Report on the RF Testing of:

KYOCERA Corporation
Mobile Phone, Model: EB1065
FCC ID: JOYEB1065

In accordance with FCC Part15 Subpart E

TÜV SÜD Japan

Add value.
Inspire trust.

Prepared for: KYOCERA Corporation
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COMMERCIAL-IN-CONFIDENCE

Document Number: JPD-TR-20234-0

SIGNATURE			
NAME	**JOB TITLE**	**RESPONSIBLE FOR**	**ISSUE DATE**
Hiroaki Suzuki	Deputy Manager of RF Group	Approved Signatory	25 JAN 2021

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD Japan Ltd. document control rules.

EXECUTIVE SUMMARY – Result: Complied
A sample of this product was tested and the result above was confirmed in accordance with FCC Part15 Subpart E.

ilac-MRA A2LA ACCREDITED Certificate #3686.03

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Japan

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1 Summary of Test

1.1 Modification history of the test report

Document Number	Modification History	Issue Date
JPD-TR-20234-0	First Issue	Refer to the cover page

1.2 Standards

CFR47 FCC Part 15 Subpart E

1.3 Test methods

ANSI C63.10-2013
KDB662911 D01 Multiple Transmitter Output v02r01
KDB789033 D02 General U-NII Test Procedures New Rules v02r01

1.4 Deviation from standards

None

1.5 List of applied test(s) of the EUT

Test item section	Test item	Condition	Result	Remark
15.407(a)	26dB Bandwidth	Conducted	Reporting Purposes only	-
15.407(a)	Maximum Conducted Output Power	Conducted	PASS	-
15.407(a)	Peak Power Spectral Density	Conducted	PASS	-
15.407(b) 15.205 15.209	Radiated emissions (Restricted Bands of Operation)	Radiated	PASS	-
15.407(g)	Frequency Stability	Conducted	PASS	-
15.207	AC Power Line Conducted Emissions	Conducted	PASS	-
ANSI C63.10, Section 12.2	Duty Cycle	Conducted	Reporting Purposes only	

1.6 Test information

None

1.7 Test set up

Table-top

1.8 Test period

11-December-2020 - 12-January-2021

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2 Equipment Under Test

All information in this chapter was provided by the applicant.

2.1 EUT information

Applicant	KYOCERA Corporation Yokohama Office 2-1-1 Kagahara, Tsuzuki-ku Yokohama-shi, Kanagawa, Japan Phone: +81-45-943-6253 Fax: +81-45-943-6314
Equipment Under Test (EUT)	Mobile Phone
Model number	EB1065
Serial number	359787710020644, 359787710020784
Trade name	Kyocera
Number of sample(s)	2
EUT condition	Pre-Production
Power rating	Battery: DC 3.85 V
Size	(W) 80 mm × (D) 20 mm × (H) 168 mm
Environment	Indoor and Outdoor use
Terminal limitation	-20˚C to 60˚C
Hardware version	DMT2
Software version	0.070VE
Firmware version	Not applicable
RF Specification	
Protocol	IEEE802.11a, IEEE802.11n (HT20), IEEE802.11n (HT40) IEEE802.11ac (VHT20), IEEE802.11ac (VHT40), EEE802.11ac (VHT80)
Frequency range	IEEE802.11a/n (HT20) / IEEE802.11ac (VHT20): 5180 MHz-5320 MHz, 5500 MHz-5720 MHz IEEE802.11n (HT40) / IEEE802.11ac (VHT40): 5190 MHz-5310 MHz, 5510 MHz-5710 MHz IEEE802.11ac (VHT80): 5210 MHz, 5290 MHz, 5530 MHz, 5610 MHz,5690MHz
Number of RF Channels	IEEE802.11a/n (HT20) / IEEE802.11ac (VHT20): 20 Channels IEEE802.11n (HT40) / IEEE802.11ac (VHT40): 10 Channels IEEE802.11ac (VHT80): 5 Channels
Modulation type	IEEE802.11a/n/ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)

Data rate	IEEE802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps IEEE802.11n (HT20 LGI): 6.5, 13, 19.5, 26, 39, 52, 58.5, 65, 78, 86.5Mbps IEEE802.11n (HT20 SGI): 7.2, 14.4, 21.7, 28.9, 43.3, 57.8, 65, 72.2, 86.7, 96.1Mbps IEEE802.11ac (VHT20 LGI): 6.5, 13, 19.5, 26, 39, 52, 58.5, 65, 78, 86.5Mbps IEEE802.11ac (VHT20 SGI): 7.2, 14.4, 21.7, 28.9, 43.3, 57.8, 65, 72.2, 86.6, 96.1Mbps IEEE802.11n (HT40 LGI): 13.5, 27, 40.5, 54, 81, 108, 121.5, 135, 162, 180Mbps IEEE802.11n (HT40 SGI): 15, 30, 45, 60, 90, 120, 135, 150, 180, 200Mbps IEEE802.11ac (VHT40 LGI): 13.5, 27, 40.5, 54, 81, 108, 121.5, 135, 162, 180Mbps IEEE802.11ac (VHT40 SGI): 15, 30, 45, 60, 90, 120, 135, 150, 180, 200Mbps IEEE802.11ac (VHT80 LGI): 29.5, 58.5, 87.8, 117, 175.5, 234, 263.3, 292.5, 351, 390Mbps IEEE802.11ac (VHT80 SGI): 32.5, 65, 97.5, 130, 195, 260, 292.5, 325, 390, 433.3Mbps
Channel separation	IEEE802.11a/n(HT20) / IEEE802.11ac (VHT20): 20 MHz IEEE802.11n (HT40) / IEEE802.11ac (VHT40): 40 MHz IEEE802.11ac (VHT80): 80 MHz
Conducted power	9.829 mW (IEEE802.11a) 17.988 mW (IEEE802.11n: HT20) 19.887 mW (IEEE802.11n: HT40) 18.997 mW (IEEE802.11ac: VHT80)
Antenna type	Internal antenna
Antenna gain	ANT3 5.15-5.25 GHz band: -0.5 dBi 5.25-5.35 GHz band: -0.5 dBi 5.47-5.725 GHz band: 0.1 dBi ANT5 5.15-5.25 GHz band: 1.0 dBi 5.25-5.35 GHz band: 1.0 dBi 5.47-5.725 GHz band: 1.1 dBi

2.2 Modification to the EUT

The table below details modifications made to the EUT during the test project.

Modification State	Description of Modification	Modification fitted by	Date of Modification
Model: EB1065, Serial Number: 359787710020644, 359787710020784			
0	As supplied by the applicant	Not Applicable	Not Applicable

2.3 Variation of family model(s)

2.3.1 List of family model(s)

Not applicable

2.3.2 Reason for selection of EUT

Not applicable

Japan

2.4 Operating channels and frequencies

[IEEE802.11a/n (HT20) / IEEE802.11ac (VHT20)]

Channel	Frequency [MHz]
36	5180
40	5200
44	5220
48	5240
52	5260
56	5280
60	5300
64	5320
100	5500
104	5520
108	5540
112	5560
116	5580
120	5600
124	5620
128	5640
132	5660
136	5680
140	5700
144	5720

[IEEE802.11n (HT40) / IEEE802.11ac (VHT40)]

Channel	Frequency [MHz]
38	5190
46	5230
54	5270
62	5310
102	5510
110	5550
118	5590
126	5630
134	5670
142	5710

[IEEE802.11ac (VHT80)]

Channel	Frequency [MHz]
42	5210
58	5290
106	5530
122	5610
138	5690

2.5 Description of test mode

The EUT had been tested under operating condition.
There are three channels have been tested as following:

Band	IEEE802.11a/n (HT20) IEEE802.11ac (VHT20)		IEEE802.11n (HT40) IEEE802.11ac (VHT40)		IEEE802.11ac (HT80)	
	Channel	Frequency [MHz]	Channel	Frequency [MHz]	Channel	Frequency [MHz]
5.2 GHz Band	36	5180	38	5190	42	5210
	40	5200	-	-	-	-
	48	5240	46	5230	-	-
5.3 GHz Band	52	5260	54	5270	58	5290
	56	5280	-	-	-	-
	64	5320	62	5310	-	-
5.6 GHz Band	100	5500	102	5510	106	5530
	116	5580	110	5550	122	5610
	140	5700	134	5670	138	5690
	144	5720	142	5710	-	-

The pre-test has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates.

Band	Modulation Type	Data Rate
5.2 GHz Band	IEEE802.11a: OFDM	6Mbps
	IEEE802.11n (HT20): OFDM	MCS0 (6.5Mbps)
	IEEE802.11n (HT40): OFDM	MCS0 (13.5Mbps)
	IEEE802.11ac (VHT80): OFDM	MCS0 (29.5Mbps)
5.3 GHz Band	IEEE802.11a: OFDM	6Mbps
	IEEE802.11n (HT20): OFDM	MCS0 (6.5Mbps)
	IEEE802.11n (HT40): OFDM	MCS0 (13.5Mbps)
	IEEE802.11ac (VHT80): OFDM	MCS0 (29.5Mbps)
5.6 GHz Band	IEEE802.11a: OFDM	6Mbps
	IEEE802.11n (HT20): OFDM	MCS0 (6.5Mbps)
	IEEE802.11n (HT40): OFDM	MCS0 (13.5Mbps)
	IEEE802.11ac (VHT80): OFDM	MCS0 (29.5Mbps)

The field strength of spurious emissions was measured at each position of all three axis X, Y and Z to compare the level, and the maximum noise.
The worst emission was found in Z axis and the worst case recorded.
Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports.

2.6 Operating flow

- Tx mode

i) Test program setup to the DM tool
ii) Select a Test mode
Operating frequency: 5.2GHz Band, 5.3GHz Band, 5.6GHz Band
iii) Start test mode

- Rx mode

i) Test program setup to DM tool
ii) Select a Test mode
Operating frequency: 5.2GHz Band, 5.3GHz Band, 5.6GHz Band
iii) Start test mode

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3 Configuration of Equipment

Numbers assigned to equipment on the diagram in “3.3 System configuration” correspond to the lists in “3.1 Equipment used” and “3.2 Cable(s) used”.
This test configuration is based on the manufacture’s instruction.
Cabling and setup(s) were taken into consideration and test data was taken under worse case condition.

3.1 Equipment used

No.	Equipment	Company	Model No.	Serial No.	FCC ID / DoC	Comment
1	Mobile Phone	KYOCERA	EB1065	359787710020644, 359787710020784	JOYEB1065	EUT
2	AC Adapter	KDDI	0301PQA	N/A	N/A	*

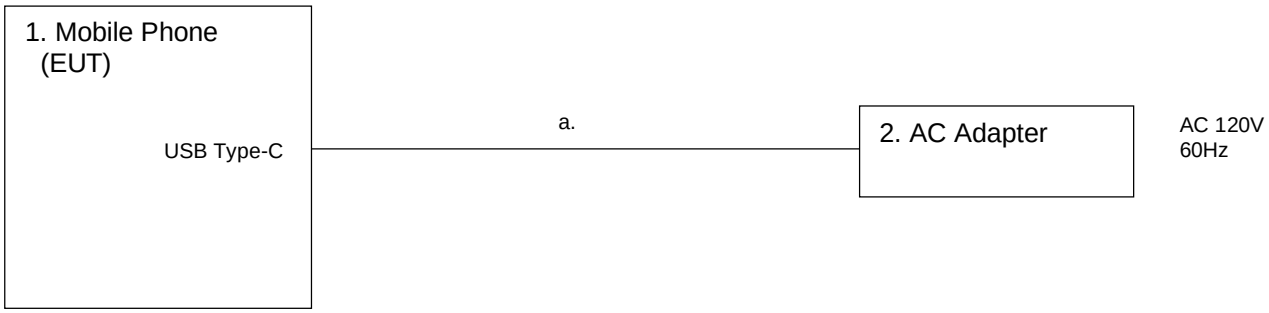
*: AC power line Conducted Emission Test.

3.2 Cable(s) used

No.	Cable	Length[m]	Shield	Connector	Comment
a	USB cable (for AC Adapter)	1.0	Yes	Metal	*

*: AC power line Conducted Emission Test.

3.3 System configuration



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4 Test Result

4.1 26dB Bandwidth and 99% Occupied Bandwidth

4.1.1 Measurement procedure

[FCC 15.407(a), KDB 789033 D02, Section C, D]

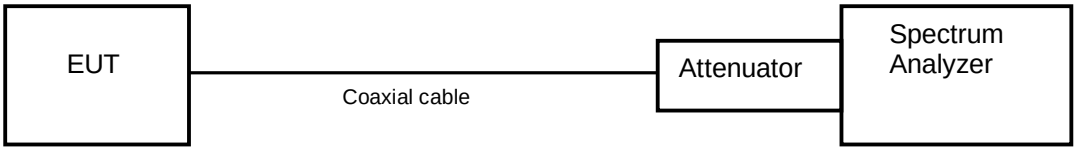
The 26dB bandwidth and 99% occupied bandwidth is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency.

The spectrum analyzer is set to;
- RBW=200 kHz/430 kHz/820 kHz, VBW=620 kHz/1.3 MHz/2.4 MHz, Span=40 MHz/80 MHz/160 MHz
  Sweep=auto, Detector=Peak, Trace mode=Max hold

The EUT was set to operate with following conditions.
- 5.2 GHz Band, 5.3 GHz Band, 5.6 GHz Band

The test mode of EUT is as follows.
- Tx mode

- Test configuration



4.1.2 Limit

None

Japan

4.1.3 Measurement result

Date : 15-December-2020
Temperature : 21.9 [˚C]
Humidity : 28.5 [%] Test engineer :
Test place : Shielded room No.4 Taiki Watanabe

Date : 24-December-2020
Temperature : 21.7 [˚C]
Humidity : 28.2 [%] Test engineer :
Test place : Shielded room No.4 Taiki Watanabe

Mode	Band	Channel	Frequency (MHz)	26 dB bandwidth (MHz)		99% Occupied bandwidth (MHz)	
				ANT3	ANT5	ANT3	ANT5
802.11a	5.2 GHz Band	36	5180	23.057	21.830	16.6633	16.5285
		40	5200	23.017	21.297	16.6234	16.5647
		48	5240	22.857	21.828	16.6633	16.5548
	5.3 GHz Band	52	5260	22.777	21.221	16.6234	16.5427
		56	5280	22.458	22.002	16.6234	16.5373
		64	5320	23.297	21.852	16.7033	16.5209
	5.6 GHz Band	100	5500	22.737	21.598	16.6633	16.5301
		116	5580	22.977	22.105	16.6234	16.5264
		140	5700	23.057	21.989	16.6633	16.5478
		144	5720	23.017	23.250	16.6633	16.5526

Mode	Band	Channel	Frequency (MHz)	26 dB bandwidth (MHz)		99% Occupied bandwidth (MHz)	
				ANT3	ANT5	ANT3	ANT5
802.11n (20 MHz)	5.2 GHz Band	36	5180	23.736	22.501	17.7822	17.6930
		40	5200	23.616	21.885	17.7822	17.6924
		48	5240	23.656	22.272	17.7822	17.6929
	5.3 GHz Band	52	5260	23.097	22.531	17.7822	17.7319
		56	5280	23.297	22.374	17.7822	17.7126
		64	5320	23.816	23.051	17.7822	17.6922
	5.6 GHz Band	100	5500	23.936	22.201	17.7822	17.7137
		116	5580	23.616	22.976	17.7822	17.7274
		140	5700	23.976	22.543	17.8621	17.7441
		144	5720	23.217	22.327	17.7822	17.7046

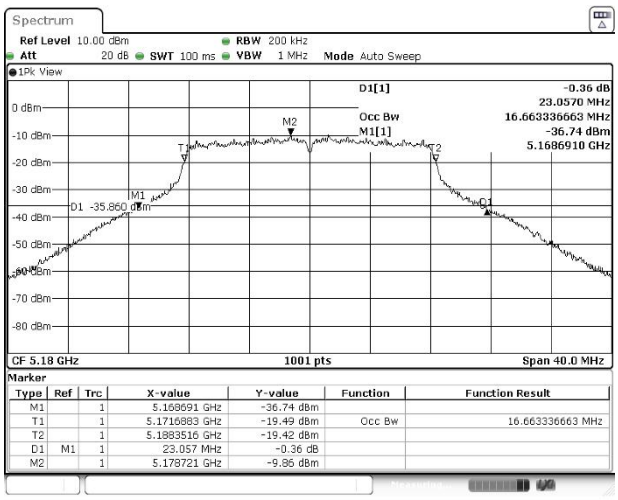
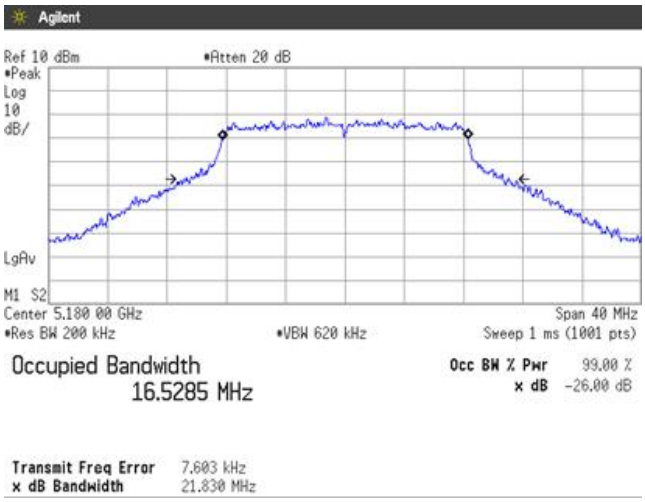
Mode	Band	Channel	Frequency (MHz)	26 dB bandwidth (MHz)		99% Occupied bandwidth (MHz)	
				ANT3	ANT5	ANT3	ANT5
802.11n (40 MHz)	5.2 GHz Band	38	5190	42.118	41.030	36.3636	36.2413
		46	5230	42.198	41.388	36.3636	36.2303
	5.3 GHz Band	54	5270	42.438	40.998	36.3636	36.2195
		62	5310	42.118	41.020	36.3636	36.2054
	5.6 GHz Band	102	5510	41.878	41.515	36.4436	36.2577
		110	5550	42.198	41.193	36.3636	36.2000
		134	5670	42.278	41.446	36.3636	36.2475
		142	5710	42.408	41.525	36.3636	36.1921

Mode	Band	Channel	Frequency (MHz)	26dB bandwidth (MHz)		99% Occupied bandwidth (MHz)	
				ANT3	ANT5	ANT3	ANT5
802.11ac (80 MHz)	5.2 GHz Band	42	5210	84.080	83.695	75.7642	75.5616
	5.3 GHz Band	58	5290	84.400	83.738	75.7642	75.6181
	5.6 GHz Band	106	530	83.760	83.601	75.7642	75.6549
		122	5610	84.240	83.658	75.6044	75.6145
		138	5690	84.450	83.708	75.7642	75.6606

Japan

4.1.4 Trace data

[IEEE802.11a]
(5.2 GHz Band)

ANT3	ANT5
Channel: 36	**Channel: 36**
	
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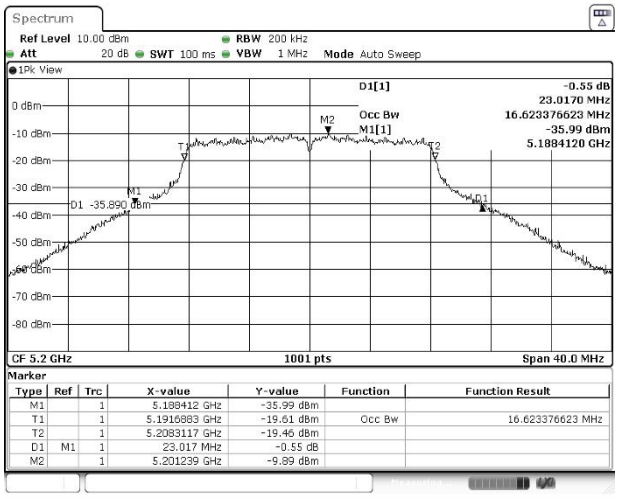	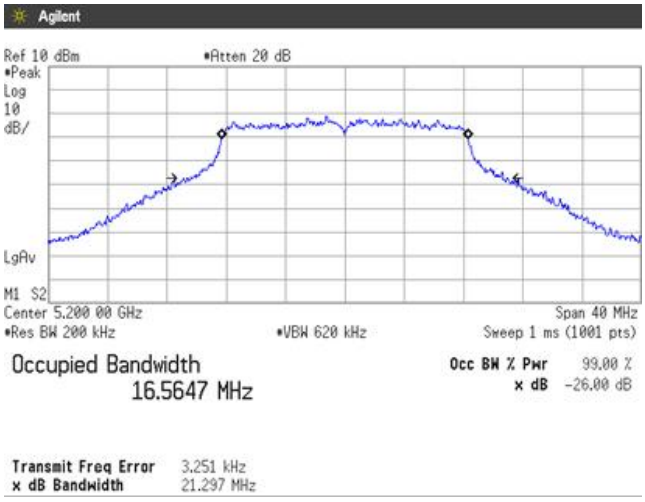
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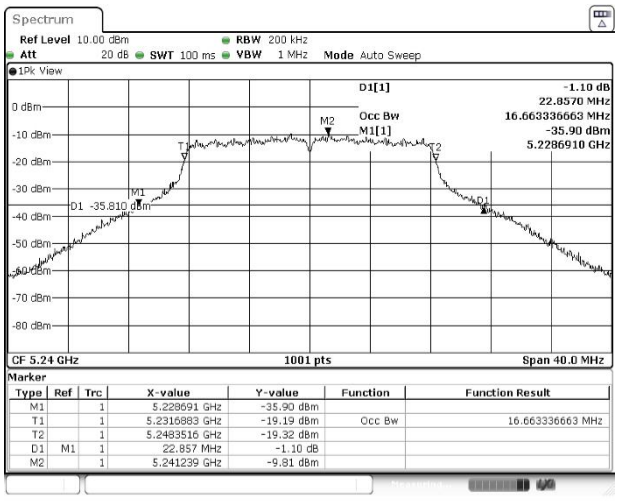
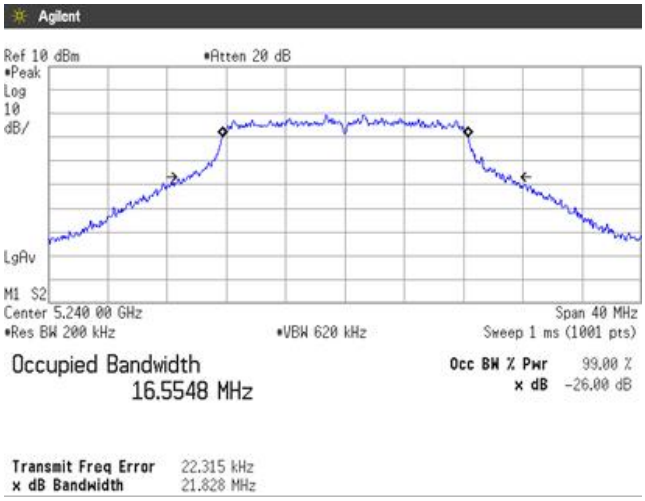
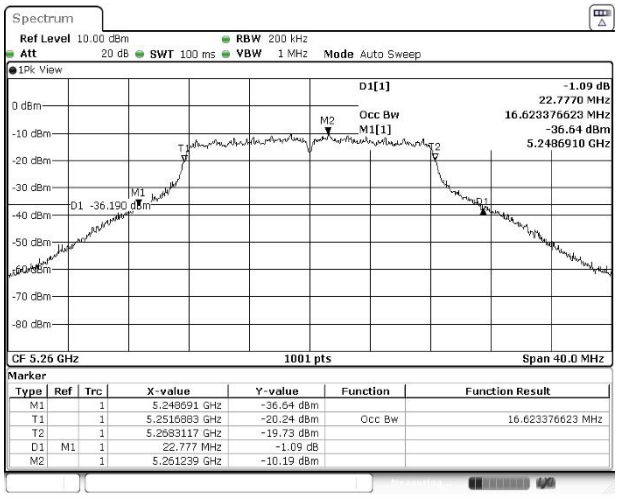
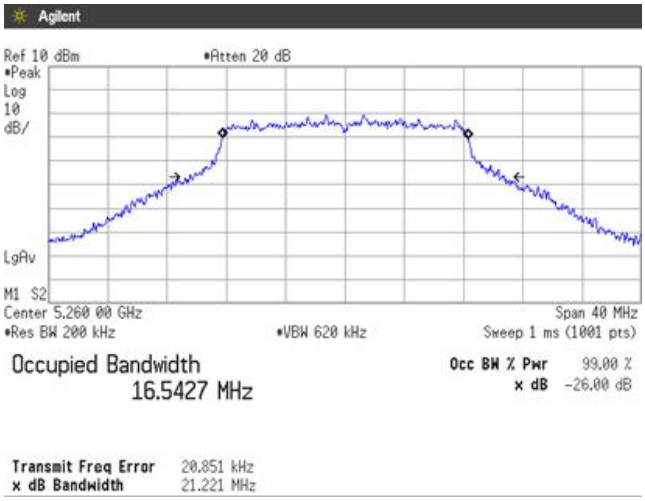
	

(5.3 GHz Band)

ANT3	ANT5
Channel: 52	**Channel: 52**
	
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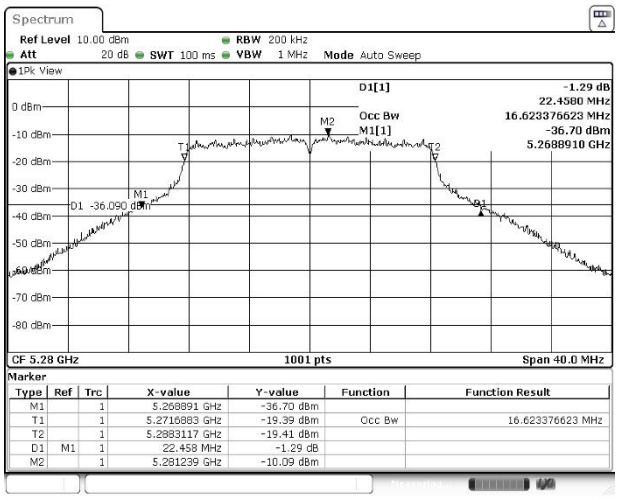	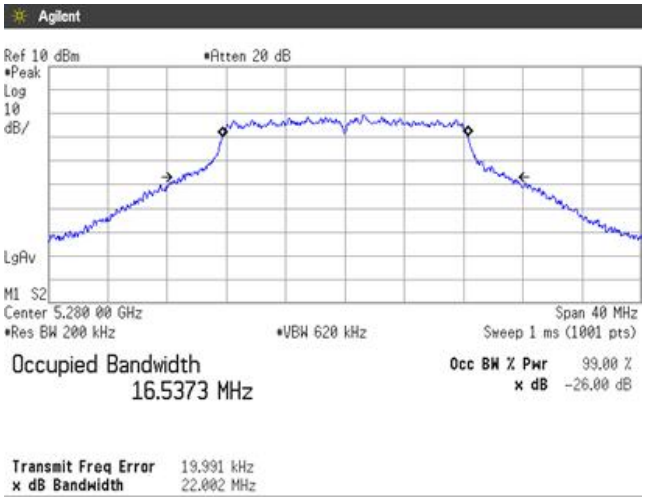
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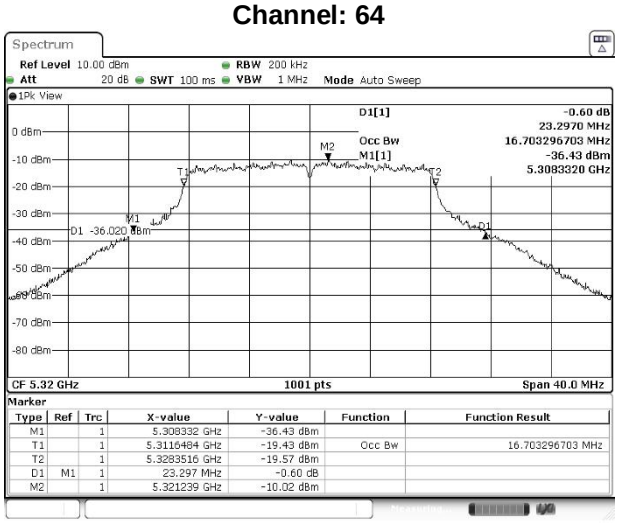
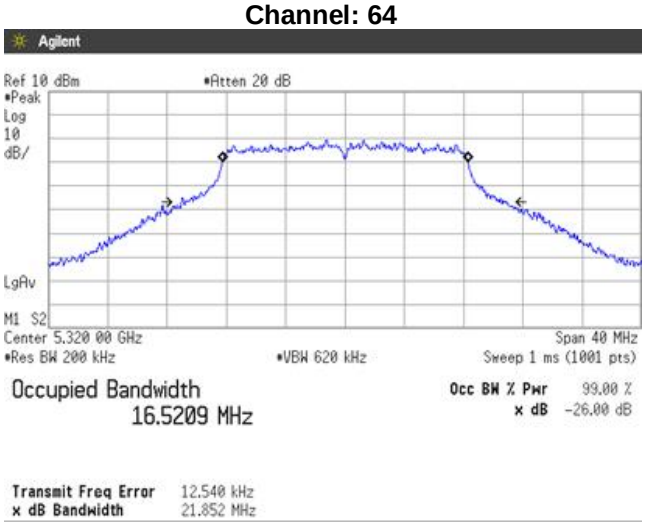
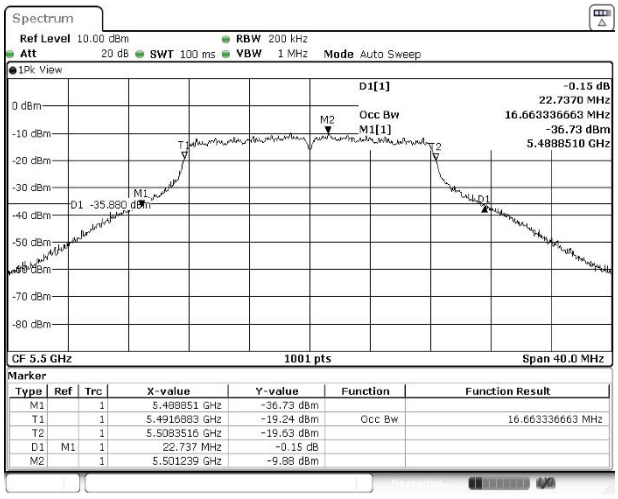
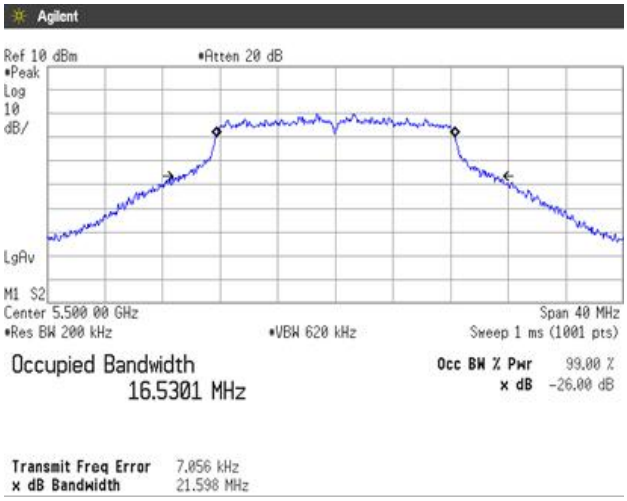
	

(5.6 GHz Band)

ANT3	ANT5
Channel: 100	**Channel: 100**
	
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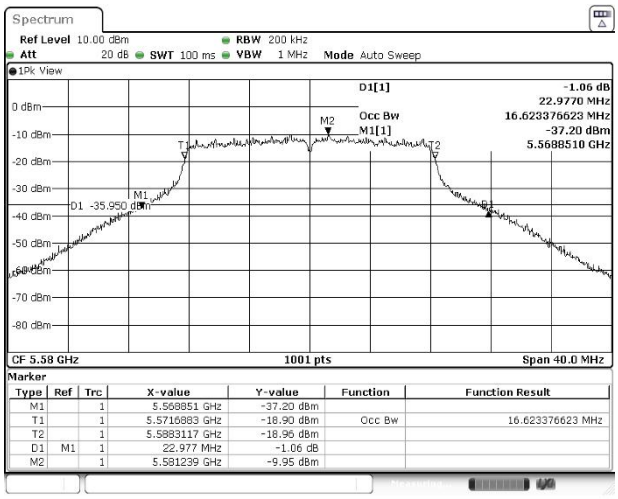	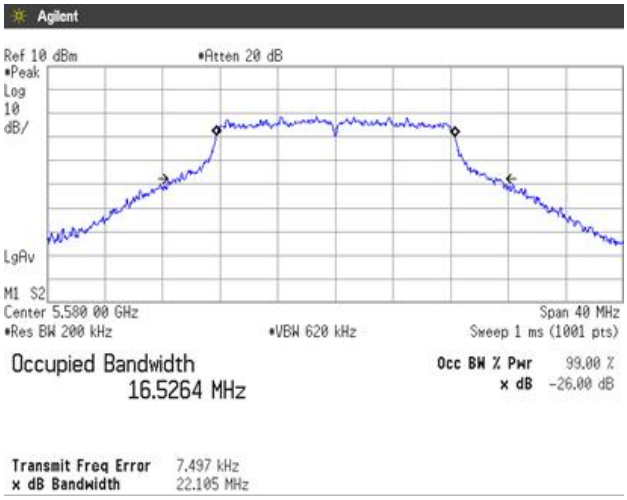
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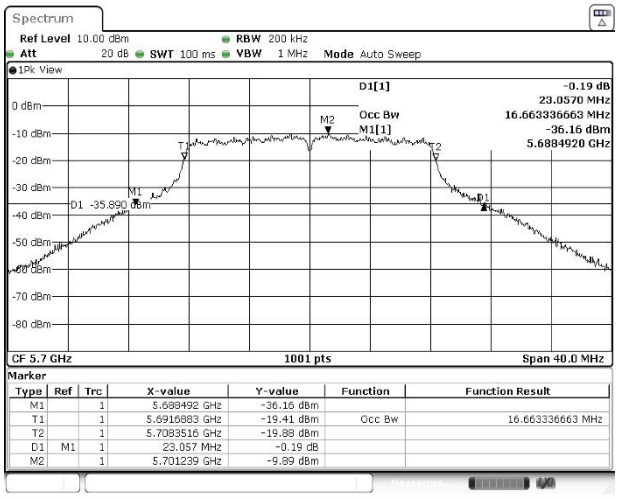	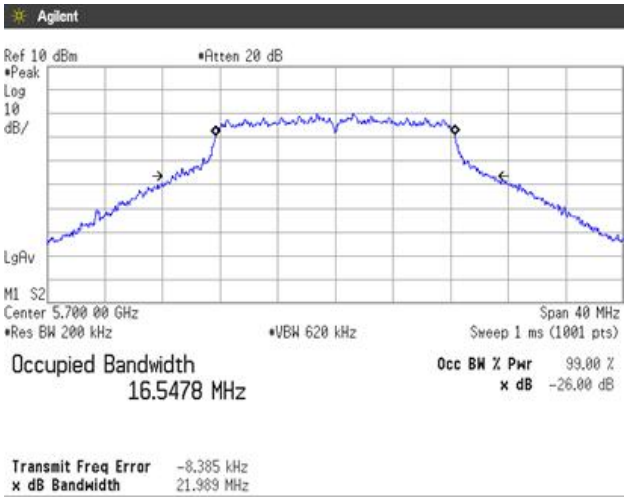

