

FCC RADIO TEST REPORT

according to

47 CFR FCC Part 15 Subpart E § 15.407

Model Name	: Cable Modem
Model No.	: TC8717T/TC8715D
Filing Type	: Class II Change
FCC ID	: RSE-TC8717T
Trade Name	: technicolor
Applicant	: Technicolor Delivery Technologies Belgium Prins Boudewijnlaan 47 B-2650 Edegem Belgium

Statement

Test result included is for the IEEE 802.11n and IEEE 802.11a/ac (5150 ~ 5250MHz / 5725 ~ 5850MHz) of the product.

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

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

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

KDB789033 D02 v01, KDB 662911 D01 v02r01 and KDB644545 D03 v01.

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



SPORTON International Inc.

No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR422507-01	Rev.01	Initial issue of report	Mar. 19, 2015

VERIFICATION OF COMPLIANCE

according to

47 CFR FCC Part 15 Subpart E § 15.407

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Model No. : TC8717T/TC8715D
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Prins Boudewijnlaan 47
B-2650 Edegem
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Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Feb. 11, 2015 would like to declare that the tested sample has been evaluated and found to be in compliance with the tested rule parts. The data recorded as well as the test configuration specified is true and accurate for showing the sample's EMC nature.


Sam Chen

SPORTON International Inc.

No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

1 SUMMARY OF THE TEST RESULT

Applied Standard: 47 CFR FCC Part 15 Subpart E				
Part	Rule Section	Description of Test	Result	Under Limit
3.1	15.407(b)(6)	AC Power Conducted Emissions	Complies	13.19 dB
3.2	15.407(e)	Emission bandwidth 6dB bandwidth for U-NII-3	Complies	-
3.3	15.407(a)(1/2/3)	Maximum Conducted Output Power	Complies	4.09 dB
3.4	15.407(a)(1/2/3)	Power Spectral Density	Complies	3.68 dB
3.5	15.407(b)(1/2/3/4/6)	Radiated Emissions	Complies	0.07 dB
		Band Edge Measurement	Complies	0.01 dB
3.6	15.407(g)	Frequency Stability	Complies	-
3.7	15.203	Antenna Requirements	Complies	-

1.1 Information provided by the manufacturer

Model Name: Cable Modem

Model No.: TC8717T/TC8715D

Trade Name: technicolor

Power Supply: For Model No.: TC8717T

1. Internal AC-DC power pack, 12Vdc, 3.5A, Manufacturer: AcBel, Model: JSSTD003-AD0G2

2. Battery, Manufacturer: Getac, Model: BP-TC-8-22 / 2250S, Rating: 7.2V 4300mAh

For Model No.: TC8715D

1. Internal AC-DC power pack, 12Vdc, 3.5A, Manufacturer: AcBel, Model: JSSTD003-AD0G2

AC Power Cord: 2pin

Hardware Version: LAB2

Interface Availability

Interface Model No.	Internal AC-DC power pack Input: 100V~130V Output : 12Vdc3.5A	Battery	Cable modem: DOCSIS 3.0 Cable Modem MoCA: MoCA 2.0 D Band 1125MHz and 1525MHz	Ethernet 10/100/1000 Mbps	USB 2. 0	FXS	WLAN IEEE 802.11a/b/g/ n/ac(2.4GHz/ 5GHz 3*3)
TC8717T	●	●	●	●(4 port)	●(2 port)	●(2 port)	●
TC8715D	●	○	●	●(4 port)	●(2 port)	○	●

Note :

1. ● : Equipped ○ : Not Equipped

2. Model No.: TC8717T was selected as representative model for the test and its data was recorded in this report.

1.2 Class II Change

This product is an extension of original one reported under Sporton project number: 422507

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
1. Changing 5GHz Band 1 and Band 4 to "New Rules" from "Old Rules". 2. Adding a RJ-45 cable.	All test items.

1.3 Application of harmonized standard

US Standard: 47 CFR FCC Part 15 Subpart E § 15.407

ANSI C63.10-2013

KDB662911 D01 Multiple Transmitter Output v02r01, 10/31/2013

KDB789033 D02 General UNII Test Procedures New Rules v01, 06/06/2014

KDB644545 D02 Alternative Guidance for 802.11ac v01, 06/07/2012

KDB644545 D03 Guidance for IEEE 802.11ac v01, 08/14/2014

1.4 Cabling Attached to the Equipment

Table 1- Cable and Interconnection

For Model No.: TC8717T

Interface	Cable type	Cable length delivered with the modem	“Real life” Cable length that can be attached to this type of interface	Cable length to be used for testing	Internal / external connection
Cable & MoCA	coaxial	2 meter	> 10 meter	10 meter	External
Eth1	UTP Cat 5	2 meter	> 10 meter	10 meter	Internal
FXS1/2	UTP Cat 3	2 meter	> 10 meter	1 meter flat cable	Internal
USB1/2	STP	1 meter	< 3 meter	1 meter	Internal
AC power					Internal
Battery					Internal

For Model No.: TC8715D

Interface	Cable type	Cable length delivered with the modem	“Real life” Cable length that can be attached to this type of interface	Cable length to be used for testing	Internal / external connection
Cable & MoCA	coaxial	2 meter	> 10 meter	10 meter	External
Eth1	UTP Cat 5	2 meter	> 10 meter	10 meter	Internal
USB1/2	STP	1 meter	< 3 meter	1 meter	Internal
AC power					Internal

1.5 Panel Drawing

For Model No.: TC8717T



For Model No.: TC8715D



2 GENERAL INFORMATION

2.1 Product Details

Items	Description			
Product	Stand alone			
Model No.	TC8717T/TC8715D			
FCC ID	RSE-TC8717T			
Power Type	Internal power supply and Battery			
EUT Stage	☒	Product Unit	☐	Pre-Sample
Antenna Type	Please see Section 2.3			
Operating Band, Conected Power	U-NII-1 5150~5250MHz	☒	IEEE 802.11a: 25.30 dBm	
		☒	For Non-Beamforming IEEE 802.11ac (20MHz): 25.40 dBm IEEE 802.11ac (40MHz): 24.94 dBm IEEE 802.11ac (80MHz): 20.59 dBm	
		☒	For Beamforming IEEE 802.11ac (20MHz): 23.17 dBm IEEE 802.11ac (40MHz): 23.61 dBm IEEE 802.11ac (80MHz): 18.84 dBm	
	U-NII-3 5725~ 5850 MHz	☒	IEEE 802.11a: 25.59 dBm	
		☒	For Non-Beamforming IEEE 802.11ac (20MHz): 24.53 dBm IEEE 802.11ac (40MHz): 25.91 dBm IEEE 802.11ac (80MHz): 21.42 dBm	
		☒	For Beamforming IEEE 802.11ac (20MHz): 23.33 dBm IEEE 802.11ac (40MHz): 22.41 dBm IEEE 802.11ac (80MHz): 19.00 dBm	
Product Type	For IEEE 802.11a: WLAN (1,3TX, 3RX) For IEEE 802.11n: WLAN (1,2,3TX, 3RX) For IEEE 802.11ac: WLAN (1,2,3TX, 3RX)			
Nominal Chennel Bandwidth	20MHz / 40MHz / 80MHz			
Modulation	802.11a: OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11n: (BPSK / QPSK / 16QAM / 64QAM) See the below table. 802.11ac:(BPSK / QPSK / 16QAM / 64QAM / 256QAM) See the below table			
Data Rate (Mbps)	11a mode :OFDM (6/9/12/18/24/36/48/54) 11n(20MHz) mode (MCS0~MCS23) 11n(40MHz) mode (MCS0~MCS23) 11ac(20MHz) mode (MCS0~MCS9 for Nss1~Nss3) 11ac(40MHz) mode (MCS0~MCS9 for Nss1~Nss3) 11ac(80MHz) mode (MCS0~MCS9 for Nss1~Nss3)			
Beam forming Function	☒	With Beam forming for IEEE 802.11ac	☐	Without Beam forming

I/O Ports	For Model No.: TC8717T LAN Port x 4 USB Host Port x 2 FXS Port x 2 Cable + MoCA Port x 1(Coaxial type)
	For Model No: TC8715D LAN Port x 4 USB Host Port x 2 Cable + MoCA Port x 1(Coaxial type)
Software Version	5.5.10mp3
Associated Devices	single-range internal AC-DC power pack

2.2 Accessories

Others
AC power cord*1, unshielded 1.8m
RJ-45 cable*1, unshielded 2.0m

2.3 Table for Filed Antenna

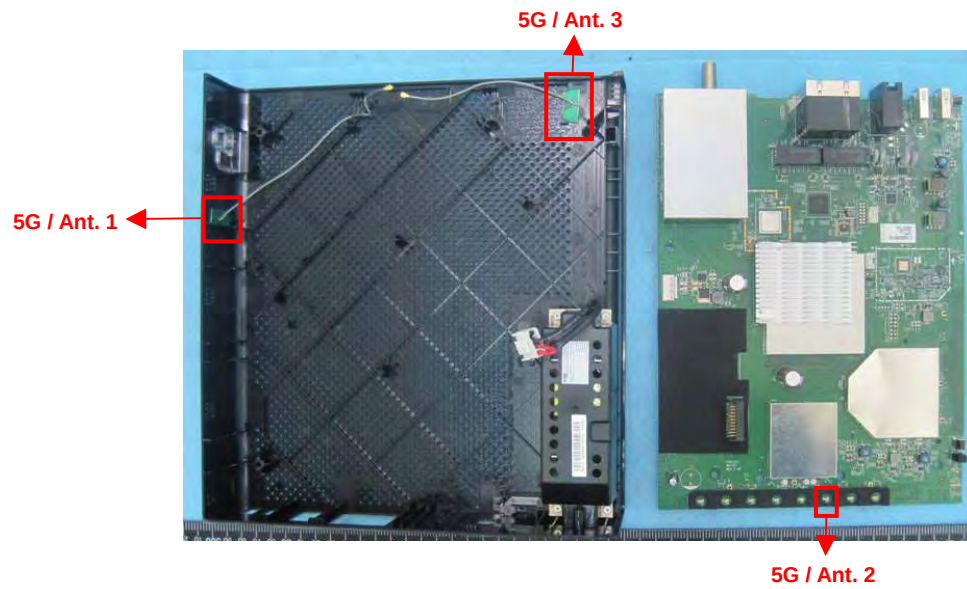
Ant.	Brand	Model Name	Antenna Type	Connector
1	WHAYU	C107-511031-A	PIFA Antenna	I-PEX
2	-	-	Printed Antenna	N/A
3	WHAYU	C107-511033-A	PIFA Antenna	I-PEX

Antenna & Bandwidth

Antenna	1st (TX)			2nd (TX)			3rd (TX)		
	20 MHz	40 MHz	80 MHz	20 MHz	40 MHz	80 MHz	20 MHz	40 MHz	80MHz
802.11a	V	X	X	V	X	X	V	X	X
802.11n	V	V	X	V	V	X	V	V	X
802.11ac	V	V	V	V	V	V	V	V	V

Frequency	Antenna Gain (dBi)								
	Ant. 1 (WJ1)			Ant. 2 (WJ2)			Ant. 3 (WJ3)		
	20 MHz	40 MHz	80MHz	20 MHz	40 MHz	80MHz	20 MHz	40 MHz	80MHz
5180MHz	5.86	-	-	6.10	-	-	5.47	-	-
5190MHz	-	5.90	-	-	6.04	-	-	5.63	-
5200MHz	5.93	-	-	6.34	-	-	5.72	-	-
5210MHz	-	-	5.94	-	-	6.02	-	-	5.83
5230MHz	-	6.07	-	-	6.44	-	-	5.71	-
5240MHz	6.21	-	-	6.36	-	-	5.82	-	-
5745MHz	5.65	-	-	4.38	-	-	5.53	-	-
5755MHz	-	5.79	-	-	5.06	-	-	5.40	-
5775MHz	-	-	5.19	-	-	4.42	-	-	5.09
5785MHz	4.93	-	-	3.78	-	-	4.70	-	-
5795MHz	-	5.12	-	-	3.92	-	-	5.20	-
5825MHz	4.18	-	-	3.69	-	-	5.03	-	-

Frequency	Directional Gain (dBi) for Beamforming and CDD mode								
	1 Stream 3TX Ant. 1 + 2 + 3			2 Stream 3TX Ant. 1 + 2 + 3			3 Stream 3TX Ant. 1 + 2 + 3		
	20 MHz	40 MHz	80MHz	20 MHz	40 MHz	80MHz	20 MHz	40 MHz	80MHz
5180MHz	6.80	-	-	5.63	-	-	2.84	-	-
5190MHz	-	6.82	-	-	5.71	-	-	2.90	-
5200MHz	6.96	-	-	5.84	-	-	3.04	-	-
5210MHz	-	-	6.72	-	-	5.64	-	-	2.83
5230MHz	-	7.18	-	-	5.93	-	-	3.19	-
5240MHz	7.07	-	-	5.95	-	-	3.17	-	-
5745MHz	7.25	-	-	6.24	-	-	3.32	-	-
5755MHz	-	7.68	-	-	6.53	-	-	3.62	-
5775MHz	-	-	7.28	-	-	6.04	-	-	3.16
5785MHz	6.80	-	-	5.54	-	-	2.67	-	-
5795MHz	-	7.07	-	-	5.79	-	-	2.95	-
5825MHz	6.68	-	-	5.30	-	-	2.46	-	-



IEEE 802.11n Data Rate spec

Standard	INDEX	Data Rate (Mbps)		Standard	INDEX	Data Rate (Mbps)	
		LGI (800ns)	SGI (400ns)			LGI (800ns)	SGI (400ns)
11n 20MHz Nss=1	MCS0	6.5	7.2	11n 40MHz Nss=1	MCS0	13.5	15
	MCS1	13	14.4		MCS1	27	30
	MCS2	19.5	21.7		MCS2	40.5	45
	MCS3	26	28.9		MCS3	54	60
	MCS4	39	43.3		MCS4	81	90
	MCS5	52	57.8		MCS5	108	120
	MCS6	58.5	65		MCS6	121.5	135
11n 20MHz Nss=2	MCS7	65	72.2	11n 40MHz Nss=2	MCS7	135	150
	MCS8	13	14.4		MCS8	27	30
	MCS9	26	28.9		MCS9	54	60
	MCS10	39	43.3		MCS10	81	90
	MCS11	52	57.8		MCS11	108	120
	MCS12	78	86.7		MCS12	162	180
	MCS13	104	115.6		MCS13	216	240
11n 20MHz Nss=3	MCS14	117	130	11n 40MHz Nss=3	MCS14	243	270
	MCS15	130	144.4		MCS15	270	300
	MCS16	19.5	21.7		MCS16	40.5	45
	MCS17	39	43.3		MCS17	81	90
	MCS18	58.5	65		MCS18	121.5	135
	MCS19	78	86.7		MCS19	162	180
	MCS20	117	130		MCS20	243	270
11n 20MHz Nss=3	MCS21	156	173.3	11n 40MHz Nss=3	MCS21	324	360
	MCS22	175.5	195		MCS22	364.5	405
	MCS23	195	216.7		MCS23	405	450

IEEE 802.11ac Data Rate spec

Standard	INDEX	Data Rate (Mbps)		Standard	INDEX	Data Rate (Mbps)		Standard	INDEX	Data Rate (Mbps)	
		LGI (800ns)	SGI (400ns)			LGI (800ns)	SGI (400ns)			LGI (800ns)	SGI (400ns)
11ac 20MHz Nss=1	MCS0	6.5	7.2	11ac 40MHz Nss=1	MCS0	13.5	15	11ac 80MHz Nss=1	MCS0	29.3	32.5
	MCS1	13	14.4		MCS1	27	30		MCS1	58.5	65.0
	MCS2	19.5	21.7		MCS2	40.5	45		MCS2	87.8	97.5
	MCS3	26	28.9		MCS3	54	60		MCS3	117.0	130.0
	MCS4	39	43.3		MCS4	81	90		MCS4	175.5	195.0
	MCS5	52	57.8		MCS5	108	120		MCS5	234.0	260.0
	MCS6	58.5	65		MCS6	121.5	135		MCS6	263.3	292.5
	MCS7	65	72.2		MCS7	135	150		MCS7	292.5	325.0
	MCS8	78	86.7		MCS8	162.0	180.0		MCS8	351.0	390.0
	MCS9	Note	Note		MCS9	180.0	200.0		MCS9	390.0	433.3

NOTE: MCS 9 is invalid due to mod (N_{CBPS}/N_{ES} , D_R) not being equal to 0.

11ac 20MHz Nss=2	MCS0	13.0	14.4	11ac 40MHz Nss=2	MCS0	27.0	30.0	11ac 80MHz Nss=2	MCS0	58.5	65.0
	MCS1	26.0	28.9		MCS1	54.0	60.0		MCS1	117.0	130.0
	MCS2	39.0	43.3		MCS2	81.0	90.0		MCS2	175.5	195.0
	MCS3	52.0	57.8		MCS3	108.0	120.0		MCS3	234.0	260.0
	MCS4	78.0	86.7		MCS4	162.0	180.0		MCS4	351.0	390.0
	MCS5	104.0	115.6		MCS5	216.0	240.0		MCS5	468.0	520.0
	MCS6	117.0	130.0		MCS6	243.0	270.0		MCS6	526.5	585.0
	MCS7	130.0	144.4		MCS7	270.0	300.0		MCS7	585.0	650.0
	MCS8	156.0	173.3		MCS8	324.0	360.0		MCS8	702.0	780.0
	MCS9	13.0	14.4		MCS9	360.0	400.0		MCS9	780.0	866.7
11ac 20MHz Nss=3	MCS0	19.5	21.7	11ac 40MHz Nss=3	MCS0	40.5	45	11ac 80MHz Nss=3	MCS0	87.8	97.5
	MCS1	39	43.3		MCS1	81	90		MCS1	175.5	195.0
	MCS2	58.5	65		MCS2	121.5	135		MCS2	263.3	292.5
	MCS3	78	86.7		MCS3	162	180		MCS3	351.0	190.0
	MCS4	117	130		MCS4	243	270		MCS4	526.5	585.0
	MCS5	156	173.3		MCS5	324	360		MCS5	702.0	780.0
	MCS6	175.5	195		MCS6	364.5	405		MCS6	Note	Note
	MCS7	195	216.7		MCS7	405	450		MCS7	877.5	975.0
	MCS8	234.0	260.0		MCS8	486.0	540.0		MCS8	1053.0	1170.0
	MCS9	260.0	228.9		MCS9	540.0	600.0		MCS9	1170.0	1300.0

NOTE: MCS 6 is invalid due to mod (N_{CBPS}/N_{ES} , D_R) not being equal to 0.

2.4 Transmit Operating Modes

Transmit Operating Mode						Transmit Multiple Antennas			
☐	Operating mode 1 (single antenna)					☒	1TX		
☐	Operating mode 2 (multiple antenna, no beam forming)					☒	2TX	☒	3TX ☐ 4TX
☐	Operating mode 3 (multiple antenna, with beam forming)					☒	2TX	☒	3TX ☐ 4TX
☐	802.11a	Operating mode	☒	1TX	☐	2TX	☒	3TX	☐ Cyclic shift
☐	802.11n(20MHz)	Operating mode	☒	1TX	☒	2TX	☒	3TX	☐ Cyclic shift
☐	802.11n(40MHz)	Operating mode	☒	1TX	☒	2TX	☒	3TX	☐ Cyclic shift
☐	802.11ac(20MHz)	Operating mode	☒	1TX	☒	2TX	☒	3TX	☐ Cyclic shift
☐	802.11ac(40MHz)	Operating mode	☒	1TX	☒	2TX	☒	3TX	☐ Cyclic shift
☐	802.11ac(80MHz)	Operating mode	☒	1TX	☒	2TX	☒	3TX	☐ Cyclic shift

Note 1: For IEEE802.11n, MCS0~MCS7: 1TX; MCS8~MCS15: 2TX; MCS0~MCS23: 3TX

Note 2: For IEEE802.11ac(20/40/80MHz), MCS0~MCS9: 1 Stream 3TX; MCS0~MCS9: 2 Stream 3TX;
MCS0~MCS9: 3 Stream 3TX

Note 3: For 2 stream 2TX without test due to covered by 2 stream 3TX MCS0 Nss2.

2.5 Table for Carrier Frequencies

Nine channels are provided for 802.11a, 802.11n, 802.11ac (20MHz):

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5150~5250 MHz Band 1	36	5180 MHz	44	5220 MHz
	40	5200 MHz	48	5240 MHz
5725~5850 MHz Band 4	149	5745 MHz	161	5805 MHz
	153	5765 MHz	165	5825 MHz
	157	5785 MHz	-	-

Four channels are provided for 802.11n, 802.11ac (40MHz):

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5150~5250 MHz Band 1	38	5190 MHz	46	5230 MHz
5725~5850 MHz Band 4	151	5755 MHz	159	5795 MHz

Two channels are provided for 802.11ac (80MHz):

Frequency Band	Channel No.	Frequency
5150~5250 MHz Band 1	42	5210 MHz
5725~ 5850 MHz Band 4	155	5775 MHz

2.6 Table for Test Modes

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	Note	Channel	Data Rate	Antenna
AC Power Line Conducted Emissions	11ac(80MHz)	OFDM/BPSK	155	-	1+2+3
Emission bandwidth 6dB bandwidth for U-NII-3	11a	OFDM/BPSK	36/40/48 149/157/165	6Mbps	1
				6Mbps	1S3T (CDD)
	11ac(20MHz)		36/40/48 149/157/165	Nss1MCS0	1
				Nss1MCS0	1S3T (CDD)
				Nss1MCS0	1S3T (TXBF)
	11ac(40MHz)		38/46 151/159	Nss1MCS0	1
				Nss1MCS0	1S3T (CDD)
				Nss1MCS0	1S3T (TXBF)
	11ac(80MHz)		42 155	Nss1MCS0	1
				Nss1MCS0	1S3T (CDD)
				Nss1MCS0	1S3T (TXBF)
Maximum Conducted Output Power (Average)	11a	OFDM/BPSK	36/40/48 149/157/165	6Mbps	1
				6Mbps	1S3T (CDD)
	11ac(20MHz)		36/40/48 149/157/165	Nss1MCS0	1
				Nss1MCS0	1S3T (CDD)
				Nss1MCS0	1S3T (TXBF)
	11ac(40MHz)		38/46 151/159	Nss1MCS0	1
				Nss1MCS0	1S3T (CDD)
				Nss1MCS0	1S3T (TXBF)
	11ac(80MHz)		42 155	Nss1MCS0	1
				Nss1MCS0	1S3T (CDD)
				Nss1MCS0	1S3T (TXBF)

Power Spectral Density	11a	OFDM/BPSK	36/40/48 149/157/165	6Mbps	1
				6Mbps	1S3T (CDD)
	11ac(20MHz)		36/40/48 149/157/165	Nss1MCS0	1
				Nss1MCS0	1S3T (CDD)
				Nss1MCS0	1S3T (TXBF)
	11ac(40MHz)		38/46 151/159	Nss1MCS0	1
				Nss1MCS0	1S3T (CDD)
				Nss1MCS0	1S3T (TXBF)
	11ac(80MHz)		42 155	Nss1MCS0	1
				Nss1MCS0	1S3T (CDD)
				Nss1MCS0	1S3T (TXBF)
Unwanted emissions in the restricted bands Above 1GHz (Radiated) & Band Edge Measurement	11a	OFDM/BPSK	36/40/48 149/157/165	6Mbps	1
				6Mbps	1S3T (CDD)
	11ac(20MHz)		36/40/48 149/157/165	Nss1MCS0	1
				Nss1MCS0	1S3T (CDD)
				Nss1MCS0	1S3T (TXBF)
	11ac(40MHz)		38/46 151/159	Nss1MCS0	1
				Nss1MCS0	1S3T (CDD)
				Nss1MCS0	1S3T (TXBF)
	11ac(80MHz)		42 155	Nss1MCS0	1
				Nss1MCS0	1S3T (CDD)
				Nss1MCS0	1S3T (TXBF)
Radiated Emissions Below 1GHz (Radiated)	11ac(80MHz)	OFDM/BPSK	155	-	1+2+3
Frequency Stability	20MHz	Un-modulation	40/157	-	1, 2, 3
	40MHz		38/151	-	1, 2, 3
	80MHz		42/155	-	1, 2, 3

Note 1:11n (20/40MHz) 1TX/2TX/3TX without test due to covered by 802.11ac (20/40MHz) 1TX/2TX/3TX which are same modulation, bandwidth and frequency.

Note 2:11ac (20/40/80MHz) 3TX MCS0 Nss2/3 without test due to covered by 802.11ac (20/40/80MHz) 3TX MCS0 Nss1.

