SPORTON International Inc.
No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
Ph: 886-3-327-3456 / FAX: 886-3-327-0973 / www.sporton.com.tw

FCC RADIO TEST REPORT

Applicant's company	**PEGATRON CORPORATION**
Applicant Address	5F., NO. 76, LIGONG ST., BEITOU DISTRICT, TAIPEI CITY 11259, Taiwan
FCC ID	**VUI-WAP571**
Manufacturer's company	**MAINTEK Computer (Suzhou) Co., Ltd.**
Manufacturer Address	233 JIN FENG RD NEW DISTRICT SUZHOU JIANGSU 215011 CHINA

Product Name	Wireless-AC/N Premium Dual Radio Access Point with PoE
Brand Name	CISCO
Model No.	WAP571
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	Jun. 05, 2015
Final Test Date	Aug. 05, 2015
Submission Type	Original Equipment
Operate Mode	Master Client without radar detection Bridge

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.

TAF
Testing Laboratory
1190

Table of Contents

History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR560260AB	Rev. 01	Initial issue of report	Aug. 19, 2015

1. VERIFICATION OF COMPLIANCE

Product Name	:	Wireless-AC/N Premium Dual Radio Access Point with PoE
Brand Name	:	CISCO
Model No.	:	WAP571
Applicant	:	PEGATRON CORPORATION
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 Jun. 05, 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	3.32 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	0.01 dB
4.5	15.407(a)	Power Spectral Density	Complies	0.03 dB
4.6	15.407(b)	Radiated Emissions	Complies	0.78 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 PoE
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	24 for 20MHz bandwidth ; 11 for 40MHz bandwidth 5 for 80MHz bandwidth
Channel Band Width (99%)	Band 1: IEEE 802.11a: 17.97 MHz IEEE 802.11ac MCS0/Nss1 (VHT20): 18.15 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 37.48 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.12 MHz Band 2: IEEE 802.11a: 16.84 MHz IEEE 802.11ac MCS0/Nss1 (VHT20): 17.63 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 36.76 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.12 MHz Band 3: IEEE 802.11a: 16.93 MHz IEEE 802.11ac MCS0/Nss1 (VHT20): 17.63 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 36.76 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.12 MHz Band 4: IEEE 802.11a: 21.27 MHz IEEE 802.11ac MCS0/Nss1 (VHT20): 23.97 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 36.90 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.12 MHz

Maximum Conducted Output Power	Band 1: IEEE 802.11a: 29.53 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 29.38 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 29.96 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 20.47 dBm Band 2: IEEE 802.11a: 23.72 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 23.64 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 23.99 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 19.89 dBm Band 3: IEEE 802.11a: 23.97 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 23.95 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 23.98 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 23.87 dBm Band 4: IEEE 802.11a: 29.98 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 29.89 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 26.45 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 23.64 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

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	☒ Without beamforming
Operating Mode	☐ Outdoor access point	
	☒ Indoor access point	
	☐ Fixed point-to-point access points	
	☐ Mobile and portable client devices	

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

Description
Wall-mounted rack*1
RJ-45 cable*1: Non-shielded, 1.8m

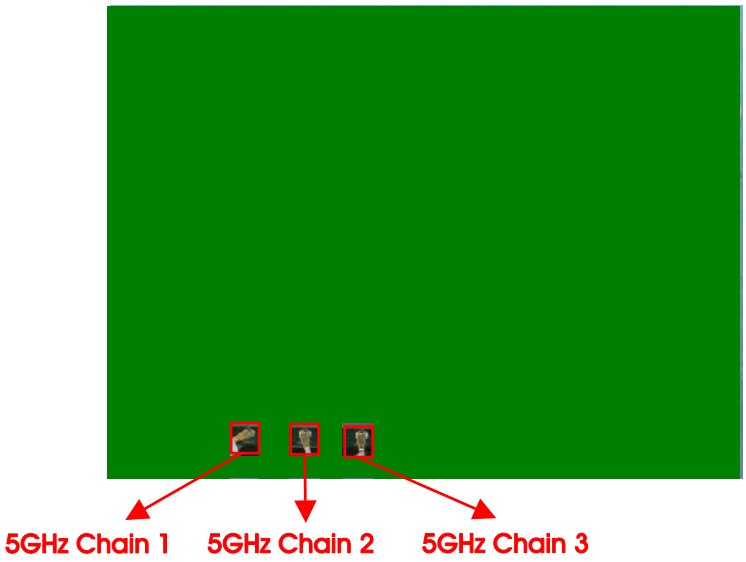
3.3. Table for Filed Antenna

Ant.	Brand	Part Number	Antenna Type	Connector	Gain (dBi)			
					5GHz Band 1	5GHz Band 2	5GHz Band 3	5GHz Band 4
1	Hong Lin	290-30258	PIFA Antenna	I-PEX	1.11	1.51	1.48	1.90
2	Hong Lin	290-30259	PIFA Antenna	I-PEX	1.66	1.43	1.25	1.34
3	Hong Lin	290-30260	PIFA Antenna	I-PEX	1.73	1.96	1.99	1.34

Note: 1. The EUT has three antennas for 5GHz WLAN function use.

2. Chain 1: Connect to Ant. 1, Chain 2: Connect to Ant. 2, Chain 3: Connect to Ant. 3.

3. 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, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165.

For 40MHz bandwidth systems, use Channel 38, 46, 54, 62, 102, 110, 118, 126, 134, 151, 159.

For 80MHz bandwidth systems, use Channel 42, 58, 106, 122, 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	120	5600 MHz
	102	5510 MHz	122	5610 MHz
	104	5520 MHz	124	5620 MHz
	106	5530 MHz	126	5630 MHz
	108	5540 MHz	128	5640 MHz
	110	5550 MHz	132	5660 MHz
	112	5560 MHz	134	5670 MHz
	116	5580 MHz	136	5680 MHz
	118	5590 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.

Test Items	Mode		Data Rate	Channel	Chain
AC Power Conducted Emission	CTX		-	-	-
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	42/58/106/122/155	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	42/58/106/122/155	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	42/58/106/122/155	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	CTX		-	-	-
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	42/58/106/122/155	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	42/58/106/122/155	1+2+3
Frequency Stability	20 MHz	Band 1~4	-	40/60/116/157	1+2+3
	40 MHz	Band 1~4	-	38/62/110/151	1+2+3
	80 MHz	Band 1~4	-	42/58/106/155	1+2+3

Note: 1. 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.

2. The PoE is for measurement only, would not be marketed.

Support Unit	Brand	Model	FCC ID
PoE	CERIO	POE-S48G	N/A

The following test modes were performed for all tests:

For Radiated Emission below 1GHz test:

Mode 1. Place EUT in Y axis

Mode 2. Place EUT in Z axis

Mode 1 generated the worst test result, so it was recorded in this report.

For Radiated Emission above1GHz test:

There are two modes of EUT, one is Place EUT in Y axis, and the other is Place EUT in Z axis, after evaluating, Place EUT in Y axis has been evaluated to be the worst case, so it was selected to test and record in this test report.

For Radiated Emission Co-location test:

There are two modes of EUT, one is Place EUT in Y axis, and the other is Place EUT in Z axis.

Place EUT in Y axis generated the worst test result for Radiated emission below 1GHz test, thus the measurement for Radiated emission co-location test will follow this same test configuration.

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 Appendix B) and Radiated Emission Co-location (please refer to Appendix C) tests are added for simultaneously transmit between 2.4GHz WLAN function and 5GHz WLAN function.

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: 03CH01-CB and TH01-CB

Support Unit	Brand	Model	FCC ID
Notebook	DELL	E4300	DoC
PoE	CERIO	POE-S48G	N/A

For Test Site No: CO01-CB

Support Unit	Brand	Model	FCC ID
Notebook	DELL	E6430	DoC
PoE	CERIO	POE-S48G	N/A

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.

Test Software Version	Mtool 2.0.2.3											
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	87	100	100	74	73	73	75	76	76	75	100	80
802.11ac MCS0/Nss1 VHT20	85	100	99	73	73	73	75	75	76	79	100	80

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	99	75	62	64	75	75	70	84

Mode	NCB: 80MHz				
802.11ac MCS0/Nss1 VHT80	5210 MHz	5290 MHz	5530 MHz	5610 MHz	5775 MHz
	60	56	64	76	72

3.9. EUT Operation during Test

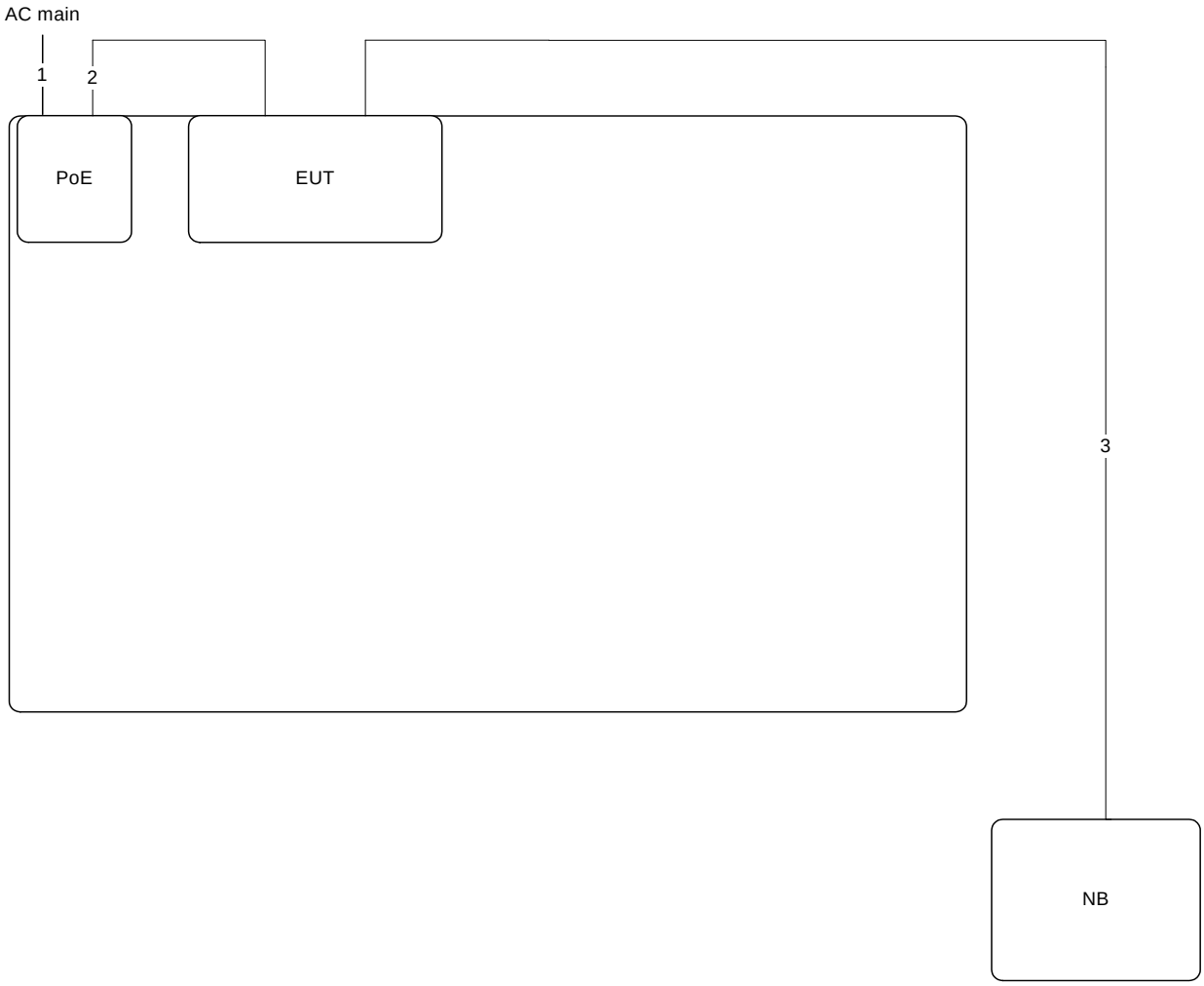
The EUT was programmed to be in continuously transmitting mode.

3.10. Duty Cycle

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11a	2.058	2.087	98.61	0.06	0.01
802.11ac MCS0/Nss1 VHT20	1.920	1.943	98.84	0.05	0.01
802.11ac MCS0/Nss1 VHT40	0.917	0.972	94.34	0.25	1.09
802.11ac MCS0/Nss1 VHT80	0.428	0.486	88.06	0.55	2.34

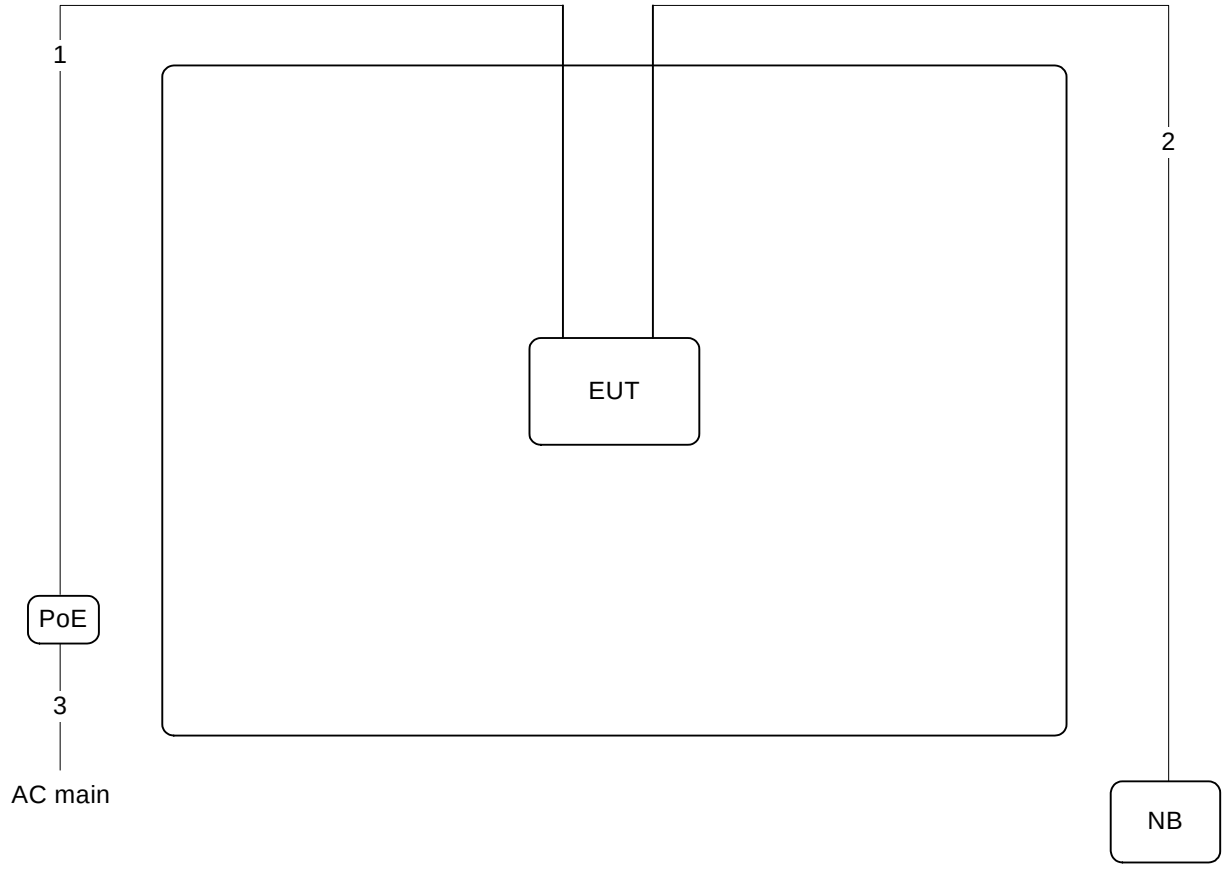
3.11. Test Configurations

3.11.1. AC Power Line Conduction Emissions Test Configuration



Item	Connection	Shielded	Length
1	Power cable	No	3m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	1m

3.11.2. Radiation Emissions Test Configuration



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	10m
3	Power cable	No	3m

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

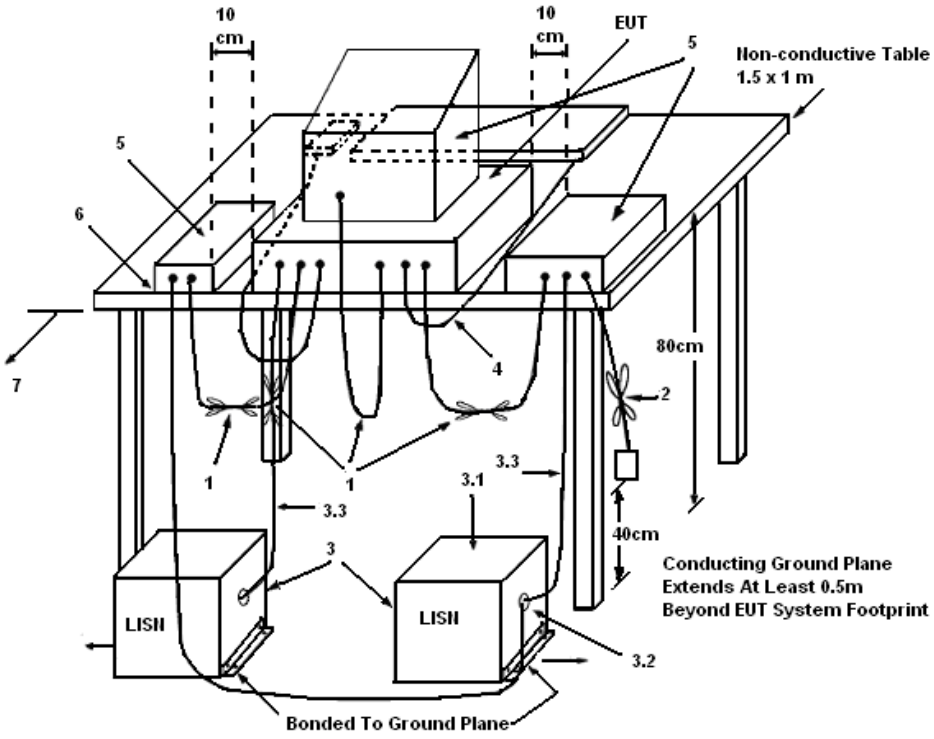
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

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

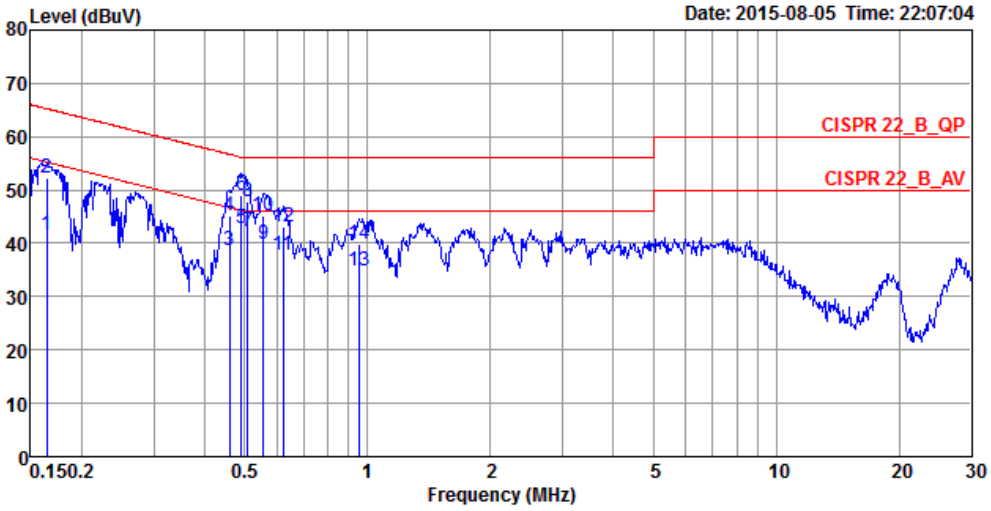
There is no deviation with the original standard.

4.1.6. EUT Operation during Test

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

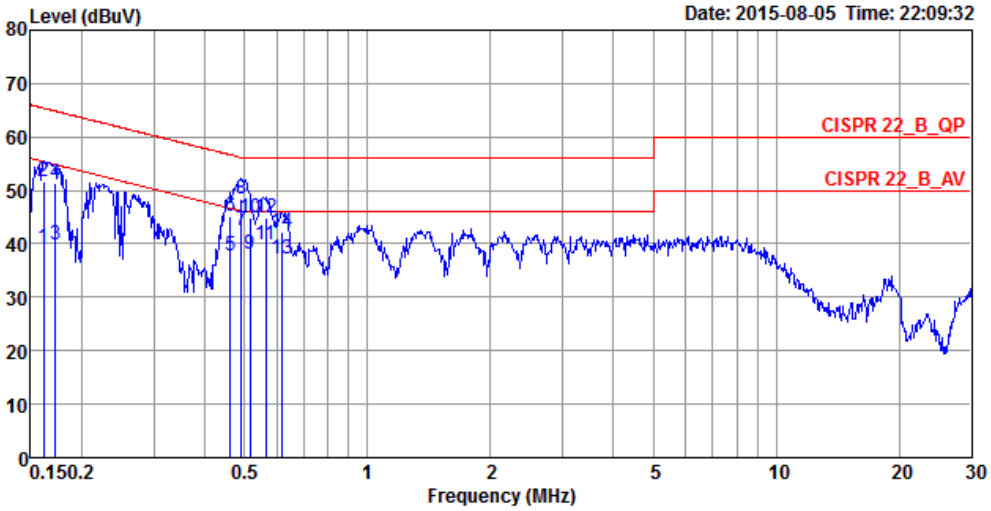
4.1.7. Results of AC Power Line Conducted Emissions Measurement

Temperature	23°C	Humidity	60%
Test Engineer	Edison Lin	Phase	Line
Configuration	CTX		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1641	41.77	-13.48	55.25	31.82	9.93	0.02	LINE	Average
2	0.1641	52.31	-12.94	65.25	42.36	9.93	0.02	LINE	QP
3	0.4588	38.57	-8.14	46.71	28.60	9.93	0.04	LINE	Average
4	0.4588	45.07	-11.64	56.71	35.10	9.93	0.04	LINE	QP
5	0.4915	42.82	-3.32	46.14	32.84	9.94	0.04	LINE	Average
6	0.4915	49.03	-7.11	56.14	39.05	9.94	0.04	LINE	QP
7	0.5101	42.29	-3.71	46.00	32.31	9.94	0.04	LINE	Average
8	0.5101	47.75	-8.25	56.00	37.77	9.94	0.04	LINE	QP
9	0.5552	39.88	-6.12	46.00	29.90	9.94	0.04	LINE	Average
10	0.5552	45.21	-10.79	56.00	35.23	9.94	0.04	LINE	QP
11	0.6205	37.85	-8.15	46.00	27.87	9.94	0.04	LINE	Average
12	0.6205	43.06	-12.94	56.00	33.08	9.94	0.04	LINE	QP
13	0.9531	34.88	-11.12	46.00	24.87	9.96	0.05	LINE	Average
14	0.9531	39.95	-16.05	56.00	29.94	9.96	0.05	LINE	QP

Temperature	23°C	Humidity	60%
Test Engineer	Edison Lin	Phase	Neutral
Configuration	CTX		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1616	39.34	-16.04	55.38	29.54	9.78	0.02	NEUTRAL	Average
2	0.1616	51.60	-13.78	65.38	41.80	9.78	0.02	NEUTRAL	QP
3	0.1722	39.76	-15.10	54.86	29.96	9.78	0.02	NEUTRAL	Average
4	0.1722	51.28	-13.58	64.86	41.48	9.78	0.02	NEUTRAL	QP
5	0.4612	37.93	-8.74	46.67	28.10	9.79	0.04	NEUTRAL	Average
6	0.4612	45.04	-11.63	56.67	35.21	9.79	0.04	NEUTRAL	QP
7	0.4915	42.43	-3.71	46.14	32.60	9.79	0.04	NEUTRAL	Average
8	0.4915	48.40	-7.74	56.14	38.57	9.79	0.04	NEUTRAL	QP
9	0.5155	38.14	-7.86	46.00	28.30	9.80	0.04	NEUTRAL	Average
10	0.5155	44.87	-11.13	56.00	35.03	9.80	0.04	NEUTRAL	QP
11	0.5641	39.96	-6.04	46.00	30.12	9.80	0.04	NEUTRAL	Average
12	0.5641	44.87	-11.13	56.00	35.03	9.80	0.04	NEUTRAL	QP
13	0.6173	37.11	-8.89	46.00	27.27	9.80	0.04	NEUTRAL	Average
14	0.6173	42.22	-13.78	56.00	32.38	9.80	0.04	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.

