



Test Report

FCC Part15 Subpart E

Product Name : Wireless Access Point

Model No. : AP305C、AP305CX

FCC ID : QXO-AP305C

Applicant : Extreme Networks, Inc

Address : 6480 Via Del Oro, San Jose, CA
95119

Date of Receipt : Jun. 27, 2019

Test Date : Jun. 28, 2019 ~ Aug. 08, 2019

Issued Date : Aug. 23, 2019

Report No. : 1962097R-RF-US-P09V01

Report Version : V1.0

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 : Aug. 23, 2019

Report No. : 1962097R-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. : AP305C、AP305CX
Brand : Extreme Networks
FCC ID : QXO-AP305C
EUT Voltage : POE 48V
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.
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TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098
FCC Designation Number: CN1199;

Documented By : 
(Adm. Specialist: Kitty Li)

Reviewed By : 
(Senior Engineer: Frank He)

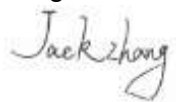
Approved By : 
(Engineer Supervisor: Jack Zhang)

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1962097R-RF-US-P09V01	V1.0	Initial Issued Report	Aug. 23, 2019

1. General Information

1.1. EUT Description

Product Name	Wireless Access Point					
Model No.	AP305C、AP305CX					
EUT Voltage	PoE48V					
Type of Modulation	OFDM-BPSK, QPSK, 16QAM, 64QAM, 128QAM, 256QAM, 1024QAM					
Data Rate	802.11a: 6/9/12/18/24/36/48/54Mbps					
	802.11n: up to 300Mbps					
	802.11ac: up to 866.6Mbps					
	802.11ax: up to 1.2Gbps					
Channel Control	Auto					
Transmit modes	☒	802.11a	☒	802.11n(20MHz)	☒	802.11n(40MHz)
	☒	802.11ac(20MHz)	☒	802.11ac(40MHz)	☒	802.11ac(80MHz)
	☒	802.11ax(20MHz)	☒	802.11ax(40MHz)	☒	802.11ax(80MHz)
	☐	802.11ax(160MHz)				
Support Bands	☒	5150MHz~5250MHz	☐	Outdoor AP		
			☒	Indoor AP		
			☐	Fixed point-to-point AP		
			☐	Mobile and Portable Client		
	☐	5250MHz~5350MHz				
	☐	5470MHz~5725MHz	☐	With TDWR Channels		
			☐	Without TDWR Channels		
	☒	5725MHz~5850MHz				

Note1: AP305C and AP305CX are the same except the antenna type and antenna gain, due to the same power setting of AP305C and AP305CX, the conducted test item data is the same.

2: The device contains two 5GHz modules, and called eth1 and eth2, eth2 can work separately and eth1 can only transmit with eth2 which at 5150~5250MHz and eth2 work at 5725~5850MHz. So eth2 test all the frequency bands and eth1 only test 5150~5250MHz.

1.2. Antenna information

AP305C:

Antenna Model No.	N/A				
Antenna Manufacturer	N/A				
Antenna Delivery	☒	1*TX+1*RX	☒	2*TX+2*RX	☐ 3*TX+3*RX
Antenna Technology	☒	SISO			
	☒	MIMO	☐	Basic methodology	
			☐	Sectorized antenna systems	
			☐	Cross-polarized antennas	
			☐	Unequal antenna gains, with equal transmit powers	
			☒	Spatial Multiplexing	
			☒	Cyclic Delay Diversity (CDD)	
Antenna Type	PIFA				
Antenna Gain					
Antenna Technology			Ant Gain(eth1) (dBi)		
☒	SISO	☒	Ant1	3.97	
		☒	Ant2	3.45	
☒	CDD		3.97dBi for Power; 6.97dBi for PSD		
☒	Beam-forming		6.97dBi for Power; 6.97dBi for PSD		
Antenna Technology			Ant Gain(eth2) (dBi)		
☒	SISO	☒	Ant3	3.75	
		☒	Ant4	2.95	
☒	CDD		3.75dBi for Power; 6.75dBi for PSD		
☒	Beam-forming		6.75dBi for Power; 6.75dBi for PSD		

AP305CX:

Antenna Model No.	N/A				
Antenna Manufacturer	N/A				
Antenna Delivery	☒	1*TX+1*RX	☒	2*TX+2*RX	☐ 3*TX+3*RX
Antenna Technology	☒	SISO			
	☒	MIMO	☐	Basic methodology	
			☐	Sectorized antenna systems	
			☐	Cross-polarized antennas	
			☐	Unequal antenna gains, with equal transmit powers	
			☒	Spatial Multiplexing	
			☒	Cyclic Delay Diversity (CDD)	
Antenna Type	Dipole				
Antenna Gain					
Antenna Technology			Ant Gain(eth1) (dBi)		
☒	SISO	☒ Ant1	2.51		
		☒ Ant2	2.67		
☒	CDD		2.67dBi for Power; 5.67dBi for PSD		
☒	Beam-forming		5.67dBi for Power; 5.67dBi for PSD		
Antenna Technology			Ant Gain(eth2) (dBi)		
☒	SISO	☒ Ant3	4.00		
		☒ Ant4	4.37		
☒	CDD		4.37dBi for Power; 7.37dBi for PSD		
☒	Beam-forming		7.37dBi for Power; 7.37dBi for PSD		

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.

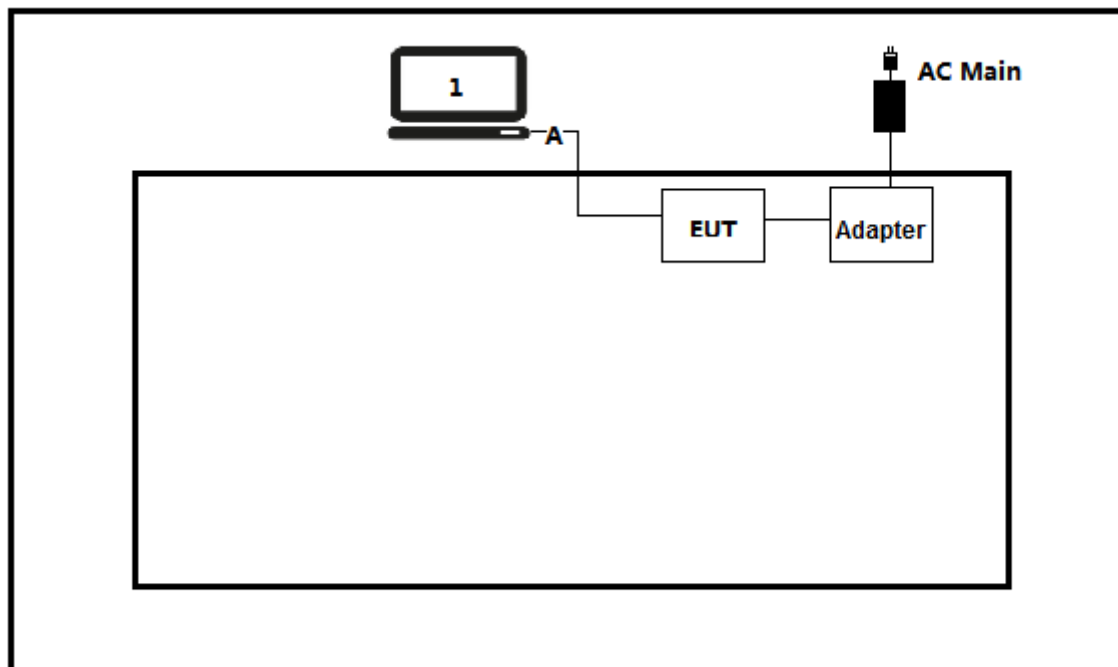
1.5. Tested System Details

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

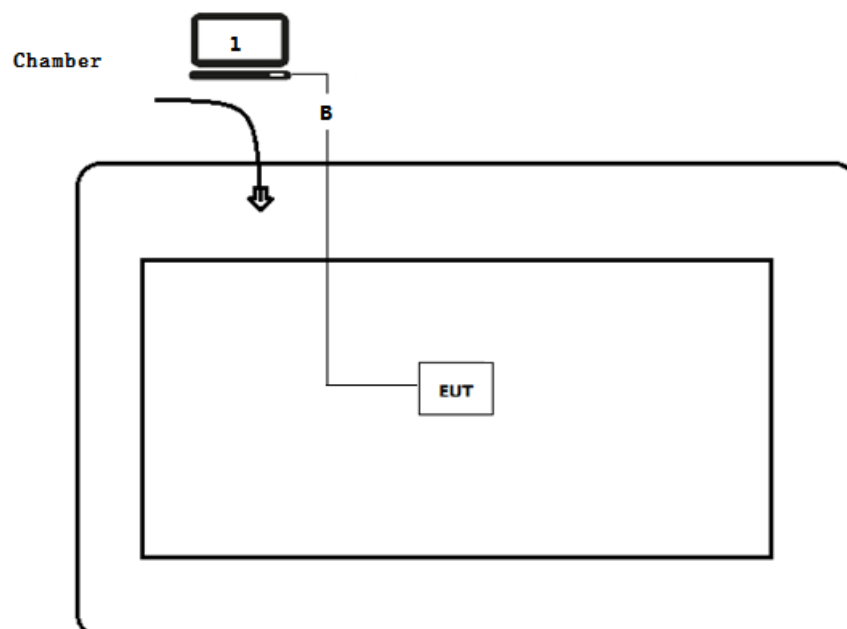
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Lenovo	Think pad x220	SUA0600195	Non-shielded
A	WLAN cable	N/A	N/A	N/A	Shielded, 0.5m
B	WLAN cable	N/A	N/A	N/A	Shielded, 10m

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(a)	FCC 15.407(e)	PASS
6dB Emission Bandwidth	FCC CFR Title 47 Part 15 Subpart E: Section 15.407(a)	FCC 15.407(e)	PASS
Power Output	FCC CFR Title 47 Part 15 Subpart E: Section 15.407(a)	FCC 15.407(a)	PASS
Peak Power Spectral Density	FCC CFR Title 47 Part 15 Subpart E: Section 15.407(a)	FCC 15.407(a)	PASS
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart E: Section 15.205, 15.407(b)	FCC 15.407(b)	PASS
Frequency Stability	FCC CFR Title 47 Part 15 Subpart E: Section 15.407(g)	± 20 ppm	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

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

2: The EUT supports two 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
Note 1: The blue form is the maximum power data rate. 2: The EUT supports two 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
Note 1: The blue form is the maximum power data rate.											
2: The EUT supports two spatial streams.											

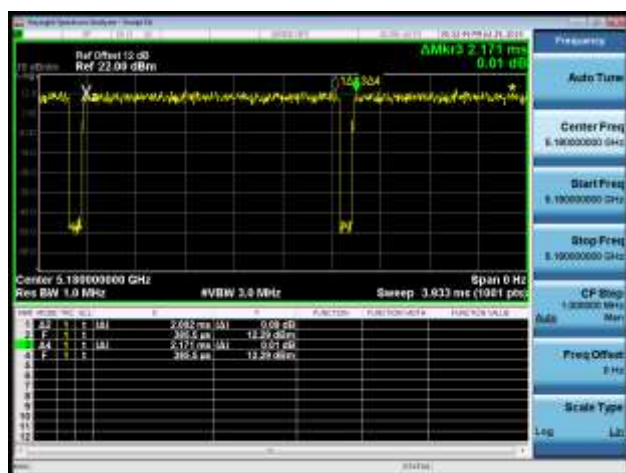
2.4. Duty Cycle

Test Mode	Tx On (ms)	Tx Off (ms)	VBW(KHz)	Tx On + Tx Off (ms)	Duty Cycle (%)
802.11a	2.002	0.169	0.51	2.171	92.22
802.11n(20MHz)	1.900	0.122	0.56	2.022	93.97
802.11n(40MHz)	0.900	0.143	1.2	1.043	86.29
802.11ac(20MHz)	1.898	0.059	0.56	1.957	96.99
802.11ac(40MHz)	0.907	0.075	1.2	0.982	92.36
802.11ac(80MHz)	0.426	0.064	2.4	0.490	86.94
802.11ax(20MHz)	1.478	0.044	0.68	1.522	97.11
802.11ax(40MHz)	0.742	0.072	1.5	0.814	91.15
802.11ax(80MHz)	0.397	0.048	2.7	0.445	89.21

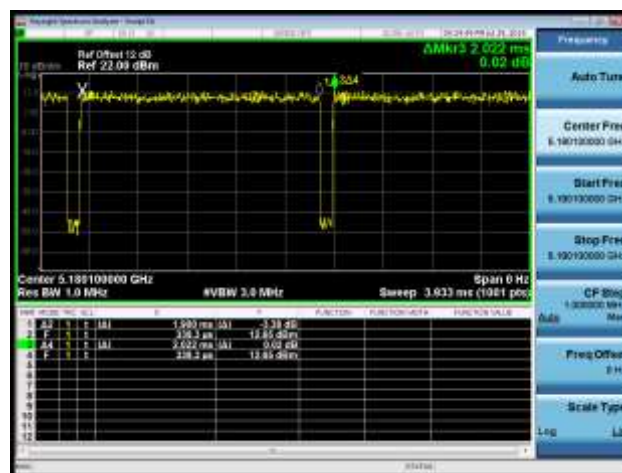
Note 1: T means the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

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

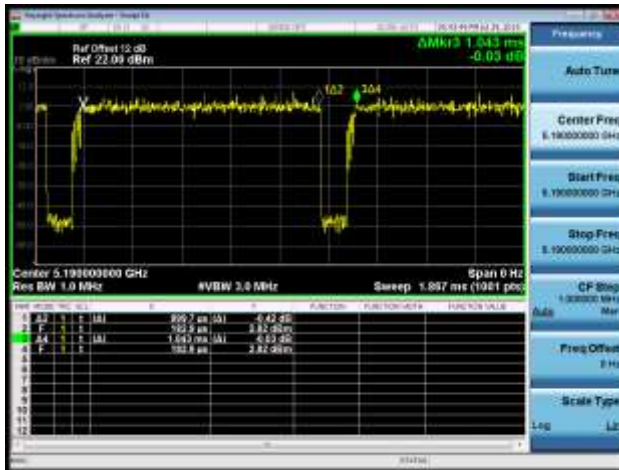
802.11a



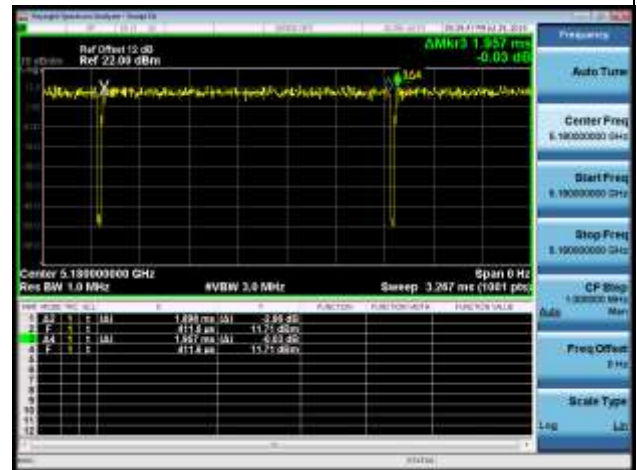
802.11n(20MHz)



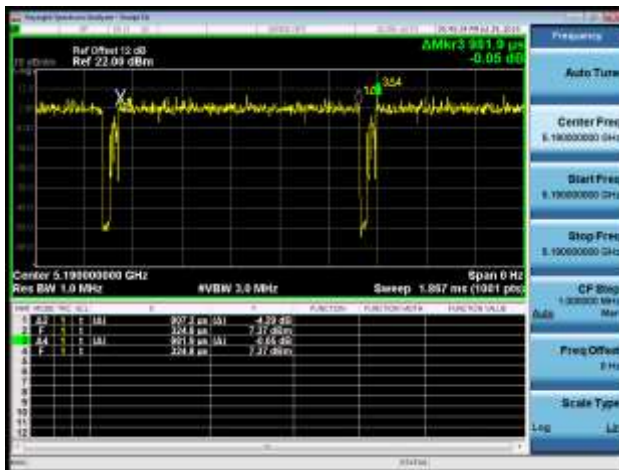
802.11n(40MHz)



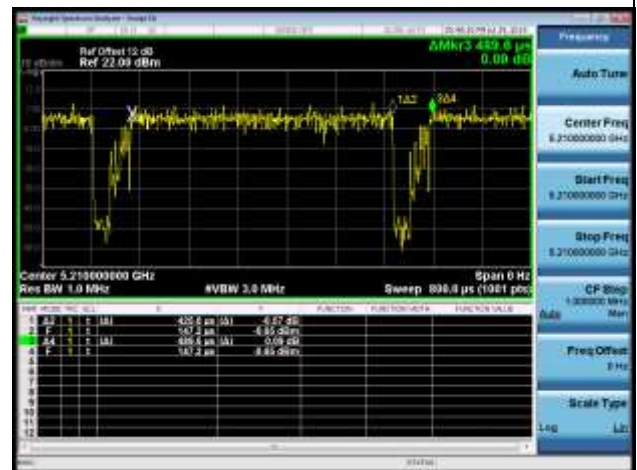
802.11ac(20MHz)



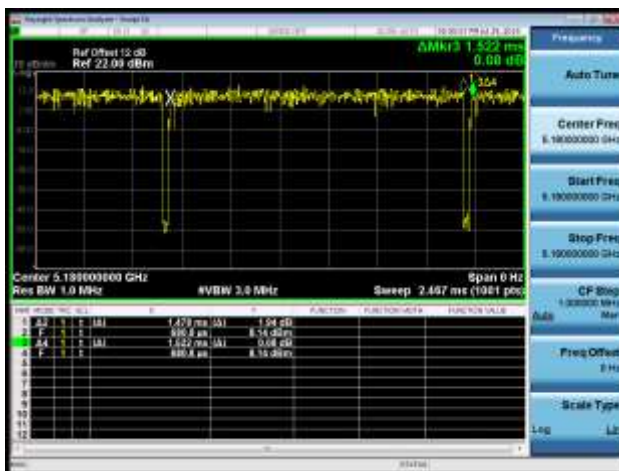
802.11ac(40MHz)



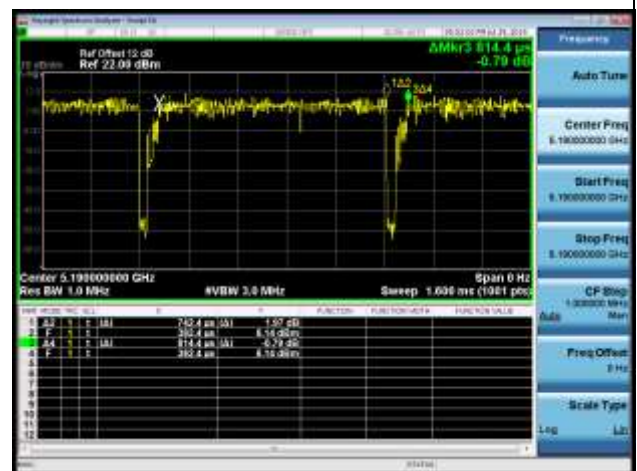
802.11ac(80MHz)



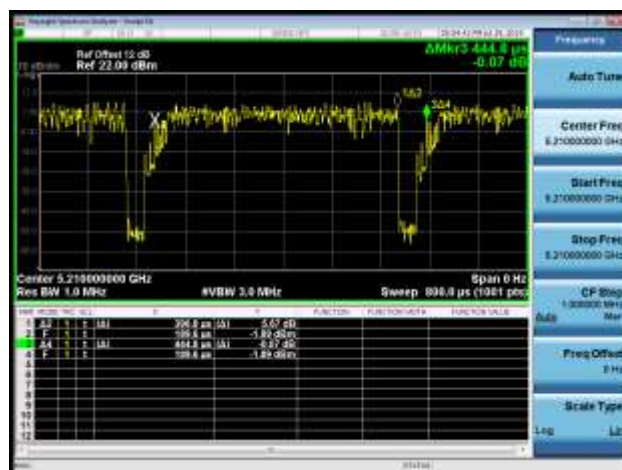
802.11ax(20MHz)



802.11ax(40MHz)



802.11ax(80MHz)



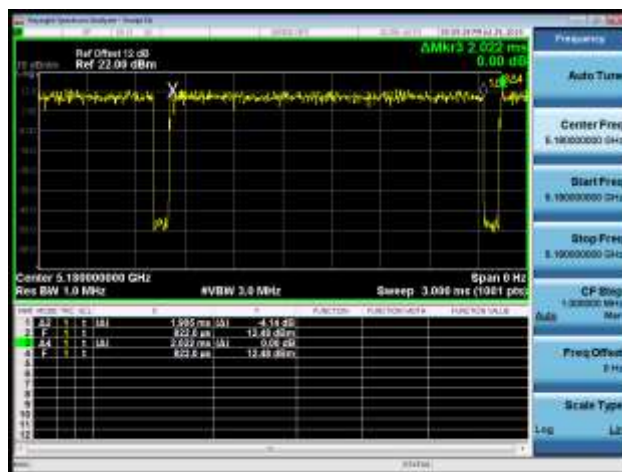
Beam-forming:

Test Mode	Tx On (ms)	Tx Off (ms)	VBW(KHz)	Tx On + Tx Off (ms)	Duty Cycle (%)
802.11n(20MHz)	1.905	0.117	0.56	2.022	94.21
802.11n(40MHz)	0.907	0.134	1.2	1.041	87.13
802.11ac(20MHz)	1.907	0.050	0.56	1.957	97.45
802.11ac(40MHz)	0.902	0.080	1.2	0.982	91.85
802.11ac(80MHz)	0.426	0.064	2.2	0.490	86.94
802.11ax(20MHz)	1.471	0.048	0.68	1.519	96.84
802.11ax(40MHz)	0.743	0.069	1.5	0.812	91.50
802.11ax(80MHz)	0.397	0.052	2.7	0.449	88.42

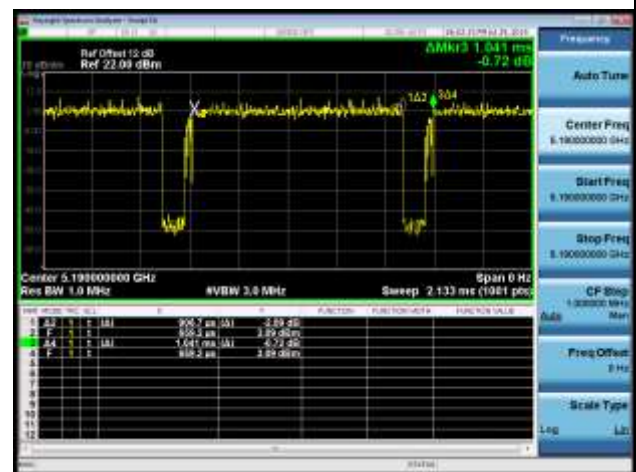
Note 1: T means the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

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

802.11n(20MHz)



802.11n(40MHz)



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	$\pm 100\text{ Hz}$

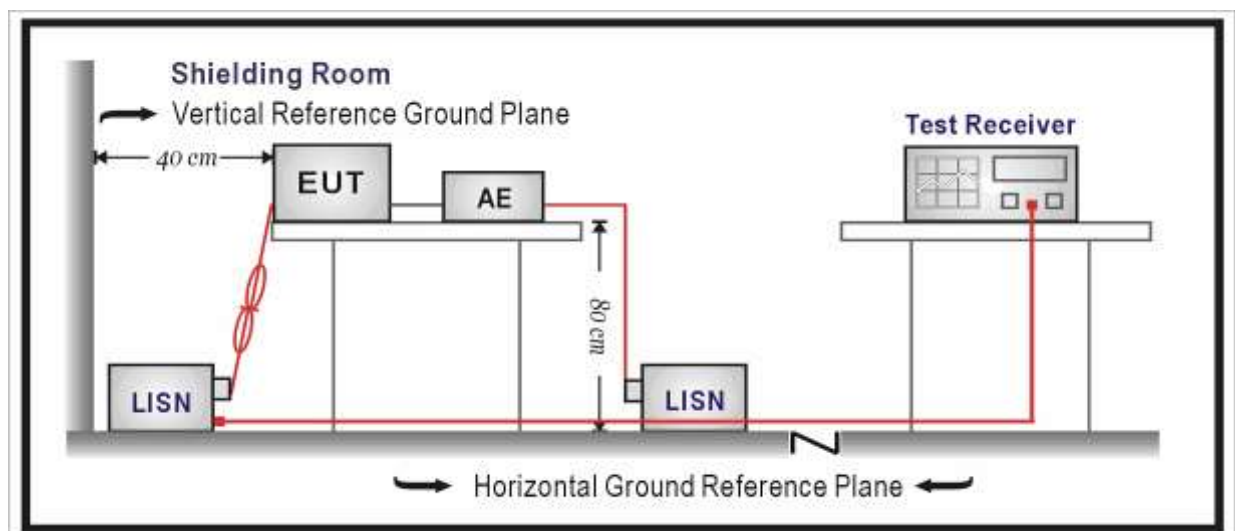
3. Conducted Emission

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	2018.09.16	2019.09.15
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
50ohm Termination	SHX	TF2	07081402	2018.09.16	2019.09.15
Temperature/Humidity Meter	Zhichen	ZC1-2	TR1-TH	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.

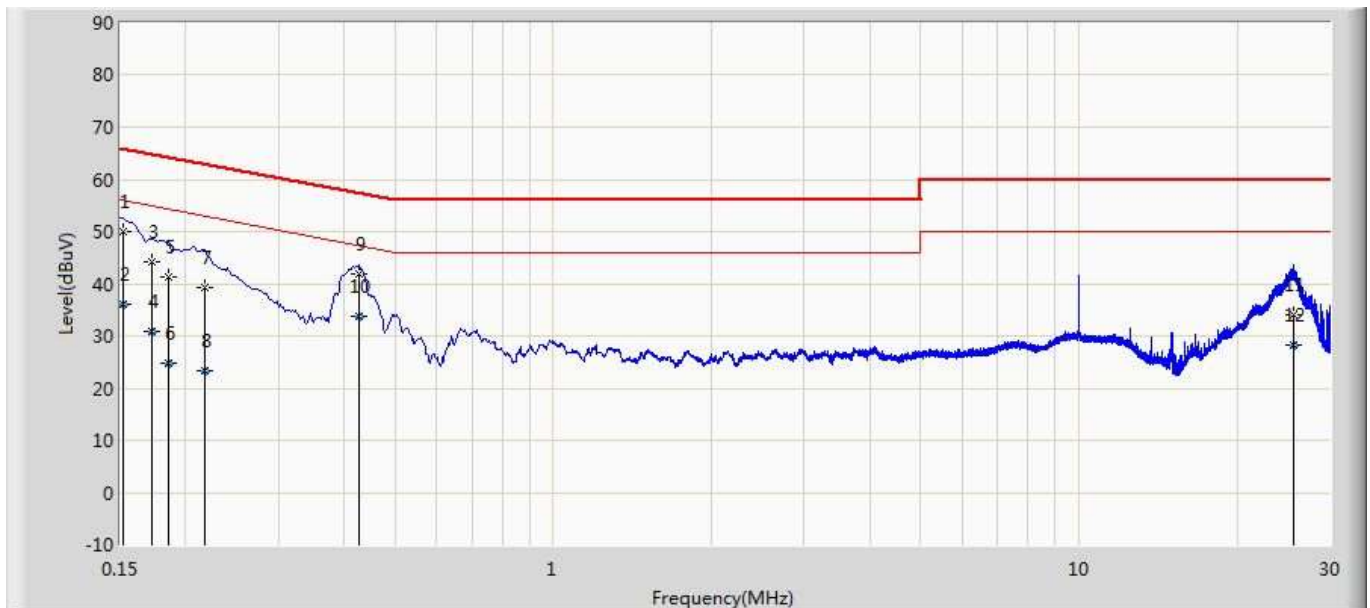
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

3.4. Test Procedure

Test Method			
	References Rule	Chapter	Item
☒	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: 2019/07/29
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: Mode 1	

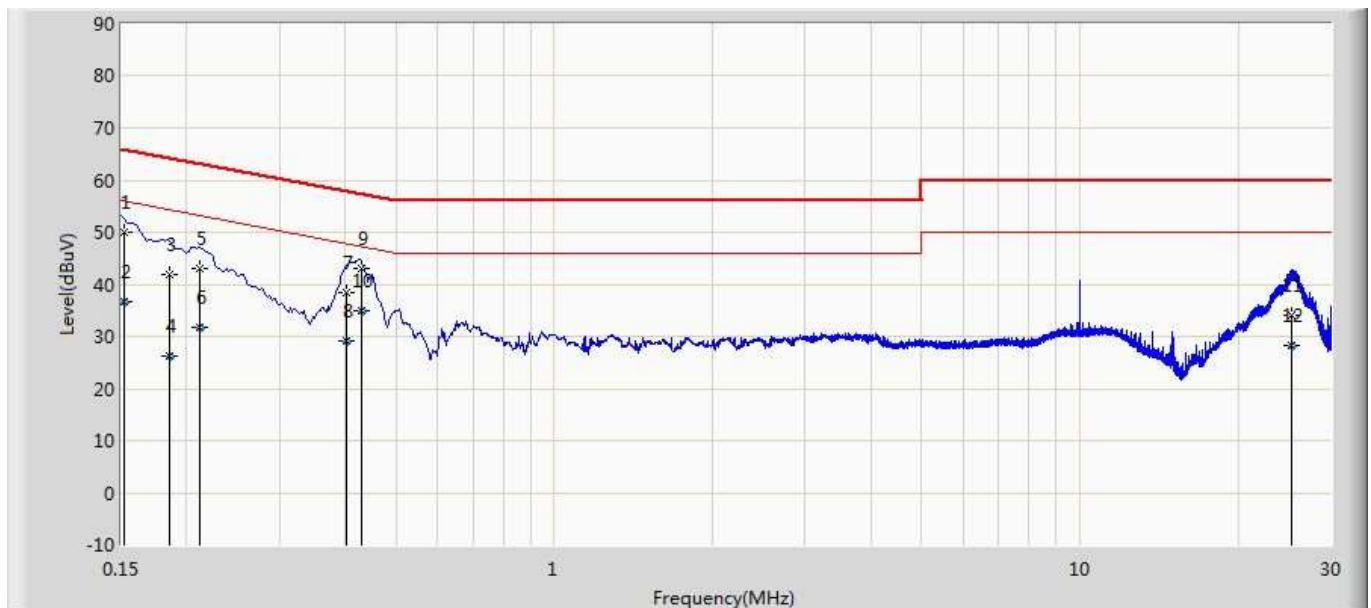


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.152	49.929	40.306	-15.948	65.876	9.593	0.029	0.000	QP
2		0.152	35.979	26.357	-19.897	55.876	9.593	0.029	0.000	AV
3		0.172	44.126	34.503	-20.713	64.839	9.595	0.028	0.000	QP
4		0.172	30.838	21.215	-24.001	54.839	9.595	0.028	0.000	AV
5		0.186	41.223	31.598	-22.990	64.213	9.597	0.028	0.000	QP
6		0.186	24.909	15.283	-29.305	54.213	9.597	0.028	0.000	AV
7		0.217	39.332	29.704	-23.582	62.914	9.599	0.029	0.000	QP
8		0.217	23.191	13.563	-29.723	52.914	9.599	0.029	0.000	AV
9		0.427	41.874	32.243	-15.441	57.316	9.592	0.040	0.000	QP
10	*	0.427	33.739	24.107	-13.577	47.316	9.592	0.040	0.000	AV
11		25.548	34.116	23.134	-25.884	60.000	10.653	0.328	0.000	QP
12		25.548	28.240	17.259	-21.760	50.000	10.653	0.328	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: 2019/07/29
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: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.152	50.013	40.374	-15.864	65.876	9.609	0.029	0.000	QP
2		0.152	36.647	27.009	-19.229	55.876	9.609	0.029	0.000	AV
3		0.186	41.941	32.310	-22.272	64.213	9.603	0.028	0.000	QP
4		0.186	26.273	16.642	-27.940	54.213	9.603	0.028	0.000	AV
5		0.211	42.915	33.285	-20.261	63.176	9.601	0.029	0.000	QP
6		0.211	31.678	22.049	-21.497	53.176	9.601	0.029	0.000	AV
7		0.402	38.263	28.625	-19.549	57.812	9.600	0.038	0.000	QP
8		0.402	29.245	19.606	-18.567	47.812	9.600	0.038	0.000	AV
9		0.429	42.941	33.301	-14.331	57.272	9.600	0.040	0.000	QP
10	*	0.429	34.824	25.185	-12.448	47.272	9.600	0.040	0.000	AV
11		25.287	34.026	23.234	-25.974	60.000	10.465	0.326	0.000	QP
12		25.287	28.127	17.335	-21.873	50.000	10.465	0.326	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

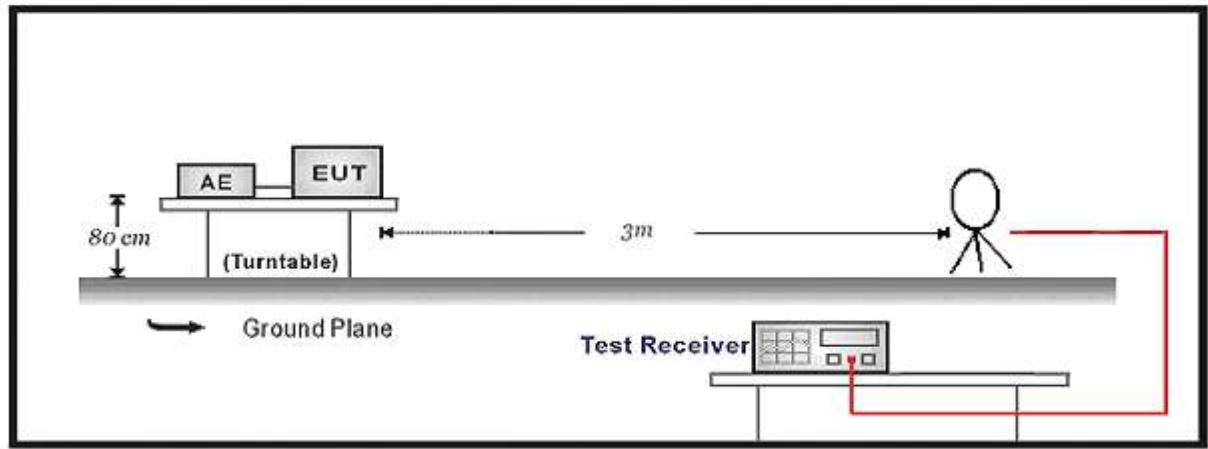
4.1. Test Equipment

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	2018.11.16	2019.11.15
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2018.10.16	2019.10.15
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.					

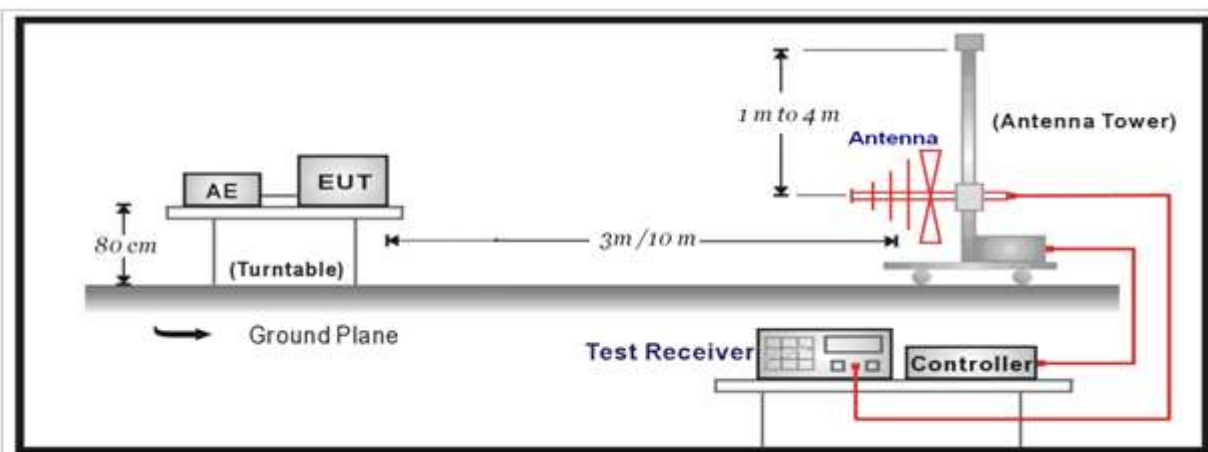
Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2019.01.04	2020.01.03
Preamplifier	Miteq	NSP1800-25	1364185	2019.05.06	2020.05.05
Preamplifier	QuieTek	AP-040G	CHM-0906001	2019.05.06	2020.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2019.01.22	2020.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2018.11.25	2019.11.24
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

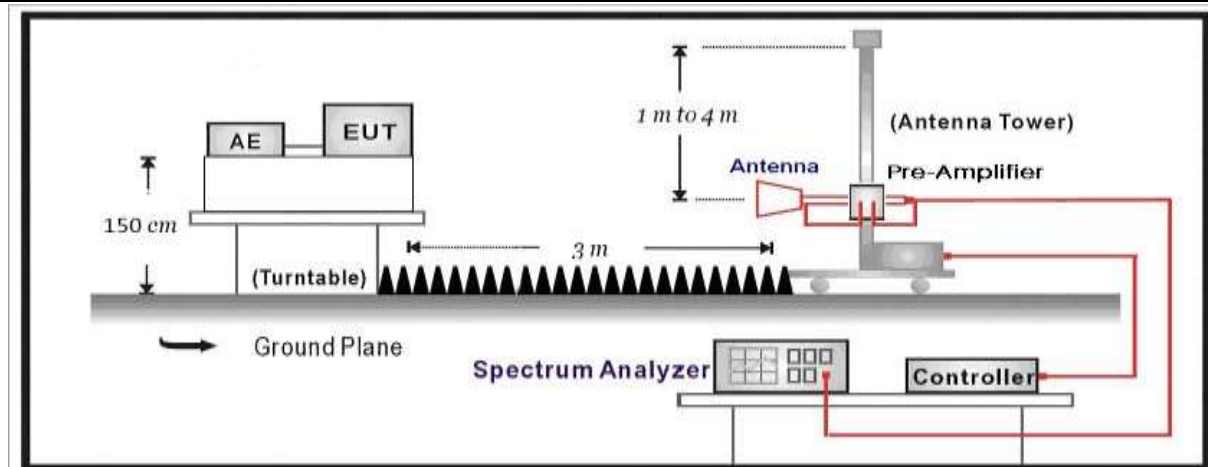
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



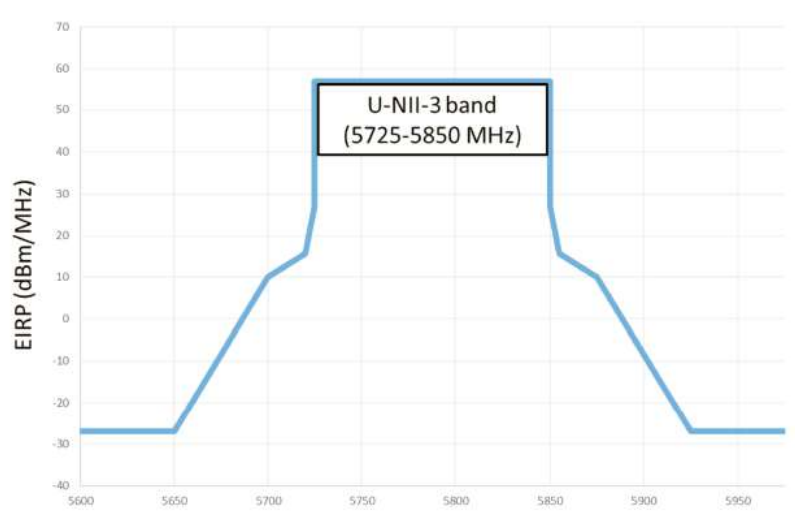
4.3. Limit

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).

