

TEST REPORT

Report No.: BCTC2108391545-2E

Applicant: Mofi Network Inc

Product Name: MOFI5500-5GXeLTE

Model/Type
reference: MOFI5500-5GXeLTE

Tested Date: 2021-08-04 to 2021-10-25

Issued Date: 2021-10-26



Shenzhen BCTC Testing Co., Ltd.



FCC ID: 2AE6X-MOFI5500

Product Name: MOFI5500-5GXeLTE
Trademark: N/A
Model/Type reference: MOFI5500-5GXeLTE
Prepared For: Mofi Network Inc
Address: 15 SIMS CRES UNITS 4,5,6 RICHMOND HILL, ON, L4B 1C9
Manufacturer: Mofi Network Inc
Address: 15 SIMS CRES UNITS 4,5,6 RICHMOND HILL, ON, L4B 1C9
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: 2021-08-04
Sample tested Date: 2021-08-04 to 2021-10-25
Issue Date: 2021-10-26
Report No.: BCTC2108391545-2E
Test Standards: FCC Part15 15.407
ANSI C63.10-2013
KDB 662911 D01 v02r01
KDB 789033 D02 v02r01
Test Results: PASS

Tested by:



Eric Yang/Project Handler

Approved by:



Zero Zhou/Reviewer

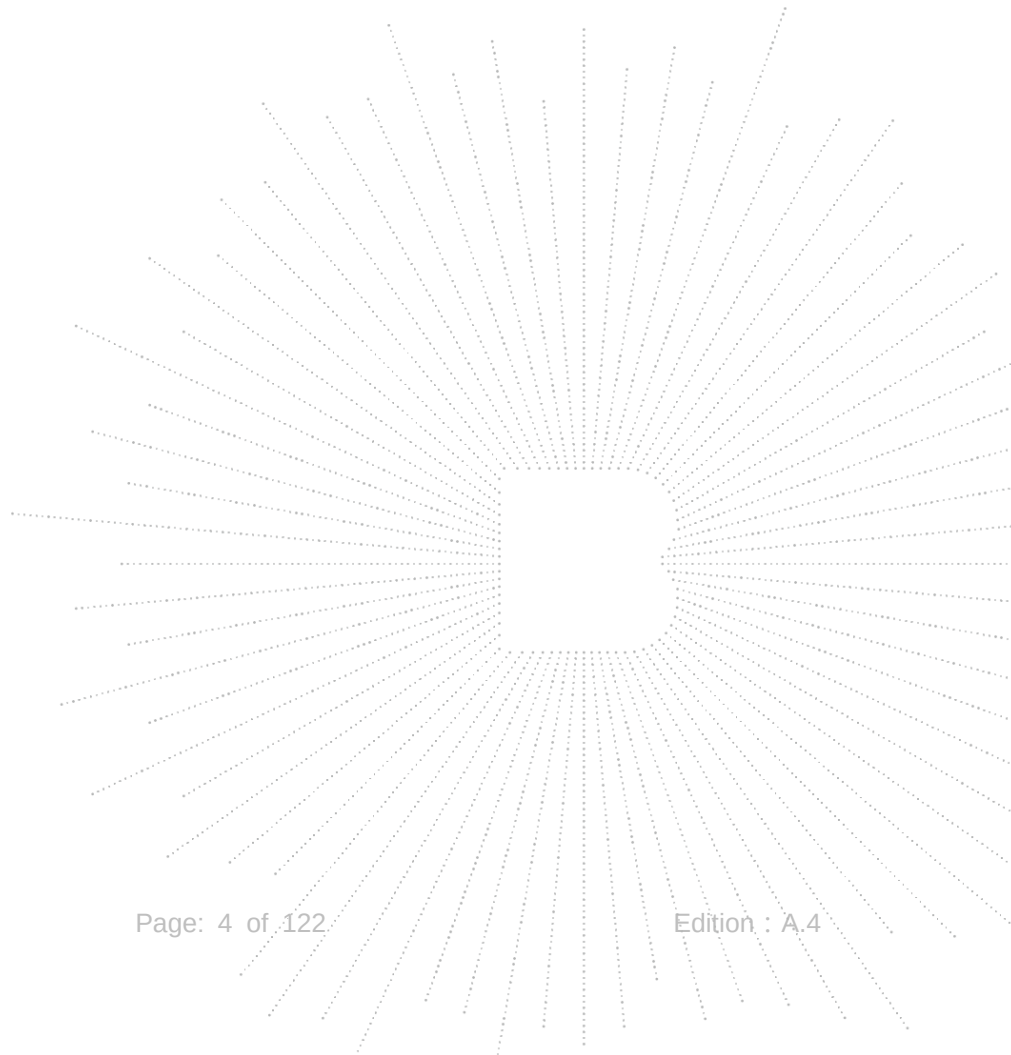
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(Note: N/A Means Not Applicable)



1. Version

Report No.	Issue Date	Description	Approved
BCTC2108391545-2E	2021-10-26	Original	Valid

2. Test Summary

The Product has been tested according to the following specifications:

1	Test Parameter	Clause No.	Results
1	Spurious Radiated Emissions	15.209(a), 15.407 (b)(1) 15.407 (b)(4) 15.407 (b)(8)	PASS
2	Conducted Emission	15.207	PASS
3	26 dB and 99% Emission Bandwidth	15.407 (a)(12) 15.1049	PASS
4	Minimum 6 dB bandwidth	15.407(e)	PASS
5	Maximum Conducted Output Power	15.407 (a)(1) 15.407 (a)(3)	PASS
6	Band Edge	2.1051, 15.407(b)(1) 15.407(b)(4)	PASS
7	Power Spectral Density	15.407 (a)(1) 15.407 (a)(3)	PASS
8	Spurious Emissions at Antenna Terminals	2.1051, 15.407(b)	PASS
9	Antenna Requirement	15.203	PASS

3. Measurement Uncertainty

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

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
2	3m chamber Radiated spurious emission(9KHz-30MHz)	U=3.7dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.5dB
4	3m chamber Radiated spurious mission(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:	MOFI5500-5GXeLTE
Model differences:	N/A
IEEE 802.11 WLAN	802.11a/n/ac(20MHz channel bandwidth)
Mode Supported	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 *4
Antenna Gain:	Antenna A:2dBi Antenna B:2dBi Antenna C:2dBi Antenna D:2dBi
Ratings:	DC 12V 3A
Adapter:	MODEL: TAP45-120S350U1 INPUT: AC100-240V~50/60Hz OUTPUT: DC 12 V 3.5A

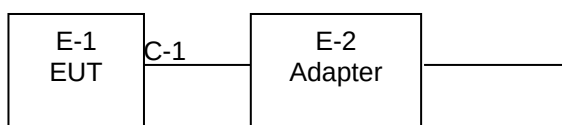
4.2 Test Setup Configuration

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-2	Adapter	N/A	TAP45-120S350U 1	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 possibly have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

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

Note:

(1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.

4.7 Antenna

EUT has four External antennas with Max gain GANT 2dBi on every antenna, CDD device with two spatial streams, also can operate with one spatial stream according to KDB662911 D01 v02r01, Directional gain= GANT + Array Gain, where Array Gain is as follows.

1) For power spectral density (PSD) measurements,
Array Gain=10log(NANT/NSS)dB=10log(4/1)=6.02dB,

So the directional gain for PSD is 8.02dBi

2) For power measurements,
The Array gain=0 dB for NANT≤4,

So the directional gain for Power measurements is 2dBi

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

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

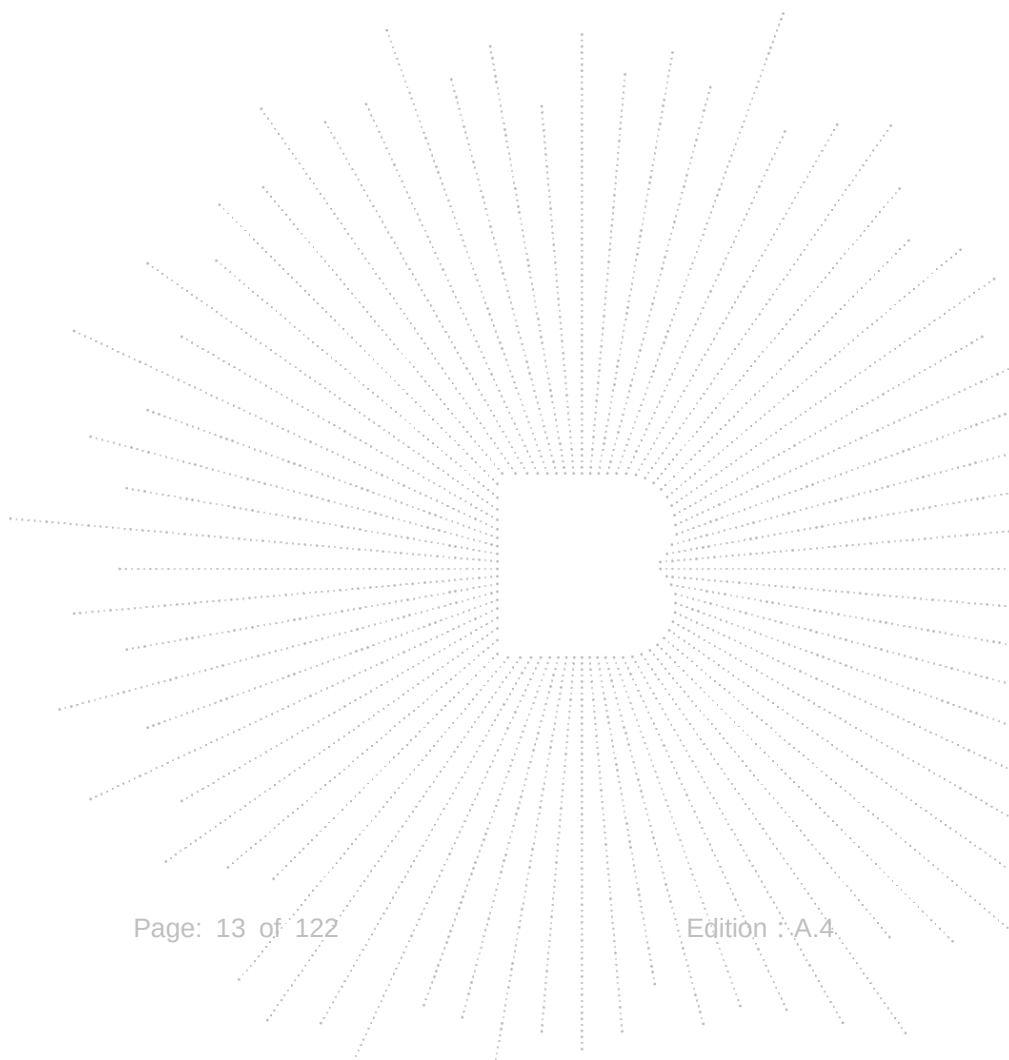
Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	Agilent	E4407B	MY45109572	May 28, 2021	May 27, 2022
2	Test Receiver (9kHz-7GHz)	R&S	ESRP	101154	May 28, 2021	May 27, 2022
3	Bilog Antenna (30MHz-3GHz)	SCHWARZBEC K	VULB9163	VULB9163-942	Jun. 01, 2021	May 31, 2022
4	Horn Antenna (1GHz-18GHz)	SCHWARZBEC K	BBHA9120D	1541	Jun. 02, 2021	Jun. 01, 2022
5	Horn Antenna (18GHz-40GHz)	SCHWARZBEC K	BBHA9170	00822	Jun. 15, 2021	Jun. 14, 2022
6	Amplifier (9KHz-6GHz)	SCHWARZBEC K	BBV9744	9744-0037	May 28, 2021	May 27, 2022
7	Amplifier	SKET	LAPA_01G18G-45dB	\	May 28, 2021	May 27, 2022
8	Amplifier (18GHz-40GHz)	MITEQ	TTA1840-35-H G	2034381	May 28, 2021	May 27, 2022
9	Loop Antenna (9KHz-30MHz)	SCHWARZBEC K	FMZB1519B	00014	Jun. 02, 2021	Jun. 01, 2022
10	RF cables1 (9kHz-30MHz)	Huber+Suhner	9kHz-30MHz	B1702988-0008	May 28, 2021	May 27, 2022
11	RF cables2 (30MHz-1GHz)	Huber+Suhner	30MHz-1GHz	1486150	May 28, 2021	May 27, 2022
12	RF cables3 (1GHz-40GHz)	Huber+Suhner	1GHz-40GHz	1607106	May 28, 2021	May 27, 2022
13	Power Metter	Keysight	E4419B	\	May 28, 2021	May 27, 2022
14	Power Sensor (AV)	Keysight	E9 300A	\	May 28, 2021	May 27, 2022
15	Signal Analyzer 20kHz-26.5GHz	KEYSIGHT	N9020A	MY49100060	May 28, 2021	May 27, 2022
16	Spectrum Analyzer 9kHz-40GHz	Agilent	FSP40	100363	May 28, 2021	May 27, 2022
17	D.C. Power Supply	LongWei	TPR-6405D	\	\	\
18	Software	Frad	EZ-EMC	FA-03A2 RE	\	\

Conduction Test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Test Receiver	R&S	ESR3	102075	May 28, 2021	May 27, 2022
2	LISN	SCHWARZBEC K	NSLK8127	8127739	May 28, 2021	May 27, 2022
3	LISN	R&S	ENV216	101375	May 28, 2021	May 27, 2022
4	RF cables	Huber+Suhnar	9kHz-30MHz	B1702988-0008	May 28, 2021	May 27, 2022
5	Software	Frad	EZ-EMC	EMC-CON 3A1	\	\

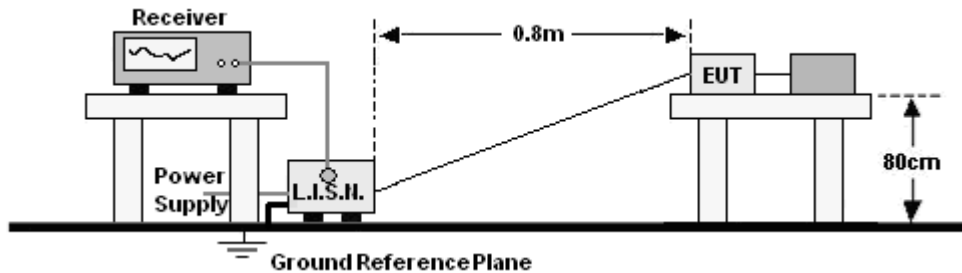
RF conducted test

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Signal Analyzer 20kHz-26.5GHz	KEYSIGHT	N9020A	MY49100060	May 28, 2021	May 27, 2022
2	Spectrum Analyzer 9kHz-40GHz	Agilent	FSP40	100363	May 28, 2021	May 27, 2022



6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

FREQUENCY (MHz)	Limit (dBuV)	
	Quas-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Notes:

- *Decreasing linearly with logarithm of frequency.
- The lower limit shall apply at the transition frequencies.