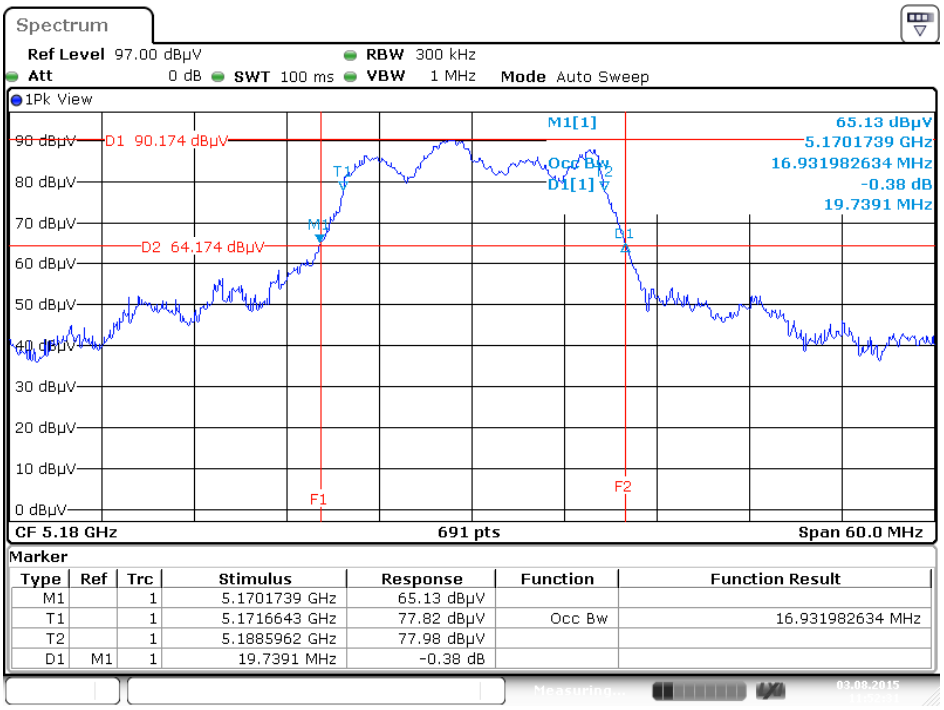
4.2.7. Test Result of 26dB Bandwidth and 99% Occupied Bandwidth

Temperature	26.2°C	Humidity	62%
Test Engineer	Nick Peng		

Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a	5180 MHz	19.73	16.93
	5200 MHz	22.52	17.80
	5240 MHz	27.04	17.97
	5260 MHz	20.00	16.84
	5300 MHz	20.09	16.84
	5320 MHz	20.00	16.84
	5500 MHz	20.00	16.84
	5580 MHz	20.09	16.93
	5700 MHz	20.17	16.84
	5745 MHz	20.00	16.84
	5785 MHz	36.52	21.27
	5825 MHz	20.00	16.84
802.11ac MCS0/Nss1 VHT20	5180 MHz	20.17	17.71
	5200 MHz	31.91	18.15
	5240 MHz	30.52	18.06
	5260 MHz	20.09	17.63
	5300 MHz	20.17	17.63
	5320 MHz	20.26	17.63
	5500 MHz	20.26	17.63
	5580 MHz	20.17	17.54
	5700 MHz	20.17	17.54
	5745 MHz	20.26	17.63
	5785 MHz	41.91	23.97
	5825 MHz	20.17	17.63

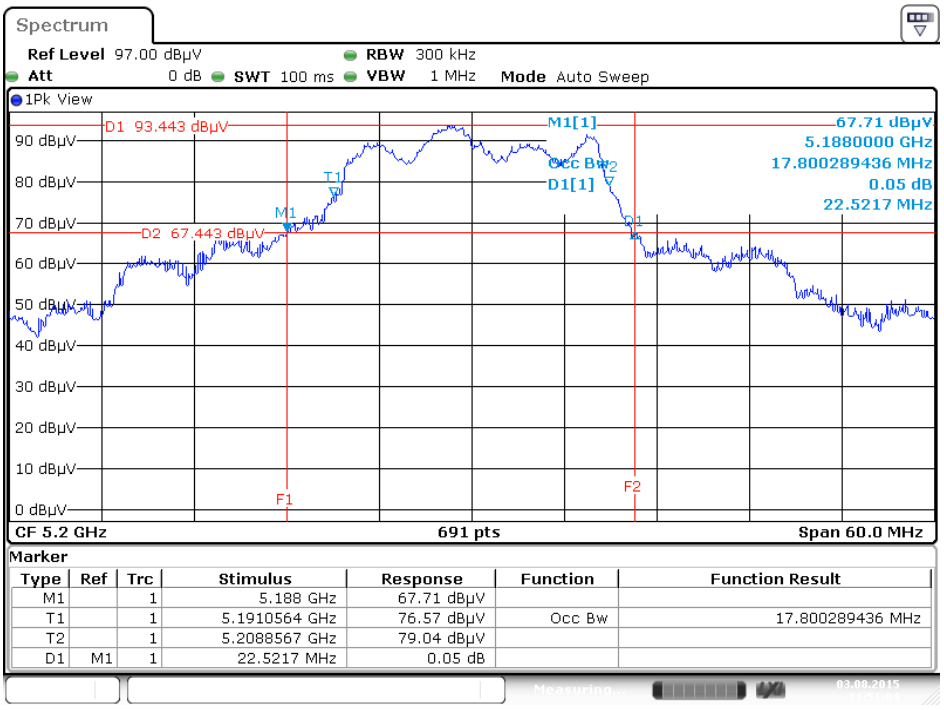
Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac MCS0/Nss1 VHT40	5190 MHz	40.58	36.76
	5230 MHz	71.01	37.48
	5270 MHz	40.58	36.76
	5310 MHz	40.15	36.61
	5510 MHz	40.44	36.61
	5550 MHz	40.44	36.76
	5670 MHz	40.44	36.76
	5755 MHz	40.44	36.90
	5795 MHz	50.73	36.90
802.11ac MCS0/Nss1 VHT80	5210 MHz	81.74	76.12
	5290 MHz	82.03	76.12
	5530 MHz	80.87	76.12
	5610 MHz	81.74	76.12
	5775 MHz	81.74	76.12