2.7 Table for Testing Locations

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

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

2.8 Table for Supporting Units

For Test Site No: CO01-CB and TH01-CB

Support Unit	Brand	Model	FCC ID
Notebook	DELL	E6430	DoC

For Test Site No: 03CH01-CB

For Non-Beamforming

Support Unit	Brand	Model	FCC ID
Notebook	DELL	M1330	E2K4965AGNM

For Beamforming

Support Unit	Brand	Model	FCC ID
Notebook	DELL	M1330	E2K4965AGNM
Notebook	DELL	M1340	E2K4965AGNM
WLAN ac Dongle	Netgear	A6200	PY31220200

2.9 Table for Parameters of Test Software Setting

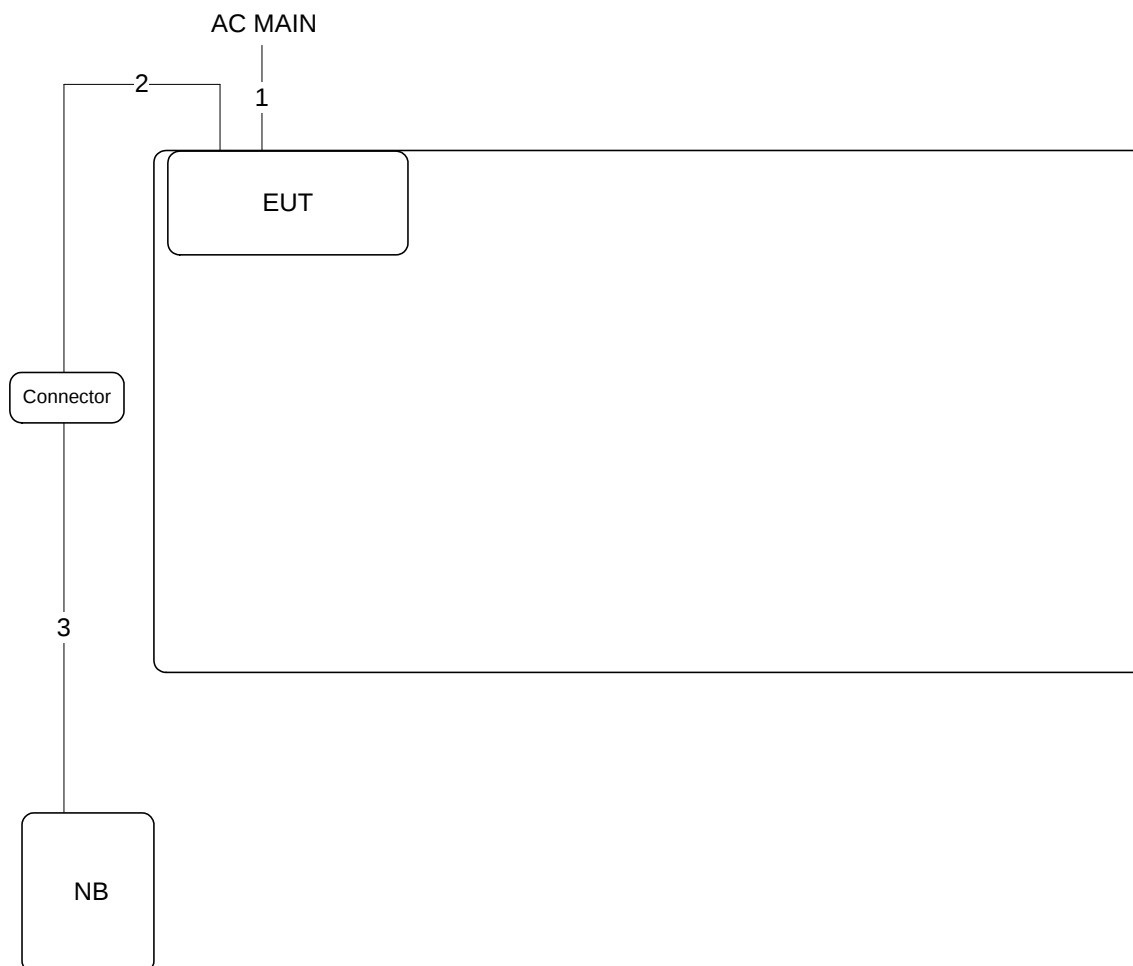
During testing, Channel & Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final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

The Power Setting Parameter					
Test Software Version	5.5.10mp3				
Worst Modulation Mode	Number of Transmit Chains (NTX)	Frequency (MHz)	Maximum Output Power (dBm)	Power Setting	Data Rate / MCS
802.11a Ant. 1	1 Stream 1TX	5180	17.16	70	6Mbps
802.11a Ant. 1	1 Stream 1TX	5200	19.18	78	6Mbps
802.11a Ant. 1	1 Stream 1TX	5240	23.49	93	6Mbps
802.11a Ant. 1	1 Stream 1TX	5745	19.62	78	6Mbps
802.11a Ant. 1	1 Stream 1TX	5785	20.09	80	6Mbps
802.11a Ant. 1	1 Stream 1TX	5825	18.18	72	6Mbps
802.11a (CDD)	1 stream 3TX	5180	22.25	70	6Mbps
802.11a (CDD)	1 stream 3TX	5200	21.80	68	6Mbps
802.11a (CDD)	1 stream 3TX	5240	25.30	82	6Mbps
802.11a (CDD)	1 stream 3TX	5745	24.17	76	6Mbps
802.11a (CDD)	1 stream 3TX	5785	25.59	81	6Mbps
802.11a (CDD)	1 stream 3TX	5825	24.50	78	6Mbps
802.11ac 20MHz Ant. 1	1 Stream 1TX	5180	17.79	73	Nss1MCS0 (6.5)
802.11ac 20MHz Ant. 1	1 Stream 1TX	5200	19.60	80	Nss1MCS0 (6.5)
802.11ac 20MHz Ant. 1	1 Stream 1TX	5240	23.30	93	Nss1MCS0 (6.5)
802.11ac 20MHz Ant. 1	1 Stream 1TX	5745	18.96	75	Nss1MCS0 (6.5)
802.11ac 20MHz Ant. 1	1 Stream 1TX	5785	20.25	80	Nss1MCS0 (6.5)
802.11ac 20MHz Ant. 1	1 Stream 1TX	5825	17.91	71	Nss1MCS0 (6.5)
802.11ac 20MHz (CDD)	1 stream 3TX	5180	21.91	69	Nss1MCS0 (6.5)
802.11ac 20MHz (CDD)	1 stream 3TX	5200	23.39	75	Nss1MCS0 (6.5)
802.11ac 20MHz (CDD)	1 stream 3TX	5240	25.40	83	Nss1MCS0 (6.5)
802.11ac 20MHz (CDD)	1 stream 3TX	5745	23.63	74	Nss1MCS0 (6.5)
802.11ac 20MHz (CDD)	1 stream 3TX	5785	24.53	78	Nss1MCS0 (6.5)
802.11ac 20MHz (CDD)	1 stream 3TX	5825	23.37	73	Nss1MCS0 (6.5)
802.11ac 20MHz (TXBF)	1 stream 3TX	5180	21.03	65	Nss1MCS0 (6.5)
802.11ac 20MHz (TXBF)	1 stream 3TX	5200	20.97	65	Nss1MCS0 (6.5)
802.11ac 20MHz (TXBF)	1 stream 3TX	5240	23.17	74	Nss1MCS0 (6.5)
802.11ac 20MHz (TXBF)	1 stream 3TX	5745	23.33	73	Nss1MCS0 (6.5)
802.11ac 20MHz (TXBF)	1 stream 3TX	5785	20.46	60	Nss1MCS0 (6.5)
802.11ac 20MHz (TXBF)	1 stream 3TX	5825	21.12	63	Nss1MCS0 (6.5)

802.11ac 40MHz Ant. 1	1 Stream 1TX	5190	17.58	73	Nss1MCS0 (13.5)
802.11ac 40MHz Ant. 1	1 Stream 1TX	5230	21.65	90	Nss1MCS0 (13.5)
802.11ac 40MHz Ant. 1	1 Stream 1TX	5755	17.24	70	Nss1MCS0 (13.5)
802.11ac 40MHz Ant. 1	1 Stream 1TX	5795	20.37	84	Nss1MCS0 (13.5)
802.11ac 40MHz (CDD)	1 Stream 3TX	5190	21.76	70	Nss1MCS0 (13.5)
802.11ac 40MHz (CDD)	1 Stream 3TX	5230	24.94	84	Nss1MCS0 (13.5)
802.11ac 40MHz (CDD)	1 Stream 3TX	5755	22.75	73	Nss1MCS0 (13.5)
802.11ac 40MHz (CDD)	1 Stream 3TX	5795	25.91	87	Nss1MCS0 (13.5)
802.11ac 40MHz (TXBF)	1 Stream 3TX	5190	21.50	69	Nss1MCS0 (13.5)
802.11ac 40MHz (TXBF)	1 Stream 3TX	5230	23.61	78	Nss1MCS0 (13.5)
802.11ac 40MHz (TXBF)	1 Stream 3TX	5755	20.97	65	Nss1MCS0 (13.5)
802.11ac 40MHz (TXBF)	1 Stream 3TX	5795	22.41	71	Nss1MCS0 (13.5)
802.11ac 80MHz Ant. 1	1 Stream 1TX	5210	16.21	65	Nss1MCS0 (29.3)
802.11ac 80MHz Ant. 1	1 Stream 1TX	5775	18.04	72	Nss1MCS0 (29.3)
802.11ac 80MHz (CDD)	1 Stream 3TX	5210	20.59	62	Nss1MCS0 (29.3)
802.11ac 80MHz (CDD)	1 Stream 3TX	5775	21.42	64	Nss1MCS0 (29.3)
802.11ac 80MHz (TXBF)	1 Stream 3TX	5210	18.84	55	Nss1MCS0 (29.3)
802.11ac 80MHz (TXBF)	1 Stream 3TX	5775	19.00	53	Nss1MCS0 (29.3)

2.10 Test Configuration

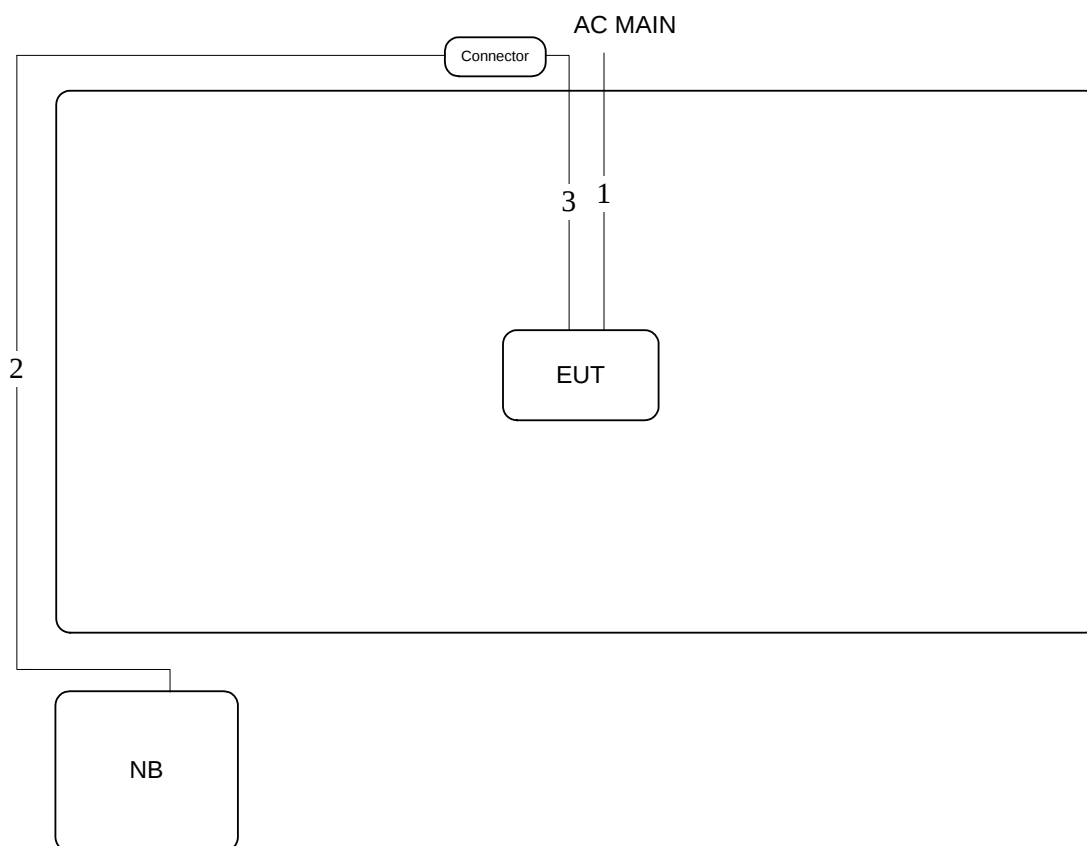
2.10.1 AC Power Line Conduction Emissions Test Configuration



Item	Connection	Shielded	Length
1	Power cable	No	2.4M
2	RJ-45 cable	No	2M
3	RJ-45 cable	No	10M

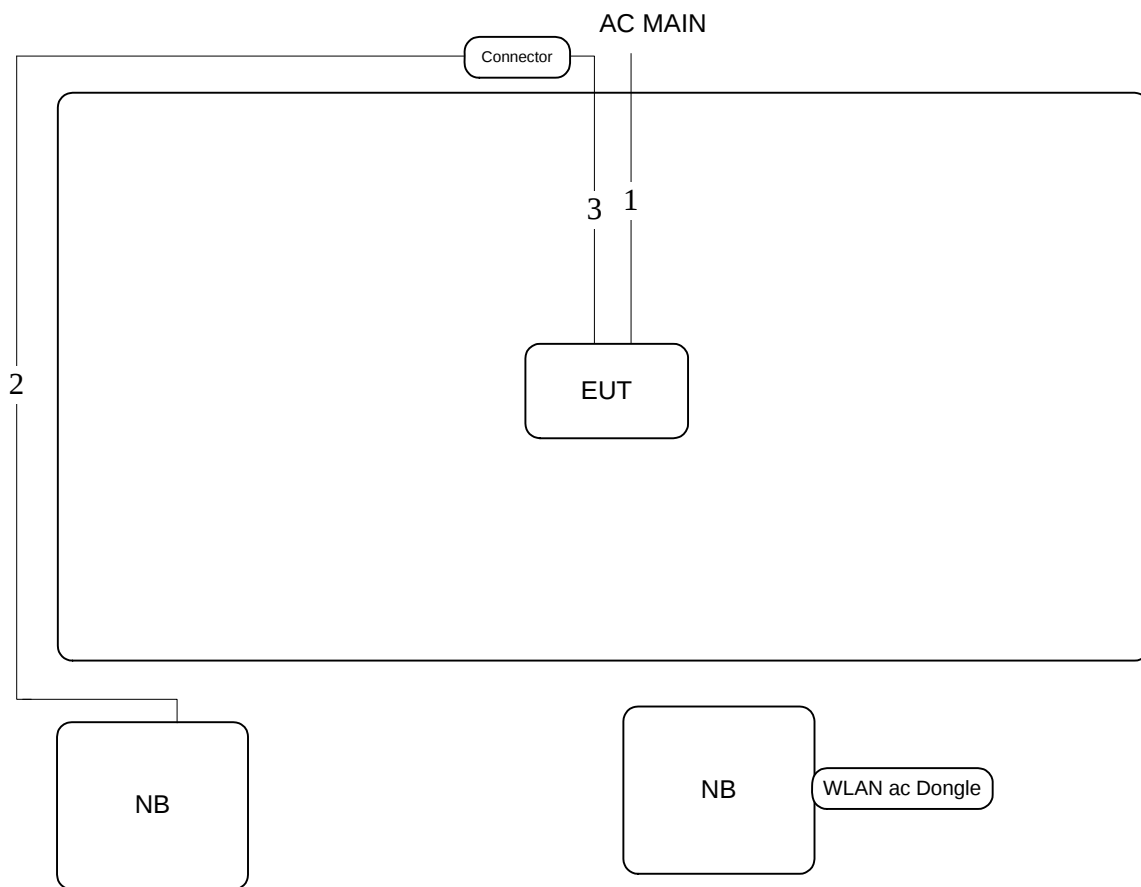
2.10.2 Radiation Emissions Test Configuration

For Non-Beamforming



Item	Connection	Shielded	Length
1	Power cable	No	2.4M
2	RJ-45 cable	No	10M
3	RJ-45 cable	No	2M

For Beamforming



Item	Connection	Shielded	Length
1	Power cable	No	2.4M
2	RJ-45 cable	No	10M
3	RJ-45 cable	No	2M

3 TEST RESULT

3.1 AC Power Line Conducted Emissions Measurement

3.1.1 Limit

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

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

3.1.2 Measuring Instruments and Setting

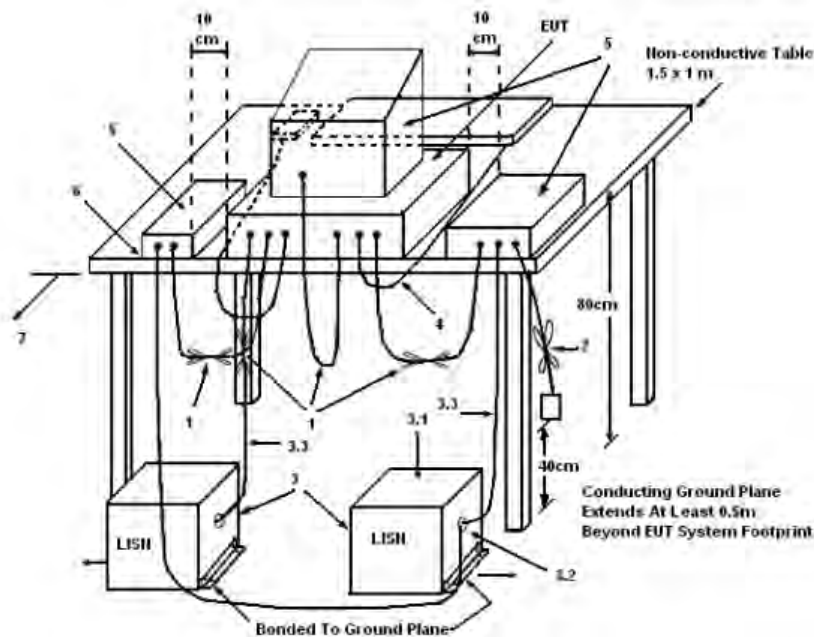
Please refer to section 4 of equipments list in this report. The following table is the setting of the receiver.

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

3.1.3 Test Procedures

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

3.1.4 Test Setup Layout



LEGEND:

1. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
2. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
3. EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω . LISN can be placed on top of, or immediately beneath, reference ground plane.
4. All other equipment powered from additional LISN(s).
5. Multiple outlet strip can be used for multiple power cords of non-EUT equipment.
6. LISN at least 80 cm from nearest part of EUT chassis.
7. Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use.
8. Non-EUT components of EUT system being tested.
9. Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop.
10. Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.

3.1.5 Test Deviation

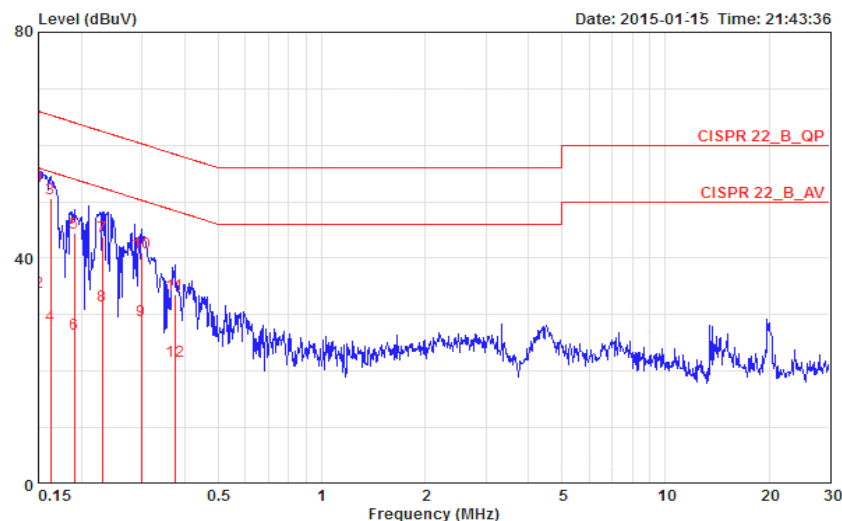
There is no deviation with the original standard.

3.1.6 EUT Operation during Test

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

3.1.7 Results of AC Power Line Conducted Emissions Measurement

Temperature	20°C	Humidity	49%
Test Engineer	Kane Liu	Phase	Line
Configuration	802.11ac 80MHz		



	Freq	Level	Over	Limit	Read	LISN	Cable		
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark	Pol/Phase
			dB	dBuV	dBuV	dB	dB		
1 #	0.15000	52.81	-13.19	66.00	42.88	9.77	0.16	QP	LINE
2	0.15000	33.90	-22.10	56.00	23.97	9.77	0.16	AVERAGE	LINE
3	0.16241	50.50	-14.84	65.34	40.57	9.77	0.16	QP	LINE
4	0.16241	28.14	-27.20	55.34	18.21	9.77	0.16	AVERAGE	LINE
5	0.19039	44.51	-19.51	64.02	34.57	9.78	0.16	QP	LINE
6	0.19039	26.61	-27.41	54.02	16.67	9.78	0.16	AVERAGE	LINE
7	0.23040	43.91	-18.53	62.44	33.96	9.78	0.17	QP	LINE
8	0.23040	31.65	-20.79	52.44	21.70	9.78	0.17	AVERAGE	LINE
9	0.29869	29.04	-21.24	50.28	19.09	9.77	0.17	AVERAGE	LINE
10	0.29869	40.88	-19.40	60.28	30.93	9.77	0.17	QP	LINE
11	0.37314	33.63	-24.80	58.43	23.68	9.77	0.18	QP	LINE
12	0.37314	21.80	-26.63	48.43	11.85	9.77	0.18	AVERAGE	LINE

Note 1: The test was passed at the minimum margin that marked by the frame in the following data

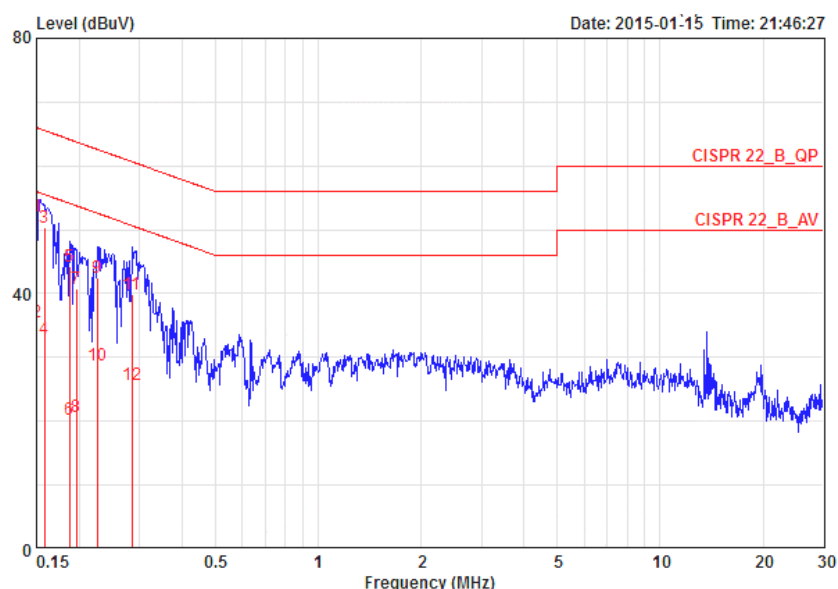
Note 2: The emission levels of other frequencies were very low against the limit.

Note 3: Q.P. and AV. are abbreviations of quasi-peak and average individually.

Note 4: Corrected Reading (dBuV) = LISN Factor + Cable Loss + Read Level = Level

Note 5: Over Limit value = level - Limit value

Temperature	20°C	Humidity	49%
Test Engineer	Kane Liu	Phase	Neutral
Configuration	802.11ac 80MHz		



	Freq	Level	Over	Limit	Read	LISN	Cable		
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.15000	52.18	-13.82	66.00	42.10	9.92	0.16	QP	NEUTRAL
2	0.15000	35.50	-20.50	56.00	25.42	9.92	0.16	AVERAGE	NEUTRAL
3	0.15816	50.44	-15.12	65.56	40.36	9.92	0.16	QP	NEUTRAL
4	0.15816	32.92	-22.64	55.56	22.84	9.92	0.16	AVERAGE	NEUTRAL
5	0.18739	44.15	-20.00	64.15	34.07	9.92	0.16	QP	NEUTRAL
6	0.18739	20.17	-33.98	54.15	10.09	9.92	0.16	AVERAGE	NEUTRAL
7	0.19654	40.80	-22.95	63.76	30.72	9.92	0.16	QP	NEUTRAL
8	0.19654	20.60	-33.15	53.76	10.52	9.92	0.16	AVERAGE	NEUTRAL
9	0.22556	42.53	-20.09	62.61	32.44	9.92	0.17	QP	NEUTRAL
10	0.22556	28.78	-23.84	52.61	18.69	9.92	0.17	AVERAGE	NEUTRAL
11	0.28478	39.80	-20.88	60.68	29.71	9.91	0.17	QP	NEUTRAL
12	0.28478	25.79	-24.89	50.68	15.70	9.91	0.17	AVERAGE	NEUTRAL

Note 1: The test was passed at the minimum margin that marked by the frame in the following data

Note 2: The emission levels of other frequencies were very low against the limit.

Note 3: Q.P. and AV. are abbreviations of quasi-peak and average individually.

Note 4: Corrected Reading (dBuV) = LISN Factor + Cable Loss + Read Level = Level

Note 5: Over Limit value = level - Limit value

3.2 Emission bandwidth Measurement

3.2.1 Limit

No restriction limits

3.2.2 26dB Bandwidth Measuring Instruments and Setting

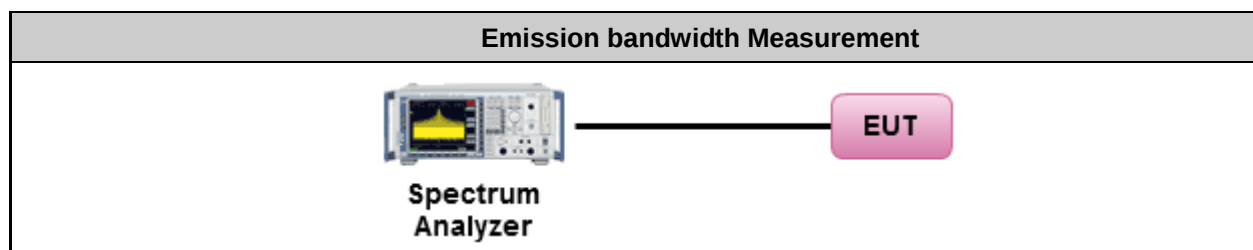
Please refer to section 4 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Power Meter Parameter	Setting
Attenuation	Auto
Span Frequency	> 26dB Bandwidth
RBW	Approximately 1% of the emission bandwidth
VBW	> RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

3.2.3 Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Test was performed in accordance with Measurement of Digital Transmission Systems Operating under KDB789033 D02 General UNII Test Procedures New Rules v01, in section "Emission bandwidth (C)(1)" , 06/06/2014.
3. When measuring Emission bandwidth with multiple antenna systems, add every result of the values by mathematic formula.

3.2.4 Test Setup Layout



3.2.5 Test Deviation

There is no deviation with the original standard.

