

TEST REPORT

Report No.: BCTC2111104388-4E

Applicant: MedSign International Corporation

Product Name: Qortex

Model/Type Ref.: model III

Tested Date: 2021-11-11 to 2022-01-06

Issued Date: 2022-01-06

Shenzhen BCTC Testing Co., Ltd.



FCC ID: 2A3W4-QORTEX

Product Name: Qortex

Trademark: 

Model/Type Ref.: model III

Prepared For: MedSign International Corporation

Address: 651 Okeechobee Blvd., Suite 1112 West Palm Beach, FL 33401, United States

Manufacturer: MedSign International Corporation

Address: 651 Okeechobee Blvd., Suite 1112 West Palm Beach, FL 33401, United States

Prepared By: Shenzhen BCTC Testing Co., Ltd.

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Sample Received Date: 2021-11-11

Sample tested Date: 2021-11-11 to 2022-01-06

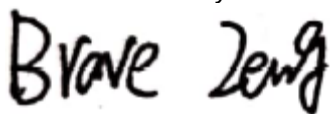
Issue Date: 2022-01-06

Report No.: BCTC2111104388-4E

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

Test Results: PASS

Tested by:



Brave Zeng/ Project Handler

Approved by:



Zero Zhou/Reviewer

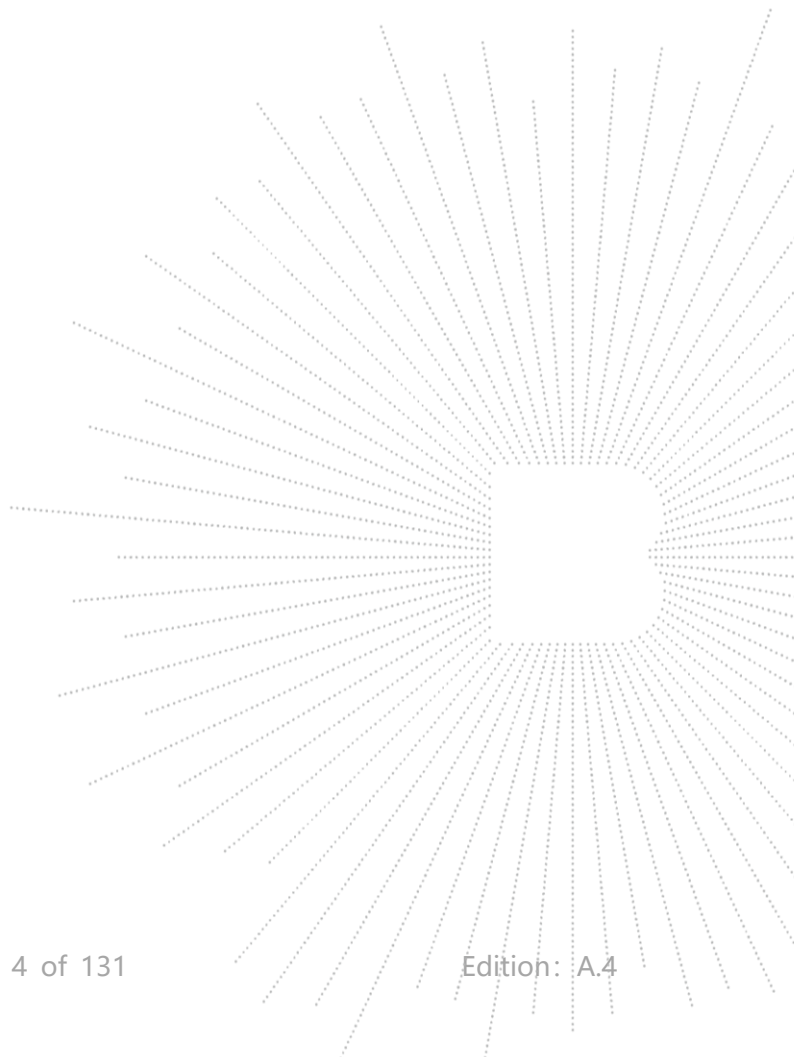
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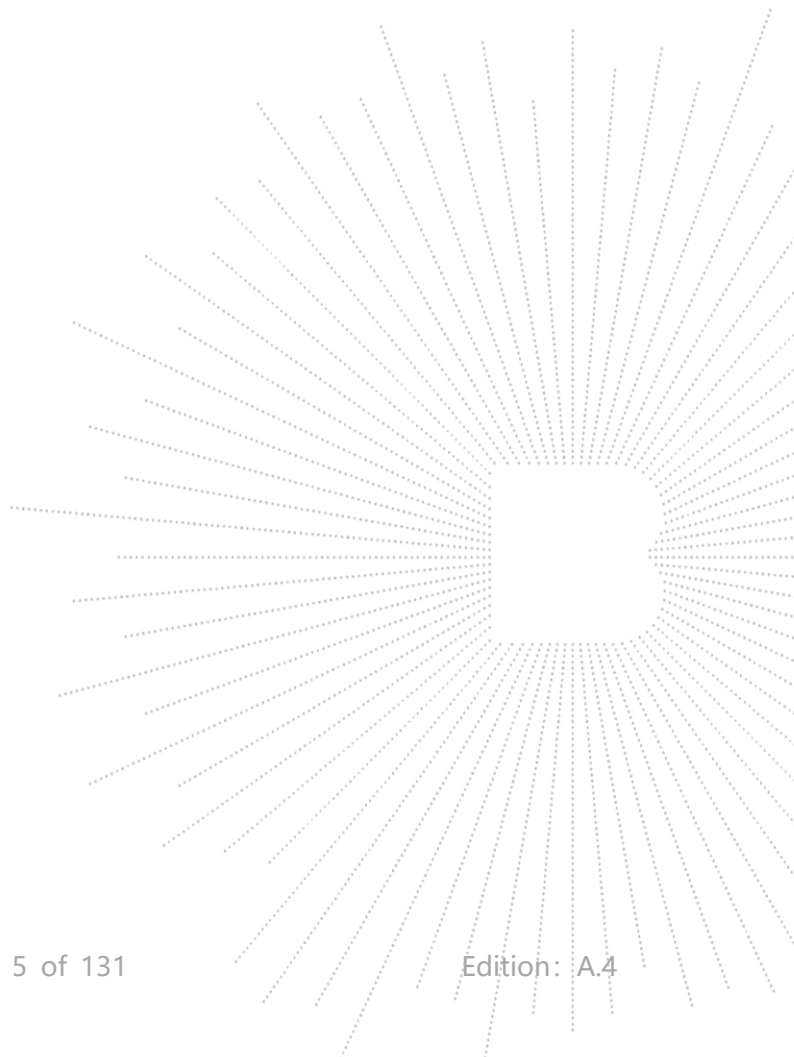
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(Note: N/A Means Not Applicable)



1. Version

Report No.	Issue Date	Description	Approved
BCTC2111104388-4E	2022-01-06	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

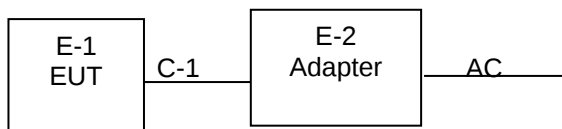
4.1 Product Information

Model/Type Ref.:	model III
Model differences:	N/A
Hardware Version:	N/A
Software Version:	N/A
IEEE 802.11 WLAN	802.11a/n/ac(20MHz channel bandwidth) 802.11n/ac(40MHz channel bandwidth)
Mode Supported	802.11ac(80MHz channel bandwidth) 5180-5240MHz for 802.11a/n(HT20); 5190-5230MHz for 802.11n(HT40); 5210MHz for 802.11 ac80;
Operation Frequency:	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:	External antenna
Antenna Gain:	5.1G: Antenna A: 5dBi Antenna B: 5dBi 5.8G: Antenna A: 5dBi Antenna B: 5dBi
Ratings:	AC 120V/60Hz
Adapter:	MODELS: SK03T1-1200200U INPUT: 100-240V 50/60Hz 0.6A Max OUTPUT: DC 12V 2A

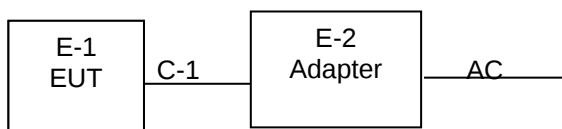
4.2 Test Setup Configuration

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	Qortex		model III	N/A	EUT
E-2	Adapter	N/A	SK03T1-12 00200U	N/A	Auxiliary
E-3	Displayer	N/A	T2264MD	N/A	Auxiliary
E-4	Mouse	N/A	OP-0158	N/A	Auxiliary
E-5	keyboard	N/A	DPO-5186	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	1.2M	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.

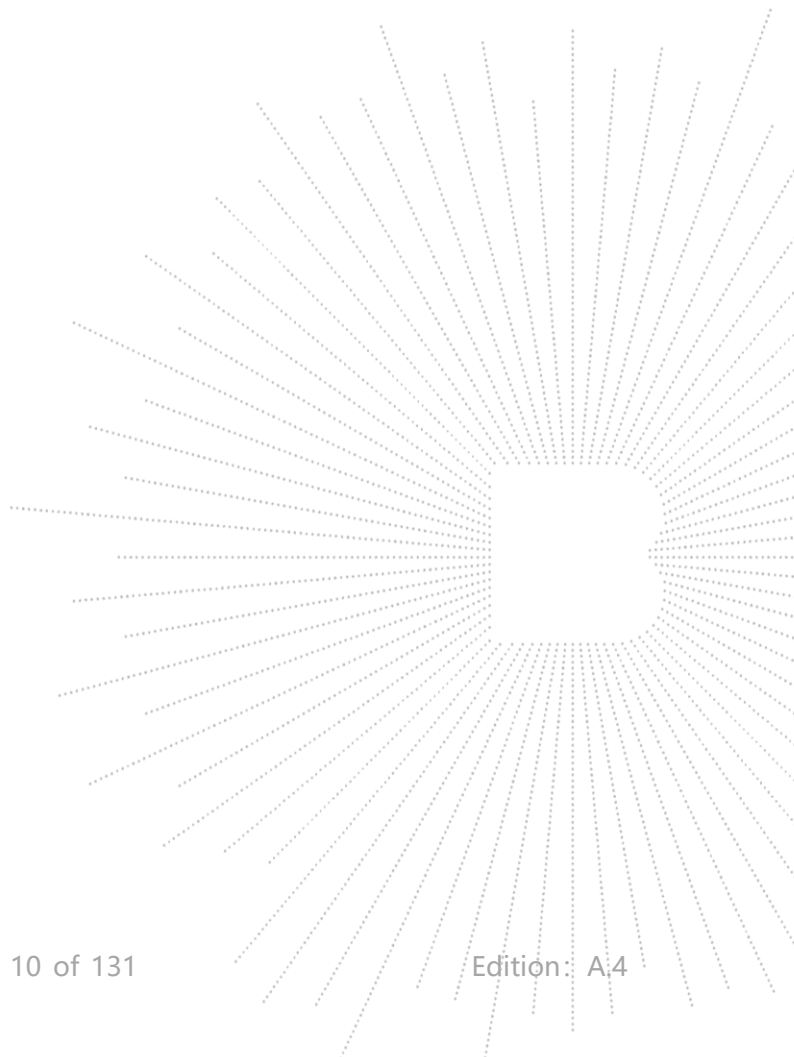
4.4 Channel List

Frequency and Channel list for 802.11a/n/ac(20 MHz) band IV (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)
42	5210



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

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.

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

5.2G

Antenna A gain: 5dBi, Antenna B gain: 5dBi, For MIMO mode for 802.11n , Directional gain=[10log(GA+ G B)] dbi =8.01dbi

Antenna	Brand	Model Name	Antenna Type	Gain (dBi)	NOTE
A	N/A	N/A	External antenna	5	
B	N/A	N/A	External antenna	5	

5.8G

Antenna A gain: 5dBi, Antenna B gain: 5dBi, For MIMO mode for 802.11n , Directional gain=[10log(GA+ G B)] dbi =8.01dbi

Antenna	Brand	Model Name	Antenna Type	Gain (dBi)	NOTE
A	N/A	N/A	External antenna	5	
B	N/A	N/A	External antenna	5	

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

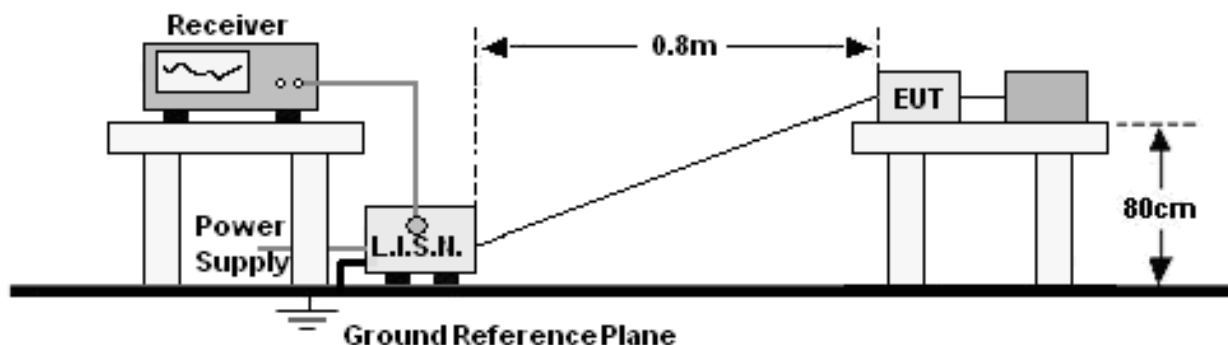
Conducted emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESR3	102075	May 28, 2021	May 27, 2022
LISN	R&S	ENV216	101375	May 28, 2021	May 27, 2022
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Attenuator	\	10dB DC-6GHz	1650	May 28, 2021	May 27, 2022

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.

