

TEST REPORT

Report No.: BCTC2203084212-4E

Applicant: Emdoor Information Co.,Ltd.

Product Name: Rugged Tablet

Model/Type
reference: EM-I86H

Tested Date: 2022-03-31 to 2022-04-11

Issued Date: 2022-04-11



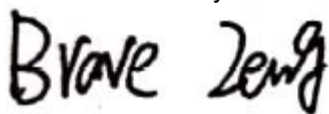
Shenzhen BCTC Testing Co., Ltd.



FCC ID:2A37Q-EM-I86H

Product Name: Rugged Tablet
Trademark: Emdoor
Model/Type reference: EM-I86H
EM-I86HH, EM-I86, W86H, W86, W86HH
Prepared For: Emdoor Information Co., Ltd.
Address: 3/F, Bldg 5th, Wonderful Life Wisdom Valley TechnoPark, No.83 Dabao Rd, Xin'an Sub-district, Bao'an District, Shenzhen 518101, Guangdong Province, China
Manufacturer: Emdoor Information Co., Ltd.
Address: 3/F, Bldg 5th, Wonderful Life Wisdom Valley TechnoPark, No.83 Dabao Rd, Xin'an Sub-district, Bao'an District, Shenzhen 518101, Guangdong Province, China
Prepared By: Shenzhen BCTC Testing Co., Ltd.
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Sample Received Date: 2022-03-31
Sample tested Date: 2022-03-31 to 2022-04-11
Issue Date: 2022-04-11
Report No.: BCTC2203084212-4E
FCC Part 15 15.407
Test Standards: ANSI C63.10-2013
KDB 662911 D01 v02r01
KDB 789033 D02 v02r01
Test Results: PASS

Tested by:



Brave Zeng/ Project Handler

Approved by:



Zero Zhou/Reviewer

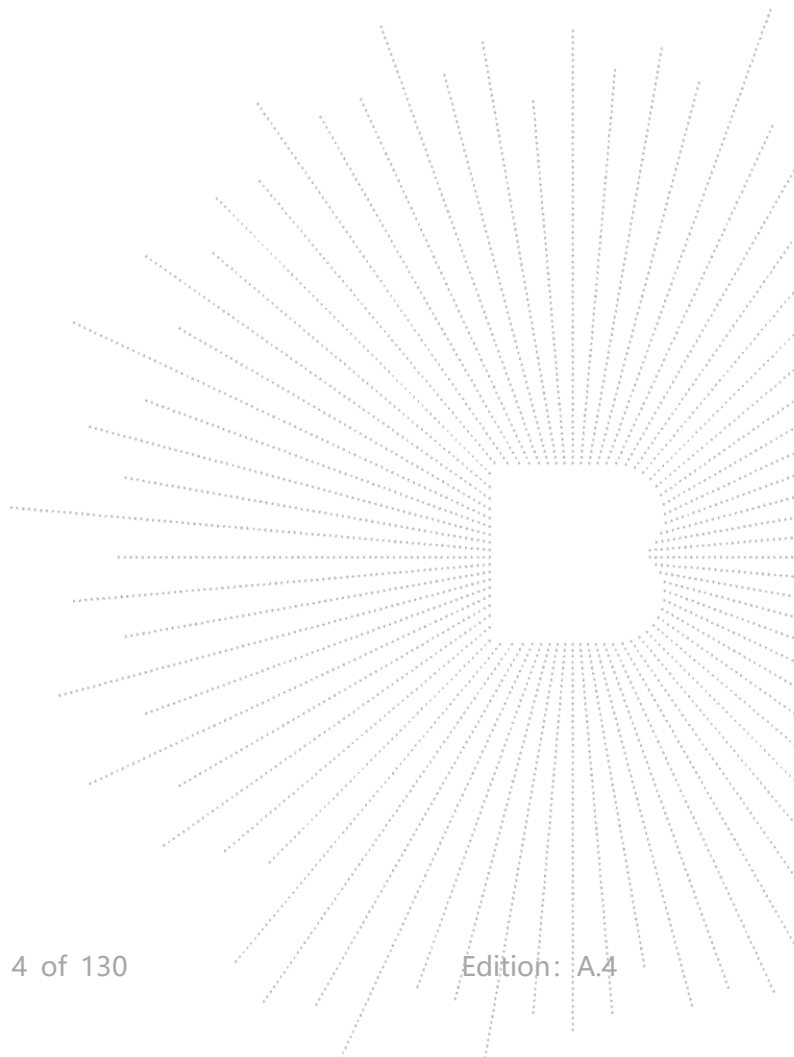
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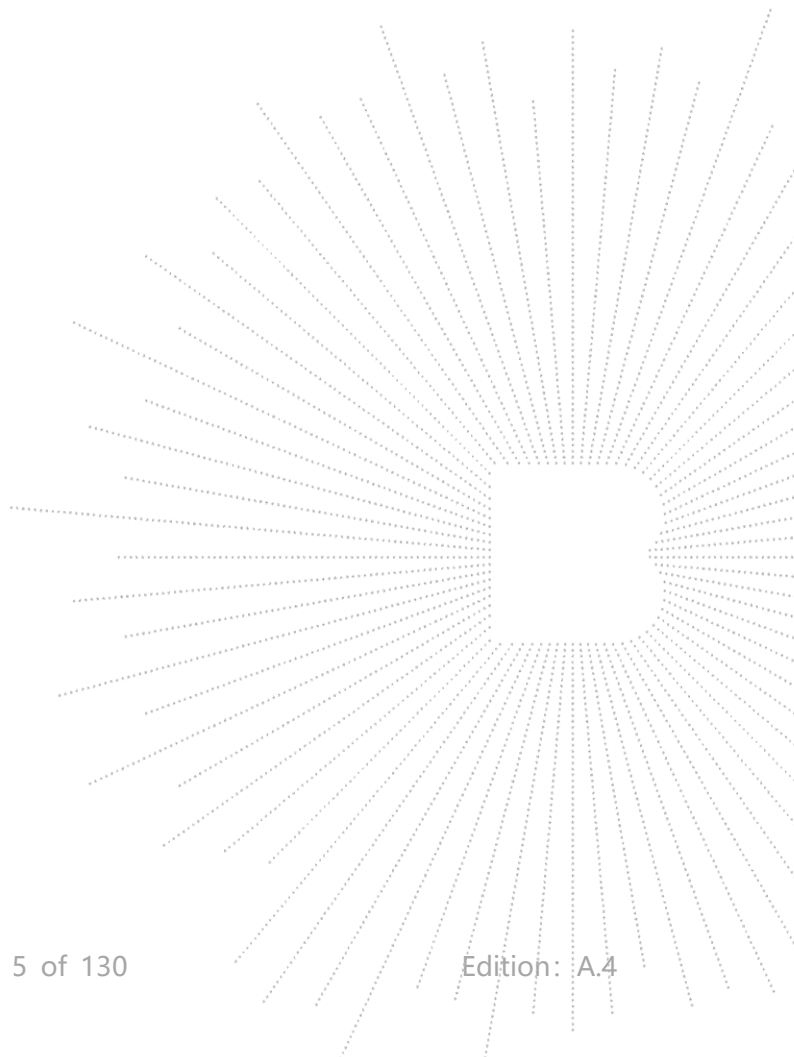
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(Note: N/A Means Not Applicable)



1. Version

Report No.	Issue Date	Description	Approved
BCTC2203084212-4E	2022-04-11	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

3. Measurement Uncertainty

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

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

4. Product Information And Test Setup

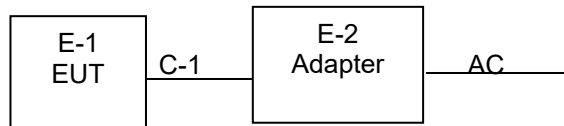
4.1 Product Information

Model/Type Ref.:	EM-I86H EM-I86HH, EM-I86, W86H, W86, W86HH
Model differences:	All the model are the same circuit and RF module, except model names.
Hardware Version:	N/A
Software Version:	N/A
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); 5190-5230MHz for 802.11n(HT40); 5210MHz for 802.11 ac80; 5745-5825 MHz for 802.11a/n(HT20); 5755-5795 MHz for 802.11n(HT40); 5775MHz for 802.11 ac80;
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;
Number Of Channel	4 channels for 802.11a/n20 in the 5180-5240MHz band ; 2 channels for 802.11 n40 in the 5190-5230MHz band ; 1 channels for 802.11 ac80 in the 5210MHz band ; 5 channels for 802.11a/n20 in the 5745-5825MHz band ; 2 channels for 802.11 n40 in the 5755-5795MHz band ; 1 channels for 802.11 ac80 in the 5775MHz band
Antenna installation:	Internal antenna
Antenna Gain:	5.1G: Antenna A: 2dBi Antenna B: 2dBi 5.8G: Antenna A: 2dBi Antenna B: 2dBi
Ratings:	AC 120V/60Hz/DC 3.7V Model:AW018WR-0500300UH
Adapter:	Inout:100-240V~50/60 0.5A Output:DC 5V 3A

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	Rugged Tablet	Emdoor	EM-I86H	EM-I86HH	EUT
E-2	Adapter	N/A	AW018WR-0500300UH	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
C-1	N/A	N/A	0.3M	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	Link Mode

Conducted Emission	
Final Test Mode	Description
Mode 4	Link Mode

For Radiated Emission	
Final Test 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

Note:

- (1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.
- (2) We're testing antenna A data.

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

4.7 Antenna

5.1G

1)For power spectral density(PSD) measurements,
Array Gain= $10\log(\text{NANT}/\text{NSS})\text{dB}=10\log(2/1)=3.01\text{dB}$,
So the directional gain for PSD is 5.01dBi

2)For power measurements,
The Array gain=0 dB for $\text{NANT} \leq 4$,
So the directional gain for Power measurements is 2dBi

Antenna	Brand	Model Name	Antenna Type	Gain (dBi)	NOTE
A	N/A	N/A	Internal antenna	2	
B	N/A	N/A	Internal antenna	2	

5.8G

For power spectral density(PSD) measurements,
Array Gain= $10\log(\text{NANT}/\text{NSS})\text{dB}=10\log(2/1)=3.01\text{dB}$,
So the directional gain for PSD is 5.01dB

2)For power measurements,
The Array gain=0 dB for $\text{NANT} \leq 4$,
So the directional gain for Power measurements is 2dBi

Antenna	Brand	Model Name	Antenna Type	Gain (dBi)	NOTE
A	N/A	N/A	Internal antenna	2	
B	N/A	N/A	Internal antenna	2	

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, Tangwei, 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
IC Registered No.: 23583

5.2 Test Instrument Used

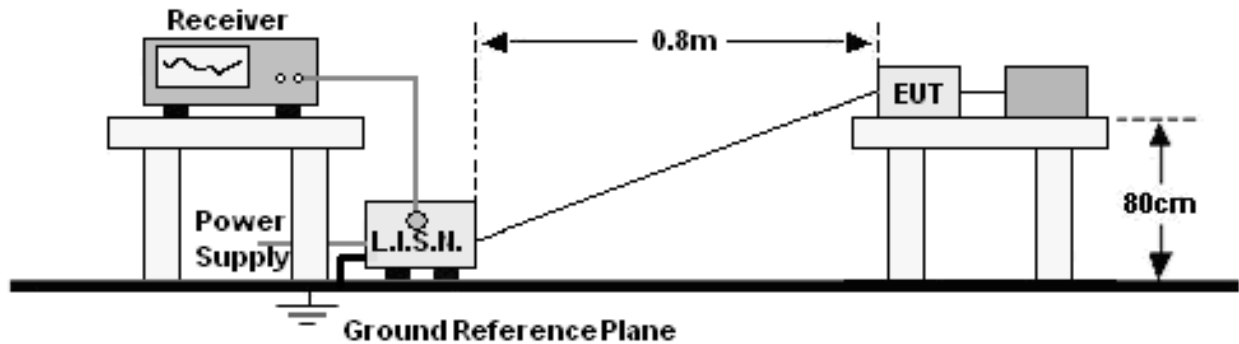
Conducted emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESR3	102075	May 28, 2021	May 27, 2022
LISN	R&S	ENV216	101375	May 28, 2021	May 27, 2022
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Attenuator	\	10dB DC-6GHz	1650	May 28, 2021	May 27, 2022

RF Conducted Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Power Metter	Keysight	E4419	\	May 28, 2021	May 27, 2022
Power Sensor (AV)	Keysight	E9300A	\	May 28, 2021	May 27, 2022
Signal Analyzer20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 28, 2021	May 27, 2022
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	\	May 28, 2021	May 27, 2022

Radiated emissions Test (966 chamber)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	Jun. 06. 2020	Jun. 05, 2023
Receiver	R&S	ESR3	102075	May 28, 2021	May 27, 2022
Receiver	R&S	ESRP	101154	May 28, 2021	May 27, 2022
Amplifier	SKET	LAPA_01G18 G-45dB	\	May 28, 2021	May 27, 2022
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 28, 2021	May 27, 2022
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	Jun. 01, 2021	May 31, 2022
Horn Antenna	Schwarzbeck	BBHA9120D	1541	Jun. 02, 2021	Jun. 01, 2022
Horn Antenn(18GHz -40GHz)	Schwarzbeck	BBHA9170	00822	Jun. 15, 2021	Jun. 14, 2022
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35- HG	2034381	May 28, 2021	May 27, 2022
Loop Antenna(9kHz -30MHz)	Schwarzbeck	FMZB1519B	00014	Jun. 02, 2021	Jun. 01, 2022
RF cables1(9kHz- 30MHz)	Huber+Suhnar	9kHz-30MHz	B1702988-00 08	May 28, 2021	May 27, 2022
RF cables2(30MH z-1GHz)	Huber+Suhnar	30MHz-1GH z	1486150	May 28, 2021	May 27, 2022
RF cables3(1GHz- 40GHz)	Huber+Suhnar	1GHz-40GHz	1607106	May 28, 2021	May 27, 2022
Power Metter	Keysight	E4419	\	May 28, 2021	May 27, 2022
Power Sensor (AV)	Keysight	E9300A	\	May 28, 2021	May 27, 2022
Signal Analyzer20kHz -26.5GHz	Keysight	N9020A	MY49100060	May 28, 2021	May 27, 2022
Spectrum Analyzer9kHz- 40GHz	R&S	FSP40	\	May 28, 2021	May 27, 2022
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

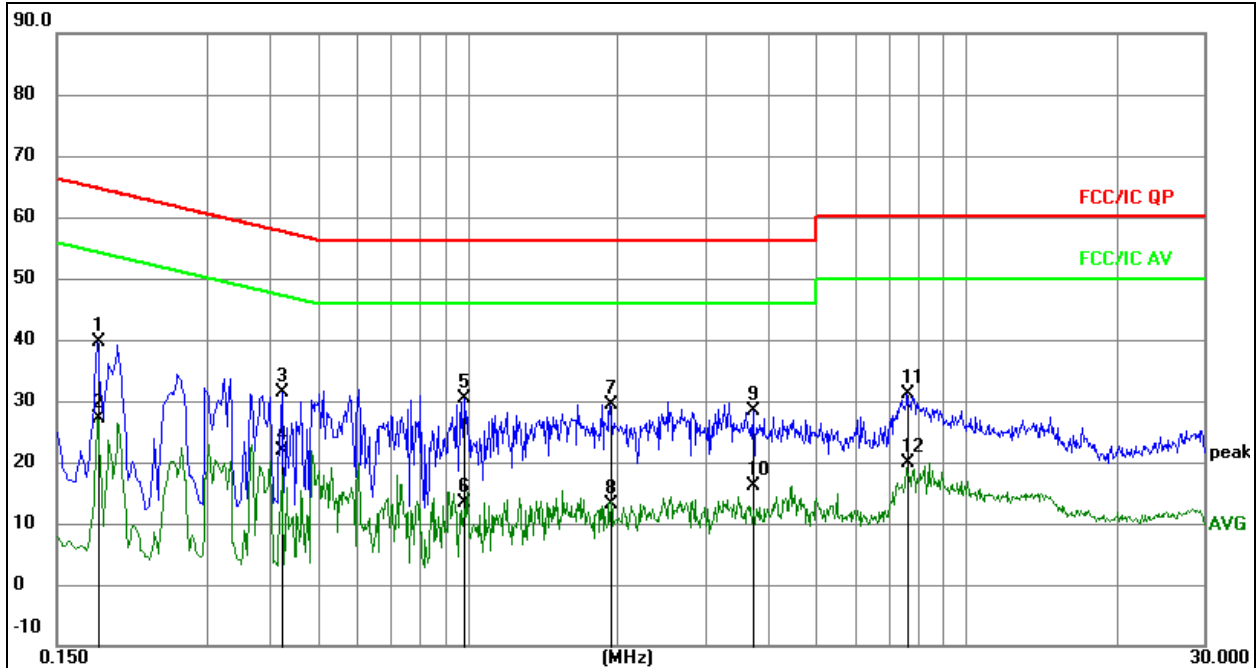
- The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak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

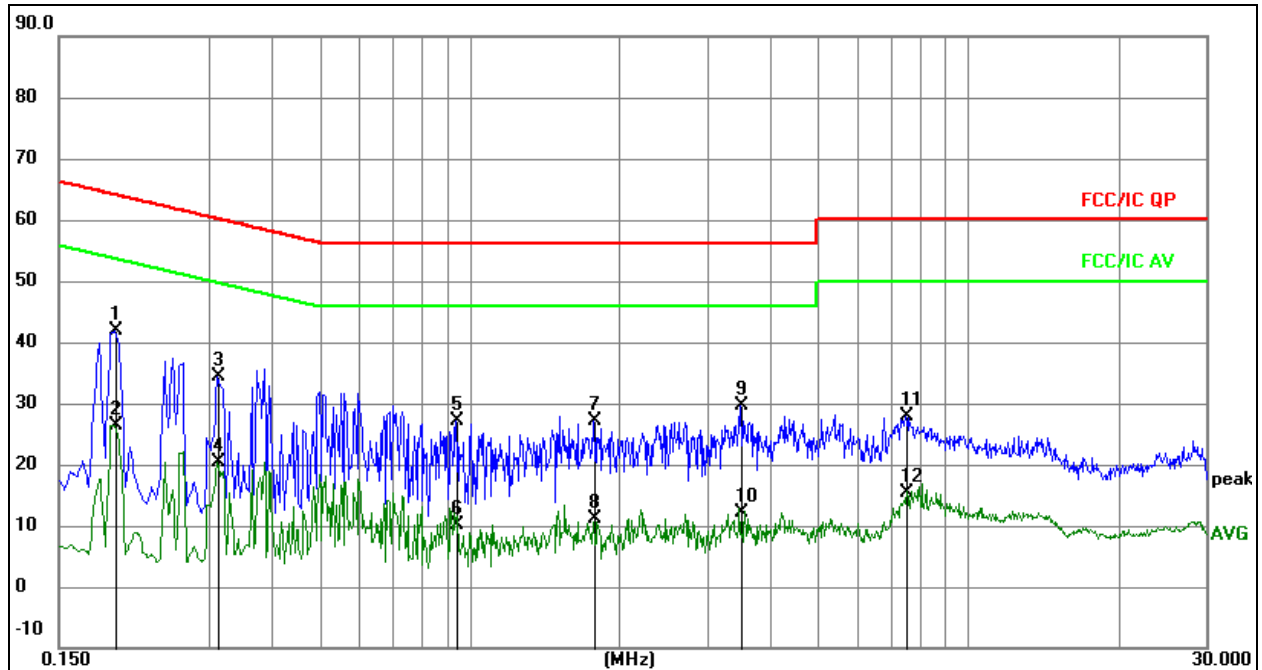


Remark:

