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FCC RADIO TEST REPORT

Applicant's company	Mojo Networks, Inc.
Applicant Address	339 N. Bernardo Avenue, Suite #200, Mountain View, CA USA
FCC ID	TOR-C75
Manufacturer's company	Lite-On Network Communication (Dongguan) Limited
Manufacturer Address	30#Keji Rd., Yin Hu Industrial Area, Qingxi Town, DongGuan City, Guangdong, China

Product Name	AirTight Access Point
Brand Name	MOJO, WatchGuard
Model No.	C-75, C-75-E, AP320
Test Rule Part(s)	47 CFR FCC Part 15 Subpart E § 15.407
Test Freq. Range	5250 ~ 5350MHz / 5470 ~ 5725MHz
Received Date	Jan. 10, 2014
Final Test Date	Jul. 16, 2016
Submission Type	Class II Change

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 v01r03, KDB662911 D01 v02r01, KDB644545 D03 v01**.

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



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History of This Test Report



1. VERIFICATION OF COMPLIANCE

Product Name : Airtight Access Point
Brand Name : MOJO, WatchGuard
Model No. : C-75, C-75-E, AP320
Applicant : Mojo Networks, Inc.
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 Jan. 10, 2014 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.

A handwritten signature in black ink, appearing to read "Sam Chen".

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
4.1	15.407(a)	26dB Spectrum Bandwidth and 99% Occupied Bandwidth	Complies
4.2	15.407(a)	Maximum Conducted Output Power	Complies
4.3	15.407(a)	Power Spectral Density	Complies
4.4	15.407(b)	Radiated Emissions	Complies
4.5	15.407(b)	Band Edge Emissions	Complies
4.6	15.407(g)	Frequency Stability	Complies
4.7	15.203	Antenna Requirements	Complies

3. GENERAL INFORMATION

3.1. Product Details

Items	Description
Product Type	IEEE 802.11a: WLAN (1TX, 1RX) IEEE 802.11n/ac: WLAN (3TX, 3RX)
Radio Type	Intentional Transceiver
Power Type	From adapter or PoE
Modulation	IEEE 802.11a: OFDM IEEE 802.11n/ac: see the below table
Data Modulation	IEEE 802.11a/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) IEEE 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QA)
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	5250 ~ 5350MHz / 5470 ~ 5725MHz
Channel Number	15 for 20MHz bandwidth ; 7 for 40MHz bandwidth 3 for 80MHz bandwidth
Channel Bandwidth (99%)	<p>For Mode 1 (EUT 1):</p> <p>Band 2: IEEE 802.11a: 22.40 MHz IEEE 802.11ac MCS0/Nss1 (VHT20): 18.15 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 37.34 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 74.96 MHz</p> <p>Band 3: IEEE 802.11a: 25.53 MHz IEEE 802.11ac MCS0/Nss1 (VHT20): 18.23 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 37.63 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 75.54 MHz</p> <p>For Mode 2 (EUT 2):</p> <p>Band 2: IEEE 802.11a: 33.86 MHz IEEE 802.11ac MCS0/Nss1 (VHT20): 18.23 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 37.48 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 74.67 MHz</p> <p>Band 3: IEEE 802.11a: 34.65 MHz IEEE 802.11ac MCS0/Nss1 (VHT20): 17.97 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 37.34 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 75.54 MHz</p>

Maximum Conducted Output Power	<p>For Mode 1 (EUT 1):</p> <p>Band 2:</p> <p>IEEE 802.11a: 22.78 dBm</p> <p>IEEE 802.11ac MCS0/Nss1 (VHT20): 18.57 dBm</p> <p>IEEE 802.11ac MCS0/Nss1 (VHT40): 21.61 dBm</p> <p>IEEE 802.11ac MCS0/Nss1 (VHT80): 17.51 dBm</p> <p>Band 3:</p> <p>IEEE 802.11a: 21.93 dBm</p> <p>IEEE 802.11ac MCS0/Nss1 (VHT20): 18.49 dBm</p> <p>IEEE 802.11ac MCS0/Nss1 (VHT40): 21.57 dBm</p> <p>IEEE 802.11ac MCS0/Nss1 (VHT80): 23.26 dBm</p> <p>For Mode 2 (EUT 2):</p> <p>Band 2:</p> <p>IEEE 802.11a: 23.75 dBm</p> <p>IEEE 802.11ac MCS0/Nss1 (VHT20): 20.23 dBm</p> <p>IEEE 802.11ac MCS0/Nss1 (VHT40): 23.08 dBm</p> <p>IEEE 802.11ac MCS0/Nss1 (VHT80): 18.40 dBm</p> <p>Band 3:</p> <p>IEEE 802.11a: 23.05 dBm</p> <p>IEEE 802.11ac MCS0/Nss1 (VHT20): 20.08 dBm</p> <p>IEEE 802.11ac MCS0/Nss1 (VHT40): 23.05 dBm</p> <p>IEEE 802.11ac MCS0/Nss1 (VHT80): 16.36 dBm</p>
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

Items	Description		
Communication Mode	<input checked="" type="checkbox"/>	IP Based (Load Based)	<input type="checkbox"/> Frame Based
TPC Function	<input checked="" type="checkbox"/>	With TPC	<input type="checkbox"/> Without TPC
Weather Band (5600~5650MHz)	<input checked="" type="checkbox"/>	With 5600~5650MHz	<input type="checkbox"/> Without 5600~5650MHz
Beamforming Function	<input type="checkbox"/>	With beamforming	<input checked="" type="checkbox"/> Without beamforming
Operate Condition	<input checked="" type="checkbox"/>	Indoor	<input type="checkbox"/> Outdoor

Antenna and Band width

Antenna	Single (TX)			Three (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)	3	MCS 0-23
802.11n (HT40)	3	MCS 0-23
802.11ac (VHT20)	3	MCS 0-9/Nss1-3
802.11ac (VHT40)	3	MCS 0-9/Nss1-3
802.11ac (VHT80)	3	MCS 0-9/Nss1-3

Note 1: IEEE Std. 802.11n modulation consists of HT20 and HT40 (HT: High Throughput).

Then EUT supports HT20 and HT40.

Note 2: IEEE Std. 802.11ac modulation consists of VHT20, VHT40, VHT80 and VHT160 (VHT: Very High Throughput). Then EUT supports VHT20, VHT40 and VHT80.

Note 3: Modulation modes consist of below configuration:

HT20/HT40: IEEE 802.11n, VHT20/VHT40/VHT80: IEEE 802.11ac

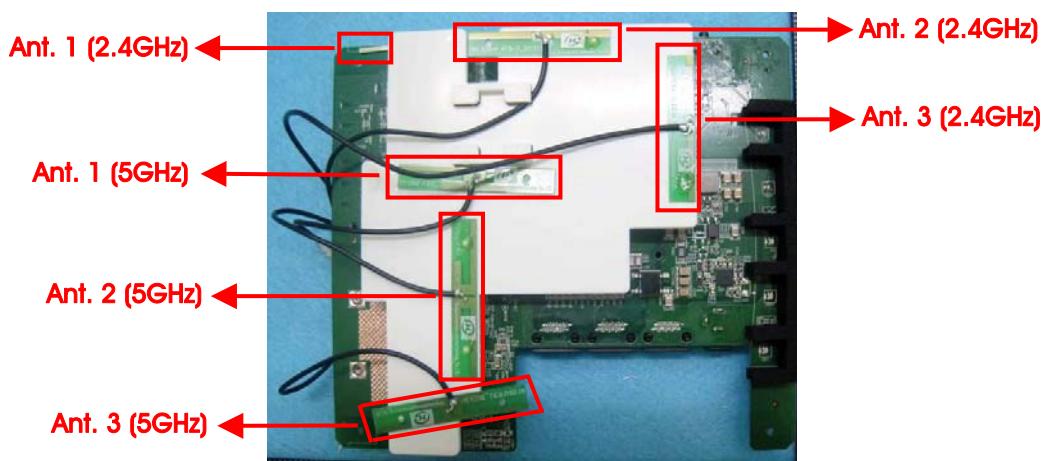
3.2. Accessories

Power	Brand	Model No.	Rating
Adapter	APD	WA-24Q12R	Input: 100-240Vac, 50-60Hz, 0.7A Max. Output: 12Vdc, 2A
Other			
Plug*1			

3.3. Table for Filed Antenna

For EUT 1 (Model No.: C-75) and EUT 3 (Model No.: AP320)

Ant.	Brand	Model No.	Type	Connector	Antenna Gain		Cable loss		True Gain (dBi)	
					2.4GHz	5GHz	2.4GHz	5GHz	2.4GHz	5GHz
1	LITEON	WP838 AP	PCB	I-PEX	3.5	6.5	0.2	-	3.3	6.5
2	LITEON	WP838 AP	PCB	I-PEX	6	5.8	-	-	6	5.8
3	LITEON	WP838 AP	PCB	I-PEX	5.4	6.6	-	-	5.4	6.6



For EUT 2 (Model No.: C-75-E)

Ant.	Brand	Model No.	Type	Connector	Gain (dBi)	
					2.4GHz	5GHz
1	MAG.LAYERS	EDA-1713-25GR2-A7	Dipole	SMA Male RP	5	5
2	MAG.LAYERS	EDA-1713-25GR2-A7	Dipole	SMA Male RP	5	5
3	MAG.LAYERS	EDA-1713-25GR2-A7	Dipole	SMA Male RP	5	5





<For 2.4GHz Band>

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

Only Ant. 1 could transmit/receive simultaneously.

For IEEE 802.11n mode (3TX/3RX):

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

<For 5GHz Band>

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

Only Ant. 1 could transmit/receive simultaneously.

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

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

3.4. Table for Carrier Frequencies

There are three bandwidth systems.

For 20MHz bandwidth systems, use Channel 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140.

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

For 80MHz bandwidth systems, use Channel 58, 106, 122.

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
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

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	Ant.
Max. Conducted Output Power	11a/BPSK	Band 2-3	6Mbps	52/60/64/ 100/116/140	1
	11ac VHT20	Band 2-3	MCS0/Nss1	52/60/64/ 100/116/140	1+2+3
	11ac VHT40	Band 2-3	MCS0/Nss1	54/62/ 102/110/134	1+2+3
	11ac VHT80	Band 2-3	MCS0/Nss1	58/106/122	1+2+3
Power Spectral Density	11a/BPSK	Band 2-3	6Mbps	52/60/64/ 100/116/140	1
	11ac VHT20	Band 2-3	MCS0/Nss1	52/60/64/ 100/116/140	1+2+3
	11ac VHT40	Band 2-3	MCS0/Nss1	54/62/ 102/110/134	1+2+3
	11ac VHT80	Band 2-3	MCS0/Nss1	58/106/122	1+2+3
26dB Spectrum Bandwidth 99% Occupied Bandwidth Measurement	11a/BPSK	Band 2-3	6Mbps	52/60/64/ 100/116/140	1
	11ac VHT20	Band 2-3	MCS0/Nss1	52/60/64/ 100/116/140	1+2+3
	11ac VHT40	Band 2-3	MCS0/Nss1	54/62/ 102/110/134	1+2+3
	11ac VHT80	Band 2-3	MCS0/Nss1	58/106/122	1+2+3
Radiated Emission Above 1GHz	11a/BPSK	Band 2-3	6Mbps	52/60/64/ 100/116/140	1
	11ac VHT20	Band 2-3	MCS0/Nss1	52/60/64/ 100/116/140	1+2+3
	11ac VHT40	Band 2-3	MCS0/Nss1	54/62/ 102/110/134	1+2+3
	11ac VHT80	Band 2-3	MCS0/Nss1	58/106/122	1+2+3
Band Edge Emission	11a/BPSK	Band 2-3	6Mbps	52/60/64/ 100/116/140	1

	11ac VHT20	Band 2-3	MCS0/Nss1	52/60/64/ 100/116/140	1+2+3
	11ac VHT40	Band 2-3	MCS0/Nss1	54/62/ 102/110/134	1+2+3
	11ac VHT80	Band 2-3	MCS0/Nss1	58/106/122	1+2+3
Frequency Stability	20 MHz	Band 2-3	-	60/116	1
	40 MHz	Band 2-3	-	62/110	1
	80 MHz	Band 2-3	-	58/106	1

Note: 1. All the specification of test configurations and test mode was base on customer's request.

2. 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:

Radiated Emissions Above 1GHz and Band Edge Emissions tests	
Test Mode	Description
1	EUT 1 in Z axis + Adapter
2	EUT 1 in Y axis + Adapter
Mode 2 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3 will follow this same test mode.	
3	EUT 2 in Y axis + Adapter
Mode 2 and Mode 3 generated the worst test result, so it was recorded in this report.	

Other tests	
Test Mode	Description
1	EUT 1
2	EUT 2

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 Designation No.	IC File No.	VCCI Reg. No
03CH01-CB	SAC	Hsin Chu	TW0006	IC 4086D	-
TH01-CB	OVEN Room	Hsin Chu	-	-	-

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

3.7. Table for Multiple Listing

The EUT has three model numbers which are identical to each other in all aspects except for the following table:

Brand Name	Model No.	Antenna	Description
MOJO	C-75	Internal antenna	EUT 1
	C-75-E	External antenna	EUT 2
WatchGuard	AP320	Internal antenna	EUT 3

From the above models, EUT 1 and EUT 2 were selected as representative model for the test and their data was recorded in this report.

3.8. Table for Class II Change

This product is an extension of original one reported under Sporton project number: FR411023-06AB
Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
Adding 5GHz Band 2 and Band 3 (5250~5350 MHz, 5470~5725 MHz) for this device.	<ol style="list-style-type: none"> 26dB Bandwidth and 99% Occupied Bandwidth Measurement Maximum Conducted Output Power Measurement Power Spectral Density Measurement Radiated Emissions above 1GHz Band Edge Emissions Measurement Frequency Stability Measurement

3.9. Table for Supporting Units

For Test Site No: 03CH01-CB (above 1GHz) and TH01-CB

Support Unit	Brand	Model	FCC ID
Notebook	DELL	E4300	DoC

3.10. Table for Parameters of Test Software Setting

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

For Mode 1 (EUT 1):

Test Software Version	ART2-GUI V2.3					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz	
802.11a	23.5	23.5	20	20	25	21
802.11ac MCS0/Nss1 VHT20	15	14.5	14.5	15	15.5	16
Mode	NCB: 40MHz					
802.11ac MCS0/Nss1 VHT40	5270 MHz	5310 MHz	5510 MHz	5550 MHz	5670 MHz	
	18.5	16	16.5	19	19	
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5290 MHz		5530 MHz		5610 MHz	
	14		14		20.5	

For Mode 2 (EUT 2):

Test Software Version	ART2-GUI V2.3					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz	
802.11a	29	26	21	21	29	21
802.11ac MCS0/Nss1 VHT20	17.5	17.5	17.5	17.5	18	19
Mode	NCB: 40MHz					
802.11ac MCS0/Nss1 VHT40	5270 MHz	5310 MHz	5510 MHz	5550 MHz	5670 MHz	
	21	17.5	16	21.5	20	
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5290 MHz		5530 MHz		5610 MHz	
	17		15		21	

3.11. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.12. Duty Cycle

For Mode 1 (EUT 1):

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11a	2.020	2.090	96.65%	0.15	0.50
802.11ac MCS0/Nss1 VHT20	1.900	1.970	96.45%	0.16	0.53
802.11ac MCS0/Nss1 VHT40	0.897	0.986	90.97%	0.41	1.11
802.11ac MCS0/Nss1 VHT80	0.435	0.527	82.54%	0.83	2.30

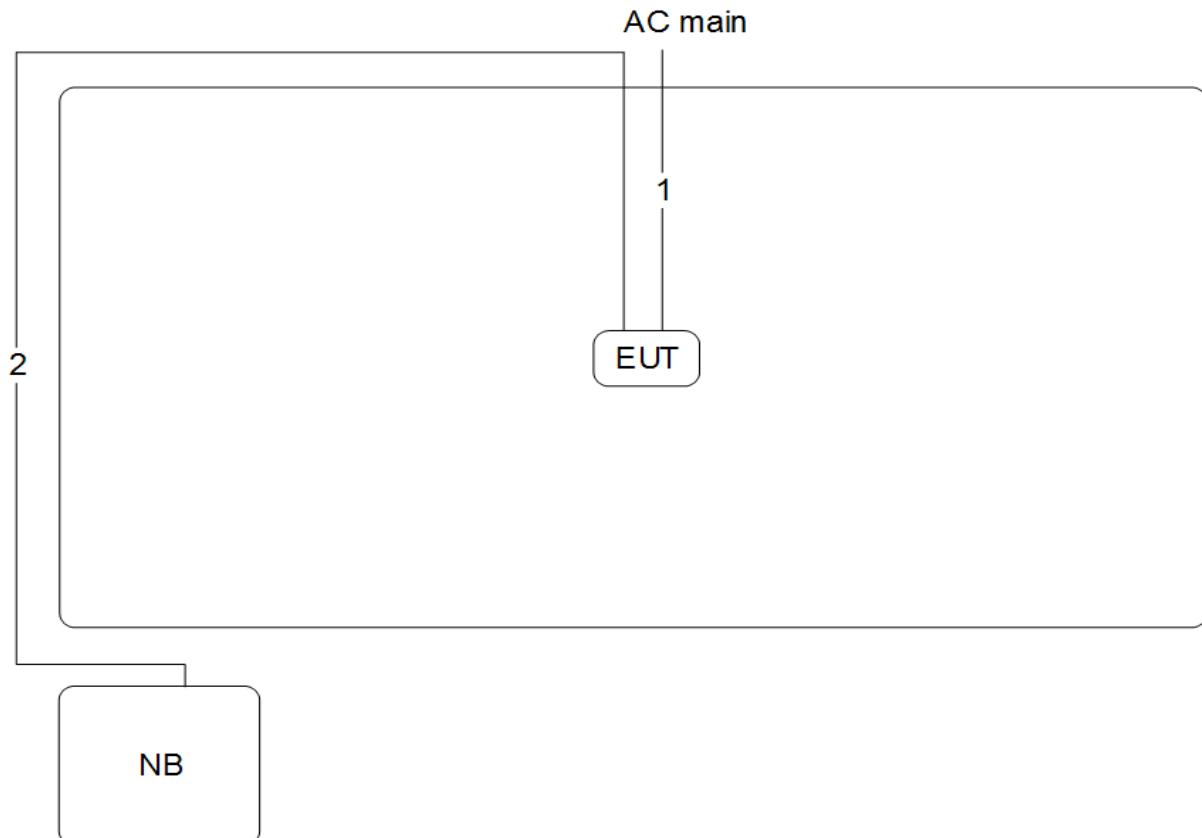
For Mode 2 (EUT 2):

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11a	2.020	2.080	97.12%	0.13	0.50
802.11ac MCS0/Nss1 VHT20	1.896	2.000	94.80%	0.23	0.53
802.11ac MCS0/Nss1 VHT40	0.863	0.924	93.40%	0.30	1.16
802.11ac MCS0/Nss1 VHT80	0.408	0.468	87.18%	0.60	2.45

3.13. Test Configurations

3.13.1. Radiation Emissions Test Configuration

Test Configuration: above 1GHz



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

4. TEST RESULT

4.1. 26dB Bandwidth and 99% Occupied Bandwidth Measurement

4.1.1. Limit

No restriction limits.

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 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	$\geq 3 \times$ RBW
Detector	Peak
Trace	Max Hold

4.1.3. 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%.

4.1.4. Test Setup Layout

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

This test setup layout is the same as that shown in section 4.4.4.

4.1.5. Test Deviation

There is no deviation with the original standard.

4.1.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

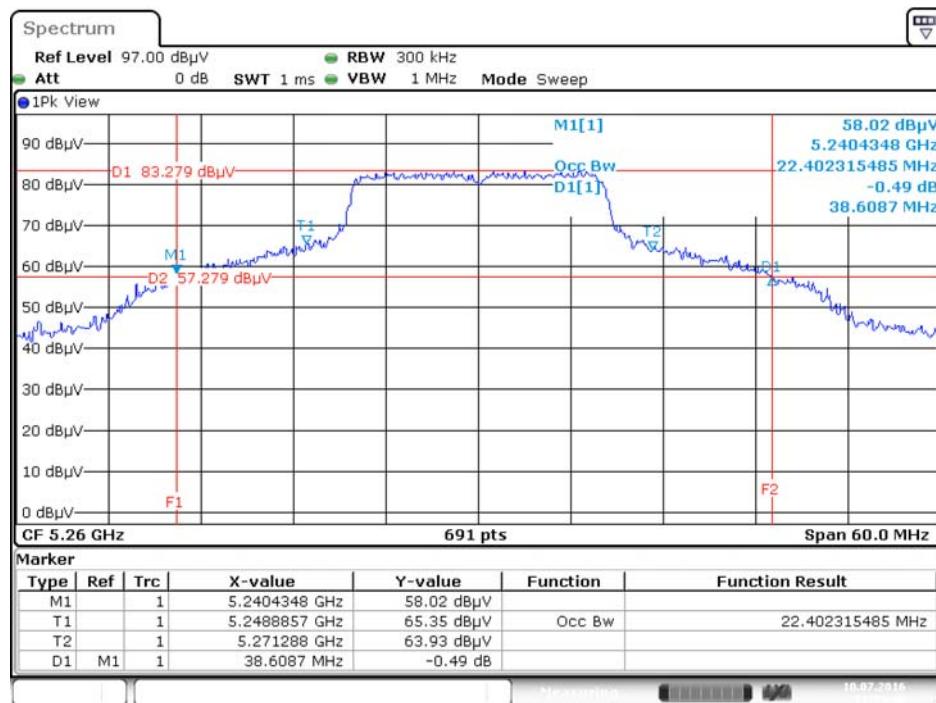
4.1.7. Test Result of 26dB Bandwidth and 99% Occupied Bandwidth

For Mode 1 (EUT 1):

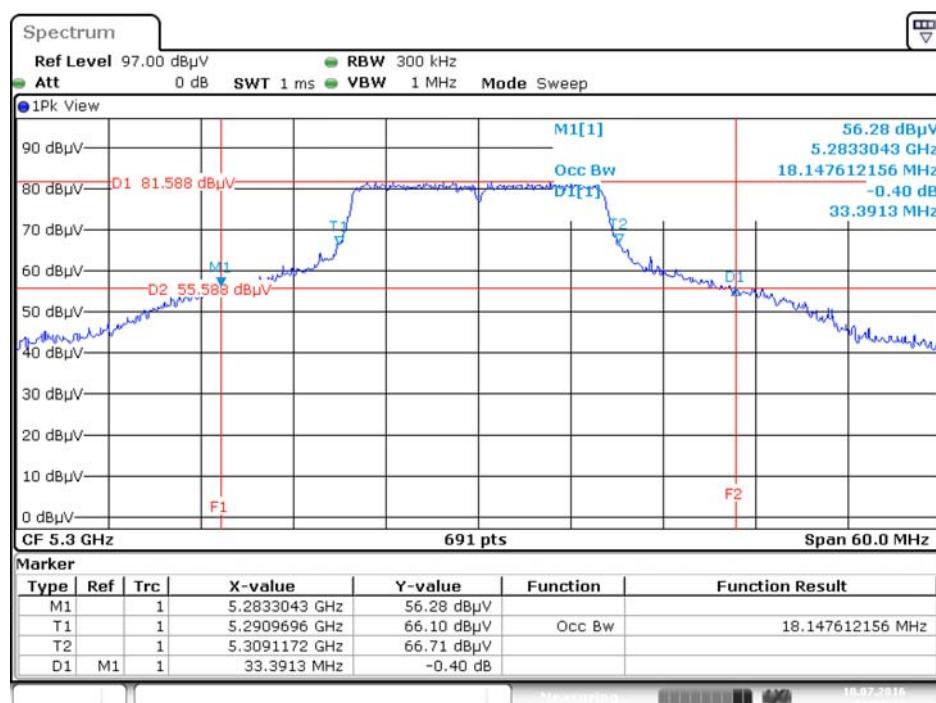
Temperature	25°C	Humidity	55%
Test Engineer	Roki Liu		

Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a	5260 MHz	38.61	22.40
	5300 MHz	33.39	18.15
	5320 MHz	22.09	16.85
	5500 MHz	22.78	16.85
	5580 MHz	41.83	25.53
	5700 MHz	22.96	16.85
802.11ac MCS0/Nss1 VHT20	5260 MHz	20.35	17.45
	5300 MHz	22.70	18.15
	5320 MHz	22.26	18.15
	5500 MHz	22.00	18.23
	5580 MHz	21.83	17.89
	5700 MHz	22.43	17.80
802.11ac MCS0/Nss1 VHT40	5270 MHz	44.64	37.34
	5310 MHz	43.91	37.19
	5510 MHz	44.20	37.34
	5550 MHz	44.93	37.48
	5670 MHz	43.62	37.63
802.11ac MCS0/Nss1 VHT80	5290 MHz	84.93	74.96
	5530 MHz	82.32	75.54
	5610 MHz	82.32	73.81

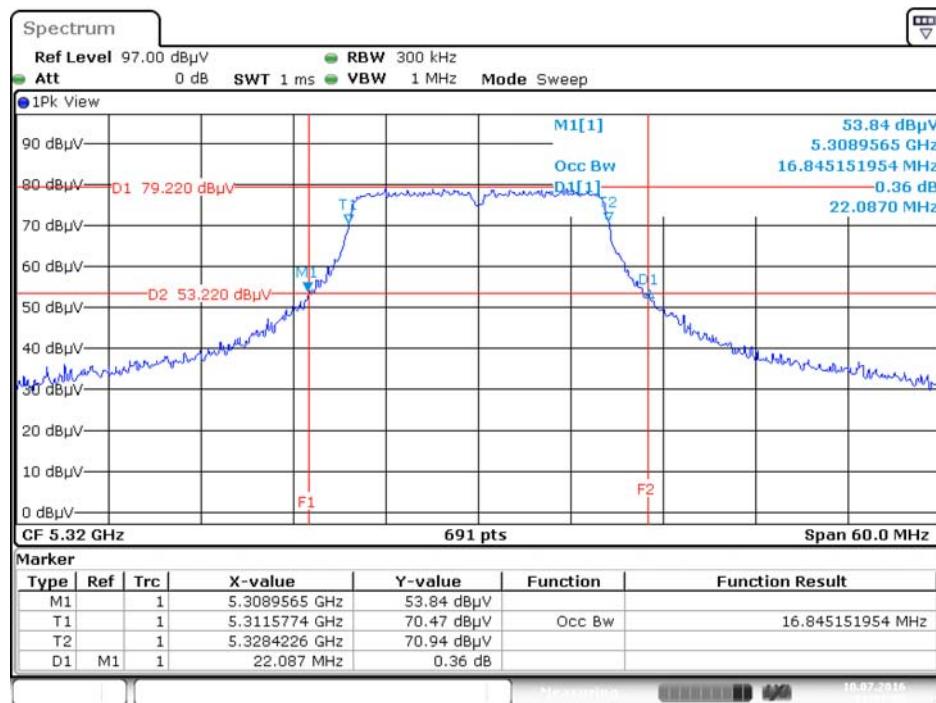
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5260 MHz



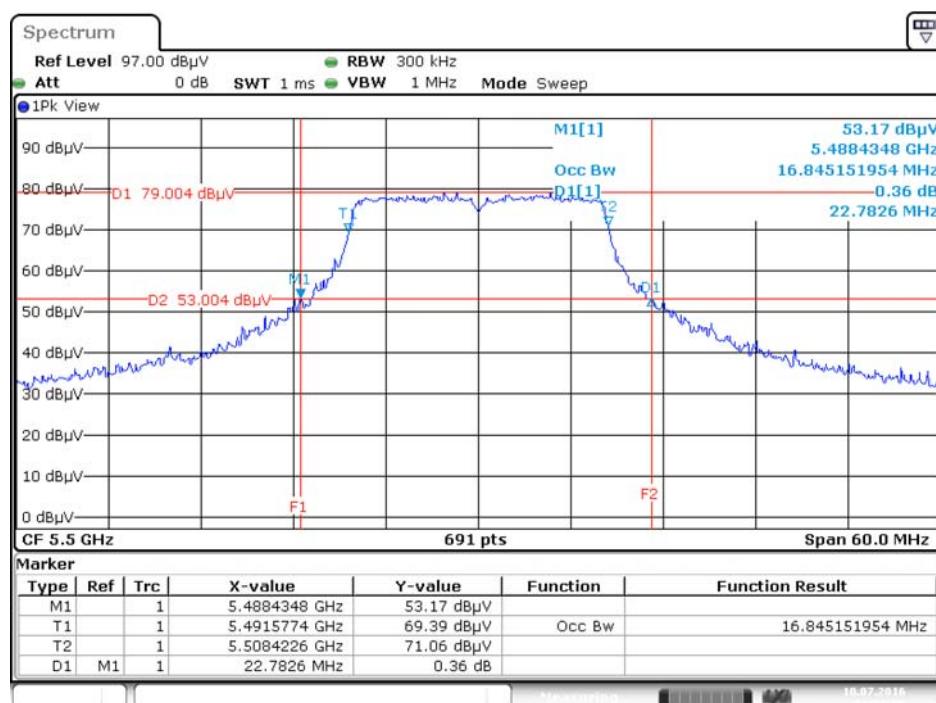
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5300 MHz



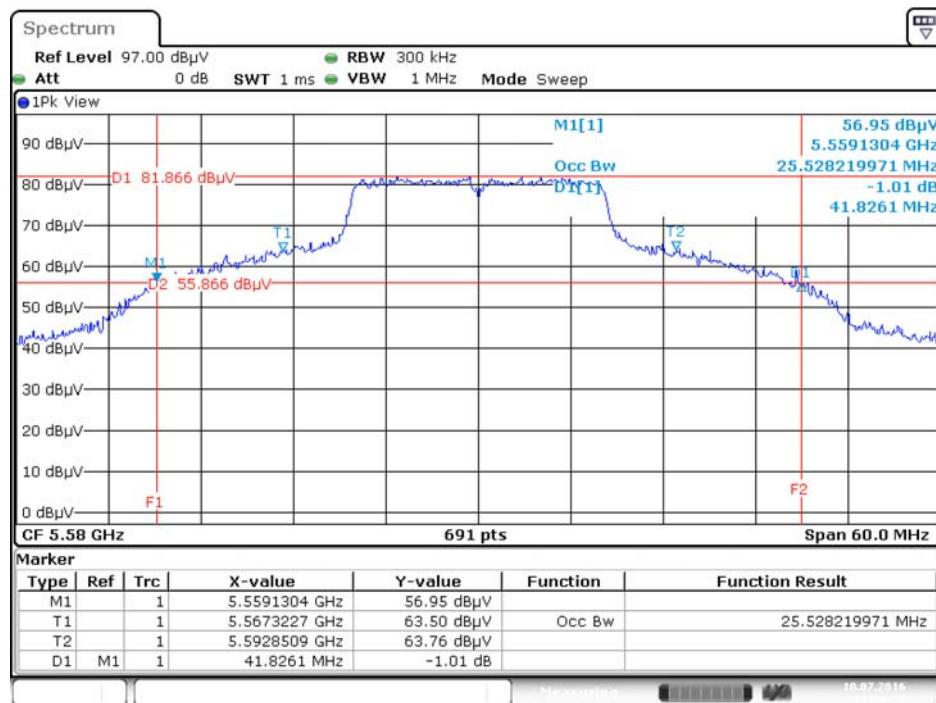
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5320 MHz



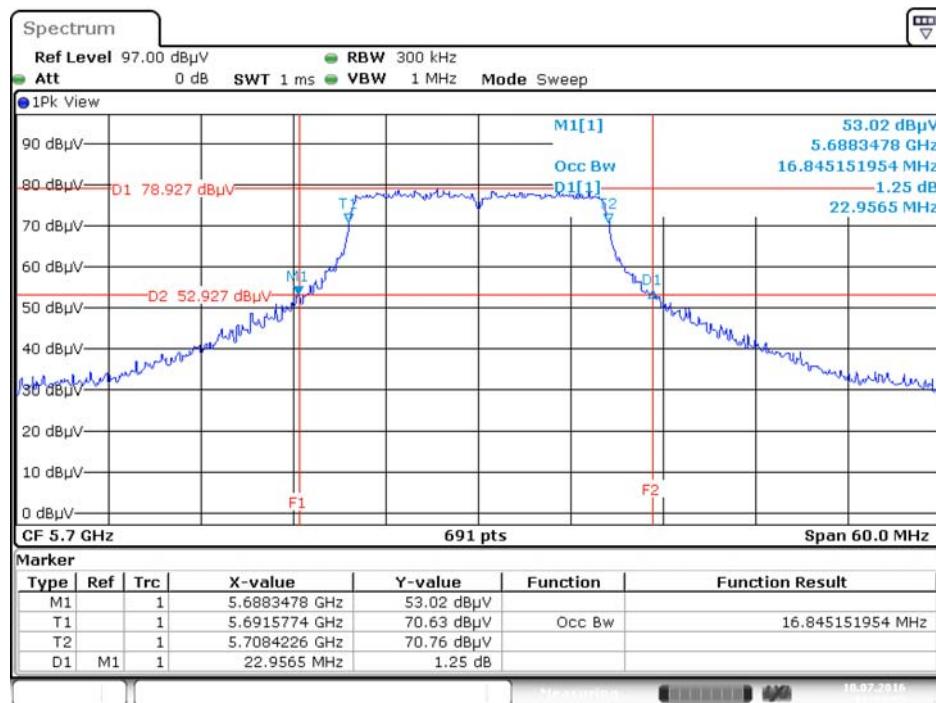
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5500 MHz



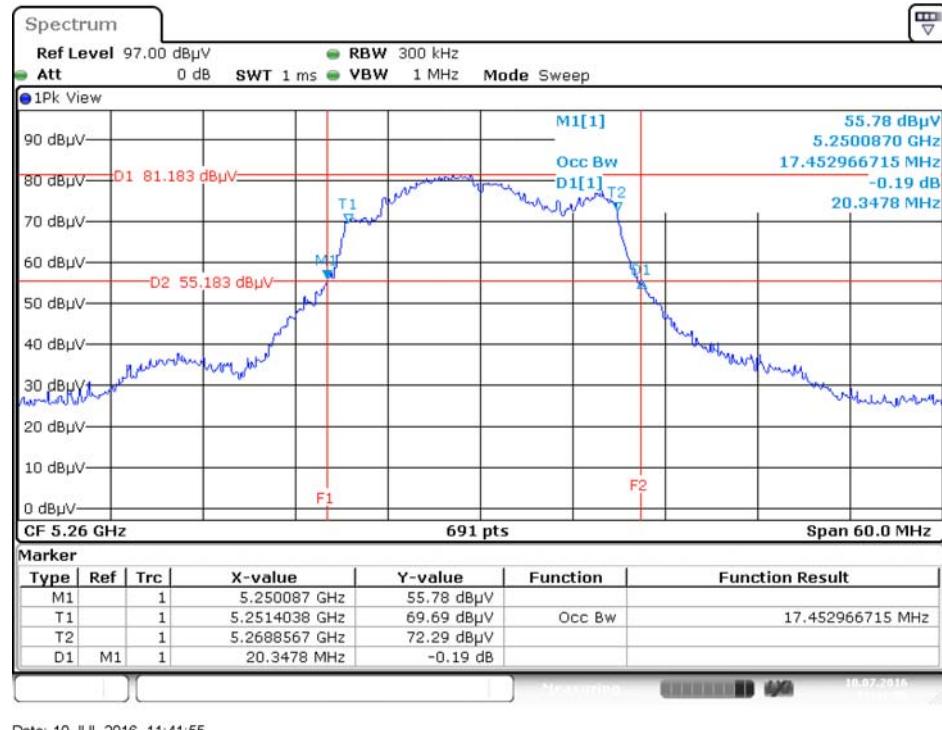
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5580 MHz



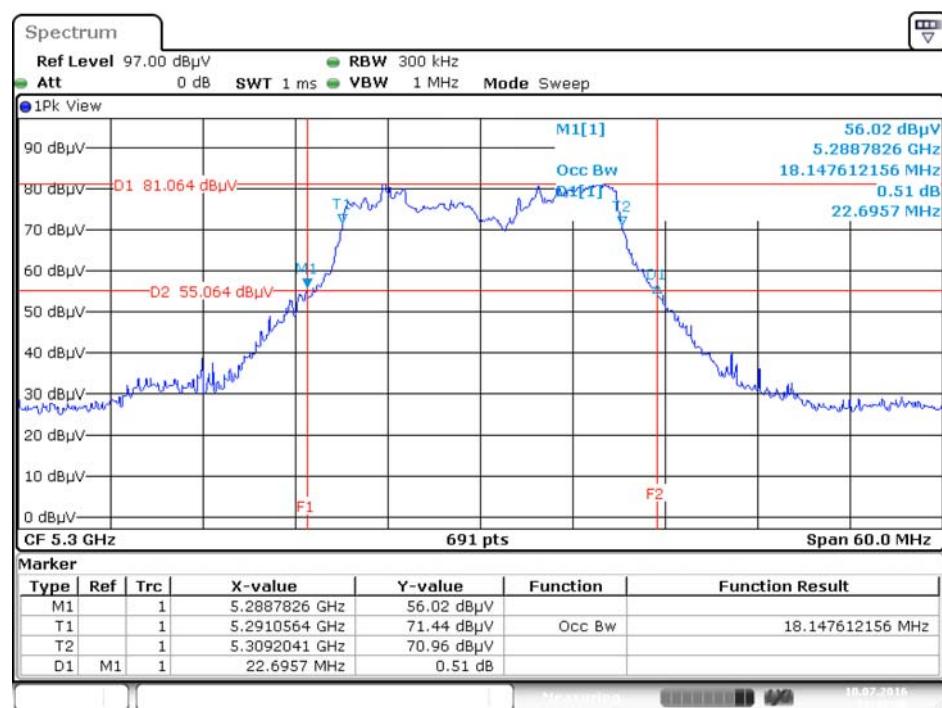
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5700 MHz



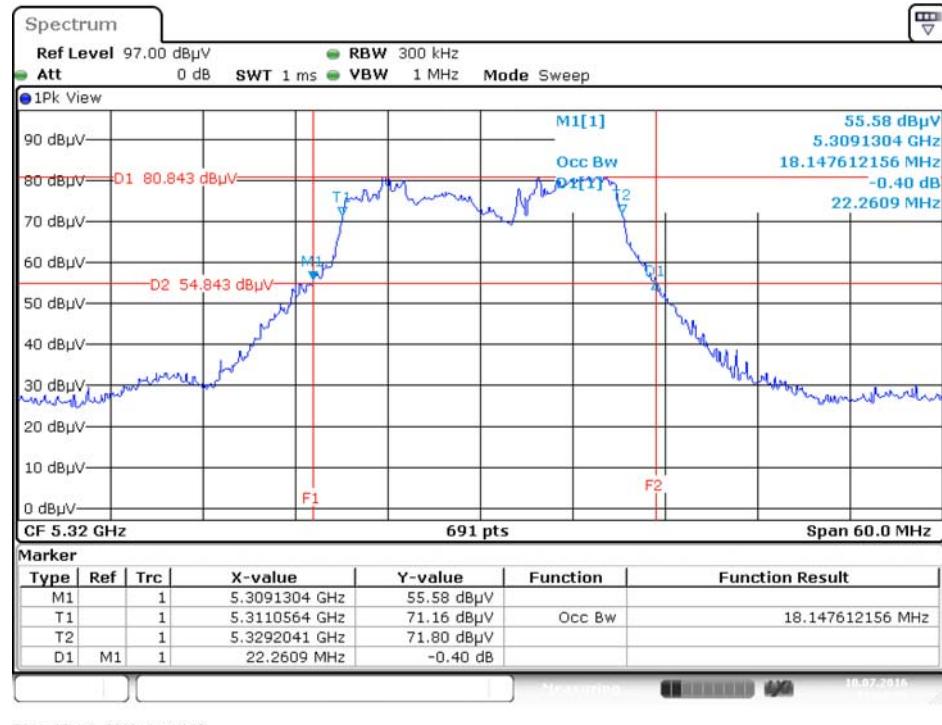
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 /
Ant. 1 + Ant. 2 + Ant. 3 / 5260 MHz**