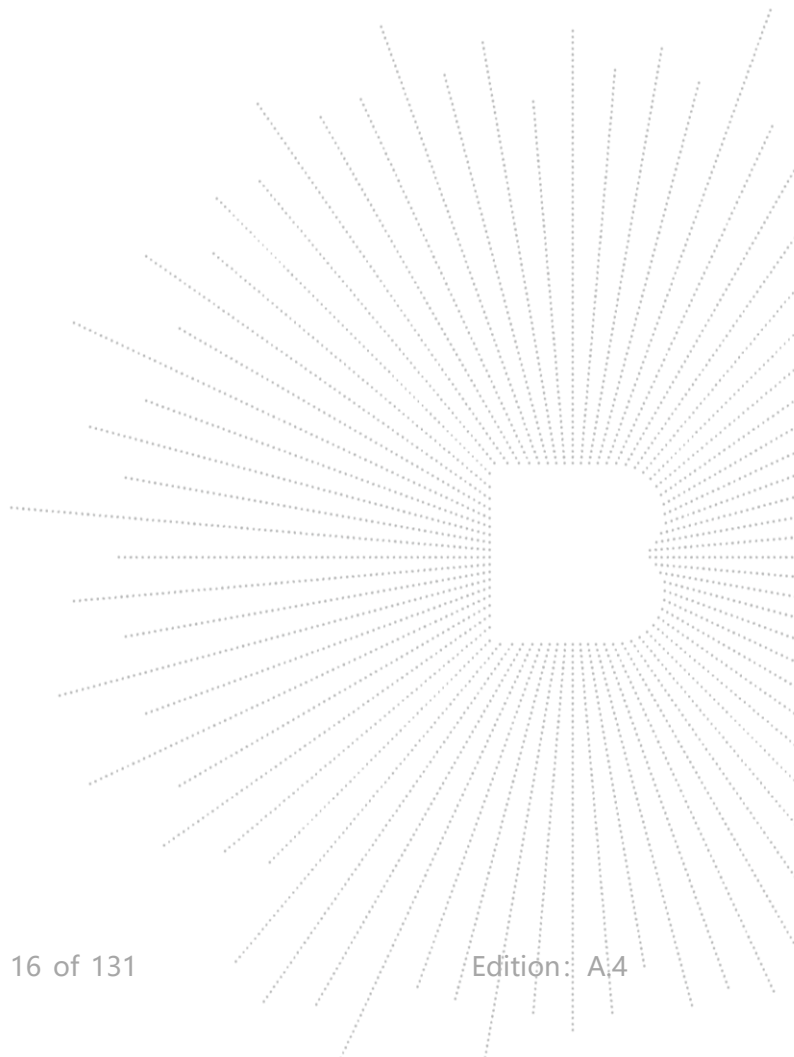
6.3 Test Procedure

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.

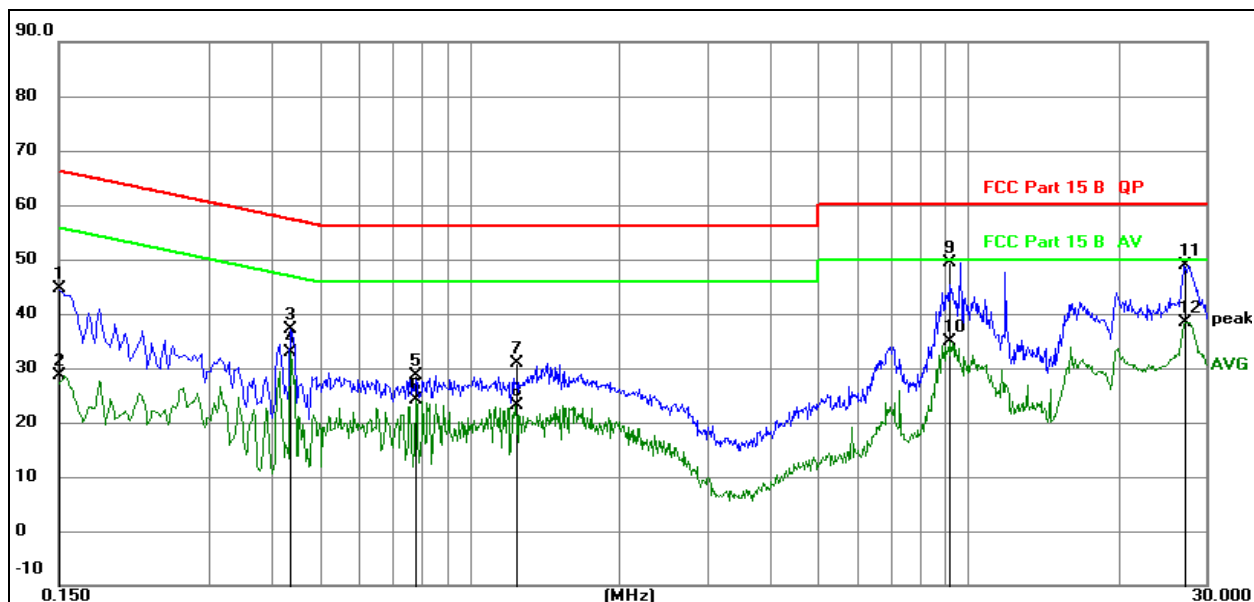
6.4 EUT Operating Conditions

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

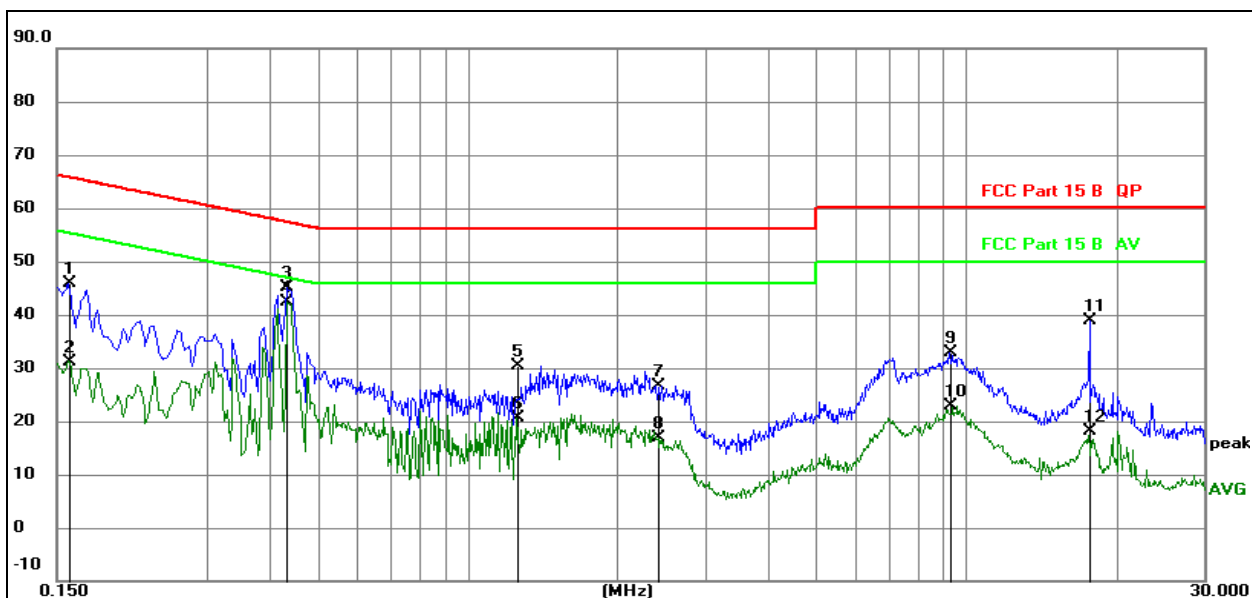


Remark:

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. MHz	Reading Level	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1	0.1500	24.96	19.61	44.57	66.00	-21.43	QP
2	0.1500	9.06	19.61	28.67	56.00	-27.33	AVG
3	0.4374	17.59	19.62	37.21	57.11	-19.90	QP
4	0.4374	13.38	19.62	33.00	47.11	-14.11	AVG
5	0.7793	8.89	19.62	28.51	56.00	-27.49	QP
6	0.7793	4.40	19.62	24.02	46.00	-21.98	AVG
7	1.2357	11.23	19.63	30.86	56.00	-25.14	QP
8	1.2357	3.57	19.63	23.20	46.00	-22.80	AVG
9 *	9.1557	29.51	19.78	49.29	60.00	-10.71	QP
10	9.1557	14.99	19.78	34.77	50.00	-15.23	AVG
11	27.1270	29.17	19.74	48.91	60.00	-11.09	QP
12	27.1270	18.71	19.74	38.45	50.00	-11.55	AVG

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


Remark:

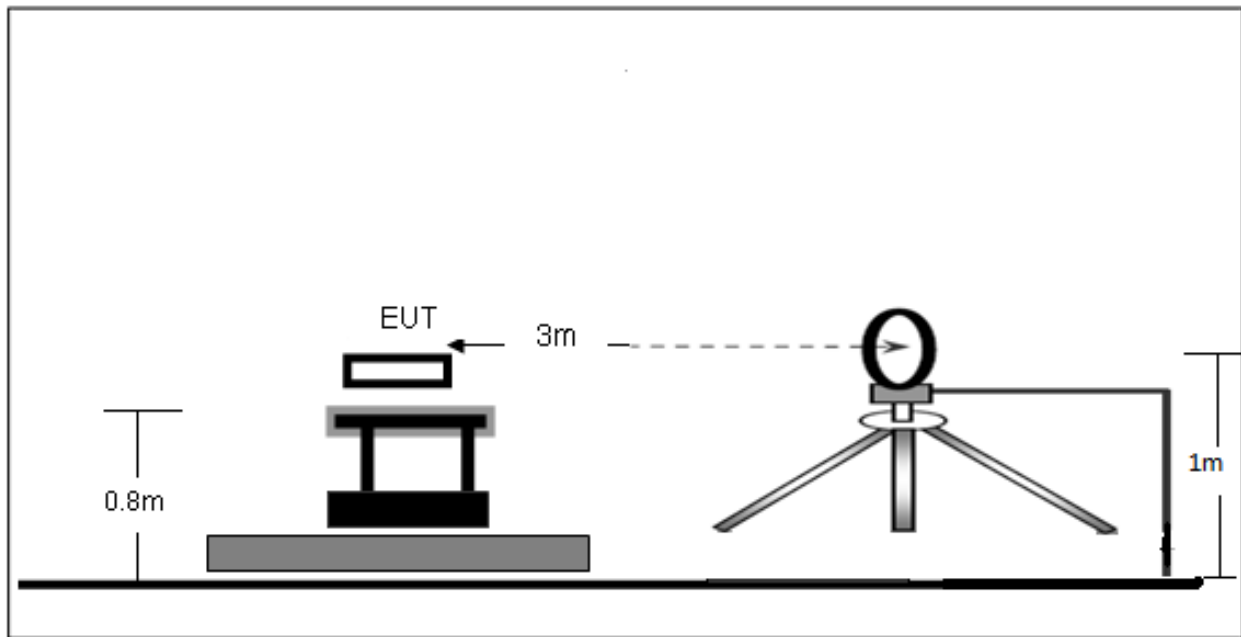
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement=Reading Level+ Correct Factor
4. Over+ Measurement-Limit

No. Mk.	Freq. MHz	Reading Level	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1	0.1590	26.15	19.61	45.76	65.52	-19.76	QP
2	0.1590	11.64	19.61	31.25	55.52	-24.27	AVG
3	0.4335	25.39	19.62	45.01	57.19	-12.18	QP
4 *	0.4335	22.73	19.62	42.35	47.19	-4.84	AVG
5	1.2615	10.81	19.63	30.44	56.00	-25.56	QP
6	1.2615	0.96	19.63	20.59	46.00	-25.41	AVG
7	2.4135	6.94	19.64	26.58	56.00	-29.42	QP
8	2.4135	-2.73	19.64	16.91	46.00	-29.09	AVG
9	9.2534	12.99	19.79	32.78	60.00	-27.22	QP
10	9.2534	3.01	19.79	22.80	50.00	-27.20	AVG
11	17.6729	19.18	19.76	38.94	60.00	-21.06	QP
12	17.6729	-1.68	19.76	18.08	50.00	-31.92	AVG

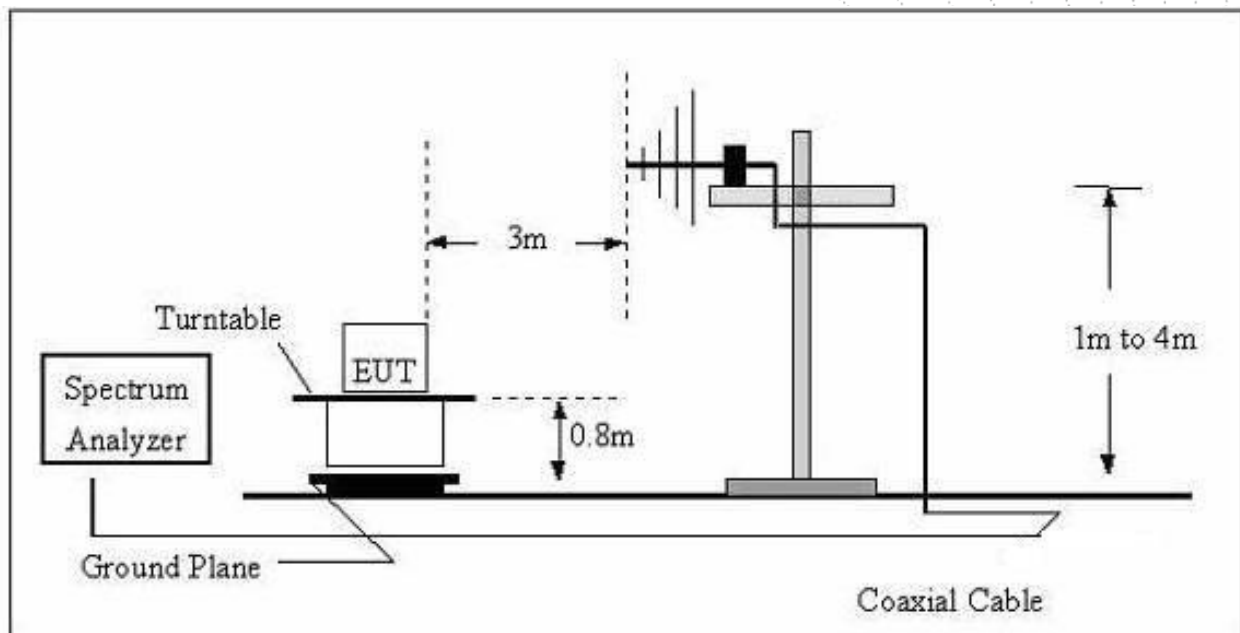
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

