



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 Jun.01,2017~ Jun.06,2017 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
SEDL1704145	Rev.01	2017-06-06	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/Tablet computer	Lenovo N24, 80AF



1.2 Antenna Construction and Directional Gain

Ant Type	Manufacturer	Part Number
1	HONGLIN TECHNOLOGY Co., LTD.	Main: N/A Aux: N/A
2	Shenzhen South Star Technology Co., LTD	Main: D04-0282-R0A Aux: D04-0281-R0A

Antenna Peak Gain	HongLin: 2.4G: 0.73dBi, 5.2G: 0.58dBi, 5.5G: 0.69dBi, 5.8G: 0.42dBi SouthStar: 2.4G: 3.52dBi, 5.2G: 3.81dBi, 5.5G: 4.01dBi, 5.8G: 2.48dBi
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1. WLAN/BT coexistence mode:

- ◆ 2x2 WLAN + BT:
- 5GHz 802.11a/an (or 11ac) transmit concurrent with BT.
- 2.4GHz: timely shared coexistence.



1.3 Channels

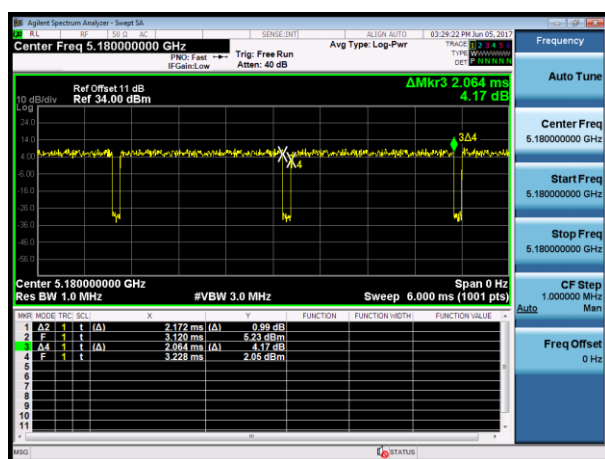
802.11a/n/ac(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz	48	5240 MHz
52	5260 MHz	56	5280 MHz	60	5300 MHz	64	5320 MHz
100	5500 MHz	104	5520 MHz	108	5540 MHz	112	5560 MHz
116	5580 MHz	120	5600 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



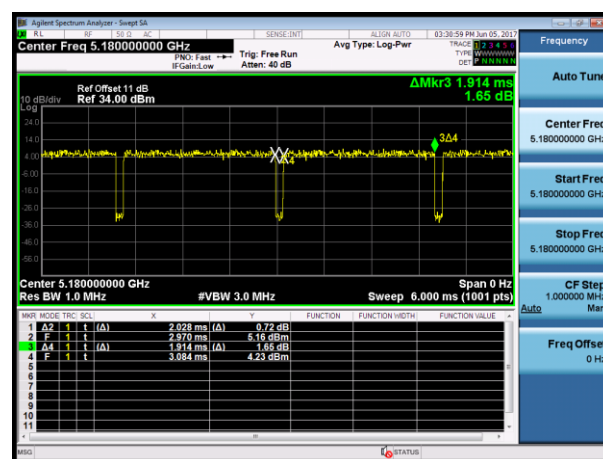
1.4 Duty Cycle

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%

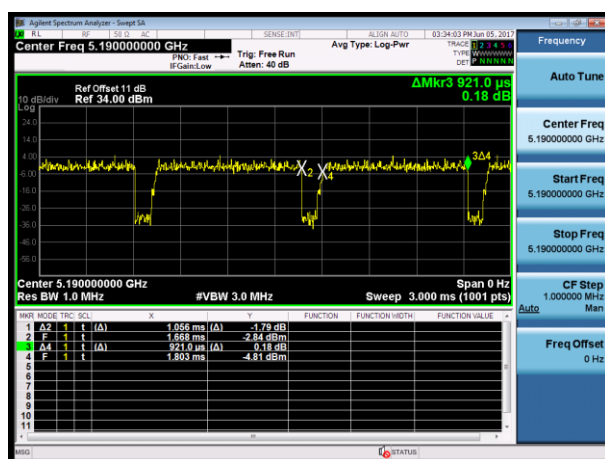
Transmit at 5180MHz by 802.11a



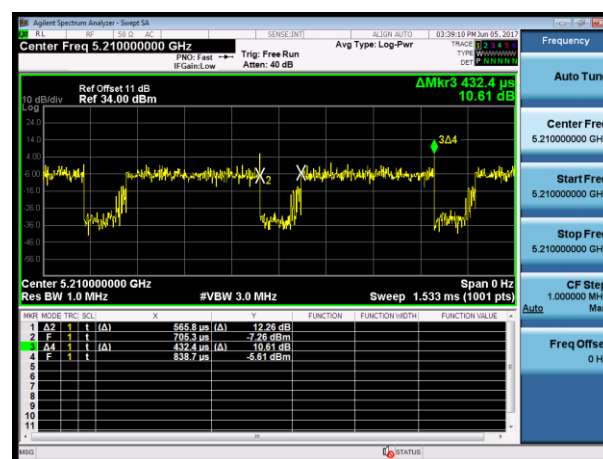
Transmit at 5180MHz by 802.11 ac(20MHz)



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.



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	. Maximum Peak Output Power	Pass



2.2 General Information of Test

Test Site	CerpPASS 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



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 D02v01r02 – Section II.G.4 (Procedure for Unwanted Emissions Measurements below 1000 MHz)

KDB 789033 D02v01r02 – Section II.G.5 (Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz)

