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FCC RADIO TEST REPORT

Applicant's company	**Synology Incorporated**
Applicant Address	3F-3,No.106,Chang An W. Rd. Taipei 103 Taiwan
FCC ID	**YOR-RT1900ACR1**
Manufacturer's company	**Synology Incorporated**
Manufacturer Address	3F-3,No.106,Chang An W. Rd. Taipei 103 Taiwan

Product Name	802.11ac Wireless Router
Brand Name	Synology
Model No.	RT1900ac
Test Rule Part(s)	47 CFR FCC Part 15 Subpart E § 15.407
Test Freq. Range	5150 ~ 5350MHz / 5470 ~ 5725MHz / 5725 ~ 5850 MHz
Received Date	Nov. 25, 2015
Final Test Date	Jan. 08, 2016
Submission Type	Original Equipment

Statement

Test result included is for the IEEE 802.11n and IEEE 802.11a/ac of the product.

The test result in this report refers exclusively to the presented test model / sample.

Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.

The measurements and test results shown in this test report were made in accordance with the procedures and found in compliance with the limit given in **ANSI C63.10-2013**, **47 CFR FCC Part 15 Subpart E, KDB789033 D02 v01, KDB662911 D01 v02r01, KDB644545 D03 v01.**

The test equipment used to perform the test is calibrated and traceable to NML/ROC.

Testing Laboratory
1190

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR5N2423AB	Rev. 01	Initial issue of report	Jan. 27, 2016

1. VERIFICATION OF COMPLIANCE

Product Name	:	802.11ac Wireless Router
Brand Name	:	Synology
Model No.	:	RT1900ac
Applicant	:	Synology Incorporated
Test Rule Part(s)	:	47 CFR FCC Part 15 Subpart E § 15.407

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Nov. 25, 2015 would like to declare that the tested sample has been evaluated and found to be in compliance with the tested rule parts. The data recorded as well as the test configuration specified is true and accurate for showing the sample's EMC nature.

Sam Chen

SPORTON INTERNATIONAL INC.

2. SUMMARY OF THE TEST RESULT

Applied Standard: 47 CFR FCC Part 15 Subpart E				
Part	**Rule Section**	**Description of Test**	**Result**	**Under Limit**
4.1	15.207	AC Power Line Conducted Emissions	Complies	5.92 dB
4.2	15.407(a)	26dB Spectrum Bandwidth and 99% Occupied Bandwidth	Complies	-
4.3	15.407(e)	6dB Spectrum Bandwidth	Complies	-
4.4	15.407(a)	Maximum Conducted Output Power	Complies	0.13 dB
4.5	15.407(a)	Power Spectral Density	Complies	0.05 dB
4.6	15.407(b)	Radiated Emissions	Complies	0.11 dB
4.7	15.407(b)	Band Edge Emissions	Complies	0.03 dB
4.8	15.407(g)	Frequency Stability	Complies	-
4.9	15.203	Antenna Requirements	Complies	-

3. GENERAL INFORMATION

3.1. Product Details

Items	Description
Product Type	WLAN (3TX, 3RX)
Radio Type	Intentional Transceiver
Power Type	From power adapter
Modulation	IEEE 802.11a: OFDM IEEE 802.11n/ac: see the below table
Data Modulation	IEEE 802.11a/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) IEEE 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)
Data Rate (Mbps)	IEEE 802.11a: OFDM (6/9/12/18/24/36/48/54) IEEE 802.11n/ac: see the below table
Frequency Range	5150 ~ 5350MHz / 5470 ~ 5725MHz / 5725 ~ 5850 MHz
Channel Number	21 for 20MHz bandwidth ; 9 for 40MHz bandwidth 4 for 80MHz bandwidth
Channel Band Width (99%)	**<For Non-Beamforming Mode>** Band 1: IEEE 802.11a: 17.71 MHz IEEE 802.11ac MCS0/Nss1 (VHT20): 18.58 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 36.61 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 75.83 MHz Band 2: IEEE 802.11a: 16.93 MHz IEEE 802.11ac MCS0/Nss1 (VHT20): 17.89 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 36.76 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.41 MHz Band 3: IEEE 802.11a: 16.85 MHz IEEE 802.11ac MCS0/Nss1 (VHT20): 17.71 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 37.05 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.41 MHz Band 4: IEEE 802.11a: 16.85 MHz IEEE 802.11ac MCS0/Nss1 (VHT20): 17.80 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 36.76 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.12 MHz

	<For Beamforming Mode> Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 17.80 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 36.61 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 75.83 MHz Band 2: IEEE 802.11ac MCS0/Nss1 (VHT20): 17.80MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 36.76 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 75.83 MHz Band 3: IEEE 802.11ac MCS0/Nss1 (VHT20): 17.80 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 36.61 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.12 MHz Band 4: IEEE 802.11ac MCS0/Nss1 (VHT20): 17.80 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 36.61 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 75.83 MHz
Maximum Conducted Output Power	<For Non-Beamforming Mode> Band 1: IEEE 802.11a: 26.90 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 26.93 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 20.53 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 20.23 dBm Band 2: IEEE 802.11a: 20.90 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 20.75 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 18.98 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 20.73 dBm Band 3: IEEE 802.11a: 20.83 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 20.90 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 19.15 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 21.40 dBm Band 4: IEEE 802.11a: 20.63 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 16.72 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 19.63 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 17.17 dBm

	<For Beamforming Mode> Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 22.00 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 20.53 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 19.81 dBm Band 2: IEEE 802.11ac MCS0/Nss1 (VHT20): 20.46 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 18.98 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 19.59 dBm Band 3: IEEE 802.11ac MCS0/Nss1 (VHT20): 20.48 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 19.15 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 19.26 dBm Band 4: IEEE 802.11ac MCS0/Nss1 (VHT20): 16.72 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 18.59 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 17.17 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

Note: The EUT supports Master and Bridge in 2.4GHz, 5GHz band 1, band 4 / Client without radar detection in 2.4GHz, 5GHz band 1~band 4.

Items	Description	
Communication Mode	☒ IP Based (Load Based)	☐ Frame Based
TPC Function	☒ With TPC	☐ Without TPC
Weather Band (5600~5650MHz)	☐ With 5600~5650MHz	☒ Without 5600~5650MHz
Beamforming Function	☒ With beamforming for 802.11ac in 5GHz	☐ Without beamforming
Operate Condition	☒ Indoor	☐ Outdoor

Antenna and Band width

Antenna	Three (TX)		
Band width Mode	20 MHz	40 MHz	80 MHz
IEEE 802.11a	V	X	X
IEEE 802.11n	V	V	X
IEEE 802.11ac	V	V	V

IEEE 11n/ac Spec.

Protocol	Number of Transmit Chains (NTX)	Data Rate / MCS
802.11n (HT20)	3	MCS 0-23
802.11n (HT40)	3	MCS 0-23
802.11ac (VHT20)	3	MCS 0-9/Nss1-3
802.11ac (VHT40)	3	MCS 0-9/Nss1-3
802.11ac (VHT80)	3	MCS 0-9/Nss1-3
Note 1: IEEE Std. 802.11n modulation consists of HT20 and HT40 (HT: High Throughput). Then EUT supports HT20 and HT40. Note 2: IEEE Std. 802.11ac modulation consists of VHT20, VHT40, VHT80 and VHT160 (VHT: Very High Throughput). Then EUT supports VHT20, VHT40 and VHT80. Note 3: Modulation modes consist of below configuration: HT20/HT40: IEEE 802.11n, VHT20/VHT40/VHT80: IEEE 802.11ac		

3.2. Accessories

Power	Brand	Model	Rating
Adapter	EDAC	EA1024QU	Input: 100-240V~1.0A, 50-60Hz Output: 12V, 2A
Others			
RJ-45 Cable*1: Non-Shielded, 1.2m			
Foot Holder*1			

3.3. Table for Filed Antenna

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)	
					2.4GHz	5GHz
1	ACON	ARMEE-000000	Dipole Antenna	Revised SMA	3.5	4.6
2	ACON	ARMEE-000000	Dipole Antenna	Revised SMA	3.5	4.6
3	ACON	ARMEE-000000	Dipole Antenna	Revised SMA	3.5	4.6

Note: The EUT has three Antennas.

<For 2.4GHz Band>

For IEEE 802.11b/g/n mode (3TX/3RX)

Chain 1, Chain 2 and Chain 3 can be used as transmitting/receiving antenna.

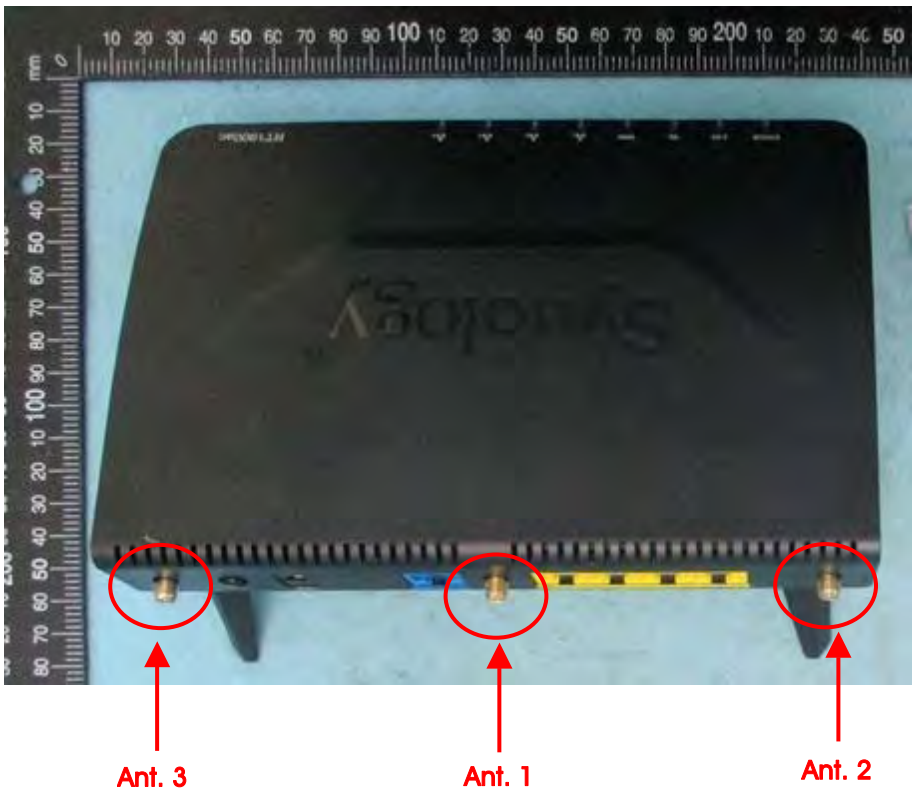
Chain 1, Chain 2 and Chain 3 could transmit/receive simultaneously.

<For 5GHz Band>

For IEEE 802.11a/n/ac mode (3TX/3RX)

Chain 1, Chain 2 and Chain 3 can be used as transmitting/receiving antenna.

Chain 1, Chain 2 and Chain 3 could transmit/receive simultaneously.



3.4. Table for Carrier Frequencies

There are three bandwidth systems.

For 20MHz bandwidth systems, use Channel 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 132, 136, 140, 149, 153, 157, 161, 165.

For 40MHz bandwidth systems, use Channel 38, 46, 54, 62, 102, 110, 134, 151, 159.

For 80MHz bandwidth systems, use Channel 42, 58, 106, 155.

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5150~5250 MHz Band 1	36	5180 MHz	44	5220 MHz
	38	5190 MHz	46	5230 MHz
	40	5200 MHz	48	5240 MHz
	42	5210 MHz	-	-
5250~5350 MHz Band 2	52	5260 MHz	60	5300 MHz
	54	5270 MHz	62	5310 MHz
	56	5280 MHz	64	5320 MHz
	58	5290 MHz	-	-
5470~5725 MHz Band 3	100	5500 MHz	112	5560 MHz
	102	5510 MHz	116	5580 MHz
	104	5520 MHz	132	5660 MHz
	106	5530 MHz	134	5670 MHz
	108	5540 MHz	136	5680 MHz
	110	5550 MHz	140	5700 MHz
5725~5850 MHz Band 4	149	5745 MHz	157	5785 MHz
	151	5755 MHz	159	5795 MHz
	153	5765 MHz	161	5805 MHz
	155	5775 MHz	165	5825 MHz

3.5. Table for Test Modes

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

<For Non-Beamforming Mode>

Test Items	Mode		Data Rate	Channel	Ant.
AC Power Conducted Emission	Normal Link		-	-	-
Max. Conducted Output Power	11a/BPSK	Band 1~4	6Mbps	36/40/48/52/60/64/100 /116/140/149/157/165	1+2+3
	11ac VHT20	Band 1~4	MCS0/Nss1	36/40/48/52/60/64/100 /116/140/149/157/165	1+2+3
	11ac VHT40	Band 1~4	MCS0/Nss1	38/46/54/62/ 102/110/134/151/159	1+2+3
	11ac VHT80	Band 1~4	MCS0/Nss1	42/58/106/155	1+2+3
Power Spectral Density	11a/BPSK	Band 1~4	6Mbps	36/40/48/52/60/64/100 /116/140/149/157/165	1+2+3
	11ac VHT20	Band 1~4	MCS0/Nss1	36/40/48/52/60/64/100 /116/140/149/157/165	1+2+3
	11ac VHT40	Band 1~4	MCS0/Nss1	38/46/54/62/ 102/110/134/151/159	1+2+3
	11ac VHT80	Band 1~4	MCS0/Nss1	42/58/106/155	1+2+3
26dB Spectrum Bandwidth & 99% Occupied Bandwidth Measurement	11a/BPSK	Band 1~4	6Mbps	36/40/48/52/60/64/100 /116/140/149/157/165	1+2+3
	11ac VHT20	Band 1~4	MCS0/Nss1	36/40/48/52/60/64/100 /116/140/149/157/165	1+2+3
	11ac VHT40	Band 1~4	MCS0/Nss1	38/46/54/62/ 102/110/134/151/159	1+2+3
	11ac VHT80	Band 1~4	MCS0/Nss1	42/58/106/155	1+2+3
6dB Spectrum Bandwidth Measurement	11a/BPSK	Band 4	6Mbps	149/157/165	1+2+3
	11ac VHT20	Band 4	MCS0/Nss1	149/157/165	1+2+3
	11ac VHT40	Band 4	MCS0/Nss1	151/159	1+2+3
	11ac VHT80	Band 4	MCS0/Nss1	155	1+2+3
Radiated Emission Below 1GHz	Normal Link		-	-	-

Radiated Emission Above 1GHz	11a/BPSK	Band 1~4	6Mbps	36/40/48/52/60/64/100 /116/140/149/157/165	1+2+3
	11ac VHT20	Band 1~4	MCS0/Nss1	36/40/48/52/60/64/100 /116/140/149/157/165	1+2+3
	11ac VHT40	Band 1~4	MCS0/Nss1	38/46/54/62/ 102/110/134/151/159	1+2+3
	11ac VHT80	Band 1~4	MCS0/Nss1	42/58/106/155	1+2+3
Band Edge Emission	11a/BPSK	Band 1~4	6Mbps	36/40/48/52/60/64/100 /116/140/149/157/165	1+2+3
	11ac VHT20	Band 1~4	MCS0/Nss1	36/40/48/52/60/64/100 /116/140/149/157/165	1+2+3
	11ac VHT40	Band 1~4	MCS0/Nss1	38/46/54/62/ 102/110/134/151/159	1+2+3
	11ac VHT80	Band 1~4	MCS0/Nss1	42/58/106/155	1+2+3
Frequency Stability	20 MHz	Band 1~4	-	40/60/116/157	1
	40 MHz	Band 1~4	-	38/62/110/151	1
	80 MHz	Band 1~4	-	42/58/106/155	1

<For Beamforming Mode>

Test Items	Mode		Data Rate	Channel	Ant.
Max. Conducted Output Power	11ac VHT20	Band 1~4	MCS0/Nss1	36/40/48/52/60/64/100 /116/140/149/157/165	1+2+3
	11ac VHT40	Band 1~4	MCS0/Nss1	38/46/54/62/ 102/110/134/151/159	1+2+3
	11ac VHT80	Band 1~4	MCS0/Nss1	42/58/106/155	1+2+3
Power Spectral Density	11ac VHT20	Band 1~4	MCS0/Nss1	36/40/48/52/60/64/100 /116/140/149/157/165	1+2+3
	11ac VHT40	Band 1~4	MCS0/Nss1	38/46/54/62/ 102/110/134/151/159	1+2+3
	11ac VHT80	Band 1~4	MCS0/Nss1	42/58/106/155	1+2+3
26dB Spectrum Bandwidth & 99% Occupied Bandwidth Measurement	11ac VHT20	Band 1~4	MCS0/Nss1	36/40/48/52/60/64/100 /116/140/149/157/165	1+2+3
	11ac VHT40	Band 1~4	MCS0/Nss1	38/46/54/62/ 102/110/134/151/159	1+2+3
	11ac VHT80	Band 1~4	MCS0/Nss1	42/58/106/155	1+2+3
6dB Spectrum Bandwidth Measurement	11ac VHT20	Band 4	MCS0/Nss1	149/157/165	1+2+3
	11ac VHT40	Band 4	MCS0/Nss1	151/159	1+2+3
	11ac VHT80	Band 4	MCS0/Nss1	155	1+2+3
Radiated Emission Below 1GHz	Normal Link		-	-	-
Radiated Emission Above 1GHz	11ac VHT20	Band 1~4	MCS0/Nss1	36/40/48/52/60/64/100 /116/140/149/157/165	1+2+3
	11ac VHT40	Band 1~4	MCS0/Nss1	38/46/54/62/ 102/110/134/151/159	1+2+3
	11ac VHT80	Band 1~4	MCS0/Nss1	42/58/106/155	1+2+3
Band Edge Emission	11ac VHT20	Band 1~4	MCS0/Nss1	36/40/48/52/60/64/100 /116/140/149/157/165	1+2+3
	11ac VHT40	Band 1~4	MCS0/Nss1	38/46/54/62/ 102/110/134/151/159	1+2+3
	11ac VHT80	Band 1~4	MCS0/Nss1	42/58/106/155	1+2+3

Note: VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.

The following test modes were performed for all tests:

For Conducted Emission test:

Mode 1. AP Mode

Mode 2. Bridge Mode

Mode 1 is the worst case, so it was selected to record in this test report.

For Radiated Emission test (Below 1GHz):

Mode 1. Place EUT in Y axis + AP Mode

Mode 2. Place EUT in Z axis + AP Mode

Mode 2 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3 will follow this same test mode.

Mode 3. Place EUT in Z axis + Bridge mode

Mode 2 is the worst case, so it was selected to record in this test report.

For Radiated Emission test (Above 1GHz):

Radiated Emissions above 1GHz test was performed at its 2-axis (Y-axis and Z-axis). Z-axis was the worst case, so it's recorded in this report.

For Co-location MPE and Radiated Emission Co-location Test:

The EUT could be applied with 2.4GHz WLAN function and 5GHz WLAN function; therefore Co-location Maximum Permissible Exposure (Please refer to FA5N2423) and Radiated Emission Co-location (please refer to Appendix B) tests are added for simultaneously transmit between 2.4GHz WLAN function and 5GHz WLAN function.

Note: There are three modes of EUT: AP, bridge and client modes. After evaluating, AP and Bridge were selected to record in this test report.

3.6. Table for Testing Locations

Test Site Location					
Address:	No.8, Lane 724, Bo-ai St., Jhubei City, Hsinchu County 302, Taiwan, R.O.C.				
TEL:	886-3-656-9065				
FAX:	886-3-656-9085				
Test Site No.	**Site Category**	**Location**	**FCC Reg. No.**	**IC File No.**	**VCCI Reg. No**
03CH01-CB	SAC	Hsin Chu	262045	IC 4086D	-
CO01-CB	Conduction	Hsin Chu	262045	IC 4086D	-
TH01-CB	OVEN Room	Hsin Chu	-	-	-

Open Area Test Site (OATS); Semi Anechoic Chamber (SAC).

3.7. Table for Supporting Units

For Test Site No: CO01-CB

Support Unit	Brand	Model	FCC ID
NB*4	DELL	E6430	DoC
Flash disk3.0	Transcend	JetFlash-700	DoC

For Test Site No: 03CH01-CB (Below 1GHz)

Support Unit	Brand	Model	FCC ID
NB*2	DELL	E4300	DoC
NB*2	Apple	Mac Book	DoC
SD Card	Apacer	SD Card	N/A
Flash disk3.0	Transcend	JetFlash-700	DoC

<For Non-Beamforming Mode>

For Test Site No: 03CH01-CB (Above 1GHz)

Support Unit	Brand	Model	FCC ID
NB	DELL	E4300	DoC

<For Beamforming Mode>

For Test Site No: 03CH01-CB (Above 1GHz)

Support Unit	Brand	Model	FCC ID
NB*2	DELL	E4300	DoC
RX Device	Broadcom	BCM4366	N/A

For Test Site No: TH01-CB

Support Unit	Brand	Model	FCC ID
NB	DELL	E4300	DoC

3.8. Table for Parameters of Test Software Setting

During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

<For Non-Beamforming Mode>

Test Software Version	Mtool 2.0.1.1											
Mode	Test Frequency (MHz)											
	NCB: 20MHz											
	5180 MHz	5200 MHz	5240 MHz	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	62	60	95	70	62	66	55	70	47	55	53	68
802.11ac MCS0/Nss1 VHT20	63	66	96	70	55	55	54	72	67	52	50	50

Mode	NCB: 40MHz								
802.11ac MCS0/Nss1 VHT40	5190 MHz	5230 MHz	5270 MHz	5310 MHz	5510 MHz	5550 MHz	5670 MHz	5755 MHz	5795 MHz
	70	68	63	61	59	64	65	65	61

Mode	NCB: 80MHz			
802.11ac MCS0/Nss1 VHT80	5210 MHz	5290 MHz	5530 MHz	5775 MHz
	68	69	69	54

<For Beamforming Mode>

Test Software Version	Mtool 2.0.1.1											
Mode	Test Frequency (MHz)											
	NCB: 20MHz											
	5180 MHz	5200 MHz	5240 MHz	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz	5745 MHz	5785 MHz	5825 MHz
802.11ac MCS0/Nss1 VHT20	63	66	74	69	55	55	47	70	65	52	50	50

Mode	NCB: 40MHz								
802.11ac MCS0/Nss1 VHT40	5190 MHz	5230 MHz	5270 MHz	5310 MHz	5510 MHz	5550 MHz	5670 MHz	5755 MHz	5795 MHz
	68	68	63	61	59	64	65	54	61

Mode	NCB: 80MHz			
802.11ac MCS0/Nss1 VHT80	5210 MHz	5290 MHz	5530 MHz	5775 MHz
	66	65	60	54

3.9. EUT Operation during Test

<For Non-Beamforming Mode>

The EUT was programmed to be in continuously transmitting mode.

<For Beamforming Mode>

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

During the test, the following programs under WIN XP were executed.

The program was executed as follows:

1. During the test, the EUT operation to normal function.
2. Executed command fixed test channel under DOS.
3. Executed "Lantest.exe " to link with the remote workstation to receive and transmit packet by RX Device and transmit duty cycle no less 98%

3.10. Duty Cycle

<For Non-Beamforming Mode>

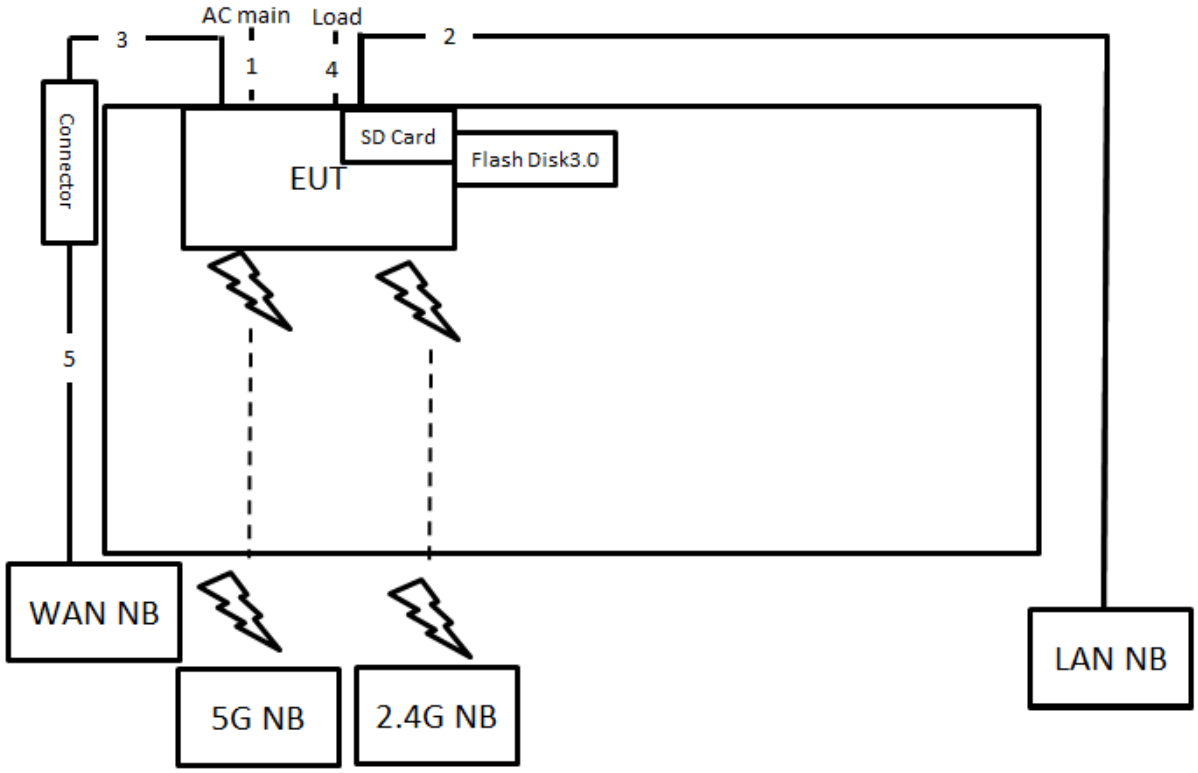
Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11a	2.060	2.100	98.10%	0.08	0.01
802.11ac MCS0/Nss1 VHT20	1.910	1.940	98.45%	0.07	0.01
802.11ac MCS0/Nss1 VHT40	0.920	0.974	94.46%	0.25	1.09
802.11ac MCS0/Nss1 VHT80	0.448	0.492	91.06%	0.41	2.23

<For Beamforming Mode>

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11ac MCS0/Nss1 VHT20	1.940	2.240	86.61%	0.62	0.52
802.11ac MCS0/Nss1 VHT40	2.780	3.110	89.39%	0.49	0.36
802.11ac MCS0/Nss1 VHT80	3.430	3.780	90.74%	0.42	0.29

3.11. Test Configurations

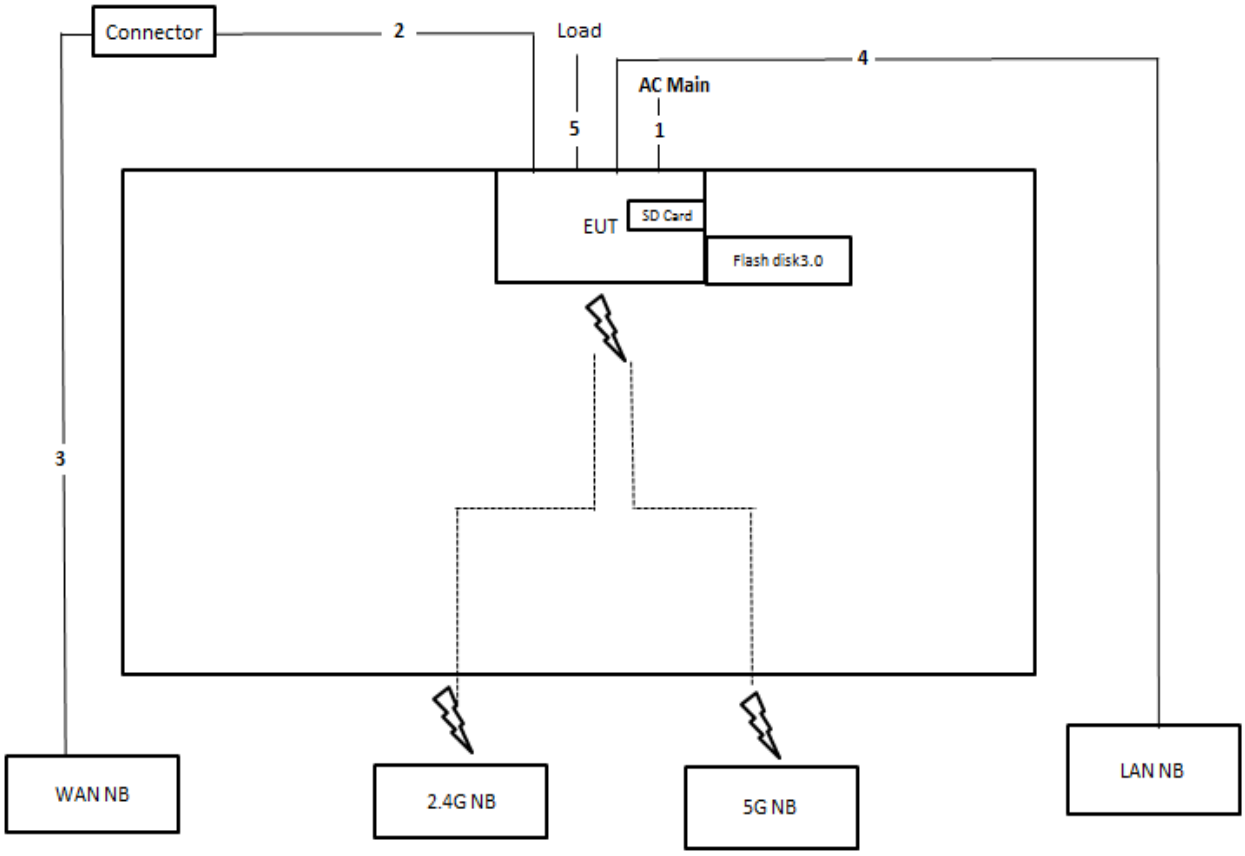
3.11.1. AC Power Line Conduction Emissions Test Configuration



Item	Connection	Shielded	Length
1	Power cable	No	1.2m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	1.5m
4	RJ-45 cable*3	No	1.5m
5	RJ-45 cable	No	10m

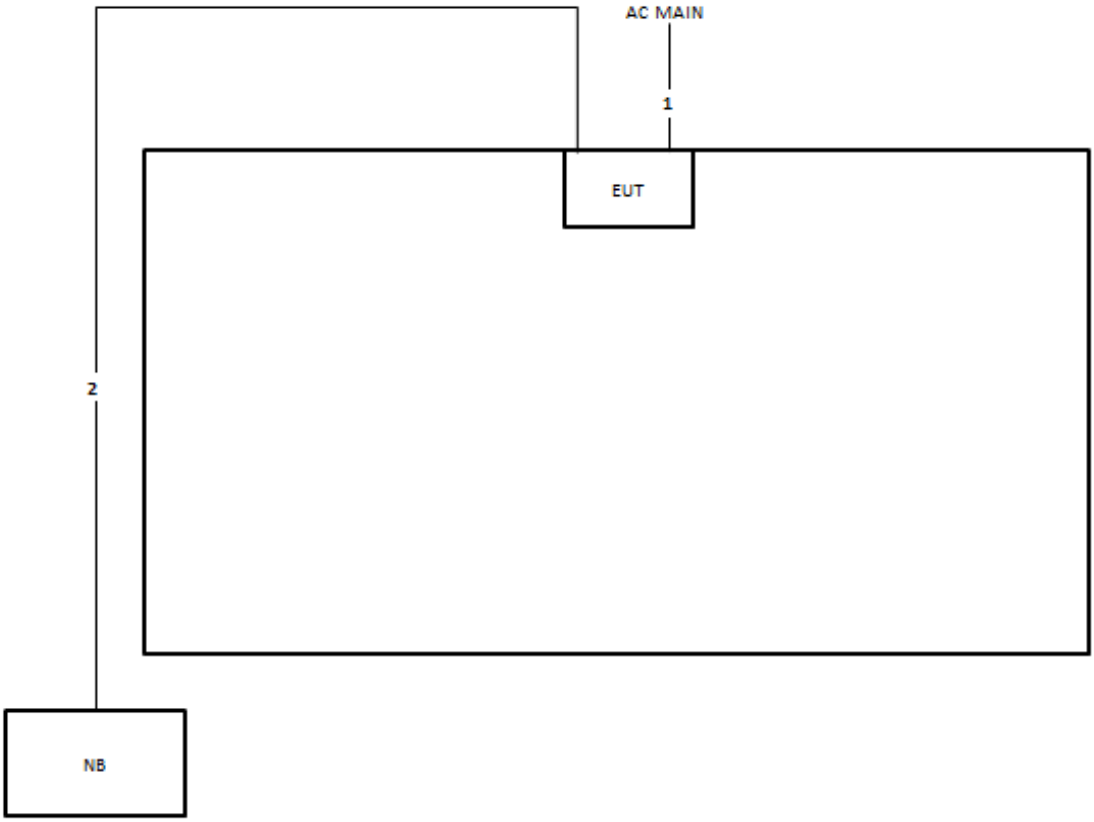
3.11.2. Radiation Emissions Test Configuration

Test Configuration: 30MHz~1GHz



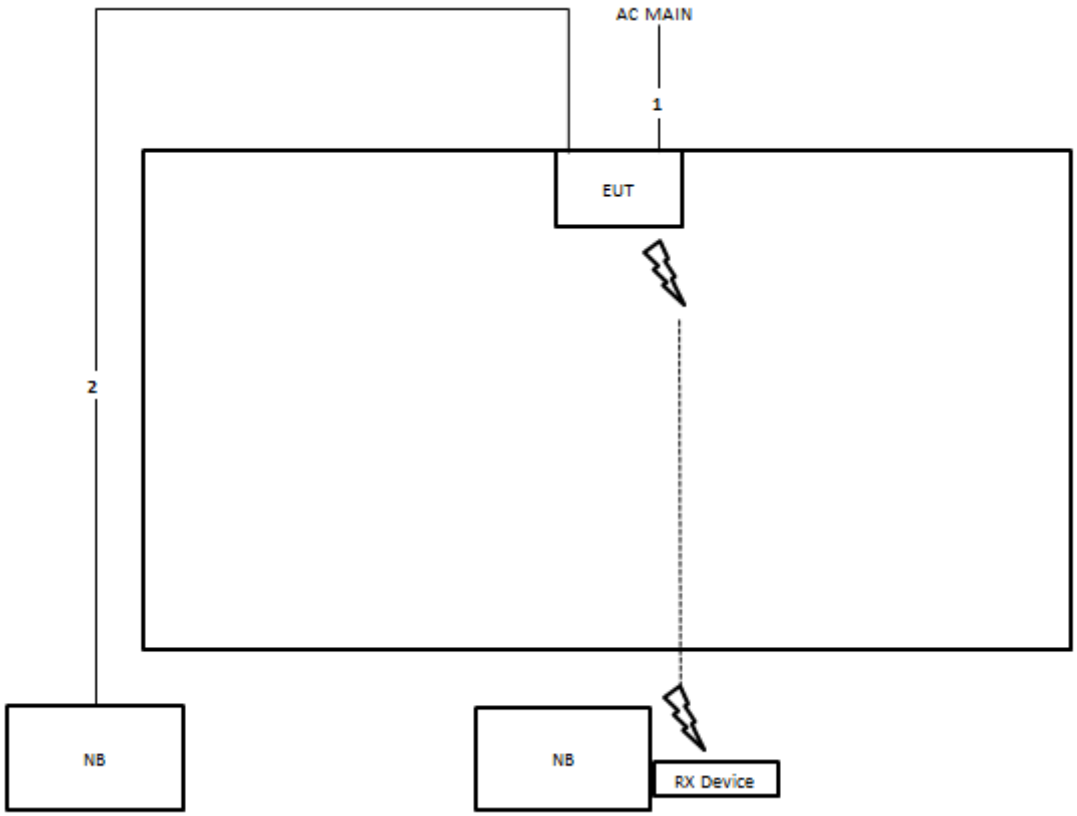
Item	Connection	Shielded	Length
1	Power cable	No	1.2m
2	RJ-45 cable	No	1.5m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	10m
5	RJ-45 cable*3	No	1.5m

Test Configuration: above 1GHz <For Non-Beamforming Mode>



Item	Connection	Shielded	Length
1	Power cable	No	1.2m
2	RJ-45 cable	No	10m

Test Configuration: above 1GHz <For Beamforming Mode>



Item	Connection	Shielded	Length
1	Power cable	No	1.2m
2	RJ-45 cable	No	10m

4. TEST RESULT

4.1. AC Power Line Conducted Emissions Measurement

4.1.1. Limit

For this product that is designed to connect to the AC power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed below limits table.

Frequency (MHz)	QP Limit (dBuV)	AV Limit (dBuV)
0.15~0.5	66~56	56~46
0.5~5	56	46
5~30	60	50

4.1.2. Measuring Instruments and Setting

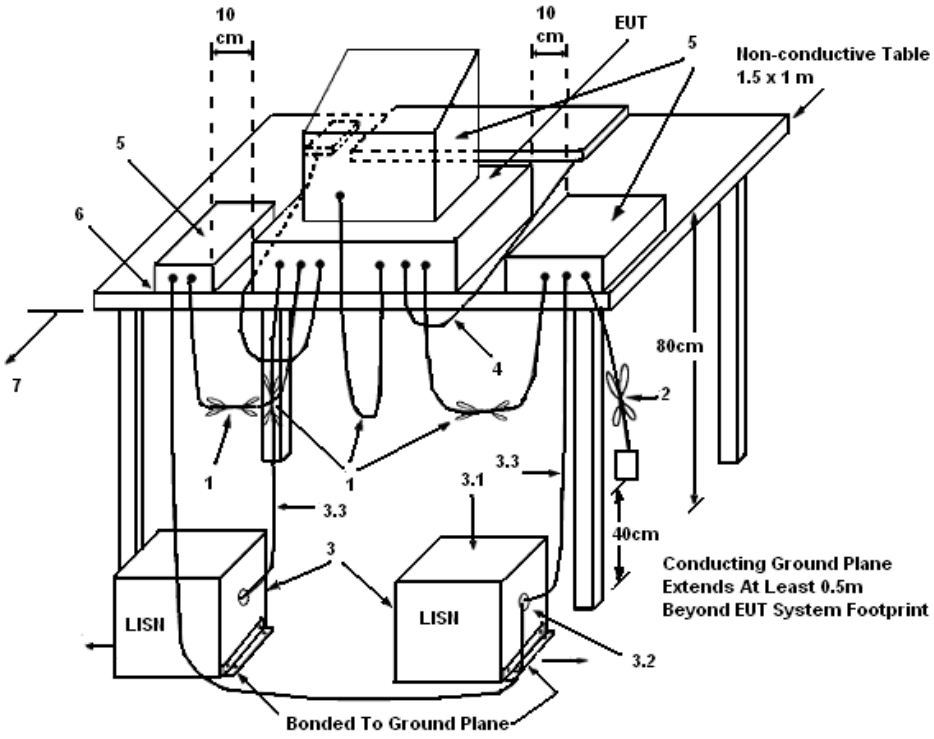
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

4.1.3. Test Procedures

1. Configure the EUT according to ANSI C63.10. The EUT or host of EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
4. The frequency range from 150 kHz to 30 MHz was searched.
5. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. The measurement has to be done between each power line and ground at the power terminal.

4.1.4. Test Setup Layout



LEGEND:

(1) Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

(2) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

(3) EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω. LISN can be placed on top of, or immediately beneath, reference ground plane.

(3.1) All other equipment powered from additional LISN(s).

(3.2) Multiple outlet strip can be used for multiple power cords of non-EUT equipment.

(3.3) LISN at least 80 cm from nearest part of EUT chassis.

(4) Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use.

(5) Non-EUT components of EUT system being tested.

(6) Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop.

(7) Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.

4.1.5. Test Deviation

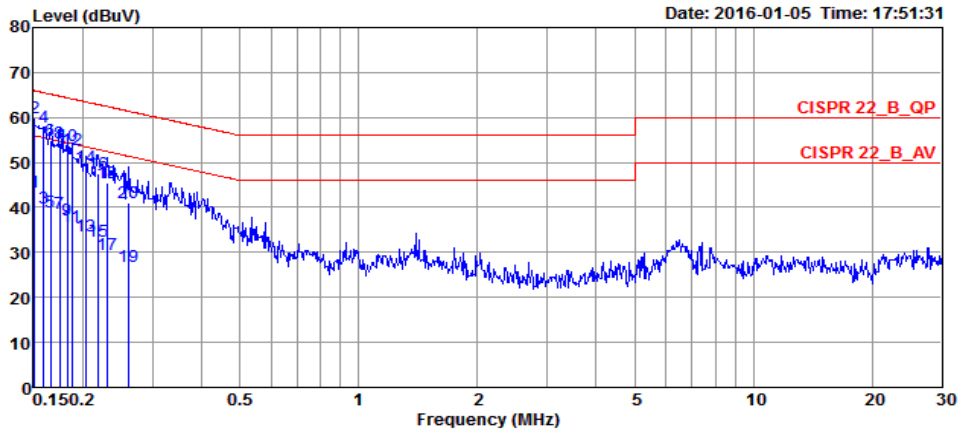
There is no deviation with the original standard.

4.1.6. EUT Operation during Test

The EUT was placed on the test table and programmed in normal function.

4.1.7. Results of AC Power Line Conducted Emissions Measurement

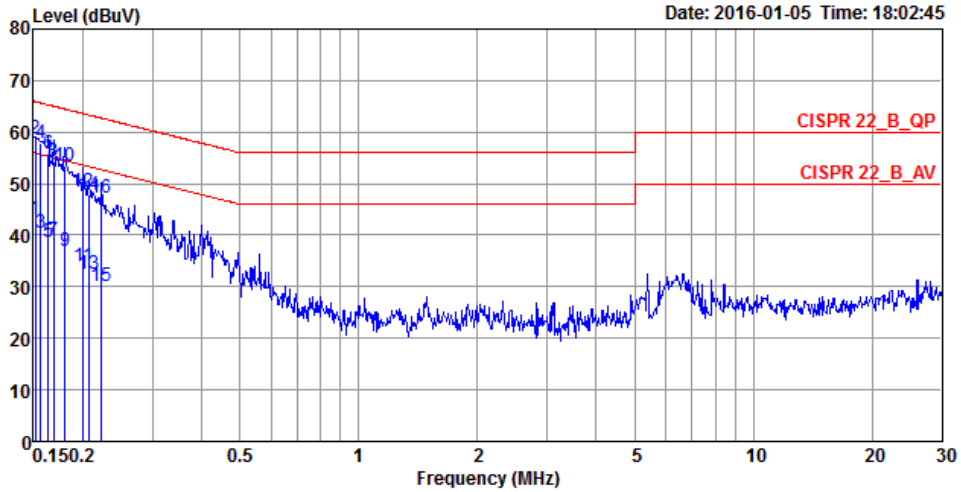
Temperature	22°C	Humidity	62%
Test Engineer	Deven Huang	Phase	Line
Configuration	Normal Link	Test Mode	Mode 1



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1508	43.36	-12.60	55.96	33.41	9.93	0.02	LINE	Average
2	0.1508	60.04	-5.92	65.96	50.09	9.93	0.02	LINE	QP
3	0.1590	39.73	-15.79	55.52	29.78	9.93	0.02	LINE	Average
4	0.1590	57.79	-7.73	65.52	47.84	9.93	0.02	LINE	QP
5	0.1659	38.84	-16.32	55.16	28.89	9.93	0.02	LINE	Average
6	0.1659	54.92	-10.24	65.16	44.97	9.93	0.02	LINE	QP
7	0.1749	38.66	-16.06	54.72	28.71	9.93	0.02	LINE	Average
8	0.1749	54.21	-10.51	64.72	44.26	9.93	0.02	LINE	QP
9	0.1825	37.13	-17.24	54.37	27.18	9.93	0.02	LINE	Average
10	0.1825	53.59	-10.78	64.37	43.64	9.93	0.02	LINE	QP
11	0.1874	35.69	-18.46	54.15	25.74	9.93	0.02	LINE	Average
12	0.1874	52.73	-11.42	64.15	42.78	9.93	0.02	LINE	QP
13	0.2040	33.59	-19.86	53.45	23.64	9.93	0.02	LINE	Average
14	0.2040	49.06	-14.39	63.45	39.11	9.93	0.02	LINE	QP
15	0.2185	32.53	-20.35	52.88	22.58	9.93	0.02	LINE	Average
16	0.2185	47.39	-15.49	62.88	37.44	9.93	0.02	LINE	QP
17	0.2304	29.39	-23.05	52.44	19.43	9.93	0.03	LINE	Average

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
18	0.2304	45.46	-16.98	62.44	35.50	9.93	0.03	LINE	QP
19	0.2616	26.77	-24.61	51.38	16.81	9.93	0.03	LINE	Average
20	0.2616	41.12	-20.26	61.38	31.16	9.93	0.03	LINE	QP

Temperature	22°C	Humidity	62%
Test Engineer	Deven Huang	Phase	Neutral
Configuration	Normal Link	Test Mode	Mode 1



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1516	43.21	-12.70	55.91	33.41	9.78	0.02	NEUTRAL	Average
2	0.1516	58.75	-7.16	65.91	48.95	9.78	0.02	NEUTRAL	QP
3	0.1565	40.42	-15.23	55.65	30.62	9.78	0.02	NEUTRAL	Average
4	0.1565	57.93	-7.72	65.65	48.13	9.78	0.02	NEUTRAL	QP
5	0.1633	38.78	-16.52	55.30	28.98	9.78	0.02	NEUTRAL	Average
6	0.1633	55.84	-9.46	65.30	46.04	9.78	0.02	NEUTRAL	QP
7	0.1685	39.04	-15.99	55.03	29.24	9.78	0.02	NEUTRAL	Average
8	0.1685	54.19	-10.84	65.03	44.39	9.78	0.02	NEUTRAL	QP
9	0.1806	36.83	-17.63	54.46	27.02	9.79	0.02	NEUTRAL	Average
10	0.1806	53.43	-11.03	64.46	43.62	9.79	0.02	NEUTRAL	QP
11	0.2007	33.84	-19.74	53.58	24.03	9.79	0.02	NEUTRAL	Average
12	0.2007	48.36	-15.22	63.58	38.55	9.79	0.02	NEUTRAL	QP
13	0.2072	32.40	-20.92	53.32	22.59	9.79	0.02	NEUTRAL	Average
14	0.2072	47.70	-15.62	63.32	37.89	9.79	0.02	NEUTRAL	QP
15	0.2232	30.14	-22.56	52.70	20.32	9.79	0.03	NEUTRAL	Average
16	0.2232	47.10	-15.60	62.70	37.28	9.79	0.03	NEUTRAL	QP

Note:

Level = Read Level + LISN Factor + Cable Loss.

4.2. 26dB Bandwidth and 99% Occupied Bandwidth Measurement

4.2.1. Limit

No restriction limits.

4.2.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

26dB Bandwidth	
Spectrum Parameters	**Setting**
Attenuation	Auto
Span Frequency	> 26dB Bandwidth
RBW	Approximately 1% of the emission bandwidth
VBW	VBW > RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto
99% Occupied Bandwidth	
Spectrum Parameters	**Setting**
Span	1.5 times to 5.0 times the OBW
RBW	1 % to 5 % of the OBW
VBW	≥ 3 x RBW
Detector	Peak
Trace	Max Hold

4.2.3. Test Procedures

For Radiated 26dB Bandwidth and 99% Occupied Bandwidth Measurement:

1. The transmitter was radiated to the spectrum analyzer in peak hold mode.
2. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

4.2.4. Test Setup Layout

For Radiated 26dB Bandwidth and 99% Occupied Bandwidth Measurement:

This test setup layout is the same as that shown in section 4.6.4.

4.2.5. Test Deviation

There is no deviation with the original standard.

