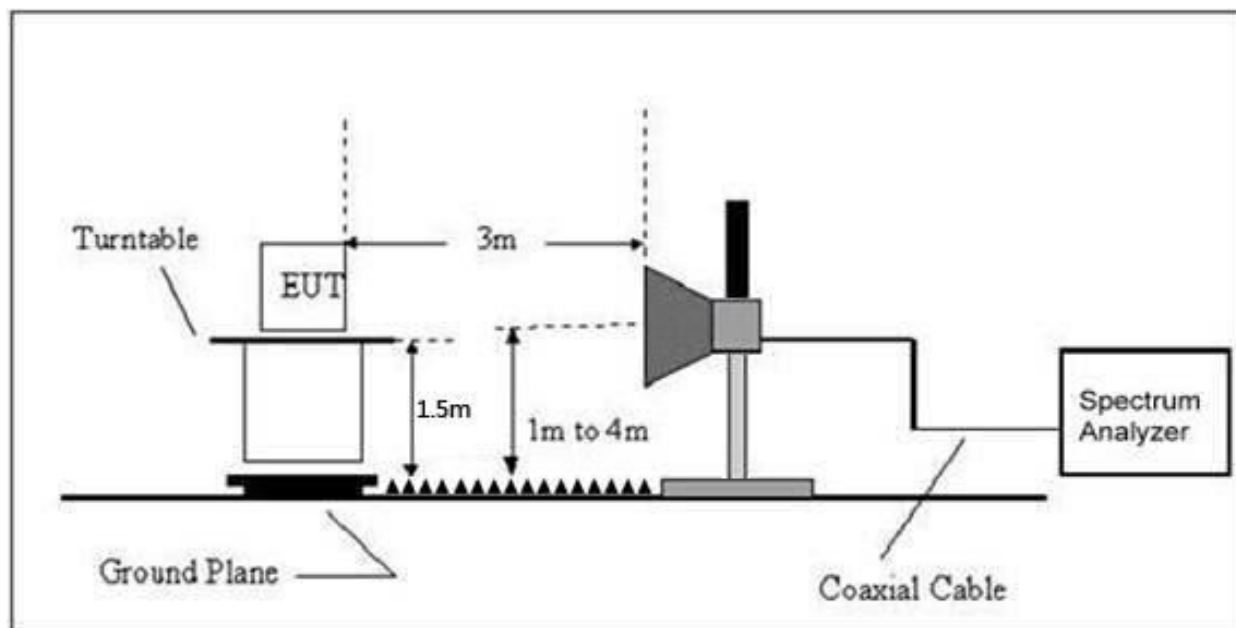
(A) Radiated Emission Test-Up Frequency Below 30MHz



(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).

The provisions of §15.205 apply to intentional radiators operating under this section, 15.205 Restricted bands of operation

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

- Remark:
1. Emission level in dBuV/m=20 log (uV/m)
 2. Measurement was performed at an antenna to the closed point of EUT distance of meters.
 3. Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of § 15.205, and the emissions located in restricted bands also comply with 15.209 limit.

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℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 4	Polarization :	--

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

Note:

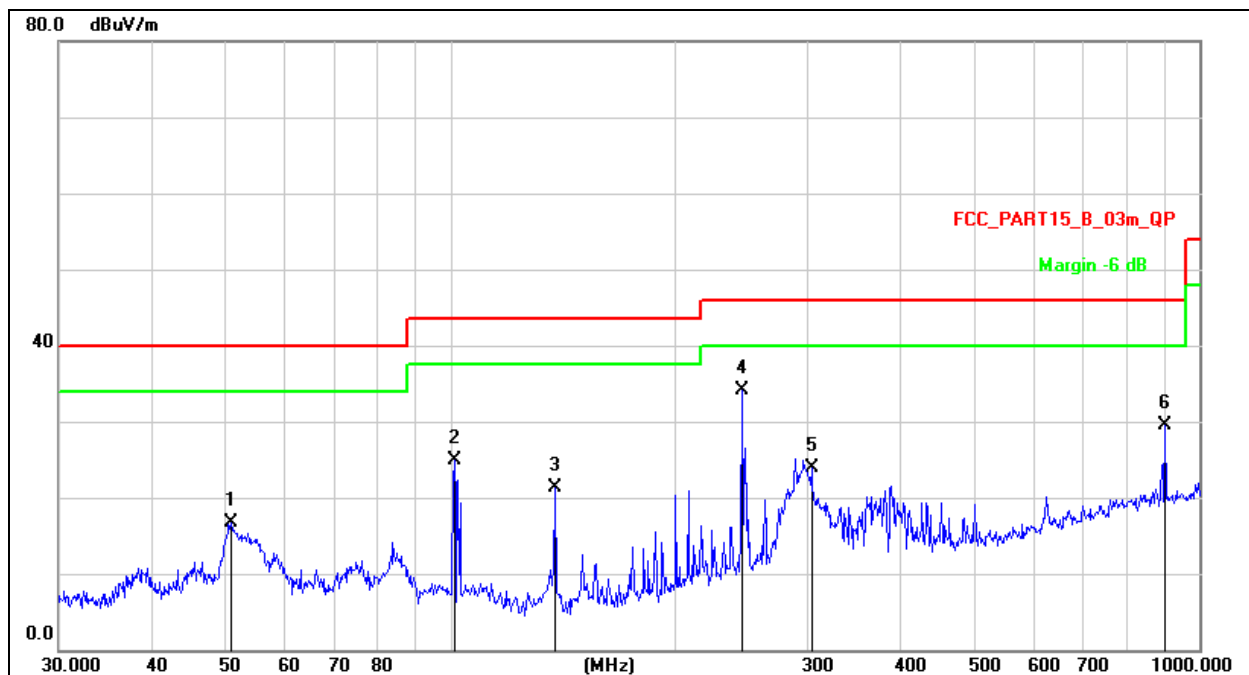
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

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

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

Between 30MHz – 1GHz

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

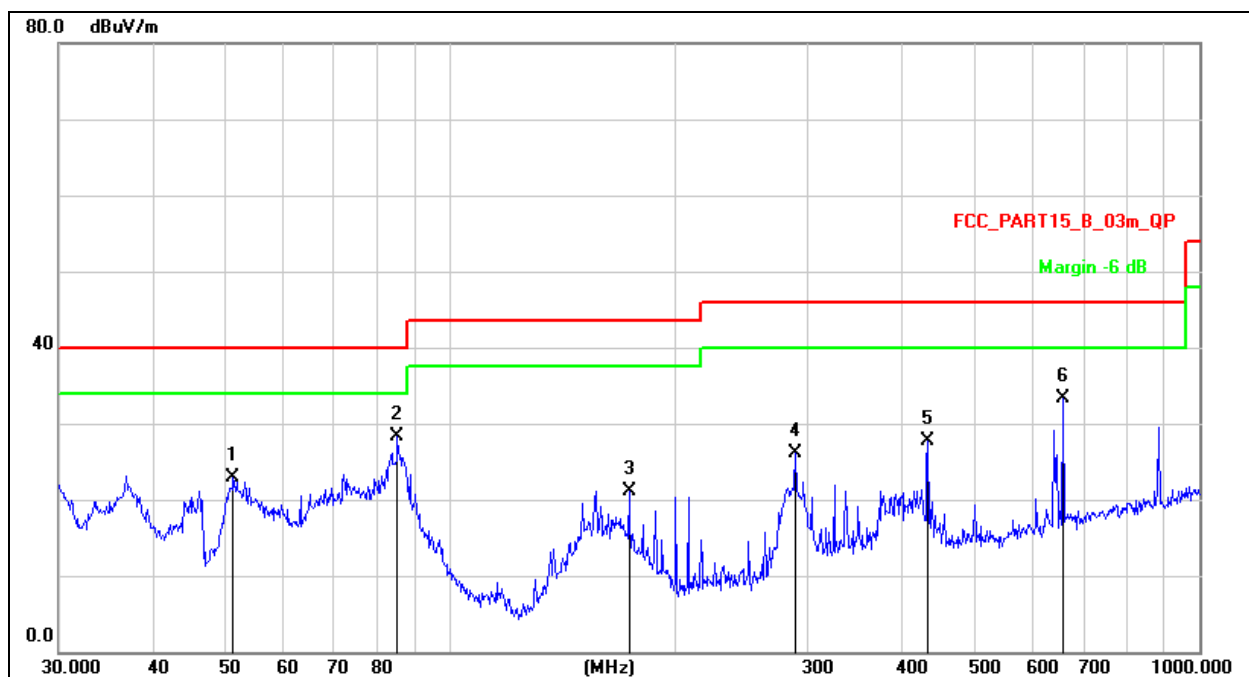


Remark:

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

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector
1		50.9420	32.34	-15.73	16.61	40.00	-23.39	QP
2		101.2885	42.74	-17.84	24.90	43.50	-18.60	QP
3		137.9028	41.58	-20.25	21.33	43.50	-22.17	QP
4	*	245.0900	50.04	-15.98	34.06	46.00	-11.94	QP
5		303.5437	38.39	-14.45	23.94	46.00	-22.06	QP
6		900.1474	34.04	-4.59	29.45	46.00	-16.55	QP

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



Remark:

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		51.3004	38.60	-15.78	22.82	40.00	-17.18	QP
2	*	84.9993	48.62	-20.40	28.22	40.00	-11.78	QP
3		173.2051	40.46	-19.34	21.12	43.50	-22.38	QP
4		289.0021	40.91	-14.85	26.06	46.00	-19.94	QP
5		434.0651	39.39	-11.72	27.67	46.00	-18.33	QP
6		656.5300	40.85	-7.63	33.22	46.00	-12.78	QP

Between 1GHz – 40GHz

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	4434.036	71.59	-20.73	50.86	68.2	-17.34	Pk
Vertical	4434.036	59.76	-20.73	39.03	54	-14.97	AV
Vertical	10360.116	61.97	-9.36	52.61	68.2	-15.59	Pk
Vertical	10360.116	49.11	-9.36	39.75	54	-14.25	AV
Vertical	15540.083	64.67	-7.84	56.83	74	-17.17	Pk
Vertical	15540.083	49.89	-7.84	42.05	54	-11.95	AV
Horizontal	4434.048	72.95	-20.73	52.22	68.2	-15.98	Pk
Horizontal	4434.048	59.98	-20.73	39.25	54	-14.75	AV
Horizontal	10360.048	61.80	-9.36	52.44	68.2	-15.76	Pk
Horizontal	10360.048	49.81	-9.36	40.45	54	-13.55	AV
Horizontal	15540.008	63.48	-7.84	55.64	74	-18.36	Pk
Horizontal	15540.008	49.76	-7.84	41.92	54	-12.08	AV
Middle Channel (5200 MHz)-Above 1G							
Vertical	4592.168	74.60	-20.42	54.18	74	-19.82	Pk
Vertical	4592.168	59.03	-20.42	38.61	54	-15.39	AV
Vertical	10400.049	64.84	-9.30	55.54	68.2	-12.66	Pk
Vertical	10400.049	49.12	-9.30	39.82	54	-14.18	AV
Vertical	15600.106	62.20	-7.82	54.38	74	-19.62	Pk
Vertical	15600.106	49.50	-7.82	41.68	54	-12.32	AV
Horizontal	4592.121	73.93	-20.42	53.52	74	-20.48	Pk
Horizontal	4592.121	59.32	-20.42	38.90	54	-15.10	AV
Horizontal	10400.117	64.11	-9.30	54.81	68.2	-13.39	Pk
Horizontal	10400.117	49.97	-9.30	40.67	54	-13.33	AV
Horizontal	15600.042	63.97	-7.82	56.15	74	-17.85	Pk
Horizontal	15600.042	49.01	-7.82	41.19	54	-12.81	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.186	71.80	-20.12	51.68	74	-22.32	Pk
Vertical	4739.186	59.61	-20.12	39.49	54	-14.51	AV
Vertical	10480.070	60.25	-9.18	51.07	68.2	-17.13	Pk
Vertical	10480.070	49.79	-9.18	40.61	54	-13.39	AV
Vertical	15720.111	64.08	-7.78	56.30	74	-17.70	Pk
Vertical	15720.111	49.92	-7.78	42.14	54	-11.86	AV
Horizontal	4739.119	71.83	-20.12	51.71	74	-22.29	Pk
Horizontal	4739.119	59.94	-20.12	39.82	54	-14.18	AV
Horizontal	10480.115	63.58	-9.18	54.40	68.2	-13.80	Pk
Horizontal	10480.115	49.58	-9.18	40.40	54	-13.60	AV
Horizontal	15720.151	61.05	-7.78	53.27	74	-20.73	Pk
Horizontal	15720.151	49.56	-7.78	41.78	54	-12.22	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(5.1G) - 802.11n-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	4434.088	73.26	-20.73	52.53	68.2	-15.67	Pk
Vertical	4434.088	59.43	-20.73	38.70	54	-15.30	AV
Vertical	10360.085	62.33	-9.36	52.97	68.2	-15.23	Pk
Vertical	10360.085	49.87	-9.36	40.51	54	-13.49	AV
Vertical	15540.078	61.55	-7.84	53.71	74	-20.29	Pk
Vertical	15540.078	49.54	-7.84	41.70	54	-12.30	AV
Horizontal	4434.012	71.97	-20.73	51.24	68.2	-16.96	Pk
Horizontal	4434.012	59.74	-20.73	39.01	54	-14.99	AV
Horizontal	10360.111	64.06	-9.36	54.70	68.2	-13.50	Pk
Horizontal	10360.111	49.79	-9.36	40.43	54	-13.57	AV
Horizontal	15540.178	60.45	-7.84	52.61	74	-21.39	Pk
Horizontal	15540.178	49.20	-7.84	41.36	54	-12.64	AV
Middle Channel (5200 MHz)-Above 1G							
Vertical	4592.018	71.95	-20.42	51.54	74	-22.46	Pk
Vertical	4592.018	59.73	-20.42	39.31	54	-14.69	AV
Vertical	10400.116	61.13	-9.30	51.83	68.2	-16.37	Pk
Vertical	10400.116	49.60	-9.30	40.30	54	-13.70	AV
Vertical	15600.123	62.27	-7.82	54.45	74	-19.55	Pk
Vertical	15600.123	49.39	-7.82	41.57	54	-12.43	AV
Horizontal	4592.099	73.19	-20.42	52.78	74	-21.22	Pk
Horizontal	4592.099	59.39	-20.42	38.98	54	-15.02	AV
Horizontal	10400.002	61.80	-9.30	52.50	68.2	-15.70	Pk
Horizontal	10400.002	49.75	-9.30	40.45	54	-13.55	AV
Horizontal	15600.101	61.70	-7.82	53.88	74	-20.12	Pk
Horizontal	15600.101	49.85	-7.82	42.03	54	-11.97	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.132	70.46	-20.12	50.34	74	-23.66	Pk
Vertical	4739.132	59.19	-20.12	39.07	54	-14.93	AV
Vertical	10480.161	61.67	-9.18	52.49	68.2	-15.71	Pk
Vertical	10480.161	49.97	-9.18	40.79	54	-13.21	AV
Vertical	15720.125	64.39	-7.78	56.61	74	-17.39	Pk
Vertical	15720.125	49.31	-7.78	41.53	54	-12.47	AV
Horizontal	4739.102	74.84	-20.12	54.71	74	-19.29	Pk
Horizontal	4739.102	59.16	-20.12	39.04	54	-14.96	AV
Horizontal	10480.079	61.31	-9.18	52.13	68.2	-16.07	Pk
Horizontal	10480.079	49.10	-9.18	39.92	54	-14.08	AV
Horizontal	15720.153	60.27	-7.78	52.49	74	-21.51	Pk
Horizontal	15720.153	49.82	-7.78	42.04	54	-11.96	AV