KDB 789033 D02v01r02 – 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

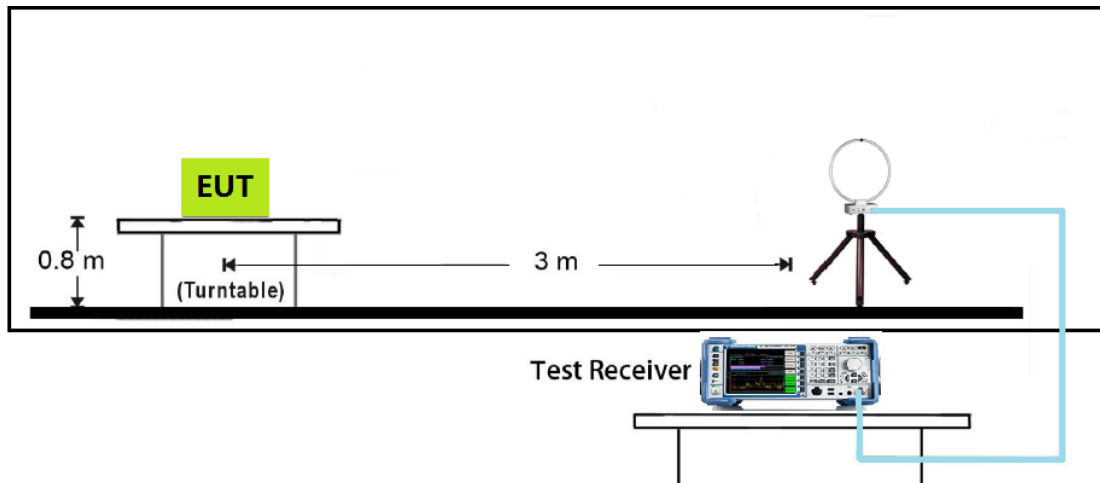
Peak Measurements above 1GHz

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

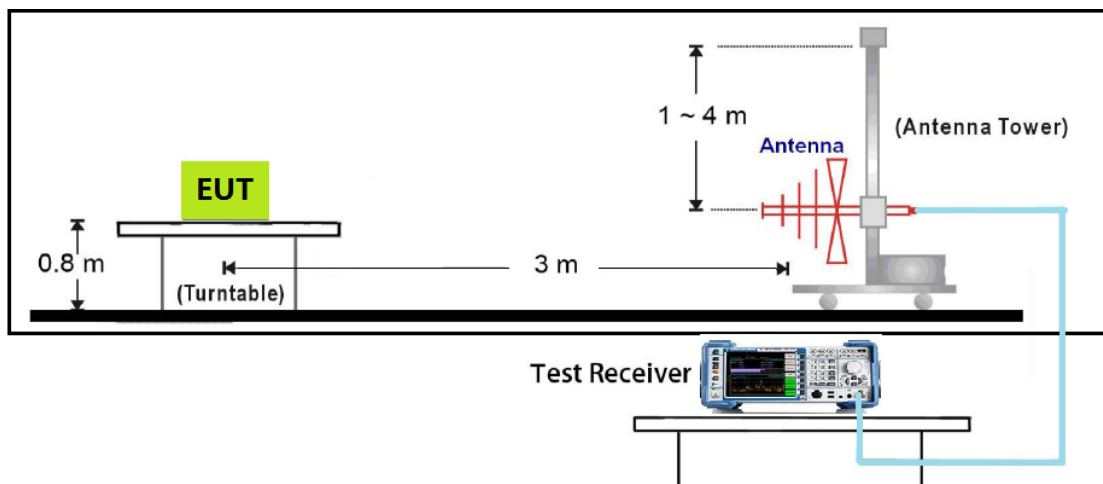


3.4 Typical Test Setup

9kHz~30MHz Test Setup

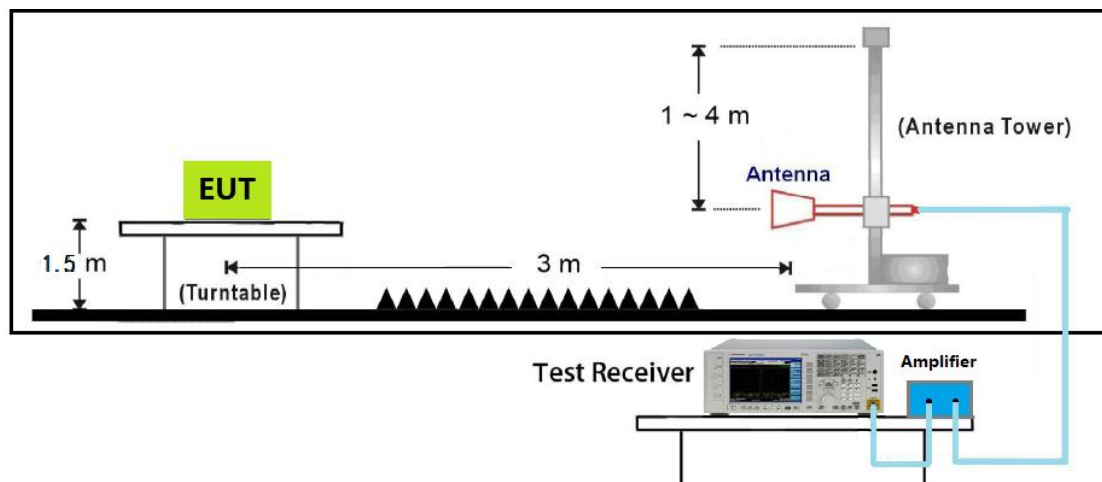


Below 1GHz Test Setup

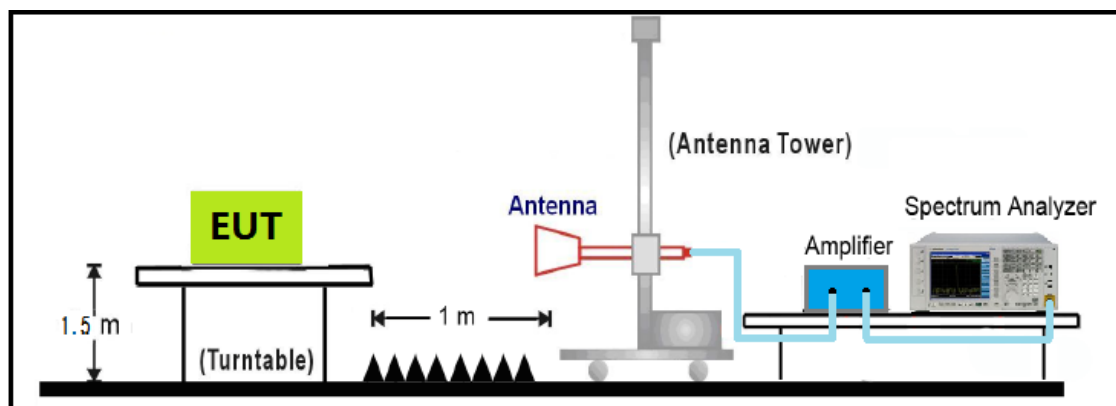




1GHz~18GHz Test Setup



18GHz~40GHz Test Setup



3.5 Measurement equipment

Instrument	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date.
EMI Test Receiver	R&S	ESCI	100563	2017.03.10	2018.03.09
Spectrum Analyzer	R&S	FSP40	100047	2017.03.27	2018.03.26
H64 Preamplifier	HP	8447F	3113A05582	2017.03.10	2018.03.09
Preamplifier	COM-POWER	PA-840	711885	2017.03.24	2018.03.23
Preamplifier	Agilent	8449B	3008A02342	2017.03.10	2018.03.09
Ultra Broadband Antenna	R&S	HL562	100362	2017.05.03	2018.05.02
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-619	2017.05.03	2018.05.02
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	9170-347	2017.05.03	2018.05.02
Spectrum Analyzer	Agilent	E4407B	MY44211883	2017.09.25	2018.09.25
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-002	2017.03.10	2018.03.09



3.6 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	173.5600	-7.60	38.04	30.44	43.50	-13.06	QP	H
2	230.7898	-12.04	44.22	32.18	46.00	-13.82	QP	H
3	408.3000	-4.72	39.29	34.57	46.00	-11.43	QP	H
4	432.5500	-4.61	37.18	32.57	46.00	-13.43	QP	H
5	590.6598	-2.25	35.44	33.19	46.00	-12.81	QP	H
6	711.9098	1.28	32.40	33.68	46.00	-12.32	QP	H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	AntPol. H/V
1	184.2298	-8.67	37.97	29.30	43.50	-14.20	QP	V
2	273.4700	-9.36	39.61	30.25	46.00	-15.75	QP	V
3	466.5000	-7.10	40.87	33.77	46.00	-12.23	QP	V
4	597.4500	-2.04	36.53	34.49	46.00	-11.51	QP	V
5	696.3899	0.79	34.59	35.38	46.00	-10.62	QP	V
6	750.7100	1.37	32.59	33.96	46.00	-12.04	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 : 2017-06-01
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	7191.4	36.5	14.0	50.5	68.2(Note 6)	-17.7	Peak	H
	7919.9	35.0	16.1	51.1	68.2(Note 6)	-17.1	Peak	H
	8432.1	35.5	15.4	50.9	74	-23.1	Peak	H
	9383.0	33.5	15.9	49.4	74	-24.6	Peak	H
	7189.1	37.7	13.8	51.5	68.2(Note 6)	-16.7	Peak	V
	7827.1	35.5	14.6	50.1	68.2(Note 6)	-18.1	Peak	V
	8275.4	33.5	14.5	48.0	74	-26.0	Peak	V
	9348.5	33.4	13.7	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
5220	7153.0	35.1	13.5	48.6	68.2(Note 6)	-19.6	Peak	H
	7893.9	34.8	15.0	49.8	68.2(Note 6)	-18.4	Peak	H
	8437.4	34.9	12.6	47.5	74	-26.5	Peak	H
	9160.4	35.4	15.8	51.2	74	-22.8	Peak	H
	7188.1	37.1	12.7	49.8	68.2(Note 6)	-18.4	Peak	V
	7878.8	33.6	16.9	50.5	68.2(Note 6)	-17.7	Peak	V
	8401.2	33.6	15.6	49.2	74	-24.8	Peak	V
	9076.9	34.4	12.7	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.
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4. The average measurement was not performed when the peak measured data under the limit of average detection.
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Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5240	7149.0	35.0	13.0	48.0	68.2(Note 6)	-20.2	Peak	H
	7792.3	33.7	13.7	47.4	68.2(Note 6)	-20.8	Peak	H
	8304.4	34.0	16.0	50.0	74	-24.0	Peak	H
	9100.1	34.4	12.9	47.3	74	-26.7	Peak	H
	7084.5	35.3	15.2	50.5	68.2(Note 6)	-17.7	Peak	V
	7786.1	33.0	13.7	46.7	68.2(Note 6)	-21.5	Peak	V
	8350.0	33.4	15.3	48.7	74	-25.3	Peak	V
	9038.3	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.
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Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5260	7118.7	35.0	12.6	47.6	68.2(Note 6)	-20.6	Peak	H
	7843.0	35.0	14.5	49.5	68.2(Note 6)	-18.7	Peak	H
	8251.4	33.3	16.4	49.7	74	-24.3	Peak	H
	9387.7	34.2	13.7	47.9	74	-26.1	Peak	H
	7241.9	36.2	13.1	49.3	68.2(Note 6)	-18.9	Peak	V
	7784.8	34.1	14.0	48.1	68.2(Note 6)	-20.1	Peak	V
	8454.9	33.2	13.9	47.1	74	-26.9	Peak	V
	9109.8	34.9	12.7	47.6	74	-26.4	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
5300	7222.5	35.8	14.8	50.6	68.2(Note 6)	-17.6	Peak	H
	7866.6	32.8	13.2	46.0	68.2(Note 6)	-22.2	Peak	H
	8464.3	32.9	15.9	48.8	74	-25.2	Peak	H
	9133.8	34.5	16.0	50.5	74	-23.5	Peak	H
	7188.1	36.5	11.7	48.2	68.2(Note 6)	-20.0	Peak	V
	7887.7	33.4	14.2	47.6	68.2(Note 6)	-20.6	Peak	V
	8307.3	34.5	12.8	47.3	74	-26.7	Peak	V
	9033.5	35.0	14.7	49.7	74	-24.3	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.
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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	7157.6	35.7	14.9	50.6	68.2(Note 6)	-17.6	Peak	H
	7972.3	33.7	15.0	48.7	68.2(Note 6)	-19.5	Peak	H
	8387.2	34.7	13.5	48.2	74	-25.8	Peak	H
	9015.1	34.6	14.4	49.0	74	-25.0	Peak	H
	7157.1	37.1	12.5	49.6	68.2(Note 6)	-18.6	Peak	V
	7707.1	34.6	13.9	48.5	68.2(Note 6)	-19.7	Peak	V
	8352.0	34.0	16.2	50.2	74	-23.8	Peak	V
	9400.3	34.6	16.9	51.5	74	-22.5	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
5500	7195.4	36.8	12.1	48.9	68.2(Note 6)	-19.3	Peak	H
	7767.6	35.4	15.7	51.1	68.2(Note 6)	-17.1	Peak	H
	8440.3	35.1	15.4	50.5	74	-23.5	Peak	H
	9464.0	34.4	17.2	51.6	74	-22.4	Peak	H
	7240.8	36.6	15.1	51.7	68.2(Note 6)	-16.5	Peak	V
	7987.1	33.4	15.9	49.3	68.2(Note 6)	-18.9	Peak	V
	8371.0	33.9	12.5	46.4	74	-27.6	Peak	V
	9141.5	35.0	15.4	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.
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	7229.2	36.5	13.0	49.5	68.2(Note 6)	-18.7	Peak	H
	7985.6	33.1	16.0	49.1	68.2(Note 6)	-19.1	Peak	H
	8461.0	34.3	13.4	47.7	74	-26.3	Peak	H
	9467.8	35.0	14.1	49.1	74	-24.9	Peak	H
	7224.2	36.1	12.8	48.9	68.2(Note 6)	-19.3	Peak	V
	7875.9	33.9	14.8	48.7	68.2(Note 6)	-19.5	Peak	V
	8402.8	33.9	14.9	48.8	74	-25.2	Peak	V
	9038.8	35.5	12.7	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 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
5700	7198.4	36.5	12.4	48.9	68.2(Note 6)	-19.3	Peak	H
	7851.5	34.7	14.9	49.6	68.2(Note 6)	-18.6	Peak	H
	8279.5	34.7	15.9	50.6	74	-23.4	Peak	H
	9091.8	34.6	15.5	50.1	74	-23.9	Peak	H
	7223.8	36.8	13.1	49.9	68.2(Note 6)	-18.3	Peak	V
	7843.7	33.6	17.1	50.7	68.2(Note 6)	-17.5	Peak	V
	8474.2	34.5	12.7	47.2	74	-26.8	Peak	V
	9136.1	35.2	15.0	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 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	7246.9	37.5	13.5	51.0	68.2(Note 6)	-17.2	Peak	H
	7808.3	33.9	15.6	49.5	68.2(Note 6)	-18.7	Peak	H
	8388.8	34.0	13.5	47.5	74	-26.5	Peak	H
	9039.4	35.6	12.8	48.4	74	-25.6	Peak	H
	7177.2	37.3	13.1	50.4	68.2(Note 6)	-17.8	Peak	V
	7773.0	33.7	15.1	48.8	68.2(Note 6)	-19.4	Peak	V
	8384.9	33.7	13.7	47.4	74	-26.6	Peak	V
	9095.7	34.9	13.0	47.9	74	-26.1	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
5745	7128.5	35.7	11.7	47.4	68.2(Note 6)	-20.8	Peak	H
	7850.8	34.5	15.3	49.8	68.2(Note 6)	-18.4	Peak	H
	8350.8	34.4	15.7	50.1	74	-23.9	Peak	H
	9091.8	35.0	13.4	48.4	74	-25.6	Peak	H
	7188.6	36.3	14.3	50.6	68.2(Note 6)	-17.6	Peak	V
	7850.9	34.6	13.9	48.5	68.2(Note 6)	-19.7	Peak	V
	8308.5	33.1	16.0	49.1	74	-24.9	Peak	V
	9149.3	35.3	14.7	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 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	7180.4	35.9	12.2	48.1	68.2(Note 6)	-20.1	Peak	H
	7842.0	33.9	16.0	49.9	68.2(Note 6)	-18.3	Peak	H
	8173.0	34.3	16.5	50.8	74	-23.2	Peak	H
	9092.9	34.9	12.8	47.7	74	-26.3	Peak	H
	7183.0	35.8	13.5	49.3	68.2(Note 6)	-18.9	Peak	V
	7777.0	33.2	15.2	48.4	68.2(Note 6)	-19.8	Peak	V
	8369.7	34.4	15.1	49.5	74	-24.5	Peak	V
	9103.0	34.3	12.8	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
5825	7119.3	35.9	11.9	47.8	68.2(Note 6)	-20.4	Peak	H
	7908.5	33.5	15.5	49.0	68.2(Note 6)	-19.2	Peak	H
	8243.4	34.4	15.9	50.3	74	-23.7	Peak	H
	9047.2	35.7	16.0	51.7	74	-22.3	Peak	H
	7199.0	36.9	15.5	52.4	68.2(Note 6)	-15.8	Peak	V
	7844.5	34.3	14.1	48.4	68.2(Note 6)	-19.8	Peak	V
	8309.6	35.0	13.0	48.0	74	-26.0	Peak	V
	9058.7	35.5	15.5	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.



