

TEST REPORT

Report No.: BCTC2112986488-4E

Applicant: L FORWARD INC.

Product Name: 15.6inch laptop

Model/Type Ref.: SGIN_X15

Tested Date: 2021-12-09 to 2022-01-10

Issued Date: 2022-01-10

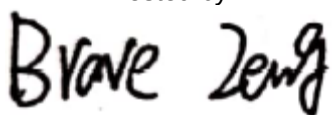
Shenzhen BCTC Testing Co., Ltd.



FCC ID: 2A3YZ-SGINX15

Product Name: 15.6inch laptop
Trademark: N/A
Model/Type Ref.: SGIN_X15
M156NN
Prepared For: L FORWARD INC.
Address: 1908 Thomes Ave Cheyenne,Laramie, WY 82001, us
Manufacturer: Shenzhen NST Industry and Trade Co., Ltd.
Address: 3/F, Bldg 1, Hongbang Technology Park, No.30 Cuibao Road, Baolong Street, Longgang District, Shenzhen, China
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: 2021-12-09
Sample tested Date: 2021-12-09 to 2022-01-10
Issue Date: 2022-01-10
Report No.: BCTC2112986488-4E
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

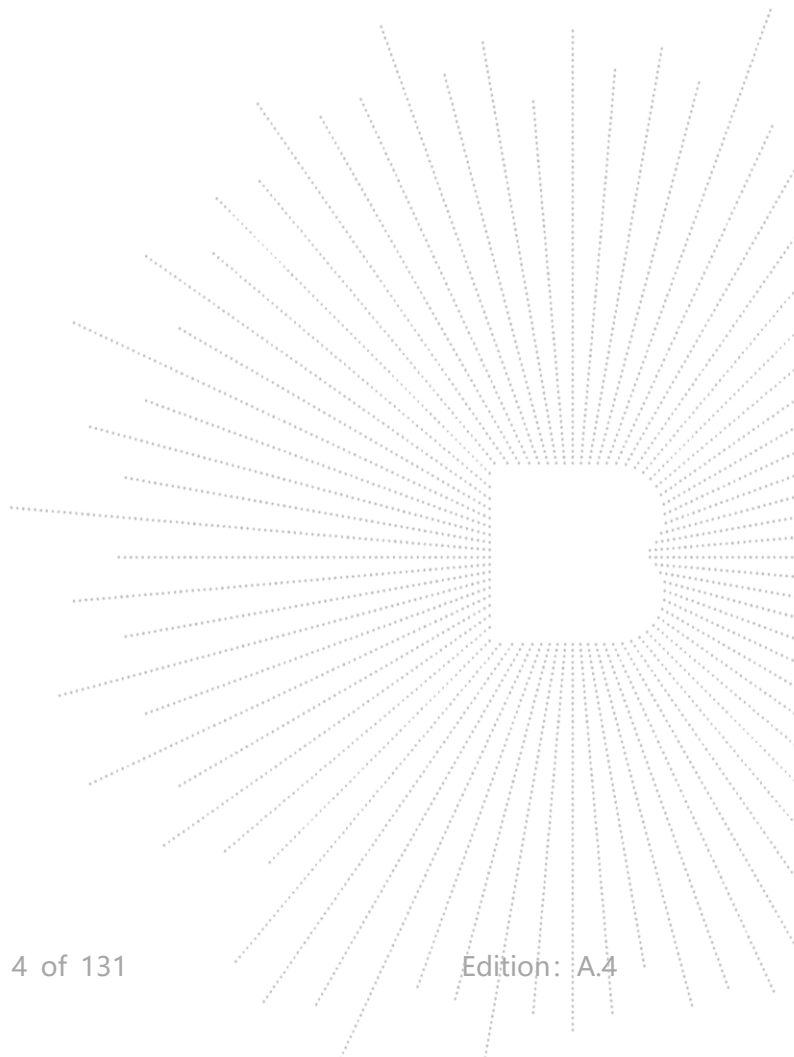
The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

Table Of Content

Test Report Declaration	Page
1. Version	5
2. Test Summary	6
3. Measurement Uncertainty	7
4. Product Information And Test Setup	8
4.1 Product Information.....	8
4.2 Test Setup Configuration	9
4.3 Support Equipment	9
4.4 Channel List	9
4.5 Test Mode	10
4.7 Antenna.....	11
5. Test Facility And Test Instrument Used.....	12
5.1 Test Facility	12
5.2 Test Instrument Used.....	12
6. Conducted Emissions.....	14
6.1 Block Diagram Of Test Setup.....	14
6.2 Limit	14
6.3 Test Procedure	14
6.4 EUT Operating Conditions	15
6.5 Test Result.....	16
7. Radiated Emissions.....	18
7.1 Block Diagram Of Test Setup.....	18
7.2 Limit	19
7.3 Test Procedure	20
7.4 EUT Operating Conditions	21
7.5 Test Result.....	21
8. Power Spectral Density Test	36
8.1 Block Diagram Of Test Setup.....	36
8.2 Limit	36
8.3 Test Procedure	37
8.4 EUT Operating Conditions	37
8.5 Test Result.....	38
9. 26dB & 6dB & 99% Emission Bandwidth	54
9.1 Block Diagram Of Test Setup.....	54
9.2 Limit	54
9.3 Test Procedure	54
9.4 EUT Operating Conditions	56
9.5 Test Result.....	56
10. Maximum Conducted Output Power.....	88
10.1 Block Diagram Of Test Setup.....	88
10.2 Limit	88
10.3 Test Procedure	88
10.4 EUT Operating Conditions	89
10.5 Test Result.....	90

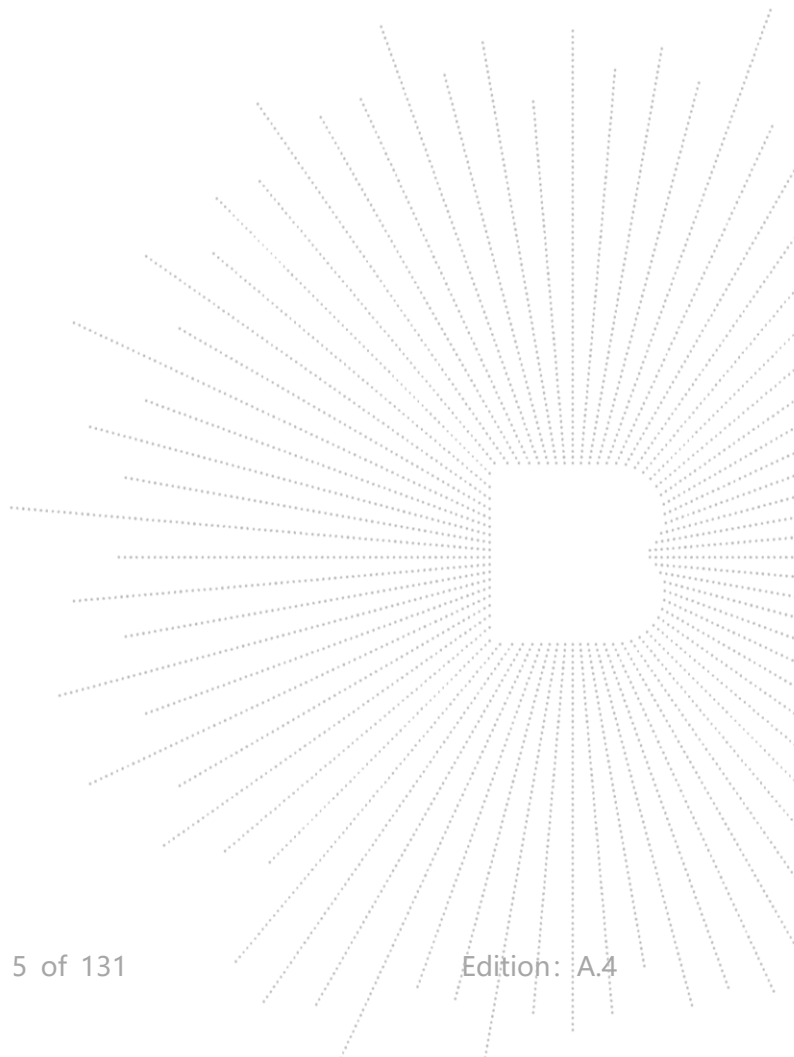
11. Out Of Band Emissions	92
11.1 Block Diagram Of Test Setup.....	92
11.2 Limit	92
11.3 Test Procedure	92
11.4 EUT Operating Conditions	92
11.5 Test Result.....	92
12. Spurious RF Conducted Emissions.....	105
12.1 Block Diagram Of Test Setup.....	105
12.2 Limit	105
12.3 Test Procedure	105
12.4 Test Result.....	105
13. Frequency Stability Measurement	120
13.1 Block Diagram Of Test Setup.....	120
13.2 Limit	120
13.3 Test Procedure	120
13.4 Test Result.....	121
14. Antenna Requirement	127
14.1 Limit	127
14.2 Test Result.....	127
15. EUT Photographs.....	128
16. EUT Test Setup Photographs.....	129

(Note: N/A Means Not Applicable)



1. Version

Report No.	Issue Date	Description	Approved
BCTC2112986488-4E	2022-01-10	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

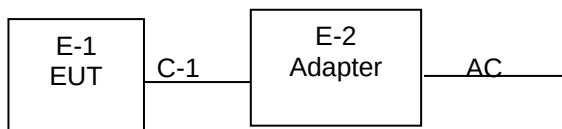
4.1 Product Information

Model/Type Ref.:	SGIN_X15 M156NN
Model differences:	All the model are the same circuit and RF module, except model names.
Hardware Version:	P142K-1-REV003
Software Version:	E.P142K_6.D12.E1.006
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:	Internal antenna
Antenna Gain:	5.1G: Antenna A: 2.66dBi Antenna B: 2.66dBi 5.8G: Antenna A: 5.02dBi Antenna B: 5.02dBi
Ratings:	AC 120V/60Hz/DC 7.6V MODEL: JZB024-120250UX
Adapter:	INPUT: 100-240V 50/60Hz 0.7A OUTPUT: DC 12V 2.5A 30W

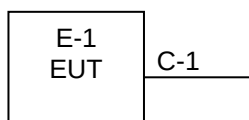
4.2 Test Setup Configuration

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	15.6inch laptop	N/A	SGIN_X15	N/A	EUT
E-2	Adapter	N/A	JZB024-120250UX	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.
- (2) We're testing antenna A data.

4.6 Table Of Parameters Of Text Software Setting

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

Test software Version	CMD		
Parameters	DEF	DEF	DEF

4.7 Antenna

5.2G

1)For power spectral density(PSD) measurements,
Array Gain= $10\log(\text{NANT}/\text{NSS})\text{dB}=10\log(2/1)=3.01\text{dB}$,
So the directional gain for PSD is 5.67dBi

Antenna	Brand	Model Name	Antenna Type	Gain (dBi)	NOTE
A	N/A	N/A	Internal antenna	2.66	
B	N/A	N/A	Internal antenna	2.66	

5.8G

For power spectral density(PSD) measurements,
Array Gain= $10\log(\text{NANT}/\text{NSS})\text{dB}=10\log(2/1)=3.01\text{dB}$,
So the directional gain for PSD is 8.03dBi

Antenna	Brand	Model Name	Antenna Type	Gain (dBi)	NOTE
A	N/A	N/A	Internal antenna	5.02	
B	N/A	N/A	Internal antenna	5.02	

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

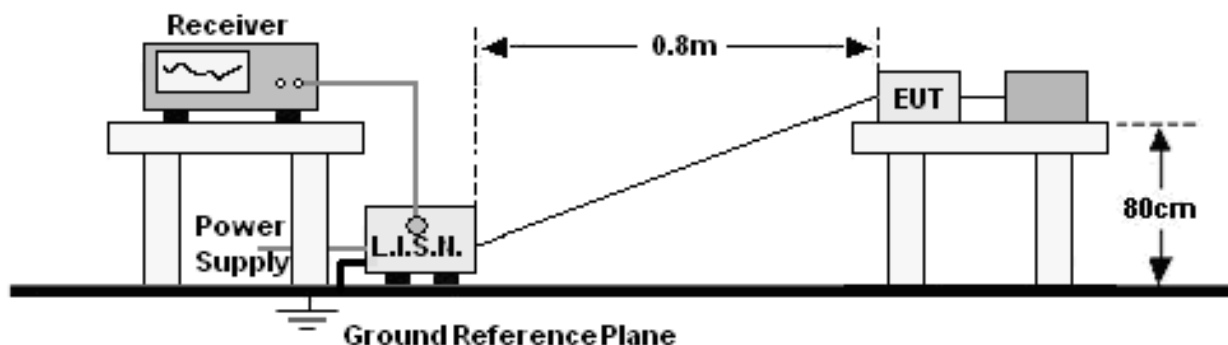
Conducted emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESR3	102075	May 28, 2021	May 27, 2022
LISN	R&S	ENV216	101375	May 28, 2021	May 27, 2022
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Attenuator	\	10dB DC-6GHz	1650	May 28, 2021	May 27, 2022

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.