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

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

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

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

Test Mode:	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	4434.100	72.37	-20.73	51.63	68.2	-16.57	Pk
Vertical	4434.100	59.59	-20.73	38.86	54	-15.14	AV
Vertical	10380.096	61.10	-9.33	51.77	68.2	-16.43	Pk
Vertical	10380.096	49.91	-9.33	40.58	54	-13.42	AV
Vertical	15570.008	63.24	-7.83	55.41	74	-18.59	Pk
Vertical	15570.008	49.78	-7.83	41.95	54	-12.05	AV
Horizontal	4434.199	74.09	-20.73	53.36	74	-20.64	Pk
Horizontal	4434.199	59.69	-20.73	38.96	54	-15.04	AV
Horizontal	10380.186	62.81	-9.33	53.48	68.2	-14.72	Pk
Horizontal	10380.186	49.81	-9.33	40.48	54	-13.52	AV
Horizontal	15570.021	60.20	-7.83	52.37	74	-21.63	Pk
Horizontal	15570.021	49.21	-7.83	41.38	54	-12.62	AV
Middle Channel (5230 MHz)-Above 1G							
Vertical	4739.119	70.18	-20.12	50.06	68.2	-18.14	Pk
Vertical	4739.119	59.69	-20.12	39.57	54	-14.43	AV
Vertical	10460.044	62.97	-9.21	53.76	68.2	-14.44	Pk
Vertical	10460.044	49.80	-9.21	40.59	54	-13.41	AV
Vertical	15690.181	63.49	-7.79	55.70	74	-18.30	Pk
Vertical	15690.181	49.45	-7.79	41.66	54	-12.34	AV
Horizontal	4739.106	73.88	-20.12	53.76	68.2	-14.44	Pk
Horizontal	4739.106	59.06	-20.12	38.94	54	-15.06	AV
Horizontal	10460.143	60.07	-9.21	50.86	68.2	-17.34	Pk
Horizontal	10460.143	49.49	-9.21	40.28	54	-13.72	AV
Horizontal	15690.105	64.21	-7.79	56.42	74	-17.58	Pk
Horizontal	15690.105	49.76	-7.79	41.97	54	-12.03	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	4434.046	71.63	-20.73	50.89	68.2	-17.31	Pk
Vertical	4434.046	59.45	-20.73	38.72	54	-15.28	AV
Vertical	10360.067	62.47	-9.36	53.11	68.2	-15.09	Pk
Vertical	10360.067	49.14	-9.36	39.78	54	-14.22	AV
Vertical	15540.195	64.10	-7.84	56.26	74	-17.74	Pk
Vertical	15540.195	49.12	-7.84	41.28	54	-12.72	AV
Horizontal	4434.080	74.62	-20.73	53.89	68.2	-14.31	Pk
Horizontal	4434.080	59.74	-20.73	39.01	54	-14.99	AV
Horizontal	10360.157	63.13	-9.36	53.77	68.2	-14.43	Pk
Horizontal	10360.157	49.90	-9.36	40.54	54	-13.46	AV
Horizontal	15540.129	61.03	-7.84	53.19	74	-20.81	Pk
Horizontal	15540.129	49.29	-7.84	41.45	54	-12.55	AV
Middle Channel (5200 MHz)-Above 1G							
Vertical	4592.154	71.68	-20.42	51.26	74	-22.74	Pk
Vertical	4592.154	59.44	-20.42	39.02	54	-14.98	AV
Vertical	10400.088	61.04	-9.30	51.74	68.2	-16.46	Pk
Vertical	10400.088	49.97	-9.30	40.67	54	-13.33	AV
Vertical	15600.026	64.89	-7.82	57.07	74	-16.93	Pk
Vertical	15600.026	49.19	-7.82	41.37	54	-12.63	AV
Horizontal	4592.034	72.70	-20.42	52.28	74	-21.72	Pk
Horizontal	4592.034	59.33	-20.42	38.92	54	-15.08	AV
Horizontal	10400.076	61.60	-9.30	52.30	68.2	-15.90	Pk
Horizontal	10400.076	49.38	-9.30	40.08	54	-13.92	AV
Horizontal	15600.118	61.54	-7.82	53.72	74	-20.28	Pk
Horizontal	15600.118	49.66	-7.82	41.84	54	-12.16	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.115	71.62	-20.12	51.50	74	-22.50	Pk
Vertical	4739.115	59.52	-20.12	39.39	54	-14.61	AV
Vertical	10480.118	62.05	-9.18	52.87	68.2	-15.33	Pk
Vertical	10480.118	49.03	-9.18	39.85	54	-14.15	AV
Vertical	15720.123	62.92	-7.78	55.14	74	-18.86	Pk
Vertical	15720.123	49.51	-7.78	41.73	54	-12.27	AV
Horizontal	4739.109	74.51	-20.12	54.39	74	-19.61	Pk
Horizontal	4739.109	59.68	-20.12	39.56	54	-14.44	AV
Horizontal	10480.004	63.07	-9.18	53.89	68.2	-14.31	Pk
Horizontal	10480.004	49.75	-9.18	40.57	54	-13.43	AV
Horizontal	15720.144	60.19	-7.78	52.41	74	-21.59	Pk
Horizontal	15720.144	49.64	-7.78	41.86	54	-12.14	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	4434.132	74.61	-20.73	53.88	68.2	-14.32	Pk
Vertical	4434.132	59.50	-20.73	38.77	54	-15.23	AV
Vertical	10380.097	64.09	-9.33	54.76	68.2	-13.44	Pk
Vertical	10380.097	49.96	-9.33	40.63	54	-13.37	AV
Vertical	15570.096	63.21	-7.83	55.38	74	-18.62	Pk
Vertical	15570.096	49.95	-7.83	42.12	54	-11.88	AV
Horizontal	4434.058	71.94	-20.73	51.21	74	-22.79	Pk
Horizontal	4434.058	59.84	-20.73	39.11	54	-14.89	AV
Horizontal	10380.019	61.02	-9.33	51.69	68.2	-16.51	Pk
Horizontal	10380.019	49.96	-9.33	40.63	54	-13.37	AV
Horizontal	15570.122	62.62	-7.83	54.79	74	-19.21	Pk
Horizontal	15570.122	49.83	-7.83	42.00	54	-12.00	AV
Middle Channel (5230 MHz)-Above 1G							
Vertical	4739.172	72.95	-20.12	52.83	68.2	-15.37	Pk
Vertical	4739.172	59.31	-20.12	39.19	54	-14.81	AV
Vertical	10460.041	60.64	-9.21	51.43	68.2	-16.77	Pk
Vertical	10460.041	49.89	-9.21	40.68	54	-13.32	AV
Vertical	15690.184	64.60	-7.79	56.81	74	-17.19	Pk
Vertical	15690.184	49.03	-7.79	41.24	54	-12.76	AV
Horizontal	4739.057	70.09	-20.12	49.97	68.2	-18.23	Pk
Horizontal	4739.057	59.54	-20.12	39.42	54	-14.58	AV
Horizontal	10460.159	62.24	-9.21	53.03	68.2	-15.17	Pk
Horizontal	10460.159	49.04	-9.21	39.83	54	-14.17	AV
Horizontal	15690.023	62.47	-7.79	54.68	74	-19.32	Pk
Horizontal	15690.023	49.31	-7.79	41.52	54	-12.48	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 80
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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 (5210 MHz)-Above 1G							
Vertical	4434.108	74.46	-20.73	53.73	68.2	-14.47	Pk
Vertical	4434.108	59.01	-20.73	38.28	54	-15.72	AV
Vertical	10420.185	63.23	-9.27	53.96	68.2	-14.24	Pk
Vertical	10420.185	49.57	-9.27	40.30	54	-13.70	AV
Vertical	15630.052	61.03	-7.81	53.22	74	-20.78	Pk
Vertical	15630.052	49.83	-7.81	42.02	54	-11.98	AV
Horizontal	4434.029	71.05	-20.73	50.31	68.2	-17.89	Pk
Horizontal	4434.029	59.81	-20.73	39.08	54	-14.92	AV
Horizontal	10420.146	63.72	9.27	72.99	68.2	4.79	Pk
Horizontal	10420.146	49.08	9.27	58.35	54	4.35	AV
Horizontal	15630.025	63.20	-7.81	55.39	74	-18.61	Pk
Horizontal	15630.025	49.81	-7.81	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(5.1G) - 802.11ax-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	4434.078	72.23	-20.73	51.50	68.2	-16.70	Pk
Vertical	4434.078	59.34	-20.73	38.61	54	-15.39	AV
Vertical	10360.109	61.91	-9.36	52.55	68.2	-15.65	Pk
Vertical	10360.109	49.92	-9.36	40.56	54	-13.44	AV
Vertical	15540.172	64.44	-7.84	56.60	74	-17.40	Pk
Vertical	15540.172	49.46	-7.84	41.62	54	-12.38	AV
Horizontal	4434.121	73.35	-20.73	52.61	68.2	-15.59	Pk
Horizontal	4434.121	59.33	-20.73	38.59	54	-15.41	AV
Horizontal	10360.189	64.63	-9.36	55.27	68.2	-12.93	Pk
Horizontal	10360.189	49.18	-9.36	39.82	54	-14.18	AV
Horizontal	15540.199	61.65	-7.84	53.81	74	-20.19	Pk
Horizontal	15540.199	49.18	-7.84	41.34	54	-12.66	AV
Middle Channel (5200 MHz)-Above 1G							
Vertical	4592.153	71.71	-20.42	51.29	74	-22.71	Pk
Vertical	4592.153	59.53	-20.42	39.12	54	-14.88	AV
Vertical	10400.133	60.89	-9.30	51.59	68.2	-16.61	Pk
Vertical	10400.133	49.07	-9.30	39.77	54	-14.23	AV
Vertical	15600.056	60.40	-7.82	52.58	74	-21.42	Pk
Vertical	15600.056	49.64	-7.82	41.82	54	-12.18	AV
Horizontal	4592.172	70.06	-20.42	49.64	74	-24.36	Pk
Horizontal	4592.172	59.05	-20.42	38.64	54	-15.36	AV
Horizontal	10400.181	63.93	-9.30	54.63	68.2	-13.57	Pk
Horizontal	10400.181	49.95	-9.30	40.65	54	-13.35	AV
Horizontal	15600.131	62.13	-7.82	54.31	74	-19.69	Pk
Horizontal	15600.131	49.73	-7.82	41.91	54	-12.09	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.119	71.00	-20.12	50.88	74	-23.12	Pk
Vertical	4739.119	59.93	-20.12	39.81	54	-14.19	AV
Vertical	10480.004	63.30	-9.18	54.12	68.2	-14.08	Pk
Vertical	10480.004	49.67	-9.18	40.49	54	-13.51	AV
Vertical	15720.042	63.66	-7.78	55.88	74	-18.12	Pk
Vertical	15720.042	49.65	-7.78	41.87	54	-12.13	AV
Horizontal	4739.104	72.06	-20.12	51.94	74	-22.06	Pk
Horizontal	4739.104	59.32	-20.12	39.20	54	-14.80	AV
Horizontal	10480.104	62.00	-9.18	52.82	68.2	-15.38	Pk
Horizontal	10480.104	49.15	-9.18	39.97	54	-14.03	AV
Horizontal	15720.156	64.25	-7.78	56.47	74	-17.53	Pk
Horizontal	15720.156	49.29	-7.78	41.51	54	-12.49	AV

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

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

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

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

Test Mode:	TX(5.1G) - 802.11ax-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	4434.175	70.43	-20.73	49.70	68.2	-18.50	Pk
Vertical	4434.175	59.27	-20.73	38.54	54	-15.46	AV
Vertical	10380.150	61.60	-9.33	52.27	68.2	-15.93	Pk
Vertical	10380.150	49.02	-9.33	39.69	54	-14.31	AV
Vertical	15570.052	64.02	-7.83	56.19	74	-17.81	Pk
Vertical	15570.052	49.45	-7.83	41.62	54	-12.38	AV
Horizontal	4434.006	70.82	-20.73	50.09	74	-23.91	Pk
Horizontal	4434.006	59.37	-20.73	38.64	54	-15.36	AV
Horizontal	10380.147	61.94	-9.33	52.61	68.2	-15.59	Pk
Horizontal	10380.147	49.31	-9.33	39.98	54	-14.02	AV
Horizontal	15570.188	60.32	-7.83	52.49	74	-21.51	Pk
Horizontal	15570.188	49.21	-7.83	41.38	54	-12.62	AV
Middle Channel (5230 MHz)-Above 1G							
Vertical	4739.027	72.67	-20.12	52.55	68.2	-15.65	Pk
Vertical	4739.027	59.09	-20.12	38.97	54	-15.03	AV
Vertical	10460.098	64.14	-9.21	54.93	68.2	-13.27	Pk
Vertical	10460.098	49.69	-9.21	40.48	54	-13.52	AV
Vertical	15690.148	64.21	-7.79	56.42	74	-17.58	Pk
Vertical	15690.148	49.16	-7.79	41.37	54	-12.63	AV
Horizontal	4739.099	73.40	-20.12	53.28	68.2	-14.92	Pk
Horizontal	4739.099	59.83	-20.12	39.70	54	-14.30	AV
Horizontal	10460.006	60.55	-9.21	51.34	68.2	-16.86	Pk
Horizontal	10460.006	49.29	-9.21	40.08	54	-13.92	AV
Horizontal	15690.200	60.42	-7.79	52.63	74	-21.37	Pk
Horizontal	15690.200	49.53	-7.79	41.74	54	-12.26	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 80
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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 (5210 MHz)-Above 1G							
Vertical	4434.180	71.52	-20.73	50.79	68.2	-17.41	Pk
Vertical	4434.180	59.15	-20.73	38.42	54	-15.58	AV
Vertical	10420.113	62.60	-9.27	53.33	68.2	-14.87	Pk
Vertical	10420.113	49.56	-9.27	40.29	54	-13.71	AV
Vertical	15630.188	60.82	-7.81	53.01	74	-20.99	Pk
Vertical	15630.188	49.35	-7.81	41.54	54	-12.46	AV
Horizontal	4434.116	74.36	-20.73	53.63	68.2	-14.57	Pk
Horizontal	4434.116	59.65	-20.73	38.91	54	-15.09	AV
Horizontal	10420.198	63.07	9.27	72.34	68.2	4.14	Pk
Horizontal	10420.198	49.14	9.27	58.41	54	4.41	AV
Horizontal	15630.005	61.72	-7.81	53.91	74	-20.09	Pk
Horizontal	15630.005	49.09	-7.81	41.28	54	-12.72	AV

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

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

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

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

- ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
- All the modes 802.11a/n/ac has been tested and the worst result 802.11ac20 recorded as below:

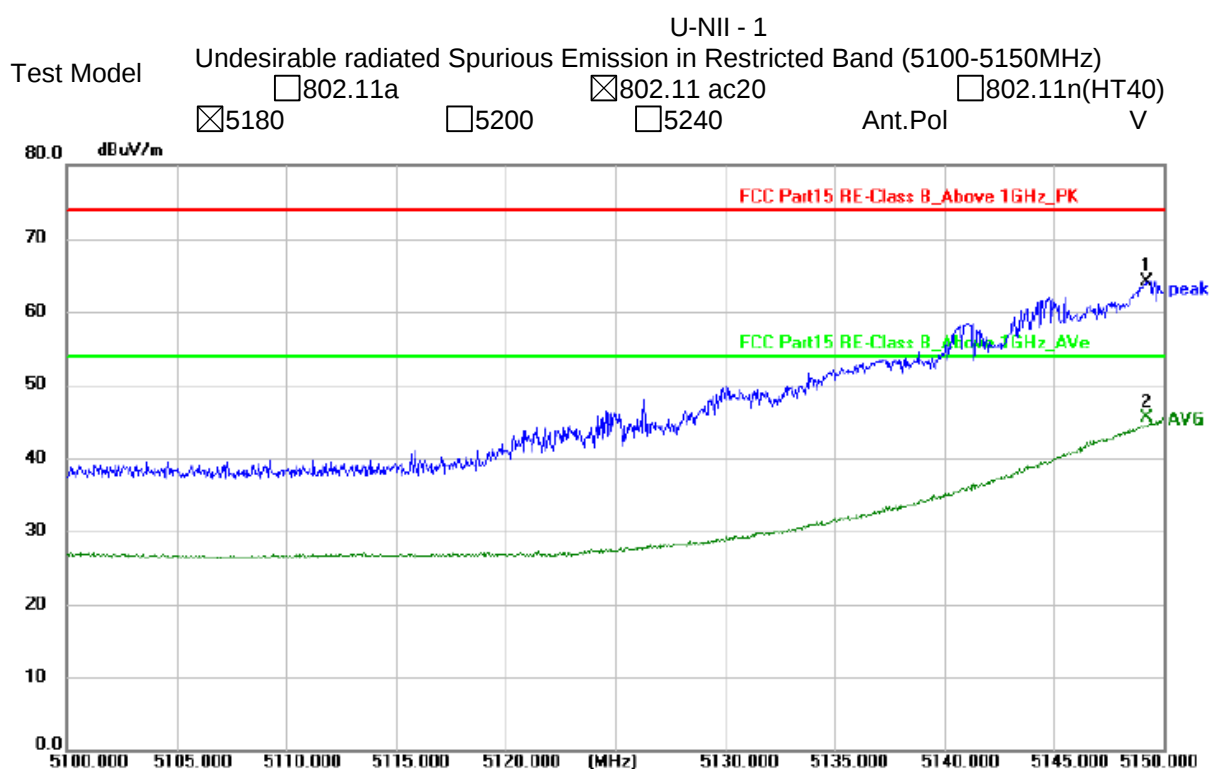
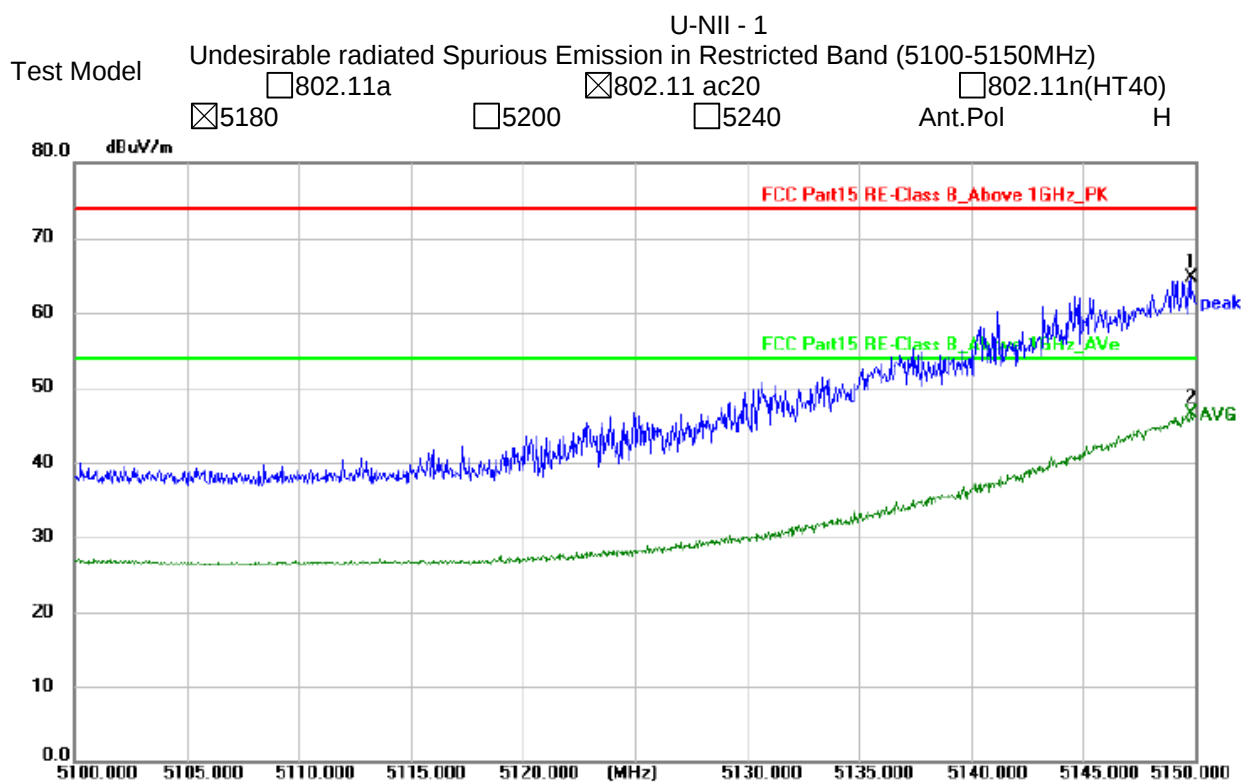
Test mode: 802.11ac20 Frequency(MHz): 5180

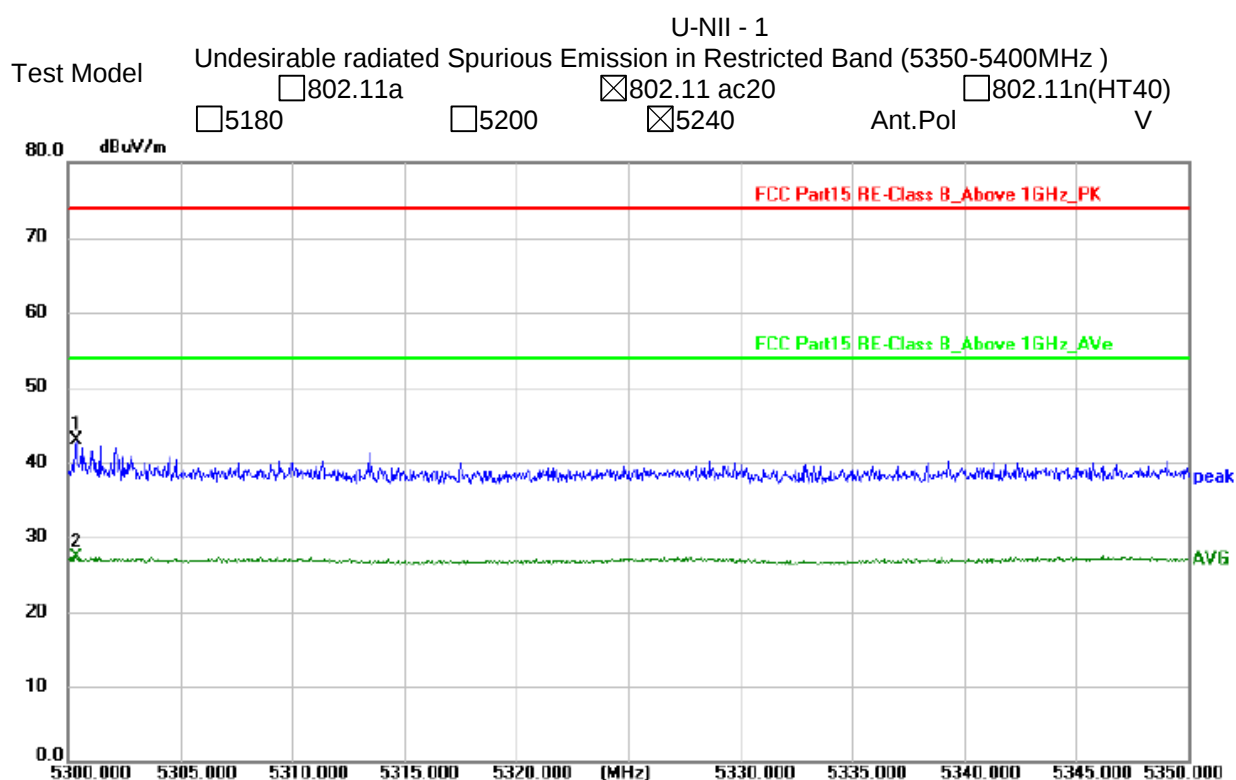
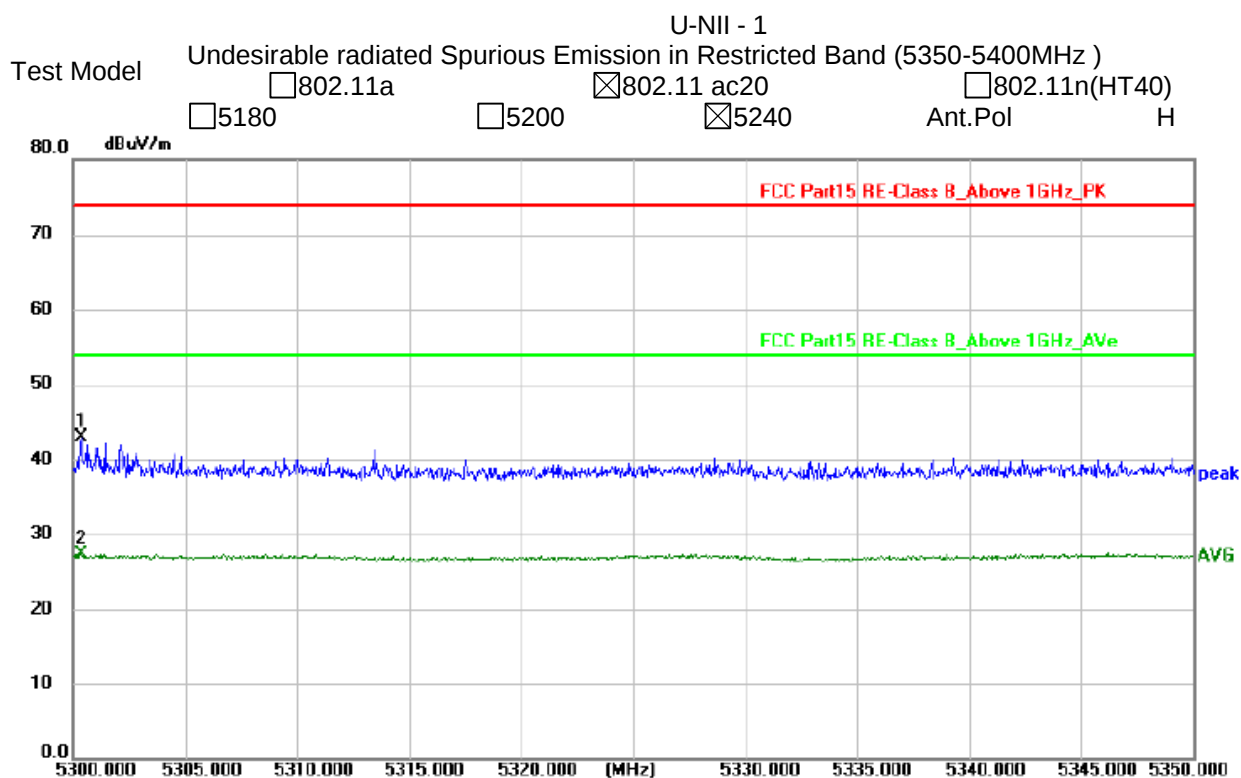
Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)
5149.80	H	64.74	74	46.46	54
5149.25	V	64.12	74	45.42	54