4.2.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.2.7. Test Result of 26dB Bandwidth and 99% Occupied Bandwidth

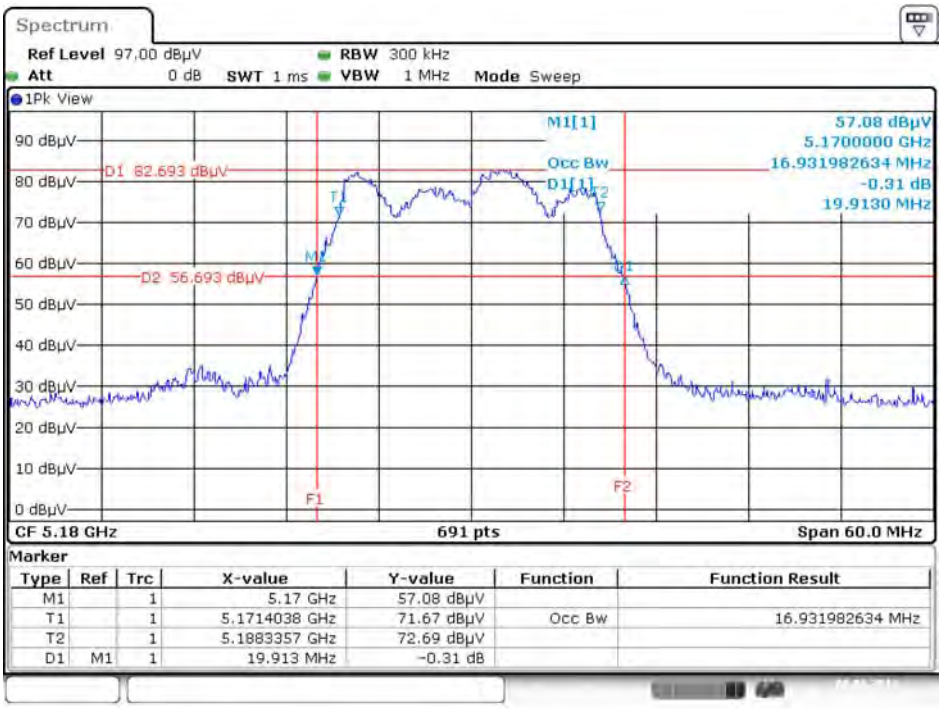
<For Non-Beamforming Mode>

Temperature	24℃	Humidity	60%
Test Engineer	Clemens Fang		

Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a	5180 MHz	19.91	16.93
	5200 MHz	19.65	16.85
	5240 MHz	29.57	17.71
	5260 MHz	19.74	16.85
	5300 MHz	19.65	16.85
	5320 MHz	19.74	16.93
	5500 MHz	19.48	16.32
	5580 MHz	19.74	16.85
	5700 MHz	19.83	16.85
	5745 MHz	20.00	16.85
	5785 MHz	19.74	16.76
	5825 MHz	19.74	16.67
802.11ac MCS0/Nss1 VHT20	5180 MHz	20.35	17.89
	5200 MHz	20.17	17.89
	5240 MHz	34.96	18.58
	5260 MHz	20.35	17.89
	5300 MHz	20.17	17.71
	5320 MHz	20.09	17.71
	5500 MHz	20.17	17.63
	5580 MHz	20.26	17.63
	5700 MHz	20.17	17.71
	5745 MHz	20.17	17.71
	5785 MHz	20.43	17.80
	5825 MHz	20.09	17.80

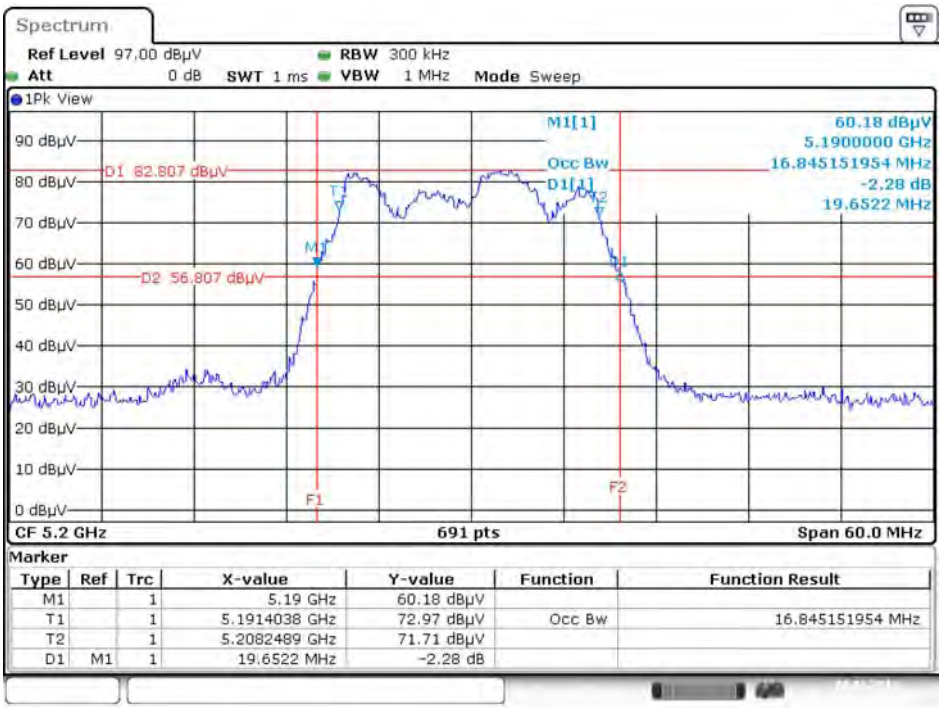
Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac MCS0/Nss1 VHT40	5190 MHz	40.29	36.61
	5230 MHz	40.29	36.61
	5270 MHz	40.00	36.76
	5310 MHz	40.15	36.76
	5510 MHz	40.44	36.90
	5550 MHz	40.44	37.05
	5670 MHz	40.29	36.90
	5755 MHz	40.44	36.76
	5795 MHz	40.29	36.76
802.11ac MCS0/Nss1 VHT80	5210 MHz	81.16	75.83
	5290 MHz	81.16	76.41
	5530 MHz	81.16	76.41
	5775 MHz	80.87	76.12

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5180 MHz



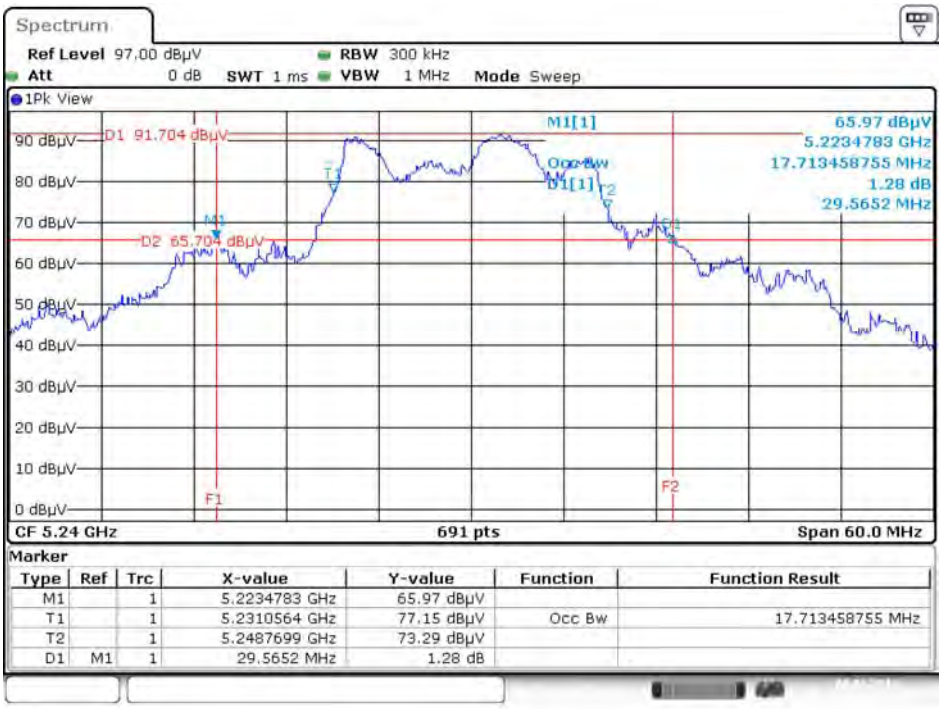
Date: 8.JAN.2016 20:26:17

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5200 MHz



Date: 8.JAN.2016 20:27:04

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5240 MHz



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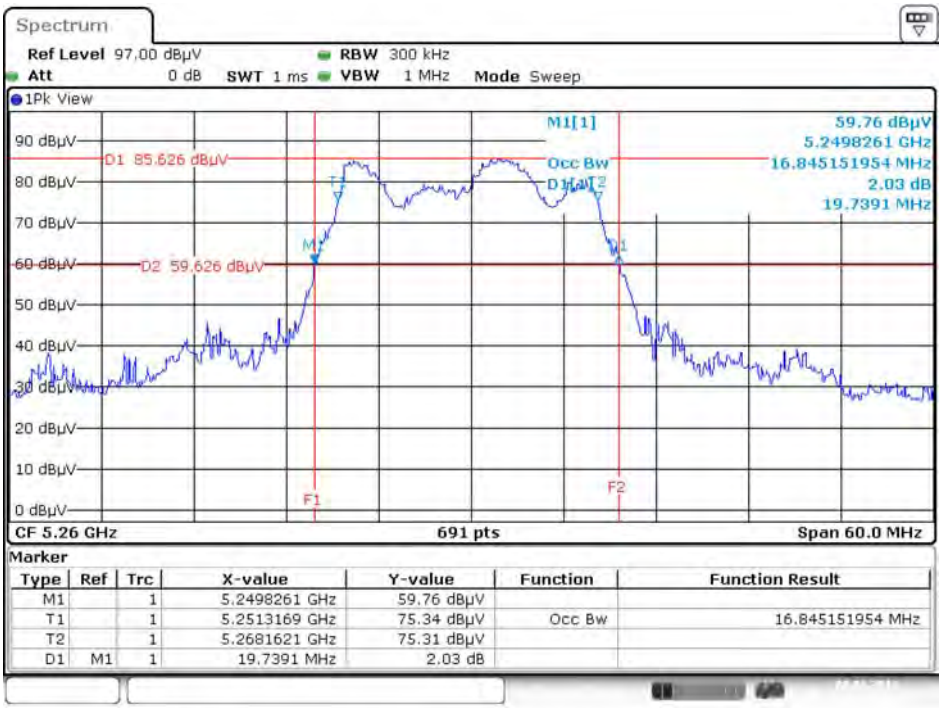
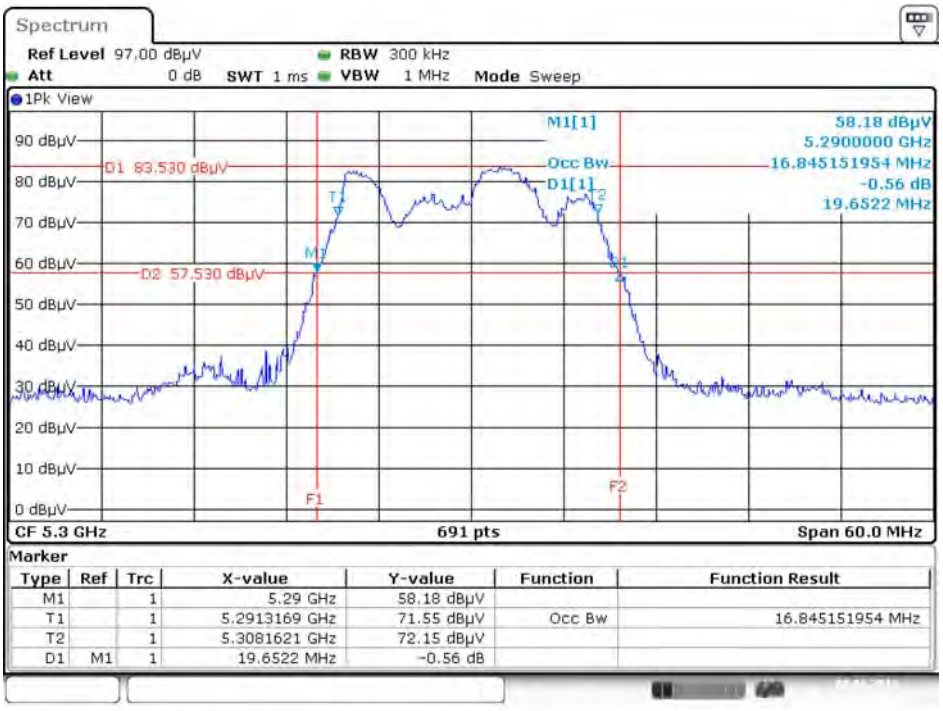
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5260 MHz