ANT3	ANT5
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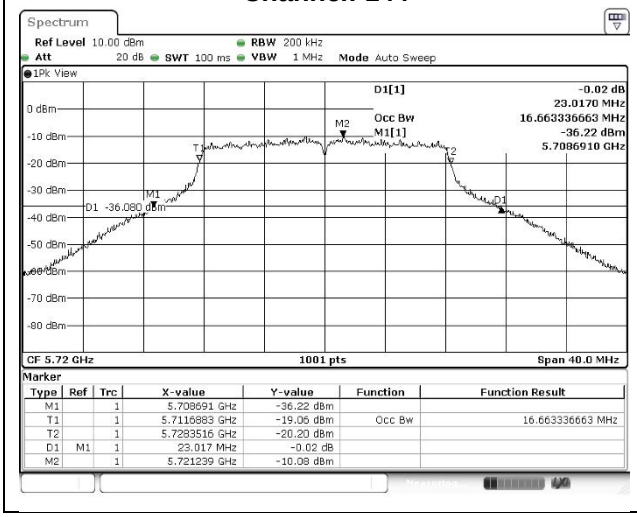
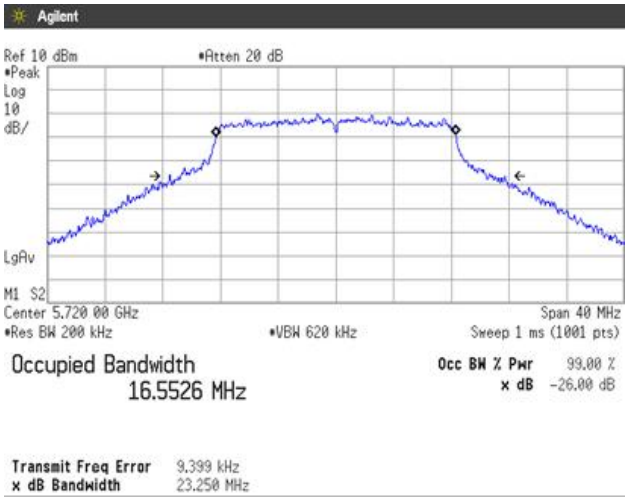
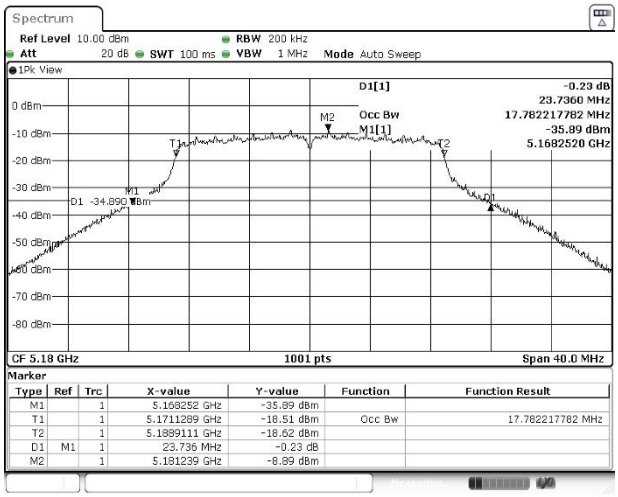
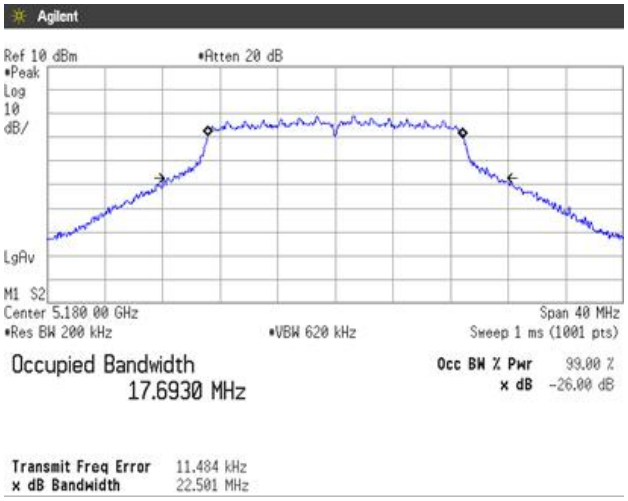
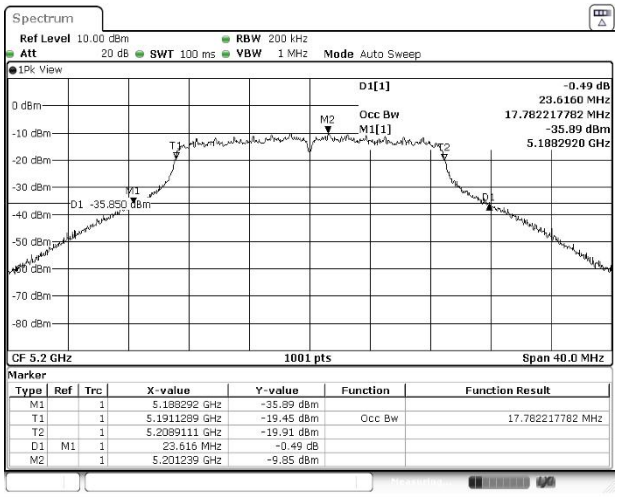
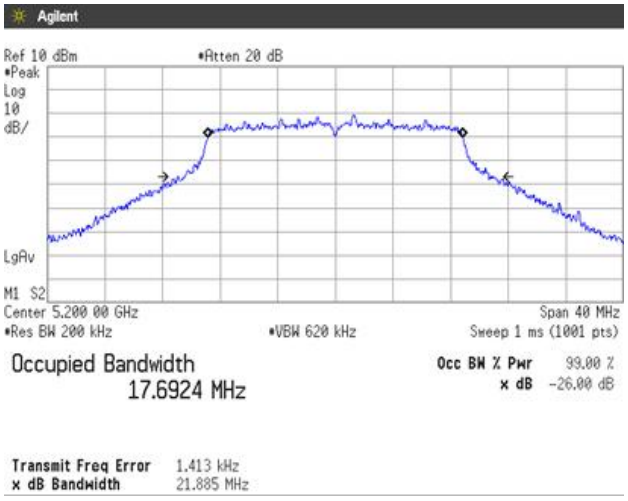
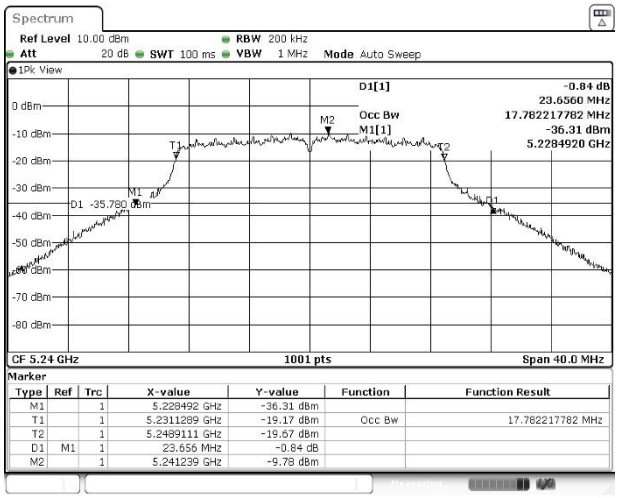
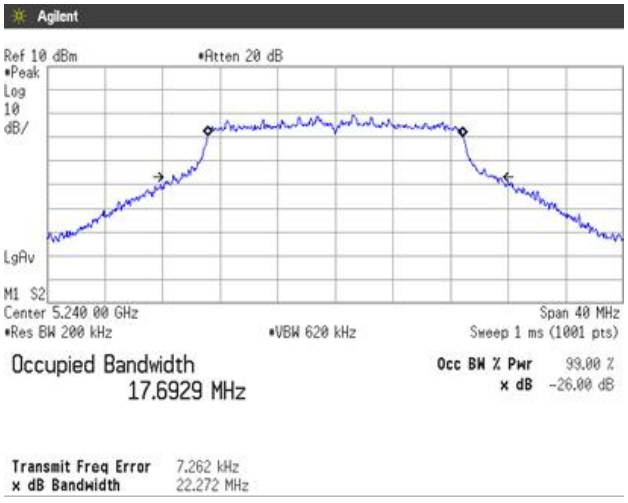
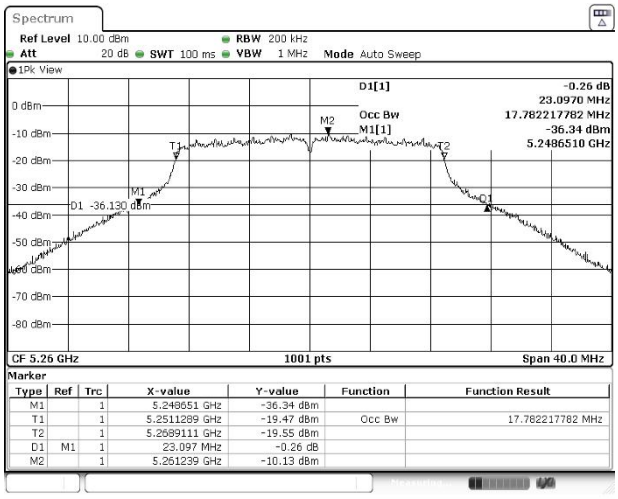
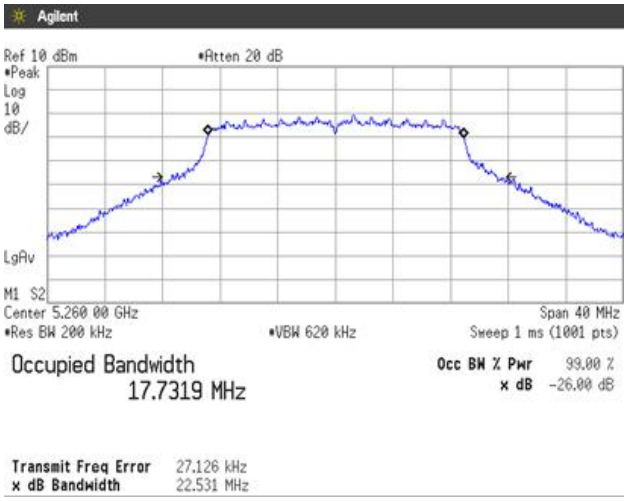
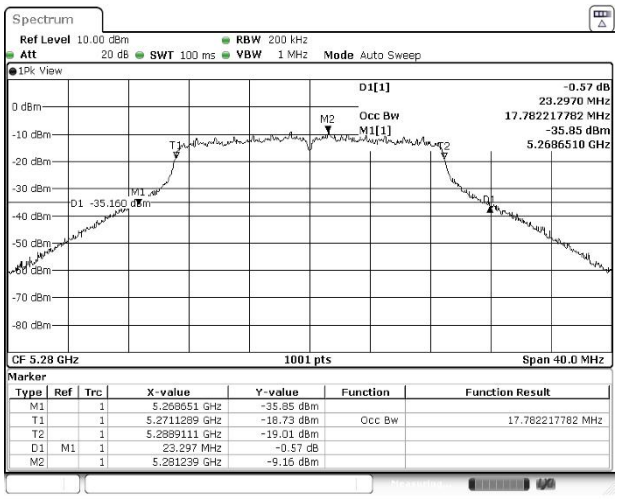
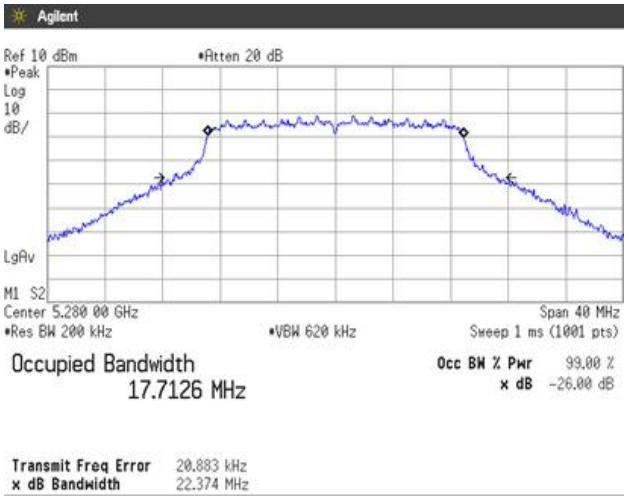
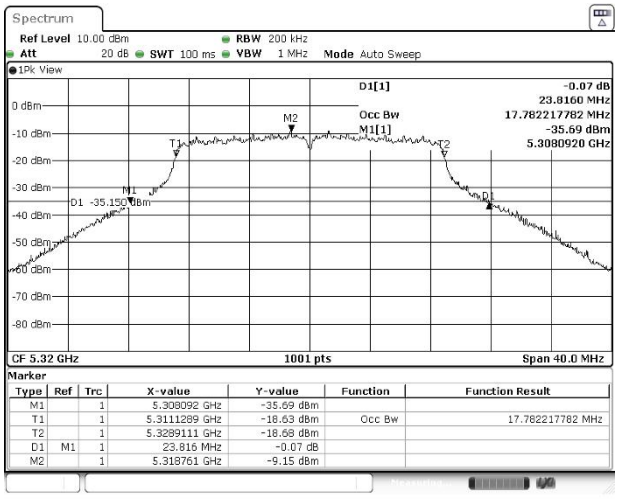
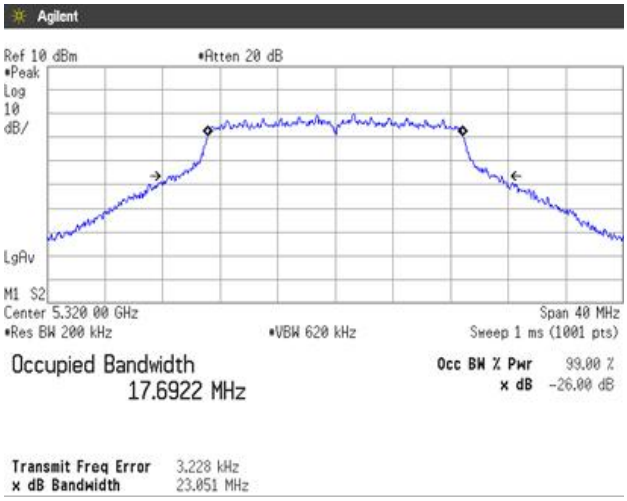
	

Japan

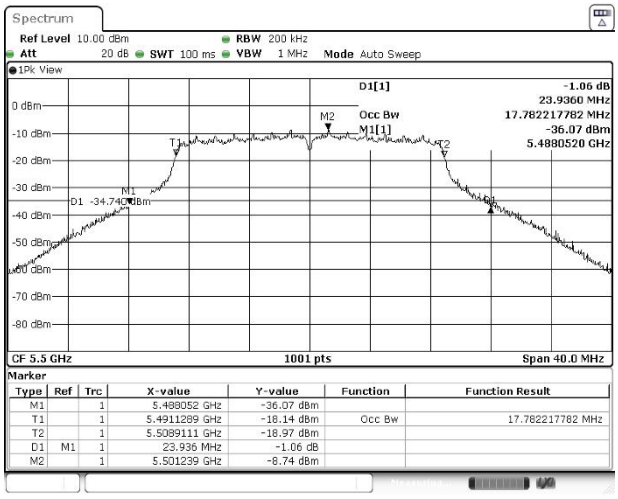
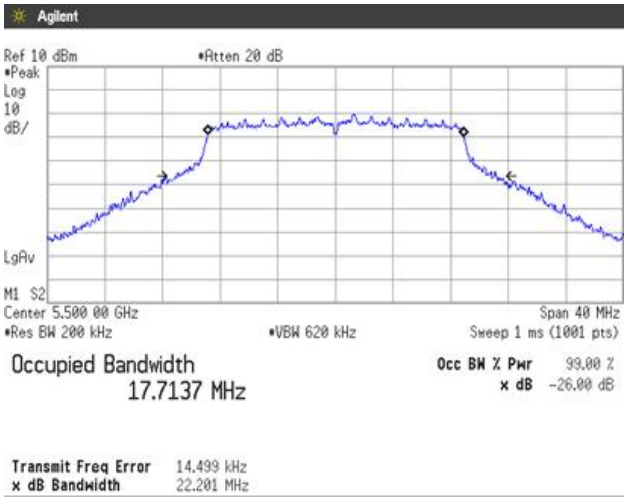
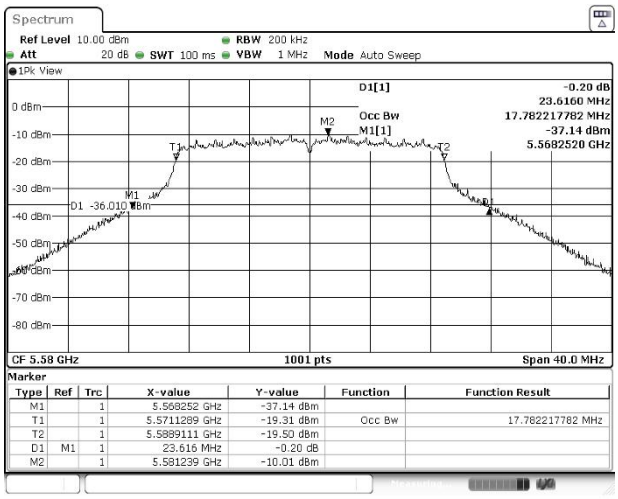
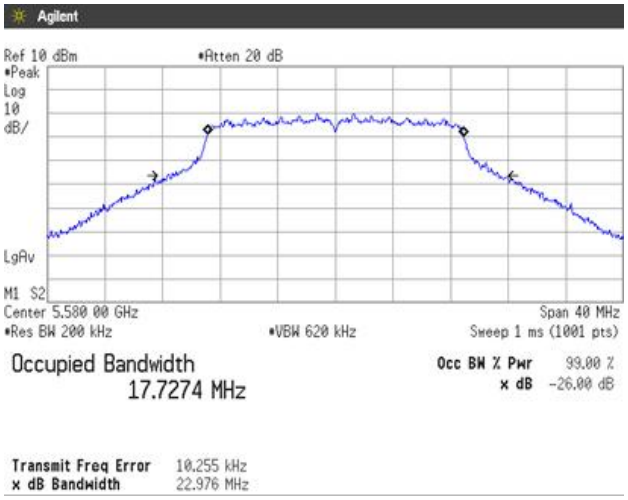
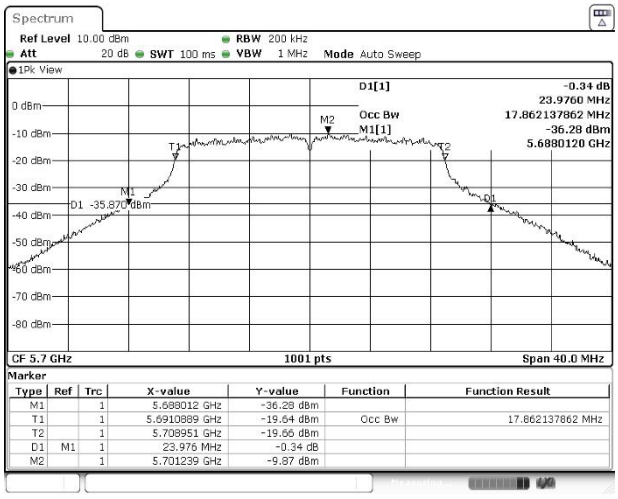
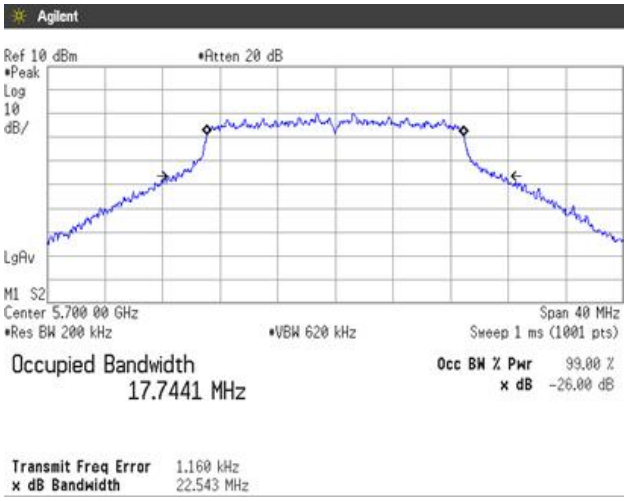
[IEEE802.11n (HT20)]
(5.2 GHz Band)

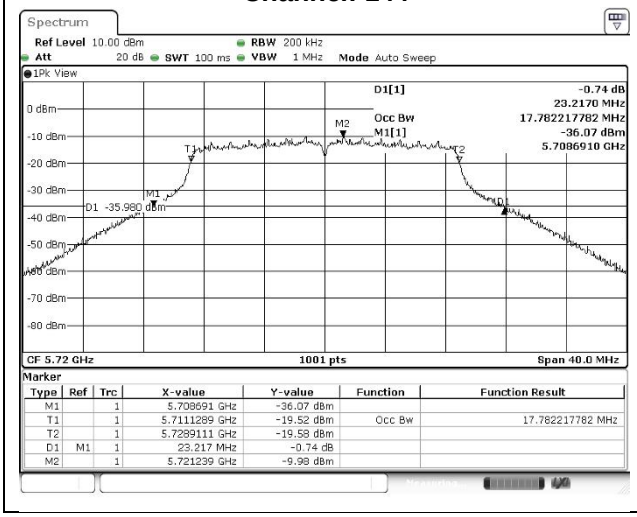
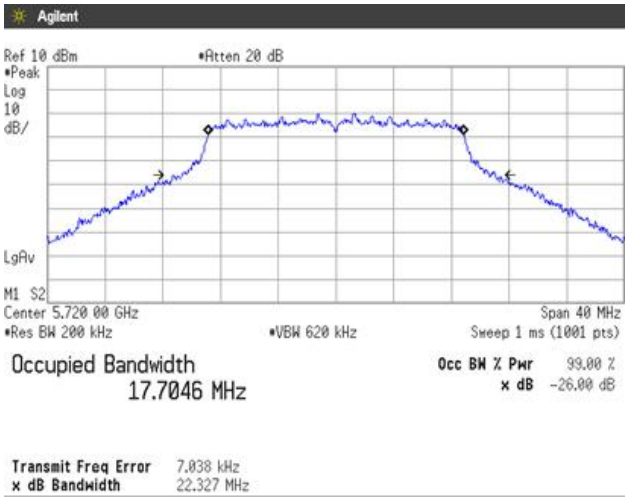
ANT3	ANT5
Channel: 36	**Channel: 36**
	
Channel: 40	**Channel: 40**
	
Channel: 48	**Channel: 48**
	

(5.3 GHz Band)

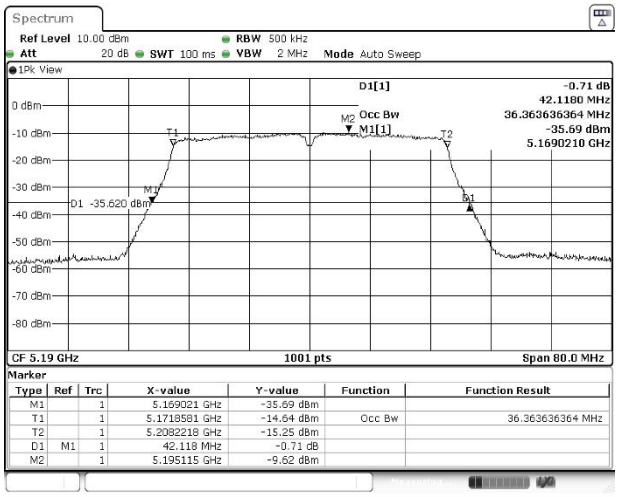
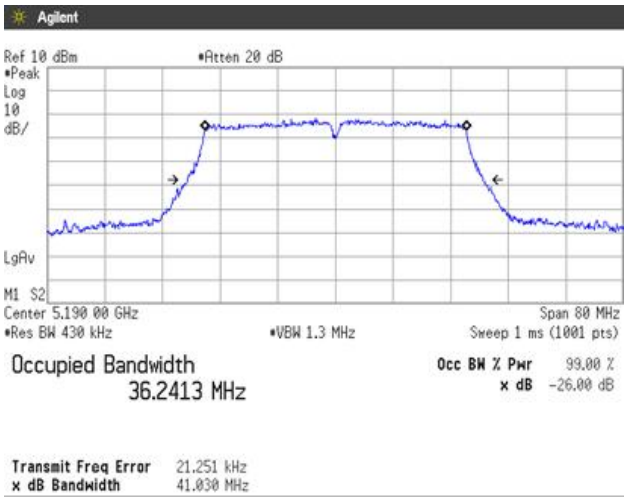
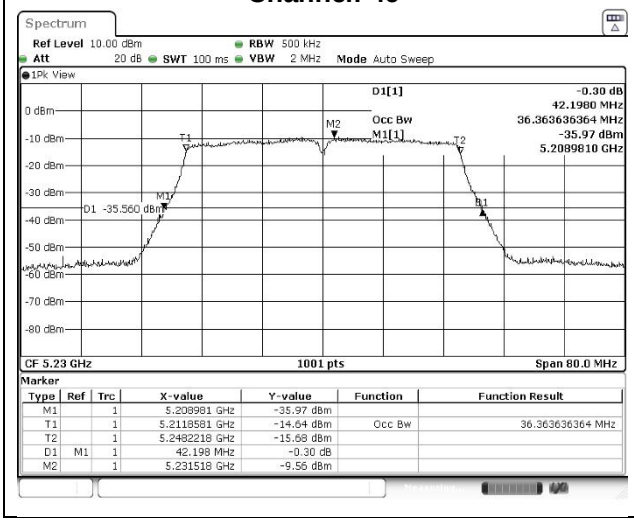
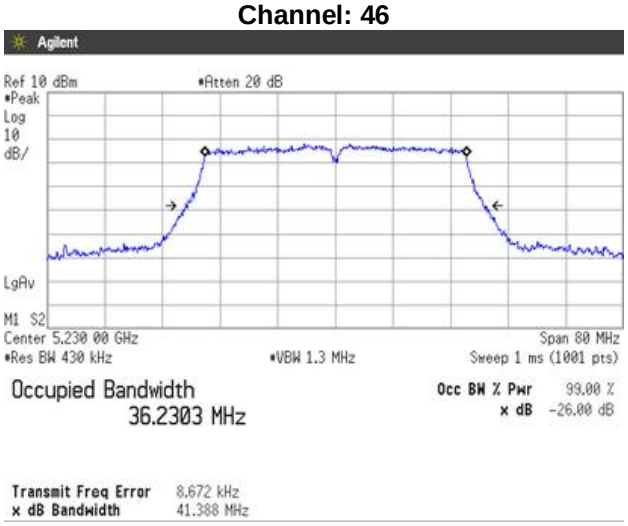
ANT3	ANT5
Channel: 52	**Channel: 52**
	
Channel: 56	**Channel: 56**
	
Channel: 64	**Channel: 64**
	

(5.6 GHz Band)

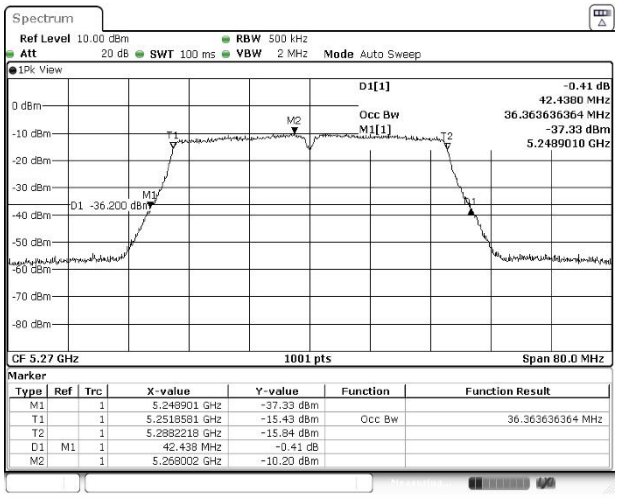
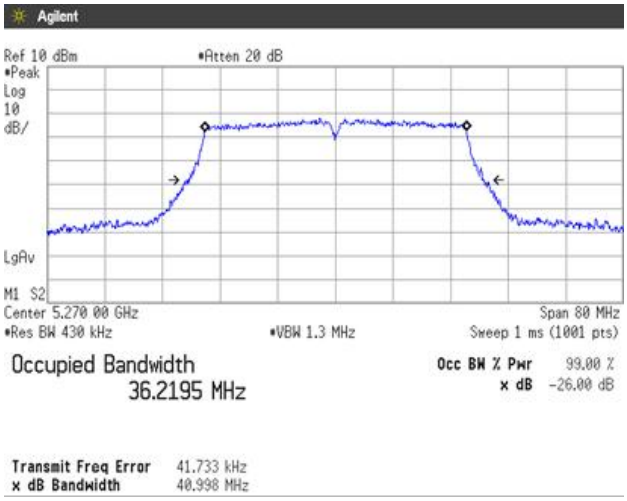
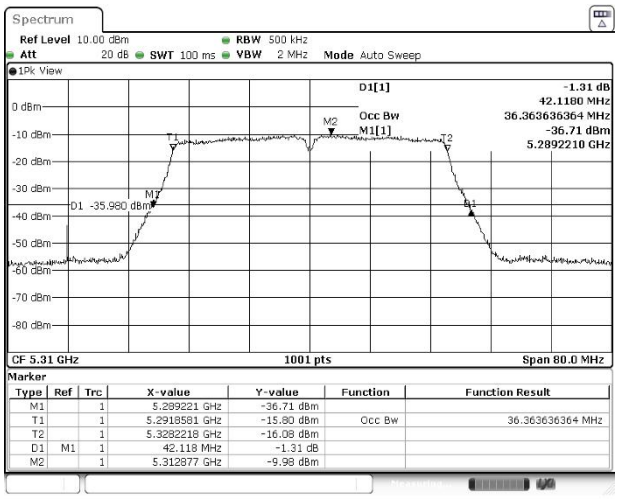
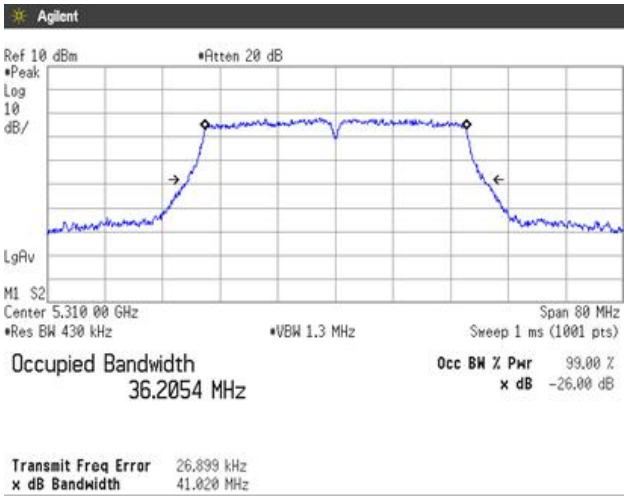
ANT3	ANT5
Channel: 100	**Channel: 100**
	
Channel: 116	**Channel: 116**
	
Channel: 140	**Channel: 140**
	

ANT3	ANT5
Channel: 144	**Channel: 144**
	

[IEEE802.11n (HT40)]
(5.2 GHz Band)

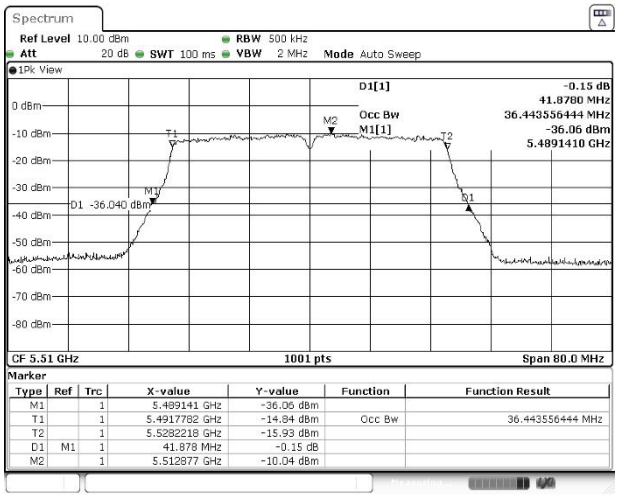
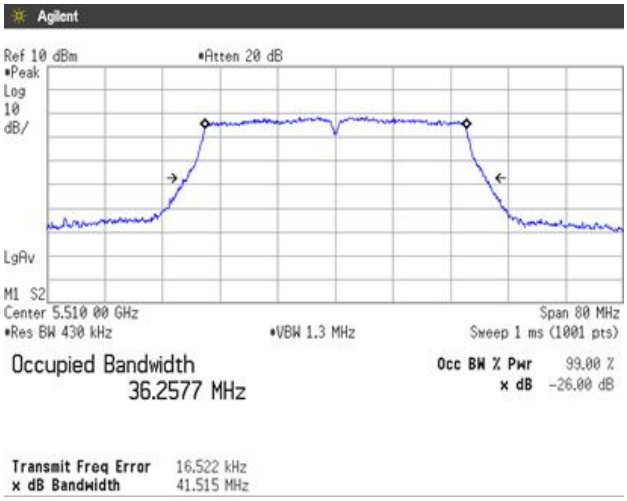
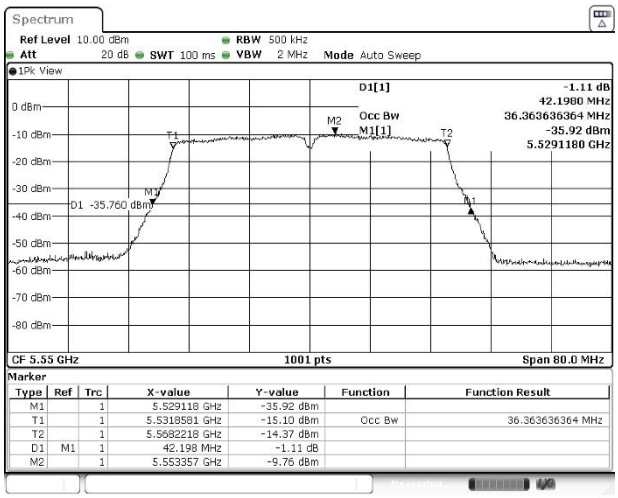
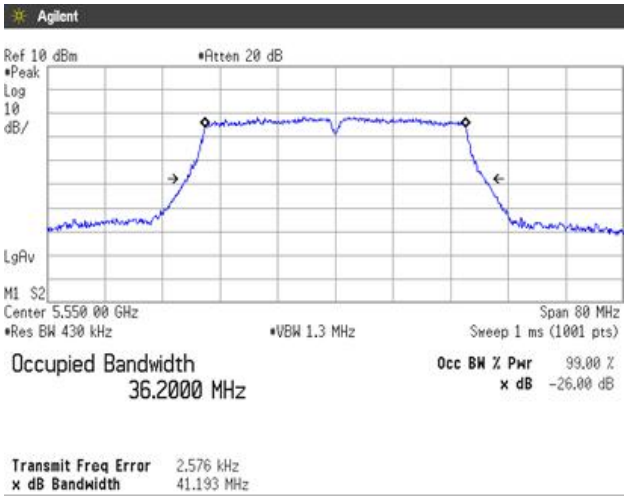
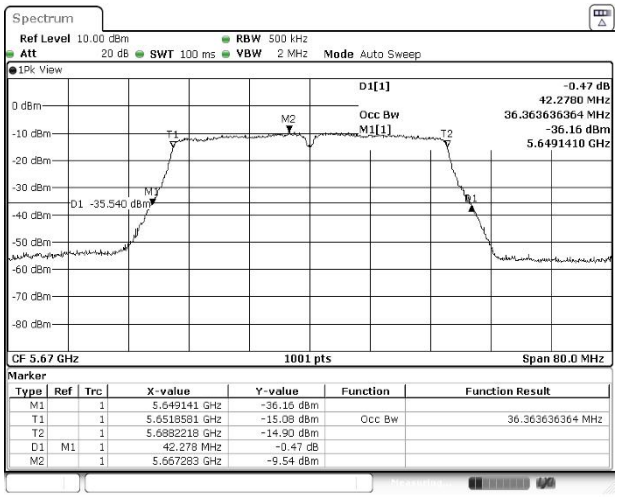
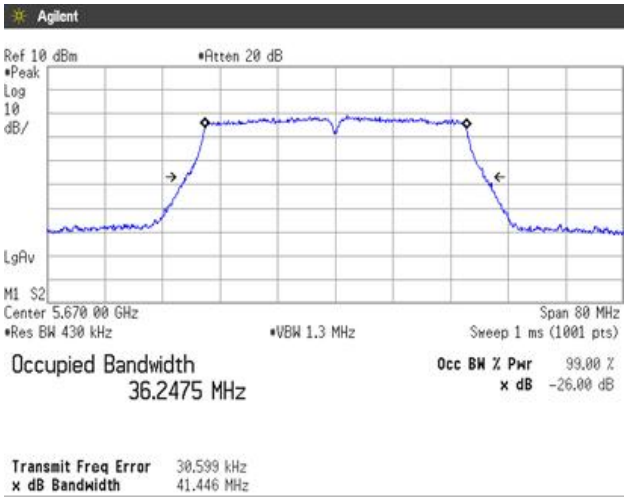
ANT3	ANT5
Channel: 38	**Channel: 38**
	
Channel: 46	**Channel: 46**
	

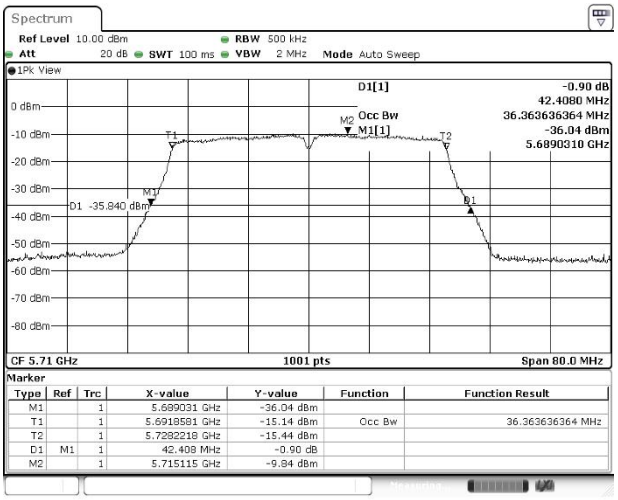
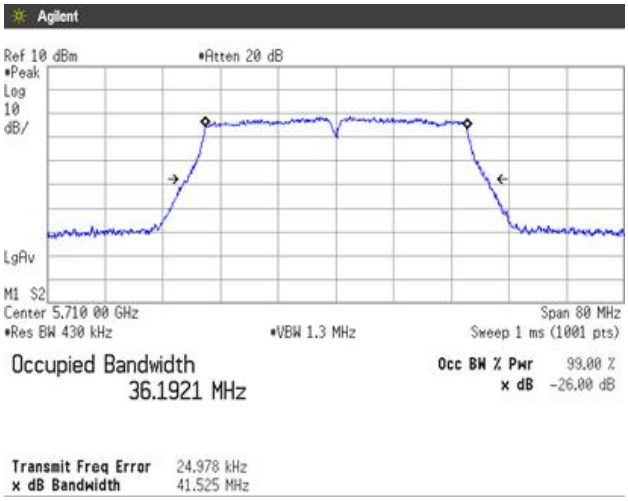
(5.3 GHz Band)

ANT3	ANT5
Channel: 54  	**Channel: 54** 
Channel: 62  	**Channel: 62** 

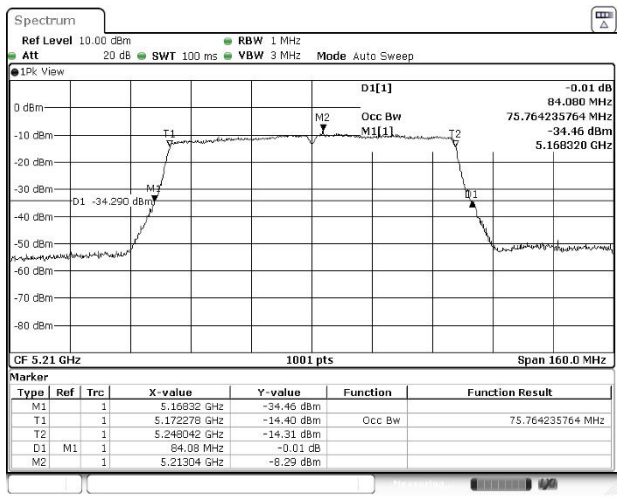
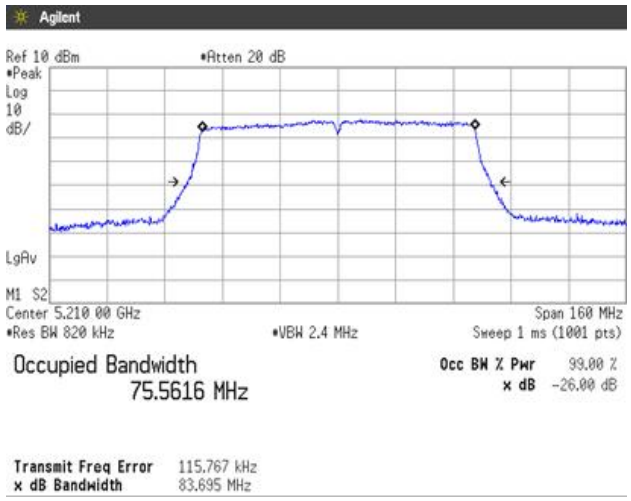
Japan

(5.6 GHz Band)

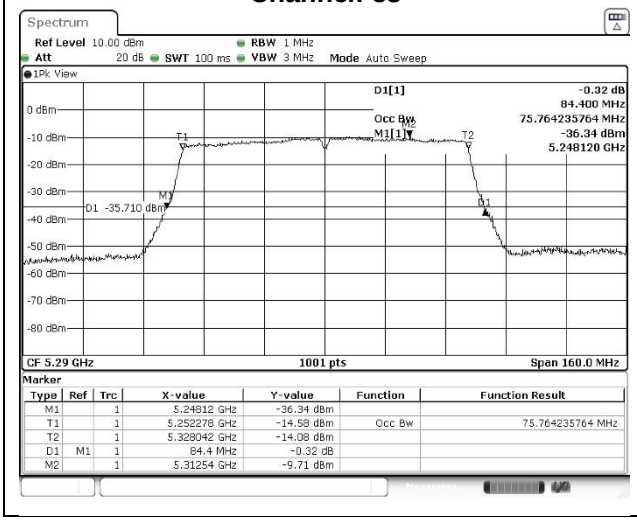
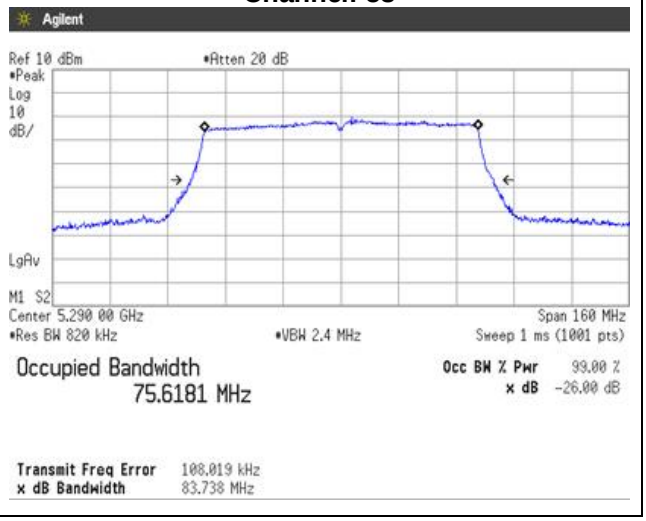
ANT3	ANT5
Channel: 102	**Channel: 102**
	
Channel: 110	**Channel: 110**
	
Channel: 134	**Channel: 134**
	

ANT3	ANT5
Channel: 142	**Channel: 142**
	

[IEEE802.11ac (HT80)]
(5.2 GHz Band)

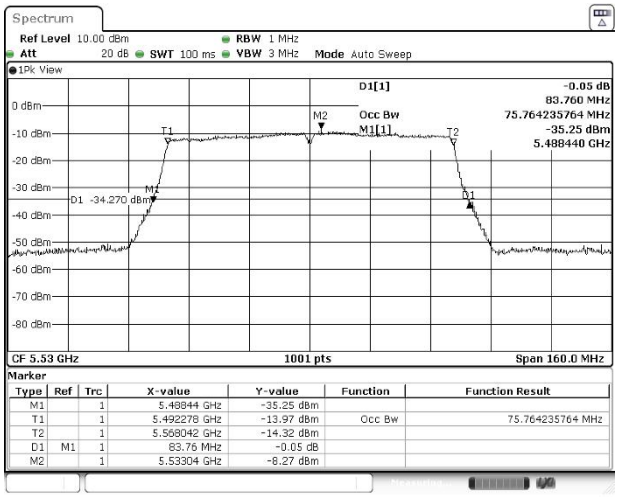
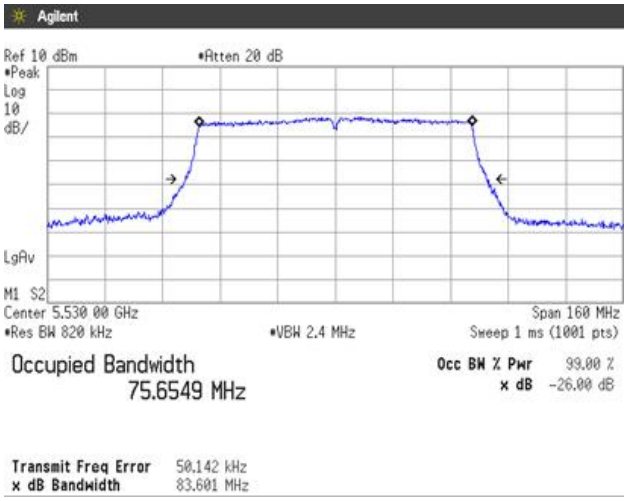
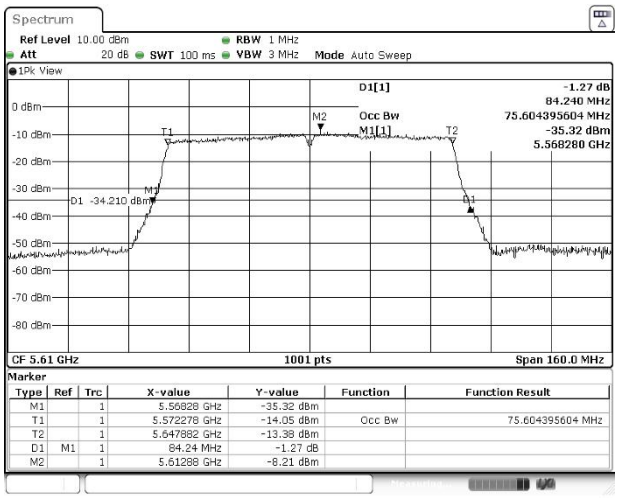
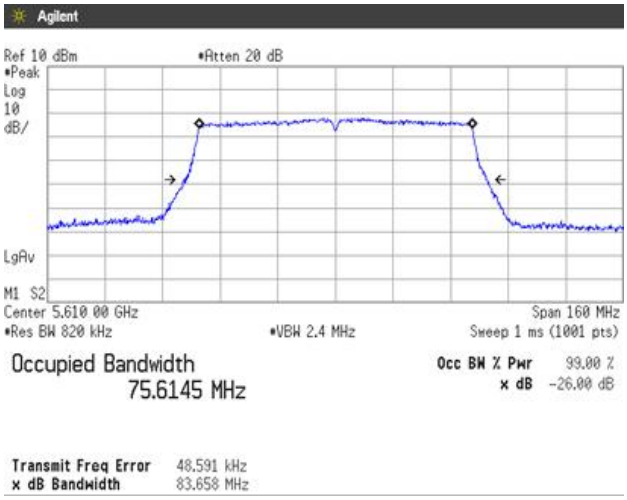
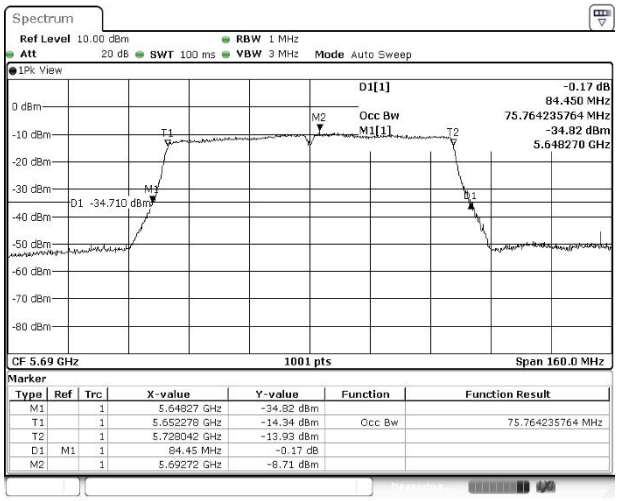
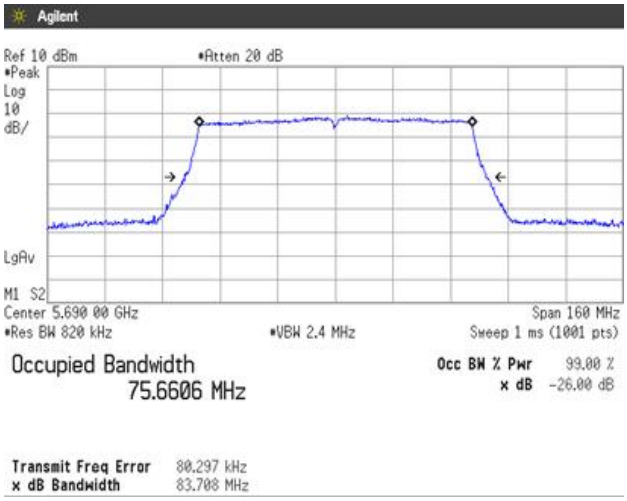
ANT3	ANT5
Channel: 42	**Channel: 42**
	

(5.3GHz Band)

ANT3	ANT5
Channel: 58	**Channel: 58**
	

Japan

(5.6 GHz Band)

ANT3	ANT5
Channel: 106	**Channel: 106**
	
Channel: 122	**Channel: 122**
	
Channel: 138	**Channel: 138**
	

4.2 Maximum Conducted Output Power

4.2.1 Measurement procedure

[FCC 15.407(a), KDB 789033 D02, Section E.2.b) Method SA-1, d)Method SA-2]

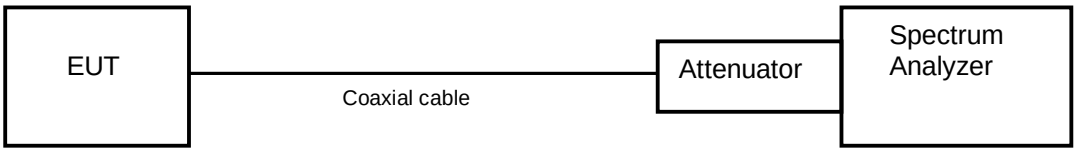
The peak power is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency.