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



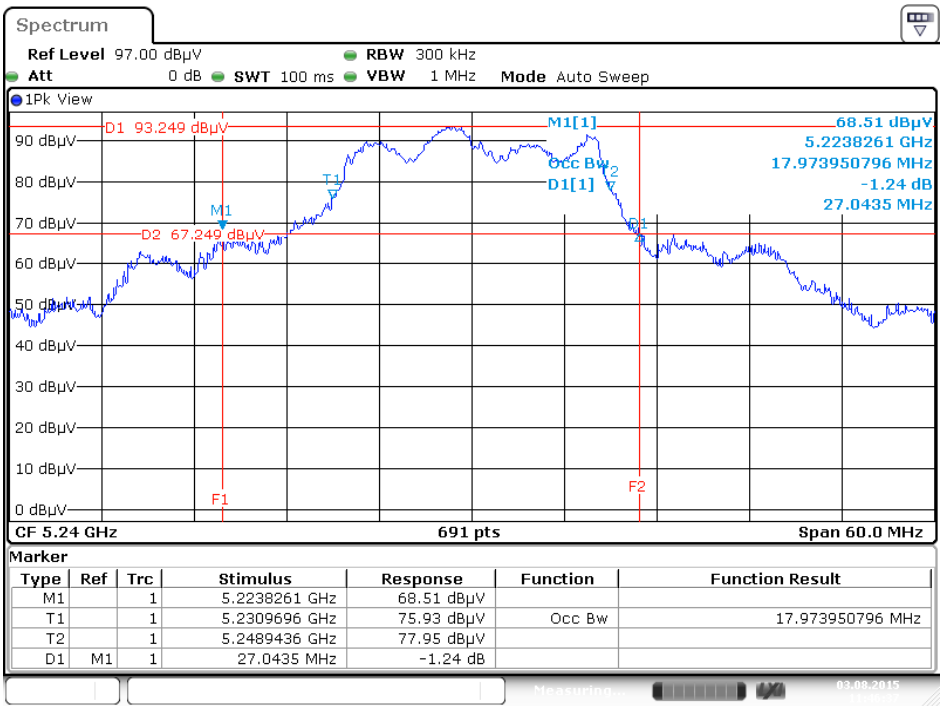
Date: 3.AUG.2015 11:52:31

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



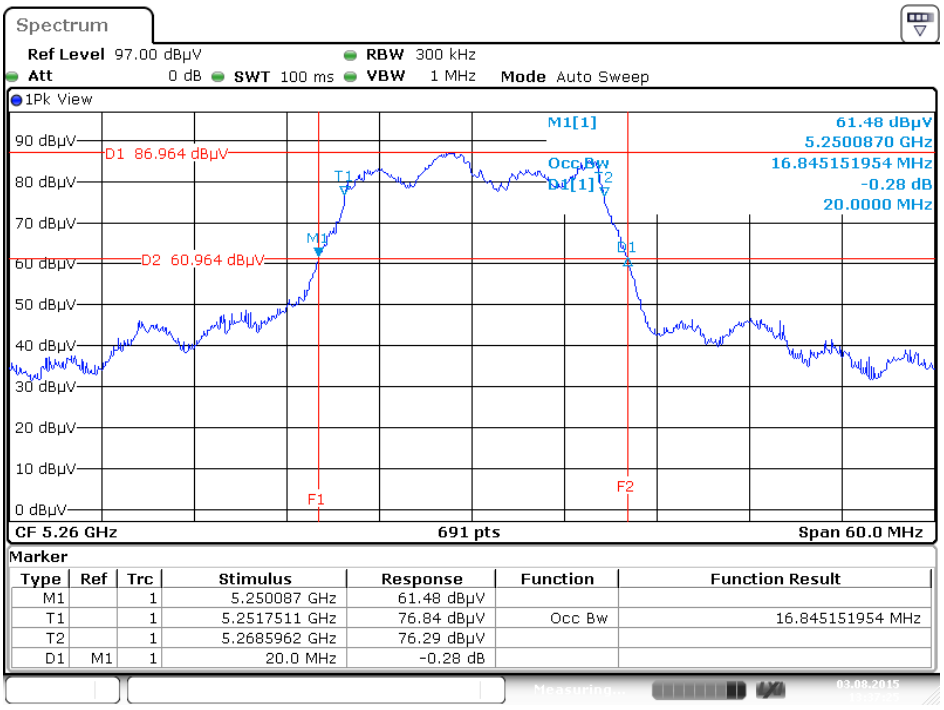
Date: 3.AUG.2015 11:51:04

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



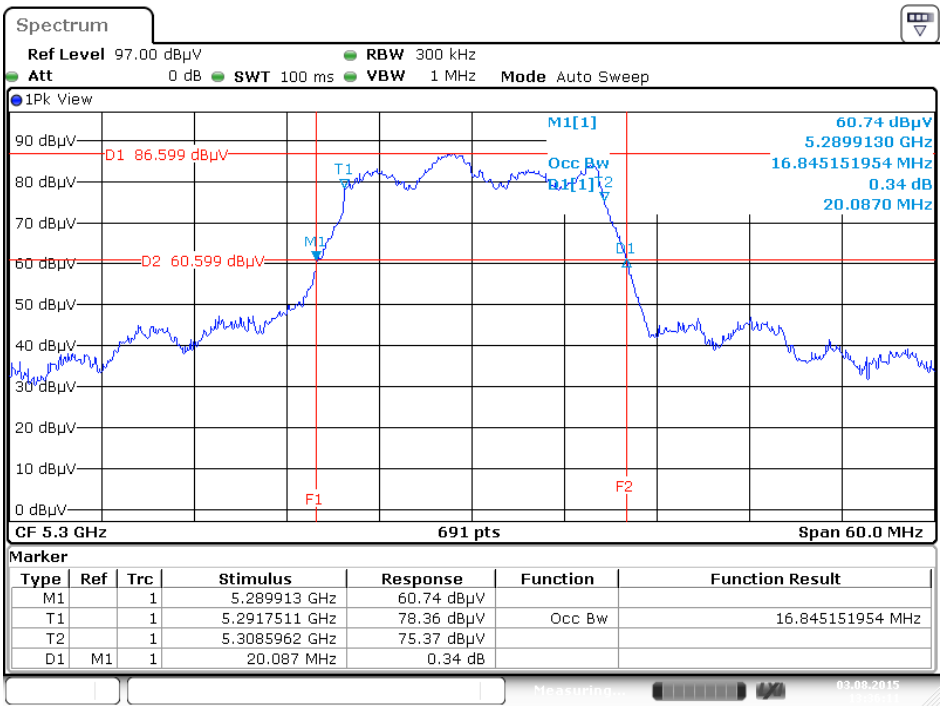
Date: 3.AUG.2015 11:46:38

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



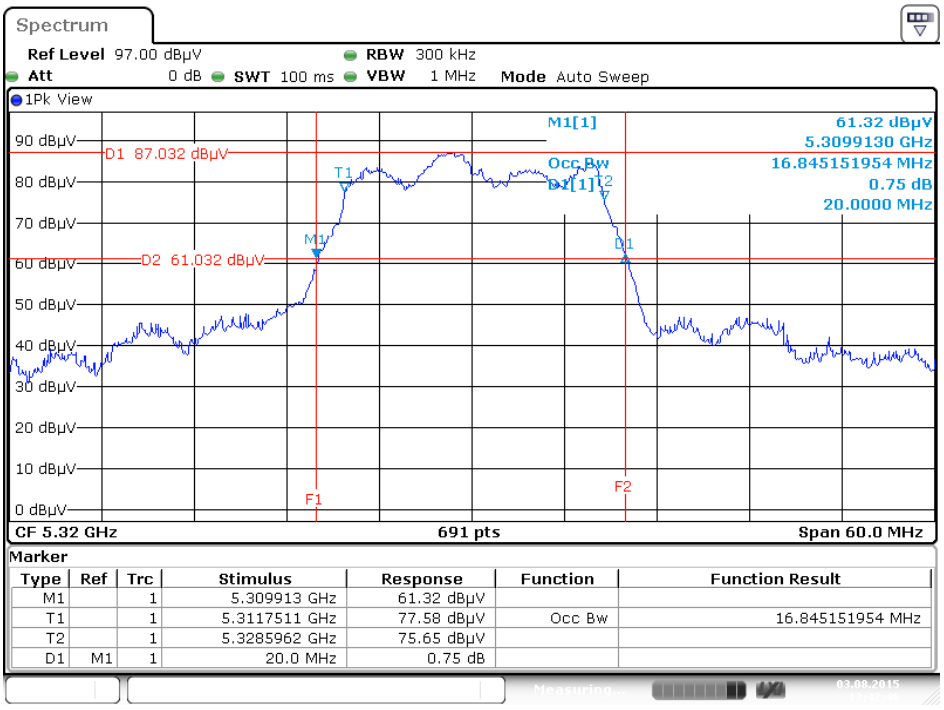
Date: 3.AUG.2015 13:37:25

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



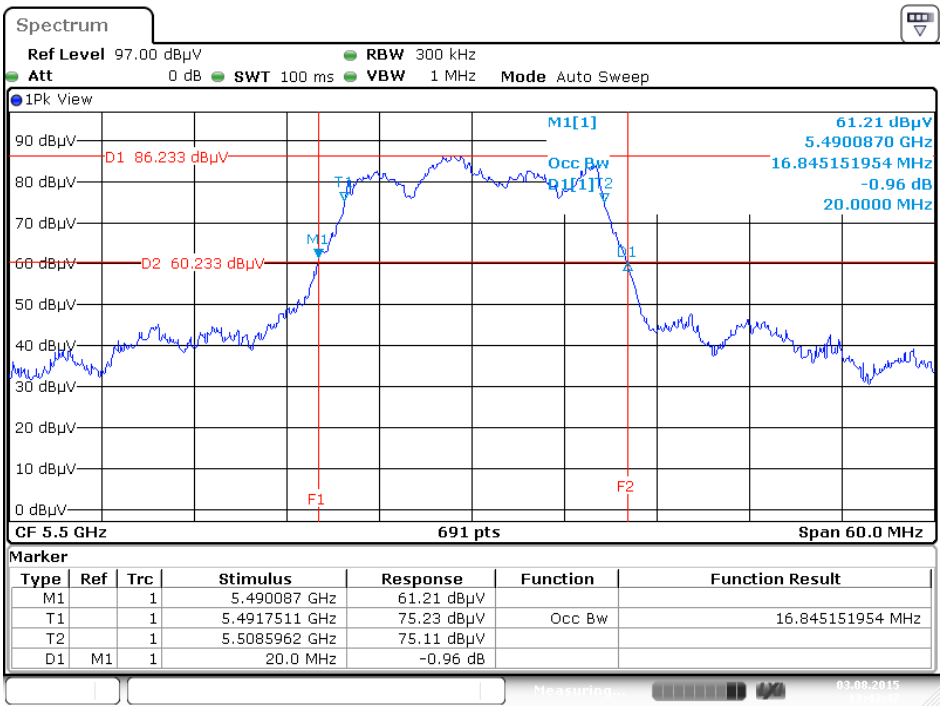
Date: 3.AUG.2015 13:36:11

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



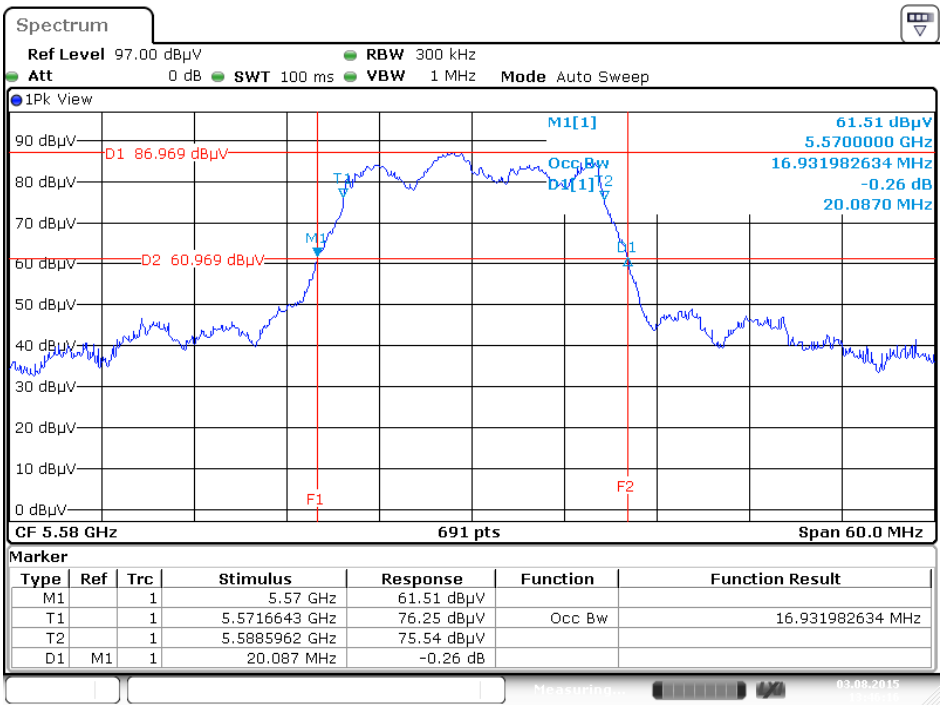
Date: 3.AUG.2015 13:42:46

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



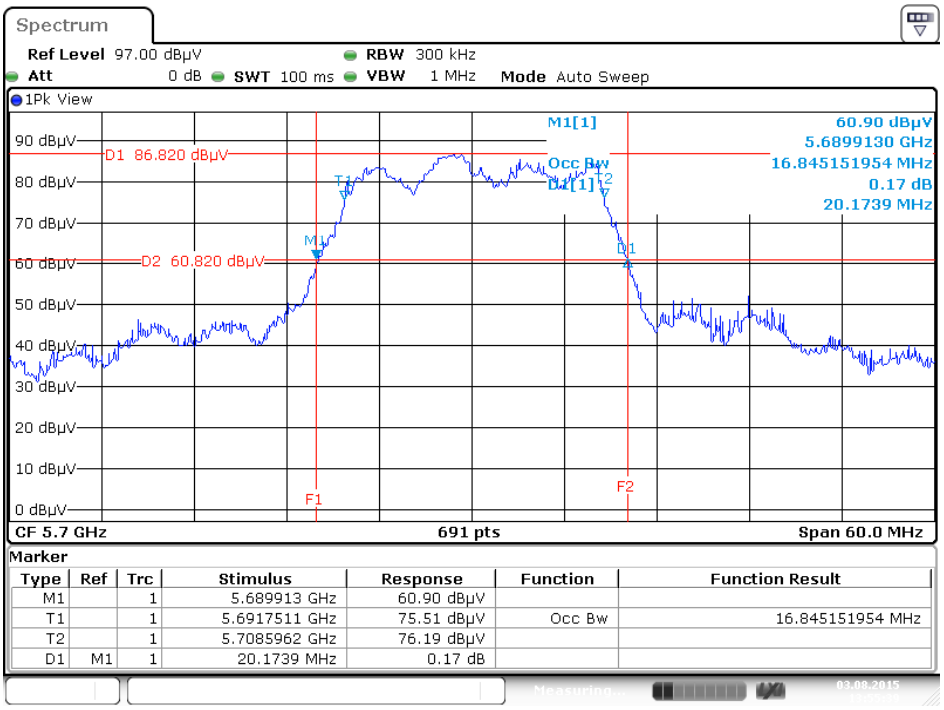
Date: 3.AUG.2015 13:43:47

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



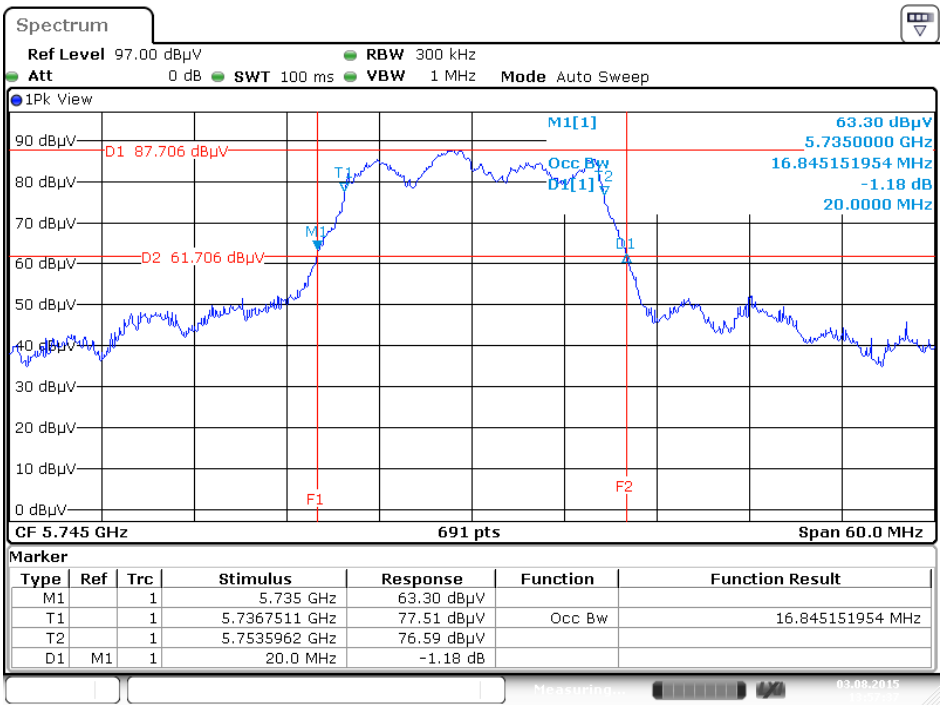
Date: 3.AUG.2015 13:46:16

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



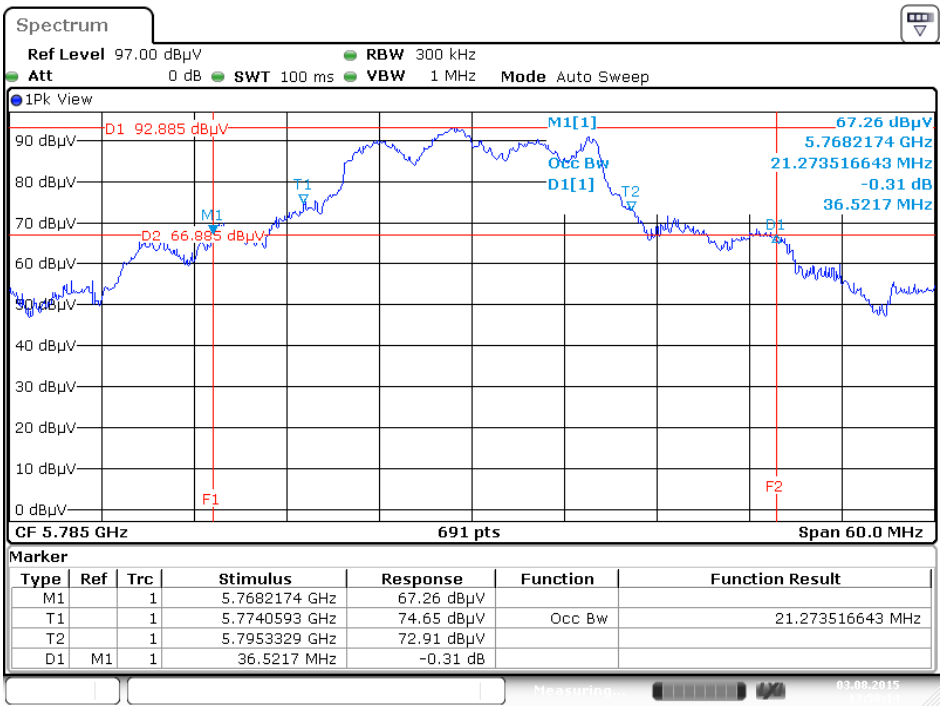
Date: 3.AUG.2015 13:55:39

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



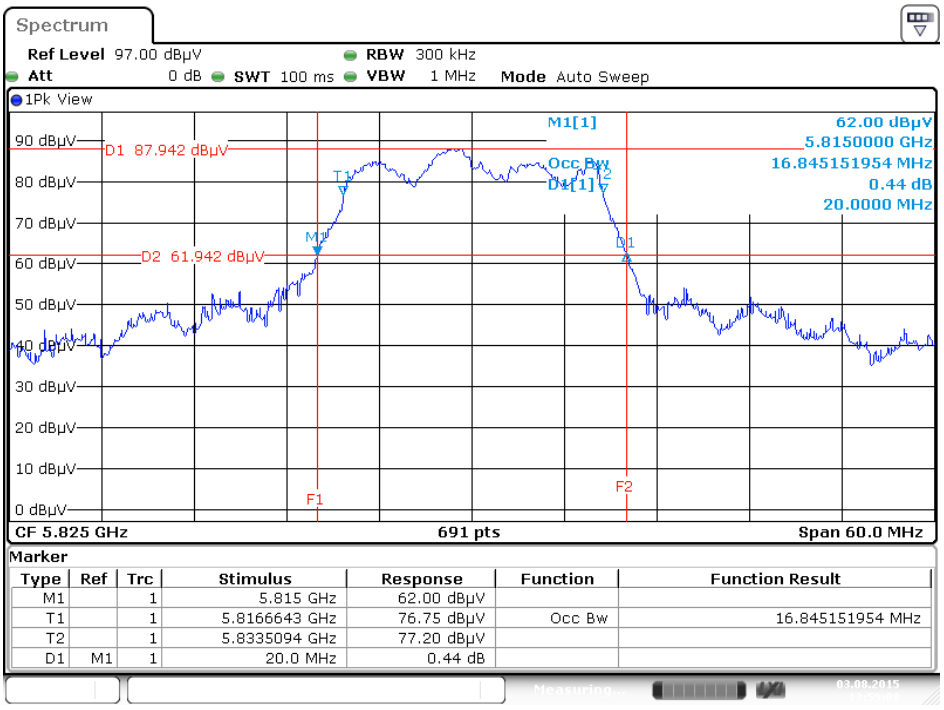
Date: 3.AUG.2015 13:57:38

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



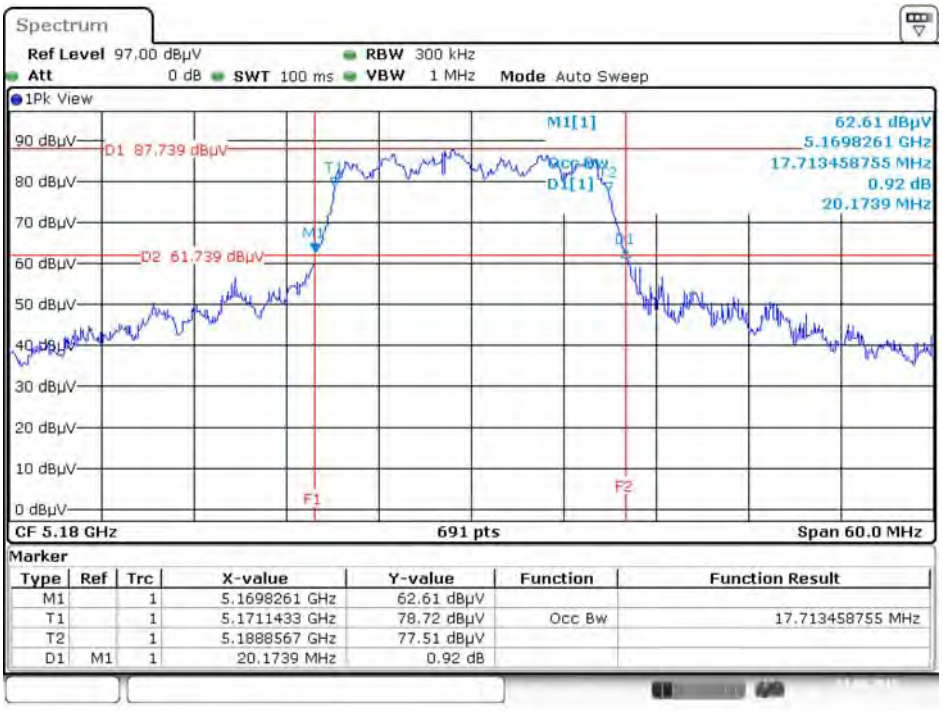
Date: 3.AUG.2015 13:58:14

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



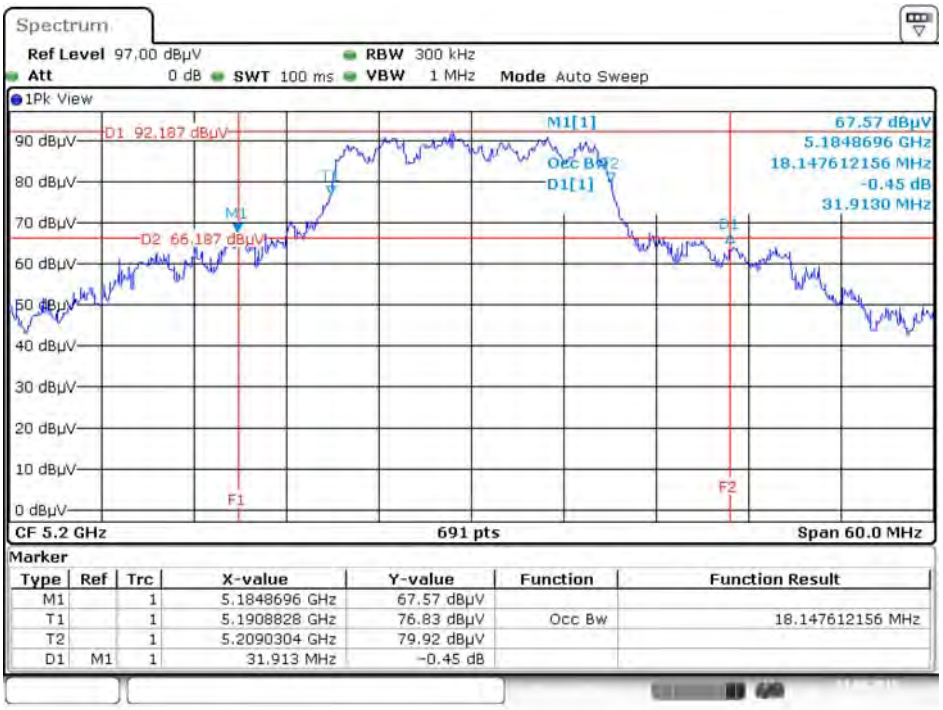
Date: 3.AUG.2015 13:59:08

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



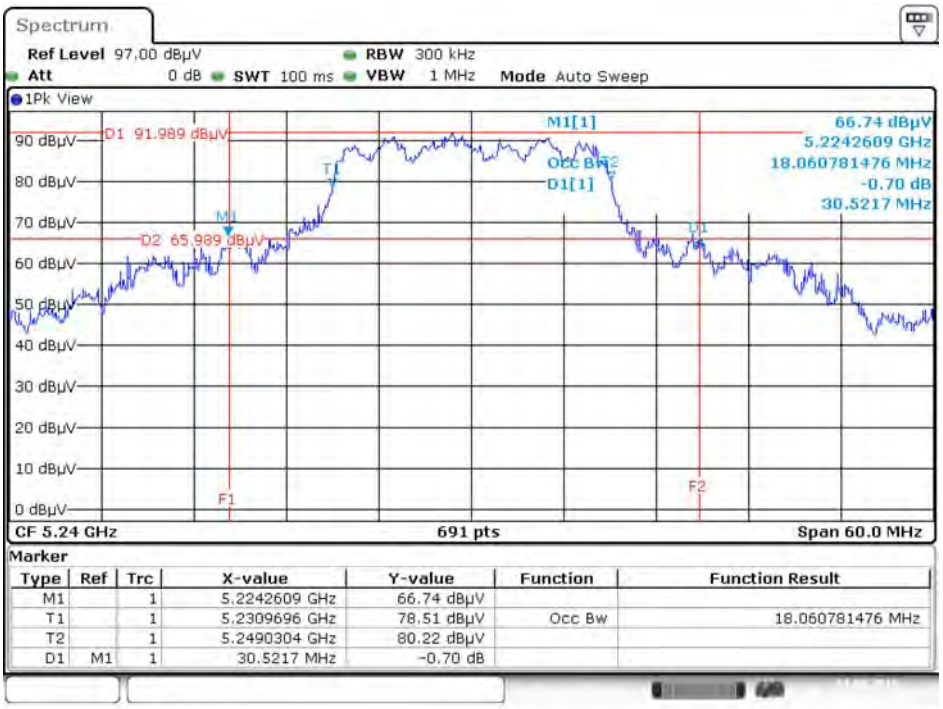
Date: 3.AUG.2015 20:43:12

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



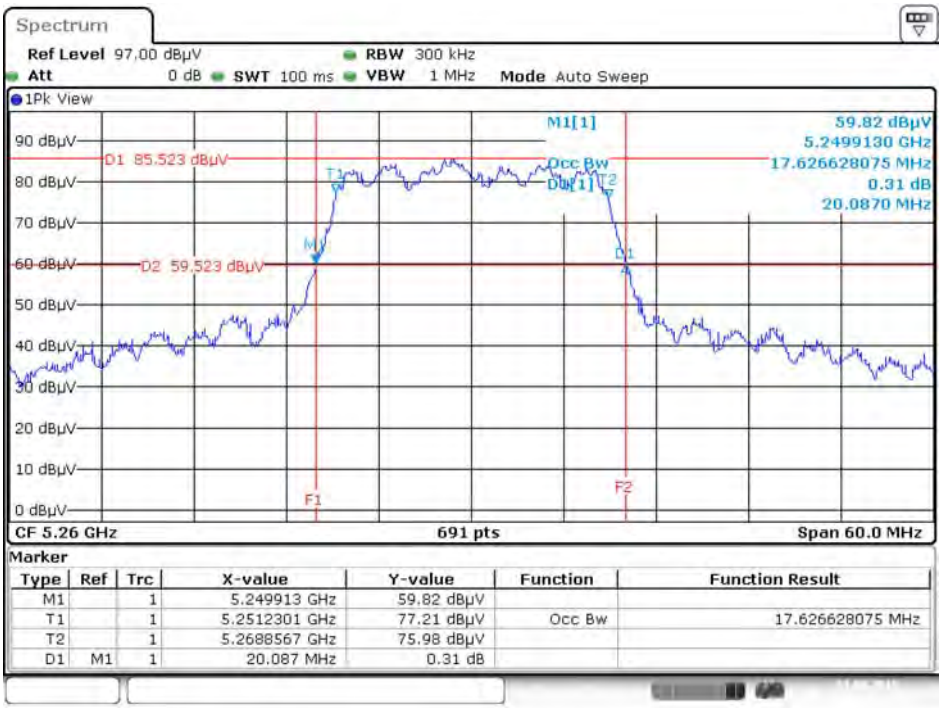
Date: 3.AUG.2015 20:44:59

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



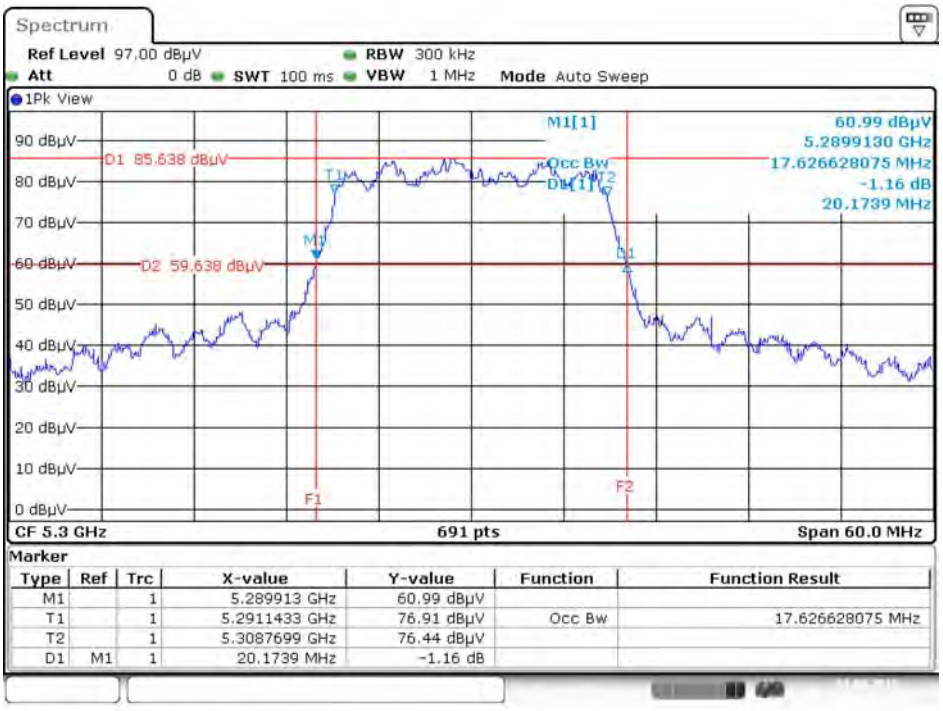
Date: 3.AUG.2015 20:45:40

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



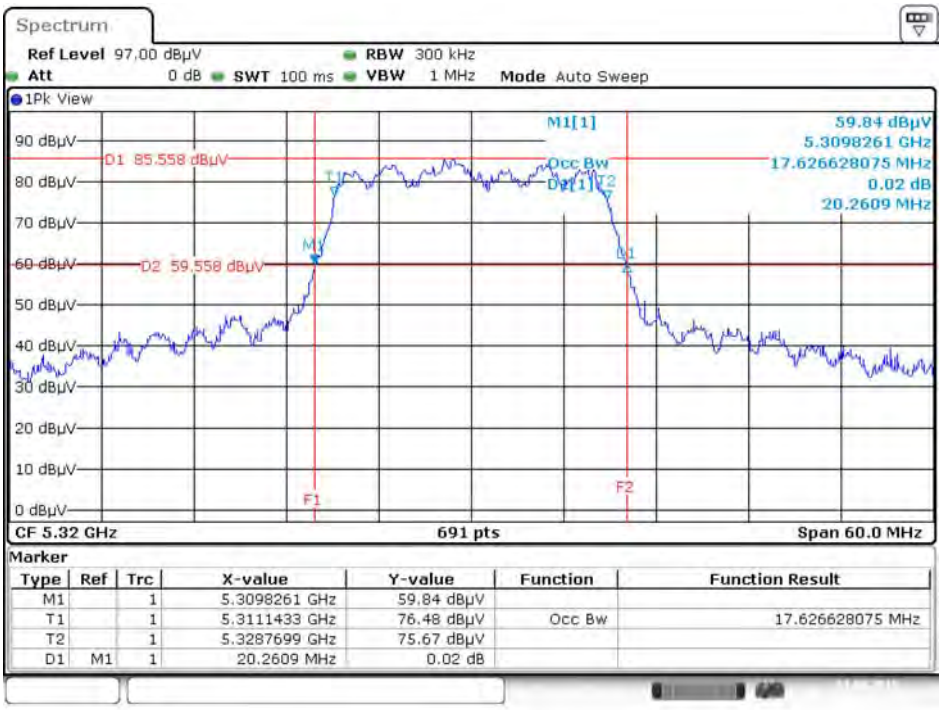
Date: 3.AUG.2015 20:46:24

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



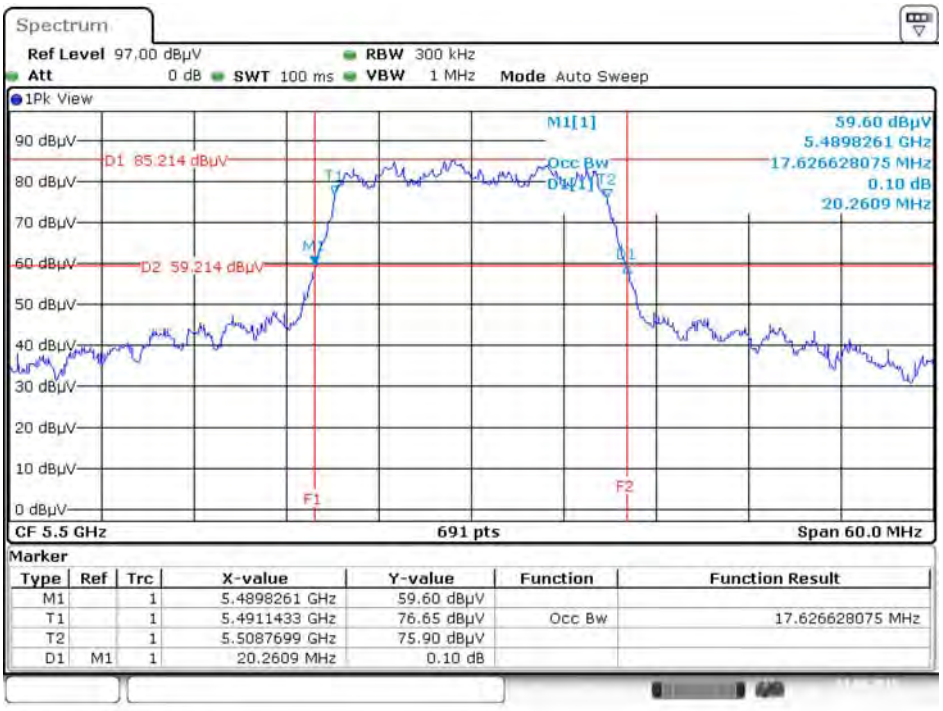
Date: 3.AUG.2015 20:46:58

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



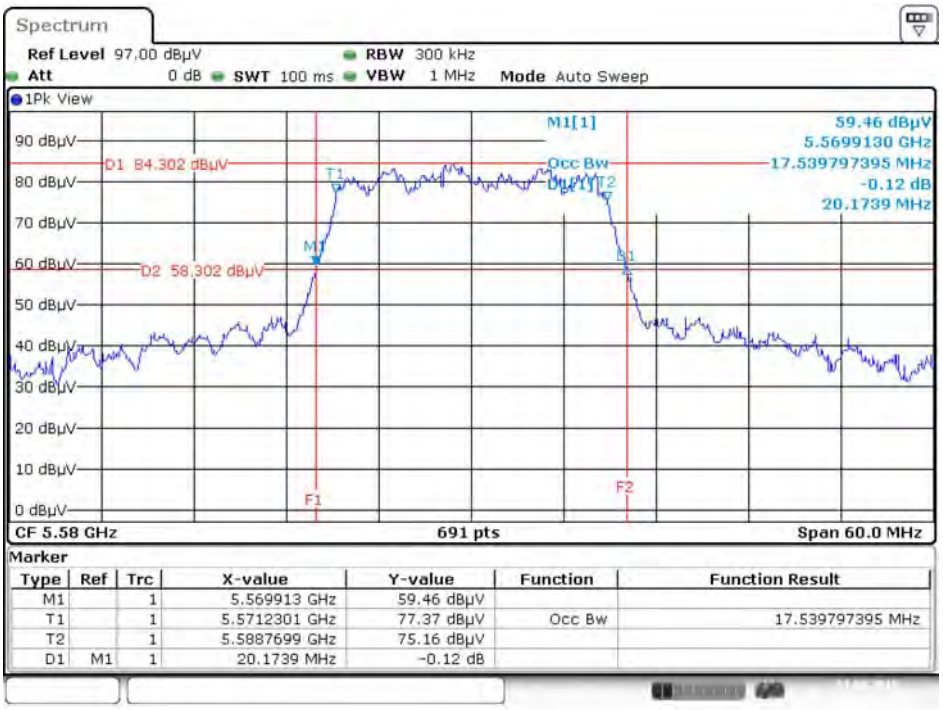
Date: 3.AUG.2015 20:47:49

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



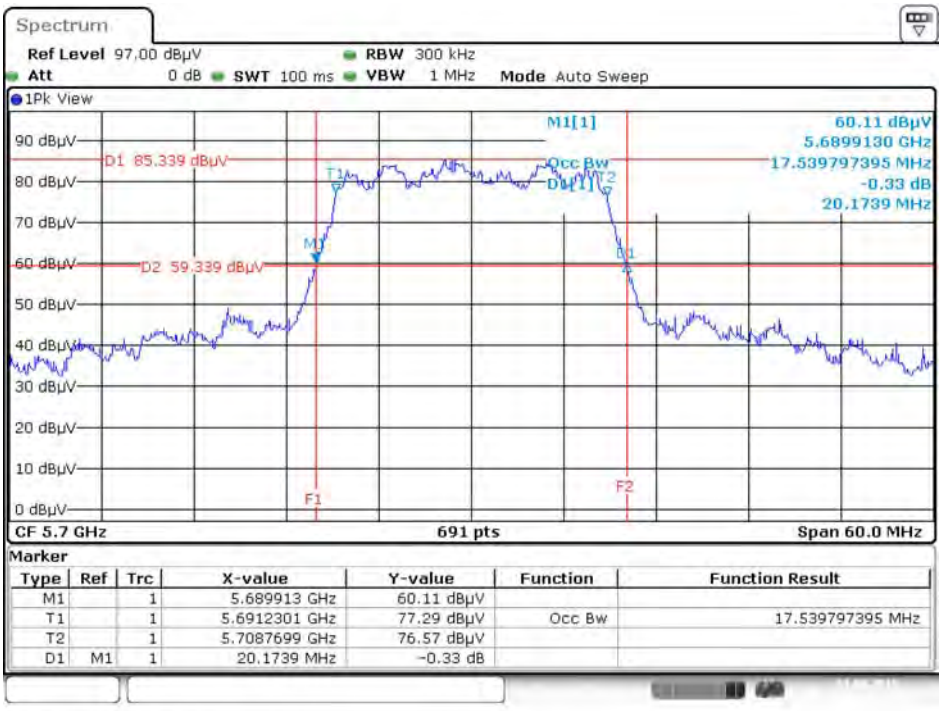
Date: 3.AUG.2015 20:48:29

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



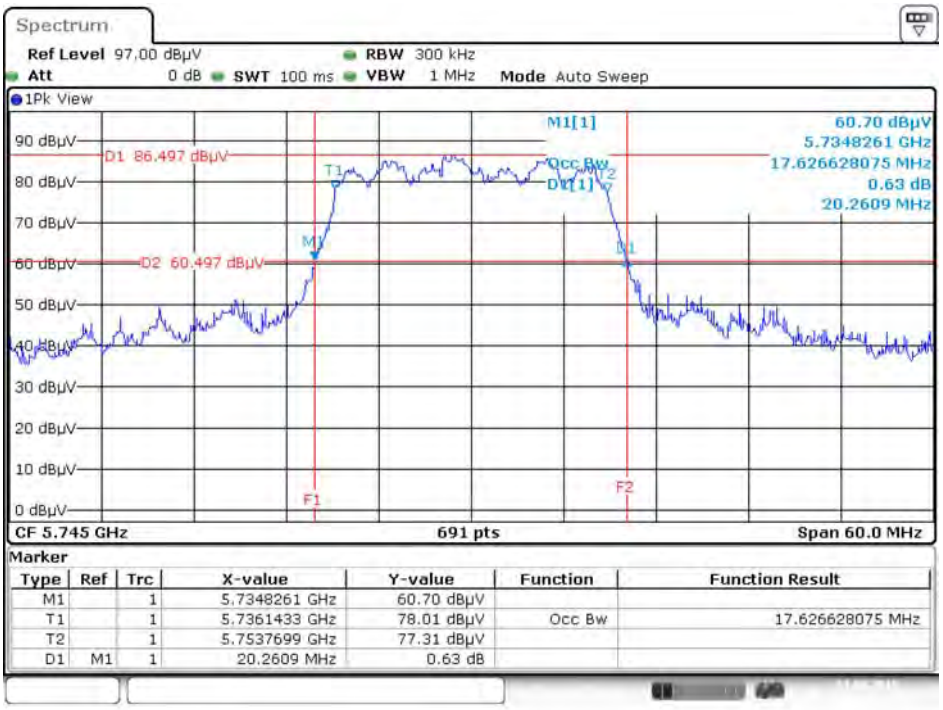
Date: 3.AUG.2015 20:58:14

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



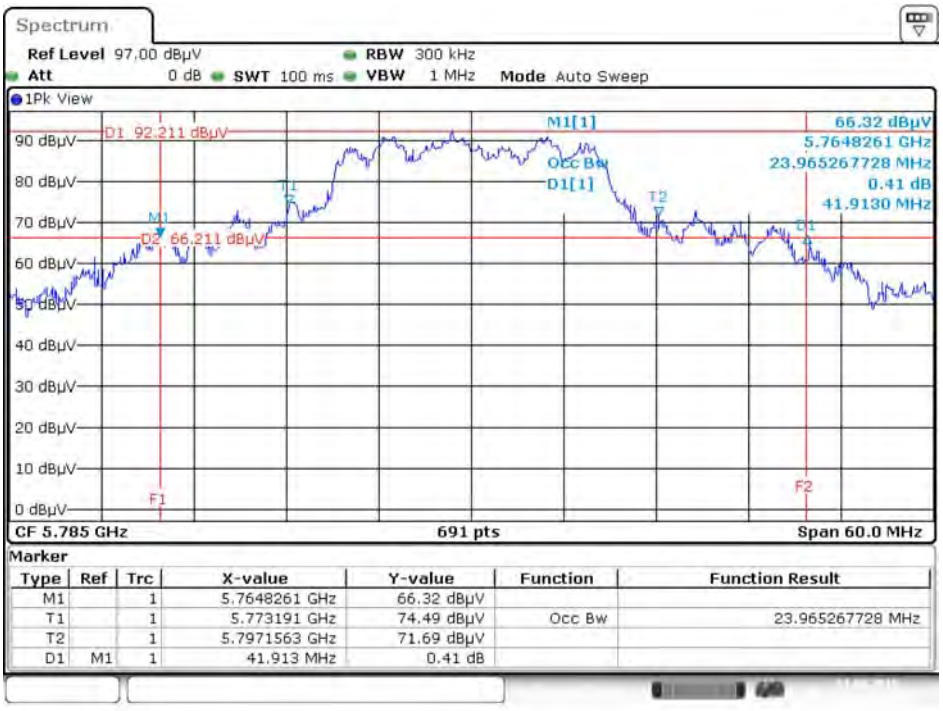
Date: 3.AUG.2015 20:58:46

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



