

TEST REPORT

Report No.: BCTC2204216643-3E

Applicant: MINIX Technology Limited

Product Name: MINIX NEO X35-i

Model/Type
reference: X35-i

Tested Date: 2022-04-27 to 2022-05-18

Issued Date: 2022-05-19



Shenzhen BCTC Testing Co., Ltd.



FCC ID: 2ADACX35-I

Product Name: MINIX NEO X35-i
Trademark: MINIX
Model/Type reference: X35-i
X35-i Plus, X35-i Max.
Prepared For: MINIX Technology Limited
Address: Unit 01, 15/F, Chevalier Commercial Center, No.8 Wang Hoi Road, Kowloon Bay, Kowloon, Hong Kong
Manufacturer: MINIX Technology Limited
Address: Unit 01, 15/F, Chevalier Commercial Center, No.8 Wang Hoi Road, Kowloon Bay, Kowloon, Hong Kong
Prepared By: 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
Sample Received Date: 2022-04-27
Sample tested Date: 2022-04-27 to 2022-05-18
Issue Date: 2022-05-19
Report No.: BCTC2204216643-3E
Test Standards: FCC Part15 15.407
ANSI C63.10-2013
KDB 662911 D01 v02r01
KDB 789033 D02 v02r01
Test Results: PASS
Remark: This is WIFI-5GHz band radio test report.

Tested by:



Eric Yang/Project Handler

Approved by:



Zero Zhou/Reviewer

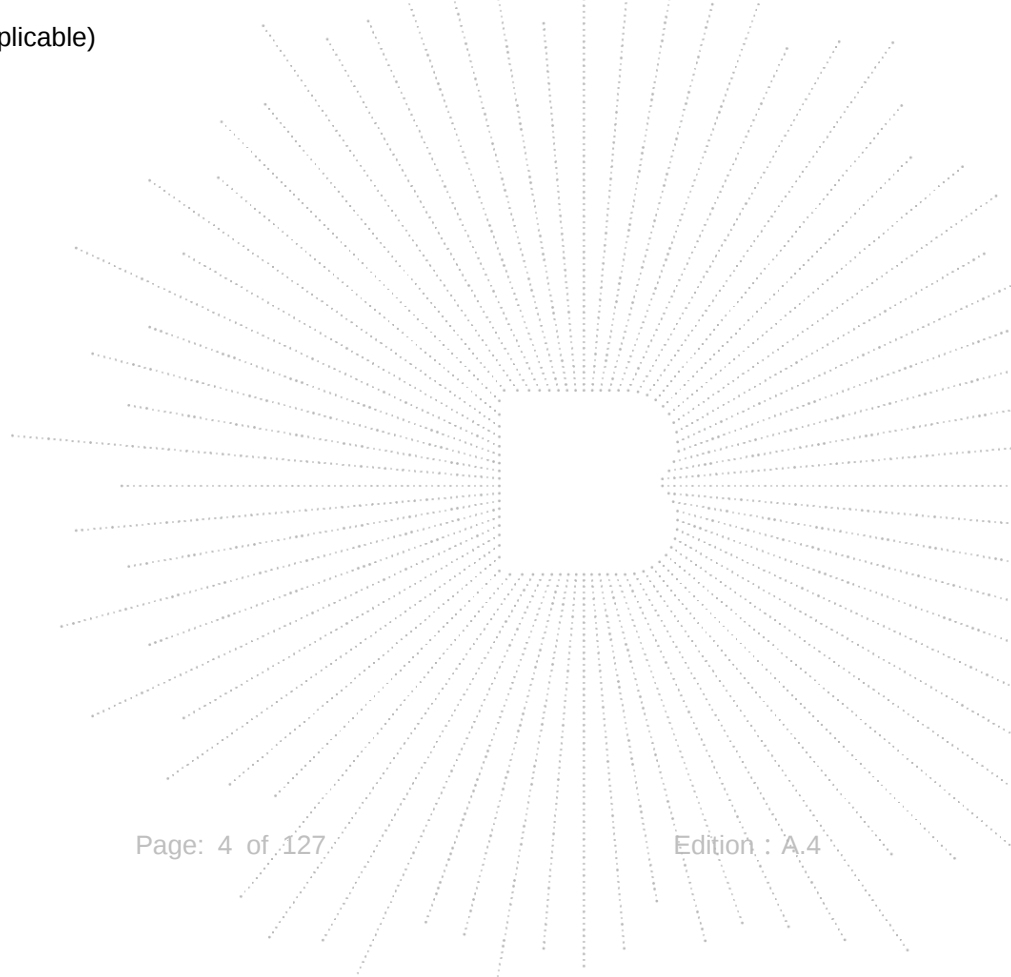
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(Note: N/A Means Not Applicable)



1. Version

Report No.	Issue Date	Description	Approved
BCTC2204216643-3E	2022-05-19	Original	Valid

2. Test Summary

The Product has been tested according to the following specifications:

1	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(30MHz-1GHz)	U=4.3dB
2	3m chamber Radiated spurious emission(9KHz-30MHz)	U=3.7dB
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

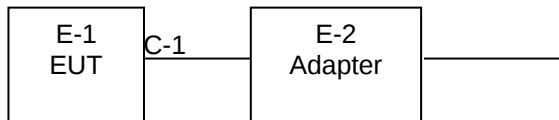
4.1 Product Information

Model/Type reference:	X35-i X35-i Plus, X35-i Max.
Model differences:	All the model are the same circuit and RF module, except model names.
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)/ac20; 5190-5230MHz for 802.11n(HT40)/ac40; 5210MHz for 802.11 ac80; 5745-5825 MHz for 802.11a/n(HT20)/ac20; 5755-5795 MHz for 802.11a/n(HT40)/ac40; 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:	Antenna A: External antenna, Antenna B: FPC antenna
Antenna Gain:	WiFi (5GHz): Antenna A: 3.94 dBi
	Antenna B: 5.1 dBi
	WiFi (5.8GHz): Antenna A: 4.79 dBi
	Antenna B: 5.25 dBi
Ratings:	DC 12V
Adapter:	Model: WB-24M12R Input:100-240V~ 50-60Hz 0.7A max Output: DC 12.0V 2.0A 24.0W

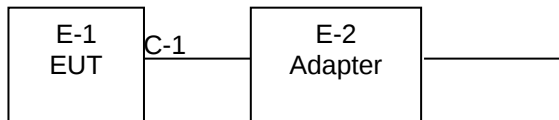
4.2 Test Setup Configuration

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-2	Adapter	N/A	WB-24M12R	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
C-1	N/A	N/A	1M	DC cable unshielded

Notes:

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

4.4 Channel List

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

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)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
42	5210	-	-	-	-	-	-

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

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

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

Note: 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

4.7 Antenna

Table for antenna

Ant.	Brand	Model Name	Antenna Type	Gain (dBi)	NOTE
A	N/A	N/A	External antenna	See 4.1 chapter	N/A
B	N/A	N/A	FPC antenna	See 4.1 chapter	N/A

5G

EUT has two External antennas with Max antenna A gain 3.94dBi and antenna B gain 5.1dBi on every antenna, CDD device with two spatial streams, also can operat with one spatial streams according to KDB662911 D01 v02r01,

Directional gain= $G_{ANT} + \text{Array Gain}$, where Array Gain is as follows.

1)For power spectral density(PSD) measurements,
 $\text{Array Gain} = 10\log(N_{ANT}/N_{SS})\text{dB} = 10\log(2/1) = 3.01\text{dB}$,
 So the directional gain for PSD is 8.11dBi

2)For power measurements,
 The Array gain=0 dB for $N_{ANT} \leq 4$,
 So the directional gain for Power measurements is 5.1dBi

Directional gain may be calculated by using the formulas applicable to equal gain antennas with G_{ANT} set equal to the gain of the antenna having the highest gain.

5.8G

EUT has two External antennas with Max antenna A gain 4.79dBi and antenna B gain 5.25dBi on every antenna, CDD device with two spatial streams, also can operate with one spatial streams according to KDB662911 D01 v02r01,

Directional gain= $G_{ANT} + \text{Array Gain}$, where Array Gain is as follows.

1) For power spectral density (PSD) measurements,
Array Gain = $10 \log(N_{ANT}/N_{SS}) \text{ dB} = 10 \log(2/1) = 3.01 \text{ dB}$,
So the directional gain for PSD is 8.26dBi

2) For power measurements,
The Array gain = 0 dB for $N_{ANT} \leq 4$,
So the directional gain for Power measurements is 5.25dBi

Directional gain may be calculated by using the formulas applicable to equal gain antennas with G_{ANT} set equal to the gain of the antenna having the highest gain.

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

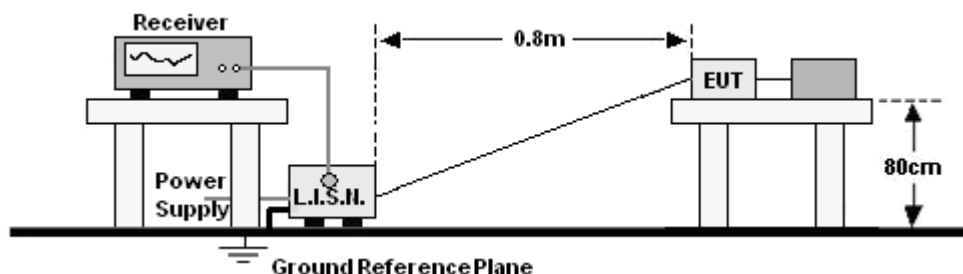
Conducted Emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESR3	102075	May 28, 2021	May 27, 2022
LISN	R&S	ENV216	101375	May 28, 2021	May 27, 2022
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Attenuator	\	10dB C-6GHz	1650	May 28, 2021	May 27, 2022

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 Analyzer 20kHz-26.5G Hz	Keysight	N9020A	MY49100060	May 28, 2021	May 27, 2022
Spectrum Analyzer 9kHz-40GHz	R&S	FSP 40	\	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 (18GHz-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	B1702988-000 8	May 28, 2021	May 27, 2022
RF cables2 (30MHz-1GHz)	Huber+Suhnar	30MHz-1GHz	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 Analyzer 20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 28, 2021	May 27, 2022
Spectrum Analyzer 9kHz-40GHz	R&S	FSP 40	\	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.

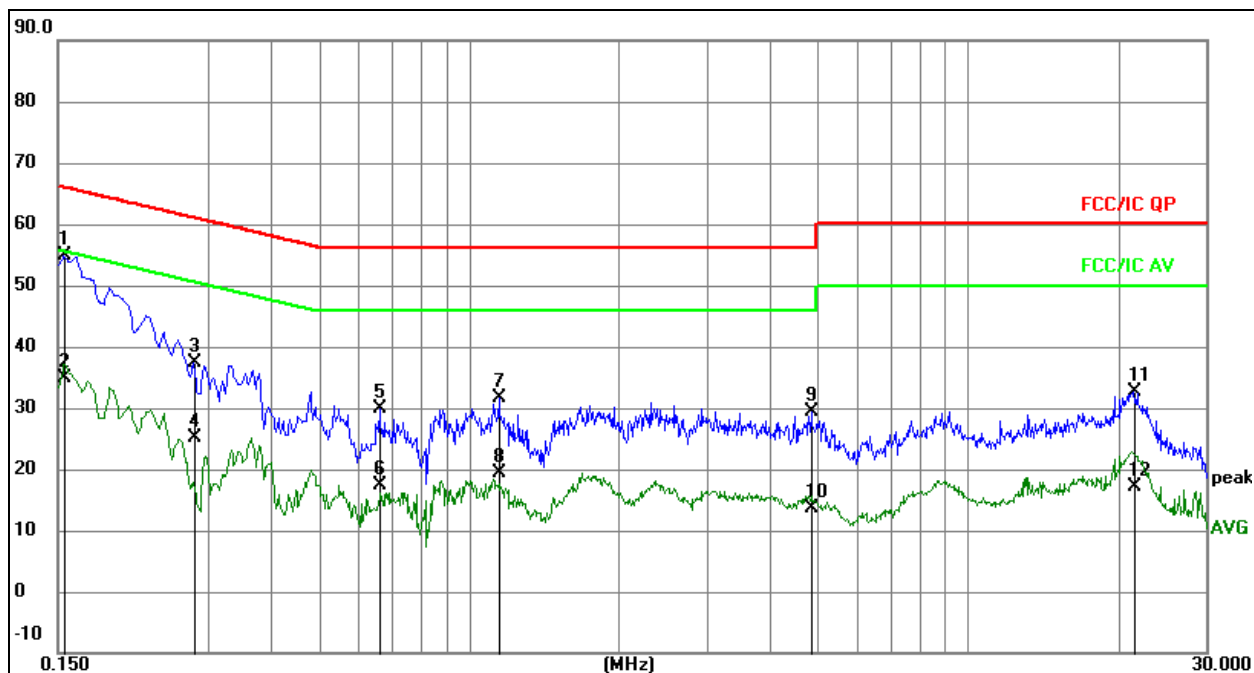
6.4 EUT operating Conditions

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.

We pretest AC 120V and AC 240V, the worst voltage was AC 120V and the data recording in the report.

6.5 Test Result

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

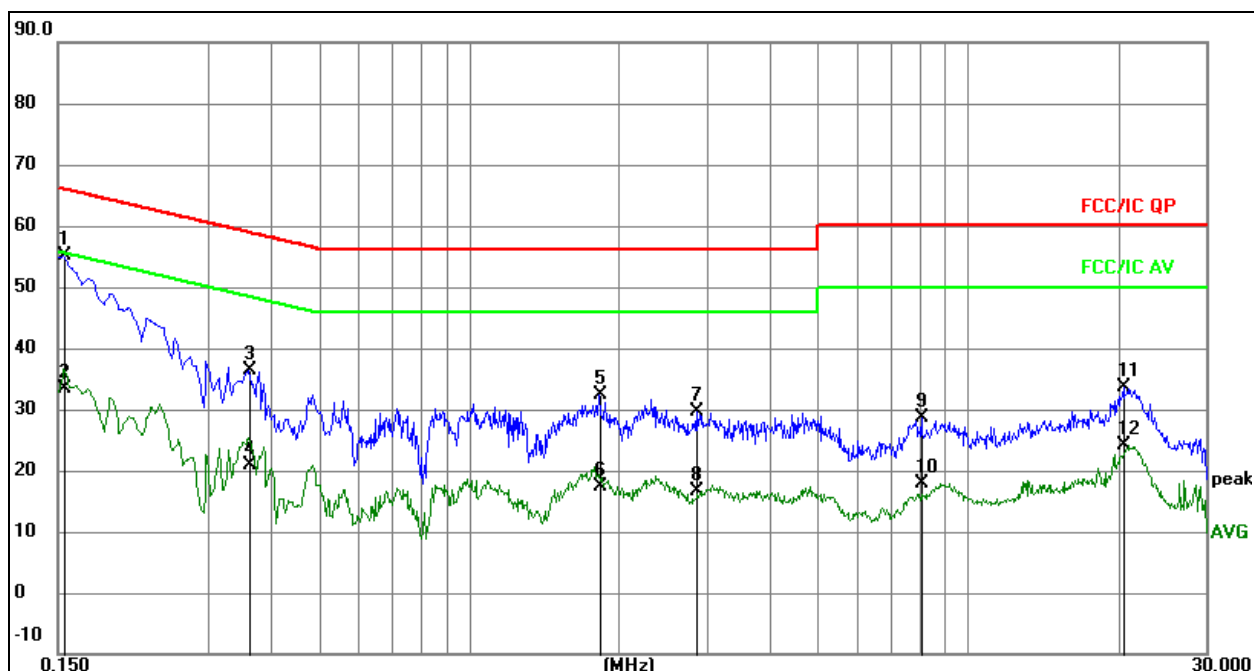


Remark:

