

TEST REPORT

Report No.: BCTC2506974006-3E

Applicant: Shenzhen Tianruixiang Communication
Equipment Co.,LTD

Product Name: Smart Phone

Test Model: Panther 2

Tested Date: 2025-06-05 to 2025-07-08

Issued Date: 2025-07-09

Shenzhen BCTC Testing Co., Ltd.



FCC ID: 2BOJC-PANTHER2

Product Name: Smart Phone

Trademark: LAGENIO 

Model/Type reference: Panther 2
Panther 2 PRO

Prepared For: Shenzhen Tianruixiang Communication Equipment Co.,LTD

Address: 12/F, Building B Longhua Digital Innovation Center, Longhua District, Shenzhen, China

Manufacturer: Shenzhen Tianruixiang Communication Equipment Co.,LTD

Address: 12/F, Building B Longhua Digital Innovation Center, Longhua District, Shenzhen, China

Prepared By: Shenzhen BCTC Testing Co., Ltd.

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Sample Received Date: 2025-06-05

Sample tested Date: 2025-06-05 to 2025-07-08

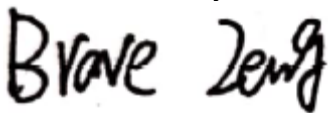
Issue Date: 2025-07-09

Report No.: BCTC2506974006-3E

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

Test Results: PASS

Tested by:



Brave Zeng/ Project Handler

Approved by:



Zero Zhou/Reviewer

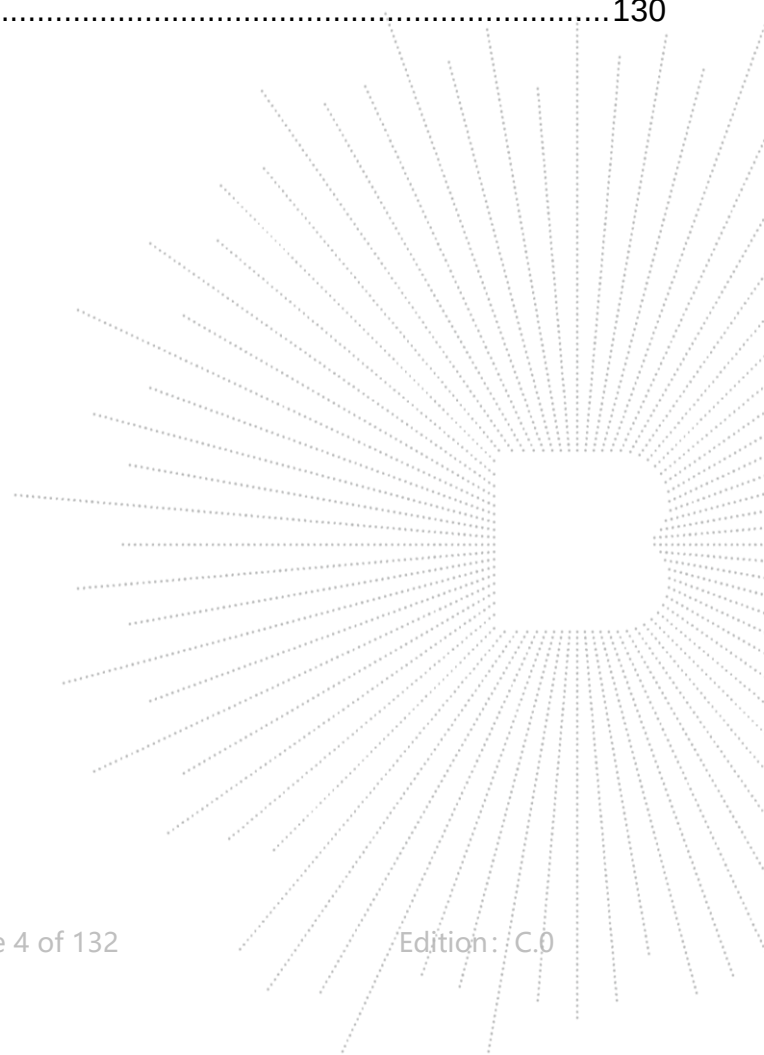
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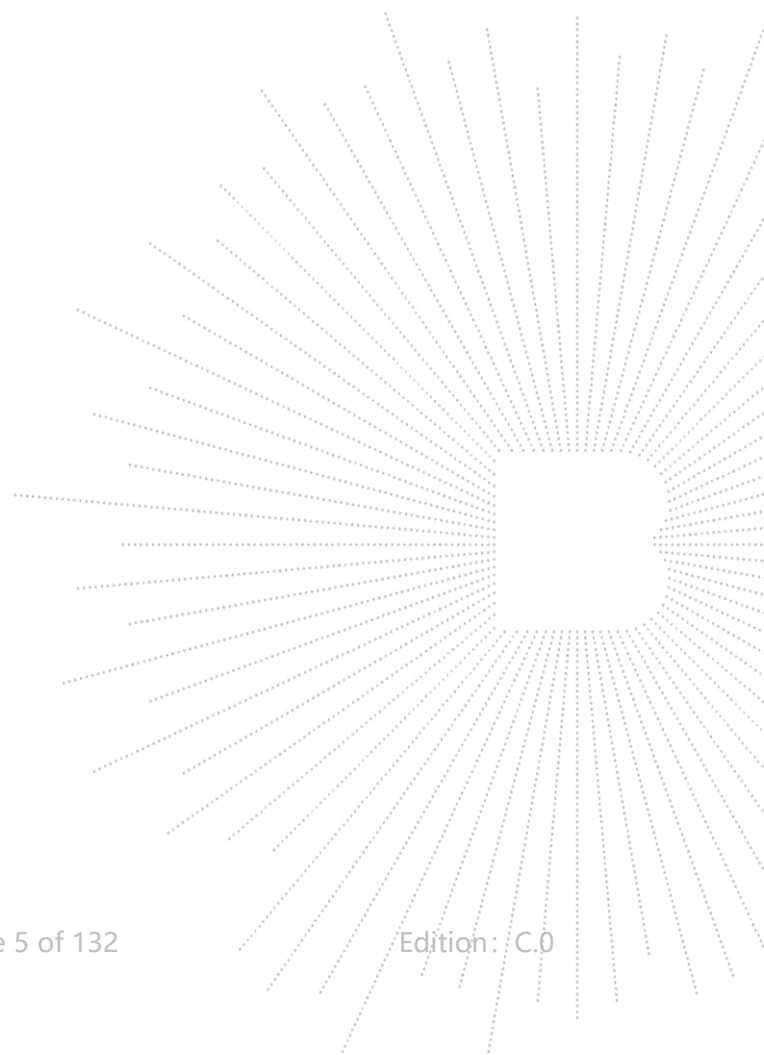
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(Note: N/A Means Not Applicable)



1. Version

Report No.	Issue Date	Description	Approved
BCTC2506974006-3E	2025-07-09	Original	Valid

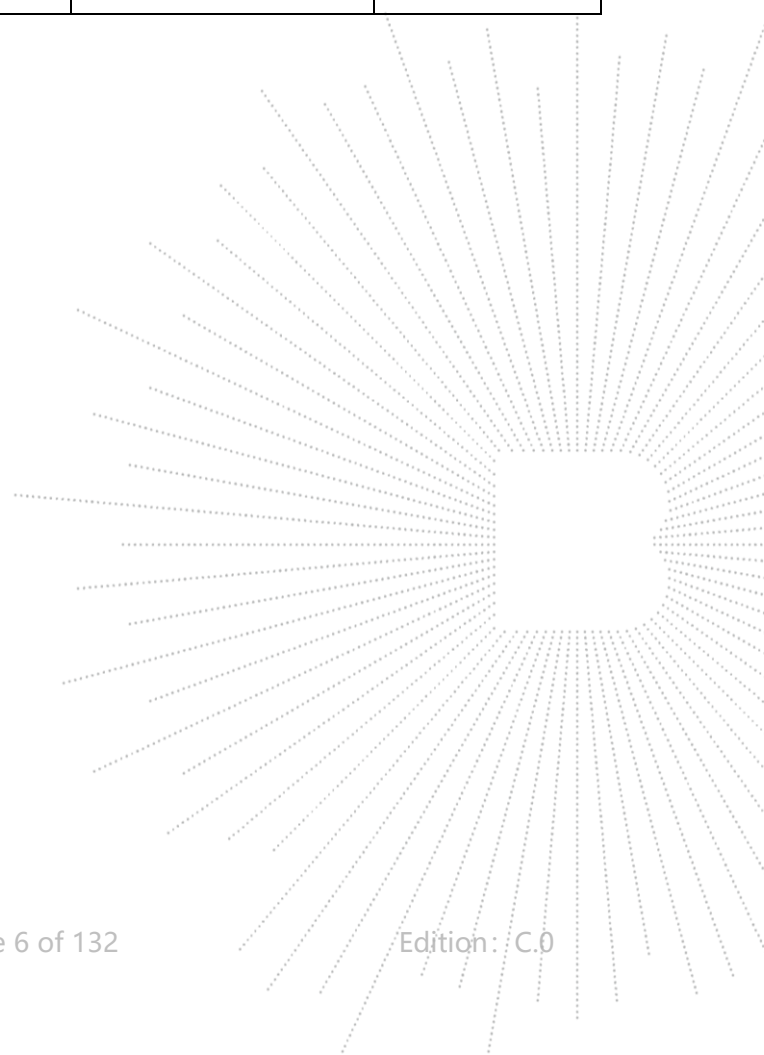


2. Test Summary

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: "N/A" means not applicable in this report.



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:	Panther 2 Panther 2 PRO
Model differences:	All the circuit and RF modules are the same, only the model names and colors are different.
Hardware Version:	SC6035LU
Software Version:	LAGENIO_Panther2_V07_20250629
IEEE 802.11 WLAN Mode Supported	802.11a/n/ac(20MHz channel bandwidth) 802.11n/ac(40MHz channel bandwidth) 802.11ac(80MHz channel bandwidth)
Operation Frequency:	5180-5240MHz for 802.11a/n(HT20)/ac(HT20); 5190-5230MHz for 802.11n(HT40)/ac(HT40); 5210MHz for 802.11 ac(HT80); 5745-5825 MHz for 802.11a/n(HT20)/ac(HT20); 5755-5795 MHz for 802.11n(HT40)/ac(HT40); 5775MHz for 802.11 ac(HT80);
Data Rate	802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(HT20/HT40):MCS0-MCS15; 802.11ac(VHT20): NSS1, MCS0-MCS8 802.11ac(VHT40/VHT80):NSS1, MCS0-MCS
Type of Modulation:	OFDM with BPSK/QPSK/16QAM/64QAM/256QAM for 802.11a/n/ac; 4 channels for 802.11a/n20/ac20 in the 5180-5240MHz band ; 2 channels for 802.11 n40/ac40 in the 5190-5230MHz band ;
Number Of Channel	1 channels for 802.11 ac80 in the 5210MHz band ; 5 channels for 802.11a/n20/ac20 in the 5745-5825MHz band ; 2 channels for 802.11 n40/ac40 in the 5755-5795MHz band ; 1 channels for 802.11 ac80 in the 5775MHz band
Antenna installation:	Internal antenna 0.30 dBi
Antenna Gain:	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. ☒ The antenna gain of the product is provided by the customer, and the test data is affected by the customer information.
Ratings:	DC 9V from adapter/DC 3.87V from battery
Adapter Information:	Model: QZ-0180AA2H Input: 100-240V~50/60Hz 0.5A Output: DC 5.0V 3.0A 15.0W or DC 9.0V 2.22A 20.0W Max. or DC 12.0V 1.67A 20.0W Max.

4.2 Test Setup Configuration

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

4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Smart Phone	LAGENIO 	Panther 2	N/A	EUT
E-2	Adapter	/	QZ-0180AA2H	N/A	Auxiliary
E-3	TF card	SanDisk	32G	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	0M	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) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220	-	-	-	-
40	5200	48	5240	-	-	-	-

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

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

5.8G

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

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

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

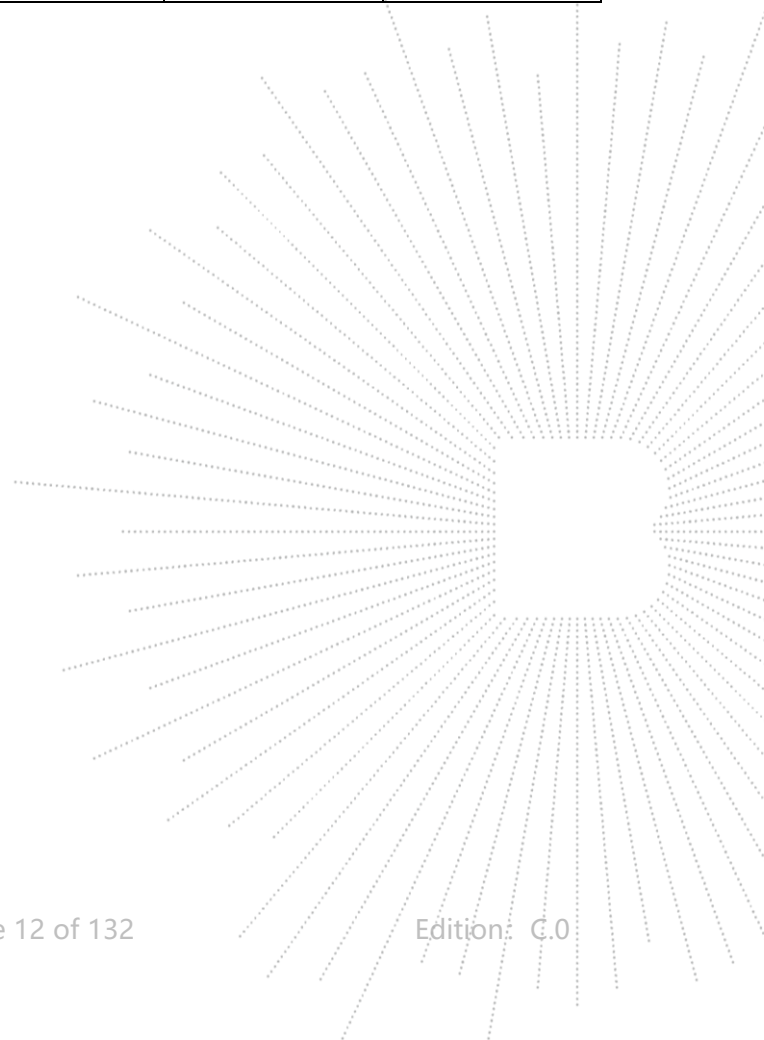
ISED CAB identifier: CN0017

5.2 Test Instrument Used

Conducted Emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESR3	102075	May 08, 2025	May 07, 2026
LISN	R&S	ENV216	101375	May 14, 2025	May 13, 2026
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Pulse limiter	Schwarzbeck	VTSD9561-F	01323	May 14, 2025	May 13, 2026

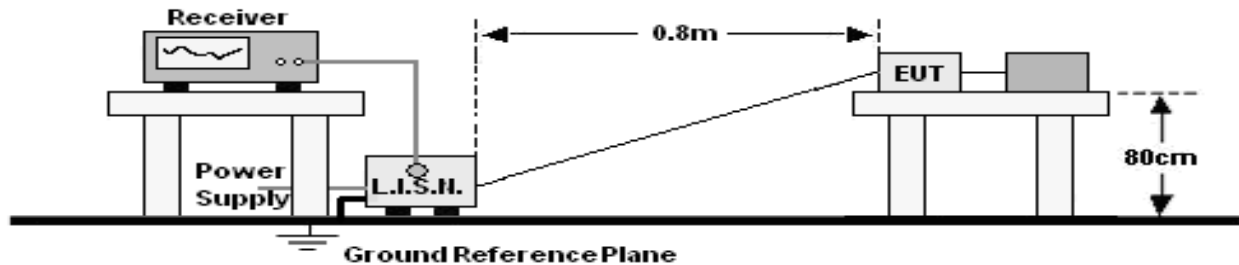
RF Conducted Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Power meter	Keysight	E4419	\	May 14, 2025	May 13, 2026
Power Sensor (AV)	Keysight	E9300A	\	May 14, 2025	May 13, 2026
Signal Analyzer20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 14, 2025	May 13, 2026
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 14, 2025	May 13, 2026
Communication test set	R&S	CMW500	126173	May 14, 2025	May 13, 2026
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 08, 2025	May 07, 2026
Receiver	R&S	ESRP	101154	May 14, 2025	May 13, 2026
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 14, 2025	May 13, 2026
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 24, 2025	May 23, 2026
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 24, 2025	May 23, 2026
Amplifier	SKET	LAPA_01G18 G-45dB	SK2021040901	May 14, 2025	May 13, 2026
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 24, 2025	May 23, 2026
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 14, 2025	May 13, 2026
Horn Antenna(18G Hz-40GHz)	Schwarzbeck	BBHA9170	00822	May 24, 2025	May 23, 2026
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 14, 2025	May 13, 2026
Communication test set	R&S	CMW500	126173	Nov. 11. 2024	Nov. 10, 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

