



FCC/ IC TEST REPORT

According to

FCC CFR Title 47 Part 15 Subpart E (15.407) & RSS-247 Issue 1

Applicant	:	Qualcomm Atheros, Inc.
Address	:	1700 Technology Drive, San Jose, CA 95110
Manufacturer	:	Qualcomm Atheros, Inc.
Address	:	1700 Technology Drive, San Jose, CA 95110
Equipment	:	802.11a/b/g/n/ac + BT 4.1 M.2 2230 Type Card
Brand	:	Qualcomm Atheros
Model No.	:	QCNFA344A
FCC ID	:	PPD-QCNFA344AH
IC ID	:	4104A-QCNFA344A

- The test result refers exclusively to the test presented test model / sample.,
- Without written approval of **Cerpass Technology (Suzhou) Co.,Ltd.** the test report shall not be reproduced except in full.
- The test was carried out on Apr.06,2017~ Apr.15,2017 at **Cerpass Technology(Suzhou) Corp.**

I HEREBY CERTIFY THAT:

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.10**. The equipment was **passed** the test performed according to **FCC Rules and Regulations Part 15 Subpart E (15.407) and RSS-247 Issue 1**.

Prepared By:

Kerry Zhou

Approved by:

Miro Chueh (EMC/RF Manager)

Laboratory Accreditation:

Cerpass Technology Corporation Test Laboratory



NVLAP LAB Code:	200954-0
TAF LAB Code:	1439

Cerpass Technology (SuZhou) Co., Ltd.



NVLAP LAB Code:	200814-0
CNAS LAB Code:	L5515



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**History of this test report**

Report No.	Version	Issue Date	Description
SEDL1703329	Rev.01	2017-04-20	Initial release



1. Test Configuration of Equipment under Test

1.1 Feature of Equipment under Test

WLAN Module	QCNFA344A
Frequency Range	802.11a/n/ac(20MHz): 5180~5320MHz, 5500~5720MHz,5725~5850MHz 802.11n/ac(40MHz): 5190~5310MHz, 5510~5710,5755~5795MHz 802.11ac(80MHz): 5210MHz,5290MHz,5530MHz,5610MHz,5690MHz,5775MHz
Type of Modulation	802.11a/g/n/ac: OFDM
Data Rate	802.11a: 6/9/12/18/24/36/48/54 Mbps 802.11ac: up to 433.3 Mbps
Channel Control	Auto
Antenna Delivery	2*Tx + 2*Rx for 5GHz

Host Details,

Host Manufacture	Host Type	Host Model
Lenovo	Notebook Computer	Lenovo ideapad 720S-13IKB, Lenovo ideapad 720S Touch-13IKB, Lenovo ideapad 720S-13ARR



1.2 Antenna Construction and Directional Gain

Antenna	Manufacturer	Ant Type	Ant Part number	Peak Gain
Main(chain 1)	Amphenol	PIFA	AM149000C10	-2.45dBi for 2.40~2.50GHz band -1.57dBi for 5.15~5.35GHz band -2.69dBi for 5.47~5.725GHz band -1.68dBi for 5.725~5.85GHz band
Aux(chain 0)			AM149000C10	-1.32dBi for 2.40~2.50GHz band -0.79dBi for 5.15~5.35GHz band -1.14dBi for 5.47~5.725GHz band -1.14dBi for 5.725~5.85GHz band
Main(chain 1)	LUXSHARE-ICT	PIFA	AM149000C00	-3.65dBi for 2.40~2.50GHz band -1.23dBi for 5.15~5.35GHz band -0.75dBi for 5.47~5.725GHz band -2.22dBi for 5.725~5.85GHz band
Aux(chain 0)			AM149000C00	0.70dBi for 2.40~2.50GHz band -0.94dBi for 5.15~5.35GHz band -1.18dBi for 5.47~5.725GHz band -1.18dBi for 5.725~5.85GHz band

Note: The EUT will collocation two kinds of antenna, we choose one of the high peak gain antenna for all RF testing.



1.3 Channels

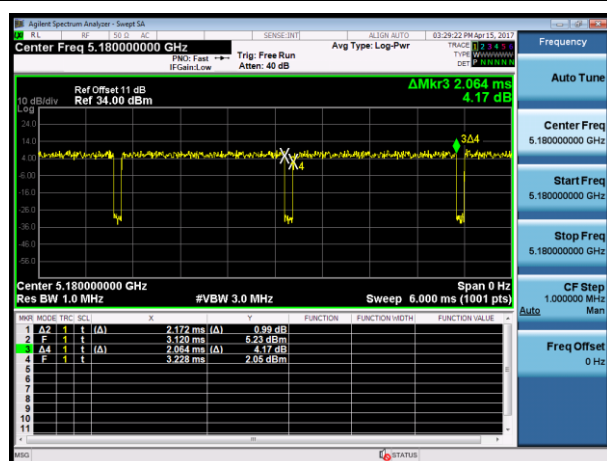
802.11a/n/ac(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz	48	5240 MHz
52	5260 MHz	56	5280 MHz	60	5300 MHz	64	5320 MHz
100	5500 MHz	104	5520 MHz	108	5540 MHz	112	5560 MHz
116	5580 MHz	120	5600 MHz	124	5620 MHz	128	5640 MHz
132	5660 MHz	136	5680 MHz	140	5700 MHz	144	5720 MHz
149	5745 MHz	153	5765 MHz	157	5785 MHz	161	5805 MHz
165	5825 MHz	N/A	N/A	N/A	N/A	N/A	N/A
802.11n/ac(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	54	5270 MHz	62	5310 MHz
102	5510 MHz	110	5550 MHz	118	5590 MHz	126	5630 MHz
134	5670 MHz	142	5710 MHz	151	5755 MHz	159	5795 MHz
802.11ac(80MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz	106	5530 MHz	122	5610 MHz
138	5690 MHz	155	5775 MHz	N/A	N/A	N/A	N/A



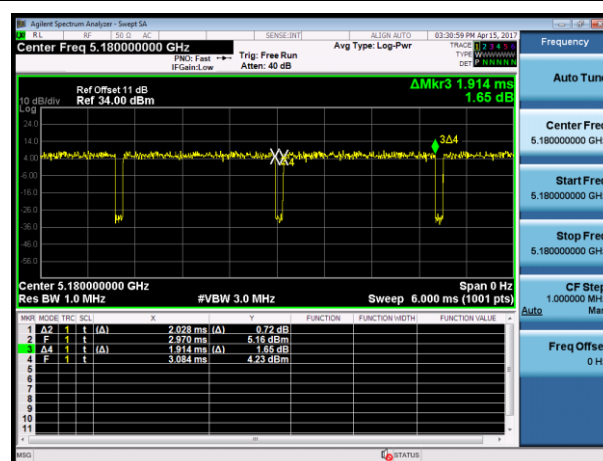
1.4 Duty Cycle

Test Mode	Frequency (MHz)	Duty Cycle
802.11a	5180	95.03%
802.11ac (20MHz)	5180	94.38%
802.11ac (40MHz)	5190	87.22%
802.11ac(80MHz)	5210	76.42%

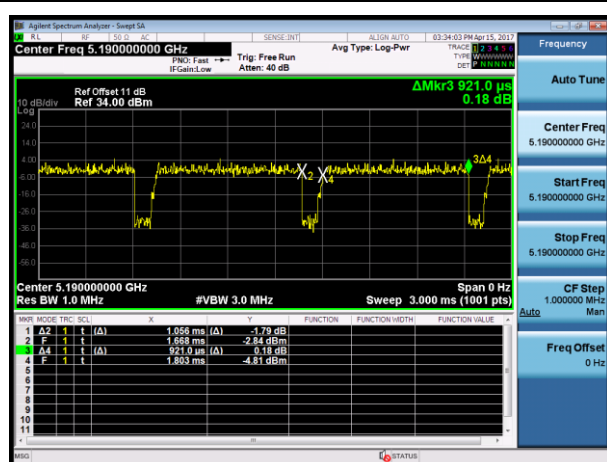
Transmit at 5180MHz by 802.11a



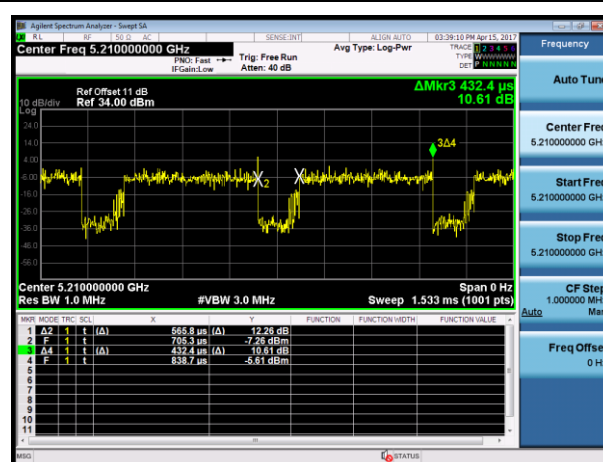
Transmit at 5180MHz by 802.11 ac(20MHz)



Transmit at 5190MHz by 802.11 ac(40MHz)



Transmit at 5210MHz by 802.11 ac(80MHz)





1.5 Test Manner

Test Manner	
a	During testing, the interface cables and equipment positions were varied according to ANSI C63.10
b	Adjust the EUT at the test mode and the test channel. Then test.

Test Mode
Mode 1: Transmit by 802.11 a
Mode 2: Transmit by 802.11ac(20MHz)
Mode 3: Transmit by 802.11ac(40MHz)
Mode 4: Transmit by 802.11ac (80MHz)

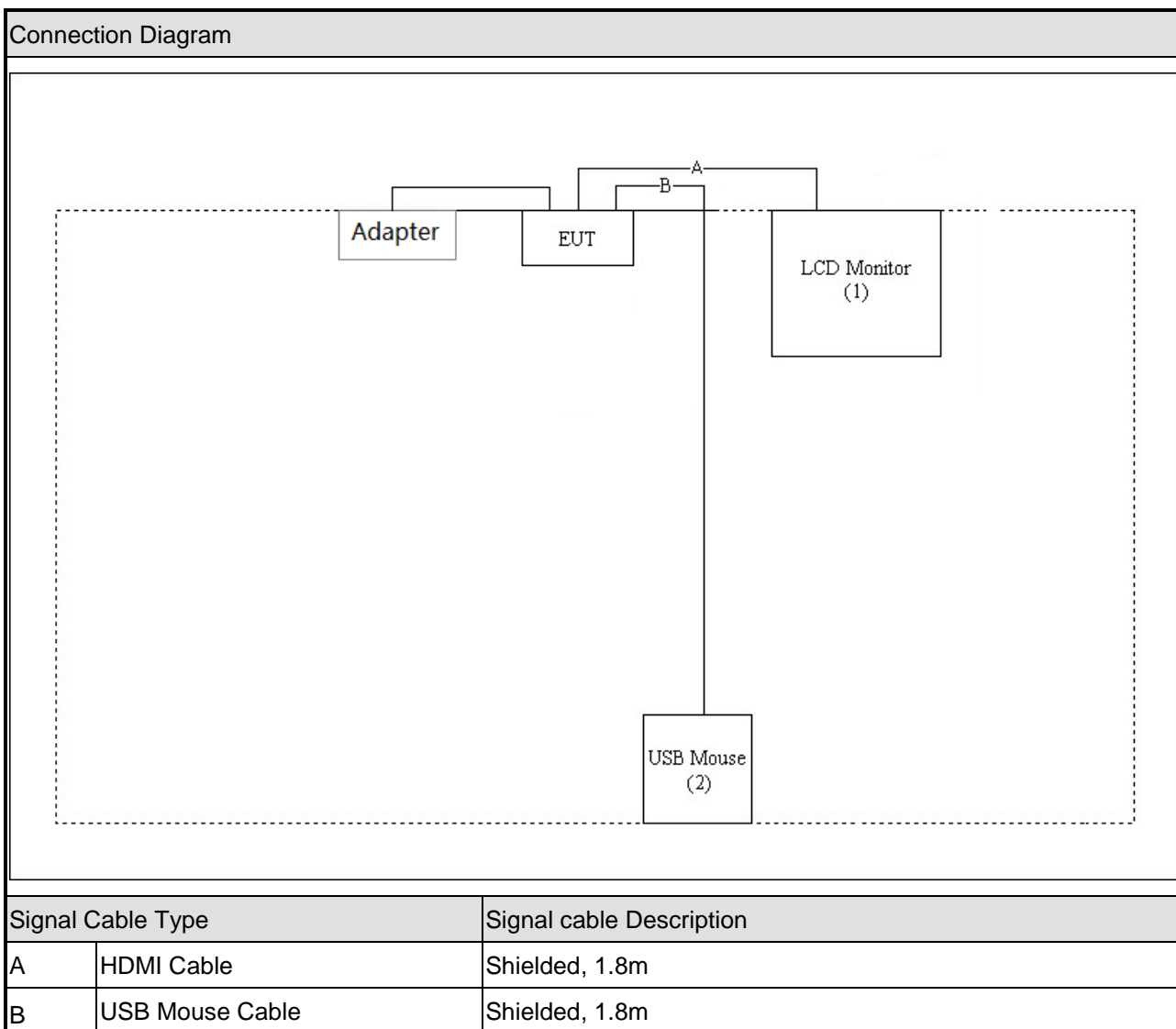
Note: Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.