Engineer : Ternence	
Site : EMC Lab AC 102	Time : 2017-06-01
Limit : FCC_15_03M_PK	Margin : 6
EUT :Notebook computer	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 ac(20MHz)

Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5180	7191.5	38.0	13.7	51.7	68.2(Note 6)	-16.5	Peak	H
	7811.1	35.3	15.7	51.0	68.2(Note 6)	-17.2	Peak	H
	8223.7	34.8	14.8	49.6	74	-24.4	Peak	H
	9341.0	34.4	14.8	49.2	74	-24.8	Peak	H
	7147.7	35.1	12.5	47.6	68.2(Note 6)	-20.6	Peak	V
	7952.7	33.8	16.7	50.5	68.2(Note 6)	-17.7	Peak	V
	8483.7	35.3	15.8	51.1	74	-22.9	Peak	V
	9340.6	33.8	13.7	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
5220	7188.7	37.0	12.5	49.5	68.2(Note 6)	-18.7	Peak	H
	7972.6	33.1	14.2	47.3	68.2(Note 6)	-20.9	Peak	H
	8278.1	34.6	13.4	48.0	74	-26.0	Peak	H
	9305.6	34.9	15.7	50.6	74	-23.4	Peak	H
	7042.4	34.9	11.1	46.0	68.2(Note 6)	-22.2	Peak	V
	7807.1	33.7	15.4	49.1	68.2(Note 6)	-19.1	Peak	V
	8219.3	34.1	16.3	50.4	74	-23.6	Peak	V
	9323.3	35.0	16.5	51.5	74	-22.5	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
5240	7128.0	34.5	14.4	48.9	68.2(Note 6)	-19.3	Peak	H
	7918.8	34.1	14.2	48.3	68.2(Note 6)	-19.9	Peak	H
	8175.3	35.0	15.8	50.8	74	-23.2	Peak	H
	9030.1	34.3	14.9	49.2	74	-24.8	Peak	H
	7190.8	36.4	15.2	51.6	68.2(Note 6)	-16.6	Peak	V
	7852.5	34.0	16.7	50.7	68.2(Note 6)	-17.5	Peak	V
	8172.9	34.9	16.5	51.4	74	-22.6	Peak	V
	9133.9	33.2	14.2	47.4	74	-26.6	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.
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	7228.4	36.2	14.0	50.2	68.2(Note 6)	-18.0	Peak	H
	7951.4	33.8	14.0	47.8	68.2(Note 6)	-20.4	Peak	H
	8284.4	35.0	13.8	48.8	74	-25.2	Peak	H
	9389.8	34.6	15.7	50.3	74	-23.7	Peak	H
	7144.8	36.3	12.2	48.5	68.2(Note 6)	-19.7	Peak	V
	7844.7	34.2	14.3	48.5	68.2(Note 6)	-19.7	Peak	V
	8316.1	34.5	15.1	49.6	74	-24.4	Peak	V
	9102.3	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 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	7008.7	36.5	13.7	50.2	68.2(Note 6)	-18.0	Peak	H
	7808.3	34.3	14.5	48.8	68.2(Note 6)	-19.4	Peak	H
	8132.6	34.2	13.4	47.6	74	-26.4	Peak	H
	9417.8	34.6	17.3	51.9	74	-22.1	Peak	H
	7179.5	35.2	14.7	49.9	68.2(Note 6)	-18.3	Peak	V
	7825.9	33.3	15.4	48.7	68.2(Note 6)	-19.5	Peak	V
	8285.5	34.5	14.0	48.5	74	-25.5	Peak	V
	9056.7	34.7	13.7	48.4	74	-25.6	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.
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	7135.5	35.3	13.6	48.9	68.2(Note 6)	-19.3	Peak	H
	7845.9	33.9	16.8	50.7	68.2(Note 6)	-17.5	Peak	H
	8130.5	34.5	16.4	50.9	74	-23.1	Peak	H
	9149.8	36.2	15.1	51.3	74	-22.7	Peak	H
	7212.5	36.1	14.8	50.9	68.2(Note 6)	-17.3	Peak	V
	7848.8	34.3	15.6	49.9	68.2(Note 6)	-18.3	Peak	V
	8173.2	35.3	15.4	50.7	74	-23.3	Peak	V
	9039.6	36.7	16.3	53.0	74	-21.0	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
5500	7130.2	35.7	12.3	48.0	68.2(Note 6)	-20.2	Peak	H
	7853.8	33.9	14.7	48.6	68.2(Note 6)	-19.6	Peak	H
	9052.0	34.6	16.3	50.9	74	-23.1	Peak	H
	9452.5	34.8	15.4	50.2	74	-23.8	Peak	H
	7172.6	35.1	13.7	48.8	68.2(Note 6)	-19.4	Peak	V
	7808.5	34.4	13.7	48.1	68.2(Note 6)	-20.1	Peak	V
	8197.5	34.8	14.2	49.0	74	-25.0	Peak	V
	9302.7	35.1	14.6	49.7	74	-24.3	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.



Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5600	7198.1	37.4	13.0	50.4	68.2(Note 6)	-17.8	Peak	H
	7887.6	34.2	15.6	49.8	68.2(Note 6)	-18.4	Peak	H
	8410.8	35.0	12.5	47.5	74	-26.5	Peak	H
	9110.3	35.8	13.5	49.3	74	-24.7	Peak	H
	7181.2	35.3	14.5	49.8	68.2(Note 6)	-18.4	Peak	V
	7842.8	35.0	15.7	50.7	68.2(Note 6)	-17.5	Peak	V
	8168.4	34.7	13.3	48.0	74	-26.0	Peak	V
	9092.8	35.9	14.7	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 dBμV/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 68.2dBμV/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	7144.8	35.9	14.5	50.4	68.2(Note 6)	-17.8	Peak	H
	7841.3	33.9	13.9	47.8	68.2(Note 6)	-20.4	Peak	H
	8369.2	34.5	14.8	49.3	74	-24.7	Peak	H
	9425.2	34.6	15.8	50.4	74	-23.6	Peak	H
	7199.9	36.3	15.2	51.5	68.2(Note 6)	-16.7	Peak	V
	7807.2	34.4	13.2	47.6	68.2(Note 6)	-20.6	Peak	V
	8131.9	35.2	16.9	52.1	74	-21.9	Peak	V
	9162.4	35.2	16.2	51.4	74	-22.6	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.
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	7109.4	35.6	15.3	50.9	68.2(Note 6)	-17.3	Peak	H
	7807.0	34.1	15.5	49.6	68.2(Note 6)	-18.6	Peak	H
	8091.9	34.7	15.9	50.6	74	-23.4	Peak	H
	9133.5	34.1	15.9	50.0	74	-24.0	Peak	H
	7113.0	35.4	12.2	47.6	68.2(Note 6)	-20.6	Peak	V
	7892.3	34.7	13.5	48.2	68.2(Note 6)	-20.0	Peak	V
	8426.7	34.7	15.3	50.0	74	-24.0	Peak	V
	9153.2	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	7138.6	35.4	13.8	49.2	68.2(Note 6)	-19.0	Peak	H
	7845.1	34.7	14.4	49.1	68.2(Note 6)	-19.1	Peak	H
	8079.1	35.3	14.7	50.0	74	-24.0	Peak	H
	8250.7	35.4	12.9	48.3	74	-25.7	Peak	H
	7191.9	36.4	13.5	49.9	68.2(Note 6)	-18.3	Peak	V
	7987.6	34.2	14.5	48.7	68.2(Note 6)	-19.5	Peak	V
	8275.5	34.1	15.1	49.2	74	-24.8	Peak	V
	9489.1	34.6	15.0	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
5785	7221.3	37.1	13.5	50.6	68.2(Note 6)	-17.6	Peak	H
	7759.3	34.5	16.2	50.7	68.2(Note 6)	-17.5	Peak	H
	8405.5	34.0	12.8	46.8	74	-27.2	Peak	H
	9069.2	35.3	14.9	50.2	74	-23.8	Peak	H
	7190.7	35.8	12.9	48.7	68.2(Note 6)	-19.5	Peak	V
	7952.7	35.0	13.3	48.3	68.2(Note 6)	-19.9	Peak	V
	8317.7	34.8	13.9	48.7	74	-25.3	Peak	V
	9134.8	33.8	14.2	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
5825	7199.8	36.2	12.0	48.2	68.2(Note 6)	-20.0	Peak	H
	7775.6	34.6	15.8	50.4	68.2(Note 6)	-17.8	Peak	H
	8480.5	34.7	15.7	50.4	74	-23.6	Peak	H
	9185.4	34.8	16.4	51.2	74	-22.8	Peak	H
	7205.9	37.1	14.5	51.6	68.2(Note 6)	-16.6	Peak	V
	7807.5	33.7	15.4	49.1	68.2(Note 6)	-19.1	Peak	V
	8183.4	35.9	13.1	49.0	74	-25.0	Peak	V
	9101.7	35.1	13.3	48.4	74	-25.6	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.
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.