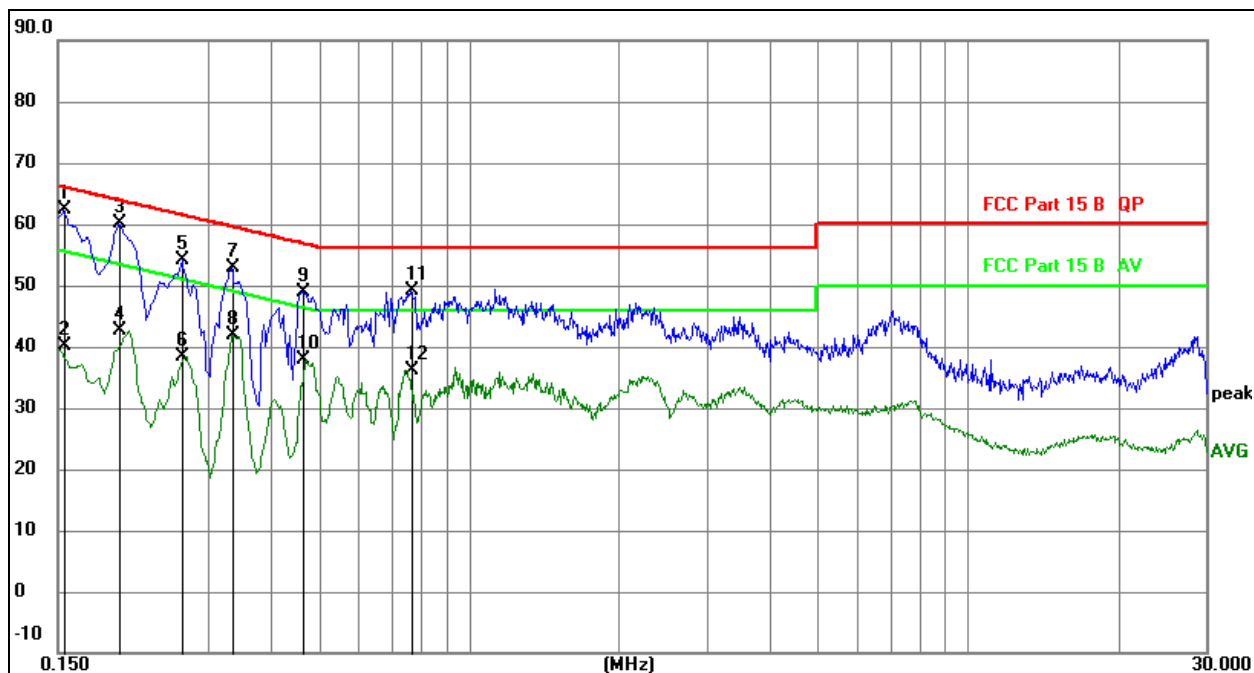
- The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak 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:	23.5 °C	Relative Humidity:	50 %
Pressure:	101KPa	Phase :	L
Test Mode:	Mode 4	Test Voltage :	AC 120V/60Hz

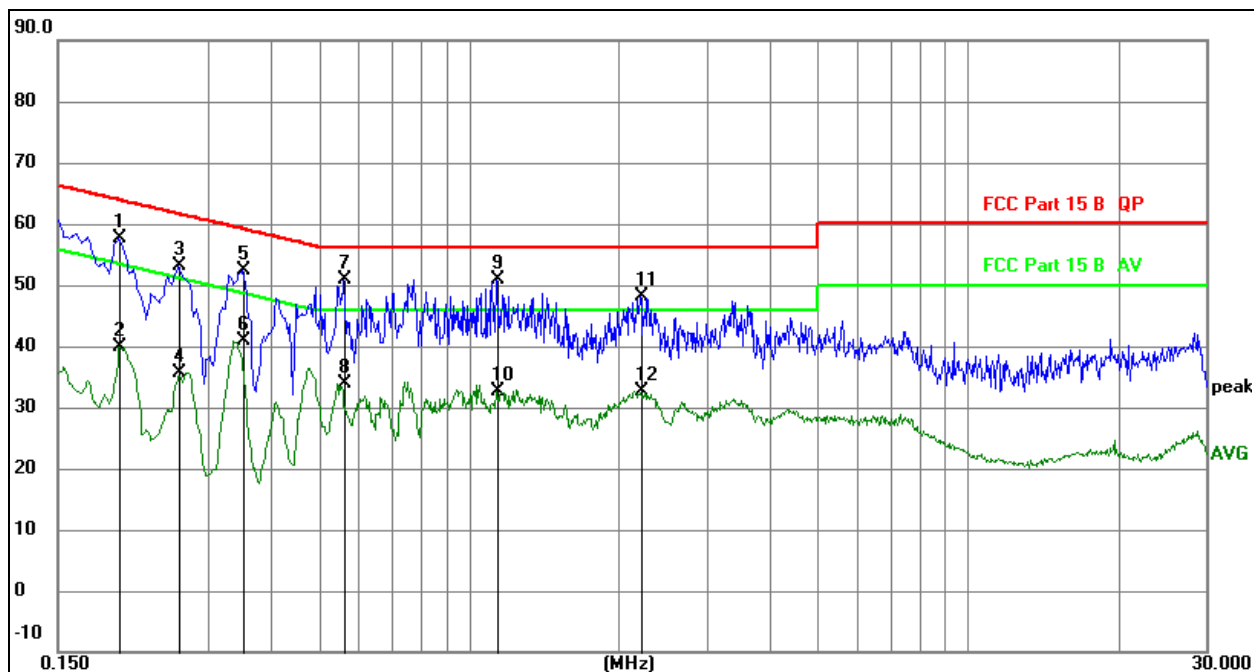


Remark:

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
1		0.1545	42.22	20.07	62.29	65.75	-3.46	QP
2		0.1545	19.95	20.07	40.02	55.75	-15.73	AVG
3	*	0.1995	40.16	20.07	60.23	63.63	-3.40	QP
4		0.1995	22.61	20.07	42.68	53.63	-10.95	AVG
5		0.2670	34.15	20.07	54.22	61.21	-6.99	QP
6		0.2670	18.34	20.07	38.41	51.21	-12.80	AVG
7		0.3345	32.77	20.07	52.84	59.34	-6.50	QP
8		0.3345	21.87	20.07	41.94	49.34	-7.40	AVG
9		0.4650	28.81	20.08	48.89	56.60	-7.71	QP
10		0.4650	17.91	20.08	37.99	46.60	-8.61	AVG
11		0.7665	28.96	20.09	49.05	56.00	-6.95	QP
12		0.7665	16.14	20.09	36.23	46.00	-9.77	AVG

Temperature:	23.5 °C	Relative Humidity:	50 %
Pressure:	101KPa	Phase :	N
Test Mode:	Mode 4	Test Voltage :	AC 120V/60Hz



Remark:

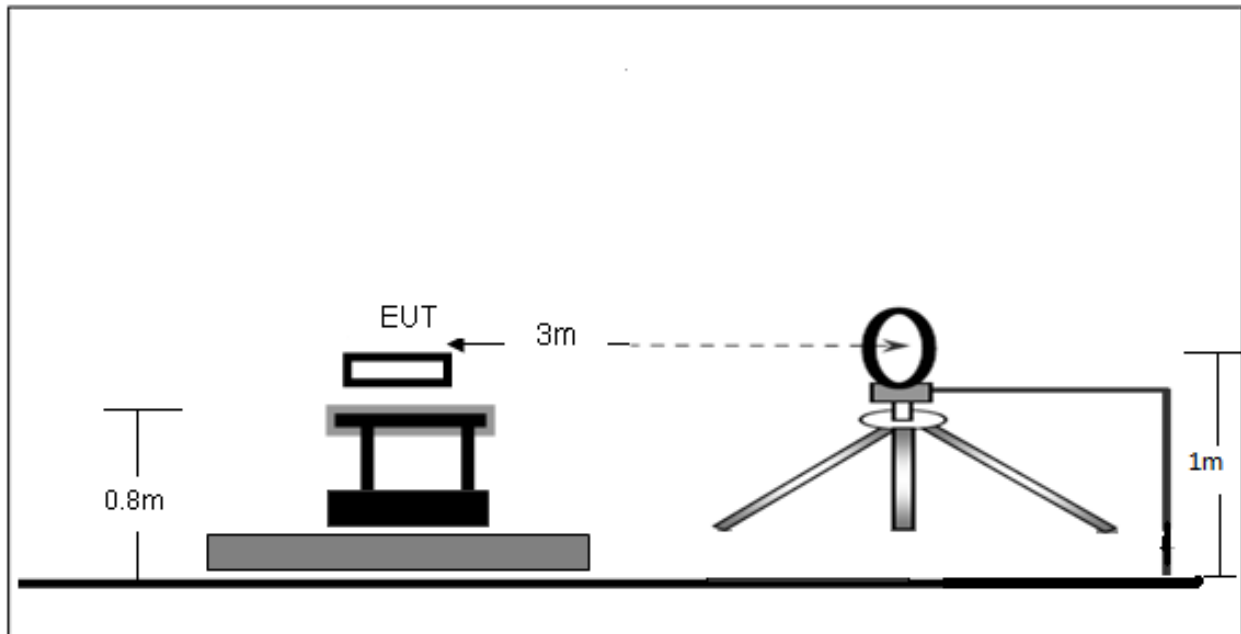
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Mk.	Freq. MHz	Reading Level	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1995	37.63	20.07	57.70	63.63	-5.93	QP
2		0.1995	19.69	20.07	39.76	53.63	-13.87	AVG
3		0.2625	32.97	20.07	53.04	61.35	-8.31	QP
4		0.2625	15.56	20.07	35.63	51.35	-15.72	AVG
5		0.3525	32.25	20.08	52.33	58.90	-6.57	QP
6		0.3525	20.69	20.08	40.77	48.90	-8.13	AVG
7		0.5639	30.71	20.08	50.79	56.00	-5.21	QP
8		0.5639	13.73	20.08	33.81	46.00	-12.19	AVG
9	*	1.1400	30.79	20.09	50.88	56.00	-5.12	QP
10		1.1400	12.54	20.09	32.63	46.00	-13.37	AVG
11		2.2110	27.92	20.10	48.02	56.00	-7.98	QP
12		2.2110	12.42	20.10	32.52	46.00	-13.48	AVG

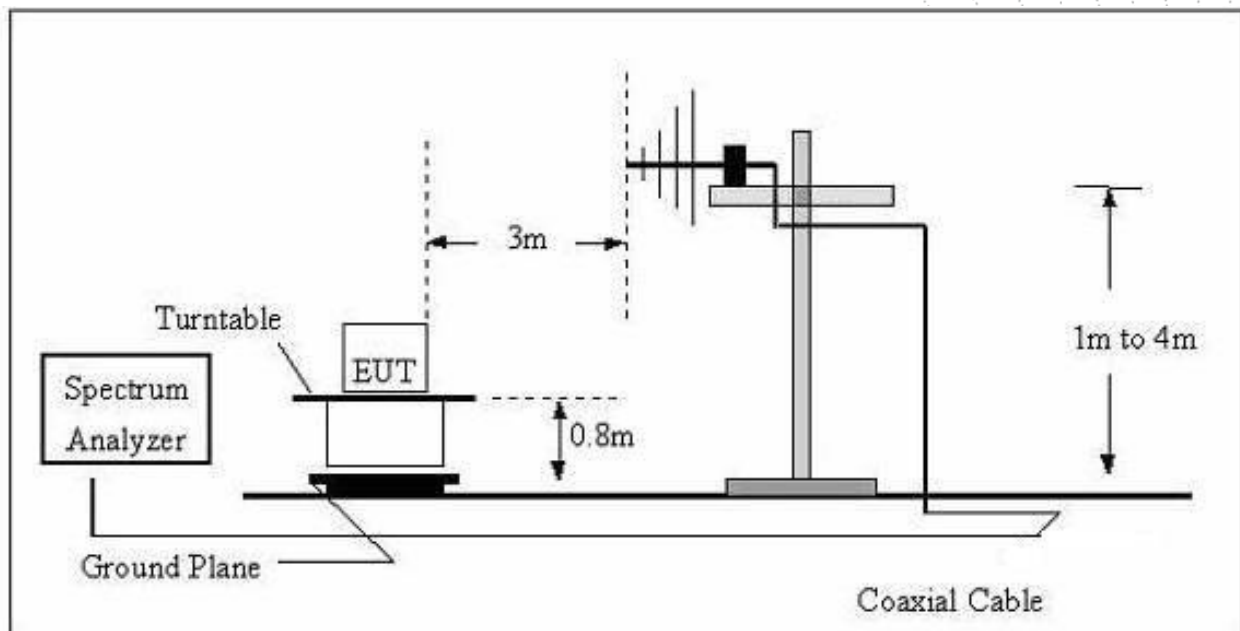
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

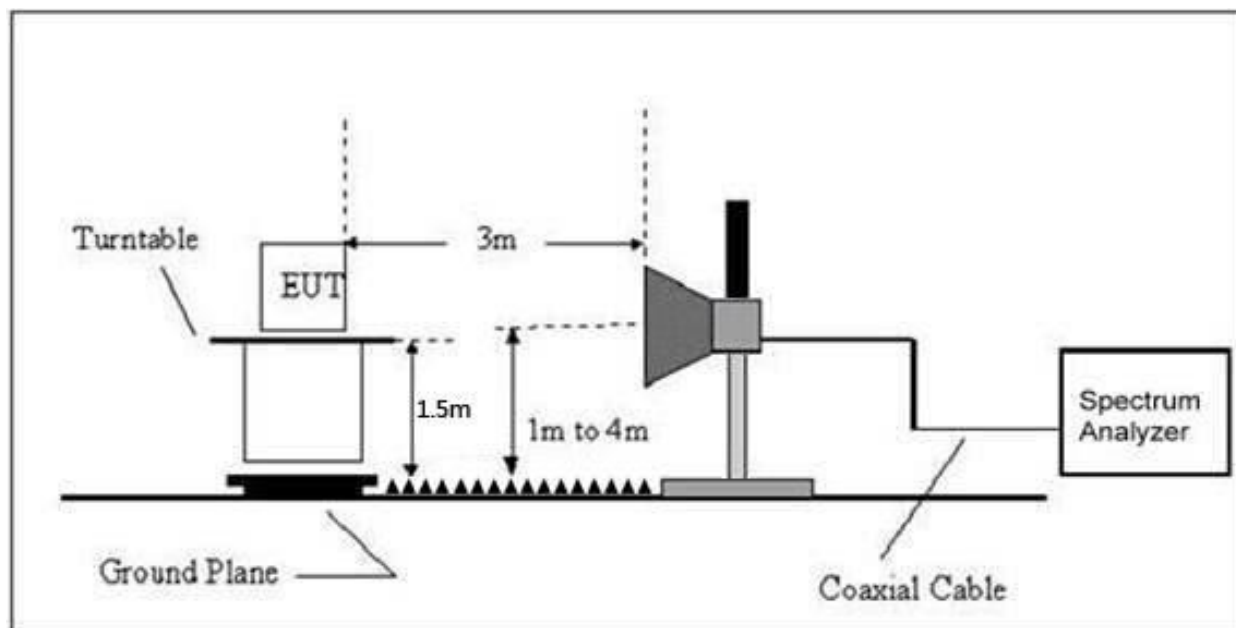
(A) Radiated Emission Test-Up Frequency Below 30MHz



(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

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

Note:

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

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

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

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

7.4 EUT Operating Conditions

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

7.5 Test Result

Below 30MHz

Temperature:	24.8 °C	Relative Humidity:	60 %
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	Mode 4	Polarization :	--

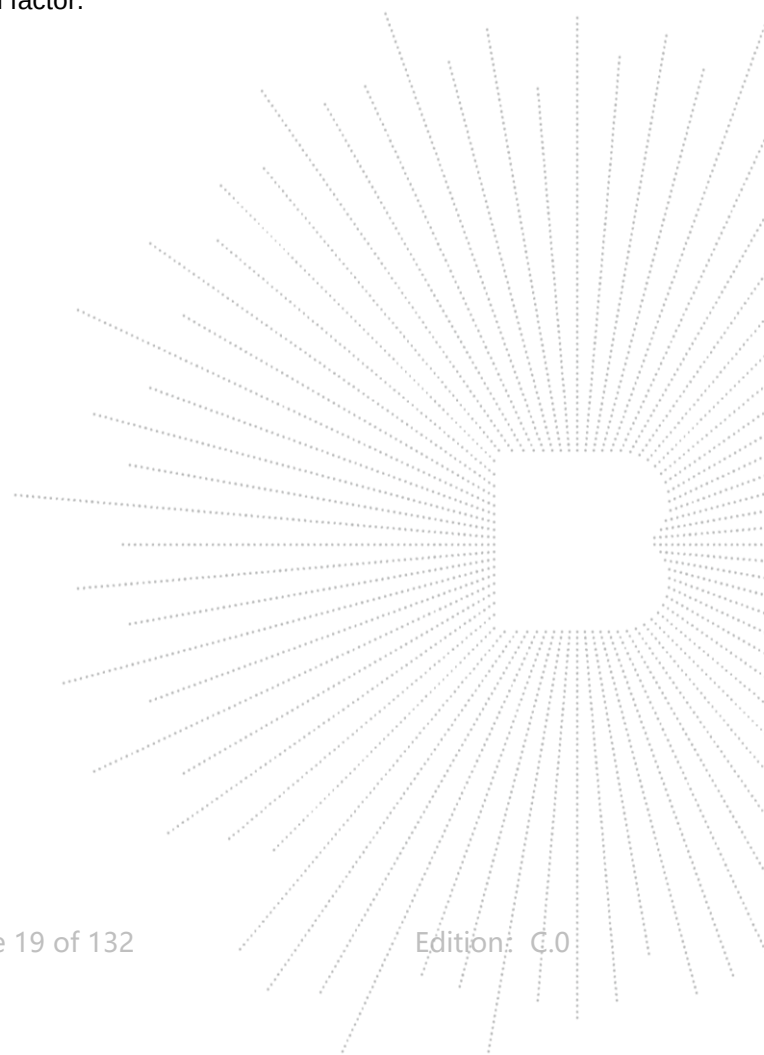
Freq. (MHz)	Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	State P/F
--	--	--	--	PASS
--	--	--	--	PASS

Note:

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

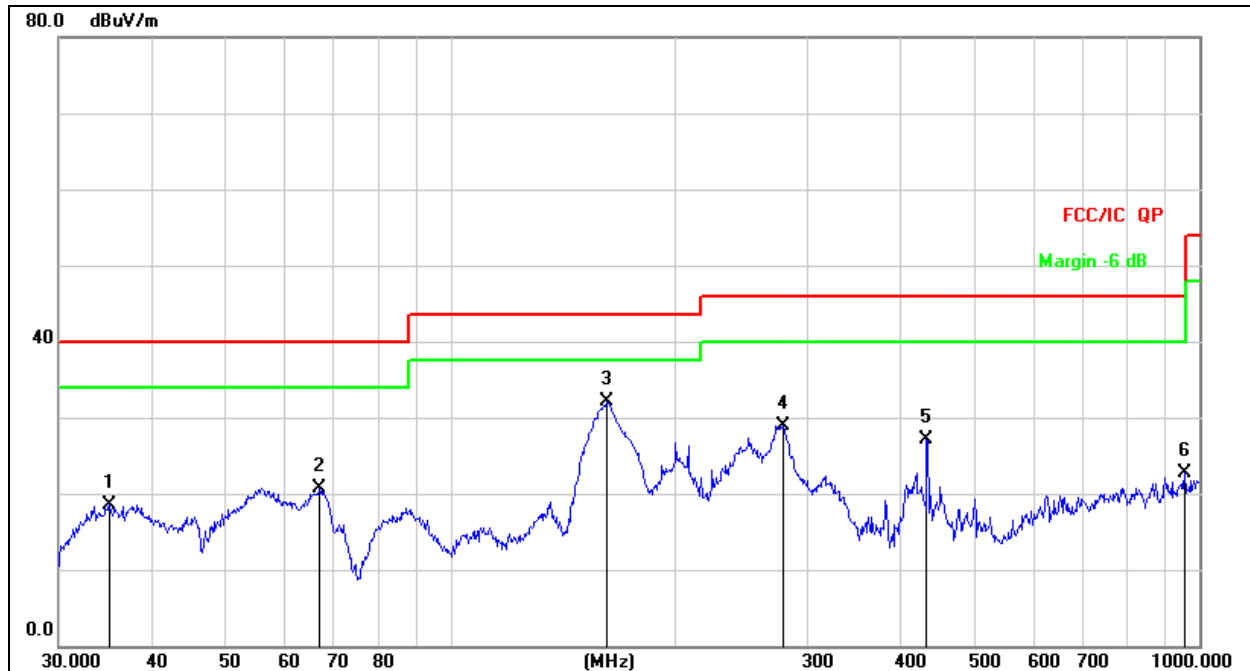
Distance extrapolation factor = $40 \log (\text{specific distance/test distance})$ (dB);