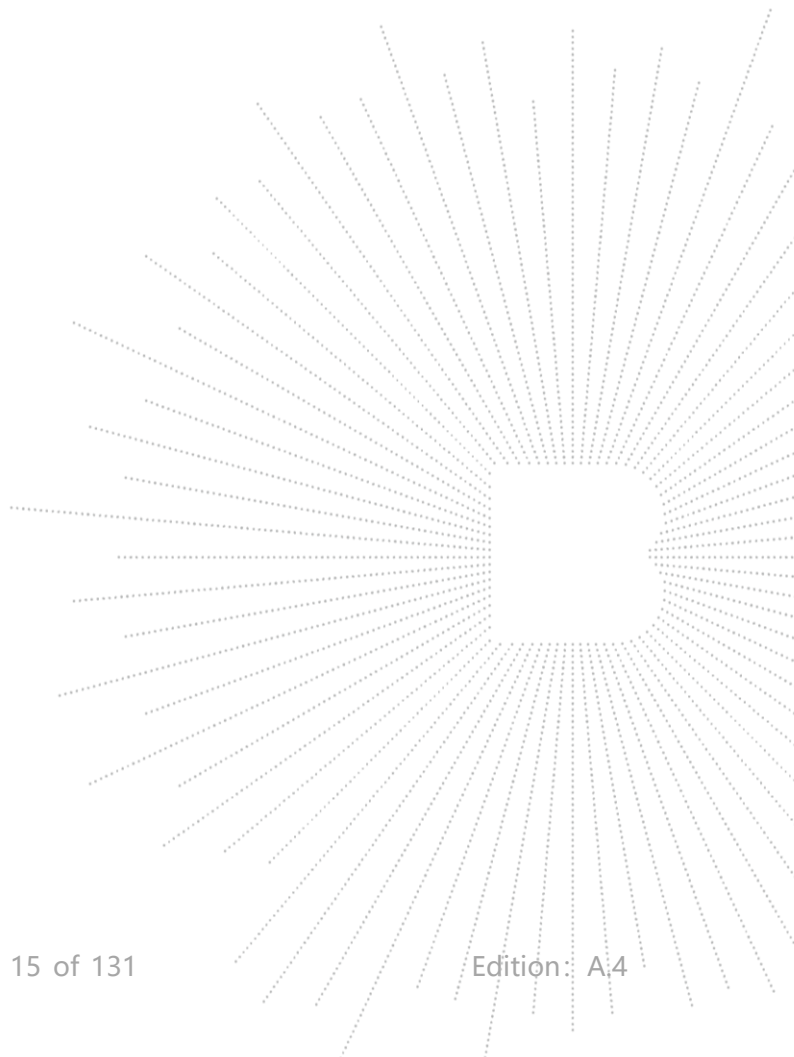
6.3 Test Procedure

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.

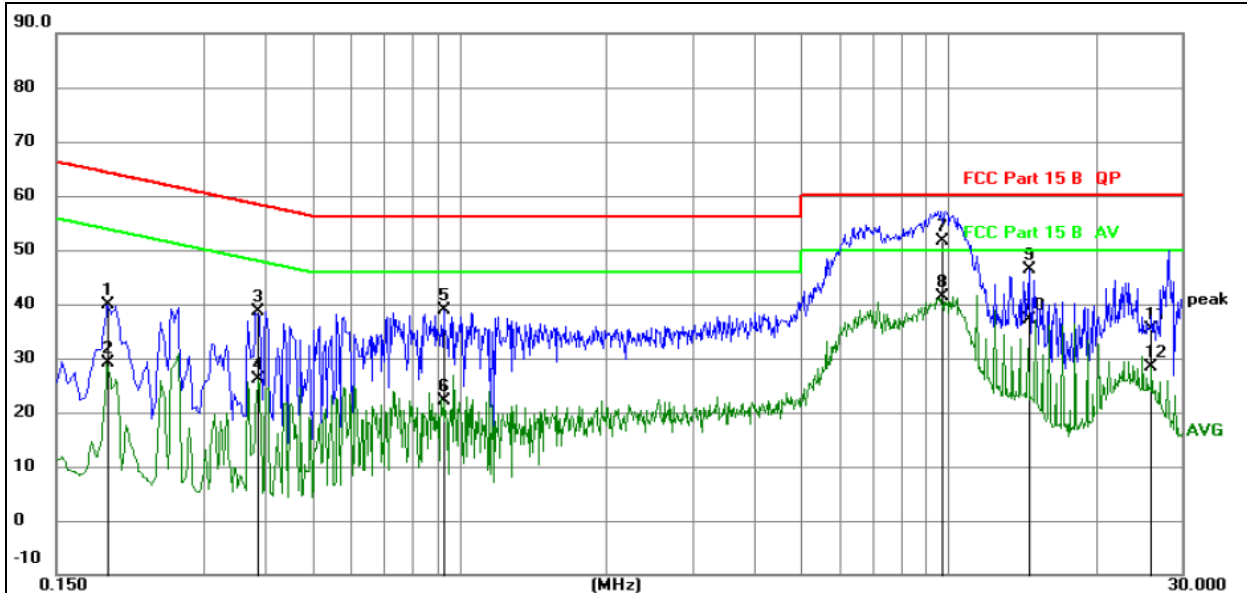
6.4 EUT Operating Conditions

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

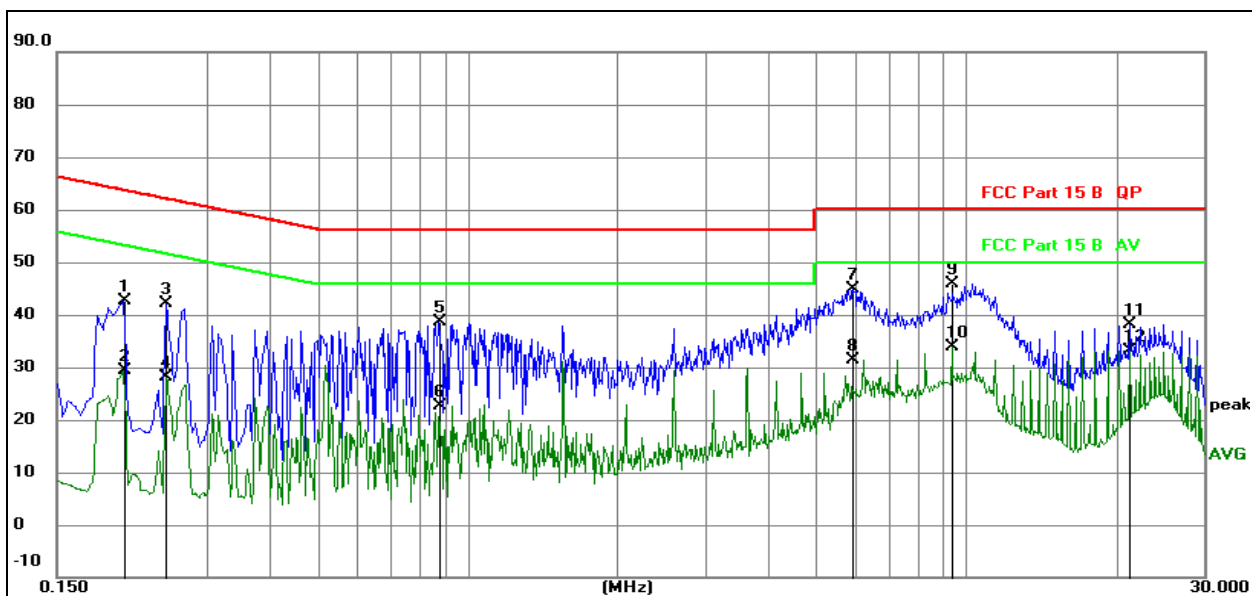


Remark:

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 dB	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1904	20.37	19.61	39.98	64.02	-24.04	QP
2		0.1904	9.40	19.61	29.01	54.02	-25.01	AVG
3		0.3871	18.89	19.62	38.51	58.13	-19.62	QP
4		0.3871	6.42	19.62	26.04	48.13	-22.09	AVG
5		0.9282	19.25	19.62	38.87	56.00	-17.13	QP
6		0.9282	2.56	19.62	22.18	46.00	-23.82	AVG
7	*	9.6930	31.94	19.79	51.73	60.00	-8.27	QP
8		9.6930	21.52	19.79	41.31	50.00	-8.69	AVG
9		14.5942	26.48	19.78	46.26	60.00	-13.74	QP
10		14.5942	17.37	19.78	37.15	50.00	-12.85	AVG
11		26.0012	15.65	19.74	35.39	60.00	-24.61	QP
12		26.0012	8.60	19.74	28.34	50.00	-21.66	AVG

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



Remark:

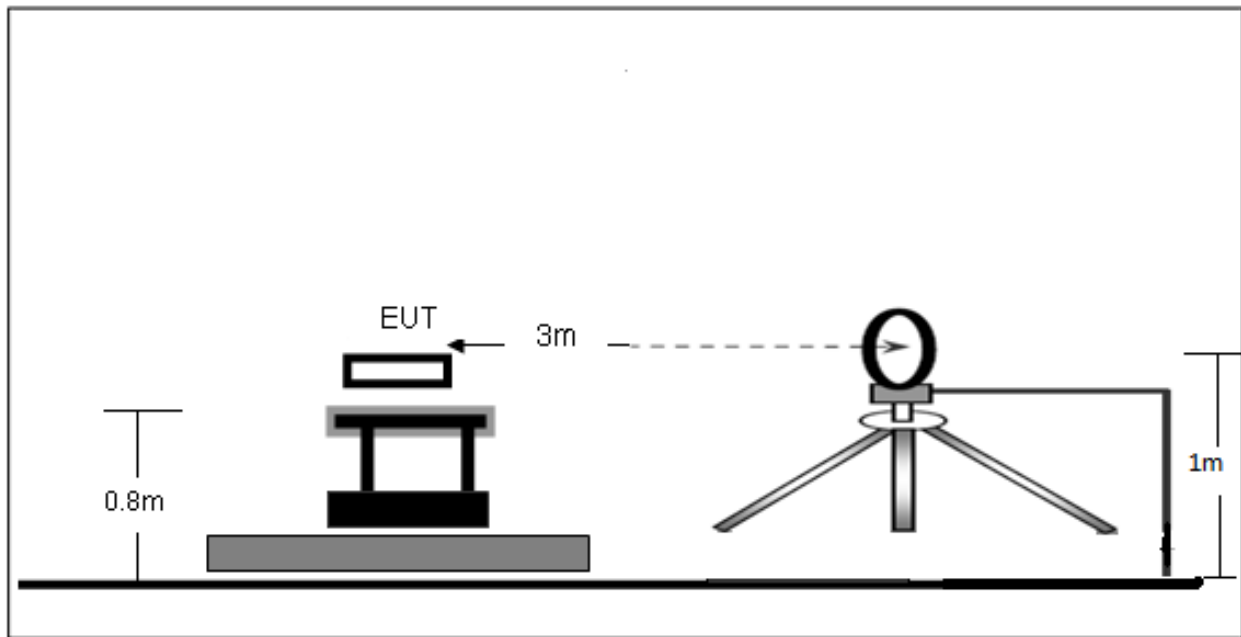
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement=Reading Level+ Correct Factor
4. Over+ Measurement-Limit

No.	Mk.	Freq. MHz	Reading Level	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.2040	23.07	19.61	42.68	63.45	-20.77	QP
2		0.2040	9.75	19.61	29.36	53.45	-24.09	AVG
3		0.2481	22.46	19.61	42.07	61.82	-19.75	QP
4		0.2481	8.56	19.61	28.17	51.82	-23.65	AVG
5		0.8757	19.11	19.62	38.73	56.00	-17.27	QP
6		0.8757	3.11	19.62	22.73	46.00	-23.27	AVG
7		5.9293	25.13	19.72	44.85	60.00	-15.15	QP
8		5.9293	11.71	19.72	31.43	50.00	-18.57	AVG
9	*	9.3518	26.02	19.79	45.81	60.00	-14.19	QP
10		9.3518	14.12	19.79	33.91	50.00	-16.09	AVG
11		21.2595	18.40	19.75	38.15	60.00	-21.85	QP
12		21.2595	13.35	19.75	33.10	50.00	-16.90	AVG

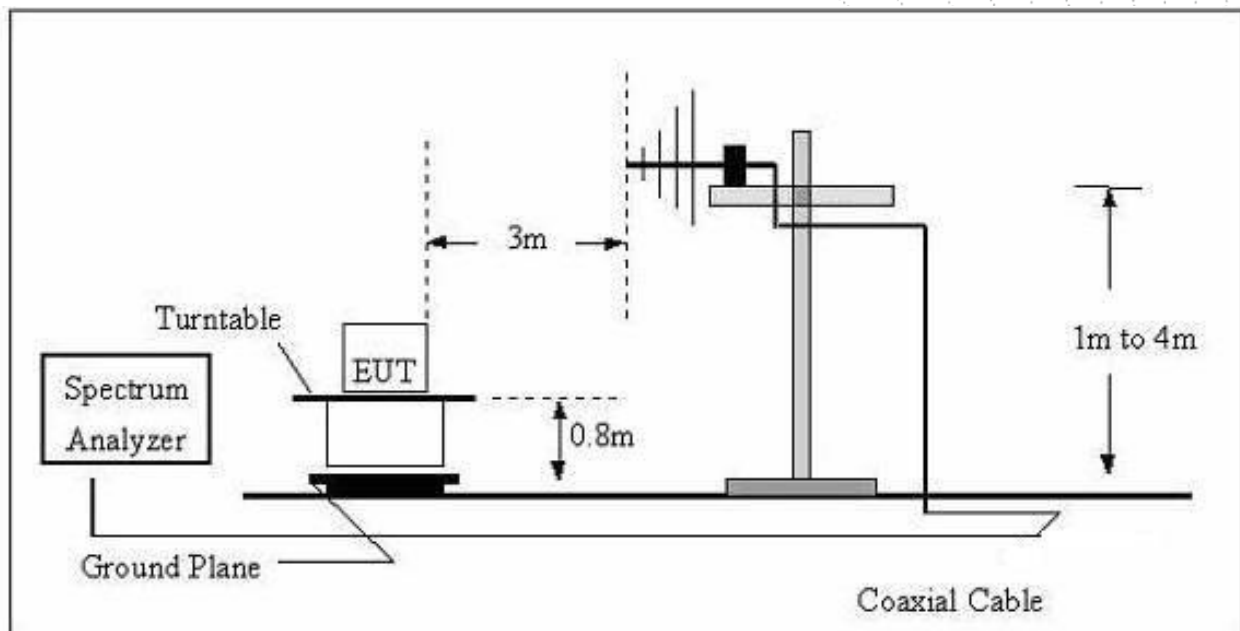
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