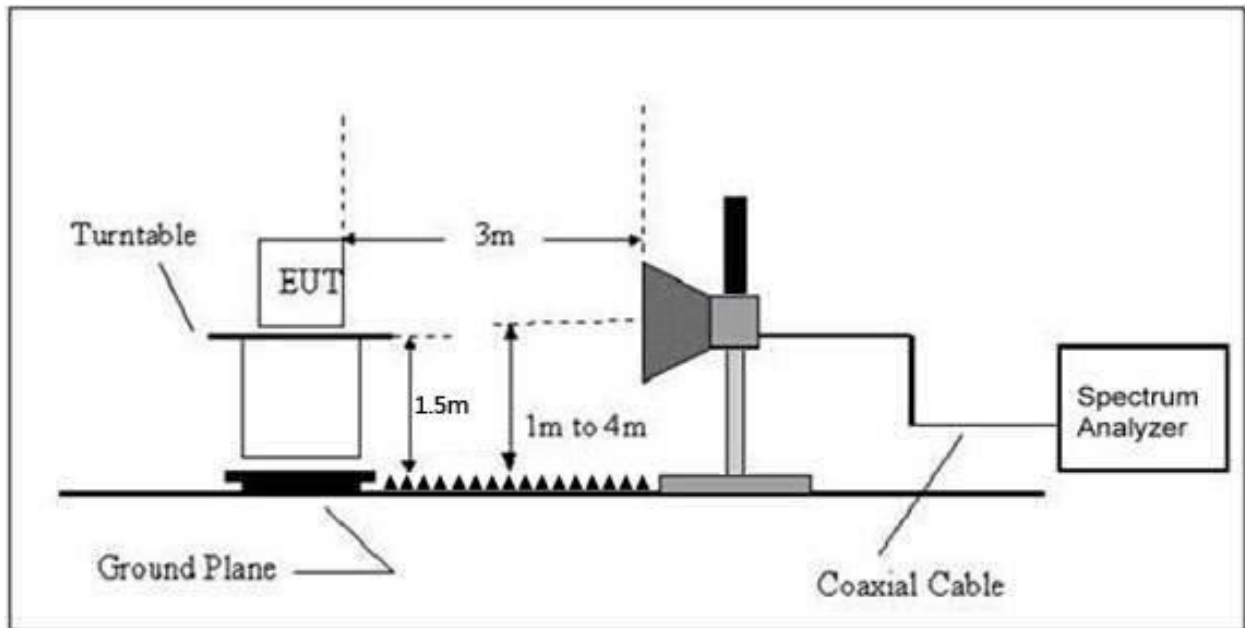
(A) Radiated Emission Test-Up Frequency Below 30MHz



(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 :	AC 120V/60Hz
Test Mode :	Mode 4	Polarization :	--

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

Note:

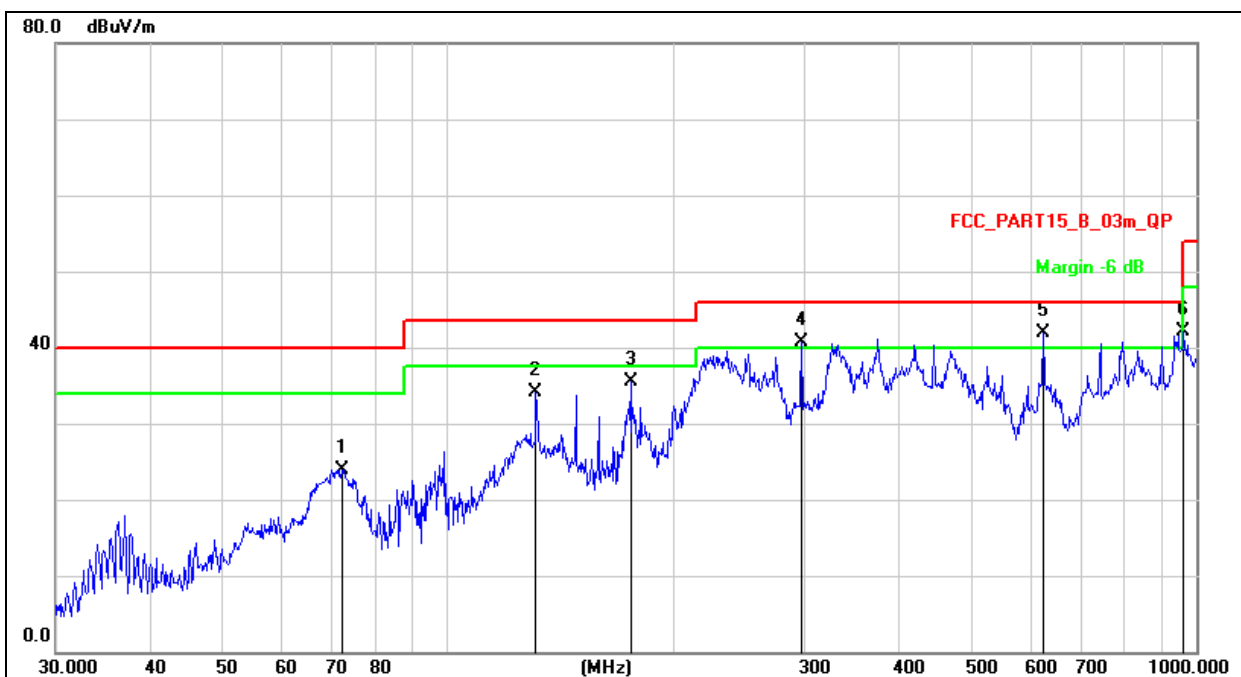
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

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

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

Between 30MHz – 1GHz

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kPa	Test Voltage :	AC 120V/60Hz
Test Mode :	Mode 2 (ANT A 802.11n AC 20 CH149)	Polarization :	Horizontal

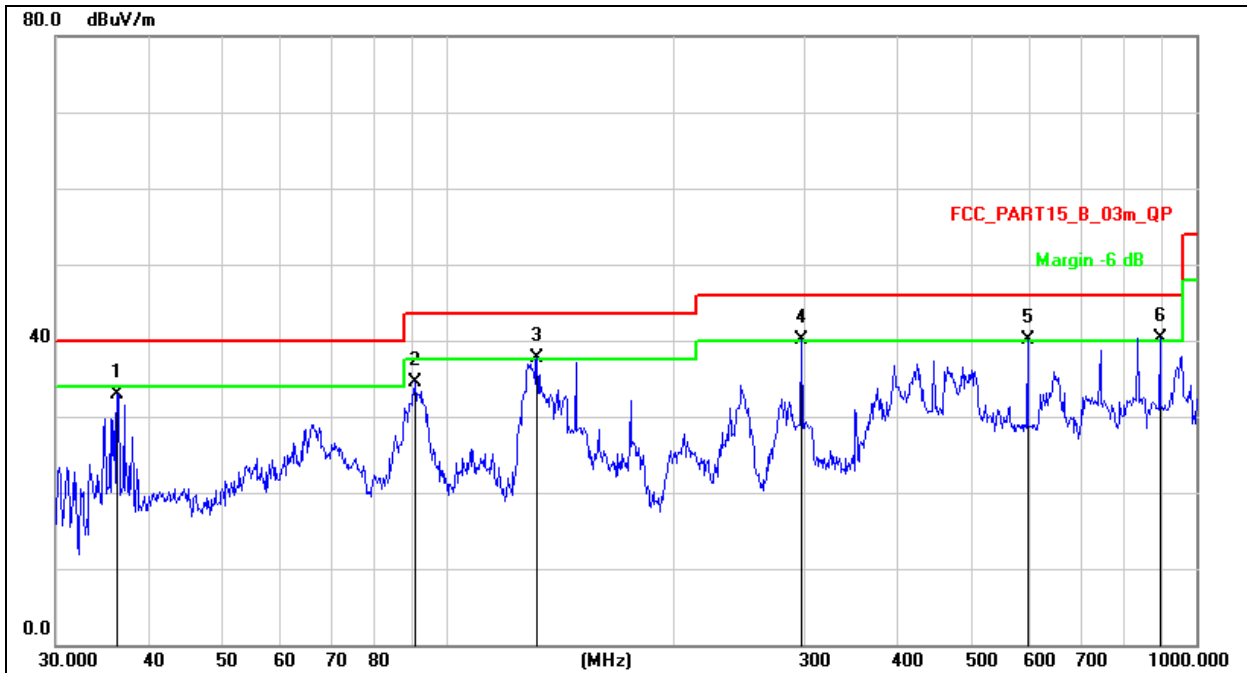


Remark:

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		72.3375	42.70	-18.71	23.99	40.00	-16.01	QP
2		131.2965	52.45	-18.30	34.15	43.50	-9.35	QP
3		175.6516	53.33	-17.86	35.47	43.50	-8.03	QP
4	!	297.2241	54.39	-13.69	40.70	46.00	-5.30	QP
5	*	625.0779	48.64	-6.67	41.97	46.00	-4.03	QP
6		962.1622	43.18	-1.04	42.14	54.00	-11.86	QP

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kpa	Test Voltage :	AC 120V/60Hz
Test Mode :	Mode 2 (ANT A 802.11n AC 20 CH149)	Polarization :	Vertical



Remark:

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		36.2541	49.00	-16.11	32.89	40.00	-7.11	QP
2		90.5374	52.42	-18.00	34.42	43.50	-9.08	QP
3	!	131.7573	56.09	-18.33	37.76	43.50	-5.74	QP
4	!	297.2241	53.73	-13.69	40.04	46.00	-5.96	QP
5	!	595.1326	46.75	-6.63	40.12	46.00	-5.88	QP
6	*	893.8567	41.94	-1.63	40.31	46.00	-5.69	QP

