

TEST REPORT

Report No.: BCTC2305351239-2E

Applicant: Benison Technologies Pvt Ltd

Product Name: N200-I-SDWAN-EDGE

Model/Type
reference: N200-I-SDWAN-EDGE

Tested Date: 2023-05-05 to 2023-06-12

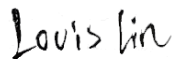
Issued Date: 2023-06-12

Shenzhen BCTC Testing Co., Ltd.

FCC ID: 2BBHY-N200

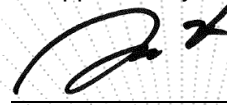
Product Name: N200-I-SDWAN-EDGE
Trademark: Nirad Networks
Model/Type reference: N200-I-SDWAN-EDGE,N200-I-LBV2,N200-I-EDGE,N200-I,N100-I-SDWA
N-EDGE, N100-I, N100-O, N200-O & N200-O-SDWAN-EDGE
Prepared For: Benison Technologies Pvt Ltd
Address: Akshay Tech Park, Unit No. 102, First Floor, Plot No. 72 & 73 EPIP area,
Hoodi Village, Whitefield, Bangalore,Karnataka,India.
Manufacturer: Benison Technologies Pvt Ltd
Address: Akshay Tech Park, Unit No. 102, First Floor, Plot No. 72 & 73 EPIP area,
Hoodi Village, Whitefield, Bangalore,Karnataka,India.
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: 2023-05-04
Sample tested Date: 2023-05-05 to 2023-06-12
Report No.: BCTC2305351239-2E
FCC Part15 15.407
Test Standards ANSI C63.10-2013
KDB 662911 D01 v02r01
KDB 789033 D02 v02r01
Test Results PASS

Tested by:



Louis lin/Project Handler

Approved by:



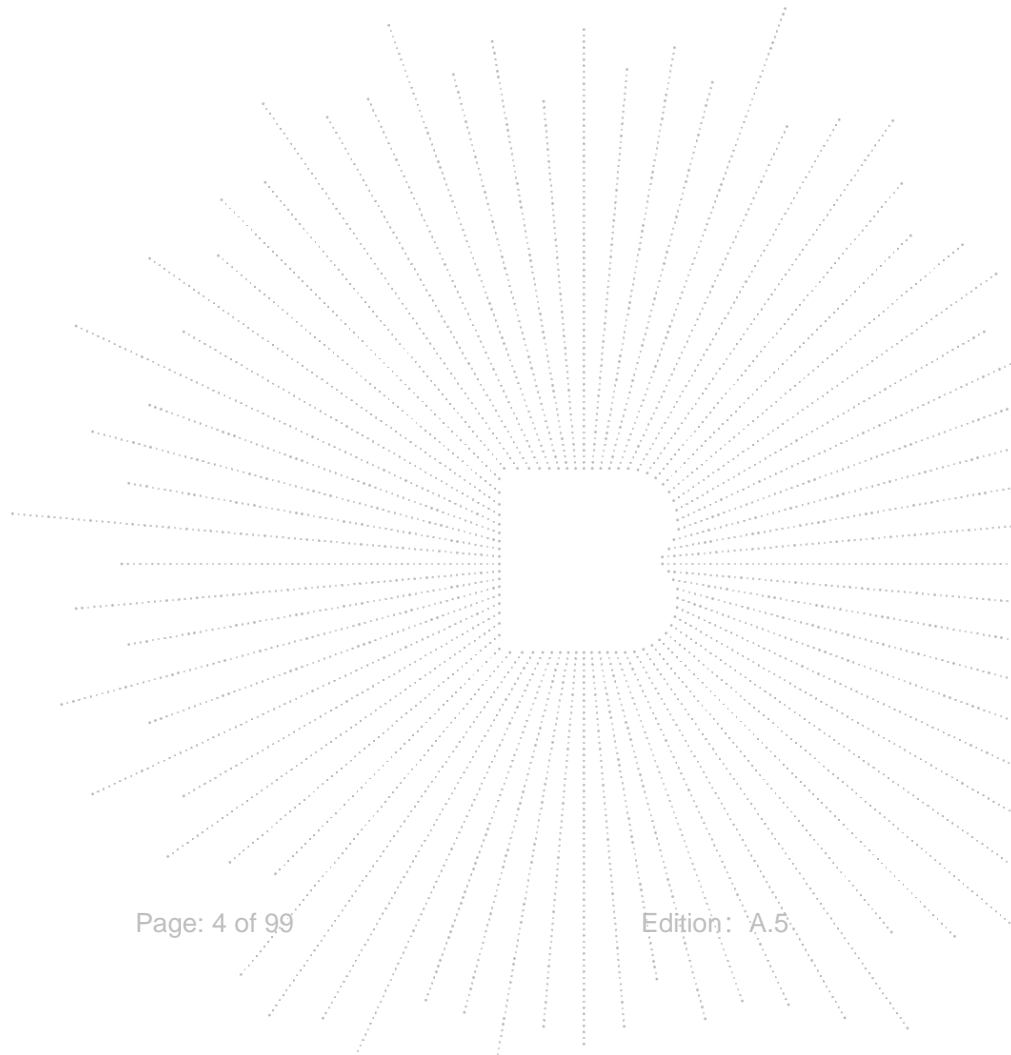
Zero Zhou/Reviewer

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

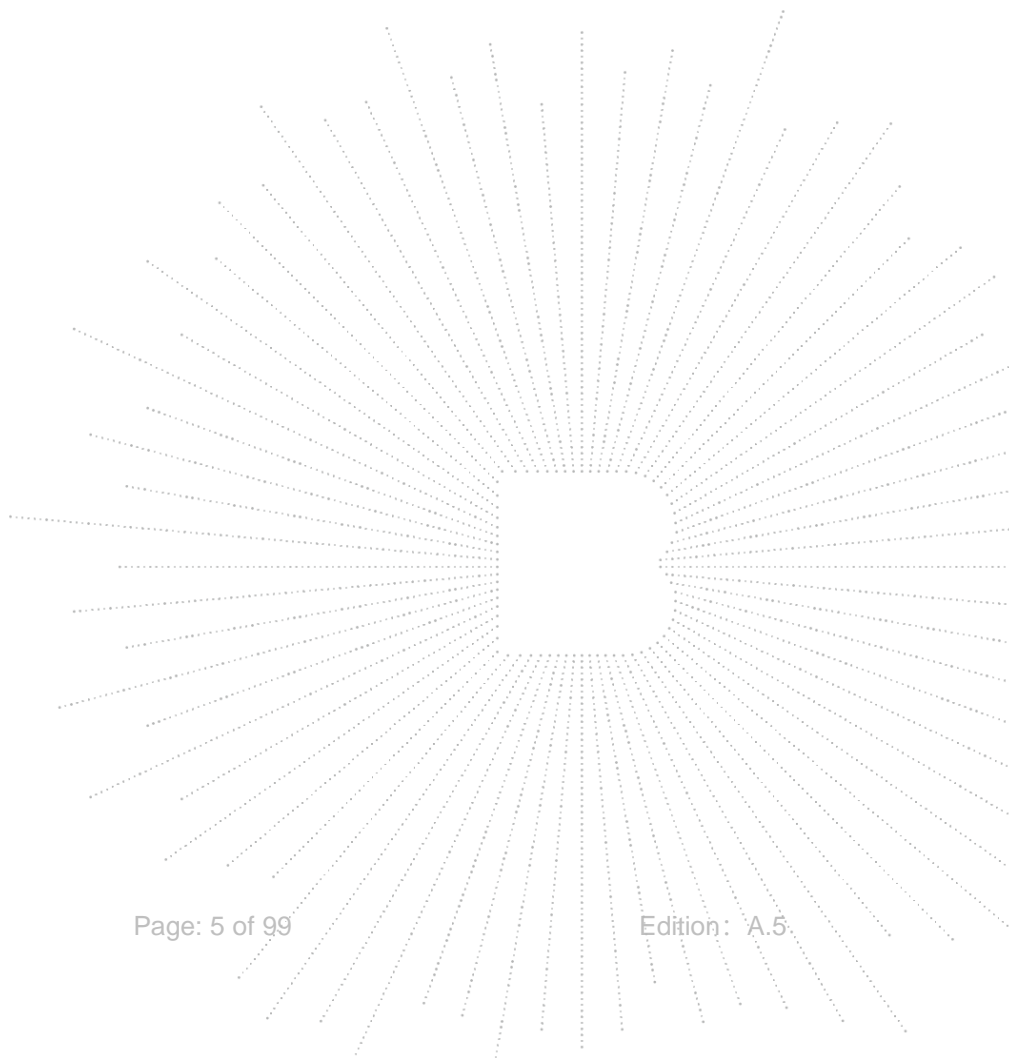
Test Report Declaration	Page
1. Version	5
2. Test Summary	6
3. Measurement Uncertainty	7
4. Product Information And Test Setup	8
4.1 Product Information	8
4.2 Test Setup Configuration	9
4.3 Support Equipment	9
4.4 Channel List	10
4.5 Test Mode	11
4.6 table of parameters of text software setting	12
4.7 Antenna	12
5. Test Facility And Test Instrument Used	13
5.1 Test Facility	13
5.2 Test Instrument Used	13
6. Conducted Emissions	15
6.1 Block Diagram Of Test Setup	15
6.2 Limit	15
6.3 Test procedure	15
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	20
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	46
9.1 Block Diagram Of Test Setup	46
9.2 Limit	46
9.3 Test procedure	46
9.4 EUT operating Conditions	46
9.5 Test Result	47
10. Maximum Conducted Output Power	66
10.1 Block Diagram Of Test Setup	66
10.2 Limit	66
10.3 Test procedure	66
10.4 EUT operating Conditions	67
10.5 Test Result	68
11. Out Of Band Emissions	70

11.1	Block Diagram Of Test Setup.....	70
11.2	Limit	70
11.3	Test procedure.....	70
11.4	EUT operating Conditions	70
11.5	Test Result.....	71
12.	Spurious RF Conducted Emissions.....	83
12.1	Block Diagram Of Test Setup.....	83
12.2	Limit	83
12.3	Test procedure.....	83
12.4	Test Result.....	84
13.	Frequency Stability Measurement.....	91
13.1	Block Diagram Of Test Setup.....	91
13.2	Limit	91
13.3	Test procedure.....	91
13.4	Test Result.....	92
14.	Antenna Requirement	98
14.1	Limit	98
14.2	Test Result.....	98



1. Version

Report No.	Issue Date	Description	Approved
BCTC2305351239-2E	2023-06-12	Original	Valid



2. Test Summary

The Product has been tested according to the following specifications:

1	Test Parameter	Clause No	Results
1	Spurious Radiated Emissions	15.209(a), 15.407 (b)(1) 15.407 (b)(4) 15.407 (b)(8)	PASS
2	Conducted Emission	15.207	PASS
3	26 dB and 99% Emission Bandwidth	15.407 (a)(12)	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	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	15.407(b)	PASS
9	Antenna Requirement	15.203	PASS

3. Measurement Uncertainty

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

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

4. Product Information And Test Setup

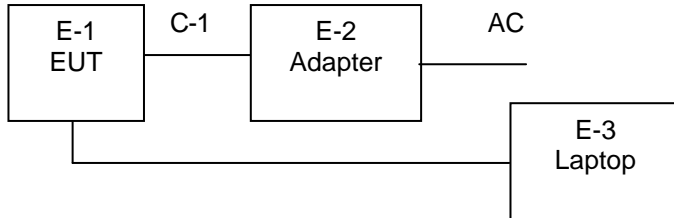
4.1 Product Information

Model/Type reference:	N200-I-SDWAN-EDGE ,N200-I-LBV2,N200-I-EDGE,N200-I,N100-I-SDWAN-EDGE, N100-I, N100-O, N200-O & N200-O-SDWAN-EDGE
Model differences:	Our production units bearing the following model numbers are identical in circuitry and electrical, mechanical and physical construction; The difference is only in model names and appearance.
IEEE 802.11 WLAN Mode Supported	802.11a/n/ac(20MHz channel bandwidth) 802.11n/ac(40MHz channel bandwidth) 802.11ac(80MHz channel bandwidth)
Operation Frequency:	5180-5240MHz for 802.11a/n/ac(HT20); 5190-5230MHz for 802.11n/ac(HT40); 5210MHz for 802.11 ac80; 5745-5825 MHz for 802.11a/n/ac(HT20); 5755-5795 MHz for 802.11a/n/ac(HT40); 5775MHz for 802.11 ac80;
Data Rate	802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n/ac(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:	Antenna A:5.53dBi Antenna B:5.53dBi
Ratings:	DC 12V
Adapter:	Input: AC100-240V 50/60Hz 0.8A Output: 12V 2.5A

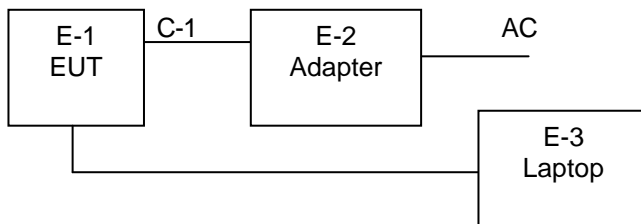
4.2 Test Setup Configuration

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	N200-I-SDWAN-EDGE	N/A	N200-I-SDWAN-EDGE	N/A	EUT
E-2	Adapter	N/A	N/A	N/A	EUT
E-3	Laptop	Lenovo	ThinkPad E550C	SL10H52814	N/A
N/A	Router	N/A	N/A	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 generated from EUT, the test system was pre-scanning tested based 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.