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



Between 30MHz – 1GHz

Temperature:	24.8 °C	Relative Humidity:	60 %
Pressure:	101KPa	Phase :	Horizontal
Test Mode:	Mode 4	Test Voltage:	AC 120V/60Hz

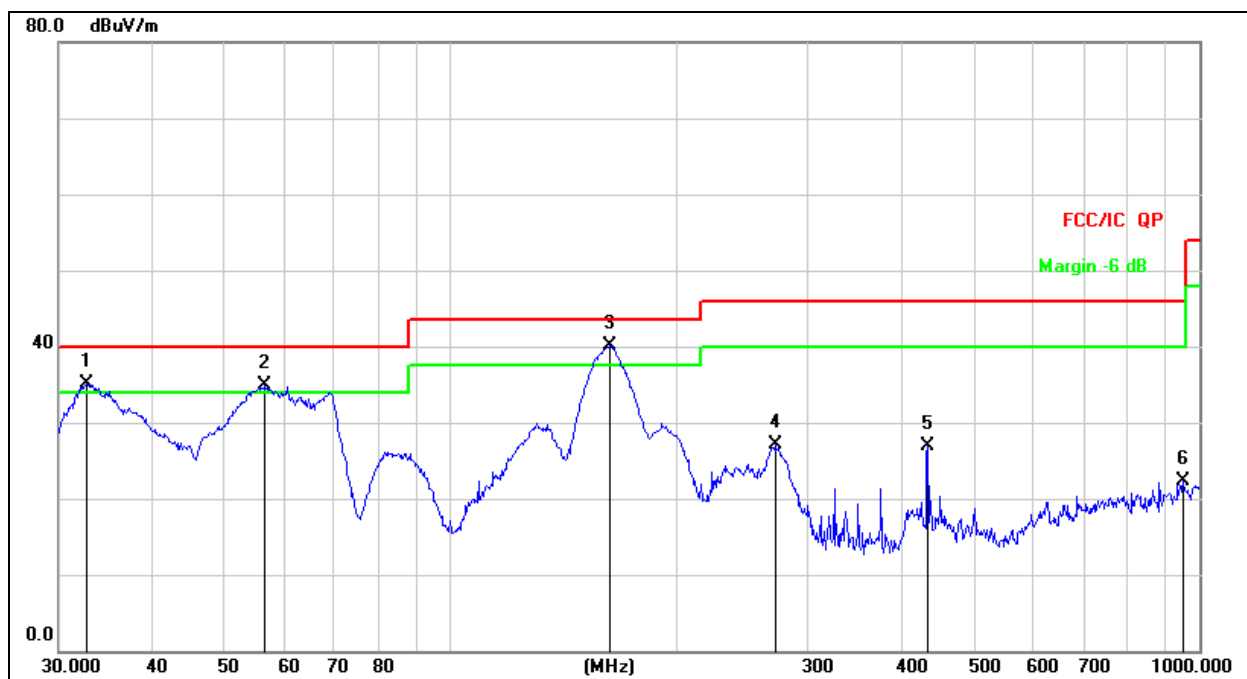


Remark:

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		35.0048	34.28	-15.68	18.60	40.00	-21.40	QP
2		66.9669	37.94	-17.17	20.77	40.00	-19.23	QP
3	*	162.0414	50.64	-18.54	32.10	43.50	-11.40	QP
4		278.0668	42.57	-13.70	28.87	46.00	-17.13	QP
5		432.5457	37.22	-10.20	27.02	46.00	-18.98	QP
6		955.4381	25.63	-2.88	22.75	46.00	-23.25	QP

Temperature:	24.8 °C	Relative Humidity:	60 %
Pressure:	101KPa	Phase :	Vertical
Test Mode:	Mode 4	Test Voltage:	AC 120V/60Hz



Remark:

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	!	32.7486	51.31	-16.12	35.19	40.00	-4.81	QP
2	!	56.5929	49.78	-14.79	34.99	40.00	-5.01	QP
3	*	163.1818	58.58	-18.45	40.13	43.50	-3.37	QP
4		271.3246	40.89	-13.84	27.05	46.00	-18.95	QP
5		434.0651	37.10	-10.17	26.93	46.00	-19.07	QP
6		952.0937	25.19	-2.92	22.27	46.00	-23.73	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	4434.028	74.55	-20.73	53.81	68.20	-14.39	PK
Vertical	4434.028	59.35	-20.73	38.62	54.00	-15.38	AV
Vertical	10360.080	63.11	-9.36	53.75	68.20	-14.45	PK
Vertical	10360.080	49.57	-9.36	40.21	54.00	-13.79	AV
Vertical	15540.090	63.74	-7.84	55.90	74.00	-18.10	PK
Vertical	15540.090	49.51	-7.84	41.67	54.00	-12.33	AV
Horizontal	4434.077	70.07	-20.73	49.34	68.20	-18.86	PK
Horizontal	4434.077	59.43	-20.73	38.70	54.00	-15.30	AV
Horizontal	10360.027	63.52	-9.36	54.16	68.20	-14.04	PK
Horizontal	10360.027	49.58	-9.36	40.22	54.00	-13.78	AV
Horizontal	15540.170	62.48	-7.84	54.64	74.00	-19.36	PK
Horizontal	15540.170	49.52	-7.84	41.68	54.00	-12.32	AV
Middle Channel (5200 MHz)-Above 1G							
Vertical	4592.081	71.82	-20.42	51.41	74.00	-22.59	PK
Vertical	4592.081	59.86	-20.42	39.45	54.00	-14.55	AV
Vertical	10400.060	63.84	-9.30	54.54	68.20	-13.66	PK
Vertical	10400.060	49.90	-9.30	40.60	54.00	-13.40	AV
Vertical	15600.014	64.29	-7.82	56.47	74.00	-17.53	PK
Vertical	15600.014	49.79	-7.82	41.97	54.00	-12.03	AV
Horizontal	4592.170	74.88	-20.42	54.46	74.00	-19.54	PK
Horizontal	4592.170	59.70	-20.42	39.29	54.00	-14.71	AV
Horizontal	10400.128	63.69	-9.30	54.39	68.20	-13.81	PK
Horizontal	10400.128	49.93	-9.30	40.63	54.00	-13.37	AV
Horizontal	15600.102	61.96	-7.82	54.14	74.00	-19.86	PK
Horizontal	15600.102	49.29	-7.82	41.47	54.00	-12.53	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.056	74.48	-20.12	54.35	74.00	-19.65	PK
Vertical	4739.056	59.32	-20.12	39.19	54.00	-14.81	AV
Vertical	10480.163	61.85	-9.18	52.67	68.20	-15.53	PK
Vertical	10480.163	49.79	-9.18	40.61	54.00	-13.39	AV
Vertical	15720.007	61.18	-7.78	53.40	74.00	-20.60	PK
Vertical	15720.007	49.94	-7.78	42.16	54.00	-11.84	AV
Horizontal	4739.186	72.55	-20.12	52.43	74.00	-21.57	PK
Horizontal	4739.186	59.83	-20.12	39.71	54.00	-14.29	AV
Horizontal	10480.125	61.36	-9.18	52.18	68.20	-16.02	PK
Horizontal	10480.125	49.53	-9.18	40.35	54.00	-13.65	AV
Horizontal	15720.086	64.04	-7.78	56.26	74.00	-17.74	PK
Horizontal	15720.086	49.62	-7.78	41.84	54.00	-12.16	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(5.1G) - 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	4434.121	71.65	-20.73	50.92	68.20	-17.28	PK
Vertical	4434.121	59.20	-20.73	38.47	54.00	-15.53	AV
Vertical	10360.162	61.33	-9.36	51.97	68.20	-16.23	PK
Vertical	10360.162	49.96	-9.36	40.60	54.00	-13.40	AV
Vertical	15540.137	60.25	-7.84	52.41	74.00	-21.59	PK
Vertical	15540.137	49.87	-7.84	42.03	54.00	-11.97	AV
Horizontal	4434.181	70.94	-20.73	50.21	68.20	-17.99	PK
Horizontal	4434.181	59.64	-20.73	38.91	54.00	-15.09	AV
Horizontal	10360.125	60.25	-9.36	50.89	68.20	-17.31	PK
Horizontal	10360.125	49.60	-9.36	40.24	54.00	-13.76	AV
Horizontal	15540.164	61.68	-7.84	53.84	74.00	-20.16	PK
Horizontal	15540.164	49.21	-7.84	41.37	54.00	-12.63	AV
Middle Channel (5200 MHz)-Above 1G							
Vertical	4592.118	73.85	-20.42	53.43	74.00	-20.57	PK
Vertical	4592.118	59.80	-20.42	39.39	54.00	-14.61	AV
Vertical	10400.101	61.39	-9.30	52.09	68.20	-16.11	PK
Vertical	10400.101	49.45	-9.30	40.15	54.00	-13.85	AV
Vertical	15600.102	60.14	-7.82	52.32	74.00	-21.68	PK
Vertical	15600.102	49.84	-7.82	42.02	54.00	-11.98	AV
Horizontal	4592.058	73.32	-20.42	52.90	74.00	-21.10	PK
Horizontal	4592.058	59.13	-20.42	38.71	54.00	-15.29	AV
Horizontal	10400.150	64.16	-9.30	54.86	68.20	-13.34	PK
Horizontal	10400.150	49.17	-9.30	39.87	54.00	-14.13	AV
Horizontal	15600.053	64.48	-7.82	56.66	74.00	-17.34	PK
Horizontal	15600.053	49.98	-7.82	42.16	54.00	-11.84	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.180	70.57	-20.12	50.45	74.00	-23.55	PK
Vertical	4739.180	59.63	-20.12	39.51	54.00	-14.49	AV
Vertical	10480.176	63.02	-9.18	53.84	68.20	-14.36	PK
Vertical	10480.176	49.27	-9.18	40.09	54.00	-13.91	AV
Vertical	15720.031	64.99	-7.78	57.21	74.00	-16.79	PK
Vertical	15720.031	49.57	-7.78	41.79	54.00	-12.21	AV
Horizontal	4739.042	73.30	-20.12	53.18	74.00	-20.82	PK
Horizontal	4739.042	59.61	-20.12	39.49	54.00	-14.51	AV
Horizontal	10480.194	64.95	-9.18	55.77	68.20	-12.43	PK
Horizontal	10480.194	49.97	-9.18	40.79	54.00	-13.21	AV
Horizontal	15720.080	61.53	-7.78	53.75	74.00	-20.25	PK
Horizontal	15720.080	49.73	-7.78	41.95	54.00	-12.05	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	4434.157	70.31	-20.73	49.58	68.20	-18.62	PK
Vertical	4434.157	59.32	-20.73	38.59	54.00	-15.41	AV
Vertical	10380.153	64.38	-9.33	55.05	68.20	-13.15	PK
Vertical	10380.153	49.54	-9.33	40.21	54.00	-13.79	AV
Vertical	15570.084	61.21	-7.83	53.38	74.00	-20.62	PK
Vertical	15570.084	49.84	-7.83	42.01	54.00	-11.99	AV
Horizontal	4434.014	70.33	-20.73	49.60	74.00	-24.40	PK
Horizontal	4434.014	59.13	-20.73	38.40	54.00	-15.60	AV
Horizontal	10380.087	63.64	-9.33	54.31	68.20	-13.89	PK
Horizontal	10380.087	49.16	-9.33	39.83	54.00	-14.17	AV
Horizontal	15570.078	60.02	-7.83	52.19	74.00	-21.81	PK
Horizontal	15570.078	49.49	-7.83	41.66	54.00	-12.34	AV
Middle Channel (5230 MHz)-Above 1G							
Vertical	4739.079	73.75	-20.12	53.63	68.20	-14.57	PK
Vertical	4739.079	59.20	-20.12	39.08	54.00	-14.92	AV
Vertical	10460.182	62.80	-9.21	53.59	68.20	-14.61	PK
Vertical	10460.182	49.41	-9.21	40.20	54.00	-13.80	AV
Vertical	15690.151	64.66	-7.79	56.87	74.00	-17.13	PK
Vertical	15690.151	49.61	-7.79	41.82	54.00	-12.18	AV
Horizontal	4739.132	73.70	-20.12	53.58	68.20	-14.62	PK
Horizontal	4739.132	59.41	-20.12	39.29	54.00	-14.71	AV
Horizontal	10460.149	64.45	-9.21	55.24	68.20	-12.96	PK
Horizontal	10460.149	49.71	-9.21	40.50	54.00	-13.50	AV
Horizontal	15690.155	61.32	-7.79	53.53	74.00	-20.47	PK
Horizontal	15690.155	49.95	-7.79	42.16	54.00	-11.84	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	4434.086	74.77	-20.73	54.04	68.20	-14.16	PK
Vertical	4434.086	59.60	-20.73	38.87	54.00	-15.13	AV
Vertical	10360.005	61.25	-9.36	51.89	68.20	-16.31	PK
Vertical	10360.005	49.02	-9.36	39.66	54.00	-14.34	AV
Vertical	15540.019	60.79	-7.84	52.95	74.00	-21.05	PK
Vertical	15540.019	49.73	-7.84	41.89	54.00	-12.11	AV
Horizontal	4434.107	70.46	-20.73	49.73	68.20	-18.47	PK
Horizontal	4434.107	59.24	-20.73	38.50	54.00	-15.50	AV
Horizontal	10360.184	61.09	-9.36	51.73	68.20	-16.47	PK
Horizontal	10360.184	49.80	-9.36	40.44	54.00	-13.56	AV
Horizontal	15540.106	62.29	-7.84	54.45	74.00	-19.55	PK
Horizontal	15540.106	49.46	-7.84	41.62	54.00	-12.38	AV
Middle Channel (5200 MHz)-Above 1G							
Vertical	4592.097	74.45	-20.42	54.04	74.00	-19.96	PK
Vertical	4592.097	59.91	-20.42	39.50	54.00	-14.50	AV
Vertical	10400.191	60.25	-9.30	50.95	68.20	-17.25	PK
Vertical	10400.191	49.43	-9.30	40.13	54.00	-13.87	AV
Vertical	15600.024	64.23	-7.82	56.41	74.00	-17.59	PK
Vertical	15600.024	49.53	-7.82	41.71	54.00	-12.29	AV
Horizontal	4592.097	70.25	-20.42	49.84	74.00	-24.16	PK
Horizontal	4592.097	59.85	-20.42	39.43	54.00	-14.57	AV
Horizontal	10400.021	64.41	-9.30	55.11	68.20	-13.09	PK
Horizontal	10400.021	49.13	-9.30	39.83	54.00	-14.17	AV
Horizontal	15600.118	60.30	-7.82	52.48	74.00	-21.52	PK
Horizontal	15600.118	49.11	-7.82	41.29	54.00	-12.71	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.073	71.95	-20.12	51.82	74.00	-22.18	PK
Vertical	4739.073	59.93	-20.12	39.80	54.00	-14.20	AV
Vertical	10480.015	64.34	-9.18	55.16	68.20	-13.04	PK
Vertical	10480.015	49.96	-9.18	40.78	54.00	-13.22	AV
Vertical	15720.091	63.68	-7.78	55.90	74.00	-18.10	PK
Vertical	15720.091	49.53	-7.78	41.75	54.00	-12.25	AV
Horizontal	4739.027	73.75	-20.12	53.63	74.00	-20.37	PK
Horizontal	4739.027	59.15	-20.12	39.02	54.00	-14.98	AV
Horizontal	10480.131	60.78	-9.18	51.60	68.20	-16.60	PK
Horizontal	10480.131	49.56	-9.18	40.38	54.00	-13.62	AV
Horizontal	15720.137	60.23	-7.78	52.45	74.00	-21.55	PK
Horizontal	15720.137	49.13	-7.78	41.35	54.00	-12.65	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(5.1G) - 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	4434.139	73.72	-20.73	52.98	68.20	-15.22	PK
Vertical	4434.139	59.51	-20.73	38.78	54.00	-15.22	AV
Vertical	10380.151	62.23	-9.33	52.90	68.20	-15.30	PK
Vertical	10380.151	49.34	-9.33	40.01	54.00	-13.99	AV
Vertical	15570.151	61.48	-7.83	53.65	74.00	-20.35	PK
Vertical	15570.151	49.60	-7.83	41.77	54.00	-12.23	AV
Horizontal	4434.073	72.60	-20.73	51.87	74.00	-22.13	PK
Horizontal	4434.073	59.21	-20.73	38.47	54.00	-15.53	AV
Horizontal	10380.086	64.17	-9.33	54.84	68.20	-13.36	PK
Horizontal	10380.086	49.33	-9.33	40.00	54.00	-14.00	AV
Horizontal	15570.053	63.80	-7.83	55.97	74.00	-18.03	PK
Horizontal	15570.053	49.98	-7.83	42.15	54.00	-11.85	AV
Middle Channel (5230 MHz)-Above 1G							
Vertical	4739.109	72.29	-20.12	52.17	68.20	-16.03	PK
Vertical	4739.109	59.84	-20.12	39.72	54.00	-14.28	AV
Vertical	10460.156	61.79	-9.21	52.58	68.20	-15.62	PK
Vertical	10460.156	49.30	-9.21	40.09	54.00	-13.91	AV
Vertical	15690.162	60.38	-7.79	52.59	74.00	-21.41	PK
Vertical	15690.162	49.90	-7.79	42.11	54.00	-11.89	AV
Horizontal	4739.039	70.03	-20.12	49.91	68.20	-18.29	PK
Horizontal	4739.039	59.98	-20.12	39.85	54.00	-14.15	AV
Horizontal	10460.000	64.79	-9.21	55.58	68.20	-12.62	PK
Horizontal	10460.000	49.87	-9.21	40.66	54.00	-13.34	AV
Horizontal	15690.178	62.44	-7.79	54.65	74.00	-19.35	PK
Horizontal	15690.178	49.50	-7.79	41.71	54.00	-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(5.1G) - 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	4434.167	72.43	-20.73	51.70	68.20	-16.50	PK
Vertical	4434.167	59.16	-20.73	38.43	54.00	-15.57	AV
Vertical	10420.191	63.91	-9.27	54.64	68.20	-13.56	PK
Vertical	10420.191	49.17	-9.27	39.90	54.00	-14.10	AV
Vertical	15630.120	64.23	-7.81	56.42	74.00	-17.58	PK
Vertical	15630.120	49.80	-7.81	41.99	54.00	-12.01	AV
Horizontal	4434.005	72.58	-20.73	51.85	68.20	-16.35	PK
Horizontal	4434.005	59.48	-20.73	38.74	54.00	-15.26	AV
Horizontal	10420.110	44.86	9.27	54.13	68.20	-14.07	PK
Horizontal	10420.110	29.39	9.27	38.66	54.00	-15.34	AV
Horizontal	15630.129	63.59	-7.81	55.78	74.00	-18.22	PK
Horizontal	15630.129	49.95	-7.81	42.14	54.00	-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 (5.8G) -- 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	4679.075	70.22	-20.24	49.98	74.00	-24.02	PK
Vertical	4679.075	59.40	-20.24	39.16	54.00	-14.84	AV
Vertical	11490.165	64.29	-8.79	55.50	68.20	-12.70	PK
Vertical	11490.165	49.89	-8.79	41.10	54.00	-12.90	AV
Vertical	17235.096	55.66	-3.18	52.48	68.20	-15.72	PK
Vertical	17235.096	44.31	-3.18	41.13	54.00	-12.87	AV
Horizontal	4679.107	74.99	-20.73	54.26	74.00	-19.74	PK
Horizontal	4679.107	59.45	-20.73	38.72	54.00	-15.28	AV
Horizontal	11490.057	61.15	-8.79	52.36	68.20	-15.84	PK
Horizontal	11490.057	49.60	-8.79	40.81	54.00	-13.19	AV
Horizontal	17235.029	57.84	-3.18	54.66	68.20	-13.54	PK
Horizontal	17235.029	44.20	-3.18	41.02	54.00	-12.98	AV
Middle Channel (5785 MHz)-Above 1G							
Vertical	4592.000	71.73	-20.42	51.31	74.00	-22.69	PK
Vertical	4592.000	59.71	-20.42	39.29	54.00	-14.71	AV
Vertical	11570.068	61.32	-8.86	52.46	68.20	-15.74	PK
Vertical	11570.068	49.93	-8.86	41.07	54.00	-12.93	AV
Vertical	17355.045	57.73	-2.52	55.21	68.20	-12.99	PK
Vertical	17355.045	44.75	-2.52	42.23	54.00	-11.77	AV
Horizontal	4592.116	70.35	-20.42	49.93	74.00	-24.07	PK
Horizontal	4592.116	59.44	-20.42	39.02	54.00	-14.98	AV
Horizontal	11570.119	62.30	-8.86	53.44	68.20	-14.76	PK
Horizontal	11570.119	49.78	-8.86	40.92	54.00	-13.08	AV
Horizontal	17355.182	57.35	-2.52	54.83	68.20	-13.37	PK
Horizontal	17355.182	44.91	-2.52	42.39	54.00	-11.61	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.158	70.24	-18.93	51.31	68.20	-16.89	PK
Vertical	6039.158	60.00	-18.93	41.07	54.00	-12.93	AV
Vertical	11650.017	64.37	-8.92	55.45	74.00	-18.55	PK
Vertical	11650.017	49.03	-8.92	40.11	54.00	-13.89	AV
Vertical	17475.181	56.92	-1.86	55.06	68.20	-13.14	PK
Vertical	17475.181	44.61	-1.86	42.75	54.00	-11.25	AV
Horizontal	6039.161	71.54	-18.93	52.61	68.20	-15.59	PK
Horizontal	6039.161	59.84	-18.93	40.90	54.00	-13.10	AV
Horizontal	11650.003	61.73	-8.92	52.81	74.00	-21.19	PK
Horizontal	11650.003	49.34	-8.92	40.42	54.00	-13.58	AV
Horizontal	17475.024	59.02	-1.86	57.16	68.20	-11.04	PK
Horizontal	17475.024	44.42	-1.86	42.56	54.00	-11.44	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	4679.047	74.93	-20.24	54.69	74.00	-19.31	PK
Vertical	4679.047	59.84	-20.24	39.60	54.00	-14.40	AV
Vertical	11490.040	62.33	-8.79	53.54	68.20	-14.66	PK
Vertical	11490.040	49.80	-8.79	41.01	54.00	-12.99	AV
Vertical	17235.164	58.86	-3.18	55.68	68.20	-12.52	PK
Vertical	17235.164	44.97	-3.18	41.79	54.00	-12.21	AV
Horizontal	4679.036	71.39	-20.24	51.15	74.00	-22.85	PK
Horizontal	4679.036	59.50	-20.24	39.25	54.00	-14.75	AV
Horizontal	11490.078	63.15	-8.79	54.36	68.20	-13.84	PK
Horizontal	11490.078	49.69	-8.79	40.90	54.00	-13.10	AV
Horizontal	17235.123	58.50	-3.18	55.32	68.20	-12.88	PK
Horizontal	17235.123	44.36	-3.18	41.18	54.00	-12.82	AV
Middle Channel (5785 MHz)-Above 1G							
Vertical	4592.165	72.89	-20.42	52.48	74.00	-21.52	PK
Vertical	4592.165	59.71	-20.42	39.29	54.00	-14.71	AV
Vertical	11570.092	63.95	-8.86	55.09	68.20	-13.11	PK
Vertical	11570.092	49.03	-8.86	40.17	54.00	-13.83	AV
Vertical	17355.026	56.69	-2.52	54.17	68.20	-14.03	PK
Vertical	17355.026	44.78	-2.52	42.26	54.00	-11.74	AV
Horizontal	4592.040	70.99	-20.42	50.57	74.00	-23.43	PK
Horizontal	4592.040	59.59	-20.42	39.17	54.00	-14.83	AV
Horizontal	11570.020	61.36	-8.86	52.50	68.20	-15.70	PK
Horizontal	11570.020	49.17	-8.86	40.31	54.00	-13.69	AV
Horizontal	17355.062	56.31	-2.52	53.79	68.20	-14.41	PK
Horizontal	17355.062	44.34	-2.52	41.82	54.00	-12.18	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.055	72.04	-18.93	53.10	68.20	-15.10	PK
Vertical	6039.055	59.75	-18.93	40.82	54.00	-13.18	AV
Vertical	11650.025	64.45	-8.92	55.53	74.00	-18.47	PK
Vertical	11650.025	49.99	-8.92	41.07	54.00	-12.93	AV
Vertical	17475.144	56.91	-1.86	55.05	68.20	-13.15	PK
Vertical	17475.144	44.64	-1.86	42.78	54.00	-11.22	AV
Horizontal	6039.028	70.41	-18.93	51.48	68.20	-16.72	PK
Horizontal	6039.028	59.32	-18.93	40.39	54.00	-13.61	AV
Horizontal	11650.075	63.27	-8.92	54.35	74.00	-19.65	PK
Horizontal	11650.075	49.17	-8.92	40.25	54.00	-13.75	AV
Horizontal	17475.169	57.23	-1.86	55.37	68.20	-12.83	PK
Horizontal	17475.169	44.64	-1.86	42.78	54.00	-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) -- 802.11n-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	4679.144	72.18	-20.24	51.94	74.00	-22.06	PK
Vertical	4679.144	59.20	-20.24	38.95	54.00	-15.05	AV
Vertical	11510.165	61.67	-8.81	52.86	74.00	-21.14	PK
Vertical	11510.165	49.77	-8.81	40.96	54.00	-13.04	AV
Vertical	17265.024	57.81	-3.01	54.80	68.20	-13.40	PK
Vertical	17265.024	44.52	-3.01	41.51	54.00	-12.49	AV
Horizontal	4679.142	72.47	-20.24	52.22	74.00	-21.78	PK
Horizontal	4679.142	59.17	-20.24	38.93	54.00	-15.07	AV
Horizontal	11510.151	60.68	-8.81	51.87	74.00	-22.13	PK
Horizontal	11510.151	49.54	-8.81	40.73	54.00	-13.27	AV
Horizontal	17265.126	57.06	-3.01	54.05	68.20	-14.15	PK
Horizontal	17265.126	44.65	-3.01	41.64	54.00	-12.36	AV
Middle Channel (5795 MHz)-Above 1G							
Vertical	6039.126	73.96	-18.93	55.03	68.20	-13.17	PK
Vertical	6039.126	59.90	-18.93	40.97	54.00	-13.03	AV
Vertical	11590.060	62.71	-8.87	53.84	74.00	-20.16	PK
Vertical	11590.060	49.71	-8.87	40.84	54.00	-13.16	AV
Vertical	17385.079	55.08	-2.35	52.73	68.20	-15.47	PK
Vertical	17385.079	44.52	-2.35	42.17	54.00	-11.83	AV
Horizontal	6039.033	70.31	-18.93	51.38	68.20	-16.82	PK
Horizontal	6039.033	59.96	-18.93	41.03	54.00	-12.97	AV
Horizontal	11590.091	62.03	-8.87	53.16	74.00	-20.84	PK
Horizontal	11590.091	49.19	-8.87	40.32	54.00	-13.68	AV
Horizontal	17385.088	57.62	-2.35	55.27	68.20	-12.93	PK
Horizontal	17385.088	44.47	-2.35	42.12	54.00	-11.88	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	4679.066	71.75	-20.24	51.51	74.00	-22.49	PK
Vertical	4679.066	59.52	-20.24	39.28	54.00	-14.72	AV
Vertical	11490.056	64.23	-8.79	55.44	68.20	-12.76	PK
Vertical	11490.056	49.36	-8.79	40.57	54.00	-13.43	AV
Vertical	17235.156	57.75	-3.18	54.57	68.20	-13.63	PK
Vertical	17235.156	44.75	-3.18	41.57	54.00	-12.43	AV
Horizontal	4679.166	72.60	-20.24	52.36	74.00	-21.64	PK
Horizontal	4679.166	59.96	-20.24	39.72	54.00	-14.28	AV
Horizontal	11490.172	61.90	-8.79	53.11	68.20	-15.09	PK
Horizontal	11490.172	49.23	-8.79	40.44	54.00	-13.56	AV
Horizontal	17235.169	55.36	-3.18	52.18	68.20	-16.02	PK
Horizontal	17235.169	44.88	-3.18	41.70	54.00	-12.30	AV
Middle Channel (5785 MHz)-Above 1G							
Vertical	4592.063	70.52	-20.42	50.10	74.00	-23.90	PK
Vertical	4592.063	59.35	-20.42	38.94	54.00	-15.06	AV
Vertical	11570.002	64.81	-8.86	55.95	68.20	-12.25	PK
Vertical	11570.002	49.25	-8.86	40.39	54.00	-13.61	AV
Vertical	17355.014	58.32	-2.52	55.80	68.20	-12.40	PK
Vertical	17355.014	44.17	-2.52	41.65	54.00	-12.35	AV
Horizontal	4592.132	73.39	-20.42	52.97	74.00	-21.03	PK
Horizontal	4592.132	59.55	-20.42	39.14	54.00	-14.86	AV
Horizontal	11570.156	64.70	-8.86	55.84	68.20	-12.36	PK
Horizontal	11570.156	49.53	-8.86	40.67	54.00	-13.33	AV
Horizontal	17355.071	58.29	-2.52	55.77	68.20	-12.43	PK
Horizontal	17355.071	44.85	-2.52	42.33	54.00	-11.67	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.153	74.46	-18.93	55.53	68.20	-12.67	PK
Vertical	6039.153	59.73	-18.93	40.80	54.00	-13.20	AV
Vertical	11650.147	64.27	-8.92	55.35	74.00	-18.65	PK
Vertical	11650.147	49.15	-8.92	40.23	54.00	-13.77	AV
Vertical	17475.169	56.83	-1.86	54.97	68.20	-13.23	PK
Vertical	17475.169	44.28	-1.86	42.42	54.00	-11.58	AV
Horizontal	6039.074	71.36	-18.93	52.43	68.20	-15.77	PK
Horizontal	6039.074	59.38	-18.93	40.45	54.00	-13.55	AV
Horizontal	11650.075	61.27	-8.92	52.35	74.00	-21.65	PK
Horizontal	11650.075	49.93	-8.92	41.01	54.00	-12.99	AV
Horizontal	17475.129	56.32	-1.86	54.46	68.20	-13.74	PK
Horizontal	17475.129	44.59	-1.86	42.73	54.00	-11.27	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	4679.108	74.23	-20.24	53.99	74.00	-20.01	PK
Vertical	4679.108	59.91	-20.24	39.67	54.00	-14.33	AV
Vertical	11510.062	61.62	-8.81	52.81	74.00	-21.19	PK
Vertical	11510.062	49.86	-8.81	41.05	54.00	-12.95	AV
Vertical	17265.155	55.23	-3.01	52.22	68.20	-15.98	PK
Vertical	17265.155	44.78	-3.01	41.77	54.00	-12.23	AV
Horizontal	4679.034	70.13	-20.24	49.89	74.00	-24.11	PK
Horizontal	4679.034	59.63	-20.24	39.39	54.00	-14.61	AV
Horizontal	11510.117	63.55	-8.81	54.74	74.00	-19.26	PK
Horizontal	11510.117	49.43	-8.81	40.62	54.00	-13.38	AV
Horizontal	17265.051	55.33	-3.01	52.32	68.20	-15.88	PK
Horizontal	17265.051	44.58	-3.01	41.57	54.00	-12.43	AV
Middle Channel (5795 MHz)-Above 1G							
Vertical	6039.180	72.71	-18.93	53.78	68.20	-14.42	PK
Vertical	6039.180	59.27	-18.93	40.34	54.00	-13.66	AV
Vertical	11590.050	62.41	-8.87	53.54	74.00	-20.46	PK
Vertical	11590.050	49.60	-8.87	40.73	54.00	-13.27	AV
Vertical	17385.075	57.43	-2.35	55.08	68.20	-13.12	PK
Vertical	17385.075	44.01	-2.35	41.66	54.00	-12.34	AV
Horizontal	6039.159	70.30	-18.93	51.37	68.20	-16.83	PK
Horizontal	6039.159	59.67	-18.93	40.74	54.00	-13.26	AV
Horizontal	11590.003	64.02	-8.87	55.15	74.00	-18.85	PK
Horizontal	11590.003	49.17	-8.87	40.30	54.00	-13.70	AV
Horizontal	17385.027	55.07	-2.35	52.72	68.20	-15.48	PK
Horizontal	17385.027	44.91	-2.35	42.56	54.00	-11.44	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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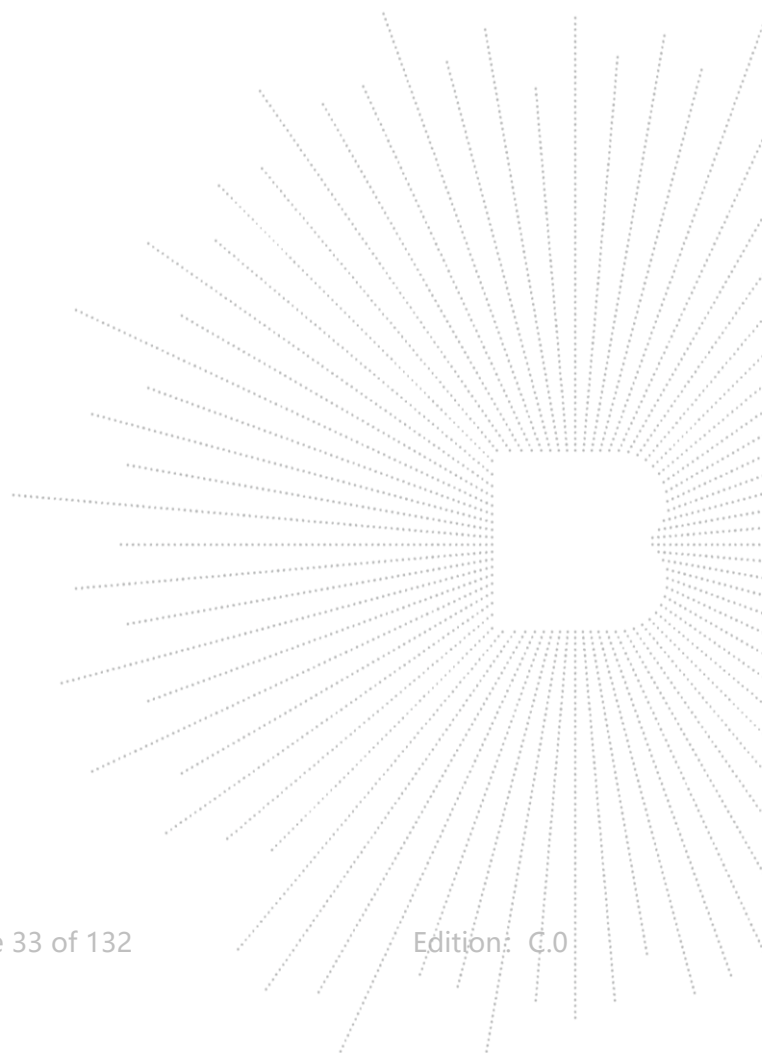
Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure- ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5775 MHz)-Above 1G							
Vertical	4679.154	74.13	-20.24	53.89	74.00	-20.11	PK
Vertical	4679.154	59.29	-20.24	39.05	54.00	-14.95	AV
Vertical	11550.077	60.40	-8.84	51.56	74.00	-22.44	PK
Vertical	11550.077	49.55	-8.84	40.71	54.00	-13.29	AV
Vertical	17325.145	57.12	-2.68	54.44	68.20	-13.76	PK
Vertical	17325.145	44.15	-2.68	41.47	54.00	-12.53	AV
Horizontal	4679.118	70.10	-20.24	49.86	74.00	-24.14	PK
Horizontal	4679.118	59.12	-20.24	38.88	54.00	-15.12	AV
Horizontal	11550.089	64.13	-8.84	55.29	74.00	-18.71	PK
Horizontal	11550.089	49.86	-8.84	41.02	54.00	-12.98	AV
Horizontal	17325.142	55.99	-2.68	53.31	68.20	-14.89	PK
Horizontal	17325.142	44.53	-2.68	41.85	54.00	-12.15	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.