3.2.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.2.7 Test Result for Emission bandwidth

Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Configuration	802.11a
Duty Cycle	<6Mbps, Ant. 1 >: 99.04% <6Mbps, 1S3T, CDD>: 98.89%		

Configuration IEEE 802.11a

<6Mbps, Ant. 1 >

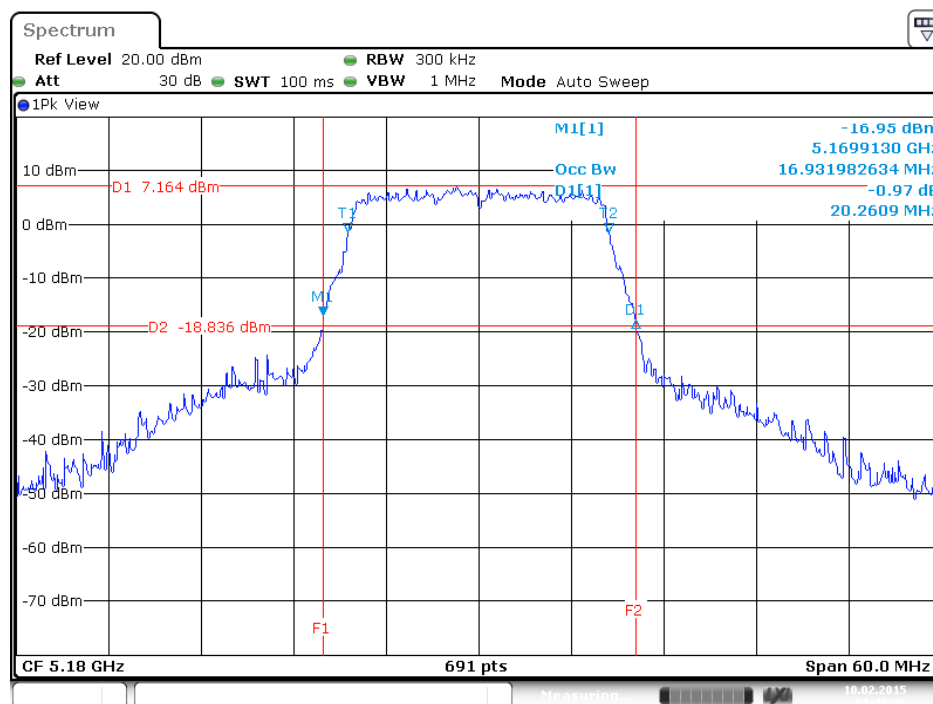
Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Data Rate / MCS
36	5180 MHz	20.26	16.93	6Mbps
40	5200 MHz	20.61	17.02	6Mbps
48	5240 MHz	33.65	18.49	6Mbps
149	5745 MHz	20.70	17.02	6Mbps
157	5785 MHz	20.78	17.11	6Mbps
165	5825 MHz	20.52	17.02	6Mbps

<6Mbps, 1S3T, CDD>

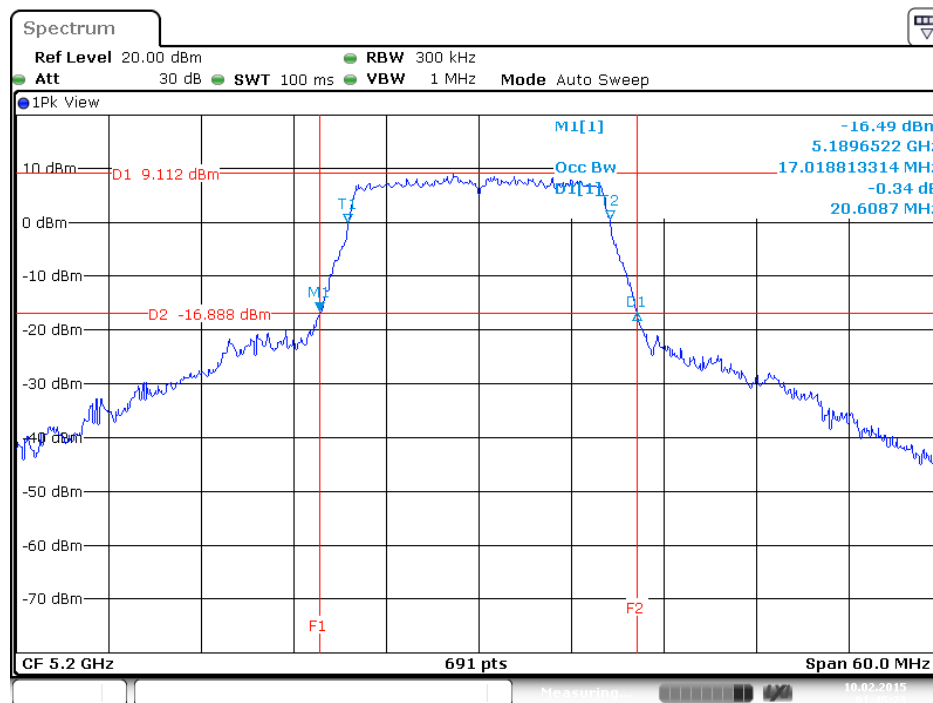
Channel	Frequency	26dB Bandwidth (MHz)			99% Occupied Bandwidth (MHz)			Data Rate / MCS
		Ant. 1	Ant. 2	Ant. 3	Ant. 1	Ant. 2	Ant. 3	
36	5180 MHz	20.52	20.26	20.26	16.85	16.93	16.85	6Mbps
40	5200 MHz	20.43	20.26	20.35	16.93	16.85	16.85	6Mbps
48	5240 MHz	20.70	21.22	23.22	17.88	16.93	17.11	6Mbps
149	5745 MHz	20.61	20.35	26.96	17.02	16.85	17.11	6Mbps
157	5785 MHz	21.83	21.22	33.74	17.11	17.02	17.89	6Mbps
165	5825 MHz	20.70	20.52	32.70	17.11	16.85	17.45	6Mbps

<6Mbps, Ant. 1 >:

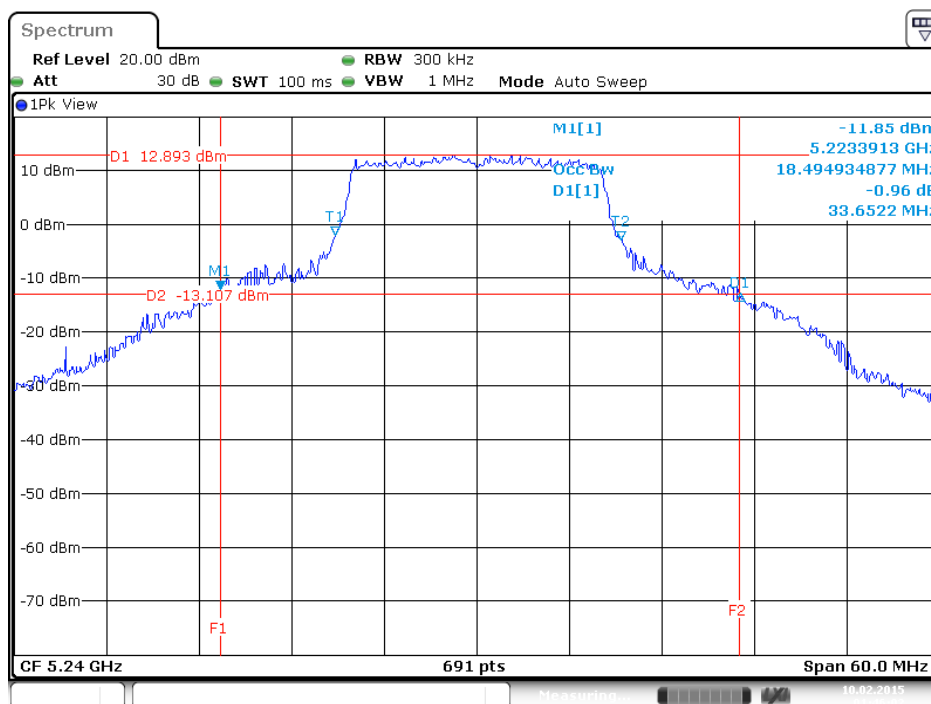
26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 36 / Ant. 1



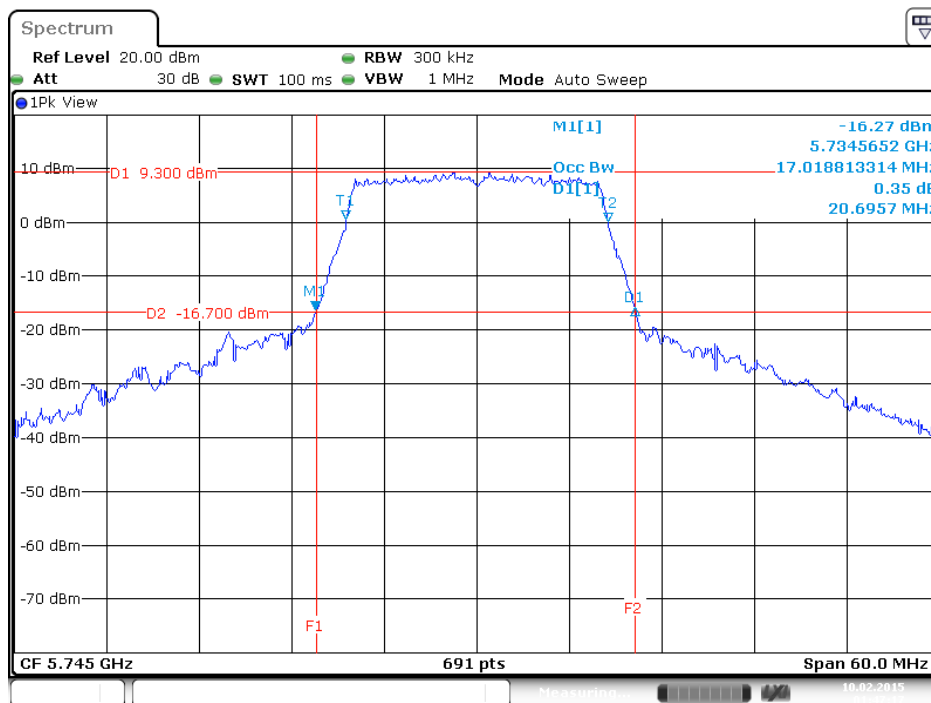
26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 40 / Ant. 1



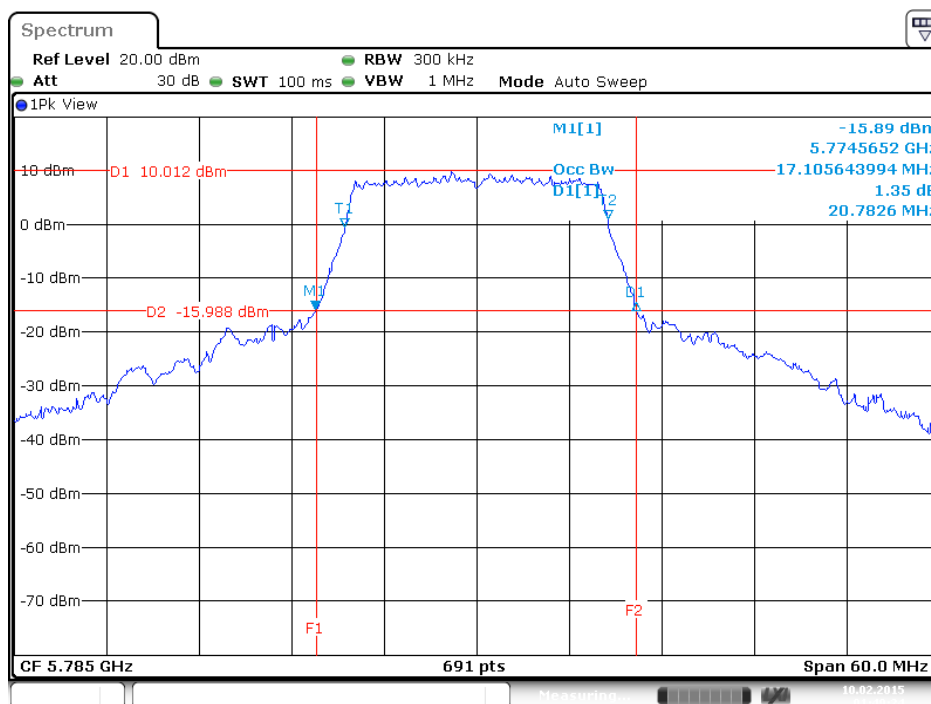
26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 48 / Ant. 1



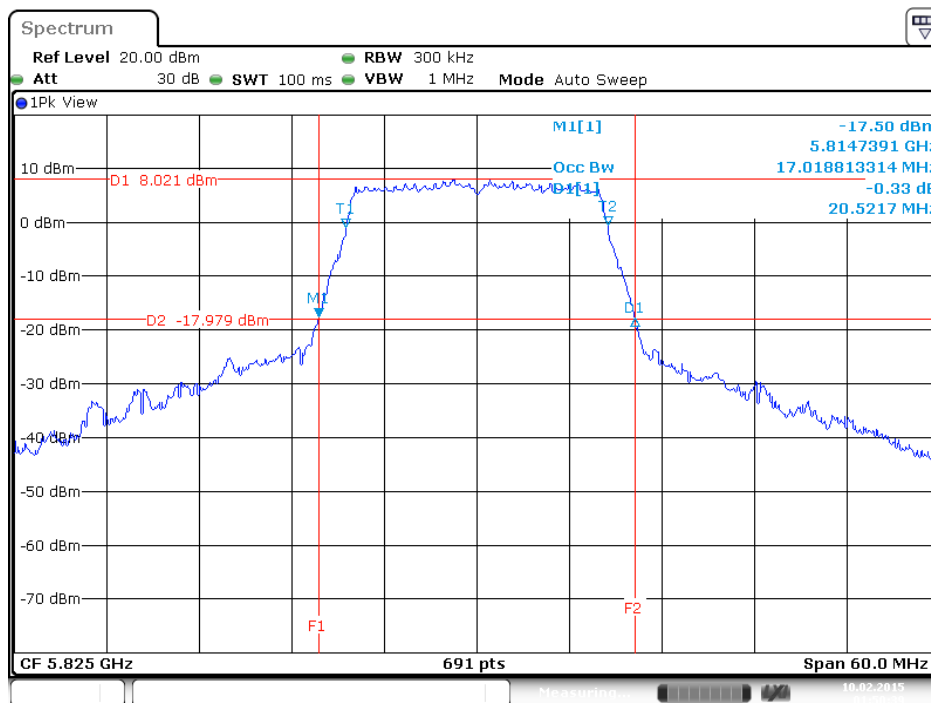
26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 149 / Ant. 1



26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 157 / Ant. 1

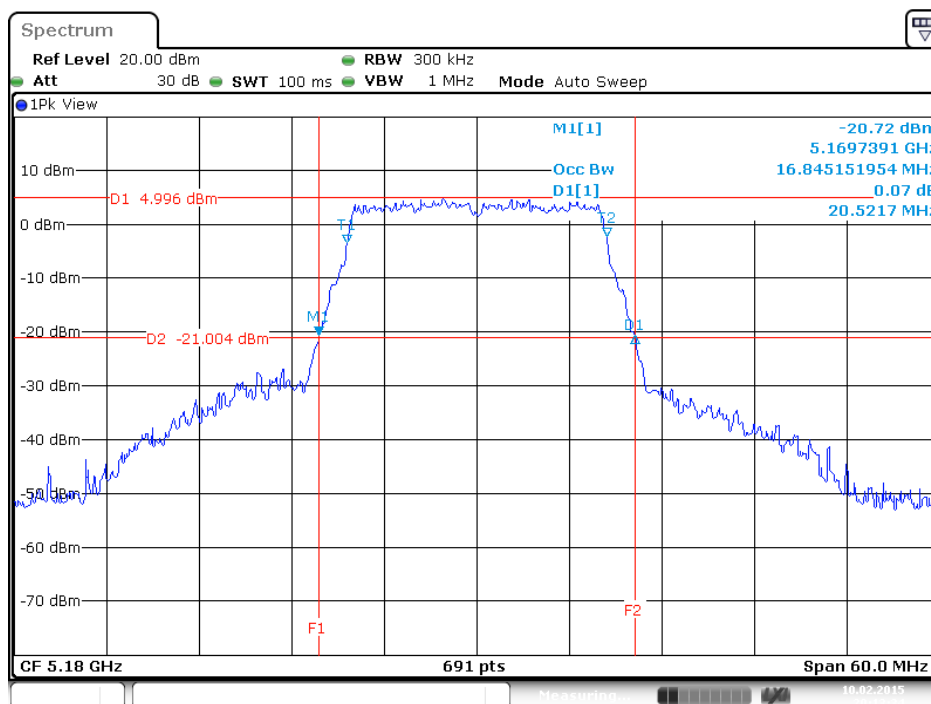


26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 165 / Ant. 1



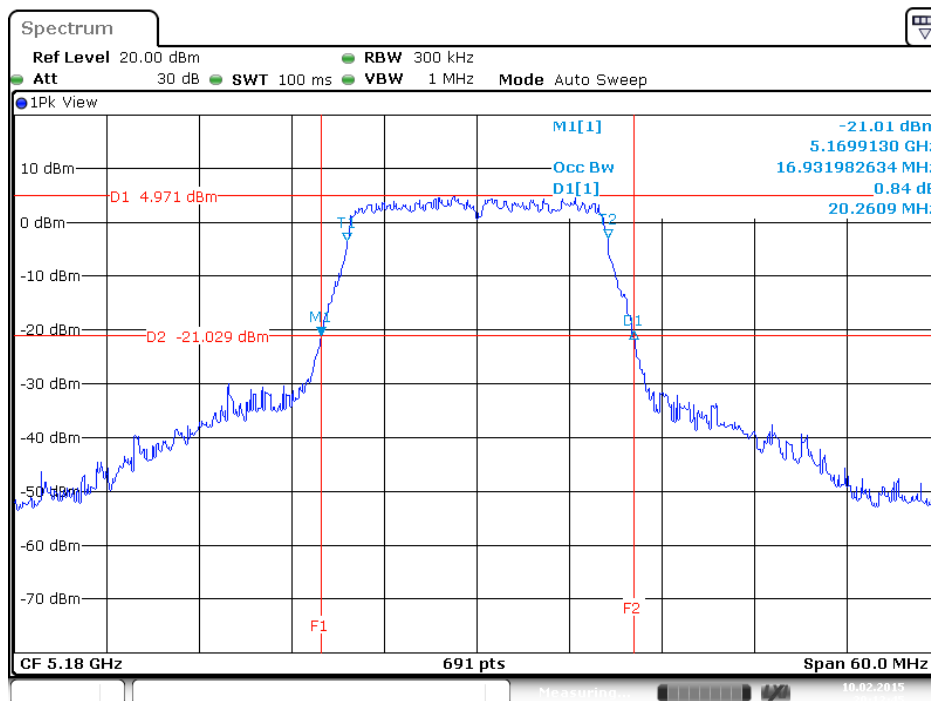
<6Mbps, 1S3T, CDD>:

26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 36 / Ant. 1



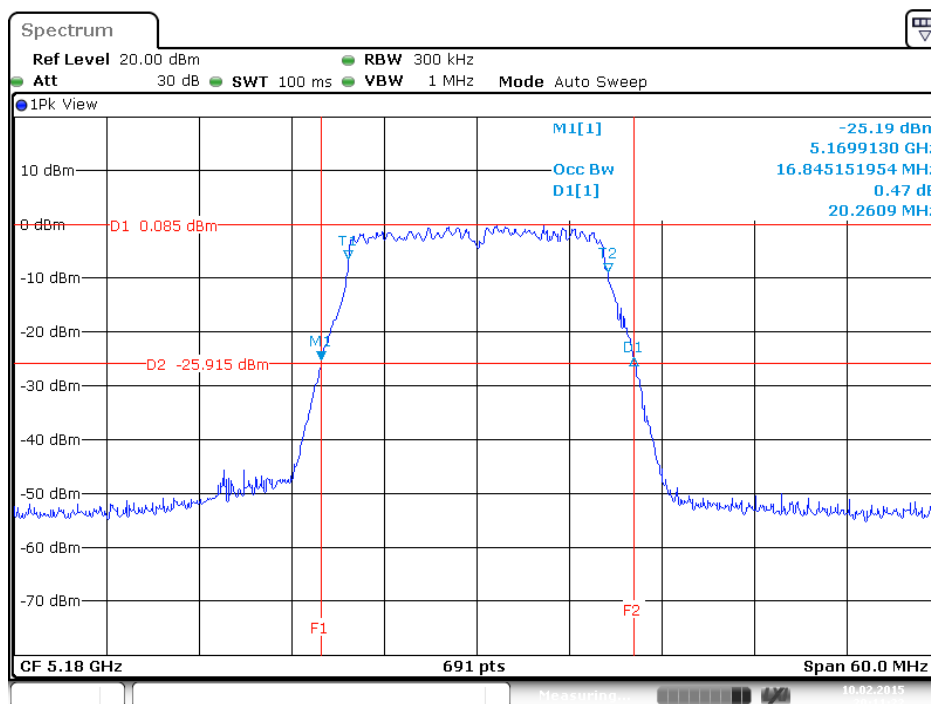
Date: 10.FEB.2015 20:13:35

26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 36 / Ant. 2



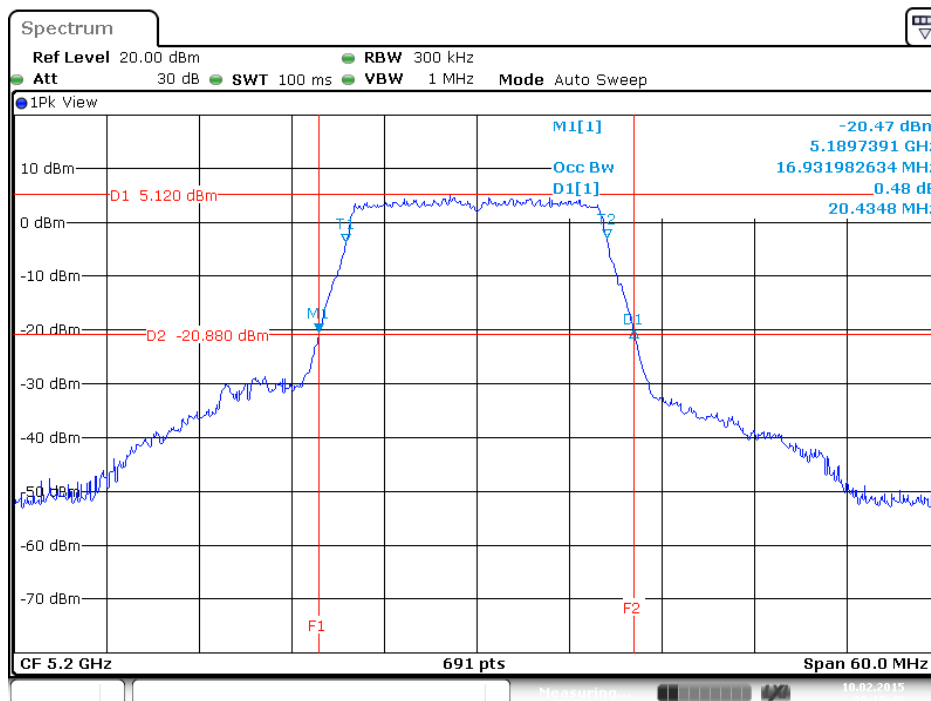
Date: 10.FEB.2015 20:12:45

26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 36 / Ant. 3



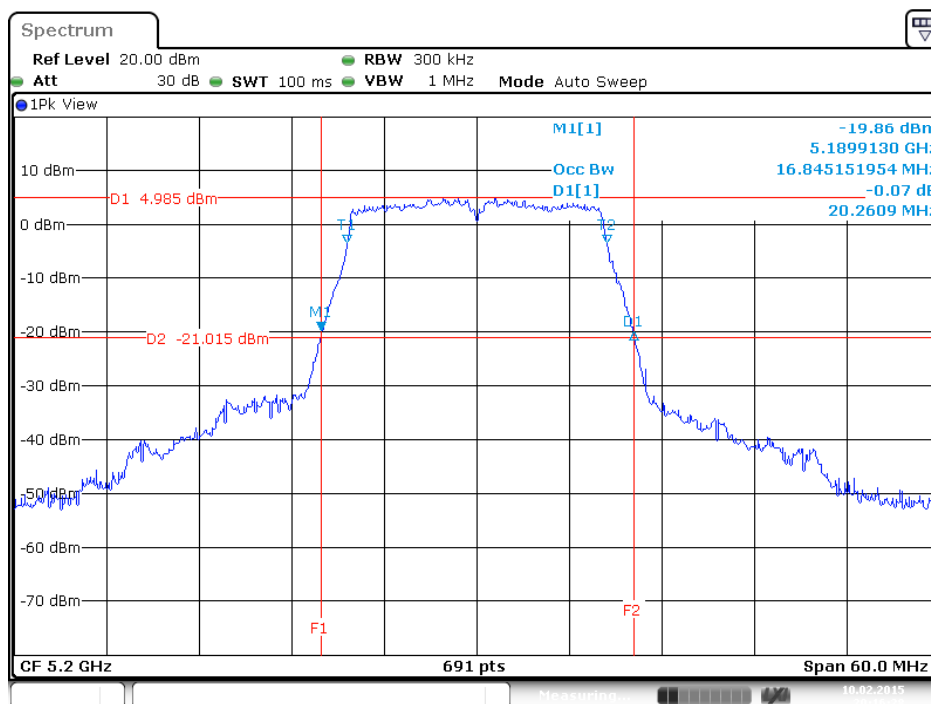
Date: 10.FEB.2015 20:11:23

26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 40 / Ant. 1



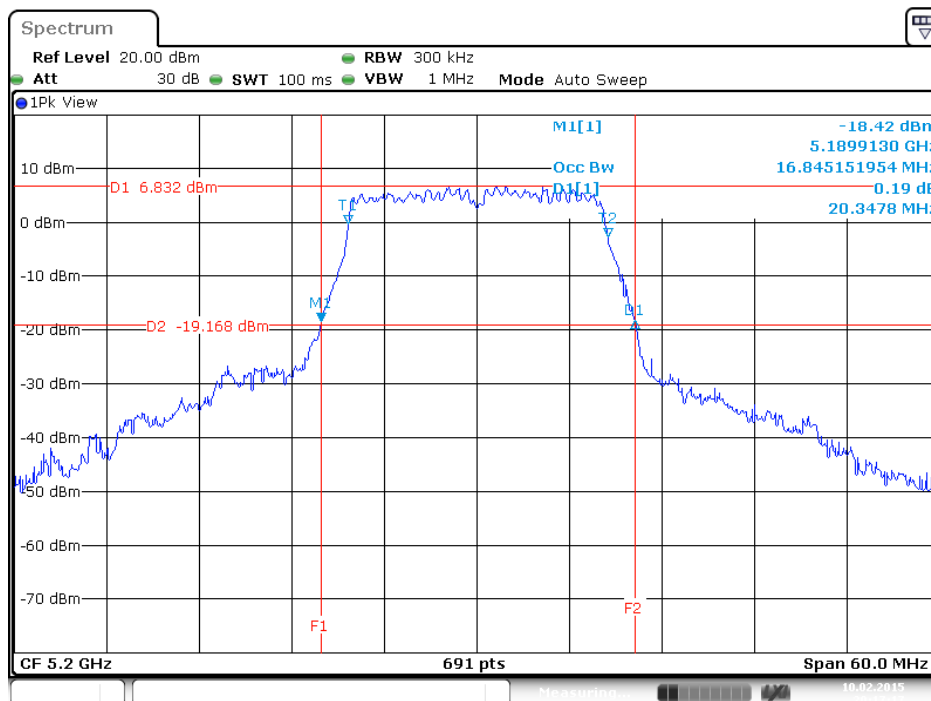
Date: 10.FEB.2015 20:15:40

26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 40 / Ant. 2



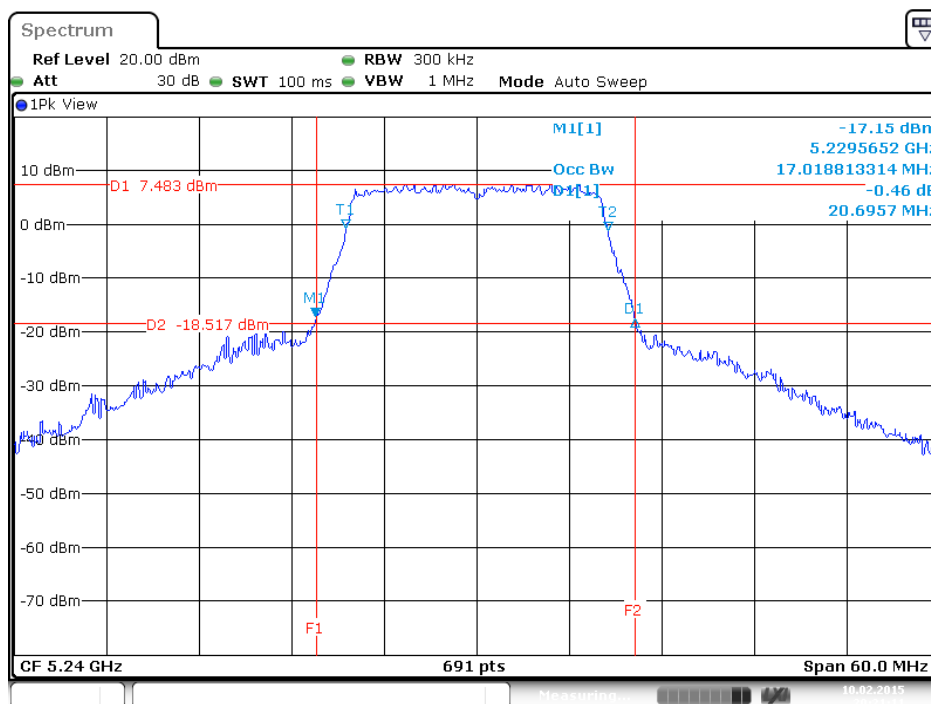
Date: 10.FEB.2015 20:16:28

26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 40 / Ant. 3



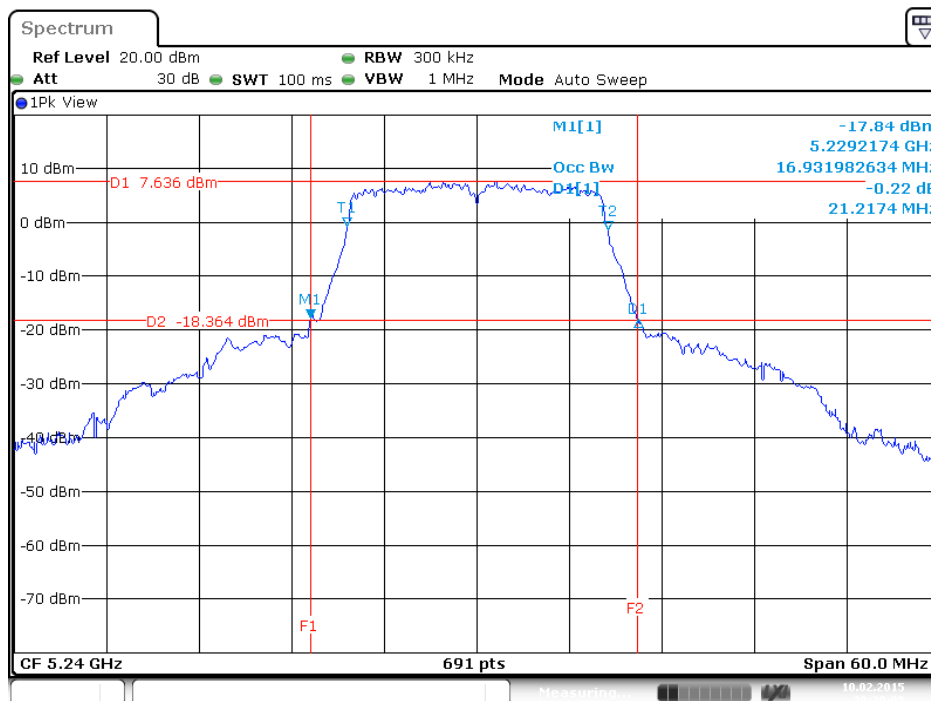
Date: 10.FEB.2015 20:17:18

26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 48 / Ant. 1



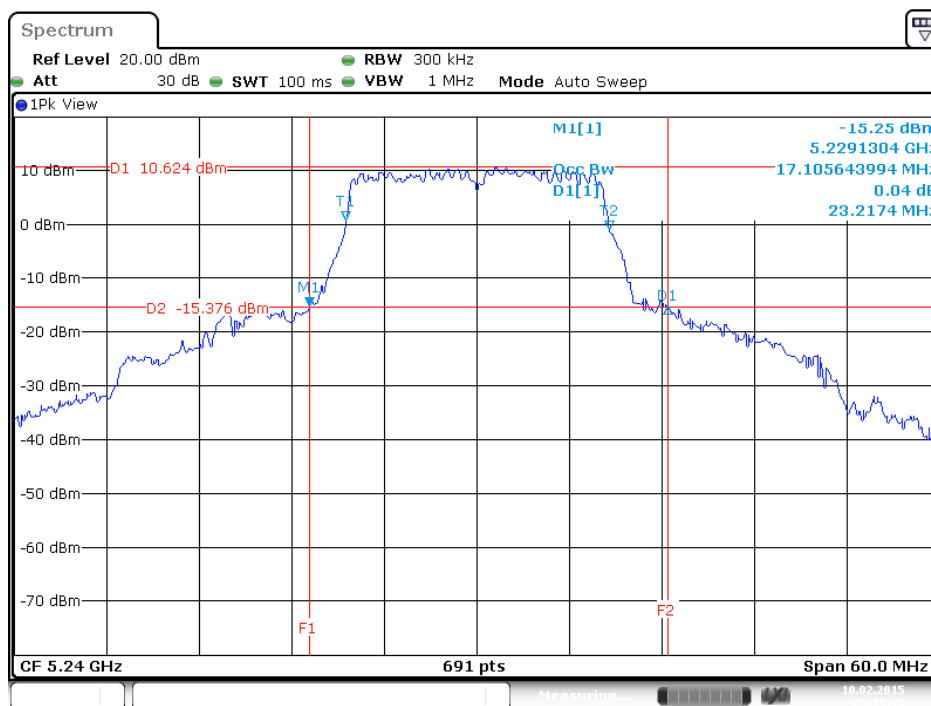
Date: 10.FEB.2015 20:21:10

26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 48 / Ant. 2



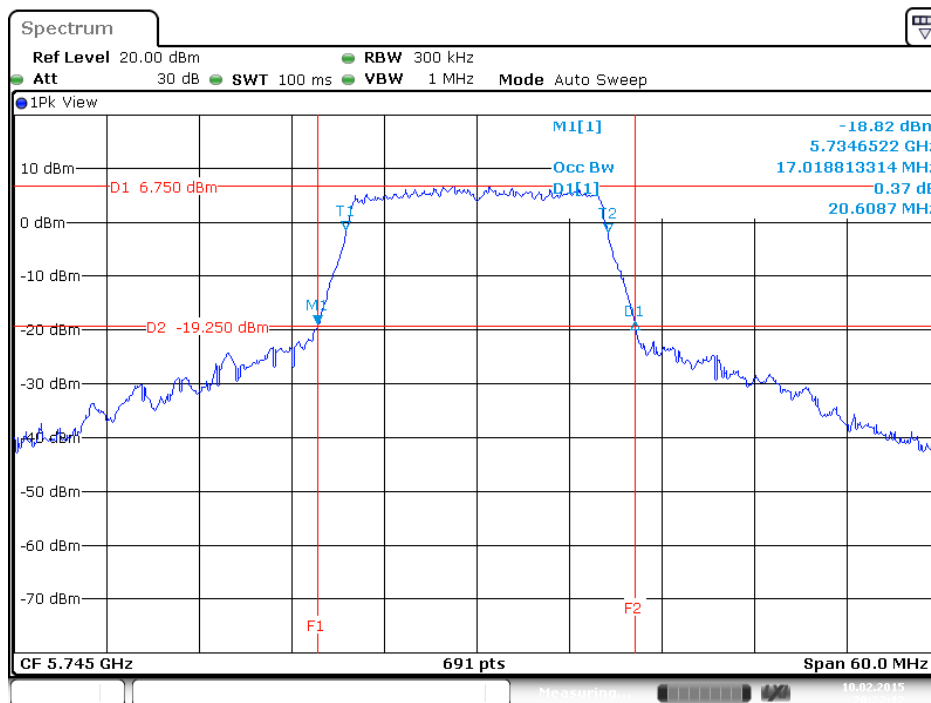
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26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 48 / Ant. 3



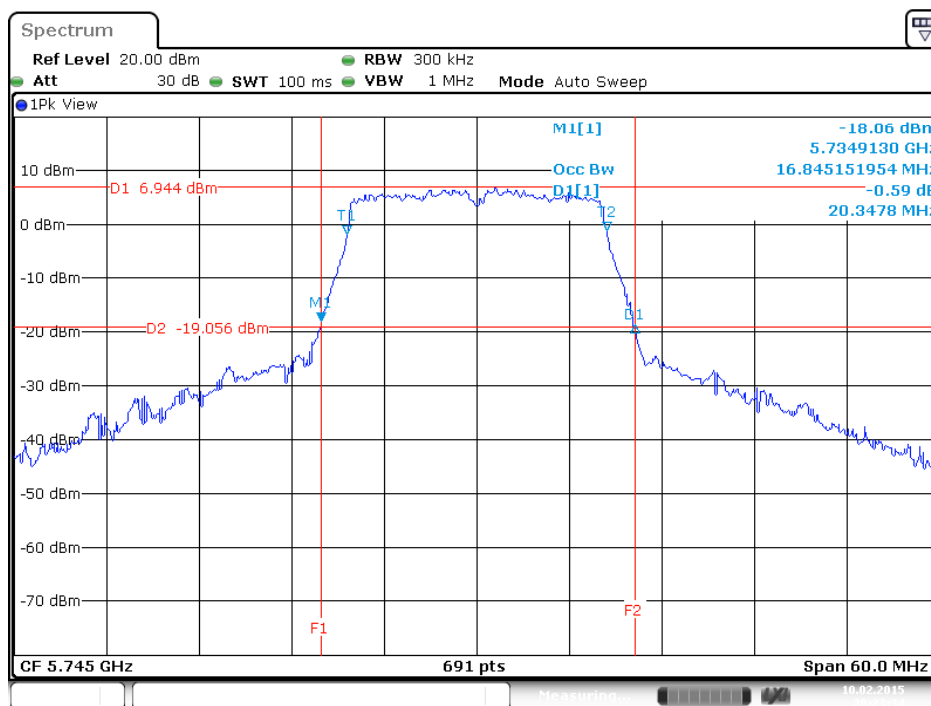
Date: 10.FEB.2015 20:19:18

26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 149 / Ant. 1

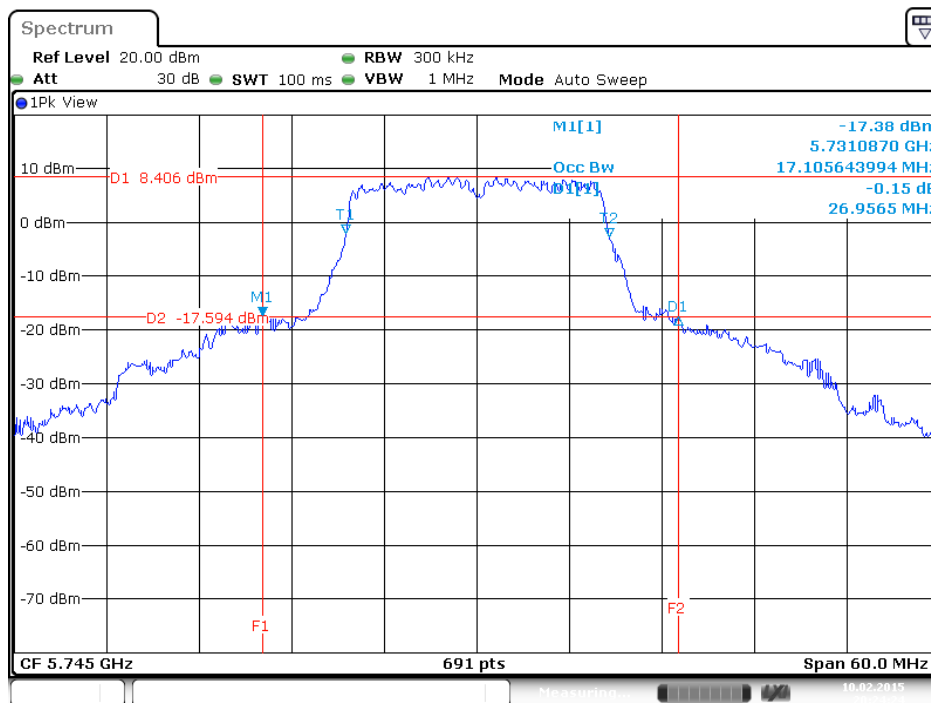


Date: 10.FEB.2015 20:22:13

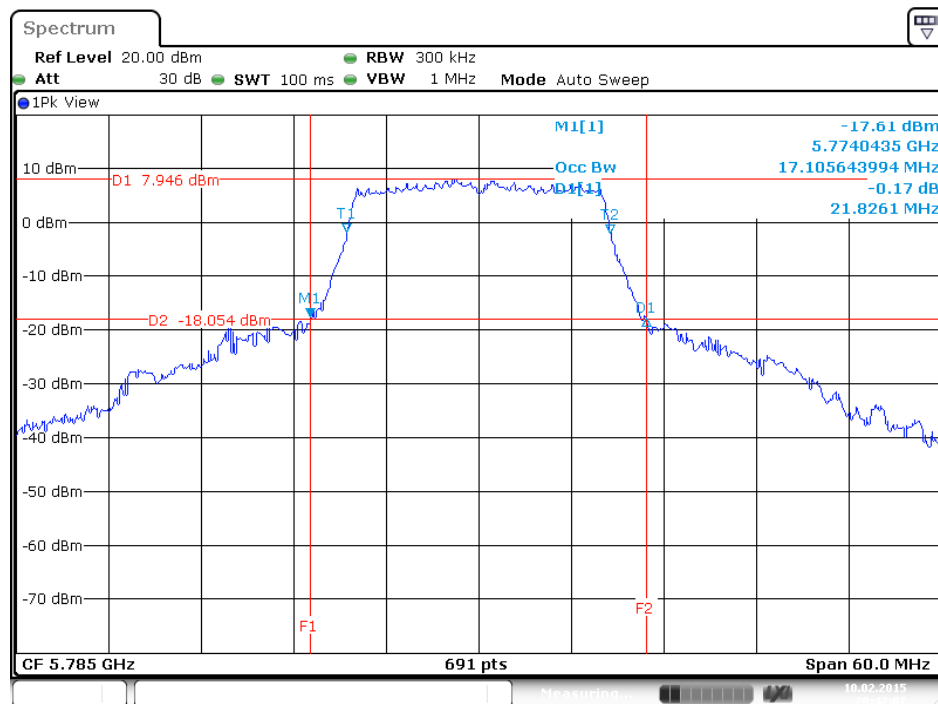
26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 149 / Ant. 2



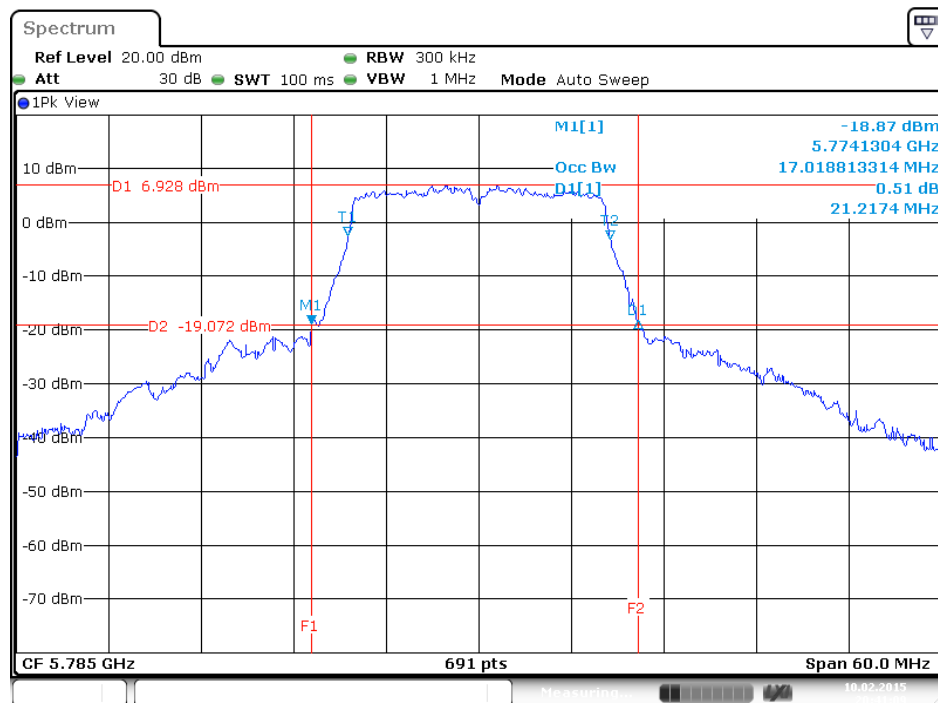
26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 149 / Ant. 3



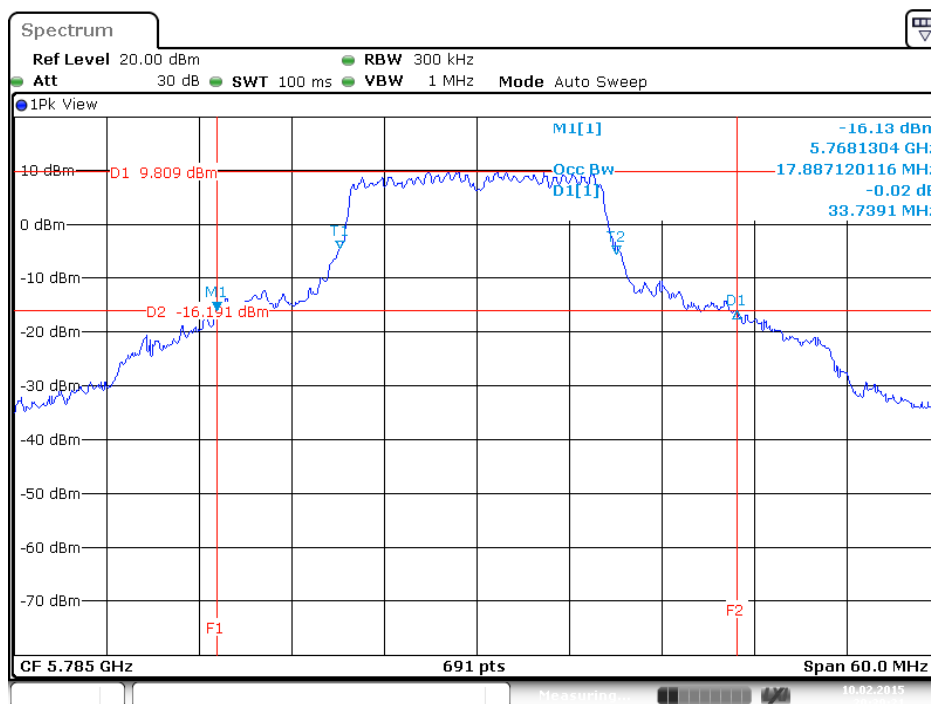
26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 157 / Ant. 1



26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 157 / Ant. 2

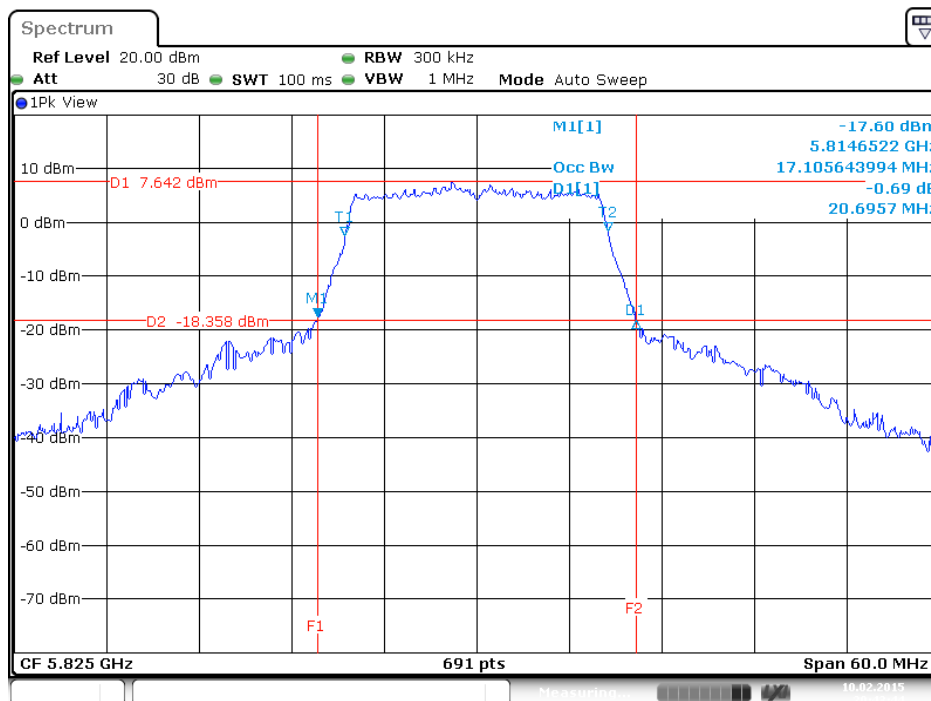


26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 157 / Ant. 3



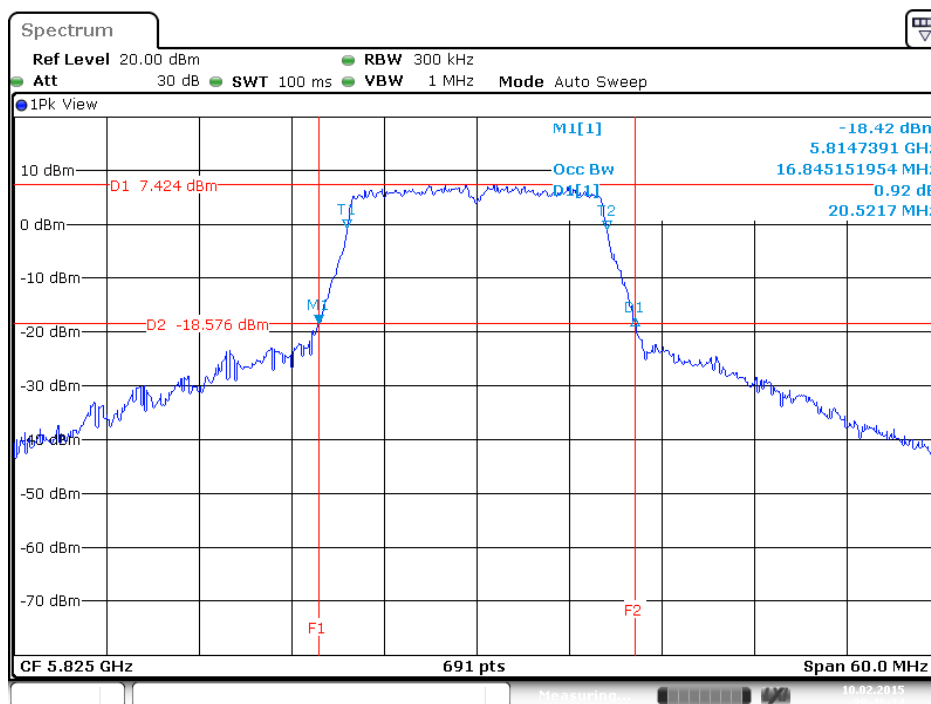
Date: 10.FEB.2015 20:39:21

26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 165 / Ant. 1

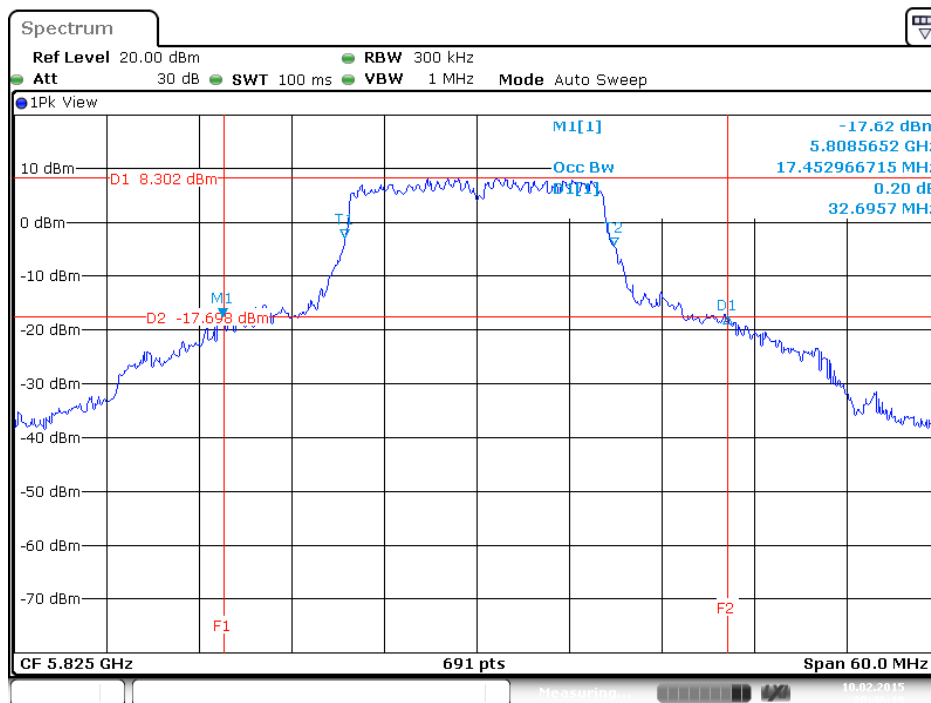


Date: 10.FEB.2015 20:43:44

26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 165 / Ant. 2



26dB Bandwidth Plot on Configuration IEEE 802.11a / CH 165 / Ant. 3



Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Configuration	802.11ac 20MHz
Duty Cycle	<Nss1MCS0, Ant. 1>: 98.97% <Nss1MCS0, 1S3T, CDD>: 98.85% <Nss1MCS0, 1S3T, TXBF>: 98.85%		

Configuration IEEE 802.11ac 20MHz

<Nss1MCS0, Ant. 1>

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Data Rate / MCS
36	5180 MHz	20.87	18.06	Nss1MCS0
40	5200 MHz	21.04	18.06	Nss1MCS0
48	5240 MHz	38.52	19.19	Nss1MCS0
149	5745 MHz	20.87	18.06	Nss1MCS0
157	5785 MHz	25.57	18.23	Nss1MCS0
165	5825 MHz	20.87	17.97	Nss1MCS0

<Nss1MCS0, 1S3T, CDD>

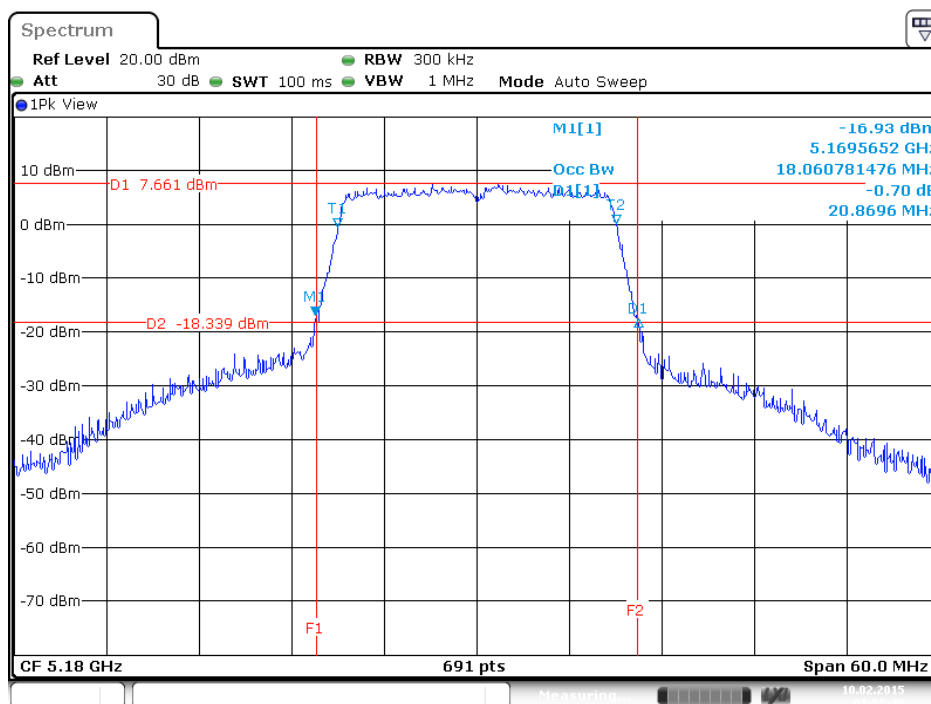
Channel	Frequency	26dB Bandwidth (MHz)			99% Occupied Bandwidth (MHz)			Data Rate / MCS
		Ant. 1	Ant. 2	Ant. 3	Ant. 1	Ant. 2	Ant. 3	
36	5180 MHz	20.87	20.52	20.61	18.06	17.80	17.89	Nss1MCS0
40	5200 MHz	20.87	20.61	20.78	18.06	17.80	17.89	Nss1MCS0
48	5240 MHz	24.43	26.96	30.70	18.15	17.89	18.06	Nss1MCS0
149	5745 MHz	20.87	20.52	29.74	18.06	17.80	18.06	Nss1MCS0
157	5785 MHz	22.09	21.48	35.65	18.15	17.89	18.32	Nss1MCS0
165	5825 MHz	20.87	20.43	30.26	17.97	17.89	18.06	Nss1MCS0