Engineer : Ternence	
Site : EMC Lab AC 102	Time : 2017-06-01
Limit : FCC_15_03M_PK	Margin : 6
EUT :Notebook computer	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 ac(40MHz)

Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5190	7139.9	35.4	13.5	48.9	68.2(Note 6)	-19.3	Peak	H
	7879.4	33.2	14.2	47.4	68.2(Note 6)	-20.8	Peak	H
	8388.0	34.8	15.8	50.6	74	-23.4	Peak	H
	9179.3	35.4	13.7	49.1	74	-24.9	Peak	H
	7136.7	35.3	13.9	49.2	68.2(Note 6)	-19.0	Peak	V
	7799.2	34.0	14.5	48.5	68.2(Note 6)	-19.7	Peak	V
	8259.8	34.4	12.4	46.8	74	-27.2	Peak	V
	9154.7	35.1	14.8	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 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	7146.3	36.0	13.7	49.7	68.2(Note 6)	-18.5	Peak	H
	7775.2	34.0	15.9	49.9	68.2(Note 6)	-18.3	Peak	H
	8426.4	34.7	12.9	47.6	74	-26.4	Peak	H
	9052.8	34.8	13.7	48.5	74	-25.5	Peak	H
	7229.1	36.5	13.1	49.6	68.2(Note 6)	-18.6	Peak	V
	7873.9	32.9	16.1	49.0	68.2(Note 6)	-19.2	Peak	V
	8428.4	33.9	16.1	50.0	74	-24.0	Peak	V
	9143.5	34.5	15.4	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 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
5270	7146.9	36.3	12.6	48.9	68.2(Note 6)	-19.3	Peak	H
	7877.9	33.1	15.8	48.9	68.2(Note 6)	-19.3	Peak	H
	8129.7	34.3	14.7	49.0	74	-25.0	Peak	H
	9066.6	34.6	13.5	48.1	74	-25.9	Peak	H
	7228.7	36.0	13.4	49.4	68.2(Note 6)	-18.8	Peak	V
	7902.8	34.1	16.2	50.3	68.2(Note 6)	-17.9	Peak	V
	8427.5	34.4	14.5	48.9	74	-25.1	Peak	V
	9023.5	33.9	15.8	49.7	74	-24.3	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 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
5310	7180.6	35.6	13.8	49.4	68.2(Note 6)	-18.8	Peak	H
	7900.2	34.3	14.1	48.4	68.2(Note 6)	-19.8	Peak	H
	8473.8	34.0	13.2	47.2	74	-26.8	Peak	H
	9012.9	34.5	14.0	48.5	74	-25.5	Peak	H
	7144.4	35.9	15.0	50.9	68.2(Note 6)	-17.3	Peak	V
	7901.0	34.0	15.1	49.1	68.2(Note 6)	-19.1	Peak	V
	8276.2	33.3	14.2	47.5	74	-26.5	Peak	V
	9355.1	33.0	14.0	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
5510	7145.5	36.6	12.0	48.6	68.2(Note 6)	-19.6	Peak	H
	7884.9	34.2	15.6	49.8	68.2(Note 6)	-18.4	Peak	H
	8240.3	35.1	14.9	50.0	74	-24.0	Peak	H
	9091.0	35.1	13.7	48.8	74	-25.2	Peak	H
	7174.2	35.9	15.0	50.9	68.2(Note 6)	-17.3	Peak	V
	7840.4	33.9	15.3	49.2	68.2(Note 6)	-19.0	Peak	V
	8166.1	34.9	14.0	48.9	74	-25.1	Peak	V
	9466.1	35.0	16.6	51.6	74	-22.4	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
5590	7122.0	34.4	13.1	47.5	68.2(Note 6)	-20.7	Peak	H
	7947.9	35.0	16.9	51.9	68.2(Note 6)	-16.3	Peak	H
	8439.1	34.1	15.4	49.5	74	-24.5	Peak	H
	9133.0	34.1	15.4	49.5	74	-24.5	Peak	H
	7189.7	36.7	11.9	48.6	68.2(Note 6)	-19.6	Peak	V
	7962.3	32.8	16.4	49.2	68.2(Note 6)	-19.0	Peak	V
	8395.3	33.5	14.3	47.8	74	-26.2	Peak	V
	9306.4	35.5	14.8	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
5670	7188.8	35.4	15.3	50.7	68.2(Note 6)	-17.5	Peak	H
	7808.0	34.1	14.6	48.7	68.2(Note 6)	-19.5	Peak	H
	8353.0	32.0	12.5	44.5	74	-29.5	Peak	H
	9307.7	34.2	14.9	49.1	74	-24.9	Peak	H
	7170.8	35.0	12.2	47.2	68.2(Note 6)	-21.0	Peak	V
	7781.4	33.4	15.8	49.2	68.2(Note 6)	-19.0	Peak	V
	8463.6	32.8	13.7	46.5	74	-27.5	Peak	V
	9349.8	33.3	13.9	47.2	74	-26.8	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
5710	7179.1	36.0	12.8	48.8	68.2(Note 6)	-19.4	Peak	H
	7884.3	33.8	13.5	47.3	68.2(Note 6)	-20.9	Peak	H
	8435.5	33.9	14.3	48.2	74	-25.8	Peak	H
	9024.0	34.9	12.8	47.7	74	-26.3	Peak	H
	7248.3	36.1	12.0	48.1	68.2(Note 6)	-20.1	Peak	V
	7807.2	34.0	14.3	48.3	68.2(Note 6)	-19.9	Peak	V
	8319.9	33.7	15.6	49.3	74	-24.7	Peak	V
	9185.0	34.9	16.0	50.9	74	-23.1	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
5755	7225.5	37.2	13.8	51.0	68.2(Note 6)	-17.2	Peak	H
	7798.8	33.7	15.4	49.1	68.2(Note 6)	-19.1	Peak	H
	8324.5	33.6	12.9	46.5	74	-27.5	Peak	H
	9026.4	35.1	14.1	49.2	74	-24.8	Peak	H
	7204.4	35.2	14.1	49.3	68.2(Note 6)	-18.9	Peak	V
	7798.1	34.5	13.6	48.1	68.2(Note 6)	-20.1	Peak	V
	8241.7	33.8	15.2	49.0	74	-25.0	Peak	V
	9133.8	34.7	14.6	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 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	7206.3	36.0	14.2	50.2	68.2(Note 6)	-18.0	Peak	H
	7886.9	33.4	13.2	46.6	68.2(Note 6)	-21.6	Peak	H
	9024.6	35.0	14.9	49.9	74	-24.1	Peak	H
	9424.8	36.3	15.5	51.8	74	-22.2	Peak	H
	7146.8	34.9	11.5	46.4	68.2(Note 6)	-21.8	Peak	V
	7866.4	33.3	13.1	46.4	68.2(Note 6)	-21.8	Peak	V
	8287.3	33.3	13.8	47.1	74	-26.9	Peak	V
	9435.2	34.3	14.1	48.4	74	-25.6	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.
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 : 2017-06-01
Limit : FCC_15_03M_PK	Margin : 6
EUT :Notebook computer	Probe : VERTICAL/ HORIZONTAL
Power : AC 120V/60Hz	Note : Transmit by 802.11 ac(80MHz)

Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5210	7143.9	35.7	15.2	50.9	68.2(Note 6)	-17.3	Peak	H
	7835.7	35.1	14.8	49.9	68.2(Note 6)	-18.3	Peak	H
	8428.5	33.9	12.7	46.6	74	-27.4	Peak	H
	9434.7	34.0	16.7	50.7	74	-23.3	Peak	H
	7240.3	37.2	13.2	50.4	68.2(Note 6)	-17.8	Peak	V
	7911.0	34.2	13.4	47.6	68.2(Note 6)	-20.6	Peak	V
	8321.5	34.7	15.4	50.1	74	-23.9	Peak	V
	9361.5	33.2	14.1	47.3	74	-26.7	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
5290	7113.2	35.4	12.5	47.9	68.2(Note 6)	-20.3	Peak	H
	7993.3	34.3	13.7	48.0	68.2(Note 6)	-20.2	Peak	H
	8446.7	32.7	12.7	45.4	74	-28.6	Peak	H
	9337.5	33.9	16.3	50.2	74	-23.8	Peak	H
	7151.8	36.1	12.3	48.4	68.2(Note 6)	-19.8	Peak	V
	7877.7	33.6	15.0	48.6	68.2(Note 6)	-19.6	Peak	V
	8242.0	34.5	13.2	47.7	74	-26.3	Peak	V
	9305.8	34.0	17.3	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 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	7145.7	36.1	11.8	47.9	68.2(Note 6)	-20.3	7145.7	H
	7840.9	34.9	14.5	49.4	68.2(Note 6)	-18.8	7840.9	H
	8427.2	35.0	15.8	50.8	74	-23.2	8427.2	H
	9017.1	36.7	12.6	49.3	74	-24.7	9017.1	H
	7230.2	35.8	12.4	48.2	68.2(Note 6)	-20.0	7230.2	V
	7843.9	35.3	13.4	48.7	68.2(Note 6)	-19.5	7843.9	V
	8489.4	35.5	14.8	50.3	74	-23.7	8489.4	V
	9178.6	35.6	16.5	52.1	74	-21.9	9178.6	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	7195.1	37.4	13.3	50.7	68.2(Note 6)	-17.5	7195.1	H
	7886.3	34.2	15.2	49.4	68.2(Note 6)	-18.8	7886.3	H
	8413.5	35.0	14.5	49.5	74	-24.5	8413.5	H
	9110.4	35.8	14.3	50.1	74	-23.9	9110.4	H
	7180.1	35.3	14.5	49.8	68.2(Note 6)	-18.4	7180.1	V
	7844.7	35.0	15.1	50.1	68.2(Note 6)	-18.1	7844.7	V
	8163.4	34.7	13.5	48.2	74	-25.8	8163.4	V
	9093.1	35.9	14.5	50.4	74	-23.6	9093.1	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	7148.7	35.0	11.6	46.6	68.2(Note 6)	-21.6	Peak	H
	7789.3	33.7	14.6	48.3	68.2(Note 6)	-19.9	Peak	H
	8303.5	34.0	15.7	49.7	74	-24.3	Peak	H
	9099.6	34.4	13.6	48.0	74	-26.0	Peak	H
	7089.0	35.3	12.2	47.5	68.2(Note 6)	-20.7	Peak	V
	7784.3	33.0	13.1	46.1	68.2(Note 6)	-22.1	Peak	V
	8352.3	33.4	13.3	46.7	74	-27.3	Peak	V
	9042.9	34.3	14.9	49.2	74	-24.8	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.