1.6 Description of Test System

Product		Manufacturer	Model No.	Power Cord
1	LCD Monitor	DELL	U2713HMT	Non-Shielded, 1.8m
2	USB Mouse	LENOVO	M-U0025-O	Power by Notebook

1.7 Configuration of Tested System





2. Technical Test

2.1 Summary of Test Result

☒ No deviations from the test standards

☐ Deviations from the test standards as below description:

RSS-247, Issue 1 Section(s)	Test Description	Test Result	Reference
FCC 15.407(h)(1) RSS-247 Issue 1 May 2015 Section 6.2.1.1& 6.2.2.1&6.2.3.1&6.2.4.1	Maximum Conducted Output Power	Pass	Section 7.4
FCC 15.407(b)(1), (2), (3), (4)	Undesirable Emissions	Pass	Section 7.8 & 7.9
FCC 15.205, 15.209 15.407(b)(5), (6), (7) RSS-247 Issue 1 May 2015 Section 6.2.1.2& 6.2.2.2&6.2.3.2&6.2.4.2	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Pass	Section 7.8 & 7.9

ANSI C63.10: 2013; RSS-247 Issue 1; RSS-Gen issue 4

IC Rule	. Description of Test	Result
Item 6	. Spurious Emission(Radiated)	Pass
Item 6	. Maximum Peak Output Power	Pass



2.2 General Information of Test

Test Site	Cerpass Technology (Suzhou) Co.,Ltd
Test Site Location	No.66,Tangzhuang Road, Suzhou Industrial Park, Jiangsu 215006, China
NVLAP LAB Code	200814-0
FCC Registration Number	916572, 331395
IC Registration Number	7290A-1, 7290A-2
VCCI Registration Number	T-1945 for Telecommunication Test C-2919 for Conducted emission test R-2670 for Radiated emission test below 1GHz G-227 for Radiated emission test above 1GHz
Frequency Range Investigated	Conducted: from 150kHz to 30MHz Radiation: from 30MHz to 40000MHz
Test Distance	The test distance of radiated emission from antenna to EUT is 3 M.

2.3 Measurement Uncertainty

Measurement Item	Measurement Frequency	Polarization	Uncertainty
Radiated Emission	30 MHz ~ 40GHz	Vertical	±4.11 dB
		Horizontal	±4.10 dB
Maximum Peak Output Power	---	---	±1.4 dB
Conducted Band Edges	---	---	±2.2 dB

2.4 Measuring Equipment

RF Conducted Measuring Equipment-AC104					
Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Peak Power Sensor	Boonton	55006	9778	2016.06.08	2017.06.07
Series Power Meter	ANRITSU	ML2495A	1224005	2017.03.27	2018.03.26
Spectrum Analyzer	N9010A	Agilent	MY53400169	2016.11.11	2017.11.11
Spectrum Analyzer	E4407B	Agilent	MY44211883	2016.10.15	2017.10.14
Temperature/Humidity Meter	Zhicheng	ZC1-11	CEP-TH-003	2017.03.31	2018.03.30



Radiated Measuring Equipment-AC102					
Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Loop Antenna	R&S	HFH2-Z2	100150	2017.08.31	2018.08.30
Bilog Antenna	Sunol Science	JB1	A072414-1	2016.04.16	2017.04.15
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-619	2016.07.16	2017.07.15
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	9170-348	2016.05.07	2017.05.06
Preamplifier	HP	8447F	3113A05582	2017.03.26	2018.03.25
Preamplifier	EMCI	EMC-051835	980085	2016.09.06	2017.09.05
Preamplifier	COM-POWER	PA-840	711885	2017.03.26	2018.03.25
EMI Test Receiver	R&S	ESCI-3	101183	2016.06.29	2017.06.28
Spectrum Analyzer	N9010A	Agilent	MY53400169	2016.11.11	2017.11.11
Spectrum Analyzer	R&S	FS040	100324	2017.03.26	2018.03.25
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-002	2017.03.31	2018.03.30



3. Test of Radiated Emission

3.1 Test Limit

3.1.1 Limits of radiated emission

According to §15.209(a), except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Distance Meters	Radiated (μ V / M)	Radiated (dB μ V/ M)
30-88	3	100	40.0
88-216	3	150	43.5
216-960	3	200	46.0
Above 960	3	500	54.0

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB.

3.1.2 Limits of unwanted emission out of the restricted bands

LIMIT	
Field strength at 3M (dB μ V/ M)	
PK	AV
74	54



3.2 Test Procedures

KDB 789033 D02v01r03 – Section II.G.4 (Procedure for Unwanted Emissions Measurements below 1000 MHz)

KDB 789033 D02v01r03 – Section II.G.5 (Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz)

KDB 789033 D02v01r03 – Section II.G.6 (Procedures for Average Unwanted Emissions Measurements above 1000 MHz)



3.3 Test Setting

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = 120 kHz
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Average Measurements above 1GHz (Method AD)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = power average (RMS)
5. Number of measurement points = 1001 (Number of points must be $> 2 \times \text{span}/\text{RBW}$)
6. Sweep time = auto
7. Trace was averaged over at 100 sweeps

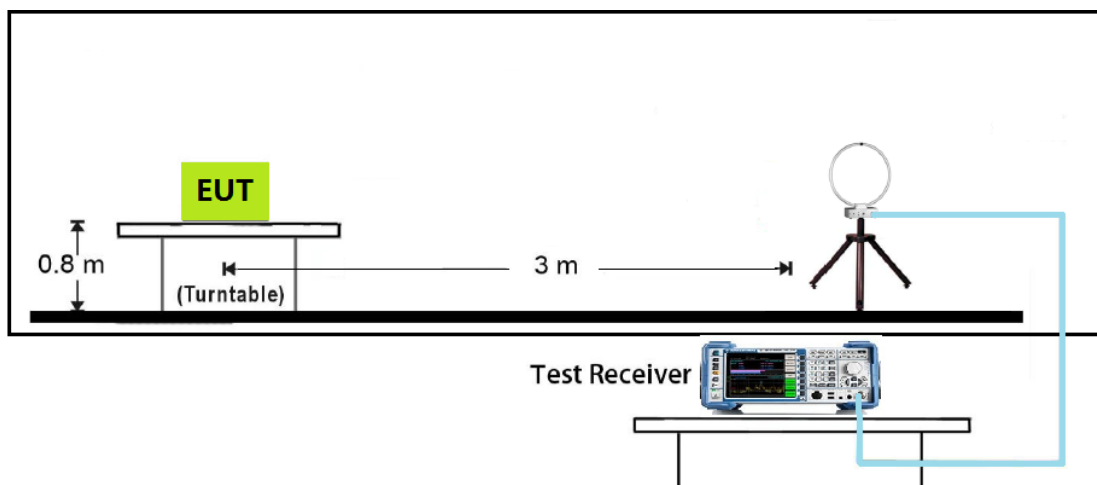
Peak Measurements above 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

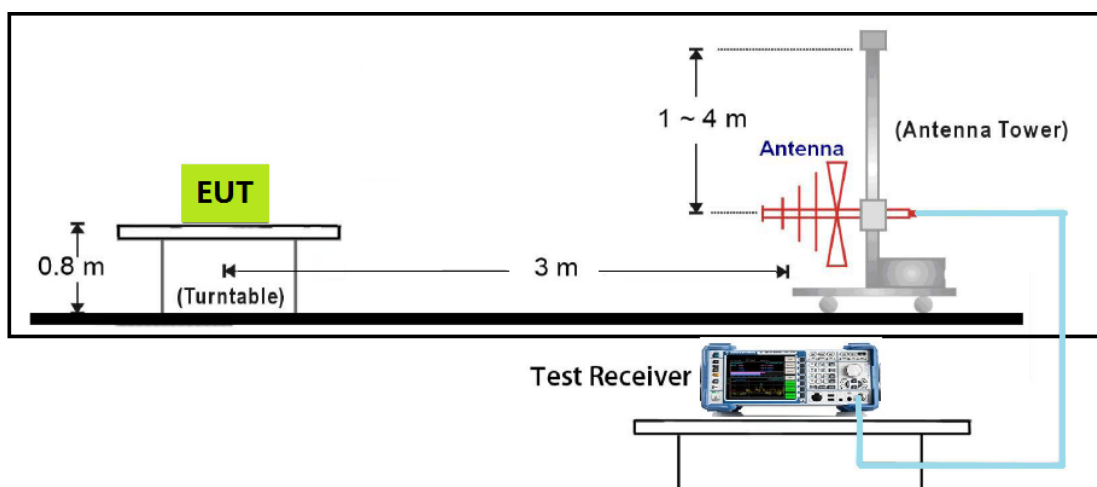


3.4 Typical Test Setup

9kHz~30MHz Test Setup

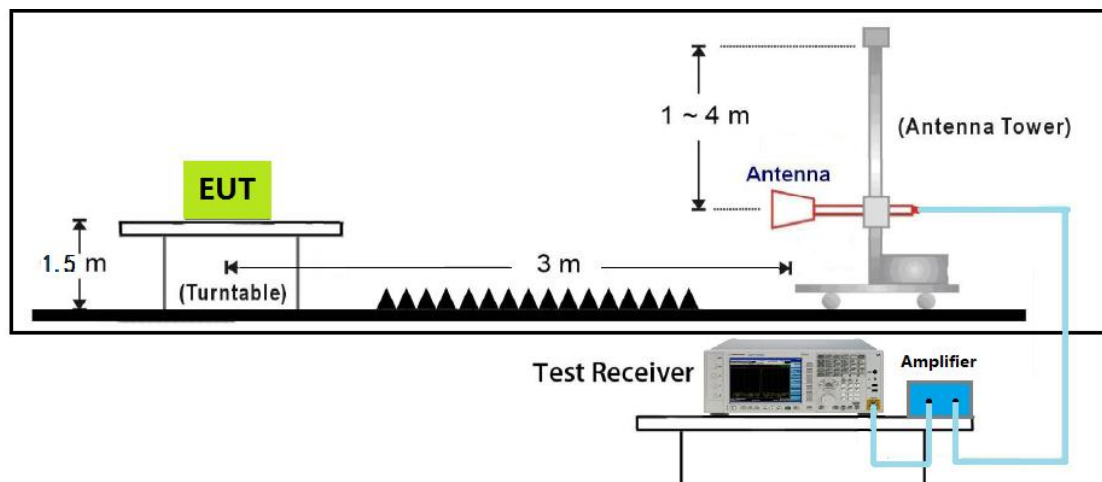


Below 1GHz Test Setup

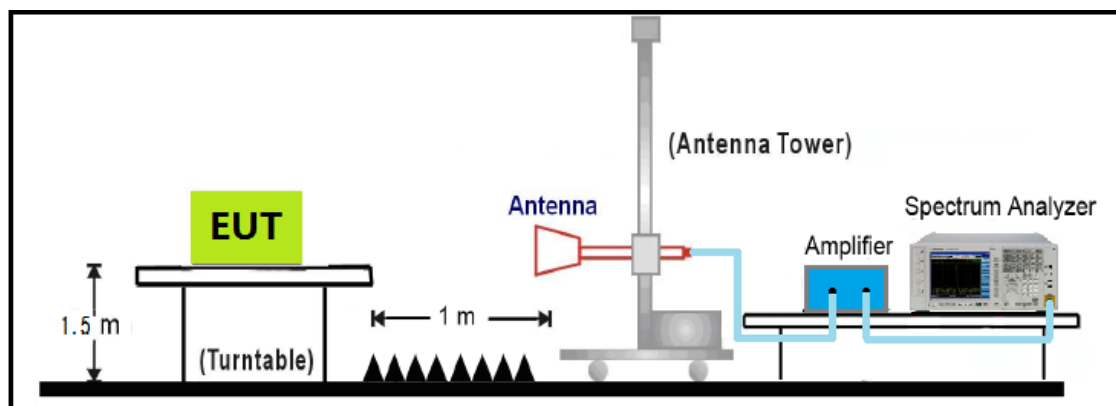




1GHz~18GHz Test Setup



18GHz~40GHz Test Setup





3.5 Test Result and Data

The worst case of Radiated Emission below 1GHz:

Engineer :Ternence	Site : EMC Lab AC 102
Limit : FCC_CLASS_B_03M_QP	Margin : 6
EUT : Notebook computer	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Normal Link

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
1	135.7298	-12.83	35.19	22.36	43.50	-21.14	QP	H
2	416.0600	-3.76	30.09	26.33	46.00	-19.67	QP	H
3	499.4800	-4.89	34.05	29.16	46.00	-16.84	QP	H
4	528.5800	-4.26	33.65	29.39	46.00	-16.61	QP	H
5	698.3300	0.97	32.74	33.71	46.00	-12.29	QP	H
6	780.7798	0.64	34.70	35.34	46.00	-10.66	QP	H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
1	202.6596	-12.40	33.70	21.30	43.50	-22.20	QP	V
2	323.9100	-6.31	34.77	28.46	46.00	-17.54	QP	V
3	416.0600	-3.76	30.73	26.97	46.00	-19.03	QP	V
4	511.1200	-4.63	31.16	26.53	46.00	-19.47	QP	V
5	603.2698	-1.85	29.56	27.71	46.00	-18.29	QP	V
6	736.1598	1.59	28.88	30.47	46.00	-15.53	QP	V

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or AVG measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)
3. The test trace is same as the ambient noise (the test frequency range: 9kHz~30MHz, 18GHz~40GHz), therefore no data appear in the report.