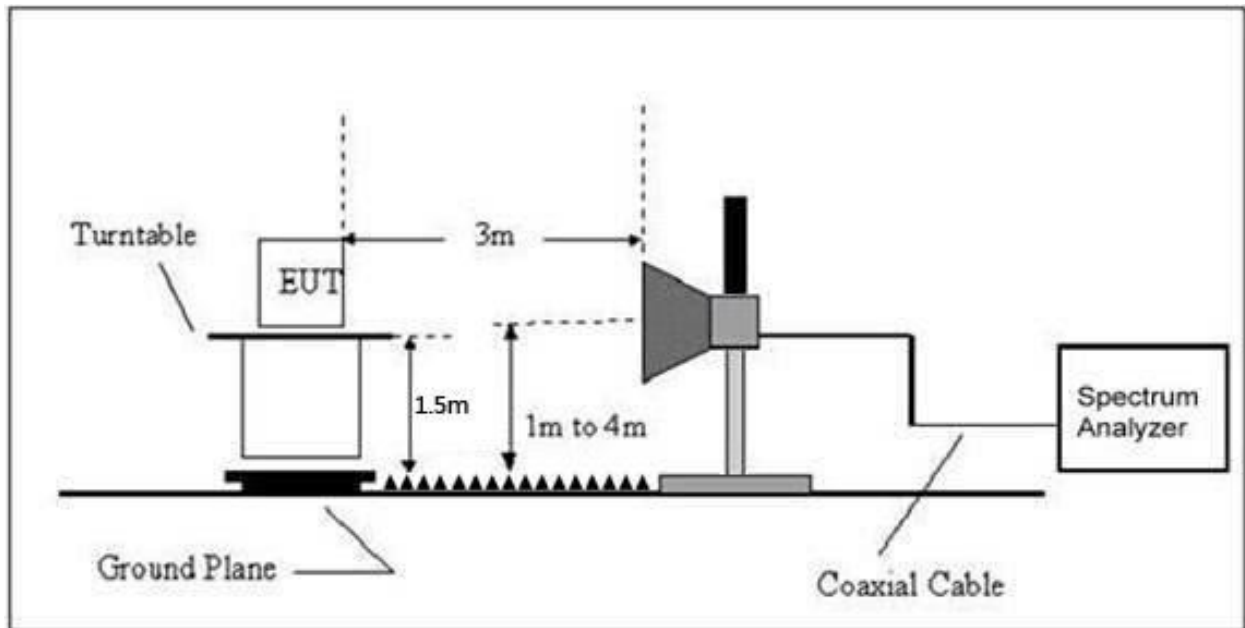
(A) Radiated Emission Test-Up Frequency Below 30MHz



(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 :	DC 7.6V
Test Mode :	Mode 1	Polarization :	--

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

Note:

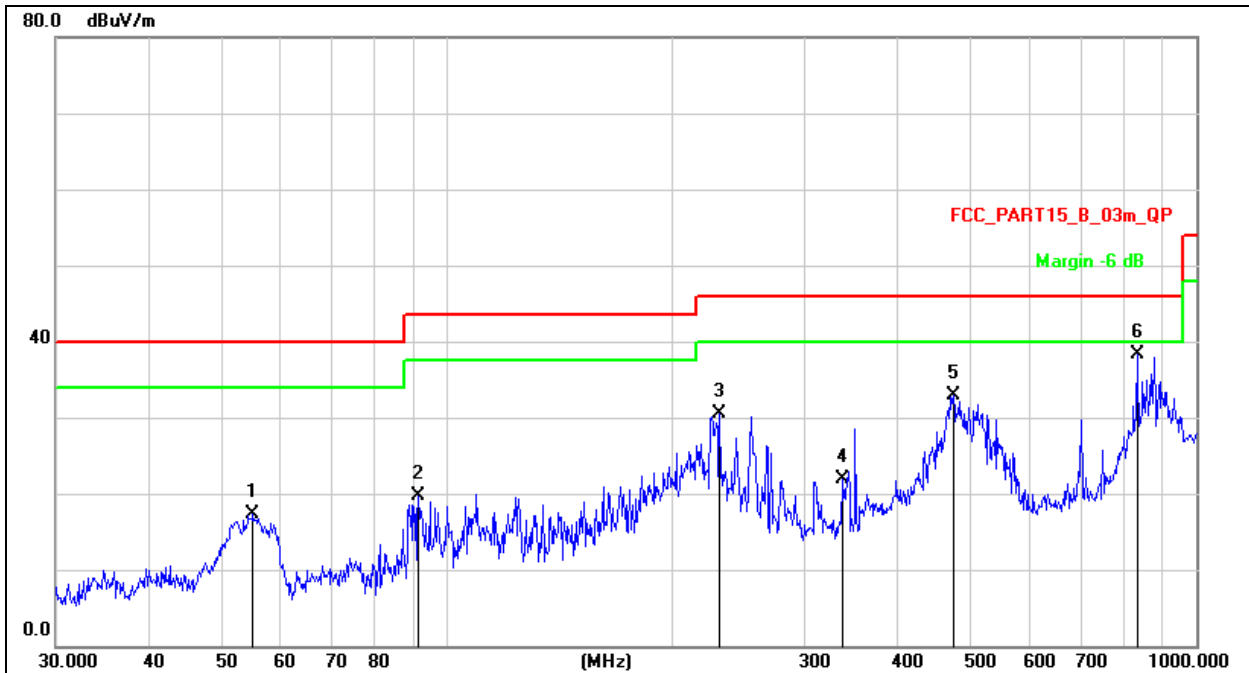
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

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 :	DC 7.6V
Test Mode :	Mode 4	Polarization :	Horizontal

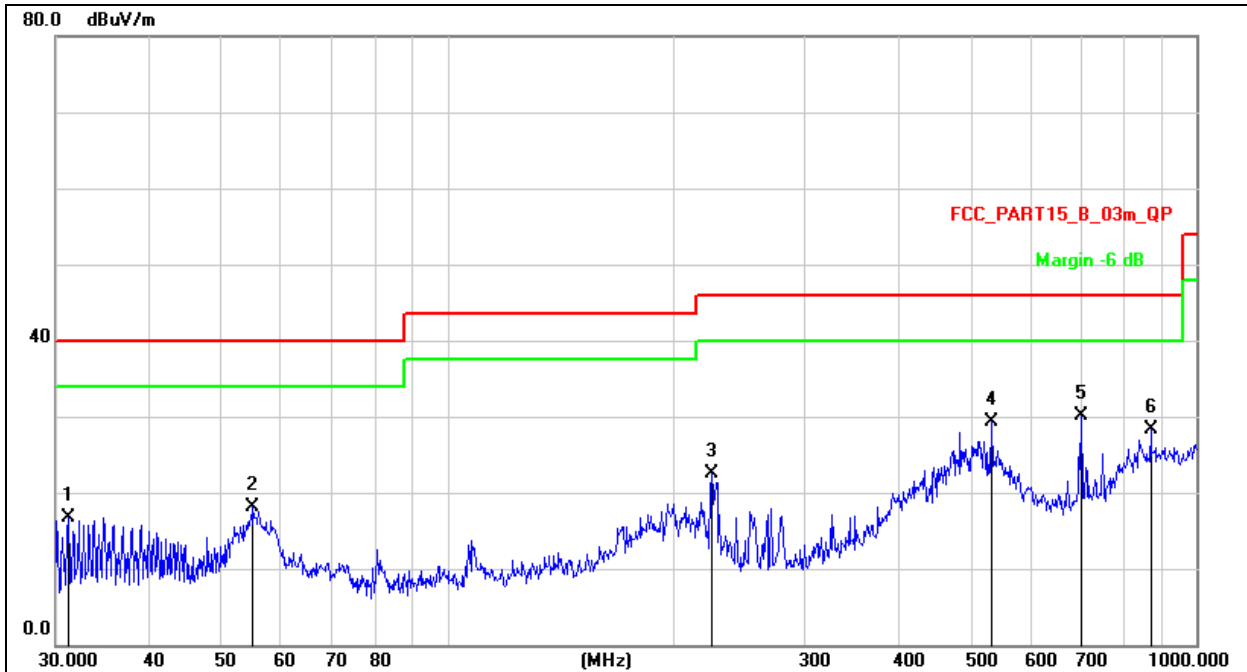


Remark:

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

No. Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Detector
	MHz	dBuV	dB	dBuV/m	dB/m	dB	
1	55.0274	32.76	-15.38	17.38	40.00	-22.62	QP
2	91.4949	37.54	-17.83	19.71	43.50	-23.79	QP
3	230.9068	46.06	-15.59	30.47	46.00	-15.53	QP
4	337.2155	34.53	-12.58	21.95	46.00	-24.05	QP
5	473.8346	42.39	-9.48	32.91	46.00	-13.09	QP
6 *	833.3170	41.11	-2.89	38.22	46.00	-7.78	QP

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kPa	Test Voltage :	DC 7.6V
Test Mode :	Mode 4	Polarization :	Vertical



Remark:

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

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector
1		31.1798	33.79	-17.06	16.73	40.00	-23.27	QP
2		55.0274	33.41	-15.38	18.03	40.00	-21.97	QP
3		225.3078	38.25	-15.72	22.53	46.00	-23.47	QP
4		531.9633	37.49	-8.13	29.36	46.00	-16.64	QP
5	*	701.7607	35.16	-5.11	30.05	46.00	-15.95	QP
6		869.1300	30.48	-2.13	28.35	46.00	-17.65	QP

Between 1GHz – 40GHz

Test Mode :	TX(5.2G) - 802.11a
-------------	--------------------

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	4434.090	60.28	5.94	35.40	44.00	57.62	68.2	-10.58	PK
V	4434.090	43.18	5.94	35.40	44.00	40.52	54	-13.48	AV
V	10360.139	63.69	8.46	39.75	44.50	67.40	68.2	-0.80	PK
V	10360.139	43.79	8.46	39.75	44.50	47.50	54	-6.50	AV
V	15540.086	61.00	10.12	38.80	44.10	65.82	74	-8.18	PK
V	15540.086	43.78	10.12	38.80	42.70	50.00	54	-4.00	AV
H	4434.033	61.57	5.94	35.18	44.00	58.69	68.2	-9.51	PK
H	4434.033	43.61	5.94	35.18	44.00	40.73	54	-13.27	AV
H	10360.199	51.63	8.46	38.71	44.50	54.30	68.2	-13.90	PK
H	10360.199	42.54	8.46	38.71	44.50	45.21	54	-8.79	AV
H	15540.124	51.86	10.12	38.38	44.10	56.26	74	-17.74	PK
H	15540.124	41.28	10.12	38.38	44.10	45.68	54	-8.32	AV
middle Channel (5200 MHz)-Above 1G									
V	4592.112	64.91	6.48	36.35	44.05	63.69	74	-10.31	PK
V	4592.112	43.32	6.48	36.35	44.05	42.10	54	-11.90	AV
V	10400.169	64.71	8.47	37.88	44.51	66.55	68.2	-1.65	PK
V	10400.169	43.87	8.47	37.88	44.51	45.71	54	-8.29	AV
V	15600.025	63.95	10.12	38.80	44.10	68.77	74	-5.23	PK
V	15600.025	43.82	10.12	38.80	42.70	50.04	54	-3.96	AV
H	4592.182	60.80	6.48	36.37	44.05	59.60	74	-14.40	PK
H	4592.182	43.64	6.48	36.37	44.05	42.44	54	-11.56	AV
H	10400.013	51.11	8.47	38.64	44.50	53.72	68.2	-14.48	PK
H	10400.013	43.64	8.47	38.64	44.50	46.25	54	-7.75	AV
H	15600.150	51.95	10.12	38.38	44.10	56.35	74	-17.65	PK
H	15600.150	41.39	10.12	38.38	44.10	45.79	54	-8.21	AV
High Channel (5240 MHz)-Above 1G									
V	4739.125	62.94	7.10	37.24	43.50	63.78	74	-10.22	PK
V	4739.125	43.56	7.10	37.24	43.50	44.40	54	-9.60	AV
V	10480.117	60.08	8.46	37.68	44.50	61.72	68.2	-6.48	PK
V	10480.117	43.88	8.46	37.68	44.50	45.52	54	-8.48	AV
V	15720.087	62.73	10.12	38.80	44.10	67.55	74	-6.45	PK
V	15720.087	43.66	10.12	38.80	42.70	49.88	54	-4.12	AV
H	4739.185	60.81	7.10	37.24	43.50	61.65	74	-12.35	PK
H	4739.185	43.58	7.10	37.24	43.50	44.42	54	-9.58	AV
H	10480.030	50.42	8.46	38.57	44.50	52.95	68.2	-15.25	PK
H	10480.030	40.05	8.46	38.57	44.50	42.58	54	-11.42	AV
H	15720.199	51.92	10.12	38.38	44.10	56.32	74	-17.68	PK
H	15720.199	41.42	10.12	38.38	44.10	45.82	54	-8.18	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
-------------	-------------------------