The spectrum analyzer is set to;
- RBW=1MHz, VBW=3MHz, Span=35MHz/70MHz/140MHz, Sweep=auto, Detector=RMS, Trace mode=Averaging

The EUT was set to operate with following conditions.
- 5.2GHz Band, 5.3GHz Band, 5.6GHz Band

The test mode of EUT is as follows.
- Tx mode

- Test configuration



4.2.2 Limit

(1) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250mW provided the maximum antenna gain does not exceed 6 dBi.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250mW or 11dBm + 10logB, where B is the 2 6dB emission bandwidth in megahertz.

(3) For the 5.725-5.85 GHz bands, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

4.2.3 DIRECTIONAL ANTENNA GAIN

Tx chains are uncorrelated for power and correlated for PSD due to the device supporting OFDMA in all MIMO modes. The directional gains are as follows:

Band	ANT3 Gain (dBi)	ANT5 Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)	Correlated Chains Directional Gain (dBi)
5.2 GHz Band	-0.5	1.0	0.31	3.29
5.3 GHz Band	-0.5	1.0	0.31	3.29
5.6 GHz Band	0.1	1.1	0.63	3.62

Note: 802.11a does not support MIMO.

<Output Power Limit Calculation>

ANT3

Band	Mode	Power Limit (mW)	Calculated Limit (dBm)	Antenna Gain (dBi)	Determined Limit (dBm)
5.2GHz Band	802.11a	250	23.97	-0.5	23.97
	802.11n HT20				
	802.11n HT20				
	802.11ac HT80				

ANT5

Band	Mode	Power Limit (mW)	Calculated Limit (dBm)	Antenna Gain (dBi)	Determined Limit (dBm)
5.2GHz Band	802.11a	250	23.97	1.0	23.97
	802.11n HT20				
	802.11n HT20				
	802.11ac HT80				

ANT3+ANT5

Band	Mode	Power Limit (mW)	Calculated Limit (dBm)	Antenna Gain (dBi)	Determined Limit (dBm)
5.2GHz Band	802.11a	MIMO is not supported.			
	802.11n HT20	250	23.97	0.31	23.97
	802.11n HT20				
	802.11ac HT80				

ANT3

Band	Mode	Power Limit (mW) / Least 26dBc BW (MHz)	Calculated Limit (dBm)	Antenna Gain (dBi)	Determined Limit (dBm)
5.3GHz Band	802.11a	250	23.97	-0.5	23.97
		22.458	24.51		
	802.11n HT20	250	23.97		23.97
		23.097	24.64		
	802.11n HT20	250	23.97		23.97
		42.118	27.24		
	802.11ac HT80	250	23.97		23.97
		84.400	30.26		

ANT5

Band	Mode	Power Limit (mW) / Least 26dBc BW (MHz)	Calculated Limit (dBm)	Antenna Gain (dBi)	Determined Limit (dBm)
5.3GHz Band	802.11a	250	23.97	1.0	23.97
		21.221	24.27		
	802.11n HT20	250	23.97		23.97
		22.374	24.50		
	802.11n HT20	250	23.97		23.97
		40.998	27.13		
	802.11ac HT80	250	23.97		23.97
		83.738	30.23		

ANT3+ANT5

Band	Mode	Power Limit (mW) / Least 26dBc BW (MHz)	Calculated Limit (dBm)	Antenna Gain (dBi)	Determined Limit (dBm)
5.3GHz Band	802.11a	MIMO is not supported.			
	802.11n HT20	250	23.97	0.31	23.97
		22.374	24.50		
	802.11n HT20	250	23.97		23.97
		40.998	27.13		
	802.11ac HT80	250	23.97		23.97
		83.738	30.23		

ANT3

Band	Mode	Power Limit (mW) / Least 26dBc BW (MHz)	Calculated Limit (dBm)	Antenna Gain (dBi)	Determined Limit (dBm)
5.6GHz Band	802.11a	250	23.97	0.1	23.97
		22.737	24.57		
	802.11n HT20	250	23.97		23.97
		23.616	24.73		
	802.11n HT20	250	23.97		23.97
		41.878	27.22		
	802.11ac HT80	250	23.97		23.97
		83.760	30.23		

ANT5

Band	Mode	Power Limit (mW) / Least 26dBc BW (MHz)	Calculated Limit (dBm)	Antenna Gain (dBi)	Determined Limit (dBm)
5.6GHz Band	802.11a	250	23.97	1.1	23.97
		21.598	24.34		
	802.11n HT20	250	23.97		23.97
		22.201	24.46		
	802.11n HT20	250	23.97		23.97
		41.193	27.15		
	802.11ac HT80	250	23.97		23.97
		83.601	30.22		

ANT3+ANT5

Band	Mode	Power Limit (mW) / Least 26dBc BW (MHz)	Calculated Limit (dBm)	Antenna Gain (dBi)	Determined Limit (dBm)
5.6GHz Band	802.11a	MIMO is not supported.			
	802.11n HT20	250	23.97	0.63	23.97
		22.201	24.46		
	802.11n HT20	250	23.97		23.97
		41.193	27.15		
	802.11ac HT80	250	23.97		23.97
		83.601	30.22		

Japan

4.2.4 Measurement result

Date	:	15-December-2020			
Temperature	:	21.9 [˚C]			
Humidity	:	28.5 [%]	Test engineer	:	
Test place	:	Shielded room No.4			Taiki Watanabe

Date	:	22-December-2020			
Temperature	:	22.8 [˚C]			
Humidity	:	27.9 [%]	Test engineer	:	
Test place	:	Shielded room No.4			Taiki Watanabe

Date	:	24-December-2020			
Temperature	:	21.7 [˚C]			
Humidity	:	28.2 [%]	Test engineer	:	
Test place	:	Shielded room No.4			Taiki Watanabe

ANT3

Mode	Channel	Frequency (MHz)	Reading (dBm)	Duty Cycle			DCF (dB)	Test Result (dBm)	Test Result (mW)
				On Time(ms)	On+Off Time(ms)	X			
802.11a	36	5180	8.68	1.344	1.382	0.973	0.121	8.801	7.588
	40	5200	8.51					8.631	7.296
	58	5240	9.13					9.251	8.416
	52	5260	8.74	1.342	1.378	0.974	0.115	8.855	7.682
	56	5280	8.89					9.005	7.952
	64	5320	8.80					8.915	7.789
	100	5500	9.81	1.342	1.378	0.974	0.115	9.925	9.829
	116	5580	9.51					9.625	9.173
	140	5700	9.59					9.705	9.343
	144	5720	9.62					9.735	9.408

ANT5

Mode	Channel	Frequency (MHz)	Reading (dBm)	Duty Cycle			DCF (dB)	Test Result (dBm)	Test Result (mW)
				On Time(ms)	On+Off Time(ms)	X			
802.11a	36	5180	8.68	1.344	1.382	0.973	0.121	8.801	7.588
	40	5200	9.02					9.141	8.206
	58	5240	8.46					8.581	7.213
	52	5260	8.61	1.342	1.378	0.974	0.115	8.725	7.456
	56	5280	8.45					8.565	7.186
	64	5320	8.95					9.065	8.063
	100	5500	9.19	1.342	1.378	0.974	0.115	9.305	8.521
	116	5580	8.91					9.025	7.989
	140	5700	8.93					9.045	8.026
	144	5720	9.58					9.695	9.322

Note1: X = On time / (On + Off time), DCF=10log (1/x)
Note2: Test Result=Reading + DCF

ANT3+ANT5

Note: 802.11a does not support MIMO.

ANT3

Mode	Channel	Frequency (MHz)	Reading (dBm)	Duty Cycle			DCF (dB)	Test Result (dBm)	Test Result (mW)
				On Time(ms)	On+Off Time(ms)	X			
802.11n (20MHz)	36	5180	8.49	1.258	1.294	0.972	0.123	8.613	7.265
	40	5200	8.63					8.753	7.503
	58	5240	8.90					9.023	7.985
	52	5260	8.57	1.258	1.296	0.971	0.129	8.699	7.412
	56	5280	8.69					8.819	7.619
	64	5320	8.76					8.889	7.743
	100	5500	9.56	1.256	1.294	0.971	0.129	9.689	9.310
	116	5580	9.33					9.459	8.830
	140	5700	9.35					9.479	8.870
	144	5720	9.41					9.539	8.994

ANT5

Mode	Channel	Frequency (MHz)	Reading (dBm)	Duty Cycle			DCF (dB)	Test Result (dBm)	Test Result (mW)
				On Time(ms)	On+Off Time(ms)	X			
802.11n (20MHz)	36	5180	8.45	1.258	1.294	0.972	0.123	8.573	7.199
	40	5200	8.68					8.803	7.590
	58	5240	8.96					9.083	8.096
	52	5260	8.50	1.258	1.296	0.971	0.129	8.629	7.293
	56	5280	8.29					8.419	6.949
	64	5320	8.77					8.899	7.761
	100	5500	8.75	1.256	1.294	0.971	0.129	8.879	7.726
	116	5580	8.88					9.009	7.961
	140	5700	9.19					9.319	8.550
	144	5720	9.41					9.539	8.994

ANT3+ANT5

Mode	Channel	Frequency (MHz)	Test Result (dBm)		Total Test Result (dBm)	Total Test Result (mW)
			ANT3	ANT5		
802.11n (20MHz)	36	5180	8.613	8.573	11.603	14.464
	40	5200	8.753	8.803	11.788	15.094
	58	5240	9.023	9.083	12.063	16.080
	52	5260	8.699	8.629	11.675	14.705
	56	5280	8.819	8.419	11.634	14.568
	64	5320	8.889	8.899	11.905	15.504
	100	5500	9.689	8.879	12.314	17.036
	116	5580	9.459	9.009	12.251	16.790
	140	5700	9.479	9.319	12.410	17.420
	144	5720	9.539	9.539	12.550	17.988

Note: X = On time / (On + Off time), DCF=10log (1/x)
Note2: Test Result=Reading + DCF

Japan

ANT3

Mode	Channel	Frequency (MHz)	Reading (dBm)	Duty Cycle			DCF (dB)	Test Result (dBm)	Test Result (mW)
				On Time(ms)	On+Off Time(ms)	X			
802.11n (40MHz)	38	5190	8.65	0.627	0.664	0.944	0.249	8.899	7.761
	46	5230	9.11					9.359	8.628
	54	5270	8.66	0.627	0.664	0.944	0.249	8.909	7.779
	62	5310	8.84					9.089	8.108
	102	5510	9.90	0.628	0.665	0.944	0.249	10.149	10.348
	110	5550	9.85					10.099	10.230
	134	5670	9.55					9.799	9.547
	142	5710	9.52					9.769	9.481

ANT5

Mode	Channel	Frequency (MHz)	Reading (dBm)	Duty Cycle			DCF (dB)	Test Result (dBm)	Test Result (mW)
				On Time(ms)	On+Off Time(ms)	X			
802.11n (40MHz)	38	5190	8.54	0.627	0.664	0.944	0.249	8.789	7.567
	46	5230	8.47					8.719	7.446
	54	5270	8.47	0.627	0.664	0.944	0.249	8.719	7.446
	62	5310	9.00					9.249	8.412
	102	5510	9.20	0.628	0.665	0.944	0.249	9.449	8.808
	110	5550	9.60					9.849	9.657
	134	5670	9.29					9.539	8.992
	142	5710	9.48					9.729	9.394

ANT3+ANT5

Mode	Channel	Frequency (MHz)	Test Result (dBm)		Total Test Result (dBm)	Total Test Result (mW)
			ANT3	ANT5		
802.11n (40MHz)	38	5190	8.899	8.789	11.855	15.327
	46	5230	9.359	8.719	12.061	16.073
	54	5270	8.909	8.719	11.825	15.224
	62	5310	9.089	9.249	12.180	16.520
	102	5510	10.149	9.449	12.823	19.156
	110	5550	10.099	9.849	12.986	19.887
	134	5670	9.799	9.539	12.681	18.539
	142	5710	9.769	9.729	12.759	18.875

Note: X = On time / (On + Off time), DCF=10log (1/x)
Note2: Test Result=Reading + DCF

ANT3

Mode	Channel	Frequency (MHz)	Reading (dBm)	Duty Cycle			DCF (dB)	Test Result (dBm)	Test Result (mW)
				On Time(ms)	On+Off Time(ms)	X			
802.11ac (80MHz)	42	5210	8.20	0.315	0.352	0.895	0.481	8.681	7.381
	58	5290	8.42	0.316	0.352	0.897	0.474	8.894	7.752
	106	5530	9.45	0.316	0.352	0.897	0.474	9.924	9.827
	122	5610	9.25	0.316	0.352	0.897	0.474	9.724	9.384
	138	5690	8.91	0.316	0.352	0.897	0.474	9.384	8.678

ANT5

Mode	Channel	Frequency (MHz)	Reading (dBm)	Duty Cycle			DCF (dB)	Test Result (dBm)	Test Result (mW)
				On Time(ms)	On+Off Time(ms)	X			
802.11ac (80MHz)	42	5210	8.26	0.315	0.352	0.895	0.481	8.741	7.483
	58	5290	8.51	0.316	0.352	0.897	0.474	8.984	7.914
	106	5530	9.15	0.316	0.352	0.897	0.474	9.624	9.171
	122	5610	8.72	0.316	0.352	0.897	0.474	9.194	8.306
	138	5690	8.94	0.316	0.352	0.897	0.474	9.414	8.738

ANT3+ANT5

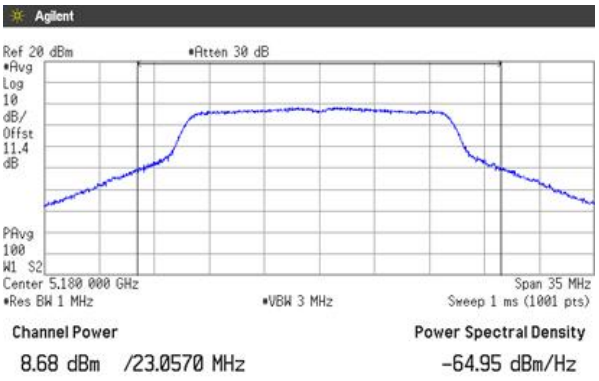
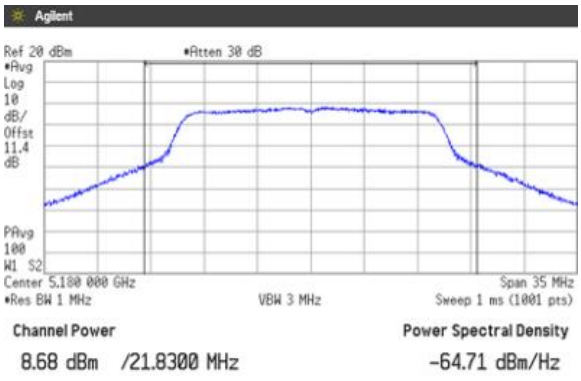
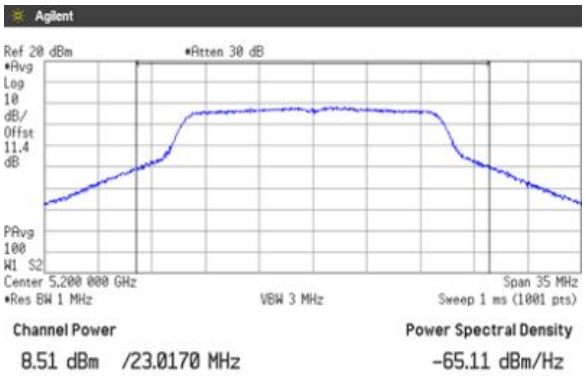
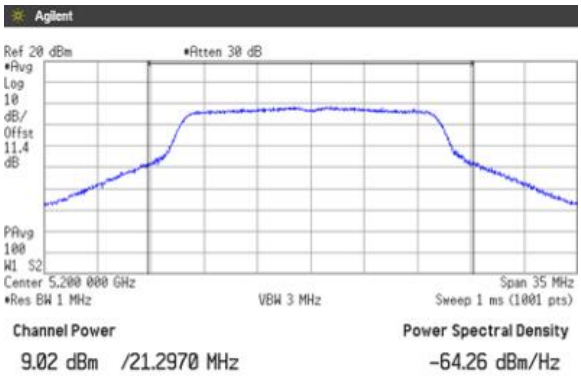
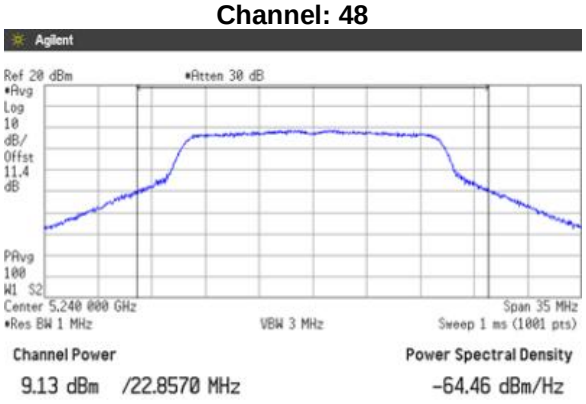
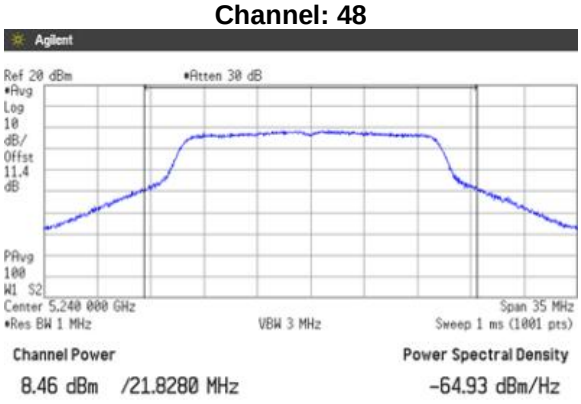
Mode	Channel	Frequency (MHz)	Test Result (dBm)		Total Test Result (dBm)	Total Test Result (mW)
			ANT3	ANT5		
802.11ac (80MHz)	42	5210	8.681	8.741	11.721	14.864
	58	5290	8.894	8.984	11.950	15.666
	106	5530	9.924	9.624	12.787	18.997
	122	5610	9.724	9.194	12.477	17.691
	138	5690	9.384	9.414	12.409	17.416

Note: X = On time / (On + Off time), DCF=10log (1/x)
Note2: Test Result=Reading + DCF

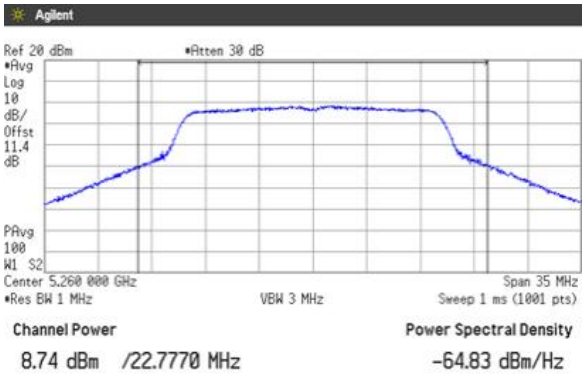
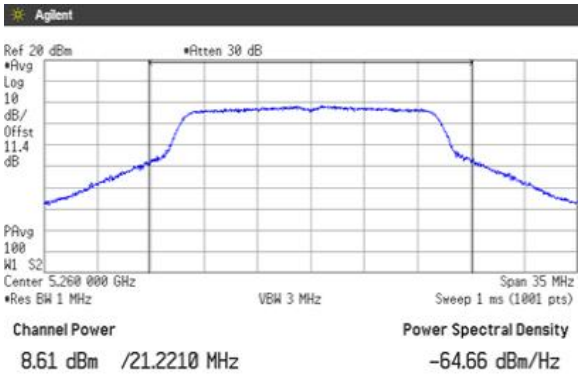
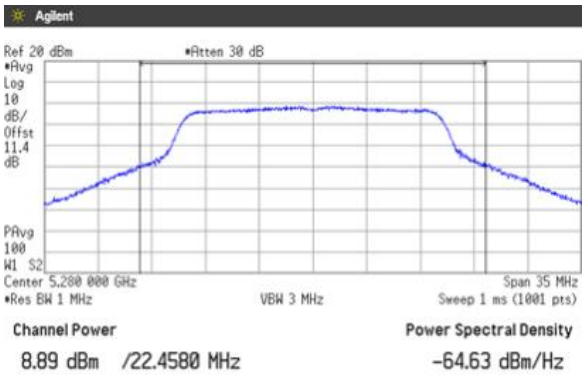
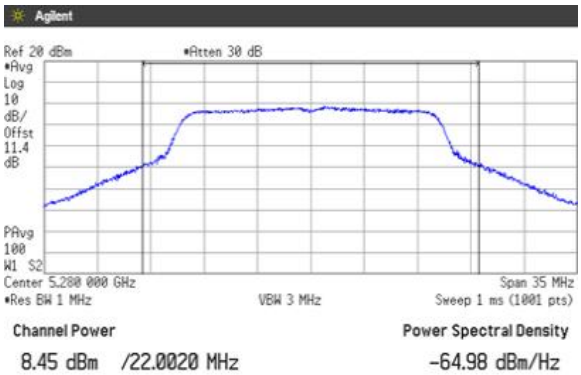
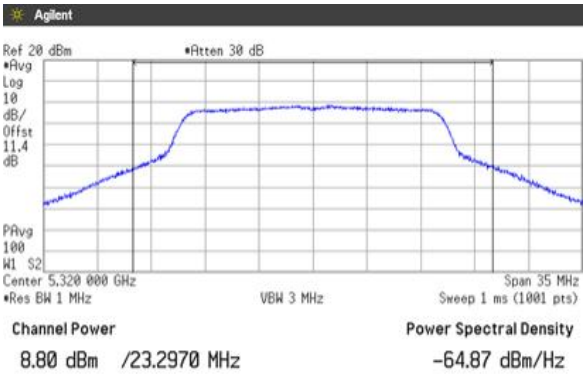
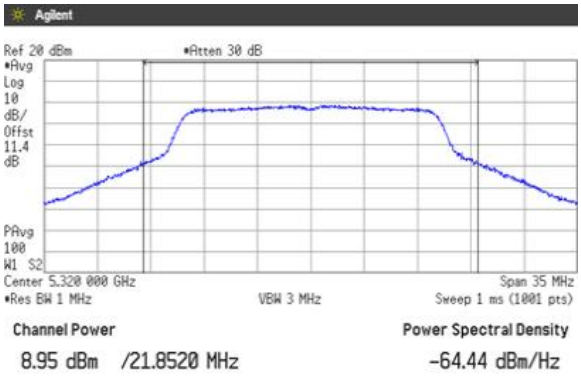
Japan

4.2.5 Trace data

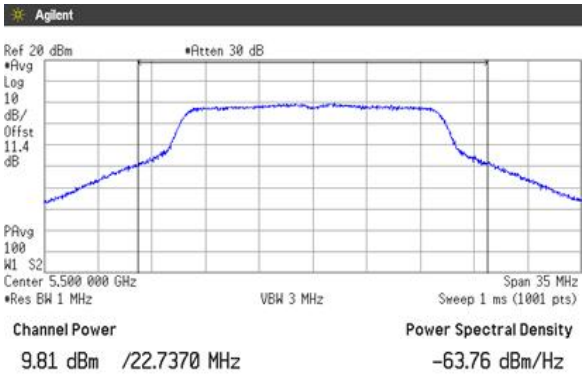
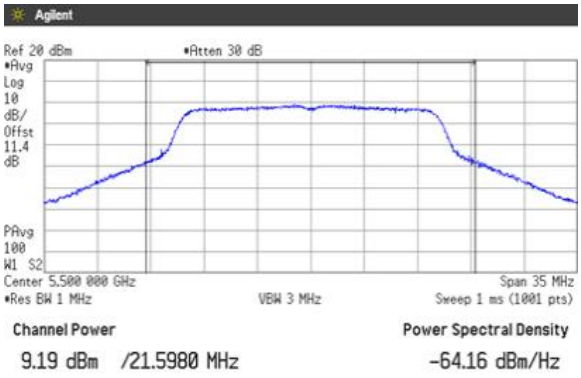
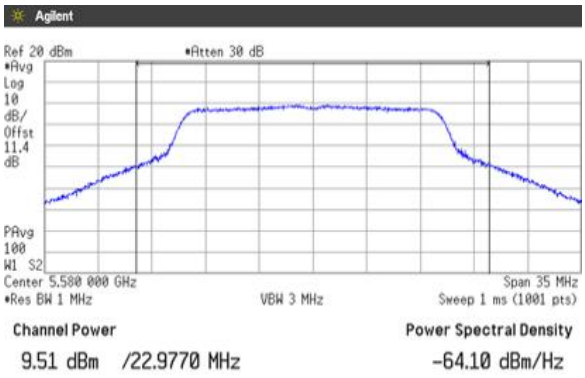
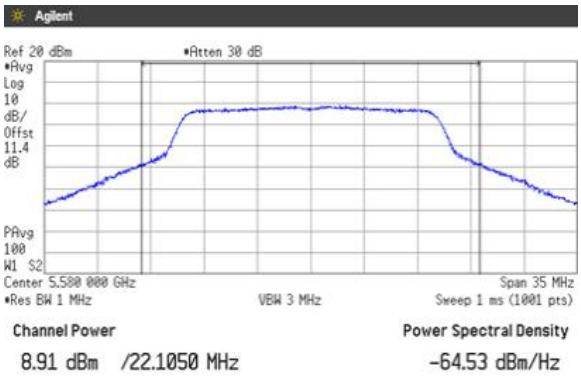
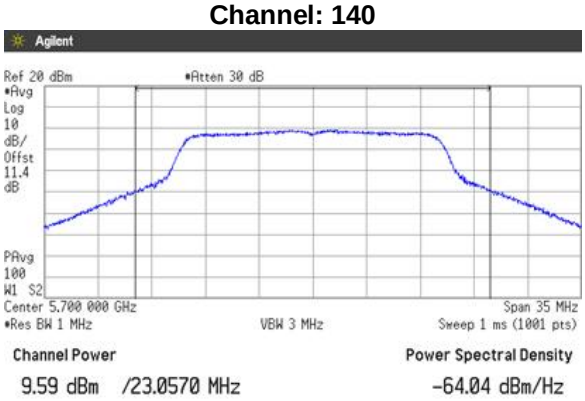
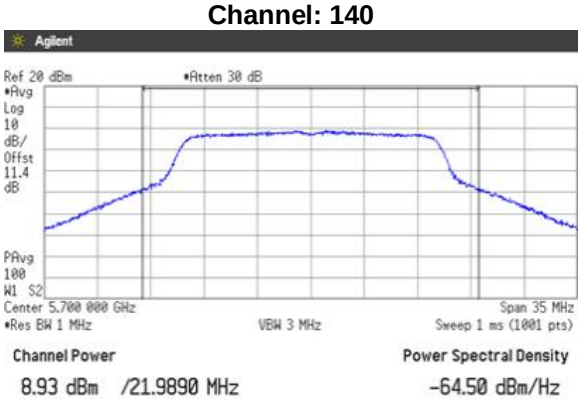
[IEEE802.11a]
(5.2 GHz Band)

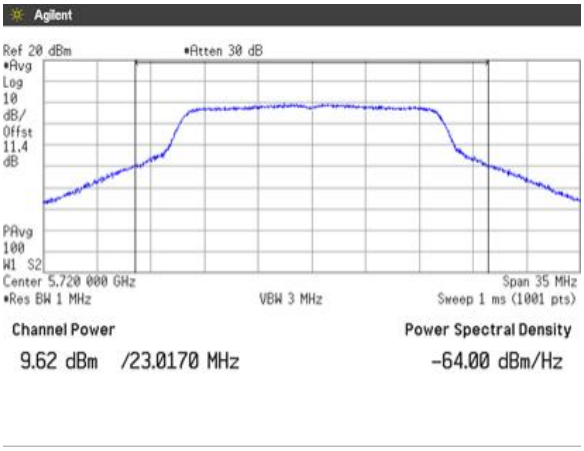
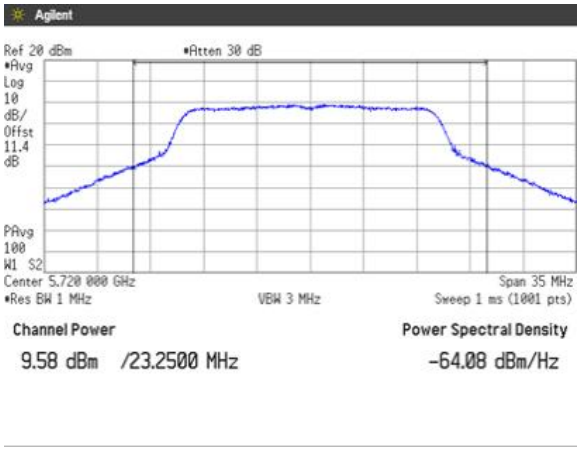
ANT3	ANT5
Channel: 36	**Channel: 36**
	
Channel: 40	**Channel: 40**
	
Channel: 48	**Channel: 48**
	

(5.3 GHz Band)

ANT3	ANT5
Channel: 52  	**Channel: 52** 
Channel: 56  	**Channel: 56** 
Channel: 64  	**Channel: 64** 

(5.6 GHz Band)

ANT3	ANT5
Channel: 100  	**Channel: 100** 
Channel: 116  	**Channel: 116** 
Channel: 140  	**Channel: 140** 

ANT3	ANT5
Channel: 144	**Channel: 144**
	

[IEEE802.11n (HT20)]
(5.2 GHz Band)

ANT3	ANT5
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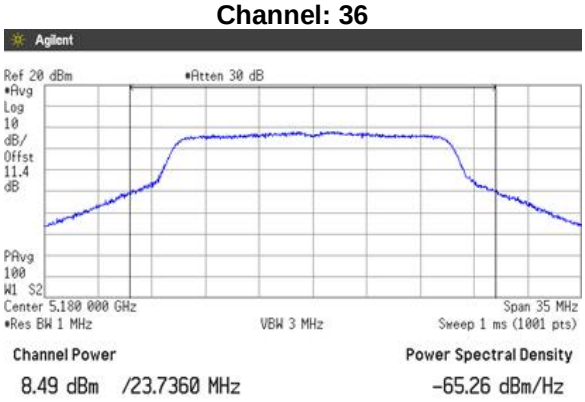	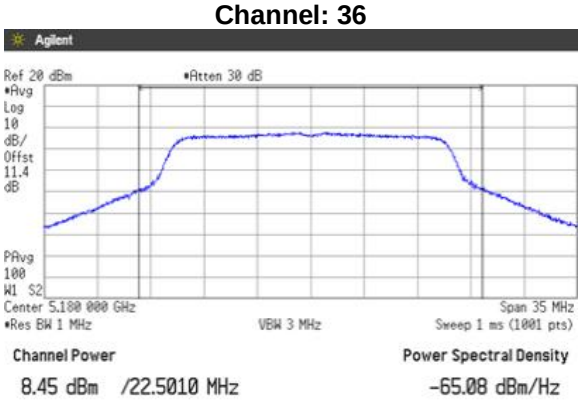
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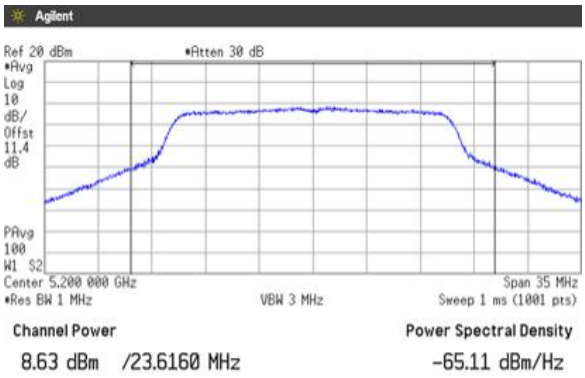
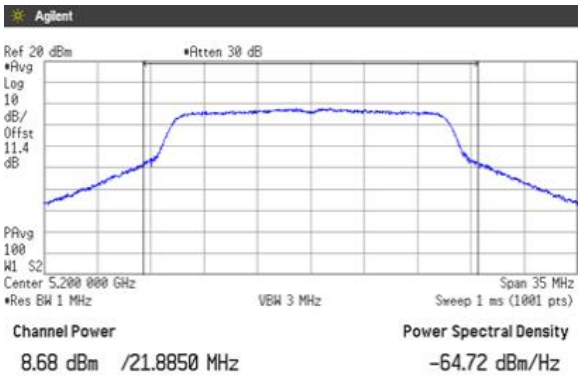
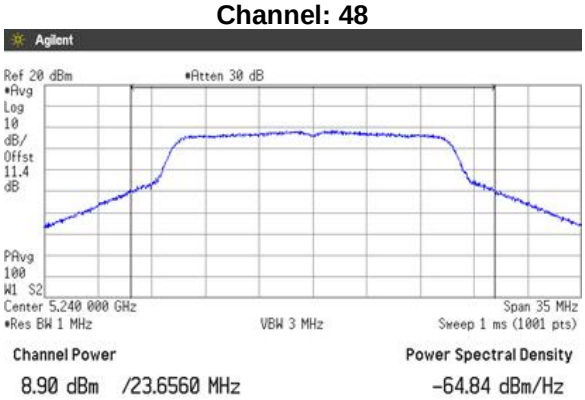
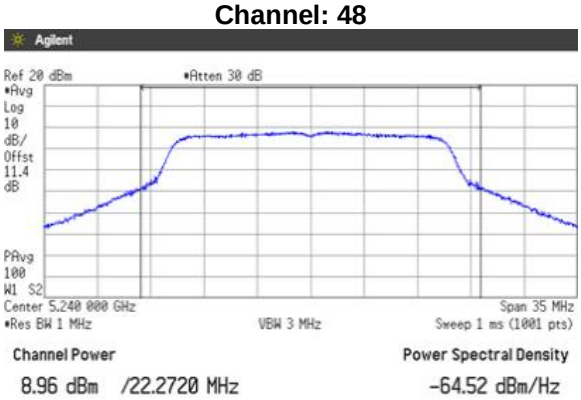
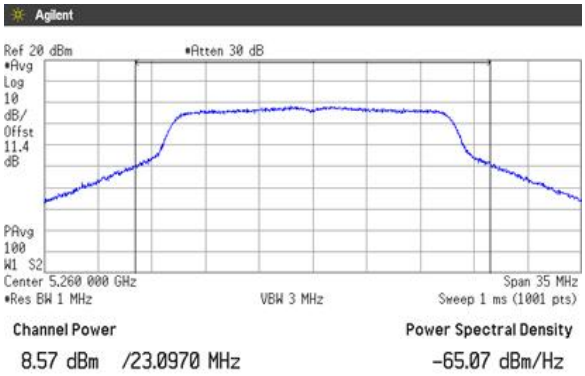
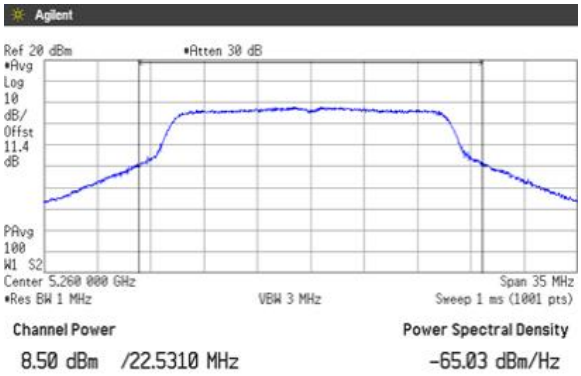
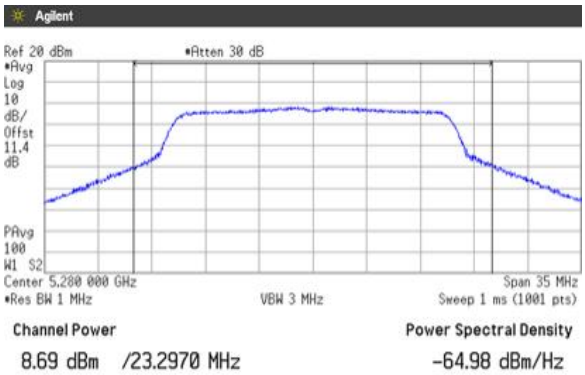
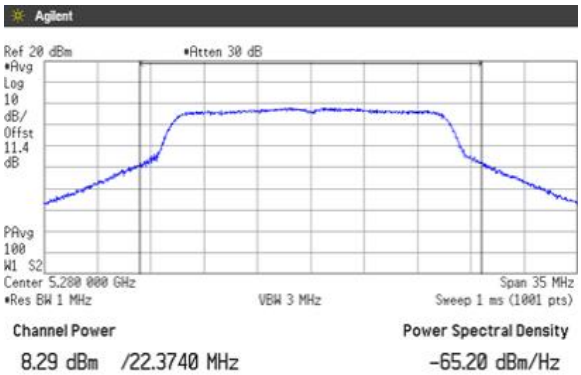
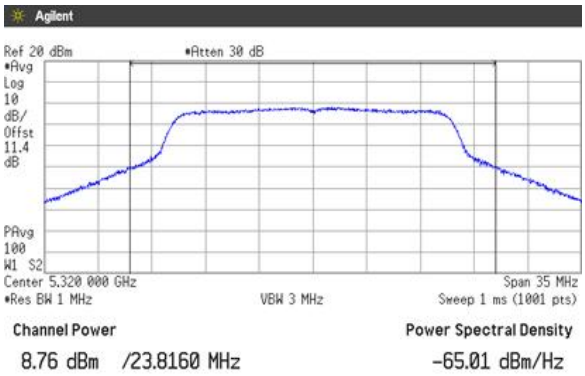
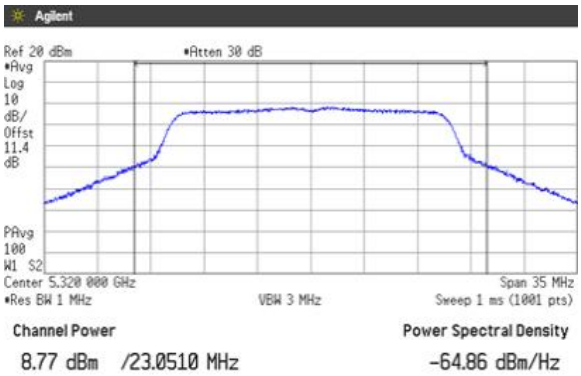
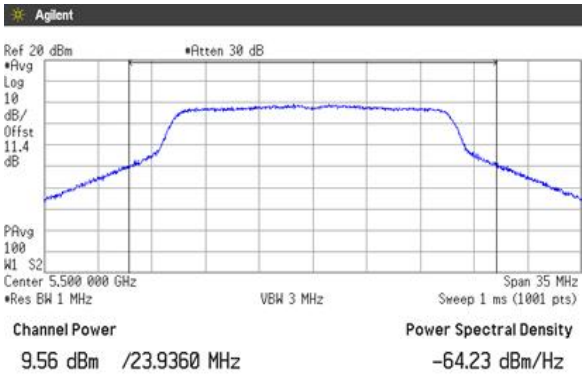
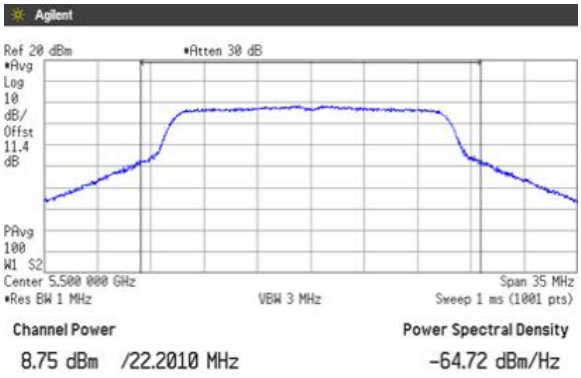
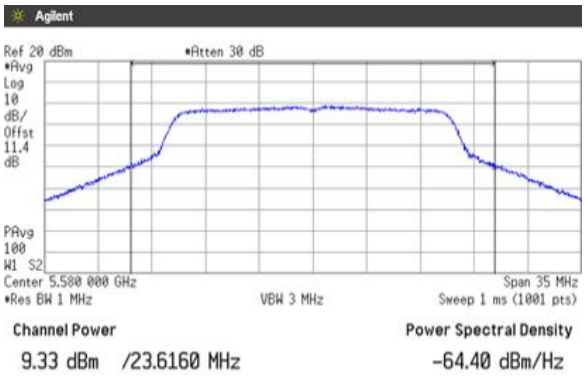
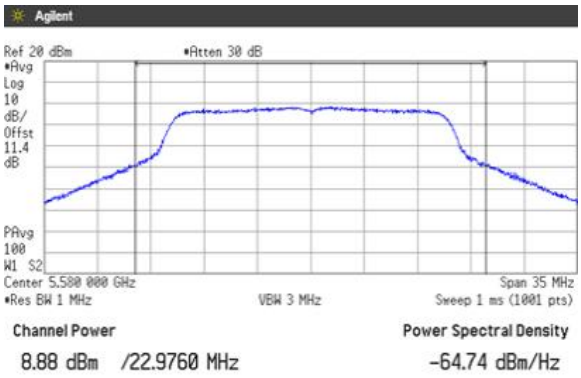
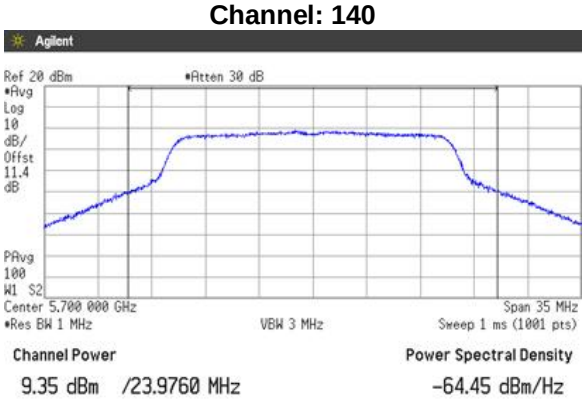
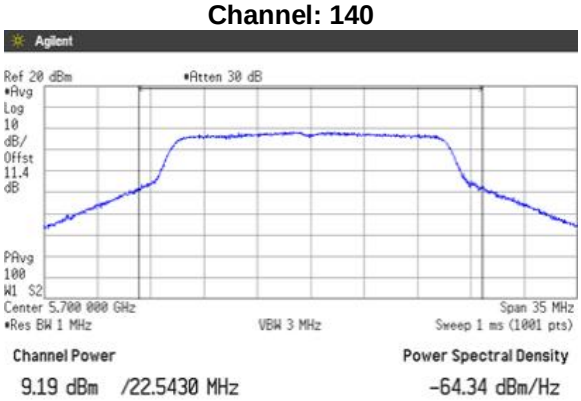
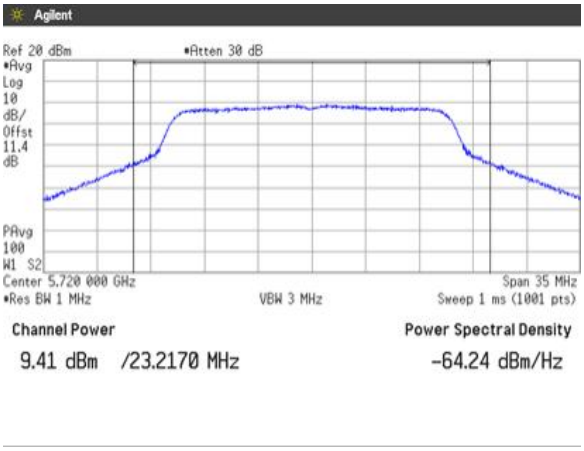
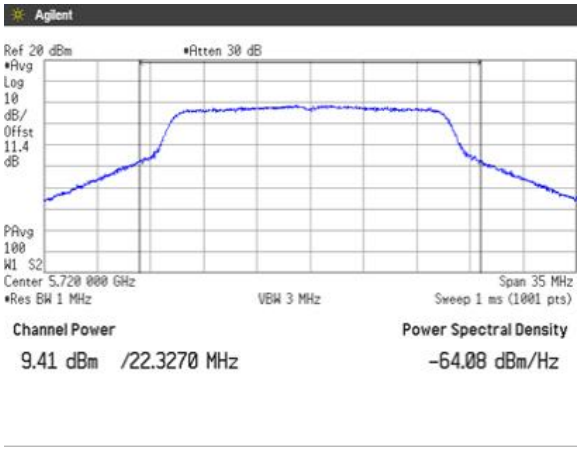
	