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

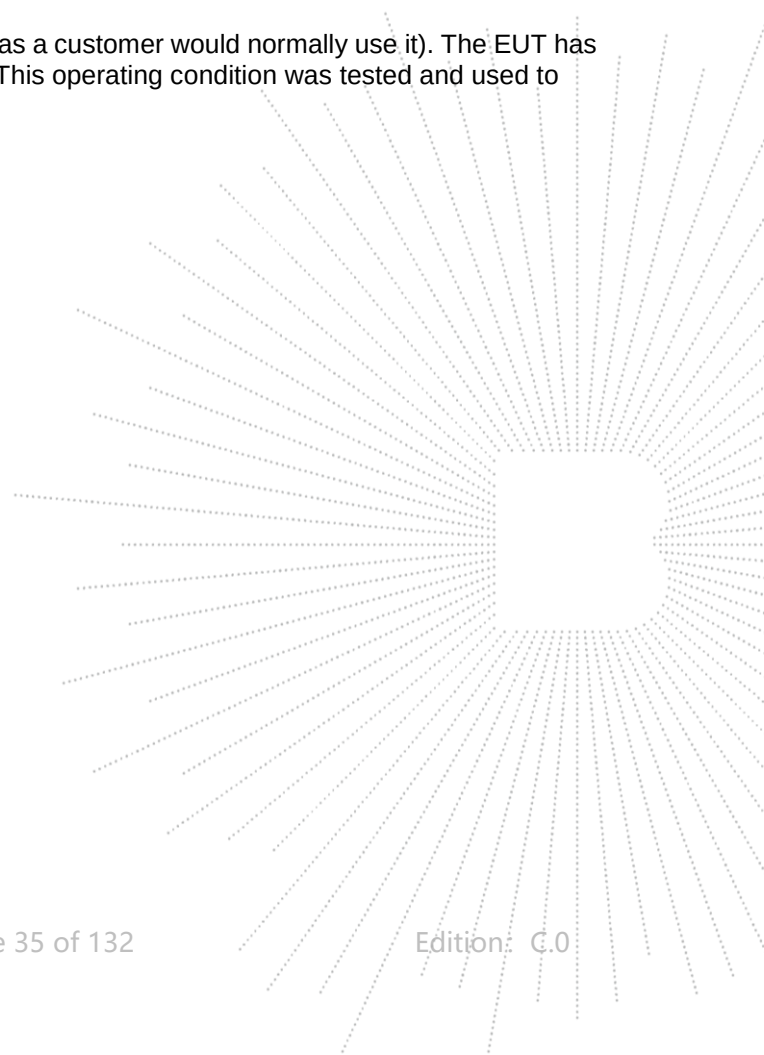
For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 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.



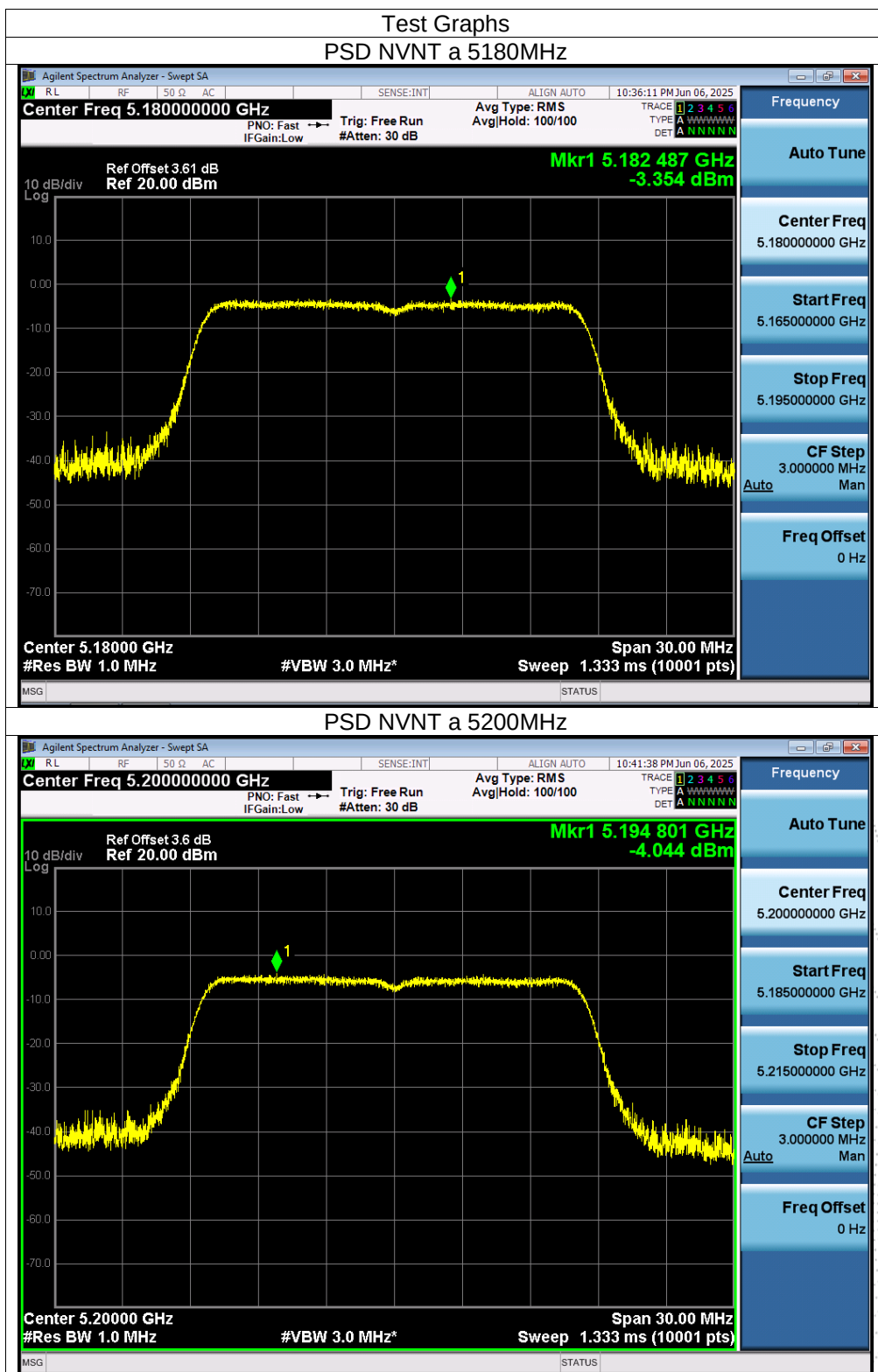
8.5 Test Result

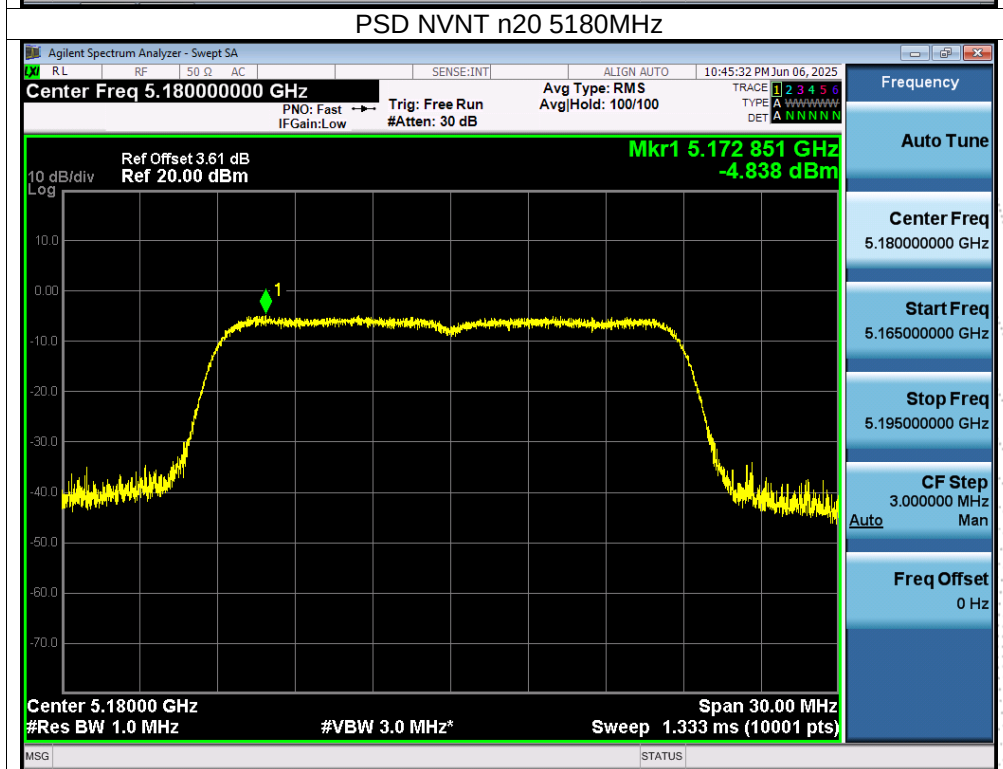
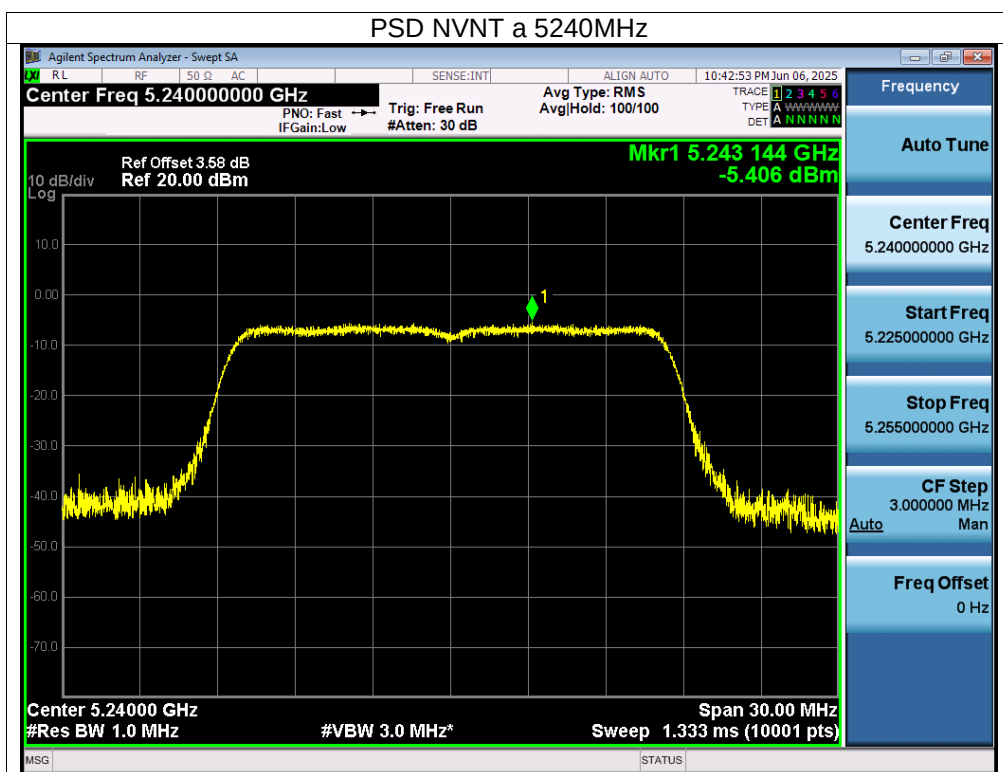
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa	Test Voltage:	DC 3.87V
Test Mode:	(U-NII-1) 5180MHz-5240MHz (U-NII-3) 5745MHz-5825MHz		

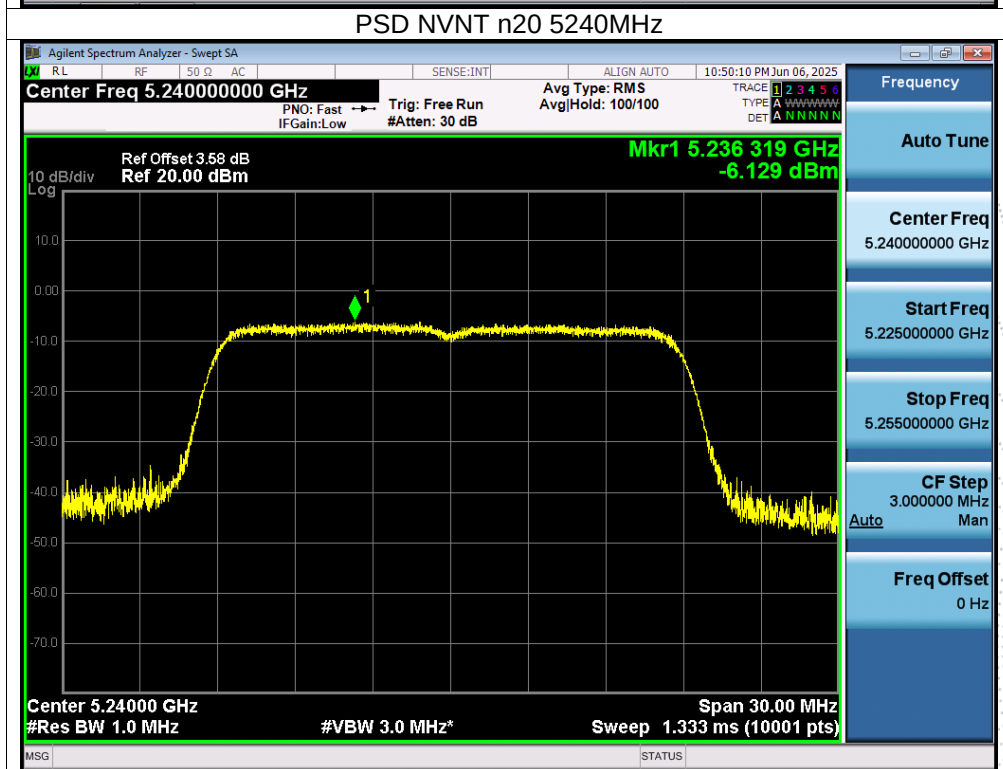
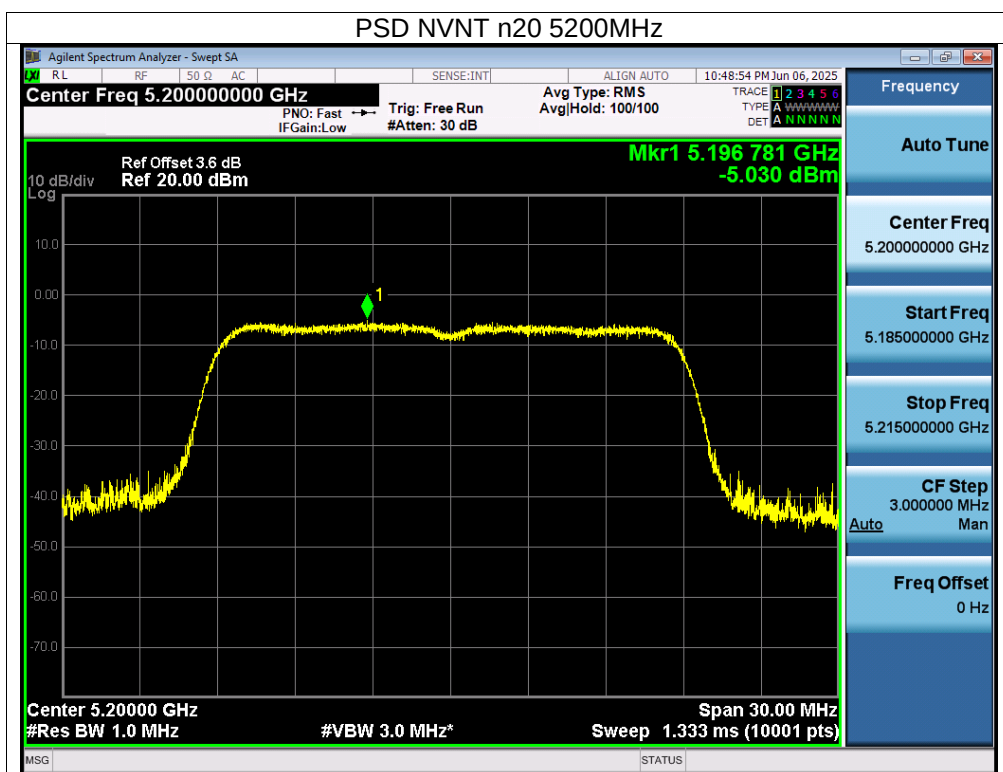
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/1MHz)	Limit (dBm/1MHz)	Verdict
NVNT	a	5180	-3.35	11	Pass
NVNT	a	5200	-4.04	11	Pass
NVNT	a	5240	-5.41	11	Pass
NVNT	n20	5180	-4.84	11	Pass
NVNT	n20	5200	-5.03	11	Pass
NVNT	n20	5240	-6.13	11	Pass
NVNT	n40	5190	-8.68	11	Pass
NVNT	n40	5230	-9.52	11	Pass
NVNT	ac20	5180	-5.19	11	Pass
NVNT	ac20	5200	-5.13	11	Pass
NVNT	ac20	5240	-6.15	11	Pass
NVNT	ac40	5190	-8.52	11	Pass
NVNT	ac40	5230	-9.42	11	Pass
NVNT	ac80	5210	-12.42	11	Pass