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	4434.148	64.24	5.94	35.40	44.00	61.58	68.2	-6.62	PK
V	4434.148	43.87	5.94	35.40	44.00	41.21	54	-12.79	AV
V	10360.040	61.48	8.46	39.75	44.50	65.19	68.2	-3.01	PK
V	10360.040	43.60	8.46	39.75	44.50	47.31	54	-6.69	AV
V	15540.002	60.48	10.12	38.80	44.10	65.30	74	-8.70	PK
V	15540.002	43.86	10.12	38.80	42.70	50.08	54	-3.92	AV
H	4434.120	64.24	5.94	35.18	44.00	61.36	68.2	-6.84	PK
H	4434.120	43.04	5.94	35.18	44.00	40.16	54	-13.84	AV
H	10360.046	50.87	8.46	38.71	44.50	53.54	68.2	-14.66	PK
H	10360.046	44.40	8.46	38.71	44.50	47.07	54	-6.93	AV
H	15540.053	52.59	10.12	38.38	44.10	56.99	74	-17.01	PK
H	15540.053	43.53	10.12	38.38	44.10	47.93	54	-6.07	AV
middle Channel (5200 MHz)-Above 1G									
V	4592.086	60.98	6.48	36.35	44.05	59.76	74	-14.24	PK
V	4592.086	43.02	6.48	36.35	44.05	41.80	54	-12.20	AV
V	10400.120	61.36	8.47	37.88	44.51	63.20	68.2	-5.00	PK
V	10400.120	43.86	8.47	37.88	44.51	45.70	54	-8.30	AV
V	15600.062	62.04	10.12	38.80	44.10	66.86	74	-7.14	PK
V	15600.062	43.16	10.12	38.80	42.70	49.38	54	-4.62	AV
H	4592.126	61.88	6.48	36.37	44.05	60.68	74	-13.32	PK
H	4592.126	43.98	6.48	36.37	44.05	42.78	54	-11.22	AV
H	10400.142	51.80	8.47	38.64	44.50	54.41	68.2	-13.79	PK
H	10400.142	42.23	8.47	38.64	44.50	44.84	54	-9.16	AV
H	15600.134	50.59	10.12	38.38	44.10	54.99	74	-19.01	PK
H	15600.134	41.37	10.12	38.38	44.10	45.77	54	-8.23	AV
High Channel (5240 MHz)-Above 1G									
V	4739.081	60.83	7.10	37.24	43.50	61.67	74	-12.33	PK
V	4739.081	43.24	7.10	37.24	43.50	44.08	54	-9.92	AV
V	10480.135	62.28	8.46	37.68	44.50	63.92	68.2	-4.28	PK
V	10480.135	43.03	8.46	37.68	44.50	44.67	54	-9.33	AV
V	15720.101	64.62	10.12	38.80	44.10	69.44	74	-4.56	PK
V	15720.101	43.16	10.12	38.80	42.70	49.38	54	-4.62	AV
H	4739.174	64.89	7.10	37.24	43.50	65.73	74	-8.27	PK
H	4739.174	43.85	7.10	37.24	43.50	44.69	54	-9.31	AV
H	10480.099	51.31	8.46	38.57	44.50	53.84	68.2	-14.36	PK
H	10480.099	40.43	8.46	38.57	44.50	42.96	54	-11.04	AV
H	15720.123	54.17	10.12	38.38	44.10	58.57	74	-15.43	PK
H	15720.123	44.11	10.12	38.38	44.10	48.51	54	-5.49	AV

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

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

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

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

Test Mode is MIMO Mode.

Test Mode :	TX(5.2G) - 802.11n-HT40
-------------	-------------------------

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/ m)	Margin (dB)	Detector Type
Low Channel (5190 MHz)-Above 1G									
V	4434.153	61.10	5.94	35.40	44.00	58.44	68.2	-9.76	PK
V	4434.153	43.73	5.94	35.40	44.00	41.07	54	-12.93	AV
V	10380.185	63.63	8.46	39.75	44.50	67.34	68.2	-0.86	PK
V	10380.185	43.71	8.46	39.75	44.50	47.42	54	-6.58	AV
V	15570.091	62.14	10.12	38.80	44.10	66.96	74	-7.04	PK
V	15570.091	43.53	10.12	38.80	42.70	49.75	54	-4.25	AV
H	4434.169	64.28	5.94	35.18	44.00	61.40	74	-12.60	PK
H	4434.169	43.63	5.94	35.18	44.00	40.75	54	-13.25	AV
H	10380.147	53.42	8.46	38.71	44.50	56.09	68.2	-12.11	PK
H	10380.147	42.10	8.46	38.71	44.50	44.77	54	-9.23	AV
H	15570.179	50.55	10.12	38.38	44.10	54.95	74	-19.05	PK
H	15570.179	42.40	10.12	38.38	44.10	46.80	54	-7.20	AV
middle Channel (5230 MHz)-Above 1G									
V	4739.126	60.59	6.48	36.35	44.05	59.37	68.2	-8.83	PK
V	4739.126	43.40	6.48	36.35	44.05	42.18	54	-11.82	AV
V	10460.194	64.12	8.47	37.88	44.51	65.96	68.2	-2.24	PK
V	10460.194	43.16	8.47	37.88	44.51	45.00	54	-9.00	AV
V	15690.150	60.77	10.12	38.80	44.10	65.59	74	-8.41	PK
V	15690.150	43.28	10.12	38.80	42.70	49.50	54	-4.50	AV
H	4739.075	61.65	6.48	36.37	44.05	60.45	68.2	-7.75	PK
H	4739.075	43.11	6.48	36.37	44.05	41.91	54	-12.09	AV
H	10460.090	50.68	8.47	38.64	44.50	53.29	68.2	-14.91	PK
H	10460.090	42.35	8.47	38.64	44.50	44.96	54	-9.04	AV
H	15690.001	52.53	10.12	38.38	44.10	56.93	74	-17.07	PK
H	15690.001	43.03	10.12	38.38	44.10	47.43	54	-6.57	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
-------------	--------------------------

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	4434.111	64.50	5.94	35.40	44.00	61.84	68.2	-6.36	PK
V	4434.111	43.82	5.94	35.40	44.00	41.16	54	-12.84	AV
V	10360.048	63.15	8.46	39.75	44.50	66.86	68.2	-1.34	PK
V	10360.048	43.80	8.46	39.75	44.50	47.51	54	-6.49	AV
V	15540.178	62.46	10.12	38.80	44.10	67.28	74	-6.72	PK
V	15540.178	43.63	10.12	38.80	42.70	49.85	54	-4.15	AV
H	4434.007	61.53	5.94	35.18	44.00	58.65	68.2	-9.55	PK
H	4434.007	43.35	5.94	35.18	44.00	40.47	54	-13.53	AV
H	10360.025	52.87	8.46	38.71	44.50	55.54	68.2	-12.66	PK
H	10360.025	43.13	8.46	38.71	44.50	45.80	54	-8.20	AV
H	15540.010	53.24	10.12	38.38	44.10	57.64	74	-16.36	PK
H	15540.010	42.15	10.12	38.38	44.10	46.55	54	-7.45	AV
middle Channel (5200 MHz)-Above 1G									
V	4592.143	62.43	6.48	36.35	44.05	61.21	74	-12.79	PK
V	4592.143	43.87	6.48	36.35	44.05	42.65	54	-11.35	AV
V	10400.185	63.69	8.47	37.88	44.51	65.53	68.2	-2.67	PK
V	10400.185	43.76	8.47	37.88	44.51	45.60	54	-8.40	AV
V	15600.060	64.75	10.12	38.80	44.10	69.57	74	-4.43	PK
V	15600.060	43.23	10.12	38.80	42.70	49.45	54	-4.55	AV
H	4592.131	61.75	6.48	36.37	44.05	60.55	74	-13.45	PK
H	4592.131	43.52	6.48	36.37	44.05	42.32	54	-11.68	AV
H	10400.062	51.07	8.47	38.64	44.50	53.68	68.2	-14.52	PK
H	10400.062	40.25	8.47	38.64	44.50	42.86	54	-11.14	AV
H	15600.069	53.81	10.12	38.38	44.10	58.21	74	-15.79	PK
H	15600.069	41.69	10.12	38.38	44.10	46.09	54	-7.91	AV
High Channel (5240 MHz)-Above 1G									
V	4739.061	60.80	7.10	37.24	43.50	61.64	74	-12.36	PK
V	4739.061	43.59	7.10	37.24	43.50	44.43	54	-9.57	AV
V	10480.036	61.81	8.46	37.68	44.50	63.45	68.2	-4.75	PK
V	10480.036	43.18	8.46	37.68	44.50	44.82	54	-9.18	AV
V	15720.125	60.13	10.12	38.80	44.10	64.95	74	-9.05	PK
V	15720.125	43.60	10.12	38.80	42.70	49.82	54	-4.18	AV
H	4739.095	62.51	7.10	37.24	43.50	63.35	74	-10.65	PK
H	4739.095	43.12	7.10	37.24	43.50	43.96	54	-10.04	AV
H	10480.192	54.12	8.46	38.57	44.50	56.65	68.2	-11.55	PK
H	10480.192	41.47	8.46	38.57	44.50	44.00	54	-10.00	AV
H	15720.138	52.71	10.12	38.38	44.10	57.11	74	-16.89	PK
H	15720.138	43.71	10.12	38.38	44.10	48.11	54	-5.89	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
-------------	--------------------------

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	4434.136	63.48	5.94	35.40	44.00	60.82	68.2	-7.38	PK
V	4434.136	43.57	5.94	35.40	44.00	40.91	54	-13.09	AV
V	10380.111	63.02	8.46	39.75	44.50	66.73	68.2	-1.47	PK
V	10380.111	43.39	8.46	39.75	44.50	47.10	54	-6.90	AV
V	15570.132	64.13	10.12	38.80	44.10	68.95	74	-5.05	PK
V	15570.132	43.46	10.12	38.80	42.70	49.68	54	-4.32	AV
H	4434.085	61.72	5.94	35.18	44.00	58.84	74	-15.16	PK
H	4434.085	43.42	5.94	35.18	44.00	40.54	54	-13.46	AV
H	10380.196	51.21	8.46	38.71	44.50	53.88	68.2	-14.32	PK
H	10380.196	41.39	8.46	38.71	44.50	44.06	54	-9.94	AV
H	15570.094	52.21	10.12	38.38	44.10	56.61	74	-17.39	PK
H	15570.094	40.91	10.12	38.38	44.10	45.31	54	-8.69	AV
middle Channel (5230 MHz)-Above 1G									
V	4739.002	60.68	6.48	36.35	44.05	59.46	68.2	-8.74	PK
V	4739.002	43.70	6.48	36.35	44.05	42.48	54	-11.52	AV
V	10460.016	61.11	8.47	37.88	44.51	62.95	68.2	-5.25	PK
V	10460.016	43.24	8.47	37.88	44.51	45.08	54	-8.92	AV
V	15690.063	61.25	10.12	38.80	44.10	66.07	74	-7.93	PK
V	15690.063	43.54	10.12	38.80	42.70	49.76	54	-4.24	AV
H	4739.122	64.88	6.48	36.37	44.05	63.68	68.2	-4.52	PK
H	4739.122	43.55	6.48	36.37	44.05	42.35	54	-11.65	AV
H	10460.049	50.43	8.47	38.64	44.50	53.04	68.2	-15.16	PK
H	10460.049	41.55	8.47	38.64	44.50	44.16	54	-9.84	AV
H	15690.112	53.93	10.12	38.38	44.10	58.33	74	-15.67	PK
H	15690.112	40.18	10.12	38.38	44.10	44.58	54	-9.42	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
-------------	------------------------

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	4434.130	63.85	5.94	35.40	44.00	61.19	68.2	-7.01	PK
V	4434.130	43.37	5.94	35.40	44.00	40.71	54	-13.29	AV
V	10420.042	63.02	8.46	39.75	44.50	66.73	68.2	-1.47	PK
V	10420.042	43.15	8.46	39.75	44.50	46.86	54	-7.14	AV
V	15630.106	61.04	10.12	38.80	44.10	65.86	74	-8.14	PK
V	15630.106	43.84	10.12	38.80	42.70	50.06	54	-3.94	AV
H	4434.007	60.49	5.94	35.18	44.00	57.61	68.2	-10.59	PK
H	4434.007	43.09	5.94	35.18	44.00	40.21	54	-13.79	AV
H	10420.105	50.27	8.46	38.71	44.50	52.94	68.2	-15.26	PK
H	10420.105	41.41	8.46	38.71	44.50	44.08	54	-9.92	AV
H	15630.041	50.89	10.12	38.38	44.10	55.29	74	-18.71	PK
H	15630.041	40.79	10.12	38.38	44.10	45.19	54	-8.81	AV

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

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

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

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

Test Mode is MIMO Mode.