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	*	0.1544	35.16	19.60	54.76	65.76	-11.00	QP
2		0.1544	15.35	19.60	34.95	55.76	-20.81	AVG
3		0.2805	17.88	19.61	37.49	60.80	-23.31	QP
4		0.2805	5.52	19.61	25.13	50.80	-25.67	AVG
5		0.6629	10.37	19.61	29.98	56.00	-26.02	QP
6		0.6629	-2.34	19.61	17.27	46.00	-28.73	AVG
7		1.1489	12.13	19.62	31.75	56.00	-24.25	QP
8		1.1489	-0.34	19.62	19.28	46.00	-26.72	AVG
9		4.8570	9.58	19.70	29.28	56.00	-26.72	QP
10		4.8570	-6.04	19.70	13.66	46.00	-32.34	AVG
11		21.5970	12.82	19.74	32.56	60.00	-27.44	QP
12		21.5970	-2.69	19.74	17.05	50.00	-32.95	AVG

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



Remark:

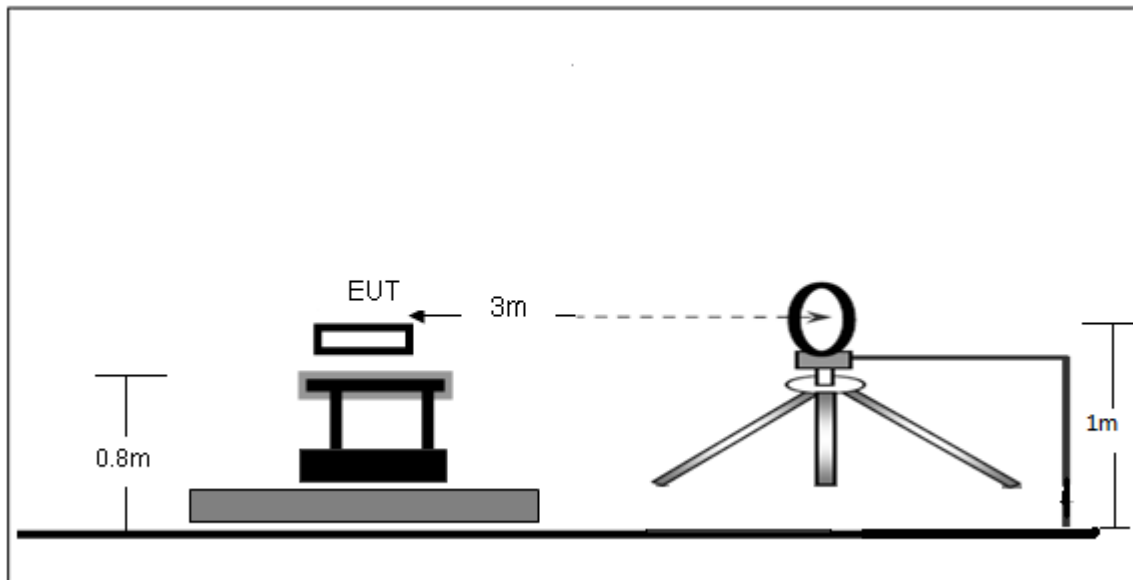
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Mk.	Freq. MHz	Reading Level dB	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1	*	0.1544	35.56	19.60	55.16	65.76	-10.60	QP
2		0.1544	13.74	19.60	33.34	55.76	-22.42	AVG
3		0.3615	16.66	19.61	36.27	58.69	-22.42	QP
4		0.3615	1.23	19.61	20.84	48.69	-27.85	AVG
5		1.8239	12.68	19.62	32.30	56.00	-23.70	QP
6		1.8239	-2.13	19.62	17.49	46.00	-28.51	AVG
7		2.8680	9.92	19.64	29.56	56.00	-26.44	QP
8		2.8680	-2.92	19.64	16.72	46.00	-29.28	AVG
9		8.0655	8.86	19.75	28.61	60.00	-31.39	QP
10		8.0655	-1.95	19.75	17.80	50.00	-32.20	AVG
11		20.5845	13.83	19.74	33.57	60.00	-26.43	QP
12		20.5845	4.33	19.74	24.07	50.00	-25.93	AVG

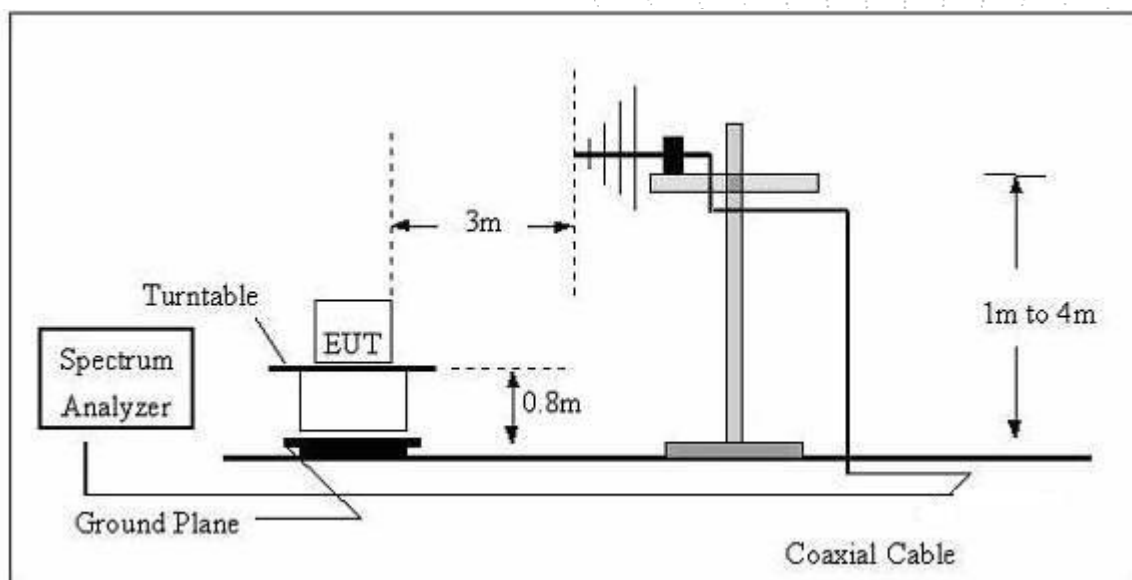
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

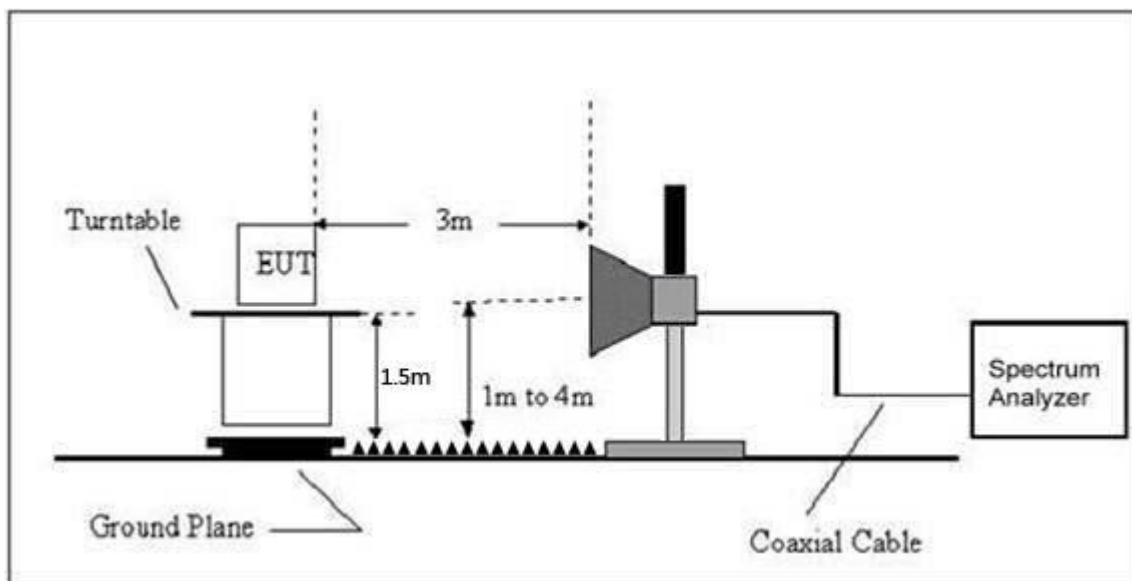
(A) Radiated Emission Test-Up Frequency Below 30MHz



(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(kHz)	300	$10000 * 2400/F(\text{kHz})$	$20\log^{(2400/F(\text{kHz}))} + 80$
0.490 ~ 1.705	24000/F(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:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	AC 120V
Test Mode:	Mode 4	Polarization :	---

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

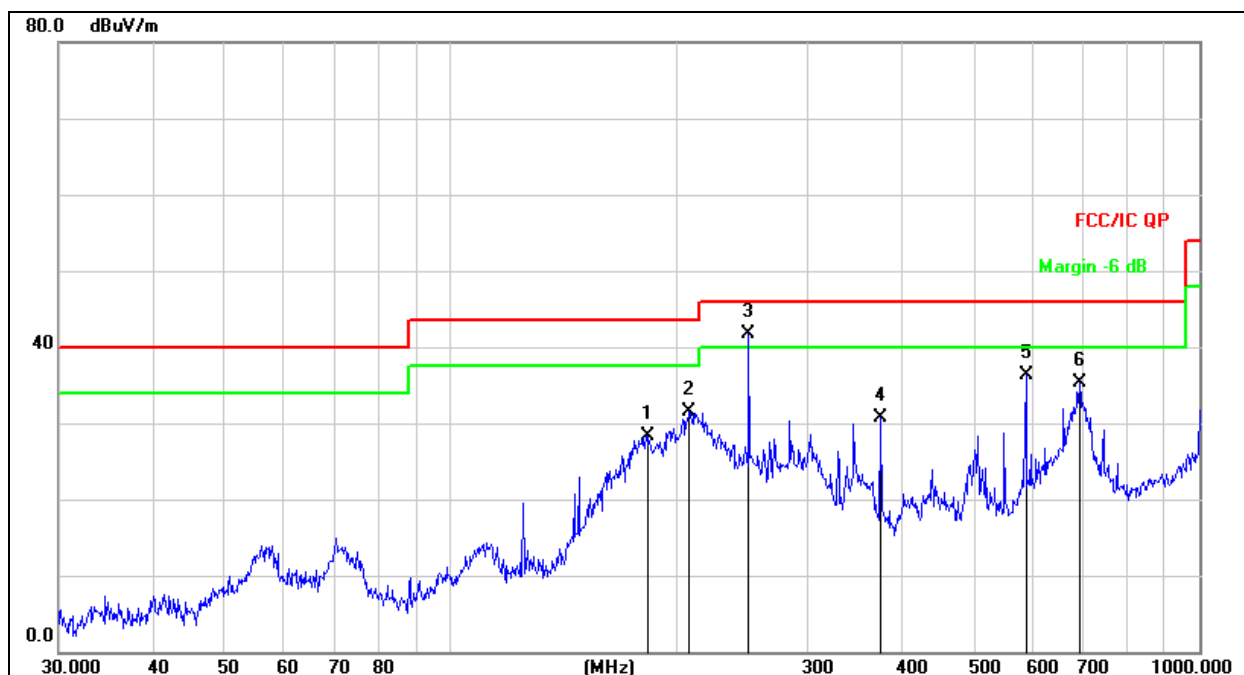
Note:

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

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

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

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

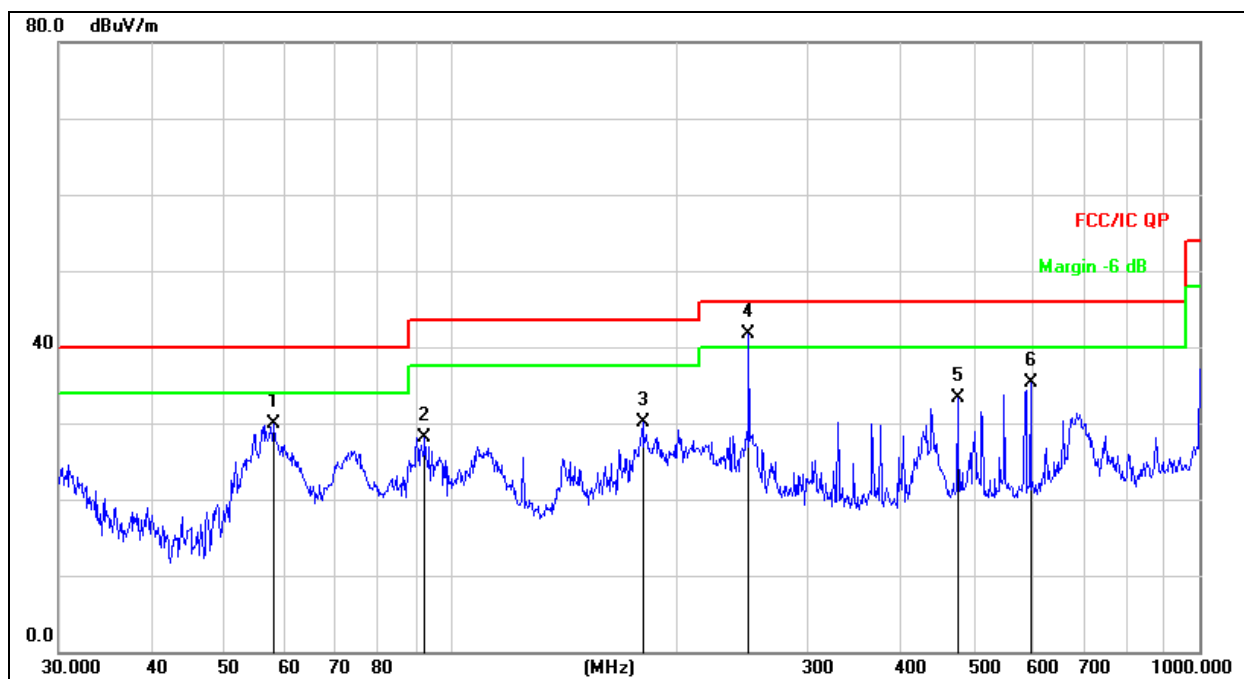


Remark:

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

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector
1		183.8440	45.09	-16.76	28.33	43.50	-15.17	QP
2		208.5803	46.73	-15.31	31.42	43.50	-12.08	QP
3	*	250.3012	56.32	-14.64	41.68	46.00	-4.32	QP
4		375.9385	42.28	-11.55	30.73	46.00	-15.27	QP
5		586.8437	42.56	-6.32	36.24	46.00	-9.76	QP
6		691.9867	39.16	-3.85	35.31	46.00	-10.69	QP

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



Remark:

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		58.2030	45.73	-15.90	29.83	40.00	-10.17	QP
2		92.4624	46.21	-18.10	28.11	43.50	-15.39	QP
3		180.6488	47.02	-17.01	30.01	43.50	-13.49	QP
4	*	250.3012	56.42	-14.64	41.78	46.00	-4.22	QP
5		475.4991	42.23	-8.93	33.30	46.00	-12.70	QP
6		595.1329	41.44	-6.13	35.31	46.00	-10.69	QP

