FCC Test Report

FCC Part15 Subpart E
ISED RSS-247 Issue 2

Product Name : Wireless Access Point

Model No.　　　：　AP630X

FCC ID　　　　：　WBV-AP650X

IC　　　　　　：　7774A- AP650

Applicant ： Aerohive Networks, Inc.

Address ： Aerohive Networks, 1011 McCarthy Boulevard,

Milpitas, CA 95035, United States

Date of Receipt ： Apr. 04, 2018

Test Date ： Apr. 04, 2018~ Aug. 30, 2018

Issued Date ： Sep. 25, 2018

Report No. ： 1842039R-RF-US-P09V01

Report Version ： V1.0
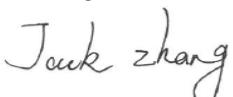
Test Report Certification

Issued Date : Sep. 25, 2018
Report No. : 1842039R-RF-US-P09V01

Product Name	:	Wireless Access Point
Applicant	:	Aerohive Networks, Inc.
Address	:	Aerohive Networks, 1011 McCarthy Boulevard, Milpitas, CA 95035, United States
Manufacturer	:	Aerohive Networks, Inc.
Address	:	Aerohive Networks, 1011 McCarthy Boulevard, Milpitas, CA 95035, United States
Model No.	:	AP650X
FCC ID	:	WBV-AP650X
IC		7774A- AP650
EUT Voltage	:	PoE 48V
Test Voltage	:	AC 120V/60Hz
Brand Name	:	Aerohive
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart E RSS-Gen Issue 5 RSS-247 Issue 2 ANSI C63.10:2013; 789033 D02 General UNII Test Procedures New Rules v02r01 KDB 662911 D01 Multiple Transmitter Output v02r01
Test Result	:	Complied
Performed Location	:	DEKRA Testing and Certification (Suzhou) Co., Ltd. No.99 Hongye Rd., Suzhou Industrial Park, Suzhou,215006, Jiangsu, China TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098 FCC Designation Number: CN1199

Documented By : *Kathy Feng*

(Project Assistant: Kathy Feng)

Reviewed By : *Frank he*

(Senior Engineer: Frank He)

Approved By : *Jack zhang*

(Engineering Supervisor: Jack Zhang)

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1842039R-RF-US-P09V01	V1.0	Initial Issued Report	Sep. 25, 2018

1. General Information

1.1. EUT Description

Product Name	Wireless Access Point				
Brand Name	Aerohive				
Model No.	AP650X				
EUT Voltage	PoE 48V				
Type of Modulation	OFDM-BPSK, QPSK, 16QAM, 64QAM, 128QAM, 256QAM,1024QAM				
Data Rate	802.11a: 6/9/12/18/24/36/48/54Mbps				
	802.11n: up to 600Mbps				
	802.11ac: up to 1.7Gbps				
	802.11ax: up to 2.4Gbps				
Channel Control	Auto				
Transmit modes	☒	802.11a	☒	802.11n(20MHz)	☒ 802.11n(40MHz)
	☒	802.11ac(20MHz)	☒	802.11ac(40MHz)	☒ 802.11ac(80MHz)
	☒	802.11ax(20MHz)	☒	802.11ax(40MHz)	☒ 802.11ax(80MHz)
	☒	802.11ax(160MHz)			
Support Bands	☒	5150MHz~5250MHz	☐ Outdoor AP		
			☒ Indoor AP		
			☐ Fixed point-to-point AP		
			☐ Mobile and Portable Client		
	☒	5250MHz~5350MHz			
	☒	5470MHz~5725MHz	☒ With TDWR Channels		
			☐ Without TDWR Channels		
	☒	5725MHz~5850MHz			

1.2. Antenna information

Antenna Model No.	N/A							
Antenna Manufacturer	N/A							
Antenna Delivery	☒	1*TX+1*RX	☒	2*TX+2*RX	☒	3*TX+3*RX	☒	4*TX+4*RX
Antenna Technology	☒	SISO						

	☒ MIMO	☐	Basic methodology
		☐	Sectorized antenna systems
		☐	Cross-polarized antennas
		☐	Unequal antenna gains, with equal transmit powers
		☒	Spatial Multiplexing
		☒	Cyclic Delay Diversity (CDD)

Antenna Type	Dipole Antenna		

Antenna Technology(2*TX+2*RX)	Ant Gain (dBi)	Directional Gain (dBi)	
		For Power	For PSD
☒ CDD	5.5	5.5	8.5
☒ Beam-forming		8.5	8.5

Antenna Technology(4*TX+4*RX)	Ant Gain (dBi)	Directional Gain (dBi)	
		For Power	For PSD
☒ CDD	5.5	5.5	11.5
☒ Beam-forming		11.5	11.5

1.3. Working Frequency of Each Channel:

802.11a/n/ac/ax(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	5260MHz	56	5280 MHz	60	5300 MHz	64	5320 MHz
100	5500MHz	104	5520 MHz	108	5540 MHz	112	5550 MHz
116	5580MHz	120	5600MHz	124	5620MHz	128	5640MHz
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	5825MHz	N/A	N/A	N/A	N/A	N/A	N/A
802.11n/ac/ax(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/ax(80MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz	106	5530MHz	122	5610 MHz
138	5690 MHz	155	5775 MHz	N/A	N/A	N/A	N/A
802.11ax(160MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
50	5250 MHz	114	5570MHz	N/A	N/A	N/A	N/A

1.4. Mode of Operation

DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: Transmit by 802.11a with CDD
Mode 2: Transmit by 802.11n(20MHz) with CDD
Mode 3: Transmit by 802.11n(40MHz) with CDD
Mode 4: Transmit by 802.11ac(20MHz) with CDD
Mode 5: Transmit by 802.11ac(40MHz) with CDD
Mode 6: Transmit by 802.11ac(80MHz) with CDD
Mode 7: Transmit by 802.11ax(20MHz) with CDD
Mode 8: Transmit by 802. 11ax(40MHz) with CDD
Mode 9: Transmit by 802. 11ax(80MHz) with CDD
Mode 10: Transmit by 802. 11ax(160MHz) with CDD
Mode 11: Transmit by 802.11a with Beam-forming
Mode 12: Transmit by 802. 11n(20MHz) with Beam-forming
Mode 13: Transmit by 802. 11n(40MHz) with Beam-forming
Mode 14: Transmit by 802.11ac(20MHz) with Beam-forming
Mode 15: Transmit by 802.11ac(40MHz) with Beam-forming
Mode 16: Transmit by 802.11ac(80MHz) with Beam-forming
Mode 17: Transmit by 802.11ax(20MHz) with Beam-forming
Mode 18: Transmit by 802.11ax(40MHz) with Beam-forming
Mode 19: Transmit by 802.11ax(80MHz) with Beam-forming
Mode 20: Transmit by 802.11ax(160MHz) with Beam-forming

Note 1: 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.

Note 2: For portable device, radiated tests was verified over X, Y, Z axis, and shown the worst case on this report.

Note 3: The 1*1 and 3*3 power setting are same with 2*2 and 4*4, so we only test 2*2 and 4*4 for compliances

Note4: The device contains two 5GHz modules, and called eth6 and eth7, eth6 can work separately and eth7 can only transmit with eth6 which at 5150~5350MHz and eth6 work at 5470~5850MHz. So eth6 test all the frequency bands and eth7 only test 5150~5350MHz.

Note 5: The output power of 802.11ax is lower than 802.11ac, so we didn't show 802.11ax test data in this report.
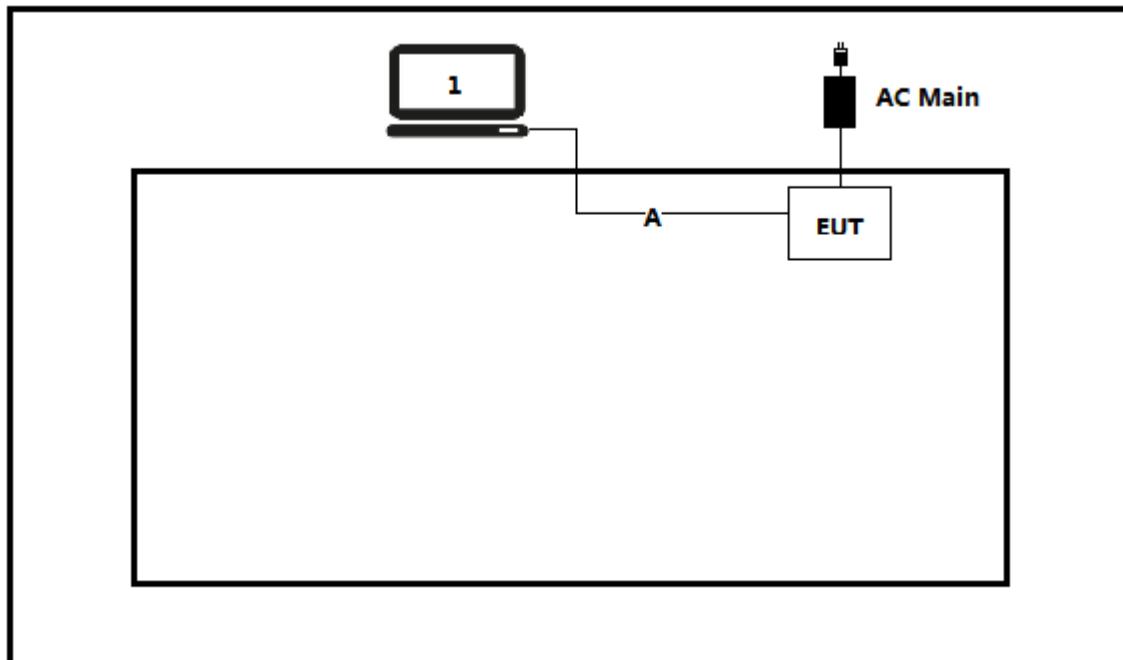
1.5. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:
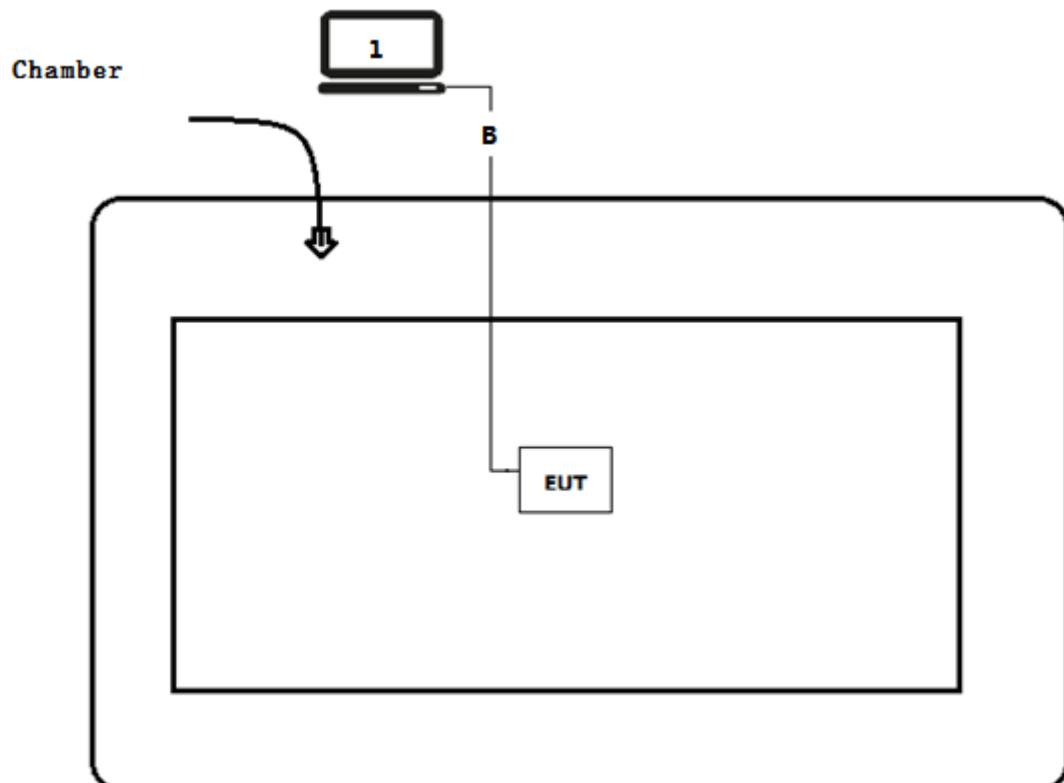
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Lenovo	Think pad x220	SUA0600195	Non-shielded
A	WLAN cable	N/A	N/A	N/A	Shielded, 0.5m
B	WLAN cable	N/A	N/A	N/A	Shielded, 10m

1.6. Configuration of Tested System

Test setup Diagram- AC Line Conducted Emission Test

Test setup Diagram- Radiated Emission

1.7. EUT Exercise Software

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of equipment.
3	Run RF software [MTool 3.0.0.6], and set the test mode and channel, then press OK to start to continue transmit.

2. Technical Test

2.1. Summary of Test Result

☒ No deviations from the test standards

☐ Deviations from the test standards as below description:

FCC

Performed Test Item	Normative References	Limit	Result
Conducted Emission	FCC CFR Title 47 Part 15 Subpart E: Section 15.207	FCC 15.207	PASS
Radiated Emission	FCC CFR Title 47 Part 15 Subpart E: Section 15.209	FCC 15.209	PASS
Emission bandwidth and occupied bandwidth	FCC CFR Title 47 Part 15 Subpart E: Section 15.407(a)	FCC 15.407(e)	PASS
6dB Emission Bandwidth	FCC CFR Title 47 Part 15 Subpart E: Section 15.407(a)	FCC 15.407(e)	PASS
Power Output	FCC CFR Title 47 Part 15 Subpart E: Section 15.407(a)	FCC 15.407(a)	PASS
Peak Power Spectral Density	FCC CFR Title 47 Part 15 Subpart E: Section 15.407(a)	FCC 15.407(a)	PASS
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart E: Section 15.205, 15.407(b)	FCC 15.407(b)	PASS
Frequency Stability	FCC CFR Title 47 Part 15 Subpart E: Section 15.407(g)	$\pm$20ppm	PASS

IC

Performed Test Item	Normative References	Limit	Result
Conducted Emission	RSS-Gen Issue 4 November 2014 Section 8.8	RSS-Gen	PASS
Radiated Emission	RSS-Gen Issue 4 November 2014 Section 8.9 RSS-247 Issue 2 Feb. 2017 Section 6.2	RSS-247	PASS
Emission bandwidth and occupied bandwidth	RSS-Gen Issue 4 November 2014 Section 6.6 RSS-247 Issue 2 Feb. 2017 Section 6.2.4	≥500KHz	PASS
Power Output	RSS-247 Issue 2 Feb. 2017 Section 6.2	RSS-247	PASS
Peak Power Spectral Density	RSS-247 Issue 2 Feb. 2017 Section 6.2	RSS-247	PASS
Radiated Emission Band Edge	RSS-Gen Issue 4 November 2014 Section 8.10	RSS-247	PASS
Frequency Stability	RSS-Gen Issue 4 November 2014 Section 6.11	±20ppm	PASS
Antenna Requirement	RSS-Gen Issue 4 Section 8.3	RSS-Gen	PASS

2.2. Test Frequency configuration:

Modulation Mode	Channel	Frequency	Channel	Frequency	Channel	Frequency
802.11a/n/ac/ax (20MHz)/	36	5180MHz	44	5220MHz	48	5240MHz
	52	5260MHz	60	5300MHz	64	5320MHz
	100	5500MHz	116	5580MHz	132	5700MHz
	144	5720MHz	149	5745MHz	157	5785MHz
	165	5825MHz	N/A	N/A	N/A	N/A
802.11n/ac/ax(40MHz)	38	5190MHz	46	5230MHz	54	5270MHz
	62	5310MHz	102	5510MHz	110	5550MHz
	134	5670MHz	142	5710MHz	151	5755MHz
	159	5795MHz	N/A	N/A	N/A	N/A
802.11ac/ax(80MHz)	42	5210MHz	58	5290MHz	106	5530MHz
	138	5690MHz	155	5775MHz	N/A	N/A
802.11ax(160MHz)	50	5250MHz	114	5570MHz	N/A	N/A

2.3. Power vs Data Rate

MCS Index for 802.11n	Spatial Streams	Data Rate (Mbps)						
		802.11b	802.11g	802.11a	20MHz Bandwidth		40MHz Bandwidth	
					800ns GI	400ns GI	800ns GI	400ns GI
0	1	1	6	6	6.5	7.2	13.5	15.0
1	1	2	9	9	13.0	14.4	27.0	30.0
2	1	5.5	12	12	19.5	21.7	40.5	45.0
3	1	11	18	18	26.0	28.9	54.0	60.0
4	1	---	24	24	39.0	43.3	81.0	90.0
5	1	---	36	36	52.0	57.8	108.0	120.0
6	1	---	48	48	58.5	65.0	121.5	135.0
7	1	---	54	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
16	3	---	---	---	19.5	21.6	40.5	45.0
17	3	---	---	---	39.0	43.2	81.0	90.0
18	3	---	---	---	58.5	65.1	121.5	135.0
19	3	---	---	---	78.0	86.7	162.0	180.0
20	3	---	---	---	117.0	129.9	243.0	270.0
21	3	---	---	---	156.0	173.4	324.0	360.0
22	3	---	---	---	175.5	195.0	364.5	405.0
23	3	---	---	---	195.0	216.6	405.0	450.0
24	4	---	---	---	26.0	28.8	54.0	60.0
25	4	---	---	---	52.0	57.6	108.0	120.0
26	4	---	---	---	78.0	86.8	162.0	180.0
27	4	---	---	---	104.0	115.6	216.0	240.0
28	4	---	---	---	156.0	173.2	324.0	360.0
29	4	---	---	---	208.0	231.2	432.0	480.0
30	4	---	---	---	234.0	260.0	486.0	540.0
31	4	---	---	---	260.0	288.8	540.0	600.0

Note1: The blue form is the maximum power data rate.

2: The EUT supports four spatial streams.

Spatial Streams (Note1)	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
2	10	BPSK	1/2	13.0	14.4	27.0	30.0	58.6	65.0
	11	QPSK	1/2	26.0	28.8	54.0	60.0	117.0	130.0
	12	QPSK	3/4	39.0	43.4	81.0	90.0	175.6	195.0
	13	16-QAM	1/2	52.0	57.8	108.0	120.0	234.0	260.0
	14	16-QAM	3/4	78.0	86.6	162.0	180.0	351.0	390.0
	15	64-QAM	2/3	104.0	115.6	216.0	240.0	468.0	520.0
	16	64-QAM	3/4	117.0	130.0	243.0	270.0	526.6	585.0
	17	64-QAM	5/6	130.0	144.4	270.0	300.0	585.0	650.0
	18	256-QAM	3/4	156.0	173.4	324.0	360.0	702.0	780.0
	19	256-QAM	5/6	#VALUE!	#VALUE!	360.0	400.0	780.0	866.6
3	20	BPSK	1/2	19.5	21.6	40.5	45.0	87.9	97.5
	21	QPSK	1/2	39.0	43.2	81.0	90.0	175.5	195.0
	22	QPSK	3/4	58.5	65.1	121.5	135.0	263.4	292.5
	23	16-QAM	1/2	78.0	86.7	162.0	180.0	351.0	390.0
	24	16-QAM	3/4	117.0	129.9	243.0	270.0	526.5	585.0
	25	64-QAM	2/3	156.0	173.4	324.0	360.0	702.0	780.0
	26	64-QAM	3/4	175.5	195.0	364.5	405.0	789.9	877.5
	27	64-QAM	5/6	195.0	216.6	405.0	450.0	877.5	975.0
	28	256-QAM	3/4	234.0	260.1	486.0	540.0	1053.0	1170.0
	29	256-QAM	5/6	#VALUE!	#VALUE!	540.0	600.0	1170.0	1299.9
4	30	BPSK	1/2	26.0	28.8	54.0	60.0	117.2	130.0
	31	QPSK	1/2	52.0	57.6	108.0	120.0	234.0	260.0
	32	QPSK	3/4	78.0	86.8	162.0	180.0	351.2	390.0

33	16-QAM	1/2	104.0	115.6	216.0	240.0	468.0	520.0
34	16-QAM	3/4	156.0	173.2	324.0	360.0	702.0	780.0
35	64-QAM	2/3	208.0	231.2	432.0	480.0	936.0	1040.0
36	64-QAM	3/4	234.0	260.0	486.0	540.0	1053.2	1170.0
37	64-QAM	5/6	260.0	288.8	540.0	600.0	1170.0	1300.0
38	256-QAM	3/4	312.0	346.8	648.0	720.0	1404.0	1560.0
39	256-QAM	5/6	#VALUE!	#VALUE!	720.0	800.0	1560.0	1733.2

Note 1: The blue form is the maximum power data rate.