Test Mode :	TX (5.8G) -- 802.11a
-------------	----------------------

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	4679.011	59.33	5.94	35.40	44.00	56.67	74	-17.33	PK
V	4679.011	43.59	5.94	35.40	44.00	40.93	54	-13.07	AV
V	11490.104	57.15	8.46	39.75	44.50	60.86	68.2	-7.34	PK
V	11490.104	43.39	8.46	39.75	44.50	47.10	54	-6.90	AV
V	17235.115	58.17	10.12	38.80	44.10	62.99	68.2	-5.21	PK
V	17235.115	43.75	10.12	38.80	42.70	49.97	54	-4.03	AV
H	4679.043	56.54	5.94	35.18	44.00	53.66	74	-20.34	PK
H	4679.043	43.13	5.94	35.18	44.00	40.25	54	-13.75	AV
H	11490.079	53.07	8.46	38.71	44.50	55.74	68.2	-12.46	PK
H	11490.079	44.14	8.46	38.71	44.50	46.81	54	-7.19	AV
H	17235.150	50.20	10.12	38.38	44.10	54.60	68.2	-13.60	PK
H	17235.150	44.63	10.12	38.38	44.10	49.03	54	-4.97	AV
middle Channel (5785 MHz)-Above 1G									
V	4592.132	55.61	6.48	36.35	44.05	54.39	74	-19.61	PK
V	4592.132	43.23	6.48	36.35	44.05	42.01	54	-11.99	AV
V	11570.018	58.73	8.47	37.88	44.51	60.57	68.2	-7.63	PK
V	11570.018	43.21	8.47	37.88	44.51	45.05	54	-8.95	AV
V	17355.089	60.26	10.12	38.80	44.10	65.08	68.2	-3.12	PK
V	17355.089	39.98	10.12	38.80	42.70	46.20	54	-7.80	AV
H	4592.021	55.68	6.48	36.37	44.05	54.48	74	-19.52	PK
H	4592.021	43.12	6.48	36.37	44.05	41.92	54	-12.08	AV
H	11570.127	53.50	8.47	38.64	44.50	56.11	68.2	-12.09	PK
H	11570.127	42.23	8.47	38.64	44.50	44.84	54	-9.16	AV
H	17355.186	51.57	10.12	38.38	44.10	55.97	68.2	-12.23	PK
H	17355.186	40.61	10.12	38.38	44.10	45.01	54	-8.99	AV
High Channel (5825 MHz)-Above 1G									
V	6039.189	59.88	7.10	37.24	43.50	60.72	68.2	-7.48	PK
V	6039.189	43.75	7.10	37.24	43.50	44.59	54	-9.41	AV
V	11650.101	62.93	8.46	37.68	44.50	64.57	74	-9.43	PK
V	11650.101	43.13	8.46	37.68	44.50	44.77	54	-9.23	AV
V	17475.047	56.06	10.12	38.80	44.10	60.88	68.2	-7.32	PK
V	17475.047	43.15	10.12	38.80	42.70	49.37	54	-4.63	AV
H	6039.061	58.37	7.10	37.24	43.50	59.21	68.2	-8.99	PK
H	6039.061	43.31	7.10	37.24	43.50	44.15	54	-9.85	AV
H	11650.128	50.57	8.46	38.57	44.50	53.10	74	-20.90	PK
H	11650.128	40.39	8.46	38.57	44.50	42.92	54	-11.08	AV
H	17475.069	53.19	10.12	38.38	44.10	57.59	68.2	-10.61	PK
H	17475.069	43.27	10.12	38.38	44.10	47.67	54	-6.33	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.

The Worst mode is Antenna A.

Test Mode :	TX (5.8G) --802.11n-HT20
-------------	--------------------------

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	4679.016	59.47	5.94	35.40	44.00	56.81	74	-17.19	PK
V	4679.016	43.37	5.94	35.40	44.00	40.71	54	-13.29	AV
V	11490.118	55.47	8.46	39.75	44.50	59.18	68.2	-9.02	PK
V	11490.118	43.51	8.46	39.75	44.50	47.22	54	-6.78	AV
V	17235.020	61.09	10.12	38.80	44.10	65.91	68.2	-2.29	PK
V	17235.020	43.21	10.12	38.80	42.70	49.43	54	-4.57	AV
H	4679.200	59.27	5.94	35.18	44.00	56.39	74	-17.61	PK
H	4679.200	43.60	5.94	35.18	44.00	40.72	54	-13.28	AV
H	11490.080	50.92	8.46	38.71	44.50	53.59	68.2	-14.61	PK
H	11490.080	41.62	8.46	38.71	44.50	44.29	54	-9.71	AV
H	17235.011	53.12	10.12	38.38	44.10	57.52	68.2	-10.68	PK
H	17235.011	44.66	10.12	38.38	44.10	49.06	54	-4.94	AV
middle Channel (5785 MHz)-Above 1G									
V	4592.026	62.66	6.48	36.35	44.05	61.44	74	-12.56	PK
V	4592.026	43.29	6.48	36.35	44.05	42.07	54	-11.93	AV
V	11570.149	54.28	8.47	37.88	44.51	56.12	68.2	-12.08	PK
V	11570.149	43.72	8.47	37.88	44.51	45.56	54	-8.44	AV
V	17355.105	57.79	10.12	38.80	44.10	62.61	68.2	-5.59	PK
V	17355.105	43.99	10.12	38.80	42.70	50.21	54	-3.79	AV
H	4592.119	58.83	6.48	36.37	44.05	57.63	74	-16.37	PK
H	4592.119	43.59	6.48	36.37	44.05	42.39	54	-11.61	AV
H	11570.063	53.13	8.47	38.64	44.50	55.74	68.2	-12.46	PK
H	11570.063	42.00	8.47	38.64	44.50	44.61	54	-9.39	AV
H	17355.097	53.53	10.12	38.38	44.10	57.93	68.2	-10.27	PK
H	17355.097	43.42	10.12	38.38	44.10	47.82	54	-6.18	AV
High Channel (5825 MHz)-Above 1G									
V	6039.159	58.97	7.10	37.24	43.50	59.81	68.2	-8.39	PK
V	6039.159	43.42	7.10	37.24	43.50	44.26	54	-9.74	AV
V	11650.048	57.03	8.46	37.68	44.50	58.67	74	-15.33	PK
V	11650.048	43.26	8.46	37.68	44.50	44.90	54	-9.10	AV
V	17475.088	58.84	10.12	38.80	44.10	63.66	68.2	-4.54	PK
V	17475.088	43.56	10.12	38.80	42.70	49.78	54	-4.22	AV
H	6039.050	57.96	7.10	37.24	43.50	58.80	68.2	-9.40	PK
H	6039.050	43.06	7.10	37.24	43.50	43.90	54	-10.10	AV
H	11650.003	50.68	8.46	38.57	44.50	53.21	74	-20.79	PK
H	11650.003	41.57	8.46	38.57	44.50	44.10	54	-9.90	AV
H	17475.070	54.54	10.12	38.38	44.10	58.94	68.2	-9.26	PK
H	17475.070	44.90	10.12	38.38	44.10	49.30	54	-4.70	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.

Test Mode is MIMO Mode.

Test Mode :	TX (5.8G) -- 802.11n-HT40
-------------	---------------------------

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	4679.032	57.44	5.94	35.40	44.00	54.78	74	-19.22	PK
V	4679.032	43.58	5.94	35.40	44.00	40.92	54	-13.08	AV
V	11510.115	55.17	8.46	39.75	44.50	58.88	74	-15.12	PK
V	11510.115	43.61	8.46	39.75	44.50	47.32	54	-6.68	AV
V	17265.029	58.61	10.12	38.80	44.10	63.43	68.2	-4.77	PK
V	17265.029	2.00	10.12	38.80	42.70	8.22	54	-45.78	AV
H	4679.154	58.80	5.94	35.18	44.00	55.92	74	-18.08	PK
H	4679.154	43.36	5.94	35.18	44.00	40.48	54	-13.52	AV
H	11510.070	52.73	8.46	38.71	44.50	55.40	74	-18.60	PK
H	11510.070	43.39	8.46	38.71	44.50	46.06	54	-7.94	AV
H	17265.189	52.38	10.12	38.38	44.10	56.78	68.2	-11.42	PK
H	17265.189	44.80	10.12	38.38	44.10	49.20	54	-4.80	AV
middle Channel (5795 MHz)-Above 1G									
V	6039.067	57.08	6.48	36.35	44.05	55.86	68.2	-12.34	PK
V	6039.067	43.07	6.48	36.35	44.05	41.85	54	-12.15	AV
V	11590.068	59.33	8.47	37.88	44.51	61.17	74	-12.83	PK
V	11590.068	43.37	8.47	37.88	44.51	45.21	54	-8.79	AV
V	17385.083	55.06	10.12	38.80	44.10	59.88	68.2	-8.32	PK
V	17385.083	41.26	10.12	38.80	42.70	47.48	54	-6.52	AV
H	6039.099	57.42	6.48	36.37	44.05	56.22	68.2	-11.98	PK
H	6039.099	43.01	6.48	36.37	44.05	41.81	54	-12.19	AV
H	11590.092	54.11	8.47	38.64	44.50	56.72	74	-17.28	PK
H	11590.092	40.20	8.47	38.64	44.50	42.81	54	-11.19	AV
H	17385.003	50.38	10.12	38.38	44.10	54.78	68.2	-13.42	PK
H	17385.003	41.90	10.12	38.38	44.10	46.30	54	-7.70	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 mode is Antenna A.

Test Mode :	TX (5.8G) --802.11ac-HT20
-------------	---------------------------

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	4679.071	59.04	5.94	35.40	44.00	56.38	74	-17.62	PK
V	4679.071	43.94	5.94	35.40	44.00	41.28	54	-12.72	AV
V	11490.061	54.99	8.46	39.75	44.50	58.70	68.2	-9.50	PK
V	11490.061	43.91	8.46	39.75	44.50	47.62	54	-6.38	AV
V	17235.126	56.50	10.12	38.80	44.10	61.32	68.2	-6.88	PK
V	17235.126	43.18	10.12	38.80	42.70	49.40	54	-4.60	AV
H	4679.028	54.21	5.94	35.18	44.00	51.33	74	-22.67	PK
H	4679.028	43.10	5.94	35.18	44.00	40.22	54	-13.78	AV
H	11490.037	52.25	8.46	38.71	44.50	54.92	68.2	-13.28	PK
H	11490.037	41.89	8.46	38.71	44.50	44.56	54	-9.44	AV
H	17235.118	52.21	10.12	38.38	44.10	56.61	68.2	-11.59	PK
H	17235.118	44.03	10.12	38.38	44.10	48.43	54	-5.57	AV
middle Channel (5785 MHz)-Above 1G									
V	4592.176	57.98	6.48	36.35	44.05	56.76	74	-17.24	PK
V	4592.176	43.95	6.48	36.35	44.05	42.73	54	-11.27	AV
V	11570.177	55.09	8.47	37.88	44.51	56.93	68.2	-11.27	PK
V	11570.177	43.06	8.47	37.88	44.51	44.90	54	-9.10	AV
V	17355.122	57.03	10.12	38.80	44.10	61.85	68.2	-6.35	PK
V	17355.122	39.35	10.12	38.80	42.70	45.57	54	-8.43	AV
H	4592.065	57.41	6.48	36.37	44.05	56.21	74	-17.79	PK
H	4592.065	43.87	6.48	36.37	44.05	42.67	54	-11.33	AV
H	11570.108	51.69	8.47	38.64	44.50	54.30	68.2	-13.90	PK
H	11570.108	40.96	8.47	38.64	44.50	43.57	54	-10.43	AV
H	17355.173	54.07	10.12	38.38	44.10	58.47	68.2	-9.73	PK
H	17355.173	42.57	10.12	38.38	44.10	46.97	54	-7.03	AV
High Channel (5825 MHz)-Above 1G									
V	6039.138	57.35	7.10	37.24	43.50	58.19	68.2	-10.01	PK
V	6039.138	43.21	7.10	37.24	43.50	44.05	54	-9.95	AV
V	11650.147	61.52	8.46	37.68	44.50	63.16	74	-10.84	PK
V	11650.147	43.44	8.46	37.68	44.50	45.08	54	-8.92	AV
V	17475.028	55.44	10.12	38.80	44.10	60.26	68.2	-7.94	PK
V	17475.028	43.31	10.12	38.80	42.70	49.53	54	-4.47	AV
H	6039.062	58.20	7.10	37.24	43.50	59.04	68.2	-9.16	PK
H	6039.062	43.90	7.10	37.24	43.50	44.74	54	-9.26	AV
H	11650.153	50.88	8.46	38.57	44.50	53.41	74	-20.59	PK
H	11650.153	44.34	8.46	38.57	44.50	46.87	54	-7.13	AV
H	17475.082	53.65	10.12	38.38	44.10	58.05	68.2	-10.15	PK
H	17475.082	44.67	10.12	38.38	44.10	49.07	54	-4.93	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
-------------	----------------------------

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	4679.048	56.04	5.94	35.40	44.00	53.38	74	-20.62	PK
V	4679.048	43.98	5.94	35.40	44.00	41.32	54	-12.68	AV
V	11510.122	56.47	8.46	39.75	44.50	60.18	74	-13.82	PK
V	11510.122	43.80	8.46	39.75	44.50	47.51	54	-6.49	AV
V	17265.057	58.27	10.12	38.80	44.10	63.09	68.2	-5.11	PK
V	17265.057	2.00	10.12	38.80	42.70	8.22	54	-45.78	AV
H	4679.101	57.49	5.94	35.18	44.00	54.61	74	-19.39	PK
H	4679.101	43.27	5.94	35.18	44.00	40.39	54	-13.61	AV
H	11510.120	53.31	8.46	38.71	44.50	55.98	74	-18.02	PK
H	11510.120	44.69	8.46	38.71	44.50	47.36	54	-6.64	AV
H	17265.171	50.01	10.12	38.38	44.10	54.41	68.2	-13.79	PK
H	17265.171	43.11	10.12	38.38	44.10	47.51	54	-6.49	AV
middle Channel (5795 MHz)-Above 1G									
V	6039.081	58.75	6.48	36.35	44.05	57.53	68.2	-10.67	PK
V	6039.081	43.69	6.48	36.35	44.05	42.47	54	-11.53	AV
V	11590.023	59.38	8.47	37.88	44.51	61.22	74	-12.78	PK
V	11590.023	43.16	8.47	37.88	44.51	45.00	54	-9.00	AV
V	17385.199	55.79	10.12	38.80	44.10	60.61	68.2	-7.59	PK
V	17385.199	41.17	10.12	38.80	42.70	47.39	54	-6.61	AV
H	6039.091	56.95	6.48	36.37	44.05	55.75	68.2	-12.45	PK
H	6039.091	43.88	6.48	36.37	44.05	42.68	54	-11.32	AV
H	11590.078	51.47	8.47	38.64	44.50	54.08	74	-19.92	PK
H	11590.078	42.95	8.47	38.64	44.50	45.56	54	-8.44	AV
H	17385.006	50.37	10.12	38.38	44.10	54.77	68.2	-13.43	PK
H	17385.006	42.14	10.12	38.38	44.10	46.54	54	-7.46	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.

