



Test Report

FCC Part15 Subpart E

Product Name : Wireless Access Point
Model No. : AP410C
FCC ID : QXO-AP410C

Applicant : Extreme Networks, Inc
Address : 6480 Via Del Oro, San Jose, CA 95119

Date of Receipt : Sep. 20, 2019
Test Date : Sep. 20, 2019 ~ Dec. 04, 2019
Issued Date : Dec. 30, 2019
Report No. : 1992128R-RF-US-P09V01
Report Version : V1.1

The test results presented in this report relate only to the object tested.

The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result, unless the specification, standard or customer have special requirements

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Test Report Certification

Issued Date : Dec. 30, 2019

Report No. : 1992128R-RF-US-P09V01



Product Name : Wireless Access Point
 Applicant : Extreme Networks, Inc
 Address : 6480 Via Del Oro, San Jose, CA 95119
 Manufacturer : Extreme Networks, Inc
 Address : 6480 Via Del Oro, San Jose, CA 95119
 Model No. : AP410C
 Brand : Extreme Networks
 FCC ID : QXO-AP410C
 EUT Voltage : DC 37~57V
 Test Voltage : AC 120V/60Hz
 Applicable Standard : FCC CFR Title 47 Part 15 Subpart E
 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,
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 TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098
 FCC Designation Number: CN1199;

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1992128R-RF-US-P09V01	V1.0	Initial Issued Report	Dec. 24, 2019
1992128R-RF-US-P09V01	V1.1	Modified some typos in the report.	Dec. 30, 2019

1. General Information

1.1. EUT Description

Product Name	Wireless Access Point					
Model No.	AP410C					
EUT Voltage	DC 37~57V					
Type of Modulation	OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM					
Data Rate	802.11a: 6/9/12/18/24/36/48/54Mbps					
	802.11n: up to 600Mbps					
	802.11ac: up to 1732Mbps					
	802.11ax: up to 2.4Gbps					
Channel Control	Auto					
Transmit modes	<input checked="" type="checkbox"/>	802.11a	<input checked="" type="checkbox"/>	802.11n(20MHz)	<input checked="" type="checkbox"/>	802.11n(40MHz)
	<input checked="" type="checkbox"/>	802.11ac(20MHz)	<input checked="" type="checkbox"/>	802.11ac(40MHz)	<input checked="" type="checkbox"/>	802.11ac(80MHz)
	<input checked="" type="checkbox"/>	802.11ax(20MHz)	<input checked="" type="checkbox"/>	802.11ax(40MHz)	<input checked="" type="checkbox"/>	802.11ax(80MHz)
	<input type="checkbox"/>	802.11ax(160MHz)				
Support Bands	<input type="checkbox"/>	5150MHz~5250MHz	<input type="checkbox"/>	Outdoor AP		
	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Indoor AP		
	<input type="checkbox"/>		<input type="checkbox"/>	Fixed point-to-point AP		
	<input type="checkbox"/>		<input type="checkbox"/>	Mobile and Portable Client		
	<input type="checkbox"/>	5250MHz~5350MHz				
	<input type="checkbox"/>	5470MHz~5725MHz	<input type="checkbox"/>	With TDWR Channels		
<input type="checkbox"/>	<input type="checkbox"/>		Without TDWR Channels			
<input checked="" type="checkbox"/>	5725MHz~5850MHz					

1.2. Antenna information

AP410C:

Antenna Model No.	N/A							
Antenna Manufacturer	N/A							
Antenna Delivery	<input checked="" type="checkbox"/>	1*TX+1*RX	<input checked="" type="checkbox"/>	2*TX+2*RX	<input checked="" type="checkbox"/>	3*TX+3*RX	<input checked="" type="checkbox"/>	4*TX+4*RX
Antenna Technology	<input checked="" type="checkbox"/>	SISO						
	<input checked="" type="checkbox"/>	MIMO	<input type="checkbox"/>	Basic methodology				
			<input type="checkbox"/>	Sectorized antenna systems				
			<input type="checkbox"/>	Cross-polarized antennas				
			<input type="checkbox"/>	Unequal antenna gains, with equal transmit powers				
			<input checked="" type="checkbox"/>	Spatial Multiplexing				
<input checked="" type="checkbox"/>	Cyclic Delay Diversity (CDD)							
Antenna Type	PIFA							
Antenna Gain(Radio 1)								
Antenna Technology	Ant Gain (dBi)							
Ant 4(Radio 1)	3.3							
Antenna Gain(Radio 2)								
Antenna Technology	Ant Gain (dBi)							
<input checked="" type="checkbox"/>	SISO	<input checked="" type="checkbox"/>	Ant1 (Radio 2)	4.5				
		<input checked="" type="checkbox"/>	Ant2 (Radio 2)	4.7				
<input checked="" type="checkbox"/>	CDD			4.7dBi for Power; 7.71dBi for PSD				
<input checked="" type="checkbox"/>	Beam-forming			7.71dBi for Power; 7.71dBi for PSD				

Antenna Gain(Radio 3)		
Antenna Technology		Ant Gain (dBi)
<input checked="" type="checkbox"/>	SISO	<input checked="" type="checkbox"/> Ant3 (Radio 3) 4.7
		<input checked="" type="checkbox"/> Ant5 (Radio 3) 4.6
		<input checked="" type="checkbox"/> Ant6 (Radio 3) 4.6
		<input checked="" type="checkbox"/> Ant7 (Radio 3) 4.7
<input checked="" type="checkbox"/>	2*2 CDD	4.7dBi for Power; 7.71dBi for PSD
<input checked="" type="checkbox"/>	2*2 Beam-forming	7.71dBi for Power; 7.71dBi for PSD
<input checked="" type="checkbox"/>	4*4 CDD	4.7dBi for Power; 10.72dBi for PSD
<input checked="" type="checkbox"/>	4*4 Beam-forming	10.72dBi for Power; 10.72dBi for PSD

Note1: The device supports 3 radios, radio 1(1*1 2.4GHz & 1*1 5GHz full band); radio 2(2*2 2.4GHz & 2*2 5GHz low band); radio 3(4*4 5GHz full band & 1*1 BLE), and radio 2 & 3 can works with Dual 2.4GHz & 5GHz mode and Dual 5GHz mode. As the 5GHz high band filter is different between two modes, additional Radio 3 5GHz high band mode is tested for compliance.

Dual 2.4GHz & 5GHz mode: Radio 2(2.4GHz 2*2) + Radio 3(5GHz full band 4*4)

Dual 5GHz mode: Radio 2(5GHz low band 2*2) + Radio 3(5GHz high band 4*4)

2: Radio 3 1*1 and 3*3 power will follow 2*2 and 4*4 power setting, so only 2*2 and 4*4 data are tested.

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
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	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	155	5775 MHz	N/A	N/A	N/A	N/A

1.4. Mode of Operation

DEKRA Testing and Certification (Suzhou) Co., Ltd. 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
Mode 2: Transmit by 802.11n(20MHz)
Mode 3: Transmit by 802.11n(40MHz)
Mode 4: Transmit by 802.11ac(20MHz)
Mode 5: Transmit by 802.11ac(40MHz)
Mode 6: Transmit by 802.11ac(80MHz)
Mode 7: Transmit by 802.11ax(20MHz)
Mode 8: Transmit by 802.11ax(40MHz)
Mode 9: Transmit by 802.11ax(80MHz)

Note 1: Regards to the frequency band operation: the lowest, middle and highest frequency 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.

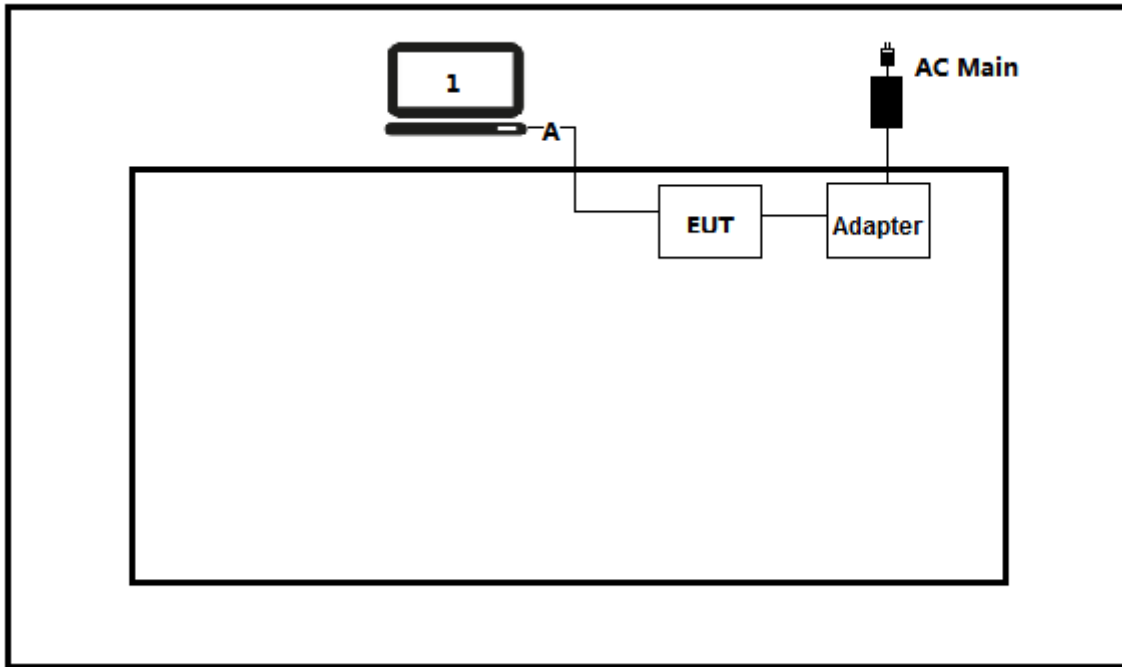
1.5. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

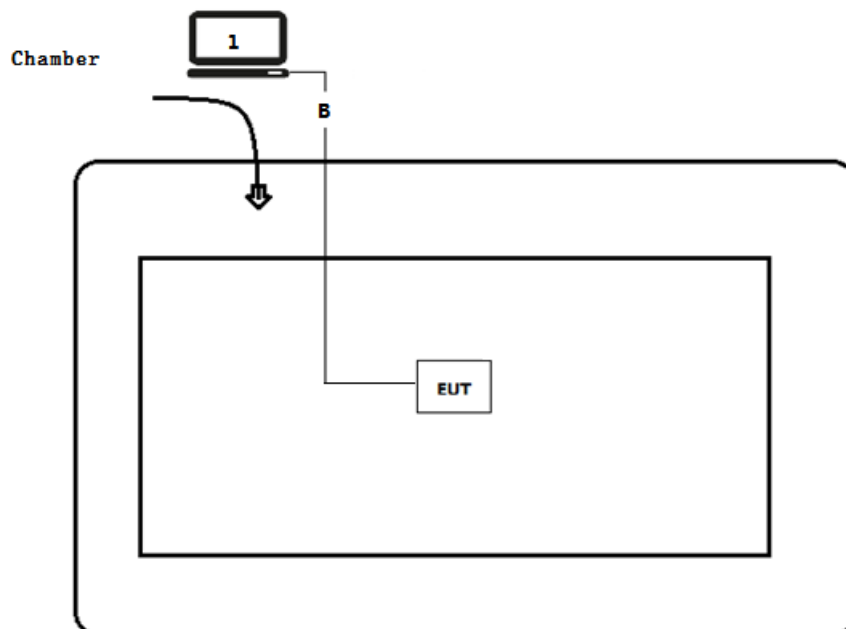
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Lenovo	Think pad x220	SUA0600195	Non-shielded
A	WLAN cable	N/A	N/A	N/A	Shielded, 0.5m
B	WLAN cable	N/A	N/A	N/A	Shielded, 10m

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], 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:

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(e)	FCC 15.407(e)	PASS
6dB Emission Bandwidth	FCC CFR Title 47 Part 15 Subpart E: Section 15.407(e)	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)	±20ppm	PASS

2.2. Test Frequency configuration:

Modulation Mode	Channel	Frequency	Channel	Frequency	Channel	Frequency
802.11a/n/ac/ax(20MHz)	36	5180MHz	40	5200MHz	44	5220MHz
	48	5240MHz	149	5745MHz	157	5785MHz
	165	5825MHz	N/A	N/A	N/A	N/A
802.11n/ac/ax(40MHz)	38	5190MHz	46	5230MHz	151	5755MHz
	159	5795MHz	N/A	N/A	N/A	N/A
802.11ac/ax(80MHz)	42	5210MHz	155	5775MHz	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
17	3	---	---	---	39	43.2	81	90
18	3	---	---	---	58.5	65.1	121.5	135
19	3	---	---	---	78	86.7	162	180
20	3	---	---	---	117	129.9	243	270
21	3	---	---	---	156	173.4	324	360
22	3	---	---	---	175.5	195	364.5	405
23	3	---	---	---	195	216.6	405	450
24	4	---	---	---	26	28.8	54	60
25	4	---	---	---	52	57.6	108	120
26	4	---	---	---	78	86.8	162	180
27	4	---	---	---	104	115.6	216	240
28	4	---	---	---	156	173.2	324	360
29	4	---	---	---	208	231.2	432	480
30	4	---	---	---	234	260	486	540

31	4	---	---	---	260	288.8	540	600
Note1: The blue form is the maximum power data rate.								
2: The EUT supports 4 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	N/A	N/A	360.0	400.0	780.0	866.6
3	20	BPSK	1/2	26	28.8	54	60	117.2	130
	21	QPSK	1/2	39	43.2	81	90	175.5	195
	22	QPSK	3/4	58.5	65.1	121.5	135	263.4	292.5
	23	16-QAM	1/2	78	86.7	162	180	351	390
	24	16-QAM	3/4	117	129.9	243	270	526.5	585
	25	64-QAM	2/3	156	173.4	324	360	702	780
	26	64-QAM	3/4	175.5	195	364.5	405	789.9	877.5
	27	64-QAM	5/6	195	216.6	405	450	877.5	975
	28	256-QAM	3/4	234	260.1	486	540	1053	1170
	29	256-QAM	5/6	N/A	N/A	540	600	1170	1299.9
4	30	BPSK	1/2	26	28.8	54	60	117.2	130
	31	QPSK	1/2	52	57.6	108	120	234	260
	32	QPSK	3/4	78	86.8	162	180	351.2	390

33	16-QAM	1/2	104	115.6	216	240	468	520
34	16-QAM	3/4	156	173.2	324	360	702	780
35	64-QAM	2/3	208	231.2	432	480	936	1040
36	64-QAM	3/4	234	260	486	540	1053.2	1170
37	64-QAM	5/6	260	288.8	540	600	1170	1300
38	256-QAM	3/4	312	346.8	648	720	1404	1560
39	256-QAM	5/6	N/A	N/A	720	800	1560	1733.2

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

2: The EUT supports 4 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 4 spatial streams.

2.4. Duty Cycle

Radio 1:

Test Mode	Tx On (ms)	Tx Off (ms)	VBW(kHz)	Tx On + Tx Off (ms)	Duty Cycle (%)
802.11a	2.055	0.115	0.51	2.170	94.70
802.11n(20MHz)	1.920	0.105	0.56	2.025	94.81
802.11n(40MHz)	0.915	0.135	1.1	1.050	87.14
802.11ac(20MHz)	1.915	0.04	0.56	1.955	97.95
802.11ac(40MHz)	0.920	0.065	1.1	0.985	93.40
802.11ac(80MHz)	0.426	0.06	2.4	0.486	87.65
802.11ax(20MHz)	1.475	0.045	0.68	1.520	97.04
802.11ax(40MHz)	0.740	0.075	1.5	0.815	90.80
802.11ax(80MHz)	0.375	0.069	2.7	0.444	84.46

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 Conducted Emission Band Edge and Radiated Emission, $VBW \geq 1/T$ will be used.

Radio 2:

Test Mode	Tx On (ms)	Tx Off (ms)	VBW(kHz)	Tx On + Tx Off (ms)	Duty Cycle (%)
802.11a	2.055	0.12	0.51	2.175	94.48
802.11n(20MHz)	1.915	0.11	0.56	2.025	94.57
802.11n(40MHz)	0.915	0.132	1.1	1.047	87.39
802.11ac(20MHz)	1.920	0.04	0.56	1.960	97.96
802.11ac(40MHz)	0.918	0.069	1.1	0.987	93.01
802.11ac(80MHz)	0.426	0.063	2.4	0.489	87.12
802.11ax(20MHz)	1.475	0.04	0.68	1.515	97.36
802.11ax(40MHz)	0.744	0.066	1.5	0.810	91.85
802.11ax(80MHz)	0.375	0.069	2.7	0.444	84.46

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 Conducted Emission Band Edge and Radiated Emission, $VBW \geq 1/T$ will be used.

Beam-forming:

Test Mode	Tx On (ms)	Tx Off (ms)	VBW(kHz)	Tx On + Tx Off (ms)	Duty Cycle (%)
802.11n(20MHz)	1.917	0.111	0.56	2.028	94.53
802.11n(40MHz)	0.909	0.135	1.2	1.044	87.07
802.11ac(20MHz)	1.920	0.04	0.56	1.960	97.96
802.11ac(40MHz)	0.918	0.066	1.1	0.984	93.29
802.11ac(80MHz)	0.426	0.063	2.4	0.489	87.12
802.11ax(20MHz)	1.475	0.045	0.68	1.520	97.04
802.11ax(40MHz)	0.747	0.063	1.5	0.810	92.22
802.11ax(80MHz)	0.378	0.066	2.7	0.444	85.14

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 Conducted Emission Band Edge and Radiated Emission, $VBW \geq 1/T$ will be used.

Radio 3:

Test Mode	Tx On (ms)	Tx Off (ms)	VBW(kHz)	Tx On + Tx Off (ms)	Duty Cycle (%)
802.11a	2.055	0.117	0.51	2.172	94.61
802.11n(20MHz)	1.917	0.108	0.56	2.025	94.67
802.11n(40MHz)	0.912	0.135	1.1	1.047	87.11
802.11ac(20MHz)	1.920	0.045	0.56	1.965	97.71
802.11ac(40MHz)	0.918	0.063	1.1	0.981	93.58
802.11ac(80MHz)	0.424	0.068	2.4	0.492	86.18
802.11ax(20MHz)	1.479	0.039	0.68	1.518	97.43
802.11ax(40MHz)	0.753	0.057	1.5	0.810	92.96
802.11ax(80MHz)	0.376	0.07	2.7	0.446	84.30

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 Conducted Emission Band Edge and Radiated Emission, $VBW \geq 1/T$ will be used.

Beam-forming:

Test Mode	Tx On (ms)	Tx Off (ms)	VBW(kHz)	Tx On + Tx Off (ms)	Duty Cycle (%)
802.11n(20MHz)	1.915	0.11	0.56	2.025	94.57
802.11n(40MHz)	0.915	0.132	1.1	1.047	87.39
802.11ac(20MHz)	1.910	0.045	0.56	1.955	97.70
802.11ac(40MHz)	0.918	0.063	1.1	0.981	93.58
802.11ac(80MHz)	0.426	0.063	2.4	0.489	87.12
802.11ax(20MHz)	1.455	0.065	0.75	1.520	95.72
802.11ax(40MHz)	0.744	0.069	1.5	0.813	91.51
802.11ax(80MHz)	0.375	0.069	2.7	0.444	84.46

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 Conducted Emission Band Edge and Radiated Emission, $VBW \geq 1/T$ will be used.

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	$\pm 2.02\text{dB}$
Radiated Emission	Below 1GHz $\pm 3.8\text{ dB}$
	Above 1GHz $\pm 3.9\text{ dB}$
RF Antenna Port Conducted Emission	$\pm 1.27\text{dB}$
Radiated Emission Band Edge	$\pm 3.9\text{dB}$
Occupied Bandwidth	$\pm 1\text{kHz}$
Power Spectral Density	$\pm 1.27\text{dB}$
Frequency Stability	$\pm 100\text{ Hz}$

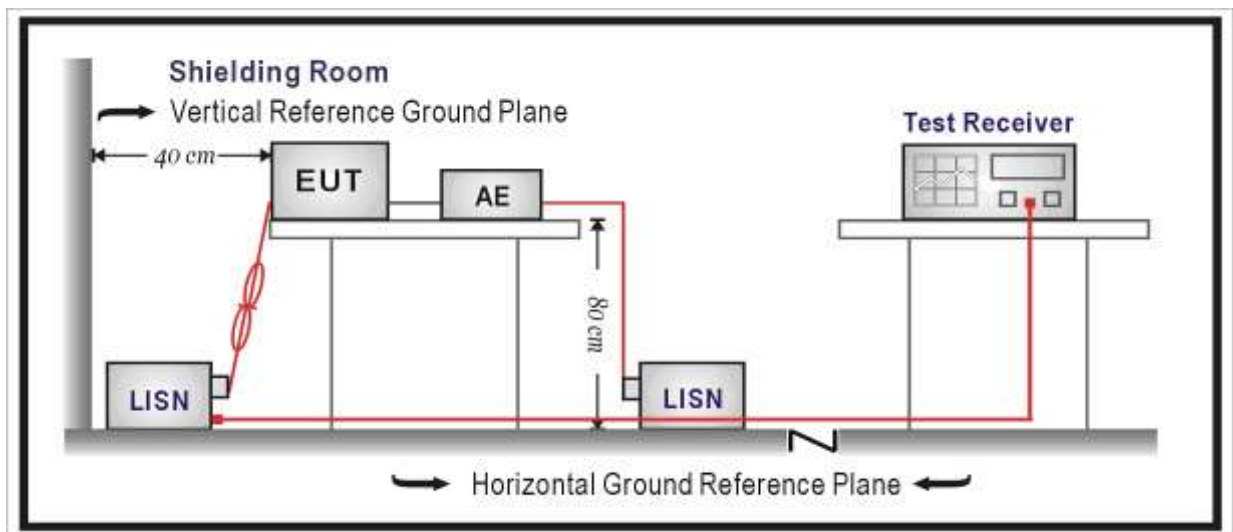
3. Conducted Emission

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	2019.03.05	2020.03.04
Two-Line V-Network	R&S	ENV 216	101189	2019.06.16	2020.06.15
Two-Line V-Network	R&S	ENV 216	101044	2019.09.16	2020.09.15
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
50ohm Termination	SHX	TF2	07081402	2019.09.16	2020.09.15
Temperature/Humidity Meter	Zhichen	ZC1-2	TR1-TH	2019.01.05	2020.01.04

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.

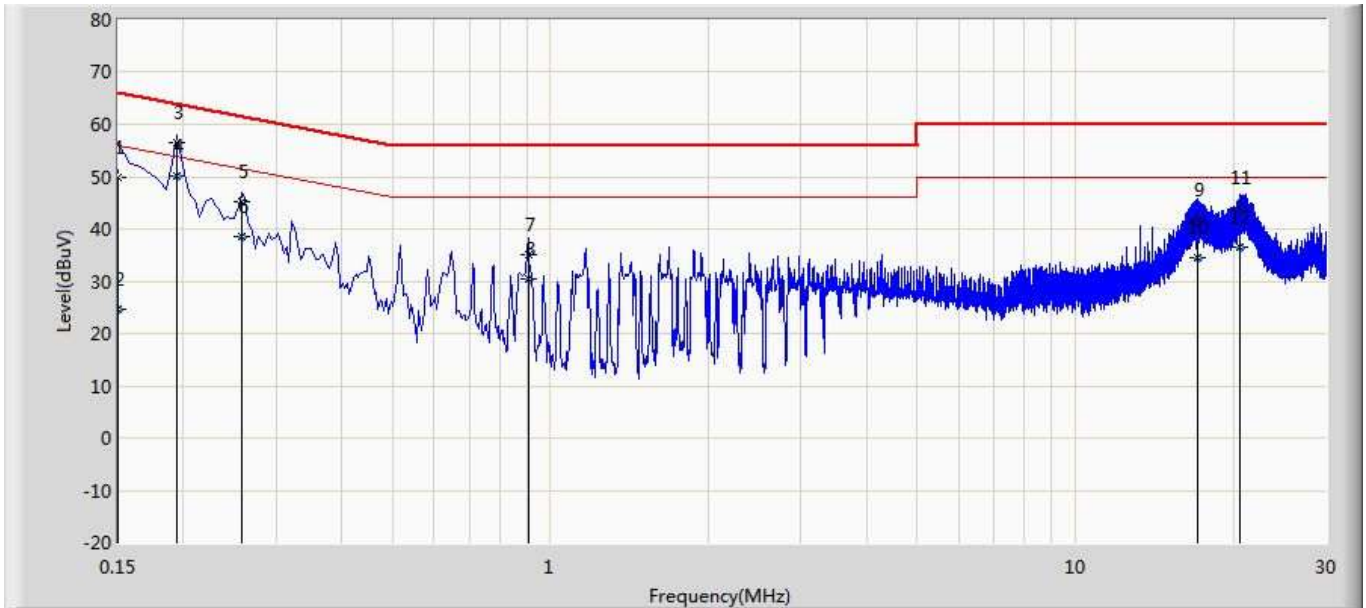
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

3.4. Test Procedure

Test Method			
	References Rule	Chapter	Item
<input checked="" type="checkbox"/>	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices

3.5. Test Result

Site: TR1	Time: 2019/11/20
Limit: FCC_Part15.207_CE_AC Power	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: Wireless Access Point	Power: AC 120V/60Hz
Note: Simultaneous transmission with 2.4G WIFI + 5G WIFI + BLE	

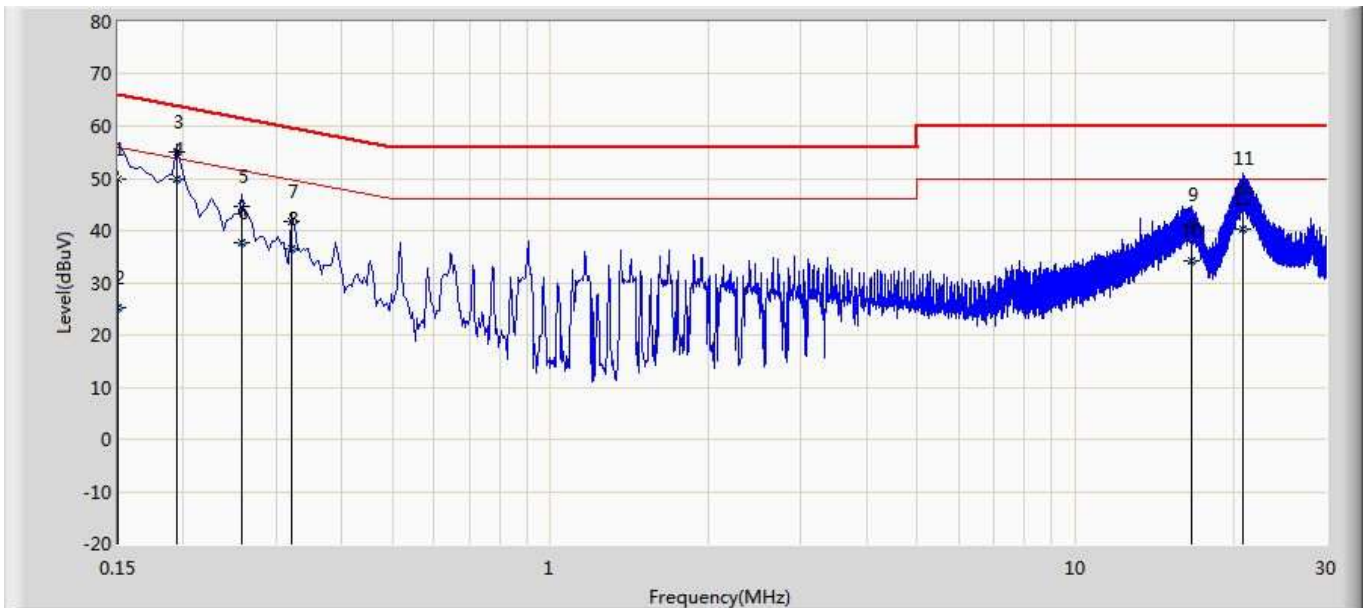


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.150	49.896	40.296	-16.104	66.000	9.570	0.029	0.000	QP
2		0.150	24.774	15.174	-31.226	56.000	9.570	0.029	0.000	AV
3		0.194	56.574	46.959	-7.290	63.864	9.587	0.028	0.000	QP
4	*	0.194	50.011	40.396	-3.852	53.864	9.587	0.028	0.000	AV
5		0.258	45.104	35.478	-16.392	61.496	9.594	0.032	0.000	QP
6		0.258	38.532	28.906	-12.964	51.496	9.594	0.032	0.000	AV
7		0.906	35.115	25.432	-20.885	56.000	9.627	0.057	0.000	QP
8		0.906	30.304	20.621	-15.696	46.000	9.627	0.057	0.000	AV
9		17.138	41.883	31.681	-18.117	60.000	9.936	0.266	0.000	QP
10		17.138	34.557	24.355	-15.443	50.000	9.936	0.266	0.000	AV
11		20.626	44.123	33.834	-15.877	60.000	9.996	0.293	0.000	QP
12		20.626	36.523	26.233	-13.477	50.000	9.996	0.293	0.000	AV

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Site: TR1	Time: 2019/11/20
Limit: FCC_Part15.207_CE_AC Power	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: Wireless Access Point	Power: AC 120V/60Hz
Note: Simultaneous transmission with 2.4G WIFI + 5G WIFI + BLE	



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	49.990	40.391	-16.010	66.000	9.570	0.029	0.000	QP
2		0.150	25.204	15.604	-30.796	56.000	9.570	0.029	0.000	AV
3		0.194	55.046	45.431	-8.817	63.864	9.587	0.028	0.000	QP
4	*	0.194	49.937	40.322	-3.926	53.864	9.587	0.028	0.000	AV
5		0.258	44.677	35.051	-16.819	61.496	9.594	0.032	0.000	QP
6		0.258	37.732	28.106	-13.764	51.496	9.594	0.032	0.000	AV
7		0.322	41.694	32.062	-17.961	59.655	9.598	0.035	0.000	QP
8		0.322	36.449	26.816	-13.206	49.655	9.598	0.035	0.000	AV
9		16.618	41.150	30.912	-18.850	60.000	9.976	0.262	0.000	QP
10		16.618	34.167	23.929	-15.833	50.000	9.976	0.262	0.000	AV
11		20.822	48.030	37.667	-11.970	60.000	10.068	0.295	0.000	QP
12		20.822	40.153	29.790	-9.847	50.000	10.068	0.295	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(Below 1GHz) / AC-2					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100573	2019.03.29	2020.03.28
Loop Antenna	R&S	HFH2-Z2	833799/003	2019.11.16	2020.11.15
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2019.10.16	2020.10.15
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2019.03.02	2020.03.01
Temperature/Humidity Meter	Zhichen	ZC1-2	AC2-TH	2019.01.04	2020.01.03

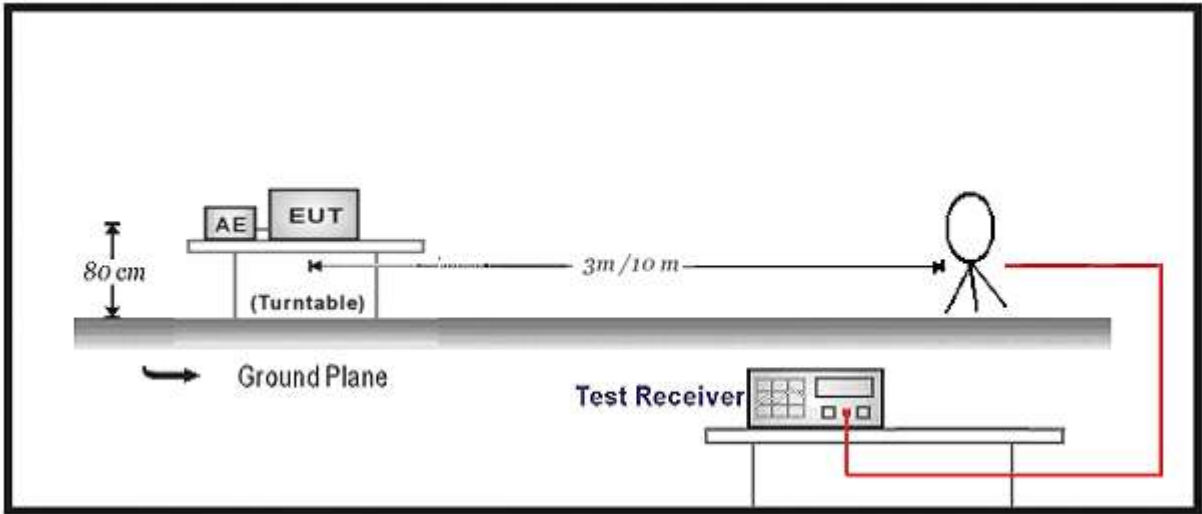
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2019.01.04	2020.01.03
Preamplifier	Miteq	NSP1800-25	1364185	2019.05.06	2020.05.05
Preamplifier	QuieTek	AP-040G	CHM-0906001	2019.05.06	2020.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2019.01.22	2020.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2019.11.25	2020.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2019.03.02	2020.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2019.03.02	2020.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2019.03.02	2020.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2019.06.10	2020.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2019.01.04	2020.01.03

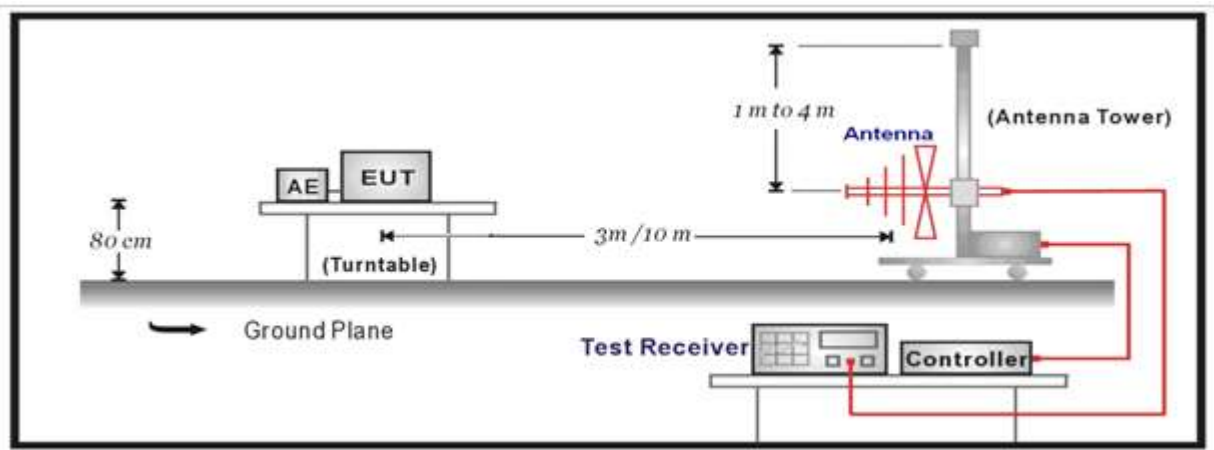
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

4.2. Test Setup

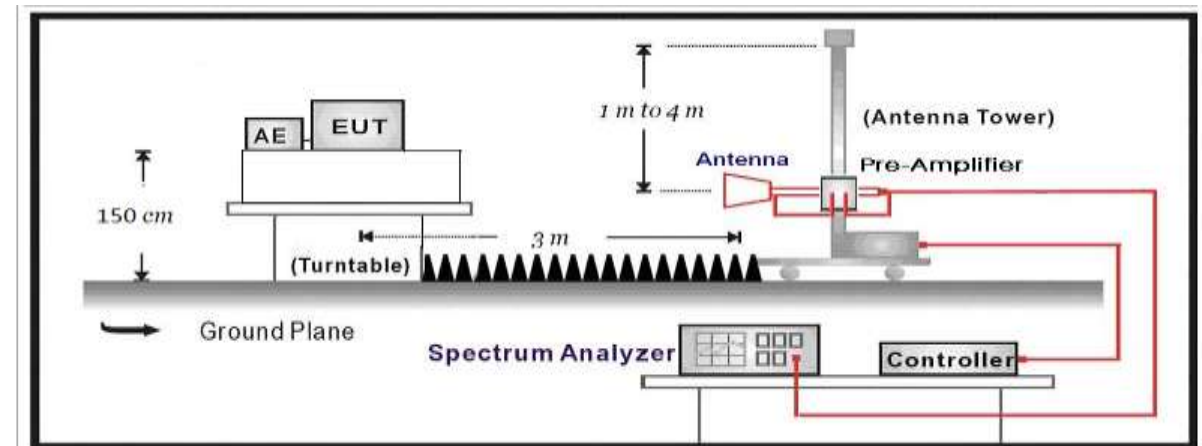
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



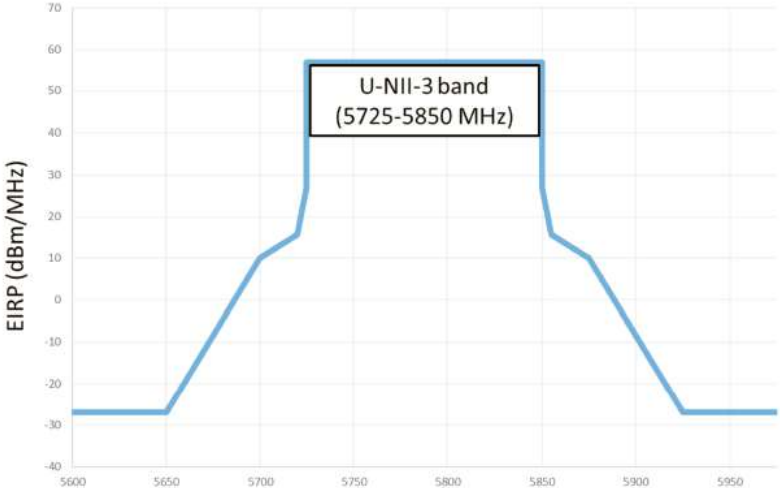
4.3. Limit

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).