6.3 Test procedure

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

- The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
- For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

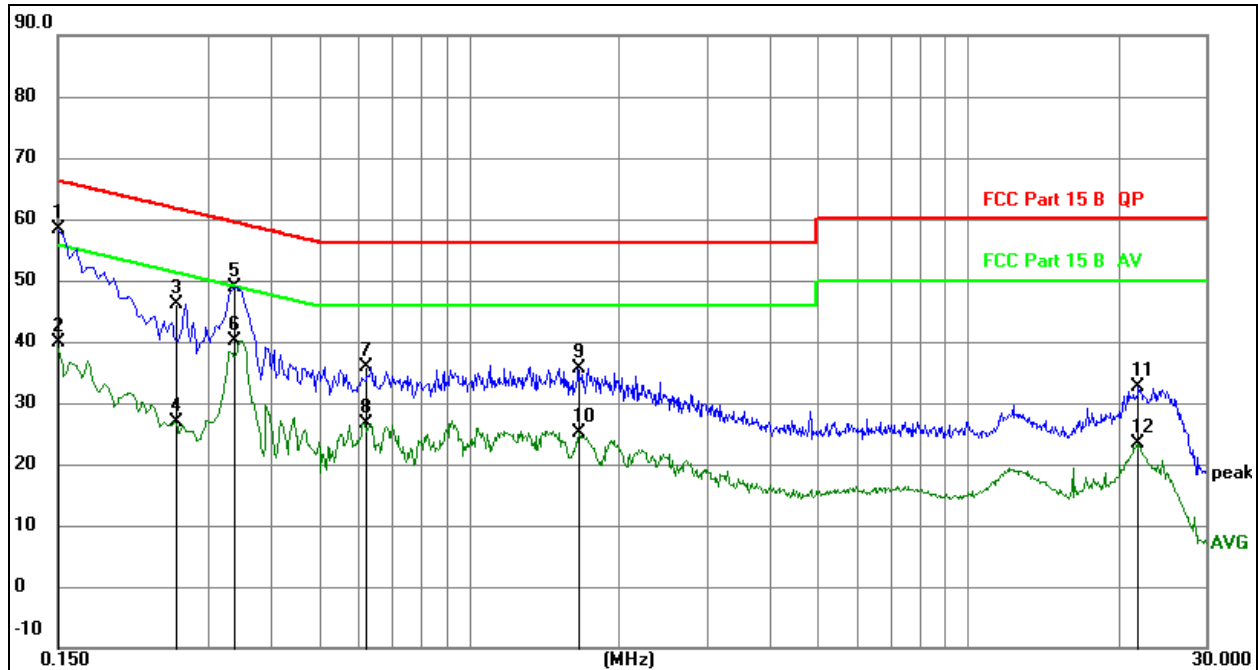
6.4 EUT operating Conditions

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

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

6.5 Test Result

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

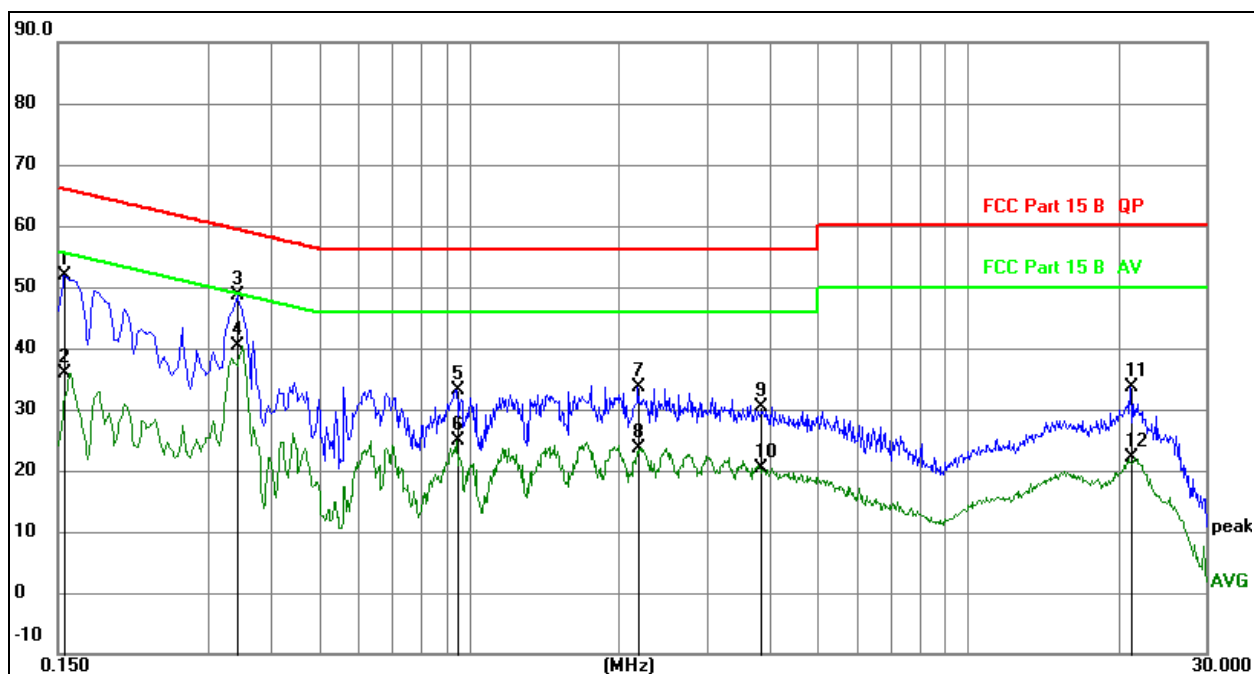


Remark:

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	
		MHz		dB	dBuV	dBuV	dB	Detector
1	*	0.1500	48.72	9.61	58.33	66.00	-7.67	QP
2		0.1500	30.34	9.61	39.95	56.00	-16.05	AVG
3		0.2580	36.45	9.61	46.06	61.50	-15.44	QP
4		0.2580	17.37	9.61	26.98	51.50	-24.52	AVG
5		0.3390	39.39	9.61	49.00	59.23	-10.23	QP
6		0.3390	30.53	9.61	40.14	49.23	-9.09	AVG
7		0.6180	26.35	9.62	35.97	56.00	-20.03	QP
8		0.6180	17.13	9.62	26.75	46.00	-19.25	AVG
9		1.6620	26.07	9.63	35.70	56.00	-20.30	QP
10		1.6620	15.52	9.63	25.15	46.00	-20.85	AVG
11		21.8625	22.83	9.75	32.58	60.00	-27.42	QP
12		21.8625	13.51	9.75	23.26	50.00	-26.74	AVG

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



Remark:

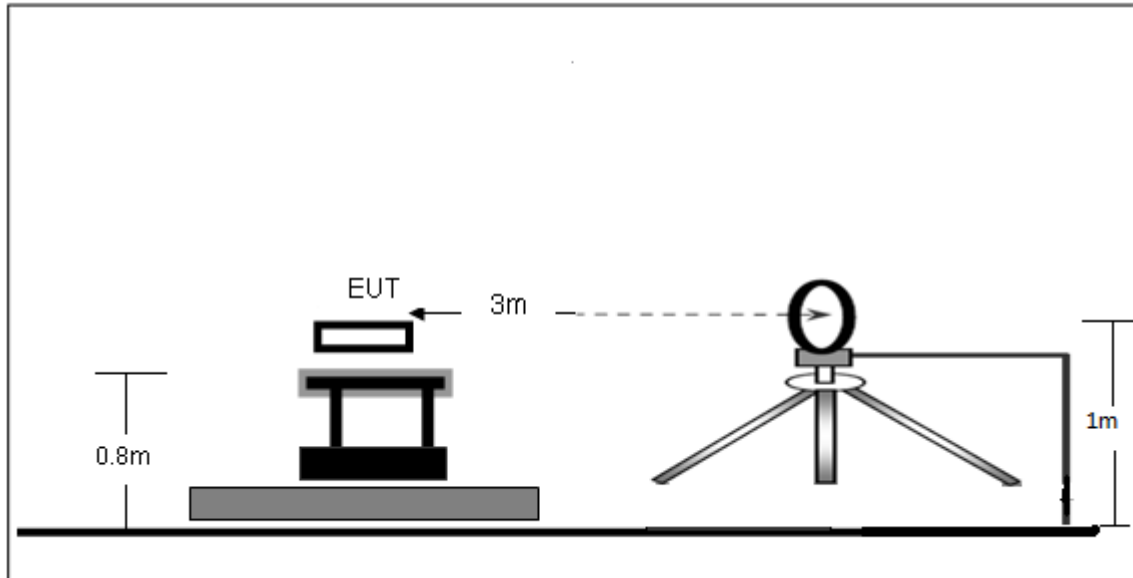
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.1545	42.38	9.61	51.99	65.75	-13.76	QP
2		0.1545	26.19	9.61	35.80	55.75	-19.95	AVG
3		0.3435	39.12	9.61	48.73	59.12	-10.39	QP
4	*	0.3435	30.77	9.61	40.38	49.12	-8.74	AVG
5		0.9465	23.55	9.62	33.17	56.00	-22.83	QP
6		0.9465	15.20	9.62	24.82	46.00	-21.18	AVG
7		2.1885	24.07	9.64	33.71	56.00	-22.29	QP
8		2.1885	14.02	9.64	23.66	46.00	-22.34	AVG
9		3.8265	20.59	9.68	30.27	56.00	-25.73	QP
10		3.8265	10.81	9.68	20.49	46.00	-25.51	AVG
11		21.2505	23.86	9.75	33.61	60.00	-26.39	QP
12		21.2505	12.37	9.75	22.12	50.00	-27.88	AVG

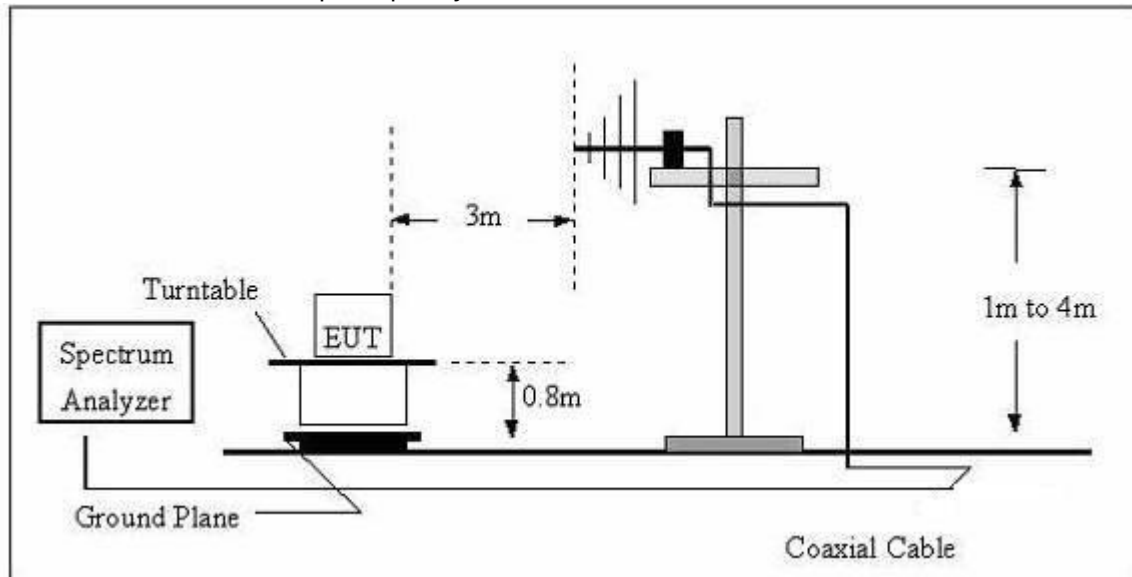
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