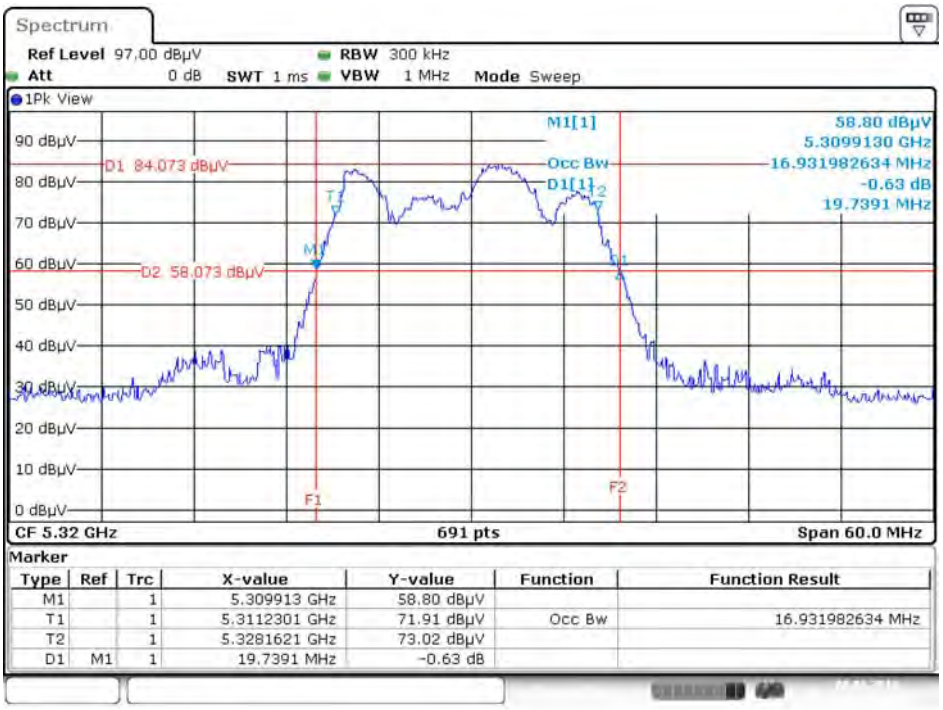
Date: 8.JAN.2016 20:28:43

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5300 MHz



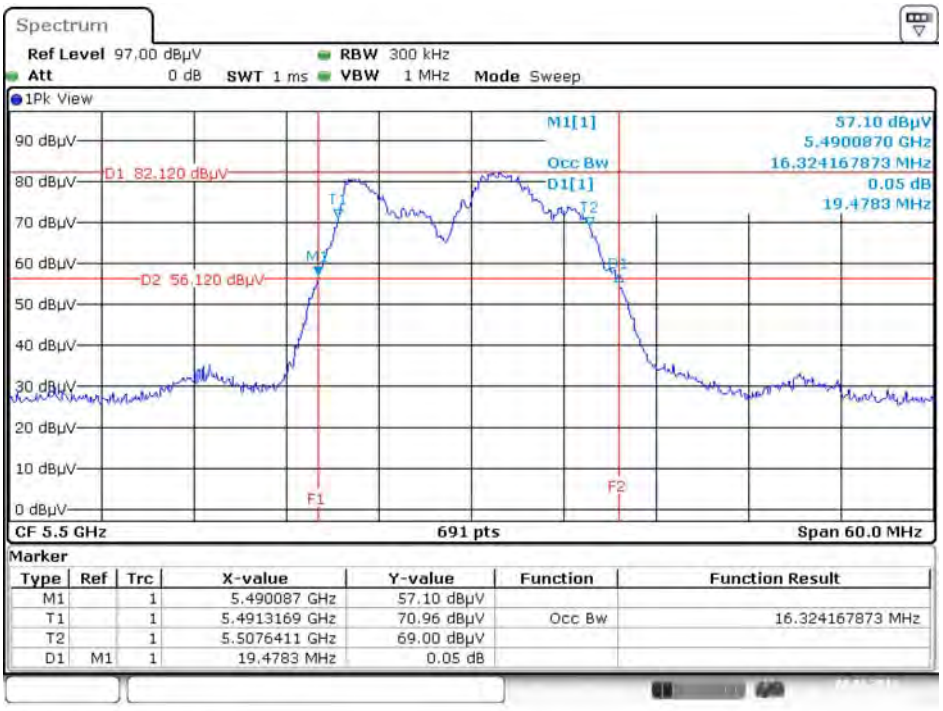
Date: 8.JAN.2016 20:29:26

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5320 MHz



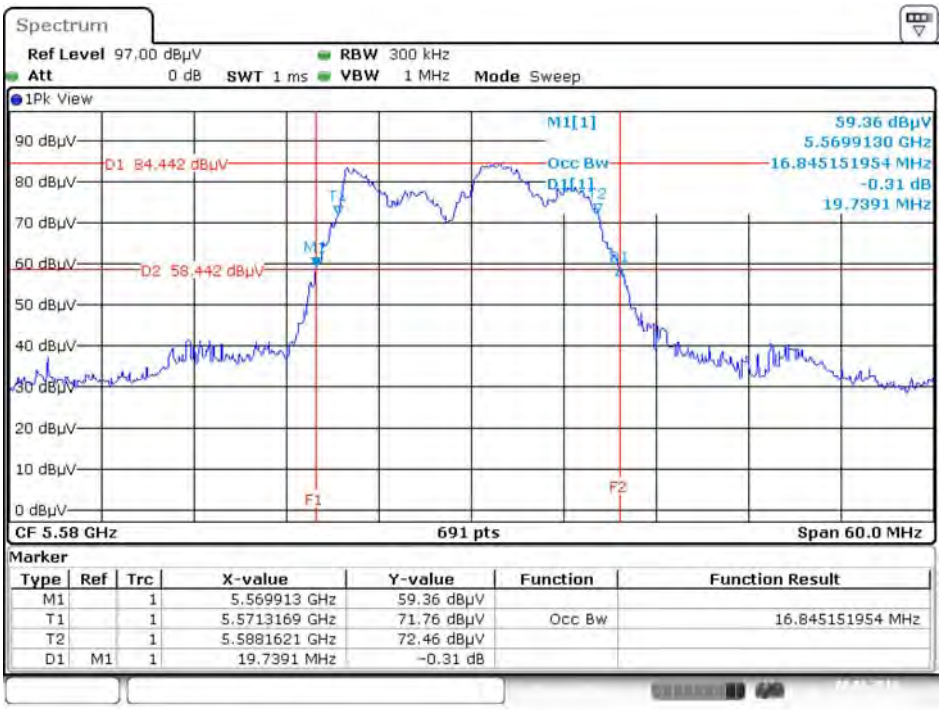
Date: 8.JAN.2016 20:30:17

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5500 MHz



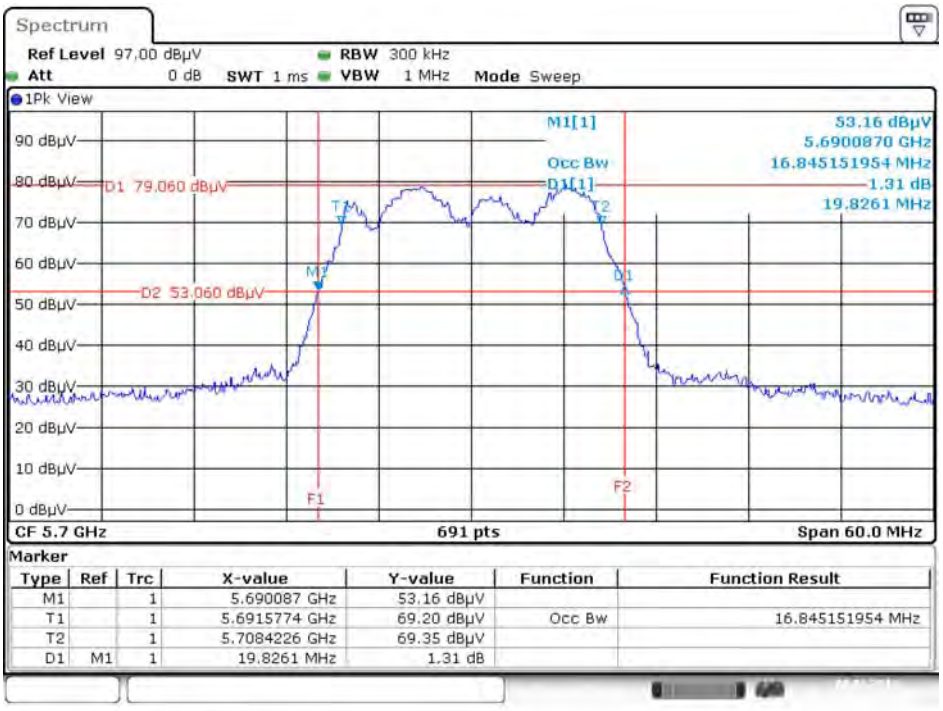
Date: 8.JAN.2016 20:30:43

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5580 MHz



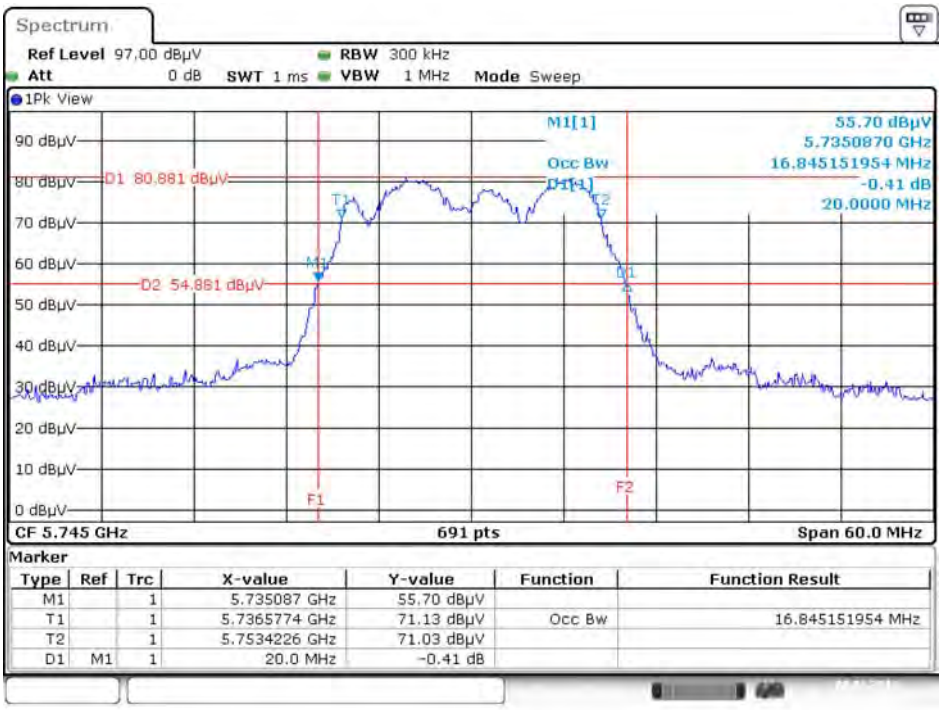
Date: 8.JAN.2016 20:31:18

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5700 MHz



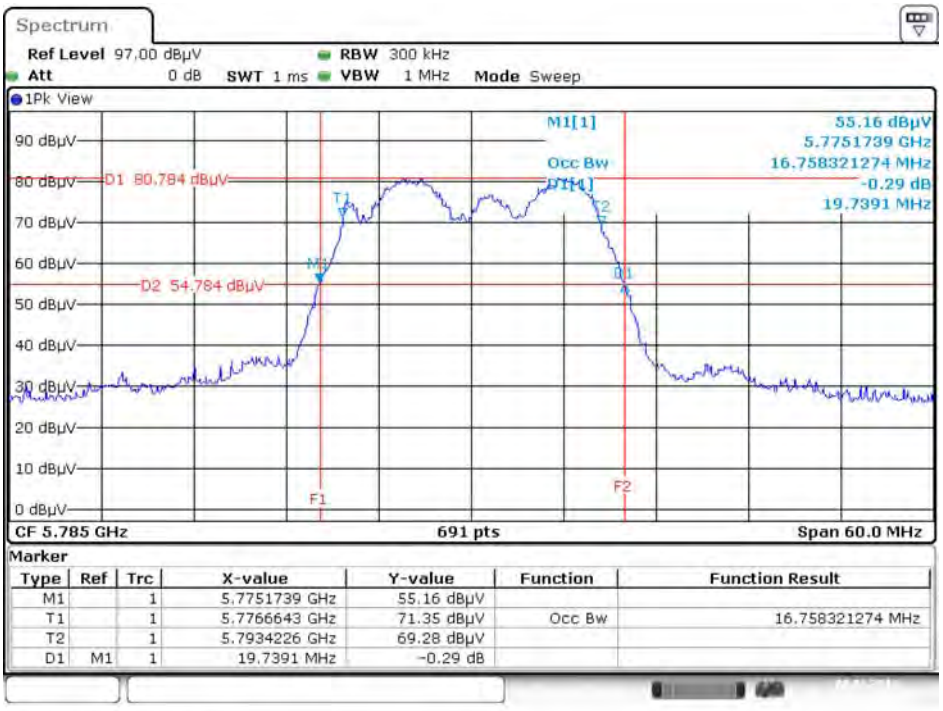
Date: 8.JAN.2016 20:32:28

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5745 MHz



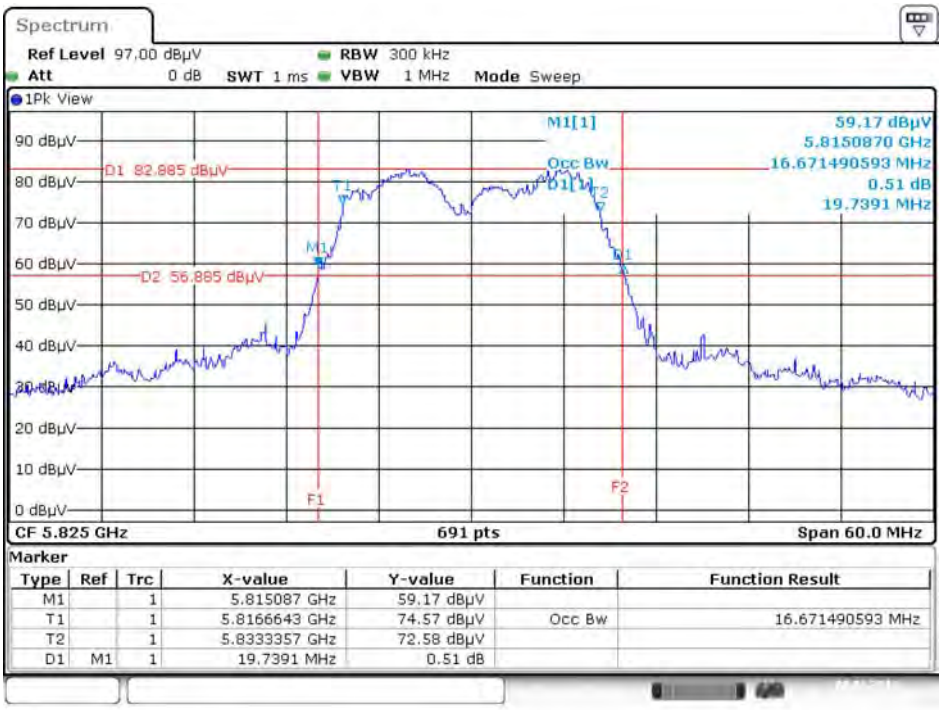
Date: 8.JAN.2016 20:33:16

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5785 MHz



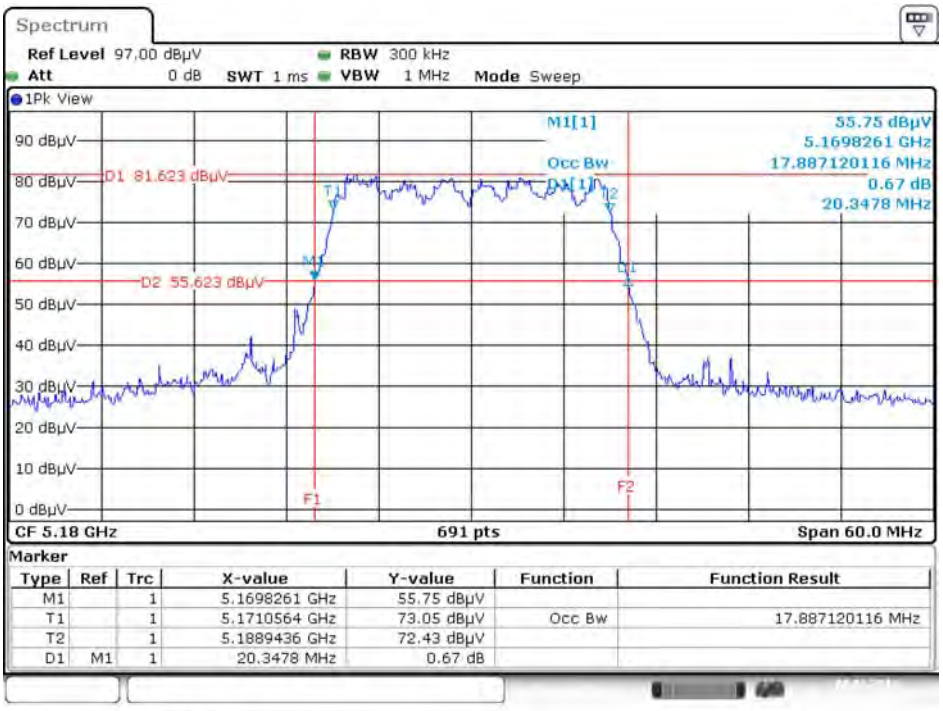
Date: 8.JAN.2016 20:33:50

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5825 MHz



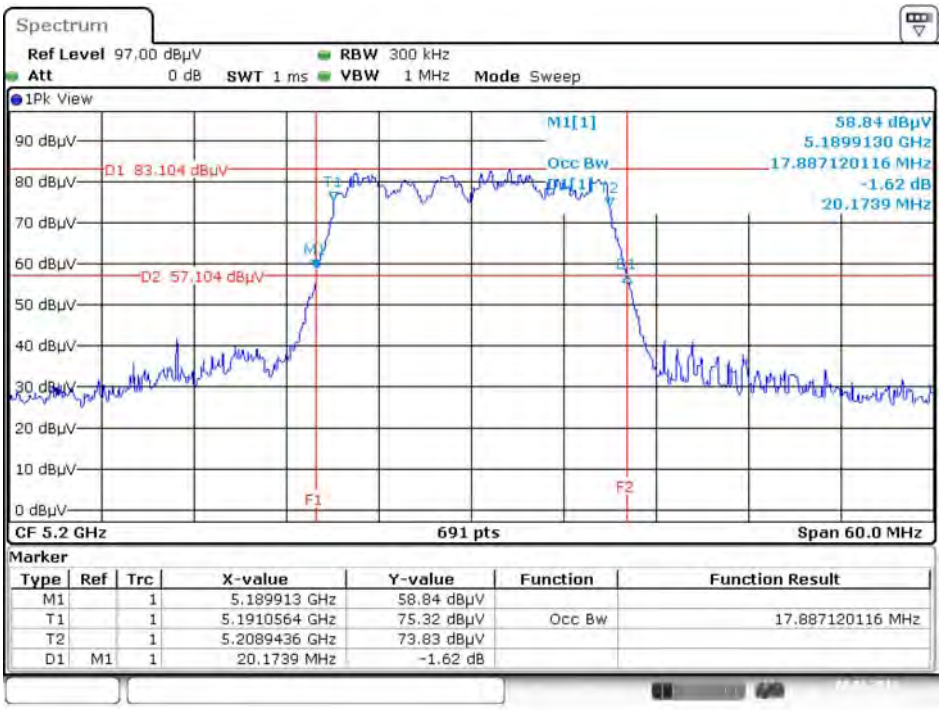
Date: 8.JAN.2016 20:36:14

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5180 MHz



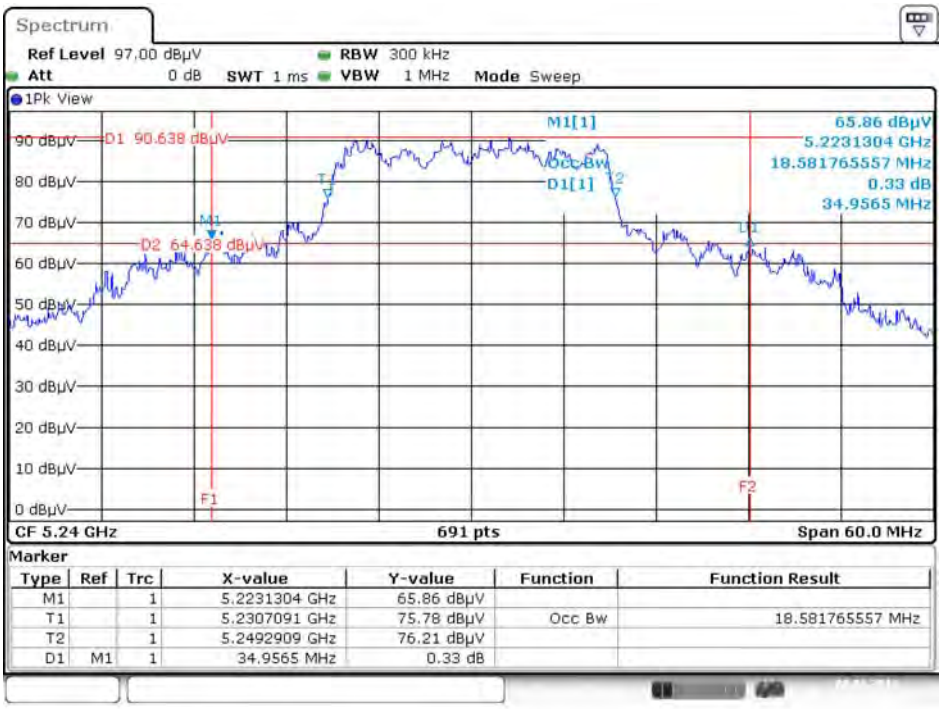
Date: 8.JAN.2016 20:47:17

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5200 MHz



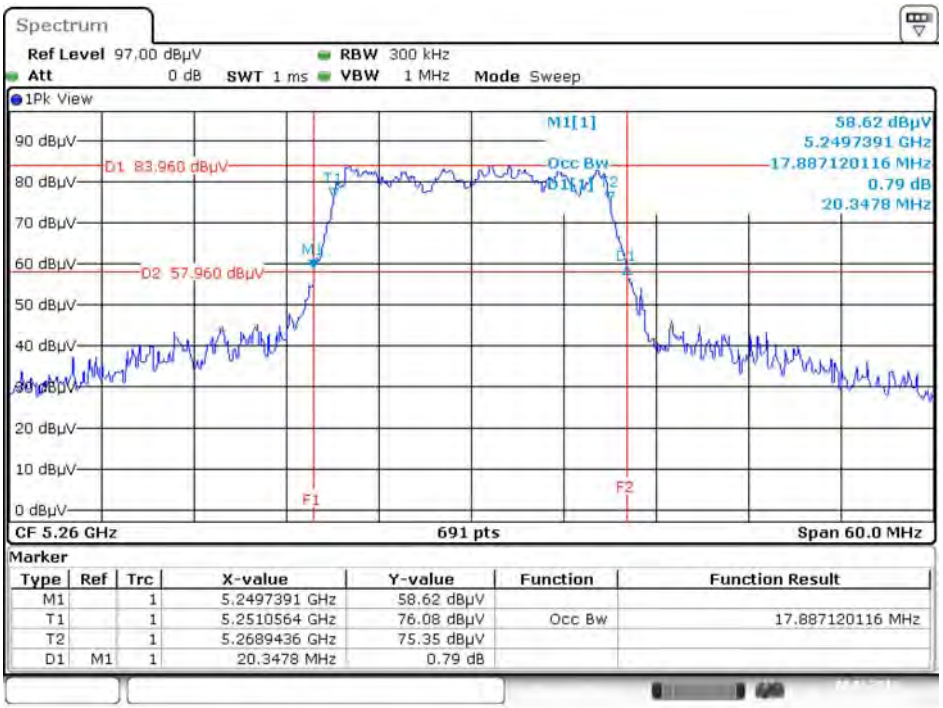
Date: 8.JAN.2016 20:46:42

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5240 MHz



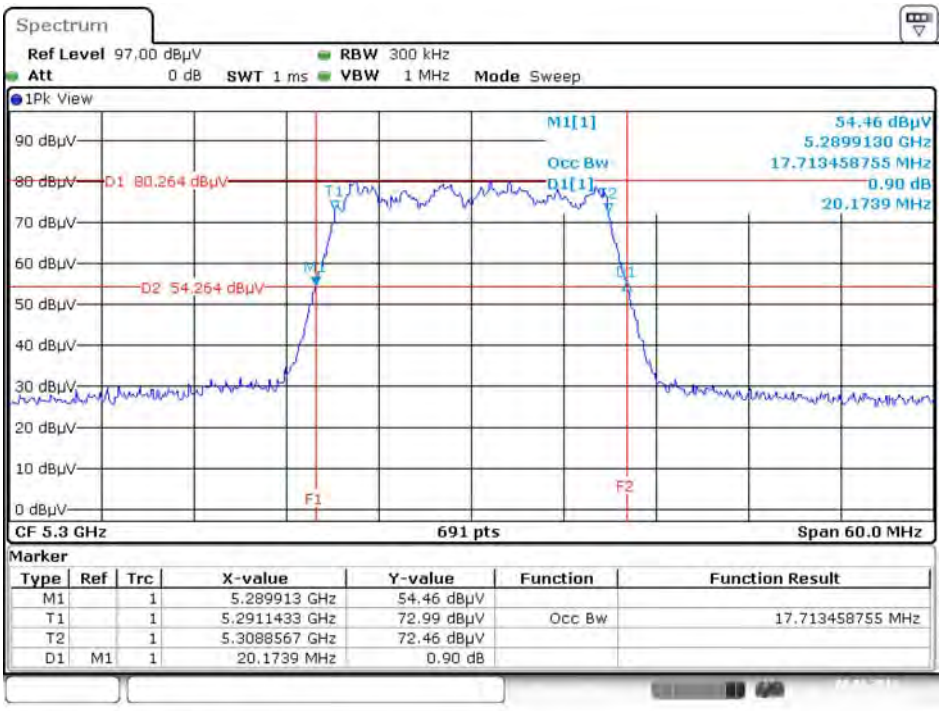
Date: 8.JAN.2016 20:46:12

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5260 MHz



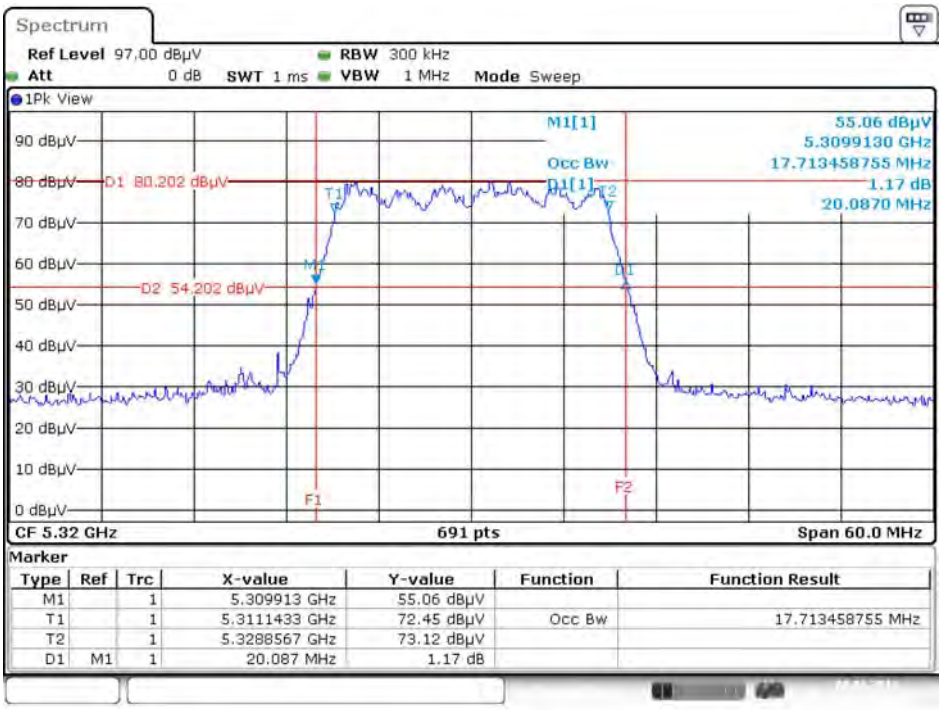
Date: 8.JAN.2016 20:45:36

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5300 MHz



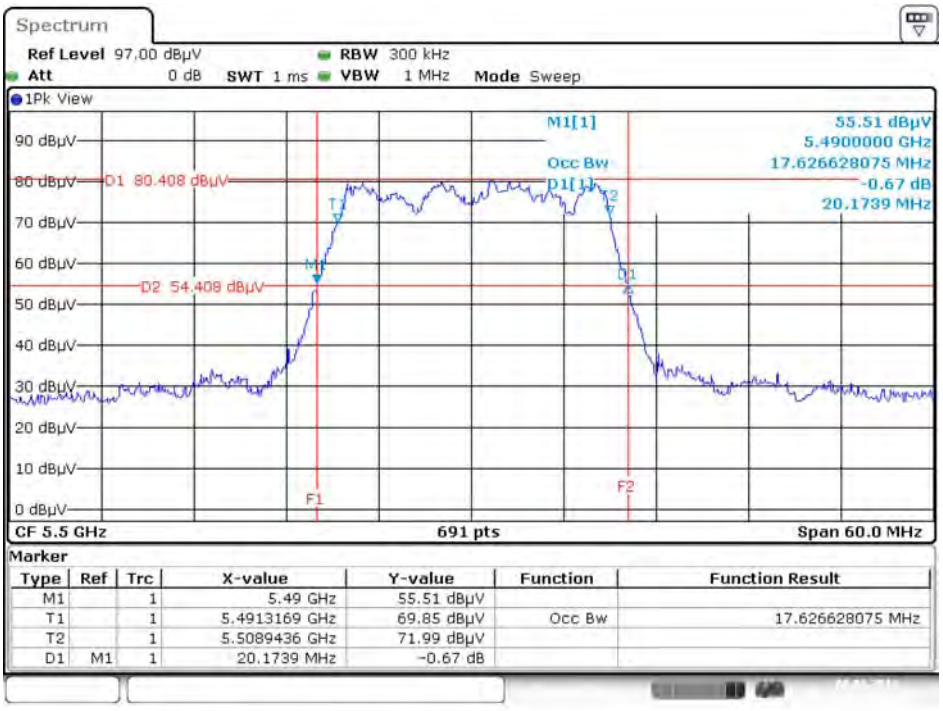
Date: 8.JAN.2016 20:44:50

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5320 MHz



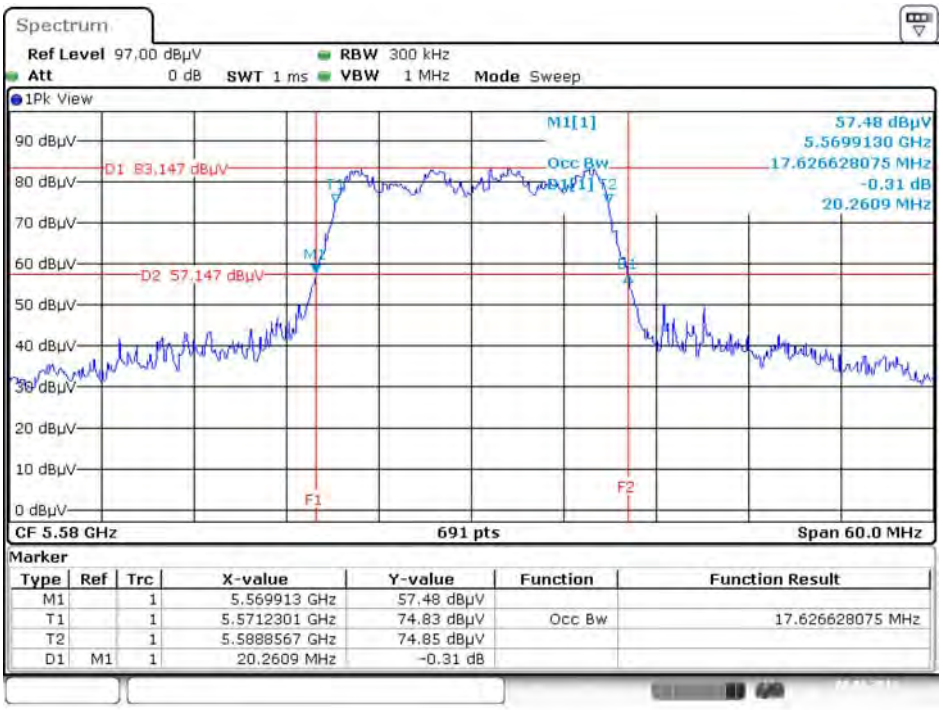
Date: 8.JAN.2016 20:42:43

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5500 MHz



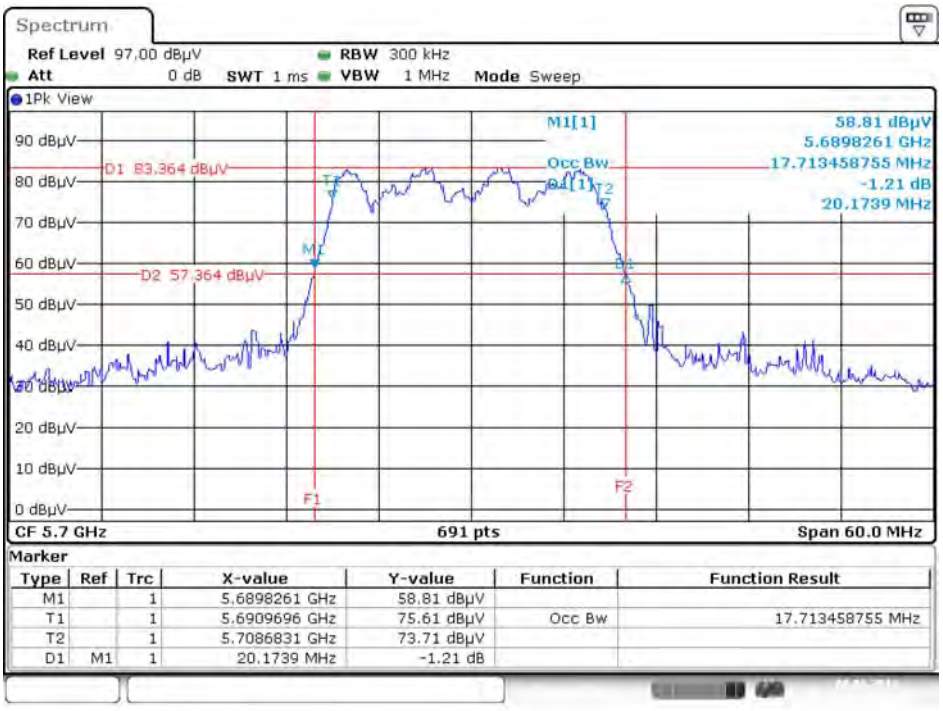
Date: 8.JAN.2016 20:42:05

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5580 MHz



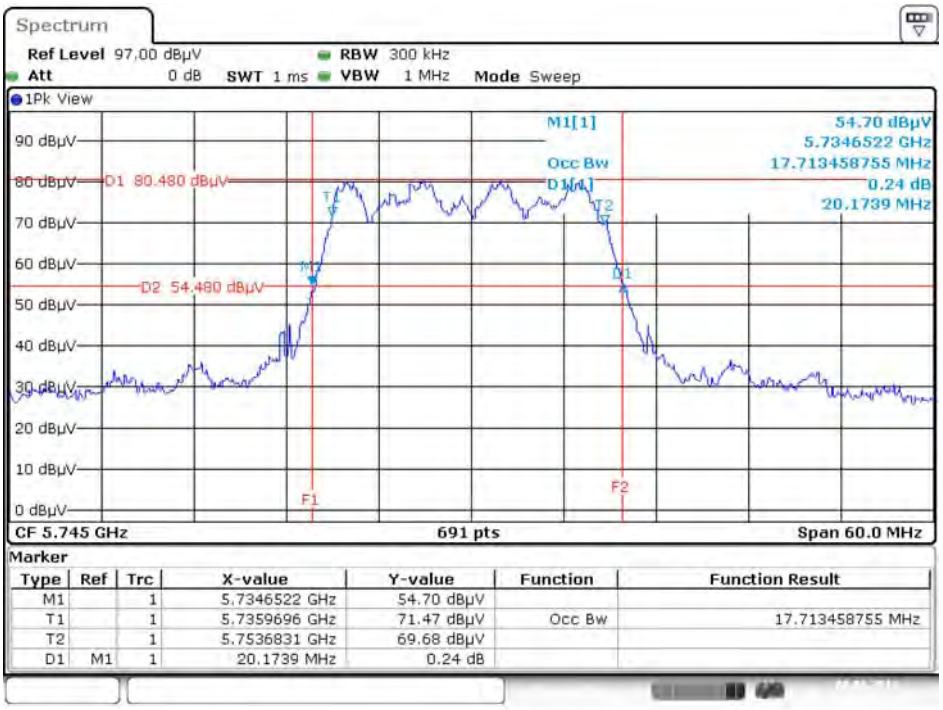
Date: 8.JAN.2016 20:41:32

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5700 MHz



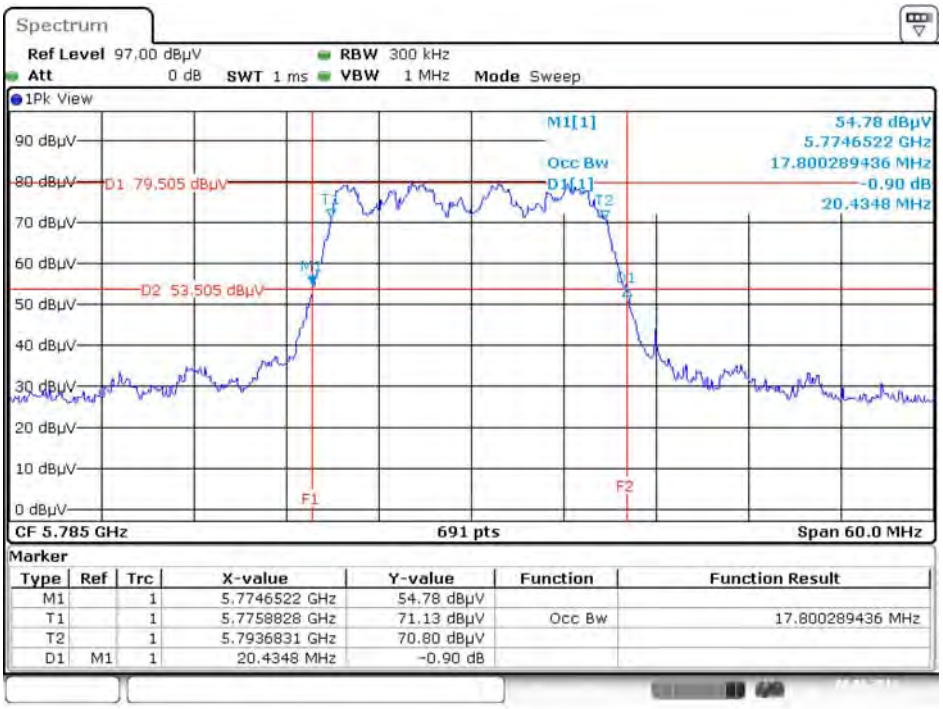
Date: 8.JAN.2016 20:40:23

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5745 MHz



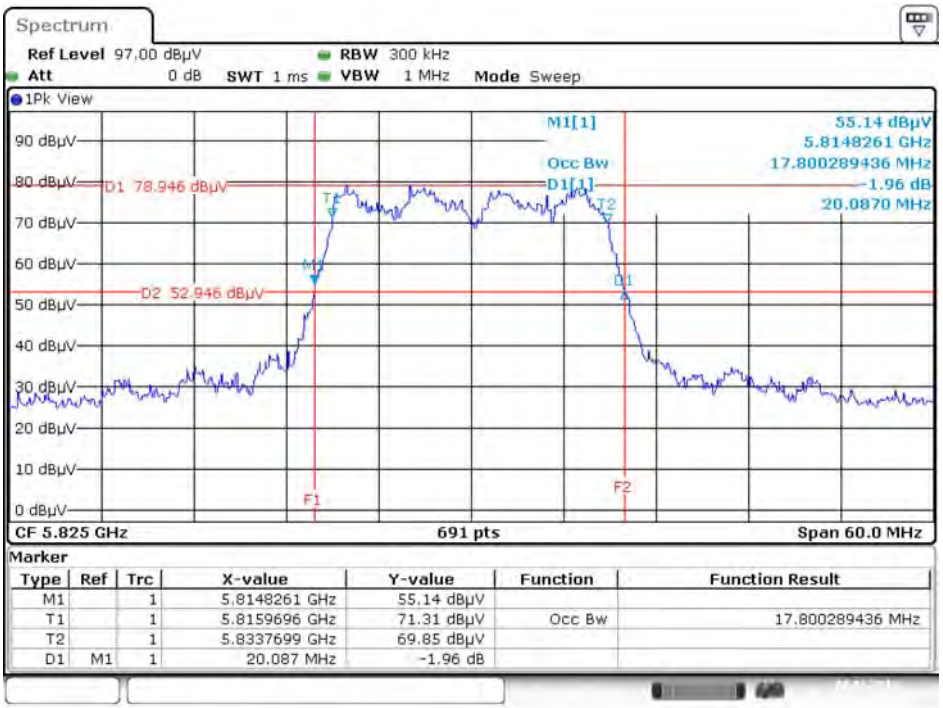
Date: 8.JAN.2016 20:38:31

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5785 MHz



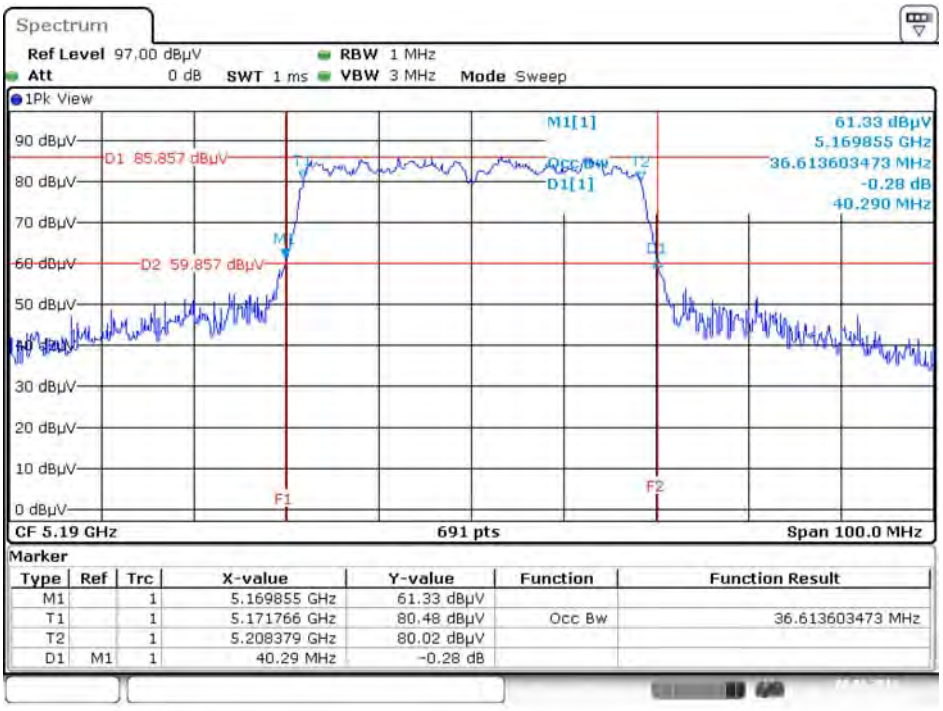
Date: 8.JAN.2016 20:37:39

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5825 MHz



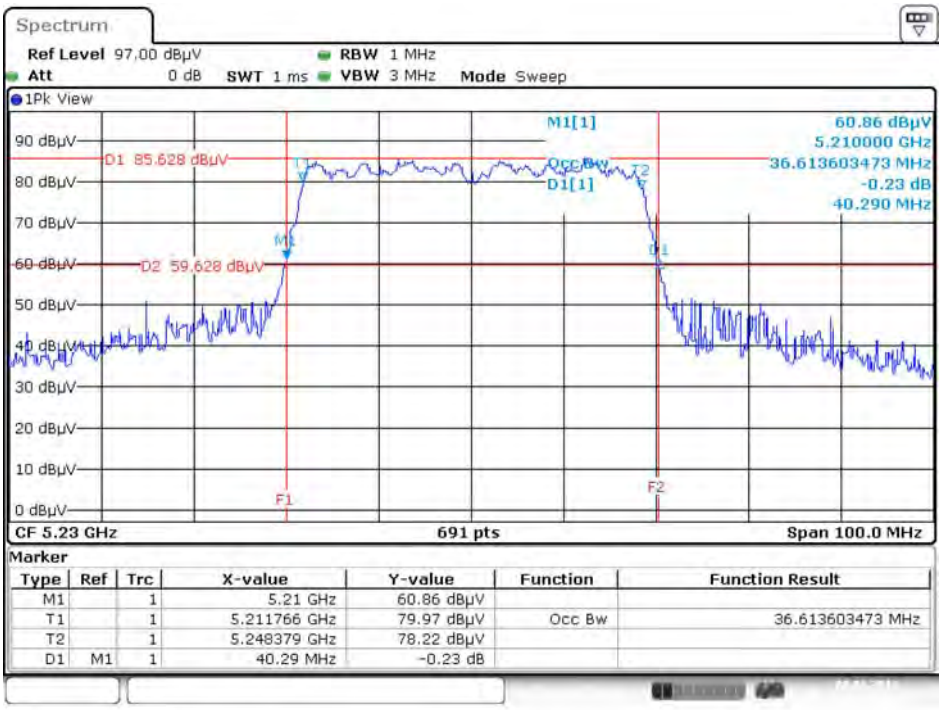
Date: 8.JAN.2016 20:37:04

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5190 MHz



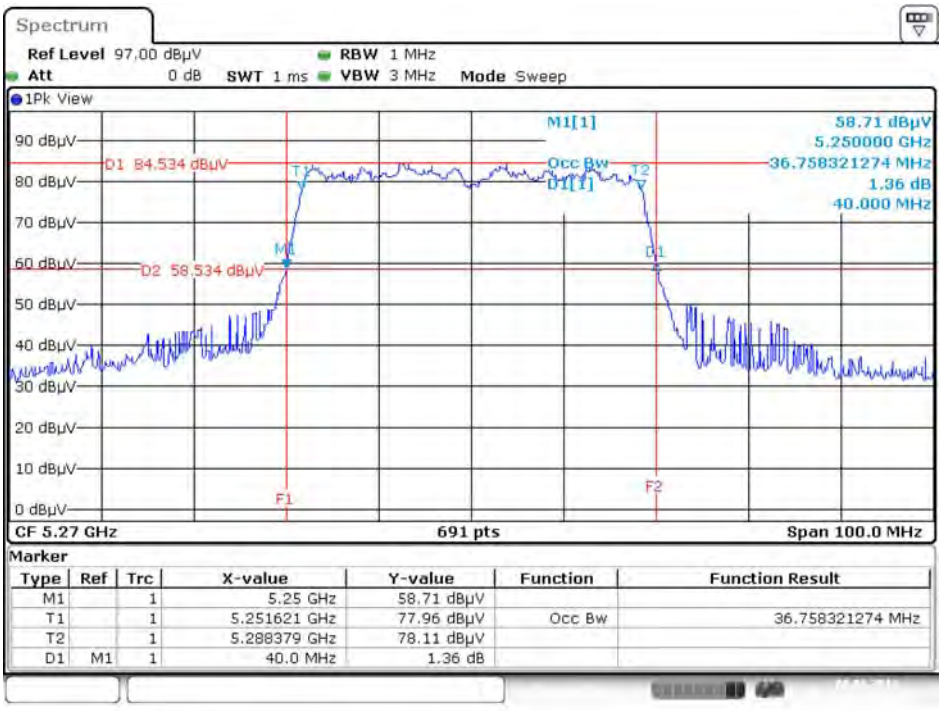
Date: 8.JAN.2016 20:50:23

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5230 MHz



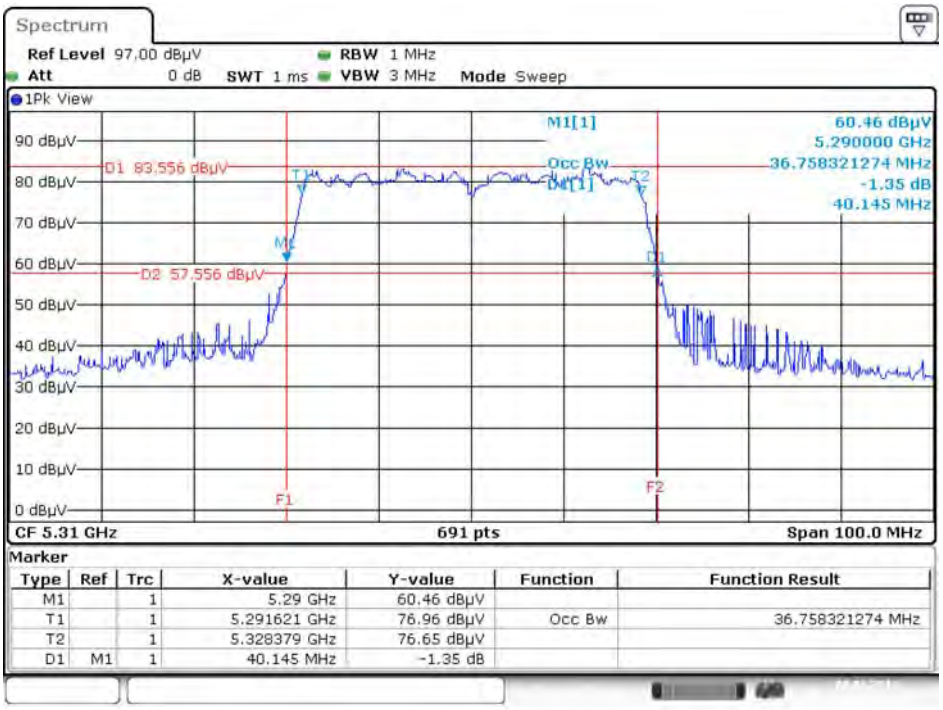
Date: 8.JAN.2016 20:51:21

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5270 MHz



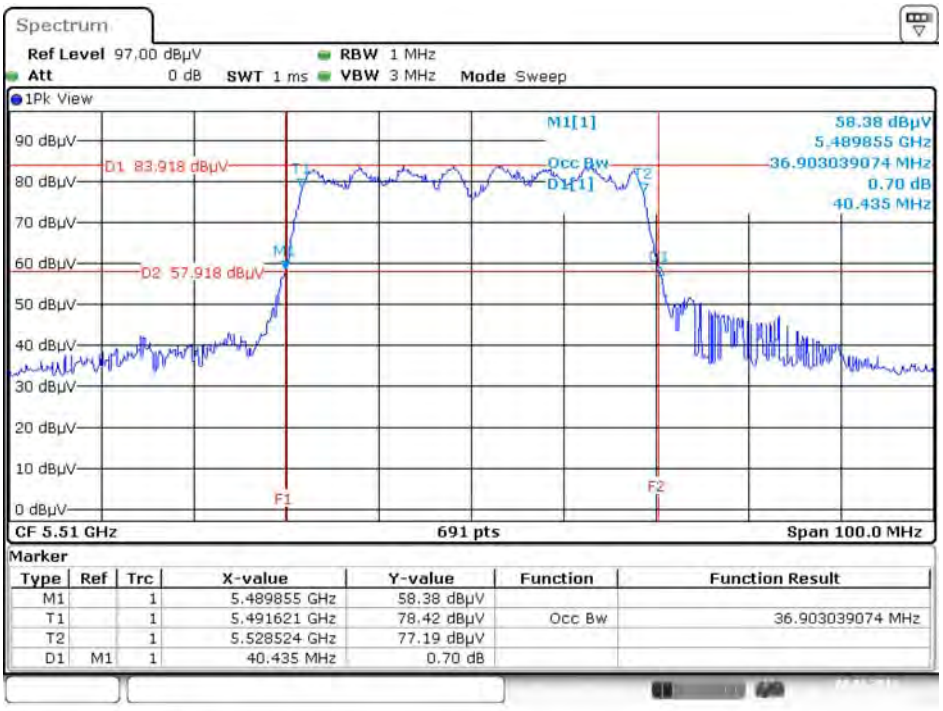
Date: 8.JAN.2016 20:51:54

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5310 MHz



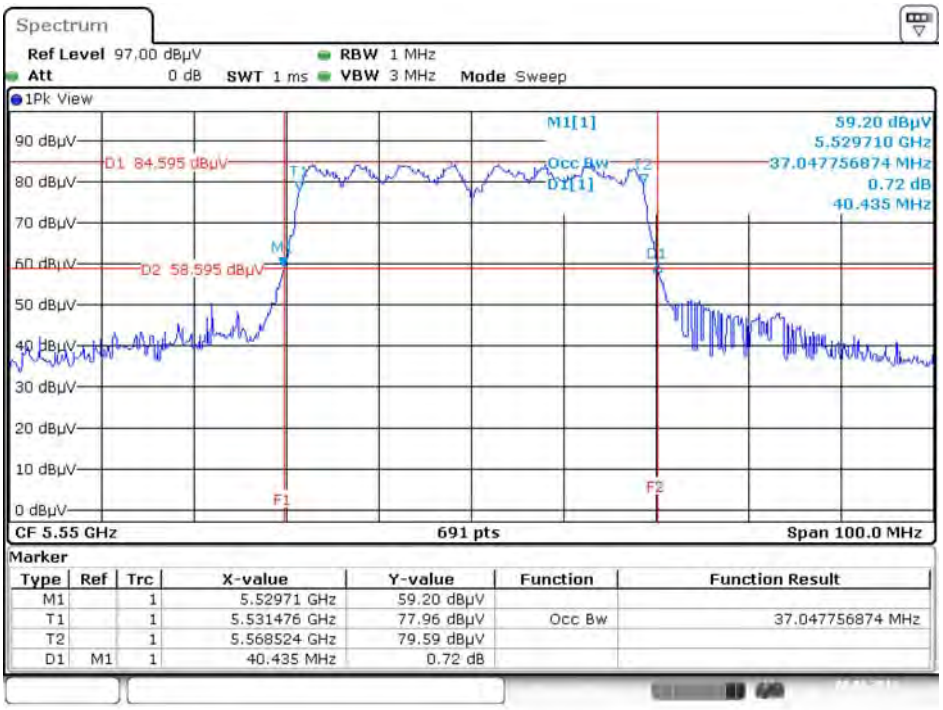
Date: 8.JAN.2016 20:52:31

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5510 MHz



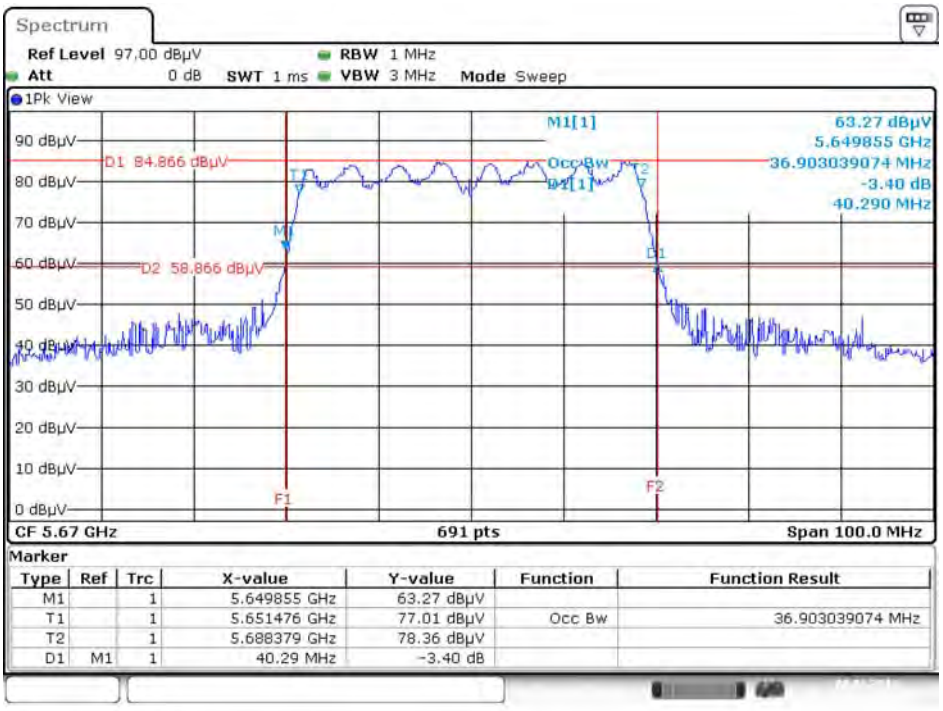
Date: 8.JAN.2016 20:54:04

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5550 MHz



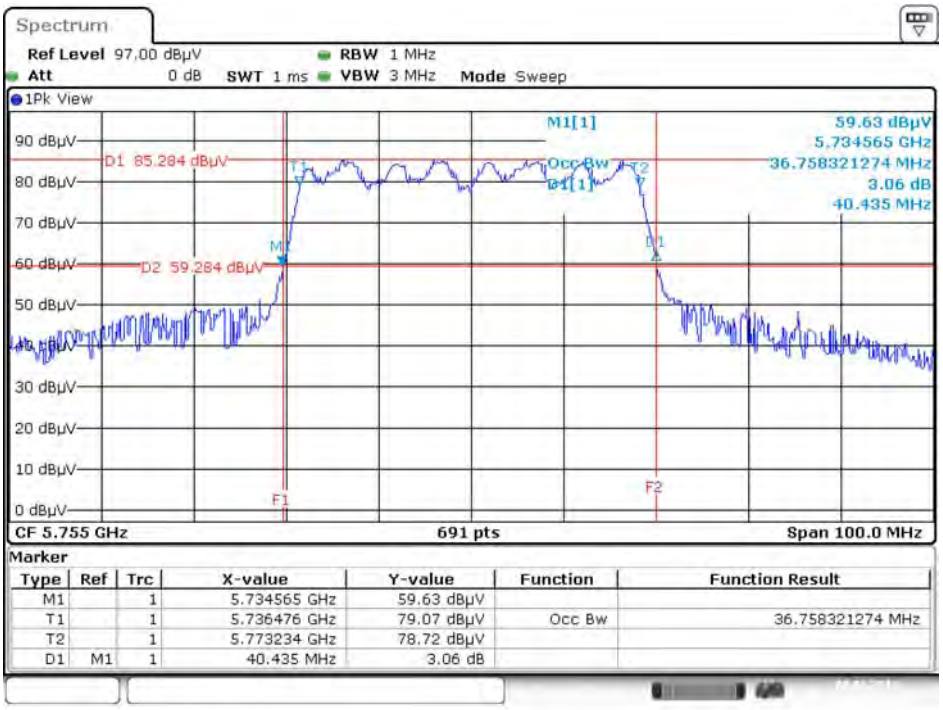
Date: 8.JAN.2016 20:54:36

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5670 MHz



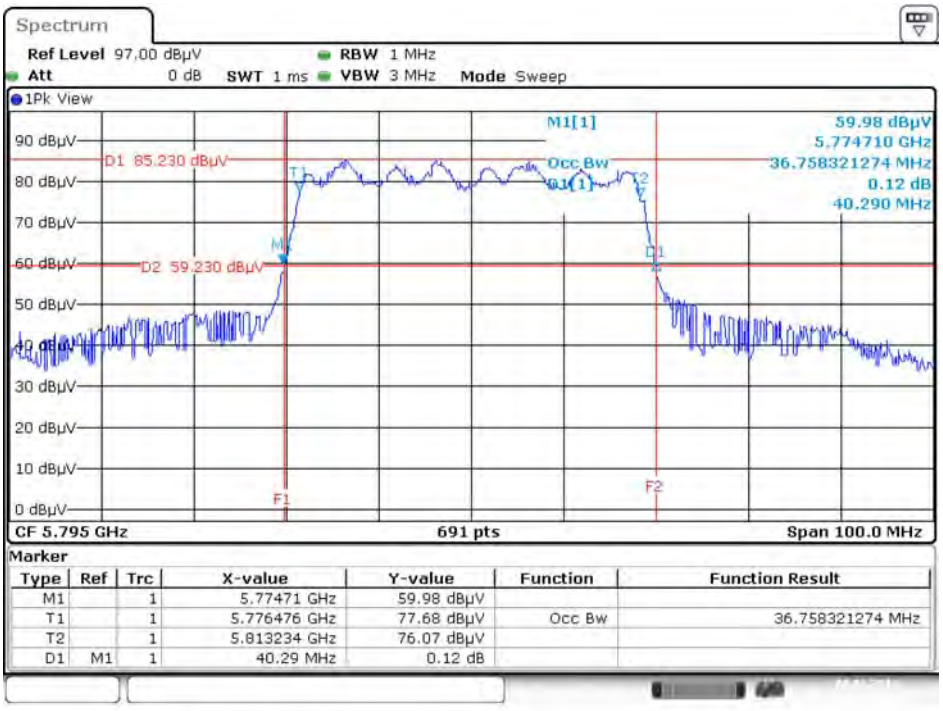
Date: 8.JAN.2016 20:55:09

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5755 MHz



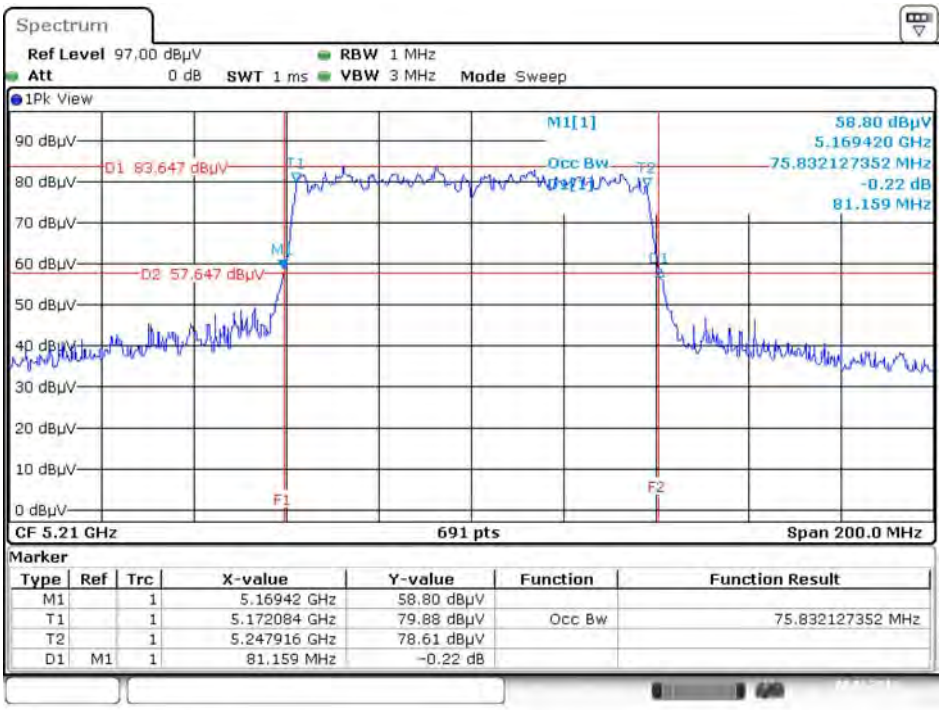
Date: 8.JAN.2016 20:55:41

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5795 MHz



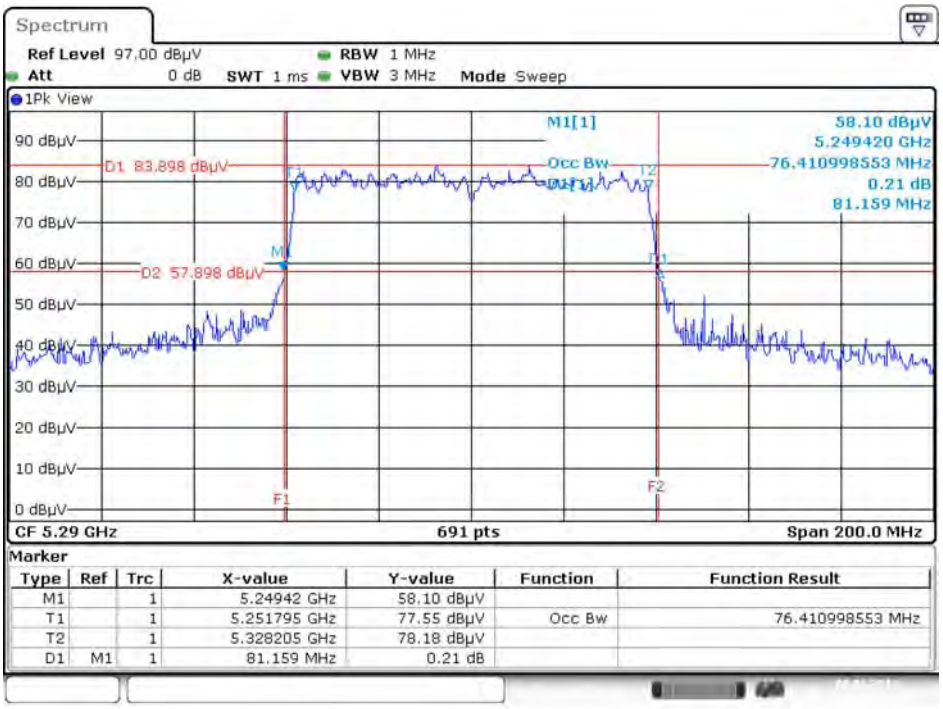
Date: 8.JAN.2016 20:56:17

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5210 MHz



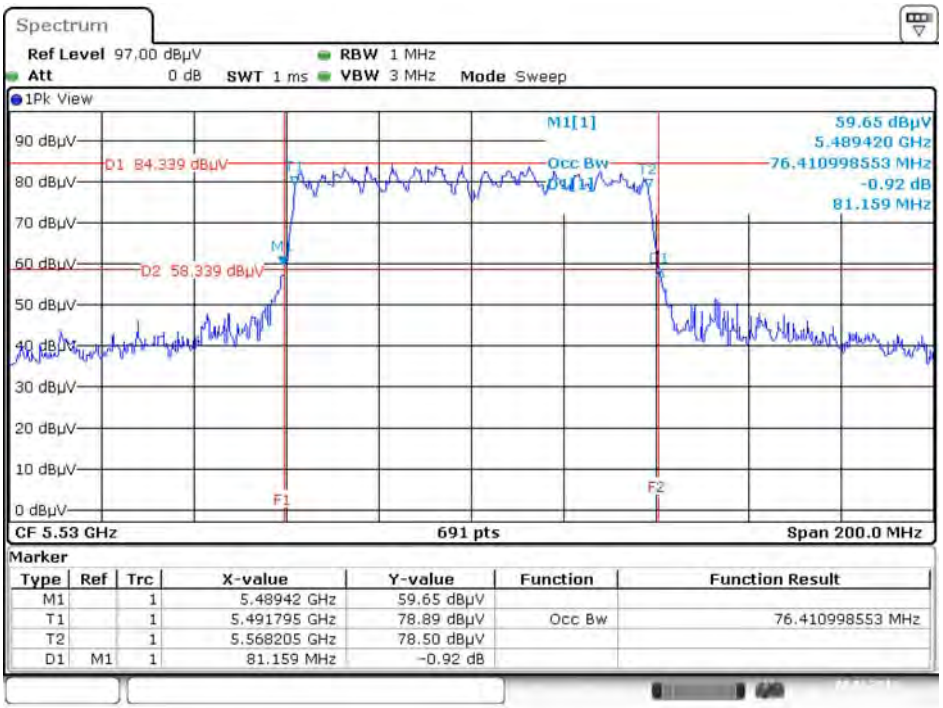
Date: 8.JAN.2016 21:01:45

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5290 MHz



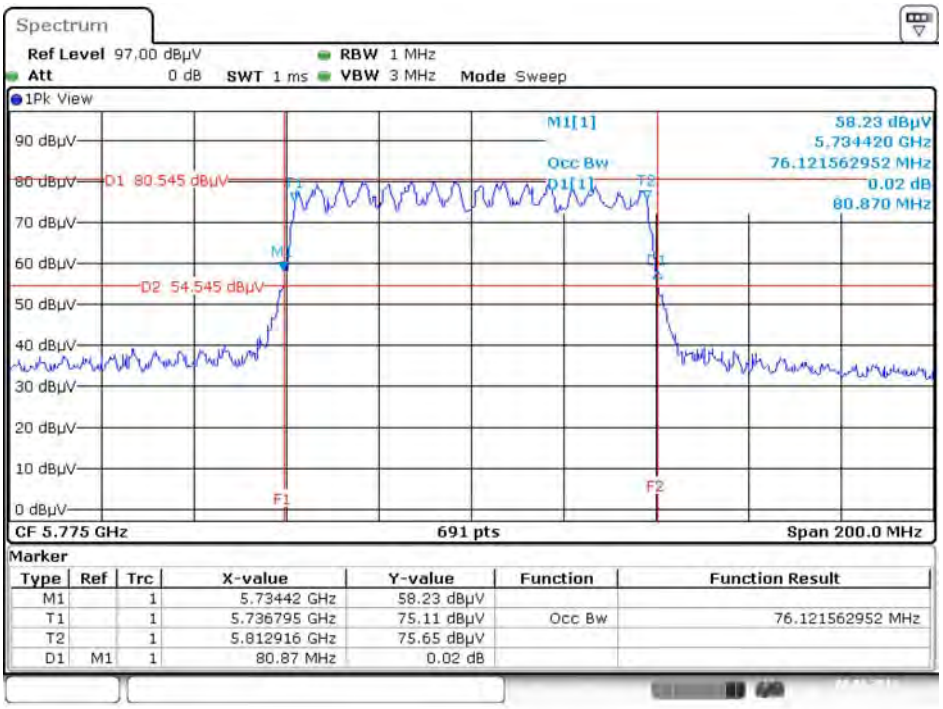
Date: 8.JAN.2016 21:02:22

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5530 MHz



Date: 8.JAN.2016 21:02:52

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5775 MHz

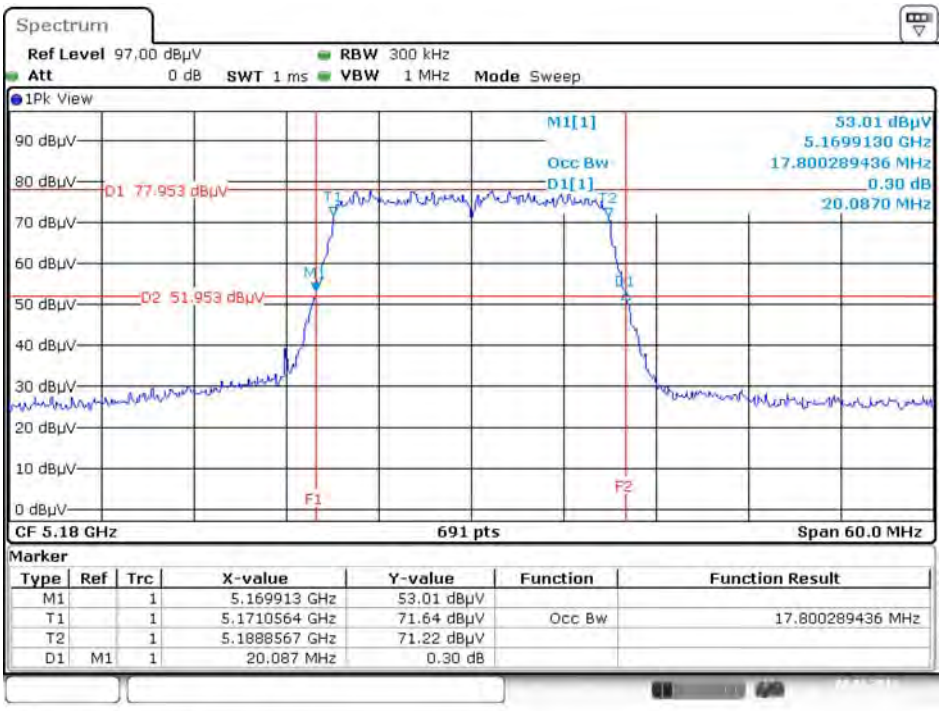


<For Beamforming Mode>

Temperature	24℃	Humidity	60%
Test Engineer	Clemens Fang		

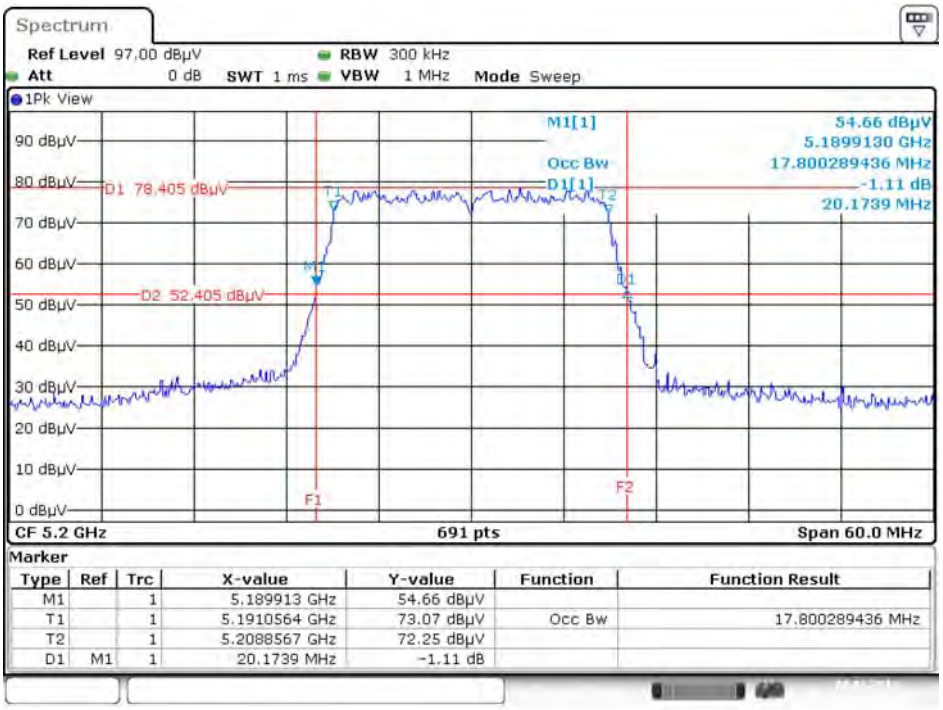
Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac MCS0/Nss1 VHT20	5180 MHz	20.09	17.80
	5200 MHz	20.17	17.80
	5240 MHz	20.26	17.80
	5260 MHz	20.52	17.80
	5300 MHz	20.35	17.80
	5320 MHz	20.52	17.80
	5500 MHz	20.35	17.80
	5580 MHz	20.43	17.80
	5700 MHz	20.26	17.80
	5745 MHz	20.43	17.80
	5785 MHz	20.35	17.80
	5825 MHz	20.17	17.80
802.11ac MCS0/Nss1 VHT40	5190 MHz	40.58	36.61
	5230 MHz	40.44	36.47
	5270 MHz	40.73	36.76
	5310 MHz	40.44	36.76
	5510 MHz	40.29	36.61
	5550 MHz	40.44	36.61
	5670 MHz	40.29	36.47
	5755 MHz	40.58	36.61
	5795 MHz	40.44	36.61
802.11ac MCS0/Nss1 VHT80	5210 MHz	81.16	75.83
	5290 MHz	81.74	75.83
	5530 MHz	80.87	76.12
	5775 MHz	81.16	75.83