Test Mode:	TX(5.1G) - 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 (5180 MHz)-Above 1G									
V	4434.122	64.70	5.94	35.40	44.00	62.04	68.2	-6.16	PK
V	4434.122	43.62	5.94	35.40	44.00	40.96	54	-13.04	AV
V	10360.087	63.60	8.46	39.75	44.50	67.31	68.2	-0.89	PK
V	10360.087	43.89	8.46	39.75	44.50	47.60	54	-6.40	AV
V	15540.095	61.28	10.12	38.80	44.10	66.10	74	-7.90	PK
V	15540.095	43.56	10.12	38.80	42.70	49.78	54	-4.22	AV
H	4434.047	63.07	5.94	35.18	44.00	60.19	68.2	-8.01	PK
H	4434.047	43.38	5.94	35.18	44.00	40.50	54	-13.50	AV
H	10360.129	50.44	8.46	38.71	44.50	53.11	68.2	-15.09	PK
H	10360.129	42.68	8.46	38.71	44.50	45.35	54	-8.65	AV
H	15540.190	51.83	10.12	38.38	44.10	56.23	74	-17.77	PK
H	15540.190	40.56	10.12	38.38	44.10	44.96	54	-9.04	AV
Middle Channel (5200 MHz)-Above 1G									
V	4592.034	63.91	6.48	36.35	44.05	62.69	74	-11.31	PK
V	4592.034	43.19	6.48	36.35	44.05	41.97	54	-12.03	AV
V	10400.039	63.59	8.47	37.88	44.51	65.43	68.2	-2.77	PK
V	10400.039	43.88	8.47	37.88	44.51	45.72	54	-8.28	AV
V	15600.100	60.48	10.12	38.80	44.10	65.30	74	-8.70	PK
V	15600.100	43.76	10.12	38.80	42.70	49.98	54	-4.02	AV
H	4592.094	63.30	6.48	36.37	44.05	62.10	74	-11.90	PK
H	4592.094	43.20	6.48	36.37	44.05	42.00	54	-12.00	AV
H	10400.099	51.77	8.47	38.64	44.50	54.38	68.2	-13.82	PK
H	10400.099	44.13	8.47	38.64	44.50	46.74	54	-7.26	AV
H	15600.012	50.65	10.12	38.38	44.10	55.05	74	-18.95	PK
H	15600.012	40.91	10.12	38.38	44.10	45.31	54	-8.69	AV
High Channel (5240 MHz)-Above 1G									
V	4739.010	62.06	7.10	37.24	43.50	62.90	74	-11.10	PK
V	4739.010	43.15	7.10	37.24	43.50	43.99	54	-10.01	AV
V	10480.090	63.60	8.46	37.68	44.50	65.24	68.2	-2.96	PK
V	10480.090	43.63	8.46	37.68	44.50	45.27	54	-8.73	AV
V	15720.083	63.16	10.12	38.80	44.10	67.98	74	-6.02	PK
V	15720.083	43.86	10.12	38.80	42.70	50.08	54	-3.92	AV
H	4739.075	62.43	7.10	37.24	43.50	63.27	74	-10.73	PK
H	4739.075	43.78	7.10	37.24	43.50	44.62	54	-9.38	AV
H	10480.086	54.26	8.46	38.57	44.50	56.79	68.2	-11.41	PK
H	10480.086	44.50	8.46	38.57	44.50	47.03	54	-6.97	AV
H	15720.006	53.29	10.12	38.38	44.10	57.69	74	-16.31	PK
H	15720.006	41.07	10.12	38.38	44.10	45.47	54	-8.53	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 B.

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	4434.016	62.60	5.94	35.40	44.00	59.94	68.2	-8.26	PK
V	4434.016	43.06	5.94	35.40	44.00	40.40	54	-13.60	AV
V	10360.191	63.38	8.46	39.75	44.50	67.09	68.2	-1.11	PK
V	10360.191	43.61	8.46	39.75	44.50	47.32	54	-6.68	AV
V	15540.077	62.90	10.12	38.80	44.10	67.72	74	-6.28	PK
V	15540.077	43.15	10.12	38.80	42.70	49.37	54	-4.63	AV
H	4434.064	60.11	5.94	35.18	44.00	57.23	68.2	-10.97	PK
H	4434.064	43.52	5.94	35.18	44.00	40.64	54	-13.36	AV
H	10360.190	54.41	8.46	38.71	44.50	57.08	68.2	-11.12	PK
H	10360.190	41.20	8.46	38.71	44.50	43.87	54	-10.13	AV
H	15540.087	50.48	10.12	38.38	44.10	54.88	74	-19.12	PK
H	15540.087	43.09	10.12	38.38	44.10	47.49	54	-6.51	AV
Middle Channel (5200 MHz)-Above 1G									
V	4592.025	62.47	6.48	36.35	44.05	61.25	74	-12.75	PK
V	4592.025	43.25	6.48	36.35	44.05	42.03	54	-11.97	AV
V	10400.059	60.54	8.47	37.88	44.51	62.38	68.2	-5.82	PK
V	10400.059	43.06	8.47	37.88	44.51	44.90	54	-9.10	AV
V	15600.164	61.81	10.12	38.80	44.10	66.63	74	-7.37	PK
V	15600.164	43.28	10.12	38.80	42.70	49.50	54	-4.50	AV
H	4592.171	60.42	6.48	36.37	44.05	59.22	74	-14.78	PK
H	4592.171	43.00	6.48	36.37	44.05	41.80	54	-12.20	AV
H	10400.101	50.35	8.47	38.64	44.50	52.96	68.2	-15.24	PK
H	10400.101	44.82	8.47	38.64	44.50	47.43	54	-6.57	AV
H	15600.134	50.83	10.12	38.38	44.10	55.23	74	-18.77	PK
H	15600.134	40.95	10.12	38.38	44.10	45.35	54	-8.65	AV
High Channel (5240 MHz)-Above 1G									
V	4739.019	62.68	7.10	37.24	43.50	63.52	74	-10.48	PK
V	4739.019	43.02	7.10	37.24	43.50	43.86	54	-10.14	AV
V	10480.122	62.19	8.46	37.68	44.50	63.83	68.2	-4.37	PK
V	10480.122	43.28	8.46	37.68	44.50	44.92	54	-9.08	AV
V	15720.096	62.00	10.12	38.80	44.10	66.82	74	-7.18	PK
V	15720.096	43.46	10.12	38.80	42.70	49.68	54	-4.32	AV
H	4739.177	60.75	7.10	37.24	43.50	61.59	74	-12.41	PK
H	4739.177	43.24	7.10	37.24	43.50	44.08	54	-9.92	AV
H	10480.081	52.32	8.46	38.57	44.50	54.85	68.2	-13.35	PK
H	10480.081	40.12	8.46	38.57	44.50	42.65	54	-11.35	AV
H	15720.146	51.67	10.12	38.38	44.10	56.07	74	-17.93	PK
H	15720.146	41.35	10.12	38.38	44.10	45.75	54	-8.25	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	4434.159	64.07	5.94	35.40	44.00	61.41	68.2	-6.79	PK
V	4434.159	43.48	5.94	35.40	44.00	40.82	54	-13.18	AV
V	10380.164	62.38	8.46	39.75	44.50	66.09	68.2	-2.11	PK
V	10380.164	43.55	8.46	39.75	44.50	47.26	54	-6.74	AV
V	15570.165	60.05	10.12	38.80	44.10	64.87	74	-9.13	PK
V	15570.165	43.90	10.12	38.80	42.70	50.12	54	-3.88	AV
H	4434.194	62.56	5.94	35.18	44.00	59.68	74	-14.32	PK
H	4434.194	43.90	5.94	35.18	44.00	41.02	54	-12.98	AV
H	10380.052	50.26	8.46	38.71	44.50	52.93	68.2	-15.27	PK
H	10380.052	40.96	8.46	38.71	44.50	43.63	54	-10.37	AV
H	15570.047	50.85	10.12	38.38	44.10	55.25	74	-18.75	PK
H	15570.047	40.31	10.12	38.38	44.10	44.71	54	-9.29	AV
High Channel (5230 MHz)-Above 1G									
V	4739.086	64.79	6.48	36.35	44.05	63.57	68.2	-4.63	PK
V	4739.086	43.97	6.48	36.35	44.05	42.75	54	-11.25	AV
V	10460.094	62.64	8.47	37.88	44.51	64.48	68.2	-3.72	PK
V	10460.094	43.49	8.47	37.88	44.51	45.33	54	-8.67	AV
V	15690.006	60.28	10.12	38.80	44.10	65.10	74	-8.90	PK
V	15690.006	43.26	10.12	38.80	42.70	49.48	54	-4.52	AV
H	4739.016	64.07	6.48	36.37	44.05	62.87	68.2	-5.33	PK
H	4739.016	43.65	6.48	36.37	44.05	42.45	54	-11.55	AV
H	10460.138	52.87	8.47	38.64	44.50	55.48	68.2	-12.72	PK
H	10460.138	42.29	8.47	38.64	44.50	44.90	54	-9.10	AV
H	15690.140	51.98	10.12	38.38	44.10	56.38	74	-17.62	PK
H	15690.140	41.00	10.12	38.38	44.10	45.40	54	-8.60	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	4434.121	60.57	5.94	35.40	44.00	57.91	68.2	-10.29	PK
V	4434.121	43.75	5.94	35.40	44.00	41.09	54	-12.91	AV
V	10360.083	62.67	8.46	39.75	44.50	66.38	68.2	-1.82	PK
V	10360.083	43.01	8.46	39.75	44.50	46.72	54	-7.28	AV
V	15540.026	63.94	10.12	38.80	44.10	68.76	74	-5.24	PK
V	15540.026	43.38	10.12	38.80	42.70	49.60	54	-4.40	AV
H	4434.192	62.31	5.94	35.18	44.00	59.43	68.2	-8.77	PK
H	4434.192	43.17	5.94	35.18	44.00	40.29	54	-13.71	AV
H	10360.150	54.35	8.46	38.71	44.50	57.02	68.2	-11.18	PK
H	10360.150	42.78	8.46	38.71	44.50	45.45	54	-8.55	AV
H	15540.177	50.15	10.12	38.38	44.10	54.55	74	-19.45	PK
H	15540.177	43.06	10.12	38.38	44.10	47.46	54	-6.54	AV
Middle Channel (5200 MHz)-Above 1G									
V	4592.159	63.09	6.48	36.35	44.05	61.87	74	-12.13	PK
V	4592.159	43.26	6.48	36.35	44.05	42.04	54	-11.96	AV
V	10400.114	64.38	8.47	37.88	44.51	66.22	68.2	-1.98	PK
V	10400.114	43.95	8.47	37.88	44.51	45.79	54	-8.21	AV
V	15600.122	62.02	10.12	38.80	44.10	66.84	74	-7.16	PK
V	15600.122	43.12	10.12	38.80	42.70	49.34	54	-4.66	AV
H	4592.113	63.29	6.48	36.37	44.05	62.09	74	-11.91	PK
H	4592.113	43.10	6.48	36.37	44.05	41.90	54	-12.10	AV
H	10400.082	51.78	8.47	38.64	44.50	54.39	68.2	-13.81	PK
H	10400.082	43.20	8.47	38.64	44.50	45.81	54	-8.19	AV
H	15600.125	52.20	10.12	38.38	44.10	56.60	74	-17.40	PK
H	15600.125	44.03	10.12	38.38	44.10	48.43	54	-5.57	AV
High Channel (5240 MHz)-Above 1G									
V	4739.170	60.41	7.10	37.24	43.50	61.25	74	-12.75	PK
V	4739.170	43.18	7.10	37.24	43.50	44.02	54	-9.98	AV
V	10480.122	61.49	8.46	37.68	44.50	63.13	68.2	-5.07	PK
V	10480.122	43.86	8.46	37.68	44.50	45.50	54	-8.50	AV
V	15720.154	60.80	10.12	38.80	44.10	65.62	74	-8.38	PK
V	15720.154	43.54	10.12	38.80	42.70	49.76	54	-4.24	AV
H	4739.088	64.16	7.10	37.24	43.50	65.00	74	-9.00	PK
H	4739.088	43.41	7.10	37.24	43.50	44.25	54	-9.75	AV
H	10480.060	51.34	8.46	38.57	44.50	53.87	68.2	-14.33	PK
H	10480.060	44.33	8.46	38.57	44.50	46.86	54	-7.14	AV
H	15720.027	54.80	10.12	38.38	44.10	59.20	74	-14.80	PK
H	15720.027	41.57	10.12	38.38	44.10	45.97	54	-8.03	AV

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

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

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

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

Test Mode 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	4434.056	63.99	5.94	35.40	44.00	61.33	68.2	-6.87	PK
V	4434.056	43.07	5.94	35.40	44.00	40.41	54	-13.59	AV
V	10380.128	61.17	8.46	39.75	44.50	64.88	68.2	-3.32	PK
V	10380.128	43.52	8.46	39.75	44.50	47.23	54	-6.77	AV
V	15570.053	63.75	10.12	38.80	44.10	68.57	74	-5.43	PK
V	15570.053	43.03	10.12	38.80	42.70	49.25	54	-4.75	AV
H	4434.197	60.97	5.94	35.18	44.00	58.09	74	-15.91	PK
H	4434.197	43.32	5.94	35.18	44.00	40.44	54	-13.56	AV
H	10380.182	50.60	8.46	38.71	44.50	53.27	68.2	-14.93	PK
H	10380.182	43.25	8.46	38.71	44.50	45.92	54	-8.08	AV
H	15570.019	52.33	10.12	38.38	44.10	56.73	74	-17.27	PK
H	15570.019	44.74	10.12	38.38	44.10	49.14	54	-4.86	AV
High Channel (5230 MHz)-Above 1G									
V	4739.199	64.31	6.48	36.35	44.05	63.09	68.2	-5.11	PK
V	4739.199	43.42	6.48	36.35	44.05	42.20	54	-11.80	AV
V	10460.043	62.50	8.47	37.88	44.51	64.34	68.2	-3.86	PK
V	10460.043	43.62	8.47	37.88	44.51	45.46	54	-8.54	AV
V	15690.062	63.33	10.12	38.80	44.10	68.15	74	-5.85	PK
V	15690.062	43.27	10.12	38.80	42.70	49.49	54	-4.51	AV
H	4739.179	63.30	6.48	36.37	44.05	62.10	68.2	-6.10	PK
H	4739.179	43.19	6.48	36.37	44.05	41.99	54	-12.01	AV
H	10460.164	51.91	8.47	38.64	44.50	54.52	68.2	-13.68	PK
H	10460.164	43.75	8.47	38.64	44.50	46.36	54	-7.64	AV
H	15690.059	51.17	10.12	38.38	44.10	55.57	74	-18.43	PK
H	15690.059	43.78	10.12	38.38	44.10	48.18	54	-5.82	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-HT80
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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
(5210 MHz)-Above 1G									
V	4434.100	63.99	5.94	35.40	44.00	61.33	68.2	-6.87	PK
V	4434.100	43.52	5.94	35.40	44.00	40.86	54	-13.14	AV
V	10420.194	61.70	8.46	39.75	44.50	65.41	68.2	-2.79	PK
V	10420.194	43.62	8.46	39.75	44.50	47.33	54	-6.67	AV
V	15630.124	64.05	10.12	38.80	44.10	68.87	74	-5.13	PK
V	15630.124	43.79	10.12	38.80	42.70	50.01	54	-3.99	AV
H	4434.127	63.00	5.94	35.18	44.00	60.12	68.2	-8.08	PK
H	4434.127	43.06	5.94	35.18	44.00	40.18	54	-13.82	AV
H	10420.024	52.83	8.46	38.71	44.50	55.50	68.2	-12.70	PK
H	10420.024	43.22	8.46	38.71	44.50	45.89	54	-8.11	AV
H	15630.156	53.69	10.12	38.38	44.10	58.09	74	-15.91	PK
H	15630.156	43.86	10.12	38.38	44.10	48.26	54	-5.74	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	4679.155	59.63	5.94	35.40	44.00	56.97	74	-17.03	PK
V	4679.155	43.14	5.94	35.40	44.00	40.48	54	-13.52	AV
V	11490.174	55.03	8.46	39.75	44.50	58.74	68.2	-9.46	PK
V	11490.174	43.69	8.46	39.75	44.50	47.40	54	-6.60	AV
V	17235.022	56.26	10.12	38.80	44.10	61.08	68.2	-7.12	PK
V	17235.022	43.06	10.12	38.80	42.70	49.28	54	-4.72	AV
H	4679.133	58.95	5.94	35.18	44.00	56.07	74	-17.93	PK
H	4679.133	43.74	5.94	35.18	44.00	40.86	54	-13.14	AV
H	11490.102	54.31	8.46	38.71	44.50	56.98	68.2	-11.22	PK
H	11490.102	40.35	8.46	38.71	44.50	43.02	54	-10.98	AV
H	17235.058	50.84	10.12	38.38	44.10	55.24	68.2	-12.96	PK
H	17235.058	42.53	10.12	38.38	44.10	46.93	54	-7.07	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.091	54.36	6.48	36.35	44.05	53.14	74	-20.86	PK
V	4592.091	43.24	6.48	36.35	44.05	42.02	54	-11.98	AV
V	11570.068	57.11	8.47	37.88	44.51	58.95	68.2	-9.25	PK
V	11570.068	43.37	8.47	37.88	44.51	45.21	54	-8.79	AV
V	17355.033	58.62	10.12	38.80	44.10	63.44	68.2	-4.76	PK
V	17355.033	39.26	10.12	38.80	42.70	45.48	54	-8.52	AV
H	4592.026	57.52	6.48	36.37	44.05	56.32	74	-17.68	PK
H	4592.026	43.44	6.48	36.37	44.05	42.24	54	-11.76	AV
H	11570.035	51.71	8.47	38.64	44.50	54.32	68.2	-13.88	PK
H	11570.035	43.18	8.47	38.64	44.50	45.79	54	-8.21	AV
H	17355.176	53.60	10.12	38.38	44.10	58.00	68.2	-10.20	PK
H	17355.176	43.98	10.12	38.38	44.10	48.38	54	-5.62	AV
High Channel (5825 MHz)-Above 1G									
V	6039.146	60.50	7.10	37.24	43.50	61.34	68.2	-6.86	PK
V	6039.146	43.83	7.10	37.24	43.50	44.67	54	-9.33	AV
V	11650.038	58.68	8.46	37.68	44.50	60.32	74	-13.68	PK
V	11650.038	43.25	8.46	37.68	44.50	44.89	54	-9.11	AV
V	17475.191	56.44	10.12	38.80	44.10	61.26	68.2	-6.94	PK
V	17475.191	43.65	10.12	38.80	42.70	49.87	54	-4.13	AV
H	6039.064	54.36	7.10	37.24	43.50	55.20	68.2	-13.00	PK
H	6039.064	43.40	7.10	37.24	43.50	44.24	54	-9.76	AV
H	11650.114	53.66	8.46	38.57	44.50	56.19	74	-17.81	PK
H	11650.114	44.06	8.46	38.57	44.50	46.59	54	-7.41	AV
H	17475.044	51.44	10.12	38.38	44.10	55.84	68.2	-12.36	PK
H	17475.044	42.22	10.12	38.38	44.10	46.62	54	-7.38	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 case is Antenna B.