2: The EUT supports four spatial streams.

Spatial Streams (Note1)	MCS Index	Modulation type	Coding rate	Data Rate(Mb/s)							
				20MHz		40MHz		80MHz		160MHz	
				Guard Interval		Guard Interval		Guard Interval		Guard Interval	
				1600 ns GI	800 ns GI	1600 ns GI	800 ns GI	1600 ns GI	800 ns GI	1600 ns GI	800 ns GI
1	0	BPSK	1/2	4	4	8	9	17	18	34	36
	1	QPSK	1/2	16	17	33	34	68	72	136	144
	2	QPSK	3/4	24	26	49	52	102	108	204	216
	3	16-QAM	1/2	33	34	65	69	136	144	272	282
	4	16-QAM	3/4	49	52	98	103	204	216	408	432
	5	64-QAM	2/3	65	69	130	138	272	288	544	576
	6	64-QAM	3/4	73	77	146	155	306	324	613	649
	7	64-QAM	5/6	81	86	163	172	340	360	681	721
	8	256-QAM	3/4	98	103	195	207	408	432	817	865
	9	256-QAM	5/6	108	115	217	229	453	480	907	961
	10	1024-QAM	3/4	122	129	244	258	510	540	1021	1081
	11	1024-QAM	5/6	135	143	271	287	567	600	1134	1201
2	12	BPSK	1/2	8	8	16	18	34	36	68	72
	13	QPSK	1/2	32	34	66	68	136	144	272	288
	14	QPSK	3/4	48	52	98	104	204	216	408	432
	15	16-QAM	1/2	66	68	130	138	272	288	544	564
	16	16-QAM	3/4	98	104	196	206	408	432	816	864
	17	64-QAM	2/3	130	138	260	276	544	576	1088	1152
	18	64-QAM	3/4	146	154	292	310	612	648	1226	1298
	19	64-QAM	5/6	162	172	326	344	680	720	1362	1442
	20	256-QAM	3/4	196	206	390	414	816	864	1634	1730
	21	256-QAM	5/6	216	230	434	458	906	960	1814	1922
	22	1024-QAM	3/4	244	258	488	516	1020	1080	2042	2162
	23	1024-QAM	5/6	270	286	542	574	1134	1200	2268	2402
3	24	BPSK	1/2	12	12	24	27	51	54	102	108
	25	QPSK	1/2	48	51	99	102	204	216	408	432
	26	QPSK	3/4	72	78	147	156	306	324	612	648
	27	16-QAM	1/2	99	102	195	207	408	432	816	846
	28	16-QAM	3/4	147	156	294	309	612	648	1224	1296
	29	64-QAM	2/3	195	207	390	414	816	864	1632	1728
	30	64-QAM	3/4	219	231	438	465	918	972	1839	1947
	31	64-QAM	5/6	243	258	489	516	1020	1080	2043	2163

	32	256-QAM	3/4	294	309	585	621	1224	1296	2451	2595
	33	256-QAM	5/6	324	345	651	687	1359	1440	2721	2883
	34	1024-QAM	3/4	366	387	732	774	1530	1620	3063	3243
	35	1024-QAM	5/6	405	429	813	861	1701	1800	3402	3603
4	36	BPSK	1/2	16	16	32	36	68	72	136	144
	37	QPSK	1/2	64	68	132	136	272	288	544	576
	38	QPSK	3/4	96	104	196	208	408	432	816	864
	39	16-QAM	1/2	132	136	260	276	544	576	1088	1128
	40	16-QAM	3/4	196	208	392	412	816	864	1632	1728
	41	64-QAM	2/3	260	276	520	552	1088	1152	2176	2304
	42	64-QAM	3/4	292	308	584	620	1224	1296	2452	2596
	43	64-QAM	5/6	324	344	652	688	1360	1440	2724	2884
	44	256-QAM	3/4	392	412	780	828	1632	1728	3268	3460
	45	256-QAM	5/6	432	460	868	916	1812	1920	3628	3844
	46	1024-QAM	3/4	488	516	976	1032	2040	2160	4084	4324
	47	1024-QAM	5/6	540	572	1084	1148	2268	2400	4536	4804

Note 1: The blue form is the maximum power data rate.

2: The EUT supports four spatial streams.
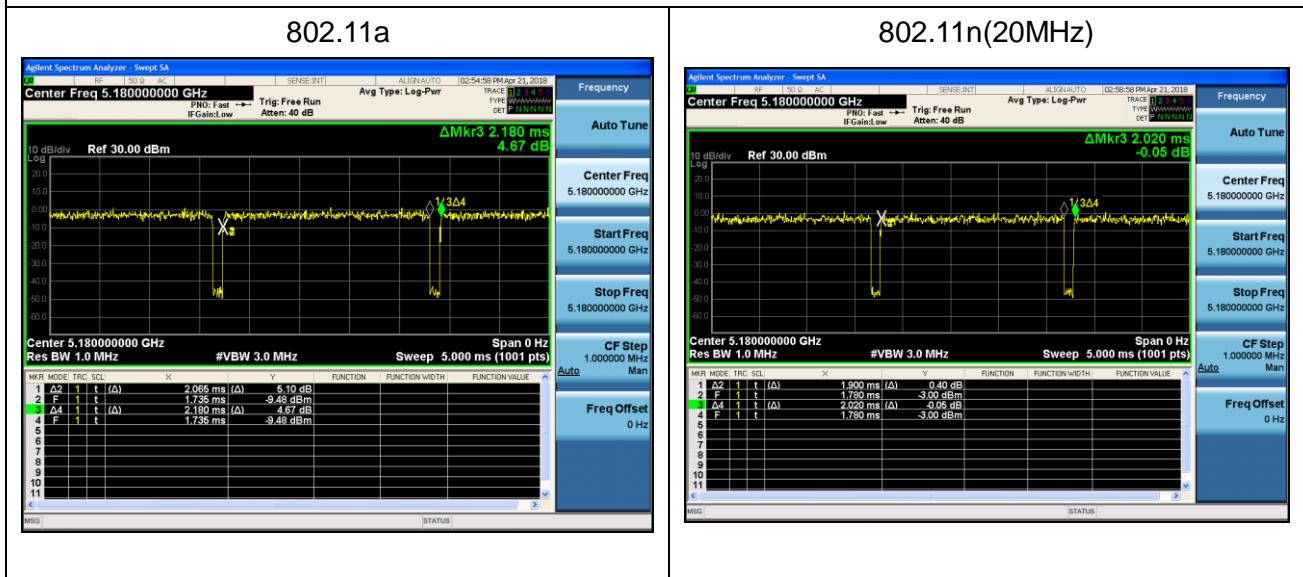
2.4. Duty Cycle

CDD:
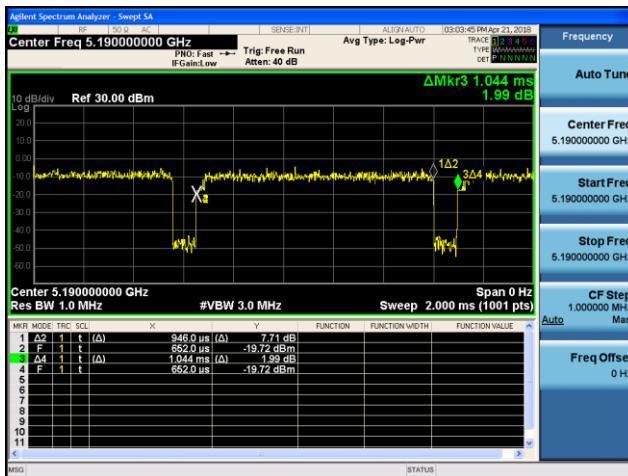
Test Mode	Tx On (ms)	Tx Off (ms)	VBW(Hz)	Tx On + Tx Off (ms)	Duty Cycle
802.11a	2.065	0.115	510	2.180	94.72%
802.11n(20MHz)	1.900	0.12	560	2.020	94.06%
802.11n(40MHz)	0.946	0.098	1.1k	1.044	90.61%
802.11ac(20MHz)	1.905	0.045	560	1.950	97.69%
802.11ac(40MHz)	0.912	0.07	1.1k	0.982	92.87%
802.11ac(80MHz)	0.421	0.067	2.4k	0.488	86.27%
802.11ax(20MHz)	1.475	0.035	680	1.510	97.68%
802.11ax(40MHz)	0.728	0.074	1.5k	0.802	90.77%
802.11ax(80MHz)	0.361	0.071	3k	0.432	83.56%
802.11ax(160MHz)	0.234	0.028	4.3k	0.262	89.31%

Note 1: T means the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Note 2: According to KDB 789033，when test for Radiated Emission Band Edge and Radiated Emission, VBW $\geqslant$ 1/T will be used.

802.11a	802.11n(20MHz)
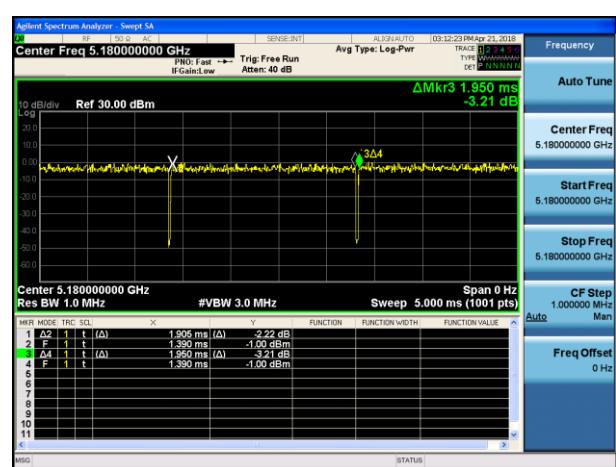
802.11n(40MHz)
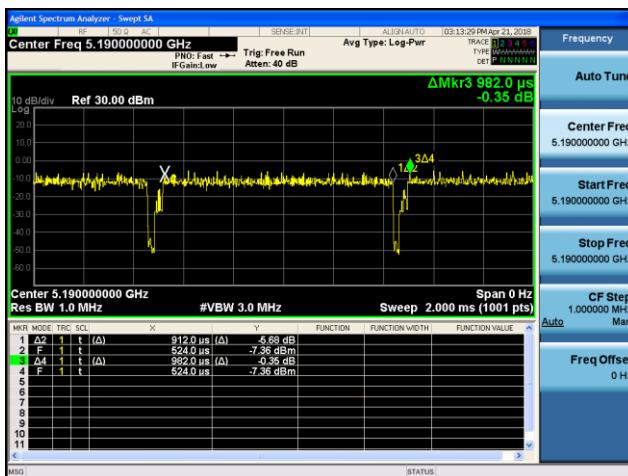
802.11ac(20MHz)
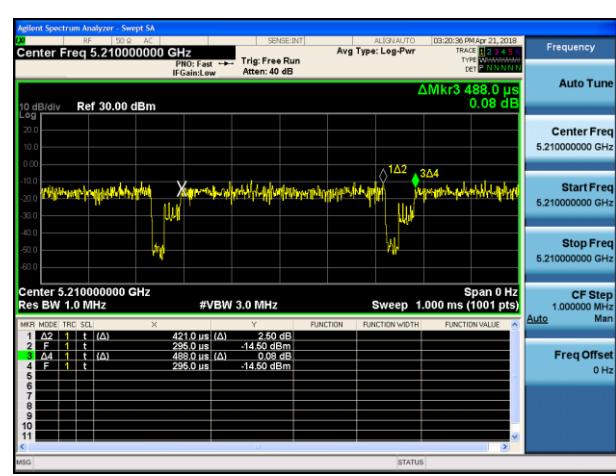
802.11ac(40MHz)
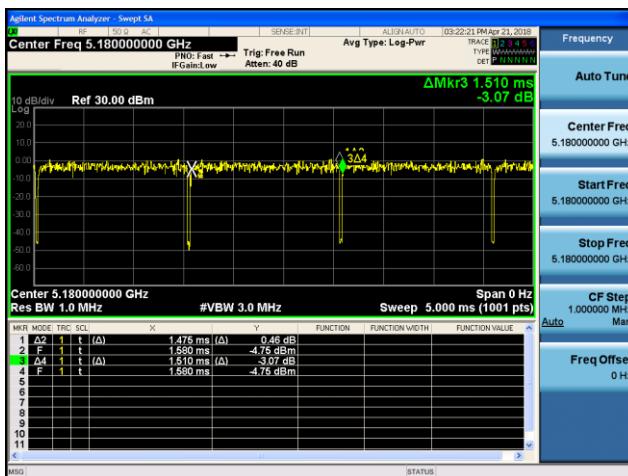
802.11ac(80MHz)
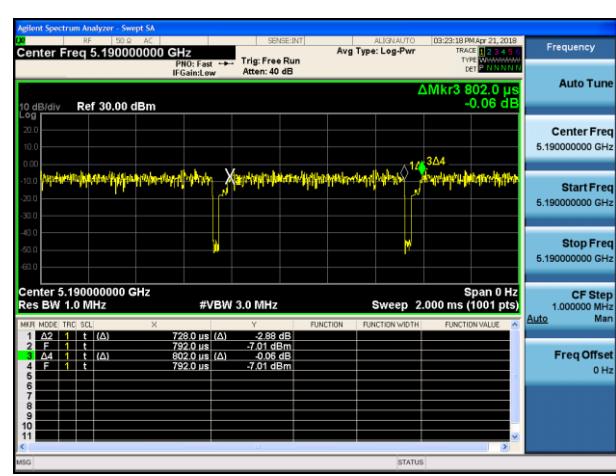
802.11ax(20MHz)
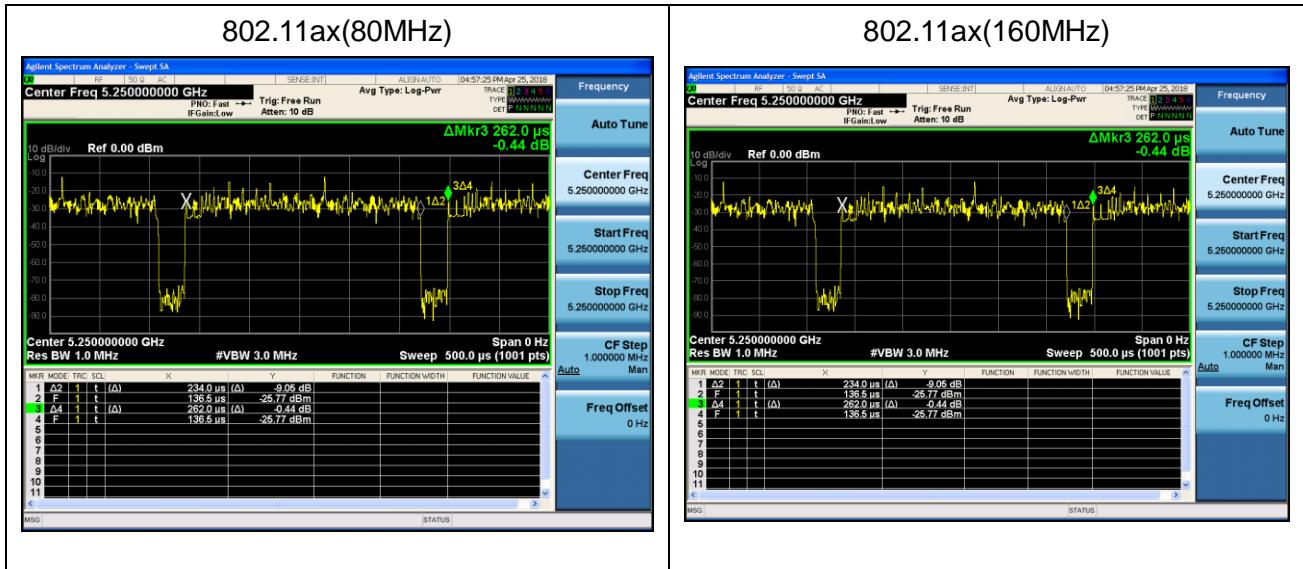
802.11ax(40MHz)

802.11ax(80MHz)	802.11ax(160MHz)
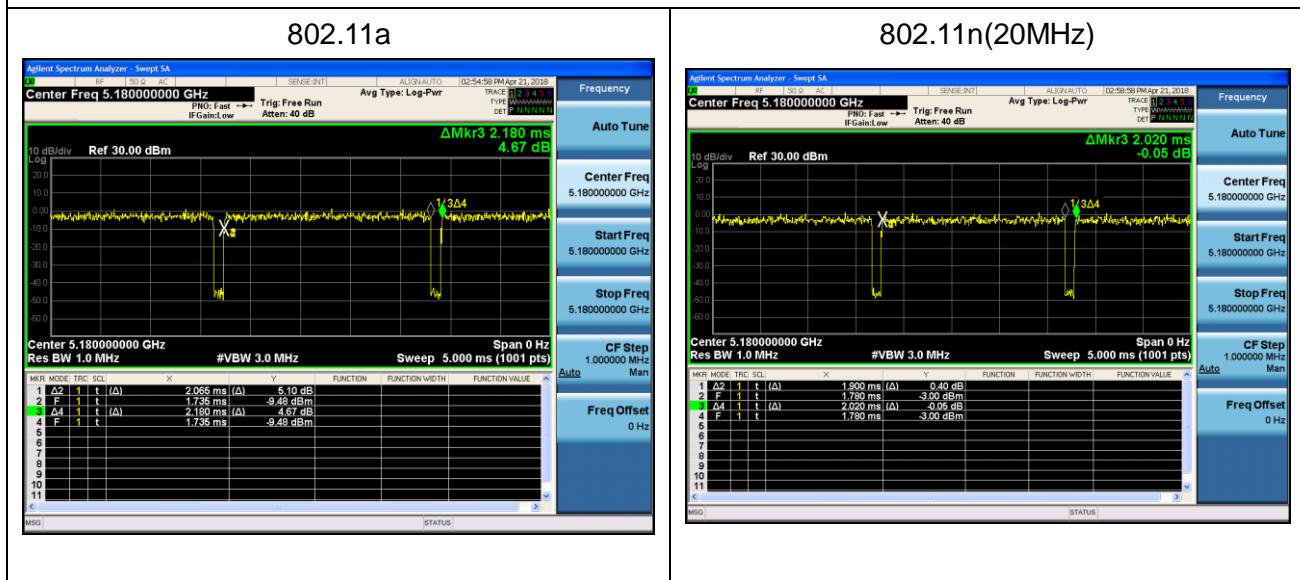
Beam-forming:

Test Mode	Tx On (ms)	Tx Off (ms)	VBW(Hz)	Tx On + Tx Off (ms)	Duty Cycle
802.11a	2.065	0.115	510	2.180	94.72%
802.11n(20MHz)	1.900	0.12	560	2.020	94.06%
802.11n(40MHz)	0.946	0.098	1.1k	1.044	90.61%
802.11ac(20MHz)	1.905	0.045	560	1.950	97.69%
802.11ac(40MHz)	0.912	0.07	1.1k	0.982	92.87%
802.11ac(80MHz)	0.421	0.067	2.4k	0.488	86.27%
802.11ax(20MHz)	1.475	0.035	680	1.510	97.68%
802.11ax(40MHz)	0.728	0.074	1.5k	0.802	90.77%
802.11ax(80MHz)	0.361	0.071	3k	0.432	83.56%
802.11ax(160MHz)	0.233	0.028	4.3	0.261	89.27%