Test mode: 802.11ac20 Frequency(MHz): 5240

Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)
5300.35	H	42.88	74	27.35	54
5300.25	V	41.86	74	27.20	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	4679.063	72.96	-20.24	52.72	74	-21.28	Pk
Vertical	4679.063	59.59	-20.24	39.35	54	-14.65	AV
Vertical	11490.088	60.15	-8.79	51.36	68.2	-16.84	Pk
Vertical	11490.088	49.15	-8.79	40.36	54	-13.64	AV
Vertical	17235.048	58.95	-3.18	55.77	68.2	-12.43	Pk
Vertical	17235.048	44.04	-3.18	40.86	54	-13.14	AV
Horizontal	4679.028	74.28	-20.73	53.55	74	-20.45	Pk
Horizontal	4679.028	59.39	-20.73	38.66	54	-15.34	AV
Horizontal	11490.109	60.94	-8.79	52.15	68.2	-16.05	Pk
Horizontal	11490.109	49.79	-8.79	41.00	54	-13.00	AV
Horizontal	17235.109	59.76	-3.18	56.58	68.2	-11.62	Pk
Horizontal	17235.109	44.67	-3.18	41.49	54	-12.51	AV
Middle Channel (5785 MHz)-Above 1G							
Vertical	4592.134	72.10	-20.42	51.68	74	-22.32	Pk
Vertical	4592.134	59.72	-20.42	39.31	54	-14.69	AV
Vertical	11570.188	60.37	-8.86	51.51	68.2	-16.69	Pk
Vertical	11570.188	49.28	-8.86	40.42	54	-13.58	AV
Vertical	17355.027	56.62	-2.52	54.10	68.2	-14.10	Pk
Vertical	17355.027	44.49	-2.52	41.97	54	-12.03	AV
Horizontal	4592.058	74.95	-20.42	54.53	74	-19.47	Pk
Horizontal	4592.058	59.13	-20.42	38.72	54	-15.28	AV
Horizontal	11570.185	62.74	-8.86	53.88	68.2	-14.32	Pk
Horizontal	11570.185	49.97	-8.86	41.11	54	-12.89	AV
Horizontal	17355.191	59.71	-2.52	57.19	68.2	-11.01	Pk
Horizontal	17355.191	44.12	-2.52	41.60	54	-12.40	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.004	72.63	-18.93	53.70	68.2	-14.50	Pk
Vertical	6039.004	59.13	-18.93	40.19	54	-13.81	AV
Vertical	11650.100	63.96	-8.92	55.04	74	-18.96	Pk
Vertical	11650.100	49.05	-8.92	40.13	54	-13.87	AV
Vertical	17475.147	55.95	-1.86	54.09	68.2	-14.11	Pk
Vertical	17475.147	44.84	-1.86	42.98	54	-11.02	AV
Horizontal	6039.044	70.41	-18.93	51.48	68.2	-16.72	Pk
Horizontal	6039.044	59.12	-18.93	40.18	54	-13.82	AV
Horizontal	11650.141	61.49	-8.92	52.57	74	-21.43	Pk
Horizontal	11650.141	49.94	-8.92	41.02	54	-12.98	AV
Horizontal	17475.160	55.07	-1.86	53.21	68.2	-14.99	Pk
Horizontal	17475.160	44.69	-1.86	42.83	54	-11.17	AV

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

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

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

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

Test Mode: 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	4679.006	73.75	-20.24	53.51	74	-20.49	Pk
Vertical	4679.006	59.15	-20.24	38.91	54	-15.09	AV
Vertical	11490.093	62.75	-8.79	53.96	68.2	-14.24	Pk
Vertical	11490.093	49.80	-8.79	41.01	54	-12.99	AV
Vertical	17235.095	58.46	-3.18	55.28	68.2	-12.92	Pk
Vertical	17235.095	44.70	-3.18	41.52	54	-12.48	AV
Horizontal	4679.074	72.69	-20.24	52.45	74	-21.55	Pk
Horizontal	4679.074	59.50	-20.24	39.26	54	-14.74	AV
Horizontal	11490.026	60.56	-8.79	51.77	68.2	-16.43	Pk
Horizontal	11490.026	49.38	-8.79	40.59	54	-13.41	AV
Horizontal	17235.010	56.96	-3.18	53.78	68.2	-14.42	Pk
Horizontal	17235.010	44.84	-3.18	41.66	54	-12.34	AV
Middle Channel (5785 MHz)-Above 1G							
Vertical	4592.156	74.75	-20.42	54.33	74	-19.67	Pk
Vertical	4592.156	59.88	-20.42	39.47	54	-14.53	AV
Vertical	11570.167	62.80	-8.86	53.94	68.2	-14.26	Pk
Vertical	11570.167	49.98	-8.86	41.12	54	-12.88	AV
Vertical	17355.141	56.23	-2.52	53.71	68.2	-14.49	Pk
Vertical	17355.141	44.71	-2.52	42.19	54	-11.81	AV
Horizontal	4592.063	74.40	-20.42	53.98	74	-20.02	Pk
Horizontal	4592.063	59.30	-20.42	38.89	54	-15.11	AV
Horizontal	11570.177	63.03	-8.86	54.17	68.2	-14.03	Pk
Horizontal	11570.177	49.82	-8.86	40.96	54	-13.04	AV
Horizontal	17355.153	57.84	-2.52	55.32	68.2	-12.88	Pk
Horizontal	17355.153	44.93	-2.52	42.41	54	-11.59	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.047	73.26	-18.93	54.33	68.2	-13.87	Pk
Vertical	6039.047	59.64	-18.93	40.71	54	-13.29	AV
Vertical	11650.038	63.78	-8.92	54.86	74	-19.14	Pk
Vertical	11650.038	49.48	-8.92	40.56	54	-13.44	AV
Vertical	17475.091	57.40	-1.86	55.54	68.2	-12.66	Pk
Vertical	17475.091	44.32	-1.86	42.46	54	-11.54	AV
Horizontal	6039.077	74.78	-18.93	55.85	68.2	-12.35	Pk
Horizontal	6039.077	59.87	-18.93	40.94	54	-13.06	AV
Horizontal	11650.161	64.86	-8.92	55.94	74	-18.06	Pk
Horizontal	11650.161	49.35	-8.92	40.43	54	-13.57	AV
Horizontal	17475.021	55.73	-1.86	53.87	68.2	-14.33	Pk
Horizontal	17475.021	44.18	-1.86	42.32	54	-11.68	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
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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 (5755 MHz)-Above 1G							
Vertical	4679.086	71.64	-20.24	51.40	74	-22.60	Pk
Vertical	4679.086	59.24	-20.24	39.00	54	-15.00	AV
Vertical	11510.175	63.73	-8.81	54.92	74	-19.08	Pk
Vertical	11510.175	49.72	-8.81	40.91	54	-13.09	AV
Vertical	17265.002	55.61	-3.01	52.60	68.2	-15.60	Pk
Vertical	17265.002	44.05	-3.01	41.04	54	-12.96	AV
Horizontal	4679.044	73.95	-20.24	53.71	74	-20.29	Pk
Horizontal	4679.044	59.98	-20.24	39.74	54	-14.26	AV
Horizontal	11510.079	62.43	-8.81	53.62	74	-20.38	Pk
Horizontal	11510.079	49.81	-8.81	41.00	54	-13.00	AV
Horizontal	17265.072	59.72	-3.01	56.71	68.2	-11.49	Pk
Horizontal	17265.072	44.32	-3.01	41.31	54	-12.69	AV
Middle Channel (5795 MHz)-Above 1G							
Vertical	6039.086	74.12	-18.93	55.19	68.2	-13.01	Pk
Vertical	6039.086	59.54	-18.93	40.61	54	-13.39	AV
Vertical	11590.092	61.34	-8.87	52.47	74	-21.53	Pk
Vertical	11590.092	49.96	-8.87	41.09	54	-12.91	AV
Vertical	17385.140	58.33	-2.35	55.98	68.2	-12.22	Pk
Vertical	17385.140	44.17	-2.35	41.82	54	-12.18	AV
Horizontal	6039.080	71.22	-18.93	52.29	68.2	-15.91	Pk
Horizontal	6039.080	59.32	-18.93	40.38	54	-13.62	AV
Horizontal	11590.084	62.22	-8.87	53.35	74	-20.65	Pk
Horizontal	11590.084	49.57	-8.87	40.70	54	-13.30	AV
Horizontal	17385.121	56.14	-2.35	53.79	68.2	-14.41	Pk
Horizontal	17385.121	44.03	-2.35	41.68	54	-12.32	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	4679.020	74.69	-20.24	54.45	74	-19.55	Pk
Vertical	4679.020	59.67	-20.24	39.42	54	-14.58	AV
Vertical	11490.152	63.38	-8.79	54.59	68.2	-13.61	Pk
Vertical	11490.152	49.51	-8.79	40.72	54	-13.28	AV
Vertical	17235.008	57.69	-3.18	54.51	68.2	-13.69	Pk
Vertical	17235.008	44.97	-3.18	41.79	54	-12.21	AV
Horizontal	4679.175	73.69	-20.24	53.45	74	-20.55	Pk
Horizontal	4679.175	59.40	-20.24	39.16	54	-14.84	AV
Horizontal	11490.075	60.05	-8.79	51.26	68.2	-16.94	Pk
Horizontal	11490.075	49.48	-8.79	40.69	54	-13.31	AV
Horizontal	17235.033	58.86	-3.18	55.68	68.2	-12.52	Pk
Horizontal	17235.033	44.94	-3.18	41.76	54	-12.24	AV
Middle Channel (5785 MHz)-Above 1G							
Vertical	4592.166	74.92	-20.42	54.50	74	-19.50	Pk
Vertical	4592.166	59.50	-20.42	39.09	54	-14.91	AV
Vertical	11570.042	61.05	-8.86	52.19	68.2	-16.01	Pk
Vertical	11570.042	49.10	-8.86	40.24	54	-13.76	AV
Vertical	17355.010	57.26	-2.52	54.74	68.2	-13.46	Pk
Vertical	17355.010	44.05	-2.52	41.53	54	-12.47	AV
Horizontal	4592.043	73.43	-20.42	53.02	74	-20.98	Pk
Horizontal	4592.043	59.23	-20.42	38.81	54	-15.19	AV
Horizontal	11570.026	61.70	-8.86	52.84	68.2	-15.36	Pk
Horizontal	11570.026	49.82	-8.86	40.96	54	-13.04	AV
Horizontal	17355.013	56.09	-2.52	53.57	68.2	-14.63	Pk
Horizontal	17355.013	44.01	-2.52	41.49	54	-12.51	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.003	71.80	-18.93	52.87	68.2	-15.33	Pk
Vertical	6039.003	59.26	-18.93	40.32	54	-13.68	AV
Vertical	11650.176	62.07	-8.92	53.15	74	-20.85	Pk
Vertical	11650.176	49.52	-8.92	40.60	54	-13.40	AV
Vertical	17475.011	55.45	-1.86	53.59	68.2	-14.61	Pk
Vertical	17475.011	44.59	-1.86	42.73	54	-11.27	AV
Horizontal	6039.116	74.29	-18.93	55.36	68.2	-12.84	Pk
Horizontal	6039.116	59.68	-18.93	40.74	54	-13.26	AV
Horizontal	11650.190	62.26	-8.92	53.34	74	-20.66	Pk
Horizontal	11650.190	49.86	-8.92	40.94	54	-13.06	AV
Horizontal	17475.171	58.30	-1.86	56.44	68.2	-11.76	Pk
Horizontal	17475.171	44.71	-1.86	42.85	54	-11.15	AV

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

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

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

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

Test Mode :	TX (5.8G) -- 802.11ac-HT40
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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 (5755 MHz)-Above 1G							
Vertical	4679.184	71.20	-20.24	50.96	74	-23.04	Pk
Vertical	4679.184	59.86	-20.24	39.61	54	-14.39	AV
Vertical	11510.022	64.60	-8.81	55.79	74	-18.21	Pk
Vertical	11510.022	49.05	-8.81	40.24	54	-13.76	AV
Vertical	17265.099	55.29	-3.01	52.28	68.2	-15.92	Pk
Vertical	17265.099	44.25	-3.01	41.24	54	-12.76	AV
Horizontal	4679.164	73.49	-20.24	53.25	74	-20.75	Pk
Horizontal	4679.164	59.86	-20.24	39.62	54	-14.38	AV
Horizontal	11510.047	61.48	-8.81	52.67	74	-21.33	Pk
Horizontal	11510.047	49.07	-8.81	40.26	54	-13.74	AV
Horizontal	17265.049	55.75	-3.01	52.74	68.2	-15.46	Pk
Horizontal	17265.049	44.56	-3.01	41.55	54	-12.45	AV
Middle Channel (5795 MHz)-Above 1G							
Vertical	6039.101	72.46	-18.93	53.52	68.2	-14.68	Pk
Vertical	6039.101	59.62	-18.93	40.69	54	-13.31	AV
Vertical	11590.006	63.17	-8.87	54.30	74	-19.70	Pk
Vertical	11590.006	49.68	-8.87	40.81	54	-13.19	AV
Vertical	17385.112	55.17	-2.35	52.82	68.2	-15.38	Pk
Vertical	17385.112	44.94	-2.35	42.59	54	-11.41	AV
Horizontal	6039.003	71.92	-18.93	52.99	68.2	-15.21	Pk
Horizontal	6039.003	59.26	-18.93	40.33	54	-13.67	AV
Horizontal	11590.172	60.92	-8.87	52.05	74	-21.95	Pk
Horizontal	11590.172	49.97	-8.87	41.10	54	-12.90	AV
Horizontal	17385.090	55.16	-2.35	52.81	68.2	-15.39	Pk
Horizontal	17385.090	44.83	-2.35	42.48	54	-11.52	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 (5.8G) -- 802.11ac 80
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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 (5775 MHz)-Above 1G							
Vertical	4679.066	73.61	-20.24	53.37	74	-20.63	Pk
Vertical	4679.066	59.72	-20.24	39.48	54	-14.52	AV
Vertical	11550.032	64.65	-8.84	55.81	74	-18.19	Pk
Vertical	11550.032	49.88	-8.84	41.04	54	-12.96	AV
Vertical	17325.044	55.97	-2.68	53.29	68.2	-14.91	Pk
Vertical	17325.044	44.60	-2.68	41.92	54	-12.08	AV
Horizontal	4679.119	73.51	-20.24	53.27	74	-20.73	Pk
Horizontal	4679.119	59.50	-20.24	39.26	54	-14.74	AV
Horizontal	11550.022	61.56	-8.84	52.72	74	-21.28	Pk
Horizontal	11550.022	49.11	-8.84	40.27	54	-13.73	AV
Horizontal	17325.080	58.06	-2.68	55.38	68.2	-12.82	Pk
Horizontal	17325.080	44.22	-2.68	41.54	54	-12.46	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-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	4679.168	71.72	-20.24	51.47	74	-22.53	Pk
Vertical	4679.168	59.46	-20.24	39.22	54	-14.78	AV
Vertical	11490.145	61.28	-8.79	52.49	68.2	-15.71	Pk
Vertical	11490.145	49.27	-8.79	40.48	54	-13.52	AV
Vertical	17235.098	58.17	-3.18	54.99	68.2	-13.21	Pk
Vertical	17235.098	44.39	-3.18	41.21	54	-12.79	AV
Horizontal	4679.024	72.74	-20.24	52.49	74	-21.51	Pk
Horizontal	4679.024	59.59	-20.24	39.35	54	-14.65	AV
Horizontal	11490.142	60.86	-8.79	52.07	68.2	-16.13	Pk
Horizontal	11490.142	49.53	-8.79	40.74	54	-13.26	AV
Horizontal	17235.143	55.95	-3.18	52.77	68.2	-15.43	Pk
Horizontal	17235.143	44.38	-3.18	41.20	54	-12.80	AV
Middle Channel (5785 MHz)-Above 1G							
Vertical	4592.123	74.31	-20.42	53.89	74	-20.11	Pk
Vertical	4592.123	59.32	-20.42	38.90	54	-15.10	AV
Vertical	11570.143	60.88	-8.86	52.02	68.2	-16.18	Pk
Vertical	11570.143	49.55	-8.86	40.69	54	-13.31	AV
Vertical	17355.008	56.05	-2.52	53.53	68.2	-14.67	Pk
Vertical	17355.008	44.97	-2.52	42.45	54	-11.55	AV
Horizontal	4592.029	71.54	-20.42	51.12	74	-22.88	Pk
Horizontal	4592.029	59.04	-20.42	38.62	54	-15.38	AV
Horizontal	11570.043	60.66	-8.86	51.80	68.2	-16.40	Pk
Horizontal	11570.043	49.46	-8.86	40.60	54	-13.40	AV
Horizontal	17355.161	58.74	-2.52	56.22	68.2	-11.98	Pk
Horizontal	17355.161	44.53	-2.52	42.01	54	-11.99	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.037	70.19	-18.93	51.26	68.2	-16.94	Pk
Vertical	6039.037	59.77	-18.93	40.83	54	-13.17	AV
Vertical	11650.048	64.25	-8.92	55.33	74	-18.67	Pk
Vertical	11650.048	49.58	-8.92	40.66	54	-13.34	AV
Vertical	17475.162	55.78	-1.86	53.92	68.2	-14.28	Pk
Vertical	17475.162	44.83	-1.86	42.97	54	-11.03	AV
Horizontal	6039.058	73.83	-18.93	54.90	68.2	-13.30	Pk
Horizontal	6039.058	59.97	-18.93	41.04	54	-12.96	AV
Horizontal	11650.111	62.45	-8.92	53.53	74	-20.47	Pk
Horizontal	11650.111	49.72	-8.92	40.80	54	-13.20	AV
Horizontal	17475.015	58.31	-1.86	56.45	68.2	-11.75	Pk
Horizontal	17475.015	44.15	-1.86	42.29	54	-11.71	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-HT40
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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 (5755 MHz)-Above 1G							
Vertical	4679.184	70.23	-20.24	49.99	74	-24.01	Pk
Vertical	4679.184	59.47	-20.24	39.23	54	-14.77	AV
Vertical	11510.195	60.31	-8.81	51.50	74	-22.50	Pk
Vertical	11510.195	49.59	-8.81	40.78	54	-13.22	AV
Vertical	17265.097	56.51	-3.01	53.50	68.2	-14.70	Pk
Vertical	17265.097	44.17	-3.01	41.16	54	-12.84	AV
Horizontal	4679.076	73.39	-20.24	53.15	74	-20.85	Pk
Horizontal	4679.076	59.95	-20.24	39.71	54	-14.29	AV
Horizontal	11510.035	63.59	-8.81	54.78	74	-19.22	Pk
Horizontal	11510.035	49.36	-8.81	40.55	54	-13.45	AV
Horizontal	17265.179	55.91	-3.01	52.90	68.2	-15.30	Pk
Horizontal	17265.179	44.17	-3.01	41.16	54	-12.84	AV
Middle Channel (5795 MHz)-Above 1G							
Vertical	6039.113	70.05	-18.93	51.12	68.2	-17.08	Pk
Vertical	6039.113	59.87	-18.93	40.94	54	-13.06	AV
Vertical	11590.098	63.28	-8.87	54.41	74	-19.59	Pk
Vertical	11590.098	49.96	-8.87	41.09	54	-12.91	AV
Vertical	17385.041	59.48	-2.35	57.13	68.2	-11.07	Pk
Vertical	17385.041	45.00	-2.35	42.65	54	-11.35	AV
Horizontal	6039.079	74.62	-18.93	55.68	68.2	-12.52	Pk
Horizontal	6039.079	59.45	-18.93	40.52	54	-13.48	AV
Horizontal	11590.053	64.49	-8.87	55.62	74	-18.38	Pk
Horizontal	11590.053	49.50	-8.87	40.63	54	-13.37	AV
Horizontal	17385.158	55.22	-2.35	52.87	68.2	-15.33	Pk
Horizontal	17385.158	44.07	-2.35	41.72	54	-12.28	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 80
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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 (5775 MHz)-Above 1G							
Vertical	4679.120	71.13	-20.24	50.89	74	-23.11	Pk
Vertical	4679.120	59.08	-20.24	38.84	54	-15.16	AV
Vertical	11550.186	61.51	-8.84	52.67	74	-21.33	Pk
Vertical	11550.186	49.53	-8.84	40.69	54	-13.31	AV
Vertical	17325.058	59.92	-2.68	57.24	68.2	-10.96	Pk
Vertical	17325.058	44.92	-2.68	42.24	54	-11.76	AV
Horizontal	4679.137	73.30	-20.24	53.05	74	-20.95	Pk
Horizontal	4679.137	59.42	-20.24	39.18	54	-14.82	AV
Horizontal	11550.167	64.35	-8.84	55.51	74	-18.49	Pk
Horizontal	11550.167	49.26	-8.84	40.42	54	-13.58	AV
Horizontal	17325.095	58.61	-2.68	55.93	68.2	-12.27	Pk
Horizontal	17325.095	44.46	-2.68	41.78	54	-12.22	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.