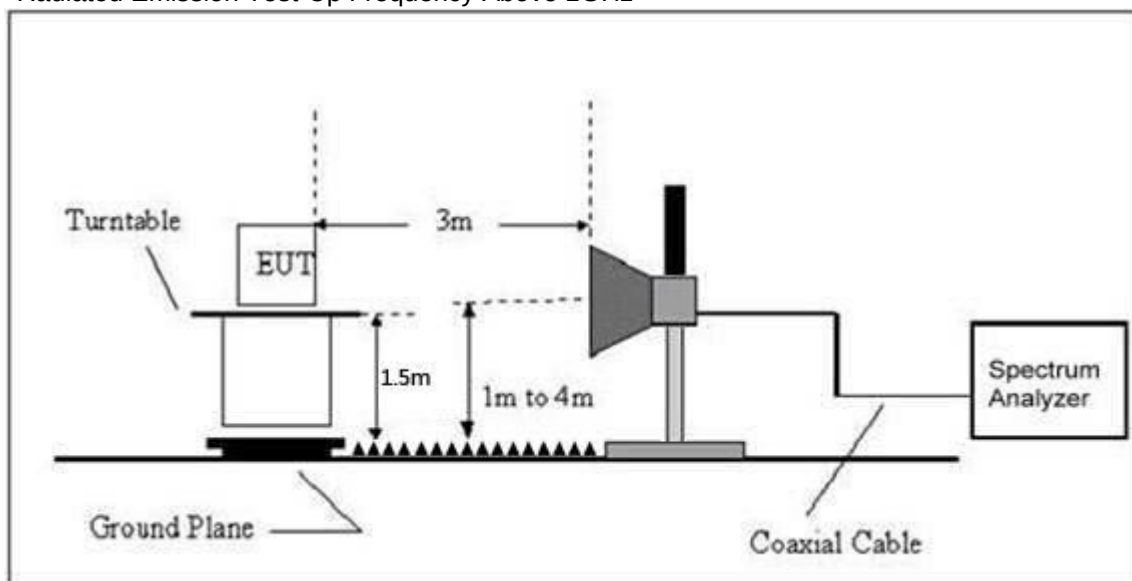
(A) Radiated Emission Test-Up Frequency Below 30MHz



(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	Field Strength	Distance	Field Strength Limit at 3m Distance	
(MHz)	uV/m	(m)	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 or 68.2	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).
- (4)Restricted bands: 74.00 dBuV/m, Other frequencies: $E[\text{dBuV/m}] = \text{EIRP}[\text{dBm}] + 95.2 = 68.2 \text{ dBuV/m}$

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

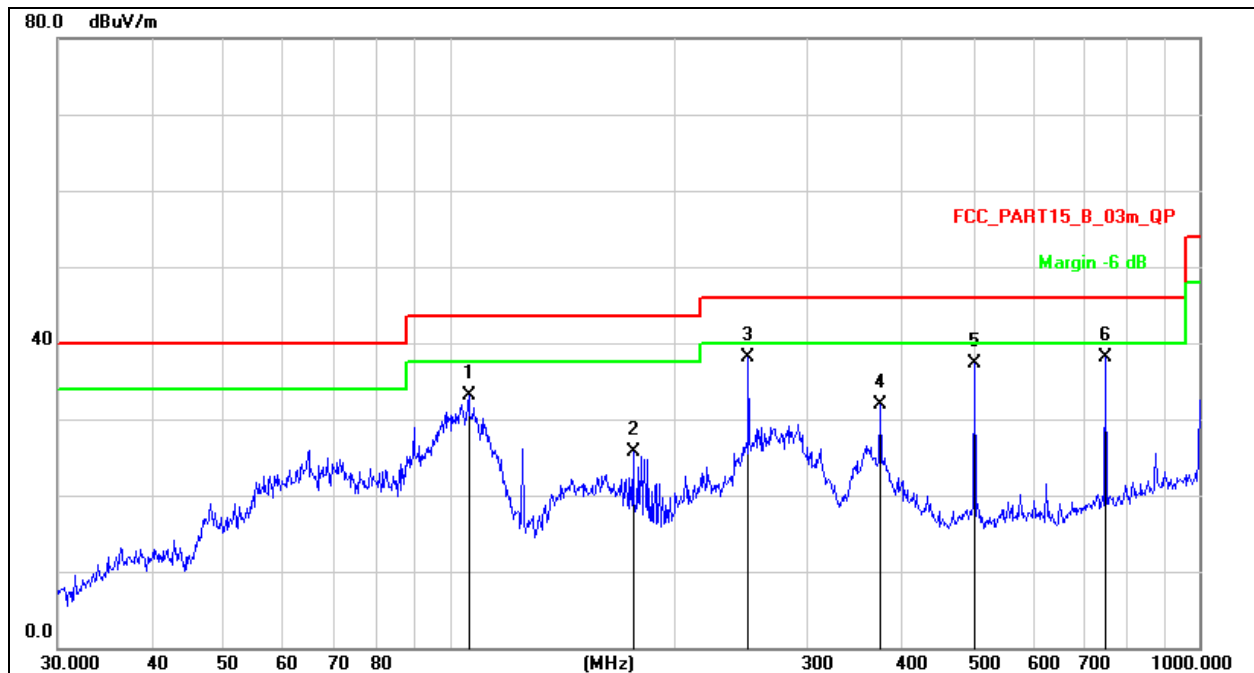
Note:

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.

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

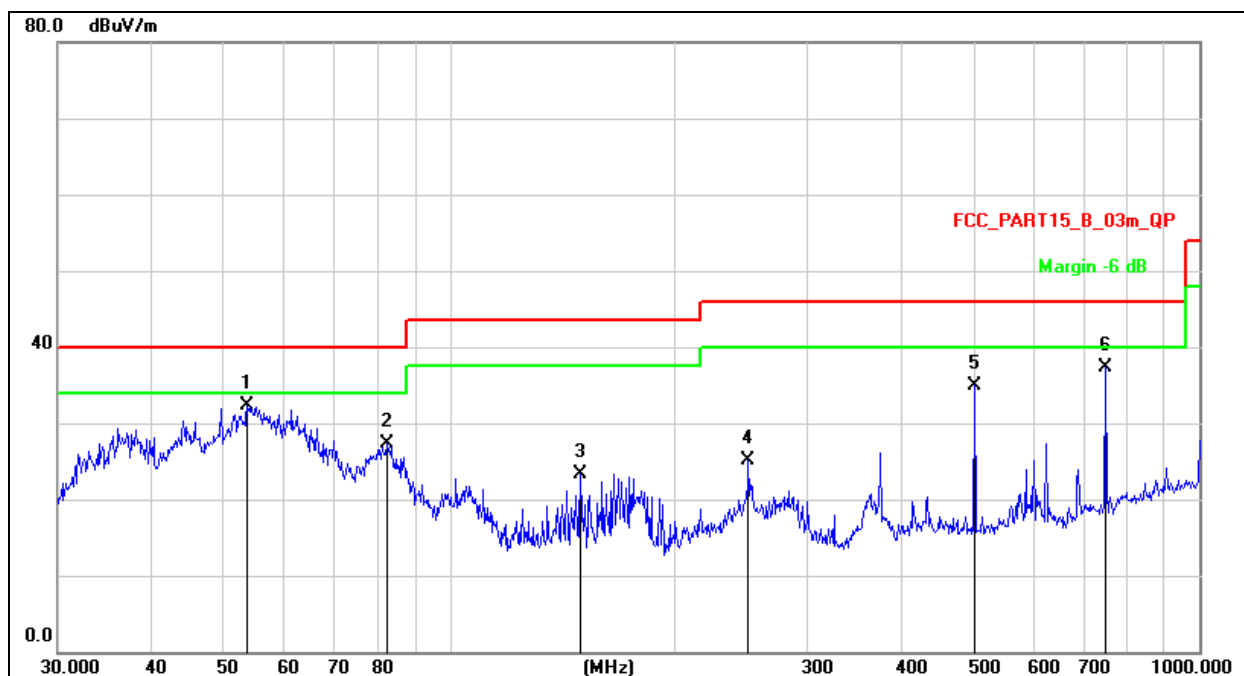


Remark:

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

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		106.0126	49.75	-16.67	33.08	43.50	-10.42	QP
2		175.6516	43.56	-17.86	25.70	43.50	-17.80	QP
3		250.3012	53.25	-15.14	38.11	46.00	-7.89	QP
4		375.9385	43.61	-11.64	31.97	46.00	-14.03	QP
5		501.1790	46.31	-8.91	37.40	46.00	-8.60	QP
6	*	750.1083	42.53	-4.34	38.19	46.00	-7.81	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.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	*	53.6932	47.52	-15.24	32.28	40.00	-7.72	QP
2		82.3588	47.19	-19.87	27.32	40.00	-12.68	QP
3		149.4857	42.81	-19.47	23.34	43.50	-20.16	QP
4		250.3012	40.23	-15.14	25.09	46.00	-20.91	QP
5		501.1790	43.90	-8.91	34.99	46.00	-11.01	QP
6		750.1083	41.61	-4.34	37.27	46.00	-8.73	QP

Between 1GHz – 40GHz

Test Mode:	TX(5.1G) - 802.11a
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G									
V	4434.169	65.00	5.94	35.40	44.00	62.34	68.20	-5.86	PK
V	4434.169	43.32	5.94	35.40	44.00	40.66	54.00	-13.34	AV
V	10360.081	62.00	8.46	39.75	44.50	65.71	68.20	-2.49	PK
V	10360.081	43.54	8.46	39.75	44.50	47.25	54.00	-6.75	AV
V	15540.032	63.31	10.12	38.80	44.10	68.13	74.00	-5.87	PK
V	15540.032	43.97	10.12	38.80	42.70	50.19	54.00	-3.81	AV
H	4434.007	60.13	5.94	35.18	44.00	57.25	68.20	-10.95	PK
H	4434.007	43.78	5.94	35.18	44.00	40.90	54.00	-13.10	AV
H	10360.187	54.83	8.46	38.71	44.50	57.50	68.20	-10.70	PK
H	10360.187	43.72	8.46	38.71	44.50	46.39	54.00	-7.61	AV
H	15540.050	50.34	10.12	38.38	44.10	54.74	74.00	-19.26	PK
H	15540.050	43.73	10.12	38.38	44.10	48.13	54.00	-5.87	AV
Middle Channel (5200 MHz)-Above 1G									
V	4592.182	61.17	6.48	36.35	44.05	59.95	74.00	-14.05	PK
V	4592.182	43.89	6.48	36.35	44.05	42.67	54.00	-11.33	AV
V	10400.010	63.70	8.47	37.88	44.51	65.54	68.20	-2.66	PK
V	10400.010	43.82	8.47	37.88	44.51	45.66	54.00	-8.34	AV
V	15600.152	63.58	10.12	38.80	44.10	68.40	74.00	-5.60	PK
V	15600.152	43.55	10.12	38.80	42.70	49.77	54.00	-4.23	AV
H	4592.168	63.33	6.48	36.37	44.05	62.13	74.00	-11.87	PK
H	4592.168	43.07	6.48	36.37	44.05	41.87	54.00	-12.13	AV
H	10400.095	51.42	8.47	38.64	44.50	54.03	68.20	-14.17	PK
H	10400.095	41.98	8.47	38.64	44.50	44.59	54.00	-9.41	AV
H	15600.047	50.76	10.12	38.38	44.10	55.16	74.00	-18.84	PK
H	15600.047	41.21	10.12	38.38	44.10	45.61	54.00	-8.39	AV
High Channel (5240 MHz)-Above 1G									
V	4739.157	62.53	7.10	37.24	43.50	63.37	74.00	-10.63	PK
V	4739.157	43.96	7.10	37.24	43.50	44.80	54.00	-9.20	AV
V	10480.171	64.75	8.46	37.68	44.50	66.39	68.20	-1.81	PK
V	10480.171	43.41	8.46	37.68	44.50	45.05	54.00	-8.95	AV
V	15720.061	60.95	10.12	38.80	44.10	65.77	74.00	-8.23	PK
V	15720.061	43.38	10.12	38.80	42.70	49.60	54.00	-4.40	AV
H	4739.012	62.09	7.10	37.24	43.50	62.93	74.00	-11.07	PK
H	4739.012	43.31	7.10	37.24	43.50	44.15	54.00	-9.85	AV
H	10480.176	52.87	8.46	38.57	44.50	55.40	68.20	-12.80	PK
H	10480.176	42.39	8.46	38.57	44.50	44.92	54.00	-9.08	AV
H	15720.061	51.15	10.12	38.38	44.10	55.55	74.00	-18.45	PK
H	15720.061	42.07	10.12	38.38	44.10	46.47	54.00	-7.53	AV