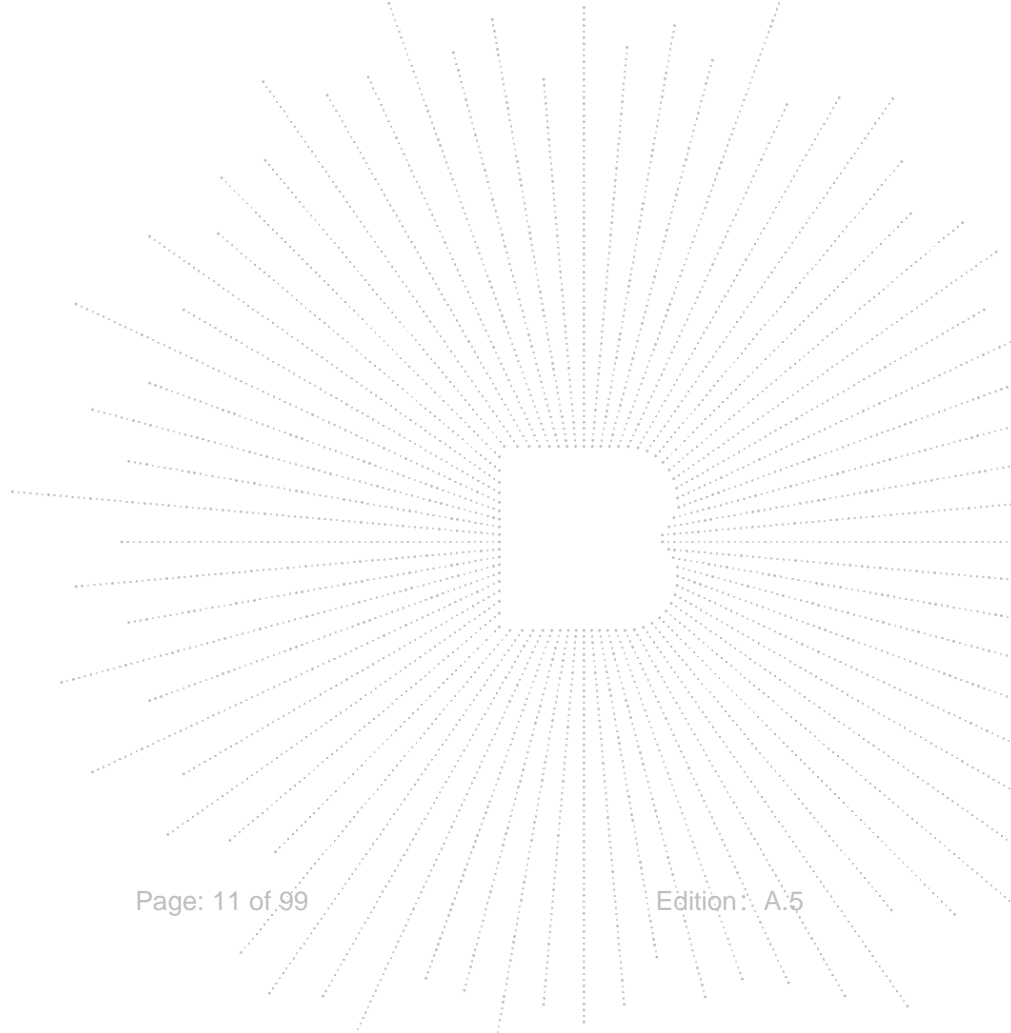
Pretest Mode	Description
Mode 1	802.11a / n/ ac 20 CH36/ CH40/ CH 48 802.11a /n/ ac 20 CH149/ CH157/ CH 165
Mode 2	802.11n/ ac40 CH38/ CH 46 802.11n/ ac40 CH 151 / CH 159
Mode 3	802.11 ac80 CH 42/CH 155
Mode 4	Link Mode

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

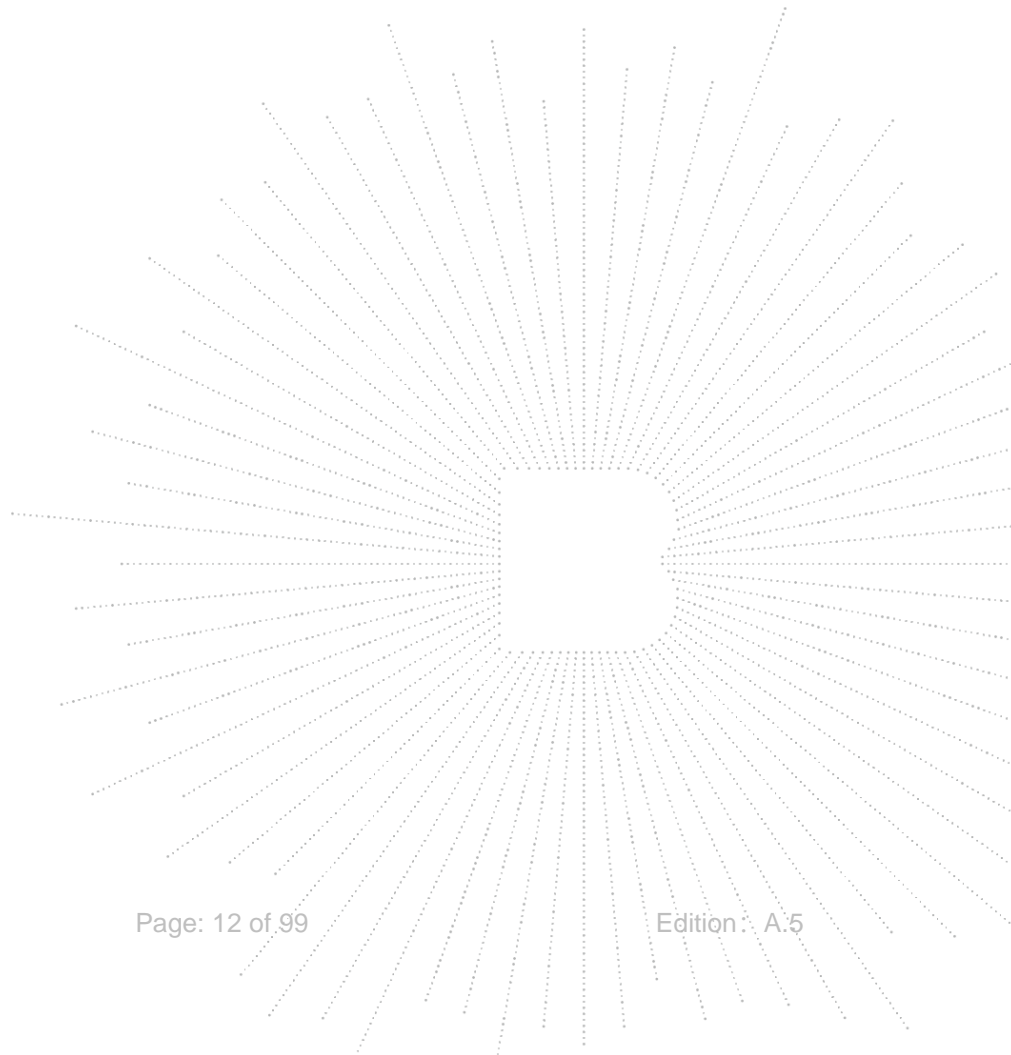
4.7 Antenna

Table for External antenna

Ant.	Brand	Model Name	Antenna Type	Gain (dBi)	NOTE
A	N/A	N/A	External antenna	5.53	N/A
B	N/A	N/A	External antenna	5.53	N/A

EUT has two External antennas with Max gain GANT 5.53dBi on every antenna, CDD device with two spatial streams, also can operat with one spatial streams according to KDB662911 D01 v02r01,

Directional gain = GANT + 10 log (NANT) dBi=5.53+10log (2) =8.54dBi



5. Test Facility And Test Instrument Used

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuha i Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

FCC Test Firm Registration Number: 712850

A2LA certificate registration number is: CN1212

ISED Registered No.: 23583

ISED CAB identifier: CN0017

5.2 Test Instrument Used

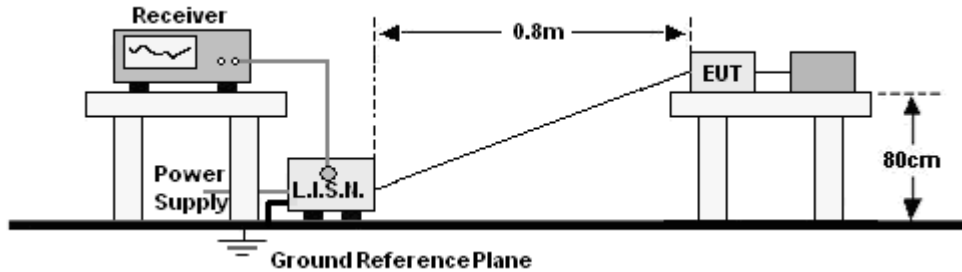
Conducted Emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESR3	102075	May 24, 2022	May 23, 2023
LISN	R&S	ENV216	101375	May 24, 2022	May 23, 2023
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Attenuator	\	10dB DC-6GHz	1650	May 24, 2022	May 23, 2023

RF Conducted Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Power Meter	Keysight	E4419	\	May 24, 2022	May 23, 2023
Power Sensor (AV)	Keysight	E9300A	\	May 24, 2022	May 23, 2023
Signal Analyzer20kHz- 26.5GHz	Keysight	N9020A	MY49100060	May 24, 2022	May 23, 2023
Spectrum Analyzer9kHz- 40GHz	R&S	FSP40	\	May 24, 2022	May 23, 2023

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 24, 2022	May 23, 2023
Receiver	R&S	ESRP	101154	May 24, 2022	May 23, 2023
Amplifier	SKET	LAPA_01G18 G-45dB	\	May 24, 2022	May 23, 2023
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 24, 2022	May 23, 2023
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 26, 2022	May 25, 2023
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 24, 2022	May 23, 2023
Horn Antenn(18GH z-40GHz)	Schwarzbeck	BBHA9170	00822	May 24, 2022	May 23, 2023
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35- HG	2034381	May 24, 2022	May 23, 2023
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 26, 2022	May 25, 2023
RF cables1(9kHz- 30MHz)	Huber+Suhnar	9kHz-30MHz	B1702988-000 8	May 26, 2022	May 25, 2023
RF cables2(30MH z-1GHz)	Huber+Suhnar	30MHz-1GHz	1486150	May 26, 2022	May 25, 2023
RF cables3(1GHz -40GHz)	Huber+Suhnar	1GHz-40GHz	1607106	May 24, 2022	May 23, 2023
Power Metter	Keysight	E4419	\	May 26, 2022	May 25, 2023
Power Sensor (AV)	Keysight	E9300A	\	May 26, 2022	May 25, 2023
Signal Analyzer20kH z-26.5GHz	Keysight	N9020A	MY49100060	May 26, 2022	May 25, 2023
Spectrum Analyzer9kHz- 40GHz	R&S	FSP40	\	May 26, 2022	May 25, 2023
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

a. 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).

b. 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.

c. For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

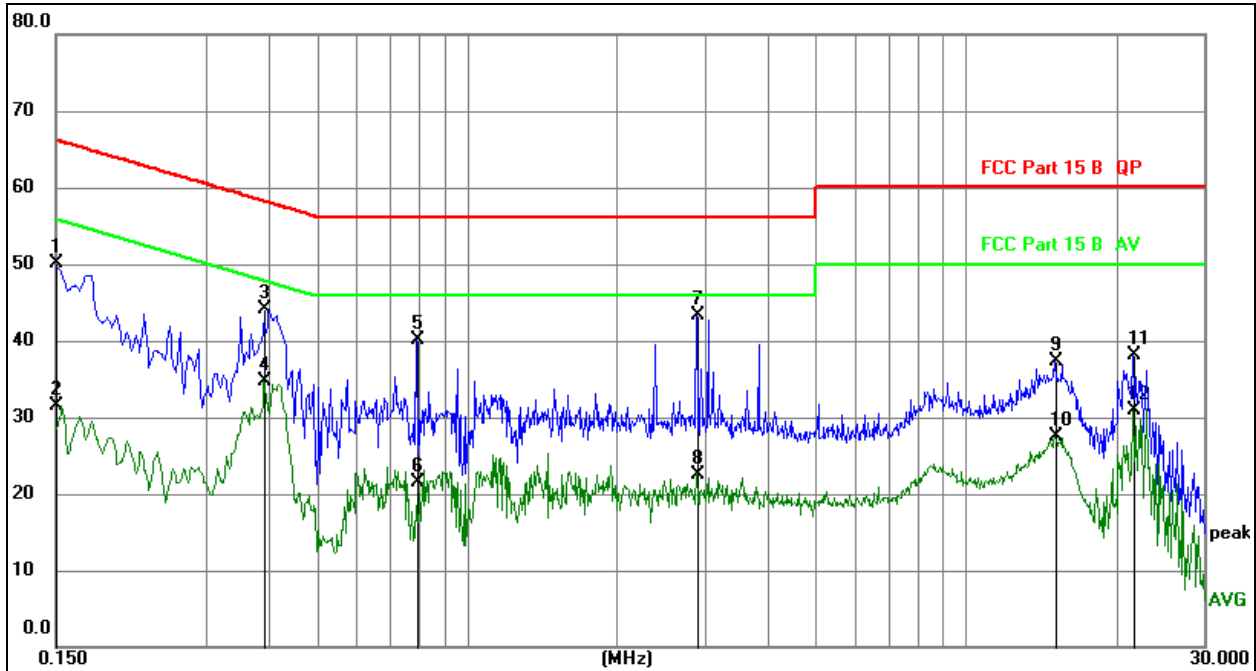
6.4 EUT operating Conditions

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

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

6.5 Test Result

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	AC120V/60Hz
Test Mode:	Mode 4	Polarization :	L

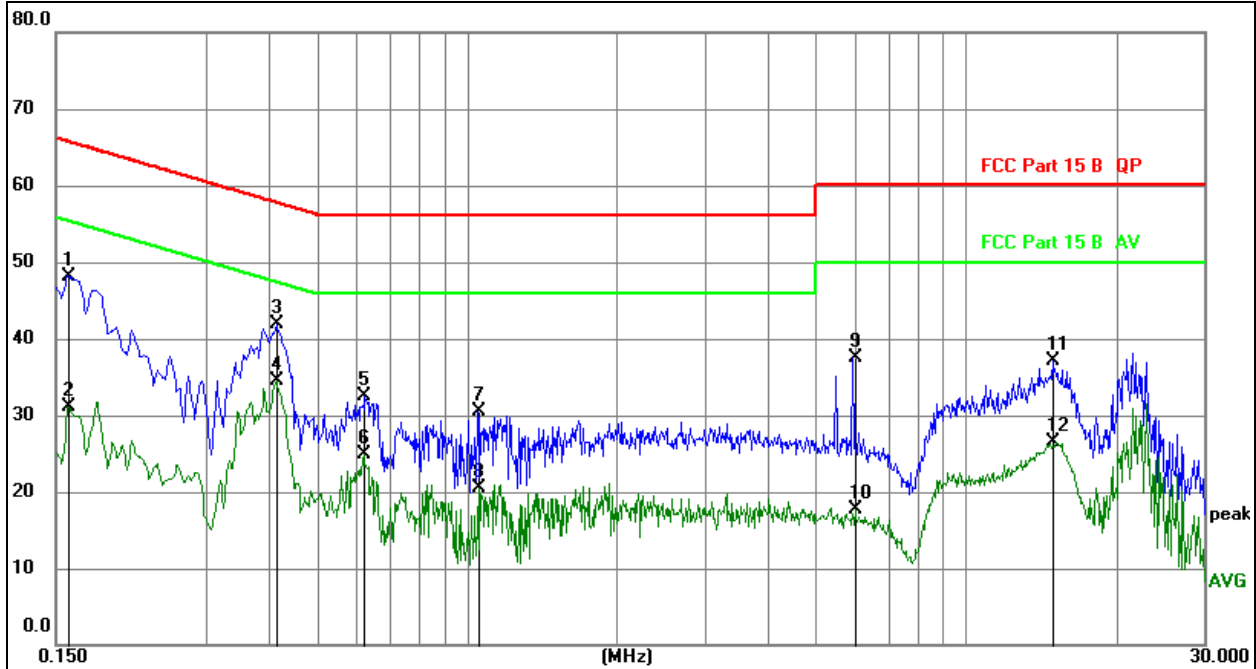


Remark:

- All readings are Quasi-Peak and Average values.
- Factor = Insertion Loss + Cable Loss.