Channel: 48	**Channel: 48**
	

(5.3 GHz Band)

ANT3	ANT5
Channel: 52  	**Channel: 52** 
Channel: 56  	**Channel: 56** 
Channel: 64  	**Channel: 64** 

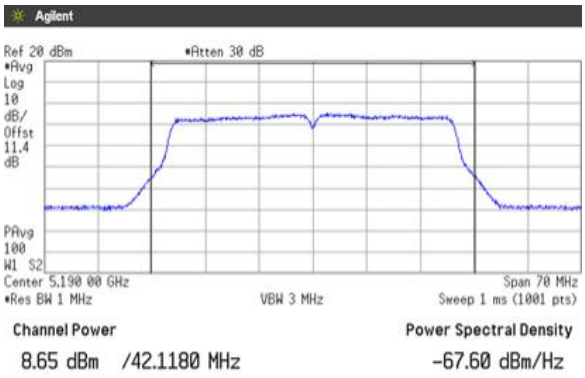
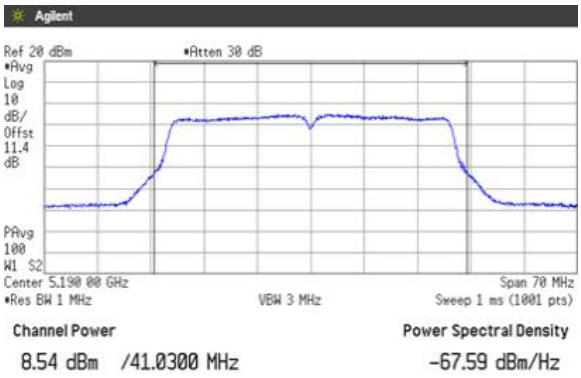
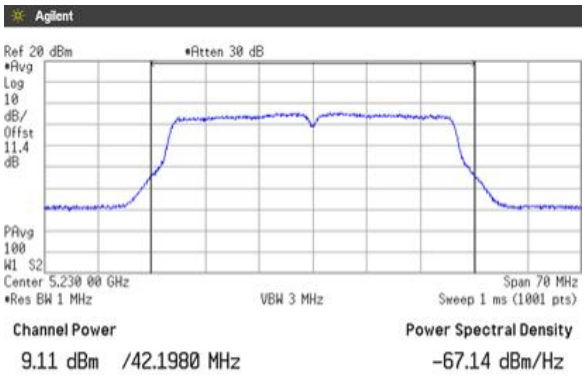
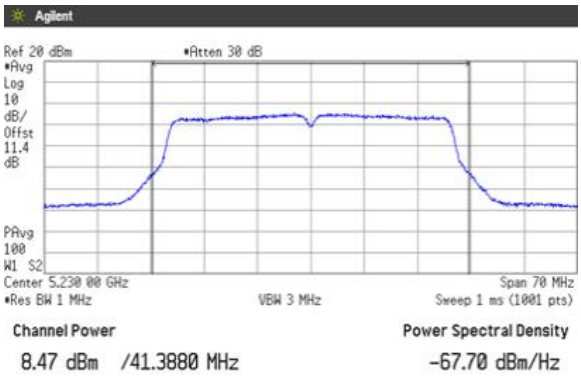
(5.6 GHz Band)

ANT3	ANT5
Channel: 100  	**Channel: 100** 
Channel: 116  	**Channel: 116** 
Channel: 140  	**Channel: 140** 

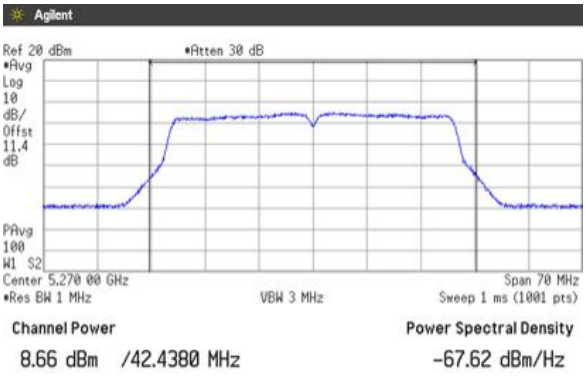
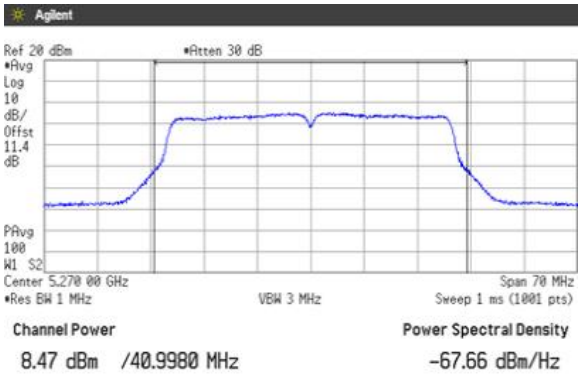
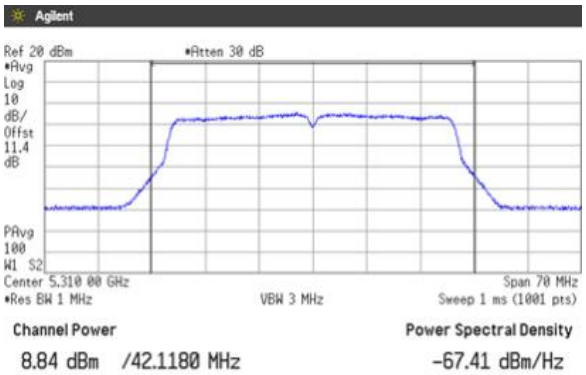
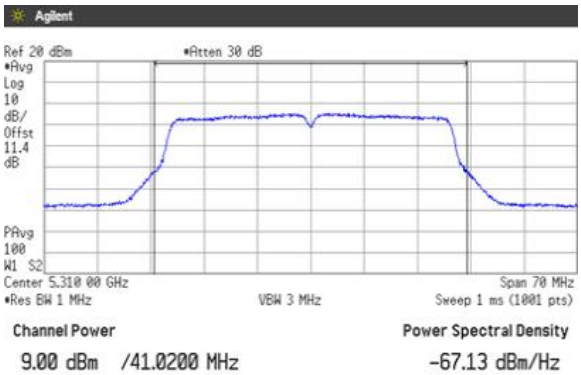
ANT3	ANT5
Channel: 144	**Channel: 144**
	

Japan

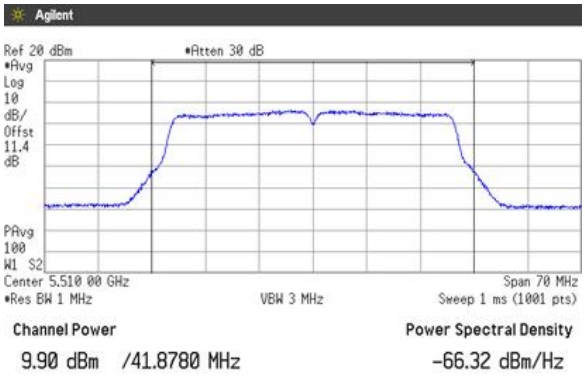
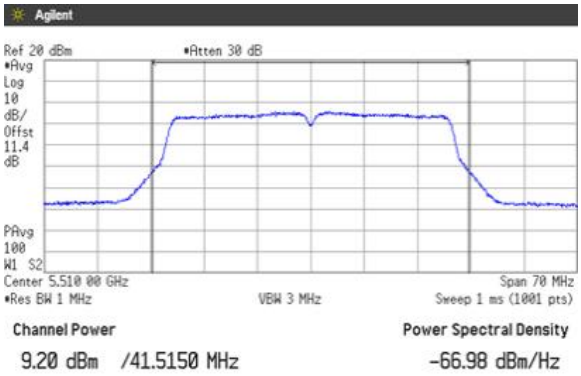
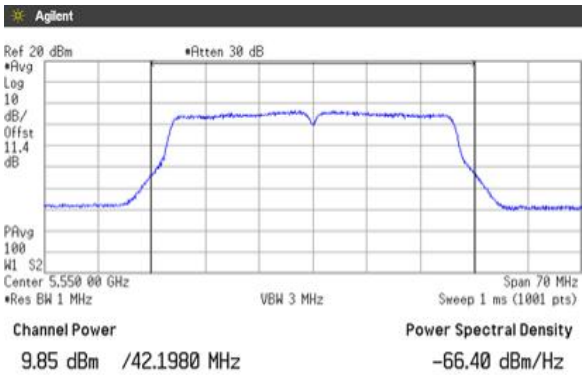
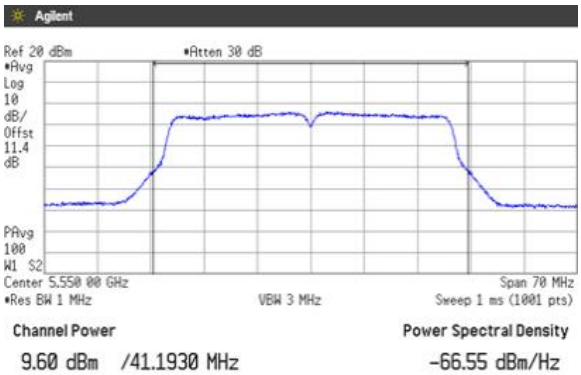
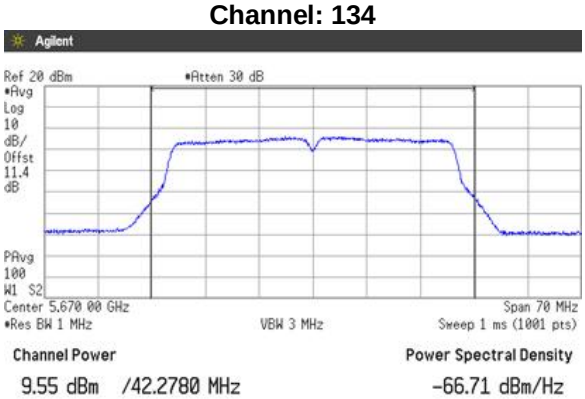
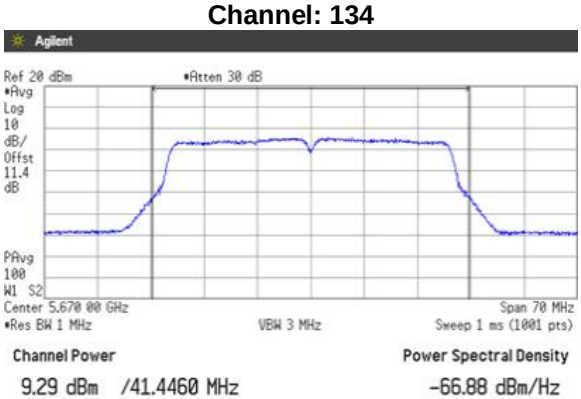
[IEEE802.11n (HT40)]
(5.2 GHz Band)

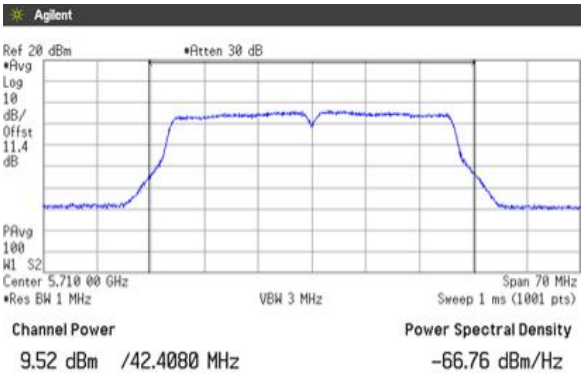
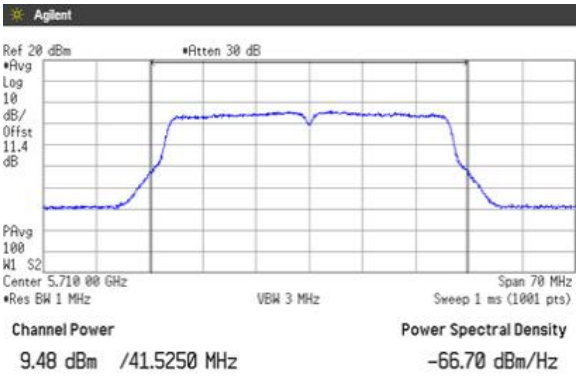
ANT3	ANT5
Channel: 38  	**Channel: 38** 
Channel: 46  	**Channel: 46** 

(5.3 GHz Band)

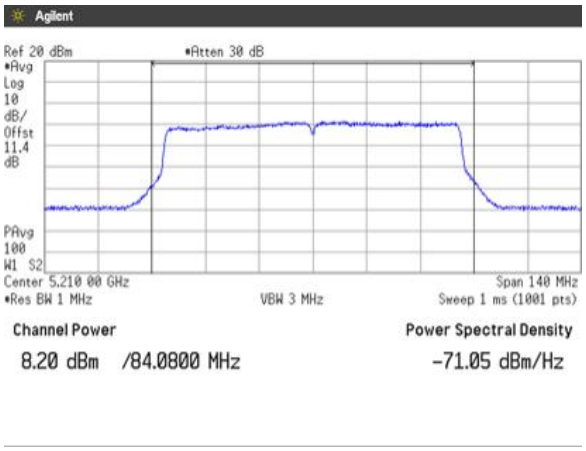
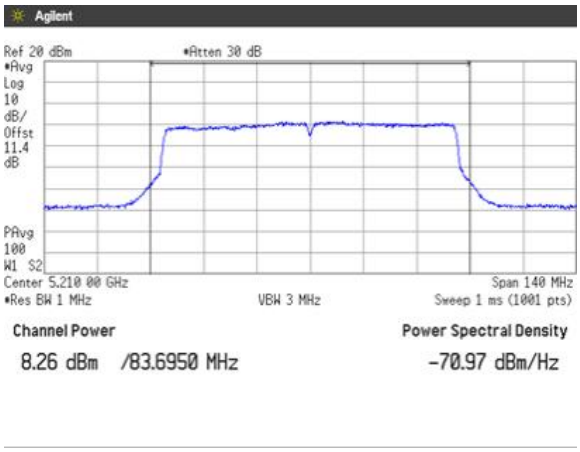
ANT3	ANT5
Channel: 54  	**Channel: 54** 
Channel: 62  	**Channel: 62** 

(5.6 GHz Band)

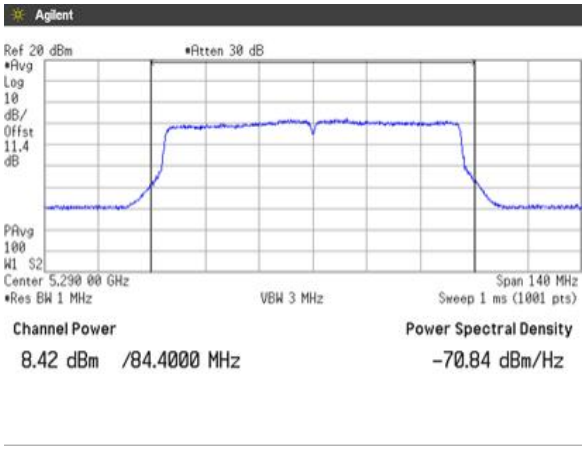
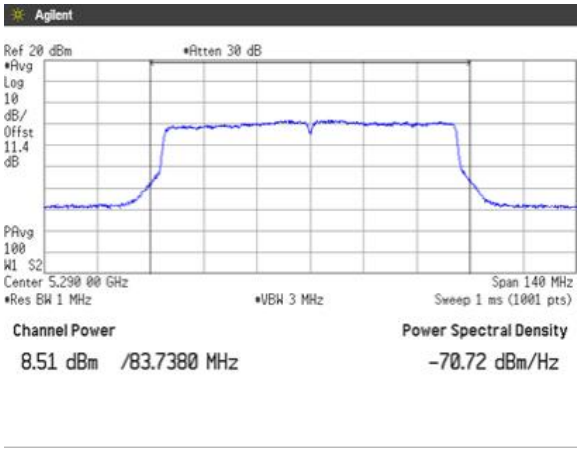
ANT3	ANT5
Channel: 102  	**Channel: 102** 
Channel: 110  	**Channel: 110** 
Channel: 134  	**Channel: 134** 

ANT3	ANT5
Channel: 142	**Channel: 142**
	

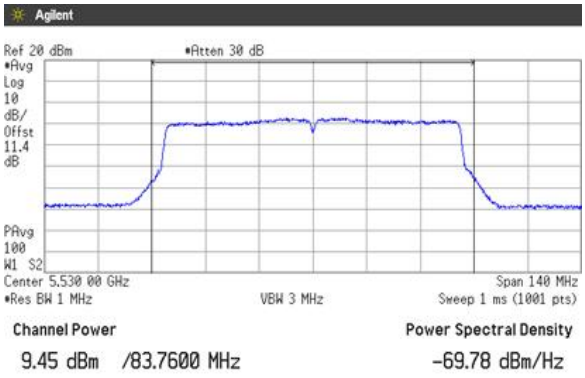
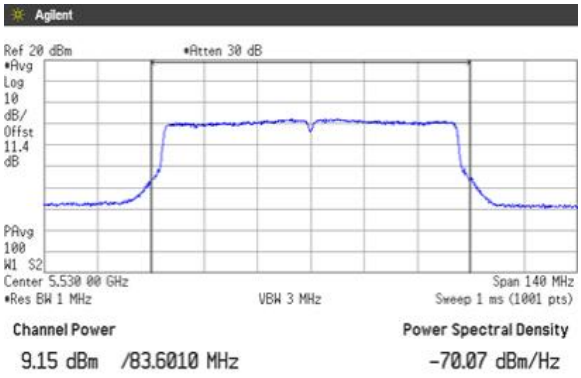
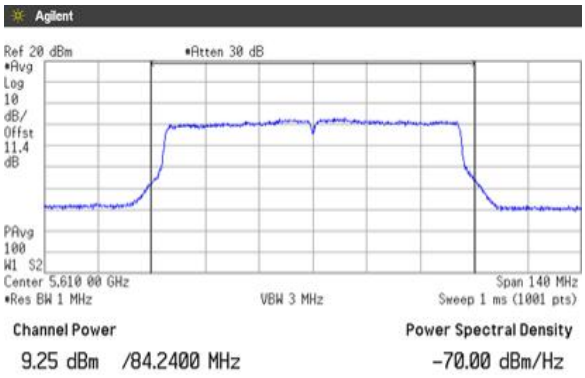
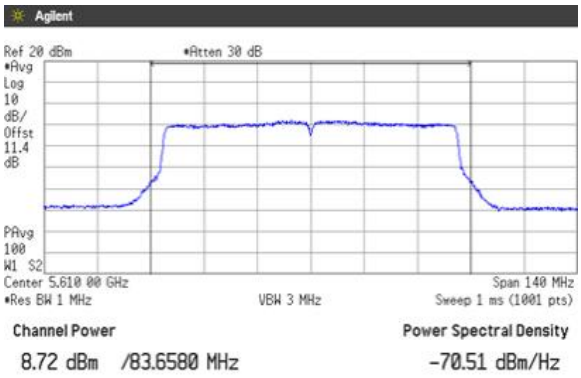
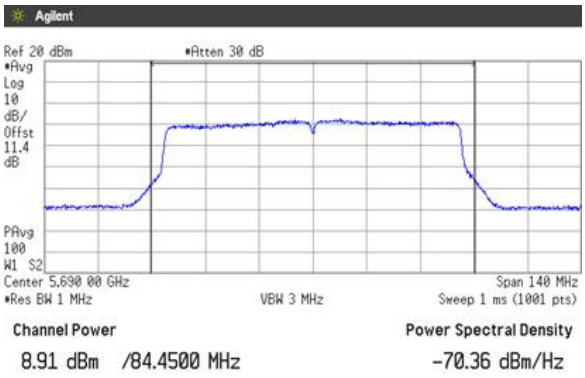
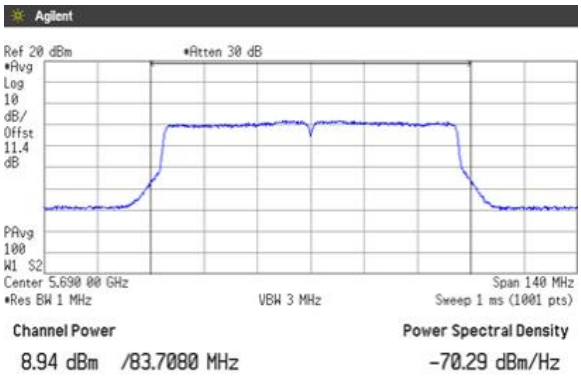
[IEEE802.11ac (HT80)]
(5.2 GHz Band)

ANT3	ANT5
Channel: 42	**Channel: 42**
	

(5.3GHz Band)

ANT3	ANT5
Channel: 58	**Channel: 58**
	

(5.6 GHz Band)

ANT3	ANT5
Channel: 106  	**Channel: 106** 
Channel: 122  	**Channel: 122** 
Channel: 138  	**Channel: 138** 

Japan

4.3 Peak Power Spectral Density

4.3.1 Measurement procedure

[FCC 15.407(a), KDB 789033 D02, Section F]

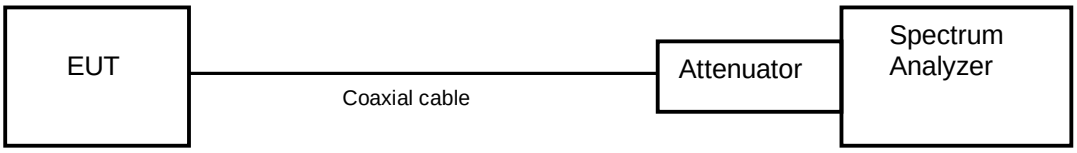
The peak power spectral density is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency.

The spectrum analyzer is set to;
- RBW=1 MHz, VBW=3 MHz, Span=25 MHz/50 MHz/100 MHz, Sweep=Auto, Detector=RMS, Trace mode=Averaging

The EUT was set to operate with following conditions.
- 5.2 GHz Band, 5.3 GHz Band, 5.6 GHz Band

The test mode of EUT is as follows.
- Tx mode

- Test configuration



4.3.2 Limit

(1) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6dBi.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

(3) For the 5.725-5.85 GHz bands, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirection applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Japan

4.3.3 DIRECTIONAL ANTENNA GAIN

Tx chains are uncorrelated for power and correlated for PSD due to the device supporting OFDMA in all MIMO modes. The directional gains are as follows:

Band	ANT3 Gain (dBi)	ANT5 Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)	Correlated Chains Directional Gain (dBi)
5.2 GHz Band	-0.5	1.0	0.31	3.29
5.3 GHz Band	-0.5	1.0	0.31	3.29
5.6 GHz Band	0.1	1.1	0.63	3.62

Note: 802.11a does not support MIMO.

<Peak Power Spectral Density Limit Calculation>

Band	ANT3 Gain (dBi)	Limit
5.2 GHz Band	-0.5	10.5 dBm/MHz
5.3 GHz Band	-0.5	10.5 dBm/MHz
5.6 GHz Band	0.1	11.1 dBm/MHz

Band	ANT5 Gain (dBi)	Limit
5.2 GHz Band	1.0	12.0 dBm/MHz
5.3 GHz Band	1.0	12.0 dBm/MHz
5.6 GHz Band	1.1	12.1 dBm/MHz

Band	ANT3+ANT5 Gain (dBi)	Limit
5.2 GHz Band	3.29	14.29 dBm/MHz
5.3 GHz Band	3.29	14.29 dBm/MHz
5.6 GHz Band	3.62	14.62 dBm/MHz

Japan

4.3.4 Measurement result

Date : 22-December-2020
Temperature : 22.8 [˚C]
Humidity : 27.9 [%] Test engineer :
Test place : Shielded room No.4 Taiki Watanabe

Date : 25-December-2020
Temperature : 21.4 [˚C]
Humidity : 29.3 [%] Test engineer :
Test place : Shielded room No.4 Taiki Watanabe

ANT3

Mode	Channel	Frequency (MHz)	Reading (dBm)	Duty Cycle			DCF (dB)	Test Result (dBm)
				On Time(ms)	On+Off Time(ms)	X		
802.11a	36	5180	-1.645	1.344	1.382	0.973	0.121	-1.524
	40	5200	-1.631					-1.510
	48	5240	-1.206					-1.085
	52	5260	-1.560	1.342	1.378	0.974	0.115	-1.445
	56	5280	-1.435					-1.320
	64	5320	-1.113					-0.998
	100	5500	-0.459	1.342	1.378	0.974	0.115	-0.344
	116	5580	-0.779					-0.664
	140	5700	-0.751					-0.636
	144	5720	-0.698					-0.583

ANT5

Mode	Channel	Frequency (MHz)	Reading (dBm)	Duty Cycle			DCF (dB)	Test Result (dBm)
				On Time(ms)	On+Off Time(ms)	X		
802.11a	36	5180	-1.571	1.344	1.382	0.973	0.121	-1.450
	40	5200	-1.429					-1.308
	48	5240	-1.293					-1.172
	52	5260	-1.489	1.342	1.378	0.974	0.115	-1.374
	56	5280	-1.285					-1.170
	64	5320	-1.046					-0.931
	100	5500	-1.018	1.342	1.378	0.974	0.115	-0.903
	116	5580	-0.550					-0.435
	140	5700	-0.677					-0.562
	144	5720	-0.591					-0.476

Note: X = On time / (On + Off time), DCF=10log (1/x)
Note 2: Test Result = Reading + DCF

ANT3+ANT5
Note: 802.11a does not support MIMO.

ANT3

Mode	Channel	Frequency (MHz)	Reading (dBm)	Duty Cycle			DCF (dB)	Test Result (dBm)
				On Time(ms)	On+Off Time(ms)	X		
802.11n (20MHz)	36	5180	-1.890	1.258	1.294	0.972	0.123	-1.767
	40	5200	-1.709					-1.586
	48	5240	-1.442					-1.319
	52	5260	-1.935	1.258	1.296	0.971	0.129	-1.806
	56	5280	-1.780					-1.651
	64	5320	-1.664					-1.535
	100	5500	-0.756	1.256	1.294	0.971	0.129	-0.627
	116	5580	-1.122					-0.993
	140	5700	-0.715					-0.586
	144	5720	-0.938					-0.809

ANT5

Mode	Channel	Frequency (MHz)	Reading (dBm)	Duty Cycle			DCF (dB)	Test Result (dBm)
				On Time(ms)	On+Off Time(ms)	X		
802.11n (20MHz)	36	5180	-1.596	1.258	1.294	0.972	0.123	-1.473
	40	5200	-1.906					-1.783
	48	5240	-1.850					-1.727
	52	5260	-1.797	1.258	1.296	0.971	0.129	-1.668
	56	5280	-1.461					-1.332
	64	5320	-1.293					-1.164
	100	5500	-1.418	1.256	1.294	0.971	0.129	-1.289
	116	5580	-1.744					-1.615
	140	5700	-1.263					-1.134
	144	5720	-1.072					-0.943

ANT3+ANT5

Mode	Channel	Frequency (MHz)	Test Result (dBm)		Total Test Result (dBm)
			ANT3	ANT5	
802.11n (20MHz)	36	5180	-1.767	-1.473	1.392
	40	5200	-1.586	-1.783	1.326
	58	5240	-1.319	-1.727	1.492
	52	5260	-1.806	-1.668	1.274
	56	5280	-1.651	-1.332	1.522
	64	5320	-1.535	-1.164	1.665
	100	5500	-0.627	-1.289	2.065
	116	5580	-0.993	-1.615	1.718
	140	5700	-0.586	-1.134	2.159
	144	5720	-0.809	-0.943	2.135

Note: X = On time / (On + Off time), DCF=10log (1/x)
Note 2: Test Result = Reading + DCF

ANT3

Mode	Channel	Frequency (MHz)	Reading (dBm)	Duty Cycle			DCF (dB)	Test Result (dBm)
				On Time(ms)	On+Off Time(ms)	X		
802.11n (40MHz)	38	5190	-4.693	0.627	0.664	0.944	0.249	-4.444
	46	5230	-4.249					-4.000
	54	5270	-4.450	0.627	0.664	0.944	0.249	-4.201
	62	5310	-4.363					-4.114
	102	5510	-3.576	0.628	0.665	0.944	0.249	-3.327
	110	5550	-3.671					-3.422
	134	5670	-3.688					-3.439
	142	5710	-4.116					-3.867

ANT5

Mode	Channel	Frequency (MHz)	Reading (dBm)	Duty Cycle			DCF (dB)	Test Result (dBm)
				On Time(ms)	On+Off Time(ms)	X		
802.11n (40MHz)	38	5190	-4.824	0.627	0.664	0.944	0.249	-4.575
	46	5230	-4.648					-4.399
	54	5270	-4.488	0.627	0.664	0.944	0.249	-4.239
	62	5310	-4.204					-3.955
	102	5510	-4.267	0.628	0.665	0.944	0.249	-4.018
	110	5550	-3.761					-3.512
	134	5670	-4.646					-4.397
	142	5710	-3.948					-3.699

ANT3+ANT5

Mode	Channel	Frequency (MHz)	Test Result (dBm)		Total Test Result (dBm)
			ANT3	ANT5	
802.11n (40MHz)	38	5190	-4.444	-4.575	-1.499
	46	5230	-4.000	-4.399	-1.185
	54	5270	-4.201	-4.239	-1.210
	62	5310	-4.114	-3.955	-1.023
	102	5510	-3.327	-4.018	-0.649
	110	5550	-3.422	-3.512	-0.457
	134	5670	-3.439	-4.397	-0.882
	142	5710	-3.867	-3.699	-0.772

Note: X = On time / (On + Off time), DCF=10log (1/x)
Note 2: Test Result = Reading + DCF

ANT3

Mode	Channel	Frequency (MHz)	Reading (dBm)	Duty Cycle			DCF (dB)	Test Result (dBm)
				On Time(ms)	On+Off Time(ms)	X		
802.11ac (80MHz)	42	5210	-8.422	0.315	0.352	0.895	0.481	-7.941
	58	5290	-8.151	0.316	0.352	0.897	0.474	-7.677
	106	5530	-7.008	0.316	0.352	0.897	0.474	-6.534
	122	5610	-7.297	0.316	0.352	0.897	0.474	-6.823
	138	5690	-7.577	0.316	0.352	0.897	0.474	-7.103

ANT5

Mode	Channel	Frequency (MHz)	Reading (dBm)	Duty Cycle			DCF (dB)	Test Result (dBm)
				On Time(ms)	On+Off Time(ms)	X		
802.11ac (80MHz)	42	5210	-8.306	0.315	0.352	0.895	0.481	-7.825
	58	5290	-8.165	0.316	0.352	0.897	0.474	-7.691
	106	5530	-7.346	0.316	0.352	0.897	0.474	-6.872
	122	5610	-7.868	0.316	0.352	0.897	0.474	-7.394
	138	5690	-7.812	0.316	0.352	0.897	0.474	-7.338

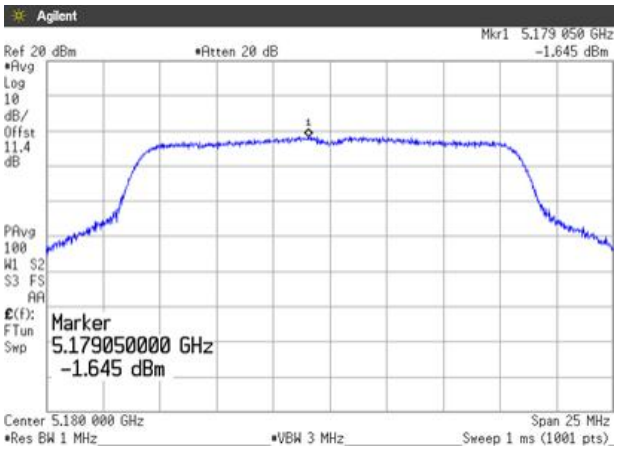
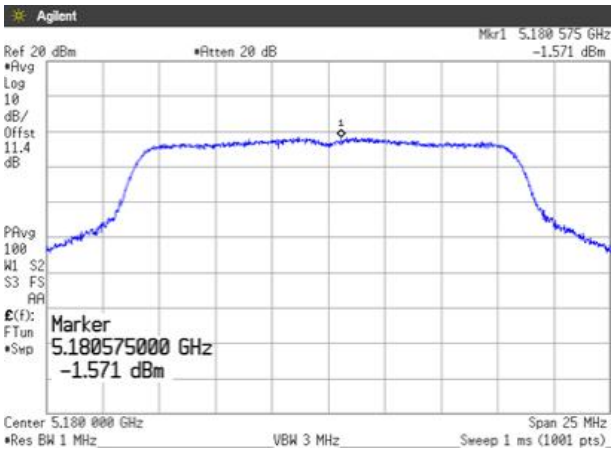
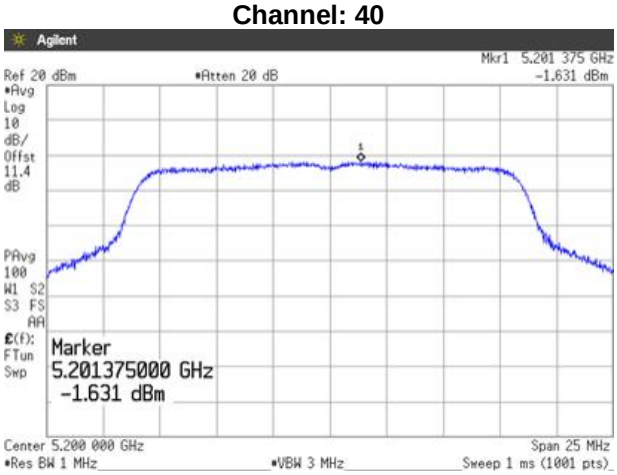
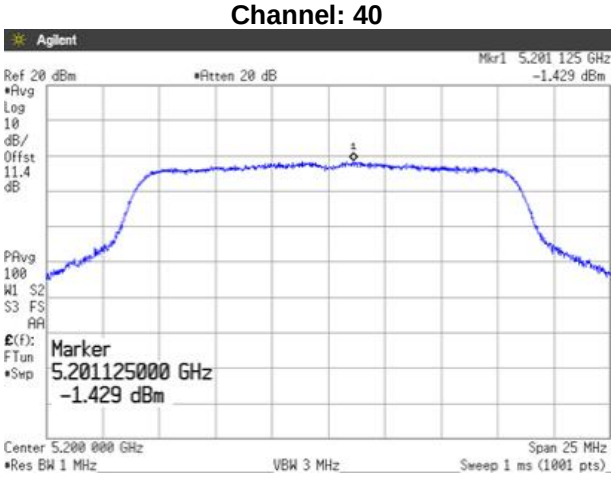
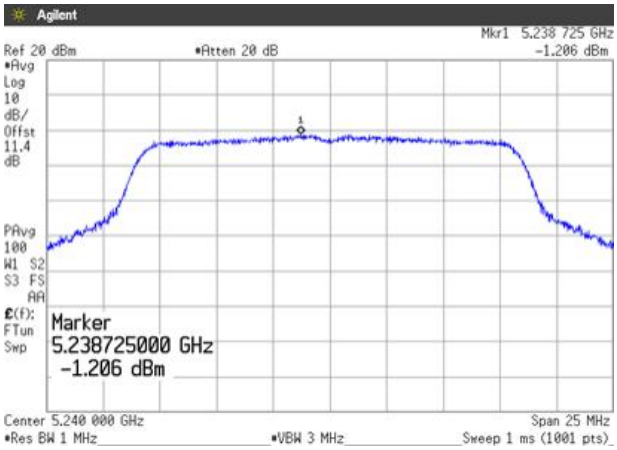
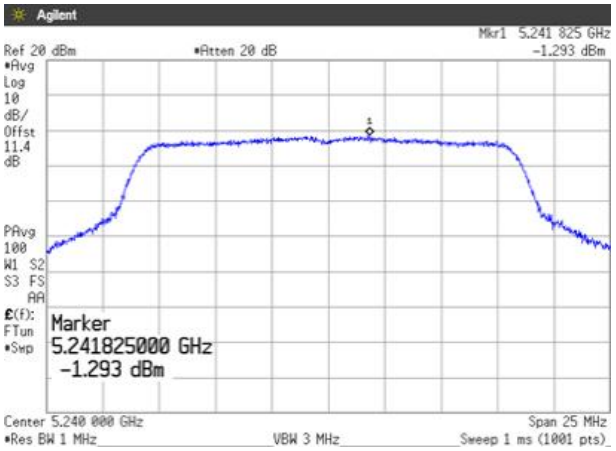
ANT3+ANT5