The Worst mode is Antenna A.

Test Mode :	TX (5.8G) -- 802.11ac 80
-------------	--------------------------

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	4679.004	59.23	5.94	35.40	44.00	56.57	74	-17.43	PK
V	4679.004	43.56	5.94	35.40	44.00	40.90	54	-13.10	AV
V	11550.155	56.01	8.46	39.75	44.50	59.72	74	-14.28	PK
V	11550.155	42.01	8.46	39.75	44.50	45.72	54	-8.28	AV
V	17325.129	56.27	10.12	38.80	44.10	61.09	68.2	-7.11	PK
V	17325.129	41.36	10.12	38.80	42.70	47.58	54	-6.42	AV
H	4679.078	56.59	5.94	35.18	44.00	53.71	74	-20.29	PK
H	4679.078	43.12	5.94	35.18	44.00	40.24	54	-13.76	AV
H	11550.098	54.76	8.46	38.71	44.50	57.43	74	-16.57	PK
H	11550.098	44.17	8.46	38.71	44.50	46.84	54	-7.16	AV
H	17325.130	52.77	10.12	38.38	44.10	57.17	68.2	-11.03	PK
H	17325.130	40.48	10.12	38.38	44.10	44.88	54	-9.12	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

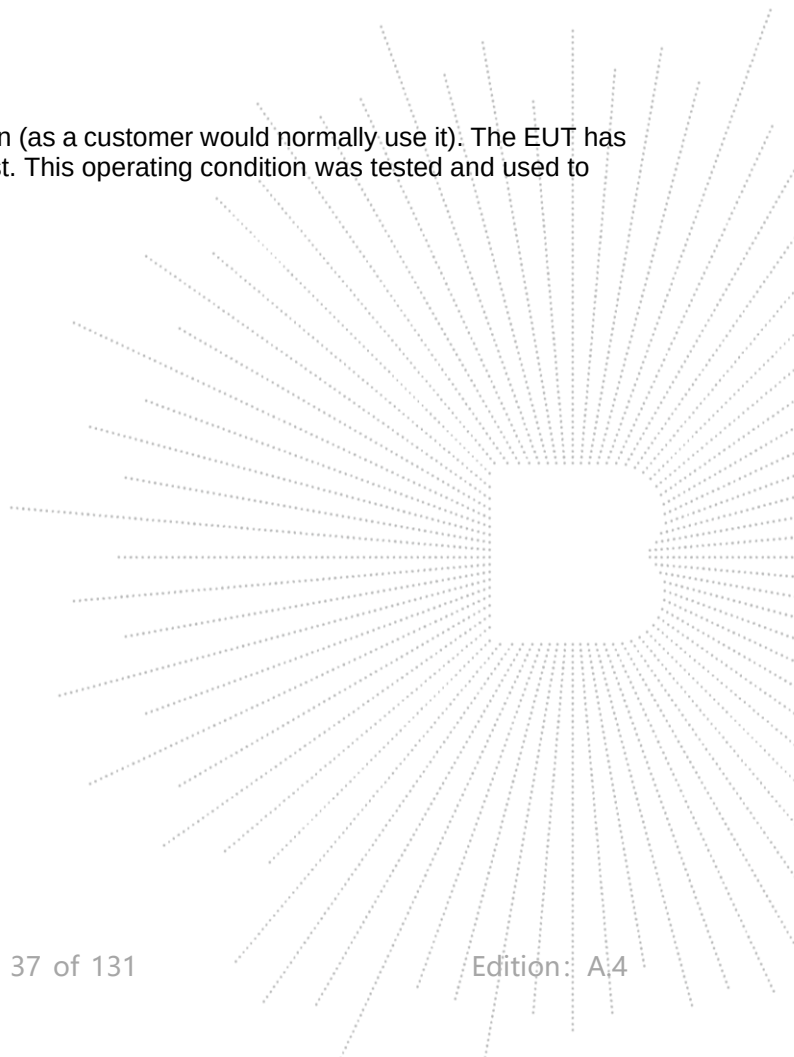
For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of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



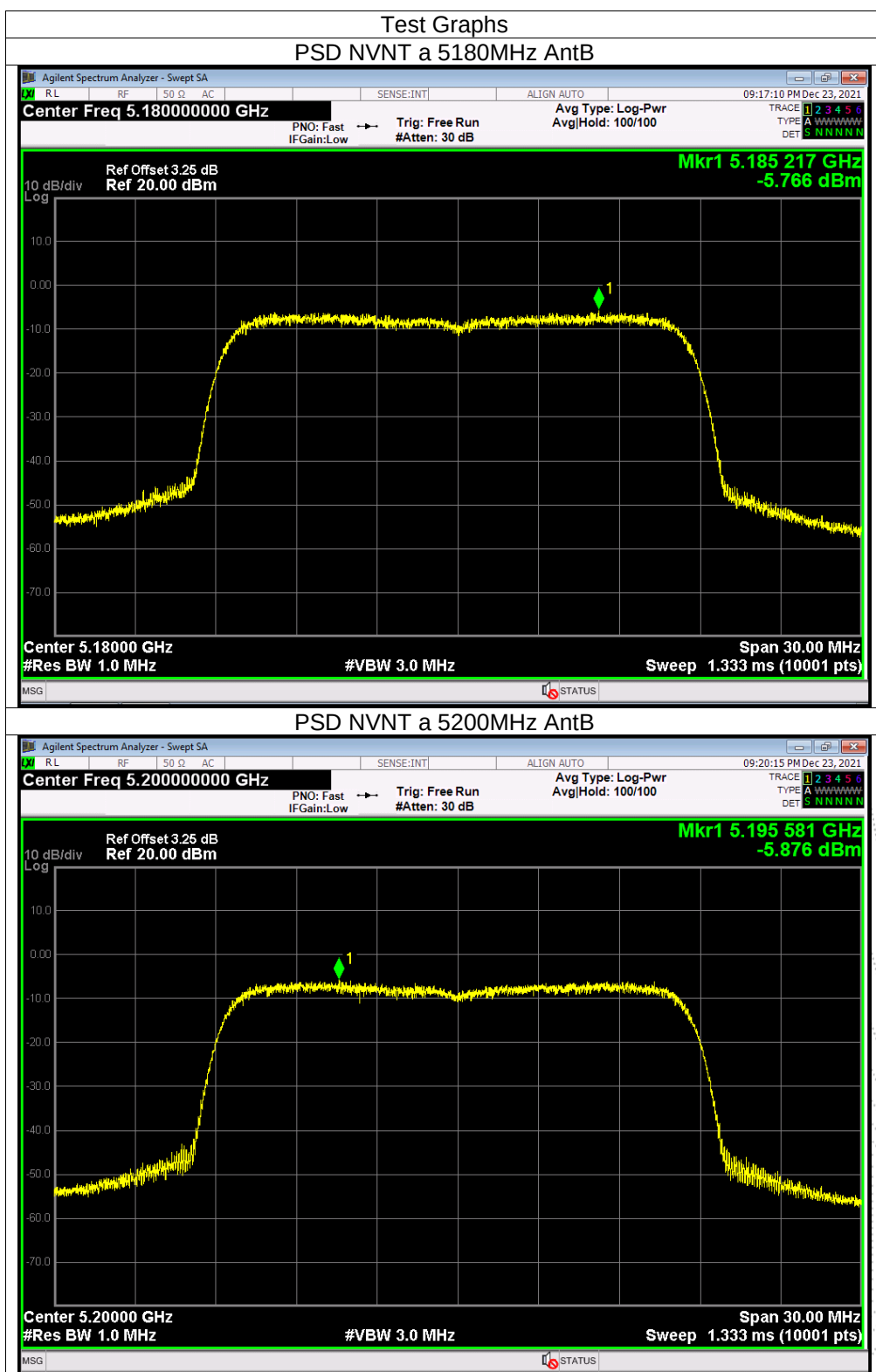
8.5 Test Result

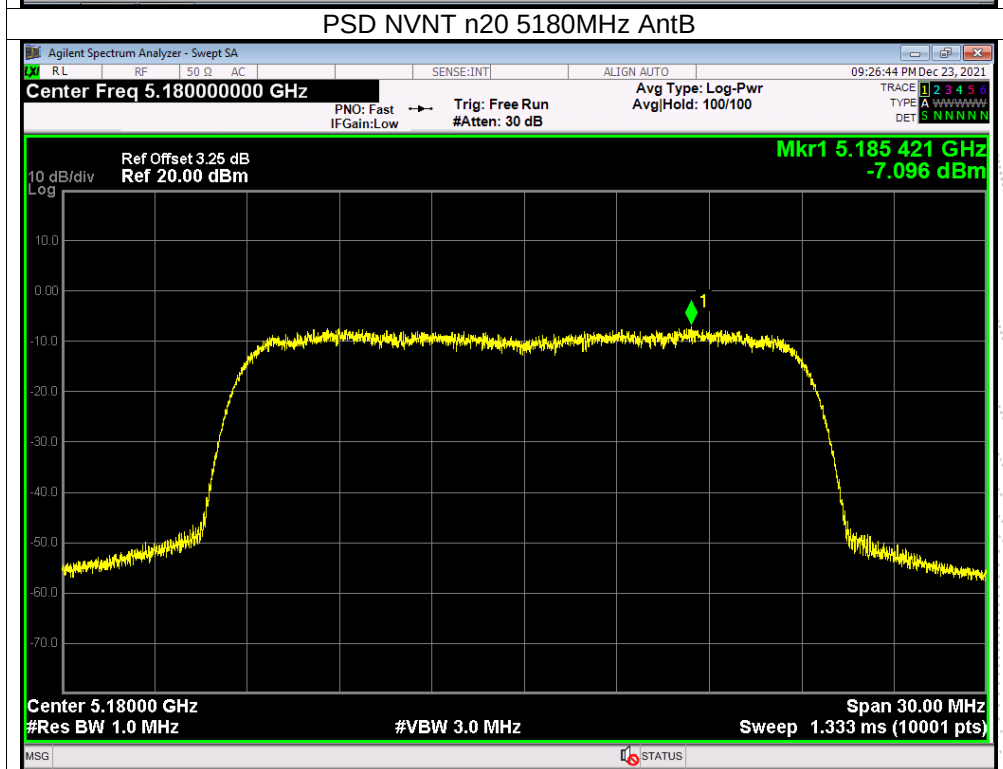
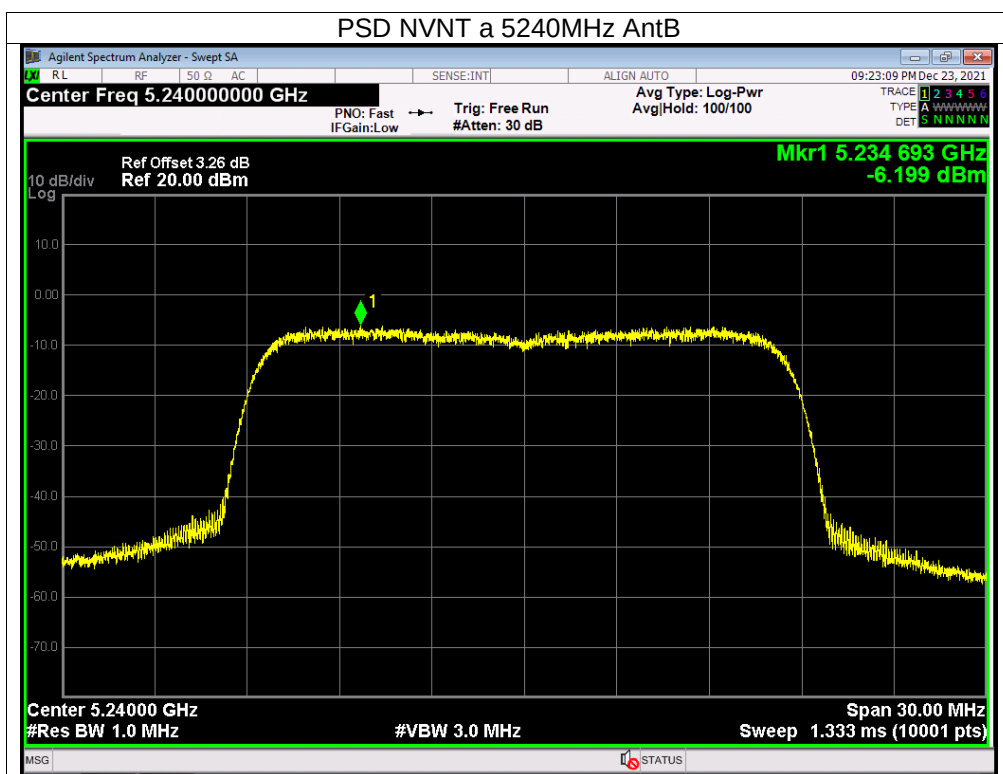
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 7.6V
Test Mode :	TX Frequency U-NII-1 (5180-5240MHz)		