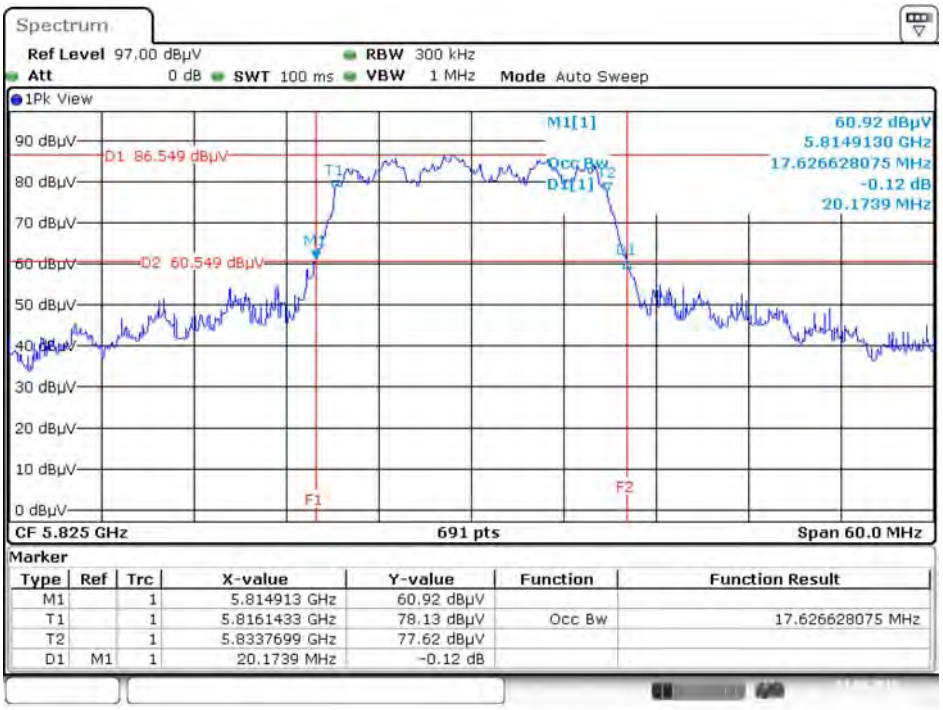
Date: 3.AUG.2015 20:59:18

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



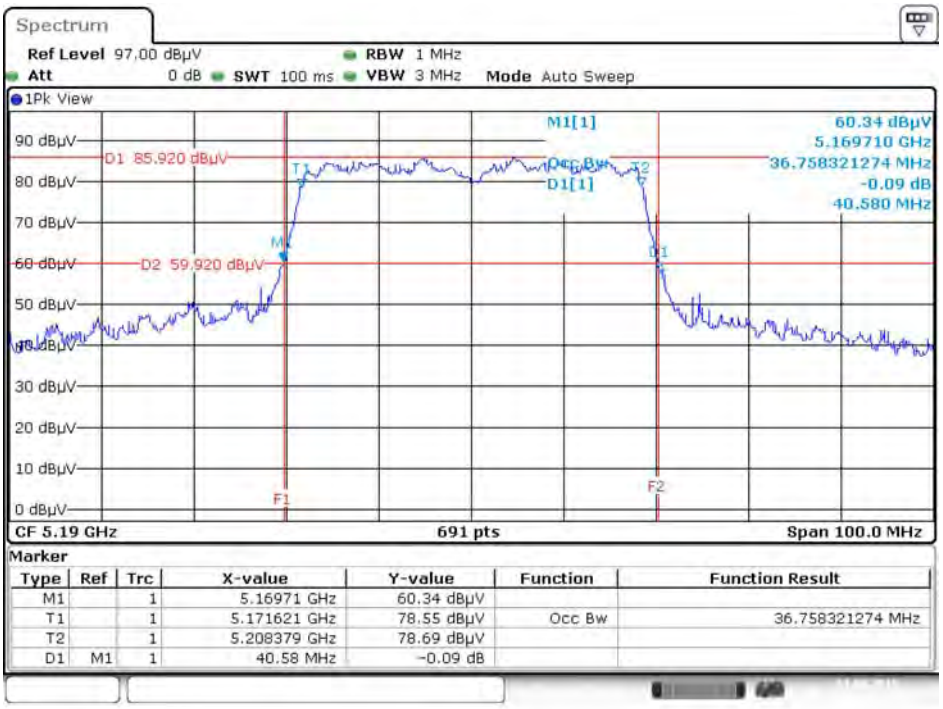
Date: 3.AUG.2015 20:59:57

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



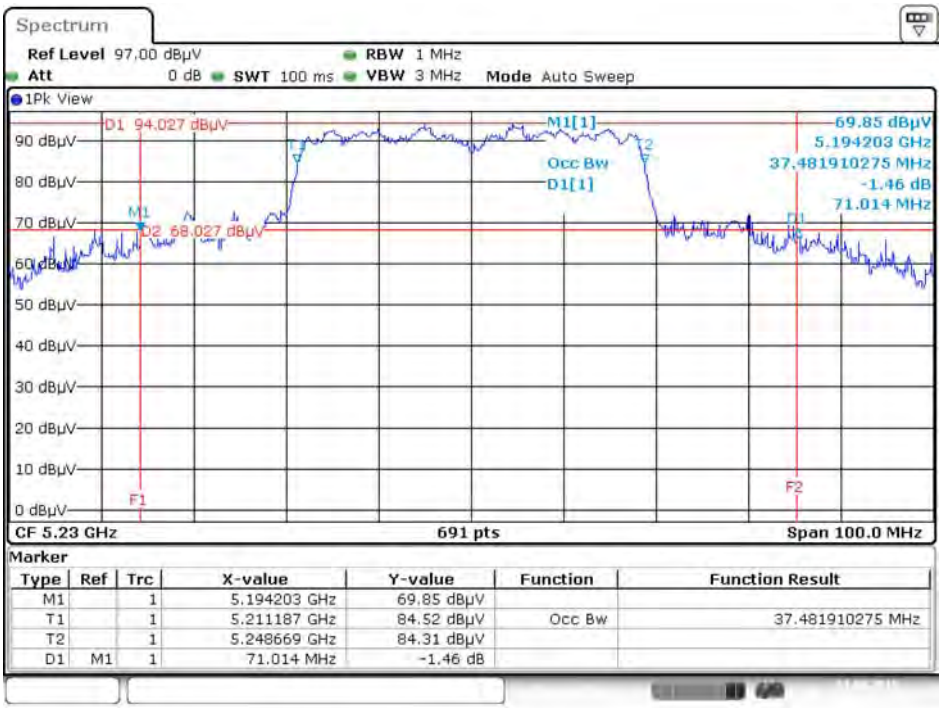
Date: 3.AUG.2015 21:00:29

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



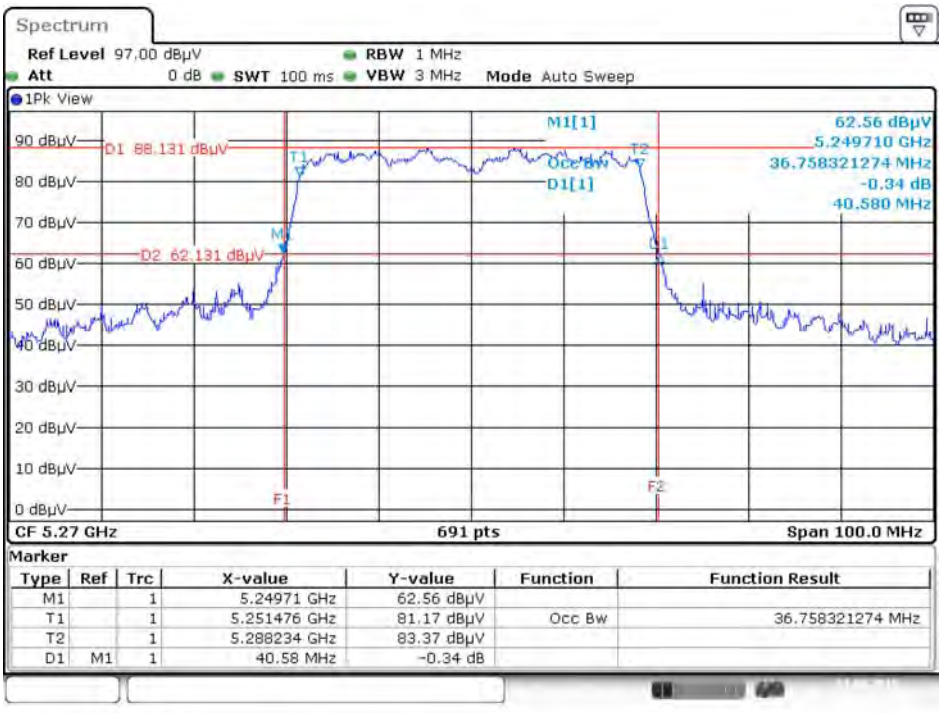
Date: 3.AUG.2015 21:10:50

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



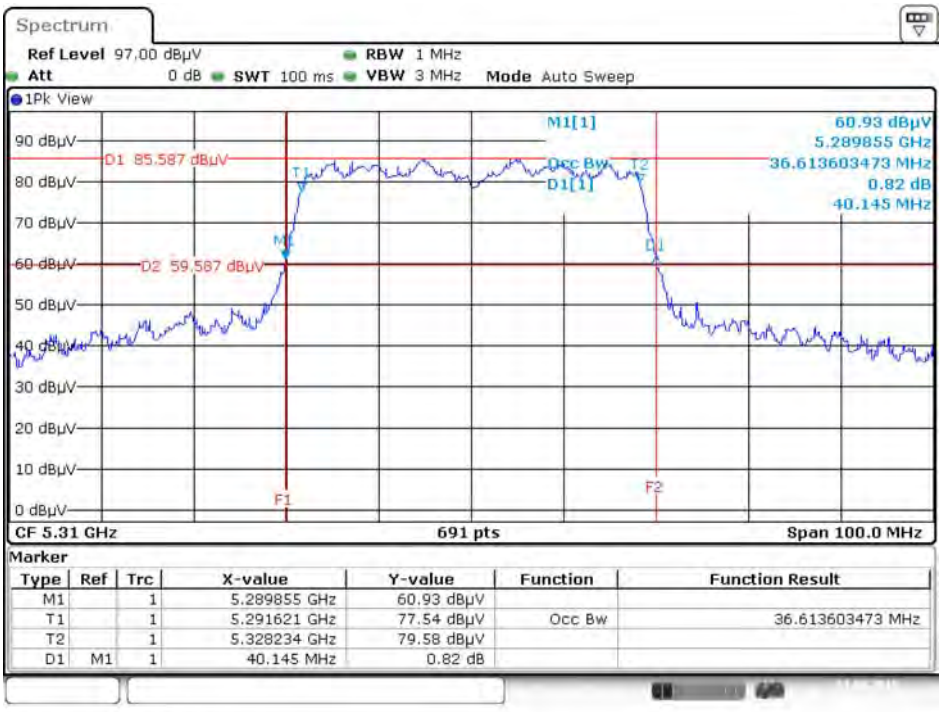
Date: 3.AUG.2015 21:11:27

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



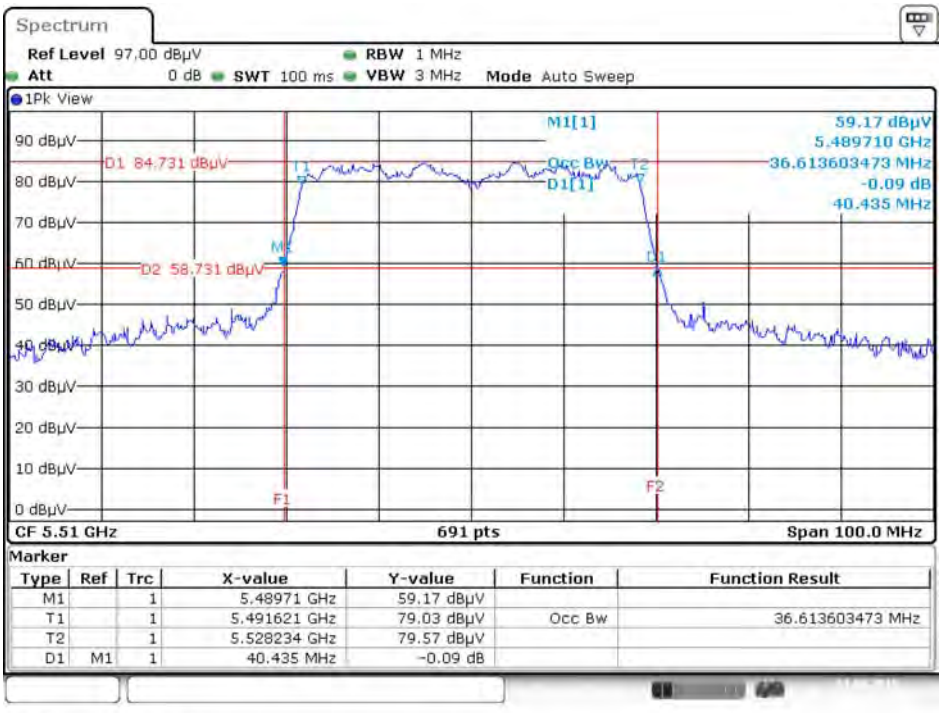
Date: 3.AUG.2015 21:12:03

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



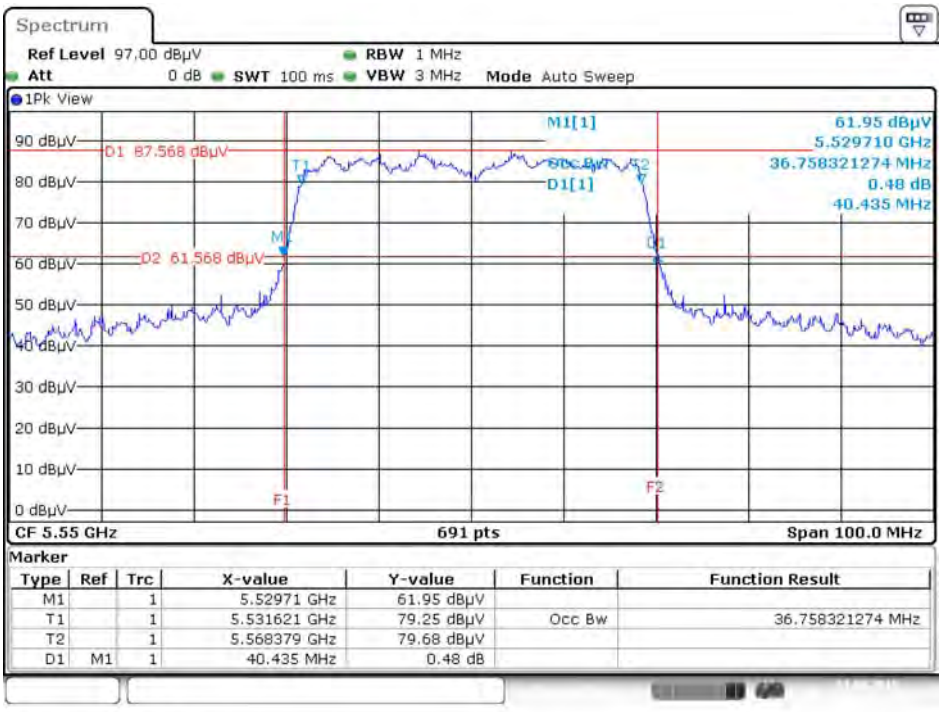
Date: 3.AUG.2015 21:12:41

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



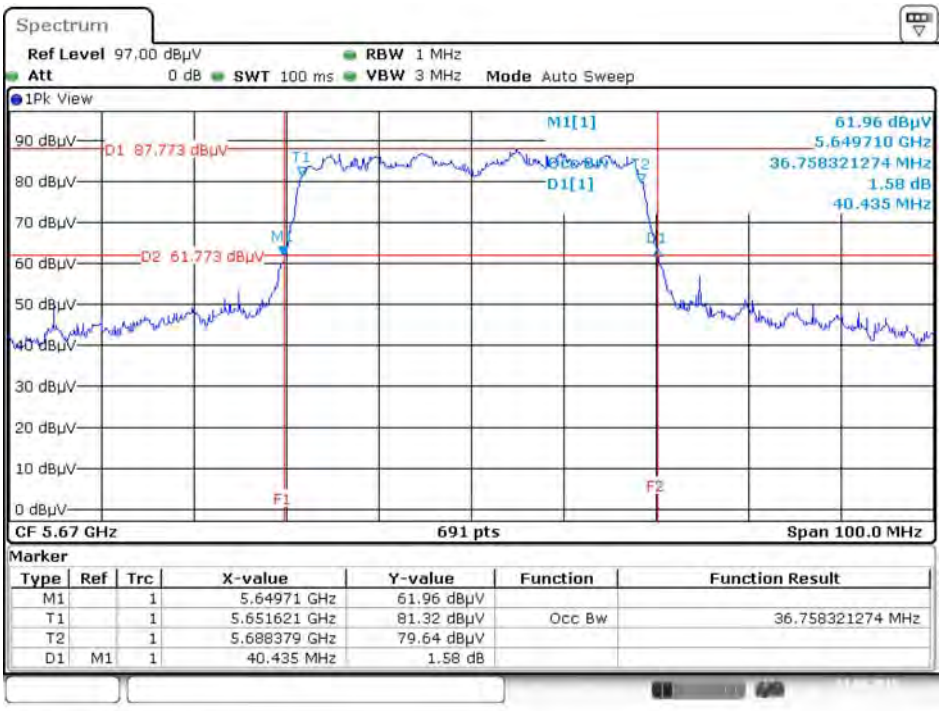
Date: 3.AUG.2015 21:13:09

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



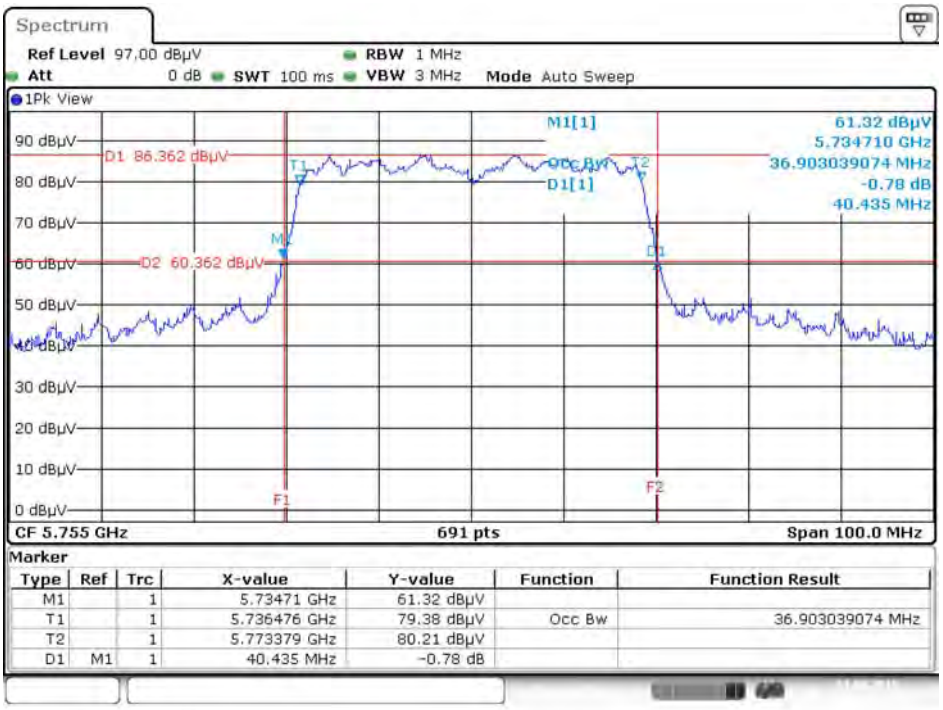
Date: 3.AUG.2015 21:13:47

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



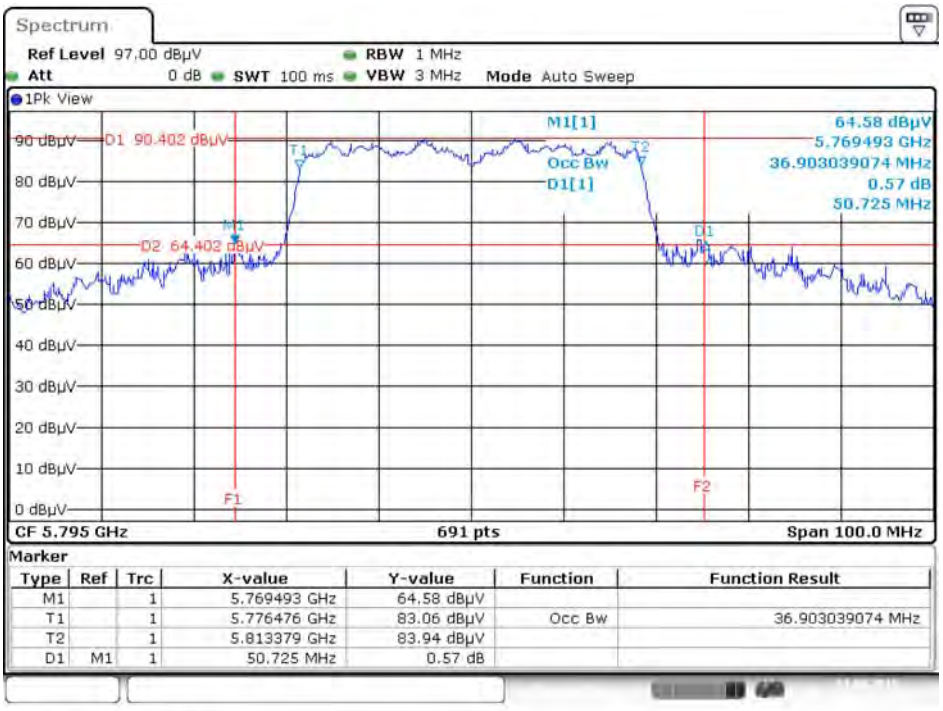
Date: 3.AUG.2015 21:14:27

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



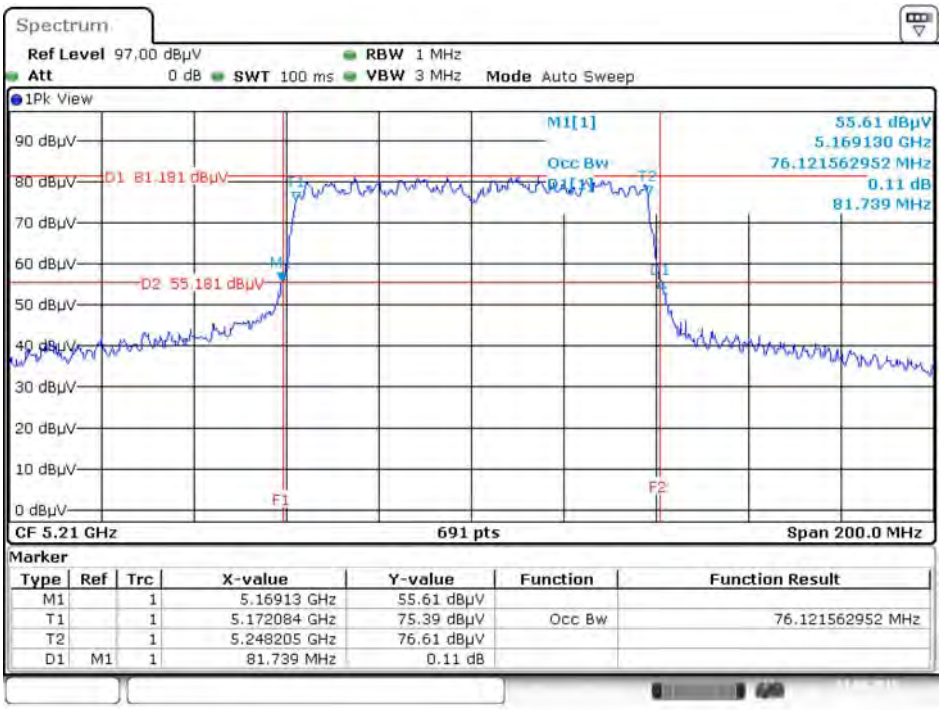
Date: 3.AUG.2015 21:14:56

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



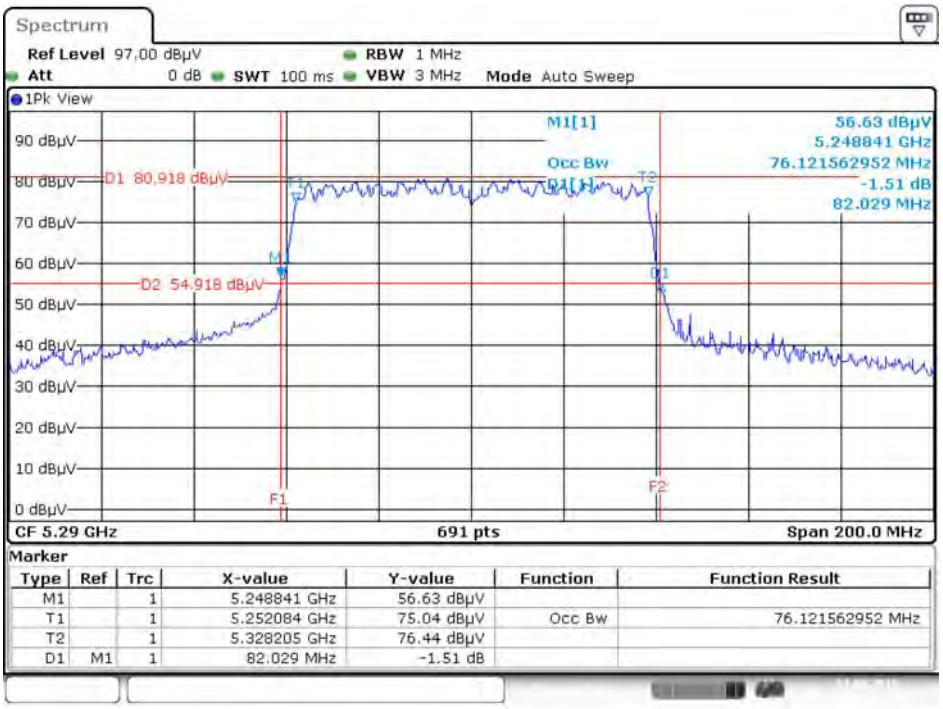
Date: 3.AUG.2015 21:15:40

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



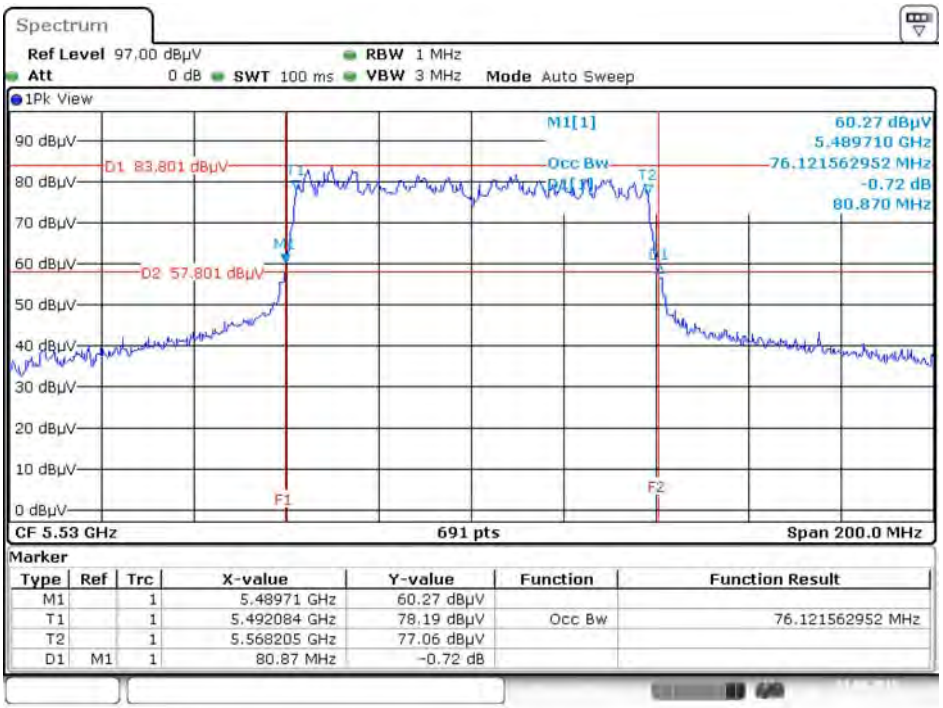
Date: 3.AUG.2015 21:20:50

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



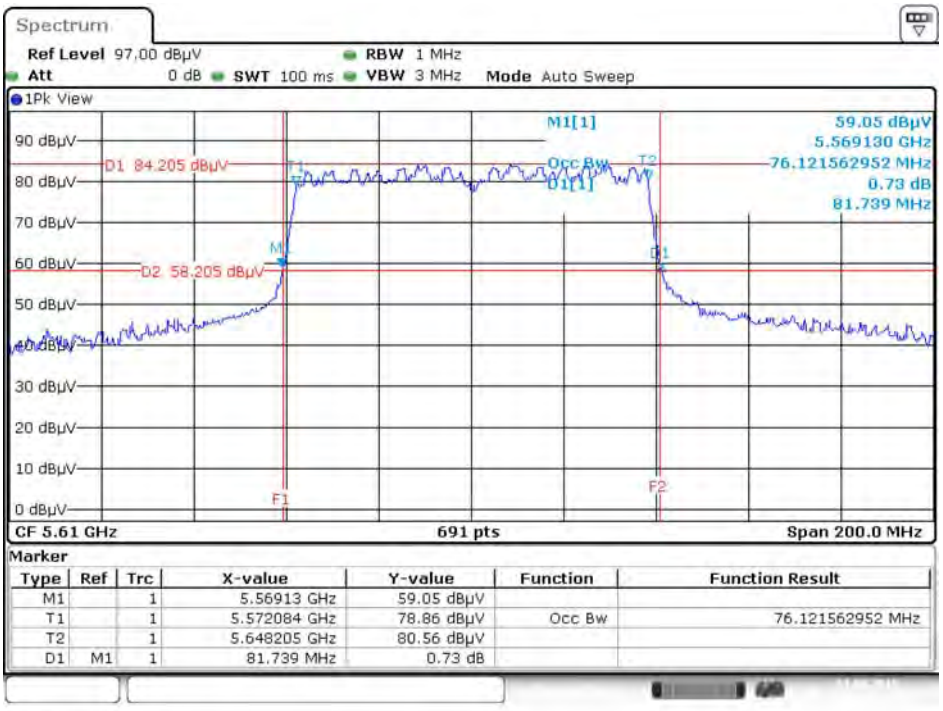
Date: 3.AUG.2015 21:21:20

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



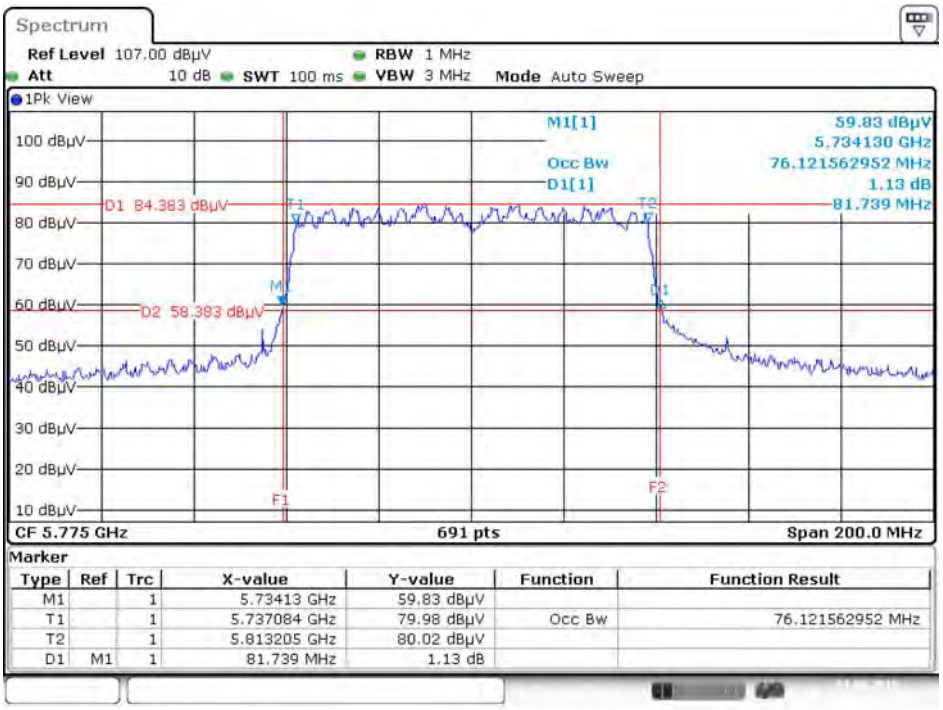
Date: 3.AUG.2015 21:22:01

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3 / 5610 MHz



Date: 3.AUG.2015 21:22:34

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



Date: 3.AUG.2015 21:23:08

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

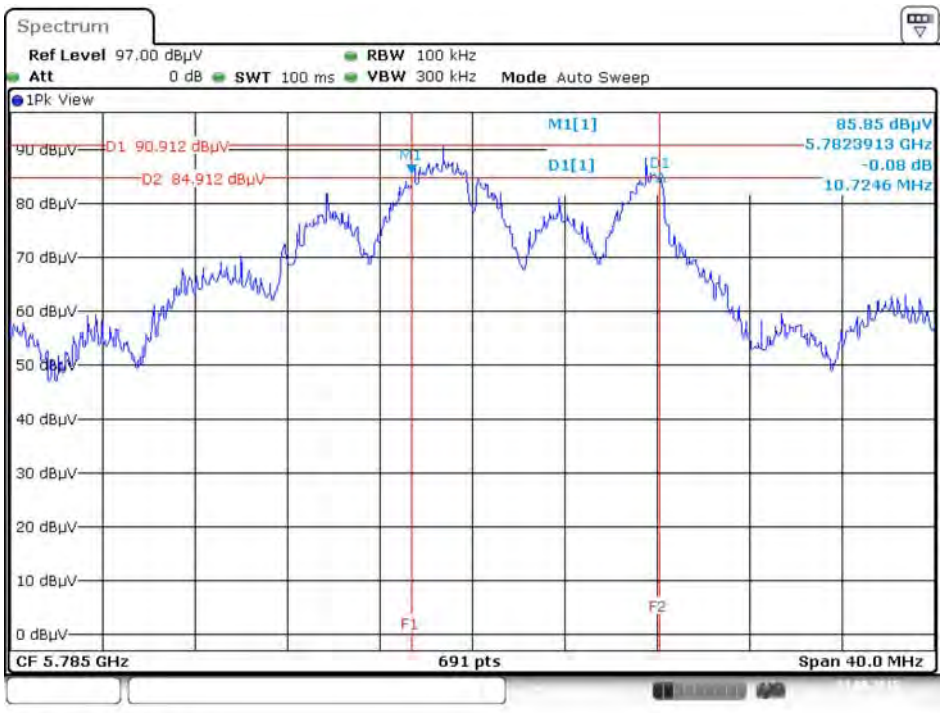
Temperature	26.2℃	Humidity	62%
Test Engineer	Nick Peng		

Mode	Frequency	6dB Bandwidth (MHz)	Min. Limit (kHz)	Test Result
802.11a	5745 MHz	11.42	500	Complies
	5785 MHz	10.72	500	Complies
	5825 MHz	10.72	500	Complies
802.11ac MCS0/Nss1 VHT20	5745 MHz	13.97	500	Complies
	5785 MHz	12.87	500	Complies
	5825 MHz	13.80	500	Complies
802.11ac MCS0/Nss1 VHT40	5755 MHz	33.74	500	Complies
	5795 MHz	35.59	500	Complies
802.11ac MCS0/Nss1 VHT80	5775 MHz	72.75	500	Complies

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

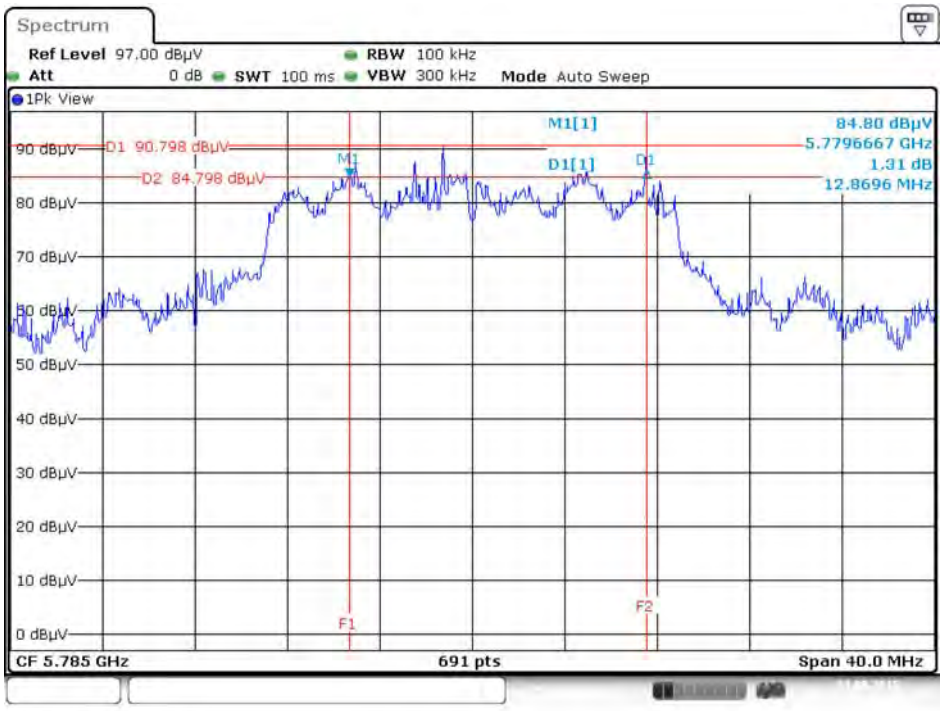
For plots, only the channel with worse result was shown.