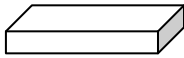
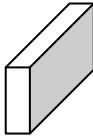
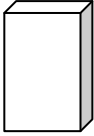
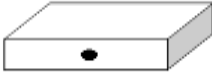



FCC Part 15 Subpart C Paragraph 15.205 (Restricted Band)			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 – 16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	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	 <p>U-NII-3 band (5725-5850 MHz)</p>	

4.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
<input type="checkbox"/>	ANSI C63.10	12.7.3	Emissions in non-restricted frequency bands
<input checked="" type="checkbox"/>	ANSI C63.10	12.7.2	Emissions in restricted frequency bands
	<input checked="" type="checkbox"/> ANSI C63.10	12.7.5	Radiated emission measurements
	<input checked="" type="checkbox"/> ANSI C63.10	12.7.6	Procedure for peak unwanted emissions measurements above 1000 MHz
	<input checked="" type="checkbox"/> ANSI C63.10	12.7.7	Procedures for average unwanted emissions measurements above 1000 MHz
	<input type="checkbox"/> ANSI C63.10	12.7.7.2	Method AD (average detection)—primary method
	<input checked="" type="checkbox"/> ANSI C63.10	12.7.7.3	Method VB-A (Alternative)
	<input checked="" type="checkbox"/> ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	<input checked="" type="checkbox"/> ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	<input checked="" type="checkbox"/> ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
<input type="checkbox"/>	FCC KDB 789033 D02v02r01	G.2	Unwanted Emissions that fall Outside of the Restricted Bands
<input type="checkbox"/>	FCC KDB 789033 D02v02r01	G.1	Unwanted Emissions in the Restricted Bands
	<input type="checkbox"/> FCC KDB 789033 D02v02r01	G.4	Procedure for Unwanted Emissions Measurements below 1000 MHz
	<input type="checkbox"/> FCC KDB 789033 D02v02r01	G.5	Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz
	<input type="checkbox"/> FCC KDB 789033 D02v02r01	G.6	Procedures for Average Unwanted Emissions Measurements above 1000 MHz
	<input type="checkbox"/> FCC KDB 789033 D02v02r01	G.6.c	Method AD (Average detection)—primary method
	<input type="checkbox"/> FCC KDB 789033 D02v02r01	G.6.d	Method VB (Averaging using reduced video bandwidth): Alternative method.

4.5. EUT test Axis definition

Item	Radiated Emission				
Device Category	<input checked="" type="checkbox"/>	Indoor use			
	<input type="checkbox"/>	Outdoor use			
	<input type="checkbox"/>	Fix position use			
	<input type="checkbox"/>	Client use			
Test mode	Mode 1-9				
Test method	<input checked="" type="checkbox"/>	Radiated			
		X Axis	Y Axis	Z Axis	
					
		Worst Axis <input checked="" type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>	
	<input type="checkbox"/>	Conducted			
	<input type="checkbox"/>	Chain 1			
					
	<input type="checkbox"/>	Chain 1	Chain 2		
					
	<input type="checkbox"/>	Chain 1	Chain 2	Chain 3	
					
	<input type="checkbox"/>	Chain 1	Chain 2	Chain 3	Chain 4
					

4.6. Test Result

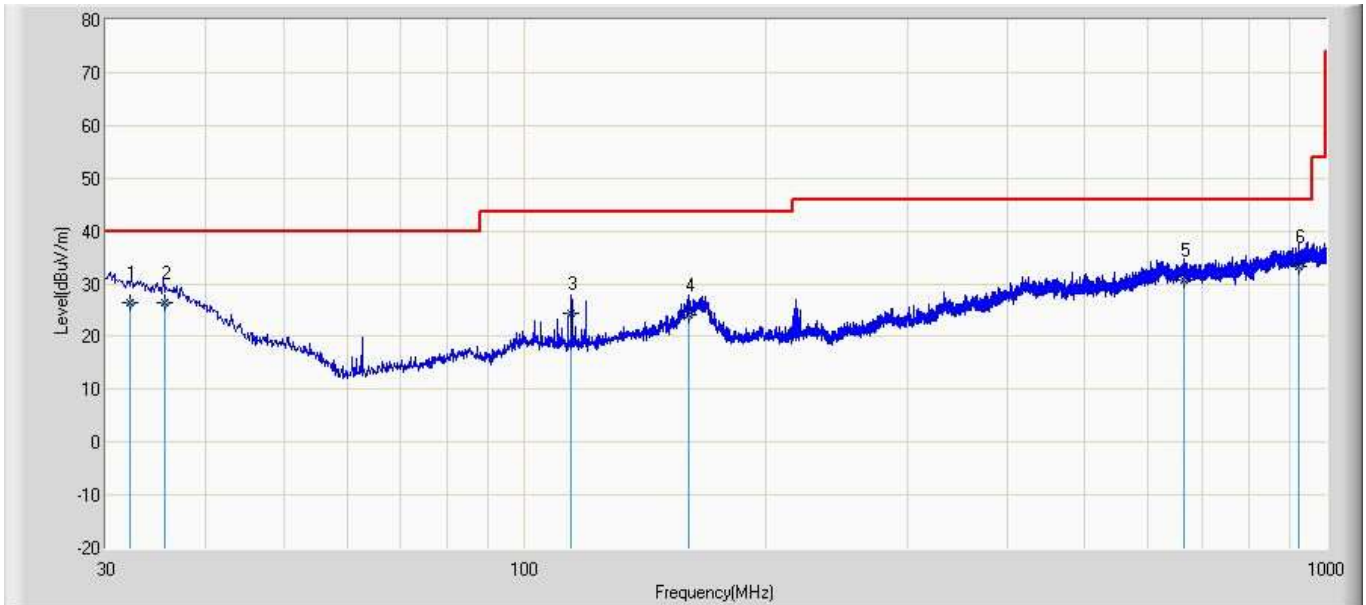
Note:

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.
4. As the radiated emission was performed, so conducted emission was not tested.
5. The data was too large so was showed in below attached files.

Appendix 3: 5GHz Radiated spurious emission

The worst case of Radiated Emission below 1GHz:

Site: AC2	Time: 2019/11/21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Horizontal
EUT: Wireless Access Point	Power: AC 120V/60Hz
Note: Simultaneous transmission with 2.4G WIFI +5G WIFI + BLE	

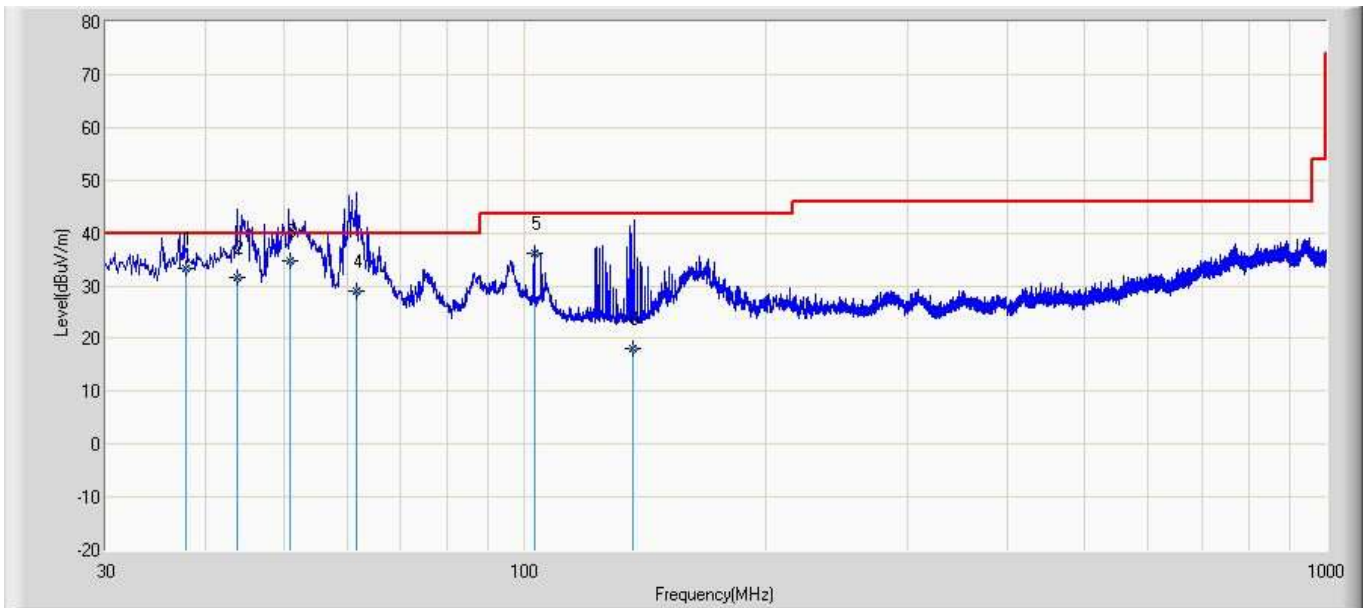


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		32.104	26.446	-0.300	-13.554	40.000	20.281	6.465	0.000	100	0	QP
2		35.463	26.378	0.700	-13.622	40.000	19.184	6.494	0.000	100	121	QP
3		114.365	24.431	8.600	-19.069	43.500	8.911	6.920	0.000	100	310	QP
4		160.234	24.114	6.800	-19.386	43.500	10.187	7.127	0.000	100	144	QP
5		663.850	30.768	1.300	-15.232	46.000	20.883	8.585	0.000	166	360	QP
6	*	924.362	33.239	0.900	-12.761	46.000	23.189	9.150	0.000	100	221	QP

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Site: AC2	Time: 2019/11/21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Vertical
EUT: Wireless Access Point	Power: AC 120V/60Hz
Note: Simultaneous transmission with 2.4G WIFI +5G WIFI + BLE	



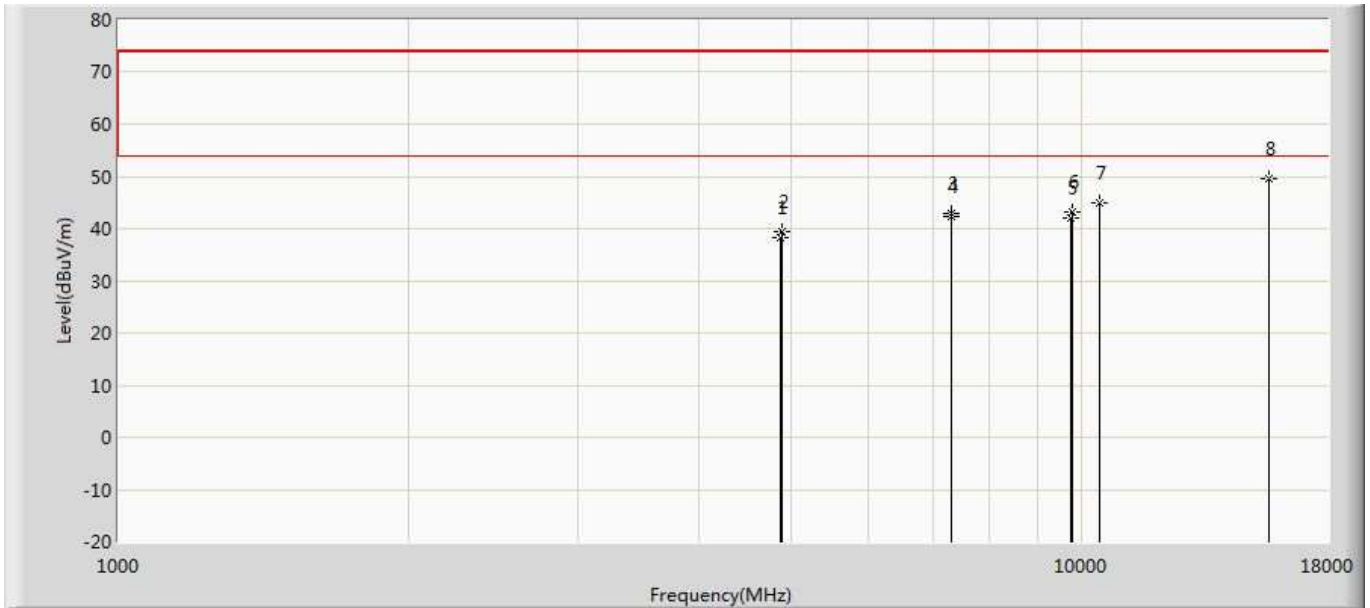
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		37.831	33.304	12.200	-6.696	40.000	14.594	6.511	0.000	100	306	QP
2		43.837	31.557	13.900	-8.443	40.000	11.104	6.552	0.000	100	232	QP
3	*	50.867	34.721	16.700	-5.279	40.000	11.429	6.592	0.000	100	137	QP
4		61.647	29.018	13.100	-10.982	40.000	9.262	6.656	0.000	100	186	QP
5		102.801	36.075	14.000	-7.425	43.500	15.208	6.867	0.000	100	0	QP
6		136.607	18.142	-2.100	-25.358	43.500	13.221	7.021	0.000	200	217	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: Simon	
Site: AC5	Time: 2019/11/19
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: Simultaneous transmission with 2.4G WIFI +5G WIFI + BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	38.212	33.365	-35.788	74.000	4.846	PK
2		4880.000	39.457	34.678	-34.543	74.000	4.778	PK
3		7311.000	42.834	34.843	-31.166	74.000	7.991	PK
4		7320.000	42.419	34.349	-31.581	74.000	8.071	PK
5		9748.000	42.062	32.357	-31.938	74.000	9.705	PK
6		9760.000	43.252	33.348	-30.748	74.000	9.904	PK
7		10440.000	44.864	32.513	-29.136	74.000	12.351	PK
8	*	15660.000	49.517	31.990	-24.483	74.000	17.527	PK

Engineer: Simon	
Site: AC5	Time: 2019/11/19
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: Simultaneous transmission with 2.4G WIFI +5G WIFI + BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	40.134	35.287	-33.866	74.000	4.846	PK
2		4880.000	39.918	35.139	-34.082	74.000	4.778	PK
3		7311.000	41.825	33.834	-32.175	74.000	7.991	PK
4		7320.000	42.024	33.954	-31.976	74.000	8.071	PK
5		9748.000	43.739	34.034	-30.261	74.000	9.705	PK
6		9760.000	43.207	33.303	-30.793	74.000	9.904	PK
7		10440.000	44.715	32.364	-29.285	74.000	12.351	PK
8	*	15660.000	49.772	32.245	-24.228	74.000	17.527	PK

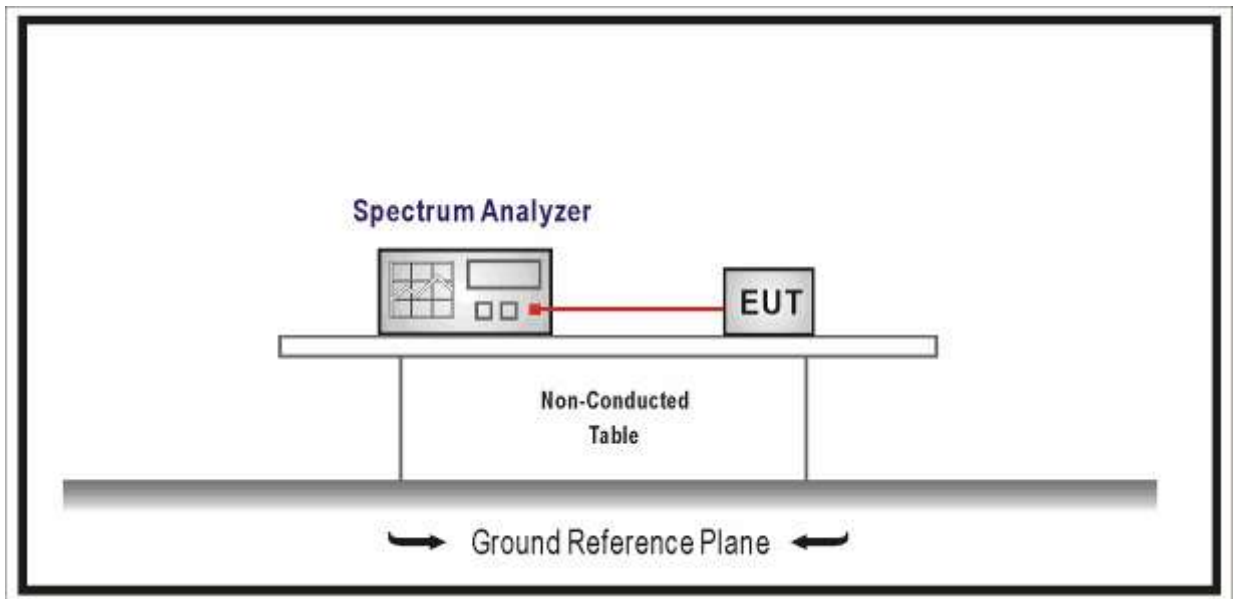
5. Emission bandwidth and occupied bandwidth

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	2019.02.04	2020.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2019.04.09	2020.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2019.04.09	2020.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2019.04.10	2020.04.09

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

5.2. Test Setup



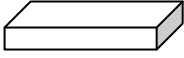
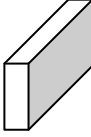
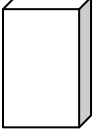
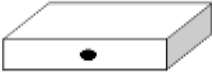



5.3. Limit

N/A

5.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
<input type="checkbox"/>	ANSI C63.10	12.4	Emission bandwidth and occupied bandwidth
	<input type="checkbox"/> ANSI C63.10	12.4.1	Emission bandwidth (26dB)
	<input type="checkbox"/> ANSI C63.10	12.4.2	Occupied bandwidth (99%)
<input checked="" type="checkbox"/>	FCC KDB 789033 D02v02r01	C	Bandwidth Measurement
	<input checked="" type="checkbox"/> FCC KDB 789033 D02v02r01	C.1	Emission Bandwidth (26dB)
	<input type="checkbox"/> FCC KDB 789033 D02v02r01	C.2	Minimum Emission Bandwidth for the band 5.725-5.85 GHz (6dB)
<input checked="" type="checkbox"/>	FCC KDB 789033 D02v02r01	D	99 Percent Occupied Bandwidth

5.5. EUT test Axis definition

Item	Occupied bandwidth			
Device Category	<input checked="" type="checkbox"/>	Indoor use		
	<input type="checkbox"/>	Outdoor use		
	<input type="checkbox"/>	Fix position use		
	<input type="checkbox"/>	Client use		
Test mode	Mode 1-9			
Test method	<input type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input checked="" type="checkbox"/>	Conducted		
	<input checked="" type="checkbox"/>	Chain 1		
				
	<input checked="" type="checkbox"/>	Chain 1	Chain 2	
				
	<input type="checkbox"/>	Chain 1	Chain 2	Chain 3
				
<input checked="" type="checkbox"/>	Chain 1	Chain 2	Chain 3	Chain 4
				

5.6. Test Result

Product Name	: Wireless Access Point	Power	: AC 120V/60Hz
Test Mode	: Mode 1~9	Test Site	: TR8
Test Date	: 2019.11.12	Test Engineer	: Simon

Mode 1: Transmit by 802.11a					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
CH36	5180	36.25	17.279	5171.361	Pass
CH44	5220	22.80	17.111	N/A	Pass
CH48	5240	36.68	17.563	5248.782	Pass

Mode 2: Transmit by 802.11n(20MHz)					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
CH36	5180	31.60	18.866	5170.567	Pass
CH44	5220	29.97	18.862	N/A	Pass
CH48	5240	24.76	18.208	5249.104	Pass

Mode 3: Transmit by 802.11n(40MHz)					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
CH38	5190	67.16	36.521	5171.740	Pass
CH46	5230	52.61	36.517	5248.259	Pass

Mode 4: Transmit by 802.11ac(20MHz)					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
CH36	5180	31.84	18.643	5170.679	Pass
CH44	5220	30.36	18.451	N/A	Pass
CH48	5240	24.01	18.458	5249.229	Pass

Mode 5: Transmit by 802.11ac(40MHz)					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
CH38	5190	54.47	36.495	5171.753	Pass
CH46	5230	48.14	36.503	5248.252	Pass

Mode 6: Transmit by 802.11ac(80MHz)					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
CH42	5210	112.3	76.300	5171.85/5248.15	Pass

Mode 7: Transmit by 802.11ax(20MHz)					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
CH36	5180	32.46	19.367	5170.317	Pass
CH44	5220	22.04	19.119	N/A	Pass
CH48	5240	25.88	19.197	5249.599	Pass

Mode 8: Transmit by 802.11ax(40MHz)					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
CH38	5190	46.83	37.677	5171.162	Pass
CH46	5230	40.93	37.723	5248.862	Pass

Mode 9: Transmit by 802.11ax(80MHz)					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
CH42	5210	97.46	77.283	5171.359/5248.642	Pass

The worst case of Occupied Bandwidth as below:



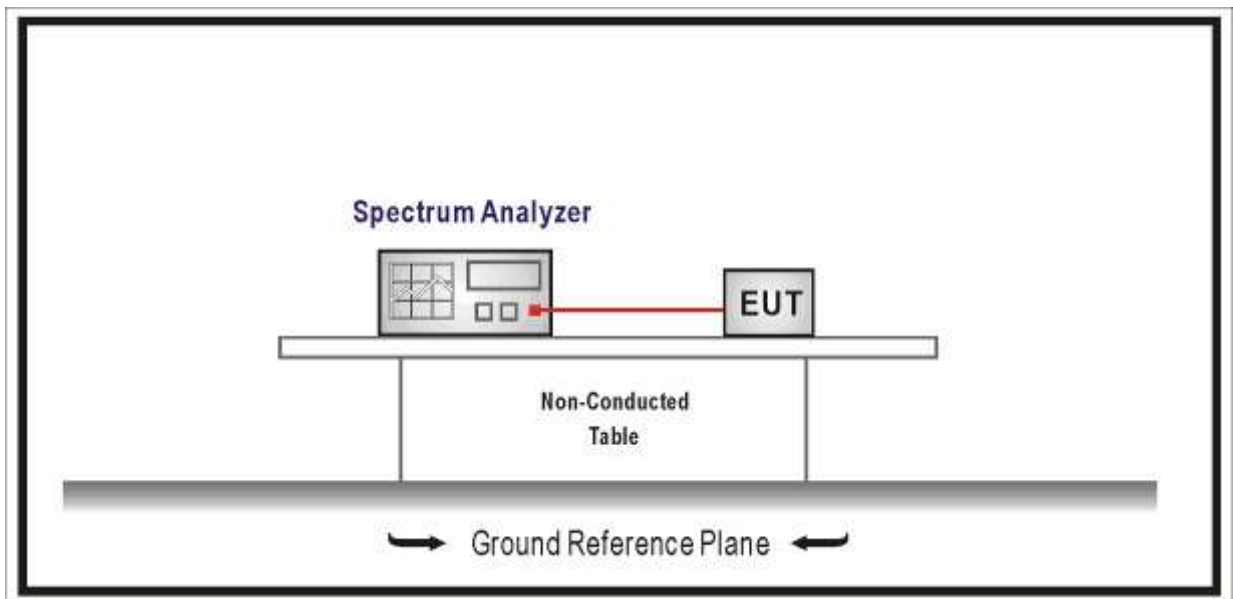
6. 6dB bandwidth

6.1. Test Equipment

6dB bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2019.02.04	2020.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2019.04.09	2020.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2019.04.09	2020.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2019.04.10	2020.04.09

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

6.2. Test Setup



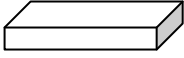
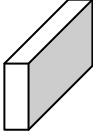
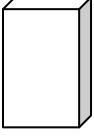
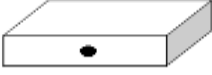

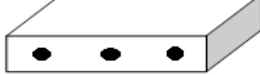

6.3. Limit

>500kHz

6.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
<input type="checkbox"/>	ANSI C63.10	12.4	Emission bandwidth and occupied bandwidth
	<input type="checkbox"/> ANSI C63.10	12.4.1	Emission bandwidth (26dB)
	<input type="checkbox"/> ANSI C63.10	12.4.2	Occupied bandwidth (99%)
<input checked="" type="checkbox"/>	FCC KDB 789033 D02v02r01	C	Bandwidth Measurement
	<input type="checkbox"/> FCC KDB 789033 D02v02r01	C.1	Emission Bandwidth (26dB)
	<input checked="" type="checkbox"/> FCC KDB 789033 D02v02r01	C.2	Minimum Emission Bandwidth for the band 5.725-5.85 GHz (6dB)
<input type="checkbox"/>	FCC KDB 789033 D02v02r01	D	99 Percent Occupied Bandwidth

6.5. EUT test Axis definition

Item	6dB bandwidth			
Device Category	<input checked="" type="checkbox"/>	Indoor use		
	<input type="checkbox"/>	Outdoor use		
	<input type="checkbox"/>	Fix position use		
	<input type="checkbox"/>	Client use		
Test mode	Mode 1-9			
Test method	<input type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input checked="" type="checkbox"/>	Conducted		
	<input checked="" type="checkbox"/>	Chain 1		
				
	<input checked="" type="checkbox"/>	Chain 1	Chain 2	
				
	<input type="checkbox"/>	Chain 1	Chain 2	Chain 3
				
<input checked="" type="checkbox"/>	Chain 1	Chain 2	Chain 3	Chain 4
				

6.6. Test Result

Product Name	: Wireless Access Point	Power	: AC 120V/60Hz
Test Mode	: Mode 1~9	Test Site	: TR8
Test Date	: 2019.11.12	Test Engineer	: Simon

Mode 1: Transmit by 802.11a				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
149	5745	16.38	>500	Pass
157	5785	16.52		Pass
165	5825	16.49		Pass
Mode 2: Transmit by 802.11n(20MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
149	5745	17.59	>500	Pass
157	5785	17.62		Pass
165	5825	17.10		Pass
Mode 3: Transmit by 802.11n(40MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
151	5755	36.14	>500	Pass
159	5795	35.01		Pass
Mode 4: Transmit by 802.11ac(20MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
149	5745	17.75	>500	Pass
157	5785	17.58		Pass
165	5825	17.17		Pass

Mode 5: Transmit by 802.11ac(40MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
151	5755	36.13	>500	Pass
159	5795	36.13		Pass
Mode 6: Transmit by 802.11ac(80MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
155	5775	74.58	>500	Pass
Mode 7: Transmit by 802.11ax(20MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
149	5745	18.79	>500	Pass
157	5785	19.00		Pass
165	5825	19.11		Pass
Mode 8: Transmit by 802.11ax(40MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
151	5755	36.40	>500	Pass
159	5795	37.09		Pass
Mode 9: Transmit by 802.11ax(80MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
155	5775	76.66	>500	Pass

The worst case of 6dB Bandwidth as below:

Mode 1: CH149 (5745MHz)



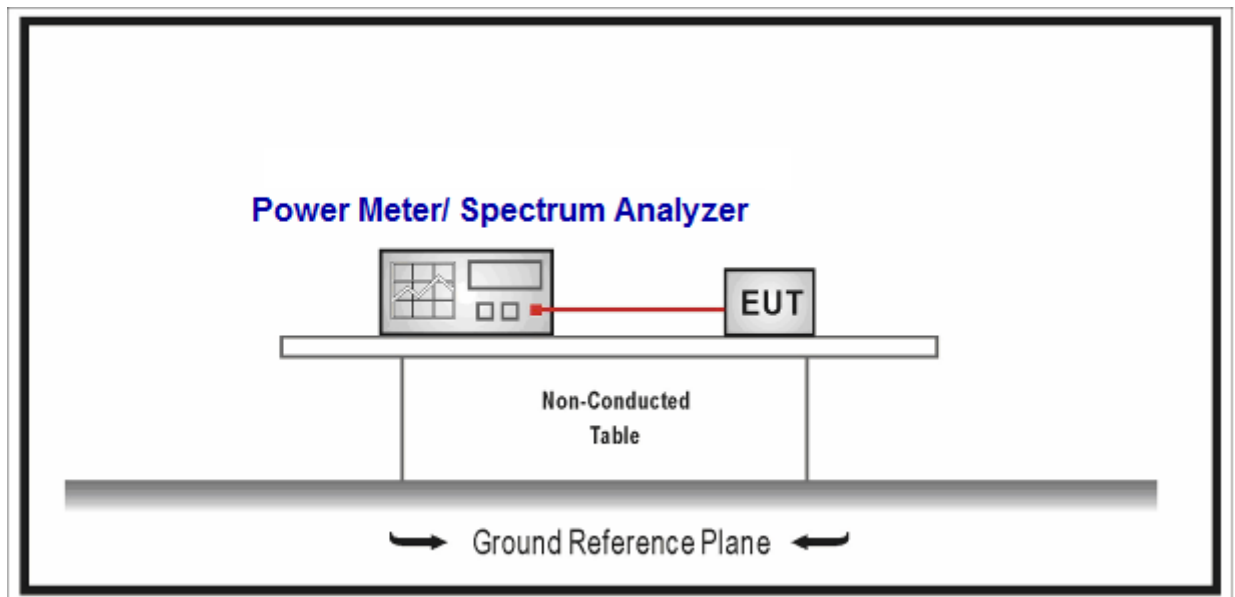
7. Power Output

7.1. Test Equipment

Power Output / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2019.01.04	2020.01.03
Spectrum Analyzer	Agilent	N9010A	MY48030494	2019.02.04	2020.02.03
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2019.10.14	2020.10.13
Power Sensor	Anritsu	MA2411B	0846014	2019.10.14	2020.10.13
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2019.04.10	2020.04.09

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

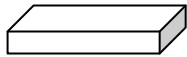
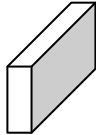
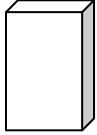
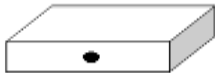
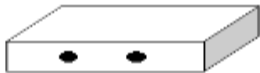


Fundamental emission output power Limit	
<input checked="" type="checkbox"/>	For the band 5.15-5.25 GHz
<input type="checkbox"/>	Outdoor access point: the maximum conducted output power shall not exceed 1 W. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 30 - (G_{TX} - 6)$ and $\leq 125\text{mW}$ at any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

7.4. Test Procedure

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

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

7.5. EUT test Axis definition

Item	output power			
Device Category	<input checked="" type="checkbox"/>	Indoor use		
	<input type="checkbox"/>	Outdoor use		
	<input type="checkbox"/>	Fix position use		
	<input type="checkbox"/>	Client use		
Test mode	Mode 1-9			
Test method	<input type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input checked="" type="checkbox"/>	Conducted		
	<input checked="" type="checkbox"/>	Chain 1		
				
	<input checked="" type="checkbox"/>	Chain 1	Chain 2	
				
	<input type="checkbox"/>	Chain 1	Chain 2	Chain 3
				
<input checked="" type="checkbox"/>	Chain 1	Chain 2	Chain 3	Chain 4
				

7.6. Test Result

Pass

The test data please refer to the files attached.

Appendix 4: 5GHz FCC RF output power

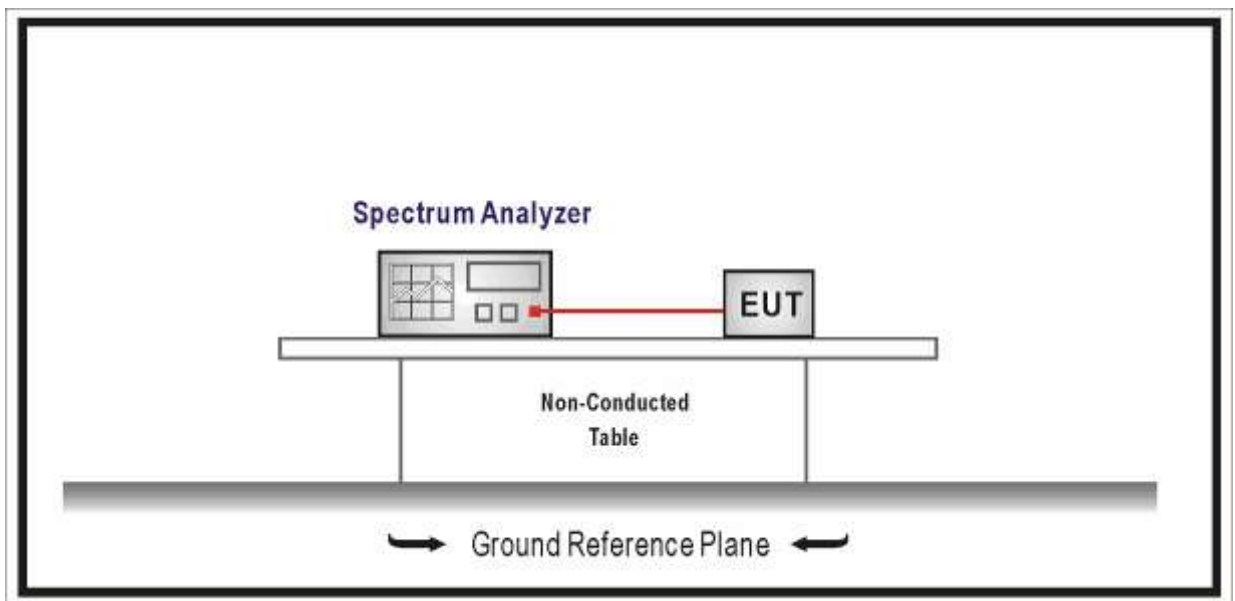
8. Peak Power Spectral Density

8.1. Test Equipment

Peak Power Spectral Density / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2019.02.04	2020.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2019.04.09	2020.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2019.04.09	2020.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2019.04.10	2020.04.09

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

8.2. Test Setup



8.3. Limit

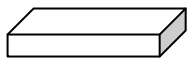
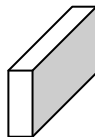
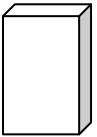


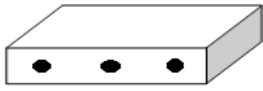

Fundamental emission output power Limit	
<input checked="" type="checkbox"/>	For the band 5.15-5.25 GHz
<input type="checkbox"/>	Outdoor access point: the maximum power spectral density shall not exceed 17 dBm/MHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 17 - (G_{TX} - 6)$
<input checked="" type="checkbox"/>	Indoor access point: the maximum power spectral density shall not exceed 17 dBm/MHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 17 - (G_{TX} - 6)$
<input type="checkbox"/>	Fixed point-to-point access points: the maximum power spectral density shall not exceed 17 dBm/MHz. If $G_{TX} > 23\text{dBi}$, then $P_{out} \leq 17 - (G_{TX} - 23)$
<input type="checkbox"/>	Mobile and portable client devices: the maximum power spectral density shall not exceed 11 dBm/MHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 11 - (G_{TX} - 6)$
<input type="checkbox"/>	For the 5.25-5.35 GHz:
<input type="checkbox"/>	the maximum power spectral density shall not exceed 11 dBm/MHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 11 - (G_{TX} - 6)$
<input type="checkbox"/>	For the 5.47-5.725 GHz:
<input type="checkbox"/>	the maximum power spectral density shall not exceed 11 dBm/MHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 11 - (G_{TX} - 6)$
<input checked="" type="checkbox"/>	For the band 5.725-5.85 GHz:
<input checked="" type="checkbox"/>	the maximum power spectral density shall not exceed 30 dBm/500KHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 30 - (G_{TX} - 6)$
Note 1: G_{TX} directional gain of transmitting antennas.	
Note 2: P_{out} is maximum peak conducted output power.	