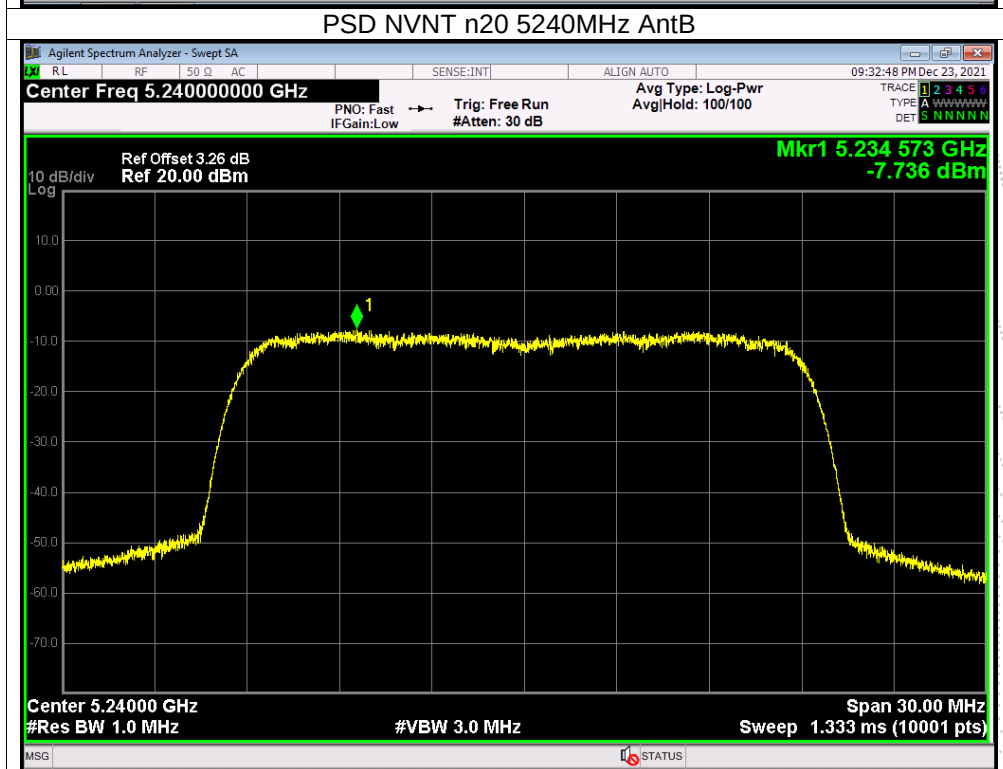
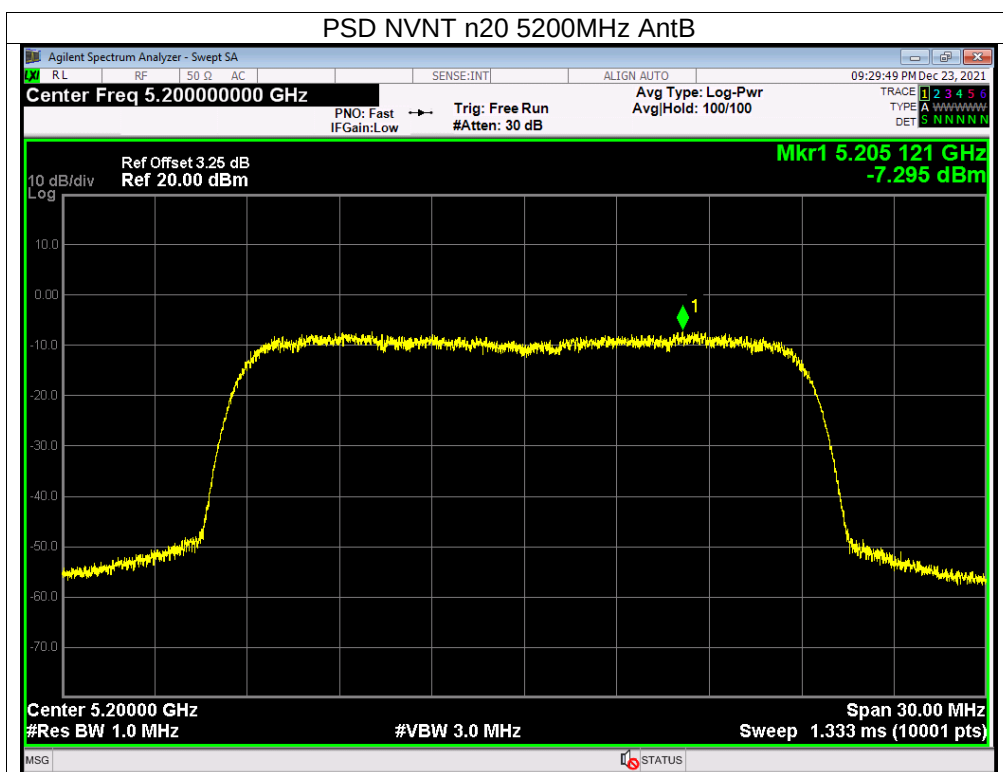
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

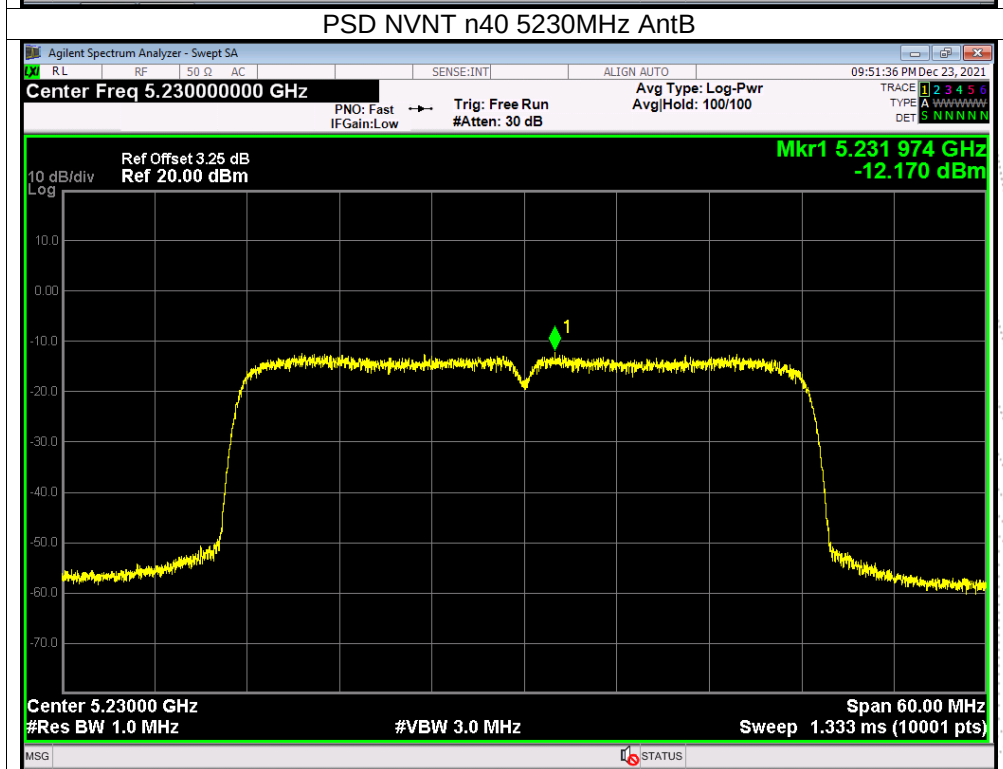
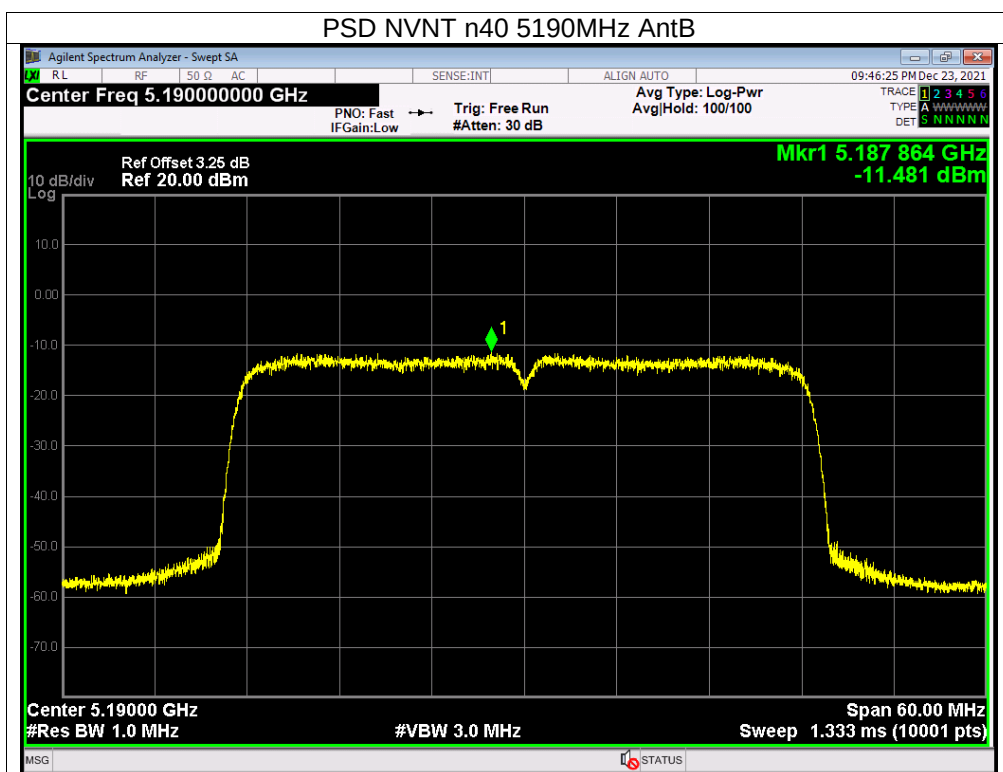
Note: Antenna A gain: 2.66dBi, Antenna B gain:2.66dBi, Directional gain=[10log(GA+ G B)] dbi =5.67dbi

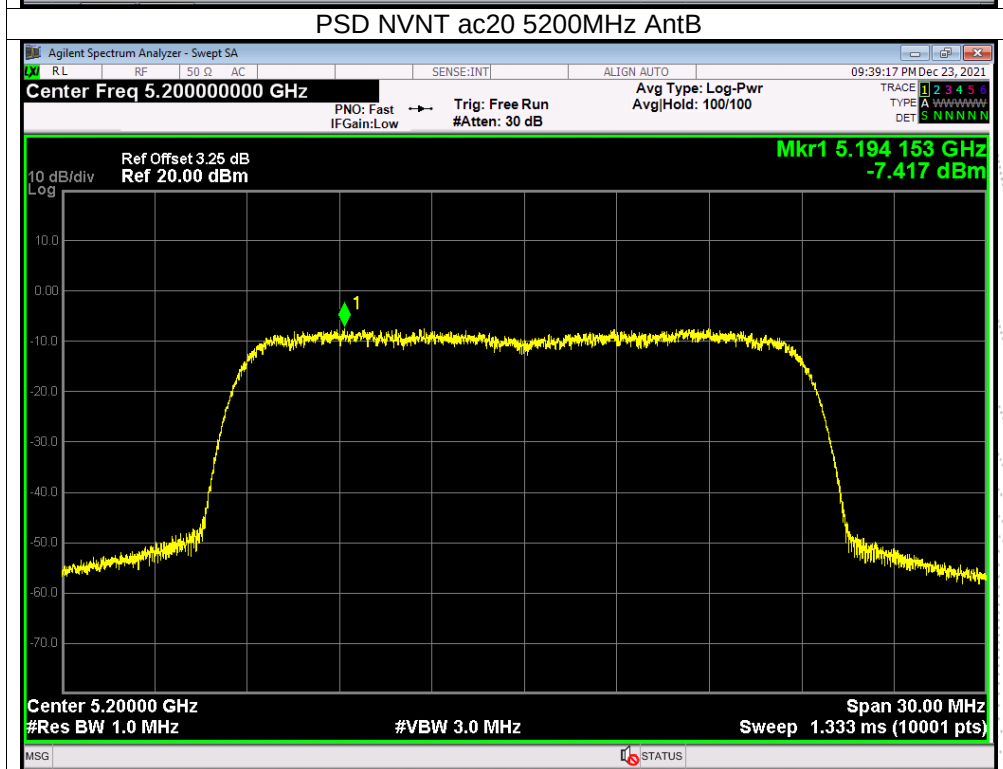
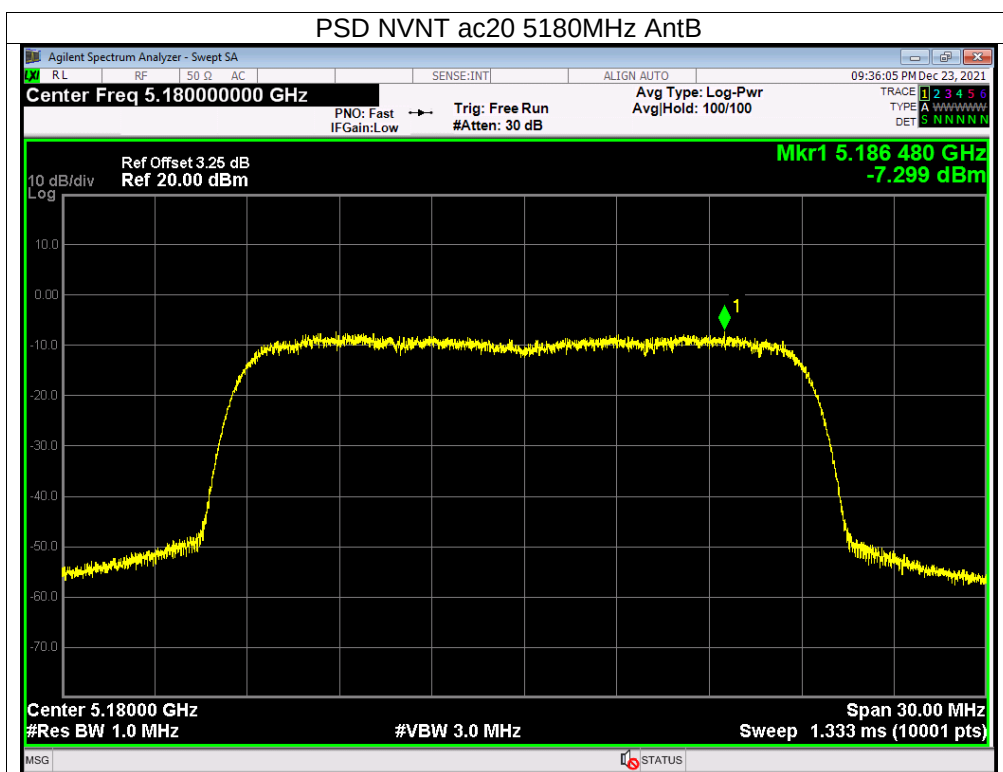
Mode	Frequency	Measured Power Density (dBm/MHz)			Limit (dBm/MHz)	Result
		ANT A	ANT B	Total		
802.11 a	5180 MHz	-5.85	-5.77	/	11	PASS
	5200 MHz	-6.41	-5.88	/	11	PASS
	5240 MHz	-6.86	-6.2	/	11	PASS
802.11 n20	5180 MHz	-7.22	-7.1	-4.15	11	PASS
	5200 MHz	-7.17	-7.3	-4.22	11	PASS
	5240 MHz	-7.01	-7.74	-4.35	11	PASS
802.11 n40	5190 MHz	-11.68	-11.48	-8.57	11	PASS
	5230 MHz	-12.06	-12.17	-9.10	11	PASS
802.11 ac20	5180 MHz	-7.56	-7.3	-4.42	11	PASS
	5200 MHz	-6.85	-7.42	-4.12	11	PASS
	5240 MHz	-7.61	-7.58	-4.58	11	PASS
802.11 ac40	5190 MHz	-12.53	-11.78	-9.13	11	PASS
	5230 MHz	-12.67	-12.01	-9.32	11	PASS
802.11 AC80	5210 MHz	-14.43	-14.56	-11.48	11	PASS