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

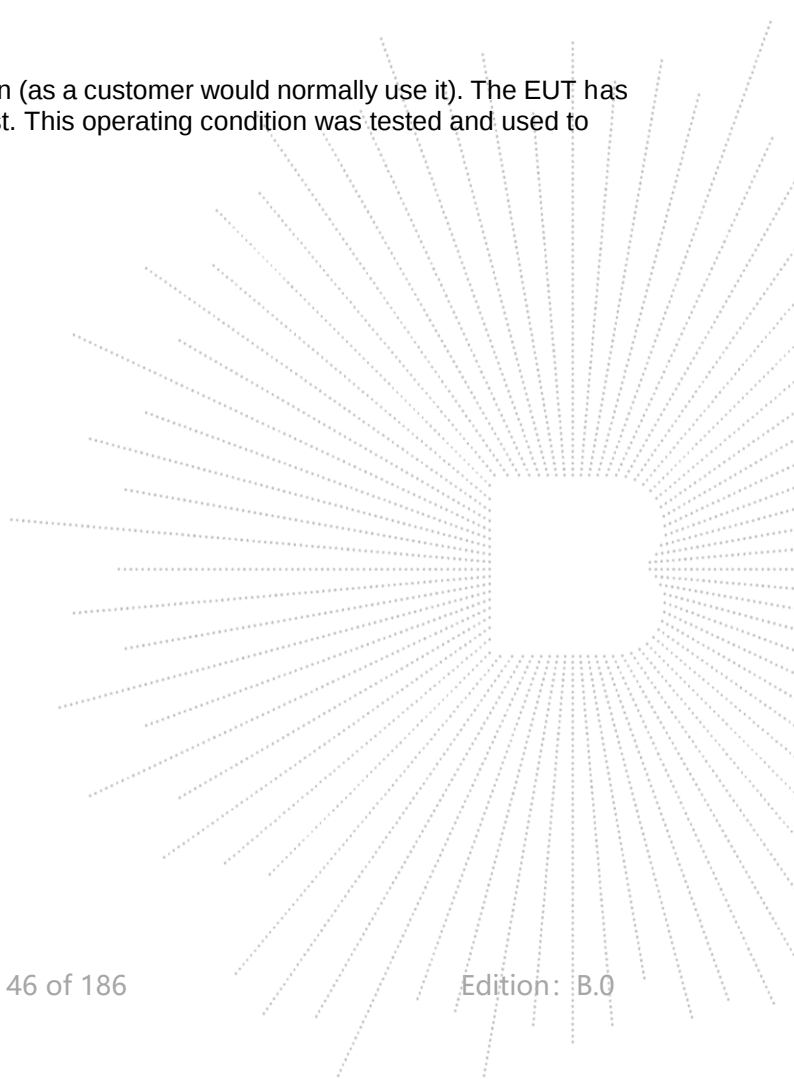
For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 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 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
- d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add $10\log(1\text{MHz}/RBW)$ to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
- e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

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

8.4 EUT Operating Conditions

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

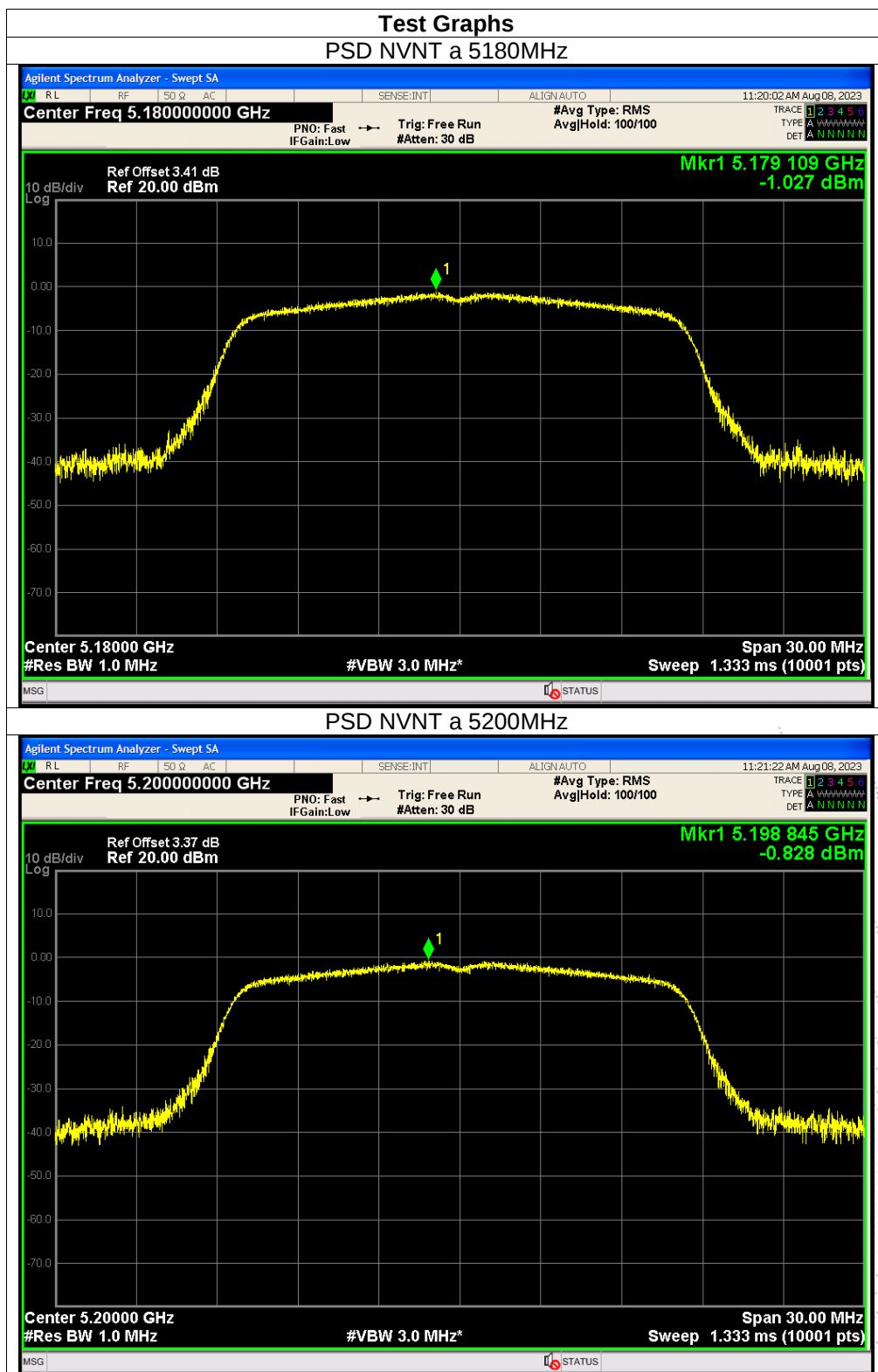


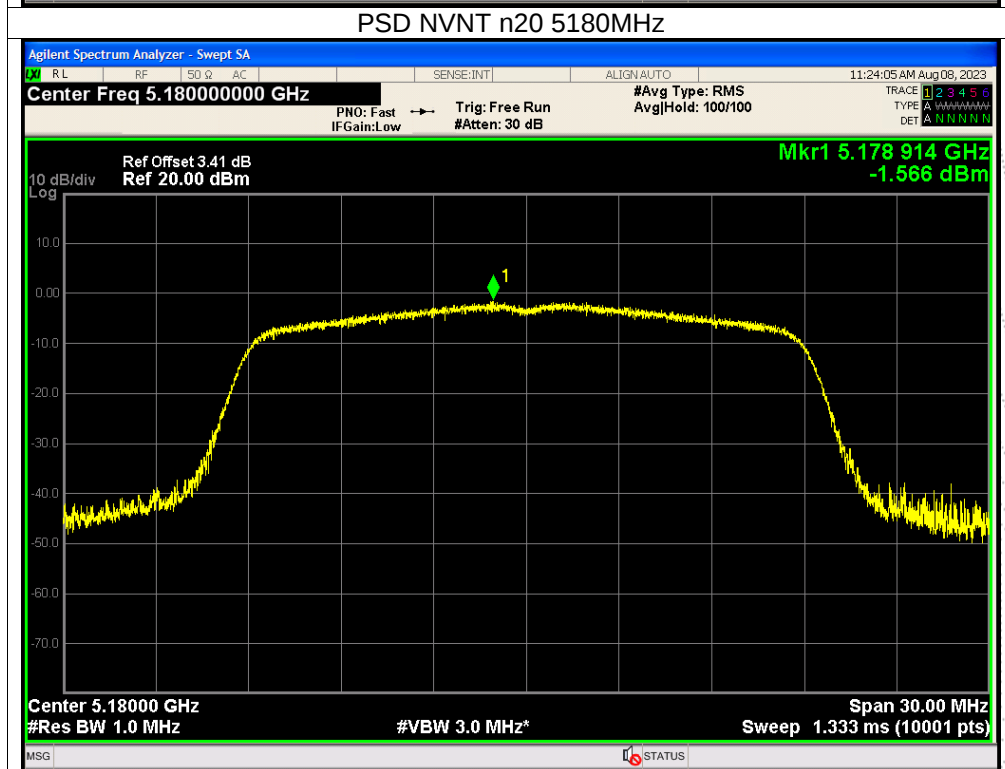
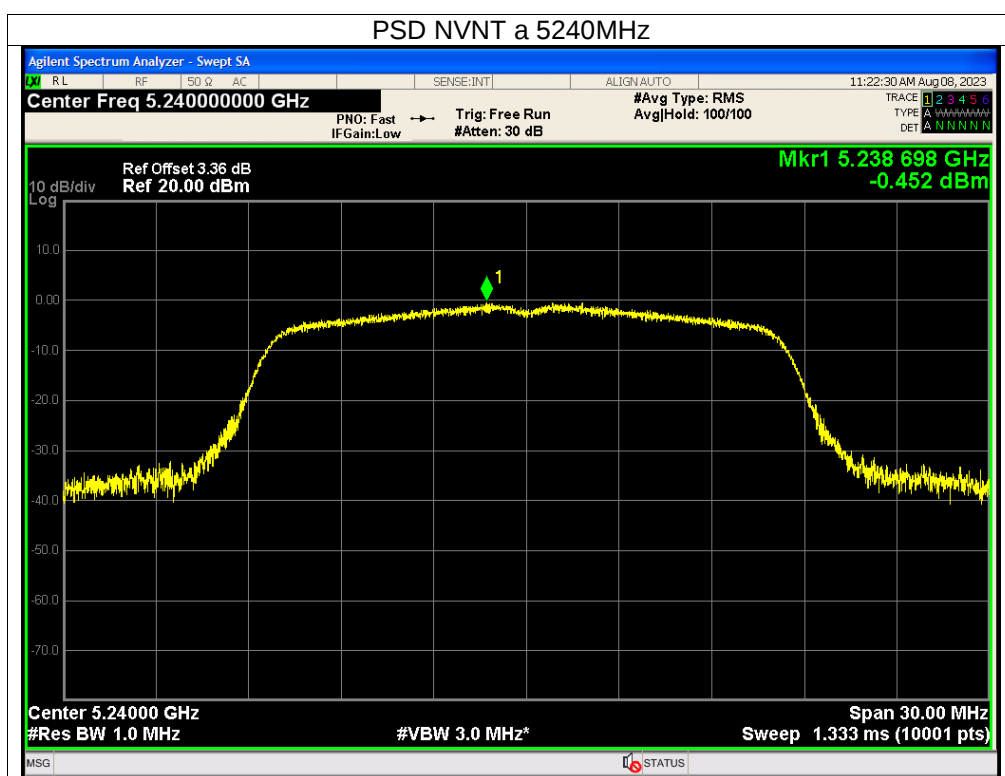
8.5 Test Result

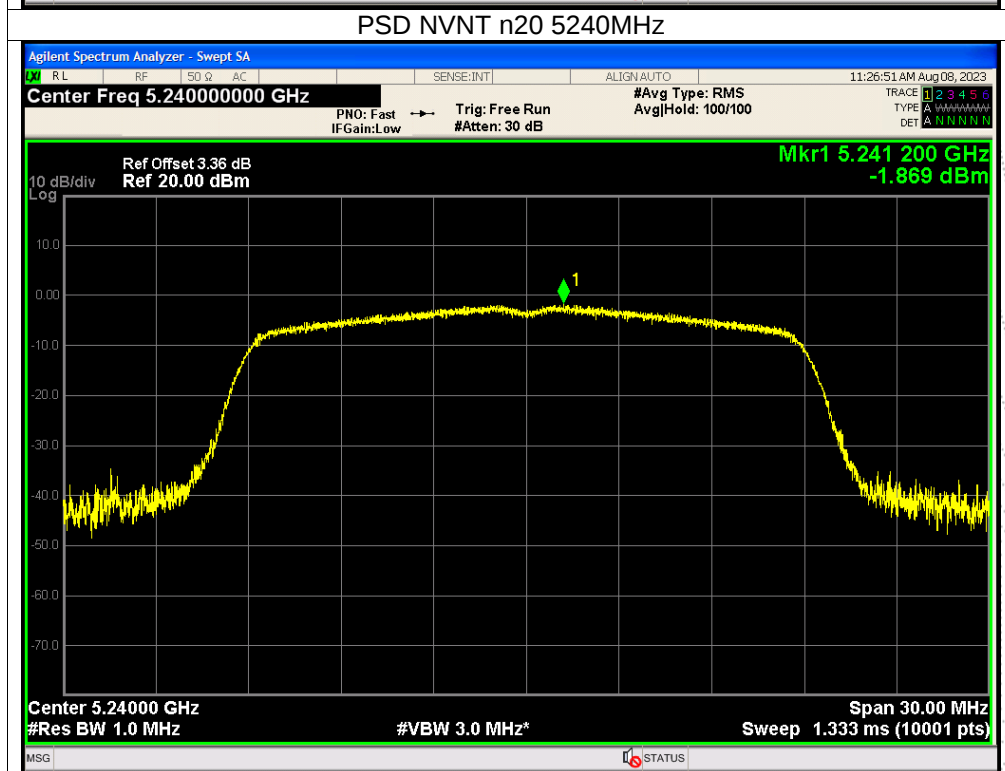
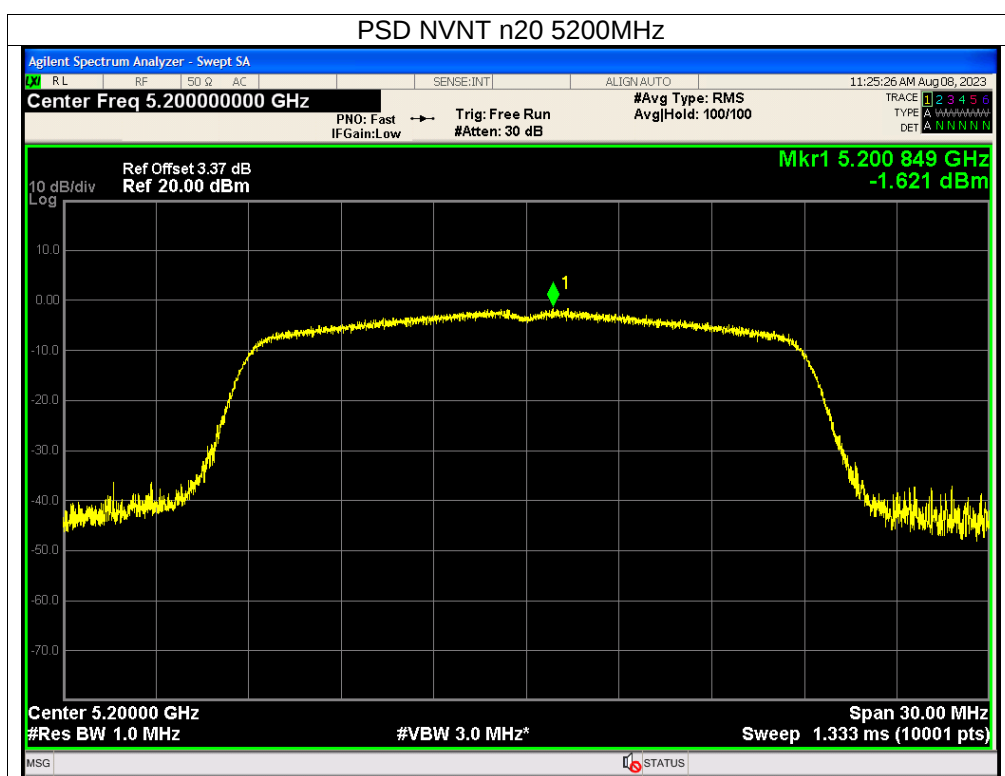
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa	Test Voltage :	DC 5V
Test Mode :	(5180-5240MHz); (5745-5825MHz)		

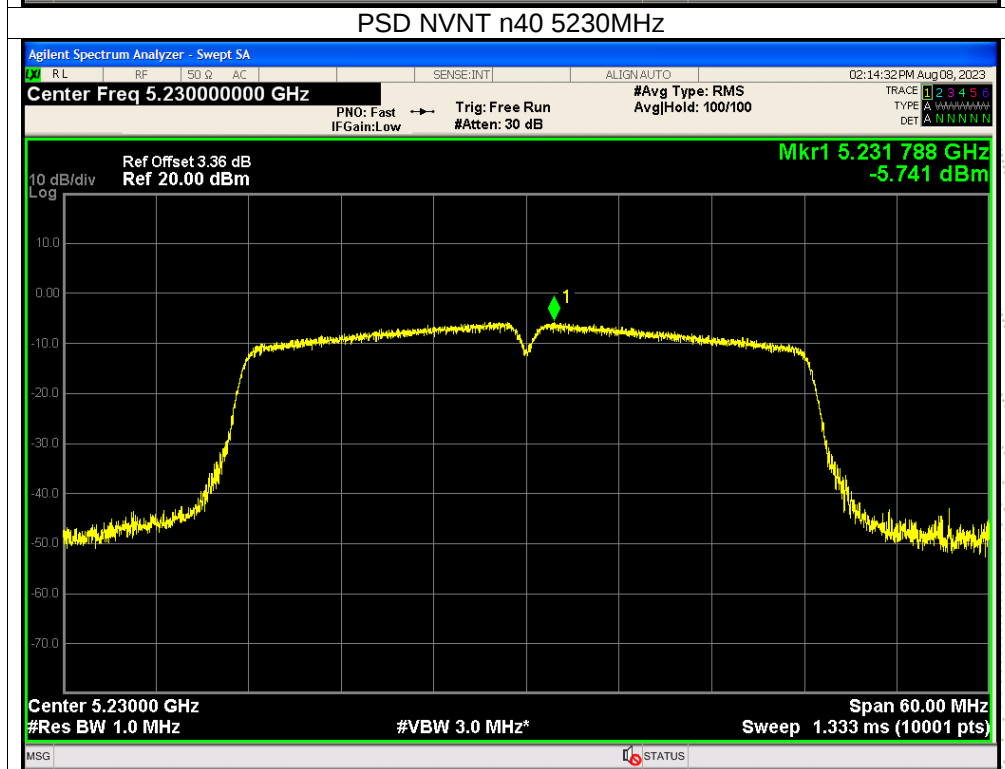
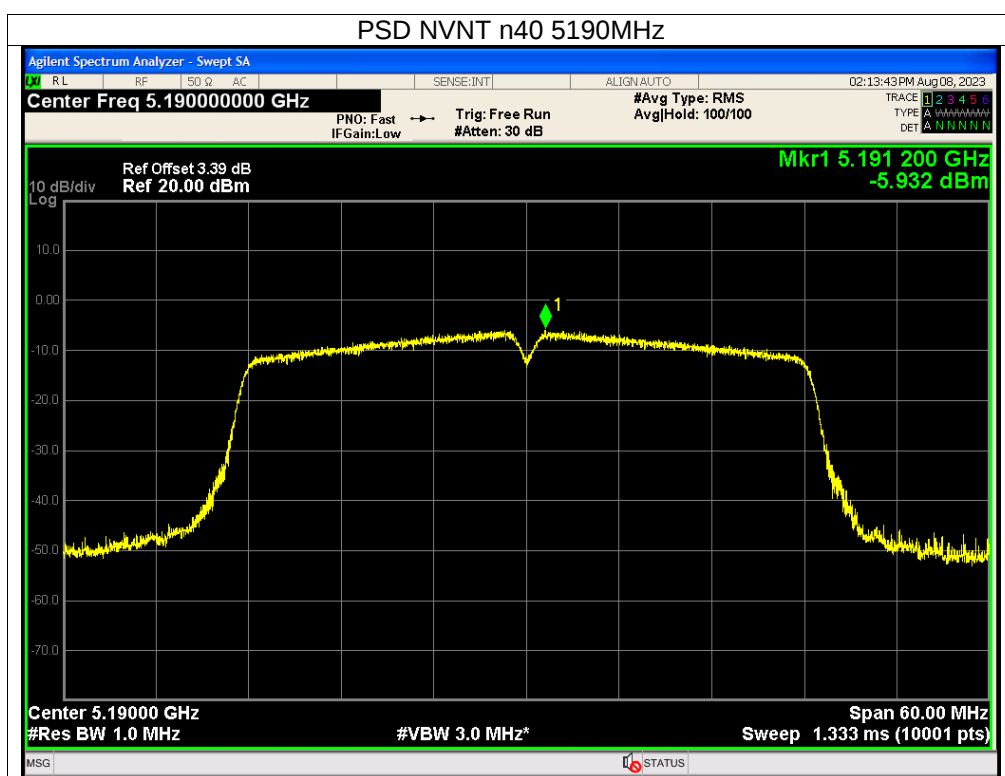
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/1MHz)	Limit (dBm/1MHz)	Verdict
NVNT	a	5180	-1.03	11	Pass
NVNT	a	5200	-0.83	11	Pass
NVNT	a	5240	-0.45	11	Pass
NVNT	n20	5180	-1.57	11	Pass
NVNT	n20	5200	-1.62	11	Pass
NVNT	n20	5240	-1.87	11	Pass
NVNT	n40	5190	-5.93	11	Pass
NVNT	n40	5230	-5.74	11	Pass
NVNT	ac20	5180	-1.5	11	Pass
NVNT	ac20	5200	-2.19	11	Pass
NVNT	ac20	5240	-0.84	11	Pass
NVNT	ac40	5190	-5.06	11	Pass
NVNT	ac40	5230	-5.25	11	Pass
NVNT	ac80	5210	-9.88	11	Pass
NVNT	ax20	5180	-3.49	11	Pass
NVNT	ax20	5200	-2.74	11	Pass
NVNT	ax20	5240	-1.7	11	Pass
NVNT	ax40	5190	-7.79	11	Pass
NVNT	ax40	5230	-6.17	11	Pass
NVNT	ax80	5210	-13.16	11	Pass