<Nss1MCS0, 1S3T, TXBF>

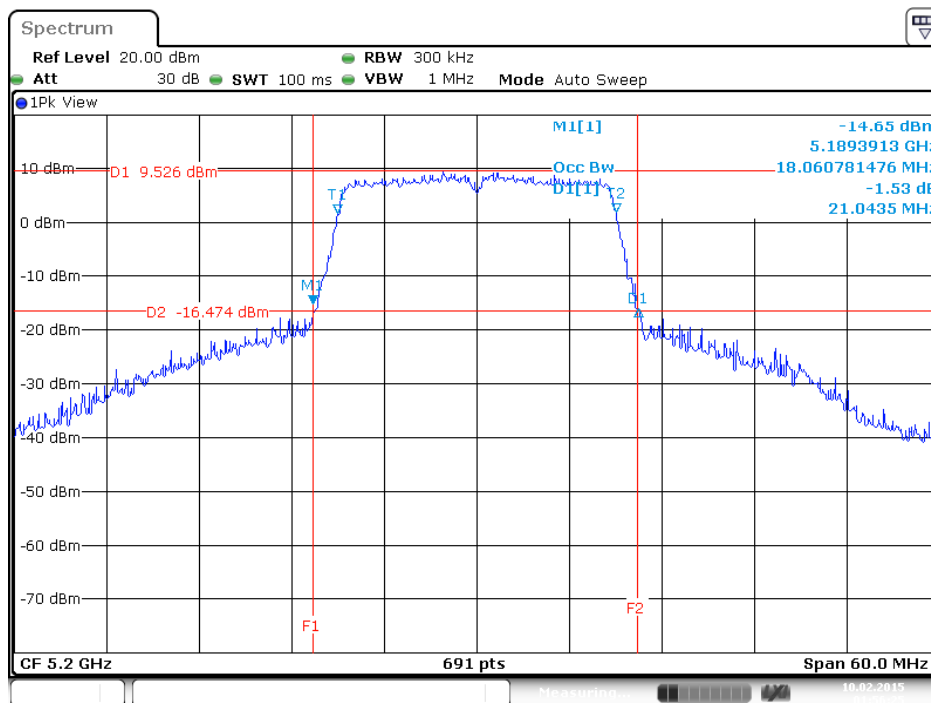
Channel	Frequency	26dB Bandwidth (MHz)			99% Occupied Bandwidth (MHz)			Data Rate / MCS
		Ant. 1	Ant. 2	Ant. 3	Ant. 1	Ant. 2	Ant. 3	
36	5180 MHz	20.70	20.52	20.52	17.97	17.80	17.80	Nss1MCS0
40	5200 MHz	20.70	20.52	20.61	17.97	17.80	17.80	Nss1MCS0
48	5240 MHz	20.78	20.52	21.04	18.06	17.80	17.89	Nss1MCS0
149	5745 MHz	21.65	20.43	27.13	17.97	17.80	18.06	Nss1MCS0
157	5785 MHz	20.78	20.52	20.52	17.97	17.80	17.80	Nss1MCS0
165	5825 MHz	20.70	20.35	20.52	18.06	17.80	17.89	Nss1MCS0

<Nss1MCS0, Ant. 1>:

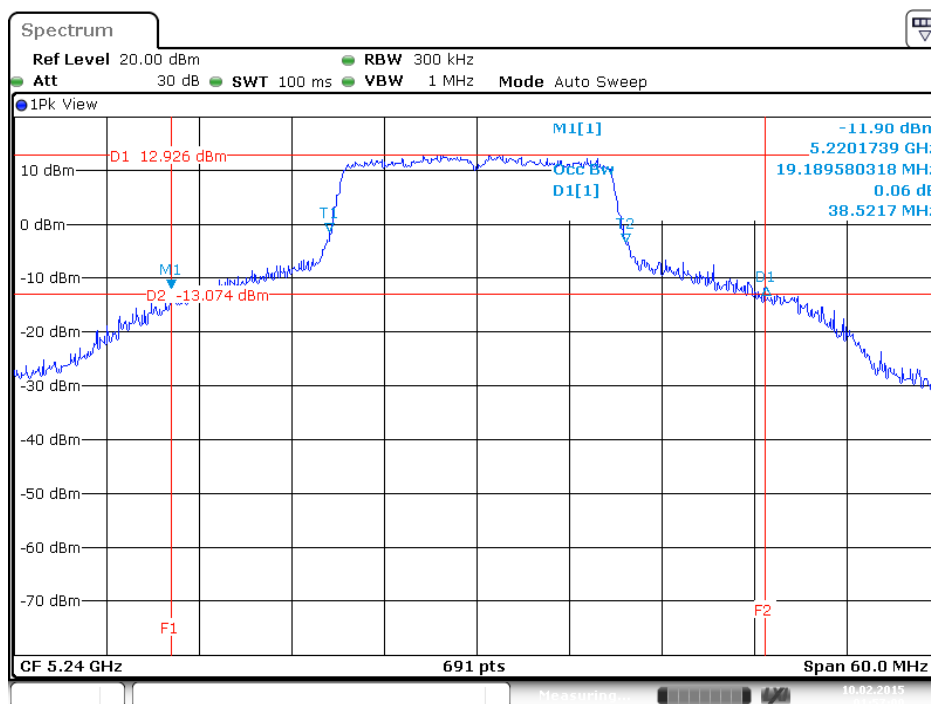
26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 36 / Ant. 1



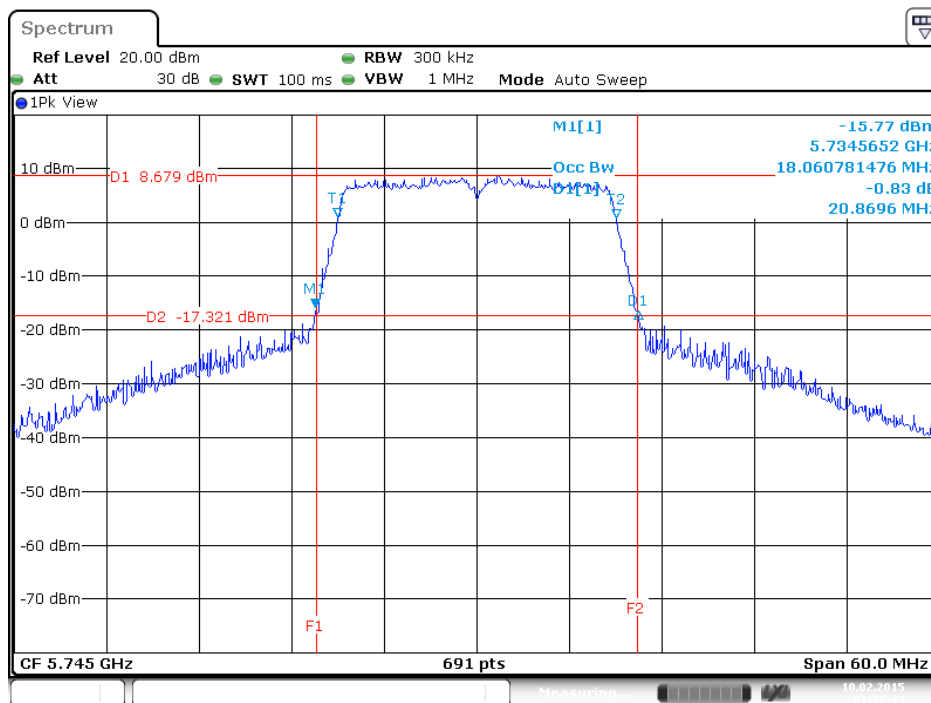
26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 40 / Ant. 1



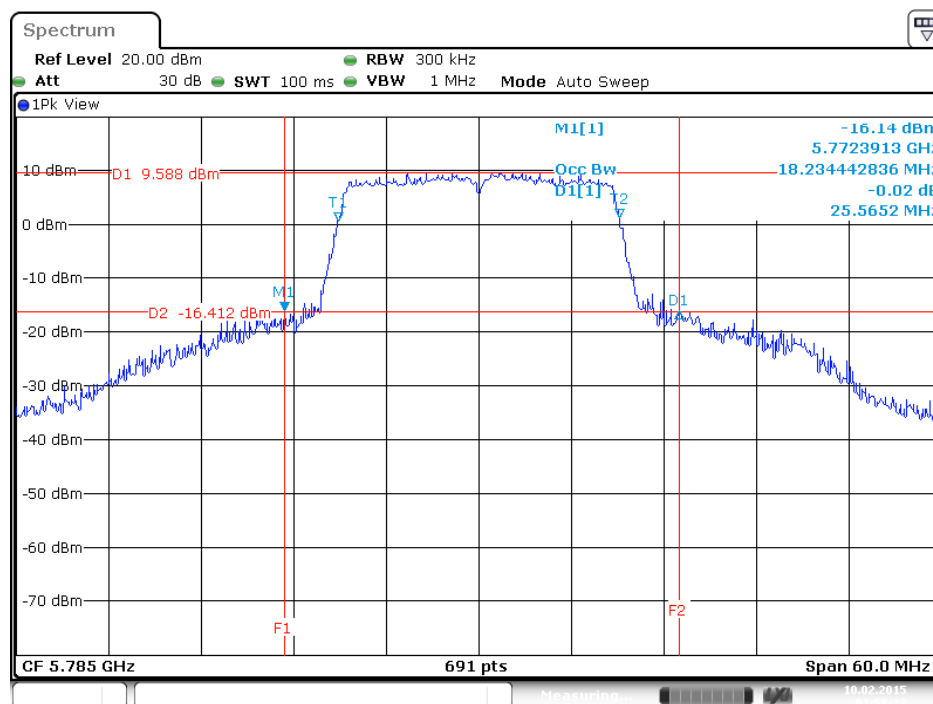
26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 48 / Ant. 1



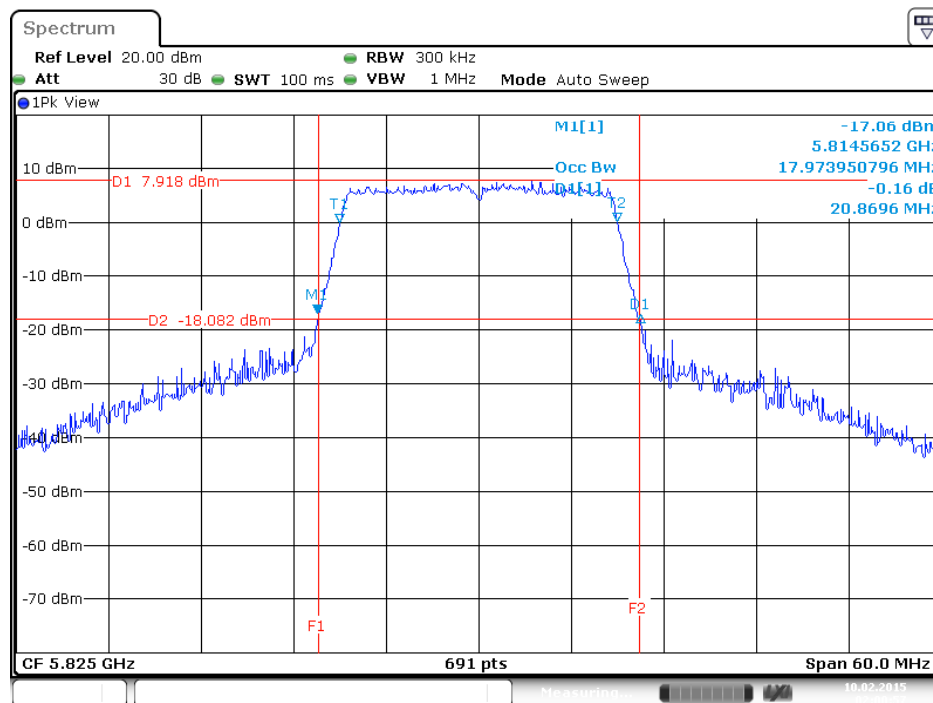
26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 149 / Ant. 1



26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 157 / Ant. 1

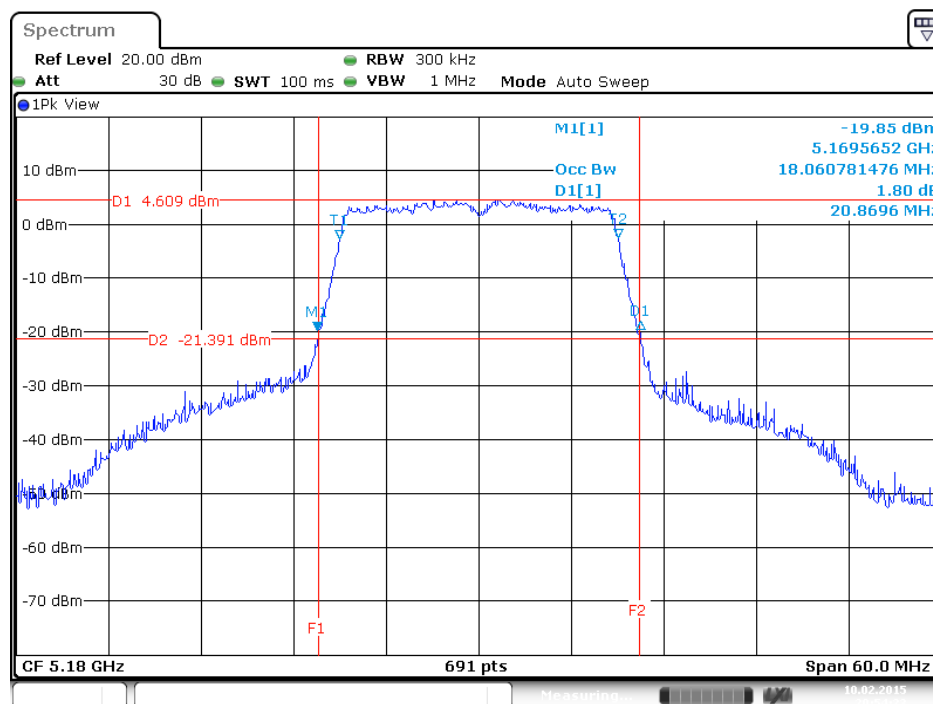


26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 165 / Ant. 1



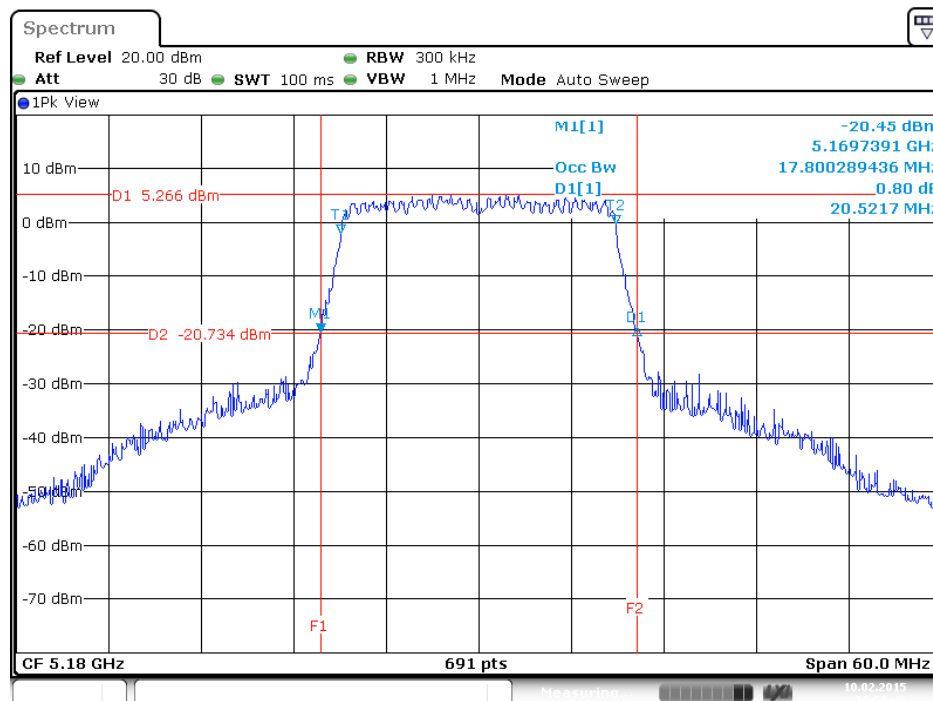
<Nss1MCS0, 1S3T, CDD>:

26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 36 / Ant. 1



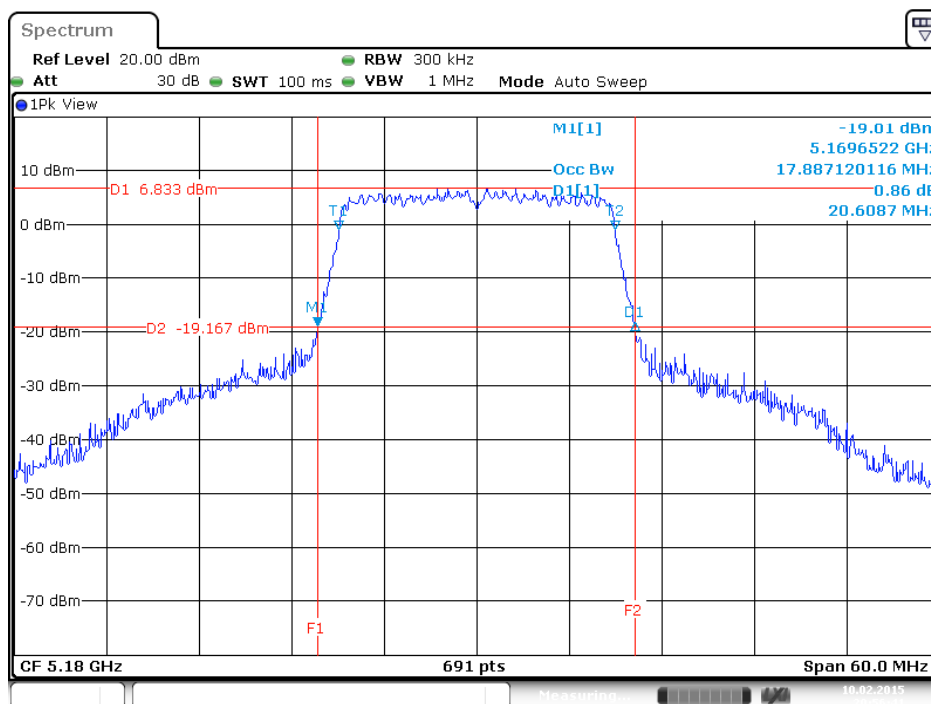
Date: 10.FEB.2015 20:54:23

26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 36 / Ant. 2

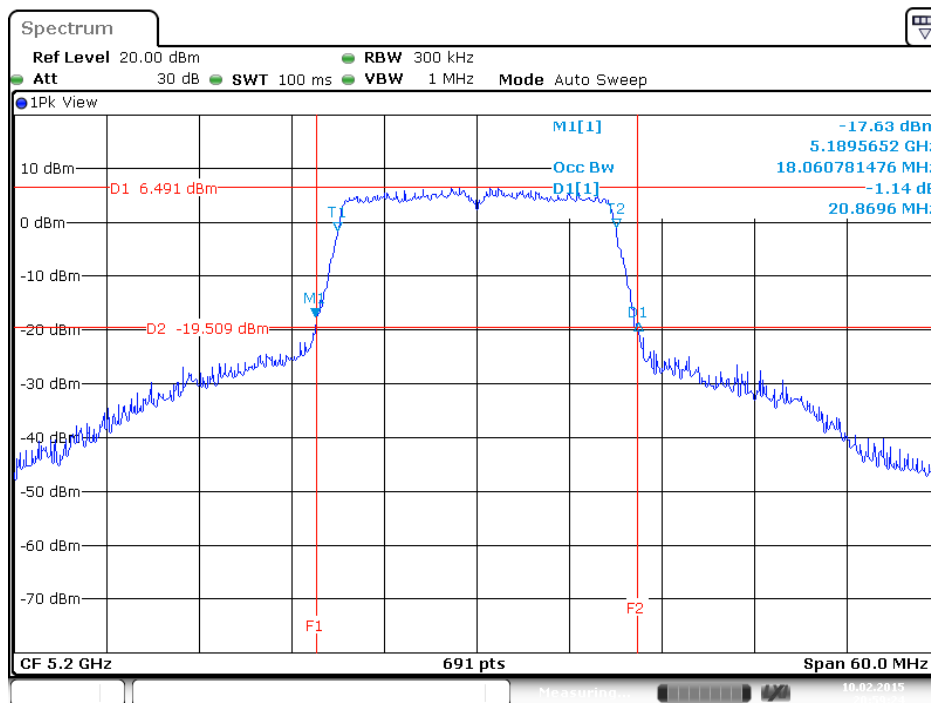


Date: 10.FEB.2015 20:55:47

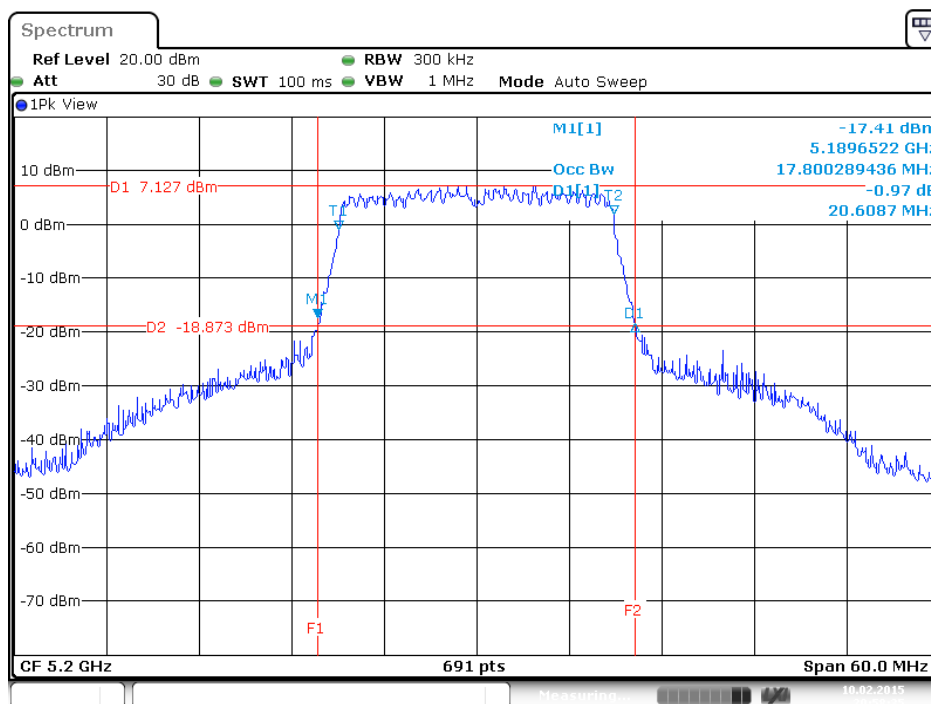
26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 36 / Ant. 3