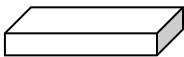
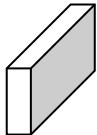
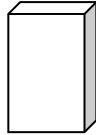
FCC Part 15 Subpart C Paragraph 15.205 (Restricted Band)			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 – 16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128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

4.4. Test Procedure

Test Method				
	References Rule		Chapter	Description
☐	ANSI C63.10		12.7.3	Emissions in non-restricted frequency bands
☒	ANSI C63.10		12.7.2	Emissions in restricted frequency bands
	☒	ANSI C63.10	12.7.5	Radiated emission measurements
	☒	ANSI C63.10	12.7.6	Procedure for peak unwanted emissions measurements above 1000 MHz
	☒	ANSI C63.10	12.7.7	Procedures for average unwanted emissions measurements above 1000 MHz
	☐	ANSI C63.10	12.7.7.2	Method AD (average detection)—primary method
	☒	ANSI C63.10	12.7.7.3	Method VB-A (Alternative)
	☒	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	☒	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
☐	FCC KDB 789033 D02v02r01		G.2	Unwanted Emissions that fall Outside of the Restricted Bands
☐	FCC KDB 789033 D02v02r01		G.1	Unwanted Emissions in the Restricted Bands
	☐	FCC KDB 789033 D02v02r01	G.4	Procedure for Unwanted Emissions Measurements below 1000 MHz
	☐	FCC KDB 789033 D02v02r01	G.5	Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz
	☐	FCC KDB 789033 D02v02r01	G.6	Procedures for Average Unwanted Emissions Measurements above 1000 MHz
	☐	FCC KDB 789033 D02v02r01	G.6.c	Method AD (Average detection)—primary method
	☐	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	☒	Indoor use			
	☐	Outdoor use			
	☐	Fix position use			
	☐	Client use			
Test mode	Mode 1-9				
Test method	☒	Radiated			
		X Axis	Y Axis	Z Axis	
					
		Worst Axis ☒	Worst Axis ☐	Worst Axis ☐	
	☐	Conducted			
	☐	Chain 1			
					
	☐	Chain 1	Chain 2		
					
	☐	Chain 1	Chain 2	Chain 3	
					
	☐	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 1: AP305C-Eth1 RSE

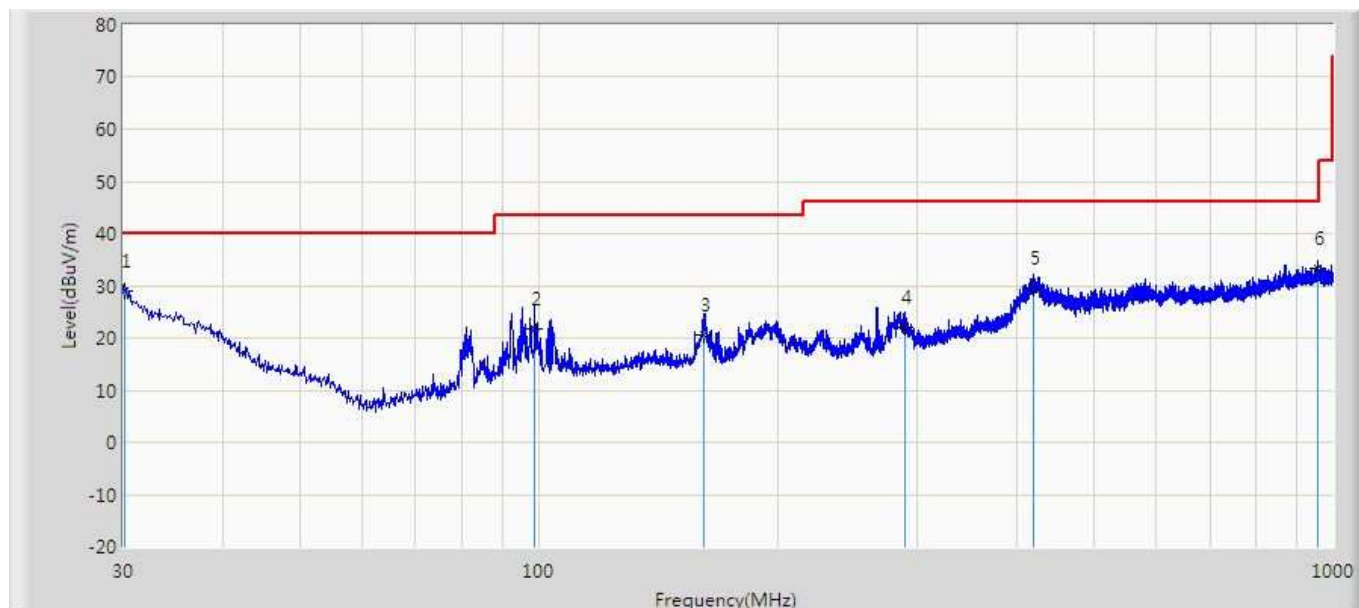
Appendix 2: AP305C-Eth2 RSE

Appendix 3: AP305CX-Eth1 RSE

Appendix 4: AP305CX-Eth2 RSE

The worst case of Radiated Emission below 1GHz:

Site: AC3	Time: 2019/08/01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Horizontal
EUT: Wireless Access Point	Power: AC 120V/60Hz
Note: Mode 1	

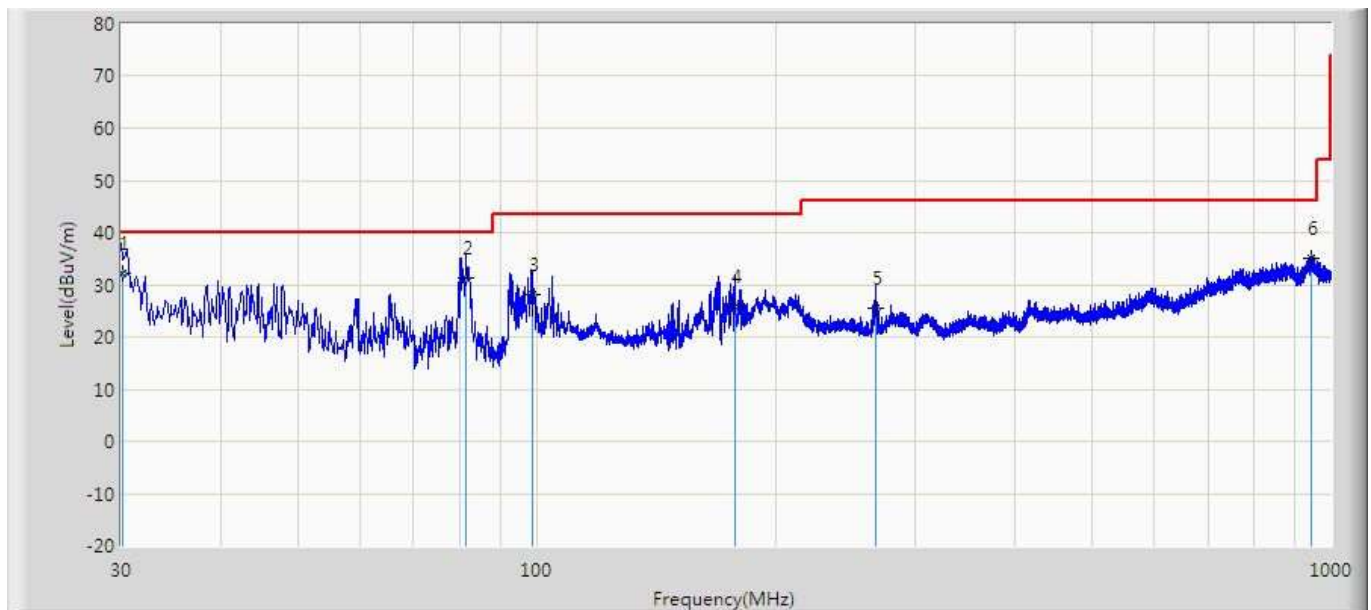


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1	*	30.133	29.096	1.200	-10.904	40.000	21.442	6.454	0.000	200	302	QP
2		98.890	21.855	5.400	-21.645	43.500	9.612	6.843	0.000	100	208	QP
3		161.647	20.498	3.100	-23.002	43.500	10.271	7.127	0.000	100	115	QP
4		289.746	22.150	1.500	-23.850	46.000	13.070	7.580	0.000	100	89	QP
5		419.124	29.507	2.500	-16.493	46.000	19.049	7.958	0.000	100	55	QP
6		957.564	33.355	0.600	-12.645	46.000	23.539	9.216	0.000	100	154	QP

Note:

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

Site: AC3	Time: 2019/08/01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Vertical
EUT: Wireless Access Point	Power: AC 120V/60Hz
Note: Mode 1	



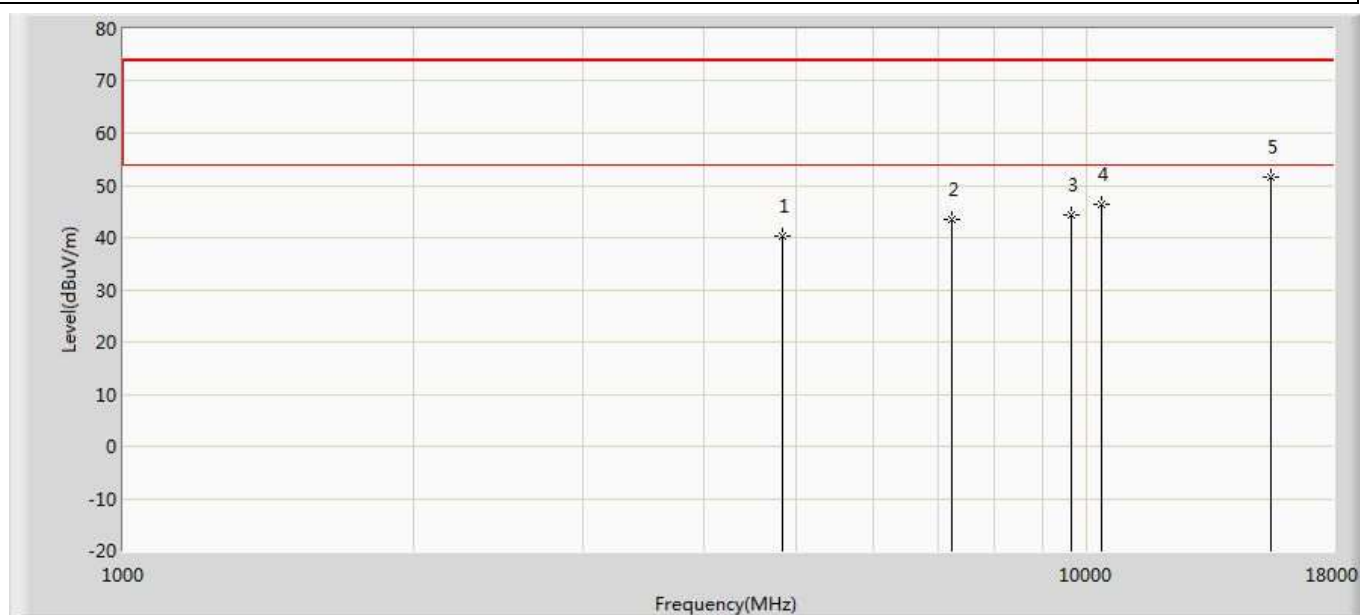
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1	*	30.136	32.161	8.100	-7.839	40.000	17.607	6.454	0.000	100	208	QP
2		81.566	31.449	15.800	-8.551	40.000	8.887	6.763	0.000	200	31	QP
3		98.900	27.983	6.300	-15.517	43.500	14.840	6.843	0.000	100	258	QP
4		177.570	25.821	7.900	-17.679	43.500	10.726	7.194	0.000	100	162	QP
5		267.165	25.434	2.600	-20.566	46.000	15.320	7.514	0.000	100	30	QP
6		943.790	34.954	0.600	-11.046	46.000	25.163	9.191	0.000	100	230	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: 2019/08/06
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 WIFI 2.4G+5G	

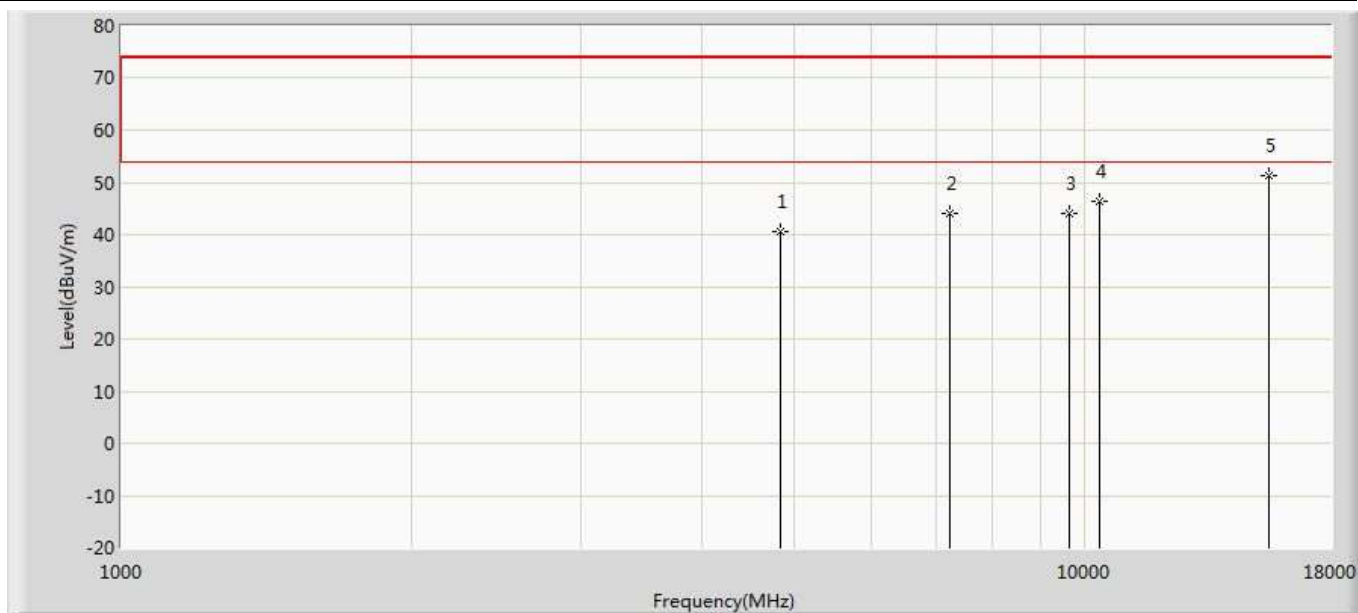


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	40.417	35.530	-33.583	74.000	4.887	PK
2		7236.000	43.428	35.573	-30.572	74.000	7.855	PK
3		9648.000	44.253	34.544	-29.747	74.000	9.709	PK
4		10360.000	46.476	34.957	-27.524	74.000	11.519	PK
5	*	15540.000	51.623	33.766	-22.377	74.000	17.857	PK

Note:

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

Engineer: Simon	
Site: AC5	Time: 2019/08/06
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 WIFI 2.4G+5G	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	40.511	35.624	-33.489	74.000	4.887	PK
2		7236.000	44.145	36.290	-29.855	74.000	7.855	PK
3		9648.000	44.159	34.450	-29.841	74.000	9.709	PK
4		10360.000	46.426	34.907	-27.574	74.000	11.519	PK
5	*	15540.000	51.216	33.359	-22.784	74.000	17.857	PK

Note:

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

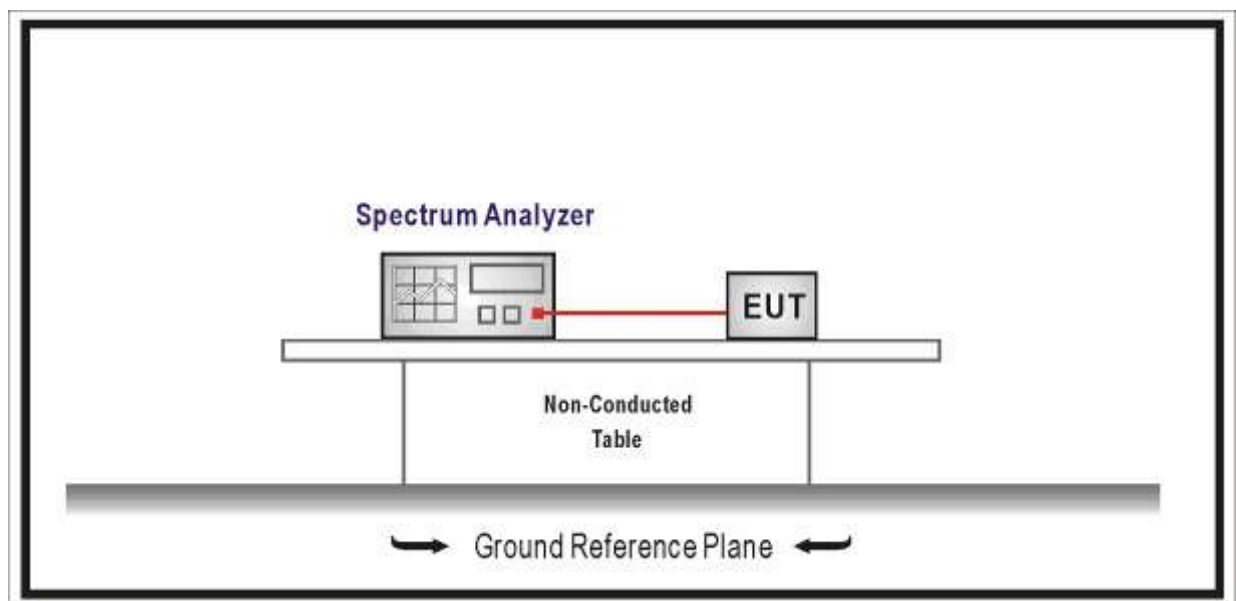
5. Emission bandwidth and occupied bandwidth

5.1. Test Equipment

Emission bandwidth and occupied bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	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



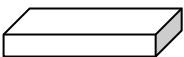
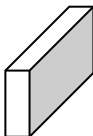
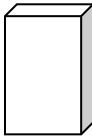
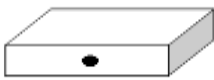
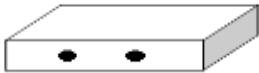
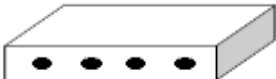
5.3. Limit

N/A

5.4. Test Procedure

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

5.5. EUT test Axis definition

Item	Occupied bandwidth				
Device Category	☒	Indoor use			
	☐	Outdoor use			
	☐	Fix position use			
	☐	Client use			
Test mode	Mode 1-9				
Test method	☐	Radiated			
		X Axis	Y Axis	Z Axis	
					
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐	
	☒	Conducted			
	☒	Chain 1			
					
	☒	Chain 1	Chain 2		
					
	☐	Chain 1	Chain 2	Chain 3	
					
	☐	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	:	2019.07.12	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	28.86	17.326	5171.337	Pass
CH44	5220	26.34	17.093	N/A	Pass
CH48	5240	24.74	17.073	5248.537	Pass
CH149	5745	22.18	17.094	N/A	Pass
CH157	5785	21.55	17.029	N/A	Pass
CH165	5825	21.34	16.907	N/A	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	29.57	18.303	5170.849	Pass
CH44	5220	29.62	18.147	N/A	Pass
CH48	5240	29.50	18.142	5249.071	Pass
CH149	5745	24.00	18.222	N/A	Pass
CH157	5785	25.29	18.323	N/A	Pass
CH165	5825	23.32	18.088	N/A	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	59.40	36.663	5171.669	Pass
CH46	5230	59.52	36.840	5248.420	Pass
CH151	5755	59.75	36.630	N/A	Pass
CH159	5795	59.65	36.481	N/A	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	28.64	18.249	5170.876	Pass
CH44	5220	27.96	18.139	N/A	Pass
CH48	5240	25.66	18.127	5249.064	Pass
CH149	5745	22.45	18.079	N/A	Pass
CH157	5785	21.89	18.071	N/A	Pass
CH165	5825	26.47	18.121	N/A	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	59.30	36.621	5171.690	Pass
CH46	5230	59.00	36.684	5248.342	Pass
CH151	5755	49.22	36.468	N/A	Pass
CH159	5795	47.33	36.515	N/A	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	76.094	5171.953/5248.047	Pass
CH155	5775	92.56	75.911	N/A	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	28.80	19.192	5170.404	Pass
CH44	5220	28.25	19.133	N/A	Pass
CH48	5240	28.50	19.139	5249.570	Pass
CH149	5745	25.45	19.112	N/A	Pass
CH157	5785	25.87	19.114	N/A	Pass
CH165	5825	23.40	19.114	N/A	Pass

Mode 8: Transmit by 802.11ax(40MHz)

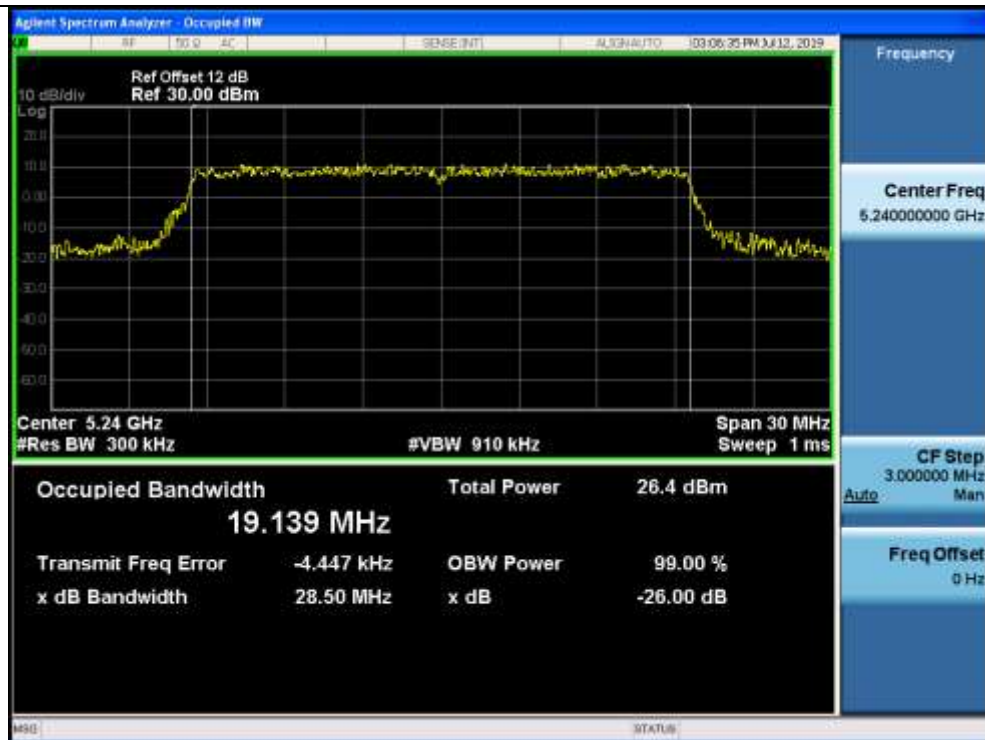
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
CH38	5190	56.12	37.751	5171.125	Pass
CH46	5230	48.03	37.660	5248.830	Pass
CH151	5755	43.16	37.574	N/A	Pass
CH159	5795	40.32	37.616	N/A	Pass

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	98.06	77.181	5171.410/5248.591	Pass
CH155	5775	81.54	77.019	N/A	Pass

The worst case of Occupied Bandwidth as below:

Mode 7: CH48 (5240MHz)



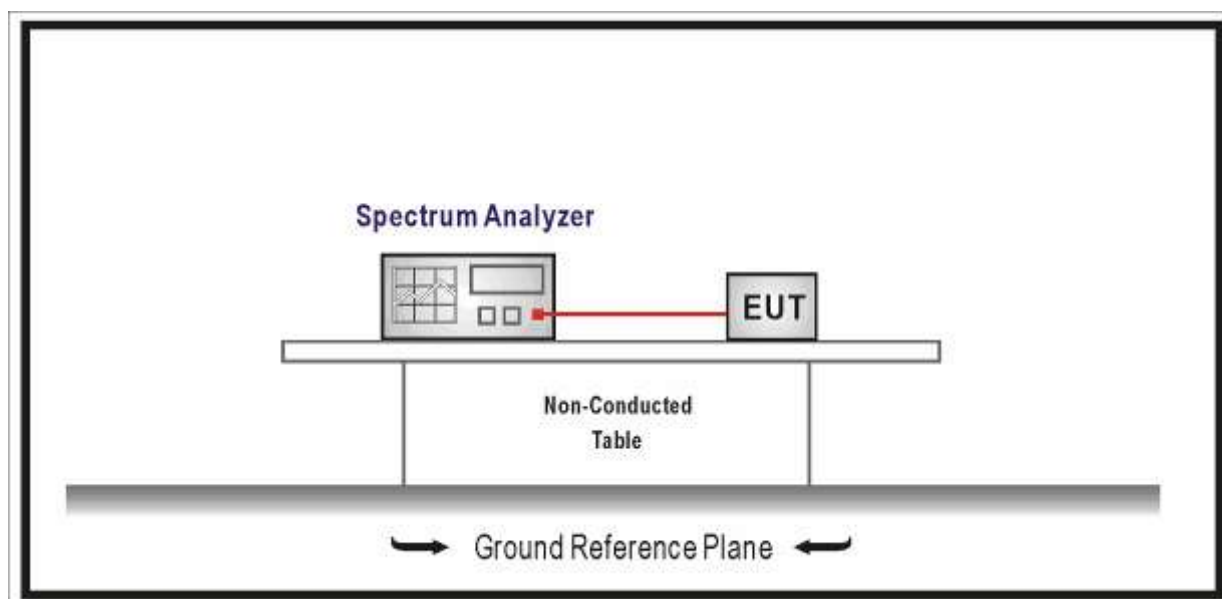
6. 6dB bandwidth

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



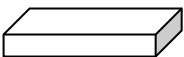
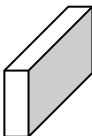
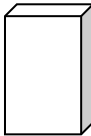
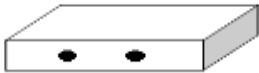
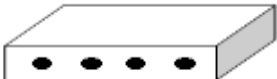
6.3. Limit

>500kHz

6.4. Test Procedure

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

6.5. EUT test Axis definition

Item	6dB bandwidth				
Device Category	☒	Indoor use			
	☐	Outdoor use			
	☐	Fix position use			
	☐	Client use			
Test mode	Mode 1-9				
Test method	☐	Radiated			
		X Axis	Y Axis	Z Axis	
					
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐	
	☒	Conducted			
	☒	Chain 1			
					
	☒	Chain 1	Chain 2		
					
	☐	Chain 1	Chain 2	Chain 3	
					
	☐	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	: 2019.07.12	Test Engineer	: Simon

Mode 1: Transmit by 802.11a				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
149	5745	16.37	>500	Pass
157	5785	16.37		Pass
165	5825	16.37		Pass
Mode 2: Transmit by 802.11n(20MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
149	5745	17.62	>500	Pass
157	5785	17.63		Pass
165	5825	17.61		Pass
Mode 3: Transmit by 802.11n(40MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
151	5755	36.43	>500	Pass
159	5795	36.34		Pass
Mode 4: Transmit by 802.11ac(20MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
149	5745	17.63	>500	Pass
157	5785	17.65		Pass
165	5825	17.63		Pass

Mode 5: Transmit by 802.11ac(40MHz)

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
151	5755	36.37	>500	Pass
159	5795	36.40		Pass

Mode 6: Transmit by 802.11ac(80MHz)

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
155	5775	76.15	>500	Pass

Mode 7: Transmit by 802.11ax(20MHz)

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
149	5745	18.95	>500	Pass
157	5785	18.85		Pass
165	5825	18.99		Pass

Mode 8: Transmit by 802.11ax(40MHz)

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
151	5755	37.67	>500	Pass
159	5795	37.58		Pass

Mode 9: Transmit by 802.11ax(80MHz)

Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
155	5775	77.33	>500	Pass

The worst case of 6dB Bandwidth as below:

Mode 1: CH149 (5745MHz)



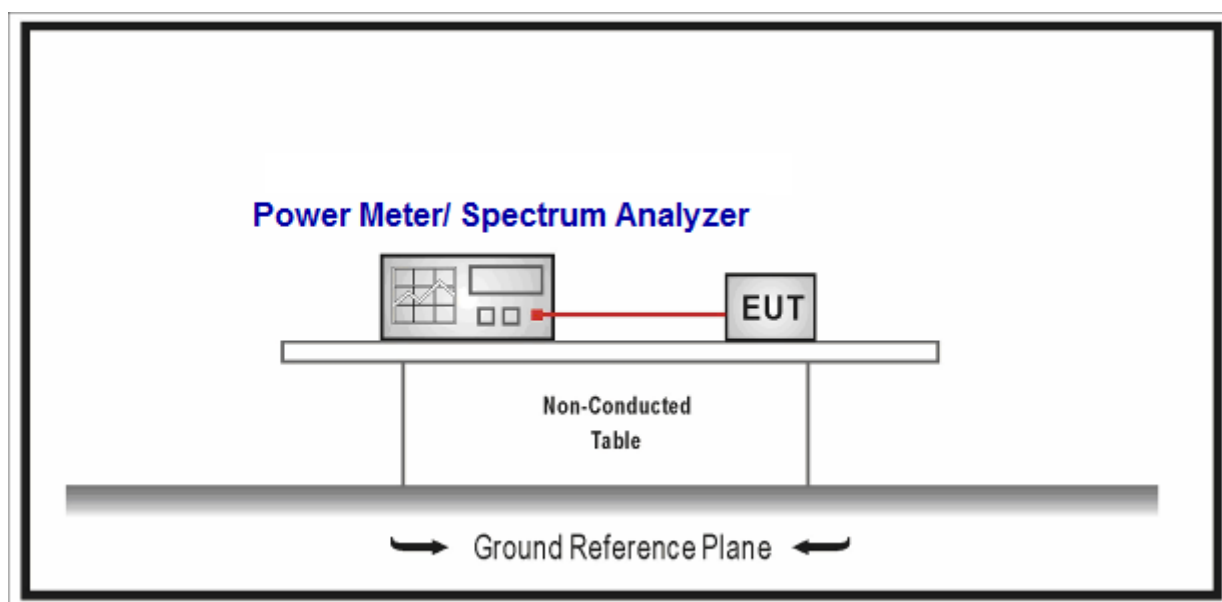
7. Power Output

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	2018.10.14	2019.10.13
Power Sensor	Anritsu	MA2411B	0846014	2018.10.14	2019.10.13
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

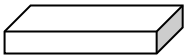
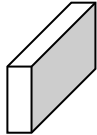
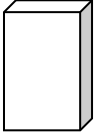
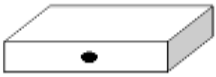
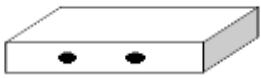
Fundamental emission output power Limit	
☒	For the band 5.15-5.25 GHz
☐	Outdoor access point: the maximum conducted output power shall not exceed 1 W. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 30 - (G_{TX} - 6)$ and $\leq 125\text{mW}$ at any angle above 30 degrees
☒	Indoor access point: the maximum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

7.4. Test Procedure

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

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

7.5.EUT test Axis definition

Item	output power			
Device Category	☒	Indoor use		
	☐	Outdoor use		
	☐	Fix position use		
	☐	Client use		
Test mode	Mode 1-9			
Test method	☐	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒	Conducted		
	☒	Chain 1		
				
	☒	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				
	☐	Chain 1	Chain 2	Chain 3
				

7.6. Test Result

Product Name	:	Wireless Access Point	Power	:	AC 120V/60Hz
Test Mode	:	Mode 1~9	Test Site	:	TR8
Test Date	:	2019.07.12	Test Engineer	:	Simon

ETH1:

Mode 1: Transmit by 802.11a with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant1	Ant2	Ant1	Ant2		
CH36	5180	18.17	18.05	18.17	18.05	30.00	Pass
CH40	5200	18.41	18.36	18.41	18.36	30.00	Pass
CH44	5220	18.52	18.44	18.52	18.44	30.00	Pass
CH48	5240	18.38	18.27	18.38	18.27	30.00	Pass

Mode 1: Transmit by 802.11a with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant1	Ant2			
CH36	5180	17.84	17.61	20.74	30.00	Pass
CH40	5200	18.46	18.42	21.45	30.00	Pass
CH44	5220	18.48	18.33	21.42	30.00	Pass
CH48	5240	18.37	18.29	21.34	30.00	Pass

Mode 2: Transmit by 802.11n(20MHz) with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant1	Ant2	Ant1	Ant2		
CH36	5180	18.26	17.41	18.26	17.41	30.00	Pass
CH40	5200	18.46	18.27	18.46	18.27	30.00	Pass
CH44	5220	18.55	18.39	18.55	18.39	30.00	Pass
CH48	5240	18.65	18.41	18.65	18.41	30.00	Pass

Mode 2: Transmit by 802.11n(20MHz) with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant1	Ant2			
CH36	5180	17.55	17.11	20.35	30.00	Pass
CH40	5200	18.65	18.45	21.56	30.00	Pass
CH44	5220	18.58	18.33	21.47	30.00	Pass
CH48	5240	18.68	18.56	21.63	30.00	Pass

Mode 2: Transmit by 802.11n(20MHz) with Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant1	Ant2			
CH36	5180	17.18	16.98	20.09	29.03/30.00(note1)	Pass
CH40	5200	18.41	18.23	21.33	29.03/30.00(note1)	Pass
CH44	5220	18.77	18.69	21.74	29.03/30.00(note1)	Pass
CH48	5240	18.71	18.56	21.65	29.03/30.00(note1)	Pass

Note1: 29.03dBm is AP305C power limit, 30dBm is AP305CX power limit.

Mode 3: Transmit by 802.11n(40MHz) with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant1	Ant2	Ant1	Ant2		
CH38	5190	17.03	16.01	17.03	16.01	30.00	Pass
CH46	5230	18.64	18.03	18.64	18.03	30.00	Pass

Mode 3: Transmit by 802.11n(40MHz) with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant1	Ant2			
CH38	5190	15.89	15.26	18.60	30.00	Pass
CH46	5230	18.72	18.29	21.52	30.00	Pass

Mode 3: Transmit by 802.11n(40MHz) with Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant1	Ant2			
CH38	5190	16.03	15.21	18.65	29.03/30.00(note1)	Pass
CH46	5230	18.64	18.12	21.40	29.03/30.00(note1)	Pass

Note1: 29.03dBm is AP305C power limit, 30dBm is AP305CX power limit.

Mode 4: Transmit by 802.11ac(20MHz) with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant1	Ant2	Ant1	Ant2		
CH36	5180	18.51	18.03	18.51	18.03	30.00	Pass
CH40	5200	18.64	18.94	18.64	18.94	30.00	Pass
CH44	5220	18.81	18.75	18.81	18.75	30.00	Pass
CH48	5240	18.74	18.66	18.74	18.66	30.00	Pass

Mode 4: Transmit by 802.11ac(20MHz) with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant1	Ant2			
CH36	5180	17.61	17.49	20.56	30.00	Pass
CH40	5200	18.76	18.97	21.88	30.00	Pass
CH44	5220	18.54	18.67	21.62	30.00	Pass
CH48	5240	18.65	18.77	21.72	30.00	Pass

Mode 4: Transmit by 802.11ac(20MHz) with Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant1	Ant2			
CH36	5180	17.46	17.28	20.38	29.03/30.00(note1)	Pass
CH40	5200	18.62	18.73	21.69	29.03/30.00(note1)	Pass
CH44	5220	18.52	18.65	21.60	29.03/30.00(note1)	Pass
CH48	5240	18.44	18.59	21.53	29.03/30.00(note1)	Pass

Note1: 29.03dBm is AP305C power limit, 30dBm is AP305CX power limit.

Mode 5: Transmit by 802.11ac(40MHz) with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant1	Ant2	Ant1	Ant2		
CH38	5190	16.86	15.81	16.86	15.81	30.00	Pass
CH46	5230	18.16	18.11	18.16	18.11	30.00	Pass

Mode 5: Transmit by 802.11ac(40MHz) with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant1	Ant2			
CH38	5190	15.72	15.77	18.76	30.00	Pass
CH46	5230	18.01	18.26	21.15	30.00	Pass

Mode 5: Transmit by 802.11ac(40MHz) with Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant1	Ant2			
CH38	5190	15.53	15.61	18.58	29.03/30.00(note1)	Pass
CH46	5230	17.88	18.13	21.02	29.03/30.00(note1)	Pass

Note1: 29.03dBm is AP305C power limit, 30dBm is AP305CX power limit.

Mode 6: Transmit by 802.11ac(80MHz) with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant1	Ant2	Ant1	Ant2		
CH42	5210	18.14	16.87	18.14	16.87	30.00	Pass

Mode 6: Transmit by 802.11ac(80MHz) with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant1	Ant2			
CH42	5210	17.38	16.67	20.05	30.00	Pass

Mode 6: Transmit by 802.11ac(80MHz) with Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant1	Ant2			
CH42	5210	17.23	16.44	19.86	29.03/30.00(note1)	Pass

Note1: 29.03dBm is AP305C power limit, 30dBm is AP305CX power limit.

Mode 7: Transmit by 802.11ax(20MHz) with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant1	Ant2	Ant1	Ant2		
CH36	5180	18.74	16.78	18.74	16.78	30.00	Pass
CH40	5200	18.81	19.45	18.81	19.45	30.00	Pass
CH44	5220	18.75	18.89	18.75	18.89	30.00	Pass
CH48	5240	18.81	18.95	18.81	18.95	30.00	Pass

Mode 7: Transmit by 802.11ax(20MHz) with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant1	Ant2			
CH36	5180	17.11	17.31	20.22	30.00	Pass
CH40	5200	19.01	19.49	22.27	30.00	Pass
CH44	5220	18.89	19.08	22.00	30.00	Pass
CH48	5240	18.94	19.12	22.04	30.00	Pass

Mode 7: Transmit by 802.11ax(20MHz) with Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant1	Ant2			
CH36	5180	16.98	17.16	20.08	29.03/30.00(note1)	Pass
CH40	5200	18.89	19.21	22.06	29.03/30.00(note1)	Pass
CH44	5220	18.88	18.79	21.85	29.03/30.00(note1)	Pass
CH48	5240	18.41	18.65	21.54	29.03/30.00(note1)	Pass

Note1: 29.03dBm is AP305C power limit, 30dBm is AP305CX power limit.

Mode 8: Transmit by 802.11ax(40MHz) with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant1	Ant2	Ant1	Ant2		
CH38	5190	17.53	16.17	17.53	16.17	30.00	Pass
CH46	5230	19.32	18.71	19.32	18.71	30.00	Pass

Mode 8: Transmit by 802.11ax(40MHz) with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant1	Ant2			
CH38	5190	16.89	17.02	19.97	30.00	Pass
CH46	5230	19.43	19.77	22.61	30.00	Pass

Mode 8: Transmit by 802.11ax(40MHz) with Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant1	Ant2			
CH38	5190	16.76	16.97	19.88	29.03/30.00(note1)	Pass
CH46	5230	19.25	19.58	22.43	29.03/30.00(note1)	Pass

Note1: 29.03dBm is AP305C power limit, 30dBm is AP305CX power limit.

Mode 9: Transmit by 802.11ax(80MHz) with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant1	Ant2	Ant1	Ant2		
CH42	5210	17.22	16.26	17.22	16.26	30.00	Pass

Mode 9: Transmit by 802.11ax(80MHz) with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant1	Ant2			
CH42	5210	16.96	16.82	19.90	30.00	Pass

Mode 9: Transmit by 802.11ax(80MHz) with Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant1	Ant2			
CH42	5210	16.83	16.69	19.77	29.03/30.00(note1)	Pass

Note1: 29.03dBm is AP305C power limit, 30dBm is AP305CX power limit.

ETH2:

Mode 1: Transmit by 802.11a with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant3	Ant4	Ant3	Ant4		
CH36	5180	19.14	18.63	19.14	18.63	30.00	Pass
CH40	5200	20.38	19.52	20.38	19.52	30.00	Pass
CH44	5220	19.23	18.72	19.23	18.72	30.00	Pass
CH48	5240	19.33	18.66	19.33	18.66	30.00	Pass
CH149	5745	18.29	17.05	18.29	17.05	30.00	Pass
CH157	5785	17.89	18.11	17.89	18.11	30.00	Pass
CH165	5825	19.13	18.57	19.13	18.57	30.00	Pass

Mode 1: Transmit by 802.11a with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant3	Ant4			
CH36	5180	18.13	17.31	20.75	30.00	Pass
CH40	5200	20.12	19.45	22.81	30.00	Pass
CH44	5220	19.34	18.94	22.15	30.00	Pass
CH48	5240	19.21	18.78	22.01	30.00	Pass
CH149	5745	19.16	18.04	21.65	30.00	Pass
CH157	5785	19.22	18.13	21.72	30.00	Pass
CH165	5825	19.89	19.36	22.64	30.00	Pass

Mode 2: Transmit by 802.11n(20MHz) with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant3	Ant4	Ant3	Ant4		
CH36	5180	18.37	17.72	18.37	17.72	30.00	Pass
CH40	5200	20.12	19.61	20.12	19.61	30.00	Pass
CH44	5220	19.89	19.47	19.89	19.47	30.00	Pass
CH48	5240	19.44	18.93	19.44	18.93	30.00	Pass
CH149	5745	18.89	18.02	18.89	18.02	30.00	Pass
CH157	5785	19.07	18.37	19.07	18.37	30.00	Pass
CH165	5825	19.92	19.11	19.92	19.11	30.00	Pass

Mode 2: Transmit by 802.11n(20MHz) with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant3	Ant4			
CH36	5180	18.33	17.05	20.75	30.00	Pass
CH40	5200	20.21	19.24	22.76	30.00	Pass
CH44	5220	19.12	18.71	21.93	30.00	Pass
CH48	5240	18.85	18.23	21.56	30.00	Pass
CH149	5745	18.48	17.79	21.16	30.00	Pass
CH157	5785	18.52	17.87	21.22	30.00	Pass
CH165	5825	20.33	19.41	22.90	30.00	Pass

Mode 2: Transmit by 802.11n(20MHz) with Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant3	Ant4			
CH36	5180	18.19	17.12	20.70	29.25/28.63(note1)	Pass
CH40	5200	20.11	19.03	22.61	29.25/28.63(note1)	Pass
CH44	5220	19.77	18.89	22.36	29.25/28.63(note1)	Pass
CH48	5240	19.26	18.63	21.97	29.25/28.63(note1)	Pass
CH149	5745	18.23	17.62	20.95	29.25/28.63(note1)	Pass
CH157	5785	18.31	17.57	20.97	29.25/28.63(note1)	Pass
CH165	5825	20.09	19.21	22.68	29.25/28.63(note1)	Pass

Note1: 29.25dBm is AP305C power limit, 28.63dBm is AP305CX power limit.

Mode 3 Transmit by 802.11n(40MHz) with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant3	Ant4	Ant3	Ant4		
CH38	5190	17.17	16.37	17.17	16.37	30.00	Pass
CH46	5230	19.41	18.66	19.41	18.66	30.00	Pass
CH151	5755	18.61	17.86	18.61	17.86	30.00	Pass
CH159	5795	19.12	18.51	19.12	18.51	30.00	Pass

Mode 3 Transmit by 802.11n(40MHz) with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant3	Ant4			
CH38	5190	16.88	16.04	19.49	30.00	Pass
CH46	5230	19.21	18.67	21.96	30.00	Pass
CH151	5755	18.22	17.84	21.04	30.00	Pass
CH159	5795	19.09	18.43	21.78	30.00	Pass

Mode 3 Transmit by 802.11n(40MHz) with Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant3	Ant4			
CH38	5190	16.68	16.27	19.49	29.25/28.63(note1)	Pass
CH46	5230	19.05	18.39	21.74	29.25/28.63(note1)	Pass
CH151	5755	18.06	17.66	20.87	29.25/28.63(note1)	Pass
CH159	5795	19.23	18.17	21.74	29.25/28.63(note1)	Pass

Note1: 29.25dBm is AP305C power limit, 28.63dBm is AP305CX power limit.

Mode 4: Transmit by 802.11ac(20MHz) with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant3	Ant4	Ant3	Ant4		
CH36	5180	18.18	17.42	18.18	17.42	30.00	Pass
CH40	5200	19.89	19.28	19.89	19.28	30.00	Pass
CH44	5220	19.77	19.19	19.77	19.19	30.00	Pass
CH48	5240	19.49	18.91	19.49	18.91	30.00	Pass
CH149	5745	19.23	18.18	19.23	18.18	30.00	Pass
CH157	5785	19.45	18.21	19.45	18.21	30.00	Pass
CH165	5825	20.74	19.88	20.74	19.88	30.00	Pass

Mode 4: Transmit by 802.11ac(20MHz) with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant3	Ant4			
CH36	5180	17.79	16.94	20.40	30.00	Pass
CH40	5200	20.12	19.41	22.79	30.00	Pass
CH44	5220	19.76	18.98	22.40	30.00	Pass
CH48	5240	19.08	18.65	21.88	30.00	Pass
CH149	5745	19.41	18.22	21.87	30.00	Pass
CH157	5785	19.52	18.17	21.91	30.00	Pass
CH165	5825	20.58	19.86	23.25	30.00	Pass

Mode 4: Transmit by 802.11ac(20MHz) with Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant3	Ant4			
CH36	5180	17.53	16.82	20.20	29.25/28.63(note1)	Pass
CH40	5200	20.33	19.07	22.76	29.25/28.63(note1)	Pass
CH44	5220	19.65	18.87	22.29	29.25/28.63(note1)	Pass
CH48	5240	19.22	18.43	21.85	29.25/28.63(note1)	Pass
CH149	5745	19.23	18.15	21.73	29.25/28.63(note1)	Pass
CH157	5785	19.29	18.36	21.86	29.25/28.63(note1)	Pass
CH165	5825	20.14	19.55	22.87	29.25/28.63(note1)	Pass

Note1: 29.25dBm is AP305C power limit, 28.63dBm is AP305CX power limit.

Mode 5: Transmit by 802.11ac(40MHz) with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant3	Ant4	Ant3	Ant4		
CH38	5190	17.72	16.52	17.72	16.52	30.00	Pass
CH46	5230	19.93	19.24	19.93	19.24	30.00	Pass
CH151	5755	19.21	18.17	19.21	18.17	30.00	Pass
CH159	5795	19.81	18.77	19.81	18.77	30.00	Pass

Mode 5: Transmit by 802.11ac(40MHz) with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant3	Ant4			
CH38	5190	17.41	16.28	19.89	30.00	Pass
CH46	5230	20.49	19.26	22.93	30.00	Pass
CH151	5755	19.35	18.16	21.81	30.00	Pass
CH159	5795	19.87	18.71	22.34	30.00	Pass

Mode 5: Transmit by 802.11ac(40MHz) with Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant3	Ant4			
CH38	5190	17.22	16.09	19.70	29.25/28.63(note1)	Pass
CH46	5230	20.13	19.02	22.62	29.25/28.63(note1)	Pass
CH151	5755	19.08	18.32	21.73	29.25/28.63(note1)	Pass
CH159	5795	19.56	18.58	22.11	29.25/28.63(note1)	Pass

Note1: 29.25dBm is AP305C power limit, 28.63dBm is AP305CX power limit.