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.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1	*	0.1806	19.98	19.60	39.58	64.46	-24.88	QP
2		0.1806	7.43	19.60	27.03	54.46	-27.43	AVG
3		0.4237	11.70	19.61	31.31	57.38	-26.07	QP
4		0.4237	2.28	19.61	21.89	47.38	-25.49	AVG
5		0.9839	10.73	19.62	30.35	56.00	-25.65	QP
6		0.9839	-6.19	19.62	13.43	46.00	-32.57	AVG
7		1.9284	9.74	19.62	29.36	56.00	-26.64	QP
8		1.9284	-6.38	19.62	13.24	46.00	-32.76	AVG
9		3.7395	8.62	19.67	28.29	56.00	-27.71	QP
10		3.7395	-3.53	19.67	16.14	46.00	-29.86	AVG
11		7.6060	11.27	19.74	31.01	60.00	-28.99	QP
12		7.6060	0.21	19.74	19.95	50.00	-30.05	AVG

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


Remark:

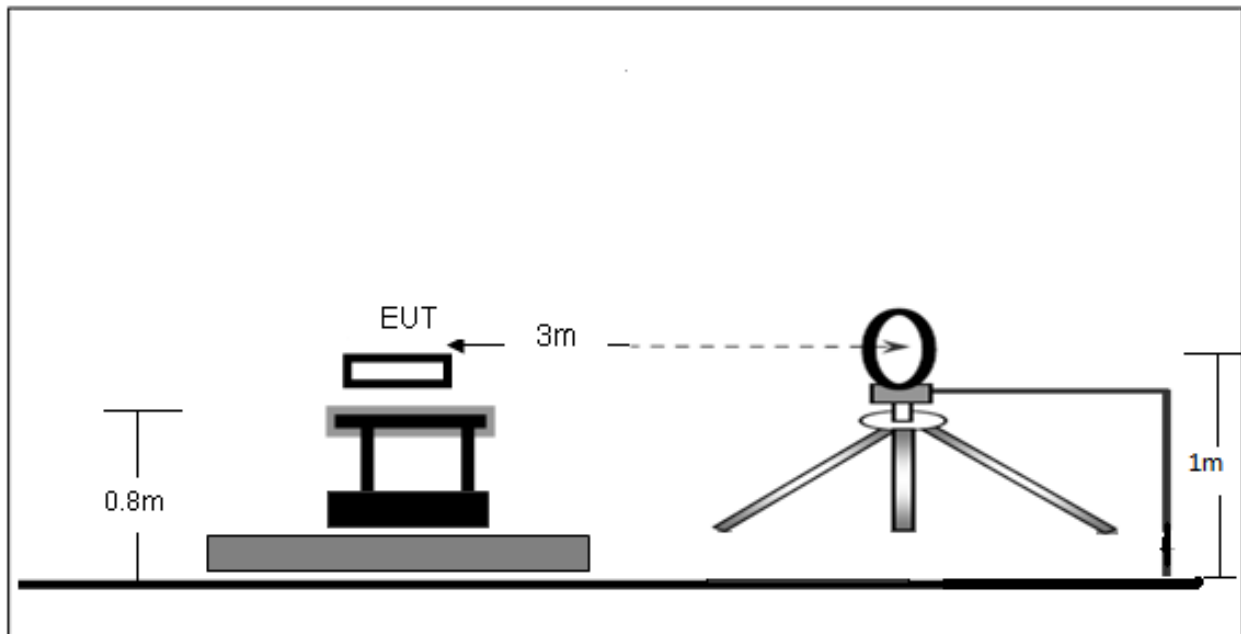
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement=Reading Level+ Correct Factor
4. Over+ Measurement-Limit

No.	Mk.	Freq. MHz	Reading Level	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1	*	0.1949	22.21	19.60	41.81	63.83	-22.02	QP
2		0.1949	6.75	19.60	26.35	53.83	-27.48	AVG
3		0.3120	14.82	19.61	34.43	59.92	-25.49	QP
4		0.3120	0.69	19.61	20.30	49.92	-29.62	AVG
5		0.9420	7.59	19.61	27.20	56.00	-28.80	QP
6		0.9420	-9.37	19.61	10.24	46.00	-35.76	AVG
7		1.7745	7.52	19.62	27.14	56.00	-28.86	QP
8		1.7745	-8.55	19.62	11.07	46.00	-34.93	AVG
9		3.4980	9.88	19.66	29.54	56.00	-26.46	QP
10		3.4980	-7.51	19.66	12.15	46.00	-33.85	AVG
11		7.4985	8.23	19.74	27.97	60.00	-32.03	QP
12		7.4985	-4.38	19.74	15.36	50.00	-34.64	AVG

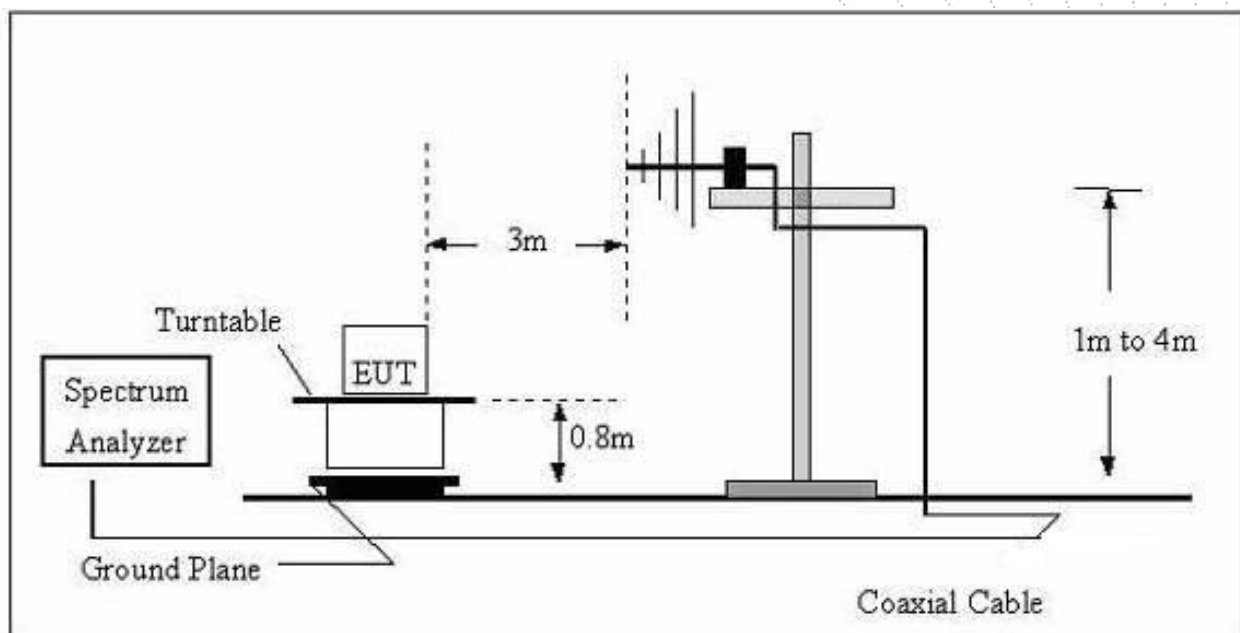
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

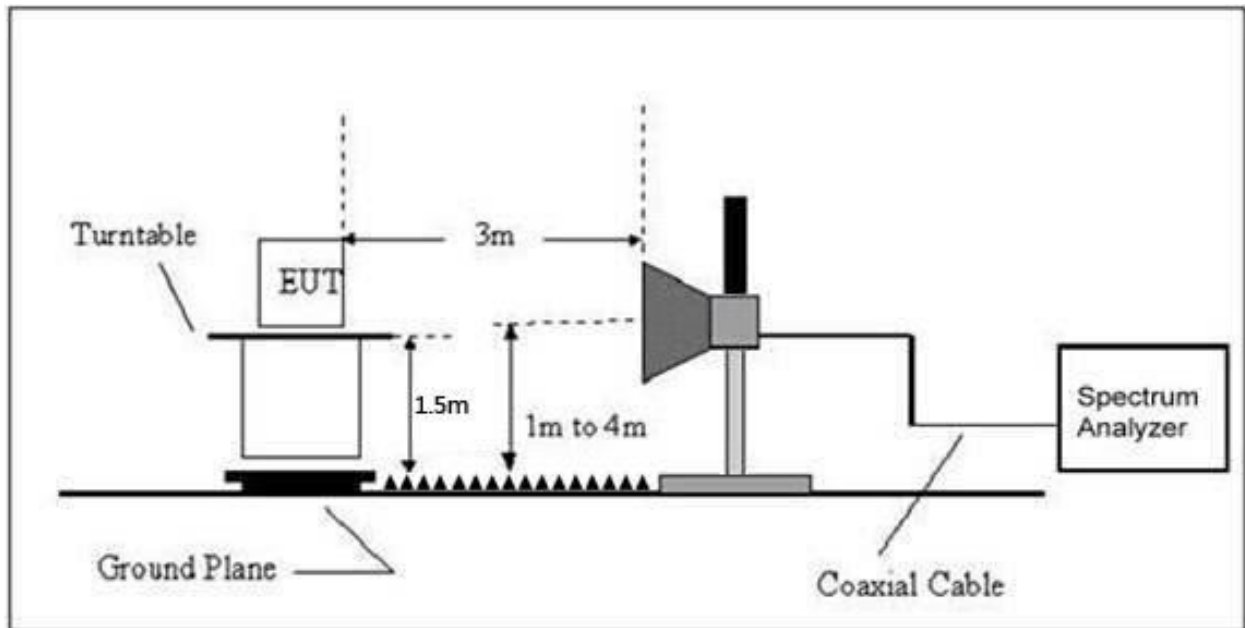
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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



7.2 Limit

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

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

Limits Of Radiated Emission Measurement (Above 1000MHz)

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

Notes:

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

7.3 Test Procedure

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

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

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

Use the following spectrum analyzer settings:

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

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

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

Note:

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

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

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

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

7.4 EUT Operating Conditions

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

7.5 Test Result

Below 30MHz

Temperature:	26°C	Relative Humidity:	24%
Pressure:	101 kPa	Test Voltage:	AC120/60Hz
Test Mode:	Mode 4	Polarization:	--

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

Note:

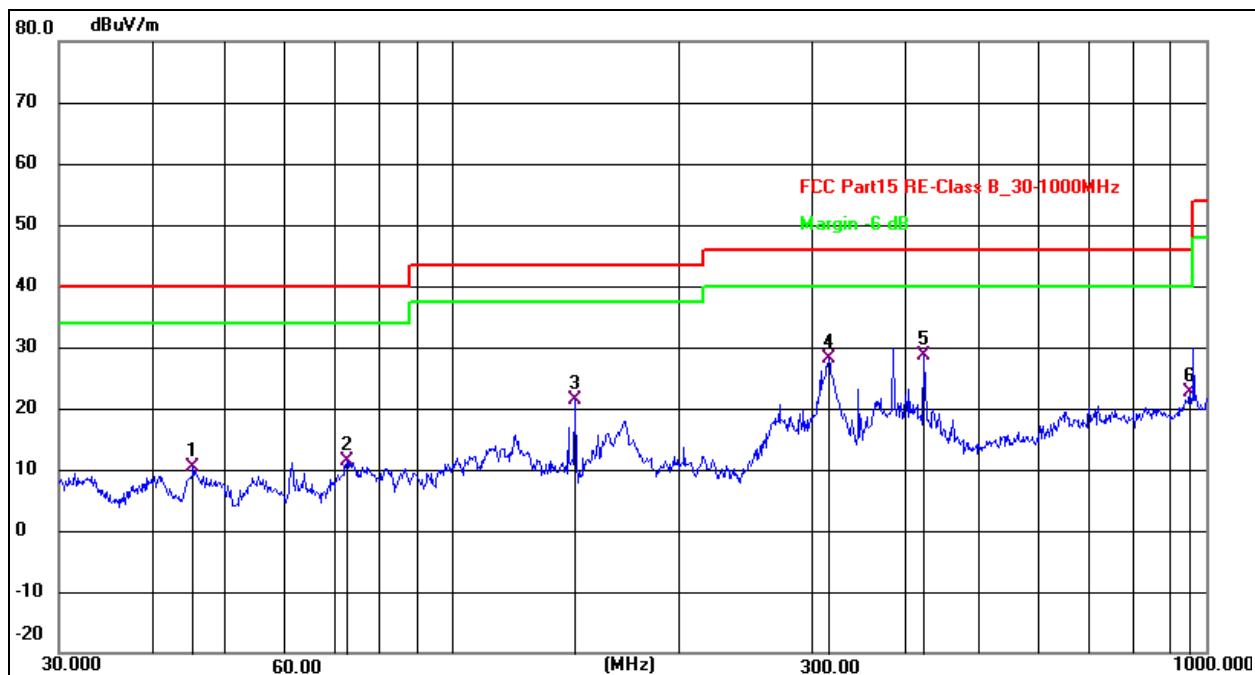
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

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℃	Relative Humidity:	54%
Pressure:	101 kPa	Test Voltage :	AC120/60Hz
Test Mode :	Mode 4	Polarization :	Horizontal

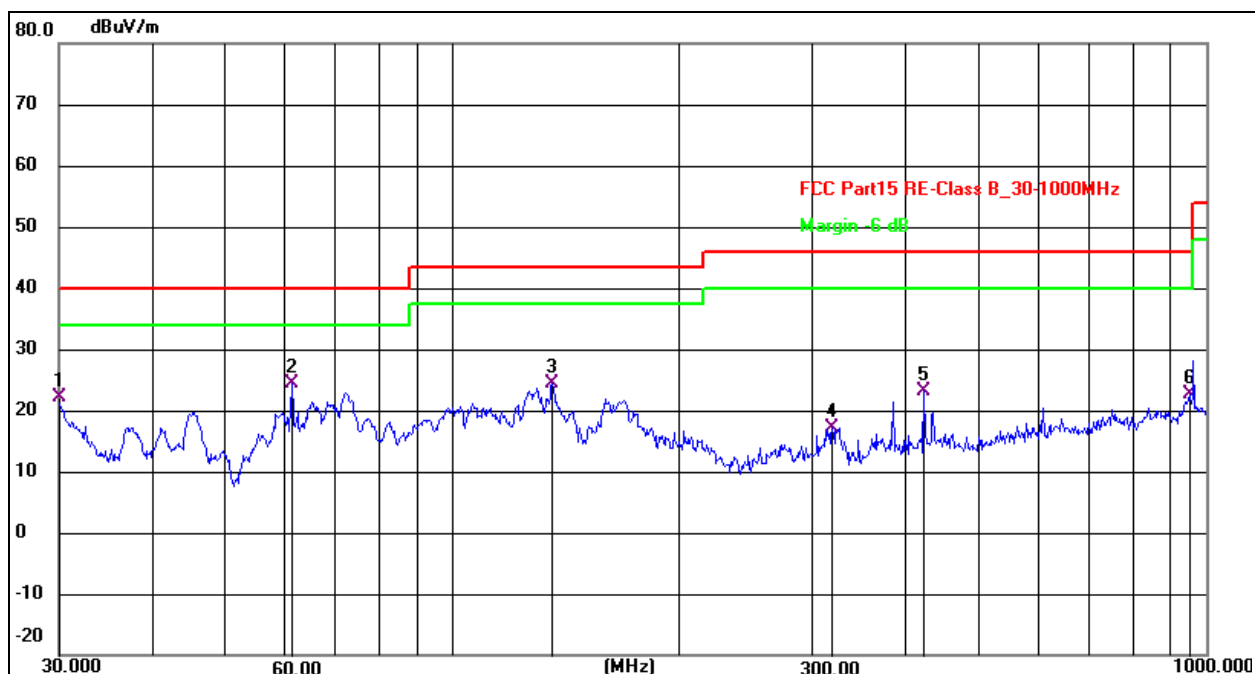


Remark:

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

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	45.2166	28.63	-18.26	10.37	40.00	-29.63	QP
2	72.3376	32.76	-21.38	11.38	40.00	-28.62	QP
3	145.3506	39.05	-17.78	21.27	43.50	-22.23	QP
4	315.4808	44.90	-16.71	28.19	46.00	-17.81	QP
5 *	422.0577	42.16	-13.65	28.51	46.00	-17.49	QP
6	952.0937	26.22	-3.70	22.52	46.00	-23.48	QP

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kPa	Test Voltage :	AC120/60Hz
Test Mode :	Mode 4	Polarization :	Vertical



Remark:

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

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	30.0000	41.06	-18.91	22.15	40.00	-17.85	QP
2 *	61.1316	43.66	-19.40	24.26	40.00	-15.74	QP
3	135.5062	42.95	-18.61	24.34	43.50	-19.16	QP
4	318.8170	33.81	-16.64	17.17	46.00	-28.83	QP
5	422.0577	36.67	-13.65	23.02	46.00	-22.98	QP
6	952.0937	26.22	-3.70	22.52	46.00	-23.48	QP

