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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-PXW02ABA**
Manufacturer's company	**Pace plc**
Manufacturer Address	Victoria Road, Saltaire, Shipley, West Yorkshire, BD18 3LF, United Kingdom

Product Name	802.11AC Wifi Adapter for IP Client Set-Top Box
Brand Name	Xfinity XW2
Model No.	PXW02ABA
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. 03, 2015
Final Test Date	Aug. 18, 2015
Submission Type	Original Equipment

Statement

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

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

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

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

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

TAF
Testing Laboratory
1190

Table of Contents

History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR560418AB	Rev. 01	Initial issue of report	Aug. 25, 2015
FR560418AB	Rev. 02	Changing 802.11a/g to 1TX/2RX.	Aug. 26, 2015

1. VERIFICATION OF COMPLIANCE

Product Name	:	802.11AC Wifi Adapter for IP Client Set-Top Box
Brand Name	:	Xfinity XW2
Model No.	:	PXW02ABA
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. 03, 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	13.52 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	4.02 dB
4.5	15.407(a)	Power Spectral Density	Complies	3.92 dB
4.6	15.407(b)	Radiated Emissions	Complies	1.32 dB
4.7	15.407(b)	Band Edge Emissions	Complies	0.02 dB
4.9	15.407(g)	Frequency Stability	Complies	-
4.10	15.203	Antenna Requirements	Complies	-

3. GENERAL INFORMATION

3.1. Product Details

Items	Description
Product Type	IEEE 802.11a: WLAN (1TX, 2RX) IEEE 802.11n/ac: WLAN (2TX, 2RX)
Radio Type	Intentional Transceiver
Power Type	From host system
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: 36.03 MHz IEEE 802.11ac MCS0/Nss1 (VHT20): 17.89 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 37.19 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 79.05 MHz Band 2: IEEE 802.11a: 36.73 MHz IEEE 802.11ac MCS0/Nss1 (VHT20): 17.89 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 37.92 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.41 MHz Band 3: IEEE 802.11a: 30.91 MHz IEEE 802.11ac MCS0/Nss1 (VHT20): 17.80 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 38.49 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.41 MHz Band 4: IEEE 802.11a: 30.04 MHz IEEE 802.11ac MCS0/Nss1 (VHT20): 37.68 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 72.50 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 80.75 MHz

Maximum Conducted Output Power	Band 1: IEEE 802.11a: 19.96 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 19.76 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 19.82 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 19.82 dBm Band 2: IEEE 802.11a: 19.98 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 19.85 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 19.82 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 19.61 dBm Band 3: IEEE 802.11a: 19.96 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 19.86 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 19.83 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 19.84 dBm Band 4: IEEE 802.11a: 19.95 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 19.85 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 19.72 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 19.79 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	

Note: That EUT only installation with STB , it won't installation with portable devices.

Antenna and Band width

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

IEEE 11n/ac Spec.

Protocol	Number of Transmit Chains (NTX)	Data Rate / MCS
802.11n (HT20)	2	MCS 0-15
802.11n (HT40)	2	MCS 0-15
802.11ac (VHT20)	2	MCS 0-9/Nss1-2
802.11ac (VHT40)	2	MCS 0-9/Nss1-2
802.11ac (VHT80)	2	MCS 0-9/Nss1-2

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

Other
USB Base*1

3.3. Table for Filed Antenna

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)				
					2.4GHz	Band 1	Band 2	Band 3	Band 4
1	HongLin	290-30229	PIFA Antenna	I-PEX	3.27	3.20	2.91	2.26	2.11
2	HongLin	290-30230	PIFA Antenna	I-PEX	2.31	4.04	3.20	2.80	3.00

Note: The EUT has two antennas.

For 2.4GHz function:

For IEEE 802.11b mode (1TX/1RX):

Only Chain 1 can be used as transmitting/receiving antenna.

For IEEE 802.11g mode (1TX/2RX):

Only Chain 1 can be used as transmitting antenna.

Chain 1 and Chain 2 can be used as receiving antenna.

Chain 1 and Chain 2 could receive simultaneously.

For IEEE 802.11n mode (2TX/2RX):

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

Chain 1 and Chain 2 could transmit/receive simultaneously.

For 5GHz function:

For IEEE 802.11a mode (1TX/2RX):

Only Chain 1 can be used as transmitting antenna.

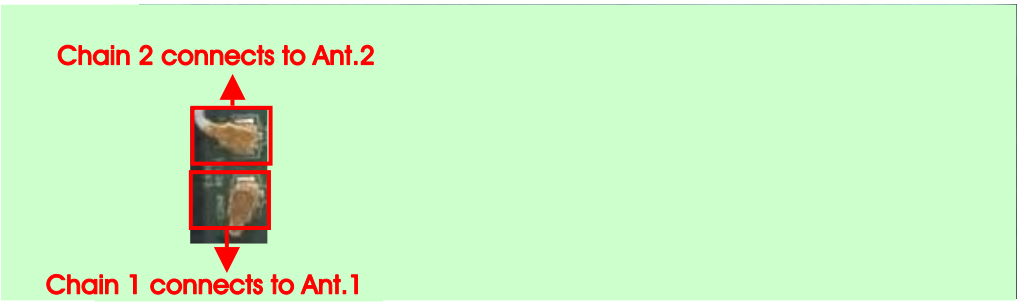
Chain 1 and Chain 2 can be used as receiving antenna.

Chain 1 and Chain 2 could receive simultaneously.

For IEEE 802.11n/ac mode (2TX/2RX):

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

Chain 1 and Chain 2 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
	11ac VHT20	Band 1~4	MCS0/Nss1	36/40/48/52/60/64/100/116/140/149/157/165	1+2
	11ac VHT40	Band 1~4	MCS0/Nss1	38/46/54/62/102/110/134/151/159	1+2
	11ac VHT80	Band 1~4	MCS0/Nss1	42/58/106/122/155	1+2
Power Spectral Density	11a/BPSK	Band 1~4	6Mbps	36/40/48/52/60/64/100/116/140/149/157/165	1
	11ac VHT20	Band 1~4	MCS0/Nss1	36/40/48/52/60/64/100/116/140/149/157/165	1+2
	11ac VHT40	Band 1~4	MCS0/Nss1	38/46/54/62/102/110/134/151/159	1+2
	11ac VHT80	Band 1~4	MCS0/Nss1	42/58/106/122/155	1+2

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
	11ac VHT20	Band 1~4	MCS0/Nss1	36/40/48/52/60/64/100/116/140/149/157/165	1+2
	11ac VHT40	Band 1~4	MCS0/Nss1	38/46/54/62/102/110/134/151/159	1+2
	11ac VHT80	Band 1~4	MCS0/Nss1	42/58/106/122/155	1+2
6dB Spectrum Bandwidth Measurement	11a/BPSK	Band 4	6Mbps	149/157/165	1
	11ac VHT20	Band 4	MCS0/Nss1	149/157/165	1+2
	11ac VHT40	Band 4	MCS0/Nss1	151/159	1+2
	11ac VHT80	Band 4	MCS0/Nss1	155	1+2
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
	11ac VHT20	Band 1~4	MCS0/Nss1	36/40/48/52/60/64/100/116/140/149/157/165/	1+2
	11ac VHT40	Band 1~4	MCS0/Nss1	38/46/54/62/102/110/134/151/159	1+2
	11ac VHT80	Band 1~4	MCS0/Nss1	42/58/106/122/155	1+2

Band Edge Emission	11a/BPSK	Band 1~4	6Mbps	36/40/48/52/60/64/100/116/140/149/157/165	1
	11ac VHT20	Band 1~4	MCS0/Nss1	36/40/48/52/60/64/100/116/140/149/157/165	1+2
	11ac VHT40	Band 1~4	MCS0/Nss1	38/46/54/62/102/110/134/151/159	1+2
	11ac VHT80	Band 1~4	MCS0/Nss1	42/58/106/122/155	1+2
Frequency Stability	20 MHz	Band 1~4	-	40/60/116/157	1
	40 MHz	Band 1~4	-	38/62/110/151	1+2
	80 MHz	Band 1~4	-	42/58/106/122/155	1+2

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

The following test modes were performed for all tests:

For Conducted Emission test:

Test Mode: CTX - 2.4GHz

Test Mode: CTX - 5GHz

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

For Radiated Emission test (Below 1G):

Mode 1. EUT X axis CTX - 2.4GHz

Mode 2. EUT Y axis CTX - 2.4GHz

Mode 3. EUT Z axis CTX - 2.4GHz

Mode 2 has been evaluated to be the worst case between Mode 1~3, thus measurement for Mode 4 will follow this same test mode.

Mode 4. EUT Y axis CTX - 5GHz

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

For Radiated Emission test (Above 1G):

The EUT was performed at X axis, Y axis and Z axis position. The worst case was found at Y axis, so it was selected to perform test and its test result was written in the report.

Mode 1. EUT Y axis CTX

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: TH01-CB and 03CH01-CB

Support Unit	Brand	Model	FCC ID
Notebook	DELL	E4300	DoC
USB Base	PEGATRON	N/A	N/A

For Test Site No: CO01-CB

Support Unit	Brand	Model	FCC ID
Notebook	DELL	PP13S	DoC
USB Base	PEGATRON	N/A	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	Terminal											
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	45	45	45	45	44	44	46	44	41	41	45	44
802.11ac MCS0/Nss1 VHT20	40/36	41/35	40/35	41/35	43/35	38/31	41/35	36/32	37/32	37/34	37/33	37/32

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
	40/35	40/35	40/33	40/33	41/36	40/36	41/36	40/37	40/36

Mode	NCB: 80MHz				
802.11ac MCS0/Nss1 VHT80	5210 MHz	5290 MHz	5530 MHz	5610 MHz	5775 MHz
	41/35	41/33	41/37	40/36	40/36

3.9. EUT Operation during Test

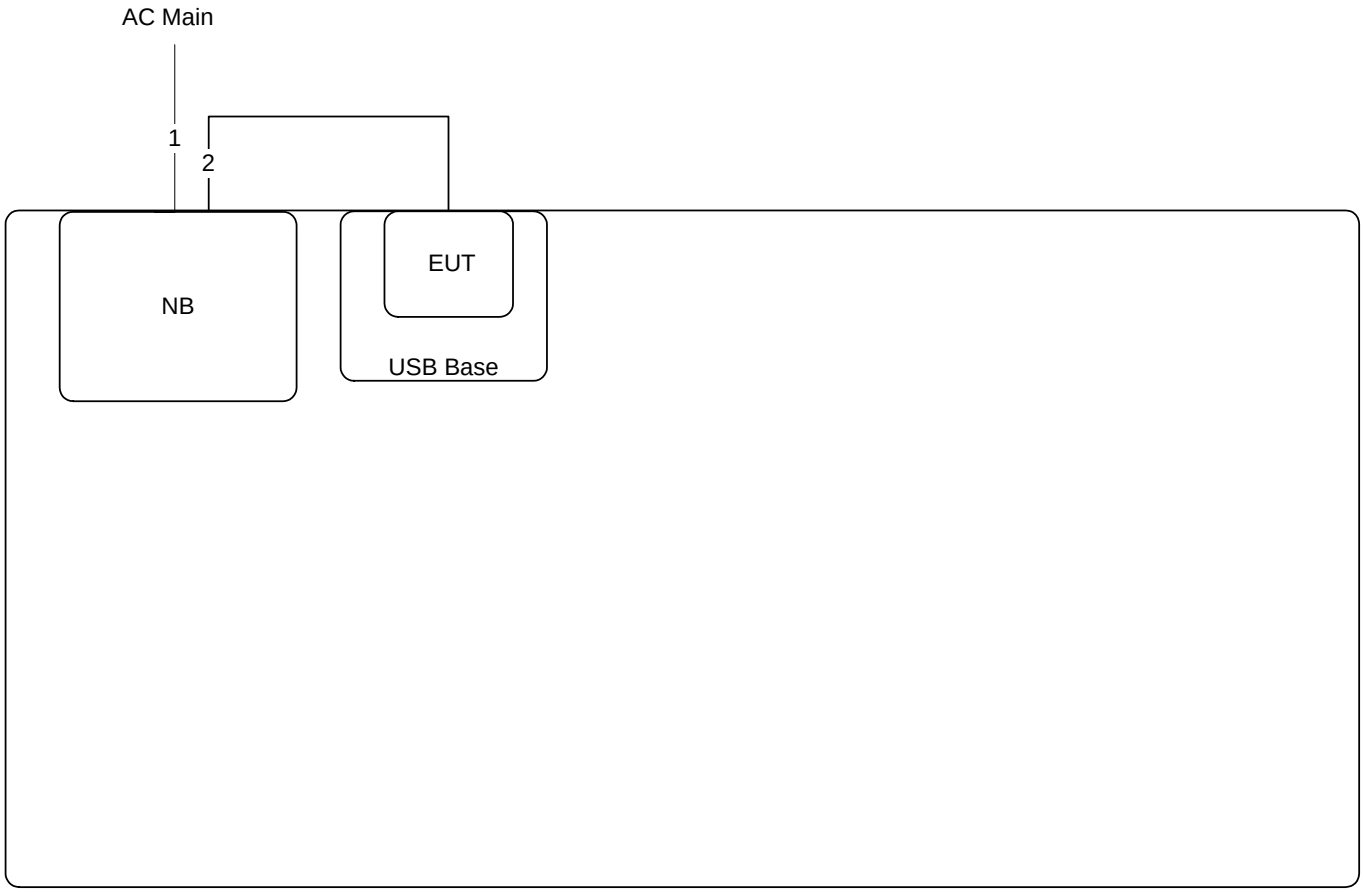
The EUT was programmed to be in continuously transmitting mode.

3.10. Duty Cycle

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11a	1.000	1.000	100.00%	0.00	0.01
802.11ac MCS0/Nss1 VHT20	1.000	1.000	100.00%	0.00	0.01
802.11ac MCS0/Nss1 VHT40	1.000	1.000	100.00%	0.00	0.01
802.11ac MCS0/Nss1 VHT80	1.000	1.000	100.00%	0.00	0.01

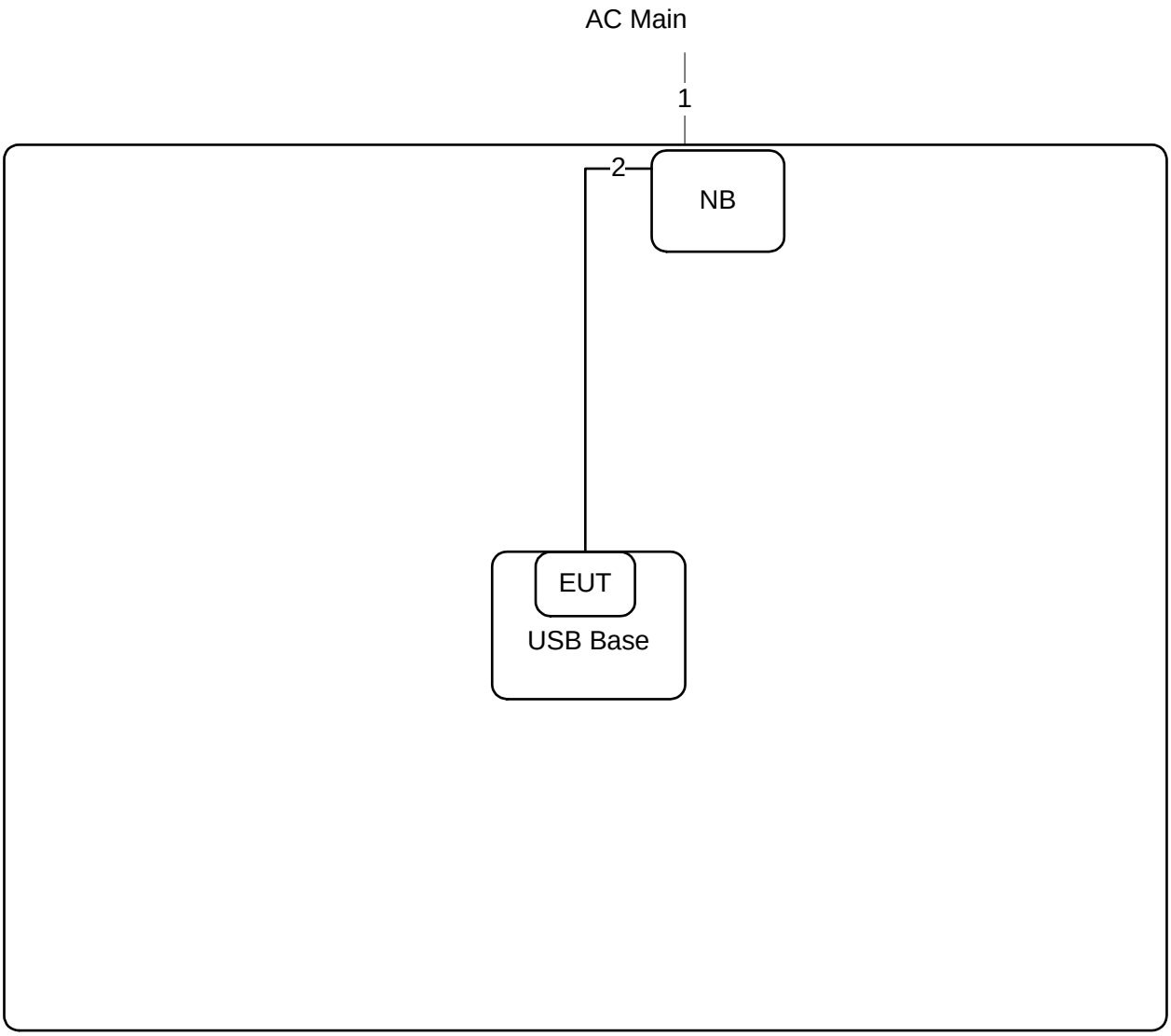
3.11. Test Configurations

3.11.1. AC Power Line Conduction Emissions Test Configuration



Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	USB cable	Yes	1m

3.11.2. Radiation Emissions Test Configuration



Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	USB cable	No	1.0m

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

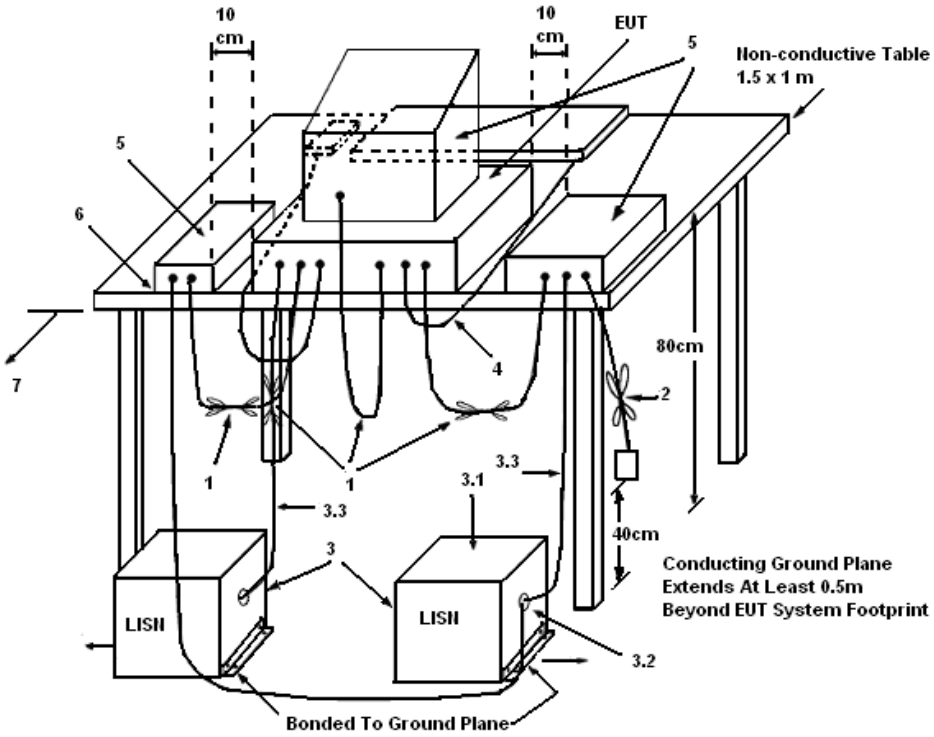
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

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

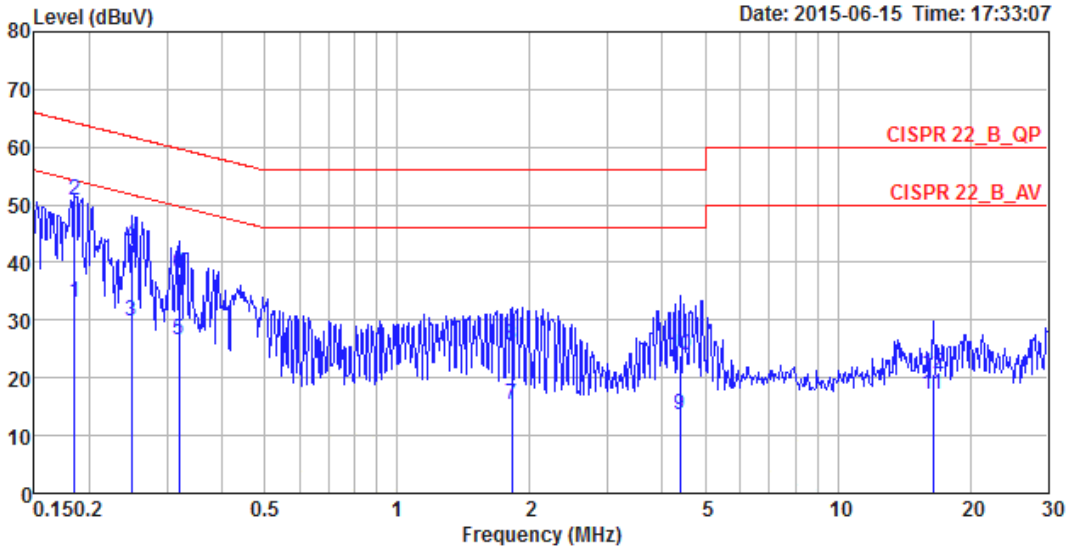
There is no deviation with the original standard.

4.1.6. EUT Operation during Test

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

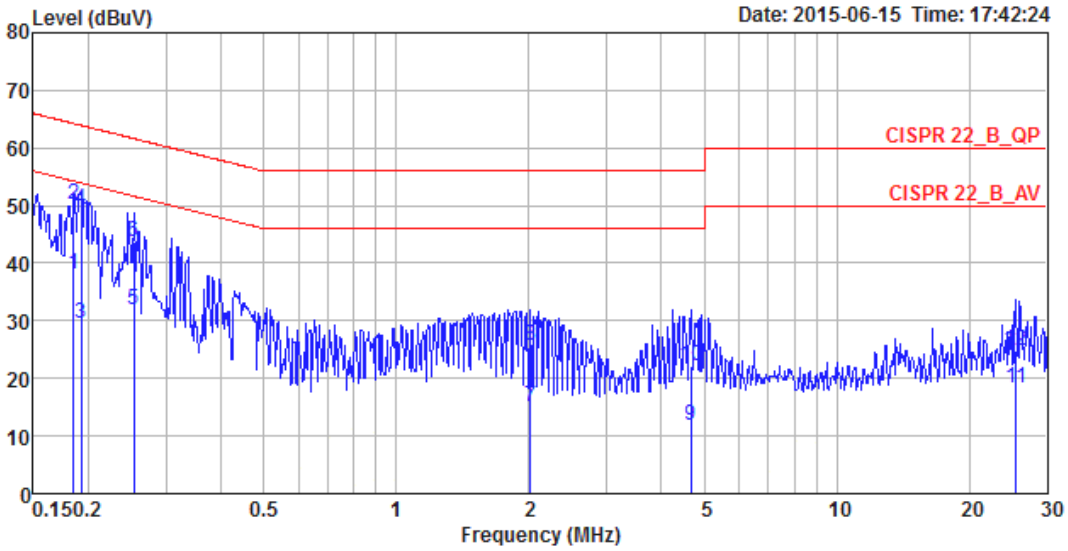
4.1.7. Results of AC Power Line Conducted Emissions Measurement

Temperature	23°C	Humidity	63%
Test Engineer	Deven Huang	Phase	Line
Configuration	CTX / Mode 1		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1854	33.10	-21.14	54.24	23.15	9.93	0.02	LINE	Average
2	0.1854	50.72	-13.52	64.24	40.77	9.93	0.02	LINE	QP
3	0.2495	29.91	-21.87	51.78	19.95	9.93	0.03	LINE	Average
4	0.2495	43.11	-18.67	61.78	33.15	9.93	0.03	LINE	QP
5	0.3200	26.68	-23.03	49.71	16.71	9.93	0.04	LINE	Average
6	0.3200	37.96	-21.75	59.71	27.99	9.93	0.04	LINE	QP
7	1.8192	15.43	-30.57	46.00	5.38	9.99	0.06	LINE	Average
8	1.8192	25.69	-30.31	56.00	15.64	9.99	0.06	LINE	QP
9	4.3838	13.58	-32.42	46.00	3.46	10.04	0.08	LINE	Average
10	4.3838	24.01	-31.99	56.00	13.89	10.04	0.08	LINE	QP
11	16.4856	17.12	-32.88	50.00	6.49	10.37	0.26	LINE	Average
12	16.4856	20.71	-39.29	60.00	10.08	10.37	0.26	LINE	QP

Temperature	23°C	Humidity	63%
Test Engineer	Deven Huang	Phase	Neutral
Configuration	CTX / Mode 1		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1854	38.17	-16.07	54.24	28.36	9.79	0.02	NEUTRAL	Average
2	0.1854	50.18	-14.06	64.24	40.37	9.79	0.02	NEUTRAL	QP
3	0.1924	29.55	-24.38	53.93	19.74	9.79	0.02	NEUTRAL	Average
4	0.1924	49.20	-14.73	63.93	39.39	9.79	0.02	NEUTRAL	QP
5	0.2535	31.83	-19.81	51.64	22.01	9.79	0.03	NEUTRAL	Average
6	0.2535	43.66	-17.98	61.64	33.84	9.79	0.03	NEUTRAL	QP
7	2.0119	15.12	-30.88	46.00	5.22	9.84	0.06	NEUTRAL	Average
8	2.0119	25.73	-30.27	56.00	15.83	9.84	0.06	NEUTRAL	QP
9	4.6715	11.69	-34.31	46.00	1.71	9.89	0.09	NEUTRAL	Average
10	4.6715	22.08	-33.92	56.00	12.10	9.89	0.09	NEUTRAL	QP
11	25.5912	18.42	-31.58	50.00	7.86	10.28	0.28	NEUTRAL	Average
12	25.5912	24.83	-35.17	60.00	14.27	10.28	0.28	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.