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

8.4. Test Procedure

Fundamental emission output power Test Method			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	12.5	Peak power spectral density
<input checked="" type="checkbox"/>	FCC KDB 789033 D02v02r01	F	Maximum Power Spectral Density (PSD)

8.5. EUT test Axis definition

Item	Power Spectral Density			
Device Category	<input checked="" type="checkbox"/>	Indoor use		
	<input type="checkbox"/>	Outdoor use		
	<input type="checkbox"/>	Fix position use		
	<input type="checkbox"/>	Client use		
Test mode	Mode 1-9			
Test method	<input type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input checked="" type="checkbox"/>	Conducted		
	<input checked="" type="checkbox"/>	Chain 1		
				
	<input checked="" type="checkbox"/>	Chain 1	Chain 2	
				
	<input type="checkbox"/>	Chain 1	Chain 2	Chain 3
				
	<input checked="" type="checkbox"/>	Chain 1	Chain 2	Chain 3
				

8.6. Test Result

Product Name	: Wireless Access Point	Power	: AC 120V/60Hz
Test Mode	: Mode 1~9	Test Site	: TR8
Test Date	: 2019.11.18	Test Engineer	: Simon

Radio 1:

Mode 1: Transmit by 802.11a with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	6.793	0.237	7.030	17	Pass
CH44	5220	7.070	0.237	7.307	17	Pass
CH48	5240	7.033	0.237	7.270	17	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	5.196	0.237	5.433	30	Pass
CH157	5785	4.000	0.237	4.237	30	Pass
CH165	5825	2.714	0.237	2.951	30	Pass

Mode 2: Transmit by 802.11n(20MHz) with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	7.505	0.231	7.736	17	Pass
CH44	5220	7.165	0.231	7.396	17	Pass
CH48	5240	6.911	0.231	7.142	17	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	5.290	0.231	5.521	30	Pass
CH157	5785	4.047	0.231	4.278	30	Pass
CH165	5825	3.169	0.231	3.400	30	Pass

Mode 3: Transmit by 802.11n(40MHz) with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	3.219	0.598	3.817	17	Pass
CH46	5230	1.681	0.598	2.279	17	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH151	5755	-1.842	0.598	-1.244	30	Pass
CH159	5795	0.486	0.598	1.084	30	Pass

Mode 4: Transmit by 802.11ac(20MHz) with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	9.339	0.090	9.429	17	Pass
CH44	5220	8.645	0.090	8.735	17	Pass
CH48	5240	8.810	0.090	8.900	17	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	6.090	0.090	6.180	30	Pass
CH157	5785	5.426	0.090	5.516	30	Pass
CH165	5825	5.070	0.090	5.160	30	Pass

Mode 5: Transmit by 802.11ac(40MHz) with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	5.304	0.297	5.601	17	Pass
CH46	5230	5.383	0.297	5.680	17	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH151	5755	3.540	0.297	3.837	30	Pass
CH159	5795	2.631	0.297	2.928	30	Pass

Mode 6: Transmit by 802.11ac(80MHz) with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH42	5210	1.568	0.572	2.140	17	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH155	5775	-0.967	0.572	-0.395	30	Pass

Mode 7: Transmit by 802.11ax(20MHz) with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	9.605	0.130	9.735	17	Pass
CH44	5220	8.543	0.130	8.673	17	Pass
CH48	5240	8.379	0.130	8.509	17	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	5.802	0.130	5.932	30	Pass
CH157	5785	5.233	0.130	5.363	30	Pass
CH165	5825	4.847	0.130	4.977	30	Pass

Mode 8: Transmit by 802.11ax(40MHz) with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	5.678	0.419	6.097	17	Pass
CH46	5230	5.635	0.419	6.054	17	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH151	5755	3.256	0.419	3.675	30	Pass
CH159	5795	2.590	0.419	3.009	30	Pass

Mode 9: Transmit by 802.11ax(80MHz) with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH42	5210	1.815	0.733	2.548	17	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH155	5775	-1.791	0.733	-1.058	30	Pass

Radio 2:

Mode 1: Transmit by 802.11a with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	7.651	0.247	7.898	17	Pass
CH44	5220	8.614	0.247	8.861	17	Pass
CH48	5240	7.218	0.247	7.465	17	Pass

Mode 1: Transmit by 802.11a with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	5.235	0.247	5.482	12.28	Pass
CH44	5220	8.132	0.247	8.379	12.28	Pass
CH48	5240	8.166	0.247	8.413	12.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: $PSD\ limit = 17dBm/MHz - 10Log(2) - (4.7 + 10Log(2) - 6)$

Mode 2: Transmit by 802.11n(20MHz) with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	7.367	0.242	7.609	17	Pass
CH44	5220	7.856	0.242	8.098	17	Pass
CH48	5240	7.139	0.242	7.381	17	Pass

Mode 2: Transmit by 802.11n(20MHz) with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	4.919	0.242	5.161	12.28	Pass
CH44	5220	7.498	0.242	7.740	12.28	Pass
CH48	5240	7.284	0.242	7.526	12.28	Pass

Mode 2: Transmit by 802.11n(20MHz) with 2*2 Beamforming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	3.988	0.244	4.232	12.28	Pass
CH44	5220	7.108	0.244	7.352	12.28	Pass
CH48	5240	6.949	0.244	7.193	12.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 3: Transmit by 802.11n(40MHz) with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	3.497	0.585	4.082	17	Pass
CH46	5230	4.322	0.585	4.907	17	Pass

Mode 3: Transmit by 802.11n(40MHz) with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	1.077	0.585	1.662	12.28	Pass
CH46	5230	5.186	0.585	5.771	12.28	Pass

Mode 3: Transmit by 802.11n(40MHz) with 2*2 Beamforming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	-0.077	0.601	0.524	12.28	Pass
CH46	5230	4.504	0.601	5.105	12.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 4: Transmit by 802.11ac(20MHz) with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	7.301	0.090	7.391	17	Pass
CH44	5220	8.160	0.090	8.250	17	Pass
CH48	5240	7.794	0.090	7.884	17	Pass

Mode 4: Transmit by 802.11ac(20MHz) with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	5.200	0.090	5.290	12.28	Pass
CH44	5220	8.212	0.090	8.302	12.28	Pass
CH48	5240	7.172	0.090	7.262	12.28	Pass

Mode 4: Transmit by 802.11ac(20MHz) with 2*2 Beamforming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	4.339	0.090	4.429	12.28	Pass
CH44	5220	7.540	0.090	7.630	12.28	Pass
CH48	5240	6.588	0.090	6.678	12.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 5: Transmit by 802.11ac(40MHz) with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	4.186	0.315	4.501	17	Pass
CH46	5230	5.137	0.315	5.452	17	Pass

Mode 5: Transmit by 802.11ac(40MHz) with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	1.011	0.315	1.326	12.28	Pass
CH46	5230	5.404	0.315	5.719	12.28	Pass

Mode 5: Transmit by 802.11ac(40MHz) with 2*2 Beamforming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	0.259	0.302	0.561	12.28	Pass
CH46	5230	4.716	0.302	5.018	12.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 6: Transmit by 802.11ac(80MHz) with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH42	5210	-0.515	0.599	0.084	17	Pass

Mode 6: Transmit by 802.11ac(80MHz) with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH42	5210	-2.000	0.599	-1.401	12.28	Pass

Mode 6: Transmit by 802.11ac(80MHz) with 2*2 Beamforming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH42	5210	-2.585	0.599	-1.986	12.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 7: Transmit by 802.11ax(20MHz) with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	7.431	0.116	7.547	17	Pass
CH44	5220	8.498	0.116	8.614	17	Pass
CH48	5240	7.016	0.116	7.132	17	Pass

Mode 7: Transmit by 802.11ax(20MHz) with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	4.753	0.116	4.869	12.28	Pass
CH44	5220	8.265	0.116	8.381	12.28	Pass
CH48	5240	7.561	0.116	7.677	12.28	Pass

Mode 7: Transmit by 802.11ax(20MHz) with 2*2 Beamforming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	4.838	0.130	4.968	12.28	Pass
CH44	5220	8.071	0.130	8.201	12.28	Pass
CH48	5240	6.844	0.130	6.974	12.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 8: Transmit by 802.11ax(40MHz) with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	1.393	0.369	1.762	17	Pass
CH46	5230	4.828	0.369	5.197	17	Pass

Mode 8: Transmit by 802.11ax(40MHz) with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	1.059	0.369	1.428	12.28	Pass
CH46	5230	5.100	0.369	5.469	12.28	Pass

Mode 8: Transmit by 802.11ax(40MHz) with 2*2 Beamforming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	0.653	0.352	1.005	12.28	Pass
CH46	5230	4.507	0.352	4.859	12.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 9: Transmit by 802.11ax(80MHz) with SISO						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH42	5210	-0.283	0.733	0.450	17	Pass

Mode 9: Transmit by 802.11ax(80MHz) with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH42	5210	-2.393	0.733	-1.660	12.28	Pass

Mode 9: Transmit by 802.11ax(80MHz) with 2*2 Beamforming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH42	5210	-1.710	0.699	-1.011	12.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: $PSD\ limit = 17dBm/MHz - 10Log(2) - (4.7 + 10Log(2) - 6)$

Radio 3:

Mode 1: Transmit by 802.11a with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	4.543	0.241	4.784	12.28	Pass
CH44	5220	6.731	0.241	6.972	12.28	Pass
CH48	5240	6.313	0.241	6.554	12.28	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	4.028	0.241	4.269	25.28	Pass
CH157	5785	4.073	0.241	4.314	25.28	Pass
CH165	5825	3.162	0.241	3.403	25.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 1: Transmit by 802.11a with 4*4 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	1.780	0.241	2.021	6.26	Pass
CH44	5220	2.819	0.241	3.060	6.26	Pass
CH48	5240	1.966	0.241	2.207	6.26	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	2.151	0.241	2.392	19.26	Pass
CH157	5785	1.532	0.241	1.773	19.26	Pass
CH165	5825	0.473	0.241	0.714	19.26	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(4) – (4.7 + 10Log(4) - 6)

Mode 2: Transmit by 802.11n(20MHz) with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	6.623	0.238	6.861	12.28	Pass
CH44	5220	6.043	0.238	6.281	12.28	Pass
CH48	5240	5.518	0.238	5.756	12.28	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	4.768	0.238	5.006	25.28	Pass
CH157	5785	3.623	0.238	3.861	25.28	Pass
CH165	5825	2.824	0.238	3.062	25.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 2: Transmit by 802.11n(20MHz) with 4*4 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	2.108	0.238	2.346	6.26	Pass
CH44	5220	3.081	0.238	3.319	6.26	Pass
CH48	5240	2.767	0.238	3.005	6.26	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	1.533	0.238	1.771	19.26	Pass
CH157	5785	1.305	0.238	1.543	19.26	Pass
CH165	5825	1.407	0.238	1.645	19.26	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(4) – (4.7 + 10Log(4) - 6)

Mode 2: Transmit by 802.11n(20MHz) with 2*2 Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	2.145	0.242	2.387	12.28	Pass
CH44	5220	6.140	0.242	6.382	12.28	Pass
CH48	5240	6.238	0.242	6.480	12.28	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	4.277	0.242	4.519	25.28	Pass
CH157	5785	4.544	0.242	4.786	25.28	Pass
CH165	5825	4.663	0.242	4.905	25.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 2: Transmit by 802.11n(20MHz) with 4*4 Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	1.839	0.242	2.081	6.26	Pass
CH44	5220	3.024	0.242	3.266	6.26	Pass
CH48	5240	3.185	0.242	3.427	6.26	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	5.124	0.242	5.366	19.26	Pass
CH157	5785	4.384	0.242	4.626	19.26	Pass
CH165	5825	4.951	0.242	5.193	19.26	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(4) – (4.7 + 10Log(4) - 6)

Mode 3: Transmit by 802.11n(40MHz) with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	0.888	0.599	1.487	12.28	Pass
CH46	5230	2.214	0.599	2.813	12.28	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH151	5755	-0.587	0.599	0.012	25.28	Pass
CH159	5795	-1.699	0.599	-1.100	25.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 3: Transmit by 802.11n(40MHz) with 4*4 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	-3.437	0.599	-2.838	6.26	Pass
CH46	5230	0.044	0.599	0.643	6.26	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH151	5755	-1.392	0.599	-0.793	19.26	Pass
CH159	5795	-1.503	0.599	-0.904	19.26	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(4) – (4.7 + 10Log(4) - 6)

Mode 3: Transmit by 802.11n(40MHz) with 2*2 Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	-0.192	0.585	0.393	12.28	Pass
CH46	5230	0.373	0.585	0.958	12.28	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH151	5755	2.513	0.585	3.098	25.28	Pass
CH159	5795	1.859	0.585	2.444	25.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 3: Transmit by 802.11n(40MHz) with 4*4 Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	-2.059	0.585	-1.474	6.26	Pass
CH46	5230	0.286	0.585	0.871	6.26	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH151	5755	1.681	0.585	2.266	19.26	Pass
CH159	5795	0.918	0.585	1.503	19.26	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(4) – (4.7 + 10Log(4) - 6)

Mode 4: Transmit by 802.11ac(20MHz) with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	8.088	0.101	8.189	12.28	Pass
CH44	5220	7.903	0.101	8.004	12.28	Pass
CH48	5240	7.991	0.101	8.092	12.28	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	5.715	0.101	5.816	25.28	Pass
CH157	5785	5.003	0.101	5.104	25.28	Pass
CH165	5825	5.167	0.101	5.268	25.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 4: Transmit by 802.11ac(20MHz) with 4*4 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	1.715	0.101	1.816	6.26	Pass
CH44	5220	2.239	0.101	2.340	6.26	Pass
CH48	5240	2.310	0.101	2.411	6.26	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	1.204	0.101	1.305	19.26	Pass
CH157	5785	0.722	0.101	0.823	19.26	Pass
CH165	5825	0.750	0.101	0.851	19.26	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(4) – (4.7 + 10Log(4) - 6)

Mode 4: Transmit by 802.11ac(20MHz) with 2*2 Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	2.324	0.101	2.425	12.28	Pass
CH44	5220	6.403	0.101	6.504	12.28	Pass
CH48	5240	6.438	0.101	6.539	12.28	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	5.449	0.101	5.550	25.28	Pass
CH157	5785	4.804	0.101	4.905	25.28	Pass
CH165	5825	4.714	0.101	4.815	25.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 4: Transmit by 802.11ac(20MHz) with 4*4 Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	2.202	0.101	2.303	6.26	Pass
CH44	5220	3.163	0.101	3.264	6.26	Pass
CH48	5240	3.376	0.101	3.477	6.26	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	4.750	0.101	4.851	19.26	Pass
CH157	5785	4.421	0.101	4.522	19.26	Pass
CH165	5825	3.682	0.101	3.783	19.26	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(4) – (4.7 + 10Log(4) - 6)

Mode 5: Transmit by 802.11ac(40MHz) with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	4.737	0.288	5.025	12.28	Pass
CH46	5230	5.289	0.288	5.577	12.28	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH151	5755	2.448	0.288	2.736	25.28	Pass
CH159	5795	2.891	0.288	3.179	25.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 5: Transmit by 802.11ac(40MHz) with 4*4 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	-0.785	0.288	-0.497	6.26	Pass
CH46	5230	1.162	0.288	1.450	6.26	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH151	5755	-1.023	0.288	-0.735	19.26	Pass
CH159	5795	-1.562	0.288	-1.274	19.26	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(4) – (4.7 + 10Log(4) - 6)

Mode 5: Transmit by 802.11ac(40MHz) with 2*2 Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	-0.679	0.288	-0.391	12.28	Pass
CH46	5230	2.538	0.288	2.826	12.28	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH151	5755	2.212	0.288	2.500	25.28	Pass
CH159	5795	2.230	0.288	2.518	25.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 5: Transmit by 802.11ac(40MHz) with 4*4 Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	-2.241	0.288	-1.953	6.26	Pass
CH46	5230	1.120	0.288	1.408	6.26	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH151	5755	1.433	0.288	1.721	19.26	Pass
CH159	5795	-0.133	0.288	0.155	19.26	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(4) – (4.7 + 10Log(4) - 6)

Mode 6: Transmit by 802.11ac(80MHz) with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH42	5210	0.411	0.646	1.057	12.28	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH155	5775	-2.607	0.646	-1.961	25.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 6: Transmit by 802.11ac(80MHz) with 4*4 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH42	5210	-4.214	0.646	-3.568	6.26	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH155	5775	-5.347	0.646	-4.701	19.26	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(4) – (4.7 + 10Log(4) - 6)

Mode 6: Transmit by 802.11ac(80MHz) with 2*2 Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH42	5210	0.339	0.599	0.938	12.28	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH155	5775	-2.357	0.599	-1.758	25.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 6: Transmit by 802.11ac(80MHz) with 4*4 Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH42	5210	-6.008	0.599	-5.409	6.26	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH155	5775	-2.508	0.599	-1.909	19.26	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(4) – (4.7 + 10Log(4) - 6)

Mode 7: Transmit by 802.11ax(20MHz) with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	7.548	0.113	7.661	12.28	Pass
CH44	5220	7.674	0.113	7.787	12.28	Pass
CH48	5240	8.212	0.113	8.325	12.28	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	5.230	0.113	5.343	25.28	Pass
CH157	5785	4.705	0.113	4.818	25.28	Pass
CH165	5825	4.241	0.113	4.354	25.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 7: Transmit by 802.11ax(20MHz) with 4*4 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	1.905	0.113	2.018	6.26	Pass
CH44	5220	2.290	0.113	2.403	6.26	Pass
CH48	5240	2.307	0.113	2.420	6.26	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	1.188	0.113	1.301	19.26	Pass
CH157	5785	0.512	0.113	0.625	19.26	Pass
CH165	5825	0.347	0.113	0.460	19.26	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(4) – (4.7 + 10Log(4) - 6)

Mode 7: Transmit by 802.11ax(20MHz) with 2*2 Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	2.781	0.190	2.971	12.28	Pass
CH44	5220	6.307	0.190	6.497	12.28	Pass
CH48	5240	6.732	0.190	6.922	12.28	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	5.584	0.190	5.774	25.28	Pass
CH157	5785	4.727	0.190	4.917	25.28	Pass
CH165	5825	4.834	0.190	5.024	25.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 7: Transmit by 802.11ax(20MHz) with 4*4 Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH36	5180	2.294	0.190	2.484	6.26	Pass
CH44	5220	3.641	0.190	3.831	6.26	Pass
CH48	5240	3.573	0.190	3.763	6.26	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH149	5745	5.426	0.190	5.616	19.26	Pass
CH157	5785	4.798	0.190	4.988	19.26	Pass
CH165	5825	4.435	0.190	4.625	19.26	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(4) – (4.7 + 10Log(4) - 6)

Mode 8: Transmit by 802.11ax(40MHz) with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	3.504	0.317	3.821	12.28	Pass
CH46	5230	3.981	0.317	4.298	12.28	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH151	5755	1.044	0.317	1.361	25.28	Pass
CH159	5795	1.383	0.317	1.700	25.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 8: Transmit by 802.11ax(40MHz) with 4*4 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	-2.441	0.317	-2.124	6.26	Pass
CH46	5230	0.496	0.317	0.813	6.26	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH151	5755	-1.326	0.317	-1.009	19.26	Pass
CH159	5795	-1.494	0.317	-1.177	19.26	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(4) – (4.7 + 10Log(4) - 6)

Mode 8: Transmit by 802.11ax(40MHz) with 2*2 Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	-0.199	0.385	0.186	12.28	Pass
CH46	5230	2.121	0.385	2.506	12.28	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH151	5755	2.246	0.385	2.631	25.28	Pass
CH159	5795	2.337	0.385	2.722	25.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 8: Transmit by 802.11ax(40MHz) with 4*4 Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH38	5190	-3.807	0.385	-3.422	6.26	Pass
CH46	5230	1.411	0.385	1.796	6.26	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH151	5755	2.047	0.385	2.432	19.26	Pass
CH159	5795	1.756	0.385	2.141	19.26	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(4) – (4.7 + 10Log(4) - 6)

Mode 9: Transmit by 802.11ax(80MHz) with 2*2 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH42	5210	-0.442	0.742	0.300	12.28	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH155	5775	-3.507	0.742	-2.765	25.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 9: Transmit by 802.11ax(80MHz) with 4*4 CDD						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH42	5210	-4.602	0.742	-3.860	6.26	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH155	5775	-5.271	0.742	-4.529	19.26	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(4) – (4.7 + 10Log(4) - 6)

Mode 9: Transmit by 802.11ax(80MHz) with 2*2 Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH42	5210	0.549	0.733	1.282	12.28	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH155	5775	-1.971	0.733	-1.238	25.28	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(2) – (4.7 + 10Log(2) - 6)

Mode 9: Transmit by 802.11ax(80MHz) with 4*4 Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)	Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Worst Chain				
CH42	5210	-5.214	0.733	-4.481	6.26	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)	Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Worst Chain				
CH155	5775	-2.215	0.733	-1.482	19.26	Pass

Note1: Both of two chains are tested and only the worst chain of the PSD was showed.

2: PSD limit = 17dBm/MHz – 10Log(4) – (4.7 + 10Log(4) - 6)

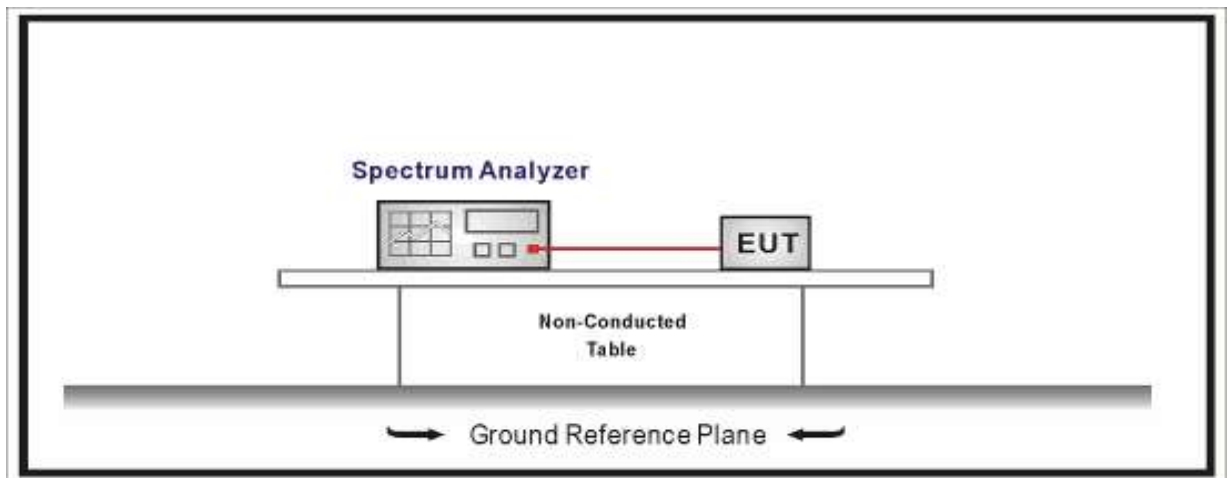
9. Band Edge

9.1. Test Equipment

Band Edge / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2019.02.04	2020.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2019.04.09	2020.04.08
Signal Analyzer	R&S	FSV	104212	2019.02.23	2020.02.22
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2019.04.09	2020.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2019.04.10	2020.04.09

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

9.2. Test Setup



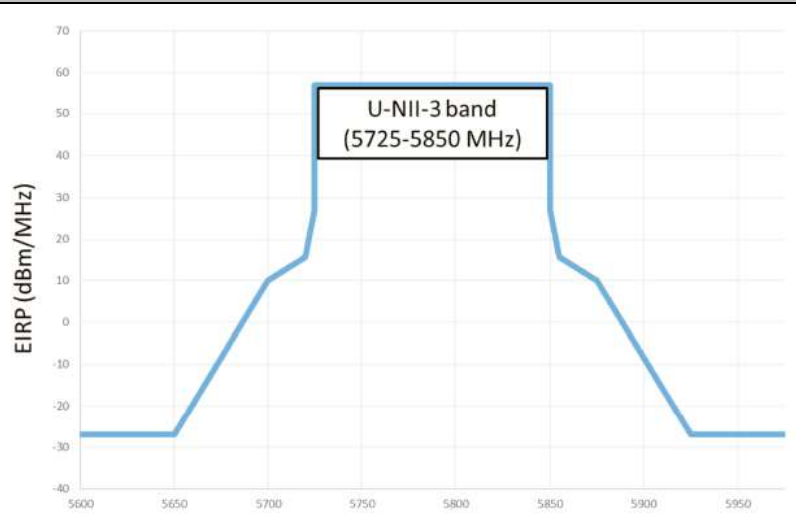
9.3. Limit

FCC Part 15 Subpart C Paragraph 15.209 (Restricted Band Emissions Limit)		
Frequency (MHz)	Distance (m)	Level (dBµV/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).

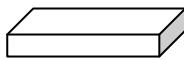
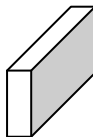
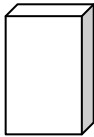

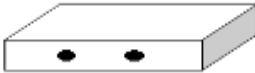


FCC Part 15 Subpart C Paragraph 15.205 (Restricted Band)			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (MHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 – 16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	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 E 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		

9.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
<input type="checkbox"/>	ANSI C63.10	12.7.3	Emissions in non-restricted frequency bands
<input checked="" type="checkbox"/>	ANSI C63.10	12.7.2	Emissions in restricted frequency bands
<input type="checkbox"/>	ANSI C63.10	12.7.5	Radiated emission measurements
<input checked="" type="checkbox"/>	ANSI C63.10	12.7.6	Procedure for peak unwanted emissions measurements above 1000 MHz
<input checked="" type="checkbox"/>	ANSI C63.10	12.7.7	Procedures for average unwanted emissions measurements above 1000 MHz
<input type="checkbox"/>	ANSI C63.10	12.7.7.2	Method AD (average detection)—primary method
<input checked="" type="checkbox"/>	ANSI C63.10	12.7.7.3	Method VB-A (Alternative)
<input type="checkbox"/>	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
<input type="checkbox"/>	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
<input type="checkbox"/>	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
<input type="checkbox"/>	FCC KDB 789033 D02v02r01	G.2	Unwanted Emissions that fall Outside of the Restricted Bands
<input type="checkbox"/>	FCC KDB 789033 D02v02r01	G.1	Unwanted Emissions in the Restricted Bands
<input type="checkbox"/>	FCC KDB 789033 D02v02r01	G.4	Procedure for Unwanted Emissions Measurements below 1000 MHz
<input type="checkbox"/>	FCC KDB 789033 D02v02r01	G.5	Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz
<input type="checkbox"/>	FCC KDB 789033 D02v02r01	G.6	Procedures for Average Unwanted Emissions Measurements above 1000 MHz
<input type="checkbox"/>	FCC KDB 789033 D02v02r01	G.6.c	Method AD (Average detection)—primary method
<input type="checkbox"/>	FCC KDB 789033 D02v02r01	G.6.d	Method VB (Averaging using reduced video bandwidth): Alternative method.

9.5. EUT test Axis definition

Item	Band Edge			
Device Category	<input checked="" type="checkbox"/>	Indoor use		
	<input type="checkbox"/>	Outdoor use		
	<input type="checkbox"/>	Fix position use		
	<input type="checkbox"/>	Client use		
Test mode	Mode 1-9			
Test method	<input type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input checked="" type="checkbox"/>	Conducted		
	<input checked="" type="checkbox"/>	Chain 1		
				
	<input checked="" type="checkbox"/>	Chain 1	Chain 2	
				
	<input type="checkbox"/>	Chain 1	Chain 2	Chain 3
				
<input checked="" type="checkbox"/>	Chain 1	Chain 2	Chain 3	
				

9.6. Test Result

Radio 1:

SISO PK Limit=74dBuV/m-95.2-3.3(Antenna Gain)=-24.5dBm

SISO AV Limit=54dBuV/m-95.2-3.3(Antenna Gain)=-44.5dBm

Radio 2:

SISO PK Limit=74dBuV/m-95.2-4.7(Antenna Gain)=-25.9dBm

SISO AV Limit=54dBuV/m-95.2-4.7(Antenna Gain)=-45.9dBm

2*2 CDD/Beamforming PK Limit=74dBuV/m-95.2-10lg2(2Tx)-7.71(Directional Gain)=-31.92dBm

2*2 CDD/Beamforming AV Limit=54dBuV/m-95.2-10lg2(2Tx)-7.71(Directional Gain)=-51.92dBm

Radio 3:

2*2 CDD/Beamforming PK Limit=74dBuV/m-95.2-10lg2(2Tx)-7.71(Directional Gain)=-31.92dBm

2*2 CDD/Beamforming AV Limit=54dBuV/m-95.2-10lg2(2Tx)-7.71(Directional Gain)=-51.92dBm

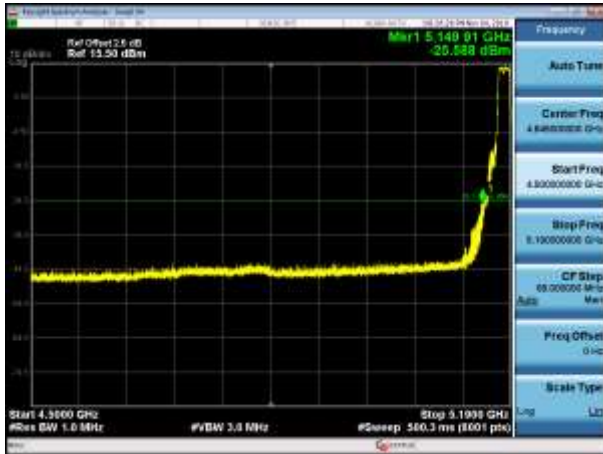
4*4 CDD/Beamforming PK Limit=74dBuV/m-95.2-10lg4(4Tx)-10.72(Directional Gain)=-37.94dBm

4*4 CDD/Beamforming AV Limit=54dBuV/m-95.2-10lg4(4Tx)-10.72(Directional Gain)=-57.94dBm

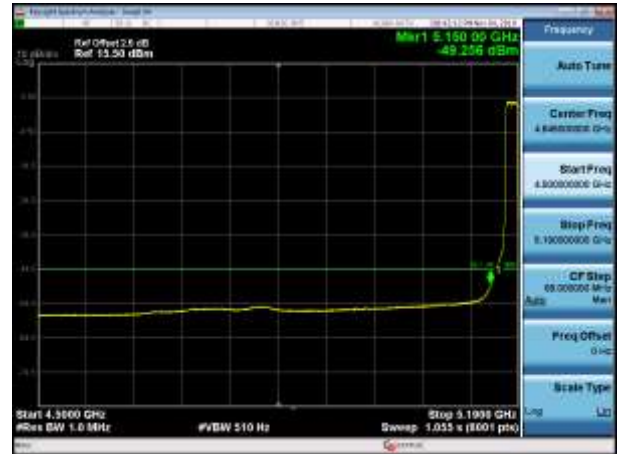
Note: Above limit is the worst case of AP410C.