Mode	Channel	Frequency (MHz)	Test Result (dBm)		Total Test Result (dBm)
			ANT3	ANT5	
802.11ac (80MHz)	42	5210	-7.941	-7.825	-4.872
	58	5290	-7.677	-7.691	-4.674
	106	5530	-6.534	-6.872	-3.689
	122	5610	-6.823	-7.394	-4.089
	138	5690	-7.103	-7.338	-4.209

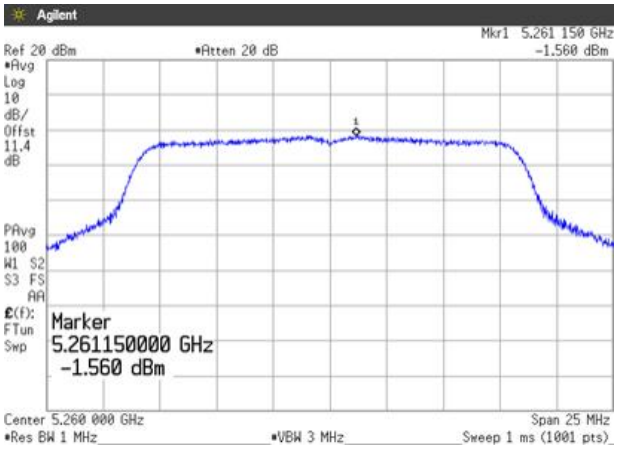
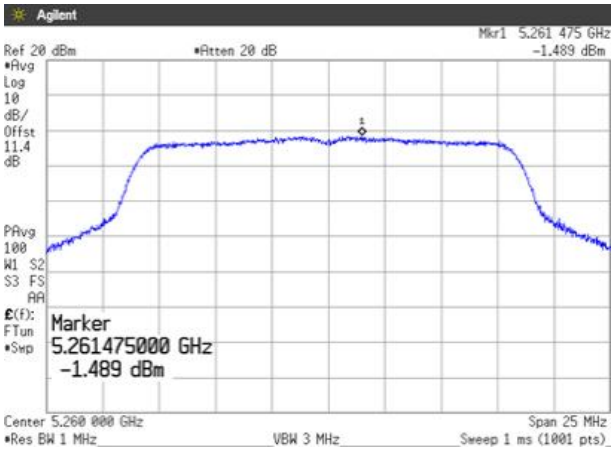
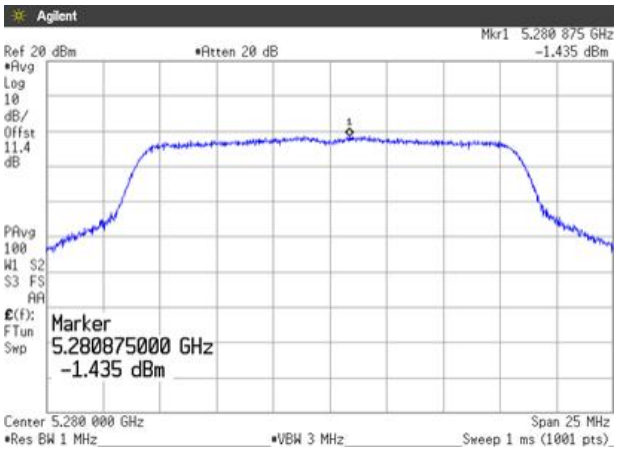
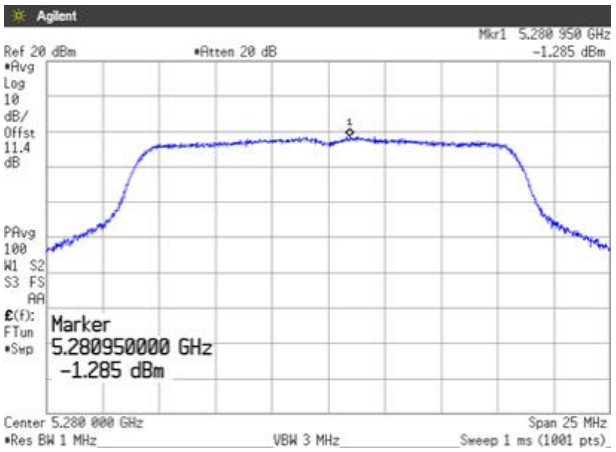
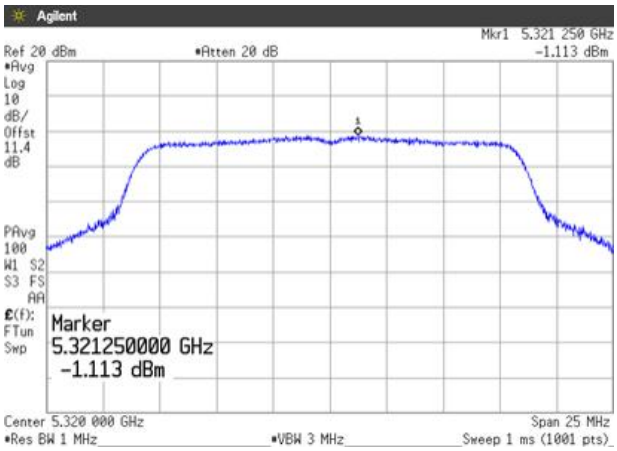
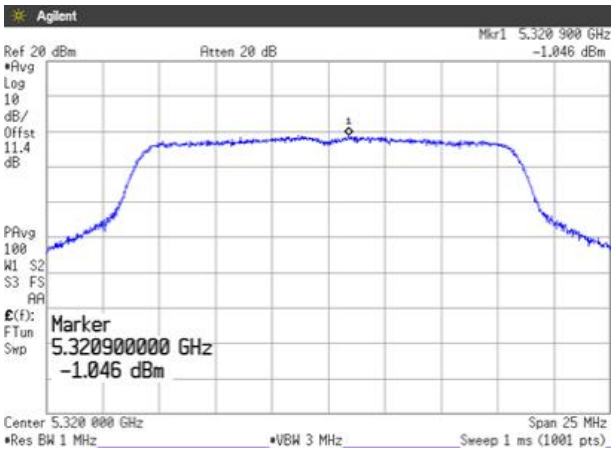
Note: X = On time / (On + Off time), DCF=10log (1/x)
Note 2: Test Result = Reading + DCF

4.3.5 Trace data

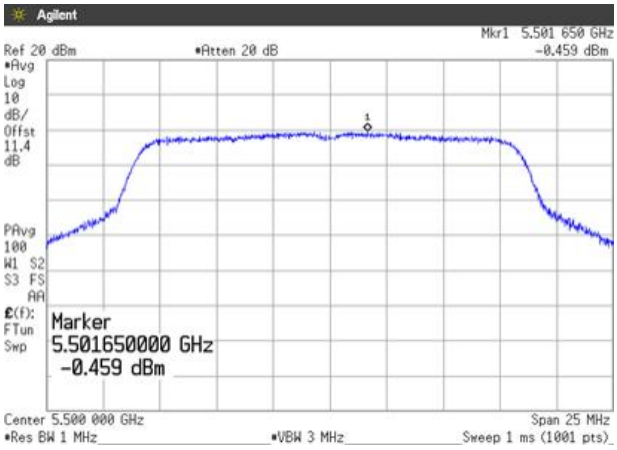
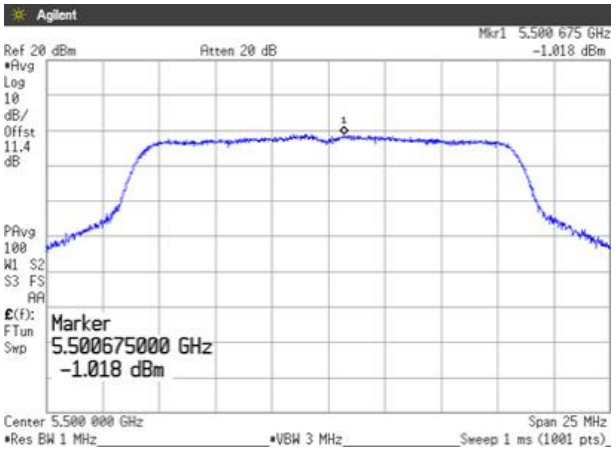
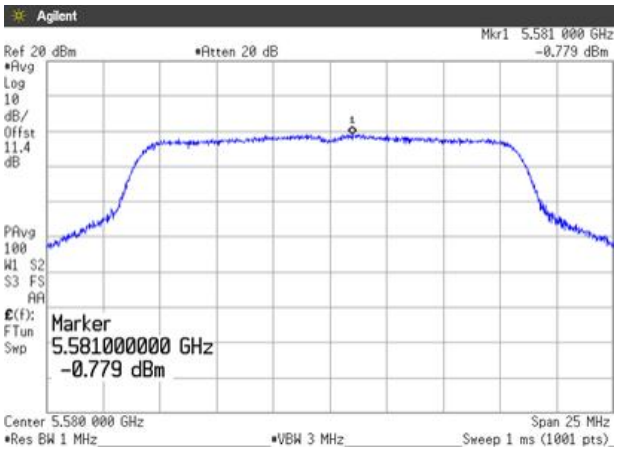
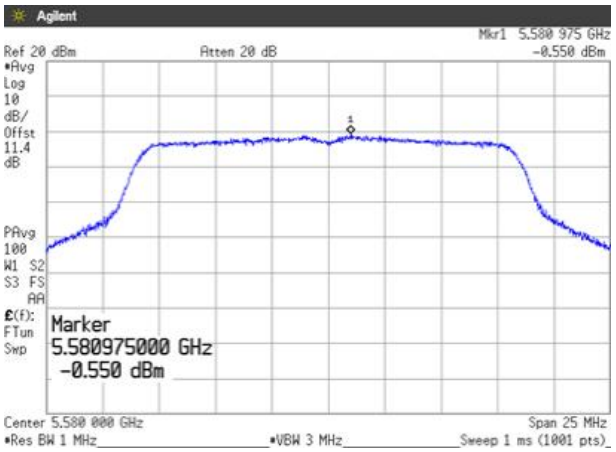
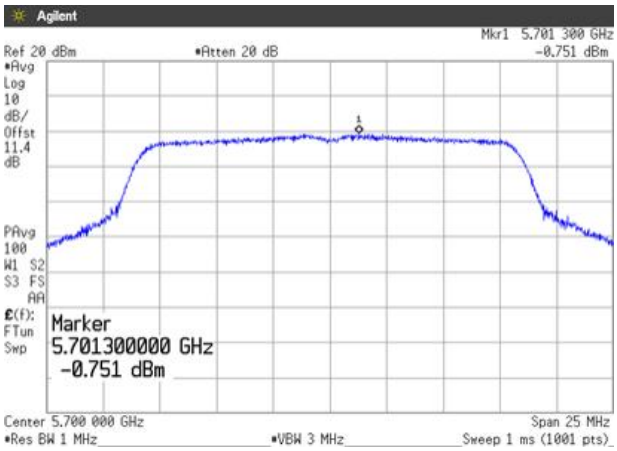
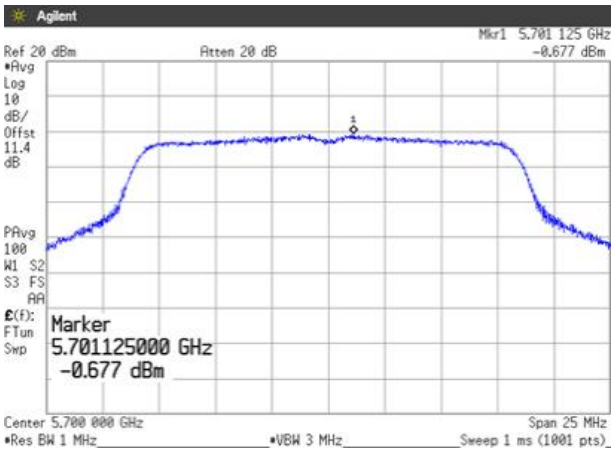
[IEEE802.11a]
(5.2 GHz Band)

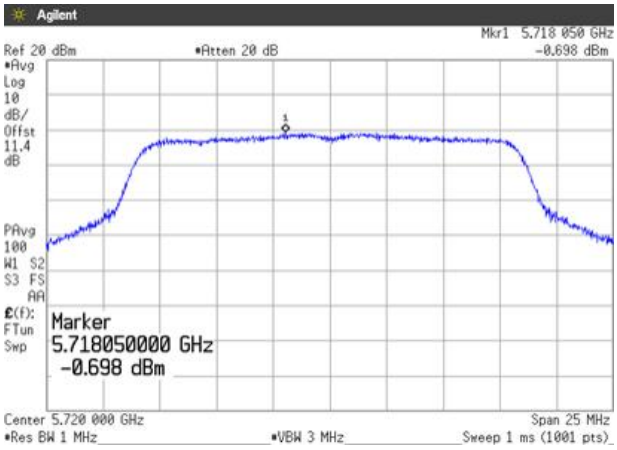
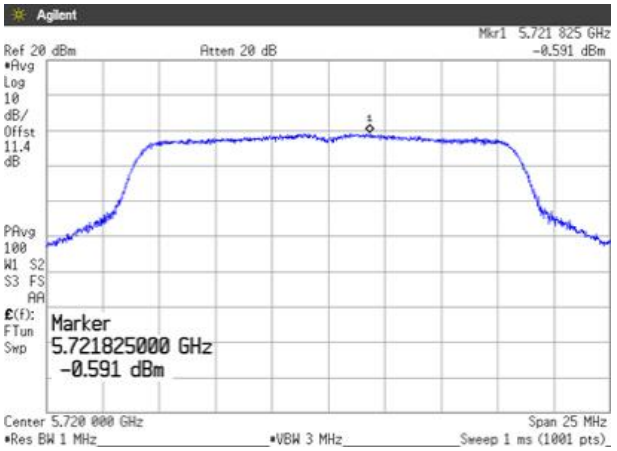
ANT3	ANT5
Channel: 36	**Channel: 36**
	
Channel: 40	**Channel: 40**
	
Channel: 48	**Channel: 48**
	

(5.3 GHz Band)

ANT3	ANT5
Channel: 52	**Channel: 52**
	
Channel: 56	**Channel: 56**
	
Channel: 64	**Channel: 64**
	

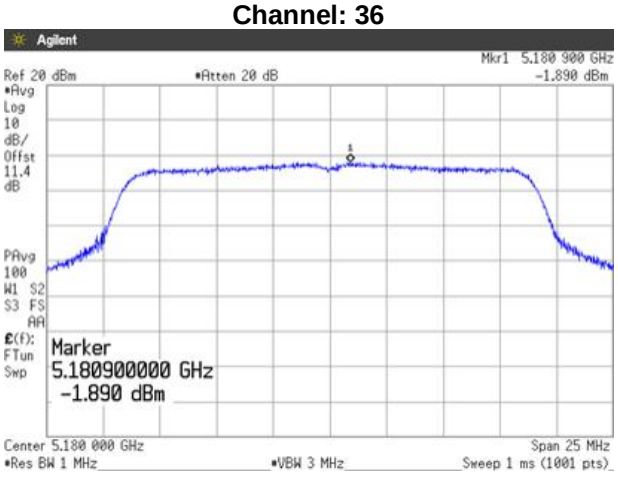
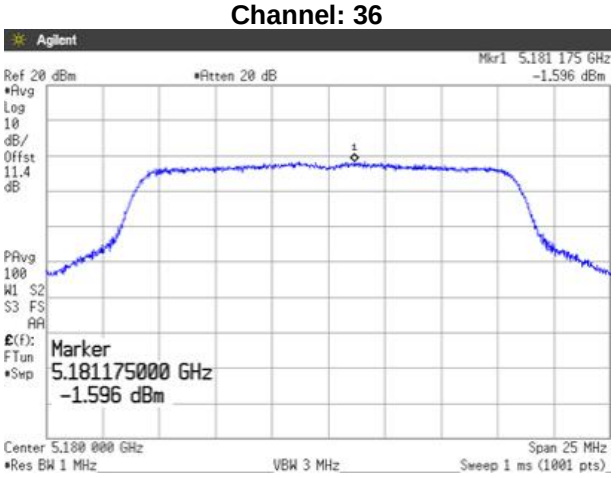
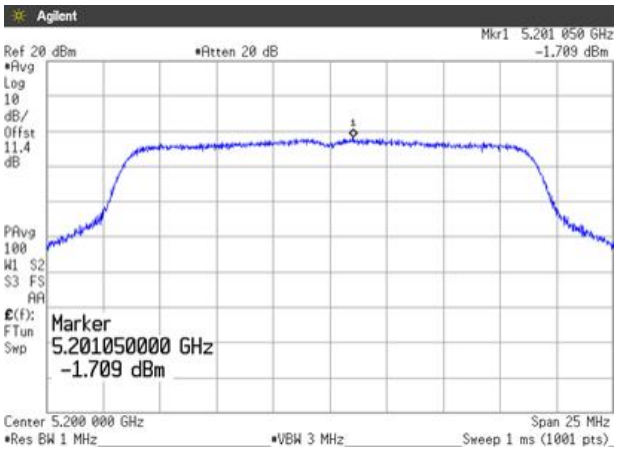
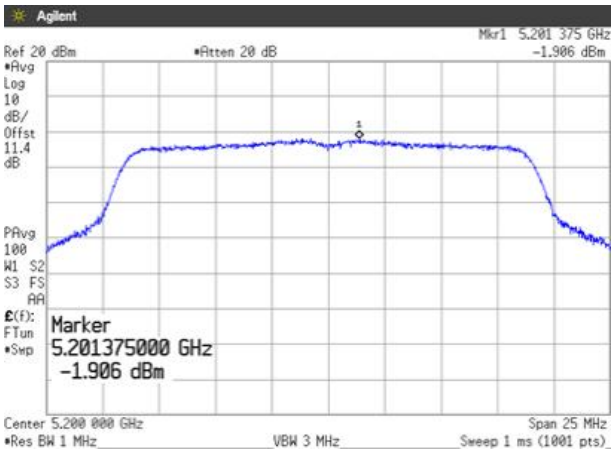
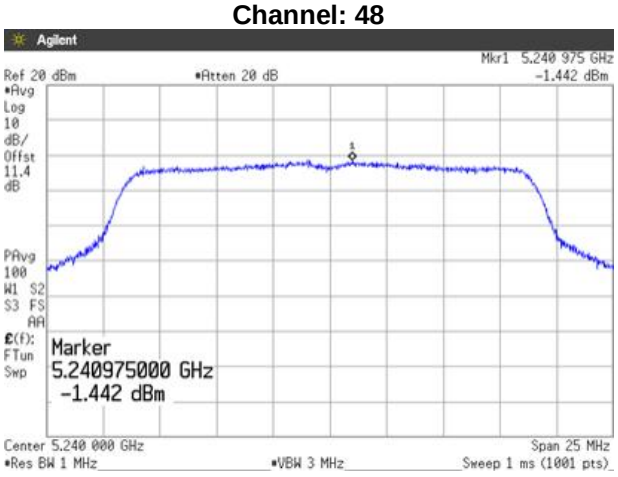
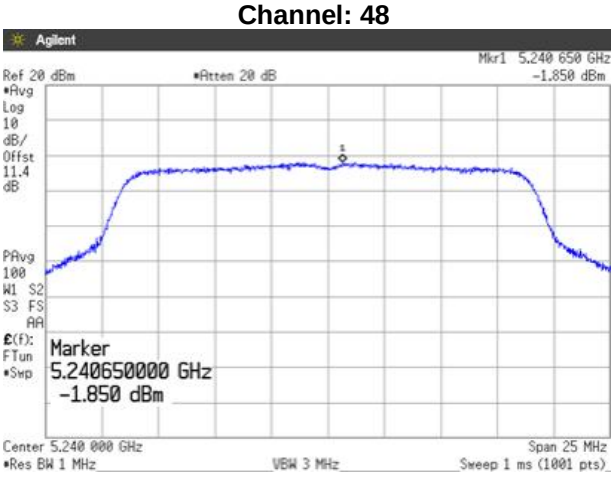
(5.6 GHz Band)

ANT3	ANT5
Channel: 100	**Channel: 100**
	
Channel: 116	**Channel: 116**
	
Channel: 140	**Channel: 140**
	

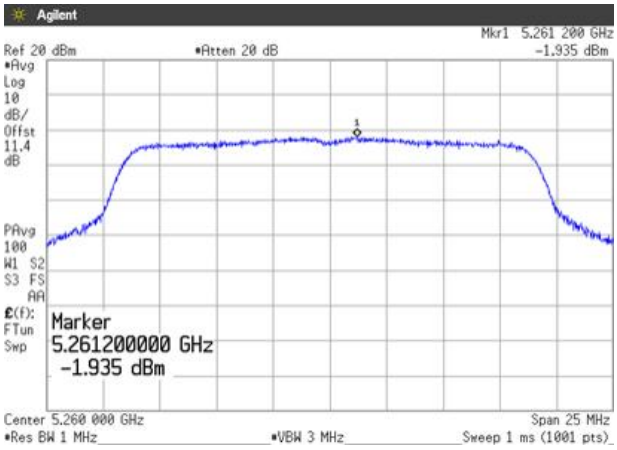
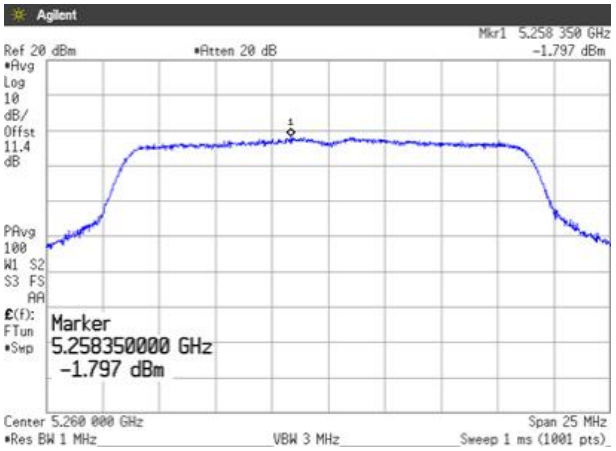
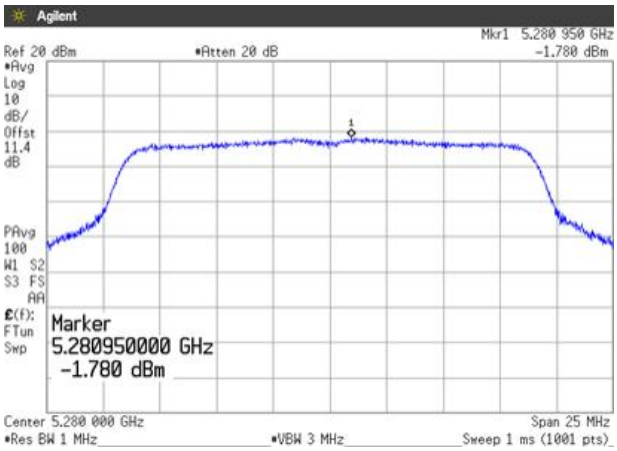
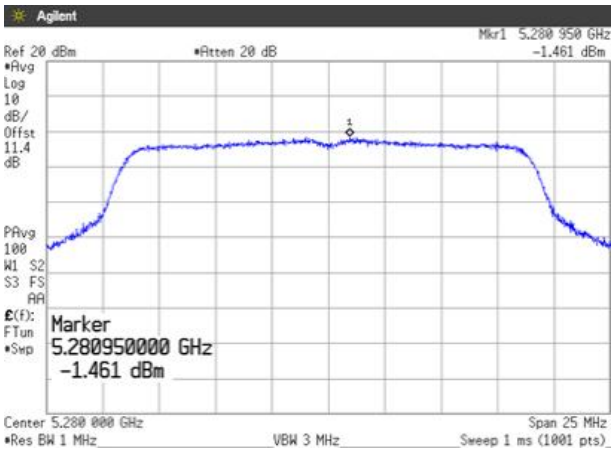
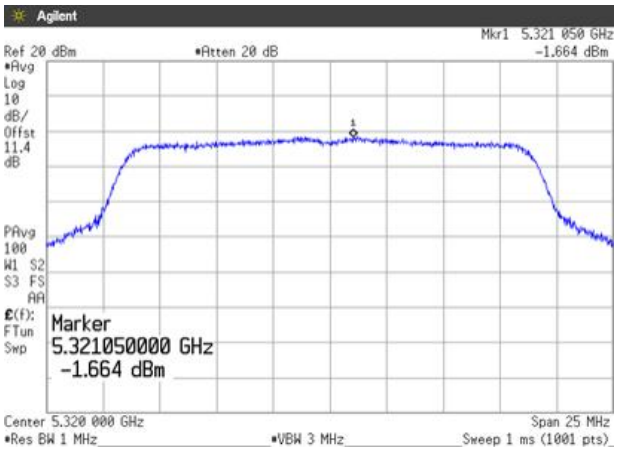
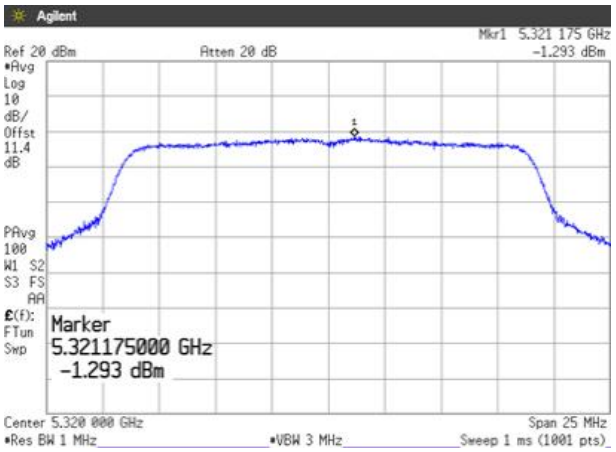
ANT3	ANT5
Channel: 144	**Channel: 144**
	

Japan

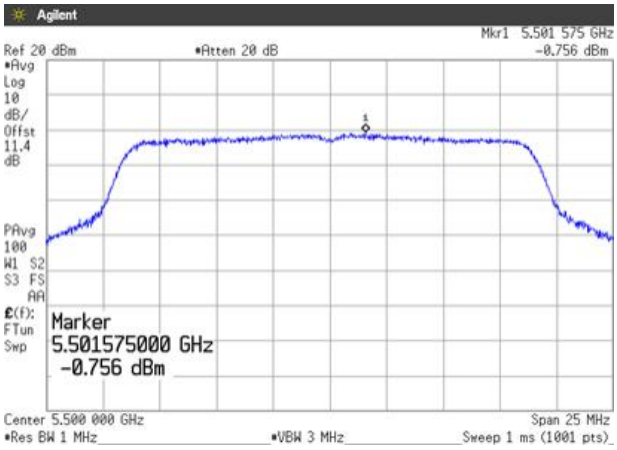
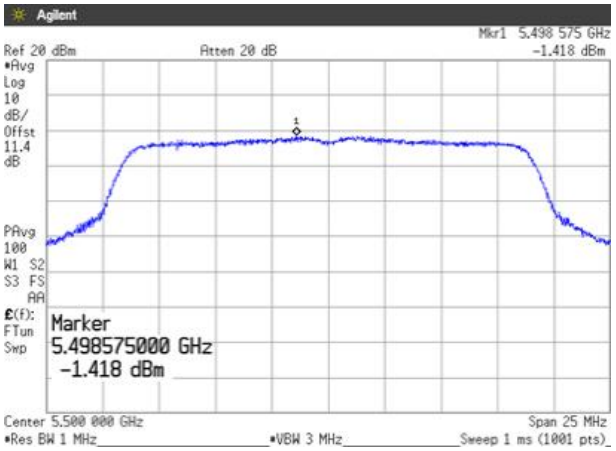
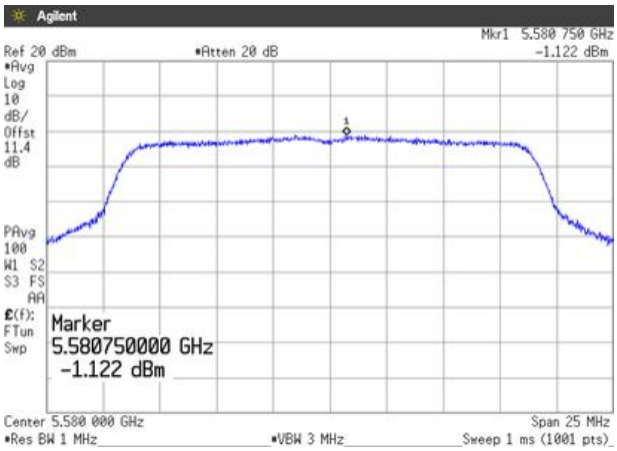
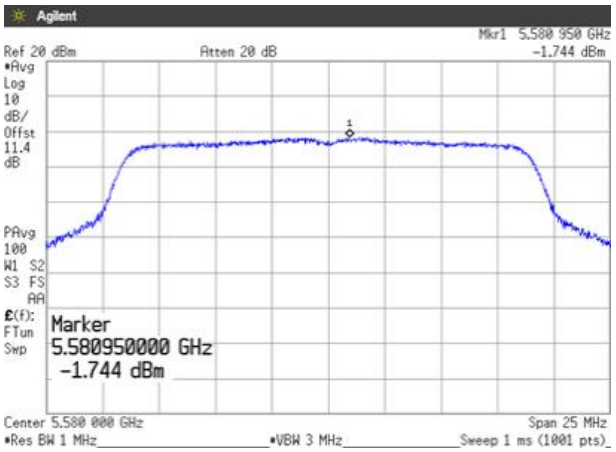
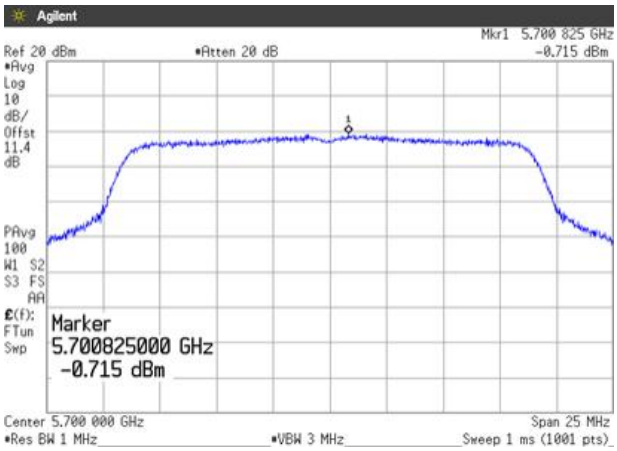
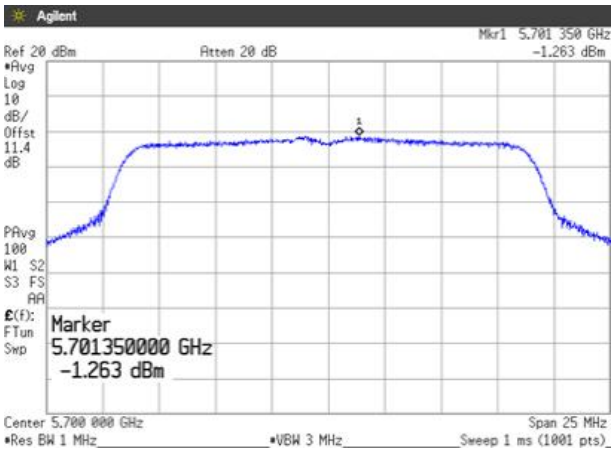
[IEEE802.11n (HT20)]
(5.2 GHz Band)

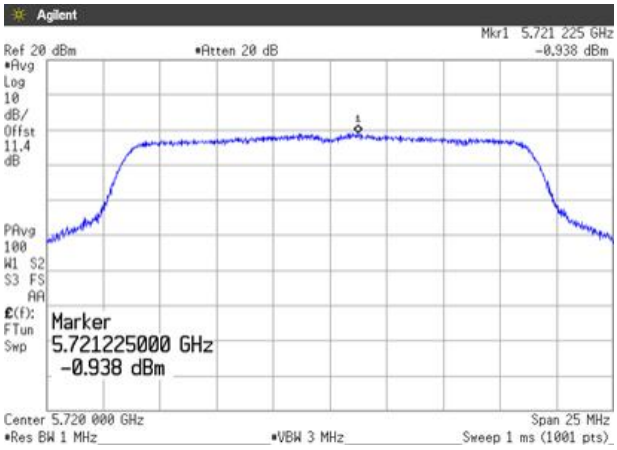
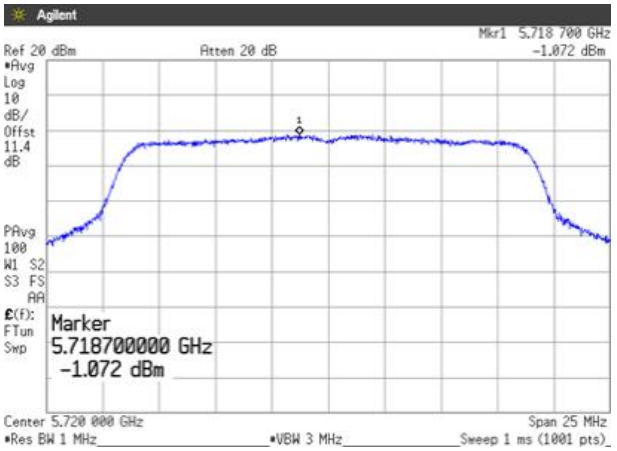
ANT3	ANT5
Channel: 36	**Channel: 36**
	
Channel: 40	**Channel: 40**
	
Channel: 48	**Channel: 48**
	

(5.3 GHz Band)

ANT3	ANT5
Channel: 52	**Channel: 52**
	
Channel: 56	**Channel: 56**
	
Channel: 64	**Channel: 64**
	

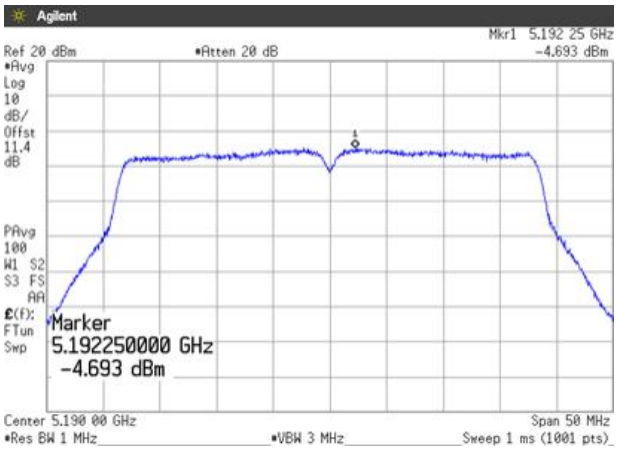
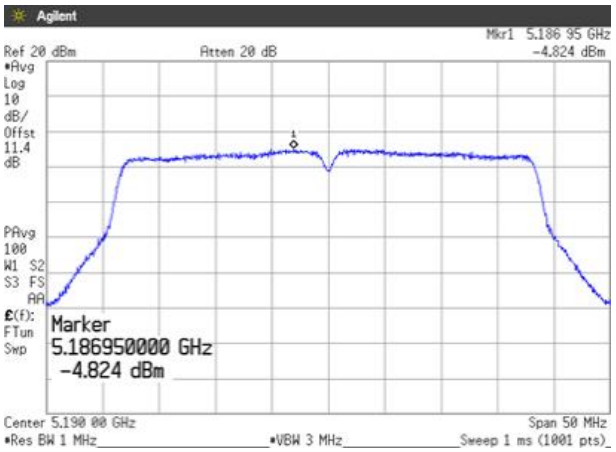
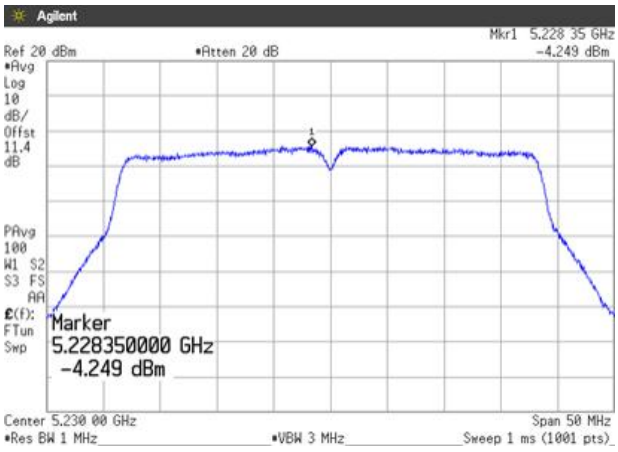
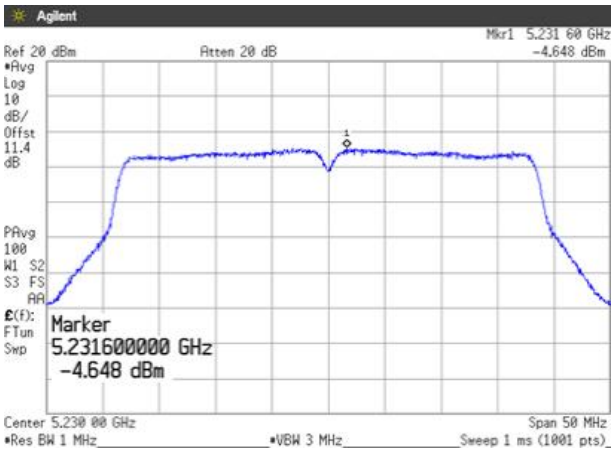
(5.6 GHz Band)