Above 1G:

Engineer : Ternence	
Site : EMC Lab AC 102	Time : 2017-02-25
Limit : FCC_15_03M_PK	Margin : 6
EUT :Notebook computer	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 a

Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5180	7187.6	36.5	13.8	50.3	68.2(Note 6)	-17.9	Peak	H
	7921.6	35.0	14.0	49.0	68.2(Note 6)	-19.2	Peak	H
	8426.8	35.5	15.8	51.3	74	-22.7	Peak	H
	9380.0	33.5	16.5	50.0	74	-24.0	Peak	H
	7185.4	37.7	11.6	49.3	68.2(Note 6)	-18.9	Peak	V
	7827.5	35.5	15.2	50.7	68.2(Note 6)	-17.5	Peak	V
	8275.1	33.5	16.0	49.5	74	-24.5	Peak	V
	9346.5	33.4	16.9	50.3	74	-23.7	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
- 7.The data above is worst case.
- 8.The test trace is same as the ambient noise (the test frequency range18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5220	7155.5	35.1	13.6	48.7	68.2(Note 6)	-19.5	Peak	H
	7892.7	34.8	16.1	50.9	68.2(Note 6)	-17.3	Peak	H
	8440.6	34.9	13.4	48.3	74	-25.7	Peak	H
	9158.8	35.4	13.4	48.8	74	-25.2	Peak	H
	7187.2	37.1	13.3	50.4	68.2(Note 6)	-17.8	Peak	V
	7876.9	33.6	15.4	49.0	68.2(Note 6)	-19.2	Peak	V
	8403.4	33.6	12.9	46.5	74	-27.5	Peak	V
	9072.4	34.4	16.0	50.4	74	-23.6	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
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7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5240	7145.0	35.0	15.3	50.3	68.2(Note 6)	-17.9	Peak	H
	7791.3	33.7	14.4	48.1	68.2(Note 6)	-20.1	Peak	H
	8303.1	34.0	13.9	47.9	74	-26.1	Peak	H
	9098.6	34.4	14.1	48.5	74	-25.5	Peak	H
	7086.6	35.3	13.2	48.5	68.2(Note 6)	-19.7	Peak	V
	7781.6	33.0	15.4	48.4	68.2(Note 6)	-19.8	Peak	V
	8355.8	33.4	15.3	48.7	74	-25.3	Peak	V
	9043.6	34.3	13.7	48.0	74	-26.0	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
- 7.The data above is worst case.
- 8.The test trace is same as the ambient noise (the test frequency range18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5260	7123.8	35.0	15.0	50.0	68.2(Note 6)	-18.2	Peak	H
	7843.6	35.0	16.5	51.5	68.2(Note 6)	-16.7	Peak	H
	8254.0	33.3	16.4	49.7	74	-24.3	Peak	H
	9393.4	34.2	14.1	48.3	74	-25.7	Peak	H
	7240.6	36.2	13.3	49.5	68.2(Note 6)	-18.7	Peak	V
	7783.4	34.1	14.0	48.1	68.2(Note 6)	-20.1	Peak	V
	8454.5	33.2	16.5	49.7	74	-24.3	Peak	V
	9111.9	34.9	16.2	51.1	74	-22.9	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
- 7.The data above is worst case.
- 8.The test trace is same as the ambient noise (the test frequency range18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5300	7219.9	35.8	14.3	50.1	68.2(Note 6)	-18.1	Peak	H
	7869.2	32.8	15.0	47.8	68.2(Note 6)	-20.4	Peak	H
	8461.0	32.9	13.5	46.4	74	-27.6	Peak	H
	9135.5	34.5	13.9	48.4	74	-25.6	Peak	H
	7191.3	36.5	12.4	48.9	68.2(Note 6)	-19.3	Peak	V
	7888.5	33.4	14.0	47.4	68.2(Note 6)	-20.8	Peak	V
	8307.8	34.5	16.1	50.6	74	-23.4	Peak	V
	9033.6	35.0	16.3	51.3	74	-22.7	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
- 7.The data above is worst case.
- 8.The test trace is same as the ambient noise (the test frequency range18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5320	7157.2	35.7	11.6	47.3	68.2(Note 6)	-20.9	Peak	H
	7971.8	33.7	14.7	48.4	68.2(Note 6)	-19.8	Peak	H
	8390.1	34.7	14.8	49.5	74	-24.5	Peak	H
	9019.3	34.6	13.2	47.8	74	-26.2	Peak	H
	7157.0	37.1	11.6	48.7	68.2(Note 6)	-19.5	Peak	V
	7707.9	34.6	15.5	50.1	68.2(Note 6)	-18.1	Peak	V
	8353.0	34.0	13.0	47.0	74	-27.0	Peak	V
	9400.9	34.6	16.2	50.8	74	-23.2	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
- 7.The data above is worst case.
- 8.The test trace is same as the ambient noise (the test frequency range18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5500	7195.5	36.8	15.0	51.8	68.2(Note 6)	-16.4	Peak	H
	7763.9	35.4	15.5	50.9	68.2(Note 6)	-17.3	Peak	H
	8440.3	35.1	12.9	48.0	74	-26.0	Peak	H
	9466.5	34.4	15.9	50.3	74	-23.7	Peak	H
	7239.6	36.6	15.0	51.6	68.2(Note 6)	-16.6	Peak	V
	7989.6	33.4	15.0	48.4	68.2(Note 6)	-19.8	Peak	V
	8367.8	33.9	13.4	47.3	74	-26.7	Peak	V
	9141.4	35.0	13.6	48.6	74	-25.4	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
- 7.The data above is worst case.
- 8.The test trace is same as the ambient noise (the test frequency range18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5600	7232.1	36.5	15.6	52.1	68.2(Note 6)	-16.1	Peak	H
	7987.5	33.1	13.3	46.4	68.2(Note 6)	-21.8	Peak	H
	8462.4	34.3	14.4	48.7	74	-25.3	Peak	H
	9469.0	35.0	16.5	51.5	74	-22.5	Peak	H
	7225.2	36.1	11.7	47.8	68.2(Note 6)	-20.4	Peak	V
	7879.6	33.9	15.9	49.8	68.2(Note 6)	-18.4	Peak	V
	8401.7	33.9	14.1	48.0	74	-26.0	Peak	V
	9040.7	35.5	14.4	49.9	74	-24.1	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5700	7196.3	36.5	14.9	51.4	68.2(Note 6)	-16.8	Peak	H
	7848.7	34.7	16.4	51.1	68.2(Note 6)	-17.1	Peak	H
	8274.1	34.7	12.9	47.6	74	-26.4	Peak	H
	9094.8	34.6	14.7	49.3	74	-24.7	Peak	H
	7223.1	36.8	13.9	50.7	68.2(Note 6)	-17.5	Peak	V
	7842.9	33.6	13.2	46.8	68.2(Note 6)	-21.4	Peak	V
	8471.2	34.5	13.6	48.1	74	-25.9	Peak	V
	9138.0	35.2	16.1	51.3	74	-22.7	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5720	7247.0	37.5	12.3	49.8	68.2(Note 6)	-18.4	Peak	H
	7809.1	33.9	16.3	50.2	68.2(Note 6)	-18.0	Peak	H
	8388.2	34.0	15.7	49.7	74	-24.3	Peak	H
	9041.3	35.6	16.3	51.9	74	-22.1	Peak	H
	7180.6	37.3	15.1	52.4	68.2(Note 6)	-15.8	Peak	V
	7772.9	33.7	16.2	49.9	68.2(Note 6)	-18.3	Peak	V
	8386.8	33.7	16.1	49.8	74	-24.2	Peak	V
	9095.2	34.9	14.6	49.5	74	-24.5	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5745	7126.8	35.7	13.7	49.4	68.2(Note 6)	-18.8	Peak	H
	7851.2	34.5	13.5	48.0	68.2(Note 6)	-20.2	Peak	H
	8350.9	34.4	14.6	49.0	74	-25.0	Peak	H
	9091.4	35.0	15.7	50.7	74	-23.3	Peak	H
	7190.2	36.3	12.7	49.0	68.2(Note 6)	-19.2	Peak	V
	7849.2	34.6	16.3	50.9	68.2(Note 6)	-17.3	Peak	V
	8312.9	33.1	15.2	48.3	74	-25.7	Peak	V
	9153.4	35.3	17.3	52.6	74	-21.4	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5785	7179.1	35.9	12.4	48.3	68.2(Note 6)	-19.9	Peak	H
	7844.9	33.9	14.2	48.1	68.2(Note 6)	-20.1	Peak	H
	8177.1	34.3	13.7	48.0	74	-26.0	Peak	H
	9092.7	34.9	13.7	48.6	74	-25.4	Peak	H
	7177.3	35.8	13.4	49.2	68.2(Note 6)	-19.0	Peak	V
	7777.0	33.2	14.5	47.7	68.2(Note 6)	-20.5	Peak	V
	8372.3	34.4	16.0	50.4	74	-23.6	Peak	V
	9102.3	34.3	13.2	47.5	74	-26.5	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5825	7120.7	35.9	11.9	47.8	68.2(Note 6)	-20.4	Peak	H
	7910.6	33.5	16.2	49.7	68.2(Note 6)	-18.5	Peak	H
	8243.5	34.4	14.5	48.9	74	-25.1	Peak	H
	9049.8	35.7	13.9	49.6	74	-24.4	Peak	H
	7198.0	36.9	14.6	51.5	68.2(Note 6)	-16.7	Peak	V
	7844.8	34.3	13.1	47.4	68.2(Note 6)	-20.8	Peak	V
	8308.2	35.0	13.8	48.8	74	-25.2	Peak	V
	9058.6	35.5	13.2	48.7	74	-25.3	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Engineer : Ternence	
Site : EMC Lab AC 102	Time : 2017-02-25
Limit : FCC_15_03M_PK	Margin : 6
EUT :Notebook computer	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 ac(20MHz) (Chain 0+1)

Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5180	7188.9	38.0	12.1	50.1	68.2(Note 6)	-18.1	Peak	H
	7806.1	35.3	16.0	51.3	68.2(Note 6)	-16.9	Peak	H
	8225.7	34.8	13.4	48.2	74	-25.8	Peak	H
	9341.7	34.4	16.7	51.1	74	-22.9	Peak	H
	7143.0	35.1	15.1	50.2	68.2(Note 6)	-18.0	Peak	V
	7955.8	33.8	16.1	49.9	68.2(Note 6)	-18.3	Peak	V
	8478.1	35.3	14.6	49.9	74	-24.1	Peak	V
	9337.8	33.8	17.2	51.0	74	-23.0	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5220	7187.2	37.0	13.3	50.3	68.2(Note 6)	-17.9	Peak	H
	7969.5	33.1	15.2	48.3	68.2(Note 6)	-19.9	Peak	H
	8274.1	34.6	15.7	50.3	74	-23.7	Peak	H
	9305.5	34.9	15.3	50.2	74	-23.8	Peak	H
	7041.4	34.9	15.0	49.9	68.2(Note 6)	-18.3	Peak	V
	7808.0	33.7	13.7	47.4	68.2(Note 6)	-20.8	Peak	V
	8218.3	34.1	16.3	50.4	74	-23.6	Peak	V
	9321.2	35.0	16.9	51.9	74	-22.1	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5240	7130.1	34.5	13.1	47.6	68.2(Note 6)	-20.6	Peak	H
	7917.1	34.1	16.9	51.0	68.2(Note 6)	-17.2	Peak	H
	8173.3	35.0	16.7	51.7	74	-22.3	Peak	H
	9034.3	34.3	16.4	50.7	74	-23.3	Peak	H
	7191.1	36.4	15.4	51.8	68.2(Note 6)	-16.4	Peak	V
	7850.4	34.0	16.7	50.7	68.2(Note 6)	-17.5	Peak	V
	8171.7	34.9	12.9	47.8	74	-26.2	Peak	V
	9136.2	33.2	13.8	47.0	74	-27.0	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5260	7230.2	36.2	13.4	49.6	68.2(Note 6)	-18.6	Peak	H
	7951.3	33.8	15.8	49.6	68.2(Note 6)	-18.6	Peak	H
	8285.3	35.0	13.3	48.3	74	-25.7	Peak	H
	9390.2	34.6	14.2	48.8	74	-25.2	Peak	H
	7149.4	36.3	11.7	48.0	68.2(Note 6)	-20.2	Peak	V
	7842.7	34.2	16.0	50.2	68.2(Note 6)	-18.0	Peak	V
	8319.4	34.5	15.1	49.6	74	-24.4	Peak	V
	9099.7	33.9	13.2	47.1	74	-26.9	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5300	7008.7	36.5	11.0	47.5	68.2(Note 6)	-20.7	Peak	H
	7812.0	34.3	14.1	48.4	68.2(Note 6)	-19.8	Peak	H
	8134.1	34.2	14.4	48.6	74	-25.4	Peak	H
	9413.8	34.6	17.1	51.7	74	-22.3	Peak	H
	7183.0	35.2	12.0	47.2	68.2(Note 6)	-21.0	Peak	V
	7823.8	33.3	16.2	49.5	68.2(Note 6)	-18.7	Peak	V
	8285.7	34.5	15.1	49.6	74	-24.4	Peak	V
	9057.1	34.7	13.5	48.2	74	-25.8	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5320	7137.1	35.3	15.0	50.3	68.2(Note 6)	-17.9	Peak	H
	7841.6	33.9	15.5	49.4	68.2(Note 6)	-18.8	Peak	H
	8130.9	34.5	14.1	48.6	74	-25.4	Peak	H
	9154.4	36.2	13.4	49.6	74	-24.4	Peak	H
	7216.0	36.1	14.5	50.6	68.2(Note 6)	-17.6	Peak	V
	7853.2	34.3	16.2	50.5	68.2(Note 6)	-17.7	Peak	V
	8176.0	35.3	14.2	49.5	74	-24.5	Peak	V
	9038.9	36.7	16.4	53.1	74	-20.9	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
- 7.The data above is worst case.
- 8.The test trace is same as the ambient noise (the test frequency range18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5500	7128.4	35.7	12.2	47.9	68.2(Note 6)	-20.3	Peak	H
	7849.2	33.9	15.3	49.2	68.2(Note 6)	-19.0	Peak	H
	9048.3	34.6	16.3	50.9	74	-23.1	Peak	H
	9449.9	34.8	16.9	51.7	74	-22.3	Peak	H
	7173.1	35.1	13.9	49.0	68.2(Note 6)	-19.2	Peak	V
	7808.6	34.4	15.0	49.4	68.2(Note 6)	-18.8	Peak	V
	8202.8	34.8	13.7	48.5	74	-25.5	Peak	V
	9305.2	35.1	13.8	48.9	74	-25.1	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5600	7195.4	37.4	12.4	49.8	68.2(Note 6)	-18.4	Peak	H
	7883.7	34.2	13.0	47.2	68.2(Note 6)	-21.0	Peak	H
	8409.4	35.0	15.4	50.4	74	-23.6	Peak	H
	9106.7	35.8	15.3	51.1	74	-22.9	Peak	H
	7181.9	35.3	15.0	50.3	68.2(Note 6)	-17.9	Peak	V
	7845.0	35.0	16.8	51.8	68.2(Note 6)	-16.4	Peak	V
	8163.6	34.7	13.8	48.5	74	-25.5	Peak	V
	9095.4	35.9	16.2	52.1	74	-21.9	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
- 7.The data above is worst case.
- 8.The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5700	7148.2	35.9	12.0	47.9	68.2(Note 6)	-20.3	Peak	H
	7842.7	33.9	15.4	49.3	68.2(Note 6)	-18.9	Peak	H
	8369.6	34.5	15.0	49.5	74	-24.5	Peak	H
	9423.8	34.6	17.4	52.0	74	-22.0	Peak	H
	7197.7	36.3	12.7	49.0	68.2(Note 6)	-19.2	Peak	V
	7806.3	34.4	14.2	48.6	68.2(Note 6)	-19.6	Peak	V
	8133.0	35.2	13.6	48.8	74	-25.2	Peak	V
	9163.3	35.2	17.1	52.3	74	-21.7	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
- 7.The data above is worst case.
- 8.The test trace is same as the ambient noise (the test frequency range18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5720	7111.7	35.6	15.3	50.9	68.2(Note 6)	-17.3	Peak	H
	7807.2	34.1	15.6	49.7	68.2(Note 6)	-18.5	Peak	H
	8091.1	34.7	16.2	50.9	74	-23.1	Peak	H
	9136.7	34.1	14.6	48.7	74	-25.3	Peak	H
	7114.0	35.4	12.3	47.7	68.2(Note 6)	-20.5	Peak	V
	7892.6	34.7	13.0	47.7	68.2(Note 6)	-20.5	Peak	V
	8428.4	34.7	15.0	49.7	74	-24.3	Peak	V
	9153.4	35.3	13.7	49.0	74	-25.0	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5745	7139.8	35.4	14.6	50.0	68.2(Note 6)	-18.2	Peak	H
	7843.1	34.7	16.1	50.8	68.2(Note 6)	-17.4	Peak	H
	8083.3	35.3	17.1	52.4	74	-21.6	Peak	H
	8248.8	35.4	15.5	50.9	74	-23.1	Peak	H
	7190.5	36.4	13.8	50.2	68.2(Note 6)	-18.0	Peak	V
	7987.9	34.2	15.5	49.7	68.2(Note 6)	-18.5	Peak	V
	8276.7	34.1	13.9	48.0	74	-26.0	Peak	V
	9492.2	34.6	14.7	49.3	74	-24.7	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5785	7225.8	37.1	15.7	52.8	68.2(Note 6)	-15.4	Peak	H
	7757.5	34.5	16.7	51.2	68.2(Note 6)	-17.0	Peak	H
	8402.4	34.0	16.3	50.3	74	-23.7	Peak	H
	9066.0	35.3	15.6	50.9	74	-23.1	Peak	H
	7188.0	35.8	13.4	49.2	68.2(Note 6)	-19.0	Peak	V
	7956.3	35.0	13.6	48.6	68.2(Note 6)	-19.6	Peak	V
	8318.5	34.8	13.9	48.7	74	-25.3	Peak	V
	9134.0	33.8	14.3	48.1	74	-25.9	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5825	7195.7	36.2	13.1	49.3	68.2(Note 6)	-18.9	Peak	H
	7777.2	34.6	13.4	48.0	68.2(Note 6)	-20.2	Peak	H
	8480.9	34.7	15.6	50.3	74	-23.7	Peak	H
	9186.9	34.8	15.1	49.9	74	-24.1	Peak	H
	7206.7	37.1	14.3	51.4	68.2(Note 6)	-16.8	Peak	V
	7806.3	33.7	15.9	49.6	68.2(Note 6)	-18.6	Peak	V
	8183.9	35.9	14.4	50.3	74	-23.7	Peak	V
	9097.9	35.1	13.5	48.6	74	-25.4	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Engineer : Ternence	
Site : EMC Lab AC 102	Time : 2017-02-25
Limit : FCC_15_03M_PK	Margin : 6
EUT :Notebook computer	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 ac(40MHz) (Chain 0+1)

Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5190	7138.2	35.4	12.4	47.8	68.2(Note 6)	-20.4	Peak	H
	7875.4	33.2	13.5	46.7	68.2(Note 6)	-21.5	Peak	H
	8386.1	34.8	15.4	50.2	74	-23.8	Peak	H
	9174.9	35.4	15.5	50.9	74	-23.1	Peak	H
	7134.6	35.3	15.0	50.3	68.2(Note 6)	-17.9	Peak	V
	7800.9	34.0	14.7	48.7	68.2(Note 6)	-19.5	Peak	V
	8260.5	34.4	16.1	50.5	74	-23.5	Peak	V
	9152.4	35.1	15.7	50.8	74	-23.2	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
- 7.The data above is worst case.
- 8.The test trace is same as the ambient noise (the test frequency range18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5230	7144.8	36.0	14.4	50.4	68.2(Note 6)	-17.8	Peak	H
	7773.0	34.0	16.1	50.1	68.2(Note 6)	-18.1	Peak	H
	8428.7	34.7	13.4	48.1	74	-25.9	Peak	H
	9050.8	34.8	15.2	50.0	74	-24.0	Peak	H
	7228.3	36.5	12.0	48.5	68.2(Note 6)	-19.7	Peak	V
	7879.4	32.9	14.9	47.8	68.2(Note 6)	-20.4	Peak	V
	8427.9	33.9	15.6	49.5	74	-24.5	Peak	V
	9142.4	34.5	15.6	50.1	74	-23.9	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5270	7144.3	36.3	13.6	49.9	68.2(Note 6)	-18.3	Peak	H
	7874.6	33.1	16.8	49.9	68.2(Note 6)	-18.3	Peak	H
	8130.4	34.3	13.5	47.8	74	-26.2	Peak	H
	9064.2	34.6	13.0	47.6	74	-26.4	Peak	H
	7233.8	36.0	12.0	48.0	68.2(Note 6)	-20.2	Peak	V
	7905.0	34.1	14.2	48.3	68.2(Note 6)	-19.9	Peak	V
	8428.0	34.4	12.8	47.2	74	-26.8	Peak	V
	9026.7	33.9	15.0	48.9	74	-25.1	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5310	7182.5	35.6	15.6	51.2	68.2(Note 6)	-17.0	Peak	H
	7903.9	34.3	16.2	50.5	68.2(Note 6)	-17.7	Peak	H
	8471.6	34.0	14.3	48.3	74	-25.7	Peak	H
	9013.3	34.5	14.8	49.3	74	-24.7	Peak	H
	7146.5	35.9	12.2	48.1	68.2(Note 6)	-20.1	Peak	V
	7904.3	34.0	14.7	48.7	68.2(Note 6)	-19.5	Peak	V
	8275.4	33.3	15.6	48.9	74	-25.1	Peak	V
	9354.9	33.0	17.0	50.0	74	-24.0	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
- 7.The data above is worst case.
- 8.The test trace is same as the ambient noise (the test frequency range18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5510	7146.3	36.6	12.7	49.3	68.2(Note 6)	-18.9	Peak	H
	7887.8	34.2	16.7	50.9	68.2(Note 6)	-17.3	Peak	H
	8244.2	35.1	13.5	48.6	74	-25.4	Peak	H
	9090.5	35.1	12.8	47.9	74	-26.1	Peak	H
	7172.5	35.9	14.4	50.3	68.2(Note 6)	-17.9	Peak	V
	7841.4	33.9	16.9	50.8	68.2(Note 6)	-17.4	Peak	V
	8165.9	34.9	16.1	51.0	74	-23.0	Peak	V
	9467.2	35.0	13.5	48.5	74	-25.5	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5590	7120.6	34.4	13.3	47.7	68.2(Note 6)	-20.5	Peak	H
	7947.7	35.0	13.9	48.9	68.2(Note 6)	-19.3	Peak	H
	8435.7	34.1	15.6	49.7	74	-24.3	Peak	H
	9136.8	34.1	16.2	50.3	74	-23.7	Peak	H
	7191.7	36.7	14.0	50.7	68.2(Note 6)	-17.5	Peak	V
	7960.3	32.8	14.7	47.5	68.2(Note 6)	-20.7	Peak	V
	8393.7	33.5	13.6	47.1	74	-26.9	Peak	V
	9306.5	35.5	17.3	52.8	74	-21.2	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5670	7186.0	35.4	12.7	48.1	68.2(Note 6)	-20.1	Peak	H
	7808.7	34.1	15.6	49.7	68.2(Note 6)	-18.5	Peak	H
	8352.2	32.0	13.1	45.1	74	-28.9	Peak	H
	9302.0	34.2	14.0	48.2	74	-25.8	Peak	H
	7173.9	35.0	12.3	47.3	68.2(Note 6)	-20.9	Peak	V
	7781.4	33.4	13.7	47.1	68.2(Note 6)	-21.1	Peak	V
	8463.2	32.8	12.6	45.4	74	-28.6	Peak	V
	9347.9	33.3	16.6	49.9	74	-24.1	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5710	7179.5	36.0	12.6	48.6	68.2(Note 6)	-19.6	Peak	H
	7887.9	33.8	13.0	46.8	68.2(Note 6)	-21.4	Peak	H
	8440.2	33.9	12.7	46.6	74	-27.4	Peak	H
	9021.7	34.9	14.5	49.4	74	-24.6	Peak	H
	7245.2	36.1	12.1	48.2	68.2(Note 6)	-20.0	Peak	V
	7808.2	34.0	14.8	48.8	68.2(Note 6)	-19.4	Peak	V
	8320.6	33.7	13.2	46.9	74	-27.1	Peak	V
	9187.4	34.9	16.2	51.1	74	-22.9	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5755	7222.0	37.2	15.6	52.8	68.2(Note 6)	-15.4	Peak	H
	7798.4	33.7	13.3	47.0	68.2(Note 6)	-21.2	Peak	H
	8325.2	33.6	16.1	49.7	74	-24.3	Peak	H
	9024.1	35.1	14.2	49.3	74	-24.7	Peak	H
	7203.7	35.2	14.5	49.7	68.2(Note 6)	-18.5	Peak	V
	7797.7	34.5	14.8	49.3	68.2(Note 6)	-18.9	Peak	V
	8244.7	33.8	16.4	50.2	74	-23.8	Peak	V
	9138.2	34.7	16.3	51.0	74	-23.0	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
- 7.The data above is worst case.
- 8.The test trace is same as the ambient noise (the test frequency range18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5795	7208.2	36.0	12.2	48.2	68.2(Note 6)	-20.0	Peak	H
	7887.0	33.4	13.6	47.0	68.2(Note 6)	-21.2	Peak	H
	9024.5	35.0	14.1	49.1	74	-24.9	Peak	H
	9425.8	36.3	15.7	52.0	74	-22.0	Peak	H
	7148.0	34.9	13.0	47.9	68.2(Note 6)	-20.3	Peak	V
	7868.6	33.3	14.8	48.1	68.2(Note 6)	-20.1	Peak	V
	8282.5	33.3	15.6	48.9	74	-25.1	Peak	V
	9432.6	34.3	16.5	50.8	74	-23.2	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Engineer : Ternence	
Site : EMC Lab AC 102	Time : 2017-02-25
Limit : FCC_15_03M_PK	Margin : 6
EUT :Notebook computer	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 ac(80MHz) (Chain 0+1)

Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5210	7143.4	35.7	14.6	50.3	68.2(Note 6)	-17.9	Peak	H
	7832.7	35.1	15.6	50.7	68.2(Note 6)	-17.5	Peak	H
	8428.5	33.9	12.6	46.5	74	-27.5	Peak	H
	9430.4	34.0	14.8	48.8	74	-25.2	Peak	H
	7240.4	37.2	12.4	49.6	68.2(Note 6)	-18.6	Peak	V
	7910.7	34.2	15.7	49.9	68.2(Note 6)	-18.3	Peak	V
	8318.0	34.7	15.6	50.3	74	-23.7	Peak	V
	9363.3	33.2	13.7	46.9	74	-27.1	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
- 7.The data above is worst case.
- 8.The test trace is same as the ambient noise (the test frequency range18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5290	7112.3	35.4	14.7	50.1	68.2(Note 6)	-18.1	Peak	H
	7998.3	34.3	15.9	50.2	68.2(Note 6)	-18.0	Peak	H
	8444.5	32.7	13.0	45.7	74	-28.3	Peak	H
	9335.7	33.9	14.0	47.9	74	-26.1	Peak	H
	7155.8	36.1	14.3	50.4	68.2(Note 6)	-17.8	Peak	V
	7874.4	33.6	13.9	47.5	68.2(Note 6)	-20.7	Peak	V
	8240.0	34.5	15.8	50.3	74	-23.7	Peak	V
	9302.3	34.0	16.2	50.2	74	-23.8	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5530	7146.2	36.1	12.0	48.1	68.2(Note 6)	-20.1	Peak	H
	7842.0	34.9	14.5	49.4	68.2(Note 6)	-18.8	Peak	H
	8429.0	35.0	14.7	49.7	74	-24.3	Peak	H
	9013.3	36.7	14.3	51.0	74	-23.0	Peak	H
	7233.6	35.8	14.9	50.7	68.2(Note 6)	-17.5	Peak	V
	7844.9	35.3	13.8	49.1	68.2(Note 6)	-19.1	Peak	V
	8489.7	35.5	14.7	50.2	74	-23.8	Peak	V
	9174.4	35.6	14.0	49.6	74	-24.4	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5610	7187.0	36.5	12.7	49.2	68.2(Note 6)	-19.0	Peak	H
	7917.5	35.0	13.6	48.6	68.2(Note 6)	-19.6	Peak	H
	8428.9	35.5	14.8	50.3	74	-23.7	Peak	H
	9383.3	33.5	16.7	50.2	74	-23.8	Peak	H
	7189.4	37.7	15.5	53.2	68.2(Note 6)	-15.0	Peak	V
	7826.9	35.5	14.6	50.1	68.2(Note 6)	-18.1	Peak	V
	8279.4	33.5	15.3	48.8	74	-25.2	Peak	V
	9345.8	33.4	14.4	47.8	74	-26.2	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
- 7.The data above is worst case.
- 8.The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5690	7152.6	35.1	14.9	50.0	68.2(Note 6)	-18.2	Peak	H
	7893.5	34.8	15.9	50.7	68.2(Note 6)	-17.5	Peak	H
	8441.1	34.9	14.7	49.6	74	-24.4	Peak	H
	9163.1	35.4	14.3	49.7	74	-24.3	Peak	H
	7190.3	37.1	13.2	50.3	68.2(Note 6)	-17.9	Peak	V
	7878.5	33.6	14.6	48.2	68.2(Note 6)	-20.0	Peak	V
	8402.3	33.6	16.3	49.9	74	-24.1	Peak	V
	9078.1	34.4	16.2	50.6	74	-23.4	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.



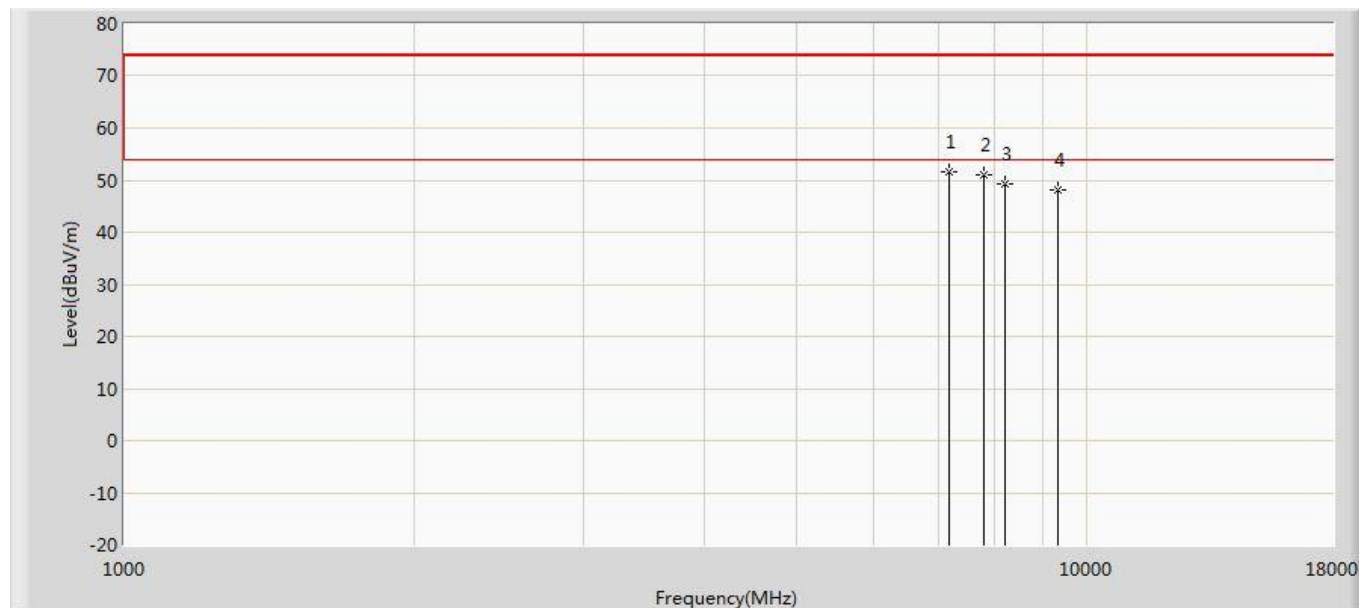
Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5775	7147.2	35.0	14.7	49.7	68.2(Note 6)	-18.5	Peak	H
	7791.1	33.7	13.2	46.9	68.2(Note 6)	-21.3	Peak	H
	8300.6	34.0	15.8	49.8	74	-24.2	Peak	H
	9101.4	34.4	14.0	48.4	74	-25.6	Peak	H
	7084.7	35.3	14.2	49.5	68.2(Note 6)	-18.7	Peak	V
	7783.1	33.0	13.3	46.3	68.2(Note 6)	-21.9	Peak	V
	8354.8	33.4	15.8	49.2	74	-24.8	Peak	V
	9042.3	34.3	12.5	46.8	74	-27.2	Peak	V

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.
8. The test trace is same as the ambient noise (the test frequency range 18GHz~40GHz), therefore no data appear in the report.

**The worst case of Radiated Emission 1~18GHz:**

Site: AC102	Time: 2017/04/15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D(1-18GHz)	Polarity: Horizontal
EUT: QCNFA344A	Power: 120V/60HZ
Note: Transmit by 802.11 ac80MHz at 5610MHz (Chain 0+1)	



No	Mark	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Type
1	*	7187.0	36.5	12.7	49.2	68.2(Note 6)	-19.0	PK
2		7917.5	35.0	13.6	48.6	68.2(Note 6)	-19.6	PK
3		8428.9	35.5	14.8	50.3	74	-23.7	PK
4		9383.3	33.5	16.7	50.2	74	-23.8	PK

Note:

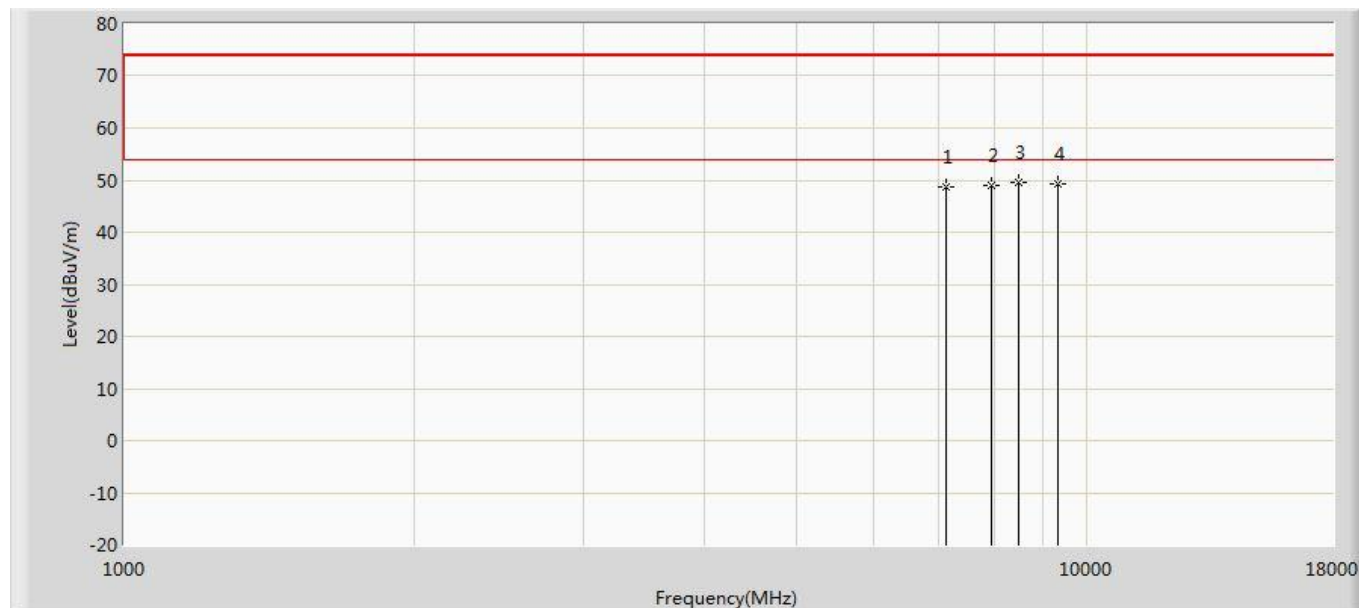
1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
7. The data above is worst case.



8.The test trace is same as the ambient noise (the test frequency range18GHz~40GHz), therefore no data appear in the report.



Site: AC102	Time: 2017/04/15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D(1-18GHz)	Polarity: Vertical
EUT: QCNFA344A	Power: 120V/60HZ
Note: Transmit by 802.11 ac80MHz at 5610MHz (Chain 0+1)	



No	Mark	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Type
1		7189.4	37.7	15.5	53.2	68.2(Note 6)	-15.0	PK
2		7826.9	35.5	14.6	50.1	68.2(Note 6)	-18.1	PK
3	*	8279.4	33.5	15.3	48.8	74	-25.2	PK
4		9345.8	33.4	14.4	47.8	74	-26.2	PK

Note:

1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.
6. Is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the PK limit for out of band spurious emissions of 68.2dBuV/m.
- 7.The data above is worst case.

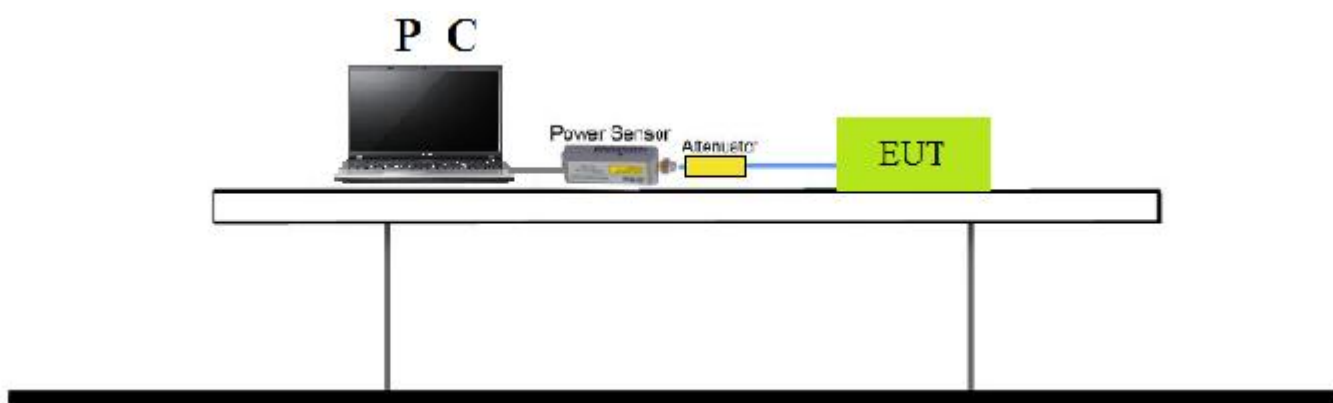


8.The test trace is same as the ambient noise (the test frequency range18GHz~40GHz), therefore no data appear in the report.