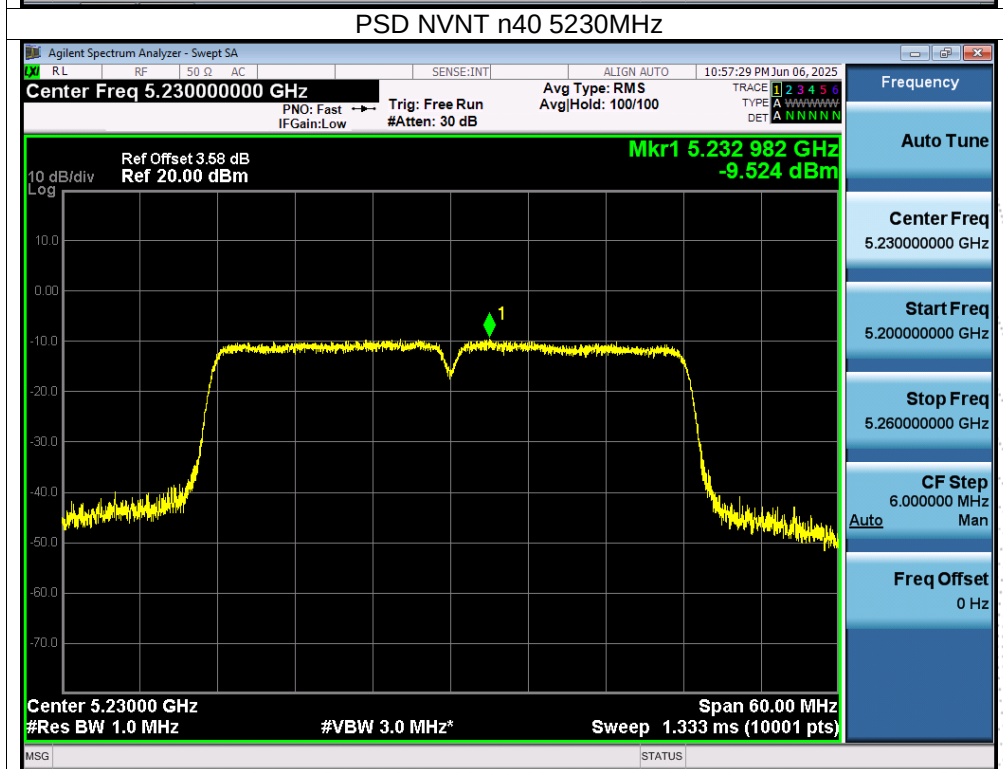
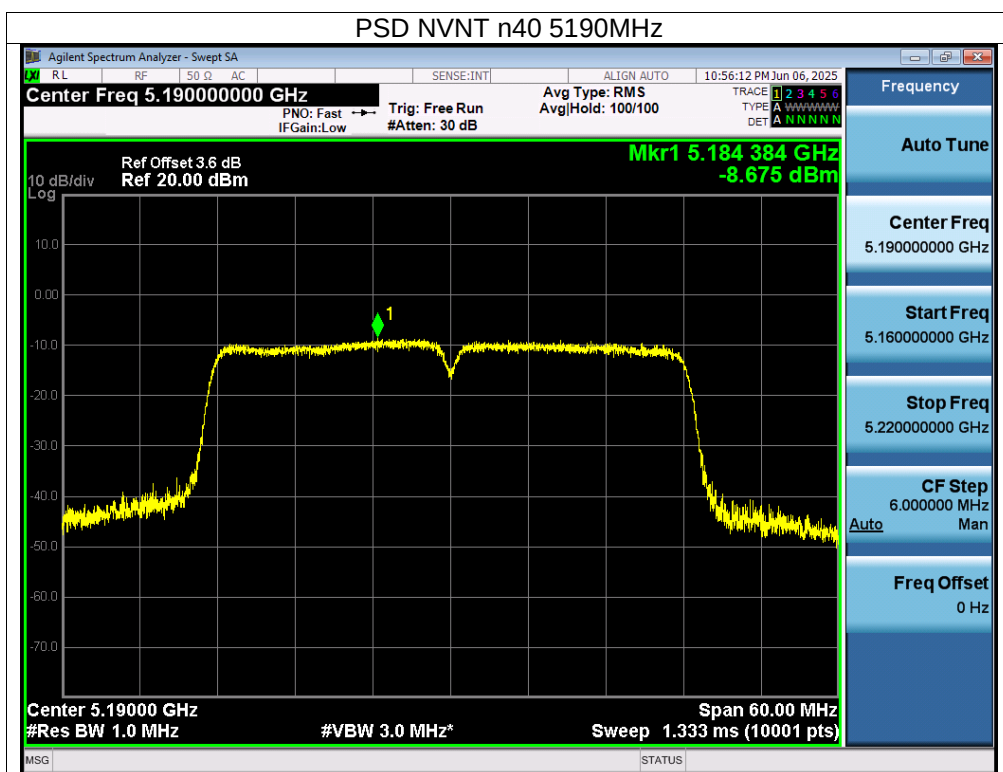
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/510KHz)	Conducted PSD (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
NVNT	a	5745	-7.25	-7.336	30	Pass
NVNT	a	5785	-7.57	-7.656	30	Pass
NVNT	a	5825	-8.62	-8.706	30	Pass
NVNT	n20	5745	-8.32	-8.406	30	Pass
NVNT	n20	5785	-8.65	-8.736	30	Pass
NVNT	n20	5825	-9.53	-9.616	30	Pass
NVNT	n40	5755	-12.2	-12.286	30	Pass
NVNT	n40	5795	-12.42	-12.506	30	Pass
NVNT	ac20	5745	-8.63	-8.716	30	Pass
NVNT	ac20	5785	-8.64	-8.726	30	Pass
NVNT	ac20	5825	-9.62	-9.706	30	Pass
NVNT	ac40	5755	-12.21	-12.296	30	Pass
NVNT	ac40	5795	-12.39	-12.476	30	Pass
NVNT	ac80	5775	-16.72	-16.806	30	Pass

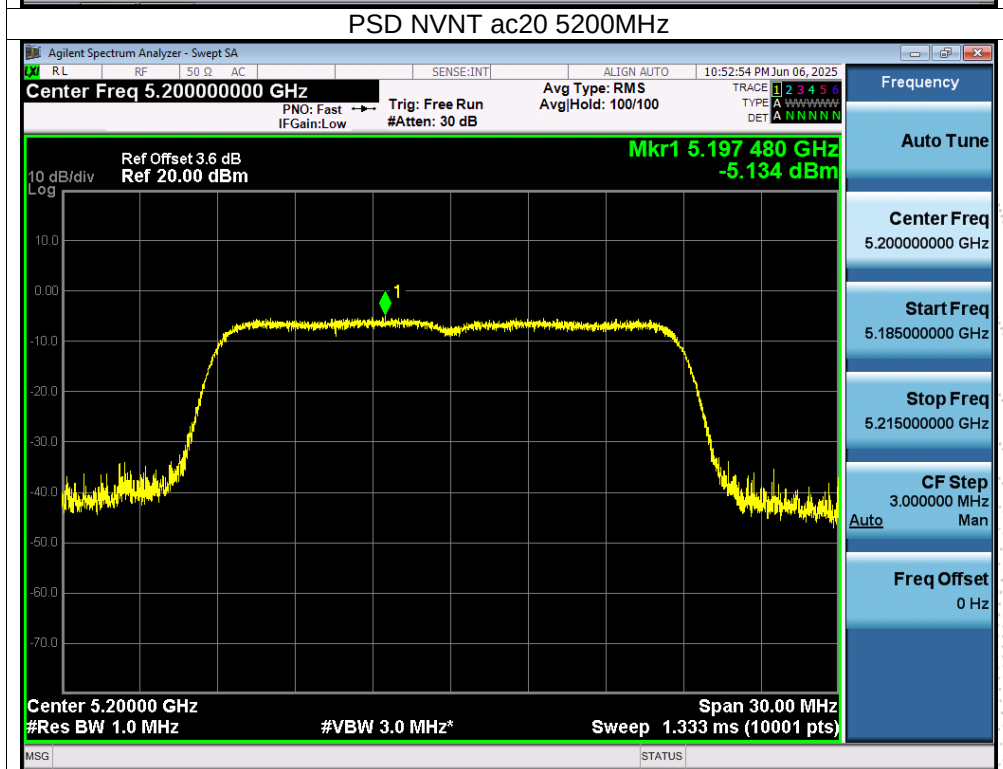
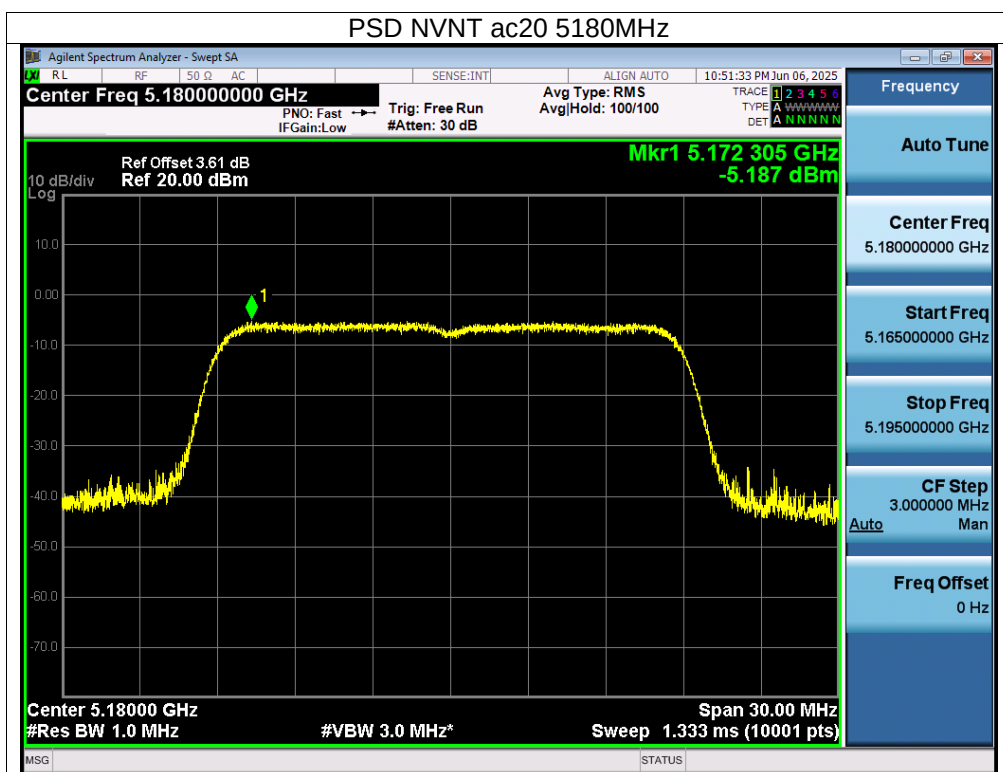
Note: Correction Factor = $10\log(500\text{KHz}/\text{RBW in measurement}) = -0.086$

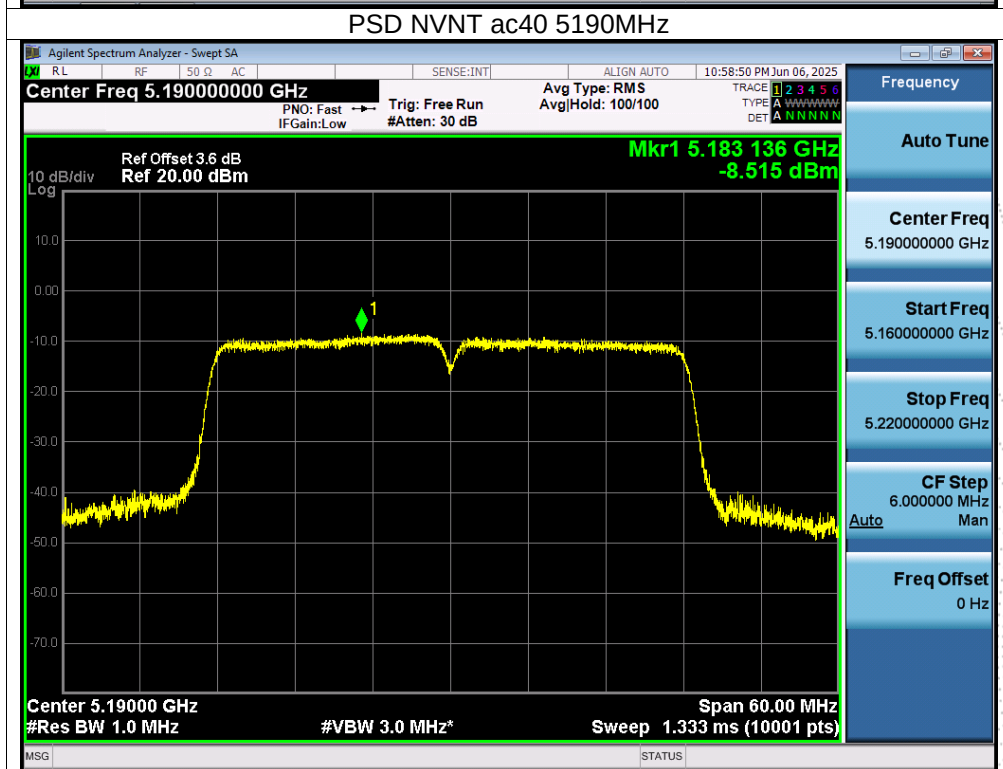
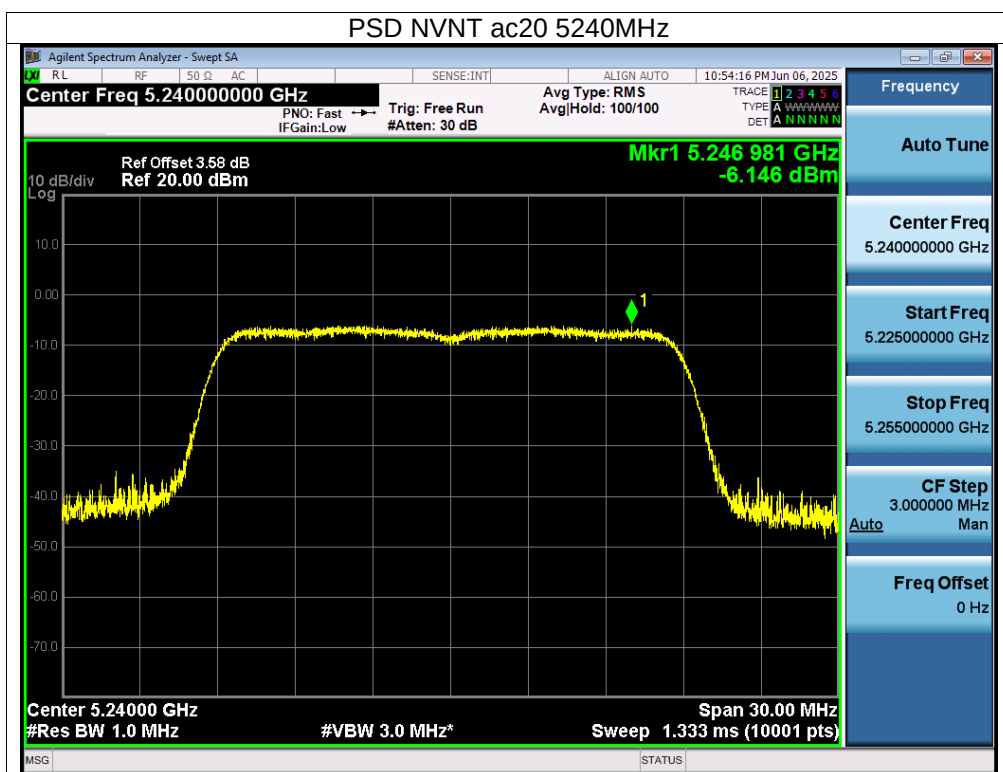


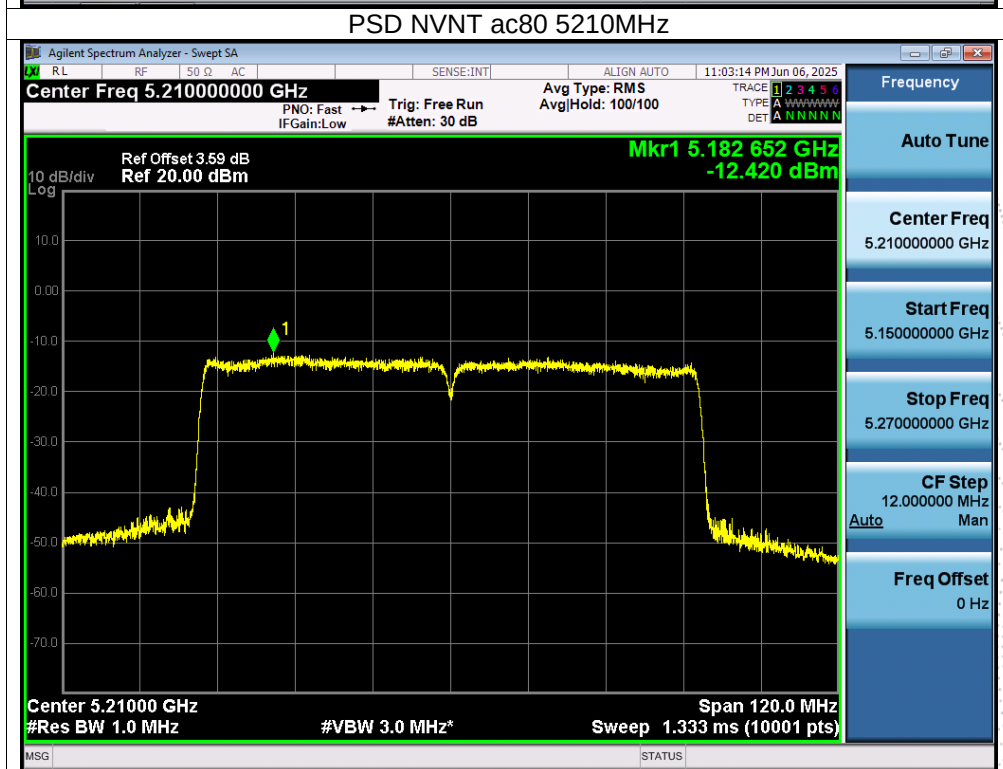
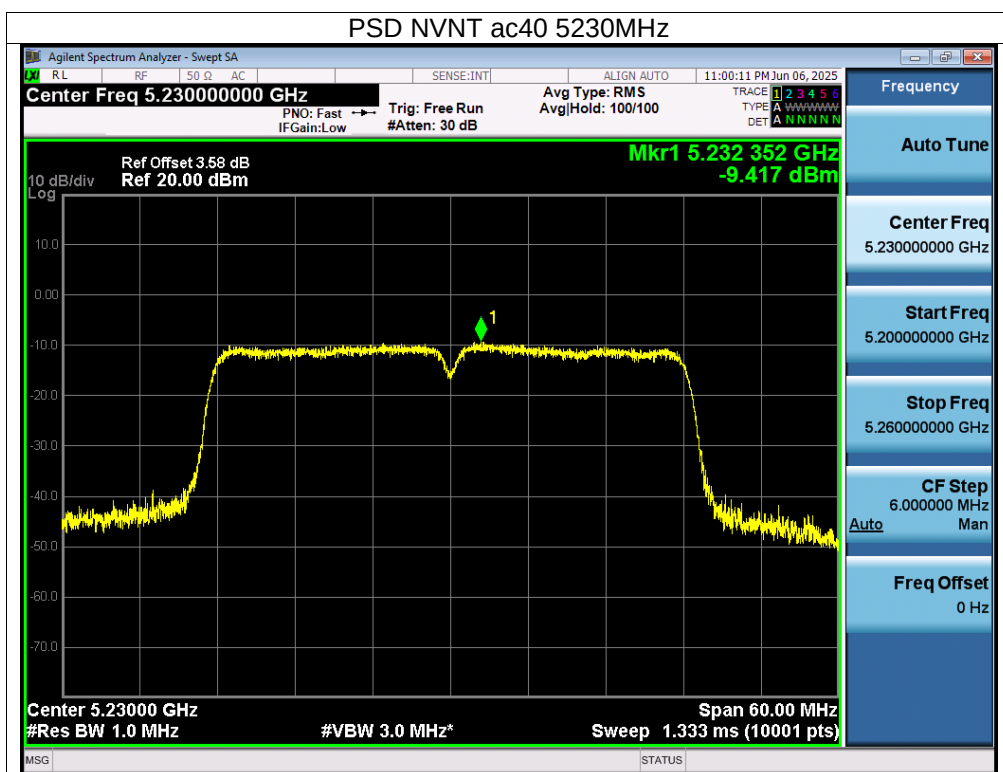