Note 1: T means the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Note 2: According to KDB 789033，when test for Radiated Emission Band Edge and Radiated Emission, VBW $\geqslant$ 1/T will be used.

| 802.11a	802.11n(20MHz)
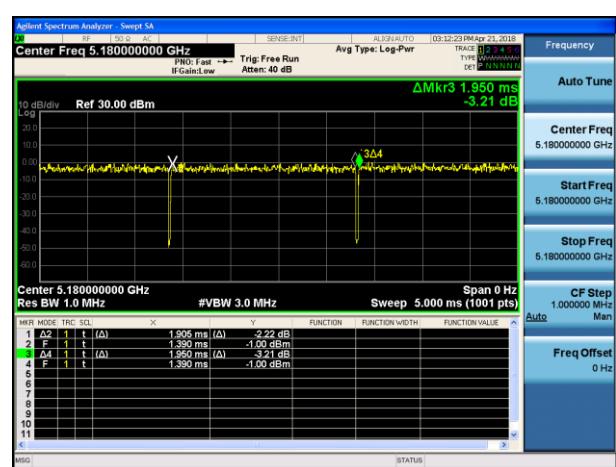
802.11n(40MHz)
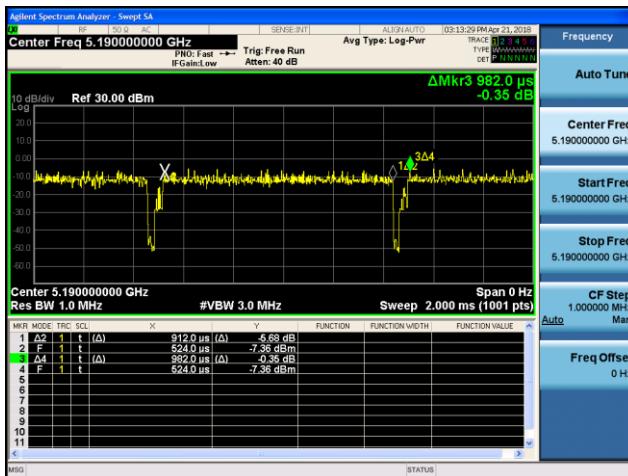
802.11ac(20MHz)
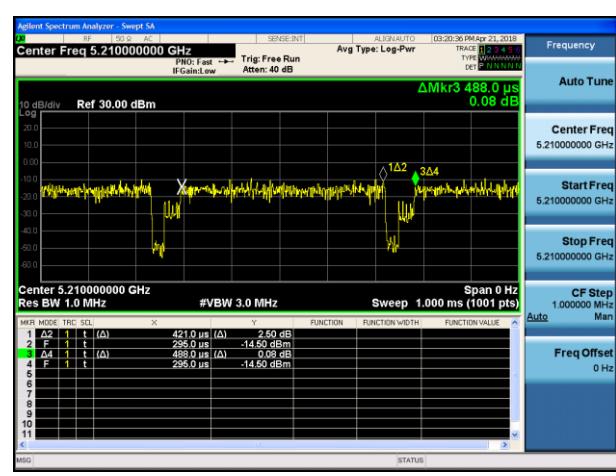
802.11ac(40MHz)
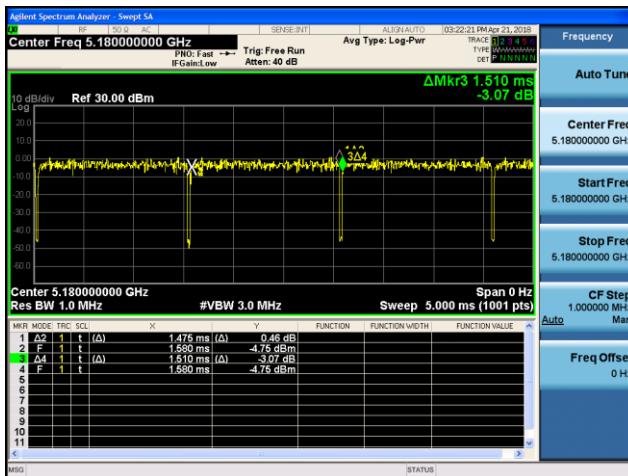
802.11ac(80MHz)
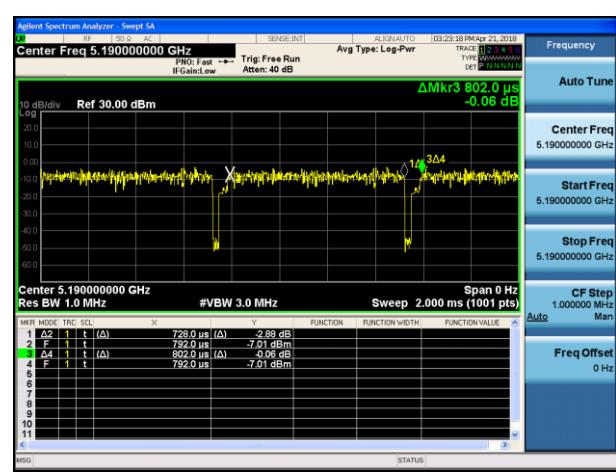
802.11ax(20MHz)
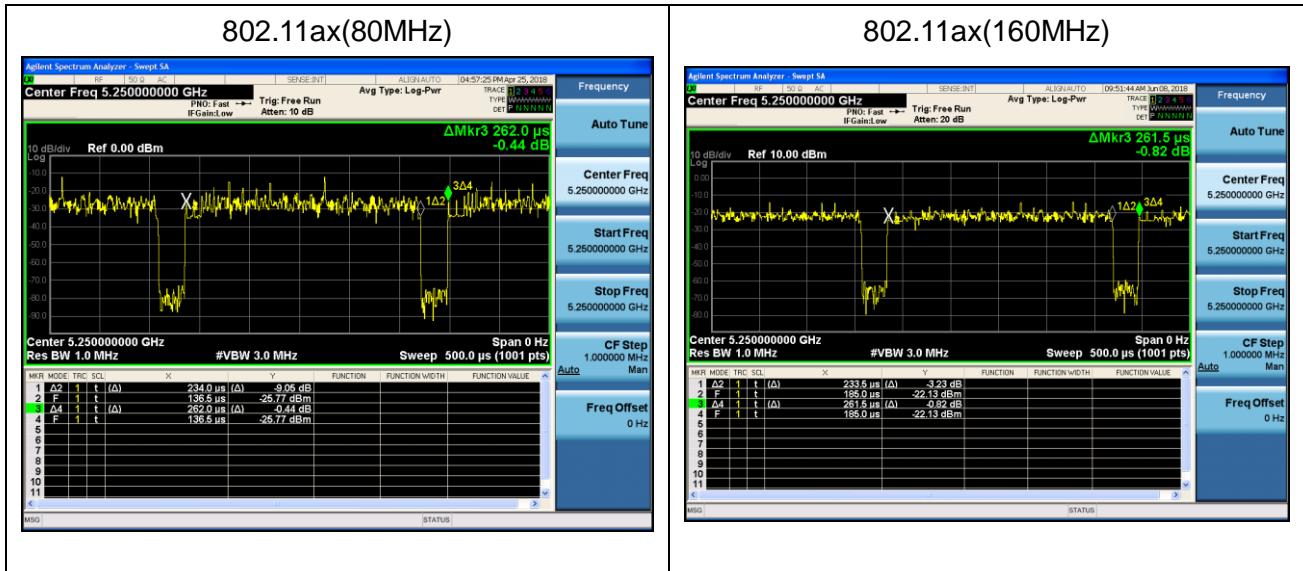
802.11ax(40MHz)

802.11ax(80MHz)	802.11ax(160MHz)

2.5. Test Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	21
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

2.6. Uncertainty

Test Items	Uncertainty
AC Power Line Conducted Emission	±2.02dB
Radiated Emission	Below 1GHz ±3.8 dB
	Above 1GHz ±3.9 dB
RF Antenna Port Conducted Emission	±1.27dB
Radiated Emission Band Edge	±3.9dB
Occupied Bandwidth	±1kHz
Power Spectral Density	±1.27dB
Frequency Stability	± 100 Hz
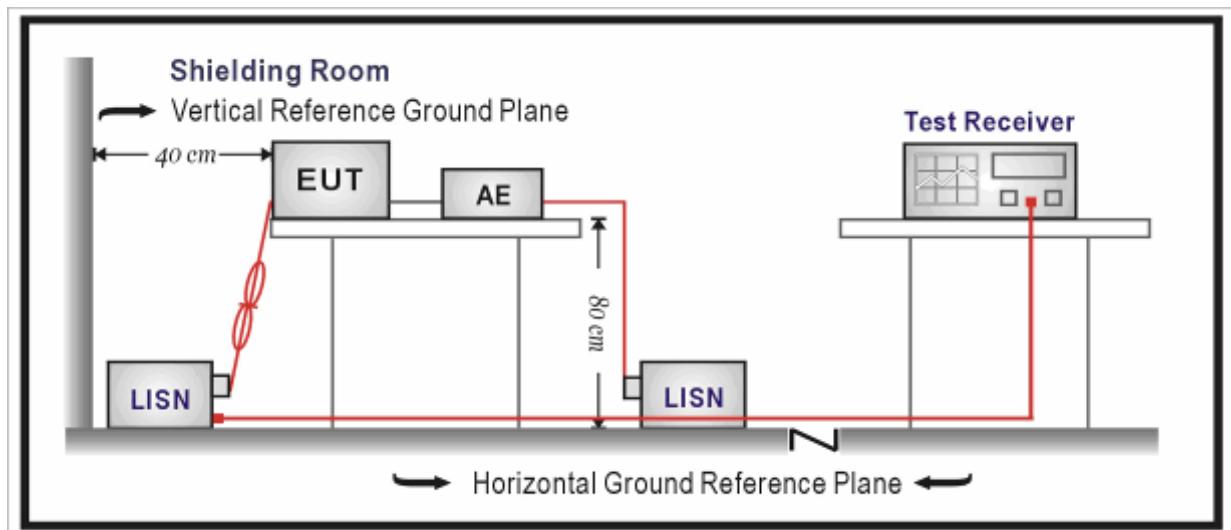
3. Conducted Emission

3.1. Test Equipment

Conducted Emission / TR-1					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100906	2018.03.05	2019.03.04
Two-Line V-Network	R&S	ENV 216	101189	2018.06.16	2019.06.15
Two-Line V-Network	R&S	ENV 216	101044	2018.09.16	2019.09.15
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
50ohm Termination	SHX	TF2	07081402	2018.09.16	2019.09.15
Temperature/Humidity Meter	Zhichen	ZC1-2	TR1-TH	2018.01.05	2019.01.04
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

3.2. Test Setup

3.3. Limit

Frequency (MHz)	QP (dB μ V)	AV (dB μ V)
0.15 - 0.50	66 – 56	56 – 46
0.50 - 5.0	56	46
5.0 - 30	60	50
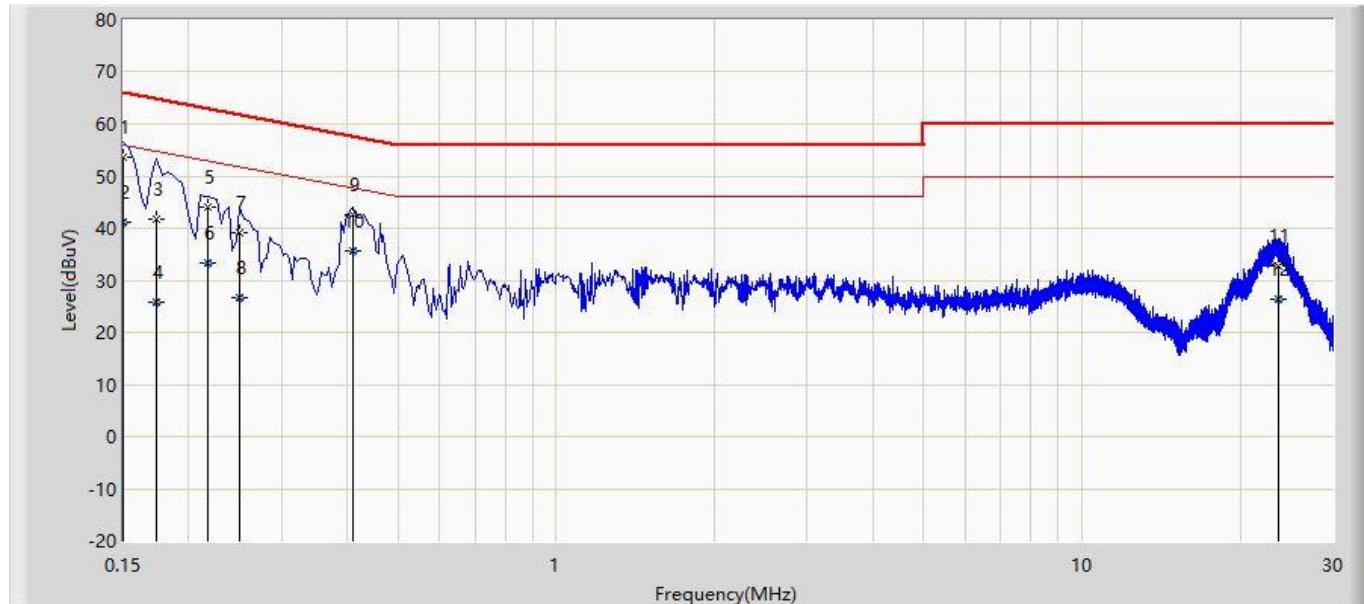
Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

3.4. Test Procedure

Test Method			
	References Rule	Chapter	Item
☒	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices

![DEKRA]

3.5. Test Result

Engineer: Lucas	
Site: TR1	Time: 2018/06/20
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: Wireless Access Point	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 5250MHz by 802.11a	
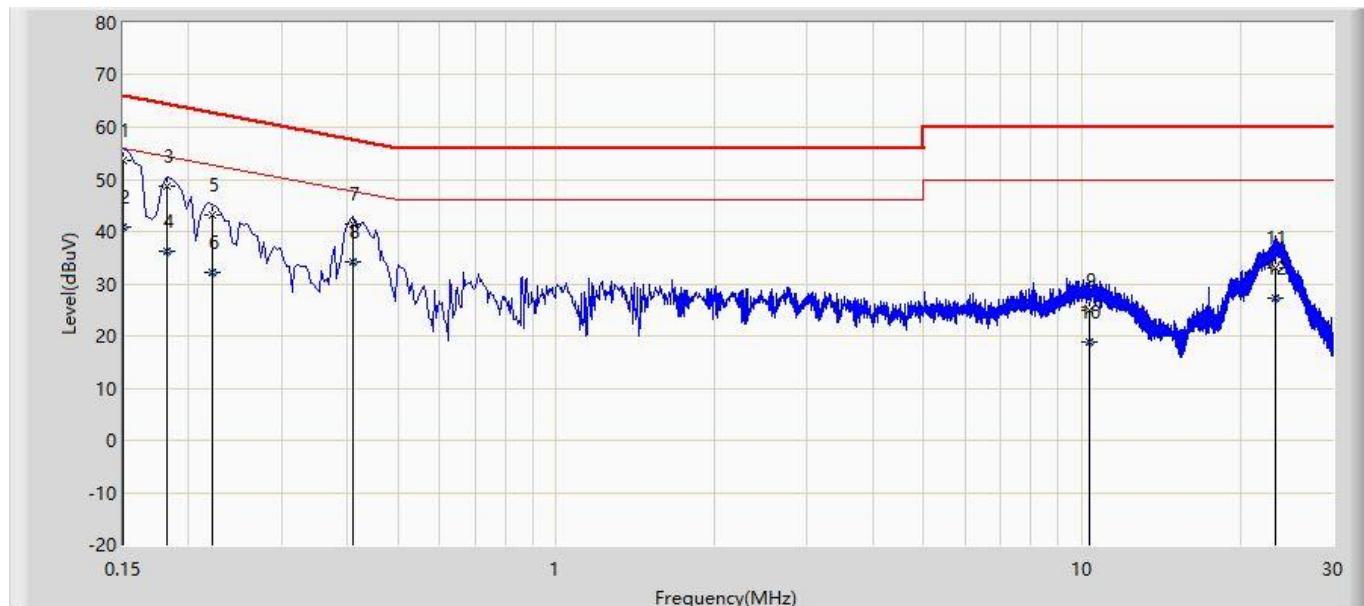
No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.150	53.766	44.131	-12.234	66.000	9.610	0.025	0.000	QP
2		0.150	41.118	31.483	-14.882	56.000	9.610	0.025	0.000	AV
3		0.174	41.846	32.213	-22.921	64.767	9.605	0.027	0.000	QP
4		0.174	25.878	16.246	-28.889	54.767	9.605	0.027	0.000	AV
5		0.218	44.117	34.487	-18.778	62.895	9.600	0.029	0.000	QP
6		0.218	33.443	23.814	-19.452	52.895	9.600	0.029	0.000	AV
7		0.250	39.162	29.531	-22.595	61.757	9.600	0.031	0.000	QP
8		0.250	26.588	16.957	-25.169	51.757	9.600	0.031	0.000	AV
9		0.410	42.721	33.083	-14.927	57.648	9.600	0.039	0.000	QP
10	*	0.410	35.590	25.951	-12.058	47.648	9.600	0.039	0.000	AV
11		23.574	32.630	21.940	-27.370	60.000	10.375	0.315	0.000	QP
12		23.574	26.503	15.813	-23.497	50.000	10.375	0.315	0.000	AV

Note:

1. " * ", means this data is the worst emission level.

2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Lucas	
Site: TR1	Time: 2018/06/20
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: Wireless Access Point	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 5250MHz by 802.11a	

No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1	*	0.150	53.518	43.900	-12.482	66.000	9.594	0.025	0.000	QP
2		0.150	40.795	31.176	-15.205	56.000	9.594	0.025	0.000	AV
3		0.182	48.650	39.025	-15.744	64.394	9.597	0.028	0.000	QP
4		0.182	36.195	26.570	-18.199	54.394	9.597	0.028	0.000	AV
5		0.222	43.103	33.475	-19.640	62.744	9.599	0.029	0.000	QP
6		0.222	32.276	22.648	-20.467	52.744	9.599	0.029	0.000	AV
7		0.410	41.558	31.926	-16.090	57.648	9.593	0.039	0.000	QP
8		0.410	34.095	24.464	-13.553	47.648	9.593	0.039	0.000	AV
9		10.342	24.790	14.784	-35.210	60.000	9.802	0.205	0.000	QP
10		10.342	18.722	8.715	-31.278	50.000	9.802	0.205	0.000	AV
11		23.330	33.168	22.355	-26.832	60.000	10.500	0.313	0.000	QP
12		23.330	27.105	16.292	-22.895	50.000	10.500	0.313	0.000	AV

Note:

1. " * ", means this data is the worst emission level.