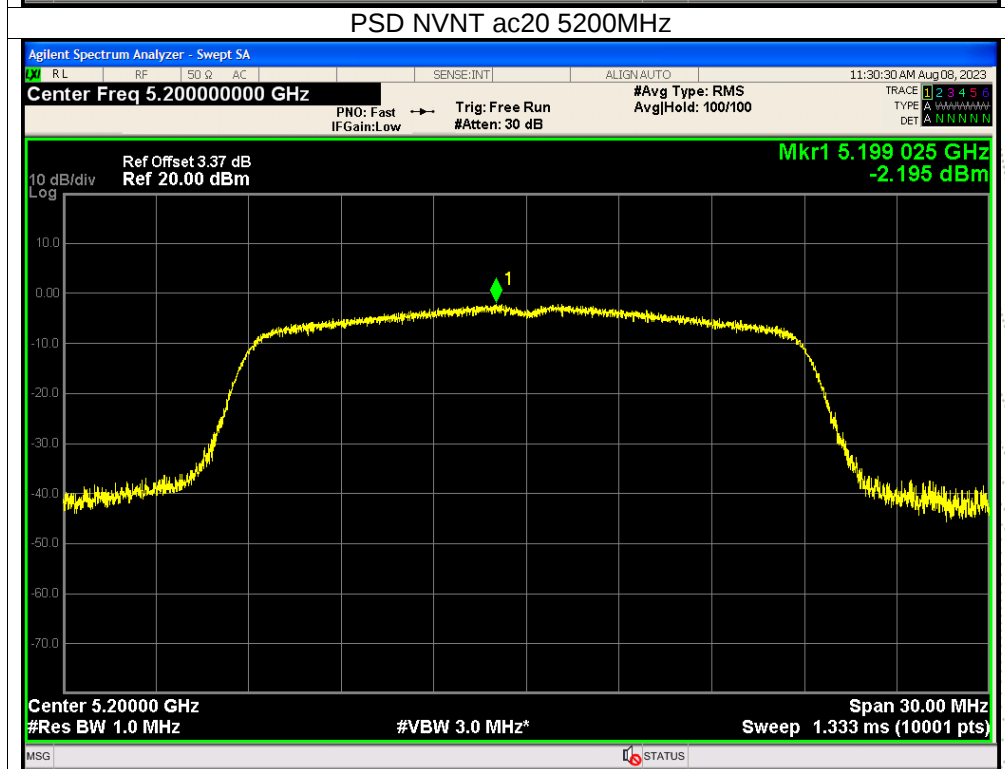
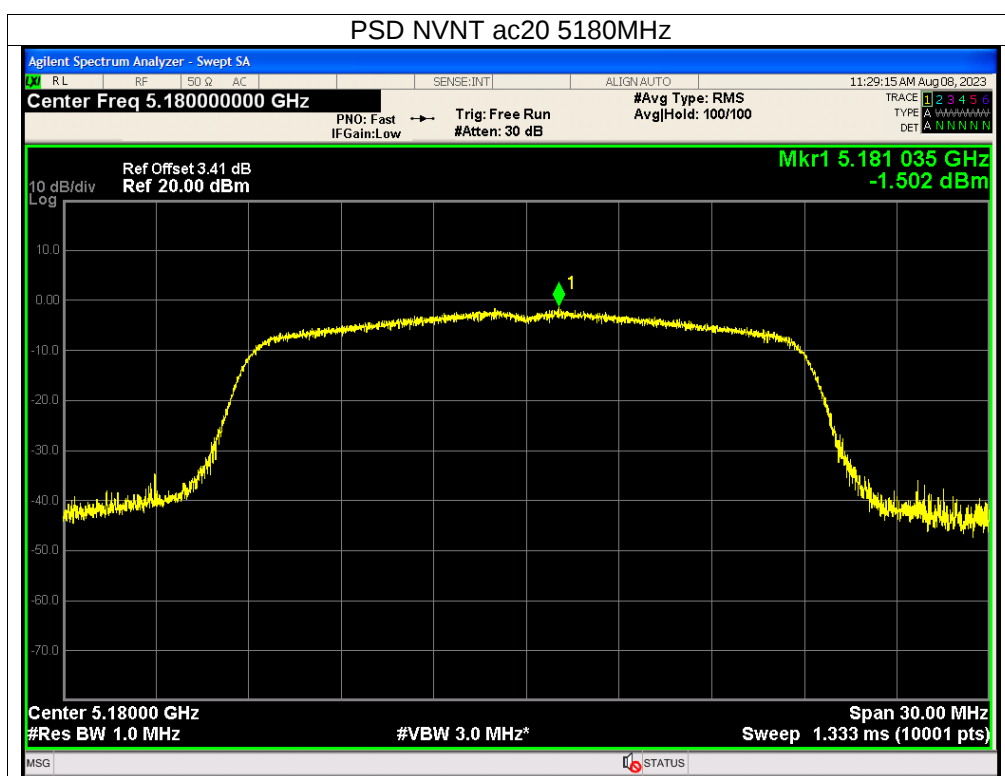
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
NVNT	a	5745	-2.35	30	Pass
NVNT	a	5785	-1.81	30	Pass
NVNT	a	5825	-1.53	30	Pass
NVNT	n20	5745	-3.06	30	Pass
NVNT	n20	5785	-2.95	30	Pass
NVNT	n20	5825	-2.64	30	Pass
NVNT	n40	5755	-7.98	30	Pass
NVNT	n40	5795	-6.88	30	Pass
NVNT	ac20	5745	-3.04	30	Pass
NVNT	ac20	5785	-2.76	30	Pass
NVNT	ac20	5825	-2.24	30	Pass
NVNT	ac40	5755	-7.92	30	Pass
NVNT	ac40	5795	-6.98	30	Pass
NVNT	ac80	5775	-12.54	30	Pass
NVNT	ax20	5745	-4.27	30	Pass
NVNT	ax20	5785	-4.64	30	Pass
NVNT	ax20	5825	-4.31	30	Pass
NVNT	ax40	5755	-9.23	30	Pass
NVNT	ax40	5795	-9.42	30	Pass
NVNT	ax80	5775	-15.9	30	Pass

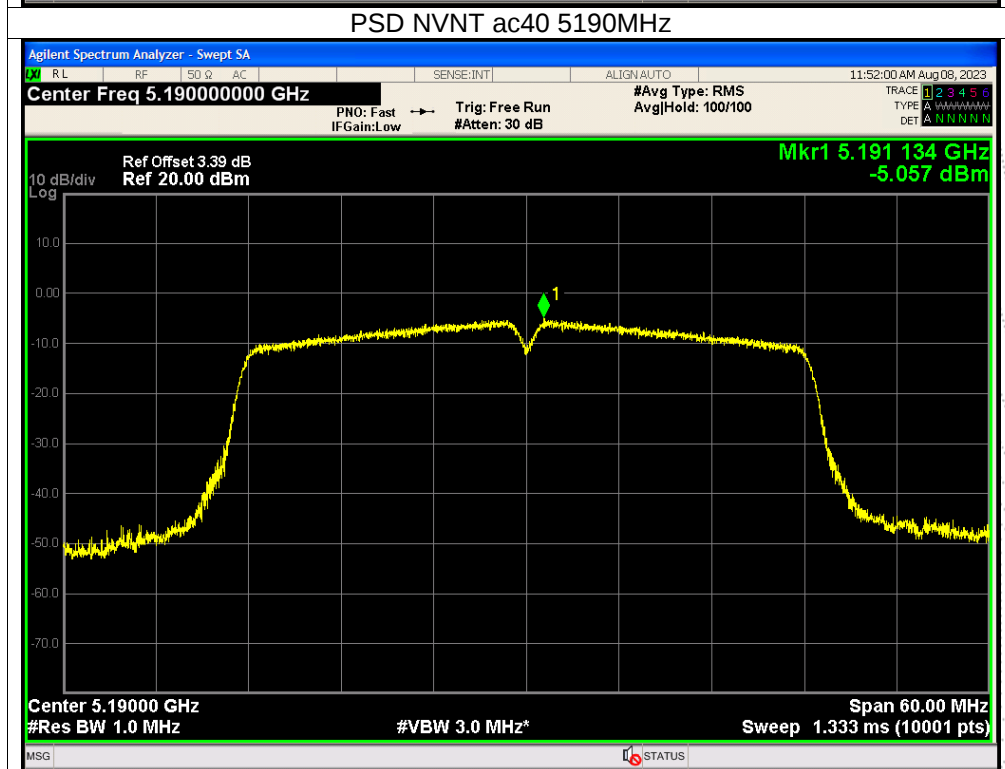
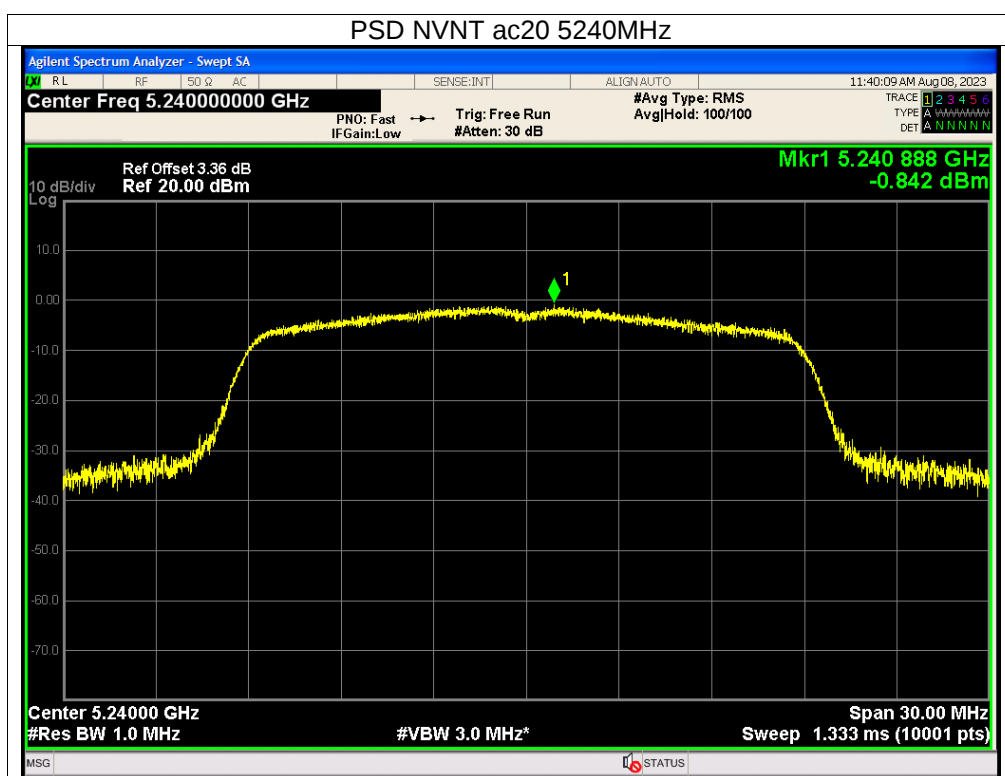


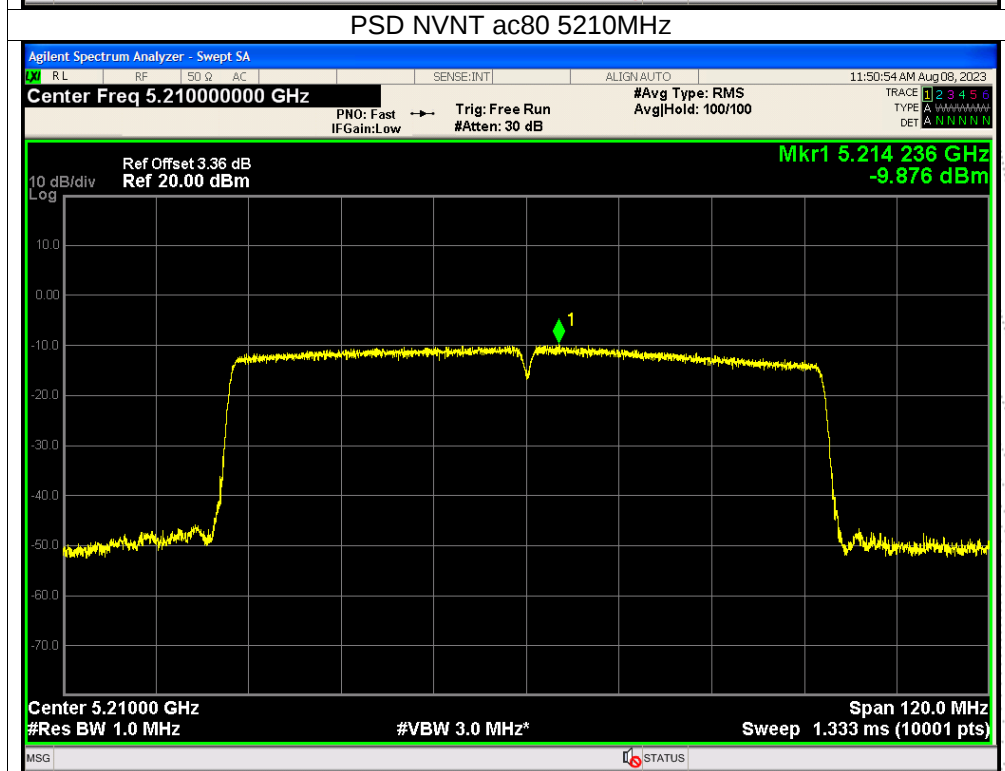
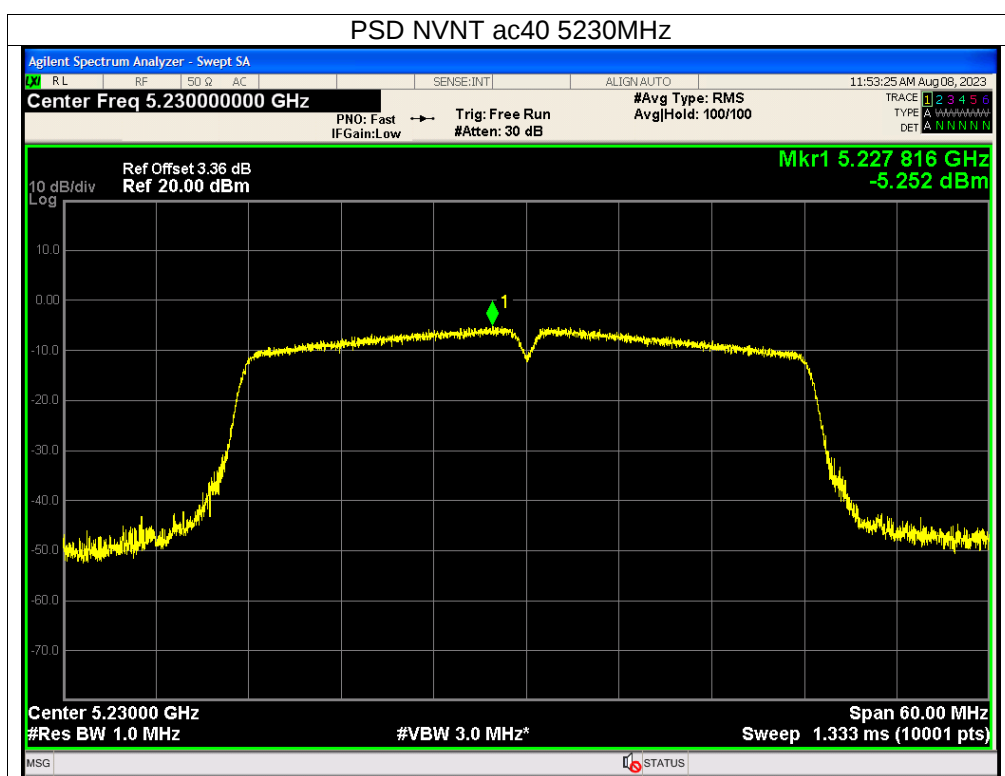


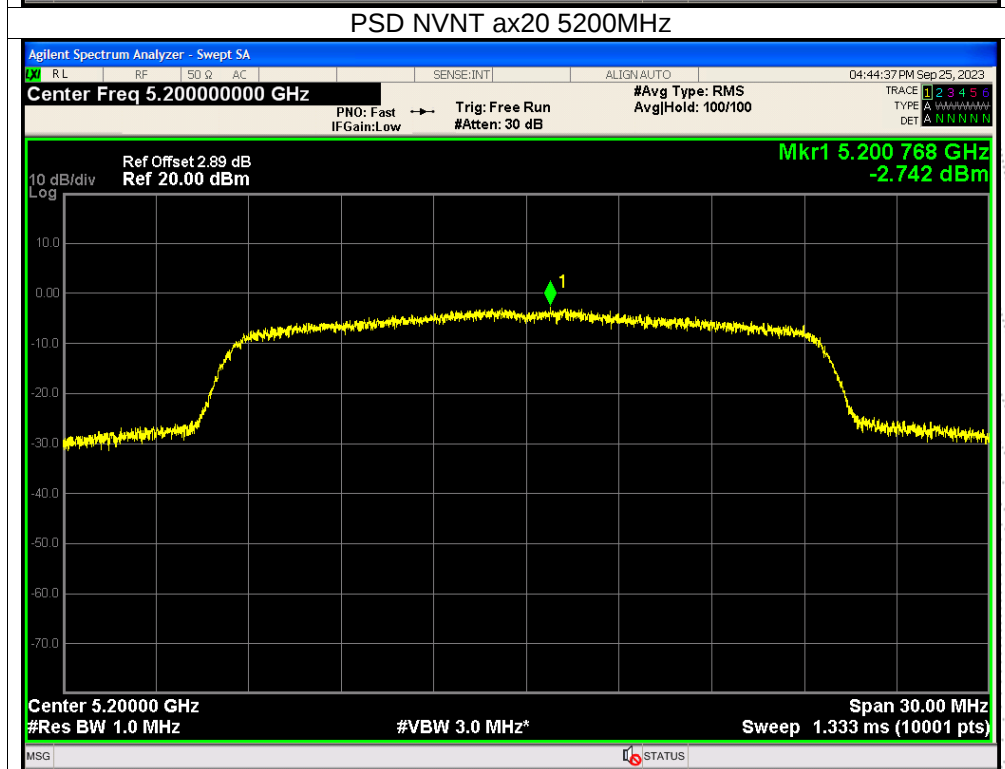
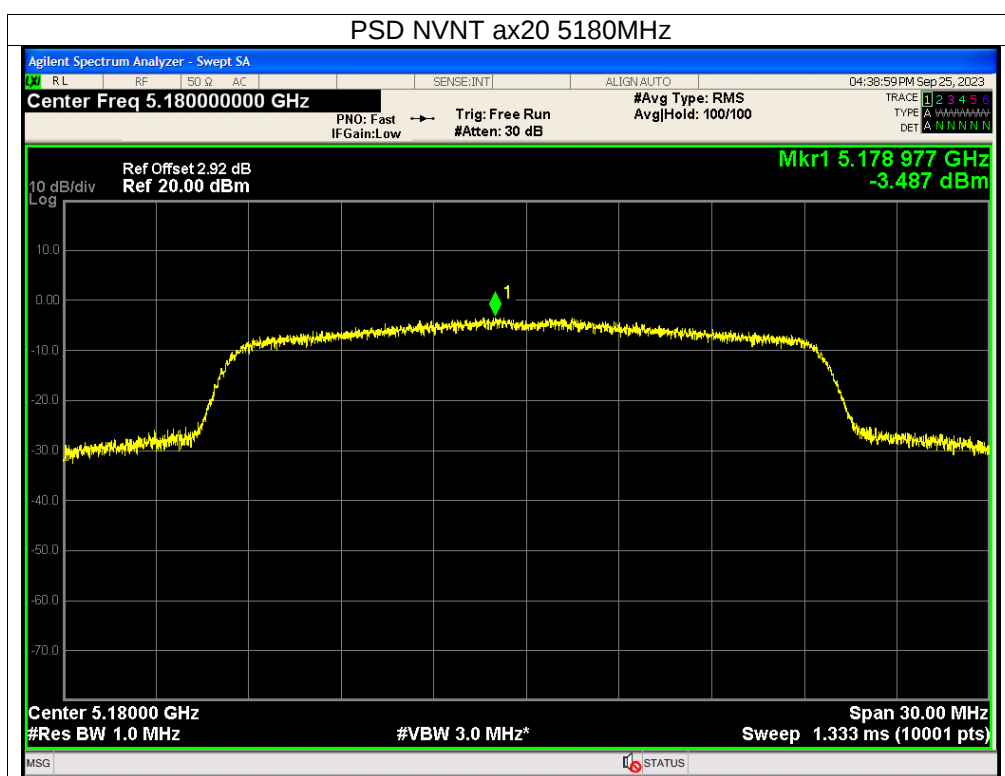