ANT3	ANT5
Channel: 100	**Channel: 100**
	
Channel: 116	**Channel: 116**
	
Channel: 140	**Channel: 140**
	

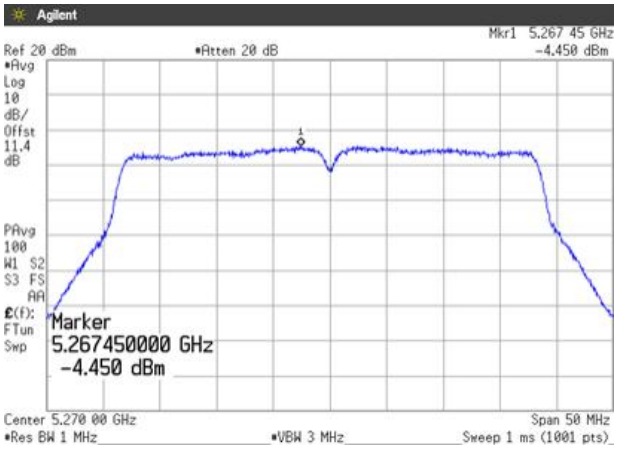
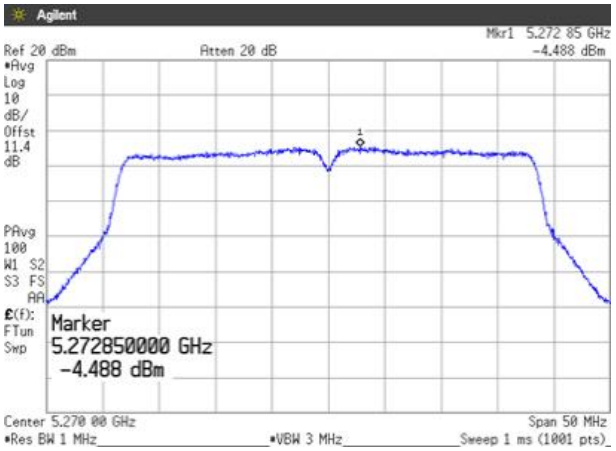
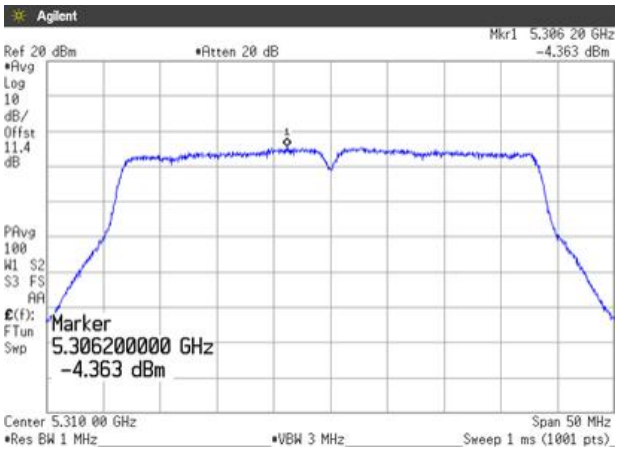
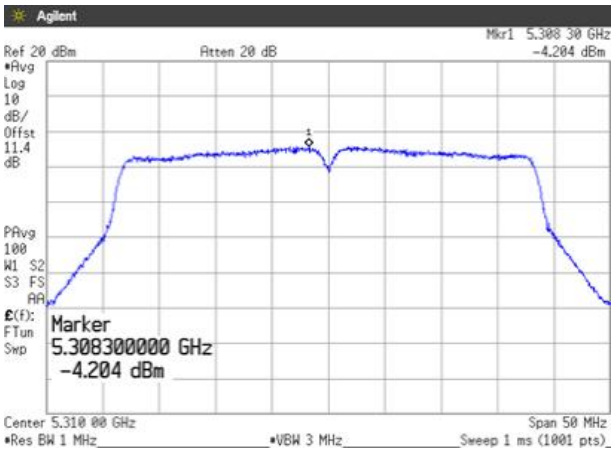
ANT3	ANT5
Channel: 144	**Channel: 144**
	

Japan

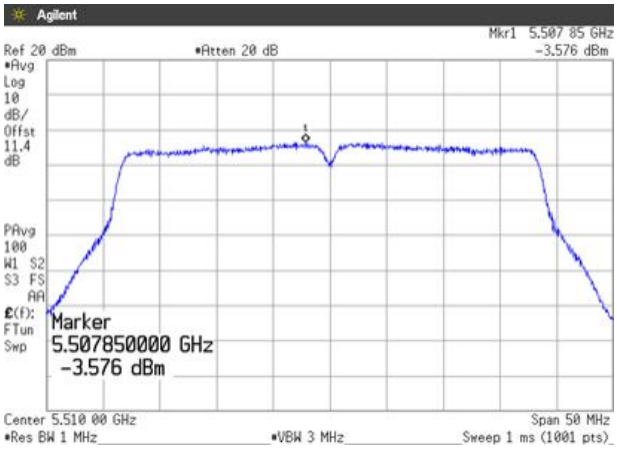
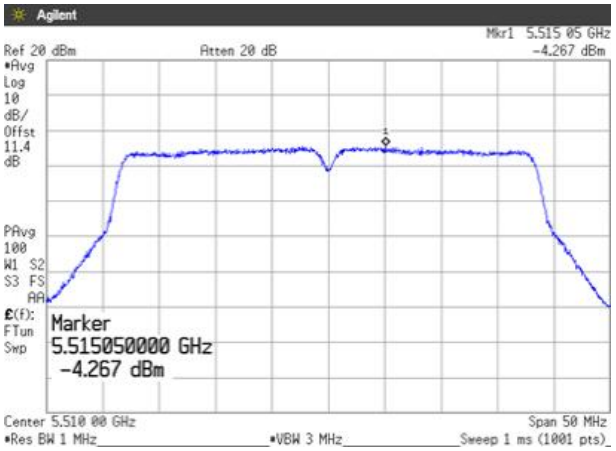
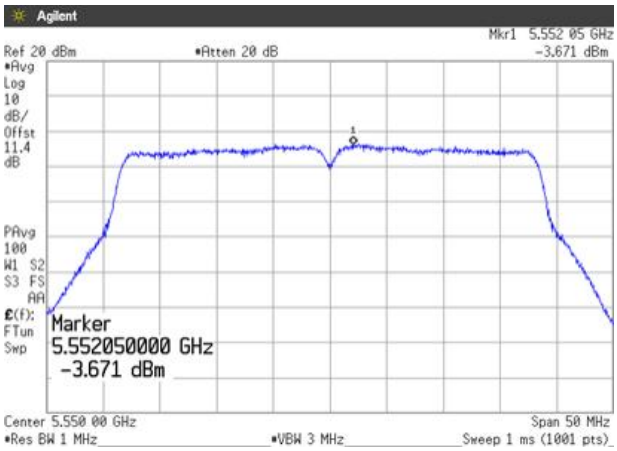
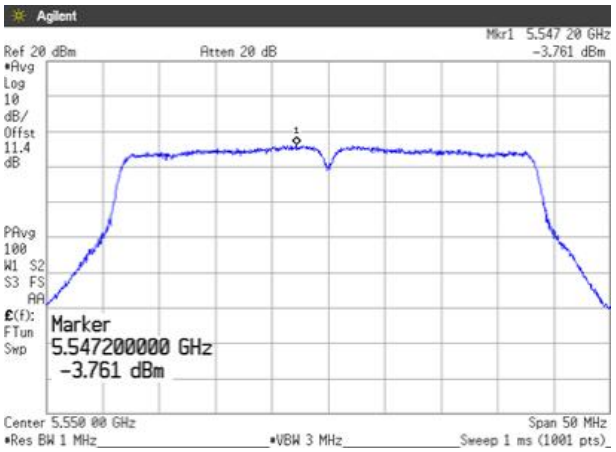
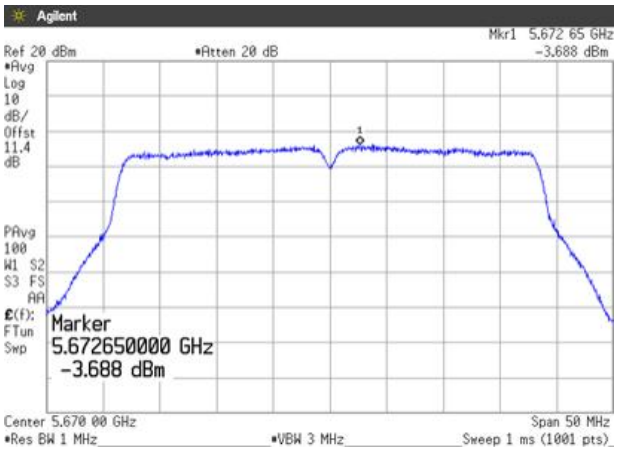
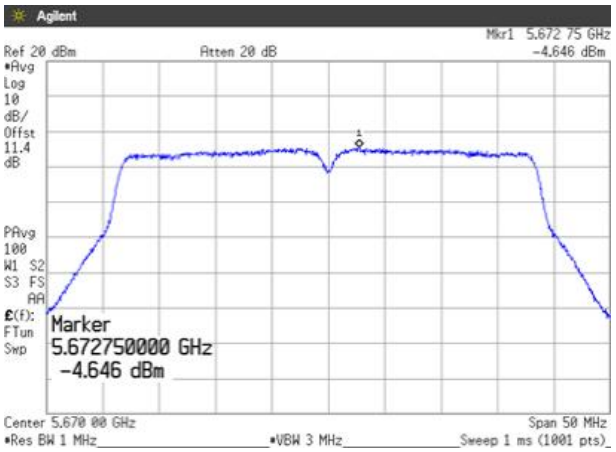
[IEEE802.11n (HT40)]
(5.2 GHz Band)

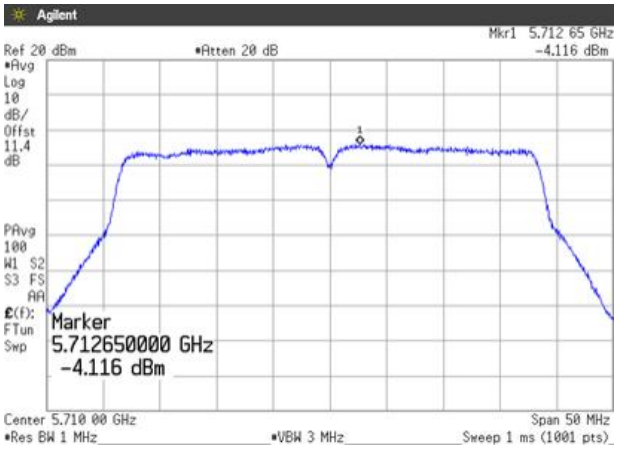
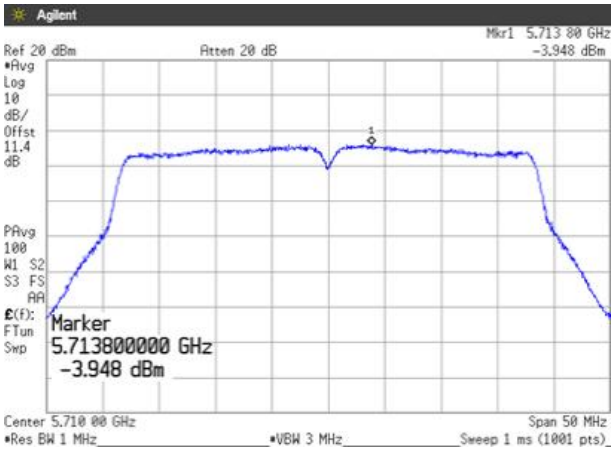
ANT3	ANT5
Channel: 38	**Channel: 38**
	
Channel: 46	**Channel: 46**
	

(5.3 GHz Band)

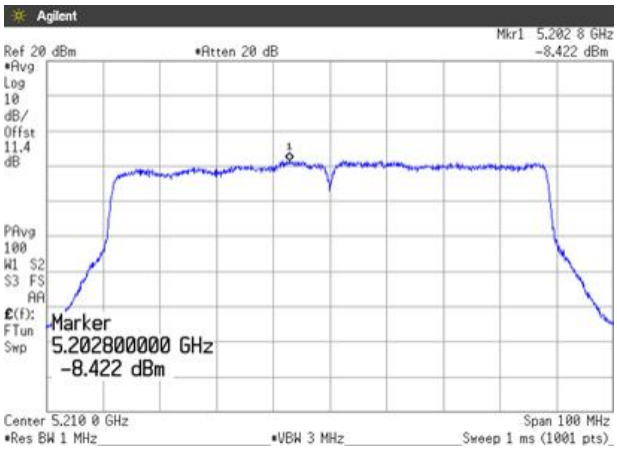
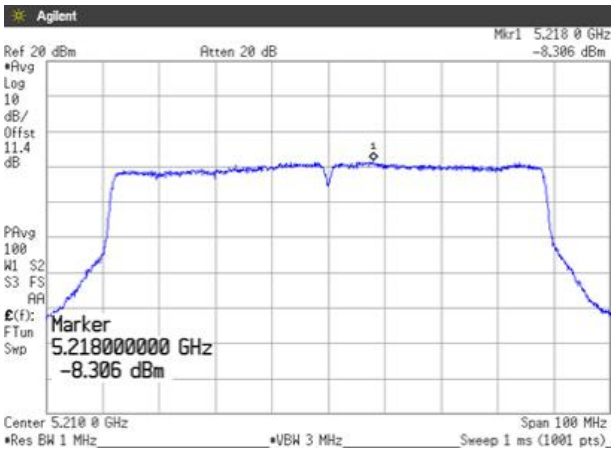
ANT3	ANT5
Channel: 54	**Channel: 54**
	
Channel: 62	**Channel: 62**
	

(5.6 GHz Band)

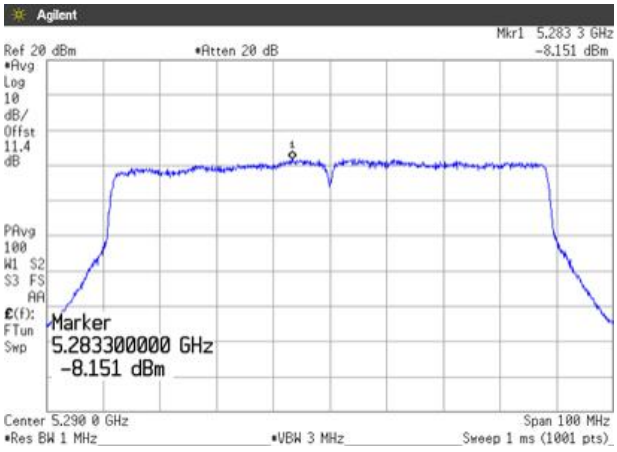
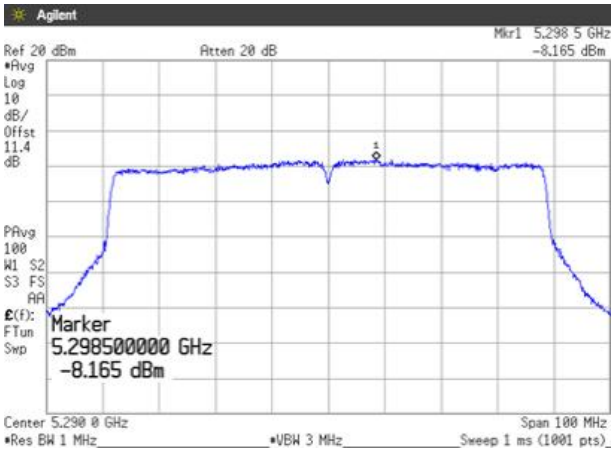
ANT3	ANT5
Channel: 102	**Channel: 102**
	
Channel: 110	**Channel: 110**
	
Channel: 134	**Channel: 134**
	

ANT3	ANT5
Channel: 142	**Channel: 142**
	

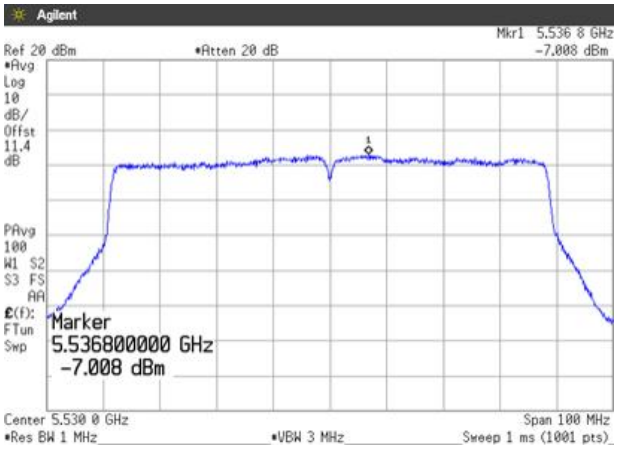
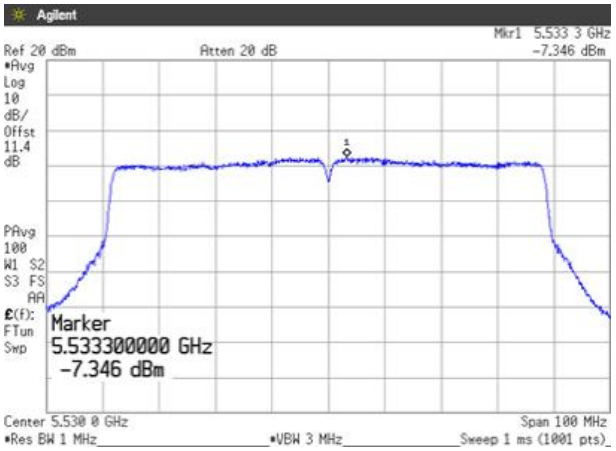
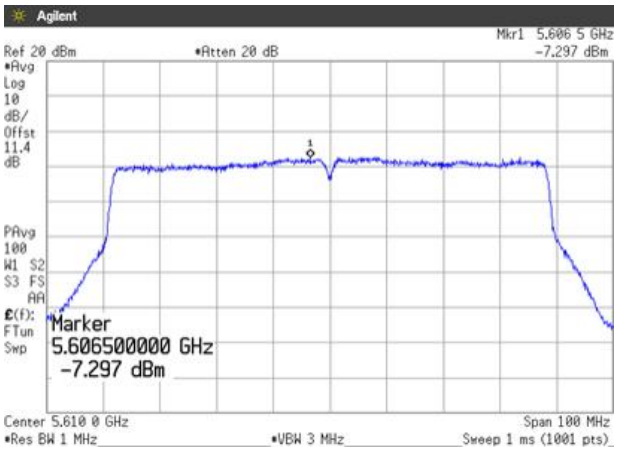
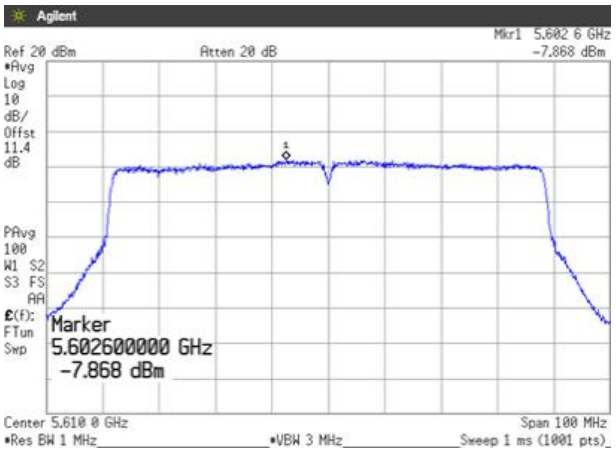
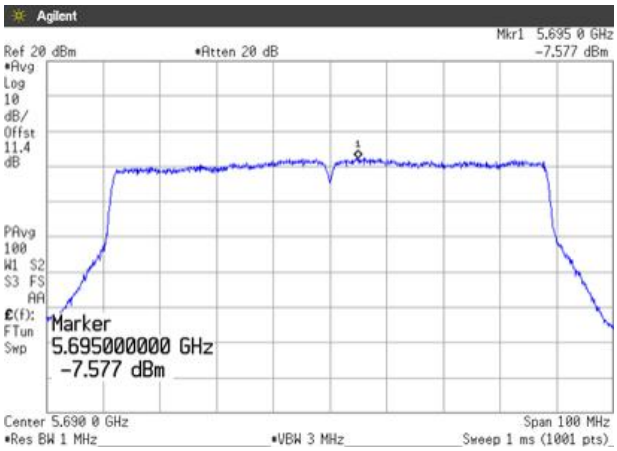
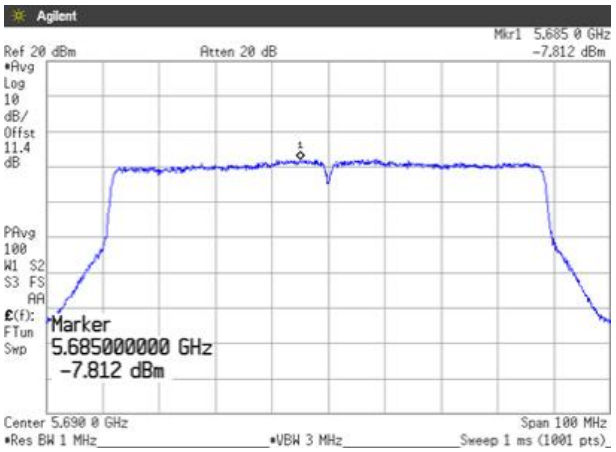
[IEEE802.11ac (HT80)]
(5.2 GHz Band)

ANT3	ANT5
Channel: 42	**Channel: 42**
	

(5.3GHz Band)

ANT3	ANT5
Channel: 58	**Channel: 58**
	

(5.6 GHz Band)

ANT3	ANT5
Channel: 106	**Channel: 106**
	
Channel: 122	**Channel: 122**
	
Channel: 138	**Channel: 138**
	

4.4 Radiated Emissions (Restricted Bands of Operation)

4.4.1 Measurement procedure

[FCC 15.407(b), 15.205, 15.209, KDB 789033 D02, Section G.4, 5, 6.c)Method AD]

Test was applied by following conditions.

Test method	:	ANSI C63.10
Frequency range	:	9 kHz to 40 GHz
Test place	:	3m Semi-anechoic chamber
EUT was placed on	:	Styrofoam table / (W) 1.0 × (D) 1.0 ×(H) 0.8 m (below 1 GHz) Styrofoam table / (W) 0.6 × (D) 0.6 ×(H) 1.5 m (above 1 GHz)
Antenna distance	:	3m
Test receiver setting		Below 1 GHz
- Detector	:	Quasi-peak
- Bandwidth	:	120 kHz
Spectrum analyzer setting		Above 1 GHz
- Peak	:	RBW=1 MHz, VBW=3 MHz, Span=0 Hz, Sweep=auto, Detector=Peak Trace mode=Max hold
- Average	:	RBW=1 MHz, VBW=3 MHz, Span=0 Hz, Sweep=auto, Detector=RMS Trace mode=Averaging(300 counts)

Radiated emission measurements are performed at 3m distance with the broadband antenna (Loop antenna, Biconical antenna, Log periodic antenna, Double ridged guide antenna and Bload-band horn Antenna). The antenna is positioned both the horizontal and vertical planes of polarization and height is varied 1m to 4m and stopped at height producing the maximum emission. As for the Loop antenna, it is positioned with its plane vertical, and the center of the Loop antenna is 1m above the ground plane.

The EUT is Placed on a turntable, which is 0.8m (below 1 GHz) and 1.5m (above 1 GHz) above ground plane. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. The test results represent the worst case emission for each emission with manipulating the EUT, support equipment, interconnecting cables and varying the mode of operation. Sufficient time for the EUT, support equipment, and test equipment are allowed in order for them to warm up to their normal operating condition.

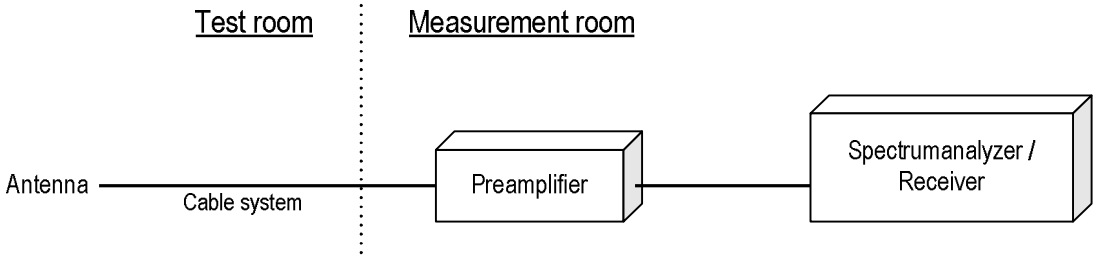
The EUT was set to operate with following conditions.

- 5.2 GHz Band, 5.3 GHz Band, 5.6 GHz Band

The test mode of EUT is as follows.

- Tx mode, Rx mode

- Test configuration



Duty cycle result

Mode	Band	On Time(ms)	On+Off Time(ms)	Duty Cycle (%)	DCF (dB)
802.11a	W52	1.344	1.382	97.25	0.121
	W53	1.342	1.378	97.39	0.115
	W56	1.342	1.378	97.39	0.115
802.11n (20MHz)	W52	1.258	1.294	97.22	0.123
	W53	1.258	1.296	97.07	0.129
	W56	1.256	1.294	97.06	0.129
802.11n (40MHz)	W52	0.627	0.664	94.43	0.249
	W53	0.627	0.664	94.43	0.249
	W56	0.628	0.665	94.44	0.249
802.11ac (80MHz)	W52	0.315	0.352	89.52	0.481
	W53	0.316	0.352	89.66	0.474
	W56	0.316	0.352	89.66	0.474

Note: DCF = 10log(1/x)

4.4.2 Calculation method

[150 kHz to 25 GHz]
Emission level = Reading + (Ant. factor + Cable system loss - Amp. Gain)
Margin = Limit - Emission level

Example:
Detector: Peak
Limit @ 5147.0 MHz: 74.0 dBuV/m (Peak Limit)
S.A Reading = 40.9 dBuV Cable system loss = 16.4 dB
Result = 40.9 + 16.4 = 57.3 dBuV/m
Margin = 74.0 - 57.3 = 16.7 dB

Japan

4.4.3 Limit

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

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

(3) For transmitters operating in the 5.47-5.725GHz band: all emissions outside of the 5.47 5-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz.

Frequency [MHz]	Field strength		Distance [m]
	[uV/m]	[dBuV/m]	
0.009-0.490	2400 / F [kHz]	20logE [uV/m]	300
0.490-1.705	24000 / F [kHz]	20logE [uV/m]	30
1.705-30	30	29.5	30
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

Note:
1. The lower limit shall apply at the transition frequencies.
2. Emission level [dBuV/m] = 20log Emission [uV/m]
3. As shown in 15.35(b), for frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition modulation.

4.4.4 Transmission mode

Modulation Type	Mode
IEEE802.11a	Simultaneous transmission (ANT3 + ANT5)
IEEE802.11n (HT20) IEEE802.11n (HT40) IEEE802.11ac (VHT80)	MIMO (ANT3 + ANT5)

Japan

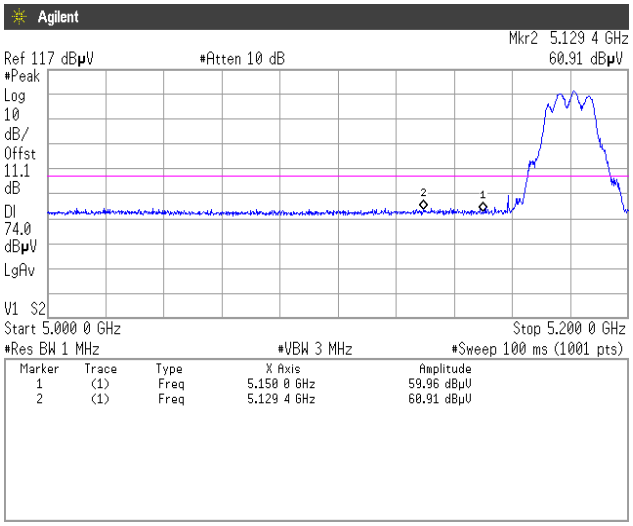
4.4.5 Test data

Date	:	23-December-2020		
Temperature	:	21.4 [˚C]		
Humidity	:	69.5 [%]	Test engineer	:
Test place	:	3m Semi-anechoic chamber		Tadahiro Seino

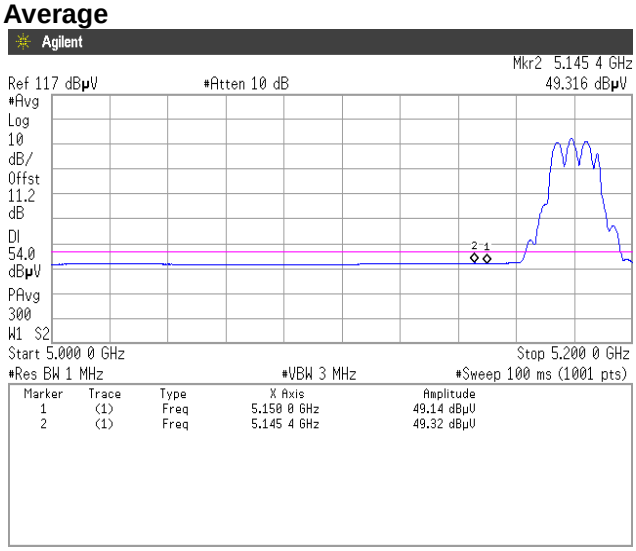
4.4.5.1 Restricted Bandedge

[IEEE802.11a]

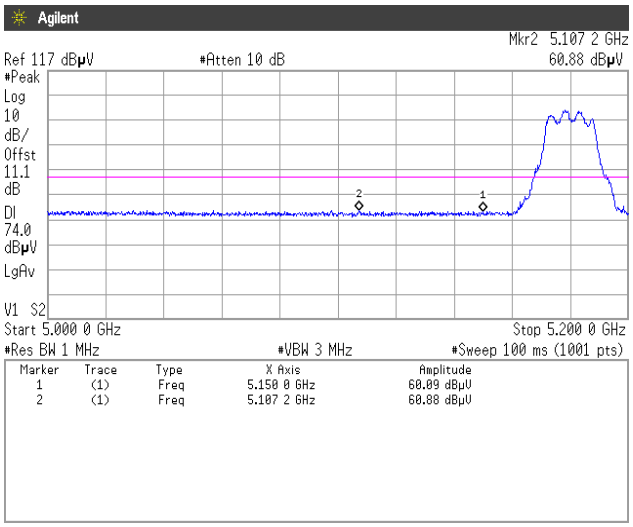
5.2 GHz Band, Channel Low
Horizontal
Peak



Average



Vertical
Peak



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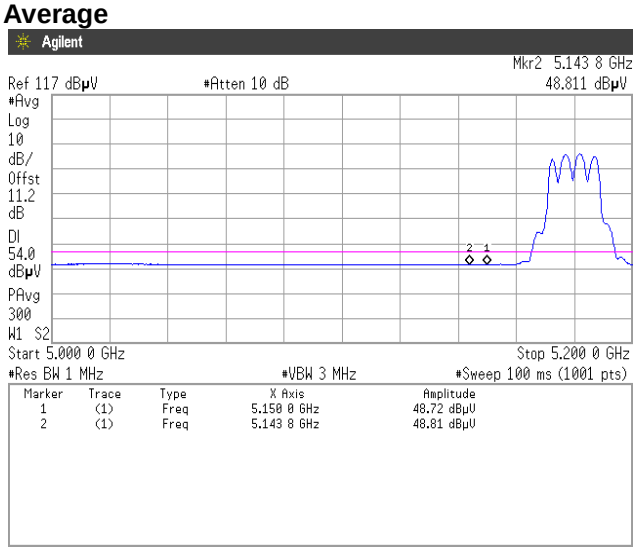
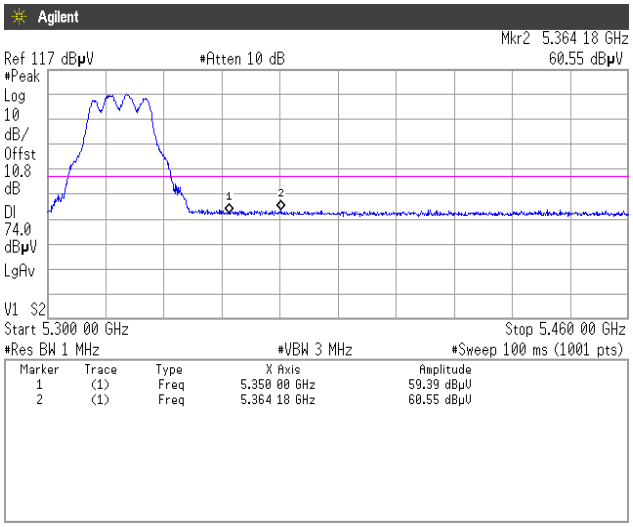
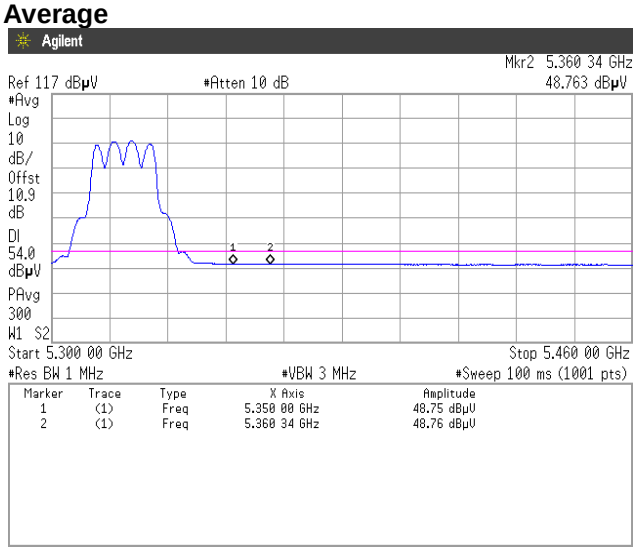


[IEEE802.11a]

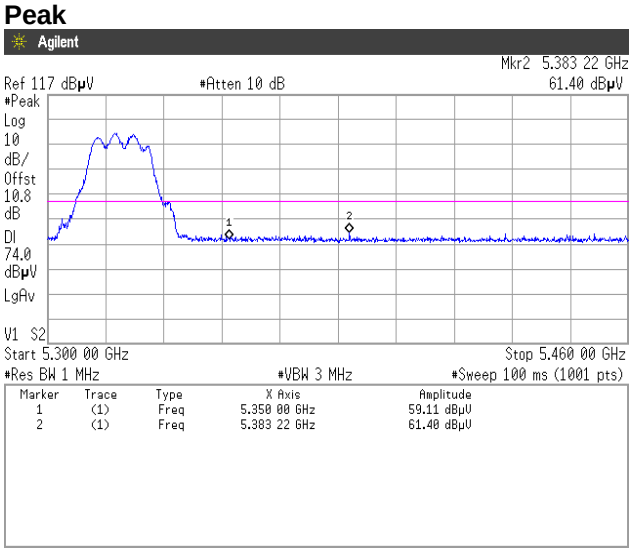
5.3 GHz Band, Channel High
Horizontal
Peak



Average



Vertical
Peak



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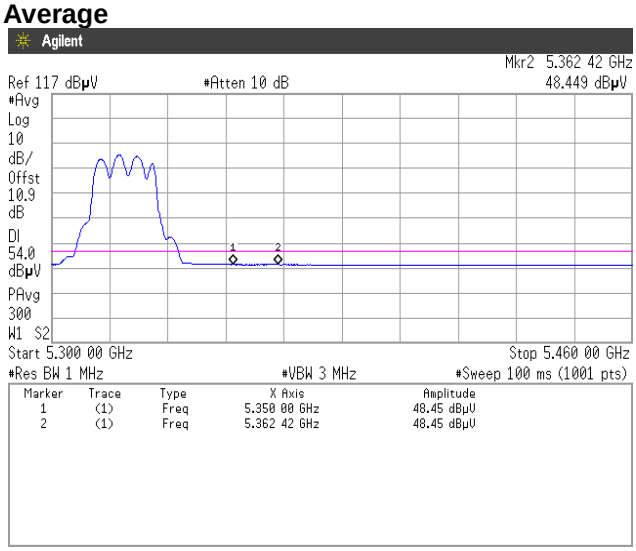
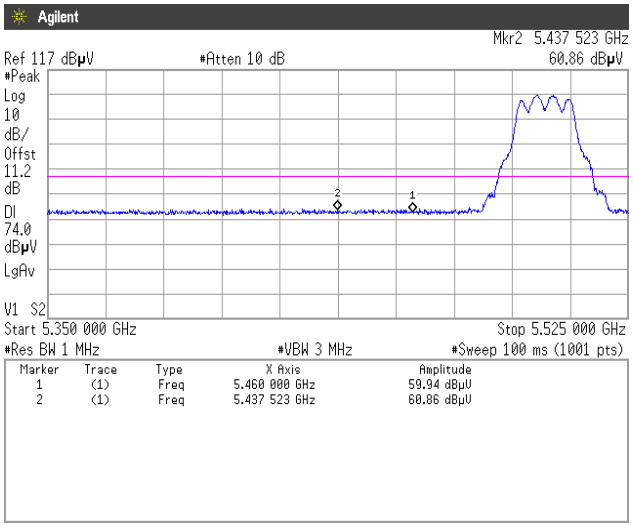


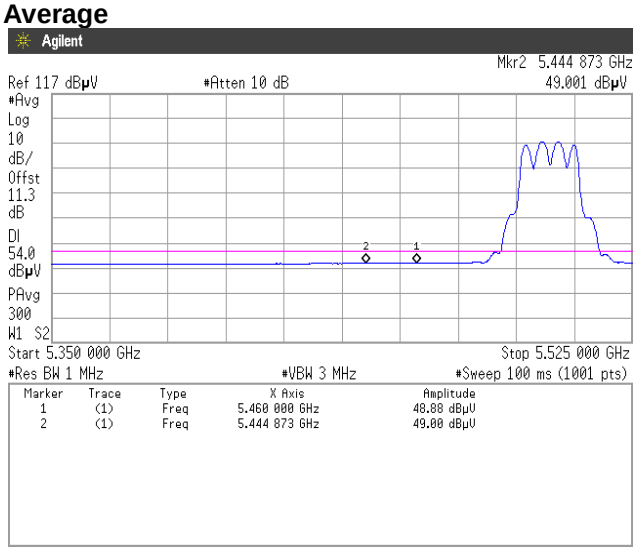
Japan

[IEEE802.11a]

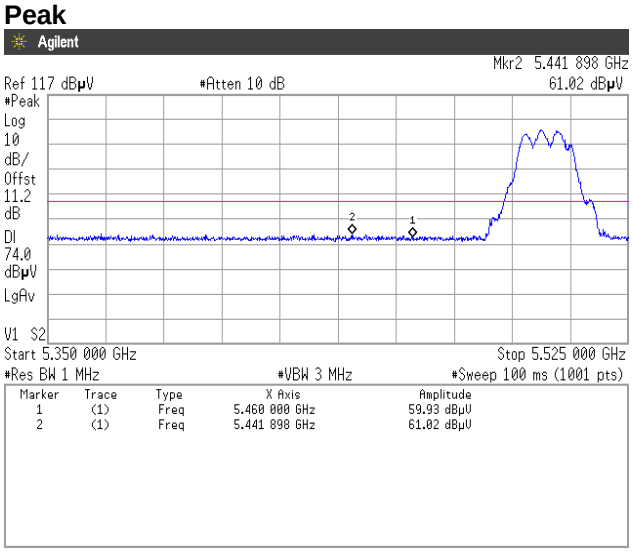
5.6 GHz Band, Channel Low
Horizontal
Peak



Average



Vertical
Peak



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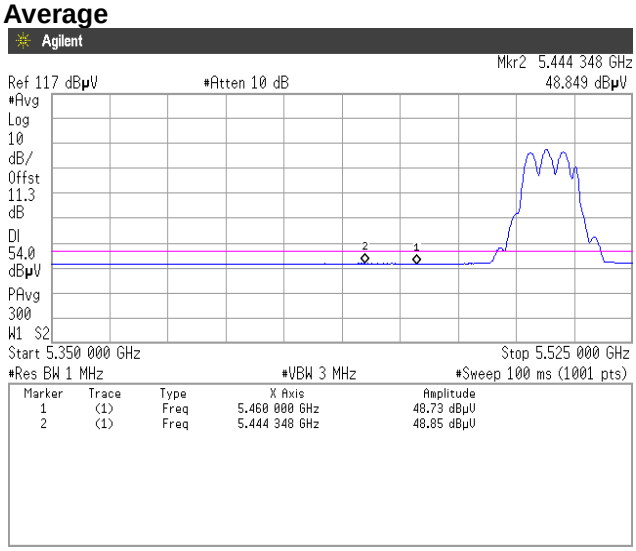
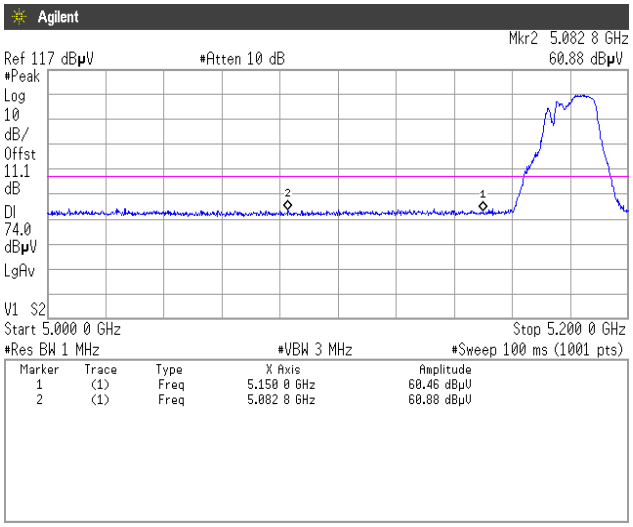