No.	Mk.	Freq. MHz	Reading Level dB	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	39.78	10.23	50.01	66.00	-15.99	QP	
2		0.1500	21.29	10.23	31.52	56.00	-24.48	AVG	
3		0.3930	33.88	10.23	44.11	58.00	-13.89	QP	
4		0.3930	24.51	10.23	34.74	48.00	-13.26	AVG	
5		0.7934	30.05	10.14	40.19	56.00	-15.81	QP	
6		0.7934	11.32	10.14	21.46	46.00	-24.54	AVG	
7	*	2.8995	33.11	10.21	43.32	56.00	-12.68	QP	
8		2.8995	12.39	10.21	22.60	46.00	-23.40	AVG	
9		15.0945	26.85	10.44	37.29	60.00	-22.71	QP	
10		15.0945	16.97	10.44	27.41	50.00	-22.59	AVG	
11		21.6645	27.50	10.54	38.04	60.00	-21.96	QP	
12		21.6645	20.37	10.54	30.91	50.00	-19.09	AVG	

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	AC120V/60Hz
Test Mode:	Mode 4	Polarization :	N


Remark:

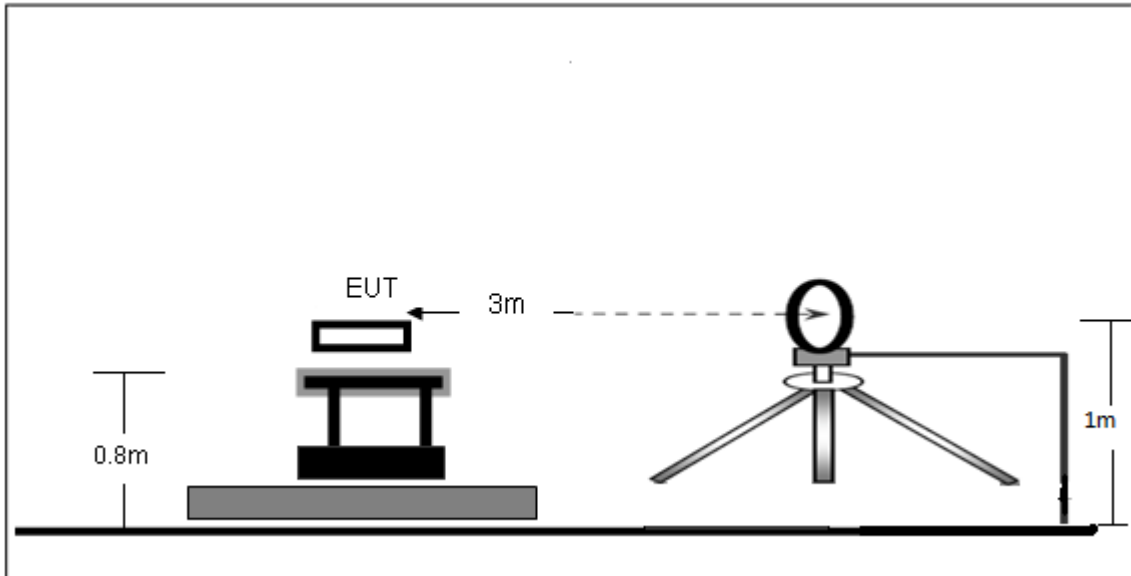
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz		dB	dBuV	dBuV	dB		
1		0.1590	37.97	10.23	48.20	65.52	-17.32	QP	
2		0.1590	20.85	10.23	31.08	55.52	-24.44	AVG	
3		0.4155	31.72	10.23	41.95	57.54	-15.59	QP	
4	*	0.4155	24.25	10.23	34.48	47.54	-13.06	AVG	
5		0.6224	22.24	10.22	32.46	56.00	-23.54	QP	
6		0.6224	14.61	10.22	24.83	46.00	-21.17	AVG	
7		1.0500	20.35	10.15	30.50	56.00	-25.50	QP	
8		1.0500	10.29	10.15	20.44	46.00	-25.56	AVG	
9		6.0000	27.15	10.32	37.47	60.00	-22.53	QP	
10		6.0000	7.34	10.32	17.66	50.00	-32.34	AVG	
11		14.9505	26.63	10.44	37.07	60.00	-22.93	QP	
12		14.9505	16.03	10.44	26.47	50.00	-23.53	AVG	

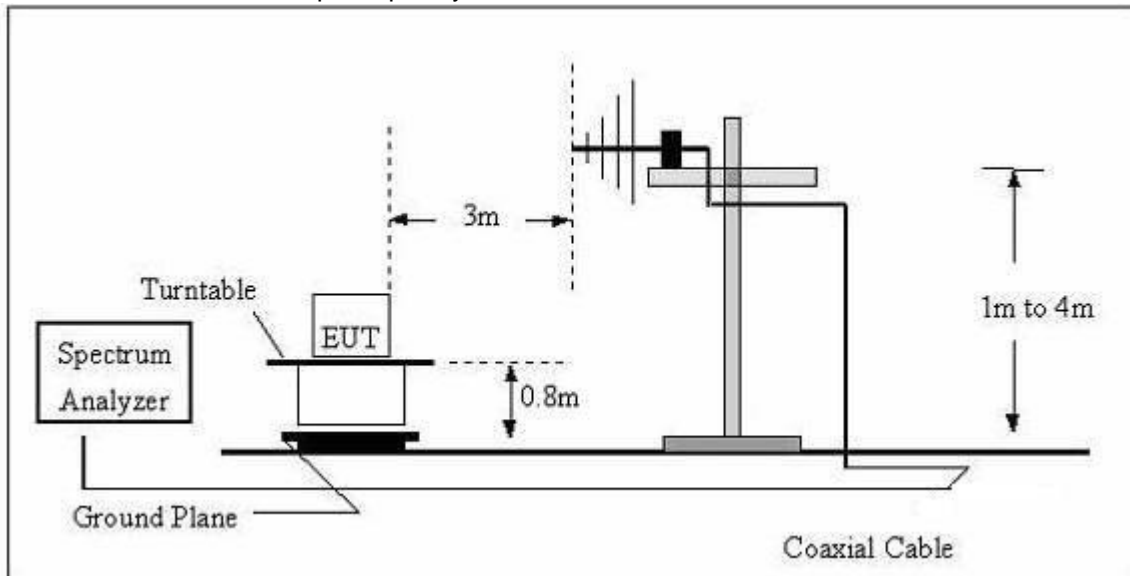
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

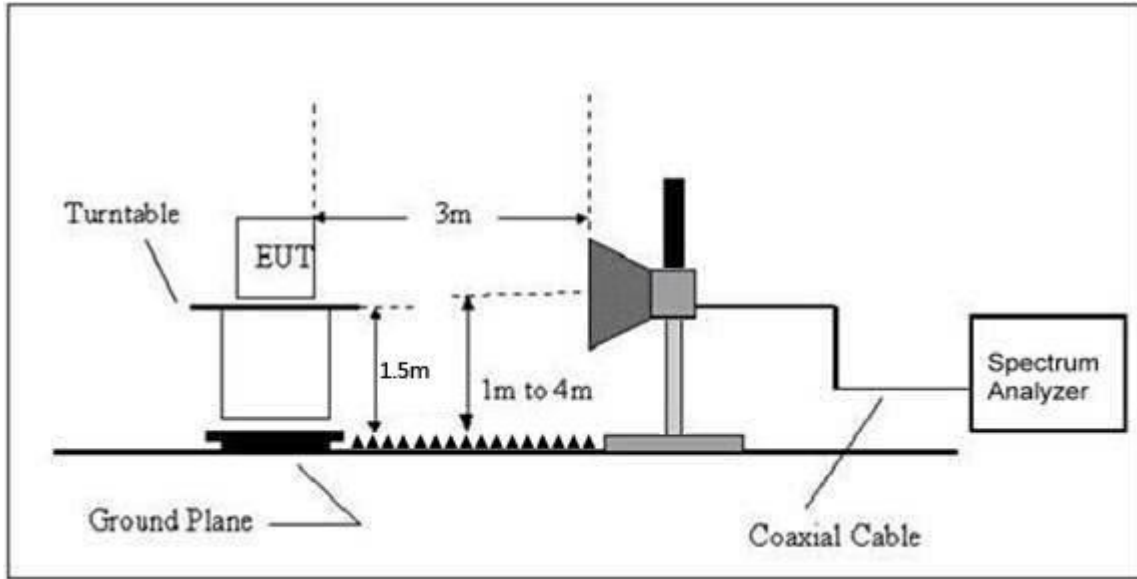
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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


7.2 Limit

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

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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

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

7.3 Test procedure

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

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

It must be performed with the highest gain of each type of antenna proposed for use with the EUT. Use the following spectrum analyzer settings:

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

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

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

Note:

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

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

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

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

7.4 EUT operating Conditions

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

7.5 Test Result

Below 30MHz

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	AC120V/60Hz
Test Mode:	Mode 4	Polarization :	---

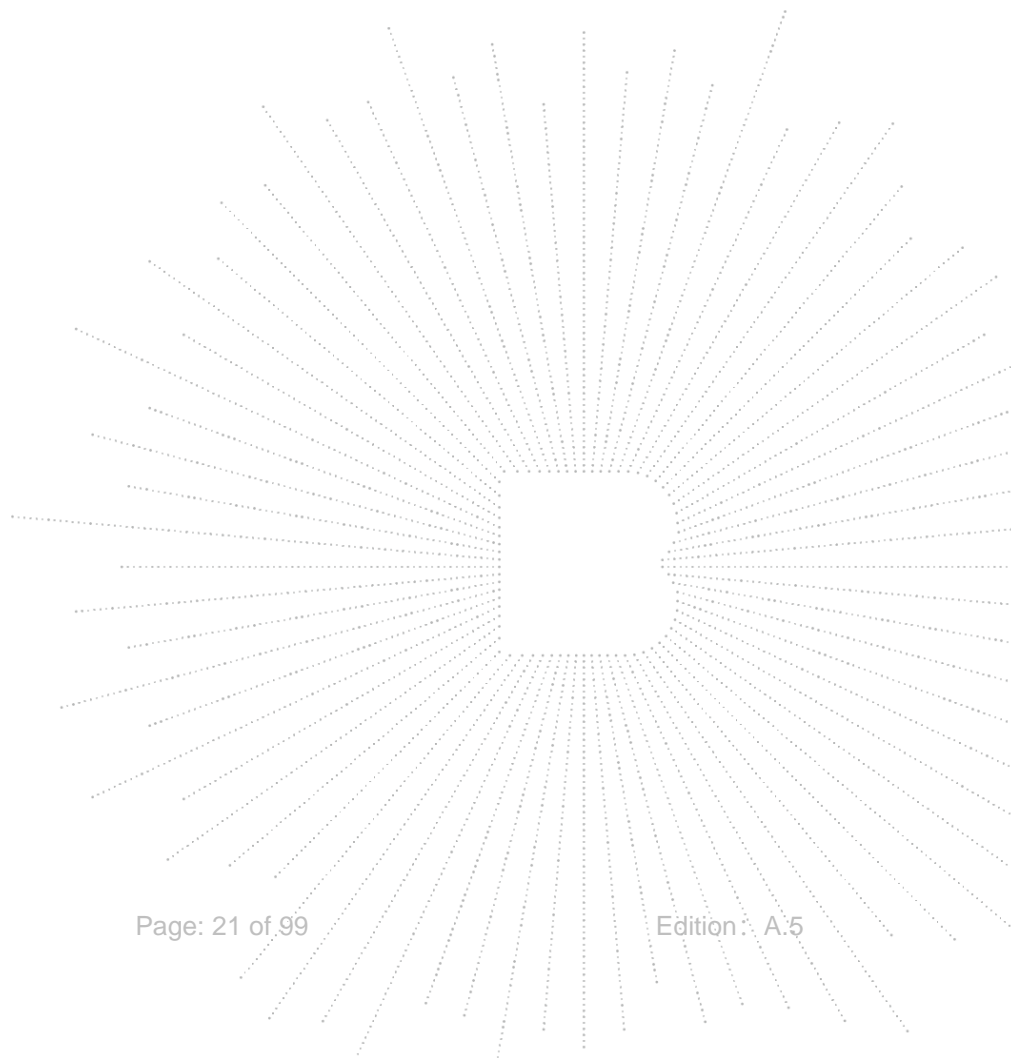
Freq. (MHz)	Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	State P/F
--	--	--	--	PASS
--	--	--	--	PASS

Note:

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

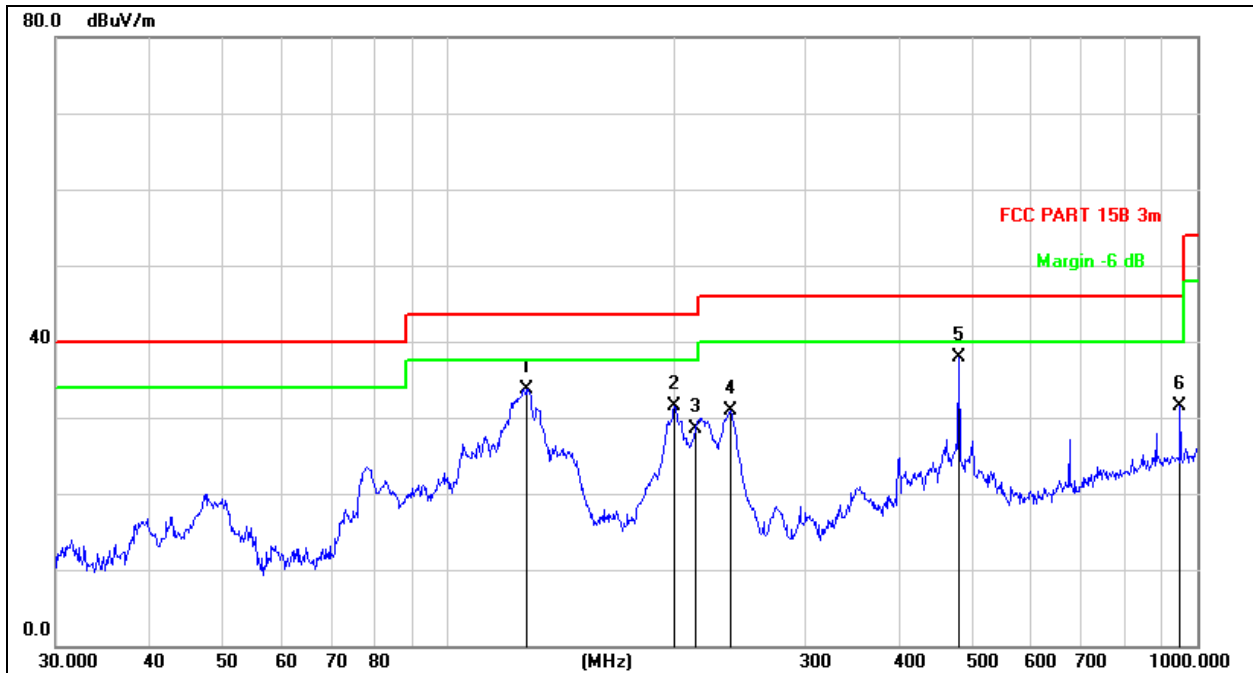
Distance extrapolation factor = $40 \log (\text{specific distance}/\text{test distance})(\text{dB})$;