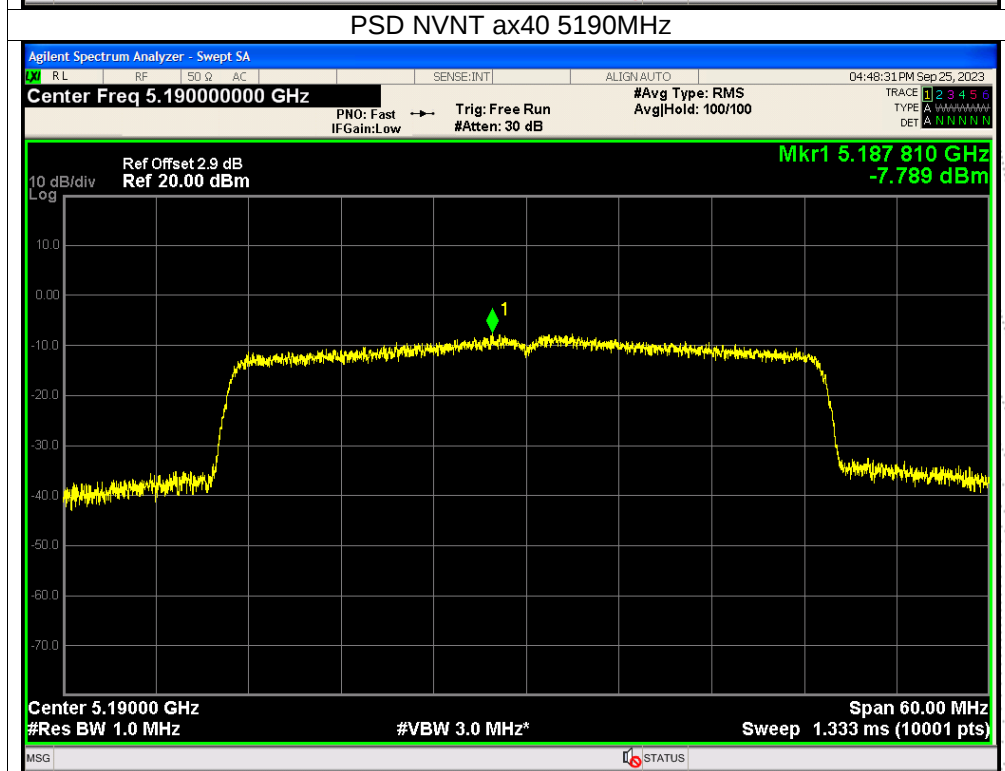
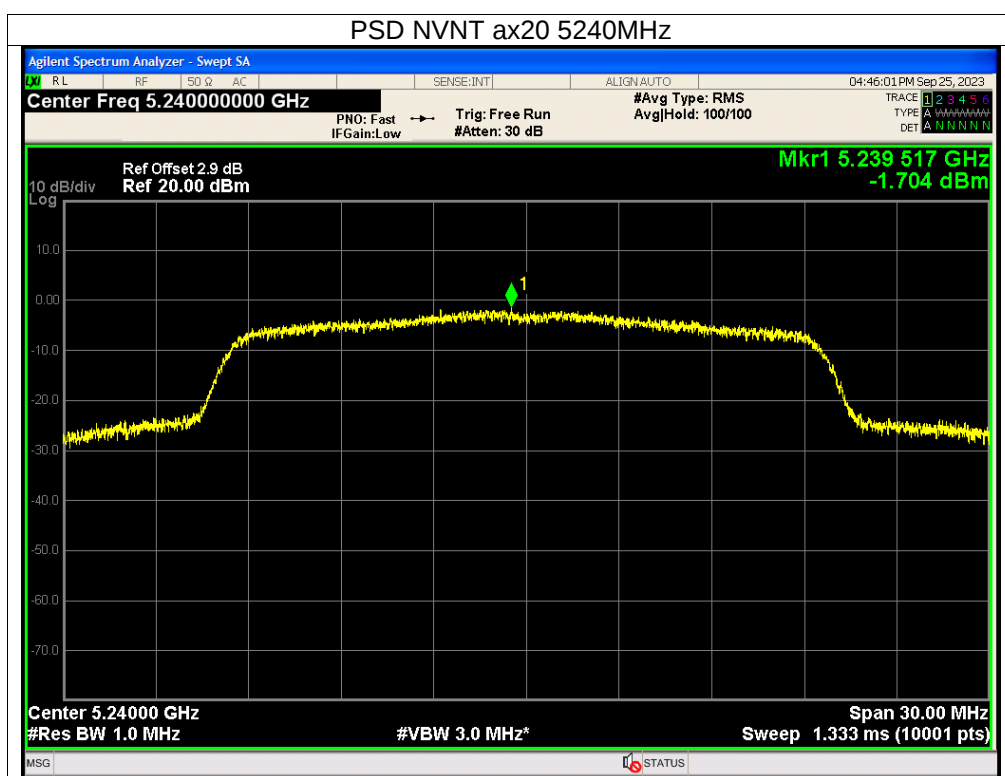


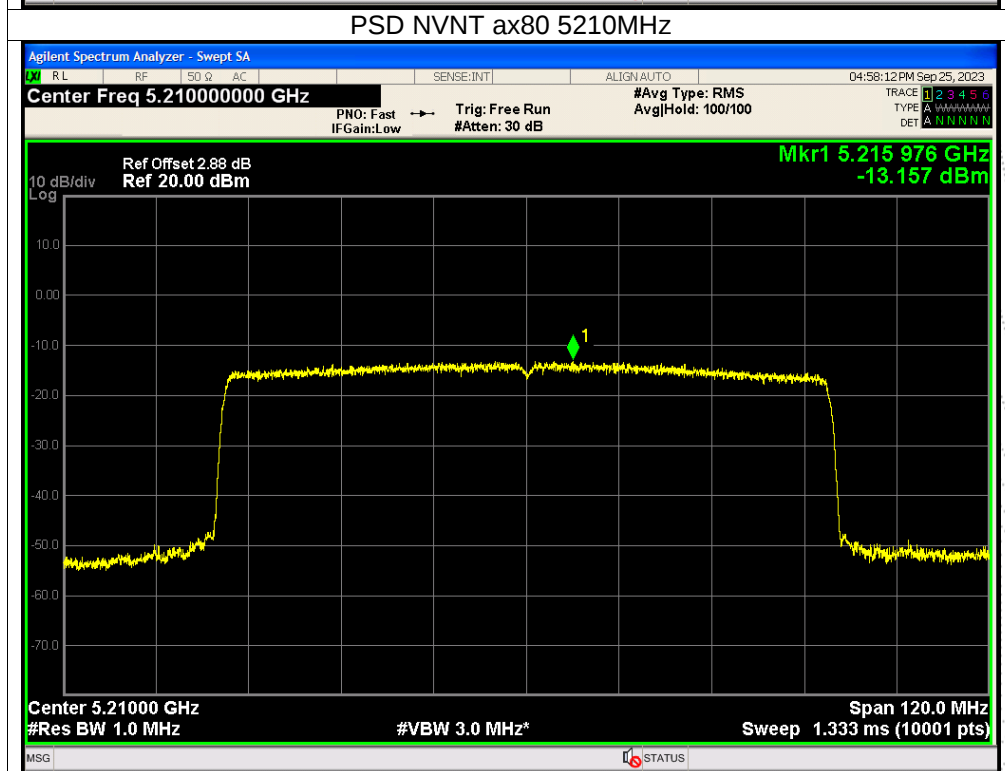
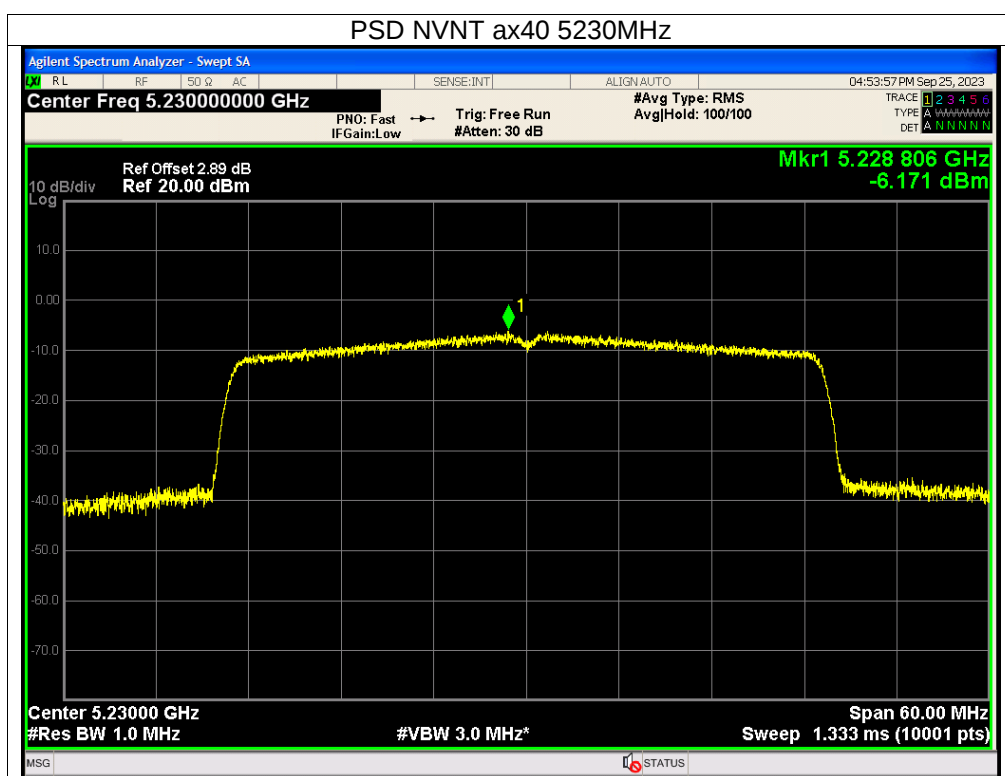


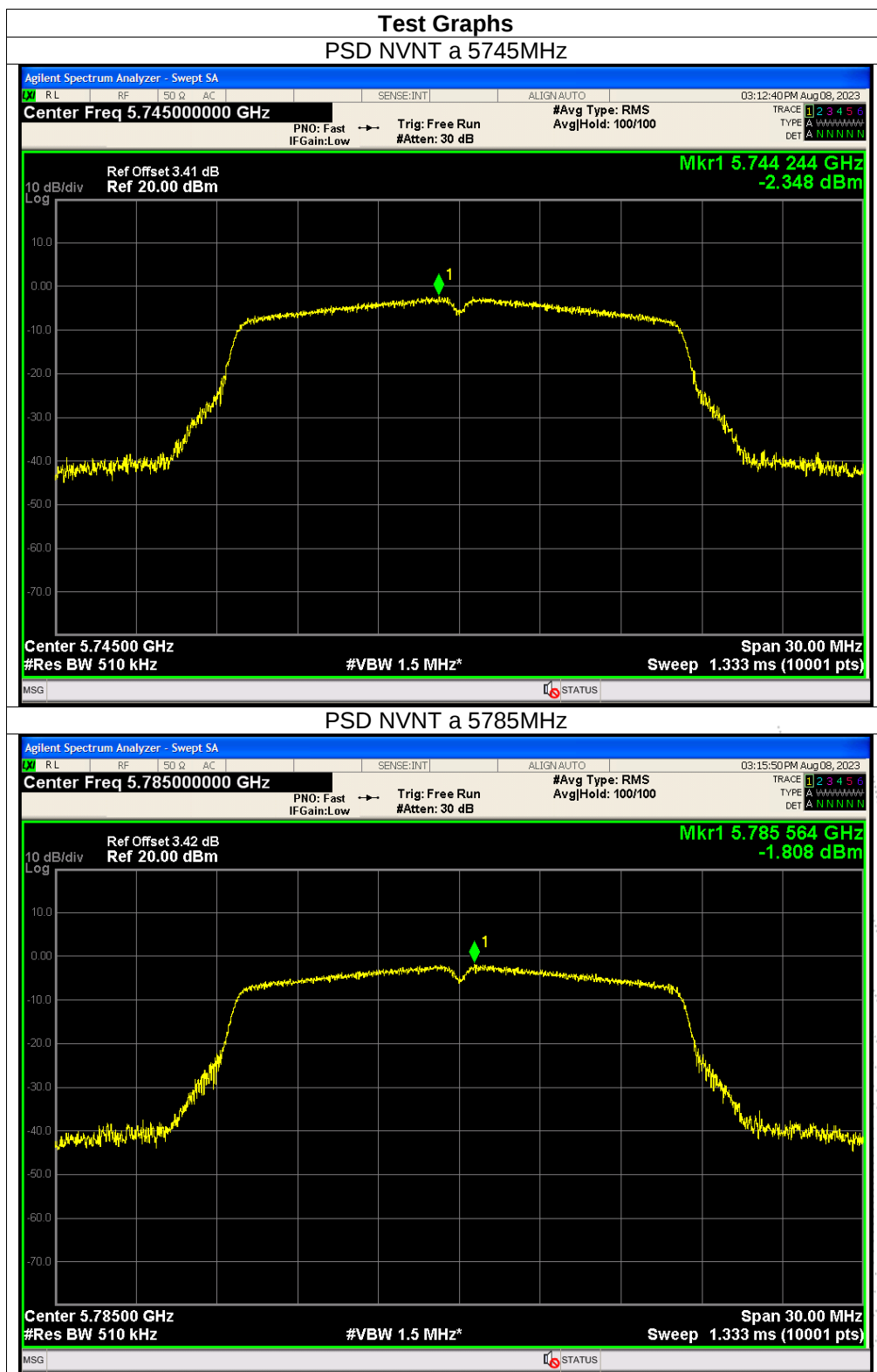


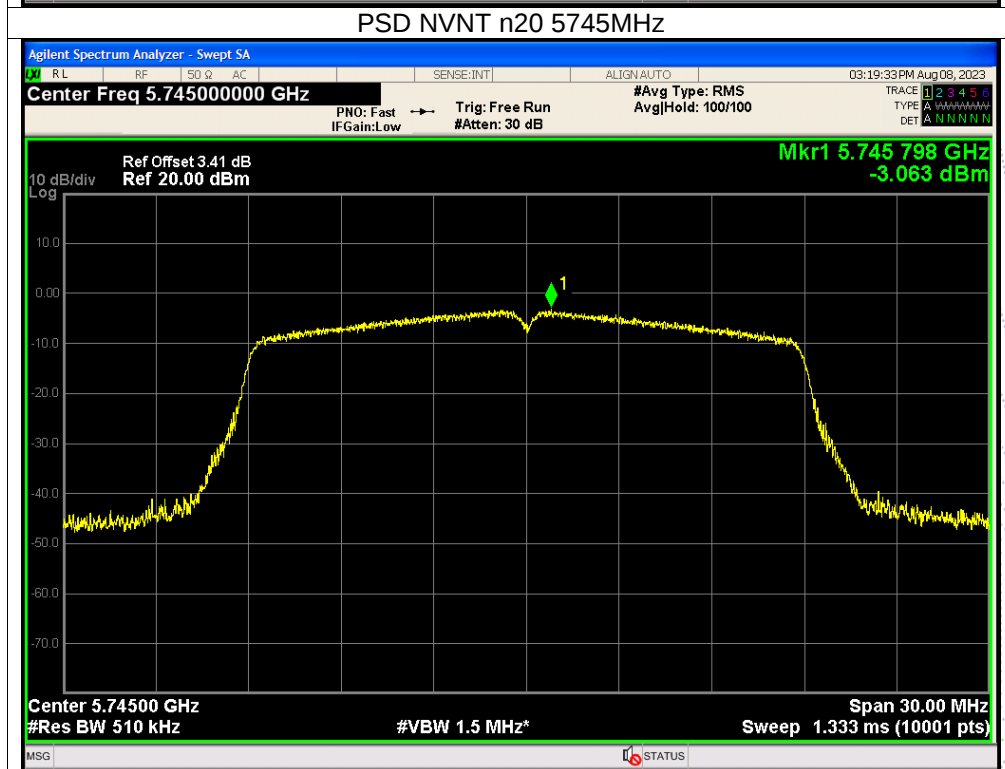
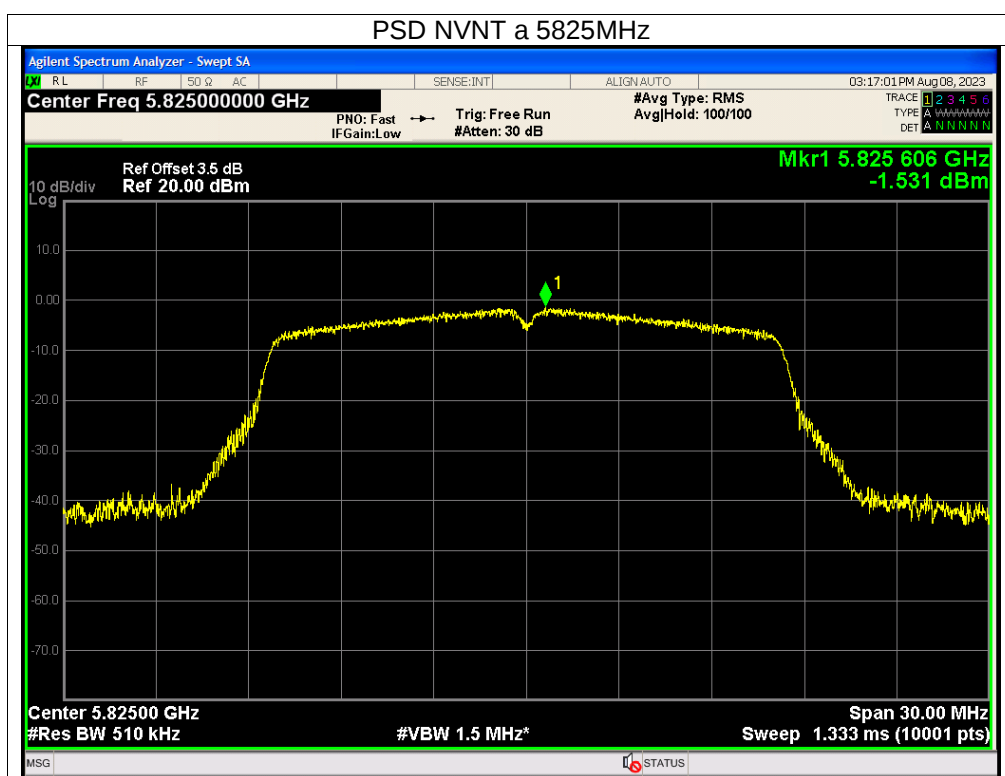