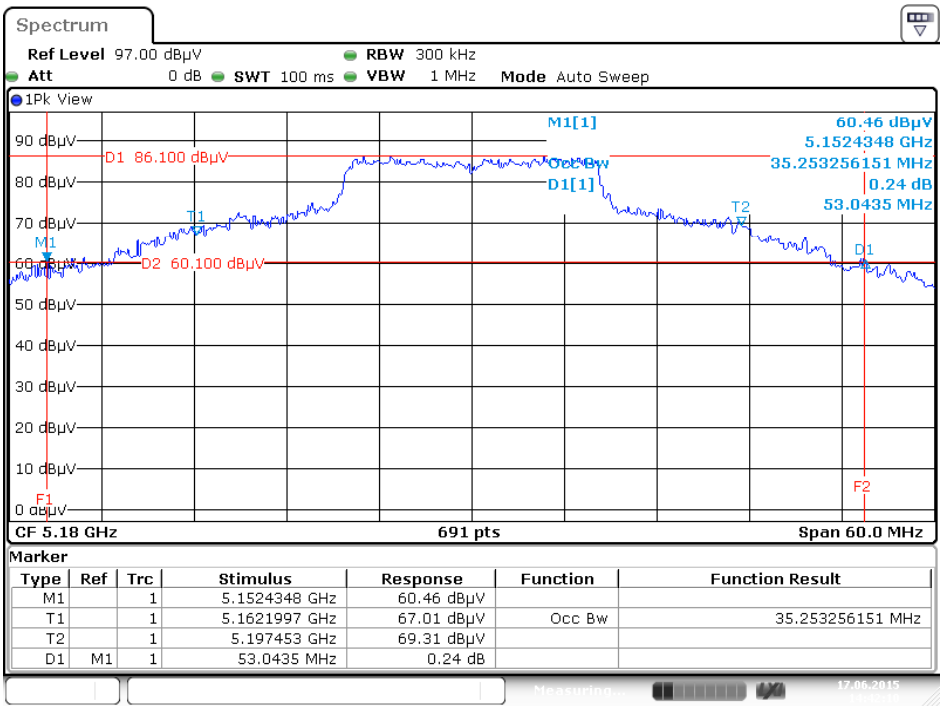
4.2.7. Test Result of 26dB Bandwidth and 99% Occupied Bandwidth

Temperature	25℃	Humidity	45%
Test Engineer	Roki Liu		

Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a	5180 MHz	53.04	35.25
	5200 MHz	53.91	36.03
	5240 MHz	43.13	29.70
	5260 MHz	55.48	36.56
	5300 MHz	55.57	36.73
	5320 MHz	51.48	35.17
	5500 MHz	43.30	30.91
	5580 MHz	39.91	24.14
	5700 MHz	34.26	18.23
	5745 MHz	34.70	18.76
	5785 MHz	43.04	30.04
	5825 MHz	24.87	16.93
802.11ac MCS0/Nss1 VHT20	5180 MHz	21.91	17.89
	5200 MHz	21.74	17.89
	5240 MHz	21.74	17.80
	5260 MHz	21.48	17.89
	5300 MHz	21.57	17.89
	5320 MHz	21.22	17.89
	5500 MHz	21.48	17.80
	5580 MHz	20.96	17.80
	5700 MHz	21.91	17.80
	5745 MHz	43.04	27.96
	5785 MHz	53.30	37.68
	5825 MHz	51.22	35.86

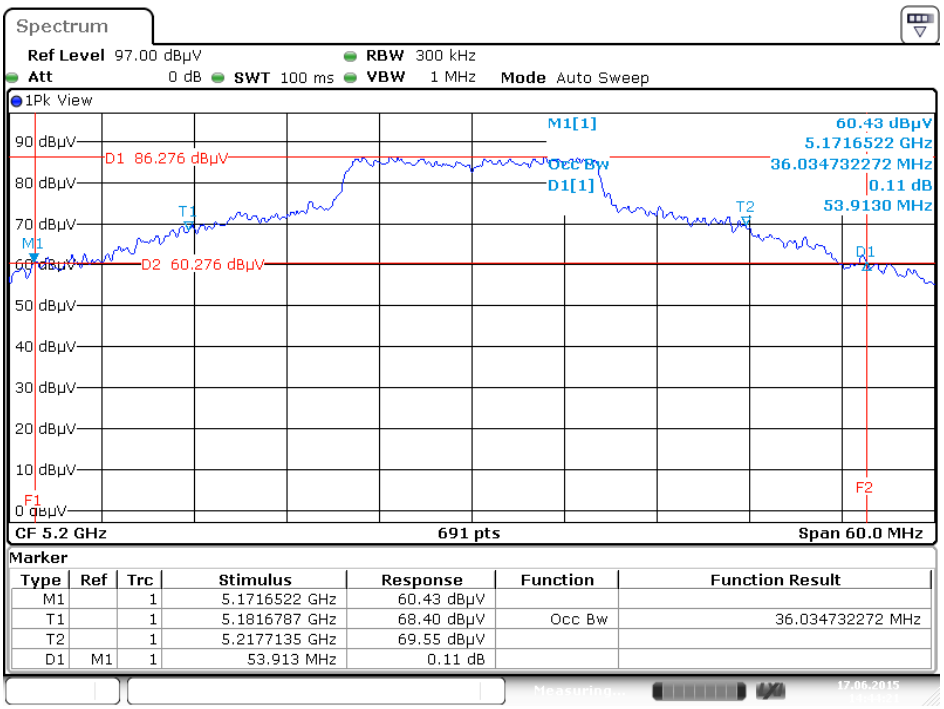
Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac MCS0/Nss1 VHT40	5190 MHz	44.64	37.19
	5230 MHz	44.35	37.05
	5270 MHz	60.44	37.92
	5310 MHz	55.80	37.92
	5510 MHz	45.22	37.34
	5550 MHz	59.42	37.92
	5670 MHz	68.84	38.49
	5755 MHz	69.13	38.49
	5795 MHz	100.00	72.50
802.11ac MCS0/Nss1 VHT80	5210 MHz	144.35	79.02
	5290 MHz	111.59	76.41
	5530 MHz	84.35	75.83
	5610 MHz	115.36	76.41
	5775 MHz	147.83	80.75