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



Between 30MHz – 1GHz

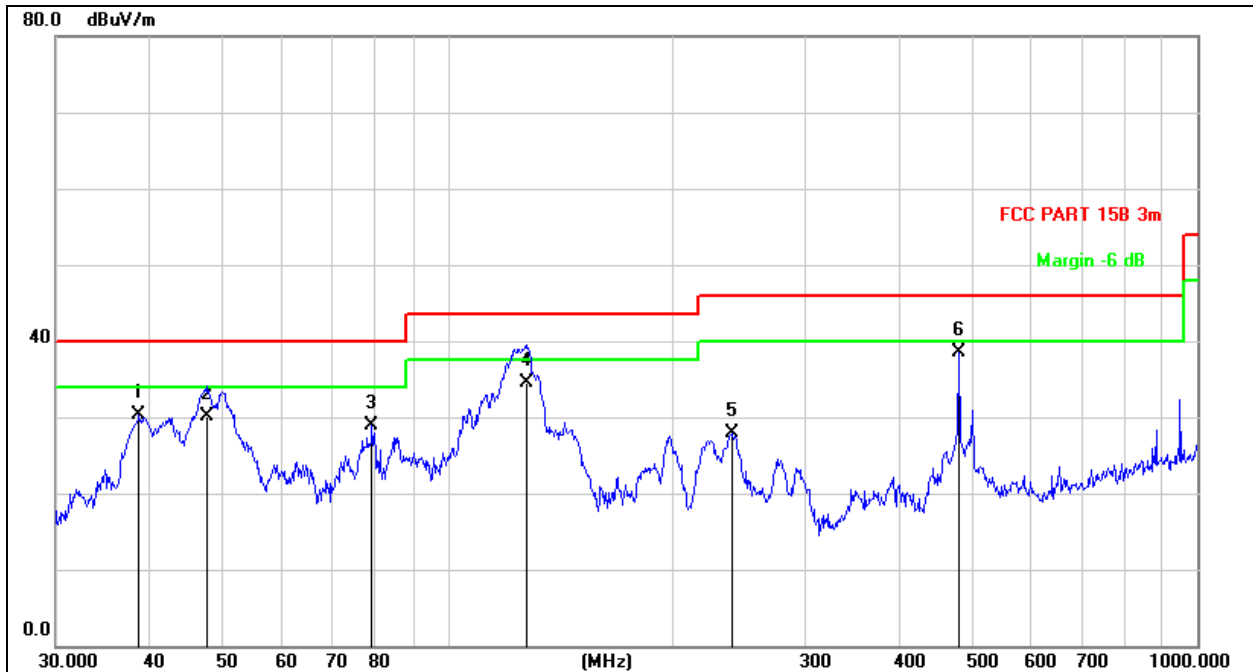
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	AC120V/60Hz
Test Mode:	Mode 4	Polarization :	Horizontal



Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector
1		127.6645	41.31	-7.53	33.78	43.50	-9.72	QP
2		200.6881	40.88	-9.31	31.57	43.50	-11.93	QP
3		213.7634	37.39	-8.80	28.59	43.50	-14.91	QP
4		238.3102	38.66	-7.84	30.82	46.00	-15.18	QP
5	*	480.5276	38.88	-0.96	37.92	46.00	-8.08	QP
6		948.7610	24.59	6.88	31.47	46.00	-14.53	QP

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	AC120V/60Hz
Test Mode:	Mode 4	Polarization :	Vertical



Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector
1		38.7518	38.63	-8.40	30.23	40.00	-9.77	QP
2		47.8260	39.12	-8.92	30.20	40.00	-9.80	QP
3		79.2426	40.51	-11.62	28.89	40.00	-11.11	QP
4		127.2176	42.17	-7.57	34.60	43.50	-8.90	QP
5		239.9874	35.68	-7.77	27.91	46.00	-18.09	QP
6	*	480.5276	39.44	-0.96	38.48	46.00	-7.52	QP

Between 1GHz – 40GHz

The worst case is Antenna A.

Test Mode:	TX(5.1G) - 802.11a
------------	--------------------

Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G									
V	4434.066	62.26	5.94	35.40	44.00	59.60	68.2	-8.60	PK
V	4434.066	43.47	5.94	35.40	44.00	40.81	54	-13.19	AV
V	10360.157	61.60	8.46	39.75	44.50	65.31	68.2	-2.89	PK
V	10360.157	43.77	8.46	39.75	44.50	47.48	54	-6.52	AV
V	15540.198	64.44	10.12	38.80	44.10	69.26	74	-4.74	PK
V	15540.198	43.71	10.12	38.80	42.70	49.93	54	-4.07	AV
H	4434.058	64.05	5.94	35.18	44.00	61.17	68.2	-7.03	PK
H	4434.058	43.75	5.94	35.18	44.00	40.87	54	-13.13	AV
H	10360.095	54.98	8.46	38.71	44.50	57.65	68.2	-10.55	PK
H	10360.095	44.80	8.46	38.71	44.50	47.47	54	-6.53	AV
H	15540.173	52.24	10.12	38.38	44.10	56.64	74	-17.36	PK
H	15540.173	40.50	10.12	38.38	44.10	44.90	54	-9.10	AV
Middle Channel (5200 MHz)-Above 1G									
V	4592.009	62.07	6.48	36.35	44.05	60.85	74	-13.15	PK
V	4592.009	43.06	6.48	36.35	44.05	41.84	54	-12.16	AV
V	10400.200	63.45	8.47	37.88	44.51	65.29	68.2	-2.91	PK
V	10400.200	43.79	8.47	37.88	44.51	45.63	54	-8.37	AV
V	15600.102	64.35	10.12	38.80	44.10	69.17	74	-4.83	PK
V	15600.102	43.98	10.12	38.80	42.70	50.20	54	-3.80	AV
H	4592.110	62.18	6.48	36.37	44.05	60.98	74	-13.02	PK
H	4592.110	43.07	6.48	36.37	44.05	41.87	54	-12.13	AV
H	10400.037	52.05	8.47	38.64	44.50	54.66	68.2	-13.54	PK
H	10400.037	41.80	8.47	38.64	44.50	44.41	54	-9.59	AV
H	15600.118	51.51	10.12	38.38	44.10	55.91	74	-18.09	PK
H	15600.118	41.33	10.12	38.38	44.10	45.73	54	-8.27	AV
High Channel (5240 MHz)-Above 1G									
V	4739.075	61.95	7.10	37.24	43.50	62.79	74	-11.21	PK
V	4739.075	43.40	7.10	37.24	43.50	44.24	54	-9.76	AV
V	10480.183	61.16	8.46	37.68	44.50	62.80	68.2	-5.40	PK
V	10480.183	43.79	8.46	37.68	44.50	45.43	54	-8.57	AV
V	15720.188	60.81	10.12	38.80	44.10	65.63	74	-8.37	PK
V	15720.188	43.83	10.12	38.80	42.70	50.05	54	-3.95	AV
H	4739.011	63.39	7.10	37.24	43.50	64.23	74	-9.77	PK
H	4739.011	43.68	7.10	37.24	43.50	44.52	54	-9.48	AV
H	10480.058	54.79	8.46	38.57	44.50	57.32	68.2	-10.88	PK
H	10480.058	43.03	8.46	38.57	44.50	45.56	54	-8.44	AV
H	15720.034	53.52	10.12	38.38	44.10	57.92	74	-16.08	PK
H	15720.034	41.71	10.12	38.38	44.10	46.11	54	-7.89	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:	TX(5.1G) - 802.11n-HT20
------------	-------------------------

Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G									
V	4434.064	61.02	5.94	35.40	44.00	58.36	68.2	-9.84	PK
V	4434.064	43.63	5.94	35.40	44.00	40.97	54	-13.03	AV
V	10360.127	62.63	8.46	39.75	44.50	66.34	68.2	-1.86	PK
V	10360.127	43.04	8.46	39.75	44.50	46.75	54	-7.25	AV
V	15540.138	64.02	10.12	38.80	44.10	68.84	74	-5.16	PK
V	15540.138	43.75	10.12	38.80	42.70	49.97	54	-4.03	AV
H	4434.031	61.95	5.94	35.18	44.00	59.07	68.2	-9.13	PK
H	4434.031	43.26	5.94	35.18	44.00	40.38	54	-13.62	AV
H	10360.196	52.64	8.46	38.71	44.50	55.31	68.2	-12.89	PK
H	10360.196	43.13	8.46	38.71	44.50	45.80	54	-8.20	AV
H	15540.127	51.08	10.12	38.38	44.10	55.48	74	-18.52	PK
H	15540.127	41.07	10.12	38.38	44.10	45.47	54	-8.53	AV
Middle Channel (5200 MHz)-Above 1G									
V	4592.036	60.18	6.48	36.35	44.05	58.96	74	-15.04	PK
V	4592.036	43.63	6.48	36.35	44.05	42.41	54	-11.59	AV
V	10400.167	62.08	8.47	37.88	44.51	63.92	68.2	-4.28	PK
V	10400.167	43.68	8.47	37.88	44.51	45.52	54	-8.48	AV
V	15600.074	61.56	10.12	38.80	44.10	66.38	74	-7.62	PK
V	15600.074	43.89	10.12	38.80	42.70	50.11	54	-3.89	AV
H	4592.081	64.76	6.48	36.37	44.05	63.56	74	-10.44	PK
H	4592.081	43.15	6.48	36.37	44.05	41.95	54	-12.05	AV
H	10400.127	50.27	8.47	38.64	44.50	52.88	68.2	-15.32	PK
H	10400.127	41.67	8.47	38.64	44.50	44.28	54	-9.72	AV
H	15600.155	50.53	10.12	38.38	44.10	54.93	74	-19.07	PK
H	15600.155	43.30	10.12	38.38	44.10	47.70	54	-6.30	AV
High Channel (5240 MHz)-Above 1G									
V	4739.101	60.61	7.10	37.24	43.50	61.45	74	-12.55	PK
V	4739.101	43.51	7.10	37.24	43.50	44.35	54	-9.65	AV
V	10480.156	63.11	8.46	37.68	44.50	64.75	68.2	-3.45	PK
V	10480.156	43.52	8.46	37.68	44.50	45.16	54	-8.84	AV
V	15720.151	63.41	10.12	38.80	44.10	68.23	74	-5.77	PK
V	15720.151	43.55	10.12	38.80	42.70	49.77	54	-4.23	AV
H	4739.188	64.17	7.10	37.24	43.50	65.01	74	-8.99	PK
H	4739.188	43.13	7.10	37.24	43.50	43.97	54	-10.03	AV
H	10480.169	53.39	8.46	38.57	44.50	55.92	68.2	-12.28	PK
H	10480.169	41.40	8.46	38.57	44.50	43.93	54	-10.07	AV
H	15720.019	54.99	10.12	38.38	44.10	59.39	74	-14.61	PK
H	15720.019	41.33	10.12	38.38	44.10	45.73	54	-8.27	AV

Note: PK value is lower than the Average value limit, So average didn't record.
 The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
 Emission level (dBuV/m) = 20 log Emission level (uV/m).
 Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
 Test Mode is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11n-HT40
------------	-------------------------

Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5190 MHz)-Above 1G									
V	4434.053	64.23	5.94	35.40	44.00	61.57	68.2	-6.63	PK
V	4434.053	43.99	5.94	35.40	44.00	41.33	54	-12.67	AV
V	10380.170	60.31	8.46	39.75	44.50	64.02	68.2	-4.18	PK
V	10380.170	43.84	8.46	39.75	44.50	47.55	54	-6.45	AV
V	15570.192	61.89	10.12	38.80	44.10	66.71	74	-7.29	PK
V	15570.192	43.29	10.12	38.80	42.70	49.51	54	-4.49	AV
H	4434.118	62.67	5.94	35.18	44.00	59.79	74	-14.21	PK
H	4434.118	43.31	5.94	35.18	44.00	40.43	54	-13.57	AV
H	10380.013	51.56	8.46	38.71	44.50	54.23	68.2	-13.97	PK
H	10380.013	43.42	8.46	38.71	44.50	46.09	54	-7.91	AV
H	15570.085	52.95	10.12	38.38	44.10	57.35	74	-16.65	PK
H	15570.085	40.19	10.12	38.38	44.10	44.59	54	-9.41	AV
High Channel (5230 MHz)-Above 1G									
V	4739.060	63.29	6.48	36.35	44.05	62.07	68.2	-6.13	PK
V	4739.060	43.80	6.48	36.35	44.05	42.58	54	-11.42	AV
V	10460.079	64.77	8.47	37.88	44.51	66.61	68.2	-1.59	PK
V	10460.079	43.72	8.47	37.88	44.51	45.56	54	-8.44	AV
V	15690.099	64.09	10.12	38.80	44.10	68.91	74	-5.09	PK
V	15690.099	43.44	10.12	38.80	42.70	49.66	54	-4.34	AV
H	4739.008	62.18	6.48	36.37	44.05	60.98	68.2	-7.22	PK
H	4739.008	43.12	6.48	36.37	44.05	41.92	54	-12.08	AV
H	10460.052	51.62	8.47	38.64	44.50	54.23	68.2	-13.97	PK
H	10460.052	44.42	8.47	38.64	44.50	47.03	54	-6.97	AV
H	15690.178	50.98	10.12	38.38	44.10	55.38	74	-18.62	PK
H	15690.178	43.37	10.12	38.38	44.10	47.77	54	-6.23	AV

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

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

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

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

Test Mode is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11ac-HT20
------------	--------------------------

Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G									
V	4434.059	62.02	5.94	35.40	44.00	59.36	68.2	-8.84	PK
V	4434.059	43.00	5.94	35.40	44.00	40.34	54	-13.66	AV
V	10360.105	61.14	8.46	39.75	44.50	64.85	68.2	-3.35	PK
V	10360.105	43.73	8.46	39.75	44.50	47.44	54	-6.56	AV
V	15540.001	60.44	10.12	38.80	44.10	65.26	74	-8.74	PK
V	15540.001	43.39	10.12	38.80	42.70	49.61	54	-4.39	AV
H	4434.183	62.17	5.94	35.18	44.00	59.29	68.2	-8.91	PK
H	4434.183	43.62	5.94	35.18	44.00	40.74	54	-13.26	AV
H	10360.014	50.59	8.46	38.71	44.50	53.26	68.2	-14.94	PK
H	10360.014	41.09	8.46	38.71	44.50	43.76	54	-10.24	AV
H	15540.146	50.09	10.12	38.38	44.10	54.49	74	-19.51	PK
H	15540.146	41.45	10.12	38.38	44.10	45.85	54	-8.15	AV
Middle Channel (5200 MHz)-Above 1G									
V	4592.162	63.05	6.48	36.35	44.05	61.83	74	-12.17	PK
V	4592.162	43.41	6.48	36.35	44.05	42.19	54	-11.81	AV
V	10400.006	63.80	8.47	37.88	44.51	65.64	68.2	-2.56	PK
V	10400.006	43.87	8.47	37.88	44.51	45.71	54	-8.29	AV
V	15600.152	64.36	10.12	38.80	44.10	69.18	74	-4.82	PK
V	15600.152	43.04	10.12	38.80	42.70	49.26	54	-4.74	AV
H	4592.098	61.96	6.48	36.37	44.05	60.76	74	-13.24	PK
H	4592.098	43.27	6.48	36.37	44.05	42.07	54	-11.93	AV
H	10400.155	50.43	8.47	38.64	44.50	53.04	68.2	-15.16	PK
H	10400.155	44.01	8.47	38.64	44.50	46.62	54	-7.38	AV
H	15600.137	54.86	10.12	38.38	44.10	59.26	74	-14.74	PK
H	15600.137	44.12	10.12	38.38	44.10	48.52	54	-5.48	AV
High Channel (5240 MHz)-Above 1G									
V	4739.169	63.72	7.10	37.24	43.50	64.56	74	-9.44	PK
V	4739.169	43.69	7.10	37.24	43.50	44.53	54	-9.47	AV
V	10480.054	63.35	8.46	37.68	44.50	64.99	68.2	-3.21	PK
V	10480.054	43.42	8.46	37.68	44.50	45.06	54	-8.94	AV
V	15720.042	64.11	10.12	38.80	44.10	68.93	74	-5.07	PK
V	15720.042	43.62	10.12	38.80	42.70	49.84	54	-4.16	AV
H	4739.178	61.75	7.10	37.24	43.50	62.59	74	-11.41	PK
H	4739.178	43.77	7.10	37.24	43.50	44.61	54	-9.39	AV
H	10480.163	51.58	8.46	38.57	44.50	54.11	68.2	-14.09	PK
H	10480.163	43.28	8.46	38.57	44.50	45.81	54	-8.19	AV
H	15720.164	50.20	10.12	38.38	44.10	54.60	74	-19.40	PK
H	15720.164	40.21	10.12	38.38	44.10	44.61	54	-9.39	AV