4. Power Output

4.1 Test Setup



4.2 Limit

For FCC 15.407 Power Limit:

- For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, 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 mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, 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 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + $10\log B$, where B is the 26 dB emission bandwidth in megahertz. If transmitting antenna of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
- For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm).

For RSS-247 Power Limit:

Frequency Band 5150-5250 MHz: The maximum e.i.r.p. shall not exceed 200 mW or $10 + 10\log_{10}B$, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

Frequency Band 5250-5350 MHz: The maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10\log_{10}B$, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

Frequency Bands 5470-5600 MHz and 5650-5725 MHz: The maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10\log_{10}B$, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

Frequency Band 5725-5850 MHz: The maximum conducted output power shall not exceed 1 W. The 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 power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed point-to-point operations exclude the use of point-to-multipoint³ systems, omnidirectional applications and multiple collocated transmitters transmitting the same information.

4.3 Test Procedure

The EUT was tested according to KDB 789033 D02v01r03 Section E.3.b) for compliance to FCC 47CFR 15.407 requirements.

Use the wideband power meter to test RMS power and record the result.

Refer to RSS-247 Clause 6.



4.4 Test Result

Power output test was verified over all data rates of each mode shown as below, and then choose the maximum power output (yellow marker) for final test of each channel.

MCS Index for 802.11n	Spatial Streams	Data Rate (Mbps)				
		802.11a	20MHz Bandwidth		40MHz Bandwidth	
			800ns GI	400ns GI	800ns GI	400ns GI
0	1	6	6.5	7.2	13.5	15.0
1	1	9	13.0	14.4	27.0	30.0
2	1	12	19.5	21.7	40.5	45.0
3	1	18	26.0	28.9	54.0	60.0
4	1	24	39.0	43.3	81.0	90.0
5	1	36	52.0	57.8	108.0	120.0
6	1	48	58.5	65.0	121.5	135.0
7	1	54	65.0	72.2	135.0	150.0
8	2	---	13.0	14.4	27.0	30.0
9	2	---	26.0	28.9	54.0	60.0
10	2	---	39.0	43.3	81.0	90.0
11	2	---	52.0	57.8	108.0	120.0
12	2	---	78.0	86.7	162.0	180.0
13	2	---	104.0	115.6	216.0	240.0
14	2	---	117.0	130.0	243.0	270.0
15	2	---	130.0	144.0	270.0	300.0



Spatial Streams	MCS Index	Modulation type	Coding rate	Data Rate(Mb/s)					
				20MHz		40MHz		80MHz	
				Guard Interval		Guard Interval		Guard Interval	
				800ns	400ns	800ns	400ns	800ns	400ns
1	0	BPSK	1/2	6.5	7.2	13.5	15	29.3	32.5
	1	QPSK	1/2	13	14.4	27	30	58.5	65
	2	QPSK	3/4	19.5	21.7	40.5	45	87.8	97.5
	3	16-QAM	1/2	26	28.9	54	60	117	130
	4	16-QAM	3/4	39	43.3	81	90	175.5	195
	5	64-QAM	2/3	52	57.8	108	120	234	260
	6	64-QAM	3/4	58.5	65	121.5	135	263.3	292.5
	7	64-QAM	5/6	65	72.2	135	150	292.5	325
	8	256-QAM	3/4	78	86.7	162	180	351	390
	9	256-QAM	5/6	N/A	N/A	180	200	390	433.3



FOR AVERAGE POWER

Test Item	Maximum Output Power
Test Mode	Transmit by 802.11a
Test Date	2017-04-12

Channel No.	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Required Limit (dBm) FCC/IC	Result
		Chain 0	Chain 1				
36	5180	14.31	14.35	54.22	17.34	24/20.18	Pass
38	5200	14.39	14.39	54.98	17.40	24/20.18	Pass
44	5220	14.42	14.41	55.29	17.43	24/20.18	Pass
48	5240	14.27	14.25	53.32	17.27	24/20.18	Pass
52	5260	16.45	16.45	88.31	19.46	24/27.18	Pass
56	5280	14.74	14.81	60.03	17.78	24/27.18	Pass
60	5300	14.93	14.89	61.93	17.92	24/27.18	Pass
64	5320	14.82	14.86	60.98	17.85	24/27.18	Pass
100	5500	14.89	14.94	61.97	17.92	24/27.18	Pass
104	5520	14.91	14.93	62.11	17.93	24/27.18	Pass
108	5540	14.97	14.89	62.20	17.94	24/27.18	Pass
112	5560	16.34	16.35	86.18	19.35	24/27.18	Pass
116	5580	16.42	16.49	88.42	19.47	24/27.18	Pass
120	5600	16.39	16.31	86.35	19.36	24/27.18	Pass
124	5620	16.30	16.31	85.43	19.32	24/27.18	Pass
128	5640	16.23	16.23	83.99	19.24	24/27.18	Pass
132	5660	16.36	16.35	86.36	19.36	24/27.18	Pass
136	5680	16.41	16.43	87.65	19.43	24/27.18	Pass
140	5700	14.86	14.90	61.52	17.89	24/27.18	Pass
144	5720	16.28	16.29	84.97	19.29	24/27.18	Pass
149	5745	14.79	14.75	60.00	17.78	30	Pass
153	5765	16.32	16.34	85.93	19.34	30	Pass
157	5785	16.43	16.50	88.58	19.47	30	Pass
161	5805	16.39	16.39	87.03	19.40	30	Pass
165	5825	16.33	16.31	85.72	19.33	30	Pass



Test Item	Maximum Output Power
Test Mode	Transmit by 802.11ac(20MHz) (Chain 0+1)
Test Date	2017-04-12

Channel No.	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Required Limit (dBm) FCC/IC	Result
		Chain 0	Chain 1				
36	5180	14.22	14.24	52.97	17.24	24/20.18	Pass
38	5200	14.31	14.33	54.11	17.33	24/20.18	Pass
44	5220	14.43	14.37	55.07	17.41	24/20.18	Pass
48	5240	14.34	14.44	54.97	17.40	24/20.18	Pass
52	5260	16.29	16.34	85.56	19.32	24/27.18	Pass
56	5280	14.57	14.66	57.89	17.63	24/27.18	Pass
60	5300	14.72	14.73	59.34	17.73	24/27.18	Pass
64	5320	14.86	14.78	60.68	17.83	24/27.18	Pass
100	5500	14.75	14.75	59.67	17.76	24/27.18	Pass
104	5520	14.69	14.78	59.46	17.74	24/27.18	Pass
108	5540	14.80	14.84	60.71	17.83	24/27.18	Pass
112	5560	16.28	16.27	84.81	19.28	24/27.18	Pass
116	5580	16.25	16.27	84.50	19.27	24/27.18	Pass
120	5600	16.32	16.22	84.71	19.28	24/27.18	Pass
124	5620	16.36	16.32	86.11	19.35	24/27.18	Pass
128	5640	16.35	16.28	85.58	19.32	24/27.18	Pass
132	5660	16.27	16.14	83.56	19.22	24/27.18	Pass
136	5680	16.21	16.27	84.14	19.25	24/27.18	Pass
140	5700	14.84	14.80	60.68	17.83	24/27.18	Pass
144	5720	16.23	16.27	84.28	19.26	24/27.18	Pass
149	5745	14.72	14.83	60.02	17.78	30	Pass
153	5765	16.26	16.27	84.69	19.28	30	Pass
157	5785	16.36	16.34	86.35	19.36	30	Pass
161	5805	16.31	16.27	85.13	19.30	30	Pass
165	5825	16.14	16.11	81.94	19.13	30	Pass



Test Item	Maximum Output Power
Test Mode	Transmit by 802.11ac(40MHz) (Chain 0+1)
Test Date	2017-04-12

Channel No.	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Required Limit (dBm) FCC/IC	Result
		Chain 0	Chain 1				
38	5190	11.48	11.41	27.89	14.45	24/20.18	Pass
46	5230	13.88	13.91	49.03	16.90	24/20.18	Pass
54	5270	13.82	13.87	48.50	16.86	24/27.18	Pass
62	5310	13.86	13.89	48.78	16.88	24/27.18	Pass
102	5510	11.33	11.42	27.44	14.38	24/27.18	Pass
110	5550	15.66	15.77	74.55	18.72	24/27.18	Pass
118	5590	15.81	15.81	76.17	18.82	24/27.18	Pass
126	5630	15.90	15.88	77.58	18.90	24/27.18	Pass
134	5670	14.21	14.39	53.86	17.31	24/27.18	Pass
142	5710	15.80	15.77	75.78	18.80	24/27.18	Pass
151	5755	11.37	11.38	27.45	14.38	30	Pass
159	5795	15.84	15.83	76.61	18.84	30	Pass



Test Item	Maximum Output Power
Test Mode	Transmit by 802.11ac(80MHz) (Chain 0+1)
Test Date	2017-04-12

Channel No.	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Required Limit (dBm) FCC/IC	Result
		Chain 0	Chain 1				
42	5210	10.32	10.29	21.46	13.32	24/20.18	Pass
58	5290	11.91	11.40	29.32	14.67	24/27.18	Pass
106	5530	11.77	11.85	30.35	14.82	24/27.18	Pass
122	5610	15.40	15.48	70.05	18.45	24/27.18	Pass
138	5690	15.36	15.29	68.20	18.34	24/27.18	Pass
155	5775	9.94	9.92	19.69	12.94	30	Pass



5. Band Edges Measurement

5.1 Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)

**For 15.407(b) requirement:**

For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.

Operating Frequency Band (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength at 3m (dBuV/m)
5150 - 5350	-27	68.2
5470 - 5725	-27	68.2

For transmitters operating in the 5.725-5.85 GHz band:

All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Note:

1. Refer to KDB 789033 D02v01r03 G)2)c), as specified in § 15.407(b)(1)-(3) specifies that emissions outside of the respective U-NII bands are subject to a maximum emission limit of -27 dBm/MHz. § 15.407(b)(4) provides two requirement options for devices that operate in the 5.725 – 5.85 GHz band. If the option specified in § 15.407(b)(4)(ii) is exercised, then the procedures specified in Clause 11.11 of ANSI C63.10-2013 and/or in Section 11.0 of KDB Publication 558074 shall be utilized. In general, an out-of-band emission that complies with both the peak and average power limits of § 15.209 is not required to also satisfy the -27 dBm/MHz or -17 dBm/MHz maximum emission limit.

2. All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [V/m]	Measured Distance [Meters]
0.009 – 0.490	2400/F (kHz)	300
0.490 – 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	200	3
216 - 960	200	3
Above 960	500	3



5.2 Test Setting

Peak Measurements above 1GHz

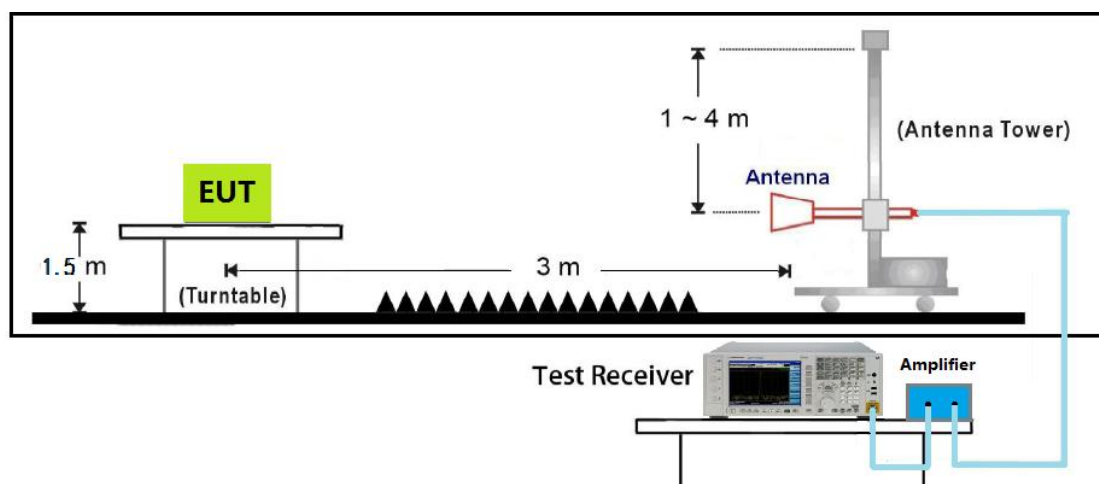
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz

- (i) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- (ii) Set sweep trigger to "free run."
- (iii) Set RBW = 1 MHz.
- (iv) Set VBW=1/T, where T is defined in section II.B.1.a).
- (v) Number of points in sweep $\geq 2 \times \text{span} / \text{RBW}$. (This ensures that bin-to-bin spacing is $\leq \text{RBW}/2$, so that narrowband signals are not lost between frequency bins.)
- (vi) Sweep time = auto.
- (vii) Detector = peak.
- (viii) Video filtering shall be applied to a voltage-squared or power signal (rms), if possible. Otherwise, it shall be set to operate on a linear voltage signal (which may require use of linear display mode). Log mode must not be used.
 - The preferred voltage-squared (i.e., power or rms) mode is selected on some analyzers by setting the "Average-VBW Type" to power or rms.
 - ☐ If power averaging (rms) mode is not available, linear voltage mode is selected on some analyzers by setting the display mode to linear. Other analyzers have a setting for "Average-VBW Type" that can be set to "Voltage" regardless of the display mode.
- (ix) Trace mode = max hold.
- (x) Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
- (xi) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.
- (xii) If linear mode was used in step (viii), add 1 dB to the final result to compensate for the difference between linear averaging and power averaging.