Between 1GHz – 40GHz

Test Mode :	TX(5.2G) - 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	4434.070	61.44	5.94	35.40	44.00	58.78	68.2	-9.42	PK
V	4434.070	43.34	5.94	35.40	44.00	40.68	54	-13.32	AV
V	10360.090	62.75	8.46	39.75	44.50	66.46	68.2	-1.74	PK
V	10360.090	43.86	8.46	39.75	44.50	47.57	54	-6.43	AV
V	15540.165	61.07	10.12	38.80	44.10	65.89	74	-8.11	PK
V	15540.165	43.21	10.12	38.80	42.70	49.43	54	-4.57	AV
H	4434.018	61.99	5.94	35.18	44.00	59.11	68.2	-9.09	PK
H	4434.018	43.42	5.94	35.18	44.00	40.54	54	-13.46	AV
H	10360.179	53.12	8.46	38.71	44.50	55.79	68.2	-12.41	PK
H	10360.179	45.00	8.46	38.71	44.50	47.67	54	-6.33	AV
H	15540.062	50.52	10.12	38.38	44.10	54.92	74	-19.08	PK
H	15540.062	43.89	10.12	38.38	44.10	48.29	54	-5.71	AV
middle Channel (5200 MHz)-Above 1G									
V	4592.024	60.71	6.48	36.35	44.05	59.49	74	-14.51	PK
V	4592.024	43.14	6.48	36.35	44.05	41.92	54	-12.08	AV
V	10400.191	62.90	8.47	37.88	44.51	64.74	68.2	-3.46	PK
V	10400.191	43.78	8.47	37.88	44.51	45.62	54	-8.38	AV
V	15600.012	61.45	10.12	38.80	44.10	66.27	74	-7.73	PK
V	15600.012	43.01	10.12	38.80	42.70	49.23	54	-4.77	AV
H	4592.068	63.82	6.48	36.37	44.05	62.62	74	-11.38	PK
H	4592.068	43.56	6.48	36.37	44.05	42.36	54	-11.64	AV
H	10400.190	50.65	8.47	38.64	44.50	53.26	68.2	-14.94	PK
H	10400.190	44.05	8.47	38.64	44.50	46.66	54	-7.34	AV
H	15600.069	53.36	10.12	38.38	44.10	57.76	74	-16.24	PK
H	15600.069	42.78	10.12	38.38	44.10	47.18	54	-6.82	AV
High Channel (5240 MHz)-Above 1G									
V	4739.182	62.57	7.10	37.24	43.50	63.41	74	-10.59	PK
V	4739.182	43.20	7.10	37.24	43.50	44.04	54	-9.96	AV
V	10480.117	60.15	8.46	37.68	44.50	61.79	68.2	-6.41	PK
V	10480.117	43.76	8.46	37.68	44.50	45.40	54	-8.60	AV
V	15720.066	63.92	10.12	38.80	44.10	68.74	74	-5.26	PK
V	15720.066	43.33	10.12	38.80	42.70	49.55	54	-4.45	AV
H	4739.066	61.30	7.10	37.24	43.50	62.14	74	-11.86	PK
H	4739.066	43.96	7.10	37.24	43.50	44.80	54	-9.20	AV
H	10480.105	54.01	8.46	38.57	44.50	56.54	68.2	-11.66	PK
H	10480.105	41.35	8.46	38.57	44.50	43.88	54	-10.12	AV
H	15720.031	50.75	10.12	38.38	44.10	55.15	74	-18.85	PK
H	15720.031	42.90	10.12	38.38	44.10	47.30	54	-6.70	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(5.2G) - 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	4434.024	62.03	5.94	35.40	44.00	59.37	68.2	-8.83	PK
V	4434.024	43.62	5.94	35.40	44.00	40.96	54	-13.04	AV
V	10360.131	62.08	8.46	39.75	44.50	65.79	68.2	-2.41	PK
V	10360.131	43.06	8.46	39.75	44.50	46.77	54	-7.23	AV
V	15540.152	61.02	10.12	38.80	44.10	65.84	74	-8.16	PK
V	15540.152	43.80	10.12	38.80	42.70	50.02	54	-3.98	AV
H	4434.188	60.87	5.94	35.18	44.00	57.99	68.2	-10.21	PK
H	4434.188	43.99	5.94	35.18	44.00	41.11	54	-12.89	AV
H	10360.104	54.35	8.46	38.71	44.50	57.02	68.2	-11.18	PK
H	10360.104	42.55	8.46	38.71	44.50	45.22	54	-8.78	AV
H	15540.010	52.50	10.12	38.38	44.10	56.90	74	-17.10	PK
H	15540.010	40.61	10.12	38.38	44.10	45.01	54	-8.99	AV
middle Channel (5200 MHz)-Above 1G									
V	4592.028	64.87	6.48	36.35	44.05	63.65	74	-10.35	PK
V	4592.028	43.62	6.48	36.35	44.05	42.40	54	-11.60	AV
V	10400.157	62.60	8.47	37.88	44.51	64.44	68.2	-3.76	PK
V	10400.157	43.79	8.47	37.88	44.51	45.63	54	-8.37	AV
V	15600.099	61.19	10.12	38.80	44.10	66.01	74	-7.99	PK
V	15600.099	43.02	10.12	38.80	42.70	49.24	54	-4.76	AV
H	4592.021	63.17	6.48	36.37	44.05	61.97	74	-12.03	PK
H	4592.021	43.41	6.48	36.37	44.05	42.21	54	-11.79	AV
H	10400.098	50.69	8.47	38.64	44.50	53.30	68.2	-14.90	PK
H	10400.098	43.71	8.47	38.64	44.50	46.32	54	-7.68	AV
H	15600.174	54.13	10.12	38.38	44.10	58.53	74	-15.47	PK
H	15600.174	40.73	10.12	38.38	44.10	45.13	54	-8.87	AV
High Channel (5240 MHz)-Above 1G									
V	4739.095	64.46	7.10	37.24	43.50	65.30	74	-8.70	PK
V	4739.095	43.87	7.10	37.24	43.50	44.71	54	-9.29	AV
V	10480.156	64.60	8.46	37.68	44.50	66.24	68.2	-1.96	PK
V	10480.156	43.55	8.46	37.68	44.50	45.19	54	-8.81	AV
V	15720.055	63.70	10.12	38.80	44.10	68.52	74	-5.48	PK
V	15720.055	43.41	10.12	38.80	42.70	49.63	54	-4.37	AV
H	4739.075	63.82	7.10	37.24	43.50	64.66	74	-9.34	PK
H	4739.075	43.03	7.10	37.24	43.50	43.87	54	-10.13	AV
H	10480.134	51.73	8.46	38.57	44.50	54.26	68.2	-13.94	PK
H	10480.134	44.60	8.46	38.57	44.50	47.13	54	-6.87	AV
H	15720.069	53.48	10.12	38.38	44.10	57.88	74	-16.12	PK
H	15720.069	40.77	10.12	38.38	44.10	45.17	54	-8.83	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(5.2G) - 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	4434.182	60.31	5.94	35.40	44.00	57.65	68.2	-10.55	PK
V	4434.182	43.85	5.94	35.40	44.00	41.19	54	-12.81	AV
V	10380.065	62.62	8.46	39.75	44.50	66.33	68.2	-1.87	PK
V	10380.065	43.50	8.46	39.75	44.50	47.21	54	-6.79	AV
V	15570.182	63.65	10.12	38.80	44.10	68.47	74	-5.53	PK
V	15570.182	43.29	10.12	38.80	42.70	49.51	54	-4.49	AV
H	4434.044	62.12	5.94	35.18	44.00	59.24	74	-14.76	PK
H	4434.044	43.49	5.94	35.18	44.00	40.61	54	-13.39	AV
H	10380.034	52.47	8.46	38.71	44.50	55.14	68.2	-13.06	PK
H	10380.034	43.29	8.46	38.71	44.50	45.96	54	-8.04	AV
H	15570.174	51.68	10.12	38.38	44.10	56.08	74	-17.92	PK
H	15570.174	44.47	10.12	38.38	44.10	48.87	54	-5.13	AV
middle Channel (5230 MHz)-Above 1G									
V	4739.150	64.55	6.48	36.35	44.05	63.33	68.2	-4.87	PK
V	4739.150	43.08	6.48	36.35	44.05	41.86	54	-12.14	AV
V	10460.176	64.02	8.47	37.88	44.51	65.86	68.2	-2.34	PK
V	10460.176	43.06	8.47	37.88	44.51	44.90	54	-9.10	AV
V	15690.001	63.53	10.12	38.80	44.10	68.35	74	-5.65	PK
V	15690.001	43.98	10.12	38.80	42.70	50.20	54	-3.80	AV
H	4739.107	64.62	6.48	36.37	44.05	63.42	68.2	-4.78	PK
H	4739.107	43.37	6.48	36.37	44.05	42.17	54	-11.83	AV
H	10460.150	52.52	8.47	38.64	44.50	55.13	68.2	-13.07	PK
H	10460.150	42.42	8.47	38.64	44.50	45.03	54	-8.97	AV
H	15690.105	50.25	10.12	38.38	44.10	54.65	74	-19.35	PK
H	15690.105	43.01	10.12	38.38	44.10	47.41	54	-6.59	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(5.2G) - 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	4434.161	61.91	5.94	35.40	44.00	59.25	68.2	-8.95	PK
V	4434.161	43.19	5.94	35.40	44.00	40.53	54	-13.47	AV
V	10360.073	61.49	8.46	39.75	44.50	65.20	68.2	-3.00	PK
V	10360.073	43.17	8.46	39.75	44.50	46.88	54	-7.12	AV
V	15540.070	63.21	10.12	38.80	44.10	68.03	74	-5.97	PK
V	15540.070	43.13	10.12	38.80	42.70	49.35	54	-4.65	AV
H	4434.078	60.94	5.94	35.18	44.00	58.06	68.2	-10.14	PK
H	4434.078	43.53	5.94	35.18	44.00	40.65	54	-13.35	AV
H	10360.147	53.68	8.46	38.71	44.50	56.35	68.2	-11.85	PK
H	10360.147	41.82	8.46	38.71	44.50	44.49	54	-9.51	AV
H	15540.014	54.22	10.12	38.38	44.10	58.62	74	-15.38	PK
H	15540.014	43.62	10.12	38.38	44.10	48.02	54	-5.98	AV
middle Channel (5200 MHz)-Above 1G									
V	4592.028	61.50	6.48	36.35	44.05	60.28	74	-13.72	PK
V	4592.028	43.58	6.48	36.35	44.05	42.36	54	-11.64	AV
V	10400.016	61.29	8.47	37.88	44.51	63.13	68.2	-5.07	PK
V	10400.016	43.78	8.47	37.88	44.51	45.62	54	-8.38	AV
V	15600.200	63.16	10.12	38.80	44.10	67.98	74	-6.02	PK
V	15600.200	43.49	10.12	38.80	42.70	49.71	54	-4.29	AV
H	4592.019	62.04	6.48	36.37	44.05	60.84	74	-13.16	PK
H	4592.019	43.16	6.48	36.37	44.05	41.96	54	-12.04	AV
H	10400.041	53.15	8.47	38.64	44.50	55.76	68.2	-12.44	PK
H	10400.041	44.45	8.47	38.64	44.50	47.06	54	-6.94	AV
H	15600.158	54.57	10.12	38.38	44.10	58.97	74	-15.03	PK
H	15600.158	40.30	10.12	38.38	44.10	44.70	54	-9.30	AV
High Channel (5240 MHz)-Above 1G									
V	4739.102	64.38	7.10	37.24	43.50	65.22	74	-8.78	PK
V	4739.102	43.85	7.10	37.24	43.50	44.69	54	-9.31	AV
V	10480.088	62.26	8.46	37.68	44.50	63.90	68.2	-4.30	PK
V	10480.088	43.44	8.46	37.68	44.50	45.08	54	-8.92	AV
V	15720.052	61.06	10.12	38.80	44.10	65.88	74	-8.12	PK
V	15720.052	43.64	10.12	38.80	42.70	49.86	54	-4.14	AV
H	4739.166	63.21	7.10	37.24	43.50	64.05	74	-9.95	PK
H	4739.166	43.86	7.10	37.24	43.50	44.70	54	-9.30	AV
H	10480.088	50.03	8.46	38.57	44.50	52.56	68.2	-15.64	PK
H	10480.088	41.06	8.46	38.57	44.50	43.59	54	-10.41	AV
H	15720.099	51.95	10.12	38.38	44.10	56.35	74	-17.65	PK
H	15720.099	43.76	10.12	38.38	44.10	48.16	54	-5.84	AV

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

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

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

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

Test Mode is MIMO Mode.