Note: PK value is lower than the Average value limit, So average didn't record.
 The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
 Emission level (dBuV/m) = 20 log Emission level (uV/m).
 Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
 Test Mode is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11ac-HT40
------------	--------------------------

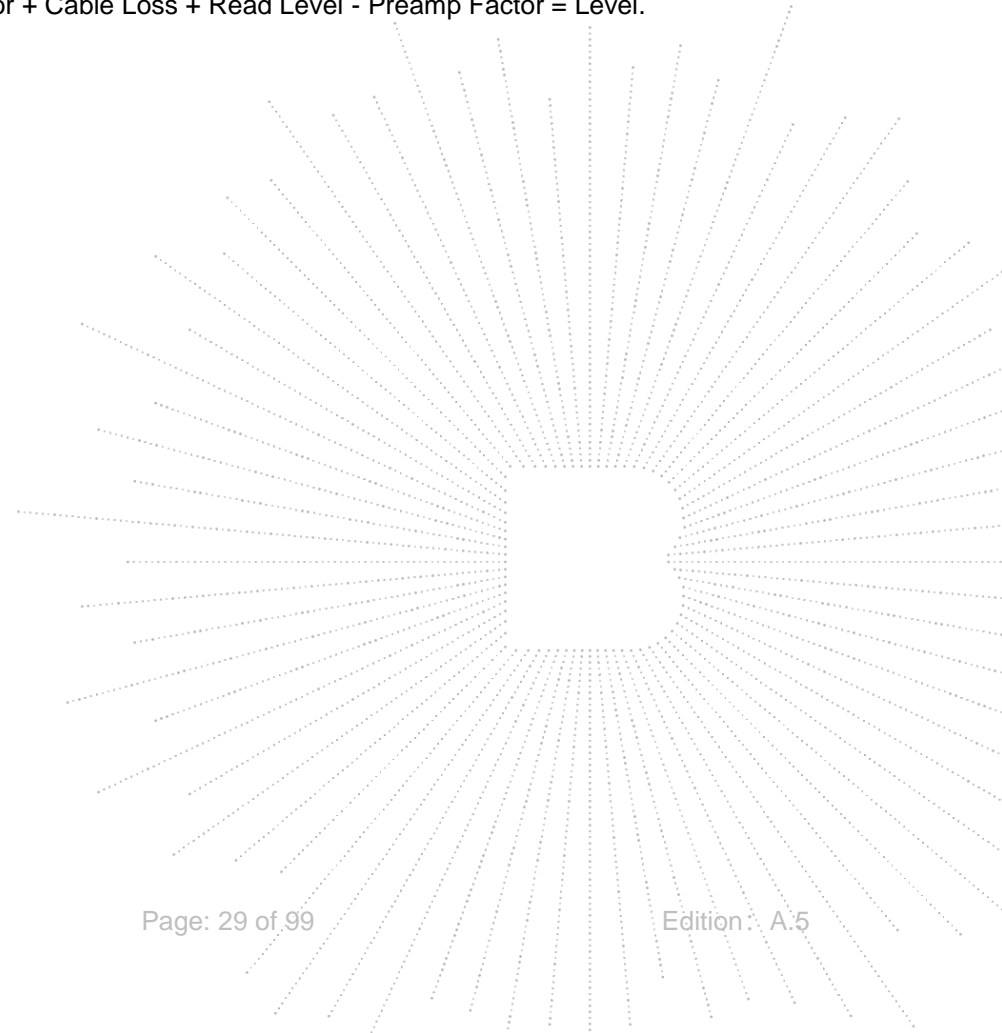
Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5190 MHz)-Above 1G									
V	4434.097	63.77	5.94	35.40	44.00	61.11	68.2	-7.09	PK
V	4434.097	43.64	5.94	35.40	44.00	40.98	54	-13.02	AV
V	10380.028	60.96	8.46	39.75	44.50	64.67	68.2	-3.53	PK
V	10380.028	43.18	8.46	39.75	44.50	46.89	54	-7.11	AV
V	15570.033	60.62	10.12	38.80	44.10	65.44	74	-8.56	PK
V	15570.033	43.70	10.12	38.80	42.70	49.92	54	-4.08	AV
H	4434.113	61.31	5.94	35.18	44.00	58.43	74	-15.57	PK
H	4434.113	43.20	5.94	35.18	44.00	40.32	54	-13.68	AV
H	10380.164	51.08	8.46	38.71	44.50	53.75	68.2	-14.45	PK
H	10380.164	44.72	8.46	38.71	44.50	47.39	54	-6.61	AV
H	15570.048	53.78	10.12	38.38	44.10	58.18	74	-15.82	PK
H	15570.048	41.00	10.12	38.38	44.10	45.40	54	-8.60	AV
High Channel (5230 MHz)-Above 1G									
V	4739.091	63.32	6.48	36.35	44.05	62.10	68.2	-6.10	PK
V	4739.091	44.00	6.48	36.35	44.05	42.78	54	-11.22	AV
V	10460.075	64.12	8.47	37.88	44.51	65.96	68.2	-2.24	PK
V	10460.075	43.30	8.47	37.88	44.51	45.14	54	-8.86	AV
V	15690.091	64.34	10.12	38.80	44.10	69.16	74	-4.84	PK
V	15690.091	43.32	10.12	38.80	42.70	49.54	54	-4.46	AV
H	4739.010	61.81	6.48	36.37	44.05	60.61	68.2	-7.59	PK
H	4739.010	43.71	6.48	36.37	44.05	42.51	54	-11.49	AV
H	10460.183	51.41	8.47	38.64	44.50	54.02	68.2	-14.18	PK
H	10460.183	40.88	8.47	38.64	44.50	43.49	54	-10.51	AV
H	15690.080	50.18	10.12	38.38	44.10	54.58	74	-19.42	PK
H	15690.080	44.70	10.12	38.38	44.10	49.10	54	-4.90	AV

Note: PK value is lower than the Average value limit, So average didn't record.
 The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
 Emission level (dBuV/m) = 20 log Emission level (uV/m).
 Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
 Test Mode is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11ac-HT80
------------	--------------------------

Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
(5210 MHz)-Above 1G									
V	4434.129	61.90	5.94	35.40	44.00	59.24	68.2	-8.96	PK
V	4434.129	43.64	5.94	35.40	44.00	40.98	54	-13.02	AV
V	10420.170	61.92	8.46	39.75	44.50	65.63	68.2	-2.57	PK
V	10420.170	43.66	8.46	39.75	44.50	47.37	54	-6.63	AV
V	15630.002	63.31	10.12	38.80	44.10	68.13	74	-5.87	PK
V	15630.002	43.47	10.12	38.80	42.70	49.69	54	-4.31	AV
H	4434.089	62.47	5.94	35.18	44.00	59.59	68.2	-8.61	PK
H	4434.089	43.00	5.94	35.18	44.00	40.12	54	-13.88	AV
H	10420.017	53.99	8.46	38.71	44.50	56.66	68.2	-11.54	PK
H	10420.017	42.84	8.46	38.71	44.50	45.51	54	-8.49	AV
H	15630.115	50.78	10.12	38.38	44.10	55.18	74	-18.82	PK
H	15630.115	41.86	10.12	38.38	44.10	46.26	54	-7.74	AV

Note: PK value is lower than the Average value limit, So average didn't record.
 The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
 Emission level (dBuV/m) = 20 log Emission level (uV/m).
 Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
 Test Mode is MIMO Mode.



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

Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5745 MHz)-Above 1G									
V	4679.008	55.82	5.94	35.40	44.00	53.16	74	-20.84	PK
V	4679.008	43.83	5.94	35.40	44.00	41.17	54	-12.83	AV
V	11490.130	57.73	8.46	39.75	44.50	61.44	68.2	-6.76	PK
V	11490.130	43.44	8.46	39.75	44.50	47.15	54	-6.85	AV
V	17235.178	59.35	10.12	38.80	44.10	64.17	68.2	-4.03	PK
V	17235.178	43.14	10.12	38.80	42.70	49.36	54	-4.64	AV
H	4679.192	57.42	5.94	35.18	44.00	54.54	74	-19.46	PK
H	4679.192	43.65	5.94	35.18	44.00	40.77	54	-13.23	AV
H	11490.015	54.07	8.46	38.71	44.50	56.74	68.2	-11.46	PK
H	11490.015	41.86	8.46	38.71	44.50	44.53	54	-9.47	AV
H	17235.075	50.55	10.12	38.38	44.10	54.95	68.2	-13.25	PK
H	17235.075	42.00	10.12	38.38	44.10	46.40	54	-7.60	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.049	57.59	6.48	36.35	44.05	56.37	74	-17.63	PK
V	4592.049	43.11	6.48	36.35	44.05	41.89	54	-12.11	AV
V	11570.022	57.76	8.47	37.88	44.51	59.60	68.2	-8.60	PK
V	11570.022	43.47	8.47	37.88	44.51	45.31	54	-8.69	AV
V	17355.146	59.17	10.12	38.80	44.10	63.99	68.2	-4.21	PK
V	17355.146	39.40	10.12	38.80	42.70	45.62	54	-8.38	AV
H	4592.076	58.67	6.48	36.37	44.05	57.47	74	-16.53	PK
H	4592.076	43.76	6.48	36.37	44.05	42.56	54	-11.44	AV
H	11570.099	52.51	8.47	38.64	44.50	55.12	68.2	-13.08	PK
H	11570.099	41.82	8.47	38.64	44.50	44.43	54	-9.57	AV
H	17355.097	51.74	10.12	38.38	44.10	56.14	68.2	-12.06	PK
H	17355.097	43.52	10.12	38.38	44.10	47.92	54	-6.08	AV
High Channel (5825 MHz)-Above 1G									
V	6039.131	60.72	7.10	37.24	43.50	61.56	68.2	-6.64	PK
V	6039.131	43.21	7.10	37.24	43.50	44.05	54	-9.95	AV
V	11650.123	60.67	8.46	37.68	44.50	62.31	74	-11.69	PK
V	11650.123	43.83	8.46	37.68	44.50	45.47	54	-8.53	AV
V	17475.042	56.04	10.12	38.80	44.10	60.86	68.2	-7.34	PK
V	17475.042	43.18	10.12	38.80	42.70	49.40	54	-4.60	AV
H	6039.141	54.83	7.10	37.24	43.50	55.67	68.2	-12.53	PK
H	6039.141	43.35	7.10	37.24	43.50	44.19	54	-9.81	AV
H	11650.119	54.44	8.46	38.57	44.50	56.97	74	-17.03	PK
H	11650.119	40.16	8.46	38.57	44.50	42.69	54	-11.31	AV
H	17475.022	54.05	10.12	38.38	44.10	58.45	68.2	-9.75	PK
H	17475.022	42.24	10.12	38.38	44.10	46.64	54	-7.36	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	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5745 MHz)-Above 1G									
V	4679.116	59.53	5.94	35.40	44.00	56.87	74	-17.13	PK
V	4679.116	43.89	5.94	35.40	44.00	41.23	54	-12.77	AV
V	11490.009	55.91	8.46	39.75	44.50	59.62	68.2	-8.58	PK
V	11490.009	43.63	8.46	39.75	44.50	47.34	54	-6.66	AV
V	17235.003	60.58	10.12	38.80	44.10	65.40	68.2	-2.80	PK
V	17235.003	43.26	10.12	38.80	42.70	49.48	54	-4.52	AV
H	4679.080	57.01	5.94	35.18	44.00	54.13	74	-19.87	PK
H	4679.080	43.72	5.94	35.18	44.00	40.84	54	-13.16	AV
H	11490.115	47.18	8.46	38.71	44.50	49.85	68.2	-18.35	PK
H	11490.115	41.93	8.46	38.71	44.50	44.60	54	-9.40	AV
H	17235.022	53.74	10.12	38.38	44.10	58.14	68.2	-10.06	PK
H	17235.022	41.96	10.12	38.38	44.10	46.36	54	-7.64	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.179	61.42	6.48	36.35	44.05	60.20	74	-13.80	PK
V	4592.179	43.41	6.48	36.35	44.05	42.19	54	-11.81	AV
V	11570.024	56.72	8.47	37.88	44.51	58.56	68.2	-9.64	PK
V	11570.024	43.47	8.47	37.88	44.51	45.31	54	-8.69	AV
V	17355.172	60.25	10.12	38.80	44.10	65.07	68.2	-3.13	PK
V	17355.172	43.64	10.12	38.80	42.70	49.86	54	-4.14	AV
H	4592.085	57.85	6.48	36.37	44.05	56.65	74	-17.35	PK
H	4592.085	43.06	6.48	36.37	44.05	41.86	54	-12.14	AV
H	11570.159	53.60	8.47	38.64	44.50	56.21	68.2	-11.99	PK
H	11570.159	43.63	8.47	38.64	44.50	46.24	54	-7.76	AV
H	17355.098	51.26	10.12	38.38	44.10	55.66	68.2	-12.54	PK
H	17355.098	44.50	10.12	38.38	44.10	48.90	54	-5.10	AV
High Channel (5825 MHz)-Above 1G									
V	6039.037	56.41	7.10	37.24	43.50	57.25	68.2	-10.95	PK
V	6039.037	43.28	7.10	37.24	43.50	44.12	54	-9.88	AV
V	11650.062	58.03	8.46	37.68	44.50	59.67	74	-14.33	PK
V	11650.062	43.03	8.46	37.68	44.50	44.67	54	-9.33	AV
V	17475.103	58.27	10.12	38.80	44.10	63.09	68.2	-5.11	PK
V	17475.103	43.57	10.12	38.80	42.70	49.79	54	-4.21	AV
H	6039.132	56.79	7.10	37.24	43.50	57.63	68.2	-10.57	PK
H	6039.132	43.69	7.10	37.24	43.50	44.53	54	-9.47	AV
H	11650.095	50.32	8.46	38.57	44.50	52.85	74	-21.15	PK
H	11650.095	43.73	8.46	38.57	44.50	46.26	54	-7.74	AV
H	17475.110	50.06	10.12	38.38	44.10	54.46	68.2	-13.74	PK
H	17475.110	41.71	10.12	38.38	44.10	46.11	54	-7.89	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(5.8G) - 802.11n-HT40
------------	-------------------------

Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5755 MHz)-Above 1G									
V	4679.110	60.38	5.94	35.40	44.00	57.72	74	-16.28	PK
V	4679.110	43.86	5.94	35.40	44.00	41.20	54	-12.80	AV
V	11510.170	55.39	8.46	39.75	44.50	59.10	74	-14.90	PK
V	11510.170	43.93	8.46	39.75	44.50	47.64	54	-6.36	AV
V	17265.116	59.17	10.12	38.80	44.10	63.99	68.2	-4.21	PK
V	17265.116	44.94	8.47	38.64	44.50	47.55	54	-6.45	AV
H	4679.036	60.26	5.94	35.18	44.00	57.38	74	-16.62	PK
H	4679.036	43.62	5.94	35.18	44.00	40.74	54	-13.26	AV
H	11510.076	51.08	8.46	38.71	44.50	53.75	74	-20.25	PK
H	11510.076	44.36	8.46	38.71	44.50	47.03	54	-6.97	AV
H	17265.140	52.21	10.12	38.38	44.10	56.61	68.2	-11.59	PK
H	17265.140	41.52	10.12	38.38	44.10	45.92	54	-8.08	AV
High Channel (5795 MHz)-Above 1G									
V	6039.152	56.56	6.48	36.35	44.05	55.34	68.2	-12.86	PK
V	6039.152	43.04	6.48	36.35	44.05	41.82	54	-12.18	AV
V	11590.145	59.21	8.47	37.88	44.51	61.05	74	-12.95	PK
V	11590.145	43.37	8.47	37.88	44.51	45.21	54	-8.79	AV
V	17385.033	55.97	10.12	38.80	44.10	60.79	68.2	-7.41	PK
V	17385.033	41.48	10.12	38.80	42.70	47.70	54	-6.30	AV
H	6039.066	58.78	6.48	36.37	44.05	57.58	68.2	-10.62	PK
H	6039.066	43.73	6.48	36.37	44.05	42.53	54	-11.47	AV
H	11590.119	51.54	8.47	38.64	44.50	54.15	74	-19.85	PK
H	11590.119	44.94	8.47	38.64	44.50	47.55	54	-6.45	AV
H	17385.116	53.75	10.12	38.38	44.10	58.15	68.2	-10.05	PK
H	17385.116	42.98	10.12	38.38	44.10	47.38	54	-6.62	AV

Note: PK value is lower than the Average value limit, So average didn't record.
 The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
 Emission level (dBuV/m) = 20 log Emission level (uV/m).
 Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
 Test Mode is MIMO Mode.