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



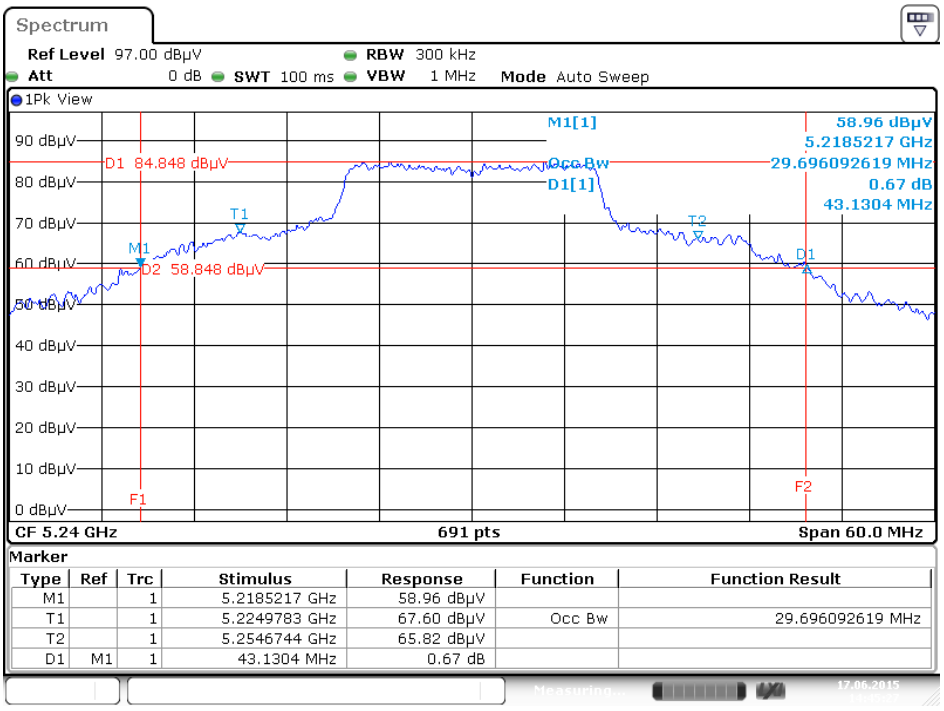
Date: 17.JUN.2015 14:42:10

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



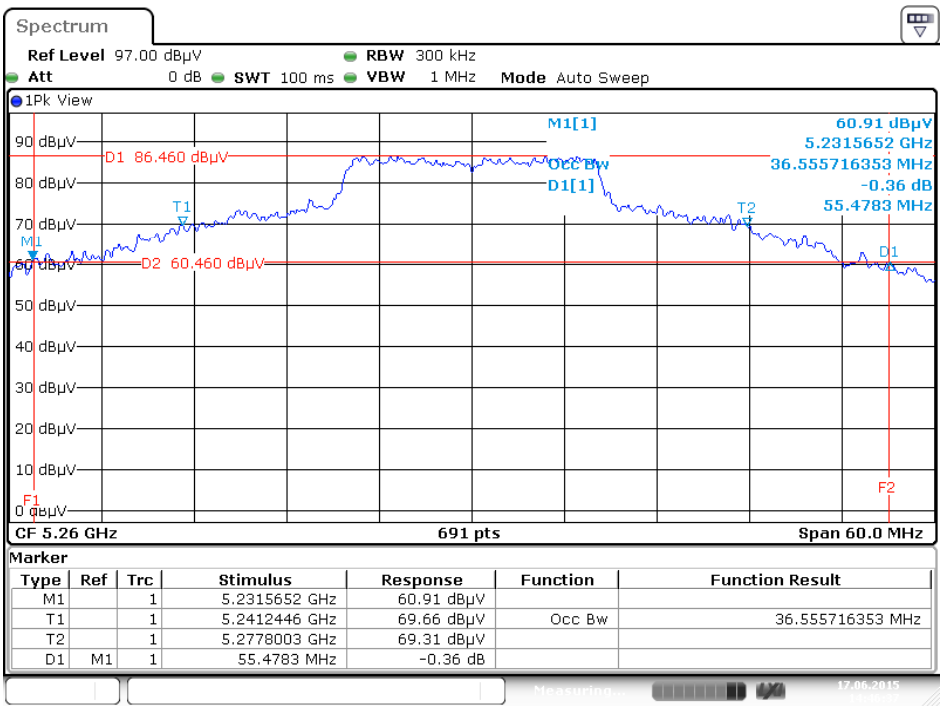
Date: 17.JUN.2015 14:44:21

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



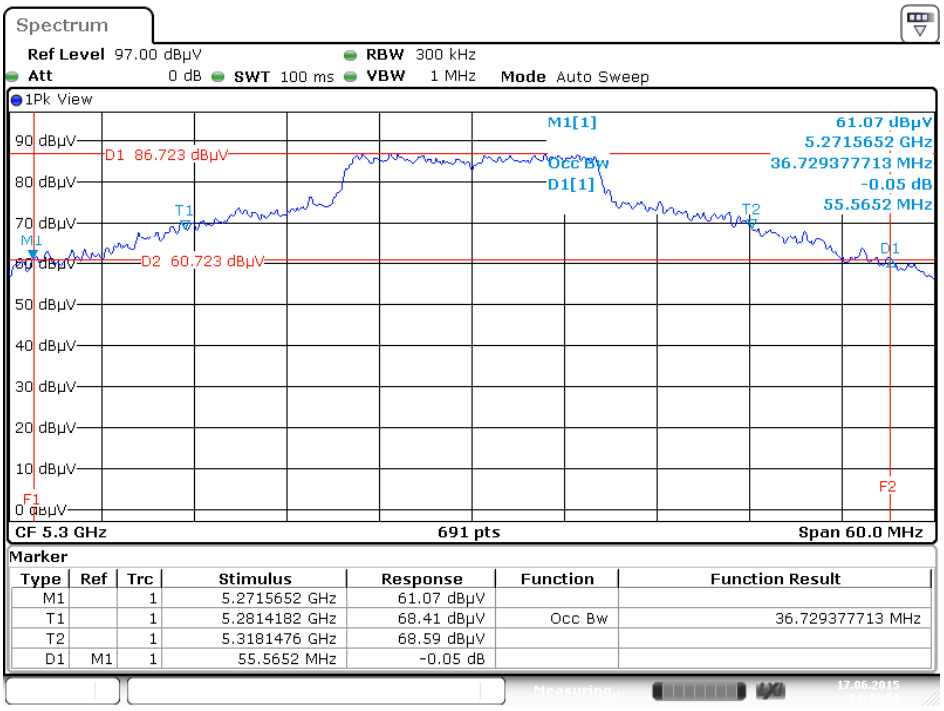
Date: 17.JUN.2015 14:45:27

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



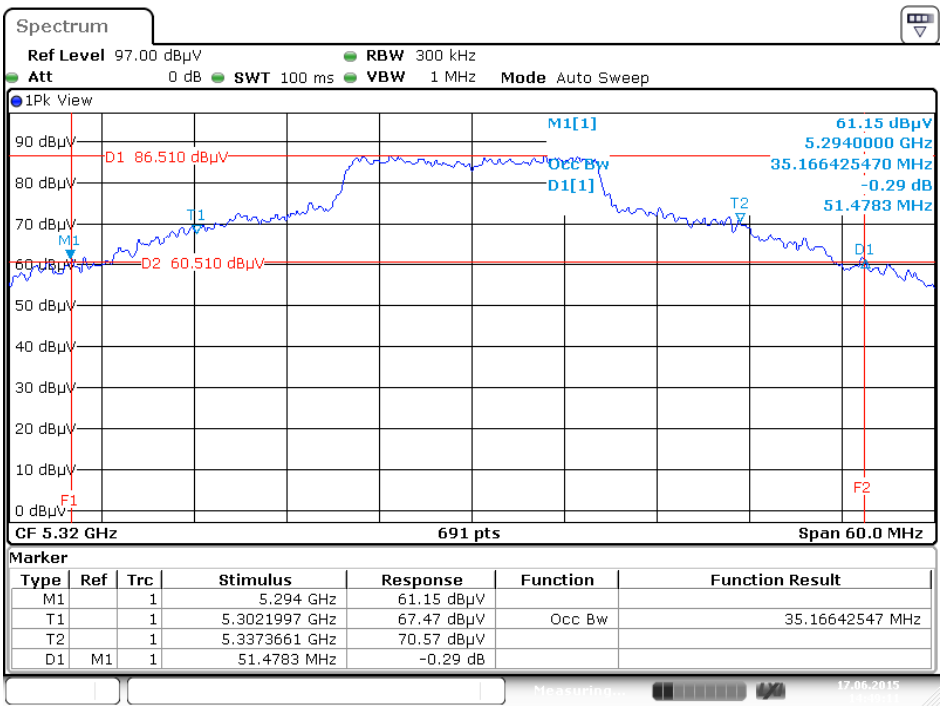
Date: 17.JUN.2015 14:46:37

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



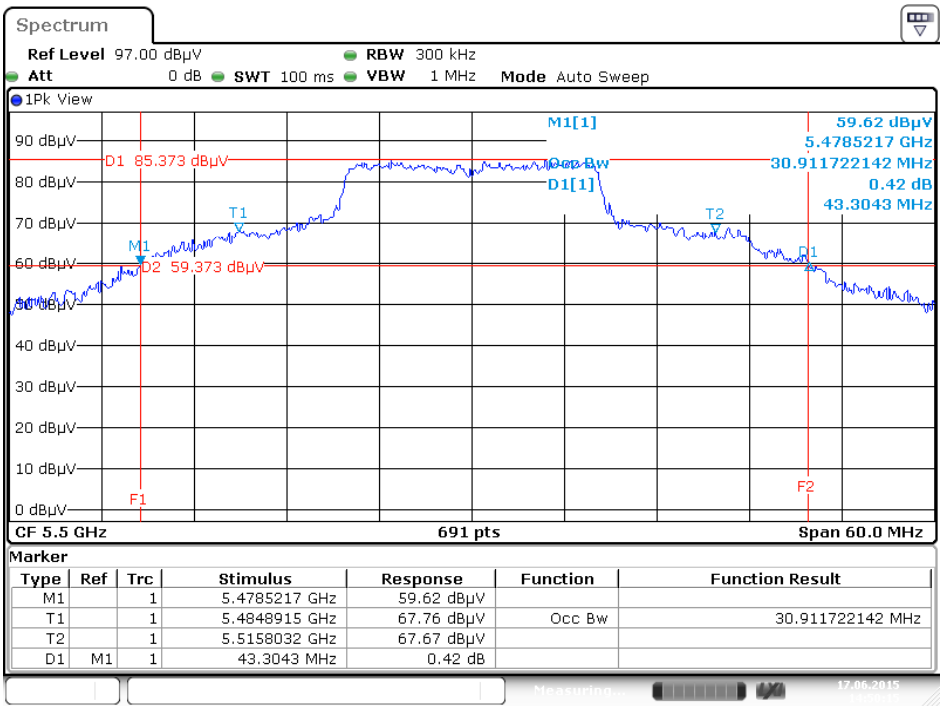
Date: 17.JUN.2015 14:47:52

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



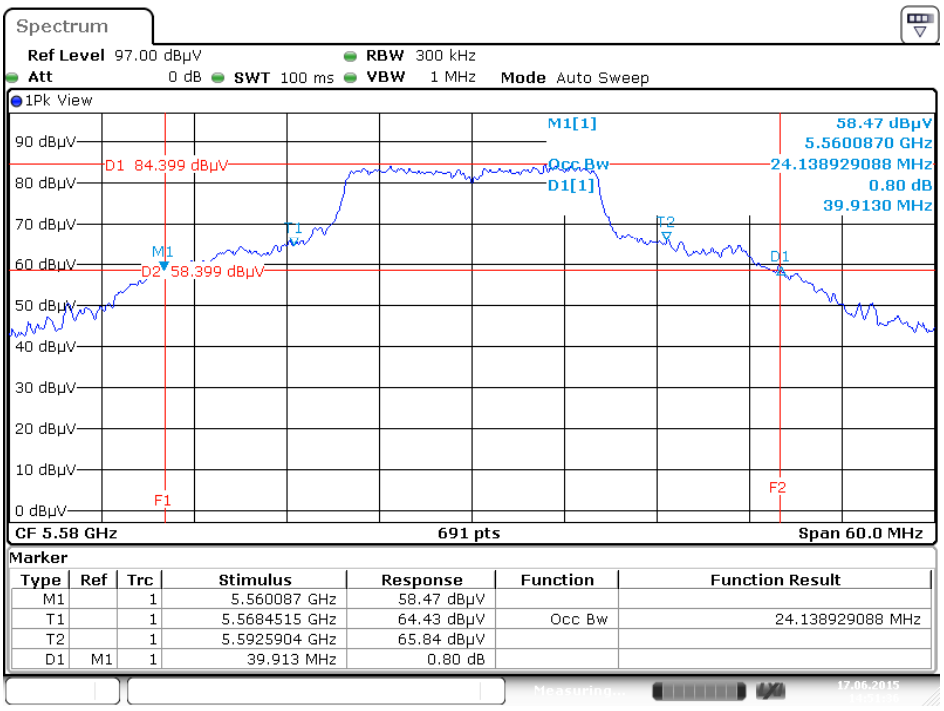
Date: 17.JUN.2015 14:49:11

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



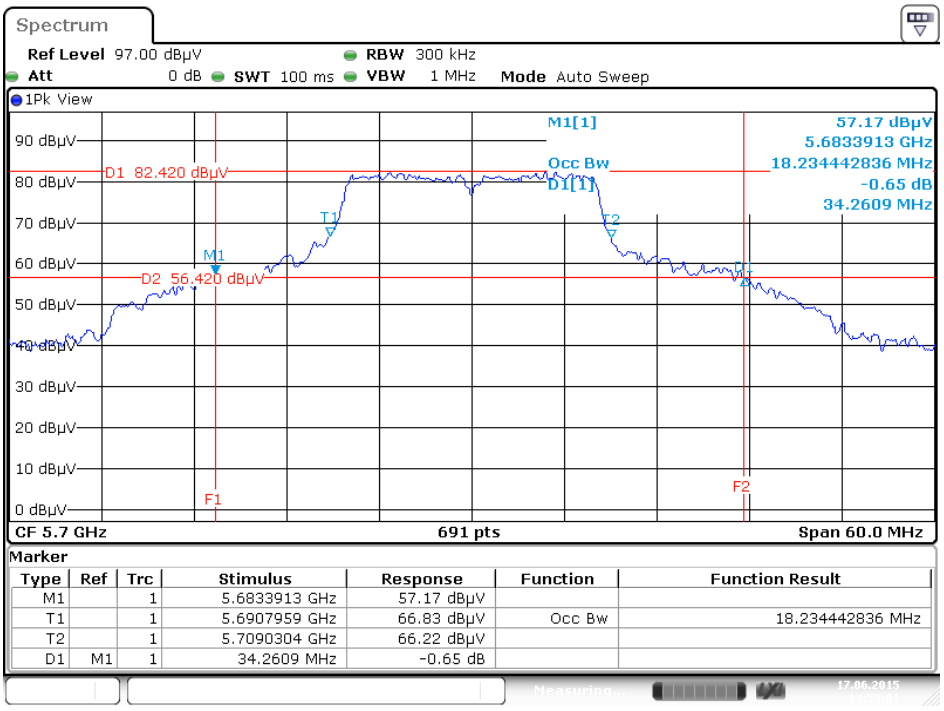
Date: 17.JUN.2015 14:50:16

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



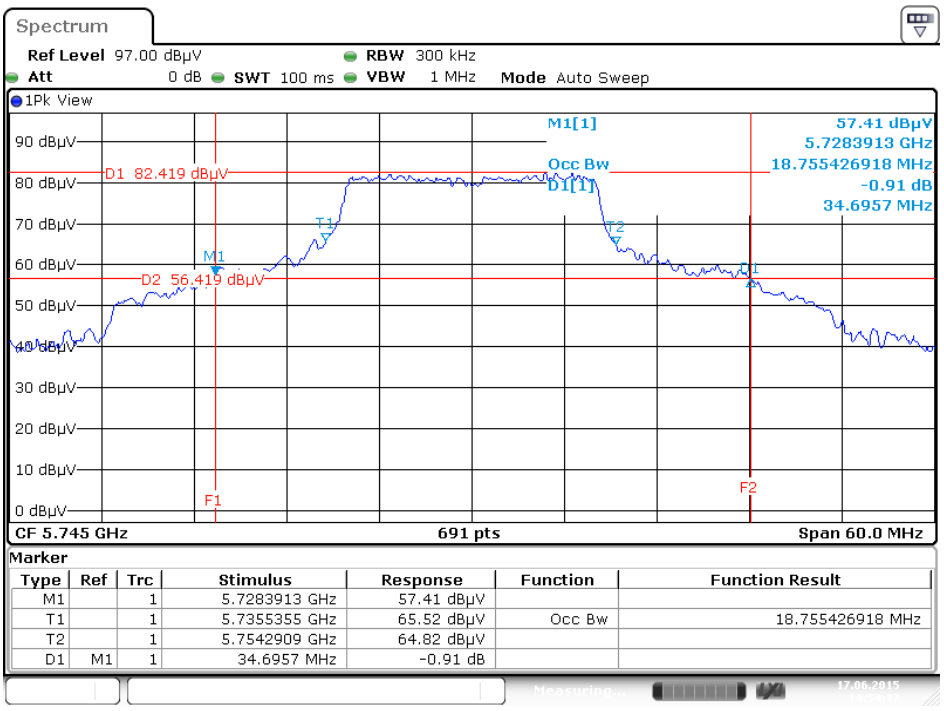
Date: 17.JUN.2015 14:51:36

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



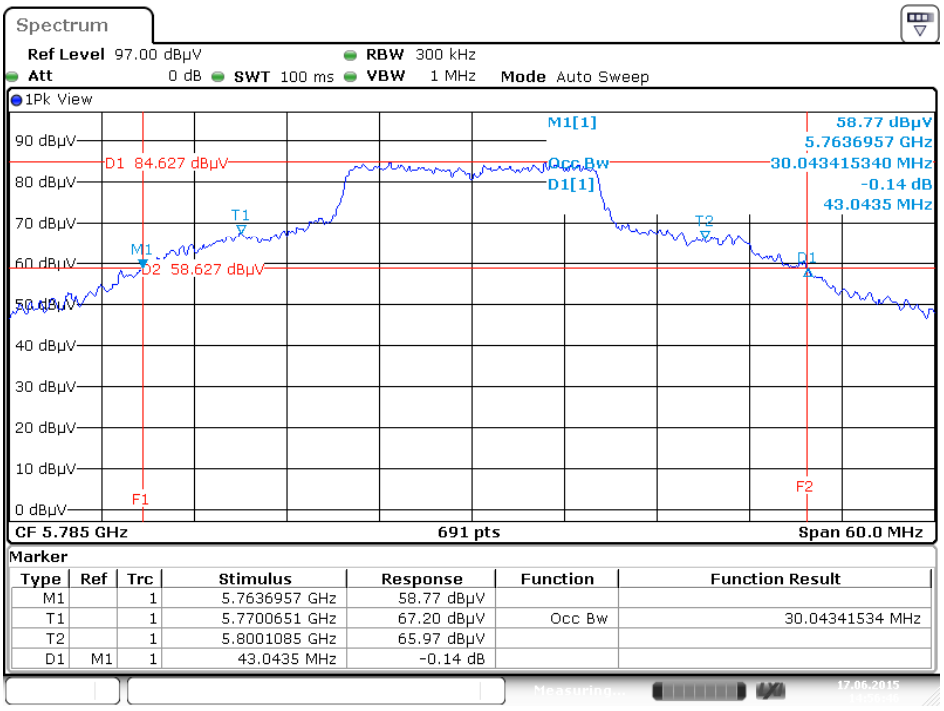
Date: 17.JUN.2015 14:53:01

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



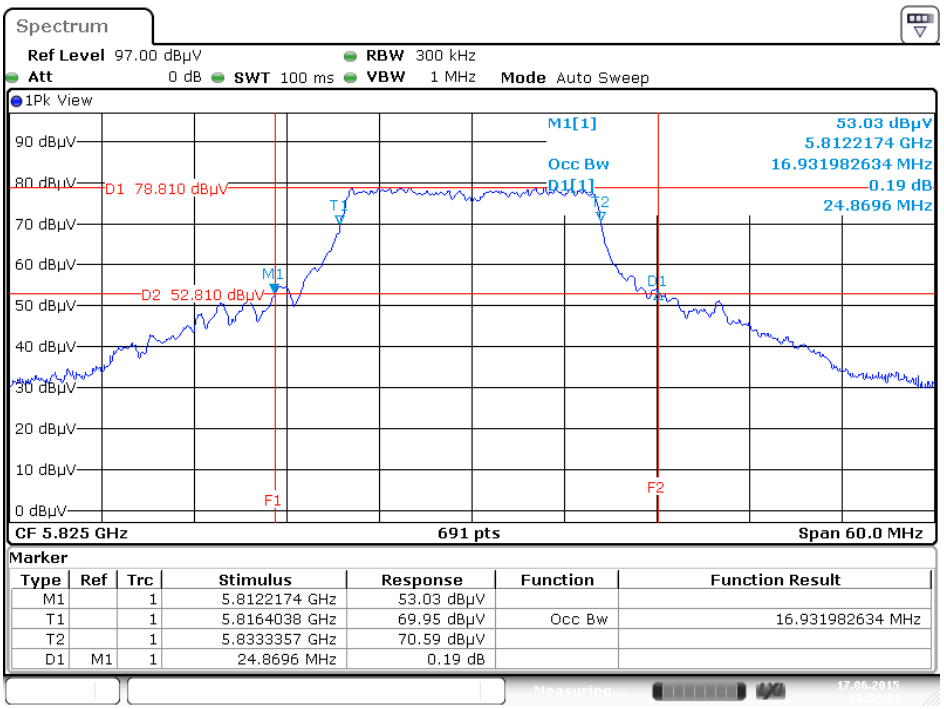
Date: 17.JUN.2015 14:54:17

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



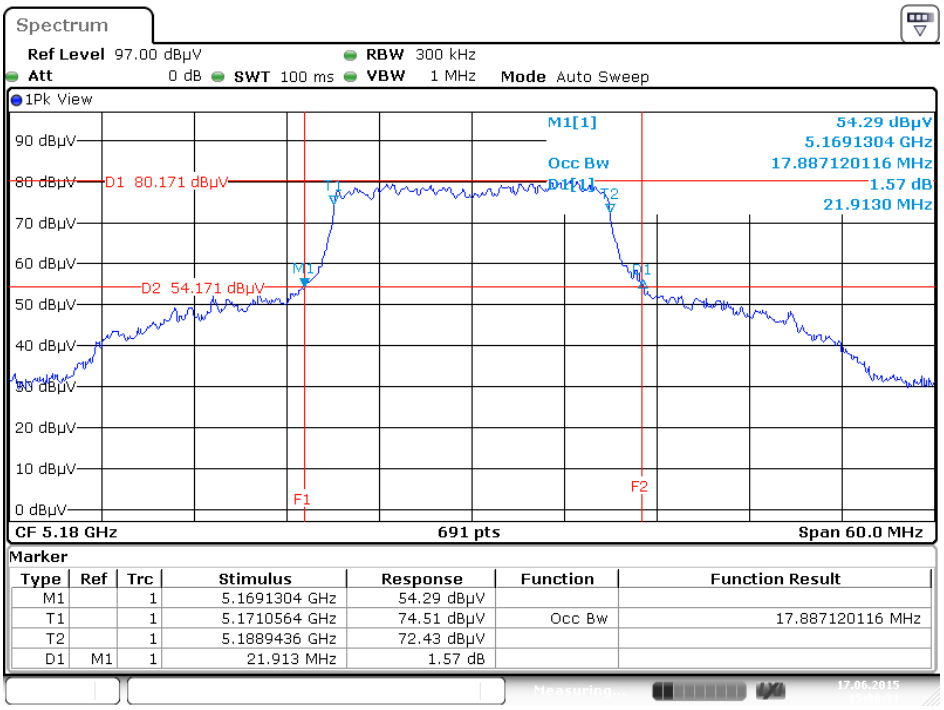
Date: 17.JUN.2015 14:56:46

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



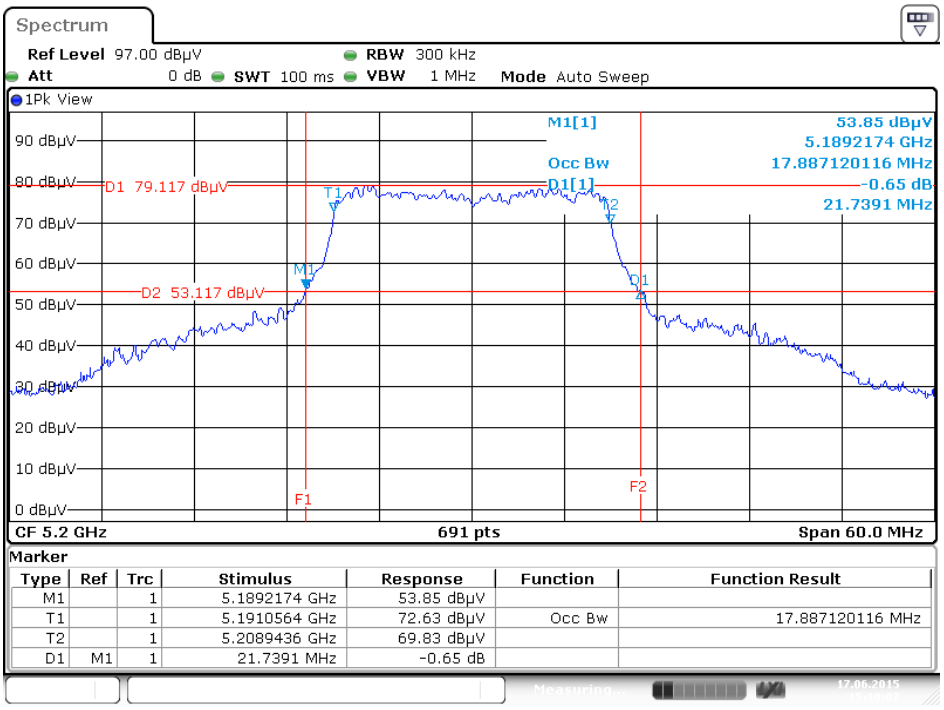
Date: 17.JUN.2015 14:57:54

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



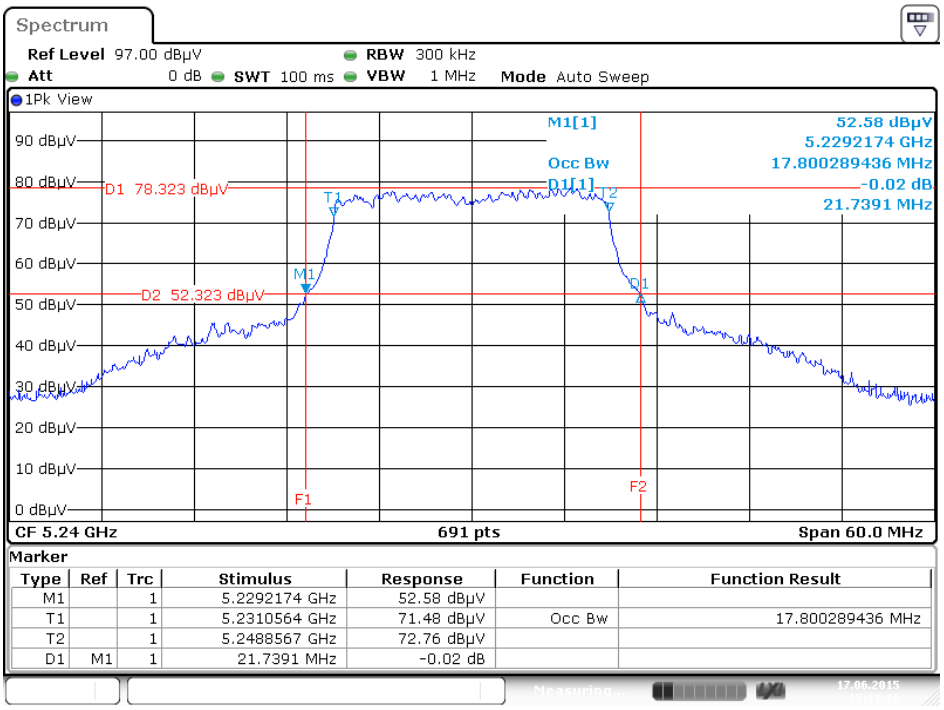
Date: 17.JUN.2015 15:08:31

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



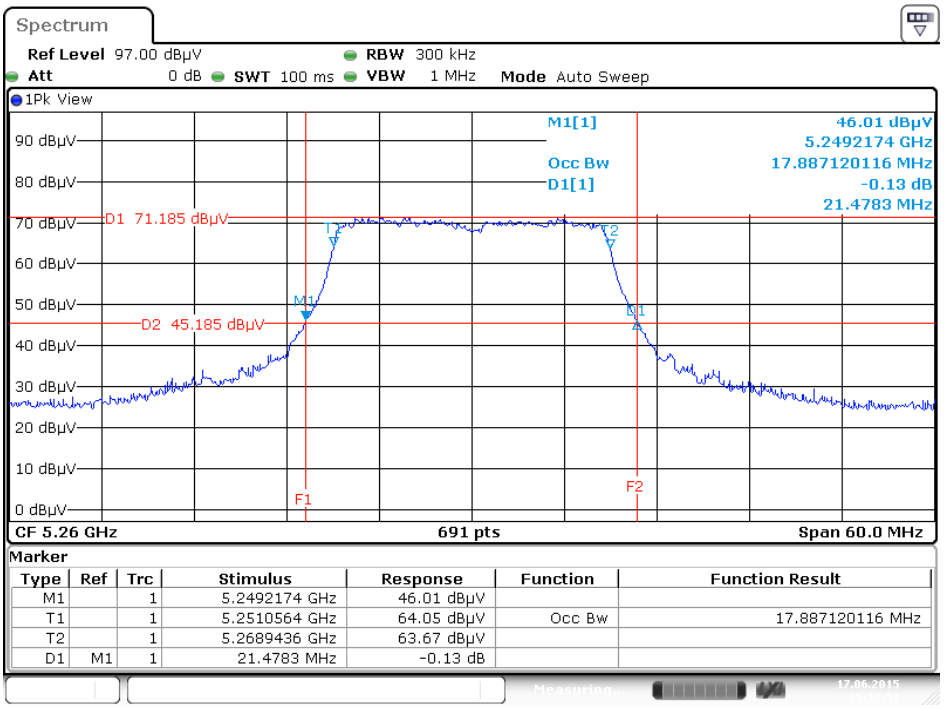
Date: 17.JUN.2015 15:10:07

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



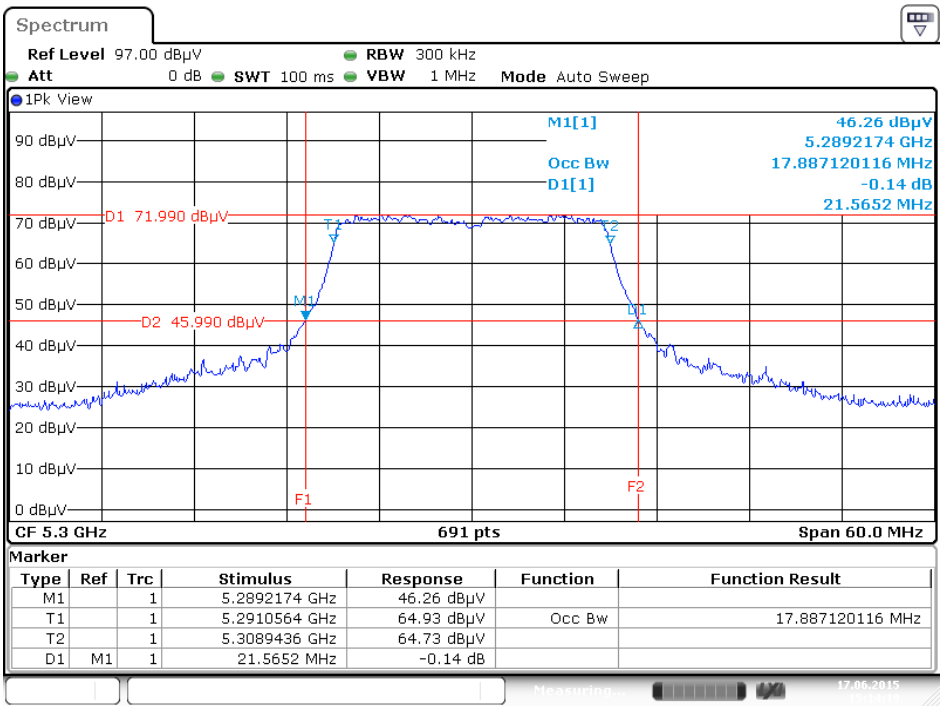
Date: 17.JUN.2015 15:11:26

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



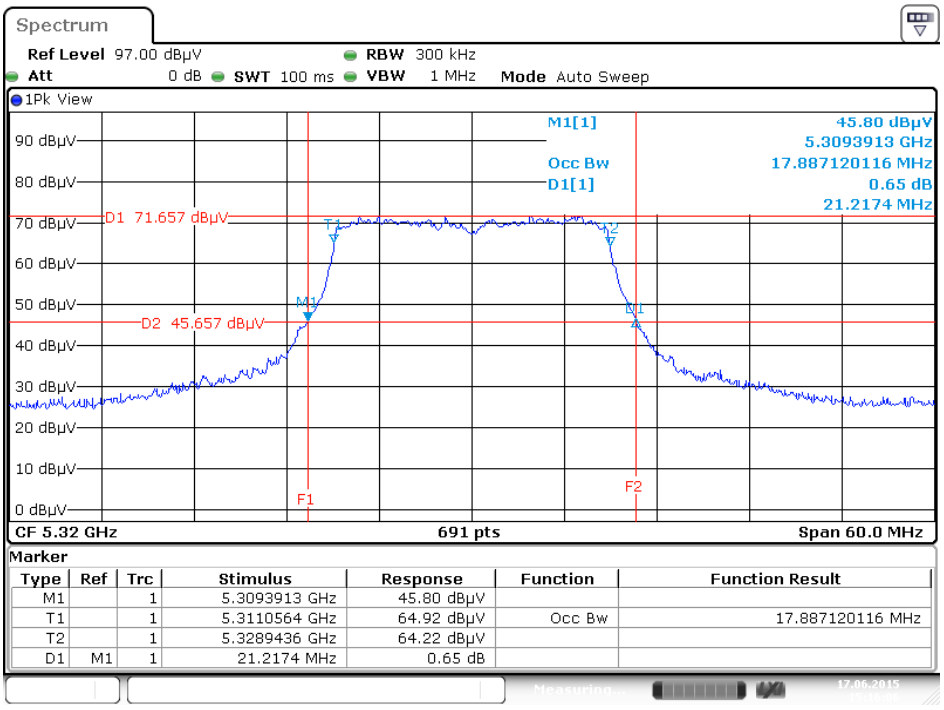
Date: 17.JUN.2015 15:12:51

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



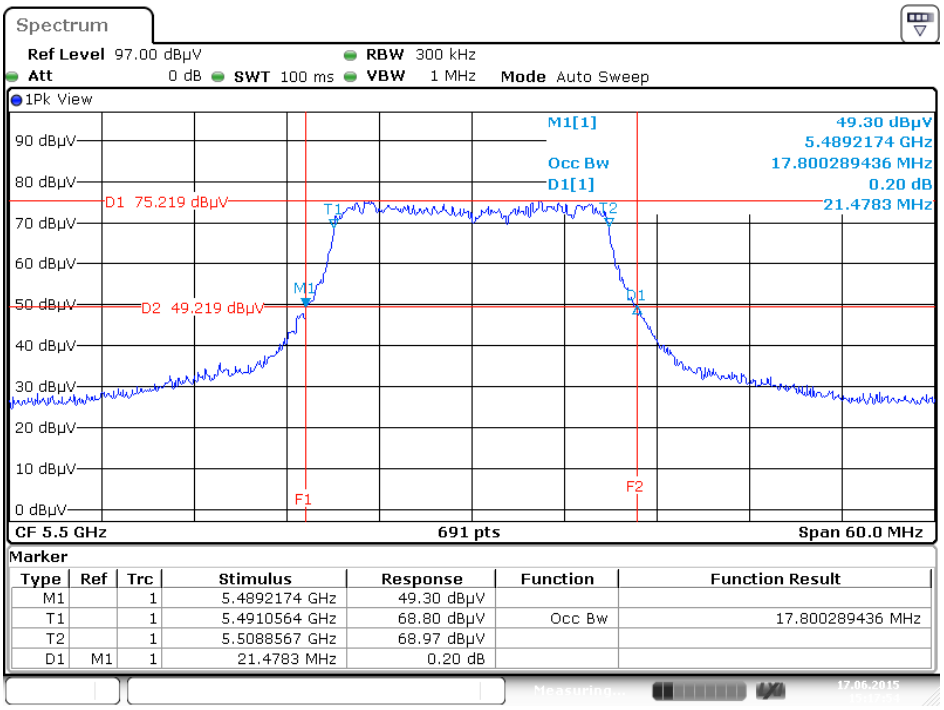
Date: 17.JUN.2015 15:14:19

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



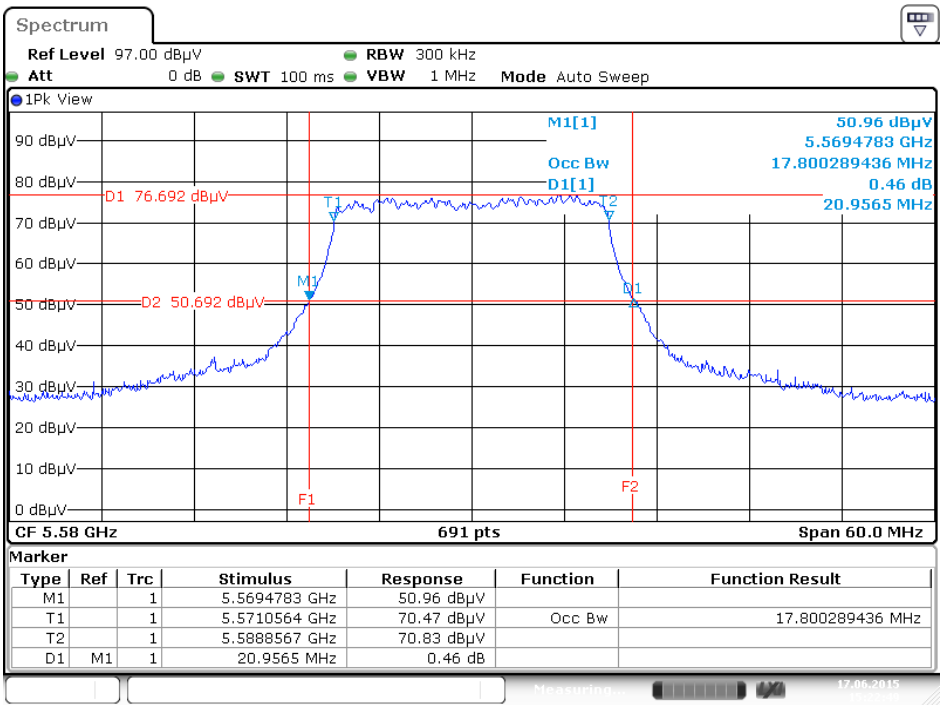
Date: 17.JUN.2015 15:16:06

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



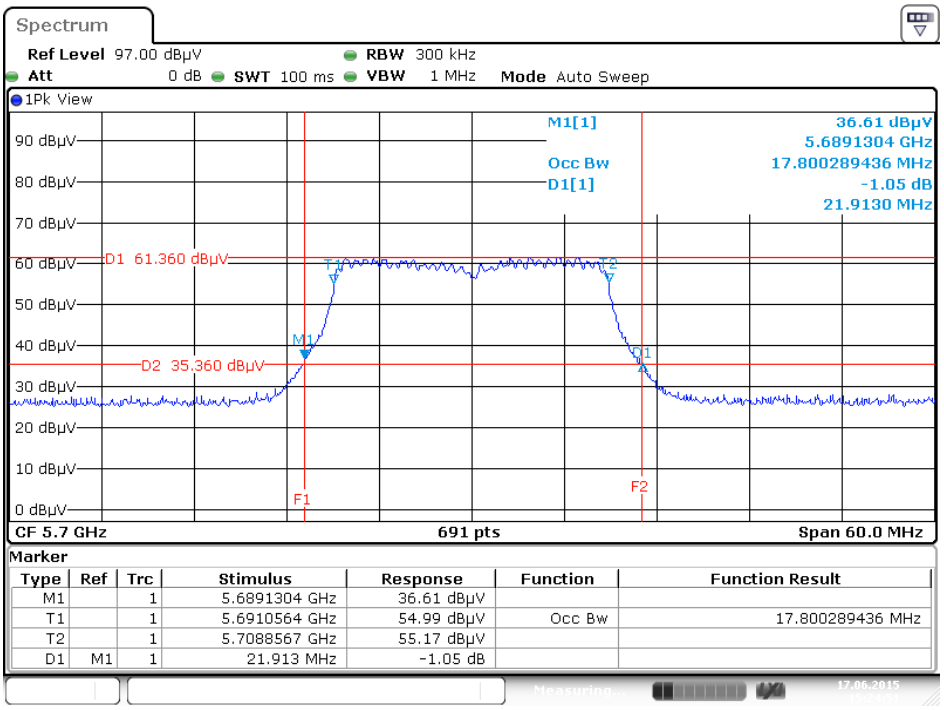
Date: 17.JUN.2015 15:17:54

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



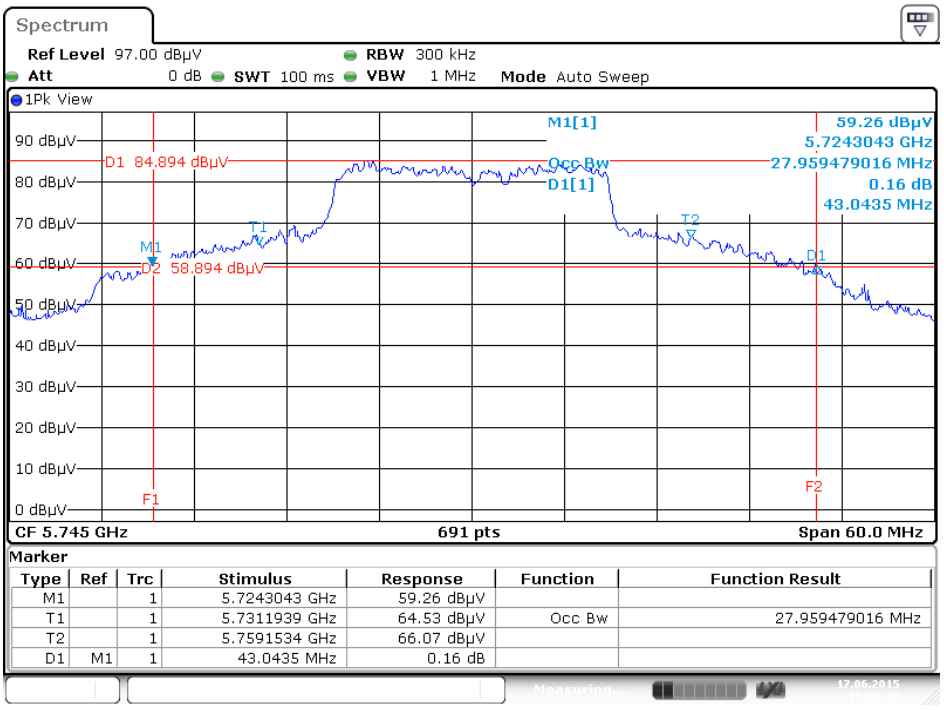
Date: 17.JUN.2015 15:22:49

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



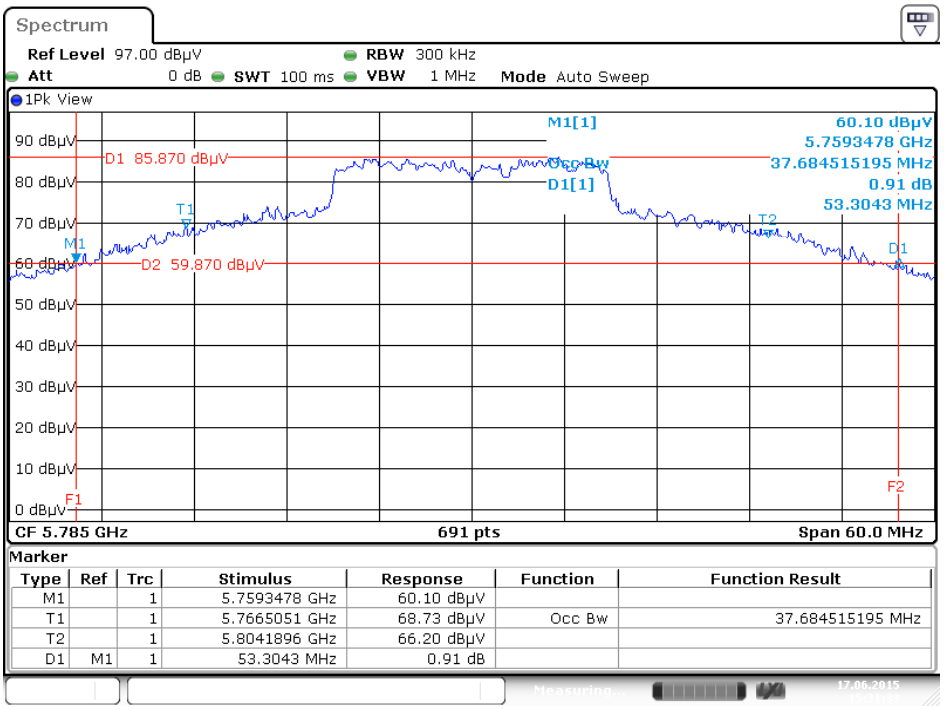
Date: 17.JUN.2015 15:24:52

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



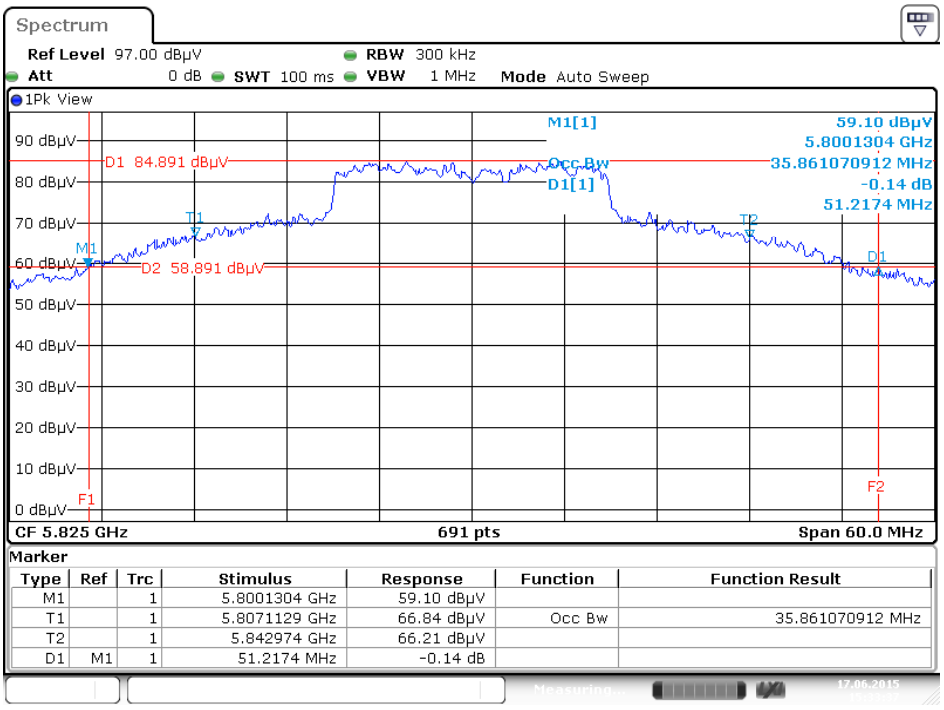
Date: 17.JUN.2015 15:29:17

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



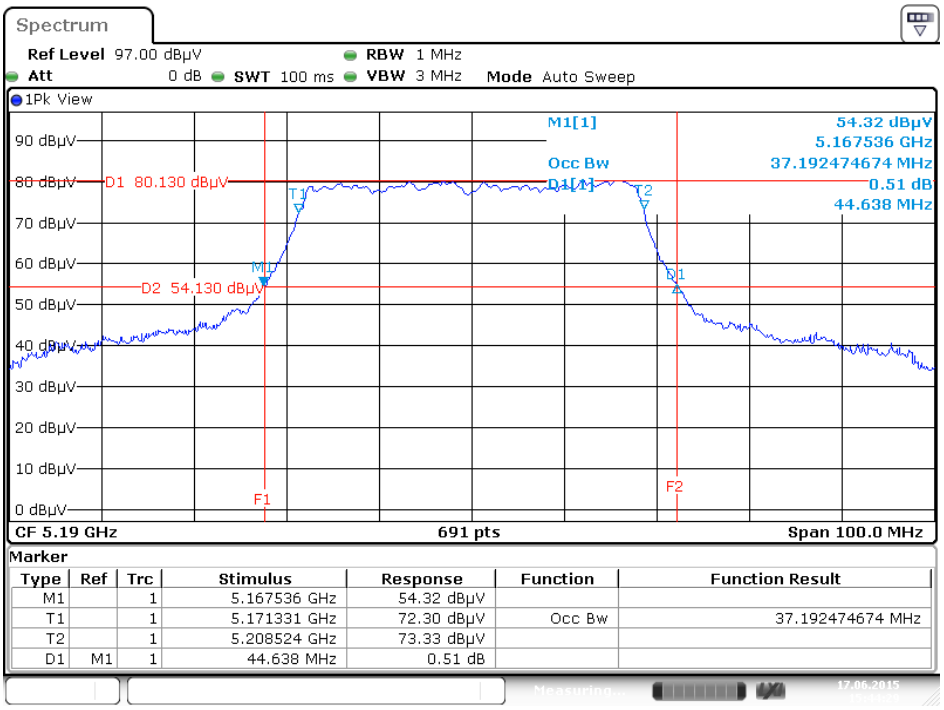
Date: 17.JUN.2015 15:31:33

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



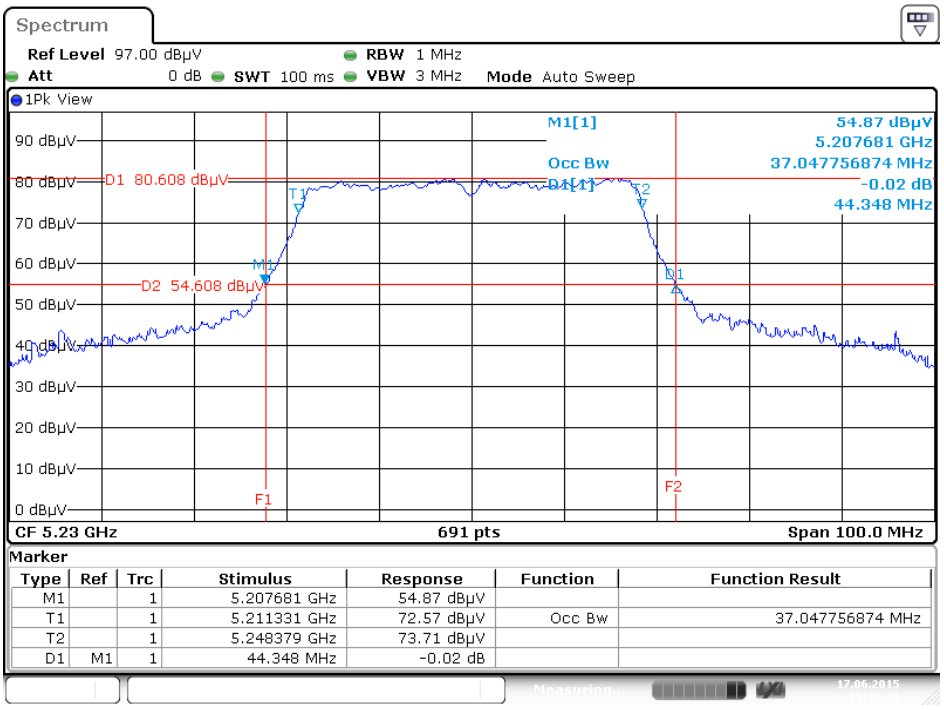
Date: 17.JUN.2015 15:33:37

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



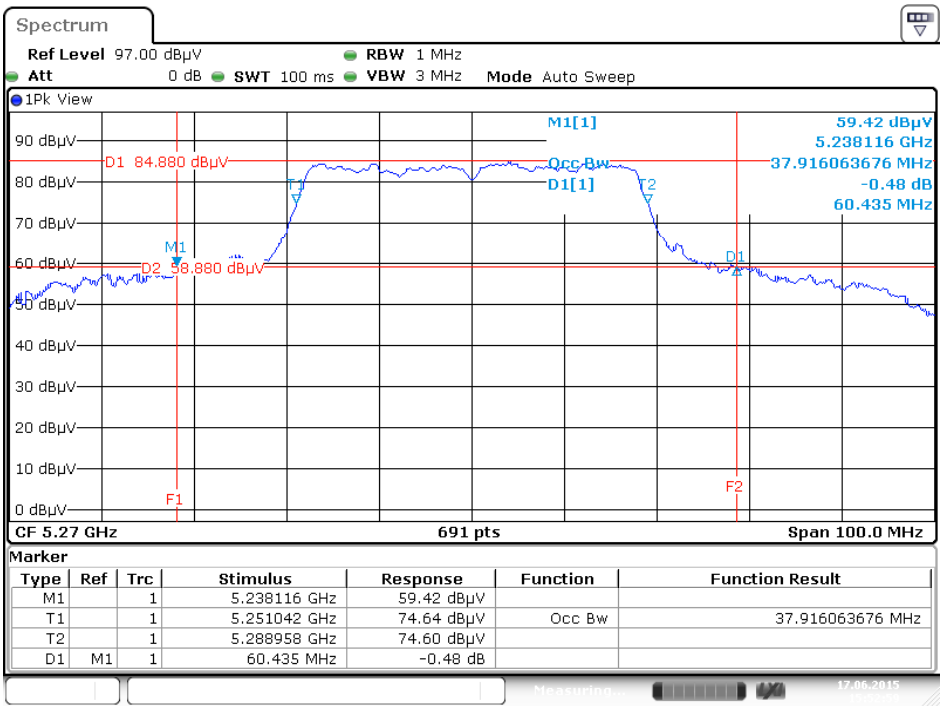
Date: 17.JUN.2015 15:44:29

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



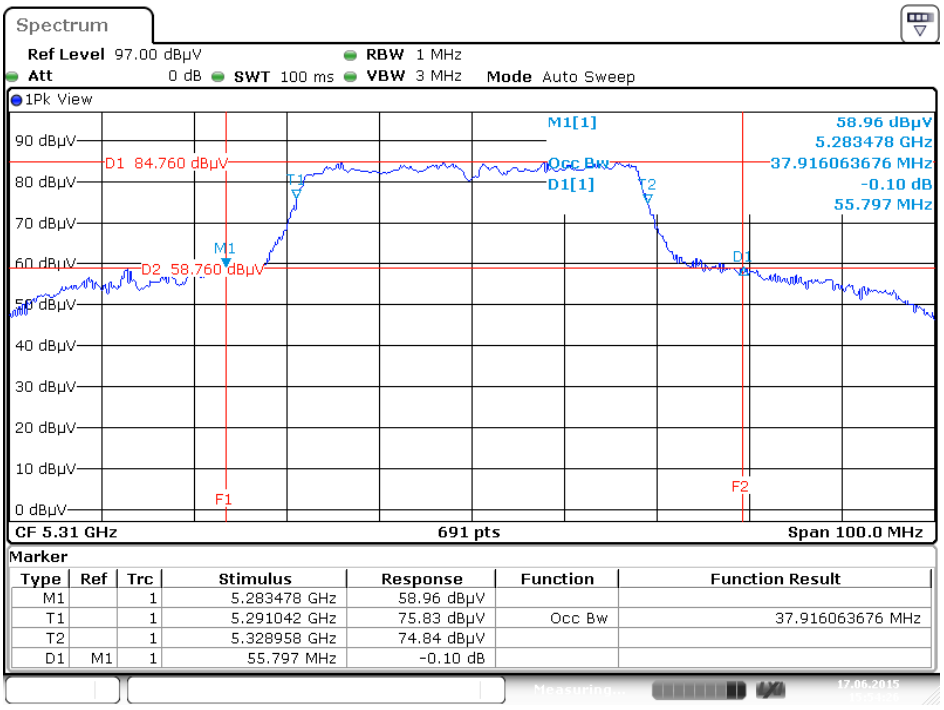
Date: 17.JUN.2015 15:42:49

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



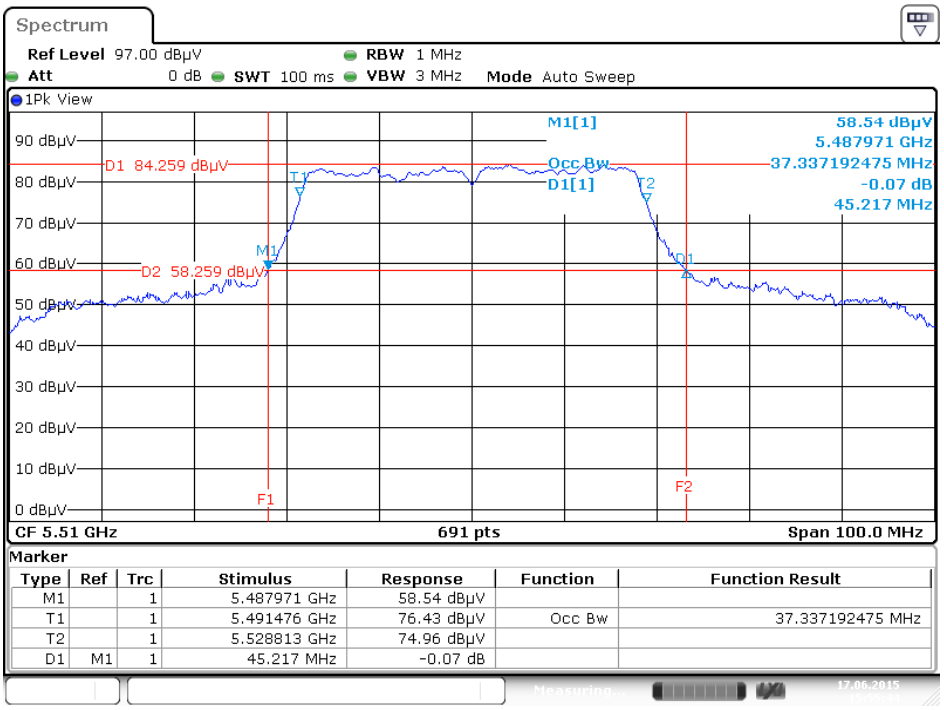
Date: 17.JUN.2015 15:52:59

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



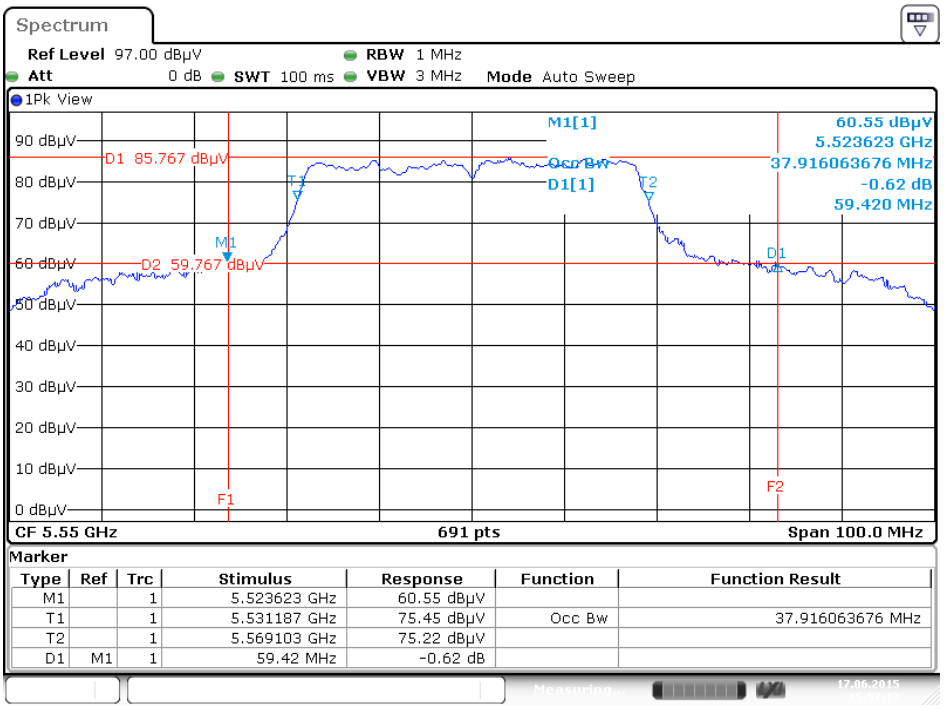
Date: 17.JUN.2015 15:54:26

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



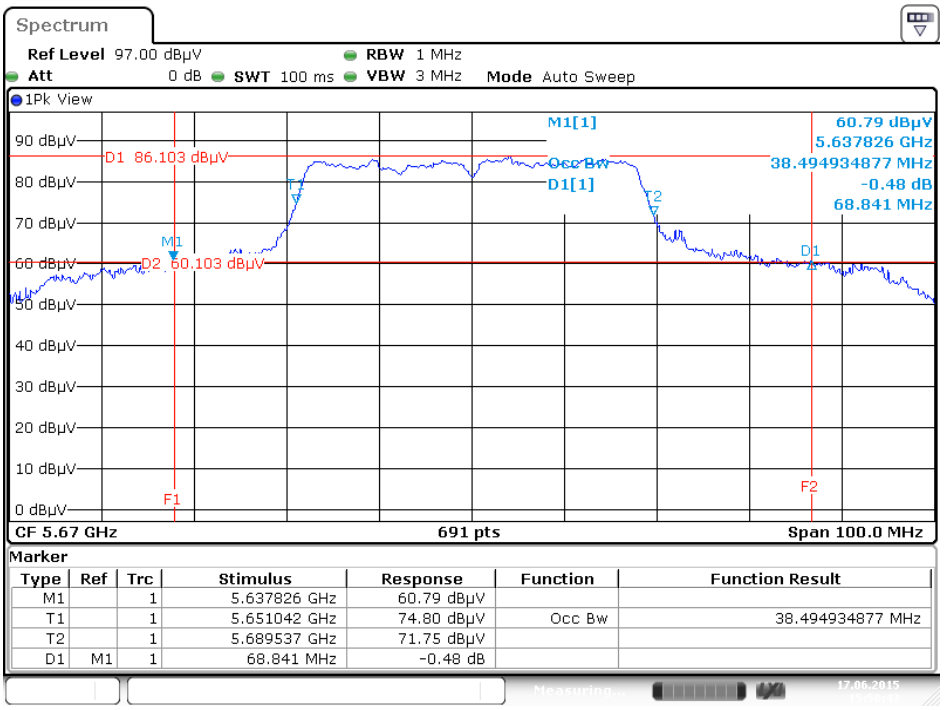
Date: 17.JUN.2015 15:55:44

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



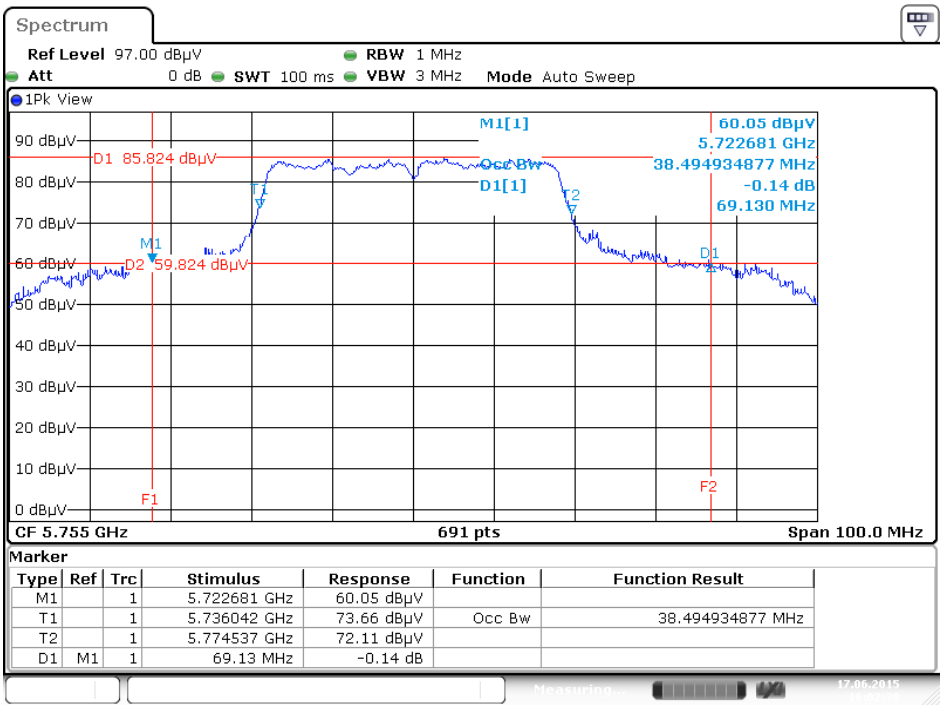
Date: 17.JUN.2015 15:57:13

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