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

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

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

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

Test Mode is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11n-HT20
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G									
V	4434.050	64.21	5.94	35.40	44.00	61.55	68.20	-6.65	PK
V	4434.050	43.06	5.94	35.40	44.00	40.40	54.00	-13.60	AV
V	10360.019	61.05	8.46	39.75	44.50	64.76	68.20	-3.44	PK
V	10360.019	43.70	8.46	39.75	44.50	47.41	54.00	-6.59	AV
V	15540.083	63.33	10.12	38.80	44.10	68.15	74.00	-5.85	PK
V	15540.083	43.78	10.12	38.80	42.70	50.00	54.00	-4.00	AV
H	4434.058	60.94	5.94	35.18	44.00	58.06	68.20	-10.14	PK
H	4434.058	43.64	5.94	35.18	44.00	40.76	54.00	-13.24	AV
H	10360.153	51.44	8.46	38.71	44.50	54.11	68.20	-14.09	PK
H	10360.153	43.14	8.46	38.71	44.50	45.81	54.00	-8.19	AV
H	15540.090	50.84	10.12	38.38	44.10	55.24	74.00	-18.76	PK
H	15540.090	43.41	10.12	38.38	44.10	47.81	54.00	-6.19	AV
Middle Channel (5200 MHz)-Above 1G									
V	4592.149	63.89	6.48	36.35	44.05	62.67	74.00	-11.33	PK
V	4592.149	43.25	6.48	36.35	44.05	42.03	54.00	-11.97	AV
V	10400.115	60.73	8.47	37.88	44.51	62.57	68.20	-5.63	PK
V	10400.115	43.58	8.47	37.88	44.51	45.42	54.00	-8.58	AV
V	15600.181	61.47	10.12	38.80	44.10	66.29	74.00	-7.71	PK
V	15600.181	43.43	10.12	38.80	42.70	49.65	54.00	-4.35	AV
H	4592.115	60.69	6.48	36.37	44.05	59.49	74.00	-14.51	PK
H	4592.115	43.03	6.48	36.37	44.05	41.83	54.00	-12.17	AV
H	10400.083	50.52	8.47	38.64	44.50	53.13	68.20	-15.07	PK
H	10400.083	43.54	8.47	38.64	44.50	46.15	54.00	-7.85	AV
H	15600.024	51.95	10.12	38.38	44.10	56.35	74.00	-17.65	PK
H	15600.024	42.49	10.12	38.38	44.10	46.89	54.00	-7.11	AV
High Channel (5240 MHz)-Above 1G									
V	4739.196	61.31	7.10	37.24	43.50	62.15	74.00	-11.85	PK
V	4739.196	43.74	7.10	37.24	43.50	44.58	54.00	-9.42	AV
V	10480.194	64.49	8.46	37.68	44.50	66.13	68.20	-2.07	PK
V	10480.194	43.30	8.46	37.68	44.50	44.94	54.00	-9.06	AV
V	15720.002	62.37	10.12	38.80	44.10	67.19	74.00	-6.81	PK
V	15720.002	43.02	10.12	38.80	42.70	49.24	54.00	-4.76	AV
H	4739.020	61.02	7.10	37.24	43.50	61.86	74.00	-12.14	PK
H	4739.020	43.51	7.10	37.24	43.50	44.35	54.00	-9.65	AV
H	10480.176	51.04	8.46	38.57	44.50	53.57	68.20	-14.63	PK
H	10480.176	43.30	8.46	38.57	44.50	45.83	54.00	-8.17	AV
H	15720.057	52.94	10.12	38.38	44.10	57.34	74.00	-16.66	PK
H	15720.057	44.19	10.12	38.38	44.10	48.59	54.00	-5.41	AV

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

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

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

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

Test Mode is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11n-HT40
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5190 MHz)-Above 1G									
V	4434.170	62.54	5.94	35.40	44.00	59.88	68.20	-8.32	PK
V	4434.170	43.14	5.94	35.40	44.00	40.48	54.00	-13.52	AV
V	10380.024	60.32	8.46	39.75	44.50	64.03	68.20	-4.17	PK
V	10380.024	43.41	8.46	39.75	44.50	47.12	54.00	-6.88	AV
V	15570.130	60.61	10.12	38.80	44.10	65.43	74.00	-8.57	PK
V	15570.130	43.88	10.12	38.80	42.70	50.10	54.00	-3.90	AV
H	4434.128	63.31	5.94	35.18	44.00	60.43	68.20	-7.77	PK
H	4434.128	43.11	5.94	35.18	44.00	40.23	54.00	-13.77	AV
H	10380.173	53.78	8.46	38.71	44.50	56.45	68.20	-11.75	PK
H	10380.173	43.51	8.46	38.71	44.50	46.18	54.00	-7.82	AV
H	15570.097	51.07	10.12	38.38	44.10	55.47	74.00	-18.53	PK
H	15570.097	43.56	10.12	38.38	44.10	47.96	54.00	-6.04	AV
High Channel (5230 MHz)-Above 1G									
V	4739.169	61.02	6.48	36.35	44.05	59.80	74.00	-14.20	PK
V	4739.169	43.65	6.48	36.35	44.05	42.43	54.00	-11.57	AV
V	10460.162	64.42	8.47	37.88	44.51	66.26	68.20	-1.94	PK
V	10460.162	43.42	8.47	37.88	44.51	45.26	54.00	-8.74	AV
V	15690.013	64.17	10.12	38.80	44.10	68.99	74.00	-5.01	PK
V	15690.013	43.23	10.12	38.80	42.70	49.45	54.00	-4.55	AV
H	4739.108	64.50	6.48	36.37	44.05	63.30	74.00	-10.70	PK
H	4739.108	43.59	6.48	36.37	44.05	42.39	54.00	-11.61	AV
H	10460.177	50.95	8.47	38.64	44.50	53.56	68.20	-14.64	PK
H	10460.177	40.81	8.47	38.64	44.50	43.42	54.00	-10.58	AV
H	15690.056	51.16	10.12	38.38	44.10	55.56	74.00	-18.44	PK
H	15690.056	44.03	10.12	38.38	44.10	48.43	54.00	-5.57	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(5.1G) - 802.11ac-HT20
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G									
V	4434.184	61.53	5.94	35.40	44.00	58.87	68.20	-9.33	PK
V	4434.184	43.17	5.94	35.40	44.00	40.51	54.00	-13.49	AV
V	10360.159	63.00	8.46	39.75	44.50	66.71	68.20	-1.49	PK
V	10360.159	43.26	8.46	39.75	44.50	46.97	54.00	-7.03	AV
V	15540.184	61.45	10.12	38.80	44.10	66.27	74.00	-7.73	PK
V	15540.184	43.51	10.12	38.80	42.70	49.73	54.00	-4.27	AV
H	4434.055	61.02	5.94	35.18	44.00	58.14	68.20	-10.06	PK
H	4434.055	43.15	5.94	35.18	44.00	40.27	54.00	-13.73	AV
H	10360.023	54.05	8.46	38.71	44.50	56.72	68.20	-11.48	PK
H	10360.023	40.22	8.46	38.71	44.50	42.89	54.00	-11.11	AV
H	15540.052	54.65	10.12	38.38	44.10	59.05	74.00	-14.95	PK
H	15540.052	43.32	10.12	38.38	44.10	47.72	54.00	-6.28	AV
Middle Channel (5200 MHz)-Above 1G									
V	4592.148	60.75	6.48	36.35	44.05	59.53	74.00	-14.47	PK
V	4592.148	43.74	6.48	36.35	44.05	42.52	54.00	-11.48	AV
V	10400.106	60.72	8.47	37.88	44.51	62.56	68.20	-5.64	PK
V	10400.106	43.33	8.47	37.88	44.51	45.17	54.00	-8.83	AV
V	15600.143	64.87	10.12	38.80	44.10	69.69	74.00	-4.31	PK
V	15600.143	43.68	10.12	38.80	42.70	49.90	54.00	-4.10	AV
H	4592.048	61.58	6.48	36.37	44.05	60.38	74.00	-13.62	PK
H	4592.048	43.53	6.48	36.37	44.05	42.33	54.00	-11.67	AV
H	10400.034	50.47	8.47	38.64	44.50	53.08	68.20	-15.12	PK
H	10400.034	41.29	8.47	38.64	44.50	43.90	54.00	-10.10	AV
H	15600.192	51.06	10.12	38.38	44.10	55.46	74.00	-18.54	PK
H	15600.192	41.33	10.12	38.38	44.10	45.73	54.00	-8.27	AV
High Channel (5240 MHz)-Above 1G									
V	4739.088	63.99	7.10	37.24	43.50	64.83	74.00	-9.17	PK
V	4739.088	43.32	7.10	37.24	43.50	44.16	54.00	-9.84	AV
V	10480.171	63.13	8.46	37.68	44.50	64.77	68.20	-3.43	PK
V	10480.171	43.24	8.46	37.68	44.50	44.88	54.00	-9.12	AV
V	15720.114	60.88	10.12	38.80	44.10	65.70	74.00	-8.30	PK
V	15720.114	43.27	10.12	38.80	42.70	49.49	54.00	-4.51	AV
H	4739.123	61.33	7.10	37.24	43.50	62.17	74.00	-11.83	PK
H	4739.123	43.16	7.10	37.24	43.50	44.00	54.00	-10.00	AV
H	10480.032	53.71	8.46	38.57	44.50	56.24	68.20	-11.96	PK
H	10480.032	44.39	8.46	38.57	44.50	46.92	54.00	-7.08	AV
H	15720.101	51.34	10.12	38.38	44.10	55.74	74.00	-18.26	PK
H	15720.101	43.06	10.12	38.38	44.10	47.46	54.00	-6.54	AV

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

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

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

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

Test Mode is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11ac-HT40
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5190 MHz)-Above 1G									
V	4434.026	64.02	5.94	35.40	44.00	61.36	68.20	-6.84	PK
V	4434.026	43.80	5.94	35.40	44.00	41.14	54.00	-12.86	AV
V	10380.105	63.33	8.46	39.75	44.50	67.04	68.20	-1.16	PK
V	10380.105	43.13	8.46	39.75	44.50	46.84	54.00	-7.16	AV
V	15570.148	60.97	10.12	38.80	44.10	65.79	74.00	-8.21	PK
V	15570.148	43.49	10.12	38.80	42.70	49.71	54.00	-4.29	AV
H	4434.079	64.37	5.94	35.18	44.00	61.49	68.20	-6.71	PK
H	4434.079	43.77	5.94	35.18	44.00	40.89	54.00	-13.11	AV
H	10380.067	52.62	8.46	38.71	44.50	55.29	68.20	-12.91	PK
H	10380.067	43.92	8.46	38.71	44.50	46.59	54.00	-7.41	AV
H	15570.131	51.91	10.12	38.38	44.10	56.31	74.00	-17.69	PK
H	15570.131	44.27	10.12	38.38	44.10	48.67	54.00	-5.33	AV
High Channel (5230 MHz)-Above 1G									
V	4739.167	61.96	6.48	36.35	44.05	60.74	74.00	-13.26	PK
V	4739.167	43.79	6.48	36.35	44.05	42.57	54.00	-11.43	AV
V	10460.157	64.31	8.47	37.88	44.51	66.15	68.20	-2.05	PK
V	10460.157	43.31	8.47	37.88	44.51	45.15	54.00	-8.85	AV
V	15690.113	64.25	10.12	38.80	44.10	69.07	74.00	-4.93	PK
V	15690.113	43.90	10.12	38.80	42.70	50.12	54.00	-3.88	AV
H	4739.108	60.09	6.48	36.37	44.05	58.89	74.00	-15.11	PK
H	4739.108	43.55	6.48	36.37	44.05	42.35	54.00	-11.65	AV
H	10460.036	50.22	8.47	38.64	44.50	52.83	68.20	-15.37	PK
H	10460.036	42.80	8.47	38.64	44.50	45.41	54.00	-8.59	AV
H	15690.061	53.95	10.12	38.38	44.10	58.35	74.00	-15.65	PK
H	15690.061	44.21	10.12	38.38	44.10	48.61	54.00	-5.39	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-HT80
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
(5210 MHz)-Above 1G									
V	4434.136	62.13	5.94	35.40	44.00	59.47	68.20	-8.73	PK
V	4434.136	43.97	5.94	35.40	44.00	41.31	54.00	-12.69	AV
V	10420.037	62.52	8.46	39.75	44.50	66.23	68.20	-1.97	PK
V	10420.037	43.95	8.46	39.75	44.50	47.66	54.00	-6.34	AV
V	15630.079	62.87	10.12	38.80	44.10	67.69	74.00	-6.31	PK
V	15630.079	43.57	10.12	38.80	42.70	49.79	54.00	-4.21	AV
H	4434.083	64.64	5.94	35.18	44.00	61.76	68.20	-6.44	PK
H	4434.083	43.30	5.94	35.18	44.00	40.42	54.00	-13.58	AV
H	10420.072	52.87	8.46	38.71	44.50	55.54	68.20	-12.66	PK
H	10420.072	43.26	8.46	38.71	44.50	45.93	54.00	-8.07	AV
H	15630.154	53.72	10.12	38.38	44.10	58.12	74.00	-15.88	PK
H	15630.154	40.80	10.12	38.38	44.10	45.20	54.00	-8.80	AV

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

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

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

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

Test Mode is MIMO Mode.