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

Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5745 MHz)-Above 1G									
V	4679.006	60.74	5.94	35.40	44.00	58.08	74	-15.92	PK
V	4679.006	43.23	5.94	35.40	44.00	40.57	54	-13.43	AV
V	11490.138	53.39	8.46	39.75	44.50	57.10	68.2	-11.10	PK
V	11490.138	43.77	8.46	39.75	44.50	47.48	54	-6.52	AV
V	17235.118	57.35	10.12	38.80	44.10	62.17	68.2	-6.03	PK
V	17235.118	43.46	10.12	38.80	42.70	49.68	54	-4.32	AV
H	4679.114	59.32	5.94	35.18	44.00	56.44	74	-17.56	PK
H	4679.114	43.99	5.94	35.18	44.00	41.11	54	-12.89	AV
H	11490.146	48.53	8.46	38.71	44.50	51.20	68.2	-17.00	PK
H	11490.146	41.29	8.46	38.71	44.50	43.96	54	-10.04	AV
H	17235.176	50.46	10.12	38.38	44.10	54.86	68.2	-13.34	PK
H	17235.176	41.31	10.12	38.38	44.10	45.71	54	-8.29	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.105	61.39	6.48	36.35	44.05	60.17	74	-13.83	PK
V	4592.105	43.61	6.48	36.35	44.05	42.39	54	-11.61	AV
V	11570.179	55.31	8.47	37.88	44.51	57.15	68.2	-11.05	PK
V	11570.179	43.89	8.47	37.88	44.51	45.73	54	-8.27	AV
V	17355.034	58.47	10.12	38.80	44.10	63.29	68.2	-4.91	PK
V	17355.034	43.75	10.12	38.80	42.70	49.97	54	-4.03	AV
H	4592.189	57.62	6.48	36.37	44.05	56.42	74	-17.58	PK
H	4592.189	43.52	6.48	36.37	44.05	42.32	54	-11.68	AV
H	11570.127	52.92	8.47	38.64	44.50	55.53	68.2	-12.67	PK
H	11570.127	42.35	8.47	38.64	44.50	44.96	54	-9.04	AV
H	17355.075	52.79	10.12	38.38	44.10	57.19	68.2	-11.01	PK
H	17355.075	43.91	10.12	38.38	44.10	48.31	54	-5.69	AV
High Channel (5825 MHz)-Above 1G									
V	6039.062	58.26	7.10	37.24	43.50	59.10	68.2	-9.10	PK
V	6039.062	43.40	7.10	37.24	43.50	44.24	54	-9.76	AV
V	11650.082	59.33	8.46	37.68	44.50	60.97	74	-13.03	PK
V	11650.082	43.30	8.46	37.68	44.50	44.94	54	-9.06	AV
V	17475.152	56.40	10.12	38.80	44.10	61.22	68.2	-6.98	PK
V	17475.152	43.70	10.12	38.80	42.70	49.92	54	-4.08	AV
H	6039.104	55.60	7.10	37.24	43.50	56.44	68.2	-11.76	PK
H	6039.104	43.79	7.10	37.24	43.50	44.63	54	-9.37	AV
H	11650.144	51.87	8.46	38.57	44.50	54.40	74	-19.60	PK
H	11650.144	42.80	8.46	38.57	44.50	45.33	54	-8.67	AV
H	17475.143	53.96	10.12	38.38	44.10	58.36	68.2	-9.84	PK
H	17475.143	44.73	10.12	38.38	44.10	49.13	54	-4.87	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(5.8G) - 802.11ac-HT40
------------	--------------------------

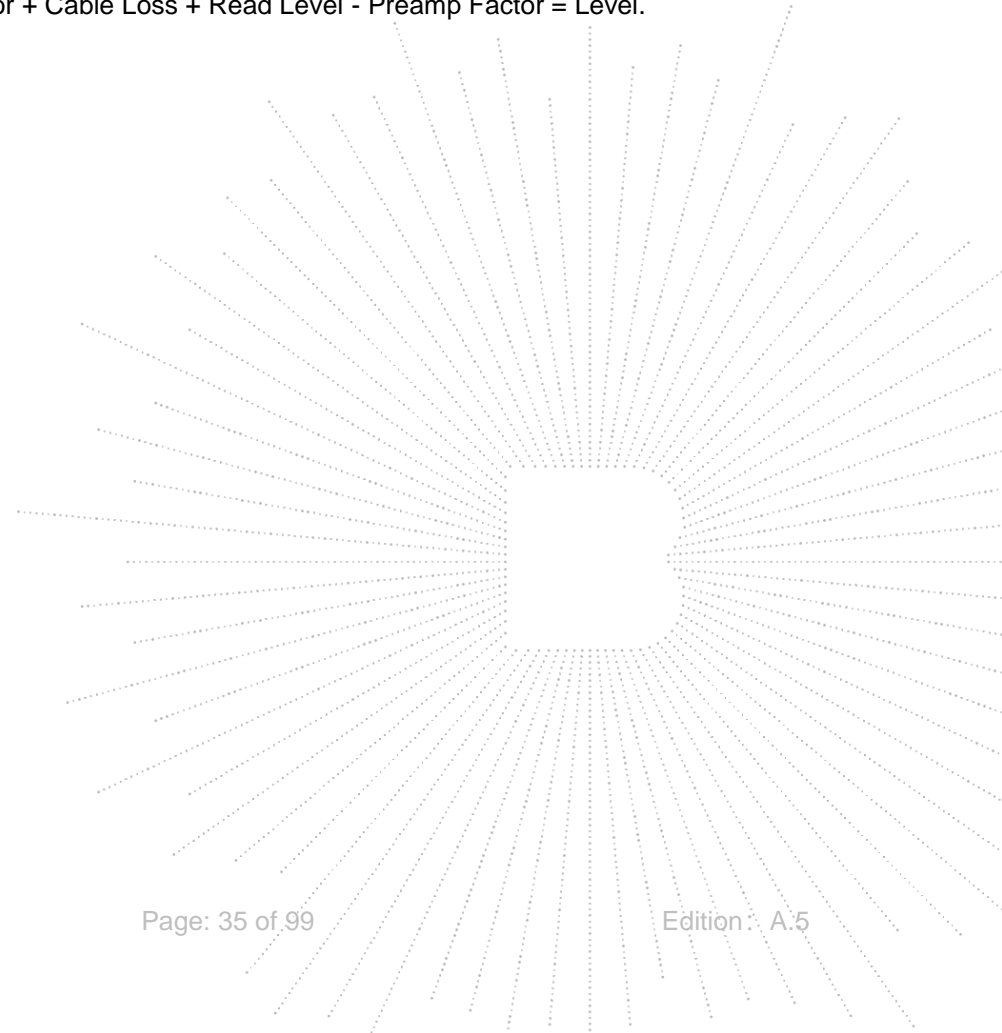
Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5755 MHz)-Above 1G									
V	4679.108	58.22	5.94	35.40	44.00	55.56	74	-18.44	PK
V	4679.108	43.62	5.94	35.40	44.00	40.96	54	-13.04	AV
V	11510.153	55.47	8.46	39.75	44.50	59.18	74	-14.82	PK
V	11510.153	43.71	8.46	39.75	44.50	47.42	54	-6.58	AV
V	17265.089	59.52	10.12	38.80	44.10	64.34	68.2	-3.86	PK
V	17265.089	43.67	6.48	36.37	44.05	42.47	54	-11.53	AV
H	4679.051	59.75	5.94	35.18	44.00	56.87	74	-17.13	PK
H	4679.051	43.89	5.94	35.18	44.00	41.01	54	-12.99	AV
H	11510.176	54.19	8.46	38.71	44.50	56.86	74	-17.14	PK
H	11510.176	40.56	8.46	38.71	44.50	43.23	54	-10.77	AV
H	17265.050	53.66	10.12	38.38	44.10	58.06	68.2	-10.14	PK
H	17265.050	43.03	10.12	38.38	44.10	47.43	54	-6.57	AV
High Channel (5795 MHz)-Above 1G									
V	6039.094	57.47	6.48	36.35	44.05	56.25	68.2	-11.95	PK
V	6039.094	43.80	6.48	36.35	44.05	42.58	54	-11.42	AV
V	11590.196	59.67	8.47	37.88	44.51	61.51	74	-12.49	PK
V	11590.196	43.71	8.47	37.88	44.51	45.55	54	-8.45	AV
V	17385.114	55.77	10.12	38.80	44.10	60.59	68.2	-7.61	PK
V	17385.114	41.91	10.12	38.80	42.70	48.13	54	-5.87	AV
H	6039.149	60.43	6.48	36.37	44.05	59.23	68.2	-8.97	PK
H	6039.149	43.67	6.48	36.37	44.05	42.47	54	-11.53	AV
H	11590.116	50.45	8.47	38.64	44.50	53.06	74	-20.94	PK
H	11590.116	44.48	8.47	38.64	44.50	47.09	54	-6.91	AV
H	17385.020	50.22	10.12	38.38	44.10	54.62	68.2	-13.58	PK
H	17385.020	43.17	10.12	38.38	44.10	47.57	54	-6.43	AV

Note: PK value is lower than the Average value limit, So average didn't record.
 The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
 Emission level (dBuV/m) = 20 log Emission level (uV/m).
 Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
 Test Mode is MIMO Mode.

Test Mode:	TX(5.8G) - 802.11ac-HT80
------------	--------------------------

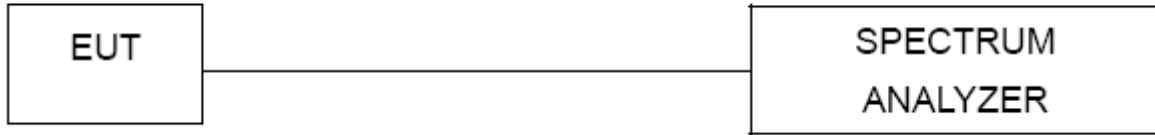
Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
(5775 MHz)-Above 1G									
V	4679.061	57.75	5.94	35.40	44.00	55.09	74	-18.91	PK
V	4679.061	43.22	5.94	35.40	44.00	40.56	54	-13.44	AV
V	11550.010	56.08	8.46	39.75	44.50	59.79	74	-14.21	PK
V	11550.010	42.13	8.46	39.75	44.50	45.84	54	-8.16	AV
V	17325.077	57.29	10.12	38.80	44.10	62.11	68.2	-6.09	PK
V	17325.077	41.44	10.12	38.80	42.70	47.66	54	-6.34	AV
H	4679.121	59.36	5.94	35.18	44.00	56.48	74	-17.52	PK
H	4679.121	43.42	5.94	35.18	44.00	40.54	54	-13.46	AV
H	11550.182	52.99	8.46	38.71	44.50	55.66	74	-18.34	PK
H	11550.182	40.76	8.46	38.71	44.50	43.43	54	-10.57	AV
H	17325.013	50.01	10.12	38.38	44.10	54.41	68.2	-13.79	PK
H	17325.013	40.59	10.12	38.38	44.10	44.99	54	-9.01	AV

Note: PK value is lower than the Average value limit, So average didn't record.
 The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
 Emission level (dBuV/m) = 20 log Emission level (uV/m).
 Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
 Test Mode is MIMO Mode.



8. POWER SPECTRAL DENSITY TEST

8.1 Block Diagram Of Test Setup



8.2 Limit

For the band 5.15-5.25 GHz,

(i) For an outdoor Wifi Repeater operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor Wifi Repeater operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point Wifi Repeaters operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz

(3) For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

8.3 Test procedure

For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:

a) Set $RBW \geq 1/T$, where T is defined in section II.B.I.a).

b) Set $VBW \geq 3 RBW$.

c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/RBW)$ to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

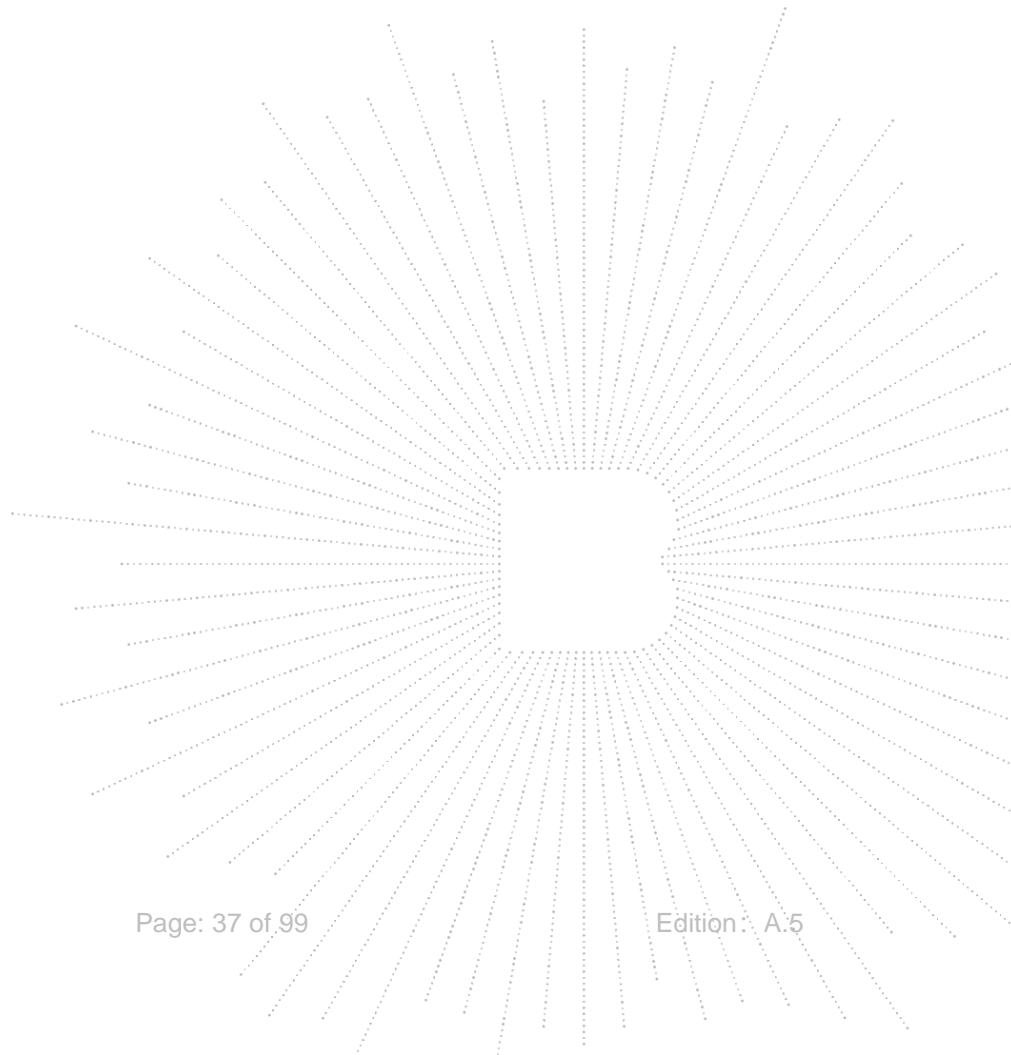
d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add $10\log(1\text{MHz}/RBW)$ to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.

e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for the sections 5.c) and 5.d) above, since RBW=100 kHz is available on nearly all spectrum analyzers.