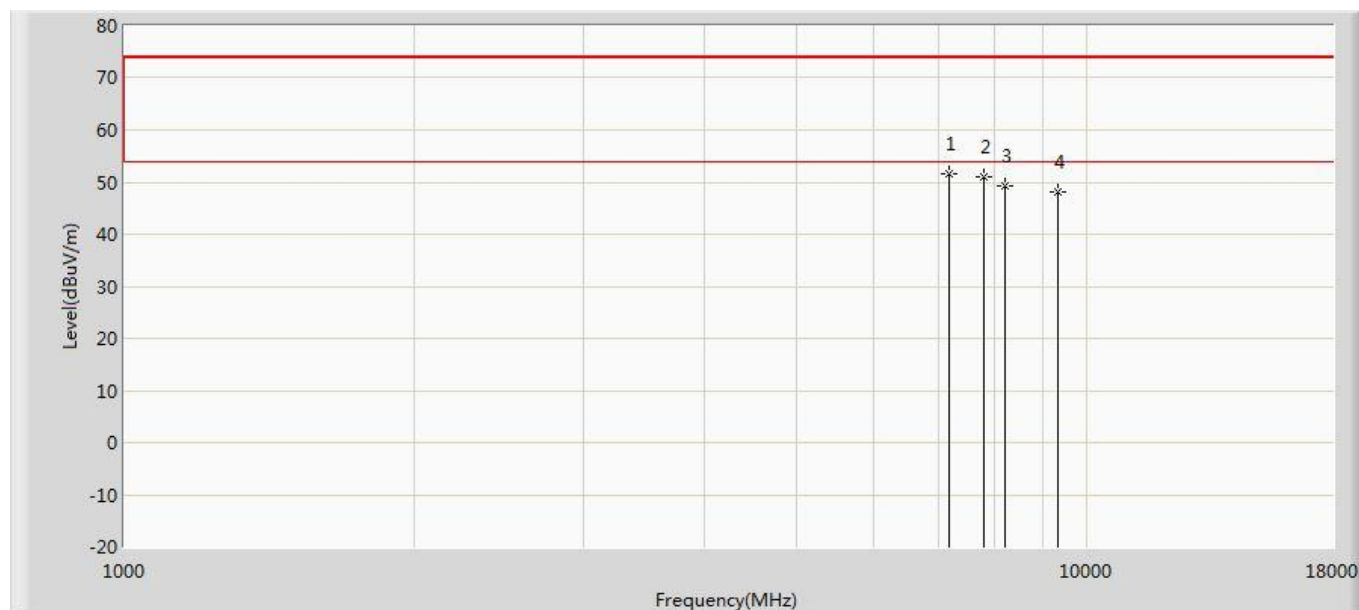
Frequency (MHz)	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna
5775	7224.2	35.8	12.9	48.7	68.2(Note 6)	-19.5	Peak	H
	7869.2	32.8	16.7	49.5	68.2(Note 6)	-18.7	Peak	H
	8463.7	32.9	16.0	48.9	74	-25.1	Peak	H
	9132.0	34.5	16.3	50.8	74	-23.2	Peak	H
	7189.8	36.5	12.1	48.6	68.2(Note 6)	-19.6	Peak	V
	7882.8	33.4	16.1	49.5	68.2(Note 6)	-18.7	Peak	V
	8312.4	34.5	15.2	49.7	74	-24.3	Peak	V
	9034.2	35.0	16.1	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.

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

Site: AC102	Time: 2017/06/01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D(1-18GHz)	Polarity: Horizontal
EUT: QCNFA344A	Power: 120V/60HZ
Note: Transmit by 802.11 ac40MHz at 5590MHz	



No	Mark	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Type
1	*	7122.0	34.4	13.1	47.5	68.2(Note 6)	-20.7	PK
2		7947.9	35.0	16.9	51.9	68.2(Note 6)	-16.3	PK
3		8439.1	34.1	15.4	49.5	74	-24.5	PK
4		9133.0	34.1	15.4	49.5	74	-24.5	PK

Note:

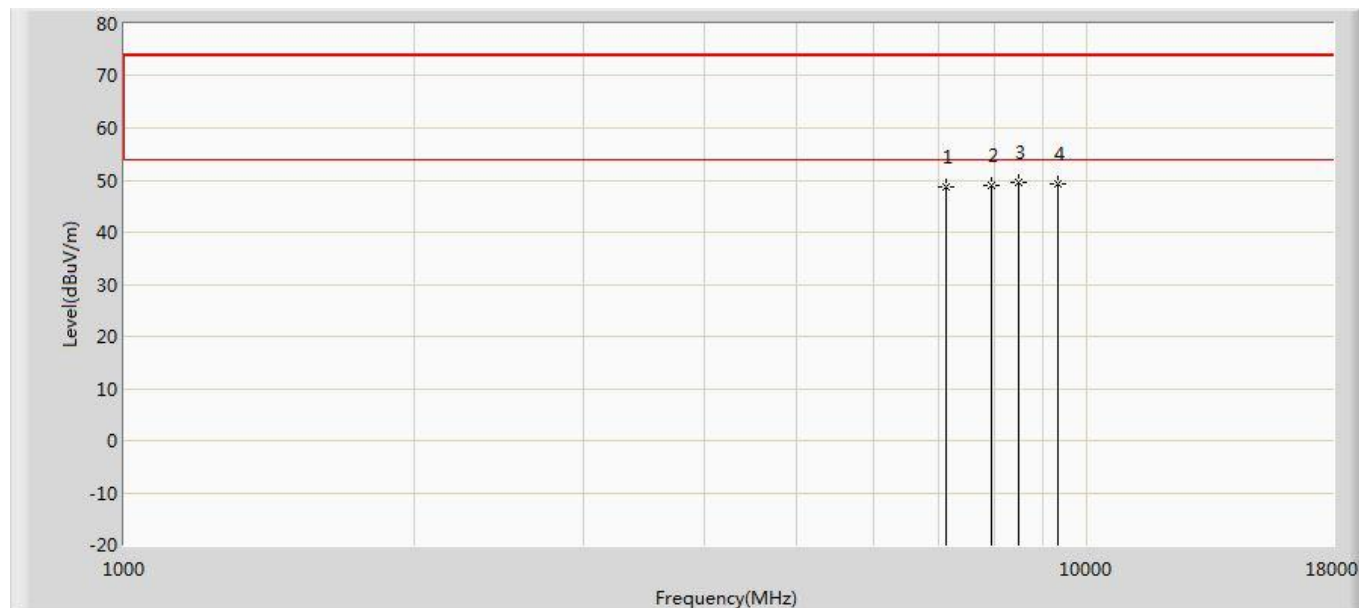
1. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission 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: 2017/06/01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D(1-18GHz)	Polarity: Vertical
EUT: QCNFA344A	Power: 120V/60HZ
Note: Transmit by 802.11 ac20MHz at 5180MHz	



No	Mark	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Type
1		7189.7	36.7	11.9	48.6	68.2(Note 6)	-19.6	PK
2		7962.3	32.8	16.4	49.2	68.2(Note 6)	-19.0	PK
3	*	8395.3	33.5	14.3	47.8	74	-26.2	PK
4		9306.4	35.5	14.8	50.3	74	-23.7	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.



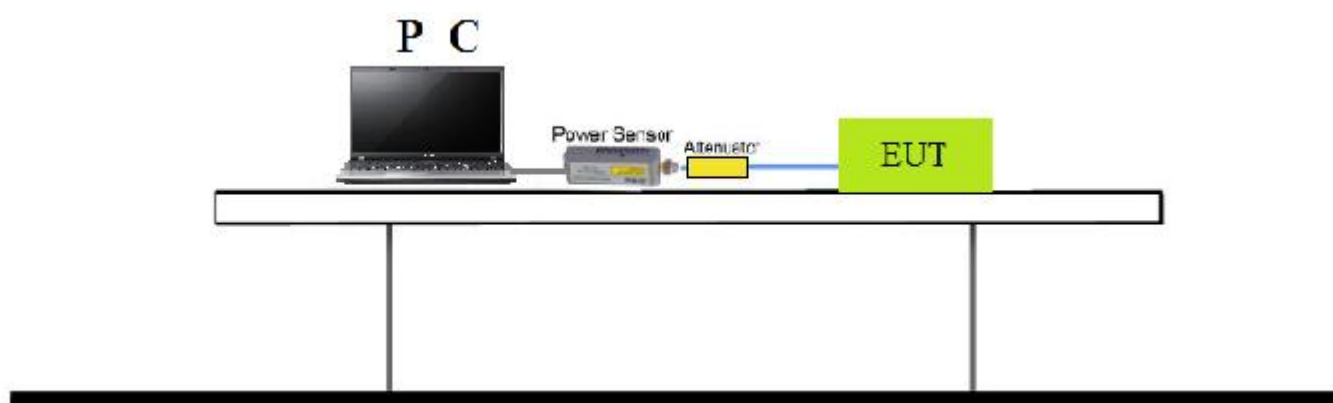
4. Power Output

4.1 Test Equipment

Instrument	Manufacturer	Type No.	Serial No.	Calibration Date	Valid Date.
PC	Lenovo	E40-70	MP078UQV	N/A	N/A
POWER SENSOR	Agilent	U2021XA	MY53260020	2017.03.27	2018.03.26
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-003	2017.03.31	2018.03.30

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

4.2 Test Setup





4.3 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 $11 \text{ dBm} + 10\log B$, 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.