Test Mode :	TX(5.2G) - 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	4434.074	60.89	5.94	35.40	44.00	58.23	68.2	-9.97	PK
V	4434.074	43.45	5.94	35.40	44.00	40.79	54	-13.21	AV
V	10380.159	61.82	8.46	39.75	44.50	65.53	68.2	-2.67	PK
V	10380.159	43.14	8.46	39.75	44.50	46.85	54	-7.15	AV
V	15570.110	63.46	10.12	38.80	44.10	68.28	74	-5.72	PK
V	15570.110	43.55	10.12	38.80	42.70	49.77	54	-4.23	AV
H	4434.133	63.92	5.94	35.18	44.00	61.04	74	-12.96	PK
H	4434.133	43.49	5.94	35.18	44.00	40.61	54	-13.39	AV
H	10380.136	53.99	8.46	38.71	44.50	56.66	68.2	-11.54	PK
H	10380.136	41.96	8.46	38.71	44.50	44.63	54	-9.37	AV
H	15570.182	52.73	10.12	38.38	44.10	57.13	74	-16.87	PK
H	15570.182	40.24	10.12	38.38	44.10	44.64	54	-9.36	AV
middle Channel (5230 MHz)-Above 1G									
V	4739.016	60.28	6.48	36.35	44.05	59.06	68.2	-9.14	PK
V	4739.016	43.74	6.48	36.35	44.05	42.52	54	-11.48	AV
V	10460.050	63.88	8.47	37.88	44.51	65.72	68.2	-2.48	PK
V	10460.050	43.39	8.47	37.88	44.51	45.23	54	-8.77	AV
V	15690.022	61.80	10.12	38.80	44.10	66.62	74	-7.38	PK
V	15690.022	43.68	10.12	38.80	42.70	49.90	54	-4.10	AV
H	4739.142	62.77	6.48	36.37	44.05	61.57	68.2	-6.63	PK
H	4739.142	43.36	6.48	36.37	44.05	42.16	54	-11.84	AV
H	10460.147	53.83	8.47	38.64	44.50	56.44	68.2	-11.76	PK
H	10460.147	44.06	8.47	38.64	44.50	46.67	54	-7.33	AV
H	15690.050	52.57	10.12	38.38	44.10	56.97	74	-17.03	PK
H	15690.050	41.73	10.12	38.38	44.10	46.13	54	-7.87	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(5.2G) - 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	4434.167	63.16	5.94	35.40	44.00	60.50	68.2	-7.70	PK
V	4434.167	43.85	5.94	35.40	44.00	41.19	54	-12.81	AV
V	10420.000	61.86	8.46	39.75	44.50	65.57	68.2	-2.63	PK
V	10420.000	43.81	8.46	39.75	44.50	47.52	54	-6.48	AV
V	15630.049	63.41	10.12	38.80	44.10	68.23	74	-5.77	PK
V	15630.049	43.98	10.12	38.80	42.70	50.20	54	-3.80	AV
H	4434.024	64.47	5.94	35.18	44.00	61.59	68.2	-6.61	PK
H	4434.024	43.72	5.94	35.18	44.00	40.84	54	-13.16	AV
H	10420.122	54.94	8.46	38.71	44.50	57.61	68.2	-10.59	PK
H	10420.122	42.31	8.46	38.71	44.50	44.98	54	-9.02	AV
H	15630.006	51.06	10.12	38.38	44.10	55.46	74	-18.54	PK
H	15630.006	40.94	10.12	38.38	44.10	45.34	54	-8.66	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	58.39	5.94	35.40	44.00	55.73	74	-18.27	PK
V	4679.155	43.25	5.94	35.40	44.00	40.59	54	-13.41	AV
V	11490.173	57.19	8.46	39.75	44.50	60.90	68.2	-7.30	PK
V	11490.173	43.69	8.46	39.75	44.50	47.40	54	-6.60	AV
V	17235.137	60.46	10.12	38.80	44.10	65.28	68.2	-2.92	PK
V	17235.137	43.14	10.12	38.80	42.70	49.36	54	-4.64	AV
H	4679.191	58.45	5.94	35.18	44.00	55.57	74	-18.43	PK
H	4679.191	43.97	5.94	35.18	44.00	41.09	54	-12.91	AV
H	11490.011	50.70	8.46	38.71	44.50	53.37	68.2	-14.83	PK
H	11490.011	43.48	8.46	38.71	44.50	46.15	54	-7.85	AV
H	17235.122	52.78	10.12	38.38	44.10	57.18	68.2	-11.02	PK
H	17235.122	41.51	10.12	38.38	44.10	45.91	54	-8.09	AV
middle Channel (5785 MHz)-Above 1G									
V	4592.180	57.38	6.48	36.35	44.05	56.16	74	-17.84	PK
V	4592.180	43.94	6.48	36.35	44.05	42.72	54	-11.28	AV
V	11570.165	56.83	8.47	37.88	44.51	58.67	68.2	-9.53	PK
V	11570.165	43.09	8.47	37.88	44.51	44.93	54	-9.07	AV
V	17355.159	60.16	10.12	38.80	44.10	64.98	68.2	-3.22	PK
V	17355.159	39.73	10.12	38.80	42.70	45.95	54	-8.05	AV
H	4592.135	57.67	6.48	36.37	44.05	56.47	74	-17.53	PK
H	4592.135	43.57	6.48	36.37	44.05	42.37	54	-11.63	AV
H	11570.009	50.12	8.47	38.64	44.50	52.73	68.2	-15.47	PK
H	11570.009	41.81	8.47	38.64	44.50	44.42	54	-9.58	AV
H	17355.090	52.51	10.12	38.38	44.10	56.91	68.2	-11.29	PK
H	17355.090	44.28	10.12	38.38	44.10	48.68	54	-5.32	AV
High Channel (5825 MHz)-Above 1G									
V	6039.110	60.28	7.10	37.24	43.50	61.12	68.2	-7.08	PK
V	6039.110	43.16	7.10	37.24	43.50	44.00	54	-10.00	AV
V	11650.060	58.77	8.46	37.68	44.50	60.41	74	-13.59	PK
V	11650.060	43.24	8.46	37.68	44.50	44.88	54	-9.12	AV
V	17475.143	56.12	10.12	38.80	44.10	60.94	68.2	-7.26	PK
V	17475.143	43.16	10.12	38.80	42.70	49.38	54	-4.62	AV
H	6039.164	56.21	7.10	37.24	43.50	57.05	68.2	-11.15	PK
H	6039.164	43.54	7.10	37.24	43.50	44.38	54	-9.62	AV
H	11650.082	51.42	8.46	38.57	44.50	53.95	74	-20.05	PK
H	11650.082	41.75	8.46	38.57	44.50	44.28	54	-9.72	AV
H	17475.065	51.13	10.12	38.38	44.10	55.53	68.2	-12.67	PK
H	17475.065	43.96	10.12	38.38	44.10	48.36	54	-5.64	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	4679.117	57.95	5.94	35.40	44.00	55.29	74	-18.71	PK
V	4679.117	43.19	5.94	35.40	44.00	40.53	54	-13.47	AV
V	11490.058	54.04	8.46	39.75	44.50	57.75	68.2	-10.45	PK
V	11490.058	43.22	8.46	39.75	44.50	46.93	54	-7.07	AV
V	17235.086	61.90	10.12	38.80	44.10	66.72	68.2	-1.48	PK
V	17235.086	43.50	10.12	38.80	42.70	49.72	54	-4.28	AV
H	4679.148	59.33	5.94	35.18	44.00	56.45	74	-17.55	PK
H	4679.148	43.52	5.94	35.18	44.00	40.64	54	-13.36	AV
H	11490.064	50.53	8.46	38.71	44.50	53.20	68.2	-15.00	PK
H	11490.064	40.63	8.46	38.71	44.50	43.30	54	-10.70	AV
H	17235.089	50.93	10.12	38.38	44.10	55.33	68.2	-12.87	PK
H	17235.089	41.93	10.12	38.38	44.10	46.33	54	-7.67	AV
middle Channel (5785 MHz)-Above 1G									
V	4592.112	60.96	6.48	36.35	44.05	59.74	74	-14.26	PK
V	4592.112	43.04	6.48	36.35	44.05	41.82	54	-12.18	AV
V	11570.114	56.28	8.47	37.88	44.51	58.12	68.2	-10.08	PK
V	11570.114	43.78	8.47	37.88	44.51	45.62	54	-8.38	AV
V	17355.075	60.89	10.12	38.80	44.10	65.71	68.2	-2.49	PK
V	17355.075	43.58	10.12	38.80	42.70	49.80	54	-4.20	AV
H	4592.010	58.06	6.48	36.37	44.05	56.86	74	-17.14	PK
H	4592.010	43.66	6.48	36.37	44.05	42.46	54	-11.54	AV
H	11570.049	51.14	8.47	38.64	44.50	53.75	68.2	-14.45	PK
H	11570.049	40.42	8.47	38.64	44.50	43.03	54	-10.97	AV
H	17355.128	52.77	10.12	38.38	44.10	57.17	68.2	-11.03	PK
H	17355.128	42.35	10.12	38.38	44.10	46.75	54	-7.25	AV
High Channel (5825 MHz)-Above 1G									
V	6039.036	59.47	7.10	37.24	43.50	60.31	68.2	-7.89	PK
V	6039.036	43.34	7.10	37.24	43.50	44.18	54	-9.82	AV
V	11650.057	57.25	8.46	37.68	44.50	58.89	74	-15.11	PK
V	11650.057	43.60	8.46	37.68	44.50	45.24	54	-8.76	AV
V	17475.048	57.48	10.12	38.80	44.10	62.30	68.2	-5.90	PK
V	17475.048	43.01	10.12	38.80	42.70	49.23	54	-4.77	AV
H	6039.045	57.19	7.10	37.24	43.50	58.03	68.2	-10.17	PK
H	6039.045	43.52	7.10	37.24	43.50	44.36	54	-9.64	AV
H	11650.043	51.35	8.46	38.57	44.50	53.88	74	-20.12	PK
H	11650.043	40.90	8.46	38.57	44.50	43.43	54	-10.57	AV
H	17475.128	50.57	10.12	38.38	44.10	54.97	68.2	-13.23	PK
H	17475.128	41.55	10.12	38.38	44.10	45.95	54	-8.05	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.

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	4679.127	59.56	5.94	35.40	44.00	56.90	74	-17.10	PK
V	4679.127	43.75	5.94	35.40	44.00	41.09	54	-12.91	AV
V	11510.083	56.15	8.46	39.75	44.50	59.86	74	-14.14	PK
V	11510.083	43.12	8.46	39.75	44.50	46.83	54	-7.17	AV
V	17265.119	59.30	10.12	38.80	44.10	64.12	68.2	-4.08	PK
V	17265.119	2.00	10.12	38.80	42.70	8.22	54	-45.78	AV
H	4679.079	58.02	5.94	35.18	44.00	55.14	74	-18.86	PK
H	4679.079	43.24	5.94	35.18	44.00	40.36	54	-13.64	AV
H	11510.104	54.04	8.46	38.71	44.50	56.71	74	-17.29	PK
H	11510.104	42.37	8.46	38.71	44.50	45.04	54	-8.96	AV
H	17265.149	52.78	10.12	38.38	44.10	57.18	68.2	-11.02	PK
H	17265.149	42.08	10.12	38.38	44.10	46.48	54	-7.52	AV
middle Channel (5795 MHz)-Above 1G									
V	6039.082	58.77	6.48	36.35	44.05	57.55	68.2	-10.65	PK
V	6039.082	43.67	6.48	36.35	44.05	42.45	54	-11.55	AV
V	11590.174	55.13	8.47	37.88	44.51	56.97	74	-17.03	PK
V	11590.174	43.37	8.47	37.88	44.51	45.21	54	-8.79	AV
V	17385.185	55.41	10.12	38.80	44.10	60.23	68.2	-7.97	PK
V	17385.185	41.69	10.12	38.80	42.70	47.91	54	-6.09	AV
H	6039.042	57.46	6.48	36.37	44.05	56.26	68.2	-11.94	PK
H	6039.042	43.82	6.48	36.37	44.05	42.62	54	-11.38	AV
H	11590.130	54.45	8.47	38.64	44.50	57.06	74	-16.94	PK
H	11590.130	44.93	8.47	38.64	44.50	47.54	54	-6.46	AV
H	17385.166	53.79	10.12	38.38	44.10	58.19	68.2	-10.01	PK
H	17385.166	40.80	10.12	38.38	44.10	45.20	54	-8.80	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	4679.050	57.41	5.94	35.40	44.00	54.75	74	-19.25	PK
V	4679.050	43.88	5.94	35.40	44.00	41.22	54	-12.78	AV
V	11490.192	57.72	8.46	39.75	44.50	61.43	68.2	-6.77	PK
V	11490.192	43.98	8.46	39.75	44.50	47.69	54	-6.31	AV
V	17235.179	60.85	10.12	38.80	44.10	65.67	68.2	-2.53	PK
V	17235.179	43.08	10.12	38.80	42.70	49.30	54	-4.70	AV
H	4679.154	55.81	5.94	35.18	44.00	52.93	74	-21.07	PK
H	4679.154	43.76	5.94	35.18	44.00	40.88	54	-13.12	AV
H	11490.107	53.14	8.46	38.71	44.50	55.81	68.2	-12.39	PK
H	11490.107	43.34	8.46	38.71	44.50	46.01	54	-7.99	AV
H	17235.191	54.98	10.12	38.38	44.10	59.38	68.2	-8.82	PK
H	17235.191	40.85	10.12	38.38	44.10	45.25	54	-8.75	AV
middle Channel (5785 MHz)-Above 1G									
V	4592.039	56.43	6.48	36.35	44.05	55.21	74	-18.79	PK
V	4592.039	43.57	6.48	36.35	44.05	42.35	54	-11.65	AV
V	11570.168	58.96	8.47	37.88	44.51	60.80	68.2	-7.40	PK
V	11570.168	43.32	8.47	37.88	44.51	45.16	54	-8.84	AV
V	17355.198	57.85	10.12	38.80	44.10	62.67	68.2	-5.53	PK
V	17355.198	39.95	10.12	38.80	42.70	46.17	54	-7.83	AV
H	4592.077	55.75	6.48	36.37	44.05	54.55	74	-19.45	PK
H	4592.077	43.85	6.48	36.37	44.05	42.65	54	-11.35	AV
H	11570.015	50.88	8.47	38.64	44.50	53.49	68.2	-14.71	PK
H	11570.015	42.22	8.47	38.64	44.50	44.83	54	-9.17	AV
H	17355.106	54.73	10.12	38.38	44.10	59.13	68.2	-9.07	PK
H	17355.106	42.43	10.12	38.38	44.10	46.83	54	-7.17	AV
High Channel (5825 MHz)-Above 1G									
V	6039.170	57.99	7.10	37.24	43.50	58.83	68.2	-9.37	PK
V	6039.170	43.70	7.10	37.24	43.50	44.54	54	-9.46	AV
V	11650.165	58.36	8.46	37.68	44.50	60.00	74	-14.00	PK
V	11650.165	43.21	8.46	37.68	44.50	44.85	54	-9.15	AV
V	17475.143	56.56	10.12	38.80	44.10	61.38	68.2	-6.82	PK
V	17475.143	43.36	10.12	38.80	42.70	49.58	54	-4.42	AV
H	6039.093	58.94	7.10	37.24	43.50	59.78	68.2	-8.42	PK
H	6039.093	43.65	7.10	37.24	43.50	44.49	54	-9.51	AV
H	11650.183	52.60	8.46	38.57	44.50	55.13	74	-18.87	PK
H	11650.183	42.53	8.46	38.57	44.50	45.06	54	-8.94	AV
H	17475.010	53.72	10.12	38.38	44.10	58.12	68.2	-10.08	PK
H	17475.010	42.27	10.12	38.38	44.10	46.67	54	-7.33	AV

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

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

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

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

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	4679.114	59.62	5.94	35.40	44.00	56.96	74	-17.04	PK
V	4679.114	43.51	5.94	35.40	44.00	40.85	54	-13.15	AV
V	11510.042	55.77	8.46	39.75	44.50	59.48	74	-14.52	PK
V	11510.042	43.44	8.46	39.75	44.50	47.15	54	-6.85	AV
V	17265.075	56.85	10.12	38.80	44.10	61.67	68.2	-6.53	PK
V	17265.075	2.00	10.12	38.80	42.70	8.22	54	-45.78	AV
H	4679.058	59.04	5.94	35.18	44.00	56.16	74	-17.84	PK
H	4679.058	43.76	5.94	35.18	44.00	40.88	54	-13.12	AV
H	11510.163	53.38	8.46	38.71	44.50	56.05	74	-17.95	PK
H	11510.163	41.92	8.46	38.71	44.50	44.59	54	-9.41	AV
H	17265.145	53.16	10.12	38.38	44.10	57.56	68.2	-10.64	PK
H	17265.145	43.87	10.12	38.38	44.10	48.27	54	-5.73	AV
middle Channel (5795 MHz)-Above 1G									
V	6039.047	58.40	6.48	36.35	44.05	57.18	68.2	-11.02	PK
V	6039.047	43.00	6.48	36.35	44.05	41.78	54	-12.22	AV
V	11590.170	56.62	8.47	37.88	44.51	58.46	74	-15.54	PK
V	11590.170	43.71	8.47	37.88	44.51	45.55	54	-8.45	AV
V	17385.044	55.01	10.12	38.80	44.10	59.83	68.2	-8.37	PK
V	17385.044	41.31	10.12	38.80	42.70	47.53	54	-6.47	AV
H	6039.112	56.91	6.48	36.37	44.05	55.71	68.2	-12.49	PK
H	6039.112	43.98	6.48	36.37	44.05	42.78	54	-11.22	AV
H	11590.059	50.61	8.47	38.64	44.50	53.22	74	-20.78	PK
H	11590.059	43.15	8.47	38.64	44.50	45.76	54	-8.24	AV
H	17385.192	53.65	10.12	38.38	44.10	58.05	68.2	-10.15	PK
H	17385.192	42.29	10.12	38.38	44.10	46.69	54	-7.31	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	4679.083	56.81	5.94	35.40	44.00	54.15	74	-19.85	PK
V	4679.083	43.89	5.94	35.40	44.00	41.23	54	-12.77	AV
V	11550.156	57.31	8.46	39.75	44.50	61.02	74	-12.98	PK
V	11550.156	43.78	8.46	39.75	44.50	47.49	54	-6.51	AV
V	17325.098	59.93	10.12	38.80	44.10	64.75	68.2	-3.45	PK
V	17325.098	41.67	10.12	38.80	42.70	47.89	54	-6.11	AV
H	4679.148	55.55	5.94	35.18	44.00	52.67	74	-21.33	PK
H	4679.148	43.06	5.94	35.18	44.00	40.18	54	-13.82	AV
H	11550.069	52.50	8.46	38.71	44.50	55.17	74	-18.83	PK
H	11550.069	40.74	8.46	38.71	44.50	43.41	54	-10.59	AV
H	17325.008	50.18	10.12	38.38	44.10	54.58	68.2	-13.62	PK
H	17325.008	40.56	10.12	38.38	44.10	44.96	54	-9.04	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