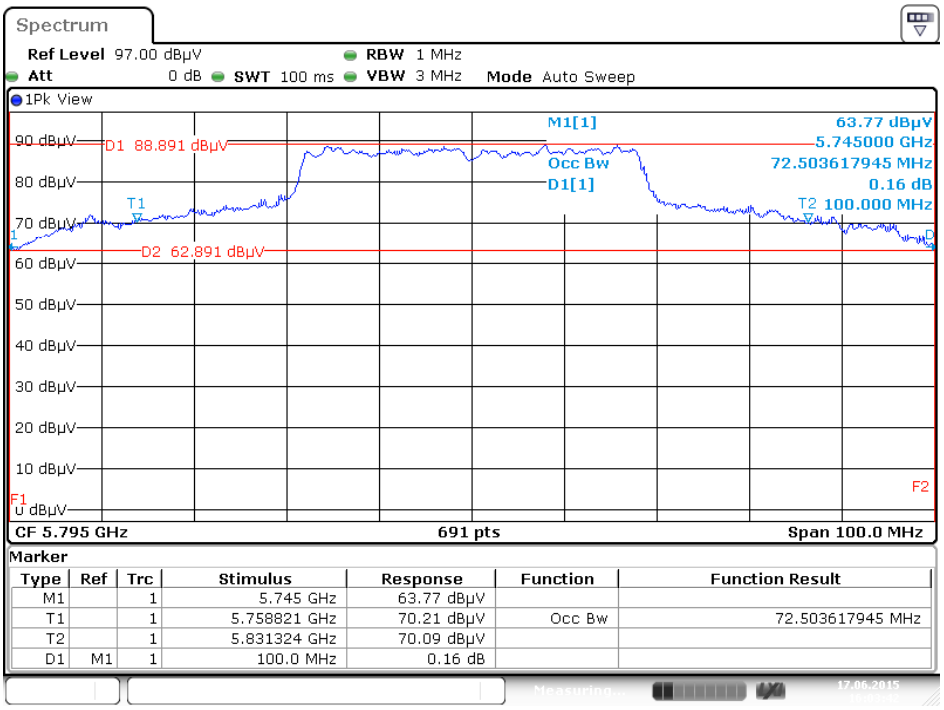
Date: 17.JUN.2015 15:58:43

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



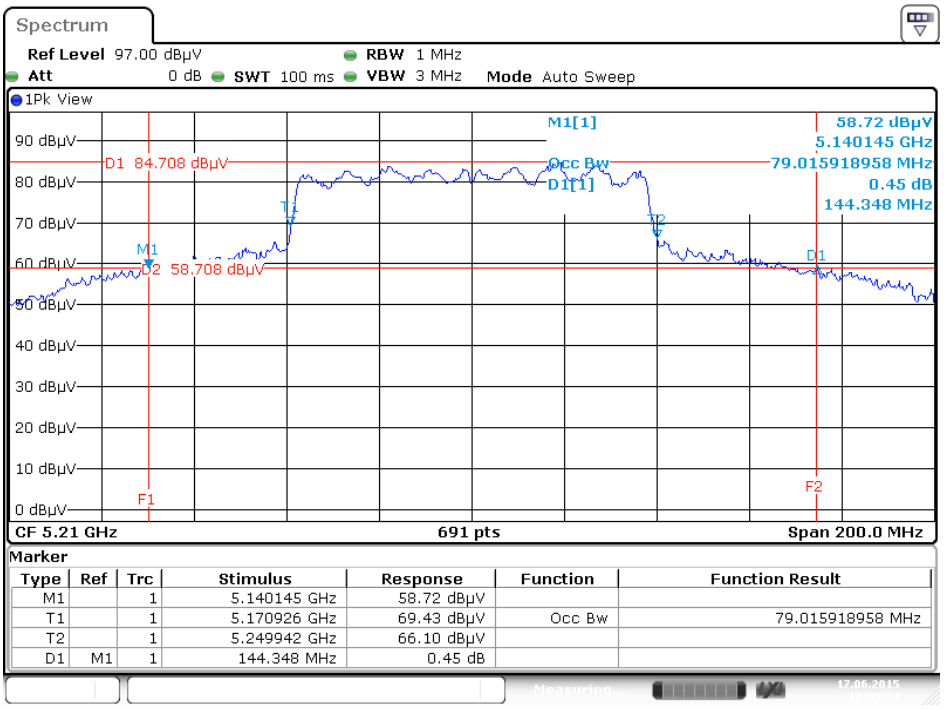
Date: 17.JUN.2015 16:02:30

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



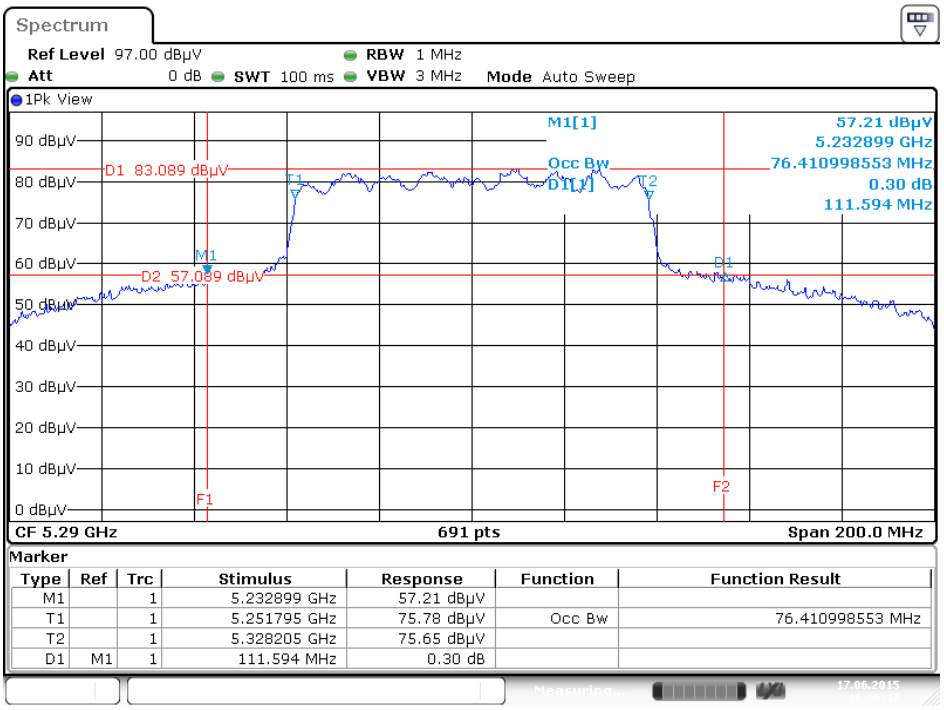
Date: 17.JUN.2015 16:03:43

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



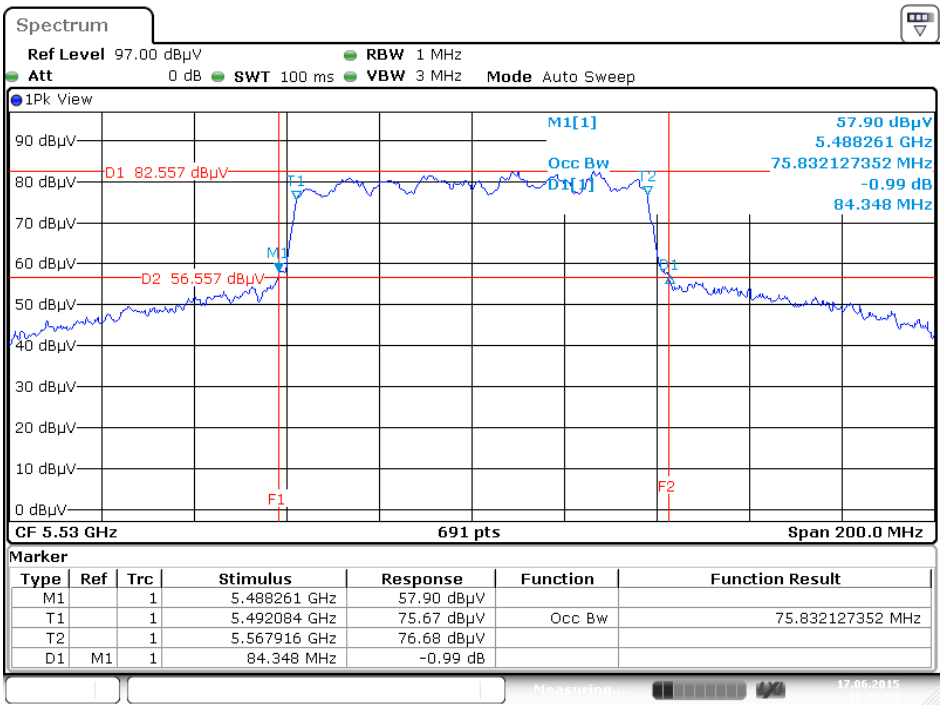
Date: 17.JUN.2015 16:05:24

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



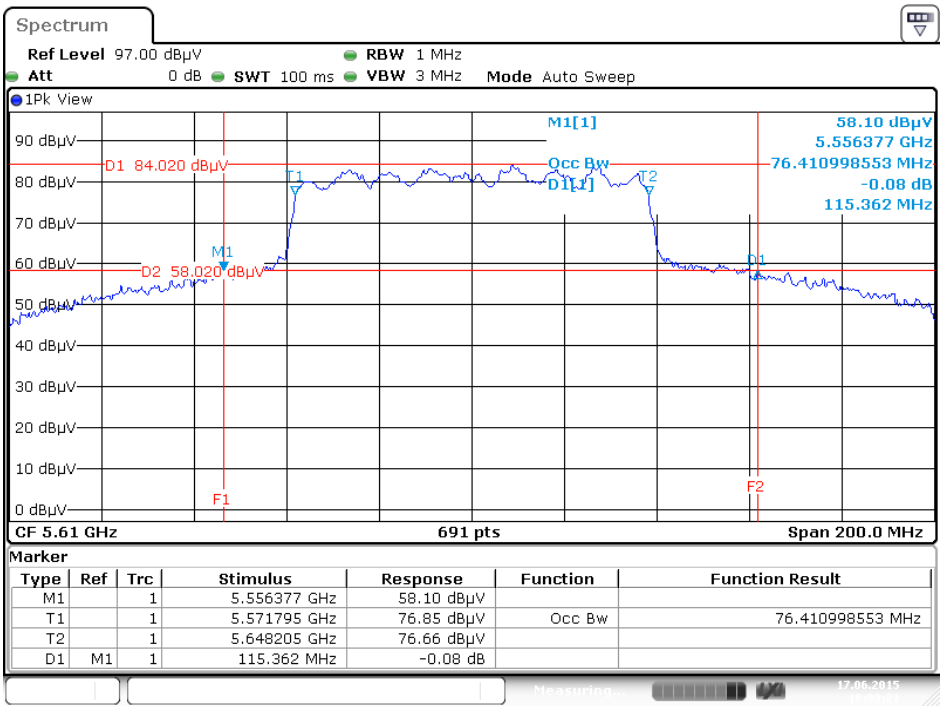
Date: 17.JUN.2015 16:06:47

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



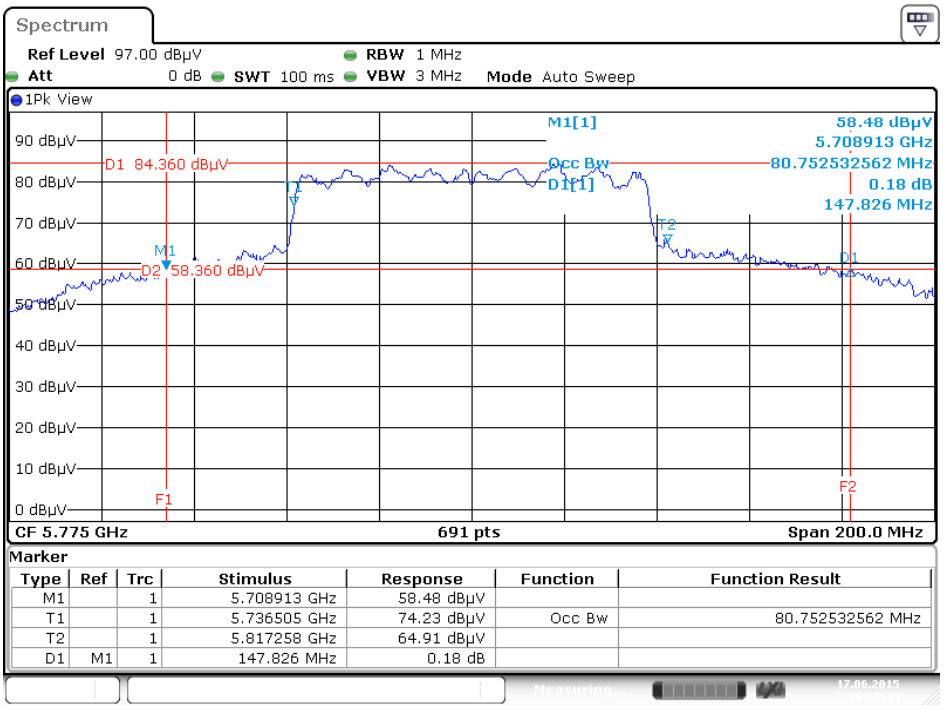
Date: 17.JUN.2015 16:08:01

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



Date: 17.JUN.2015 16:09:21

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



Date: 17.JUN.2015 16:10:44

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

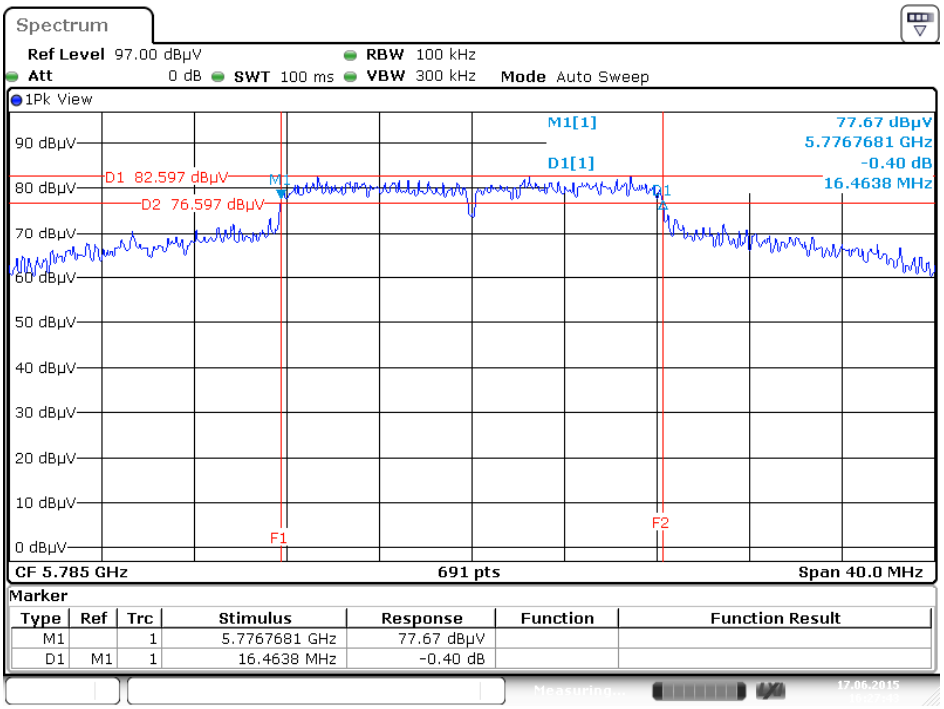
Temperature	25°C	Humidity	45%
Test Engineer	Roki Liu		

Mode	Frequency	6dB Bandwidth (MHz)	Min. Limit (kHz)	Test Result
802.11a	5745 MHz	16.46	500	Complies
	5785 MHz	16.46	500	Complies
	5825 MHz	16.46	500	Complies
802.11ac MCS0/Nss1 VHT20	5745 MHz	17.62	500	Complies
	5785 MHz	17.68	500	Complies
	5825 MHz	17.68	500	Complies
802.11ac MCS0/Nss1 VHT40	5755 MHz	36.41	500	Complies
	5795 MHz	36.41	500	Complies
802.11ac MCS0/Nss1 VHT80	5775 MHz	75.65	500	Complies

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

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

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



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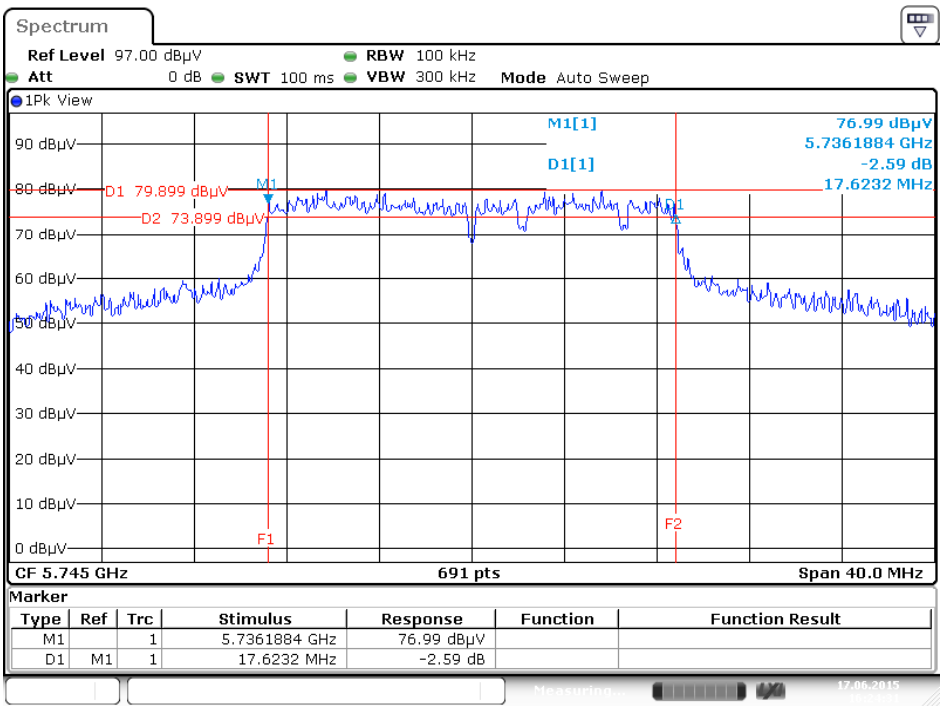
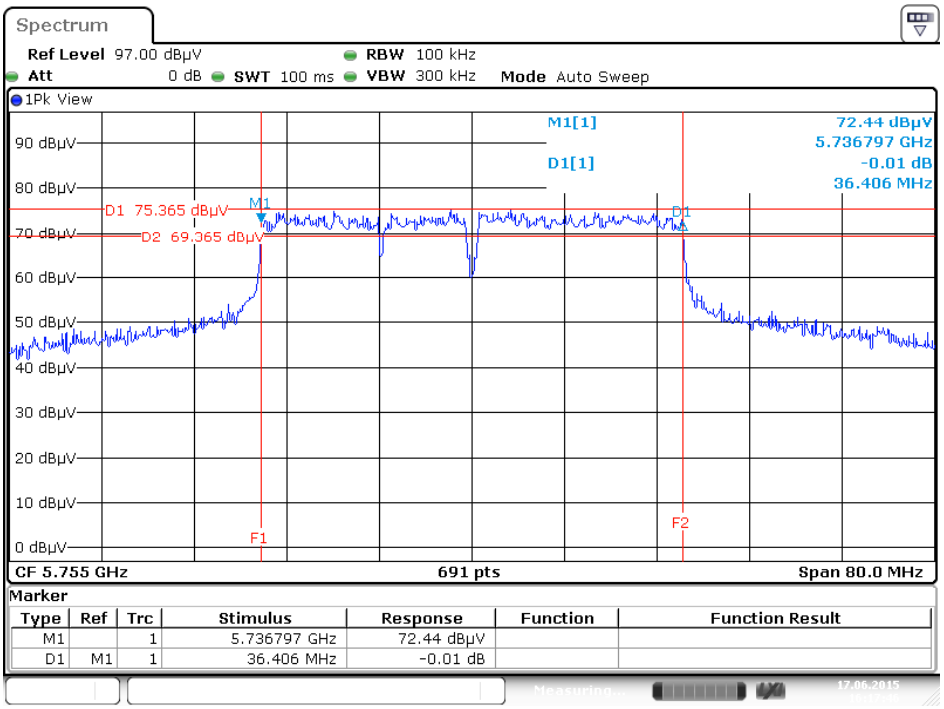
6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5745 MHz



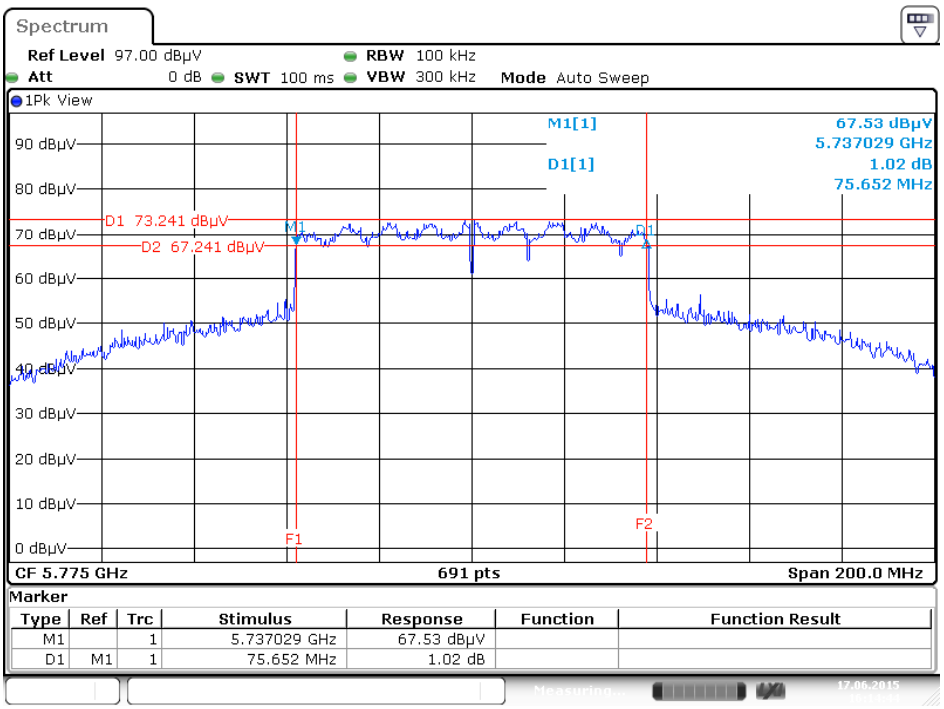
Date: 17.JUN.2015 16:24:31

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



Date: 17.JUN.2015 16:17:46

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



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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

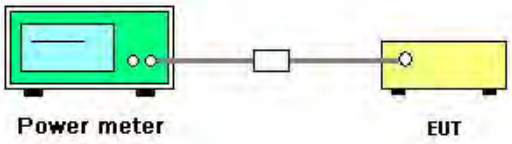
Please refer to section 5 of equipments list in this report. The following table is the setting of the power meter.

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	25°C	Humidity	45%
Test Engineer	Roki Liu	Test Date	Jun. 17, 2015 ~ Aug. 11, 2015

Mode	Frequency	Total Conducted Power (dBm)	Max. Limit (dBm)	Result
802.11a	5180 MHz	19.96	24.00	Complies
	5200 MHz	19.93	24.00	Complies
	5240 MHz	19.88	24.00	Complies
	5260 MHz	19.81	24.00	Complies
	5300 MHz	19.91	24.00	Complies
	5320 MHz	19.98	24.00	Complies
	5500 MHz	19.96	24.00	Complies
	5580 MHz	19.74	24.00	Complies
	5700 MHz	19.78	24.00	Complies
	5745 MHz	19.86	30.00	Complies
	5785 MHz	19.95	30.00	Complies
	5825 MHz	19.89	30.00	Complies

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
802.11ac MCS0/Nss1 VHT20	5180 MHz	16.71	16.69	19.71	24.00	Complies
	5200 MHz	16.72	16.77	19.76	24.00	Complies
	5240 MHz	16.05	17.17	19.66	24.00	Complies
	5260 MHz	16.66	16.78	19.73	24.00	Complies
	5300 MHz	16.87	16.81	19.85	24.00	Complies
	5320 MHz	16.65	16.73	19.70	24.00	Complies
	5500 MHz	16.89	16.47	19.70	24.00	Complies
	5580 MHz	16.63	16.54	19.60	24.00	Complies
	5700 MHz	16.86	16.84	19.86	24.00	Complies
	5745 MHz	16.76	16.66	19.72	30.00	Complies
	5785 MHz	16.84	16.53	19.70	30.00	Complies
	5825 MHz	16.97	16.7	19.85	30.00	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	16.72	16.64	19.69	24.00	Complies
	5230 MHz	16.75	16.86	19.82	24.00	Complies
	5270 MHz	16.83	16.78	19.82	24.00	Complies
	5310 MHz	16.56	16.73	19.66	24.00	Complies
	5510 MHz	16.63	16.76	19.71	24.00	Complies
	5550 MHz	16.66	16.83	19.76	24.00	Complies
	5670 MHz	16.67	16.97	19.83	24.00	Complies
	5755 MHz	16.56	16.86	19.72	30.00	Complies