Test Mode:	TX(5.8G) - 802.11a
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/ m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.103	56.37	5.94	35.40	44.00	53.71	74.00	-20.29	PK
V	4679.103	43.93	5.94	35.40	44.00	41.27	54.00	-12.73	AV
V	11490.195	57.75	8.46	39.75	44.50	61.46	74.00	-12.54	PK
V	11490.195	43.00	8.46	39.75	44.50	46.71	54.00	-7.29	AV
V	17235.010	55.69	10.12	38.80	44.10	60.51	68.20	-7.69	PK
V	17235.010	41.22	10.12	38.80	42.70	47.44	54.00	-6.56	AV
H	4679.068	55.86	5.94	35.18	44.00	52.98	74.00	-21.02	PK
H	4679.068	43.81	5.94	35.18	44.00	40.93	54.00	-13.07	AV
H	11490.132	51.12	8.46	38.71	44.50	53.79	74.00	-20.21	PK
H	11490.132	40.05	8.46	38.71	44.50	42.72	54.00	-11.28	AV
H	17235.119	50.89	10.12	38.38	44.10	55.29	68.20	-12.91	PK
H	17235.119	42.19	10.12	38.38	44.10	46.59	54.00	-7.41	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.137	56.15	6.48	36.35	44.05	54.93	74.00	-19.07	PK
V	4592.137	43.92	6.48	36.35	44.05	42.70	54.00	-11.30	AV
V	11570.026	56.57	8.47	37.88	44.51	58.41	74.00	-15.59	PK
V	11570.026	43.25	8.47	37.88	44.51	45.09	54.00	-8.91	AV
V	17355.117	56.84	10.12	38.80	44.10	61.66	68.20	-6.54	PK
V	17355.117	39.32	10.12	38.80	42.70	45.54	54.00	-8.46	AV
H	4592.027	56.71	6.48	36.37	44.05	55.51	74.00	-18.49	PK
H	4592.027	43.55	6.48	36.37	44.05	42.35	54.00	-11.65	AV
H	11570.116	50.50	8.47	38.64	44.50	53.11	68.20	-15.09	PK
H	11570.116	41.85	8.47	38.64	44.50	44.46	54.00	-9.54	AV
H	17355.122	50.65	10.12	38.38	44.10	55.05	68.20	-13.15	PK
H	17355.122	43.39	10.12	38.38	44.10	47.79	54.00	-6.21	AV
High Channel (5825 MHz)-Above 1G									
V	6039.147	60.52	7.10	37.24	43.50	61.36	68.20	-6.84	PK
V	6039.147	43.14	7.10	37.24	43.50	43.98	54.00	-10.02	AV
V	11650.136	59.30	8.46	37.68	44.50	60.94	74.00	-13.06	PK
V	11650.136	43.96	8.46	37.68	44.50	45.60	54.00	-8.40	AV
V	17475.041	53.04	10.12	38.80	44.10	57.86	68.20	-10.34	PK
V	17475.041	43.33	10.12	38.80	42.70	49.55	54.00	-4.45	AV
H	6039.076	58.17	7.10	37.24	43.50	59.01	68.20	-9.19	PK
H	6039.076	43.35	7.10	37.24	43.50	44.19	54.00	-9.81	AV
H	11650.151	50.26	8.46	38.57	44.50	52.79	74.00	-21.21	PK
H	11650.151	44.91	8.46	38.57	44.50	47.44	54.00	-6.56	AV
H	17475.191	51.82	10.12	38.38	44.10	56.22	68.20	-11.98	PK
H	17475.191	44.73	10.12	38.38	44.10	49.13	54.00	-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) - 802.11n-HT20
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/ m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.042	60.12	5.94	35.40	44.00	57.46	74.00	-16.54	PK
V	4679.042	43.98	5.94	35.40	44.00	41.32	54.00	-12.68	AV
V	11490.092	56.18	8.46	39.75	44.50	59.89	74.00	-14.11	PK
V	11490.092	43.01	8.46	39.75	44.50	46.72	54.00	-7.28	AV
V	17235.115	58.94	10.12	38.80	44.10	63.76	68.20	-4.44	PK
V	17235.115	43.09	10.12	38.80	42.70	49.31	54.00	-4.69	AV
H	4679.113	58.77	5.94	35.18	44.00	55.89	74.00	-18.11	PK
H	4679.113	43.98	5.94	35.18	44.00	41.10	54.00	-12.90	AV
H	11490.035	47.71	8.46	38.71	44.50	50.38	74.00	-23.62	PK
H	11490.035	41.06	8.46	38.71	44.50	43.73	54.00	-10.27	AV
H	17235.147	52.22	10.12	38.38	44.10	56.62	68.20	-11.58	PK
H	17235.147	42.86	10.12	38.38	44.10	47.26	54.00	-6.74	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.012	58.68	6.48	36.35	44.05	57.46	74.00	-16.54	PK
V	4592.012	43.51	6.48	36.35	44.05	42.29	54.00	-11.71	AV
V	11570.121	56.16	8.47	37.88	44.51	58.00	74.00	-16.00	PK
V	11570.121	43.61	8.47	37.88	44.51	45.45	54.00	-8.55	AV
V	17355.062	57.15	10.12	38.80	44.10	61.97	68.20	-6.23	PK
V	17355.062	43.69	10.12	38.80	42.70	49.91	54.00	-4.09	AV
H	4592.098	56.92	6.48	36.37	44.05	55.72	74.00	-18.28	PK
H	4592.098	43.62	6.48	36.37	44.05	42.42	54.00	-11.58	AV
H	11570.199	52.19	8.47	38.64	44.50	54.80	74.00	-19.20	PK
H	11570.199	43.05	8.47	38.64	44.50	45.66	54.00	-8.34	AV
H	17355.117	54.05	10.12	38.38	44.10	58.45	68.20	-9.75	PK
H	17355.117	40.18	10.12	38.38	44.10	44.58	54.00	-9.42	AV
High Channel (5825 MHz)-Above 1G									
V	6039.001	58.34	7.10	37.24	43.50	59.18	68.20	-9.02	PK
V	6039.001	43.36	7.10	37.24	43.50	44.20	54.00	-9.80	AV
V	11650.028	60.61	8.46	37.68	44.50	62.25	74.00	-11.75	PK
V	11650.028	43.38	8.46	37.68	44.50	45.02	54.00	-8.98	AV
V	17475.087	55.56	10.12	38.80	44.10	60.38	68.20	-7.82	PK
V	17475.087	43.23	10.12	38.80	42.70	49.45	54.00	-4.55	AV
H	6039.101	56.84	7.10	37.24	43.50	57.68	68.20	-10.52	PK
H	6039.101	43.40	7.10	37.24	43.50	44.24	54.00	-9.76	AV
H	11650.076	54.57	8.46	38.57	44.50	57.10	74.00	-16.90	PK
H	11650.076	43.84	8.46	38.57	44.50	46.37	54.00	-7.63	AV
H	17475.156	51.82	10.12	38.38	44.10	56.22	68.20	-11.98	PK
H	17475.156	42.16	10.12	38.38	44.10	46.56	54.00	-7.44	AV

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

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

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

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

Test Mode is MIMO Mode.

Test Mode:	TX(5.8G) - 802.11n-HT40
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5755 MHz)-Above 1G									
V	4679.085	58.10	5.94	35.40	44.00	55.44	74.00	-18.56	PK
V	4679.085	43.05	5.94	35.40	44.00	40.39	54.00	-13.61	AV
V	11510.115	55.23	8.46	39.75	44.50	58.94	74.00	-15.06	PK
V	11510.115	43.89	8.46	39.75	44.50	47.60	54.00	-6.40	AV
V	17265.160	56.27	10.12	38.80	44.10	61.09	68.20	-7.11	PK
V	17265.160	2.00	10.12	38.80	42.70	8.22	54.00	-45.78	AV
H	4679.115	56.77	5.94	35.18	44.00	53.89	74.00	-20.11	PK
H	4679.115	43.37	5.94	35.18	44.00	40.49	54.00	-13.51	AV
H	11510.055	53.10	8.46	38.71	44.50	55.77	74.00	-18.23	PK
H	11510.055	43.81	8.46	38.71	44.50	46.48	54.00	-7.52	AV
H	17265.071	52.41	10.12	38.38	44.10	56.81	68.20	-11.39	PK
H	17265.071	44.02	10.12	38.38	44.10	48.42	54.00	-5.58	AV
High Channel (5795 MHz)-Above 1G									
V	6039.046	58.46	6.48	36.35	44.05	57.24	68.20	-10.96	PK
V	6039.046	43.79	6.48	36.35	44.05	42.57	54.00	-11.43	AV
V	11590.072	59.27	8.47	37.88	44.51	61.11	74.00	-12.89	PK
V	11590.072	43.93	8.47	37.88	44.51	45.77	54.00	-8.23	AV
V	17385.128	55.30	10.12	38.80	44.10	60.12	68.20	-8.08	PK
V	17385.128	41.51	10.12	38.80	42.70	47.73	54.00	-6.27	AV
H	6039.080	60.76	6.48	36.37	44.05	59.56	68.20	-8.64	PK
H	6039.080	43.21	6.48	36.37	44.05	42.01	54.00	-11.99	AV
H	11590.025	53.82	8.47	38.64	44.50	56.43	74.00	-17.57	PK
H	11590.025	43.71	8.47	38.64	44.50	46.32	54.00	-7.68	AV
H	17385.153	52.42	10.12	38.38	44.10	56.82	68.20	-11.38	PK
H	17385.153	40.06	10.12	38.38	44.10	44.46	54.00	-9.54	AV

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

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

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

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

Test Mode is MIMO Mode.

Test Mode:	TX(5.8G) - 802.11ac-HT20
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/ m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.095	58.06	5.94	35.40	44.00	55.40	74.00	-18.60	PK
V	4679.095	43.16	5.94	35.40	44.00	40.50	54.00	-13.50	AV
V	11490.177	54.38	8.46	39.75	44.50	58.09	74.00	-15.91	PK
V	11490.177	43.28	8.46	39.75	44.50	46.99	54.00	-7.01	AV
V	17235.170	59.23	10.12	38.80	44.10	64.05	68.20	-4.15	PK
V	17235.170	43.21	10.12	38.80	42.70	49.43	54.00	-4.57	AV
H	4679.160	59.82	5.94	35.18	44.00	56.94	74.00	-17.06	PK
H	4679.160	43.02	5.94	35.18	44.00	40.14	54.00	-13.86	AV
H	11490.186	48.99	8.46	38.71	44.50	51.66	74.00	-22.34	PK
H	11490.186	43.85	8.46	38.71	44.50	46.52	54.00	-7.48	AV
H	17235.005	50.32	10.12	38.38	44.10	54.72	68.20	-13.48	PK
H	17235.005	43.81	10.12	38.38	44.10	48.21	54.00	-5.79	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.007	58.04	6.48	36.35	44.05	56.82	74.00	-17.18	PK
V	4592.007	43.23	6.48	36.35	44.05	42.01	54.00	-11.99	AV
V	11570.057	58.20	8.47	37.88	44.51	60.04	74.00	-13.96	PK
V	11570.057	43.46	8.47	37.88	44.51	45.30	54.00	-8.70	AV
V	17355.118	59.00	10.12	38.80	44.10	63.82	68.20	-4.38	PK
V	17355.118	43.02	10.12	38.80	42.70	49.24	54.00	-4.76	AV
H	4592.178	60.68	6.48	36.37	44.05	59.48	74.00	-14.52	PK
H	4592.178	43.18	6.48	36.37	44.05	41.98	54.00	-12.02	AV
H	11570.116	53.01	8.47	38.64	44.50	55.62	74.00	-18.38	PK
H	11570.116	40.26	8.47	38.64	44.50	42.87	54.00	-11.13	AV
H	17355.102	54.47	10.12	38.38	44.10	58.87	68.20	-9.33	PK
H	17355.102	40.43	10.12	38.38	44.10	44.83	54.00	-9.17	AV
High Channel (5825 MHz)-Above 1G									
V	6039.091	56.78	7.10	37.24	43.50	57.62	68.20	-10.58	PK
V	6039.091	43.05	7.10	37.24	43.50	43.89	54.00	-10.11	AV
V	11650.100	59.23	8.46	37.68	44.50	60.87	74.00	-13.13	PK
V	11650.100	43.58	8.46	37.68	44.50	45.22	54.00	-8.78	AV
V	17475.088	59.26	10.12	38.80	44.10	64.08	68.20	-4.12	PK
V	17475.088	43.03	10.12	38.80	42.70	49.25	54.00	-4.75	AV
H	6039.137	56.28	7.10	37.24	43.50	57.12	68.20	-11.08	PK
H	6039.137	43.41	7.10	37.24	43.50	44.25	54.00	-9.75	AV
H	11650.101	50.93	8.46	38.57	44.50	53.46	74.00	-20.54	PK
H	11650.101	44.43	8.46	38.57	44.50	46.96	54.00	-7.04	AV
H	17475.102	54.22	10.12	38.38	44.10	58.62	68.20	-9.58	PK
H	17475.102	42.92	10.12	38.38	44.10	47.32	54.00	-6.68	AV

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

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

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

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

Test Mode is MIMO Mode.