Radio 1:
802.11a

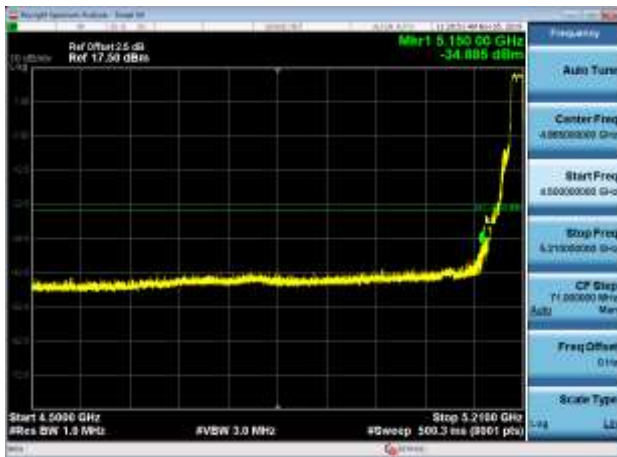
5180MHz PK



5180MHz AV



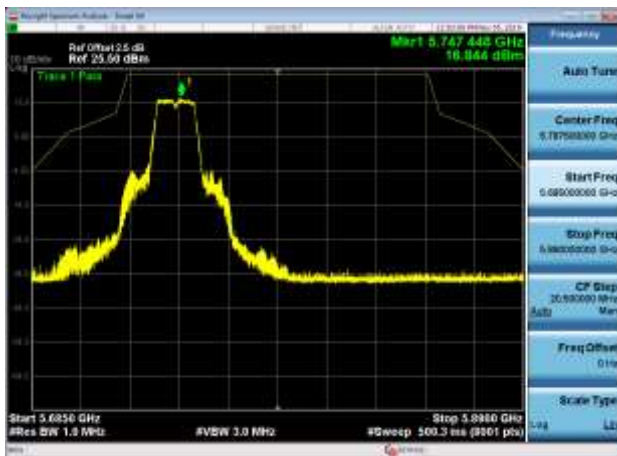
5200MHz PK



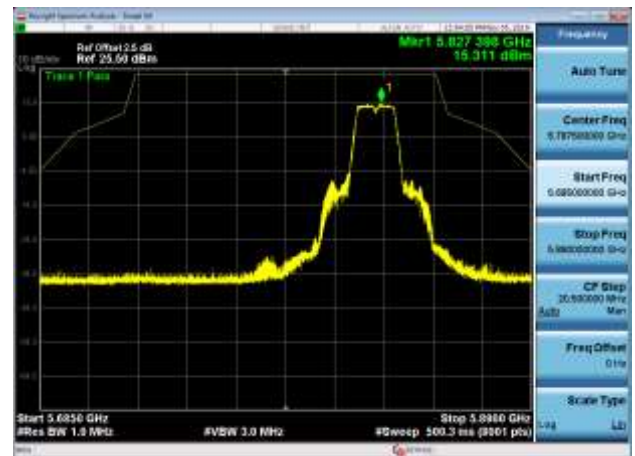
5200MHz AV



5745MHz PK

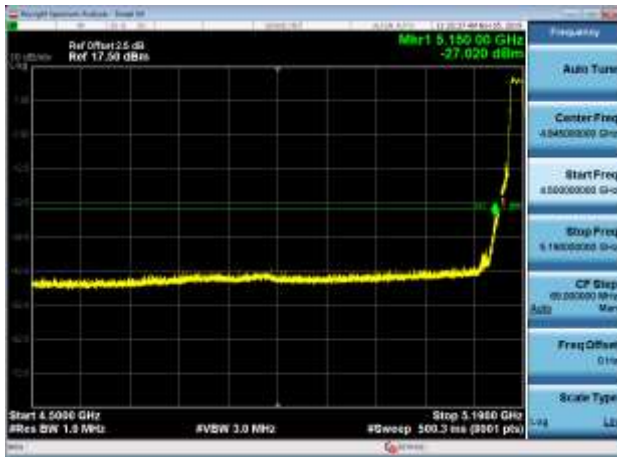


5825MHz PK

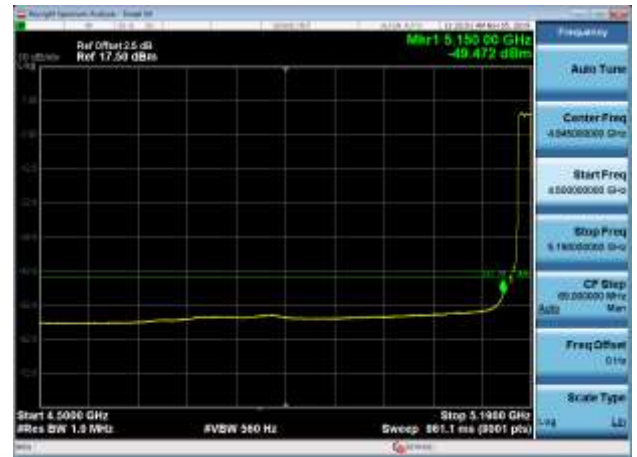


802.11n(20MHz)

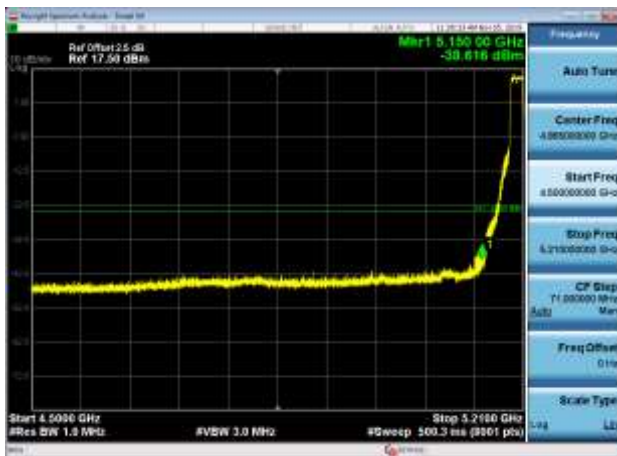
5180MHz PK



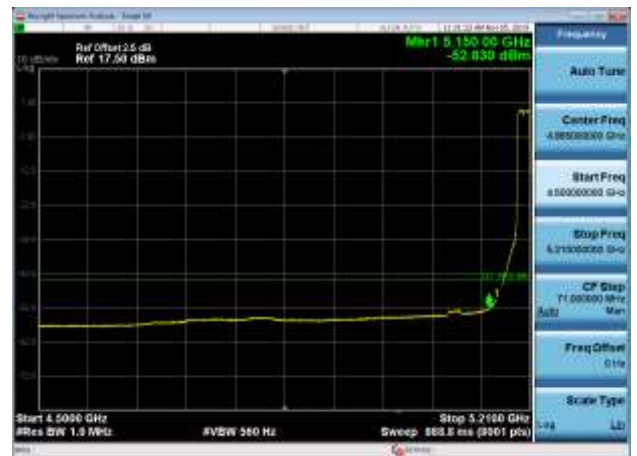
5180MHz AV



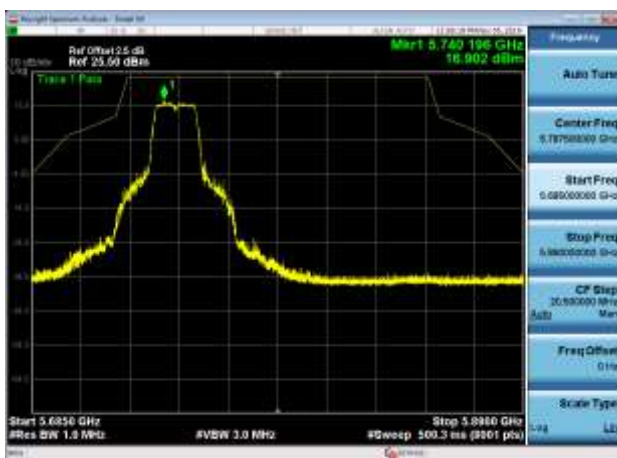
5200MHz PK



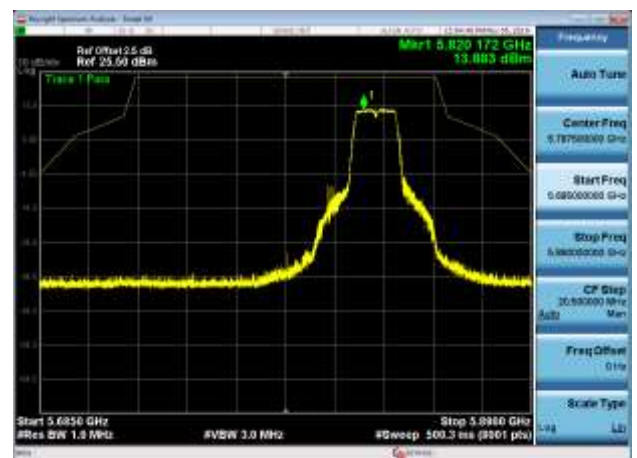
5200MHz AV



5745MHz PK

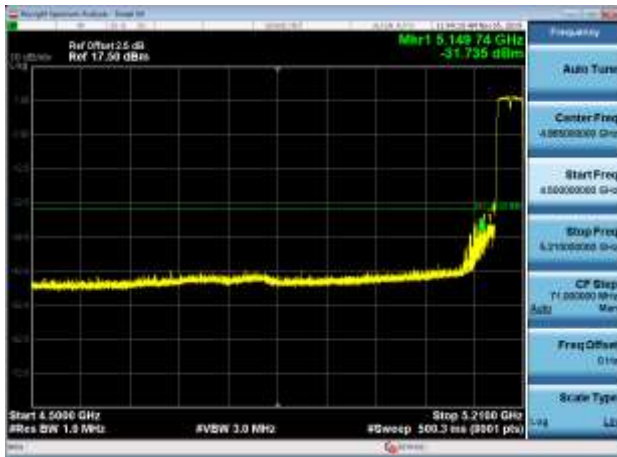


5825MHz PK



802.11n(40MHz)

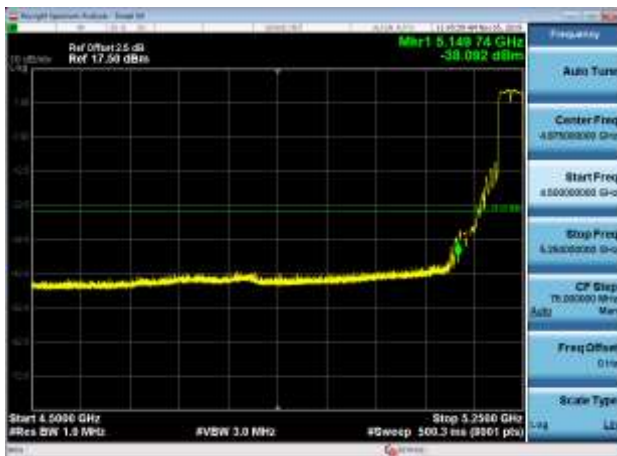
5190MHz PK



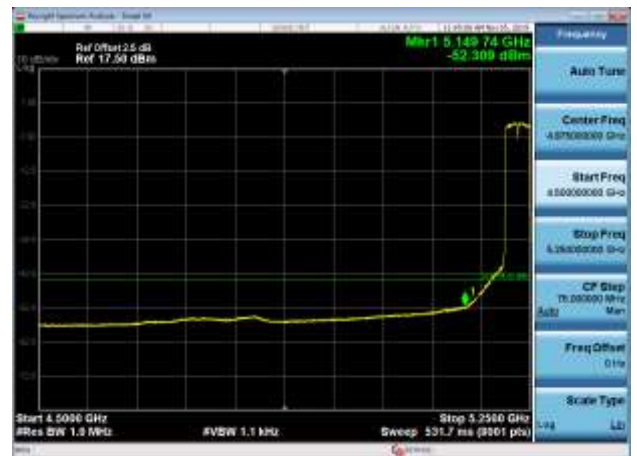
5190MHz AV



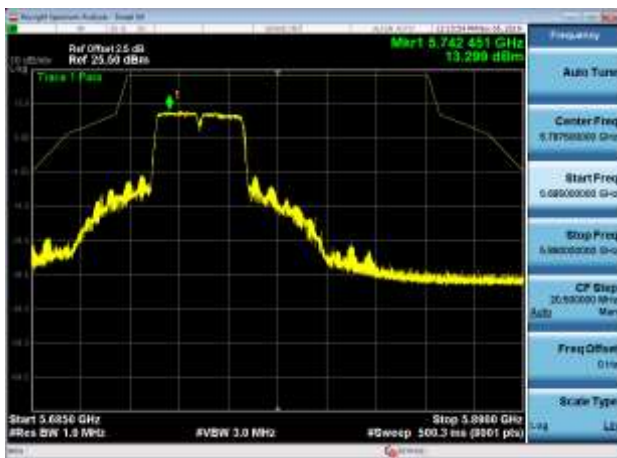
5230MHz PK



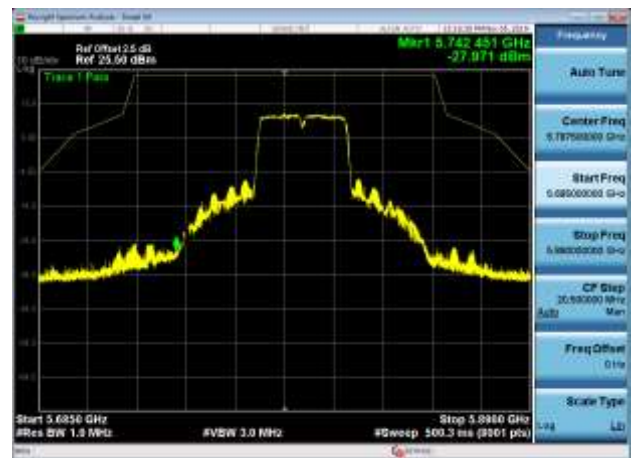
5230MHz AV



5755MHz PK

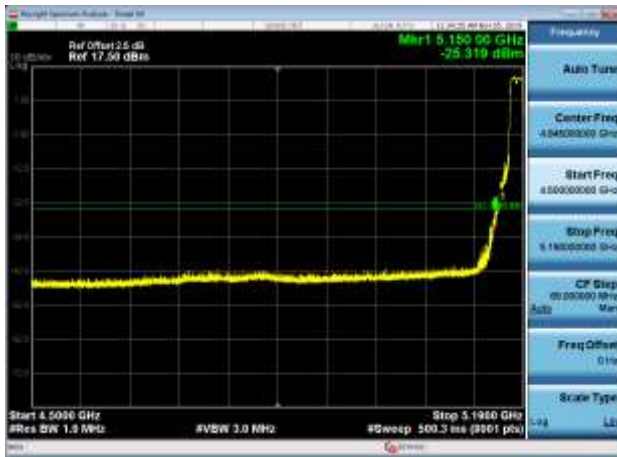


5795MHz PK

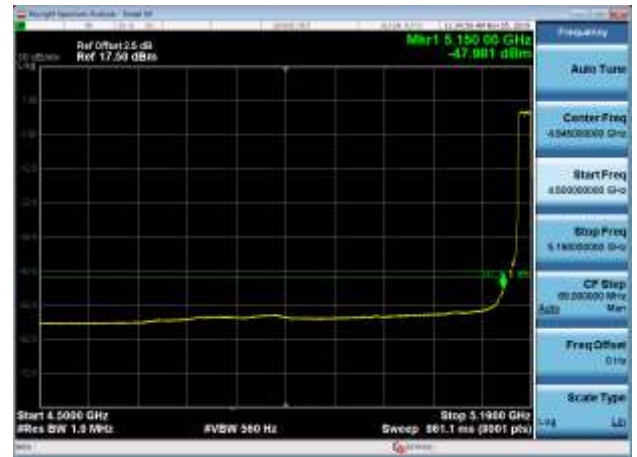


802.11ac(20MHz)

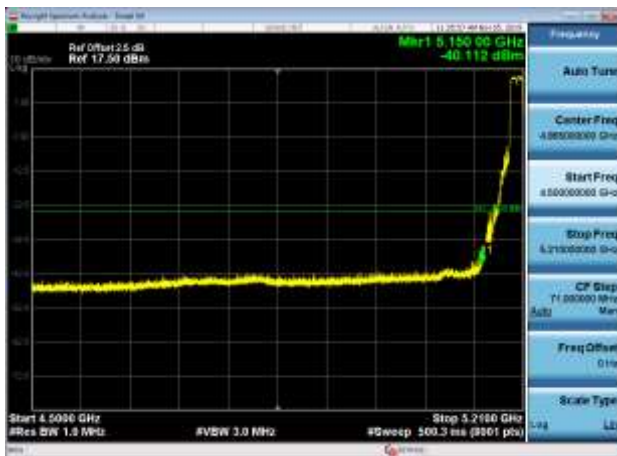
5180MHz PK



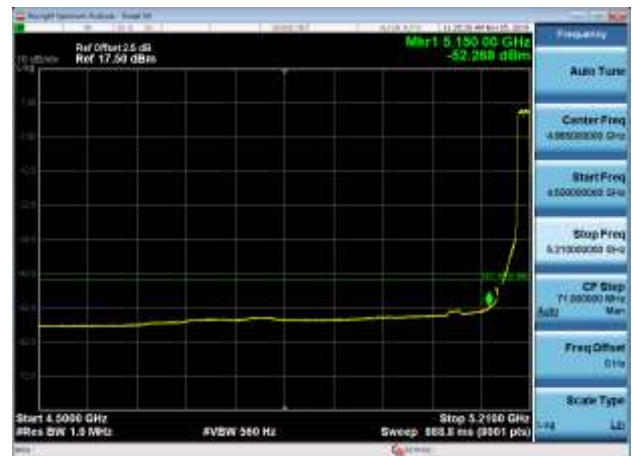
5180MHz AV



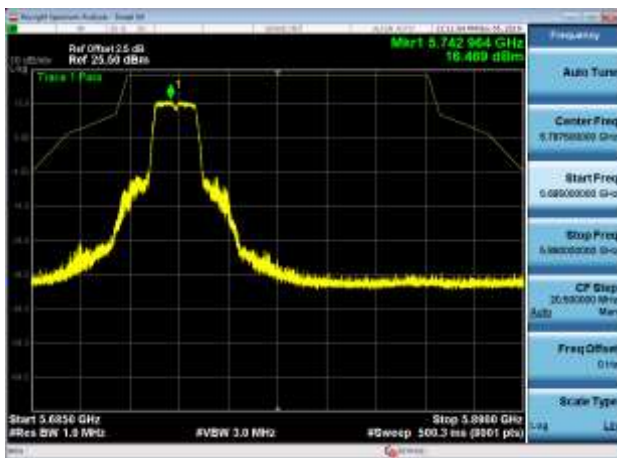
5200MHz PK



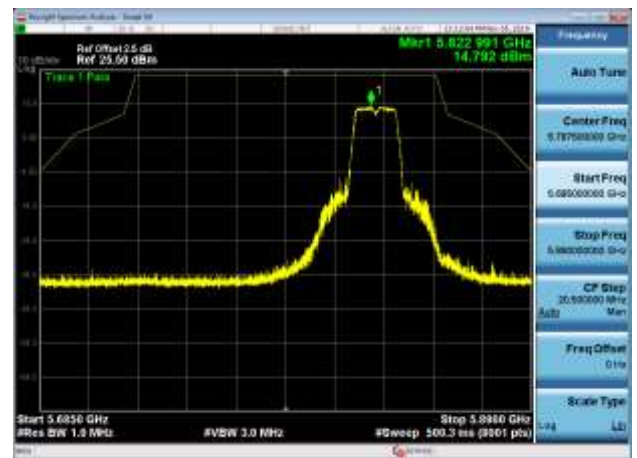
5200MHz AV



5745MHz PK

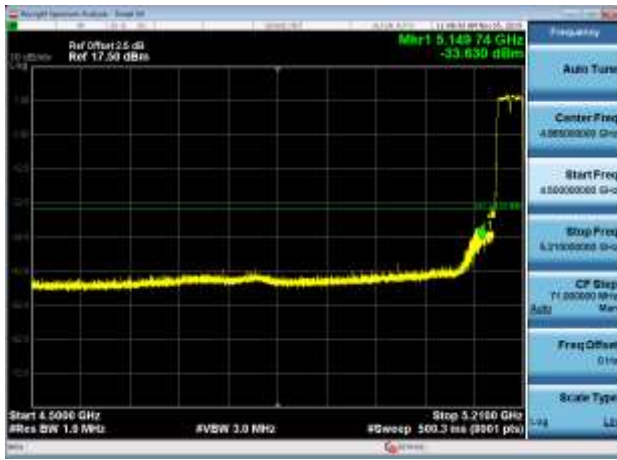


5825MHz PK

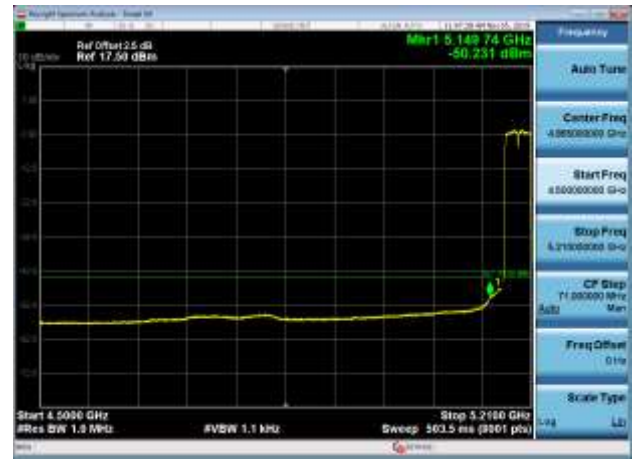


802.11ac(40MHz)

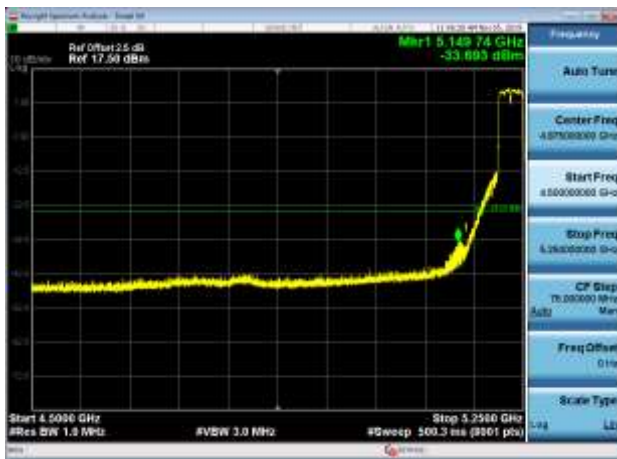
5190MHz PK



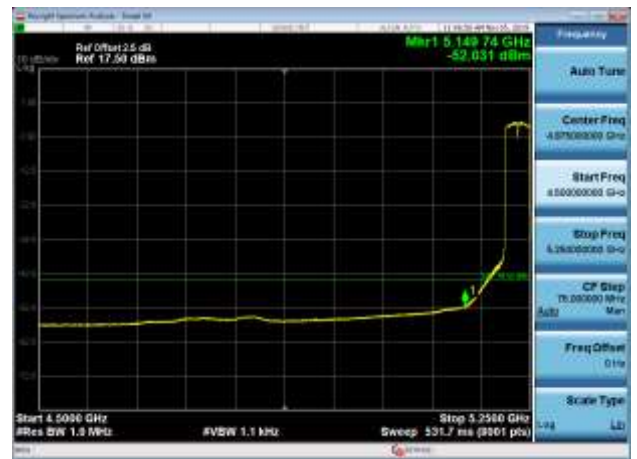
5190MHz AV



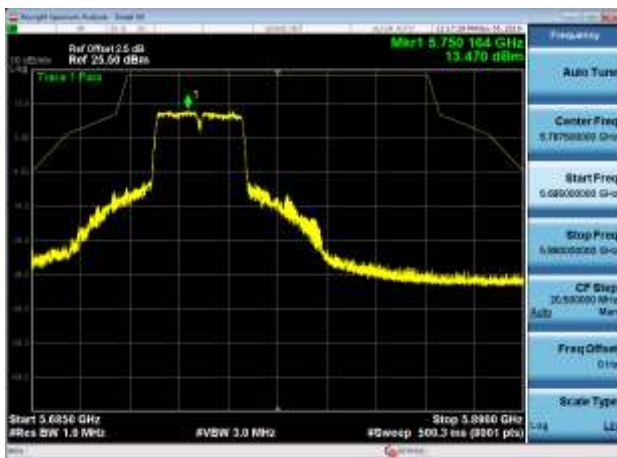
5230MHz PK



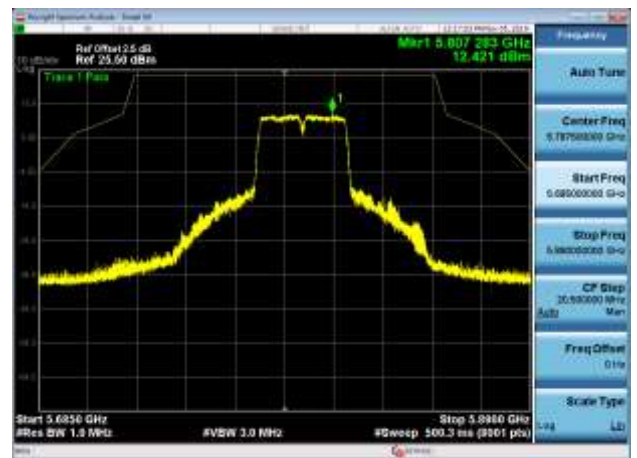
5230MHz AV



5755MHz PK

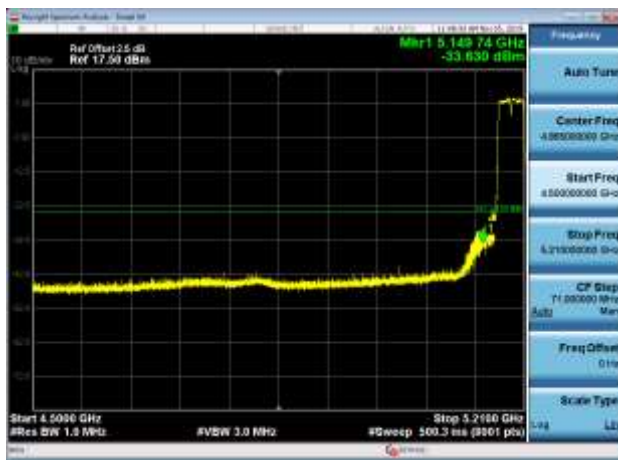


5795MHz PK

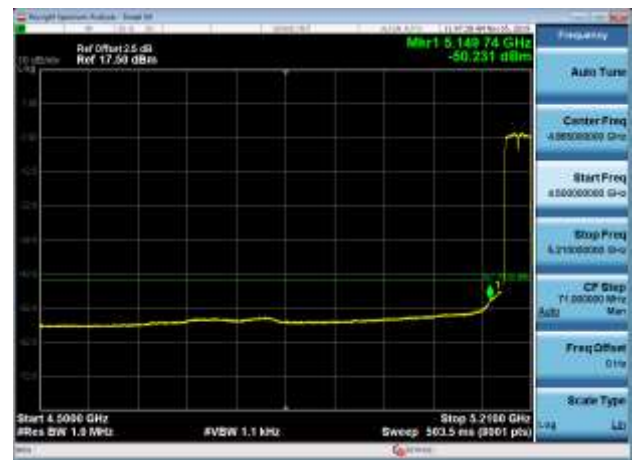


802.11ac(80MHz)

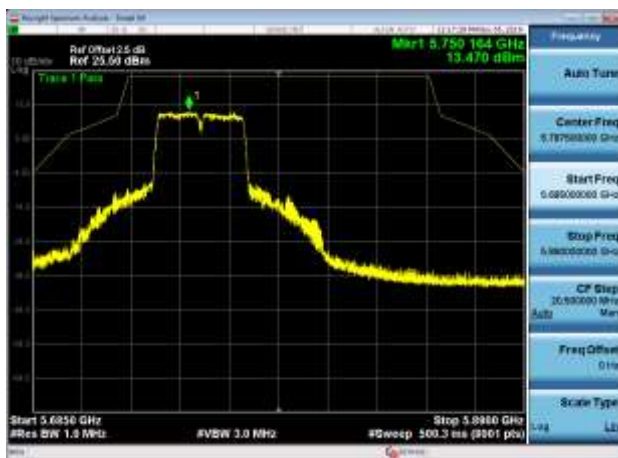
5210MHz PK



5210MHz AV

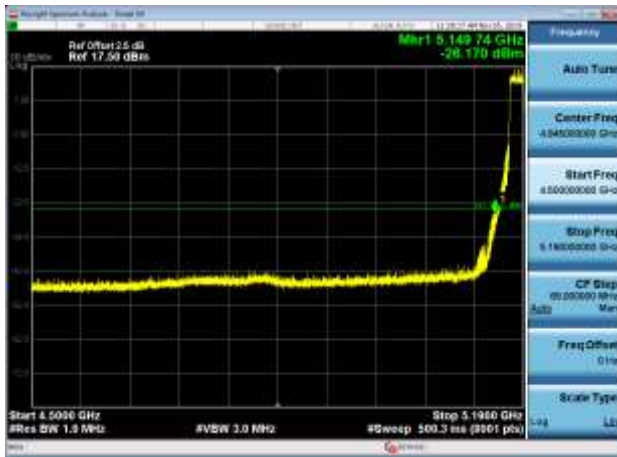


5775MHz PK



802.11ax(20MHz)

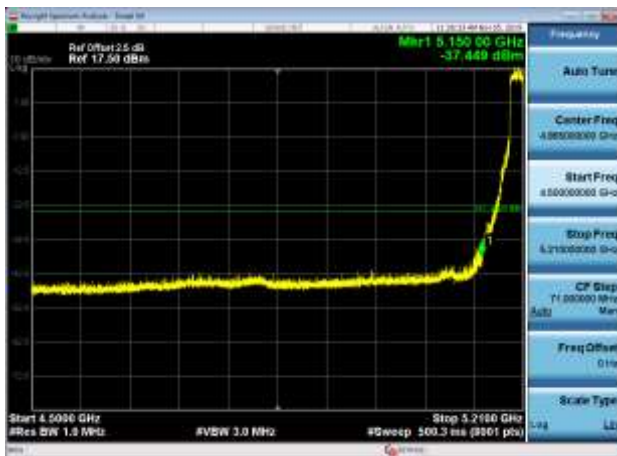
5180MHz PK



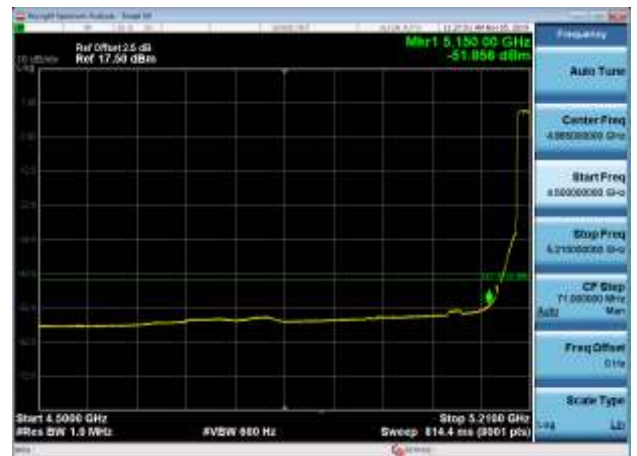
5180MHz AV



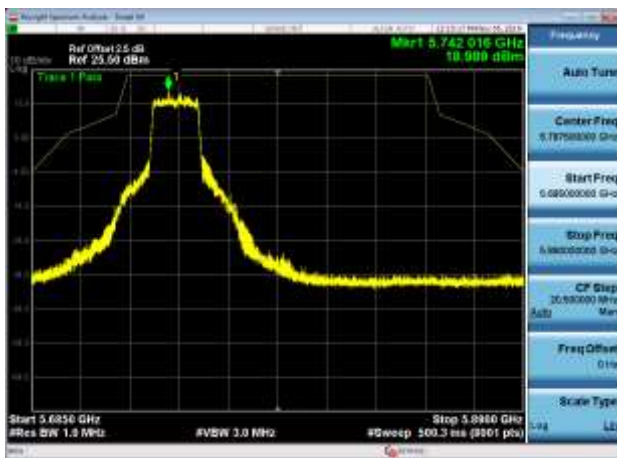
5200MHz PK



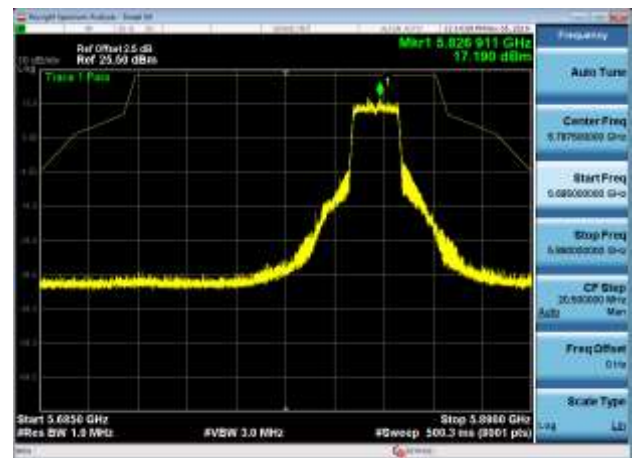
5200MHz AV



5745MHz PK

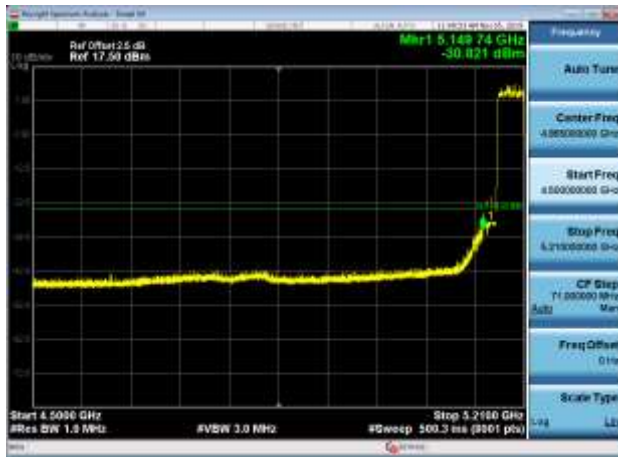


5825MHz PK

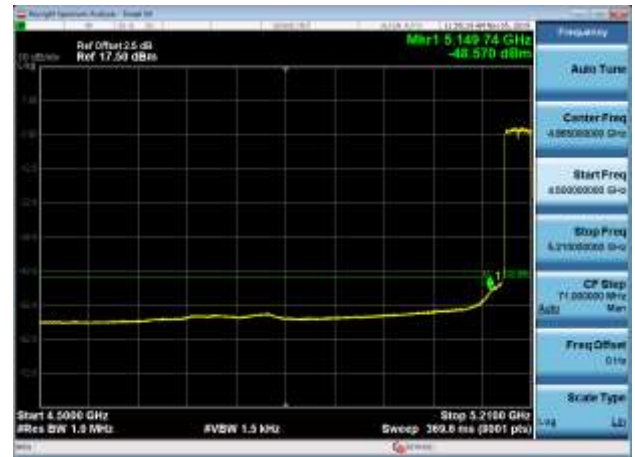


802.11ax(40MHz)

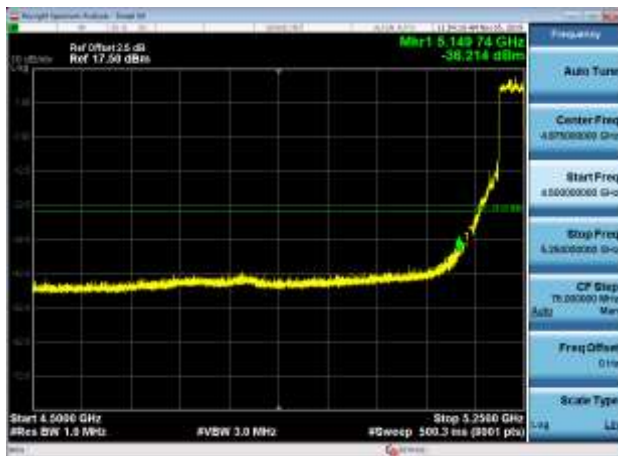
5190MHz PK



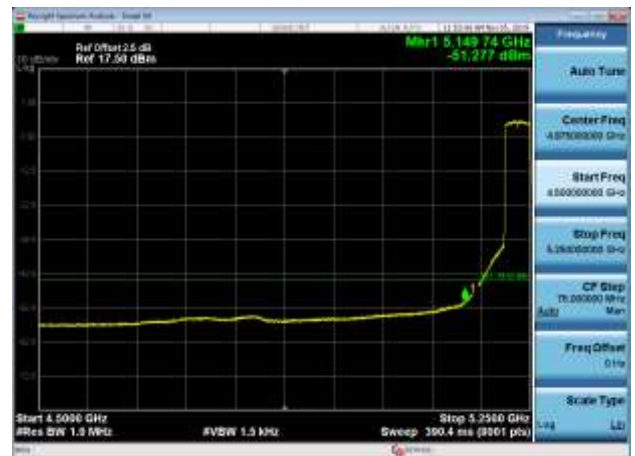
5190MHz AV



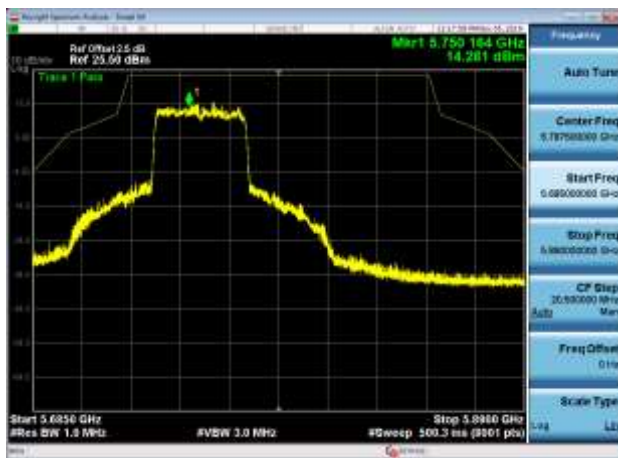
5230MHz PK



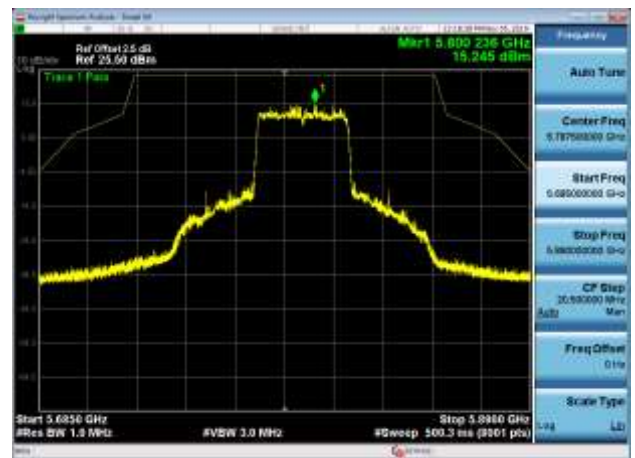
5230MHz AV



5755MHz PK

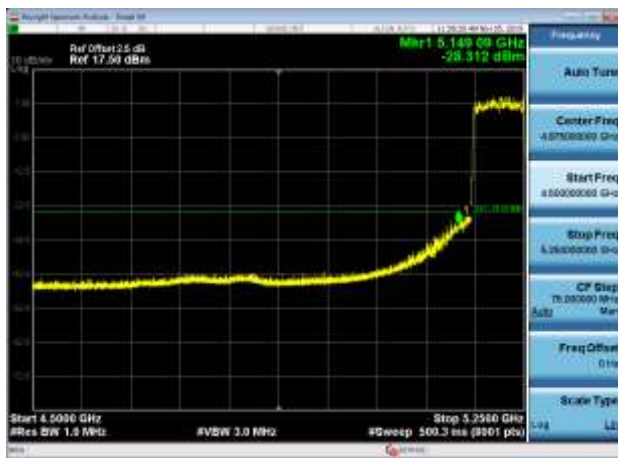


5795MHz PK

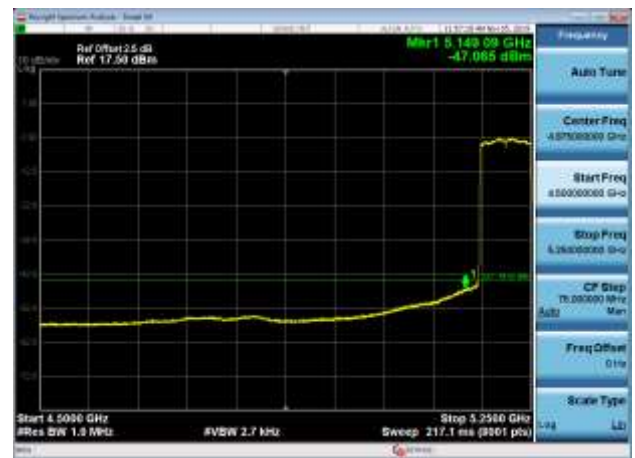


802.11ax(80MHz)