Mode 6: Transmit by 802.11ac(80MHz) with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant3	Ant4	Ant3	Ant4		
CH42	5210	18.21	17.09	18.21	17.09	30.00	Pass
CH155	5775	19.34	18.17	19.34	18.17	30.00	Pass

Mode 6: Transmit by 802.11ac(80MHz) with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant3	Ant4			
CH42	5210	17.81	16.53	20.23	30.00	Pass
CH155	5775	19.07	18.13	21.64	30.00	Pass

Mode 6: Transmit by 802.11ac(80MHz) with Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant3	Ant4			
CH42	5210	17.65	16.41	20.08	29.25/28.63(note1)	Pass
CH155	5775	18.89	18.03	21.49	29.25/28.63(note1)	Pass

Note1: 29.25dBm is AP305C power limit, 28.63dBm is AP305CX power limit.

Mode 7: Transmit by 802.11ax(20MHz) with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant3	Ant4	Ant3	Ant4		
CH36	5180	18.33	17.55	18.33	17.55	30.00	Pass
CH40	5200	20.38	19.52	20.38	19.52	30.00	Pass
CH44	5220	19.94	19.18	19.94	19.18	30.00	Pass
CH48	5240	19.82	18.92	19.82	18.92	30.00	Pass
CH149	5745	19.31	18.14	19.31	18.14	30.00	Pass
CH157	5785	19.09	18.29	19.09	18.29	30.00	Pass
CH165	5825	20.29	19.73	20.29	19.73	30.00	Pass

Mode 7: Transmit by 802.11ax(20MHz) with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant3	Ant4			
CH36	5180	17.72	16.97	20.37	30.00	Pass
CH40	5200	20.65	19.72	23.22	30.00	Pass
CH44	5220	20.12	19.33	22.75	30.00	Pass
CH48	5240	19.82	18.97	22.43	30.00	Pass
CH149	5745	19.23	18.41	21.85	30.00	Pass
CH157	5785	19.19	18.46	21.85	30.00	Pass
CH165	5825	20.76	19.91	23.37	30.00	Pass

Mode 7: Transmit by 802.11ax(20MHz) with Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant3	Ant4			
CH36	5180	17.56	16.76	20.19	29.25/28.63(note1)	Pass
CH40	5200	20.12	19.68	22.92	29.25/28.63(note1)	Pass
CH44	5220	19.87	19.15	22.54	29.25/28.63(note1)	Pass
CH48	5240	19.68	18.65	22.21	29.25/28.63(note1)	Pass
CH149	5745	19.02	18.14	21.61	29.25/28.63(note1)	Pass
CH157	5785	19.04	18.19	21.65	29.25/28.63(note1)	Pass
CH165	5825	20.44	19.72	23.11	29.25/28.63(note1)	Pass

Note1: 29.25dBm is AP305C power limit, 28.63dBm is AP305CX power limit.

Mode 8: Transmit by 802.11ax(40MHz) with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant3	Ant4	Ant3	Ant4		
CH38	5190	17.57	16.96	17.57	16.96	30.00	Pass
CH46	5230	20.19	19.44	20.19	19.44	30.00	Pass
CH151	5755	19.04	18.49	19.04	18.49	30.00	Pass
CH159	5795	19.91	19.17	19.91	19.17	30.00	Pass

Mode 8: Transmit by 802.11ax(40MHz) with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant3	Ant4			
CH38	5190	17.78	16.52	20.21	30.00	Pass
CH46	5230	20.27	19.47	22.90	30.00	Pass
CH151	5755	19.41	18.33	21.91	30.00	Pass
CH159	5795	19.88	19.01	22.48	30.00	Pass

Mode 8: Transmit by 802.11ax(40MHz) with Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant3	Ant4			
CH38	5190	17.67	16.39	20.09	29.25/28.63(note1)	Pass
CH46	5230	20.01	19.13	22.60	29.25/28.63(note1)	Pass
CH151	5755	19.18	18.09	21.68	29.25/28.63(note1)	Pass
CH159	5795	19.66	18.91	22.31	29.25/28.63(note1)	Pass

Note1: 29.25dBm is AP305C power limit, 28.63dBm is AP305CX power limit.

Mode 9: Transmit by 802.11ax(80MHz) with SISO							
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)		Limit (dBm)	Result
		Ant3	Ant4	Ant3	Ant4		
CH42	5210	17.69	16.91	17.69	16.91	30.00	Pass
CH155	5775	19.11	18.48	19.11	18.48	30.00	Pass

Mode 9: Transmit by 802.11ax(80MHz) with CDD						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant3	Ant4			
CH42	5210	17.84	16.45	20.21	30.00	Pass
CH155	5775	18.87	17.94	21.44	30.00	Pass

Mode 9: Transmit by 802.11ax(80MHz) with Beam-forming						
Channel No.	Frequency (MHz)	Measurement Power(dBm)		Total Power (dBm)	Limit (dBm)	Result
		Ant3	Ant4			
CH42	5210	17.68	16.13	19.98	29.25/28.63(note1)	Pass
CH155	5775	18.59	17.61	21.14	29.25/28.63(note1)	Pass

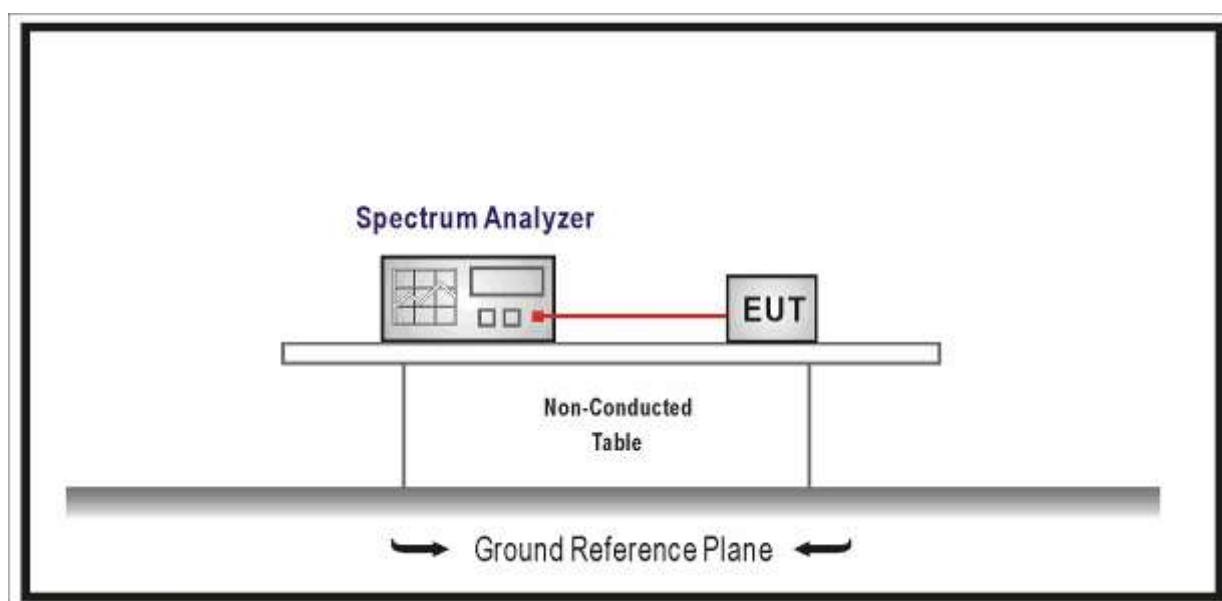
Note1: 29.25dBm is AP305C power limit, 28.63dBm is AP305CX power limit.

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

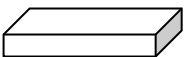
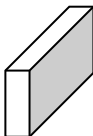
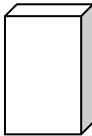
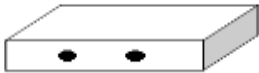
Fundamental emission output power Limit	
☒	For the band 5.15-5.25 GHz
☐	Outdoor access point: the maximum power spectral density shall not exceed 17 dBm/MHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 17 - (G_{TX} - 6)$
☒	Indoor access point: the maximum power spectral density shall not exceed 17 dBm/MHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 17 - (G_{TX} - 6)$
☐	Fixed point-to-point access points: the maximum power spectral density shall not exceed 17 dBm/MHz. If $G_{TX} > 23\text{dBi}$, then $P_{out} \leq 17 - (G_{TX} - 23)$
☐	Mobile and portable client devices: the maximum power spectral density shall not exceed 11 dBm/MHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 11 - (G_{TX} - 6)$
☐	For the 5.25-5.35 GHz:
☐	the maximum power spectral density shall not exceed 11 dBm/MHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 11 - (G_{TX} - 6)$
☐	For the 5.47-5.725 GHz:
☐	the maximum power spectral density shall not exceed 11 dBm/MHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 11 - (G_{TX} - 6)$
☒	For the band 5.725-5.85 GHz:
☒	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
☐	KDB 662911		F2)a)	Basic methodology
	☐	KDB 662911	F2)a) (i)	transmit signals are correlated
	☐	KDB 662911	F2)a) (ii)	transmit signals are uncorrelated
☐	KDB 662911		F2)b)	Sectorized antenna systems.
☐	KDB 662911		F2)c)	Cross-polarized antennas
	☐	ANSI C63.10	F2)c) (i)	Cross-polarized antennas
	☐	ANSI C63.10	F2)c) (ii)	Multiple antennas
☒	KDB 662911		F2)e)	Spatial stream
	☐	KDB 662911	F2)e) (i)	Antennas have the same gain
	☒	KDB 662911	F2)e) (ii)	Antenna have the different gain with one spatial stream
	☐	KDB 662911	F2)e) (iii)	Antenna have the different gain with more than one spatial stream
☒	KDB 662911		F2)f)	Cyclic Delay Diversity (CDD)
	☐	KDB 662911	F2)f) (i)	Antennas have the same gain
	☒	KDB 662911	F2)f) (ii)	Antenna have the different gain with one spatial stream
	☐	KDB 662911	F2)f) (iii)	Antenna have the different gain with more than one spatial stream

8.4. Test Procedure

Fundamental emission output power Test Method			
	References Rule	Chapter	Description
☒	ANSI C63.10	12.5	Peak power spectral density
☒	FCC KDB 789033 D02v02r01	F	Maximum Power Spectral Density (PSD)

8.5. EUT test Axis definition

Item	Power Spectral Density				
Device Category	☒	Indoor use			
	☐	Outdoor use			
	☐	Fix position use			
	☐	Client use			
Test mode	Mode 1-9				
Test method	☐	Radiated			
		X Axis	Y Axis	Z Axis	
					
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐	
	☒	Conducted			
	☒	Chain 1			
					
	☒	Chain 1	Chain 2		
					
	☐	Chain 1	Chain 2	Chain 3	
					
	☐	Chain 1	Chain 2	Chain 3	Chain 4
					

8.6. Test Result

Product Name	: Wireless Access Point	Power	: AC 120V/60Hz
Test Mode	: Mode 1~9	Test Site	: TR8
Test Date	: 2019.07.18	Test Engineer	: Simon

ETH1:

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
		Ant1	Ant2		Ant1	Ant2		
CH36	5180	4.66	4.36	0.35	5.01	4.71	17	Pass
CH44	5220	6.36	6.61	0.35	6.71	6.96	17	Pass
CH48	5240	5.64	5.36	0.35	5.99	5.71	17	Pass

Mode 1: Transmit by 802.11a with CDD							
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2				
CH36	5180	5.64	6.70	0.35	9.56	16.03/17(note1)	Pass
CH44	5220	6.12	6.02	0.35	9.43	16.03/17(note1)	Pass
CH48	5240	5.45	5.85	0.35	9.01	16.03/17(note1)	Pass

Note1: 16.03dBm/MHz is AP305C PSD limit, 17dBm/MHz is AP305CX PSD limit.

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
		Ant1	Ant2		Ant1	Ant2		
CH36	5180	6.40	6.06	0.27	6.67	6.33	17	Pass
CH44	5220	5.98	5.72	0.27	6.25	5.99	17	Pass
CH48	5240	6.04	5.88	0.27	6.31	6.15	17	Pass

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

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2				
CH36	5180	4.35	5.96	0.27	8.51	16.03/17(note1)	Pass
CH44	5220	5.53	6.10	0.27	9.10	16.03/17(note1)	Pass
CH48	5240	4.78	5.26	0.27	8.31	16.03/17(note1)	Pass

Note1: 16.03dBm/MHz is AP305C PSD limit, 17dBm/MHz is AP305CX PSD limit.

Mode 2: Transmit by 802.11n(20MHz) with Beamforming

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2				
CH36	5180	5.81	5.30	0.26	8.83	16.03/17(note1)	Pass
CH44	5220	5.15	5.81	0.26	8.76	16.03/17(note1)	Pass
CH48	5240	5.22	5.86	0.26	8.82	16.03/17(note1)	Pass

Note1: 16.03dBm/MHz is AP305C PSD limit, 17dBm/MHz is AP305CX PSD limit.

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
		Ant1	Ant2		Ant1	Ant2		
CH38	5190	0.42	0.45	0.64	1.06	1.09	17	Pass
CH46	5230	0.90	2.99	0.64	1.54	3.63	17	Pass

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

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2				
CH38	5190	-1.96	-1.42	0.64	1.97	16.03/17(note1)	Pass
CH46	5230	1.21	0.68	0.64	4.60	16.03/17(note1)	Pass

Note1: 16.03dBm/MHz is AP305C PSD limit, 17dBm/MHz is AP305CX PSD limit.

Mode 3: Transmit by 802.11n(40MHz) with Beamforming

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2				
CH38	5190	-0.82	-2.54	0.60	2.01	16.03/17(note1)	Pass
CH46	5230	2.18	2.49	0.60	5.95	16.03/17(note1)	Pass

Note1: 16.03dBm/MHz is AP305C PSD limit, 17dBm/MHz is AP305CX PSD limit.

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
		Ant1	Ant2		Ant1	Ant2		
CH36	5180	6.08	5.92	0.13	6.21	6.05	17	Pass
CH44	5220	5.91	5.56	0.13	6.04	5.69	17	Pass
CH48	5240	5.13	5.98	0.13	5.26	6.11	17	Pass

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

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2				
CH36	5180	5.75	5.60	0.13	8.82	16.03/17(note1)	Pass
CH44	5220	6.42	6.42	0.13	9.56	16.03/17(note1)	Pass
CH48	5240	5.69	6.07	0.13	9.02	16.03/17(note1)	Pass

Note1: 16.03dBm/MHz is AP305C PSD limit, 17dBm/MHz is AP305CX PSD limit.

Mode 4: Transmit by 802.11ac(20MHz) with Beamforming

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2				
CH36	5180	5.73	4.98	0.11	8.49	16.03/17(note1)	Pass
CH44	5220	6.16	5.73	0.11	9.07	16.03/17(note1)	Pass
CH48	5240	5.93	5.54	0.11	8.86	16.03/17(note1)	Pass

Note1: 16.03dBm/MHz is AP305C PSD limit, 17dBm/MHz is AP305CX PSD limit.

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
		Ant1	Ant2		Ant1	Ant2		
CH38	5190	-0.12	0.32	0.35	0.23	0.67	17	Pass
CH46	5230	1.06	1.68	0.35	1.41	2.03	17	Pass

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

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2				
CH38	5190	1.24	-1.46	0.35	3.46	16.03/17(note1)	Pass
CH46	5230	3.43	2.87	0.35	6.52	16.03/17(note1)	Pass

Note1: 16.03dBm/MHz is AP305C PSD limit, 17dBm/MHz is AP305CX PSD limit.

Mode 5: Transmit by 802.11ac(40MHz) with Beamforming

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2				
CH38	5190	-2.37	-2.78	0.37	0.81	16.03/17(note1)	Pass
CH46	5230	1.46	1.17	0.37	4.70	16.03/17(note1)	Pass

Note1: 16.03dBm/MHz is AP305C PSD limit, 17dBm/MHz is AP305CX PSD limit.

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
		Ant1	Ant2		Ant1	Ant2		
CH42	5210	-3.24	-2.73	0.61	-2.63	-2.12	17	Pass

Mode 6: Transmit by 802.11ac(80MHz) with CDD

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2				
CH42	5210	-2.93	-3.29	0.61	0.51	16.03/17(note1)	Pass

Note1: 16.03dBm/MHz is AP305C PSD limit, 17dBm/MHz is AP305CX PSD limit.

Mode 6: Transmit by 802.11ac(80MHz) with Beamforming

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2				
CH42	5210	-3.73	-3.78	0.61	-0.13	16.03/17(note1)	Pass

Note1: 16.03dBm/MHz is AP305C PSD limit, 17dBm/MHz is AP305CX PSD limit.

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
		Ant1	Ant2		Ant1	Ant2		
CH36	5180	6.17	6.65	0.13	6.3	6.78	17	Pass
CH44	5220	6.16	5.30	0.13	6.29	5.43	17	Pass
CH48	5240	5.18	5.90	0.13	5.31	6.03	17	Pass

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

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2				
CH36	5180	4.92	4.91	0.13	8.06	16.03/17(note1)	Pass
CH44	5220	6.35	5.80	0.13	9.22	16.03/17(note1)	Pass
CH48	5240	5.56	5.97	0.13	8.91	16.03/17(note1)	Pass

Note1: 16.03dBm/MHz is AP305C PSD limit, 17dBm/MHz is AP305CX PSD limit.

Mode 7: Transmit by 802.11ax(20MHz) with Beamforming

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2				
CH36	5180	5.10	5.24	0.14	8.32	16.03/17(note1)	Pass
CH44	5220	6.13	6.01	0.14	9.22	16.03/17(note1)	Pass
CH48	5240	5.80	5.37	0.14	8.74	16.03/17(note1)	Pass

Note1: 16.03dBm/MHz is AP305C PSD limit, 17dBm/MHz is AP305CX PSD limit.

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
		Ant1	Ant2		Ant1	Ant2		
CH38	5190	0.63	0.34	0.40	1.03	0.74	17	Pass
CH46	5230	1.64	2.27	0.40	2.04	2.67	17	Pass

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

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2				
CH38	5190	0.94	0.31	0.40	4.05	16.03/17(note1)	Pass
CH46	5230	3.25	3.01	0.40	6.54	16.03/17(note1)	Pass

Note1: 16.03dBm/MHz is AP305C PSD limit, 17dBm/MHz is AP305CX PSD limit.

Mode 8: Transmit by 802.11ax(40MHz) with Beamforming

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2				
CH38	5190	-1.32	-3.00	0.39	1.32	16.03/17(note1)	Pass
CH46	5230	1.38	1.50	0.39	4.84	16.03/17(note1)	Pass

Note1: 16.03dBm/MHz is AP305C PSD limit, 17dBm/MHz is AP305CX PSD limit.

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
		Ant1	Ant2		Ant1	Ant2		
CH42	5210	-2.80	-3.51	0.50	-2.3	-3.01	17	Pass

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

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2				
CH42	5210	-4.49	-3.28	0.50	-0.33	16.03/17(note1)	Pass

Note1: 16.03dBm/MHz is AP305C PSD limit, 17dBm/MHz is AP305CX PSD limit.

Mode 9: Transmit by 802.11ax(80MHz) with Beamforming

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2				
CH42	5210	-3.46	-3.40	0.53	0.11	16.03/17(note1)	Pass

Note1: 16.03dBm/MHz is AP305C PSD limit, 17dBm/MHz is AP305CX PSD limit.

ETH2:

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
		Ant3	Ant4		Ant3	Ant4		
CH36	5180	6.21	5.48	0.35	6.56	5.83	17	Pass
CH44	5220	5.74	5.42	0.35	6.09	5.77	17	Pass
CH48	5240	5.64	6.04	0.35	5.99	6.39	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)
		Ant3	Ant4		Ant3	Ant4		
CH149	5745	1.45	1.70	0.35	1.80	2.05	30	Pass
CH157	5785	2.65	2.00	0.35	3.00	2.35	30	Pass
CH165	5825	0.92	1.85	0.35	1.27	2.20	30	Pass

Mode 1: Transmit by 802.11a with CDD							
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant3	Ant4				
CH36	5180	5.92	4.64	0.35	8.69	16.25/15.63 (note1)	Pass
CH44	5220	5.80	5.38	0.35	8.96	16.25/15.63 (note1)	Pass
CH48	5240	5.35	4.78	0.35	8.43	16.25/15.63 (note1)	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Ant3	Ant4				
CH149	5745	1.69	1.07	0.35	4.75	29.25/28.63 (note2)	Pass
CH157	5785	1.56	1.16	0.35	4.72	29.25/28.63 (note2)	Pass
CH165	5825	0.69	0.52	0.35	3.97	29.25/28.63 (note2)	Pass

Note1: 16.25dBm/MHz is AP305C PSD limit, 15.63dBm/MHz is AP305CX PSD limit.

Note2: 29.25dBm/500KHz is AP305C PSD limit, 28.63dBm/500KHz is AP305CX PSD limit.

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
		Ant3	Ant4		Ant3	Ant4		
CH36	5180	5.01	6.27	0.27	5.28	6.54	17	Pass
CH44	5220	5.40	5.39	0.27	5.67	5.66	17	Pass
CH48	5240	5.66	5.04	0.27	5.93	5.31	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)
		Ant3	Ant4		Ant3	Ant4		
CH149	5745	1.05	1.48	0.27	1.32	1.75	30	Pass
CH157	5785	1.04	1.08	0.27	1.31	1.35	30	Pass
CH165	5825	0.79	0.74	0.27	1.06	1.01	30	Pass

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

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant3	Ant4				
CH36	5180	5.23	4.30	0.27	8.07	16.25/15.63 (note1)	Pass
CH44	5220	5.76	6.08	0.27	9.20	16.25/15.63 (note1)	Pass
CH48	5240	5.61	5.72	0.27	8.95	16.25/15.63 (note1)	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Ant3	Ant4				
CH149	5745	0.62	1.98	0.27	4.63	29.25/28.63 (note1)	Pass
CH157	5785	0.90	1.07	0.27	4.27	29.25/28.63 (note1)	Pass
CH165	5825	0.71	1.15	0.27	4.22	29.25/28.63 (note1)	Pass

Note1: 16.25dBm/MHz is AP305C PSD limit, 15.63dBm/MHz is AP305CX PSD limit.

Note2: 29.25dBm/500KHz is AP305C PSD limit, 28.63dBm/500KHz is AP305CX PSD limit.

Mode 2: Transmit by 802.11n(20MHz) with Beamforming

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant3	Ant4				
CH36	5180	5.18	4.94	0.26	8.33	16.25/15.63 (note1)	Pass
CH44	5220	6.32	5.78	0.26	9.33	16.25/15.63 (note1)	Pass
CH48	5240	5.91	5.41	0.26	8.94	16.25/15.63 (note1)	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500 KHz)
		Ant3	Ant4				
CH149	5745	0.77	0.95	0.26	4.13	29.25/28.63 (note1)	Pass
CH157	5785	1.38	0.86	0.26	4.40	29.25/28.63 (note1)	Pass
CH165	5825	0.94	0.65	0.26	4.07	29.25/28.63 (note1)	Pass

Note1: 16.25dBm/MHz is AP305C PSD limit, 15.63dBm/MHz is AP305CX PSD limit.

Note2: 29.25dBm/500KHz is AP305C PSD limit, 28.63dBm/500KHz is AP305CX PSD limit.

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
		Ant3	Ant4		Ant3	Ant4		
CH38	5190	1.87	3.01	0.64	2.51	3.65	17	Pass
CH46	5230	1.33	2.60	0.64	1.97	3.24	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)
		Ant3	Ant4		Ant3	Ant4		
CH151	5755	-1.35	-1.12	0.64	-0.71	-0.48	30	Pass
CH159	5795	-2.01	-1.50	0.64	-1.37	-0.86	30	Pass

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

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant3	Ant4				
CH38	5190	1.62	-0.67	0.64	4.27	16.25/15.63 (note1)	Pass
CH46	5230	2.03	3.61	0.64	6.54	16.25/15.63 (note1)	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Ant3	Ant4				
CH151	5755	-2.20	-2.21	0.64	1.45	29.25/28.63 (note1)	Pass
CH159	5795	-2.27	-1.45	0.64	1.81	29.25/28.63 (note1)	Pass

Note1: 16.25dBm/MHz is AP305C PSD limit, 15.63dBm/MHz is AP305CX PSD limit.

Note2: 29.25dBm/500KHz is AP305C PSD limit, 28.63dBm/500KHz is AP305CX PSD limit.

Mode 3: Transmit by 802.11n(40MHz) with Beamforming

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant3	Ant4				
CH38	5190	-0.54	-0.64	0.60	3.02	16.25/15.63 (note1)	Pass
CH46	5230	0.49	3.03	0.60	5.55	16.25/15.63 (note1)	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Ant3	Ant4				
CH151	5755	-2.06	-1.68	0.60	1.74	29.25/28.63 (note1)	Pass
CH159	5795	-4.34	-2.41	0.60	0.34	29.25/28.63 (note1)	Pass

Note1: 16.25dBm/MHz is AP305C PSD limit, 15.63dBm/MHz is AP305CX PSD limit.

Note2: 29.25dBm/500KHz is AP305C PSD limit, 28.63dBm/500KHz is AP305CX PSD limit.

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
		Ant3	Ant4		Ant3	Ant4		
CH36	5180	5.79	5.39	0.13	5.92	5.52	17	Pass
CH44	5220	6.27	5.79	0.13	6.40	5.92	17	Pass
CH48	5240	6.10	5.59	0.13	6.23	5.72	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)
		Ant3	Ant4		Ant3	Ant4		
CH149	5745	1.46	1.84	0.13	1.59	1.97	30	Pass
CH157	5785	1.67	1.25	0.13	1.80	1.38	30	Pass
CH165	5825	1.41	1.99	0.13	1.54	2.12	30	Pass

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

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant3	Ant4				
CH36	5180	6.09	4.78	0.13	8.62	16.25/15.63 (note1)	Pass
CH44	5220	6.08	5.66	0.13	9.02	16.25/15.63 (note1)	Pass
CH48	5240	6.21	5.87	0.13	9.18	16.25/15.63 (note1)	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Ant3	Ant4				
CH149	5745	1.33	0.62	0.13	4.13	29.25/28.63 (note1)	Pass
CH157	5785	0.98	0.99	0.13	4.13	29.25/28.63 (note1)	Pass
CH165	5825	1.39	0.49	0.13	4.10	29.25/28.63 (note1)	Pass

Note1: 16.25dBm/MHz is AP305C PSD limit, 15.63dBm/MHz is AP305CX PSD limit.

Note2: 29.25dBm/500KHz is AP305C PSD limit, 28.63dBm/500KHz is AP305CX PSD limit.

Mode 4: Transmit by 802.11ac(20MHz) with Beamforming

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant3	Ant4				
CH36	5180	5.01	4.79	0.11	8.02	16.25/15.63 (note1)	Pass
CH44	5220	6.30	5.37	0.11	8.98	16.25/15.63 (note1)	Pass
CH48	5240	6.23	5.21	0.11	8.87	16.25/15.63 (note1)	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500 KHz)
		Ant3	Ant4				
CH149	5745	1.11	1.65	0.11	4.51	29.25/28.63 (note1)	Pass
CH157	5785	0.87	0.69	0.11	3.90	29.25/28.63 (note1)	Pass
CH165	5825	0.47	0.32	0.11	3.52	29.25/28.63 (note1)	Pass

Note1: 16.25dBm/MHz is AP305C PSD limit, 15.63dBm/MHz is AP305CX PSD limit.

Note2: 29.25dBm/500KHz is AP305C PSD limit, 28.63dBm/500KHz is AP305CX PSD limit.

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
		Ant3	Ant4		Ant3	Ant4		
CH38	5190	2.95	2.73	0.35	3.30	3.08	17	Pass
CH46	5230	2.32	2.17	0.35	2.67	2.52	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)
		Ant3	Ant4		Ant3	Ant4		
CH151	5755	-1.20	-0.64	0.35	-0.85	-0.29	30	Pass
CH159	5795	0.09	-0.56	0.35	0.44	-0.21	30	Pass

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

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant3	Ant4				
CH38	5190	3.33	-1.25	0.35	4.98	16.25/15.63 (note1)	Pass
CH46	5230	2.56	2.00	0.35	5.65	16.25/15.63 (note1)	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Ant3	Ant4				
CH151	5755	-0.37	-2.17	0.35	2.18	29.25/28.63 (note1)	Pass
CH159	5795	-0.42	-1.06	0.35	2.63	29.25/28.63 (note1)	Pass

Note1: 16.25dBm/MHz is AP305C PSD limit, 15.63dBm/MHz is AP305CX PSD limit.

Note2: 29.25dBm/500KHz is AP305C PSD limit, 28.63dBm/500KHz is AP305CX PSD limit.

Mode 5: Transmit by 802.11ac(40MHz) with Beamforming

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant3	Ant4				
CH38	5190	-0.95	-2.68	0.37	1.65	16.25/15.63 (note1)	Pass
CH46	5230	1.86	1.56	0.37	5.09	16.25/15.63 (note1)	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Ant3	Ant4				
CH151	5755	-2.77	-3.22	0.37	0.39	29.25/28.63 (note1)	Pass
CH159	5795	-2.25	-1.07	0.37	1.76	29.25/28.63 (note1)	Pass

Note1: 16.25dBm/MHz is AP305C PSD limit, 15.63dBm/MHz is AP305CX PSD limit.

Note2: 29.25dBm/500KHz is AP305C PSD limit, 28.63dBm/500KHz is AP305CX PSD limit.

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
		Ant3	Ant4		Ant3	Ant4		
CH42	5210	-0.33	0.03	0.61	0.28	0.64	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)
		Ant3	Ant4		Ant3	Ant4		
CH155	5775	-3.87	-3.72	0.61	-3.26	-3.11	30	Pass

Mode 6: Transmit by 802.11ac(80MHz) with CDD

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant3	Ant4				
CH42	5210	-0.76	-3.80	0.61	1.60	16.25/15.63 (note1)	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Ant3	Ant4				
CH155	5775	-3.54	-3.49	0.61	0.11	29.25/28.63 (note1)	Pass

Note1: 16.25dBm/MHz is AP305C PSD limit, 15.63dBm/MHz is AP305CX PSD limit.

Note2: 29.25dBm/500KHz is AP305C PSD limit, 28.63dBm/500KHz is AP305CX PSD limit.

Mode 6: Transmit by 802.11ac(80MHz) with Beamforming

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant3	Ant4				
CH42	5210	-4.10	-3.81	0.61	-0.33	16.25/15.63 (note1)	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500 KHz)
		Ant3	Ant4				
CH155	5775	-3.16	-3.50	0.61	0.29	29.25/28.63 (note1)	Pass

Note1: 16.25dBm/MHz is AP305C PSD limit, 15.63dBm/MHz is AP305CX PSD limit.

Note2: 29.25dBm/500KHz is AP305C PSD limit, 28.63dBm/500KHz is AP305CX PSD limit.

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
		Ant3	Ant4		Ant3	Ant4		
CH36	5180	5.42	5.54	0.13	5.55	5.67	17	Pass
CH44	5220	5.66	5.88	0.13	5.79	6.01	17	Pass
CH48	5240	6.11	5.61	0.13	6.24	5.74	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)
		Ant3	Ant4		Ant3	Ant4		
CH149	5745	1.39	0.83	0.13	1.52	0.96	30	Pass
CH157	5785	0.98	1.61	0.13	1.11	1.74	30	Pass
CH165	5825	1.31	1.96	0.13	1.44	2.09	30	Pass

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

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant3	Ant4				
CH36	5180	5.52	5.30	0.13	8.55	16.25/15.63 (note1)	Pass
CH44	5220	6.07	5.88	0.13	9.12	16.25/15.63 (note1)	Pass
CH48	5240	5.57	6.01	0.13	8.94	16.25/15.63 (note1)	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Ant3	Ant4				
CH149	5745	0.62	0.83	0.13	3.87	29.25/28.63 (note1)	Pass
CH157	5785	1.59	1.34	0.13	4.61	29.25/28.63 (note1)	Pass
CH165	5825	1.43	0.62	0.13	4.18	29.25/28.63 (note1)	Pass

Note1: 16.25dBm/MHz is AP305C PSD limit, 15.63dBm/MHz is AP305CX PSD limit.

Note2: 29.25dBm/500KHz is AP305C PSD limit, 28.63dBm/500KHz is AP305CX PSD limit.

Mode 7: Transmit by 802.11ax(20MHz) with Beamforming

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant3	Ant4				
CH36	5180	5.16	4.69	0.14	8.08	16.25/15.63 (note1)	Pass
CH44	5220	6.06	6.10	0.14	9.23	16.25/15.63 (note1)	Pass
CH48	5240	5.88	6.97	0.14	9.61	16.25/15.63 (note1)	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500 KHz)
		Ant3	Ant4				
CH149	5745	1.40	1.38	0.14	4.54	29.25/28.63 (note1)	Pass
CH157	5785	0.72	1.33	0.14	4.19	29.25/28.63 (note1)	Pass
CH165	5825	1.58	0.77	0.14	4.34	29.25/28.63 (note1)	Pass

Note1: 16.25dBm/MHz is AP305C PSD limit, 15.63dBm/MHz is AP305CX PSD limit.

Note2: 29.25dBm/500KHz is AP305C PSD limit, 28.63dBm/500KHz is AP305CX PSD limit.

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
		Ant3	Ant4		Ant3	Ant4		
CH38	5190	2.75	2.56	0.40	3.15	2.96	17	Pass
CH46	5230	2.39	2.58	0.40	2.79	2.98	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)
		Ant3	Ant4		Ant3	Ant4		
CH151	5755	-1.04	-0.87	0.40	-0.64	-0.47	30	Pass
CH159	5795	-0.82	-0.47	0.40	-0.42	-0.07	30	Pass

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

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant3	Ant4				
CH38	5190	2.37	-2.07	0.40	4.10	16.25/15.63 (note1)	Pass
CH46	5230	2.45	2.04	0.40	5.66	16.25/15.63 (note1)	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Ant3	Ant4				
CH151	5755	-1.36	-3.35	0.40	1.17	29.25/28.63 (note1)	Pass
CH159	5795	-1.08	-2.55	0.40	1.66	29.25/28.63 (note1)	Pass

Note1: 16.25dBm/MHz is AP305C PSD limit, 15.63dBm/MHz is AP305CX PSD limit.

Note2: 29.25dBm/500KHz is AP305C PSD limit, 28.63dBm/500KHz is AP305CX PSD limit.

Mode 8: Transmit by 802.11ax(40MHz) with Beamforming

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant3	Ant4				
CH38	5190	-0.58	-0.63	0.39	2.80	16.25/15.63 (note1)	Pass
CH46	5230	1.00	0.63	0.39	4.22	16.25/15.63 (note1)	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500 KHz)
		Ant3	Ant4				
CH151	5755	-1.56	-3.10	0.39	1.14	29.25/28.63 (note1)	Pass
CH159	5795	-1.37	-1.71	0.39	1.86	29.25/28.63 (note1)	Pass

Note1: 16.25dBm/MHz is AP305C PSD limit, 15.63dBm/MHz is AP305CX PSD limit.

Note2: 29.25dBm/500KHz is AP305C PSD limit, 28.63dBm/500KHz is AP305CX PSD limit.

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
		Ant3	Ant4		Ant3	Ant4		
CH42	5210	-0.62	-0.36	0.50	-0.12	0.14	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)
		Ant3	Ant4		Ant3	Ant4		
CH155	5775	-3.27	-2.58	0.50	-2.77	-2.08	30	Pass

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

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant3	Ant4				
CH42	5210	-0.18	-4.01	0.50	1.82	16.25/15.63 (note1)	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500KHz)
		Ant3	Ant4				
CH155	5775	-3.58	-3.29	0.50	0.08	29.25/28.63 (note1)	Pass

Note1: 16.25dBm/MHz is AP305C PSD limit, 15.63dBm/MHz is AP305CX PSD limit.

Note2: 29.25dBm/500KHz is AP305C PSD limit, 28.63dBm/500KHz is AP305CX PSD limit.

Mode 9: Transmit by 802.11ax(80MHz) with Beamforming

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant3	Ant4				
CH42	5210	-4.55	-4.35	0.53	-0.91	16.25/15.63 (note1)	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500KHz)	Limit (dBm/500KHz)	Limit (dBm/500 KHz)
		Ant3	Ant4				
CH155	5775	-3.26	-3.46	0.53	0.18	29.25/28.63 (note1)	Pass

Note1: 16.25dBm/MHz is AP305C PSD limit, 15.63dBm/MHz is AP305CX PSD limit.

Note2: 29.25dBm/500KHz is AP305C PSD limit, 28.63dBm/500KHz is AP305CX PSD limit.

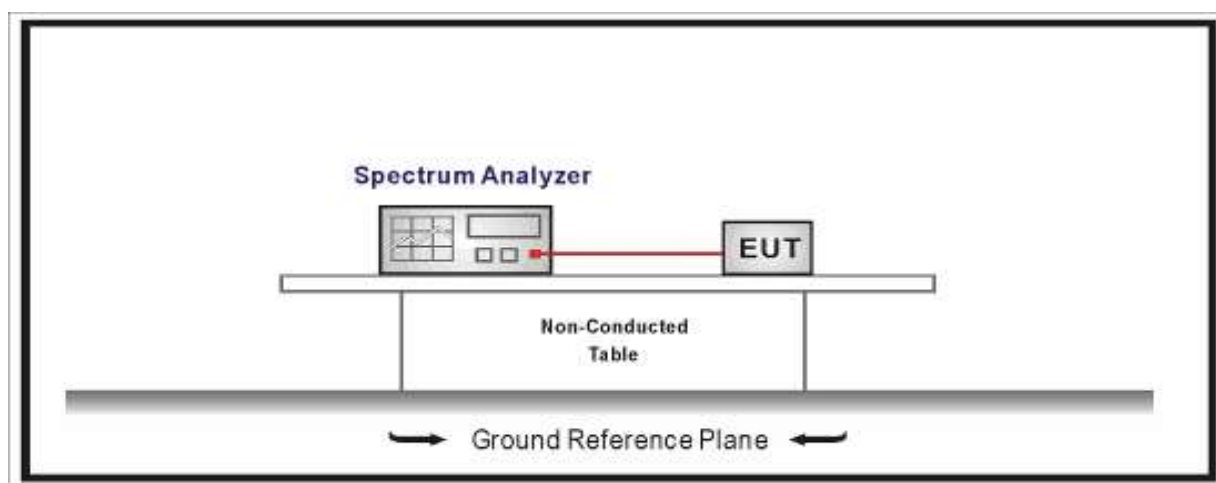
9. Band Edge

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



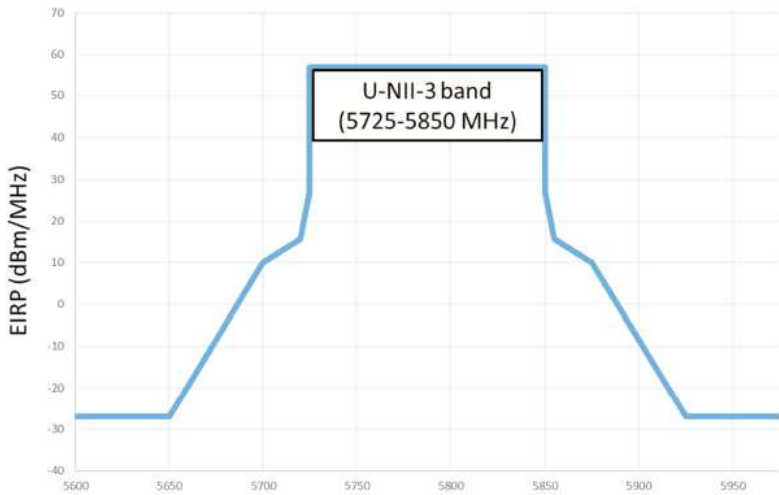
9.3. Limit

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

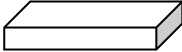
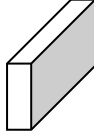
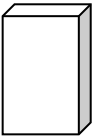
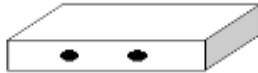
FCC Part 15 Subpart C Paragraph 15.205 (Restricted Band)			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (MHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 – 16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128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

9.4. Test Procedure

Test Method				
	References Rule		Chapter	Description
☐	ANSI C63.10		12.7.3	Emissions in non-restricted frequency bands
☒	ANSI C63.10		12.7.2	Emissions in restricted frequency bands
	☐	ANSI C63.10	12.7.5	Radiated emission measurements
	☒	ANSI C63.10	12.7.6	Procedure for peak unwanted emissions measurements above 1000 MHz
	☒	ANSI C63.10	12.7.7	Procedures for average unwanted emissions measurements above 1000 MHz
	☐	ANSI C63.10	12.7.7.2	Method AD (average detection)—primary method
	☒	ANSI C63.10	12.7.7.3	Method VB-A (Alternative)
	☐	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	☐	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	☐	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
☐	FCC KDB 789033 D02v02r01		G.2	Unwanted Emissions that fall Outside of the Restricted Bands
☐	FCC KDB 789033 D02v02r01		G.1	Unwanted Emissions in the Restricted Bands
	☐	FCC KDB 789033 D02v02r01	G.4	Procedure for Unwanted Emissions Measurements below 1000 MHz
	☐	FCC KDB 789033 D02v02r01	G.5	Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz
	☐	FCC KDB 789033 D02v02r01	G.6	Procedures for Average Unwanted Emissions Measurements above 1000 MHz
	☐	FCC KDB 789033 D02v02r01	G.6.c	Method AD (Average detection)—primary method
	☐	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	☒	Indoor use			
	☐	Outdoor use			
	☐	Fix position use			
	☐	Client use			
Test mode	Mode 1-9				
Test method	☐	Radiated			
		X Axis	Y Axis	Z Axis	
					
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐	
	☒	Conducted			
	☒	Chain 1			
					
	☒	Chain 1	Chain 2		
					
	☐	Chain 1	Chain 2	Chain 3	
					
	☒	Chain 1	Chain 2	Chain 3	Chain 4
					

9.6. Test Result

Eth1:

SISO PK Limit=74dBuV/m-95.2-3.97(Antenna Gain)=-25.17dBm

SISO AV Limit=54dBuV/m-95.2-3.97(Antenna Gain)=-45.17dBm

CDD PK Limit=74dBuV/m-95.2-10lg2(2Tx)-6.97(Directional Gain)=-31.17dBm

CDD AV Limit=54dBuV/m-95.2-10lg2(2Tx)-6.97(Directional Gain)=-51.17dBm

Beamforming PK Limit=74dBuV/m-95.2-10lg2(2Tx)-6.97(Directional Gain)=-31.17dBm

Beamforming AV Limit=54dBuV/m-95.2-10lg2(2Tx)-6.97(Directional Gain)=-51.17dBm

Note: Above limit is the tighter limit of AP305C and AP305CX.

Eth2:

SISO PK Limit=74dBuV/m-95.2-4.37(Antenna Gain)=-25.57dBm

SISO AV Limit=54dBuV/m-95.2-4.37(Antenna Gain)=-45.57dBm

CDD PK Limit=74dBuV/m-95.2-10lg2(2Tx)-7.37(Directional Gain)=-31.57dBm

CDD AV Limit=54dBuV/m-95.2-10lg2(2Tx)-7.37(Directional Gain)=-51.57dBm

Beamforming PK Limit=74dBuV/m-95.2-10lg2(2Tx)-7.37(Directional Gain)=-31.57dBm

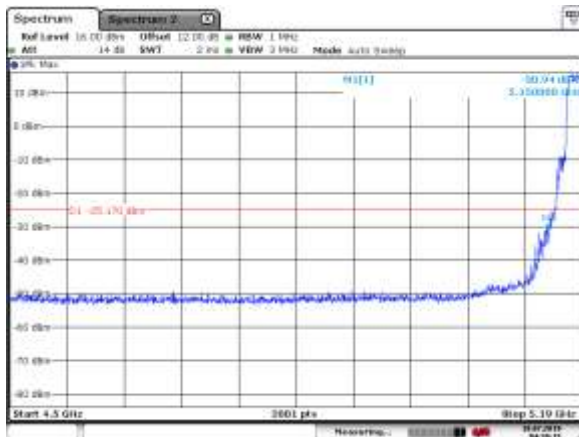
Beamforming AV Limit=54dBuV/m-95.2-10lg2(2Tx)-7.37(Directional Gain)=-51.57dBm

Note: Above limit is the tighter limit of AP305C and AP305CX.