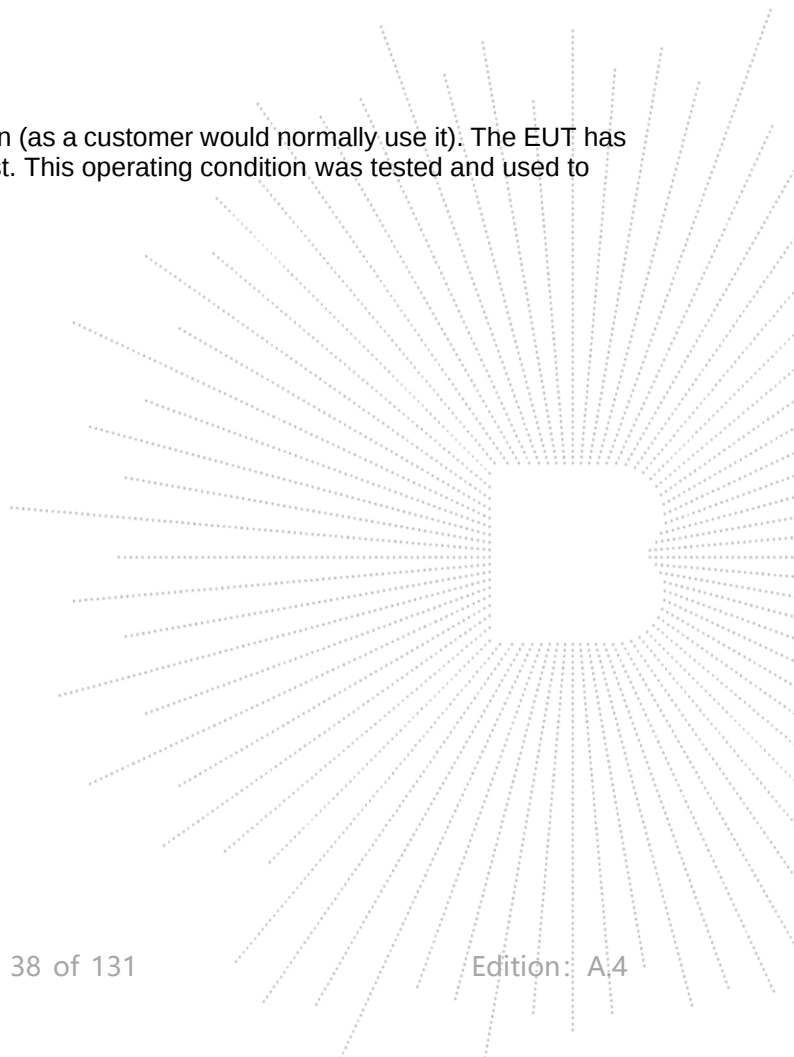
For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of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

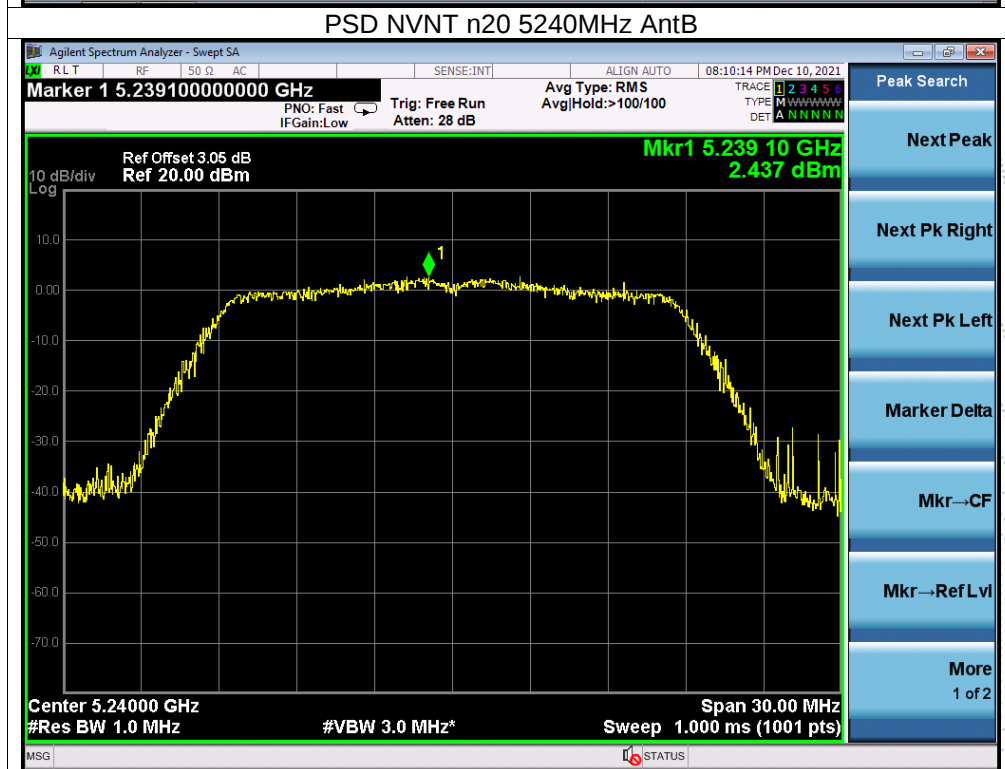
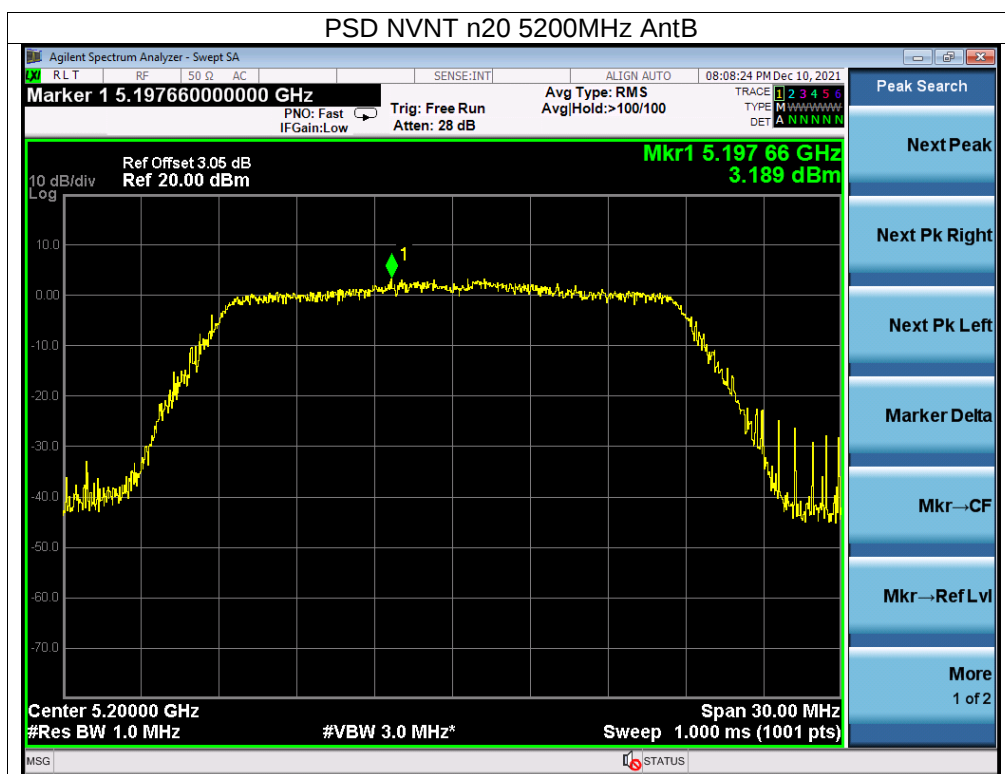
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

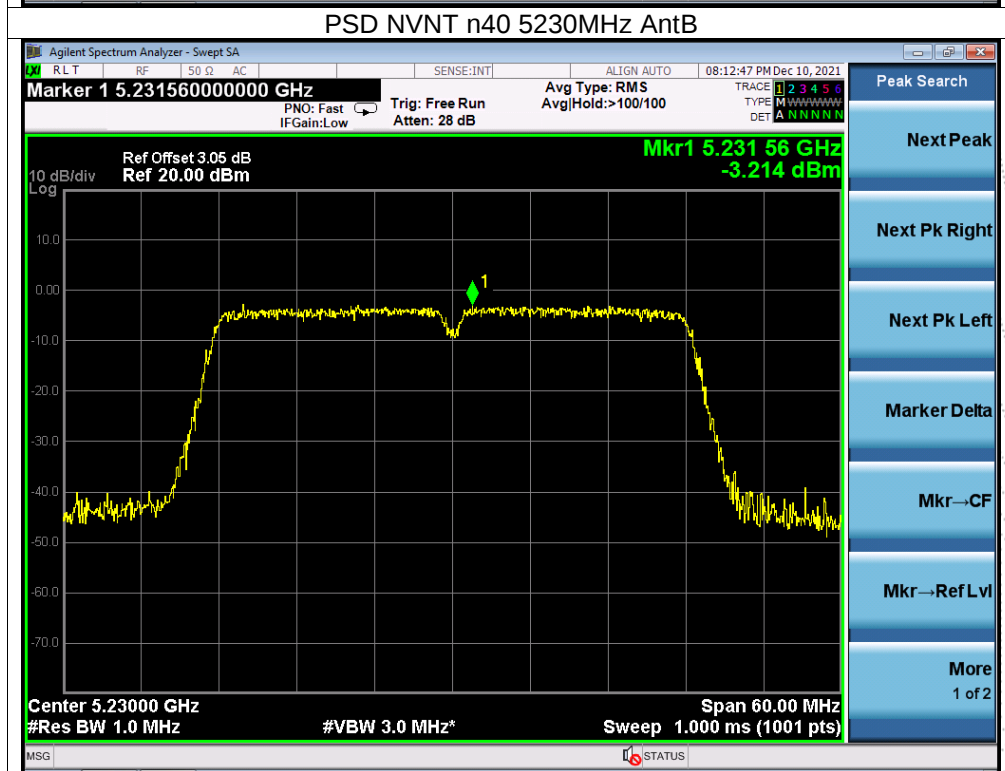
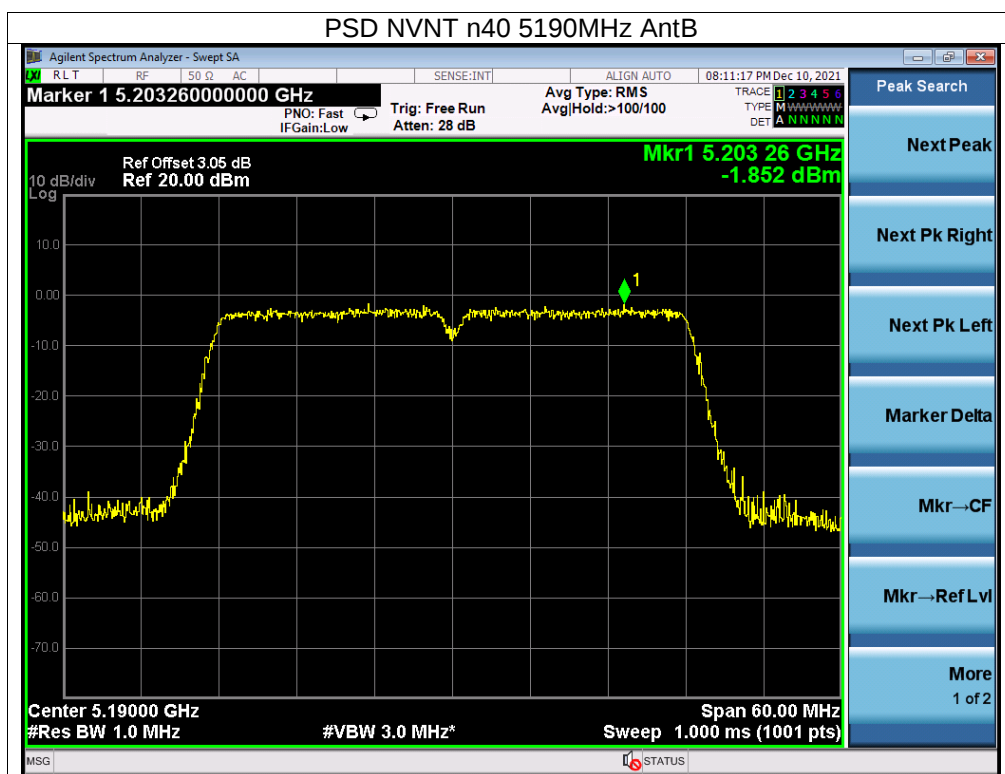
Note: Antenna A gain: 5dBi, Antenna B gain:5dBi, Directional gain=[10log(GA+ G B)] dbi =8.01dbi
limit=17-(8.01-6)=14.99