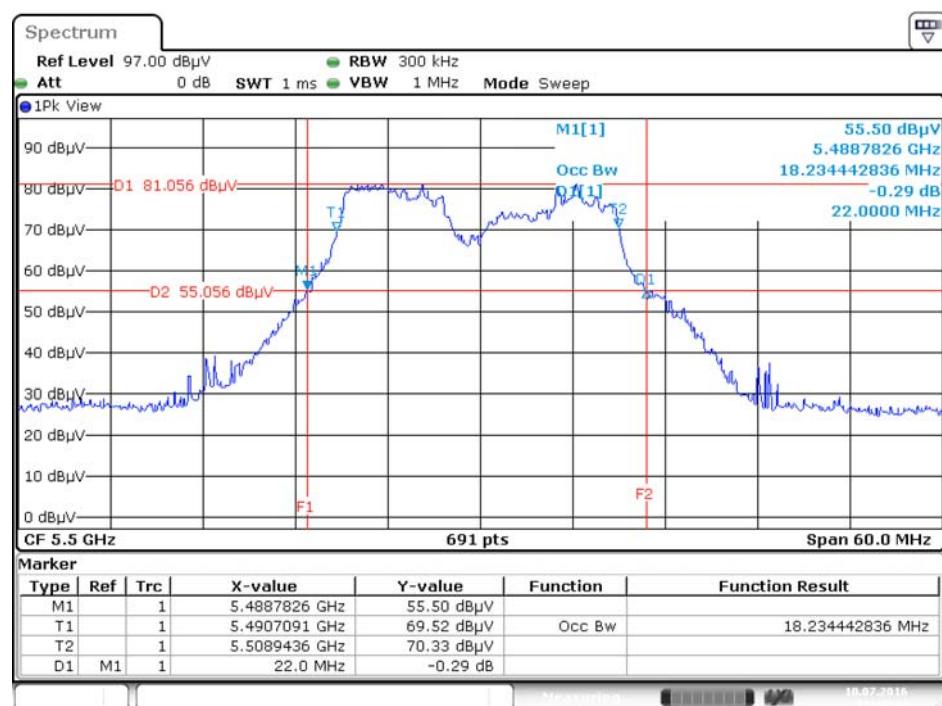
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 /
Ant. 1 + Ant. 2 + Ant. 3 / 5300 MHz**



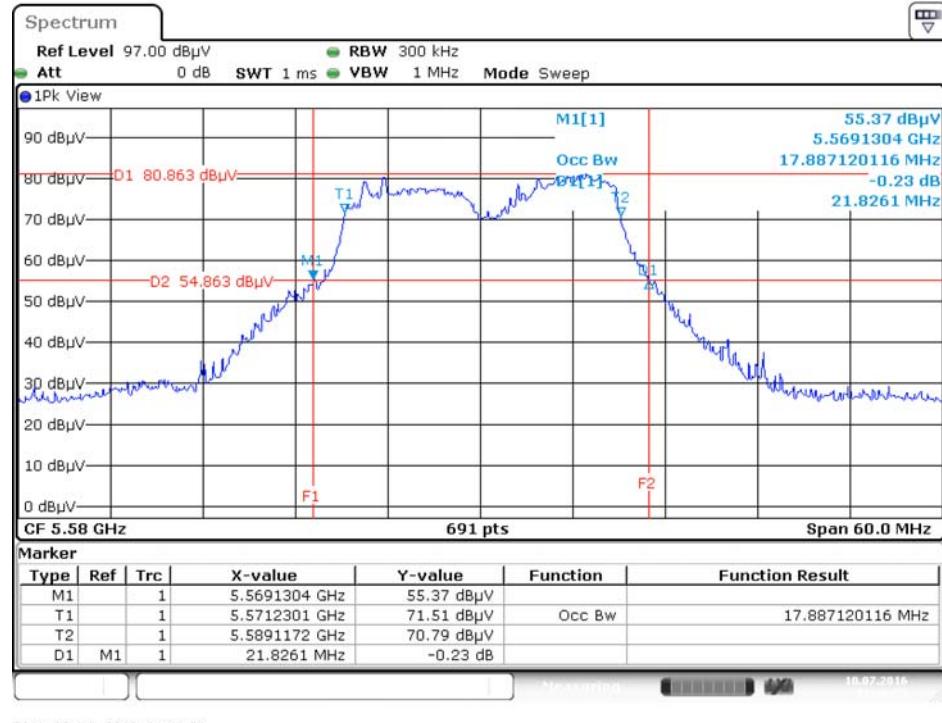
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 /
Ant. 1 + Ant. 2 + Ant. 3 / 5320 MHz**



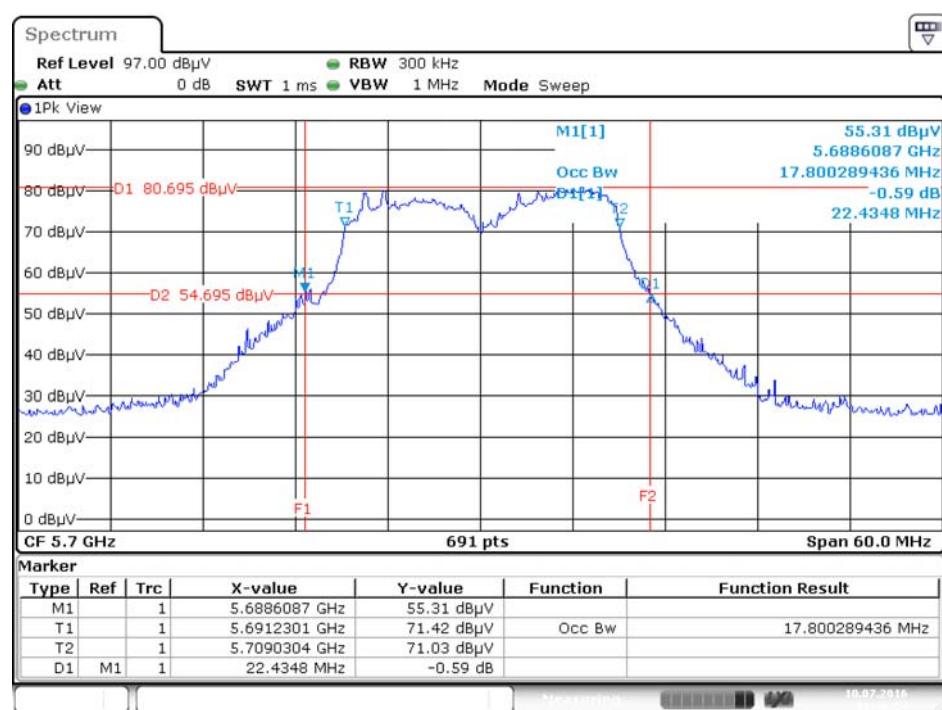
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 /
Ant. 1 + Ant. 2 + Ant. 3 / 5500 MHz**



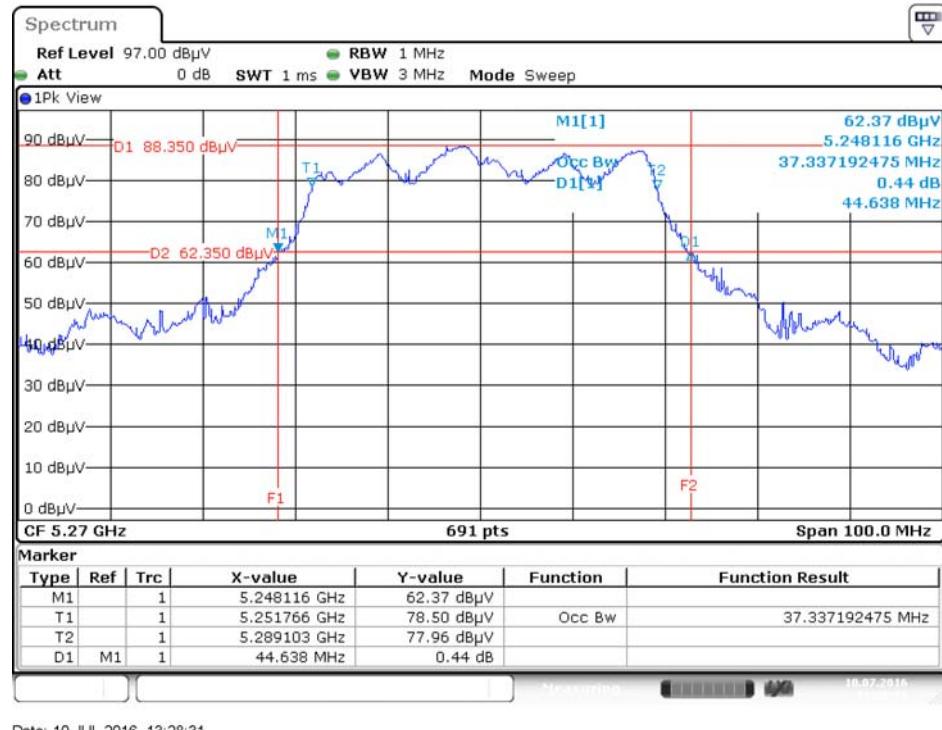
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 /
Ant. 1 + Ant. 2 + Ant. 3 / 5580 MHz**



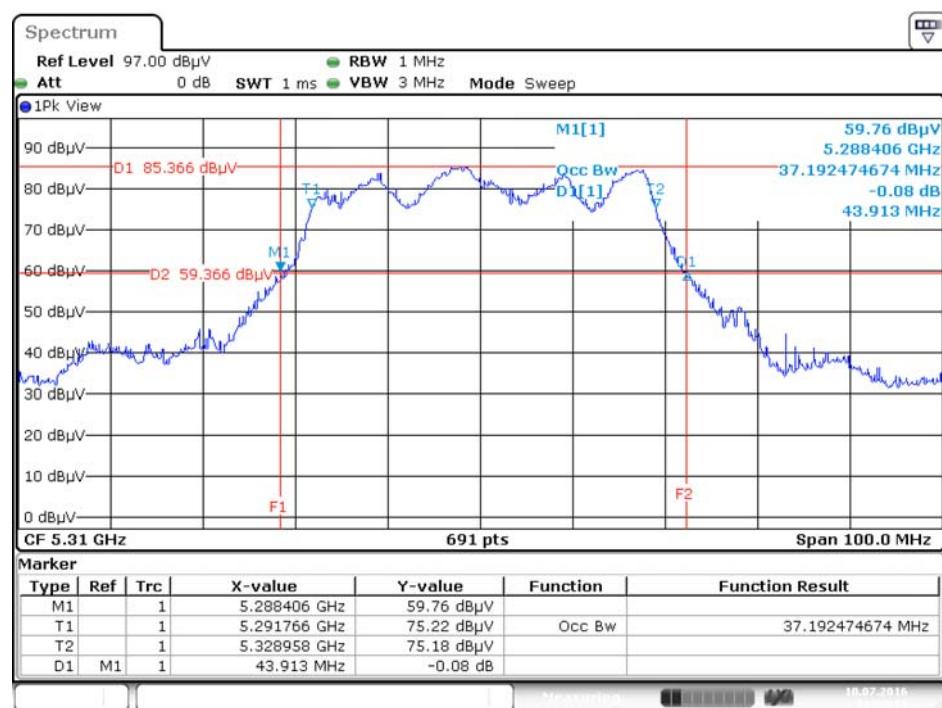
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 /
Ant. 1 + Ant. 2 + Ant. 3 / 5700 MHz**



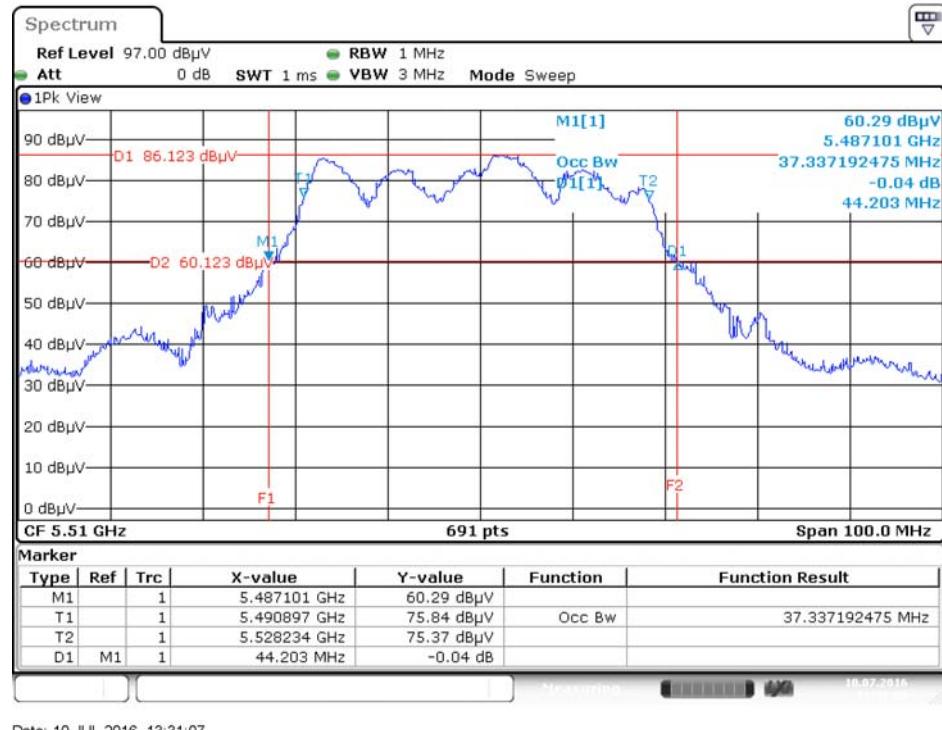
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 /
Ant. 1 + Ant. 2 + Ant. 3 / 5270 MHz**



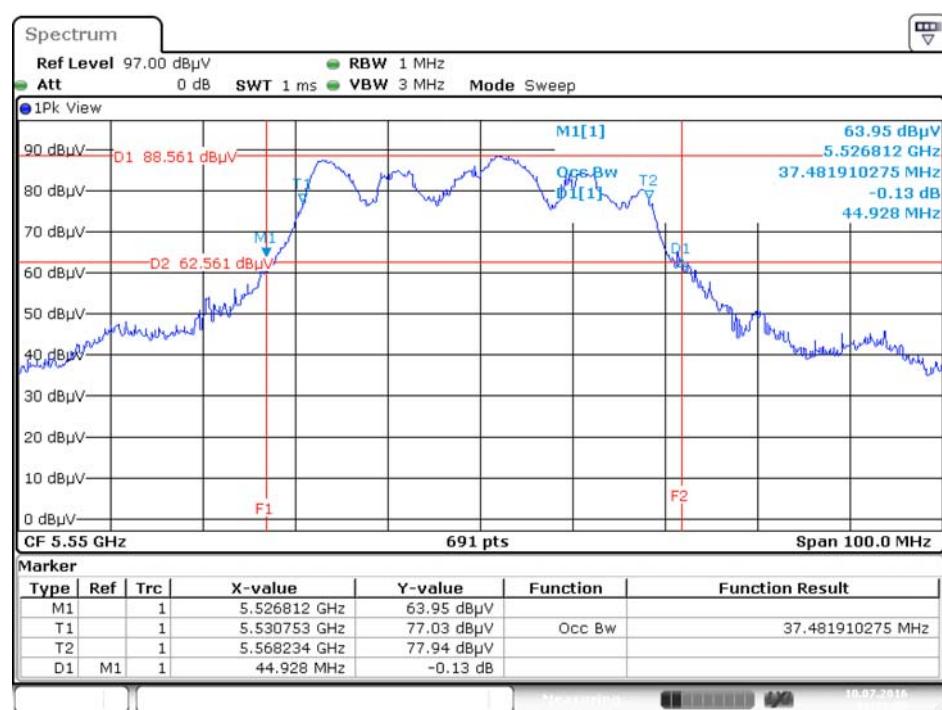
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 /
Ant. 1 + Ant. 2 + Ant. 3 / 5310 MHz**



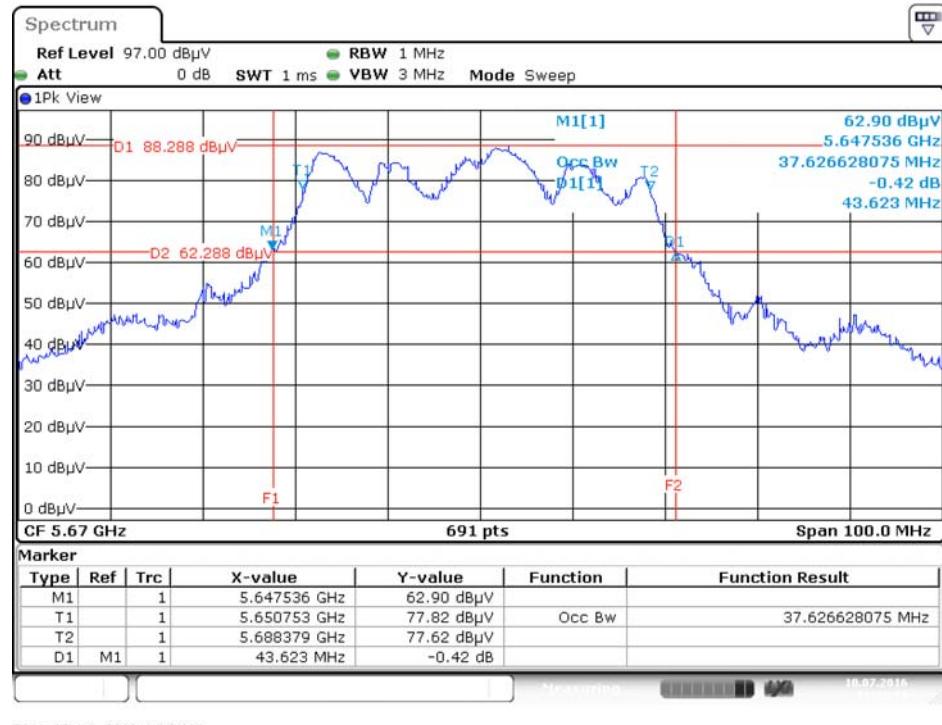
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5510 MHz



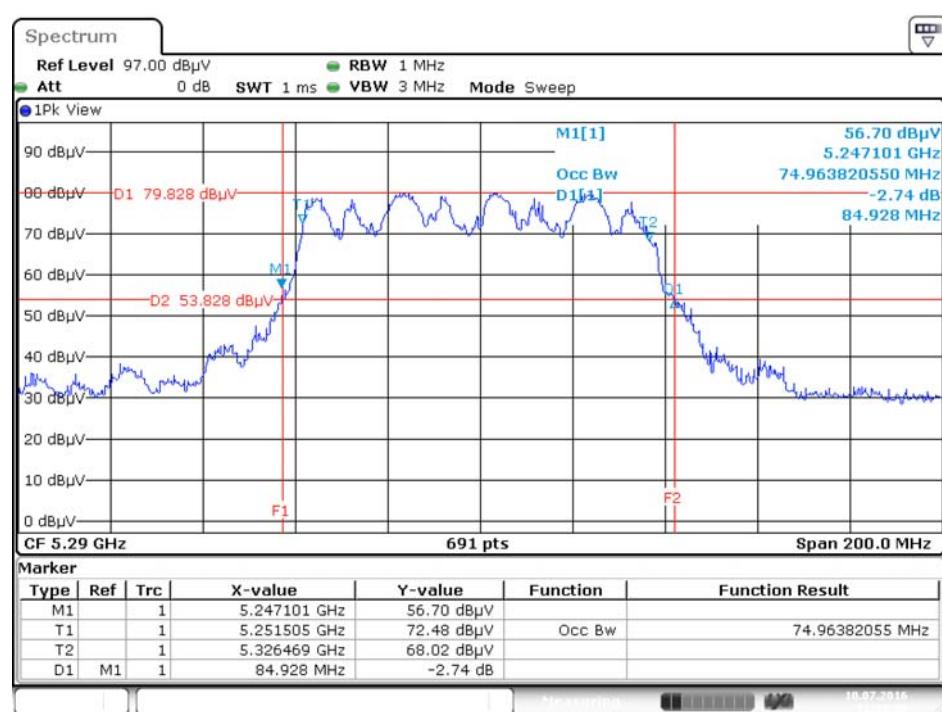
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5550 MHz



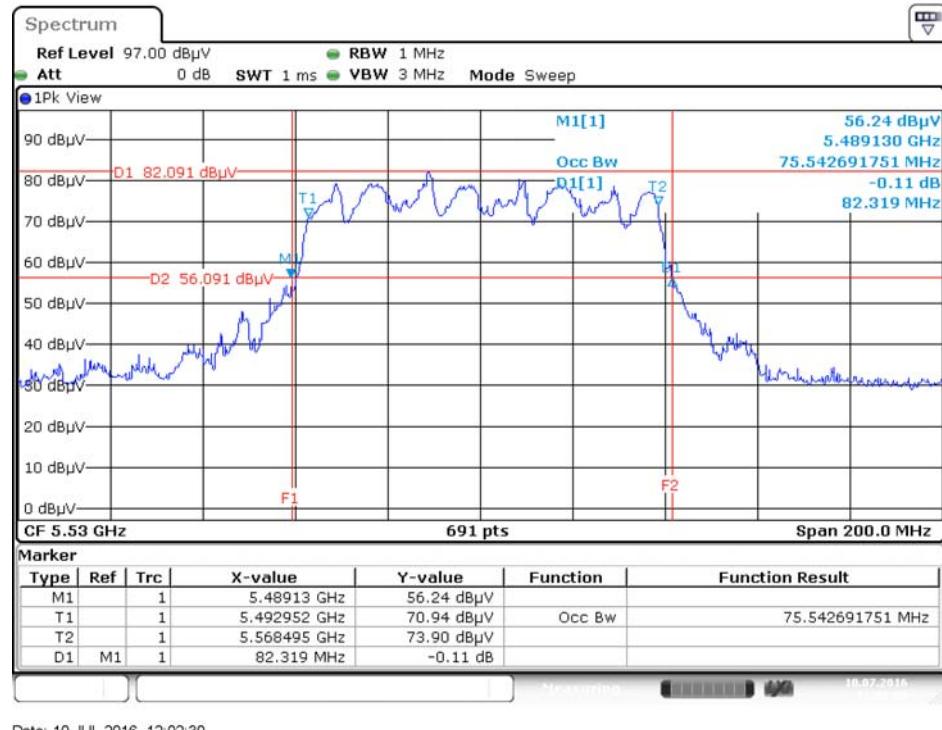
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5670 MHz



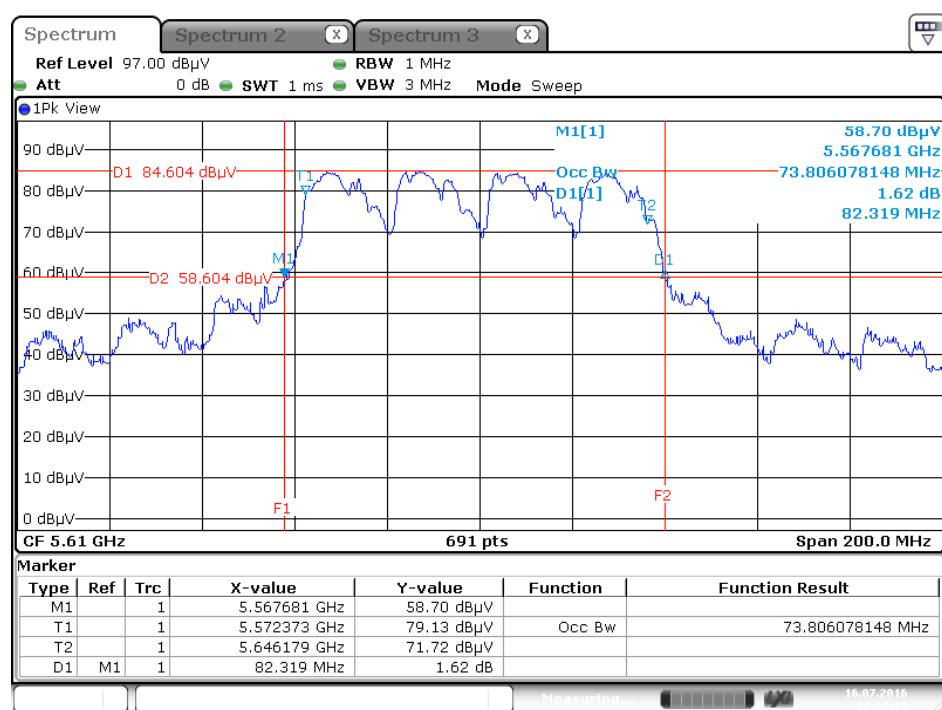
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5290 MHz



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



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

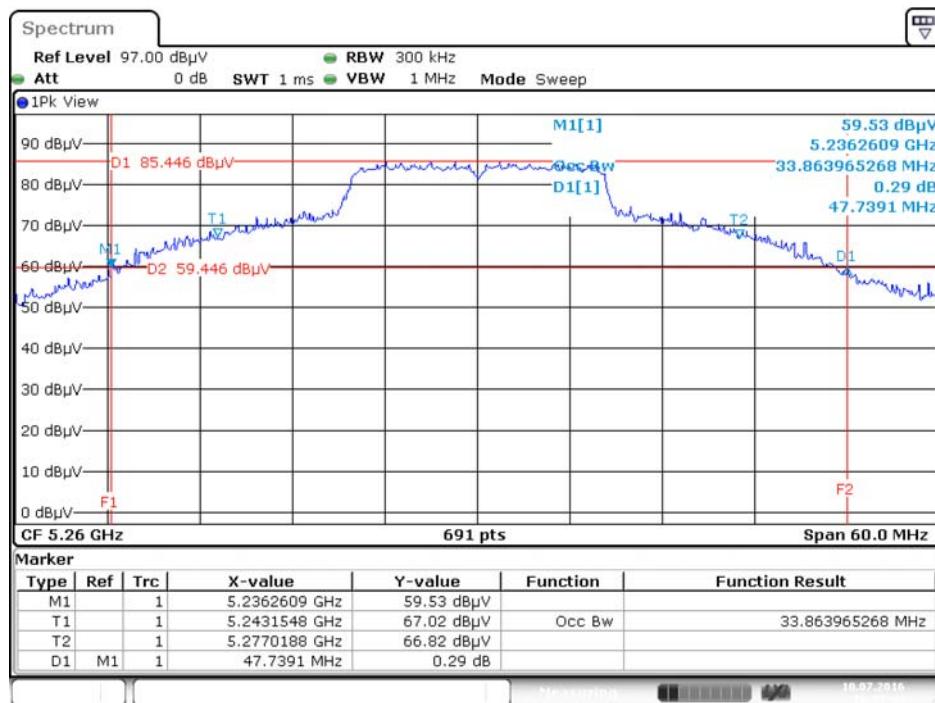


For Mode 2 (EUT 2):

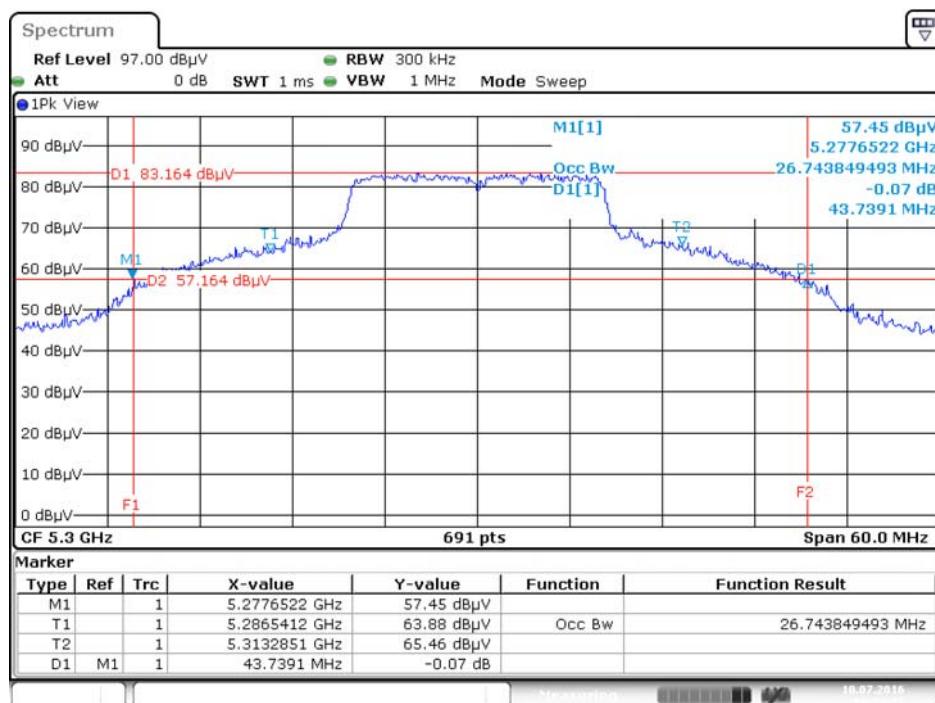
Temperature	25°C	Humidity	55%
Test Engineer	Roki Liu		

Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a	5260 MHz	47.74	33.86
	5300 MHz	43.74	26.74
	5320 MHz	22.61	16.93
	5500 MHz	24.52	16.93
	5580 MHz	48.26	34.65
	5700 MHz	23.04	16.85
802.11ac MCS0/Nss1 VHT20	5260 MHz	22.61	18.23
	5300 MHz	19.91	17.45
	5320 MHz	22.52	18.15
	5500 MHz	20.09	17.28
	5580 MHz	22.00	17.97
	5700 MHz	22.96	17.80
802.11ac MCS0/Nss1 VHT40	5270 MHz	45.22	37.48
	5310 MHz	45.07	37.34
	5510 MHz	44.93	37.34
	5550 MHz	47.97	37.19
	5670 MHz	46.67	37.05
802.11ac MCS0/Nss1 VHT80	5290 MHz	82.32	74.67
	5530 MHz	81.45	75.54
	5610 MHz	80.87	74.10

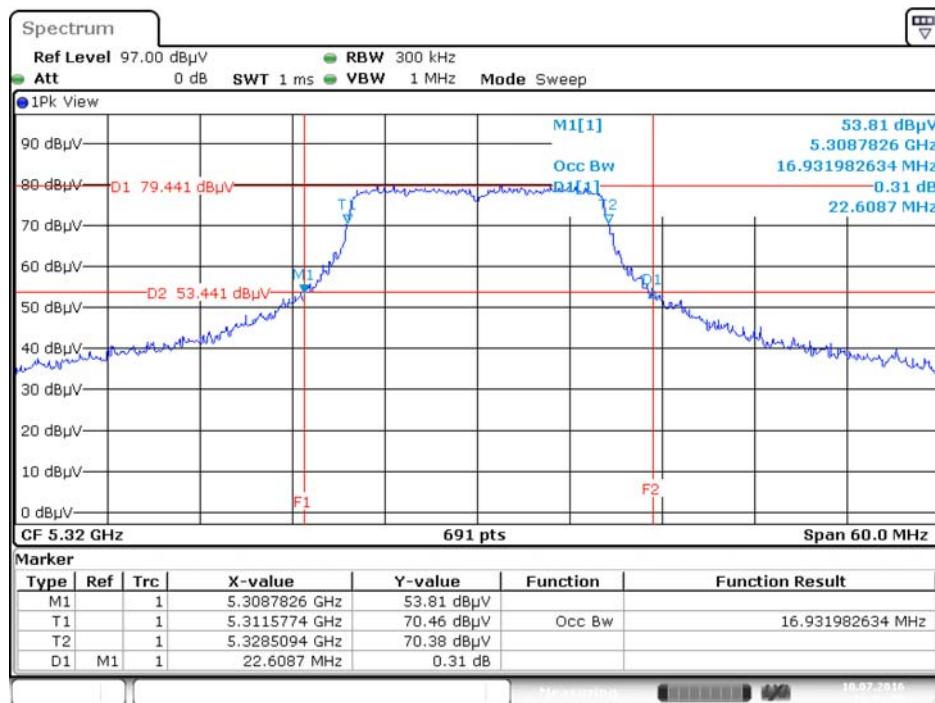
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5260 MHz



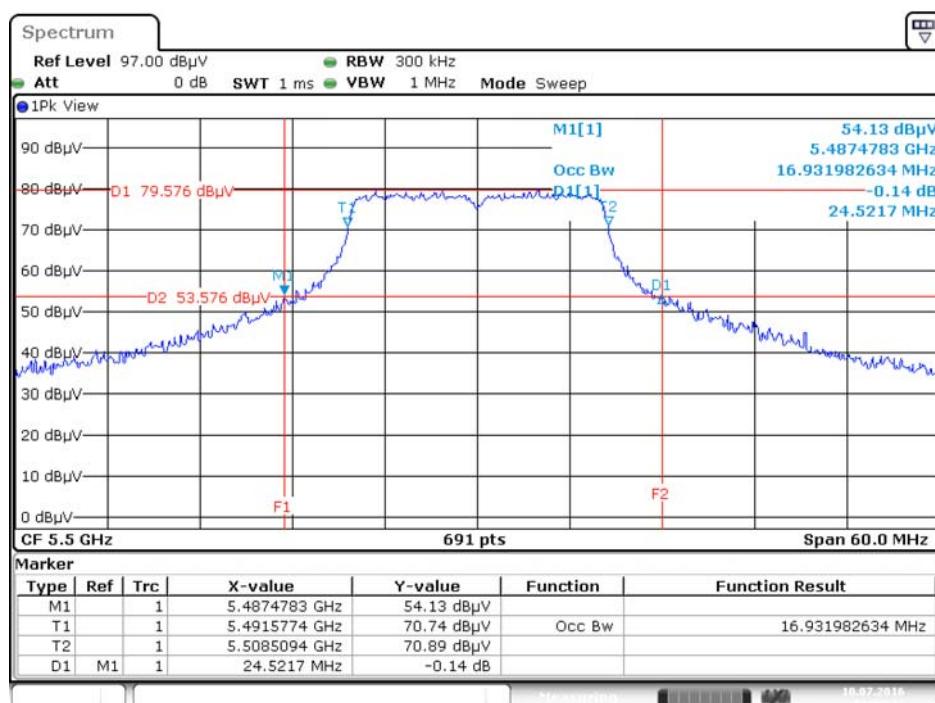
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5300 MHz

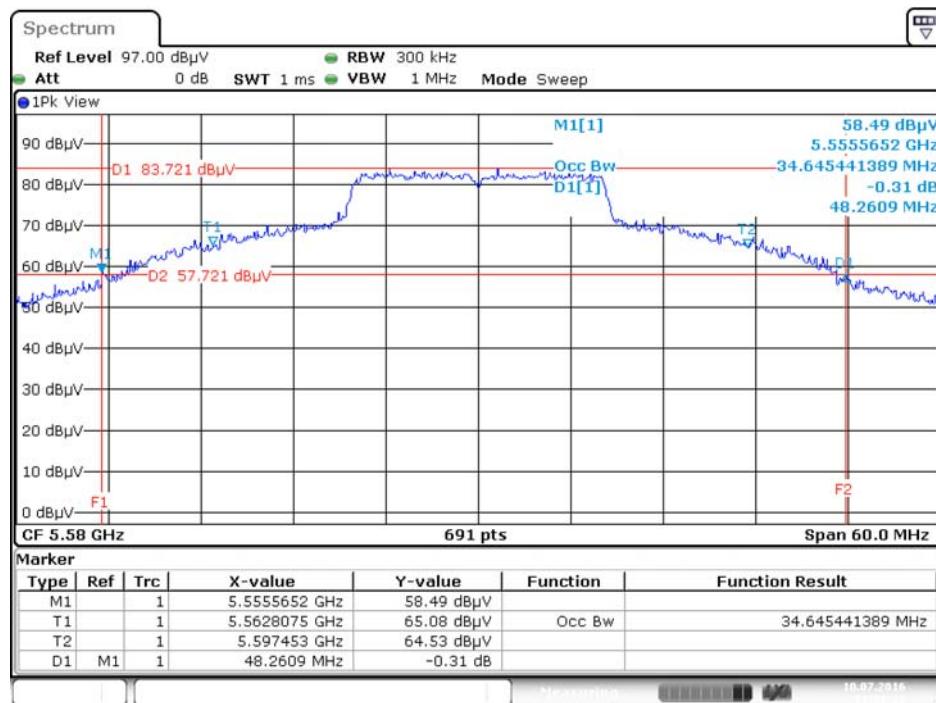


26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5320 MHz

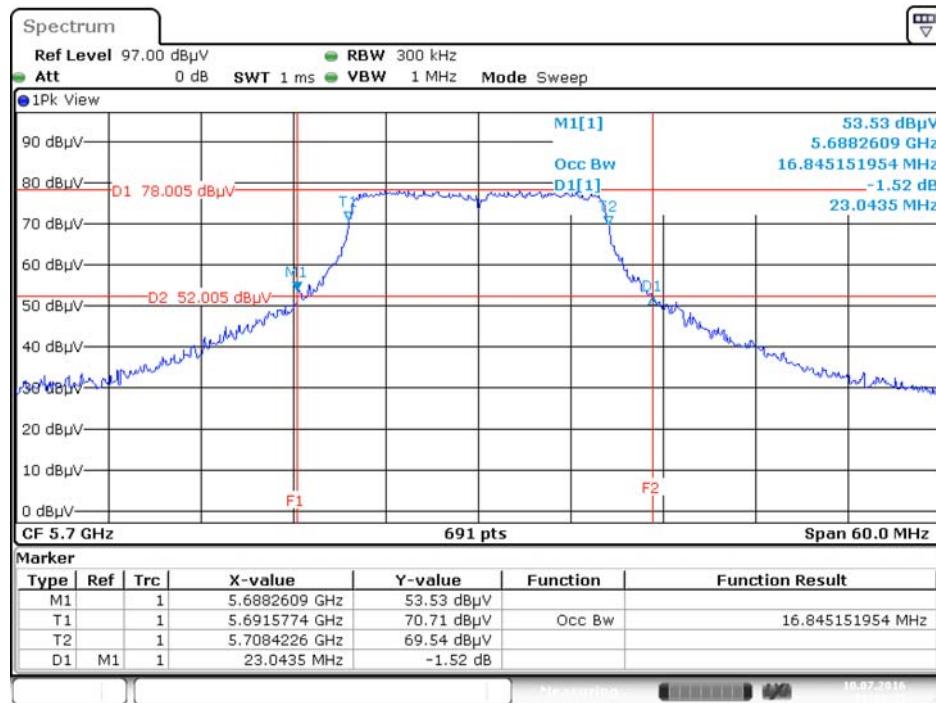


26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5500 MHz



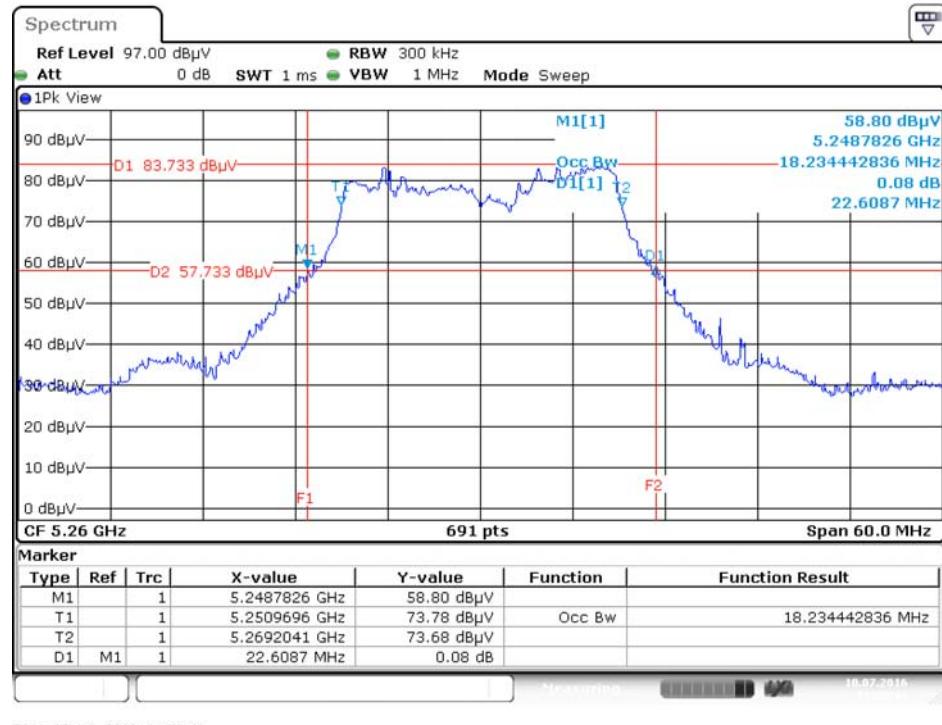
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 / 5580 MHz