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	4679.122	56.00	5.94	35.40	44.00	53.34	74	-20.66	PK
V	4679.122	43.76	5.94	35.40	44.00	41.10	54	-12.90	AV
V	11490.015	53.70	8.46	39.75	44.50	57.41	68.2	-10.79	PK
V	11490.015	43.26	8.46	39.75	44.50	46.97	54	-7.03	AV
V	17235.010	60.70	10.12	38.80	44.10	65.52	68.2	-2.68	PK
V	17235.010	43.50	10.12	38.80	42.70	49.72	54	-4.28	AV
H	4679.085	56.51	5.94	35.18	44.00	53.63	74	-20.37	PK
H	4679.085	43.18	5.94	35.18	44.00	40.30	54	-13.70	AV
H	11490.034	51.25	8.46	38.71	44.50	53.92	68.2	-14.28	PK
H	11490.034	40.56	8.46	38.71	44.50	43.23	54	-10.77	AV
H	17235.031	52.68	10.12	38.38	44.10	57.08	68.2	-11.12	PK
H	17235.031	43.80	10.12	38.38	44.10	48.20	54	-5.80	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.097	58.30	6.48	36.35	44.05	57.08	74	-16.92	PK
V	4592.097	43.54	6.48	36.35	44.05	42.32	54	-11.68	AV
V	11570.071	54.62	8.47	37.88	44.51	56.46	68.2	-11.74	PK
V	11570.071	43.89	8.47	37.88	44.51	45.73	54	-8.27	AV
V	17355.137	60.30	10.12	38.80	44.10	65.12	68.2	-3.08	PK
V	17355.137	43.69	10.12	38.80	42.70	49.91	54	-4.09	AV
H	4592.096	58.41	6.48	36.37	44.05	57.21	74	-16.79	PK
H	4592.096	43.88	6.48	36.37	44.05	42.68	54	-11.32	AV
H	11570.037	53.87	8.47	38.64	44.50	56.48	68.2	-11.72	PK
H	11570.037	41.78	8.47	38.64	44.50	44.39	54	-9.61	AV
H	17355.079	50.40	10.12	38.38	44.10	54.80	68.2	-13.40	PK
H	17355.079	40.30	10.12	38.38	44.10	44.70	54	-9.30	AV
High Channel (5825 MHz)-Above 1G									
V	6039.081	57.62	7.10	37.24	43.50	58.46	68.2	-9.74	PK
V	6039.081	43.11	7.10	37.24	43.50	43.95	54	-10.05	AV
V	11650.188	56.93	8.46	37.68	44.50	58.57	74	-15.43	PK
V	11650.188	43.12	8.46	37.68	44.50	44.76	54	-9.24	AV
V	17475.150	59.38	10.12	38.80	44.10	64.20	68.2	-4.00	PK
V	17475.150	43.71	10.12	38.80	42.70	49.93	54	-4.07	AV
H	6039.007	56.57	7.10	37.24	43.50	57.41	68.2	-10.79	PK
H	6039.007	43.85	7.10	37.24	43.50	44.69	54	-9.31	AV
H	11650.096	52.46	8.46	38.57	44.50	54.99	74	-19.01	PK
H	11650.096	43.80	8.46	38.57	44.50	46.33	54	-7.67	AV
H	17475.105	50.45	10.12	38.38	44.10	54.85	68.2	-13.35	PK
H	17475.105	40.64	10.12	38.38	44.10	45.04	54	-8.96	AV

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

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

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

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

Test Mode 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	4679.160	59.23	5.94	35.40	44.00	56.57	74	-17.43	PK
V	4679.160	43.30	5.94	35.40	44.00	40.64	54	-13.36	AV
V	11510.036	55.74	8.46	39.75	44.50	59.45	74	-14.55	PK
V	11510.036	43.09	8.46	39.75	44.50	46.80	54	-7.20	AV
V	17265.090	55.24	10.12	38.80	44.10	60.06	68.2	-8.14	PK
V	17265.090	2.00	10.12	38.80	42.70	8.22	54	-45.78	AV
H	4679.179	59.82	5.94	35.18	44.00	56.94	74	-17.06	PK
H	4679.179	43.70	5.94	35.18	44.00	40.82	54	-13.18	AV
H	11510.107	53.53	8.46	38.71	44.50	56.20	74	-17.80	PK
H	11510.107	40.04	8.46	38.71	44.50	42.71	54	-11.29	AV
H	17265.014	54.50	10.12	38.38	44.10	58.90	68.2	-9.30	PK
H	17265.014	42.18	10.12	38.38	44.10	46.58	54	-7.42	AV
High Channel (5795 MHz)-Above 1G									
V	6039.138	56.38	6.48	36.35	44.05	55.16	68.2	-13.04	PK
V	6039.138	43.14	6.48	36.35	44.05	41.92	54	-12.08	AV
V	11590.066	58.06	8.47	37.88	44.51	59.90	74	-14.10	PK
V	11590.066	43.36	8.47	37.88	44.51	45.20	54	-8.80	AV
V	17385.090	55.49	10.12	38.80	44.10	60.31	68.2	-7.89	PK
V	17385.090	41.64	10.12	38.80	42.70	47.86	54	-6.14	AV
H	6039.114	57.07	6.48	36.37	44.05	55.87	68.2	-12.33	PK
H	6039.114	43.50	6.48	36.37	44.05	42.30	54	-11.70	AV
H	11590.119	50.03	8.47	38.64	44.50	52.64	74	-21.36	PK
H	11590.119	41.87	8.47	38.64	44.50	44.48	54	-9.52	AV
H	17385.115	51.11	10.12	38.38	44.10	55.51	68.2	-12.69	PK
H	17385.115	40.82	10.12	38.38	44.10	45.22	54	-8.78	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-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	4679.020	60.70	5.94	35.40	44.00	58.04	74	-15.96	PK
V	4679.020	43.47	5.94	35.40	44.00	40.81	54	-13.19	AV
V	11490.049	53.20	8.46	39.75	44.50	56.91	68.2	-11.29	PK
V	11490.049	43.53	8.46	39.75	44.50	47.24	54	-6.76	AV
V	17235.144	60.47	10.12	38.80	44.10	65.29	68.2	-2.91	PK
V	17235.144	43.27	10.12	38.80	42.70	49.49	54	-4.51	AV
H	4679.124	57.18	5.94	35.18	44.00	54.30	74	-19.70	PK
H	4679.124	43.39	5.94	35.18	44.00	40.51	54	-13.49	AV
H	11490.014	51.11	8.46	38.71	44.50	53.78	68.2	-14.42	PK
H	11490.014	43.92	8.46	38.71	44.50	46.59	54	-7.41	AV
H	17235.012	54.68	10.12	38.38	44.10	59.08	68.2	-9.12	PK
H	17235.012	42.43	10.12	38.38	44.10	46.83	54	-7.17	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.120	59.65	6.48	36.35	44.05	58.43	74	-15.57	PK
V	4592.120	43.04	6.48	36.35	44.05	41.82	54	-12.18	AV
V	11570.151	58.29	8.47	37.88	44.51	60.13	68.2	-8.07	PK
V	11570.151	43.49	8.47	37.88	44.51	45.33	54	-8.67	AV
V	17355.185	59.90	10.12	38.80	44.10	64.72	68.2	-3.48	PK
V	17355.185	43.65	10.12	38.80	42.70	49.87	54	-4.13	AV
H	4592.072	60.43	6.48	36.37	44.05	59.23	74	-14.77	PK
H	4592.072	43.54	6.48	36.37	44.05	42.34	54	-11.66	AV
H	11570.033	52.13	8.47	38.64	44.50	54.74	68.2	-13.46	PK
H	11570.033	41.11	8.47	38.64	44.50	43.72	54	-10.28	AV
H	17355.146	54.01	10.12	38.38	44.10	58.41	68.2	-9.79	PK
H	17355.146	41.13	10.12	38.38	44.10	45.53	54	-8.47	AV
High Channel (5825 MHz)-Above 1G									
V	6039.129	56.62	7.10	37.24	43.50	57.46	68.2	-10.74	PK
V	6039.129	43.96	7.10	37.24	43.50	44.80	54	-9.20	AV
V	11650.047	57.45	8.46	37.68	44.50	59.09	74	-14.91	PK
V	11650.047	43.35	8.46	37.68	44.50	44.99	54	-9.01	AV
V	17475.103	55.77	10.12	38.80	44.10	60.59	68.2	-7.61	PK
V	17475.103	43.83	10.12	38.80	42.70	50.05	54	-3.95	AV
H	6039.164	58.37	7.10	37.24	43.50	59.21	68.2	-8.99	PK
H	6039.164	43.52	7.10	37.24	43.50	44.36	54	-9.64	AV
H	11650.016	54.22	8.46	38.57	44.50	56.75	74	-17.25	PK
H	11650.016	40.93	8.46	38.57	44.50	43.46	54	-10.54	AV
H	17475.042	50.68	10.12	38.38	44.10	55.08	68.2	-13.12	PK
H	17475.042	44.01	10.12	38.38	44.10	48.41	54	-5.59	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	4679.027	56.54	5.94	35.40	44.00	53.88	74	-20.12	PK
V	4679.027	43.87	5.94	35.40	44.00	41.21	54	-12.79	AV
V	11510.011	56.69	8.46	39.75	44.50	60.40	74	-13.60	PK
V	11510.011	43.19	8.46	39.75	44.50	46.90	54	-7.10	AV
V	17265.183	58.35	10.12	38.80	44.10	63.17	68.2	-5.03	PK
V	17265.183	2.00	10.12	38.80	42.70	8.22	54	-45.78	AV
H	4679.069	60.46	5.94	35.18	44.00	57.58	74	-16.42	PK
H	4679.069	43.60	5.94	35.18	44.00	40.72	54	-13.28	AV
H	11510.020	51.20	8.46	38.71	44.50	53.87	74	-20.13	PK
H	11510.020	43.22	8.46	38.71	44.50	45.89	54	-8.11	AV
H	17265.117	53.25	10.12	38.38	44.10	57.65	68.2	-10.55	PK
H	17265.117	40.99	10.12	38.38	44.10	45.39	54	-8.61	AV
High Channel (5795 MHz)-Above 1G									
V	6039.123	60.09	6.48	36.35	44.05	58.87	68.2	-9.33	PK
V	6039.123	43.26	6.48	36.35	44.05	42.04	54	-11.96	AV
V	11590.151	59.07	8.47	37.88	44.51	60.91	74	-13.09	PK
V	11590.151	43.37	8.47	37.88	44.51	45.21	54	-8.79	AV
V	17385.124	55.08	10.12	38.80	44.10	59.90	68.2	-8.30	PK
V	17385.124	41.55	10.12	38.80	42.70	47.77	54	-6.23	AV
H	6039.046	56.76	6.48	36.37	44.05	55.56	68.2	-12.64	PK
H	6039.046	43.18	6.48	36.37	44.05	41.98	54	-12.02	AV
H	11590.008	54.65	8.47	38.64	44.50	57.26	74	-16.74	PK
H	11590.008	40.84	8.47	38.64	44.50	43.45	54	-10.55	AV
H	17385.065	52.64	10.12	38.38	44.10	57.04	68.2	-11.16	PK
H	17385.065	43.14	10.12	38.38	44.10	47.54	54	-6.46	AV

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

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

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

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

Test Mode is MIMO Mode.

Test Mode:	TX(5.8G) - 802.11ac-HT80
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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
(5775 MHz)-Above 1G									
V	4679.117	58.27	5.94	35.40	44.00	55.61	74	-18.39	PK
V	4679.117	43.13	5.94	35.40	44.00	40.47	54	-13.53	AV
V	11550.053	58.93	8.46	39.75	44.50	62.64	74	-11.36	PK
V	11550.053	42.19	8.46	39.75	44.50	45.90	54	-8.10	AV
V	17325.163	58.86	10.12	38.80	44.10	63.68	68.2	-4.52	PK
V	17325.163	41.23	10.12	38.80	42.70	47.45	54	-6.55	AV
H	4679.125	57.01	5.94	35.18	44.00	54.13	74	-19.87	PK
H	4679.125	43.86	5.94	35.18	44.00	40.98	54	-13.02	AV
H	11550.037	51.52	8.46	38.71	44.50	54.19	74	-19.81	PK
H	11550.037	43.91	8.46	38.71	44.50	46.58	54	-7.42	AV
H	17325.105	50.71	10.12	38.38	44.10	55.11	68.2	-13.09	PK
H	17325.105	42.55	10.12	38.38	44.10	46.95	54	-7.05	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 is MIMO Mode.