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5180 MHz



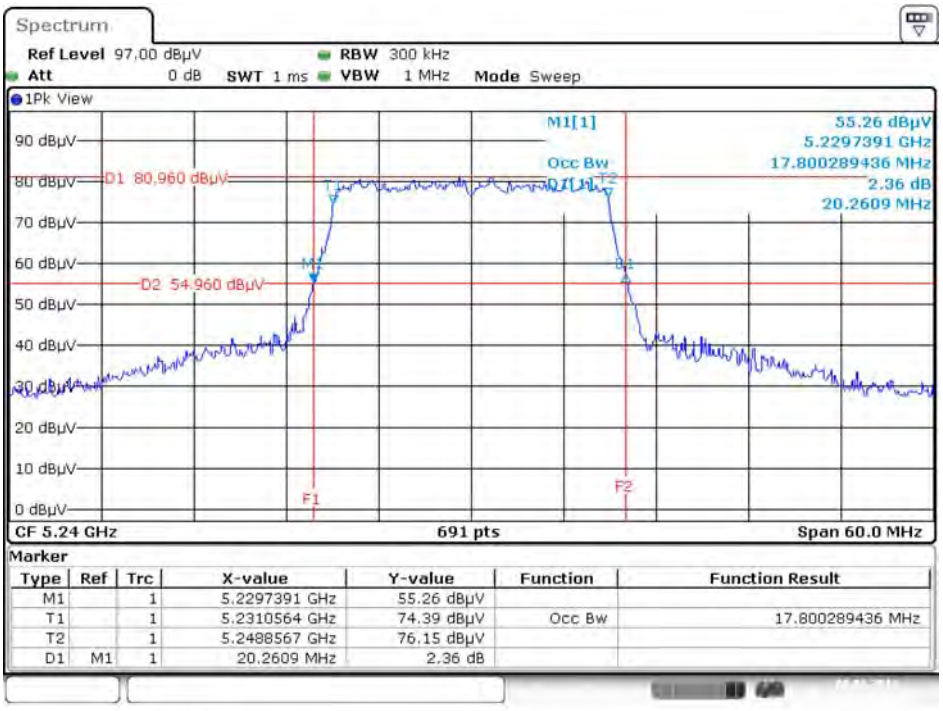
Date: 8.JAN.2016 21:20:17

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5200 MHz



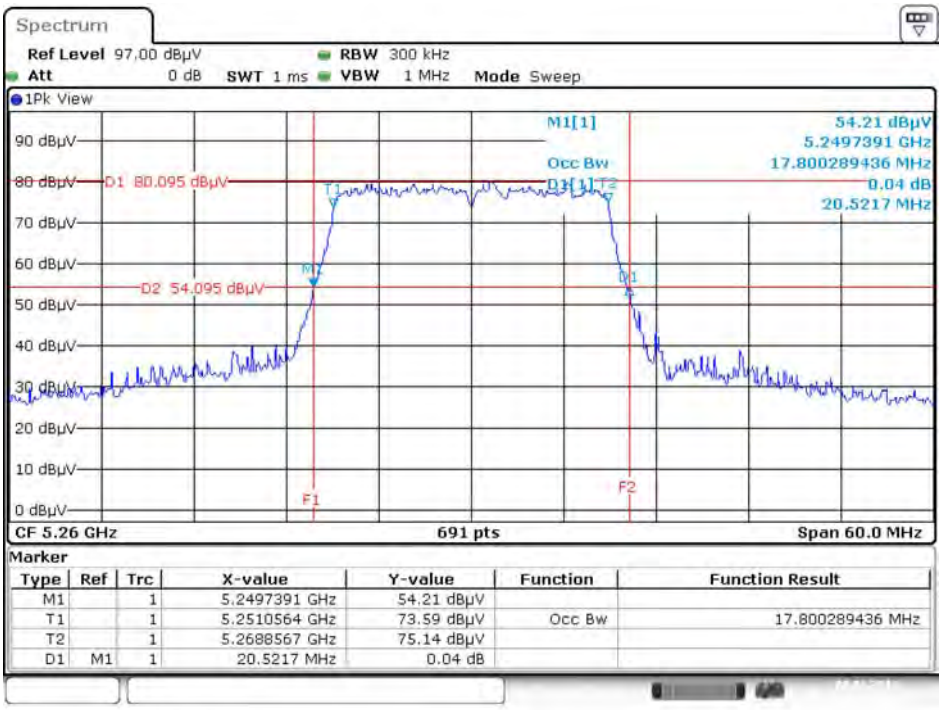
Date: 8.JAN.2016 21:21:49

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5240 MHz



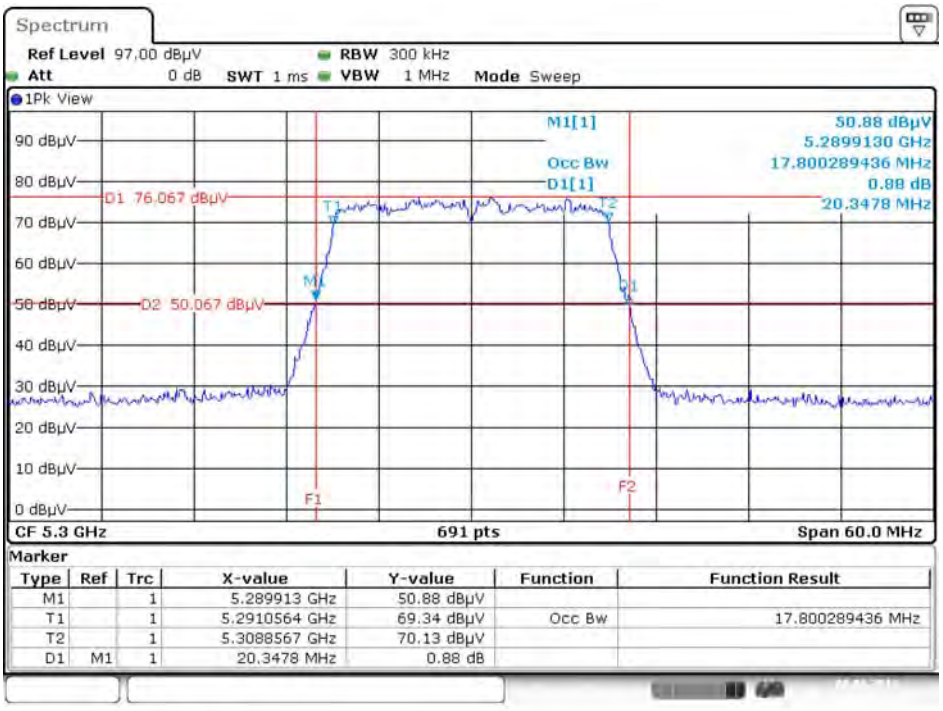
Date: 8.JAN.2016 21:22:30

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5260 MHz



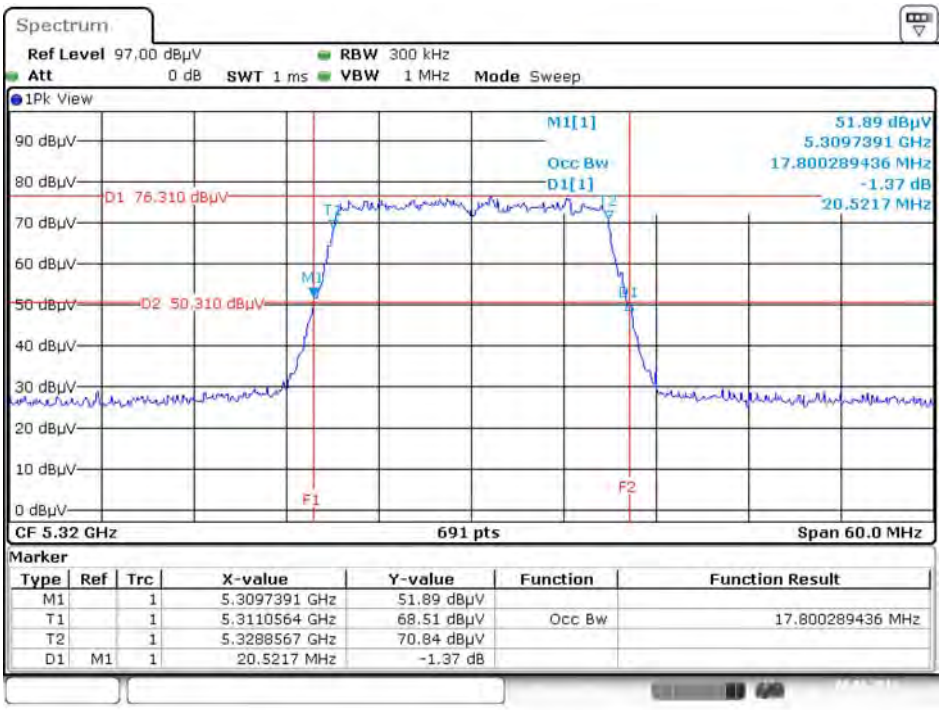
Date: 8.JAN.2016 21:24:51

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5300 MHz



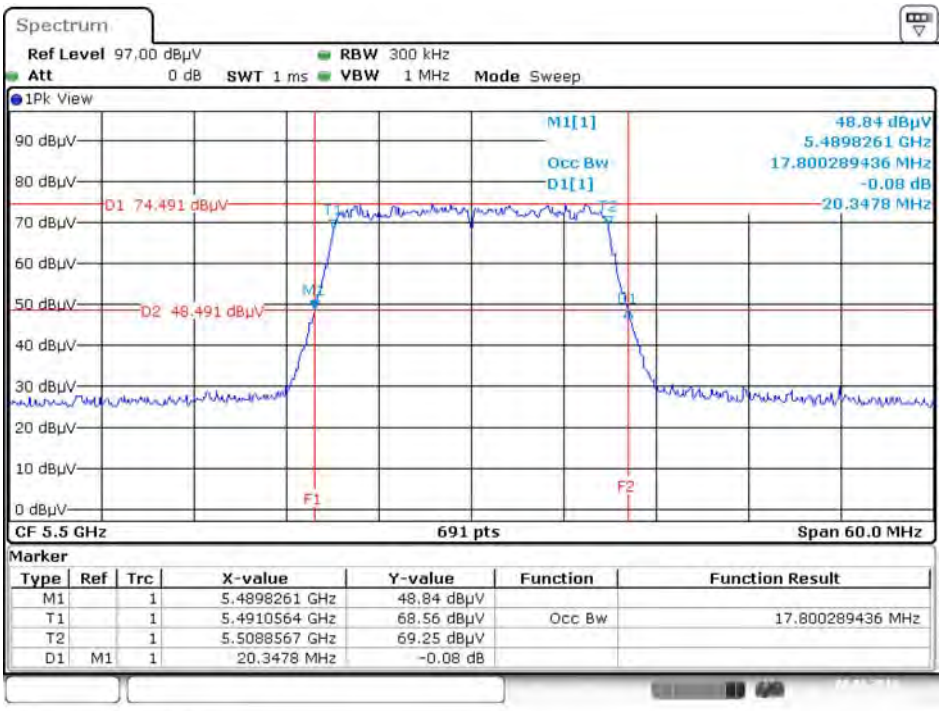
Date: 8.JAN.2016 21:25:23

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5320 MHz



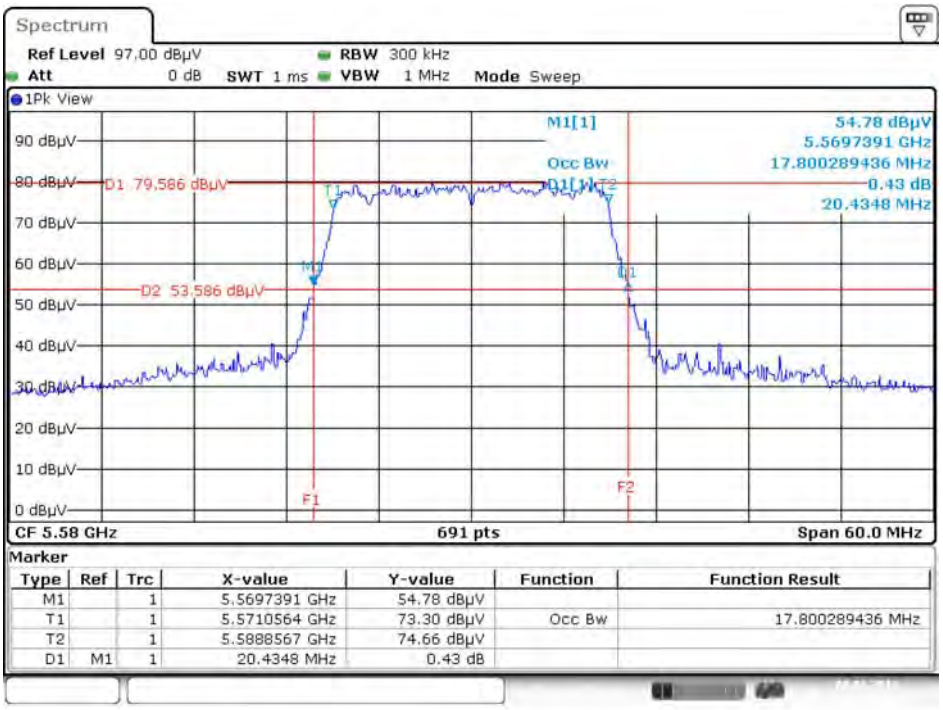
Date: 8.JAN.2016 21:25:53

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5500 MHz



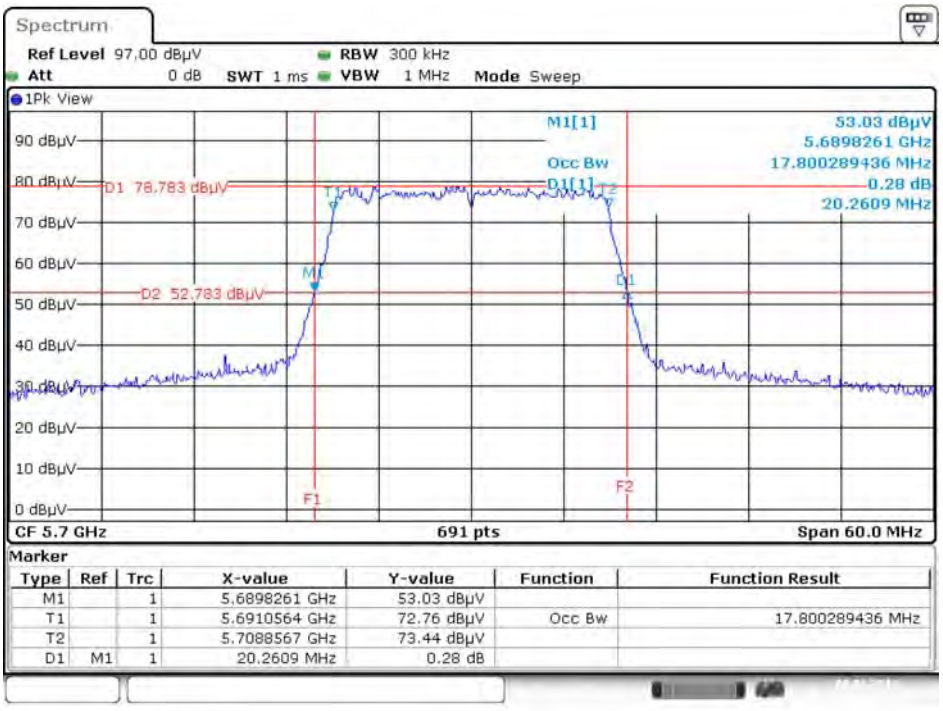
Date: 8.JAN.2016 21:26:40

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5580 MHz



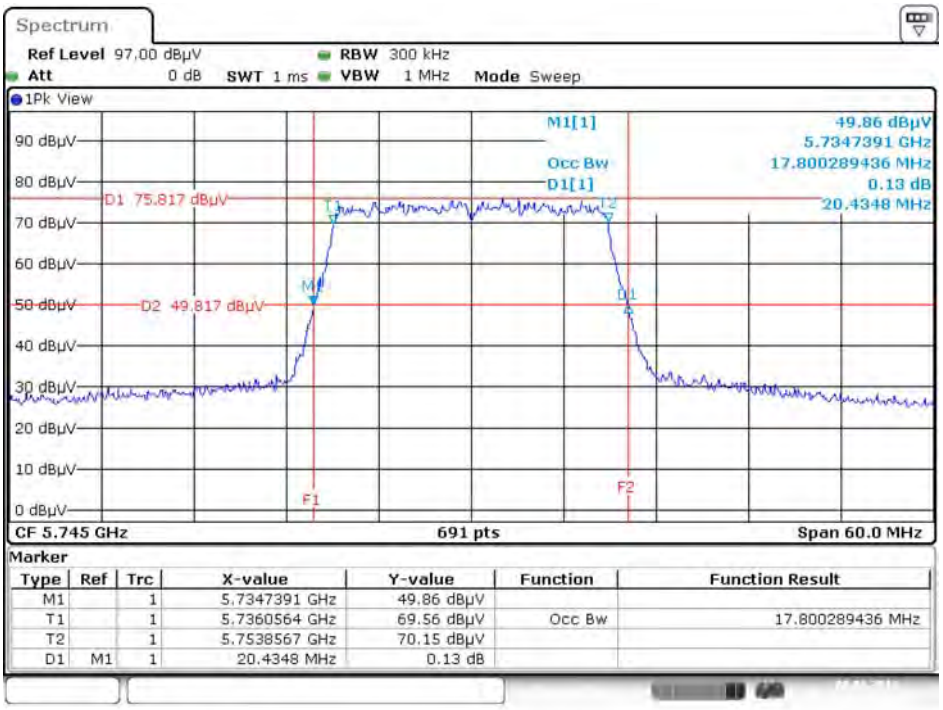
Date: 8.JAN.2016 21:27:12

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5700 MHz



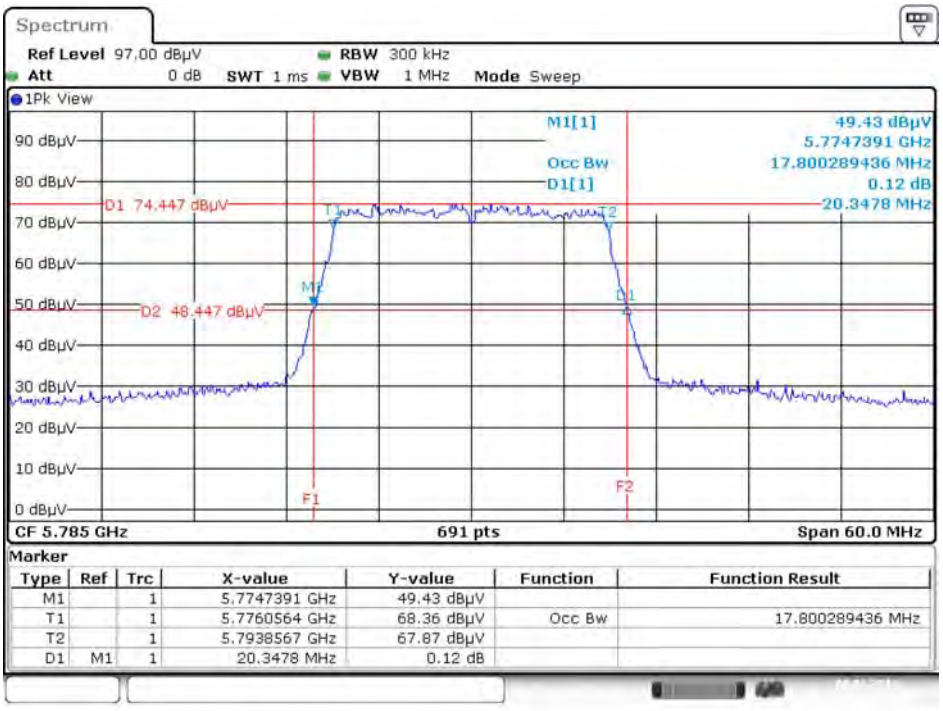
Date: 8.JAN.2016 21:27:35

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5745 MHz



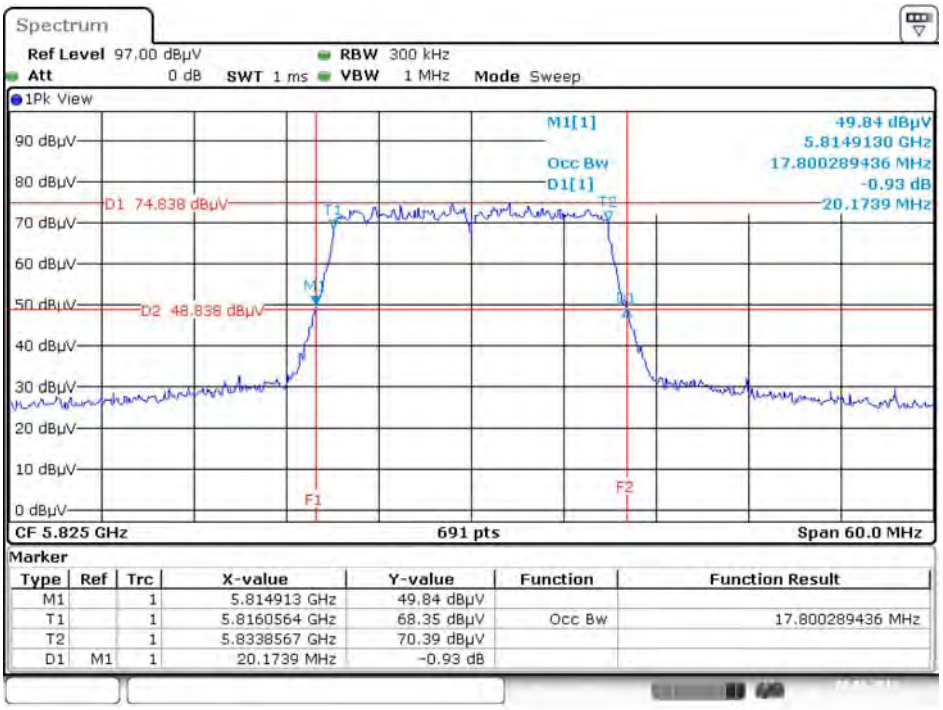
Date: 8.JAN.2016 21:28:05

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5785 MHz



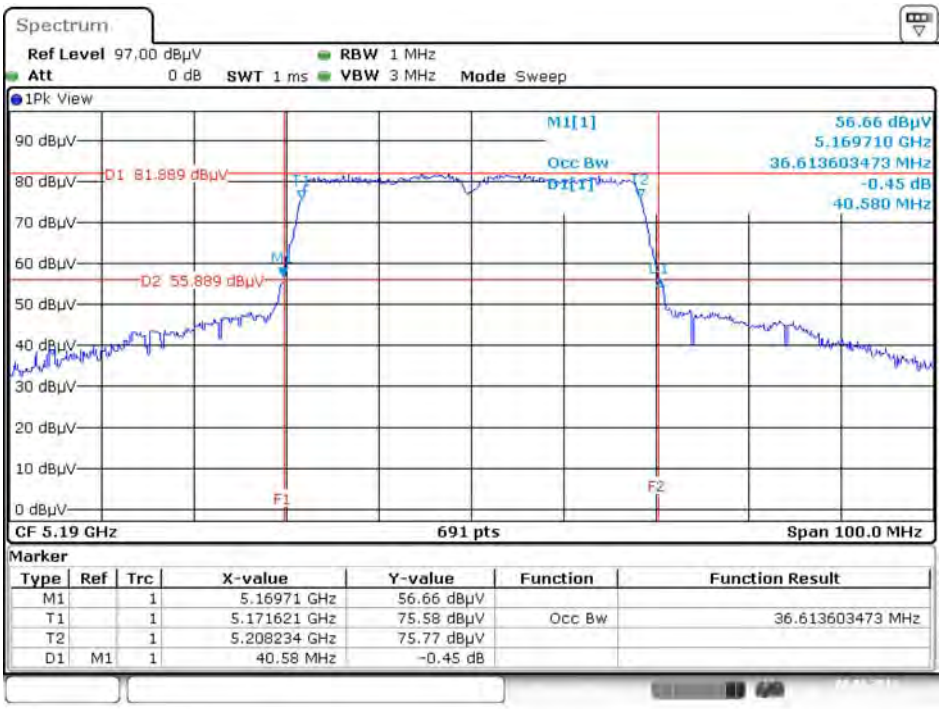
Date: 8.JAN.2016 21:28:25

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5825 MHz



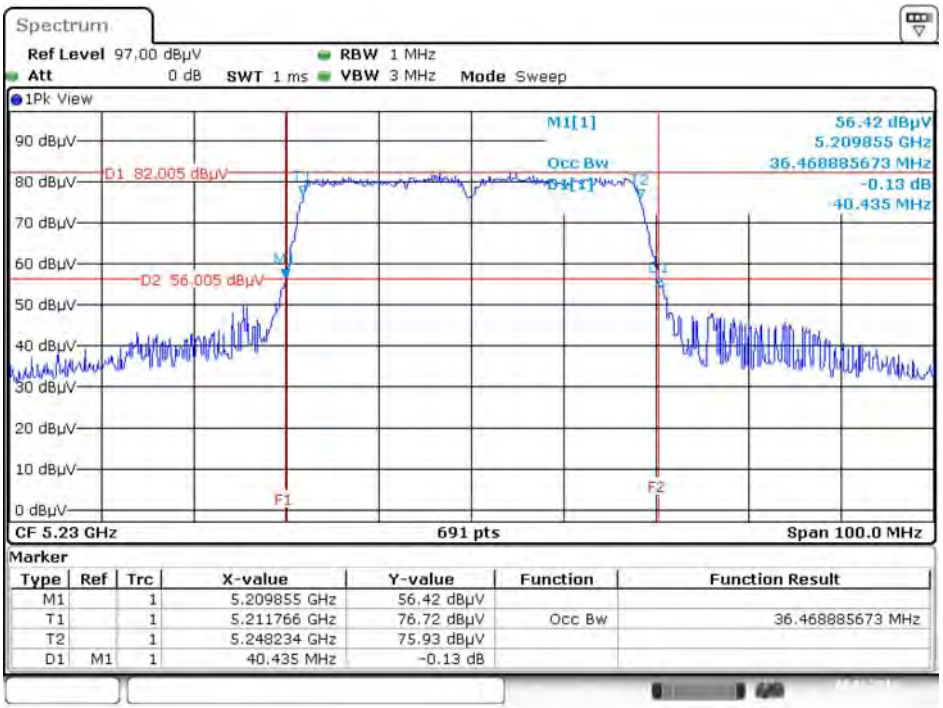
Date: 8.JAN.2016 21:28:44

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5190 MHz



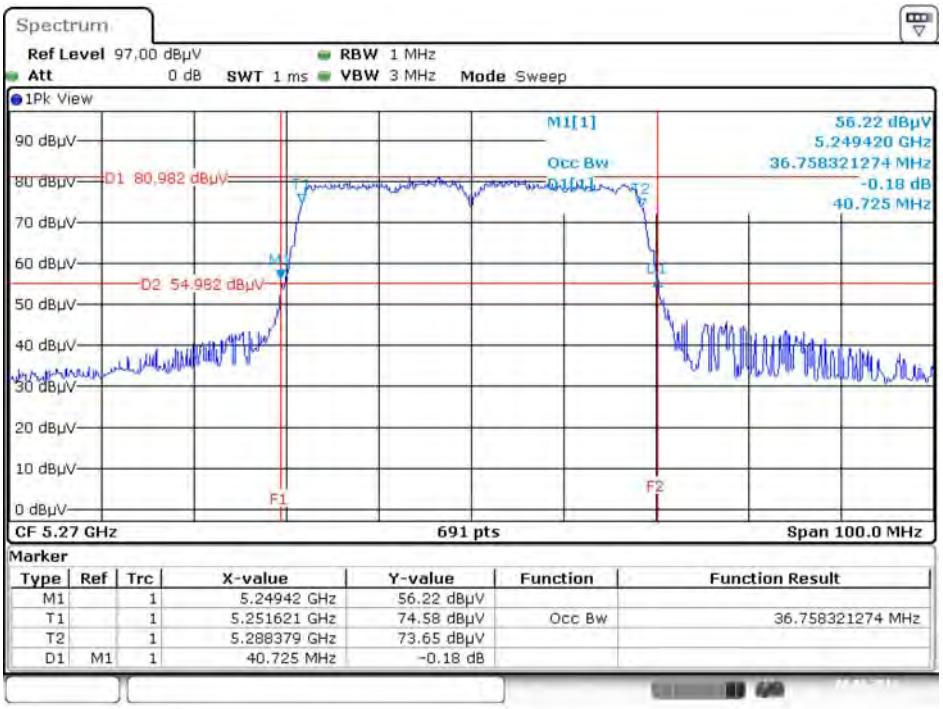
Date: 8.JAN.2016 21:11:57

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5230 MHz



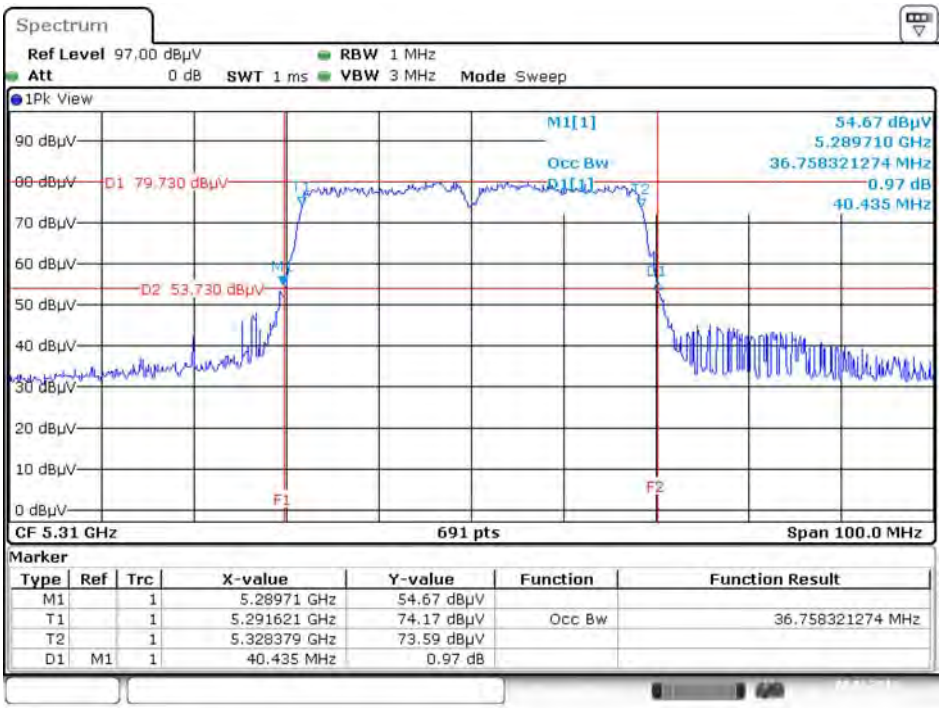
Date: 8.JAN.2016 21:12:36

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5270 MHz



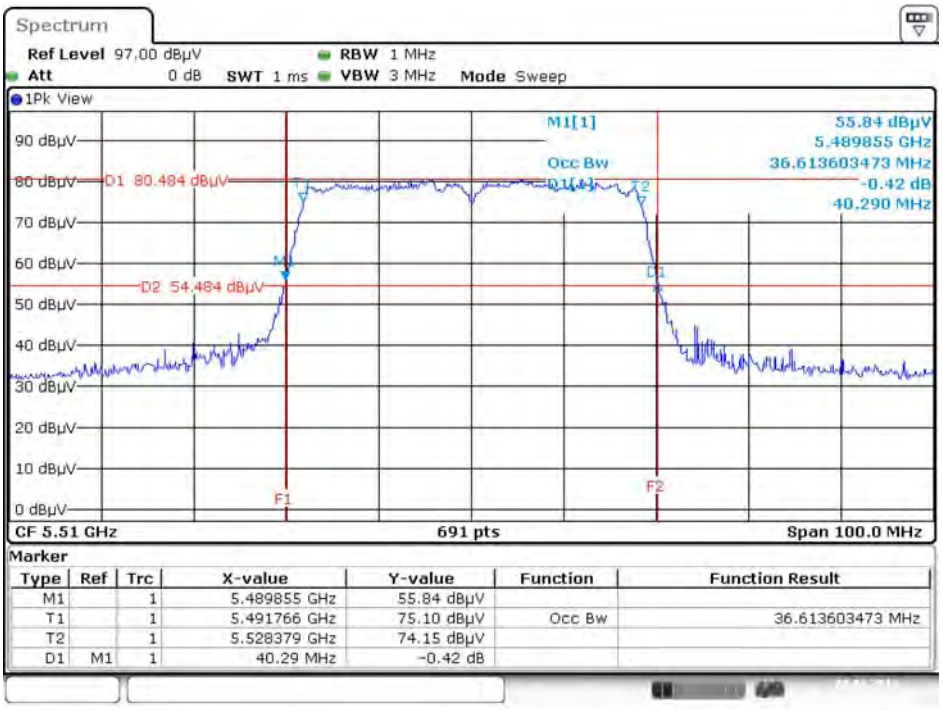
Date: 8.JAN.2016 21:14:38

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5310 MHz



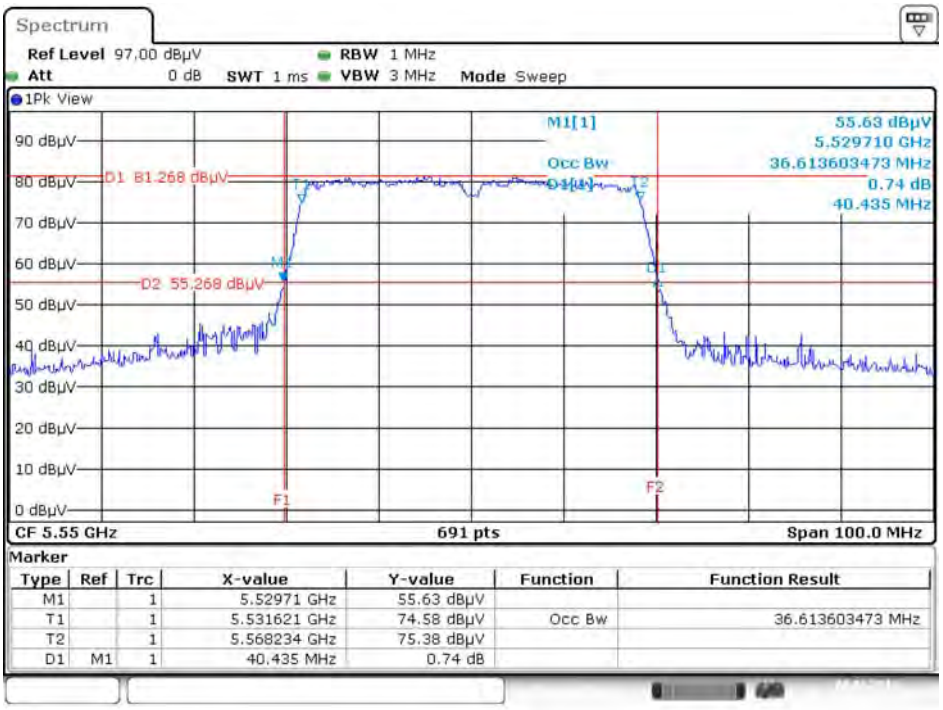
Date: 8.JAN.2016 21:15:11

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5510 MHz



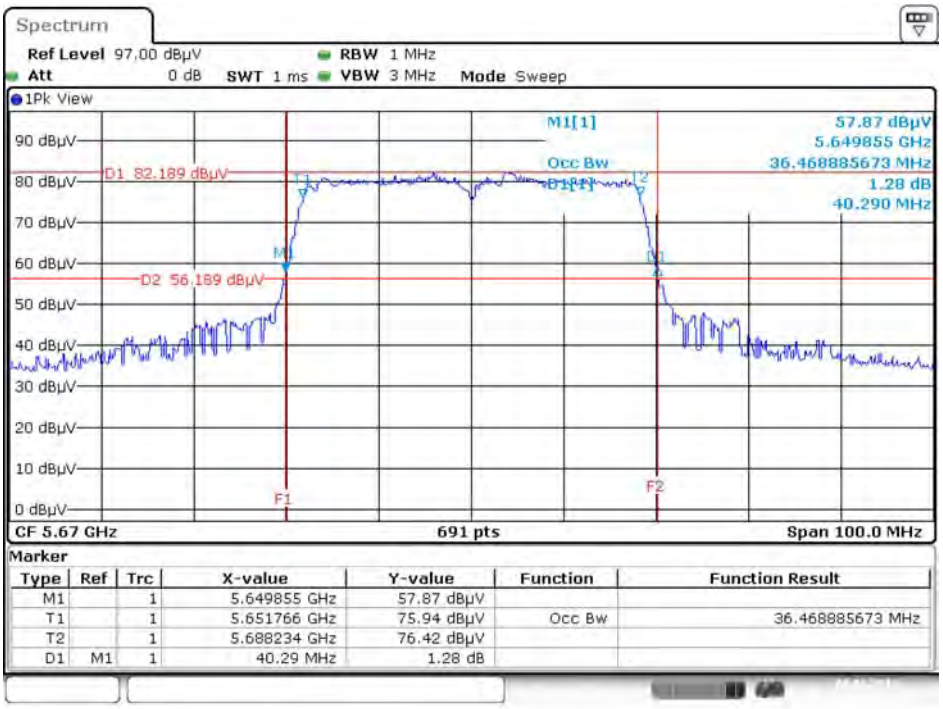
Date: 8.JAN.2016 21:16:29

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5550 MHz



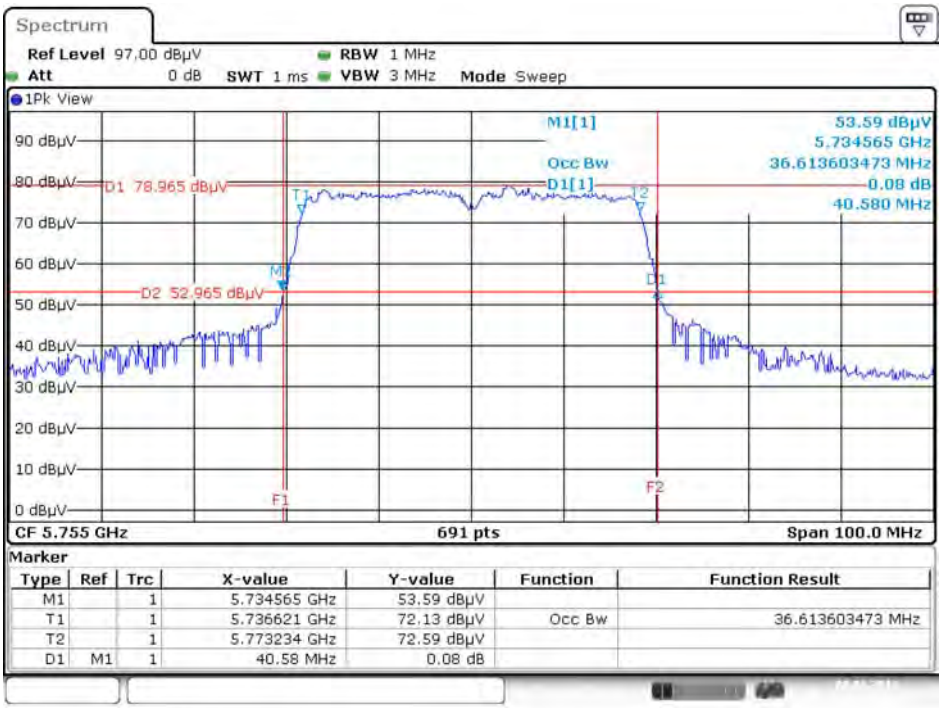
Date: 8.JAN.2016 21:17:15

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5670 MHz



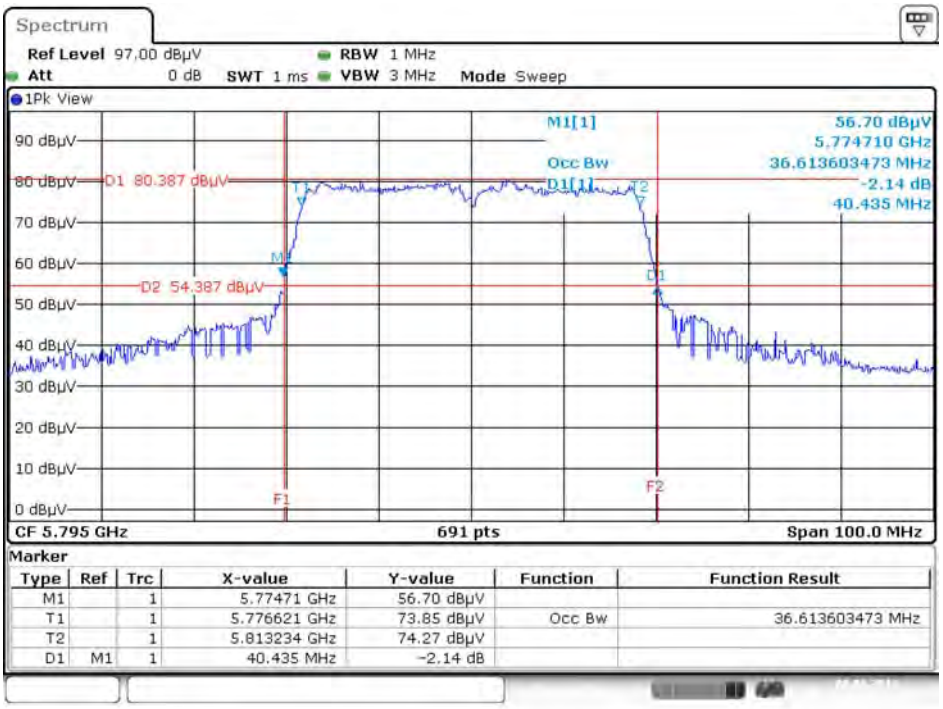
Date: 8.JAN.2016 21:17:47

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5755 MHz



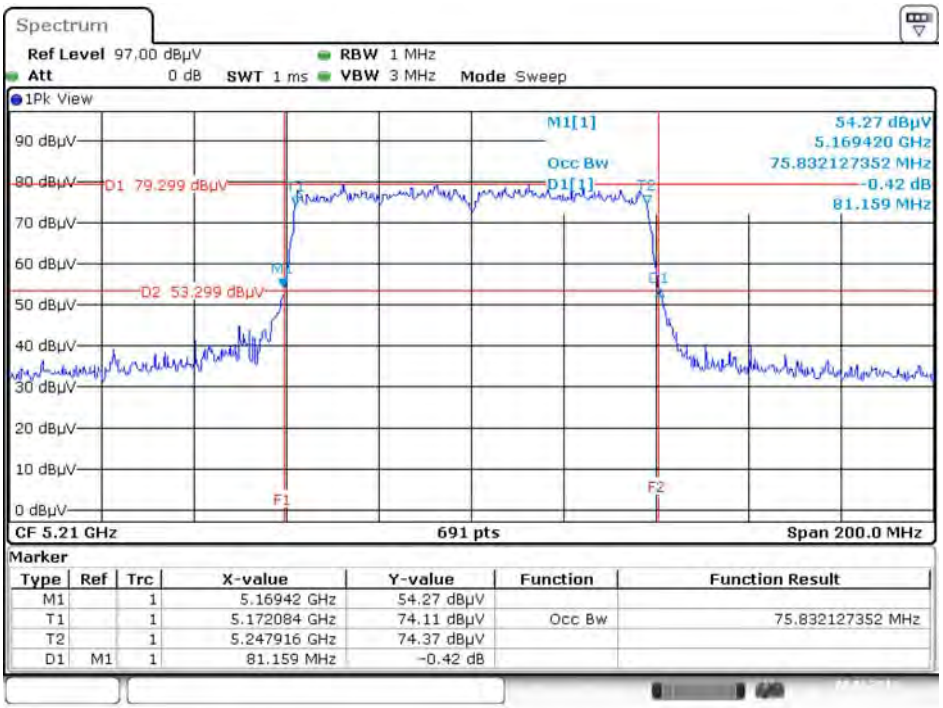
Date: 8.JAN.2016 21:18:26

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5795 MHz



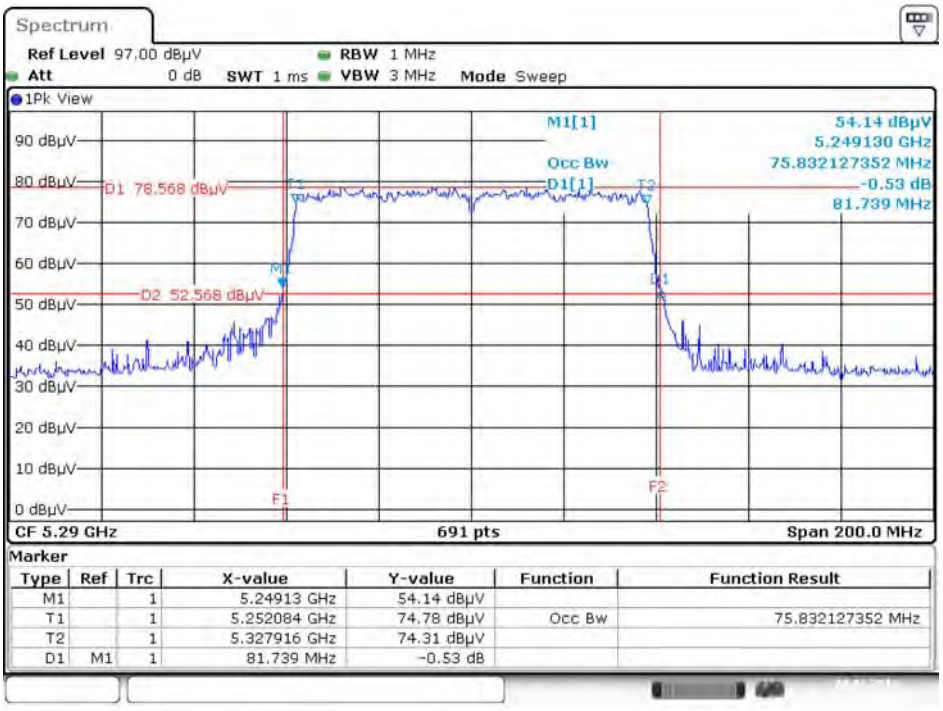
Date: 8.JAN.2016 21:18:58

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5210 MHz



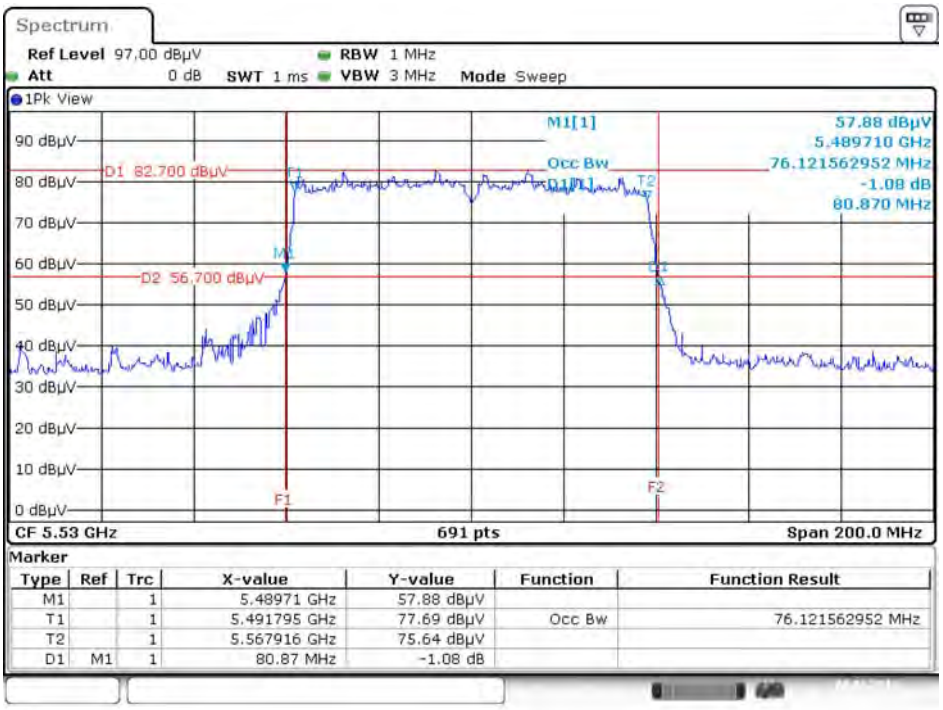
Date: 8.JAN.2016 21:07:37

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5290 MHz



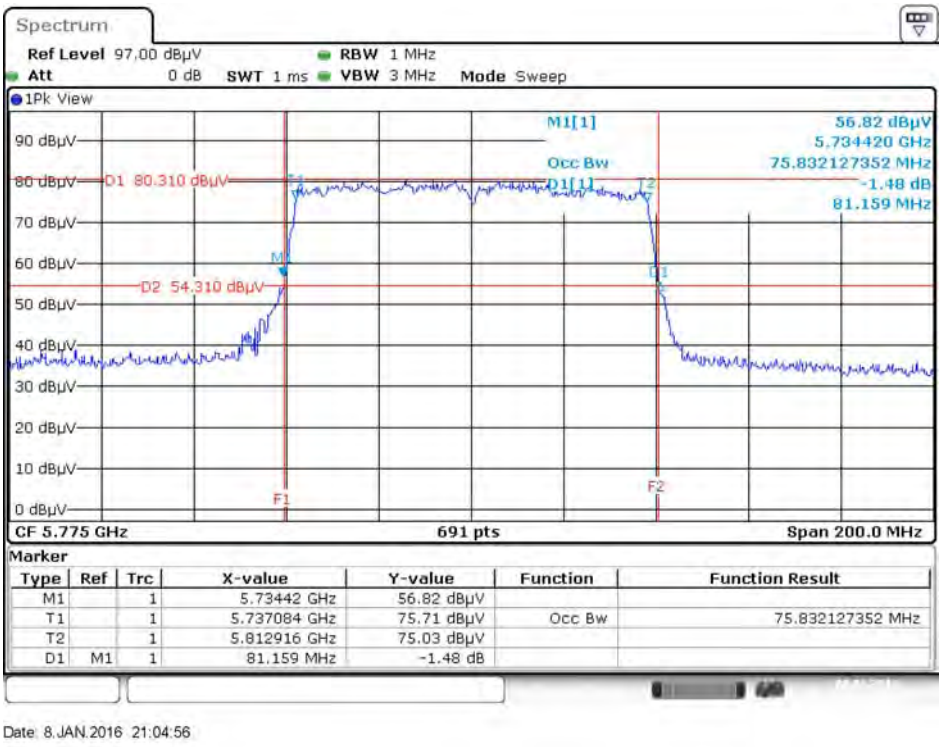
Date: 8.JAN.2016 21:07:02

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5530 MHz



Date: 8.JAN.2016 21:06:13

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5775 MHz



4.3. 6dB Spectrum Bandwidth Measurement

4.3.1. Limit

For digital modulation systems, the minimum 6dB bandwidth shall be at least 500 kHz.

4.3.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of spectrum analyzer.

6dB Spectrum Bandwidth	
Spectrum Parameters	**Setting**
Attenuation	Auto
Span Frequency	> 6dB Bandwidth
RBW	100kHz
VBW	≥ 3 x RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

4.3.3. Test Procedures

For Radiated 6dB Bandwidth Measurement:

1. The transmitter was radiated to the spectrum analyzer in peak hold mode.
2. Test was performed in accordance with KDB789033 D02 v01 for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - section (C) Emission Bandwidth.
3. Multiple antenna system was performed in accordance with KDB662911 D01 v02r01 Emissions Testing of Transmitters with Multiple Outputs in the Same Band.
4. Measured the spectrum width with power higher than 6dB below carrier.

4.3.4. Test Setup Layout

For Radiated 6dB Bandwidth Measurement:

This test setup layout is the same as that shown in section 4.6.4.

4.3.5. Test Deviation

There is no deviation with the original standard.

4.3.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.3.7. Test Result of 6dB Spectrum Bandwidth

<For Non-Beamforming Mode>

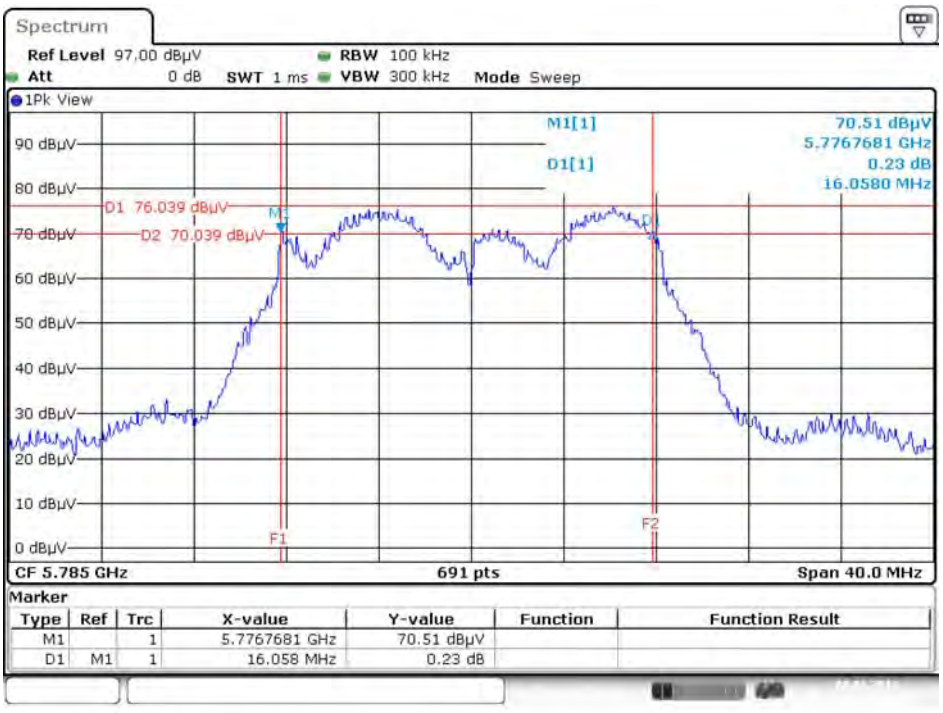
Temperature	24℃	Humidity	60%
Test Engineer	Clemens Fang		

Mode	Frequency	6dB Bandwidth (MHz)	Min. Limit (kHz)	Test Result
802.11a	5745 MHz	16.17	500	Complies
	5785 MHz	16.06	500	Complies
	5825 MHz	15.71	500	Complies
802.11ac MCS0/Nss1 VHT20	5745 MHz	17.10	500	Complies
	5785 MHz	16.58	500	Complies
	5825 MHz	16.46	500	Complies
802.11ac MCS0/Nss1 VHT40	5755 MHz	35.71	500	Complies
	5795 MHz	35.71	500	Complies
802.11ac MCS0/Nss1 VHT80	5775 MHz	75.65	500	Complies

Note: All the test values were listed in the report.