2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

4. Radiated Emission

4.1. Test Equipment
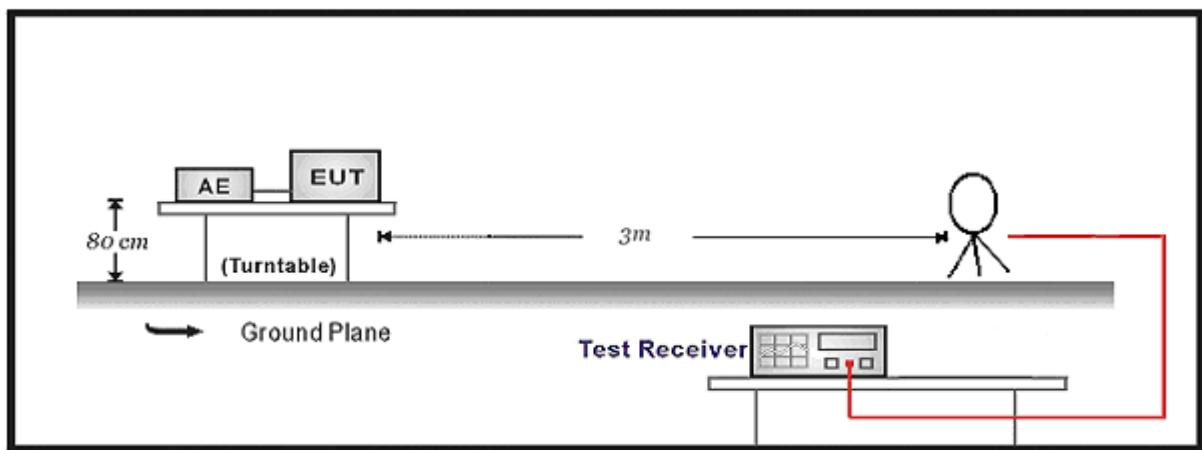
Radiated Emission / AC-2					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100573	2018.03.29	2019.03.28
Loop Antenna	R&S	HFH2-Z2	833799/003	2017.11.16	2018.11.15
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2017.10.16	2018.10.15
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2018.03.02	2019.03.01
Temperature/Humidity Meter	Zhichen	ZC1-2	AC2-TH	2018.01.04	2019.01.03

Radiated Emission / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2018.01.04	2019.01.03
Preamplifier	Miteq	NSP1800-25	1364185	2018.05.06	2019.05.05
Preamplifier	DEKRA Testing and Certification (Suzhou) Co., Ltd.	AP-040G	CHM-0906001	2018.05.06	2019.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2018.01.22	2019.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2017.11.25	2018.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2018.03.02	2019.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2018.03.02	2019.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2018.03.02	2019.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2018.06.10	2019.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2018.01.04	2019.01.03
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					
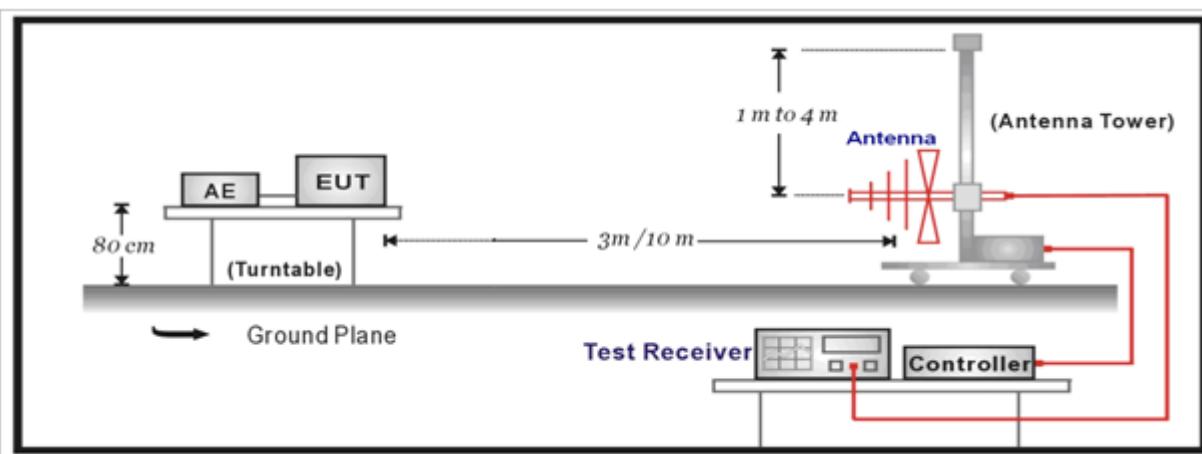
4.2. Test Setup
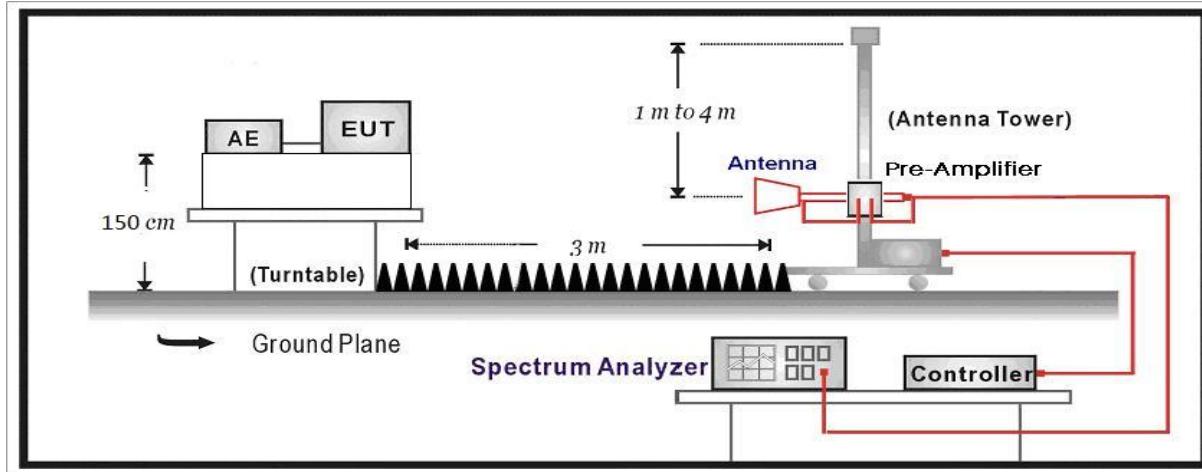
Below 30MHz Test Setup:

30MHz-1GHz Test Setup:

Above 1GHz Test Setup:
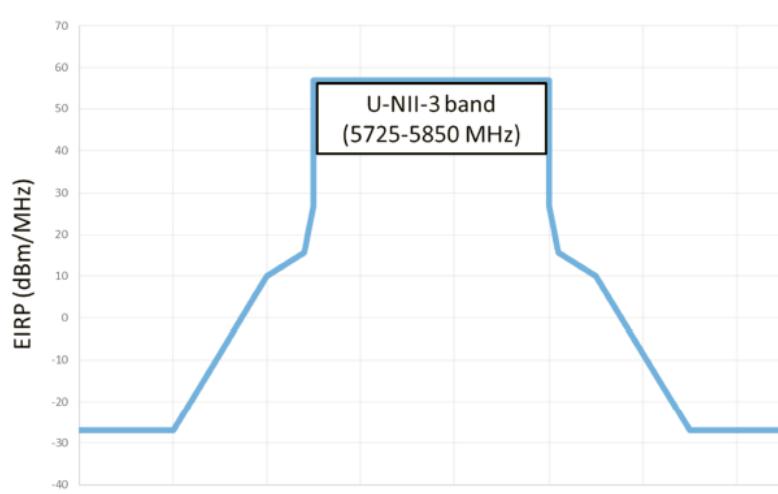
4.3. Limit

FCC Part 15 Subpart C Paragraph 15.209 (Restricted Band Emissions Limit)		
Frequency (MHz)	Distance (m)	Level (dB μ V/m)
0.009-0.490	300	2400/F(kHz)
0.490-1.705	30	24000/F(kHz)
1.705-30.0	30	30
30-88	3	100**
88-216	3	150**
216-960	3	200**
Above 960	3	500

Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).
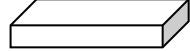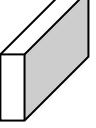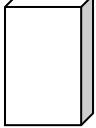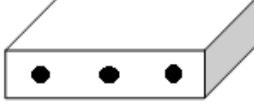
FCC Part 15 Subpart C Paragraph 15.205 (Restricted Band)			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 –16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	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
8.81425 – 8.81475	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	
13.36 – 13.41			

FCC Part 15 Subpart C Paragraph 15.407(5)(b) (Unrestricted Band Emissions Limit)

Operating Frequency Band (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength at 3m (dB μ V/m)
5150 - 5250	-27	68.3
5250 - 5350	-27	68.3
5470 - 5725	-27	68.3

Operating Frequency Band (MHz)	EIRP Limit (dBm/MHz)
5725 - 5850	

4.4. Test Procedure

Test Method				
	References Rule		Chapter	Description
☐	ANSI C63.10		12.7.3	Emissions in non-restricted frequency bands
☒	ANSI C63.10		12.7.2	Emissions in restricted frequency bands
	☒	ANSI C63.10	12.7.5	Radiated emission measurements
	☒	ANSI C63.10	12.7.6	Procedure for peak unwanted emissions measurements above 1000 MHz
	☒	ANSI C63.10	12.7.7	Procedures for average unwanted emissions measurements above 1000 MHz
		☐ ANSI C63.10	12.7.7.2	Method AD (average detection)—primary method
		☒ ANSI C63.10	12.7.7.3	Method VB-A (Alternative)
	☒	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	☒	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
☐	FCC KDB 789033 D02v01r04		G.2	Unwanted Emissions that fall Outside of the Restricted Bands
☐	FCC KDB 789033 D02v01r04		G.1	Unwanted Emissions in the Restricted Bands
	☐	FCC KDB 789033 D02v01r04	G.4	Procedure for Unwanted Emissions Measurements below 1000 MHz
	☐	FCC KDB 789033 D02v01r04	G.5	Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz
	☐	FCC KDB 789033 D02v01r04	G.6	Procedures for Average Unwanted Emissions Measurements above 1000 MHz
		☐ FCC KDB 789033 D02v01r04	G.6.c	Method AD (Average detection)—primary method
		☐ FCC KDB 789033 D02v01r04	G.6.d	Method VB (Averaging using reduced video bandwidth): Alternative method.

4.5. EUT test Axis definition

Item	Radiated Emission		
Device Category	⊠ Indoor use		
	☐ Outdoor use		
	☐ Fix position use		
	☐ Client use		
Test mode	Mode 1-20		
Test method	⊠ Radiated		
	X Axis	Y Axis	Z Axis
	Worst Axis ⊠	Worst Axis ☐	Worst Axis ☐
	☐ Conducted		
	☐ Chain 1		
	☐ Chain 1	Chain 2	
	☐ Chain 1	Chain 2	Chain 3
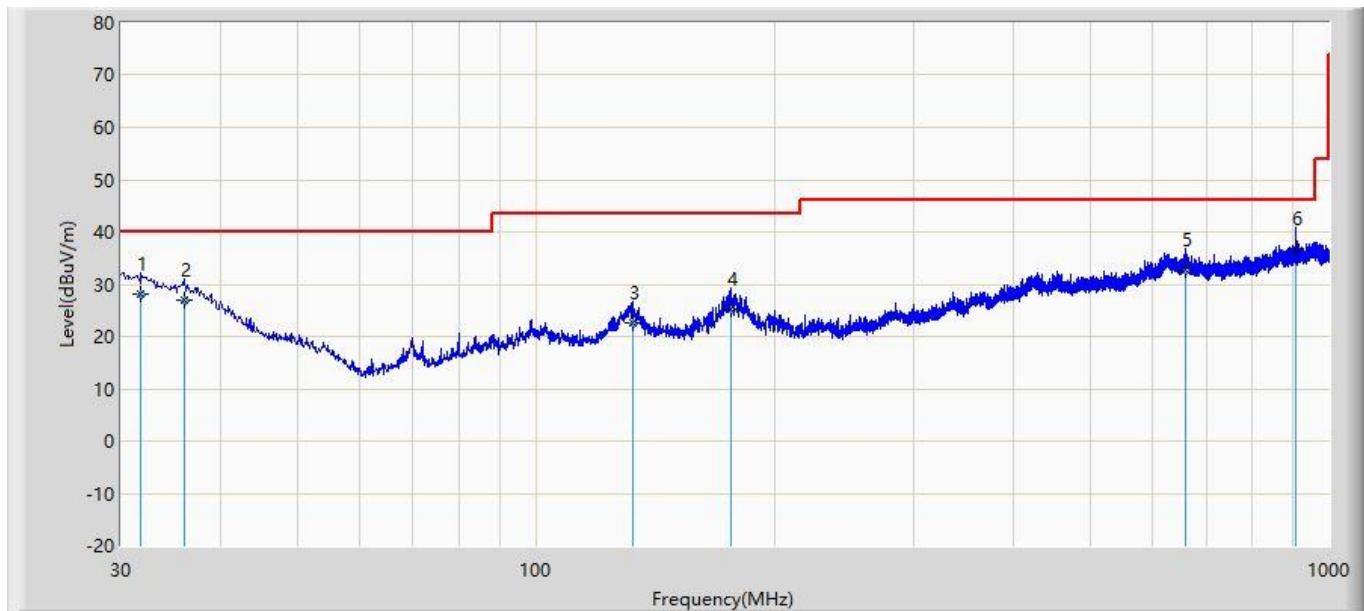
4.6. Test Result

Note:

Appendix 1: CDD Ant 2x2 RSE
Appendix 2: CDD Ant 4x4 RSE
Appendix 3: Beam-Forming Ant 2x2 RSE
Appendix 4: Beam-Forming Ant 4x4 RSE

The worst case of Radiated Emission below 1GHz:

Engineer: EricSamuel	
Site: AC3	Time: 2018/05/14
Limit: FCC_Part15.109_RE(3m)_ClassC	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Horizontal
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 5180MHz by 802.11a	
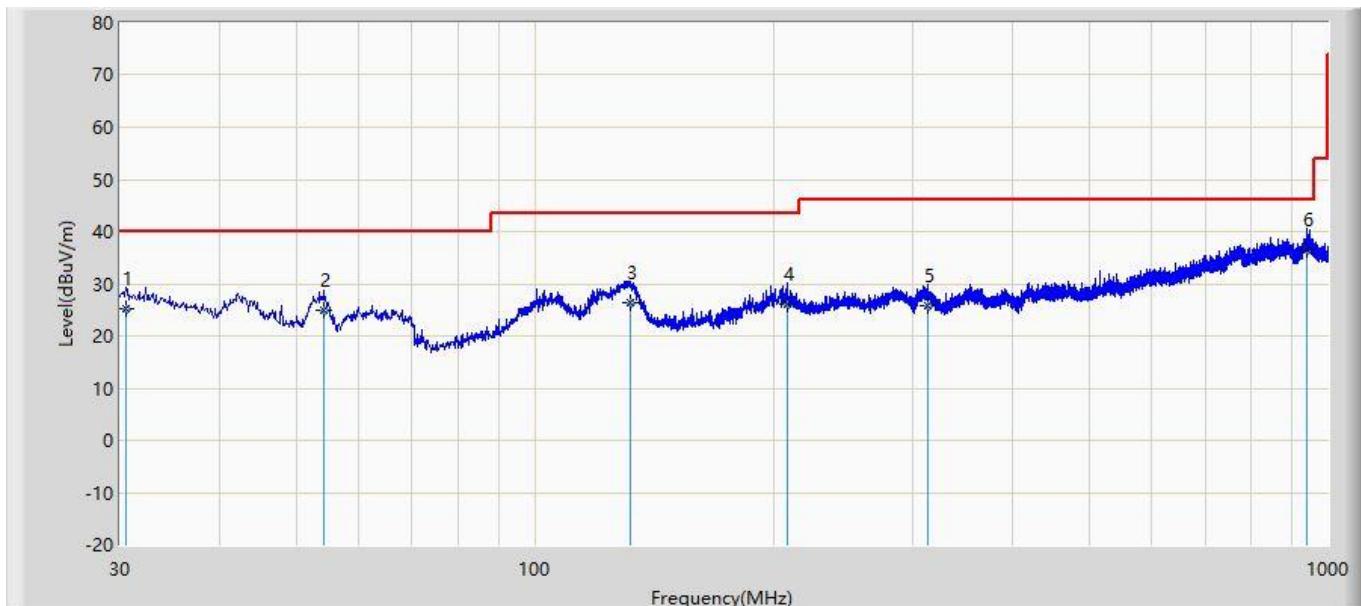
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		31.819	28.092	1.200	-11.908	40.000	20.429	6.464	0.000	100	66	QP
2		36.062	26.960	1.400	-13.040	40.000	19.062	6.498	0.000	100	152	QP
3		132.456	22.646	5.200	-20.854	43.500	10.443	7.002	0.000	100	199	QP
4		175.985	25.343	7.900	-18.157	43.500	10.257	7.186	0.000	200	360	QP
5		659.287	32.669	3.200	-13.331	46.000	20.901	8.569	0.000	100	154	QP
6	*	906.274	36.733	4.700	-9.267	46.000	22.923	9.109	0.000	100	264	QP

Note:

1. " * ", means this data is the worst emission level.

2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: EricSamuel	
Site: AC3	Time: 2018/05/14
Limit: FCC_Part15.109_RE(3m)_ClassC	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Vertical
EUT: Wireless Access point	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 5180MHz by 802.11a	
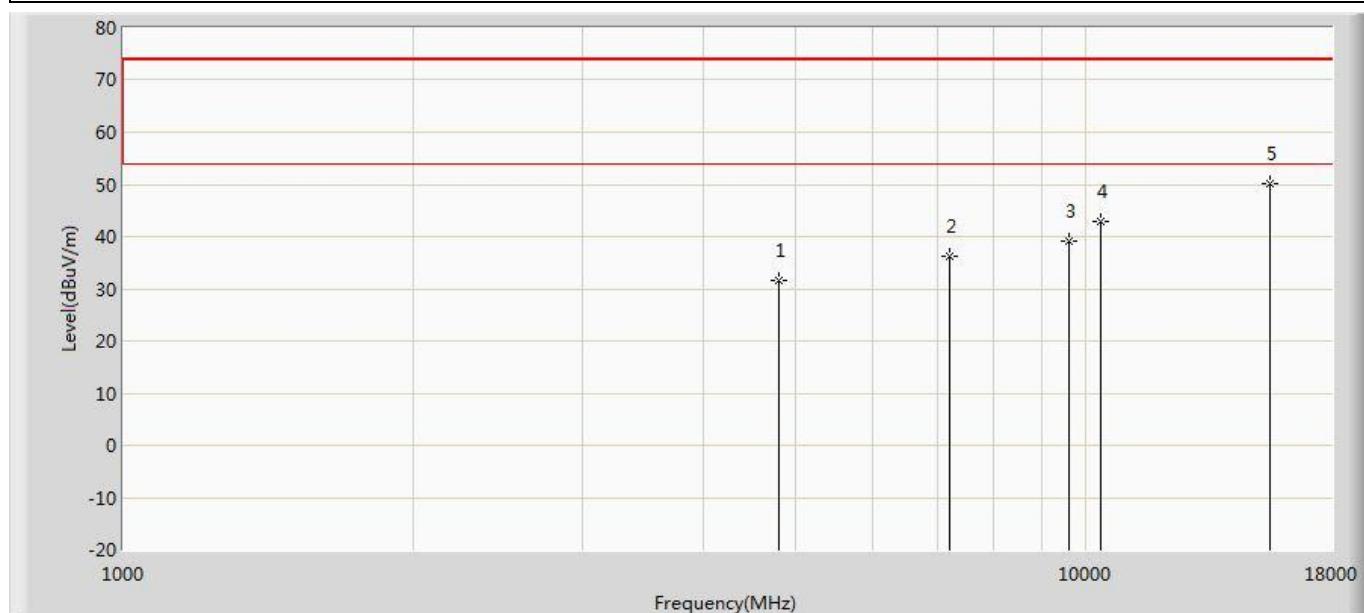
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		30.485	25.349	1.400	-14.651	40.000	17.492	6.457	0.000	100	87	QP
2		54.250	24.824	7.700	-15.176	40.000	10.504	6.620	0.000	100	331	QP
3		131.729	26.395	5.500	-17.105	43.500	13.895	7.000	0.000	100	214	QP
4		207.995	25.965	2.700	-17.535	43.500	15.954	7.311	0.000	200	196	QP
5		313.361	25.811	1.000	-20.189	46.000	17.151	7.660	0.000	100	177	QP
6	*	939.739	36.620	2.400	-9.380	46.000	25.039	9.182	0.000	100	54	QP

Note:

1. " * ", means this data is the worst emission level.