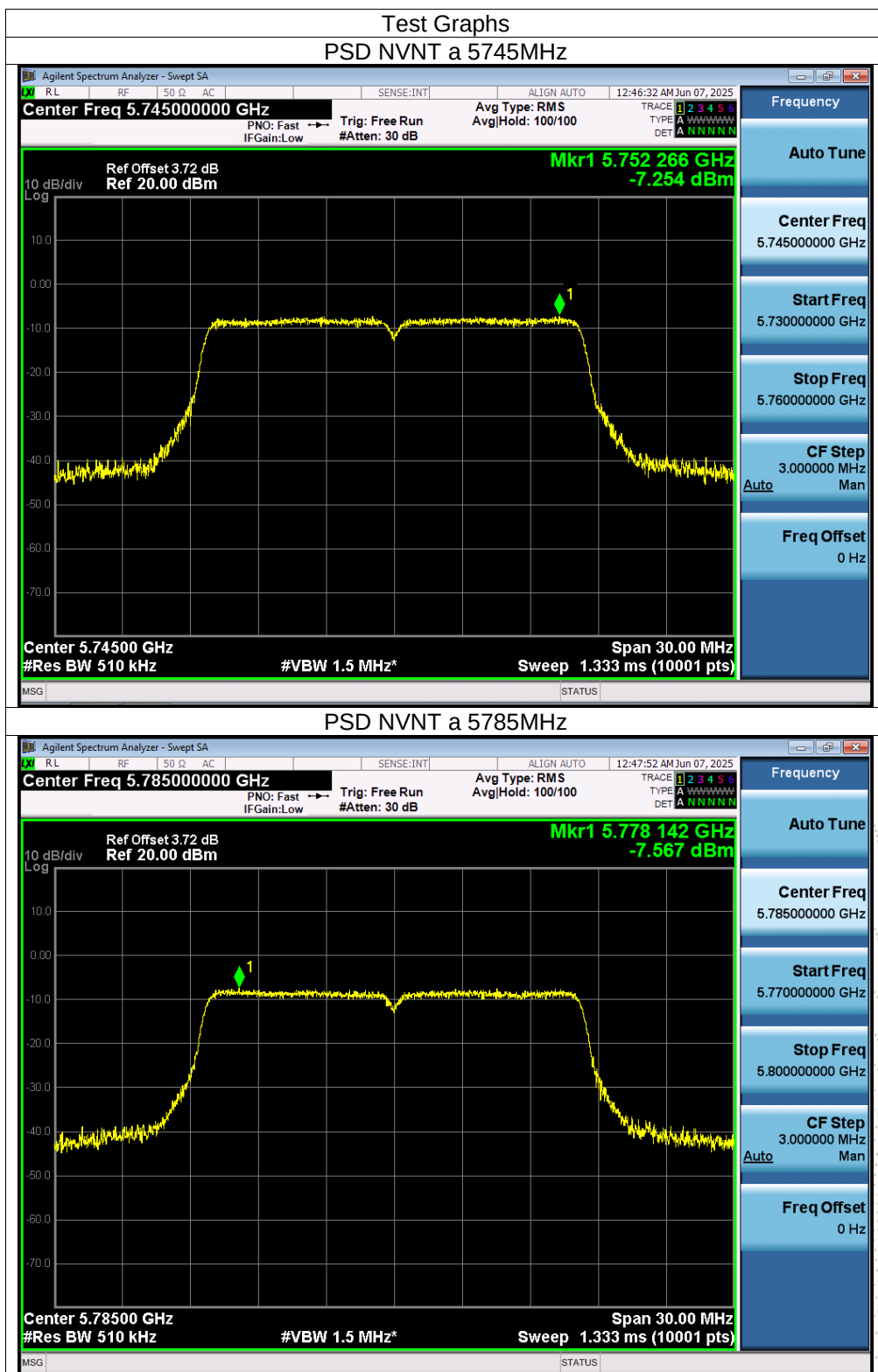


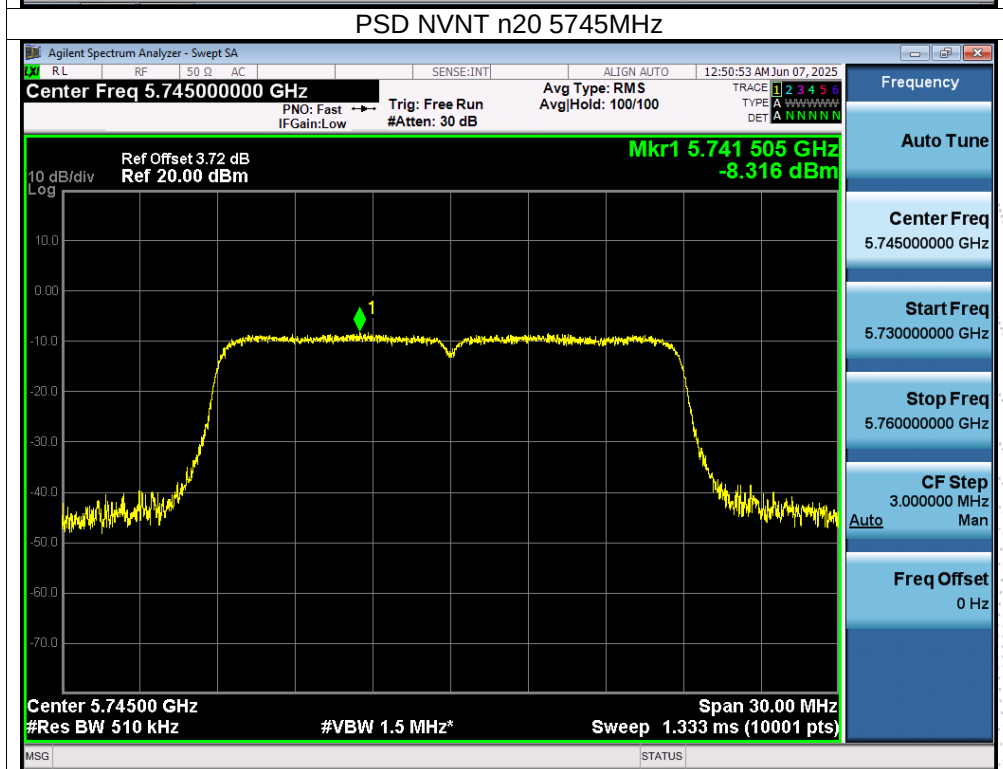
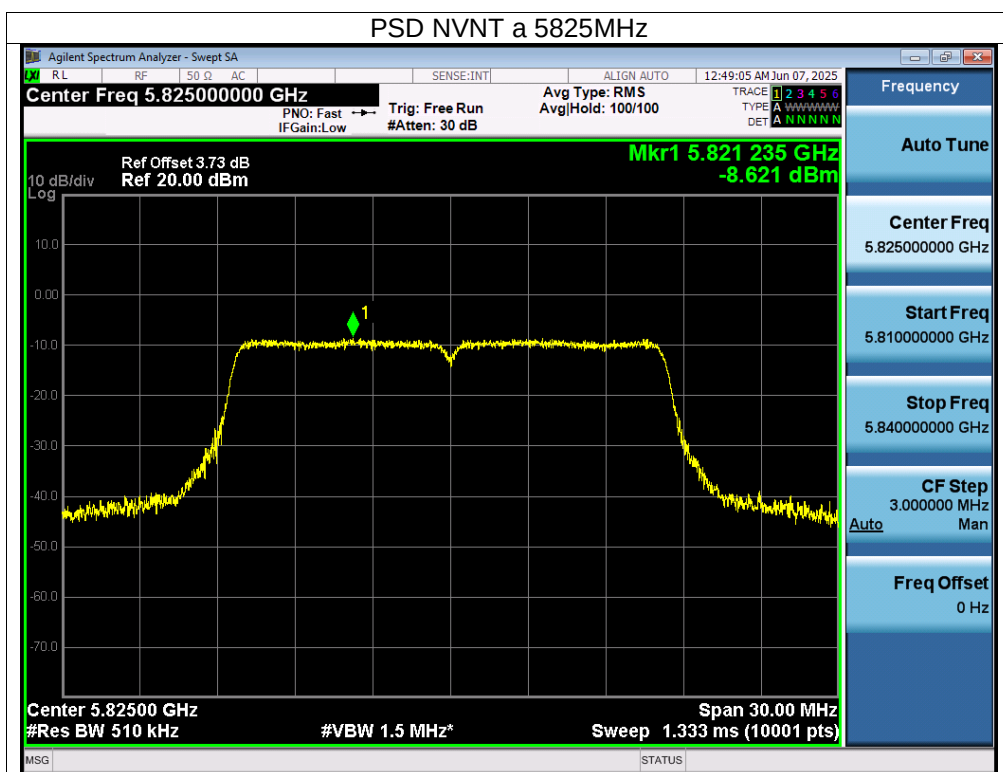


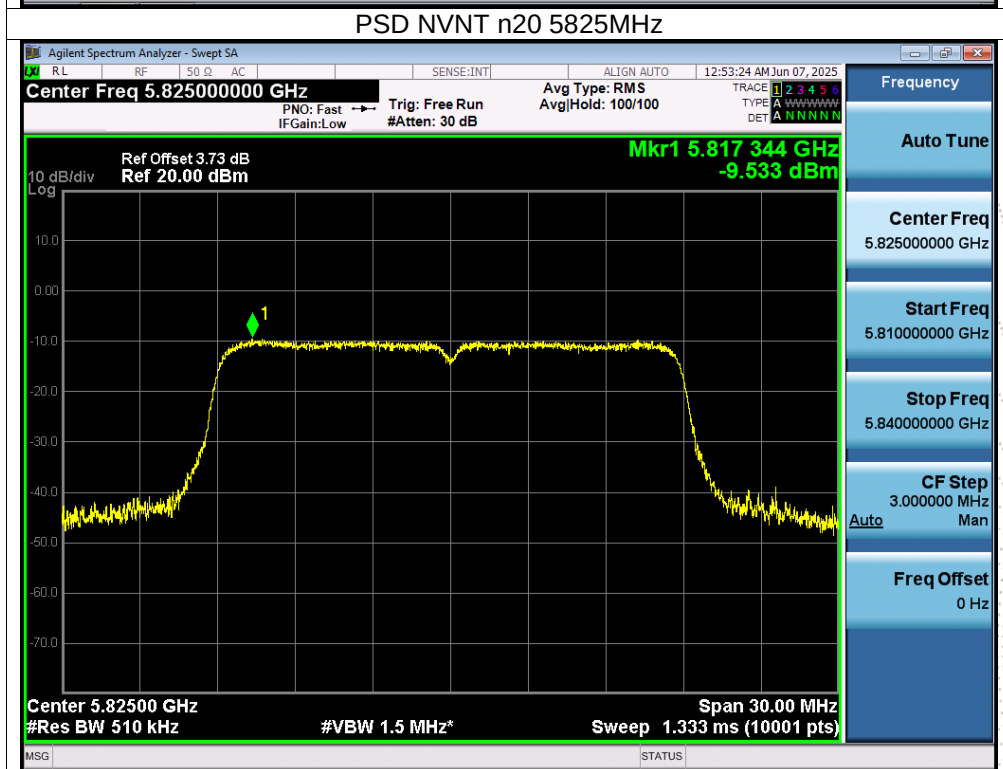
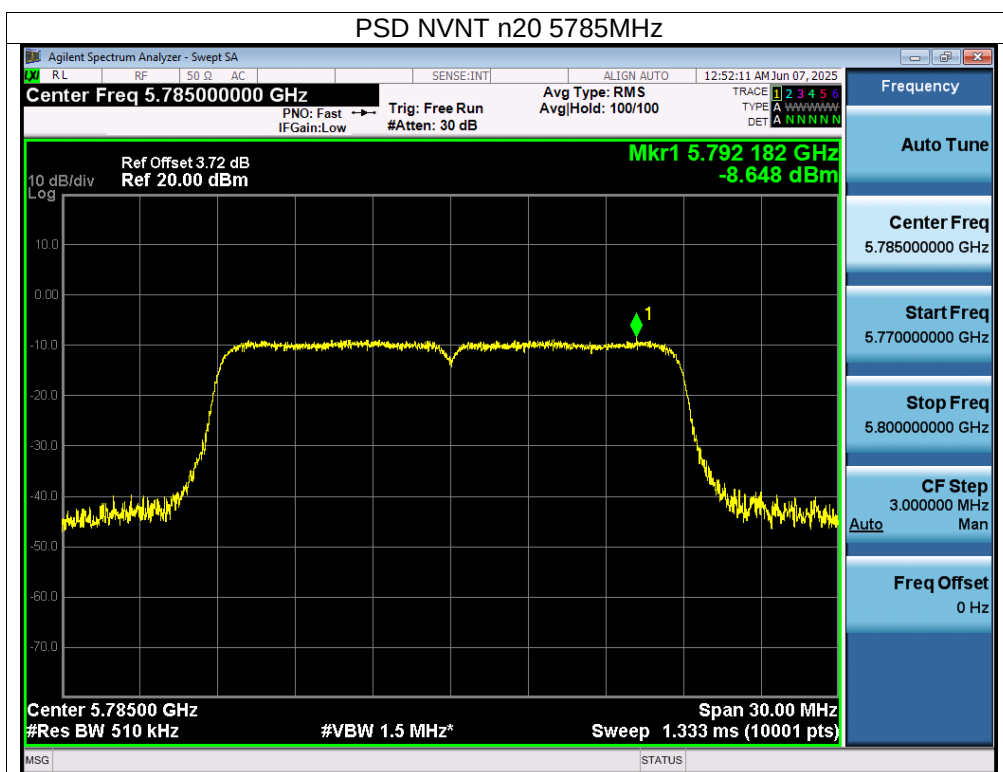


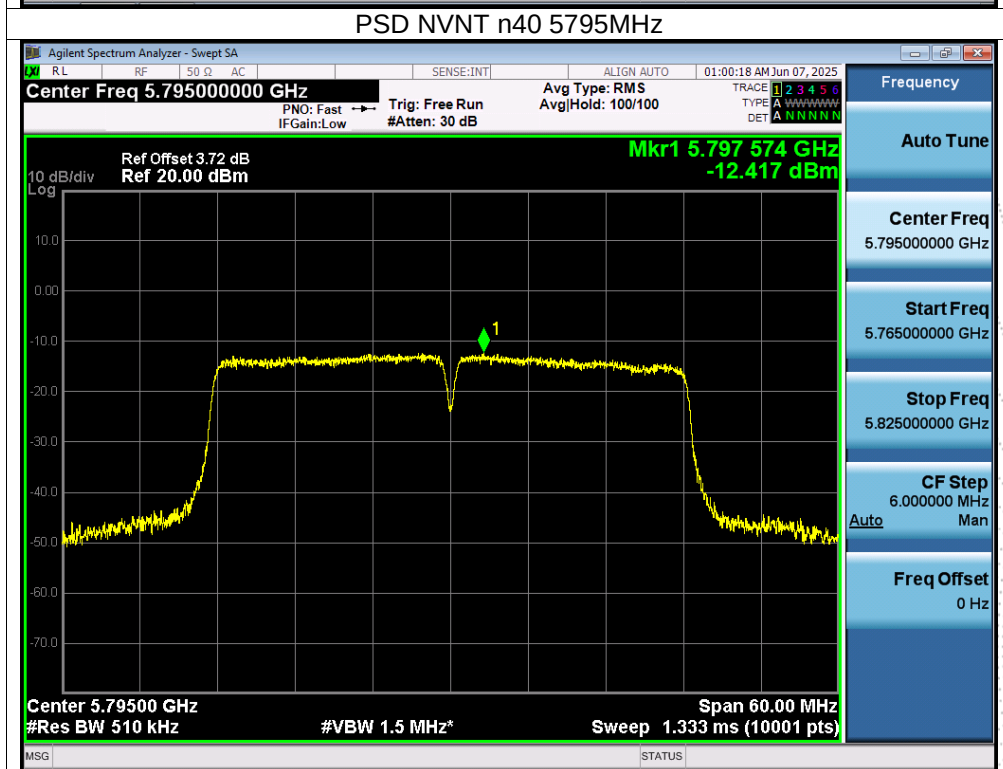
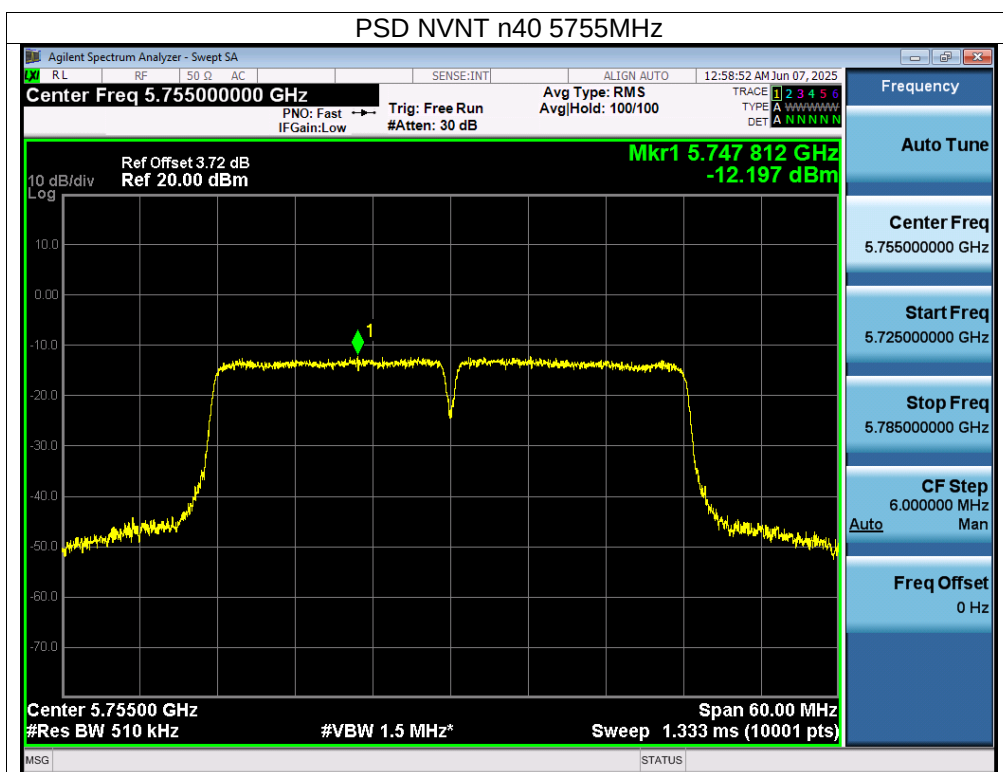