Test Mode:	TX(5.8G) - 802.11ac-HT40
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Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5755 MHz)-Above 1G									
V	4679.063	57.97	5.94	35.40	44.00	55.31	74.00	-18.69	PK
V	4679.063	43.32	5.94	35.40	44.00	40.66	54.00	-13.34	AV
V	11510.068	55.86	8.46	39.75	44.50	59.57	74.00	-14.43	PK
V	11510.068	43.18	8.46	39.75	44.50	46.89	54.00	-7.11	AV
V	17265.000	57.57	10.12	38.80	44.10	62.39	68.20	-5.81	PK
V	17265.000	2.00	10.12	38.80	42.70	8.22	54.00	-45.78	AV
H	4679.003	57.34	5.94	35.18	44.00	54.46	74.00	-19.54	PK
H	4679.003	43.55	5.94	35.18	44.00	40.67	54.00	-13.33	AV
H	11510.051	50.82	8.46	38.71	44.50	53.49	74.00	-20.51	PK
H	11510.051	42.72	8.46	38.71	44.50	45.39	54.00	-8.61	AV
H	17265.165	52.93	10.12	38.38	44.10	57.33	68.20	-10.87	PK
H	17265.165	40.00	10.12	38.38	44.10	44.40	54.00	-9.60	AV
High Channel (5795 MHz)-Above 1G									
V	6039.140	56.38	6.48	36.35	44.05	55.16	68.20	-13.04	PK
V	6039.140	43.36	6.48	36.35	44.05	42.14	54.00	-11.86	AV
V	11590.105	57.77	8.47	37.88	44.51	59.61	74.00	-14.39	PK
V	11590.105	43.58	8.47	37.88	44.51	45.42	54.00	-8.58	AV
V	17385.194	55.94	10.12	38.80	44.10	60.76	68.20	-7.44	PK
V	17385.194	41.39	10.12	38.80	42.70	47.61	54.00	-6.39	AV
H	6039.090	57.15	6.48	36.37	44.05	55.95	68.20	-12.25	PK
H	6039.090	43.42	6.48	36.37	44.05	42.22	54.00	-11.78	AV
H	11590.180	54.81	8.47	38.64	44.50	57.42	74.00	-16.58	PK
H	11590.180	42.37	8.47	38.64	44.50	44.98	54.00	-9.02	AV
H	17385.051	53.95	10.12	38.38	44.10	58.35	68.20	-9.85	PK
H	17385.051	41.32	10.12	38.38	44.10	45.72	54.00	-8.28	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 (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
(5775 MHz)-Above 1G									
V	4679.029	58.48	5.94	35.40	44.00	55.82	74.00	-18.18	PK
V	4679.029	43.89	5.94	35.40	44.00	41.23	54.00	-12.77	AV
V	11550.161	57.08	8.46	39.75	44.50	60.79	74.00	-13.21	PK
V	11550.161	42.04	8.46	39.75	44.50	45.75	54.00	-8.25	AV
V	17325.145	60.62	10.12	38.80	44.10	65.44	68.20	-2.76	PK
V	17325.145	41.11	10.12	38.80	42.70	47.33	54.00	-6.67	AV
H	4679.194	58.81	5.94	35.18	44.00	55.93	74.00	-18.07	PK
H	4679.194	43.70	5.94	35.18	44.00	40.82	54.00	-13.18	AV
H	11550.022	50.60	8.46	38.71	44.50	53.27	74.00	-20.73	PK
H	11550.022	42.66	8.46	38.71	44.50	45.33	54.00	-8.67	AV
H	17325.002	52.63	10.12	38.38	44.10	57.03	68.20	-11.17	PK
H	17325.002	41.89	10.12	38.38	44.10	46.29	54.00	-7.71	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.

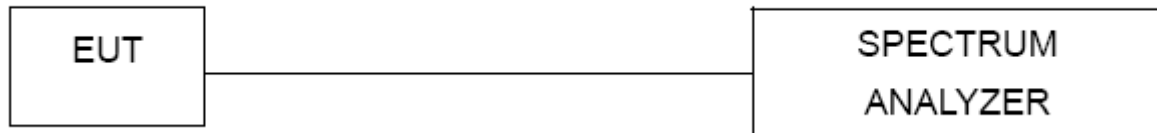
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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\C\D Represent the value of antenna A\B\C\D, The worst data is Antenna D, only shown Antenna D Plot.

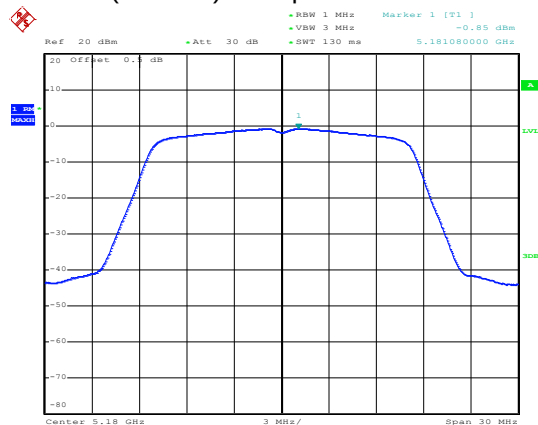
Mode	Frequency	Measured Power Density (dBm/MHz)					Limit (dBm/MHz)	Result
		ANT A	ANT B	ANT C	ANT D	Total		
802.11 a	5180 MHz	0.27	-0.37	-0.64	-0.85	5.64	14.98	PASS
	5200 MHz	0.68	-0.27	-0.66	0.00	5.99	14.98	PASS
	5240 MHz	0.79	0.67	1.25	1.61	7.12	14.98	PASS
802.11 n20	5180 MHz	-1.29	-2.37	-2.87	-2.62	3.78	14.98	PASS
	5200 MHz	-1.19	-1.90	-2.37	-2.97	3.96	14.98	PASS
	5240 MHz	1.94	0.93	-5.36	3.20	7.15	14.98	PASS
802.11 n40	5190 MHz	-3.84	-4.79	-0.45	-5.56	2.84	14.98	PASS
	5230 MHz	-1.11	-1.28	2.32	0.75	6.45	14.98	PASS
802.11 ac20	5180 MHz	-1.16	-2.12	-2.83	-2.62	3.89	14.98	PASS
	5200 MHz	-1.00	-1.82	-2.26	-2.88	4.08	14.98	PASS
	5240 MHz	1.96	1.35	2.42	3.30	8.34	14.98	PASS
802.11 ac40	5190 MHz	-4.62	-5.15	-5.87	-6.17	0.61	14.98	PASS
	5230 MHz	-1.19	-1.80	-0.49	0.38	5.32	14.98	PASS
802.11 ac80	5210 MHz	-6.68	-6.44	-5.37	-5.16	0.16	14.98	PASS

For MIMO mode:

Directional gain=GANT+10 log(NANT/NSS) dBi=8.02dBi

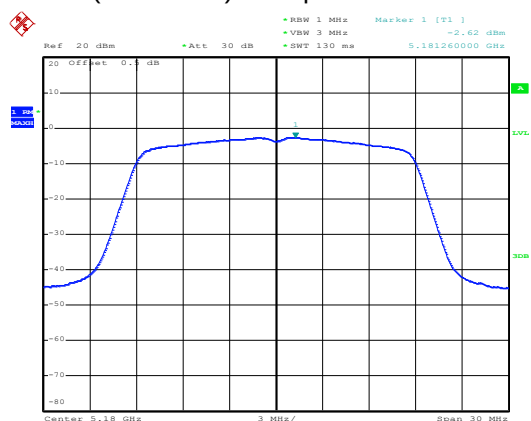
8.02dbi>6.0 dbi so power limit=17-(8.02-6.0)=14.98