Date: 10.JUL.2016 11:01:12

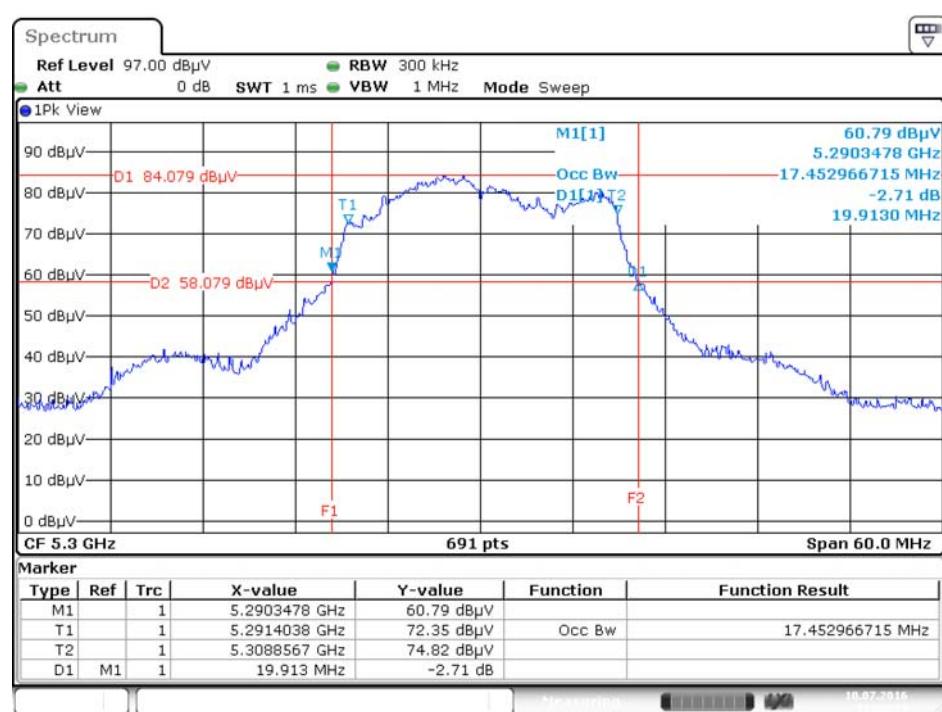
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Ant. 1 + Ant. 2 + Ant. 3 / 5700 MHz


Date: 10.JUL.2016 11:01:45

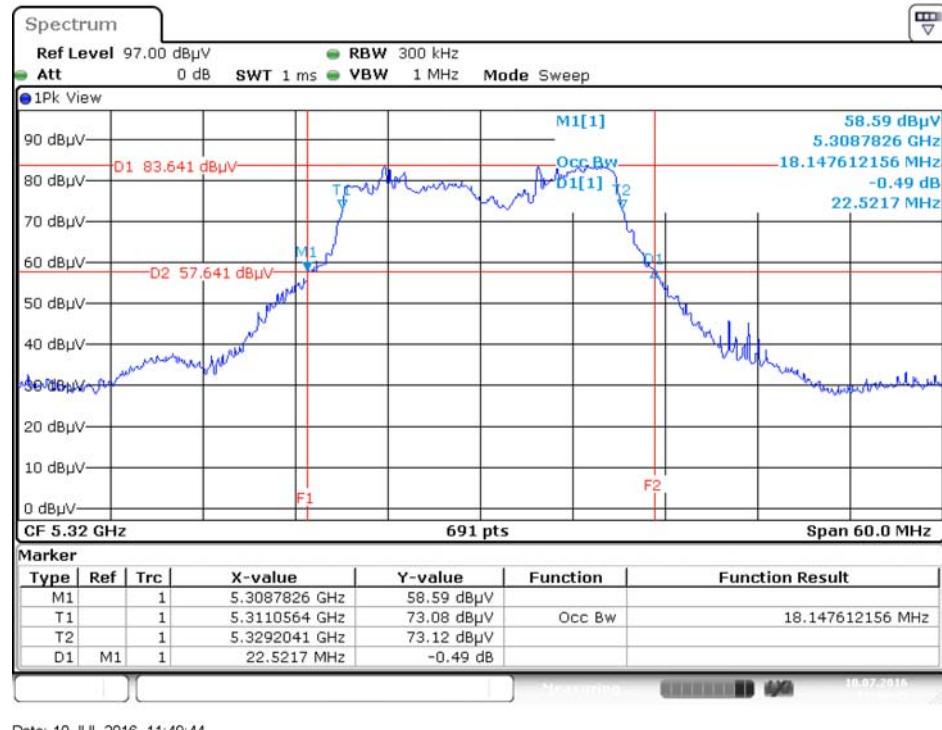
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 /
Ant. 1 + Ant. 2 + Ant. 3 / 5260 MHz**



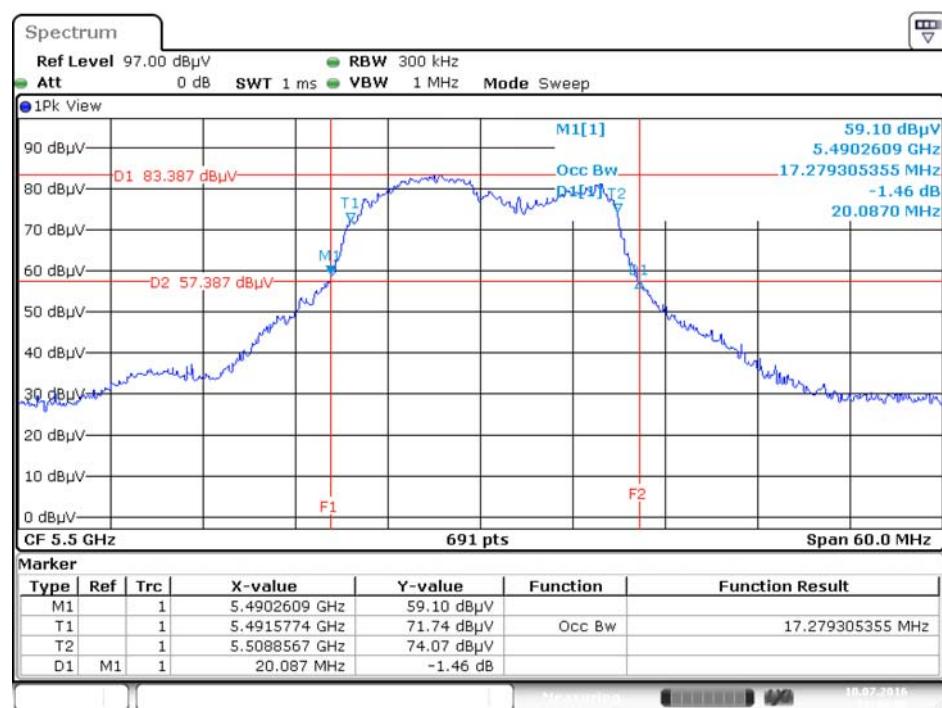
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 /
Ant. 1 + Ant. 2 + Ant. 3 / 5300 MHz**



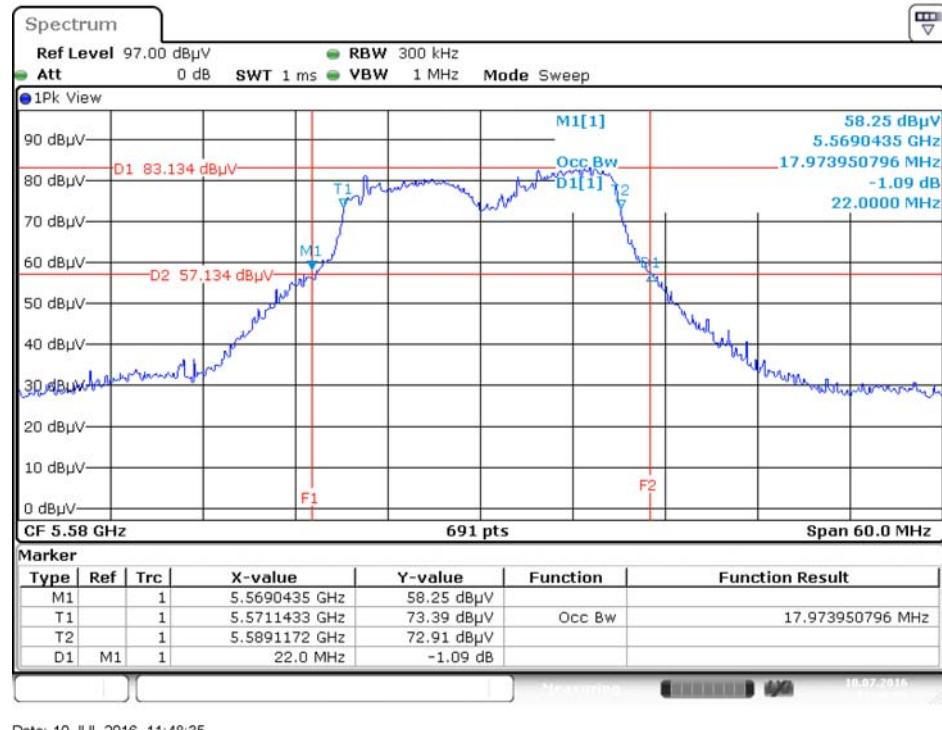
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 /
Ant. 1 + Ant. 2 + Ant. 3 / 5320 MHz**



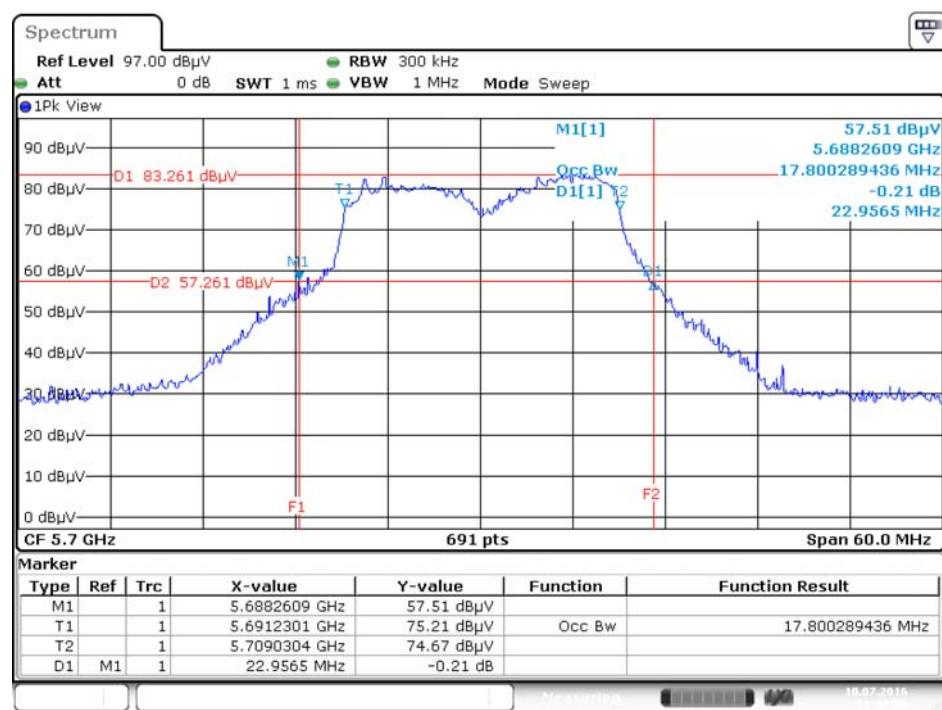
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 /
Ant. 1 + Ant. 2 + Ant. 3 / 5500 MHz**



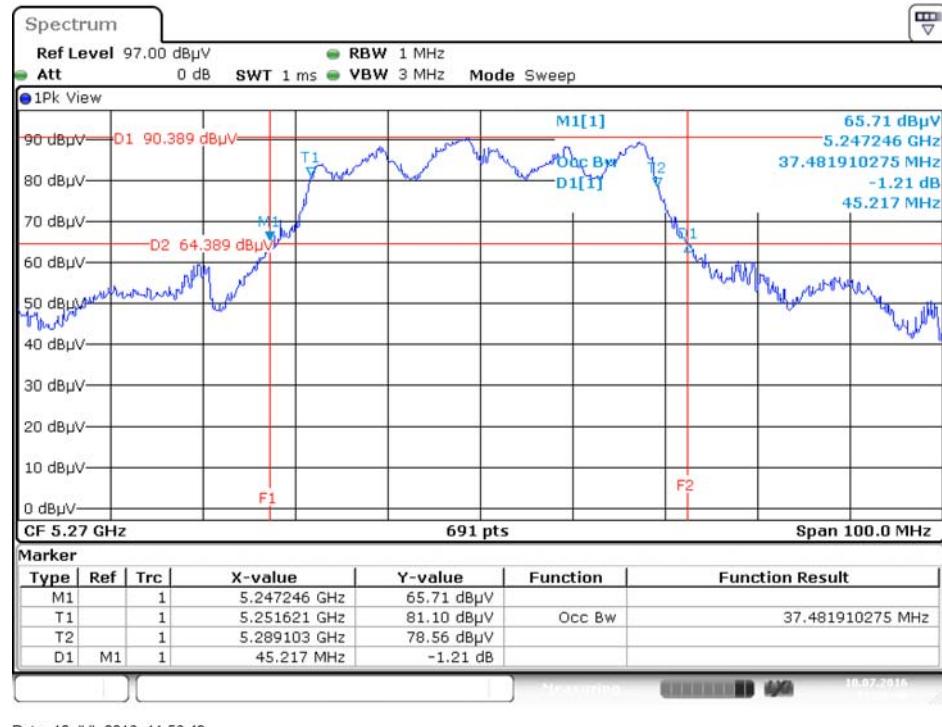
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 /
Ant. 1 + Ant. 2 + Ant. 3 / 5580 MHz**



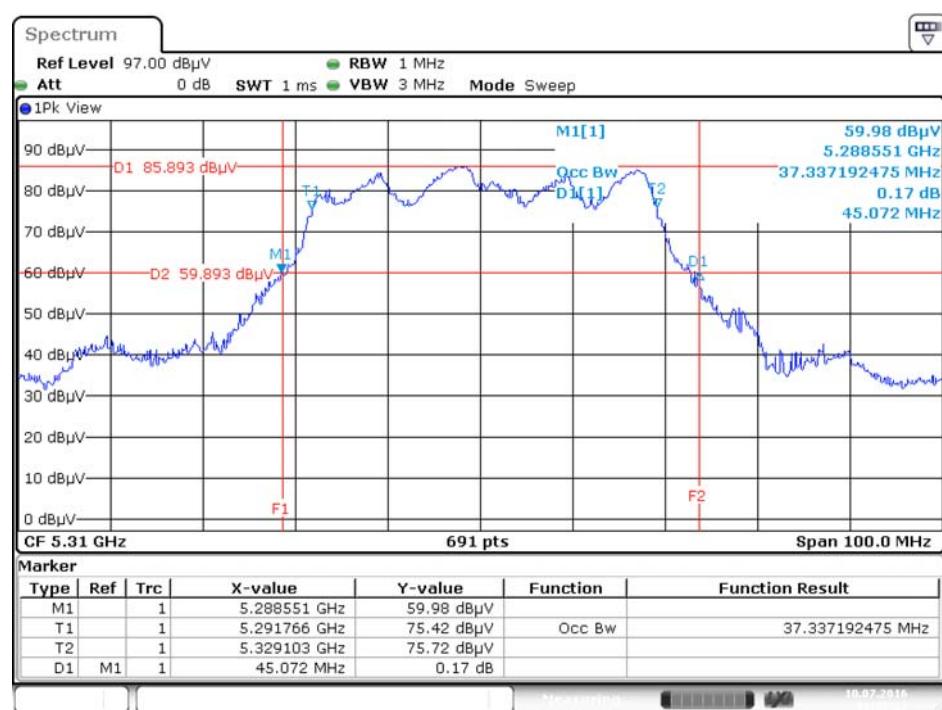
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 /
Ant. 1 + Ant. 2 + Ant. 3 / 5700 MHz**



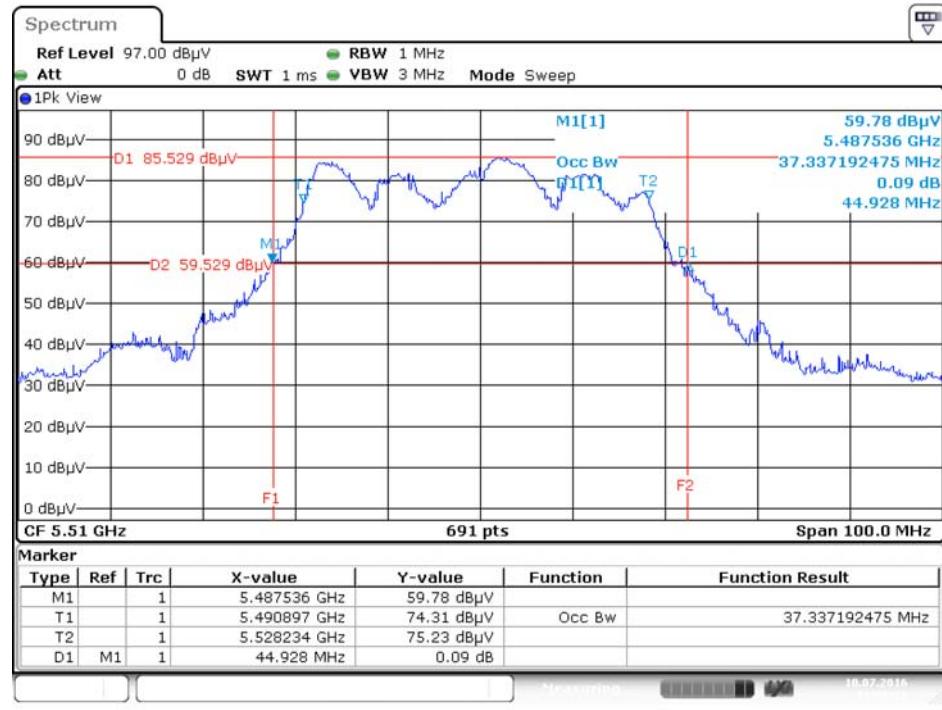
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 /
Ant. 1 + Ant. 2 + Ant. 3 / 5270 MHz**



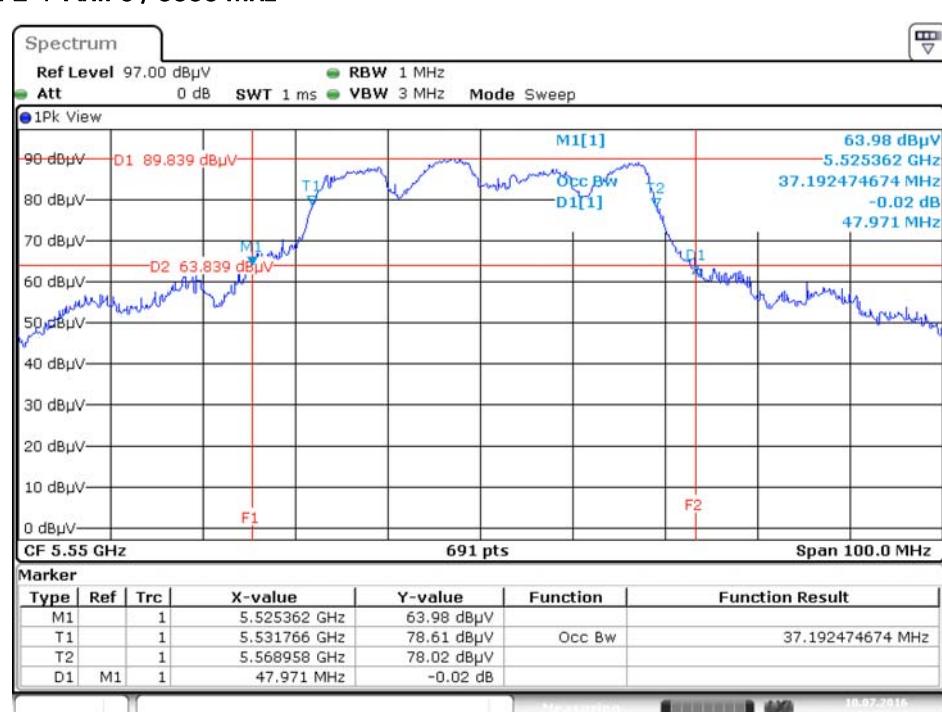
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 /
Ant. 1 + Ant. 2 + Ant. 3 / 5310 MHz**



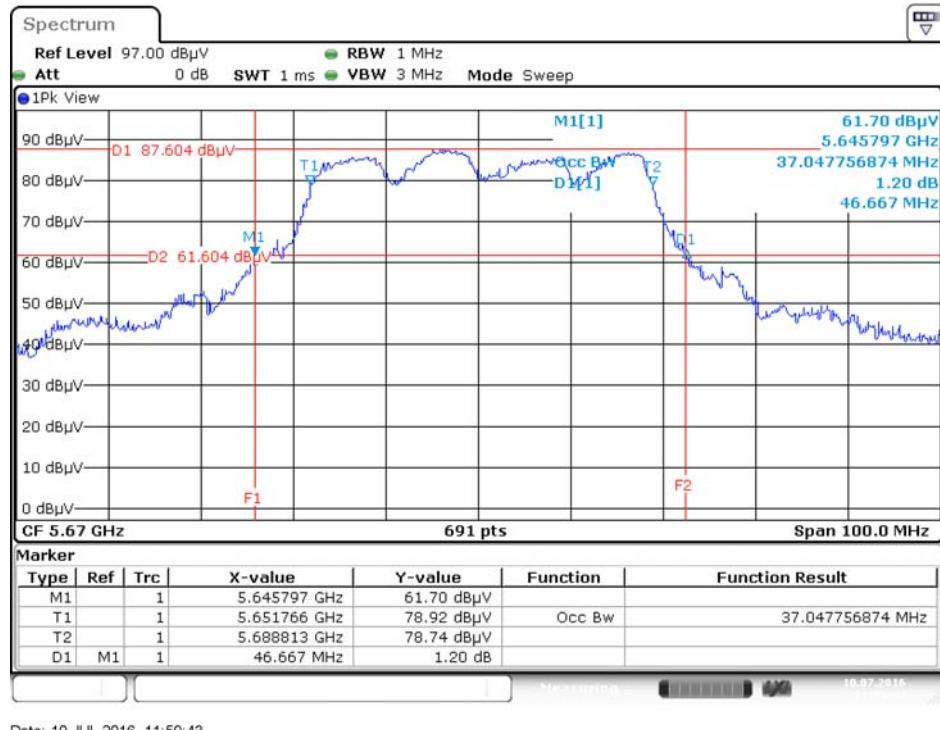
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 /
Ant. 1 + Ant. 2 + Ant. 3 / 5510 MHz**



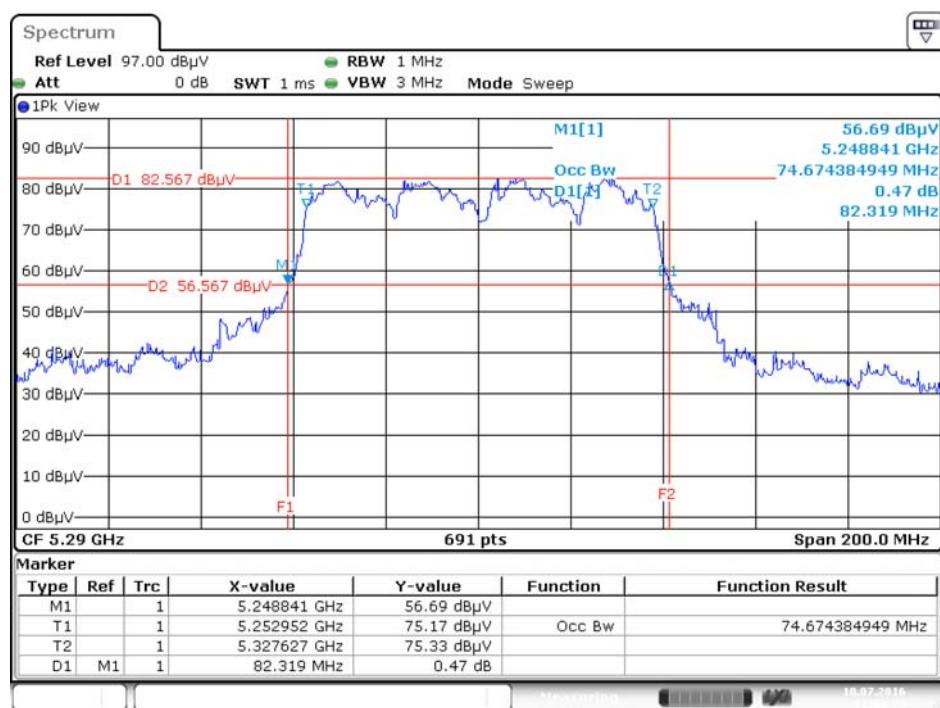
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 /
Ant. 1 + Ant. 2 + Ant. 3 / 5550 MHz**



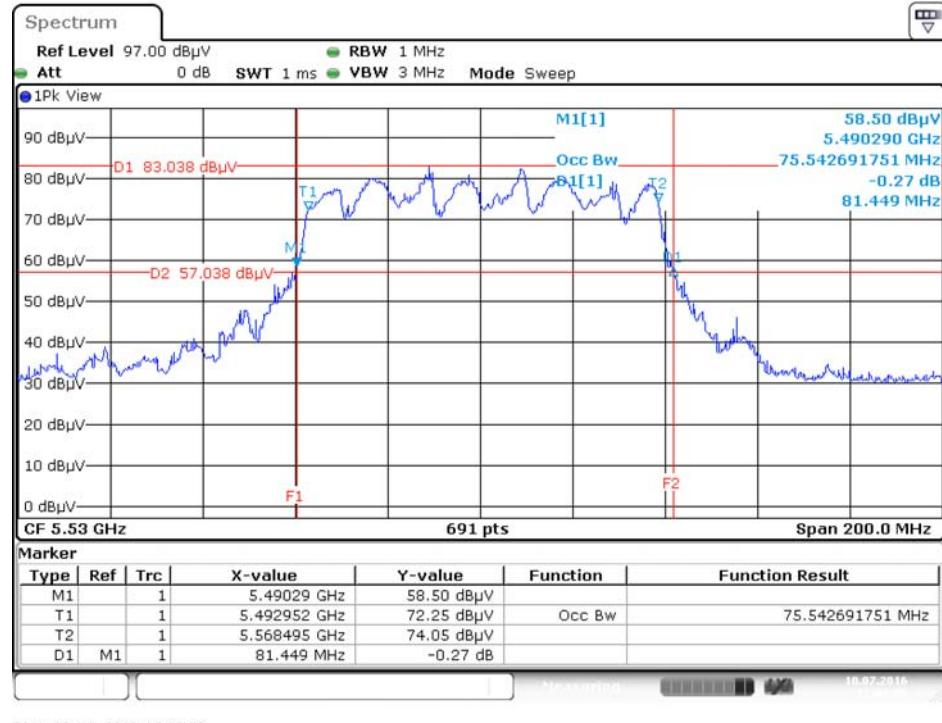
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 /
Ant. 1 + Ant. 2 + Ant. 3 / 5670 MHz**



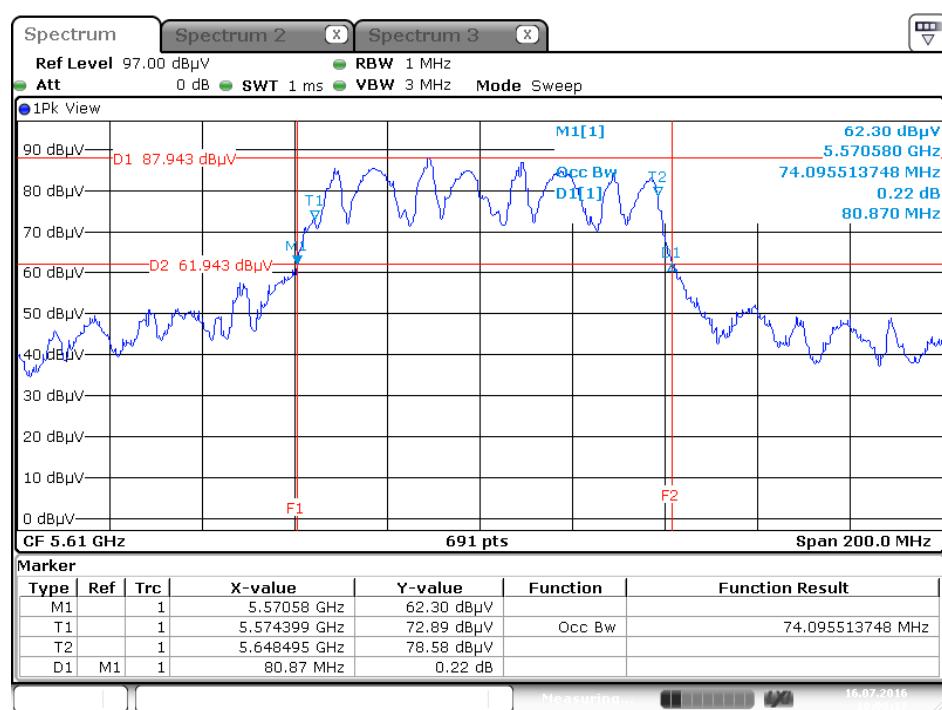
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 /
Ant. 1 + Ant. 2 + Ant. 3 / 5290 MHz**



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



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



4.2. Maximum Conducted Output Power Measurement

4.2.1. Limit

Frequency Band	Limit
<input checked="" type="checkbox"/> 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.
<input checked="" type="checkbox"/> 5.470-5.725 GHz	

4.2.2. Measuring Instruments and Setting

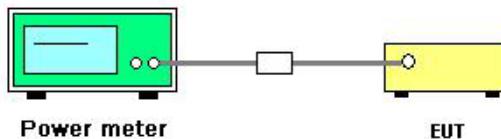
Please refer to section 5 of equipments list in this report The following table is the setting of the power meter.

Power Meter Parameter	Setting
Detector	AVERAGE

4.2.3. Test Procedures

1. The transmitter output (antenna port) was connected to the power meter.
2. Test was performed in accordance with KDB789033 D02 v01r03 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.

4.2.4. Test Setup Layout



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 Maximum Conducted Output Power

For Mode 1 (EUT 1):

Temperature	25°C	Humidity	55%
Test Engineer	Roki Liu	Test Date	Jul. 16, 2016

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result	
		Ant. 1					
802.11a	5260 MHz	22.78			23.48	Complies	
	5300 MHz	21.74			23.48	Complies	
	5320 MHz	18.97			23.48	Complies	
	5500 MHz	18.63			23.48	Complies	
	5580 MHz	21.93			23.48	Complies	
	5700 MHz	18.39			23.48	Complies	
Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result	
		Ant. 1	Ant. 2	Ant. 3	Total		
802.11ac MCS0/Nss1 VHT20	5260 MHz	12.81	14.20	14.24	18.57	23.38	Complies
	5300 MHz	12.98	13.72	14.34	18.49	23.38	Complies
	5320 MHz	12.66	13.29	14.46	18.31	23.38	Complies
	5500 MHz	12.68	13.19	14.67	18.37	23.38	Complies
	5580 MHz	12.73	13.75	14.51	18.49	23.38	Complies
	5700 MHz	12.79	14.06	13.89	18.39	23.38	Complies
802.11ac MCS0/Nss1 VHT40	5270 MHz	16.04	17.07	17.31	21.61	23.38	Complies
	5310 MHz	14.07	14.59	15.04	19.36	23.38	Complies
	5510 MHz	12.89	13.45	14.87	18.59	23.38	Complies
	5550 MHz	15.77	16.95	17.16	21.44	23.38	Complies
	5670 MHz	16.08	17.02	17.22	21.57	23.38	Complies
802.11ac MCS0/Nss1 VHT80	5290 MHz	11.98	12.92	13.22	17.51	23.38	Complies
	5530 MHz	11.87	12.21	13.17	17.22	23.38	Complies
	5610 MHz	17.66	18.63	19.07	23.26	23.38	Complies

Note: 802.11a:

Ant. Gain = 6.50dBi, so limit = $23.98 - (6.50 - 6) = 23.48$ dBm

Note: 802.11ac MCS0/Nss1 VHT20 / VHT 40 / VHT 80:

Ant. Gain = 6.60dBi, so limit = $23.98 - (6.60 - 6) = 23.38$ dBm

For Mode 2 (EUT 2):

Temperature	25°C	Humidity	55%
Test Engineer	Roki Liu	Test Date	Jul. 16, 2016

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Ant. 1					
802.11a	5260 MHz	23.75				23.98	Complies
	5300 MHz	22.77				23.98	Complies
	5320 MHz	19.05				23.98	Complies
	5500 MHz	18.87				23.98	Complies
	5580 MHz	23.05				23.98	Complies
	5700 MHz	17.34				23.98	Complies
Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Ant. 1	Ant. 2	Ant. 3	Total		
802.11ac MCS0/Nss1 VHT20	5260 MHz	15.85	15.65	14.81	20.23	23.98	Complies
	5300 MHz	15.81	15.05	15.35	20.19	23.98	Complies
	5320 MHz	15.79	14.65	15.67	20.17	23.98	Complies
	5500 MHz	15.16	14.51	16.01	20.04	23.98	Complies
	5580 MHz	15.04	14.45	16.02	19.99	23.98	Complies
	5700 MHz	15.27	14.53	16.01	20.08	23.98	Complies
802.11ac MCS0/Nss1 VHT40	5270 MHz	19.05	18.02	17.75	23.08	23.98	Complies
	5310 MHz	15.05	13.68	14.73	19.30	23.98	Complies
	5510 MHz	13.11	12.01	13.84	17.82	23.98	Complies
	5550 MHz	18.44	17.15	19.05	23.05	23.98	Complies
	5670 MHz	15.95	14.85	16.75	20.69	23.98	Complies
802.11ac MCS0/Nss1 VHT80	5290 MHz	14.29	13.06	13.44	18.40	23.98	Complies
	5530 MHz	11.63	10.75	12.25	16.36	23.98	Complies
	5610 MHz	11.59	10.75	12.21	16.33	23.98	Complies

4.3. Power Spectral Density Measurement

4.3.1. Limit

The following table is power spectral density limits and decrease power density limit rule refer to section 4.2.1.

Frequency Band	Limit
<input checked="" type="checkbox"/> 5.25-5.35 GHz	11 dBm/MHz
<input checked="" type="checkbox"/> 5.470-5.725 GHz	11 dBm/MHz

4.3.2. Measuring Instruments and Setting

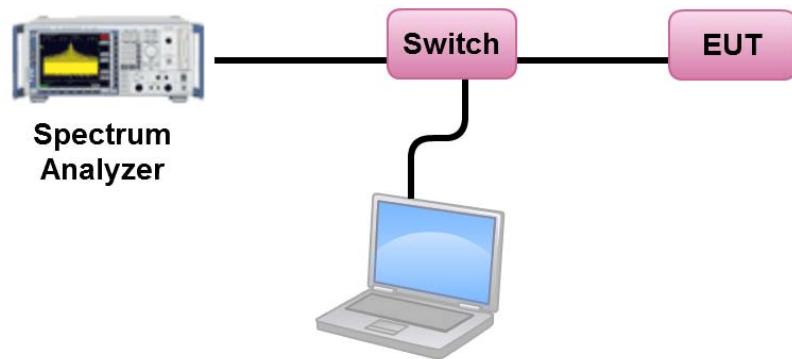
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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

4.3.3. 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 v01r03 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 and sum the spectra across the outputs.