26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 40 / Ant. 1

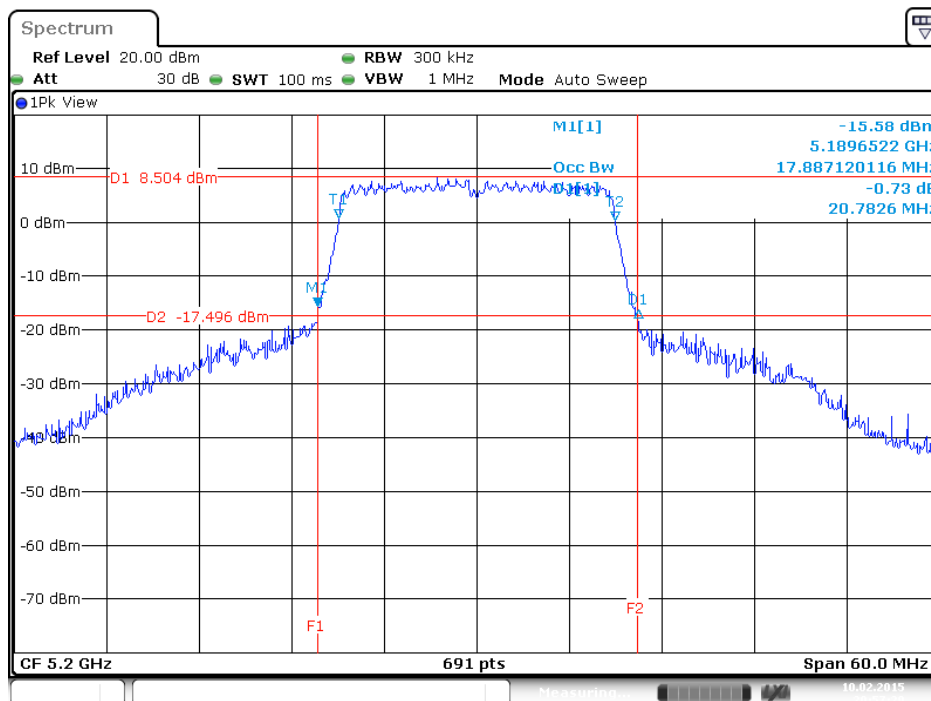


26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 40 / Ant. 2



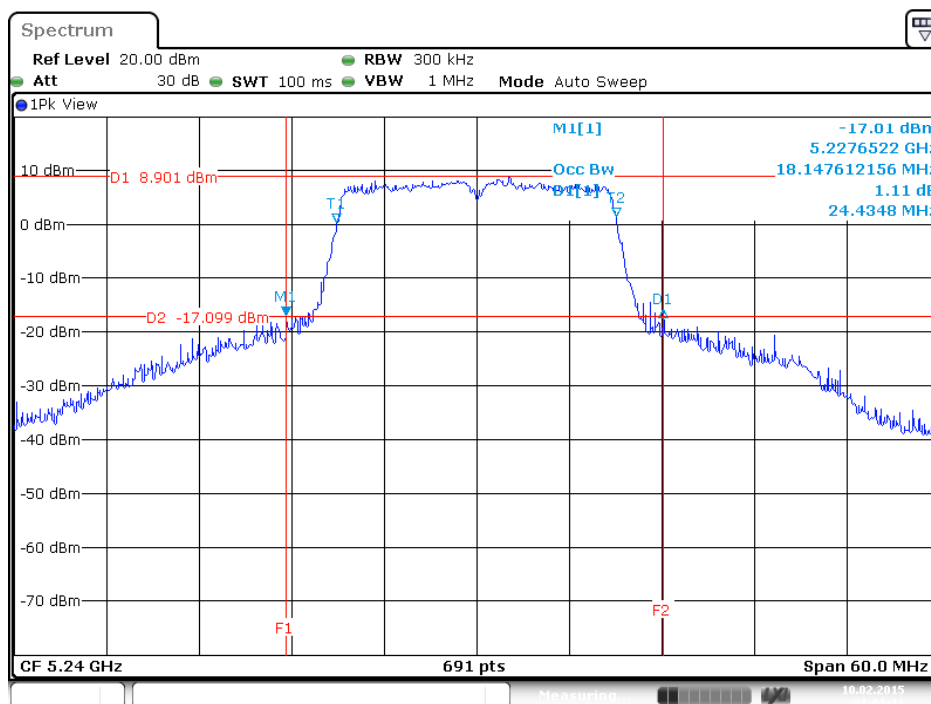
Date: 10.FEB.2015 20:58:35

26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 40 / Ant. 3

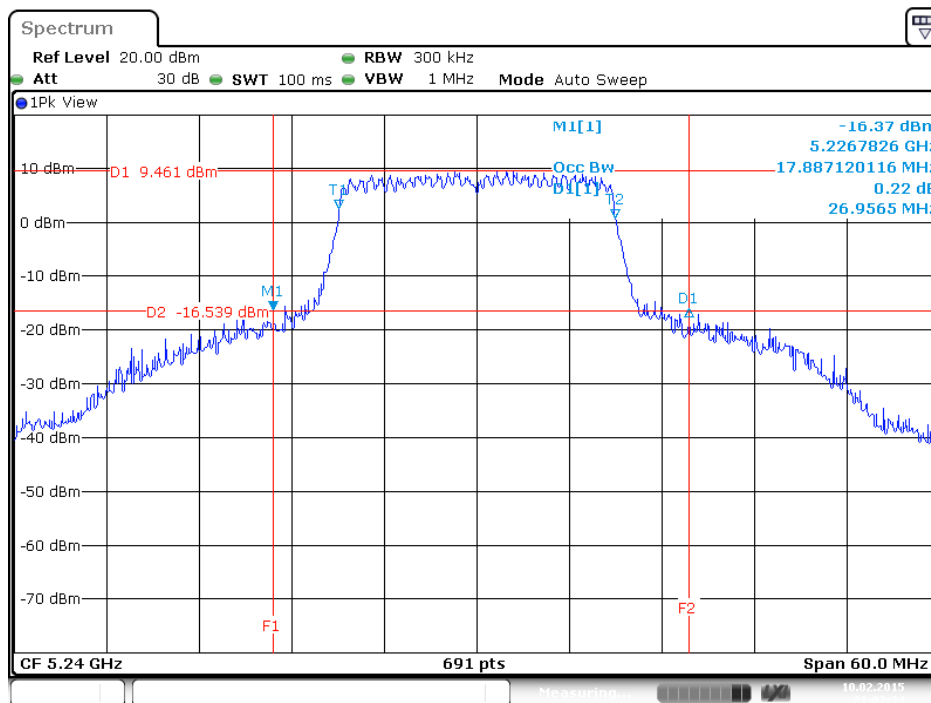


Date: 10.FEB.2015 20:57:29

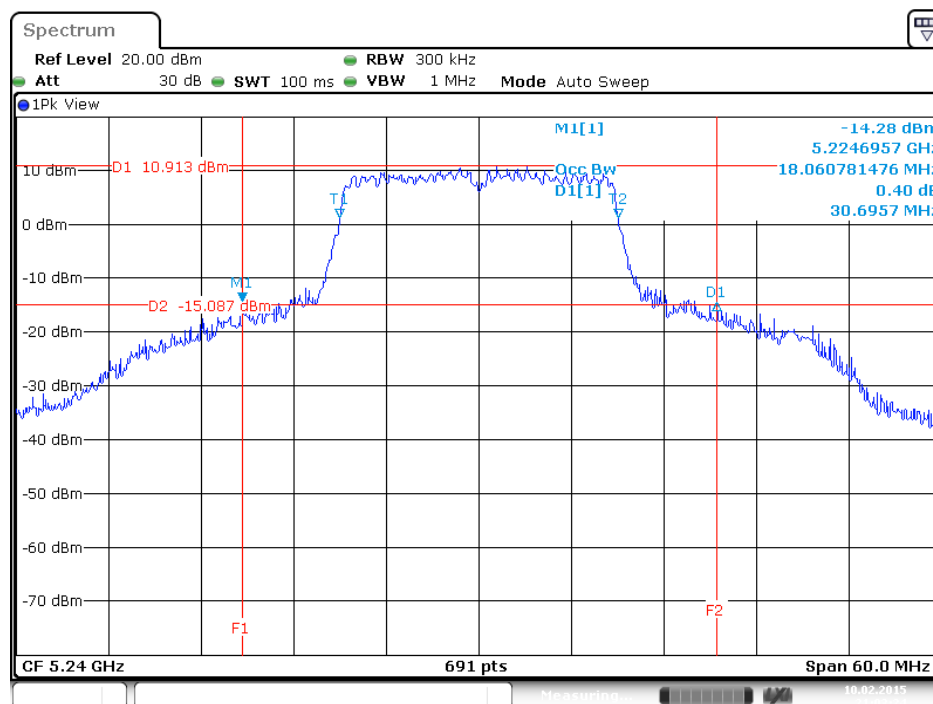
26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 48 / Ant. 1



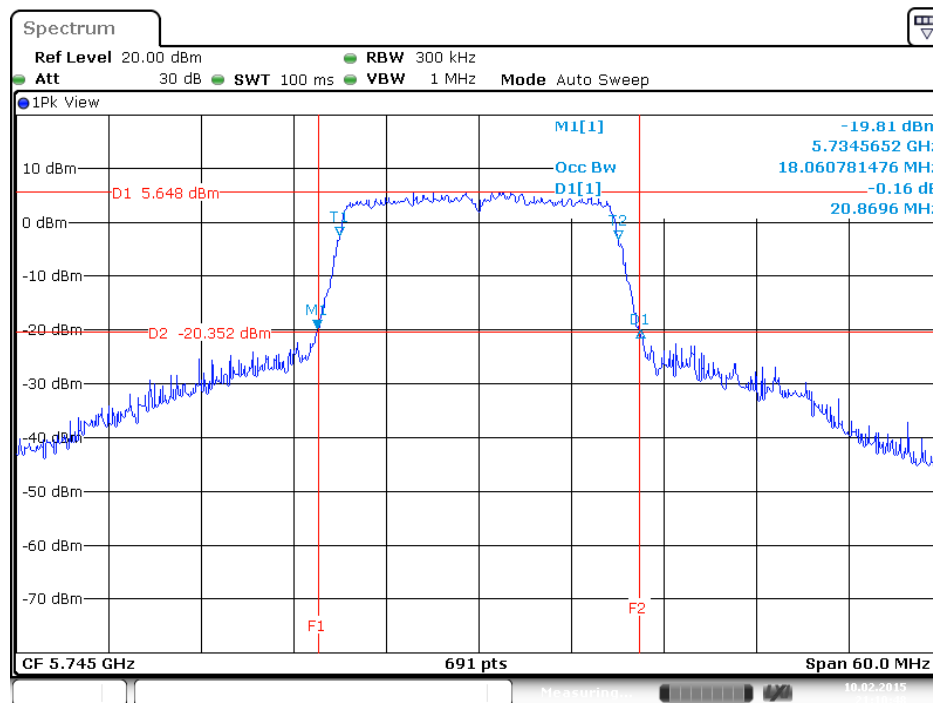
26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 48 / Ant. 2



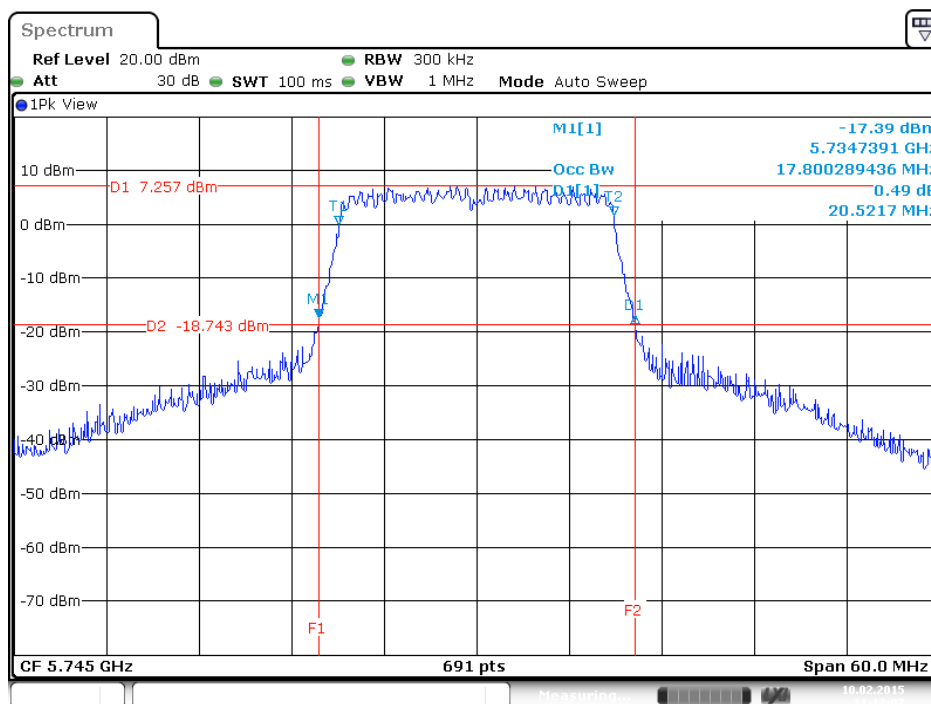
26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 48 / Ant. 3



26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 149 / Ant. 1

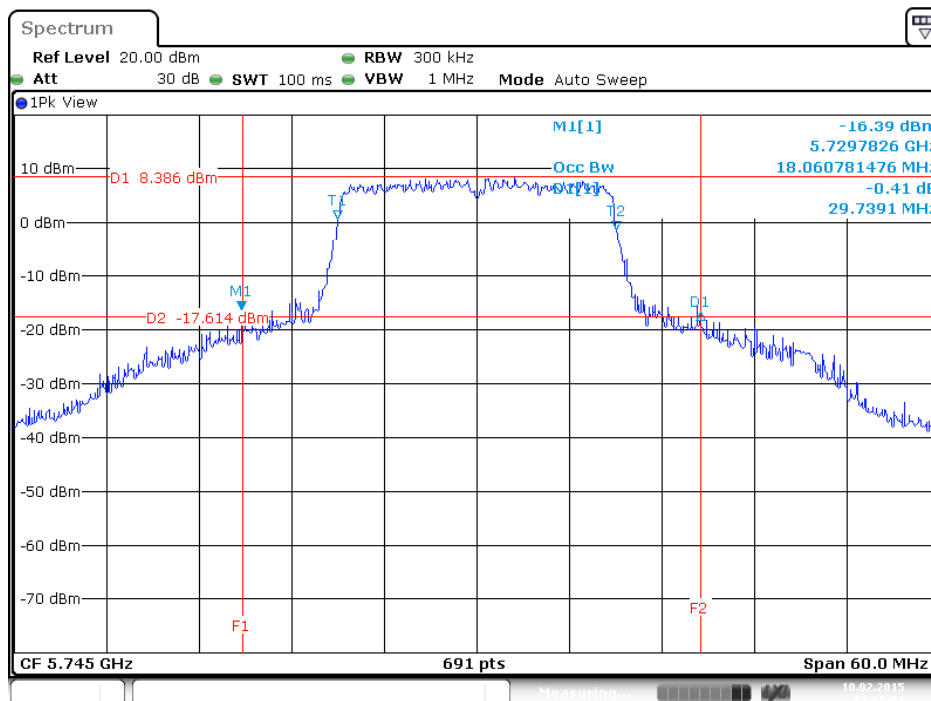


26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 149 / Ant. 2



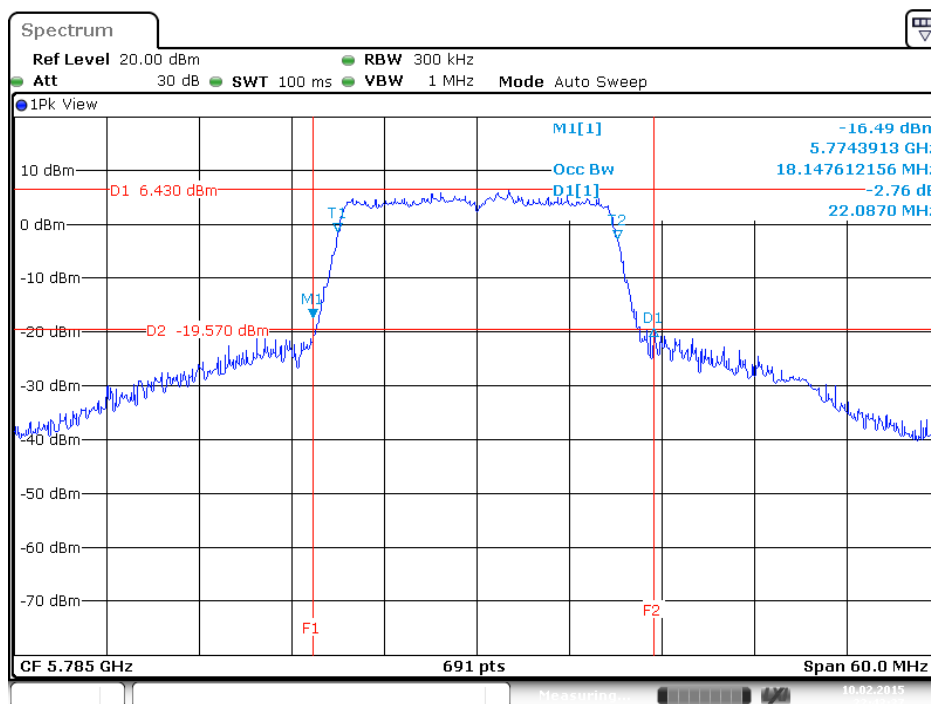
Date: 10.FEB.2015 21:13:07

26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 149 / Ant. 3



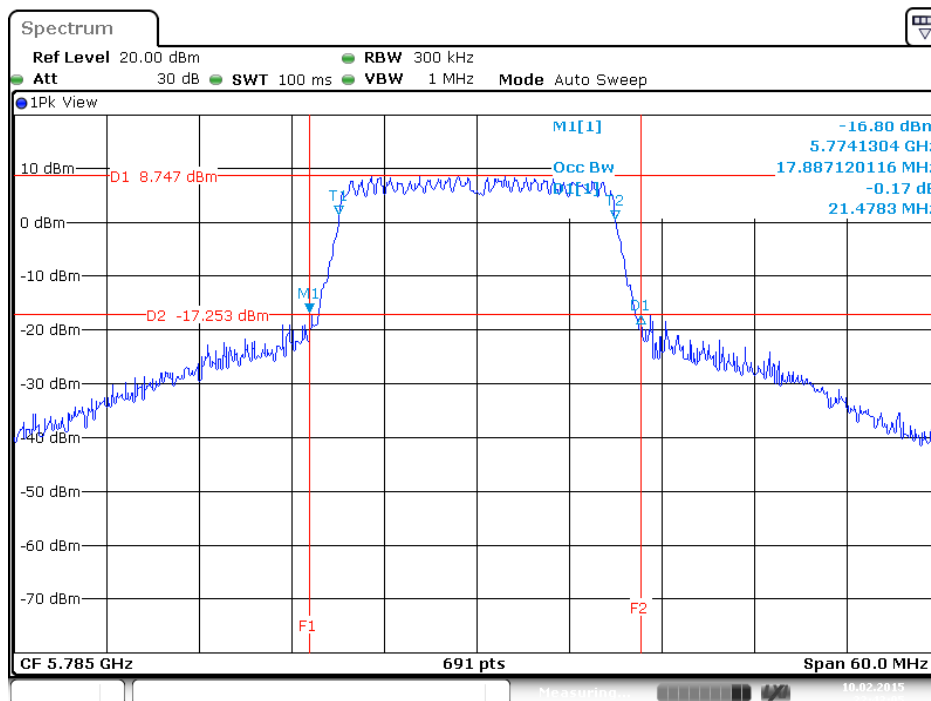
Date: 10.FEB.2015 21:05:02

26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 157 / Ant. 1



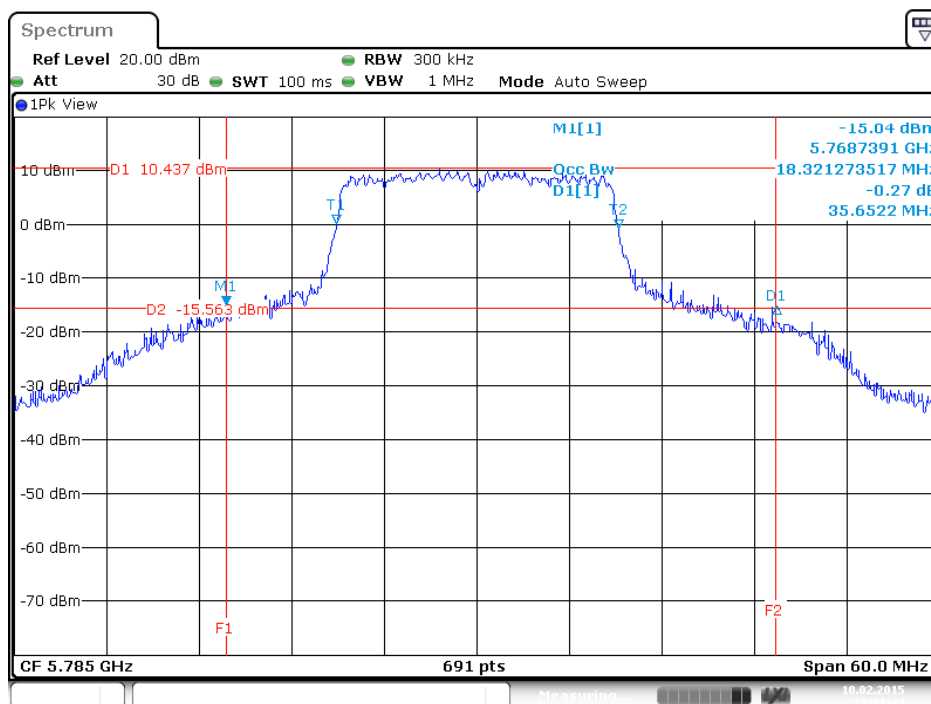
Date: 10 FEB 2015 22:43:37

26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 157 / Ant. 2

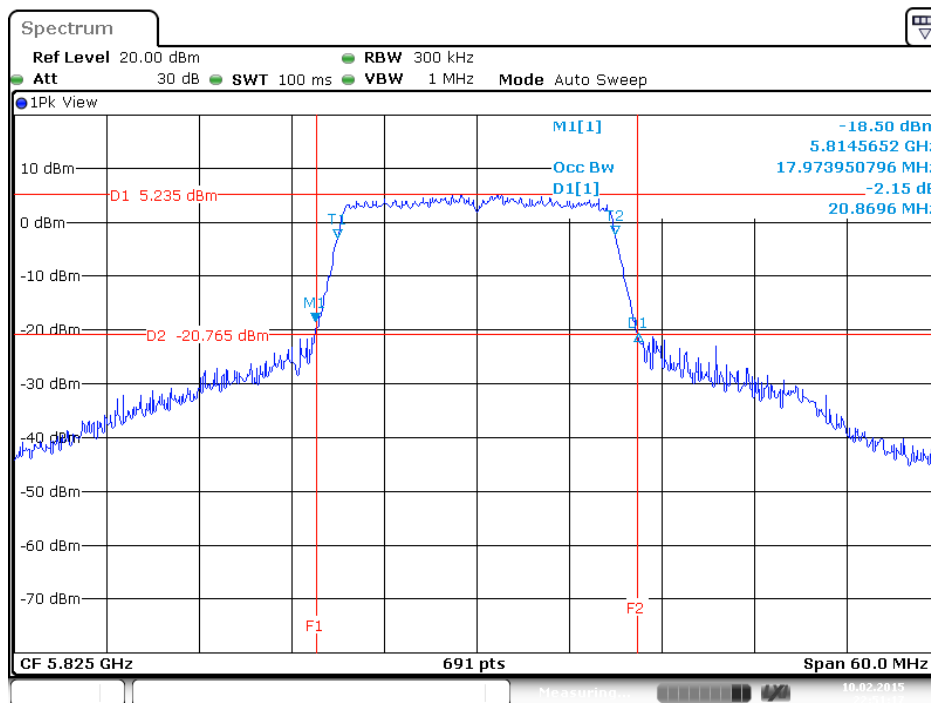


Date: 10 FEB 2015 22:43:06

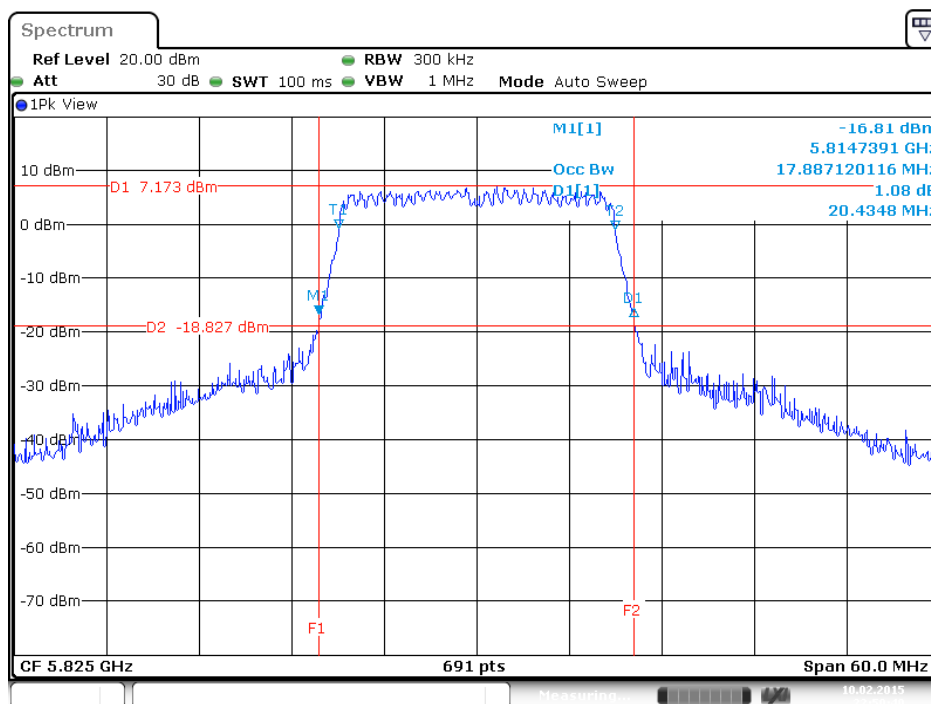
26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 157 / Ant. 3



26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 165 / Ant. 1

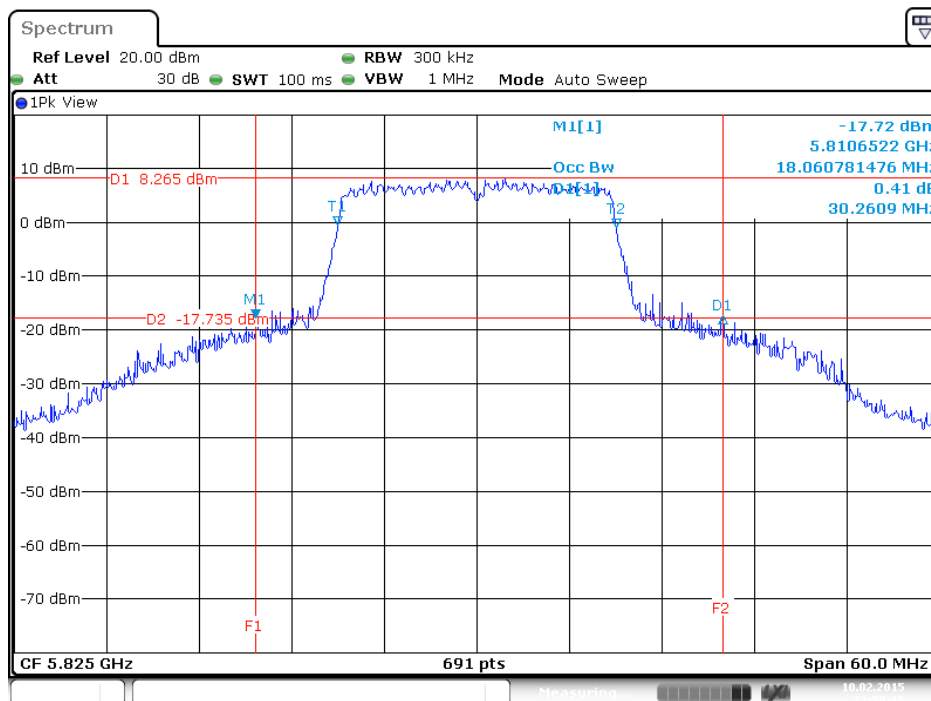


26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 165 / Ant. 2



Date: 10.FEB.2015 22:50:39

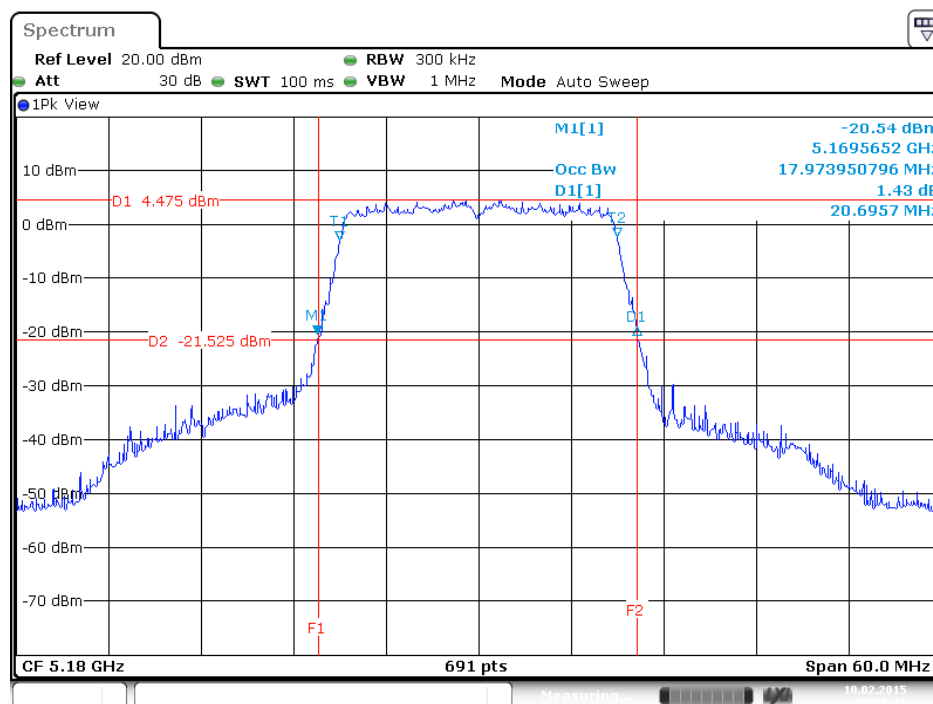
26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 165 / Ant. 3