8.4 EUT operating Conditions

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



8.5 Test Result

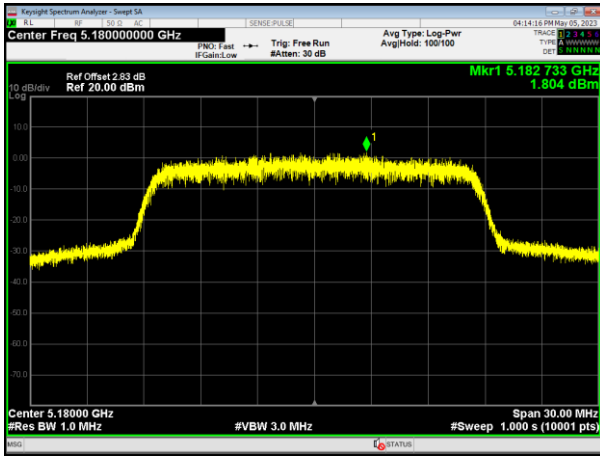
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	AC120V/60Hz
Test Mode:	TX Frequency U-NII-1 (5180-5240MHz)		

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

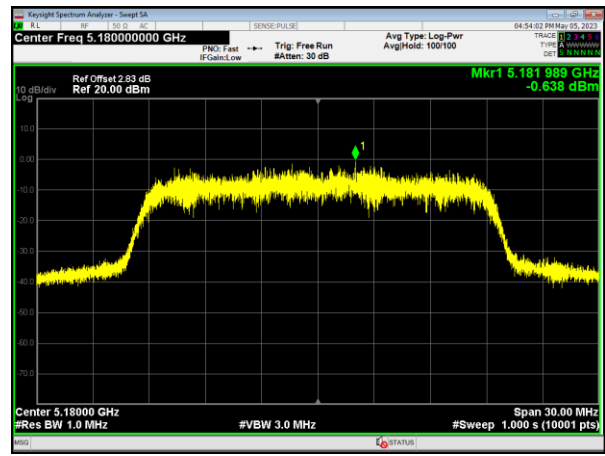
Mode	Frequency	Measured Power Density (dBm/MHz)			Limit (dBm/MHz)	Result
		ANT A	ANT B	Total		
802.11 a	5180 MHz	1.8	0.81	/	17	PASS
	5200 MHz	1.64	2.61	/	17	PASS
	5240 MHz	3.99	3.31	/	17	PASS
802.11 n20	5180 MHz	-0.64	-0.06	2.669	14.46	PASS
	5200 MHz	-2.04	-2.07	0.955	14.46	PASS
	5240 MHz	-0.67	1.72	3.697	14.46	PASS
802.11 n40	5190 MHz	-8.67	-6.09	-4.18	14.46	PASS
	5230 MHz	-9.05	-5.15	-3.665	14.46	PASS
802.11 ac20	5180 MHz	0.21	-0.98	2.665	14.46	PASS
	5200 MHz	0.91	0.08	3.525	14.46	PASS
	5240 MHz	1.65	1.64	4.655	14.46	PASS
802.11 ac40	5190 MHz	-5.22	-7.46	-3.186	14.46	PASS
	5230 MHz	-5.88	-6.11	-2.983	14.46	PASS
802.11 AC80	5210 MHz	-15.39	-14.08	-11.675	14.46	PASS

For those cases where the rule specifies that the Power Spectral Density be reduced by the amount in dB that the directional gain of the transmitting antenna exceeds 6 dBi, the applicable output power limit shall be calculated as follows: Limit =P limit- (Gain - 6)