Between 1GHz – 40GHz

Test Mode:	TX(5.1G) - 802.11a
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Polar	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
(H/V)	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G									
V	4434.047	63.56	5.94	35.40	44.00	60.90	68.2	-7.30	PK
V	4434.047	43.44	5.94	35.40	44.00	40.78	54	-13.22	AV
V	10360.173	60.26	8.46	39.75	44.50	63.97	68.2	-4.23	PK
V	10360.173	43.29	8.46	39.75	44.50	47.00	54	-7.00	AV
V	15540.053	62.43	10.12	38.80	44.10	67.25	74	-6.75	PK
V	15540.053	43.09	10.12	38.80	42.70	49.31	54	-4.69	AV
H	4434.181	64.84	5.94	35.18	44.00	61.96	68.2	-6.24	PK
H	4434.181	43.73	5.94	35.18	44.00	40.85	54	-13.15	AV
H	10360.045	51.29	8.46	38.71	44.50	53.96	68.2	-14.24	PK
H	10360.045	44.06	8.46	38.71	44.50	46.73	54	-7.27	AV
H	15540.037	52.82	10.12	38.38	44.10	57.22	74	-16.78	PK
H	15540.037	43.80	10.12	38.38	44.10	48.20	54	-5.80	AV
middle Channel (5200 MHz)-Above 1G									
V	4592.122	62.98	6.48	36.35	44.05	61.76	74	-12.24	PK
V	4592.122	43.80	6.48	36.35	44.05	42.58	54	-11.42	AV
V	10400.010	60.53	8.47	37.88	44.51	62.37	68.2	-5.83	PK
V	10400.010	43.56	8.47	37.88	44.51	45.40	54	-8.60	AV
V	15600.051	62.10	10.12	38.80	44.10	66.92	74	-7.08	PK
V	15600.051	43.21	10.12	38.80	42.70	49.43	54	-4.57	AV
H	4592.011	64.39	6.48	36.37	44.05	63.19	74	-10.81	PK
H	4592.011	43.88	6.48	36.37	44.05	42.68	54	-11.32	AV
H	10400.165	50.62	8.47	38.64	44.50	53.23	68.2	-14.97	PK
H	10400.165	44.82	8.47	38.64	44.50	47.43	54	-6.57	AV
H	15600.006	50.37	10.12	38.38	44.10	54.77	74	-19.23	PK
H	15600.006	43.28	10.12	38.38	44.10	47.68	54	-6.32	AV
High Channel (5240 MHz)-Above 1G									
V	4739.045	63.37	7.10	37.24	43.50	64.21	74	-9.79	PK
V	4739.045	43.54	7.10	37.24	43.50	44.38	54	-9.62	AV
V	10480.017	63.28	8.46	37.68	44.50	64.92	68.2	-3.28	PK
V	10480.017	43.83	8.46	37.68	44.50	45.47	54	-8.53	AV
V	15720.186	64.47	10.12	38.80	44.10	69.29	74	-4.71	PK
V	15720.186	43.09	10.12	38.80	42.70	49.31	54	-4.69	AV
H	4739.119	62.83	7.10	37.24	43.50	63.67	74	-10.33	PK
H	4739.119	43.44	7.10	37.24	43.50	44.28	54	-9.72	AV
H	10480.019	53.81	8.46	38.57	44.50	56.34	68.2	-11.86	PK
H	10480.019	44.20	8.46	38.57	44.50	46.73	54	-7.27	AV
H	15720.035	51.22	10.12	38.38	44.10	55.62	74	-18.38	PK
H	15720.035	42.79	10.12	38.38	44.10	47.19	54	-6.81	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.

The worst case is Antenna A.

Test Mode:	TX(5.1G) - 802.11n-HT20
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/ m)	Margin (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G									
V	4434.132	64.78	5.94	35.40	44.00	62.12	68.2	-6.08	PK
V	4434.132	43.91	5.94	35.40	44.00	41.25	54	-12.75	AV
V	10360.052	60.77	8.46	39.75	44.50	64.48	68.2	-3.72	PK
V	10360.052	43.03	8.46	39.75	44.50	46.74	54	-7.26	AV
V	15540.148	63.67	10.12	38.80	44.10	68.49	74	-5.51	PK
V	15540.148	43.22	10.12	38.80	42.70	49.44	54	-4.56	AV
H	4434.101	61.26	5.94	35.18	44.00	58.38	68.2	-9.82	PK
H	4434.101	43.25	5.94	35.18	44.00	40.37	54	-13.63	AV
H	10360.021	54.60	8.46	38.71	44.50	57.27	68.2	-10.93	PK
H	10360.021	43.99	8.46	38.71	44.50	46.66	54	-7.34	AV
H	15540.027	53.66	10.12	38.38	44.10	58.06	74	-15.94	PK
H	15540.027	40.57	10.12	38.38	44.10	44.97	54	-9.03	AV
middle Channel (5200 MHz)-Above 1G									
V	4592.007	64.19	6.48	36.35	44.05	62.97	74	-11.03	PK
V	4592.007	43.47	6.48	36.35	44.05	42.25	54	-11.75	AV
V	10400.113	60.59	8.47	37.88	44.51	62.43	68.2	-5.77	PK
V	10400.113	43.14	8.47	37.88	44.51	44.98	54	-9.02	AV
V	15600.020	61.10	10.12	38.80	44.10	65.92	74	-8.08	PK
V	15600.020	43.60	10.12	38.80	42.70	49.82	54	-4.18	AV
H	4592.012	64.74	6.48	36.37	44.05	63.54	74	-10.46	PK
H	4592.012	43.68	6.48	36.37	44.05	42.48	54	-11.52	AV
H	10400.041	50.12	8.47	38.64	44.50	52.73	68.2	-15.47	PK
H	10400.041	43.40	8.47	38.64	44.50	46.01	54	-7.99	AV
H	15600.088	54.25	10.12	38.38	44.10	58.65	74	-15.35	PK
H	15600.088	44.03	10.12	38.38	44.10	48.43	54	-5.57	AV
High Channel (5240 MHz)-Above 1G									
V	4739.112	62.11	7.10	37.24	43.50	62.95	74	-11.05	PK
V	4739.112	43.74	7.10	37.24	43.50	44.58	54	-9.42	AV
V	10480.129	64.34	8.46	37.68	44.50	65.98	68.2	-2.22	PK
V	10480.129	43.59	8.46	37.68	44.50	45.23	54	-8.77	AV
V	15720.190	64.91	10.12	38.80	44.10	69.73	74	-4.27	PK
V	15720.190	43.67	10.12	38.80	42.70	49.89	54	-4.11	AV
H	4739.126	62.47	7.10	37.24	43.50	63.31	74	-10.69	PK
H	4739.126	43.21	7.10	37.24	43.50	44.05	54	-9.95	AV
H	10480.155	51.39	8.46	38.57	44.50	53.92	68.2	-14.28	PK
H	10480.155	44.64	8.46	38.57	44.50	47.17	54	-6.83	AV
H	15720.085	54.96	10.12	38.38	44.10	59.36	74	-14.64	PK
H	15720.085	44.81	10.12	38.38	44.10	49.21	54	-4.79	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 is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11n-HT40
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/ m)	Margin (dB)	Detector Type
Low Channel (5190 MHz)-Above 1G									
V	4434.052	64.29	5.94	35.40	44.00	61.63	68.2	-6.57	PK
V	4434.052	43.08	5.94	35.40	44.00	40.42	54	-13.58	AV
V	10380.134	60.78	8.46	39.75	44.50	64.49	68.2	-3.71	PK
V	10380.134	43.39	8.46	39.75	44.50	47.10	54	-6.90	AV
V	15570.045	64.91	10.12	38.80	44.10	69.73	74	-4.27	PK
V	15570.045	43.87	10.12	38.80	42.70	50.09	54	-3.91	AV
H	4434.034	64.16	5.94	35.18	44.00	61.28	74	-12.72	PK
H	4434.034	43.53	5.94	35.18	44.00	40.65	54	-13.35	AV
H	10380.075	50.78	8.46	38.71	44.50	53.45	68.2	-14.75	PK
H	10380.075	41.95	8.46	38.71	44.50	44.62	54	-9.38	AV
H	15570.161	54.09	10.12	38.38	44.10	58.49	74	-15.51	PK
H	15570.161	42.57	10.12	38.38	44.10	46.97	54	-7.03	AV
middle Channel (5230 MHz)-Above 1G									
V	4739.011	61.90	6.48	36.35	44.05	60.68	68.2	-7.52	PK
V	4739.011	43.19	6.48	36.35	44.05	41.97	54	-12.03	AV
V	10460.159	62.08	8.47	37.88	44.51	63.92	68.2	-4.28	PK
V	10460.159	43.41	8.47	37.88	44.51	45.25	54	-8.75	AV
V	15690.086	63.04	10.12	38.80	44.10	67.86	74	-6.14	PK
V	15690.086	43.96	10.12	38.80	42.70	50.18	54	-3.82	AV
H	4739.158	64.97	6.48	36.37	44.05	63.77	68.2	-4.43	PK
H	4739.158	43.46	6.48	36.37	44.05	42.26	54	-11.74	AV
H	10460.008	50.25	8.47	38.64	44.50	52.86	68.2	-15.34	PK
H	10460.008	42.01	8.47	38.64	44.50	44.62	54	-9.38	AV
H	15690.137	51.24	10.12	38.38	44.10	55.64	74	-18.36	PK
H	15690.137	42.25	10.12	38.38	44.10	46.65	54	-7.35	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 is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11ac-HT20
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G									
V	4434.169	63.97	5.94	35.40	44.00	61.31	68.2	-6.89	PK
V	4434.169	43.07	5.94	35.40	44.00	40.41	54	-13.59	AV
V	10360.028	62.72	8.46	39.75	44.50	66.43	68.2	-1.77	PK
V	10360.028	43.16	8.46	39.75	44.50	46.87	54	-7.13	AV
V	15540.040	63.56	10.12	38.80	44.10	68.38	74	-5.62	PK
V	15540.040	43.15	10.12	38.80	42.70	49.37	54	-4.63	AV
H	4434.160	61.22	5.94	35.18	44.00	58.34	68.2	-9.86	PK
H	4434.160	43.95	5.94	35.18	44.00	41.07	54	-12.93	AV
H	10360.191	52.87	8.46	38.71	44.50	55.54	68.2	-12.66	PK
H	10360.191	43.35	8.46	38.71	44.50	46.02	54	-7.98	AV
H	15540.083	52.04	10.12	38.38	44.10	56.44	74	-17.56	PK
H	15540.083	44.96	10.12	38.38	44.10	49.36	54	-4.64	AV
middle Channel (5200 MHz)-Above 1G									
V	4592.188	61.71	6.48	36.35	44.05	60.49	74	-13.51	PK
V	4592.188	43.12	6.48	36.35	44.05	41.90	54	-12.10	AV
V	10400.111	61.09	8.47	37.88	44.51	62.93	68.2	-5.27	PK
V	10400.111	43.82	8.47	37.88	44.51	45.66	54	-8.34	AV
V	15600.066	62.44	10.12	38.80	44.10	67.26	74	-6.74	PK
V	15600.066	43.29	10.12	38.80	42.70	49.51	54	-4.49	AV
H	4592.109	63.04	6.48	36.37	44.05	61.84	74	-12.16	PK
H	4592.109	43.62	6.48	36.37	44.05	42.42	54	-11.58	AV
H	10400.095	51.47	8.47	38.64	44.50	54.08	68.2	-14.12	PK
H	10400.095	41.37	8.47	38.64	44.50	43.98	54	-10.02	AV
H	15600.152	52.80	10.12	38.38	44.10	57.20	74	-16.80	PK
H	15600.152	42.10	10.12	38.38	44.10	46.50	54	-7.50	AV
High Channel (5240 MHz)-Above 1G									
V	4739.085	62.22	7.10	37.24	43.50	63.06	74	-10.94	PK
V	4739.085	43.49	7.10	37.24	43.50	44.33	54	-9.67	AV
V	10480.058	63.24	8.46	37.68	44.50	64.88	68.2	-3.32	PK
V	10480.058	43.11	8.46	37.68	44.50	44.75	54	-9.25	AV
V	15720.134	61.38	10.12	38.80	44.10	66.20	74	-7.80	PK
V	15720.134	43.58	10.12	38.80	42.70	49.80	54	-4.20	AV
H	4739.010	60.46	7.10	37.24	43.50	61.30	74	-12.70	PK
H	4739.010	43.63	7.10	37.24	43.50	44.47	54	-9.53	AV
H	10480.054	54.29	8.46	38.57	44.50	56.82	68.2	-11.38	PK
H	10480.054	44.74	8.46	38.57	44.50	47.27	54	-6.73	AV
H	15720.065	54.43	10.12	38.38	44.10	58.83	74	-15.17	PK
H	15720.065	44.95	10.12	38.38	44.10	49.35	54	-4.65	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 is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11ac-HT40
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/ m)	Margin (dB)	Detector Type
Low Channel (5190 MHz)-Above 1G									
V	4434.153	63.31	5.94	35.40	44.00	60.65	68.2	-7.55	PK
V	4434.153	43.89	5.94	35.40	44.00	41.23	54	-12.77	AV
V	10380.115	62.05	8.46	39.75	44.50	65.76	68.2	-2.44	PK
V	10380.115	43.31	8.46	39.75	44.50	47.02	54	-6.98	AV
V	15570.169	60.07	10.12	38.80	44.10	64.89	74	-9.11	PK
V	15570.169	43.70	10.12	38.80	42.70	49.92	54	-4.08	AV
H	4434.157	60.21	5.94	35.18	44.00	57.33	74	-16.67	PK
H	4434.157	43.07	5.94	35.18	44.00	40.19	54	-13.81	AV
H	10380.125	52.66	8.46	38.71	44.50	55.33	68.2	-12.87	PK
H	10380.125	40.69	8.46	38.71	44.50	43.36	54	-10.64	AV
H	15570.191	52.78	10.12	38.38	44.10	57.18	74	-16.82	PK
H	15570.191	41.05	10.12	38.38	44.10	45.45	54	-8.55	AV
middle Channel (5230 MHz)-Above 1G									
V	4739.075	64.91	6.48	36.35	44.05	63.69	68.2	-4.51	PK
V	4739.075	43.40	6.48	36.35	44.05	42.18	54	-11.82	AV
V	10460.136	64.74	8.47	37.88	44.51	66.58	68.2	-1.62	PK
V	10460.136	43.88	8.47	37.88	44.51	45.72	54	-8.28	AV
V	15690.151	62.57	10.12	38.80	44.10	67.39	74	-6.61	PK
V	15690.151	43.27	10.12	38.80	42.70	49.49	54	-4.51	AV
H	4739.112	64.35	6.48	36.37	44.05	63.15	68.2	-5.05	PK
H	4739.112	43.29	6.48	36.37	44.05	42.09	54	-11.91	AV
H	10460.196	50.36	8.47	38.64	44.50	52.97	68.2	-15.23	PK
H	10460.196	42.95	8.47	38.64	44.50	45.56	54	-8.44	AV
H	15690.072	50.35	10.12	38.38	44.10	54.75	74	-19.25	PK
H	15690.072	44.44	10.12	38.38	44.10	48.84	54	-5.16	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 is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11ac 80
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/ m)	Margin (dB)	Detector Type
Low Channel (5210 MHz)-Above 1G									
V	4434.004	63.17	5.94	35.40	44.00	60.51	68.2	-7.69	PK
V	4434.004	43.90	5.94	35.40	44.00	41.24	54	-12.76	AV
V	10420.150	63.68	8.46	39.75	44.50	67.39	68.2	-0.81	PK
V	10420.150	43.41	8.46	39.75	44.50	47.12	54	-6.88	AV
V	15630.177	63.87	10.12	38.80	44.10	68.69	74	-5.31	PK
V	15630.177	43.18	10.12	38.80	42.70	49.40	54	-4.60	AV
H	4434.090	62.94	5.94	35.18	44.00	60.06	68.2	-8.14	PK
H	4434.090	43.37	5.94	35.18	44.00	40.49	54	-13.51	AV
H	10420.070	53.22	8.46	38.71	44.50	55.89	68.2	-12.31	PK
H	10420.070	44.12	8.46	38.71	44.50	46.79	54	-7.21	AV
H	15630.099	52.66	10.12	38.38	44.10	57.06	74	-16.94	PK
H	15630.099	41.05	10.12	38.38	44.10	45.45	54	-8.55	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 is MIMO Mode.

Test Mode:	TX (5.8G) -- 802.11a
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.051	55.27	5.94	35.40	44.00	52.61	74	-21.39	PK
V	4679.051	43.79	5.94	35.40	44.00	41.13	54	-12.87	AV
V	11490.115	56.47	8.46	39.75	44.50	60.18	68.2	-8.02	PK
V	11490.115	43.96	8.46	39.75	44.50	47.67	54	-6.33	AV
V	17235.151	59.63	10.12	38.80	44.10	64.45	68.2	-3.75	PK
V	17235.151	43.15	10.12	38.80	42.70	49.37	54	-4.63	AV
H	4679.175	56.89	5.94	35.18	44.00	54.01	74	-19.99	PK
H	4679.175	43.30	5.94	35.18	44.00	40.42	54	-13.58	AV
H	11490.041	52.15	8.46	38.71	44.50	54.82	68.2	-13.38	PK
H	11490.041	43.72	8.46	38.71	44.50	46.39	54	-7.61	AV
H	17235.033	54.89	10.12	38.38	44.10	59.29	68.2	-8.91	PK
H	17235.033	43.32	10.12	38.38	44.10	47.72	54	-6.28	AV
middle Channel (5785 MHz)-Above 1G									
V	4592.036	55.80	6.48	36.35	44.05	54.58	74	-19.42	PK
V	4592.036	43.55	6.48	36.35	44.05	42.33	54	-11.67	AV
V	11570.163	59.82	8.47	37.88	44.51	61.66	68.2	-6.54	PK
V	11570.163	43.03	8.47	37.88	44.51	44.87	54	-9.13	AV
V	17355.152	59.49	10.12	38.80	44.10	64.31	68.2	-3.89	PK
V	17355.152	39.20	10.12	38.80	42.70	45.42	54	-8.58	AV
H	4592.150	58.67	6.48	36.37	44.05	57.47	74	-16.53	PK
H	4592.150	43.68	6.48	36.37	44.05	42.48	54	-11.52	AV
H	11570.123	52.07	8.47	38.64	44.50	54.68	68.2	-13.52	PK
H	11570.123	43.91	8.47	38.64	44.50	46.52	54	-7.48	AV
H	17355.069	54.79	10.12	38.38	44.10	59.19	68.2	-9.01	PK
H	17355.069	40.47	10.12	38.38	44.10	44.87	54	-9.13	AV
High Channel (5825 MHz)-Above 1G									
V	6039.175	56.14	7.10	37.24	43.50	56.98	68.2	-11.22	PK
V	6039.175	43.47	7.10	37.24	43.50	44.31	54	-9.69	AV
V	11650.123	58.17	8.46	37.68	44.50	59.81	74	-14.19	PK
V	11650.123	43.10	8.46	37.68	44.50	44.74	54	-9.26	AV
V	17475.059	56.37	10.12	38.80	44.10	61.19	68.2	-7.01	PK
V	17475.059	43.01	10.12	38.80	42.70	49.23	54	-4.77	AV
H	6039.027	58.29	7.10	37.24	43.50	59.13	68.2	-9.07	PK
H	6039.027	43.34	7.10	37.24	43.50	44.18	54	-9.82	AV
H	11650.014	52.93	8.46	38.57	44.50	55.46	74	-18.54	PK
H	11650.014	41.28	8.46	38.57	44.50	43.81	54	-10.19	AV
H	17475.109	51.23	10.12	38.38	44.10	55.63	68.2	-12.57	PK
H	17475.109	41.84	10.12	38.38	44.10	46.24	54	-7.76	AV

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

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

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

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

The Worst mode is Antenna A.