4.3.4. Test Setup Layout



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 Power Spectral Density

For Mode 1 (EUT 1):

Temperature	25°C	Humidity	55%
Test Engineer	Roki Liu		

Mode	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
802.11a	5260 MHz	9.59	10.50	Complies
	5300 MHz	8.63	10.50	Complies
	5320 MHz	5.81	10.50	Complies
	5500 MHz	5.54	10.50	Complies
	5580 MHz	8.77	10.50	Complies
	5700 MHz	5.17	10.50	Complies
802.11ac MCS0/Nss1 VHT20	5260 MHz	5.38	5.92	Complies
	5300 MHz	5.32	5.92	Complies
	5320 MHz	5.20	5.92	Complies
	5500 MHz	5.36	5.92	Complies
	5580 MHz	5.32	5.92	Complies
	5700 MHz	5.22	5.92	Complies
802.11ac MCS0/Nss1 VHT40	5270 MHz	5.22	5.92	Complies
	5310 MHz	3.05	5.92	Complies
	5510 MHz	2.50	5.92	Complies
	5550 MHz	5.25	5.92	Complies
	5670 MHz	5.21	5.92	Complies
802.11ac MCS0/Nss1 VHT80	5290 MHz	-1.80	5.92	Complies
	5530 MHz	-1.87	5.92	Complies
	5610 MHz	3.98	5.92	Complies

Note: 802.11a:

Ant. gain=6.50dBi, so limit =11-(6.50-6)= 10.50 dBm/MHz

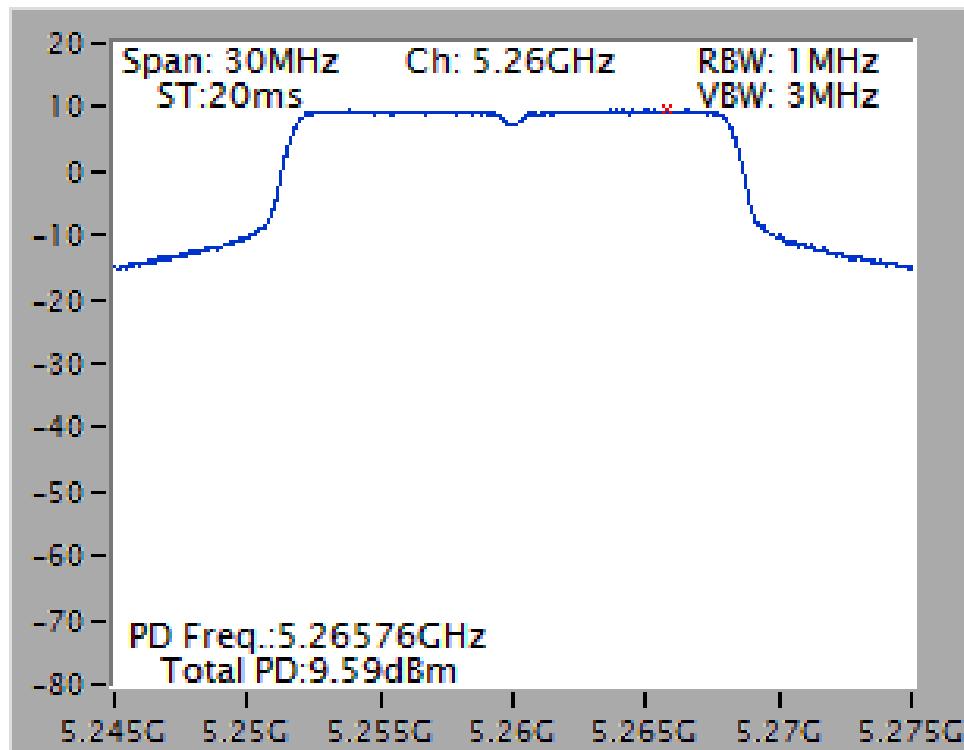
Note: 802.11ac MCS0/Nss1 VHT20 / VHT 40 / VHT 80:

$$\text{Directional Gain} = 10 \log \left[\frac{\sum_{j=1}^{N_{\text{NSS}}} \left(\sum_{k=1}^{N_{\text{ANT}}} g_{j,k} \right)^2}{N_{\text{ANT}}} \right] = 11.08 \text{ dBi, so limit} = 11-(11.08-6) = 5.92 \text{ dBm/MHz}$$

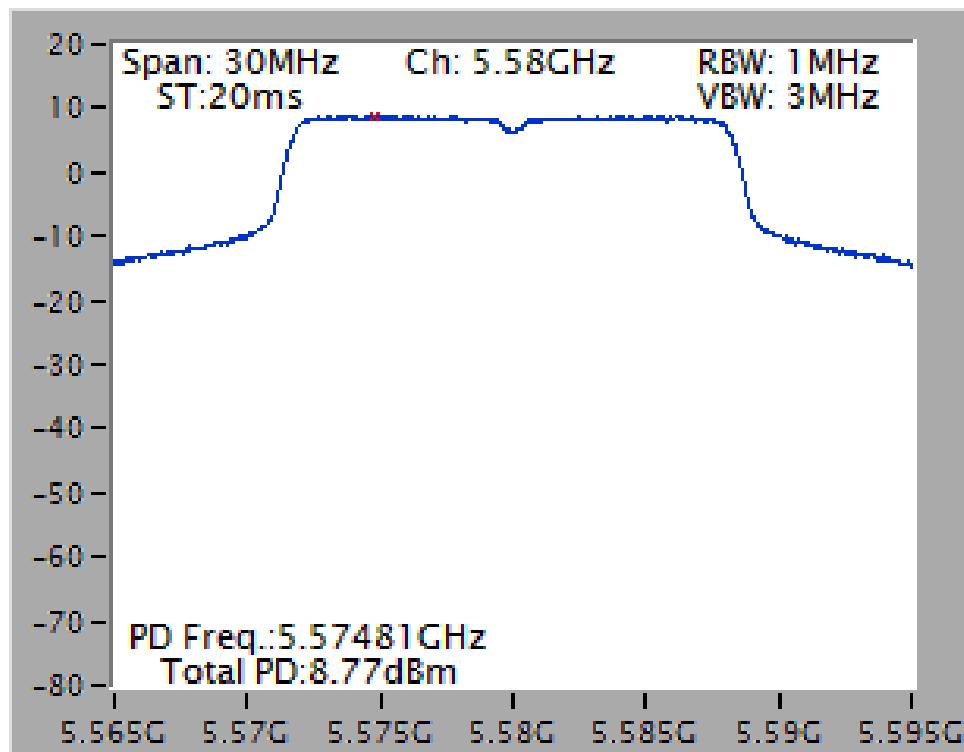
Note: All the test values were listed in the report.

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

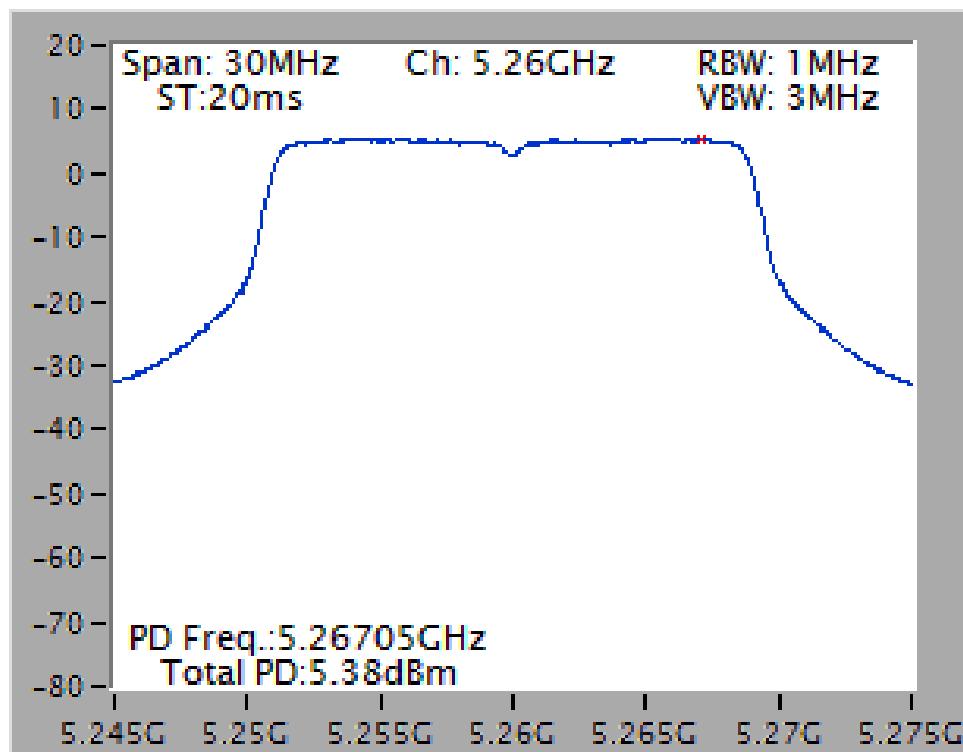
Power Density Plot on Configuration IEEE 802.11a / Ant. 1 / 5260 MHz



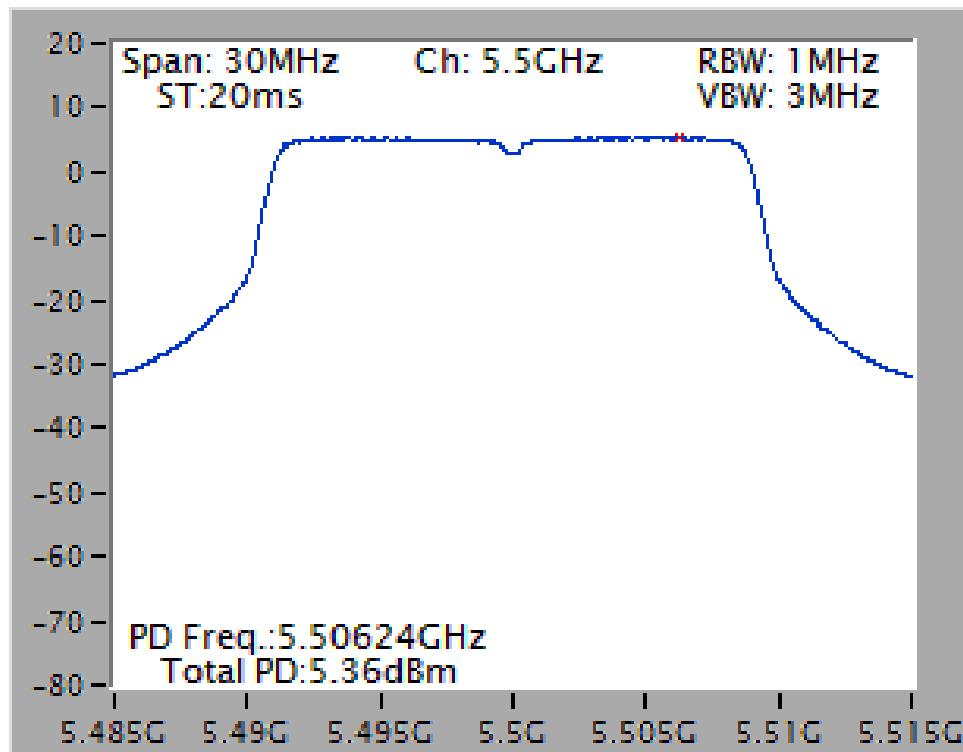
Power Density Plot on Configuration IEEE 802.11a / Ant. 1 / 5580 MHz



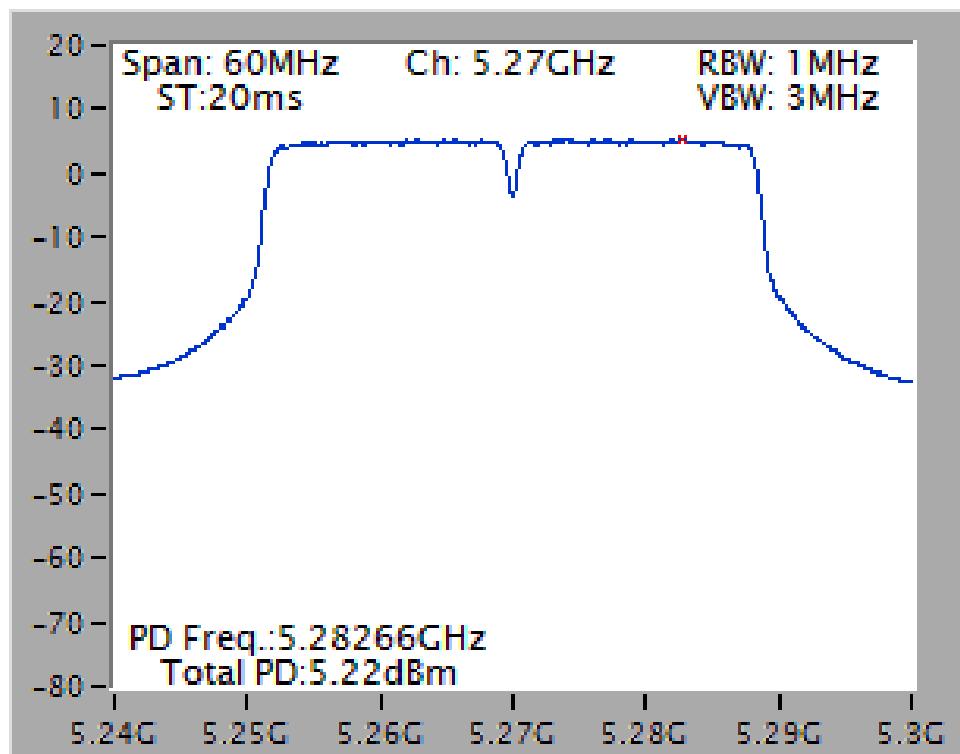
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 / 5260 MHz



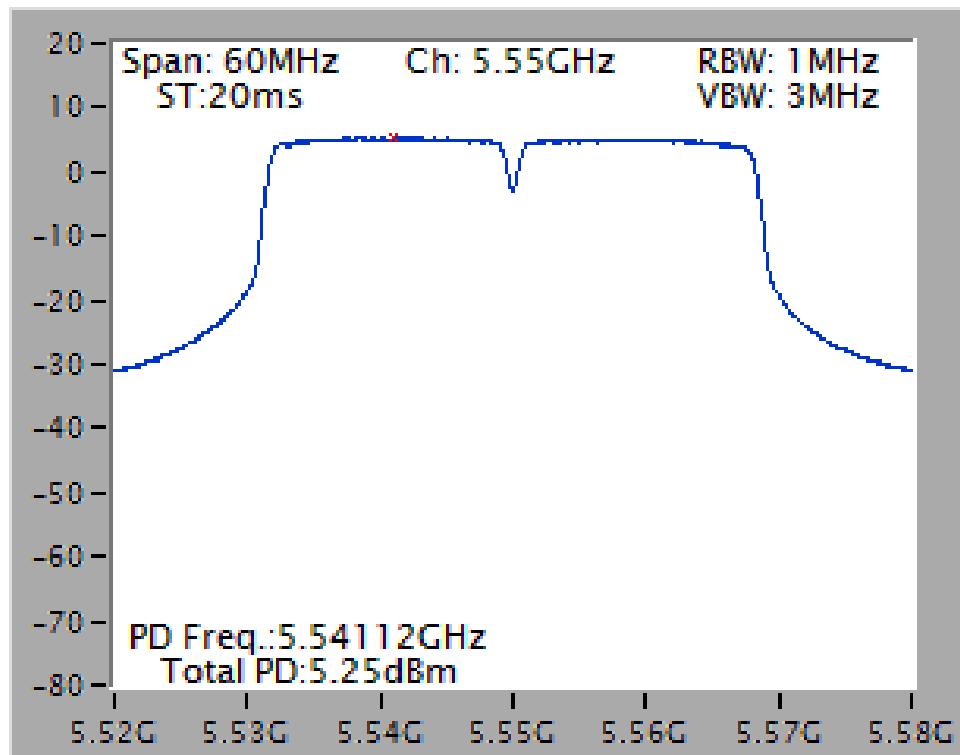
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5500 MHz



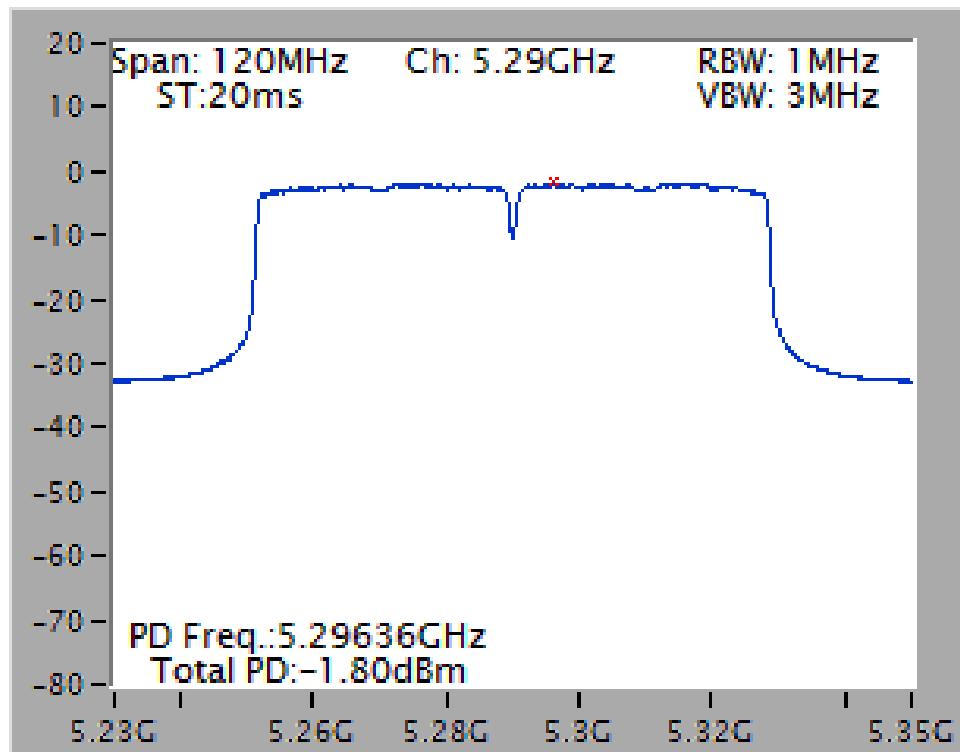
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5270 MHz



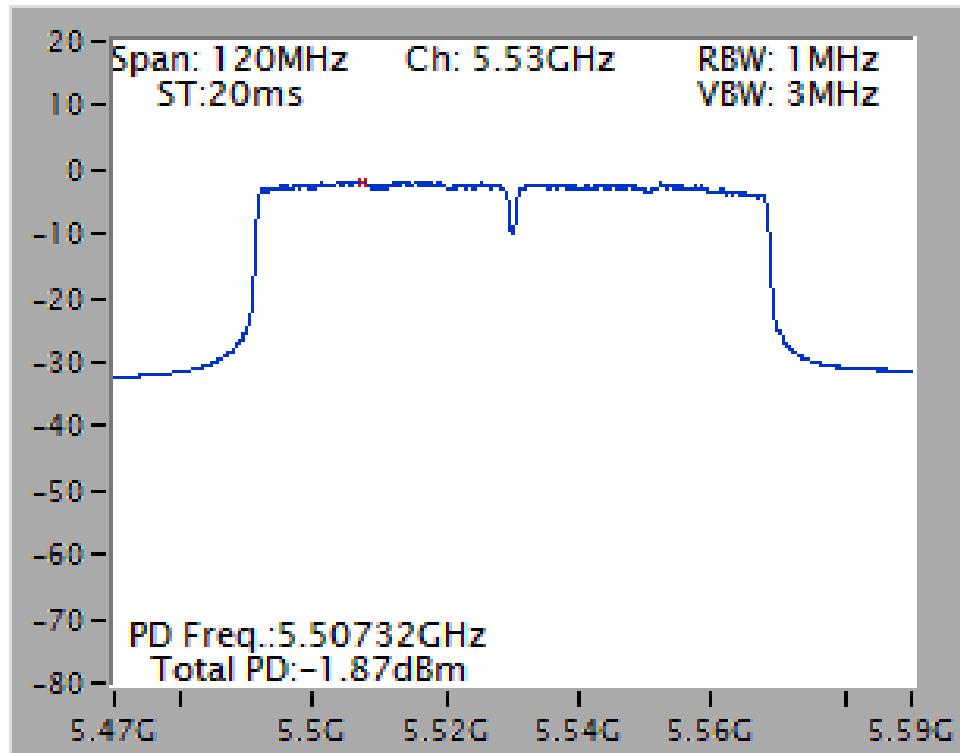
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5550 MHz



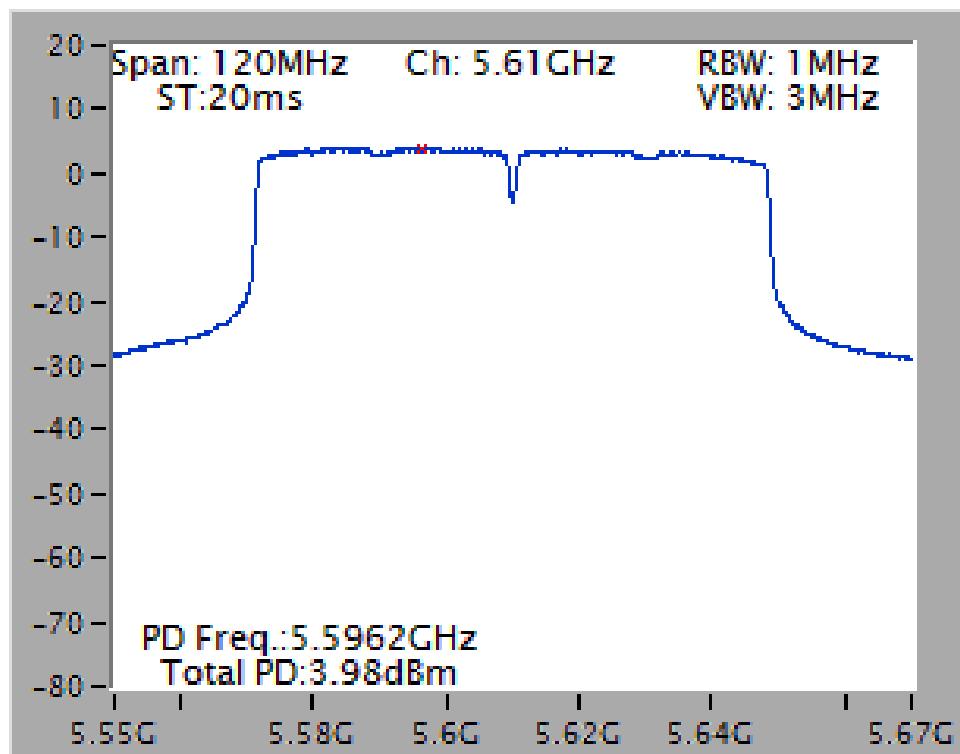
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5290 MHz



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



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



For Mode 2 (EUT 2):

Temperature	25°C	Humidity	55%
Test Engineer	Roki Liu		

Mode	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
802.11a	5260 MHz	10.72	11.00	Complies
	5300 MHz	9.75	11.00	Complies
	5320 MHz	6.03	11.00	Complies
	5500 MHz	5.78	11.00	Complies
	5580 MHz	10.01	11.00	Complies
	5700 MHz	4.28	11.00	Complies
802.11ac MCS0/Nss1 VHT20	5260 MHz	7.19	7.23	Complies
	5300 MHz	7.08	7.23	Complies
	5320 MHz	7.11	7.23	Complies
	5500 MHz	6.93	7.23	Complies
	5580 MHz	6.86	7.23	Complies
	5700 MHz	6.98	7.23	Complies
802.11ac MCS0/Nss1 VHT40	5270 MHz	7.02	7.23	Complies
	5310 MHz	3.17	7.23	Complies
	5510 MHz	1.81	7.23	Complies
	5550 MHz	6.99	7.23	Complies
	5670 MHz	4.59	7.23	Complies
802.11ac MCS0/Nss1 VHT80	5290 MHz	-0.61	7.23	Complies
	5530 MHz	-2.65	7.23	Complies
	5610 MHz	-2.71	7.23	Complies

Note: 802.11a:

Ant. gain=5.00dBi<6dBi, so the limit doesn't reduce.

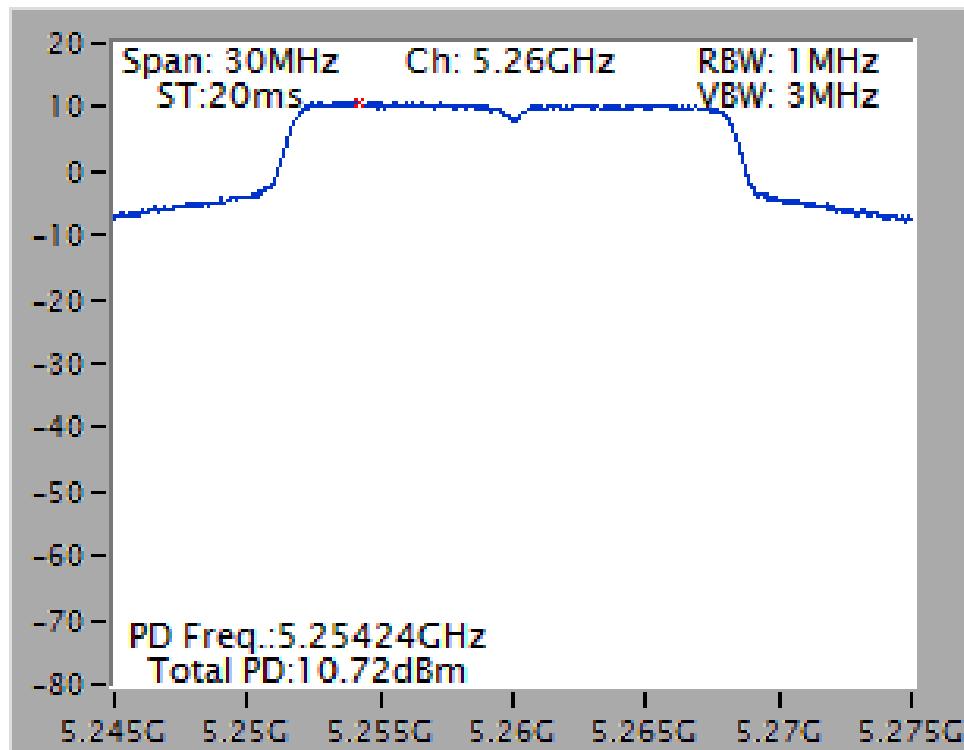
Note: 802.11ac MCS0/Nss1 VHT20 / VHT 40 / VHT 80:

$$\text{Directional Gain} = 10 \log \left[\frac{\sum_{j=1}^{N_{\text{SS}}} \left(\sum_{k=1}^{N_{\text{ANT}}} g_{j,k} \right)^2}{N_{\text{ANT}}} \right] = 9.77 \text{ dBi, so limit} = 11 - (9.77 - 6) = 7.23 \text{ dBm/MHz}$$

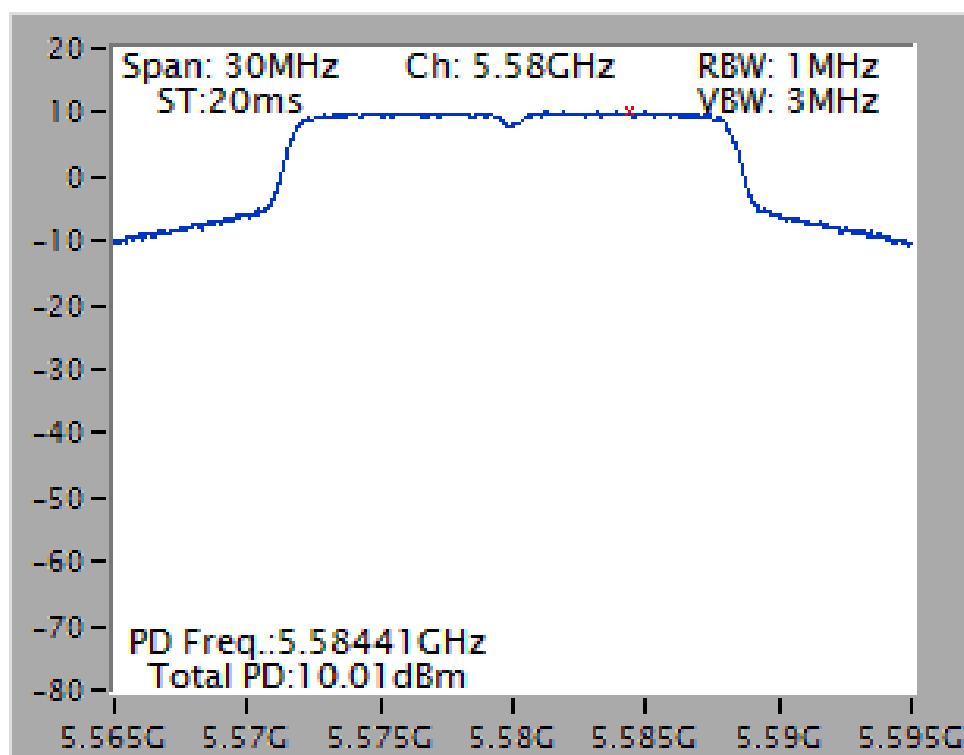
Note: All the test values were listed in the report.

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

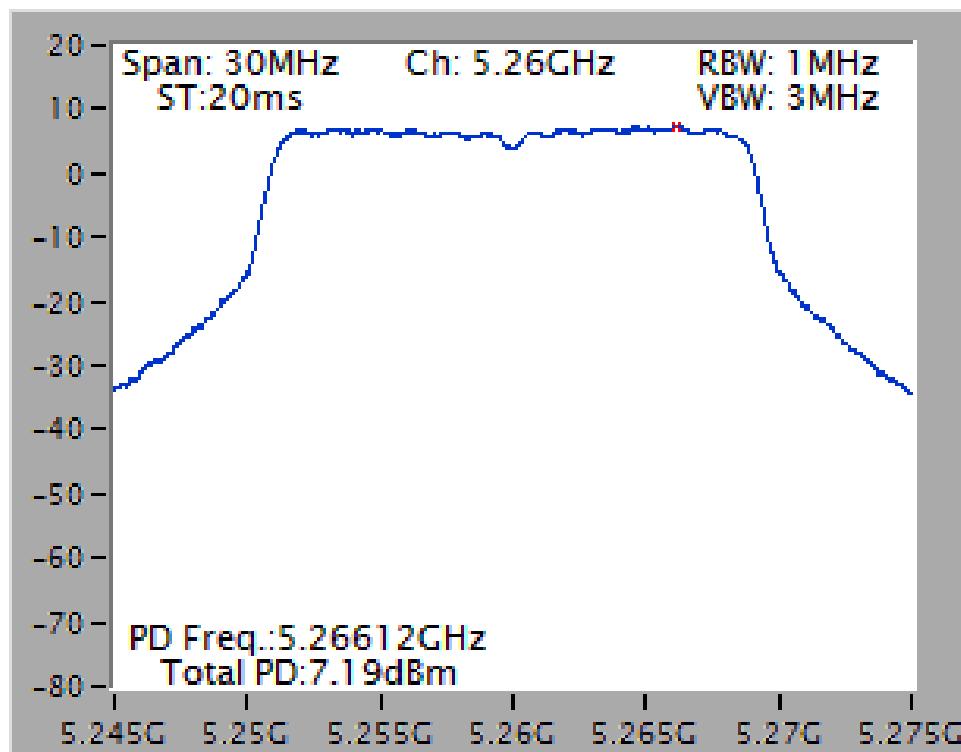
Power Density Plot on Configuration IEEE 802.11a / Ant. 1 / 5260 MHz



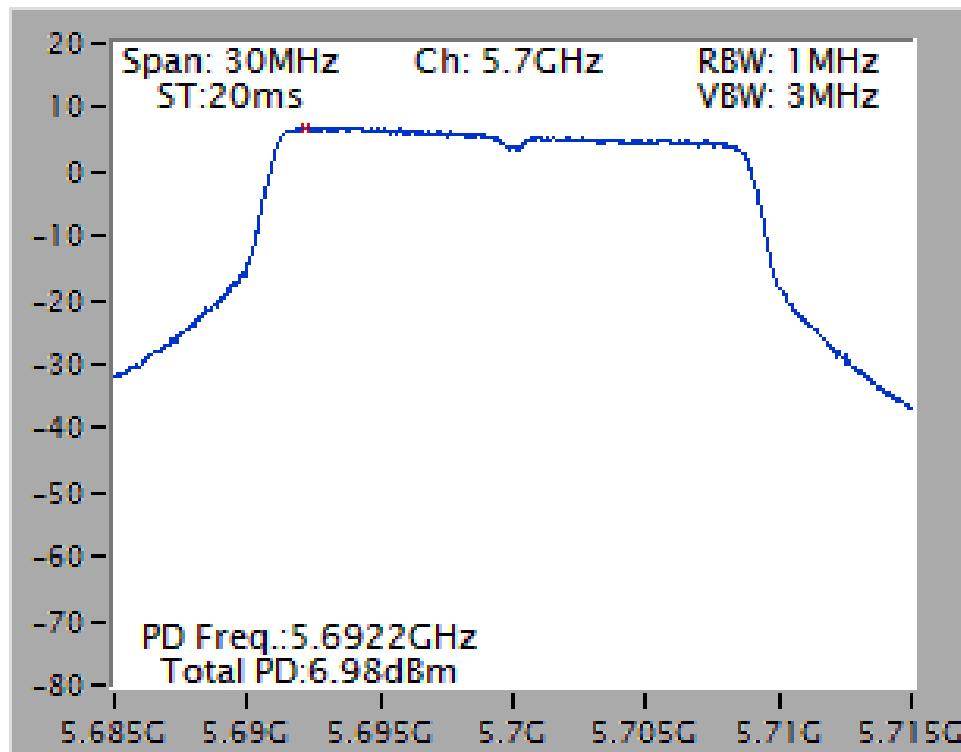
Power Density Plot on Configuration IEEE 802.11a / Ant. 1 / 5580 MHz



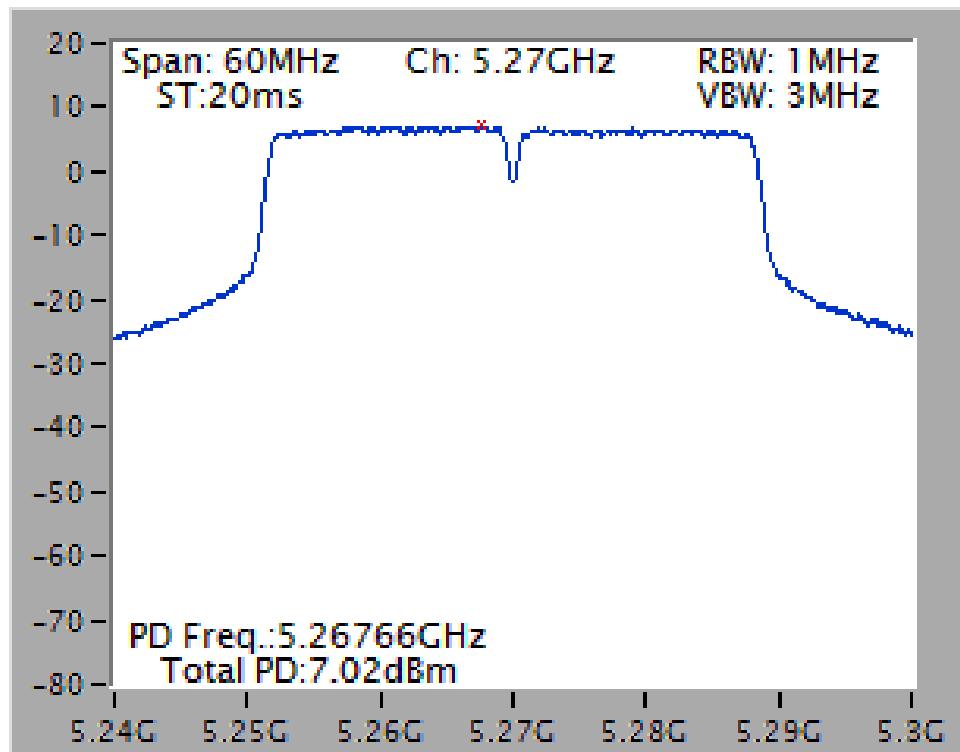
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 / 5260 MHz



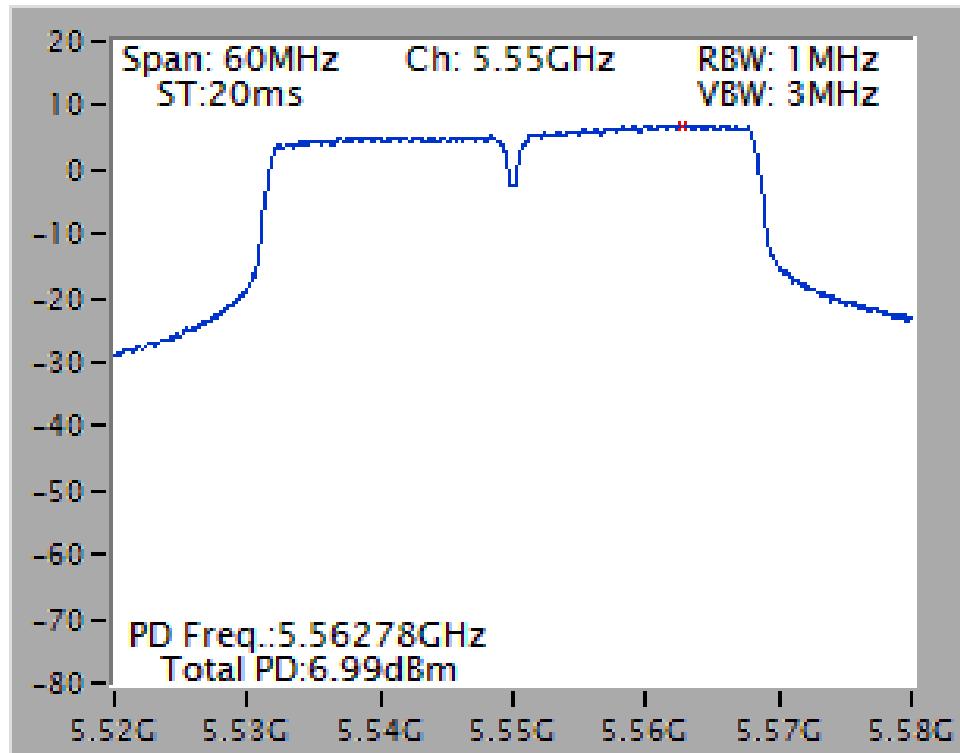
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Ant. 1 + Ant. 2 + Ant. 3 / 5700 MHz



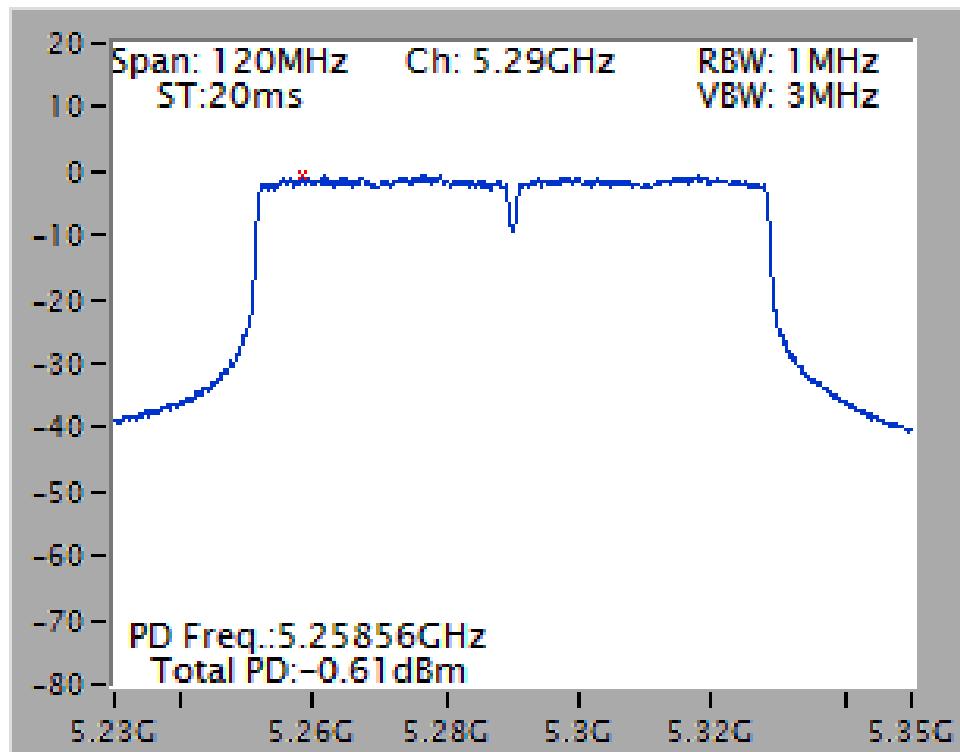
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5270 MHz



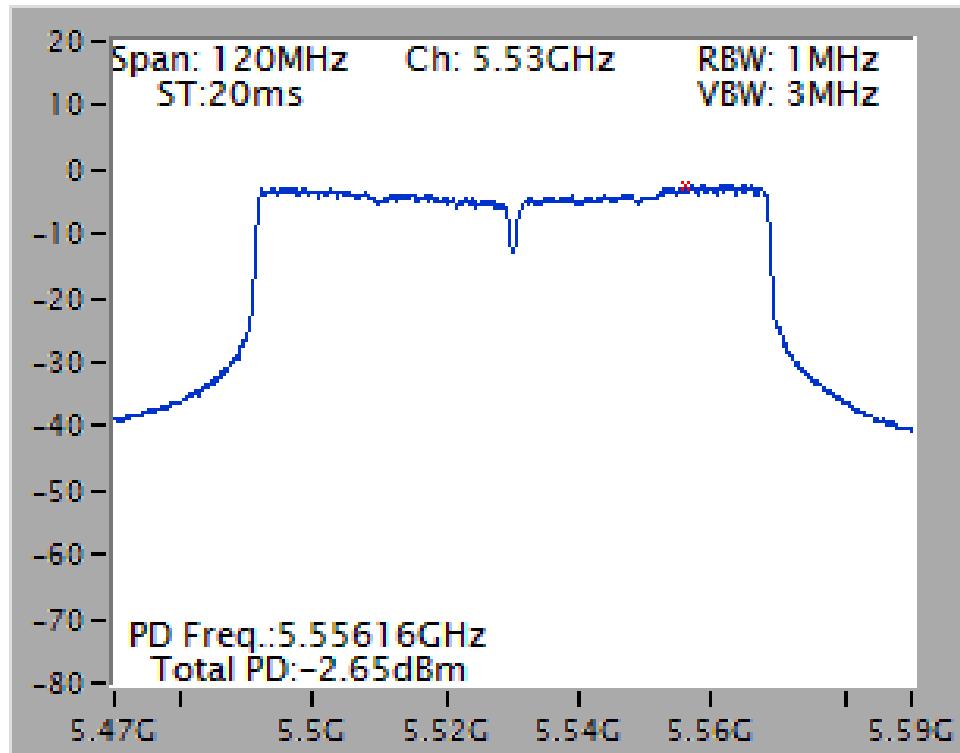
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Ant. 1 + Ant. 2 + Ant. 3 / 5550 MHz



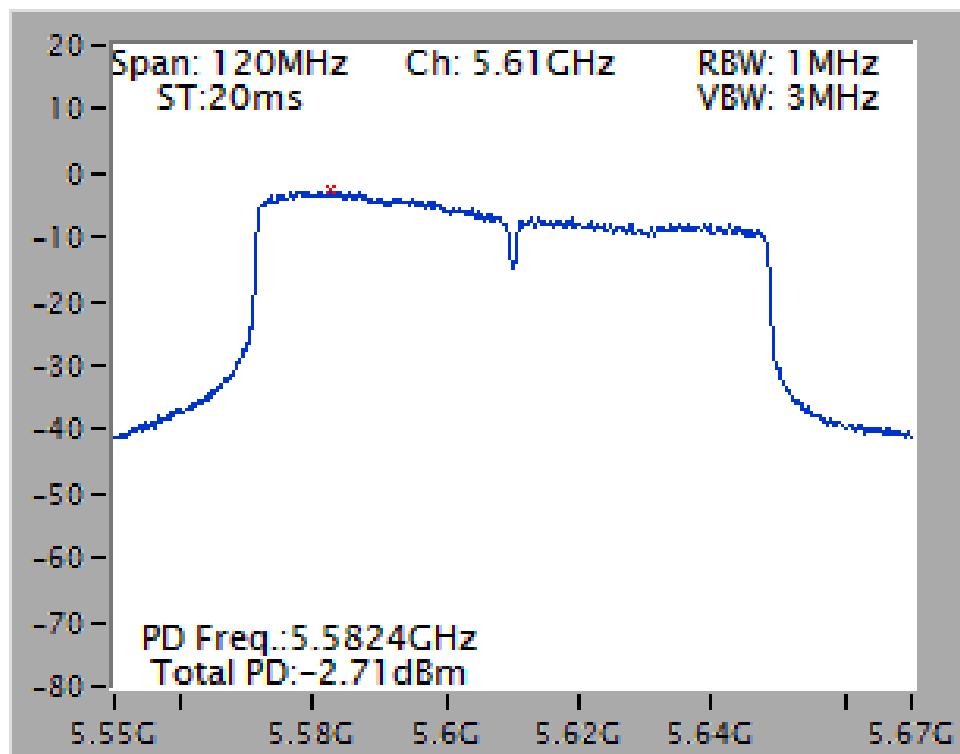
Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Ant. 1 + Ant. 2 + Ant. 3 / 5290 MHz



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



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



4.4. Radiated Emissions Measurement

4.4.1. Limit

For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an 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.