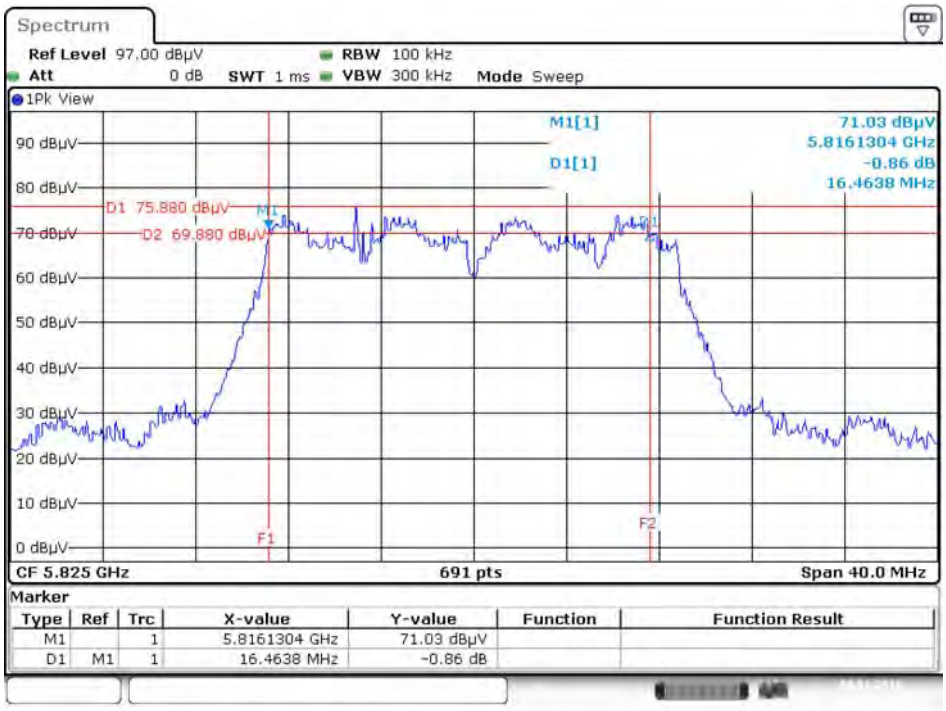
For plots, only the channel with worse result was shown.

6 dB Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5785 MHz



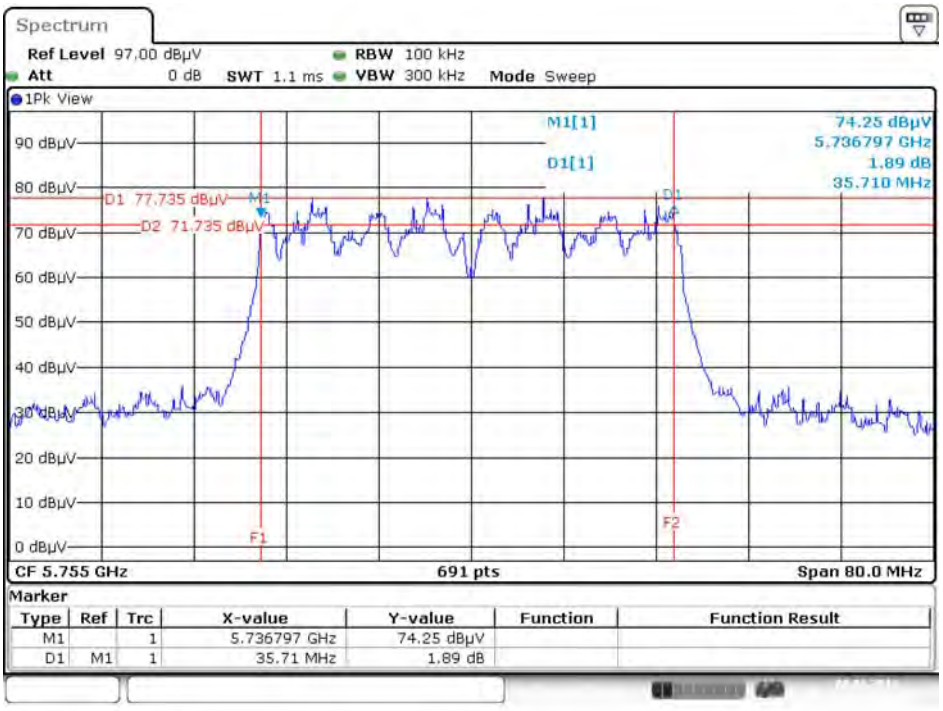
Date: 8.JAN.2016 21:36:09

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5825 MHz



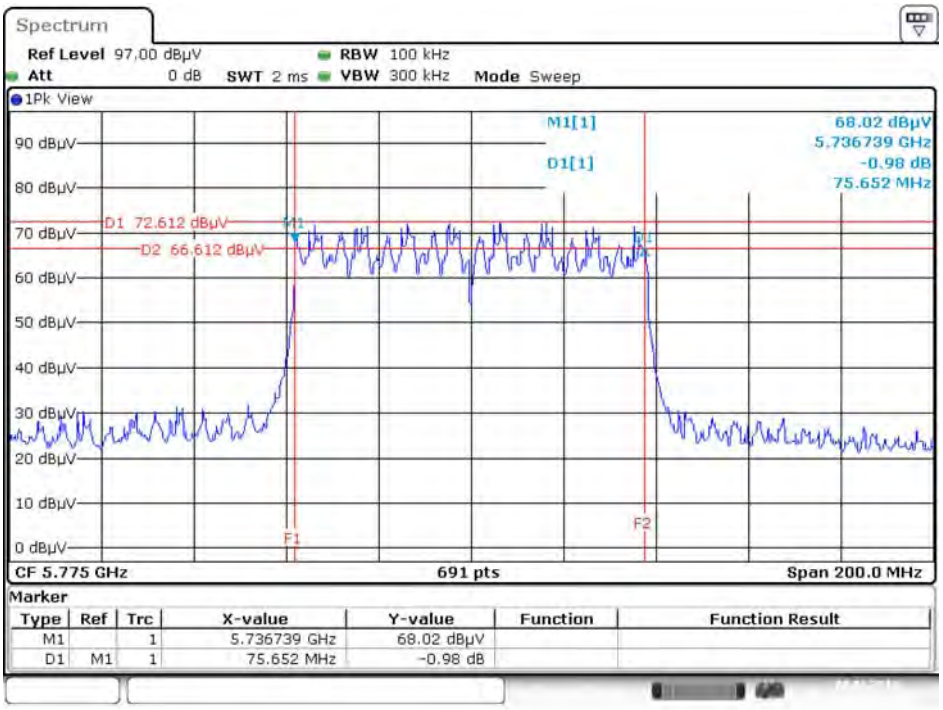
Date: 8.JAN.2016 21:34:32

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5755MHz



Date: 8.JAN.2016 21:34:04

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5775 MHz



Date: 8.JAN.2016 21:09:52

<For Beamforming Mode>

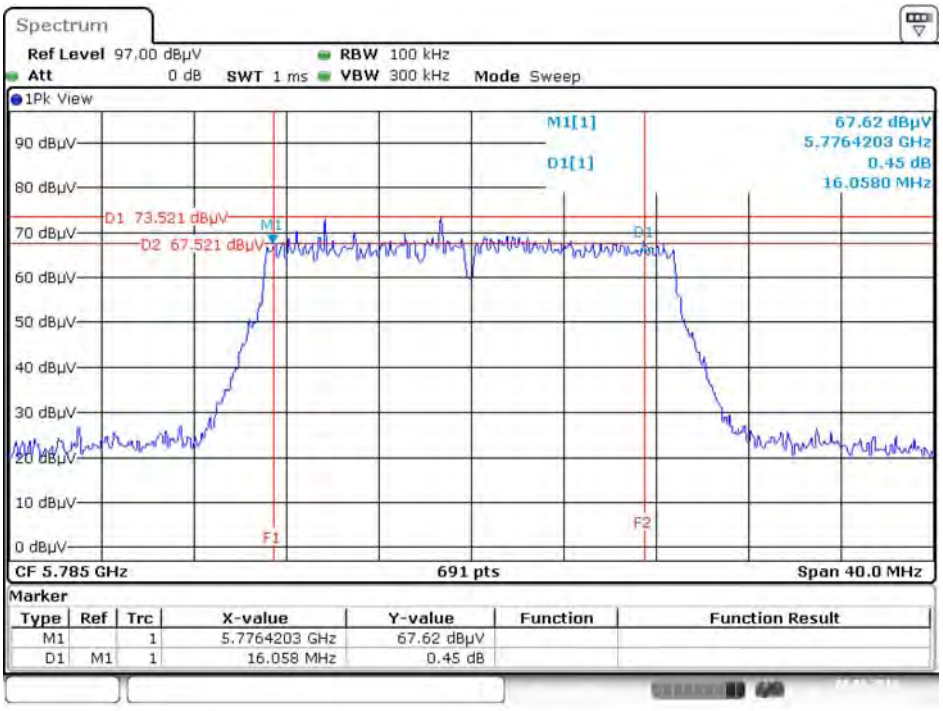
Temperature	24°C	Humidity	60%
Test Engineer	Clemens Fang		

Mode	Frequency	6dB Bandwidth (MHz)	Min. Limit (kHz)	Test Result
802.11ac MCS0/Nss1 VHT20	5745 MHz	17.04	500	Complies
	5785 MHz	16.06	500	Complies
	5825 MHz	17.22	500	Complies
802.11ac MCS0/Nss1 VHT40	5755 MHz	36.29	500	Complies
	5795 MHz	36.29	500	Complies
802.11ac MCS0/Nss1 VHT80	5775 MHz	75.94	500	Complies

Note: All the test values were listed in the report.

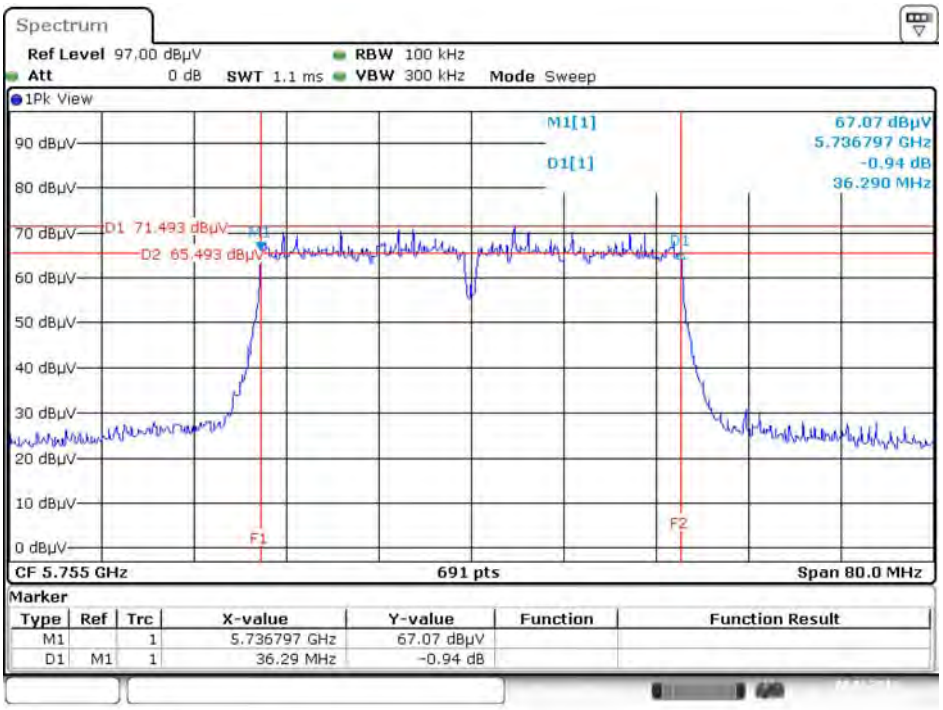
For plots, only the channel with worse result was shown.

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5785 MHz



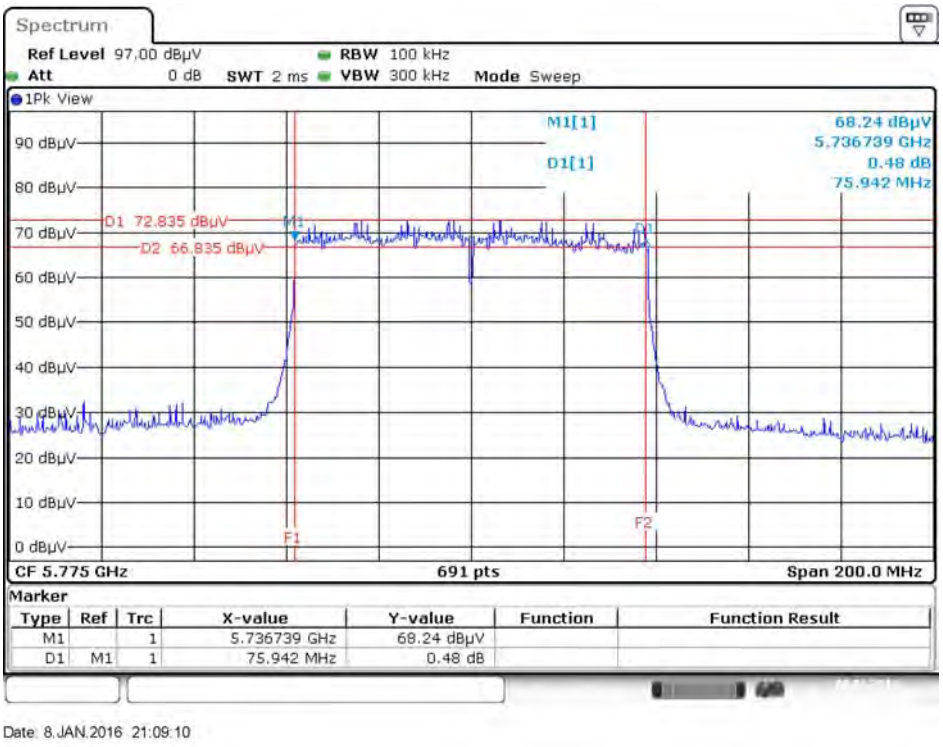
Date: 8.JAN.2016 21:30:16

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5755MHz



Date: 8.JAN.2016 21:31:09

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5775 MHz



4.4. Maximum Conducted Output Power Measurement

4.4.1. Limit

Frequency Band			Limit
☒	5.15~5.25 GHz		
	Operating Mode		
	☐	Outdoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).
	☒	Indoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
	☐	Fixed point-to-point access points	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.
	☐	Mobile and portable client devices	The maximum conducted output power over the frequency band of operation shall not exceed 250 mW (24dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

☒	5.25-5.35 GHz	The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
☒	5.470-5.725 GHz	
☒	5.725~5.85 GHz	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power.

4.4.2. Measuring Instruments and Setting

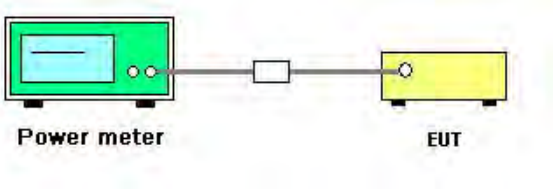
Please refer to section 5 of equipments list in this report. The following table is the setting of the power meter.

Power Meter Parameter	Setting
Detector	AVERAGE

4.4.3. Test Procedures

1. The transmitter output (antenna port) was connected to the power meter.
2. Test was performed in accordance with KDB789033 D02 v01 for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - section (E) Maximum conducted output power =>3. Measurement using a Power Meter (PM) =>b) Method PM-G (Measurement using a gated RF average power meter).
3. Multiple antenna systems was performed in accordance with KDB662911 D01 v02r01 Emissions Testing of Transmitters with Multiple Outputs in the Same Band.
4. When measuring maximum conducted output power with multiple antenna systems,add every result of the values by mathematic formula.

4.4.4. Test Setup Layout



4.4.5. Test Deviation

There is no deviation with the original standard.

4.4.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.4.7. Test Result of Maximum Conducted Output Power

<For Non-Beamforming Mode>

Temperature	24°C	Humidity	60%
Test Engineer	Clemens Fang	Test Date	Jan. 08, 2016

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Ant. 1	Ant. 2	Ant. 3	Total		
802.11a	5180 MHz	12.48	15.79	13.81	19.01	30.00	Complies
	5200 MHz	12.19	15.16	13.58	18.58	30.00	Complies
	5240 MHz	21.05	22.92	22.21	26.90	30.00	Complies
	5260 MHz	15.26	17.15	15.74	20.90	23.95	Complies
	5300 MHz	14.33	15.29	14.23	19.41	23.93	Complies
	5320 MHz	15.29	15.92	15.32	20.29	23.95	Complies
	5500 MHz	12.32	14.59	13.66	18.39	23.90	Complies
	5580 MHz	15.29	17.29	15.27	20.83	23.95	Complies
	5700 MHz	9.17	12.48	10.54	15.72	23.97	Complies
	5745 MHz	12.62	14.07	12.05	17.77	30.00	Complies
	5785 MHz	11.86	14.25	10.98	17.36	30.00	Complies
	5825 MHz	14.24	16.61	16.36	20.63	30.00	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	12.35	15.64	13.95	18.96	30.00	Complies
	5200 MHz	13.86	16.24	14.86	19.87	30.00	Complies
	5240 MHz	21.88	22.71	21.82	26.93	30.00	Complies
	5260 MHz	15.12	17.18	15.32	20.75	23.98	Complies
	5300 MHz	12.43	13.46	12.18	17.50	23.98	Complies
	5320 MHz	12.21	13.26	12.24	17.37	23.98	Complies
	5500 MHz	11.97	14.17	13.02	17.92	23.98	Complies
	5580 MHz	15.11	17.48	15.41	20.90	23.98	Complies
	5700 MHz	13.93	16.89	15.12	20.26	23.98	Complies
	5745 MHz	11.77	13.05	10.72	16.72	30.00	Complies
	5785 MHz	10.89	13.42	9.85	16.43	30.00	Complies
	5825 MHz	10.09	12.75	11.20	16.26	30.00	Complies

Note:

802.11a 5260 MHz= 23.98dBm or 11+10log (19.74)=23.95 dBm<23.98dBm, so limit=23.95 dBm
802.11a 5300 MHz= 23.98dBm or 11+10log (19.65)=23.93 dBm<23.98dBm, so limit=23.93 dBm
802.11a 5320 MHz= 23.98dBm or 11+10log (19.74)=23.95 dBm<23.98dBm, so limit=23.95 dBm
802.11a 5500 MHz= 23.98dBm or 11+10log (19.48)=23.90 dBm<23.98dBm, so limit=23.90 dBm
802.11a 5580 MHz= 23.98dBm or 11+10log (19.74)=23.95 dBm<23.98dBm, so limit=23.95 dBm
802.11a 5700 MHz= 23.98dBm or 11+10log (19.83)=23.97 dBm<23.98dBm, so limit=23.97 dBm

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Ant. 1	Ant. 2	Ant. 3	Total		
802.11ac MCS0/Nss1 VHT40	5190 MHz	14.47	17.02	15.41	20.53	30.00	Complies
	5230 MHz	15.49	16.76	14.79	20.53	30.00	Complies
	5270 MHz	13.74	15.37	13.23	18.98	23.98	Complies
	5310 MHz	13.79	14.67	13.32	18.73	23.98	Complies
	5510 MHz	12.74	15.23	14.48	19.04	23.98	Complies
	5550 MHz	13.27	15.57	13.96	19.15	23.98	Complies
	5670 MHz	13.45	15.79	13.41	19.14	23.98	Complies
	5755 MHz	14.74	15.94	13.59	19.63	30.00	Complies
	5795 MHz	12.84	15.41	12.64	18.59	30.00	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	14.32	16.73	14.97	20.23	30.00	Complies
	5290 MHz	15.42	17.02	15.21	20.73	23.98	Complies
	5530 MHz	15.21	17.65	16.69	21.40	23.98	Complies
	5775 MHz	12.43	13.47	10.92	17.17	30.00	Complies

<For Beamforming Mode>

Temperature	24°C	Humidity	60%
Test Engineer	Clemens Fang	Test Date	Jan. 08, 2016

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Ant. 1	Ant. 2	Ant. 3	Total		
802.11ac MCS0/Nss1 VHT20	5180 MHz	12.35	15.64	13.95	18.96	26.63	Complies
	5200 MHz	13.86	16.24	14.86	19.87	26.63	Complies
	5240 MHz	16.85	18.19	16.45	22.00	26.63	Complies
	5260 MHz	15.14	16.69	15.02	20.46	20.61	Complies
	5300 MHz	12.43	13.46	12.18	17.50	20.61	Complies
	5320 MHz	12.21	13.26	12.24	17.37	20.61	Complies
	5500 MHz	10.08	12.52	11.29	16.18	20.61	Complies
	5580 MHz	14.62	17.07	15.01	20.48	20.61	Complies
	5700 MHz	13.44	16.39	14.53	19.73	20.61	Complies
	5745 MHz	11.77	13.05	10.72	16.72	26.63	Complies
	5785 MHz	10.89	13.42	9.85	16.43	26.63	Complies
	5825 MHz	10.09	12.75	11.20	16.26	26.63	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	13.89	16.71	14.92	20.10	26.63	Complies
	5230 MHz	15.49	16.76	14.79	20.53	26.63	Complies
	5270 MHz	13.74	15.37	13.23	18.98	20.61	Complies
	5310 MHz	13.79	14.67	13.32	18.73	20.61	Complies
	5510 MHz	12.74	15.23	14.48	19.04	20.61	Complies
	5550 MHz	13.27	15.57	13.96	19.15	20.61	Complies
	5670 MHz	13.45	15.79	13.41	19.14	20.61	Complies
	5755 MHz	11.79	13.29	10.45	16.77	26.63	Complies
	5795 MHz	12.84	15.41	12.64	18.59	26.63	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	13.53	16.32	14.82	19.81	26.63	Complies
	5290 MHz	14.23	15.86	14.14	19.59	20.61	Complies
	5530 MHz	12.98	15.42	14.71	19.26	20.61	Complies
	5775 MHz	12.43	13.47	10.92	17.17	26.63	Complies

Note: Band 1/4: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =9.37 dBi, so limit =30-(9.37-6)=26.63 dBm

Note: Band 2/3: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =9.37 dBi, so limit =23.98-(9.37-6)=20.61 dBm

4.5. Power Spectral Density Measurement

4.5.1. Limit

The following table is power spectral density limits and decrease power density limit rule refer to section 4.4.1.

Frequency Band			Limit
☒	5.15~5.25 GHz		
	Operating Mode		
	☐	Outdoor access point	17 dBm/MHz
	☒	Indoor access point	17 dBm/MHz
	☐	Fixed point-to-point access points	17 dBm/MHz
	☐	Mobile and portable client devices	11 dBm/MHz
☒	5.25-5.35 GHz		11 dBm/MHz
☒	5.470-5.725 GHz		11 dBm/MHz
☒	5.725~5.85 GHz		30 dBm/500kHz

4.5.2. Measuring Instruments and Setting

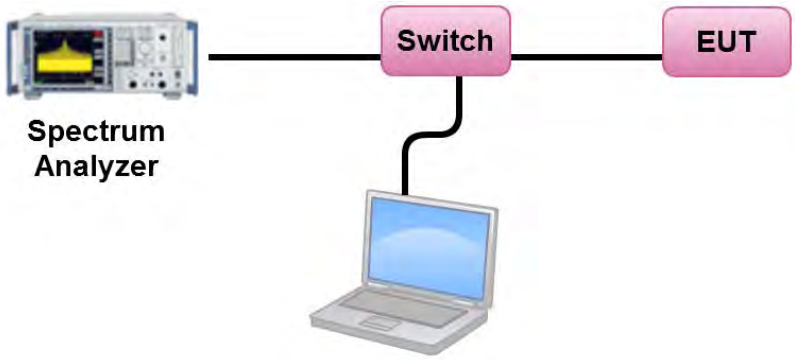
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	1000 kHz
VBW	3000 kHz
Detector	RMS
Trace	AVERAGE
Sweep Time	Auto
Trace Average	100 times
Note: If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.	

4.5.3. Test Procedures

1. The transmitter output (antenna port) was connected RF switch to the spectrum analyzer.
2. Test was performed in accordance with KDB789033 D02 v01 for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - section (F) Maximum Power Spectral Density (PSD).
3. Multiple antenna systems was performed in accordance KDB662911 D01 v02r01 in-Band Power Spectral Density (PSD) Measurements (a) Measure and sum the spectra across the outputs.
4. When measuring first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3 and so on up to the Nth output to obtain the value for the first frequency bin of the summed spectrum. The summed spectrum value for each of the other frequency bins is computed in the same way.
5. For 5.725~5.85 GHz, the measured result of PSD level must add 10log(500kHz/RBW) and the final result should ≤ 30 dBm.

4.5.4. Test Setup Layout



4.5.5. Test Deviation

There is no deviation with the original standard.

4.5.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.5.7. Test Result of Power Spectral Density

<For Non-Beamforming Mode>

Temperature	24°C	Humidity	60%
Test Engineer	Clemens Fang	Test Mode	Jan. 08, 2016

Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	5.65	13.63	Complies
40	5200 MHz	5.11	13.63	Complies
48	5240 MHz	13.57	13.63	Complies
52	5260 MHz	7.33	7.63	Complies
60	5300 MHz	5.95	7.63	Complies
64	5320 MHz	6.94	7.63	Complies
100	5500 MHz	4.82	7.63	Complies
116	5580 MHz	7.53	7.63	Complies
140	5700 MHz	2.27	7.63	Complies

Note: Band 1: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=9.37 dBi, so limit =17-(9.37-6)=13.63 dBm/MHz

Note: Band 2/3: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =9.37 dBi, so limit =11-(9.37-6)=7.63 dBm/MHz

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
149	5745 MHz	4.34	-3.01	1.33	26.63	Complies
157	5785 MHz	3.88	-3.01	0.87	26.63	Complies
165	5825 MHz	7.32	-3.01	4.31	26.63	Complies

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =9.37 dBi, so limit =30-(9.37-6)=26.63 dBm/500kHz

Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	5.58	13.63	Complies
40	5200 MHz	6.41	13.63	Complies
48	5240 MHz	13.58	13.63	Complies
52	5260 MHz	7.37	7.63	Complies
60	5300 MHz	4.05	7.63	Complies
64	5320 MHz	4.03	7.63	Complies
100	5500 MHz	4.55	7.63	Complies
116	5580 MHz	7.32	7.63	Complies
140	5700 MHz	6.91	7.63	Complies

Note: Band 1: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=9.37 dBi, so limit =17-(9.37-6)=13.63 dBm/MHz

Note: Band 2/3: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=9.37 dBi, so limit =11-(9.37-6)=7.63 dBm/MHz

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
149	5745 MHz	3.32	-3.01	0.31	26.63	Complies
157	5785 MHz	3.01	-3.01	0.00	26.63	Complies
165	5825 MHz	2.94	-3.01	-0.07	26.63	Complies

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =9.37 dBi, so limit =30-(9.37-6)=26.63 dBm/500kHz

Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	4.41	13.63	Complies
46	5230 MHz	4.43	13.63	Complies
54	5270 MHz	2.89	7.63	Complies
62	5310 MHz	2.58	7.63	Complies
102	5510 MHz	2.92	7.63	Complies
110	5550 MHz	2.99	7.63	Complies
134	5670 MHz	3.10	7.63	Complies

Note: Band 1: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=9.37 dBi, so limit =17-(9.37-6)=13.63 dBm/MHz

Note: Band 2/3: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=9.37 dBi, so limit =11-(9.37-6)=7.63 dBm/MHz

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
151	5755 MHz	3.52	-3.01	0.51	26.63	Complies
159	5795 MHz	2.52	-3.01	-0.49	26.63	Complies

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =9.37 dBi, so limit =30-(9.37-6)=26.63 dBm/500kHz

Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	1.18	13.63	Complies
58	5290 MHz	1.63	7.63	Complies
106	5530 MHz	2.26	7.63	Complies

Note: Band 1: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=9.37 dBi, so limit =17-(9.37-6)=13.63 dBm/MHz

Note: Band 2/3: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=9.37 dBi, so limit =11-(9.37-6)=7.63 dBm/MHz

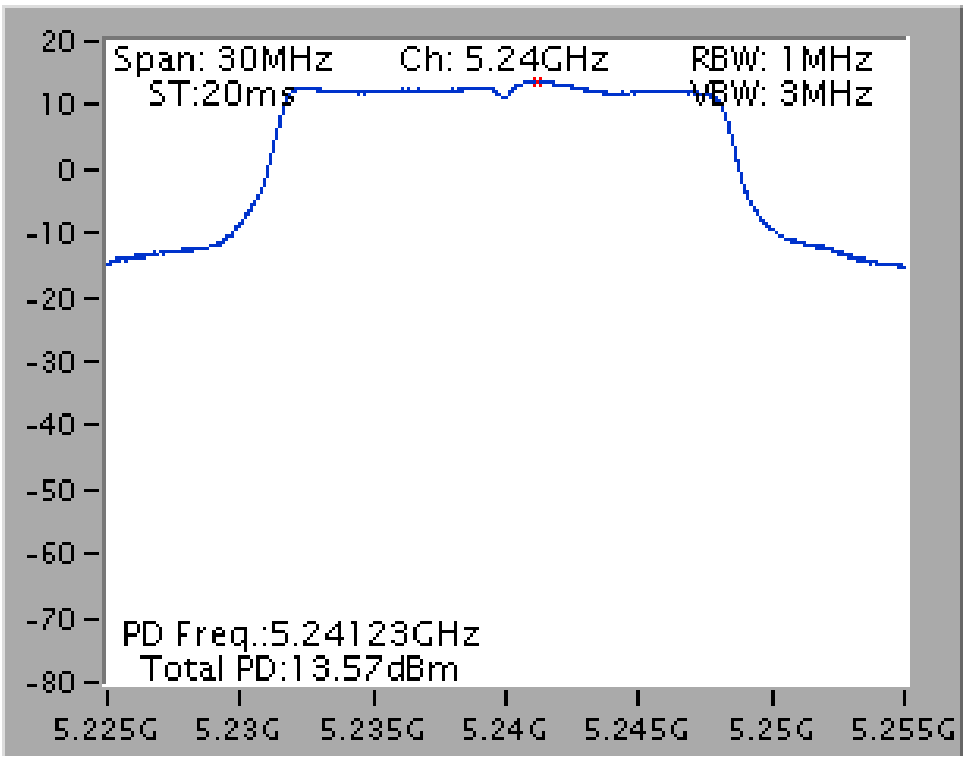
Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
155	5775 MHz	-1.84	-3.01	-4.85	26.63	Complies

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =9.37 dBi, so limit =30-(9.37-6)=26.63 dBm/500kHz

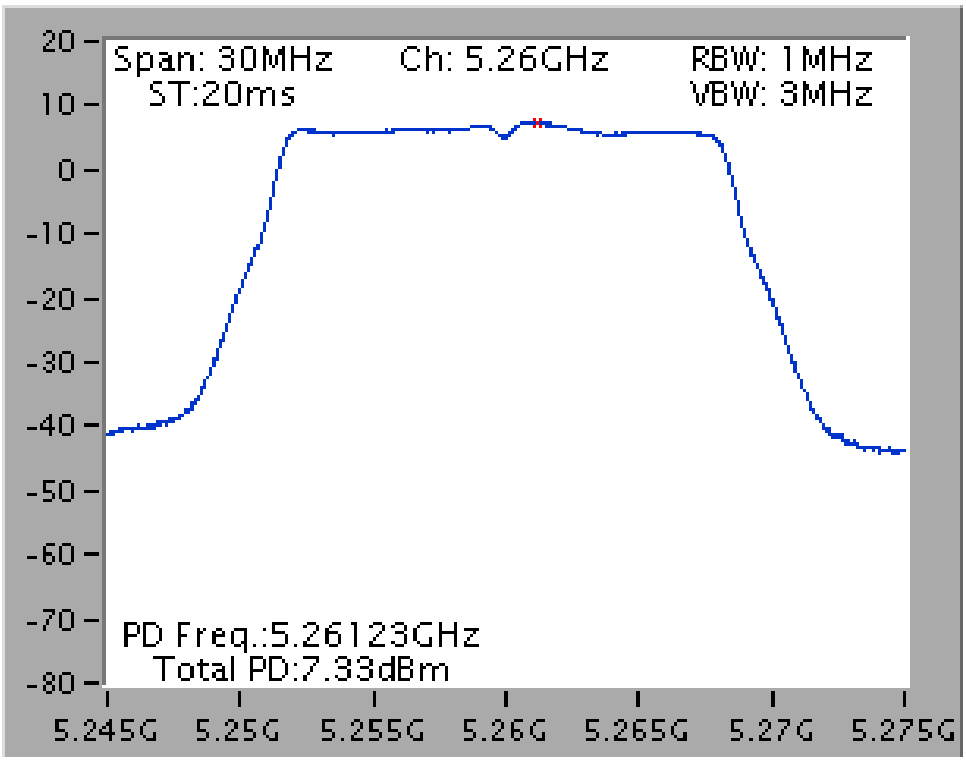
Note: All the test values were listed in the report.

For plots, only the channel with worse result was shown.

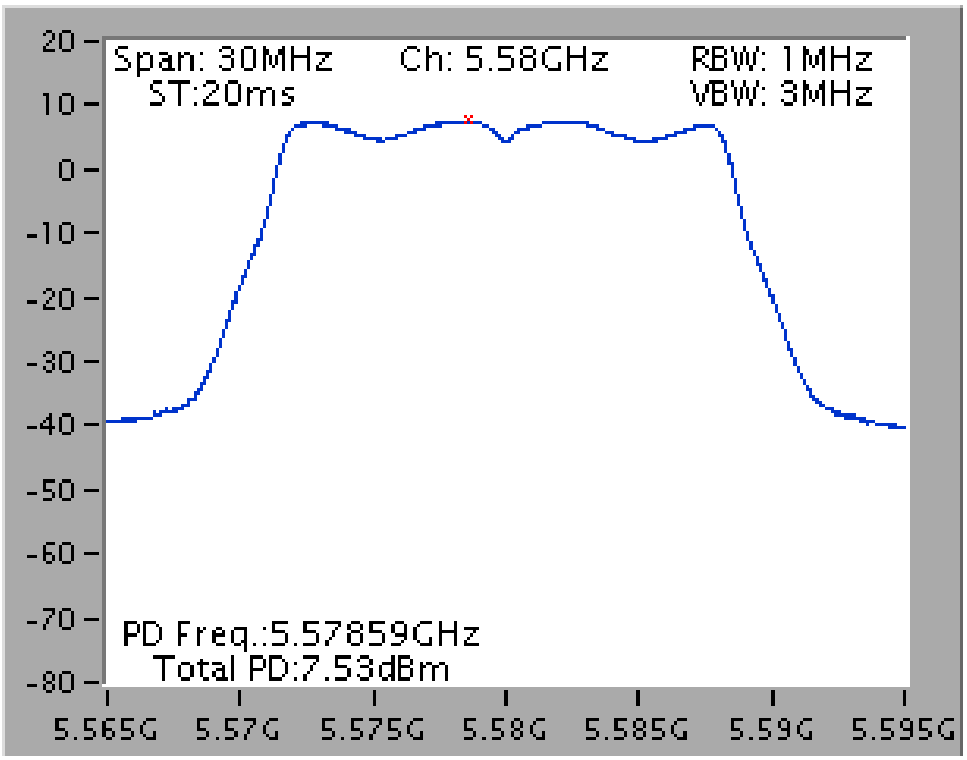
Power Density Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5240 MHz



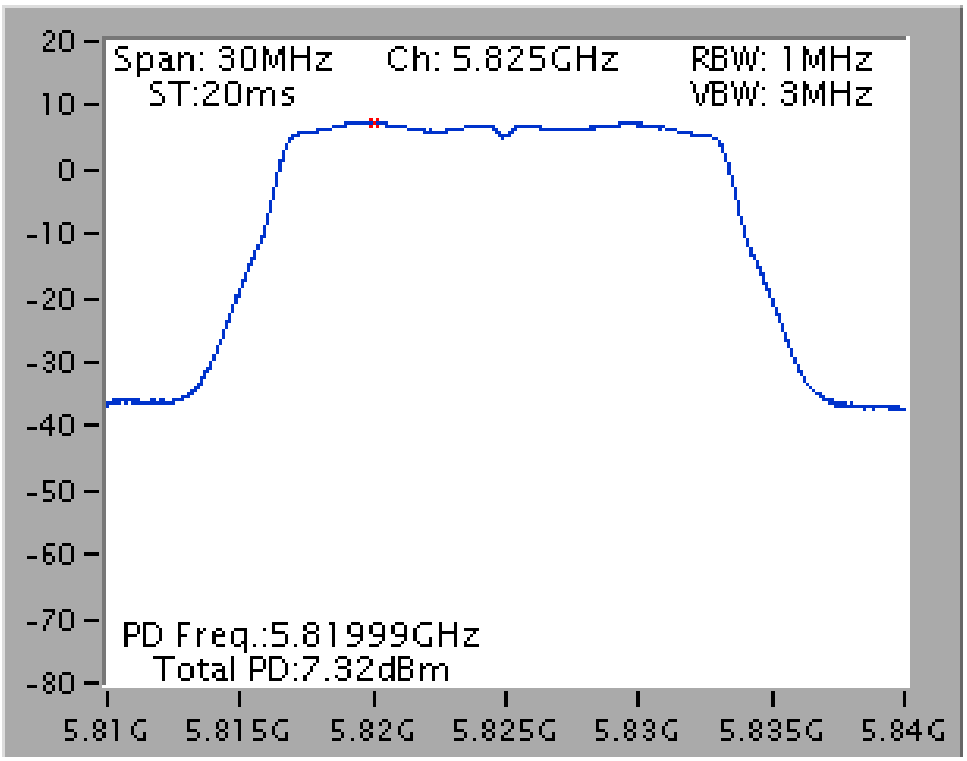
Power Density Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5260 MHz



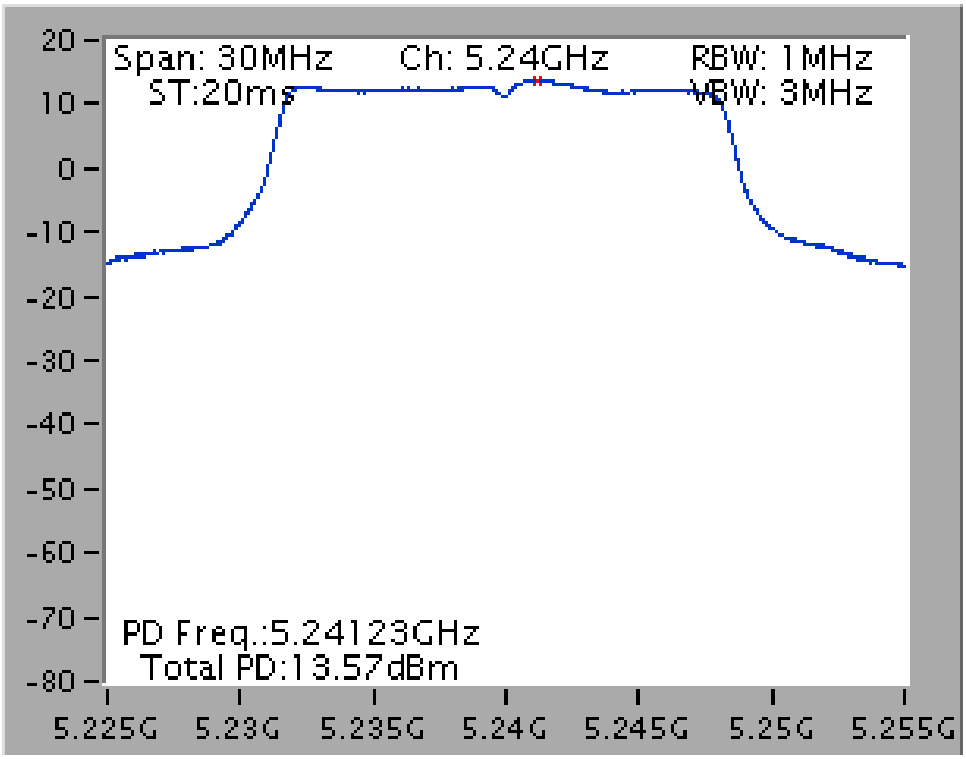
Power Density Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5580 MHz



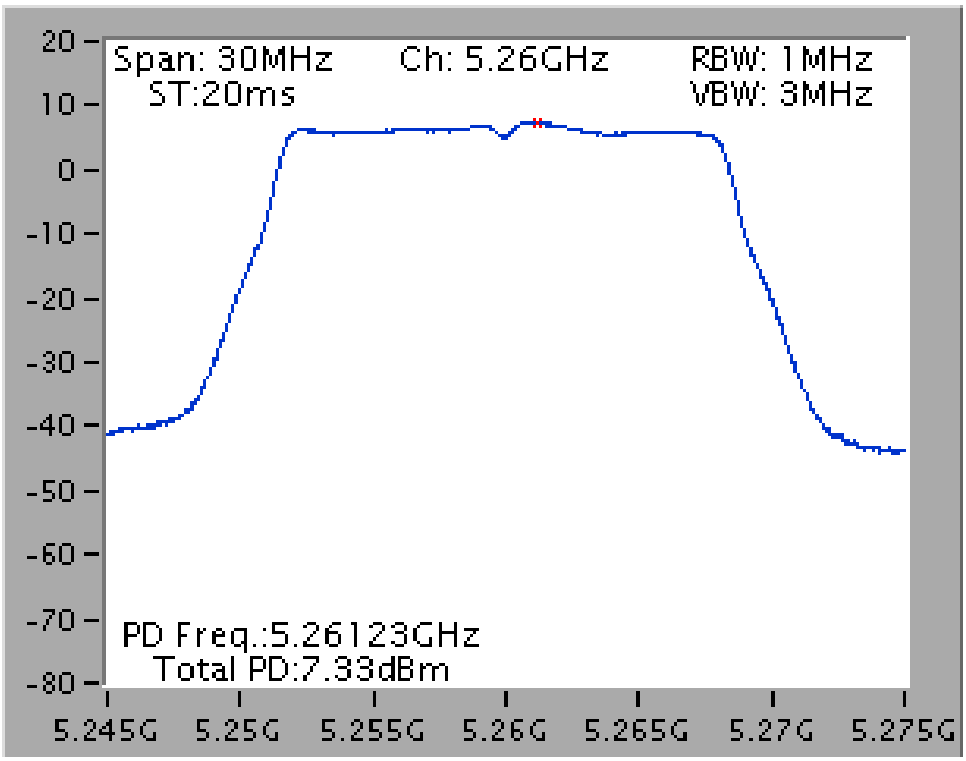
Power Density Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5825 MHz



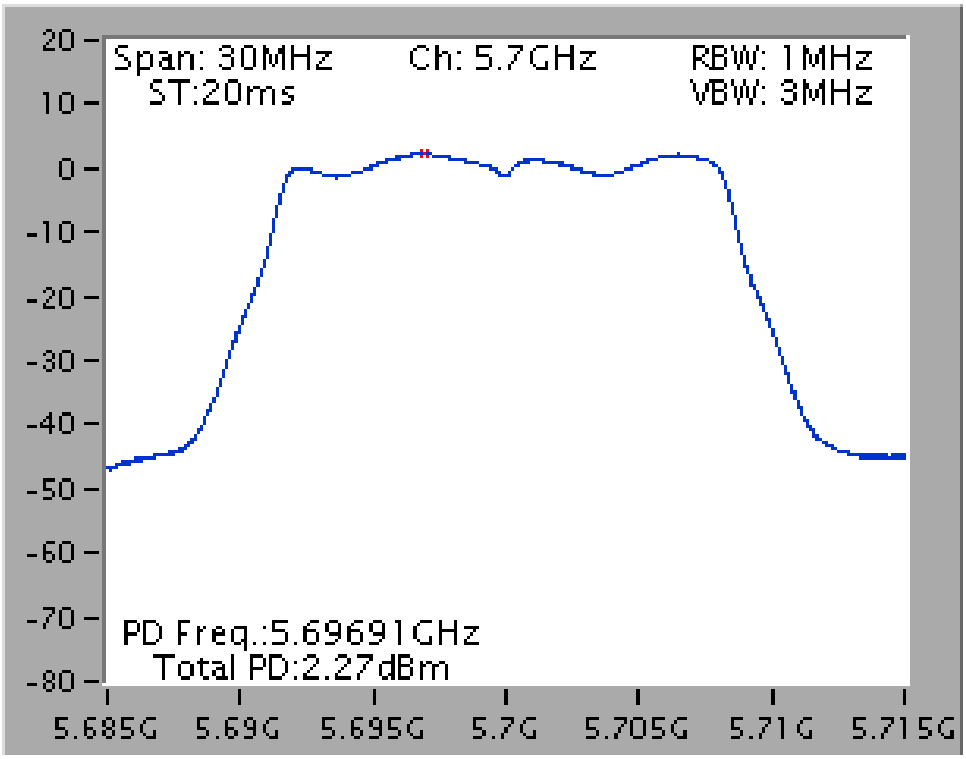
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5240 MHz



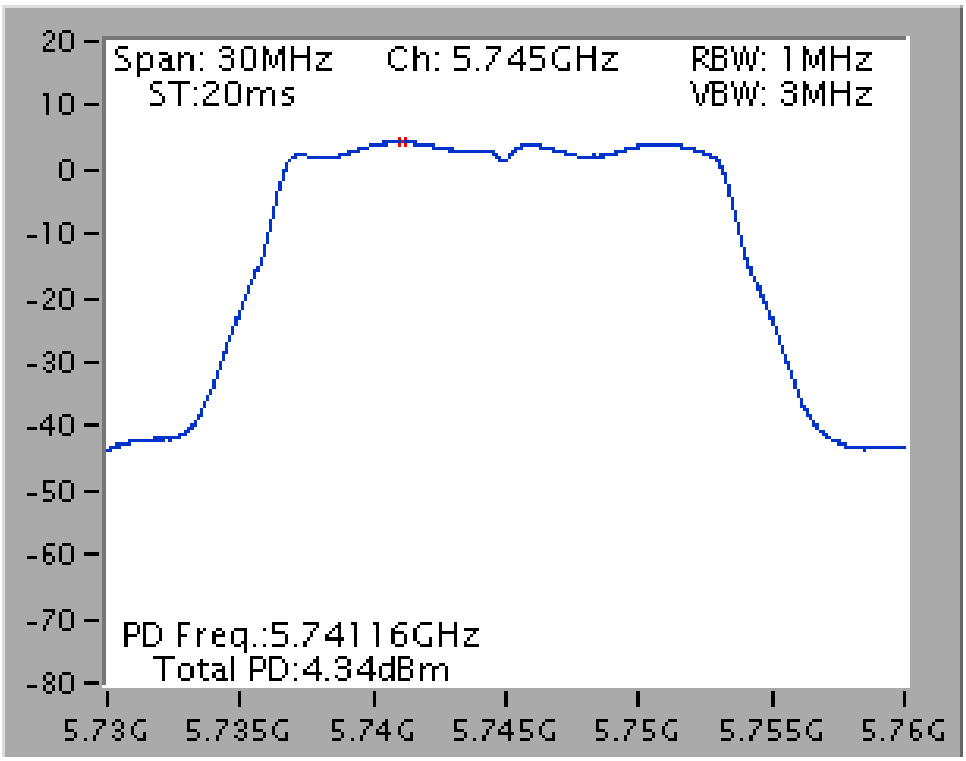
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5260 MHz



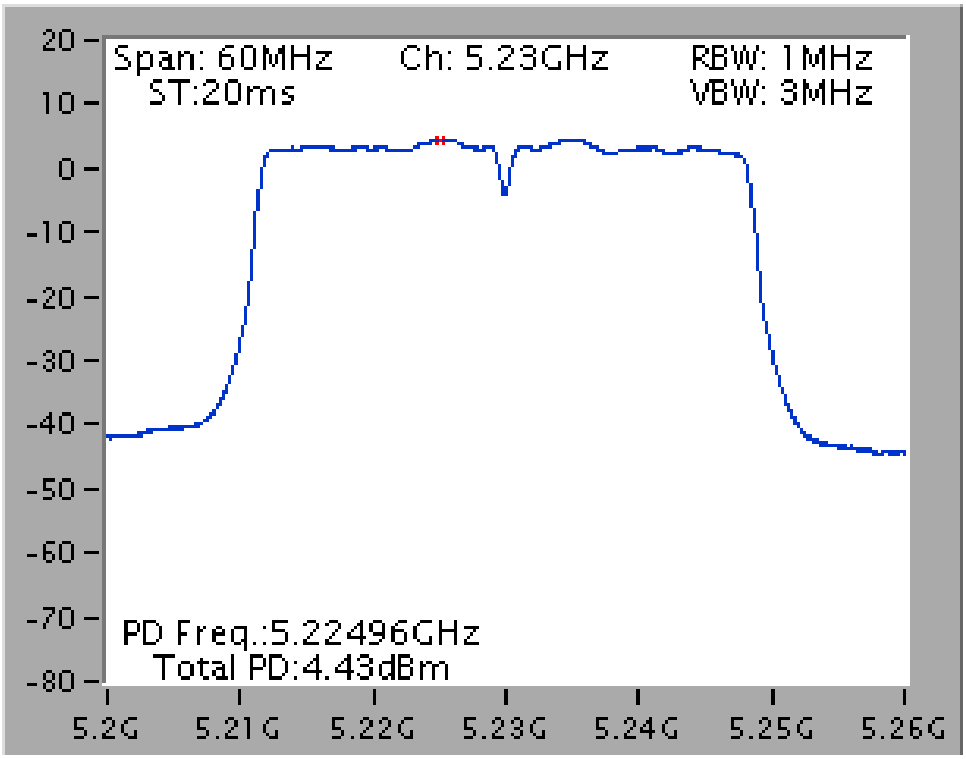
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5700 MHz