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 Wifi Repeater 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 Wifi Repeater 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 Wifi Repeaters 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

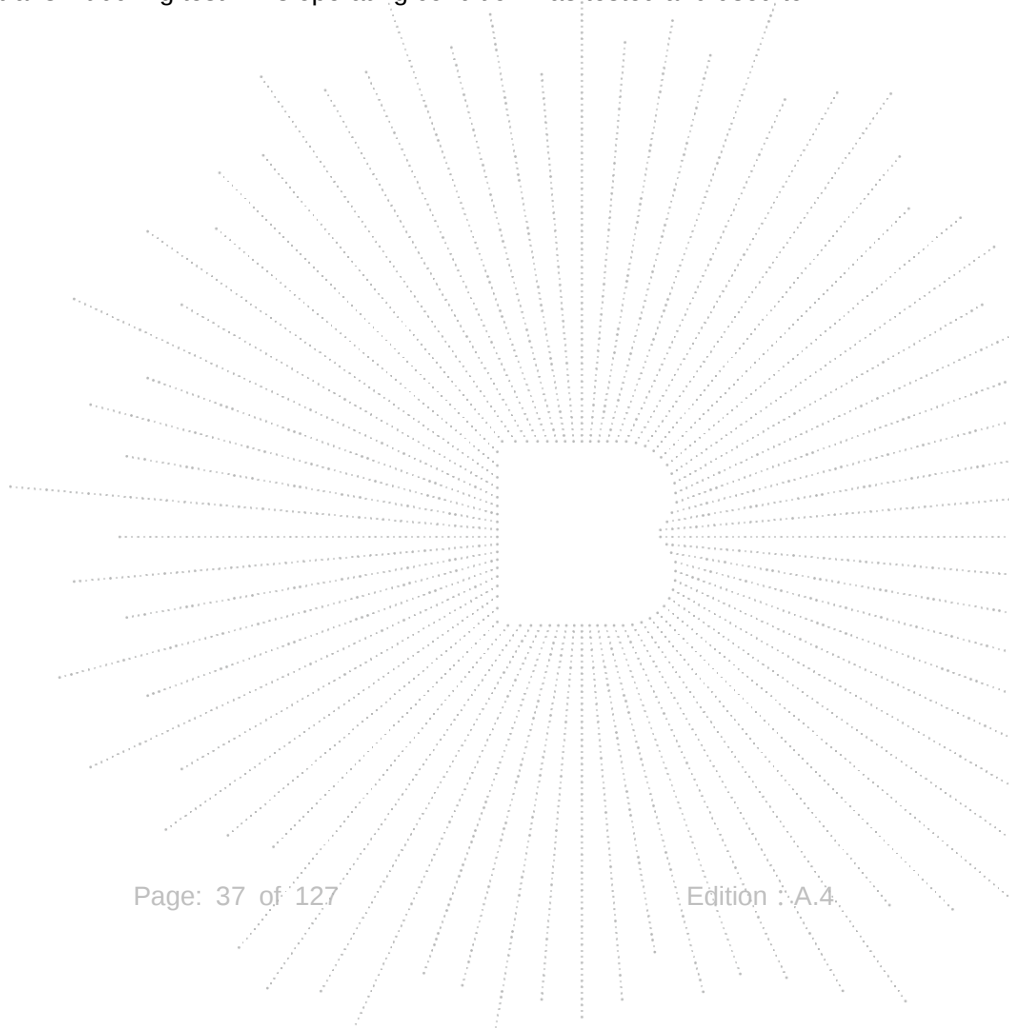
For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of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



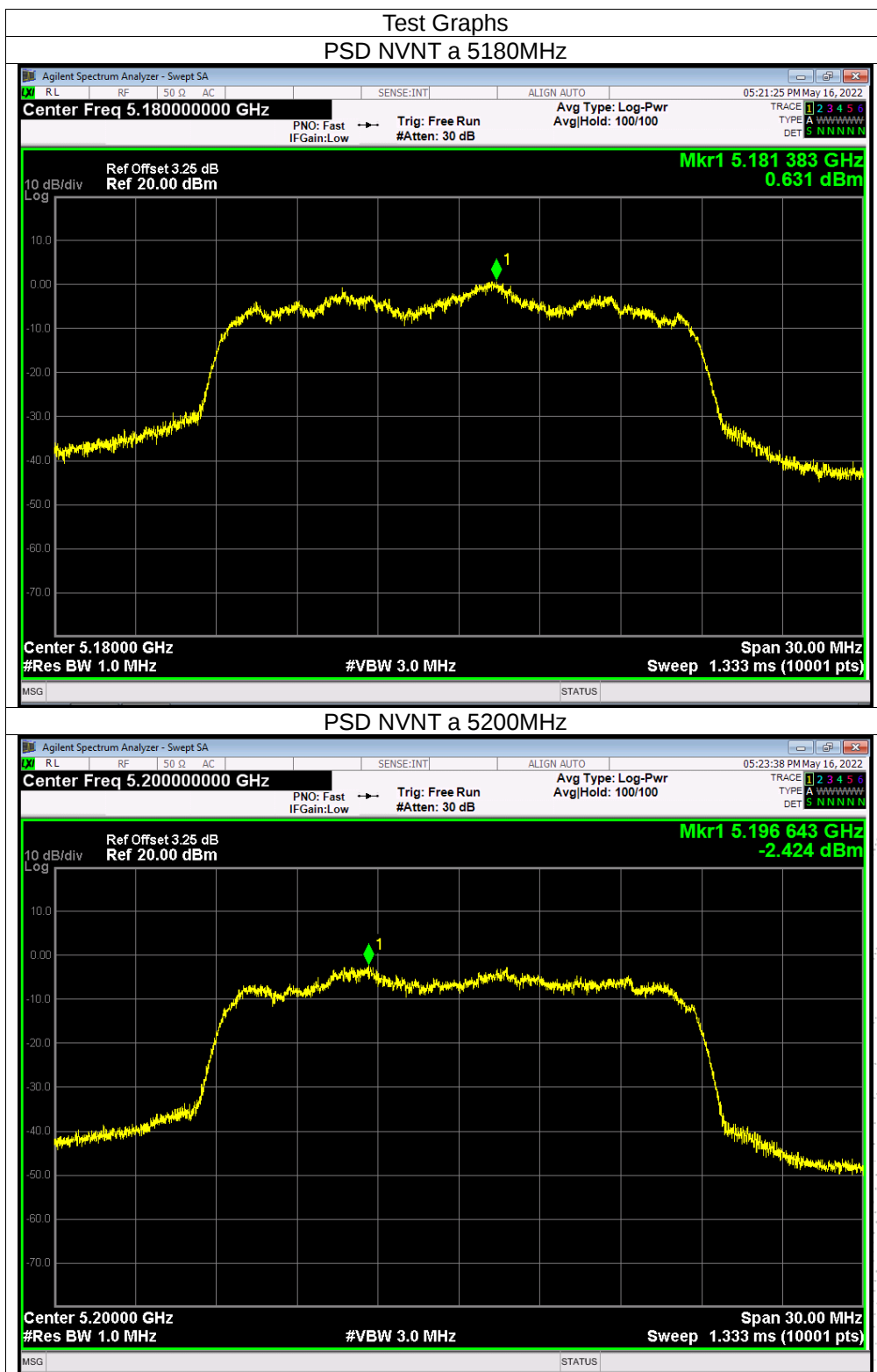
8.5 Test Result

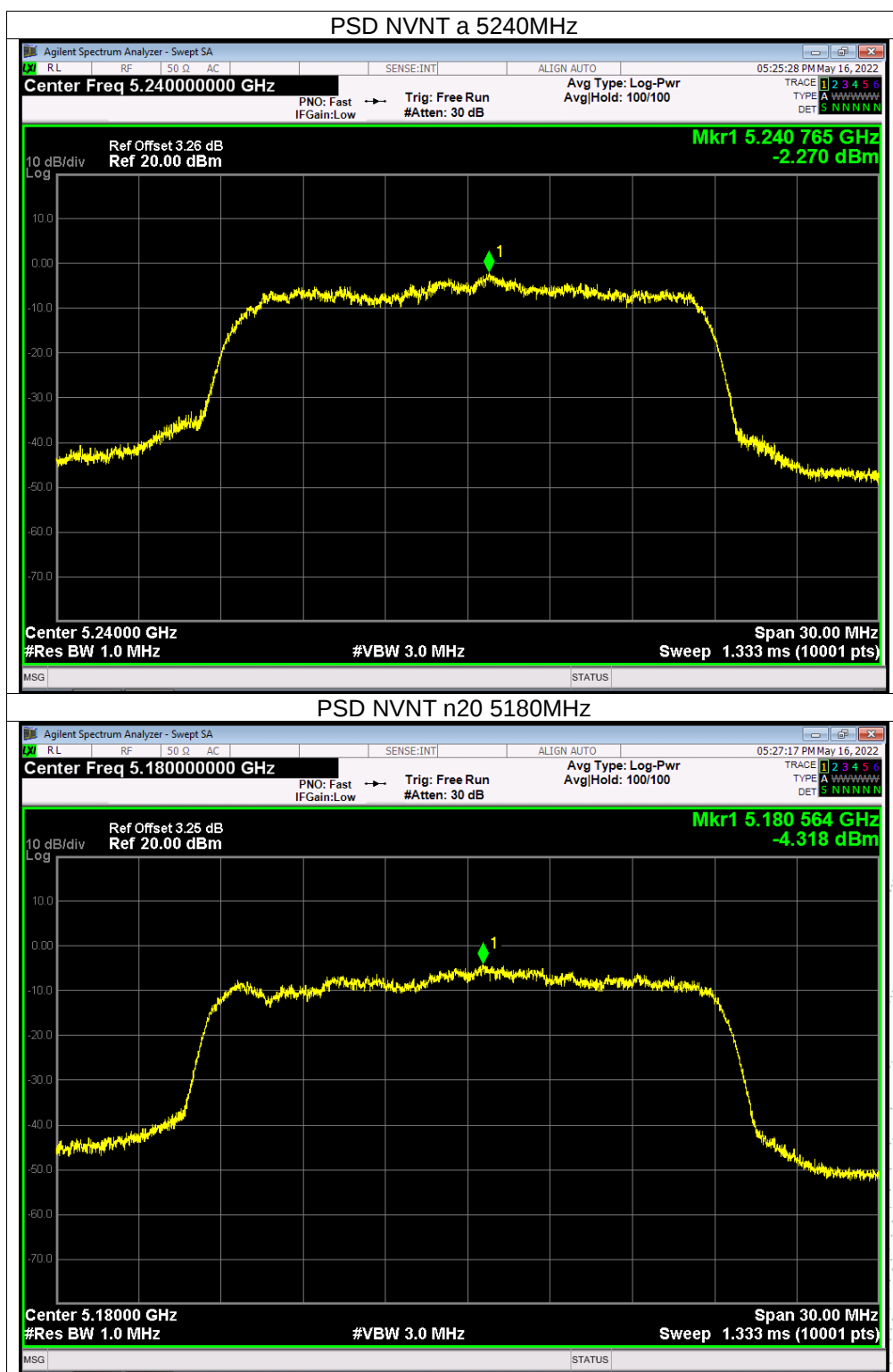
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 120V
Test Mode:	(5180-5240MHz); (5745-5825MHz)		

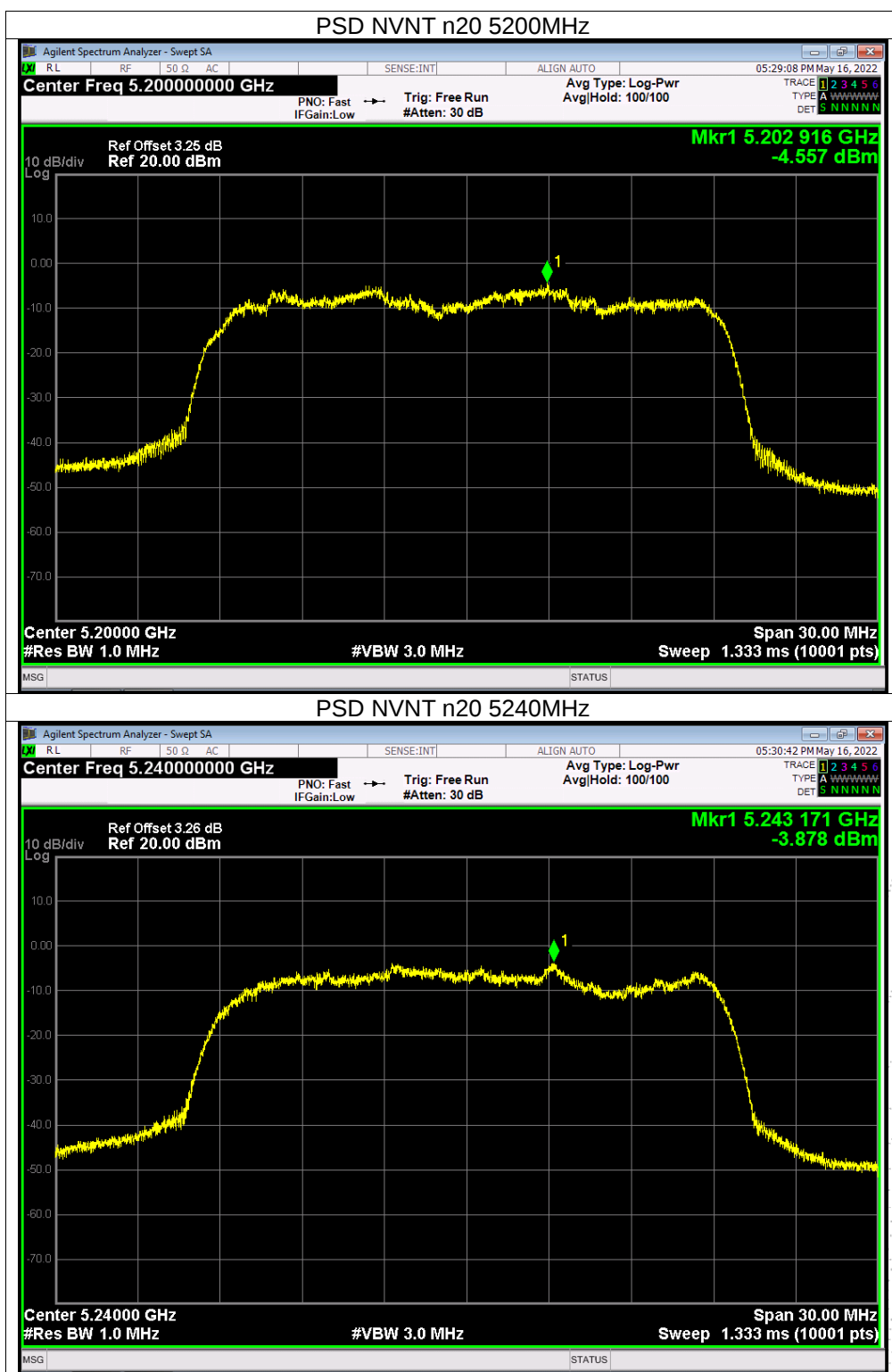
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/MHz)		Total (dBm/MHz)	Limit (dBm/MHz)	Verdict
			Ant A	Ant B			
NVNT	a	5180	0.63	0.57	/	11	Pass
NVNT	a	5200	-2.42	-3.01	/	11	Pass
NVNT	a	5240	-2.27	-2.86	/	11	Pass
NVNT	n20	5180	-4.32	-4.93	-1.60	8.89	Pass
NVNT	n20	5200	-4.56	-5.12	-1.82	8.89	Pass
NVNT	n20	5240	-3.88	-4.28	-1.07	8.89	Pass
NVNT	n40	5190	-9.75	-10.44	-7.07	8.89	Pass
NVNT	n40	5230	-9.69	-10.52	-7.07	8.89	Pass
NVNT	ac20	5180	-2.37	-2.89	0.39	8.89	Pass
NVNT	ac20	5200	-4.54	-5.03	-1.77	8.89	Pass
NVNT	ac20	5240	-3.17	-3.65	-0.39	8.89	Pass
NVNT	ac40	5190	-9.61	-10.34	-6.95	8.89	Pass
NVNT	ac40	5230	-8.93	-9.23	-6.07	8.89	Pass
NVNT	ac80	5210	-15.81	-16.17	-12.98	8.89	Pass
MIMO mode: 8.11dbi>6.0 dbi so power limit=11-(8.11-6.0)=8.89							

Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/500KHz)		Total (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
			Ant A	Ant B			
NVNT	a	5745	7.20	7.12	/	30	Pass
NVNT	a	5785	5.29	5.24	/	30	Pass
NVNT	a	5825	5.06	4.95	/	30	Pass
NVNT	n20	5745	6.14	6.12	9.14	27.74	Pass
NVNT	n20	5785	4.40	4.14	7.28	27.74	Pass
NVNT	n20	5825	4.50	4.30	7.41	27.74	Pass
NVNT	n40	5755	1.47	1.45	4.47	27.74	Pass
NVNT	n40	5795	0.86	0.81	3.85	27.74	Pass
NVNT	ac20	5745	5.16	5.02	8.10	27.74	Pass
NVNT	ac20	5785	4.18	4.07	7.14	27.74	Pass
NVNT	ac20	5825	3.69	3.55	6.63	27.74	Pass
NVNT	ac40	5755	1.49	1.27	4.39	27.74	Pass
NVNT	ac40	5795	1.09	0.85	3.98	27.74	Pass
NVNT	ac80	5775	-3.41	-3.88	-0.63	27.74	Pass
MIMO mode: 8.26dbi>6.0 dbi so power limit=30-(8.26-6.0)=27.74							

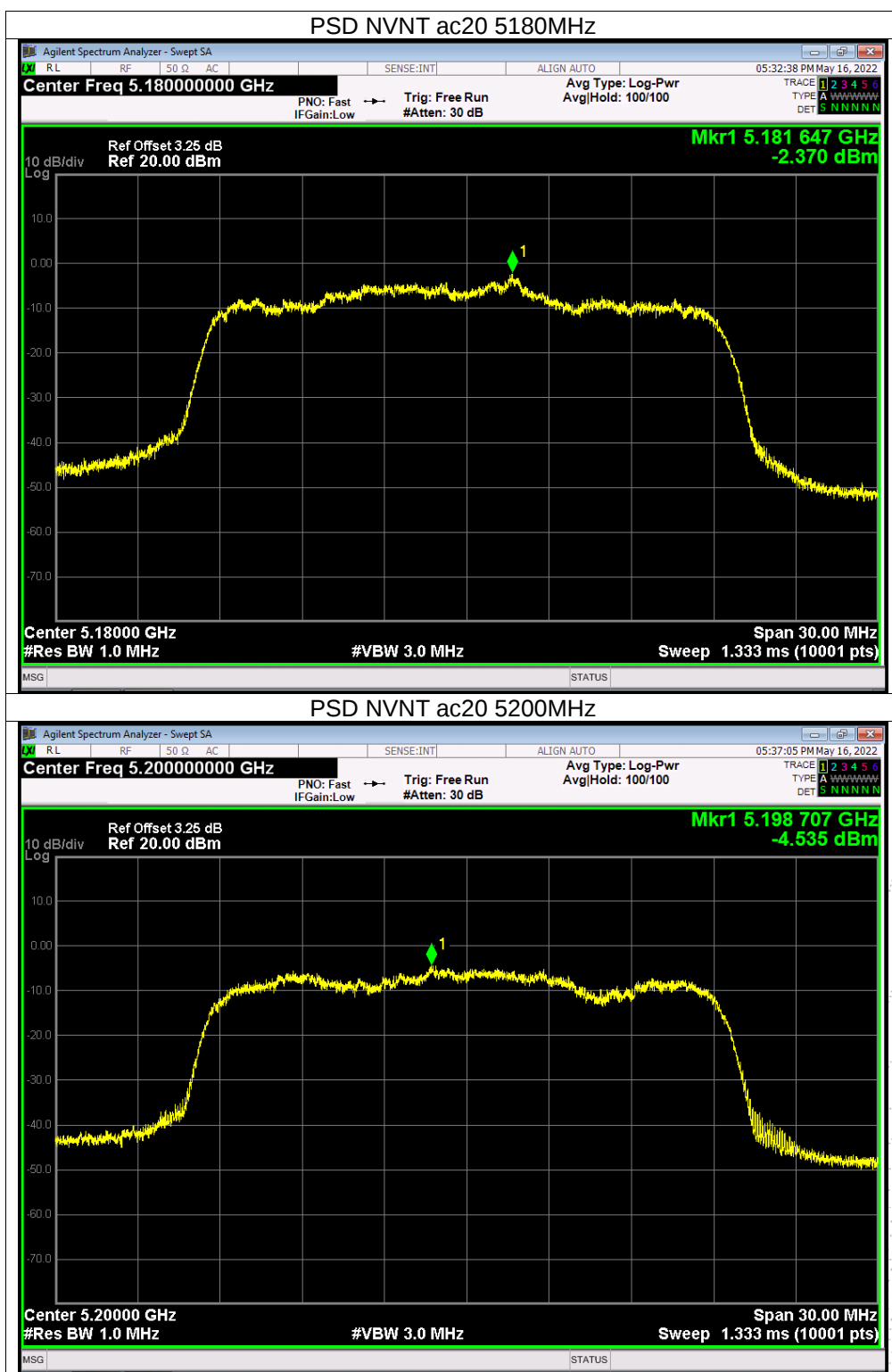
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot.

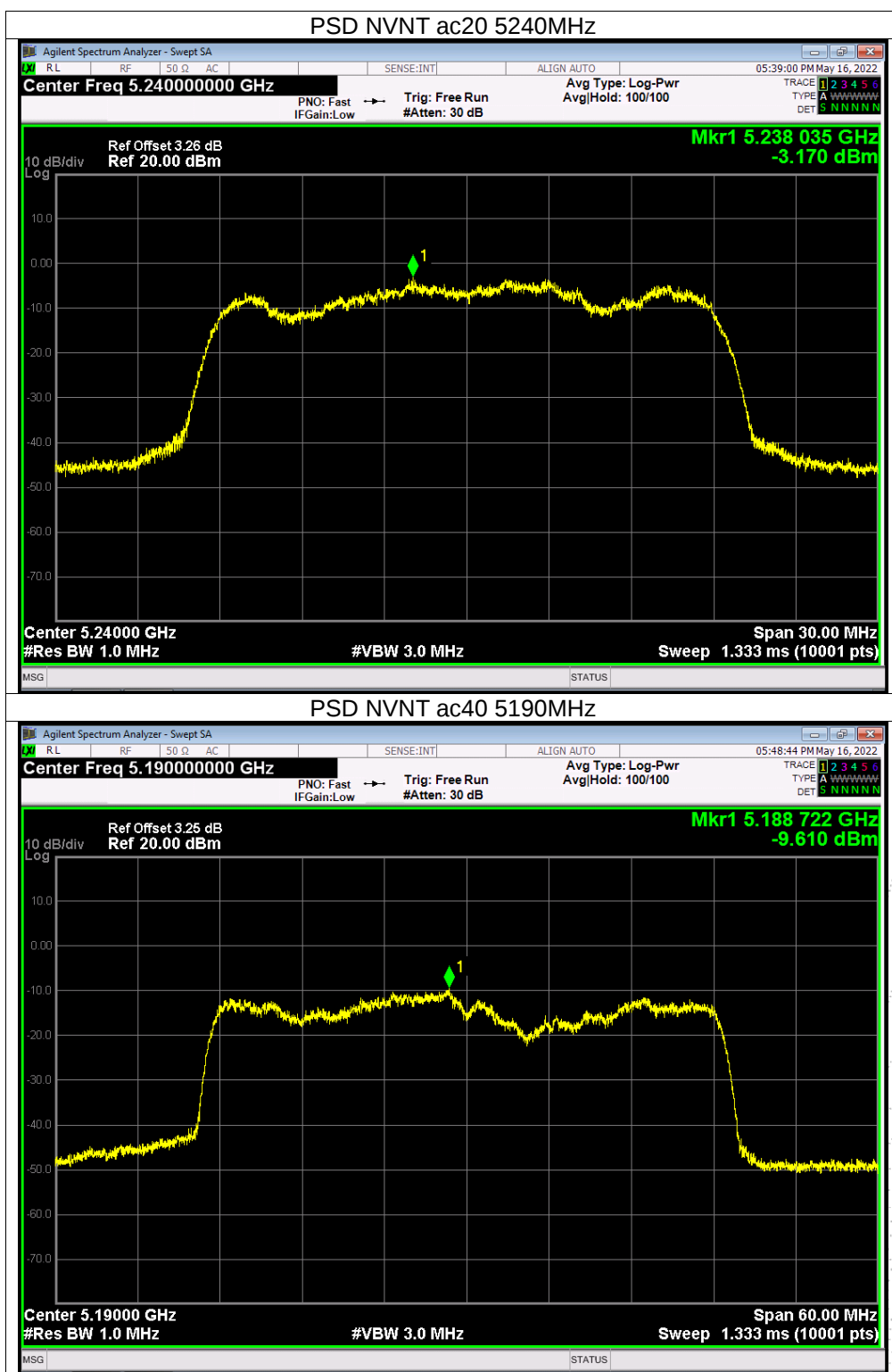




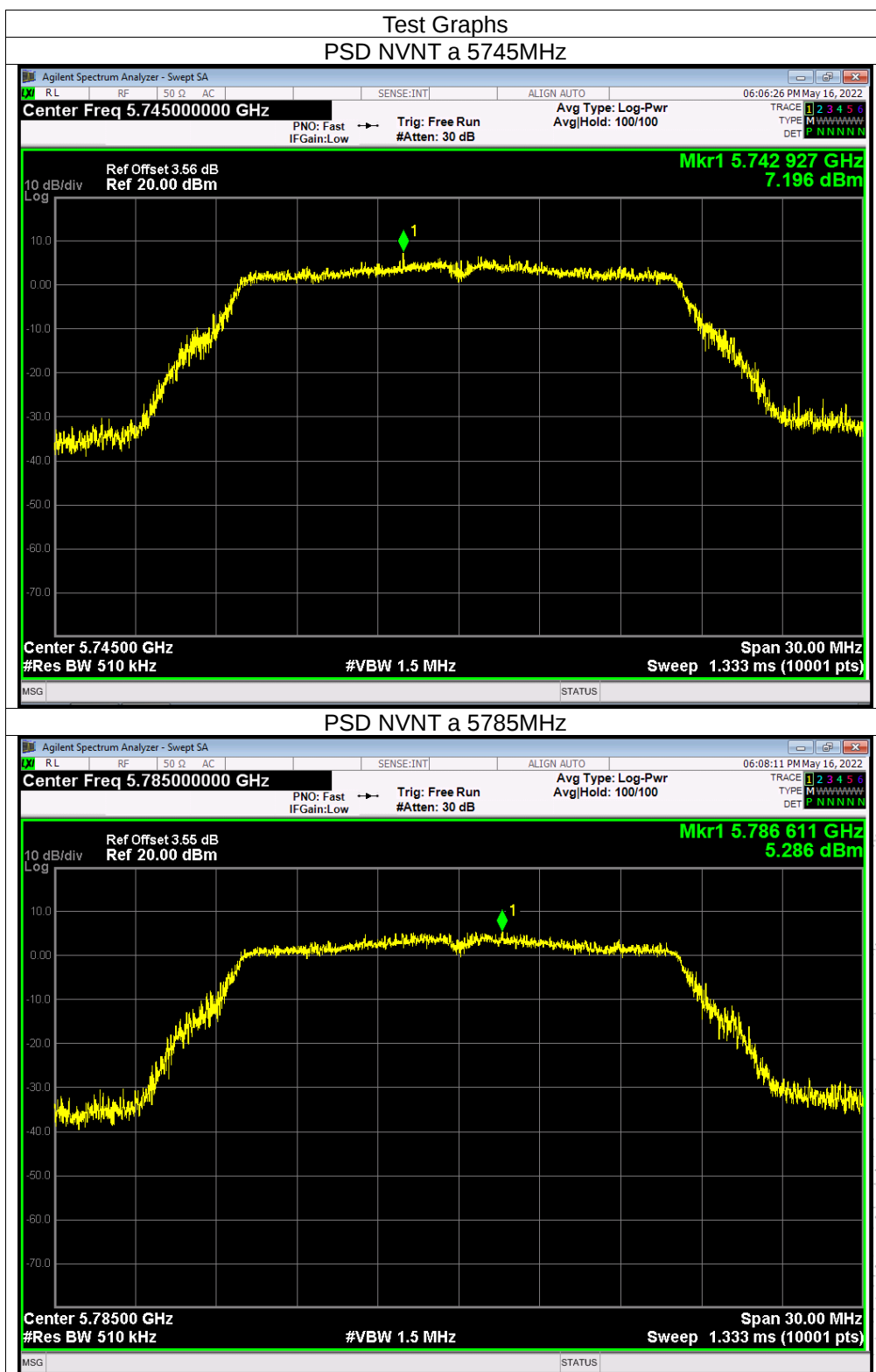


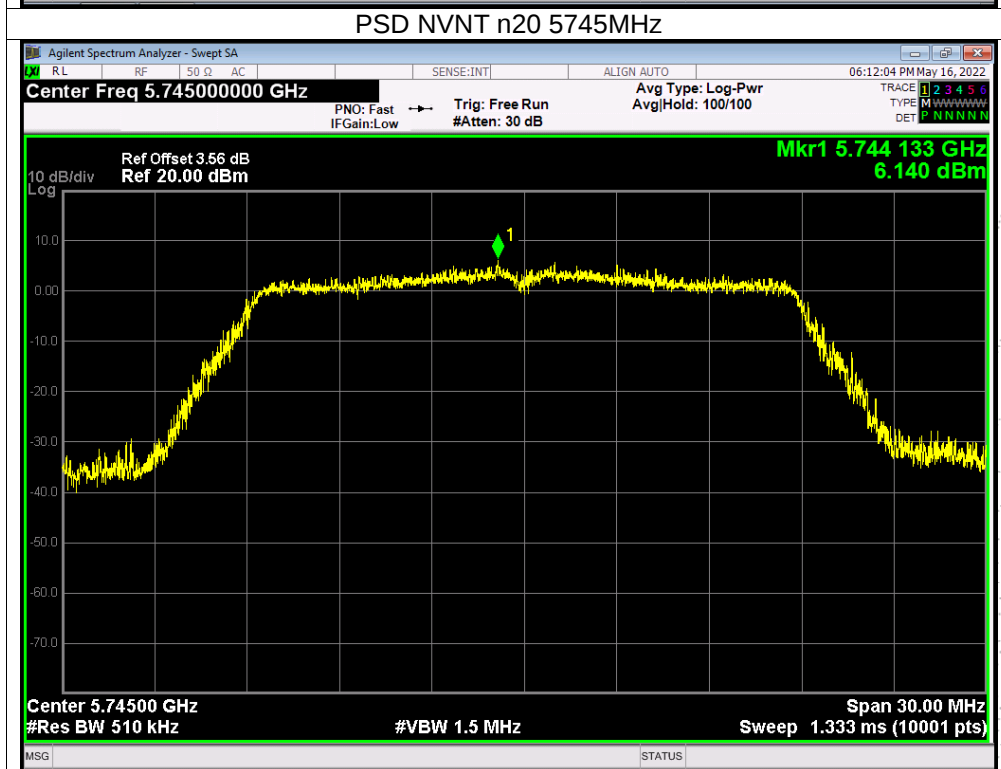
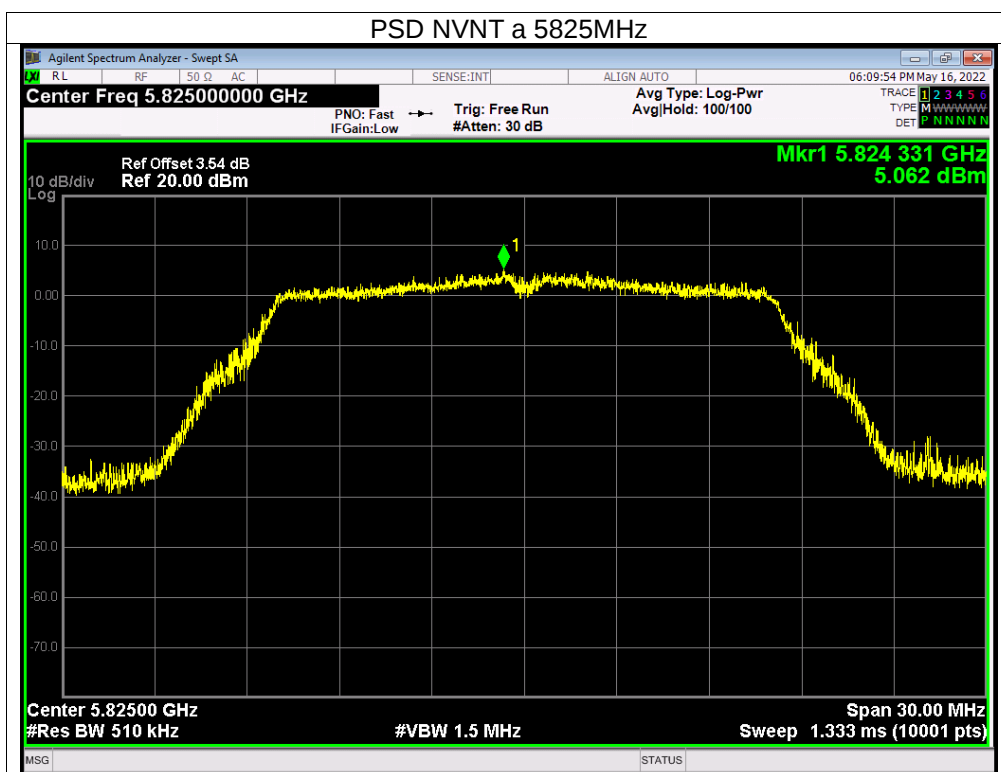