5.3 Test Setup Layout





5.4 Measurement Data

802.11a 5180

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5150.000	65.740	69.189	-8.260	74.000	-3.449	PK	H
2	5150.000	48.560	52.009	-5.440	54.000	-3.449	AV	H
3	5150.000	66.942	70.391	-7.058	74.000	-3.449	PK	V
4	5150.000	49.570	53.019	-4.430	54.000	-3.449	AV	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

802.11a 5320

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5350.000	66.215	69.236	-7.785	74.000	-3.021	PK	H
2	5350.000	50.143	53.164	-3.857	54.000	-3.021	AV	H
3	5350.000	68.466	71.487	-5.534	74.000	-3.021	PK	V
4	5350.000	51.960	54.981	-2.040	54.000	-3.021	AV	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)



802.11a 5500

No.	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5460.000	62.588	65.373	-11.412	74.000	-2.785	PK	H
2	5470.000	64.968	67.732	-9.032	74.000	-2.764	PK	H
3	5460.000	36.807	39.592	-17.193	54.000	-2.785	AV	V
4	5470.000	41.620	44.384	-12.380	54.000	-2.764	AV	V
5	5460.000	63.735	66.520	-10.265	74.000	-2.785	PK	H
6	5470.000	65.516	68.280	-8.484	74.000	-2.764	PK	H
7	5460.000	37.744	40.529	-16.256	54.000	-2.785	AV	V
8	5470.000	42.388	45.152	-11.612	54.000	-2.764	AV	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

802.11a 5700

No.	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5725.000	68.281	62.988	-5.719	74.000	5.293	PK	H
2	5725.000	47.452	42.159	-6.548	54.000	5.293	AV	H
3	5725.000	69.382	64.089	-4.618	74.000	5.293	PK	V
4	5725.000	48.587	43.294	-5.413	54.000	5.293	AV	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)



802.11a 5745

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5650.000	65.976	60.713	-8.024	74.000	5.263	PK	H
2	5700.000	65.856	60.572	-39.344	105.200	5.284	PK	H
3	5720.000	66.765	61.472	-44.035	110.800	5.293	PK	H
4	5725.000	72.955	67.660	-49.245	122.200	5.295	PK	H
5	5650.000	65.668	60.405	-8.332	74.000	5.263	PK	V
6	5700.000	65.940	60.656	-39.260	105.200	5.284	PK	V
7	5720.000	67.588	62.295	-43.212	110.800	5.293	PK	V
8	5725.000	73.964	68.669	-48.236	122.200	5.295	PK	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

802.11a 5825

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5850.000	69.350	64.003	-52.850	122.200	5.347	PK	H
2	5855.000	69.137	63.788	-41.663	110.800	5.349	PK	H
3	5875.000	66.293	60.936	-38.907	105.200	5.357	PK	H
4	5925.000	65.301	59.922	-8.699	74.000	5.379	PK	H
5	5850.000	68.210	62.863	-53.990	122.200	5.347	PK	V
6	5855.000	68.411	63.062	-42.389	110.800	5.349	PK	V
7	5875.000	66.722	61.365	-38.478	105.200	5.357	PK	V
8	5925.000	66.578	61.199	-7.422	74.000	5.379	PK	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

**802.11 n20 5180 (Chain 0+1)**

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5150.000	64.663	68.112	-9.337	74.000	-3.449	PK	H
2	5150.000	45.957	49.406	-8.043	54.000	-3.449	AV	H
3	5150.000	65.740	69.189	-8.260	74.000	-3.449	PK	V
4	5150.000	46.732	50.181	-7.268	54.000	-3.449	AV	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

802.11n20 5320 (Chain 0+1)

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5350.000	64.418	67.439	-9.582	74.000	-3.021	PK	H
2	5350.000	48.917	51.938	-5.083	54.000	-3.021	AV	H
3	5350.000	66.313	69.334	-7.687	74.000	-3.021	PK	V
4	5350.000	49.454	52.475	-4.546	54.000	-3.021	AV	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

**802.11 n20 5500 (Chain 0+1)**

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5460.000	62.529	65.314	-11.471	74.000	-2.785	PK	H
2	5470.000	66.832	69.596	-7.168	74.000	-2.764	PK	H
3	5460.000	37.604	40.389	-16.396	54.000	-2.785	AV	V
4	5470.000	40.749	43.513	-13.251	54.000	-2.764	AV	V
5	5460.000	63.100	65.885	-10.900	74.000	-2.785	PK	H
6	5470.000	67.126	69.890	-6.874	74.000	-2.764	PK	H
7	5460.000	37.865	40.650	-16.135	54.000	-2.785	AV	V
8	5470.000	42.279	45.043	-11.721	54.000	-2.764	AV	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

802.11 n20 5700 (Chain 0+1)

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5725.000	66.667	61.374	-7.333	74.000	5.293	PK	H
2	5725.000	46.829	41.536	-7.171	54.000	5.293	AV	H
3	5725.000	67.308	62.015	-6.692	74.000	5.293	PK	V
4	5725.000	48.121	42.828	-5.879	54.000	5.293	AV	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)



802.11 n20 5745 (Chain 0+1)

No.	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5650.000	65.730	60.467	-8.270	74.000	5.263	PK	H
2	5700.000	65.541	60.257	-39.659	105.200	5.284	PK	H
3	5720.000	68.730	63.437	-42.070	110.800	5.293	PK	H
4	5725.000	74.652	69.357	-47.548	122.200	5.295	PK	H
5	5650.000	65.349	60.086	-8.651	74.000	5.263	PK	V
6	5700.000	65.805	60.521	-39.395	105.200	5.284	PK	V
7	5720.000	68.237	62.944	-42.563	110.800	5.293	PK	V
8	5725.000	72.174	66.879	-50.026	122.200	5.295	PK	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

802.11 n20 5825 (Chain 0+1)

No.	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5850.000	74.908	69.561	-47.292	122.200	5.347	PK	H
2	5855.000	70.463	65.114	-40.337	110.800	5.349	PK	H
3	5875.000	66.435	61.078	-38.765	105.200	5.357	PK	H
4	5925.000	65.577	60.198	-8.423	74.000	5.379	PK	H
5	5850.000	71.192	65.845	-51.008	122.200	5.347	PK	V
6	5855.000	70.070	64.721	-40.730	110.800	5.349	PK	V
7	5875.000	68.260	62.903	-36.940	105.200	5.357	PK	V
8	5925.000	66.519	61.140	-7.481	74.000	5.379	PK	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

**802.11 n40 5190 (Chain 0+1)**

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5150.000	64.867	68.316	-9.133	74.000	-3.449	PK	H
2	5150.000	48.250	51.699	-5.750	54.000	-3.449	AV	H
3	5150.000	66.273	69.722	-7.727	74.000	-3.449	PK	V
4	5150.000	49.044	52.493	-4.956	54.000	-3.449	AV	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

802.11n40 5310 (Chain 0+1)

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5350.000	67.446	70.467	-6.554	74.000	-3.021	PK	H
2	5350.000	49.398	52.419	-4.602	54.000	-3.021	AV	H
3	5350.000	68.074	71.095	-5.926	74.000	-3.021	PK	V
4	5350.000	50.111	53.132	-3.889	54.000	-3.021	AV	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

**802.11 n40 5510 (Chain 0+1)**

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5460.000	60.047	62.832	-13.953	74.000	-2.785	PK	H
2	5470.000	65.288	68.052	-8.712	74.000	-2.764	PK	H
3	5460.000	39.008	41.793	-14.992	54.000	-2.785	AV	V
4	5470.000	45.494	48.258	-8.506	54.000	-2.764	AV	V
5	5460.000	60.152	62.937	-13.848	74.000	-2.785	PK	H
6	5470.000	66.161	68.925	-7.839	74.000	-2.764	PK	H
7	5460.000	39.357	42.142	-14.643	54.000	-2.785	AV	V
8	5470.000	46.219	48.983	-7.781	54.000	-2.764	AV	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

802.11 n40 5670 (Chain 0+1)

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5725.000	65.883	60.590	-8.117	74.000	5.293	PK	H
2	5725.000	46.442	41.149	-7.558	54.000	5.293	AV	H
3	5725.000	66.444	61.151	-7.556	74.000	5.293	PK	V
4	5725.000	48.099	42.806	-5.901	54.000	5.293	AV	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

**802.11 n40 5755 (Chain 0+1)**

No.	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5650.000	65.937	60.674	-8.063	74.000	5.263	PK	H
2	5700.000	66.103	60.819	-39.097	105.200	5.284	PK	H
3	5720.000	70.808	65.515	-39.992	110.800	5.293	PK	H
4	5725.000	74.727	69.432	-47.473	122.200	5.295	PK	H
5	5650.000	65.413	60.150	-8.587	74.000	5.263	PK	V
6	5700.000	65.711	60.427	-39.489	105.200	5.284	PK	V
7	5720.000	73.037	67.744	-37.763	110.800	5.293	PK	V
8	5725.000	75.065	69.770	-47.135	122.200	5.295	PK	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

802.11 n40 5795 (Chain 0+1)

No.	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5850.000	70.711	65.364	-51.489	122.200	5.347	PK	H
2	5855.000	69.170	63.821	-41.630	110.800	5.349	PK	H
3	5875.000	66.967	61.610	-38.233	105.200	5.357	PK	H
4	5925.000	65.301	59.922	-8.699	74.000	5.379	PK	H
5	5850.000	68.837	63.490	-53.363	122.200	5.347	PK	V
6	5855.000	69.007	63.658	-41.793	110.800	5.349	PK	V
7	5875.000	67.276	61.919	-37.924	105.200	5.357	PK	V
8	5925.000	66.725	61.346	-7.275	74.000	5.379	PK	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

**802.11 ac80 5210 (Chain 0+1)**

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5150.000	70.161	73.610	-3.839	74.000	-3.449	PK	H
2	5150.000	49.288	52.737	-4.712	54.000	-3.449	AV	H
3	5150.000	71.874	75.323	-2.126	74.000	-3.449	PK	V
4	5150.000	49.825	53.274	-4.175	54.000	-3.449	AV	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

802.11 ac80 5290 (Chain 0+1)

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5350.000	66.817	69.838	-7.183	74.000	-3.021	PK	H
2	5350.000	47.091	50.112	-6.909	54.000	-3.021	AV	H
3	5350.000	67.171	70.192	-6.829	74.000	-3.021	PK	V
4	5350.000	48.354	51.375	-5.646	54.000	-3.021	AV	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

**802.11 ac80 5530 (Chain 0+1)**

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5460.000	62.455	65.240	-11.545	74.000	-2.785	PK	H
2	5470.000	62.898	65.662	-11.102	74.000	-2.764	PK	H
3	5460.000	44.081	46.866	-9.919	54.000	-2.785	AV	V
4	5470.000	44.732	47.496	-9.268	54.000	-2.764	AV	V
5	5460.000	63.187	65.972	-10.813	74.000	-2.785	PK	H
6	5470.000	63.631	66.395	-10.369	74.000	-2.764	PK	H
7	5460.000	44.742	47.527	-9.258	54.000	-2.785	AV	V
8	5470.000	45.572	48.336	-8.428	54.000	-2.764	AV	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)