	5795 MHz	16.45	16.89	19.69	30.00	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	16.94	16.68	19.82	24.00	Complies
	5290 MHz	16.62	16.58	19.61	24.00	Complies
	5530 MHz	16.77	16.89	19.84	24.00	Complies
	5610 MHz	16.66	16.71	19.70	24.00	Complies
	5775 MHz	16.68	16.88	19.79	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

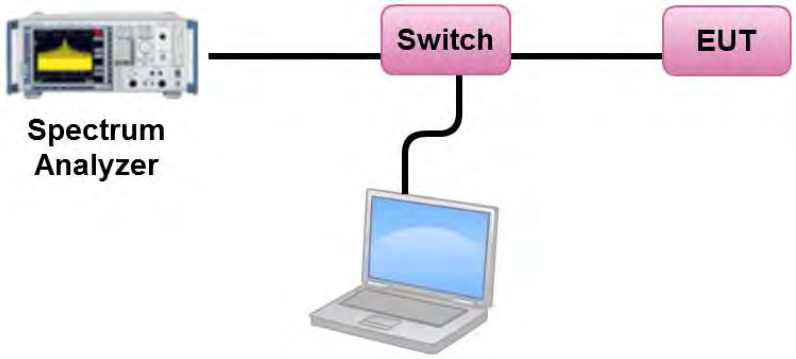
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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	25°C	Humidity	45%
Test Engineer	Roki Liu	Test Date	Jun. 16, 2015 ~ Aug. 11, 2015

Configuration IEEE 802.11a / Chain 1

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	6.70	11.00	Complies
40	5200 MHz	6.75	11.00	Complies
48	5240 MHz	6.65	11.00	Complies
52	5260 MHz	6.57	11.00	Complies
60	5300 MHz	6.85	11.00	Complies
64	5320 MHz	6.54	11.00	Complies
100	5500 MHz	6.57	11.00	Complies
116	5580 MHz	6.62	11.00	Complies
140	5700 MHz	6.26	11.00	Complies

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
149	5745 MHz	6.39	-3.01	3.38	30.00	Complies
157	5785 MHz	6.24	-3.01	3.23	30.00	Complies
165	5825 MHz	6.46	-3.01	3.45	30.00	Complies

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

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	6.20	10.36	Complies
40	5200 MHz	6.44	10.36	Complies
48	5240 MHz	6.38	10.36	Complies
52	5260 MHz	6.58	10.93	Complies
60	5300 MHz	6.78	10.93	Complies
64	5320 MHz	6.88	10.93	Complies
100	5500 MHz	6.20	11.00	Complies
116	5580 MHz	6.37	11.00	Complies
140	5700 MHz	6.25	11.00	Complies

Note:

Band 1: $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =6.64dBi, so limit =11-(6.64-6)=10.36 dBm/MHz

Band 2: $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =6.07dBi, so limit =11-(6.07-6)=10.93 dBm/MHz

Band 3: $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.54dBi<6dBi, so the limit doesn't reduce.

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
149	5745 MHz	6.46	-3.01	3.45	30.00	Complies
157	5785 MHz	6.64	-3.01	3.63	30.00	Complies
165	5825 MHz	6.47	-3.01	3.46	30.00	Complies

Note:

Band 4: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =5.58dBi<6dBi, so the limit doesn't reduce.

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

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	3.70	10.36	Complies
46	5230 MHz	3.62	10.36	Complies
54	5270 MHz	3.44	10.93	Complies
62	5310 MHz	3.48	10.93	Complies
102	5510 MHz	3.88	11.00	Complies
110	5550 MHz	3.59	11.00	Complies
134	5670 MHz	3.77	11.00	Complies

Note:

Band 1: $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =6.64dBi, so limit =11-(6.64-6)=10.36 dBm/MHz

Band 2: $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =6.07dBi, so limit =11-(6.07-6)=10.93 dBm/MHz

Band 3: $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.54dBi<6dBi, so the limit doesn't reduce.

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
151	5755 MHz	3.36	-3.01	0.35	30.00	Complies
159	5795 MHz	3.62	-3.01	0.61	30.00	Complies

Note:

Band 4: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =5.58dBi<6dBi, so the limit doesn't reduce.

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

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	0.57	10.36	Complies
58	5290 MHz	0.47	10.93	Complies
106	5530 MHz	0.18	11.00	Complies
122	5610 MHz	0.66	11.00	Complies

Note:

Band 1: $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =6.64dBi, so limit =11-(6.64-6)=10.36 dBm/MHz

Band 2: $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =6.07dBi, so limit =11-(6.07-6)=10.93 dBm/MHz

Band 3: $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.54dBi<6dBi, so the limit doesn't reduce.

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
155	5775 MHz	0.25	-3.01	-2.76	30.00	Complies

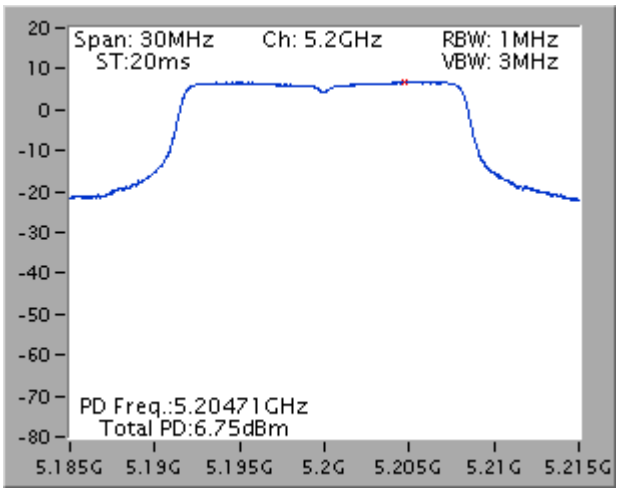
Note:

Band 4: $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.58dBi<6dBi, so the limit doesn't reduce.