2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).
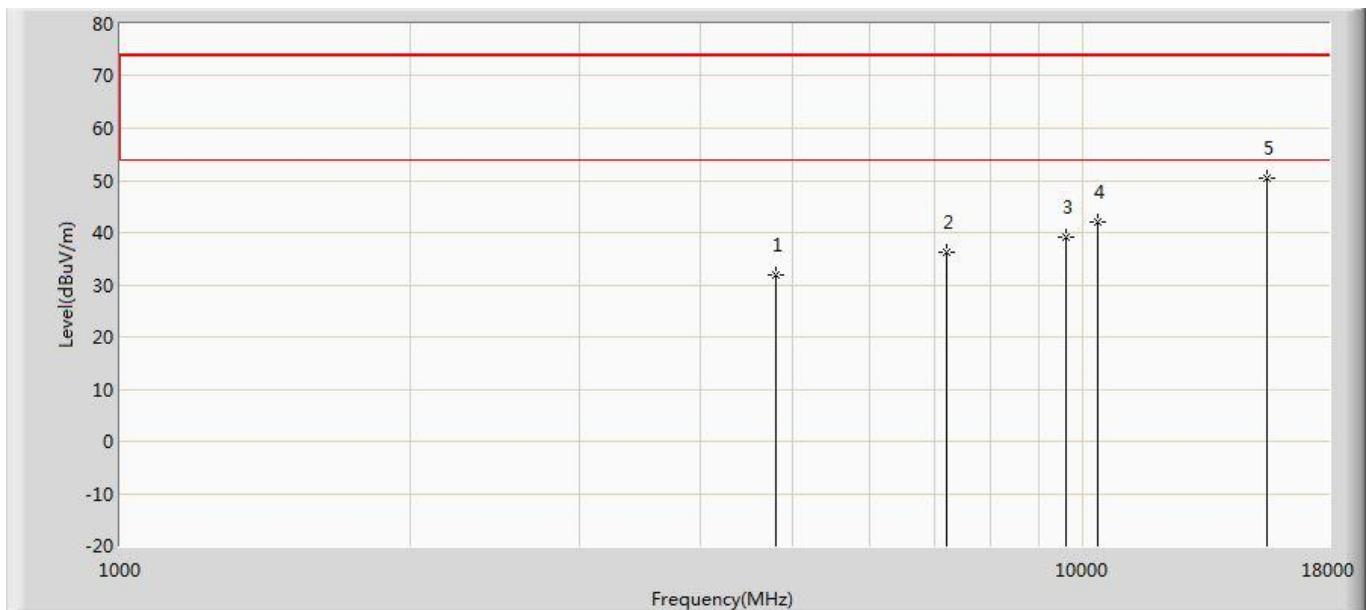
The worst case of Simultaneous Radiated Emission:

Engineer: Damon	
Site: AC5	Time: 2018/06/29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Wireless Access Point	Power: AC 120V/60Hz
Note: WIFI+BT simultaneous transmit	

No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	31.708	40.006	-42.292	74.000	-8.298	PK
2		7206.000	36.145	41.115	-37.855	74.000	-4.970	PK
3		9608.000	39.135	40.065	-34.865	74.000	-0.930	PK
4		10360.000	42.952	42.981	-31.048	74.000	-0.029	PK
5	*	15540.000	50.014	44.157	-23.986	74.000	5.857	PK

Engineer: Damon	
Site: AC5	Time: 2018/06/29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Wireless Access Point	Power: AC 120V/60Hz
Note: WIFI+BT simultaneous transmit	

No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	31.759	40.057	-42.241	74.000	-8.298	PK
2		7206.000	36.146	41.116	-37.854	74.000	-4.970	PK
3		9608.000	39.148	40.078	-34.852	74.000	-0.930	PK
4		10360.000	42.123	42.152	-31.877	74.000	-0.029	PK
5	*	15540.000	50.452	44.595	-23.548	74.000	5.857	PK

Note:

1. " * ", means this data is the worst emission level.

2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).
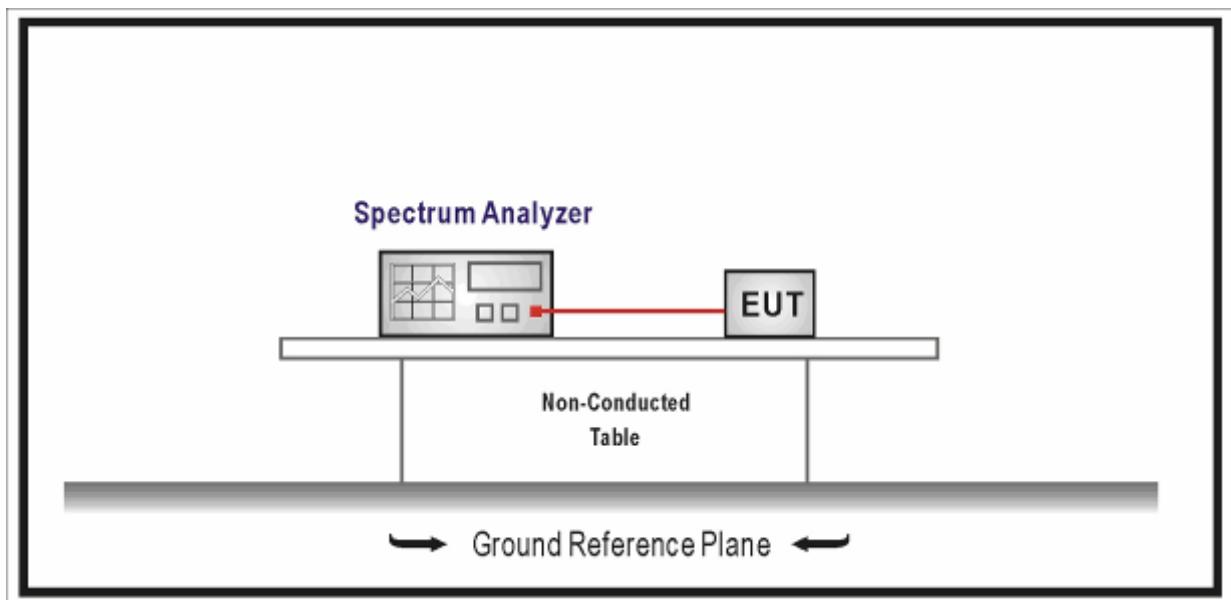
5. Emission bandwidth and occupied bandwidth

5.1. Test Equipment

Emission bandwidth and occupied bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2018.02.04	2019.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2018.04.09	2019.04.08
MXA Signal Anlyzer	Keysight	N9020A	MY56060147	2018.04.09	2019.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2018.04.10	2019.04.09
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

5.2. Test Setup
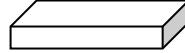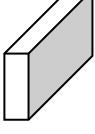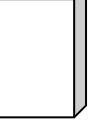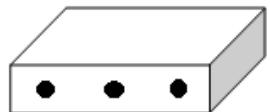
5.3. Limit

N/A

5.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
☐ ANSI C63.10		12.4	Emission bandwidth and occupied bandwidth
	☐ ANSI C63.10	12.4.1	Emission bandwidth (26dB)
	☐ ANSI C63.10	12.4.2	Occupied bandwidth (99%)
☒ FCC KDB 789033 D02v01r04		C	Bandwidth Measurement
	☒ FCC KDB 789033 D02v01r04	C.1	Emission Bandwidth (26dB)
	☐ FCC KDB 789033 D02v01r04	C.2	Minimum Emission Bandwidth for the band 5.725-5.85 GHz (6dB)
☒ FCC KDB 789033 D02v01r04		D	99 Percent Occupied Bandwidth

5.5. EUT test Axis definition

Item	Occupied bandwidth		
Device Category	☒ Indoor use		
	☐ Outdoor use		
	☐ Fix position use		
	☐ Client use		
Test mode	Mode 1-20		
Test method	☐ Radiated		
	X Axis	Y Axis	Z Axis
	Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒ Conducted		
	☐ Chain 1		
	☒ Chain 1		Chain 2
	☐ Chain 1	Chain 2	Chain 3

5.6. Test Result

Product Name	:	Wireless Access Point	Power	:	AC 120V/60Hz
Test Mode	:	Mode 1~20	Test Site	:	TR8
Test Date	:	2018.05.24	Test Engineer	:	Tommy

Mode 1: Transmit by 802.11a with CDD by ant0+1					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH36	5180	22.08	16.901	5171.550	Pass
CH44	5220	26.15	16.952	N/A	Pass
CH48	5240	26.34	16.965	5248.483	Pass
CH52	5260	22.14	16.932	N/A	Pass
CH60	5300	25.75	16.984	N/A	Pass
CH64	5320	25.85	16.927	N/A	Pass
CH100	5500	27.79	16.942	N/A	Pass
CH116	5580	29.52	17.119	N/A	Pass
CH140	5700	29.49	17.328	N/A	Pass
CH144	5720	29.18	17.216	N/A	Pass
CH149	5745	29.96	17.444	N/A	Pass
CH157	5785	29.26	17.119	N/A	Pass
CH165	5825	29.22	17.099	N/A	Pass

Mode 1: Transmit by 802.11a with CDD by ant0+1+2+3

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz) Ant1(Worst Data)	99% Occupied Bandwidth (MHz) Ant1(Worst Data)	Lower/Higher Frequency (MHz) Ant1(Worst Data)	Result
CH36	5180	21.35	16.789	5171.606	Pass
CH44	5220	21.45	16.744	N/A	Pass
CH48	5240	21.21	16.784	5248.392	Pass
CH52	5260	21.39	16.824	N/A	Pass
CH60	5300	21.37	16.763	N/A	Pass
CH64	5320	21.09	16.790	N/A	Pass
CH100	5500	21.45	16.825	N/A	Pass
CH116	5580	21.43	16.768	N/A	Pass
CH140	5700	21.12	16.789	N/A	Pass
CH144	5720	21.02	16.841	N/A	Pass
CH149	5745	29.17	17.062	N/A	Pass
CH157	5785	29.92	17.272	N/A	Pass
CH165	5825	28.51	17.015	N/A	Pass

Mode 2: Transmit by 802.11n(20MHz) with CDD by ant0+1

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz) Ant1(Worst Data)	99% Occupied Bandwidth (MHz) Ant1(Worst Data)	Lower/Higher Frequency (MHz) Ant1(Worst Data)	Result
CH36	5180	21.46	17.945	5171.028	Pass
CH44	5220	21.70	17.967	N/A	Pass
CH48	5240	22.63	17.947	5248.974	Pass
CH52	5260	22.01	17.925	N/A	Pass
CH60	5300	24.01	17.939	N/A	Pass
CH64	5320	22.92	17.900	N/A	Pass
CH100	5500	22.34	17.976	N/A	Pass
CH116	5580	29.34	18.097	N/A	Pass
CH140	5700	29.99	18.420	N/A	Pass
CH144	5720	28.87	18.212	N/A	Pass
CH149	5745	29.99	18.224	N/A	Pass
CH157	5785	29.42	18.090	N/A	Pass
CH165	5825	30.00	18.114	N/A	Pass

Mode 2: Transmit by 802.11n(20MHz) with CDD by ant0+1+2+3

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH36	5180	21.50	17.880	5171.060	Pass
CH44	5220	21.22	17.859	N/A	Pass
CH48	5240	21.52	17.875	5248.938	Pass
CH52	5260	21.52	17.920	N/A	Pass
CH60	5300	21.51	17.915	N/A	Pass
CH64	5320	21.45	17.911	N/A	Pass
CH100	5500	21.41	17.908	N/A	Pass
CH116	5580	21.54	17.888	N/A	Pass
CH140	5700	21.50	17.950	N/A	Pass
CH144	5720	21.51	17.873	N/A	Pass
CH149	5745	24.86	18.022	N/A	Pass
CH157	5785	28.87	18.112	N/A	Pass
CH165	5825	24.77	18.035	N/A	Pass

Mode 3: Transmit by 802.11n(40MHz) with CDD by ant0+1

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH38	5190	39.50	36.383	5171.809	Pass
CH46	5230	39.40	36.401	5248.201	Pass
CH54	5270	39.64	36.402	N/A	Pass
CH62	5310	39.86	36.368	N/A	Pass
CH102	5510	39.55	36.350	N/A	Pass
CH110	5550	39.88	36.343	N/A	Pass
CH134	5670	56.99	36.547	N/A	Pass
CH142	5710	56.85	36.158	N/A	Pass
CH151	5755	59.55	36.740	N/A	Pass
CH159	5795	56.49	36.575	N/A	Pass

Mode 3: Transmit by 802.11n(40MHz) with CDD by ant0+1+2+3					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH38	5190	39.50	36.402	5171.799	Pass
CH46	5230	39.34	36.290	5248.145	Pass
CH54	5270	39.47	36.380	N/A	Pass
CH62	5310	39.48	36.343	N/A	Pass
CH102	5510	39.90	36.383	N/A	Pass
CH110	5550	39.67	36.297	N/A	Pass
CH134	5670	39.68	36.294	N/A	Pass
CH142	5710	39.22	36.221	N/A	Pass
CH151	5755	57.19	36.557	N/A	Pass
CH159	5795	60.00	37.082	N/A	Pass

Mode 4: Transmit by 802.11ac(20MHz) with CDD by ant0+1					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH36	5180	21.54	17.956	5171.022	Pass
CH44	5220	22.76	17.963	N/A	Pass
CH48	5240	22.55	17.976	5248.988	Pass
CH52	5260	22.51	17.956	N/A	Pass
CH60	5300	22.44	18.004	N/A	Pass
CH64	5320	21.68	17.966	N/A	Pass
CH100	5500	24.56	17.980	N/A	Pass
CH116	5580	28.78	18.120	N/A	Pass
CH140	5700	29.14	18.170	N/A	Pass
CH144	5720	29.11	18.110	N/A	Pass
CH149	5745	28.26	18.179	N/A	Pass
CH157	5785	26.65	18.152	N/A	Pass
CH165	5825	29.94	18.129	N/A	Pass

Mode 4: Transmit by 802.11ac(20MHz) with CDD by ant0+1+2+3

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH36	5180	21.54	17.924	5171.038	Pass
CH44	5220	21.55	17.925	N/A	Pass
CH48	5240	21.39	17.942	5248.971	Pass
CH52	5260	21.55	17.936	N/A	Pass
CH60	5300	21.31	17.950	N/A	Pass
CH64	5320	21.68	17.992	N/A	Pass
CH100	5500	21.53	18.004	N/A	Pass
CH116	5580	21.43	17.951	N/A	Pass
CH140	5700	21.17	17.975	N/A	Pass
CH144	5720	21.38	17.994	N/A	Pass
CH149	5745	22.48	18.053	N/A	Pass
CH157	5785	26.48	18.129	N/A	Pass
CH165	5825	28.98	18.082	N/A	Pass

Mode 5: Transmit by 802.11ac(40MHz) with CDD by ant0+1

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH38	5190	39.80	36.331	5171.835	Pass
CH46	5230	39.78	36.360	5248.180	Pass
CH54	5270	39.60	36.359	N/A	Pass
CH62	5310	39.81	36.321	N/A	Pass
CH102	5510	39.79	36.370	N/A	Pass
CH110	5550	39.77	36.270	N/A	Pass
CH134	5670	46.39	36.506	N/A	Pass
CH142	5710	46.36	36.053	N/A	Pass
CH151	5755	57.95	36.569	N/A	Pass
CH159	5795	56.80	36.648	N/A	Pass

Mode 5: Transmit by 802.11ac(40MHz) with CDD by ant0+1+2+3					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH38	5190	39.34	36.423	5171.789	Pass
CH46	5230	39.81	36.390	5248.195	Pass
CH54	5270	39.57	36.400	N/A	Pass
CH62	5310	39.77	36.419	N/A	Pass
CH102	5510	39.60	36.415	N/A	Pass
CH110	5550	39.59	36.382	N/A	Pass
CH134	5670	39.87	36.339	N/A	Pass
CH142	5710	39.59	37.565	N/A	Pass
CH151	5755	57.85	36.535	N/A	Pass
CH159	5795	60.00	36.997	N/A	Pass

Mode 6: Transmit by 802.11ac(80MHz) with CDD by ant0+1					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH42	5210	81.47	77.139	5171.431/5248.570	Pass
CH58	5290	81.88	77.242	N/A	Pass
CH106	5530	81.17	77.149	N/A	Pass
CH138	5690	81.11	77.197	N/A	Pass
CH155	5775	113.8	77.414	N/A	Pass

Mode 6: Transmit by 802.11ac(80MHz) with CDD by ant0+1+2+3					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH42	5210	81.29	75.496	5172.252/5247.748	Pass
CH58	5290	81.38	75.749	N/A	Pass
CH106	5530	81.45	75.628	N/A	Pass
CH138	5690	80.06	76.915	N/A	Pass
CH155	5775	81.35	75.764	N/A	Pass

Mode 7: Transmit by 802.11ax(20MHz) with CDD by ant0+1

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH36	5180	22.24	19.104	5170.448	Pass
CH44	5220	24.21	19.124	N/A	Pass
CH48	5240	23.99	19.099	5249.550	Pass
CH52	5260	21.85	19.093	N/A	Pass
CH60	5300	21.62	19.063	N/A	Pass
CH64	5320	22.72	19.152	N/A	Pass
CH100	5500	24.19	19.033	N/A	Pass
CH116	5580	29.16	19.165	N/A	Pass
CH140	5700	29.79	19.247	N/A	Pass
CH144	5720	29.72	19.217	N/A	Pass
CH149	5745	29.81	19.268	N/A	Pass
CH157	5785	30.00	19.248	N/A	Pass
CH165	5825	27.70	19.120	N/A	Pass

Mode 7: Transmit by 802.11ax(20MHz) with CDD by ant0+1+2+3

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH36	5180	21.61	19.048	5170.476	Pass
CH44	5220	21.34	19.055	N/A	Pass
CH48	5240	21.34	19.063	5249.532	Pass
CH52	5260	21.19	19.104	N/A	Pass
CH60	5300	21.15	19.089	N/A	Pass
CH64	5320	21.23	19.038	N/A	Pass
CH100	5500	21.34	19.025	N/A	Pass
CH116	5580	21.32	19.012	N/A	Pass
CH140	5700	21.53	19.077	N/A	Pass
CH144	5720	21.48	19.129	N/A	Pass
CH149	5745	29.04	19.160	N/A	Pass
CH157	5785	22.82	19.112	N/A	Pass
CH165	5825	22.36	19.141	N/A	Pass

Mode 8: Transmit by 802.11ax(40MHz) with CDD by ant0+1					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH38	5190	40.01	37.497	5171.252	Pass
CH46	5230	40.12	37.595	5248.798	Pass
CH54	5270	40.08	37.590	N/A	Pass
CH62	5310	40.11	37.546	N/A	Pass
CH102	5510	39.99	37.351	N/A	Pass
CH110	5550	39.99	37.577	N/A	Pass
CH134	5670	48.56	37.662	N/A	Pass
CH142	5710	49.62	37.726	N/A	Pass
CH151	5755	49.29	37.622	N/A	Pass
CH159	5795	49.69	37.705	N/A	Pass

Mode 8: Transmit by 802.11ax(40MHz) with CDD by ant0+1+2+3					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH38	5190	39.93	37.573	5171.214	Pass
CH46	5230	39.86	37.600	5248.800	Pass
CH54	5270	40.19	37.595	N/A	Pass
CH62	5310	40.13	37.546	N/A	Pass
CH102	5510	39.82	37.609	N/A	Pass
CH110	5550	39.98	37.572	N/A	Pass
CH134	5670	40.19	37.694	N/A	Pass
CH142	5710	39.33	37.618	N/A	Pass
CH151	5755	55.64	37.731	N/A	Pass
CH159	5795	58.90	37.863	N/A	Pass