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

4.4.2. 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.

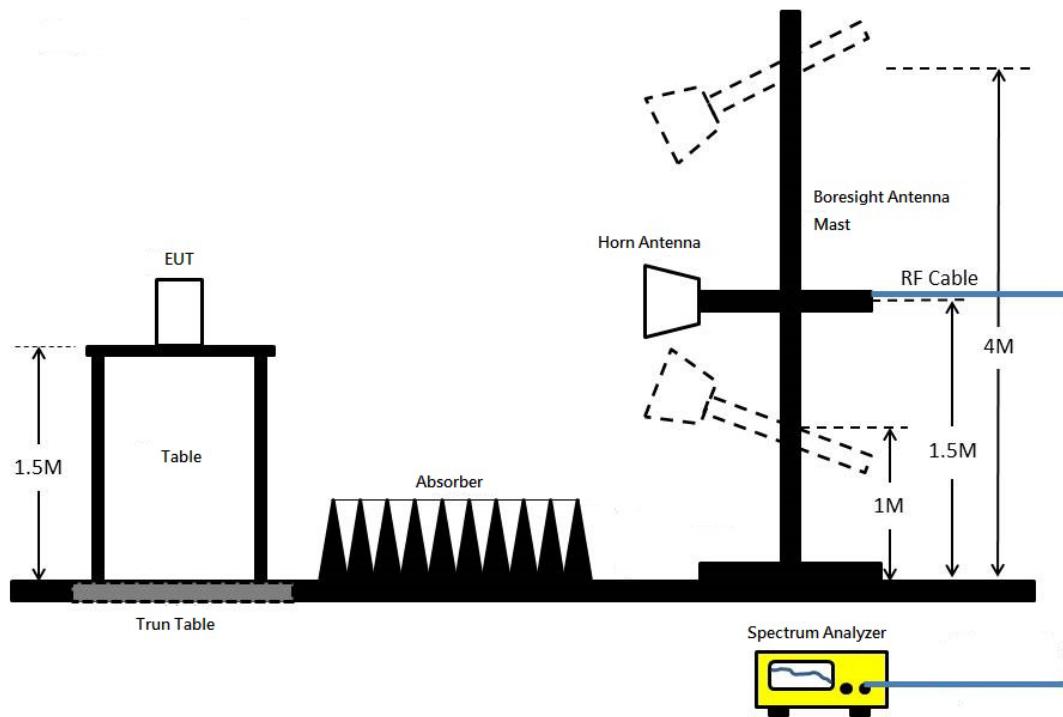
Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	40 GHz
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average
RBW / VBW (Emission in non-restricted band)	1MHz / 3MHz for peak

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

4.4.3. 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.

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

For Mode 1 (EUT 1):

Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11a CH 52 / Ant. 1
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	15770.36	48.15	54.00	-5.85	31.85	13.39	38.17	35.26	113	269	Average	HORIZONTAL
2	15784.72	60.93	74.00	-13.07	44.71	13.39	38.12	35.29	113	269	Peak	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
1	15770.00	47.93	54.00	-6.07	31.63	13.39	38.17	35.26	120	233	Average	VERTICAL
2	15774.72	61.22	74.00	-12.78	44.92	13.39	38.17	35.26	120	233	Peak	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11a CH 60 / Ant. 1
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
1	10598.84	43.90	54.00	-10.10	29.23	10.59	38.94	34.86	138	156	Average	HORIZONTAL
2	10606.44	57.49	74.00	-16.51	42.82	10.59	38.94	34.86	138	156	Peak	HORIZONTAL
3	15905.40	47.87	54.00	-6.13	31.81	13.39	38.01	35.34	137	356	Average	HORIZONTAL
4	15907.68	60.95	74.00	-13.05	44.89	13.39	38.01	35.34	137	356	Peak	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
1	10600.92	43.70	54.00	-10.30	29.03	10.59	38.94	34.86	116	281	Average	VERTICAL
2	10604.72	56.12	74.00	-17.88	41.45	10.59	38.94	34.86	116	281	Peak	VERTICAL
3	15894.52	60.84	74.00	-13.16	44.78	13.39	38.01	35.34	119	92	Peak	VERTICAL
4	15909.56	47.96	54.00	-6.04	31.90	13.39	38.01	35.34	119	92	Average	VERTICAL

Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11a CH 64 / Ant. 1
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
	MHz	dBuV/m	dBuV/m									
1	10632.88	56.08	74.00	-17.92	41.37	10.60	38.95	34.84	117	108	Peak	HORIZONTAL
2	10632.96	43.46	54.00	-10.54	28.75	10.60	38.95	34.84	117	108	Average	HORIZONTAL
3	15952.12	61.53	74.00	-12.47	45.55	13.39	37.95	35.36	119	126	Peak	HORIZONTAL
4	15956.84	48.52	54.00	-5.48	32.54	13.39	37.95	35.36	119	126	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
	MHz	dBuV/m	dBuV/m									
1	10637.28	43.47	54.00	-10.53	28.76	10.60	38.95	34.84	111	257	Average	VERTICAL
2	10644.04	56.30	74.00	-17.70	41.59	10.60	38.95	34.84	111	257	Peak	VERTICAL
3	15955.24	61.44	74.00	-12.56	45.46	13.39	37.95	35.36	112	225	Peak	VERTICAL
4	15956.84	48.60	54.00	-5.40	32.62	13.39	37.95	35.36	112	225	Average	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11a CH 100 / Ant. 1
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
1	11005.08	56.92	74.00	-17.08	41.83	10.66	39.10	34.67	117	121	Peak	HORIZONTAL
2	11006.48	43.94	54.00	-10.06	28.85	10.66	39.10	34.67	117	121	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
1	11005.80	56.23	74.00	-17.77	41.14	10.66	39.10	34.67	111	234	Peak	VERTICAL
2	11007.32	43.90	54.00	-10.10	28.81	10.66	39.10	34.67	111	234	Average	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11a CH 116 / Ant. 1
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11160.64	44.48	54.00	-9.52	29.19	10.69	39.30	34.70	112	335	Average	HORIZONTAL
2	11169.00	56.81	74.00	-17.19	41.52	10.69	39.30	34.70	112	335	Peak	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11159.08	44.28	54.00	-9.72	28.99	10.69	39.30	34.70	107	146	Average	VERTICAL
2	11167.32	57.08	74.00	-16.92	41.79	10.69	39.30	34.70	107	146	Peak	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11a CH 140 / Ant. 1
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

	Freq	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	Freq	Level	Line	Limit	Level	Loss	Factor	Factor			
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11397.32	45.08	54.00	-8.92	29.50	10.73	39.58	34.73	119	79	Average
2	11403.08	57.68	74.00	-16.32	42.10	10.73	39.58	34.73	119	79	Peak

Vertical

	Freq	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	Freq	Level	Line	Limit	Level	Loss	Factor	Factor			
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11402.08	57.64	74.00	-16.36	42.06	10.73	39.58	34.73	128	224	Peak
2	11408.32	45.07	54.00	-8.93	29.49	10.73	39.58	34.73	128	224	Average



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15782.24	61.08	74.00	-12.92	44.86	13.39	38.12	35.29	107	161	Peak	HORIZONTAL
2	15782.32	48.86	54.00	-5.14	32.64	13.39	38.12	35.29	107	161	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	15772.64	48.08	54.00	-5.92	31.78	13.39	38.17	35.26	107	243	Average	VERTICAL
2	15778.68	61.08	74.00	-12.92	44.78	13.39	38.17	35.26	107	243	Peak	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 60 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	10595.48	57.06	74.00	-16.94	42.39	10.59	38.94	34.86	125	342	Peak	HORIZONTAL
2	10602.32	43.81	54.00	-10.19	29.14	10.59	38.94	34.86	125	342	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	dB		
1	10599.72	61.04	74.00	-12.96	46.37	10.59	38.94	34.86	161	172	Peak	VERTICAL
2	10601.72	48.39	54.00	-5.61	33.72	10.59	38.94	34.86	161	172	Average	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 64 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10630.16	55.74	74.00	-18.26	41.03	10.60	38.95	34.84	118	108	Peak	HORIZONTAL
2	10646.08	43.54	54.00	-10.46	28.83	10.60	38.95	34.84	118	108	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10632.92	55.71	74.00	-18.29	41.00	10.60	38.95	34.84	122	281	Peak	VERTICAL
2	10640.28	43.39	54.00	-10.61	28.68	10.60	38.95	34.84	122	281	Average	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10999.00	56.54	74.00	-17.46	41.45	10.66	39.10	34.67	113	318	Peak	HORIZONTAL
2	11002.00	43.99	54.00	-10.01	28.90	10.66	39.10	34.67	113	318	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10995.64	57.75	74.00	-16.25	42.68	10.66	39.09	34.68	107	187	Peak	VERTICAL
2	10997.08	45.27	54.00	-8.73	30.18	10.66	39.10	34.67	107	187	Average	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 116 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

	Freq	Limit Level	Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11150.84	64.04	74.00	-9.96	48.78	10.69	39.26	34.69	162	182	Peak	HORIZONTAL
2	11153.08	49.72	54.00	-4.28	34.46	10.69	39.26	34.69	162	182	Average	HORIZONTAL

Vertical

	Freq	Limit Level	Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11150.12	45.82	54.00	-8.18	30.56	10.69	39.26	34.69	115	217	Average	VERTICAL
2	11167.52	58.40	74.00	-15.60	43.11	10.69	39.30	34.70	115	217	Peak	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 140 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
			Line	Limit	Level	Loss	Factor	Factor	dB	cm		
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11393.68	57.46	74.00	-16.54	41.88	10.73	39.58	34.73	111	148	Peak	HORIZONTAL
2	11403.36	45.39	54.00	-8.61	29.81	10.73	39.58	34.73	111	148	Average	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
			Line	Limit	Level	Loss	Factor	Factor	dB	cm		
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11400.48	58.33	74.00	-15.67	42.75	10.73	39.58	34.73	122	304	Peak	VERTICAL
2	11408.52	45.92	54.00	-8.08	30.34	10.73	39.58	34.73	122	304	Average	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	15813.04	61.04	74.00	-12.96	44.82	13.39	38.12	35.29	113	342	Peak	HORIZONTAL
2	15816.64	48.15	54.00	-5.85	31.93	13.39	38.12	35.29	113	342	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	15803.64	60.62	74.00	-13.38	44.40	13.39	38.12	35.29	108	134	Peak	VERTICAL
2	15819.36	48.14	54.00	-5.86	31.92	13.39	38.12	35.29	108	134	Average	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 62 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10618.68	43.76	54.00	-10.24	29.09	10.59	38.94	34.86	119	333	Average	HORIZONTAL
2	10627.84	57.00	74.00	-17.00	42.29	10.60	38.95	34.84	119	333	Peak	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10613.44	43.82	54.00	-10.18	29.15	10.59	38.94	34.86	113	257	Average	VERTICAL
2	10620.40	56.08	74.00	-17.92	41.41	10.59	38.94	34.86	113	257	Peak	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11017.52	56.73	74.00	-17.27	41.64	10.66	39.10	34.67	118	188	Peak	HORIZONTAL
2	11029.40	44.33	54.00	-9.67	29.20	10.67	39.14	34.68	118	188	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11013.20	44.37	54.00	-9.63	29.28	10.66	39.10	34.67	114	89	Average	VERTICAL
2	11021.08	56.94	74.00	-17.06	41.85	10.66	39.10	34.67	114	89	Peak	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 110 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11090.32	44.87	54.00	-9.13	29.70	10.67	39.18	34.68	106	243	Average	HORIZONTAL
2	11099.48	57.30	74.00	-16.70	42.09	10.68	39.22	34.69	106	243	Peak	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11091.84	44.57	54.00	-9.43	29.40	10.67	39.18	34.68	104	312	Average	VERTICAL
2	1102.72	57.24	74.00	-16.76	42.03	10.68	39.22	34.69	104	312	Peak	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 134 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11340.16	57.77	74.00	-16.23	42.27	10.72	39.50	34.72	109	188	Peak	HORIZONTAL
2	11341.60	44.78	54.00	-9.22	29.28	10.72	39.50	34.72	109	188	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11336.88	44.95	54.00	-9.05	29.45	10.72	39.50	34.72	111	327	Average	VERTICAL
2	11340.36	56.55	74.00	-17.45	41.05	10.72	39.50	34.72	111	327	Peak	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 58 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	15862.28	47.66	54.00	-6.34	31.52	13.39	38.06	35.31	111	49	Average	HORIZONTAL
2	15873.36	60.21	74.00	-13.79	44.15	13.39	38.01	35.34	111	49	Peak	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	15862.40	47.80	54.00	-6.20	31.66	13.39	38.06	35.31	115	248	Average	VERTICAL
2	15869.24	60.90	74.00	-13.10	44.76	13.39	38.06	35.31	115	248	Peak	VERTICAL

Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11051.96	57.20	74.00	-16.80	42.07	10.67	39.14	34.68	109	288	Peak	HORIZONTAL
2	11064.88	44.57	54.00	-9.43	29.40	10.67	39.18	34.68	109	288	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	11058.16	57.15	74.00	-16.85	42.02	10.67	39.14	34.68	113	354	Peak	VERTICAL
2	11064.60	44.48	54.00	-9.52	29.31	10.67	39.18	34.68	113	354	Average	VERTICAL

Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 122 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
			Line	Limit	Level	Loss	Factor	Factor	dB	cm		
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11214.84	44.44	54.00	-9.56	29.10	10.70	39.34	34.70	106	43	Average	HORIZONTAL
2	11222.64	57.27	74.00	-16.73	41.90	10.70	39.38	34.71	106	43	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
			Line	Limit	Level	Loss	Factor	Factor	dB	cm		
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11217.80	58.26	74.00	-15.74	42.92	10.70	39.34	34.70	111	214	Peak	VERTICAL
2	11226.12	44.77	54.00	-9.23	29.40	10.70	39.38	34.71	111	214	Average	VERTICAL

Note:

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

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

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

For Mode 2 (EUT 2):

Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11a CH 52 / Ant. 1
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB									
1	15773.81	58.10	74.00	-15.90	41.88	12.18	37.76	33.72	150	296	Peak	HORIZONTAL
2	15777.88	45.32	54.00	-8.68	29.10	12.18	37.76	33.72	150	296	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m	dB									
1	15773.56	58.01	74.00	-15.99	41.79	12.18	37.76	33.72	150	263	Peak	VERTICAL
2	15781.25	45.29	54.00	-8.71	29.07	12.18	37.76	33.72	150	263	Average	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11a CH 60 / Ant. 1
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10602.98	42.92	54.00	-11.08	28.34	9.65	38.40	33.47	150	143	Average	HORIZONTAL
2	10608.27	55.04	74.00	-18.96	40.44	9.65	38.40	33.45	150	143	Peak	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	10603.11	42.55	54.00	-11.45	27.97	9.65	38.40	33.47	150	196	Average	VERTICAL
2	10603.21	55.77	74.00	-18.23	41.19	9.65	38.40	33.47	150	196	Peak	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11a CH 64 / Ant. 1
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10631.31	42.92	54.00	-11.08	28.30	9.67	38.40	33.45	150	349	Average HORIZONTAL
2	10644.74	55.49	74.00	-18.51	40.85	9.67	38.40	33.43	150	349	Peak HORIZONTAL

Vertical

Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10633.04	42.73	54.00	-11.27	28.11	9.67	38.40	33.45	150	274	Average VERTICAL
2	10645.42	55.45	74.00	-18.55	40.81	9.67	38.40	33.43	150	274	Peak VERTICAL

Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11a CH 100 / Ant. 1
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	10991.51	56.36	74.00	-17.64	41.33	9.84	38.40	33.21	150	176	Peak	HORIZONTAL
2	10996.38	43.28	54.00	-10.72	28.21	9.86	38.40	33.19	150	176	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	10990.13	55.71	74.00	-18.29	40.68	9.84	38.40	33.21	150	85	Peak	VERTICAL
2	10999.62	43.83	54.00	-10.17	28.76	9.86	38.40	33.19	150	85	Average	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11a CH 116 / Ant. 1
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	dB	cm	deg		
1	11161.03	44.04	54.00	-9.96	28.62	9.94	38.67	33.19	150	162	Average	HORIZONTAL
2	11178.59	55.80	74.00	-18.20	40.38	9.94	38.67	33.19	150	162	Peak	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	dB	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	dB	cm	deg		
1	11150.83	57.29	74.00	-16.71	41.95	9.92	38.61	33.19	150	217	Peak	VERTICAL
2	11161.28	45.14	54.00	-8.86	29.72	9.94	38.67	33.19	150	217	Average	VERTICAL

Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11a CH 140 / Ant. 1
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
MHz	dBuV/m	dBuV/m										
1	11394.90	57.27	74.00	-16.73	41.36	10.05	39.04	33.18	150	116	Peak	HORIZONTAL
2	11399.36	44.79	54.00	-9.21	28.88	10.05	39.04	33.18	150	116	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
MHz	dBuV/m	dBuV/m										
1	11393.14	56.80	74.00	-17.20	40.89	10.05	39.04	33.18	150	50	Peak	VERTICAL
2	11401.67	44.83	54.00	-9.17	28.92	10.05	39.04	33.18	150	50	Average	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	15782.76	49.55	54.00	-4.45	33.38	12.20	37.69	33.72	150	111	Average	HORIZONTAL
2	15783.53	61.89	74.00	-12.11	45.72	12.20	37.69	33.72	150	111	Peak	HORIZONTAL

Vertical

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	15780.71	53.30	54.00	-0.70	37.08	12.18	37.76	33.72	155	163	Average	VERTICAL
2	15781.22	66.63	74.00	-7.37	50.41	12.18	37.76	33.72	155	163	Peak	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 60 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	15884.55	58.11	74.00	-15.89	42.13	12.24	37.55	33.81	150	311	Peak	HORIZONTAL
2	15910.00	45.77	54.00	-8.23	29.79	12.24	37.55	33.81	150	311	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	15892.05	60.61	74.00	-13.39	44.63	12.24	37.55	33.81	194	158	Peak	VERTICAL
2	15893.21	47.73	54.00	-6.27	31.75	12.24	37.55	33.81	194	158	Average	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 64 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	15948.46	44.99	54.00	-9.01	29.10	12.27	37.47	33.85	150	158	Average	HORIZONTAL
2	15956.99	57.52	74.00	-16.48	41.63	12.27	37.47	33.85	150	158	Peak	HORIZONTAL

Vertical

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	15952.50	45.07	54.00	-8.93	29.18	12.27	37.47	33.85	150	262	Average	VERTICAL
2	15956.35	57.15	74.00	-16.85	41.26	12.27	37.47	33.85	150	262	Peak	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	10995.90	55.99	74.00	-18.01	40.94	9.84	38.40	33.19	150	289	Peak	HORIZONTAL
2	11001.99	43.24	54.00	-10.76	28.17	9.86	38.40	33.19	150	289	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
1	10986.92	43.40	54.00	-10.60	28.37	9.84	38.40	33.21	150	207	Average	VERTICAL
2	10993.97	55.56	74.00	-18.44	40.51	9.84	38.40	33.19	150	207	Peak	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 116 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable			A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Antenna	Preamp Factor	Factor				
1	11153.21	64.42	74.00	-9.58	49.08	9.92	38.61	33.19	205	215	Peak	HORIZONTAL
2	11162.50	51.35	54.00	-2.65	35.93	9.94	38.67	33.19	205	215	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable			A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Antenna	Preamp Factor	Factor				
1	11160.90	46.53	54.00	-7.47	31.11	9.94	38.67	33.19	147	176	Average	VERTICAL
2	11168.53	59.37	74.00	-14.63	43.95	9.94	38.67	33.19	147	176	Peak	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 140 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11392.31	56.90	74.00	-17.10	40.99	10.05	39.04	33.18	150	213	Peak	HORIZONTAL
2	11415.32	44.18	54.00	-9.82	28.27	10.05	39.04	33.18	150	213	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	11388.65	57.02	74.00	-16.98	41.11	10.05	39.04	33.18	150	129	Peak	VERTICAL
2	11413.97	44.20	54.00	-9.80	28.29	10.05	39.04	33.18	150	129	Average	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15797.82	45.07	54.00	-8.93	28.90	12.20	37.69	33.72	150	91	Average	HORIZONTAL
2	15806.28	57.79	74.00	-16.21	41.62	12.20	37.69	33.72	150	91	Peak	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	
1	15811.28	45.09	54.00	-8.91	28.92	12.20	37.69	33.72	150	171	Average	VERTICAL
2	15812.76	57.51	74.00	-16.49	41.34	12.20	37.69	33.72	150	171	Peak	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 62 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	10623.59	55.56	74.00	-18.44	40.94	9.67	38.40	33.45	150	131	Peak	HORIZONTAL
2	10625.26	43.05	54.00	-10.95	28.43	9.67	38.40	33.45	150	131	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	10618.85	42.90	54.00	-11.10	28.30	9.65	38.40	33.45	150	59	Average	VERTICAL
2	10625.13	55.16	74.00	-18.84	40.54	9.67	38.40	33.45	150	59	Peak	VERTICAL

Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1 11030.32	55.81	74.00	-18.19	40.67	9.88	38.45	33.19	150	258	Peak	HORIZONTAL	
2 11033.27	43.30	54.00	-10.70	28.16	9.88	38.45	33.19	150	258	Average	HORIZONTAL	

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1 11010.64	55.41	74.00	-18.59	40.34	9.86	38.40	33.19	150	154	Peak	VERTICAL	
2 11013.78	43.22	54.00	-10.78	28.15	9.86	38.40	33.19	150	154	Average	VERTICAL	



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 110 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11090.77	43.39	54.00	-10.61	28.18	9.89	38.51	33.19	150	40	Average	HORIZONTAL
2	11100.38	56.48	74.00	-17.52	41.20	9.91	38.56	33.19	150	40	Peak	HORIZONTAL

Vertical

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11082.69	43.29	54.00	-10.71	28.08	9.89	38.51	33.19	150	112	Average	VERTICAL
2	11088.33	55.89	74.00	-18.11	40.68	9.89	38.51	33.19	150	112	Peak	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 134 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11353.01	57.51	74.00	-16.49	41.66	10.04	38.99	33.18	150	104	Peak	HORIZONTAL
2	11353.40	43.95	54.00	-10.05	28.10	10.04	38.99	33.18	150	104	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dBuV/m			Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	11338.91	44.22	54.00	-9.78	28.45	10.02	38.93	33.18	150	163	Average	VERTICAL
2	11342.50	56.70	74.00	-17.30	40.93	10.02	38.93	33.18	150	163	Peak	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 58 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	15875.51	58.00	74.00	-16.00	42.02	12.24	37.55	33.81	150	166	Peak	HORIZONTAL
2	15888.59	45.09	54.00	-8.91	29.11	12.24	37.55	33.81	150	166	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dBuV	dB	dB/m	dB	cm		
MHz	dBuV/m	dBuV/m										
1	15873.14	57.97	74.00	-16.03	41.94	12.22	37.62	33.81	150	230	Peak	VERTICAL
2	15889.17	44.87	54.00	-9.13	28.89	12.24	37.55	33.81	150	230	Average	VERTICAL

Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 106 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
MHz	dBuV/m	dBuV/m										
1	11051.09	55.68	74.00	-18.32	40.54	9.88	38.45	33.19	150	213	Peak	HORIZONTAL
2	11063.40	43.25	54.00	-10.75	28.04	9.89	38.51	33.19	150	213	Average	HORIZONTAL

Vertical

Freq	Level	Limit		Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	m			dB	dBuV	dB	dB/m	dB	cm	
MHz	dBuV/m	dBuV/m										
1	11044.10	56.45	74.00	-17.55	41.31	9.88	38.45	33.19	150	281	Peak	VERTICAL
2	11060.19	43.42	54.00	-10.58	28.21	9.89	38.51	33.19	150	281	Average	VERTICAL



Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 122 / Ant. 1 + Ant. 2 + Ant. 3
Test Date	Jun. 20, 2016~Jun. 23, 2016		

Horizontal

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11200.38	43.41	54.00	-10.59	27.92	9.96	38.72	33.19	150	247	Average	HORIZONTAL
2	11207.37	55.87	74.00	-18.13	40.38	9.96	38.72	33.19	150	247	Peak	HORIZONTAL

Vertical

Freq	Level	Limit		Over Line	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11201.60	43.28	54.00	-10.72	27.79	9.96	38.72	33.19	150	211	Average	VERTICAL
2	11208.72	55.97	74.00	-18.03	40.48	9.96	38.72	33.19	150	211	Peak	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.

4.5. Band Edge Emissions Measurement

4.5.1. Limit

For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an 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.

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

4.5.2. 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	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

4.5.3. Test Procedures

- The test procedure is the same as section 4.4.3.

4.5.4. Test Setup Layout

This test setup layout is the same as that shown in section 4.4.4.

4.5.5. Test Deviation

There is no deviation with the original standard.



4.5.6. EUT Operation during Test

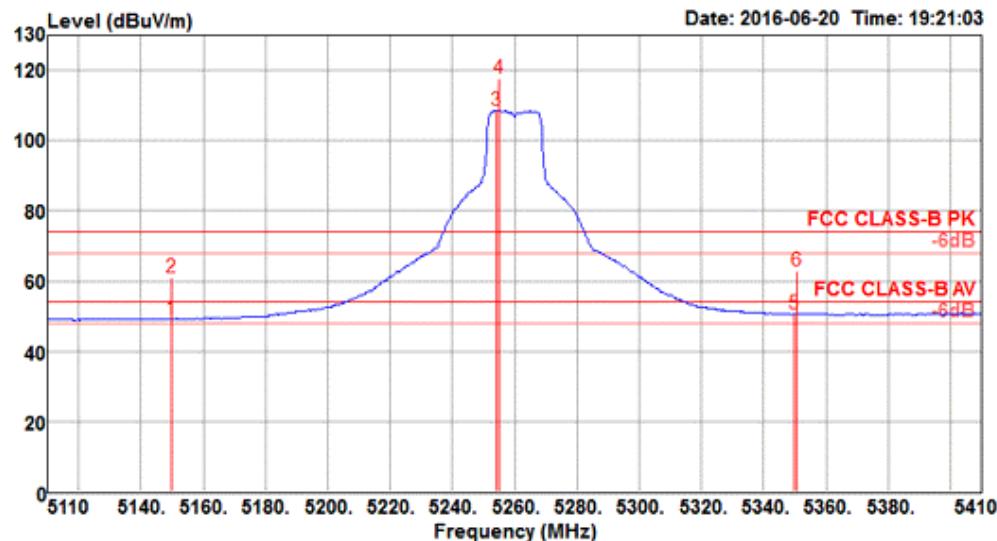
The EUT was programmed to be in continuously transmitting mode.

4.5.7. Test Result of Band Edge and Fundamental Emissions

For Mode 1 (EUT 1):

Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11a CH 52, 60, 64 / Ant. 1

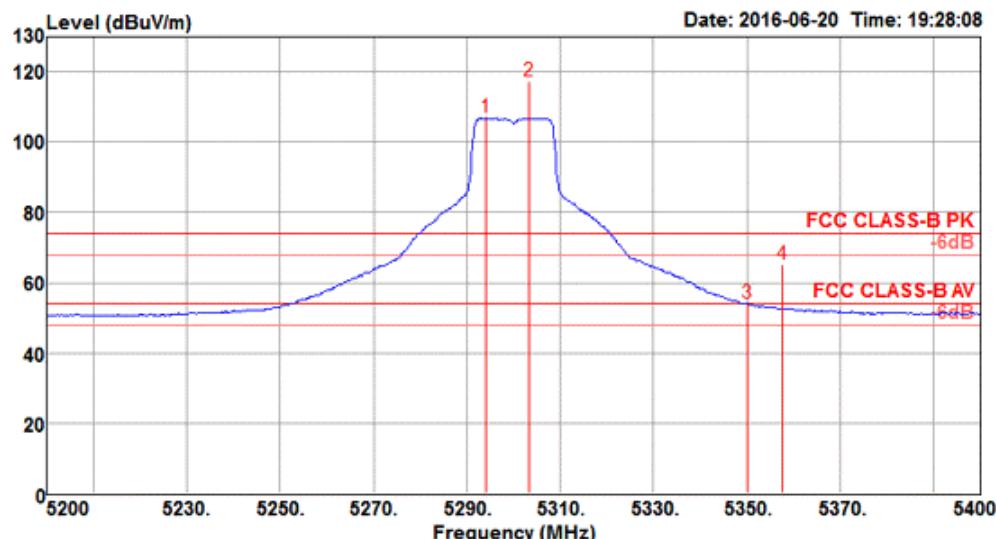
Channel 52



Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5150.00	49.06	54.00	-4.94	41.64	7.48	34.85	34.91	260	10 Average	HORIZONTAL
2	5150.00	61.13	74.00	-12.87	53.71	7.48	34.85	34.91	260	10 Peak	HORIZONTAL
3	5254.00	108.56			101.00	7.51	34.96	34.91	260	10 Average	HORIZONTAL
4	5255.20	117.90			110.34	7.51	34.96	34.91	260	10 Peak	HORIZONTAL
5	5350.00	50.52	54.00	-3.48	42.82	7.56	35.05	34.91	260	10 Average	HORIZONTAL
6	5350.60	62.86	74.00	-11.14	55.16	7.56	35.05	34.91	260	10 Peak	HORIZONTAL

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

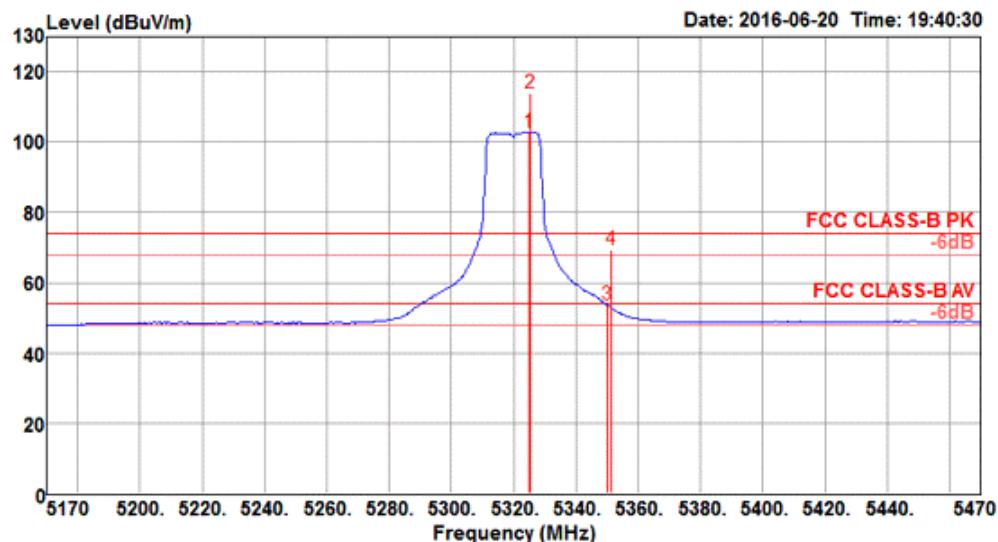
Channel 60



Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB			
1	5294.00	106.88			99.26	7.53	35.00	34.91	253	12 Average	HORIZONTAL
2	5303.20	117.32			109.70	7.53	35.00	34.91	253	12 Peak	HORIZONTAL
3	5350.00	53.97	54.00	-0.03	46.27	7.56	35.05	34.91	253	12 Average	HORIZONTAL
4	5357.60	65.22	74.00	-8.78	57.51	7.56	35.06	34.91	253	12 Peak	HORIZONTAL

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

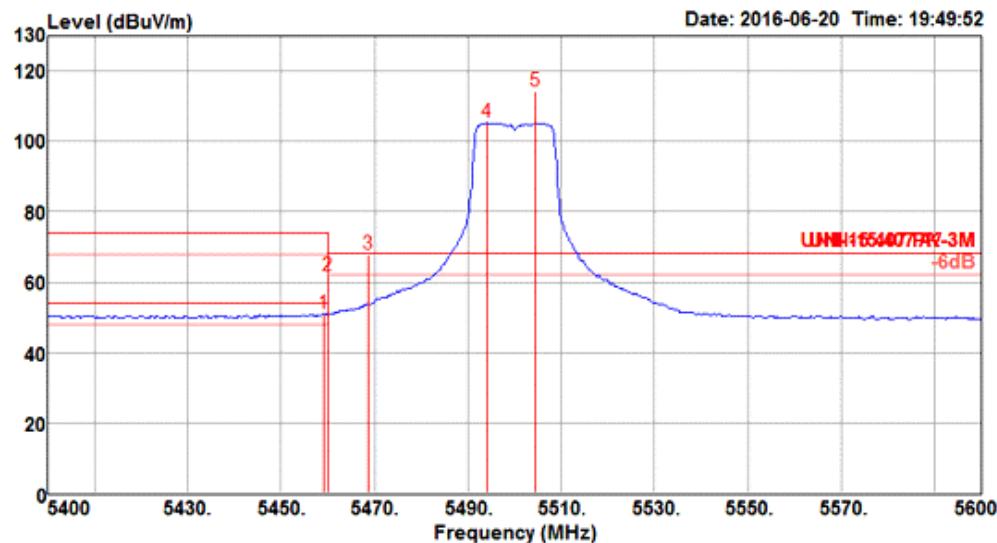
Channel 64



Freq	Level	Limit	Over	Read	Cable		Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
					Line	Limit						
MHz	dBuV/m	dBuV/m							cm	deg		
1	5324.80	102.90				95.23	7.55	35.03	34.91	251	18 Average	HORIZONTAL
2	5325.40	114.02				106.35	7.55	35.03	34.91	251	18 Peak	HORIZONTAL
3	5350.00	53.67	54.00	-0.33	45.97	7.56	35.05	34.91	251	18 Average	HORIZONTAL	
4	5351.20	69.27	74.00	-4.73	61.57	7.56	35.05	34.91	251	18 Peak	HORIZONTAL	

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

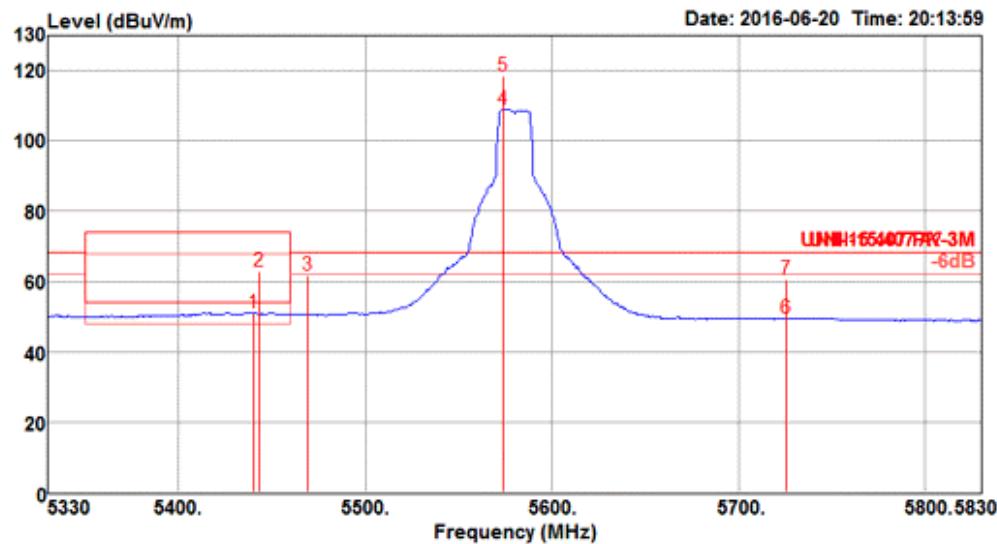
Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11a CH 100, 116, 140 / Ant. 1

Channel 100


Freq	Level	Limit Line	Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dB	dB/m	dB	cm	deg		
1	5459.20	50.98	54.00	-3.02	43.06	7.69	35.15	34.92	250	11 Average	VERTICAL
2	5460.00	61.85	74.00	-12.15	53.93	7.69	35.15	34.92	250	11 Peak	VERTICAL
3	5468.80	67.91	68.20	-0.29	59.94	7.72	35.17	34.92	250	11 Peak	VERTICAL
4	5494.00	105.30			97.29	7.75	35.18	34.92	250	11 Average	VERTICAL
5	5504.40	114.35			106.30	7.77	35.20	34.92	250	11 Peak	VERTICAL