Eth1:

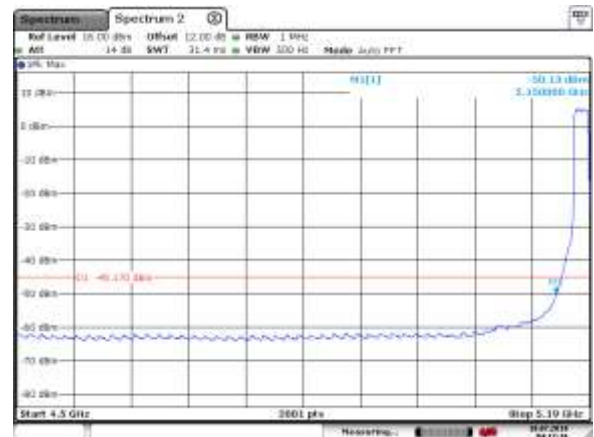
802.11a

5180MHz with SISO



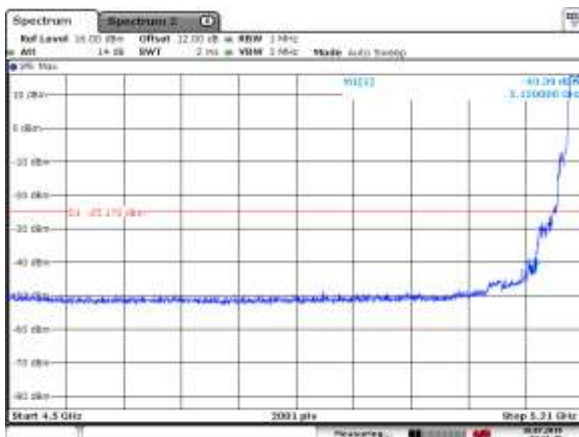
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5180MHz with SISO



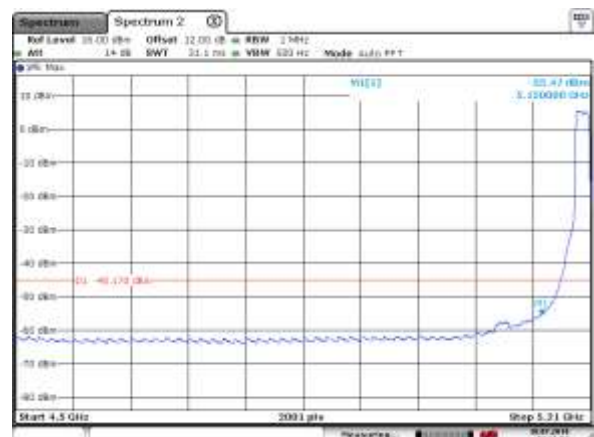
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5200MHz with SISO



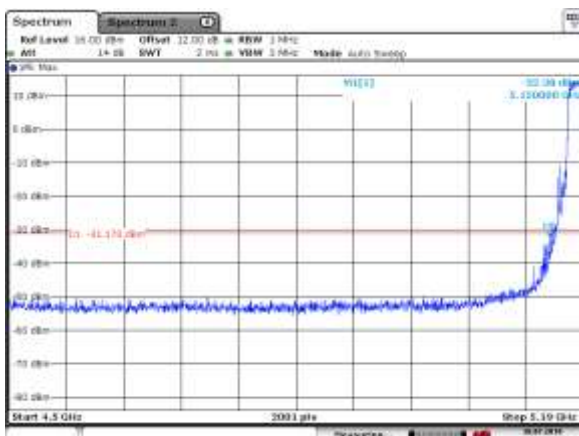
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5200MHz with SISO



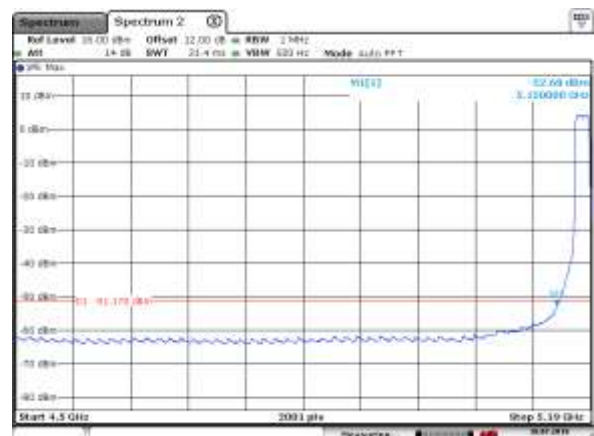
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5180MHz with CDD



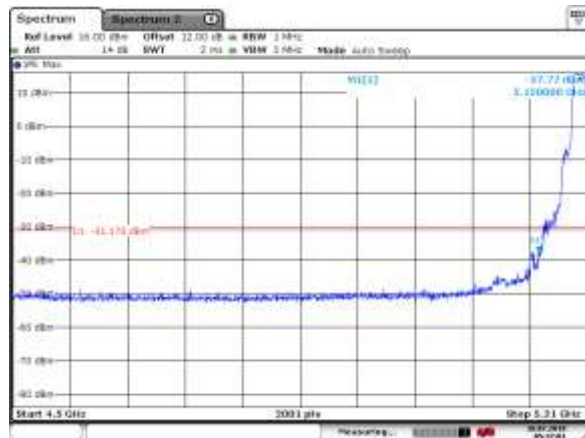
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5180MHz with CDD



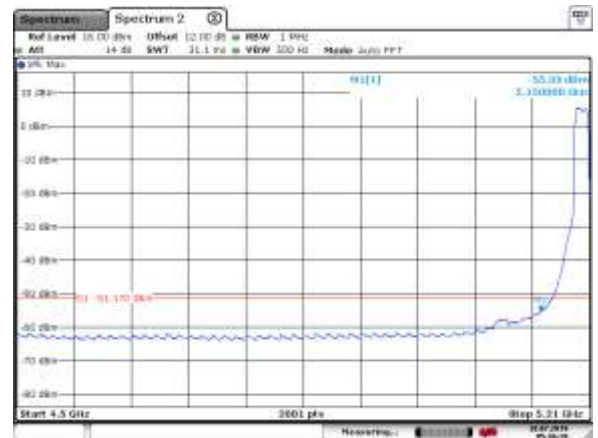
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5200MHz with CDD



Date: 18.JUL.2019 05:37:01

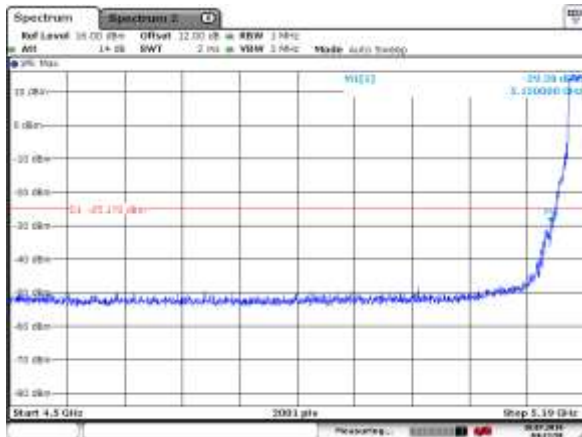
5200MHz with CDD



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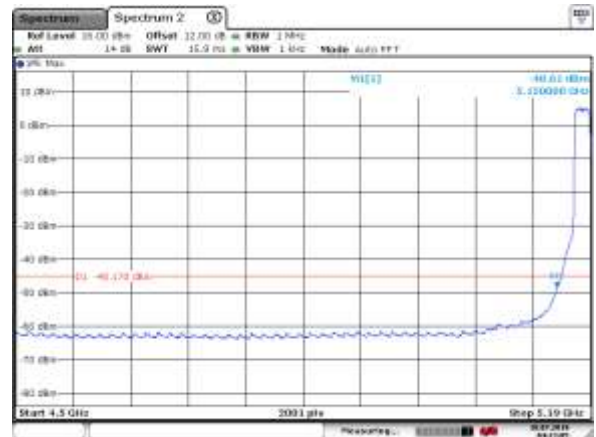
802.11n(20MHz)

5180MHz with SISO



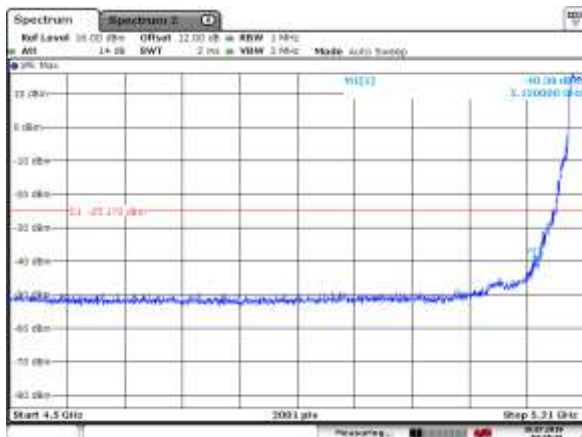
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5180MHz with SISO



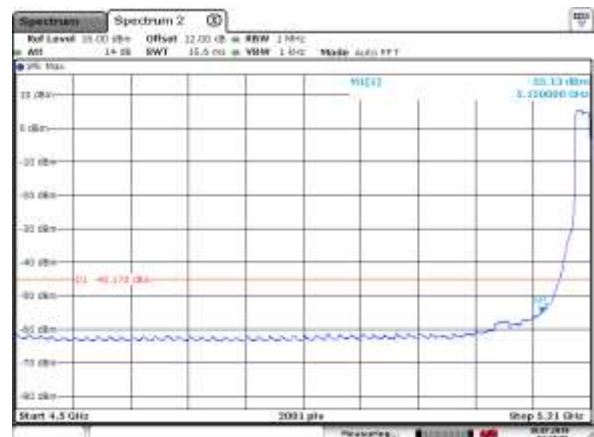
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5200MHz with SISO



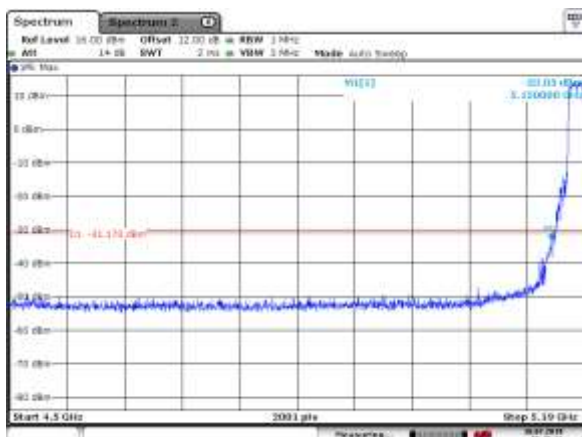
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5200MHz with SISO



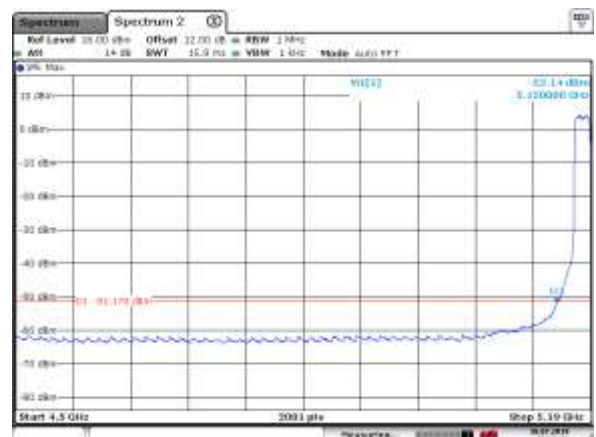
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5180MHz with CDD



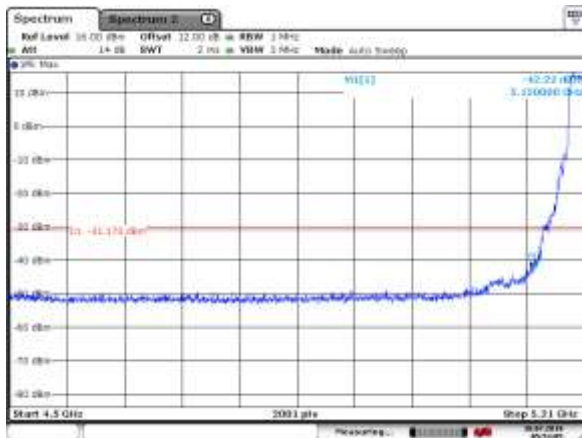
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5180MHz with CDD



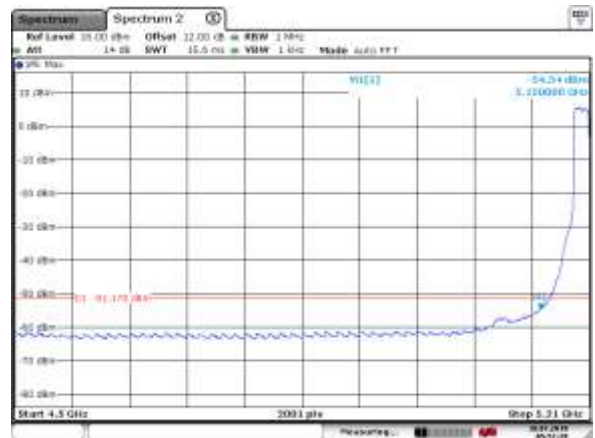
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5200MHz with CDD



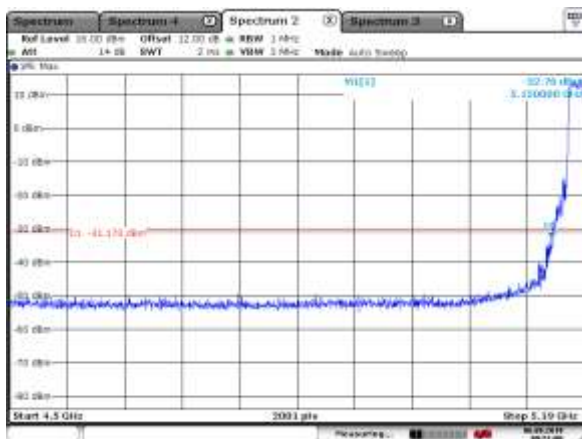
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5200MHz with CDD



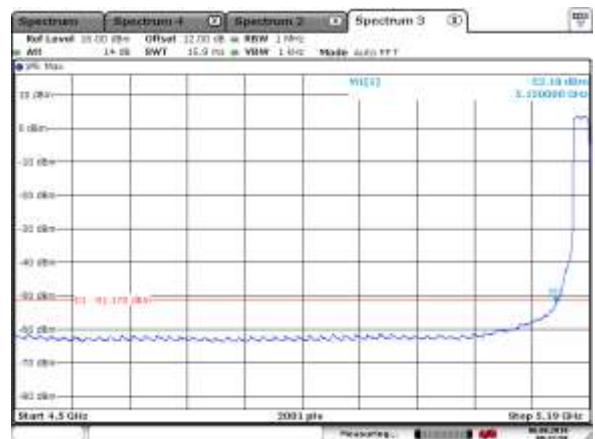
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5180MHz with Beamforming



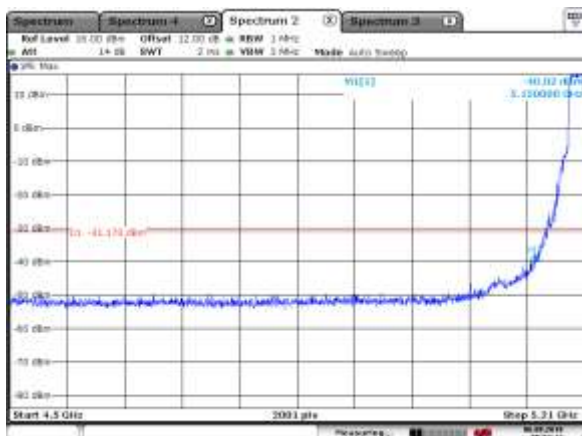
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5180MHz with Beamforming



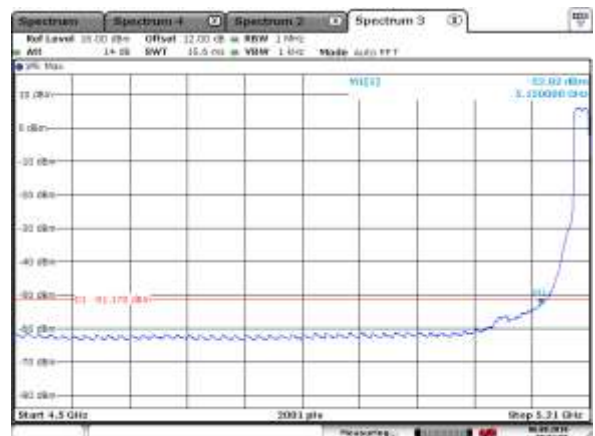
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5200MHz with Beamforming



Date: 6.AUG.2019 09:53:13

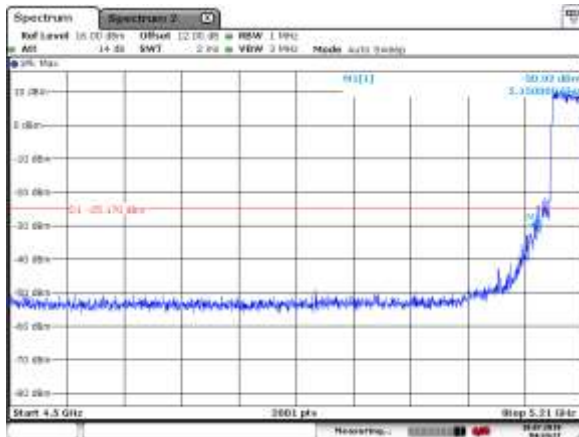
5200MHz with Beamforming



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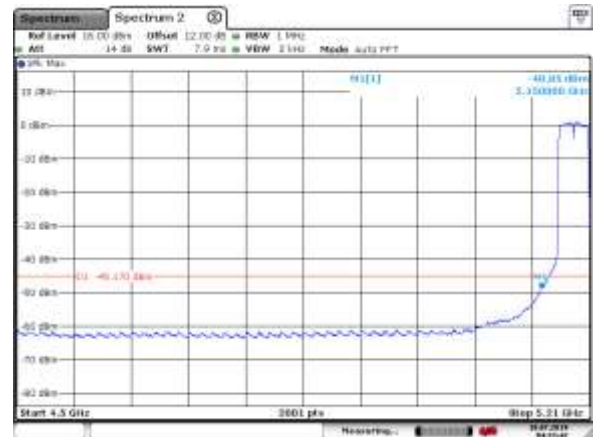
802.11n(40MHz)

5190MHz with SISO



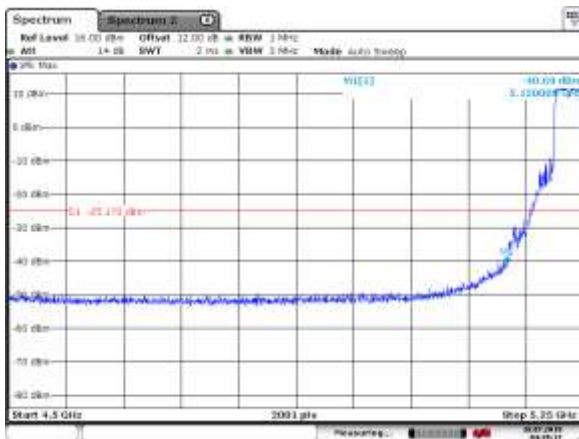
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5190MHz with SISO



Date: 18.JUL.2019 04:33:42

5230MHz with SISO



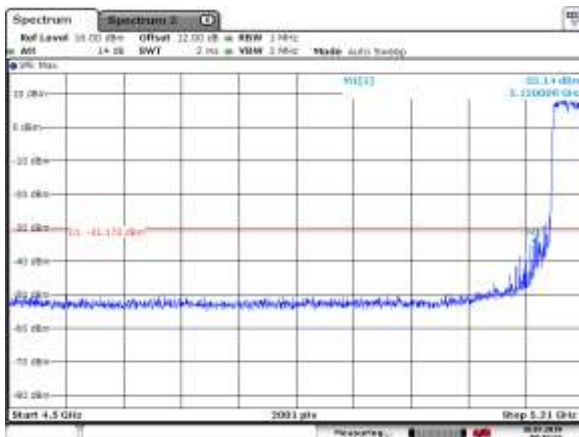
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5230MHz with SISO



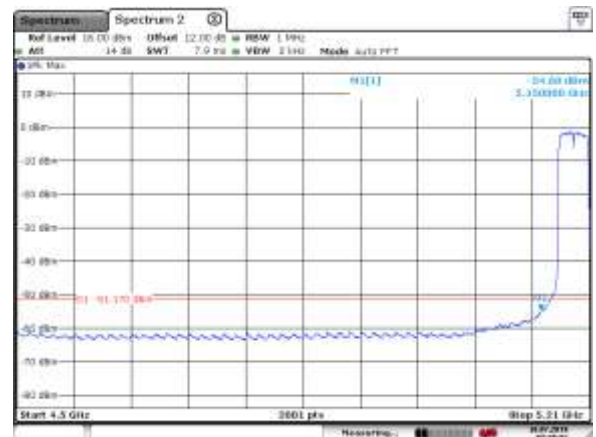
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5190MHz with CDD



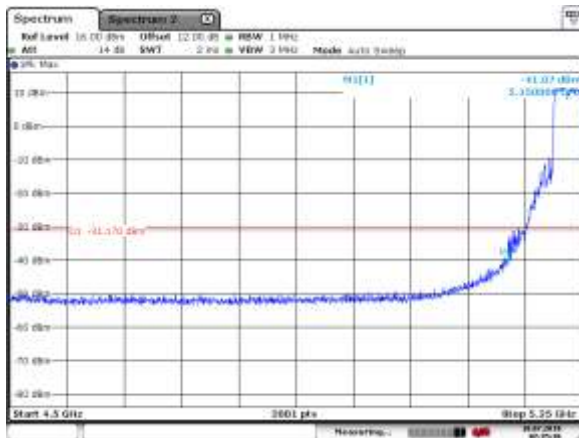
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5190MHz with CDD



Date: 18.JUL.2019 07:39:52

5230MHz with CDD



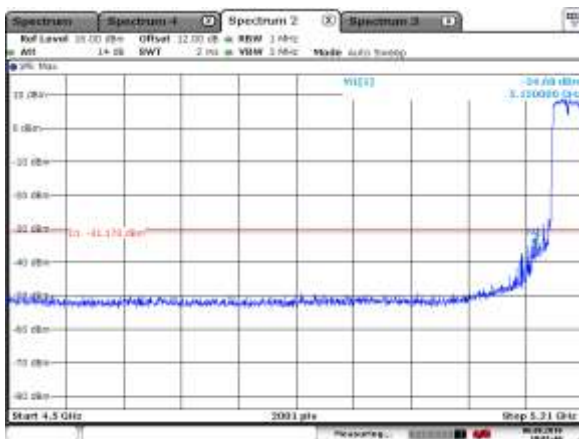
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5230MHz with CDD



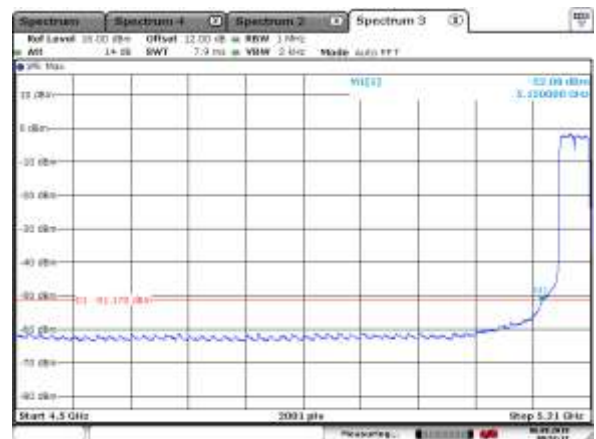
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5190MHz with Beamforming



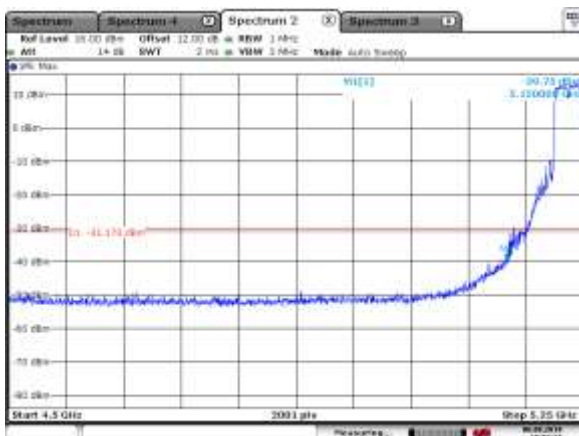
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5190MHz with Beamforming



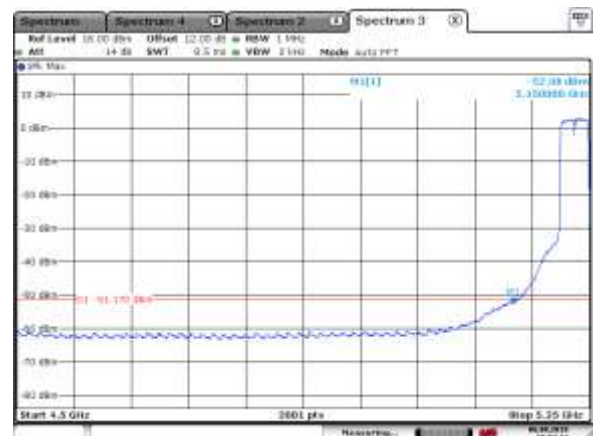
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5230MHz with Beamforming



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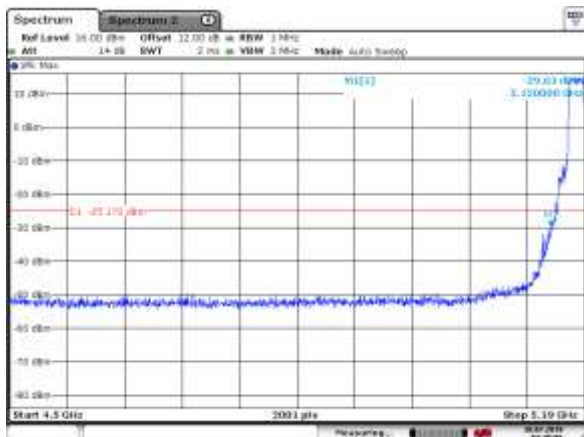
5230MHz with Beamforming



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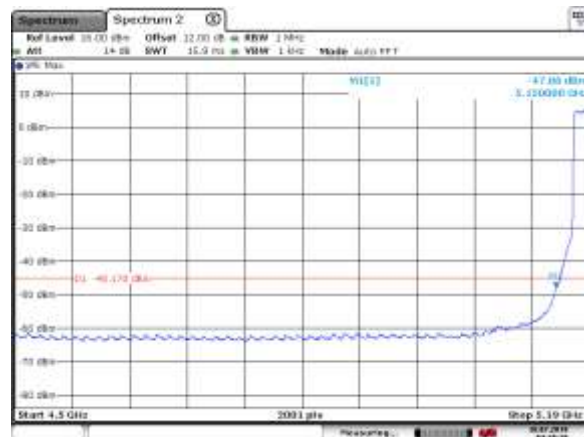
802.11ac(20MHz)

5180MHz with SISO



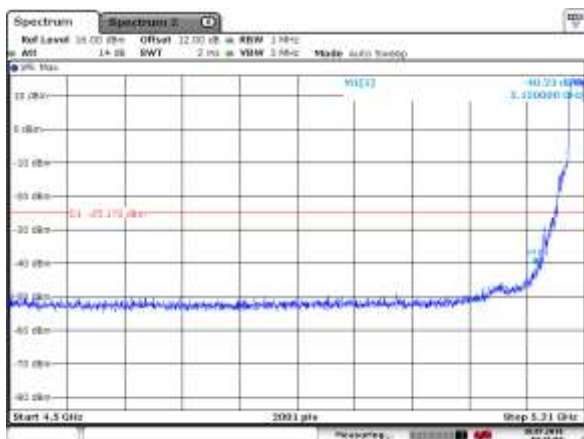
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5180MHz with SISO



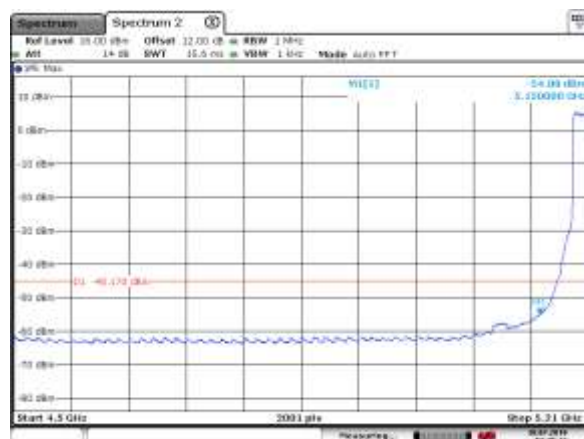
Date: 18.JUL.2019 04:39:39

5200MHz with SISO



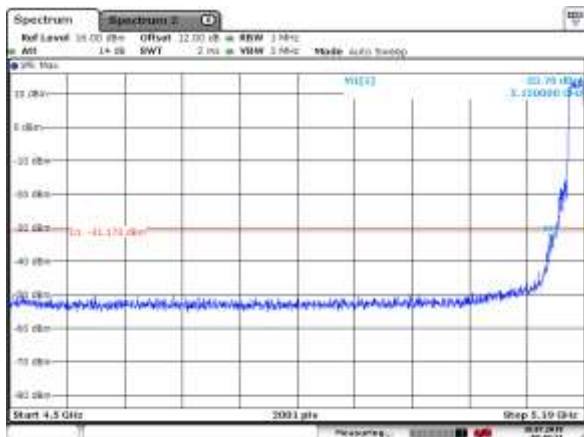
Date: 18.JUL.2019 04:41:04

5200MHz with SISO



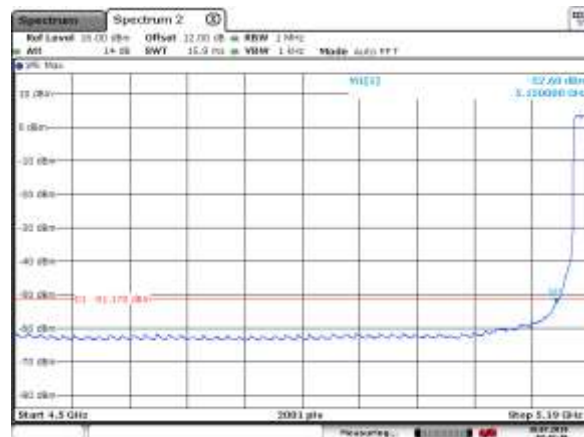
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5180MHz with CDD



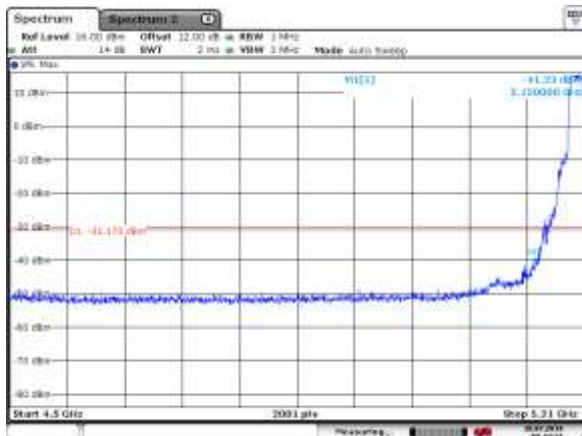
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5180MHz with CDD



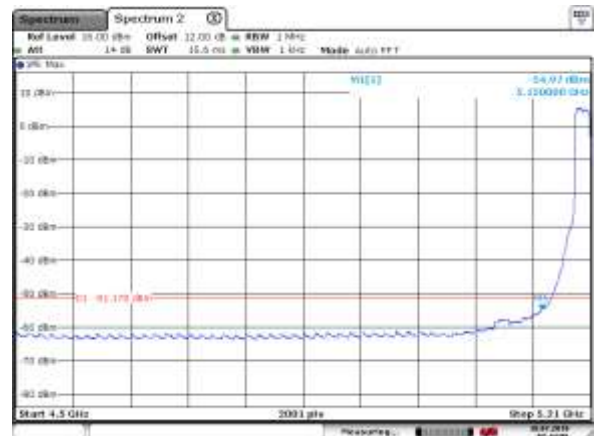
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5200MHz with CDD



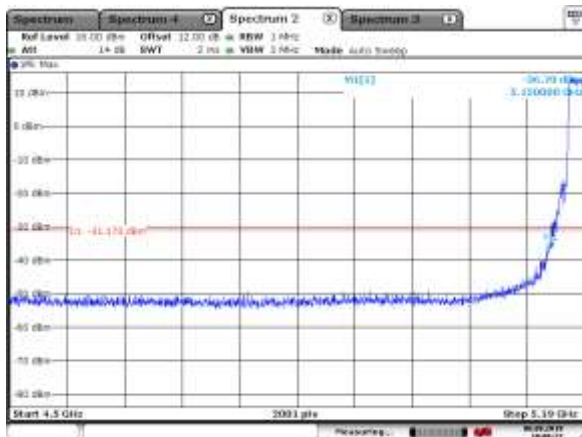
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5200MHz with CDD



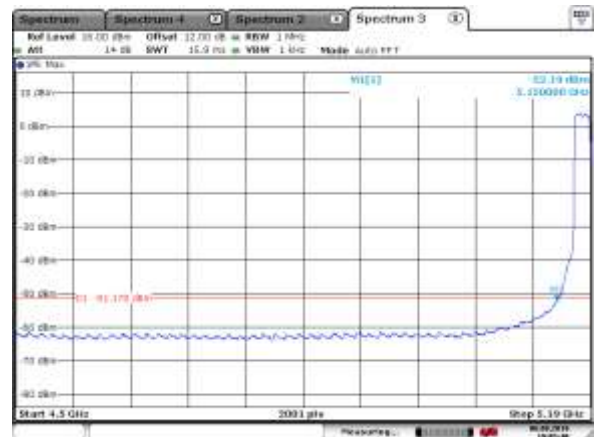
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5180MHz with Beamforming



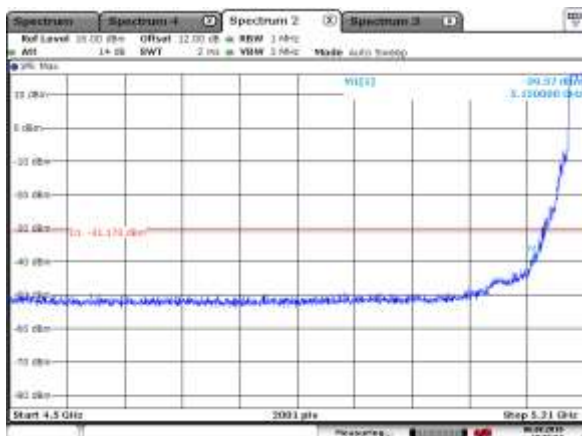
Date: 6.AUG.2019 10:06:28

5180MHz with Beamforming



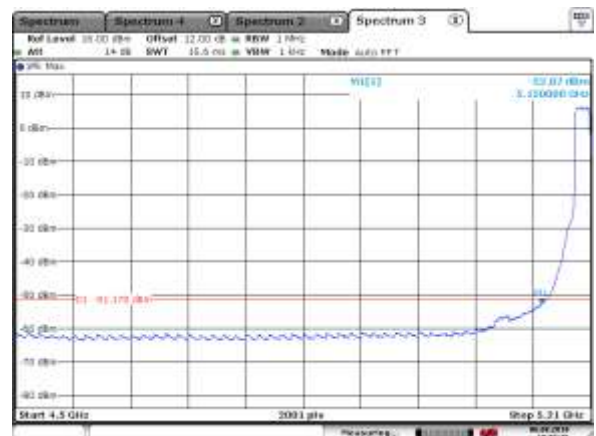
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5200MHz with Beamforming



Date: 6.AUG.2019 10:07:55

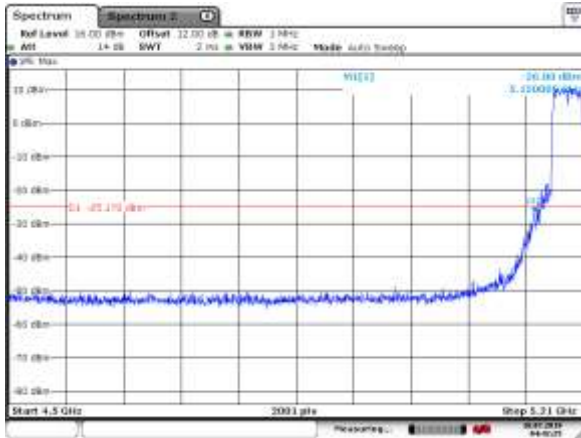
5200MHz with Beamforming



Date: 6.AUG.2019 10:07:37

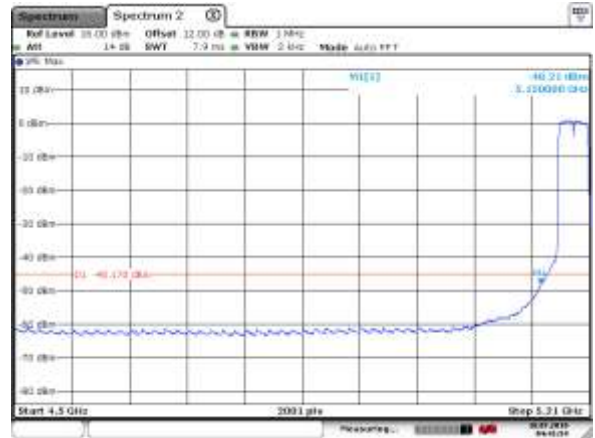
802.11ac(40MHz)

5190MHz with SISO



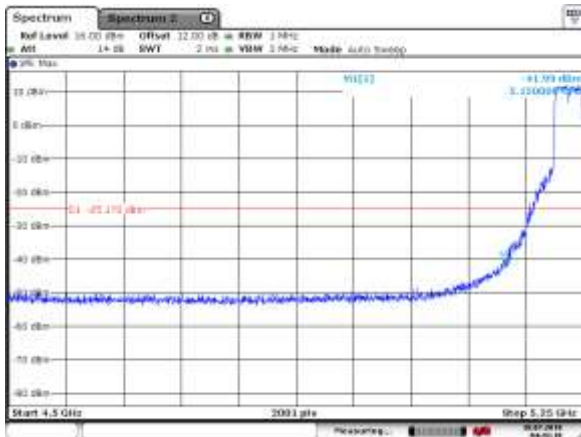
Date: 18.JUL.2019 04:42:25

5190MHz with SISO



Date: 18.JUL.2019 04:41:54

5230MHz with SISO



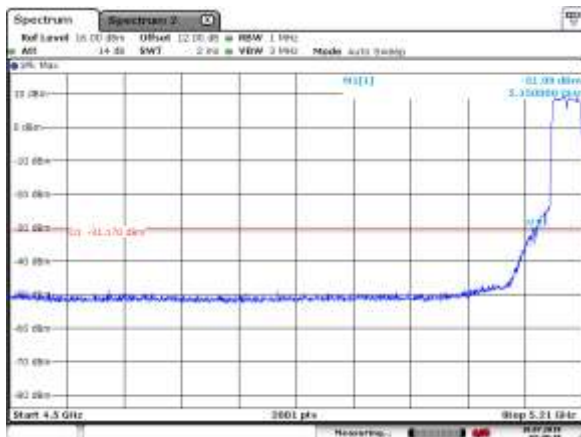
Date: 18.JUL.2019 04:43:19

5230MHz with SISO



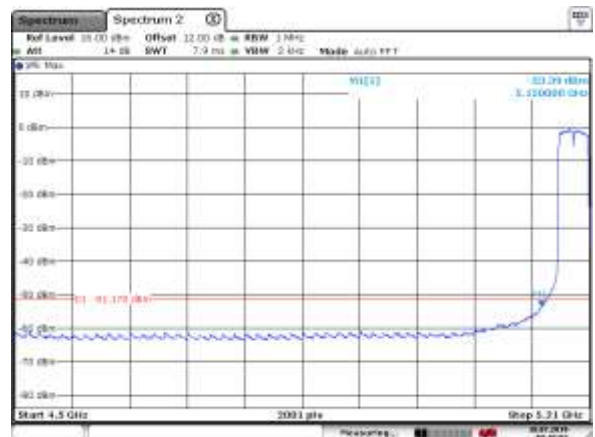
Date: 18.JUL.2019 04:43:02

5190MHz with CDD



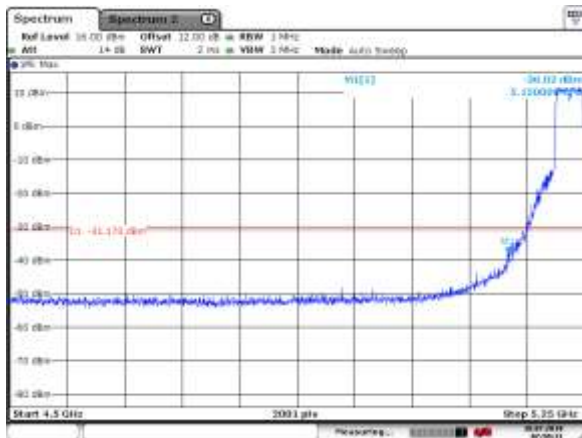
Date: 18.JUL.2019 07:49:18

5190MHz with CDD



Date: 18.JUL.2019 07:47:54

5230MHz with CDD



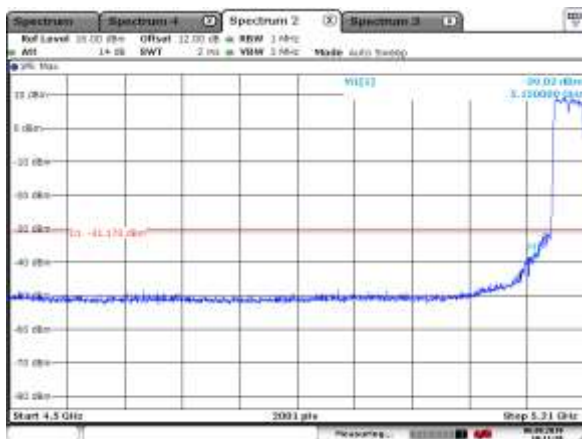
Date: 18.JUL.2019 07:50:31

5230MHz with CDD



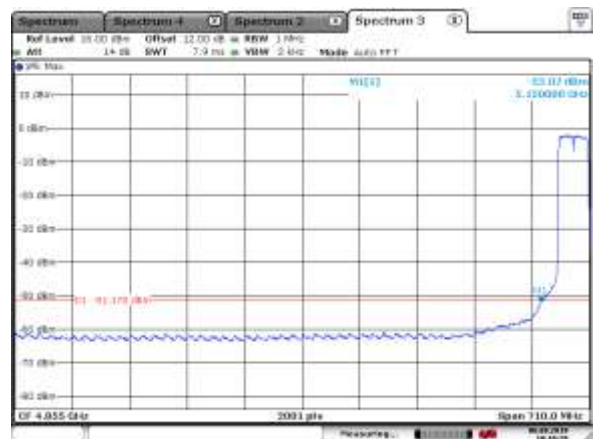
Date: 18.JUL.2019 07:50:17

5190MHz with Beamforming



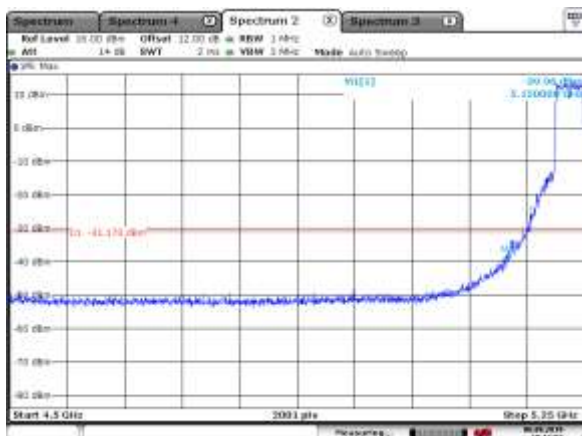
Date: 6.AUG.2019 10:11:20

5190MHz with Beamforming



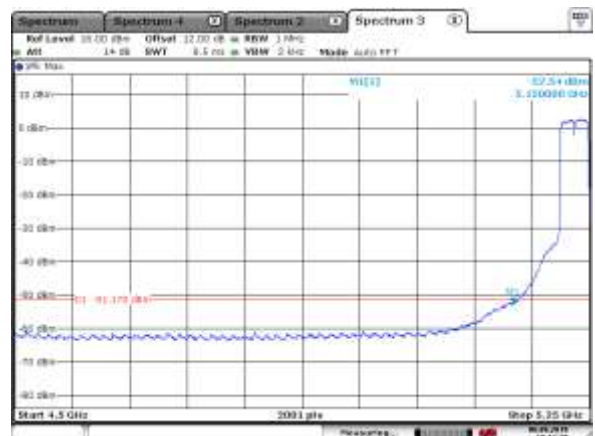
Date: 6.AUG.2019 10:10:30

5230MHz with Beamforming



Date: 6.AUG.2019 10:12:54

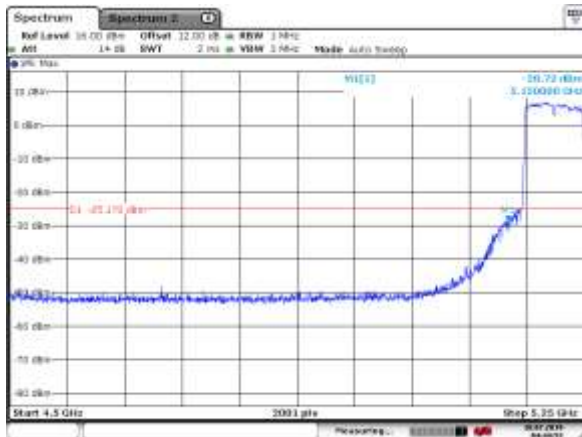
5230MHz with Beamforming



Date: 6.AUG.2019 10:12:29

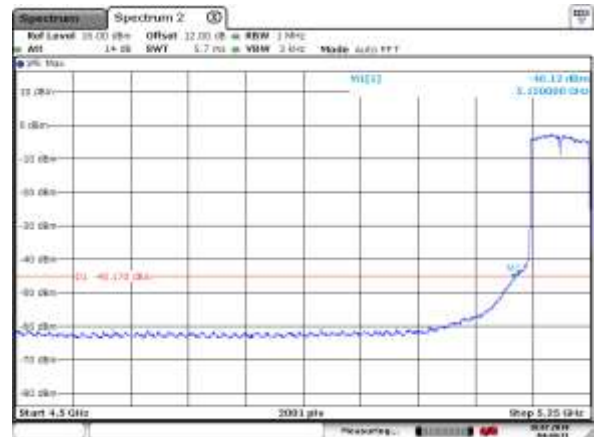
802.11ac(80MHz)