Test Mode:	TX (5.8G) --802.11n-HT20
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.131	57.54	5.94	35.40	44.00	54.88	74	-19.12	PK
V	4679.131	43.55	5.94	35.40	44.00	40.89	54	-13.11	AV
V	11490.119	53.33	8.46	39.75	44.50	57.04	68.2	-11.16	PK
V	11490.119	43.92	8.46	39.75	44.50	47.63	54	-6.37	AV
V	17235.177	60.13	10.12	38.80	44.10	64.95	68.2	-3.25	PK
V	17235.177	43.74	10.12	38.80	42.70	49.96	54	-4.04	AV
H	4679.034	57.23	5.94	35.18	44.00	54.35	74	-19.65	PK
H	4679.034	43.14	5.94	35.18	44.00	40.26	54	-13.74	AV
H	11490.102	51.33	8.46	38.71	44.50	54.00	68.2	-14.20	PK
H	11490.102	44.31	8.46	38.71	44.50	46.98	54	-7.02	AV
H	17235.056	52.52	10.12	38.38	44.10	56.92	68.2	-11.28	PK
H	17235.056	43.62	10.12	38.38	44.10	48.02	54	-5.98	AV
middle Channel (5785 MHz)-Above 1G									
V	4592.057	59.29	6.48	36.35	44.05	58.07	74	-15.93	PK
V	4592.057	43.09	6.48	36.35	44.05	41.87	54	-12.13	AV
V	11570.038	57.62	8.47	37.88	44.51	59.46	68.2	-8.74	PK
V	11570.038	43.44	8.47	37.88	44.51	45.28	54	-8.72	AV
V	17355.106	59.38	10.12	38.80	44.10	64.20	68.2	-4.00	PK
V	17355.106	43.30	10.12	38.80	42.70	49.52	54	-4.48	AV
H	4592.001	56.30	6.48	36.37	44.05	55.10	74	-18.90	PK
H	4592.001	43.90	6.48	36.37	44.05	42.70	54	-11.30	AV
H	11570.021	52.49	8.47	38.64	44.50	55.10	68.2	-13.10	PK
H	11570.021	43.96	8.47	38.64	44.50	46.57	54	-7.43	AV
H	17355.168	52.50	10.12	38.38	44.10	56.90	68.2	-11.30	PK
H	17355.168	43.18	10.12	38.38	44.10	47.58	54	-6.42	AV
High Channel (5825 MHz)-Above 1G									
V	6039.168	59.05	7.10	37.24	43.50	59.89	68.2	-8.31	PK
V	6039.168	43.06	7.10	37.24	43.50	43.90	54	-10.10	AV
V	11650.058	57.58	8.46	37.68	44.50	59.22	74	-14.78	PK
V	11650.058	43.78	8.46	37.68	44.50	45.42	54	-8.58	AV
V	17475.156	56.44	10.12	38.80	44.10	61.26	68.2	-6.94	PK
V	17475.156	43.02	10.12	38.80	42.70	49.24	54	-4.76	AV
H	6039.108	58.47	7.10	37.24	43.50	59.31	68.2	-8.89	PK
H	6039.108	43.34	7.10	37.24	43.50	44.18	54	-9.82	AV
H	11650.171	50.29	8.46	38.57	44.50	52.82	74	-21.18	PK
H	11650.171	41.35	8.46	38.57	44.50	43.88	54	-10.12	AV
H	17475.064	50.23	10.12	38.38	44.10	54.63	68.2	-13.57	PK
H	17475.064	41.45	10.12	38.38	44.10	45.85	54	-8.15	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 is MIMO Mode.

Test Mode:	TX (5.8G) -- 802.11n-HT40
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/ m)	Margin (dB)	Detector Type
Low Channel (5755 MHz)-Above 1G									
V	4679.011	60.42	5.94	35.40	44.00	57.76	74	-16.24	PK
V	4679.011	43.83	5.94	35.40	44.00	41.17	54	-12.83	AV
V	11510.165	56.62	8.46	39.75	44.50	60.33	74	-13.67	PK
V	11510.165	43.93	8.46	39.75	44.50	47.64	54	-6.36	AV
V	17265.137	58.19	10.12	38.80	44.10	63.01	68.2	-5.19	PK
V	17265.137	2.00	10.12	38.80	42.70	8.22	54	-45.78	AV
H	4679.195	57.46	5.94	35.18	44.00	54.58	74	-19.42	PK
H	4679.195	43.65	5.94	35.18	44.00	40.77	54	-13.23	AV
H	11510.073	51.53	8.46	38.71	44.50	54.20	74	-19.80	PK
H	11510.073	41.00	8.46	38.71	44.50	43.67	54	-10.33	AV
H	17265.077	53.53	10.12	38.38	44.10	57.93	68.2	-10.27	PK
H	17265.077	41.87	10.12	38.38	44.10	46.27	54	-7.73	AV
middle Channel (5795 MHz)-Above 1G									
V	6039.190	59.80	6.48	36.35	44.05	58.58	68.2	-9.62	PK
V	6039.190	43.15	6.48	36.35	44.05	41.93	54	-12.07	AV
V	11590.175	55.03	8.47	37.88	44.51	56.87	74	-17.13	PK
V	11590.175	43.92	8.47	37.88	44.51	45.76	54	-8.24	AV
V	17385.106	55.28	10.12	38.80	44.10	60.10	68.2	-8.10	PK
V	17385.106	41.26	10.12	38.80	42.70	47.48	54	-6.52	AV
H	6039.193	57.61	6.48	36.37	44.05	56.41	68.2	-11.79	PK
H	6039.193	43.16	6.48	36.37	44.05	41.96	54	-12.04	AV
H	11590.034	50.15	8.47	38.64	44.50	52.76	74	-21.24	PK
H	11590.034	43.45	8.47	38.64	44.50	46.06	54	-7.94	AV
H	17385.089	50.97	10.12	38.38	44.10	55.37	68.2	-12.83	PK
H	17385.089	43.45	10.12	38.38	44.10	47.85	54	-6.15	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.

The Worst mode is Antenna A.

Test Mode:	TX (5.8G) --802.11ac-HT20
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.178	58.61	5.94	35.40	44.00	55.95	74	-18.05	PK
V	4679.178	43.98	5.94	35.40	44.00	41.32	54	-12.68	AV
V	11490.014	56.38	8.46	39.75	44.50	60.09	68.2	-8.11	PK
V	11490.014	43.53	8.46	39.75	44.50	47.24	54	-6.76	AV
V	17235.153	57.50	10.12	38.80	44.10	62.32	68.2	-5.88	PK
V	17235.153	43.69	10.12	38.80	42.70	49.91	54	-4.09	AV
H	4679.068	57.17	5.94	35.18	44.00	54.29	74	-19.71	PK
H	4679.068	43.55	5.94	35.18	44.00	40.67	54	-13.33	AV
H	11490.169	47.56	8.46	38.71	44.50	50.23	68.2	-17.97	PK
H	11490.169	43.47	8.46	38.71	44.50	46.14	54	-7.86	AV
H	17235.070	54.63	10.12	38.38	44.10	59.03	68.2	-9.17	PK
H	17235.070	40.74	10.12	38.38	44.10	45.14	54	-8.86	AV
middle Channel (5785 MHz)-Above 1G									
V	4592.116	61.29	6.48	36.35	44.05	60.07	74	-13.93	PK
V	4592.116	43.62	6.48	36.35	44.05	42.40	54	-11.60	AV
V	11570.170	56.34	8.47	37.88	44.51	58.18	68.2	-10.02	PK
V	11570.170	43.49	8.47	37.88	44.51	45.33	54	-8.67	AV
V	17355.136	57.45	10.12	38.80	44.10	62.27	68.2	-5.93	PK
V	17355.136	43.88	10.12	38.80	42.70	50.10	54	-3.90	AV
H	4592.121	60.63	6.48	36.37	44.05	59.43	74	-14.57	PK
H	4592.121	43.02	6.48	36.37	44.05	41.82	54	-12.18	AV
H	11570.174	53.46	8.47	38.64	44.50	56.07	68.2	-12.13	PK
H	11570.174	42.38	8.47	38.64	44.50	44.99	54	-9.01	AV
H	17355.117	51.82	10.12	38.38	44.10	56.22	68.2	-11.98	PK
H	17355.117	43.75	10.12	38.38	44.10	48.15	54	-5.85	AV
High Channel (5825 MHz)-Above 1G									
V	6039.071	59.91	7.10	37.24	43.50	60.75	68.2	-7.45	PK
V	6039.071	43.41	7.10	37.24	43.50	44.25	54	-9.75	AV
V	11650.106	56.60	8.46	37.68	44.50	58.24	74	-15.76	PK
V	11650.106	43.15	8.46	37.68	44.50	44.79	54	-9.21	AV
V	17475.042	57.61	10.12	38.80	44.10	62.43	68.2	-5.77	PK
V	17475.042	43.54	10.12	38.80	42.70	49.76	54	-4.24	AV
H	6039.102	57.55	7.10	37.24	43.50	58.39	68.2	-9.81	PK
H	6039.102	43.75	7.10	37.24	43.50	44.59	54	-9.41	AV
H	11650.012	51.67	8.46	38.57	44.50	54.20	74	-19.80	PK
H	11650.012	40.19	8.46	38.57	44.50	42.72	54	-11.28	AV
H	17475.153	52.86	10.12	38.38	44.10	57.26	68.2	-10.94	PK
H	17475.153	44.47	10.12	38.38	44.10	48.87	54	-5.13	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 is MIMO Mode.

Test Mode :	TX (5.8G) -- 802.11ac-HT40
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5755 MHz)-Above 1G									
V	4679.022	59.33	5.94	35.40	44.00	56.67	74	-17.33	PK
V	4679.022	43.87	5.94	35.40	44.00	41.21	54	-12.79	AV
V	11510.101	56.72	8.46	39.75	44.50	60.43	74	-13.57	PK
V	11510.101	43.81	8.46	39.75	44.50	47.52	54	-6.48	AV
V	17265.136	59.85	10.12	38.80	44.10	64.67	68.2	-3.53	PK
V	17265.136	2.00	10.12	38.80	42.70	8.22	54	-45.78	AV
H	4679.155	60.42	5.94	35.18	44.00	57.54	74	-16.46	PK
H	4679.155	43.48	5.94	35.18	44.00	40.60	54	-13.40	AV
H	11510.024	52.32	8.46	38.71	44.50	54.99	74	-19.01	PK
H	11510.024	42.34	8.46	38.71	44.50	45.01	54	-8.99	AV
H	17265.143	52.69	10.12	38.38	44.10	57.09	68.2	-11.11	PK
H	17265.143	44.11	10.12	38.38	44.10	48.51	54	-5.49	AV
middle Channel (5795 MHz)-Above 1G									
V	6039.196	56.47	6.48	36.35	44.05	55.25	68.2	-12.95	PK
V	6039.196	43.60	6.48	36.35	44.05	42.38	54	-11.62	AV
V	11590.121	55.76	8.47	37.88	44.51	57.60	74	-16.40	PK
V	11590.121	43.43	8.47	37.88	44.51	45.27	54	-8.73	AV
V	17385.137	55.91	10.12	38.80	44.10	60.73	68.2	-7.47	PK
V	17385.137	41.38	10.12	38.80	42.70	47.60	54	-6.40	AV
H	6039.021	60.31	6.48	36.37	44.05	59.11	68.2	-9.09	PK
H	6039.021	43.88	6.48	36.37	44.05	42.68	54	-11.32	AV
H	11590.113	53.52	8.47	38.64	44.50	56.13	74	-17.87	PK
H	11590.113	42.80	8.47	38.64	44.50	45.41	54	-8.59	AV
H	17385.013	54.95	10.12	38.38	44.10	59.35	68.2	-8.85	PK
H	17385.013	40.41	10.12	38.38	44.10	44.81	54	-9.19	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.

The Worst mode is Antenna A.

Test Mode :	TX (5.8G) -- 802.11ac 80
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/ m)	Margin (dB)	Detector Type
Low Channel (5775 MHz)-Above 1G									
V	4679.156	55.33	5.94	35.40	44.00	52.67	74	-21.33	PK
V	4679.156	43.92	5.94	35.40	44.00	41.26	54	-12.74	AV
V	11550.078	56.97	8.46	39.75	44.50	60.68	74	-13.32	PK
V	11550.078	43.13	8.46	39.75	44.50	46.84	54	-7.16	AV
V	17325.064	57.52	10.12	38.80	44.10	62.34	68.2	-5.86	PK
V	17325.064	41.68	10.12	38.80	42.70	47.90	54	-6.10	AV
H	4679.033	56.46	5.94	35.18	44.00	53.58	74	-20.42	PK
H	4679.033	43.98	5.94	35.18	44.00	41.10	54	-12.90	AV
H	11550.030	53.74	8.46	38.71	44.50	56.41	74	-17.59	PK
H	11550.030	43.49	8.46	38.71	44.50	46.16	54	-7.84	AV
H	17325.174	53.45	10.12	38.38	44.10	57.85	68.2	-10.35	PK
H	17325.174	43.22	10.12	38.38	44.10	47.62	54	-6.38	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.

The Worst mode is Antenna A.

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

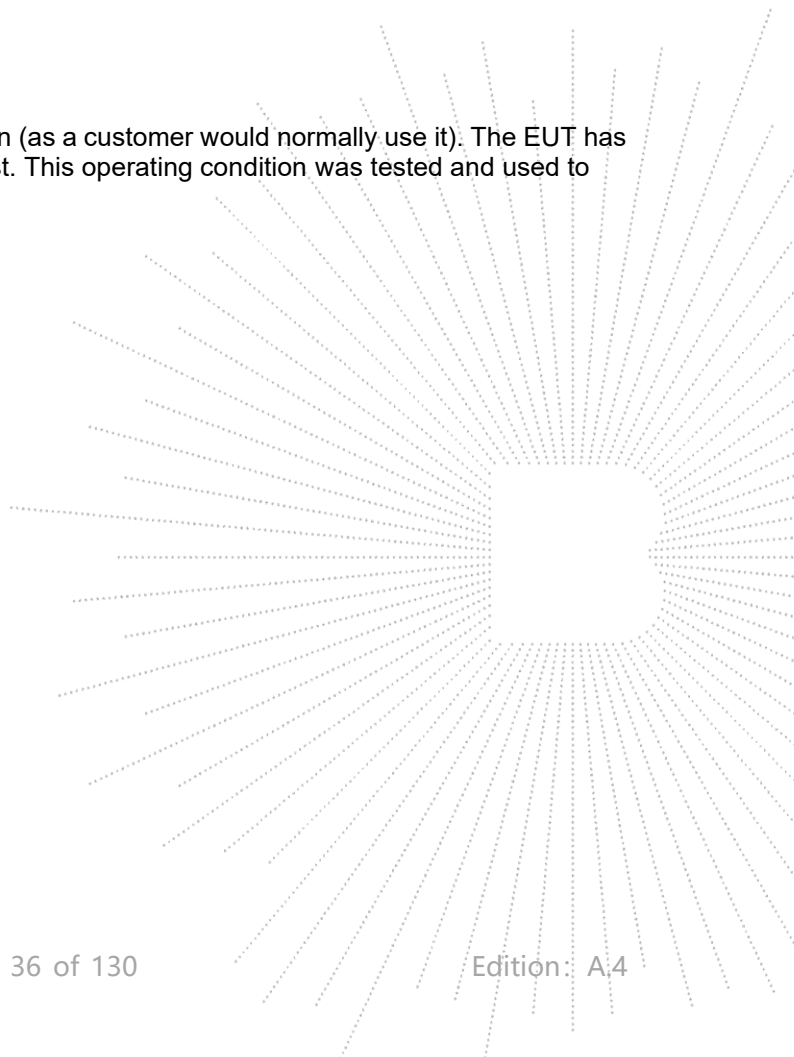
For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of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