Mode 9: Transmit by 802.11ax(80MHz) with CDD by ant0+1

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH42	5210	81.56	77.044	5171.478/5248.522	Pass
CH58	5290	81.76	77.193	N/A	Pass
CH106	5530	81.61	77.180	N/A	Pass
CH138	5690	81.11	77.071	N/A	Pass
CH155	5775	113.7	77.401	N/A	Pass

Mode 9: Transmit by 802.11ax(80MHz) with CDD by ant0+1+2+3

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH42	5210	81.43	77.002	5171.499/5248.501	Pass
CH58	5290	81.06	77.147	N/A	Pass
CH106	5530	81.48	77.025	N/A	Pass
CH138	5690	79.51	77.007	N/A	Pass
CH155	5775	81.86	77.087	N/A	Pass

Mode 10: Transmit by 802.11ax(160MHz) with CDD by ant0+1

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH50	5250	154.6	154.43	N/A	Pass
CH144	5570	154.9	154.59	N/A	Pass

Mode 10: Transmit by 802.11ax(160MHz) with CDD by ant0+1+2+3

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH50	5250	163.4	154.13	N/A	Pass
CH144	5570	163.5	154.15	N/A	Pass

Mode 11: Transmit by 802.11a with Beam-forming by ant0+1

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH36	5180	22.25	16.915	5171.543	Pass
CH44	5220	23.99	16.983	N/A	Pass
CH48	5240	23.77	16.903	5248.452	Pass
CH52	5260	22.02	16.839	N/A	Pass
CH60	5300	22.35	16.860	N/A	Pass
CH64	5320	21.98	16.853	N/A	Pass
CH100	5500	21.33	16.834	N/A	Pass
CH116	5580	21.65	16.945	N/A	Pass
CH140	5700	22.06	16.855	N/A	Pass
CH144	5720	21.19	17.006	N/A	Pass
CH149	5745	28.46	17.570	N/A	Pass
CH157	5785	28.87	17.288	N/A	Pass
CH165	5825	29.30	18.046	N/A	Pass

Mode 11: Transmit by 802.11a with Beam-forming by ant0+1+2+3

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH36	5180	21.12	16.850	5171.575	Pass
CH44	5220	20.90	16.801	N/A	Pass
CH48	5240	21.31	16.833	5248.417	Pass
CH52	5260	21.04	16.812	N/A	Pass
CH60	5300	21.47	16.780	N/A	Pass
CH64	5320	21.31	16.790	N/A	Pass
CH100	5500	21.08	16.804	N/A	Pass
CH116	5580	21.34	16.822	N/A	Pass
CH140	5700	21.17	16.798	N/A	Pass
CH144	5720	21.20	16.825	N/A	Pass
CH149	5745	28.05	16.969	N/A	Pass
CH157	5785	29.05	17.173	N/A	Pass
CH165	5825	29.15	17.225	N/A	Pass

Mode 12: Transmit by 802.11n(20MHz) with Beam-forming by ant0+1					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH36	5180	21.61	17.898	5171.051	Pass
CH44	5220	22.34	17.894	N/A	Pass
CH48	5240	21.74	17.937	5248.969	Pass
CH52	5260	21.63	17.895	N/A	Pass
CH60	5300	21.80	17.858	N/A	Pass
CH64	5320	21.77	17.904	N/A	Pass
CH100	5500	21.53	17.876	N/A	Pass
CH116	5580	21.59	17.907	N/A	Pass
CH140	5700	21.37	17.883	N/A	Pass
CH144	5720	21.37	18.546	N/A	Pass
CH149	5745	24.75	18.081	N/A	Pass
CH157	5785	28.50	18.957	N/A	Pass
CH165	5825	24.98	18.131	N/A	Pass

Mode 12: Transmit by 802.11n(20MHz) with Beam-forming by ant0+1+2+3					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH36	5180	21.31	17.934	5171.033	Pass
CH44	5220	21.30	17.876	N/A	Pass
CH48	5240	21.68	17.925	5248.963	Pass
CH52	5260	21.27	17.920	N/A	Pass
CH60	5300	21.28	17.906	N/A	Pass
CH64	5320	21.57	17.911	N/A	Pass
CH100	5500	21.37	17.902	N/A	Pass
CH116	5580	21.55	17.886	N/A	Pass
CH140	5700	21.36	17.894	N/A	Pass
CH144	5720	21.35	17.897	N/A	Pass
CH149	5745	24.32	18.028	N/A	Pass
CH157	5785	28.51	18.149	N/A	Pass
CH165	5825	24.25	18.003	N/A	Pass

Mode 13: Transmit by 802.11n(40MHz) with Beam-forming by ant0+1					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH38	5190	39.68	36.336	5171.832	Pass
CH46	5230	39.71	36.313	5248.157	Pass
CH54	5270	39.73	36.348	N/A	Pass
CH62	5310	39.62	36.274	N/A	Pass
CH102	5510	39.69	36.308	N/A	Pass
CH110	5550	39.78	36.379	N/A	Pass
CH134	5670	53.09	36.518	N/A	Pass
CH142	5710	39.02	36.495	N/A	Pass
CH151	5755	55.85	36.812	N/A	Pass
CH159	5795	59.70	37.292	N/A	Pass

Mode 13: Transmit by 802.11n(40MHz) with Beam-forming by ant0+1+2+3					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH38	5190	39.48	36.307	5171.847	Pass
CH46	5230	39.50	36.323	5248.162	Pass
CH54	5270	39.84	36.353	N/A	Pass
CH62	5310	39.71	36.228	N/A	Pass
CH102	5510	39.47	36.340	N/A	Pass
CH110	5550	39.56	36.239	N/A	Pass
CH134	5670	39.54	36.311	N/A	Pass
CH142	5710	39.27	36.188	N/A	Pass
CH151	5755	55.84	36.564	N/A	Pass
CH159	5795	60.00	37.025	N/A	Pass

Mode 14: Transmit by 802.11ac(20MHz) with Beam-forming by ant0+1

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH36	5180	21.41	17.939	5171.031	Pass
CH44	5220	21.96	17.936	N/A	Pass
CH48	5240	21.71	17.936	5248.968	Pass
CH52	5260	21.51	17.923	N/A	Pass
CH60	5300	21.54	17.956	N/A	Pass
CH64	5320	22.05	17.929	N/A	Pass
CH100	5500	21.39	17.949	N/A	Pass
CH116	5580	21.57	17.889	N/A	Pass
CH140	5700	21.48	17.961	N/A	Pass
CH144	5720	21.88	18.388	N/A	Pass
CH149	5745	26.87	18.680	N/A	Pass
CH157	5785	27.25	18.542	N/A	Pass
CH165	5825	24.88	18.307	N/A	Pass

Mode 14: Transmit by 802.11ac(20MHz) with Beam-forming by ant0+1+2+3

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH36	5180	21.58	17.957	5171.022	Pass
CH44	5220	21.61	17.979	N/A	Pass
CH48	5240	21.57	17.933	5248.967	Pass
CH52	5260	21.62	17.958	N/A	Pass
CH60	5300	21.43	17.973	N/A	Pass
CH64	5320	21.59	17.931	N/A	Pass
CH100	5500	21.33	17.976	N/A	Pass
CH116	5580	21.59	17.956	N/A	Pass
CH140	5700	21.43	17.963	N/A	Pass
CH144	5720	21.57	17.923	N/A	Pass
CH149	5745	26.14	18.045	N/A	Pass
CH157	5785	27.50	18.141	N/A	Pass
CH165	5825	24.83	18.123	N/A	Pass

Mode 15: Transmit by 802.11ac(40MHz) with Beam-forming by ant0+1

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH38	5190	39.89	36.387	5171.807	Pass
CH46	5230	39.85	36.365	5248.183	Pass
CH54	5270	39.94	36.394	N/A	Pass
CH62	5310	40.01	36.329	N/A	Pass
CH102	5510	39.79	36.352	N/A	Pass
CH110	5550	39.66	36.302	N/A	Pass
CH134	5670	52.57	36.541	N/A	Pass
CH142	5710	40.04	37.555	N/A	Pass
CH151	5755	59.07	37.061	N/A	Pass
CH159	5795	59.78	36.983	N/A	Pass

Mode 15: Transmit by 802.11ac(40MHz) with Beam-forming by ant0+1+2+3

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH38	5190	39.44	36.389	5171.806	Pass
CH46	5230	39.45	36.399	5248.200	Pass
CH54	5270	40.18	36.427	N/A	Pass
CH62	5310	39.57	36.362	N/A	Pass
CH102	5510	39.50	36.437	N/A	Pass
CH110	5550	39.53	36.377	N/A	Pass
CH134	5670	39.45	36.380	N/A	Pass
CH142	5710	39.92	37.548	N/A	Pass
CH151	5755	58.88	36.634	N/A	Pass
CH159	5795	59.82	36.941	N/A	Pass

Mode 16: Transmit by 802.11ac(80MHz) with Beam-forming by ant0+1					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH42	5210	81.25	75.717	5172.142/5247.859	Pass
CH58	5290	82.06	75.788	N/A	Pass
CH106	5530	81.81	75.655	N/A	Pass
CH138	5690	79.67	76.862	N/A	Pass
CH155	5775	80.96	75.625	N/A	Pass

Mode 16: Transmit by 802.11ac(80MHz) with Beam-forming by ant0+1+2+3					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH42	5210	80.89	75.509	5172.246/5247.755	Pass
CH58	5290	80.79	75.632	N/A	Pass
CH106	5530	81.63	75.751	N/A	Pass
CH138	5690	79.77	77.154	N/A	Pass
CH155	5775	81.32	75.829	N/A	Pass

Mode 17: Transmit by 802.11ax(20MHz) with Beam-forming by ant0+1					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH36	5180	21.18	19.074	5170.463	Pass
CH44	5220	22.33	19.105	N/A	Pass
CH48	5240	22.36	19.042	5249.521	Pass
CH52	5260	23.27	19.100	N/A	Pass
CH60	5300	21.55	19.061	N/A	Pass
CH64	5320	22.88	19.090	N/A	Pass
CH100	5500	21.14	19.105	N/A	Pass
CH116	5580	21.38	19.102	N/A	Pass
CH140	5700	21.70	19.150	N/A	Pass
CH144	5720	22.07	19.456	N/A	Pass
CH149	5745	28.21	19.299	N/A	Pass
CH157	5785	26.49	19.294	N/A	Pass
CH165	5825	23.43	19.256	N/A	Pass

Mode 17: Transmit by 802.11ax(20MHz) with Beam-forming by ant0+1+2+3					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH36	5180	21.42	19.046	5170.477	Pass
CH44	5220	21.46	19.168	N/A	Pass
CH48	5240	21.71	19.086	5249.543	Pass
CH52	5260	21.52	19.049	N/A	Pass
CH60	5300	21.41	19.051	N/A	Pass
CH64	5320	21.14	18.986	N/A	Pass
CH100	5500	21.26	19.071	N/A	Pass
CH116	5580	21.19	19.084	N/A	Pass
CH140	5700	21.39	19.043	N/A	Pass
CH144	5720	21.51	19.018	N/A	Pass
CH149	5745	27.54	19.213	N/A	Pass
CH157	5785	26.29	19.133	N/A	Pass
CH165	5825	23.09	19.043	N/A	Pass

Mode 18: Transmit by 802.11ax(40MHz) with Beam-forming by ant0+1

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH38	5190	39.88	37.552	5171.224	Pass
CH46	5230	40.01	37.569	5248.785	Pass
CH54	5270	39.75	37.578	N/A	Pass
CH62	5310	40.00	37.530	N/A	Pass
CH102	5510	39.85	37.482	N/A	Pass
CH110	5550	39.92	37.530	N/A	Pass
CH134	5670	45.15	37.627	N/A	Pass
CH142	5710	39.39	37.909	N/A	Pass
CH151	5755	52.41	37.748	N/A	Pass
CH159	5795	49.81	38.048	N/A	Pass

Mode 18: Transmit by 802.11ax(40MHz) with Beam-forming by ant0+1+2+3

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH38	5190	40.01	37.676	5171.162	Pass
CH46	5230	39.85	37.622	5248.811	Pass
CH54	5270	40.21	37.539	N/A	Pass
CH62	5310	39.88	37.576	N/A	Pass
CH102	5510	40.35	37.612	N/A	Pass
CH110	5550	40.10	37.596	N/A	Pass
CH134	5670	39.70	37.552	N/A	Pass
CH142	5710	39.71	37.680	N/A	Pass
CH151	5755	52.90	37.776	N/A	Pass
CH159	5795	50.00	37.868	N/A	Pass

Mode 19: Transmit by 802.11ax(80MHz) with Beam-forming by ant0+1

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH42	5210	81.63	77.056	5171.472/5248.528	Pass
CH58	5290	81.63	77.237	N/A	Pass
CH106	5530	81.61	77.088	N/A	Pass
CH138	5690	79.53	77.174	N/A	Pass
CH155	5775	82.48	77.038	N/A	Pass

Mode 19: Transmit by 802.11ax(80MHz) with Beam-forming by ant0+1+2+3

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH42	5210	81.72	77.014	5171.493/5248.507	Pass
CH58	5290	82.03	77.248	N/A	Pass
CH106	5530	81.28	77.066	N/A	Pass
CH138	5690	79.91	77.101	N/A	Pass
CH155	5775	82.51	77.222	N/A	Pass

Mode 20: Transmit by 802.11ax(160MHz) with Beam-forming by ant0+1
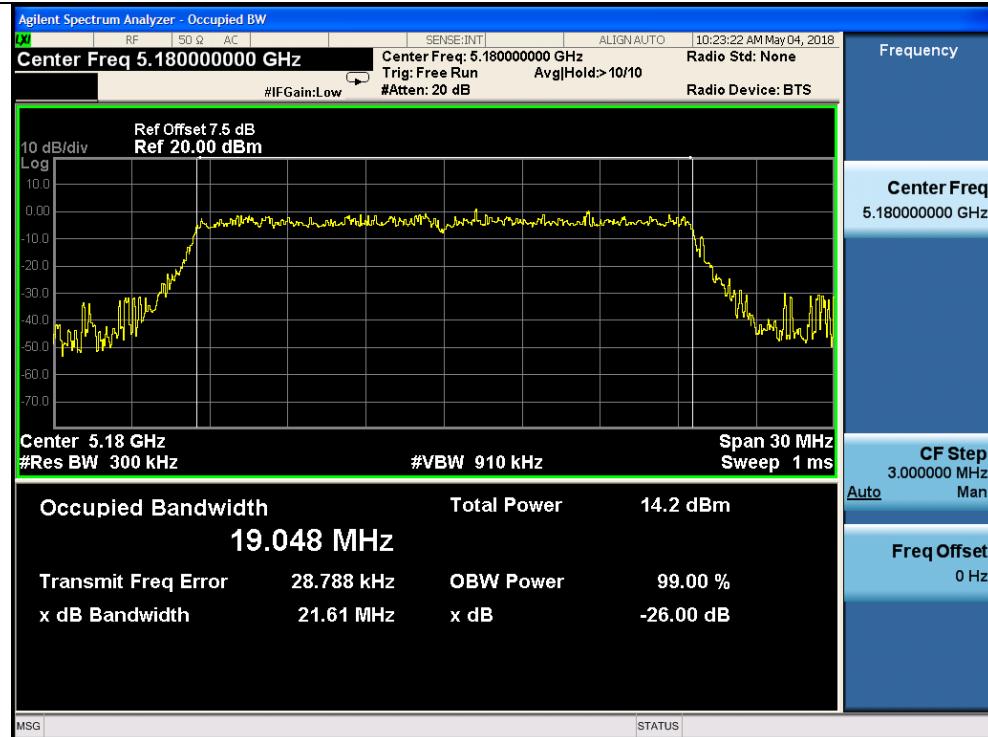
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH50	5250	163.2	154.45	N/A	Pass
CH144	5570	164.7	154.61	N/A	Pass

Mode 20: Transmit by 802.11ax(160MHz) with Beam-forming by ant0+1+2+3

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant1(Worst Data)	Ant1(Worst Data)	Ant1(Worst Data)	
CH50	5250	163.4	154.16	N/A	Pass
CH144	5570	163.7	154.26	N/A	Pass

The worst case of Occupied Bandwidth as below:

Mode 7: CH36 (5180MHz) by ant0+1+2+3
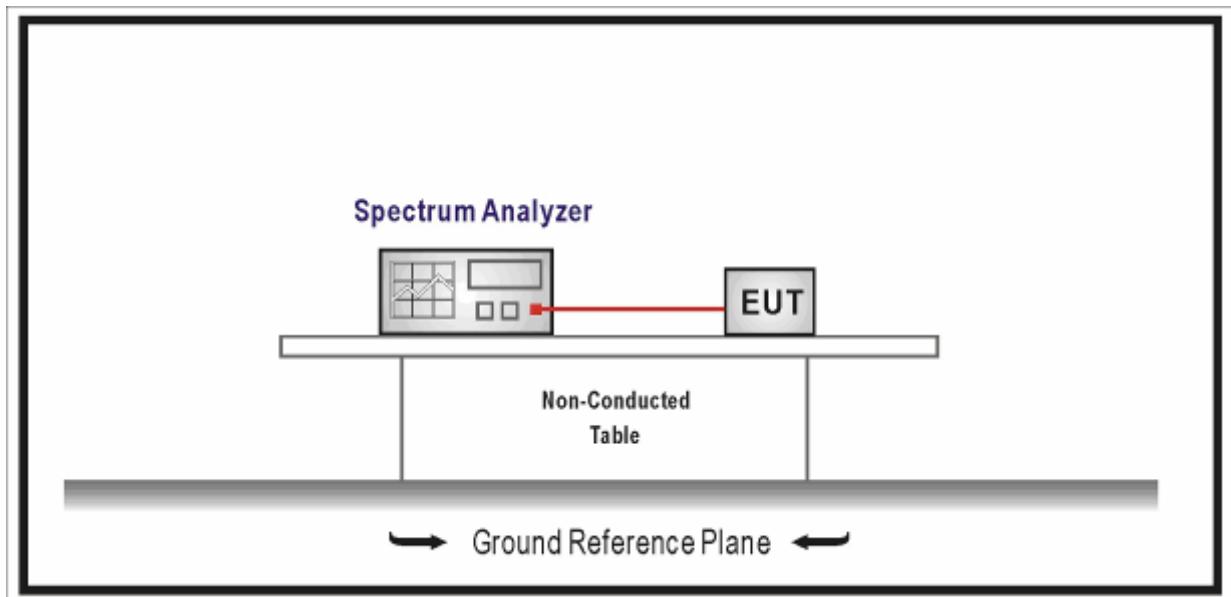
6. 6dB bandwidth

6.1. Test Equipment

Emission bandwidth and occupied bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2018.02.04	2019.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2018.04.09	2019.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2018.04.09	2019.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2018.04.10	2019.04.09
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

6.2. Test Setup
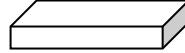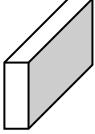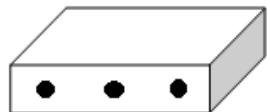
6.3. Limit

>500kHz

6.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
☐ ANSI C63.10		12.4	Emission bandwidth and occupied bandwidth
	☐ ANSI C63.10	12.4.1	Emission bandwidth (26dB)
	☐ ANSI C63.10	12.4.2	Occupied bandwidth (99%)
☒ FCC KDB 789033 D02v01r04		C	Bandwidth Measurement
	☐ FCC KDB 789033 D02v01r04	C.1	Emission Bandwidth (26dB)
	☒ FCC KDB 789033 D02v01r04	C.2	Minimum Emission Bandwidth for the band 5.725-5.85 GHz (6dB)
☒ FCC KDB 789033 D02v01r04		D	99 Percent Occupied Bandwidth