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

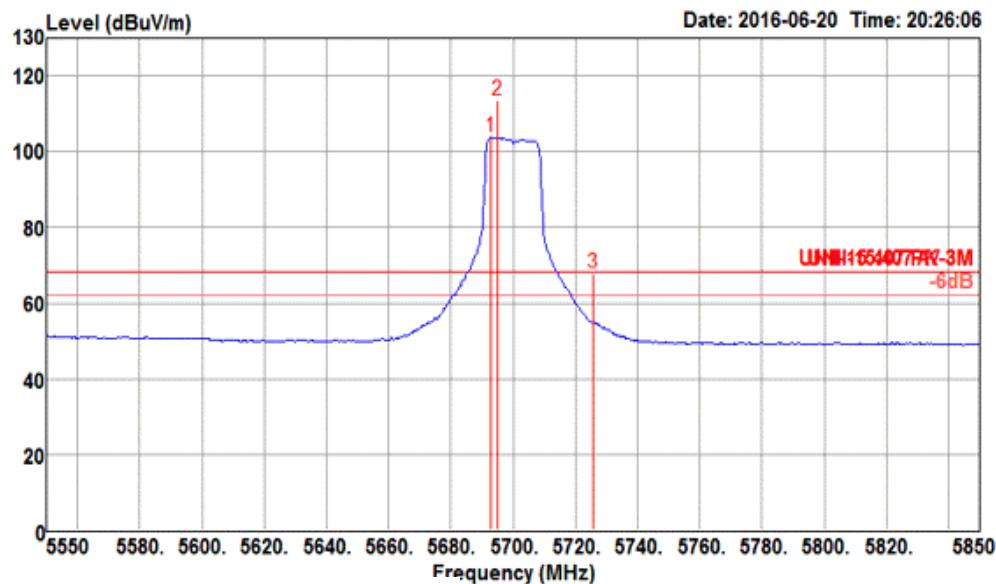
Channel 116



Freq	Level	Limit		Over Limit	Read Level	Cable		Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dB	dB						
MHz	dBuV/m	dBuV/m	dB	dB	dBuV	dB	dB	dB/m	dB	cm	deg		
1	5440.00	51.13	54.00	-2.87	43.25	7.66	35.14	34.92	256	14	Average	HORIZONTAL	
2	5443.00	62.72	74.00	-11.28	54.84	7.66	35.14	34.92	256	14	Peak	HORIZONTAL	
3	5469.00	61.73	68.20	-6.47	53.76	7.72	35.17	34.92	256	14	Peak	HORIZONTAL	
4	5574.00	108.96			100.80	7.88	35.21	34.93	256	14	Average	HORIZONTAL	
5	5574.00	118.58			110.42	7.88	35.21	34.93	256	14	Peak	HORIZONTAL	
6	5725.00	49.47	68.20	-18.73	41.37	7.79	35.25	34.94	256	14	Average	HORIZONTAL	
7	5725.00	60.47	68.20	-7.73	52.37	7.79	35.25	34.94	256	14	Peak	HORIZONTAL	

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

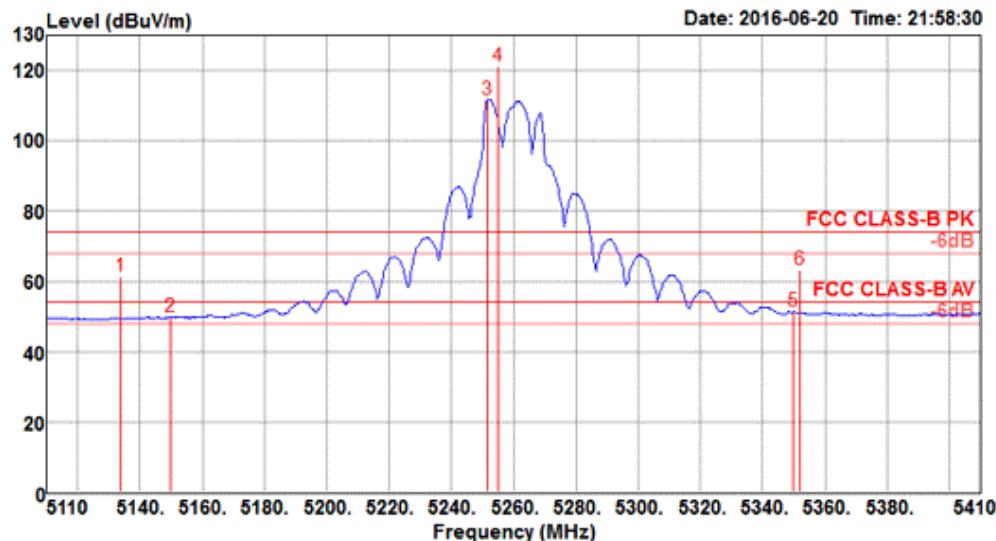
Channel 140



Freq	Level	Limit Line	Over Limit	Read Level	Cable		Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
					Loss	Factor						
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1	5692.80	103.77			95.65	7.82	35.24	34.94	249	6	Average	HORIZONTAL
2	5695.20	113.41			105.29	7.82	35.24	34.94	249	6	Peak	HORIZONTAL
3	5725.80	67.88	68.20	-0.32	59.78	7.79	35.25	34.94	249	6	Peak	HORIZONTAL

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

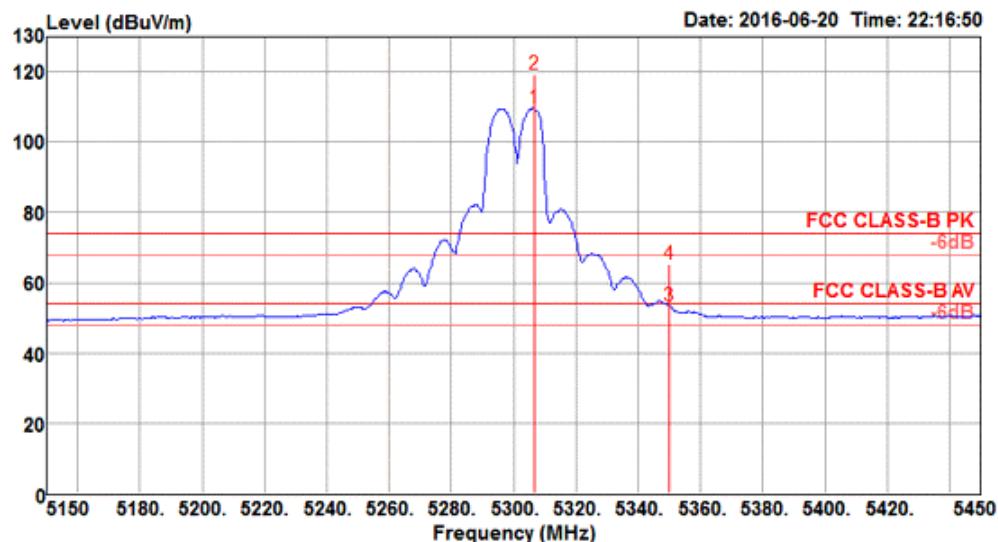
Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52, 60, 64 / Ant. 1 + Ant. 2 + Ant. 3

Channel 52


Freq	Level	Limit		Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB									
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	dB	cm	deg		
1	5134.00	61.56	74.00	-12.44	54.15	7.48	34.84	34.91	247	4	Peak	HORIZONTAL
2	5149.60	49.88	54.00	-4.12	42.46	7.48	34.85	34.91	247	4	Average	HORIZONTAL
3	5251.60	111.52			103.96	7.51	34.96	34.91	247	4	Average	HORIZONTAL
4	5255.20	121.09			113.53	7.51	34.96	34.91	247	4	Peak	HORIZONTAL
5	5350.00	51.26	54.00	-2.74	43.56	7.56	35.05	34.91	247	4	Average	HORIZONTAL
6	5351.80	63.12	74.00	-10.88	55.42	7.56	35.05	34.91	247	4	Peak	HORIZONTAL

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

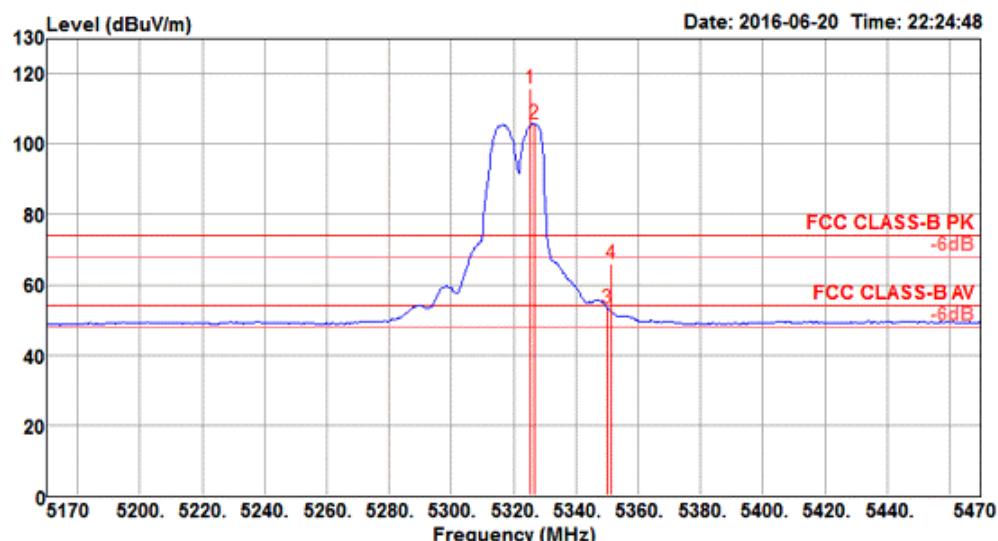
Channel 60



Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	cm	deg	
1	5306.60	109.60			101.98	7.53	35.00	34.91	258	11 Average	HORIZONTAL
2	5306.60	119.27			111.65	7.53	35.00	34.91	258	11 Peak	HORIZONTAL
3	5350.00	53.24	54.00	-0.76	45.54	7.56	35.05	34.91	258	11 Average	HORIZONTAL
4	5350.00	65.24	74.00	-8.76	57.54	7.56	35.05	34.91	258	11 Peak	HORIZONTAL

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

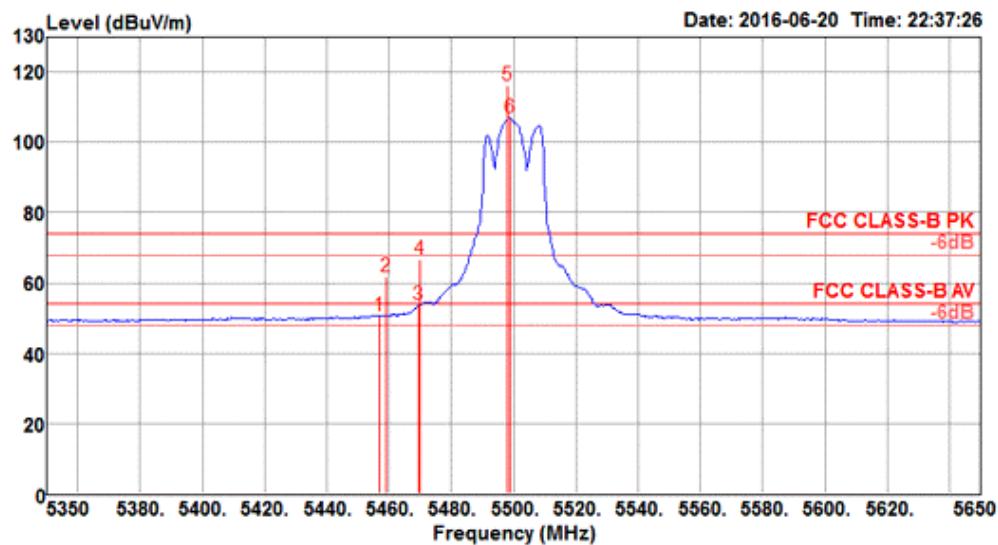
Channel 64



Freq	Level	Limit Line	Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	cm	deg	
1 5325.40	115.83			108.16	7.55	35.03	34.91	272	9	Peak	HORIZONTAL
2 5326.60	105.87			98.20	7.55	35.03	34.91	272	9	Average	HORIZONTAL
3 5350.00	53.48	54.00	-0.52	45.78	7.56	35.05	34.91	272	9	Average	HORIZONTAL
4 5351.20	66.09	74.00	-7.91	58.39	7.56	35.05	34.91	272	9	Peak	HORIZONTAL

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

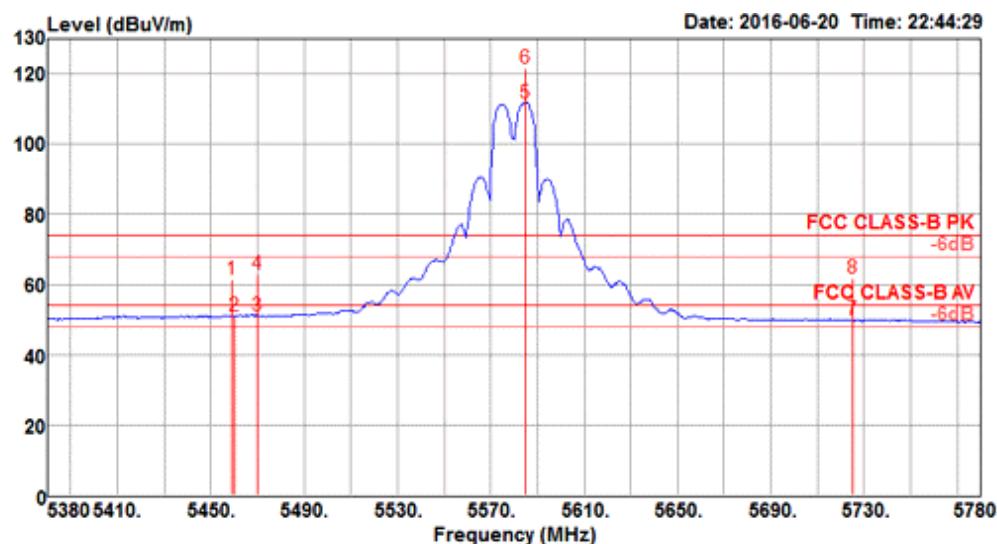
Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100, 116, 140 / Ant. 1 + Ant. 2 + Ant. 3

Channel 100


Freq	Level	Limit Line	Over Limit	Read Level	Cable			Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
					dB	dBuV	dB						
1	5456.80	50.79	54.00	-3.21	42.87	7.69	35.15	34.92	244	355	Average	HORIZONTAL	
2	5459.20	61.62	74.00	-12.38	53.70	7.69	35.15	34.92	244	355	Peak	HORIZONTAL	
3	5469.40	53.70	54.00	-0.30	45.73	7.72	35.17	34.92	244	355	Average	HORIZONTAL	
4	5470.00	66.64	74.00	-7.36	58.67	7.72	35.17	34.92	244	355	Peak	HORIZONTAL	
5	5498.20	116.16			108.11	7.77	35.20	34.92	244	355	Peak	HORIZONTAL	
6	5498.80	106.84			98.79	7.77	35.20	34.92	244	355	Average	HORIZONTAL	

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

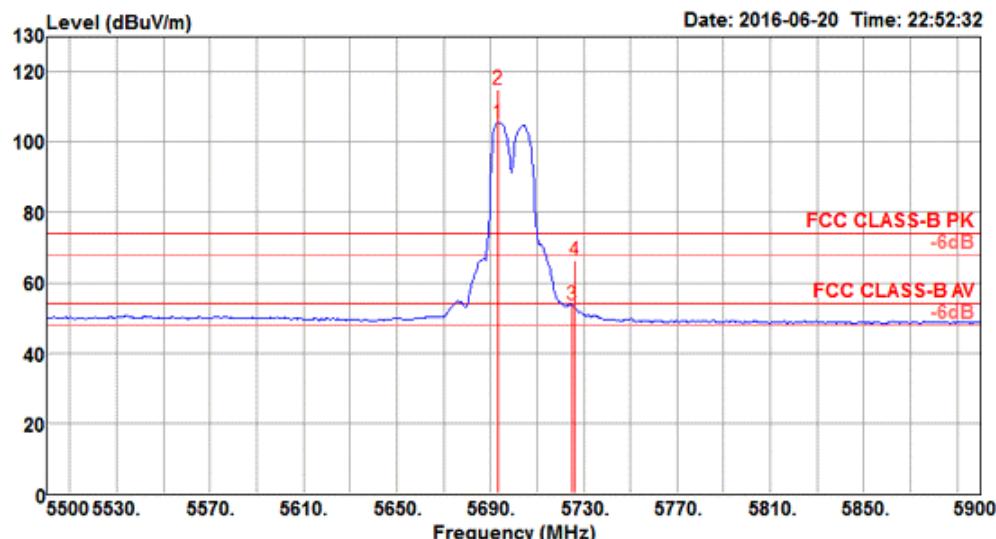
Channel 116



Freq	Limit		Over Limit	Read Level	Cable		Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	Line	dBuV/m			dB	dBuV						
MHz	dBuV/m	dBuV/m							cm	deg		
1	5459.20	61.52	74.00	-12.48	53.60	7.69	35.15	34.92	266	1 Peak	HORIZONTAL	
2	5460.00	50.93	54.00	-3.07	43.01	7.69	35.15	34.92	266	1 Average	HORIZONTAL	
3	5470.00	50.90	54.00	-3.10	42.93	7.72	35.17	34.92	266	1 Average	HORIZONTAL	
4	5470.00	63.08	74.00	-10.92	55.11	7.72	35.17	34.92	266	1 Peak	HORIZONTAL	
5	5584.80	111.67			103.47	7.91	35.22	34.93	266	1 Average	HORIZONTAL	
6	5584.80	121.41			113.21	7.91	35.22	34.93	266	1 Peak	HORIZONTAL	
7	5725.00	50.03	54.00	-3.97	41.93	7.79	35.25	34.94	266	1 Average	HORIZONTAL	
8	5725.00	61.87	74.00	-12.13	53.77	7.79	35.25	34.94	266	1 Peak	HORIZONTAL	

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

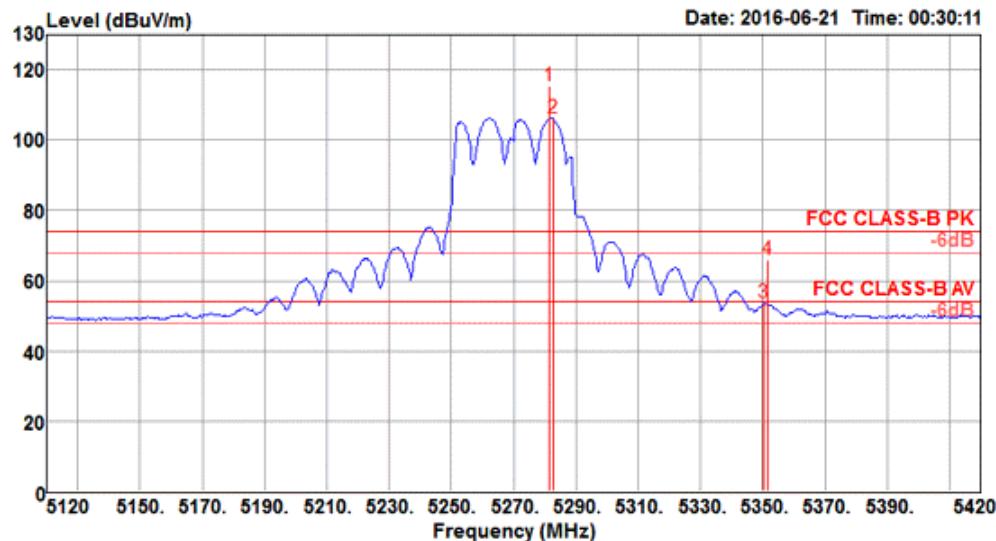
Channel 140



Freq	Level	Limit Line	Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	cm	deg	
1 5693.60	105.61				97.49	7.82	35.24	34.94	251	2 Average	HORIZONTAL
2 5693.60	115.09				106.97	7.82	35.24	34.94	251	2 Peak	HORIZONTAL
3 5725.00	53.76	54.00	-0.24	45.66	7.79	35.25	34.94	251	2 Average	HORIZONTAL	
4 5726.40	66.27	74.00	-7.73	58.17	7.79	35.25	34.94	251	2 Peak	HORIZONTAL	

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

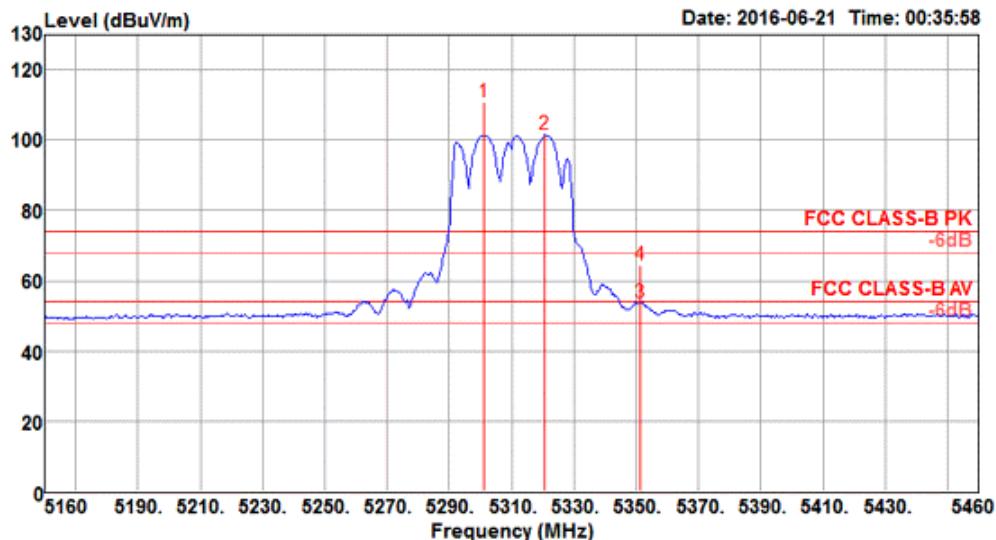
Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54, 62 / Ant. 1 + Ant. 2 + Ant. 3

Channel 54


Freq	Level	Limit Line	Over Limit	Read Level	Cable			Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
					Loss	Factor	Factor						
MHz	dBuV/m	dBuV/m		dB	dB	dB	dB/m	dB	dB	cm	deg		
1	5281.40	115.33			107.72	7.53	34.99	34.91	266	14	Peak	HORIZONTAL	
2	5282.60	106.40			98.79	7.53	34.99	34.91	266	14	Average	HORIZONTAL	
3	5350.40	53.68	54.00	-0.32	45.98	7.56	35.05	34.91	266	14	Average	HORIZONTAL	
4	5351.60	65.87	74.00	-8.13	58.17	7.56	35.05	34.91	266	14	Peak	HORIZONTAL	

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

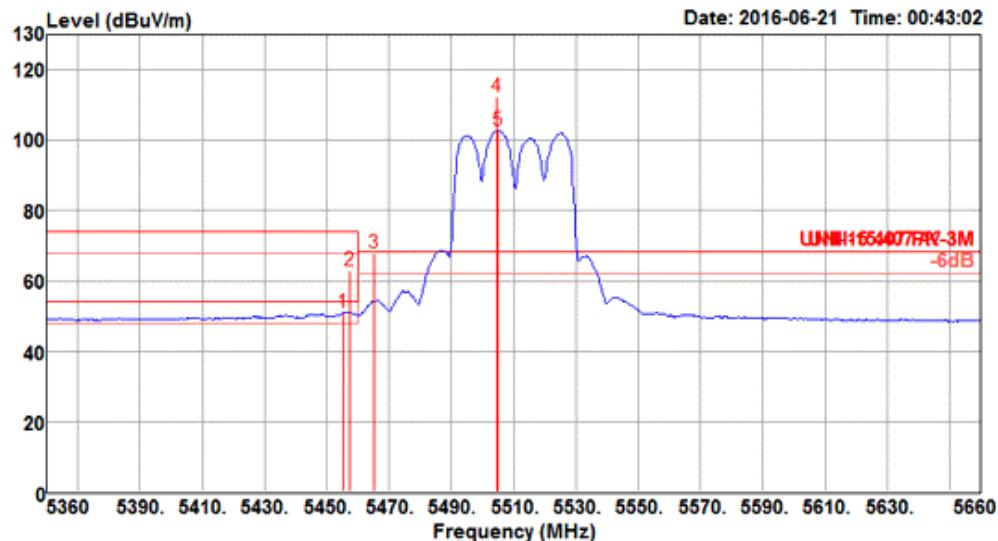
Channel 62



Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	cm	deg	
1	5301.00	111.01			103.39	7.53	35.00	34.91	256	11 Peak	HORIZONTAL
2	5320.80	101.59			93.94	7.54	35.02	34.91	256	11 Average	HORIZONTAL
3	5351.40	53.82	54.00	-0.18	46.12	7.56	35.05	34.91	256	11 Average	HORIZONTAL
4	5351.40	64.61	74.00	-9.39	56.91	7.56	35.05	34.91	256	11 Peak	HORIZONTAL

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

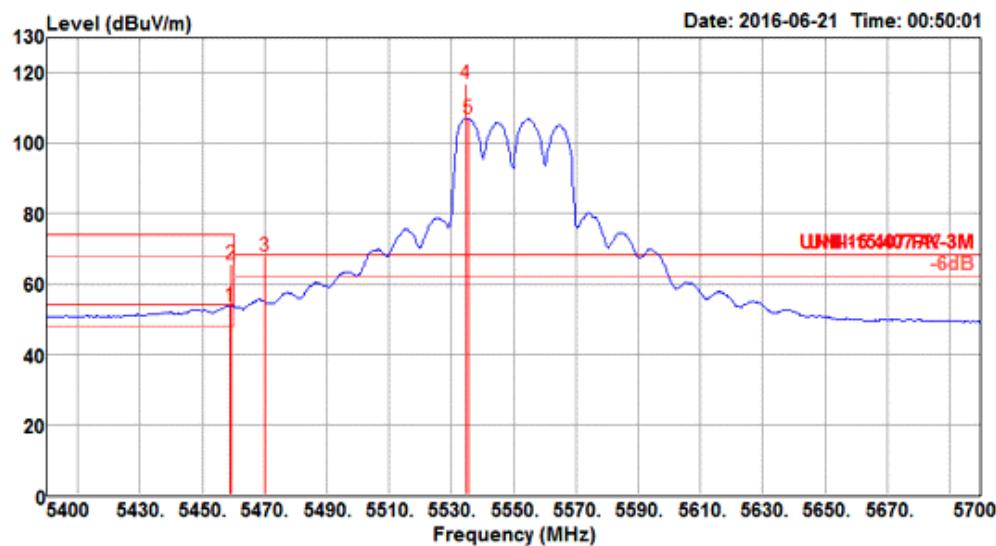
Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102, 110, 134 / Ant. 1 + Ant. 2 + Ant. 3

Channel 102


Freq	Level	Limit		Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB									
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	cm	deg		
1	5455.40	51.01	54.00	-2.99	43.09	7.69	35.15	34.92	256	17	Average	HORIZONTAL
2	5457.20	63.07	74.00	-10.93	55.15	7.69	35.15	34.92	256	17	Peak	HORIZONTAL
3	5465.00	67.88	68.20	-0.32	59.91	7.72	35.17	34.92	256	17	Peak	HORIZONTAL
4	5504.60	112.35			104.30	7.77	35.20	34.92	256	17	Peak	HORIZONTAL
5	5505.20	102.77			94.72	7.77	35.20	34.92	256	17	Average	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5510 MHz.

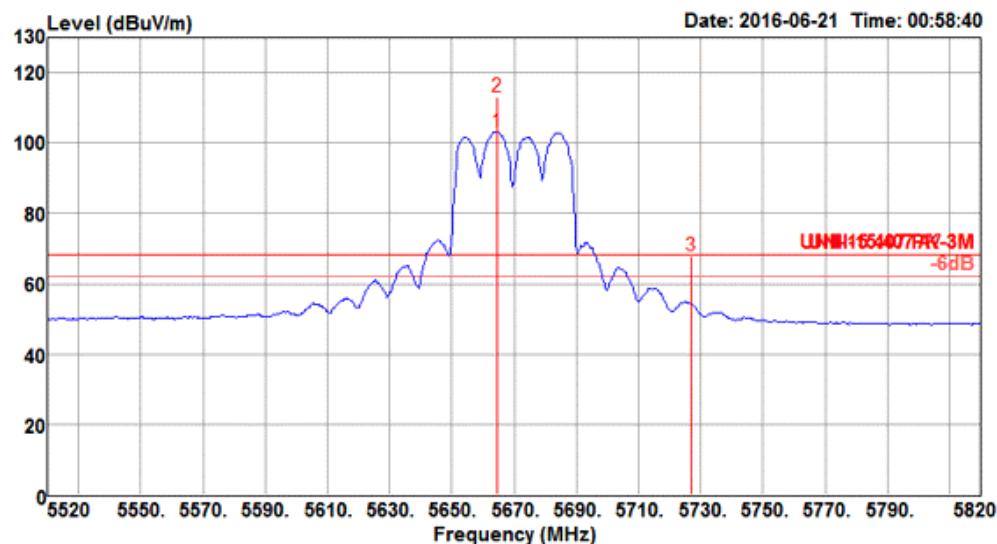
Channel 110



Freq	Level	Limit		Over Limit	Read Level	Cable		Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB			dB	dB						
MHz	dBuV/m	dBuV/m	dB	dB	dBuV	dB	dB	dB/m	dB	cm	deg		
1	5458.80	53.70	54.00	-0.30	45.78	7.69	35.15	34.92	258	13	Average	HORIZONTAL	
2	5459.40	65.41	74.00	-8.59	57.49	7.69	35.15	34.92	258	13	Peak	HORIZONTAL	
3	5470.00	67.72	68.20	-0.48	59.75	7.72	35.17	34.92	258	13	Peak	HORIZONTAL	
4	5534.40	117.02			108.90	7.83	35.21	34.92	258	13	Peak	HORIZONTAL	
5	5535.60	107.07			98.95	7.83	35.21	34.92	258	13	Average	HORIZONTAL	

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

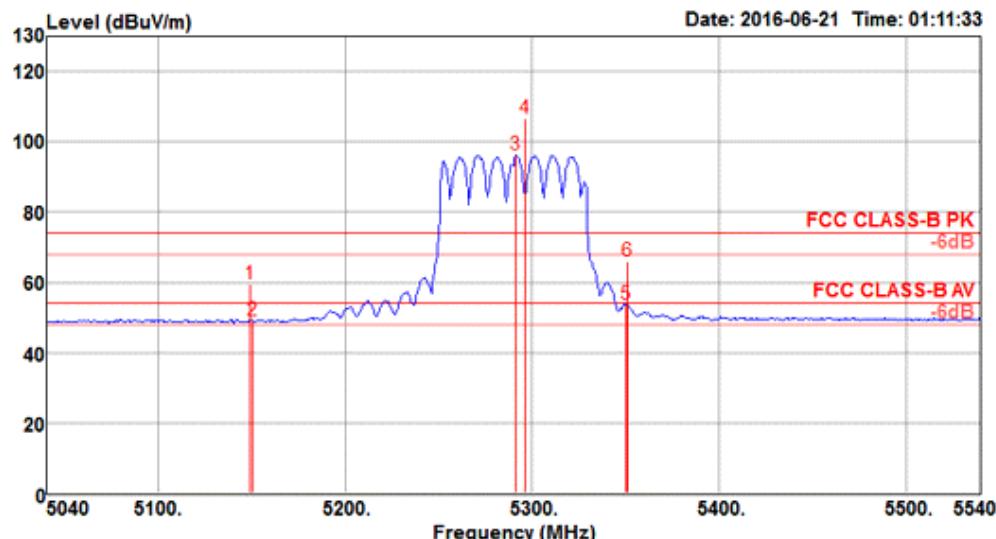
Channel 134



Freq	Level	Limit	Over	Read	Cable		Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
					Line	Limit						
MHz	dBuV/m	dBuV/m										
1	5664.60	103.36				95.21	7.86	35.23	34.94	255	14 Average	HORIZONTAL
2	5664.60	113.30				105.15	7.86	35.23	34.94	255	14 Peak	HORIZONTAL
3	5727.00	68.01	68.20	-0.19	59.91	7.79	35.25	34.94	255	14 Peak		HORIZONTAL

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

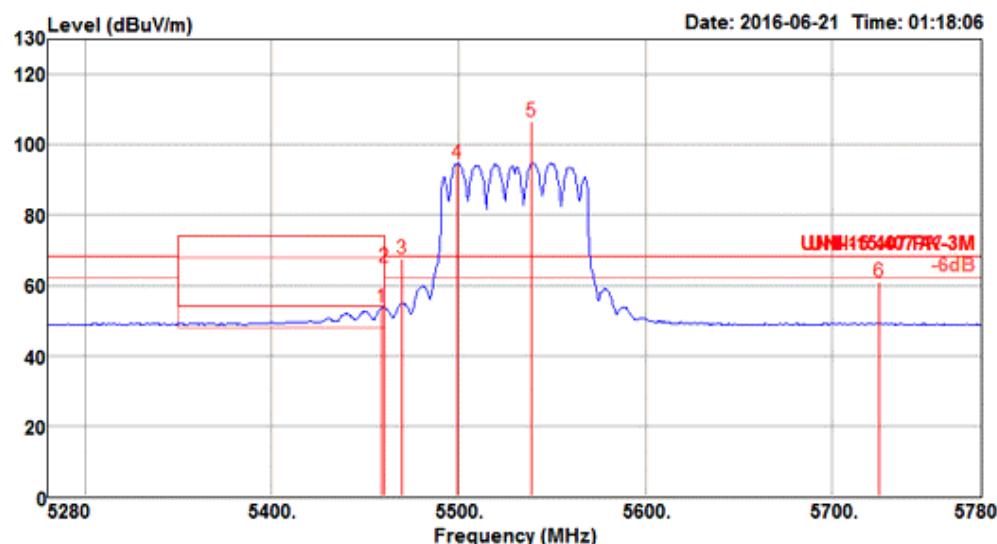
Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 58, 106, 122 / Ant. 1 + Ant. 2 + Ant. 3

Channel 58


Freq	Level	Limit		Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB									
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	deg	cm	deg	cm	deg	cm
1	5149.00	59.35	74.00	-14.65	51.93	7.48	34.85	34.91	250	6	Peak	HORIZONTAL
2	5150.00	49.01	54.00	-4.99	41.59	7.48	34.85	34.91	250	6	Average	HORIZONTAL
3	5291.00	96.18			88.57	7.53	34.99	34.91	250	6	Average	HORIZONTAL
4	5296.00	106.55			98.93	7.53	35.00	34.91	250	6	Peak	HORIZONTAL
5	5350.00	53.88	54.00	-0.12	46.18	7.56	35.05	34.91	250	6	Average	HORIZONTAL
6	5351.00	65.98	74.00	-8.02	58.28	7.56	35.05	34.91	250	6	Peak	HORIZONTAL

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

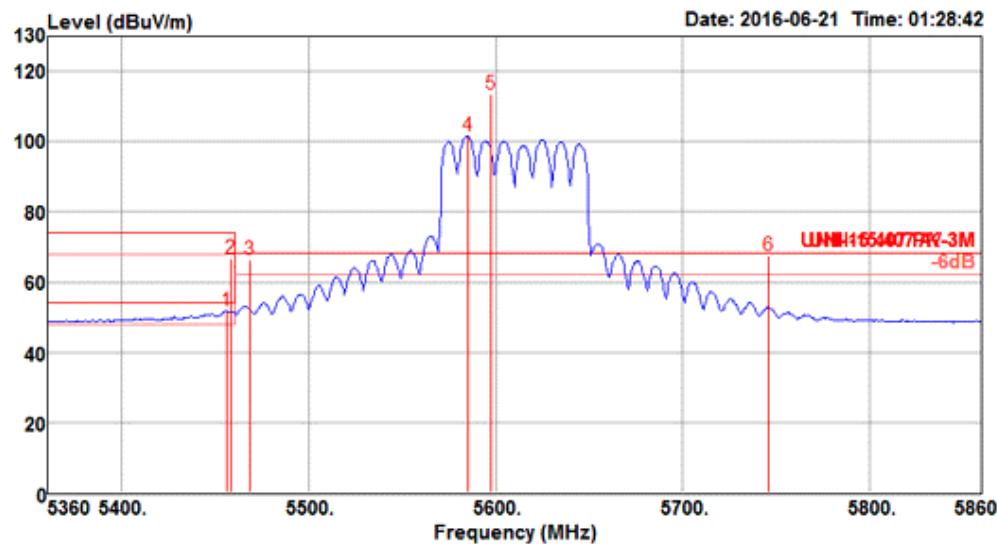
Channel 106



Freq	Limit		Over Limit	Read Level	Cable		Antenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	Level	Line			dB	dBuV						
	MHz	dBuV/m	dBuV/m									
1	5459.00	53.66	54.00	-0.34	45.74	7.69	35.15	34.92	258	5 Average	HORIZONTAL	
2	5460.00	65.27	74.00	-8.73	57.35	7.69	35.15	34.92	258	5 Peak	HORIZONTAL	
3	5470.00	67.64	68.20	-0.56	59.67	7.72	35.17	34.92	258	5 Peak	HORIZONTAL	
4	5499.00	94.82			86.77	7.77	35.20	34.92	258	5 Average	HORIZONTAL	
5	5539.00	106.79			98.67	7.83	35.21	34.92	258	5 Peak	HORIZONTAL	
6	5725.00	60.83	68.20	-7.37	52.73	7.79	35.25	34.94	258	5 Peak	HORIZONTAL	

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

Channel 122



Freq	Level	Limit		Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		Line	dB									
MHz	dBuV/m	dBuV/m			dB	dBuV	dB	dB/m	dB	cm	deg	
1	5456.00	51.67	54.00	-2.33	43.75	7.69	35.15	34.92	273	4	Average	HORIZONTAL
2	5458.00	66.84	74.00	-7.16	58.92	7.69	35.15	34.92	273	4	Peak	HORIZONTAL
3	5468.00	66.45	68.20	-1.75	58.48	7.72	35.17	34.92	273	4	Peak	HORIZONTAL
4	5585.00	101.55			93.35	7.91	35.22	34.93	273	4	Average	HORIZONTAL
5	5597.00	113.49			105.26	7.94	35.22	34.93	273	4	Peak	HORIZONTAL
6	5746.00	67.61	68.20	-0.59	59.53	7.77	35.25	34.94	273	4	Peak	HORIZONTAL

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

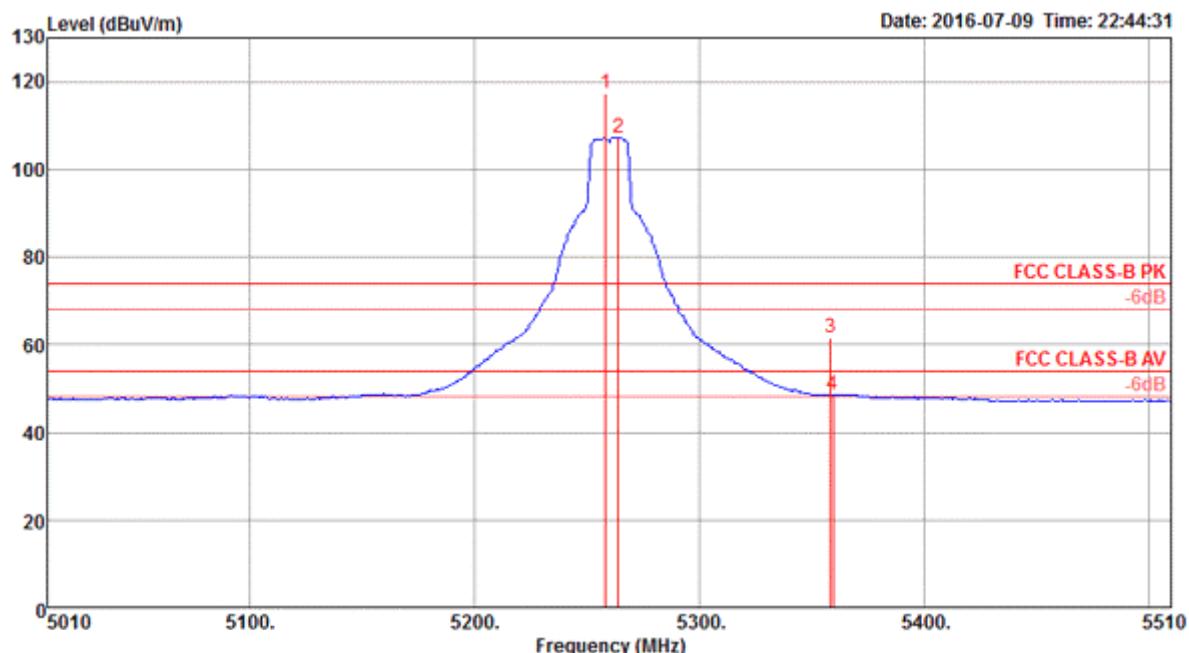
Note:

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

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

For Mode 2 (EUT 2):

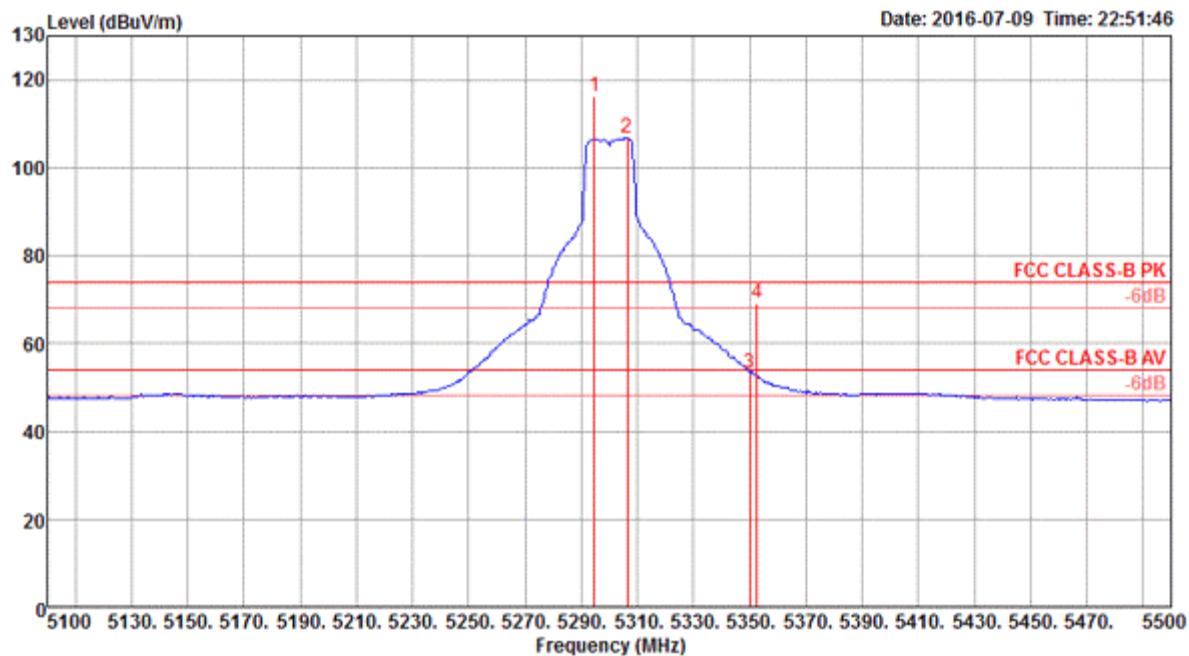
Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11a CH 52, 60, 64 / Ant. 1

Channel 52


Freq	Level	Limit Line	Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase	
					Loss	Factor	Factor	cm	deg			
1	5258.40	117.20		.09.68	6.53	33.91	32.92	202	341	Peak	HORIZONTAL	
2	5264.01	107.23		99.66	6.55	33.94	32.92	202	341	Average	HORIZONTAL	
3	5358.56	61.42	74.00	-12.58	53.64	6.62	34.08	32.92	202	341	Peak	HORIZONTAL
4	5359.36	48.68	54.00	-5.32	40.90	6.62	34.08	32.92	202	341	Average	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5260 MHz.