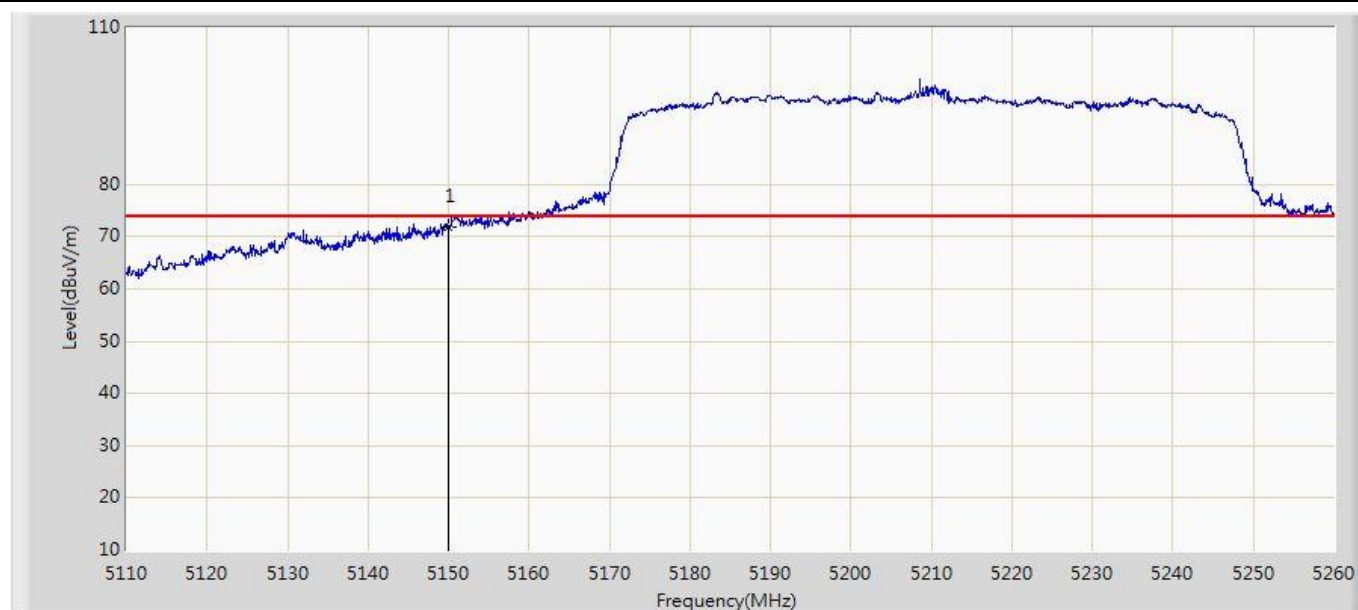
802.11 ac80 5775 (Chain 0+1)

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5650.000	66.363	61.100	-7.637	74.000	5.263	PK	H
2	5700.000	69.619	64.335	-35.581	105.200	5.284	PK	H
3	5720.000	71.292	65.999	-39.508	110.800	5.293	PK	H
4	5725.000	73.822	68.527	-48.378	122.200	5.295	PK	H
5	5850.000	72.554	67.207	-49.646	122.200	5.347	PK	H
6	5855.000	69.656	64.307	-41.144	110.800	5.349	PK	H
7	5875.000	66.214	60.857	-38.986	105.200	5.357	PK	H
8	5925.000	65.751	60.372	-8.249	74.000	5.379	PK	H
9	5650.000	66.411	61.148	-7.589	74.000	5.263	PK	V
10	5700.000	70.347	65.063	-34.853	105.200	5.284	PK	V
11	5720.000	72.509	67.216	-38.291	110.800	5.293	PK	V
12	5725.000	73.622	68.327	-48.578	122.200	5.295	PK	V
13	5850.000	68.892	63.545	-53.308	122.200	5.347	PK	V
14	5855.000	68.644	63.295	-42.156	110.800	5.349	PK	V
15	5875.000	65.977	60.620	-39.223	105.200	5.357	PK	V
16	5925.000	67.520	62.141	-6.480	74.000	5.379	PK	V

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

**The worst-case plots of bandedge for each mode in each operating band:**

Site: AC102	Time: 2017/04/06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D(1-18GHz)	Polarity: Vertical
EUT: QCNFA435	Power: AC 120V/60Hz
Note: Mode1: Transmit at 5210MHz by 802.11ac80 (Chain 0+1)	

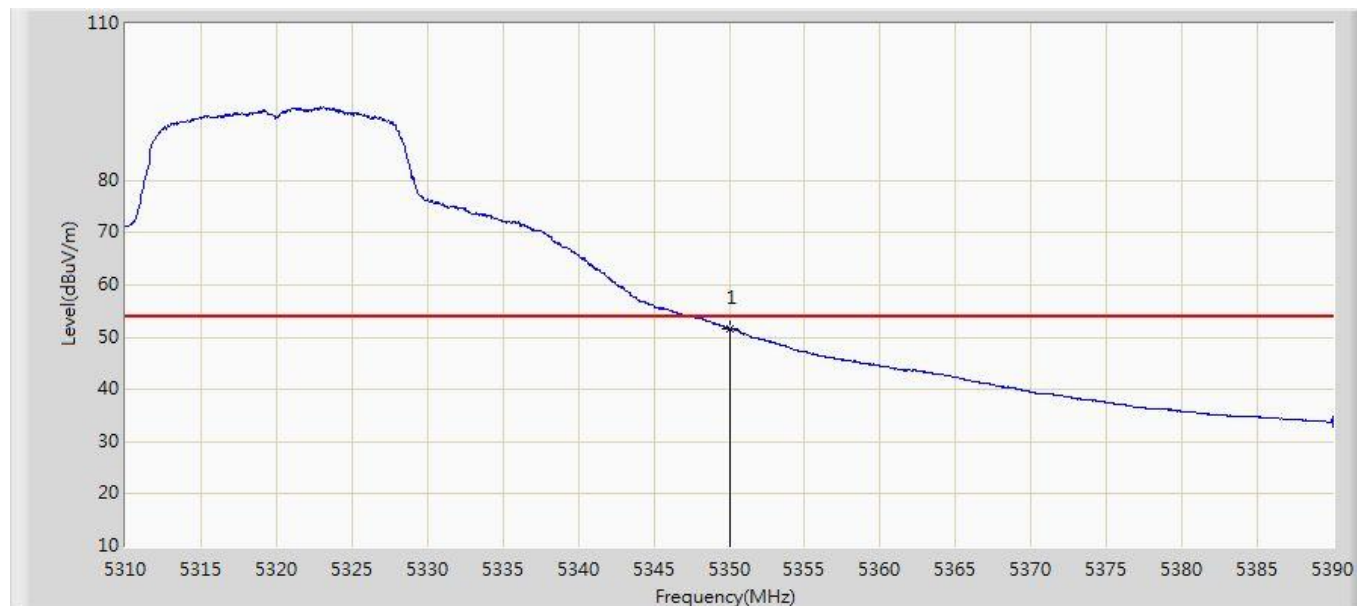


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	5150.000	71.874	75.323	-2.126	74.000	-3.449	PK

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)



Site: AC102	Time: 2017/04/06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D(1-18GHz)	Polarity: Vertical
EUT: QCNFA435	Power: AC 120V/60Hz
Note: Mode1: Transmit at 5320MHz by 802.11a	

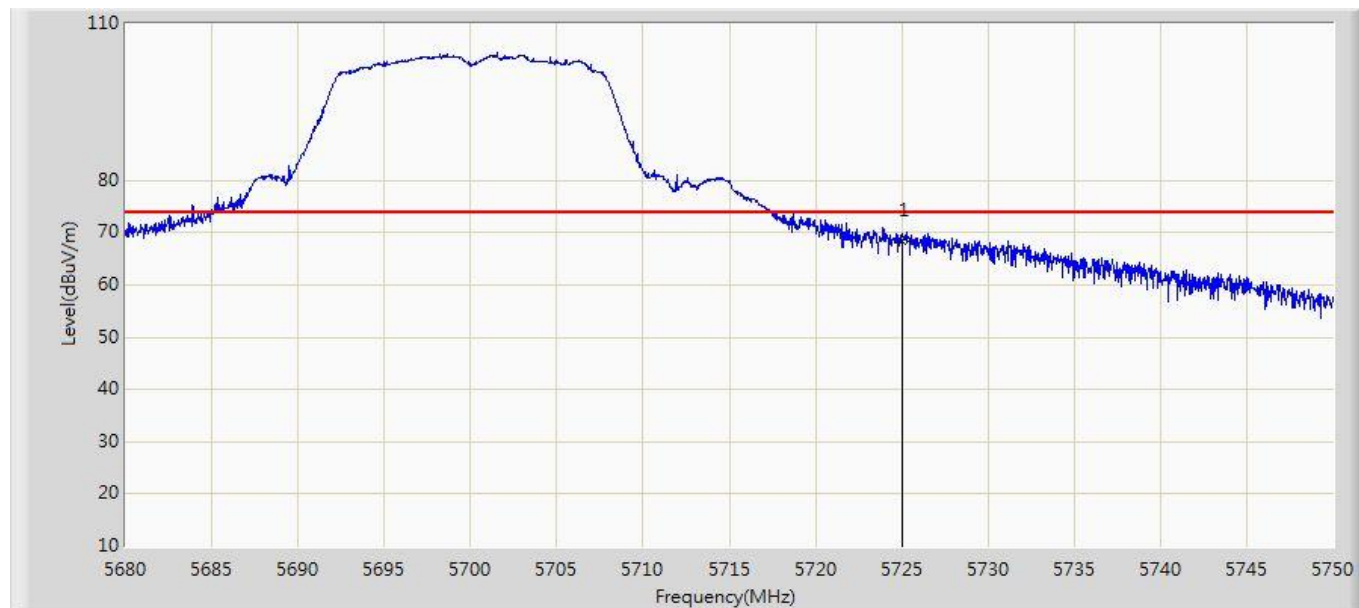


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	5350.000	51.960	54.981	-2.040	54.000	-3.021	AV

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)



Site: AC102	Time: 2017/04/06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D(1-18GHz)	Polarity: Vertical
EUT: QCNFA435	Power: AC 120V/60Hz
Note: Mode1: Transmit at 5700MHz by 802.11a	

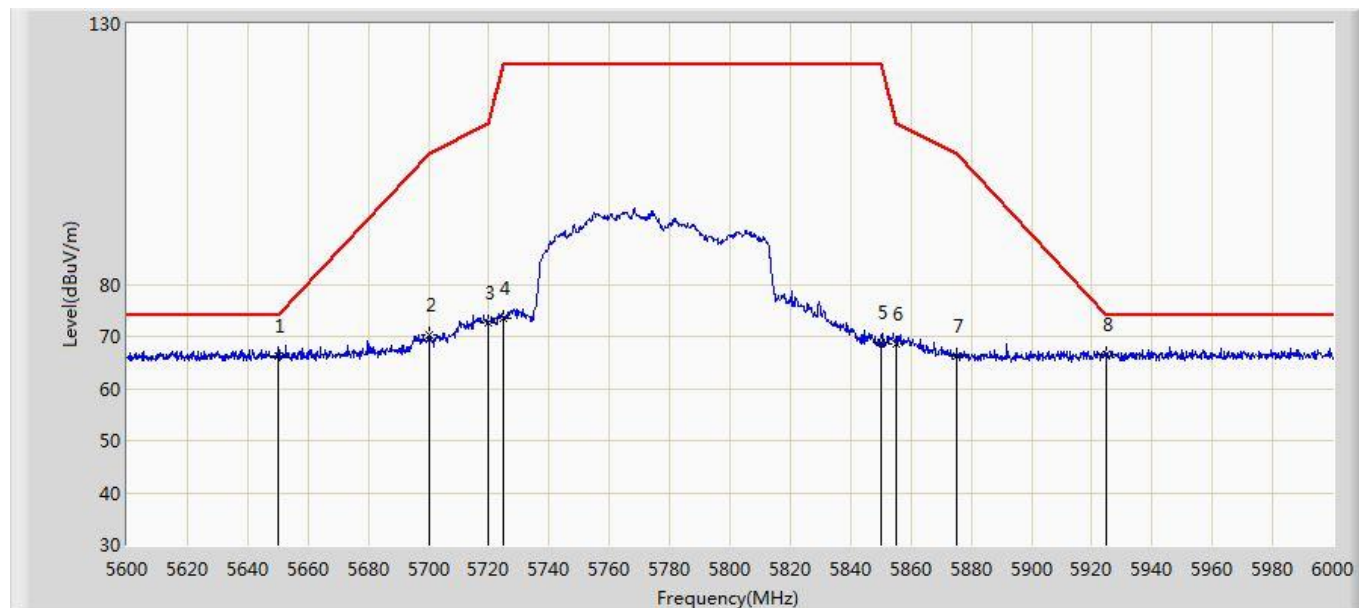


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	5725.000	69.382	64.089	-4.618	74.000	5.293	PK

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)



Site: AC102	Time: 2017/04/06
Limit: Bandedge-Band3	Margin: 0
Probe: BBHA9120D(1-18GHz)	Polarity: Vertical
EUT: QCNFA435	Power: AC 120V/60Hz
Note: Mode1: Transmit at 5775MHz by 802.11ac80(Chain 0+1)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		5650.000	66.411	61.148	-7.589	74.000	5.263	PK
2		5700.000	70.347	65.063	-34.853	105.200	5.284	PK
3		5720.000	72.509	67.216	-38.291	110.800	5.293	PK
4		5725.000	73.622	68.327	-48.578	122.200	5.295	PK
5		5850.000	68.892	63.545	-53.308	122.200	5.347	PK
6		5855.000	68.644	63.295	-42.156	110.800	5.349	PK
7		5875.000	65.977	60.620	-39.223	105.200	5.357	PK
8	*	5925.000	67.520	62.141	-6.480	74.000	5.379	PK

Note: Measurement Level = Reading Level + Correct Factor (Correct Factor= Antenna Factor + Cable Loss – Amplifier)

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