6.5. EUT test Axis definition

Item	6dB bandwidth		
Device Category	☒ Indoor use		
	☐ Outdoor use		
	☐ Fix position use		
	☐ Client use		
Test mode	Mode 1-20		
Test method	☐ Radiated		
	X Axis	Y Axis	Z Axis
	Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒ Conducted		
	☐ Chain 1		
	☒ Chain 1	Chain 2	
	☐ Chain 1	Chain 2	Chain 3

6.6. Test Result

Product Name	:	Wireless Access Point	Power	:	AC 120V/60Hz
Test Mode	:	Mode 1~20	Test Site	:	TR8
Test Date	:	2018.05.28	Test Engineer	:	Tommy

Mode 1: Transmit by 802.11a with CDD by ant0+1				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
149	5745	16.37	>500	Pass
157	5785	16.54		Pass
165	5825	16.40		Pass

Mode 1: Transmit by 802.11a with CDD by ant0+1+2+3				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
149	5745	16.36	>500	Pass
157	5785	16.40		Pass
165	5825	16.39		Pass

Mode 2: Transmit by 802.11n(20MHz) with CDD by ant0+1				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
149	5745	17.61	>500	Pass
157	5785	17.63		Pass
165	5825	17.61		Pass

Mode 2: Transmit by 802.11n(20MHz) with CDD by ant0+1+2+3				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
149	5745	17.61	>500	Pass
157	5785	17.58		Pass
165	5825	17.62		Pass

Mode 3: Transmit by 802.11n(40MHz) with CDD by ant0+1

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz) Ant1(Worst Data)	Limit (kHz)	Result
151	5755	36.36	>500	Pass
159	5795	36.36		Pass

Mode 3: Transmit by 802.11n(40MHz) with CDD by ant0+1+2+3

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz) Ant1(Worst Data)	Limit (kHz)	Result
151	5755	36.36	>500	Pass
159	5795	36.35		Pass

Mode 4: Transmit by 802.11ac(20MHz) with CDD by ant0+1

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz) Ant1(Worst Data)	Limit (kHz)	Result
149	5745	17.58	>500	Pass
157	5785	17.60		Pass
165	5825	17.60		Pass

Mode 4: Transmit by 802.11ac(20MHz) with CDD by ant0+1+2+3

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz) Ant1(Worst Data)	Limit (kHz)	Result
149	5745	17.59	>500	Pass
157	5785	17.78		Pass
165	5825	17.61		Pass

Mode 5: Transmit by 802.11ac(40MHz) with CDD by ant0+1				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
151	5755	36.39	>500	Pass
159	5795	36.38		Pass

Mode 5: Transmit by 802.11ac(40MHz) with CDD by ant0+1+2+3				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
151	5755	36.38	>500	Pass
159	5795	36.36		Pass

Mode 6: Transmit by 802.11ac(80MHz) with CDD by ant0+1				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
155	5775	76.17	>500	Pass

Mode 6: Transmit by 802.11ac(80MHz) with CDD by ant0+1+2+3				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
155	5775	76.45	>500	Pass

Mode 7: Transmit by 802.11ax(20MHz) with CDD by ant0+1

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
149	5745	18.38		Pass
157	5785	18.57	>500	Pass
165	5825	18.76		Pass

Mode 7: Transmit by 802.11ax(20MHz) with CDD by ant0+1+2+3

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
149	5745	18.92		Pass
157	5785	18.56	>500	Pass
165	5825	18.70		Pass

Mode 8: Transmit by 802.11ax(40MHz) with CDD by ant0+1

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
151	5755	37.26		Pass
159	5795	37.33	>500	Pass

Mode 8: Transmit by 802.11ax(40MHz) with CDD by ant0+1+2+3

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
151	5755	37.32		Pass
159	5795	37.33	>500	Pass

Mode 9: Transmit by 802.11ax(80MHz) with CDD by ant0+1				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
155	5775	76.41	>500	Pass
Mode 9: Transmit by 802.11ax(80MHz) with CDD by ant0+1+2+3				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
155	5775	76.96	>500	Pass

Mode 11: Transmit by 802.11a with Beam-forming by ant0+1

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
149	5745	16.38		Pass
157	5785	16.37	>500	Pass
165	5825	16.36		Pass

Mode 11: Transmit by 802.11a with Beam-forming by ant0+1+2+3

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
149	5745	16.40		Pass
157	5785	16.38	>500	Pass
165	5825	16.37		Pass

Mode 12: Transmit by 802.11n(20MHz) with Beam-forming by ant0+1

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
149	5745	17.61		Pass
157	5785	17.64	>500	Pass
165	5825	17.61		Pass

Mode 12: Transmit by 802.11n(20MHz) with Beam-forming by ant0+1+2+3

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
149	5745	17.63		Pass
157	5785	17.63	>500	Pass
165	5825	17.61		Pass

Mode 13: Transmit by 802.11n(40MHz) with Beam-forming by ant0+1

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz) Ant1(Worst Data)	Limit (kHz)	Result
151	5755	36.36	>500	Pass
159	5795	36.37		Pass

Mode 13: Transmit by 802.11n(40MHz) with Beam-forming by ant0+1+2+3

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz) Ant1(Worst Data)	Limit (kHz)	Result
151	5755	36.32	>500	Pass
159	5795	36.35		Pass

Mode 14: Transmit by 802.11ac(20MHz) with Beam-forming by ant0+1

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz) Ant1(Worst Data)	Limit (kHz)	Result
149	5745	17.62	>500	Pass
157	5785	17.59		Pass
165	5825	17.61		Pass

Mode 14: Transmit by 802.11ac(20MHz) with Beam-forming by ant0+1+2+3

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz) Ant1(Worst Data)	Limit (kHz)	Result
149	5745	17.62	>500	Pass
157	5785	17.61		Pass
165	5825	17.59		Pass

Mode 15: Transmit by 802.11ac(40MHz) with Beam-forming by ant0+1				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz) Ant1(Worst Data)	Limit (kHz)	Result
151	5755	36.11	>500	Pass
159	5795	36.38		Pass

Mode 15: Transmit by 802.11ac(40MHz) with Beam-forming by ant0+1+2+3				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz) Ant1(Worst Data)	Limit (kHz)	Result
151	5755	36.35	>500	Pass
159	5795	36.37		Pass

Mode 16: Transmit by 802.11ac(80MHz) with Beam-forming by ant0+1				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz) Ant1(Worst Data)	Limit (kHz)	Result
155	5775	75.76	>500	Pass

Mode 16: Transmit by 802.11ac(80MHz) with Beam-forming by ant0+1+2+3				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz) Ant1(Worst Data)	Limit (kHz)	Result
155	5775	75.53	>500	Pass

Mode 17: Transmit by 802.11ax(20MHz) with Beam-forming by ant0+1

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
149	5745	18.75		Pass
157	5785	18.51	>500	Pass
165	5825	18.78		Pass

Mode 17: Transmit by 802.11ax(20MHz) with Beam-forming by ant0+1+2+3

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
149	5745	18.80		Pass
157	5785	18.80	>500	Pass
165	5825	18.77		Pass

Mode18: Transmit by 802.11ax(40MHz) with Beam-forming by ant0+1

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
151	5755	37.29		Pass
159	5795	37.38	>500	Pass

Mode 18: Transmit by 802.11ax(40MHz) with Beam-forming by ant0+1+2+3

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
151	5755	37.30		Pass
159	5795	36.77	>500	Pass

Mode 19: Transmit by 802.11ax(80MHz) with Beam-forming by ant0+1

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
155	5775	75.69	>500	Pass

Mode 19: Transmit by 802.11ax(80MHz) with Beam-forming by ant0+1+2+3

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant1(Worst Data)		
155	5775	76.40	>500	Pass

The worst case of 6dB Bandwidth as below:

Mode 1: CH157 (5785MHz) Ant 0+1+2+3
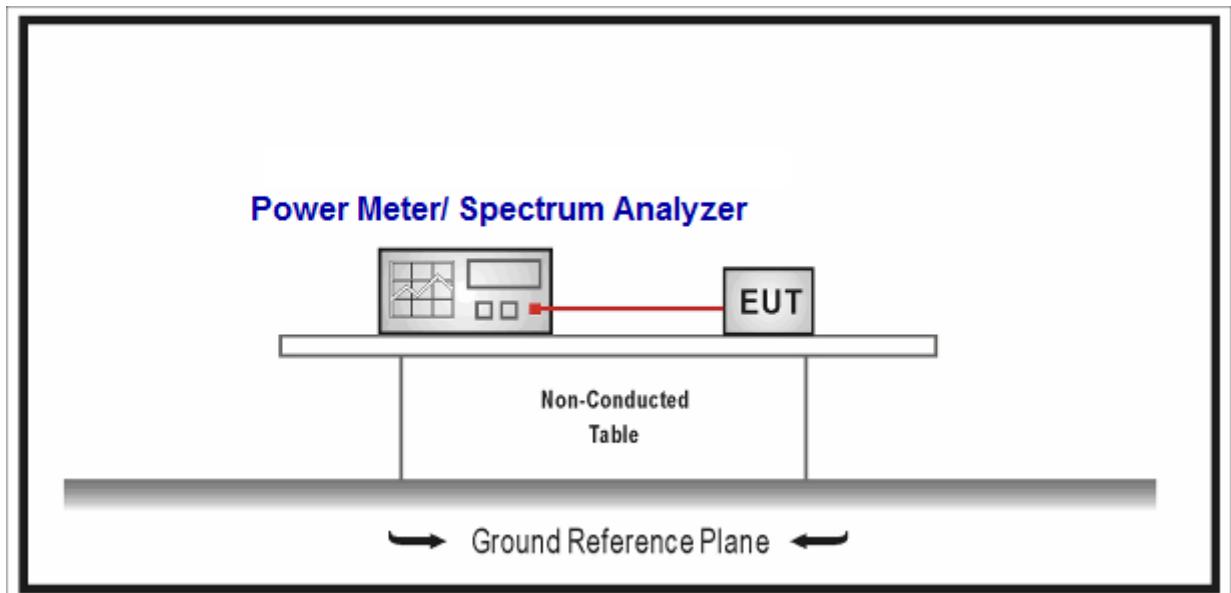
7. Power Output

7.1. Test Equipment

Power Output / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2018.01.04	2019.01.03
Spectrum Analyzer	Agilent	N9010A	MY48030494	2018.02.04	2019.02.03
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2017.10.14	2018.10.13
Power Sensor	Anritsu	MA2411B	0846014	2017.10.14	2018.10.13
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2018.04.10	2019.04.09
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

7.2. Test Setup

7.3. Limit

For FCC

	Fundamental emission output power Limit
☒	For the band 5.15-5.25 GHz
	☐ Outdoor access point: the maximum conducted output power shall not exceed 1 W. If G_{TX} >6dBi, then Pout≤30 - (G_{TX} - 6) and ≤125mW at any angle above 30 degrees
	☒ Indoor access point: the maximum conducted output power shall not exceed 1 W. If G_{TX} >6dBi, then Pout≤30 - (G_{TX} - 6)
	☐ Fixed point-to-point access points: the maximum conducted output power shall not exceed 1 W. If G_{TX} >23dBi, then Pout≤30 - (G_{TX} - 23)
	☐ Mobile and portable client devices: the maximum conducted output power shall not exceed 250mW. If G_{TX} >6dBi, then Pout≤24 - (G_{TX} - 6)
☒	For the band 5.25-5.35 GHz:
	☒ The maximum conducted output power shall not exceed 250mW or 11dBm+10 Log B, where B is the 26dB emission bandwidth in MHz. If G_{TX} > 6dBi, then Pout ≤ (The lesser of 24 or 11dBm+10 Log B) - (GTX - 6)
☒	For the 5.47-5.725 GHz:
	☒ The maximum conducted output power shall not exceed 250mW or 11dBm+10 Log B, where B is the 26dB emission bandwidth in MHz. If G_{TX} >6dBi, then Pout ≤ (The lesser of 24 or 11dBm+10 Log B) - (G_{TX} - 6)
☒	For the band 5.725-5.85 GHz:
	☒ Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6)
	☐ Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W
Note 1 : G_{TX} directional gain of transmitting antennas.	
Note 2 : P_{out} is maximum peak conducted output power .	

For IC

Fundamental emission output power Limit	
☒	For the band 5.15-5.25 GHz
	☒ The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10B, 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.
☐	For the band 5.25-5.35 GHz:
	☐ The maximum conducted output power shall not exceed 250mW or 11dBm+10 Log B, where B is the 99% bandwidth in MHz. If $G_{TX} > 6dBi$, then Pout $\leqslant$ (The lesser of 24 or 11dBm+10 Log B) - (GTX - 6)
☐	For the band 5.47-5.725 GHz:
	☐ The maximum conducted output power shall not exceed 250mW or 11dBm+10 Log B, where B is the 99% bandwidth in MHz. If $G_{TX} > 6dBi$, then Pout $\leqslant$ (The lesser of 24 or 11dBm+10 Log B) - (G_{TX} - 6)
☒	For the band 5.725-5.85 GHz:
	☒ Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)$
	☐ Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W
Note 1 : G_{TX} directional gain of transmitting antennas.	
Note 2 : P_{out} is maximum peak conducted output power .	

7.4. Test Procedure

			Chapter	Description
	Fundamental emission output power Test Method			
	References Rule		Chapter	Description
☒	ANSI C63.10		12.3	Maximum conducted output power
	☒	ANSI C63.10	12.3.2	Maximum conducted output power measurement using a spectrum analyzer (SA) or EMI receiver
		☒ ANSI C63.10	12.3.2.2	Method SA-1
		☐ ANSI C63.10	12.3.2.3	Method SA-1A (alternative)
		☒ ANSI C63.10	12.3.2.4	Method SA-2
		☐ ANSI C63.10	12.3.2.5	Method SA-2A (alternative)
		☐ ANSI C63.10	12.3.2.6	Method SA-3
		☐ ANSI C63.10	12.3.2.7	Method SA-3A (alternative)
	☒	ANSI C63.10	12.3.3	Maximum conducted output power using a power meter
		☐ ANSI C63.10	12.3.3.1	Method PM
		☒ ANSI C63.10	12.3.3.2	Method PM-G

Directional Gain Calculations for In-Band test method				
	References Rule		Chapter	Description
☐	KDB 662911		F2)a)	Basic methodology
	☐	KDB 662911	F2)a) (i)	transmit signals are correlated
	☐	KDB 662911	F2)a) (ii)	transmit signals are uncorrelated
☐	KDB 662911		F2)b)	Sectorized antenna systems.
☐	KDB 662911		F2)c)	Cross-polarized antennas
	☐	ANSI C63.10	F2)c) (i)	Cross-polarized antennas
	☐	ANSI C63.10	F2)c) (ii)	Multiple antennas
☐	KDB 662911		F2)e)	Spatial stream
	☐	KDB 662911	F2)e) (i)	Antennas have the same gain
	☐	KDB 662911	F2)e) (ii)	Antenna have the different gain with one spatial stream
	☐	KDB 662911	F2)e) (iii)	Antenna have the different gain with more than one spatial stream
☒	KDB 662911		F2)f)	Cyclic Delay Diversity (CDD)
	☐	KDB 662911	F2)f) (i)	Antennas have the same gain
	☒	KDB 662911	F2)f) (ii)	Antenna have the different gain with one spatial stream
	☒	KDB 662911	F2)f) (iii)	Antenna have the different gain with more than one spatial stream

7.5. EUT test Axis definition

Item	Power Output		
Device Category	☒ Indoor use		
	☐ Outdoor use		
	☐ Fix position use		
	☐ Client use		
Test mode	Mode 1-20		
Test method	☐ Radiated		
	X Axis	Y Axis	Z Axis
	Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒ Conducted		
	☐ Chain 1		
	☒ Chain 1	Chain 2	
	☐ Chain 1	Chain 2	Chain 3

7.6. Test Result

Product Name	:	Wireless Access Point(Eth6)	Power	:	AC 120V/60Hz
Test Mode	:	Mode 1~20	Test Site	:	TR8
Test Date	:	2018.05.24	Test Engineer	:	Tommie

Mode 1: Transmit by 802.11a with CDD by ant0+1						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant0	Ant1			
CH36	5180	18.94	18.61	18.94	30.00	Pass
CH44	5200	18.91	18.66	18.91	30.00	Pass
CH48	5240	19.07	19.07	19.07	30.00	Pass
CH52	5260	18.01	17.72	20.88	24.00	Pass
CH60	5300	18.22	17.98	21.11	24.00	Pass
CH64	5320	18.20	18.03	21.13	24.00	Pass
CH100	5500	18.16	18.20	21.19	24.00	Pass
CH116	5580	18.34	18.10	21.23	24.00	Pass
CH140	5700	18.21	18.16	21.20	24.00	Pass
CH144	5720	18.01	18.04	21.04	24.00	Pass
CH149	5745	21.26	21.25	21.26	30.00	Pass
CH157	5785	21.40	21.37	21.40	30.00	Pass
CH165	5825	21.19	21.08	21.19	30.00	Pass

Mode 1: Transmit by 802.11a with CDD by ant0+1						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Antenna Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)	Result
		Ant0	Ant1				
52	5260	18.01	17.72	5.5	26.38	30.00	Pass
60	5300	18.22	17.98	5.5	26.61	30.00	Pass
64	5320	18.20	18.03	5.5	26.63	30.00	Pass
100	5500	18.16	18.20	5.5	26.69	30.00	Pass
116	5580	18.34	18.10	5.5	26.73	30.00	Pass
140	5700	18.21	18.16	5.5	26.70	30.00	Pass
144	5720	18.01	18.04	5.5	26.54	30.00	Pass

Mode 1: Transmit by 802.11a with CDD by ant0+1+2+3								
Channel No.	Frequency (MHz)	Measurement Power(dBm)				Total Power (dBm)	Limit (dBm)	Result
		Ant0	Ant1	Ant2	Ant3			
CH36	5180	15.49	15.01	16.03	15.64	21.58	30.00	Pass
CH44	5220	15.54	15.31	15.57	15.55	21.51	30.00	Pass
CH48	5240	15.39	15.48	15.30	15.45	21.43	30.00	Pass
CH52	5260	12.93	13.27	14.94	13.99	19.87	24.00	Pass
CH60	5300	12.85	12.96	14.30	14.00	19.59	24.00	Pass
CH64	5320	12.84	13.00	14.54	13.93	19.65	24.00	Pass
CH100	5500	13.30	13.71	15.15	14.78	20.32	24.00	Pass
CH116	5580	13.09	12.67	14.97	14.19	19.85	24.00	Pass
CH140	5700	12.55	12.68	14.59	14.32	19.65	24.00	Pass
CH144	5720	12.43	12.45	14.17	14.53	19.52	24.00	Pass
CH149	5745	18.87	18.84	19.31	19.04	25.04	30.00	Pass
CH157	5785	18.72	18.88	19.08	18.53	24.83	30.00	Pass
CH165	5825	18.79	19.39	19.22	18.84	25.09	30.00	Pass

Mode 1: Transmit by 802.11a with CDD by ant0+1+2+3									
Channel No.	Frequency (MHz)	Measurement Power(dBm)				Antenna Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)	Result
		Ant0	Ant1	Ant2	Ant3				
52	5260	12.93	13.27	14.94	13.99	5.5	25.37	30.00	Pass
60	5300	12.85	12.96	14.30	14.00	5.5	25.09	30.00	Pass
64	5320	12.84	13.00	14.54	13.93	5.5	25.15	30.00	Pass
100	5500	13.30	13.71	15.15	14.78	5.5	25.82	30.00	Pass
116	5580	13.09	12.67	14.97	14.19	5.5	25.35	30.00	Pass
140	5700	12.55	12.68	14.59	14.32	5.5	25.15	30.00	Pass
144	5720	12.43	12.45	14.17	14.53	5.5	25.02	30.00	Pass