Date: 10.FEB.2015 22:50:16

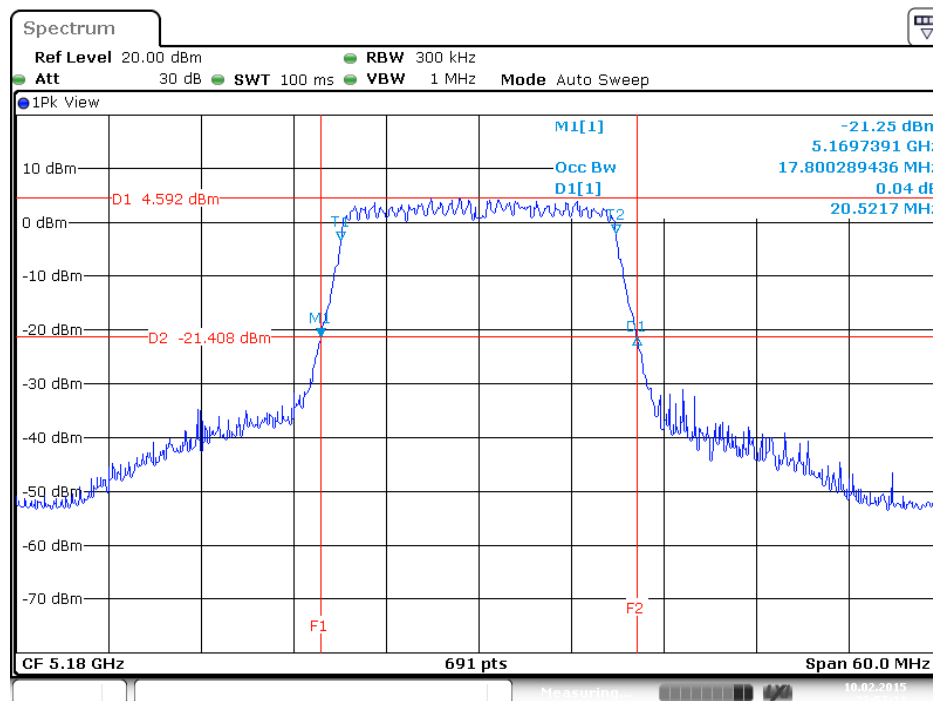
<Nss1MCS0, 1S3T, TXBF>:

26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 36 / Ant. 1



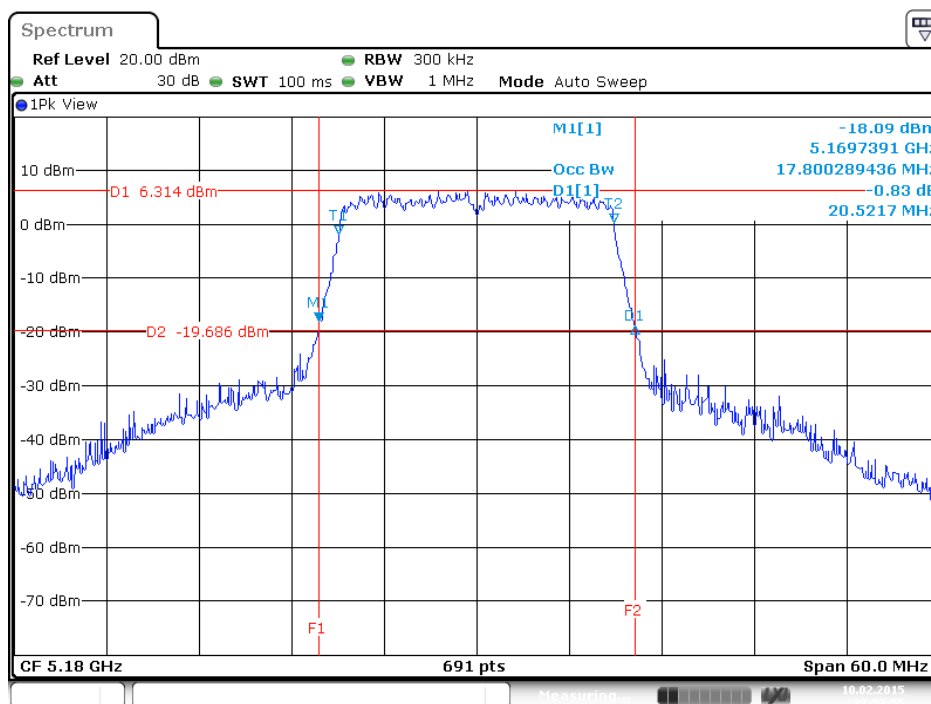
Date: 10.FEB.2015 23:56:23

26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 36 / Ant. 2



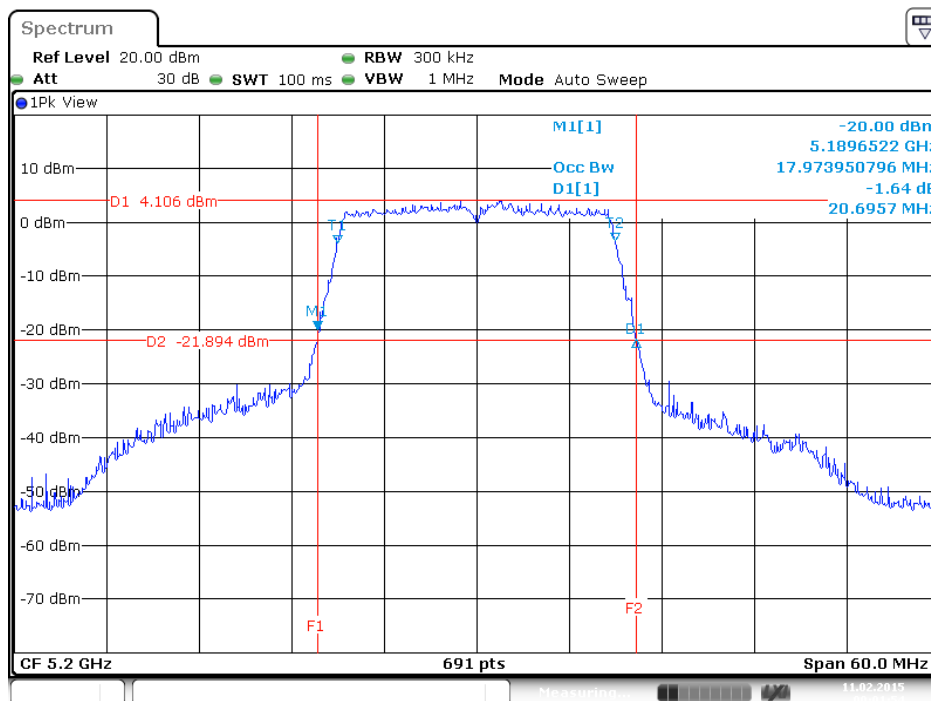
Date: 10.FEB.2015 23:57:21

26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 36 / Ant. 3



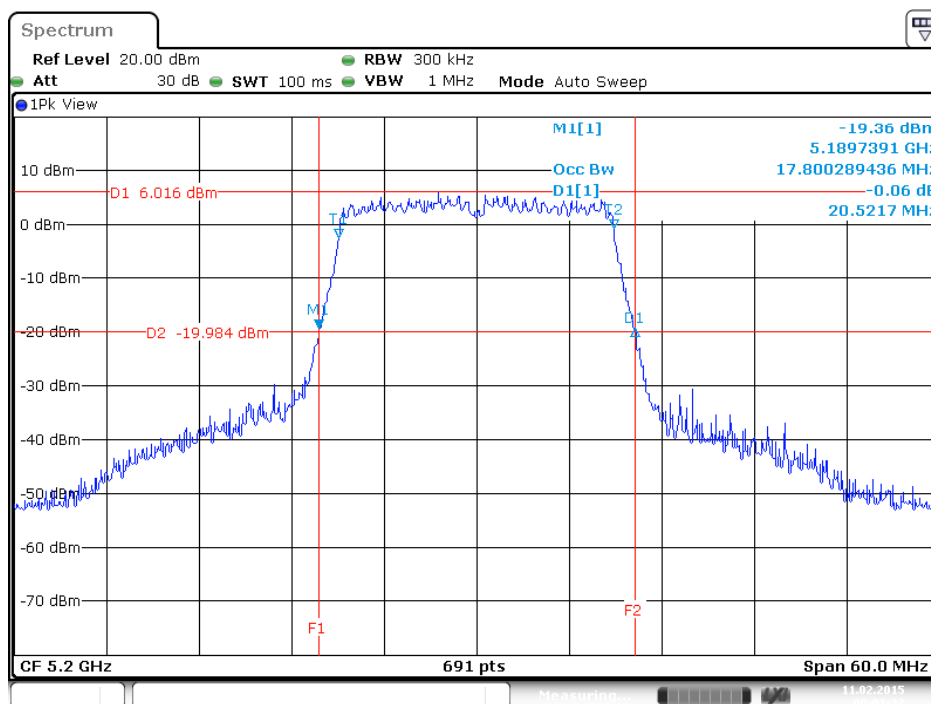
Date: 10.FEB.2015 23:57:56

26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 40 / Ant. 1



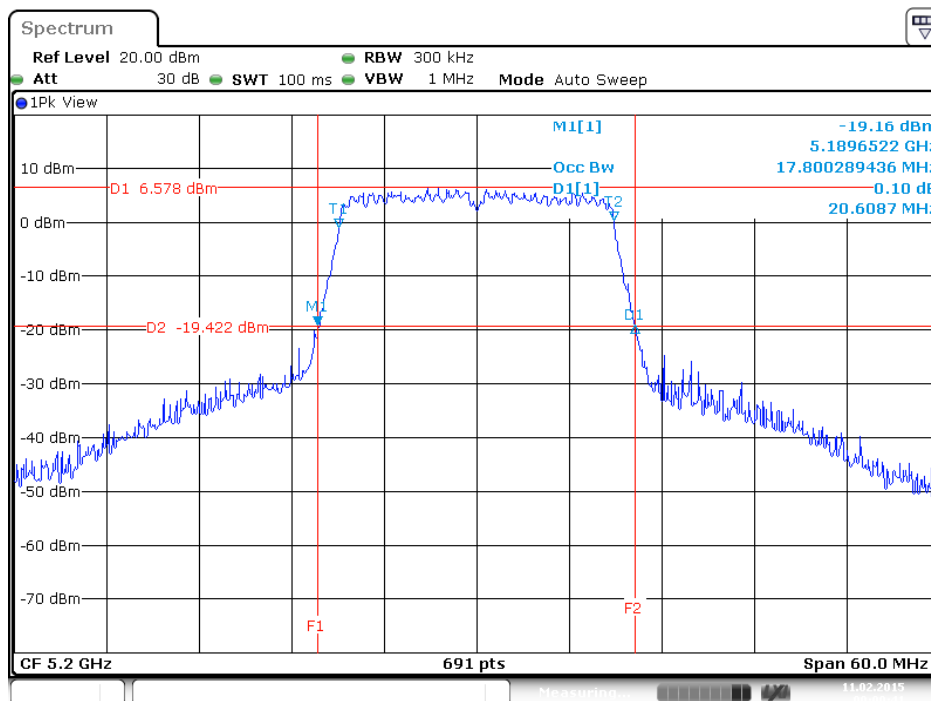
Date: 11.FEB.2015 00:01:54

26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 40 / Ant. 2



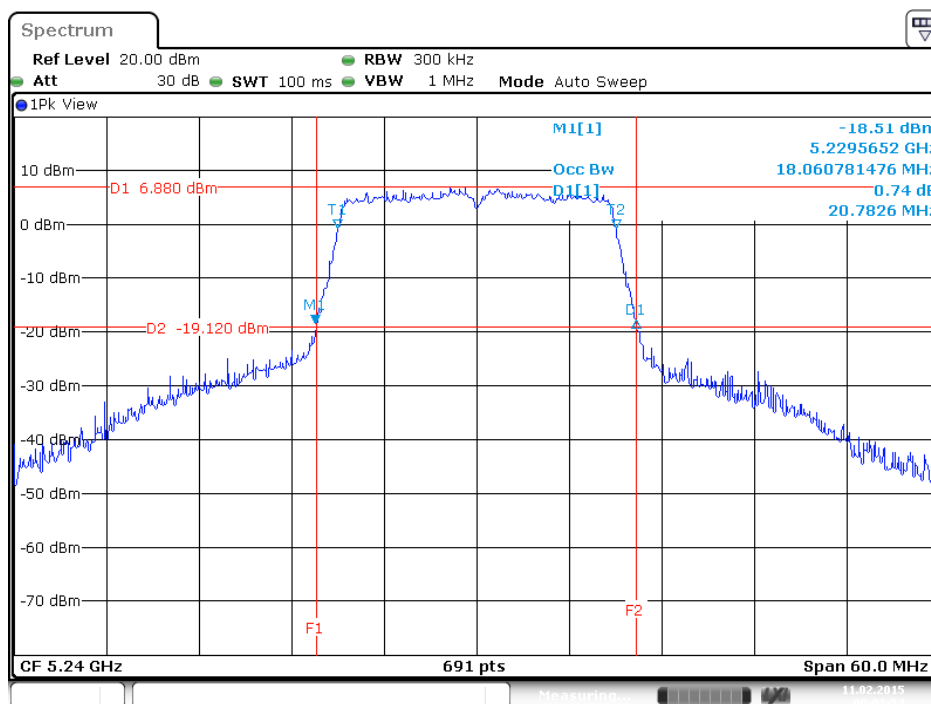
Date: 11.FEB.2015 00:01:27

26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 40 / Ant. 3

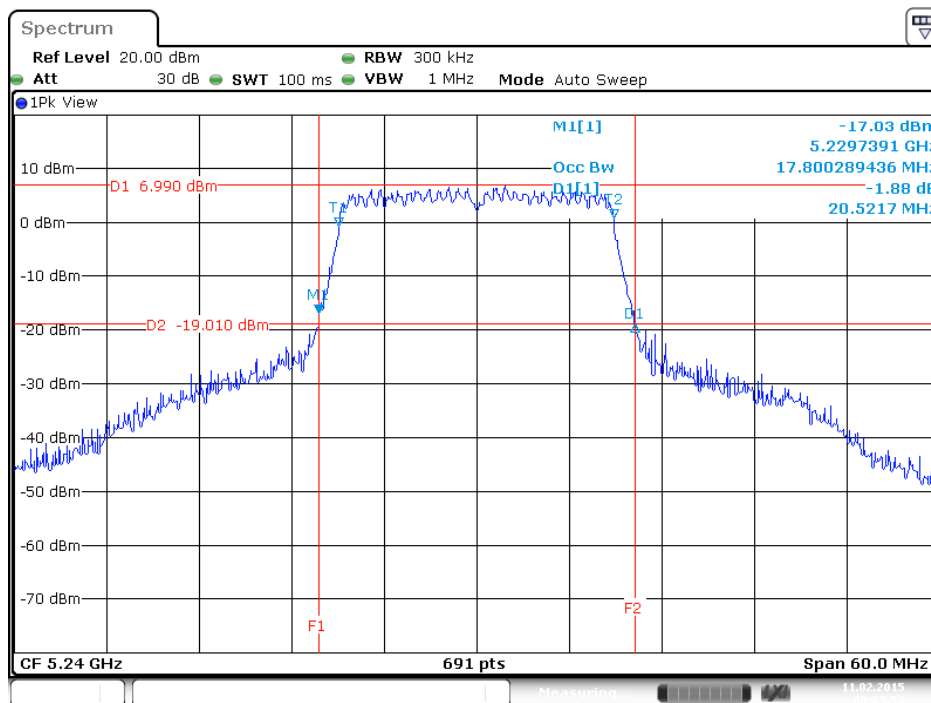


Date: 11.FEB.2015 00:00:41

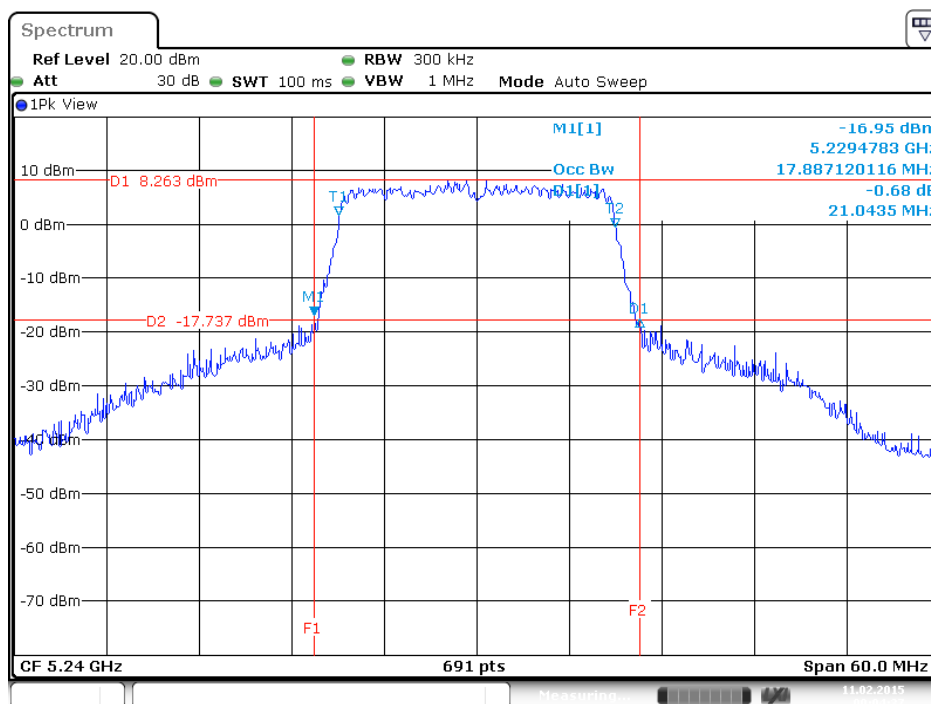
26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 48 / Ant. 1



26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 48 / Ant. 2

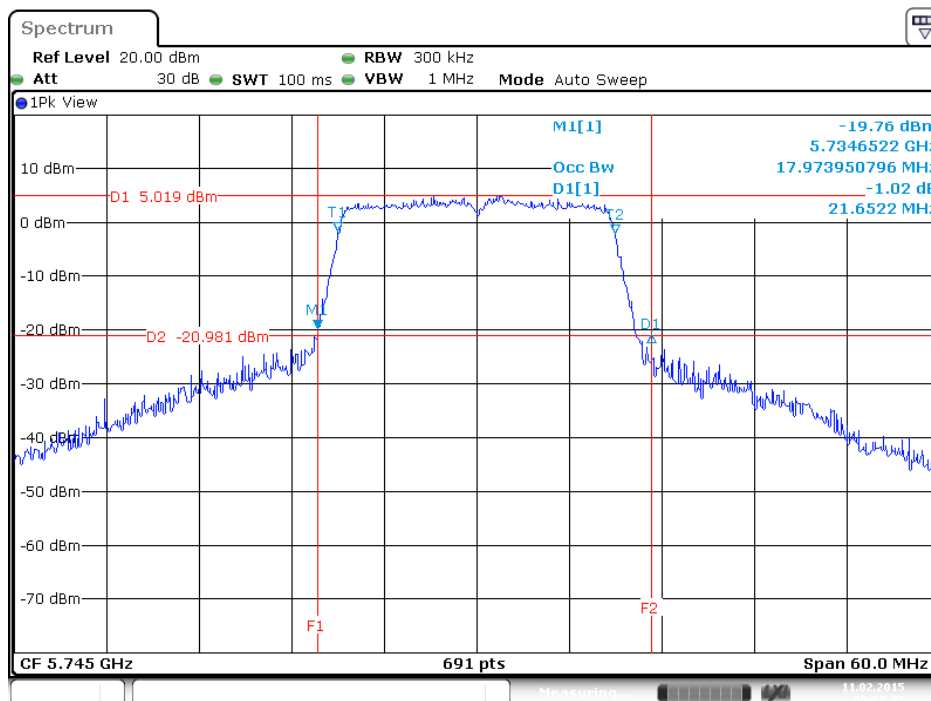


26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 48 / Ant. 3



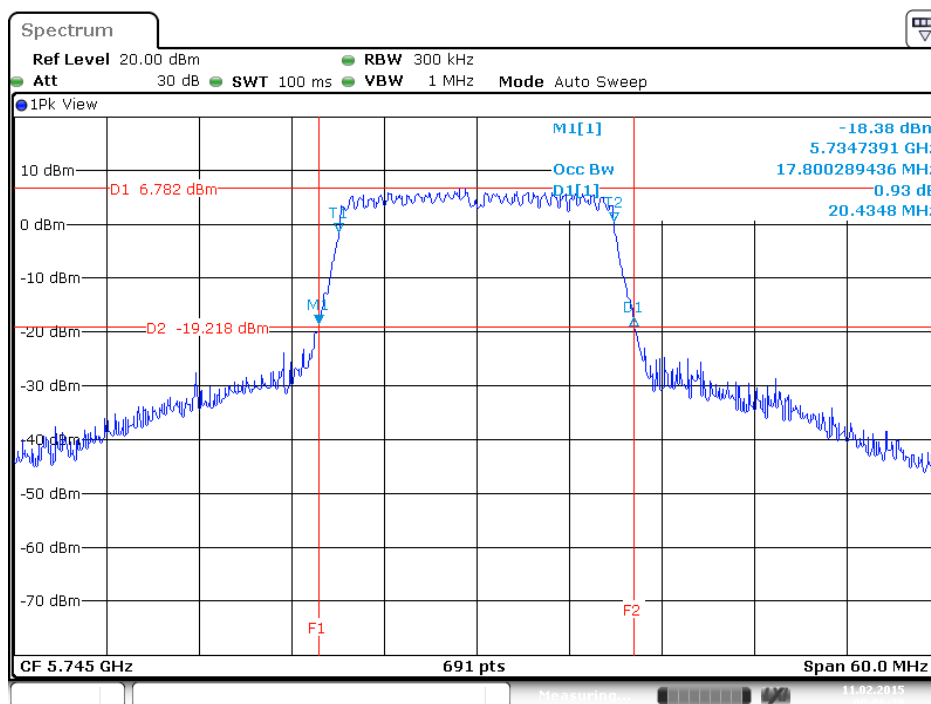
Date: 11.FEB.2015 00:04:37

26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 149 / Ant. 1

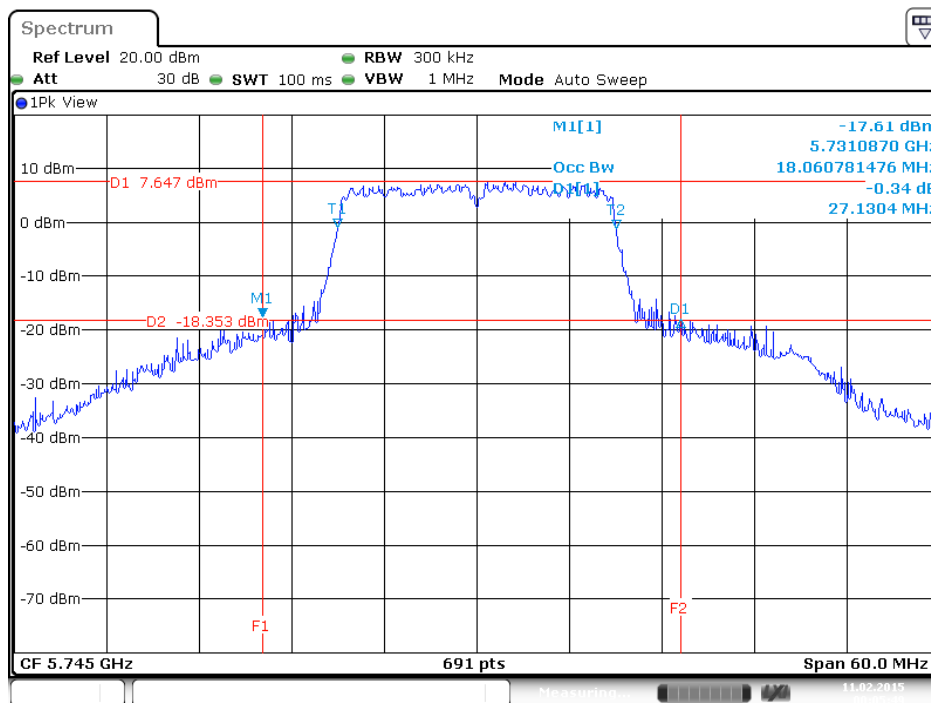


Date: 11.FEB.2015 00:07:03

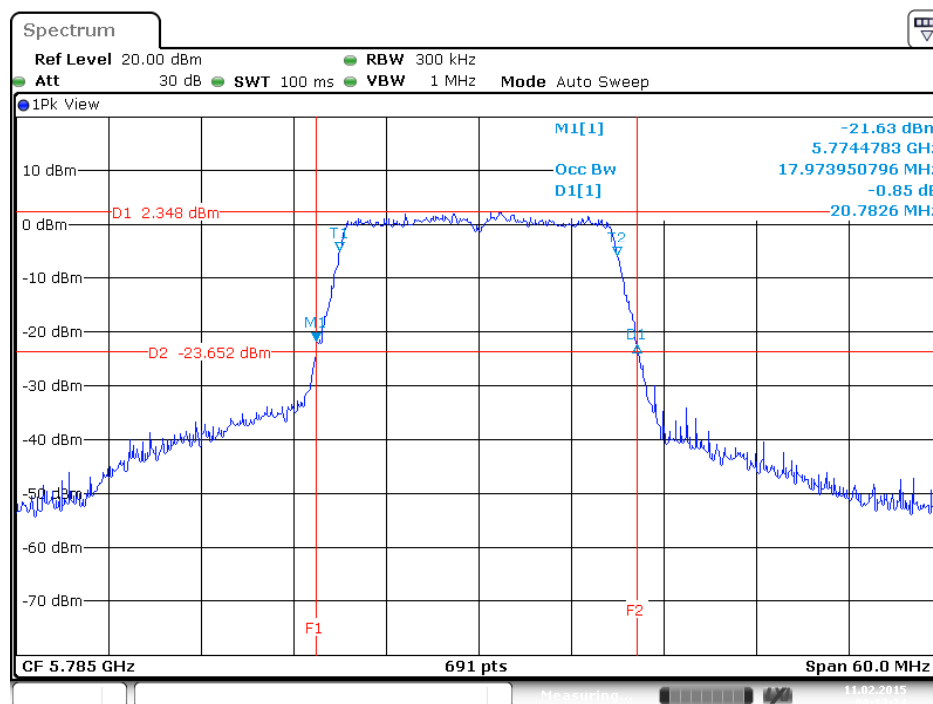
26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 149 / Ant. 2



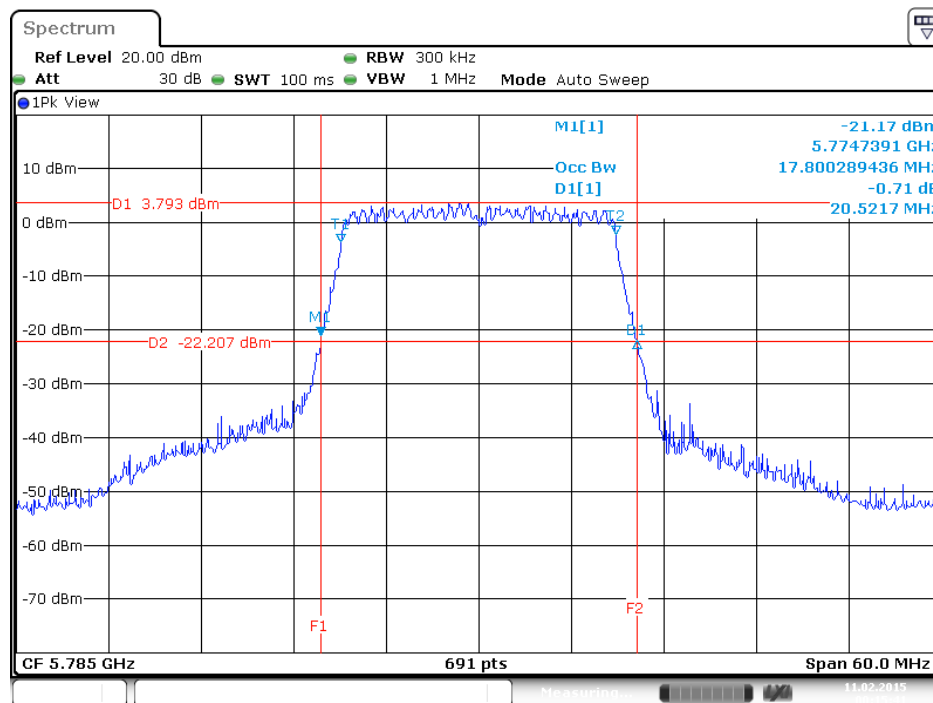
26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 149 / Ant. 3