5210MHz with SISO



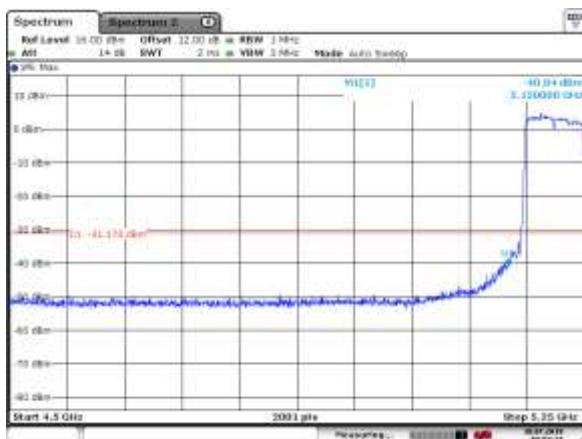
Date: 18.JUL.2019 04:44:53

5210MHz with SISO



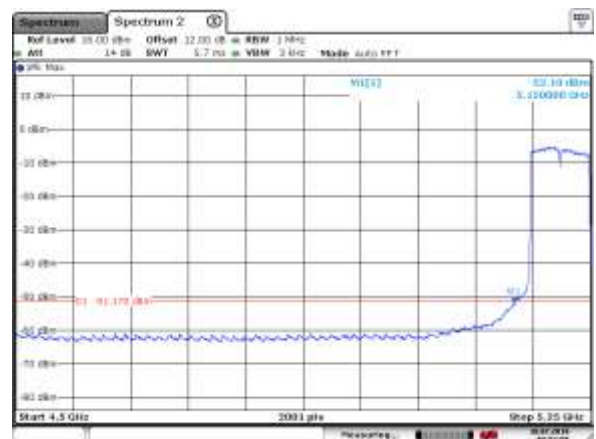
Date: 18.JUL.2019 04:44:31

5210MHz with CDD



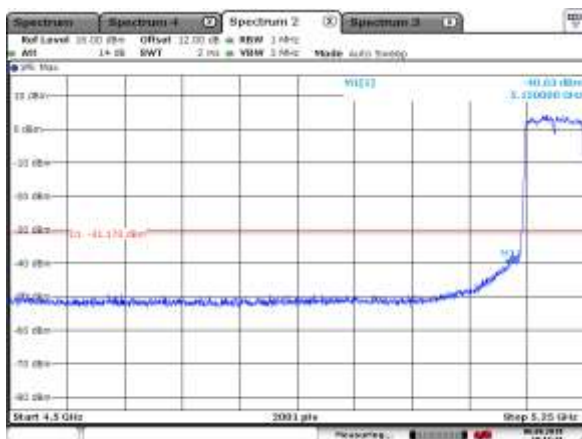
Date: 18.JUL.2019 07:53:18

5210MHz with CDD



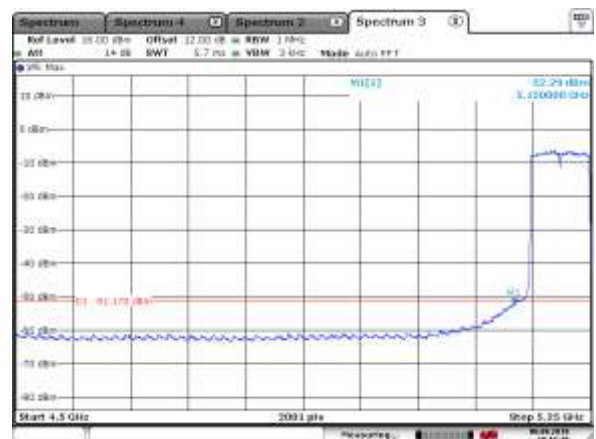
Date: 18.JUL.2019 07:52:58

5210MHz with Beamforming



Date: 6.AUG.2019 10:17:41

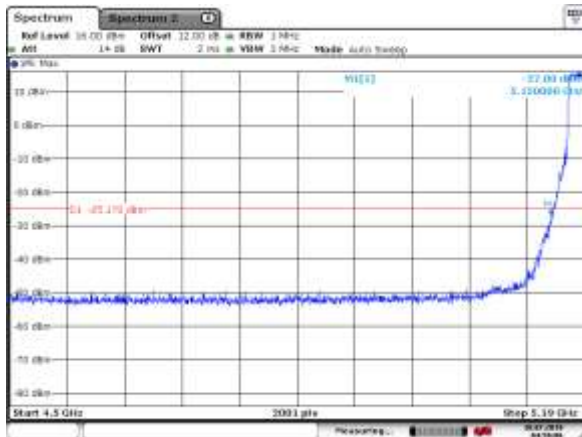
5210MHz with Beamforming



Date: 6.AUG.2019 10:17:19

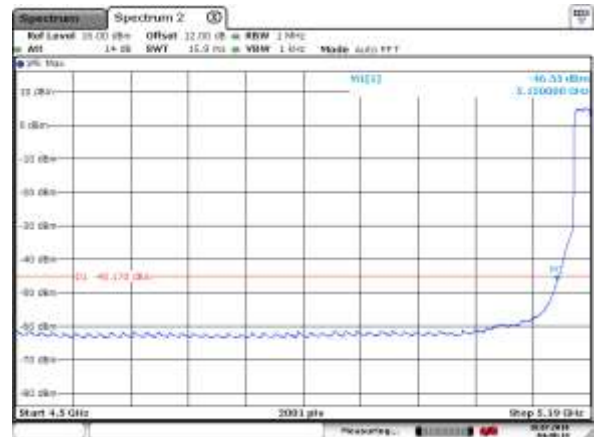
802.11ax(20MHz)

5180MHz with SISO



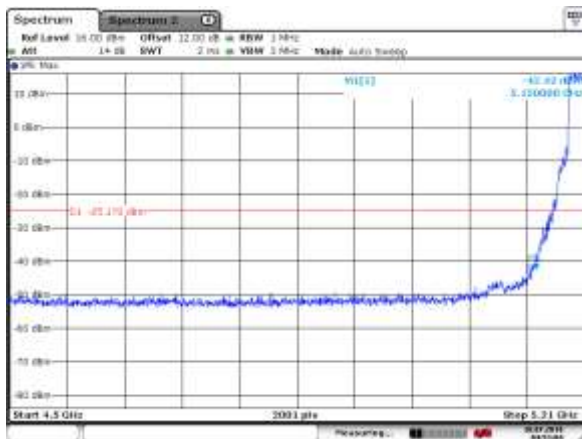
Date: 18.JUL.2019 04:50:06

5180MHz with SISO



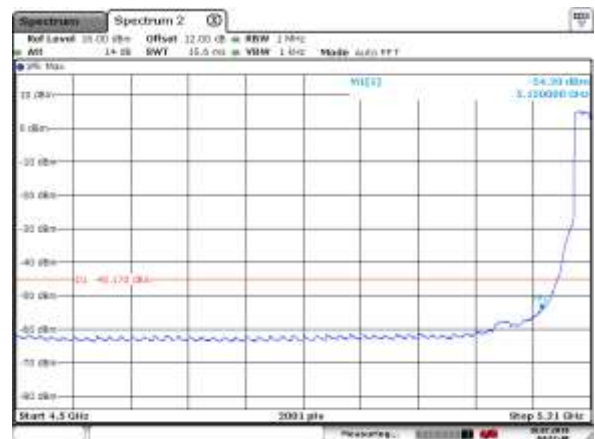
Date: 18.JUL.2019 04:48:14

5200MHz with SISO



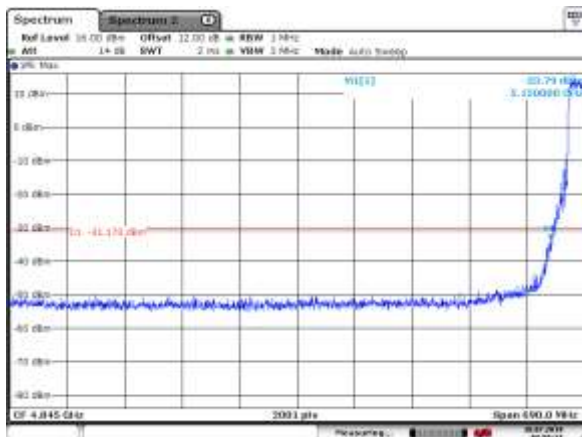
Date: 18.JUL.2019 04:53:04

5200MHz with SISO



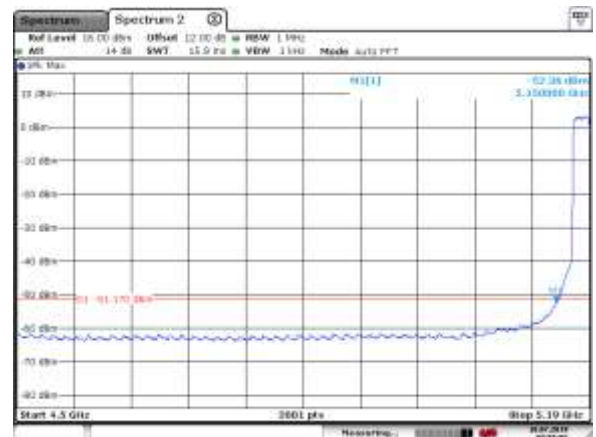
Date: 18.JUL.2019 04:52:48

5180MHz with CDD



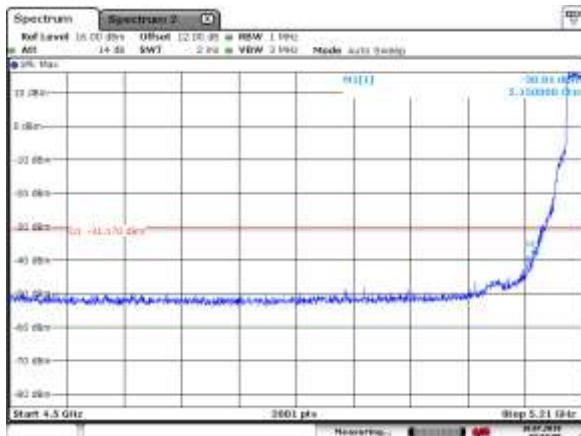
Date: 18.JUL.2019 07:55:38

5180MHz with CDD



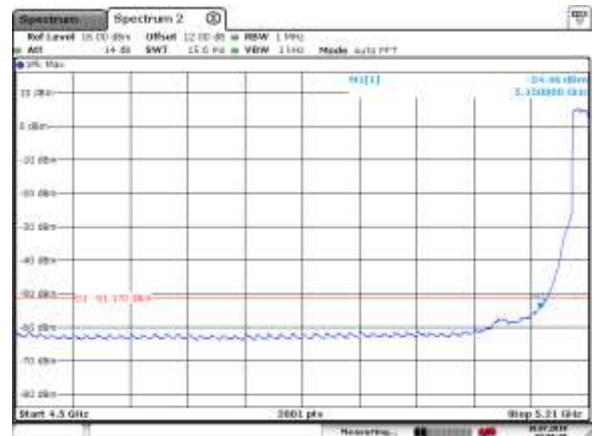
Date: 18.JUL.2019 07:55:03

5200MHz with CDD



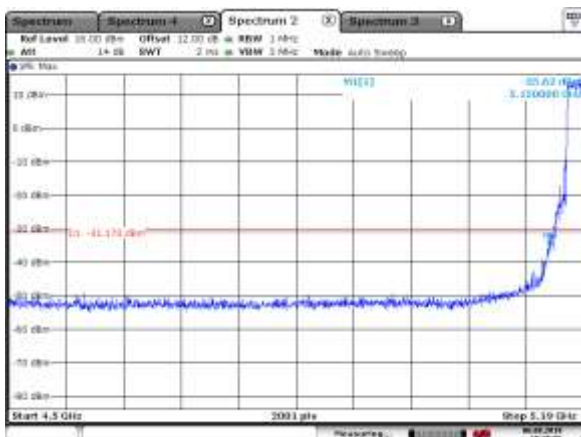
Date: 18.JUL.2019 07:57:00

5200MHz with CDD



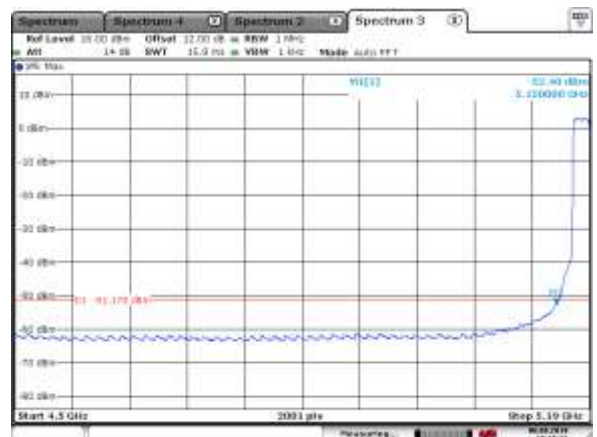
Date: 18.JUL.2019 07:56:38

5180MHz with Beamforming



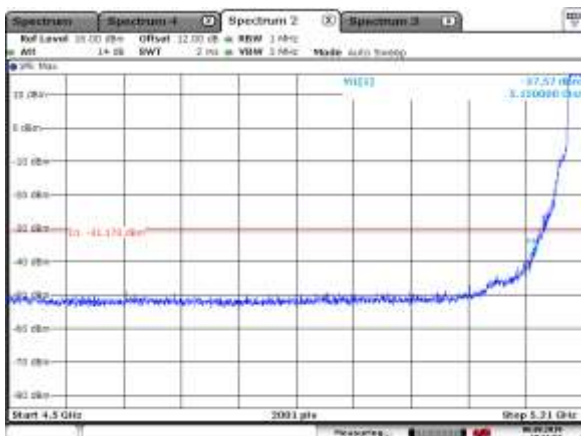
Date: 6.AUG.2019 10:20:57

5180MHz with Beamforming



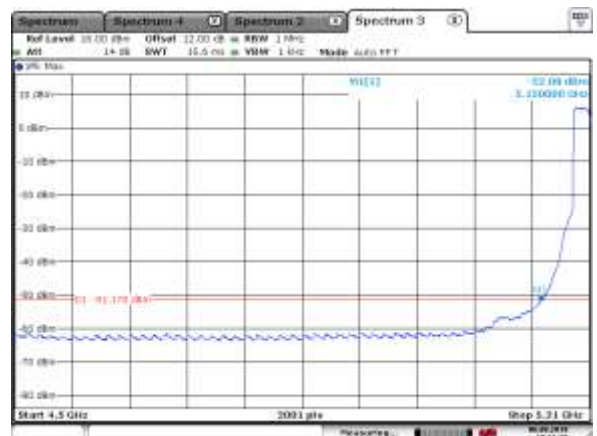
Date: 6.AUG.2019 10:19:32

5200MHz with Beamforming



Date: 6.AUG.2019 10:21:58

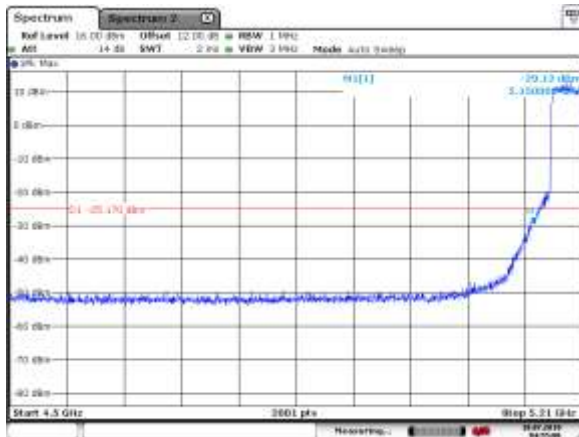
5200MHz with Beamforming



Date: 6.AUG.2019 10:21:40

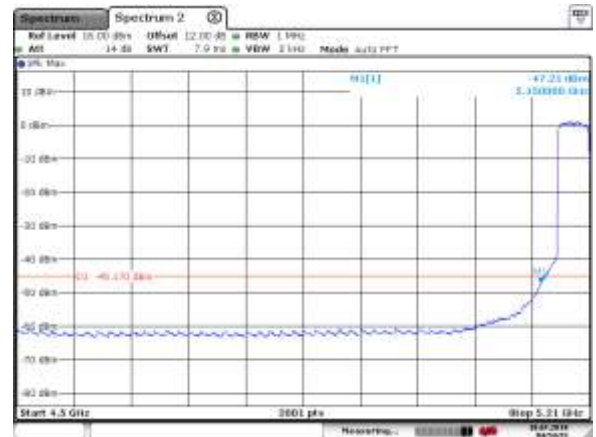
802.11ax(40MHz)

5190MHz with SISO



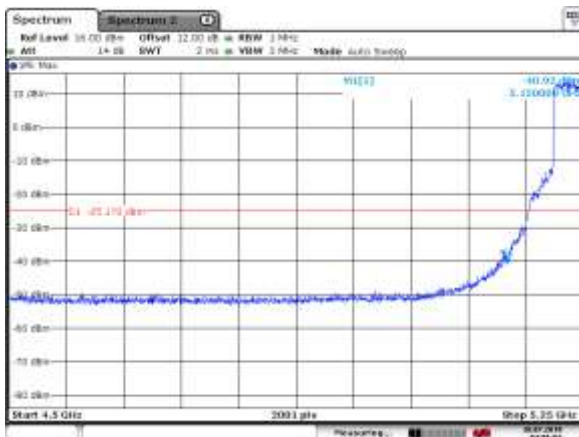
Date: 18.JUL.2019 04:55:06

5190MHz with SISO



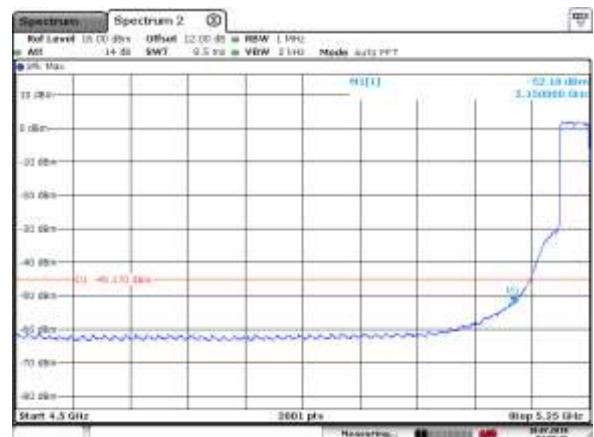
Date: 18.JUL.2019 04:54:53

5230MHz with SISO



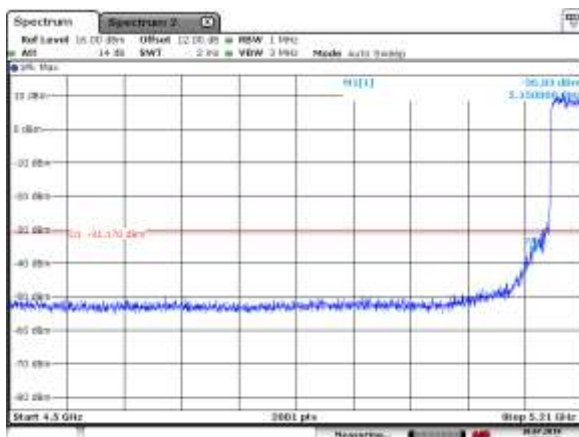
Date: 18.JUL.2019 04:56:03

5230MHz with SISO



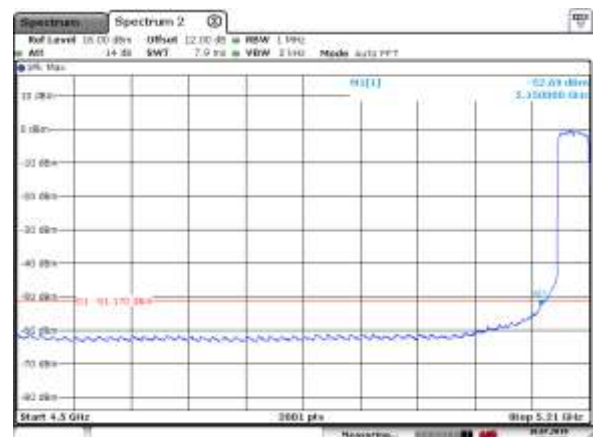
Date: 18.JUL.2019 04:55:36

5190MHz with CDD



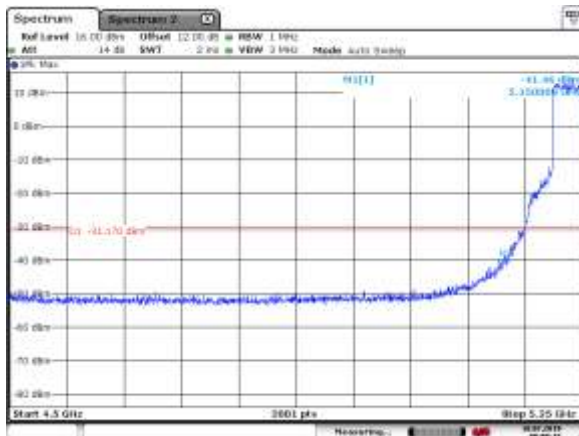
Date: 18.JUL.2019 07:58:48

5190MHz with CDD



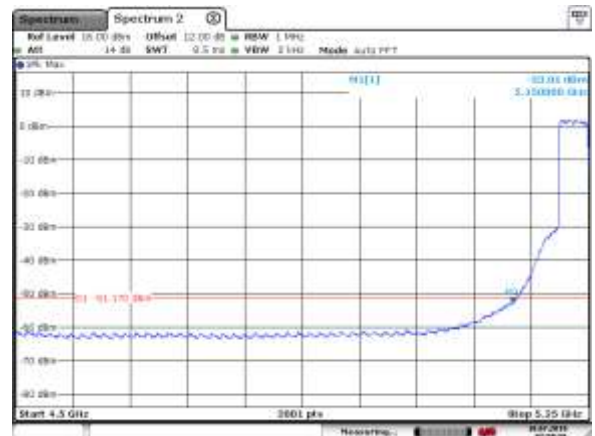
Date: 18.JUL.2019 07:57:55

5230MHz with CDD



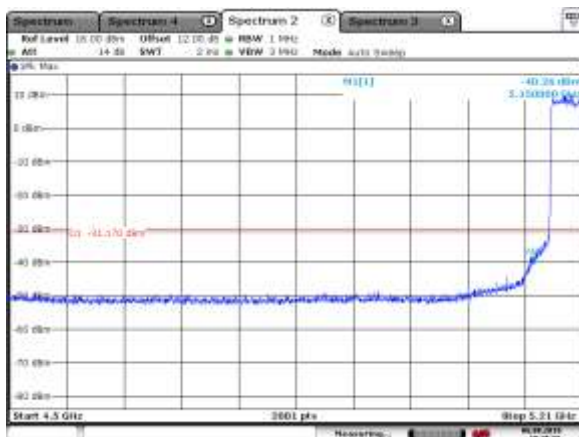
Date: 18.JUL.2019 08:00:15

5230MHz with CDD



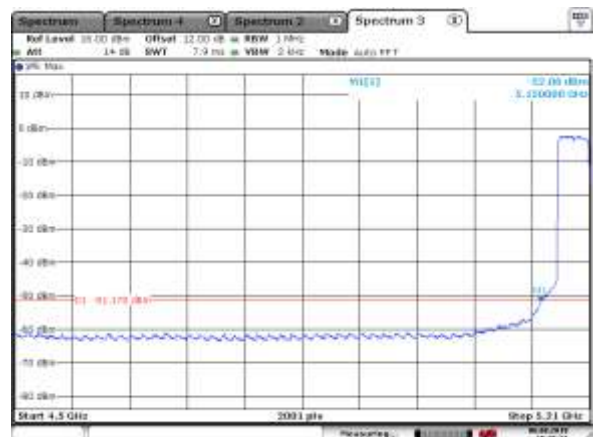
Date: 18.JUL.2019 07:59:56

5190MHz with Beamforming



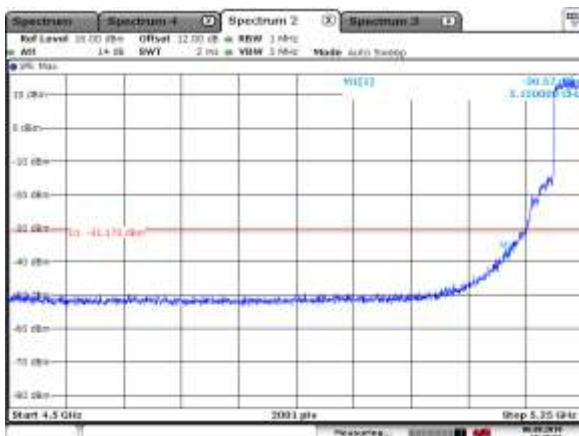
Date: 6.AUG.2019 10:25:57

5190MHz with Beamforming



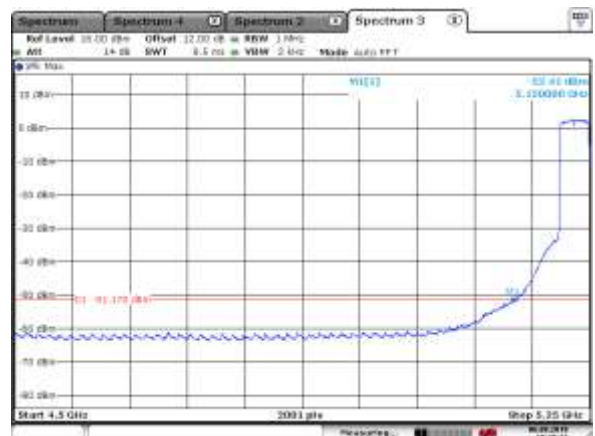
Date: 6.AUG.2019 10:25:21

5230MHz with Beamforming



Date: 6.AUG.2019 10:28:52

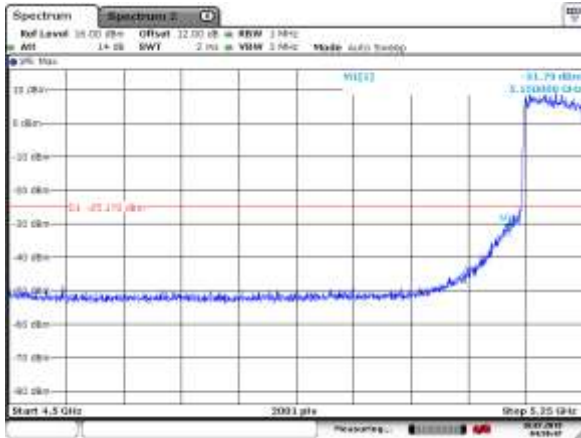
5230MHz with Beamforming



Date: 6.AUG.2019 10:28:33

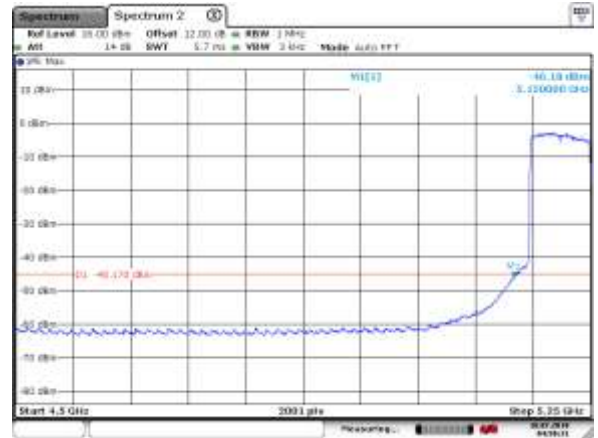
802.11ax(80MHz)

5210MHz with SISO



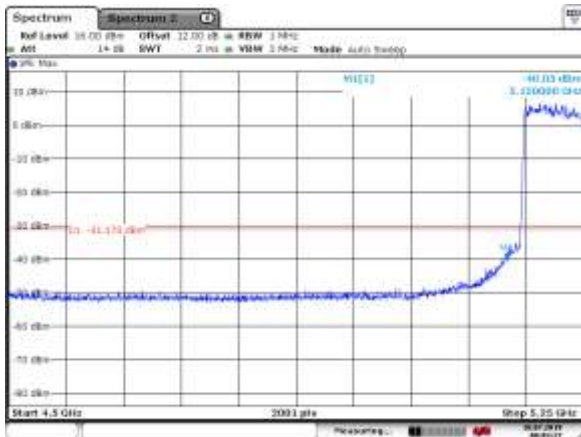
Date: 18.JUL.2019 04:58:47

5210MHz with SISO



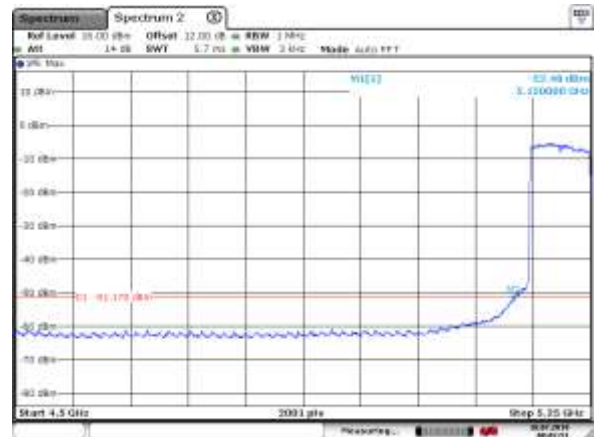
Date: 18.JUL.2019 04:58:31

5210MHz with CDD



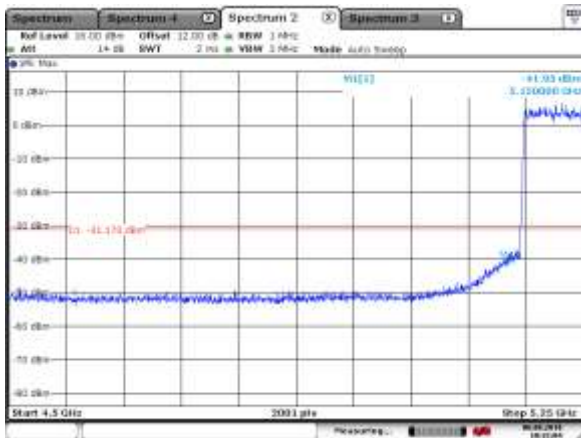
Date: 18.JUL.2019 08:03:28

5210MHz with CDD



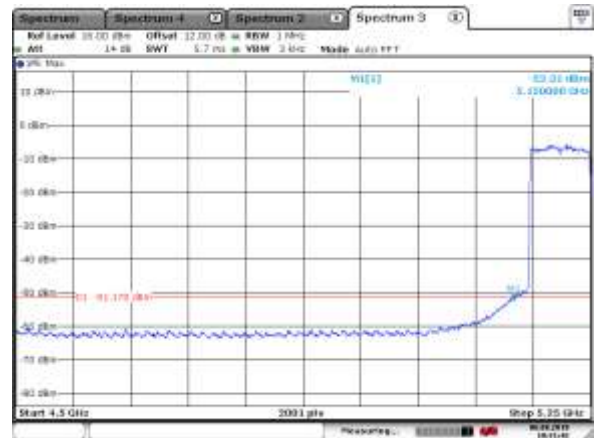
Date: 18.JUL.2019 08:02:51

5210MHz with Beamforming



Date: 6.AUG.2019 10:32:04

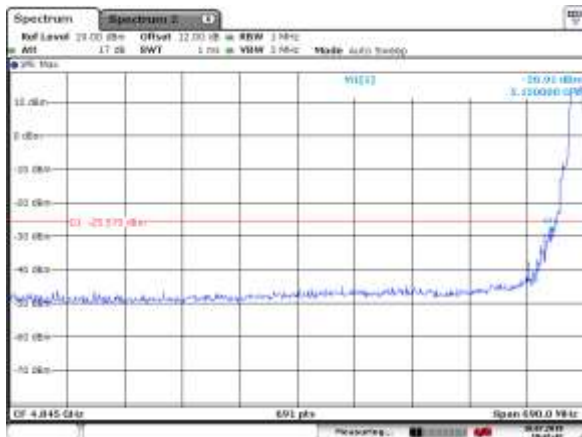
5210MHz with Beamforming



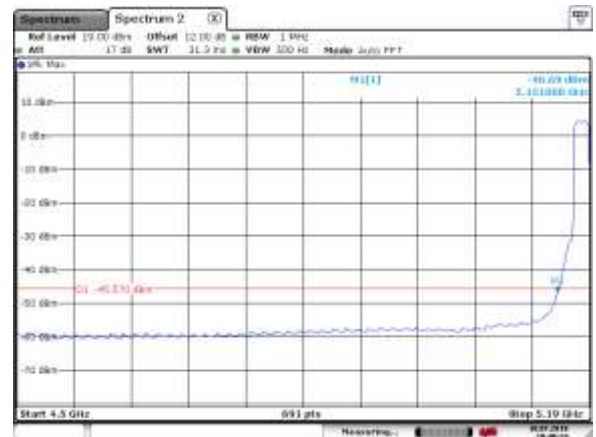
Date: 6.AUG.2019 10:31:43

Eth2:
802.11a

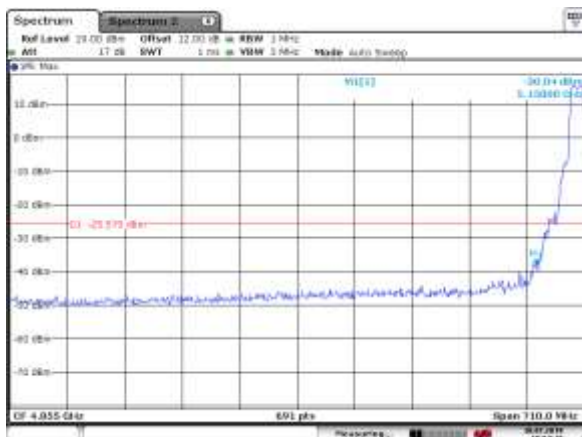
5180MHz with SISO



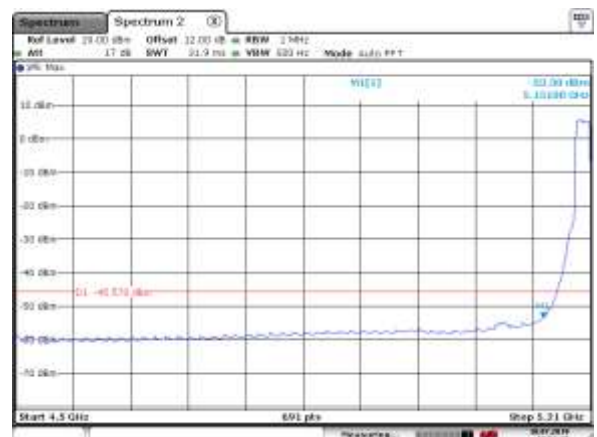
5180MHz with SISO



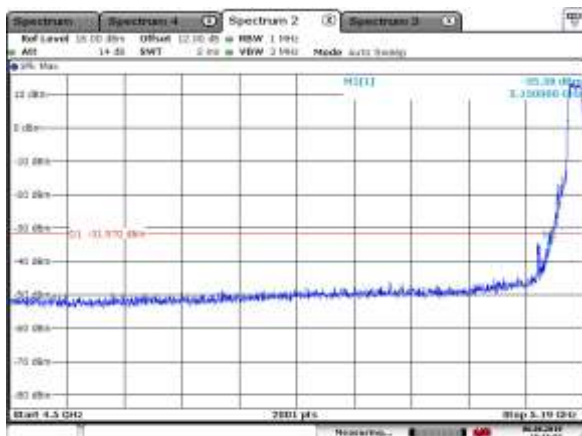
5200MHz with SISO



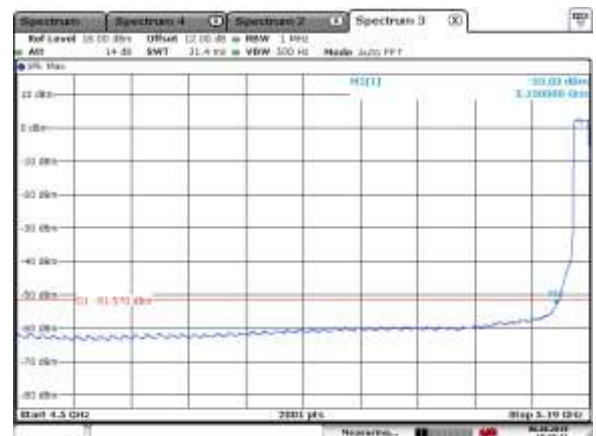
5200MHz with SISO



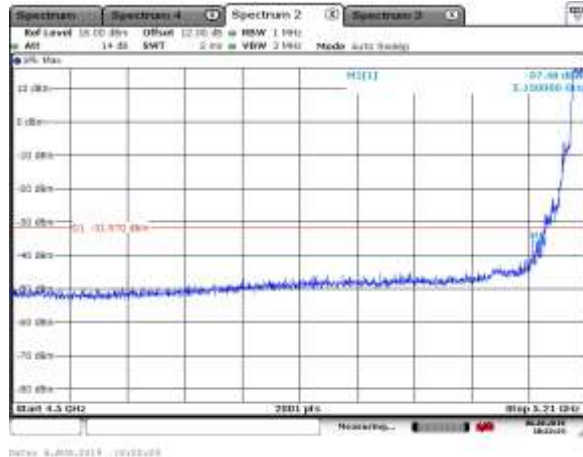
5180MHz with CDD



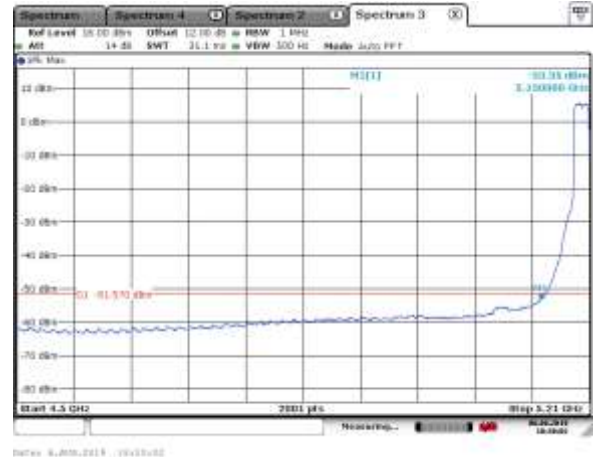
5180MHz with CDD



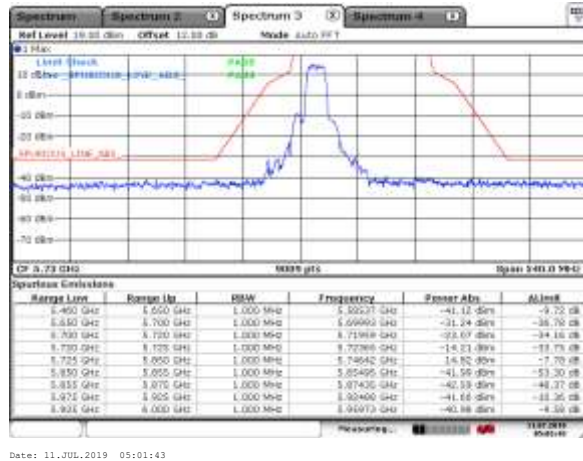
5200MHz with CDD



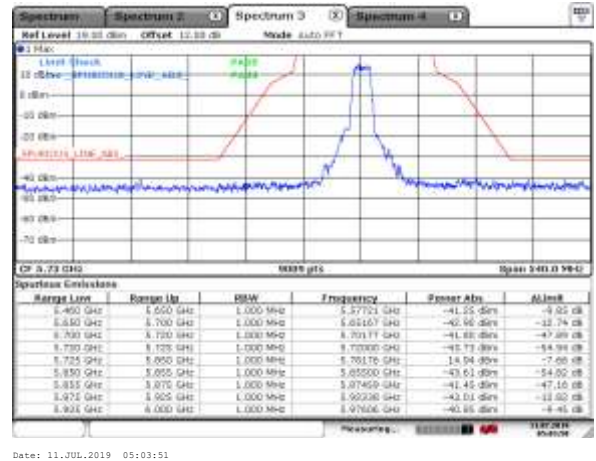
5200MHz with CDD



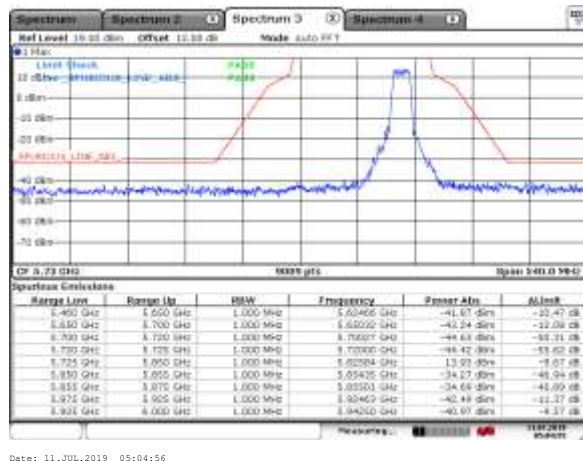
5745MHz with SISO



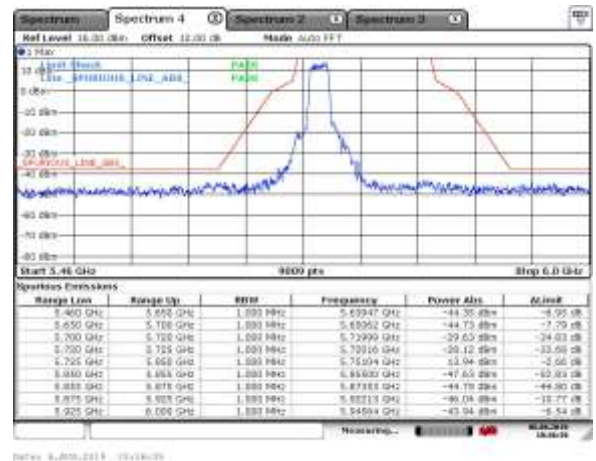
5785MHz with SISO



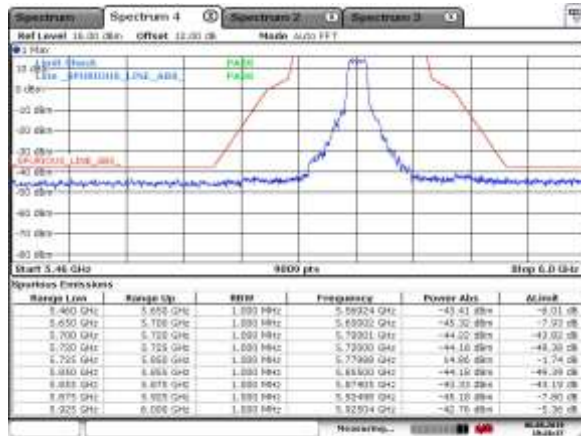
5825MHz with SISO



5745MHz with CDD

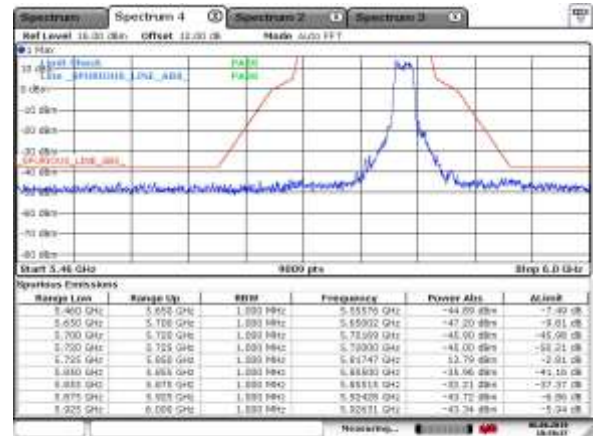


5785MHz with CDD



Date: 8/20/2018 10:00:00

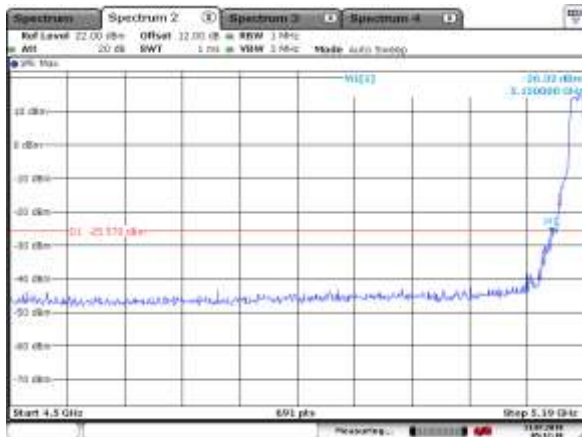
5825MHz with CDD



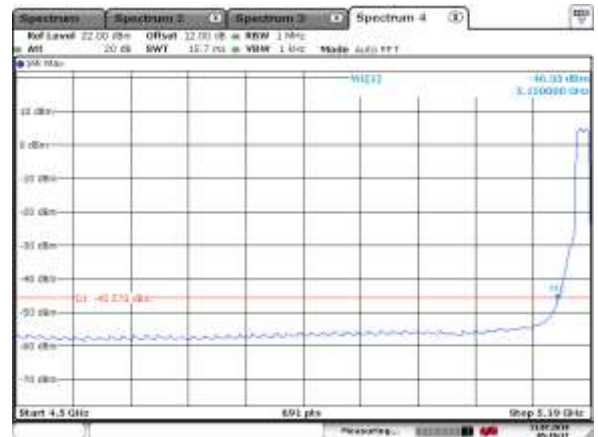
Date: 8/20/2018 10:00:00

802.11n(20MHz)