Mode 2: Transmit by 802.11n(20MHz) with CDD by ant0+1						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant0	Ant1			
CH36	5180	18.75	18.62	18.75	30.00	Pass
CH44	5200	19.11	18.84	19.11	30.00	Pass
CH48	5240	19.06	18.84	19.06	30.00	Pass
CH52	5260	18.12	18.00	21.07	24.00	Pass
CH60	5300	18.03	17.80	20.93	24.00	Pass
CH64	5320	18.07	17.91	21.00	24.00	Pass
CH100	5500	18.15	18.29	21.23	24.00	Pass
CH116	5580	18.17	17.91	21.05	24.00	Pass
CH140	5700	18.59	18.31	21.46	24.00	Pass
CH144	5720	18.43	18.01	21.24	24.00	Pass
CH149	5745	21.36	20.99	21.36	30.00	Pass
CH157	5785	21.01	20.84	21.01	30.00	Pass
CH165	5825	21.17	20.98	21.17	30.00	Pass

Mode 2: Transmit by 802.11n(20MHz) with CDD by ant0+1							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Antenna Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)	Result
		Ant0	Ant1				
52	5260	18.12	18.00	5.5	26.57	30.00	Pass
60	5300	18.03	17.80	5.5	26.43	30.00	Pass
64	5320	18.07	17.91	5.5	26.50	30.00	Pass
100	5500	18.15	18.29	5.5	26.73	30.00	Pass
116	5580	18.17	17.91	5.5	26.55	30.00	Pass
140	5700	18.59	18.31	5.5	26.96	30.00	Pass
144	5720	18.43	18.01	5.5	26.74	30.00	Pass

Mode 2: Transmit by 802.11n(20MHz) with CDD by ant0+1+2+3								
Channel No.	Frequency (MHz)	Measurement Power(dBm)				Total Power (dBm)	Limit (dBm)	Result
		Ant0	Ant1	Ant2	Ant3			
CH36	5180	15.22	14.47	15.45	15.14	21.11	30.00	Pass
CH44	5200	15.65	14.46	15.55	15.11	21.24	30.00	Pass
CH48	5240	15.55	14.90	15.64	15.33	21.38	30.00	Pass
CH52	5260	13.12	13.40	15.50	14.29	20.20	24.00	Pass
CH60	5300	12.86	13.44	15.26	14.13	20.04	24.00	Pass
CH64	5320	12.87	13.20	15.18	14.35	20.02	24.00	Pass
CH100	5500	13.52	13.88	14.98	15.03	20.42	24.00	Pass
CH116	5580	12.66	12.92	14.95	14.13	19.79	24.00	Pass
CH140	5700	12.43	12.59	14.69	14.72	19.77	24.00	Pass
CH144	5720	12.47	12.71	14.40	14.60	19.67	24.00	Pass
CH149	5745	18.72	18.60	18.59	18.50	24.62	30.00	Pass
CH157	5785	18.57	18.00	18.73	17.84	24.32	30.00	Pass
CH165	5825	19.03	18.66	18.51	17.57	24.50	30.00	Pass

Mode 2: Transmit by 802.11n(20MHz) with CDD by ant0+1+2+3									
Channel No.	Frequency (MHz)	Measurement Power(dBm)				Antenna Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)	Result
		Ant0	Ant1	Ant2	Ant3				
52	5260	13.12	13.40	15.50	14.29	5.5	25.70	30.00	Pass
60	5300	12.86	13.44	15.26	14.13	5.5	25.54	30.00	Pass
64	5320	12.87	13.20	15.18	14.35	5.5	25.52	30.00	Pass
100	5500	13.52	13.88	14.98	15.03	5.5	25.92	30.00	Pass
116	5580	12.66	12.92	14.95	14.13	5.5	25.29	30.00	Pass
140	5700	12.43	12.59	14.69	14.72	5.5	25.27	30.00	Pass
144	5720	12.47	12.71	14.40	14.60	5.5	25.17	30.00	Pass

Mode 3: Transmit by 802.11n(40MHz) with CDD by ant0+1						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant0	Ant1			
CH38	5190	17.56	17.34	17.56	30.00	Pass
CH46	5230	17.85	17.73	17.85	30.00	Pass
CH54	5270	15.97	15.60	20.56	24.00	Pass
CH62	5310	16.01	15.52	18.80	24.00	Pass
CH102	5510	18.19	17.97	18.78	24.00	Pass
CH110	5550	17.85	17.94	21.09	24.00	Pass
CH134	5670	18.59	18.28	20.91	24.00	Pass
CH142	5710	15.97	15.60	21.45	24.00	Pass
CH151	5755	20.87	20.72	20.87	30.00	Pass
CH159	5795	18.83	18.81	18.83	30.00	Pass

Mode 3: Transmit by 802.11n(40MHz) with CDD by ant0+1							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Antenna Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)	Result
		Ant0	Ant1				
54	5270	15.97	15.60	5.5	24.30	30.00	Pass
62	5310	16.01	15.52	5.5	24.28	30.00	Pass
102	5510	18.19	17.97	5.5	26.59	30.00	Pass
110	5550	17.85	17.94	5.5	26.41	30.00	Pass
134	5670	18.59	18.28	5.5	26.95	30.00	Pass
142	5710	15.97	15.60	5.5	24.30	30.00	Pass

Mode 3: Transmit by 802.11n(40MHz) with CDD by ant0+1+2+3								
Channel No.	Frequency (MHz)	Measurement Power(dBm)				Total Power (dBm)	Limit (dBm)	Result
		Ant0	Ant1	Ant2	Ant3			
CH38	5190	13.14	12.39	13.33	12.47	18.87	30.00	Pass
CH46	5230	12.93	12.45	13.19	12.55	18.81	30.00	Pass
CH54	5270	13.31	12.69	12.39	13.05	18.89	24.00	Pass
CH62	5310	12.73	11.56	12.33	12.70	18.38	24.00	Pass
CH102	5510	14.12	13.55	14.30	12.42	19.68	24.00	Pass
CH110	5550	13.79	13.35	13.98	12.61	19.48	24.00	Pass
CH134	5670	14.31	14.08	14.04	14.37	20.22	24.00	Pass
CH142	5710	14.34	14.10	14.16	14.36	20.26	24.00	Pass
CH151	5755	18.77	18.58	19.11	18.91	24.87	30.00	Pass
CH159	5795	19.90	19.30	20.50	19.64	25.88	30.00	Pass

Mode 3: Transmit by 802.11n(40MHz) with CDD by ant0+1+2+3								
Channel No.	Frequency (MHz)	Measurement Power(dBm)				Antenna Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)	Result
		Ant0	Ant1	Ant2	Ant3				
54	5270	13.31	12.69	12.39	13.05	5.5	24.39	30.00	Pass
62	5310	12.73	11.56	12.33	12.70	5.5	23.88	30.00	Pass
102	5510	14.12	13.55	14.30	12.42	5.5	25.18	30.00	Pass
110	5550	13.79	13.35	13.98	12.61	5.5	24.98	30.00	Pass
134	5670	14.31	14.08	14.04	14.37	5.5	25.72	30.00	Pass
142	5710	14.34	14.10	14.16	14.36	5.5	25.76	30.00	Pass

Mode 4: Transmit by 802.11ac(20MHz) with CDD by ant0+1						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant0	Ant1			
CH36	5180	19.13	18.87	19.13	30.00	Pass
CH44	5200	18.95	18.76	18.95	30.00	Pass
CH48	5240	21.18	21.20	21.18	30.00	Pass
CH52	5260	18.00	18.12	21.07	24.00	Pass
CH60	5300	18.10	18.29	21.21	24.00	Pass
CH64	5320	18.18	18.19	21.20	24.00	Pass
CH100	5500	18.47	18.06	21.28	24.00	Pass
CH116	5580	18.15	18.31	21.24	24.00	Pass
CH140	5700	18.32	18.14	21.24	24.00	Pass
CH144	5720	18.32	18.35	21.35	24.00	Pass
CH149	5745	21.18	21.20	21.18	30.00	Pass
CH157	5785	21.29	22.06	21.29	30.00	Pass
CH165	5825	21.61	21.28	21.61	30.00	Pass

Mode 4: Transmit by 802.11ac(20MHz) with CDD by ant0+1							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Antenna Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)	Result
		Ant0	Ant1				
52	5260	18.00	18.12	5.5	26.57	30.00	Pass
60	5300	18.10	18.29	5.5	26.71	30.00	Pass
64	5320	18.18	18.19	5.5	26.70	30.00	Pass
100	5500	18.47	18.06	5.5	26.78	30.00	Pass
116	5580	18.15	18.31	5.5	26.74	30.00	Pass
140	5700	18.32	18.14	5.5	26.74	30.00	Pass
144	5720	18.32	18.35	5.5	26.85	30.00	Pass

Mode 4: Transmit by 802.11ac(20MHz) with CDD by ant0+1+2+3								
Channel No.	Frequency (MHz)	Measurement Power(dBm)				Total Power (dBm)	Limit (dBm)	Result
		Ant0	Ant1	Ant2	Ant3			
CH36	5180	15.33	14.48	15.47	15.04	21.12	30.00	Pass
CH44	5200	14.94	14.36	15.10	15.37	20.98	30.00	Pass
CH48	5240	15.18	14.40	15.31	15.21	21.06	30.00	Pass
CH52	5260	12.55	13.16	15.09	14.35	19.92	24.00	Pass
CH60	5300	12.63	13.15	14.72	14.36	19.82	24.00	Pass
CH64	5320	12.82	13.10	14.57	13.85	19.66	24.00	Pass
CH100	5500	12.90	13.48	14.92	14.13	19.94	24.00	Pass
CH116	5580	12.39	12.78	14.47	14.16	19.56	24.00	Pass
CH140	5700	11.93	12.27	14.38	13.78	19.23	24.00	Pass
CH144	5720	12.04	12.35	14.35	14.03	19.33	24.00	Pass
CH149	5745	18.35	18.37	18.64	18.18	24.41	30.00	Pass
CH157	5785	18.77	18.50	18.42	17.26	24.29	30.00	Pass
CH165	5825	19.05	18.37	18.93	17.84	24.59	30.00	Pass

Mode 4: Transmit by 802.11ac(20MHz) with CDD by ant0+1+2+3									
Channel No.	Frequency (MHz)	Measurement Power(dBm)				Antenna Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)	Result
		Ant0	Ant1	Ant2	Ant3				
52	5260	12.55	13.16	15.09	14.35	5.5	25.42	30.00	Pass
60	5300	12.63	13.15	14.72	14.36	5.5	25.32	30.00	Pass
64	5320	12.82	13.10	14.57	13.85	5.5	25.16	30.00	Pass
100	5500	12.90	13.48	14.92	14.13	5.5	25.44	30.00	Pass
116	5580	12.39	12.78	14.47	14.16	5.5	25.06	30.00	Pass
140	5700	11.93	12.27	14.38	13.78	5.5	24.73	30.00	Pass
144	5720	12.04	12.35	14.35	14.03	5.5	24.83	30.00	Pass

Mode 5: Transmit by 802.11ac(40MHz) with CDD by ant0+1						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant0	Ant1			
CH38	5190	17.47	17.33	17.47	30.00	Pass
CH46	5230	17.70	17.55	17.70	30.00	Pass
CH54	5270	16.34	16.12	16.34	24.00	Pass
CH62	5310	16.60	16.36	16.60	24.00	Pass
CH102	5510	19.06	18.74	19.06	24.00	Pass
CH110	5550	18.36	18.41	18.36	24.00	Pass
CH134	5670	19.01	18.94	19.01	24.00	Pass
CH142	5710	18.93	18.86	18.93	24.00	Pass
CH151	5755	21.55	21.18	21.55	30.00	Pass
CH159	5795	21.47	21.19	21.47	30.00	Pass

Mode 5: Transmit by 802.11ac(40MHz) with CDD by ant0+1							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Antenna Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)	Result
		Ant0	Ant1				
54	5270	16.34	16.12	5.5	21.84	30.00	Pass
62	5310	16.60	16.36	5.5	22.10	30.00	Pass
102	5510	19.06	18.74	5.5	24.56	30.00	Pass
110	5550	18.36	18.41	5.5	23.86	30.00	Pass
134	5670	19.01	18.94	5.5	24.51	30.00	Pass
142	5710	18.93	18.86	5.5	24.43	30.00	Pass

Mode 5: Transmit by 802.11ac(40MHz) with CDD by ant0+1+2+3								
Channel No.	Frequency (MHz)	Measurement Power(dBm)				Total Power (dBm)	Limit (dBm)	Result
		Ant0	Ant1	Ant2	Ant3			
CH38	5190	13.09	12.52	13.57	12.65	19.00	30.00	Pass
CH46	5230	13.03	12.61	13.10	12.75	18.90	30.00	Pass
CH54	5270	13.05	12.28	13.02	13.40	18.98	24.00	Pass
CH62	5310	13.11	11.93	12.92	13.42	18.90	24.00	Pass
CH102	5510	14.15	13.80	14.80	12.74	19.96	24.00	Pass
CH110	5550	14.44	13.38	14.22	12.65	19.75	24.00	Pass
CH134	5670	14.48	13.62	14.19	14.65	20.27	24.00	Pass
CH142	5710	14.31	14.19	13.93	14.26	20.20	24.00	Pass
CH151	5755	19.67	18.52	19.91	19.35	25.41	30.00	Pass
CH159	5795	20.52	20.20	21.03	20.21	26.52	30.00	Pass

Mode 5: Transmit by 802.11ac(40MHz) with CDD by ant0+1+2+3									
Channel No.	Frequency (MHz)	Measurement Power(dBm)				Antenna Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)	Result
		Ant0	Ant1	Ant2	Ant3				
54	5270	13.05	12.28	13.02	13.40	5.5	24.48	30.00	Pass
62	5310	13.11	11.93	12.92	13.42	5.5	24.40	30.00	Pass
102	5510	14.15	13.80	14.80	12.74	5.5	25.46	30.00	Pass
110	5550	14.44	13.38	14.22	12.65	5.5	25.25	30.00	Pass
134	5670	14.48	13.62	14.19	14.65	5.5	25.77	30.00	Pass
142	5710	14.31	14.19	13.93	14.26	5.5	25.70	30.00	Pass

Mode 6: Transmit by 802.11ac(80MHz) with CDD by ant0+1						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant0	Ant1			
CH42	5210	17.24	17.18	17.24	30.00	Pass
CH58	5290	15.82	15.95	18.90	24.00	Pass
CH106	5530	15.53	15.20	18.38	24.00	Pass
CH138	5690	15.54	15.40	18.48	24.00	Pass
CH155	5775	19.57	19.55	19.57	30.00	Pass

Mode 6: Transmit by 802.11ac(80MHz) with CDD by ant0+1							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Antenna Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)	Result
		Ant0	Ant1				
58	5290	15.82	15.95	5.5	24.40	30.00	Pass
106	5530	15.53	15.20	5.5	23.88	30.00	Pass
138	5690	15.54	15.40	5.5	23.98	30.00	Pass

Mode 6: Transmit by 802.11ac(80MHz) with CDD by ant0+1+2+3								
Channel No.	Frequency (MHz)	Measurement Power(dBm)				Total Power (dBm)	Limit (dBm)	Result
		Ant0	Ant1	Ant2	Ant3			
CH42	5210	12.02	11.73	12.39	11.08	17.85	30.00	Pass
CH58	5290	12.34	11.49	11.56	12.24	17.95	24.00	Pass
CH106	5530	12.56	11.16	12.05	10.52	17.66	24.00	Pass
CH138	5690	12.67	10.98	11.72	10.26	17.52	24.00	Pass
CH155	5775	15.21	14.52	15.42	14.30	20.91	30.00	Pass

Mode 6: Transmit by 802.11ac(80MHz) with CDD by ant0+1+2+3									
Channel No.	Frequency (MHz)	Measurement Power(dBm)				Antenna Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)	Result
		Ant0	Ant1	Ant2	Ant3				
58	5290	12.34	11.49	11.56	12.24	5.5	23.45	30.00	Pass
106	5530	12.56	11.16	12.05	10.52	5.5	23.16	30.00	Pass
138	5690	12.67	10.98	11.72	10.26	5.5	23.02	30.00	Pass

Mode 7: Transmit by 802.11ax(20MHz) with CDD by ant0+1						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant0	Ant1			
CH36	5180	18.61	18.44	18.61	30.00	Pass
CH44	5200	18.96	18.48	18.96	30.00	Pass
CH48	5240	18.84	18.81	18.84	30.00	Pass
CH52	5260	17.70	18.06	20.89	24.00	Pass
CH60	5300	17.65	17.46	20.57	24.00	Pass
CH64	5320	18.01	17.85	20.94	24.00	Pass
CH100	5500	18.23	18.22	21.24	24.00	Pass
CH116	5580	18.33	18.03	21.19	24.00	Pass
CH140	5700	18.07	18.01	21.05	24.00	Pass
CH144	5720	18.19	18.03	21.12	24.00	Pass
CH149	5745	21.46	21.44	21.46	30.00	Pass
CH157	5785	21.38	21.17	21.38	30.00	Pass
CH165	5825	21.24	21.28	21.24	30.00	Pass

Mode 7: Transmit by 802.11ax(20MHz) with CDD by ant0+1							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Antenna Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)	Result
		Ant0	Ant1				
52	5260	17.70	18.06	5.5	26.39	30.00	Pass
60	5300	17.65	17.46	5.5	26.07	30.00	Pass
64	5320	18.01	17.85	5.5	26.44	30.00	Pass
100	5500	18.23	18.22	5.5	26.74	30.00	Pass
116	5580	18.33	18.03	5.5	26.69	30.00	Pass
140	5700	18.07	18.01	5.5	26.55	30.00	Pass
144	5720	18.19	18.03	5.5	26.62	30.00	Pass

Mode 7: Transmit by 802.11ax(20MHz) with CDD by ant0+1+2+3								
Channel No.	Frequency (MHz)	Measurement Power(dBm)				Total Power (dBm)	Limit (dBm)	Result
		Ant0	Ant1	Ant2	Ant3			
CH36	5180	14.81	14.65	15.31	14.37	20.82	30.00	Pass
CH44	5200	14.99	14.50	15.21	15.02	20.96	30.00	Pass
CH48	5240	14.42	14.37	15.09	15.36	20.85	30.00	Pass
CH52	5260	13.66	13.78	15.16	14.57	20.36	24.00	Pass
CH60	5300	13.27	13.49	15.40	14.57	20.29	24.00	Pass
CH64	5320	13.27	13.54	15.45	14.92	20.41	24.00	Pass
CH100	5500	12.94	13.31	14.68	14.69	20.00	24.00	Pass
CH116	5580	12.58	12.48	14.93	14.45	19.77	24.00	Pass
CH140	5700	12.18	12.21	14.19	14.23	19.34	24.00	Pass
CH144	5720	12.63	12.24	14.25	14.29	19.47	24.00	Pass
CH149	5745	18.70	18.71	18.85	18.81	24.79	30.00	Pass
CH157	5785	18.10	17.71	18.11	17.47	23.88	30.00	Pass
CH165	5825	17.38	17.27	18.05	17.16	23.50	30.00	Pass

Mode 7: Transmit by 802.11ax(20MHz) with CDD by ant0+1+2+3									
Channel No.	Frequency (MHz)	Measurement Power(dBm)				Antenna Gain (dBi)	Total EIRP Power (dBm)	EIRP Limit (dBm)	Result
		Ant0	Ant1	Ant2	Ant3				
52	5260	13.66	13.78	15.16	14.57	5.5	25.86	30.00	Pass
60	5300	13.27	13.49	15.40	14.57	5.5	25.79	30.00	Pass
64	5320	13.27	13.54	15.45	14.92	5.5	25.91	30.00	Pass
100	5500	12.94	13.31	14.68	14.69	5.5	25.50	30.00	Pass
116	5580	12.58	12.48	14.93	14.45	5.5	25.27	30.00	Pass
140	5700	12.18	12.21	14.19	14.23	5.5	24.84	30.00	Pass
144	5720	12.63	12.24	14.25	14.29	5.5	24.97	30.00	Pass