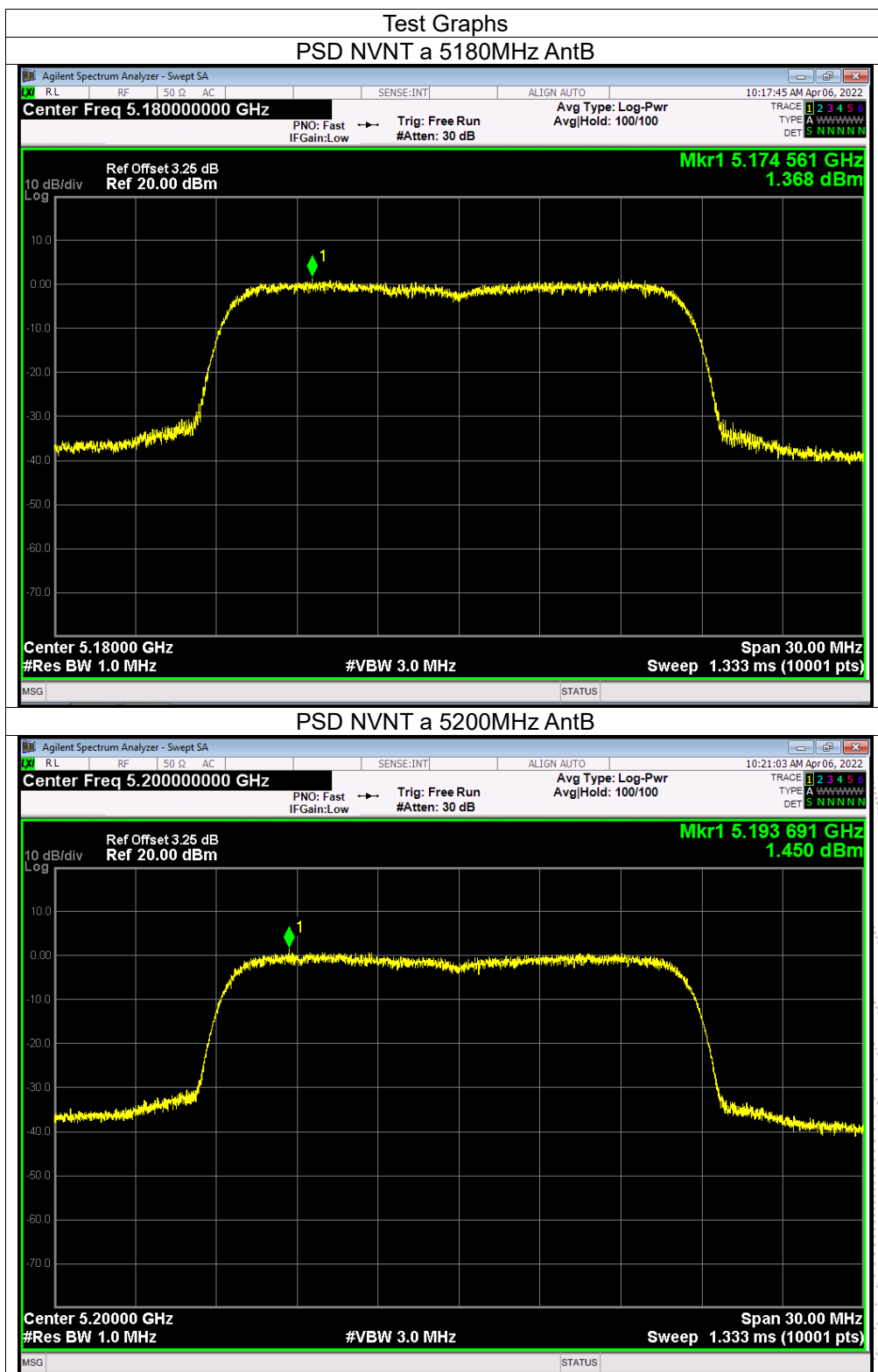


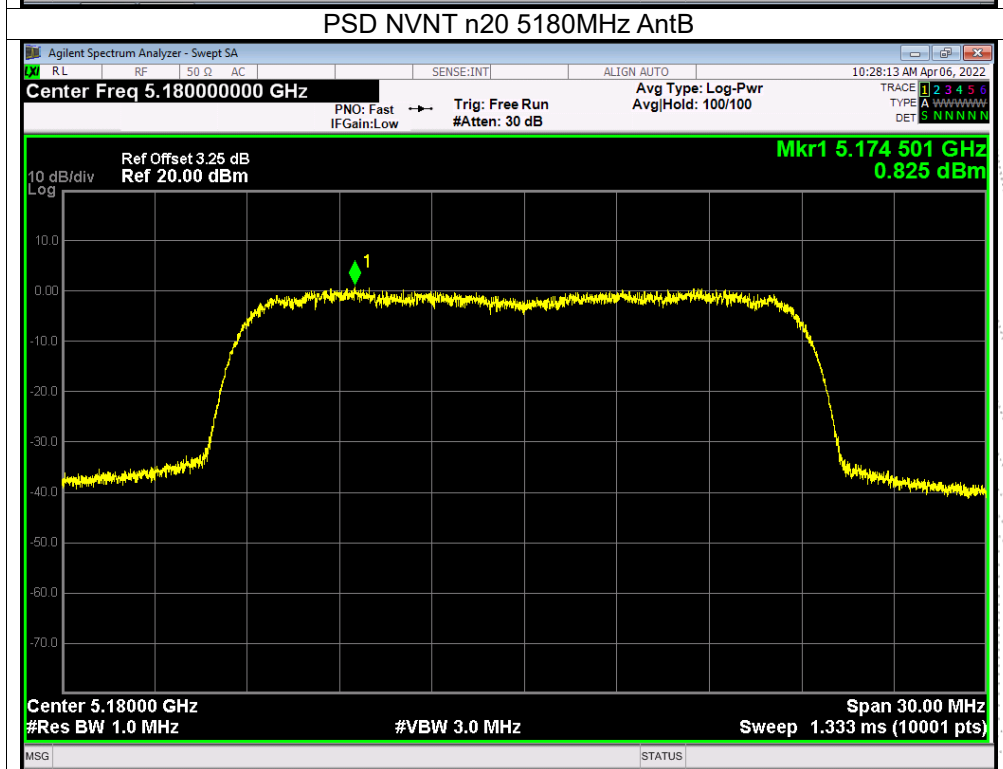
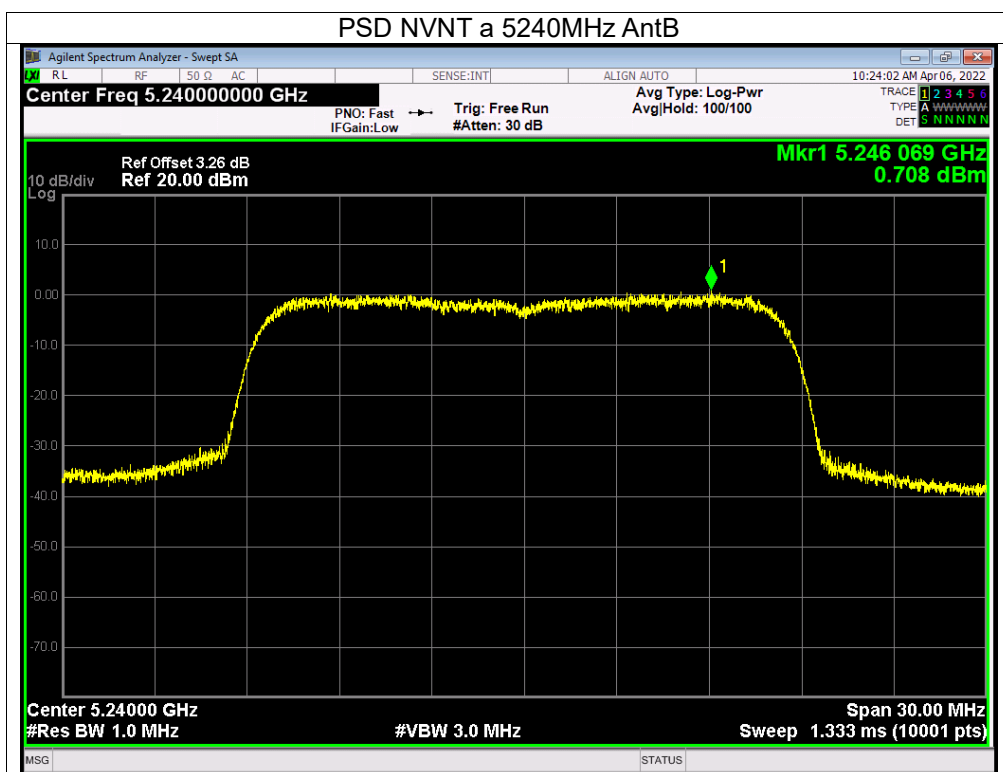
8.5 Test Result

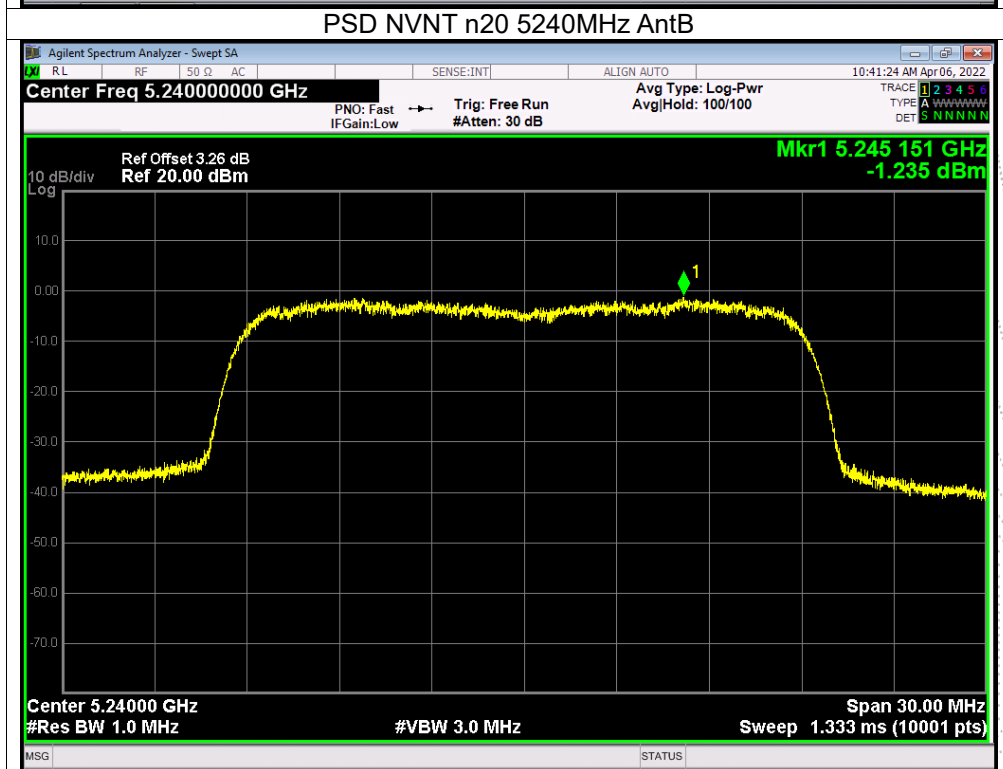
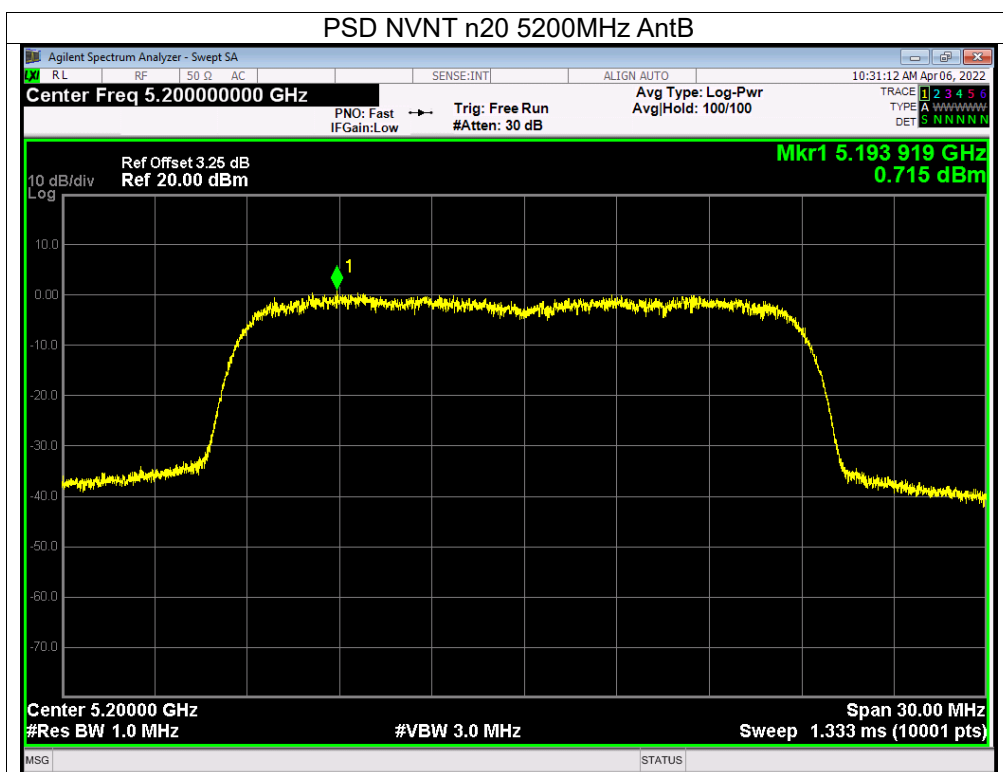
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX Frequency U-NII-1 (5180-5240MHz)		

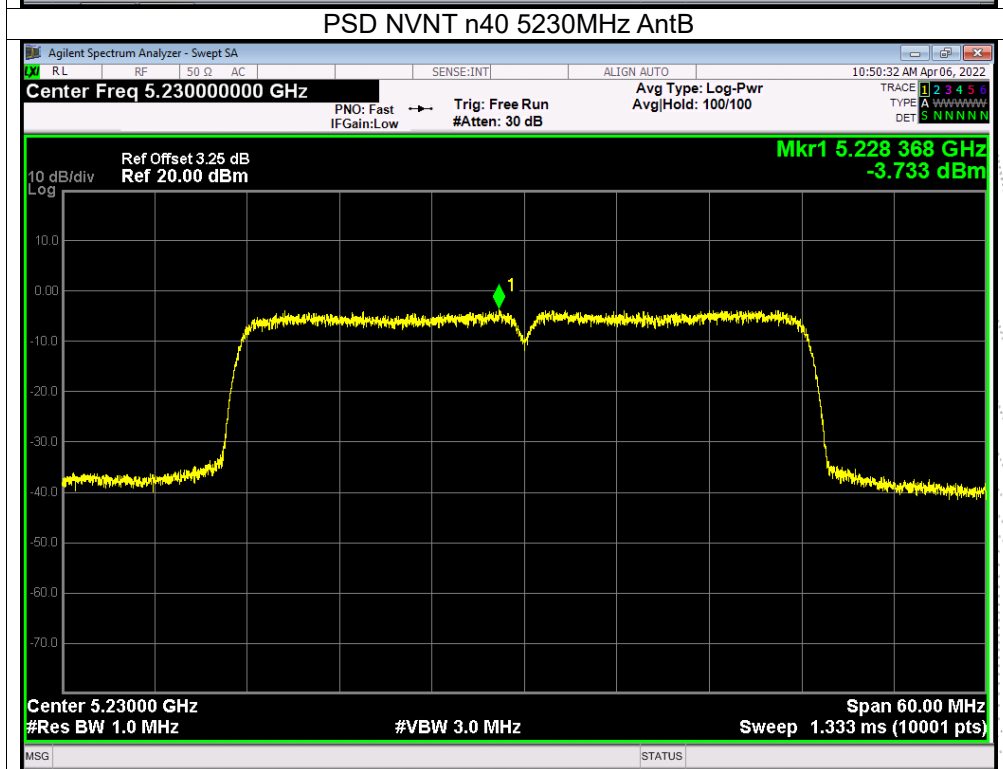
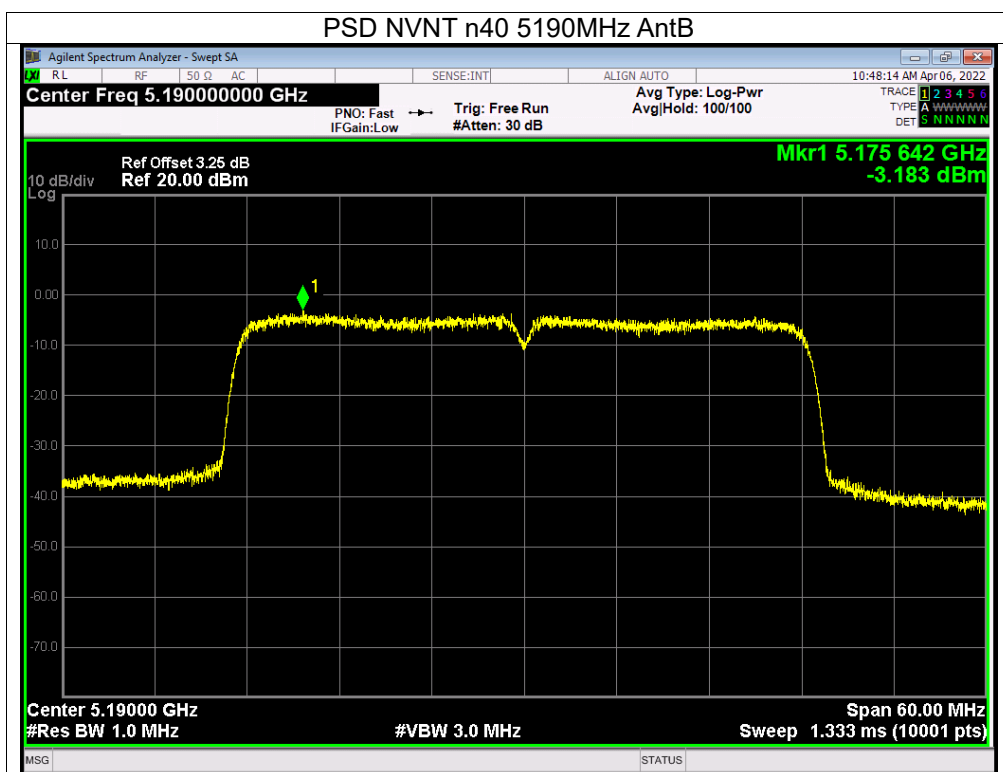
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