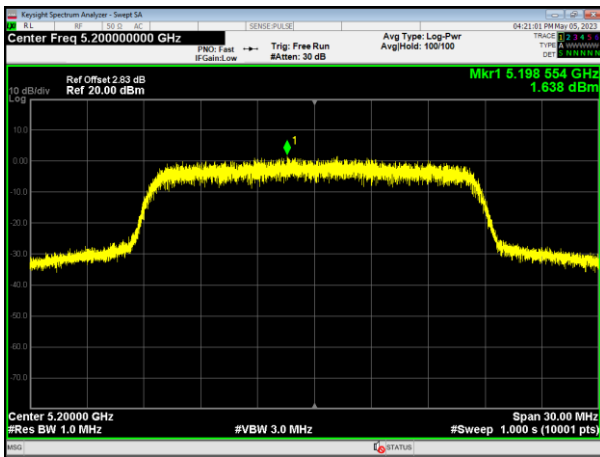
(802.11a) PSD plot on channel 36



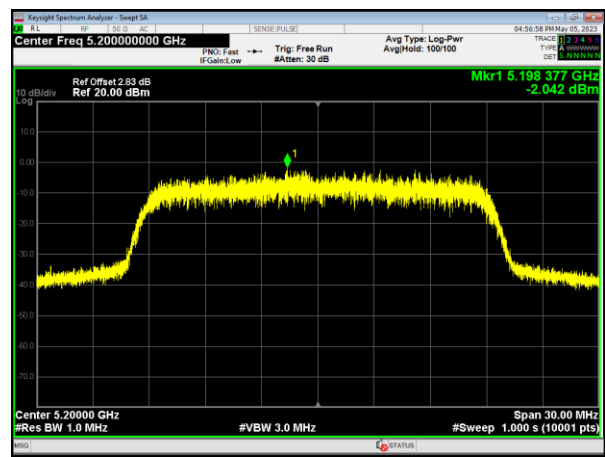
(802.11n20) PSD plot on channel 36



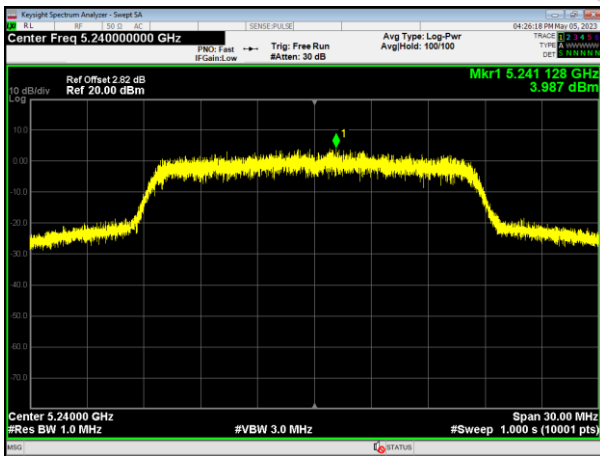
(802.11a) PSD plot on channel 40



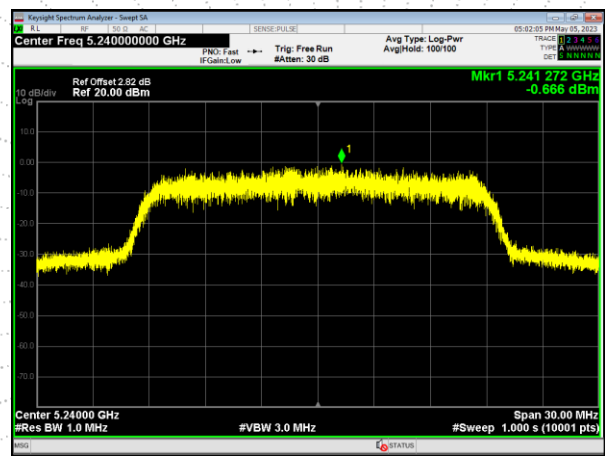
(802.11n20) PSD plot on channel 40



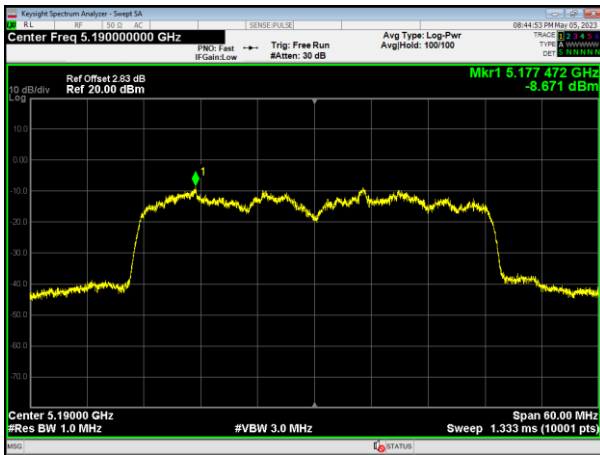
(802.11a) PSD plot on channel 48



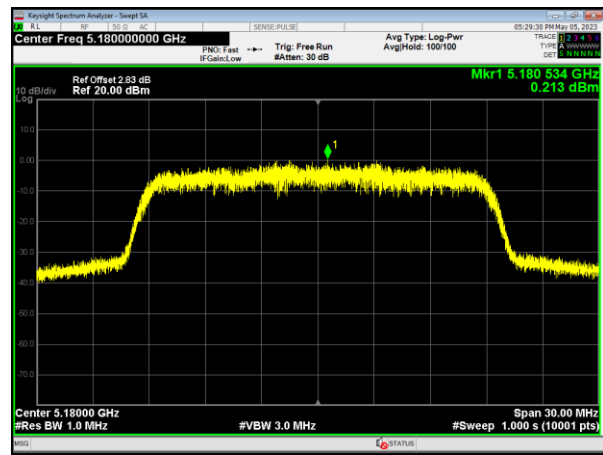
(802.11n20) PSD plot on channel 48



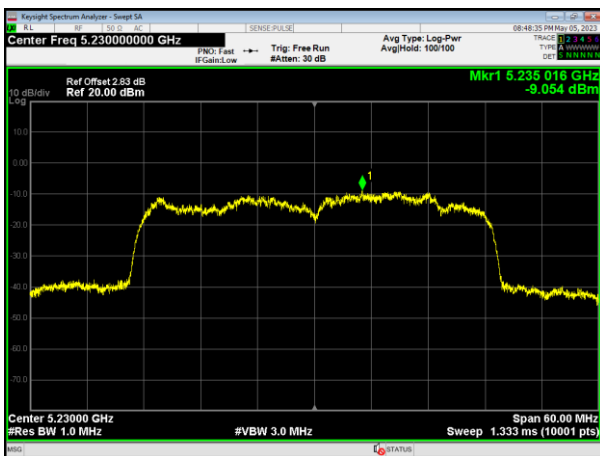
(802.11n40) PSD plot on channel 38



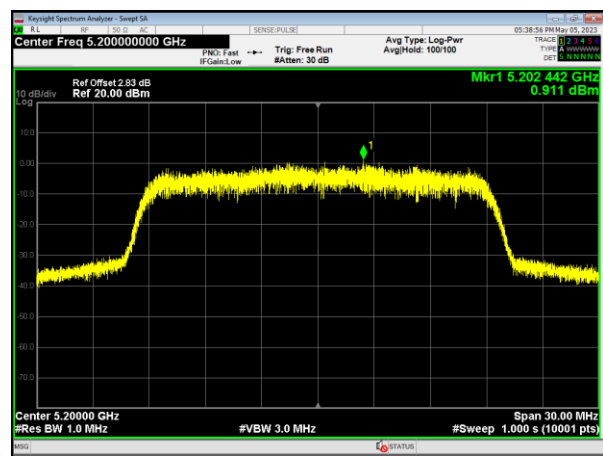
(802.11ac20) PSD plot on channel 36



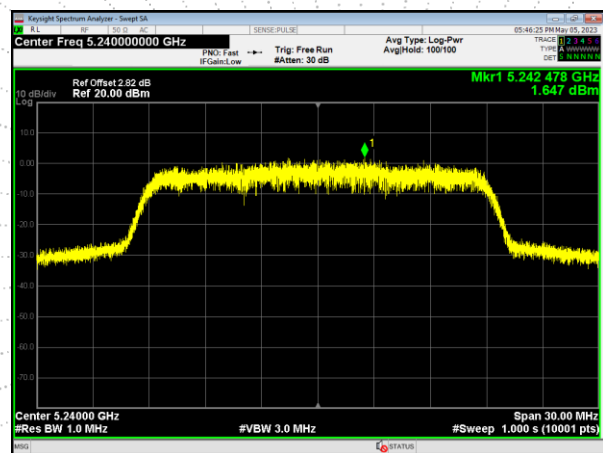
(802.11n40) PSD plot on channel 46



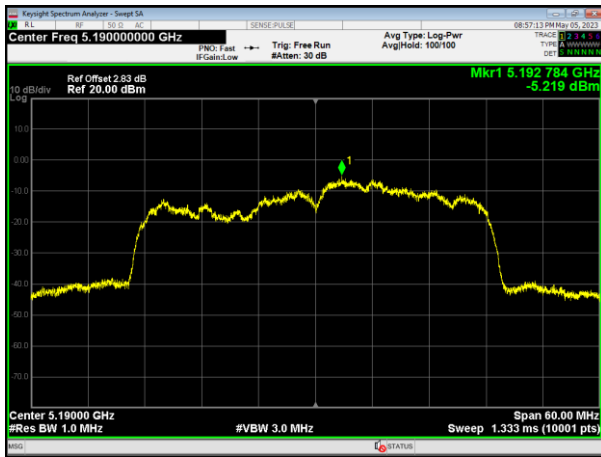
(802.11ac20) PSD plot on channel 40



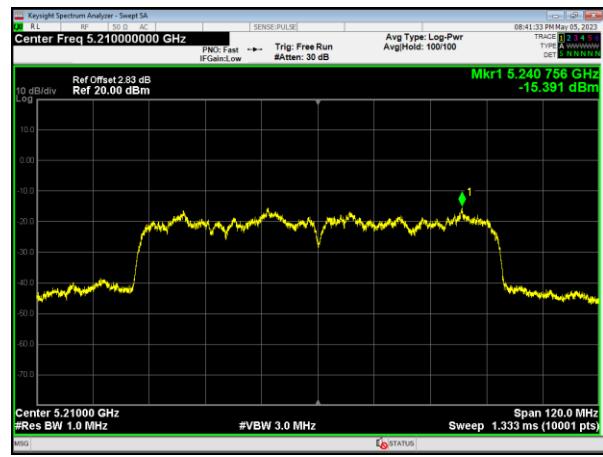
(802.11ac20) PSD plot on channel 48



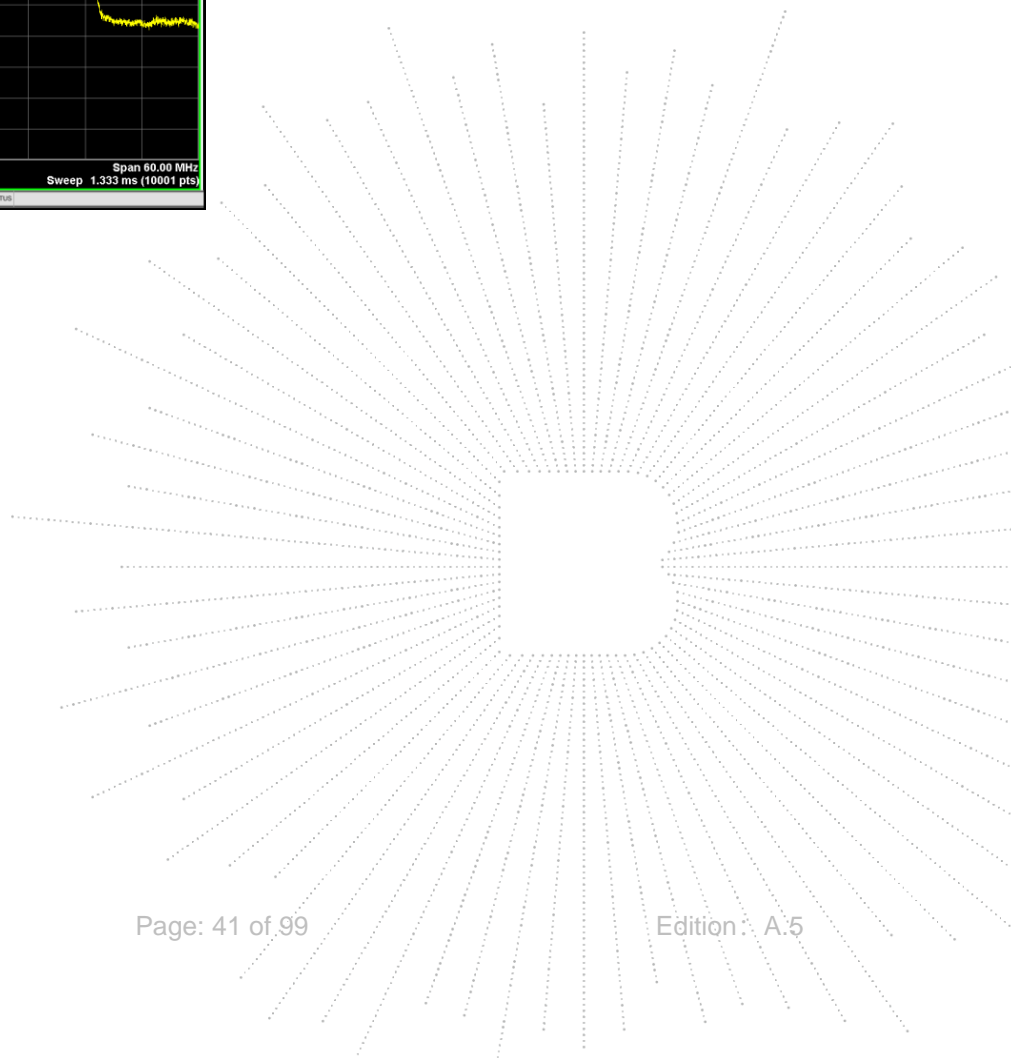
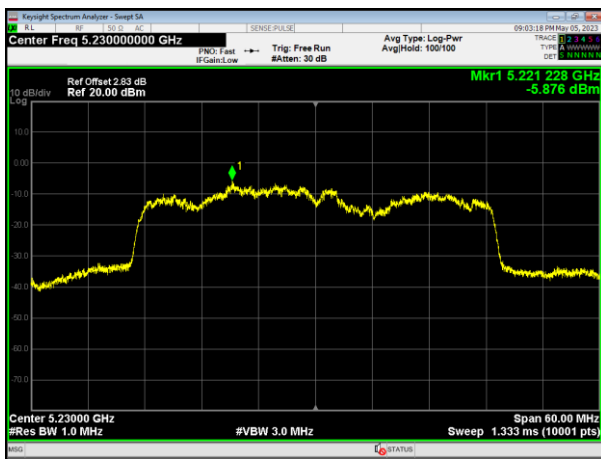
(802.11ac40) PSD plot on channel 38



(802.11ac80) PSD plot on channel 42



(802.11ac40) PSD plot on channel 46



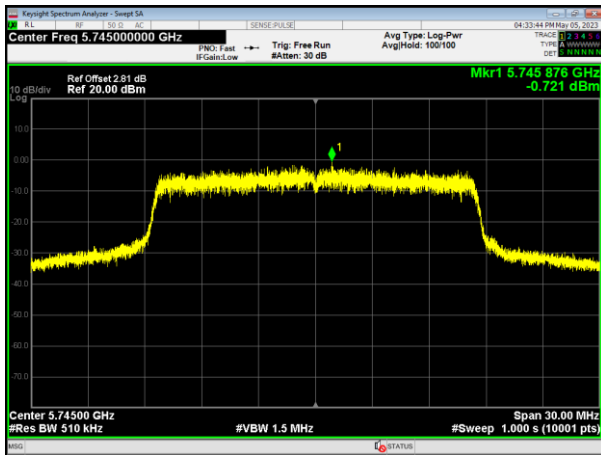
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	AC120V/60Hz
Test Mode:	TX Frequency U-NII-3 (5745-5825MHz)		

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

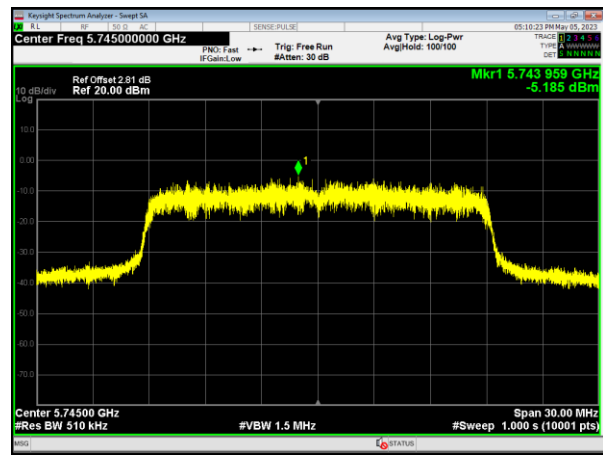
Mode	Frequency	Measured Power Density (dBm/500KHz)			Limit (dBm/500kHz)	Result
		ANT A	ANT B	Total		
802.11 a	5745 MHz	-0.72	-1.17	/	30	PASS
	5785 MHz	-0.41	-0.59	/	30	PASS
	5825 MHz	-1.19	-2.76	/	30	PASS
802.11 n20	5745 MHz	-5.19	-1.52	0.03	27.46	PASS
	5785 MHz	-4.54	-5.27	-1.88	27.46	PASS
	5825 MHz	-6.3	-3.32	-1.55	27.46	PASS
802.11 n40	5755 MHz	-10.1	-9.45	-6.75	27.46	PASS
	5795 MHz	-9.87	-10.38	-7.11	27.46	PASS
802.11 ac20	5745 MHz	-5.49	-4.36	-1.88	27.46	PASS
	5785 MHz	-3.4	-4.49	-0.90	27.46	PASS
	5825 MHz	-5.22	-2.93	-0.92	27.46	PASS
802.11 ac40	5755 MHz	-10.22	-12.45	-8.18	27.46	PASS
	5795 MHz	-9.48	-8.8	-6.12	27.46	PASS
802.11 AC80	5775 MHz	-16.42	-15.53	-12.94	27.46	PASS

For those cases where the rule specifies that the Power Spectral Density be reduced by the amount in dB that the directional gain of the transmitting antenna exceeds 6 dBi, the applicable output power limit shall be calculated as follows: $\text{Limit} = P_{\text{limit}} - (\text{Gain} - 6)$

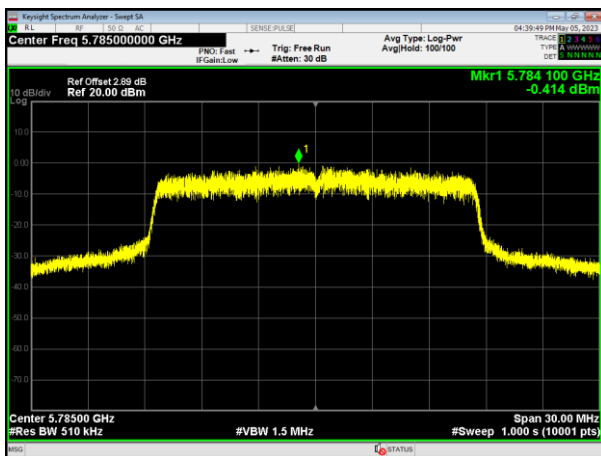
(802.11a) PSD plot on channel 149



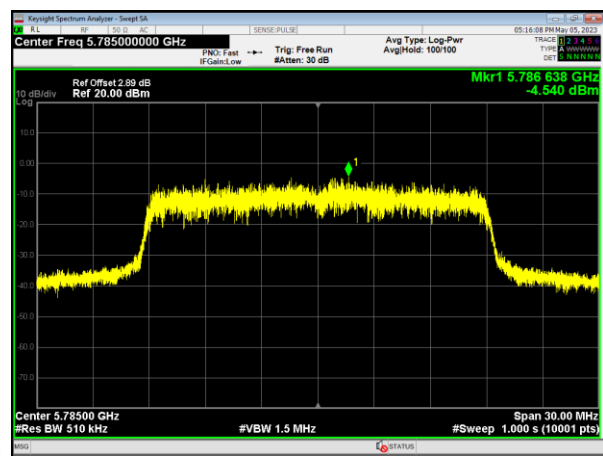
(802.11n20) PSD plot on channel 149



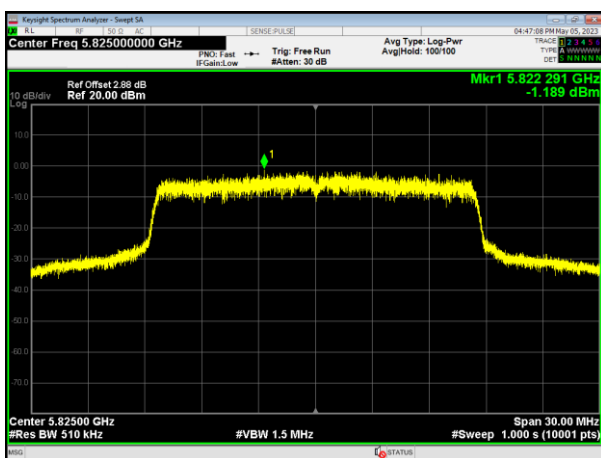
(802.11a) PSD plot on channel 157



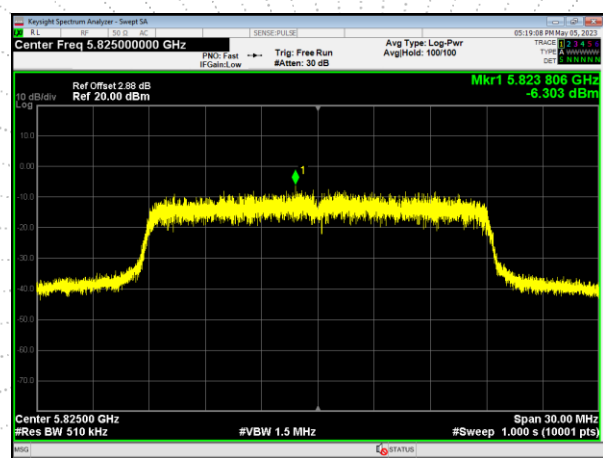
(802.11n20) PSD plot on channel 157



(802.11a) PSD plot on channel 165



(802.11n20) PSD plot on channel 165



(802.11n40) PSD plot on channel 151



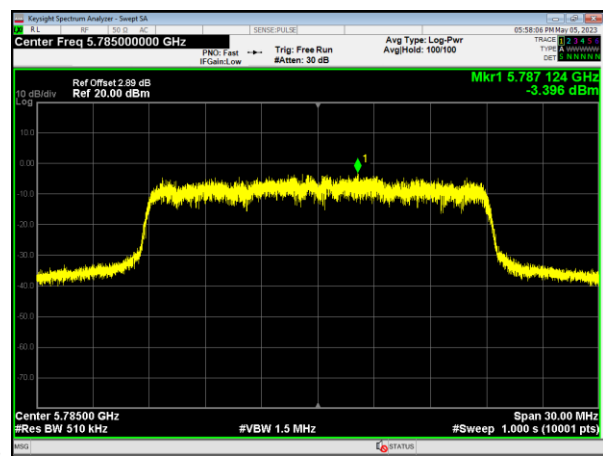
(802.11ac20) PSD plot on channel 149



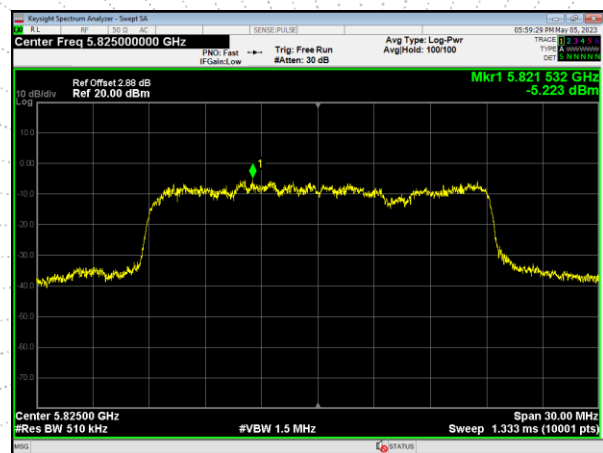
(802.11n40) PSD plot on channel 159



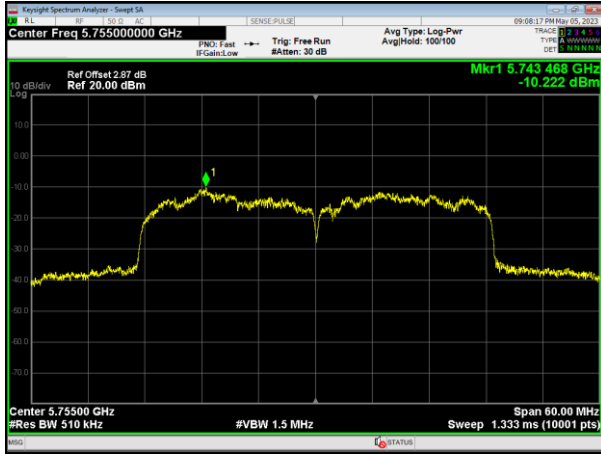
(802.11ac20) PSD plot on channel 157



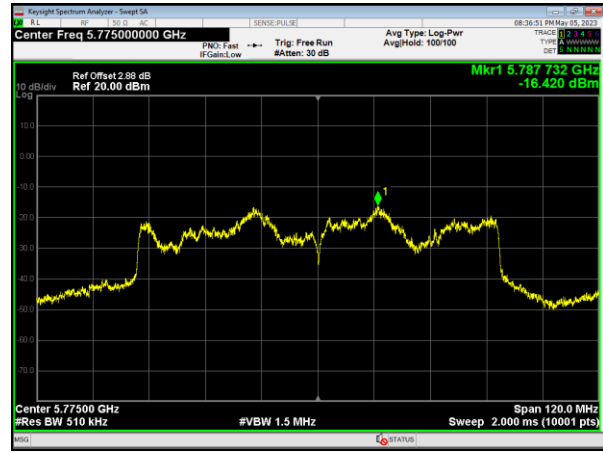
(802.11ac20) PSD plot on channel 165



(802.11ac40) PSD plot on channel 151



(802.11ac80) PSD plot on channel 155



(802.11ac40) PSD plot on channel 159