4.4 Test Procedure

The EUT was tested according to KDB 789033 D02v01r02 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.



4.5 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



< QCNFA344A_Chain0_Main> (Unit: dBm)

Configurations	Mode			
	Channel / Frequency (MHz)			
5.2GHz WLAN Average Power	802.11a			
	36/5180	40/5200	44/5220	48/5240
	14.35	14.41	14.45	14.23
	802.11n(HT20)			
	36/5180	40/5200	44/5220	48/5240
	14.31	14.29	14.43	14.35
	802.11ac(VHT20)			
	36/5180	40/5200	44/5220	48/5240
	14.26	14.35	14.38	14.42
	802.11n(HT40)			
	38/5190		46/5230	
	11.37		13.82	
	802.11ac(VHT40)			
	38/5190		38/5230	
	11.45		13.96	
	802.11ac(VHT80)			
	42/5210			
	10.31			



Configurations	Mode							
	Channel / Frequency (MHz)							
5.3GHz WLAN Average Power	802.11a							
	52/5260		56/5280		60/5300		64/5320	
	16.45		14.76		14.91		14.82	
	802.11n(HT20)							
	52/5260		56/5280		60/5300		64/5320	
	16.35		14.62		14.74		14.83	
	802.11ac(VHT20)							
	52/5260		56/5280		60/5300		64/5320	
	16.33		14.65		14.73		14.75	
	802.11n(HT40)							
	54/5270				62/5310			
	13.75				13.82			
	802.11ac(VHT40)							
	54/5270				62/5310			
	13.89				13.93			
	802.11ac(VHT80)							
	58/5290							
	11.96							
5.6GHz WLAN Average Power	802.11a							
	100/5500	112/5560	116/5580	128/5640	132/5660	136/5680	140/5700	144/5720
	14.93	16.36	16.49	16.23	16.34	16.48	14.89	16.27
	802.11n(HT20)							
	100/5500	112/5560	116/5580	128/5640	132/5660	136/5680	140/5700	144/5720
	14.85	16.32	16.29	16.31	16.24	16.33	14.75	16.24
	802.11ac(VHT20)							
	100/5500	112/5560	116/5580	128/5640	132/5660	136/5680	140/5700	144/5720
	14.72	16.27	16.31	16.30	16.15	16.34	14.71	16.28
	802.11n(HT40)							
	102/5510	110/5550	118/5590	126/5630	134/5670	142/5710		
	11.42	15.87	15.91	15.83	14.45	15.73		
	802.11ac(VHT40)							
	102/5510	110/5550	118/5590	126/5630	134/5670	142/5710		
	11.35	15.72	15.80	15.85	14.39	15.73		
	802.11ac(VHT80)							
	106/5530			122/5610			138/5690	
	11.86			15.45			15.32	



Configurations	Mode				
	Channel / Frequency (MHz)				
5.8GHz WLAN Average Power	802.11a				
	149/5745	153/5765	157/5785	161/5805	165/5825
	14.78	16.34	16.49	16.42	16.25
	802.11n(HT20)				
	149/5745	153/5765	157/5785	161/5805	165/5825
	14.76	16.35	16.33	16.35	16.22
	802.11ac(VHT20)				
	149/5745	153/5765	157/5785	161/5805	165/5825
	14.43	16.26	16.34	16.28	16.11
	802.11n(HT40)				
	151/5755		159/5795		
	11.42		15.75		
	802.11ac(VHT40)				
	151/5755		159/5795		
	11.36		15.82		
	802.11ac(VHT80)				
	155/5775				
	9.94				



< QCNFA344A_Chain1_Aux> (Unit: dBm)

Configurations	Mode			
	Channel / Frequency (MHz)			
5.2GHz WLAN Average Power	802.11a			
	36/5180	40/5200	44/5220	48/5240
	14.33	14.42	14.45	14.27
	802.11n(HT20)			
	36/5180	40/5200	44/5220	48/5240
	14.38	14.25	14.43	14.36
	802.11ac(VHT20)			
	36/5180	40/5200	44/5220	48/5240
	14.25	14.29	14.31	14.22
	802.11n(HT40)			
	38/5190		46/5230	
	11.37		13.84	
	802.11ac(VHT40)			
	38/5190		38/5230	
	11.46		13.89	
	802.11ac(VHT80)			
	42/5210			
	10.31			



Configurations	Mode							
	Channel / Frequency (MHz)							
5.3GHz WLAN Average Power	802.11a							
	52/5260		56/5280		60/5300		64/5320	
	16.46		14.79		14.93		14.85	
	802.11n(HT20)							
	52/5260		56/5280		60/5300		64/5320	
	16.37		14.61		14.71		14.83	
	802.11ac(VHT20)							
	52/5260		56/5280		60/5300		64/5320	
	16.29		14.57		14.69		14.83	
	802.11n(HT40)							
	54/5270				62/5310			
	13.74				13.86			
	802.11ac(VHT40)							
	54/5270				62/5310			
	13.81				13.84			
	802.11ac(VHT80)							
	58/5290							
	11.92							
5.6GHz WLAN Average Power	802.11a							
	100/5500	112/5560	116/5580	128/5640	132/5660	136/5680	140/5700	144/5720
	14.88	16.36	16.47	16.21	16.36	16.43	14.87	16.29
	802.11n(HT20)							
	100/5500	112/5560	116/5580	128/5640	132/5660	136/5680	140/5700	144/5720
	14.81	16.33	16.24	16.31	16.24	16.25	14.79	16.26
	802.11ac(VHT20)							
	100/5500	112/5560	116/5580	128/5640	132/5660	136/5680	140/5700	144/5720
	14.74	16.27	16.25	16.33	16.26	16.19	14.83	16.24
	802.11n(HT40)							
	102/5510	110/5550	118/5590	126/5630	134/5670	142/5710		
	11.43	15.91	15.94	15.79	14.45	15.73		
	802.11ac(VHT40)							
	102/5510	110/5550	118/5590	126/5630	134/5670	142/5710		
	11.31	15.65	15.82	15.87	14.21	15.82		
	802.11ac(VHT80)							
	106/5530			122/5610			138/5690	
	11.79			15.41			15.39	



Configurations	Mode				
	Channel / Frequency (MHz)				
5.8GHz WLAN Average Power	802.11a				
	149/5745	153/5765	157/5785	161/5805	165/5825
	14.79	16.35	16.48	16.41	16.32
	802.11n(HT20)				
	149/5745	153/5765	157/5785	161/5805	165/5825
	14.63	16.32	16.31	16.37	16.21
	802.11ac(VHT20)				
	149/5745	153/5765	157/5785	161/5805	165/5825
	14.31	16.26	16.37	16.28	16.15
	802.11n(HT40)				
	151/5755		159/5795		
	11.45		15.73		
	802.11ac(VHT40)				
	151/5755		159/5795		
	11.38		15.82		
	802.11ac(VHT80)				
	155/5775				
	9.97				

The Result: 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:

According to RSS-247-Issue 1 Section 6.2.4(2)

For the band 5725-5850 MHz, emissions at frequencies from the band edges to 10 MHz above or below the band edges shall not exceed -17 dBm/MHz e.i.r.p.

For emissions at frequencies more than 10 MHz above or below the band edges, the emissions power shall not exceed -27 dBm/MHz.

Note:

1. Refer to KDB 789033 D02v01r02 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

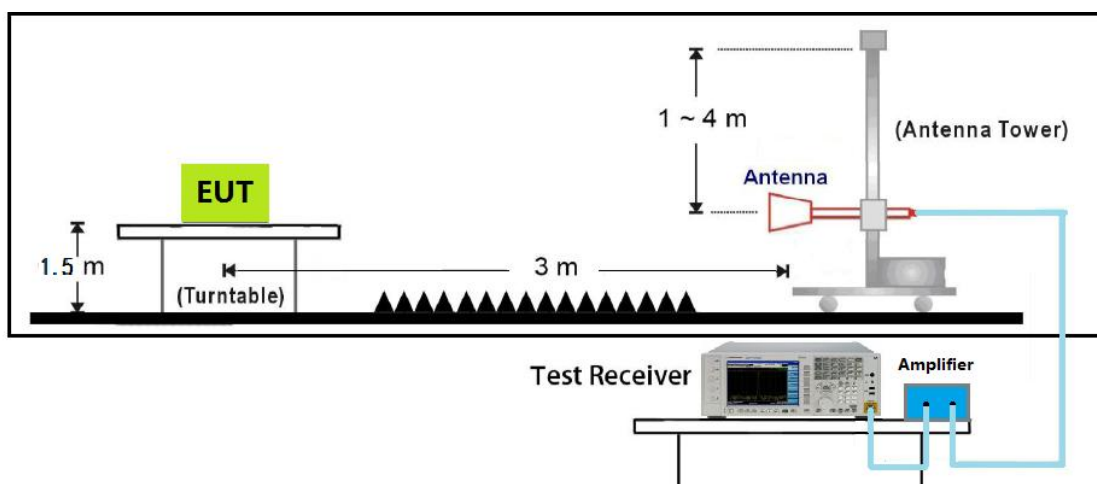
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

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 Equipment

Instrument	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date.
EMI Test Receiver	R&S	ESCI	100563	2017.03.10	2018.03.09
Spectrum Analyzer	R&S	FSP40	100047	2017.03.27	2018.03.26
H64 Preamplifier	HP	8447F	3113A05582	2017.03.10	2018.03.09
Preamplifier	Agilent	8449B	3008A02342	2017.03.10	2018.03.09
Preamplifier	COM-POWER	PA-840	711885	2017.03.24	2018.03.23
Ultra Broadband Antenna	R&S	HL562	100362	2017.05.03	2018.05.02
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-619	2017.05.03	2018.05.02
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	9170-347	2017.05.03	2018.05.02
Spectrum Analyzer	Agilent	N9010A	MY53400169	2016.11.03	2017.11.03
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-002	2017.03.10	2018.03.09