(802.11a) PSD plot on channel 36



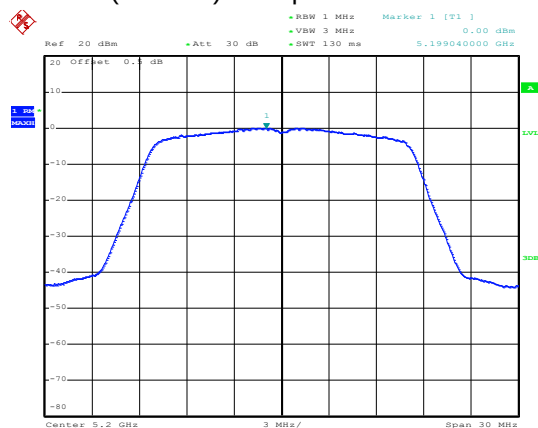
Date: 20.OCT.2021 18:58:59

(802.11n20) PSD plot on channel 36



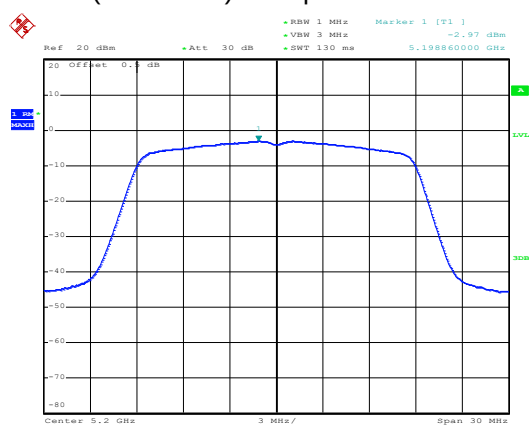
Date: 20.OCT.2021 19:00:42

(802.11a) PSD plot on channel 40



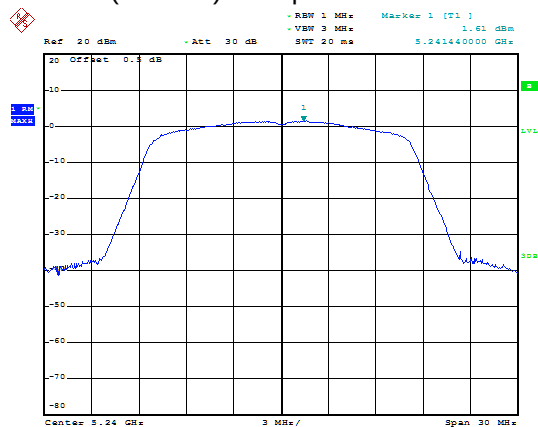
Date: 20.OCT.2021 19:03:52

(802.11n20) PSD plot on channel 40

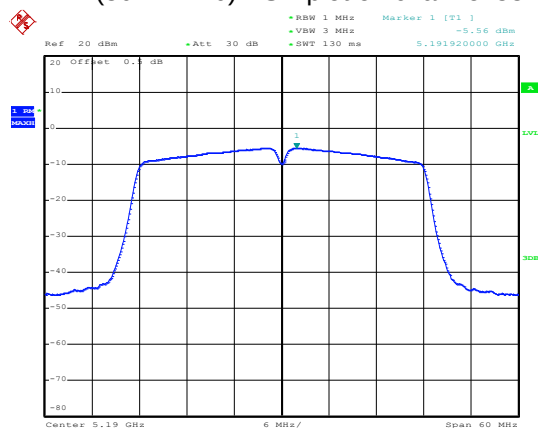


Date: 20.OCT.2021 19:01:53

(802.11a) PSD plot on channel 48

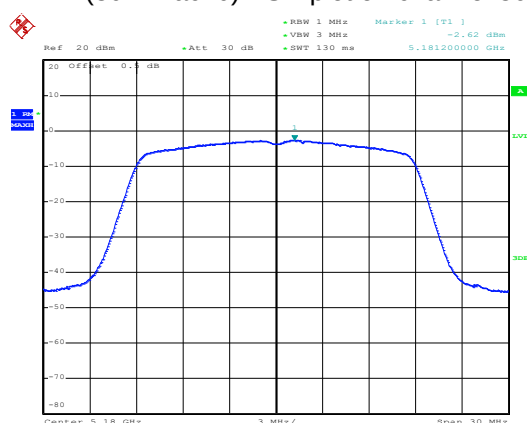


(802.11n40) PSD plot on channel 38



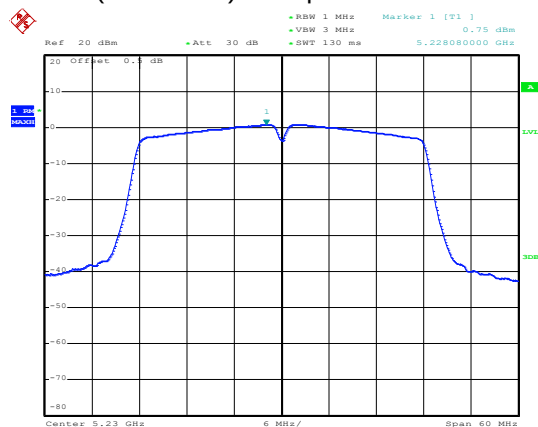
Date: 20.OCT.2021 18:56:47

(802.11ac20) PSD plot on channel 36



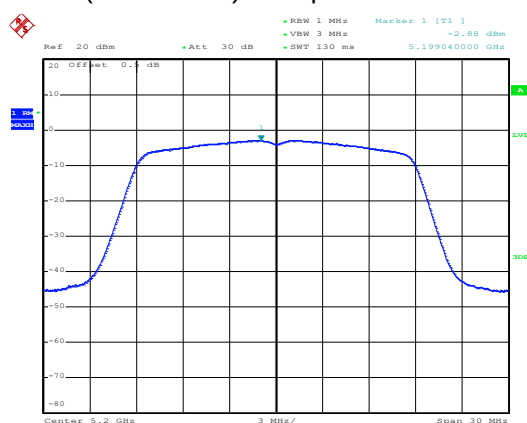
Date: 20.OCT.2021 19:01:10

(802.11n40) PSD plot on channel 46



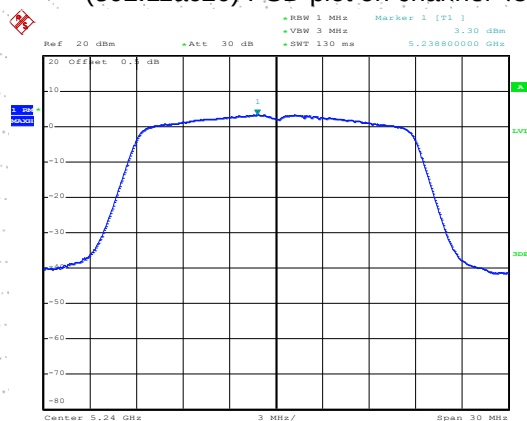
Date: 20.OCT.2021 18:57:13

(802.11ac20) PSD plot on channel 40



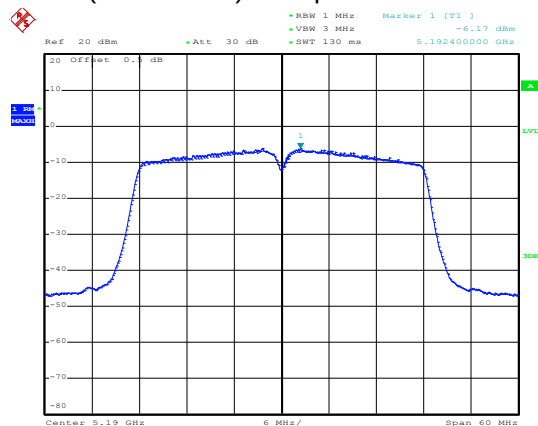
Date: 20.OCT.2021 19:01:32

(802.11ac20) PSD plot on channel 48



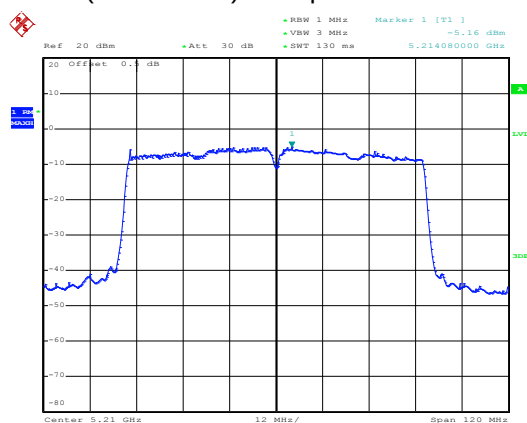
Date: 20.OCT.2021 19:05:12

(802.11ac40) PSD plot on channel 38



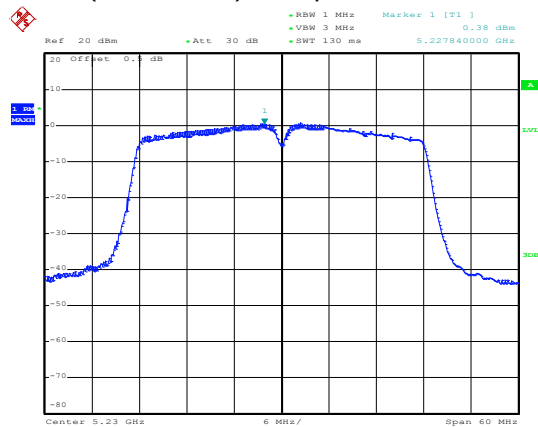
Date: 20.OCT.2021 18:55:57

(802.11ac80) PSD plot on channel 42

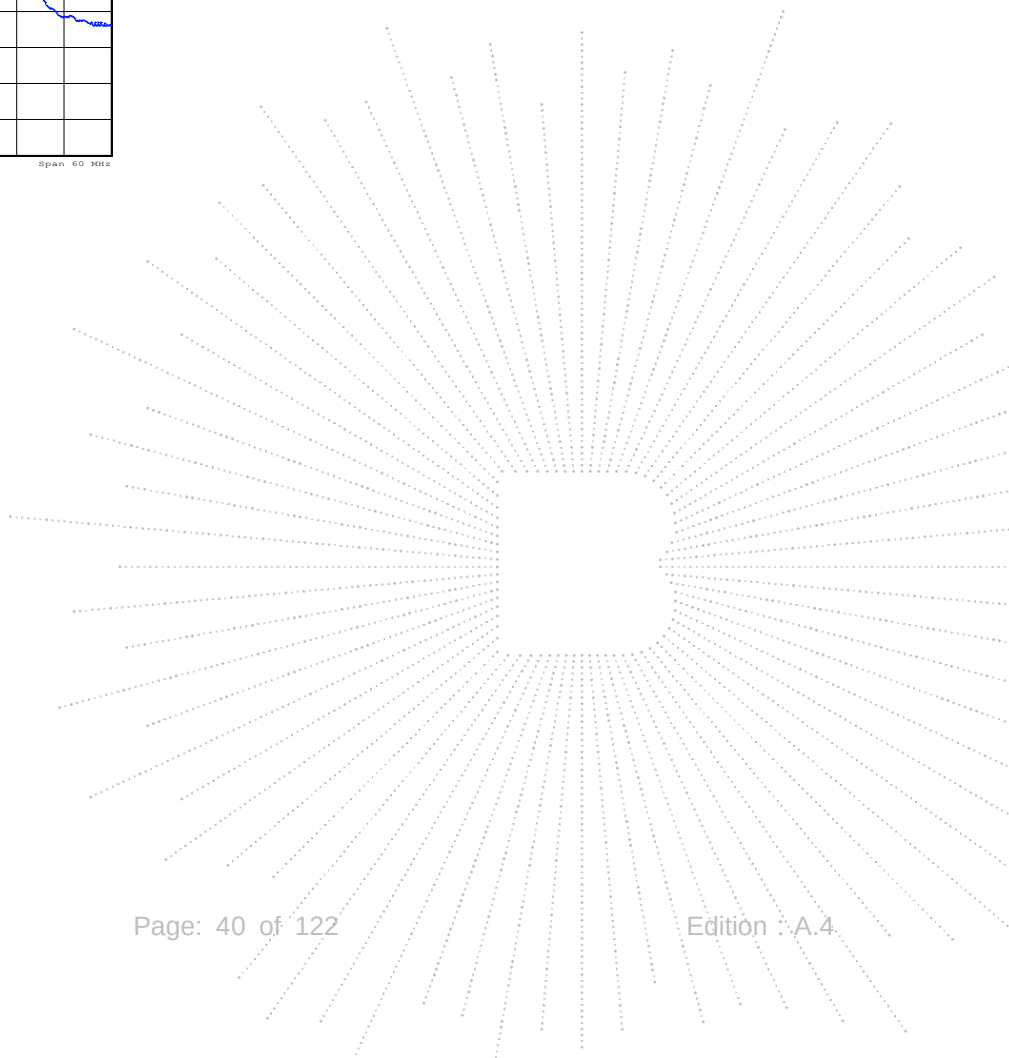


Date: 20.OCT.2021 18:54:32

(802.11ac40) PSD plot on channel 46



Date: 20.OCT.2021 18:57:38

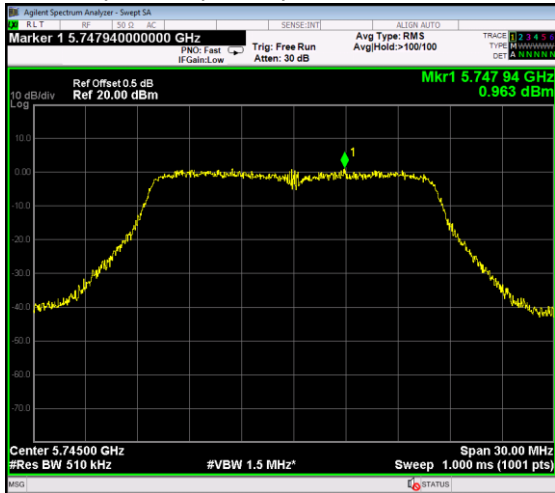


Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage :	AC120V/60Hz
Test Mode:	TX Frequency U-NII-3 (5745-5825MHz)		

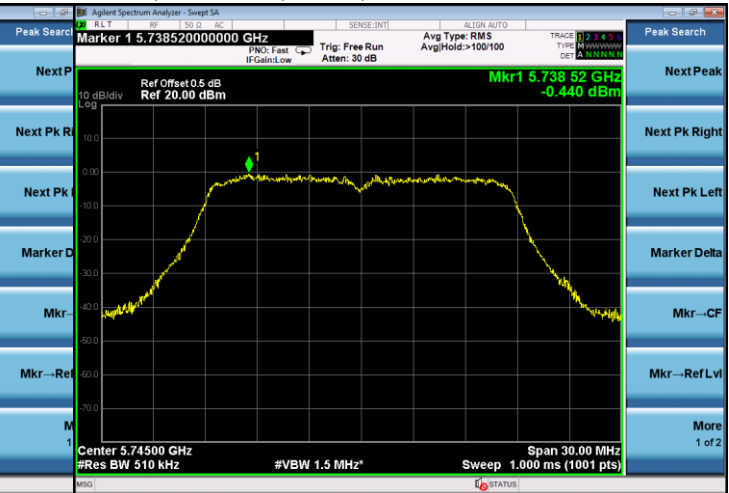
Note: A\B\C\D Represent the value of antenna A\B\C\D, The worst data is Antenna A, only shown Antenna A Plot.

Mode	Frequency	Measured Power Density (dBm/500KHz)					Limit (dBm/500kHz)	Result
		ANT A	ANT B	ANT C	ANT D	Total		
802.11 a	5745 MHz	0.963	0.254	-1.434	-0.756	5.87	27.98	PASS
	5785 MHz	0.650	-0.651	-1.386	-0.205	5.69	27.98	PASS
	5825 MHz	1.359	0.536	-0.949	-1.021	6.12	27.98	PASS
802.11 n20	5745 MHz	-0.440	-0.583	-2.876	-2.165	4.63	27.98	PASS
	5785 MHz	-0.455	-1.326	-2.300	-1.734	4.62	27.98	PASS
	5825 MHz	0.222	0.006	-2.493	-2.457	5.03	27.98	PASS
802.11 n40	5755 MHz	-4.205	-4.537	-5.156	-4.625	1.40	27.98	PASS
	5795 MHz	-4.294	-4.966	-5.438	-4.129	1.35	27.98	PASS
802.11 ac20	5745 MHz	-0.581	-0.874	-2.211	-2.028	4.65	27.98	PASS
	5785 MHz	-0.735	-1.124	-2.303	-1.463	4.65	27.98	PASS
	5825 MHz	0.033	-1.659	-2.047	-2.539	4.58	27.98	PASS
802.11 ac40	5755 MHz	-4.323	-4.478	-5.431	-4.717	1.30	27.98	PASS
	5795 MHz	-4.354	-4.821	-5.118	-5.254	1.15	27.98	PASS
802.11 ac80	5775 MHz	-6.336	-6.452	-8.522	-8.535	-1.31	27.98	PASS
For MIMO mode: Directional gain=GANT+10 log(NANT/NSS) dBi=8.02dBi 8.02dbi>6.0 dbi so power limit=30-(8.02-6.0)=27.98								