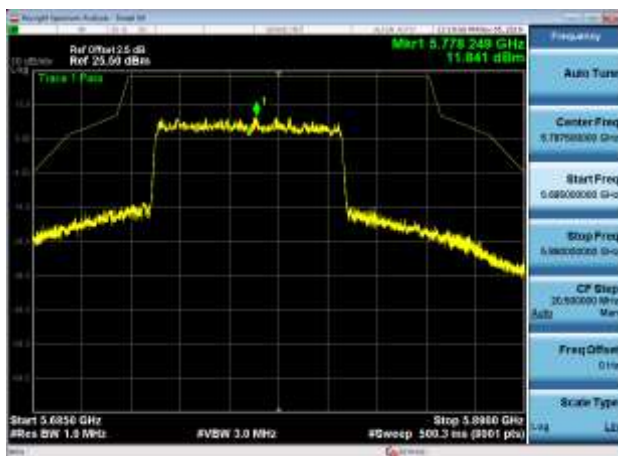
5210MHz PK



5210MHz AV

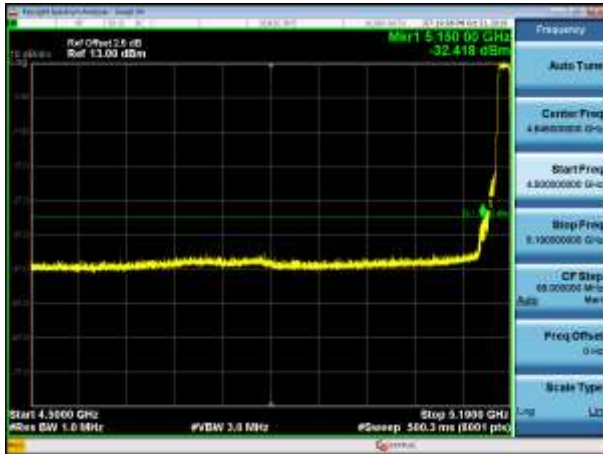


5775MHz PK

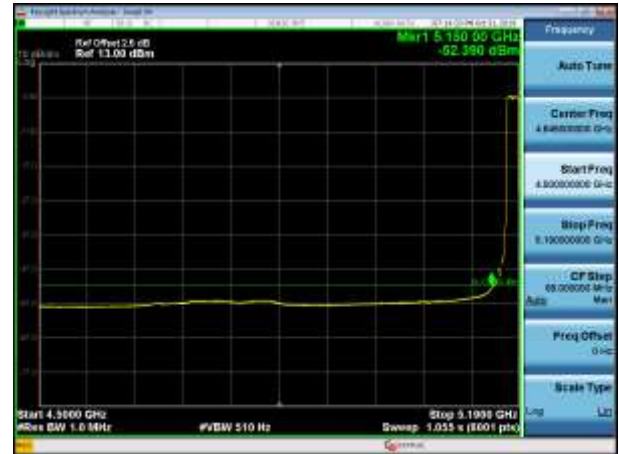


**Radio 2:
802.11a**

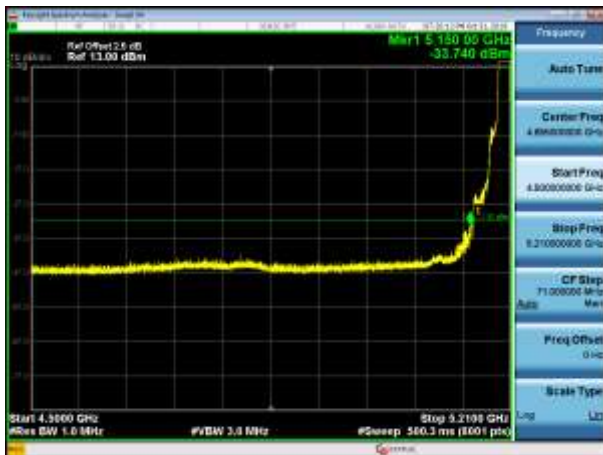
5180MHz with 2*2 CDD PK



5180MHz with 2*2 CDD AV



5200MHz with 2*2 CDD PK

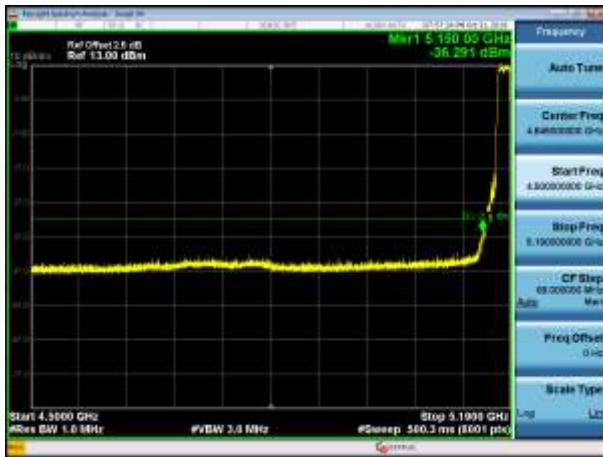


5200MHz with 2*2 CDD AV

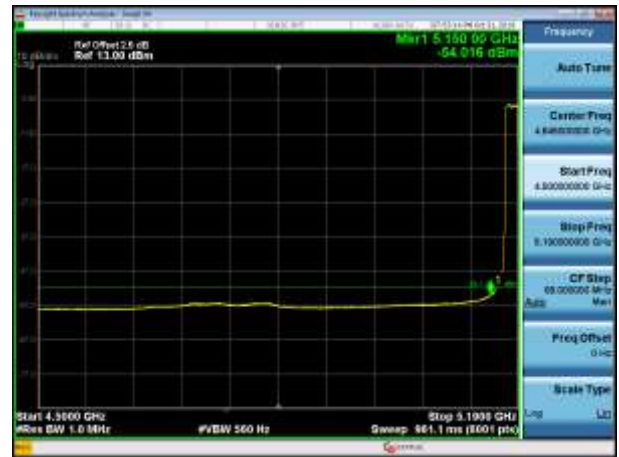


802.11n(20MHz)

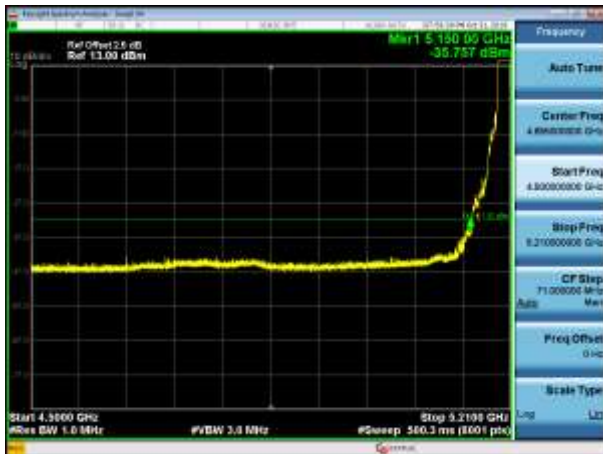
5180MHz with 2*2 CDD PK



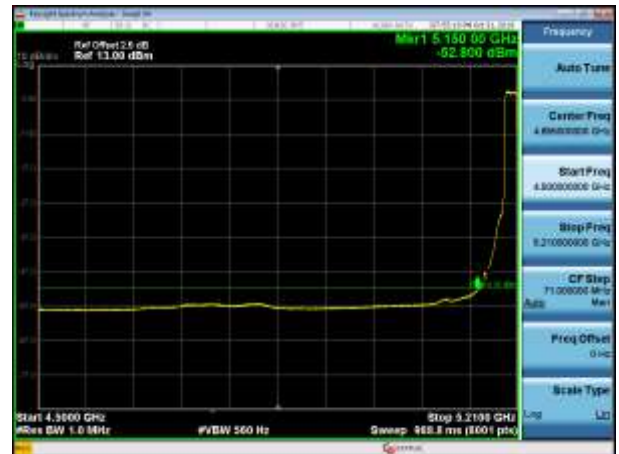
5180MHz with 2*2 CDD AV



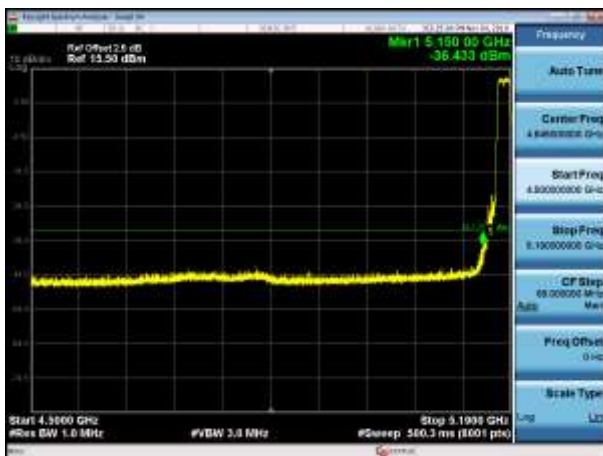
5200MHz with 2*2 CDD PK



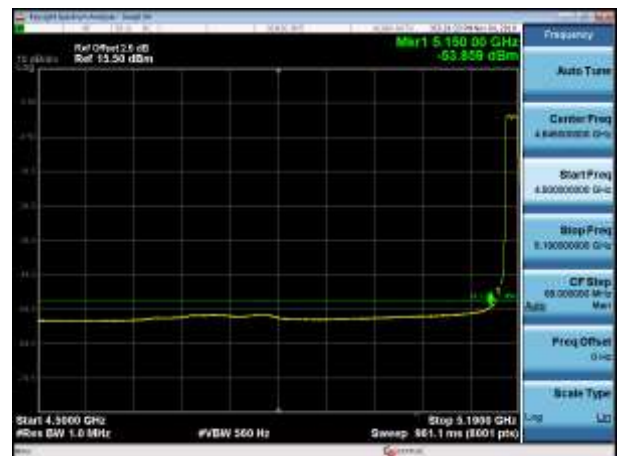
5200MHz with 2*2 CDD AV



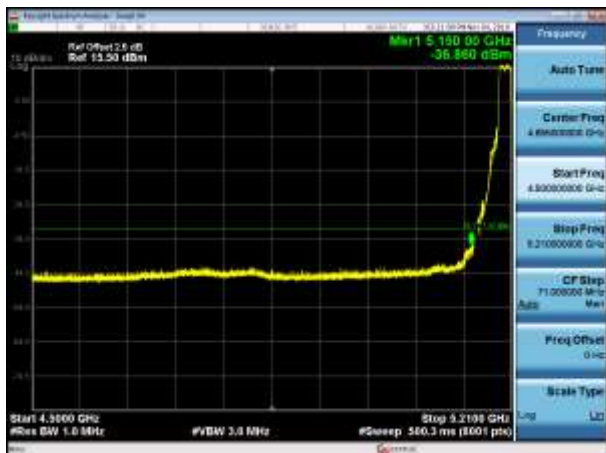
5180MHz with 2*2 Beamforming PK



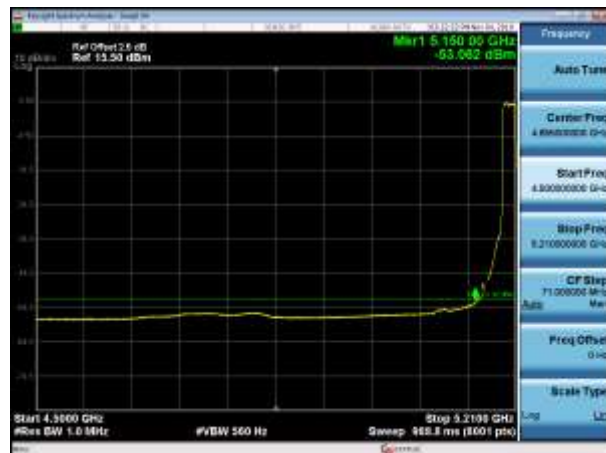
5180MHz with 2*2 Beamforming AV



5200MHz with 2*2 Beamforming PK

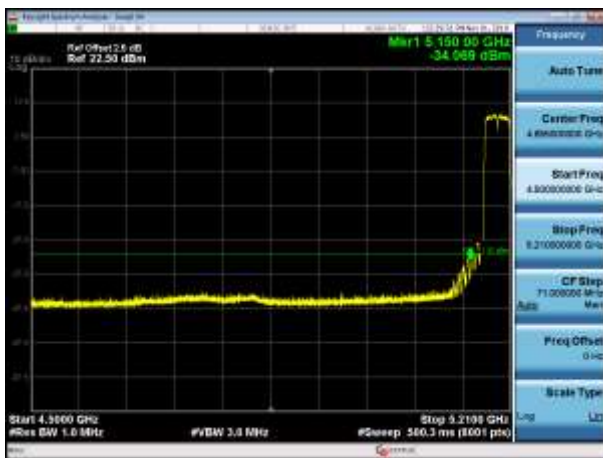


5200MHz with 2*2 Beamforming AV

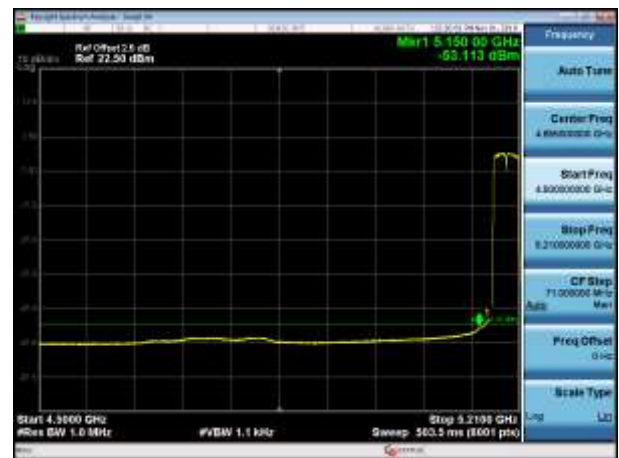


802.11n(40MHz)

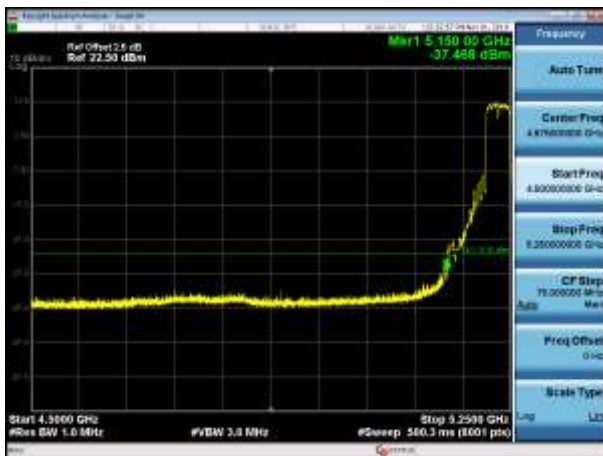
5190MHz with 2*2 CDD PK



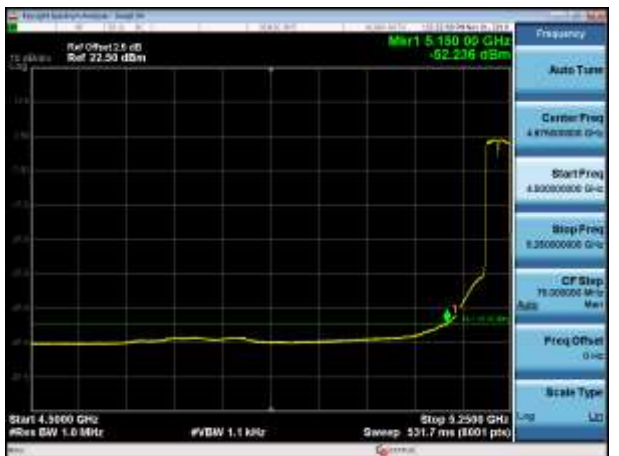
5190MHz with 2*2 CDD AV



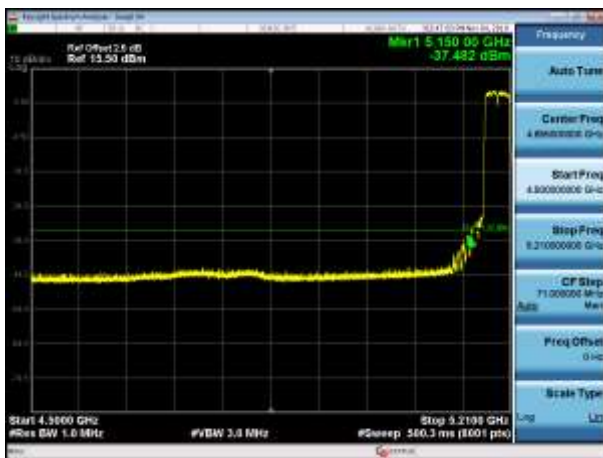
5230MHz with 2*2 CDD PK



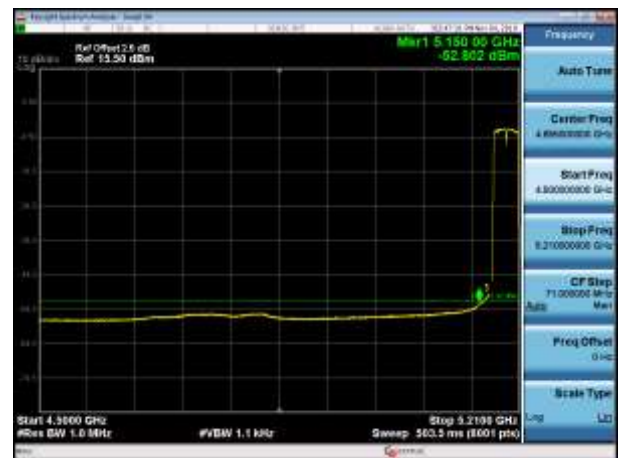
5230MHz with 2*2 CDD AV



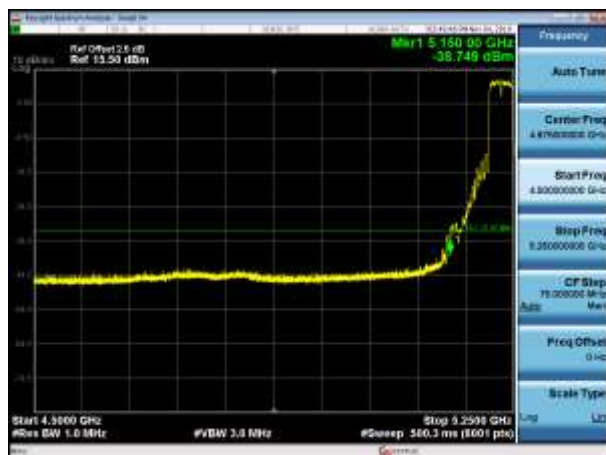
5190MHz with 2*2 Beamforming PK



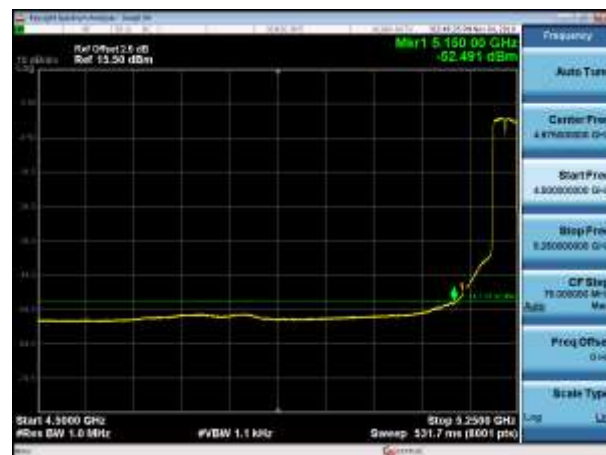
5190MHz with 2*2 Beamforming AV



5230MHz with 2*2 Beamforming PK

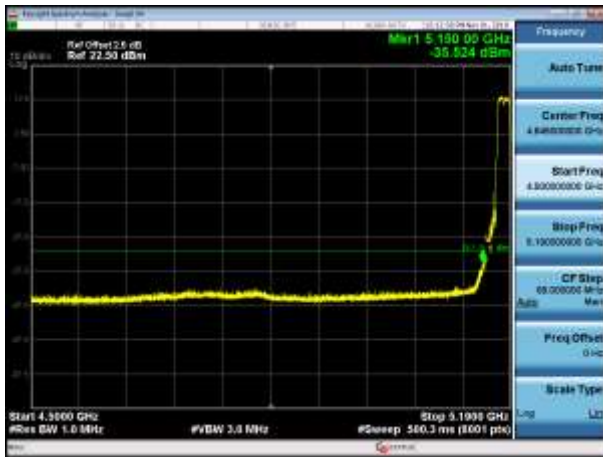


5230MHz with 2*2 Beamforming AV

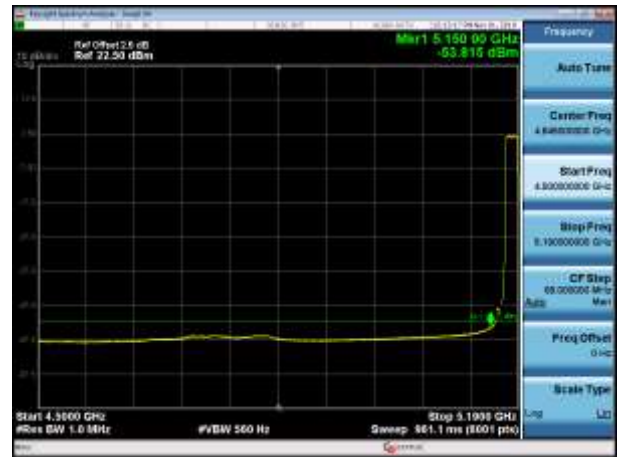


802.11ac(20MHz)

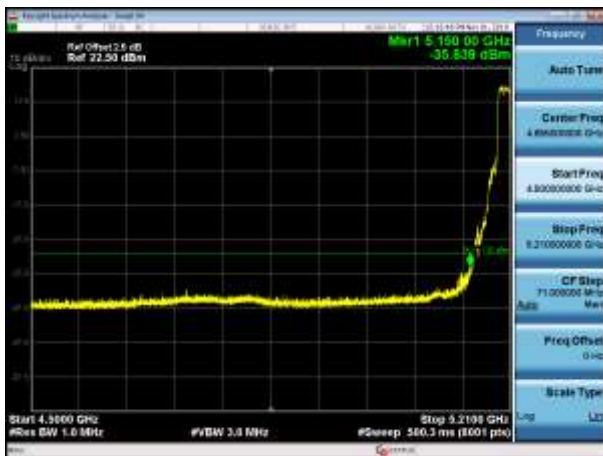
5180MHz with 2*2 CDD PK



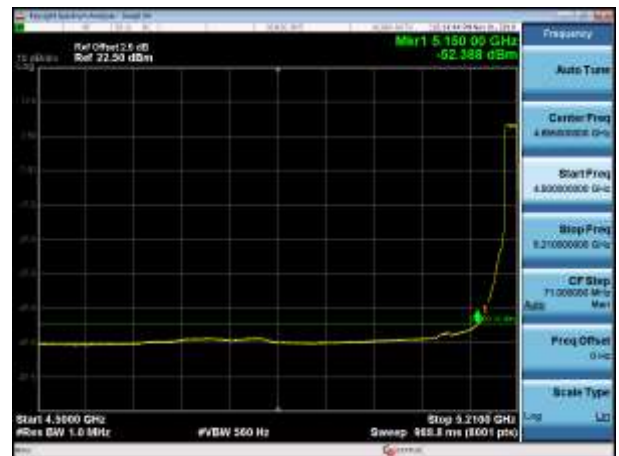
5180MHz with 2*2 CDD AV



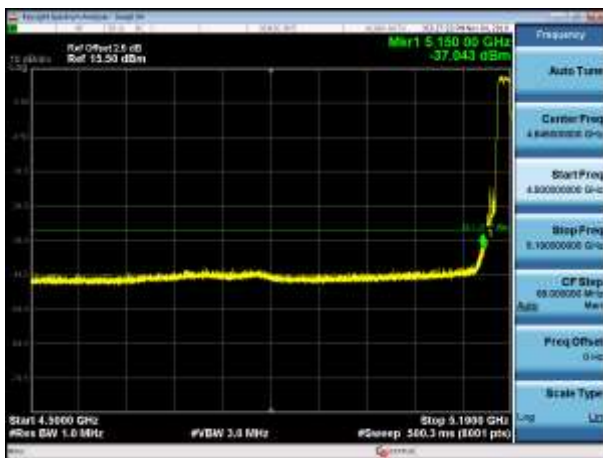
5200MHz with 2*2 CDD PK



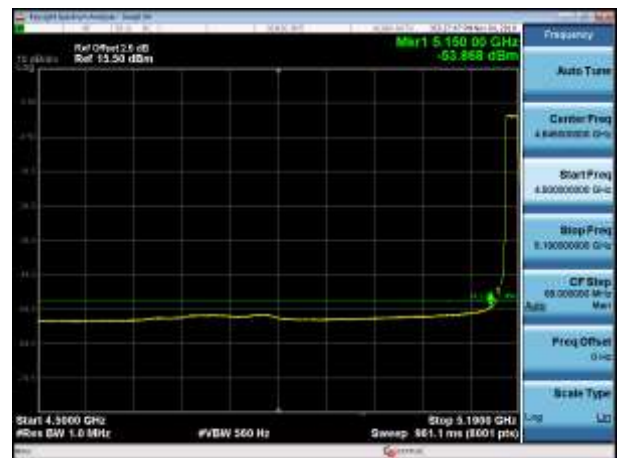
5200MHz with 2*2 CDD AV



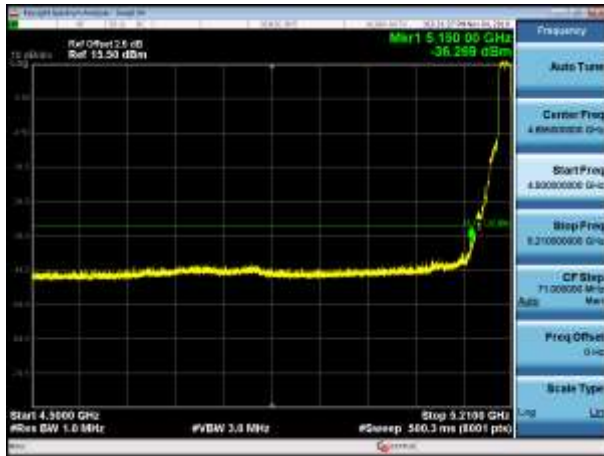
5180MHz with 2*2 Beamforming PK



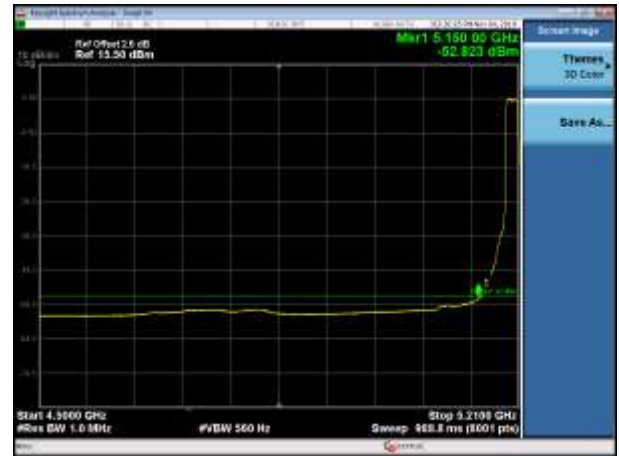
5180MHz with 2*2 Beamforming AV



5200MHz with 2*2 Beamforming PK

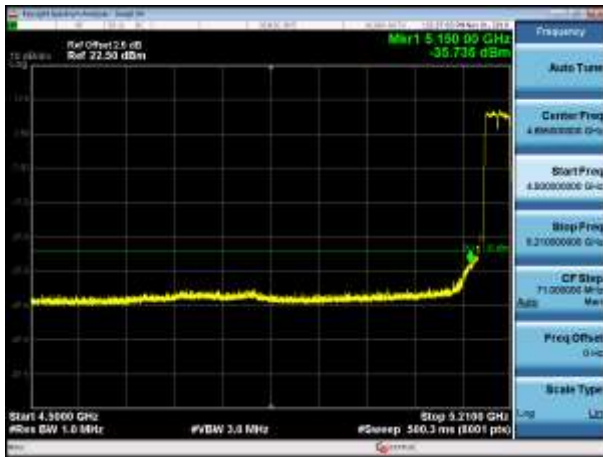


5200MHz with 2*2 Beamforming AV

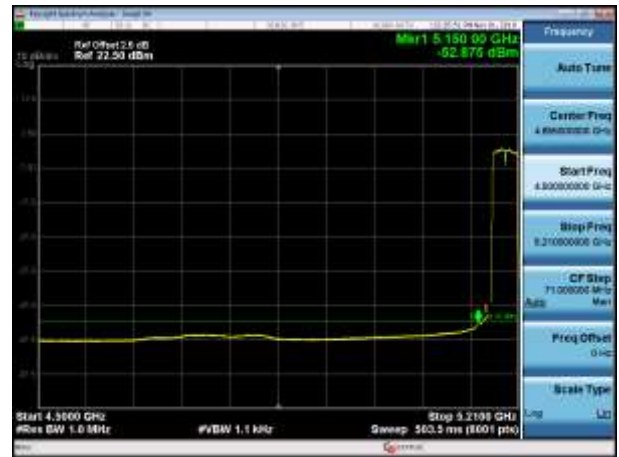


802.11ac(40MHz)

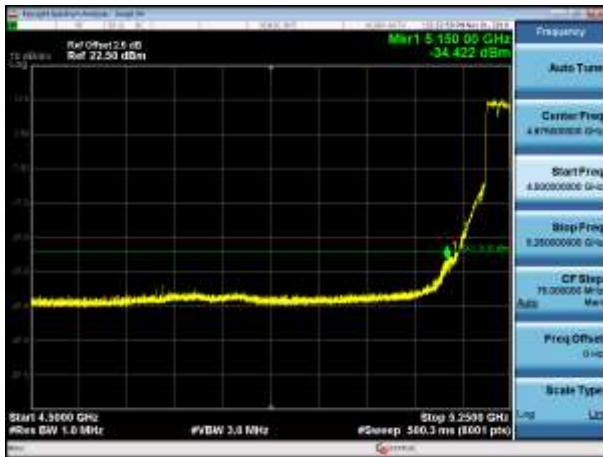
5190MHz with 2*2 CDD PK



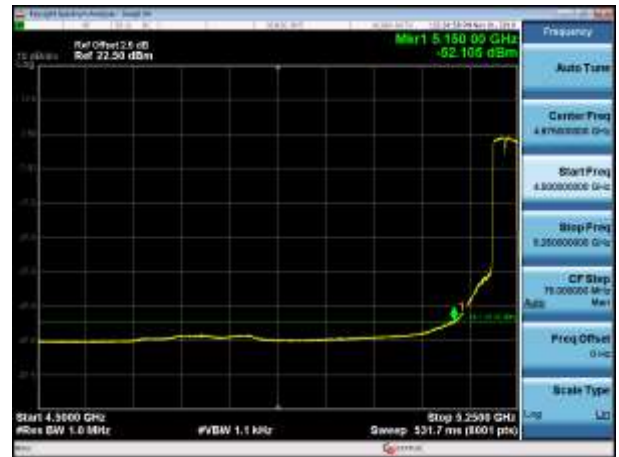
5190MHz with 2*2 CDD AV



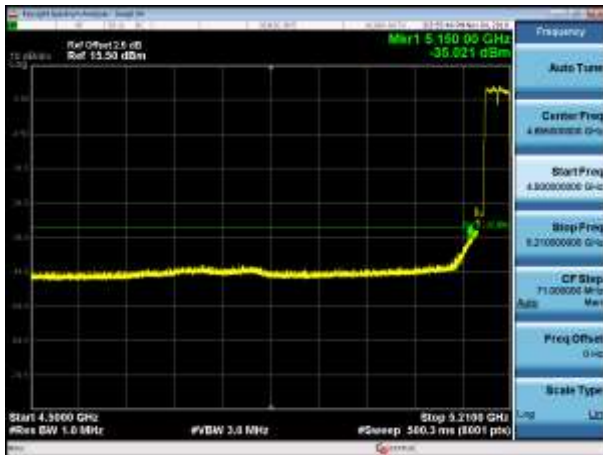
5230MHz with 2*2 CDD PK



5230MHz with 2*2 CDD AV



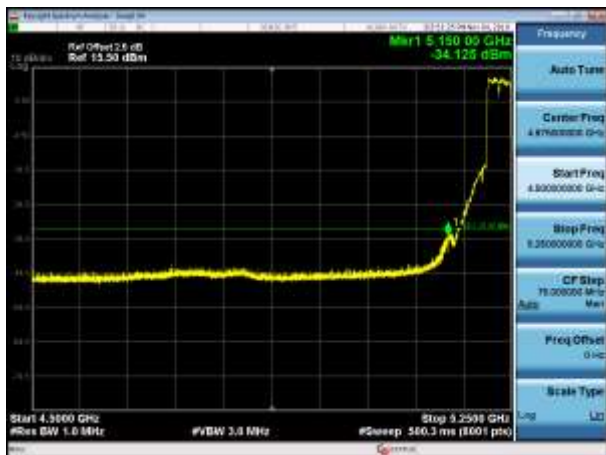
5190MHz with 2*2 Beamforming PK



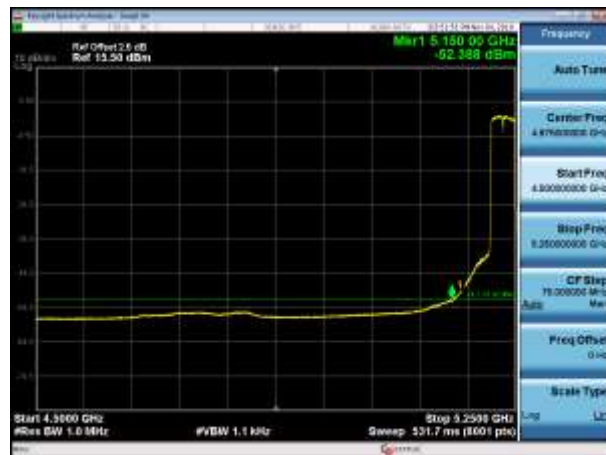
5190MHz with 2*2 Beamforming AV



5230MHz with 2*2 Beamforming PK

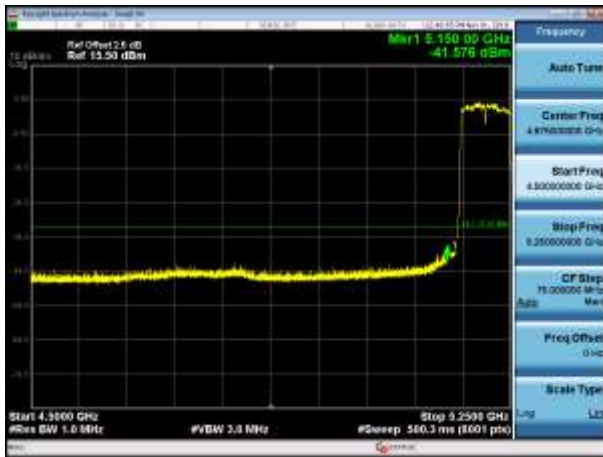


5230MHz with 2*2 Beamforming AV



802.11ac(80MHz)