5.5 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	65.603	69.052	-8.397	74.000	-3.449	PK	H
2	5150.000	48.575	52.024	-5.425	54.000	-3.449	AV	H
3	5150.000	66.876	70.325	-7.124	74.000	-3.449	PK	V
4	5150.000	49.777	53.226	-4.223	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	66.169	69.190	-7.831	74.000	-3.021	PK	H
2	5350.000	50.259	53.280	-3.741	54.000	-3.021	AV	H
3	5350.000	68.264	71.285	-5.736	74.000	-3.021	PK	V
4	5350.000	51.650	54.671	-2.350	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	62.676	65.461	-11.324	74.000	-2.785	PK	H
2	5470.000	64.858	67.622	-9.142	74.000	-2.764	PK	H
3	5460.000	36.678	39.463	-17.322	54.000	-2.785	AV	V
4	5470.000	41.597	44.361	-12.403	54.000	-2.764	AV	V
5	5460.000	63.942	66.727	-10.058	74.000	-2.785	PK	H
6	5470.000	65.805	68.569	-8.195	74.000	-2.764	PK	H
7	5460.000	37.694	40.479	-16.306	54.000	-2.785	AV	V
8	5470.000	42.658	45.422	-11.342	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	68.372	63.079	-5.628	74.000	5.293	PK	H
2	5725.000	47.268	41.975	-6.732	54.000	5.293	AV	H
3	5725.000	69.075	63.782	-4.925	74.000	5.293	PK	V
4	5725.000	48.770	43.477	-5.230	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	5715.000	65.24	67.75	-3.06	68.3	-2.515	PK	H
2	5725.000	73.57	76.08	-4.73	78.3	-2.507	PK	H
3	5715.000	65.16	67.67	-3.14	68.3	-2.515	PK	V
4	5725.000	73.69	76.20	-4.61	78.3	-2.507	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	64.64	67.04	-13.66	78.3	-2.399	PK	H
2	5860.000	62.53	64.93	-5.77	68.3	-2.391	PK	H
3	5850.000	65.35	67.74	-12.95	78.3	-2.399	PK	V
4	5860.000	57.88	60.27	-10.42	68.3	-2.391	PK	V

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

**802.11 n20 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	64.706	68.155	-9.294	74.000	-3.449	PK	H
2	5150.000	45.879	49.328	-8.121	54.000	-3.449	AV	H
3	5150.000	65.683	69.132	-8.317	74.000	-3.449	PK	V
4	5150.000	47.066	50.515	-6.934	54.000	-3.449	AV	V

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

802.11n20 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	64.409	67.430	-9.591	74.000	-3.021	PK	H
2	5350.000	48.994	52.015	-5.006	54.000	-3.021	AV	H
3	5350.000	66.517	69.538	-7.483	74.000	-3.021	PK	V
4	5350.000	49.640	52.661	-4.360	54.000	-3.021	AV	V

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

**802.11 n20 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	62.553	65.338	-11.447	74.000	-2.785	PK	H
2	5470.000	66.835	69.599	-7.165	74.000	-2.764	PK	H
3	5460.000	37.692	40.477	-16.308	54.000	-2.785	AV	V
4	5470.000	40.916	43.680	-13.084	54.000	-2.764	AV	V
5	5460.000	63.131	65.916	-10.869	74.000	-2.785	PK	H
6	5470.000	67.047	69.811	-6.953	74.000	-2.764	PK	H
7	5460.000	37.838	40.623	-16.162	54.000	-2.785	AV	V
8	5470.000	42.128	44.892	-11.872	54.000	-2.764	AV	V

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

802.11 n20 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	66.375	61.082	-7.625	74.000	5.293	PK	H
2	5725.000	46.782	41.489	-7.218	54.000	5.293	AV	H
3	5725.000	67.245	61.952	-6.755	74.000	5.293	PK	V
4	5725.000	48.345	43.052	-5.655	54.000	5.293	AV	V

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

**802.11 n20 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	5715.000	61.92	64.44	-6.38	68.3	-2.515	PK	H
2	5725.000	71.22	73.73	-7.08	78.3	-2.507	PK	H
3	5715.000	64.01	66.52	-4.29	68.3	-2.515	PK	V
4	5725.000	72.36	74.87	-5.94	78.3	-2.507	PK	V

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

802.11 n20 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	65.53	67.93	-12.77	78.3	-2.399	PK	H
2	5860.000	62.19	64.59	-6.11	68.3	-2.391	PK	H
3	5850.000	64.24	66.64	-14.06	78.3	-2.399	PK	V
4	5860.000	58.04	60.43	-10.26	68.3	-2.391	PK	V

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

802.11 n40 5190

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	64.679	68.128	-9.321	74.000	-3.449	PK	H
2	5150.000	48.137	51.586	-5.863	54.000	-3.449	AV	H
3	5150.000	65.929	69.378	-8.071	74.000	-3.449	PK	V
4	5150.000	49.076	52.525	-4.924	54.000	-3.449	AV	V

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

**802.11n40 5310**

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	67.546	70.567	-6.454	74.000	-3.021	PK	H
2	5350.000	49.237	52.258	-4.763	54.000	-3.021	AV	H
3	5350.000	68.226	71.247	-5.774	74.000	-3.021	PK	V
4	5350.000	50.106	53.127	-3.894	54.000	-3.021	AV	V

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

02.11 n40 5510

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	60.166	62.951	-13.834	74.000	-2.785	PK	H
2	5470.000	65.350	68.114	-8.650	74.000	-2.764	PK	H
3	5460.000	39.138	41.923	-14.862	54.000	-2.785	AV	V
4	5470.000	45.588	48.352	-8.412	54.000	-2.764	AV	V
5	5460.000	60.417	63.202	-13.583	74.000	-2.785	PK	H
6	5470.000	66.143	68.907	-7.857	74.000	-2.764	PK	H
7	5460.000	39.245	42.030	-14.755	54.000	-2.785	AV	V
8	5470.000	46.424	49.188	-7.576	54.000	-2.764	AV	V

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

802.11 n40 5670

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	65.912	60.619	-8.088	74.000	5.293	PK	H
2	5725.000	46.183	40.890	-7.817	54.000	5.293	AV	H
3	5725.000	66.451	61.158	-7.549	74.000	5.293	PK	V
4	5725.000	48.437	43.144	-5.563	54.000	5.293	AV	V

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

**802.11 n40 5755**

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5715.000	64.09	66.60	-4.21	68.3	-2.515	PK	H
2	5725.000	67.68	70.19	-10.62	78.3	-2.507	PK	H
3	5715.000	65.06	67.58	-3.24	68.3	-2.515	PK	V
4	5725.000	68.44	70.94	-9.86	78.3	-2.507	PK	V

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

802.11 n40 5795

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	60.67	63.07	-17.63	78.3	-2.399	PK	H
2	5860.000	58.45	60.84	-9.85	68.3	-2.391	PK	H
3	5850.000	60.11	62.51	-18.19	78.3	-2.399	PK	V
4	5860.000	57.88	60.27	-10.42	68.3	-2.391	PK	V

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

**802.11 ac80 5210**

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	70.329	73.778	-3.671	74.000	-3.449	PK	H
2	5150.000	49.030	52.479	-4.970	54.000	-3.449	AV	H
3	5150.000	71.957	75.406	-2.043	74.000	-3.449	PK	V
4	5150.000	49.613	53.062	-4.387	54.000	-3.449	AV	V

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

802.11 ac80 5290

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	67.030	70.051	-6.970	74.000	-3.021	PK	H
2	5350.000	47.171	50.192	-6.829	54.000	-3.021	AV	H
3	5350.000	66.963	69.984	-7.037	74.000	-3.021	PK	V
4	5350.000	48.135	51.156	-5.865	54.000	-3.021	AV	V

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



802.11 ac80 5530

No	Frequenc y (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5460.000	62.545	65.330	-11.455	74.000	-2.785	PK	H
2	5470.000	62.740	65.504	-11.260	74.000	-2.764	PK	H
3	5460.000	44.167	46.952	-9.833	54.000	-2.785	AV	V
4	5470.000	44.369	47.133	-9.631	54.000	-2.764	AV	V
5	5460.000	63.197	65.982	-10.803	74.000	-2.785	PK	H
6	5470.000	63.547	66.311	-10.453	74.000	-2.764	PK	H
7	5460.000	44.810	47.595	-9.190	54.000	-2.785	AV	V
8	5470.000	45.630	48.394	-8.370	54.000	-2.764	AV	V