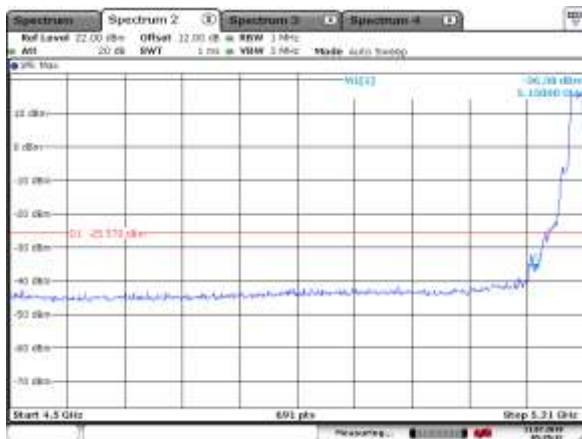
5180MHz with SISO



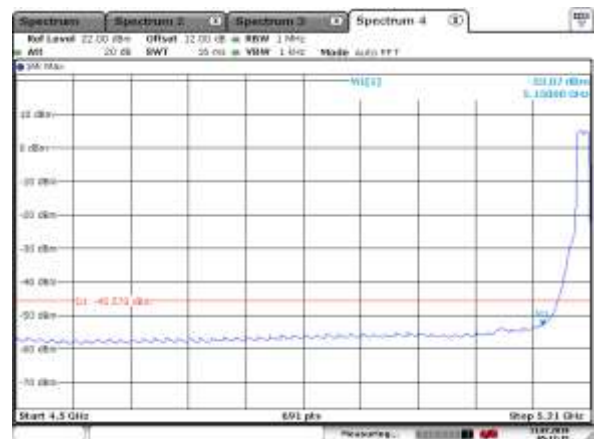
5180MHz with SISO



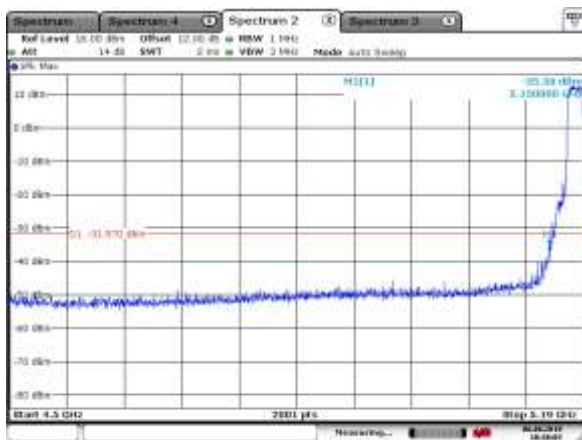
5200MHz with SISO



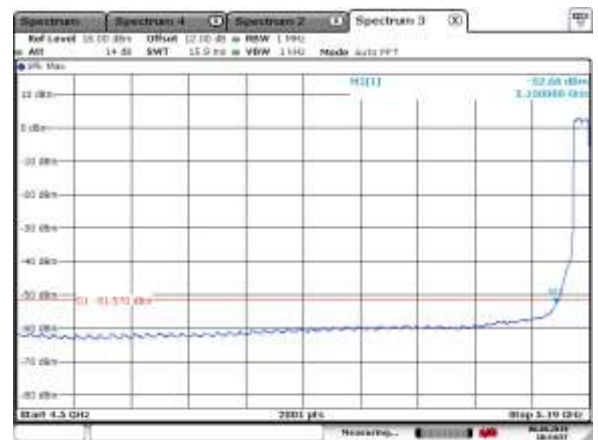
5200MHz with SISO



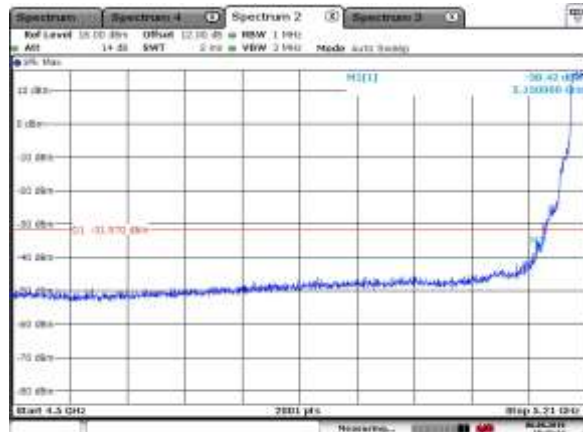
5180MHz with CDD



5180MHz with CDD

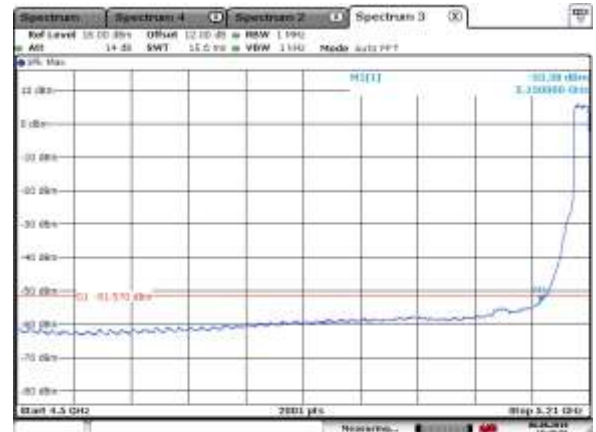


5200MHz with CDD



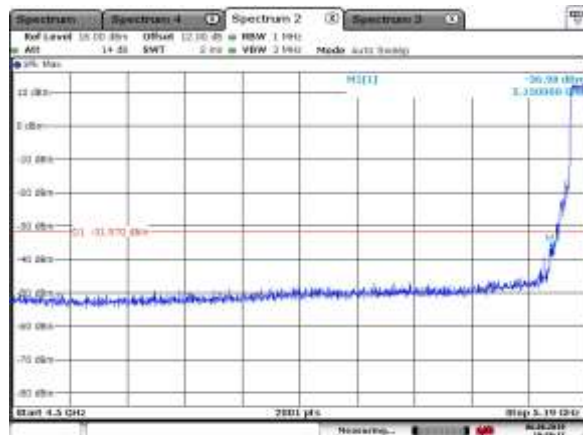
Date: 8.08.2018 10:00:00

5200MHz with CDD



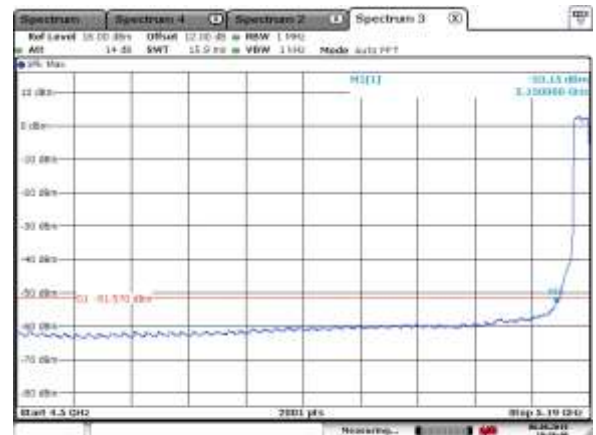
Date: 8.08.2018 10:00:00

5180MHz with Beamforming



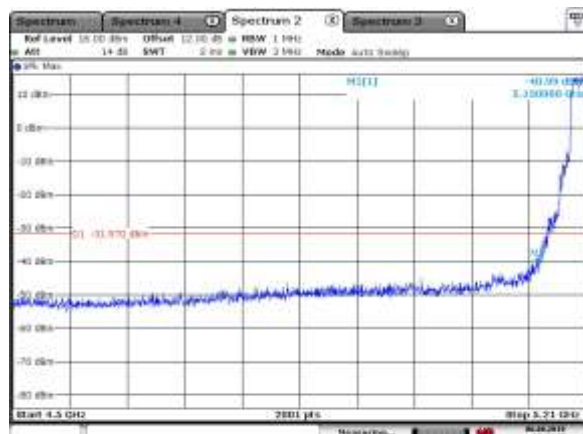
Date: 8.08.2018 10:00:00

5180MHz with Beamforming



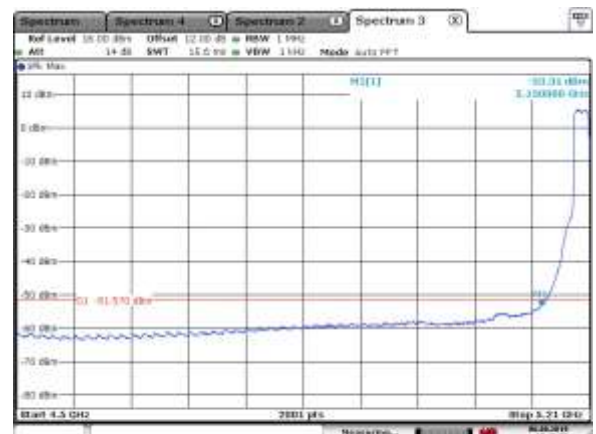
Date: 8.08.2018 10:00:00

5200MHz with Beamforming



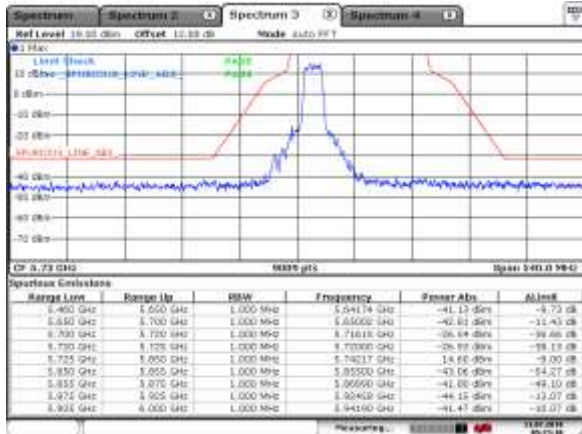
Date: 8.08.2018 10:00:00

5200MHz with Beamforming



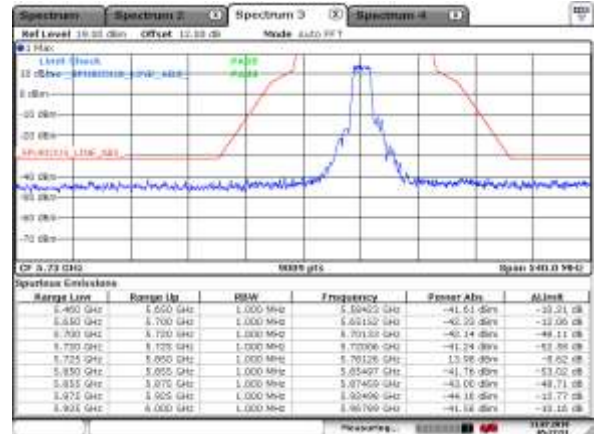
Date: 8.08.2018 10:00:00

5745MHz with SISO



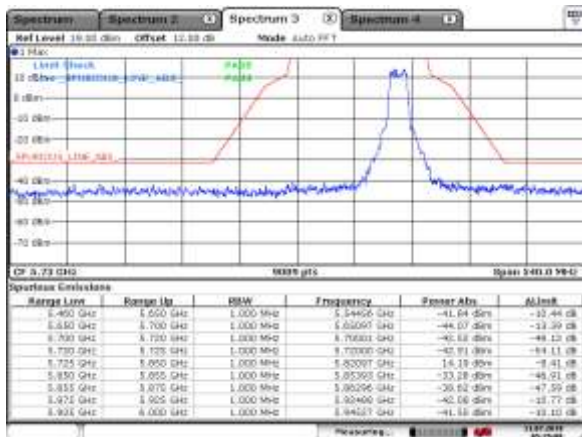
Date: 11.JUL.2019 05:23:09

5785MHz with SISO



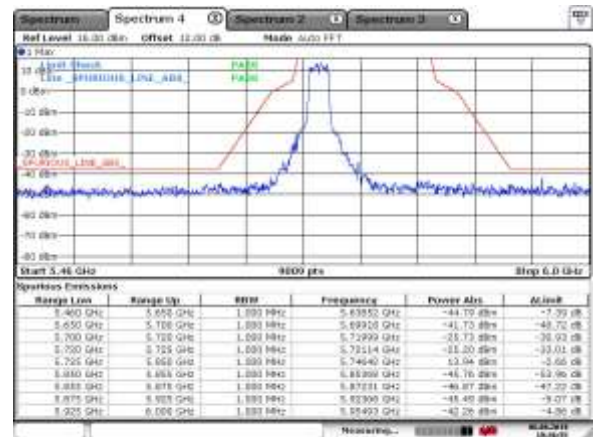
Date: 11.JUL.2019 05:27:51

5825MHz with SISO



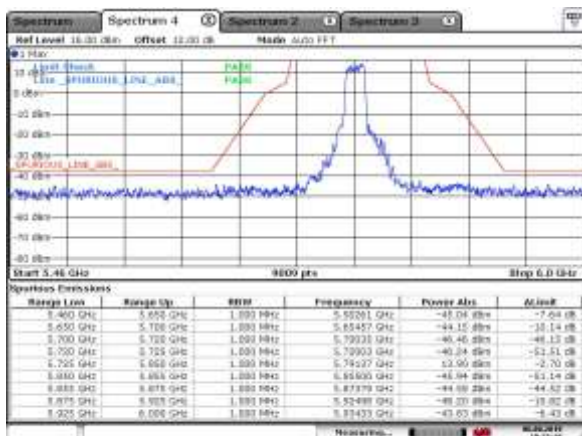
Date: 11.JUL.2019 05:29:08

5745MHz with CDD



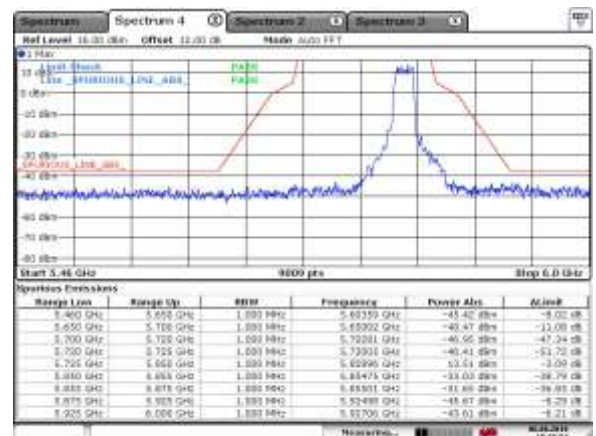
Date: 8.AUG.2019 09:43:07

5785MHz with CDD



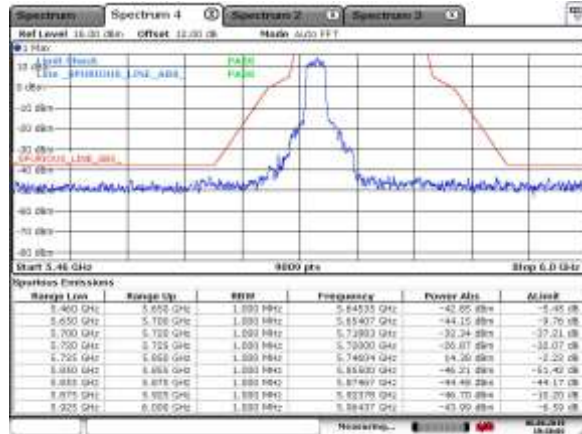
Date: 8.AUG.2019 09:45:08

5825MHz with CDD



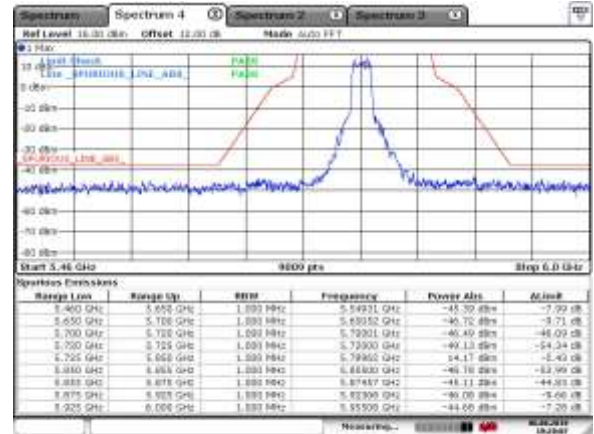
Date: 8.AUG.2019 09:45:08

5745MHz with Beamforming



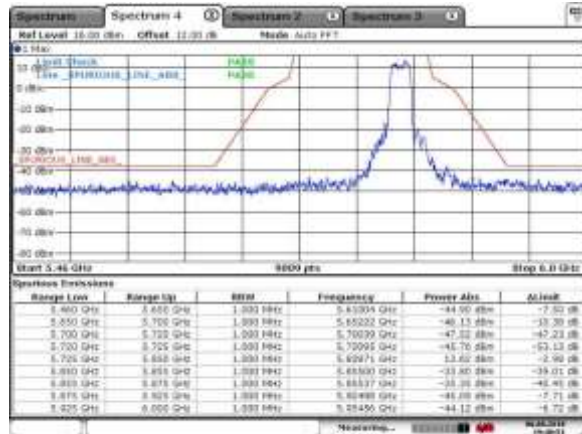
Date: 6/20/2019 10:58:02

5785MHz with Beamforming



Date: 6/20/2019 10:58:07

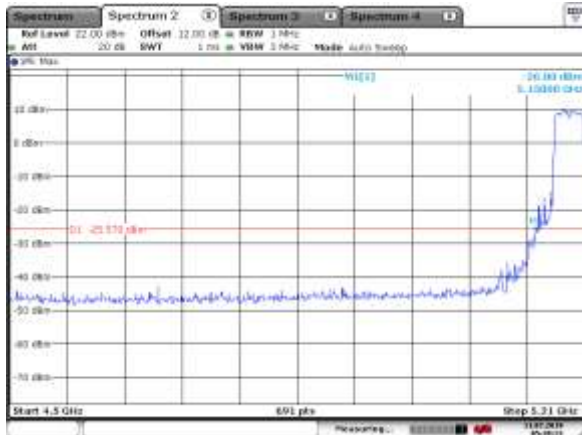
5825MHz with Beamforming



Date: 6/20/2019 10:58:07

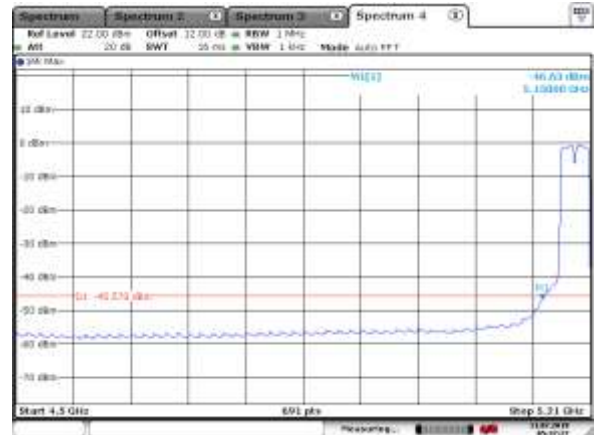
802.11n(40MHz)

5190MHz with SISO



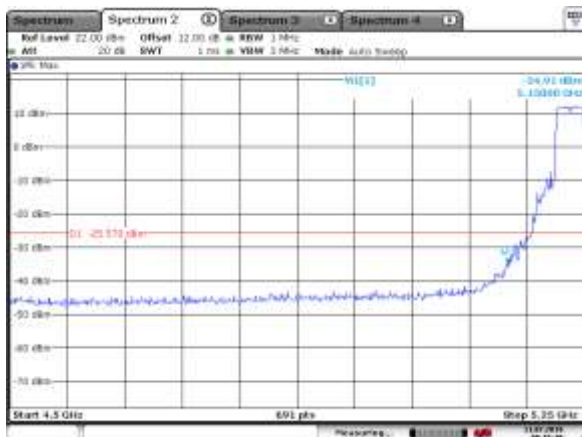
Date: 11.JUL.2019 05:38:23

5190MHz with SISO



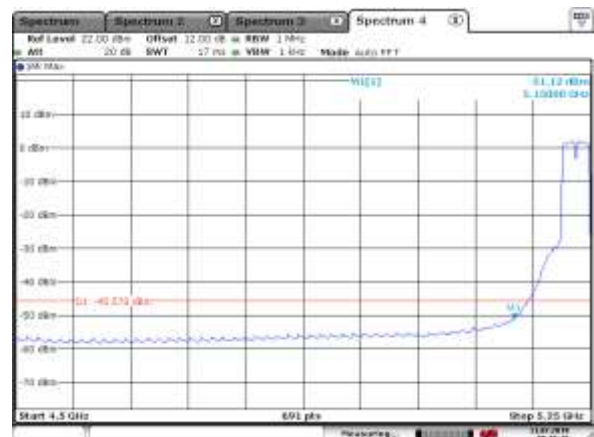
Date: 11.JUL.2019 05:37:27

5230MHz with SISO



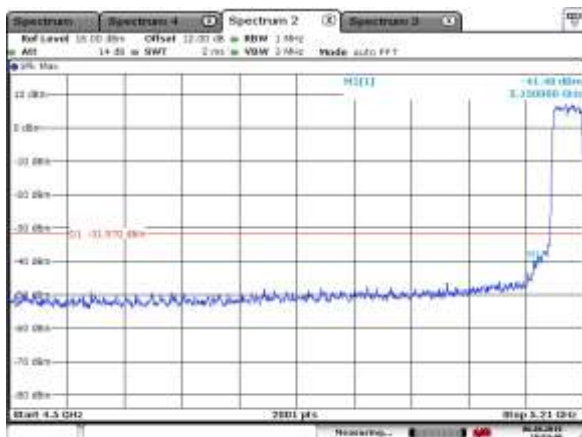
Date: 11.JUL.2019 08:15:41

5230MHz with SISO



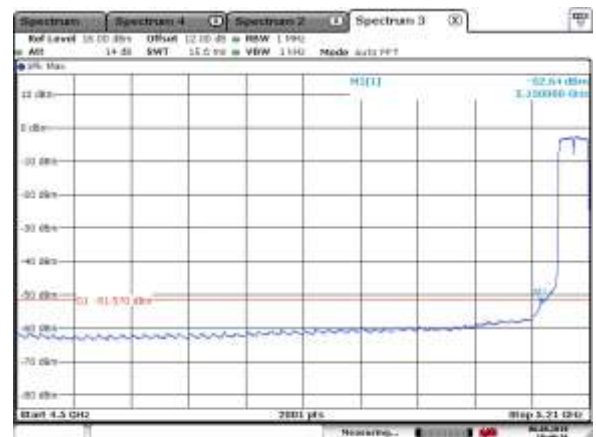
Date: 11.JUL.2019 08:15:19

5190MHz with CDD



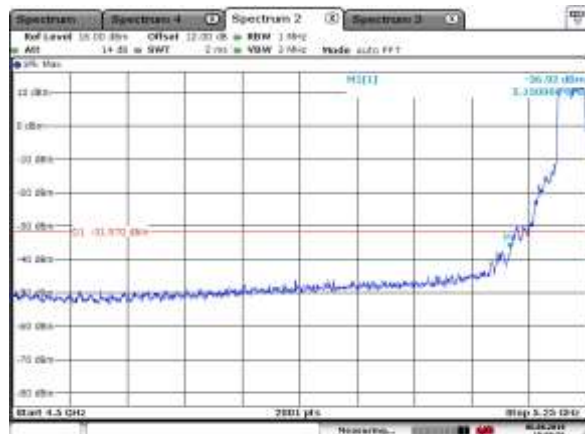
Date: 8.AUG.2019 10:56:09

5190MHz with CDD



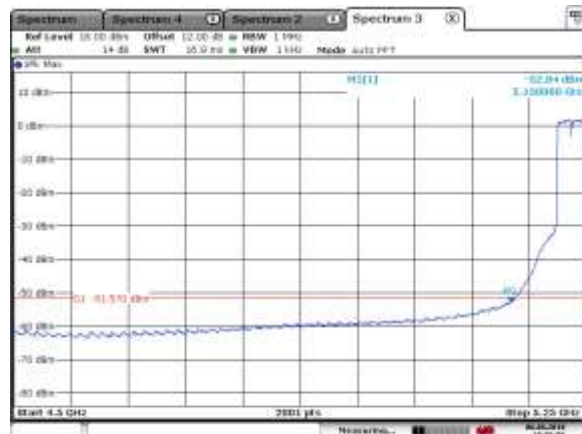
Date: 8.AUG.2019 10:56:10

5230MHz with CDD



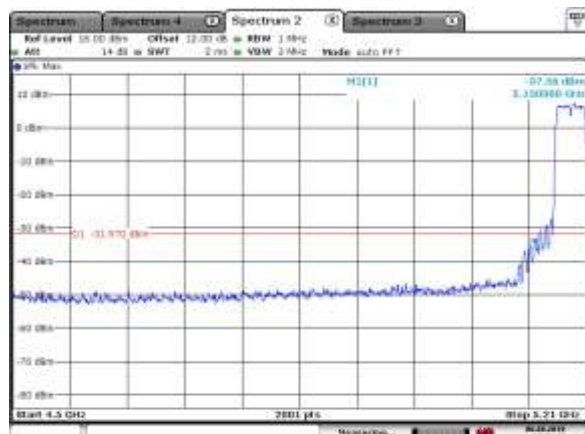
Date: 8/20/2018 10:00:00

5230MHz with CDD



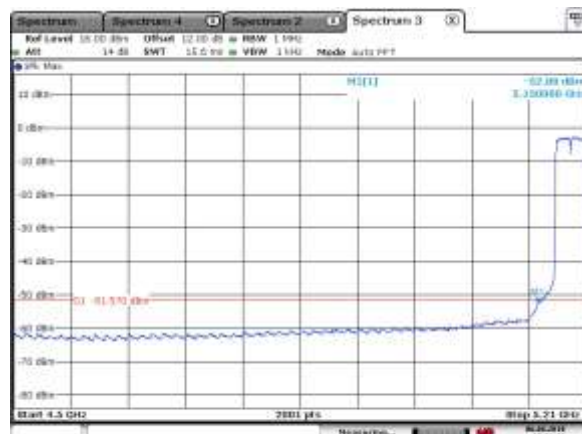
Date: 8/20/2018 10:00:00

5190MHz with Beamforming



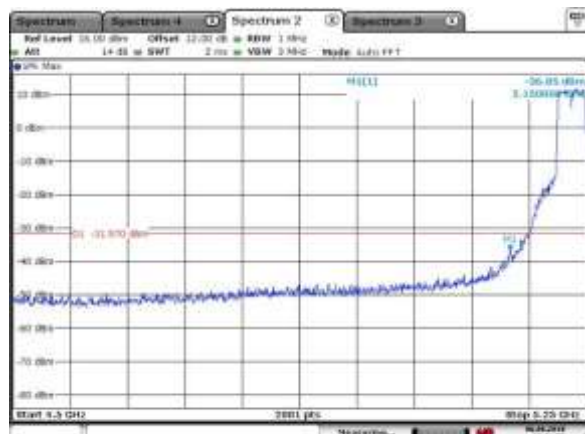
Date: 8/20/2018 10:00:00

5190MHz with Beamforming



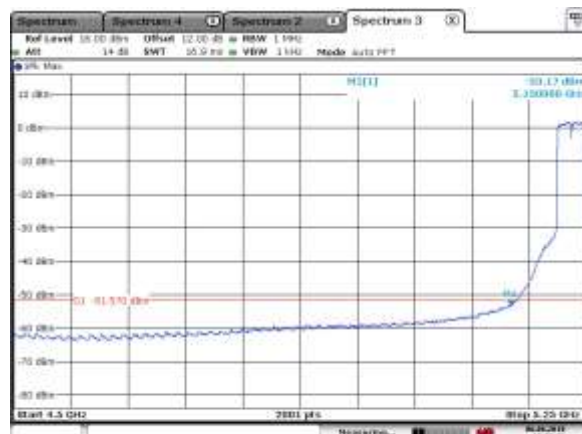
Date: 8/20/2018 10:00:00

5230MHz with Beamforming



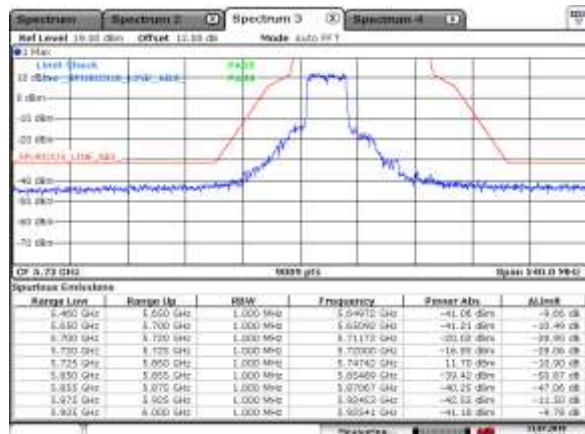
Date: 8/20/2018 10:00:00

5230MHz with Beamforming



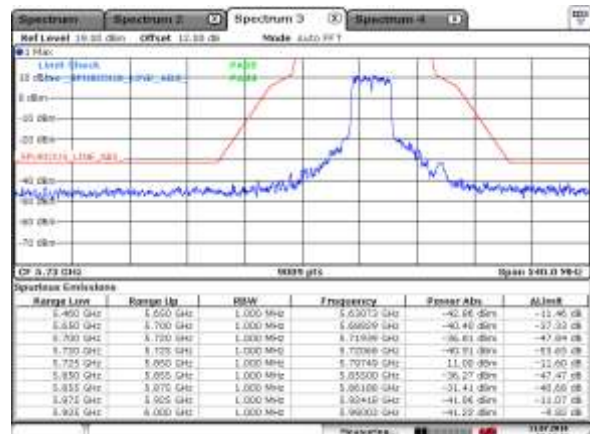
Date: 8/20/2018 10:00:00

5755MHz with SISO



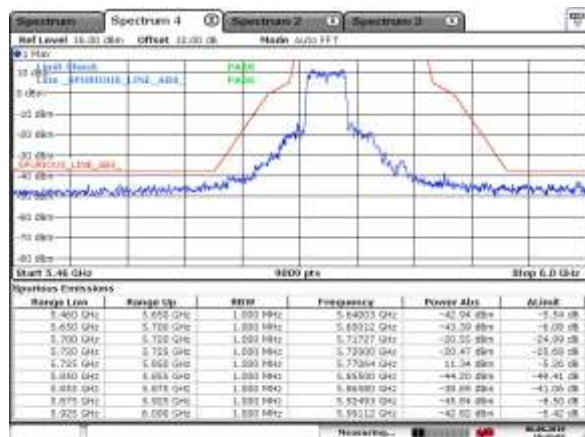
Date: 11.JUL.2019 08:16:34

5795MHz with SISO



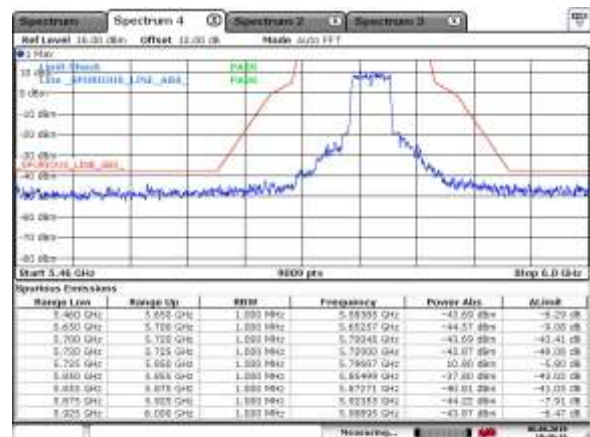
Date: 11.JUL.2019 08:17:15

5755MHz with CDD



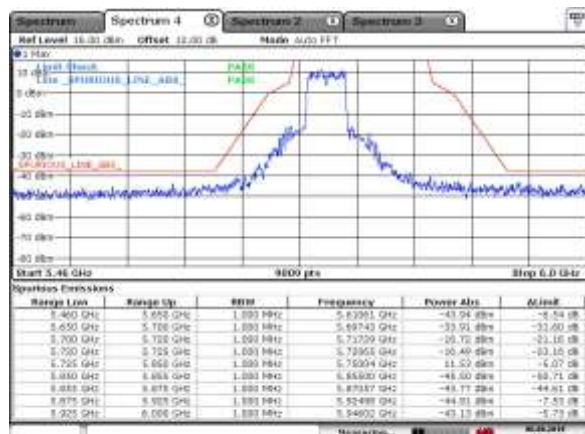
Date: 8.AUG.2019 08:45:55

5795MHz with CDD



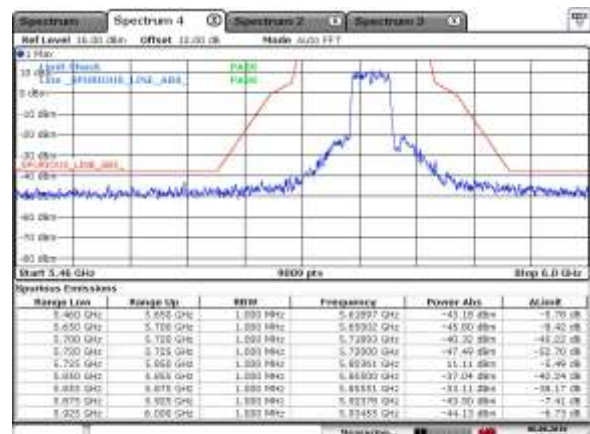
Date: 8.AUG.2019 08:45:15

5755MHz with Beamforming



Date: 8.AUG.2019 08:46:09

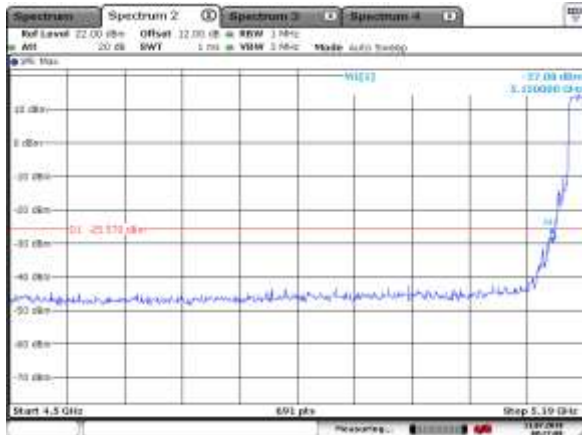
5795MHz with Beamforming



Date: 8.AUG.2019 08:45:59

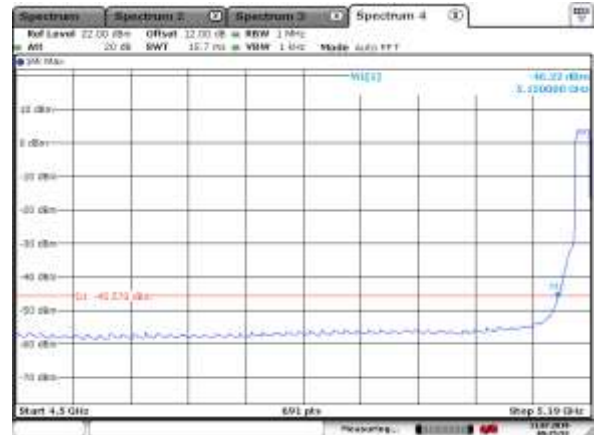
802.11ac(20MHz)