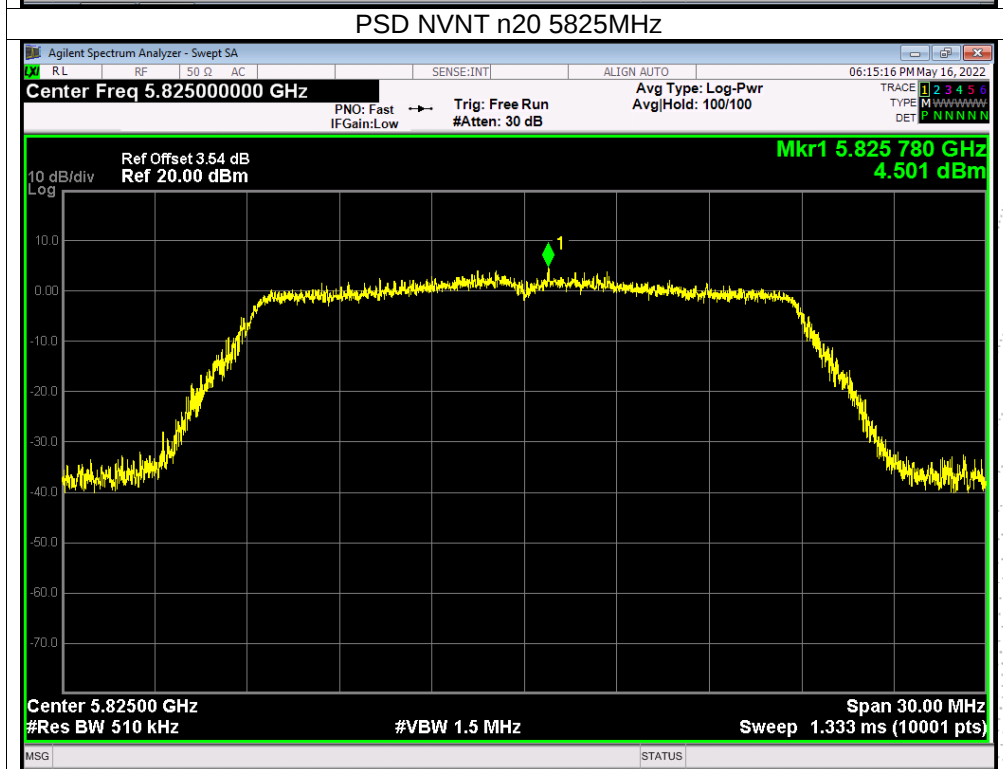
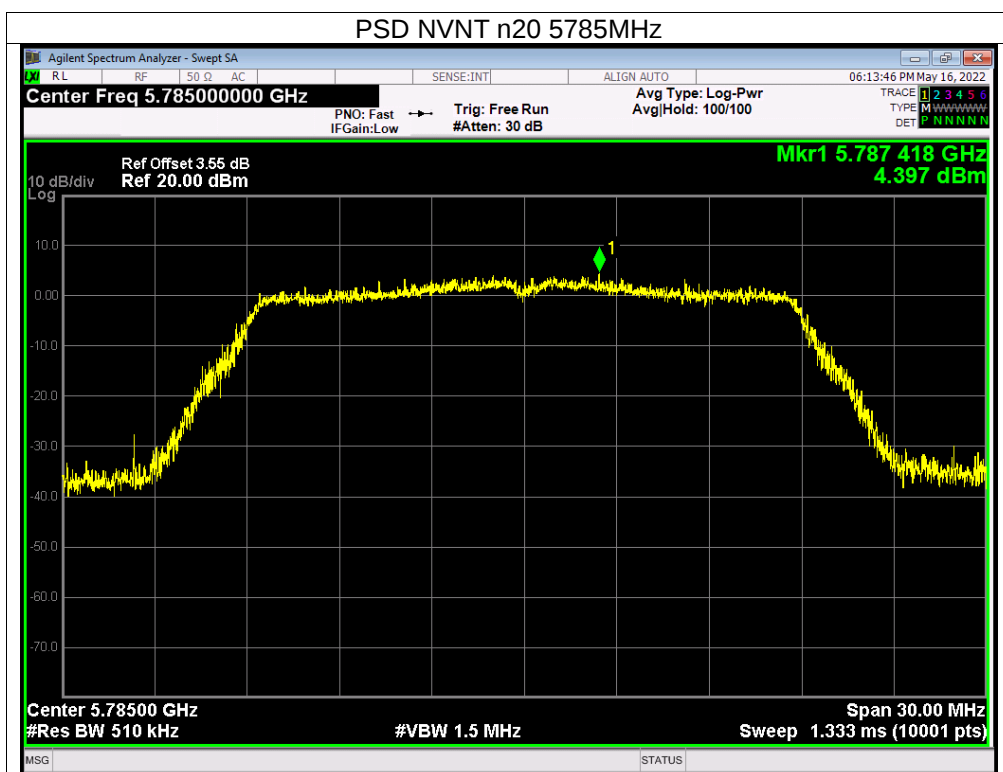


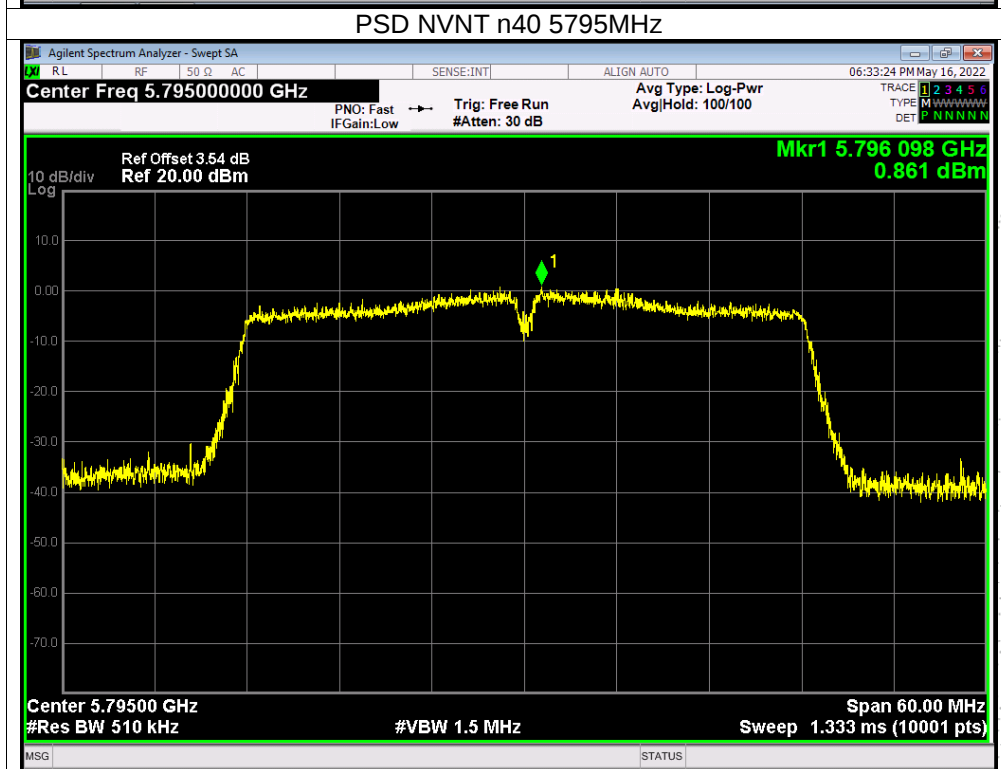
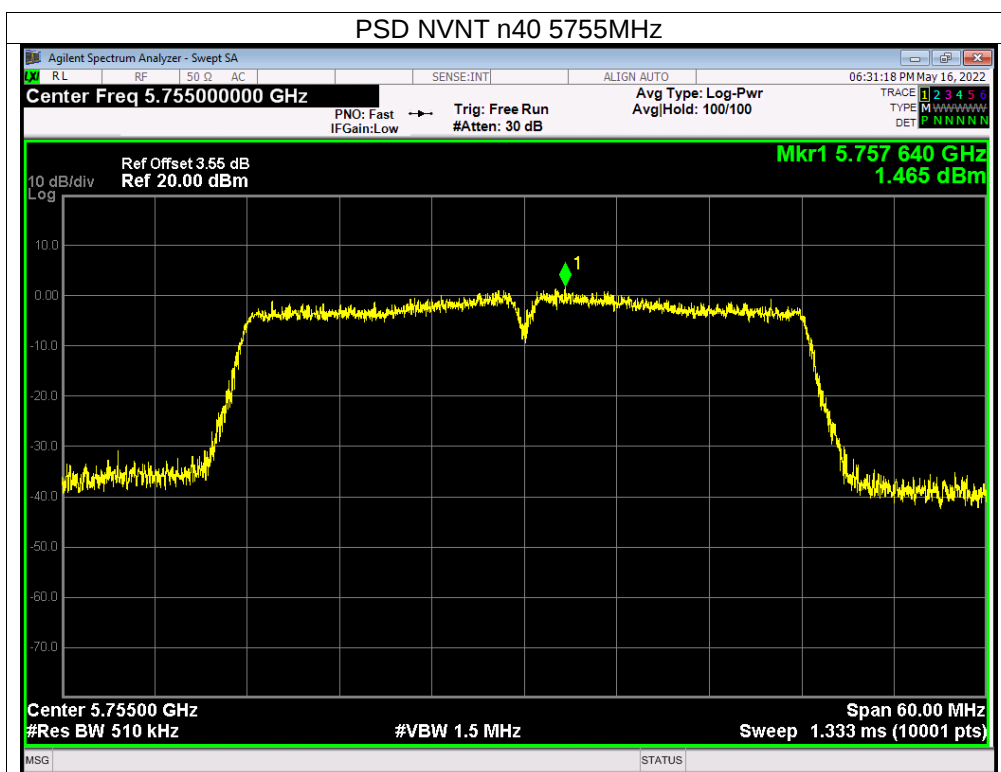


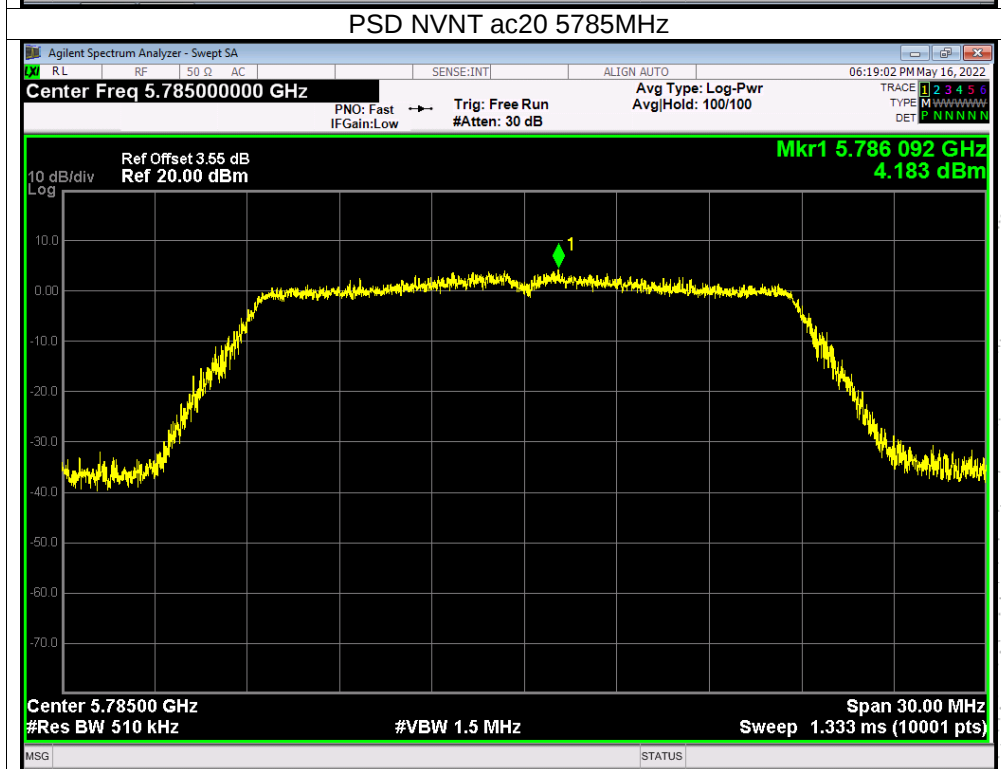
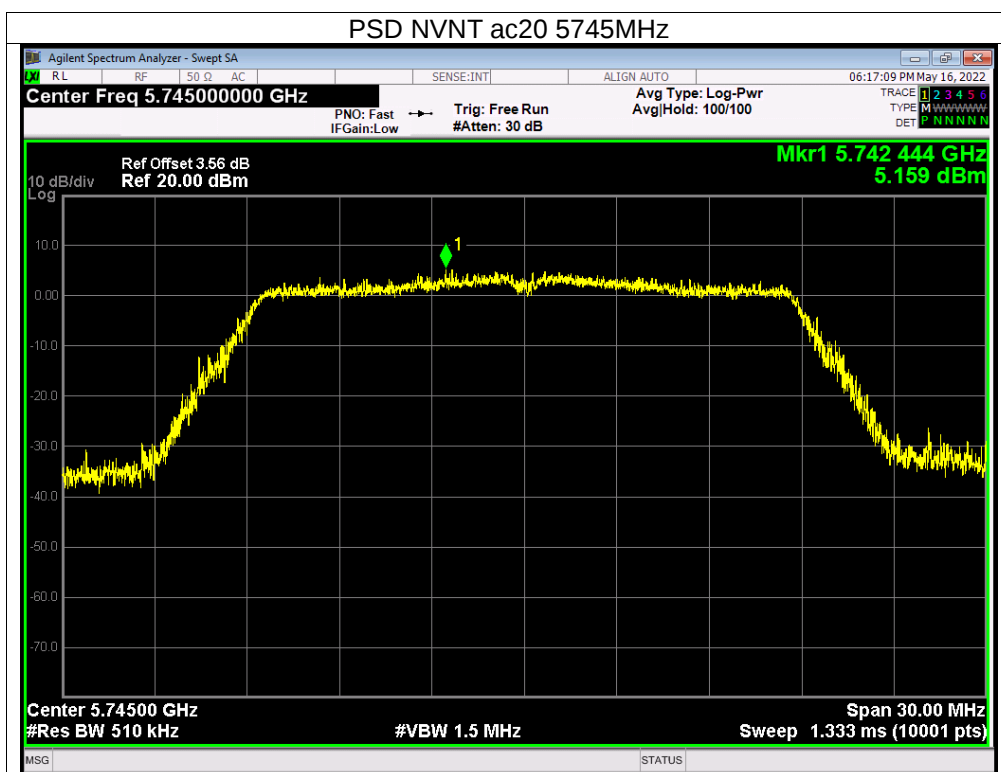