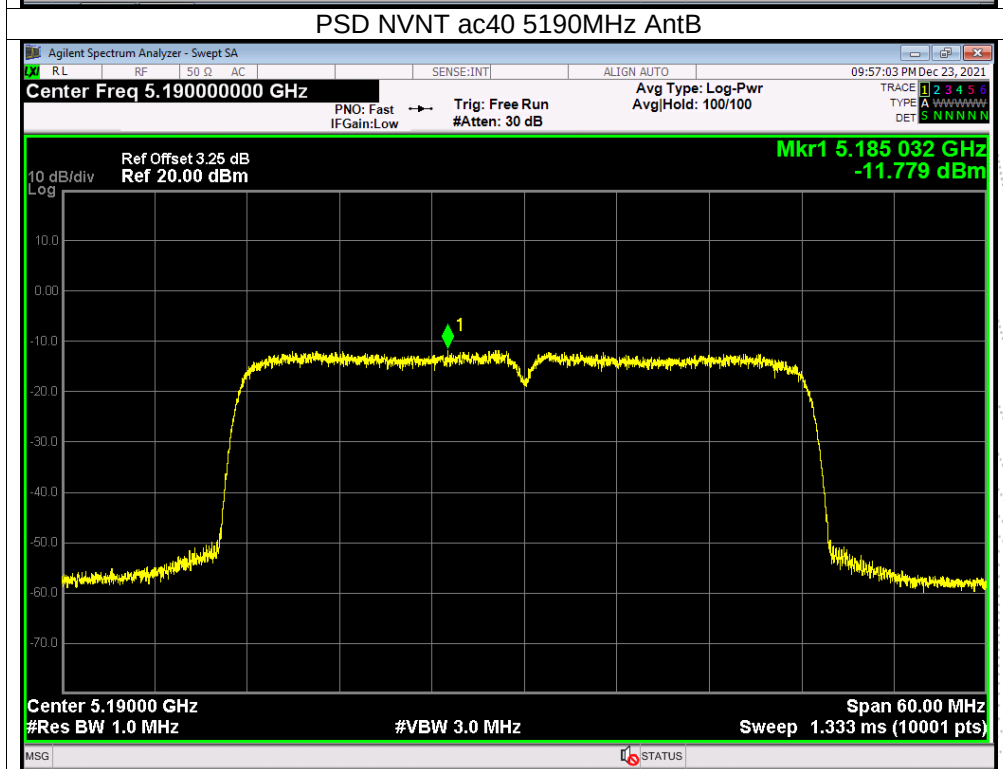
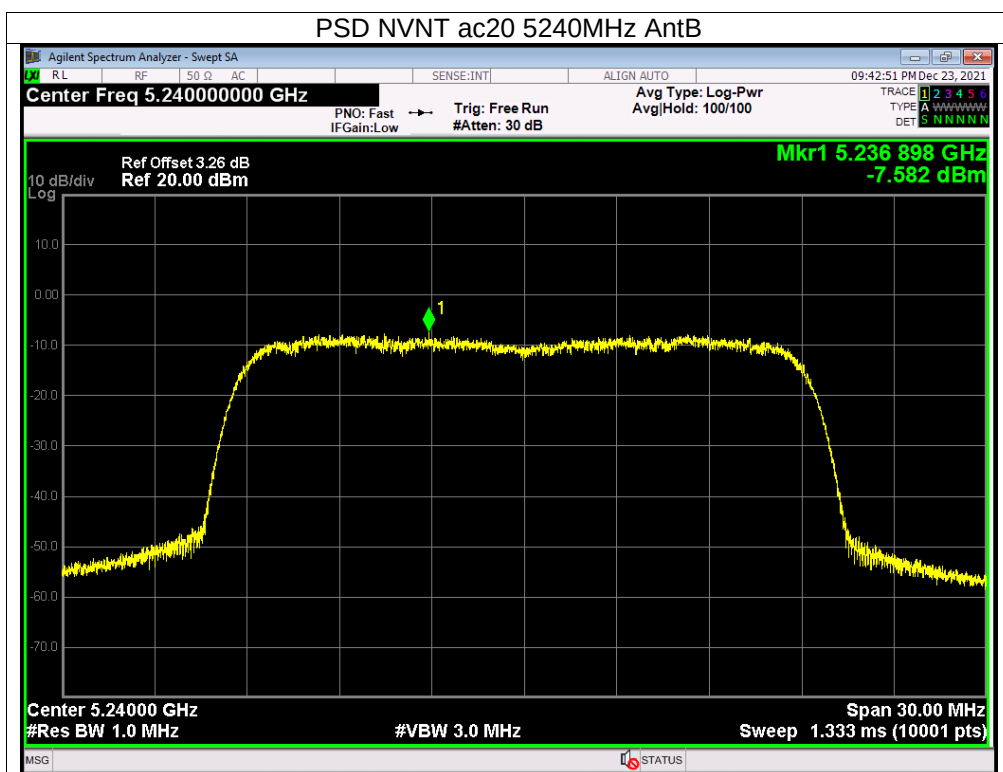


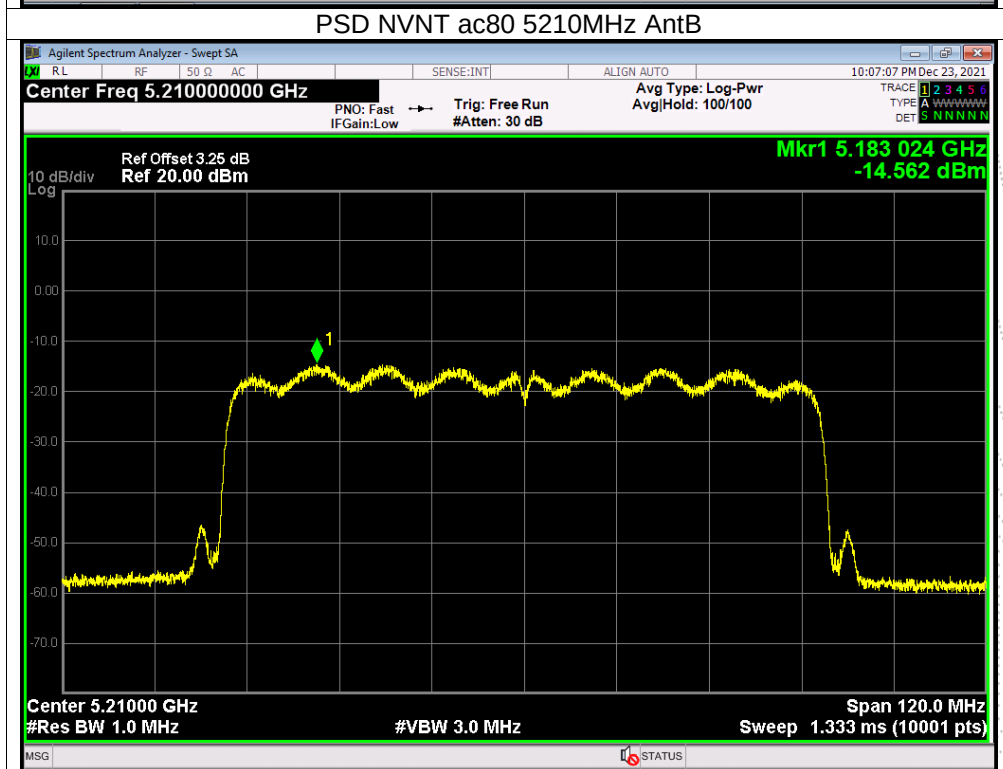
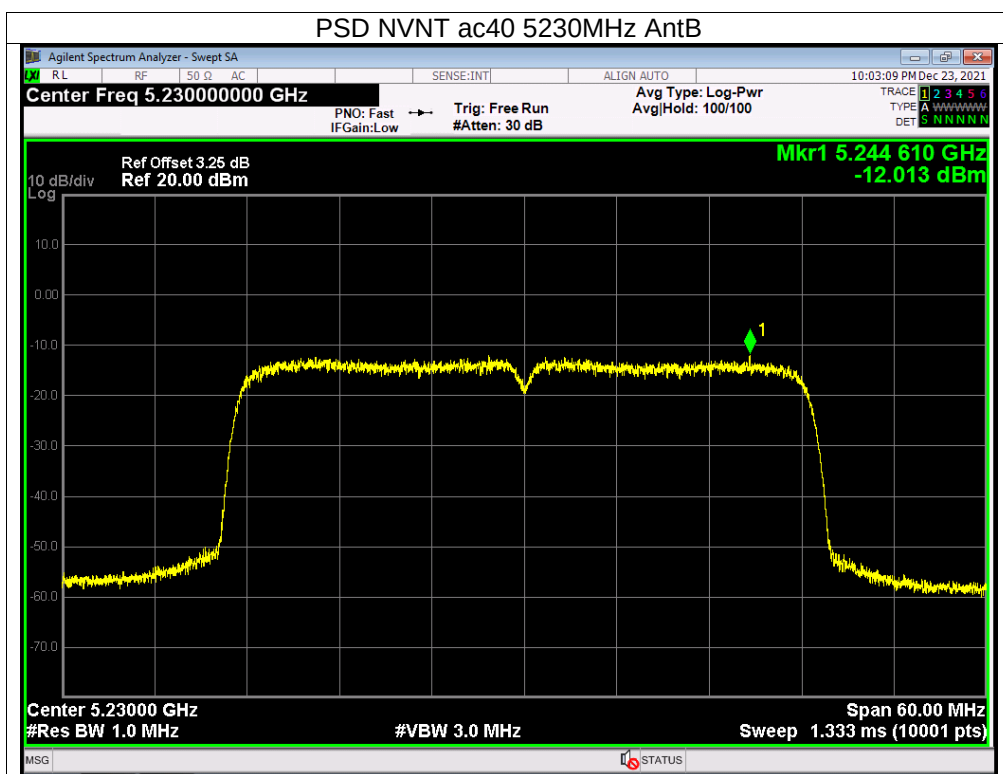












Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 7.6V
Test Mode :	TX Frequency U-NII-3 (5745-5825MHz)		

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	-10.21	-10.18	/	30	PASS
	5785 MHz	-9.49	-9.71	/	30	PASS
	5825 MHz	-9.57	-9.67	/	30	PASS
802.11 n20	5745 MHz	-12.51	-12.48	-9.48	27.99	PASS
	5785 MHz	-13.13	-12.83	-9.97	27.99	PASS
	5825 MHz	-12.37	-12.9	-9.62	27.99	PASS
802.11 n40	5755 MHz	-17.26	-16.7	-13.96	27.99	PASS
	5795 MHz	-17.03	-17.05	-14.03	27.99	PASS
802.11 ac20	5745 MHz	-12.68	-12.73	-9.69	27.99	PASS
	5785 MHz	-13.28	-12.97	-10.11	27.99	PASS
	5825 MHz	-13.29	-12.33	-9.77	27.99	PASS
802.11 ac40	5755 MHz	-17.84	-16.92	-14.35	27.99	PASS
	5795 MHz	-17.13	-16.89	-14.00	27.99	PASS
802.11 AC80	5775 MHz	-20.71	-20.45	-17.57	27.99	PASS