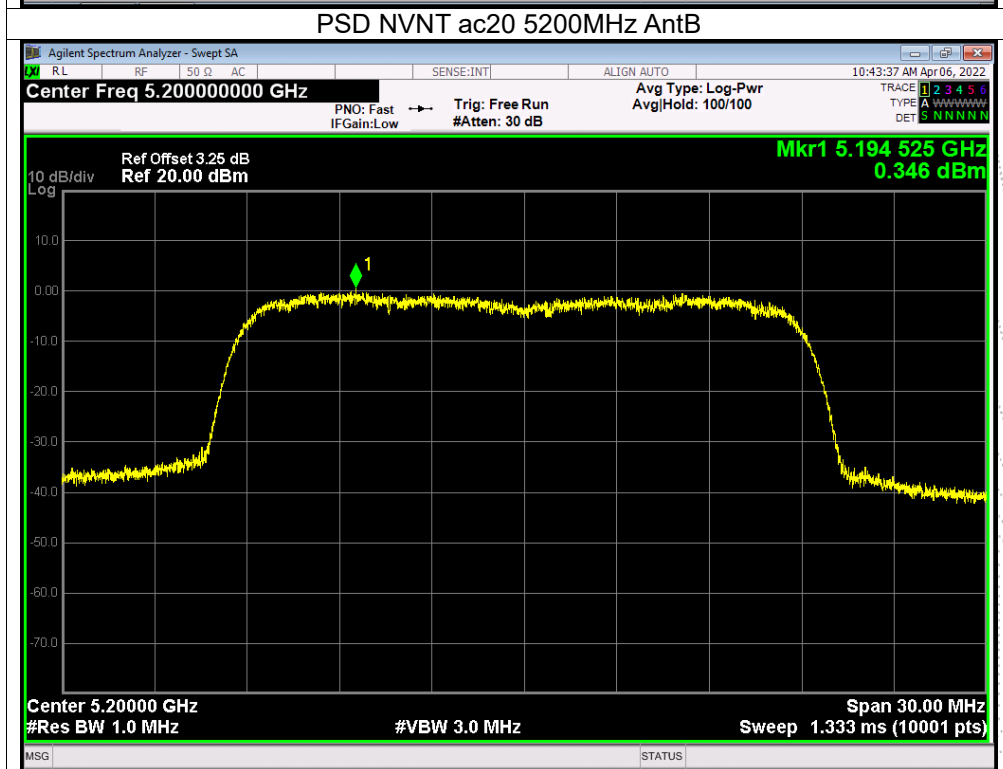
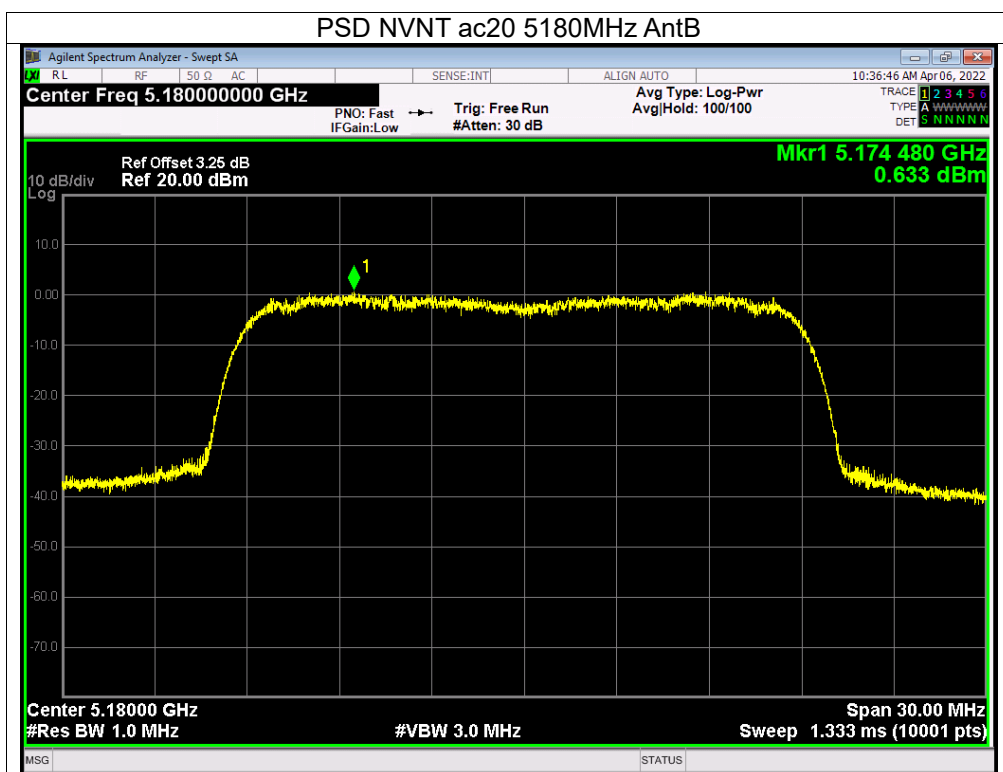
Mode	Frequency	Measured Power Density (dBm/MHz)			Limit (dBm/MHz)	Result
		ANT A	ANT B	Total		
802.11 a	5180 MHz	0.97	1.37	/	11	PASS
	5200 MHz	0.65	1.45	/	11	PASS
	5240 MHz	-0.73	0.71	/	11	PASS
802.11 n20	5180 MHz	0.30	0.83	3.58	11	PASS
	5200 MHz	0.40	0.72	3.57	11	PASS
	5240 MHz	-1.13	-1.24	1.83	11	PASS
802.11 n40	5190 MHz	-2.87	-3.18	-0.01	11	PASS
	5230 MHz	-3.49	-3.73	-0.60	11	PASS
802.11 ac20	5180 MHz	0.52	0.63	3.59	11	PASS
	5200 MHz	-0.18	0.35	3.10	11	PASS
	5240 MHz	-1.14	-1.21	1.84	11	PASS
802.11 ac40	5190 MHz	-3.80	-3.48	-0.63	11	PASS
	5230 MHz	-3.63	-3.55	-0.58	11	PASS
802.11 AC80	5210 MHz	-6.10	-6.33	-3.20	11	PASS

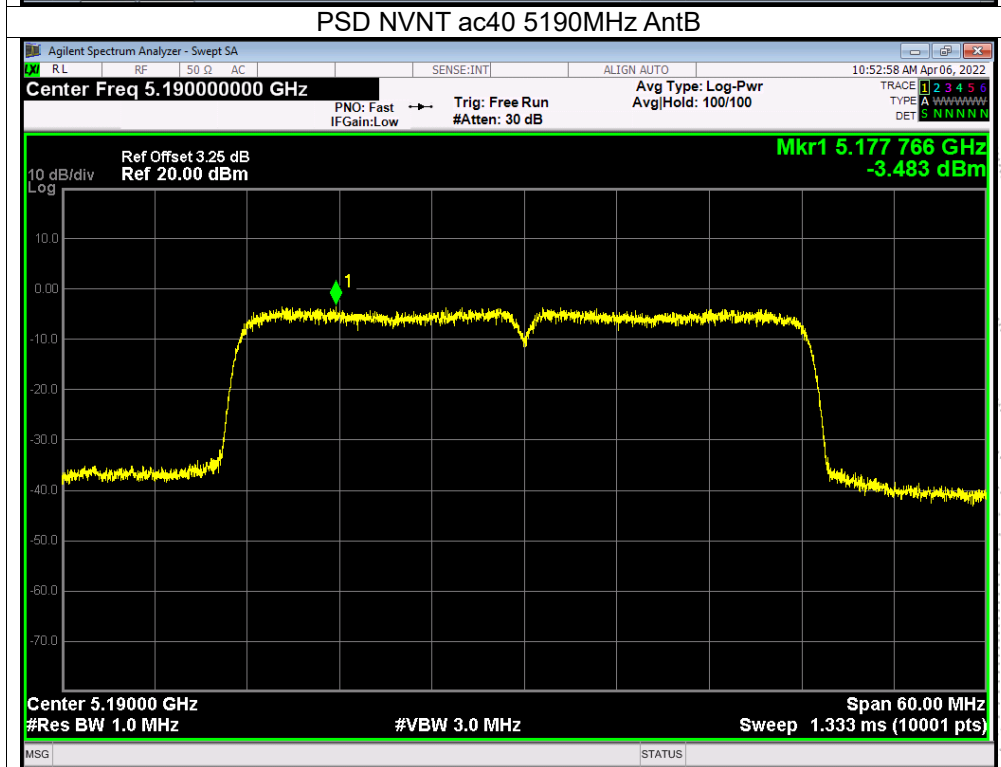
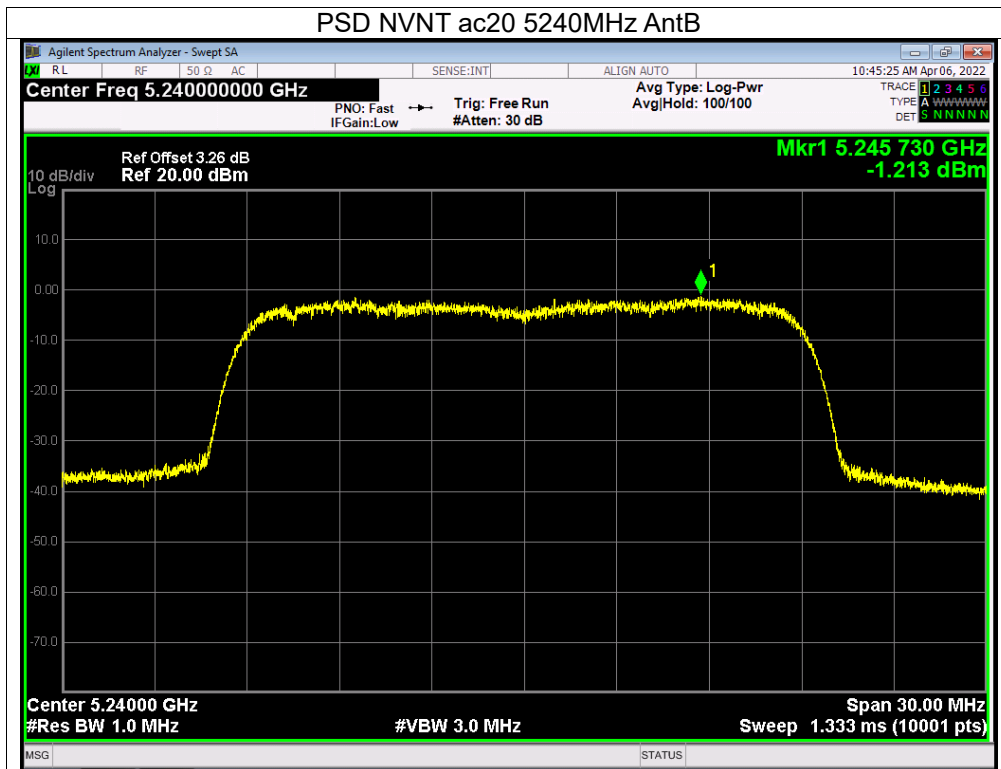


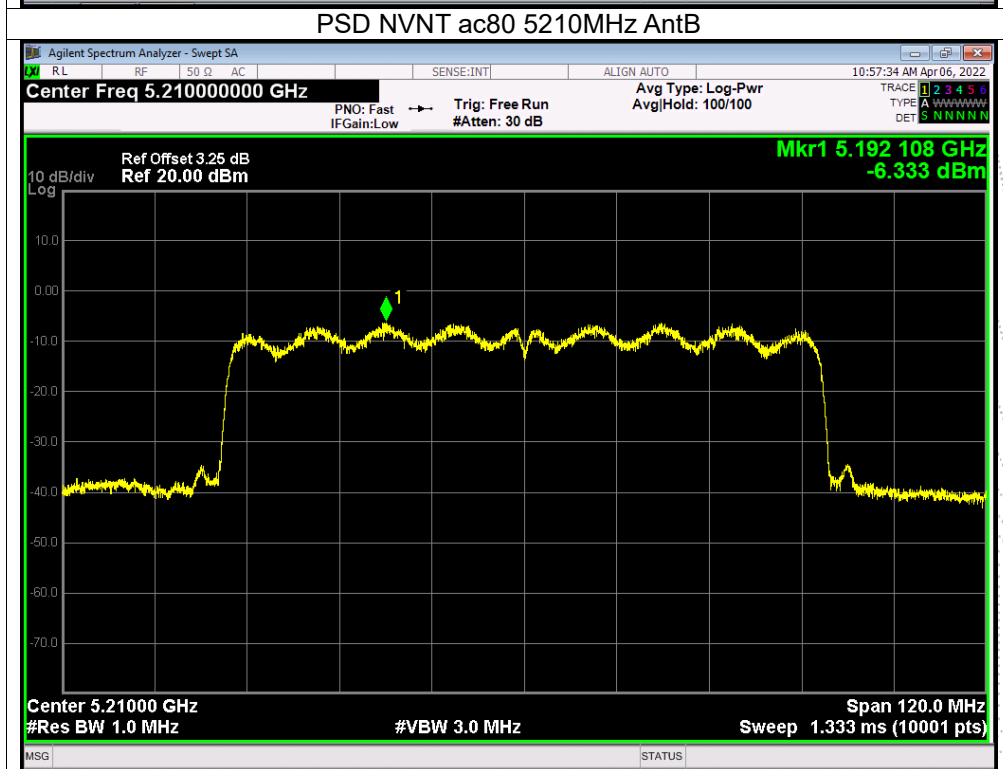
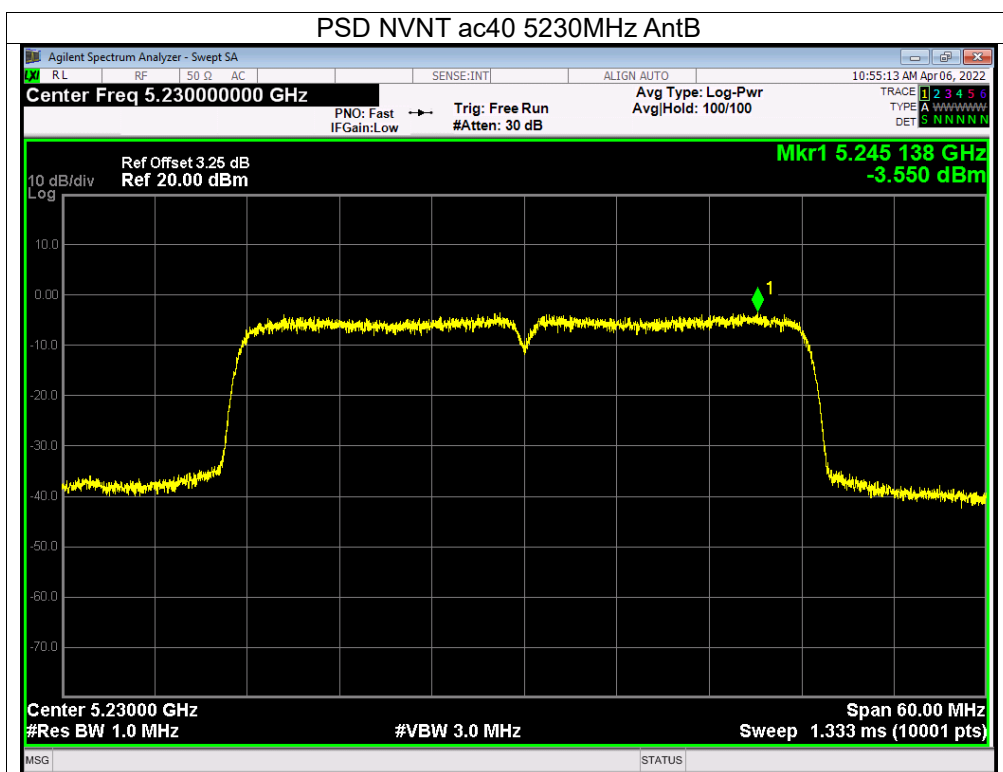