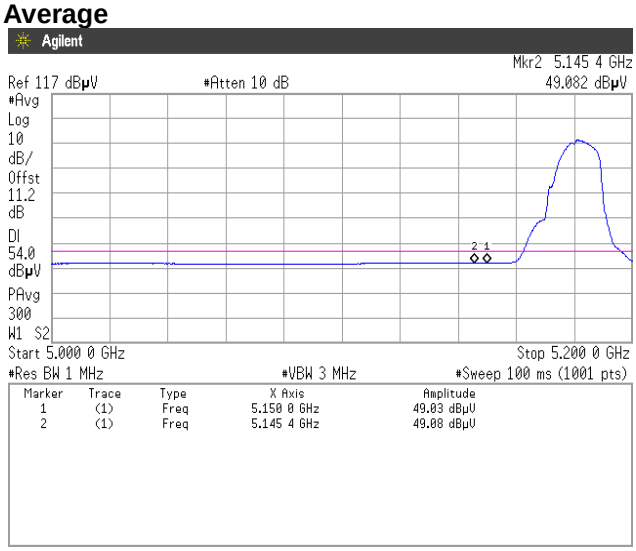
Japan

[IEEE802.11n (HT20)]

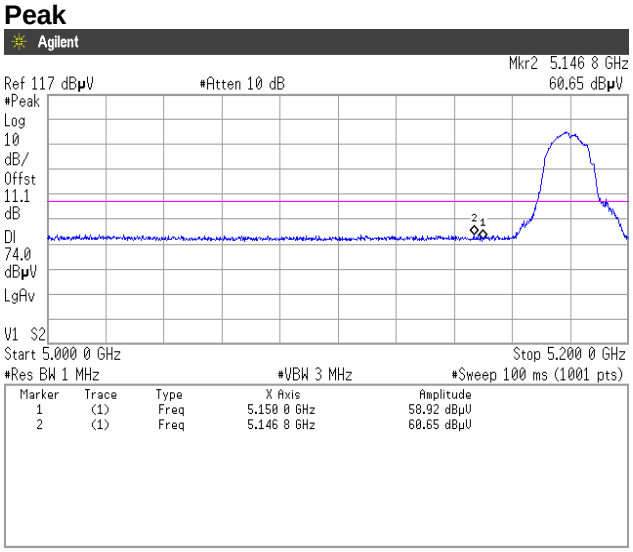
5.2 GHz Band, Channel Low
Horizontal
Peak



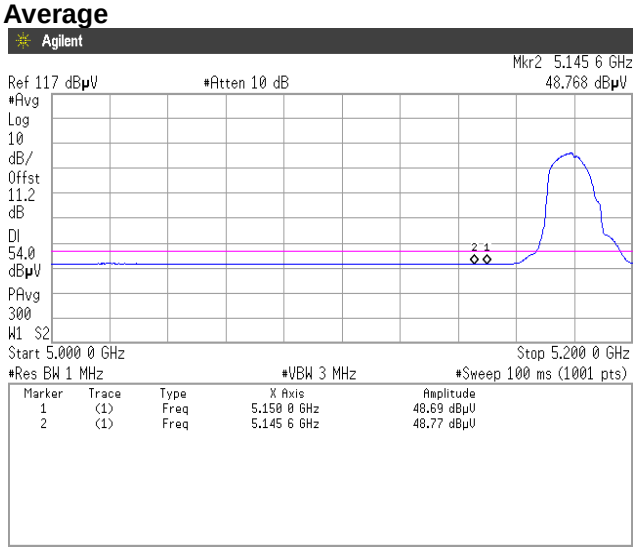
Average



Vertical
Peak

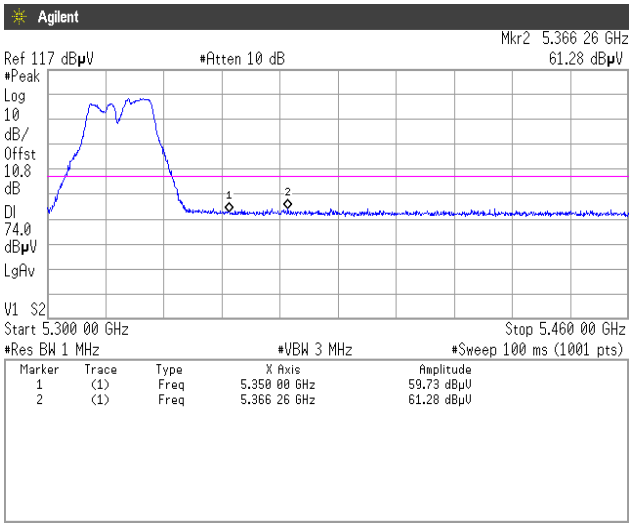


Average



[IEEE802.11n (HT20)]

5.3 GHz Band, Channel High
Horizontal
Peak



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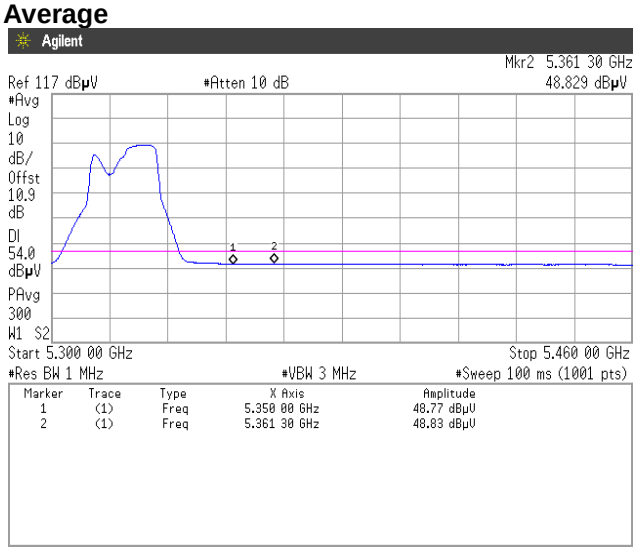
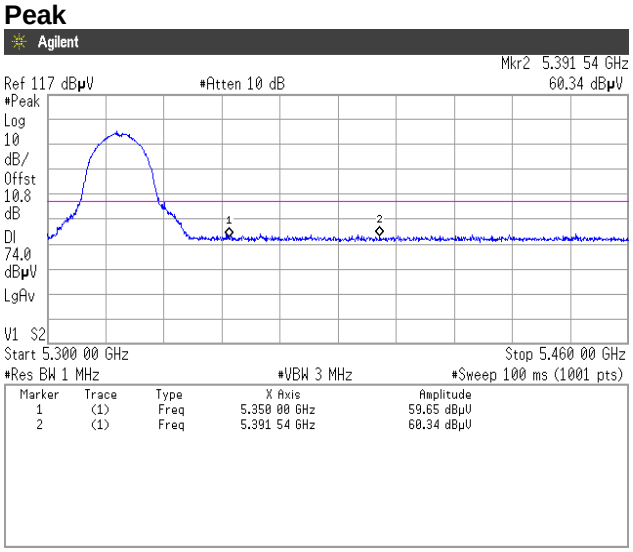
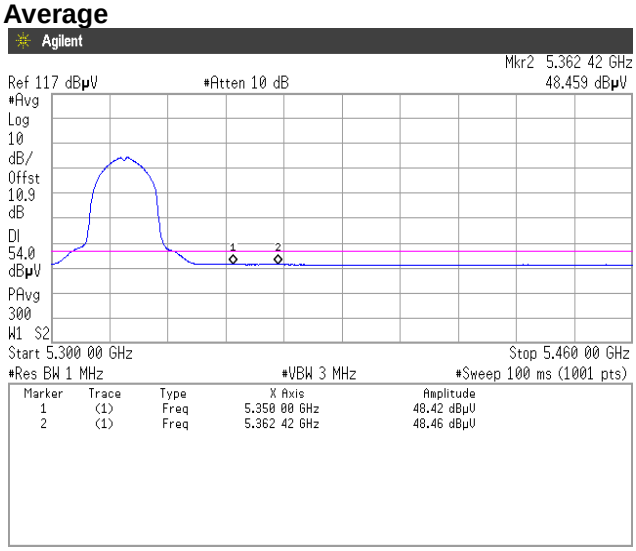


Vertical
Peak

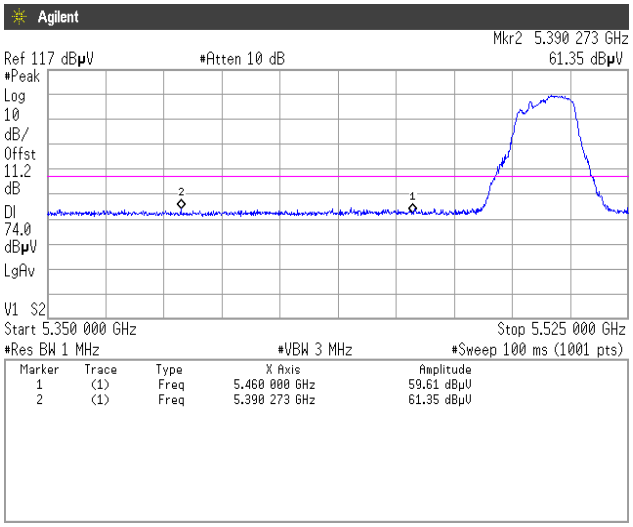


Average



[IEEE802.11n (HT20)]

5.6 GHz Band, Channel Low
Horizontal
Peak



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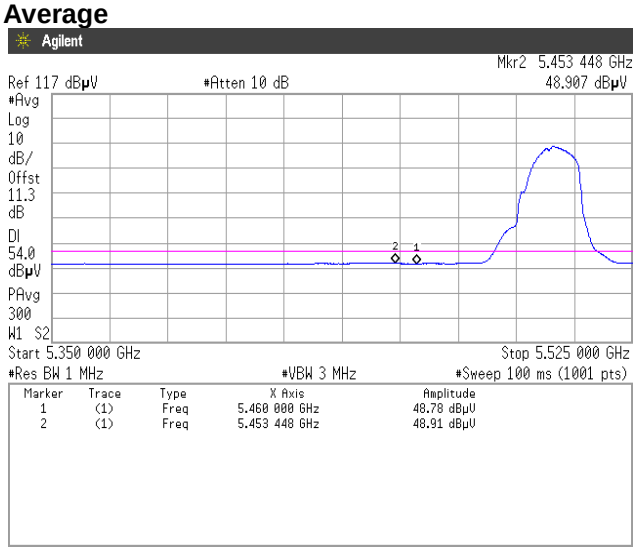
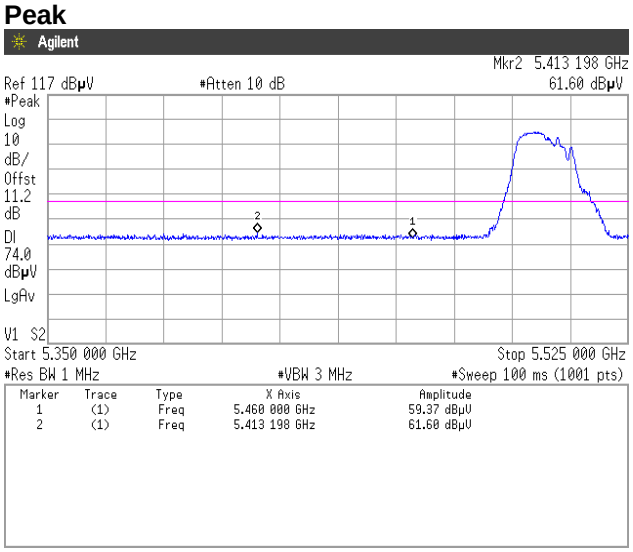
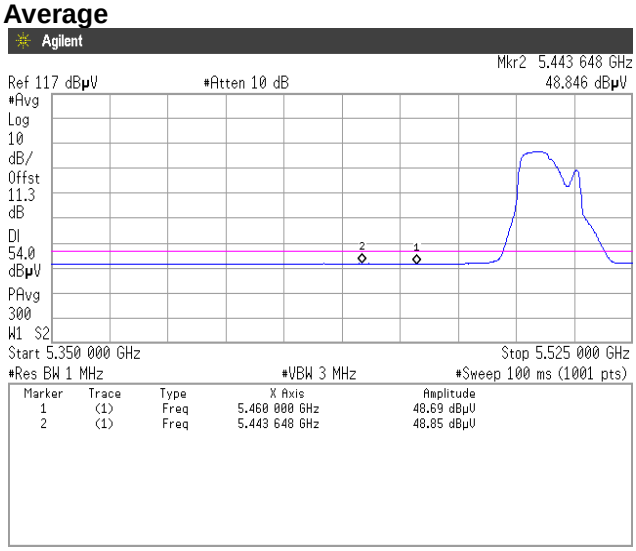


Vertical
Peak

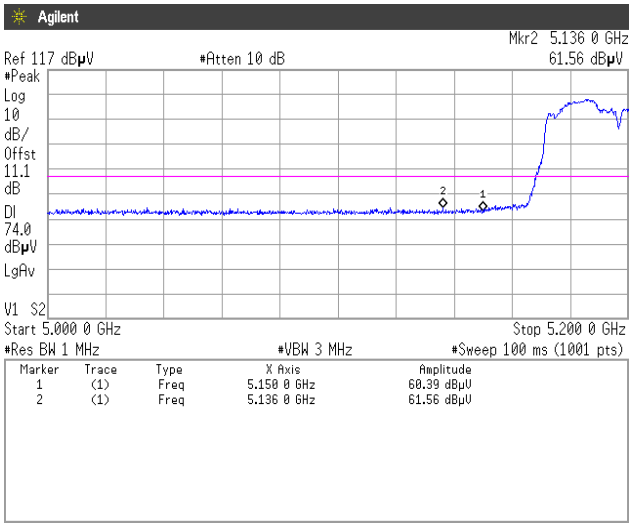


Average

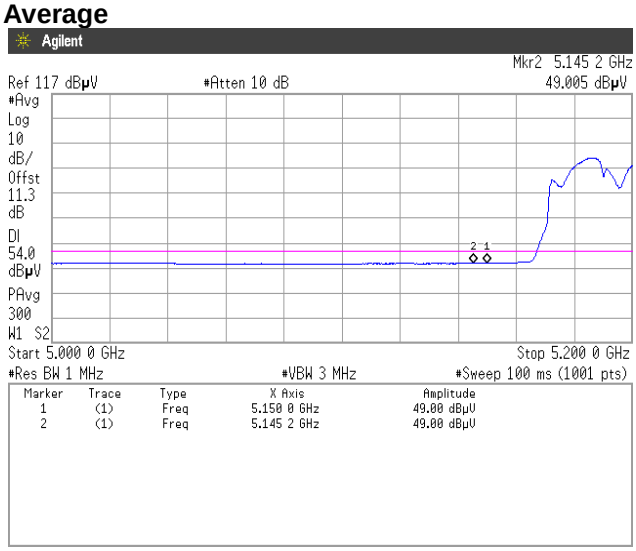


[IEEE802.11n (HT40)]

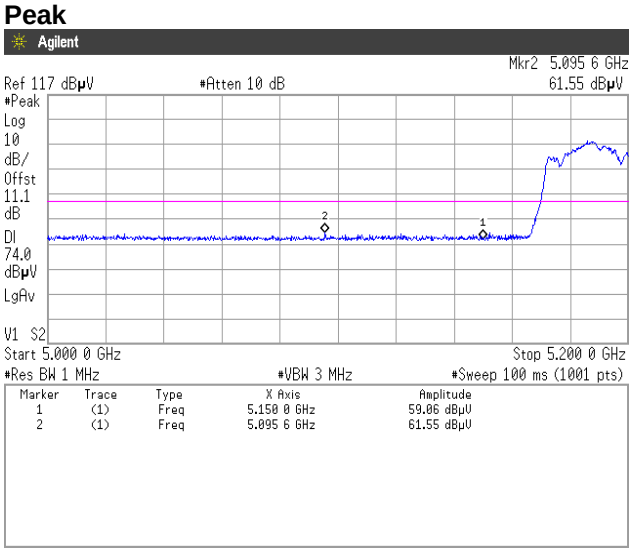
5.2 GHz Band, Channel Low
Horizontal
Peak



Average



Vertical
Peak



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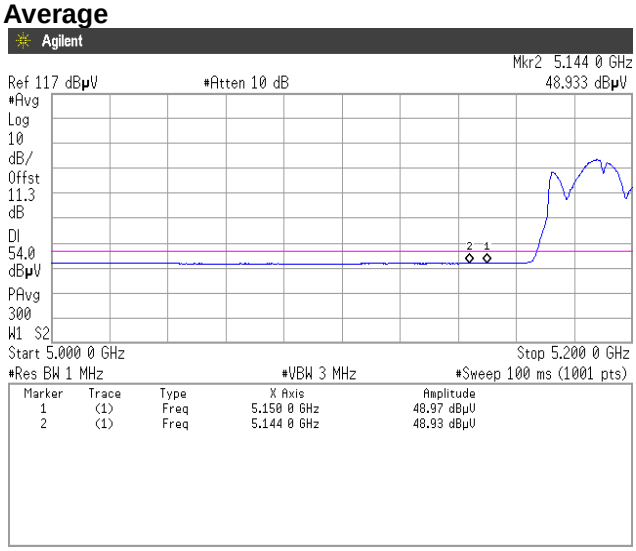
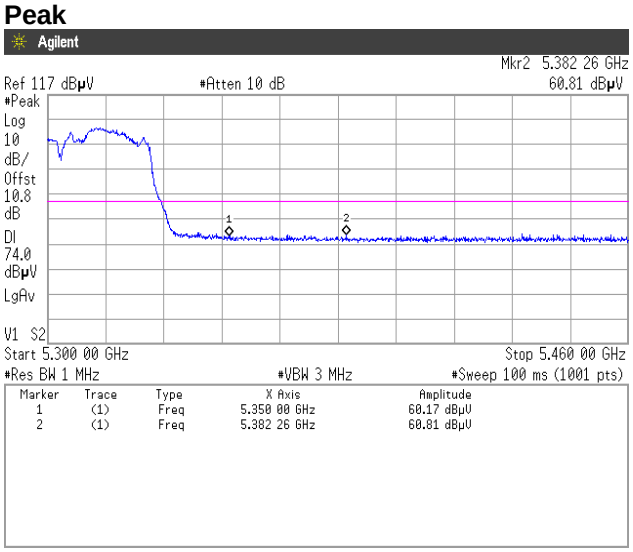
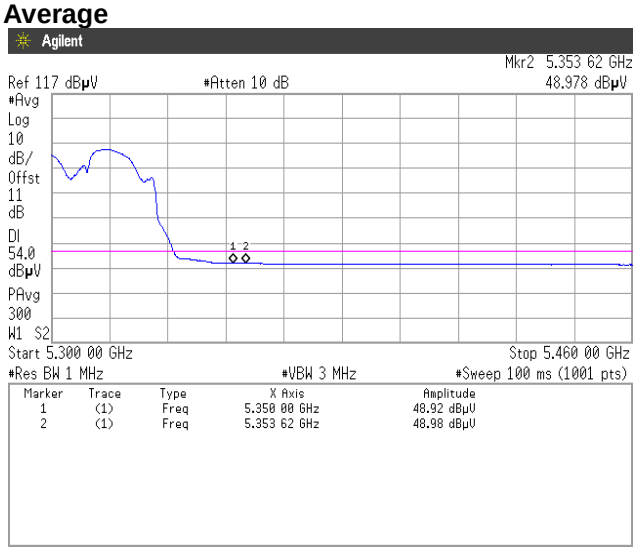


[IEEE802.11n (HT40)]

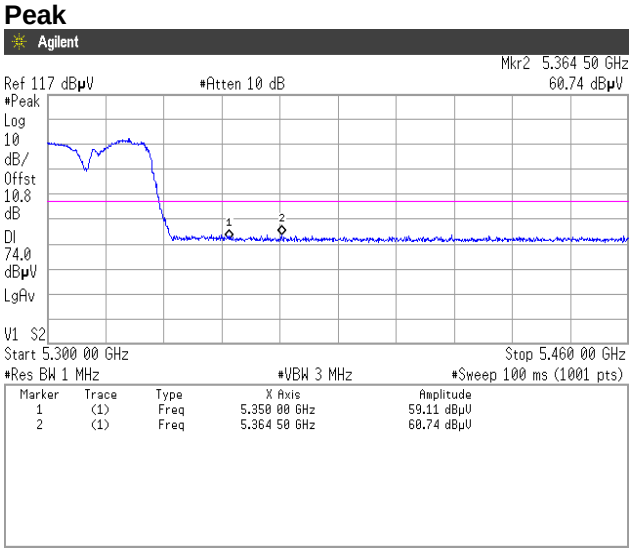
5.3 GHz Band, Channel High
Horizontal
Peak



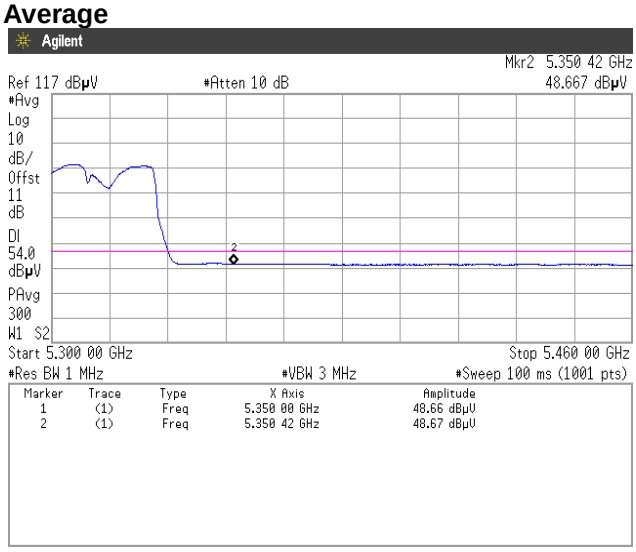
Average



Vertical
Peak

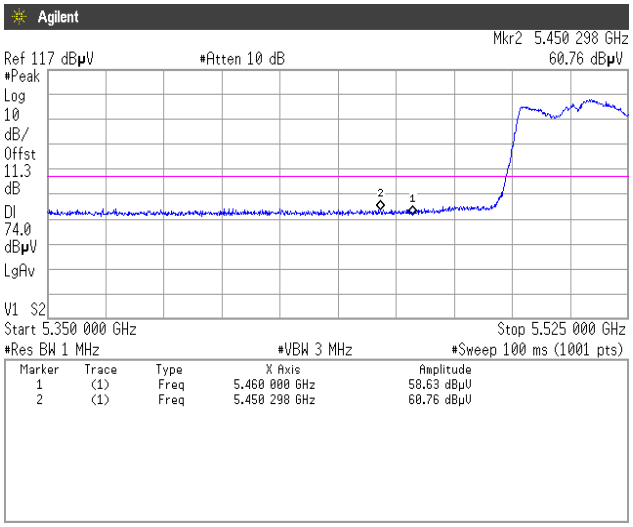


Average

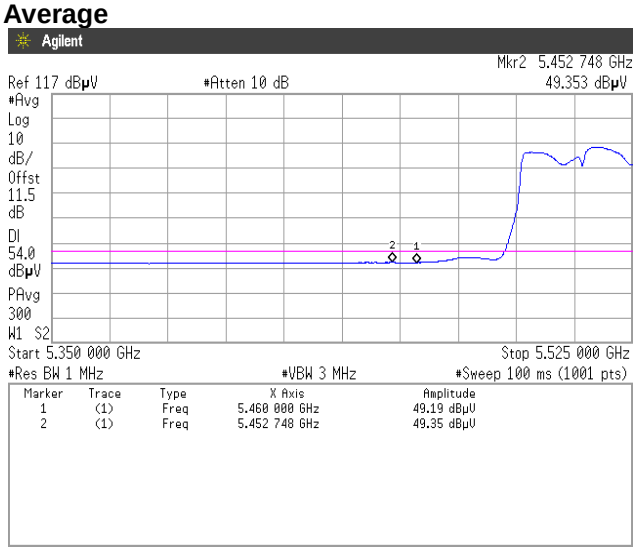


[IEEE802.11n (HT40)]

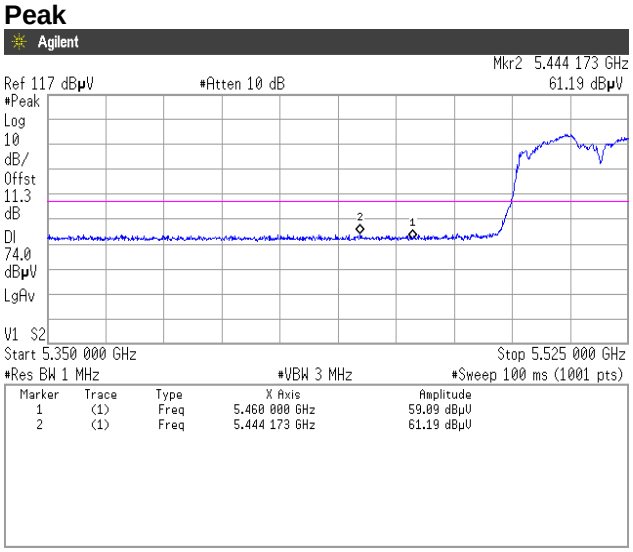
5.6 GHz Band, Channel Low
Horizontal
Peak



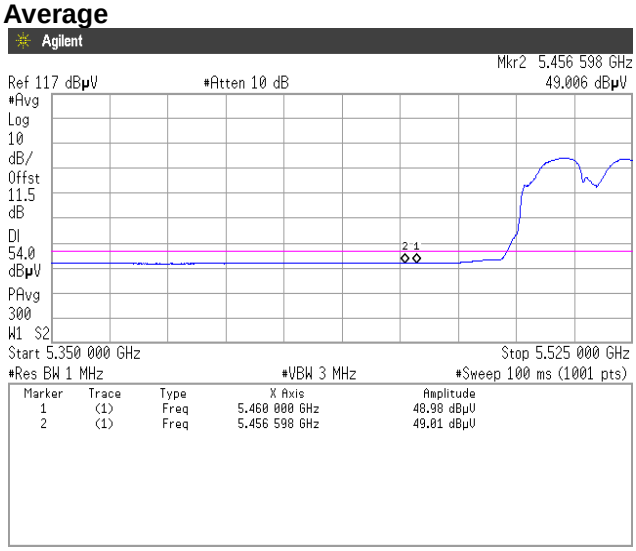
Average



Vertical
Peak

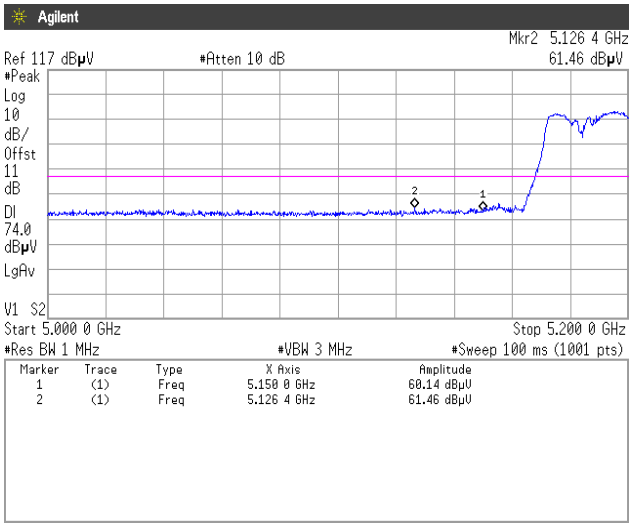


Average

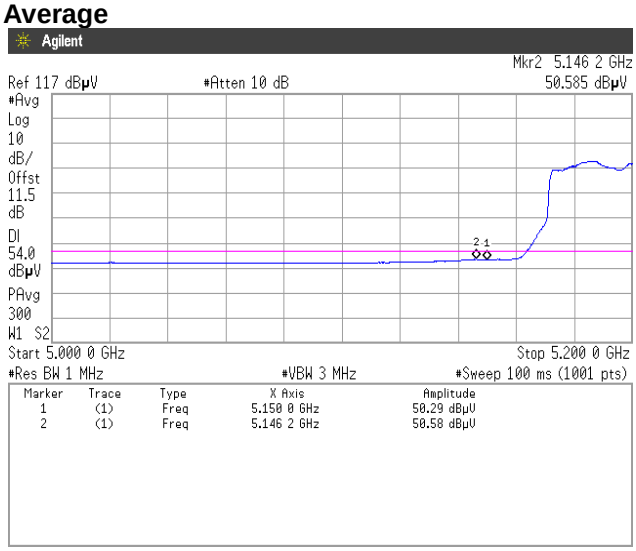


[IEEE802.11ac (VHT80)]

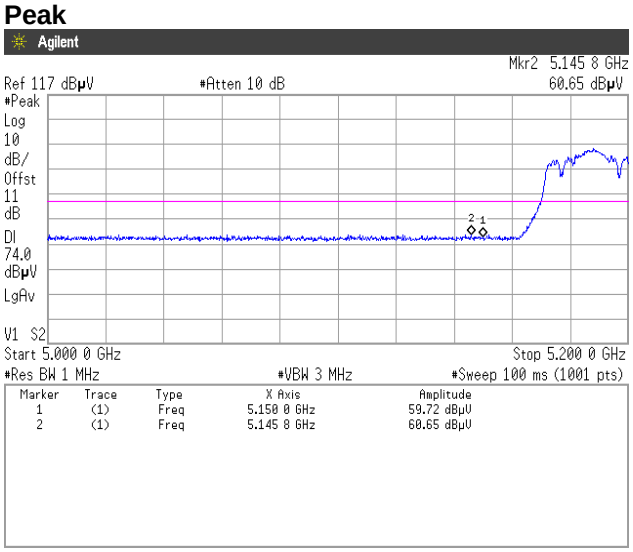
5.2 GHz Band, Channel Low
Horizontal
Peak



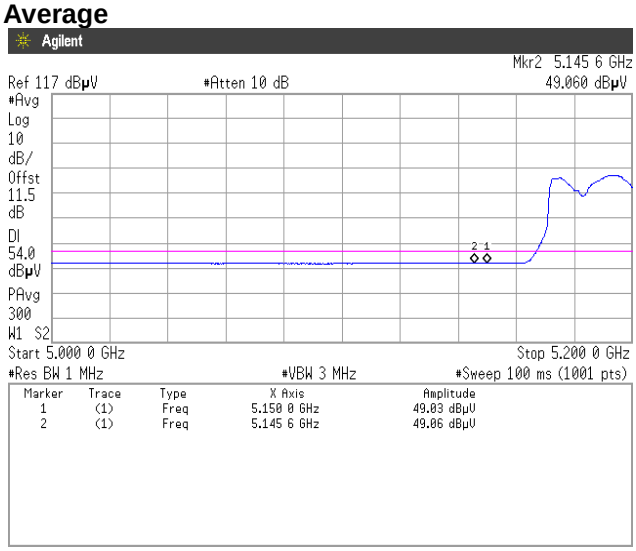
Average



Vertical
Peak

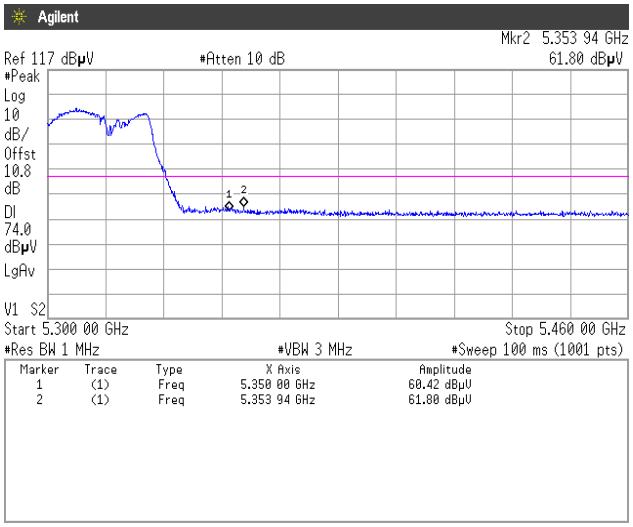


Average

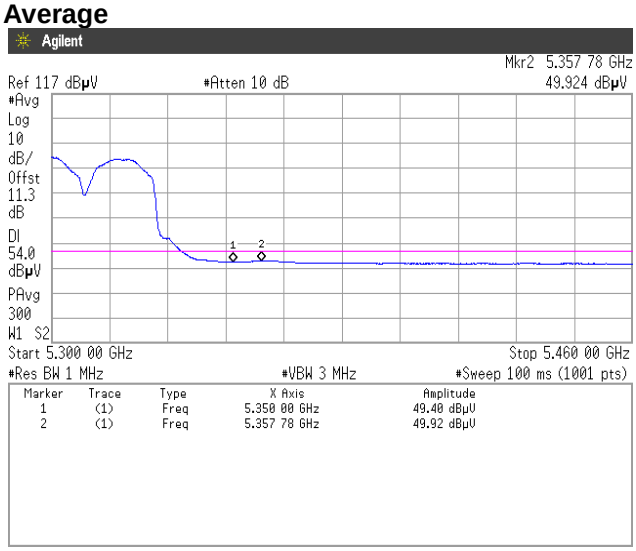


[IEEE802.11ac (VHT80)]

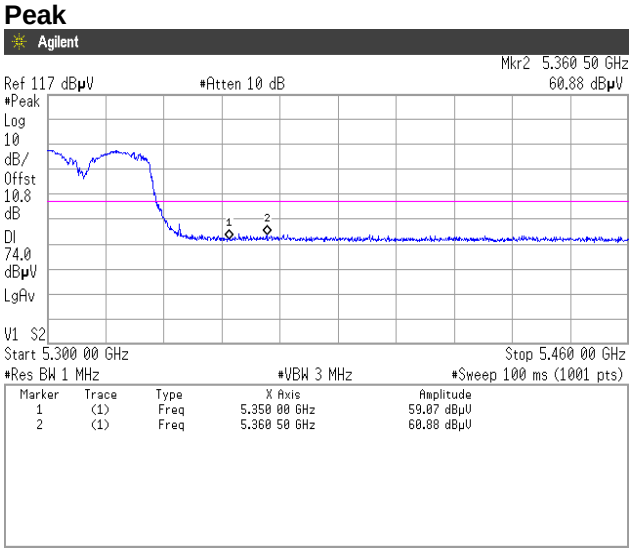
5.3 GHz Band, Channel High
Horizontal
Peak



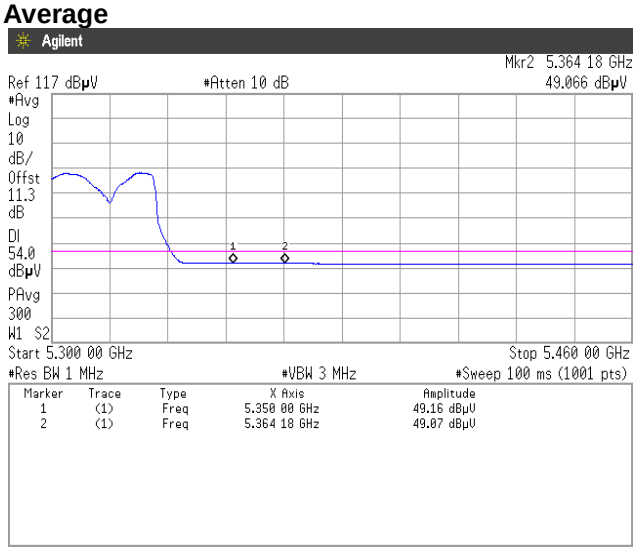
Average



Vertical
Peak

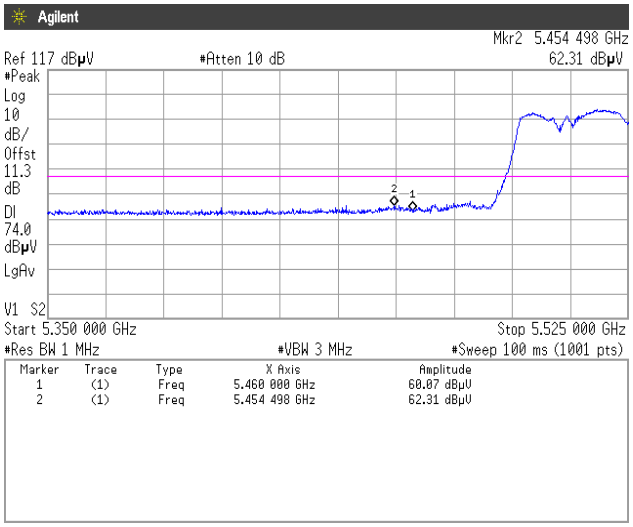


Average

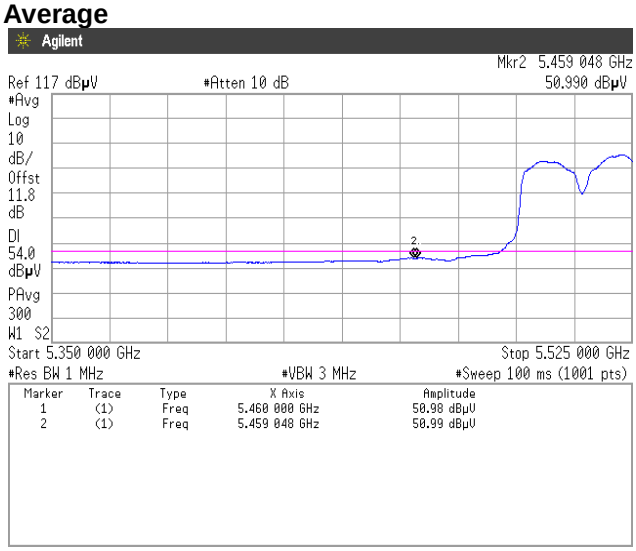


[IEEE802.11ac (VHT80)]

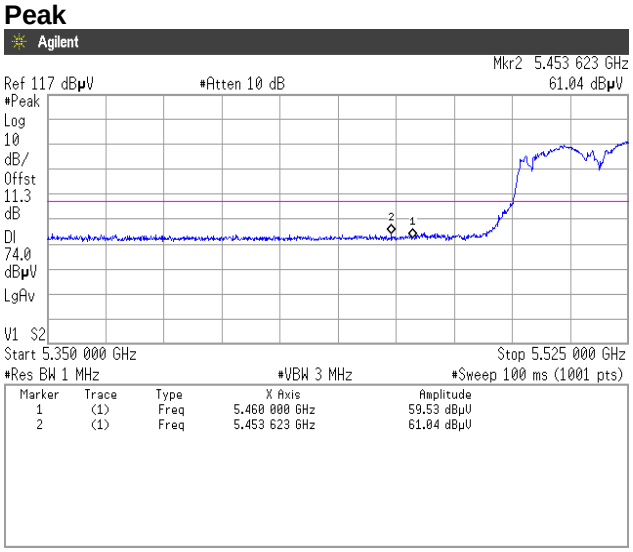
5.6 GHz Band, Channel Low
Horizontal
Peak



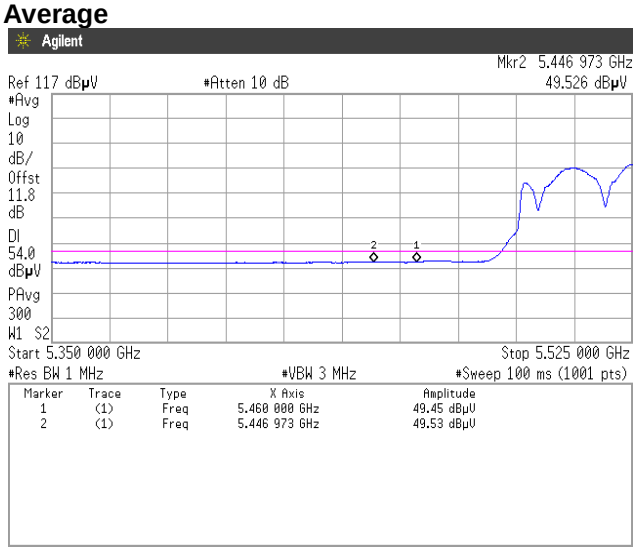
Average



Vertical
Peak



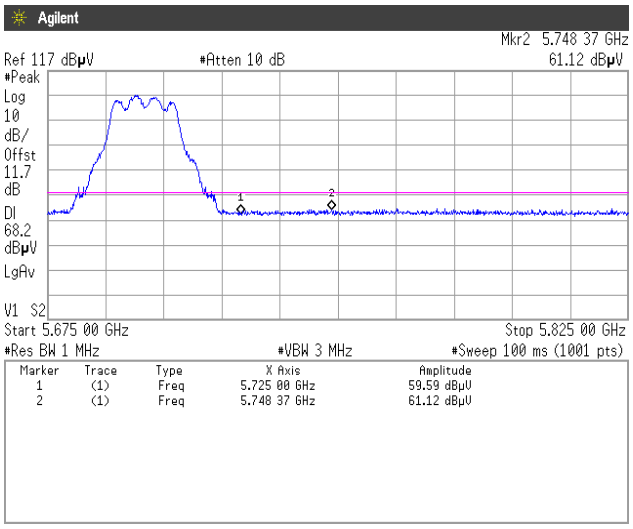
Average



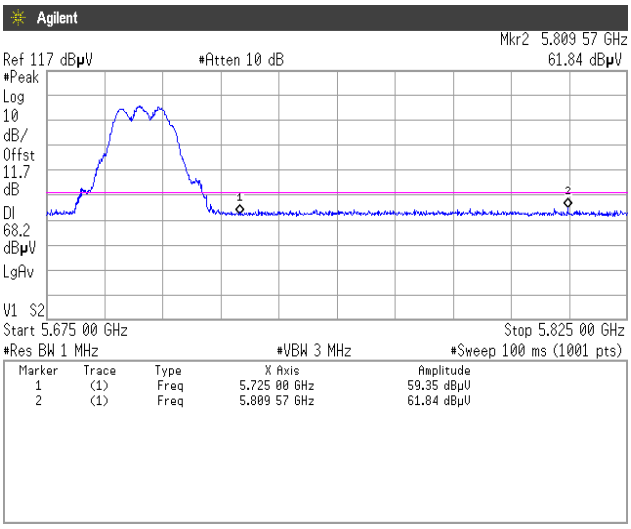
4.4.5.2 Non-Restricted Bandedge

[IEEE802.11a]