5180MHz with SISO



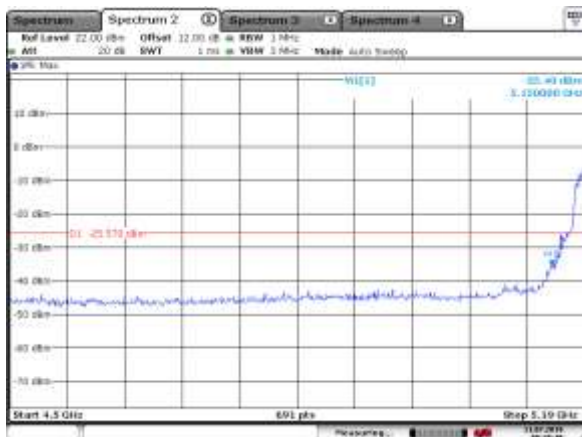
Date: 11.JUL.2019 08:27:08

5180MHz with SISO



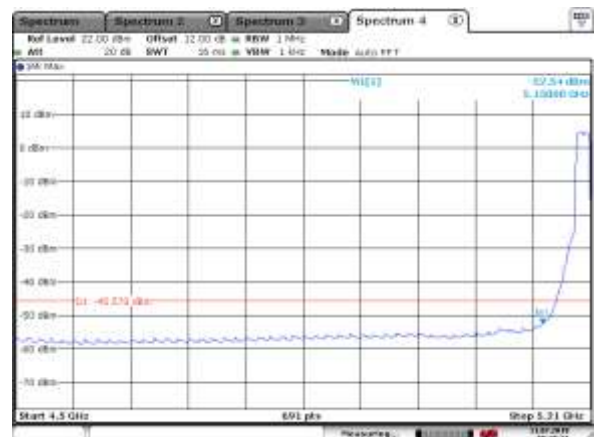
Date: 11.JUL.2019 08:25:54

5200MHz with SISO



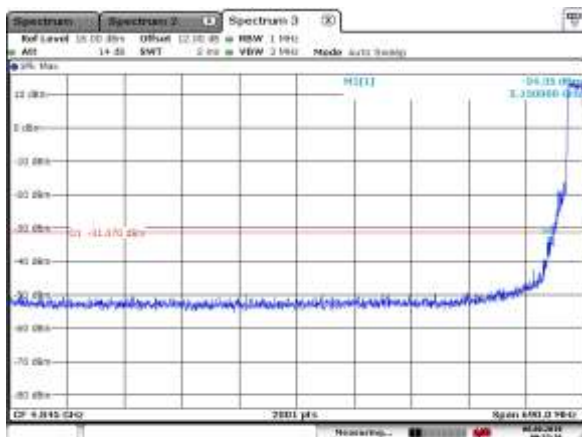
Date: 11.JUL.2019 08:28:41

5200MHz with SISO



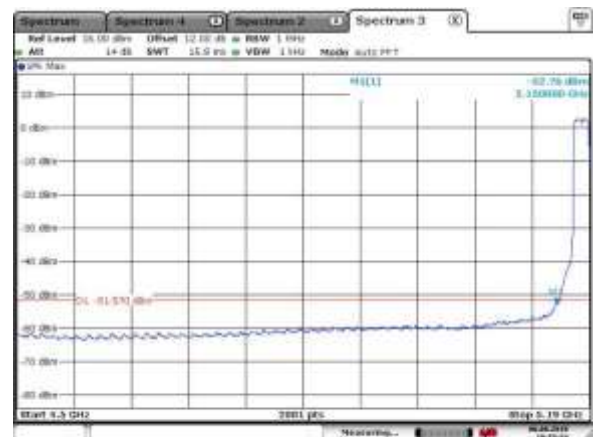
Date: 11.JUL.2019 08:28:21

5180MHz with CDD



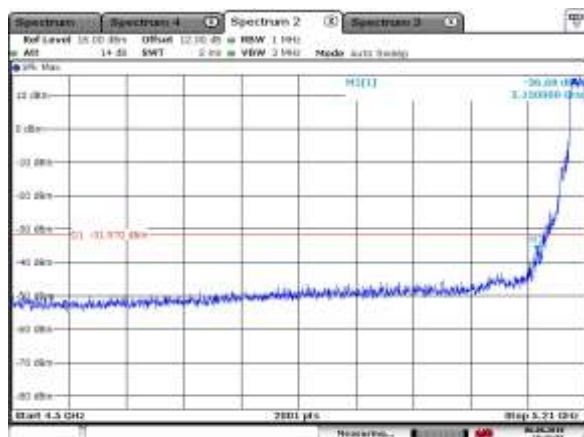
Date: 8.AUG.2019 10:51:17

5180MHz with CDD



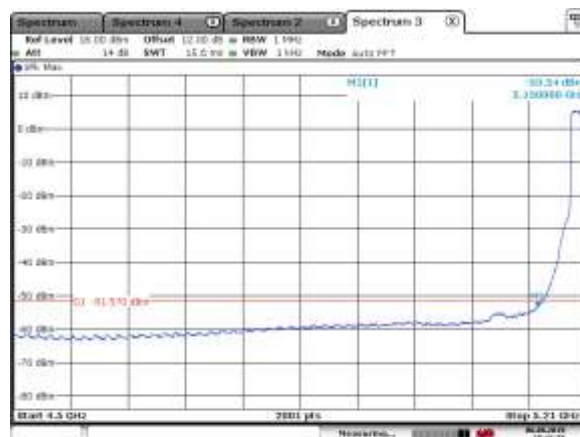
Date: 8.AUG.2019 10:55:28

5200MHz with CDD



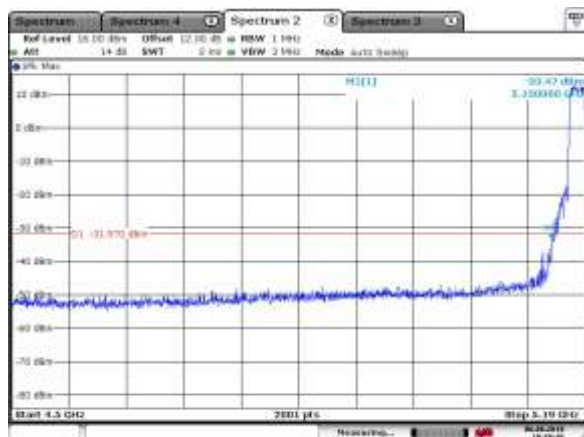
Date: 8/20/2018 10:00:00

5200MHz with CDD



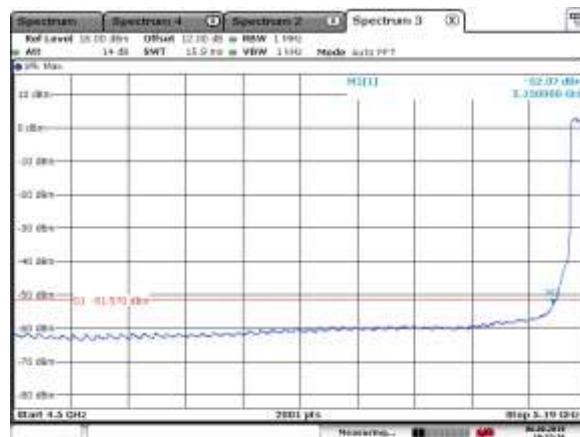
Date: 8/20/2018 10:00:00

5180MHz with Beamforming



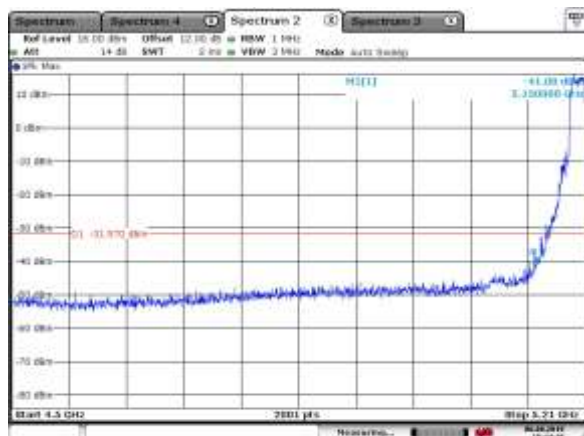
Date: 8/20/2018 10:00:00

5180MHz with Beamforming



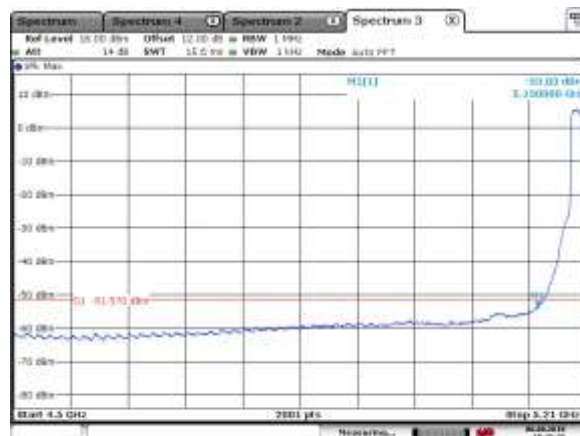
Date: 8/20/2018 10:00:00

5200MHz with Beamforming



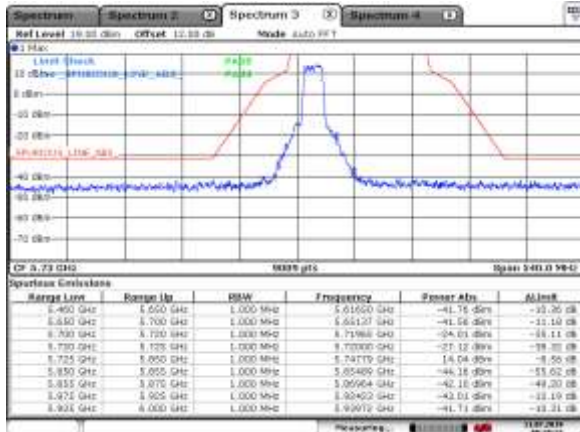
Date: 8/20/2018 10:00:00

5200MHz with Beamforming



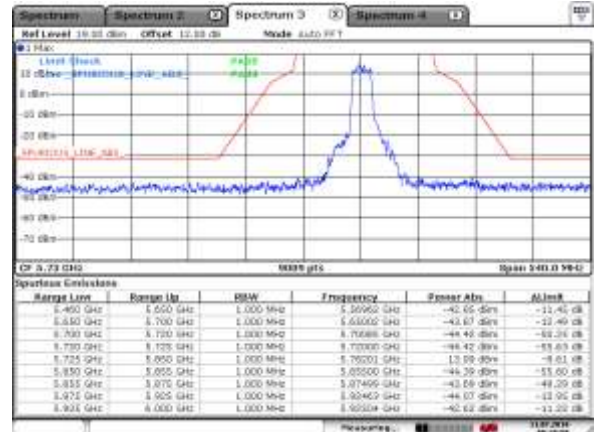
Date: 8/20/2018 10:00:00

5745MHz with SISO



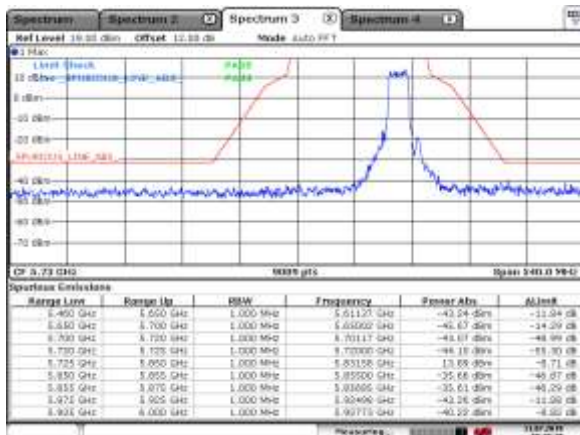
Date: 11.JUL.2019 08:29:23

5785MHz with SISO



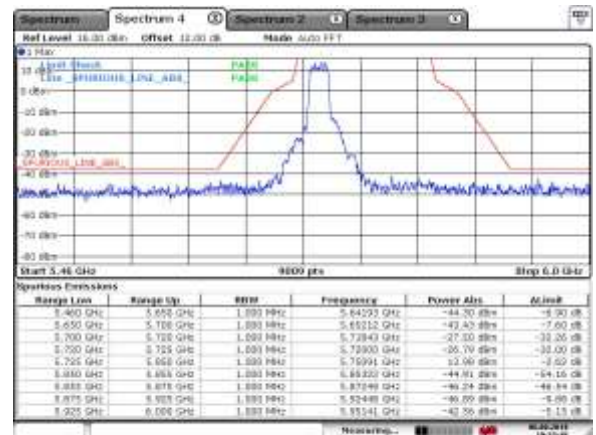
Date: 11.JUL.2019 08:29:59

5825MHz with SISO



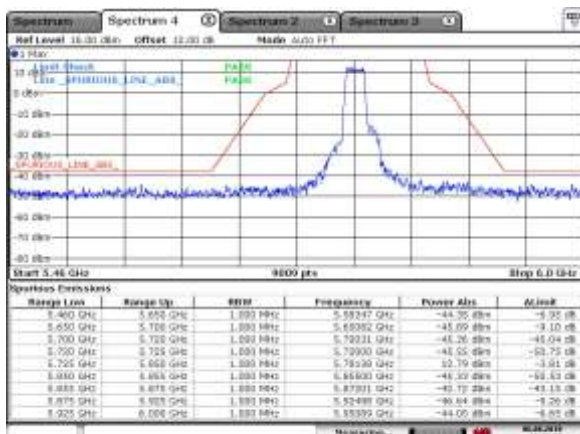
Date: 11.JUL.2019 08:30:29

5745MHz with CDD



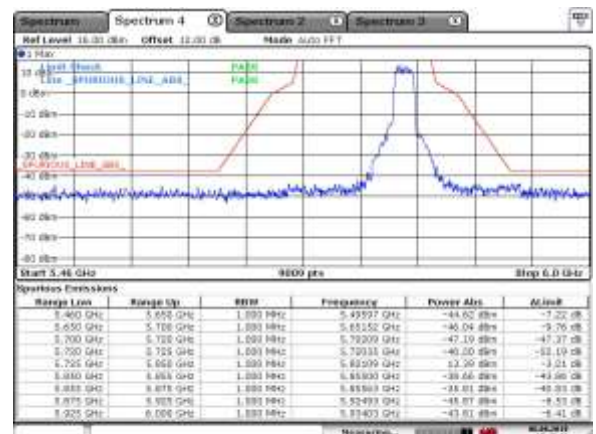
Date: 8.AUG.2019 09:45:40

5785MHz with CDD



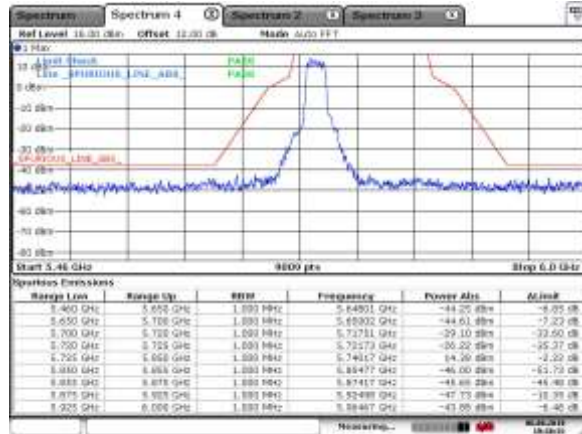
Date: 8.AUG.2019 09:45:47

5825MHz with CDD



Date: 8.AUG.2019 09:46:43

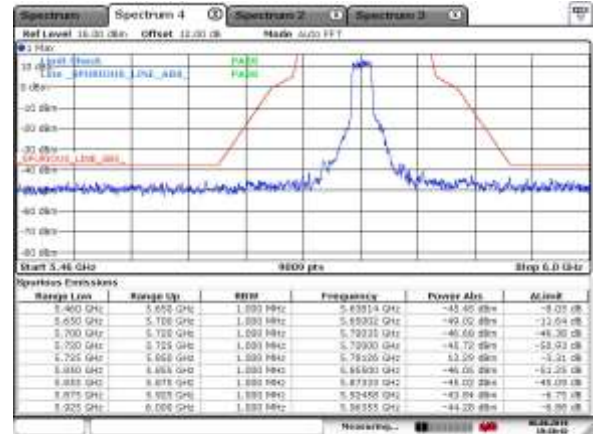
5745MHz with Beamforming



Date: 6/20/2015 15:15:22

File: 1962097R-RF-US-P09V01

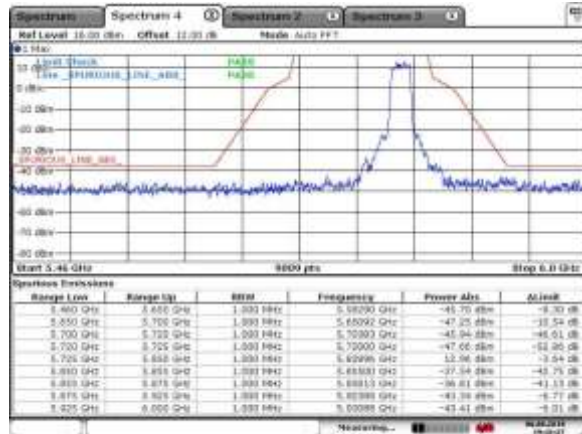
5785MHz with Beamforming



Date: 6/20/2015 15:15:30

File: 1962097R-RF-US-P09V01

5825MHz with Beamforming

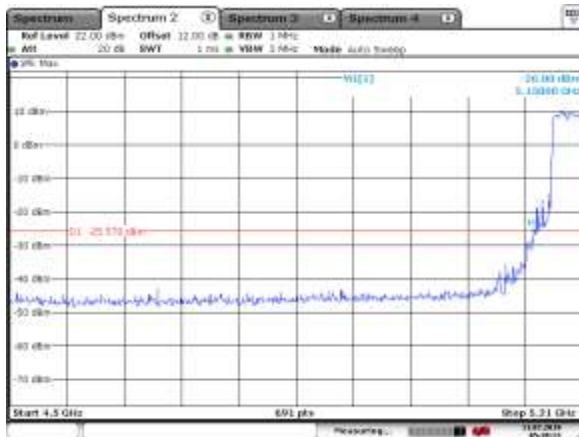


Date: 6/20/2015 15:15:27

File: 1962097R-RF-US-P09V01

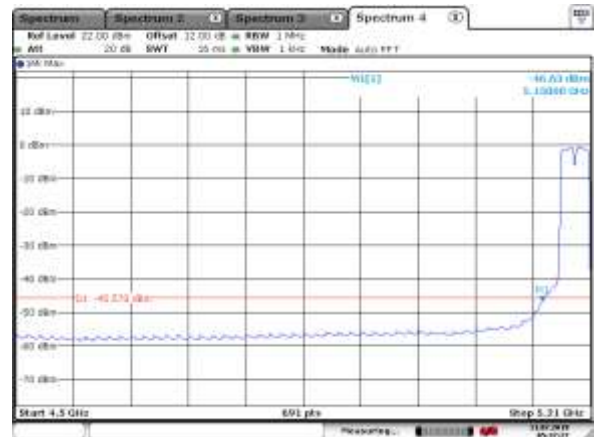
802.11ac(40MHz)

5190MHz with SISO



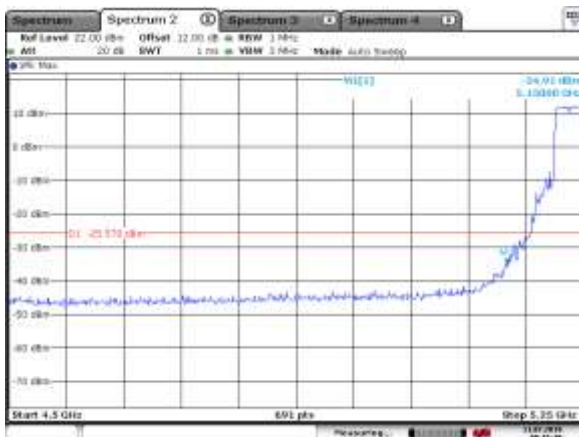
Date: 11.JUL.2019 05:38:23

5190MHz with SISO



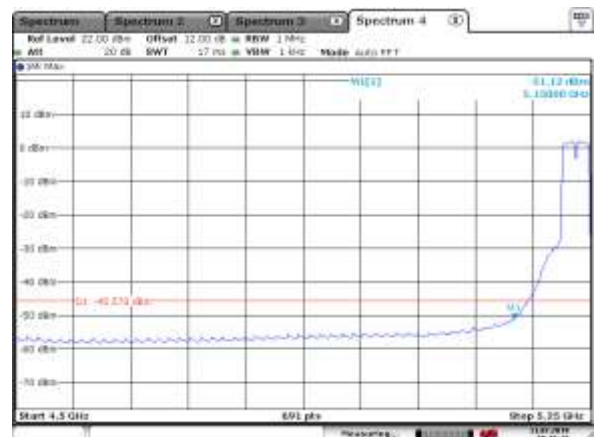
Date: 11.JUL.2019 05:37:27

5230MHz with SISO



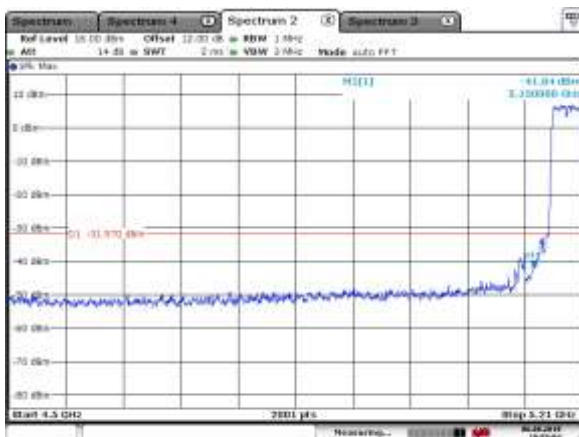
Date: 11.JUL.2019 08:15:41

5230MHz with SISO



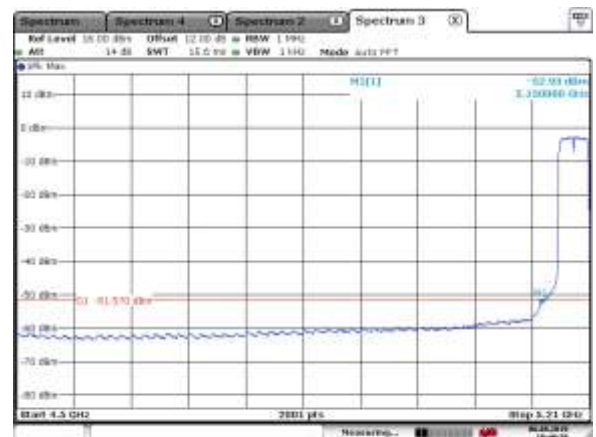
Date: 11.JUL.2019 08:15:19

5190MHz with CDD



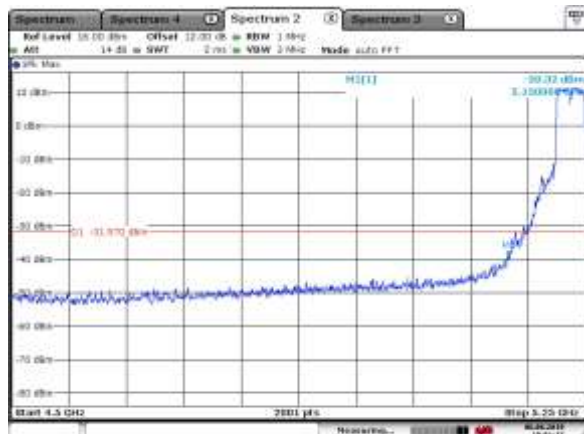
Date: 8.AUG.2019 10:44:08

5190MHz with CDD



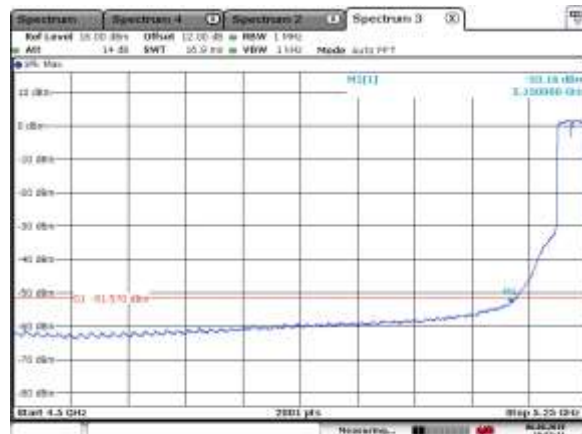
Date: 8.AUG.2019 10:44:08

5230MHz with CDD



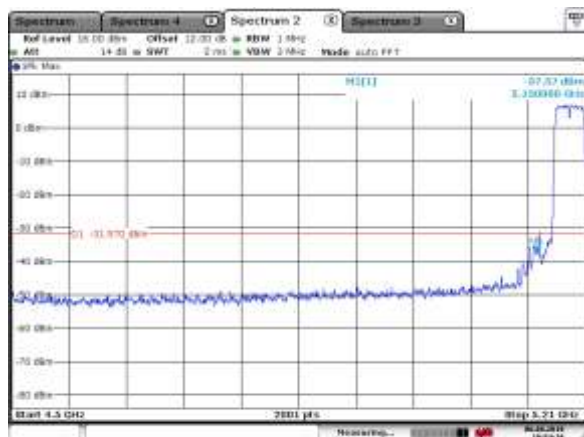
Date: 8/20/2018 10:41:17

5230MHz with CDD



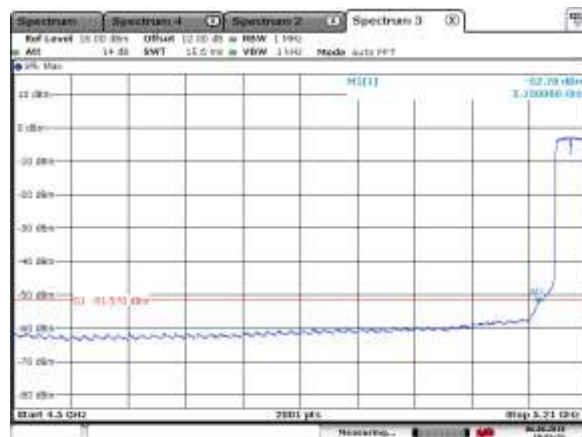
Date: 8/20/2018 10:41:17

5190MHz with Beamforming



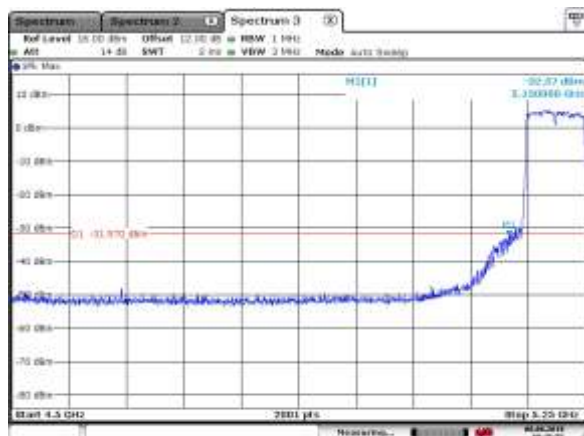
Date: 8/20/2018 10:41:18

5190MHz with Beamforming



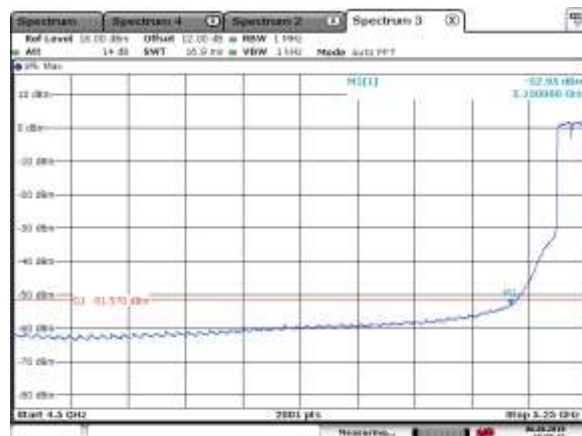
Date: 8/20/2018 10:41:18

5230MHz with Beamforming



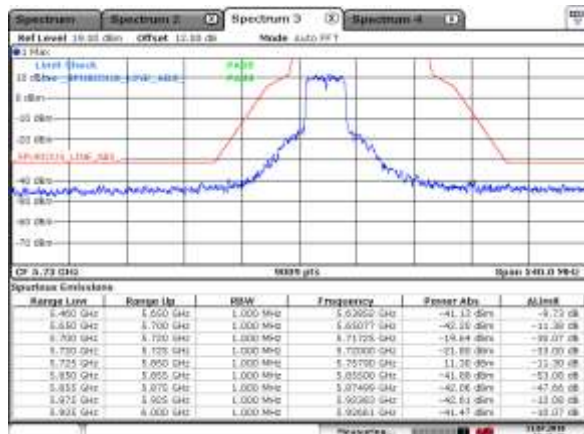
Date: 8/20/2018 10:41:19

5230MHz with Beamforming



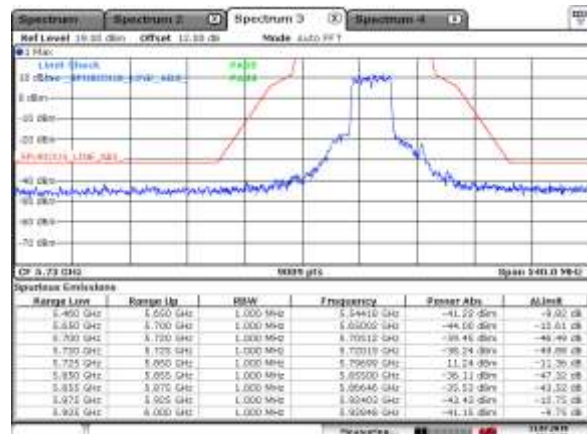
Date: 8/20/2018 10:41:19

5755MHz with SISO



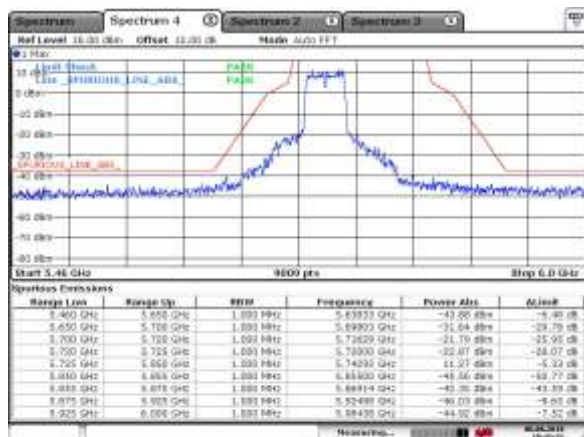
Date: 11.JUL.2019 08:45:50

5795MHz with SISO



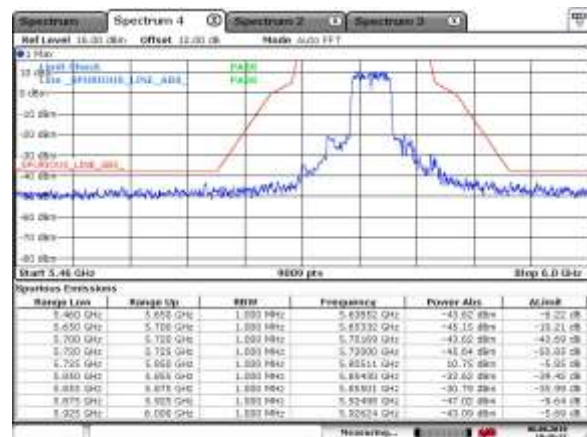
Date: 11.JUL.2019 08:46:28

5755MHz with CDD



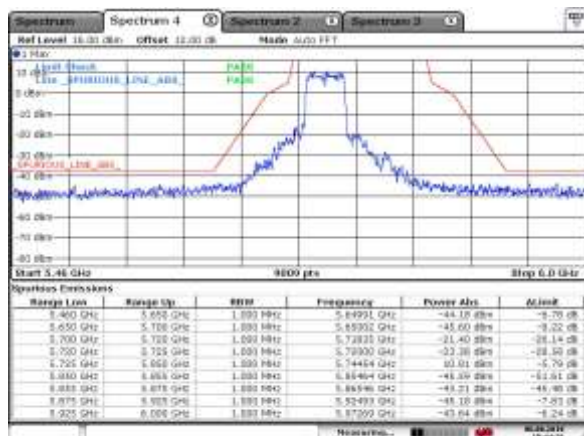
Date: 8.AUG.2019 08:45:50

5795MHz with CDD



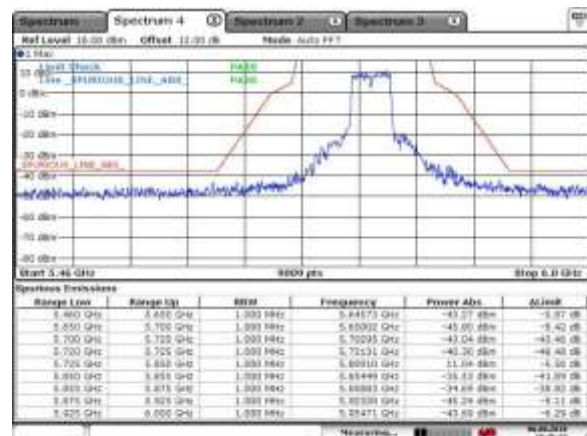
Date: 8.AUG.2019 08:46:27

5755MHz with Beamforming



Date: 8.AUG.2019 08:46:28

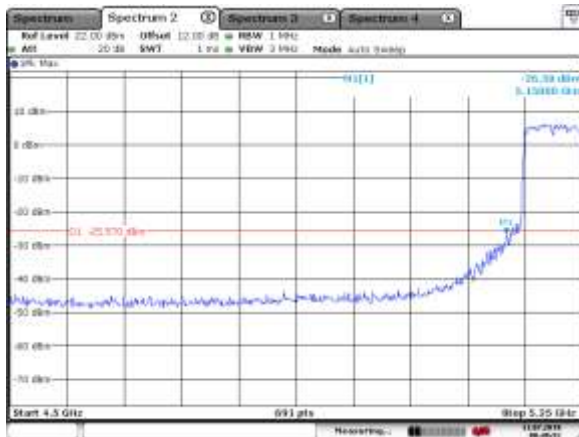
5795MHz with Beamforming



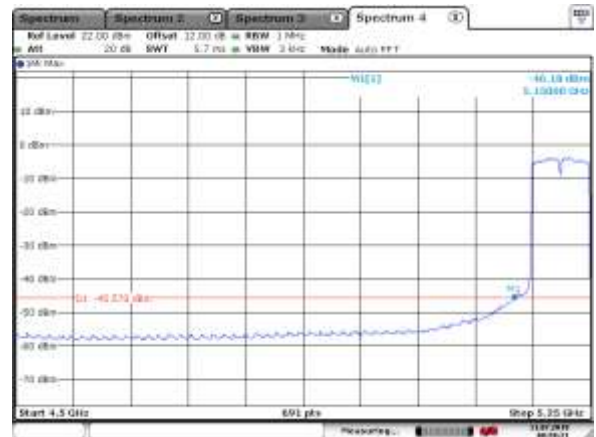
Date: 8.AUG.2019 08:46:23

802.11ac(80MHz)

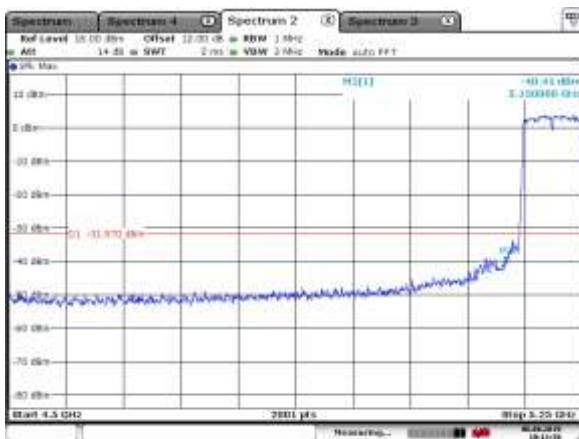
5210MHz with SISO



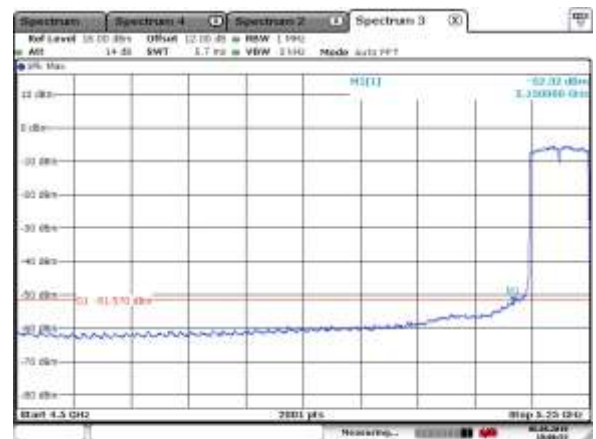
5210MHz with SISO



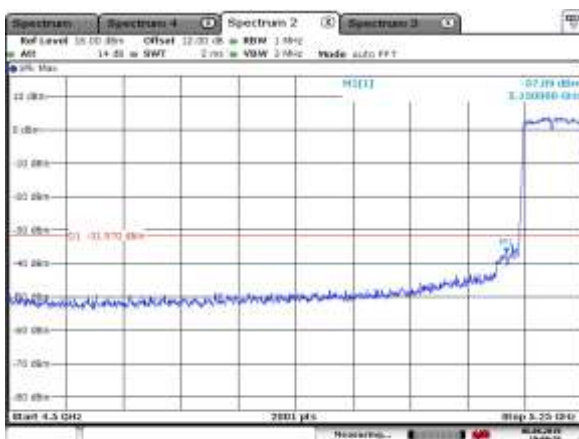
5210MHz with CDD



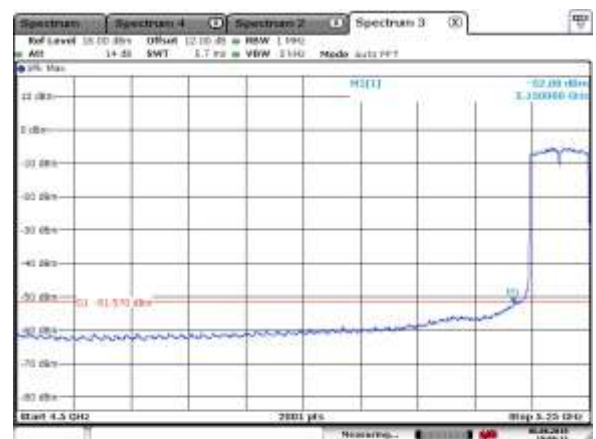
5210MHz with CDD



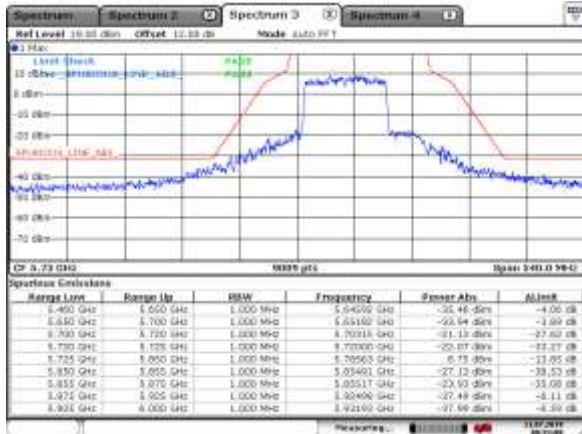
5210MHz with Beamforming



5210MHz with Beamforming

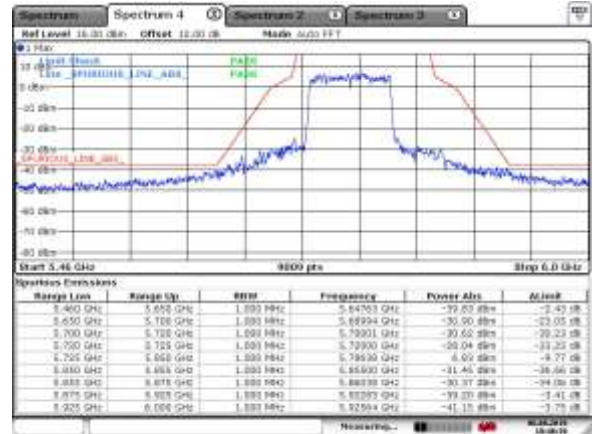


5775MHz with SISO



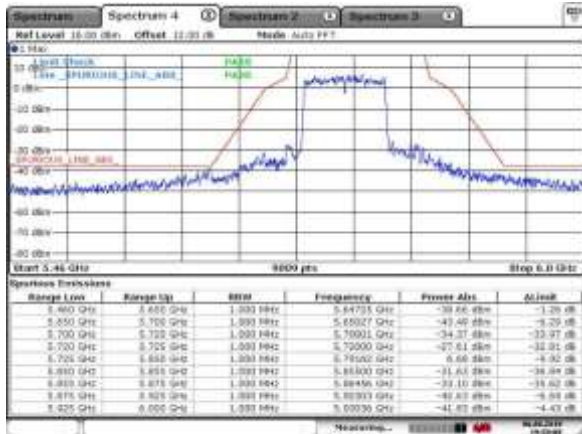
Date: 11.JUL.2019 08:53:09

5775MHz with CDD



Date: 6.AUG.2019 09:48:40

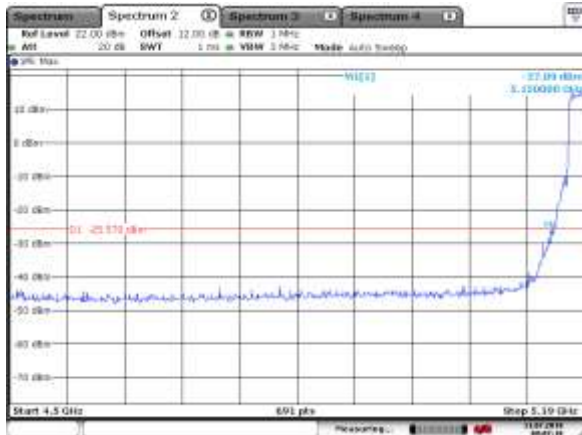
5775MHz with Beamforming



Date: 6.AUG.2019 09:55:09

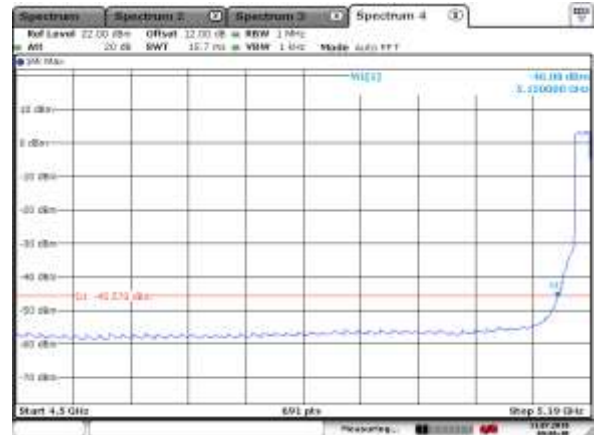
802.11ax(20MHz)

5180MHz with SISO



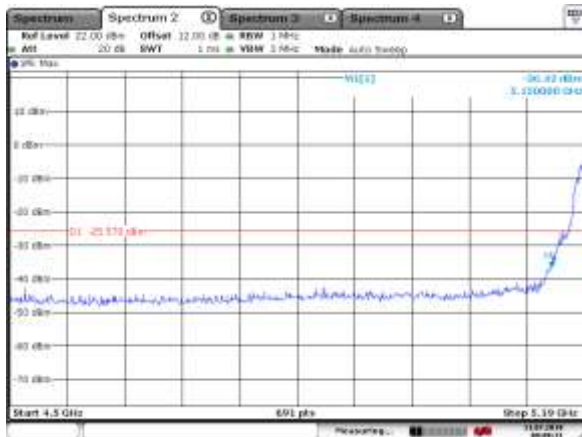
Date: 11.JUL.2019 09:07:19

5180MHz with SISO



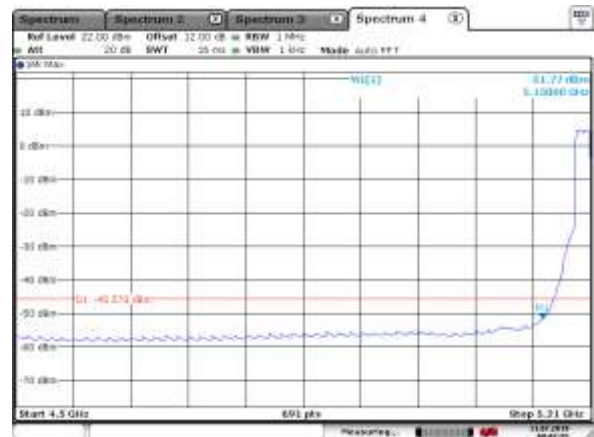
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5200MHz with SISO



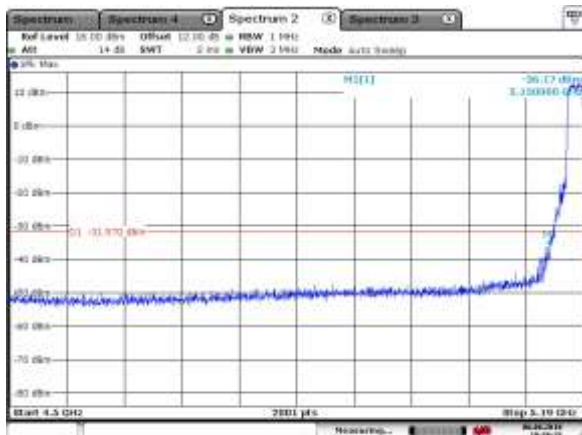
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5200MHz with SISO



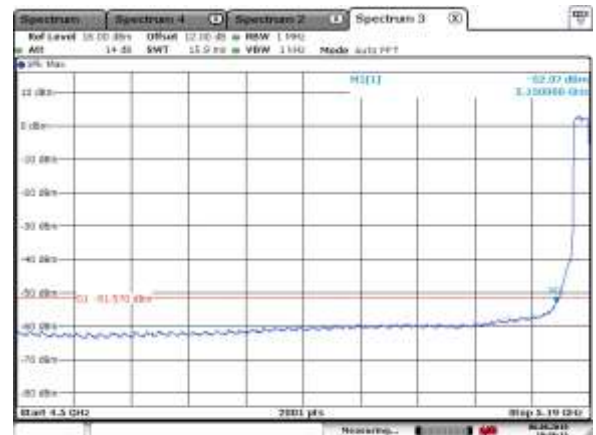
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5180MHz with CDD