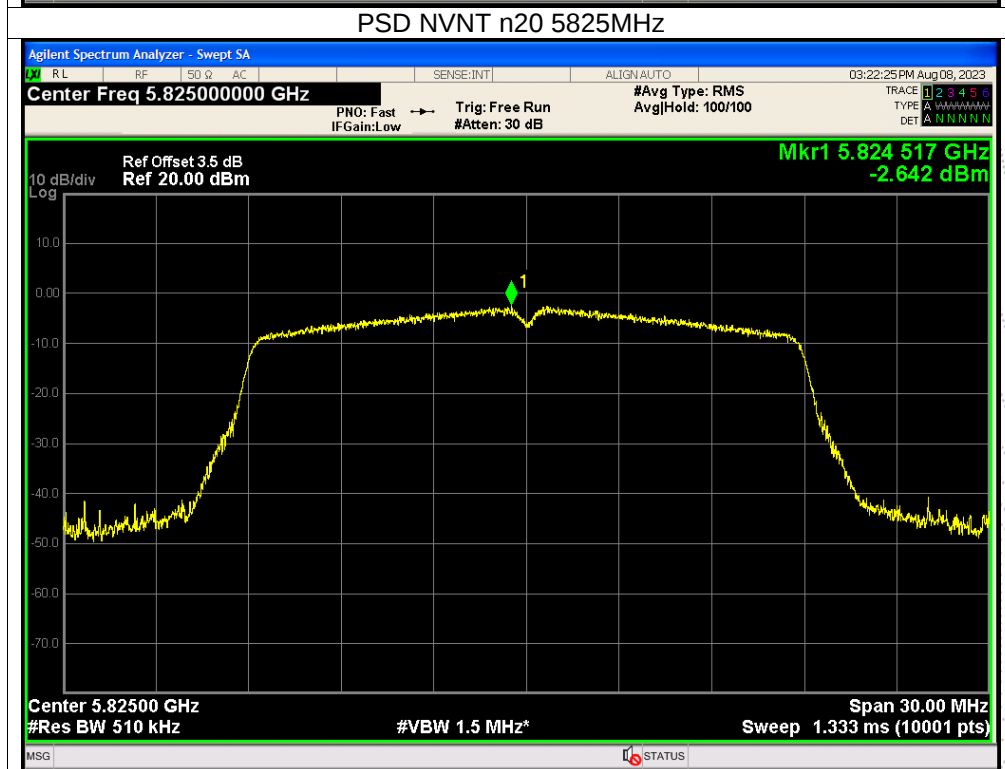
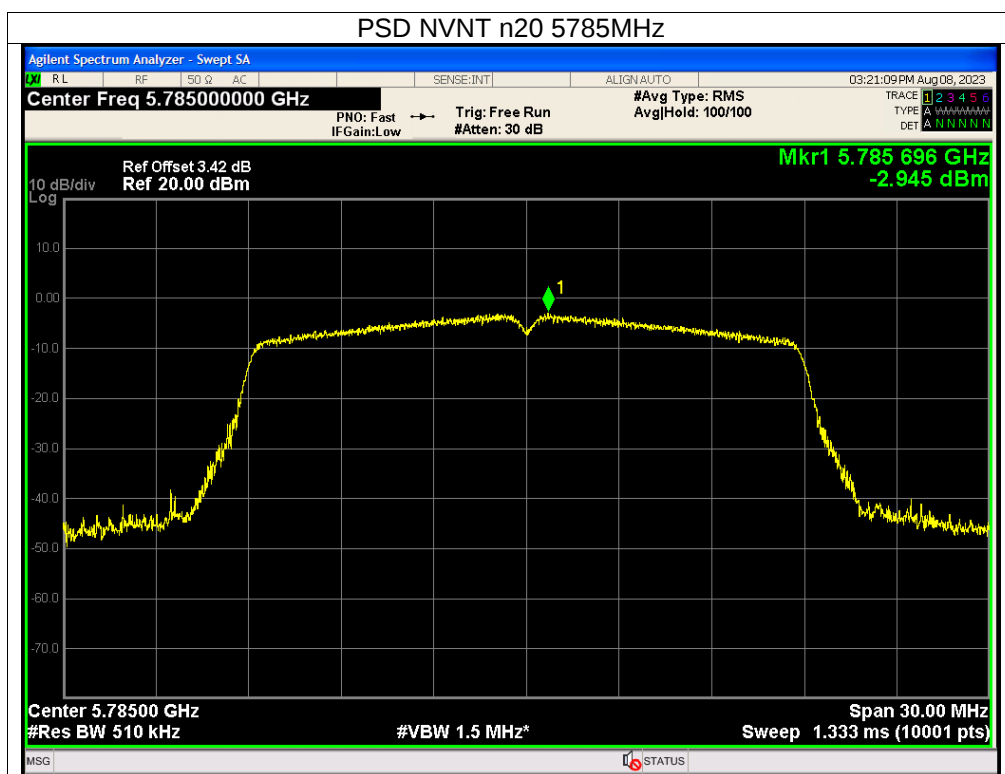


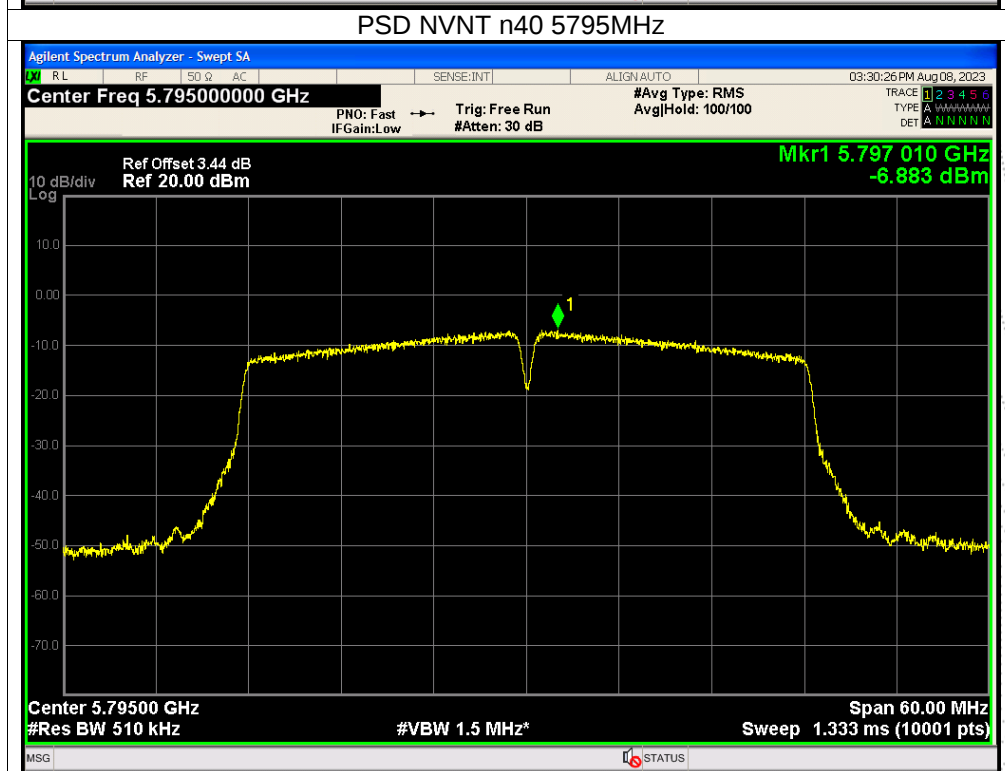
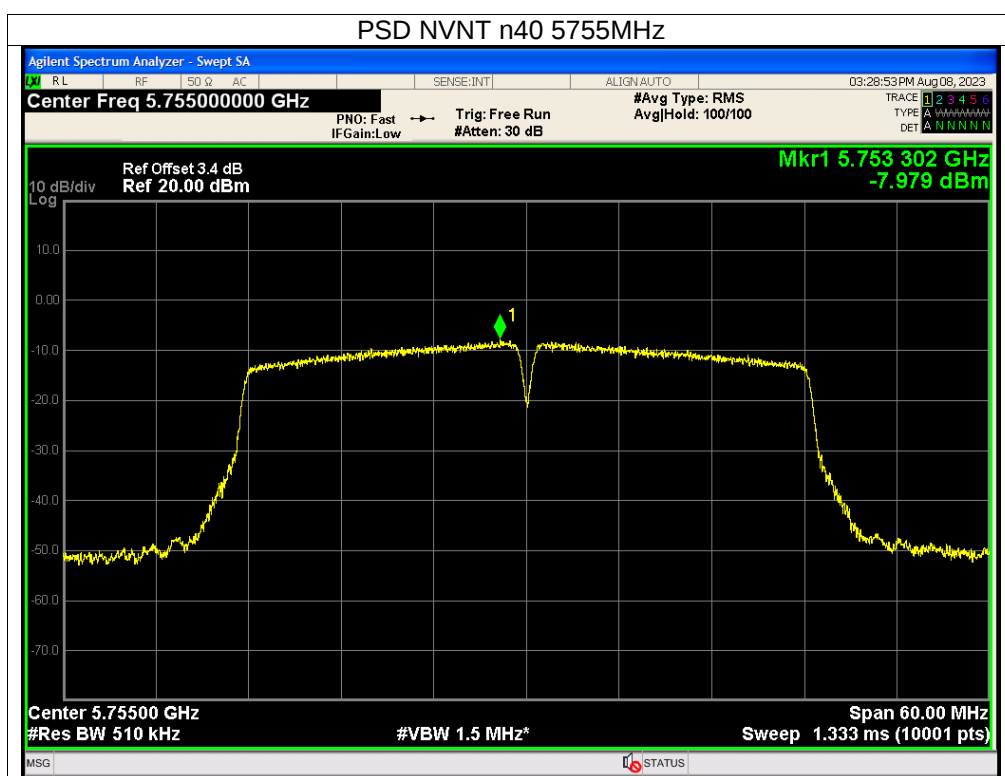


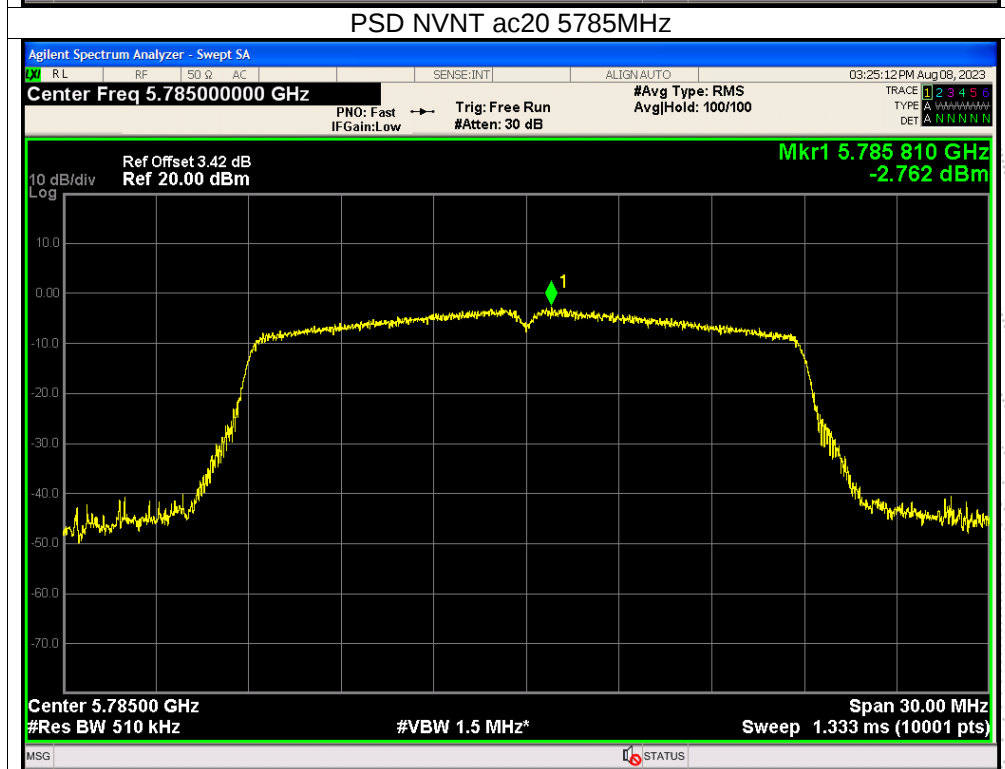
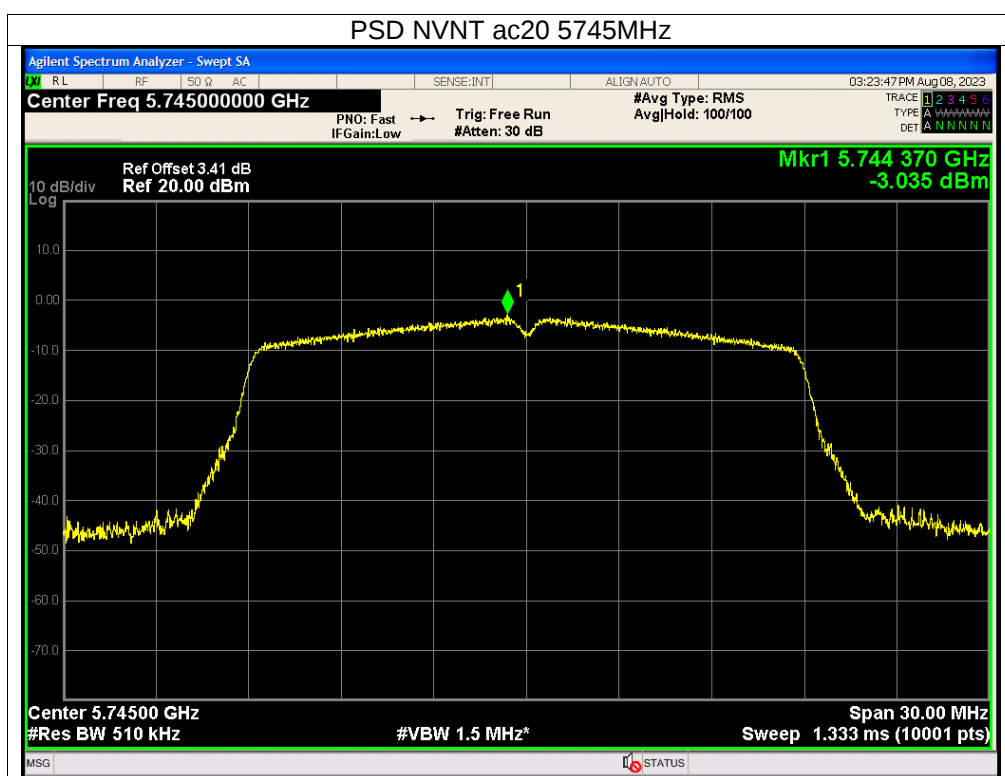


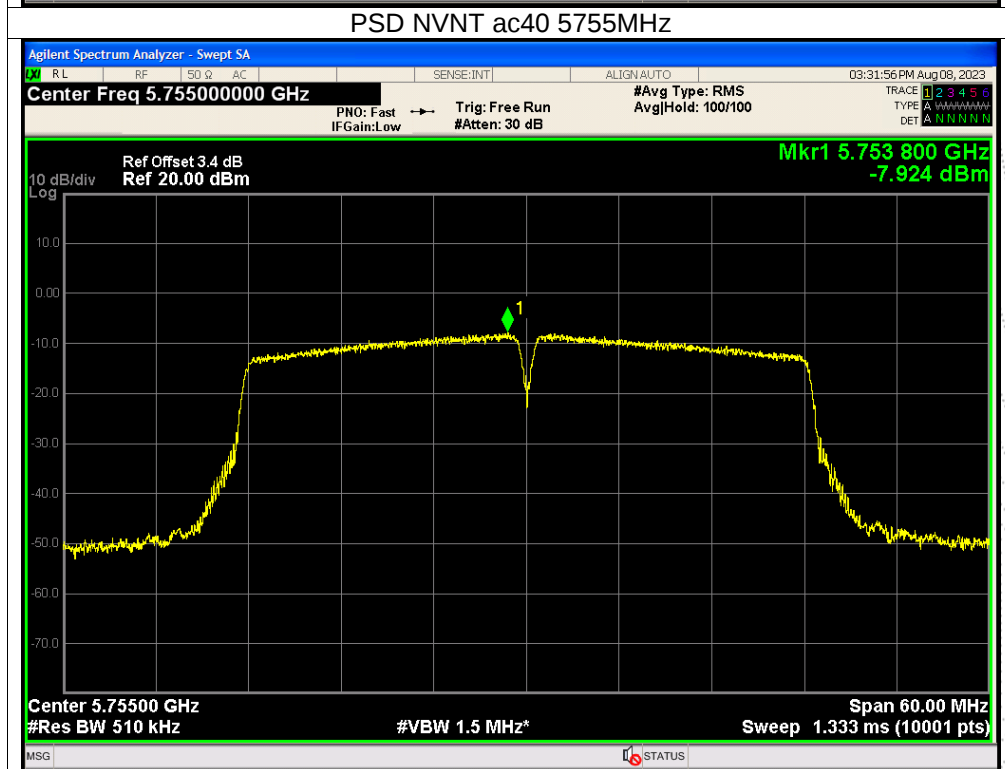
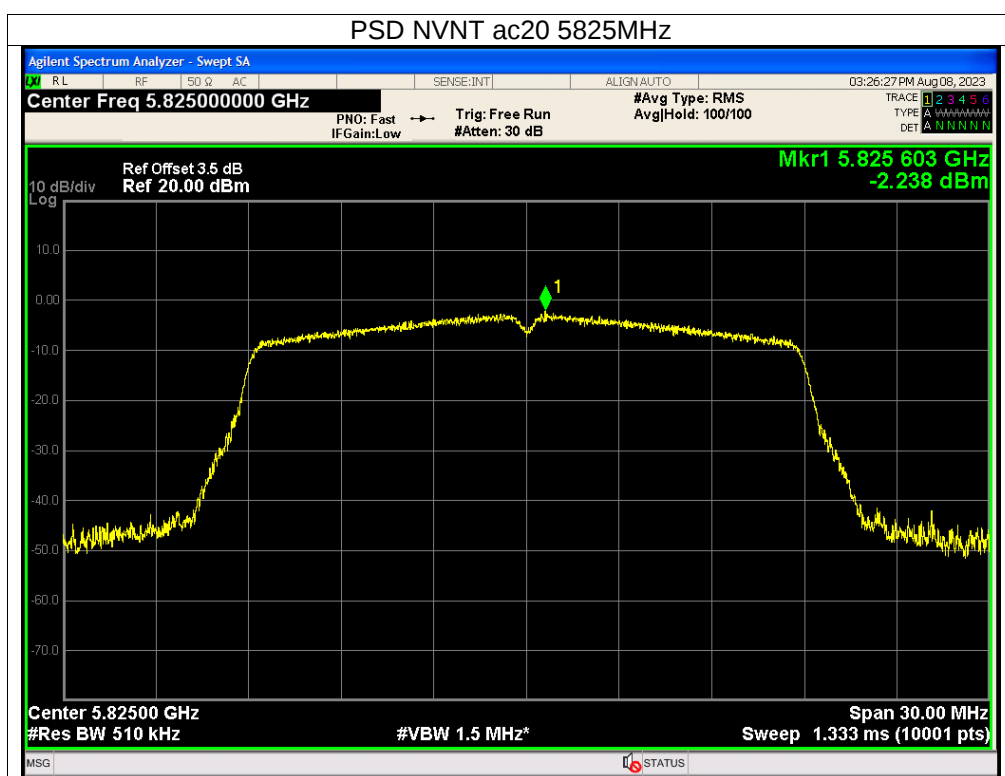