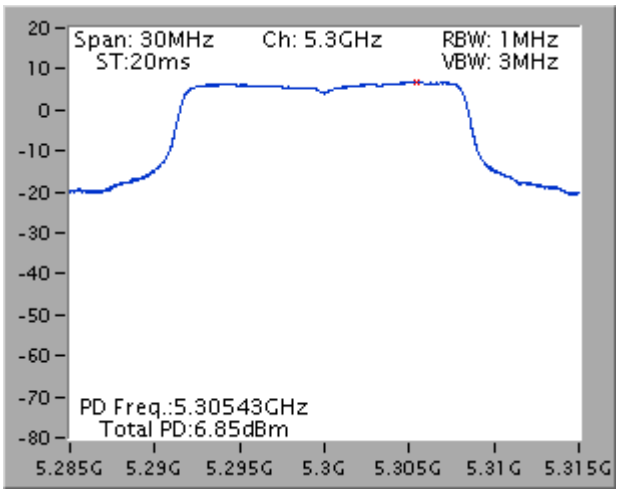
Note: All the test values were listed in the report.

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

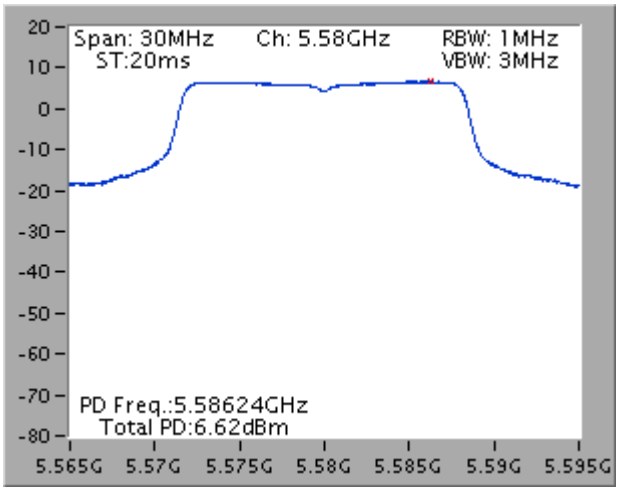
Power Density Plot on Configuration IEEE 802.11a / Chain 1 / 5200MH MHz



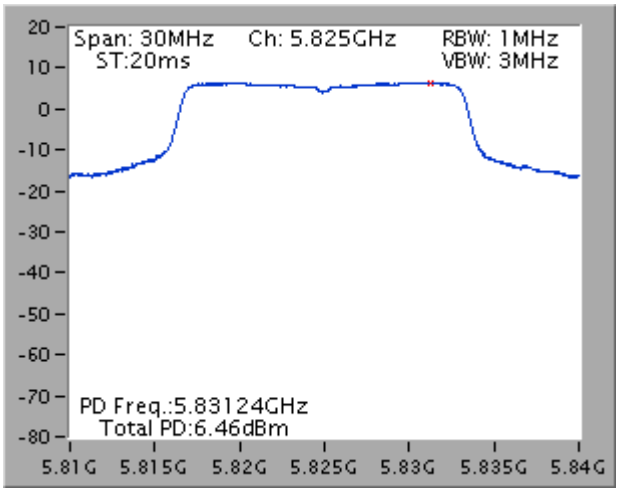
Power Density Plot on Configuration IEEE 802.11a / Chain 1 / 5300 MHz



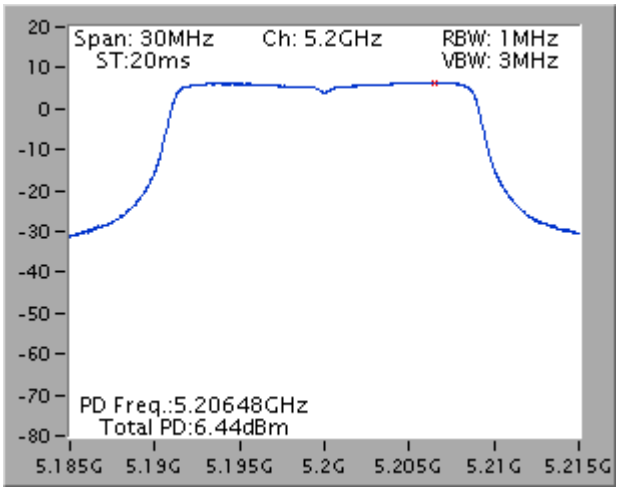
Power Density Plot on Configuration IEEE 802.11a / Chain 1 / 5580 MHz



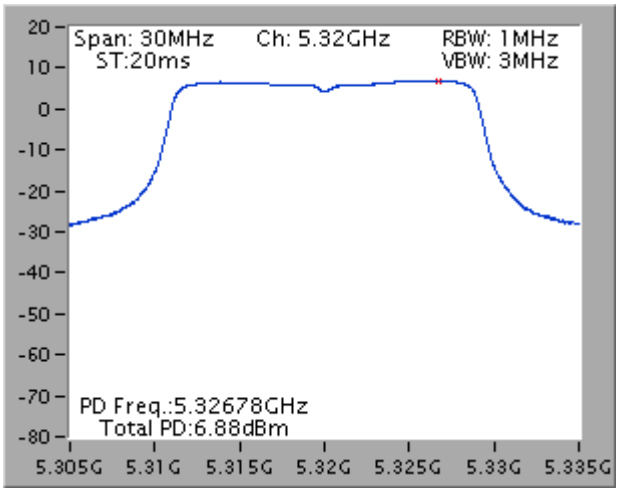
Power Density Plot on Configuration IEEE 802.11a / Chain 1 / 5825 MHz



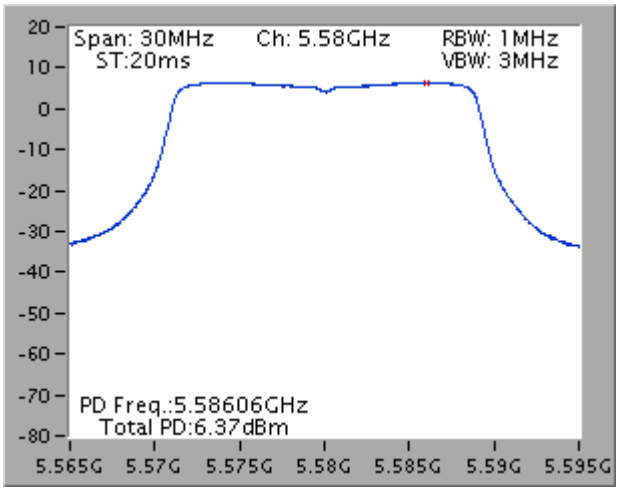
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5200 MHz



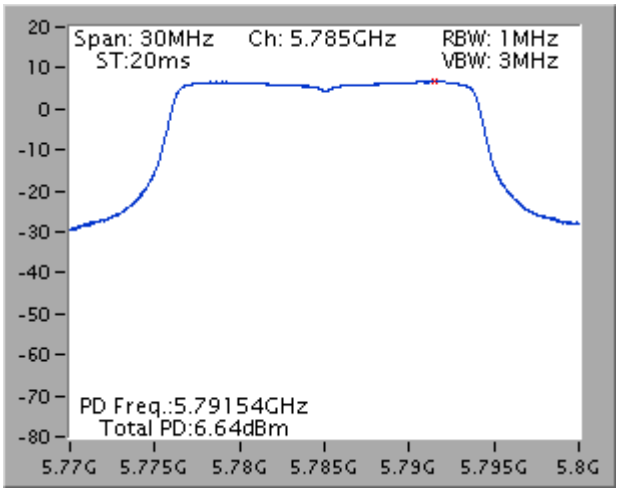
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5320 MHz



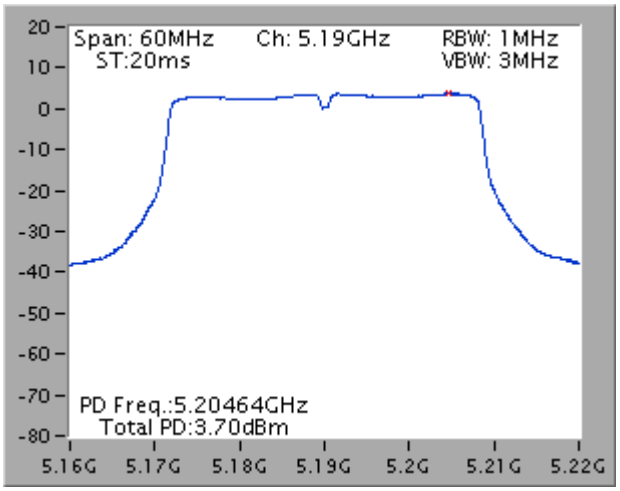
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5580 MHz



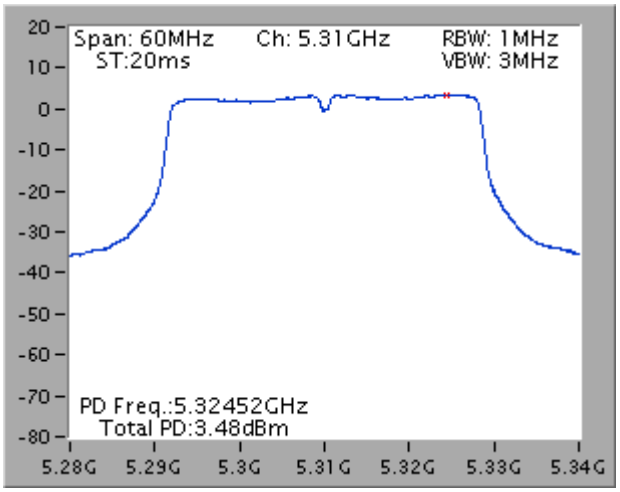
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5785 MHz



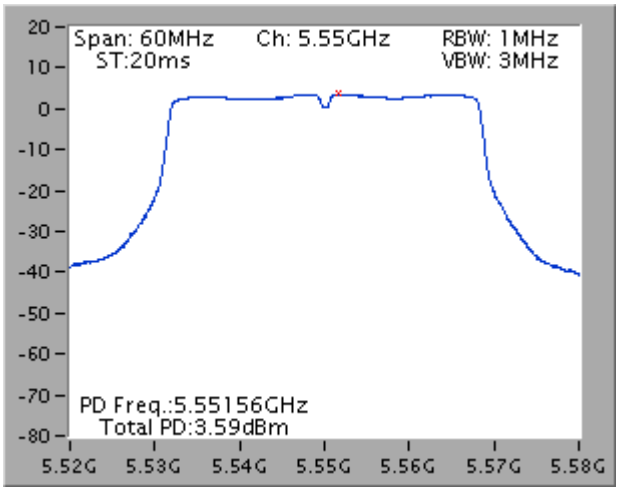
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5190 MHz



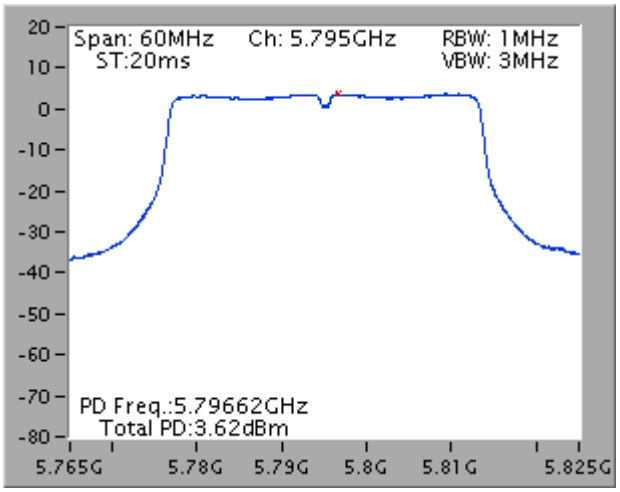
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5310 MHz



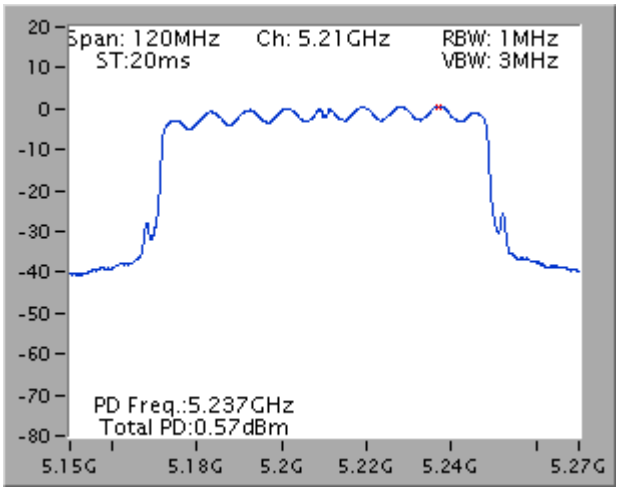
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5550 MHz



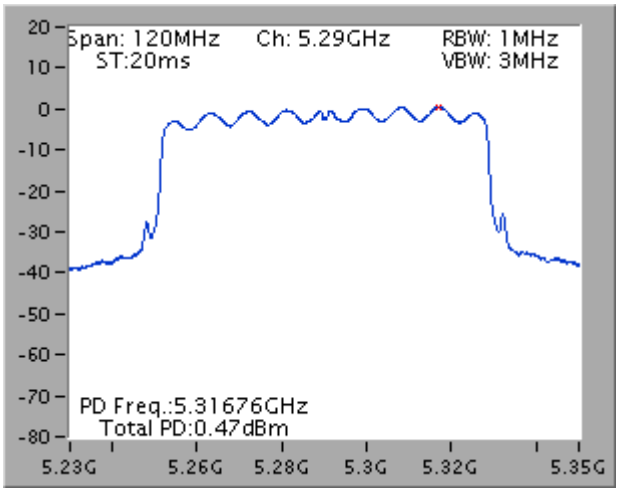
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5795 MHz



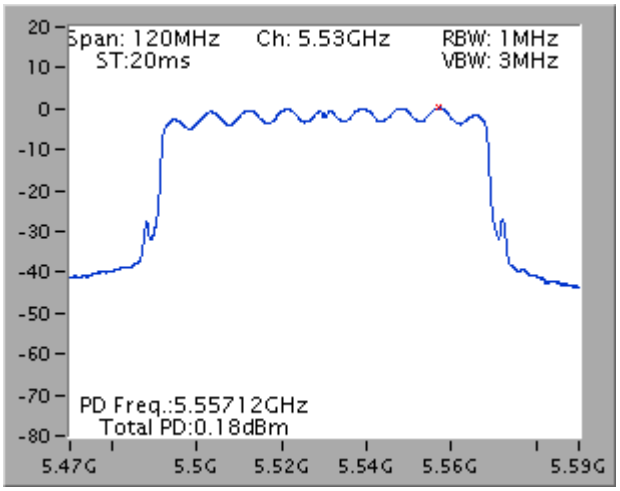
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5210 MHz



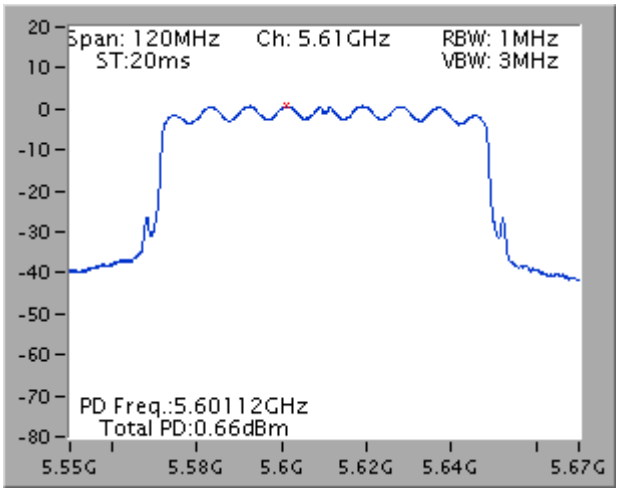
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5290 MHz



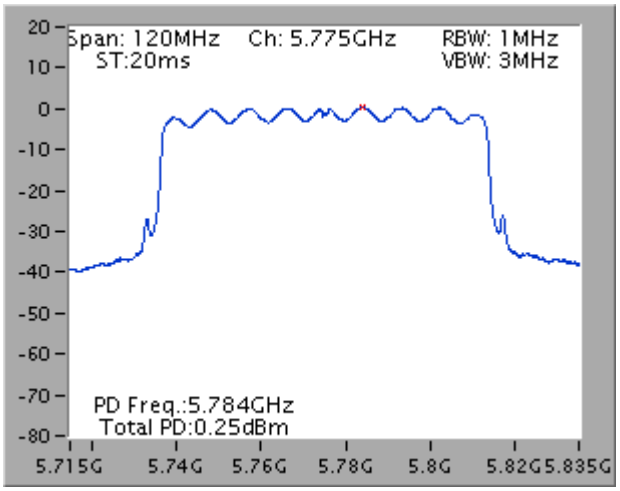
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5530 MHz



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



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

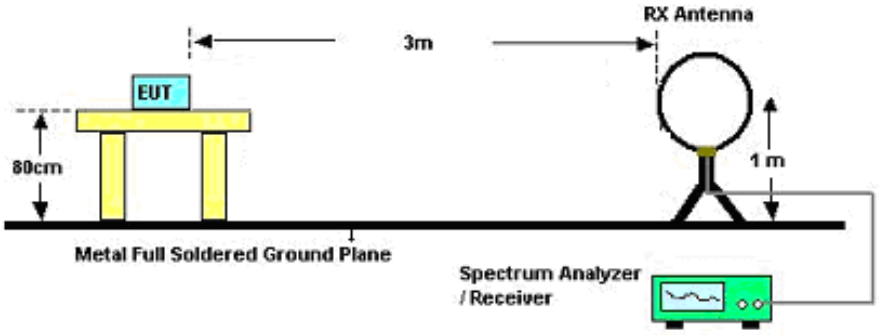
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RBW 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RBW 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RBW 120kHz for QP

4.6.3. Test Procedures

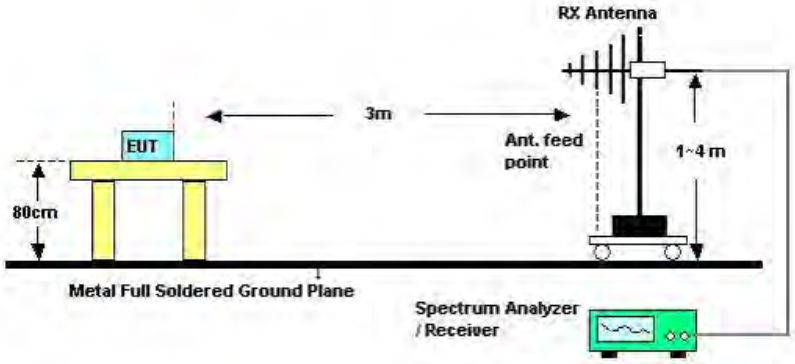
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 1m & 3m far away from the turntable.
2. Power on the EUT and all the supporting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

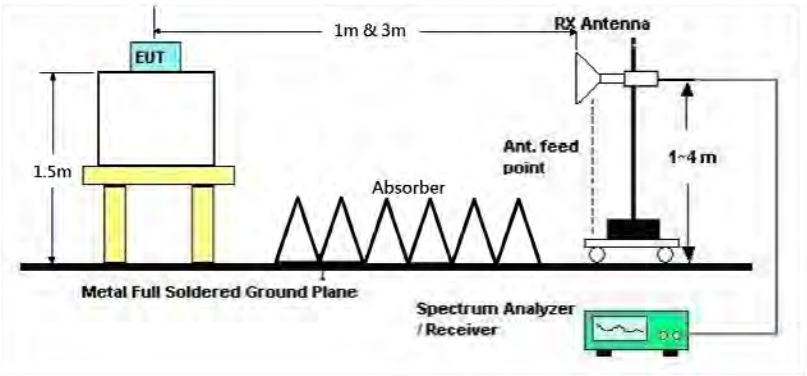
For Radiated Emissions: 9kHz ~30MHz



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	23.1℃	Humidity	39%
Test Engineer	Stim Sung	Configurations	CTX / Mode 2
Test Date	Aug. 18, 2015		

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.

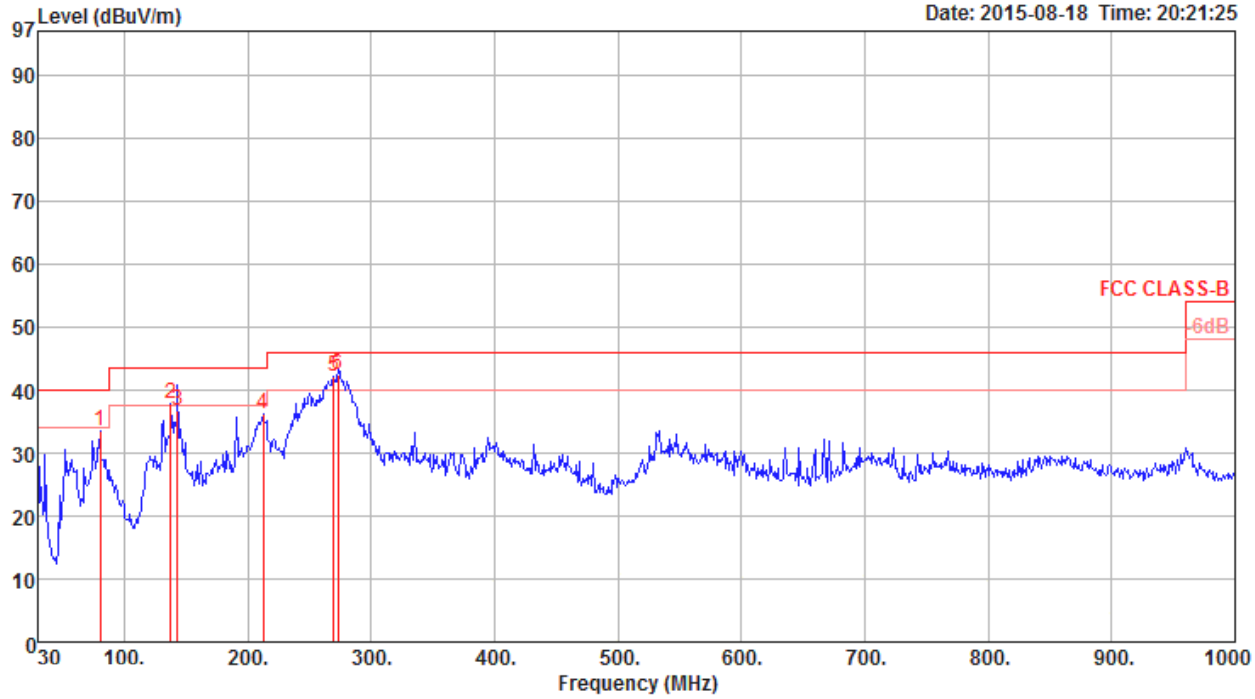
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

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

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

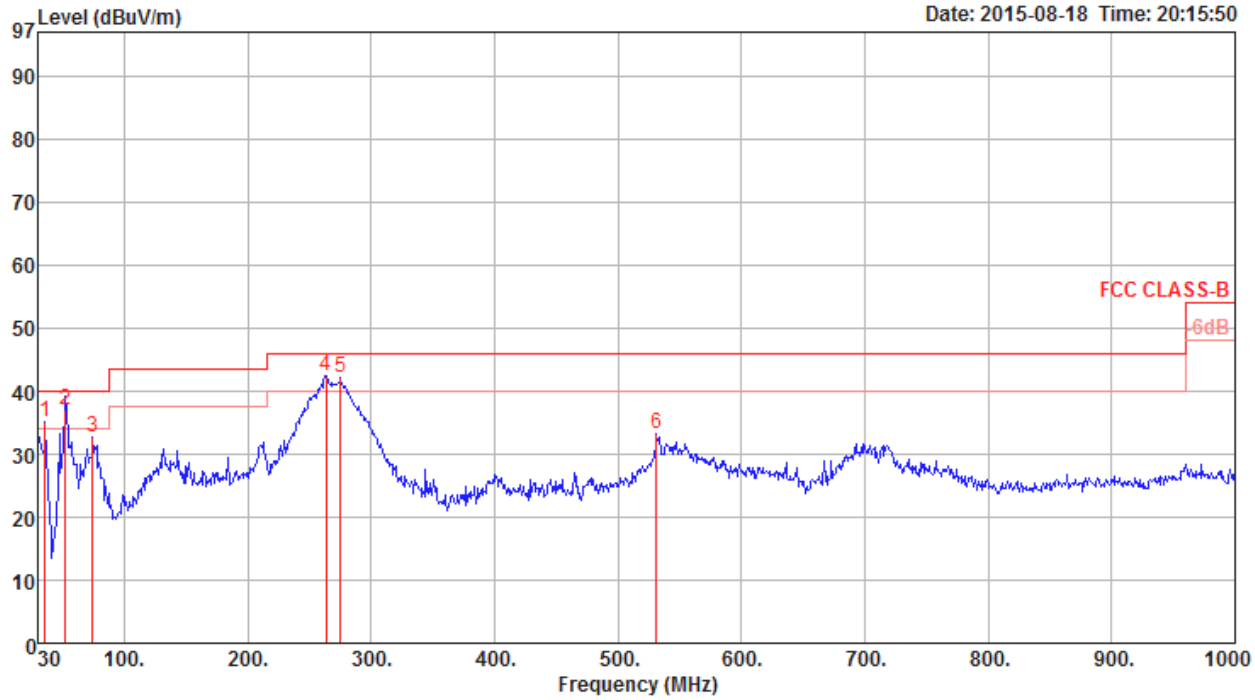
Temperature	23.1℃	Humidity	39%
Test Engineer	Stim Sung	Configurations	CTX / Mode 2

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	80.44	33.48	40.00	-6.52	53.27	0.97	7.60	28.36	Peak	100	0	HORIZONTAL
2	137.67	37.93	43.50	-5.57	52.49	1.42	12.10	28.08	Peak	100	0	HORIZONTAL
3	143.49	36.63	43.50	-6.87	51.55	1.42	11.71	28.05	QP	111	232	HORIZONTAL
4	212.36	36.23	43.50	-7.27	51.47	1.69	10.76	27.69	Peak	100	0	HORIZONTAL
5	269.59	42.02	46.00	-3.98	54.09	1.88	13.60	27.55	Peak	100	0	HORIZONTAL
6	273.47	42.39	46.00	-3.61	54.43	1.90	13.60	27.54	QP	114	218	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	35.82	35.04	40.00	-4.96	45.16	0.69	16.62	27.43	Peak	200	0	VERTICAL
2	52.31	36.99	40.00	-3.01	55.85	0.86	8.74	28.46	QP	115	259	VERTICAL
3	74.62	32.64	40.00	-7.36	52.93	0.93	7.16	28.38	Peak	200	0	VERTICAL
4	263.77	42.56	46.00	-3.44	54.38	1.85	13.90	27.57	Peak	200	0	VERTICAL
5	275.41	42.02	46.00	-3.98	54.05	1.91	13.60	27.54	Peak	200	0	VERTICAL
6	531.49	33.24	46.00	-12.76	40.76	2.74	18.43	28.69	Peak	200	0	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.