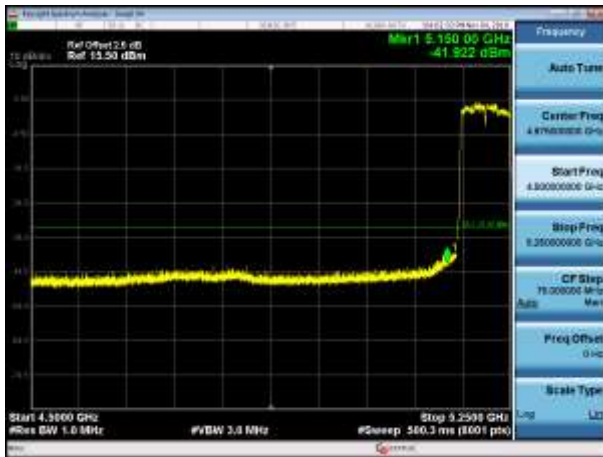
5210MHz with 2*2 CDD PK



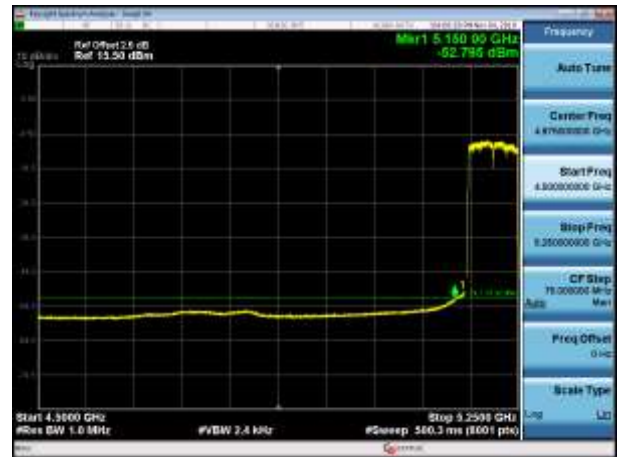
5210MHz with 2*2 CDD AV



5210MHz with 2*2 Beamforming PK

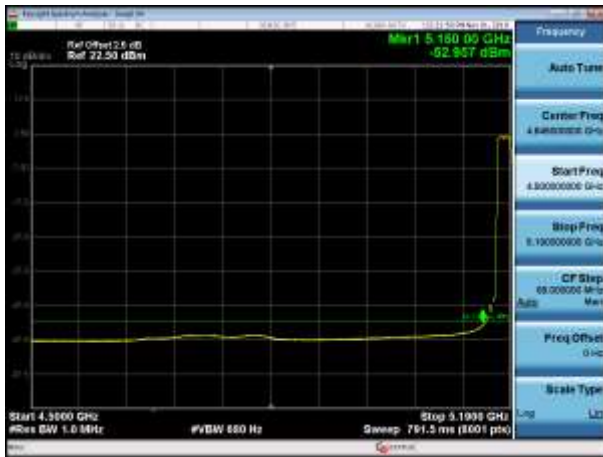


5210MHz with 2*2 Beamforming AV



802.11ax(20MHz)

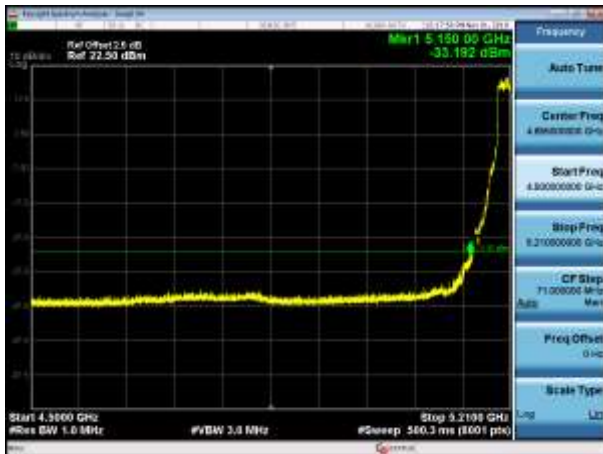
5180MHz with 2*2 CDD PK



5180MHz with 2*2 CDD AV



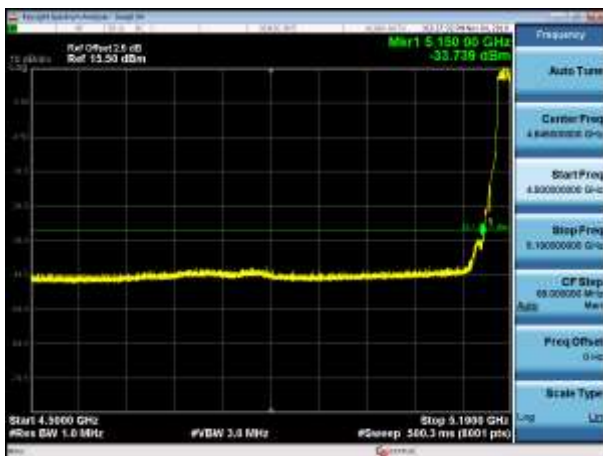
5200MHz with 2*2 CDD PK



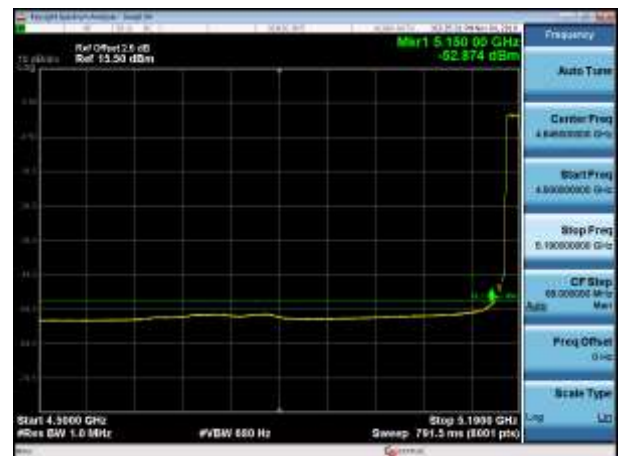
5200MHz with 2*2 CDD AV



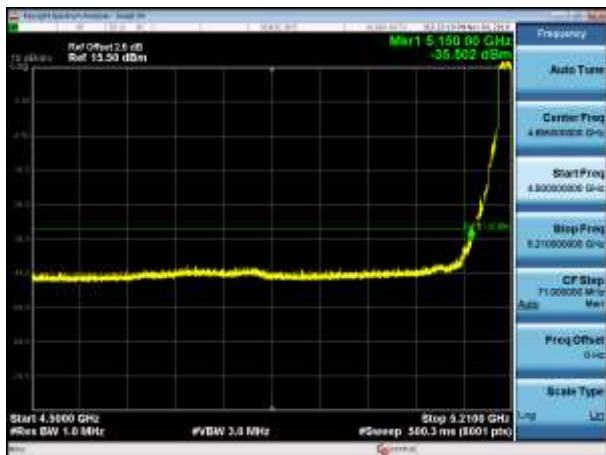
5180MHz with 2*2 Beamforming PK



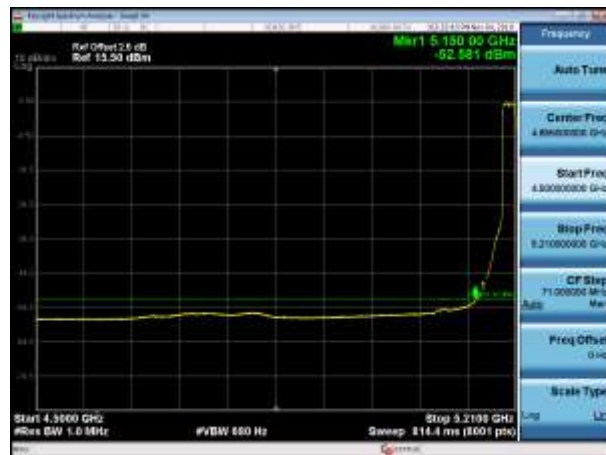
5180MHz with 2*2 Beamforming AV



5200MHz with 2*2 Beamforming PK

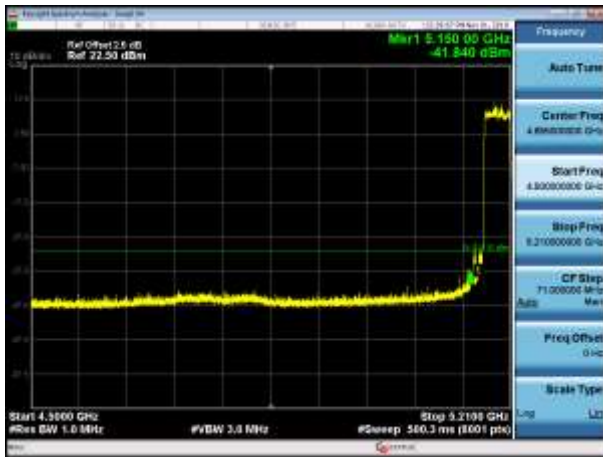


5200MHz with 2*2 Beamforming AV

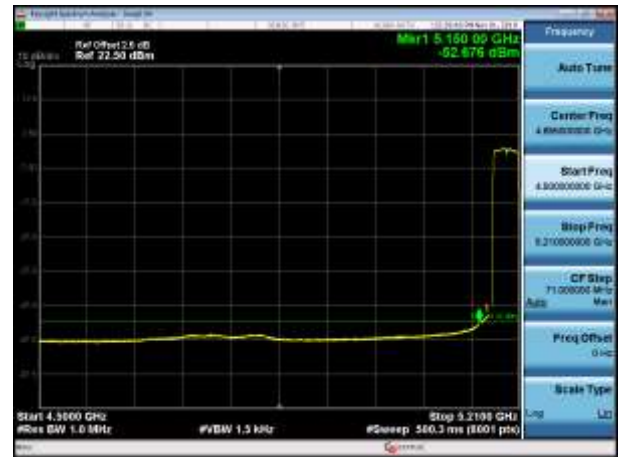


802.11ax(40MHz)

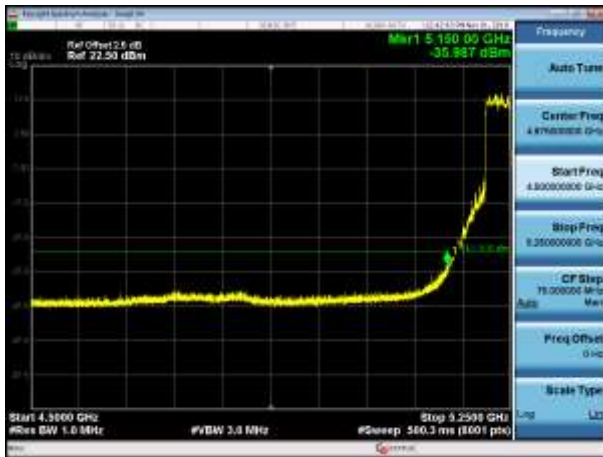
5190MHz with 2*2 CDD PK



5190MHz with 2*2 CDD AV



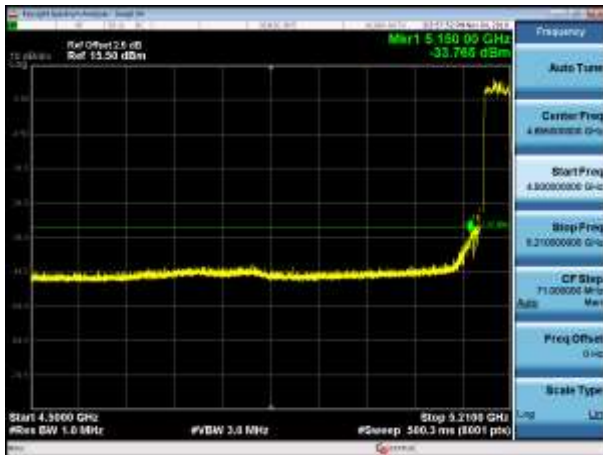
5230MHz with 2*2 CDD PK



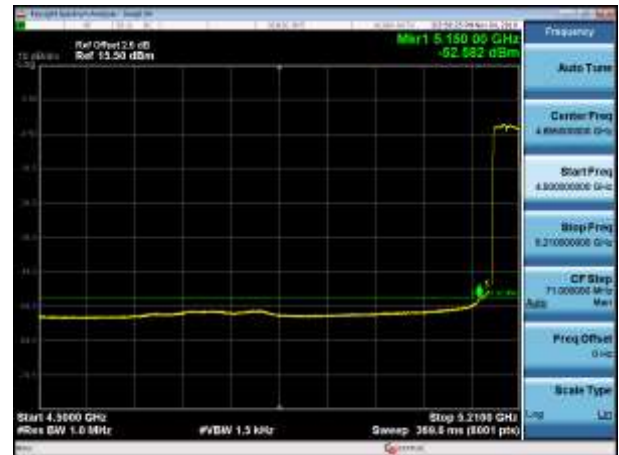
5230MHz with 2*2 CDD AV



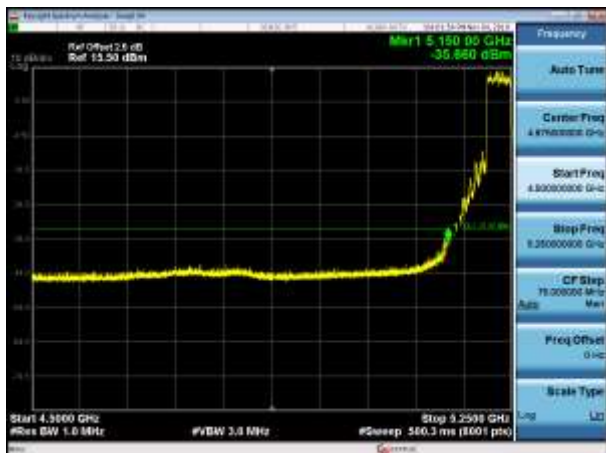
5190MHz with 2*2 Beamforming PK



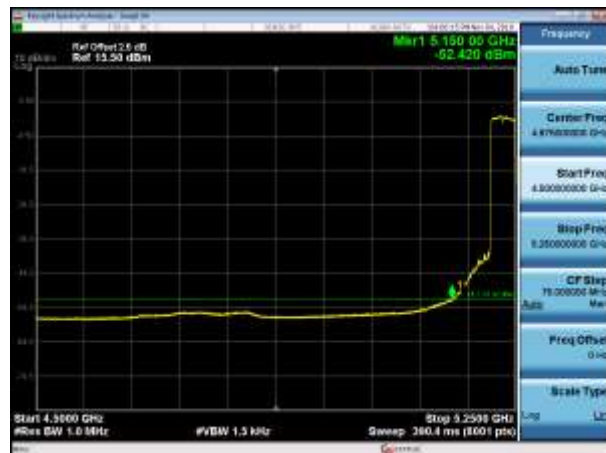
5190MHz with 2*2 Beamforming AV



5230MHz with 2*2 Beamforming PK

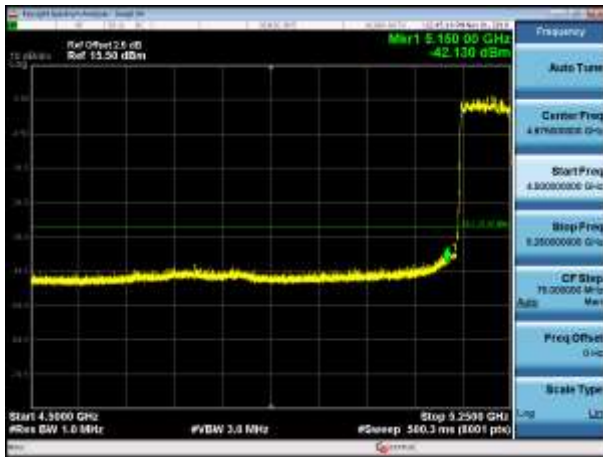


5230MHz with 2*2 Beamforming AV



802.11ax(80MHz)

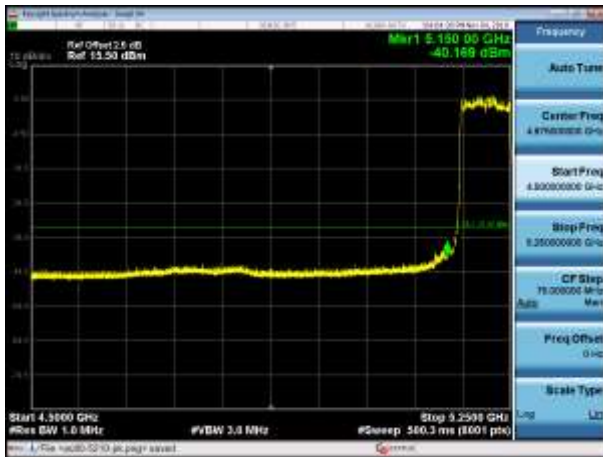
5210MHz with 2*2 CDD PK



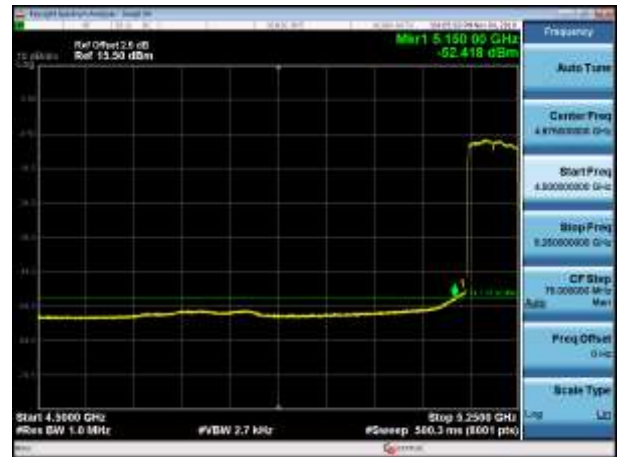
5210MHz with 2*2 CDD AV



5210MHz with 2*2 Beamforming PK

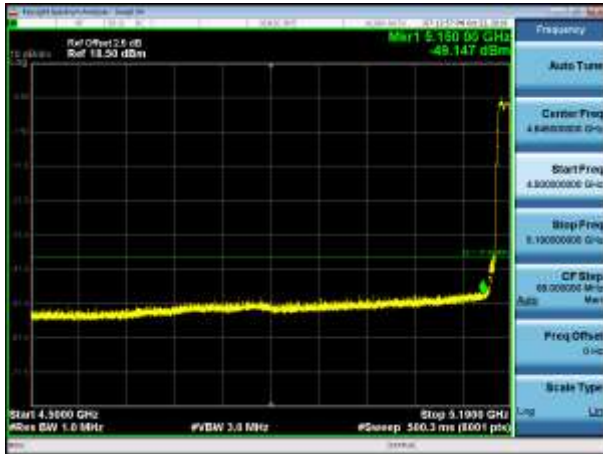


5210MHz with 2*2 Beamforming AV

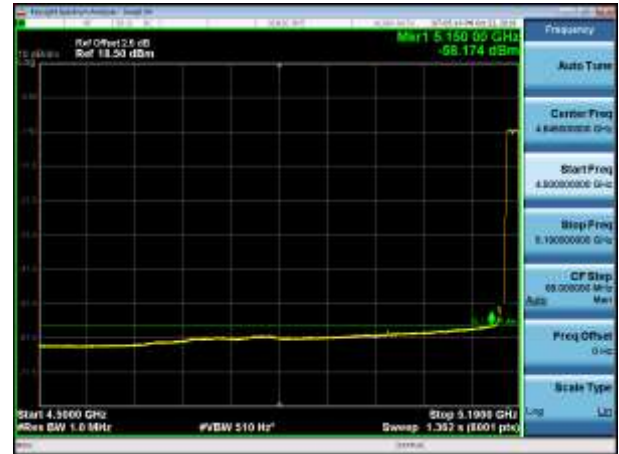


**Radio 3:
802.11a**

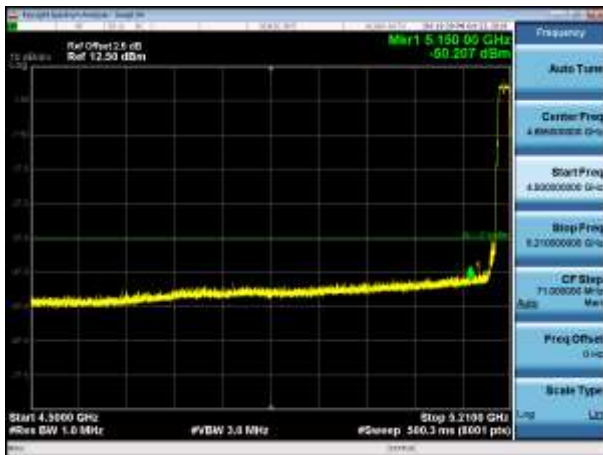
5180MHz with 4*4 CDD PK



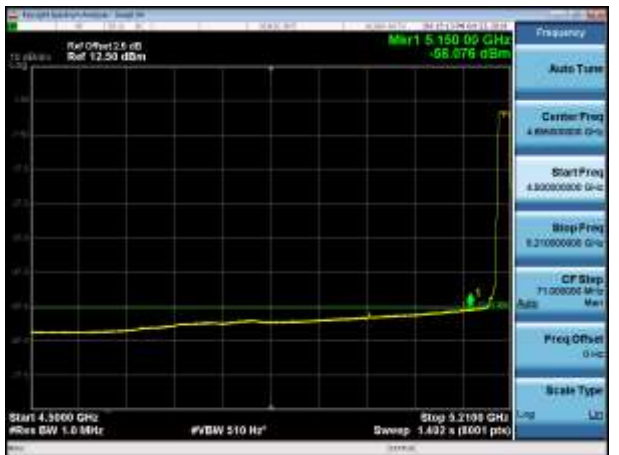
5180MHz with 4*4 CDD AV



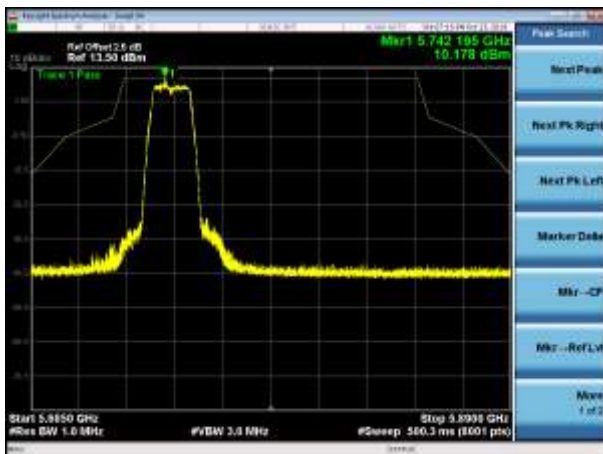
5200MHz with 4*4 CDD PK



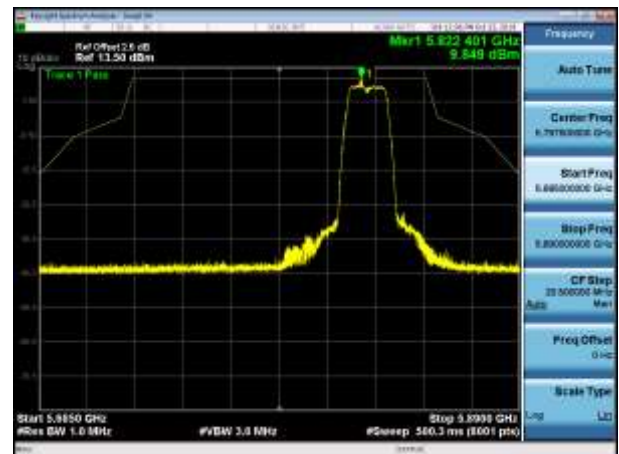
5200MHz with 4*4 CDD AV



5745MHz with 4*4 CDD PK

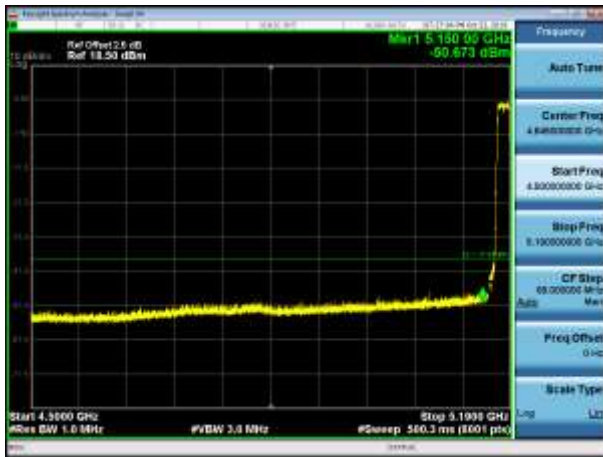


5825MHz with 4*4 CDD PK

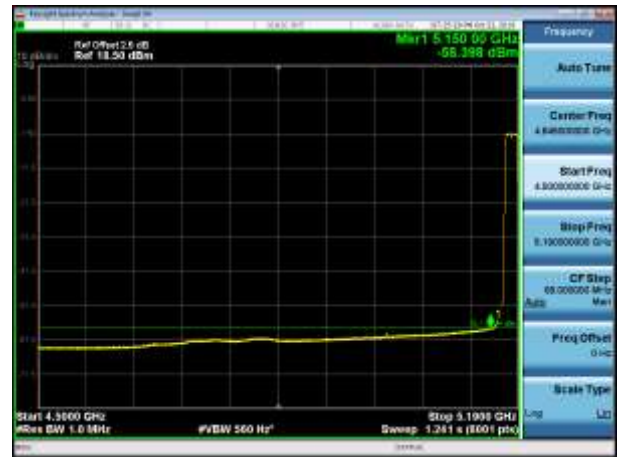


802.11n(20MHz)

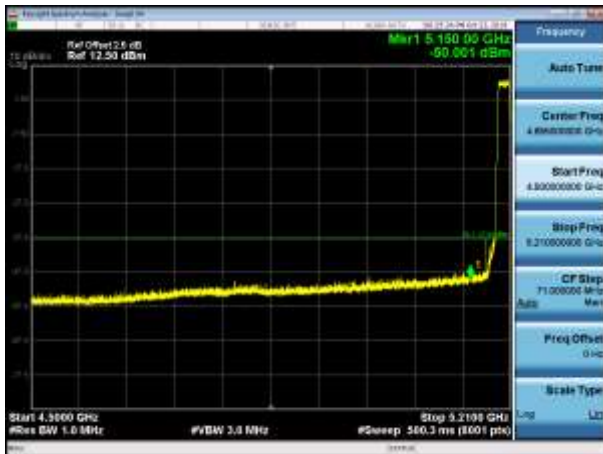
5180MHz with 4*4 CDD PK



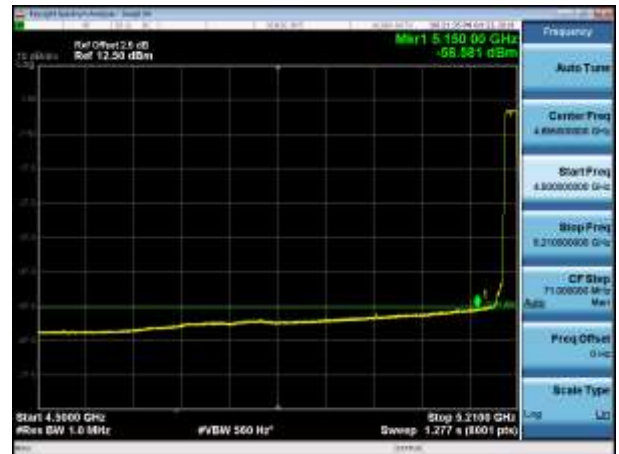
5180MHz with 4*4 CDD AV



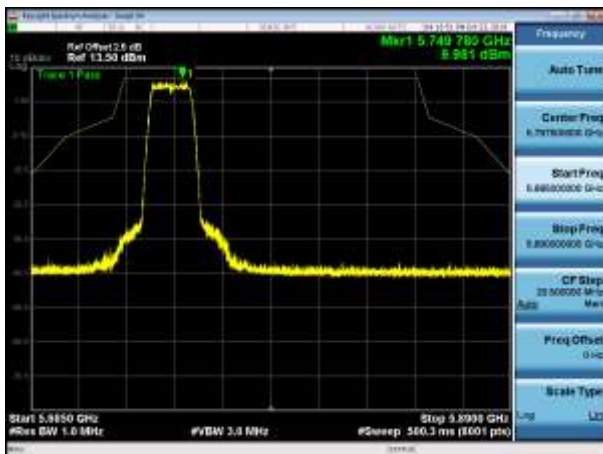
5200MHz with 4*4 CDD PK



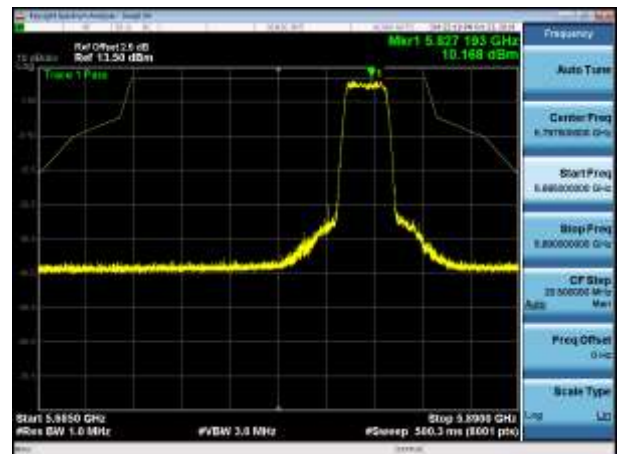
5200MHz with 4*4 CDD AV



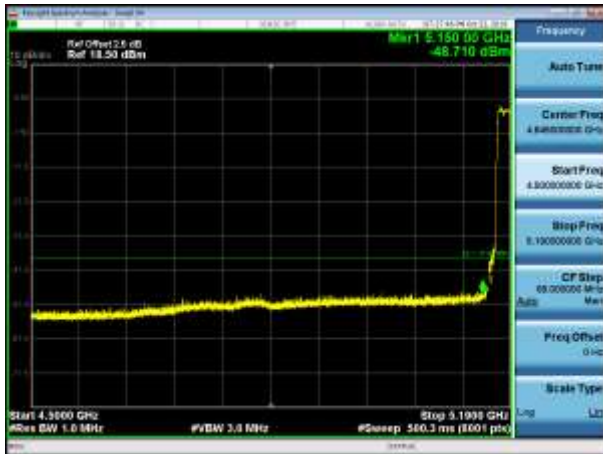
5745MHz with 4*4 CDD PK



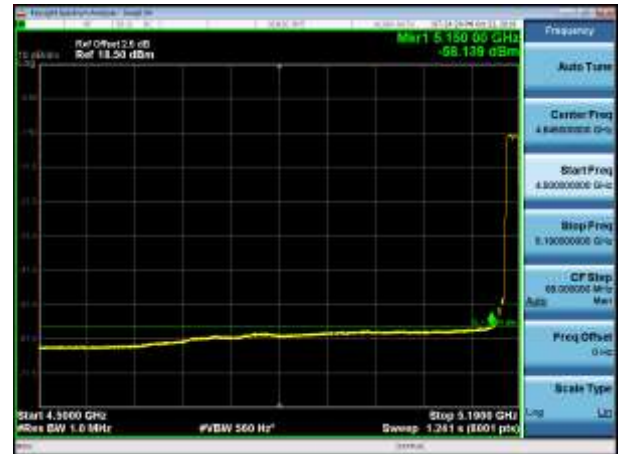
5825MHz with 4*4 CDD PK



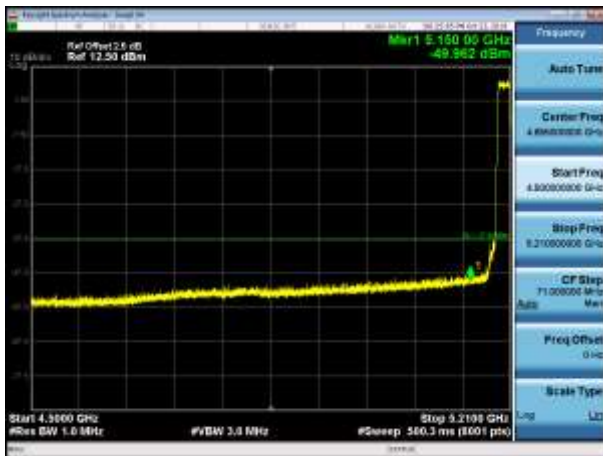
5180MHz with 4*4 Beamforming PK



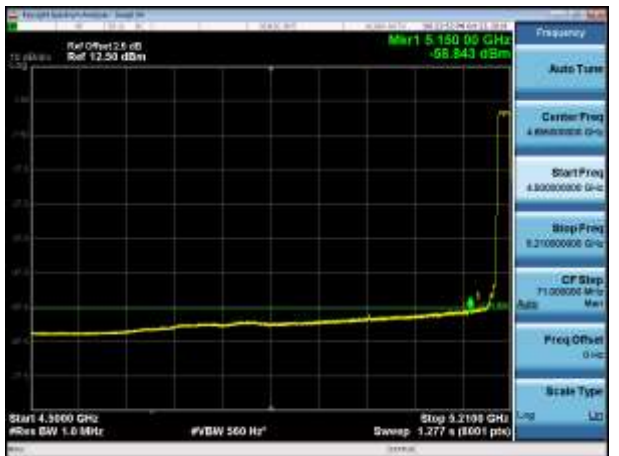
5180MHz with 4*4 Beamforming AV



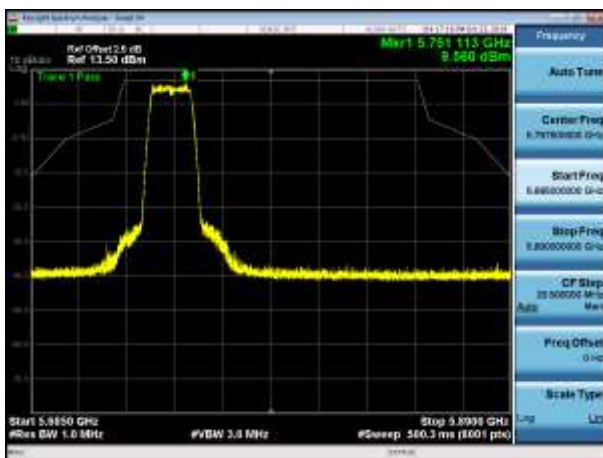
5200MHz with 4*4 Beamforming PK



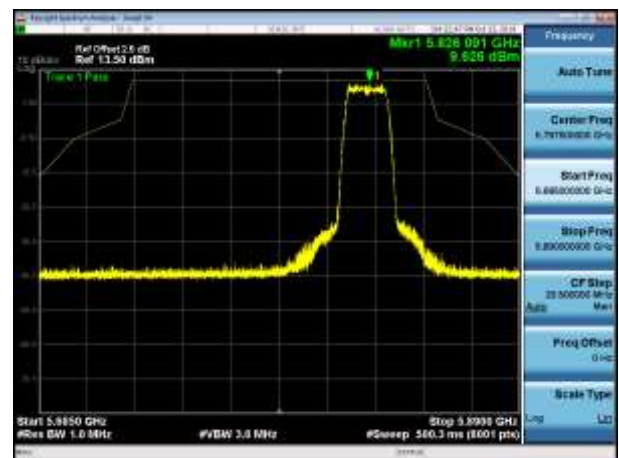
5200MHz with 4*4 Beamforming AV



5745MHz with 4*4 Beamforming PK

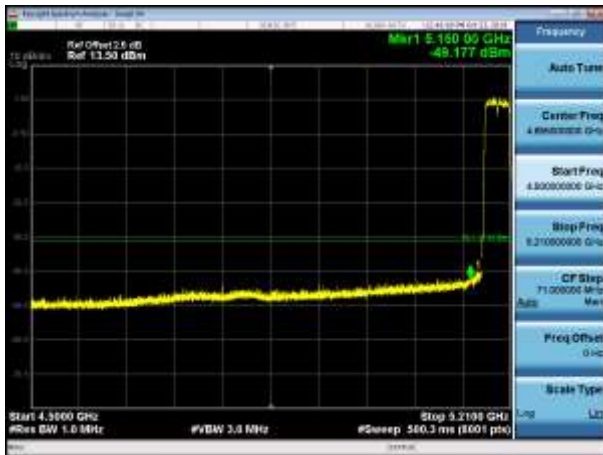


5825MHz with 4*4 Beamforming PK

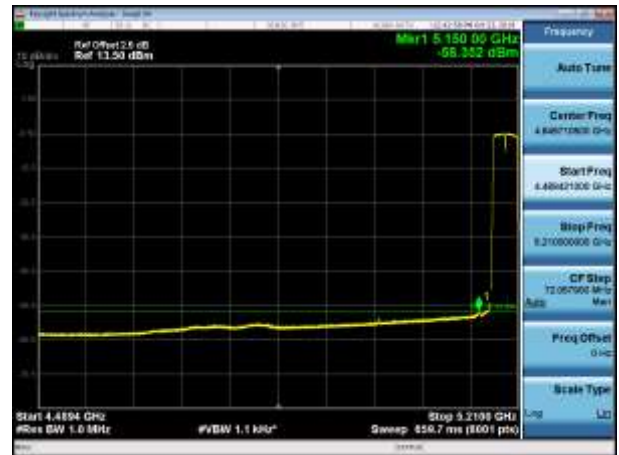


802.11n(40MHz)