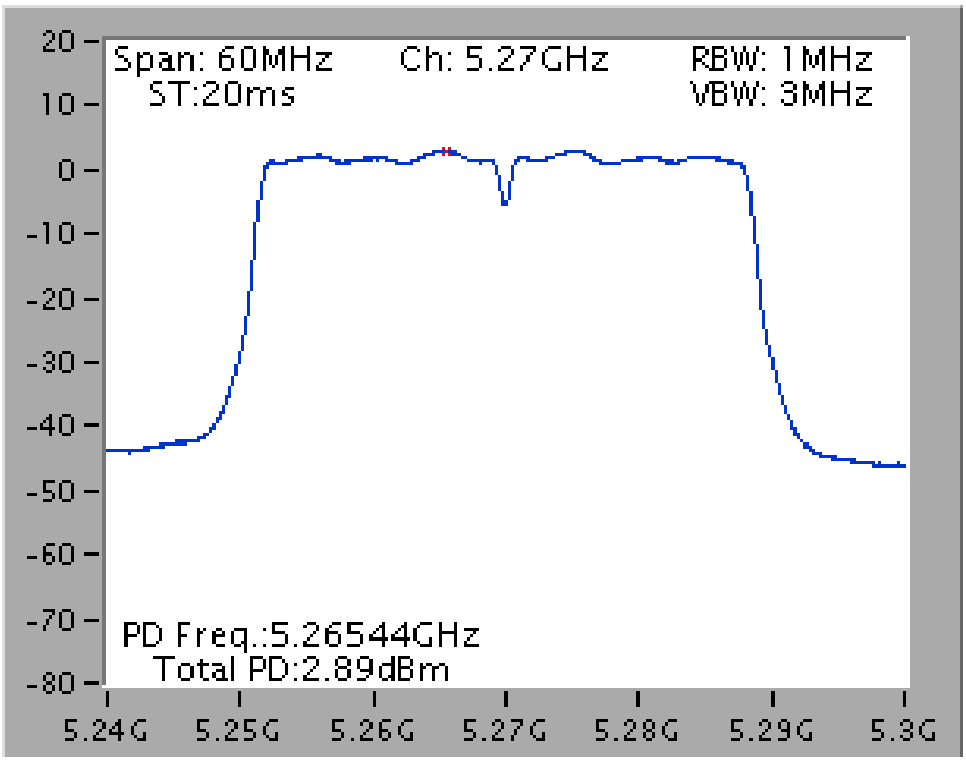
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5745 MHz



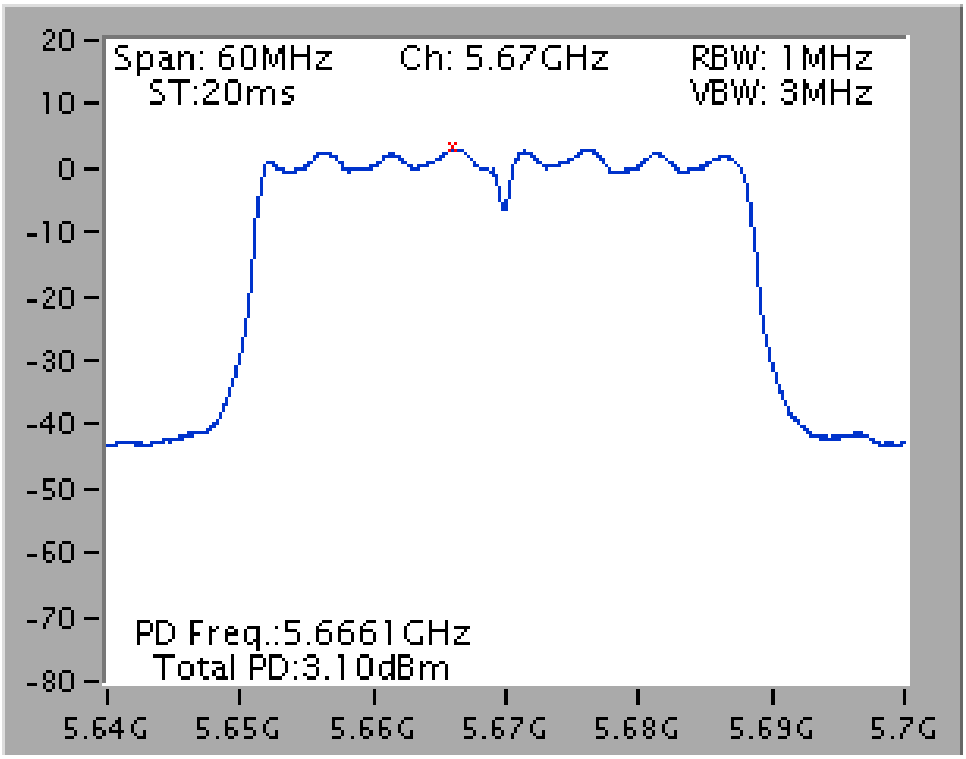
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5230 MHz



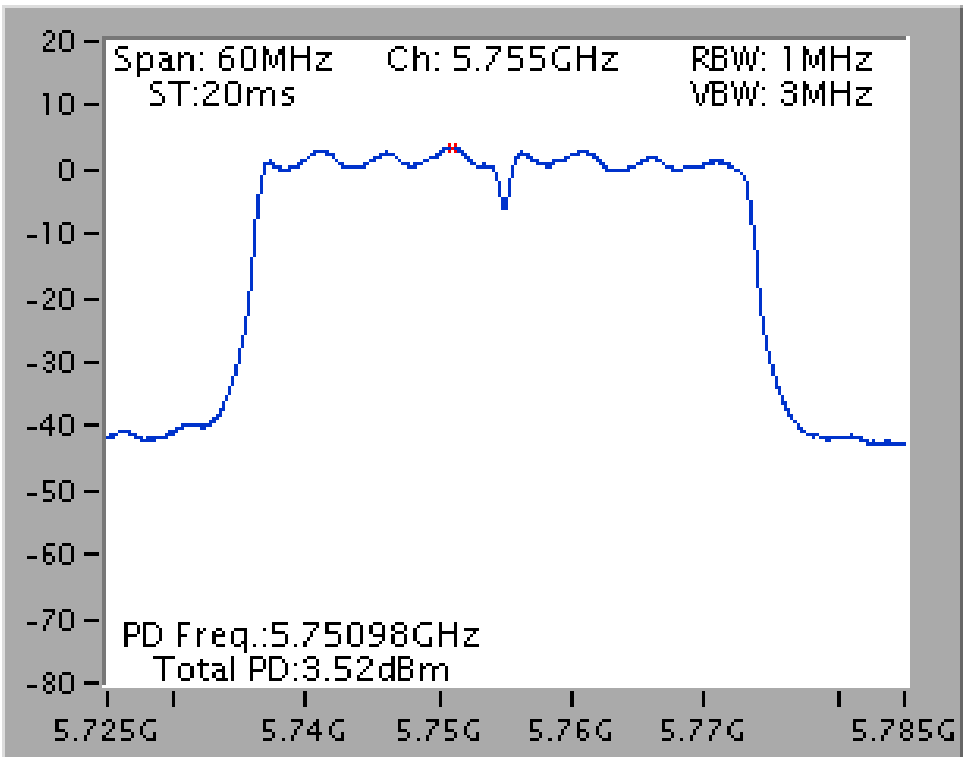
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5270 MHz



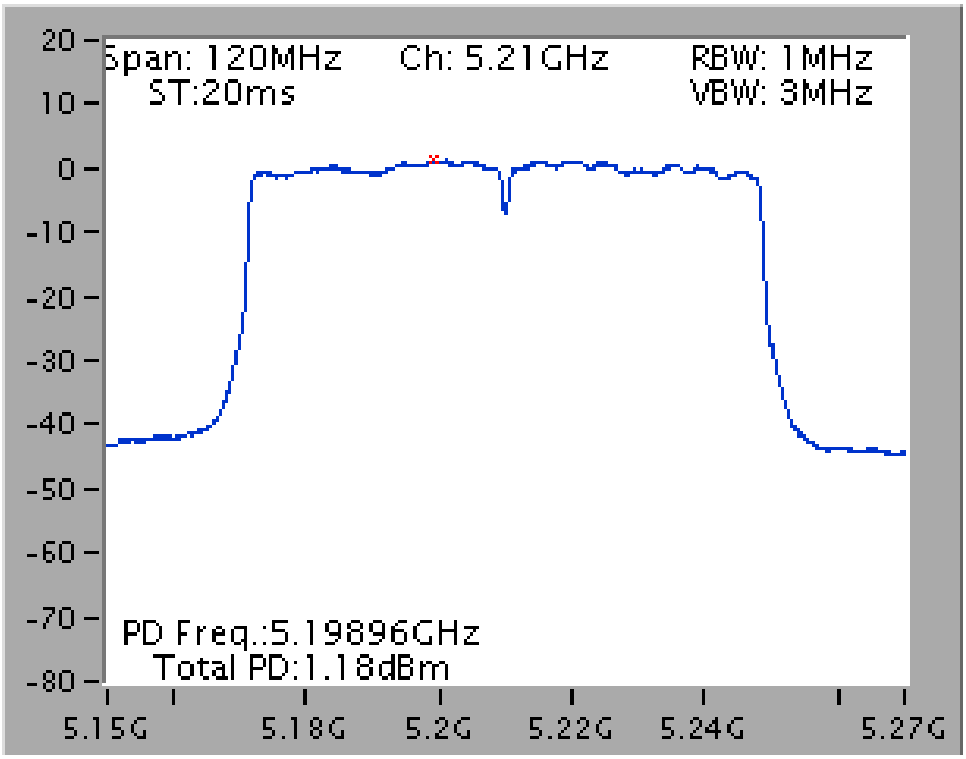
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5670 MHz



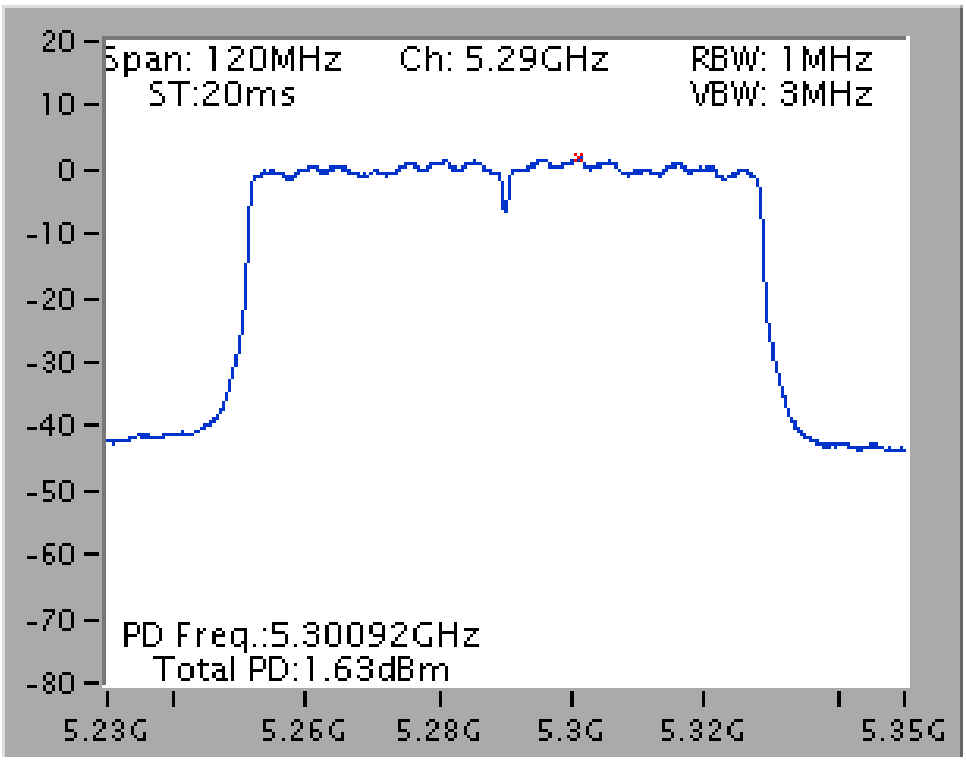
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5755 MHz



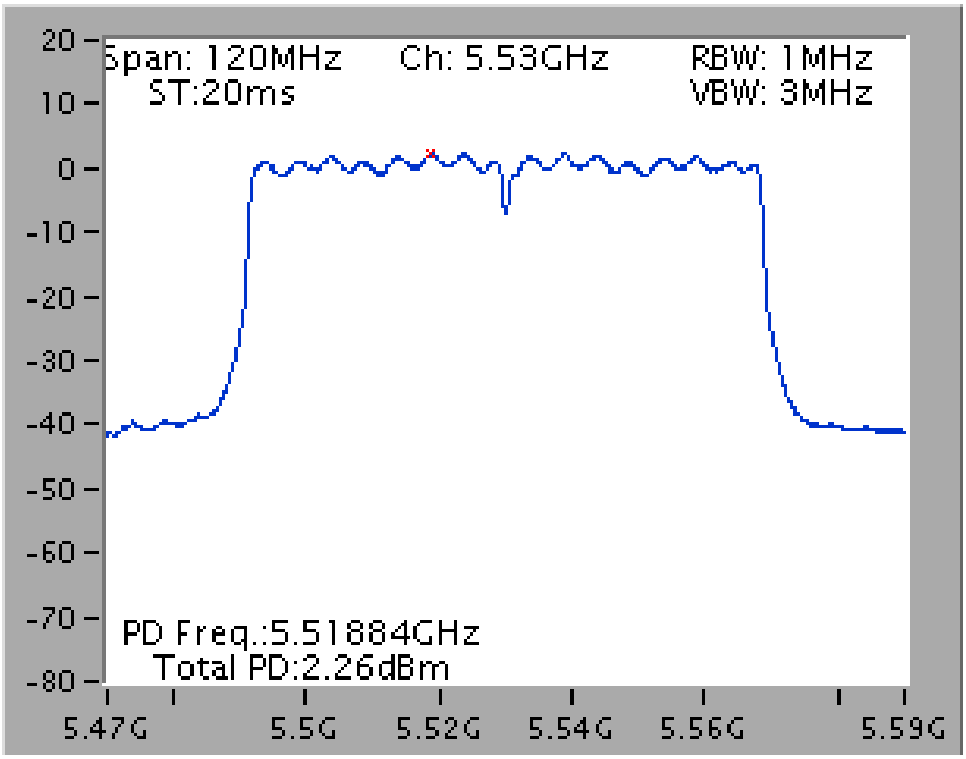
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5210 MHz



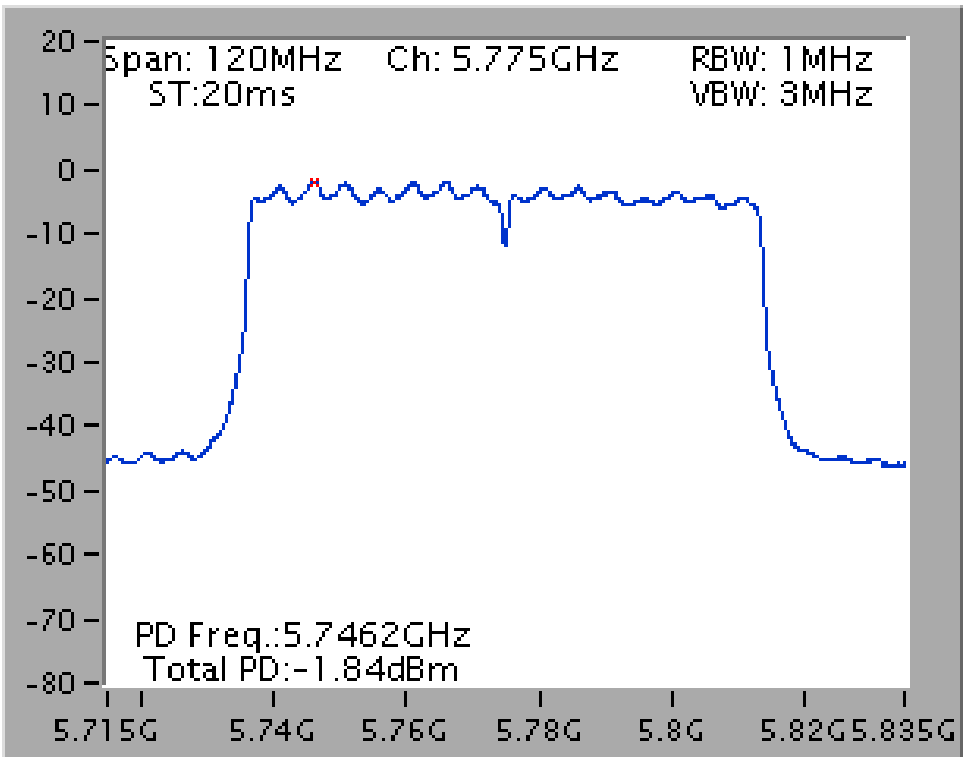
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5290 MHz



Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5530 MHz



Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5775 MHz



<For Beamforming Mode>

Temperature	24°C	Humidity	60%
Test Engineer	Clemens Fang	Test Mode	Jan. 08, 2016

Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	5.57	13.63	Complies
40	5200 MHz	6.47	13.63	Complies
48	5240 MHz	8.66	13.63	Complies
52	5260 MHz	7.10	7.63	Complies
60	5300 MHz	4.08	7.63	Complies
64	5320 MHz	3.86	7.63	Complies
100	5500 MHz	2.81	7.63	Complies
116	5580 MHz	7.17	7.63	Complies
140	5700 MHz	6.31	7.63	Complies

Note: Band 1: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=9.37 dBi, so limit =17-(9.37-6)=13.63 dBm/MHz

Note: Band 2/3: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=9.37 dBi, so limit =11-(9.37-6)=7.63 dBm/MHz

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
149	5745 MHz	3.40	-3.01	0.39	26.63	Complies
157	5785 MHz	3.08	-3.01	0.07	26.63	Complies
165	5825 MHz	2.91	-3.01	-0.10	26.63	Complies

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =9.37 dBi, so limit =30-(9.37-6)=26.63 dBm/500kHz

Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	4.08	13.63	Complies
46	5230 MHz	4.45	13.63	Complies
54	5270 MHz	2.92	7.63	Complies
62	5310 MHz	2.66	7.63	Complies
102	5510 MHz	3.03	7.63	Complies
110	5550 MHz	3.07	7.63	Complies
134	5670 MHz	3.11	7.63	Complies

Note: Band 1: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=9.37 dBi, so limit =17-(9.37-6)=13.63 dBm/MHz

Note: Band 2/3: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=9.37 dBi, so limit =11-(9.37-6)=7.63 dBm/MHz

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
151	5755 MHz	0.76	-3.01	-2.25	26.63	Complies
159	5795 MHz	2.55	-3.01	-0.46	26.63	Complies

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =9.37 dBi, so limit =30-(9.37-6)=26.63 dBm/500kHz

Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	0.66	13.63	Complies
58	5290 MHz	0.37	7.63	Complies
106	5530 MHz	0.16	7.63	Complies

Note: Band 1: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=9.37 dBi, so limit =17-(9.37-6)=13.63 dBm/MHz

Note: Band 2/3: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=9.37 dBi, so limit =11-(9.37-6)=7.63 dBm/MHz

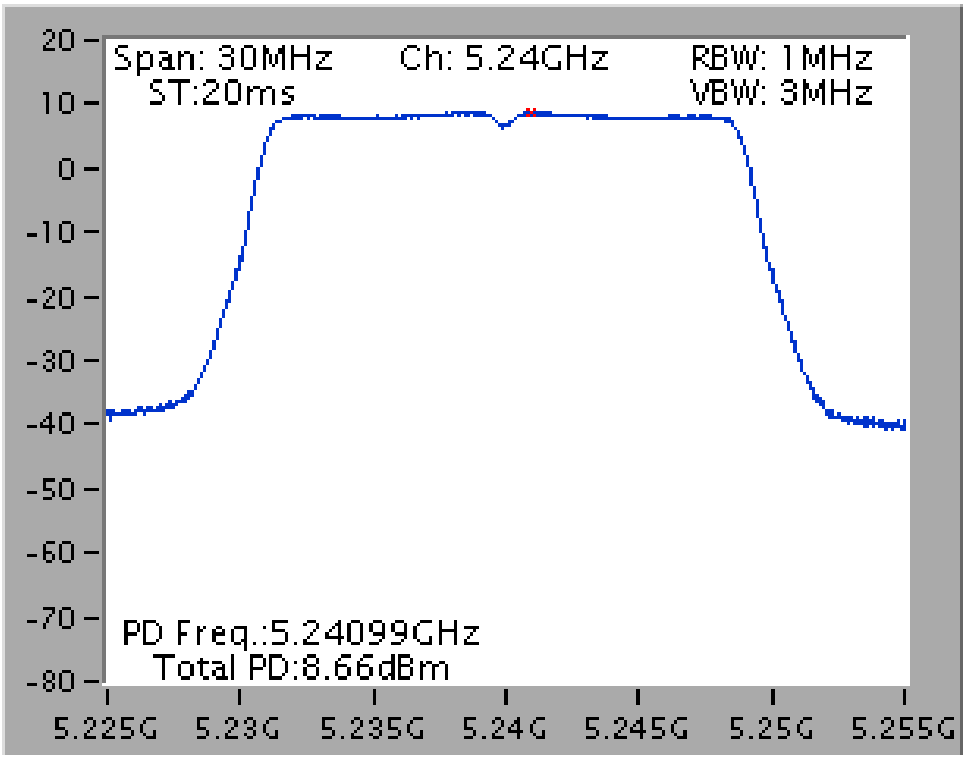
Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
155	5775 MHz	-1.88	-3.01	-4.89	26.63	Complies

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =9.37 dBi, so limit =30-(9.37-6)=26.63 dBm/500kHz

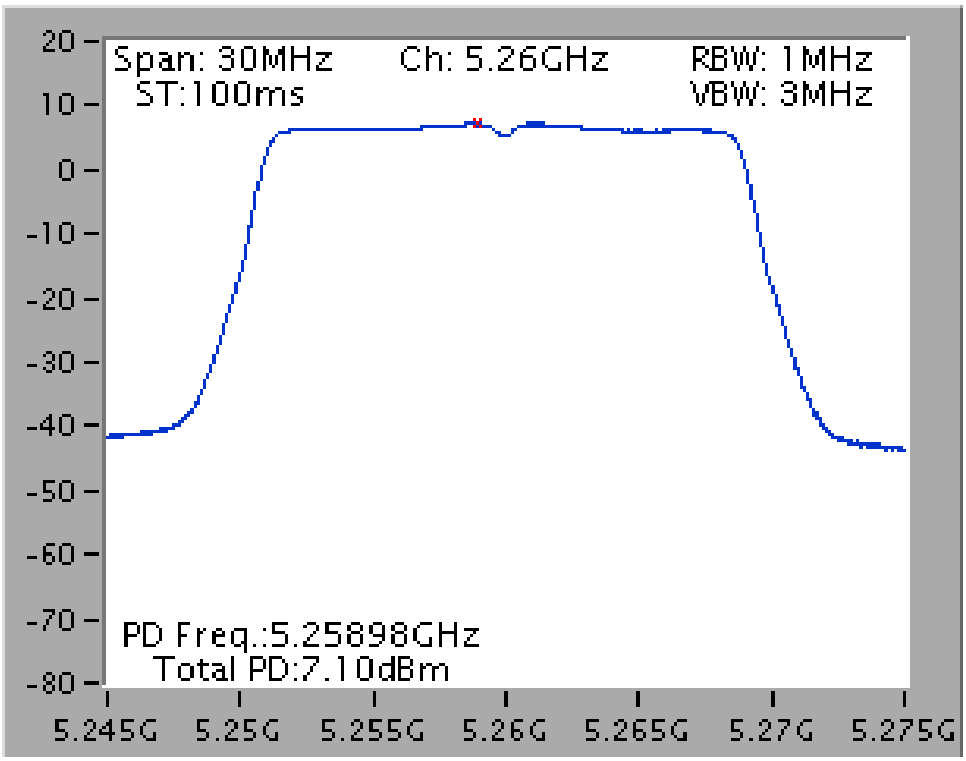
Note: All the test values were listed in the report.

For plots, only the channel with worse result was shown.

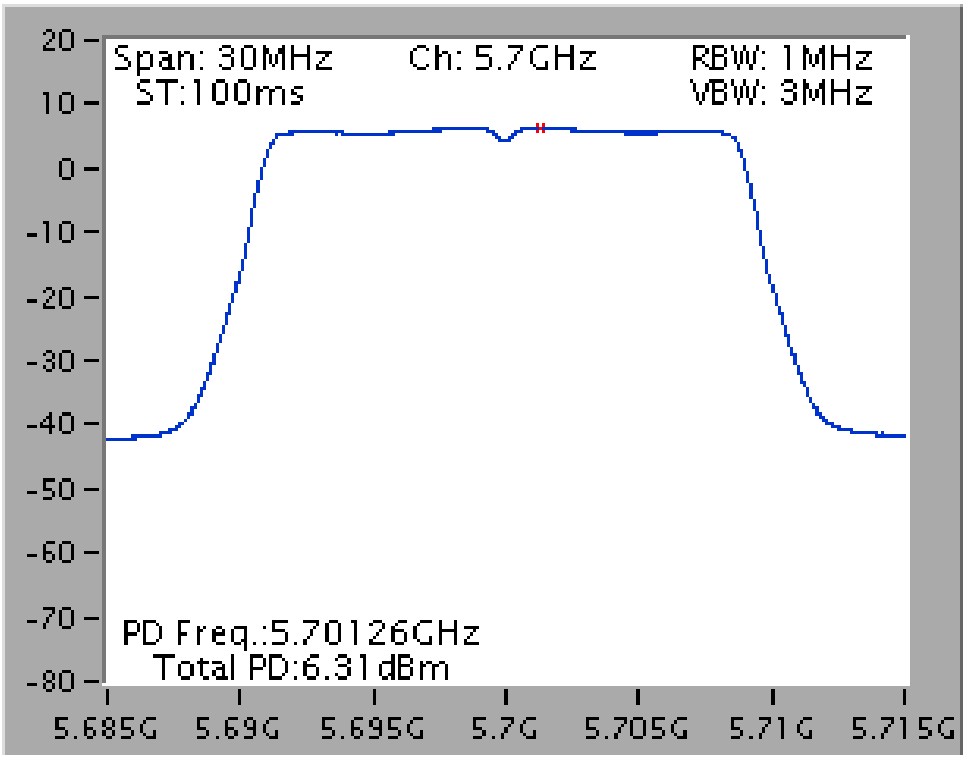
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5240 MHz



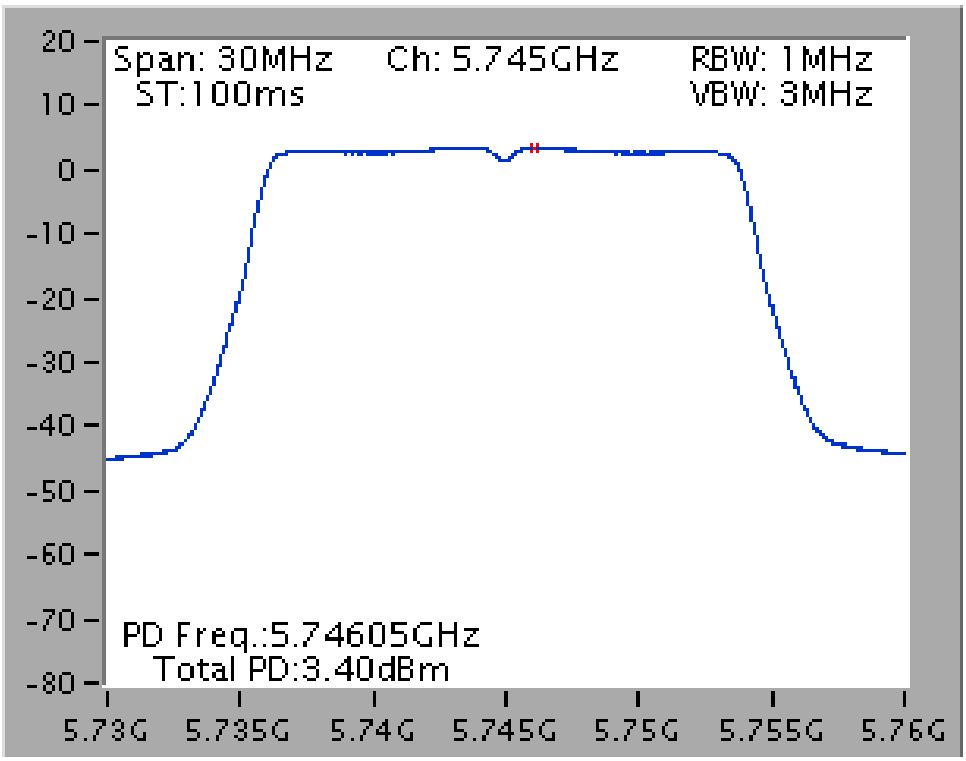
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5260 MHz



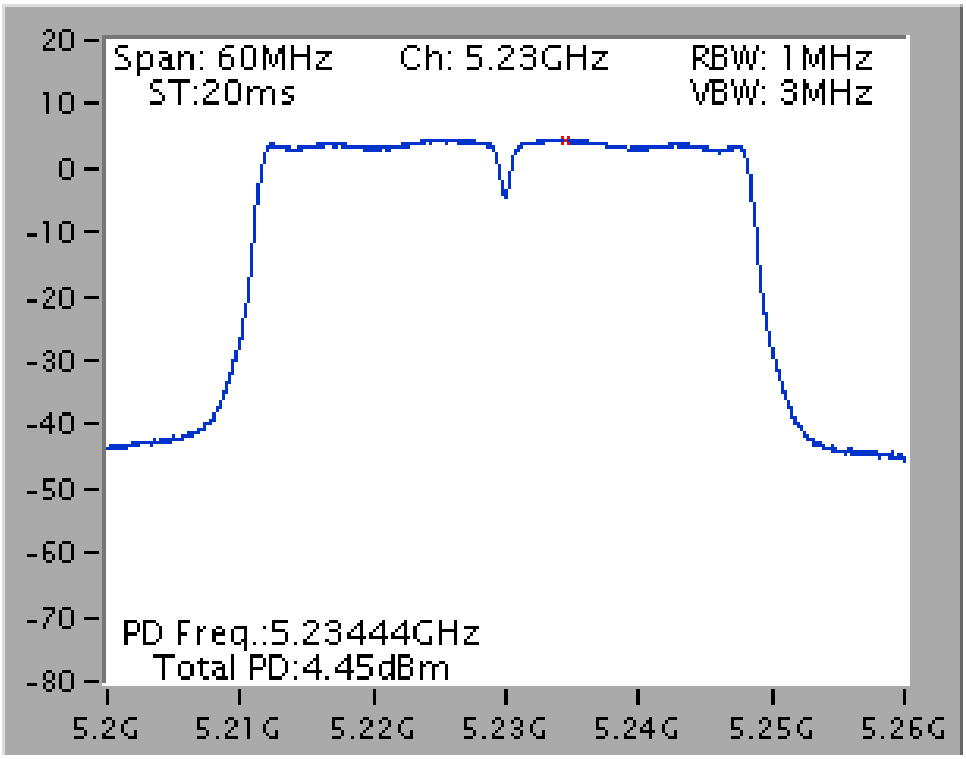
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5700 MHz



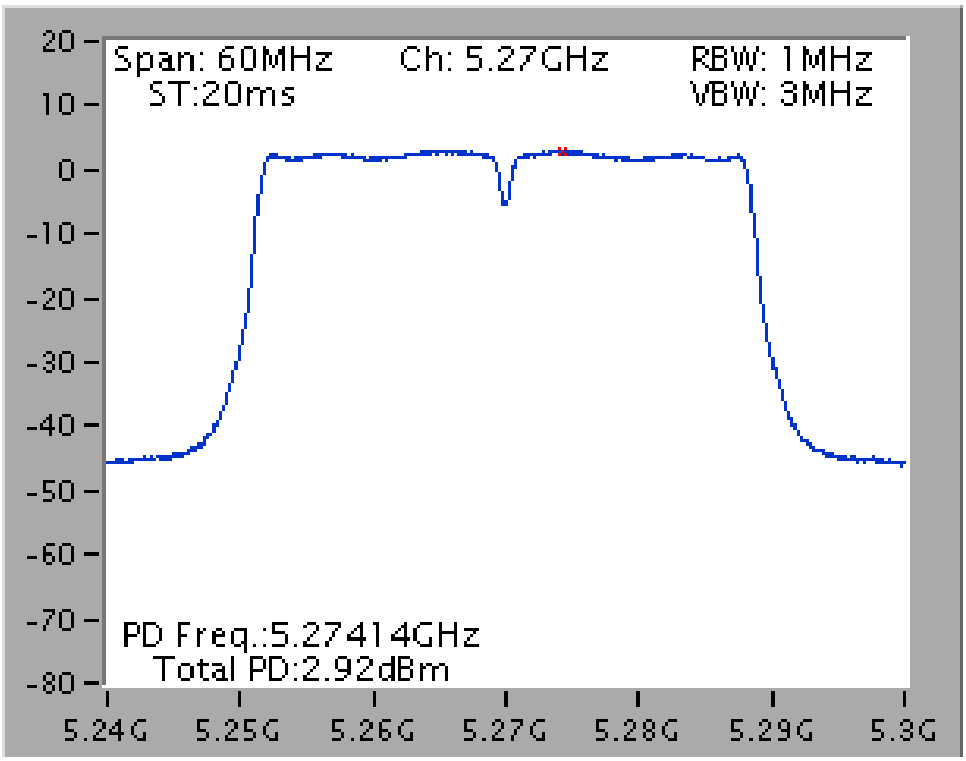
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5745 MHz



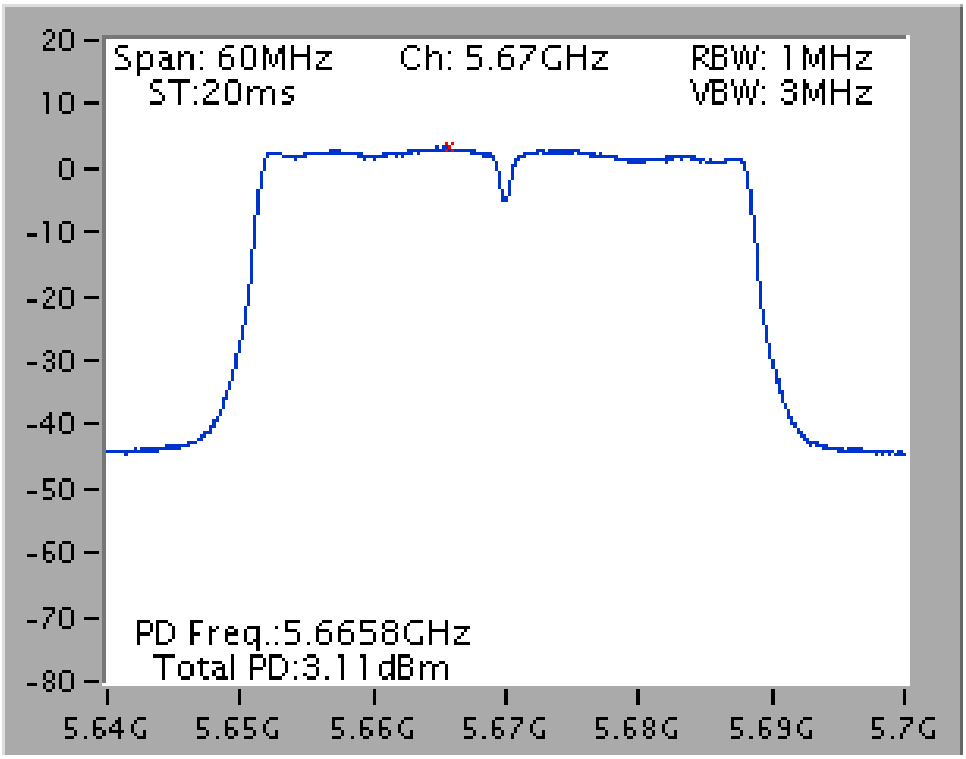
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5230 MHz



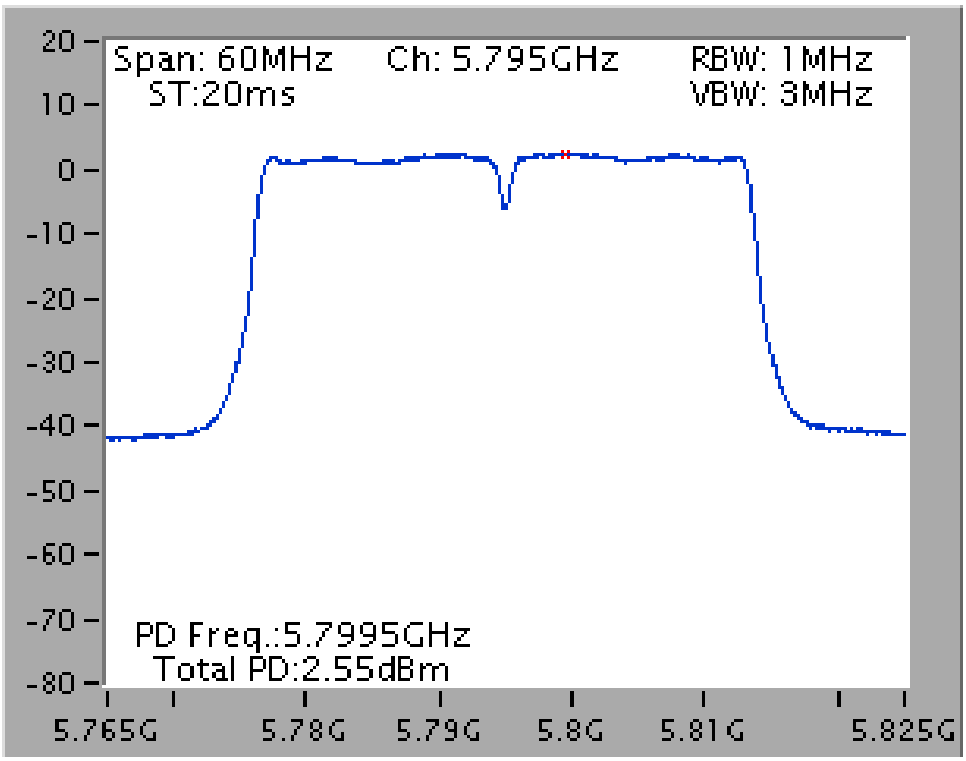
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5270 MHz



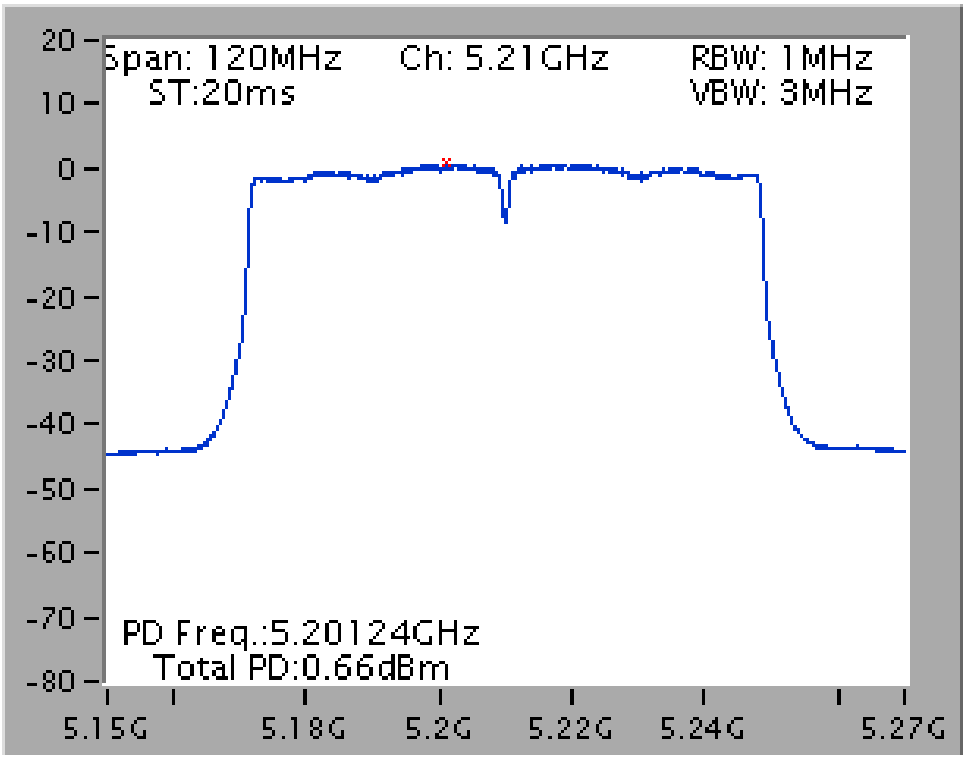
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5670 MHz



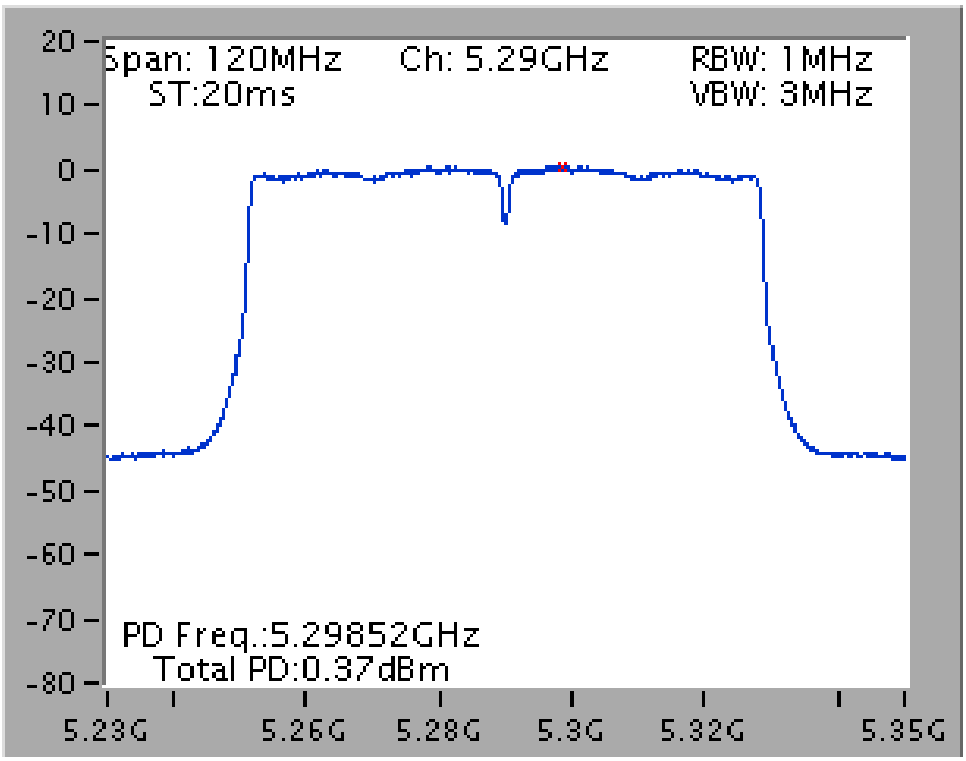
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5795 MHz



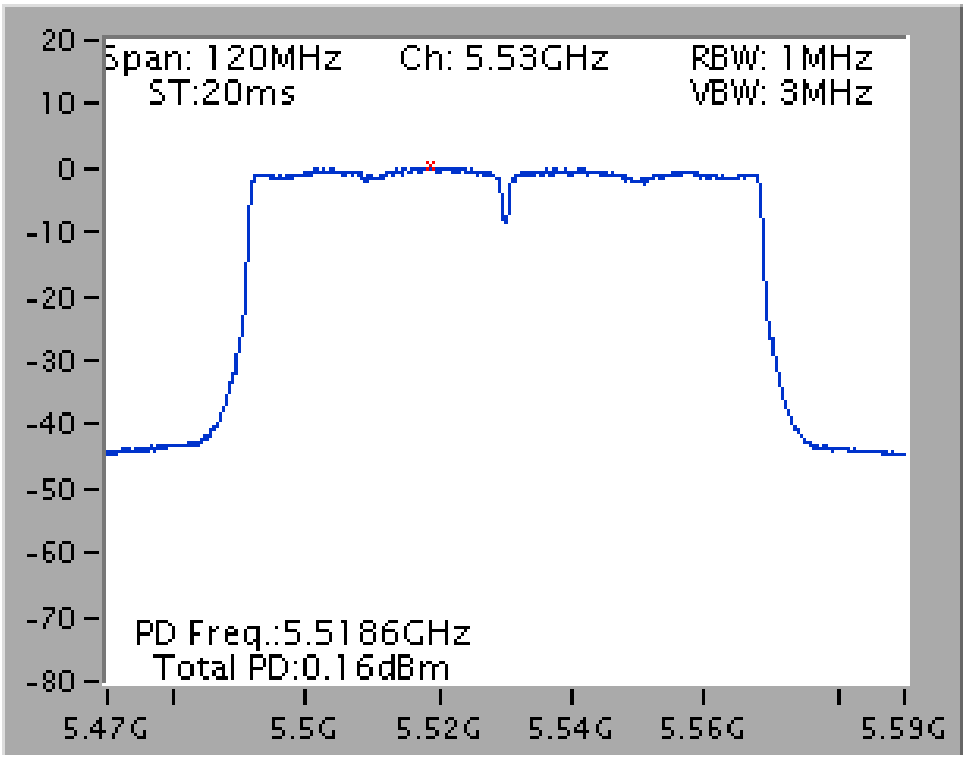
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5210 MHz



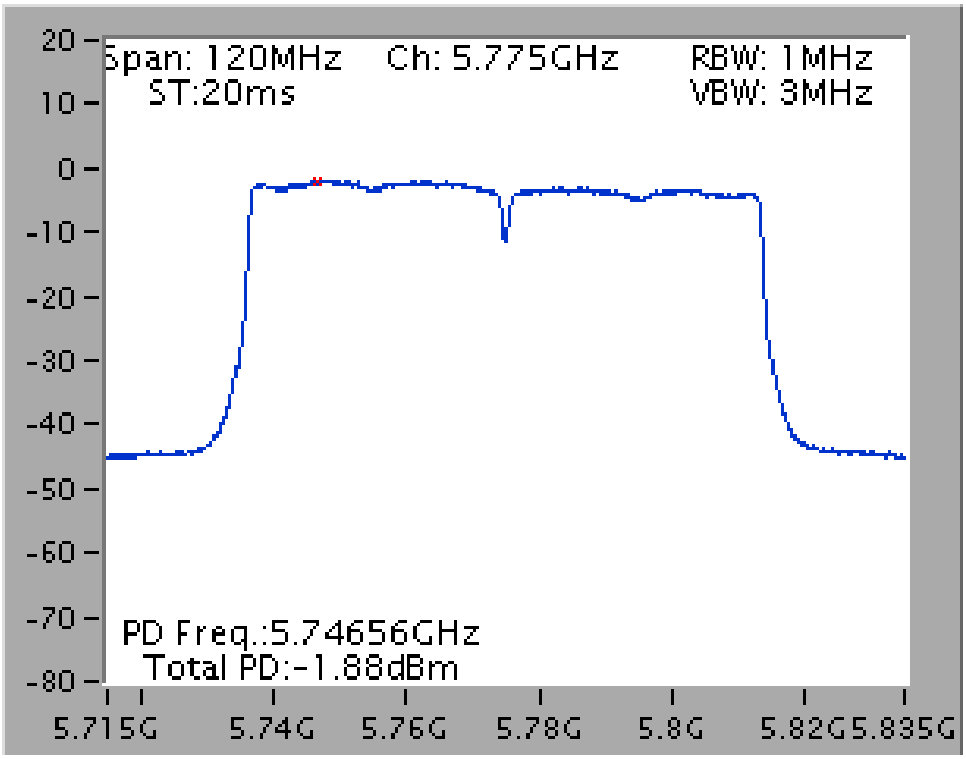
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5290 MHz



Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5530 MHz



Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5775 MHz



4.6. Radiated Emissions Measurement

4.6.1. Limit

For transmitters operating in the 5.15-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

For transmitters operating in the 5.470-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

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 e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.