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

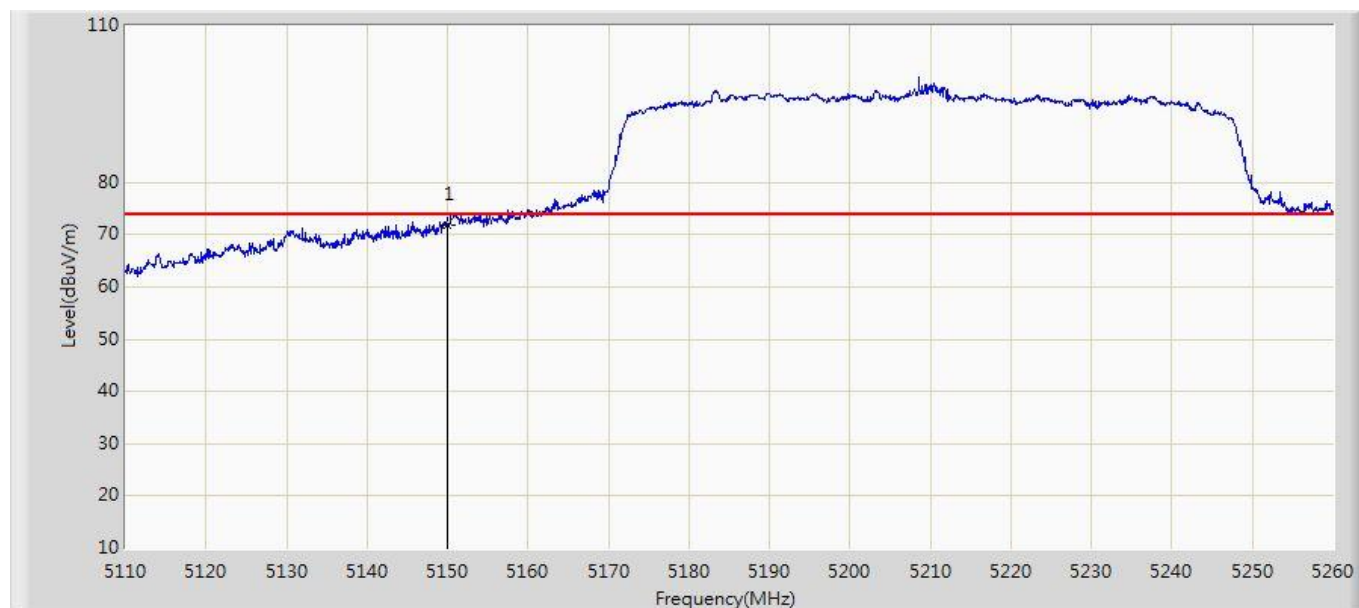
**802.11 ac80 5775**

No	Frequenc y (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type	Antenna Pole (V/H)
1	5715.000	61.14	63.66	-7.16	68.3	-2.515	PK	H
2	5725.000	64.63	67.14	-13.67	78.3	-2.507	PK	H
3	5850.000	64.65	67.05	-13.65	78.3	-2.399	PK	H
4	5860.000	61.69	64.08	-6.61	68.3	-2.391	PK	H
5	5715.000	65.49	68.01	-2.81	68.3	-2.515	PK	V
6	5725.000	69.52	72.03	-8.78	78.3	-2.507	PK	V
7	5850.000	67.65	70.04	-10.65	78.3	-2.399	PK	V
8	5860.000	63.17	65.56	-5.13	68.3	-2.391	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: 2017/05/29
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	

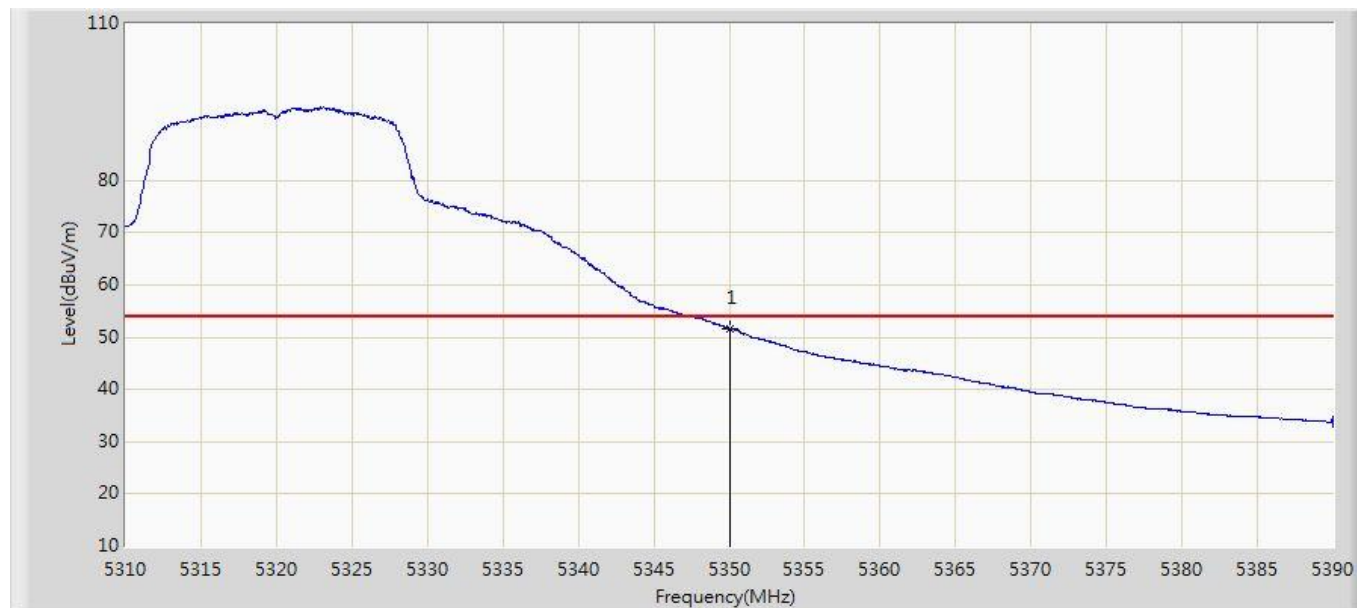


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	5150.000	71.957	75.406	-2.043	74.000	-3.449	PK

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



Site: AC102	Time: 2017/05/29
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	

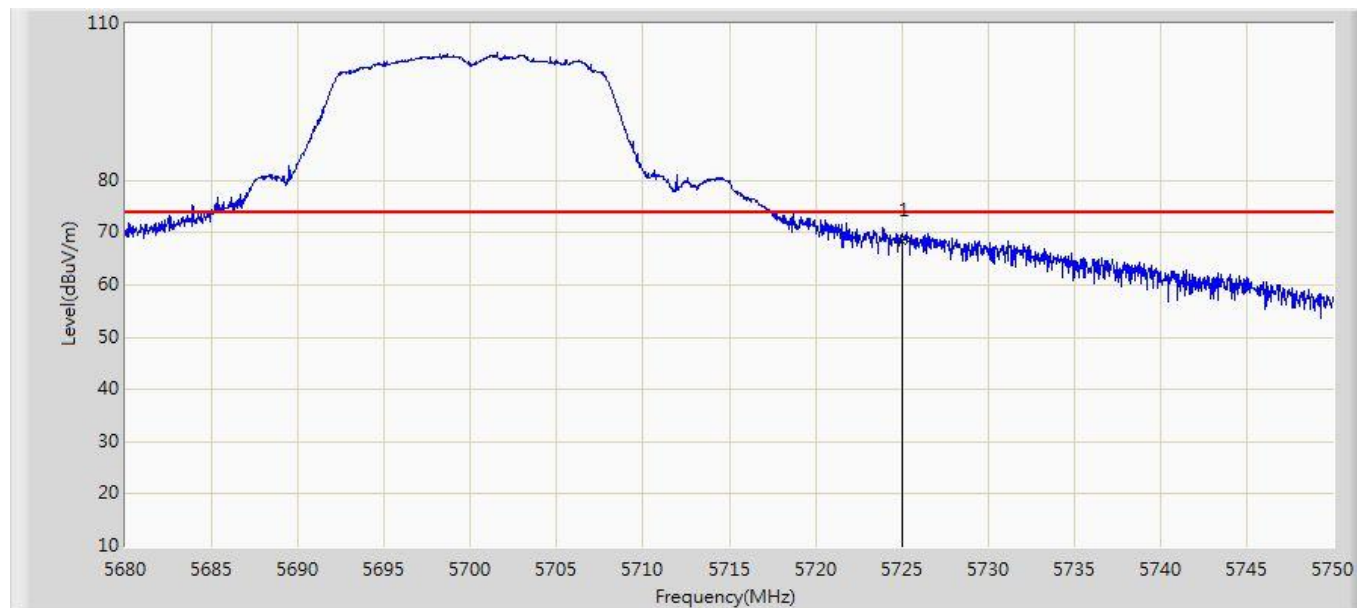


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	5350.000	51.650	54.671	-2.350	54.000	-3.021	AV

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



Site: AC102	Time: 2017/05/29
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	

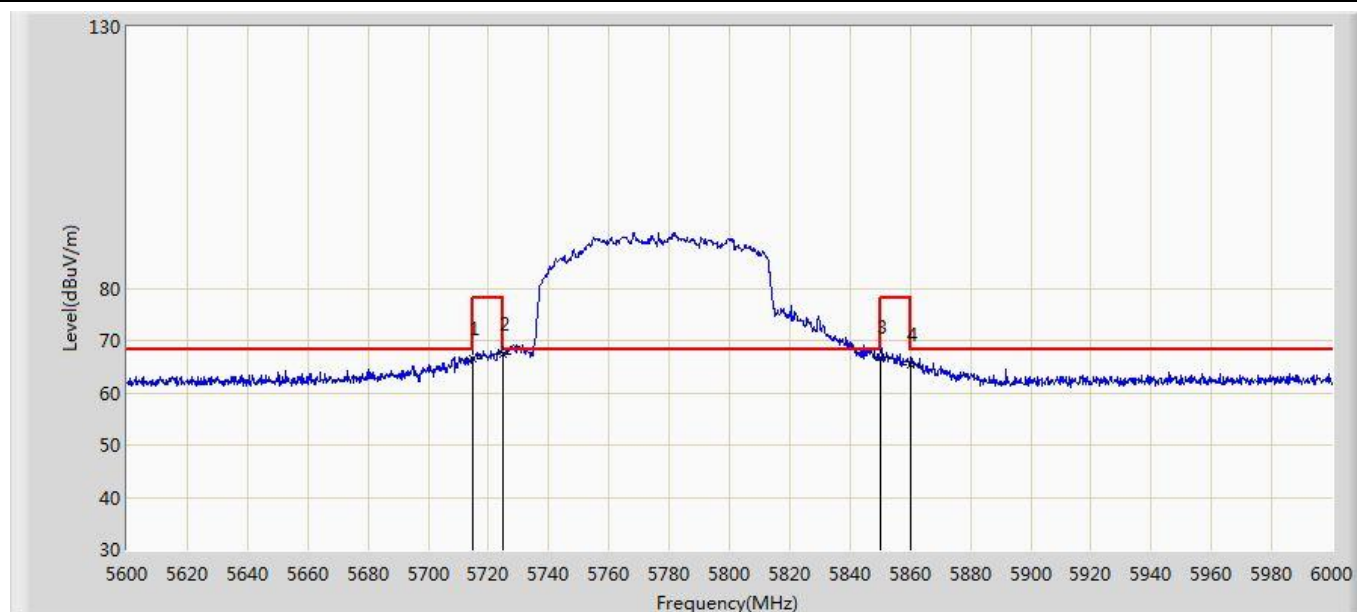


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	5725.000	69.075	63.782	-4.925	74.000	5.293	PK

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



Site: AC102	Time: 2017/05/29
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	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		5715.000	65.49	68.01	-2.81	68.3	-2.515	PK
2		5725.000	69.52	72.03	-8.78	78.3	-2.507	PK
3		5850.000	67.65	70.04	-10.65	78.3	-2.399	PK
4		5860.000	63.17	65.56	-5.13	68.3	-2.391	PK

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

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