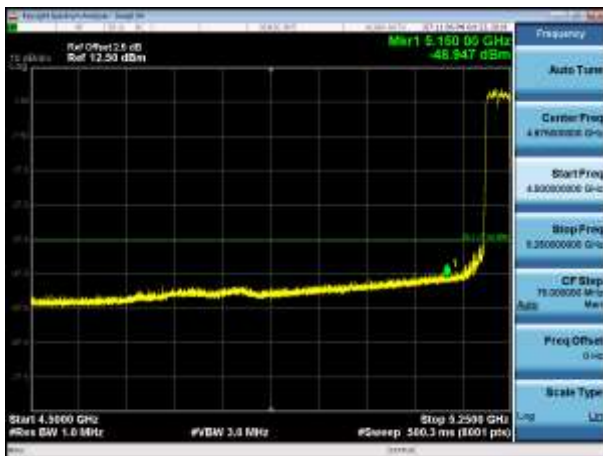
5190MHz with 4*4 CDD PK



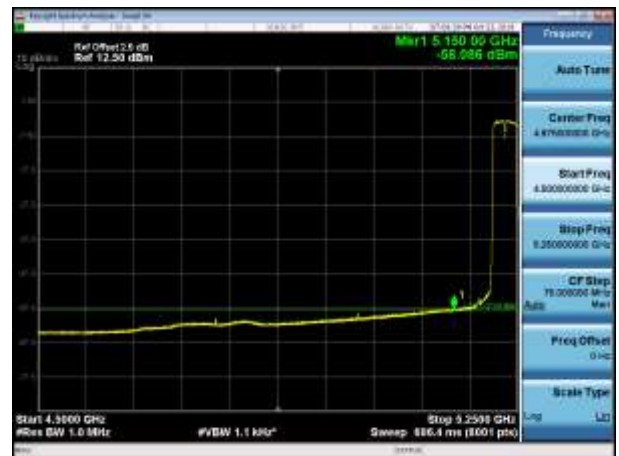
5190MHz with 4*4 CDD AV



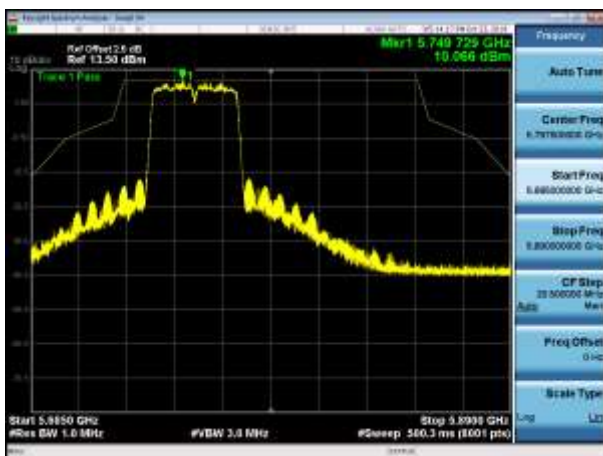
5230MHz with 4*4 CDD PK



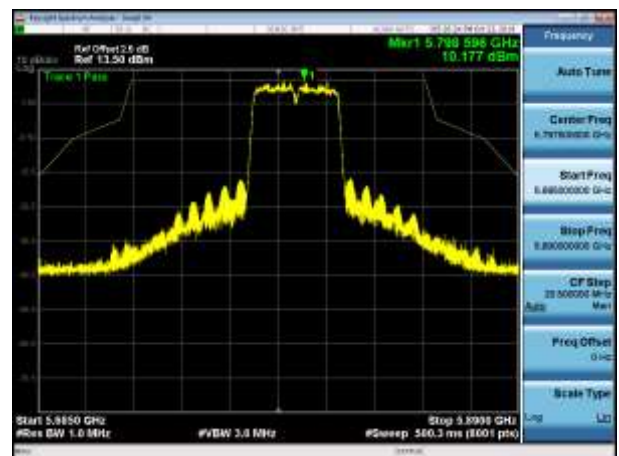
5230MHz with 4*4 CDD AV



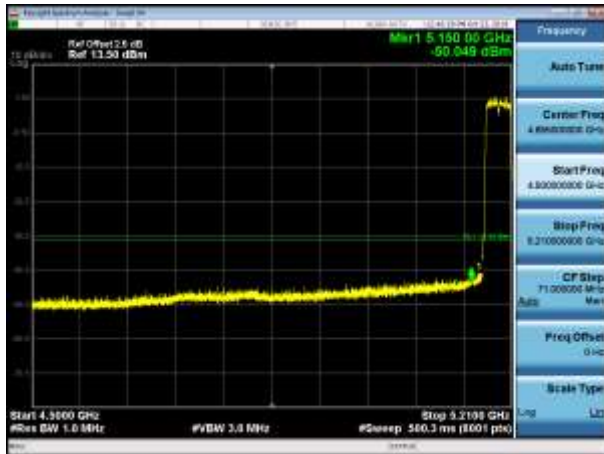
5755MHz with 4*4 CDD PK



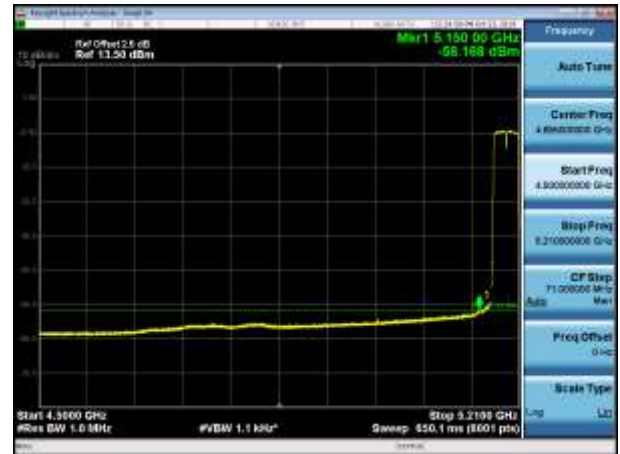
5795MHz with 4*4 CDD PK



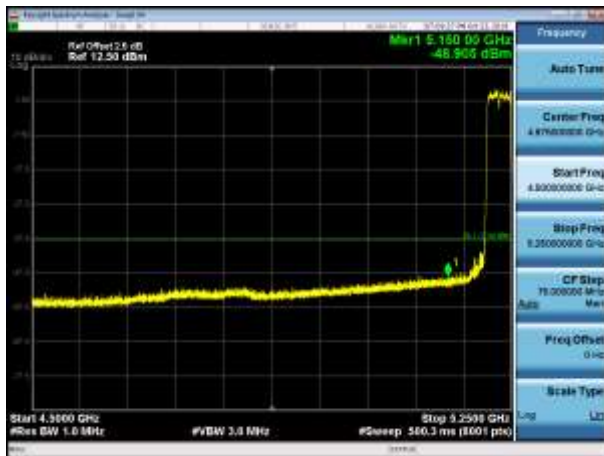
5190MHz with 4*4 Beamforming PK



5190MHz with 4*4 Beamforming AV



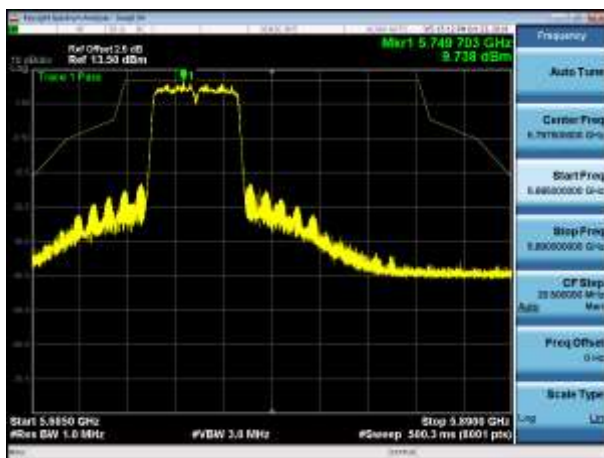
5230MHz with 4*4 Beamforming PK



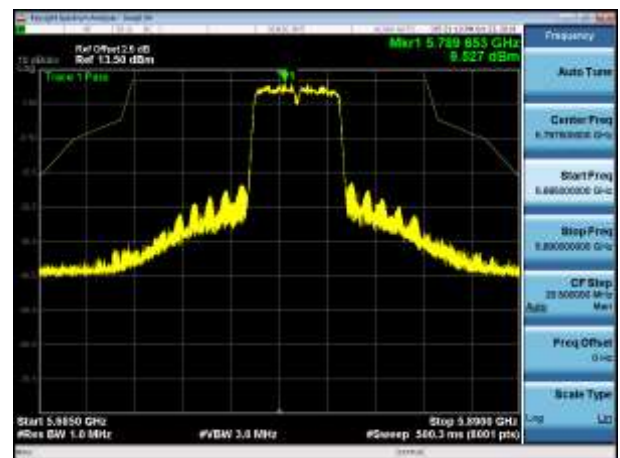
5230MHz with 4*4 Beamforming AV



5755MHz with 4*4 Beamforming PK

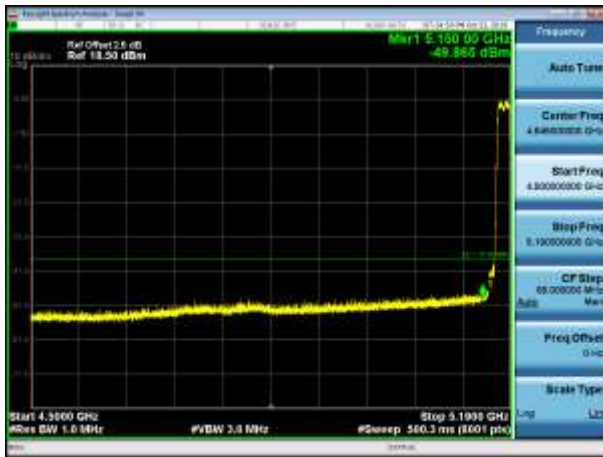


5795MHz with 4*4 Beamforming PK

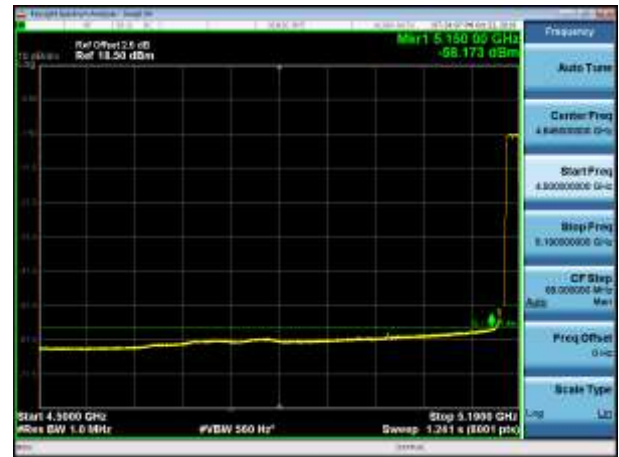


802.11ac(20MHz)

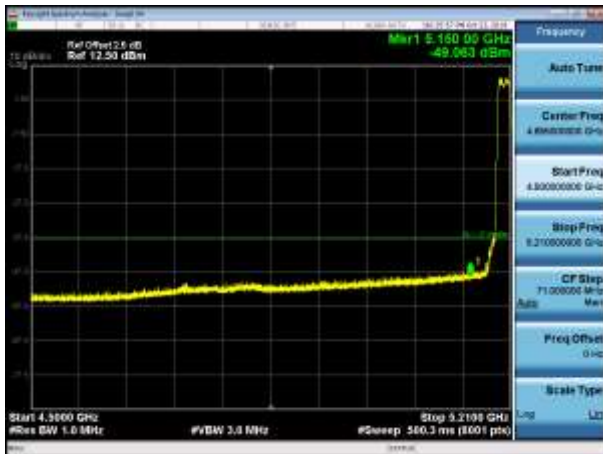
5180MHz with 4*4 CDD PK



5180MHz with 4*4 CDD AV



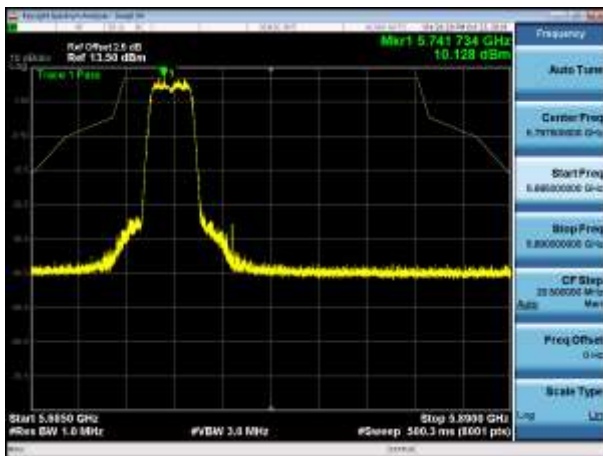
5200MHz with 4*4 CDD PK



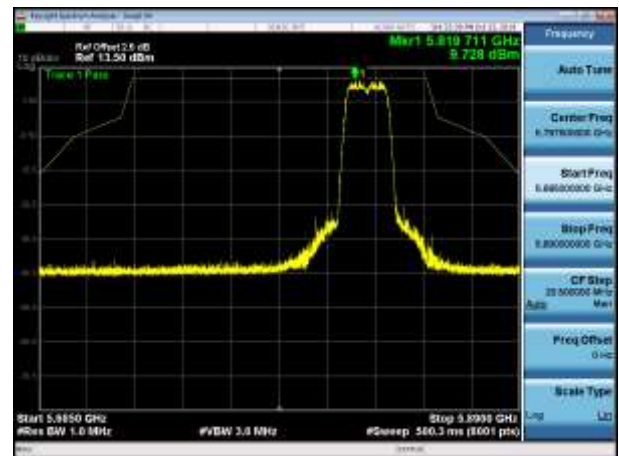
5200MHz with 4*4 CDD AV



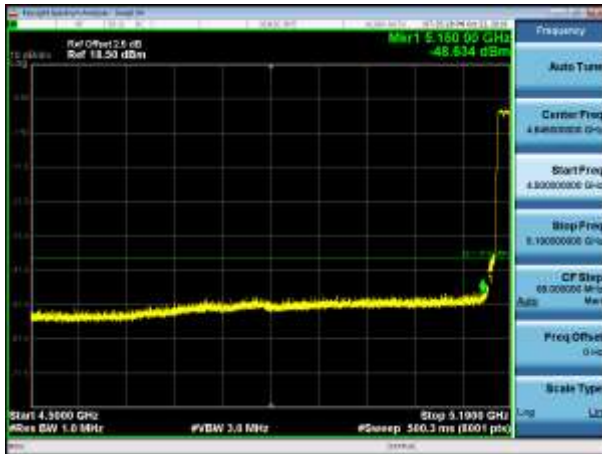
5745MHz with 4*4 CDD PK



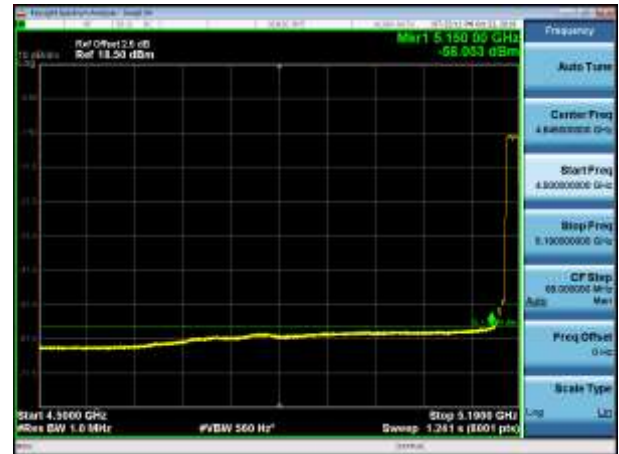
5825MHz with 4*4 CDD PK



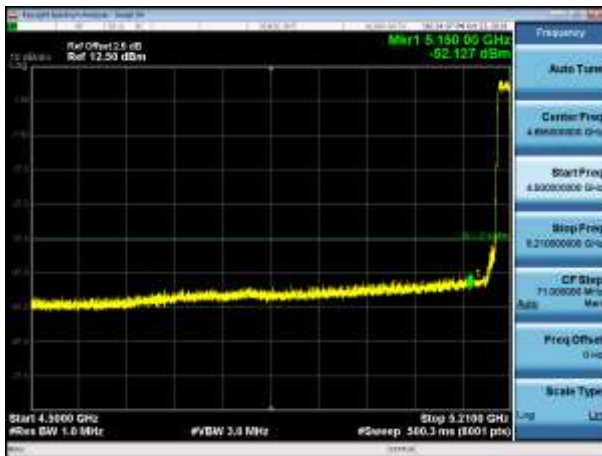
5180MHz with 4*4 Beamforming PK



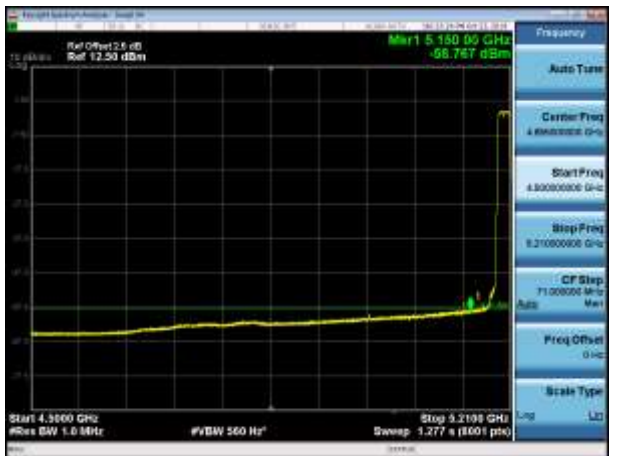
5180MHz with 4*4 Beamforming AV



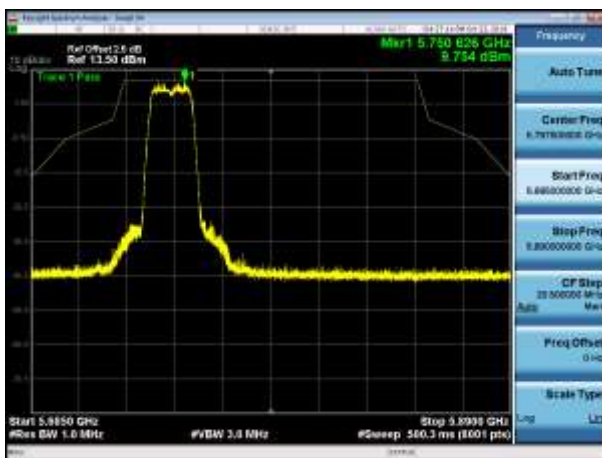
5200MHz with 4*4 Beamforming PK



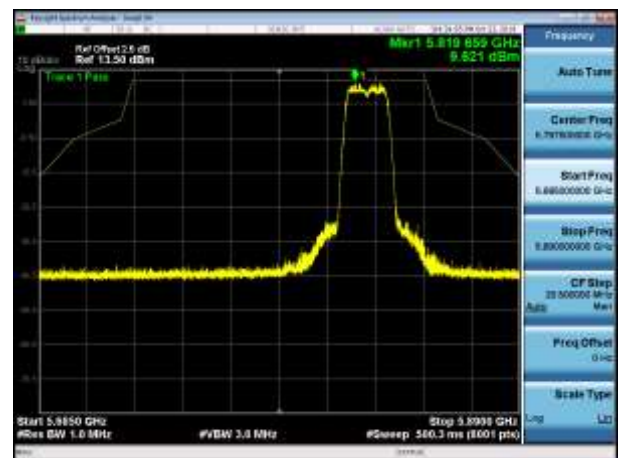
5200MHz with 4*4 Beamforming AV



5745MHz with 4*4 Beamforming PK

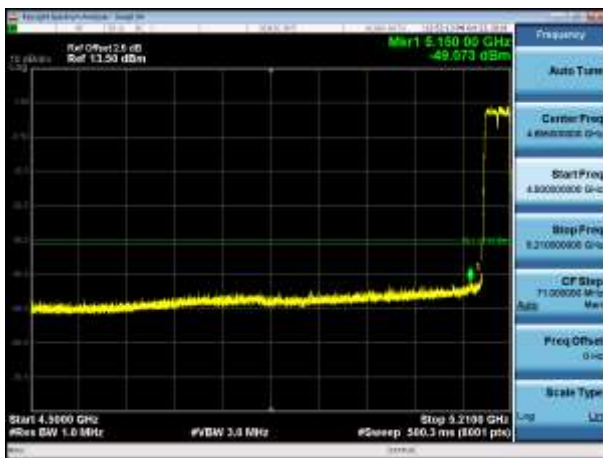


5825MHz with 4*4 Beamforming PK

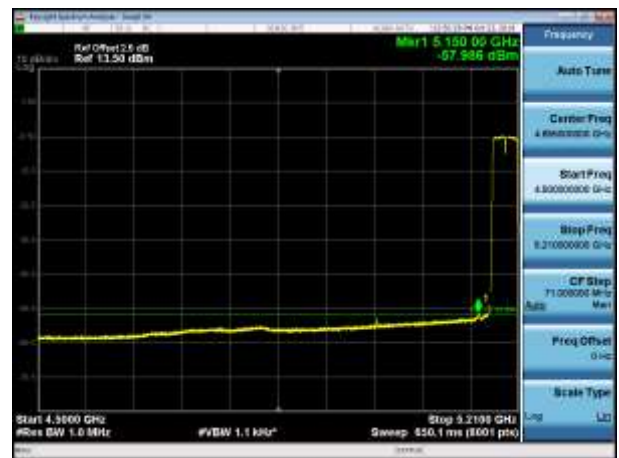


802.11ac(40MHz)

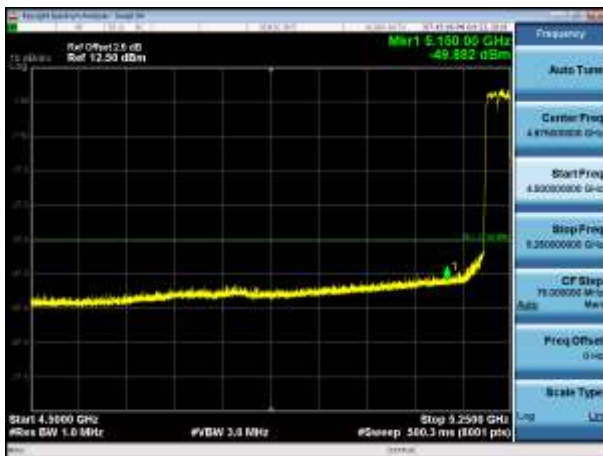
5190MHz with 4*4 CDD PK



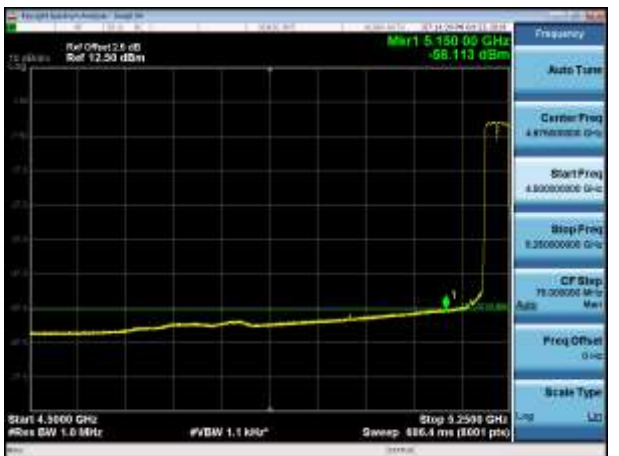
5190MHz with 4*4 CDD AV



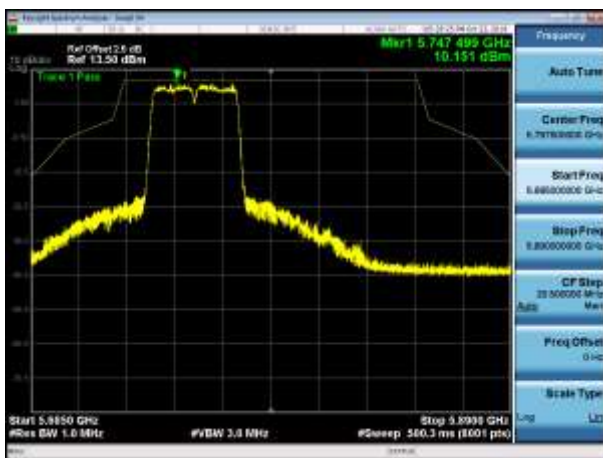
5230MHz with 4*4 CDD PK



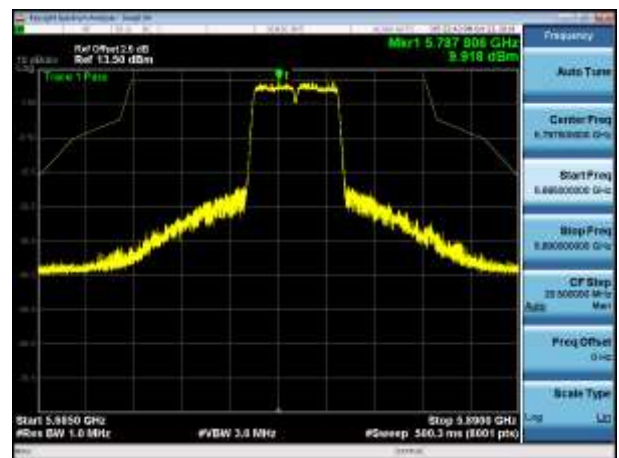
5230MHz with 4*4 CDD AV



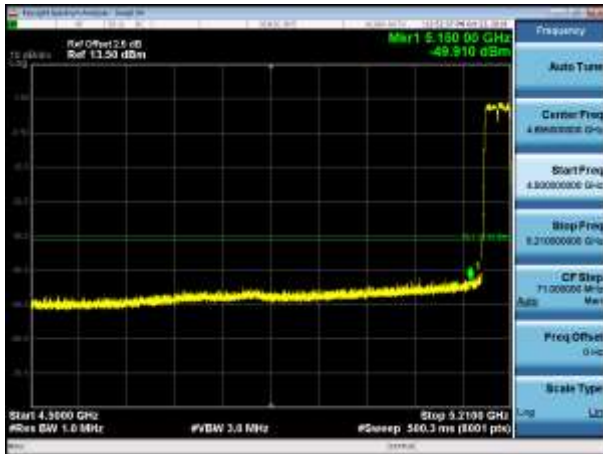
5755MHz with 4*4 CDD PK



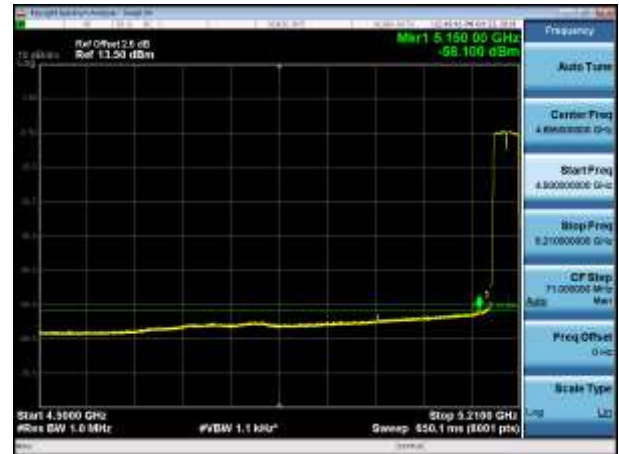
5795MHz with 4*4 CDD PK



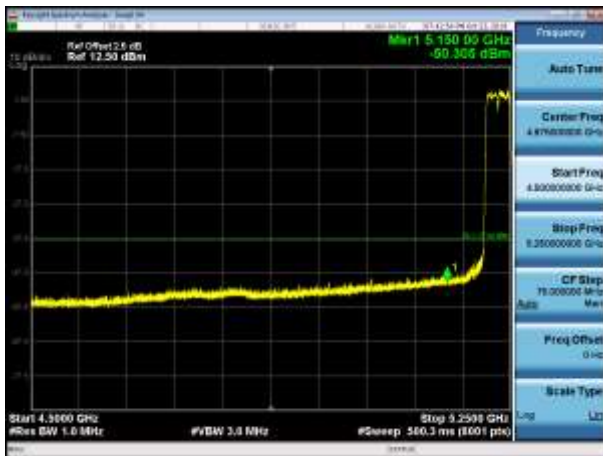
5190MHz with 4*4 Beamforming PK



5190MHz with 4*4 Beamforming AV



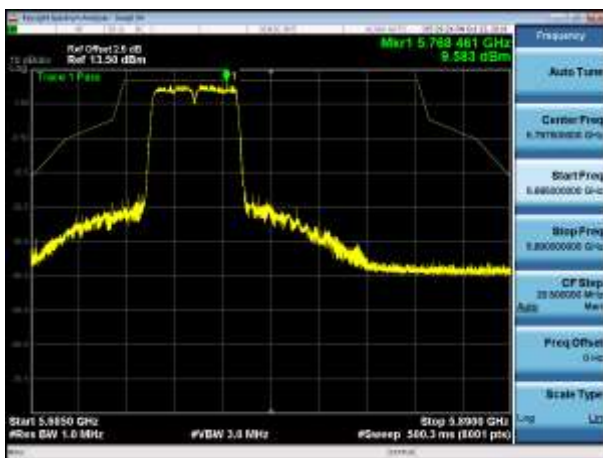
5230MHz with 4*4 Beamforming PK



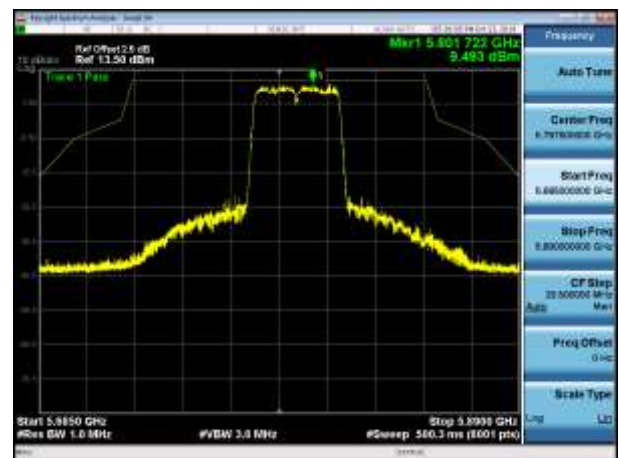
5230MHz with 4*4 Beamforming AV



5755MHz with 4*4 Beamforming PK



5795MHz with 4*4 Beamforming PK

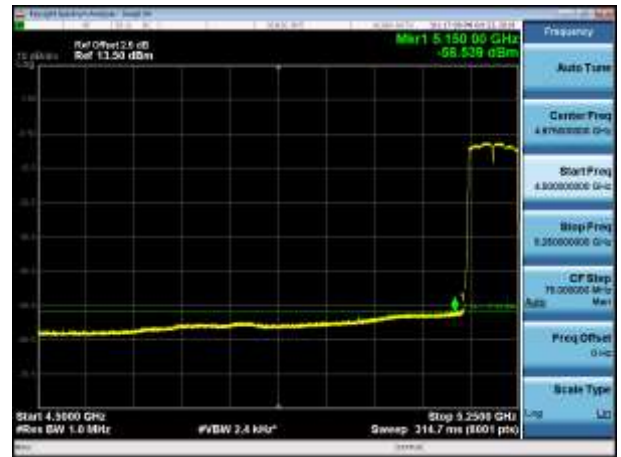


802.11ac(80MHz)

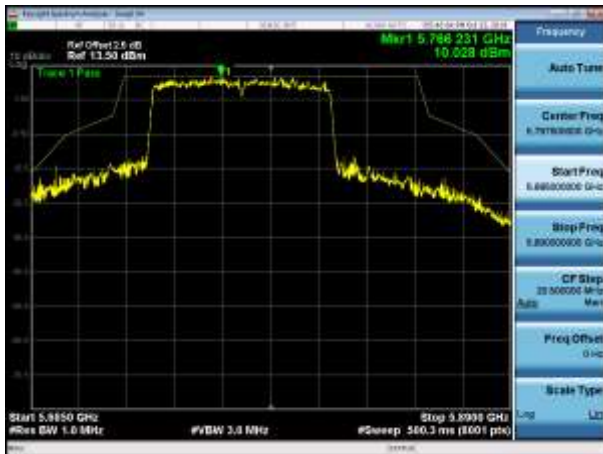
5210MHz with 4*4 CDD PK



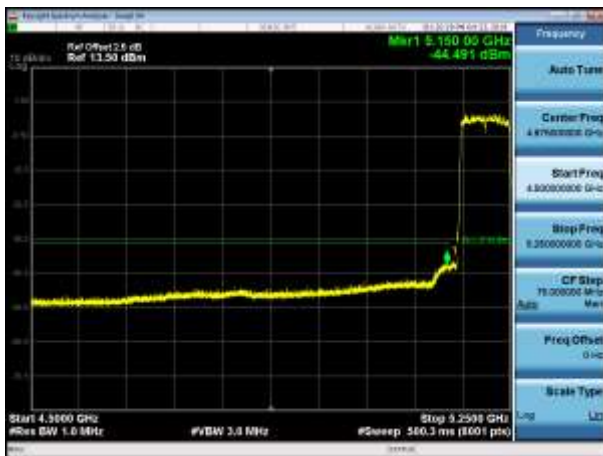
5210MHz with 4*4 CDD AV



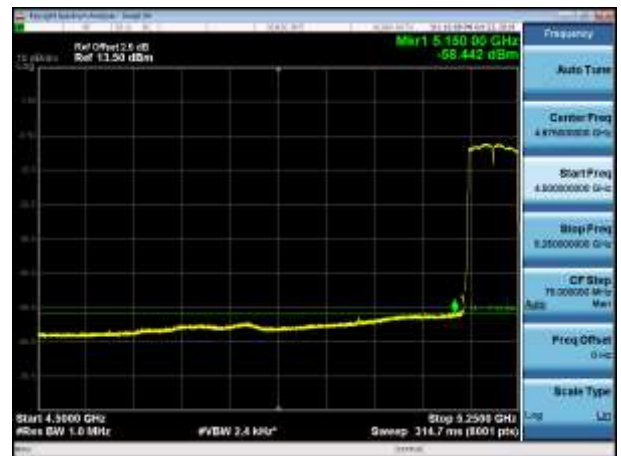
5775MHz with 4*4 CDD PK



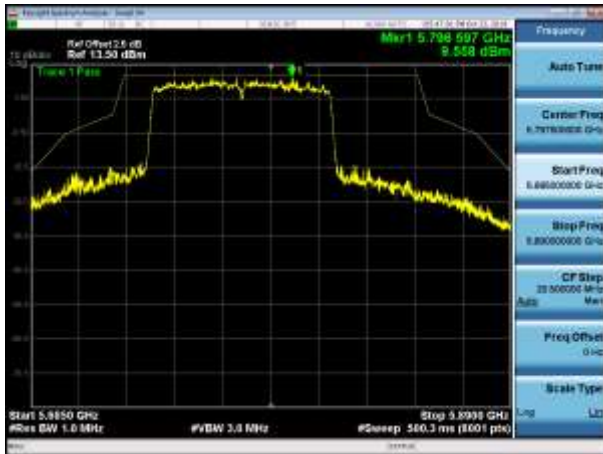
5210MHz with 4*4 Beamforming PK



5210MHz with 4*4 Beamforming AV

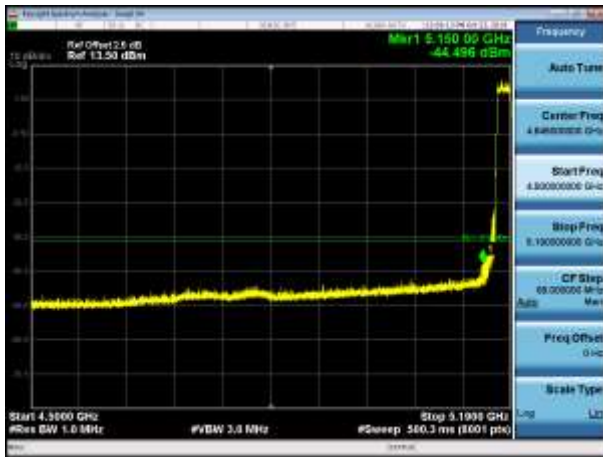


5775MHz with 4*4 Beamforming PK

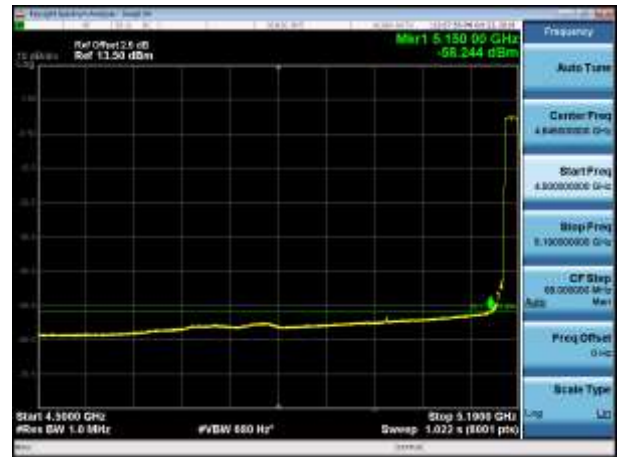


802.11ax(20MHz)