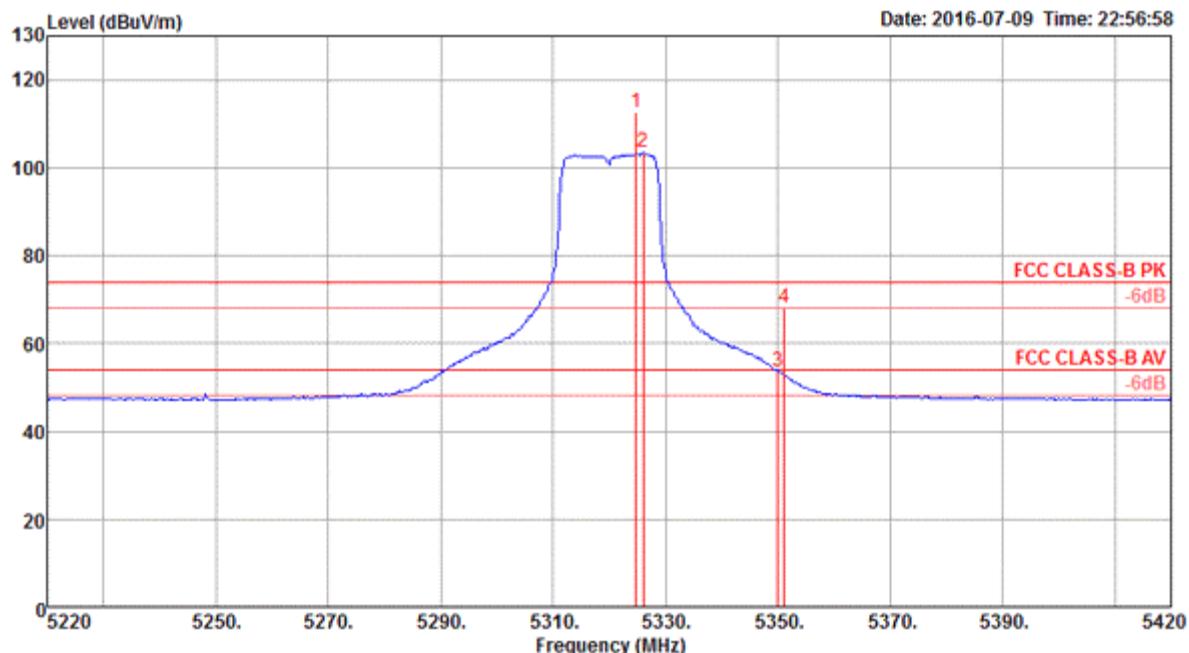
Channel 60



Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB				
1	5294.87	116.35			108.72	6.57	33.98	32.92	203	178 Peak	HORIZONTAL
2	5306.41	106.67			99.04	6.57	33.98	32.92	203	178 Average	HORIZONTAL
3	5350.00	53.35	54.00	-0.65	45.60	6.61	34.06	32.92	203	178 Average	HORIZONTAL
4	5352.56	69.26	74.00	-4.74	61.51	6.61	34.06	32.92	203	178 Peak	HORIZONTAL

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

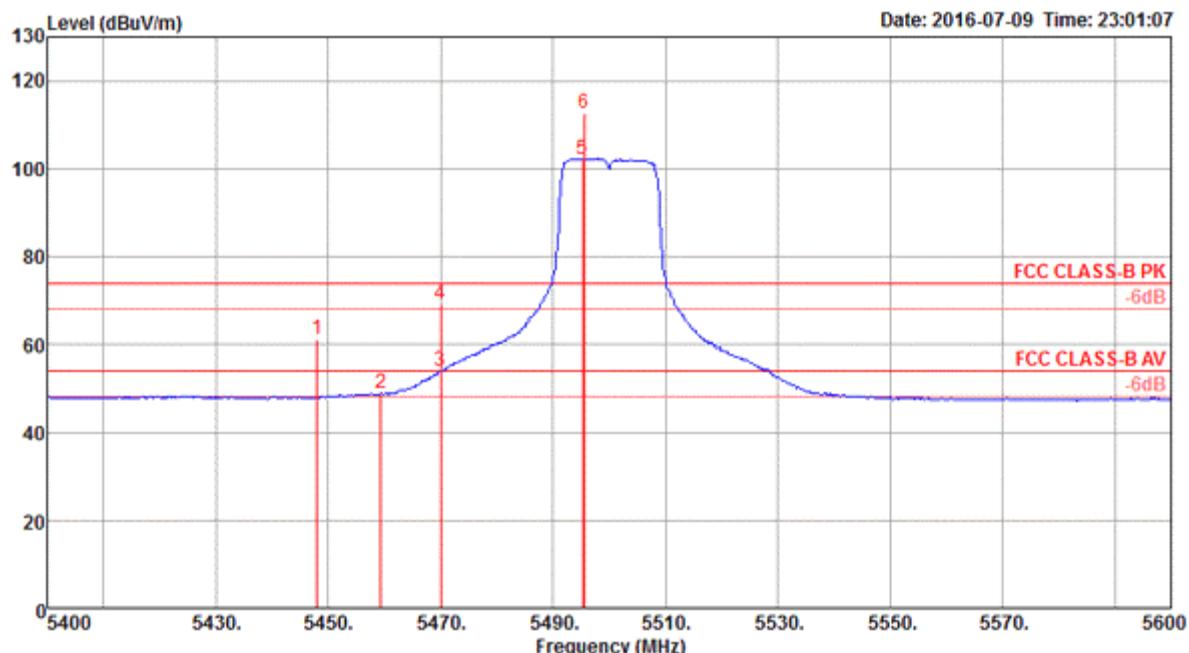
Channel 64



Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB				
1 5324.81	112.76			105.05	6.60	34.03	32.92	196	177	Peak	HORIZONTAL
2 5326.09	103.43			95.72	6.60	34.03	32.92	196	177	Average	HORIZONTAL
3 5350.00	53.43	54.00	-0.57	45.68	6.61	34.06	32.92	196	177	Average	HORIZONTAL
4 5351.09	67.90	74.00	-6.10	60.15	6.61	34.06	32.92	196	177	Peak	HORIZONTAL

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

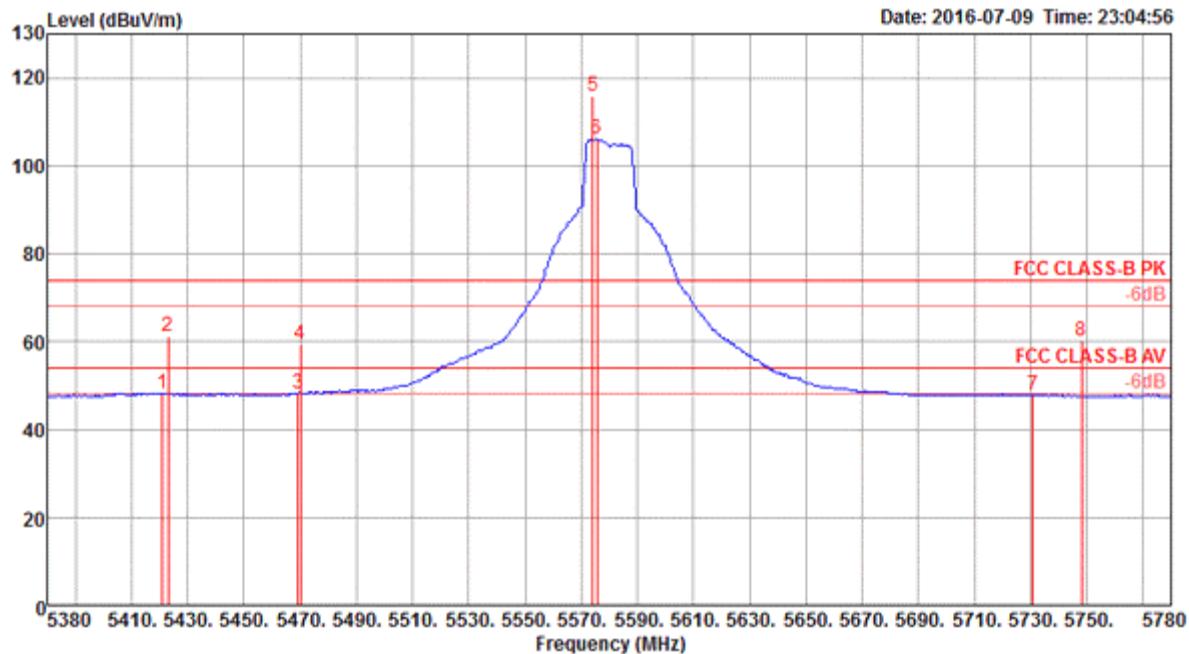
Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11a CH 100, 116, 140 / Ant. 1

Channel 100


Freq	Level	Limit Line	Over Limit	Read Level	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	cm	deg		
1 5448.08	61.06	74.00	-12.94	53.08	6.68	34.23	32.93	168	347	Peak	HORIZONTAL
2 5459.30	48.89	54.00	-5.11	40.91	6.68	34.23	32.93	168	347	Average	HORIZONTAL
3 5470.00	53.88	54.00	-0.12	45.87	6.69	34.25	32.93	168	347	Average	HORIZONTAL
4 5470.00	69.23	74.00	-4.77	61.22	6.69	34.25	32.93	168	347	Peak	HORIZONTAL
5 5495.19	102.21			94.16	6.70	34.28	32.93	168	347	Average	HORIZONTAL
6 5495.51	112.79			104.72	6.70	34.30	32.93	168	347	Peak	HORIZONTAL

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

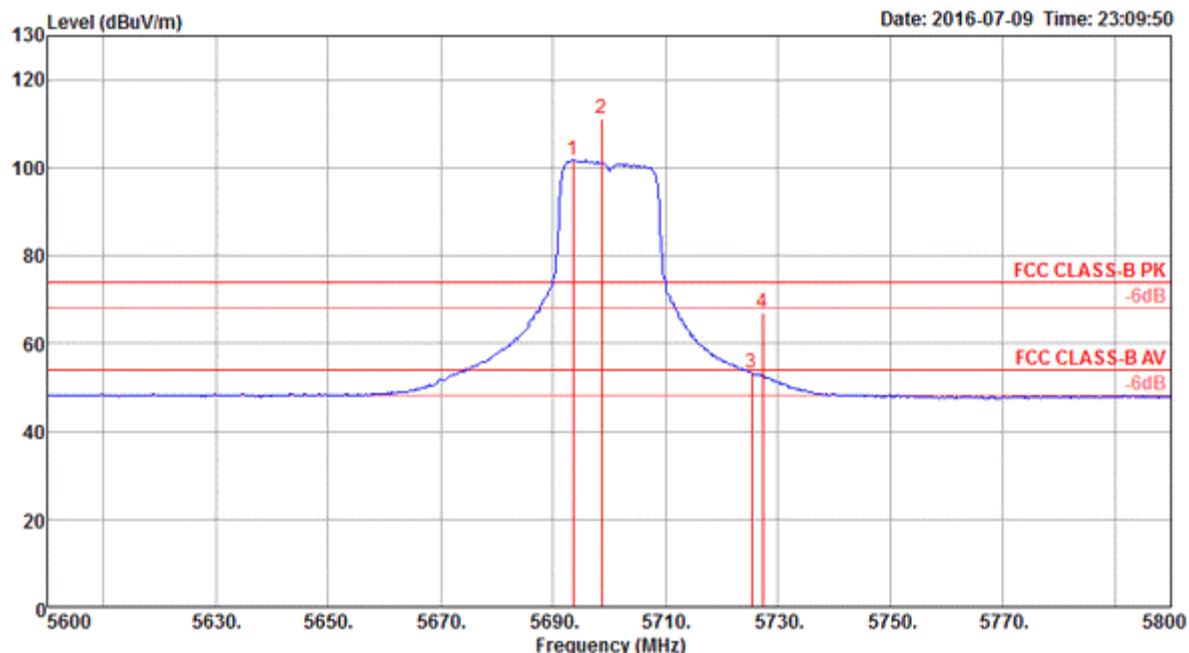
Channel 116



Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor				
MHz	dBuV/m	dBuV/m		dB	dB	dB/m	dB	cm	deg		
1	5421.03	48.07	54.00	-5.93	40.15	6.67	34.18	32.93	194	343	Average HORIZONTAL
2	5422.95	61.03	74.00	-12.97	53.11	6.67	34.18	32.93	194	343	Peak HORIZONTAL
3	5469.36	48.21	54.00	-5.79	40.20	6.69	34.25	32.93	194	343	Average HORIZONTAL
4	5470.00	59.56	74.00	-14.44	51.55	6.69	34.25	32.93	194	343	Peak HORIZONTAL
5	5574.23	115.93			107.81	6.73	34.34	32.95	194	343	Peak HORIZONTAL
6	5575.51	106.26			98.12	6.74	34.35	32.95	194	343	Average HORIZONTAL
7	5730.64	47.91	54.00	-6.09	39.58	6.88	34.44	32.99	194	343	Average HORIZONTAL
8	5747.95	59.93	74.00	-14.07	51.58	6.90	34.45	33.00	194	343	Peak HORIZONTAL

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

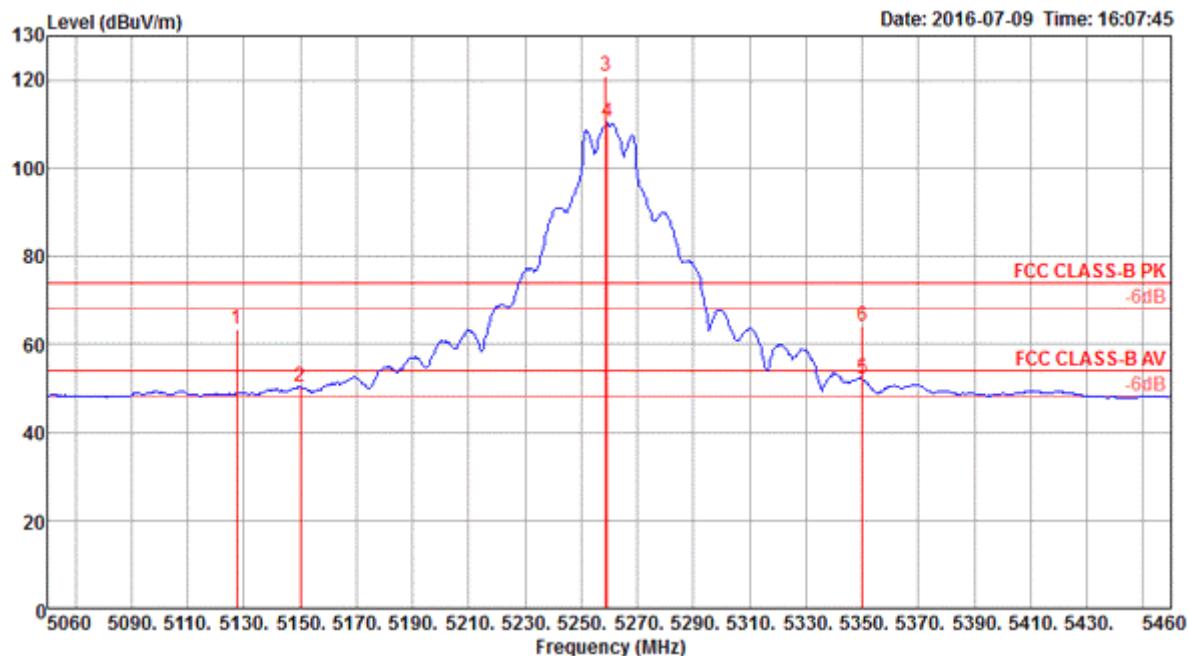
Channel 140



Freq	Level	Limit	Over	Read	Cable	Antenna	Preamplifier	A/Pos	T/Pos	Remark	Pol/Phase
					Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB				
1 5693.59	101.73				93.44	6.85	34.42	32.98			
2 5698.72	111.09				102.80	6.85	34.42	32.98	161	341	Average HORIZONTAL
3 5725.32	53.37	54.00	-0.63	45.04	6.88	34.44	32.99	161	341	Peak HORIZONTAL	
4 5727.24	67.12	74.00	-6.88	58.79	6.88	34.44	32.99	161	341	Average HORIZONTAL	

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

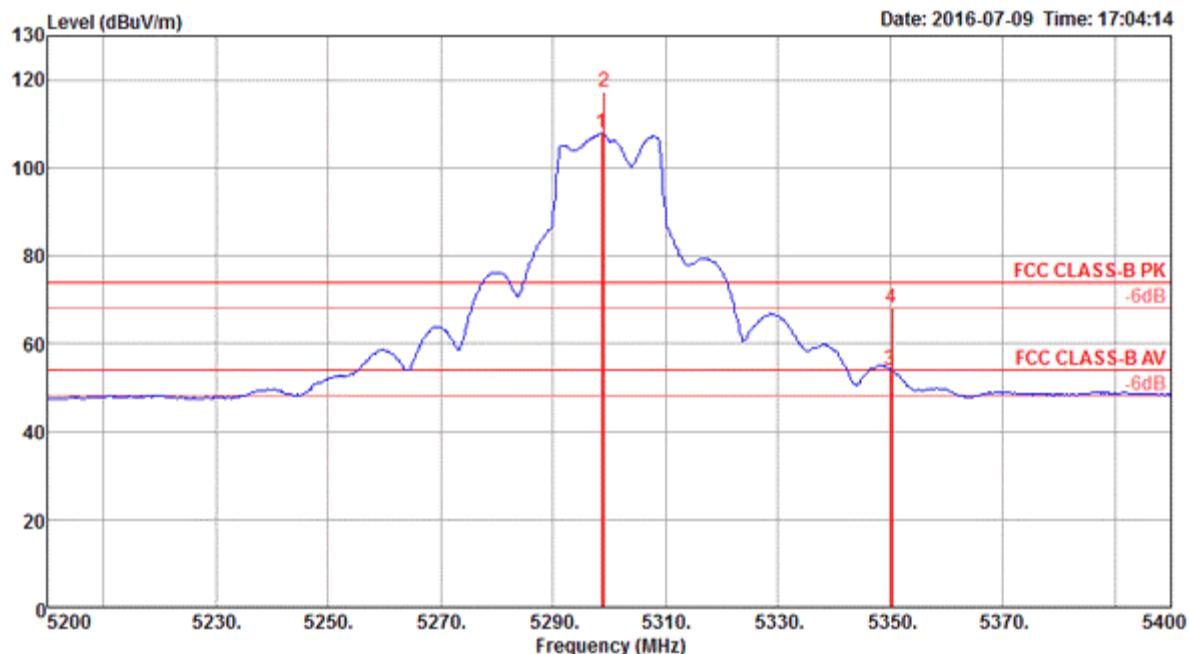
Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 52, 60, 64 / Ant. 1 + Ant. 2 + Ant. 3

Channel 52


Freq	Level	Limit Line	Over Limit	Read Level	Cable			Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
					dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	deg		
1	5127.31	63.19	74.00	-10.81	55.96	6.43	33.72	32.92	173	0	Peak	HORIZONTAL	
2	5150.00	50.20	54.00	-3.80	42.94	6.44	33.74	32.92	173	0	Average	HORIZONTAL	
3	5258.72	121.08			113.56	6.53	33.91	32.92	173	0	Peak	HORIZONTAL	
4	5259.36	110.35			102.83	6.53	33.91	32.92	173	0	Average	HORIZONTAL	
5	5350.00	52.17	54.00	-1.83	44.42	6.61	34.06	32.92	173	0	Average	HORIZONTAL	
6	5350.00	64.27	74.00	-9.73	56.52	6.61	34.06	32.92	173	0	Peak	HORIZONTAL	

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

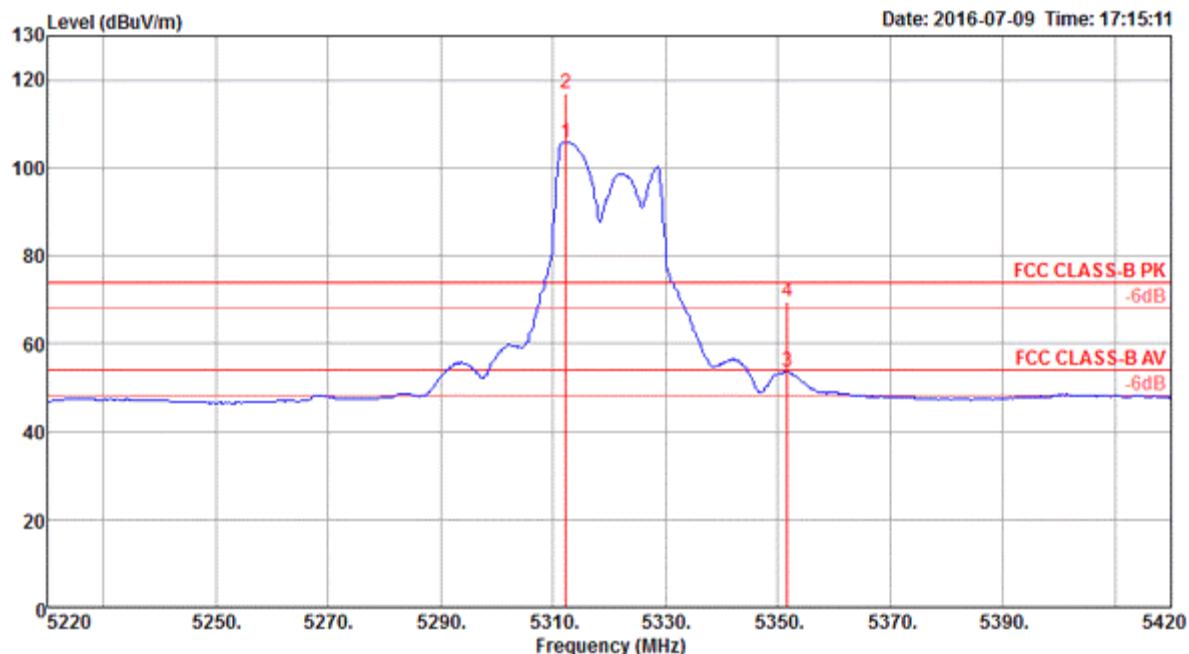
Channel 60



Freq	Level	Limit	Over	Read	Cable			A/Pos	T/Pos	Remark	Pol/Phase
					Line	Limit	Level				
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5298.72	107.81			100.18	6.57	33.98	32.92	172	29 Average	HORIZONTAL
2	5299.04	117.39			109.76	6.57	33.98	32.92	172	29 Peak	HORIZONTAL
3	5350.00	53.91	54.00	-0.09	46.16	6.61	34.06	32.92	172	29 Average	HORIZONTAL
4	5350.32	68.02	74.00	-5.98	60.27	6.61	34.06	32.92	172	29 Peak	HORIZONTAL

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

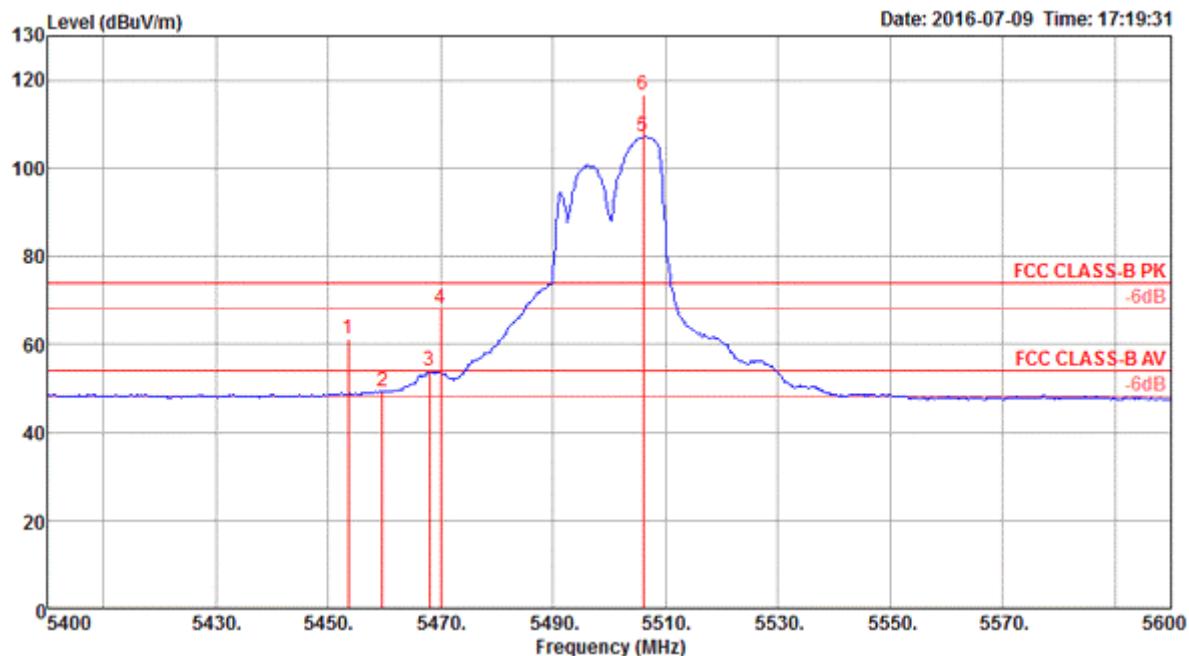
Channel 64



Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
					Line	Limit	Level	Loss	Factor		
MHz	dBuV/m	dBuV/m		dB	dBuV	dB	dB/m	dB	cm	deg	
1	5312.31	105.77			98.10	6.58	34.01	32.92	181	215	Average HORIZONTAL
2	5312.31	116.89			109.22	6.58	34.01	32.92	181	215	Peak HORIZONTAL
3	5351.73	53.62	54.00	-0.38	45.87	6.61	34.06	32.92	181	215	Average HORIZONTAL
4	5351.73	69.36	74.00	-4.64	61.61	6.61	34.06	32.92	181	215	Peak HORIZONTAL

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

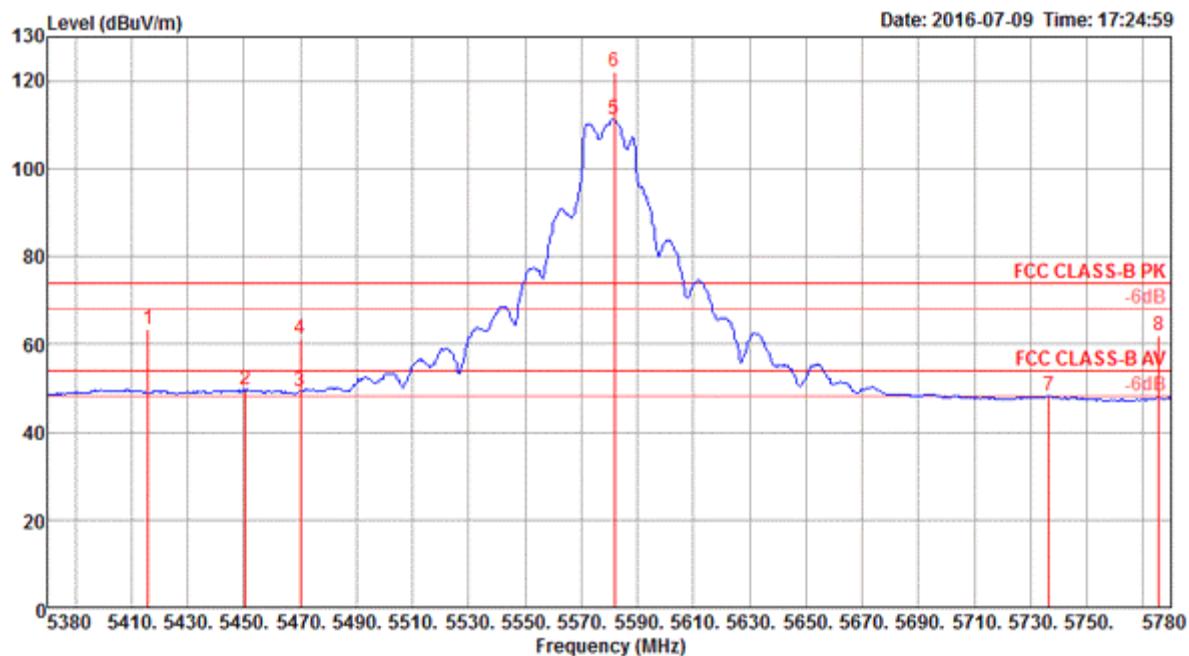
Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT20 CH 100, 116, 140 / Ant. 1 + Ant. 2 + Ant. 3

Channel 100


Freq	Level	Limit	Over	Read	Cable			A/Pos	T/Pos	Remark	Pol/Phase
					Line	Limit	Level				
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1 5453.53	61.02	74.00	-12.98	53.04	6.68	34.23	32.93	176	218	Peak	HORIZONTAL
2 5459.62	49.21	54.00	-4.79	41.23	6.68	34.23	32.93	176	218	Average	HORIZONTAL
3 5467.95	53.83	54.00	-0.17	45.82	6.69	34.25	32.93	176	218	Average	HORIZONTAL
4 5470.00	68.24	74.00	-5.76	60.23	6.69	34.25	32.93	176	218	Peak	HORIZONTAL
5 5506.09	107.14			99.07	6.70	34.30	32.93	176	218	Average	HORIZONTAL
6 5506.09	116.43			108.36	6.70	34.30	32.93	176	218	Peak	HORIZONTAL

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

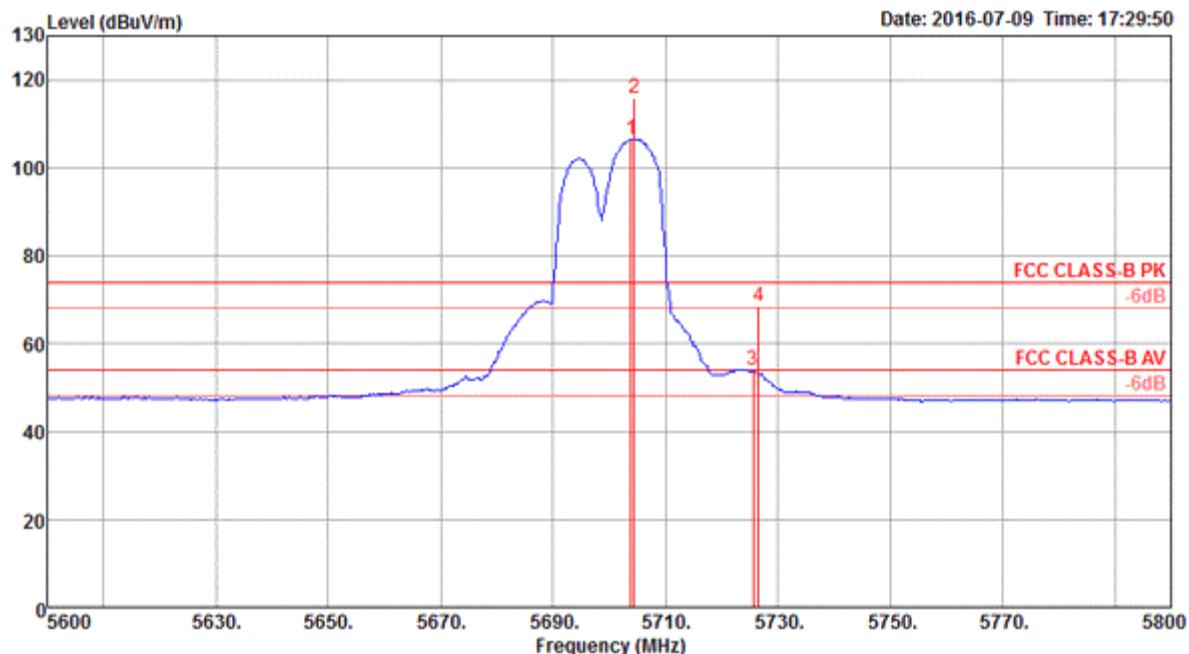
Channel 116



Freq	Level	Limit Line	Over Limit	Read Level	Cable			Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
					Loss	Antenna	Preamp						
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg				
1	5415.90	63.24	74.00	-10.76	55.36	6.66	34.15	32.93	178	219	Peak	HORIZONTAL	
2	5450.51	49.48	54.00	-4.52	41.50	6.68	34.23	32.93	178	219	Average	HORIZONTAL	
3	5470.00	49.09	54.00	-4.91	41.08	6.69	34.25	32.93	178	219	Average	HORIZONTAL	
4	5470.00	61.27	74.00	-12.73	53.26	6.69	34.25	32.93	178	219	Peak	HORIZONTAL	
5	5581.92	111.18			103.04	6.74	34.35	32.95	178	219	Average	HORIZONTAL	
6	5581.92	121.94			113.80	6.74	34.35	32.95	178	219	Peak	HORIZONTAL	
7	5736.41	48.02	54.00	-5.98	39.69	6.88	34.44	32.99	178	219	Average	HORIZONTAL	
8	5775.51	61.75	74.00	-12.25	53.35	6.93	34.47	33.00	178	219	Peak	HORIZONTAL	

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

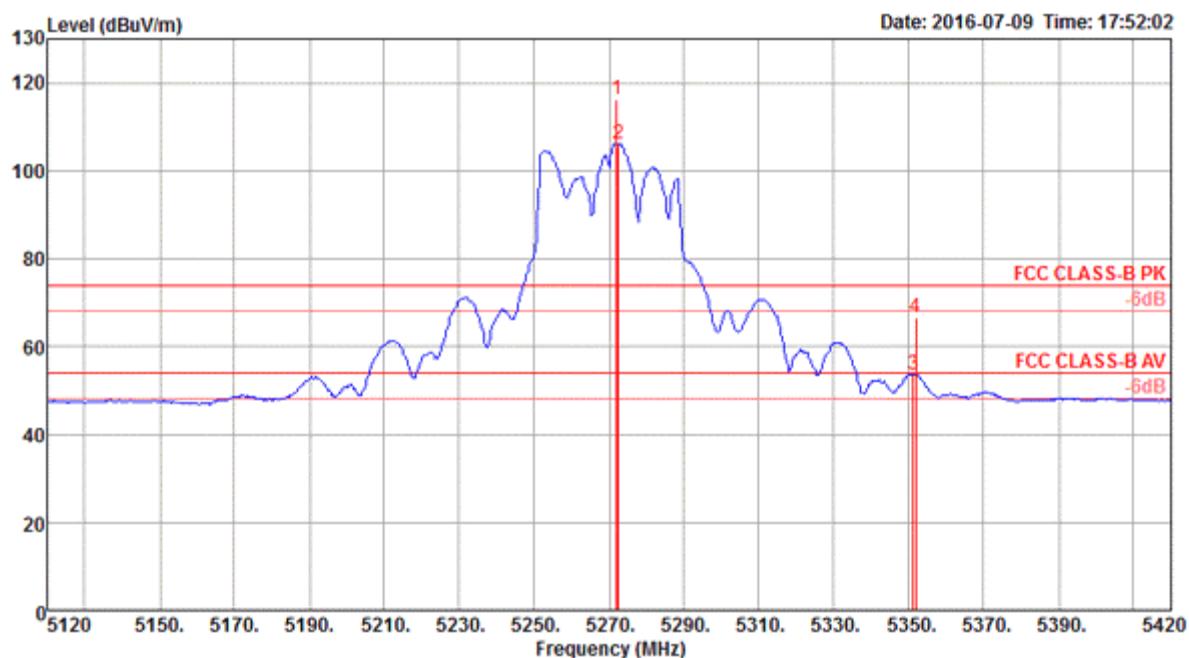
Channel 140



Freq	Level	Limit	Over	Read	Cable			A/Pos	T/Pos	Remark	Pol/Phase
					Line	Limit	Level				
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5703.85	106.53			98.24	6.85	34.42	32.98	178	231 Average	HORIZONTAL
2	5704.49	115.97			107.68	6.85	34.42	32.98	178	231 Peak	HORIZONTAL
3	5725.64	53.84	54.00	-0.16	45.51	6.88	34.44	32.99	178	231 Average	HORIZONTAL
4	5726.60	68.60	74.00	-5.40	60.27	6.88	34.44	32.99	178	231 Peak	HORIZONTAL