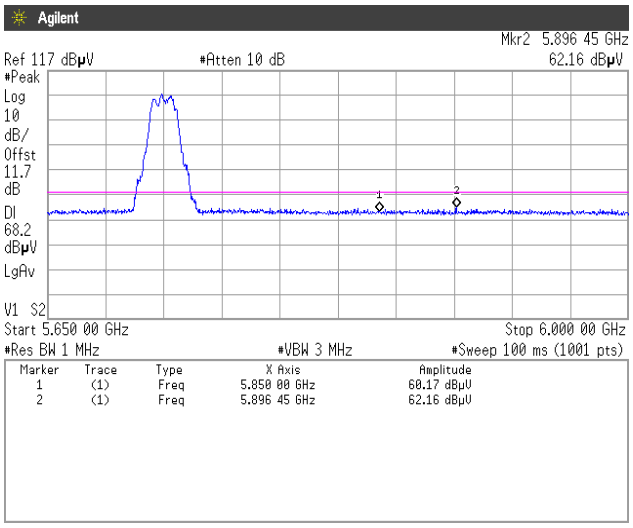
5.6 GHz Band, Channel High (140)
Peak
Horizontal



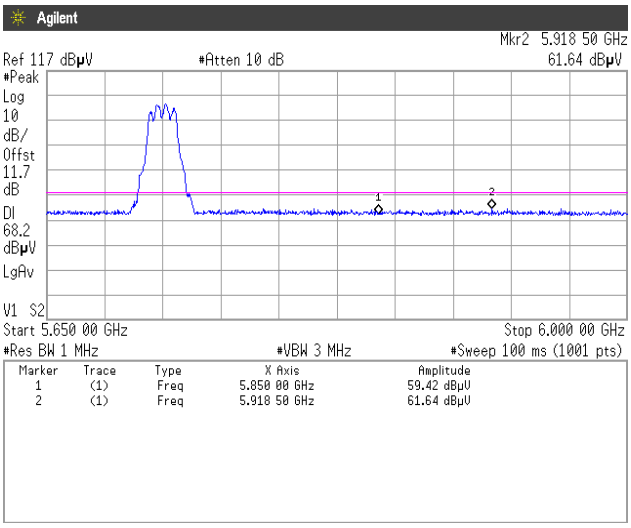
Vertical



5.6 GHz Band, Channel High (144)
Peak
Horizontal

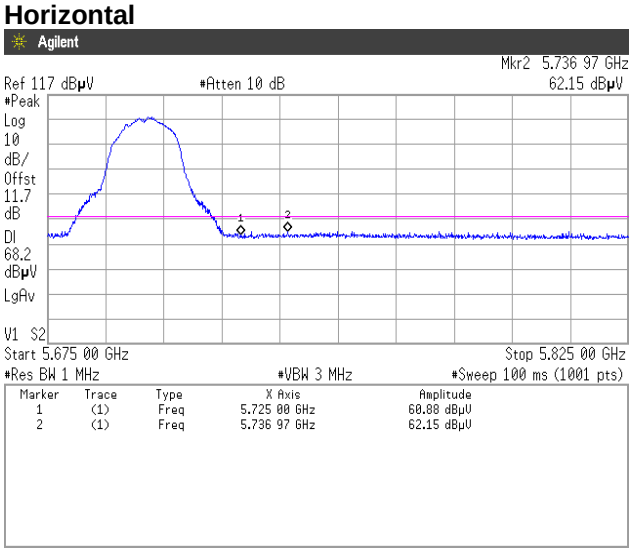


Vertical

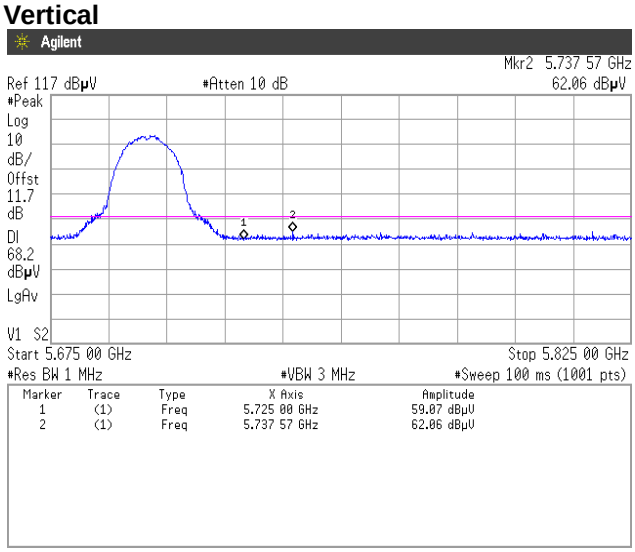


[IEEE802.11n (HT20)]

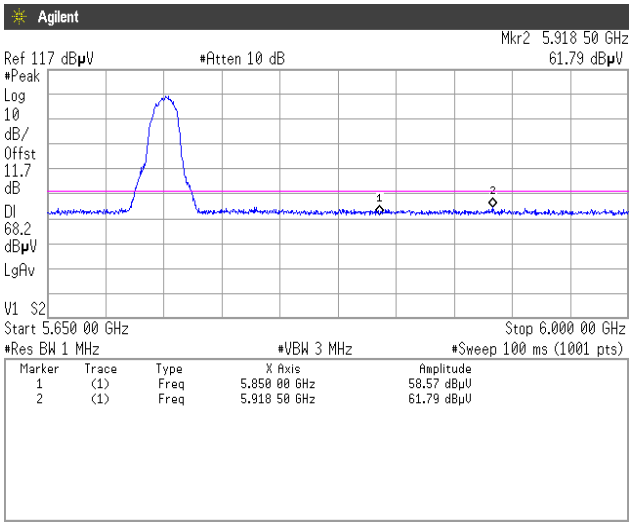
5.6GHz Band, Channel High (140)
Peak
Horizontal



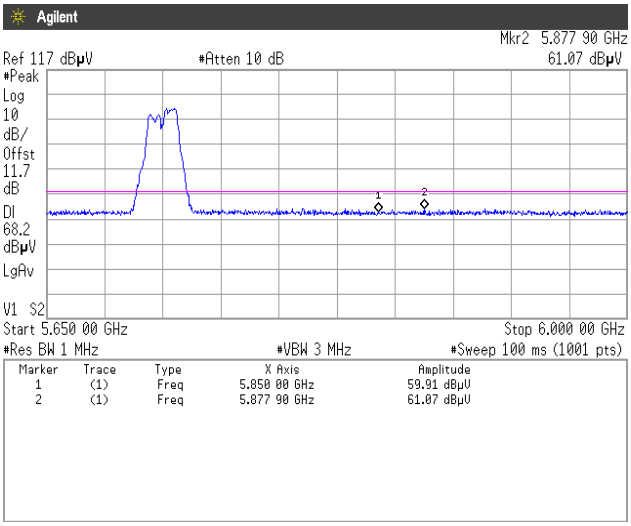
Vertical



5.6GHz Band, Channel High (144)
Peak
Horizontal



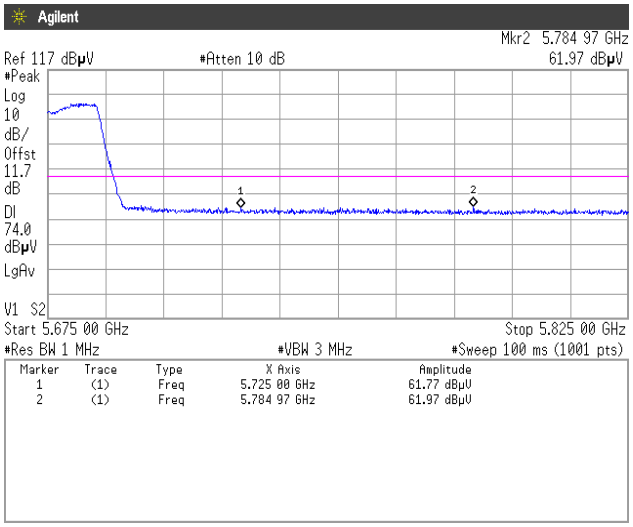
Vertical



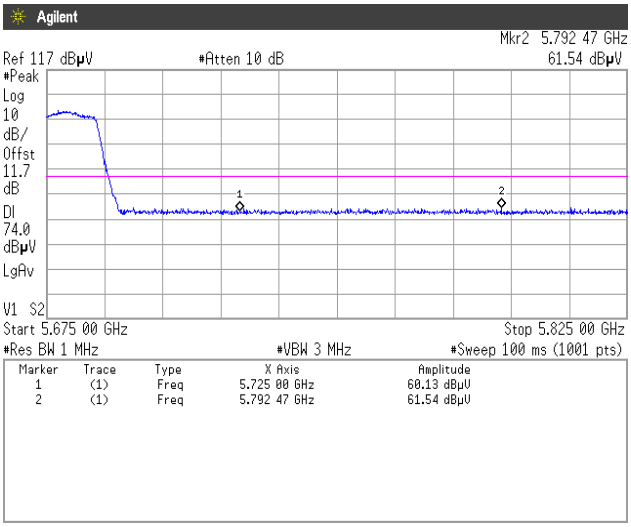
Japan

[IEEE802.11n (HT40)]

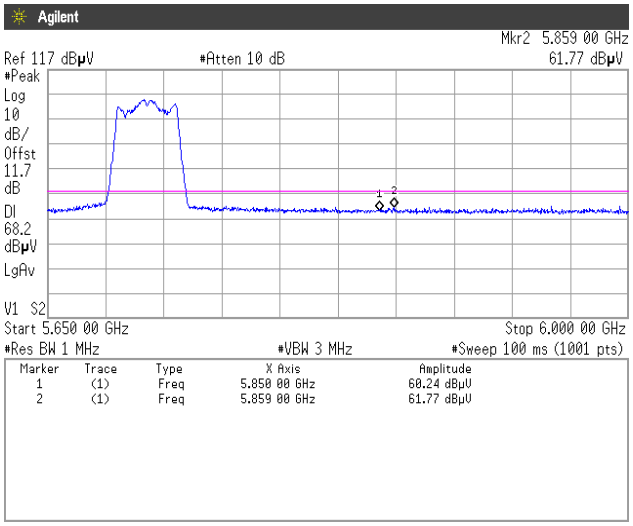
5.6GHz Band, Channel High (134)
Peak
Horizontal



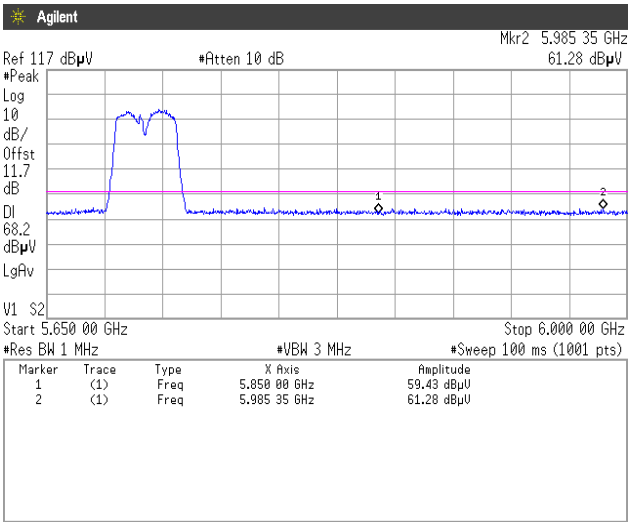
Vertical



5.6GHz Band, Channel High (142)
Peak
Horizontal

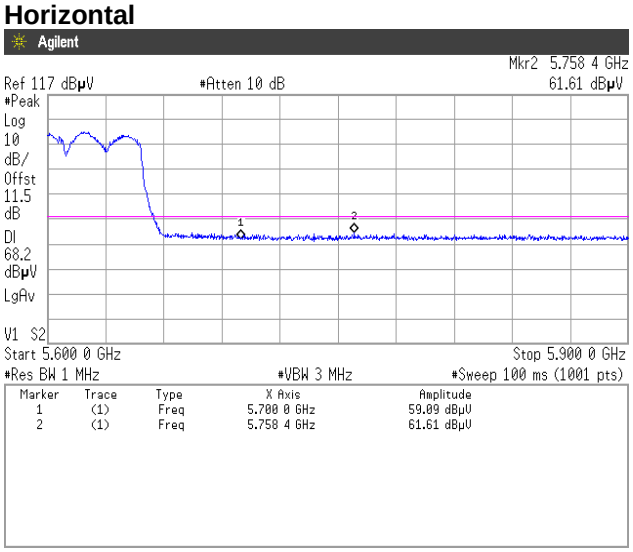


Vertical

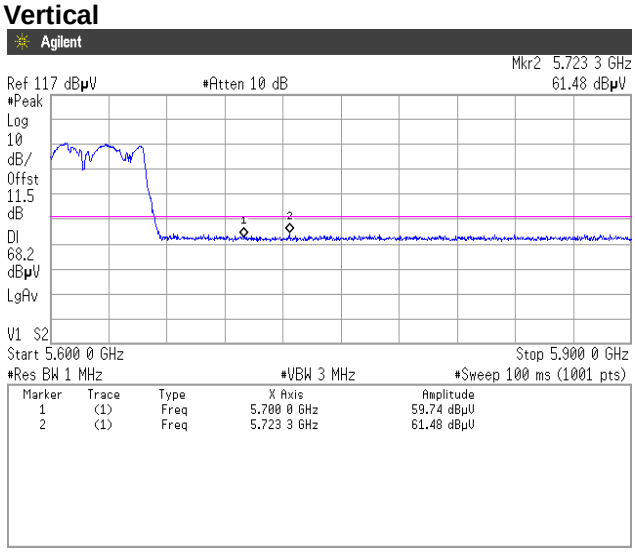


[IEEE802.11ac (VHT80)]

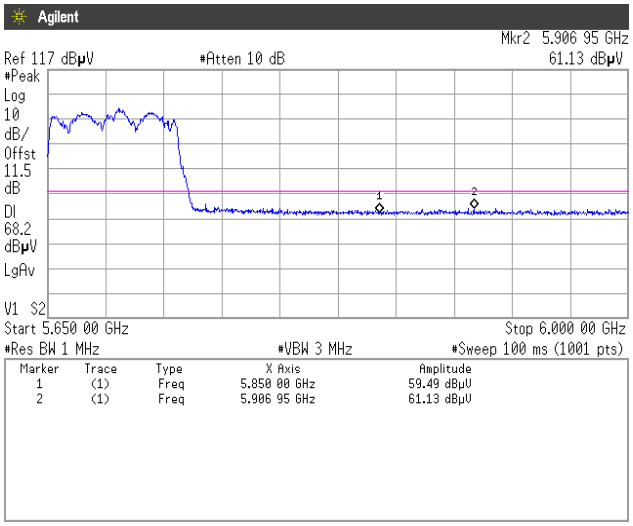
5.6GHz Band, Channel High (122)
Peak
Horizontal



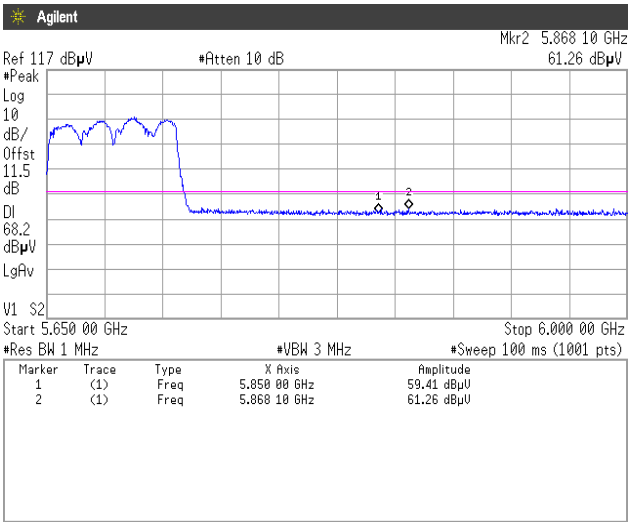
Vertical



5.6GHz Band, Channel High (138)
Peak
Horizontal



Vertical



Japan

4.4.5.3 Radiated Emissions

Date	:	11~12-December-2020			
Temperature	:	23.4 [˚C]			
Humidity	:	27.8 [%]	Test engineer	:	
Test place	:	3m Semi-anechoic chamber			Tadahiro Seino
Date	:	14~15-December-2020			
Temperature	:	21.8 [˚C]			
Humidity	:	21.5 [%]	Test engineer	:	
Test place	:	3m Semi-anechoic chamber			Tadahiro Seino
Date	:	15~16-December-2020			
Temperature	:	22.5 [˚C]			
Humidity	:	21.3 [%]	Test engineer	:	
Test place	:	3m Semi-anechoic chamber			Tadahiro Seino
Date	:	16~17-December-2020			
Temperature	:	20.4 [˚C]			
Humidity	:	20.4 [%]	Test engineer	:	
Test place	:	3m Semi-anechoic chamber			Tadahiro Seino
Date	:	17~18-December-2020			
Temperature	:	21.8 [˚C]			
Humidity	:	19.0 [%]	Test engineer	:	
Test place	:	3m Semi-anechoic chamber			Tadahiro Seino
Date	:	23~24-December-2020			
Temperature	:	20.9 [˚C]			
Humidity	:	31.8 [%]	Test engineer	:	
Test place	:	3m Semi-anechoic chamber			Chiaki Kanno
Date	:	24-December-2020			
Temperature	:	21.6 [˚C]			
Humidity	:	21.3 [%]	Test engineer	:	
Test place	:	3m Semi-anechoic chamber			Tadahiro Seino

[IEEE802.11a]
(5.2 GHz Band)

Mode	Channel	Frequency (MHz)	Frequency (MHz)	ANT H/V	Detector PK/AV	Reading (dBµV)	C.F (dB)	DCF (dB)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
802.11a	36	5180	10360.00	H	PK	46.5	10.6		57.1	68.2	11.1
	40	5200	10400.00	H	PK	44.6	10.7		55.3	68.2	12.9
	48	5240	10480.00	H	PK	45.2	10.7		55.9	68.2	12.3

(5.3 GHz Band)

Mode	Channel	Frequency (MHz)	Frequency (MHz)	ANT H/V	Detector PK/AV	Reading (dBµV)	C.F (dB)	DCF (dB)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
802.11a	52	5260	10520.00	H	PK	44.2	10.8		55.0	68.2	13.2
	56	5280	10560.00	H	PK	50.2	10.9		61.1	68.2	7.1
	64	5320	10640.00	H	PK	44.6	11.0		55.6	74.0	18.4
			10640.00	H	AV	33.1	11.0	0.115	44.2	54.0	9.8

(5.6 GHz Band)

Mode	Channel	Frequency (MHz)	Frequency (MHz)	ANT H/V	Detector PK/AV	Reading (dBµV)	C.F (dB)	DCF (dB)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
802.11a	100	5500	5464.90	H	PK	49.1	11.2		60.3	68.2	7.9
			5468.50	V	PK	49.0	11.2		60.2	68.2	8.0
			11000.00	H	PK	44.5	11.8		56.3	74.0	17.7
			11000.00	H	AV	32.0	11.8	0.115	43.9	54.0	10.1
	116	5580	11160.00	H	PK	44.5	11.9		56.4	74.0	17.6
			11160.00	H	AV	33.0	11.9	0.115	45.0	54.0	9.0
	140	5700	11400.00	H	PK	43.9	12.1		56.0	74.0	18.0
			11400.00	H	AV	33.0	12.1	0.115	45.2	54.0	8.8
	144	5720	11440.00	H	PK	43.9	12.0		55.9	74.0	18.1
			11440.00	H	AV	32.6	12.0	0.115	44.7	54.0	9.3

Note:
1. Emission Level (Margin) = Limit - [Reading + C.F (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 30 MHz to 1000 MHz at the 3 meters distance.
3. No emission was detected in the receive mode.

[IEEE802.11n (HT20)]
(5.2 GHz Band)

Mode	Channel	Frequency (MHz)	Frequency (MHz)	ANT H/V	Detector PK/AV	Reading (dBµV)	C.F (dB)	DCF (dB)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
802.11n (20MHz)	36	5180	10360.00	V	PK	44.9	10.6		55.5	68.2	12.7
	40	5200	10400.00	V	PK	43.1	10.7		53.8	68.2	14.4
	48	5240	10480.00	V	PK	44.5	10.7		55.2	68.2	13.0

(5.3 GHz Band)

Mode	Channel	Frequency (MHz)	Frequency (MHz)	ANT H/V	Detector PK/AV	Reading (dBµV)	C.F (dB)	DCF (dB)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
802.11n (20MHz)	52	5260	10520.00	V	PK	44.1	10.8		54.9	68.2	13.3
	56	5280	10560.00	V	PK	44.9	10.9		55.8	68.2	12.4
	64	5320	10640.00	V	PK	45.3	11.0		56.3	74.0	17.7
			10640.00	V	AV	33.1	11.0	0.129	44.2	54.0	9.8

(5.6 GHz Band)

Mode	Channel	Frequency (MHz)	Frequency (MHz)	ANT H/V	Detector PK/AV	Reading (dBµV)	C.F (dB)	DCF (dB)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
802.11n (20MHz)	100	5500	5469.90	H	PK	48.8	11.2		60.0	68.2	8.2
			5464.70	V	PK	49.0	11.2		60.2	68.2	8.0
			11000.00	V	PK	43.6	11.8		55.4	74.0	18.6
			11000.00	V	AV	32.4	11.8	0.129	44.3	54.0	9.7
	116	5580	11160.00	V	PK	44.6	11.9		56.5	74.0	17.5
			11160.00	V	AV	32.6	11.9	0.129	44.6	54.0	9.4
	140	5700	11400.00	V	PK	43.4	12.1		55.5	74.0	18.5
			11400.00	V	AV	32.9	12.1	0.129	45.1	54.0	8.9
	144	5720	11440.00	V	PK	44.0	12.0		56.0	74.0	18.0
			11440.00	V	AV	32.5	12.0	0.129	44.6	54.0	9.4

Note:
1. Emission Level (Margin) = Limit - [Reading + C.F (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 30 MHz to 1000 MHz at the 3 meters distance.
3. No emission was detected in the receive mode.

Japan

[IEEE802.11n (HT40)]

(5.2 GHz Band)

Mode	Channel	Frequency (MHz)	Frequency (MHz)	ANT H/V	Detector PK/AV	Reading (dBµV)	C.F (dB)	DCF (dB)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
802.11n (40MHz)	38	5190	10380.00	H	PK	44.4	10.7		55.1	68.2	13.1
	46	5230	10460.00	H	PK	43.4	10.7		54.1	68.2	14.1

(5.3 GHz Band)

Mode	Channel	Frequency (MHz)	Frequency (MHz)	ANT H/V	Detector PK/AV	Reading (dBµV)	C.F (dB)	DCF (dB)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
802.11n (40MHz)	54	5270	10540.00	H	PK	43.8	10.8		54.6	68.2	13.6
	62	5310	10620.00	H	PK	43.9	11.0		54.9	74.0	19.1
			10620.00	H	AV	32.8	11.0	0.249	44.0	54.0	10.0

(5.6 GHz Band)

Mode	Channel	Frequency (MHz)	Frequency (MHz)	ANT H/V	Detector PK/AV	Reading (dBµV)	C.F (dB)	DCF (dB)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
802.11n (40MHz)	102	5510	5467.90	H	PK	49.9	11.2		61.1	68.2	7.1
			5469.70	V	PK	48.7	11.2		59.9	68.2	8.3
			11020.00	H	PK	45.2	11.8		57.0	74.0	17.0
			11020.00	H	AV	36.9	11.8	0.249	48.9	54.0	5.1
	110	5550	11100.00	H	PK	43.9	11.9		55.8	74.0	18.2
			11100.00	H	AV	32.9	11.9	0.249	45.0	54.0	9.0
	134	5670	11340.00	H	PK	44.3	12.0		56.3	74.0	17.7
			11340.00	H	AV	33.0	12.0	0.249	45.2	54.0	8.8
	142	5710	11420.00	H	PK	43.6	12.1		55.7	74.0	18.3
			11420.00	H	AV	32.0	12.1	0.249	44.3	54.0	9.7

Note:
1. Emission Level (Margin) = Limit - [Reading + C.F (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 30 MHz to 1000 MHz at the 3 meters distance.
3. No emission was detected in the receive mode.

[IEEE802.11ac (VHT80)]

(5.2 GHz Band)

Mode	Channel	Frequency (MHz)	Frequency (MHz)	ANT H/V	Detector PK/AV	Reading (dBµV)	C.F (dB)	DCF (dB)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
802.11ac (80MHz)	42	5210	10420.00	H	PK	44.3	10.7		55.0	68.2	13.2

(5.3 GHz Band)

Mode	Channel	Frequency (MHz)	Frequency (MHz)	ANT H/V	Detector PK/AV	Reading (dBµV)	C.F (dB)	DCF (dB)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
802.11ac (80MHz)	58	5290	10580.00	H	PK	45.0	10.9		55.9	68.2	12.3

(5.6 GHz Band)

Mode	Channel	Frequency (MHz)	Frequency (MHz)	ANT H/V	Detector PK/AV	Reading (dBµV)	C.F (dB)	DCF (dB)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
802.11ac (80MHz)	106	5530	5461.70	V	PK	50.5	11.2		61.7	68.2	6.5
			5468.00	H	PK	48.5	11.2		59.7	68.2	8.5
			11060.00	H	PK	44.0	11.8		55.8	74.0	18.2
			11060.00	H	AV	32.5	11.8	0.474	44.8	54.0	9.2
	122	5610	11220.00	H	PK	44.1	12.0		56.1	74.0	17.9
			11220.00	H	AV	32.9	12.0	0.474	45.4	54.0	8.6
	138	5690	11380.00	H	PK	44.5	12.1		56.6	74.0	17.4
			11380.00	H	AV	32.8	12.1	0.474	45.4	54.0	8.6

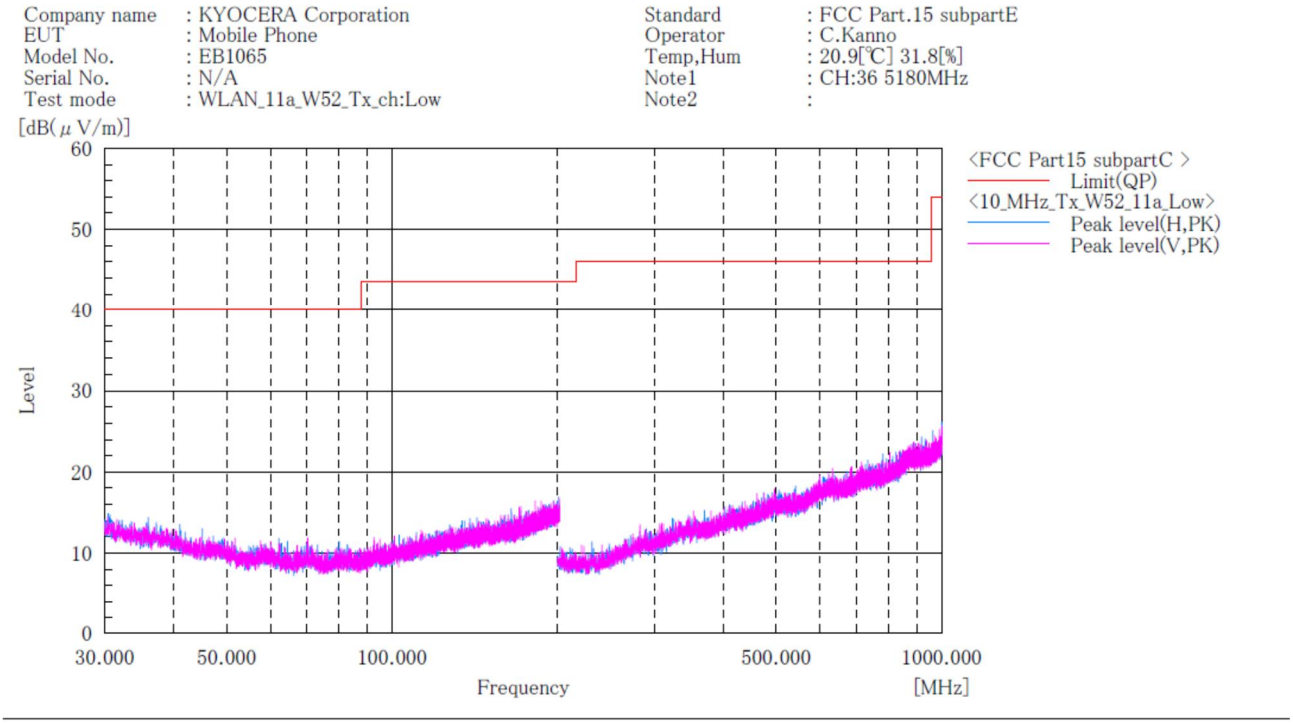
Note:
1. Emission Level (Margin) = Limit - [Reading + C.F (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 30 MHz to 1000 MHz at the 3 meters distance.
3. No emission was detected in the receive mode.

Japan

4.4.5.4 Measurement chart

Transmission mode

[11a]
W52 / Channel Low
BELOW 1GHz



Final Result

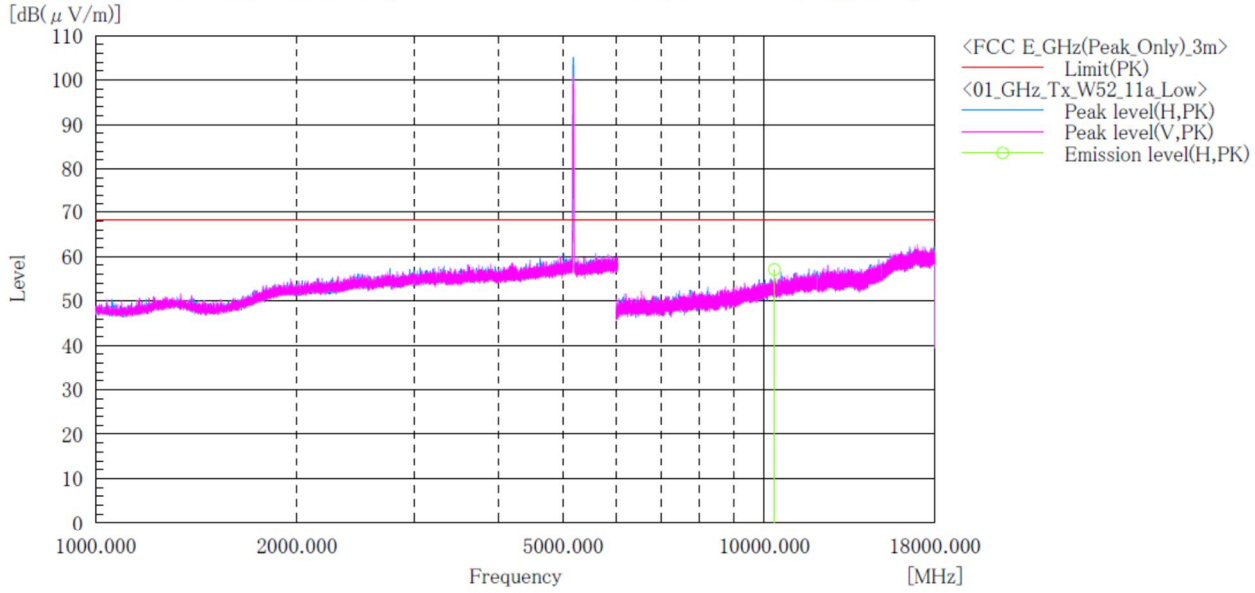
No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

Japan

[11a]
W52 / Channel Low
ABOVE 1GHz

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpart E
EUT	: Mobile Phone	Operator	: T.Seino
Model No.	: EB1065	Temp,Hum,Atm	: 23.4[℃] 27.8[%]
Serial No.	: N/A	Note1	: ch:36_5180MHz
Test mode	: 5GHz_W52_11a_Tx_Low	Note2	: Chain: Both



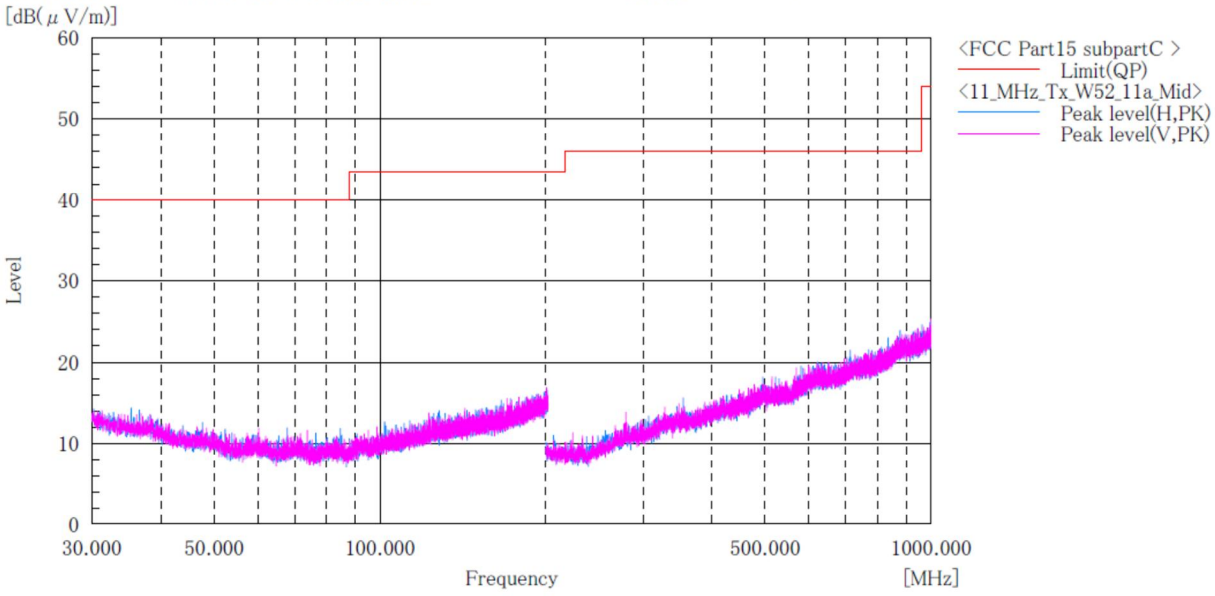
Final Result

No.	Frequency	(P)	Reading PK	c.f	Result PK	Limit PK	Margin PK	Height	Angle
	[MHz]		[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[cm]	[°]
1	10360.000	H	46.5	10.6	57.1	68.2	11.1	100.0	0.0

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.

[11a]
W52 / Channel Middle
BELOW 1GHz

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpartE
EUT	: Mobile Phone	Operator	: C.Kanno
Model No.	: EB1065	Temp,Hum	: 20.9[℃] 31.8[%]
Serial No.	: N/A	Note1	: CH:40 5200MHz
Test mode	: WLAN_11a_W52_Tx_ch:Mid	Note2	:



Final Result

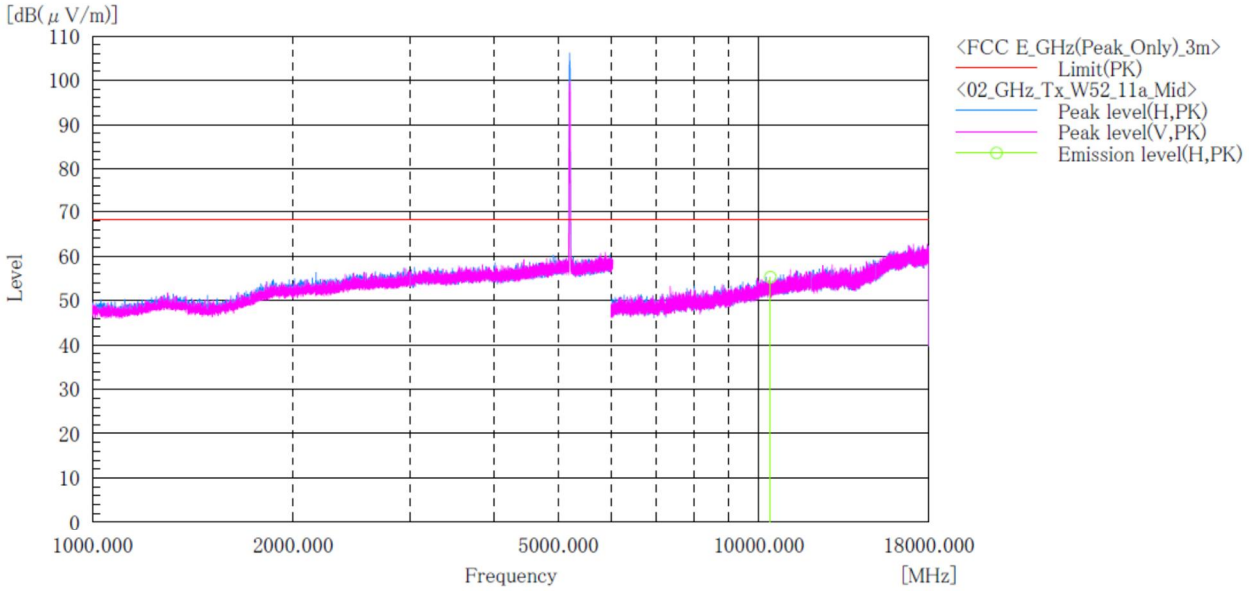
No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

Japan

[11a]
W52 / Channel Middle
ABOVE 1GHz

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpart E
EUT	: Mobile Phone	Operator	: T.Seino
Model No.	: EB1065	Temp,Hum,Atm	: 21.8[℃] 21.5[%]
Serial No.	: N/A	Note1	: ch:40_5200MHz
Test mode	: 5GHz_W52_11a_Tx_Mid	Note2	: Chain: Both



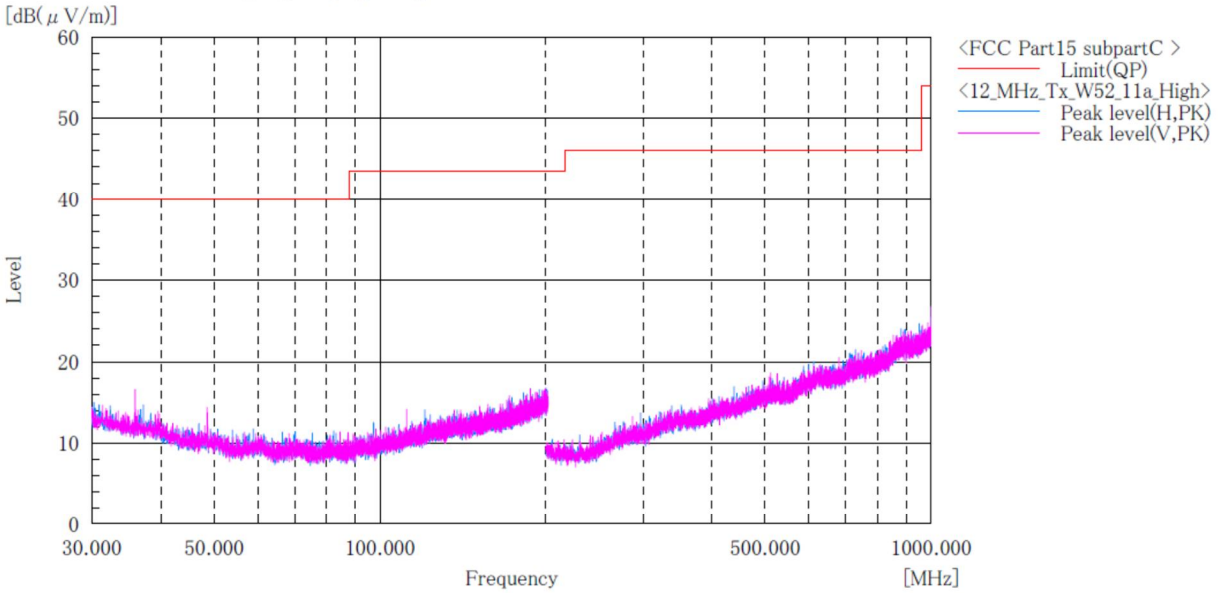
Final Result

No.	Frequency	(P)	Reading PK	c.f	Result PK	Limit PK	Margin PK	Height	Angle
	[MHz]		[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[cm]	[°]
1	10400.000	H	44.6	10.7	55.3	68.2	12.9	100.0	0.0

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.

[11a]
W52 / Channel High
BELOW 1GHz

Company name	: KYOCERA Corporation	Standard	: FCC Part.15 subpartE
EUT	: Mobile Phone	Operator	: C.Kanno
Model No.	: EB1065	Temp,Hum	: 20.9[℃] 31.8[%]
Serial No.	: N/A	Note1	: CH:48 5240MHz
Test mode	: WLAN_11a_W52_Tx_ch:High	Note2	:



Final Result

No.	Frequency [MHz]	(P)	c.f [dB(1/m)]	Height [cm]	Angle [°]

Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.