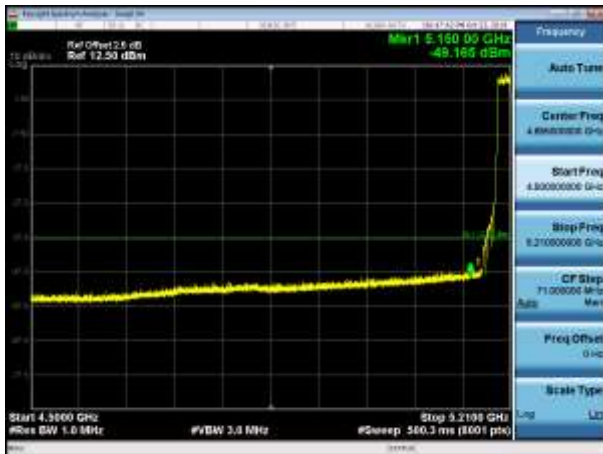
5180MHz with 4*4 CDD PK



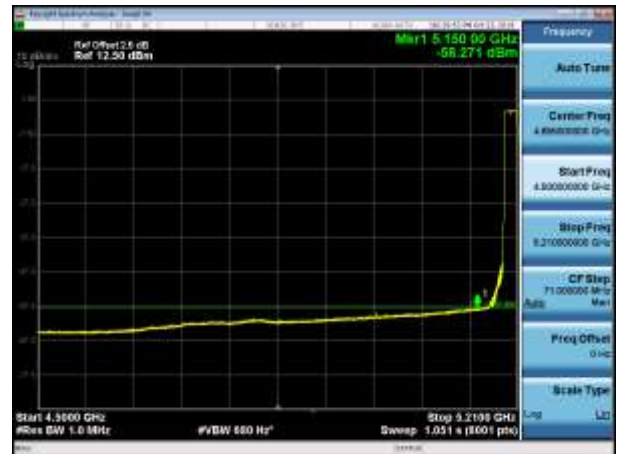
5180MHz with 4*4 CDD AV



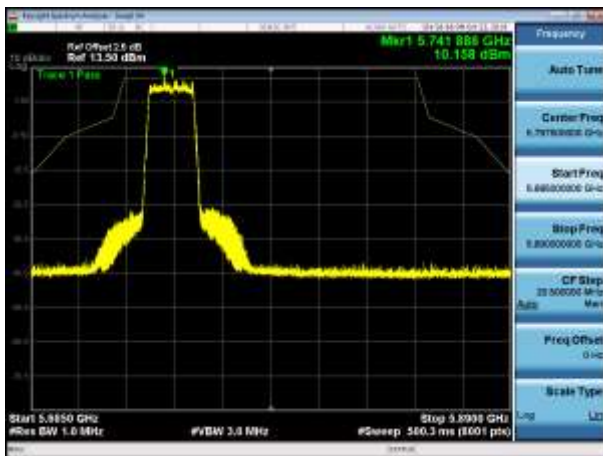
5200MHz with 4*4 CDD PK



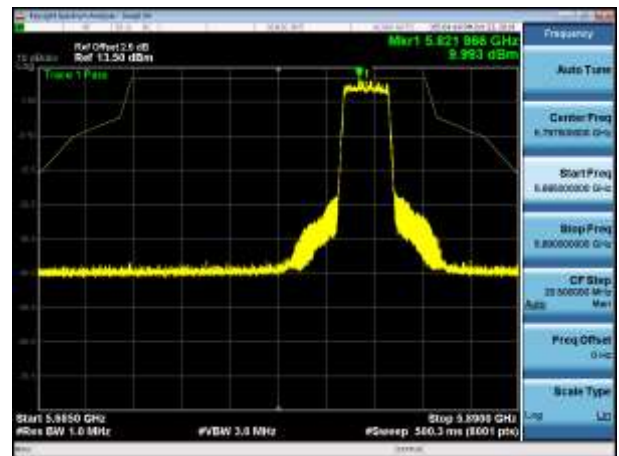
5200MHz with 4*4 CDD AV



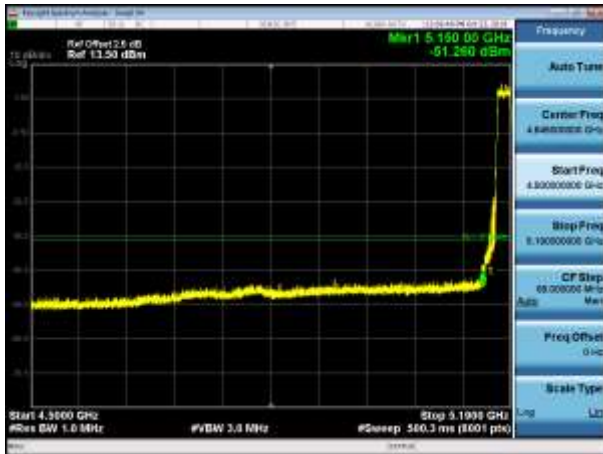
5745MHz with 4*4 CDD PK



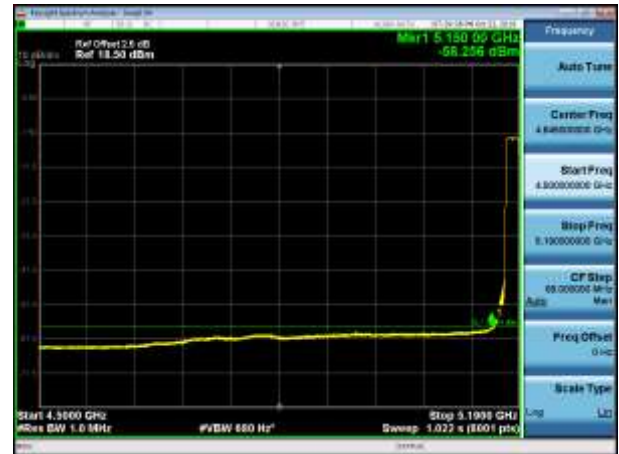
5825MHz with 4*4 CDD PK



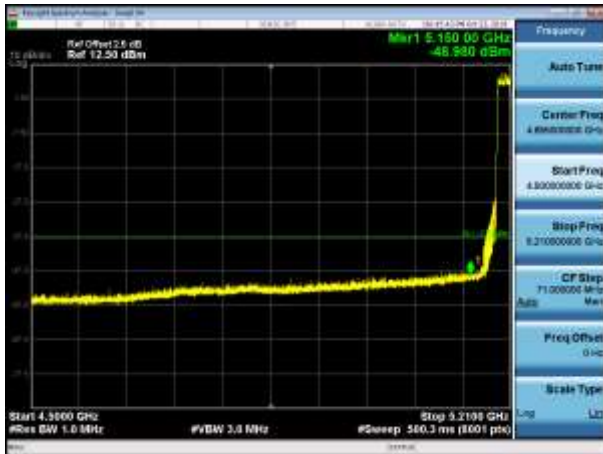
5180MHz with 4*4 Beamforming PK



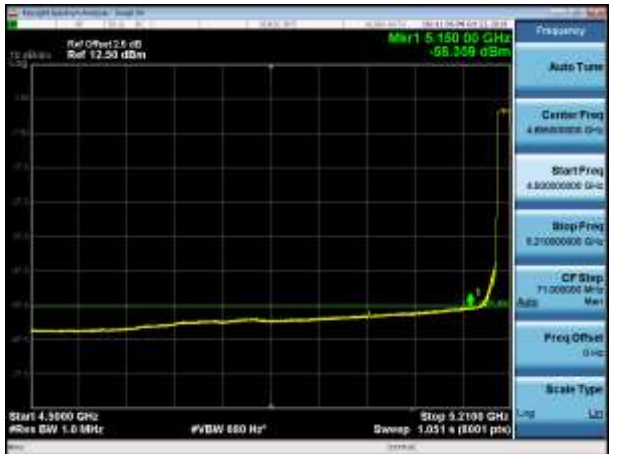
5180MHz with 4*4 Beamforming AV



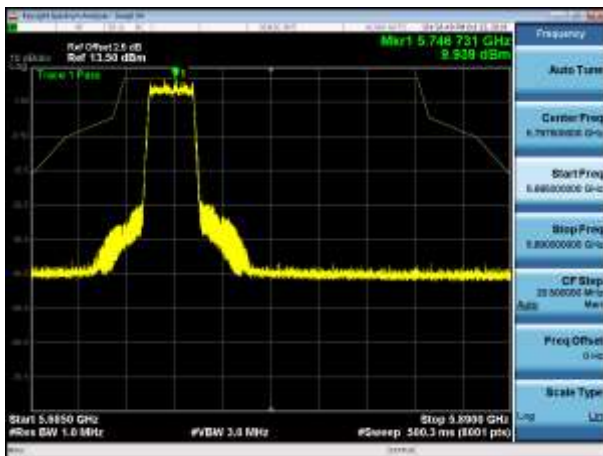
5200MHz with 4*4 Beamforming PK



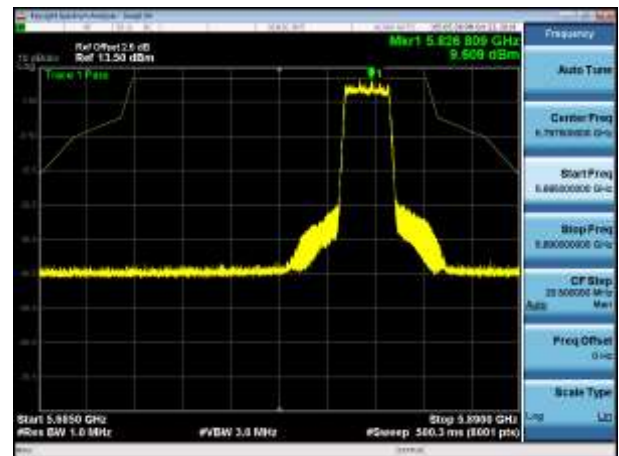
5200MHz with 4*4 Beamforming AV



5745MHz with 4*4 Beamforming PK

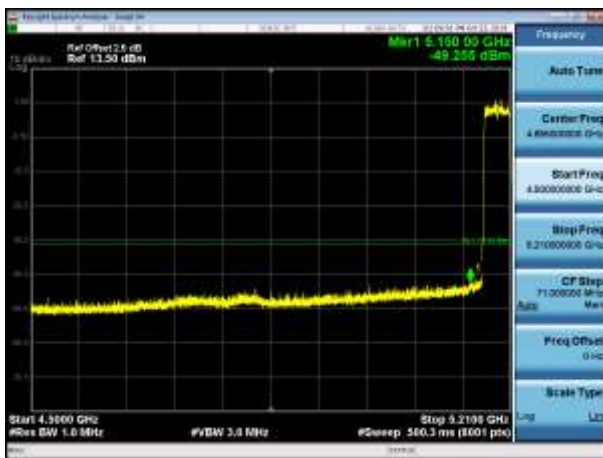


5825MHz with 4*4 Beamforming PK

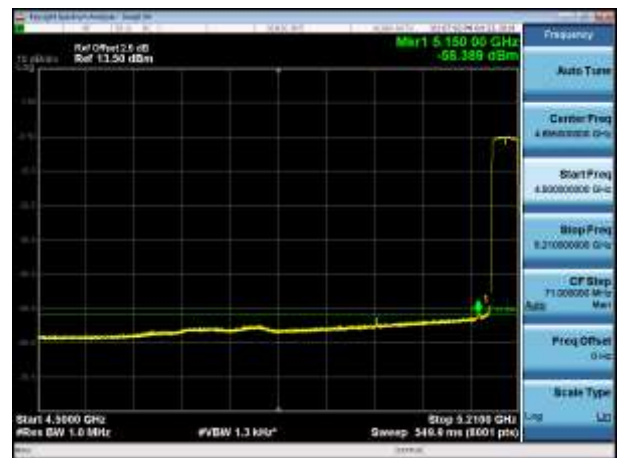


802.11ax(40MHz)

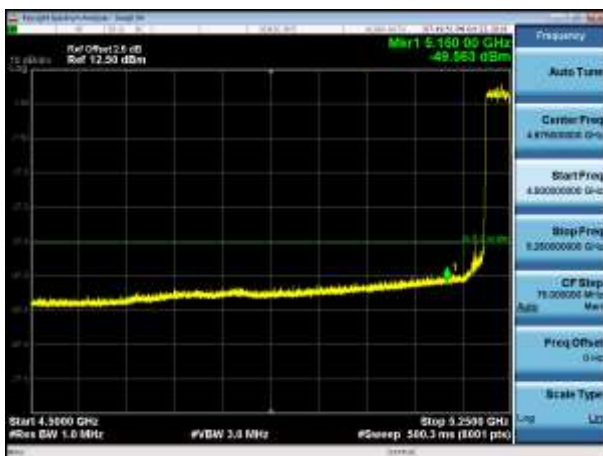
5190MHz with 4*4 CDD PK



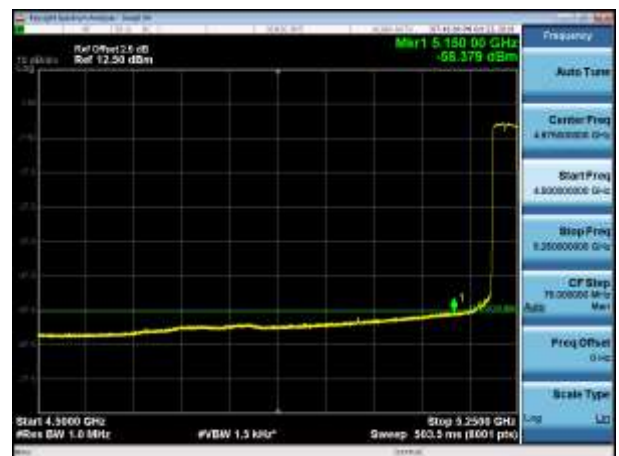
5190MHz with 4*4 CDD AV



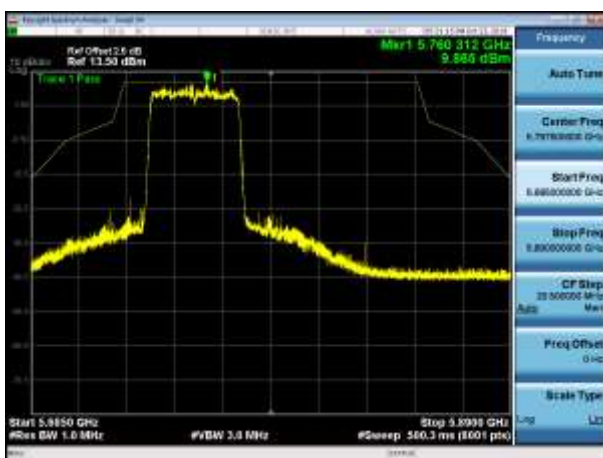
5230MHz with 4*4 CDD PK



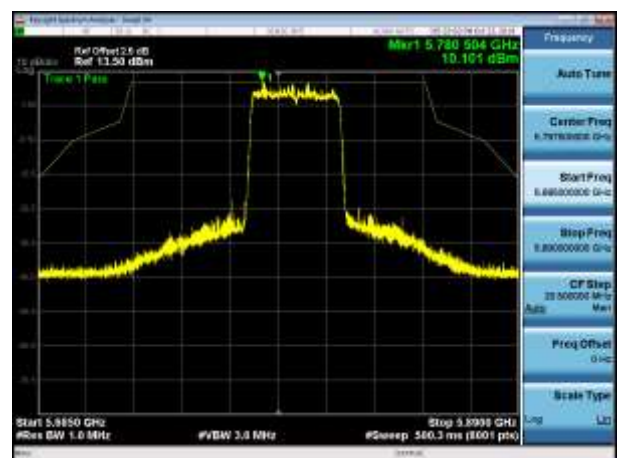
5230MHz with 4*4 CDD AV



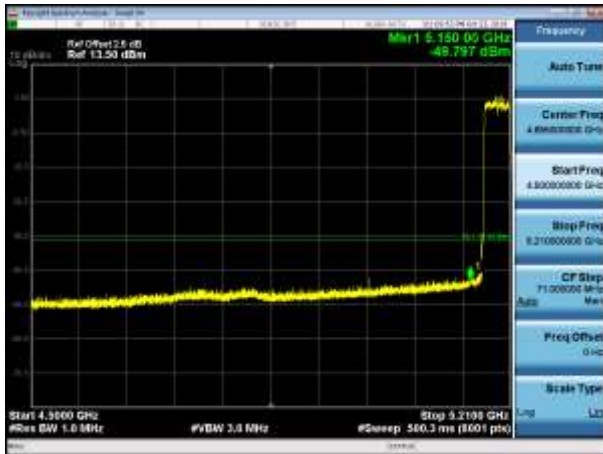
5755MHz with 4*4 CDD PK



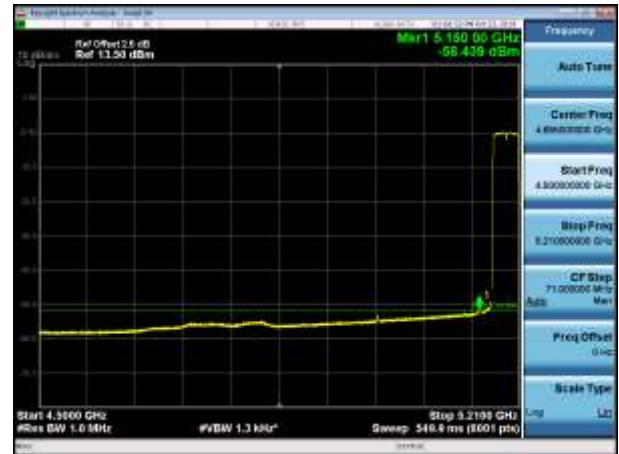
5795MHz with 4*4 CDD PK



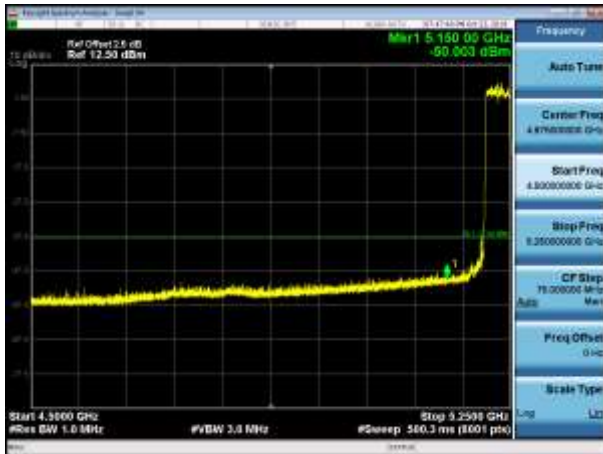
5190MHz with 4*4 Beamforming PK



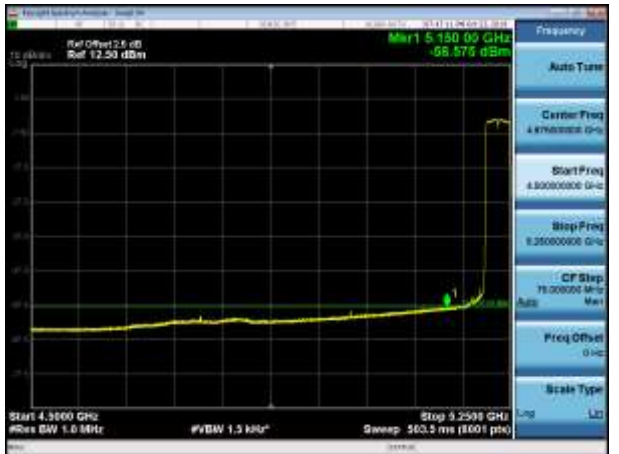
5190MHz with 4*4 Beamforming AV



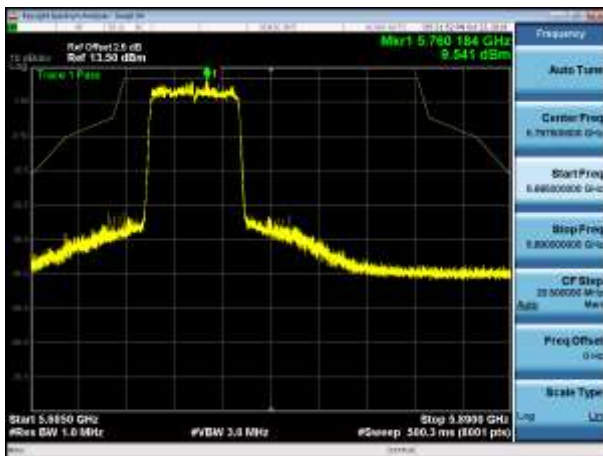
5230MHz with 4*4 Beamforming PK



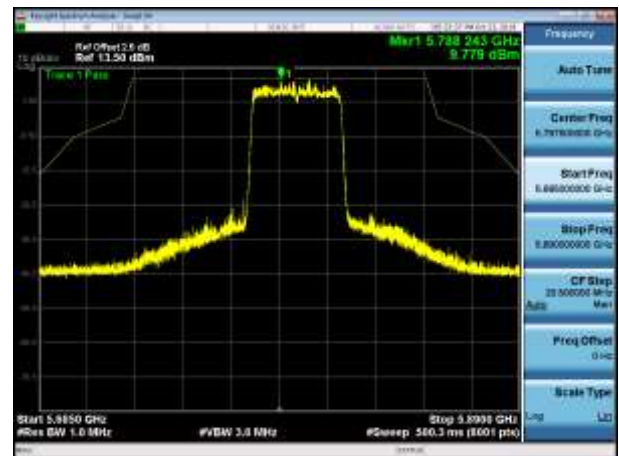
5230MHz with 4*4 Beamforming AV



5755MHz with 4*4 Beamforming PK

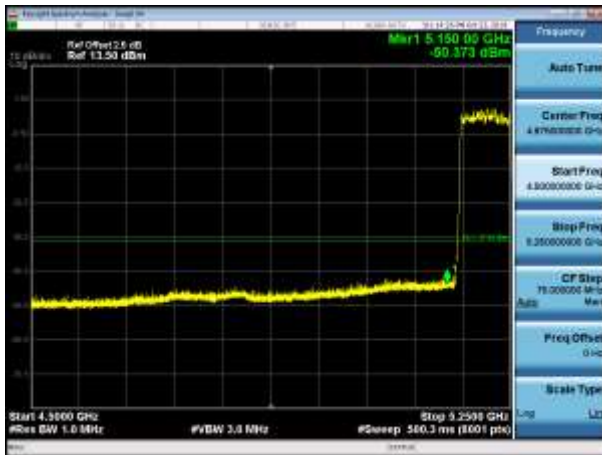


5795MHz with 4*4 Beamforming PK

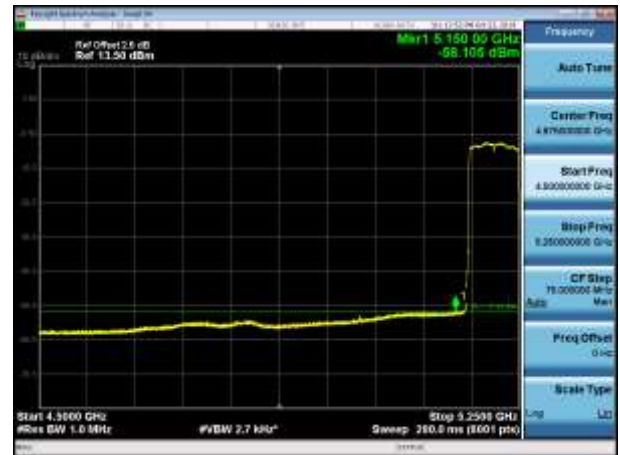


802.11ax(80MHz)

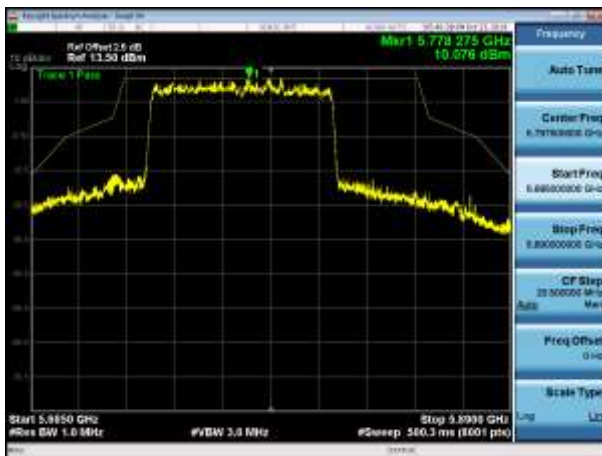
5210MHz with 4*4 CDD PK



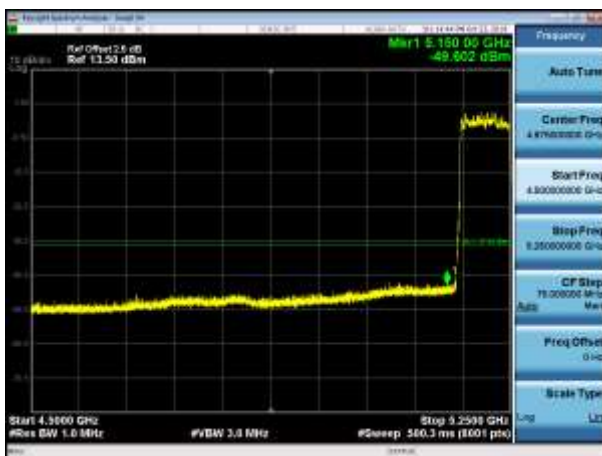
5210MHz with 4*4 CDD AV



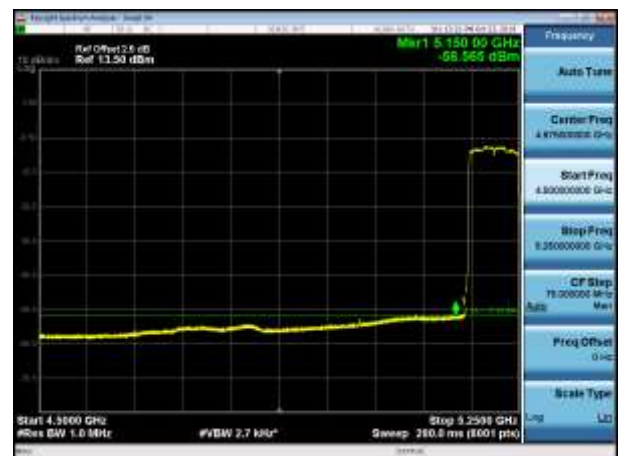
5775MHz with 4*4 CDD PK



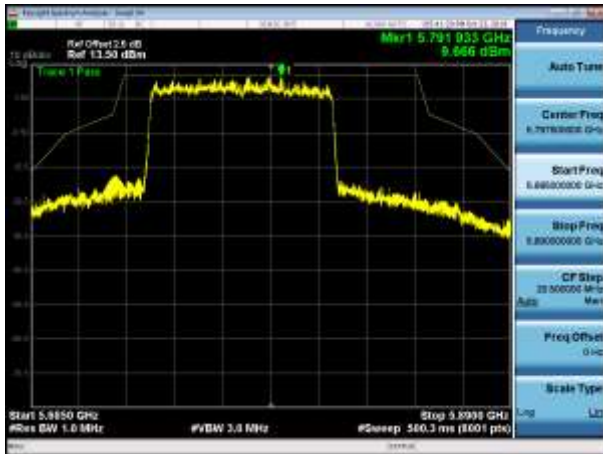
5210MHz with 4*4 Beamforming PK



5210MHz with 4*4 Beamforming AV



5775MHz with 4*4 Beamforming PK



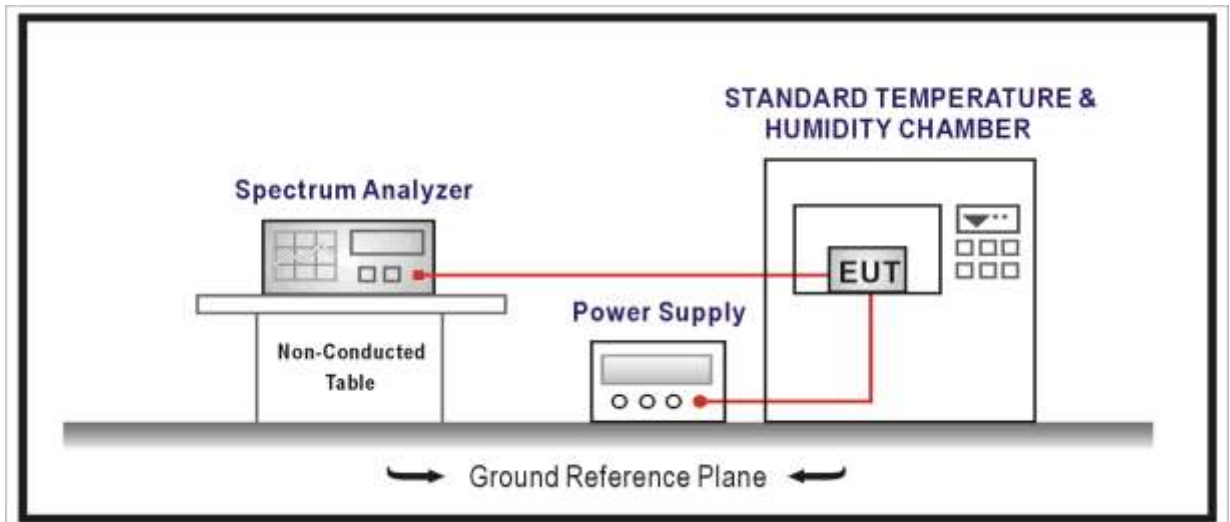
10. Frequency Stability

10.1. Test Equipment

Frequency Stability / TR-7					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2019.02.04	2020.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2019.04.09	2020.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2019.04.09	2020.04.08
AC Power Supply	IDRC	CF-500TP	979422	2019.09.16	2020.09.15
DC Power Supply	IDRC	CD-035-020PR	977272	2019.09.16	2020.09.15
Programmable Temperature & Humidity Chamber	Gaoyu	TH-1P-B	WIT-05121302	2019.01.04	2020.01.03
Temperature/Humidity Meter	zhichen	ZC1-2	TR7-TH	2019.04.10	2020.04.09

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

10.2. Test Setup



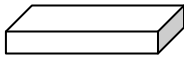
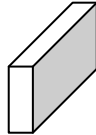
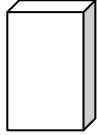
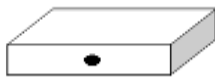



10.3. Limit

Frequency Stability Limit	
UNII Devices	
<input checked="" type="checkbox"/>	In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.
IEEE Std. 802.11n-2009	
<input checked="" type="checkbox"/>	The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band and ± 25 ppm maximum for the 2.4 GHz band.

10.4. Test Procedure

Frequency Stability Test Method			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	6.8	Frequency stability tests
	<input checked="" type="checkbox"/> ANSI C63.10	6.8.1	Frequency stability with respect to ambient temperature
	<input checked="" type="checkbox"/> ANSI C63.10	6.8.2	Frequency stability when varying supply voltage

10.5. EUT test Axis definition

Item	Frequency Stability			
Device Category	<input checked="" type="checkbox"/>	Indoor use		
	<input type="checkbox"/>	Outdoor use		
	<input type="checkbox"/>	Fix position use		
	<input type="checkbox"/>	Client use		
Test mode	Mode 1-9			
Test method	<input type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input checked="" type="checkbox"/>	Conducted		
	<input checked="" type="checkbox"/>	Chain 1		
				
	<input checked="" type="checkbox"/>	Chain 1	Chain 2	
				
	<input type="checkbox"/>	Chain 1	Chain 2	Chain 3
				
<input checked="" type="checkbox"/>	Chain 1	Chain 2	Chain 3	Chain 4
				

10.6. Test Result

Product Name	: Wireless Access Point	Power	: AC 120V/60Hz
Test Mode	: Carrier Wave	Test Site	: TR-7
Test Date	: 2019.12.05	Test Engineer	: Simon

Frequency Stability under Temperature at 0min

Temperature Interval (°C)	Test Frequency (MHz)	Deviation (Hz)	ppm	Limit
-30	5220.000	133	0.025	±20
-20	5220.000	85	0.016	±20
-10	5220.000	135	0.026	±20
0	5220.000	14	0.003	±20
10	5220.000	142	0.027	±20
20	5220.000	-142	-0.027	±20
30	5220.000	63	0.012	±20
40	5220.000	-134	-0.026	±20
50	5220.000	19	0.004	±20

Frequency Stability under Temperature at 2min

Temperature Interval (°C)	Test Frequency (MHz)	Deviation (Hz)	ppm	Limit
-30	5220.000	44	0.008	±20
-20	5220.000	134	0.026	±20
-10	5220.000	134	0.026	±20
0	5220.000	-101	-0.019	±20
10	5220.000	150	0.029	±20
20	5220.000	-69	-0.013	±20
30	5220.000	156	0.030	±20
40	5220.000	57	0.011	±20
50	5220.000	-118	-0.023	±20

Frequency Stability under Temperature at 5min

Temperature Interval (°C)	Test Frequency (MHz)	Deviation (Hz)	ppm	Limit
-30	5220.000	-80	-0.015	±20
-20	5220.000	109	0.021	±20
-10	5220.000	58	0.011	±20
0	5220.000	11	0.002	±20
10	5220.000	-98	-0.019	±20
20	5220.000	-72	-0.014	±20
30	5220.000	122	0.023	±20
40	5220.000	99	0.019	±20
50	5220.000	170	0.033	±20

Frequency Stability under Temperature at 10min

Temperature Interval (°C)	Test Frequency (MHz)	Deviation (Hz)	ppm	Limit
-30	5220.000	187	0.036	±20
-20	5220.000	-144	-0.028	±20
-10	5220.000	-72	-0.014	±20
0	5220.000	121	0.023	±20
10	5220.000	175	0.034	±20
20	5220.000	-90	-0.017	±20
30	5220.000	100	0.019	±20
40	5220.000	-97	-0.019	±20
50	5220.000	-64	-0.012	±20

Frequency Stability under Voltage

AC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	ppm	Limit
102	5220.000	-42	-0.008	±20
120	5220.000	-131	-0.025	±20
138	5220.000	98	0.019	±20

11. Antenna Requirement

11.1. Limit

Antenna Requirement Limit
<p>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.</p>

11.2. Antenna Connector Construction

Antenna Connector Construction	
<input checked="" type="checkbox"/>	The use of a permanently attached antenna
<input type="checkbox"/>	The antenna use of a unique coupling to the intentional radiator
<input type="checkbox"/>	The use of a nonstandard antenna jack or electrical connector
Please refer to the attached document "Internal Photograph" to show the antenna connector.	

_____ The End _____