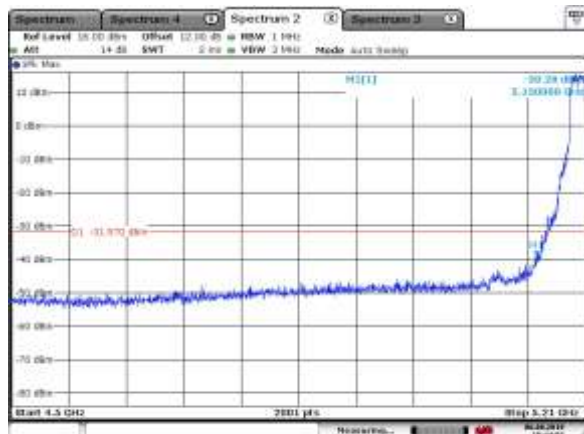
Date: 8.AUG.2019 10:48:29

5180MHz with CDD



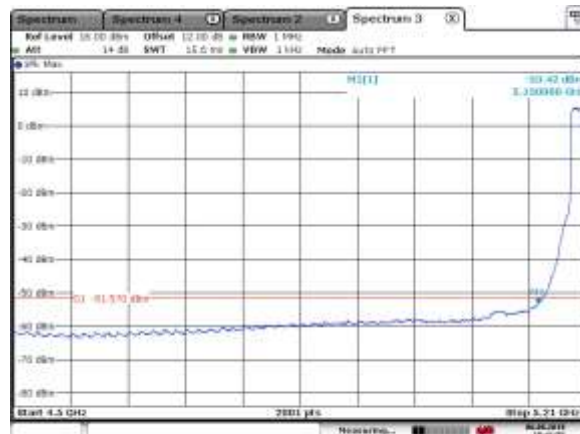
Date: 8.AUG.2019 10:48:29

5200MHz with CDD



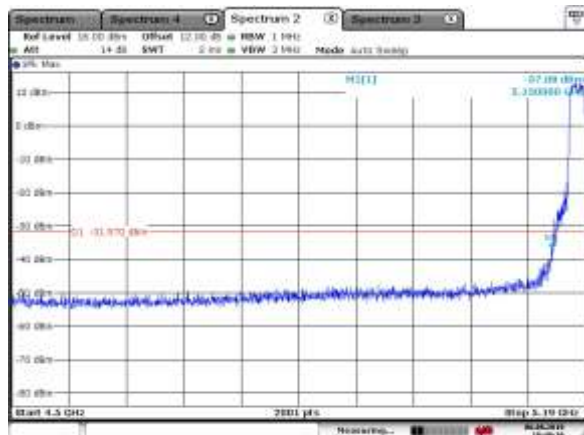
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5200MHz with CDD



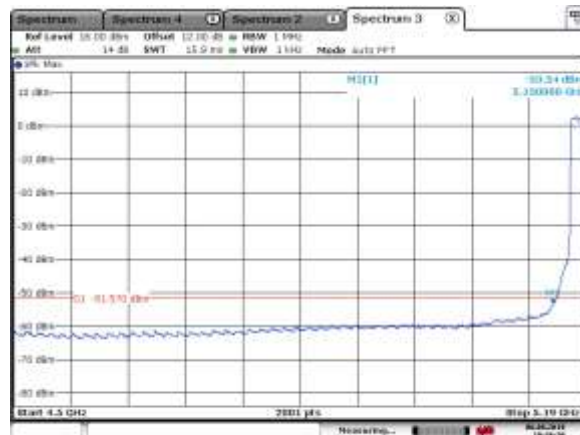
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5180MHz with Beamforming



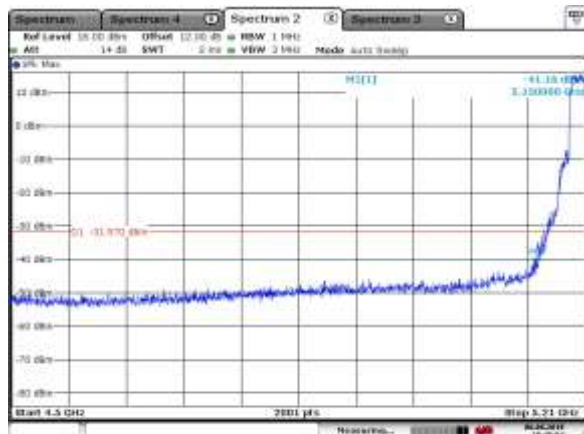
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5180MHz with Beamforming



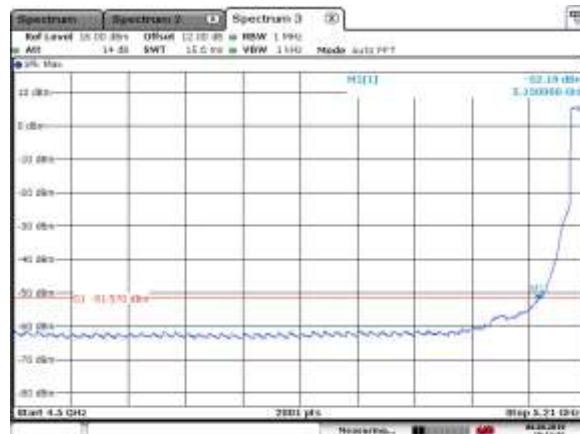
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5200MHz with Beamforming



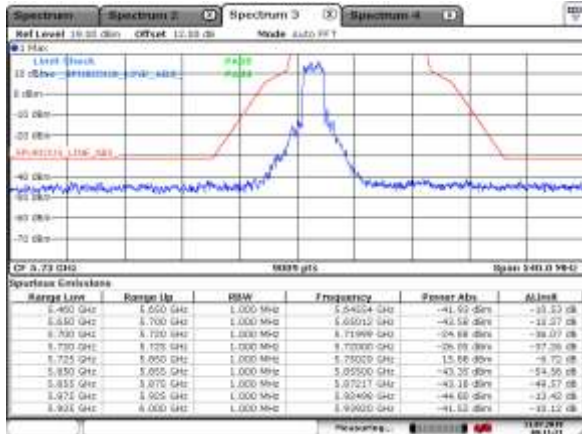
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5200MHz with Beamforming



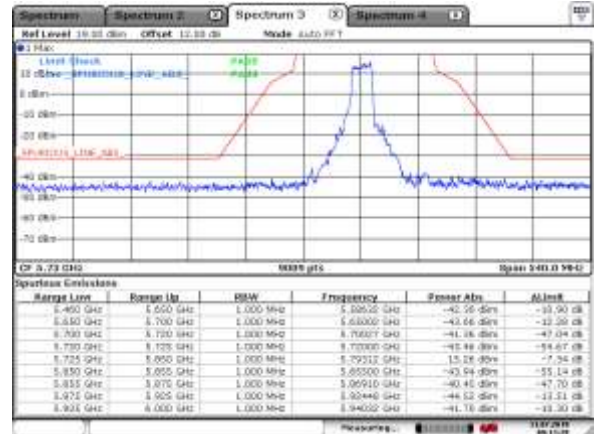
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5745MHz with SISO



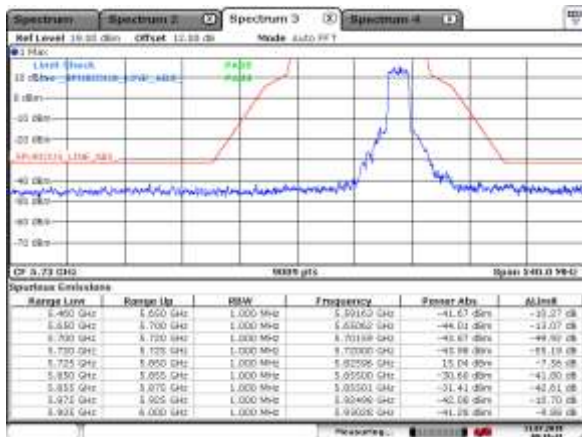
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5785MHz with SISO



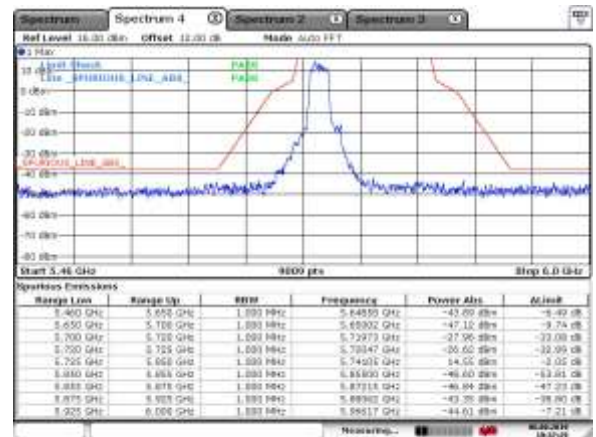
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5825MHz with SISO



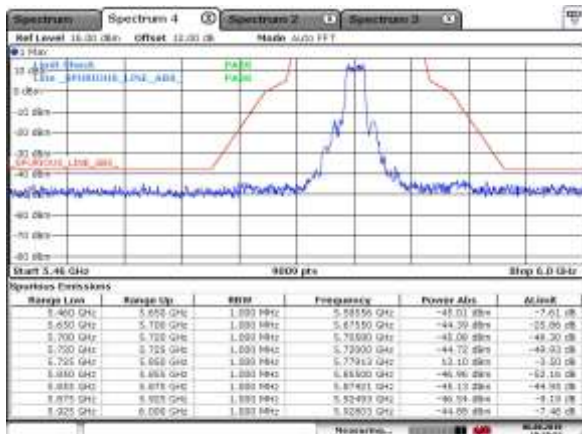
Date: 11.JUL.2019 09:16:41

5745MHz with CDD



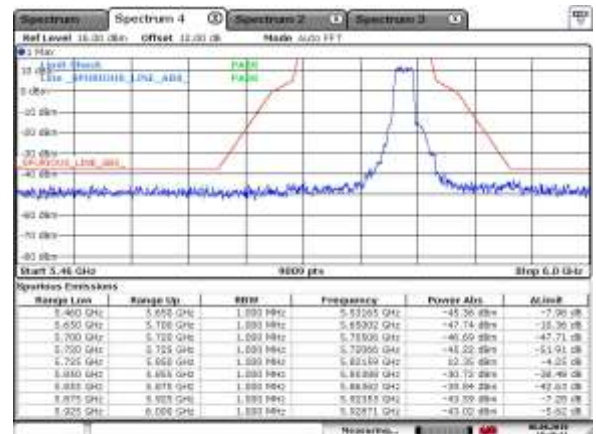
Date: 8.AUG.2019 09:57:09

5785MHz with CDD



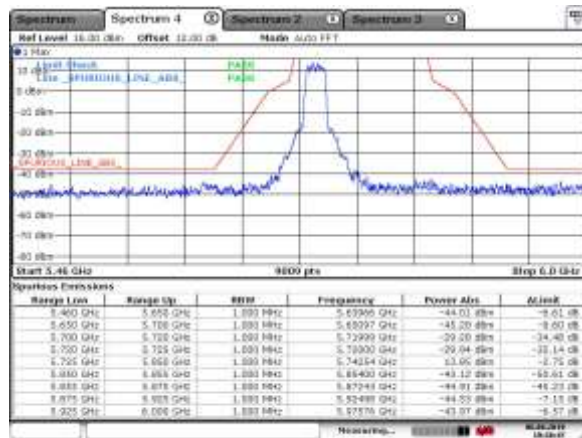
Date: 8.AUG.2019 09:58:02

5825MHz with CDD



Date: 8.AUG.2019 09:58:02

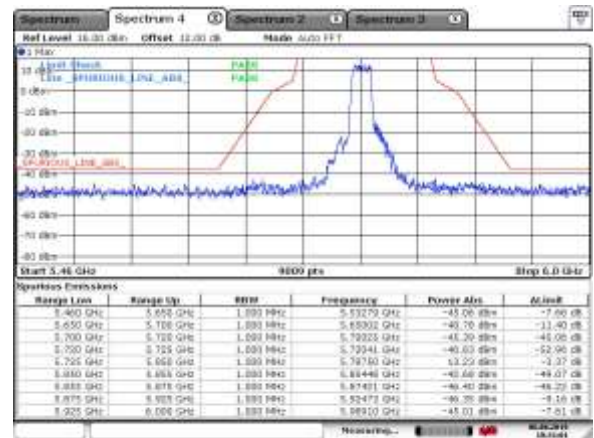
5745MHz with Beamforming



Date: 6/20/2015 15:15:00

File: 1962097R-RF-US-P09V01

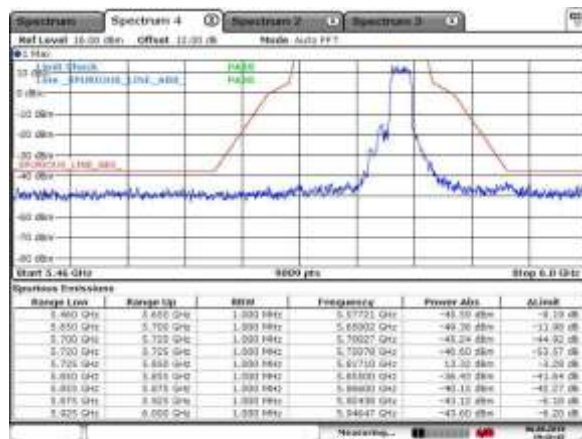
5785MHz with Beamforming



Date: 6/20/2015 15:15:00

File: 1962097R-RF-US-P09V01

5825MHz with Beamforming

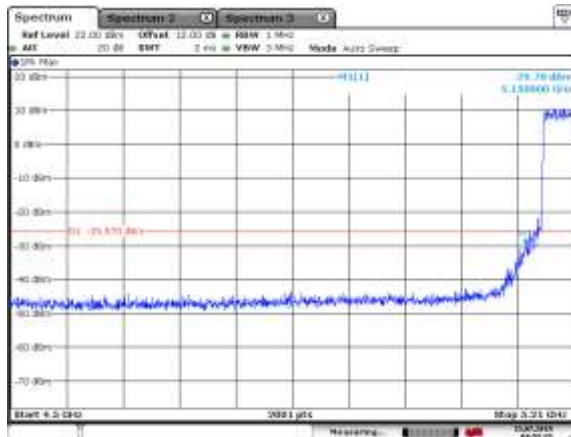


Date: 6/20/2015 15:15:00

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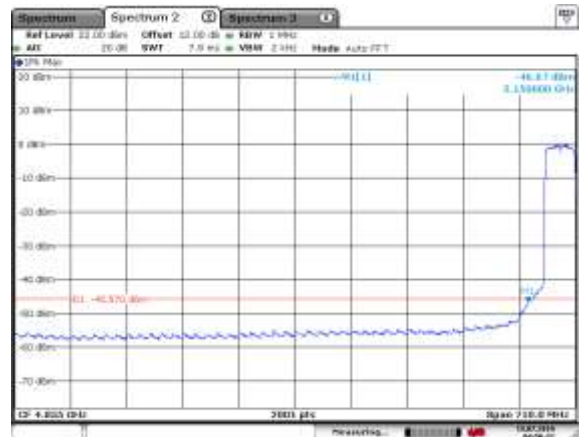
802.11ax(40MHz)

5190MHz with SISO



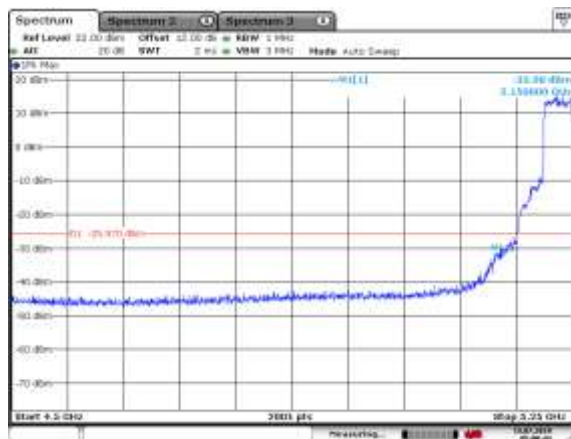
Date: 15.JUL.2019 04:57:26

5190MHz with SISO



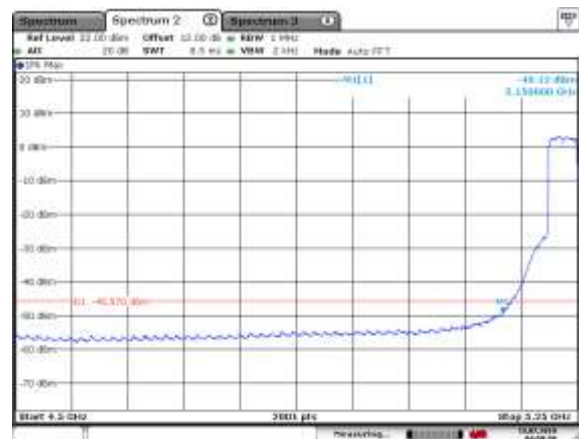
Date: 15.JUL.2019 04:56:31

5230MHz with SISO



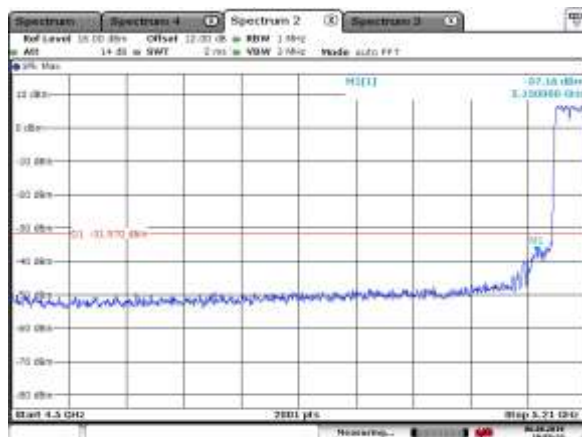
Date: 15.JUL.2019 05:00:43

5230MHz with SISO



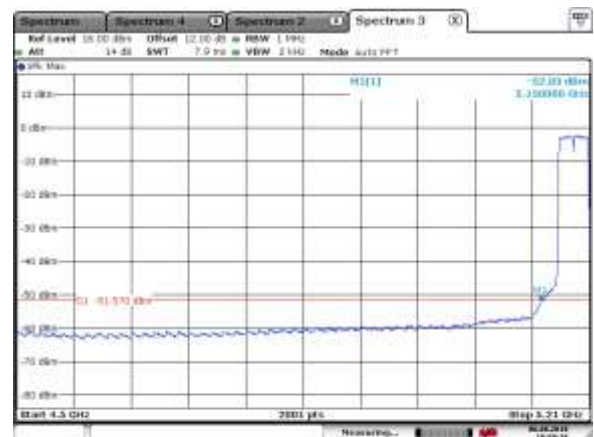
Date: 15.JUL.2019 04:59:59

5190MHz with CDD



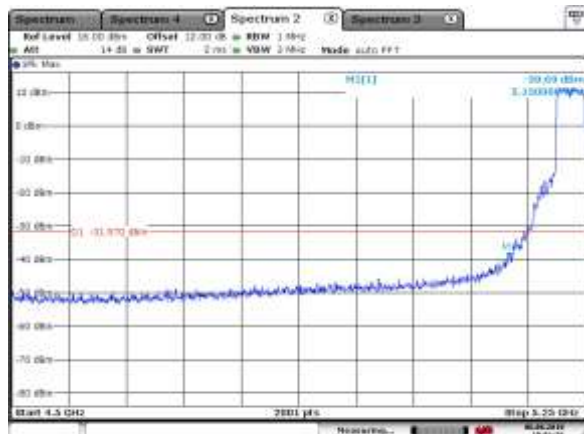
Date: 8.AUG.2019 10:48:00

5190MHz with CDD



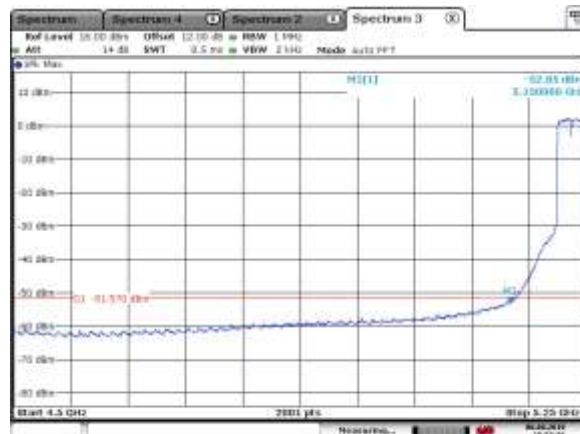
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5230MHz with CDD



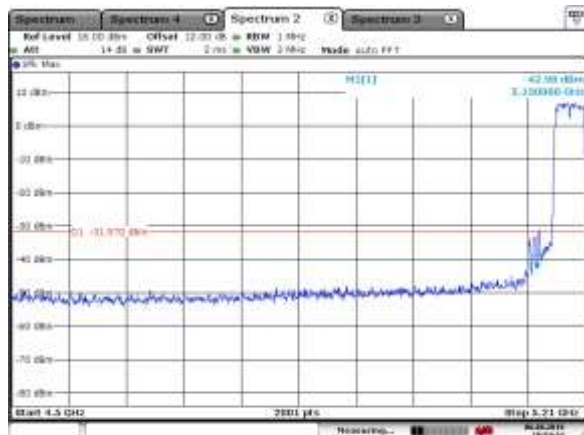
Notes 8, 200, 213 (04/11/17)

5230MHz with CDD



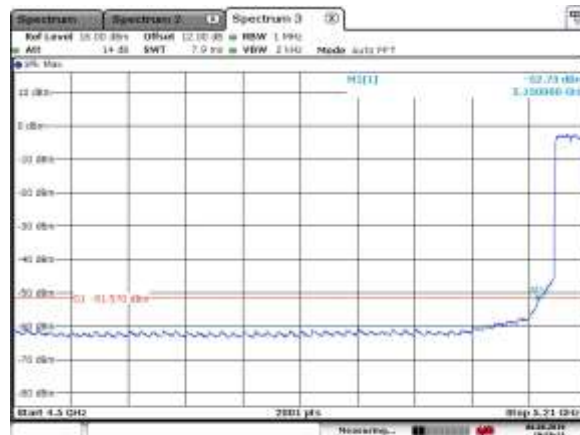
Notes 8, 200, 213 (04/11/18)

5190MHz with Beamforming



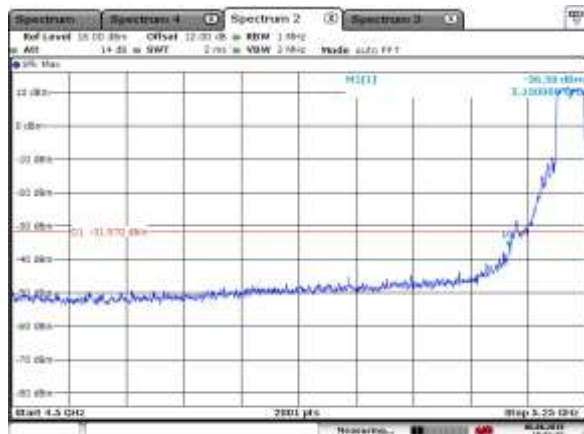
Notes 8, 200, 213 (04/11/18)

5190MHz with Beamforming



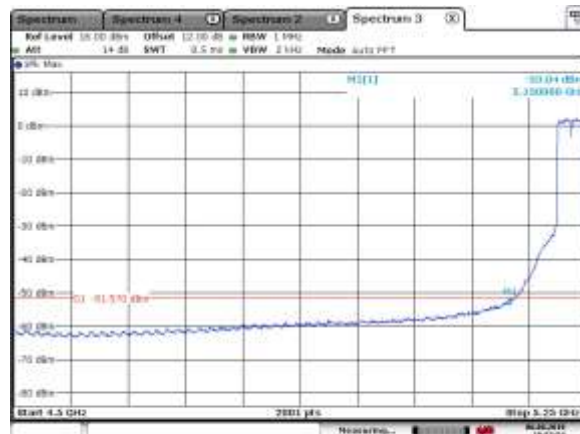
Notes 8, 200, 213 (04/11/18)

5230MHz with Beamforming



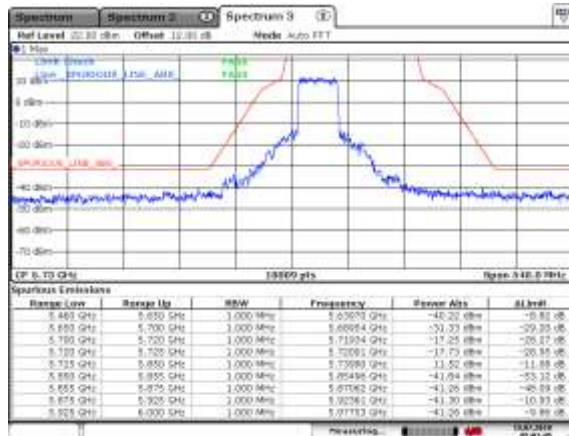
Notes 8, 200, 213 (04/11/18)

5230MHz with Beamforming



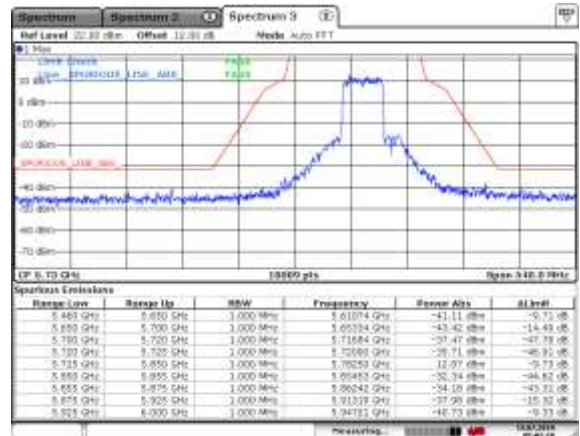
Notes 8, 200, 213 (04/11/18)

5755MHz with SISO



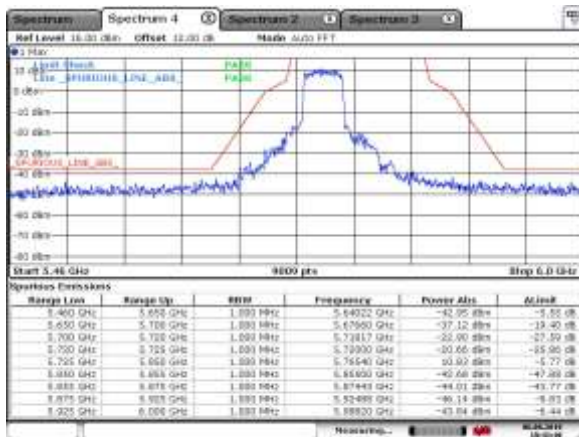
Date: 15.JUL.2019 05:01:45

5795MHz with SISO



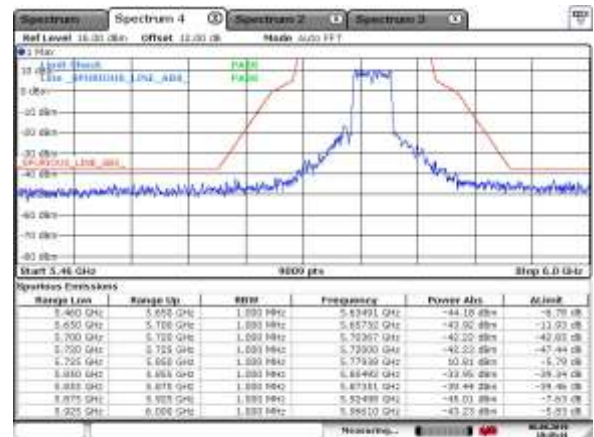
Date: 15.JUL.2019 05:02:18

5755MHz with CDD



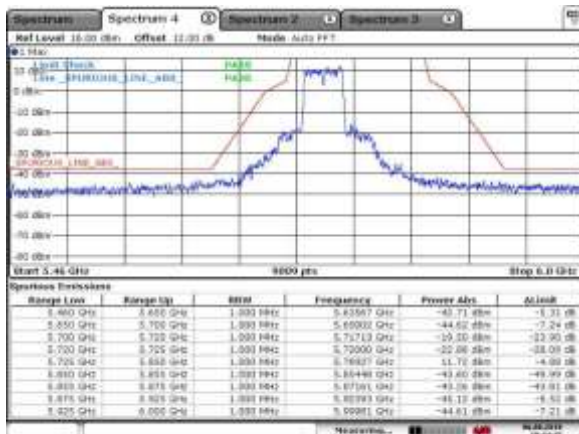
Date: 8.AUG.2019 05:48:09

5795MHz with CDD



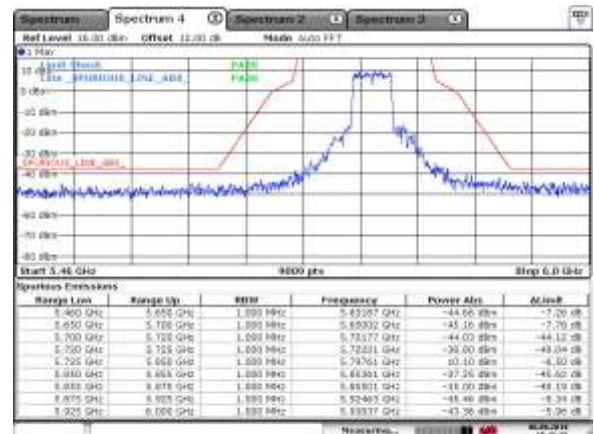
Date: 8.AUG.2019 05:48:02

5755MHz with Beamforming



Date: 8.AUG.2019 05:48:02

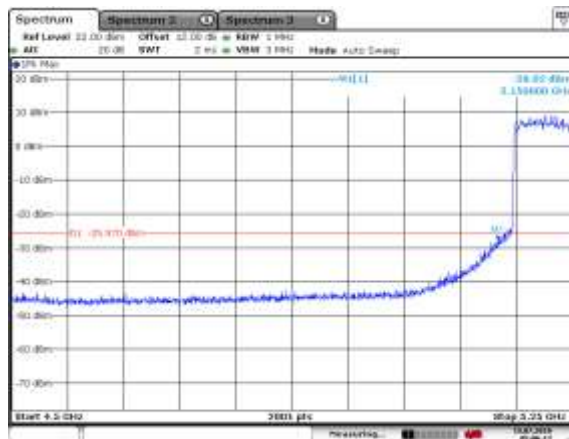
5795MHz with Beamforming



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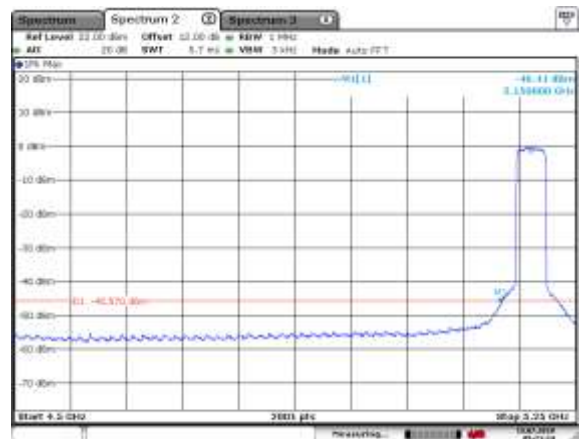
802.11ax(80MHz)

5210MHz with SISO



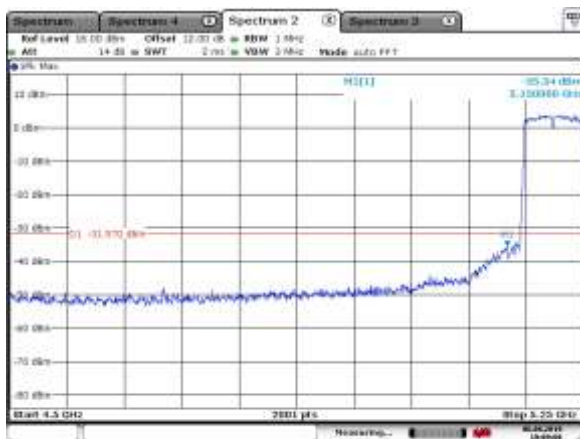
Date: 15.JUL.2019 05:06:13

5210MHz with SISO



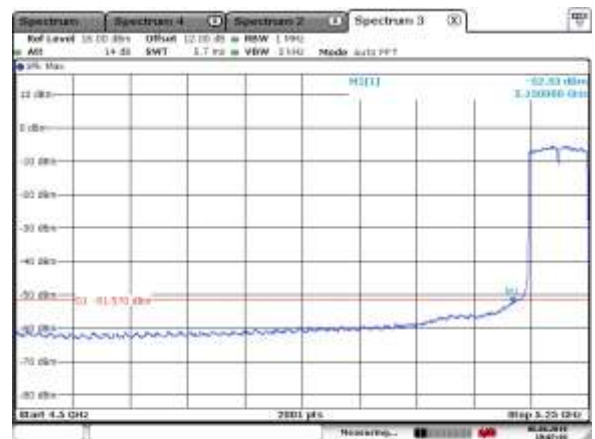
Date: 15.JUL.2019 05:21:24

5210MHz with CDD



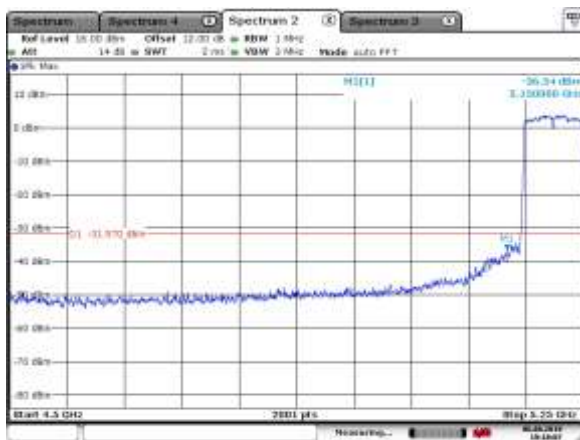
Date: 8.AUG.2019 09:55:09

5210MHz with CDD



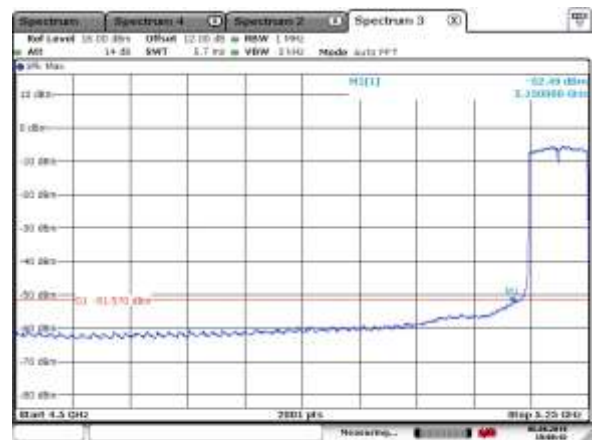
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5210MHz with Beamforming



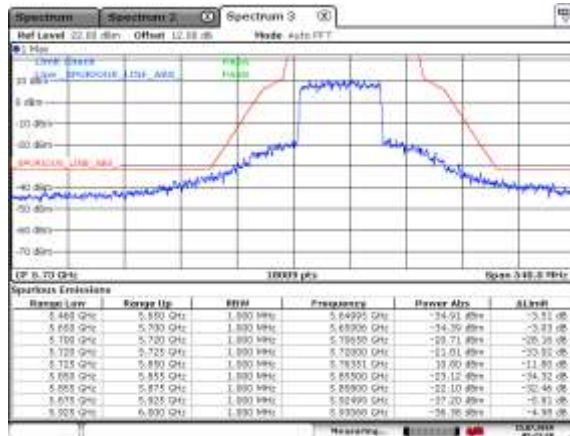
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5210MHz with Beamforming



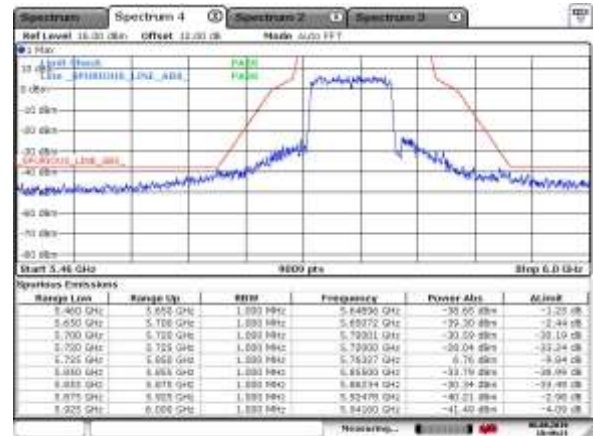
Date: 8.AUG.2019 09:55:00

5775MHz with SISO



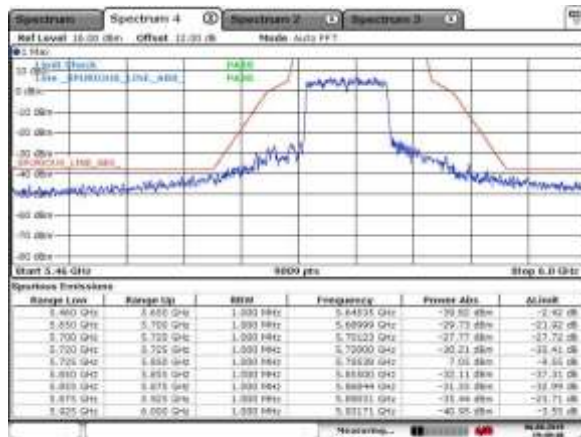
Date: 15.JUL.2019 05:23:20

5775MHz with CDD



Date: 15.JUL.2019 05:23:22

5775MHz with Beamforming



Date: 15.JUL.2019 05:23:29

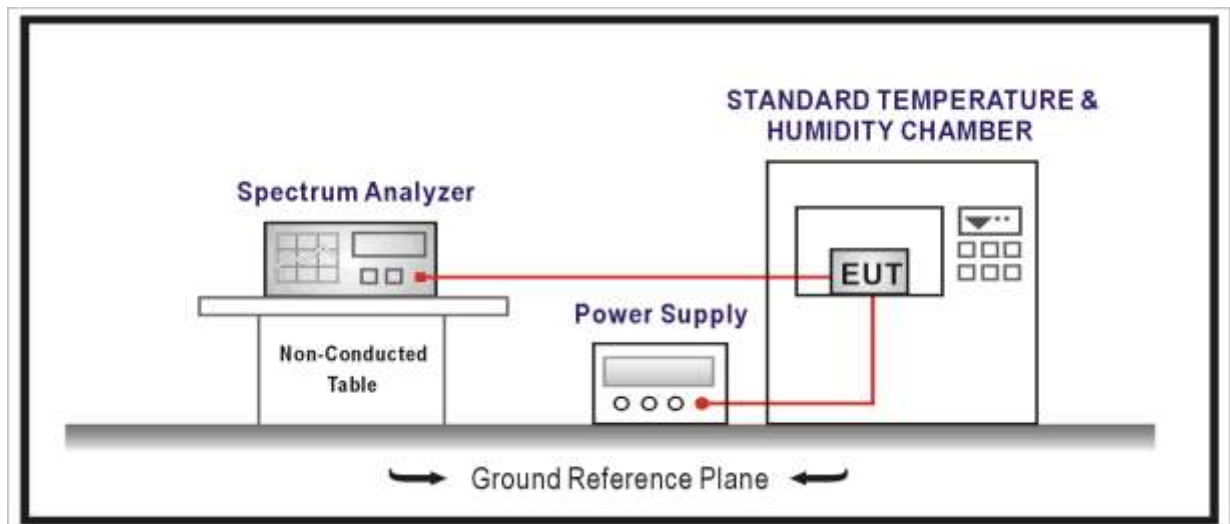
10. Frequency Stability

10.1. Test Equipment

Frequency Stability / TR-7					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2018.02.04	2019.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2019.04.09	2019.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2019.04.09	2019.04.08
AC Power Supply	IDRC	CF-500TP	979422	2017.09.16	2018.09.15
DC Power Supply	IDRC	CD-035-020PR	977272	2017.09.16	2018.09.15
Programmable Temperature & Humidity Chamber	Gaoyu	TH-1P-B	WIT-05121302	2018.01.04	2019.01.03
Temperature/Humidity Meter	zhichen	ZC1-2	TR7-TH	2018.04.10	2019.04.09

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

10.2. Test Setup



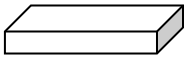
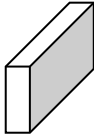
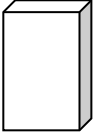
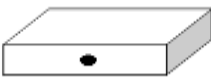
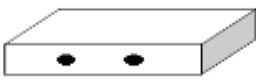
10.3. Limit

Frequency Stability Limit	
UNII Devices	
☒	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	
☒	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
☒	ANSI C63.10		6.8	Frequency stability tests
	☒	ANSI C63.10	6.8.1	Frequency stability with respect to ambient temperature
	☒	ANSI C63.10	6.8.2	Frequency stability when varying supply voltage

10.5. EUT test Axis definition

Item	Frequency Stability				
Device Category	☒	Indoor use			
	☐	Outdoor use			
	☐	Fix position use			
	☐	Client use			
Test mode	Mode 1-9				
Test method	☐	Radiated			
		X Axis	Y Axis	Z Axis	
					
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐	
	☒	Conducted			
	☐	Chain 1			
					
	☒	Chain 1	Chain 2		
					
	☐	Chain 1	Chain 2	Chain 3	
					
	☒	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	:	TR8
Test Date	:	2018.05.20	Test Engineer	:	Simon

Frequency Stability under Temperature at 0min

Temperature Interval (°C)	Test Frequency (MHz)	Deviation (Hz)	ppm	Limit
-30	5220.000	79	0.015	±20
-20	5220.000	215	0.041	±20
-10	5220.000	137	0.026	±20
0	5220.000	-10	-0.002	±20
10	5220.000	33	0.006	±20
20	5220.000	-70	-0.013	±20
30	5220.000	-74	-0.014	±20
40	5220.000	49	0.009	±20
50	5220.000	-3	-0.001	±20

Frequency Stability under Temperature at 2min

Temperature Interval (°C)	Test Frequency (MHz)	Deviation (Hz)	ppm	Limit
-30	5220.000	-210	-0.040	± 20
-20	5220.000	-156	-0.030	± 20
-10	5220.000	-37	-0.007	± 20
0	5220.000	90	0.017	± 20
10	5220.000	-90	-0.017	± 20
20	5220.000	-119	-0.023	± 20
30	5220.000	107	0.020	± 20
40	5220.000	-86	-0.016	± 20
50	5220.000	-94	-0.018	± 20

Frequency Stability under Temperature at 5min

Temperature Interval (°C)	Test Frequency (MHz)	Deviation (Hz)	ppm	Limit
-30	5220.000	-129	-0.025	± 20
-20	5220.000	-122	-0.023	± 20
-10	5220.000	107	0.020	± 20
0	5220.000	-88	-0.017	± 20
10	5220.000	113	0.022	± 20
20	5220.000	179	0.034	± 20
30	5220.000	161	0.031	± 20
40	5220.000	-95	-0.018	± 20
50	5220.000	-91	-0.017	± 20

Frequency Stability under Temperature at 10min

Temperature Interval (°C)	Test Frequency (MHz)	Deviation (Hz)	ppm	Limit
-30	5220.000	123	0.024	± 20
-20	5220.000	105	0.020	± 20
-10	5220.000	94	0.018	± 20
0	5220.000	99	0.019	± 20
10	5220.000	-100	-0.019	± 20
20	5220.000	148	0.028	± 20
30	5220.000	-123	-0.024	± 20
40	5220.000	118	0.023	± 20
50	5220.000	-94	-0.018	± 20

Frequency Stability under Voltage

AC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	ppm	Limit
102	5220.000	114	0.022	± 20
120	5220.000	-105	-0.020	± 20
138	5220.000	163	0.031	± 20

11. Antenna Requirement

11.1. Limit

Antenna Requirement Limit	
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.	

11.2. Antenna Connector Construction

Antenna Connector Construction	
☒	The use of a permanently attached antenna
☐	The antenna use of a unique coupling to the intentional radiator
☐	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 _____