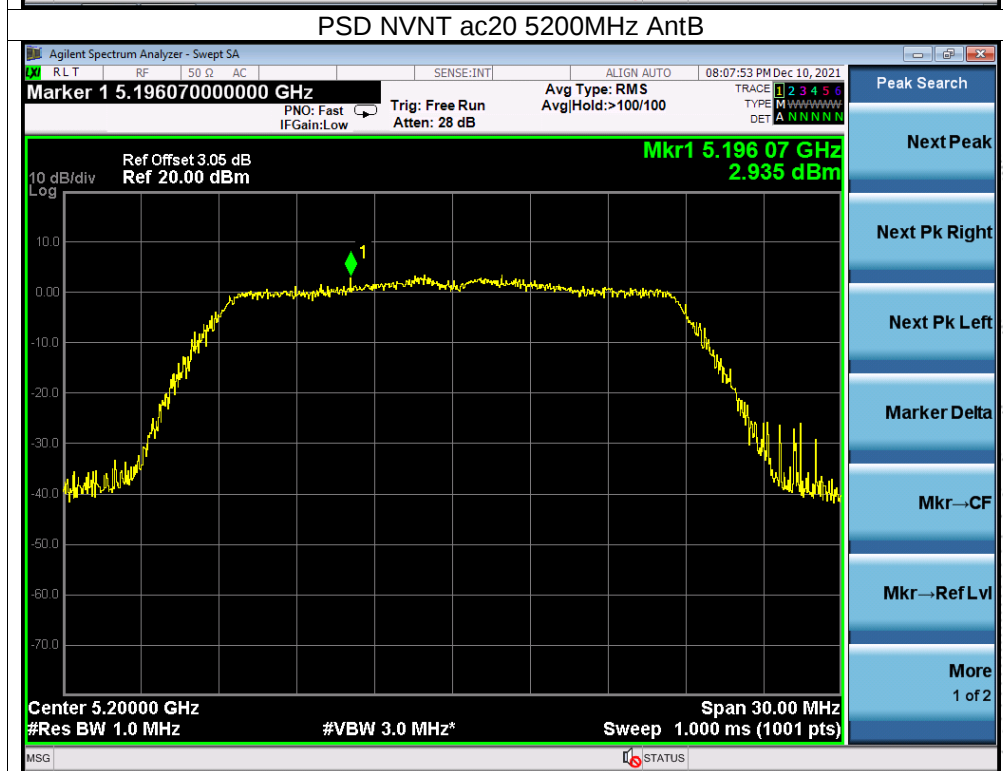
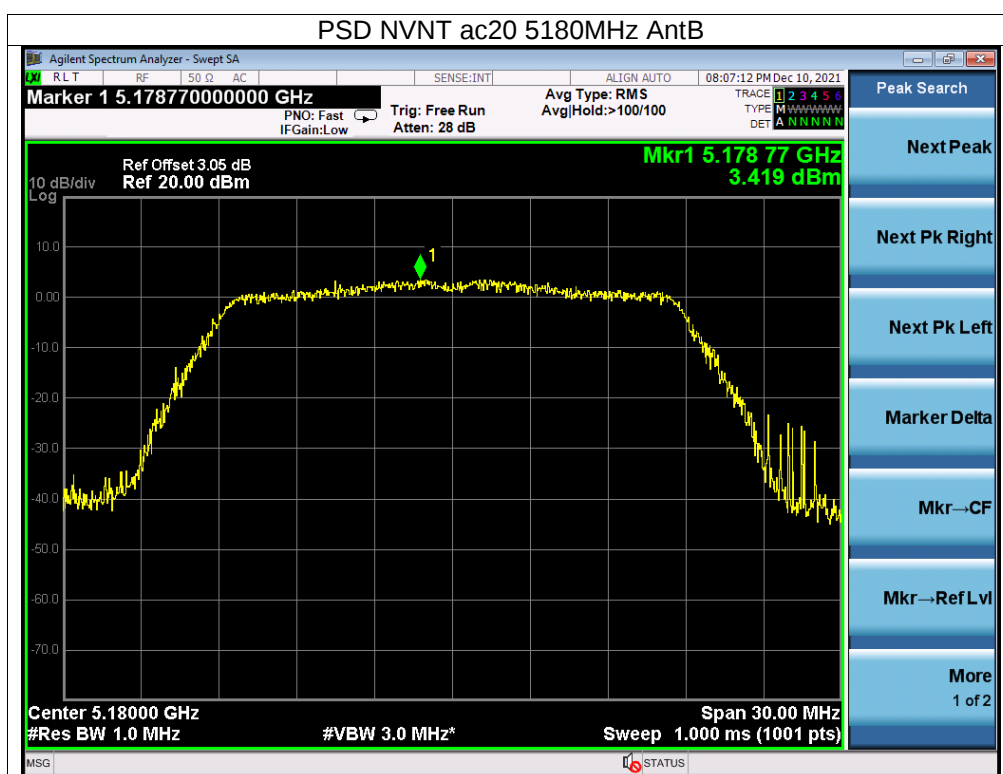
Mode	Frequency	Measured Power Density (dBm/MHz)			Limit (dBm/MHz)	Result
		ANT A	ANT B	Total		
802.11 a	5180 MHz	4.067	5.143	/	17	PASS
	5200 MHz	2.823	3.838	/	17	PASS
	5240 MHz	3.750	4.178	/	17	PASS
802.11 n20	5180 MHz	2.424	3.539	6.027	14.99	PASS
	5200 MHz	2.128	3.189	5.701	14.99	PASS
	5240 MHz	1.618	2.437	5.057	14.99	PASS
802.11 n40	5190 MHz	-3.017	-1.852	0.615	14.99	PASS
	5230 MHz	-4.261	-3.214	-0.696	14.99	PASS
802.11 ac20	5180 MHz	3.034	3.419	6.241	14.99	PASS
	5200 MHz	1.582	2.935	5.321	14.99	PASS
	5240 MHz	1.507	2.564	5.078	14.99	PASS
802.11 ac40	5190 MHz	-3.105	-2.595	0.168	14.99	PASS
	5230 MHz	-3.700	-2.668	-0.143	14.99	PASS
802.11 AC80	5210 MHz	-6.403	-4.321	-2.228	14.99	PASS

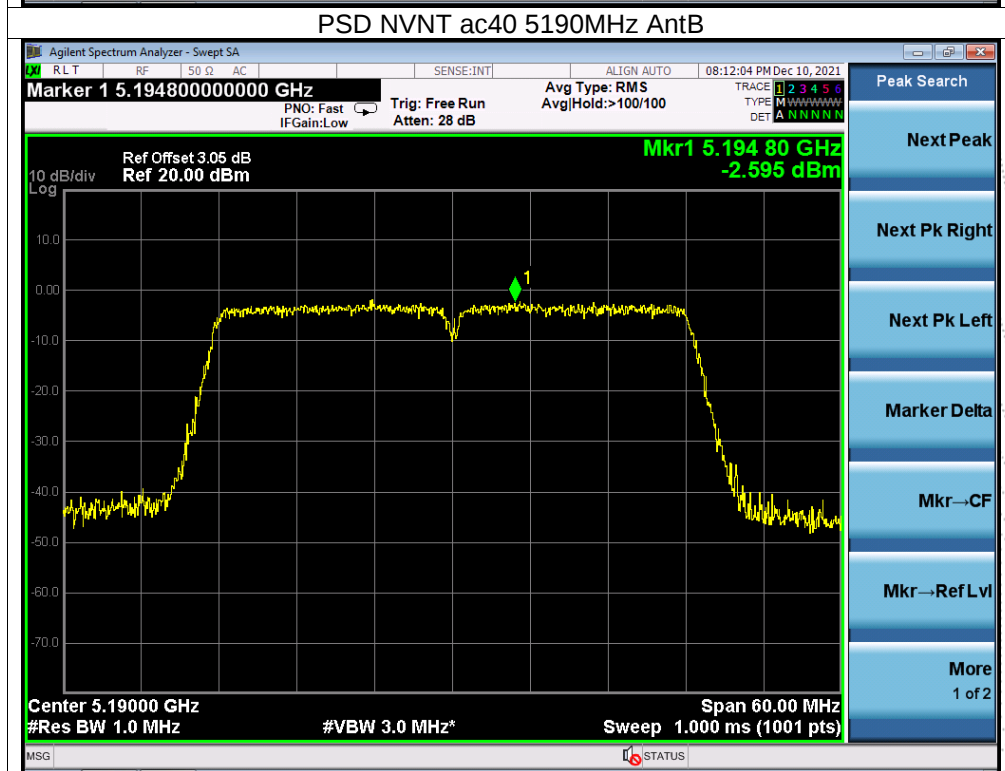
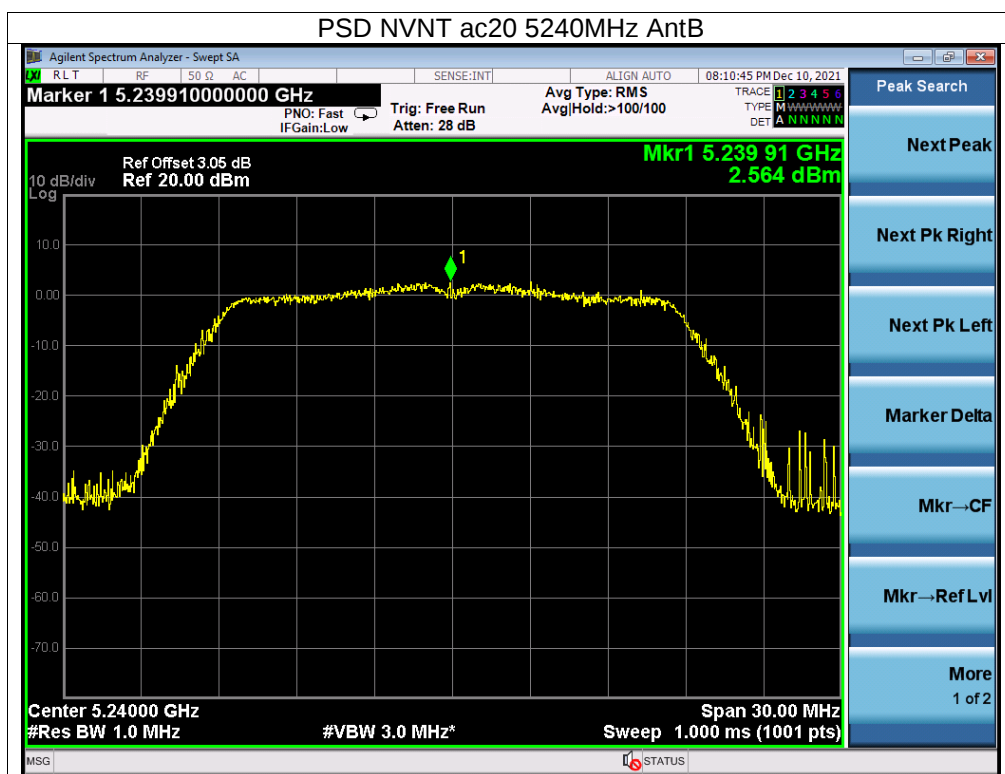


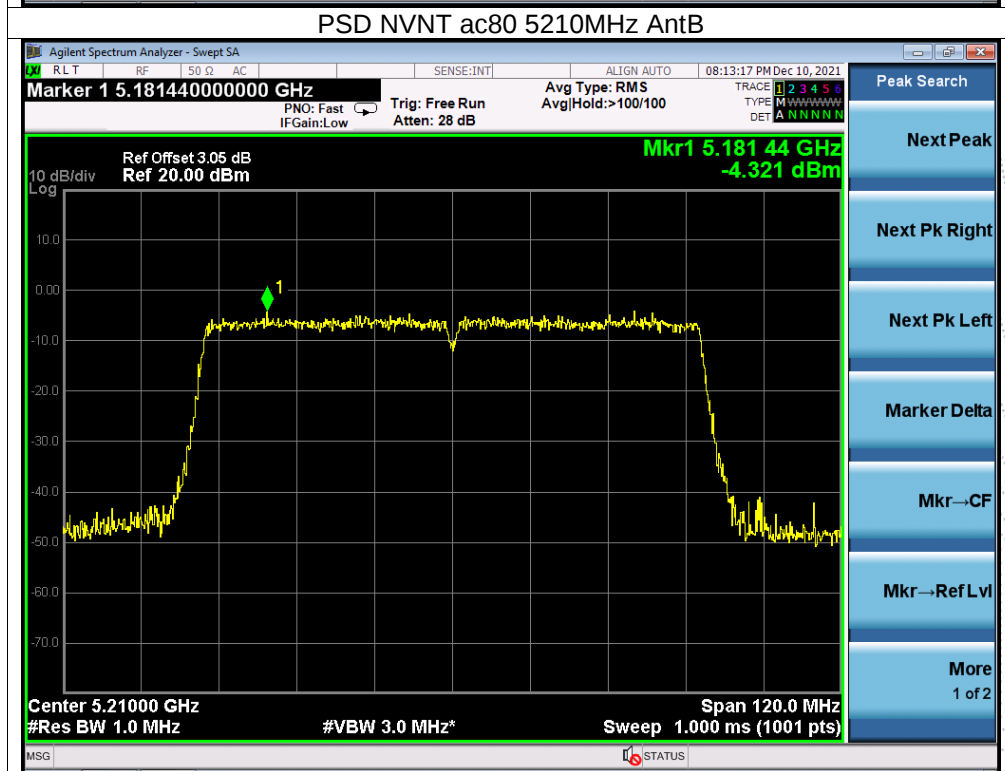
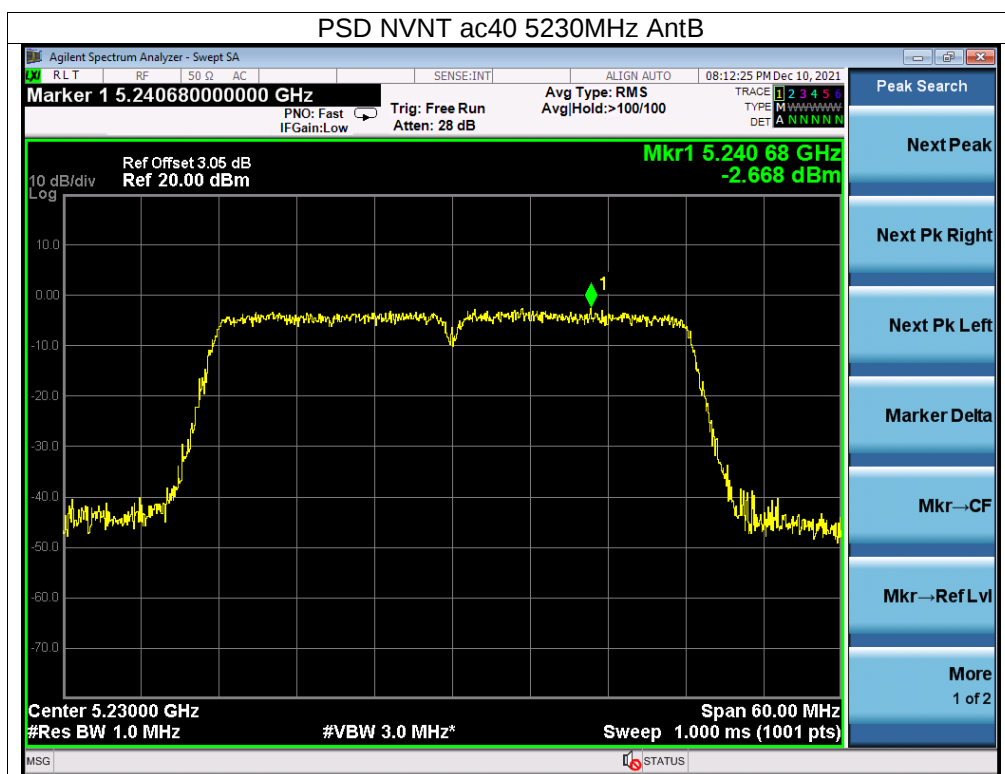












Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX Frequency U-NII-3 (5745-5825MHz)		

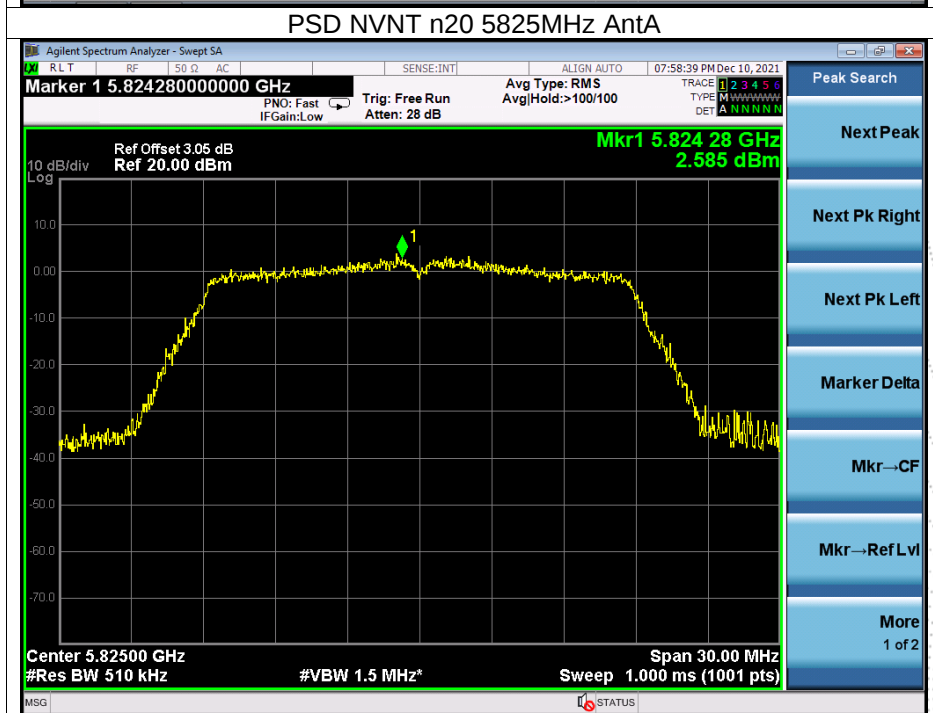
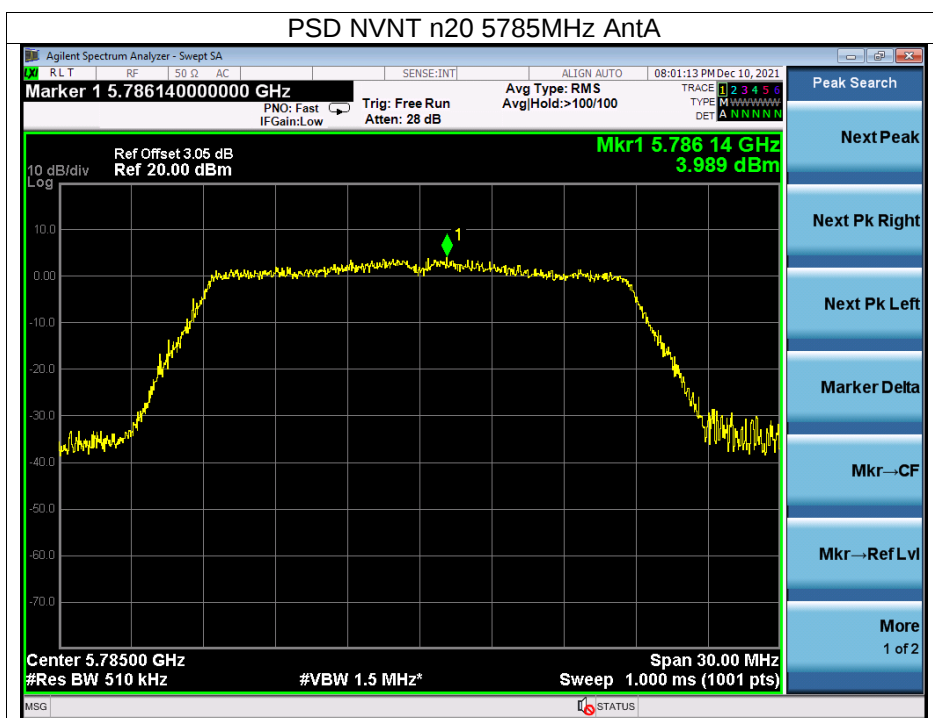
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A ,only shown Antenna A Plot.

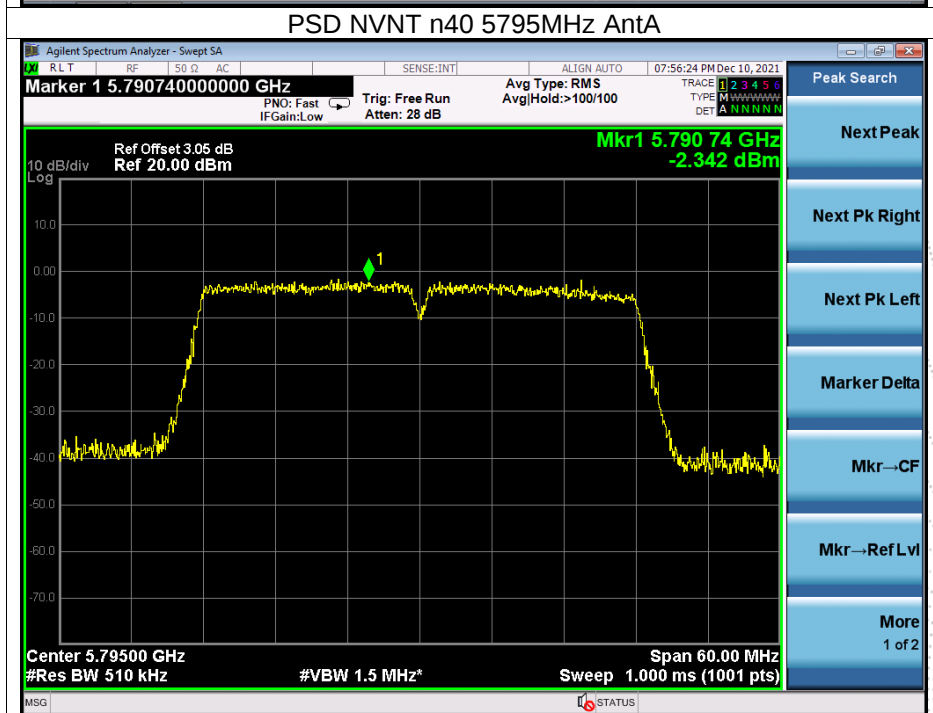
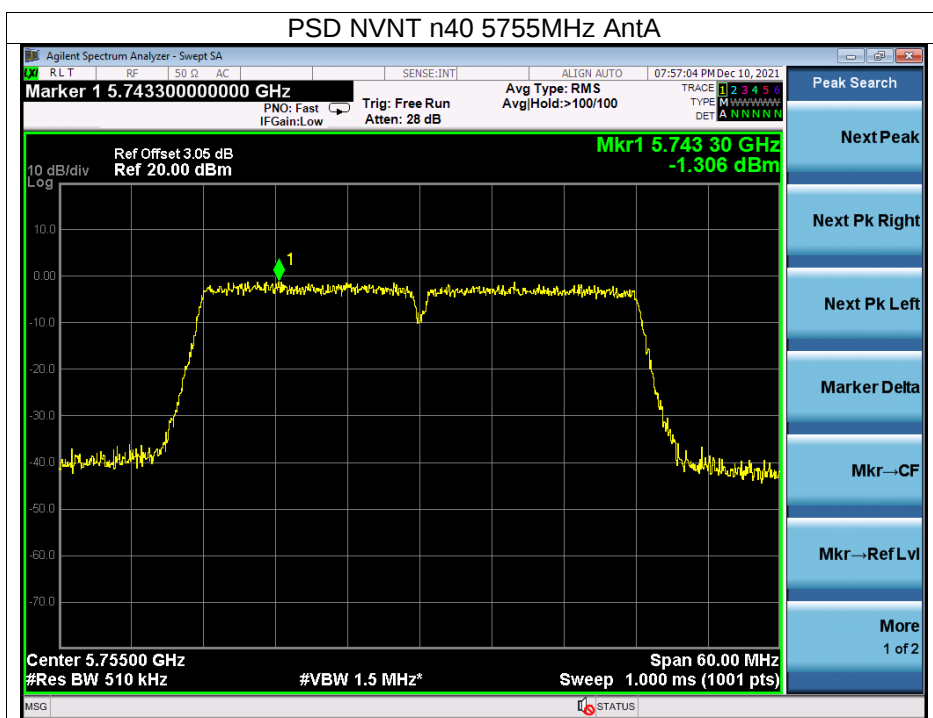
Note: Antenna A gain: 5Bi, Antenna B gain: 5Bi, Directional gain=[10log(GA+ G B)] dbi=8.01 dBi
limit=30-(8.01-6)=27.99

Mode	Frequency	Measured Power Density (dBm/500KHz)			Limit (dBm/500kHz)	Result
		ANT A	ANT B	Total		
802.11 a	5745 MHz	5.325	2.780	/	30	PASS
	5785 MHz	4.734	2.452	/	30	PASS
	5825 MHz	4.662	1.082	/	30	PASS
802.11 n20	5745 MHz	5.103	1.343	6.628	27.99	PASS
	5785 MHz	3.989	0.908	5.726	27.99	PASS
	5825 MHz	2.585	-0.143	4.442	27.99	PASS
802.11 n40	5755 MHz	-1.306	-2.727	1.052	27.99	PASS
	5795 MHz	-2.342	-3.729	0.030	27.99	PASS
802.11 ac20	5745 MHz	4.279	1.972	6.287	27.99	PASS
	5785 MHz	3.672	0.457	5.366	27.99	PASS
	5825 MHz	2.871	-0.092	4.648	27.99	PASS
802.11 ac40	5755 MHz	-0.255	-3.186	1.533	27.99	PASS
	5795 MHz	-1.654	-3.980	0.347	27.99	PASS
802.11 AC80	5775 MHz	-4.779	-4.858	-1.808	27.99	PASS









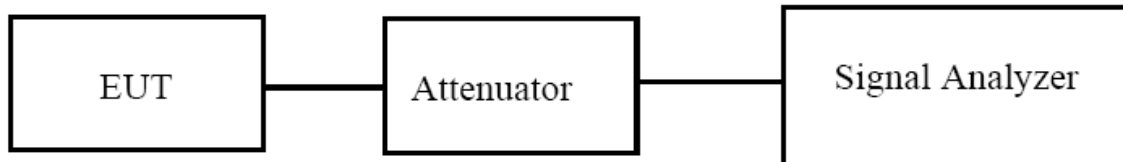






9. 26dB & 6dB & 99% Emission Bandwidth

9.1 Block Diagram Of Test Setup



9.2 Limit

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

9.3 Test Procedure

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

b) Set the VBW > RBW.

c) Detector = Peak.

d) Trace mode = max hold.

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

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

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW $\geq 3 \cdot$ RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

9.4 EUT Operating Conditions

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

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	16.598	21.382	N/A	Pass
	CH40	5200	16.644	21.369	N/A	Pass
	CH48	5240	16.533	21.08	N/A	Pass
802.11 n20	CH36	5180	17.715	21.531	N/A	Pass
	CH40	5200	17.737	21.572	N/A	Pass
	CH48	5240	17.735	21.473	N/A	Pass
802.11 n40	CH 38	5190	36.292	39.32	N/A	Pass
	CH 46	5230	36.304	39.881	N/A	Pass
802.11 ac20	CH36	5180	17.724	21.606	N/A	Pass
	CH40	5200	17.715	21.653	N/A	Pass
	CH48	5240	17.725	21.426	N/A	Pass
802.11 ac40	CH 38	5190	36.3	39.591	N/A	Pass
	CH 46	5230	36.293	39.677	N/A	Pass
802.11 AC80	CH 42	5210	75.786	80.54	N/A	Pass