(802.11a) PSD plot on channel 149



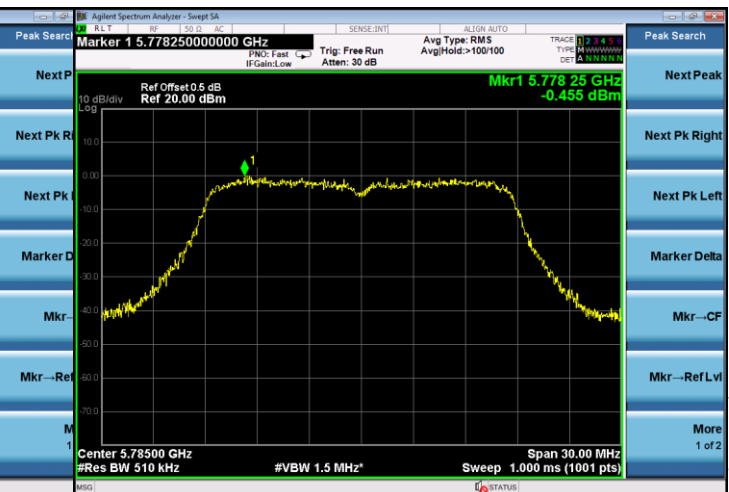
(802.11n20) PSD plot on channel 149



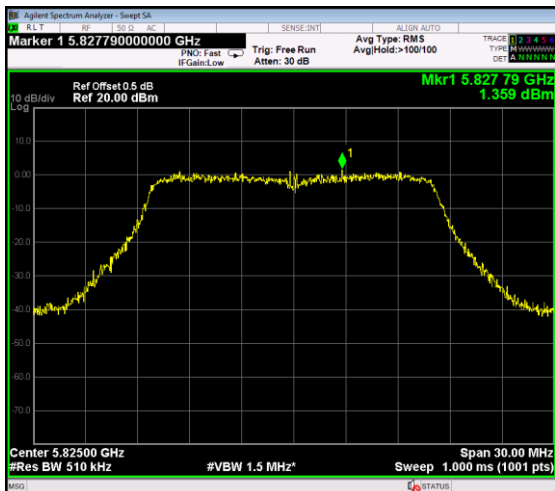
(802.11a) PSD plot on channel 157



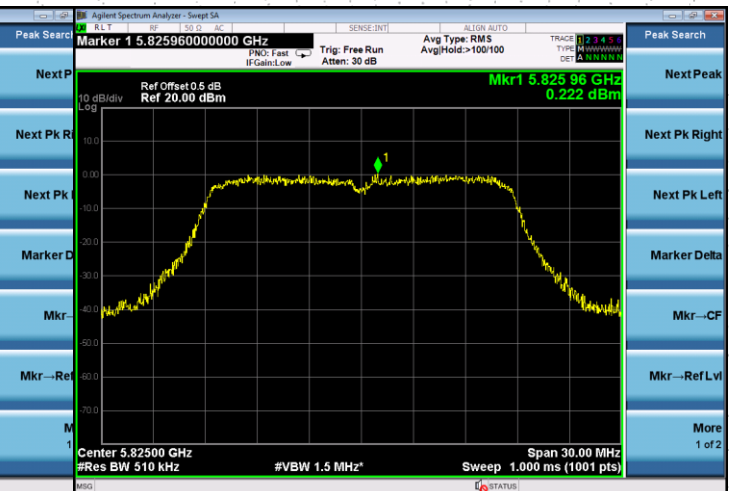
(802.11n20) PSD plot on channel 157



(802.11a) PSD plot on channel 165



(802.11n20) PSD plot on channel 165



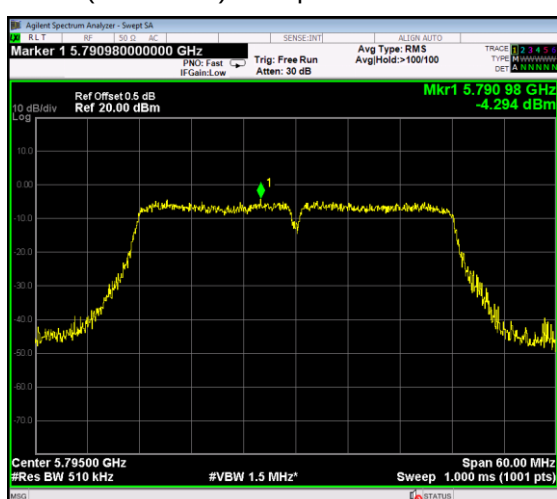
(802.11n40) PSD plot on channel 151



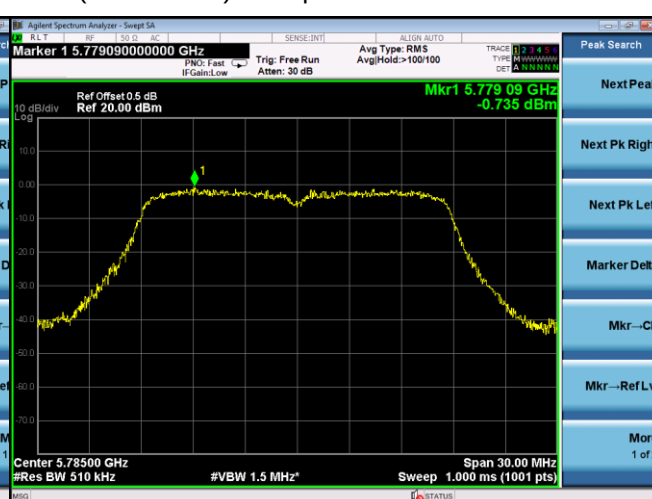
(802.11ac20) PSD plot on channel 149



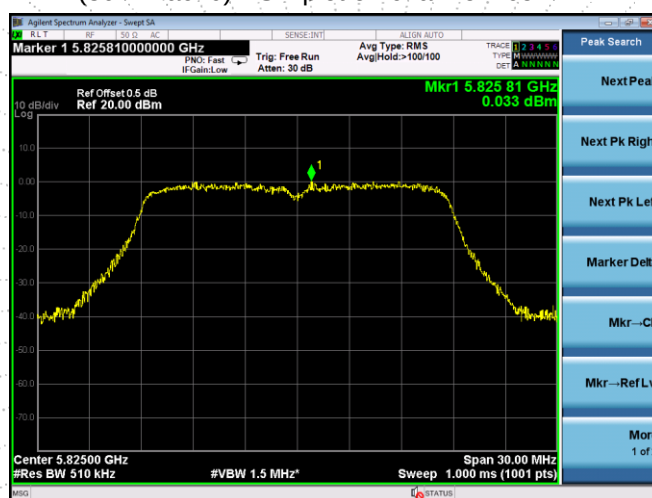
(802.11n40) PSD plot on channel 159



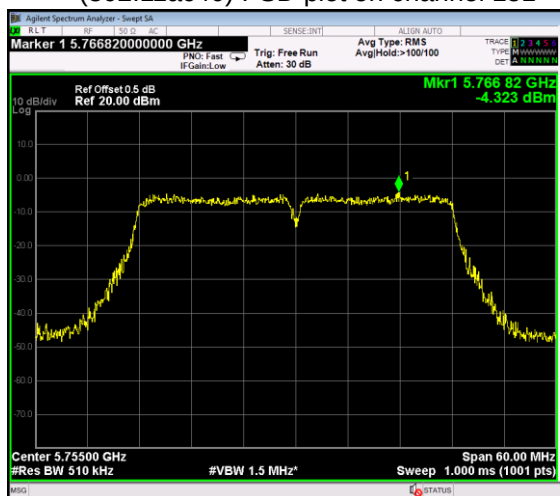
(802.11ac20) PSD plot on channel 157



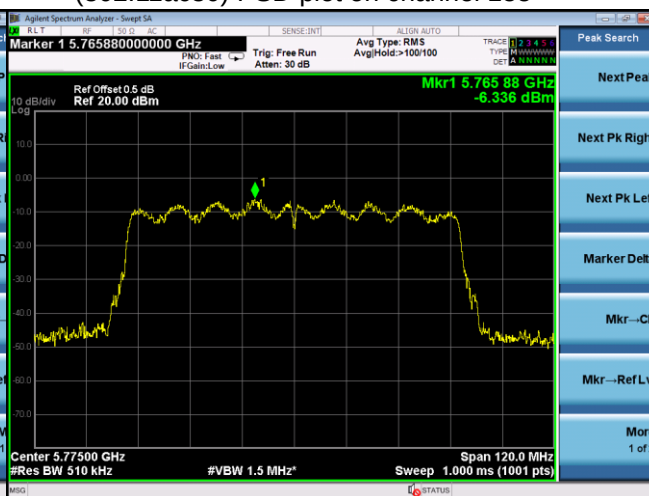
(802.11ac20) PSD plot on channel 165



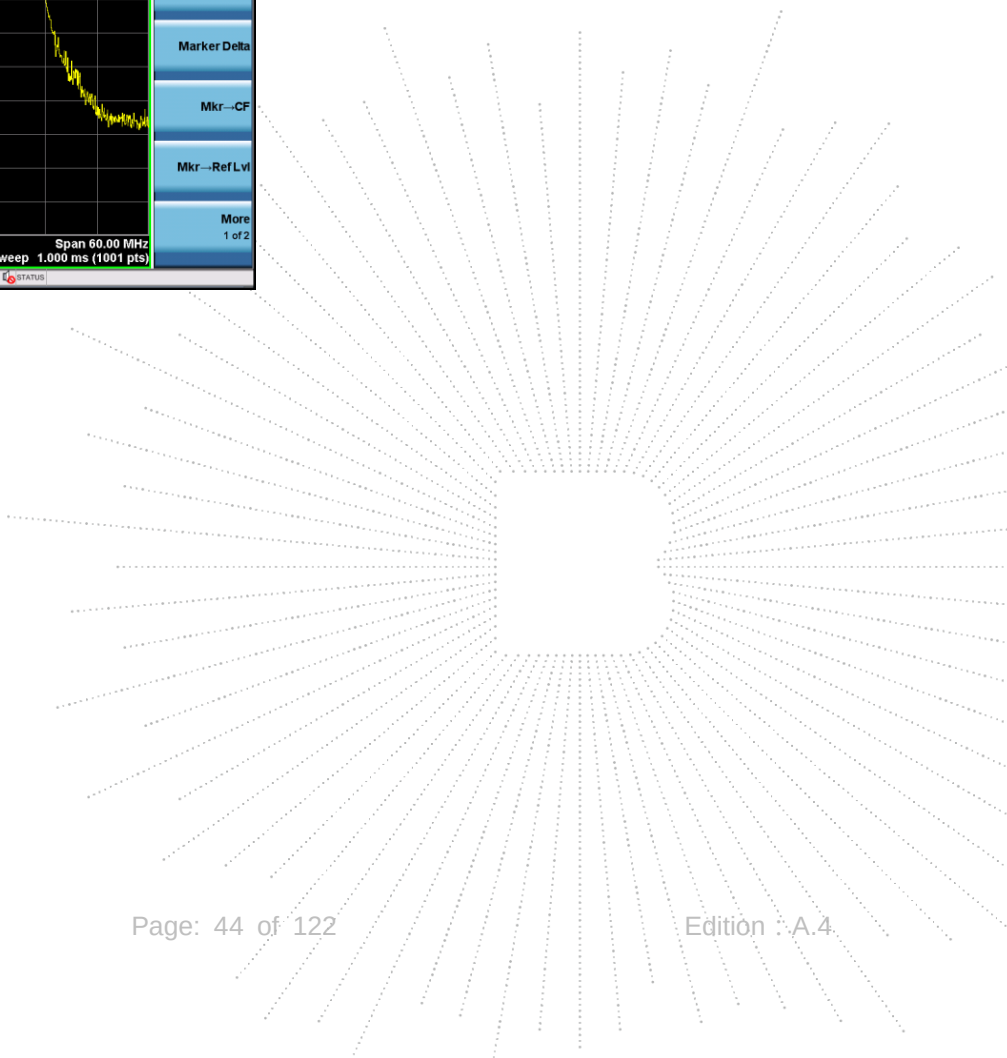
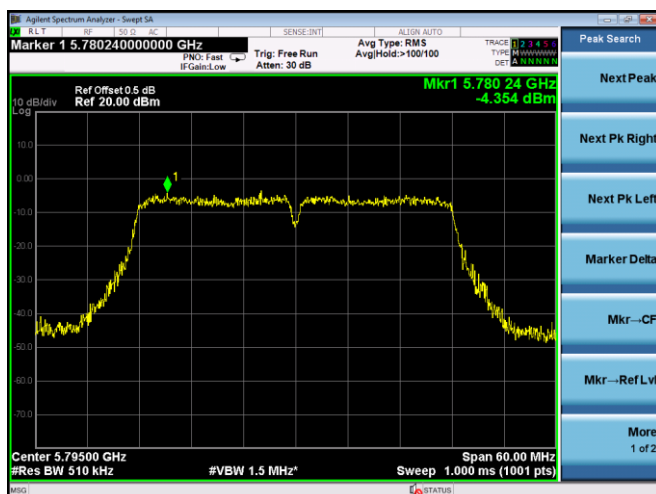
(802.11ac40) PSD plot on channel 151



(802.11ac80) PSD plot on channel 155

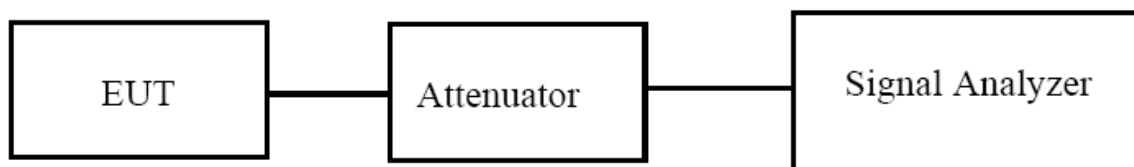


(802.11ac40) PSD plot on channel 159



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

9.1 Block Diagram Of Test Setup



9.2 Limit

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

9.3 Test procedure

- Set RBW = approximately 1% of the emission bandwidth.
- Set the VBW > RBW.
- Detector = Peak.
- Trace mode = max hold.
- Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

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

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

9.4 EUT operating Conditions

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

9.5 Test Result

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

Note: A\B\C\D Represent the value of antenna A\B\C\D, The worst data is Antenna A, only shown Antenna A Plot.

Mode	Channel	Frequency (MHz)	99% bandwidth (MHz)	26dB bandwidth (MHz)	Limit MHz	Result
			ANT A	ANT A		
802.11a	CH36	5180	16.88	20.40	N/A	Pass
	CH40	5200	16.88	20.32	N/A	Pass
	CH48	5240	16.88	20.32	N/A	Pass
802.11 n20	CH36	5180	17.76	20.64	N/A	Pass
	CH40	5200	17.76	20.64	N/A	Pass
	CH48	5240	17.76	20.64	N/A	Pass
802.11 n40	CH 38	5190	36.36	41.76	N/A	Pass
	CH 46	5230	36.36	41.64	N/A	Pass
802.11 ac20	CH36	5180	17.92	20.64	N/A	Pass
	CH40	5200	17.92	20.72	N/A	Pass
	CH48	5240	17.76	20.64	N/A	Pass
802.11 ac40	CH 38	5190	36.48	42.00	N/A	Pass
	CH 46	5230	36.48	41.88	N/A	Pass
802.11 ac80	CH 42	5210	75.60	82.08	N/A	Pass

Mode	Channel	Frequency (MHz)	99% bandwidth(M Hz)	26dB bandwidth (MHz)	Limit MHz	Result
			ANT B	ANT B		
802.11a	CH36	5180	16.64	20.16	N/A	Pass
	CH40	5200	16.64	20.16	N/A	Pass
	CH48	5240	16.64	20.16	N/A	Pass
802.11 n20	CH36	5180	17.76	20.56	N/A	Pass
	CH40	5200	17.76	20.64	N/A	Pass
	CH48	5240	17.76	20.56	N/A	Pass
802.11 n40	CH 38	5190	36.24	41.64	N/A	Pass
	CH 46	5230	36.24	41.76	N/A	Pass
802.11 ac20	CH36	5180	17.76	20.48	N/A	Pass
	CH40	5200	17.68	20.48	N/A	Pass
	CH48	5240	17.68	20.48	N/A	Pass
802.11 ac40	CH 38	5190	36.60	41.76	N/A	Pass
	CH 46	5230	36.60	41.88	N/A	Pass
802.11 ac80	CH 42	5210	75.84	81.60	N/A	Pass