In addition, In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.6.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	40 GHz
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average
RBW / VBW (Emission in non-restricted band)	1MHz / 3MHz for peak

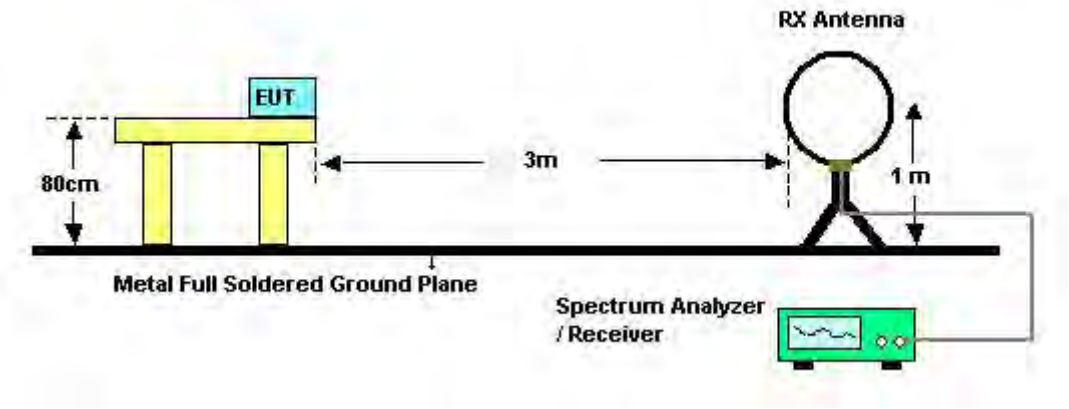
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RBW 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RBW 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RBW 120kHz for QP

4.6.3. Test Procedures

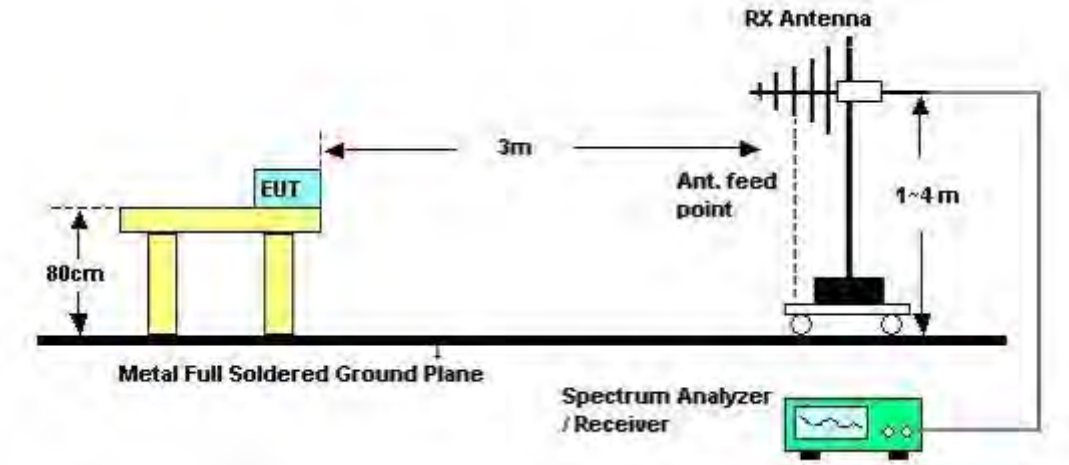
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 1m & 3m far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and 3MHz RBW for peak reading. Then 1MHz RBW and 1/T VBW for average reading in spectrum analyzer.
7. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
8. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
9. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

4.6.4. Test Setup Layout

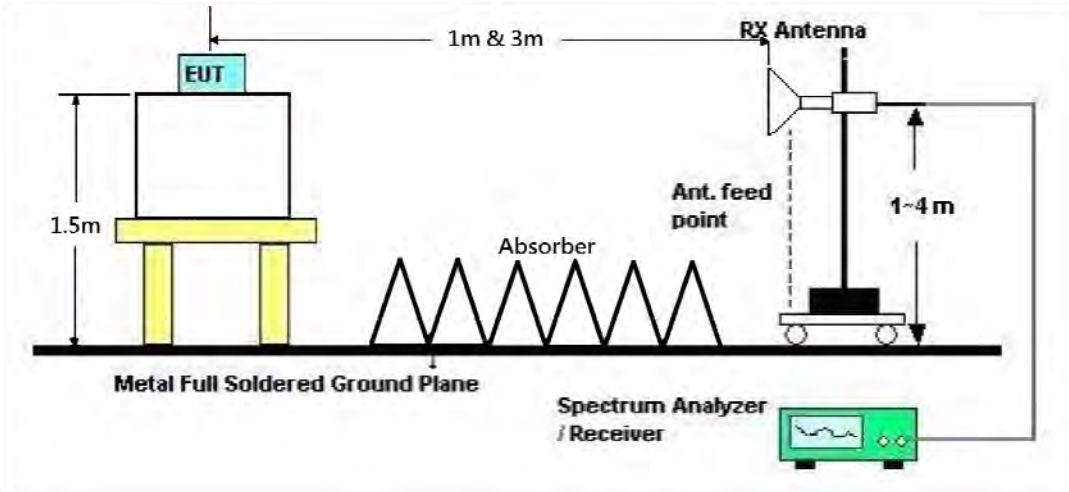
For Radiated Emissions: 9kHz ~30MHz



For Radiated Emissions: 30MHz~1GHz



For Radiated Emissions: Above 1GHz



4.6.5. Test Deviation

There is no deviation with the original standard.

4.6.6. EUT Operation during Test

For Non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

For beamforming mode:

The EUT was programmed to be in beamforming transmitting mode.

4.6.7. Results of Radiated Emissions (9kHz~30MHz)

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	Normal Link
Test Date	Jan. 04, 2016	Test Mode	Mode 2

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

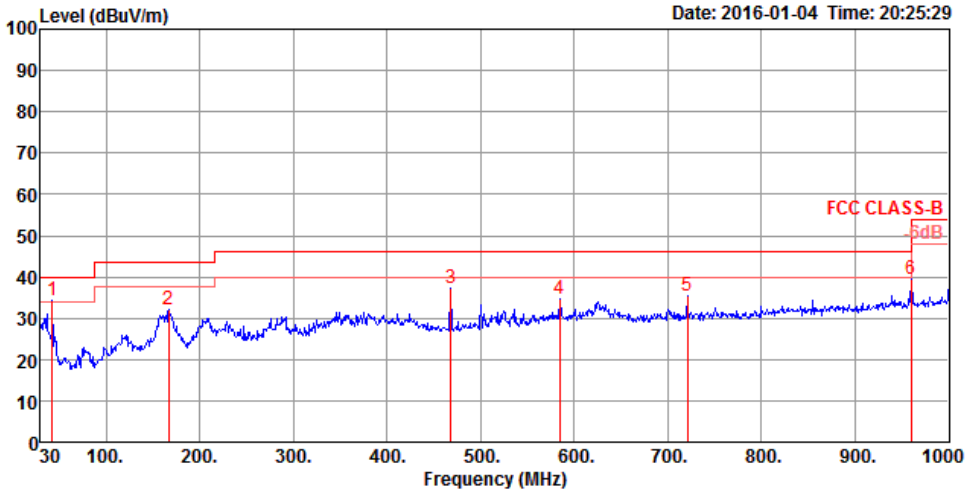
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

4.6.8. Results of Radiated Emissions (30MHz~1GHz)

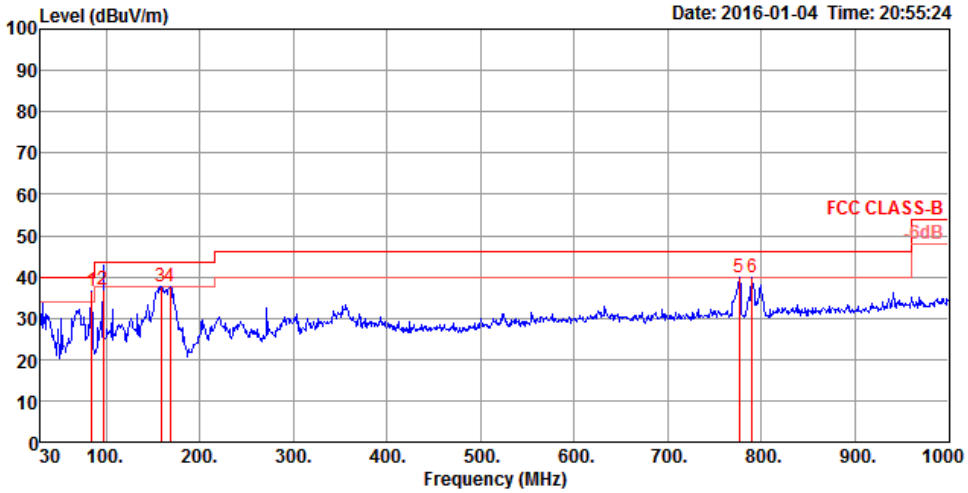
Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	Normal Link
Test Mode	Mode 2		

Horizontal



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	42.61	34.49	40.00	-5.51	47.77	0.57	18.56	32.41	100	118	Peak	HORIZONTAL
2	166.77	31.94	43.50	-11.56	46.48	1.11	16.70	32.35	150	119	Peak	HORIZONTAL
3	468.44	37.18	46.00	-8.82	44.12	1.88	23.52	32.34	100	4	Peak	HORIZONTAL
4	584.84	34.63	46.00	-11.37	39.71	2.09	25.23	32.40	200	335	Peak	HORIZONTAL
5	720.64	35.24	46.00	-10.76	39.14	2.32	26.12	32.34	150	225	Peak	HORIZONTAL
6	960.23	39.62	54.00	-14.38	39.92	2.69	28.20	31.19	100	142	Peak	HORIZONTAL

Vertical



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	84.32	36.55	40.00	-3.45	53.68	0.80	14.46	32.39	100	130	Peak	VERTICAL
2	96.93	36.77	43.50	-6.73	51.34	0.85	16.97	32.39	100	130	QP	VERTICAL
3	159.01	37.64	43.50	-5.86	51.99	1.08	16.92	32.35	100	350	Peak	VERTICAL
4	168.71	37.52	43.50	-5.98	52.11	1.12	16.63	32.34	100	341	Peak	VERTICAL
5	775.93	39.91	46.00	-6.09	43.14	2.42	26.62	32.27	200	76	Peak	VERTICAL
6	790.48	39.96	46.00	-6.04	43.04	2.44	26.73	32.25	100	29	Peak	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.6.9. Results for Radiated Emissions (1GHz~40GHz)

<For Non-Beamforming Mode>

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11a CH 36 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15540.03	46.45	54.00	-7.55	31.43	12.49	38.39	35.86	158	82	HORIZONTAL	Average
2	15541.93	59.43	74.00	-14.57	44.41	12.49	38.39	35.86	158	82	HORIZONTAL	Peak

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15537.51	46.73	54.00	-7.27	31.71	12.49	38.39	35.86	140	221	VERTICAL	Average
2	15540.71	58.80	74.00	-15.20	43.78	12.49	38.39	35.86	140	221	VERTICAL	Peak

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11a CH 40 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15597.63	46.32	54.00	-7.68	31.28	12.52	38.38	35.86	142	173	HORIZONTAL	Average
2	15598.17	58.78	74.00	-15.22	43.74	12.52	38.38	35.86	142	173	HORIZONTAL	Peak

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15597.96	59.45	74.00	-14.55	44.41	12.52	38.38	35.86	152	299	VERTICAL	Peak
2	15601.07	46.26	54.00	-7.74	31.20	12.55	38.37	35.86	152	299	VERTICAL	Average

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11a CH 48 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15718.66	58.67	74.00	-15.33	43.58	12.60	38.35	35.86	190	108	HORIZONTAL	Peak
2	15721.61	45.72	54.00	-8.28	30.63	12.60	38.35	35.86	190	108	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15719.73	45.96	54.00	-8.04	30.87	12.60	38.35	35.86	168	159	VERTICAL	Average
2	15721.71	58.62	74.00	-15.38	43.53	12.60	38.35	35.86	168	159	VERTICAL	Peak

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11a CH 52 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10517.08	61.11	68.20	-7.09	47.74	10.41	38.90	35.94	196	98	HORIZONTAL	Peak
2	15770.60	45.97	54.00	-8.03	30.85	12.63	38.35	35.86	161	191	HORIZONTAL	Average
3	15778.76	58.85	74.00	-15.15	43.73	12.63	38.35	35.86	161	191	HORIZONTAL	Peak

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10518.64	68.09	68.20	-0.11	54.72	10.41	38.90	35.94	173	13	VERTICAL	Peak
2	15774.84	45.96	54.00	-8.04	30.84	12.63	38.35	35.86	169	285	VERTICAL	Average
3	15777.72	58.60	74.00	-15.40	43.48	12.63	38.35	35.86	169	285	VERTICAL	Peak

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11a CH 60 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10601.08	56.32	74.00	-17.68	42.82	10.46	38.98	35.94	131	330	HORIZONTAL	Peak
2	10601.40	44.43	54.00	-9.57	30.93	10.46	38.98	35.94	131	330	HORIZONTAL	Average
3	15901.04	59.02	74.00	-14.98	43.85	12.71	38.32	35.86	152	110	HORIZONTAL	Peak
4	15909.40	46.18	54.00	-7.82	31.01	12.71	38.32	35.86	152	110	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10597.80	50.81	54.00	-3.19	37.31	10.46	38.98	35.94	199	312	VERTICAL	Average
2	10598.88	63.60	74.00	-10.40	50.10	10.46	38.98	35.94	199	312	VERTICAL	Peak
3	15895.08	58.55	74.00	-15.45	43.38	12.71	38.32	35.86	181	201	VERTICAL	Peak
4	15907.00	46.32	54.00	-7.68	31.15	12.71	38.32	35.86	181	201	VERTICAL	Average

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11a CH 64 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10636.24	45.80	54.00	-8.20	32.26	10.48	39.00	35.94	164	88	HORIZONTAL	Average
2	10645.52	58.61	74.00	-15.39	45.08	10.48	39.00	35.95	164	88	HORIZONTAL	Peak
3	15961.68	58.86	74.00	-15.14	43.67	12.74	38.31	35.86	153	211	HORIZONTAL	Peak
4	15964.40	46.09	54.00	-7.91	30.90	12.74	38.31	35.86	153	211	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10638.00	52.65	54.00	-1.35	39.11	10.48	39.00	35.94	172	12	VERTICAL	Average
2	10642.60	65.02	74.00	-8.98	51.49	10.48	39.00	35.95	172	12	VERTICAL	Peak
3	15964.44	60.43	74.00	-13.57	45.24	12.74	38.31	35.86	168	111	VERTICAL	Peak
4	15966.76	46.30	54.00	-7.70	31.09	12.77	38.30	35.86	168	111	VERTICAL	Average

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11a CH 100 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10999.26	59.72	74.00	-14.28	41.26	13.44	38.40	33.38	323	327	Peak	HORIZONTAL
2	11000.02	46.48	54.00	-7.52	28.02	13.44	38.40	33.38	323	327	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10998.42	61.71	74.00	-12.29	43.25	13.44	38.40	33.38	296	34	Peak	VERTICAL
2	10999.32	48.19	54.00	-5.81	29.73	13.44	38.40	33.38	296	34	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11a CH 116 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11159.36	50.23	54.00	-3.77	31.23	13.71	38.67	33.38	265	39	Average	HORIZONTAL
2	11160.36	63.66	74.00	-10.34	44.66	13.71	38.67	33.38	265	39	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11154.04	67.13	74.00	-6.87	48.25	13.65	38.61	33.38	258	311	Peak	VERTICAL
2	11161.32	53.80	54.00	-0.20	34.80	13.71	38.67	33.38	258	311	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11a CH 140 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11397.71	48.07	54.00	-5.93	28.32	14.08	39.04	33.37	105	330	Average	HORIZONTAL
2	11402.24	61.99	74.00	-12.01	42.24	14.08	39.04	33.37	105	330	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11398.47	61.43	74.00	-12.57	41.68	14.08	39.04	33.37	104	328	Peak	VERTICAL
2	11399.28	48.37	54.00	-5.63	28.62	14.08	39.04	33.37	104	328	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Ted Chiu	Configurations	IEEE 802.11a CH 149 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11488.23	48.20	54.00	-5.80	28.13	14.24	39.20	33.37	108	338	Average	HORIZONTAL
2	11490.75	61.36	74.00	-12.64	41.29	14.24	39.20	33.37	108	338	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11491.47	60.79	74.00	-13.21	40.72	14.24	39.20	33.37	106	333	Peak	VERTICAL
2	11491.74	48.43	54.00	-5.57	28.36	14.24	39.20	33.37	106	333	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Ted Chiu	Configurations	IEEE 802.11a CH 157 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11568.66	61.51	74.00	-12.49	41.35	14.35	39.20	33.39	112	349	Peak	HORIZONTAL
2	11569.87	48.92	54.00	-5.08	28.76	14.35	39.20	33.39	112	349	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11569.82	48.82	54.00	-5.18	28.66	14.35	39.20	33.39	109	341	Average	VERTICAL
2	11570.15	61.72	74.00	-12.28	41.56	14.35	39.20	33.39	109	341	Peak	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Ted Chiu	Configurations	IEEE 802.11a CH 165 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11647.50	49.01	54.00	-4.99	28.77	14.45	39.20	33.41	112	349	Average	HORIZONTAL
2	11648.01	62.10	74.00	-11.90	41.86	14.45	39.20	33.41	112	349	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11647.53	49.26	54.00	-4.74	29.02	14.45	39.20	33.41	115	351	Average	VERTICAL
2	11651.50	62.03	74.00	-11.97	41.73	14.51	39.20	33.41	115	351	Peak	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15539.98	59.13	74.00	-14.87	44.11	12.49	38.39	35.86	160	215	HORIZONTAL	Peak
2	15540.42	46.60	54.00	-7.40	31.58	12.49	38.39	35.86	160	215	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15538.30	59.52	74.00	-14.48	44.50	12.49	38.39	35.86	145	107	VERTICAL	Peak
2	15541.06	46.48	54.00	-7.52	31.46	12.49	38.39	35.86	145	107	VERTICAL	Average

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15598.89	46.30	54.00	-7.70	31.26	12.52	38.38	35.86	152	155	HORIZONTAL	Average
2	15601.25	59.42	74.00	-14.58	44.36	12.55	38.37	35.86	152	155	HORIZONTAL	Peak

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15597.50	59.49	74.00	-14.51	44.45	12.52	38.38	35.86	170	196	VERTICAL	Peak
2	15600.57	46.38	54.00	-7.62	31.32	12.55	38.37	35.86	170	196	VERTICAL	Average

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15717.85	59.21	74.00	-14.79	44.12	12.60	38.35	35.86	159	51	HORIZONTAL	Peak
2	15721.94	45.96	54.00	-8.04	30.87	12.60	38.35	35.86	159	51	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15719.13	59.11	74.00	-14.89	44.02	12.60	38.35	35.86	169	173	VERTICAL	Peak
2	15720.02	45.76	54.00	-8.24	30.67	12.60	38.35	35.86	169	173	VERTICAL	Average

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10512.24	62.60	68.20	-5.60	49.23	10.41	38.90	35.94	164	96	HORIZONTAL	Peak
2	15770.76	58.46	74.00	-15.54	43.34	12.63	38.35	35.86	171	29	HORIZONTAL	Peak
3	15774.72	46.05	54.00	-7.95	30.93	12.63	38.35	35.86	171	29	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10513.96	67.68	68.20	-0.52	54.31	10.41	38.90	35.94	168	15	VERTICAL	Peak
2	15773.16	58.76	74.00	-15.24	43.64	12.63	38.35	35.86	166	252	VERTICAL	Peak
3	15773.52	45.94	54.00	-8.06	30.82	12.63	38.35	35.86	166	252	VERTICAL	Average

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 60 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10597.92	55.87	74.00	-18.13	42.37	10.46	38.98	35.94	160	312	HORIZONTAL	Peak
2	10600.72	44.22	54.00	-9.78	30.72	10.46	38.98	35.94	160	312	HORIZONTAL	Average
3	15896.60	45.93	54.00	-8.07	30.76	12.71	38.32	35.86	152	193	HORIZONTAL	Average
4	15905.88	58.64	74.00	-15.36	43.47	12.71	38.32	35.86	152	193	HORIZONTAL	Peak

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10599.56	58.19	74.00	-15.81	44.69	10.46	38.98	35.94	158	338	VERTICAL	Peak
2	10599.88	46.20	54.00	-7.80	32.70	10.46	38.98	35.94	158	338	VERTICAL	Average
3	15899.92	58.89	74.00	-15.11	43.72	12.71	38.32	35.86	158	108	VERTICAL	Peak
4	15907.00	45.85	54.00	-8.15	30.68	12.71	38.32	35.86	158	108	VERTICAL	Average

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 64 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10640.48	44.53	54.00	-9.47	31.00	10.48	39.00	35.95	177	112	HORIZONTAL	Average
2	10640.84	56.55	74.00	-17.45	43.02	10.48	39.00	35.95	177	112	HORIZONTAL	Peak
3	15964.88	58.40	74.00	-15.60	43.21	12.74	38.31	35.86	175	179	HORIZONTAL	Peak
4	15967.56	46.04	54.00	-7.96	30.83	12.77	38.30	35.86	175	179	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10637.04	61.10	74.00	-12.90	47.56	10.48	39.00	35.94	168	184	VERTICAL	Peak
2	10642.20	47.95	54.00	-6.05	34.42	10.48	39.00	35.95	168	184	VERTICAL	Average
3	15954.20	46.22	54.00	-7.78	31.03	12.74	38.31	35.86	189	110	VERTICAL	Average
4	15954.40	58.80	74.00	-15.20	43.61	12.74	38.31	35.86	189	110	VERTICAL	Peak

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11003.62	47.43	54.00	-6.57	28.97	13.44	38.40	33.38	199	298	Average	HORIZONTAL
2	11004.39	61.17	74.00	-12.83	42.71	13.44	38.40	33.38	199	298	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11002.63	61.07	74.00	-12.93	42.61	13.44	38.40	33.38	245	325	Peak	VERTICAL
2	11004.23	47.57	54.00	-6.43	29.11	13.44	38.40	33.38	245	325	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 116 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11159.44	63.43	74.00	-10.57	44.43	13.71	38.67	33.38	265	39	Peak	HORIZONTAL
2	11160.16	50.60	54.00	-3.40	31.60	13.71	38.67	33.38	265	39	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11159.12	68.34	74.00	-5.66	49.34	13.71	38.67	33.38	263	252	Peak	VERTICAL
2	11159.16	53.78	54.00	-0.22	34.78	13.71	38.67	33.38	263	252	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 140 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11394.64	60.80	74.00	-13.20	41.05	14.08	39.04	33.37	182	210	Peak	HORIZONTAL
2	11397.96	48.46	54.00	-5.54	28.71	14.08	39.04	33.37	182	210	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11397.04	48.37	54.00	-5.63	28.62	14.08	39.04	33.37	187	147	Average	VERTICAL
2	11397.08	60.96	74.00	-13.04	41.21	14.08	39.04	33.37	187	147	Peak	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11488.33	48.48	54.00	-5.52	28.41	14.24	39.20	33.37	164	148	Average	HORIZONTAL
2	11491.69	61.30	74.00	-12.70	41.23	14.24	39.20	33.37	164	148	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11488.84	61.05	74.00	-12.95	40.98	14.24	39.20	33.37	133	126	Peak	VERTICAL
2	11498.36	48.18	54.00	-5.82	28.11	14.24	39.20	33.37	133	126	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11570.60	48.27	54.00	-5.73	28.11	14.35	39.20	33.39	166	213	Average	HORIZONTAL
2	11570.71	61.20	74.00	-12.80	41.04	14.35	39.20	33.39	166	213	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11570.02	48.31	54.00	-5.69	28.15	14.35	39.20	33.39	134	198	Average	VERTICAL
2	11570.12	61.61	74.00	-12.39	41.45	14.35	39.20	33.39	134	198	Peak	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11650.35	61.87	74.00	-12.13	41.63	14.45	39.20	33.41	161	174	Peak	HORIZONTAL
2	11650.38	48.71	54.00	-5.29	28.47	14.45	39.20	33.41	161	174	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11650.20	48.67	54.00	-5.33	28.43	14.45	39.20	33.41	146	215	Average	VERTICAL
2	11650.67	62.23	74.00	-11.77	41.99	14.45	39.20	33.41	146	215	Peak	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15570.05	58.88	74.00	-15.12	43.84	12.52	38.38	35.86	167	180	HORIZONTAL	Peak
2	15570.37	46.19	54.00	-7.81	31.15	12.52	38.38	35.86	167	180	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15569.15	46.21	54.00	-7.79	31.17	12.52	38.38	35.86	163	241	VERTICAL	Average
2	15570.80	59.75	74.00	-14.25	44.71	12.52	38.38	35.86	163	241	VERTICAL	Peak

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15691.57	59.42	74.00	-14.58	44.33	12.60	38.35	35.86	180	63	HORIZONTAL	Peak
2	15691.67	46.44	54.00	-7.56	31.35	12.60	38.35	35.86	180	63	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15691.00	58.84	74.00	-15.16	43.75	12.60	38.35	35.86	168	156	VERTICAL	Peak
2	15691.83	46.60	54.00	-7.40	31.51	12.60	38.35	35.86	168	156	VERTICAL	Average

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15804.72	58.08	74.00	-15.92	42.94	12.66	38.34	35.86	144	135	HORIZONTAL	Peak
2	15817.68	45.74	54.00	-8.26	30.60	12.66	38.34	35.86	144	135	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15805.92	58.34	74.00	-15.66	43.20	12.66	38.34	35.86	172	100	VERTICAL	Peak
2	15808.20	45.73	54.00	-8.27	30.59	12.66	38.34	35.86	172	100	VERTICAL	Average

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 62 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10613.12	55.10	74.00	-18.90	41.60	10.46	38.98	35.94	139	360	HORIZONTAL	Peak
2	10621.52	43.01	54.00	-10.99	29.47	10.48	39.00	35.94	139	360	HORIZONTAL	Average
3	15928.60	58.73	74.00	-15.27	43.54	12.74	38.31	35.86	144	296	HORIZONTAL	Peak
4	15934.92	45.51	54.00	-8.49	30.32	12.74	38.31	35.86	144	296	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10621.12	58.36	74.00	-15.64	44.86	10.46	38.98	35.94	153	170	VERTICAL	Peak
2	10621.20	46.38	54.00	-7.62	32.88	10.46	38.98	35.94	153	170	VERTICAL	Average
3	15922.80	58.45	74.00	-15.55	43.26	12.74	38.31	35.86	174	198	VERTICAL	Peak
4	15937.16	45.62	54.00	-8.38	30.43	12.74	38.31	35.86	174	198	VERTICAL	Average

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11018.89	59.19	74.00	-14.81	40.73	13.44	38.40	33.38	212	201	Peak	HORIZONTAL
2	11019.98	45.63	54.00	-8.37	27.17	13.44	38.40	33.38	212	201	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11020.17	59.62	74.00	-14.38	41.16	13.44	38.40	33.38	214	198	Peak	VERTICAL
2	11020.48	45.70	54.00	-8.30	27.24	13.44	38.40	33.38	214	198	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 110 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11097.98	46.91	54.00	-7.09	28.13	13.60	38.56	33.38	213	213	Average	HORIZONTAL
2	11098.19	60.84	74.00	-13.16	42.06	13.60	38.56	33.38	213	213	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11099.32	59.51	74.00	-14.49	40.73	13.60	38.56	33.38	215	197	Peak	VERTICAL
2	11101.94	46.99	54.00	-7.01	28.21	13.60	38.56	33.38	215	197	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 134 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11338.69	61.82	74.00	-12.18	42.29	13.97	38.93	33.37	218	246	Peak	HORIZONTAL
2	11339.81	48.54	54.00	-5.46	29.01	13.97	38.93	33.37	218	246	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11341.58	61.30	74.00	-12.70	41.77	13.97	38.93	33.37	221	234	Peak	VERTICAL
2	11342.40	48.25	54.00	-5.75	28.72	13.97	38.93	33.37	221	234	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11511.47	61.84	74.00	-12.16	41.78	14.24	39.20	33.38	166	186	Peak	HORIZONTAL
2	11512.10	48.32	54.00	-5.68	28.26	14.24	39.20	33.38	166	186	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11509.35	61.38	74.00	-12.62	41.32	14.24	39.20	33.38	147	194	Peak	VERTICAL
2	11509.39	48.59	54.00	-5.41	28.53	14.24	39.20	33.38	147	194	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11589.61	48.87	54.00	-5.13	28.67	14.40	39.20	33.40	214	169	Average	HORIZONTAL
2	11589.63	62.56	74.00	-11.44	42.36	14.40	39.20	33.40	214	169	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11587.88	62.38	74.00	-11.62	42.18	14.40	39.20	33.40	180	145	Peak	VERTICAL
2	11589.46	48.93	54.00	-5.07	28.73	14.40	39.20	33.40	180	145	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15626.62	46.41	54.00	-7.59	31.35	12.55	38.37	35.86	143	297	HORIZONTAL	Average
2	15631.14	58.80	74.00	-15.20	43.74	12.55	38.37	35.86	143	297	HORIZONTAL	Peak

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15626.00	59.67	74.00	-14.33	44.61	12.55	38.37	35.86	155	292	VERTICAL	Peak
2	15633.38	46.43	54.00	-7.57	31.37	12.55	38.37	35.86	155	292	VERTICAL	Average

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 58 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15868.36	58.21	74.00	-15.79	43.05	12.69	38.33	35.86	130	192	HORIZONTAL	Peak
2	15878.52	45.85	54.00	-8.15	30.68	12.71	38.32	35.86	130	192	HORIZONTAL	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15875.28	58.43	74.00	-15.57	43.26	12.71	38.32	35.86	174	74	VERTICAL	Peak
2	15879.00	45.82	54.00	-8.18	30.65	12.71	38.32	35.86	174	74	VERTICAL	Average

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11058.25	46.86	54.00	-7.14	28.30	13.49	38.45	33.38	178	213	Average	HORIZONTAL
2	11062.07	60.67	74.00	-13.33	41.99	13.55	38.51	33.38	178	213	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11058.34	46.79	54.00	-7.21	28.23	13.49	38.45	33.38	138	196	Average	VERTICAL
2	11061.29	60.25	74.00	-13.75	41.57	13.55	38.51	33.38	138	196	Peak	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11551.73	62.14	74.00	-11.86	41.98	14.35	39.20	33.39	188	258	Peak	HORIZONTAL
2	11552.50	48.50	54.00	-5.50	28.34	14.35	39.20	33.39	188	258	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11549.24	60.97	74.00	-13.03	40.87	14.29	39.20	33.39	186	249	Peak	VERTICAL
2	11550.17	48.40	54.00	-5.60	28.24	14.35	39.20	33.39	186	249	Average	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<For Beamforming Mode>

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15546.16	60.70	74.00	-13.30	39.93	16.37	38.13	33.73	155	218	Peak	HORIZONTAL
2	15547.96	47.33	54.00	-6.67	26.56	16.37	38.13	33.73	155	218	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15538.33	60.22	74.00	-13.78	39.45	16.37	38.13	33.73	147	250	Peak	VERTICAL
2	15548.48	47.51	54.00	-6.49	26.74	16.37	38.13	33.73	147	250	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15598.48	47.99	54.00	-6.01	27.31	16.40	38.05	33.77	145	218	Average	HORIZONTAL
2	15602.56	59.94	74.00	-14.06	39.30	16.43	37.98	33.77	145	218	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15602.20	60.67	74.00	-13.33	40.03	16.43	37.98	33.77	142	286	Peak	VERTICAL
2	15604.36	48.05	54.00	-5.95	27.41	16.43	37.98	33.77	142	286	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10477.52	64.99	68.20	-3.21	47.72	12.53	38.44	33.70	162	360	Peak	HORIZONTAL
2	15717.76	47.89	54.00	-6.11	27.49	16.48	37.84	33.92	158	226	Average	HORIZONTAL
3	15729.76	59.21	74.00	-14.79	38.81	16.48	37.84	33.92	158	226	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10471.80	67.91	68.20	-0.29	50.64	12.53	38.44	33.70	166	2	Peak	VERTICAL
2	15716.32	58.10	74.00	-15.90	37.70	16.48	37.84	33.92	169	332	Peak	VERTICAL
3	15720.08	46.99	54.00	-7.01	26.59	16.48	37.84	33.92	169	332	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10518.00	63.95	68.20	-4.25	46.64	12.59	38.40	33.68	103	155	Peak	HORIZONTAL
2	15773.36	59.51	74.00	-14.49	39.20	16.51	37.76	33.96	132	143	Peak	HORIZONTAL
3	15789.44	48.00	54.00	-6.00	27.73	16.54	37.69	33.96	132	143	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10521.96	68.03	68.20	-0.17	50.72	12.59	38.40	33.68	102	152	Peak	VERTICAL
2	15776.12	60.39	74.00	-13.61	40.08	16.51	37.76	33.96	125	36	Peak	VERTICAL
3	15788.88	47.98	54.00	-6.02	27.71	16.54	37.69	33.96	125	36	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 60 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10606.20	58.34	74.00	-15.66	40.81	12.75	38.40	33.62	122	170	Peak	HORIZONTAL
2	10608.80	46.03	54.00	-7.97	28.50	12.75	38.40	33.62	122	170	Average	HORIZONTAL
3	15893.00	60.34	74.00	-13.66	40.25	16.60	37.55	34.06	100	251	Peak	HORIZONTAL
4	15895.60	47.53	54.00	-6.47	27.44	16.60	37.55	34.06	100	251	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10598.84	60.32	74.00	-13.68	42.81	12.75	38.40	33.64	345	316	Peak	VERTICAL
2	10599.92	48.38	54.00	-5.62	30.87	12.75	38.40	33.64	345	316	Average	VERTICAL
3	15894.32	47.54	54.00	-6.46	27.45	16.60	37.55	34.06	183	39	Average	VERTICAL
4	15899.32	59.85	74.00	-14.15	39.76	16.60	37.55	34.06	183	39	Peak	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 64 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10631.16	46.14	54.00	-7.86	28.56	12.80	38.40	33.62	148	256	Average	HORIZONTAL
2	10646.36	58.64	74.00	-15.36	41.03	12.80	38.40	33.59	148	256	Peak	HORIZONTAL
3	15950.32	47.49	54.00	-6.51	27.49	16.63	37.47	34.10	137	183	Average	HORIZONTAL
4	15967.48	59.58	74.00	-14.42	39.62	16.66	37.40	34.10	137	183	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10637.04	59.43	74.00	-14.57	41.85	12.80	38.40	33.62	125	360	Peak	VERTICAL
2	10638.16	46.63	54.00	-7.37	29.05	12.80	38.40	33.62	125	360	Average	VERTICAL
3	15957.32	47.39	54.00	-6.61	27.39	16.63	37.47	34.10	109	272	Average	VERTICAL
4	15961.40	58.74	74.00	-15.26	38.74	16.63	37.47	34.10	109	272	Peak	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10990.92	58.44	74.00	-15.56	40.05	13.39	38.40	33.40	150	112	Peak	HORIZONTAL
2	10994.04	45.92	54.00	-8.08	27.51	13.39	38.40	33.38	150	112	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10990.76	59.20	74.00	-14.80	40.81	13.39	38.40	33.40	203	64	Peak	VERTICAL
2	11000.24	46.26	54.00	-7.74	27.80	13.44	38.40	33.38	203	64	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 116 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11161.20	47.35	54.00	-6.65	28.35	13.71	38.67	33.38	139	294	Average	HORIZONTAL
2	11168.04	59.95	74.00	-14.05	40.95	13.71	38.67	33.38	139	294	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11162.24	65.57	74.00	-8.43	46.57	13.71	38.67	33.38	150	163	Peak	VERTICAL
2	11163.92	52.25	54.00	-1.75	33.25	13.71	38.67	33.38	150	163	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 140 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11390.76	60.37	74.00	-13.63	40.62	14.08	39.04	33.37	164	229	Peak	HORIZONTAL
2	11396.68	48.24	54.00	-5.76	28.49	14.08	39.04	33.37	164	229	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11399.72	50.73	54.00	-3.27	30.98	14.08	39.04	33.37	160	99	Average	VERTICAL
2	11402.88	64.06	74.00	-9.94	44.31	14.08	39.04	33.37	160	99	Peak	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11493.76	60.23	74.00	-13.77	40.16	14.24	39.20	33.37	136	153	Peak	HORIZONTAL
2	11495.72	47.85	54.00	-6.15	27.78	14.24	39.20	33.37	136	153	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11488.04	60.41	74.00	-13.59	40.34	14.24	39.20	33.37	123	0	Peak	VERTICAL
2	11498.24	48.97	54.00	-5.03	28.90	14.24	39.20	33.37	123	0	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11568.52	61.14	74.00	-12.86	40.98	14.35	39.20	33.39	138	3	Peak	HORIZONTAL
2	11572.28	48.64	54.00	-5.36	28.48	14.35	39.20	33.39	138	3	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11572.64	49.50	54.00	-4.50	29.34	14.35	39.20	33.39	143	93	Average	VERTICAL
2	11577.36	61.97	74.00	-12.03	41.81	14.35	39.20	33.39	143	93	Peak	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11645.04	63.19	74.00	-10.81	42.95	14.45	39.20	33.41	162	269	Peak	HORIZONTAL
2	11647.68	48.99	54.00	-5.01	28.75	14.45	39.20	33.41	162	269	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11649.00	61.60	74.00	-12.40	41.36	14.45	39.20	33.41	157	172	Peak	VERTICAL
2	11651.24	49.82	54.00	-4.18	29.52	14.51	39.20	33.41	157	172	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15570.60	51.18	54.00	-2.82	30.50	16.40	38.05	33.77	159	298	Average	HORIZONTAL
2	15579.00	65.02	74.00	-8.98	44.34	16.40	38.05	33.77	159	298	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15570.80	51.86	54.00	-2.14	31.18	16.40	38.05	33.77	179	326	Average	VERTICAL
2	15577.00	64.41	74.00	-9.59	43.73	16.40	38.05	33.77	179	326	Peak	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15690.00	50.23	54.00	-3.77	29.74	16.45	37.91	33.87	150	278	Average	HORIZONTAL
2	15698.40	63.62	74.00	-10.38	43.17	16.48	37.84	33.87	150	278	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15695.20	63.53	74.00	-10.47	43.08	16.48	37.84	33.87	158	342	Peak	VERTICAL
2	15698.80	51.08	54.00	-2.92	30.63	16.48	37.84	33.87	158	342	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15810.52	47.77	54.00	-6.23	27.50	16.54	37.69	33.96	140	248	Average	HORIZONTAL
2	15811.64	61.16	74.00	-12.84	40.89	16.54	37.69	33.96	140	248	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15807.56	47.72	54.00	-6.28	27.45	16.54	37.69	33.96	122	264	Average	VERTICAL
2	15811.40	61.09	74.00	-12.91	40.82	16.54	37.69	33.96	122	264	Peak	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 62 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10618.69	45.02	54.00	-8.98	27.49	12.75	38.40	33.62	176	322	Average	HORIZONTAL
2	10622.46	58.58	74.00	-15.42	41.00	12.80	38.40	33.62	176	322	Peak	HORIZONTAL
3	15927.57	61.15	74.00	-12.85	41.15	16.63	37.47	34.10	170	301	Peak	HORIZONTAL
4	15930.42	48.46	54.00	-5.54	28.46	16.63	37.47	34.10	170	301	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10618.05	58.18	74.00	-15.82	40.65	12.75	38.40	33.62	148	271	Peak	VERTICAL
2	10621.87	45.01	54.00	-8.99	27.43	12.80	38.40	33.62	148	271	Average	VERTICAL
3	15928.37	61.03	74.00	-12.97	41.03	16.63	37.47	34.10	156	289	Peak	VERTICAL
4	15931.42	48.09	54.00	-5.91	28.09	16.63	37.47	34.10	156	289	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11018.92	58.64	74.00	-15.36	40.18	13.44	38.40	33.38	159	284	Peak	HORIZONTAL
2	11021.07	45.48	54.00	-8.52	27.02	13.44	38.40	33.38	159	284	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11020.16	45.81	54.00	-8.19	27.35	13.44	38.40	33.38	162	296	Average	VERTICAL
2	11021.70	59.19	74.00	-14.81	40.73	13.44	38.40	33.38	162	296	Peak	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 110 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11100.52	45.93	54.00	-8.07	27.15	13.60	38.56	33.38	165	262	Average	HORIZONTAL
2	11101.67	59.44	74.00	-14.56	40.66	13.60	38.56	33.38	165	262	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11097.55	46.16	54.00	-7.84	27.38	13.60	38.56	33.38	172	274	Average	VERTICAL
2	11100.19	59.12	74.00	-14.88	40.34	13.60	38.56	33.38	172	274	Peak	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 134 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11340.44	46.75	54.00	-7.25	27.22	13.97	38.93	33.37	167	289	Average	HORIZONTAL
2	11341.08	60.35	74.00	-13.65	40.82	13.97	38.93	33.37	167	289	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11340.07	46.88	54.00	-7.12	27.35	13.97	38.93	33.37	174	278	Average	VERTICAL
2	11340.58	60.19	74.00	-13.81	40.66	13.97	38.93	33.37	174	278	Peak	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11511.41	46.91	54.00	-7.09	26.85	14.24	39.20	33.38	167	345	Average	HORIZONTAL
2	11511.48	59.94	74.00	-14.06	39.88	14.24	39.20	33.38	167	345	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11511.91	60.24	74.00	-13.76	40.18	14.24	39.20	33.38	174	312	Peak	VERTICAL
2	11512.16	46.57	54.00	-7.43	26.51	14.24	39.20	33.38	174	312	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11591.37	60.81	74.00	-13.19	40.61	14.40	39.20	33.40	170	328	Peak	HORIZONTAL
2	11591.81	47.80	54.00	-6.20	27.60	14.40	39.20	33.40	170	328	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11590.18	48.27	54.00	-5.73	28.07	14.40	39.20	33.40	188	321	Average	VERTICAL
2	11590.43	61.31	74.00	-12.69	41.11	14.40	39.20	33.40	188	321	Peak	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15628.97	62.06	74.00	-11.94	41.47	16.43	37.98	33.82	172	323	Peak	HORIZONTAL
2	15632.14	49.42	54.00	-4.58	28.83	16.43	37.98	33.82	172	323	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15630.69	49.34	54.00	-4.66	28.75	16.43	37.98	33.82	176	341	Average	VERTICAL
2	15631.17	62.33	74.00	-11.67	41.74	16.43	37.98	33.82	176	341	Peak	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 58 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15869.37	47.74	54.00	-6.26	27.61	16.57	37.62	34.06	170	311	Average	HORIZONTAL
2	15872.32	61.09	74.00	-12.91	40.96	16.57	37.62	34.06	170	311	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15871.09	61.15	74.00	-12.85	41.02	16.57	37.62	34.06	182	342	Peak	VERTICAL
2	15872.29	47.73	54.00	-6.27	27.60	16.57	37.62	34.06	182	342	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11057.63	58.57	74.00	-15.43	40.01	13.49	38.45	33.38	172	336	Peak	HORIZONTAL
2	11060.17	45.71	54.00	-8.29	27.03	13.55	38.51	33.38	172	336	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11057.64	59.23	74.00	-14.77	40.67	13.49	38.45	33.38	178	324	Peak	VERTICAL
2	11060.20	45.74	54.00	-8.26	27.06	13.55	38.51	33.38	178	324	Average	VERTICAL

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11548.41	47.50	54.00	-6.50	27.40	14.29	39.20	33.39	191	352	Average	HORIZONTAL
2	11552.13	60.89	74.00	-13.11	40.73	14.35	39.20	33.39	191	352	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11549.64	60.62	74.00	-13.38	40.52	14.29	39.20	33.39	186	348	Peak	VERTICAL
2	11552.13	47.74	54.00	-6.26	27.58	14.35	39.20	33.39	186	348	Average	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.7. Band Edge Emissions Measurement

4.7.1. Limit

For transmitters operating in the 5.15-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

For transmitters operating in the 5.470-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

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 e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.

In addition, In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.7.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average
RBW / VBW (Emission in non-restricted band)	1MHz / 3MHz for Peak

4.7.3. Test Procedures

1. The test procedure is the same as section 4.6.3.

4.7.4. Test Setup Layout

This test setup layout is the same as that shown in section 4.6.4.

4.7.5. Test Deviation

There is no deviation with the original standard.

4.7.6. EUT Operation during Test

For Non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

For beamforming mode:

The EUT was programmed to be in beamforming transmitting mode.

4.7.7. Test Result of Band Edge and Fundamental Emissions

<For Non-Beamforming Mode>

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11a CH 36, 40, 48 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 05, 2016		

Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5100.80	53.90	54.00	-0.10	45.31	7.97	33.67	33.05	217	152	Average	VERTICAL
2	5101.20	64.56	74.00	-9.44	55.97	7.97	33.67	33.05	217	152	Peak	VERTICAL
3	5180.80	112.50			103.50	8.26	33.79	33.05	217	152	Peak	VERTICAL
4	5181.60	103.57			94.57	8.26	33.79	33.05	217	152	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5180 MHz.

Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5122.00	53.92	54.00	-0.08	50.12	7.19	33.12	36.51	150	219	VERTICAL	Average
2	5122.00	64.83	74.00	-9.17	61.03	7.19	33.12	36.51	150	219	VERTICAL	Peak
3	5192.40	102.83			98.75	7.32	33.25	36.49	150	219	VERTICAL	Average
4	5202.00	113.13			109.01	7.33	33.28	36.49	150	219	VERTICAL	Peak

Item 3, 4 are the fundamental frequency at 5200 MHz.

Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5121.20	62.27	74.00	-11.73	58.47	7.19	33.12	36.51	146	219	VERTICAL	Peak
2	5121.80	51.83	54.00	-2.17	48.03	7.19	33.12	36.51	146	219	VERTICAL	Average
3	5242.40	111.91			107.69	7.36	33.34	36.48	146	219	VERTICAL	Average
4	5243.00	121.67			117.45	7.36	33.34	36.48	146	219	VERTICAL	Peak
5	5352.80	61.45	74.00	-12.55	56.92	7.46	33.53	36.46	146	219	VERTICAL	Peak
6	5362.40	49.85	54.00	-4.15	45.29	7.47	33.55	36.46	146	219	VERTICAL	Average

Item 3, 4 are the fundamental frequency at 5240 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11a CH 52, 60, 64 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 05, 2016		

Channel 52

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5138.80	50.93	54.00	-3.07	47.06	7.22	33.15	36.50	181	166	VERTICAL	Average
2	5138.80	63.43	74.00	-10.57	59.56	7.22	33.15	36.50	181	166	VERTICAL	Peak
3	5258.20	122.12			117.86	7.38	33.36	36.48	181	166	VERTICAL	Peak
4	5258.80	112.00			107.74	7.38	33.36	36.48	181	166	VERTICAL	Average
5	5378.80	51.04	54.00	-2.96	46.43	7.49	33.58	36.46	181	166	VERTICAL	Average
6	5387.80	61.53	74.00	-12.47	56.87	7.50	33.61	36.45	181	166	VERTICAL	Peak

Item 3, 4 are the fundamental frequency at 5260 MHz.