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



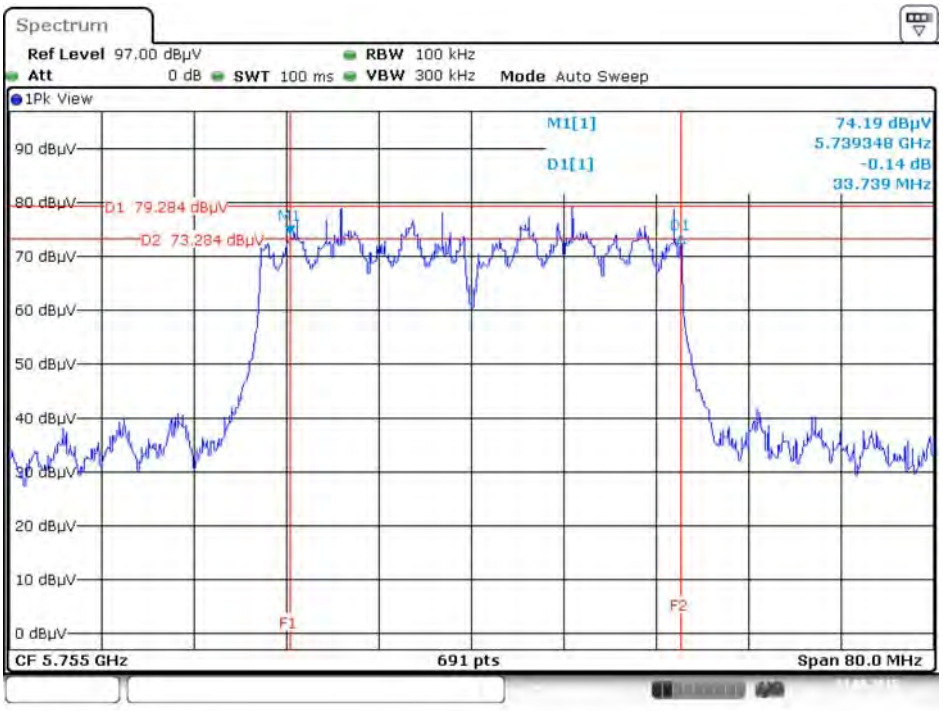
Date: 3.AUG.2015 20:11:49

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



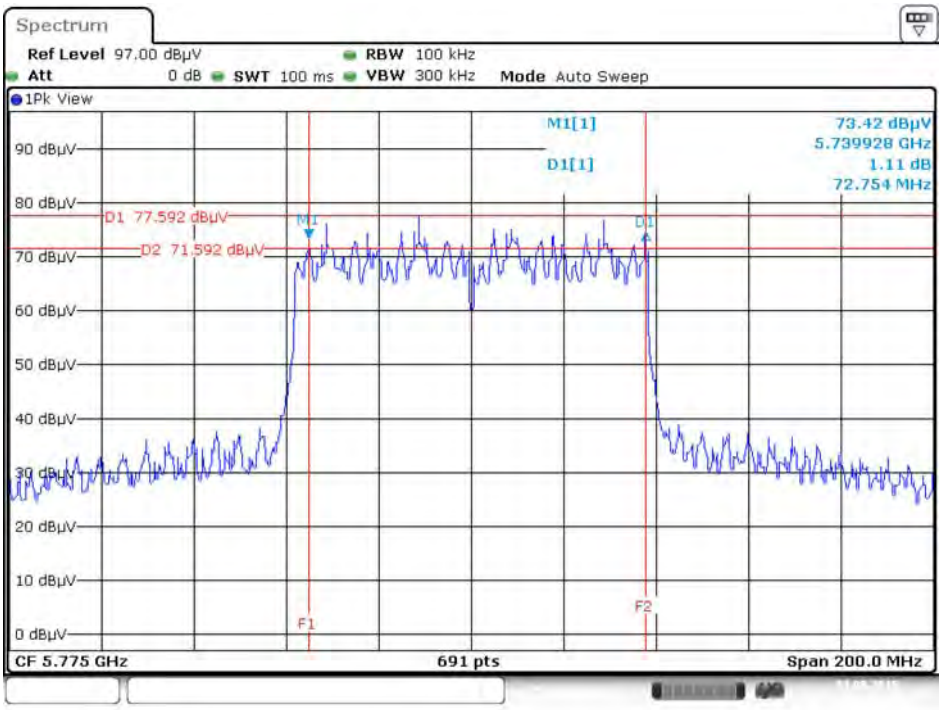
Date: 3.AUG.2015 20:18:17

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



Date: 3.AUG.2015 20:22:15

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



Date: 3.AUG.2015 20:34:58

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

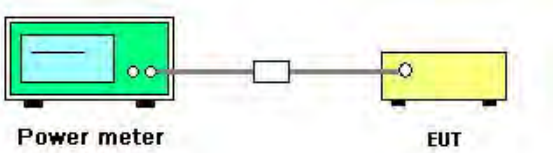
Please refer to section 5 of equipments list in this report. The following table is the setting of the power meter.

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

Temperature	26.2°C	Humidity	62%
Test Engineer	Nick Peng	Test Date	Jul. 09, 2015~Aug. 03, 2015

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3	Total		
802.11a	5180 MHz	21.38	21.82	22.46	26.68	30.00	Complies
	5200 MHz	23.80	25.03	25.03	29.43	30.00	Complies
	5240 MHz	23.91	25.01	25.23	29.53	30.00	Complies
	5260 MHz	19.05	18.64	18.91	23.64	24.00	Complies
	5300 MHz	18.80	18.87	19.01	23.67	24.00	Complies
	5320 MHz	18.84	19.02	18.99	23.72	24.00	Complies
	5500 MHz	19.34	18.92	18.84	23.81	24.00	Complies
	5580 MHz	19.34	18.90	18.91	23.83	24.00	Complies
	5700 MHz	19.59	18.91	19.08	23.97	24.00	Complies
	5745 MHz	19.13	19.34	19.45	24.08	30.00	Complies
	5785 MHz	25.01	25.49	25.11	29.98	30.00	Complies
	5825 MHz	20.13	20.35	20.15	24.98	30.00	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	20.72	21.14	21.39	25.86	30.00	Complies
	5200 MHz	23.90	25.03	24.82	29.38	30.00	Complies
	5240 MHz	23.79	24.71	24.90	29.26	30.00	Complies
	5260 MHz	18.71	18.40	18.71	23.38	24.00	Complies
	5300 MHz	18.68	18.67	18.92	23.53	24.00	Complies
	5320 MHz	18.75	18.98	18.88	23.64	24.00	Complies
	5500 MHz	19.32	19.07	18.75	23.82	24.00	Complies
	5580 MHz	19.30	18.80	18.71	23.72	24.00	Complies
	5700 MHz	19.17	19.12	19.24	23.95	24.00	Complies
	5745 MHz	20.56	20.62	20.72	25.41	30.00	Complies
	5785 MHz	25.11	25.11	25.14	29.89	30.00	Complies
	5825 MHz	20.37	20.36	20.14	25.06	30.00	Complies

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3	Total		
802.11ac MCS0/Nss1 VHT40	5190 MHz	17.64	17.78	18.01	22.58	30.00	Complies
	5230 MHz	25.24	25.22	25.12	29.96	30.00	Complies
	5270 MHz	18.72	19.21	19.68	23.99	24.00	Complies
	5310 MHz	15.70	16.22	16.53	20.93	24.00	Complies
	5510 MHz	16.49	16.79	16.73	21.44	24.00	Complies
	5550 MHz	19.10	19.42	18.98	23.94	24.00	Complies
	5670 MHz	19.01	19.28	19.32	23.98	24.00	Complies
	5755 MHz	18.42	18.52	18.64	23.30	30.00	Complies
	5795 MHz	21.62	21.73	21.68	26.45	30.00	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	15.42	15.65	16.01	20.47	30.00	Complies
	5290 MHz	15.03	15.25	15.08	19.89	24.00	Complies
	5530 MHz	16.54	16.68	15.97	21.18	24.00	Complies
	5610 MHz	18.89	19.08	19.32	23.87	24.00	Complies
	5775 MHz	18.62	18.97	19.02	23.64	30.00	Complies

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

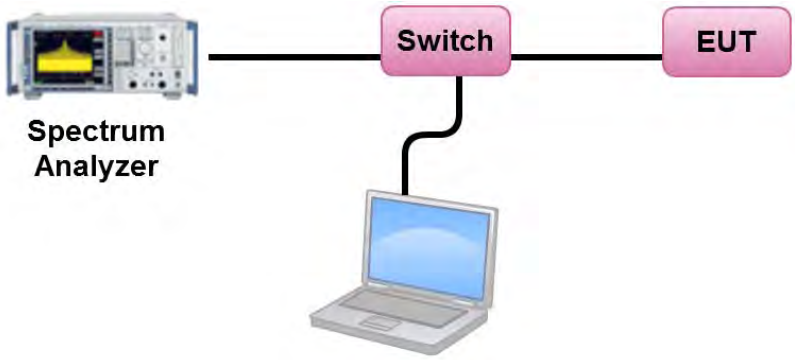
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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

Temperature	26.2°C	Humidity	62%
Test Engineer	Nick Peng	Test Date	Jul. 09, 2015~Aug. 03, 2015

Configuration IEEE 802.11a / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	13.50	16.72	Complies
40	5200 MHz	16.63	16.72	Complies
48	5240 MHz	16.67	16.72	Complies
52	5260 MHz	10.48	10.59	Complies
60	5300 MHz	10.30	10.59	Complies
64	5320 MHz	10.52	10.59	Complies
100	5500 MHz	10.51	10.64	Complies
116	5580 MHz	10.56	10.64	Complies
140	5700 MHz	10.56	10.64	Complies

Note: Band 1 $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.28dBi >6dBi, so limit=17 – (6.28 – 6)=16.72dBm/MHz.

Band 2 $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.41dBi >6dBi, so limit=11 – (6.41 – 6)=10.59dBm/MHz.

Band 3 $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.36dBi >6dBi, so limit=11 – (6.36 – 6)=10.64dBm/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	10.77	-3.01	7.76	29.69	Complies
157	5785 MHz	16.67	-3.01	13.66	29.69	Complies
165	5825 MHz	11.71	-3.01	8.70	29.69	Complies

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.31dBi >6dBi, so limit=30 – (6.31 – 6)=29.69dBm/500kHz.

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

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	12.71	16.72	Complies
40	5200 MHz	16.07	16.72	Complies
48	5240 MHz	16.06	16.72	Complies
52	5260 MHz	10.56	10.59	Complies
60	5300 MHz	10.35	10.59	Complies
64	5320 MHz	10.41	10.59	Complies
100	5500 MHz	10.35	10.64	Complies
116	5580 MHz	10.34	10.64	Complies
140	5700 MHz	10.37	10.64	Complies

Note: Band 1 $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.28dBi >6dBi, so limit=17 – (6.28 – 6)=16.72dBm/MHz.

Band 2 $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.41dBi >6dBi, so limit=11 – (6.41 – 6)=10.59dBm/MHz.

Band 3 $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.36dBi >6dBi, so limit=11 – (6.36 – 6)=10.64dBm/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	11.08	-3.01	8.07	29.69	Complies
157	5785 MHz	16.70	-3.01	13.69	29.69	Complies
165	5825 MHz	11.90	-3.01	8.89	29.69	Complies

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.31dBi >6dBi, so limit=30 – (6.31 – 6)=29.69dBm/500kHz.

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

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	3.96	16.72	Complies
46	5230 MHz	12.88	16.72	Complies
54	5270 MHz	7.63	10.59	Complies
62	5310 MHz	4.71	10.59	Complies
102	5510 MHz	5.31	10.64	Complies
110	5550 MHz	7.80	10.64	Complies
134	5670 MHz	7.27	10.64	Complies

Note: Band 1 $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.28dBi >6dBi, so limit=17 – (6.28 – 6)=16.72dBm/MHz.

Band 2 $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.41dBi >6dBi, so limit=11 – (6.41 – 6)=10.59dBm/MHz.

Band 3 $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.36dBi >6dBi, so limit=11 – (6.36 – 6)=10.64dBm/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	6.07	-3.01	3.06	29.69	Complies
159	5795 MHz	10.28	-3.01	7.27	29.69	Complies

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.31dBi >6dBi, so limit=30 – (6.31 – 6)=29.69dBm/500kHz.

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

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-1.07	16.72	Complies
58	5290 MHz	-0.59	10.59	Complies
106	5530 MHz	2.10	10.64	Complies
122	5610 MHz	3.85	10.64	Complies

Note: Band 1 $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.28dBi >6dBi, so limit=17 – (6.28 – 6)=16.72dBm/MHz.

Band 2 $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.41dBi >6dBi, so limit=11 – (6.41 – 6)=10.59dBm/MHz.

Band 3 $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.36dBi >6dBi, so limit=11 – (6.36 – 6)=10.64dBm/MHz.

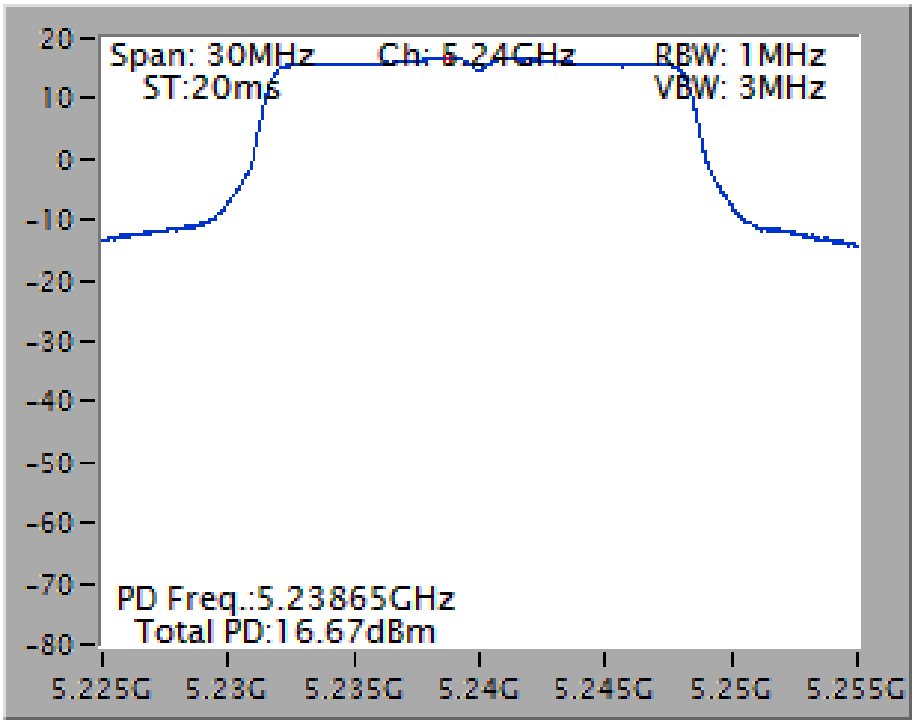
Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
155	5775 MHz	3.73	-3.01	0.72	29.69	Complies

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.31dBi >6dBi, so limit=30 – (6.31 – 6)=29.69dBm/500kHz.

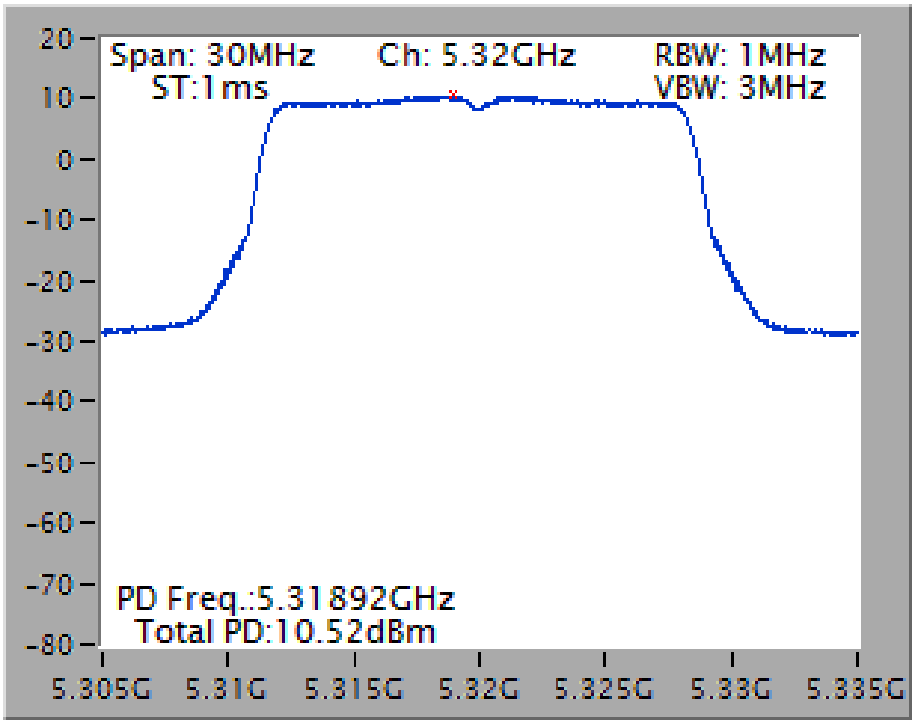
Note: All the test values were listed in the report.

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

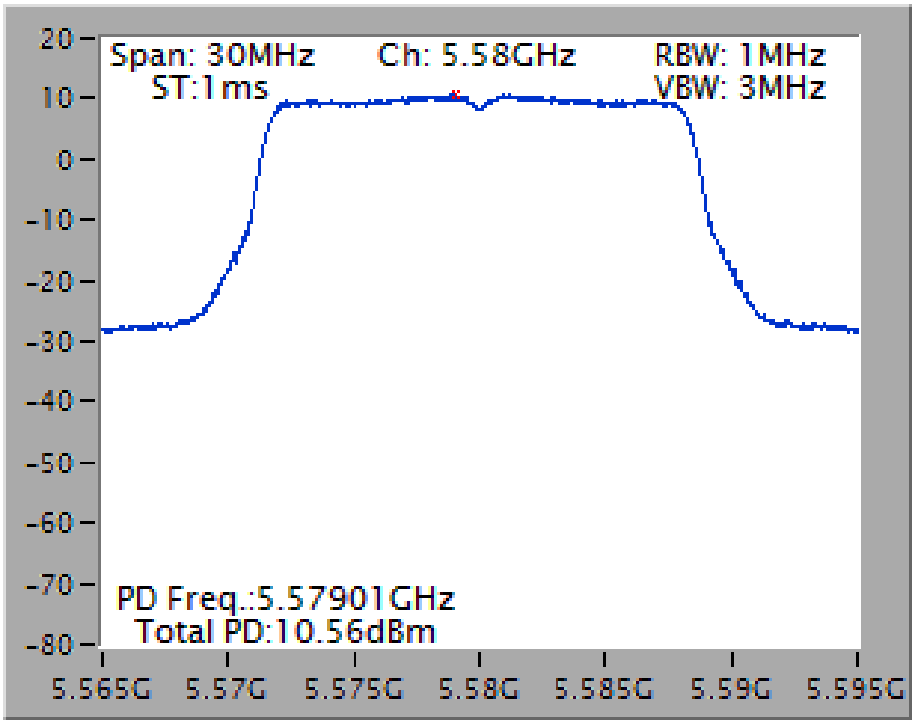
Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 + Chain 3 / 5240 MHz



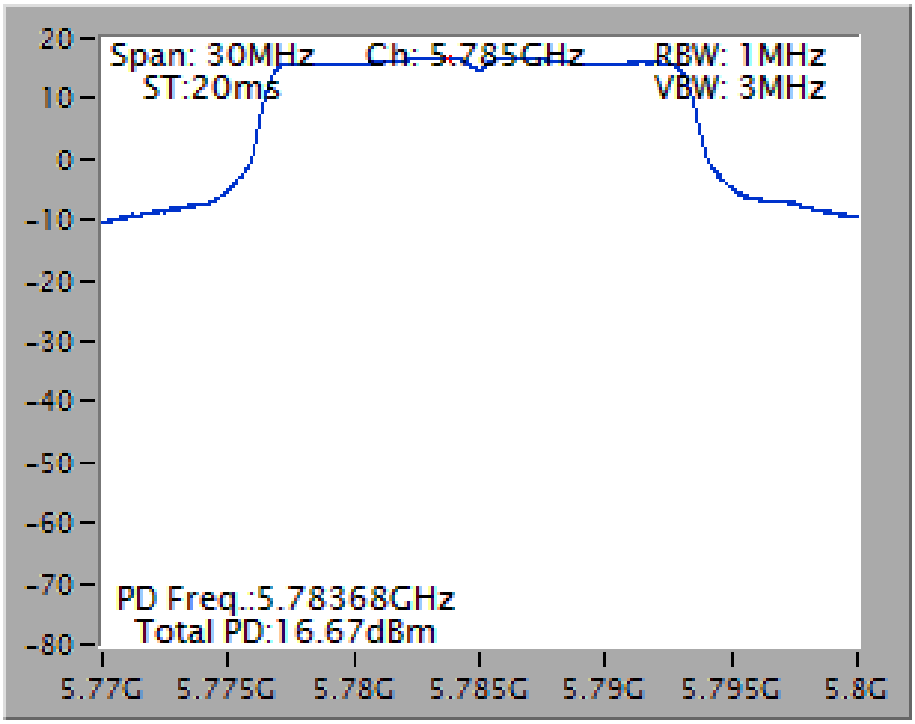
Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 + Chain 3 / 5320 MHz



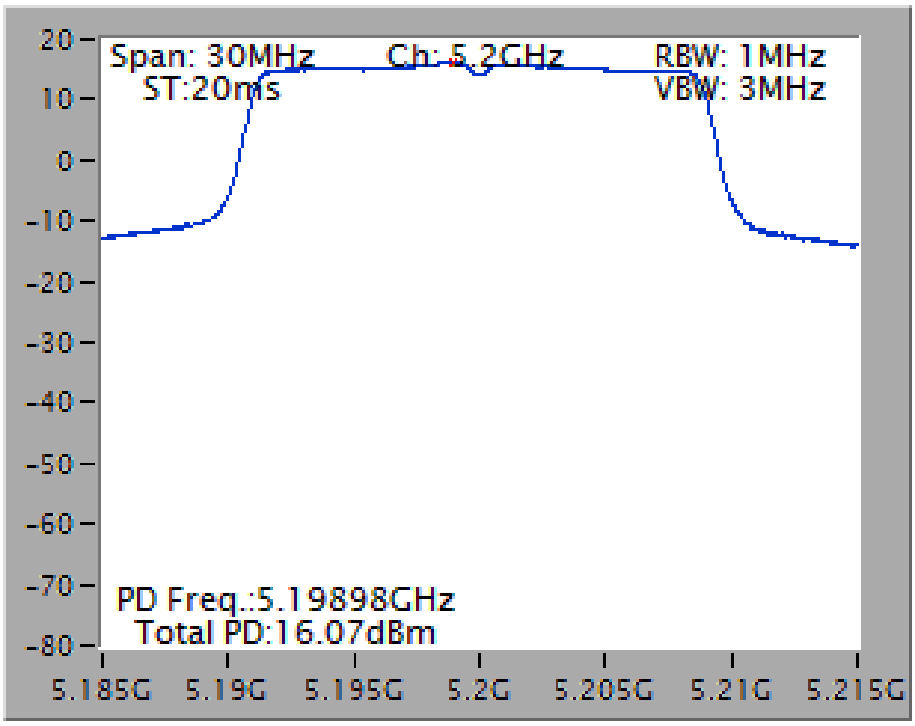
Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 + Chain 3 / 5580 MHz



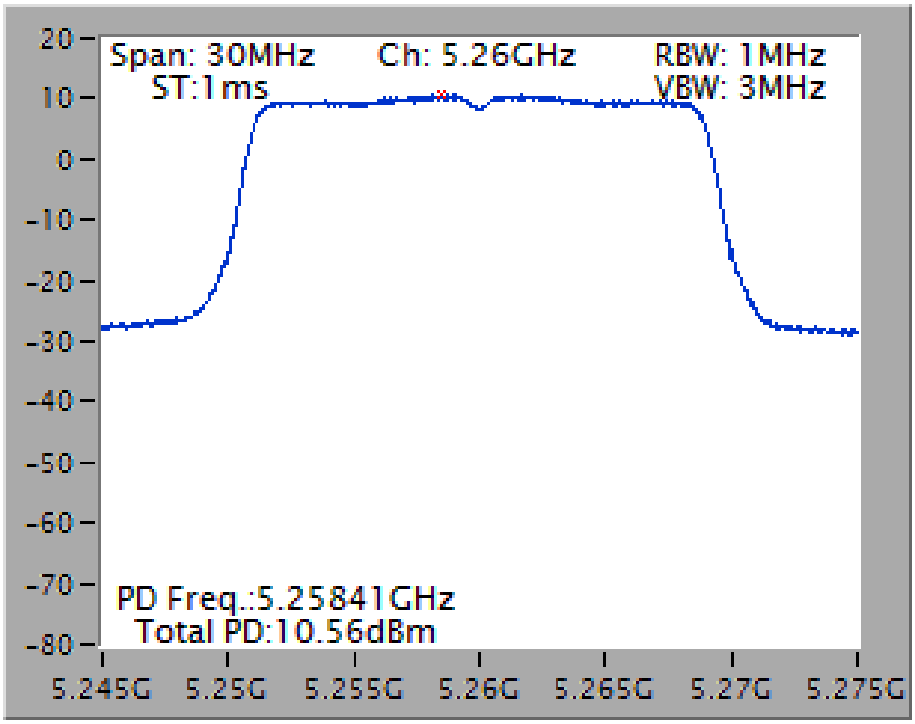
Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 + Chain 3 / 5785 MHz



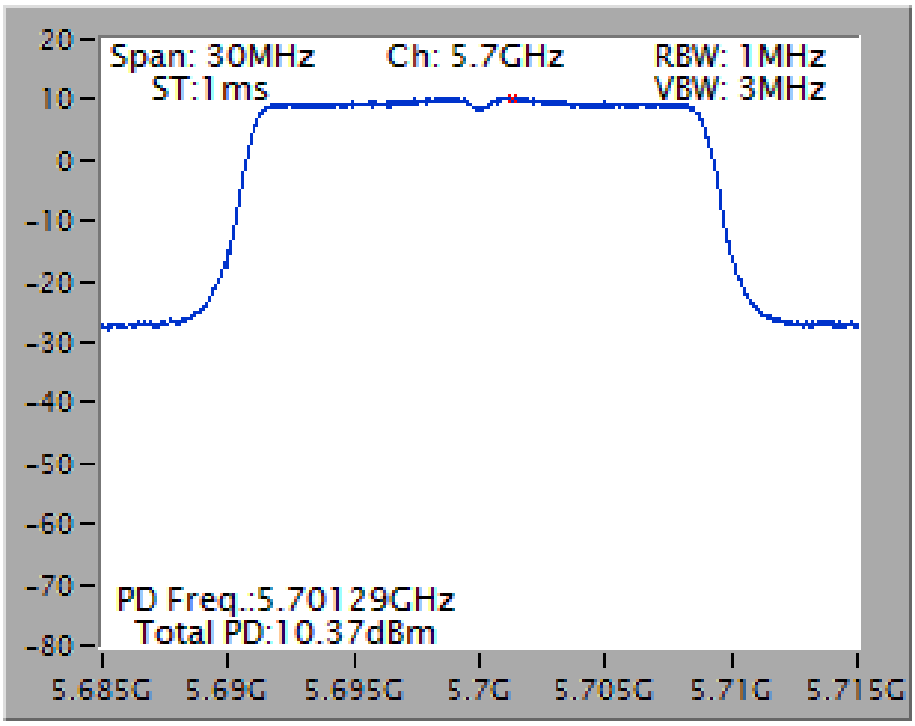
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5200 MHz