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

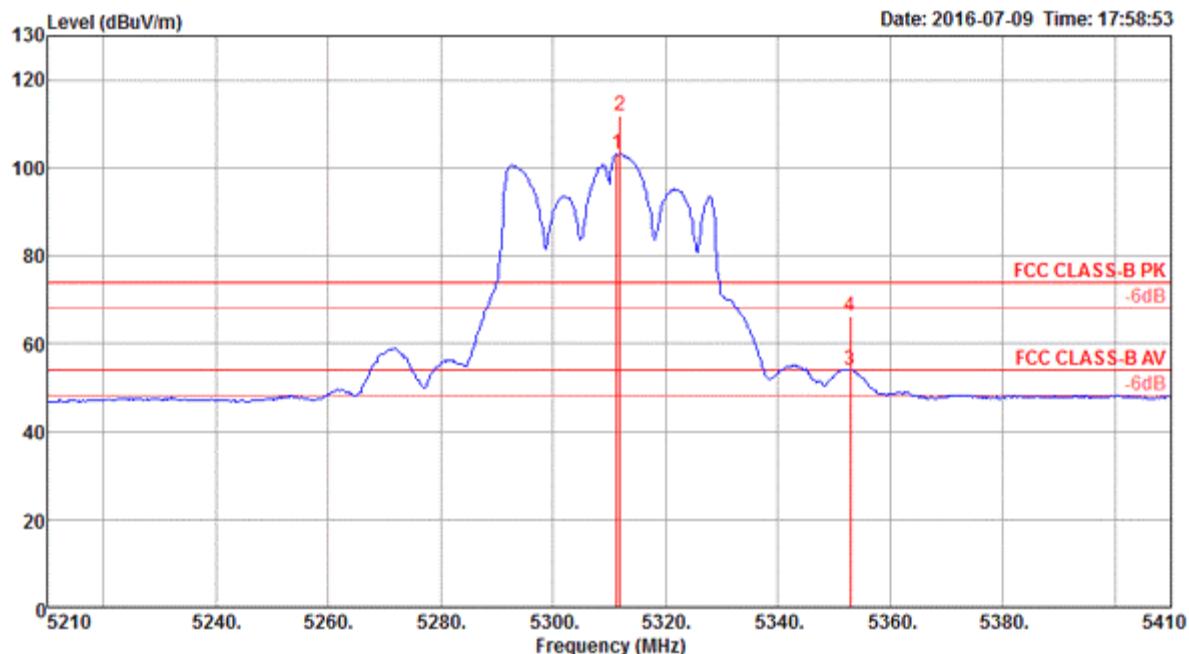
Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 54, 62 / Ant. 1 + Ant. 2 + Ant. 3

Channel 54


Freq	Level	Limit Line	Over Limit	Read Level	Cable			Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
					Loss	Antenna	Preamp						
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg				
1	5271.92	116.13			108.56	6.55	33.94	32.92	177	133	Peak		HORIZONTAL
2	5272.40	106.15			98.58	6.55	33.94	32.92	177	133	Average		HORIZONTAL
3	5351.25	53.63	54.00	-0.37	45.88	6.61	34.06	32.92	177	133	Average		HORIZONTAL
4	5351.73	66.75	74.00	-7.25	59.00	6.61	34.06	32.92	177	133	Peak		HORIZONTAL

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

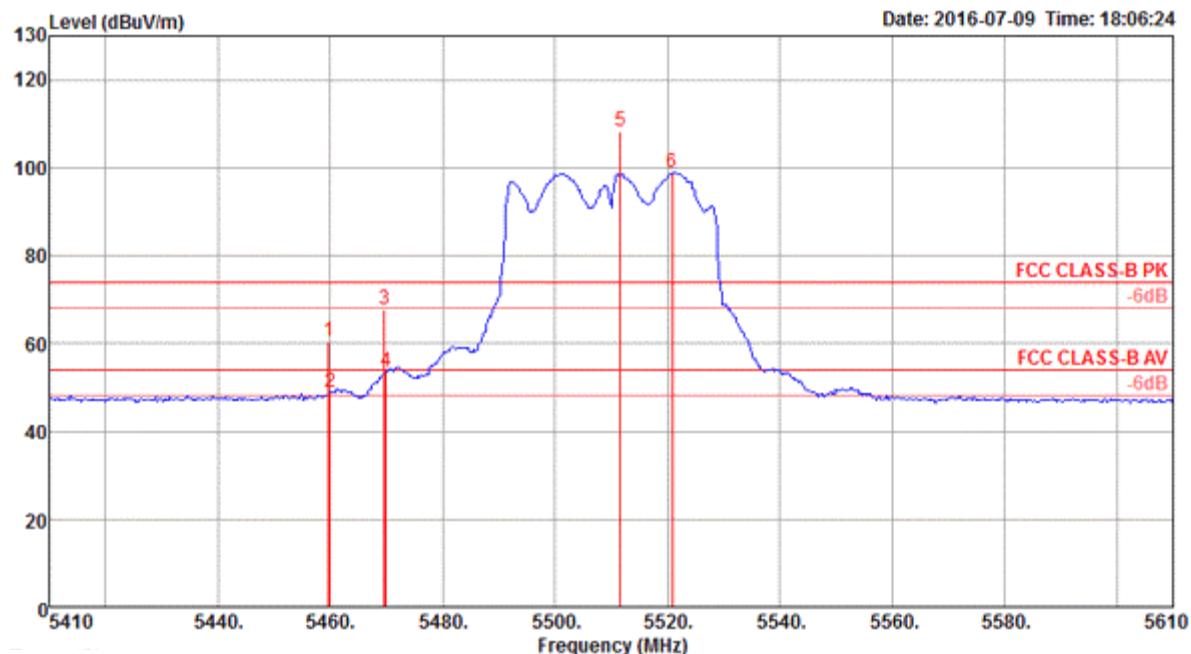
Channel 62



Freq	Level	Limit	Over	Read	Cable			A/Pos	T/Pos	Remark	Pol/Phase
					Line	Limit	Level				
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5311.28	103.18			95.51	6.58	34.01	32.92	176	219 Average	HORIZONTAL
2	5311.92	112.02			104.35	6.58	34.01	32.92	176	219 Peak	HORIZONTAL
3	5352.95	53.96	54.00	-0.04	46.21	6.61	34.06	32.92	176	219 Average	HORIZONTAL
4	5352.95	66.17	74.00	-7.83	58.42	6.61	34.06	32.92	176	219 Peak	HORIZONTAL

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

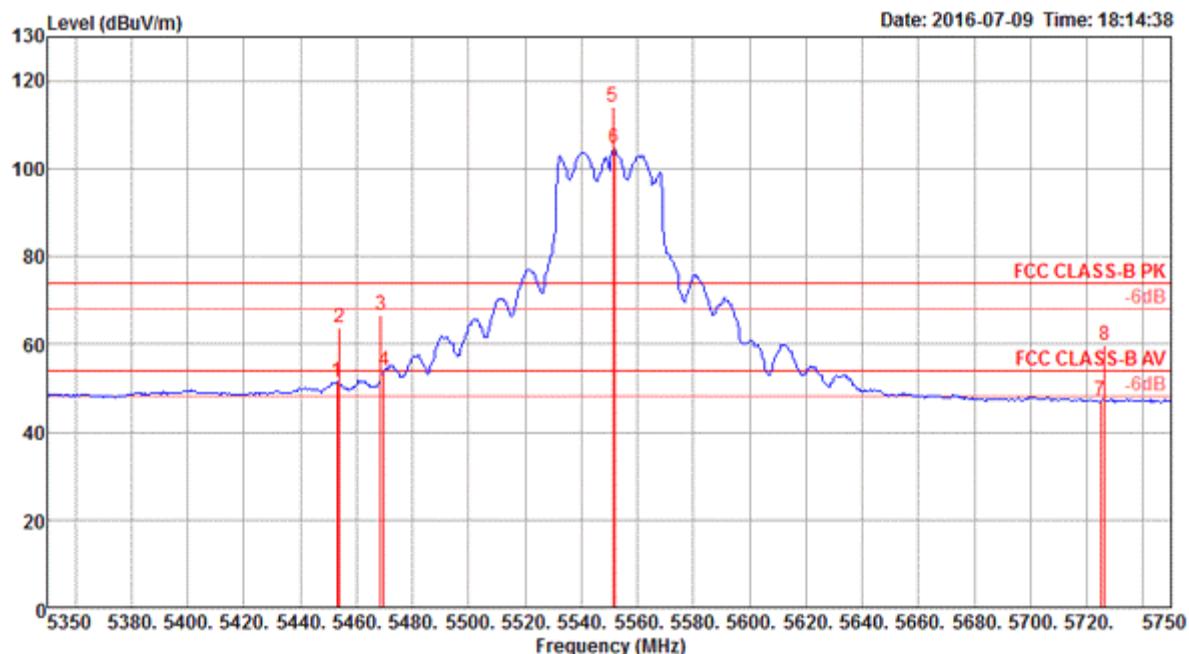
Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT40 CH 102, 110, 134 / Ant. 1 + Ant. 2 + Ant. 3

Channel 102


Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1 5459.68	60.51	74.00	-13.49	52.53	6.68	34.23	32.93	175	219	Peak	HORIZONTAL
2 5460.00	48.79	54.00	-5.21	40.81	6.68	34.23	32.93	175	219	Average	HORIZONTAL
3 5469.62	67.78	74.00	-6.22	59.77	6.69	34.25	32.93	175	219	Peak	HORIZONTAL
4 5470.00	53.76	54.00	-0.24	45.75	6.69	34.25	32.93	175	219	Average	HORIZONTAL
5 5511.60	108.32			100.23	6.71	34.31	32.93	175	219	Peak	HORIZONTAL
6 5520.90	99.00			90.91	6.71	34.31	32.93	175	219	Average	HORIZONTAL

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

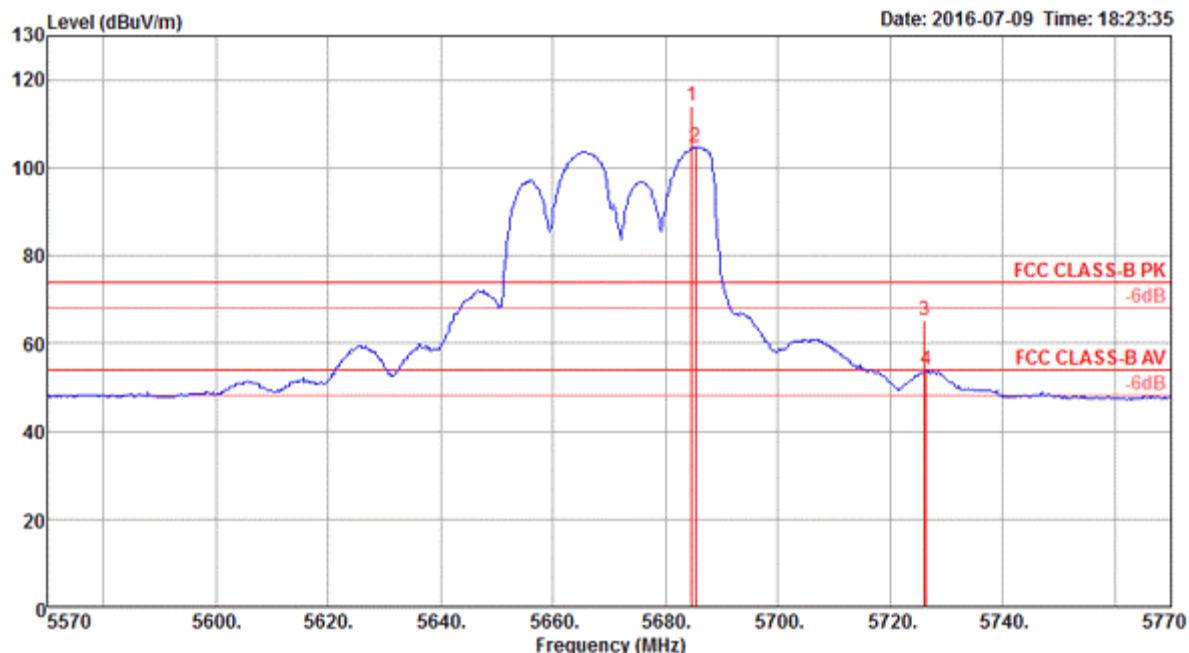
Channel 110



Freq	Level	Limit	Over	Read	Cable			Preamp	A/Pos	T/Pos	Remark	Pol/Phase
					Line	Limit	Level					
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg			
1 5453.21	51.34	54.00	-2.66	43.36	6.68	34.23	32.93	174	219	Average	HORIZONTAL	
2 5453.85	63.85	74.00	-10.15	55.87	6.68	34.23	32.93	174	219	Peak	HORIZONTAL	
3 5468.59	66.79	74.00	-7.21	58.78	6.69	34.25	32.93	174	219	Peak	HORIZONTAL	
4 5470.00	53.80	54.00	-0.20	45.79	6.69	34.25	32.93	174	219	Average	HORIZONTAL	
5 5551.28	114.14			106.02	6.73	34.33	32.94	174	219	Peak	HORIZONTAL	
6 5551.92	104.53			96.41	6.73	34.33	32.94	174	219	Average	HORIZONTAL	
7 5725.00	47.23	54.00	-6.77	38.90	6.88	34.44	32.99	174	219	Average	HORIZONTAL	
8 5726.28	59.75	74.00	-14.25	51.42	6.88	34.44	32.99	174	219	Peak	HORIZONTAL	

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

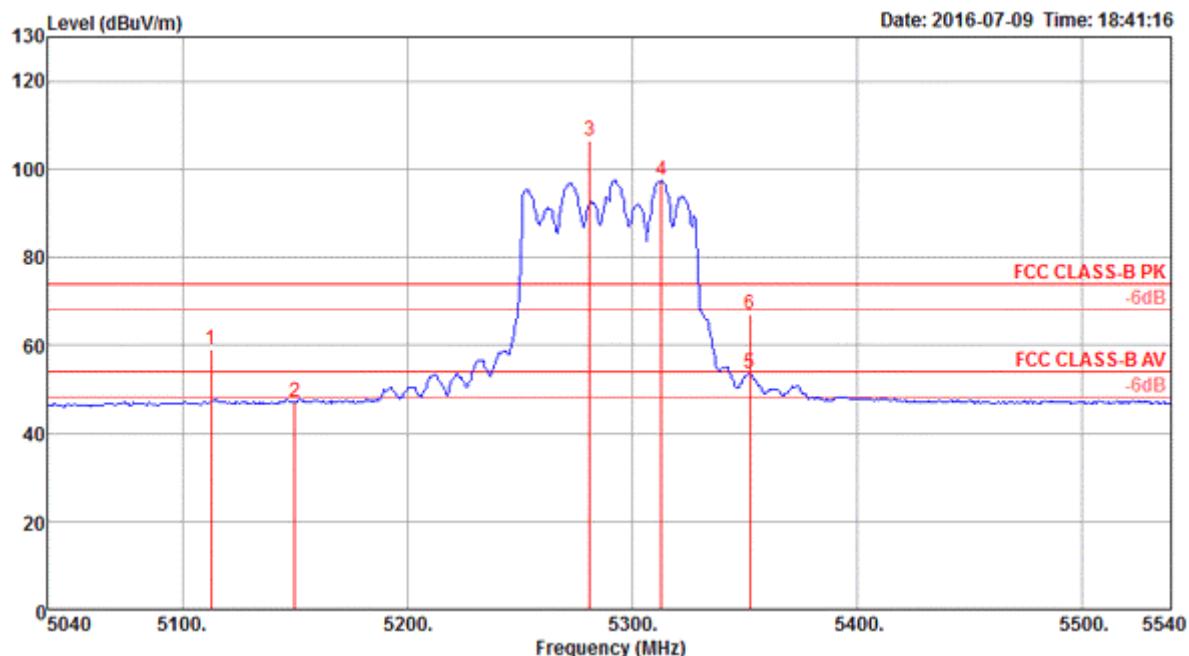
Channel 134



Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
					Line	Limit	Level	Loss	Factor		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB				
1	5684.74	114.13			105.87	6.83	34.41	32.98	173	162 Peak	HORIZONTAL
2	5685.39	104.64			96.38	6.83	34.41	32.98	173	162 Average	HORIZONTAL
3	5726.09	65.12	74.00	-8.88	56.79	6.88	34.44	32.99	173	162 Peak	HORIZONTAL
4	5726.41	53.93	54.00	-0.07	45.60	6.88	34.44	32.99	173	162 Average	HORIZONTAL

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

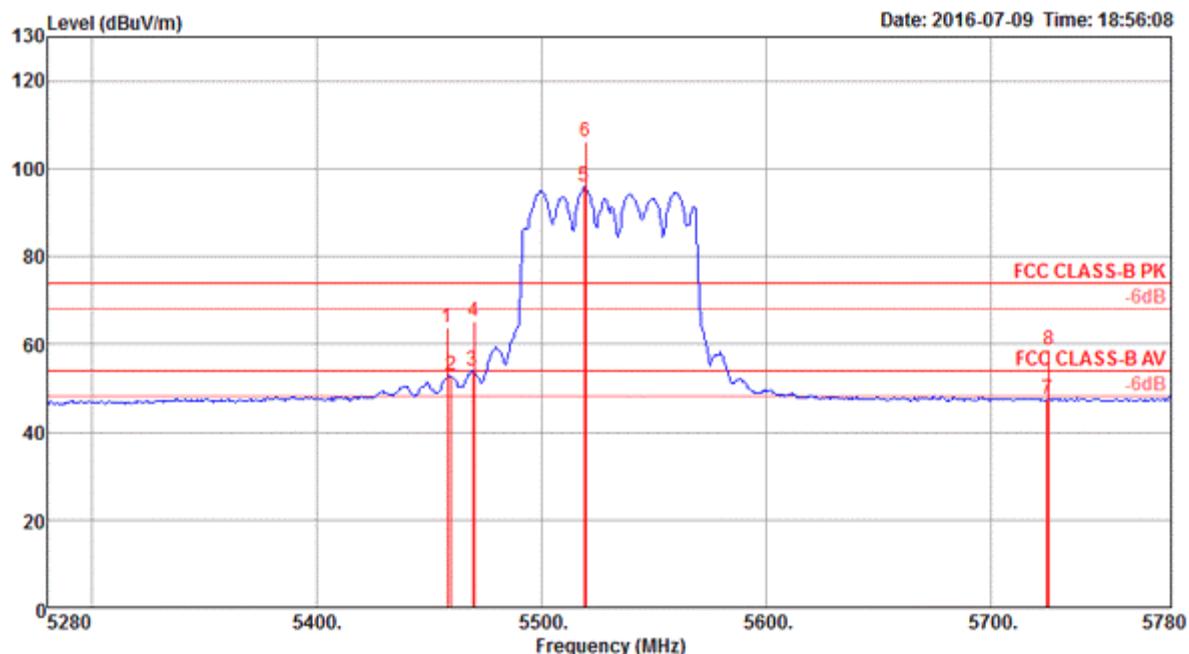
Temperature	23.4°C	Humidity	49%
Test Engineer	DK Chang/Gino Huang	Configurations	IEEE 802.11ac MCS0/Nss1 VHT80 CH 58, 106, 122 / Ant. 1 + Ant. 2 + Ant. 3

Channel 58


Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1 5112.92	58.91	74.00	-15.09	51.72	6.41	33.69	32.91	175	0	Peak	HORIZONTAL
2 5150.00	47.09	54.00	-6.91	39.83	6.44	33.74	32.92	175	0	Average	HORIZONTAL
3 5281.19	106.45			98.85	6.56	33.96	32.92	175	0	Peak	HORIZONTAL
4 5313.24	97.46			89.79	6.58	34.01	32.92	175	0	Peak	HORIZONTAL
5 5352.50	53.61	54.00	-0.39	45.86	6.61	34.06	32.92	175	0	Average	HORIZONTAL
6 5352.50	67.10	74.00	-6.90	59.35	6.61	34.06	32.92	175	0	Peak	HORIZONTAL

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

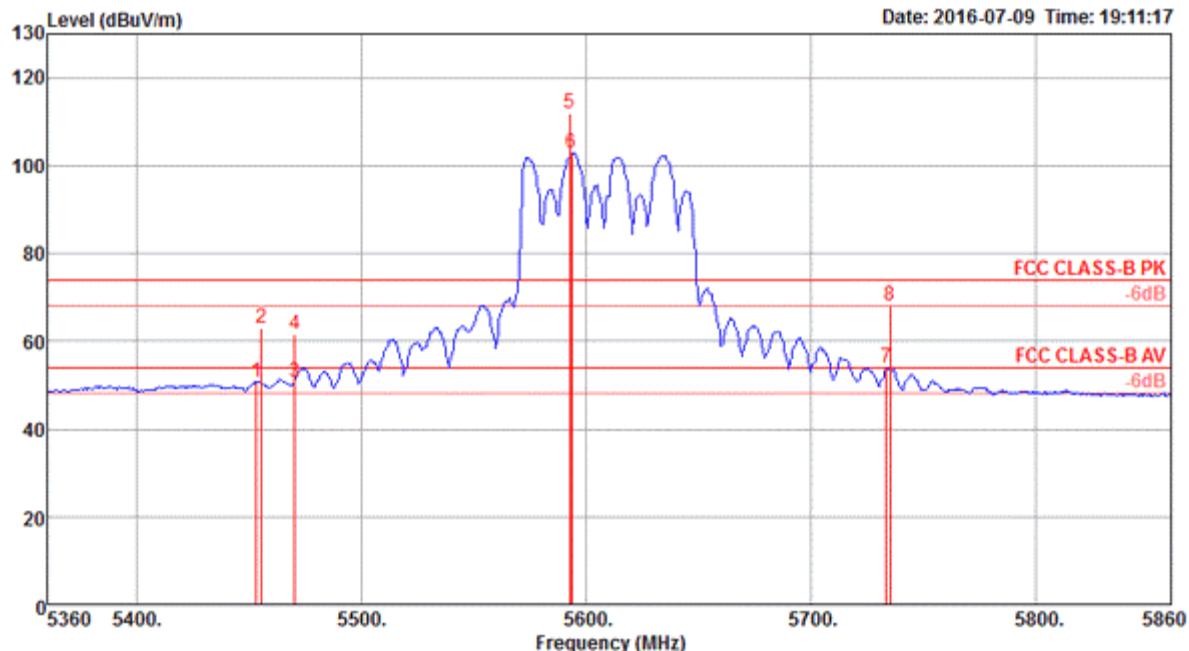
Channel 106



Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5457.89	63.87	74.00	-10.13	55.89	6.68	34.23	32.93	174	236	Peak
2	5459.49	52.75	54.00	-1.25	44.77	6.68	34.23	32.93	174	236	Average
3	5469.10	53.88	54.00	-0.12	45.87	6.69	34.25	32.93	174	236	Average
4	5470.00	65.12	74.00	-8.88	57.11	6.69	34.25	32.93	174	236	Peak
5	5518.78	95.78			87.69	6.71	34.31	32.93	174	236	Average
6	5519.58	106.00			97.91	6.71	34.31	32.93	174	236	Peak
7	5725.00	47.48	54.00	-6.52	39.15	6.88	34.44	32.99	174	236	Average
8	5725.51	58.69	74.00	-15.31	50.36	6.88	34.44	32.99	174	236	Peak

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

Channel 122



Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5452.95	50.75	54.00	-3.25	42.77	6.68	34.23	32.93	174	231 Average	HORIZONTAL
2	5455.35	62.88	74.00	-11.12	54.90	6.68	34.23	32.93	174	231 Peak	HORIZONTAL
3	5470.00	50.77	54.00	-3.23	42.76	6.69	34.25	32.93	174	231 Average	HORIZONTAL
4	5470.00	61.40	74.00	-12.60	53.39	6.69	34.25	32.93	174	231 Peak	HORIZONTAL
5	5592.37	111.86			103.70	6.75	34.36	32.95	174	231 Peak	HORIZONTAL
6	5593.17	102.93			94.77	6.75	34.36	32.95	174	231 Average	HORIZONTAL
7	5733.40	53.96	54.00	-0.04	45.63	6.88	34.44	32.99	174	231 Average	HORIZONTAL
8	5735.00	68.20	74.00	-5.80	59.87	6.88	34.44	32.99	174	231 Peak	HORIZONTAL

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

Note:

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

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

4.6. Frequency Stability Measurement

4.6.1. 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).

4.6.2. Measuring Instruments and Setting

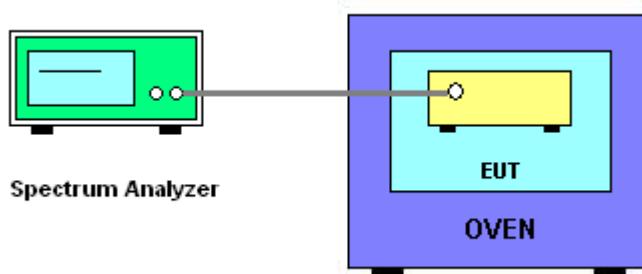
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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

4.6.3. 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 $(fc-f)/fc \times 10^6$ ppm and the limit is less than ± 20 ppm (IEEE 802.11n specification).
6. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
7. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
8. Extreme temperature is 0°C~50°C.

4.6.4. Test Setup Layout





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 un-modulation transmitting mode.

4.6.7. Test Result of Frequency Stability

For Mode 1 (EUT 1):

Temperature	25°C	Humidity	55%
Test Engineer	Roki Liu	Test Date	Jul. 16, 2016

Mode: 20 MHz / Ant. 1

Voltage vs. Frequency Stability

Voltage (V)	Measurement Frequency (MHz)			
	5300 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5299.9854	5299.9848	5299.9844	5299.9838
110.00	5299.9846	5299.9845	5299.9842	5299.9838
93.50	5299.9837	5299.9828	5299.9819	5299.9815
Max. Deviation (MHz)	0.0163	0.0172	0.0181	0.0185
Max. Deviation (ppm)	3.08	3.25	3.42	3.49
Result	Complies			

Temperature vs. Frequency Stability

Temperature (°C)	Measurement Frequency (MHz)			
	5300 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5299.9832	5299.9830	5299.9820	5299.9810
10	5299.9843	5299.9838	5299.9831	5299.9825
20	5299.9846	5299.9838	5299.9836	5299.9828
30	5299.9885	5299.9878	5299.9876	5299.9868
40	5299.9901	5299.9900	5299.9891	5299.9883
50	5299.9920	5299.9914	5299.9904	5299.9898
Max. Deviation (MHz)	0.0168	0.0170	0.0180	0.0190
Max. Deviation (ppm)	3.17	3.21	3.40	3.58
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5580 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5579.9848	5579.9845	5579.9842	5579.9834
110.00	5579.9846	5579.9840	5579.9839	5579.9838
93.50	5579.9844	5579.9841	5579.9840	5579.9830
Max. Deviation (MHz)	0.0156	0.0160	0.0161	0.0170
Max. Deviation (ppm)	2.80	2.87	2.89	3.05
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5580 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5579.9827	5579.9826	5579.9817	5579.9810
10	5579.9828	5579.9824	5579.9815	5579.9813
20	5579.9846	5579.9836	5579.9826	5579.9822
30	5579.9885	5579.9883	5579.9875	5579.9874
40	5579.9895	5579.9886	5579.9883	5579.9874
50	5579.9906	5579.9896	5579.9893	5579.9890
Max. Deviation (MHz)	0.0173	0.0176	0.0185	0.0190
Max. Deviation (ppm)	3.10	3.15	3.32	3.41
Result	Complies			

**Mode: 40 MHz / Ant. 1****Voltage vs. Frequency Stability**

Voltage	Measurement Frequency (MHz)			
(V)	5310 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5309.9852	5309.9845	5309.9840	5309.9832
110.00	5309.9846	5309.9840	5309.9833	5309.9826
93.50	5309.9838	5309.9835	5309.9827	5309.9821
Max. Deviation (MHz)	0.0162	0.0165	0.0173	0.0179
Max. Deviation (ppm)	3.05	3.11	3.26	3.37
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5310 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5309.9821	5309.9812	5309.9809	5309.9803
10	5309.9838	5309.9833	5309.9832	5309.9830
20	5309.9846	5309.9841	5309.9834	5309.9824
30	5309.9885	5309.9881	5309.9874	5309.9865
40	5309.9892	5309.9887	5309.9878	5309.9868
50	5309.9898	5309.9894	5309.9885	5309.9876
Max. Deviation (MHz)	0.0179	0.0188	0.0191	0.0197
Max. Deviation (ppm)	3.37	3.54	3.60	3.71
Result	Complies			

**Voltage vs. Frequency Stability**

Voltage	Measurement Frequency (MHz)			
(V)	5550 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5549.9852	5549.9851	5549.9843	5549.9834
110.00	5549.9846	5549.9838	5549.9828	5549.9827
93.50	5549.9845	5549.9841	5549.9831	5549.9830
Max. Deviation (MHz)	0.0155	0.0162	0.0172	0.0173
Max. Deviation (ppm)	2.79	2.92	3.10	3.12
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5550 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5549.9822	5549.9821	5549.9820	5549.9810
10	5549.9839	5549.9830	5549.9829	5549.9825
20	5549.9846	5549.9836	5549.9833	5549.9827
30	5549.9885	5549.9882	5549.9875	5549.9865
40	5549.9896	5549.9892	5549.9883	5549.9880
50	5549.9903	5549.9896	5549.9892	5549.9885
Max. Deviation (MHz)	0.0178	0.0179	0.0180	0.0190
Max. Deviation (ppm)	3.21	3.23	3.24	3.42
Result	Complies			

Mode: 80 MHz / Ant. 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5290 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5289.9856	5289.9851	5289.9845	5289.9836
110.00	5289.9846	5289.9838	5289.9835	5289.9827
93.50	5289.9844	5289.9840	5289.9838	5289.9832
Max. Deviation (MHz)	0.0156	0.0162	0.0165	0.0173
Max. Deviation (ppm)	2.95	3.06	3.12	3.27
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
($^{\circ}$ C)	5290 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5289.9817	5289.9816	5289.9810	5289.9804
10	5289.9831	5289.9829	5289.9819	5289.9816
20	5289.9846	5289.9843	5289.9838	5289.9829
30	5289.9885	5289.9883	5289.9880	5289.9870
40	5289.9889	5289.9881	5289.9876	5289.9872
50	5289.9908	5289.9907	5289.9899	5289.9897
Max. Deviation (MHz)	0.0183	0.0184	0.0190	0.0196
Max. Deviation (ppm)	3.46	3.48	3.59	3.71
Result	Complies			

Voltage vs. Frequency Stability

Voltage		Measurement Frequency (MHz)			
(V)		5530 MHz			
		0 Minute	2 Minute	5 Minute	10 Minute
126.50	5529.9853	5529.9846	5529.9840	5529.9837	
110.00	5529.9846	5529.9843	5529.9841	5529.9831	
93.50	5529.9845	5529.9843	5529.9840	5529.9832	
Max. Deviation (MHz)	0.0155	0.0157	0.0160	0.0169	
Max. Deviation (ppm)	2.80	2.84	2.89	3.06	
Result	Complies				

Temperature vs. Frequency Stability

Temperature		Measurement Frequency (MHz)			
($^{\circ}$ C)		5530 MHz			
		0 Minute	2 Minute	5 Minute	10 Minute
0	5529.9827	5529.9821	5529.9818	5529.9808	
10	5529.9831	5529.9822	5529.9819	5529.9809	
20	5529.9846	5529.9839	5529.9838	5529.9836	
30	5529.9885	5529.9881	5529.9879	5529.9871	
40	5529.9904	5529.9897	5529.9896	5529.9888	
50	5529.9909	5529.9906	5529.9900	5529.9899	
Max. Deviation (MHz)	0.0173	0.0179	0.0182	0.0192	
Max. Deviation (ppm)	3.13	3.24	3.29	3.47	
Result	Complies				

**For Mode 2 (EUT 2):**

Temperature	25°C	Humidity	55%
Test Engineer	Roki Liu	Test Date	Jul. 16, 2016

Mode: 20 MHz / Ant. 1**Voltage vs. Frequency Stability**

Voltage (V)	Measurement Frequency (MHz)			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5299.9704	5299.9694	5299.9692	5299.9686
110.00	5299.9696	5299.9690	5299.9689	5299.9682
93.50	5299.9694	5299.9686	5299.9679	5299.9669
Max. Deviation (MHz)	0.0306	0.0314	0.0321	0.0331
Max. Deviation (ppm)	5.77	5.92	6.06	6.25
Result	Complies			

Temperature vs. Frequency Stability

Temperature (°C)	Measurement Frequency (MHz)			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5299.9678	5299.9674	5299.9666	5299.9657
10	5299.9682	5299.9677	5299.9675	5299.9671
20	5299.9696	5299.9690	5299.9682	5299.9674
30	5299.9820	5299.9816	5299.9814	5299.9811
40	5299.9830	5299.9828	5299.9825	5299.9823
50	5299.9848	5299.9841	5299.9832	5299.9827
Max. Deviation (MHz)	0.0322	0.0326	0.0334	0.0343
Max. Deviation (ppm)	6.08	6.15	6.30	6.47
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5580 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5579.9704	5579.9696	5579.9694	5579.9685
110.00	5579.9696	5579.9695	5579.9686	5579.9678
93.50	5579.9687	5579.9678	5579.9672	5579.9671
Max. Deviation (MHz)	0.0313	0.0322	0.0328	0.0329
Max. Deviation (ppm)	5.61	5.77	5.88	5.90
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5580 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5579.9666	5579.9664	5579.9656	5579.9651
10	5579.9680	5579.9673	5579.9672	5579.9664
20	5579.9696	5579.9688	5579.9681	5579.9671
30	5579.9820	5579.9810	5579.9808	5579.9800
40	5579.9827	5579.9825	5579.9817	5579.9812
50	5579.9834	5579.9831	5579.9828	5579.9824
Max. Deviation (MHz)	0.0334	0.0336	0.0344	0.0349
Max. Deviation (ppm)	5.99	6.02	6.16	6.25
Result	Complies			

**Mode: 40 MHz / Ant. 1****Voltage vs. Frequency Stability**

Voltage	Measurement Frequency (MHz)			
(V)	5310 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5309.9703	5309.9701	5309.9691	5309.9685
110.00	5309.9696	5309.9694	5309.9689	5309.9686
93.50	5309.9689	5309.9688	5309.9679	5309.9677
Max. Deviation (MHz)	0.0311	0.0312	0.0321	0.0323
Max. Deviation (ppm)	5.86	5.88	6.05	6.08
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
($^{\circ}$ C)	5310 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5309.9681	5309.9671	5309.9668	5309.9658
10	5309.9693	5309.9685	5309.9681	5309.9671
20	5309.9696	5309.9689	5309.9681	5309.9675
30	5309.9820	5309.9810	5309.9804	5309.9801
40	5309.9835	5309.9831	5309.9828	5309.9822
50	5309.9846	5309.9841	5309.9834	5309.9831
Max. Deviation (MHz)	0.0319	0.0329	0.0332	0.0342
Max. Deviation (ppm)	6.01	6.20	6.25	6.44
Result	Complies			

**Voltage vs. Frequency Stability**

Voltage	Measurement Frequency (MHz)			
(V)	5550 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5549.9702	5549.9693	5549.9689	5549.9680
110.00	5549.9696	5549.9688	5549.9680	5549.9672
93.50	5549.9691	5549.9682	5549.9678	5549.9675
Max. Deviation (MHz)	0.0309	0.0318	0.0322	0.0328
Max. Deviation (ppm)	5.57	5.73	5.80	5.91
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5550 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5549.9667	5549.9657	5549.9653	5549.9650
10	5549.9683	5549.9681	5549.9680	5549.9677
20	5549.9696	5549.9694	5549.9688	5549.9680
30	5549.9820	5549.9814	5549.9810	5549.9809
40	5549.9829	5549.9821	5549.9814	5549.9807
50	5549.9845	5549.9841	5549.9839	5549.9833
Max. Deviation (MHz)	0.0333	0.0343	0.0347	0.0350
Max. Deviation (ppm)	6.00	6.18	6.25	6.31
Result	Complies			

Mode: 80 MHz / Ant. 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5290 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5289.9704	5289.9702	5289.9694	5289.9690
110.00	5289.9696	5289.9688	5289.9680	5289.9673
93.50	5289.9695	5289.9688	5289.9685	5289.9682
Max. Deviation (MHz)	0.0305	0.0312	0.0320	0.0327
Max. Deviation (ppm)	5.77	5.90	6.05	6.18
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
($^{\circ}$ C)	5290 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5289.9677	5289.9671	5289.9664	5289.9659
10	5289.9689	5289.9685	5289.9680	5289.9673
20	5289.9696	5289.9691	5289.9688	5289.9684
30	5289.9820	5289.9812	5289.9806	5289.9802
40	5289.9837	5289.9829	5289.9820	5289.9814
50	5289.9851	5289.9847	5289.9846	5289.9837
Max. Deviation (MHz)	0.0323	0.0329	0.0336	0.0341
Max. Deviation (ppm)	6.11	6.22	6.35	6.45
Result	Complies			

**Voltage vs. Frequency Stability**

Voltage	Measurement Frequency (MHz)			
(V)	5530 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5529.9700	5529.9690	5529.9688	5529.9682
110.00	5529.9696	5529.9694	5529.9684	5529.9679
93.50	5529.9691	5529.9689	5529.9681	5529.9676
Max. Deviation (MHz)	0.0309	0.0311	0.0319	0.0324
Max. Deviation (ppm)	5.59	5.62	5.77	5.86
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5530 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5529.9671	5529.9661	5529.9658	5529.9651
10	5529.9691	5529.9690	5529.9688	5529.9679
20	5529.9696	5529.9693	5529.9686	5529.9676
30	5529.9820	5529.9815	5529.9810	5529.9800
40	5529.9824	5529.9815	5529.9809	5529.9803
50	5529.9842	5529.9832	5529.9823	5529.9814
Max. Deviation (MHz)	0.0329	0.0339	0.0342	0.0349
Max. Deviation (ppm)	5.95	6.13	6.18	6.31
Result	Complies			

4.7. Antenna Requirements

4.7.1. 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.

4.7.2. 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
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Oct. 22, 2015	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170585	15GHz ~ 40GHz	Oct. 07, 2015	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 18, 2016	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26GHz ~ 40GHz	Nov. 13, 2015	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Oct. 27, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-17	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-1	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-2	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-I0-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 09, 2015	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 03, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 02, 2015	Conducted (TH01-CB)

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

6. MEASUREMENT UNCERTAINTY

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74×10^{-8}	Confidence levels of 95%
Frequency Stability	6.06×10^{-8}	Confidence levels of 95%