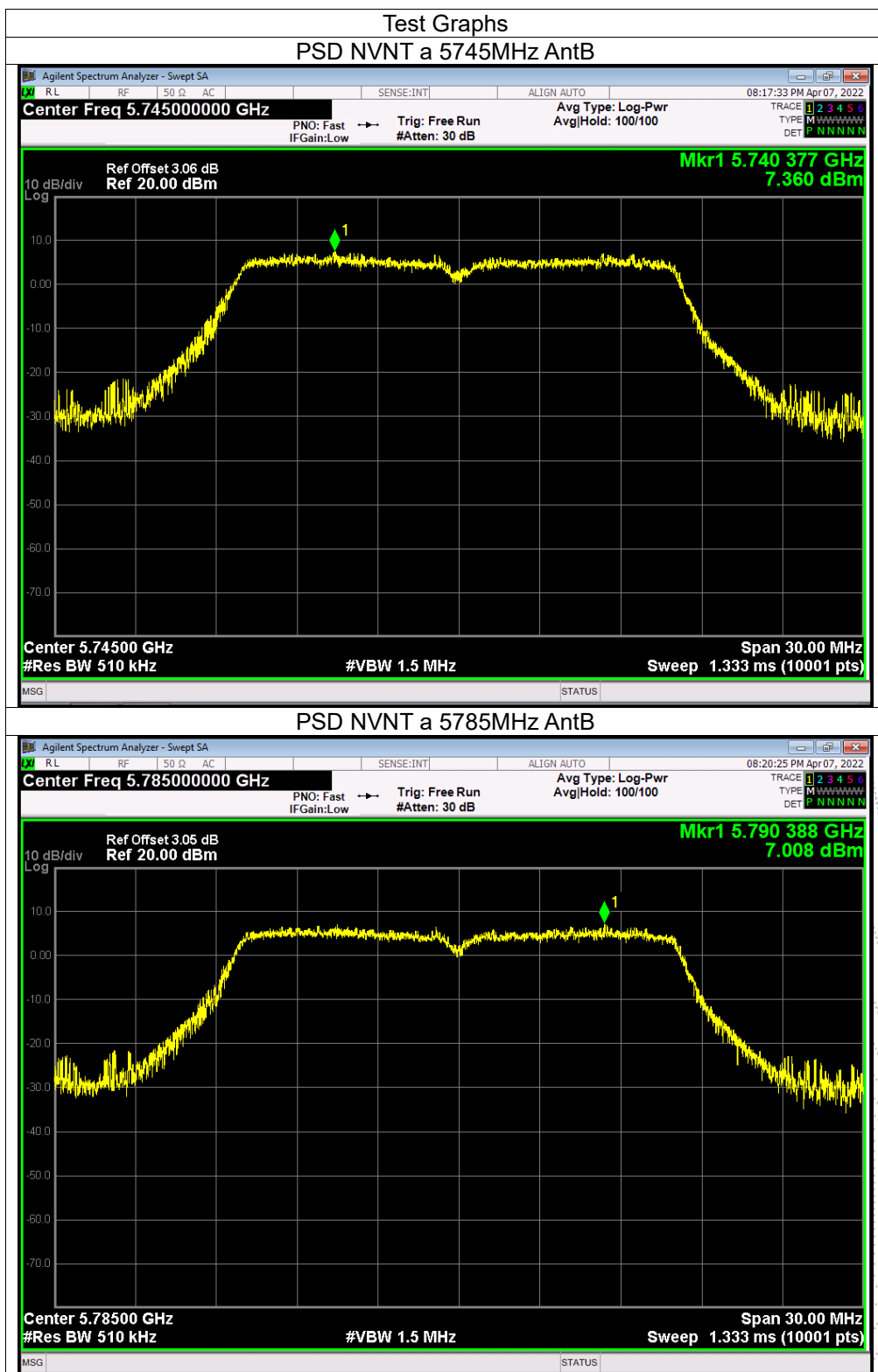


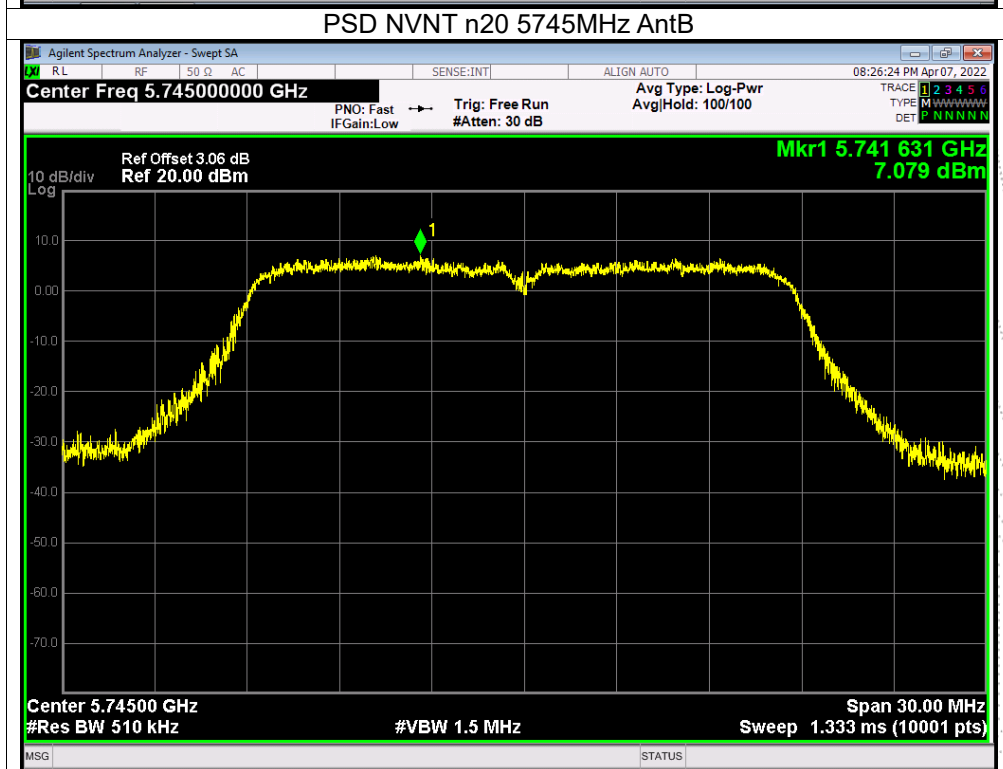
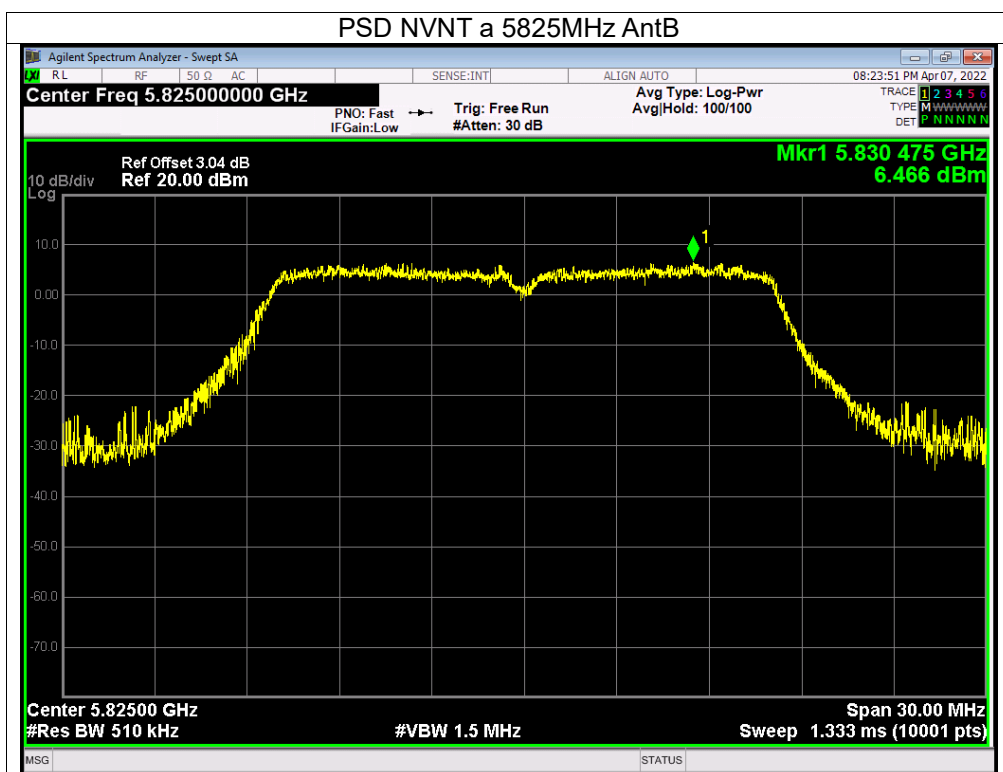


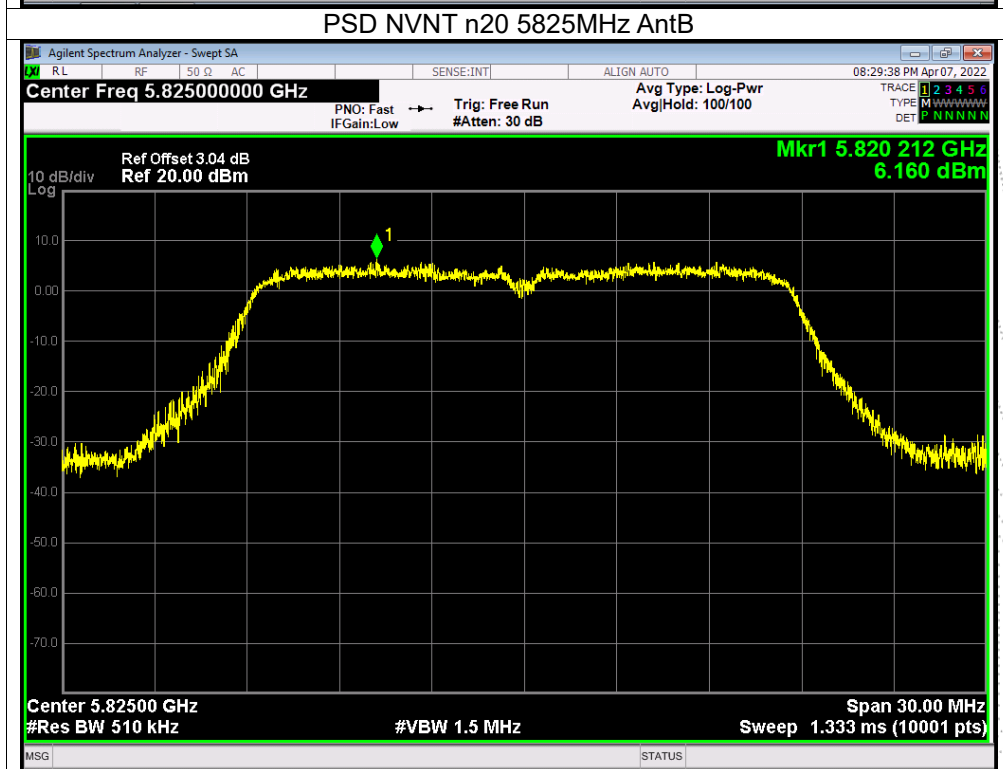
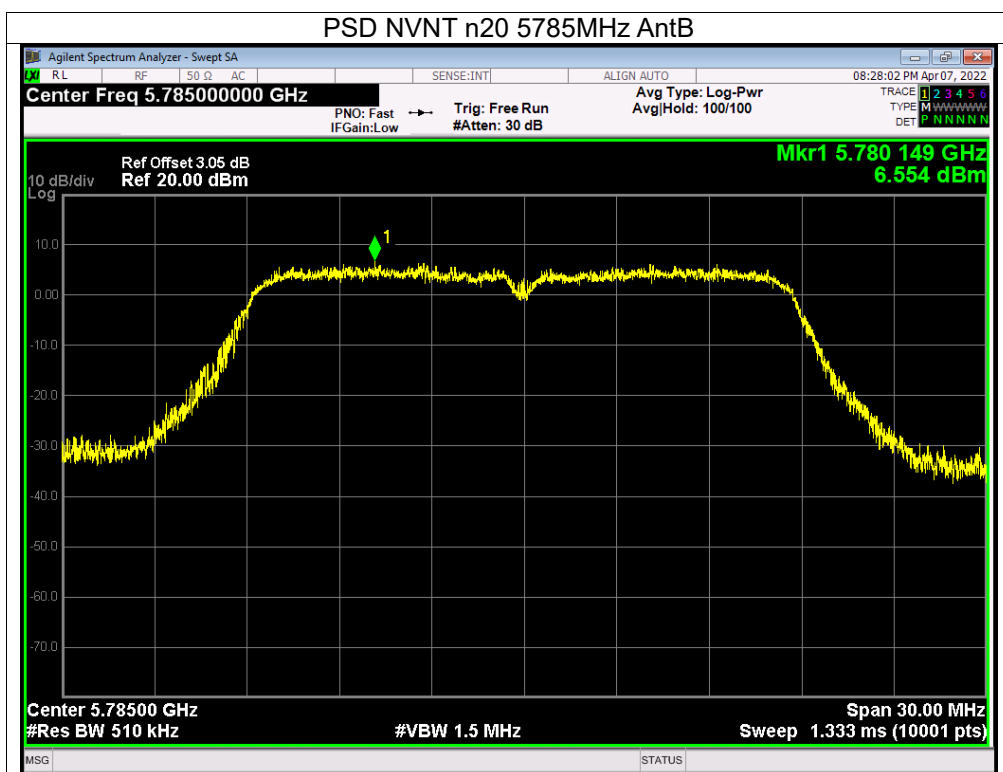
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX Frequency U-NII-3 (5745-5825MHz)		

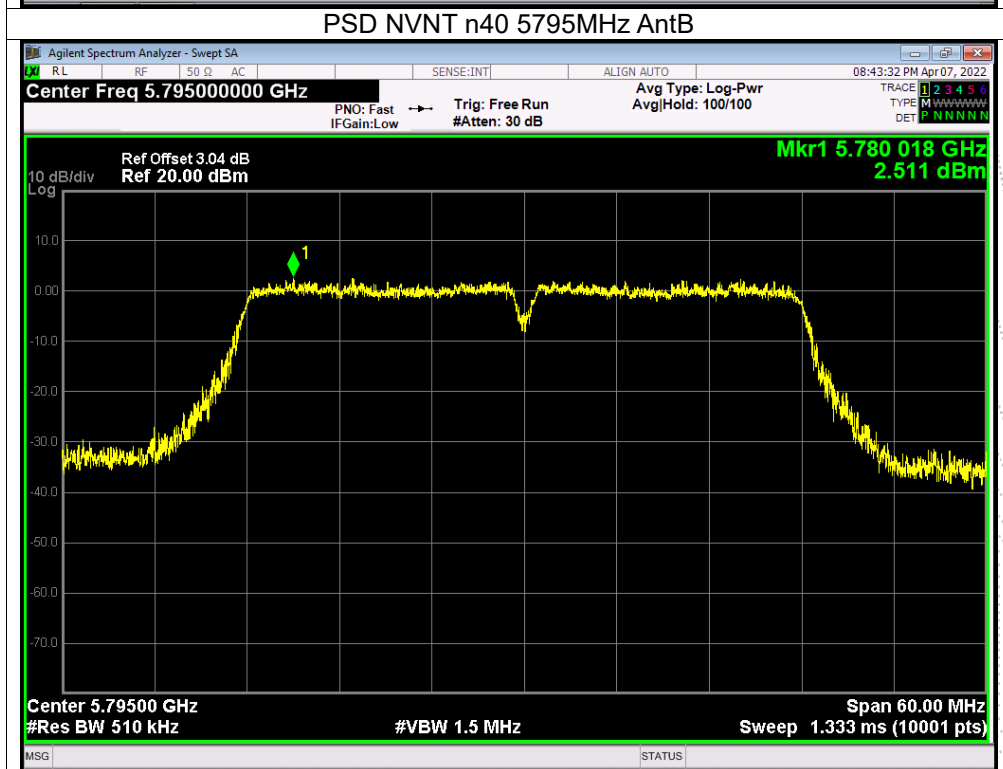
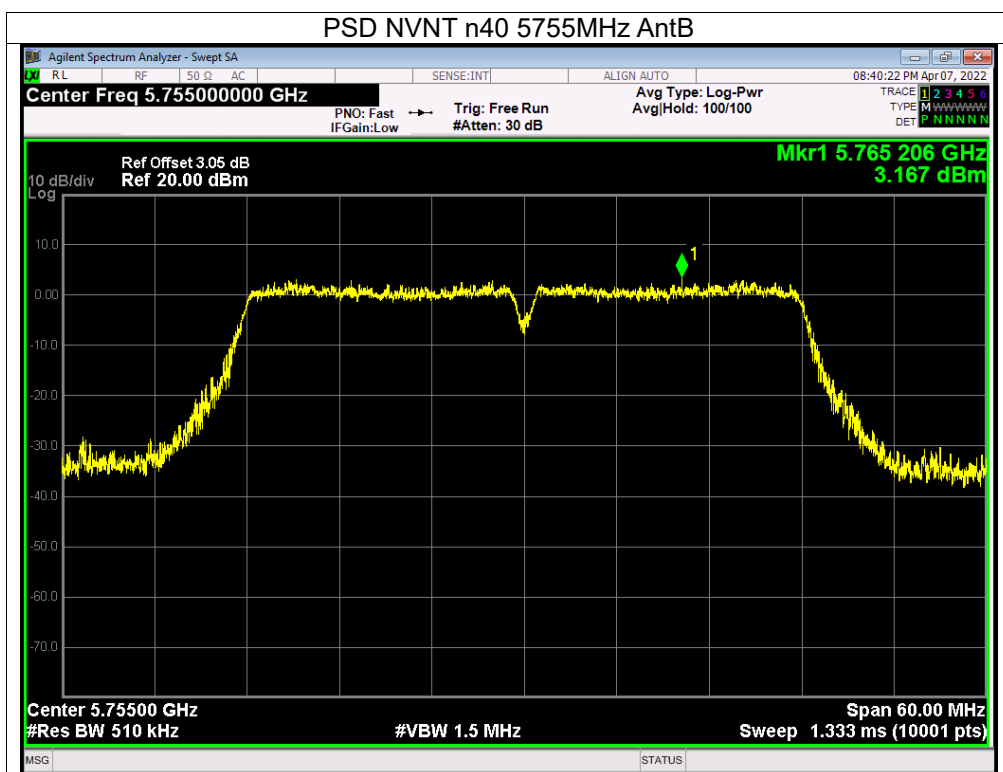
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B ,only shown Antenna B Plot.

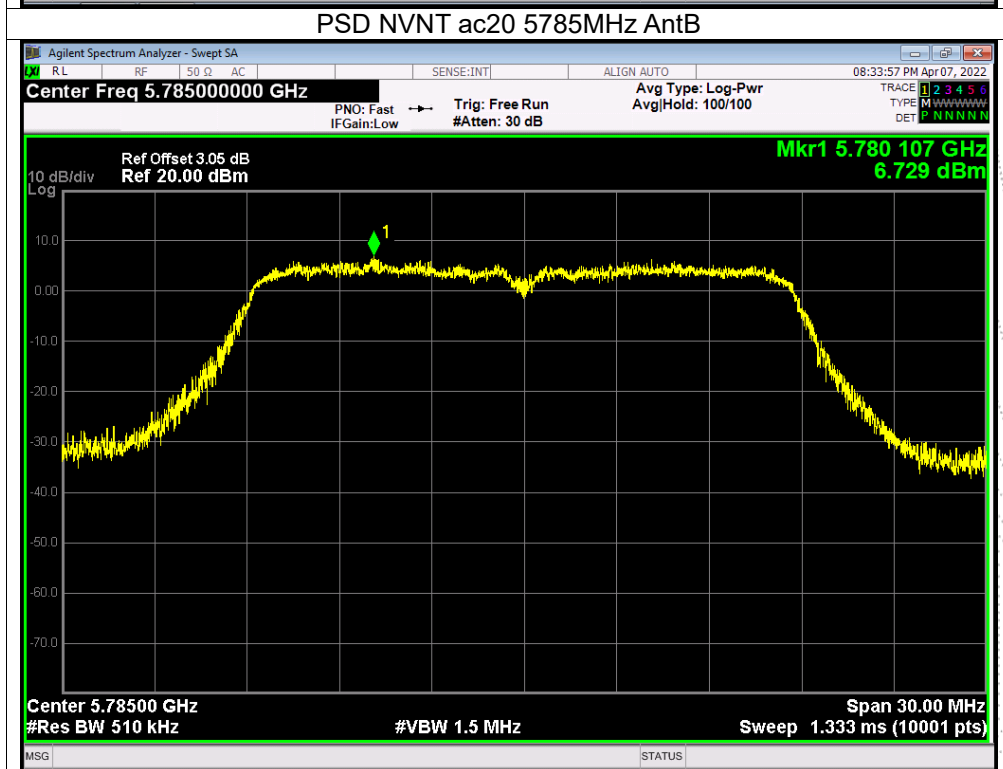
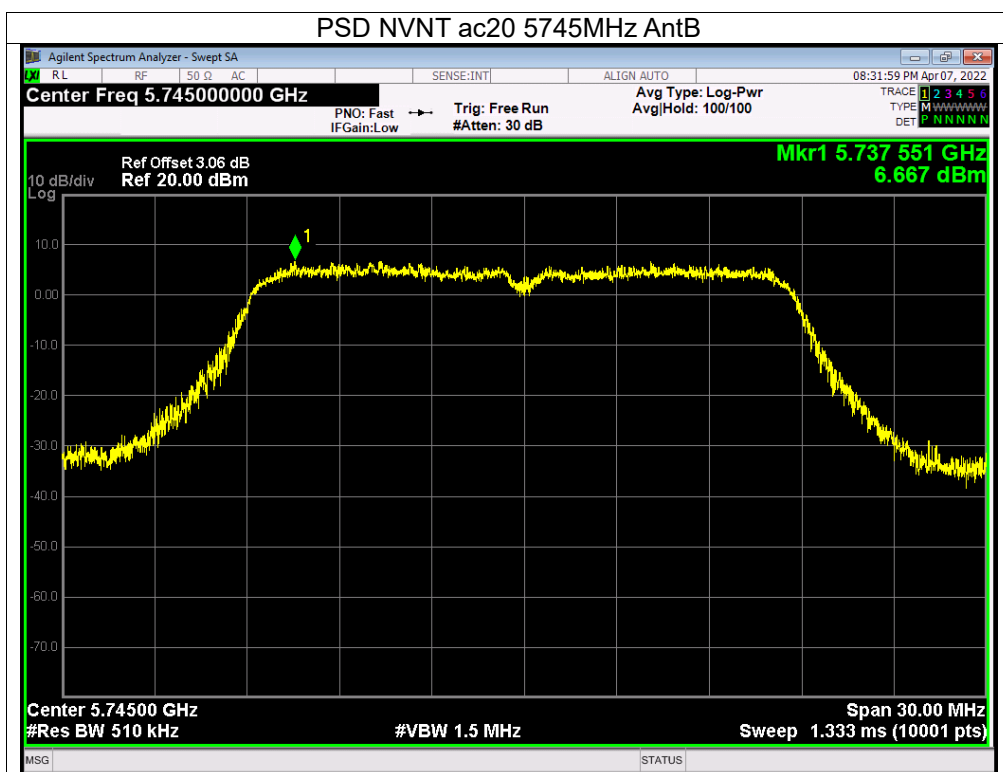
Mode	Frequency	Measured Power Density (dBm/500KHz)			Limit (dBm/500kHz)	Result
		ANT A	ANT B	Total		
802.11 a	5745 MHz	6.25	7.36	/	30	PASS
	5785 MHz	5.27	7.01	/	30	PASS
	5825 MHz	4.90	6.47	/	30	PASS
802.11 n20	5745 MHz	6.11	7.08	9.63	30	PASS
	5785 MHz	5.95	6.55	9.27	30	PASS
	5825 MHz	5.03	6.16	8.64	30	PASS
802.11 n40	5755 MHz	3.15	3.17	6.17	30	PASS
	5795 MHz	2.10	2.51	5.32	30	PASS
802.11 ac20	5745 MHz	6.63	6.67	9.66	30	PASS
	5785 MHz	5.42	6.73	9.13	30	PASS
	5825 MHz	5.16	5.90	8.56	30	PASS
802.11 ac40	5755 MHz	2.91	3.47	6.21	30	PASS
	5795 MHz	1.78	2.81	5.34	30	PASS
802.11 AC80	5775 MHz	-0.22	0.57	3.20	30	PASS