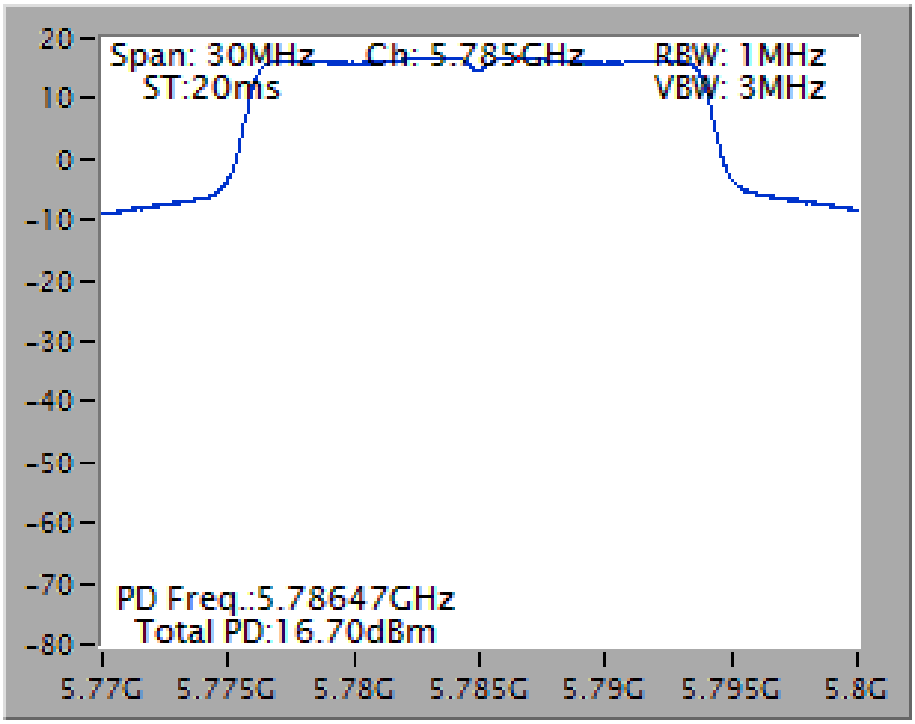
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5260 MHz



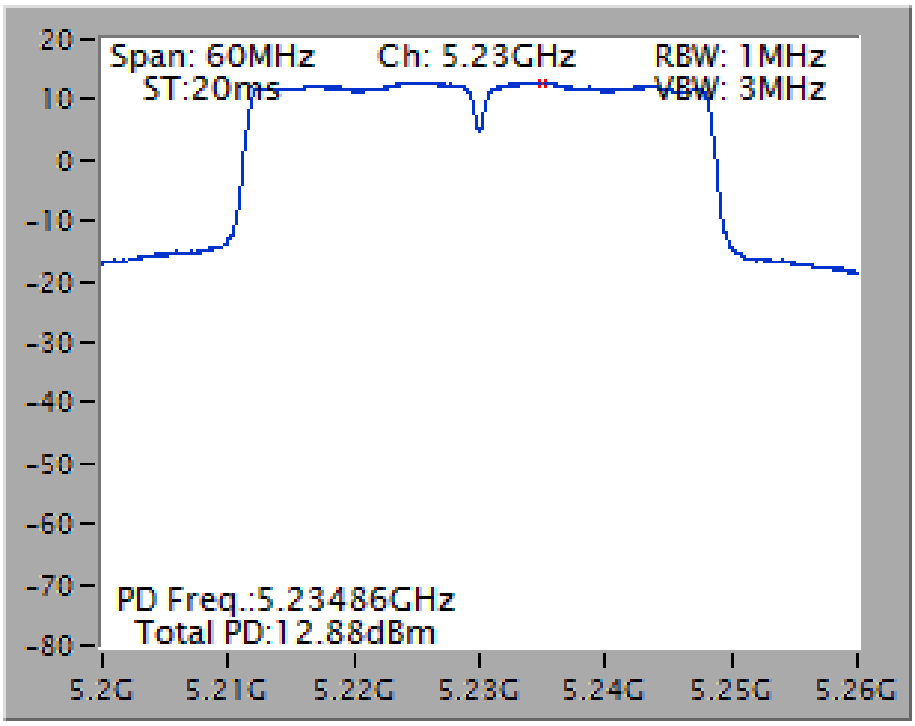
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5700 MHz



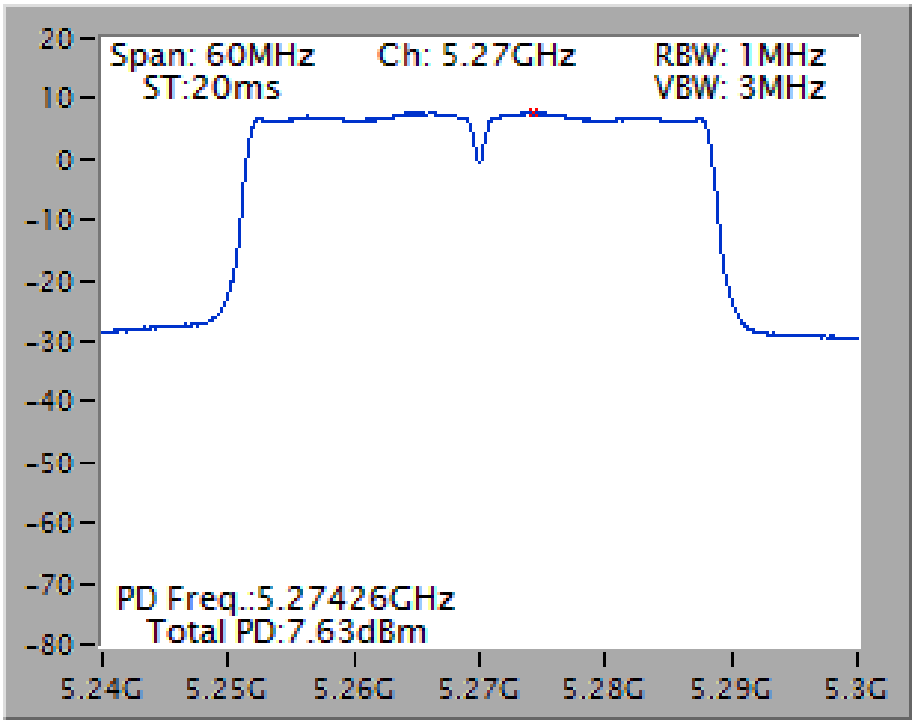
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5785 MHz



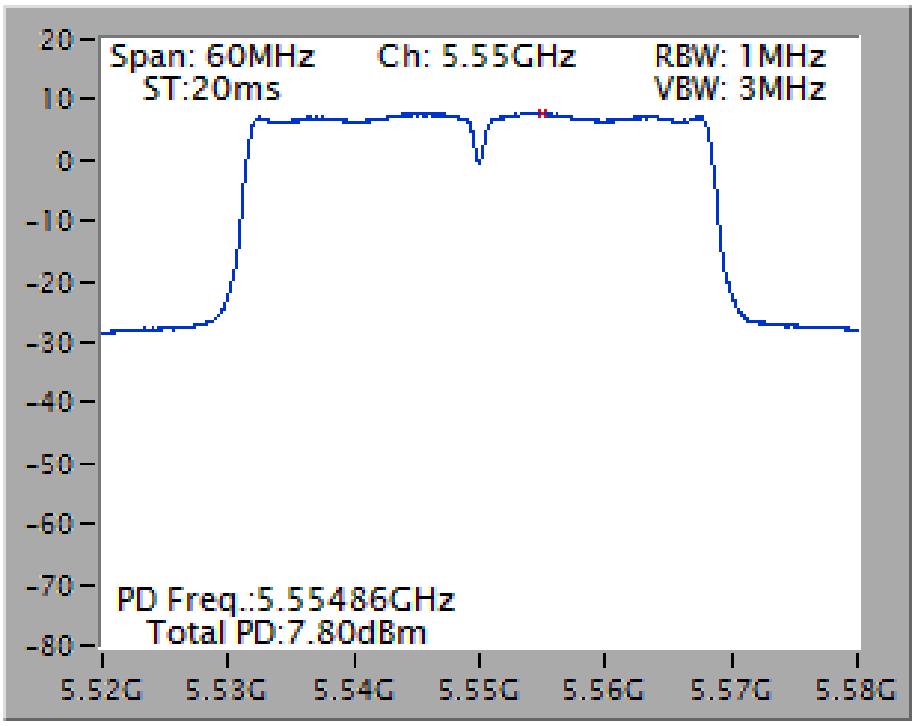
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3 / 5230 MHz



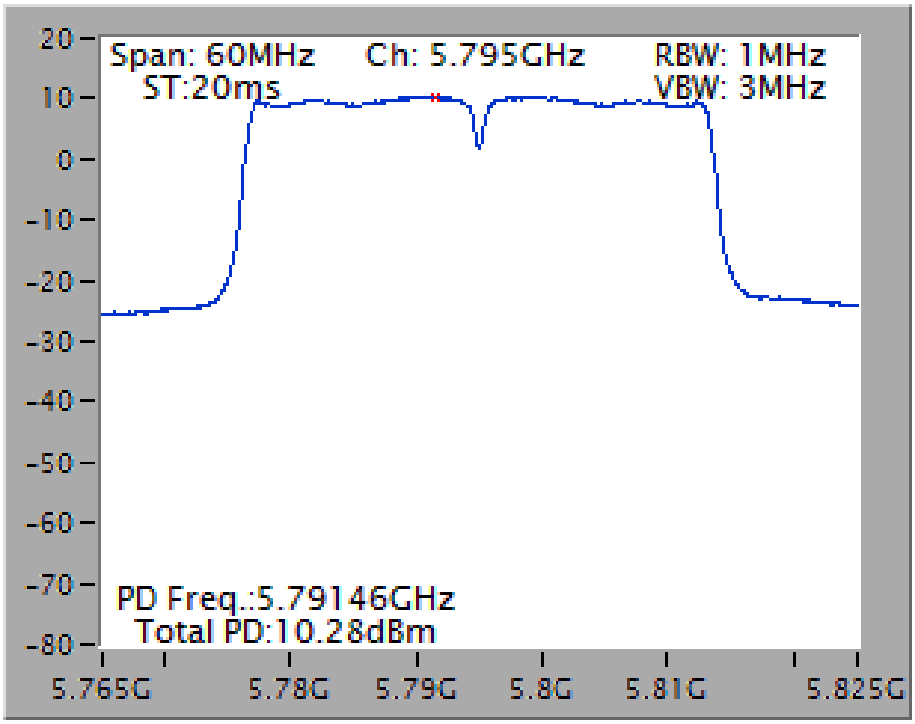
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3 / 5270 MHz



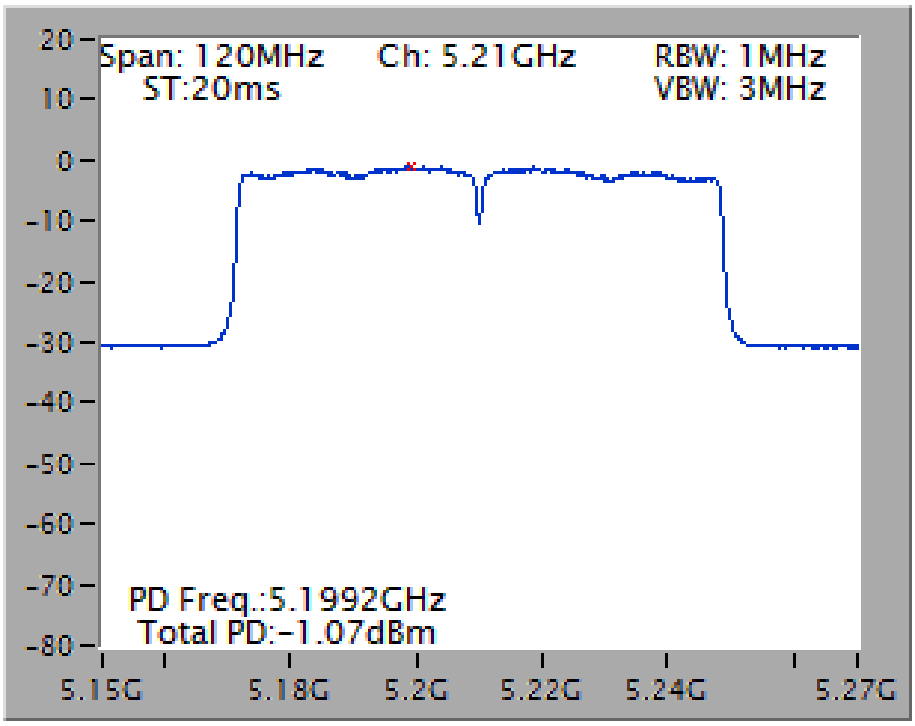
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3 / 5550 MHz



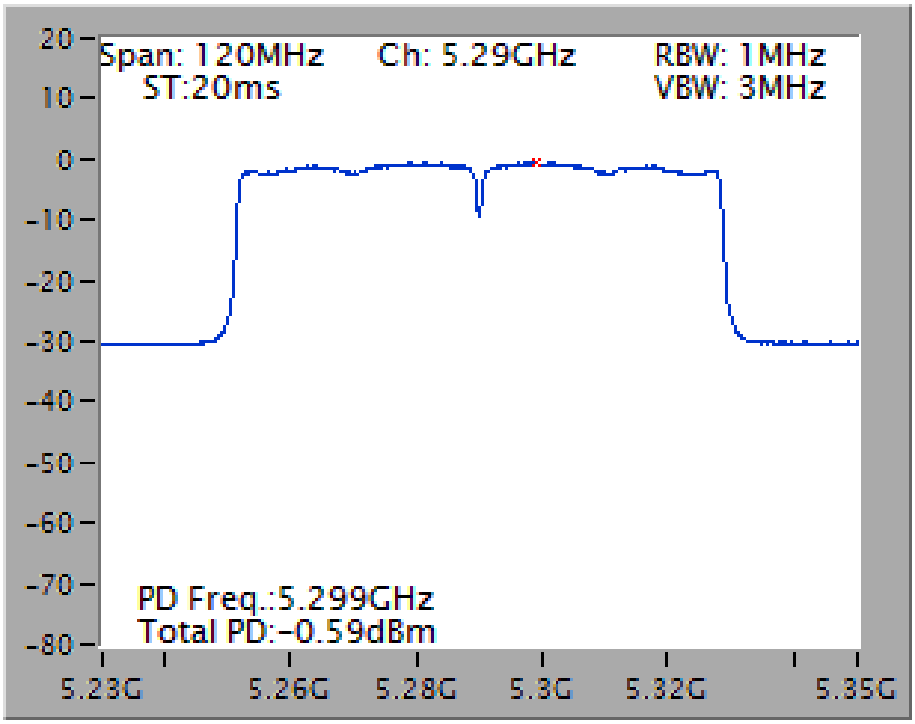
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3 / 5795 MHz



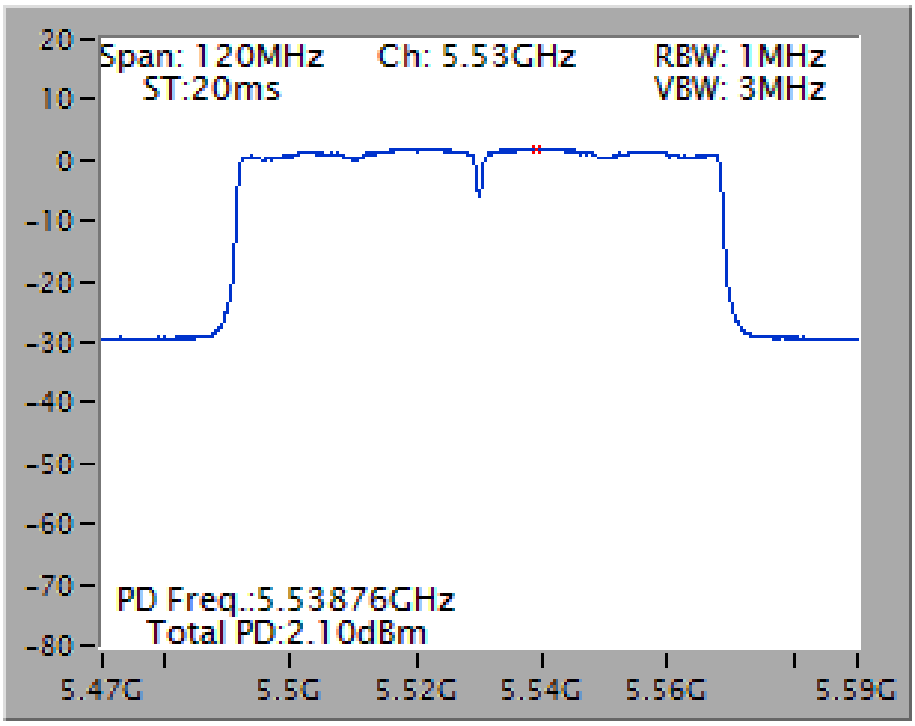
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3 / 5210 MHz



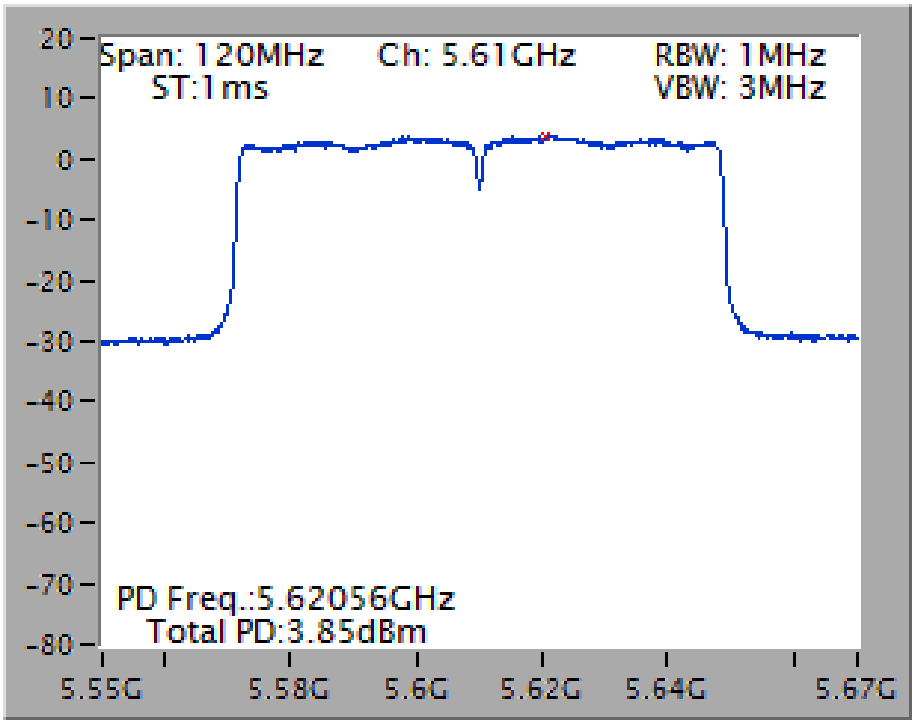
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3 / 5290 MHz



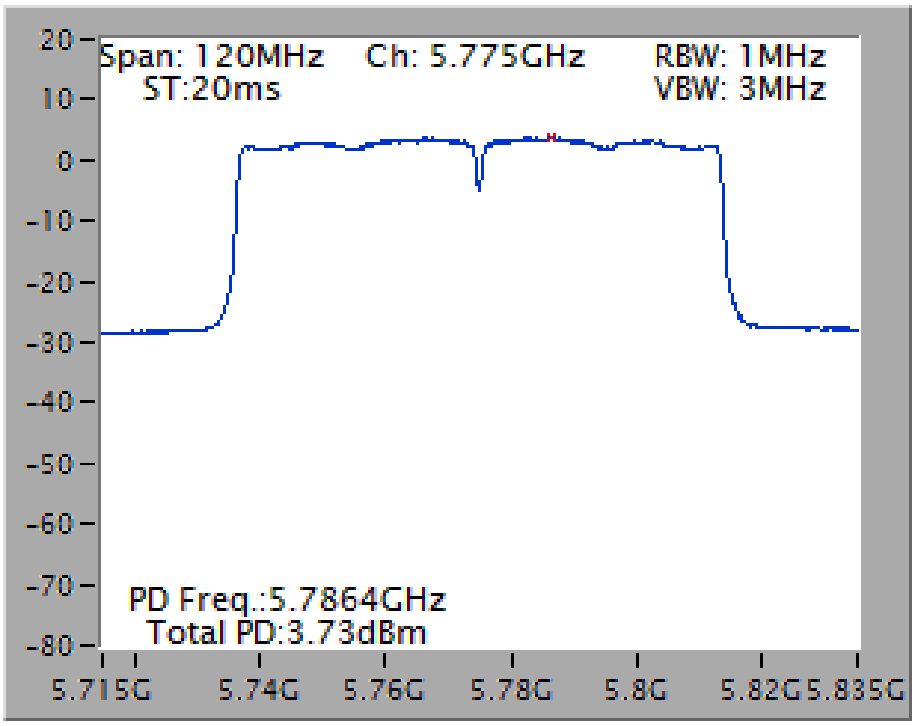
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3 / 5530 MHz



Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3 / 5610 MHz



Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 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

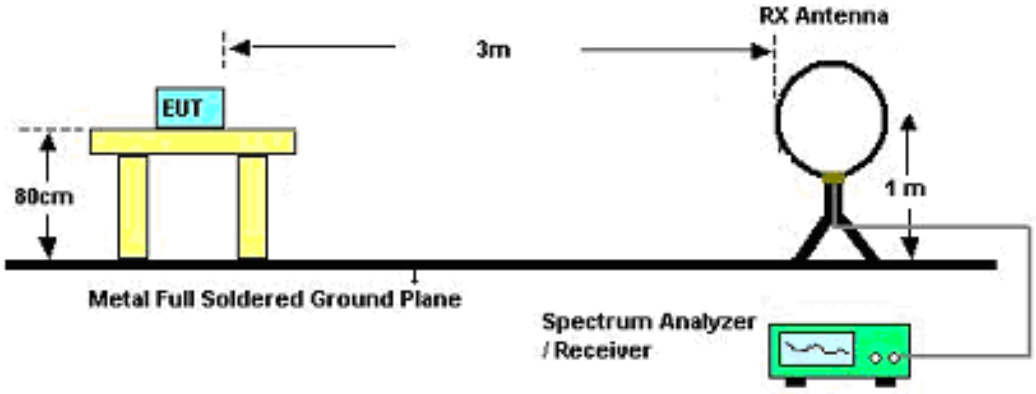
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RBW 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RBW 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RBW 120kHz for QP

4.6.3. Test Procedures

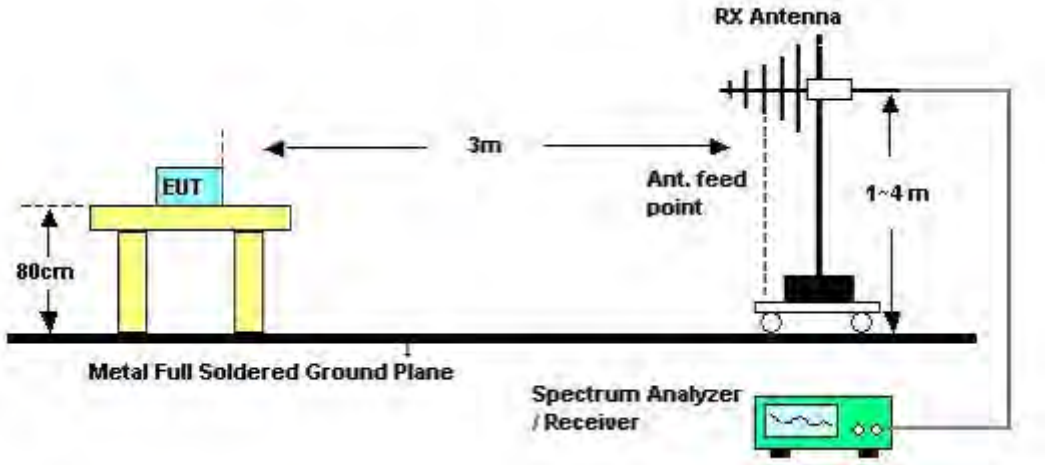
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 1m & 3m far away from the turntable.
2. Power on the EUT and all the supporting 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

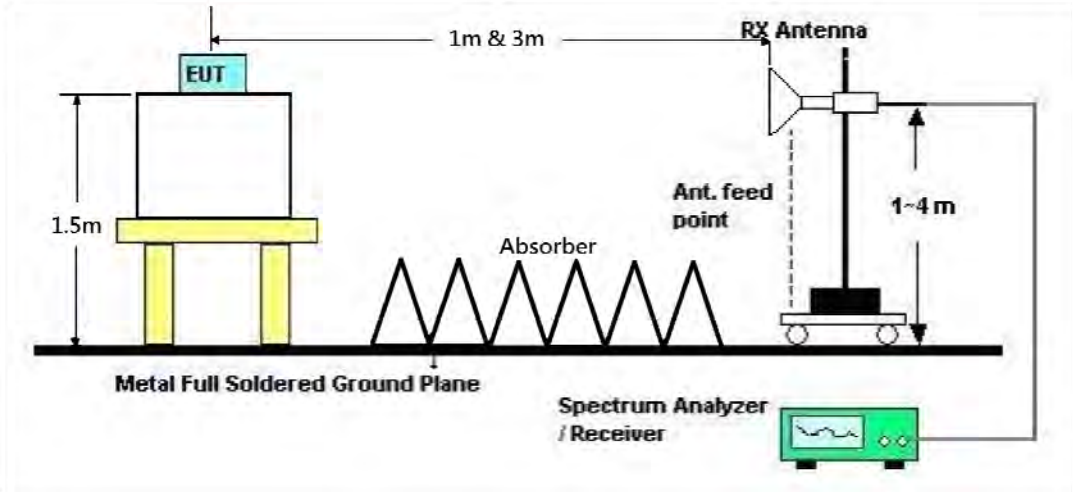
For Radiated Emissions: 9kHz ~30MHz



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

The EUT was programmed to be in continuously transmitting mode.