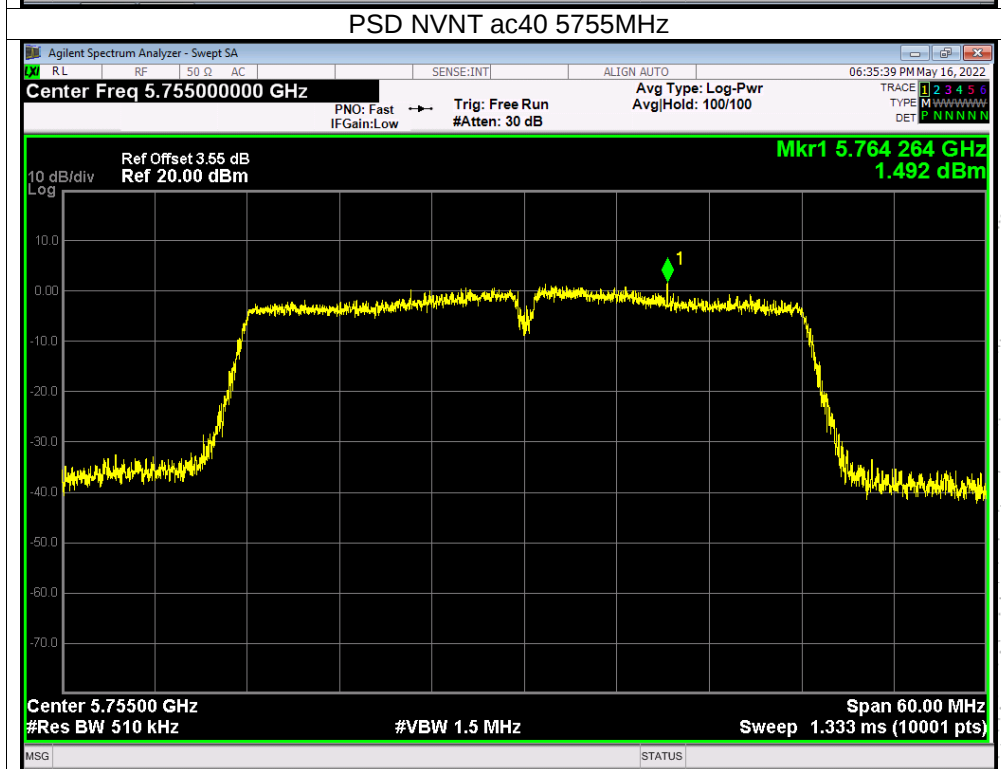
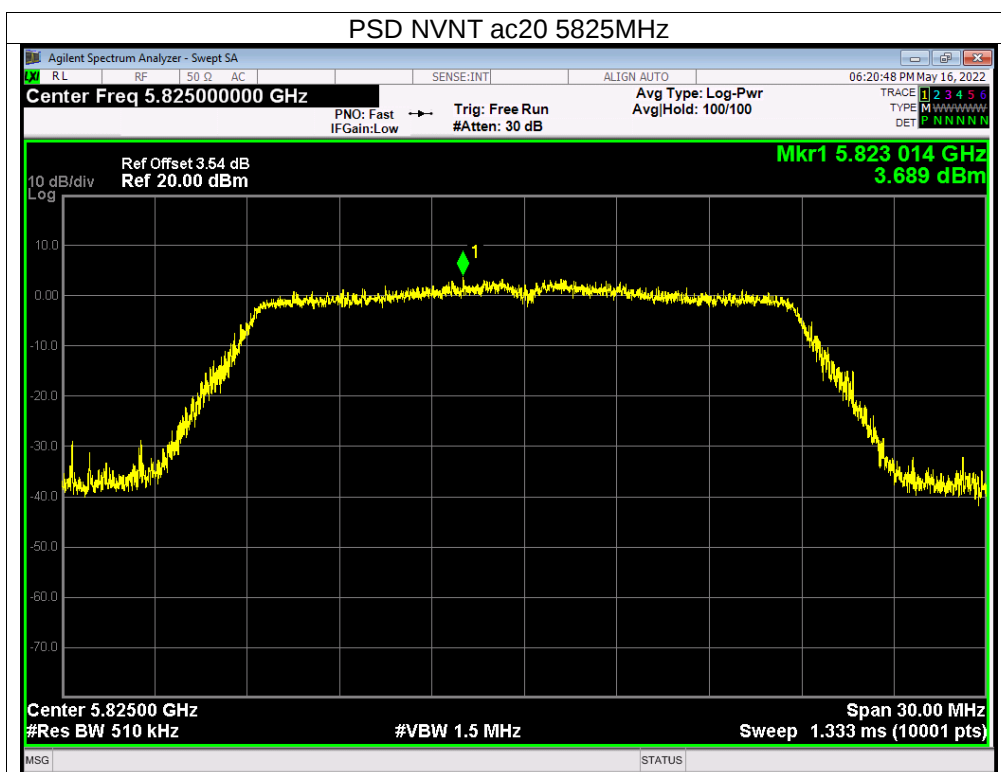


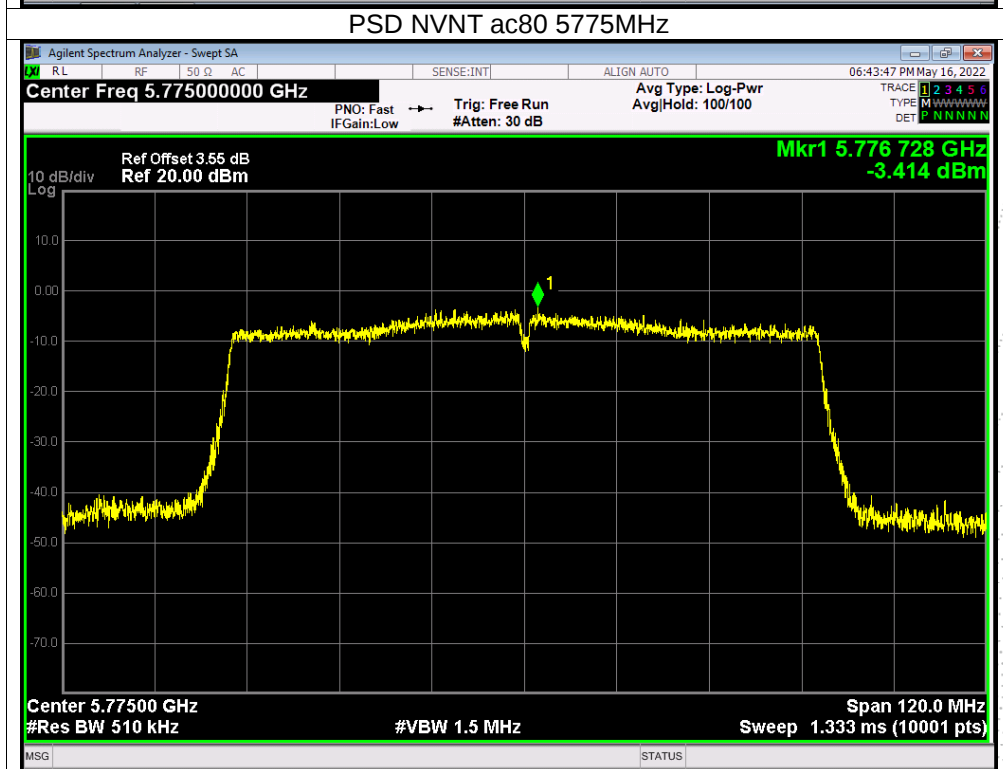
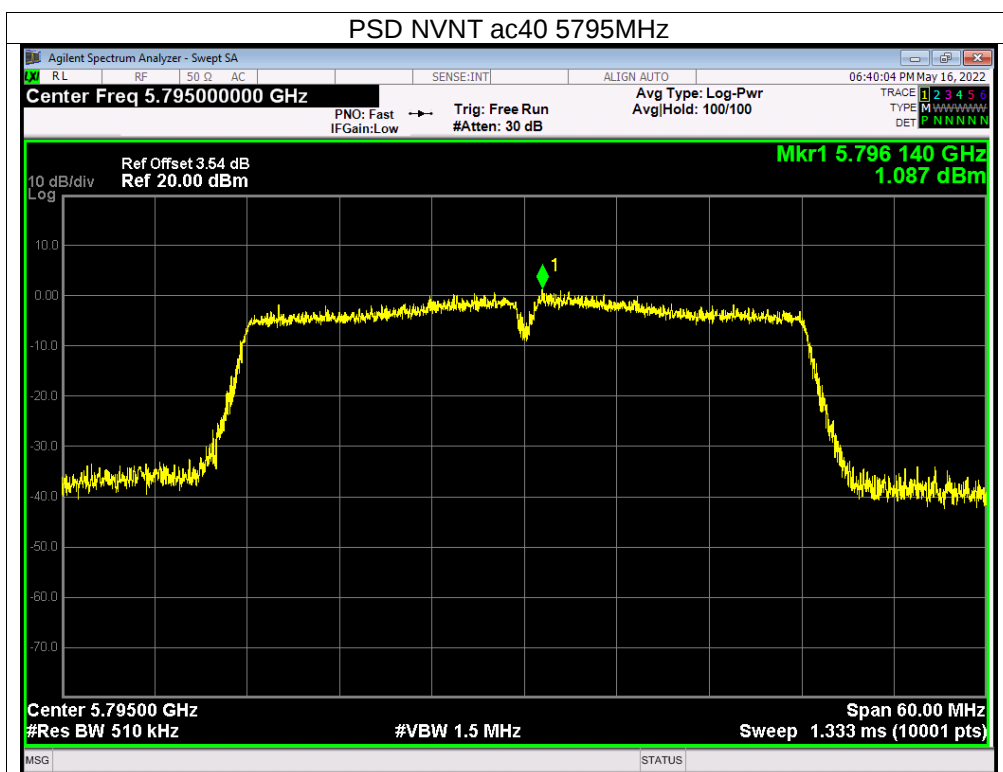






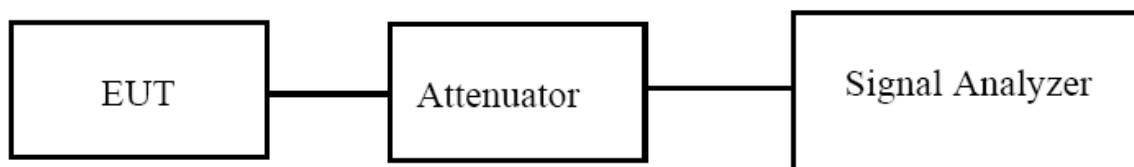






9. 26dB & 6dB & 99% Emission Bandwidth

9.1 Block Diagram Of Test Setup



9.2 Limit

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

9.3 Test procedure

a) Set RBW = approximately 1% of the emission bandwidth.

b) Set the VBW > RBW.

c) Detector = Peak.

d) Trace mode = max hold.

e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.

2. Set span = 1.5 times to 5.0 times the OBW.

3. Set RBW = 1 % to 5 % of the OBW

4. Set VBW $\geq 3 \cdot$ RBW

5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

6. Use the 99 % power bandwidth function of the instrument (if available).

7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

9.4 EUT operating Conditions

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

9.5 Test Result

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 120V
Test Mode:	(5180-5240MHz)		

Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)		Verdict
			Ant A	Ant B	
NVNT	a	5180	21.334	21.054	Pass
NVNT	a	5200	21.134	21.112	Pass
NVNT	a	5240	21.116	21.065	Pass
NVNT	n20	5180	21.313	21.429	Pass
NVNT	n20	5200	21.515	21.331	Pass
NVNT	n20	5240	21.583	21.245	Pass
NVNT	n40	5190	40.450	40.153	Pass
NVNT	n40	5230	40.414	40.211	Pass
NVNT	ac20	5180	21.991	21.654	Pass
NVNT	ac20	5200	21.669	21.271	Pass
NVNT	ac20	5240	21.518	21.135	Pass
NVNT	ac40	5190	40.709	41.105	Pass
NVNT	ac40	5230	40.617	39.876	Pass
NVNT	ac80	5210	81.565	80.752	Pass

Condition	Mode	Frequency (MHz)	99% OBW (MHz)	
			Ant A	Ant B
NVNT	a	5180	16.582	16.479
NVNT	a	5200	16.568	16.552
NVNT	a	5240	16.554	16.673
NVNT	n20	5180	17.760	17.458
NVNT	n20	5200	17.709	17.674
NVNT	n20	5240	17.741	17.531
NVNT	n40	5190	36.157	36.063
NVNT	n40	5230	36.161	36.217
NVNT	ac20	5180	17.738	17.669
NVNT	ac20	5200	17.701	17.562
NVNT	ac20	5240	17.703	17.654
NVNT	ac40	5190	36.193	36.153
NVNT	ac40	5230	36.164	36.172
NVNT	ac80	5210	75.535	75.724

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 120V
Test Mode:	(5745-5825MHz)		

Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)		Limit -6 dB Bandwidth (MHz)	Verdict
			Ant A	Ant B		
NVNT	a	5745	16.335	16.347	0.5	Pass
NVNT	a	5785	16.281	16.281	0.5	Pass
NVNT	a	5825	16.296	16.232	0.5	Pass
NVNT	n20	5745	17.238	17.142	0.5	Pass
NVNT	n20	5785	16.933	17.026	0.5	Pass
NVNT	n20	5825	17.301	17.124	0.5	Pass
NVNT	n40	5755	35.104	35.025	0.5	Pass
NVNT	n40	5795	35.168	35.165	0.5	Pass
NVNT	ac20	5745	17.578	17.459	0.5	Pass
NVNT	ac20	5785	17.292	17.312	0.5	Pass
NVNT	ac20	5825	17.531	17.361	0.5	Pass
NVNT	ac40	5755	35.798	35.575	0.5	Pass
NVNT	ac40	5795	35.256	35.365	0.5	Pass
NVNT	ac80	5775	75.181	75.241	0.5	Pass

Condition	Mode	Frequency (MHz)	99% OBW (MHz)	
			Ant A	Ant B
NVNT	a	5745	16.592	16.426
NVNT	a	5785	16.567	16.575
NVNT	a	5825	16.545	16.458
NVNT	n20	5745	17.777	17.632
NVNT	n20	5785	17.726	17.548
NVNT	n20	5825	17.684	17.369
NVNT	n40	5755	36.144	36.234
NVNT	n40	5795	36.074	36.067
NVNT	ac20	5745	17.742	17.759
NVNT	ac20	5785	17.730	17.685
NVNT	ac20	5825	17.716	17.567
NVNT	ac40	5755	36.178	36.127
NVNT	ac40	5795	36.094	36.005
NVNT	ac80	5775	75.479	75.356

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