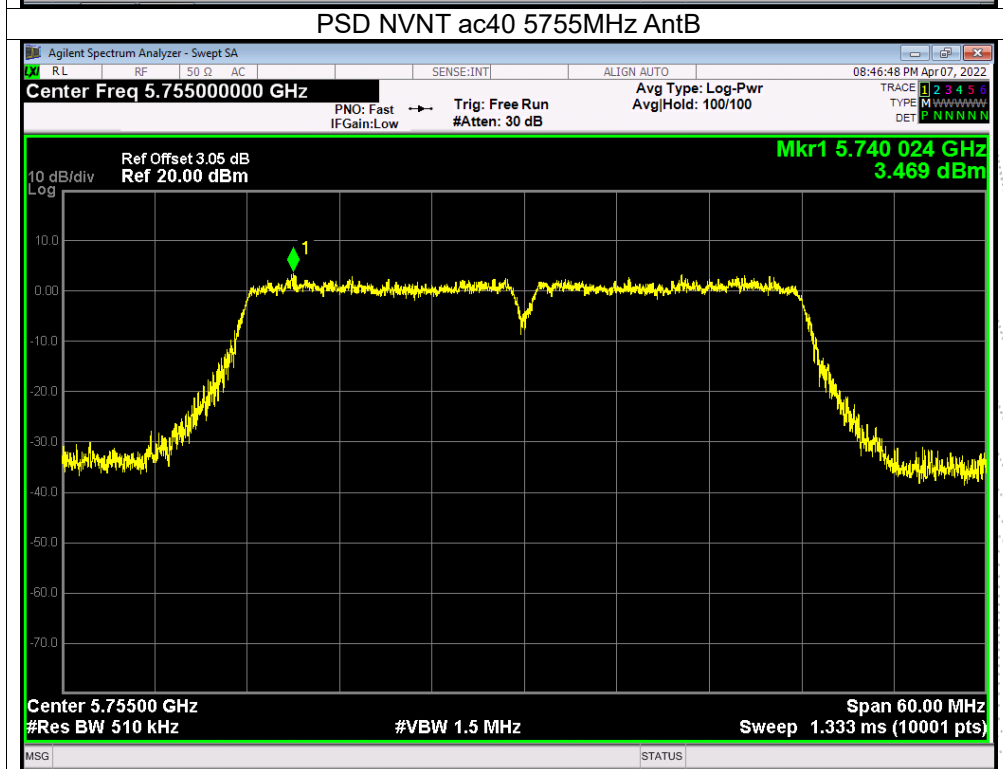
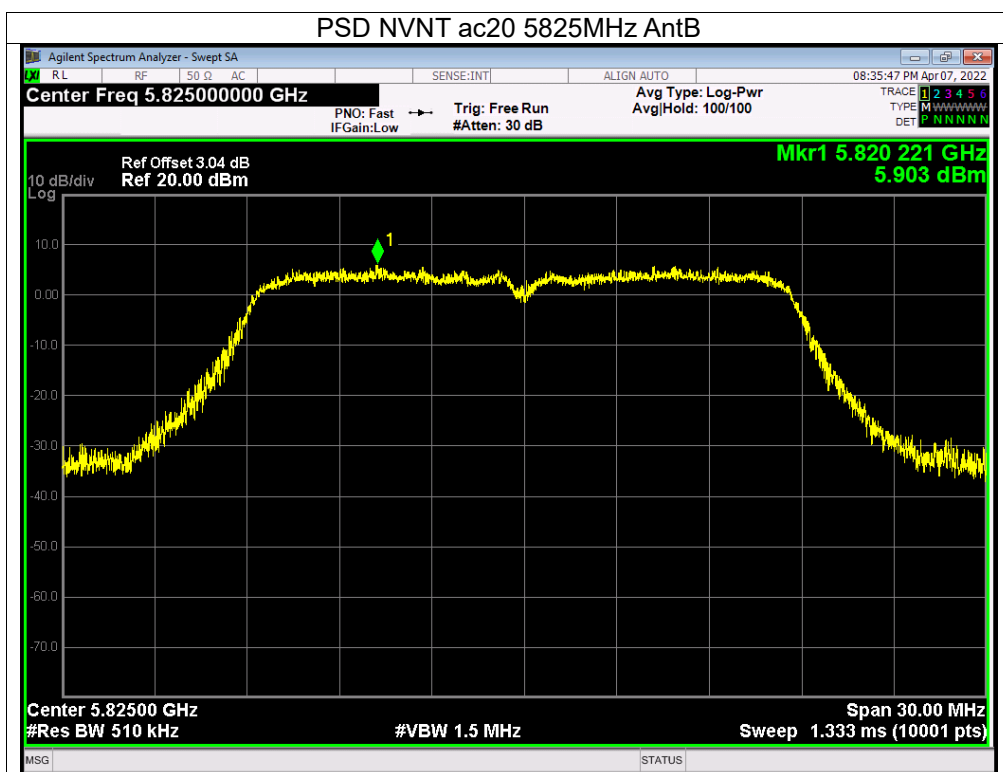


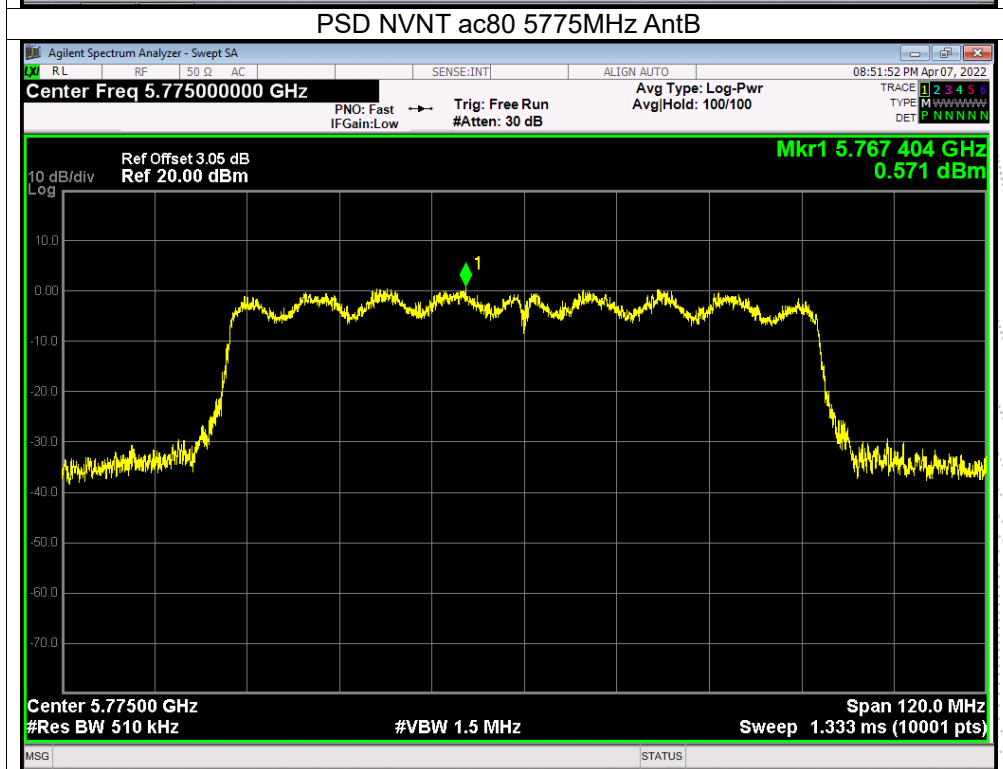
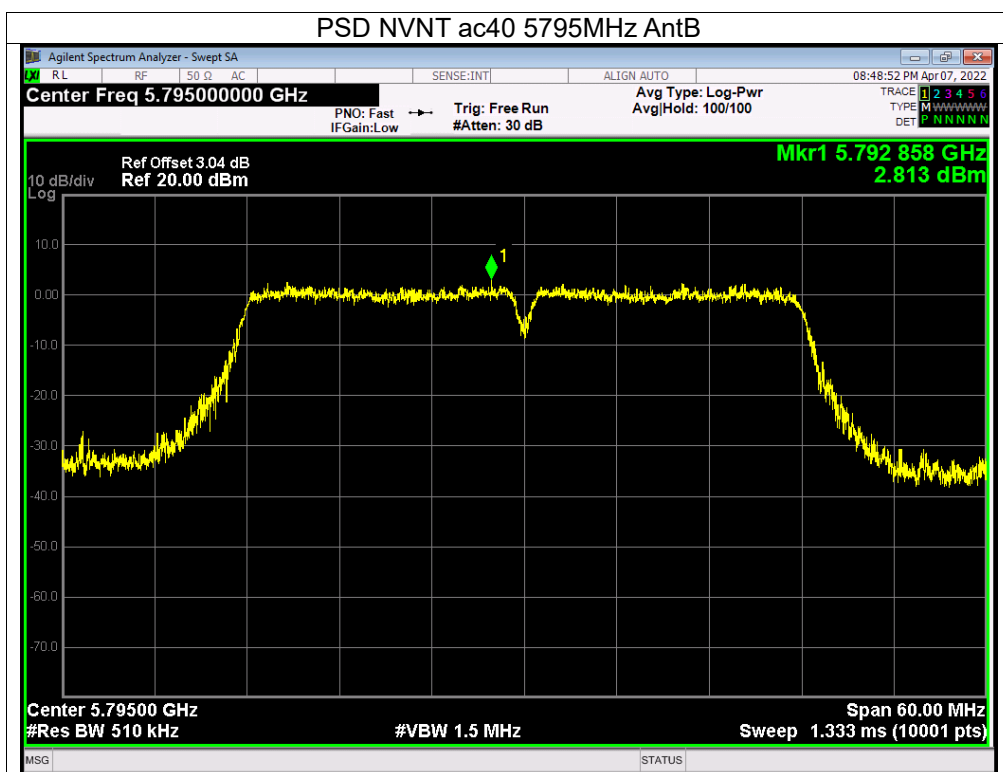






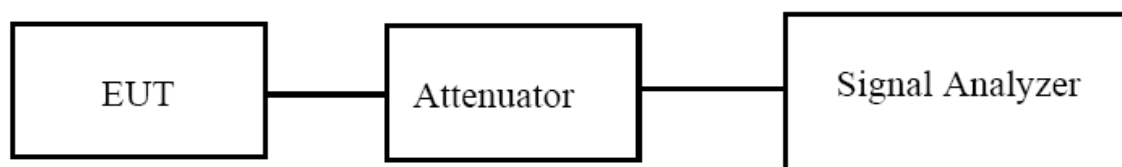






9. 26dB & 6dB & 99% Emission Bandwidth

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.

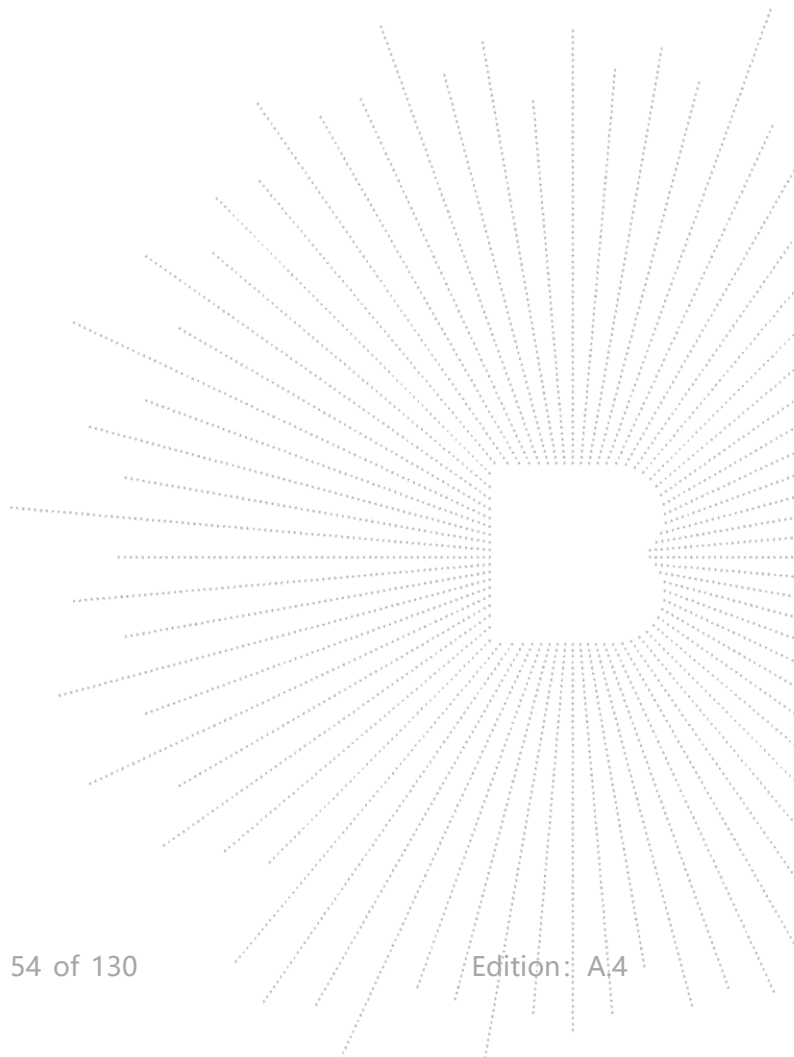
6dB

- Set RBW = 100 kHz.
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
- Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- 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 :	AC 120V/60Hz
Test Mode :	TX Frequency U-NII-1 (5180-5240MHz)		

Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot.

Mode	Channel	Frequency (MHz)	99% bandwidth (MHz)	26dB bandwidth (MHz)	Limit MHz	Result
			ANT A	ANT A		
802.11a	CH36	5180	16.475	20.615	N/A	Pass
	CH40	5200	16.476	20.778	N/A	Pass
	CH48	5240	16.485	20.606	N/A	Pass
802.11 n20	CH36	5180	17.568	21.024	N/A	Pass
	CH40	5200	17.568	21.067	N/A	Pass
	CH48	5240	17.598	21.125	N/A	Pass
802.11 n40	CH 38	5190	36.302	42.003	N/A	Pass
	CH 46	5230	36.293	42.245	N/A	Pass
802.11 ac20	CH36	5180	17.587	21.161	N/A	Pass
	CH40	5200	17.583	20.946	N/A	Pass
	CH48	5240	17.608	21.144	N/A	Pass
802.11 ac40	CH 38	5190	36.270	42.333	N/A	Pass
	CH 46	5230	36.258	41.789	N/A	Pass
802.11 AC80	CH 42	5210	75.409	79.855	N/A	Pass

Mode	Channel	Frequency (MHz)	99% bandwidth (MHz)	26dB bandwidth (MHz)	Limit MHz	Result
			ANT B	ANT B		
802.11a	CH36	5180	16.481	20.876	N/A	Pass
	CH40	5200	16.487	20.991	N/A	Pass
	CH48	5240	16.472	20.707	N/A	Pass
802.11 n20	CH36	5180	17.584	20.942	N/A	Pass
	CH40	5200	17.589	21.028	N/A	Pass
	CH48	5240	17.587	21.156	N/A	Pass
802.11 n40	CH 38	5190	36.302	42.140	N/A	Pass
	CH 46	5230	36.284	49.473	N/A	Pass
802.11 ac20	CH36	5180	17.584	21.278	N/A	Pass
	CH40	5200	17.601	21.163	N/A	Pass
	CH48	5240	17.609	21.26	N/A	Pass
802.11 ac40	CH 38	5190	36.293	44.562	N/A	Pass
	CH 46	5230	36.303	41.565	N/A	Pass
802.11 AC80	CH 42	5210	75.412	79.682	N/A	Pass