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

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	CTX
Test Date	Aug. 04, 2015	Test Mode	Mode 1

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

Note:

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

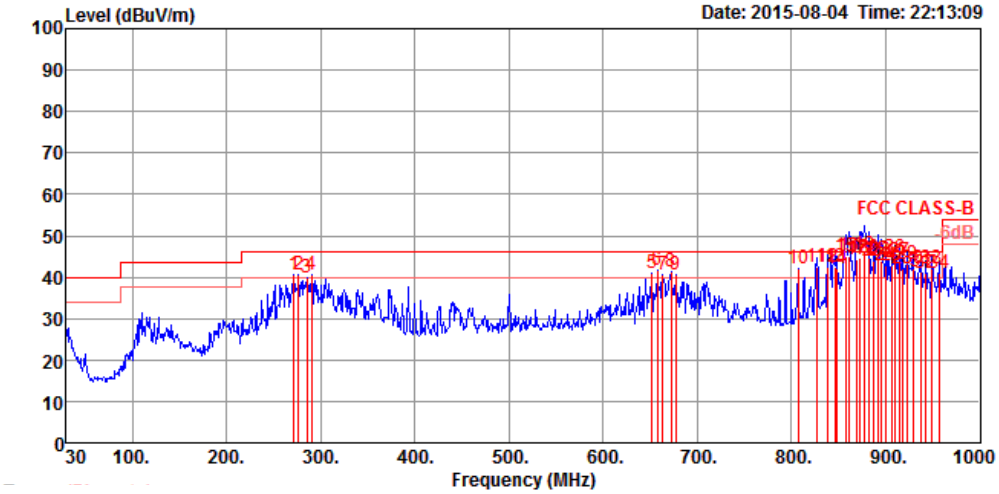
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

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

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

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	CTX
Test Mode	Mode 1		

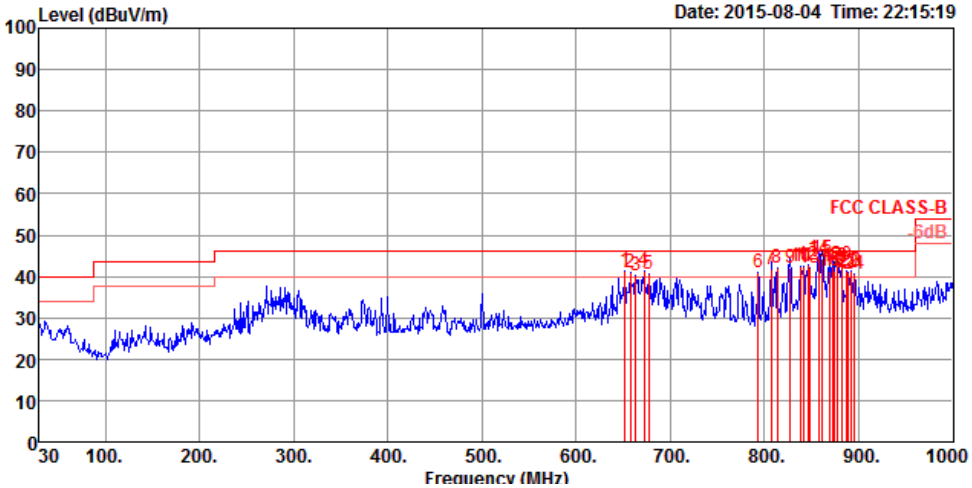
Horizontal



	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	271.53	40.60	46.00	-5.40	57.87	1.43	13.59	32.29	100	139	Peak	HORIZONTAL
2	276.38	40.71	46.00	-5.29	58.02	1.44	13.54	32.29	100	150	Peak	HORIZONTAL
3	285.11	40.02	46.00	-5.98	57.25	1.46	13.60	32.29	125	155	Peak	HORIZONTAL
4	289.96	40.75	46.00	-5.25	57.86	1.47	13.70	32.28	125	144	Peak	HORIZONTAL
5	651.77	41.09	46.00	-4.91	51.77	2.10	19.60	32.38	125	103	Peak	HORIZONTAL
6	657.59	41.68	46.00	-4.32	52.34	2.11	19.61	32.38	125	103	Peak	HORIZONTAL
7	663.41	40.55	46.00	-5.45	51.19	2.11	19.63	32.38	125	87	Peak	HORIZONTAL
8	672.14	41.46	46.00	-4.54	52.06	2.12	19.65	32.37	125	268	Peak	HORIZONTAL
9	676.99	40.49	46.00	-5.51	51.08	2.12	19.66	32.37	125	87	Peak	HORIZONTAL
10	806.97	42.24	46.00	-3.76	51.27	2.31	20.88	32.22	100	184	Peak	HORIZONTAL
11	826.37	42.59	46.00	-3.41	51.27	2.34	21.08	32.10	100	184	QP	HORIZONTAL
12	838.98	42.40	46.00	-3.60	50.90	2.35	21.19	32.04	100	178	QP	HORIZONTAL
13	845.77	42.55	46.00	-3.45	50.95	2.36	21.24	32.00	100	178	QP	HORIZONTAL
14	847.71	42.19	46.00	-3.81	50.56	2.36	21.27	32.00	100	184	QP	HORIZONTAL
15	858.38	45.18	46.00	-0.82	53.39	2.38	21.35	31.94	150	170	QP	HORIZONTAL
16	861.29	45.07	46.00	-0.93	53.23	2.38	21.38	31.92	100	184	QP	HORIZONTAL
17	869.05	44.31	46.00	-1.69	52.35	2.39	21.45	31.88	100	184	QP	HORIZONTAL
18	871.96	44.81	46.00	-1.19	52.81	2.40	21.48	31.88	150	181	QP	HORIZONTAL
19	877.78	45.22	46.00	-0.78	53.14	2.40	21.52	31.84	150	176	QP	HORIZONTAL
20	881.66	44.81	46.00	-1.19	52.67	2.41	21.55	31.82	100	188	QP	HORIZONTAL
21	887.48	44.07	46.00	-1.93	51.86	2.41	21.60	31.80	150	181	QP	HORIZONTAL
22	891.36	44.36	46.00	-1.64	52.10	2.42	21.62	31.78	150	186	QP	HORIZONTAL
23	895.24	43.97	46.00	-2.03	51.66	2.42	21.65	31.76	150	192	QP	HORIZONTAL
24	900.09	42.76	46.00	-3.24	50.37	2.43	21.70	31.74	150	186	QP	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		
25	905.91	42.69	46.00	-3.31	50.17	2.44	21.74	31.66	150	197	QP	HORIZONTAL
26	910.76	44.69	46.00	-1.31	52.11	2.44	21.76	31.62	150	186	QP	HORIZONTAL
27	915.61	43.79	46.00	-2.21	51.12	2.45	21.80	31.58	150	186	QP	HORIZONTAL
28	918.52	42.23	46.00	-3.77	49.50	2.45	21.82	31.54	150	190	QP	HORIZONTAL
29	923.37	43.35	46.00	-2.65	50.55	2.46	21.84	31.50	150	186	QP	HORIZONTAL
30	929.19	42.23	46.00	-3.77	49.34	2.47	21.88	31.46	150	181	QP	HORIZONTAL
31	936.95	41.25	46.00	-4.75	48.23	2.48	21.92	31.38	150	186	QP	HORIZONTAL
32	942.77	40.95	46.00	-5.05	47.85	2.48	21.96	31.34	125	194	QP	HORIZONTAL
33	949.56	41.92	46.00	-4.08	48.70	2.49	22.00	31.27	125	190	QP	HORIZONTAL
34	956.35	40.85	46.00	-5.15	47.54	2.50	22.04	31.23	125	194	QP	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	651.77	41.22	46.00	-4.78	51.90	2.10	19.60	32.38	150	360	Peak	VERTICAL
2	657.59	41.04	46.00	-4.96	51.70	2.11	19.61	32.38	150	6	Peak	VERTICAL
3	663.41	40.32	46.00	-5.68	50.96	2.11	19.63	32.38	150	6	Peak	VERTICAL
4	672.14	41.47	46.00	-4.53	52.07	2.12	19.65	32.37	150	0	Peak	VERTICAL
5	676.99	40.77	46.00	-5.23	51.36	2.12	19.66	32.37	150	360	Peak	VERTICAL
6	793.39	40.93	46.00	-5.07	50.13	2.29	20.76	32.25	125	360	Peak	VERTICAL
7	806.97	41.56	46.00	-4.44	50.59	2.31	20.88	32.22	125	358	QP	VERTICAL
8	813.76	41.89	46.00	-4.11	50.81	2.32	20.94	32.18	125	356	Peak	VERTICAL
9	827.34	42.16	46.00	-3.84	50.84	2.34	21.08	32.10	125	358	QP	VERTICAL
10	838.98	42.44	46.00	-3.56	50.94	2.35	21.19	32.04	125	358	Peak	VERTICAL
11	840.92	42.27	46.00	-3.73	50.73	2.36	21.22	32.04	125	25	Peak	VERTICAL
12	845.77	42.76	46.00	-3.24	51.16	2.36	21.24	32.00	125	356	Peak	VERTICAL
13	847.71	41.91	46.00	-4.09	50.28	2.36	21.27	32.00	125	0	Peak	VERTICAL
14	858.38	44.20	46.00	-1.80	52.41	2.38	21.35	31.94	125	5	QP	VERTICAL
15	861.29	44.34	46.00	-1.66	52.50	2.38	21.38	31.92	125	356	QP	VERTICAL
16	869.05	41.18	46.00	-4.82	49.22	2.39	21.45	31.88	125	5	QP	VERTICAL
17	871.96	42.50	46.00	-3.50	50.50	2.40	21.48	31.88	125	360	QP	VERTICAL
18	874.87	41.36	46.00	-4.64	49.32	2.40	21.50	31.86	125	41	QP	VERTICAL
19	877.78	42.36	46.00	-3.64	50.28	2.40	21.52	31.84	125	15	QP	VERTICAL
20	881.66	42.83	46.00	-3.17	50.69	2.41	21.55	31.82	125	25	Peak	VERTICAL
21	887.48	41.15	46.00	-4.85	48.94	2.41	21.60	31.80	100	32	Peak	VERTICAL
22	889.42	40.80	46.00	-5.20	48.54	2.42	21.62	31.78	100	38	Peak	VERTICAL
23	891.36	41.16	46.00	-4.84	48.90	2.42	21.62	31.78	100	49	Peak	VERTICAL
24	895.24	40.41	46.00	-5.59	48.10	2.42	21.65	31.76	125	43	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)

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11a CH 36 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15538.01	43.76	54.00	-10.24	32.66	7.56	38.16	34.62	248	138	Average	HORIZONTAL
2	15541.77	56.77	74.00	-17.23	45.67	7.56	38.16	34.62	248	138	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15539.96	43.15	54.00	-10.85	32.05	7.56	38.16	34.62	191	114	Average	VERTICAL
2	15540.24	52.01	74.00	-21.99	40.91	7.56	38.16	34.62	191	114	Peak	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11a CH 40 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15601.90	43.88	54.00	-10.12	32.70	7.58	38.29	34.69	289	107	Average	HORIZONTAL
2	15601.94	57.32	74.00	-16.68	46.14	7.58	38.29	34.69	289	107	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15597.89	56.75	74.00	-17.25	45.55	7.58	38.29	34.67	162	105	Peak	VERTICAL
2	15598.00	43.67	54.00	-10.33	32.47	7.58	38.29	34.67	162	105	Average	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11a CH 48 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15719.84	43.39	54.00	-10.61	32.05	7.62	38.50	34.78	220	155	Average	HORIZONTAL
2	15720.24	56.78	74.00	-17.22	45.44	7.62	38.50	34.78	220	155	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15716.44	43.30	54.00	-10.70	31.96	7.62	38.50	34.78	204	150	Average	VERTICAL
2	15718.50	56.91	74.00	-17.09	45.57	7.62	38.50	34.78	204	150	Peak	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11a CH 52 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15775.24	43.36	54.00	-10.64	31.94	7.64	38.60	34.82	185	165	Average	HORIZONTAL
2	15781.62	56.63	74.00	-17.37	45.20	7.64	38.63	34.84	185	165	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15780.38	56.30	74.00	-17.70	44.90	7.64	38.60	34.84	212	165	Peak	VERTICAL
2	15784.72	43.13	54.00	-10.87	31.70	7.64	38.63	34.84	212	165	Average	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11a CH 60 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10604.78	52.83	74.00	-21.17	42.77	6.21	38.78	34.93	216	165	Peak	HORIZONTAL
2	10604.96	39.80	54.00	-14.20	29.74	6.21	38.78	34.93	216	165	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10598.32	52.69	74.00	-21.31	42.65	6.21	38.78	34.95	221	165	Peak	VERTICAL
2	10604.12	39.64	54.00	-14.36	29.58	6.21	38.78	34.93	221	165	Average	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11a CH 64 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10639.94	40.58	54.00	-13.42	30.49	6.23	38.77	34.91	196	165	Average	HORIZONTAL
2	10643.48	53.63	74.00	-20.37	43.54	6.23	38.77	34.91	196	165	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10642.92	40.58	54.00	-13.42	30.49	6.23	38.77	34.91	186	165	Average	VERTICAL
2	10642.94	53.50	74.00	-20.50	43.41	6.23	38.77	34.91	186	165	Peak	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11a CH 100 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10998.62	52.48	74.00	-21.52	42.04	6.40	38.70	34.66	179	170	Peak	HORIZONTAL
2	10999.94	41.09	54.00	-12.91	30.65	6.40	38.70	34.66	179	170	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10999.70	51.96	74.00	-22.04	41.52	6.40	38.70	34.66	172	170	Peak	VERTICAL
2	11001.42	38.95	54.00	-15.05	28.51	6.40	38.70	34.66	172	170	Average	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11a CH 116 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11161.98	47.99	54.00	-6.01	37.50	6.44	38.70	34.65	230	145	Average	HORIZONTAL
2	11162.90	60.87	74.00	-13.13	50.38	6.44	38.70	34.65	230	145	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11160.36	57.87	74.00	-16.13	47.38	6.44	38.70	34.65	5	165	Peak	VERTICAL
2	11161.20	44.93	54.00	-9.07	34.44	6.44	38.70	34.65	5	165	Average	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11a CH 140 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11399.82	52.82	74.00	-21.18	42.24	6.51	38.70	34.63	220	165	Peak	HORIZONTAL
2	11400.00	40.36	54.00	-13.64	29.78	6.51	38.70	34.63	220	165	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11404.00	39.74	54.00	-14.26	29.16	6.51	38.70	34.63	210	165	Average	VERTICAL
2	11404.70	53.12	74.00	-20.88	42.54	6.51	38.70	34.63	210	165	Peak	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11a CH 149 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11492.80	40.55	54.00	-13.45	29.94	6.53	38.70	34.62	192	165	Average	HORIZONTAL
2	11493.68	54.42	74.00	-19.58	43.81	6.53	38.70	34.62	192	165	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11489.72	52.56	74.00	-21.44	41.95	6.53	38.70	34.62	176	165	Peak	VERTICAL
2	11490.18	39.63	54.00	-14.37	29.02	6.53	38.70	34.62	176	165	Average	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11a CH 157 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11569.98	52.01	54.00	-1.99	41.40	6.55	38.71	34.65	232	168	Average	HORIZONTAL
2	11570.34	65.99	74.00	-8.01	55.38	6.55	38.71	34.65	232	168	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11572.56	48.37	54.00	-5.63	37.76	6.55	38.71	34.65	157	156	Average	VERTICAL
2	11572.78	61.96	74.00	-12.04	51.35	6.55	38.71	34.65	157	156	Peak	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11a CH 165 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11648.76	58.44	74.00	-15.56	47.83	6.56	38.73	34.68	231	172	Peak	HORIZONTAL
2	11649.42	44.36	54.00	-9.64	33.75	6.56	38.73	34.68	231	172	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11646.96	54.89	74.00	-19.11	44.28	6.56	38.73	34.68	289	177	Peak	VERTICAL
2	11649.94	41.98	54.00	-12.02	31.37	6.56	38.73	34.68	289	177	Average	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15535.52	43.50	54.00	-10.50	32.40	7.56	38.16	34.62	285	165	Average	HORIZONTAL
2	15543.70	56.39	74.00	-17.61	45.26	7.56	38.19	34.62	285	165	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15536.12	57.42	74.00	-16.58	46.32	7.56	38.16	34.62	269	165	Peak	VERTICAL
2	15536.34	43.21	54.00	-10.79	32.11	7.56	38.16	34.62	269	165	Average	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15597.12	43.40	54.00	-10.60	32.20	7.58	38.29	34.67	250	165	Average	HORIZONTAL
2	15602.36	56.82	74.00	-17.18	45.64	7.58	38.29	34.69	250	165	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15597.98	57.13	74.00	-16.87	45.93	7.58	38.29	34.67	229	165	Peak	VERTICAL
2	15603.86	43.54	54.00	-10.46	32.36	7.58	38.29	34.69	229	165	Average	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15719.66	43.30	54.00	-10.70	31.96	7.62	38.50	34.78	218	165	Average	HORIZONTAL
2	15721.52	56.21	74.00	-17.79	44.87	7.62	38.50	34.78	218	165	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15715.16	56.42	74.00	-17.58	45.08	7.62	38.50	34.78	199	165	Peak	VERTICAL
2	15719.74	43.46	54.00	-10.54	32.12	7.62	38.50	34.78	199	165	Average	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15776.20	43.43	54.00	-10.57	32.01	7.64	38.60	34.82	189	165	Average	HORIZONTAL
2	15780.04	56.54	74.00	-17.46	45.14	7.64	38.60	34.84	189	165	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15780.94	43.31	54.00	-10.69	31.91	7.64	38.60	34.84	177	165	Average	VERTICAL
2	15784.40	56.50	74.00	-17.50	45.07	7.64	38.63	34.84	177	165	Peak	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 60 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10599.04	58.58	74.00	-15.42	48.54	6.21	38.78	34.95	253	165	Peak	HORIZONTAL
2	10599.12	43.88	54.00	-10.12	33.84	6.21	38.78	34.95	253	165	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10596.06	40.37	54.00	-13.63	30.34	6.20	38.78	34.95	170	155	Average	VERTICAL
2	10599.46	52.96	74.00	-21.04	42.92	6.21	38.78	34.95	170	155	Peak	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 64 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10635.36	39.70	54.00	-14.30	29.61	6.23	38.77	34.91	217	165	Average	HORIZONTAL
2	10636.80	52.15	74.00	-21.85	42.06	6.23	38.77	34.91	217	165	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10639.82	53.22	74.00	-20.78	43.13	6.23	38.77	34.91	238	165	Peak	VERTICAL
2	10640.28	39.62	54.00	-14.38	29.53	6.23	38.77	34.91	238	165	Average	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11000.12	39.08	54.00	-14.92	28.64	6.40	38.70	34.66	245	165	Average	HORIZONTAL
2	11000.84	52.13	74.00	-21.87	41.69	6.40	38.70	34.66	245	165	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10997.00	52.51	74.00	-21.49	42.07	6.40	38.70	34.66	257	165	Peak	VERTICAL
2	10999.84	39.04	54.00	-14.96	28.60	6.40	38.70	34.66	257	165	Average	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 116 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11157.82	60.47	74.00	-13.53	49.98	6.44	38.70	34.65	228	154	Peak	HORIZONTAL
2	11162.60	46.58	54.00	-7.42	36.09	6.44	38.70	34.65	228	154	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11162.40	42.98	54.00	-11.02	32.49	6.44	38.70	34.65	193	159	Average	VERTICAL
2	11162.48	57.31	74.00	-16.69	46.82	6.44	38.70	34.65	193	159	Peak	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 140 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 29, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11396.14	54.52	74.00	-19.48	39.90	9.19	40.18	34.75	Peak	152	153	HORIZONTAL
2	11396.44	42.07	54.00	-11.93	27.45	9.19	40.18	34.75	Average	152	153	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11397.42	41.73	54.00	-12.27	27.11	9.19	40.18	34.75	Average	117	227	VERTICAL
2	11401.56	54.89	74.00	-19.11	40.27	9.19	40.18	34.75	Peak	117	227	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 29, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11489.90	41.44	54.00	-12.56	26.67	9.24	40.28	34.75	Average	219	100	HORIZONTAL
2	11492.72	54.20	74.00	-19.80	39.43	9.24	40.28	34.75	Peak	219	100	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11490.16	41.14	54.00	-12.86	26.37	9.24	40.28	34.75	Average	163	176	VERTICAL
2	11495.00	53.93	74.00	-20.07	39.16	9.24	40.28	34.75	Peak	163	176	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11569.86	51.28	54.00	-2.72	40.67	6.55	38.71	34.65	231	167	Average	HORIZONTAL
2	11569.98	65.17	74.00	-8.83	54.56	6.55	38.71	34.65	231	167	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11568.04	48.00	54.00	-6.00	37.38	6.55	38.71	34.64	156	157	Average	VERTICAL
2	11568.24	62.32	74.00	-11.68	51.70	6.55	38.71	34.64	156	157	Peak	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11699.48	40.11	54.00	-13.89	29.50	6.57	38.74	34.70	234	165	Average	HORIZONTAL
2	11701.48	53.53	74.00	-20.47	42.92	6.57	38.74	34.70	234	165	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11703.76	53.26	74.00	-20.74	42.65	6.57	38.74	34.70	230	165	Peak	VERTICAL
2	11705.14	39.99	54.00	-14.01	29.38	6.57	38.74	34.70	230	165	Average	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 29, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15566.72	59.43	74.00	-14.57	44.44	10.78	39.33	35.12	Peak	162	222	HORIZONTAL
2	15573.80	45.97	54.00	-8.03	30.99	10.78	39.33	35.13	Average	162	222	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15565.68	46.04	54.00	-7.96	31.05	10.78	39.33	35.12	Average	177	114	VERTICAL
2	15574.18	59.53	74.00	-14.47	44.55	10.78	39.33	35.13	Peak	177	114	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 29, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15688.94	57.94	74.00	-16.06	42.95	10.79	39.38	35.18	Peak	151	220	HORIZONTAL
2	15689.96	45.41	54.00	-8.59	30.42	10.79	39.38	35.18	Average	151	220	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15686.30	58.19	74.00	-15.81	43.20	10.79	39.38	35.18	Peak	162	127	VERTICAL
2	15687.84	45.45	54.00	-8.55	30.46	10.79	39.38	35.18	Average	162	127	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15811.84	56.29	74.00	-17.71	44.85	7.65	38.66	34.87	182	165	Peak	HORIZONTAL
2	15813.12	43.55	54.00	-10.45	32.11	7.65	38.66	34.87	182	165	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15808.86	43.58	54.00	-10.42	32.14	7.65	38.66	34.87	169	165	Average	VERTICAL
2	15809.48	56.36	74.00	-17.64	44.92	7.65	38.66	34.87	169	165	Peak	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 62 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10619.62	39.81	54.00	-14.19	29.74	6.22	38.78	34.93	150	165	Average	HORIZONTAL
2	10621.84	52.69	74.00	-21.31	42.62	6.22	38.78	34.93	150	165	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10617.06	39.66	54.00	-14.34	29.59	6.22	38.78	34.93	148	165	Average	VERTICAL
2	10620.24	52.35	74.00	-21.65	42.28	6.22	38.78	34.93	148	165	Peak	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11017.76	52.62	74.00	-21.38	42.18	6.40	38.70	34.66	190	165	Peak	HORIZONTAL
2	11020.06	39.47	54.00	-14.53	29.03	6.40	38.70	34.66	190	165	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11015.24	38.87	54.00	-15.13	28.43	6.40	38.70	34.66	197	165	Average	VERTICAL
2	11019.86	52.05	74.00	-21.95	41.61	6.40	38.70	34.66	197	165	Peak	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 110 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11102.52	53.26	74.00	-20.74	42.78	6.43	38.70	34.65	220	165	Peak	HORIZONTAL
2	11102.80	39.69	54.00	-14.31	29.21	6.43	38.70	34.65	220	165	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11097.66	52.89	74.00	-21.11	42.41	6.43	38.70	34.65	225	165	Peak	VERTICAL
2	11102.74	39.59	54.00	-14.41	29.11	6.43	38.70	34.65	225	165	Average	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 134 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 29, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11338.92	55.01	74.00	-18.99	40.51	9.14	40.10	34.74	Peak	137	252	HORIZONTAL
2	11339.88	42.28	54.00	-11.72	27.78	9.14	40.10	34.74	Average	137	252	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11339.02	55.06	74.00	-18.94	40.56	9.14	40.10	34.74	Peak	171	167	VERTICAL
2	11339.60	42.01	54.00	-11.99	27.51	9.14	40.10	34.74	Average	171	167	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 29, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11505.76	40.80	54.00	-13.20	26.00	9.25	40.30	34.75	Average	139	237	HORIZONTAL
2	11507.00	54.11	74.00	-19.89	39.31	9.25	40.30	34.75	Peak	139	237	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11508.08	54.09	74.00	-19.91	39.29	9.25	40.30	34.75	Peak	156	86	VERTICAL
2	11514.16	41.09	54.00	-12.91	26.29	9.25	40.30	34.75	Average	156	86	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11587.54	55.11	74.00	-18.89	44.49	6.55	38.72	34.65	180	165	Peak	HORIZONTAL
2	11587.58	41.35	54.00	-12.65	30.73	6.55	38.72	34.65	180	165	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11586.44	54.51	74.00	-19.49	43.89	6.55	38.72	34.65	191	165	Peak	VERTICAL
2	11592.34	40.94	54.00	-13.06	30.32	6.55	38.72	34.65	191	165	Average	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 29, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15629.06	58.88	74.00	-15.12	43.90	10.78	39.36	35.16	Peak	178	79	HORIZONTAL
2	15629.46	46.06	54.00	-7.94	31.08	10.78	39.36	35.16	Average	178	79	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15626.46	59.01	74.00	-14.99	44.04	10.78	39.35	35.16	Peak	162	176	VERTICAL
2	15627.92	46.83	54.00	-7.17	31.86	10.78	39.35	35.16	Average	162	176	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 58 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 29, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15872.34	47.45	54.00	-6.55	32.45	10.81	39.45	35.26	Average	157	172	HORIZONTAL
2	15872.74	59.48	74.00	-14.52	44.48	10.81	39.45	35.26	Peak	157	172	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15871.86	60.22	74.00	-13.78	45.22	10.81	39.45	35.26	Peak	142	50	VERTICAL
2	15872.10	47.98	54.00	-6.02	32.98	10.81	39.45	35.26	Average	142	50	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11059.84	39.61	54.00	-14.39	29.14	6.42	38.70	34.65	216	165	Average	HORIZONTAL
2	11060.28	52.26	74.00	-21.74	41.79	6.42	38.70	34.65	216	165	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11061.76	39.25	54.00	-14.75	28.78	6.42	38.70	34.65	224	165	Average	VERTICAL
2	11064.50	51.96	74.00	-22.04	41.49	6.42	38.70	34.65	224	165	Peak	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 122 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 29, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11217.26	57.28	74.00	-16.72	42.99	9.07	39.96	34.74	Peak	154	53	HORIZONTAL
2	11220.00	44.24	54.00	-9.76	29.95	9.07	39.96	34.74	Average	154	53	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11215.70	43.26	54.00	-10.74	28.97	9.07	39.96	34.74	Average	174	303	VERTICAL
2	11217.64	56.18	74.00	-17.82	41.89	9.07	39.96	34.74	Peak	174	303	VERTICAL

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 29, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11545.68	42.33	54.00	-11.67	27.55	9.26	40.28	34.76	Average	188	13	HORIZONTAL
2	11548.02	55.53	74.00	-18.47	40.75	9.26	40.28	34.76	Peak	188	13	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11545.24	55.16	74.00	-18.84	40.38	9.26	40.28	34.76	Peak	163	155	VERTICAL
2	11545.84	42.50	54.00	-11.50	27.72	9.26	40.28	34.76	Average	163	155	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

The EUT was programmed to be in continuously transmitting mode.