Channel 60

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5301.80	112.46			108.06	7.42	33.45	36.47	180	177	VERTICAL	Peak
2	5302.40	102.26			97.86	7.42	33.45	36.47	180	177	VERTICAL	Average
3	5382.20	53.81	54.00	-0.19	49.19	7.49	33.58	36.45	180	177	VERTICAL	Average
4	5382.80	64.09	74.00	-9.91	59.47	7.49	33.58	36.45	180	177	VERTICAL	Peak

Item 1, 2 are the fundamental frequency at 5300 MHz.

Channel 64

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5312.80	102.40			97.97	7.43	33.47	36.47	207	216	VERTICAL	Average
2	5322.40	112.56			108.13	7.43	33.47	36.47	207	216	VERTICAL	Peak
3	5402.40	53.85	54.00	-0.15	49.13	7.53	33.64	36.45	207	216	VERTICAL	Average
4	5402.40	64.35	74.00	-9.65	59.63	7.53	33.64	36.45	207	216	VERTICAL	Peak

Item 1, 2 are the fundamental frequency at 5320 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11a CH 100, 116, 140 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 05, 2016		

Channel 100

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5421.60	64.90	74.00	-9.10	60.13	7.56	33.66	36.45	212	178	VERTICAL	Peak
2	5422.00	53.93	54.00	-0.07	49.16	7.56	33.66	36.45	212	178	VERTICAL	Average
3	5462.40	44.81	54.00	-9.19	39.90	7.63	33.72	36.44	212	178	VERTICAL	Average
4	5464.00	58.39	74.00	-15.61	53.42	7.66	33.75	36.44	212	178	VERTICAL	Peak
5	5502.00	105.06			99.97	7.72	33.80	36.43	212	178	VERTICAL	Average
6	5502.00	115.23			110.14	7.72	33.80	36.43	212	178	VERTICAL	Peak

Item 5, 6 are the fundamental frequency at 5500 MHz.

Channel 116

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5418.40	61.59	74.00	-12.41	56.82	7.56	33.66	36.45	196	173	VERTICAL	Peak
2	5452.80	50.00	54.00	-4.00	45.09	7.63	33.72	36.44	196	173	VERTICAL	Average
3	5461.60	50.50	54.00	-3.50	45.59	7.63	33.72	36.44	196	173	VERTICAL	Average
4	5464.00	62.22	74.00	-11.78	57.25	7.66	33.75	36.44	196	173	VERTICAL	Peak
5	5572.80	115.99			110.56	7.85	33.99	36.41	196	173	VERTICAL	Average
6	5572.80	126.18			120.75	7.85	33.99	36.41	196	173	VERTICAL	Peak
7	5737.60	60.15	74.00	-13.85	54.20	7.87	34.45	36.37	196	173	VERTICAL	Peak
8	5743.20	48.92	54.00	-5.08	42.93	7.86	34.50	36.37	196	173	VERTICAL	Average

Item 5, 6 are the fundamental frequency at 5580 MHz.

Channel 140

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5696.40	103.91			98.05	7.88	34.36	36.38	205	182	VERTICAL	Average
2	5696.40	113.88			108.02	7.88	34.36	36.38	205	182	VERTICAL	Peak
3	5785.80	64.62	74.00	-9.38	58.52	7.86	34.59	36.35	205	182	VERTICAL	Peak
4	5786.40	53.84	54.00	-0.16	47.74	7.86	34.59	36.35	205	182	VERTICAL	Average

Item 1, 2 are the fundamental frequency at 5700 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11a CH 149, 157, 165 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 05, 2016		

Channel 149

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5671.00	68.09	68.20	-0.11	62.31	7.89	34.27	36.38	221	220	VERTICAL	Peak
2	5722.20	65.21	78.20	-12.99	59.26	7.87	34.45	36.37	221	220	VERTICAL	Peak
3	5740.60	116.46			110.47	7.86	34.50	36.37	221	220	VERTICAL	Peak
4	5741.00	105.45			99.46	7.86	34.50	36.37	221	220	VERTICAL	Average

Item 3, 4 are the fundamental frequency at 5745 MHz.

Channel 157

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5711.20	68.17	68.20	-0.03	62.25	7.88	34.41	36.37	208	185	VERTICAL	Peak
2	5725.00	59.35	78.20	-18.85	53.40	7.87	34.45	36.37	208	185	VERTICAL	Peak
3	5780.20	115.29			109.20	7.86	34.59	36.36	208	185	VERTICAL	Peak
4	5780.80	104.67			98.58	7.86	34.59	36.36	208	185	VERTICAL	Average
5	5859.40	63.52	78.20	-14.68	57.20	7.83	34.83	36.34	208	185	VERTICAL	Peak
6	5861.20	65.61	68.20	-2.59	59.29	7.83	34.83	36.34	208	185	VERTICAL	Peak

Item 3, 4 are the fundamental frequency at 5785 MHz.

Channel 165

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5820.60	118.02			111.83	7.85	34.69	36.35	205	181	VERTICAL	Peak
2	5831.00	107.39			101.16	7.84	34.73	36.34	205	181	VERTICAL	Average
3	5851.00	69.99	78.20	-8.21	63.71	7.84	34.78	36.34	205	181	VERTICAL	Peak
4	5900.60	67.96	68.20	-0.24	61.55	7.82	34.92	36.33	205	181	VERTICAL	Peak

Item 1, 2 are the fundamental frequency at 5825 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36, 40, 48 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Dec. 29, 2015		

Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5094.00	64.73	74.00	-9.27	56.21	7.92	33.65	33.05	188	177	Peak	VERTICAL
2	5098.40	53.86	54.00	-0.14	45.27	7.97	33.67	33.05	188	177	Average	VERTICAL
3	5173.60	113.80			104.80	8.26	33.79	33.05	188	177	Peak	VERTICAL
4	5178.40	103.36			94.36	8.26	33.79	33.05	188	177	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5180 MHz.

Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5118.80	53.94	54.00	-0.06	45.27	8.03	33.69	33.05	186	176	Average	VERTICAL
2	5123.60	64.60	74.00	-9.40	55.93	8.03	33.69	33.05	186	176	Peak	VERTICAL
3	5198.80	114.25			105.16	8.32	33.82	33.05	186	176	Peak	VERTICAL
4	5198.80	103.83			94.74	8.32	33.82	33.05	186	176	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5200 MHz.

Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5112.80	63.91	74.00	-10.09	55.24	8.03	33.69	33.05	194	177	Peak	VERTICAL
2	5150.00	52.82	54.00	-1.18	43.98	8.15	33.74	33.05	194	177	Average	VERTICAL
3	5237.60	122.01			112.88	8.29	33.89	33.05	194	177	Peak	VERTICAL
4	5238.80	111.86			102.73	8.29	33.89	33.05	194	177	Average	VERTICAL
5	5358.80	64.96	74.00	-9.04	55.75	8.19	34.08	33.06	194	177	Peak	VERTICAL
6	5483.60	53.90	54.00	-0.10	44.22	8.46	34.28	33.06	194	177	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5240 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52, 60, 64 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Dec. 29, 2015		

Channel 52

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5138.80	53.02	54.00	-0.98	44.26	8.09	33.72	33.05	193	173	Average	VERTICAL
2	5146.00	64.67	74.00	-9.33	55.83	8.15	33.74	33.05	193	173	Peak	VERTICAL
3	5258.80	123.02			113.90	8.27	33.91	33.06	193	173	Peak	VERTICAL
4	5258.80	111.61			102.49	8.27	33.91	33.06	193	173	Average	VERTICAL
5	5378.80	65.60	74.00	-8.40	56.37	8.18	34.11	33.06	193	173	Peak	VERTICAL
6	5389.00	53.58	54.00	-0.42	44.34	8.17	34.13	33.06	193	173	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5260 MHz.

Channel 60

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5298.40	112.75			103.59	8.24	33.98	33.06	184	176	Peak	VERTICAL
2	5298.40	102.25			93.09	8.24	33.98	33.06	184	176	Average	VERTICAL
3	5378.40	64.90	74.00	-9.10	55.67	8.18	34.11	33.06	184	176	Peak	VERTICAL
4	5383.20	53.88	54.00	-0.12	44.65	8.18	34.11	33.06	184	176	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 5300 MHz.

Channel 64

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5313.60	111.09			101.91	8.23	34.01	33.06	212	176	Peak	VERTICAL
2	5313.60	100.80			91.62	8.23	34.01	33.06	212	176	Average	VERTICAL
3	5398.40	53.67	54.00	-0.33	44.43	8.17	34.13	33.06	212	176	Average	VERTICAL
4	5398.80	64.98	74.00	-9.02	55.74	8.17	34.13	33.06	212	176	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5320 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100, 116, 140 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Dec. 29, 2015		

Channel 100

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5427.40	53.97	54.00	-0.03	44.58	8.27	34.18	33.06	200	179	Average	VERTICAL
2	5428.00	65.09	74.00	-8.91	55.70	8.27	34.18	33.06	200	179	Peak	VERTICAL
3	5462.20	63.00	68.20	-5.20	53.47	8.36	34.23	33.06	200	179	Peak	VERTICAL
4	5492.80	114.24			104.56	8.46	34.28	33.06	200	179	Peak	VERTICAL
5	5492.80	103.43			93.75	8.46	34.28	33.06	200	179	Average	VERTICAL

Item 4, 5 are the fundamental frequency at 5500 MHz.

Channel 116

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5440.00	65.67	74.00	-8.33	56.21	8.32	34.20	33.06	207	174	Peak	VERTICAL
2	5457.00	53.74	54.00	-0.26	44.21	8.36	34.23	33.06	207	174	Average	VERTICAL
3	5467.00	66.23	68.20	-1.97	56.63	8.41	34.25	33.06	207	174	Peak	VERTICAL
4	5582.00	124.14			114.13	8.75	34.35	33.09	207	174	Peak	VERTICAL
5	5588.00	113.72			103.71	8.75	34.35	33.09	207	174	Average	VERTICAL
6	5735.20	66.29	68.20	-1.91	56.52	8.47	34.44	33.14	207	174	Peak	VERTICAL

Item 4, 5 are the fundamental frequency at 5580 MHz.

Channel 140

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5691.60	107.78			101.92	7.88	34.36	36.38	191	179	VERTICAL	Average
2	5706.40	117.15			111.24	7.88	34.41	36.38	191	179	VERTICAL	Peak
3	5732.40	68.07	68.20	-0.13	62.12	7.87	34.45	36.37	191	179	VERTICAL	Peak

Item 1, 2 are the fundamental frequency at 5700 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149, 157, 165 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Dec. 29, 2015		

Channel 149

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5671.80	68.02	68.20	-0.18	58.10	8.64	34.40	33.12	212	180	Peak	VERTICAL
2	5721.40	67.91	78.20	-10.29	58.10	8.51	34.43	33.13	212	180	Peak	VERTICAL
3	5742.00	114.59			104.85	8.43	34.45	33.14	212	180	Peak	VERTICAL
4	5746.80	105.31			95.57	8.43	34.45	33.14	212	180	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5745 MHz.

Channel 157

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5701.40	67.98	68.20	-0.22	58.13	8.56	34.42	33.13	212	182	Peak	VERTICAL
2	5721.00	65.01	78.20	-13.19	55.20	8.51	34.43	33.13	212	182	Peak	VERTICAL
3	5781.00	114.19			104.52	8.35	34.47	33.15	212	182	Peak	VERTICAL
4	5781.40	103.69			94.02	8.35	34.47	33.15	212	182	Average	VERTICAL
5	5856.40	66.31	78.20	-11.89	56.32	8.64	34.52	33.17	212	182	Peak	VERTICAL
6	5871.40	68.10	68.20	-0.10	58.12	8.64	34.52	33.18	212	182	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5785 MHz.

Channel 165

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5822.60	102.97			93.17	8.47	34.50	33.17	211	173	Average	VERTICAL
2	5823.00	113.63			103.83	8.47	34.50	33.17	211	173	Peak	VERTICAL
3	5858.00	65.44	78.20	-12.76	55.45	8.64	34.52	33.17	211	173	Peak	VERTICAL
4	5902.20	68.10	68.20	-0.10	57.95	8.80	34.54	33.19	211	173	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5825 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38, 46 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 05, 2016		

Channel 38

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5147.40	68.39	74.00	-5.61	59.55	8.15	33.74	33.05	187	176	Peak	VERTICAL
2	5148.60	53.59	54.00	-0.41	44.75	8.15	33.74	33.05	187	176	Average	VERTICAL
3	5184.00	112.07			103.07	8.26	33.79	33.05	187	176	Peak	VERTICAL
4	5203.80	102.74			93.64	8.31	33.84	33.05	187	176	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5190 MHz.

Channel 46

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5143.60	53.80	54.00	-0.20	44.96	8.15	33.74	33.05	187	175	Average	VERTICAL
2	5148.40	64.34	74.00	-9.66	55.50	8.15	33.74	33.05	187	175	Peak	VERTICAL
3	5218.60	102.69			93.58	8.30	33.86	33.05	187	175	Average	VERTICAL
4	5233.60	112.29			103.16	8.29	33.89	33.05	187	175	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5230 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54, 62 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 05, 2016		

Channel 54

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5264.60	101.42			92.28	8.26	33.94	33.06	207	168	Average	VERTICAL
2	5274.80	110.87			101.73	8.26	33.94	33.06	207	168	Peak	VERTICAL
3	5354.60	65.19	74.00	-8.81	55.98	8.19	34.08	33.06	207	168	Peak	VERTICAL
4	5354.60	53.83	54.00	-0.17	44.62	8.19	34.08	33.06	207	168	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 5270 MHz.

Channel 62

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5314.20	111.44			102.26	8.23	34.01	33.06	207	172	Peak	VERTICAL
2	5314.20	101.26			92.08	8.23	34.01	33.06	207	172	Average	VERTICAL
3	5384.40	64.09	74.00	-9.91	54.86	8.18	34.11	33.06	207	172	Peak	VERTICAL
4	5394.00	53.71	54.00	-0.29	44.47	8.17	34.13	33.06	207	172	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 5310 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102, 110, 134 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 05, 2016		

Channel 102

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5438.00	64.25	74.00	-9.75	54.79	8.32	34.20	33.06	198	171	Peak	VERTICAL
2	5443.40	53.88	54.00	-0.12	44.42	8.32	34.20	33.06	198	171	Average	VERTICAL
3	5463.40	65.50	74.00	-8.50	55.97	8.36	34.23	33.06	198	171	Peak	VERTICAL
4	5468.80	53.03	54.00	-0.97	43.43	8.41	34.25	33.06	198	171	Average	VERTICAL
5	5513.60	113.51			103.71	8.56	34.31	33.07	198	171	Peak	VERTICAL
6	5523.80	103.99			94.19	8.56	34.31	33.07	198	171	Average	VERTICAL

Item 5, 6 are the fundamental frequency at 5510 MHz.

Channel 110

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5454.00	53.79	54.00	-0.21	44.26	8.36	34.23	33.06	197	171	Average	VERTICAL
2	5458.80	64.21	74.00	-9.79	54.68	8.36	34.23	33.06	197	171	Peak	VERTICAL
3	5469.00	64.92	68.20	-3.28	55.32	8.41	34.25	33.06	197	171	Peak	VERTICAL
4	5558.40	114.27			104.37	8.65	34.33	33.08	197	171	Peak	VERTICAL
5	5563.20	104.70			94.74	8.70	34.34	33.08	197	171	Average	VERTICAL

Item 4, 5 are the fundamental frequency at 5550 MHz.

Channel 134

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5676.60	104.07			94.18	8.60	34.41	33.12	205	180	Average	VERTICAL
2	5677.20	113.86			103.97	8.60	34.41	33.12	205	180	Peak	VERTICAL
3	5736.60	67.95	68.20	-0.25	58.18	8.47	34.44	33.14	205	180	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5670 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151, 159 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 05, 2016		

Channel 151

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5692.00	67.81	68.20	-0.39	57.96	8.56	34.42	33.13	202	184	Peak	VERTICAL
2	5724.40	75.84	78.20	-2.36	66.06	8.47	34.44	33.13	202	184	Peak	VERTICAL
3	5741.20	114.55			104.81	8.43	34.45	33.14	202	184	Peak	VERTICAL
4	5751.40	104.90			95.16	8.43	34.45	33.14	202	184	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5755 MHz.

Channel 159

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5706.20	67.82	68.20	-0.38	58.01	8.51	34.43	33.13	200	184	Peak	VERTICAL
2	5720.60	69.14	78.20	-9.06	59.33	8.51	34.43	33.13	200	184	Peak	VERTICAL
3	5791.40	103.34			93.70	8.31	34.48	33.15	200	184	Average	VERTICAL
4	5799.80	113.87			104.23	8.31	34.48	33.15	200	184	Peak	VERTICAL
5	5859.40	65.87	78.20	-12.33	55.89	8.64	34.52	33.18	200	184	Peak	VERTICAL
6	5861.00	66.50	68.20	-1.70	56.52	8.64	34.52	33.18	200	184	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5795 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42, 58 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Dec. 29, 2015		

Channel 42

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5150.00	66.47	74.00	-7.53	57.63	8.15	33.74	33.05	222	152	Peak	VERTICAL
2	5150.00	53.73	54.00	-0.27	44.89	8.15	33.74	33.05	222	152	Average	VERTICAL
3	5201.00	107.37			98.28	8.32	33.82	33.05	222	152	Peak	VERTICAL
4	5240.00	98.18			89.05	8.29	33.89	33.05	222	152	Average	VERTICAL
5	5423.00	61.55	74.00	-12.45	52.16	8.27	34.18	33.06	222	152	Peak	VERTICAL
6	5447.00	51.23	54.00	-2.77	41.77	8.32	34.20	33.06	222	152	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5210 MHz.

Channel 58

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5102.00	58.75	74.00	-15.25	55.01	7.16	33.09	36.51	149	220	VERTICAL	Peak
2	5118.00	47.40	54.00	-6.60	43.60	7.19	33.12	36.51	149	220	VERTICAL	Average
3	5263.00	98.18			93.88	7.39	33.39	36.48	149	220	VERTICAL	Average
4	5303.00	108.08			103.68	7.42	33.45	36.47	149	220	VERTICAL	Peak
5	5354.00	69.83	74.00	-4.17	65.30	7.46	33.53	36.46	149	220	VERTICAL	Peak
6	5358.00	53.83	54.00	-0.17	49.27	7.47	33.55	36.46	149	220	VERTICAL	Average

Item 3, 4 are the fundamental frequency at 5290 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106, 155 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 05, 2016		

Channel 106

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5453.00	65.02	74.00	-8.98	60.11	7.63	33.72	36.44	210	169	VERTICAL	Peak
2	5458.00	52.71	54.00	-1.29	47.80	7.63	33.72	36.44	210	169	VERTICAL	Average
3	5468.00	69.26	74.00	-4.74	64.29	7.66	33.75	36.44	210	169	VERTICAL	Peak
4	5469.00	53.81	54.00	-0.19	48.84	7.66	33.75	36.44	210	169	VERTICAL	Average
5	5523.00	110.27			105.09	7.75	33.85	36.42	210	169	VERTICAL	Peak
6	5524.00	101.11			95.93	7.75	33.85	36.42	210	169	VERTICAL	Average
7	5735.00	62.83	74.00	-11.17	56.88	7.87	34.45	36.37	210	169	VERTICAL	Peak
8	5743.00	48.48	54.00	-5.52	42.49	7.86	34.50	36.37	210	169	VERTICAL	Average

Item 5, 6 are the fundamental frequency at 5530 MHz.

Channel 155

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5696.00	68.08	68.20	-0.12	62.22	7.88	34.36	36.38	211	181	VERTICAL	Peak
2	5722.00	74.40	78.20	-3.80	68.48	7.88	34.41	36.37	211	181	VERTICAL	Peak
3	5741.00	99.54			93.55	7.86	34.50	36.37	211	181	VERTICAL	Average
4	5746.00	109.18			103.18	7.86	34.50	36.36	211	181	VERTICAL	Peak
5	5851.00	63.87	78.20	-14.33	57.59	7.84	34.78	36.34	211	181	VERTICAL	Peak
6	5862.00	62.33	68.20	-5.87	56.01	7.83	34.83	36.34	211	181	VERTICAL	Peak

Item 3, 4 are the fundamental frequency at 5775 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m)

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

<For Beamforming Mode>

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36, 40, 48 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5098.00	64.99	74.00	-9.01	56.40	7.97	33.67	33.05	187	138	Peak	VERTICAL
2	5101.20	53.96	54.00	-0.04	45.37	7.97	33.67	33.05	187	138	Average	VERTICAL
3	5178.40	103.28			94.28	8.26	33.79	33.05	187	138	Average	VERTICAL
4	5181.20	113.80			104.80	8.26	33.79	33.05	187	138	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5180 MHz.

Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5115.60	64.39	74.00	-9.61	55.72	8.03	33.69	33.05	191	141	Peak	VERTICAL
2	5117.60	53.69	54.00	-0.31	45.02	8.03	33.69	33.05	191	141	Average	VERTICAL
3	5194.40	113.57			104.48	8.32	33.82	33.05	191	141	Peak	VERTICAL
4	5194.40	103.68			94.59	8.32	33.82	33.05	191	141	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5200 MHz.

Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5124.80	62.15	74.00	-11.85	53.48	8.03	33.69	33.05	194	209	Peak	VERTICAL
2	5127.80	51.06	54.00	-2.94	42.30	8.09	33.72	33.05	194	209	Average	VERTICAL
3	5243.60	122.49			113.37	8.29	33.89	33.06	194	209	Peak	VERTICAL
4	5246.60	111.43			102.31	8.29	33.89	33.06	194	209	Average	VERTICAL
5	5357.00	52.18	54.00	-1.82	42.97	8.19	34.08	33.06	194	209	Average	VERTICAL
6	5363.00	64.20	74.00	-9.80	54.99	8.19	34.08	33.06	194	209	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5240 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52, 60, 64 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Channel 52

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5141.20	64.38	74.00	-9.62	55.62	8.09	33.72	33.05	196	142	Peak	VERTICAL
2	5146.00	51.97	54.00	-2.03	43.13	8.15	33.74	33.05	196	142	Average	VERTICAL
3	5257.00	122.27			113.15	8.27	33.91	33.06	196	142	Peak	VERTICAL
4	5257.00	111.00			101.88	8.27	33.91	33.06	196	142	Average	VERTICAL
5	5372.80	64.46	74.00	-9.54	55.23	8.18	34.11	33.06	196	142	Peak	VERTICAL
6	5373.40	52.35	54.00	-1.65	43.12	8.18	34.11	33.06	196	142	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5260 MHz.

Channel 60

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5302.40	112.51			103.35	8.24	33.98	33.06	198	205	Peak	VERTICAL
2	5302.80	102.81			93.65	8.24	33.98	33.06	198	205	Average	VERTICAL
3	5386.00	64.85	74.00	-9.15	55.61	8.17	34.13	33.06	198	205	Peak	VERTICAL
4	5387.60	53.57	54.00	-0.43	44.33	8.17	34.13	33.06	198	205	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 5300 MHz.

Channel 64

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5325.20	101.88			92.69	8.22	34.03	33.06	195	142	Average	VERTICAL
2	5326.40	111.91			102.72	8.22	34.03	33.06	195	142	Peak	VERTICAL
3	5400.80	53.90	54.00	-0.10	44.59	8.22	34.15	33.06	195	142	Average	VERTICAL
4	5407.20	65.98	74.00	-8.02	56.67	8.22	34.15	33.06	195	142	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5320 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100, 116, 140 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Channel 100

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5428.00	64.21	74.00	-9.79	54.82	8.27	34.18	33.06	202	166	Peak	VERTICAL
2	5428.00	53.64	54.00	-0.36	44.25	8.27	34.18	33.06	202	166	Average	VERTICAL
3	5461.20	62.91	74.00	-11.09	53.38	8.36	34.23	33.06	202	166	Peak	VERTICAL
4	5470.00	49.95	54.00	-4.05	40.35	8.41	34.25	33.06	202	166	Average	VERTICAL
5	5508.00	113.89			104.15	8.51	34.30	33.07	202	166	Peak	VERTICAL
6	5508.00	104.45			94.71	8.51	34.30	33.07	202	166	Average	VERTICAL

Item 5, 6 are the fundamental frequency at 5500 MHz.

Channel 116

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5454.00	64.25			54.72	8.36	34.23	33.06	210	198	Average	VERTICAL
2	5458.00	53.62	54.00	-0.38	44.09	8.36	34.23	33.06	210	198	Average	VERTICAL
3	5461.00	53.40	54.00	-0.60	43.87	8.36	34.23	33.06	210	198	Average	VERTICAL
4	5465.00	64.63			55.03	8.41	34.25	33.06	210	198	Average	VERTICAL
5	5579.00	112.01			102.00	8.75	34.35	33.09	210	198	Average	VERTICAL
6	5582.00	121.16			111.15	8.75	34.35	33.09	210	198	Average	VERTICAL
7	5810.00	63.93	54.00	9.93	54.21	8.39	34.49	33.16	210	198	Average	VERTICAL
8	5813.00	53.90	54.00	-0.10	44.18	8.39	34.49	33.16	210	198	Average	VERTICAL

Item 1,4, 5, 6 are the fundamental frequency at 5580 MHz.

Channel 140

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5708.00	117.38			107.57	8.51	34.43	33.13	229	150	Peak	VERTICAL
2	5708.40	106.87			97.06	8.51	34.43	33.13	229	150	Average	VERTICAL
3	5725.60	68.00	68.20	-0.20	58.22	8.47	34.44	33.13	229	150	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5700 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149, 157, 165 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Channel 149

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5659.40	68.03	68.20	-0.17	58.10	8.64	34.40	33.11	205	182	Peak	VERTICAL
2	5723.40	68.16	78.20	-10.04	58.38	8.47	34.44	33.13	205	182	Peak	VERTICAL
3	5737.40	114.13			104.36	8.47	34.44	33.14	205	182	Peak	VERTICAL
4	5737.80	103.44			93.67	8.47	34.44	33.14	205	182	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5745 MHz.

Channel 157

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5711.80	67.76	68.20	-0.44	57.95	8.51	34.43	33.13	217	154	Peak	VERTICAL
2	5721.40	62.63	78.20	-15.57	52.82	8.51	34.43	33.13	217	154	Peak	VERTICAL
3	5792.20	102.28			92.64	8.31	34.48	33.15	217	154	Average	VERTICAL
4	5792.60	112.58			102.94	8.31	34.48	33.15	217	154	Peak	VERTICAL
5	5855.60	63.28	78.20	-14.92	53.38	8.56	34.51	33.17	217	154	Peak	VERTICAL
6	5871.80	66.30	68.20	-1.90	56.32	8.64	34.52	33.18	217	154	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5785 MHz.

Channel 165

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5831.80	112.72			102.92	8.47	34.50	33.17	215	184	Peak	VERTICAL
2	5833.00	103.81			94.01	8.47	34.50	33.17	215	184	Average	VERTICAL
3	5852.20	65.08	78.20	-13.12	55.18	8.56	34.51	33.17	215	184	Peak	VERTICAL
4	5913.40	53.76	54.00	-0.24	43.52	8.88	34.55	33.19	215	184	Average	VERTICAL
5	5913.80	64.72	74.00	-9.28	54.48	8.88	34.55	33.19	215	184	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5825 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38, 46 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Channel 38

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5149.20	67.25	74.00	-6.75	58.41	8.15	33.74	33.05	191	148	Peak	VERTICAL
2	5150.00	53.76	54.00	-0.24	44.92	8.15	33.74	33.05	191	148	Average	VERTICAL
3	5194.20	111.37			102.28	8.32	33.82	33.05	191	148	Peak	VERTICAL
4	5194.80	101.66			92.57	8.32	33.82	33.05	191	148	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5190 MHz.

Channel 46

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5145.40	53.56	54.00	-0.44	44.72	8.15	33.74	33.05	179	140	Average	VERTICAL
2	5149.00	63.50	74.00	-10.50	54.66	8.15	33.74	33.05	179	140	Peak	VERTICAL
3	5234.80	111.21			102.08	8.29	33.89	33.05	179	140	Peak	VERTICAL
4	5234.80	101.62			92.49	8.29	33.89	33.05	179	140	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5230 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54, 62 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Channel 54

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5274.80	112.77			103.63	8.26	33.94	33.06	203	174	Peak	VERTICAL
2	5274.80	103.04			93.90	8.26	33.94	33.06	203	174	Average	VERTICAL
3	5352.20	63.69	74.00	-10.31	54.49	8.20	34.06	33.06	203	174	Peak	VERTICAL
4	5352.20	53.60	54.00	-0.40	44.40	8.20	34.06	33.06	203	174	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 5270 MHz.

Channel 62

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5316.00	111.94			102.76	8.23	34.01	33.06	224	170	Peak	VERTICAL
2	5316.00	102.17			92.99	8.23	34.01	33.06	224	170	Average	VERTICAL
3	5350.00	71.72	74.00	-2.28	62.52	8.20	34.06	33.06	224	170	Peak	VERTICAL
4	5395.80	53.55	54.00	-0.45	44.31	8.17	34.13	33.06	224	170	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 5310 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102, 110, 134 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Channel 102

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5435.00	53.60	54.00	-0.40	44.14	8.32	34.20	33.06	197	163	Average	VERTICAL
2	5438.00	65.14	74.00	-8.86	55.68	8.32	34.20	33.06	197	163	Peak	VERTICAL
3	5468.20	63.81	74.00	-10.19	54.21	8.41	34.25	33.06	197	163	Peak	VERTICAL
4	5470.00	51.26	54.00	-2.74	41.66	8.41	34.25	33.06	197	163	Average	VERTICAL
5	5514.20	102.77			92.97	8.56	34.31	33.07	197	163	Average	VERTICAL
6	5515.40	112.64			102.84	8.56	34.31	33.07	197	163	Peak	VERTICAL

Item 5, 6 are the fundamental frequency at 5510 MHz.

Channel 110

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5455.80	64.44	74.00	-9.56	54.91	8.36	34.23	33.06	207	200	Peak	VERTICAL
2	5457.60	53.53	54.00	-0.47	44.00	8.36	34.23	33.06	207	200	Average	VERTICAL
3	5465.40	65.51	68.20	-2.69	55.91	8.41	34.25	33.06	207	200	Peak	VERTICAL
4	5557.80	117.16			107.26	8.65	34.33	33.08	207	200	Peak	VERTICAL
5	5563.20	106.05			96.09	8.70	34.34	33.08	207	200	Average	VERTICAL

Item 4, 5 are the fundamental frequency at 5550 MHz.

Channel 134

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5652.60	111.79			101.83	8.68	34.39	33.11	202	120	Peak	VERTICAL
2	5652.60	102.55			92.59	8.68	34.39	33.11	202	120	Average	VERTICAL
3	5733.60	53.70	54.00	-0.30	43.93	8.47	34.44	33.14	202	120	Average	VERTICAL
4	5738.40	65.77	74.00	-8.23	56.00	8.47	34.44	33.14	202	120	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5670 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151, 159 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 06, 2016		

Channel 151

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5712.40	67.77	68.20	-0.43	57.96	8.51	34.43	33.13	225	178	Peak	VERTICAL
2	5723.80	74.06	78.20	-4.14	64.28	8.47	34.44	33.13	225	178	Peak	VERTICAL
3	5737.00	103.34			93.57	8.47	34.44	33.14	225	178	Average	VERTICAL
4	5737.60	112.80			103.03	8.47	34.44	33.14	225	178	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5755 MHz.

Channel 159

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5709.20	67.74	68.20	-0.46	57.93	8.51	34.43	33.13	201	141	Peak	VERTICAL
2	5720.60	66.98	78.20	-11.22	57.17	8.51	34.43	33.13	201	141	Peak	VERTICAL
3	5790.80	112.56			102.92	8.31	34.48	33.15	201	141	Peak	VERTICAL
4	5792.60	101.40			91.76	8.31	34.48	33.15	201	141	Average	VERTICAL
5	5859.20	65.28	78.20	-12.92	55.29	8.64	34.52	33.17	201	141	Peak	VERTICAL
6	5868.20	65.26	68.20	-2.94	55.28	8.64	34.52	33.18	201	141	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5795 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42, 58 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Channel 42

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5149.00	53.83	54.00	-0.17	44.99	8.15	33.74	33.05	208	142	Average	VERTICAL
2	5150.00	68.21	74.00	-5.79	59.37	8.15	33.74	33.05	208	142	Peak	VERTICAL
3	5218.00	99.64			90.53	8.30	33.86	33.05	208	142	Average	VERTICAL
4	5219.00	110.26			101.15	8.30	33.86	33.05	208	142	Peak	VERTICAL
5	5424.00	50.22	54.00	-3.78	40.83	8.27	34.18	33.06	208	142	Average	VERTICAL
6	5437.00	62.69	74.00	-11.31	53.23	8.32	34.20	33.06	208	142	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5210 MHz.

Channel 58

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5116.00	61.12	74.00	-12.88	52.45	8.03	33.69	33.05	208	179	Peak	VERTICAL
2	5150.00	49.00	54.00	-5.00	40.16	8.15	33.74	33.05	208	179	Average	VERTICAL
3	5303.00	99.00			89.84	8.24	33.98	33.06	208	179	Average	VERTICAL
4	5306.00	108.96			99.80	8.24	33.98	33.06	208	179	Peak	VERTICAL
5	5350.00	71.32	74.00	-2.68	62.12	8.20	34.06	33.06	208	179	Peak	VERTICAL
6	5353.00	53.96	54.00	-0.04	44.76	8.20	34.06	33.06	208	179	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5290 MHz.

Temperature	24°C	Humidity	78%
Test Engineer	Paul Chen	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106, 155 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jan. 07, 2016		

Channel 106

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5452.00	66.59	74.00	-7.41	57.06	8.36	34.23	33.06	221	208	Peak	VERTICAL
2	5460.00	53.71	54.00	-0.29	44.18	8.36	34.23	33.06	221	208	Average	VERTICAL
3	5461.00	53.72	54.00	-0.28	44.19	8.36	34.23	33.06	221	208	Average	VERTICAL
4	5462.00	69.28	74.00	-4.72	59.75	8.36	34.23	33.06	221	208	Peak	VERTICAL
5	5539.00	100.78			90.92	8.61	34.32	33.07	221	208	Average	VERTICAL
6	5542.00	110.85			101.00	8.61	34.32	33.08	221	208	Peak	VERTICAL
7	5771.00	50.17	54.00	-3.83	40.47	8.39	34.46	33.15	221	208	Average	VERTICAL
8	5772.00	62.63	74.00	-11.37	52.96	8.35	34.47	33.15	221	208	Peak	VERTICAL

Item 5, 6 are the fundamental frequency at 5530 MHz.

Channel 155

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5710.00	68.08	68.20	-0.12	58.27	8.51	34.43	33.13	204	148	Peak	VERTICAL
2	5719.00	69.34	78.20	-8.86	59.53	8.51	34.43	33.13	204	148	Peak	VERTICAL
3	5738.00	99.52			89.75	8.47	34.44	33.14	204	148	Average	VERTICAL
4	5789.00	109.10			99.46	8.31	34.48	33.15	204	148	Peak	VERTICAL
5	5853.00	65.42	78.20	-12.78	55.52	8.56	34.51	33.17	204	148	Peak	VERTICAL
6	5863.00	64.21	68.20	-3.99	54.23	8.64	34.52	33.18	204	148	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5775 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m)

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

4.8. Frequency Stability Measurement

4.8.1. Limit

In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band (IEEE 802.11n specification).

4.8.2. Measuring Instruments and Setting

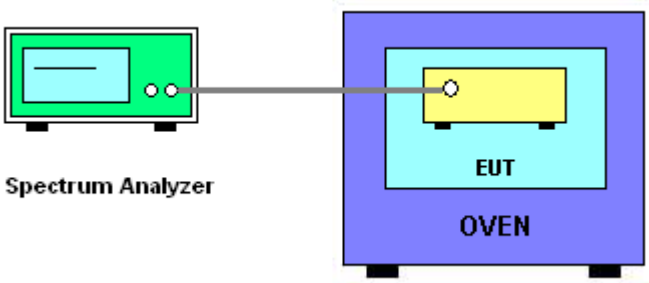
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Entire absence of modulation emissions bandwidth
RBW	10 kHz
VBW	10 kHz
Sweep Time	Auto

4.8.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. EUT have transmitted absence of modulation signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth.
4. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings.
5. fc is declaring of channel frequency. Then the frequency error formula is (fc-f)/fc × 10^6 ppm and the limit is less than ±20ppm (IEEE 802.11nspecification).
6. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
7. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
8. Extreme temperature is -0°C~40°C.

4.8.4. Test Setup Layout



4.8.5. Test Deviation

There is no deviation with the original standard.

4.8.6. EUT Operation during Test

The EUT was programmed to be in continuously un-modulation transmitting mode.

4.8.7. Test Result of Frequency Stability

Temperature	24°C	Humidity	60%
Test Engineer	Clemens Fand	Test Date	Jan. 08, 2016

Mode: 20 MHz / Ant. 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5199.9363	5199.9360	5199.9350	5199.9347
110.00	5199.9357	5199.9355	5199.9353	5199.9344
93.50	5199.9349	5199.9344	5199.9342	5199.9337
Max. Deviation (MHz)	0.0651	0.0656	0.0658	0.0663
Max. Deviation (ppm)	12.51	12.61	12.65	12.74
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5199.9347	5199.9340	5199.9331	5199.9321
10	5199.9350	5199.9343	5199.9336	5199.9328
20	5199.9357	5199.9354	5199.9352	5199.9343
30	5199.9362	5199.9356	5199.9350	5199.9344
40	5199.9374	5199.9366	5199.9363	5199.9357
Max. Deviation (MHz)	0.0665	0.0671	0.0676	0.0680
Max. Deviation (ppm)	12.78	12.90	12.99	13.07
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5300 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5299.9366	5299.9357	5299.9354	5299.9344
110.00	5299.9357	5299.9348	5299.9346	5299.9342
93.50	5299.9356	5299.9354	5299.9345	5299.9341
Max. Deviation (MHz)	0.0644	0.0652	0.0655	0.0659
Max. Deviation (ppm)	12.14	12.29	12.35	12.43
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5300 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5299.9351	5299.9341	5299.9337	5299.9332
10	5299.9355	5299.9347	5299.9337	5299.9330
20	5299.9357	5299.9350	5299.9347	5299.9346
30	5299.9362	5299.9361	5299.9352	5299.9344
40	5299.9370	5299.9365	5299.9358	5299.9350
Max. Deviation (MHz)	0.0676	0.0681	0.0687	0.0689
Max. Deviation (ppm)	12.75	12.84	12.95	12.99
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5580 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5579.9365	5579.9357	5579.9348	5579.9345
110.00	5579.9357	5579.9355	5579.9351	5579.9346
93.50	5579.9355	5579.9352	5579.9343	5579.9338
Max. Deviation (MHz)	0.0645	0.0648	0.0657	0.0662
Max. Deviation (ppm)	11.55	11.60	11.77	11.86
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5580 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5579.9340	5579.9338	5579.9330	5579.9325
10	5579.9342	5579.9339	5579.9337	5579.9334
20	5579.9357	5579.9349	5579.9348	5579.9343
30	5579.9362	5579.9360	5579.9359	5579.9349
40	5579.9380	5579.9375	5579.9370	5579.9360
Max. Deviation (MHz)	0.0688	0.0689	0.0695	0.0705
Max. Deviation (ppm)	12.32	12.34	12.45	12.63
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5784.9362	5784.9360	5784.9355	5784.9353
110.00	5784.9357	5784.9353	5784.9350	5784.9340
93.50	5784.9352	5784.9348	5784.9338	5784.9335
Max. Deviation (MHz)	0.0648	0.0652	0.0662	0.0665
Max. Deviation (ppm)	11.19	11.26	11.44	11.49
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5784.9335	5784.9331	5784.9328	5784.9324
10	5784.9353	5784.9343	5784.9339	5784.9330
20	5784.9357	5784.9353	5784.9350	5784.9346
30	5784.9362	5784.9353	5784.9343	5784.9336
40	5784.9367	5784.9366	5784.9364	5784.9360
Max. Deviation (MHz)	0.0688	0.0697	0.0706	0.0711
Max. Deviation (ppm)	11.89	12.04	12.20	12.28
Result	Complies			

Mode: 40 MHz / Ant. 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5189.9361	5189.9352	5189.9348	5189.9341
110.00	5189.9357	5189.9354	5189.9350	5189.9344
93.50	5189.9356	5189.9353	5189.9347	5189.9343
Max. Deviation (MHz)	0.0644	0.0648	0.0653	0.0659
Max. Deviation (ppm)	12.40	12.48	12.57	12.69
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5189.9346	5189.9340	5189.9332	5189.9329
10	5189.9348	5189.9346	5189.9340	5189.9334
20	5189.9357	5189.9351	5189.9345	5189.9342
30	5189.9362	5189.9356	5189.9348	5189.9338
40	5189.9380	5189.9370	5189.9366	5189.9357
Max. Deviation (MHz)	0.0677	0.0682	0.0686	0.0691
Max. Deviation (ppm)	13.04	13.13	13.21	13.31
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5310 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5309.9364	5309.9360	5309.9358	5309.9356
110.00	5309.9357	5309.9352	5309.9344	5309.9343
93.50	5309.9352	5309.9351	5309.9343	5309.9339
Max. Deviation (MHz)	0.0648	0.0649	0.0657	0.0661
Max. Deviation (ppm)	12.19	12.21	12.36	12.44
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5310 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5309.9340	5309.9338	5309.9335	5309.9328
10	5309.9351	5309.9341	5309.9337	5309.9335
20	5309.9357	5309.9351	5309.9342	5309.9336
30	5309.9362	5309.9355	5309.9352	5309.9351
40	5309.9382	5309.9380	5309.9373	5309.9364
Max. Deviation (MHz)	0.0677	0.0685	0.0692	0.0694
Max. Deviation (ppm)	12.74	12.89	13.02	13.06
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5550 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5549.9366	5549.9360	5549.9353	5549.9352
110.00	5549.9357	5549.9352	5549.9348	5549.9341
93.50	5549.9351	5549.9343	5549.9335	5549.9334
Max. Deviation (MHz)	0.0649	0.0657	0.0665	0.0666
Max. Deviation (ppm)	11.69	11.83	11.97	11.99
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5550 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5549.9334	5549.9328	5549.9319	5549.9309
10	5549.9349	5549.9343	5549.9337	5549.9336
20	5549.9357	5549.9350	5549.9346	5549.9340
30	5549.9362	5549.9355	5549.9346	5549.9345
40	5549.9379	5549.9377	5549.9369	5549.9368
Max. Deviation (MHz)	0.0683	0.0688	0.0696	0.0700
Max. Deviation (ppm)	12.30	12.39	12.53	12.60
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5754.9358	5754.9354	5754.9350	5754.9346
110.00	5754.9357	5754.9347	5754.9345	5754.9339
93.50	5754.9348	5754.9338	5754.9332	5754.9322
Max. Deviation (MHz)	0.0652	0.0662	0.0668	0.0678
Max. Deviation (ppm)	11.32	11.50	11.60	11.77
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5754.9339	5754.9338	5754.9330	5754.9324
10	5754.9348	5754.9347	5754.9345	5754.9340
20	5754.9357	5754.9354	5754.9344	5754.9341
30	5754.9362	5754.9356	5754.9350	5754.9349
40	5754.9371	5754.9367	5754.9358	5754.9348
Max. Deviation (MHz)	0.0672	0.0677	0.0682	0.0688
Max. Deviation (ppm)	11.67	11.76	11.84	11.95
Result	Complies			

Mode: 80 MHz / Ant. 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5209.9360	5209.9356	5209.9353	5209.9349
110.00	5209.9357	5209.9356	5209.9346	5209.9342
93.50	5209.9349	5209.9342	5209.9335	5209.9329
Max. Deviation (MHz)	0.0651	0.0658	0.0665	0.0671
Max. Deviation (ppm)	12.49	12.62	12.76	12.87
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5209.9345	5209.9344	5209.9342	5209.9339
10	5209.9355	5209.9352	5209.9345	5209.9344
20	5209.9357	5209.9351	5209.9346	5209.9341
30	5209.9362	5209.9358	5209.9353	5209.9348
40	5209.9368	5209.9365	5209.9364	5209.9359
Max. Deviation (MHz)	0.0668	0.0672	0.0677	0.0679
Max. Deviation (ppm)	12.81	12.89	12.99	13.02
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5290 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5289.9366	5289.9364	5289.9354	5289.9349
110.00	5289.9357	5289.9353	5289.9348	5289.9345
93.50	5289.9351	5289.9345	5289.9338	5289.9332
Max. Deviation (MHz)	0.0649	0.0655	0.0662	0.0668
Max. Deviation (ppm)	12.26	12.37	12.51	12.62
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5290 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5289.9346	5289.9343	5289.9333	5289.9323
10	5289.9351	5289.9347	5289.9342	5289.9332
20	5289.9357	5289.9350	5289.9341	5289.9335
30	5289.9362	5289.9361	5289.9356	5289.9350
40	5289.9364	5289.9357	5289.9347	5289.9339
Max. Deviation (MHz)	0.0673	0.0682	0.0684	0.0691
Max. Deviation (ppm)	12.71	12.88	12.92	13.05
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5530 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5529.9360	5529.9352	5529.9348	5529.9345
110.00	5529.9357	5529.9350	5529.9346	5529.9343
93.50	5529.9352	5529.9345	5529.9343	5529.9340
Max. Deviation (MHz)	0.0648	0.0655	0.0657	0.0660
Max. Deviation (ppm)	11.71	11.84	11.87	11.93
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5530 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5529.9321	5529.9315	5529.9312	5529.9305
10	5529.9338	5529.9330	5529.9323	5529.9314
20	5529.9357	5529.9354	5529.9344	5529.9334
30	5529.9362	5529.9354	5529.9347	5529.9340
40	5529.9375	5529.9374	5529.9366	5529.9358
Max. Deviation (MHz)	0.0711	0.0721	0.0723	0.0733
Max. Deviation (ppm)	12.85	13.03	13.07	13.25
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5774.9358	5774.9356	5774.9353	5774.9347
110.00	5774.9357	5774.9347	5774.9338	5774.9331
93.50	5774.9356	5774.9351	5774.9344	5774.9340
Max. Deviation (MHz)	0.0644	0.0653	0.0662	0.0669
Max. Deviation (ppm)	11.14	11.30	11.46	11.58
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5774.9330	5774.9326	5774.9320	5774.9315
10	5774.9347	5774.9338	5774.9334	5774.9326
20	5774.9357	5774.9350	5774.9343	5774.9335
30	5774.9362	5774.9356	5774.9348	5774.9342
40	5774.9381	5774.9378	5774.9377	5774.9369
Max. Deviation (MHz)	0.0687	0.0691	0.0694	0.0696
Max. Deviation (ppm)	11.89	11.96	12.01	12.04
Result	Complies			

4.9. Antenna Requirements

4.9.1. Limit

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

4.9.2. Antenna Connector Construction

Please refer to section 3.3 in this test report; antenna connector complied with the requirements.

5. LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Test Receiver	R&S	ESCS 30	100355	9kHz ~ 2.75G Hz	Apr. 22, 2015	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 08, 2015	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 23, 2015	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 25, 2015	Conduction (CO01-CB)
Software	Audix	E3	5.410e	-	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA	Schaffner	CBL6112D	37880	20MHz ~ 2GHz	Sep. 03, 2015	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 12, 2015*	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Oct. 22, 2015	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 21, 2015	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Feb. 24, 2015	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 12, 2015	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26GHz ~ 40GHz	Feb.10, 2015	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Oct. 27, 2015	Radiation (03CH01-CB)
EMI Receiver	Agilent	N9038A	MY52260123	9kHz ~ 8.4GHz	Jan. 21, 2015	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-1	N/A	30 MHz ~ 1 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-17	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-1	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-2	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-l0-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 09, 2015	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 02, 2015	Conducted (TH01-CB)

Note: Calibration Interval of instruments listed above is one year.

"*" Calibration Interval of instruments listed above is two years.

N.C.R. means Non-Calibration required.

6. MEASUREMENT UNCERTAINTY

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%