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

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11a CH 36 / Chain 1
Test Date	Aug. 02, 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	15537.30	43.48	54.00	-10.52	32.38	7.56	38.16	34.62	270	144	Average	HORIZONTAL
2	15541.92	56.81	74.00	-17.19	45.71	7.56	38.16	34.62	270	144	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	15535.94	56.92	74.00	-17.08	45.82	7.56	38.16	34.62	338	150	Peak	VERTICAL
2	15539.90	43.41	54.00	-10.59	32.31	7.56	38.16	34.62	338	150	Average	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11a CH 40 / Chain 1
Test Date	Aug. 02, 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	15601.94	57.34	74.00	-16.66	46.16	7.58	38.29	34.69	140	160	Peak	HORIZONTAL
2	15604.10	43.80	54.00	-10.20	32.62	7.58	38.29	34.69	140	160	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	15602.86	56.18	74.00	-17.82	45.00	7.58	38.29	34.69	235	159	Peak	VERTICAL
2	15604.04	43.56	54.00	-10.44	32.38	7.58	38.29	34.69	235	159	Average	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11a CH 48 / Chain 1
Test Date	Aug. 02, 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	15718.70	43.79	54.00	-10.21	32.45	7.62	38.50	34.78	275	157	Average	HORIZONTAL
2	15720.90	56.96	74.00	-17.04	45.62	7.62	38.50	34.78	275	157	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	15718.44	56.72	74.00	-17.28	45.38	7.62	38.50	34.78	129	112	Peak	VERTICAL
2	15724.74	43.28	54.00	-10.72	31.94	7.62	38.50	34.78	129	112	Average	VERTICAL

Temperature	23.1°C	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11a CH 52 / Chain 1
Test Date	Aug. 02, 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	15776.46	43.84	54.00	-10.16	32.42	7.64	38.60	34.82	335	140	Average	HORIZONTAL
2	15777.46	56.56	74.00	-17.44	45.16	7.64	38.60	34.84	335	140	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	15777.46	56.82	74.00	-17.18	45.42	7.64	38.60	34.84	321	152	Peak	VERTICAL
2	15777.86	43.70	54.00	-10.30	32.30	7.64	38.60	34.84	321	152	Average	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11a CH 60 / Chain 1
Test Date	Aug. 02, 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	10600.00	41.79	54.00	-12.21	31.75	6.21	38.78	34.95	105	168	Average	HORIZONTAL
2	10600.70	54.84	74.00	-19.16	44.80	6.21	38.78	34.95	105	168	Peak	HORIZONTAL
3	15903.04	44.39	54.00	-9.61	32.79	7.69	38.84	34.93	257	153	Average	HORIZONTAL
4	15904.26	57.36	74.00	-16.64	45.76	7.69	38.84	34.93	257	153	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	10596.20	52.39	74.00	-21.61	42.36	6.20	38.78	34.95	170	156	Peak	VERTICAL
2	10599.88	40.04	54.00	-13.96	30.00	6.21	38.78	34.95	170	156	Average	VERTICAL
3	15897.04	57.16	74.00	-16.84	45.60	7.68	38.81	34.93	231	123	Peak	VERTICAL
4	15902.54	43.88	54.00	-10.12	32.28	7.69	38.84	34.93	231	123	Average	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11a CH 64 / Chain 1
Test Date	Aug. 02, 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	10639.98	54.99	74.00	-19.01	44.90	6.23	38.77	34.91	246	169	Peak	HORIZONTAL
2	10640.08	42.25	54.00	-11.75	32.16	6.23	38.77	34.91	246	169	Average	HORIZONTAL
3	15956.82	57.27	74.00	-16.73	45.63	7.70	38.94	35.00	219	161	Peak	HORIZONTAL
4	15964.34	44.46	54.00	-9.54	32.82	7.70	38.94	35.00	219	161	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	10639.78	41.42	54.00	-12.58	31.33	6.23	38.77	34.91	249	141	Average	VERTICAL
2	10641.76	54.23	74.00	-19.77	44.14	6.23	38.77	34.91	249	141	Peak	VERTICAL
3	15957.04	57.02	74.00	-16.98	45.38	7.70	38.94	35.00	118	148	Peak	VERTICAL
4	15961.42	44.56	54.00	-9.44	32.92	7.70	38.94	35.00	118	148	Average	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11a CH 100 / Chain 1
Test Date	Aug. 02, 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	10998.46	56.02	74.00	-17.98	45.58	6.40	38.70	34.66	118	174	Peak	HORIZONTAL
2	11000.00	43.76	54.00	-10.24	33.32	6.40	38.70	34.66	118	174	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	11000.48	52.43	74.00	-21.57	41.99	6.40	38.70	34.66	76	115	Peak	VERTICAL
2	11002.20	40.23	54.00	-13.77	29.79	6.40	38.70	34.66	76	115	Average	VERTICAL

Temperature	23.1°C	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11a CH 116 / Chain 1
Test Date	Aug. 02, 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	11155.68	56.15	74.00	-17.85	45.66	6.44	38.70	34.65	265	153	Peak	HORIZONTAL
2	11156.02	43.90	54.00	-10.10	33.41	6.44	38.70	34.65	265	153	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	11156.46	40.92	54.00	-13.08	30.43	6.44	38.70	34.65	90	110	Average	VERTICAL
2	11156.52	54.15	74.00	-19.85	43.66	6.44	38.70	34.65	90	110	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11a CH 140 / Chain 1
Test Date	Aug. 02, 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	11399.84	47.86	54.00	-6.14	37.28	6.51	38.70	34.63	111	183	Average	HORIZONTAL
2	11401.82	60.60	74.00	-13.40	50.02	6.51	38.70	34.63	111	183	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	11395.26	39.92	54.00	-14.08	29.34	6.51	38.70	34.63	344	138	Average	VERTICAL
2	11404.46	52.54	74.00	-21.46	41.96	6.51	38.70	34.63	344	138	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11a CH 149 / Chain 1
Test Date	Aug. 02, 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	11490.04	46.92	54.00	-7.08	36.31	6.53	38.70	34.62	106	171	Average	HORIZONTAL
2	11492.12	59.93	74.00	-14.07	49.32	6.53	38.70	34.62	106	171	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	11490.82	40.61	54.00	-13.39	30.00	6.53	38.70	34.62	324	168	Average	VERTICAL
2	11492.80	52.62	74.00	-21.38	42.01	6.53	38.70	34.62	324	168	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11a CH 157 / Chain 1
Test Date	Aug. 02, 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	11569.96	45.99	54.00	-8.01	35.38	6.55	38.71	34.65	117	180	Average	HORIZONTAL
2	11572.12	58.97	74.00	-15.03	48.36	6.55	38.71	34.65	117	180	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	11566.00	40.86	54.00	-13.14	30.24	6.55	38.71	34.64	176	166	Average	VERTICAL
2	11569.20	53.84	74.00	-20.16	43.22	6.55	38.71	34.64	176	166	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11a CH 165 / Chain 1
Test Date	Aug. 02, 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	11648.36	57.35	74.00	-16.65	46.74	6.56	38.73	34.68	115	186	Peak	HORIZONTAL
2	11650.04	44.30	54.00	-9.70	33.69	6.56	38.73	34.68	115	186	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	40.66	54.00	-13.34	30.05	6.56	38.73	34.68	30	142	Average	VERTICAL
2	11654.42	54.02	74.00	-19.98	43.41	6.56	38.73	34.68	30	142	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	15540.18	43.80	54.00	-10.20	32.70	7.56	38.16	34.62	128	156	Average	HORIZONTAL
2	15542.80	56.87	74.00	-17.13	45.77	7.56	38.16	34.62	128	156	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	15543.00	43.71	54.00	-10.29	32.61	7.56	38.16	34.62	193	183	Average	VERTICAL
2	15543.64	56.65	74.00	-17.35	45.52	7.56	38.19	34.62	193	183	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	15602.94	56.77	74.00	-17.23	45.59	7.58	38.29	34.69	113	175	Peak	HORIZONTAL
2	15603.76	43.71	54.00	-10.29	32.53	7.58	38.29	34.69	113	175	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	15602.42	56.23	74.00	-17.77	45.05	7.58	38.29	34.69	279	162	Peak	VERTICAL
2	15604.84	43.70	54.00	-10.30	32.52	7.58	38.29	34.69	279	162	Average	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	15715.92	56.38	74.00	-17.62	45.04	7.62	38.50	34.78	179	167	Peak	HORIZONTAL
2	15721.92	43.61	54.00	-10.39	32.27	7.62	38.50	34.78	179	167	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	15716.68	56.24	74.00	-17.76	44.90	7.62	38.50	34.78	276	150	Peak	VERTICAL
2	15721.54	43.41	54.00	-10.59	32.07	7.62	38.50	34.78	276	150	Average	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	15778.52	56.69	74.00	-17.31	45.29	7.64	38.60	34.84	87	176	Peak	HORIZONTAL
2	15783.20	43.87	54.00	-10.13	32.44	7.64	38.63	34.84	87	176	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	15777.22	43.81	54.00	-10.19	32.39	7.64	38.60	34.82	142	139	Average	VERTICAL
2	15784.50	56.90	74.00	-17.10	45.47	7.64	38.63	34.84	142	139	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 60 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	10598.54	40.06	54.00	-13.94	30.02	6.21	38.78	34.95	103	169	Average	HORIZONTAL
2	10604.68	52.82	74.00	-21.18	42.76	6.21	38.78	34.93	103	169	Peak	HORIZONTAL
3	15897.64	57.05	74.00	-16.95	45.49	7.68	38.81	34.93	59	155	Peak	HORIZONTAL
4	15900.86	44.28	54.00	-9.72	32.68	7.69	38.84	34.93	59	155	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	10600.48	53.15	74.00	-20.85	43.11	6.21	38.78	34.95	228	150	Peak	VERTICAL
2	10603.96	39.90	54.00	-14.10	29.84	6.21	38.78	34.93	228	150	Average	VERTICAL
3	15903.82	44.26	54.00	-9.74	32.66	7.69	38.84	34.93	155	125	Average	VERTICAL
4	15903.94	57.16	74.00	-16.84	45.56	7.69	38.84	34.93	155	125	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 64 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	10636.66	52.99	74.00	-21.01	42.90	6.23	38.77	34.91	172	151	Peak	HORIZONTAL
2	10640.16	39.88	54.00	-14.12	29.79	6.23	38.77	34.91	172	151	Average	HORIZONTAL
3	15957.86	58.04	74.00	-15.96	46.40	7.70	38.94	35.00	239	168	Peak	HORIZONTAL
4	15963.86	44.65	54.00	-9.35	33.01	7.70	38.94	35.00	239	168	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	10636.74	39.88	54.00	-14.12	29.79	6.23	38.77	34.91	176	140	Average	VERTICAL
2	10638.70	53.72	74.00	-20.28	43.63	6.23	38.77	34.91	176	140	Peak	VERTICAL
3	15960.38	44.24	54.00	-9.76	32.60	7.70	38.94	35.00	325	134	Average	VERTICAL
4	15962.80	57.03	74.00	-16.97	45.39	7.70	38.94	35.00	325	134	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	10995.82	39.86	54.00	-14.14	29.42	6.40	38.70	34.66	152	178	Average	HORIZONTAL
2	10999.88	52.65	74.00	-21.35	42.21	6.40	38.70	34.66	152	178	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	10995.00	39.74	54.00	-14.26	29.30	6.40	38.70	34.66	201	178	Average	VERTICAL
2	10995.76	52.98	74.00	-21.02	42.54	6.40	38.70	34.66	201	178	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 116 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	11159.20	53.37	74.00	-20.63	42.88	6.44	38.70	34.65	119	166	Peak	HORIZONTAL
2	11159.84	40.17	54.00	-13.83	29.68	6.44	38.70	34.65	119	166	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	11155.38	53.17	74.00	-20.83	42.68	6.44	38.70	34.65	53	137	Peak	VERTICAL
2	11155.54	39.84	54.00	-14.16	29.35	6.44	38.70	34.65	53	137	Average	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 140 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	11399.08	40.34	54.00	-13.66	29.76	6.51	38.70	34.63	127	175	Average	HORIZONTAL
2	11403.02	52.44	74.00	-21.56	41.86	6.51	38.70	34.63	127	175	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	11396.40	39.83	54.00	-14.17	29.25	6.51	38.70	34.63	177	131	Average	VERTICAL
2	11396.60	53.05	74.00	-20.95	42.47	6.51	38.70	34.63	177	131	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	11485.36	40.07	54.00	-13.93	29.46	6.53	38.70	34.62	179	168	Average	HORIZONTAL
2	11489.92	53.00	74.00	-21.00	42.39	6.53	38.70	34.62	179	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	11485.94	39.93	54.00	-14.07	29.32	6.53	38.70	34.62	122	132	Average	VERTICAL
2	11487.54	52.89	74.00	-21.11	42.28	6.53	38.70	34.62	122	132	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	11565.90	40.74	54.00	-13.26	30.12	6.55	38.71	34.64	252	159	Average	HORIZONTAL
2	11569.98	53.07	74.00	-20.93	42.46	6.55	38.71	34.65	252	159	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	11565.46	40.37	54.00	-13.63	29.75	6.55	38.71	34.64	168	146	Average	VERTICAL
2	11567.78	52.74	74.00	-21.26	42.12	6.55	38.71	34.64	168	146	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	11650.34	40.49	54.00	-13.51	29.88	6.56	38.73	34.68	155	163	Average	HORIZONTAL
2	11654.04	53.73	74.00	-20.27	43.12	6.56	38.73	34.68	155	163	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	11646.78	53.30	74.00	-20.70	42.69	6.56	38.73	34.68	122	144	Peak	VERTICAL
2	11652.46	40.40	54.00	-13.60	29.79	6.56	38.73	34.68	122	144	Average	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	15568.66	43.86	54.00	-10.14	32.71	7.57	38.22	34.64	194	188	Average	HORIZONTAL
2	15569.26	56.68	74.00	-17.32	45.53	7.57	38.22	34.64	194	188	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	15565.18	56.38	74.00	-17.62	45.23	7.57	38.22	34.64	239	168	Peak	VERTICAL
2	15568.28	43.75	54.00	-10.25	32.60	7.57	38.22	34.64	239	168	Average	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	15687.66	56.55	74.00	-17.45	45.25	7.61	38.44	34.75	135	175	Peak	HORIZONTAL
2	15691.86	43.71	54.00	-10.29	32.41	7.61	38.44	34.75	135	175	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	15687.60	43.79	54.00	-10.21	32.49	7.61	38.44	34.75	72	159	Average	VERTICAL
2	15694.96	56.18	74.00	-17.82	44.88	7.61	38.44	34.75	72	159	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	15808.52	56.96	74.00	-17.04	45.52	7.65	38.66	34.87	196	164	Peak	HORIZONTAL
2	15812.84	43.89	54.00	-10.11	32.45	7.65	38.66	34.87	196	164	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	15808.72	56.75	74.00	-17.25	45.31	7.65	38.66	34.87	251	142	Peak	VERTICAL
2	15810.52	43.72	54.00	-10.28	32.28	7.65	38.66	34.87	251	142	Average	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 62 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	10617.56	40.02	54.00	-13.98	29.95	6.22	38.78	34.93	111	177	Average	HORIZONTAL
2	10621.28	52.91	74.00	-21.09	42.84	6.22	38.78	34.93	111	177	Peak	HORIZONTAL
3	15933.20	57.21	74.00	-16.79	45.62	7.69	38.88	34.98	231	166	Peak	HORIZONTAL
4	15934.14	44.07	54.00	-9.93	32.48	7.69	38.88	34.98	231	166	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	10617.48	39.94	54.00	-14.06	29.87	6.22	38.78	34.93	133	153	Average	VERTICAL
2	10621.68	52.22	74.00	-21.78	42.15	6.22	38.78	34.93	133	153	Peak	VERTICAL
3	15930.64	43.91	54.00	-10.09	32.32	7.69	38.88	34.98	163	142	Average	VERTICAL
4	15931.42	58.01	74.00	-15.99	46.42	7.69	38.88	34.98	163	142	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	11020.00	42.41	54.00	-11.59	31.97	6.40	38.70	34.66	122	168	Average	HORIZONTAL
2	11020.30	52.57	74.00	-21.43	42.13	6.40	38.70	34.66	122	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	11019.80	39.87	54.00	-14.13	29.43	6.40	38.70	34.66	65	151	Average	VERTICAL
2	11038.00	52.65	74.00	-21.35	42.20	6.41	38.70	34.66	65	151	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 110 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	11100.40	40.57	54.00	-13.43	30.09	6.43	38.70	34.65	277	177	Average	HORIZONTAL
2	11101.60	53.15	74.00	-20.85	42.67	6.43	38.70	34.65	276	177	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	11101.00	53.46	74.00	-20.54	42.98	6.43	38.70	34.65	212	150	Peak	VERTICAL
2	11103.60	40.18	54.00	-13.82	29.70	6.43	38.70	34.65	212	150	Average	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 134 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	11336.64	52.87	74.00	-21.13	42.31	6.49	38.70	34.63	104	166	Peak	HORIZONTAL
2	11337.50	39.83	54.00	-14.17	29.27	6.49	38.70	34.63	104	166	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	11337.70	39.43	54.00	-14.57	28.87	6.49	38.70	34.63	68	141	Average	VERTICAL
2	11339.46	53.07	74.00	-20.93	42.51	6.49	38.70	34.63	68	141	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	11505.38	40.36	54.00	-13.64	29.74	6.54	38.70	34.62	97	164	Average	HORIZONTAL
2	11510.80	53.92	74.00	-20.08	43.30	6.54	38.70	34.62	97	164	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	11506.54	52.97	74.00	-21.03	42.35	6.54	38.70	34.62	138	145	Peak	VERTICAL
2	11514.34	40.20	54.00	-13.80	29.58	6.54	38.70	34.62	138	145	Average	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	11586.12	40.79	54.00	-13.21	30.17	6.55	38.72	34.65	236	167	Average	HORIZONTAL
2	11594.88	53.27	74.00	-20.73	42.65	6.55	38.72	34.65	236	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	11586.44	40.59	54.00	-13.41	29.97	6.55	38.72	34.65	211	143	Average	VERTICAL
2	11590.80	53.33	74.00	-20.67	42.71	6.55	38.72	34.65	211	143	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	15630.68	43.69	54.00	-10.31	32.46	7.59	38.35	34.71	138	166	Average	HORIZONTAL
2	15633.88	56.65	74.00	-17.35	45.42	7.59	38.35	34.71	138	166	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	15629.50	57.23	74.00	-16.77	46.00	7.59	38.35	34.71	93	142	Peak	VERTICAL
2	15634.42	43.45	54.00	-10.55	32.22	7.59	38.35	34.71	93	142	Average	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 58 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	15869.46	43.63	54.00	-10.37	32.09	7.67	38.78	34.91	290	191	Average	HORIZONTAL
2	15870.74	56.21	74.00	-17.79	44.67	7.67	38.78	34.91	290	191	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	15872.98	43.59	54.00	-10.41	32.05	7.67	38.78	34.91	222	142	Average	VERTICAL
2	15873.16	56.63	74.00	-17.37	45.09	7.67	38.78	34.91	222	142	Peak	VERTICAL

Temperature	20℃	Humidity	70%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	11058.16	52.83	74.00	-21.17	42.37	6.42	38.70	34.66	77	160	Peak	HORIZONTAL
2	11060.48	39.95	54.00	-14.05	29.48	6.42	38.70	34.65	77	160	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	11057.06	39.81	54.00	-14.19	29.35	6.42	38.70	34.66	126	139	Average	VERTICAL
2	11063.50	52.83	74.00	-21.17	42.36	6.42	38.70	34.65	126	139	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 122 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	11139.32	52.29	74.00	-21.71	41.80	6.44	38.70	34.65	32	157	Peak	HORIZONTAL
2	11140.60	39.85	54.00	-14.15	29.36	6.44	38.70	34.65	32	157	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	11139.62	39.66	54.00	-14.34	29.17	6.44	38.70	34.65	281	136	Average	VERTICAL
2	11141.02	51.95	74.00	-22.05	41.46	6.44	38.70	34.65	281	136	Peak	VERTICAL

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Chain 1 + Chain 2
Test Date	Aug. 02, 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	11546.00	40.38	54.00	-13.62	29.77	6.54	38.71	34.64	234	174	Average	HORIZONTAL
2	11549.66	53.86	74.00	-20.14	43.24	6.55	38.71	34.64	234	174	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	11550.74	53.20	74.00	-20.80	42.58	6.55	38.71	34.64	165	138	Peak	VERTICAL
2	11554.54	40.29	54.00	-13.71	29.67	6.55	38.71	34.64	165	138	Average	VERTICAL

Note:

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

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

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

4.7. Band Edge Emissions Measurement

4.7.1. Limit

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

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

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

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

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

4.8. 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

4.8.1. Test Procedures

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

4.8.2. Test Setup Layout

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

4.8.3. Test Deviation

There is no deviation with the original standard.