4.7.7. Test Result of Band Edge and Fundamental Emissions

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11a CH 36, 40, 48 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 07, 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	5150.00	53.95	54.00	-0.05	50.26	5.80	31.52	33.63	165	298	Average	HORIZONTAL
2	5150.00	66.82	74.00	-7.18	63.13	5.80	31.52	33.63	165	298	Peak	HORIZONTAL
3 0	5181.45	108.81			105.06	5.82	31.55	33.62	165	298	Average	HORIZONTAL
4 0	5182.03	119.48			115.73	5.82	31.55	33.62	165	298	Peak	HORIZONTAL

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	5080.75	52.66	54.00	-1.34	49.08	5.76	31.46	33.64	165	303	Average	HORIZONTAL
2	5141.53	65.52	74.00	-8.48	61.84	5.80	31.51	33.63	165	303	Peak	HORIZONTAL
3 0	5201.16	111.77			108.00	5.83	31.56	33.62	165	303	Average	HORIZONTAL
4 0	5201.74	121.75			117.97	5.83	31.57	33.62	165	303	Peak	HORIZONTAL
5	5361.58	50.23	54.00	-3.77	46.21	5.93	31.69	33.60	165	303	Average	HORIZONTAL
6	5362.74	61.90	74.00	-12.10	57.88	5.93	31.69	33.60	165	303	Peak	HORIZONTAL

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	5121.33	52.74	54.00	-1.26	49.08	5.79	31.50	33.63	170	301	Average	HORIZONTAL
2	5121.33	63.55	74.00	-10.45	59.89	5.79	31.50	33.63	170	301	Peak	HORIZONTAL
3 0	5241.16	111.78			107.95	5.86	31.59	33.62	170	301	Average	HORIZONTAL
4 0	5241.74	121.71			117.87	5.86	31.59	33.61	170	301	Peak	HORIZONTAL
5	5361.58	53.68	54.00	-0.32	49.66	5.93	31.69	33.60	170	301	Average	HORIZONTAL
6	5362.74	65.29	74.00	-8.71	61.27	5.93	31.69	33.60	170	301	Peak	HORIZONTAL

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

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11a CH 52, 60, 64 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 07, 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	5140.75	53.19	54.00	-0.81	49.51	5.80	31.51	33.63	170	303	Average	HORIZONTAL
2	5141.33	64.53	74.00	-9.47	60.85	5.80	31.51	33.63	170	303	Peak	HORIZONTAL
3 0	5261.16	111.47			107.60	5.87	31.61	33.61	170	303	Average	HORIZONTAL
4 0	5261.74	121.41			117.54	5.87	31.61	33.61	170	303	Peak	HORIZONTAL
5	5372.58	64.12	74.00	-9.88	60.08	5.94	31.70	33.60	170	303	Peak	HORIZONTAL
6	5381.84	52.94	54.00	-1.06	48.89	5.94	31.70	33.59	170	303	Average	HORIZONTAL

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	5141.39	61.92	74.00	-12.08	58.24	5.80	31.51	33.63	169	295	Peak	HORIZONTAL
2	5141.97	50.48	54.00	-3.52	46.79	5.80	31.52	33.63	169	295	Average	HORIZONTAL
3 0	5301.74	110.34			106.42	5.89	31.64	33.61	169	295	Average	HORIZONTAL
4 0	5302.32	121.09			117.17	5.89	31.64	33.61	169	295	Peak	HORIZONTAL
5	5413.10	64.51	74.00	-9.49	60.41	5.96	31.73	33.59	169	295	Peak	HORIZONTAL
6	5422.36	53.18	54.00	-0.82	49.06	5.97	31.74	33.59	169	295	Average	HORIZONTAL

Item 3, 4 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 0	5318.55	108.24			104.29	5.90	31.65	33.60	179	43	Average	HORIZONTAL
2 0	5318.84	119.42			115.47	5.90	31.65	33.60	179	43	Peak	HORIZONTAL
3	5350.00	53.90	54.00	-0.10	49.90	5.92	31.68	33.60	179	43	Average	HORIZONTAL
4	5353.00	71.04	74.00	-2.96	67.04	5.92	31.68	33.60	179	43	Peak	HORIZONTAL

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

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11a CH 100, 116, 140 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 07, 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	5458.90	66.74	74.00	-7.26	62.57	5.99	31.76	33.58	168	35	Peak	HORIZONTAL
2	5459.19	49.23	54.00	-4.77	45.06	5.99	31.76	33.58	168	35	Average	HORIZONTAL
3	5469.32	69.85	74.00	-4.15	65.66	5.99	31.78	33.58	168	35	Peak	HORIZONTAL
4	5469.61	53.70	54.00	-0.30	49.51	5.99	31.78	33.58	168	35	Average	HORIZONTAL
5 0	5498.84	117.62			113.39	6.01	31.80	33.58	168	35	Peak	HORIZONTAL
6 0	5499.13	106.97			102.74	6.01	31.80	33.58	168	35	Average	HORIZONTAL

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	5420.81	50.19	54.00	-3.81	46.08	5.96	31.74	33.59	165	67	Average	HORIZONTAL
2	5421.39	61.69	74.00	-12.31	57.58	5.96	31.74	33.59	165	67	Peak	HORIZONTAL
3	5460.74	61.32	68.20	-6.88	57.15	5.99	31.76	33.58	165	67	Peak	HORIZONTAL
4 0	5578.84	119.45			115.10	6.04	31.90	33.59	165	67	Peak	HORIZONTAL
5 0	5579.42	109.23			104.88	6.04	31.90	33.59	165	67	Average	HORIZONTAL
6	5739.47	64.49	68.20	-3.71	59.88	6.11	32.10	33.60	165	67	Peak	HORIZONTAL

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	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1 0	5698.84	114.81			110.28	6.09	32.04	33.60	169	66	Peak	HORIZONTAL
2 0	5699.42	104.42			99.89	6.09	32.04	33.60	169	66	Average	HORIZONTAL
3	5728.08	71.37	74.00	-2.63	66.79	6.10	32.08	33.60	169	66	Peak	HORIZONTAL
4	5728.94	53.97	54.00	-0.03	49.39	6.10	32.08	33.60	169	66	Average	HORIZONTAL

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

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11a CH 149, 157, 165 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 07, 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	5715.00	68.05	68.20	-0.15	63.49	6.10	32.06	33.60	174	64	Peak	HORIZONTAL
2	5725.00	74.92	78.20	-3.28	70.34	6.10	32.08	33.60	174	64	Peak	HORIZONTAL
3 0	5744.42	105.15			100.54	6.11	32.10	33.60	174	64	Average	HORIZONTAL
4 0	5744.42	115.15			110.54	6.11	32.10	33.60	174	64	Peak	HORIZONTAL

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	5712.06	65.61	68.20	-2.59	61.05	6.10	32.06	33.60	176	64	Peak	HORIZONTAL
2	5720.17	67.63	78.20	-10.57	63.07	6.10	32.06	33.60	176	64	Peak	HORIZONTAL
3 0	5783.84	121.51			116.84	6.13	32.14	33.60	176	64	Peak	HORIZONTAL
4 0	5784.42	111.32			106.65	6.13	32.14	33.60	176	64	Average	HORIZONTAL
5	5852.73	65.83	78.20	-12.37	61.07	6.15	32.22	33.61	176	64	Peak	HORIZONTAL
6	5904.25	67.48	68.20	-0.72	62.64	6.17	32.28	33.61	176	64	Peak	HORIZONTAL

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 0	5824.13	115.98			111.25	6.14	32.20	33.61	174	61	Peak	HORIZONTAL
2 0	5824.42	106.11			101.38	6.14	32.20	33.61	174	61	Average	HORIZONTAL
3	5853.36	70.36	78.20	-7.84	65.60	6.15	32.22	33.61	174	61	Peak	HORIZONTAL
4	5862.92	67.96	68.20	-0.24	63.17	6.16	32.24	33.61	174	61	Peak	HORIZONTAL

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

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36, 40, 48 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 07, 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	5147.58	53.64	54.00	-0.36	49.95	5.80	31.52	33.63	181	289	Average	HORIZONTAL
2	5149.61	68.78	74.00	-5.22	65.09	5.80	31.52	33.63	181	289	Peak	HORIZONTAL
3 0	5181.74	106.59			102.84	5.82	31.55	33.62	181	289	Average	HORIZONTAL
4 0	5182.32	117.90			114.15	5.82	31.55	33.62	181	289	Peak	HORIZONTAL

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	5077.28	63.68	74.00	-10.32	60.10	5.76	31.46	33.64	170	290	Peak	HORIZONTAL
2	5081.91	52.19	54.00	-1.81	48.61	5.76	31.46	33.64	170	290	Average	HORIZONTAL
3 0	5202.32	110.56			106.78	5.83	31.57	33.62	170	290	Average	HORIZONTAL
4 0	5202.32	120.70			116.92	5.83	31.57	33.62	170	290	Peak	HORIZONTAL
5	5353.47	62.17	74.00	-11.83	58.16	5.93	31.68	33.60	170	290	Peak	HORIZONTAL
6	5357.53	50.60	54.00	-3.40	46.58	5.93	31.69	33.60	170	290	Average	HORIZONTAL

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	5119.02	51.80	54.00	-2.20	48.15	5.78	31.50	33.63	177	37	Average	HORIZONTAL
2	5124.23	62.57	74.00	-11.43	58.91	5.79	31.50	33.63	177	37	Peak	HORIZONTAL
3 0	5239.42	110.50			106.67	5.86	31.59	33.62	177	37	Average	HORIZONTAL
4 0	5244.63	120.57			116.73	5.86	31.59	33.61	177	37	Peak	HORIZONTAL
5	5354.05	65.90	74.00	-8.10	61.89	5.93	31.68	33.60	177	37	Peak	HORIZONTAL
6	5359.26	53.97	54.00	-0.03	49.95	5.93	31.69	33.60	177	37	Average	HORIZONTAL

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

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52, 60, 64 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 07, 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	5139.02	52.32	54.00	-1.68	48.64	5.80	31.51	33.63	186	37	Average	HORIZONTAL
2	5144.23	62.92	74.00	-11.08	59.23	5.80	31.52	33.63	186	37	Peak	HORIZONTAL
3 0	5259.42	111.29			107.42	5.87	31.61	33.61	186	37	Average	HORIZONTAL
4 0	5259.42	121.45			117.58	5.87	31.61	33.61	186	37	Peak	HORIZONTAL
5	5374.89	65.29	74.00	-8.71	61.25	5.94	31.70	33.60	186	37	Peak	HORIZONTAL
6	5379.25	53.87	54.00	-0.13	49.83	5.94	31.70	33.60	186	37	Average	HORIZONTAL

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	5139.07	49.60	54.00	-4.40	45.92	5.80	31.51	33.63	186	36	Average	HORIZONTAL
2	5144.28	59.50	74.00	-14.50	55.81	5.80	31.52	33.63	186	36	Peak	HORIZONTAL
3 0	5298.84	110.78			106.86	5.89	31.64	33.61	186	36	Average	HORIZONTAL
4 0	5298.84	120.65			116.73	5.89	31.64	33.61	186	36	Peak	HORIZONTAL
5	5350.00	68.23	74.00	-5.77	64.23	5.92	31.68	33.60	186	36	Peak	HORIZONTAL
6	5374.10	52.44	54.00	-1.56	48.40	5.94	31.70	33.60	186	36	Average	HORIZONTAL

Item 3, 4 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 0	5314.50	117.83			113.88	5.90	31.65	33.60	184	38	Peak	HORIZONTAL
2 0	5319.13	107.00			103.05	5.90	31.65	33.60	184	38	Average	HORIZONTAL
3	5350.00	53.87	54.00	-0.13	49.87	5.92	31.68	33.60	184	38	Average	HORIZONTAL
4	5350.00	70.34	74.00	-3.66	66.34	5.92	31.68	33.60	184	38	Peak	HORIZONTAL

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

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100, 116, 140 / Chain 1 + Chain 2 + Chain 3
Test Date	CH 100: Jul. 07, 2015 / CH 116: Jul. 07, 2015~Jul. 08, 2015 / CH 140: Jul. 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	5459.19	66.39	74.00	-7.61	62.22	5.99	31.76	33.58	180	34	Peak	HORIZONTAL
2	5459.48	49.47	54.00	-4.53	45.30	5.99	31.76	33.58	180	34	Average	HORIZONTAL
3	5469.32	68.29	74.00	-5.71	64.10	5.99	31.78	33.58	180	34	Peak	HORIZONTAL
4	5469.61	53.88	54.00	-0.12	49.69	5.99	31.78	33.58	180	34	Average	HORIZONTAL
5 0	5499.42	105.64			101.41	6.01	31.80	33.58	180	34	Average	HORIZONTAL
6 0	5499.42	116.43			112.20	6.01	31.80	33.58	180	34	Peak	HORIZONTAL

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	5421.39	62.37	74.00	-11.63	58.26	5.96	31.74	33.59	191	291	Peak	HORIZONTAL
2	5456.70	50.29	54.00	-3.71	46.12	5.99	31.76	33.58	191	291	Average	HORIZONTAL
3	5461.33	50.67	54.00	-3.33	46.50	5.99	31.76	33.58	191	291	Average	HORIZONTAL
4	5461.33	62.42	74.00	-11.58	58.25	5.99	31.76	33.58	191	291	Peak	HORIZONTAL
5 0	5581.74	109.68			105.33	6.04	31.90	33.59	191	291	Average	HORIZONTAL
6 0	5581.74	120.08			115.73	6.04	31.90	33.59	191	291	Peak	HORIZONTAL
7	5732.53	63.63	74.00	-10.37	59.04	6.11	32.08	33.60	191	291	Peak	HORIZONTAL
8	5742.08	52.81	54.00	-1.19	48.20	6.11	32.10	33.60	191	291	Average	HORIZONTAL

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	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5696.80	103.21			97.78	6.43	33.97	34.97	Average	187	294	HORIZONTAL
2	5696.80	114.01			108.58	6.43	33.97	34.97	Peak	187	294	HORIZONTAL
3	5727.20	53.82	54.00	-0.18	48.34	6.45	34.01	34.98	Average	187	294	HORIZONTAL
4	5727.20	69.42	74.00	-4.58	63.94	6.45	34.01	34.98	Peak	187	294	HORIZONTAL

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

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149, 157, 165 / Chain 1 + Chain 2 + Chain 3
Test Date	CH 149: Jul. 29, 2015 / CH 157, 165: Jul. 08, 2015		

Channel 149

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5714.60	67.24	68.20	-0.96	61.79	6.44	33.99	34.98	Peak	177	30	HORIZONTAL
2	5725.00	75.91	78.20	-2.29	70.43	6.45	34.01	34.98	Peak	177	30	HORIZONTAL
3	5744.20	102.72			97.22	6.45	34.04	34.99	Average	177	30	HORIZONTAL
4	5744.20	113.63			108.13	6.45	34.04	34.99	Peak	177	30	HORIZONTAL
5	5859.20	62.35	78.20	-15.85	56.65	6.50	34.21	35.01	Peak	177	30	HORIZONTAL
6	5869.00	63.32	68.20	-4.88	57.62	6.50	34.21	35.01	Peak	177	30	HORIZONTAL

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	5710.33	66.08	68.20	-2.12	61.52	6.10	32.06	33.60	146	61	Peak	HORIZONTAL
2	5720.75	70.38	78.20	-7.82	65.82	6.10	32.06	33.60	146	61	Peak	HORIZONTAL
3 0	5780.95	120.92			116.26	6.12	32.14	33.60	146	61	Peak	HORIZONTAL
4 0	5785.58	110.66			105.99	6.13	32.14	33.60	146	61	Average	HORIZONTAL
5	5855.04	67.63	78.20	-10.57	62.87	6.15	32.22	33.61	146	61	Peak	HORIZONTAL
6	5861.41	66.52	68.20	-1.68	61.73	6.16	32.24	33.61	146	61	Peak	HORIZONTAL

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 0	5820.37	115.72			111.01	6.14	32.18	33.61	144	59	Peak	HORIZONTAL
2 0	5825.58	105.15			100.42	6.14	32.20	33.61	144	59	Average	HORIZONTAL
3	5855.39	74.13	78.20	-4.07	69.37	6.15	32.22	33.61	144	59	Peak	HORIZONTAL
4	5860.60	68.05	68.20	-0.15	63.26	6.16	32.24	33.61	144	59	Peak	HORIZONTAL

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

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38, 46 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 29, 2015		

Channel 38

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5147.00	53.69	54.00	-0.31	49.15	6.13	33.35	34.94	Average	183	293	HORIZONTAL
2	5147.00	66.84	74.00	-7.16	62.30	6.13	33.35	34.94	Peak	183	293	HORIZONTAL
3	5187.00	97.96			93.37	6.15	33.38	34.94	Average	183	293	HORIZONTAL
4	5187.00	107.76			103.17	6.15	33.38	34.94	Peak	183	293	HORIZONTAL

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	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5147.20	51.95	54.00	-2.05	47.41	6.13	33.35	34.94	Average	181	289	HORIZONTAL
2	5147.20	64.37	74.00	-9.63	59.83	6.13	33.35	34.94	Peak	181	289	HORIZONTAL
3	5226.40	106.46			101.79	6.18	33.43	34.94	Average	181	289	HORIZONTAL
4	5227.60	115.85			111.18	6.18	33.43	34.94	Peak	181	289	HORIZONTAL

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

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54, 62 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 08, 2015		

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	5144.21	50.62	54.00	-3.38	46.93	5.80	31.52	33.63	165	70	Average	HORIZONTAL
2	5144.79	62.81	74.00	-11.19	59.12	5.80	31.52	33.63	165	70	Peak	HORIZONTAL
3 0	5265.37	118.84			114.96	5.87	31.62	33.61	165	70	Peak	HORIZONTAL
4 0	5274.63	108.26			104.37	5.88	31.62	33.61	165	70	Average	HORIZONTAL
5	5350.00	53.71	54.00	-0.29	49.71	5.92	31.68	33.60	165	70	Average	HORIZONTAL
6	5355.67	66.70	74.00	-7.30	62.68	5.93	31.69	33.60	165	70	Peak	HORIZONTAL

Item 3, 4 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 0	5314.05	100.01			96.06	5.90	31.65	33.60	188	37	Average	HORIZONTAL
2 0	5314.34	110.38			106.43	5.90	31.65	33.60	188	37	Peak	HORIZONTAL
3	5350.00	53.46	54.00	-0.54	49.46	5.92	31.68	33.60	188	37	Average	HORIZONTAL
4	5350.00	65.42	74.00	-8.58	61.42	5.92	31.68	33.60	188	37	Peak	HORIZONTAL

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

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102, 110, 134 / Chain 1 + Chain 2 + Chain 3
Test Date	CH 102, 110: Jul. 08, 2015 / CH 134: Jul. 29, 2015		

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	5459.35	65.21	74.00	-8.79	61.04	5.99	31.76	33.58	165	70	Peak	HORIZONTAL
2	5460.00	49.24	54.00	-4.76	45.07	5.99	31.76	33.58	165	70	Average	HORIZONTAL
3	5469.77	68.26	74.00	-5.74	64.07	5.99	31.78	33.58	165	70	Peak	HORIZONTAL
4	5470.00	53.71	54.00	-0.29	49.52	5.99	31.78	33.58	165	70	Average	HORIZONTAL
5 0	5504.50	109.50			105.27	6.01	31.80	33.58	165	70	Peak	HORIZONTAL
6 0	5504.79	99.45			95.22	6.01	31.80	33.58	165	70	Average	HORIZONTAL

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	5434.80	53.59	54.00	-0.41	49.46	5.97	31.75	33.59	165	64	Average	HORIZONTAL
2	5434.80	64.23	74.00	-9.77	60.10	5.97	31.75	33.59	165	64	Peak	HORIZONTAL
3	5469.42	53.78	54.00	-0.22	49.59	5.99	31.78	33.58	165	64	Average	HORIZONTAL
4	5469.42	68.28	74.00	-5.72	64.09	5.99	31.78	33.58	165	64	Peak	HORIZONTAL
5 0	5544.79	105.91			101.60	6.03	31.86	33.58	165	64	Average	HORIZONTAL
6 0	5555.21	116.45			112.14	6.03	31.86	33.58	165	64	Peak	HORIZONTAL
7	5725.00	62.38	74.00	-11.62	57.80	6.10	32.08	33.60	165	64	Peak	HORIZONTAL
8	5725.58	50.21	54.00	-3.79	45.63	6.10	32.08	33.60	165	64	Average	HORIZONTAL

Item 5, 6 are the fundamental frequency at 5550 MHz.

Channel 134

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5667.60	111.94			106.54	6.43	33.94	34.97	Peak	183	294	HORIZONTAL
2	5672.40	102.34			96.94	6.43	33.94	34.97	Average	183	294	HORIZONTAL
3	5727.60	67.98	68.20	-0.22	62.50	6.45	34.01	34.98	Peak	183	294	HORIZONTAL

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

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151, 159 / Chain 1 + Chain 2 + Chain 3
Test Date	CH 151: Jul. 29, 2015 / CH 159: Jul. 08, 2015		

Channel 151

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5714.20	67.83	68.20	-0.37	62.38	6.44	33.99	34.98	Peak	173	59	HORIZONTAL
2	5724.60	71.17	78.20	-7.03	65.69	6.45	34.01	34.98	Peak	173	59	HORIZONTAL
3	5750.20	99.63			94.13	6.45	34.04	34.99	Average	173	59	HORIZONTAL
4	5759.80	109.65			104.12	6.46	34.06	34.99	Peak	173	59	HORIZONTAL
5	5859.20	59.24	78.20	-18.96	53.54	6.50	34.21	35.01	Peak	173	59	HORIZONTAL
6	5884.60	60.53	68.20	-7.67	54.82	6.50	34.23	35.02	Peak	173	59	HORIZONTAL

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	5705.85	64.28	68.20	-3.92	59.73	6.09	32.06	33.60	169	59	Peak	HORIZONTAL
2	5725.00	69.21	78.20	-8.99	64.63	6.10	32.08	33.60	169	59	Peak	HORIZONTAL
3 0	5800.21	105.62			100.93	6.13	32.16	33.60	169	59	Average	HORIZONTAL
4 0	5800.21	115.30			110.61	6.13	32.16	33.60	169	59	Peak	HORIZONTAL
5	5850.00	70.96	78.20	-7.24	66.20	6.15	32.22	33.61	169	59	Peak	HORIZONTAL
6	5860.00	67.87	68.20	-0.33	63.08	6.16	32.24	33.61	169	59	Peak	HORIZONTAL

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

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42, 58 / Chain 1 + Chain 2 + Chain 3
Test Date	Jul. 29, 2015		

Channel 42

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5146.00	64.45	74.00	-9.55	59.91	6.13	33.35	34.94	Peak	188	290	HORIZONTAL
2	5147.00	53.70	54.00	-0.30	49.16	6.13	33.35	34.94	Average	188	290	HORIZONTAL
3	5202.00	94.58			89.96	6.16	33.40	34.94	Average	188	290	HORIZONTAL
4	5212.00	103.82			99.17	6.17	33.42	34.94	Peak	188	290	HORIZONTAL
5	5357.00	45.40	54.00	-8.60	40.53	6.26	33.55	34.94	Average	188	290	HORIZONTAL
6	5368.00	56.89	74.00	-17.11	51.99	6.27	33.57	34.94	Peak	188	290	HORIZONTAL

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	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5034.40	43.42	54.00	-10.58	39.09	6.05	33.23	34.95	Average	190	290	HORIZONTAL
2	5076.40	53.89	74.00	-20.11	49.47	6.09	33.28	34.95	Peak	190	290	HORIZONTAL
3	5317.60	94.33			89.51	6.24	33.52	34.94	Average	190	290	HORIZONTAL
4	5317.60	103.43			98.61	6.24	33.52	34.94	Peak	190	290	HORIZONTAL
5	5352.40	53.61	54.00	-0.39	48.74	6.26	33.55	34.94	Average	190	290	HORIZONTAL
6	5352.40	64.42	74.00	-9.58	59.55	6.26	33.55	34.94	Peak	190	290	HORIZONTAL

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

Temperature	24°C	Humidity	54%
Test Engineer	Alvin Li	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106, 122, 155 / Chain 1 + Chain 2 + Chain 3
Test Date	CH 106: Jul. 08, 2015 / CH 122, 155: Jul. 29, 2015		

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	5459.38	63.54	74.00	-10.46	59.37	5.99	31.76	33.58	166	64	Peak	HORIZONTAL
2	5460.00	53.65	54.00	-0.35	49.48	5.99	31.76	33.58	166	64	Average	HORIZONTAL
3	5470.00	66.43	68.20	-1.77	62.24	5.99	31.78	33.58	166	64	Peak	HORIZONTAL
4 @	5519.58	96.58			92.32	6.02	31.82	33.58	166	64	Average	HORIZONTAL
5 @	5539.84	106.48			102.19	6.03	31.84	33.58	166	64	Peak	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5530 MHz.

Channel 122

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5459.00	52.34	54.00	-1.66	47.29	6.33	33.65	34.93	Average	158	64	HORIZONTAL
2	5459.00	63.53	54.00	9.53	58.48	6.33	33.65	34.93	Average	158	64	HORIZONTAL
3	5469.00	64.29	68.20	-3.91	59.21	6.34	33.67	34.93	Average	158	64	HORIZONTAL
4	5600.00	112.22			106.93	6.40	33.84	34.95	Average	158	64	HORIZONTAL
5	5600.00	103.00			97.71	6.40	33.84	34.95	Average	158	64	HORIZONTAL
6	5738.00	68.06	68.20	-0.14	62.56	6.45	34.04	34.99	Average	158	64	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5610 MHz.

Channel 155

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5715.00	67.88	68.20	-0.32	62.43	6.44	33.99	34.98	Peak	197	58	HORIZONTAL
2	5725.00	69.69	78.20	-8.51	64.21	6.45	34.01	34.98	Peak	197	58	HORIZONTAL
3	5789.00	107.10			101.52	6.47	34.11	35.00	Peak	197	58	HORIZONTAL
4	5790.00	97.91			92.33	6.47	34.11	35.00	Average	197	58	HORIZONTAL
5	5850.00	68.62	78.20	-9.58	62.96	6.49	34.18	35.01	Peak	197	58	HORIZONTAL
6	5865.00	66.98	68.20	-1.22	61.28	6.50	34.21	35.01	Peak	197	58	HORIZONTAL

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

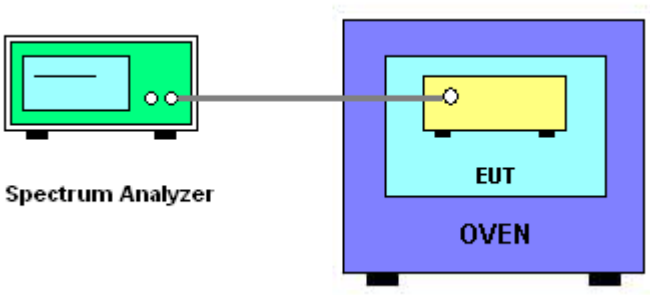
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
7. 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	26.2°C	Humidity	62%
Test Engineer	Nick Peng	Test Date	Jul. 09, 2015~Aug. 03, 2015

Mode: 20 MHz

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5200 MHz	5300 MHz	5580 MHz	5785 MHz
126.50	5200.0045	5300.0045	5580.0045	5785.0045
110.00	5200.0043	5300.0043	5580.0043	5785.0043
93.50	5200.0041	5300.0041	5580.0041	5785.0041
Max. Deviation (MHz)	0.0045	0.0045	0.0045	0.0045
Max. Deviation (ppm)	0.87	0.85	0.81	0.78

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5200 MHz	5300 MHz	5580 MHz	5785 MHz
0	5200.0045	5300.0045	5580.0045	5785.0045
10	5200.0044	5300.0044	5580.0044	5785.0044
20	5200.0043	5300.0043	5580.0043	5785.0043
30	5200.0042	5300.0042	5580.0042	5785.0042
40	5200.0041	5300.0041	5580.0041	5785.0041
Max. Deviation (MHz)	0.0047	0.0047	0.0047	0.0047
Max. Deviation (ppm)	0.90	0.89	0.84	0.81

Mode: 40 MHz

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5190 MHz	5310 MHz	5550 MHz	5755 MHz
126.50	5190.0044	5310.0044	5550.0044	5755.0044
110.00	5190.0042	5310.0042	5550.0042	5755.0042
93.50	5190.0040	5310.0040	5550.0040	5755.0040
Max. Deviation (MHz)	0.0044	0.0044	0.0044	0.0044
Max. Deviation (ppm)	0.85	0.83	0.79	0.76

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5190 MHz	5310 MHz	5550 MHz	5755 MHz
0	5190.0044	5310.0044	5550.0044	5755.0044
10	5190.0043	5310.0043	5550.0043	5755.0043
20	5190.0042	5310.0042	5550.0042	5755.0042
30	5190.0041	5310.0041	5550.0041	5755.0041
40	5190.0040	5310.0040	5550.0040	5755.0040
Max. Deviation (MHz)	0.0046	0.0046	0.0046	0.0046
Max. Deviation (ppm)	0.89	0.87	0.83	0.80

Mode: 80 MHz

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5210 MHz	5290 MHz	5530 MHz	5775 MHz
126.50	5210.0044	5290.0044	5530.0044	5775.0044
110.00	5210.0043	5290.0043	5530.0043	5775.0043
93.50	5210.0042	5290.0042	5530.0042	5775.0042
Max. Deviation (MHz)	0.0044	0.0044	0.0044	0.0044
Max. Deviation (ppm)	0.85	0.84	0.80	0.77

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5210 MHz	5290 MHz	5530 MHz	5775 MHz
0	5210.0045	5290.0045	5530.0045	5775.0045
10	5210.0044	5290.0044	5530.0044	5775.0044
20	5210.0043	5290.0043	5530.0043	5775.0043
30	5210.0042	5290.0042	5530.0042	5775.0042
40	5210.0041	5290.0041	5530.0041	5775.0041
Max. Deviation (MHz)	0.0047	0.0047	0.0047	0.0047
Max. Deviation (ppm)	0.91	0.90	0.86	0.82

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 ~ 2.75GHz	Apr. 22, 2015	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 02, 2014	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 02, 2014	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	Dec. 03, 2014	Conduction (CO01-CB)
Software	Audix	E3	5.410e	-	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA	Schaffner	CBL6112D	22021	20MHz ~ 2GHz	May 06, 2015	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Oct. 28, 2014	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 22, 2014	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	Nov. 25, 2014	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 06, 2014	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. 15, 2014	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-1	N/A	1 GHz ~ 40 GHz	Nov. 15, 2014	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-2	N/A	1 GHz ~ 40 GHz	Nov. 15, 2014	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 12, 2015	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSP40	100979	9kHz~40GHz	Dec. 12, 2014	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. 15, 2014	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz – 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz – 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 03, 2014	Conducted (TH01-CB)

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

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

6. MEASUREMENT UNCERTAINTY

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.4 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%