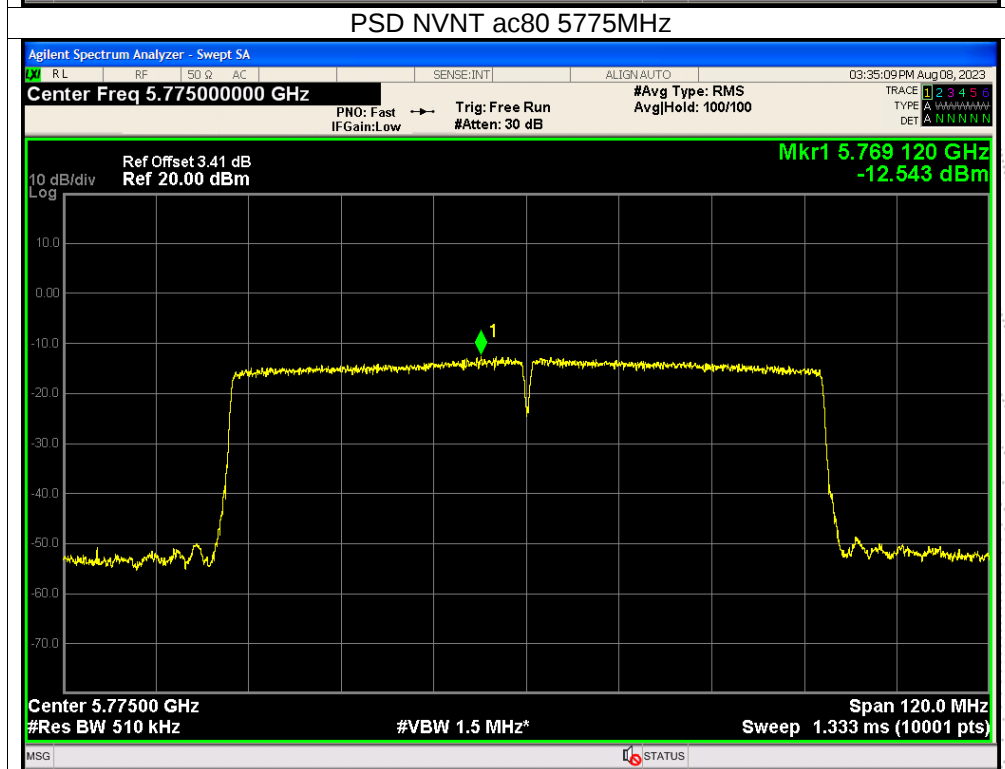
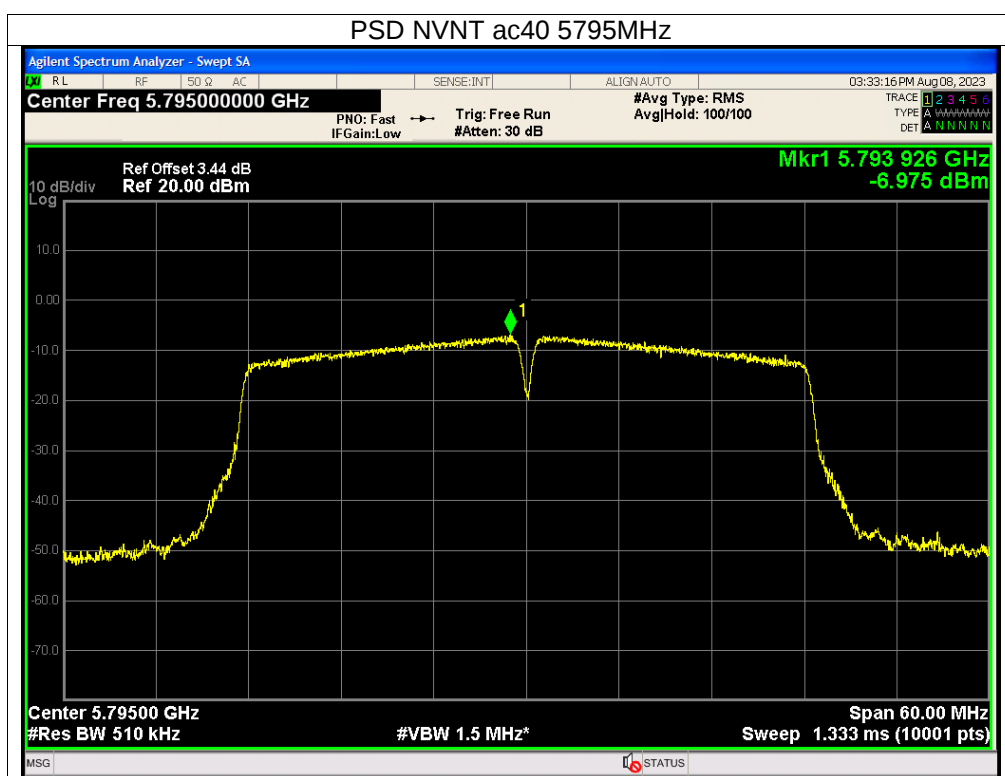


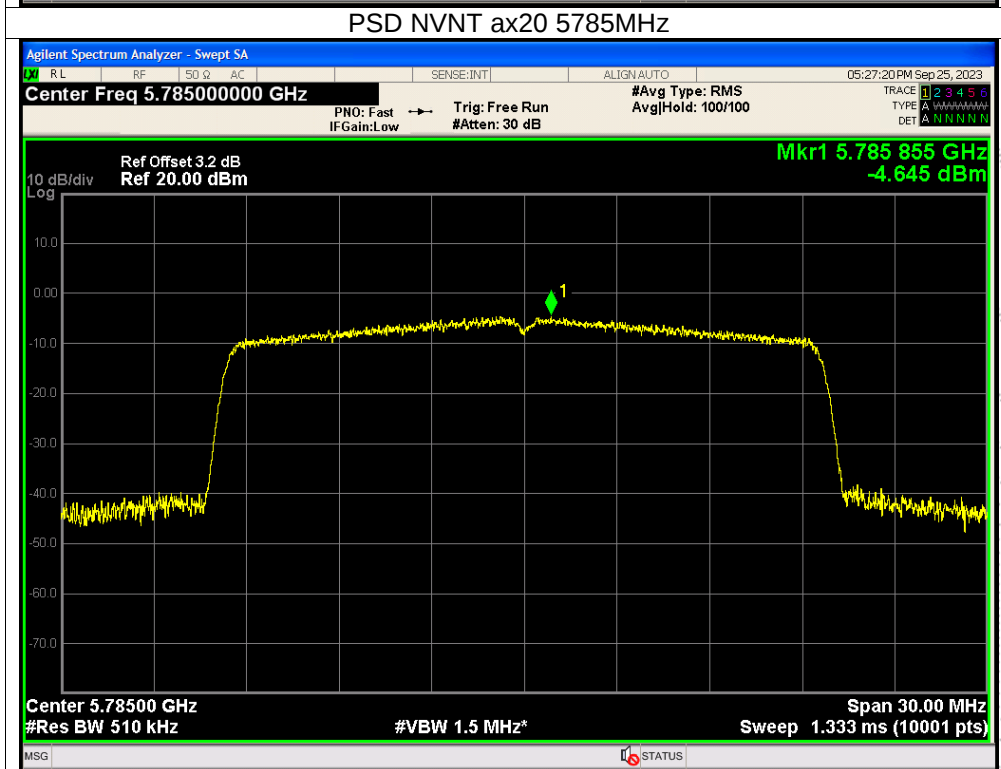
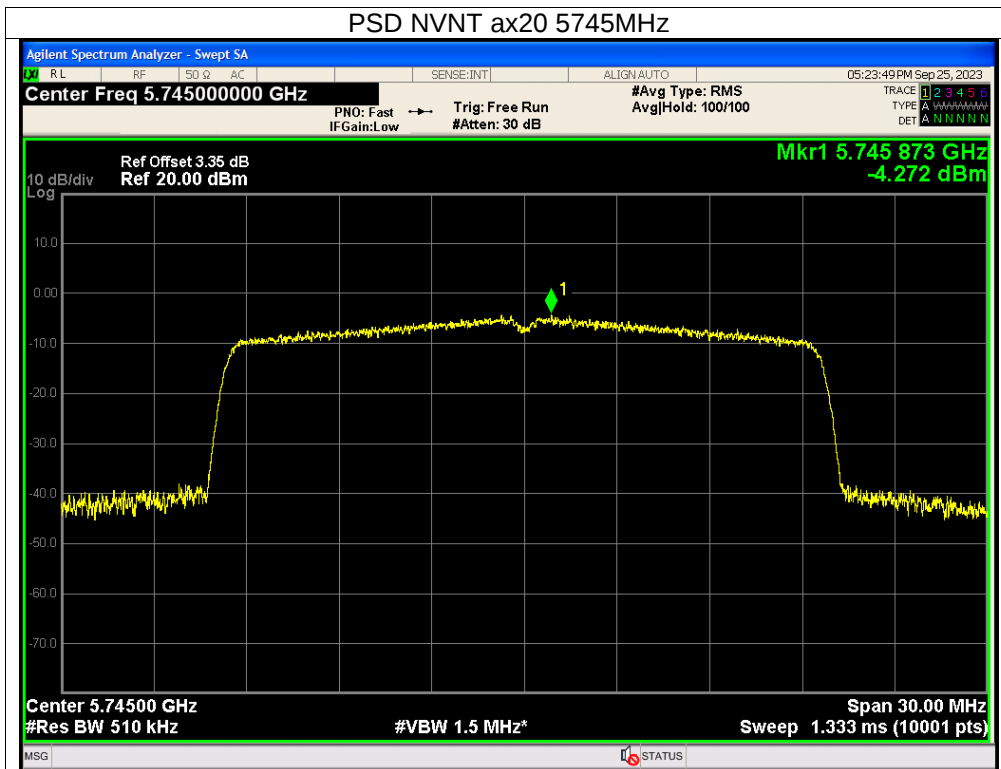


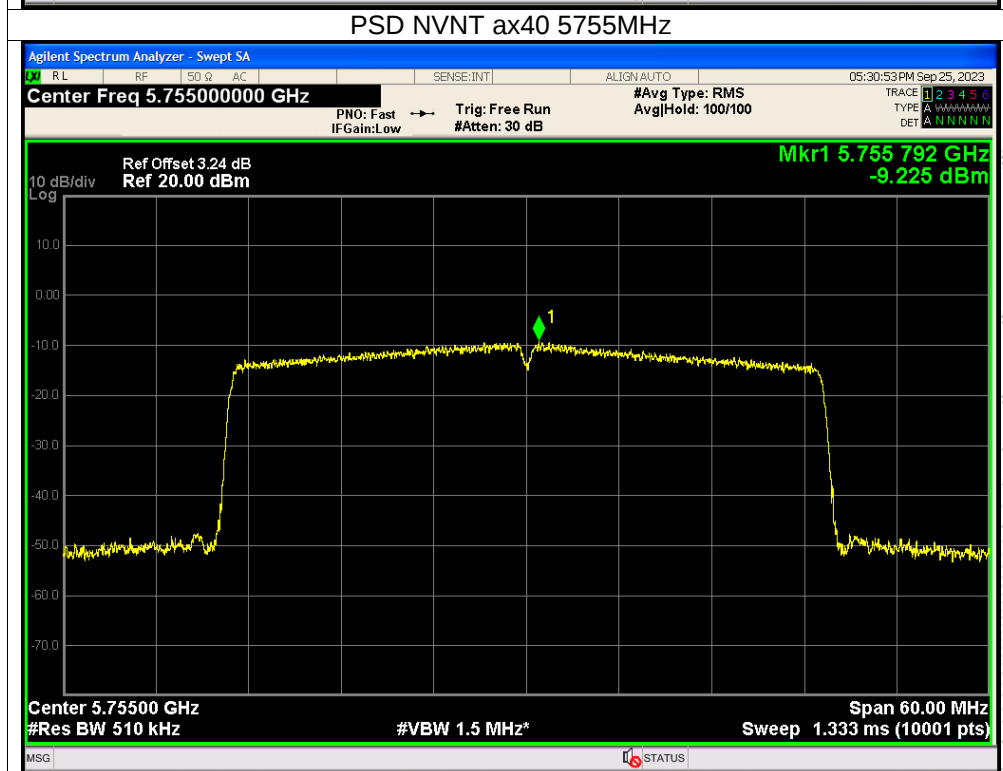
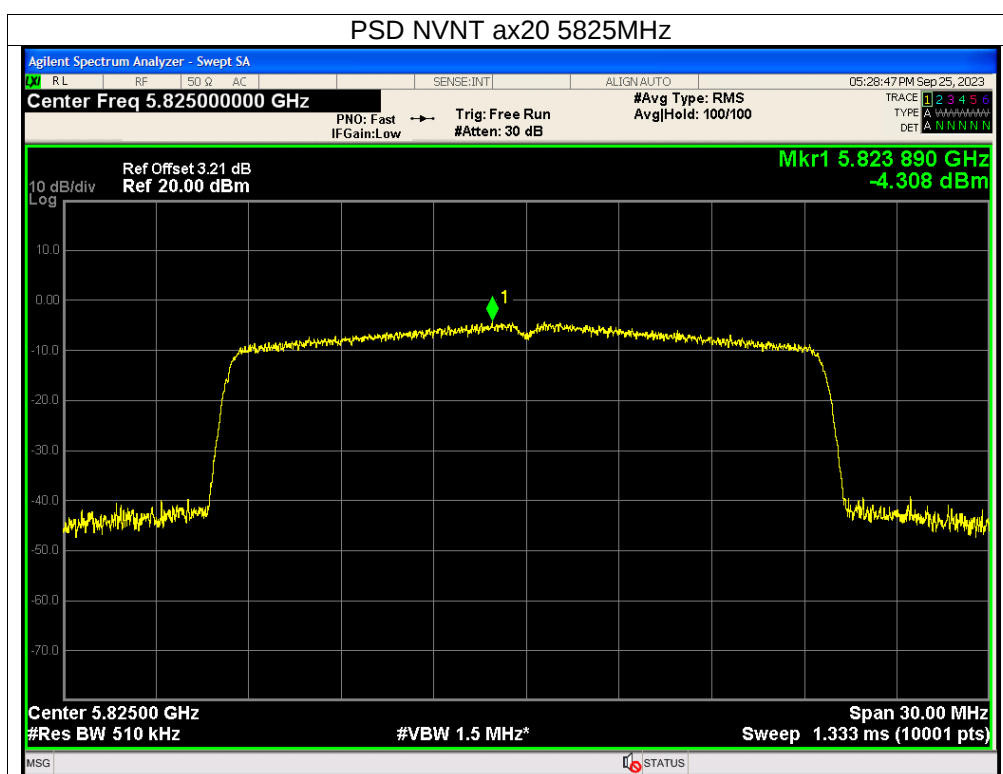


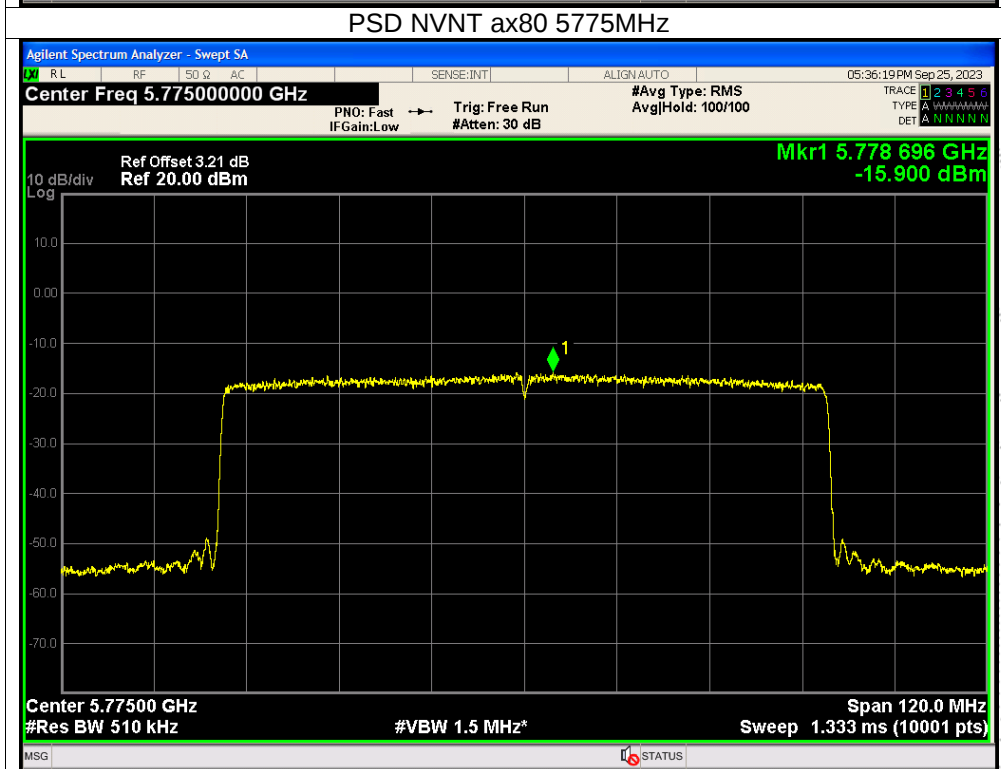
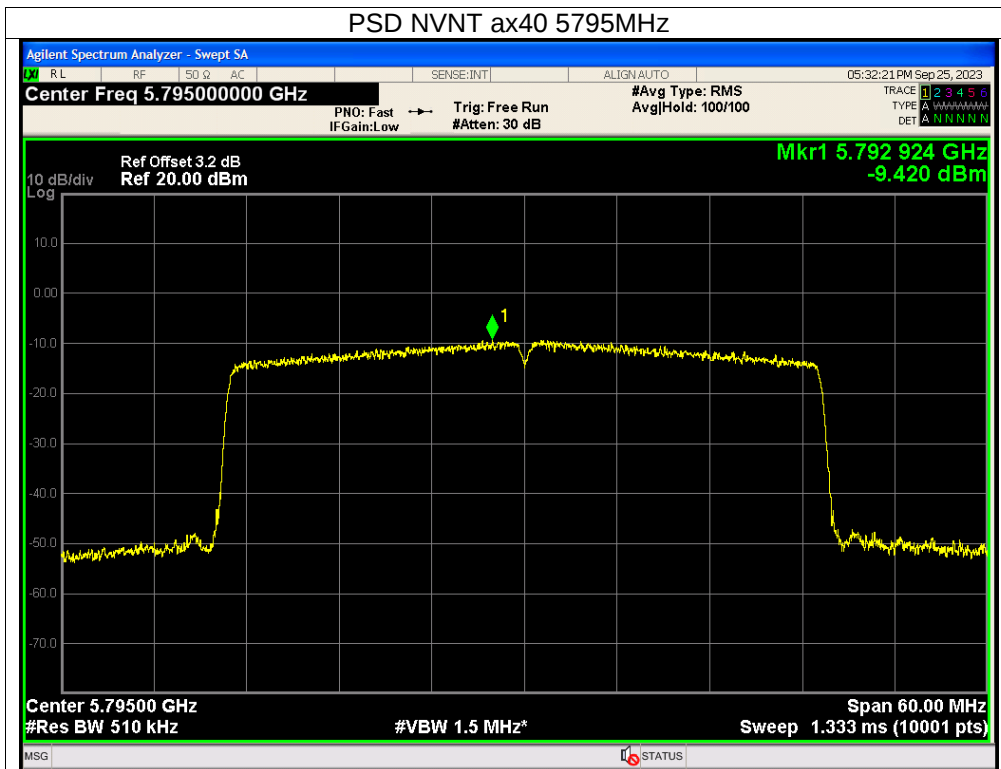






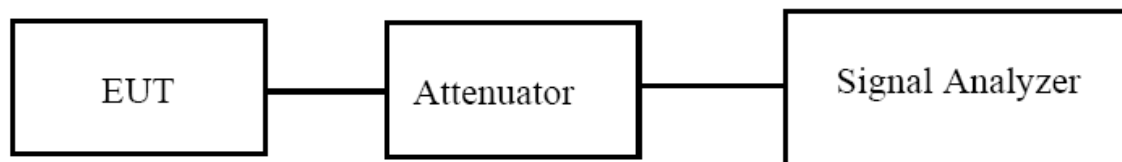






9. 26dB & 6dB & 99% Emission Bandwidth

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.
(6dB bandwidth)>500kHz

9.3 Test Procedure

- Set RBW = approximately 1% of the emission bandwidth.
- Set the VBW > RBW.
- Detector = Peak.
- Trace mode = max hold.
- 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:

- Set center frequency to the nominal EUT channel center frequency.
- Set span = 1.5 times to 5.0 times the OBW.
- Set RBW = 1 % to 5 % of the OBW
- Set $VBW \geq 3 \cdot RBW$
- 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.
- Use the 99 % power bandwidth function of the instrument (if available).
- 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.

6dB

- Set RBW = 100 kHz.
- Set the video bandwidth (VBW) $\geq 3 \times RBW$.
- Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.

6. Allow the trace to stabilize.

7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

9.4 EUT Operating Conditions

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

9.5 Test Result

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa	Test Voltage:	DC 5V
Test Mode:	TX Frequency U-NII-1 (5180-5240MHz)		

Condition	Mode	Frequency (MHz)	99% bandwidth (MHz)	-26dB bandwidth (MHz)	Result
NVNT	a	5180	16.362	22.519	Pass
NVNT	a	5200	16.416	22.337	Pass
NVNT	a	5240	16.392	23.786	Pass
NVNT	n20	5180	17.504	20.301	Pass
NVNT	n20	5200	17.527	22.393	Pass
NVNT	n20	5240	17.525	20.332	Pass
NVNT	n40	5190	35.902	41.033	Pass
NVNT	n40	5230	35.926	42.278	Pass
NVNT	ac20	5180	17.481	20.107	Pass
NVNT	ac20	5200	17.538	21.209	Pass
NVNT	ac20	5240	17.564	24.568	Pass
NVNT	ac40	5190	35.872	41.263	Pass
NVNT	ac40	5230	35.892	40.842	Pass
NVNT	ac80	5210	75.437	90.271	Pass
NVNT	ax20	5180	19.048	33.296	Pass
NVNT	ax20	5200	19.053	37.178	Pass
NVNT	ax20	5240	19.305	36.339	Pass
NVNT	ax40	5190	37.833	55.535	Pass
NVNT	ax40	5230	37.704	51.713	Pass
NVNT	ax80	5210	77.087	79.698	Pass