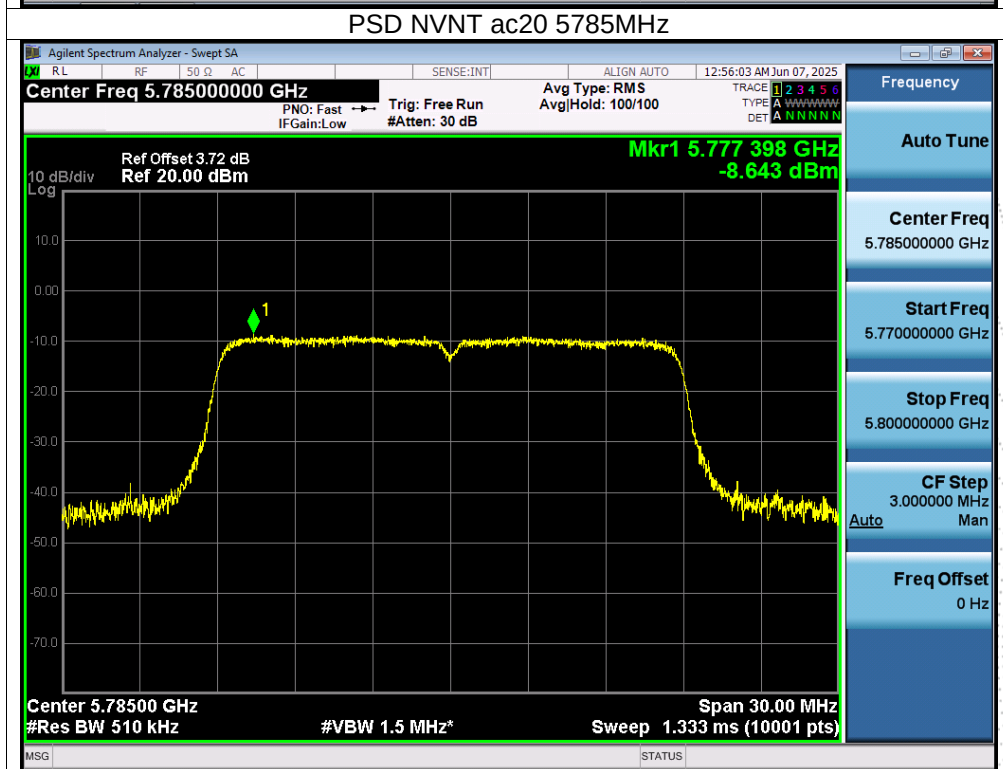
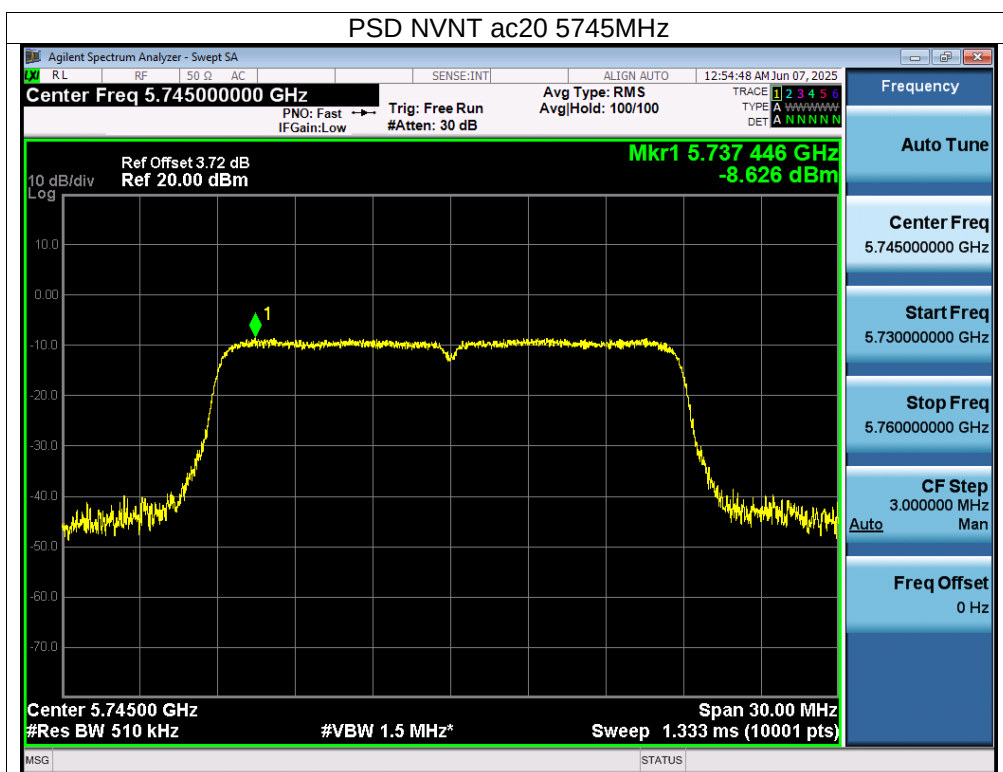


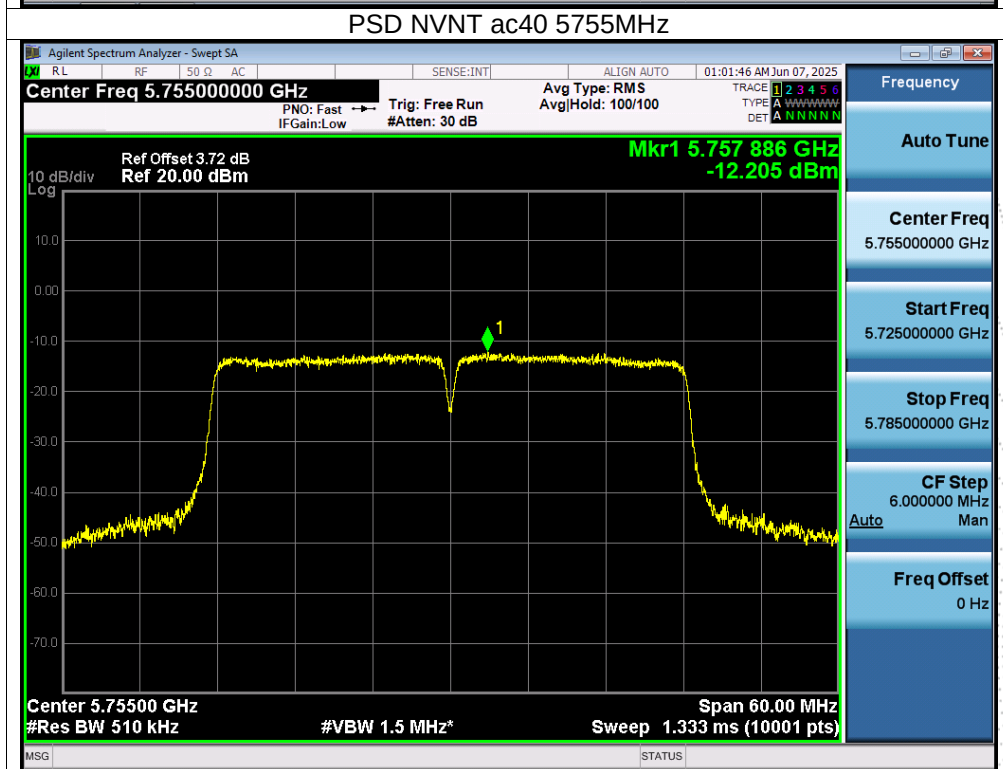
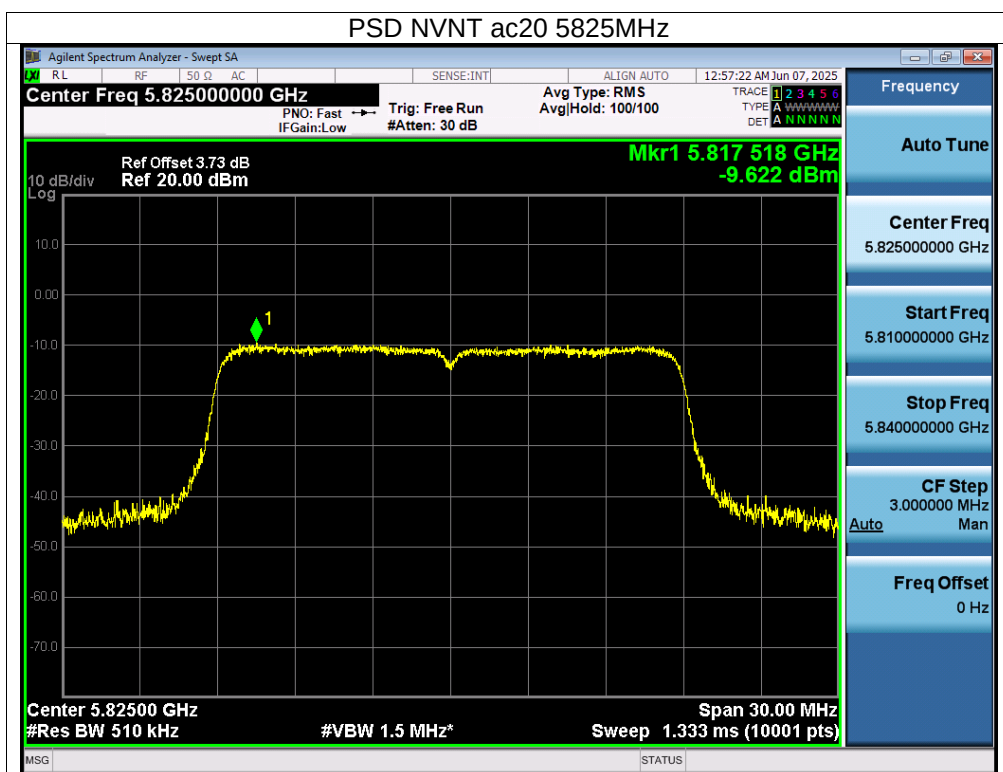


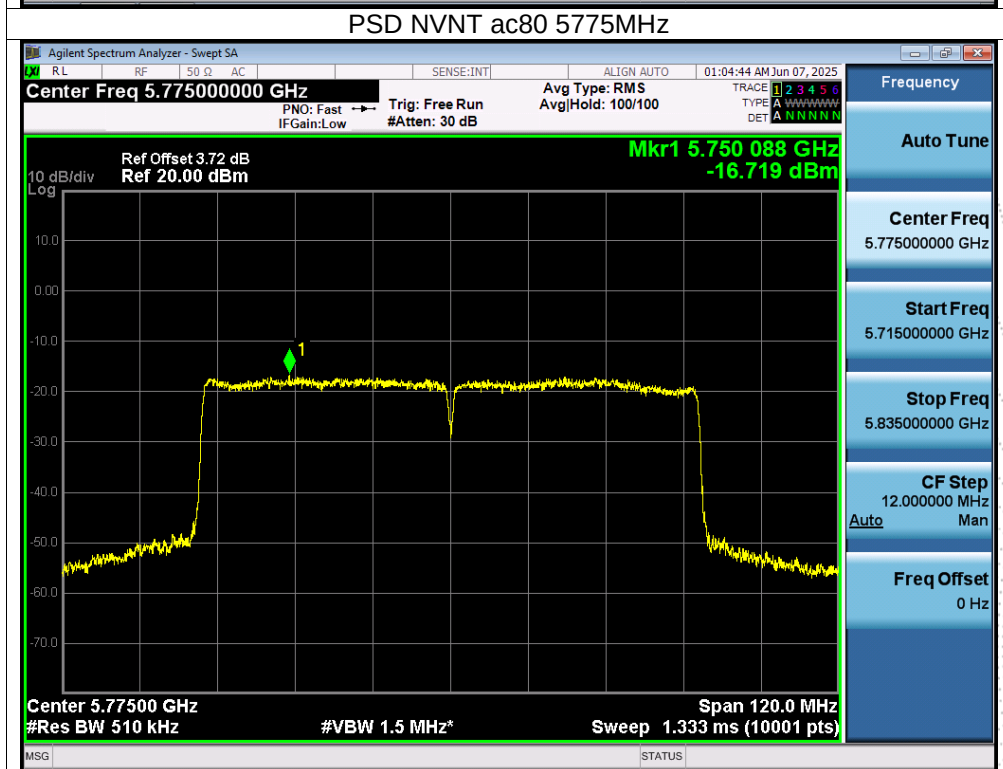
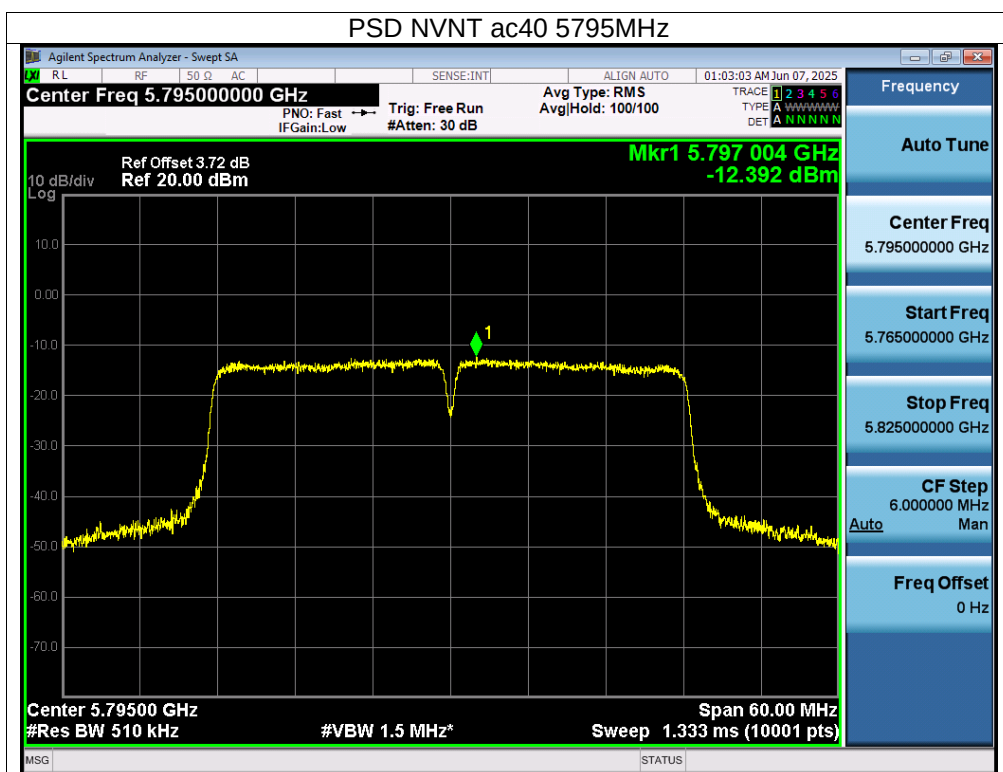






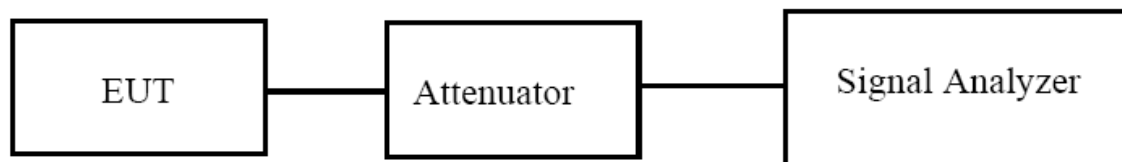






9. 26dB & 6dB & 99% Emission Bandwidth

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

- 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.

6dB

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. 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 3.87V
Test Mode:	TX Frequency U-NII-1 (5180-5240MHz)		

Condition	Mode	Frequency (MHz)	99% bandwidth (MHz)	-26dB bandwidth (MHz)	Result
NVNT	a	5180	16.548	24.912	Pass
NVNT	a	5200	16.601	25.927	Pass
NVNT	a	5240	16.55	23.117	Pass
NVNT	n20	5180	17.6	23.575	Pass
NVNT	n20	5200	17.579	22.751	Pass
NVNT	n20	5240	17.602	23.273	Pass
NVNT	n40	5190	36.168	46.188	Pass
NVNT	n40	5230	36.123	43.444	Pass
NVNT	ac20	5180	17.602	26.09	Pass
NVNT	ac20	5200	17.594	23.712	Pass
NVNT	ac20	5240	17.614	23.201	Pass
NVNT	ac40	5190	36.166	42.384	Pass
NVNT	ac40	5230	36.138	41.293	Pass
NVNT	ac80	5210	75.573	83.747	Pass