4.8.4. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.8.5. Test Result of Band Edge and Fundamental Emissions

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11a CH 36, 40, 48 / Chain 1
Test Date	Jul. 31, 2015		

Channel 36

	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	5147.40	60.57	74.00	-13.43	57.51	4.26	33.27	34.47	43	194	Peak	VERTICAL
2	5149.60	45.90	54.00	-8.10	42.84	4.26	33.27	34.47	43	194	Average	VERTICAL
3	5173.60	106.27			103.14	4.27	33.33	34.47	43	194	Peak	VERTICAL
4	5174.80	96.99			93.86	4.27	33.33	34.47	43	194	Average	VERTICAL

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

Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5118.40	56.69	74.00	-17.31	53.71	4.24	33.21	34.47	35	184	Peak	VERTICAL
2	5120.00	45.34	54.00	-8.66	42.36	4.24	33.21	34.47	35	184	Average	VERTICAL
3	5193.20	106.90			103.73	4.28	33.36	34.47	35	184	Peak	VERTICAL
4	5194.80	97.46			94.29	4.28	33.36	34.47	35	184	Average	VERTICAL

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

Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5119.40	45.31	54.00	-8.69	42.33	4.24	33.21	34.47	62	201	Average	VERTICAL
2	5120.00	56.93	74.00	-17.07	53.95	4.24	33.21	34.47	62	201	Peak	VERTICAL
3	5232.80	106.10			102.85	4.30	33.42	34.47	62	201	Peak	VERTICAL
4	5246.00	96.92			93.64	4.30	33.45	34.47	62	201	Average	VERTICAL
5	5351.60	44.89	54.00	-9.11	41.38	4.35	33.63	34.47	62	201	Average	VERTICAL
6	5370.80	57.77	74.00	-16.23	54.22	4.36	33.66	34.47	62	201	Peak	VERTICAL

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

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11a CH 52, 60, 64 / Chain 1
Test Date	Jul. 31, 2015, Aug. 01, 2015		

Channel 52

	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	5122.00	44.16	54.00	-9.84	41.18	4.24	33.21	34.47	46	201	Average	HORIZONTAL
2	5131.60	56.06	74.00	-17.94	53.04	4.25	33.24	34.47	46	201	Peak	HORIZONTAL
3	5253.40	105.24			101.96	4.30	33.45	34.47	46	201	Peak	HORIZONTAL
4	5254.60	95.93			92.65	4.30	33.45	34.47	46	201	Average	HORIZONTAL
5	5399.80	45.45	54.00	-8.55	41.83	4.37	33.72	34.47	46	201	Average	HORIZONTAL
6	5406.40	57.26	74.00	-16.74	53.64	4.37	33.72	34.47	46	201	Peak	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	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5305.60	107.04	74.00			4.33	33.54	34.47	55	185	Peak	HORIZONTAL
2	5306.40	97.69	54.00			4.33	33.54	34.47	55	185	Average	HORIZONTAL
3	5380.00	45.99	54.00	-8.01	42.40	4.37	33.69	34.47	55	185	Average	HORIZONTAL
4	5392.00	58.43	74.00	-15.57	54.84	4.37	33.69	34.47	55	185	Peak	HORIZONTAL

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

Channel 64

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5325.60	107.61			104.18	4.33	33.57	34.47	60	201	Peak	HORIZONTAL
2	5326.40	97.92			94.49	4.33	33.57	34.47	60	201	Average	HORIZONTAL
3	5350.00	67.46	74.00	-6.54	63.95	4.35	33.63	34.47	60	201	Peak	HORIZONTAL
4	5350.00	53.98	54.00	-0.02	50.47	4.35	33.63	34.47	60	201	Average	HORIZONTAL

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

Temperature	23.1°C	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11a CH 100, 116, 140 / Chain 1
Test Date	Aug. 01, 2015		

Channel 100

	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	5460.00	64.96	74.00	-9.04	61.22	4.40	33.81	34.47	53	195	Peak	HORIZONTAL
2	5460.00	47.56	54.00	-6.44	43.82	4.40	33.81	34.47	53	195	Average	HORIZONTAL
3	5467.20	68.71	74.00	-5.29	64.93	4.41	33.84	34.47	53	195	Peak	HORIZONTAL
4	5470.00	53.40	54.00	-0.60	49.62	4.41	33.84	34.47	53	195	Average	HORIZONTAL
5	5493.60	107.90			104.09	4.41	33.87	34.47	53	195	Peak	HORIZONTAL
6	5494.80	98.11			94.30	4.41	33.87	34.47	53	195	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	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5436.60	57.48	74.00	-16.52	53.78	4.39	33.78	34.47	48	200	Peak	HORIZONTAL
2	5446.20	45.07	54.00	-8.93	41.33	4.40	33.81	34.47	48	200	Average	HORIZONTAL
3	5468.20	56.18	74.00	-17.82	52.40	4.41	33.84	34.47	48	200	Peak	HORIZONTAL
4	5470.00	44.85	54.00	-9.15	41.07	4.41	33.84	34.47	48	200	Average	HORIZONTAL
5	5572.80	107.90			103.84	4.44	34.11	34.49	48	200	Peak	HORIZONTAL
6	5574.60	98.60			94.54	4.44	34.11	34.49	48	200	Average	HORIZONTAL
7	5725.00	57.01	74.00	-16.99	52.45	4.50	34.57	34.51	48	200	Peak	HORIZONTAL
8	5725.00	45.45	54.00	-8.55	40.89	4.50	34.57	34.51	48	200	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	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5692.80	108.05			103.60	4.49	34.47	34.51	51	201	Peak	HORIZONTAL
2	5694.80	98.06			93.61	4.49	34.47	34.51	51	201	Average	HORIZONTAL
3	5725.00	53.25	54.00	-0.75	48.69	4.50	34.57	34.51	51	201	Average	HORIZONTAL
4	5726.00	67.96	74.00	-6.04	63.40	4.50	34.57	34.51	51	201	Peak	HORIZONTAL

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

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11a CH 149, 157, 165 / Chain 1
Test Date	Aug. 01, 2015		

Channel 149

	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	5713.40	63.47	68.20	-4.73	58.97	4.49	34.52	34.51	53	199	Peak	HORIZONTAL
2	5724.60	77.66	78.20	-0.54	73.10	4.50	34.57	34.51	53	199	Peak	HORIZONTAL
3	5750.60	106.60			102.00	4.50	34.62	34.52	53	199	Peak	HORIZONTAL
4	5751.40	97.25			92.65	4.50	34.62	34.52	53	199	Average	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	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5709.80	57.89	68.20	-10.31	53.39	4.49	34.52	34.51	55	209	Peak	HORIZONTAL
2	5722.60	57.65	78.20	-20.55	53.09	4.50	34.57	34.51	55	209	Peak	HORIZONTAL
3	5778.20	107.78			103.06	4.52	34.73	34.53	55	209	Peak	HORIZONTAL
4	5779.80	98.04			93.32	4.52	34.73	34.53	55	209	Average	HORIZONTAL
5	5850.00	57.38	78.20	-20.82	52.45	4.54	34.93	34.54	55	209	Peak	HORIZONTAL
6	5866.20	58.86	68.20	-9.34	53.86	4.55	34.99	34.54	55	209	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	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5818.20	105.94			101.11	4.53	34.83	34.53	331	214	Peak	VERTICAL
2	5819.80	96.40			91.52	4.53	34.88	34.53	331	214	Average	VERTICAL
3	5850.60	66.40	78.20	-11.80	61.47	4.54	34.93	34.54	331	214	Peak	VERTICAL
4	5861.40	62.19	68.20	-6.01	57.19	4.55	34.99	34.54	331	214	Peak	VERTICAL

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

Temperature	23.1°C	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 36, 40, 48 / Chain 1
Test Date	Aug. 01, 2015		

Channel 36

	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	5102.00	55.66	74.00	-18.34	52.72	4.23	33.18	34.47	309	178	Peak	VERTICAL
2	5104.80	42.03	54.00	-11.97	39.09	4.23	33.18	34.47	309	178	Average	VERTICAL
3	5182.80	103.89			100.76	4.27	33.33	34.47	309	178	Peak	VERTICAL
4	5186.00	92.23			89.10	4.27	33.33	34.47	309	178	Average	VERTICAL

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

Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5110.80	54.83	74.00	-19.17	51.85	4.24	33.21	34.47	307	178	Peak	VERTICAL
2	5113.20	42.05	54.00	-11.95	39.07	4.24	33.21	34.47	307	178	Average	VERTICAL
3	5192.80	103.54			100.37	4.28	33.36	34.47	307	178	Peak	VERTICAL
4	5193.60	92.76			89.59	4.28	33.36	34.47	307	178	Average	VERTICAL

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

Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5097.20	55.33	74.00	-18.67	52.39	4.23	33.18	34.47	322	178	Peak	VERTICAL
2	5120.00	40.96	54.00	-13.04	37.98	4.24	33.21	34.47	322	178	Average	VERTICAL
3	5234.60	102.46			99.21	4.30	33.42	34.47	322	178	Peak	VERTICAL
4	5242.40	91.41			88.13	4.30	33.45	34.47	322	178	Average	VERTICAL
5	5360.00	41.60	54.00	-12.40	38.09	4.35	33.63	34.47	322	178	Average	VERTICAL
6	5371.40	55.17	74.00	-18.83	51.62	4.36	33.66	34.47	322	178	Peak	VERTICAL

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

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52, 60, 64 / Chain 1 + Chain 2
Test Date	Aug. 01, 2015, Aug. 03, 2015		

Channel 52

	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	5127.40	40.90	54.00	-13.10	37.88	4.25	33.24	34.47	308	177	Average	VERTICAL
2	5140.00	53.94	74.00	-20.06	50.88	4.26	33.27	34.47	308	177	Peak	VERTICAL
3	5253.40	103.75			100.47	4.30	33.45	34.47	308	177	Peak	VERTICAL
4	5266.60	92.95			89.63	4.31	33.48	34.47	308	177	Average	VERTICAL
5	5401.00	55.19	74.00	-18.81	51.57	4.37	33.72	34.47	308	177	Peak	VERTICAL
6	5409.40	41.79	54.00	-12.21	38.17	4.37	33.72	34.47	308	177	Average	VERTICAL

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

Channel 60

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5305.20	102.93			99.53	4.33	33.54	34.47	310	200	Peak	HORIZONTAL
2	5306.00	91.62			88.22	4.33	33.54	34.47	310	200	Average	HORIZONTAL
3	5380.40	42.45	54.00	-11.55	38.86	4.37	33.69	34.47	310	200	Average	HORIZONTAL
4	5389.60	55.50	74.00	-18.50	51.91	4.37	33.69	34.47	310	200	Peak	HORIZONTAL

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

Channel 64

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5314.80	108.15			104.72	4.33	33.57	34.47	308	198	Peak	VERTICAL
2	5322.40	98.08			94.65	4.33	33.57	34.47	308	198	Average	VERTICAL
3	5350.00	48.17	54.00	-5.83	44.66	4.35	33.63	34.47	308	198	Average	VERTICAL
4	5351.20	60.64	74.00	-13.36	57.13	4.35	33.63	34.47	308	198	Peak	VERTICAL

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

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100, 116, 140 / Chain 1 + Chain 2
Test Date	Aug. 03, 2015		

Channel 100

	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	5413.20	48.02	54.00	-5.98	44.36	4.38	33.75	34.47	328	194	Average	VERTICAL
2	5422.40	59.46	74.00	-14.54	55.80	4.38	33.75	34.47	328	194	Peak	VERTICAL
3	5470.00	64.70	74.00	-9.30	60.92	4.41	33.84	34.47	328	194	Peak	VERTICAL
4	5470.00	52.45	54.00	-1.55	48.67	4.41	33.84	34.47	328	194	Average	VERTICAL
5	5493.20	110.57			106.76	4.41	33.87	34.47	328	194	Peak	VERTICAL
6	5493.60	100.67			96.86	4.41	33.87	34.47	328	194	Average	VERTICAL

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

Channel 116

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5404.80	45.17	54.00	-8.83	41.55	4.37	33.72	34.47	54	194	Average	HORIZONTAL
2	5433.60	57.95	74.00	-16.05	54.25	4.39	33.78	34.47	54	194	Peak	HORIZONTAL
3	5467.60	56.59	74.00	-17.41	52.81	4.41	33.84	34.47	54	194	Peak	HORIZONTAL
4	5470.00	44.96	54.00	-9.04	41.18	4.41	33.84	34.47	54	194	Average	HORIZONTAL
5	5573.60	94.28			90.22	4.44	34.11	34.49	54	194	Average	HORIZONTAL
6	5574.40	103.78			99.72	4.44	34.11	34.49	54	194	Peak	HORIZONTAL
7	5729.60	58.25	74.00	-15.75	53.69	4.50	34.57	34.51	54	194	Peak	HORIZONTAL
8	5769.60	46.17	54.00	-7.83	41.45	4.52	34.73	34.53	54	194	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	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5694.80	105.81			101.36	4.49	34.47	34.51	323	193	Peak	VERTICAL
2	5702.40	95.51			91.01	4.49	34.52	34.51	323	193	Average	VERTICAL
3	5725.00	60.27	74.00	-13.73	55.71	4.50	34.57	34.51	323	193	Peak	VERTICAL
4	5725.00	48.13	54.00	-5.87	43.57	4.50	34.57	34.51	323	193	Average	VERTICAL

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

Temperature	23.1°C	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 149, 157, 165 / Chain 1 + Chain 2
Test Date	Aug. 01, 2015, Aug. 03, 2015		

Channel 149

	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	5714.20	59.34	68.20	-8.86	54.84	4.49	34.52	34.51	350	182	Peak	VERTICAL
2	5724.60	71.76	78.20	-6.44	67.20	4.50	34.57	34.51	350	182	Peak	VERTICAL
3	5747.40	108.08			103.48	4.50	34.62	34.52	350	182	Peak	VERTICAL
4	5747.40	96.85			92.25	4.50	34.62	34.52	350	182	Average	VERTICAL

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

Channel 157

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5699.80	58.01	68.20	-10.19	53.56	4.49	34.47	34.51	228	184	Peak	VERTICAL
2	5724.20	57.14	78.20	-21.06	52.58	4.50	34.57	34.51	228	184	Peak	VERTICAL
3	5777.80	103.54			98.82	4.52	34.73	34.53	228	184	Peak	VERTICAL
4	5778.60	93.08			88.36	4.52	34.73	34.53	228	184	Average	VERTICAL
5	5859.20	57.71	78.20	-20.49	52.71	4.55	34.99	34.54	228	184	Peak	VERTICAL
6	5866.00	58.93	68.20	-9.27	53.93	4.55	34.99	34.54	228	184	Peak	VERTICAL

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

Channel 165

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5818.60	101.72			96.89	4.53	34.83	34.53	304	185	Peak	HORIZONTAL
2	5818.60	91.01			86.18	4.53	34.83	34.53	304	185	Average	HORIZONTAL
3	5852.80	57.20	78.20	-21.00	52.27	4.54	34.93	34.54	304	185	Peak	HORIZONTAL
4	5865.60	58.12	68.20	-10.08	53.12	4.55	34.99	34.54	304	185	Peak	HORIZONTAL

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

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 38, 46 / Chain 1 + Chain 2
Test Date	Aug. 01, 2015		

Channel 38

	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	5146.00	56.91	74.00	-17.09	53.85	4.26	33.27	34.47	305	185	Peak	VERTICAL
2	5150.00	44.10	54.00	-9.90	41.04	4.26	33.27	34.47	305	185	Average	VERTICAL
3	5191.60	99.79			96.62	4.28	33.36	34.47	305	185	Peak	VERTICAL
4	5206.00	88.38			85.21	4.28	33.36	34.47	305	185	Average	VERTICAL

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

Channel 46

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5136.00	56.30	74.00	-17.70	53.28	4.25	33.24	34.47	336	196	Peak	VERTICAL
2	5150.00	42.97	54.00	-11.03	39.91	4.26	33.27	34.47	336	196	Average	VERTICAL
3	5233.60	88.78			85.53	4.30	33.42	34.47	336	196	Average	VERTICAL
4	5234.00	100.00			96.75	4.30	33.42	34.47	336	196	Peak	VERTICAL

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

Temperature	23.1°C	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54, 62 / Chain 1 + Chain 2
Test Date	Aug. 01, 2015, Aug. 04, 2015		

Channel 54

	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	5271.60	100.34			97.02	4.31	33.48	34.47	316	198	Peak	VERTICAL
2	5273.60	89.66			86.34	4.31	33.48	34.47	316	198	Average	VERTICAL
3	5350.00	43.56	54.00	-10.44	40.05	4.35	33.63	34.47	316	198	Average	VERTICAL
4	5351.20	55.71	74.00	-18.29	52.20	4.35	33.63	34.47	316	198	Peak	VERTICAL

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

Channel 62

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5311.20	104.48			101.05	4.33	33.57	34.47	310	180	Peak	VERTICAL
2	5311.60	92.67			89.24	4.33	33.57	34.47	310	180	Average	VERTICAL
3	5350.00	53.96	54.00	-0.04	50.45	4.35	33.63	34.47	310	180	Average	VERTICAL
4	5353.60	69.43	74.00	-4.57	65.92	4.35	33.63	34.47	310	180	Peak	VERTICAL

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

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102, 110, 134 / Chain 1 + Chain 2
Test Date	Aug. 01, 2015, Aug. 04, 2015		

Channel 102

	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	5458.30	56.55	74.00	-17.45	52.81	4.40	33.81	34.47	306	203	Peak	VERTICAL
2	5460.00	44.14	54.00	-9.86	40.40	4.40	33.81	34.47	306	203	Average	VERTICAL
3	5469.20	58.20	74.00	-15.80	54.42	4.41	33.84	34.47	306	203	Peak	VERTICAL
4	5470.00	45.64	54.00	-8.36	41.86	4.41	33.84	34.47	306	203	Average	VERTICAL
5	5506.40	99.21			95.37	4.42	33.90	34.48	306	203	Peak	VERTICAL
6	5506.80	88.40			84.56	4.42	33.90	34.48	306	203	Average	VERTICAL

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

Channel 110

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5453.60	57.22	74.00	-16.78	53.48	4.40	33.81	34.47	255	189	Peak	VERTICAL
2	5455.20	44.81	54.00	-9.19	41.07	4.40	33.81	34.47	255	189	Average	VERTICAL
3	5465.60	58.64	74.00	-15.36	54.86	4.41	33.84	34.47	255	189	Peak	VERTICAL
4	5467.20	44.92	54.00	-9.08	41.14	4.41	33.84	34.47	255	189	Average	VERTICAL
5	5551.20	104.37			100.35	4.44	34.06	34.48	255	189	Peak	VERTICAL
6	5551.60	93.28			89.26	4.44	34.06	34.48	255	189	Average	VERTICAL

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	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5685.20	105.34			100.89	4.49	34.47	34.51	258	186	Peak	VERTICAL
2	5685.60	94.37			89.92	4.49	34.47	34.51	258	186	Average	VERTICAL
3	5725.00	48.42	54.00	-5.58	43.86	4.50	34.57	34.51	258	186	Average	VERTICAL
4	5726.00	60.93	74.00	-13.07	56.37	4.50	34.57	34.51	258	186	Peak	VERTICAL

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

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 151, 159 / Chain 1 + Chain 2
Test Date	Aug. 01, 2015		

Channel 151

	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	5711.00	60.05	68.20	-8.15	55.55	4.49	34.52	34.51	232	191	Peak	VERTICAL
2	5725.00	62.94	78.20	-15.26	58.38	4.50	34.57	34.51	232	191	Peak	VERTICAL
3	5770.60	101.25			96.53	4.52	34.73	34.53	232	191	Peak	VERTICAL
4	5771.00	90.16			85.44	4.52	34.73	34.53	232	191	Average	VERTICAL

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

Channel 159

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5709.40	57.45	68.20	-10.75	52.95	4.49	34.52	34.51	36	198	Peak	HORIZONTAL
2	5725.00	56.92	78.20	-21.28	52.36	4.50	34.57	34.51	36	198	Peak	HORIZONTAL
3	5800.20	99.82			95.05	4.52	34.78	34.53	36	198	Peak	HORIZONTAL
4	5803.00	88.57			83.74	4.53	34.83	34.53	36	198	Average	HORIZONTAL
5	5850.00	57.80	78.20	-20.40	52.87	4.54	34.93	34.54	36	198	Peak	HORIZONTAL
6	5879.80	59.52	68.20	-8.68	54.47	4.55	35.04	34.54	36	198	Peak	HORIZONTAL

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

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 42, 58 / Chain 1 + Chain 2
Test Date	Aug. 04, 2015		

Channel 42

	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	5150.00	65.73	74.00	-8.27	62.67	4.26	33.27	34.47	302	185	Peak	VERTICAL
2	5150.00	53.38	54.00	-0.62	50.32	4.26	33.27	34.47	302	185	Average	VERTICAL
3	5237.00	100.01			96.76	4.30	33.42	34.47	302	185	Peak	VERTICAL
4	5237.00	89.58			86.33	4.30	33.42	34.47	302	185	Average	VERTICAL
5	5359.00	58.03	74.00	-15.97	54.52	4.35	33.63	34.47	302	185	Peak	VERTICAL
6	5379.00	44.43	54.00	-9.57	40.84	4.37	33.69	34.47	302	185	Average	VERTICAL

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

Channel 58

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5143.00	55.12	74.00	-18.88	52.06	4.26	33.27	34.47	326	195	Peak	VERTICAL
2	5150.00	42.80	54.00	-11.20	39.74	4.26	33.27	34.47	326	195	Average	VERTICAL
3	5299.00	88.23			84.83	4.33	33.54	34.47	326	195	Average	VERTICAL
4	5300.00	99.52			96.12	4.33	33.54	34.47	326	195	Peak	VERTICAL
5	5350.00	61.13	74.00	-12.87	57.62	4.35	33.63	34.47	326	195	Peak	VERTICAL
6	5350.00	47.61	54.00	-6.39	44.10	4.35	33.63	34.47	326	195	Average	VERTICAL

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

Temperature	23.1℃	Humidity	39%
Test Engineer	Gary Chu	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106, 122, 155 / Chain 1 + Chain 2
Test Date	Aug. 01, 2015, Aug. 04, 2015		

Channel 106

	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	5459.00	64.60	74.00	-9.40	60.86	4.40	33.81	34.47	320	197	Peak	VERTICAL
2	5459.00	52.22	54.00	-1.78	48.48	4.40	33.81	34.47	320	197	Average	VERTICAL
3	5467.00	53.63	54.00	-0.37	49.85	4.41	33.84	34.47	320	197	Average	VERTICAL
4	5469.00	65.51	74.00	-8.49	61.73	4.41	33.84	34.47	320	197	Peak	VERTICAL
5	5512.00	101.36			97.52	4.42	33.90	34.48	320	197	Peak	VERTICAL
6	5521.00	90.69			86.79	4.43	33.95	34.48	320	197	Average	VERTICAL
7	5760.00	59.30	74.00	-14.70	54.64	4.51	34.68	34.53	320	197	Peak	VERTICAL
8	5770.00	45.72	54.00	-8.28	41.00	4.52	34.73	34.53	320	197	Average	VERTICAL

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

Channel 122

	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	5434.00	57.19	74.00	-16.81	53.49	4.39	33.78	34.47	313	194	Peak	VERTICAL
2	5460.00	43.95	54.00	-10.05	40.21	4.40	33.81	34.47	313	194	Average	VERTICAL
3	5463.00	56.41	74.00	-17.59	52.63	4.41	33.84	34.47	313	194	Peak	VERTICAL
4	5470.00	43.92	54.00	-10.08	40.14	4.41	33.84	34.47	313	194	Average	VERTICAL
5	5619.00	85.60			81.38	4.46	34.26	34.50	313	194	Average	VERTICAL
6	5629.00	97.53			93.31	4.46	34.26	34.50	313	194	Peak	VERTICAL
7	5725.00	44.55	54.00	-9.45	39.99	4.50	34.57	34.51	313	194	Average	VERTICAL
8	5770.00	58.21	74.00	-15.79	53.49	4.52	34.73	34.53	313	194	Peak	VERTICAL

Item 5, 6 are the fundamental frequency at 5610 MHz.

Channel 155

	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	5637.00	58.42	68.20	-9.78	54.14	4.47	34.31	34.50	54	200	Peak	HORIZONTAL
2	5721.00	58.61	78.20	-19.59	54.05	4.50	34.57	34.51	54	200	Peak	HORIZONTAL
3	5793.00	85.76			80.99	4.52	34.78	34.53	54	200	Average	HORIZONTAL
4	5803.00	98.07			93.24	4.53	34.83	34.53	54	200	Peak	HORIZONTAL
5	5854.00	59.39	78.20	-18.81	54.39	4.55	34.99	34.54	54	200	Peak	HORIZONTAL
6	5934.00	59.26	68.20	-8.94	54.06	4.57	35.19	34.56	54	200	Peak	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

4.9. Frequency Stability Measurement

4.9.1. 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).

4.9.2. Measuring Instruments and Setting

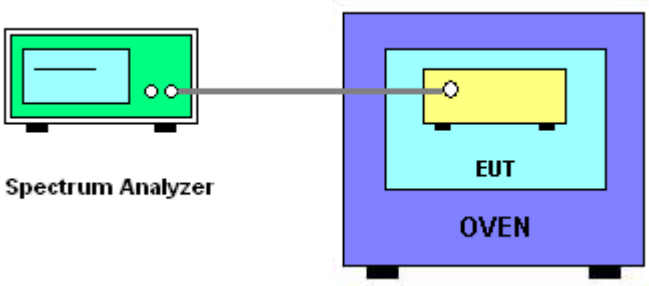
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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

4.9.3. 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.

4.9.4. Test Setup Layout



4.9.5. Test Deviation

There is no deviation with the original standard.

4.9.6. EUT Operation during Test

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

4.9.7. Test Result of Frequency Stability

Temperature	25°C	Humidity	45%
Test Engineer	Roki Liu	Test Date	Jun. 17, 2015

Mode: 20 MHz

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5200 MHz	5300 MHz	5580 MHz	5785 MHz
126.50	5199.9782	5299.9775	5579.9804	5784.9797
110.00	5199.9782	5299.9775	5579.9804	5784.9797
93.50	5199.9782	5299.9775	5579.9804	5784.9797
Max. Deviation (MHz)	**0.021800**	**0.022500**	**0.019600**	**0.020300**
Max. Deviation (ppm)	**4.19**	**4.25**	**3.51**	**3.51**

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5200 MHz	5300 MHz	5580 MHz	5785 MHz
0	5199.9782	5299.9775	5579.9804	5784.9797
10	5199.9781	5299.9777	5579.9804	5784.9797
20	5199.9782	5299.9775	5579.9804	5784.9797
30	5199.9781	5299.9775	5579.9820	5784.9797
40	5199.9782	5299.9775	5579.9820	5784.9797
Max. Deviation (MHz)	**0.021900**	**0.022500**	**0.019600**	**0.020300**
Max. Deviation (ppm)	**4.21**	**4.25**	**3.51**	**3.51**

Mode: 40 MHz

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5190 MHz	5310 MHz	5550 MHz	5755 MHz
126.50	5189.9811	5309.9819	5549.9819	5754.9782
110.00	5189.9811	5309.9819	5549.9819	5754.9782
93.50	5189.9811	5309.9819	5549.9819	5754.9782
Max. Deviation (MHz)	**0.018900**	**0.018100**	**0.018100**	**0.021800**
Max. Deviation (ppm)	**3.64**	**3.41**	**3.26**	**3.79**

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5190 MHz	5310 MHz	5550 MHz	5755 MHz
0	5189.9811	5309.9819	5549.9819	5754.9782
10	5189.9811	5309.9819	5549.9819	5754.9782
20	5189.9811	5309.9819	5549.9819	5754.9782
30	5189.9811	5309.9819	5549.9819	5754.9782
40	5189.9812	5309.9820	5549.9820	5754.9782
Max. Deviation (MHz)	**0.018900**	**0.018100**	**0.018100**	**0.021800**
Max. Deviation (ppm)	**3.64**	**3.41**	**3.26**	**3.79**

Mode: 80 MHz

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5210 MHz	5290 MHz	5530 MHz	5775 MHz
126.50	5209.9804	5289.9797	5529.9782	5774.9768
110.00	5209.9804	5289.9797	5529.9782	5774.9768
93.50	5209.9804	5289.9797	5529.9782	5774.9768
Max. Deviation (MHz)	**0.019600**	**0.020300**	**0.021800**	**0.023200**
Max. Deviation (ppm)	**3.76**	**3.84**	**3.94**	**4.02**

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5210 MHz	5290 MHz	5530 MHz	5775 MHz
0	5209.9806	5289.9800	5529.9782	5774.9768
10	5209.9804	5289.9797	5529.9782	5774.9770
20	5209.9804	5289.9797	5529.9780	5774.9768
30	5209.9804	5289.9797	5529.9782	5774.9766
40	5209.9804	5289.9797	5529.9782	5774.9768
Max. Deviation (MHz)	**0.019600**	**0.020300**	**0.022000**	**0.023500**
Max. Deviation (ppm)	**3.76**	**3.84**	**3.98**	**4.07**

4.10. Antenna Requirements

4.10.1. 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.

4.10.2. 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)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 12, 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 Test Receiver	Agilent	N9038A	MY52260123	9kHz ~ 8GHz	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)
Spectrum analyzer	R&S	FSV40	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.

(*)Calibration Interval of instruments listed above is two 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%