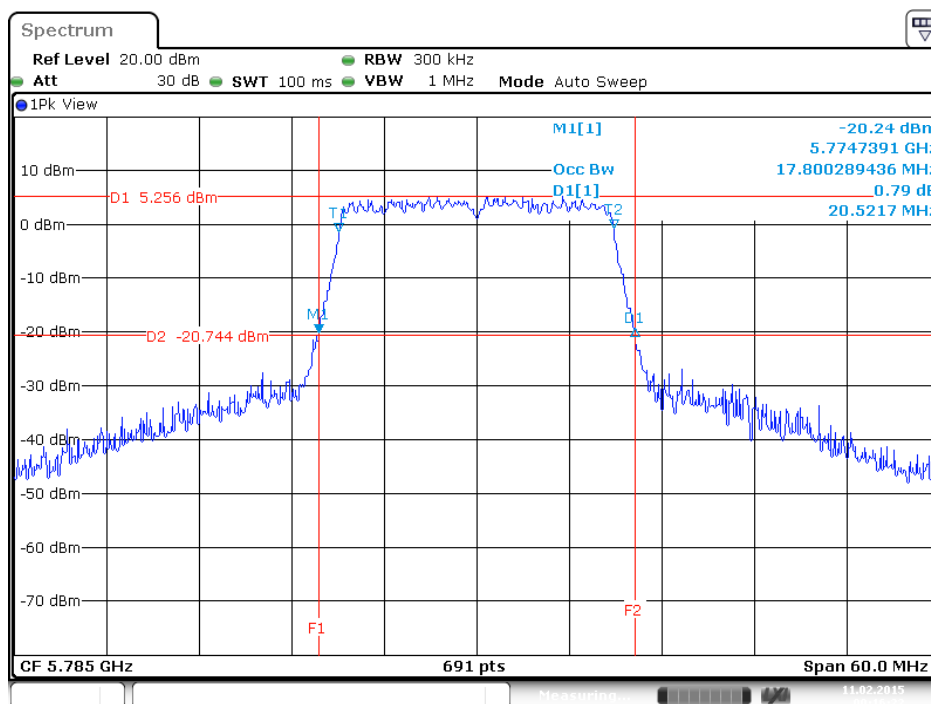
26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 157 / Ant. 1



26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 157 / Ant. 2

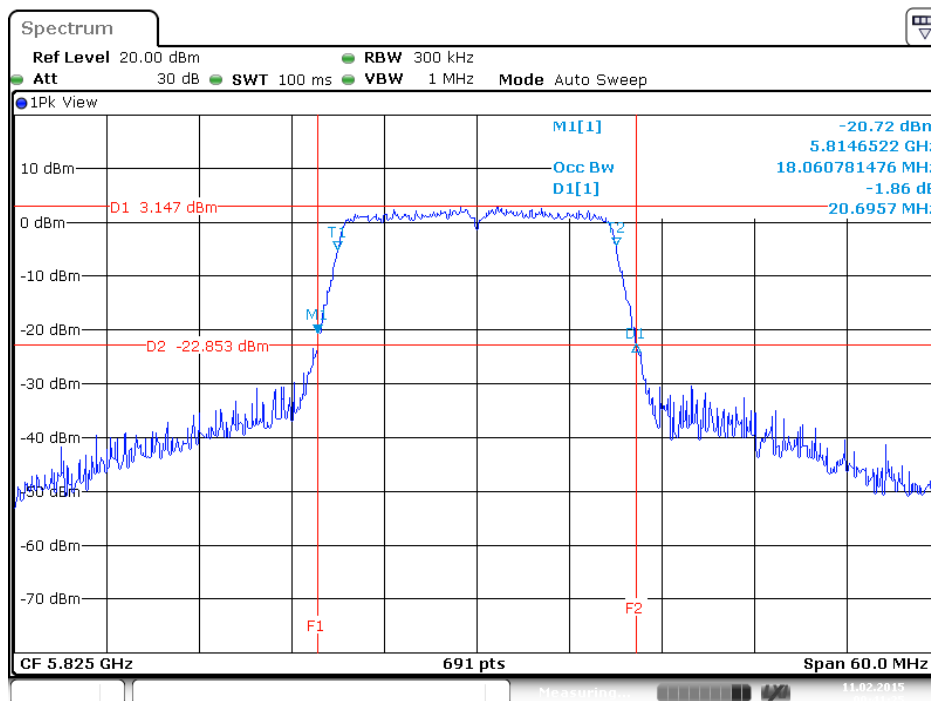


26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 157 / Ant. 3



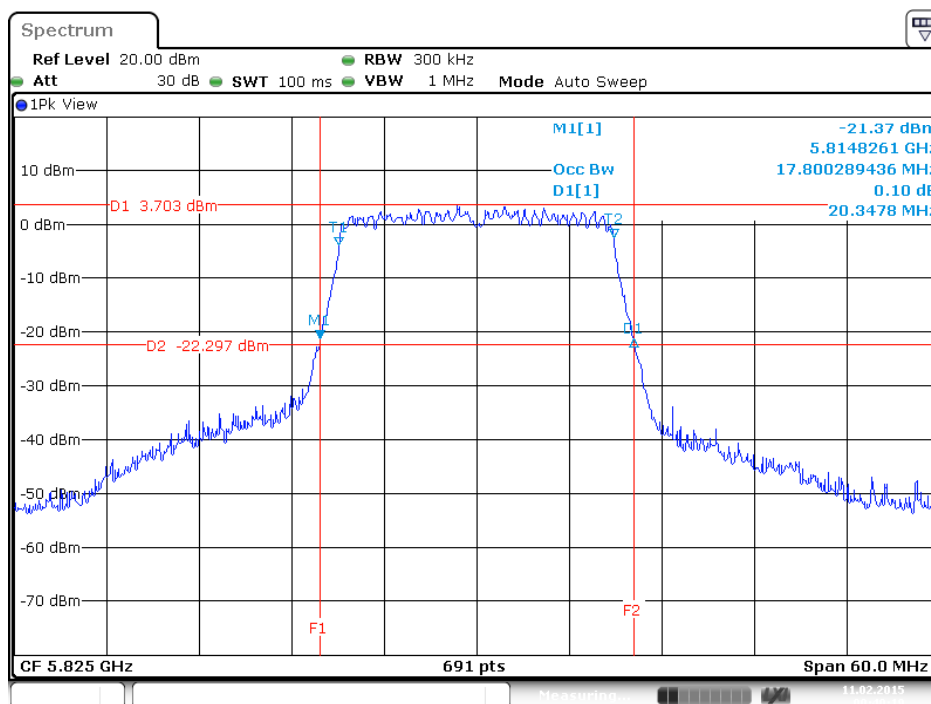
Date: 11.FEB.2015 00:16:22

26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 165 / Ant. 1



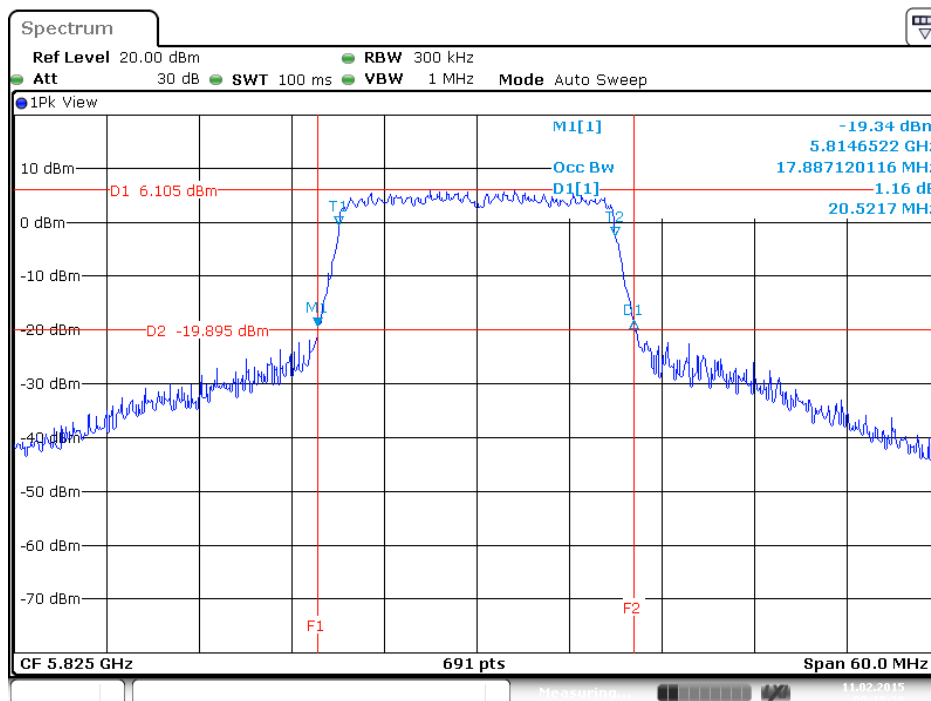
Date: 11.FEB.2015 00:41:25

26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 165 / Ant. 2



Date: 11.FEB.2015 00:40:20

26dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 165 / Ant. 3



Date: 11.FEB.2015 00:18:21

Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Configuration	802.11ac 40MHz
Duty Cycle	<Nss1MCS0, Ant. 1>: 97.84% <Nss1MCS0, 1S3T, CDD>: 98.00% <Nss1MCS0, 1S3T, TXBF>: 98.00%		

Configuration IEEE 802.11ac 40MHz

<Nss1MCS0, Ant. 1>

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Data Rate / MCS
38	5190 MHz	41.16	36.76	Nss1MCS0
46	5230 MHz	66.38	37.34	Nss1MCS0
151	5755 MHz	40.87	36.76	Nss1MCS0
159	5795 MHz	60.00	37.19	Nss1MCS0

<Nss1MCS0, 1S3T, CDD>

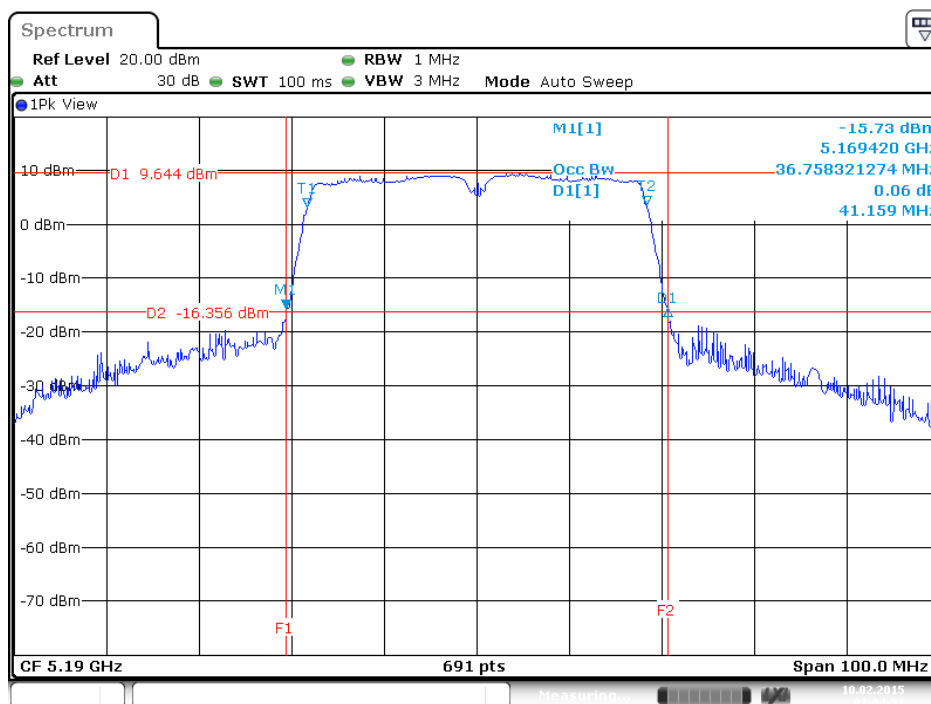
Channel	Frequency	26dB Bandwidth (MHz)			99% Occupied Bandwidth (MHz)			Data Rate / MCS
		Ant. 1	Ant. 2	Ant. 3	Ant. 1	Ant. 2	Ant. 3	
38	5190 MHz	40.73	40.58	40.44	36.76	36.76	36.61	Nss1MCS0
46	5230 MHz	58.84	55.22	64.64	37.05	36.76	37.05	Nss1MCS0
151	5755 MHz	40.87	40.58	51.88	36.90	36.76	36.90	Nss1MCS0
159	5795 MHz	74.64	60.58	82.90	37.34	36.90	41.24	Nss1MCS0

<Nss1MCS0, 1S3T, TXBF>

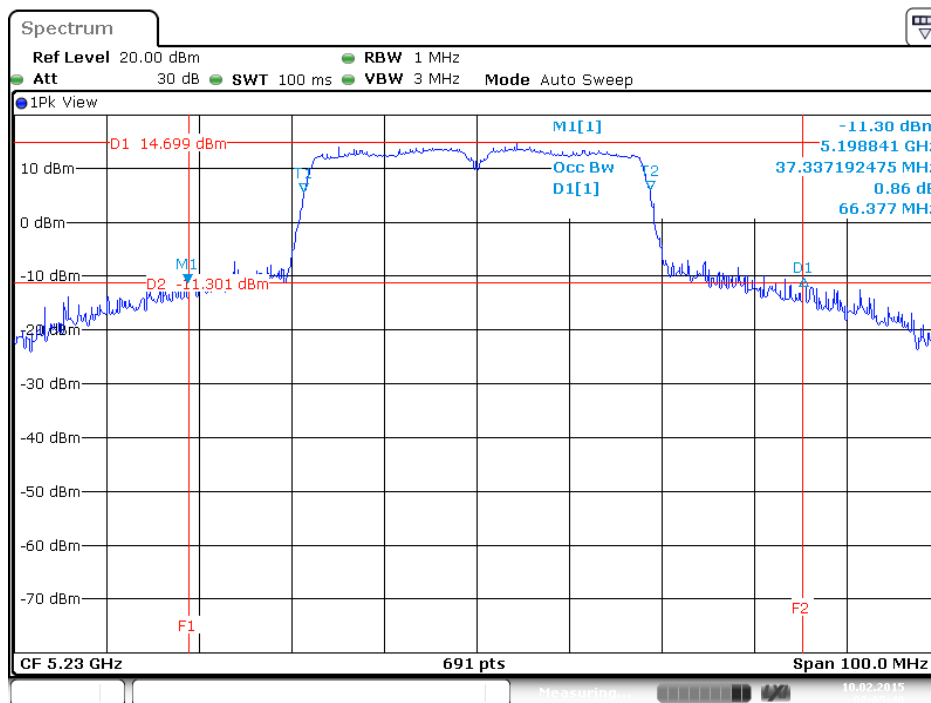
Channel	Frequency	26dB Bandwidth (MHz)			99% Occupied Bandwidth (MHz)			Data Rate / MCS
		Ant. 1	Ant. 2	Ant. 3	Ant. 1	Ant. 2	Ant. 3	
38	5190 MHz	40.73	40.58	40.29	36.61	36.61	36.61	Nss1MCS0
46	5230 MHz	40.87	42.61	45.94	36.76	36.76	36.76	Nss1MCS0
151	5755 MHz	40.73	40.44	40.29	36.76	36.61	36.61	Nss1MCS0
159	5795 MHz	41.01	36.61	44.78	36.76	40.58	36.76	Nss1MCS0

<Nss1MCS0, Ant. 1>:

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 38 / Ant. 1



26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 46 / Ant. 1



Spectrum

Ref Level 20.00 dBm

Att 30 dB RBW 1 MHz

SWT 100 ms VBW 3 MHz Mode Auto Sweep

1Pk View

CF 5.755 GHz 691 pts Span 100.0 MHz

Measurements:

- M1[1] -12.81 dBm
- 5.734565 GHz
- Occ Bw 36.758321274 MHz
- D1[1] -1.79 dBm
- 40.870 MHz
- D1 9.941 dBm
- D2 -16.059 dBm
- F1
- F2

Date: 10.FEB.2015 02:06:33

Spectrum

Ref Level 20.00 dBm RBW 1 MHz

Att 30 dB SWT 100 ms VBW 3 MHz Mode Auto Sweep

1Pk View

12.902 dBm

-13.098 dBm

11.80 dBm

5.766449 GHz

37.192474674 MHz

-1.08 dB

60.000 MHz

CF 5.795 GHz

691 pts

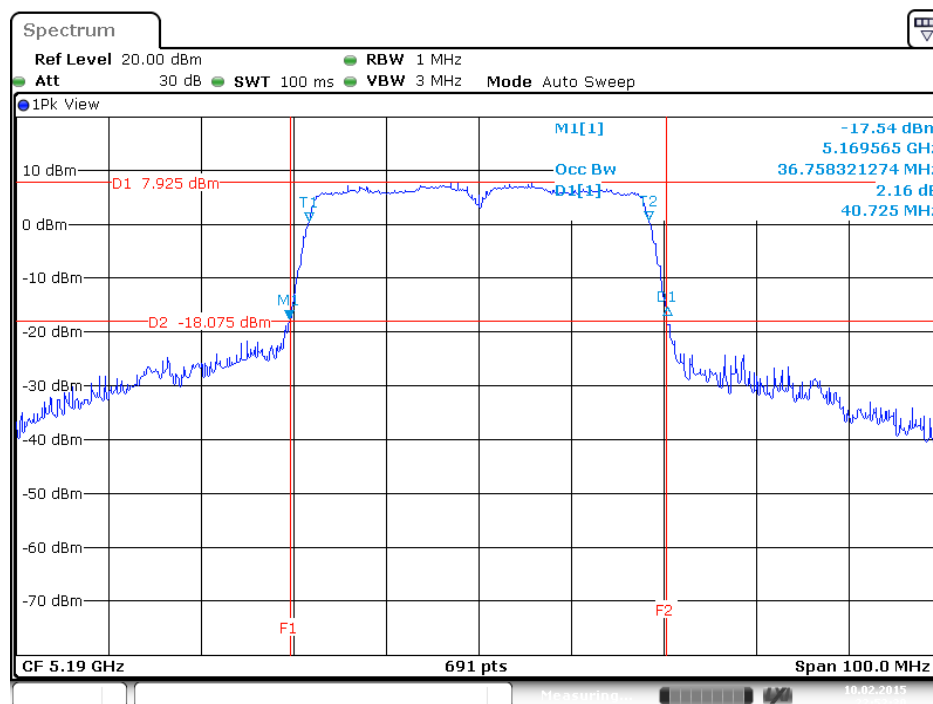
Span 100.0 MHz

10.02.2015

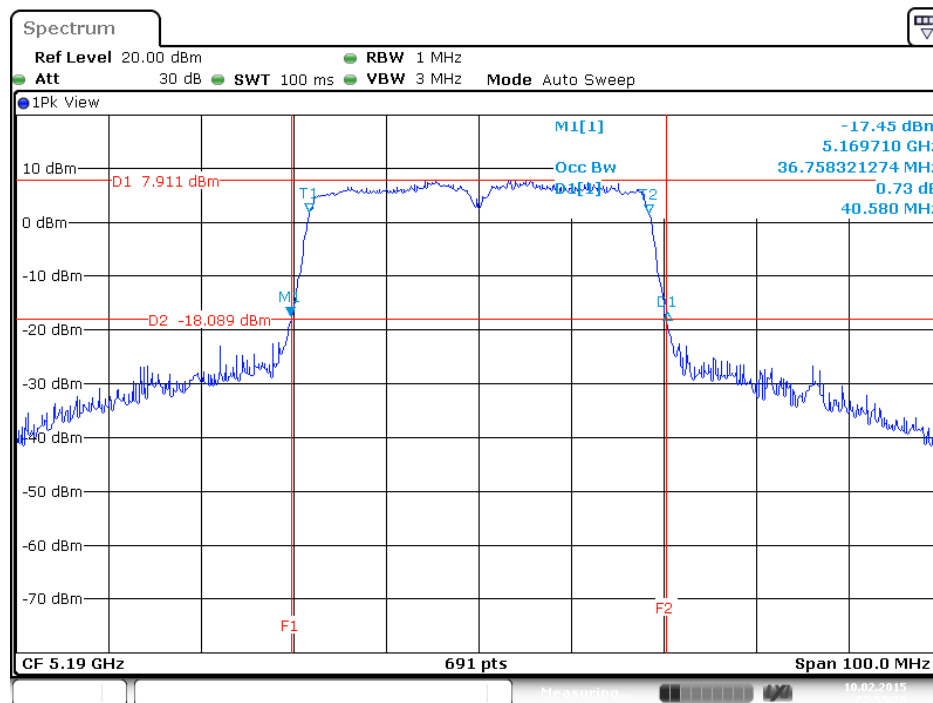
Date: 10.FEB.2015 02:09:15

<Nss1MCS0, 1S3T, CDD>:

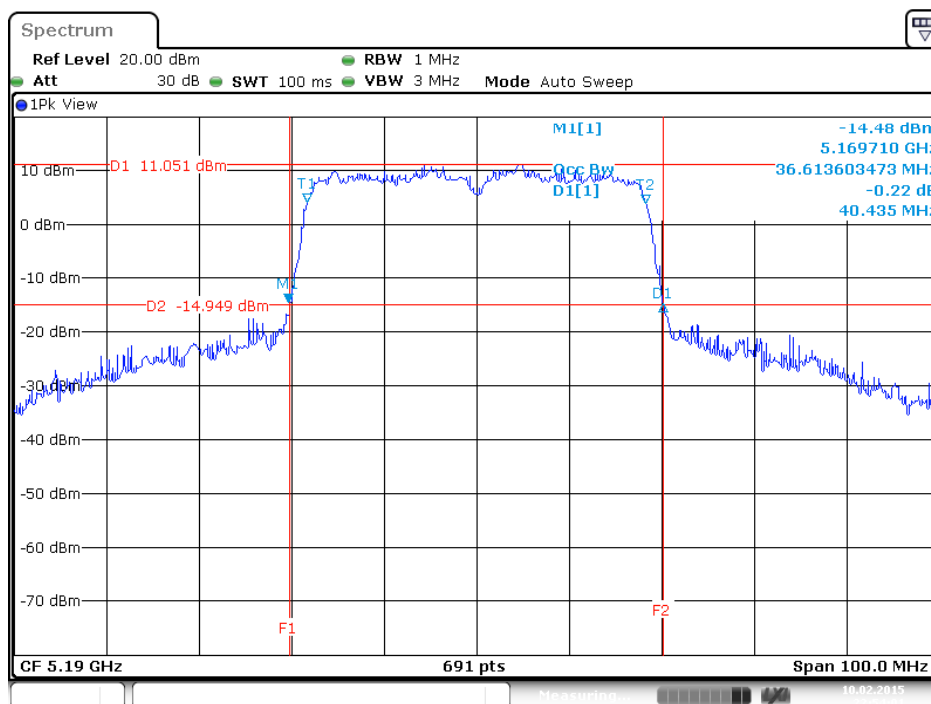
26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 38 / Ant. 1



26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 38 / Ant. 2

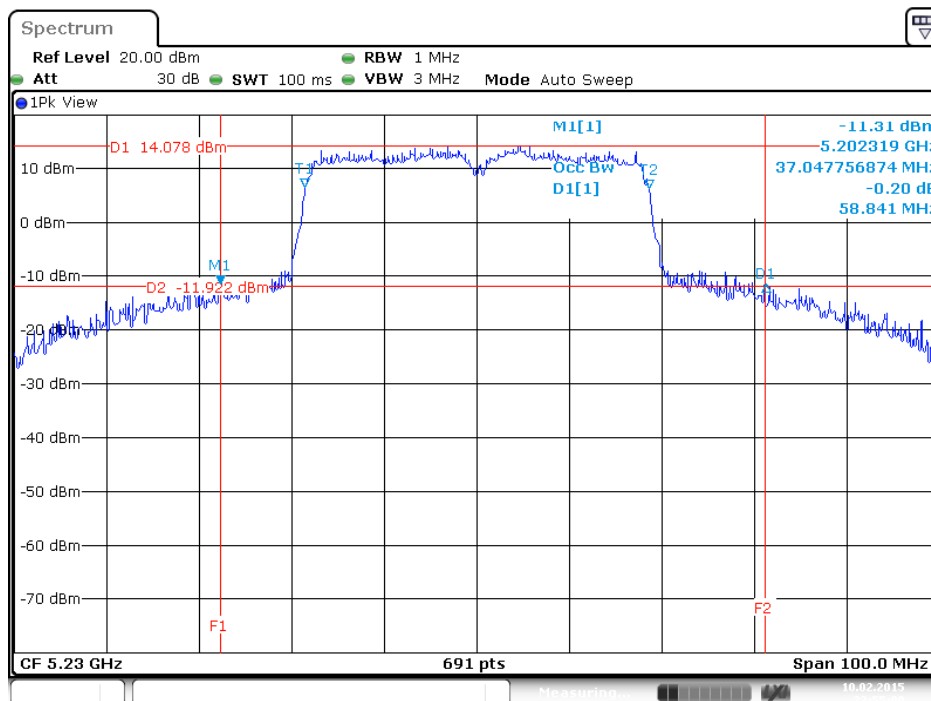


26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 38 / Ant. 3



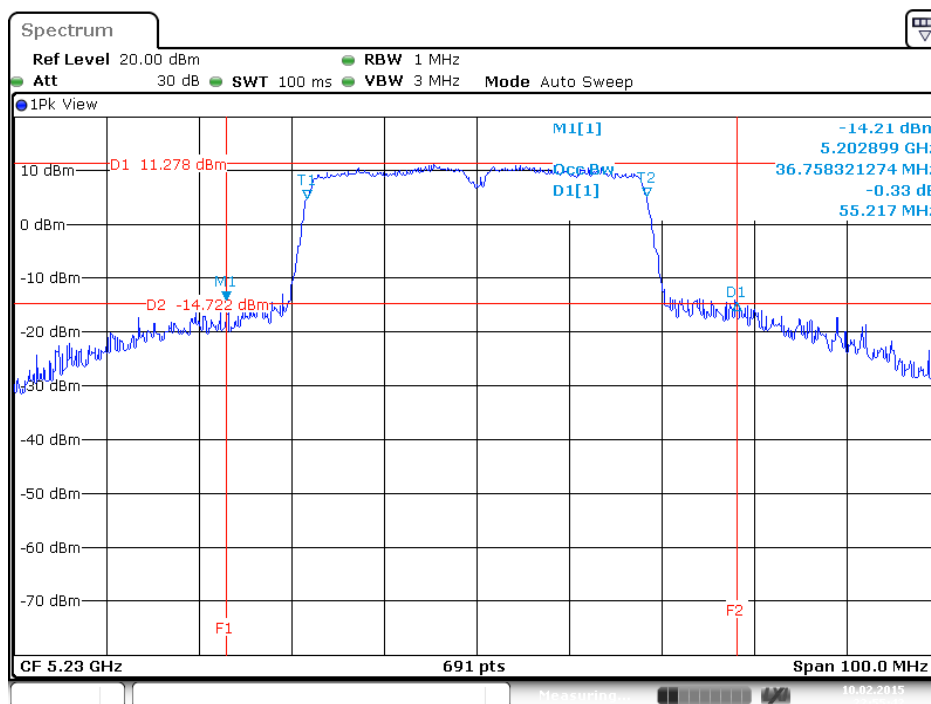
Date: 10 FEB 2015 22:54:02

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 46 / Ant. 1



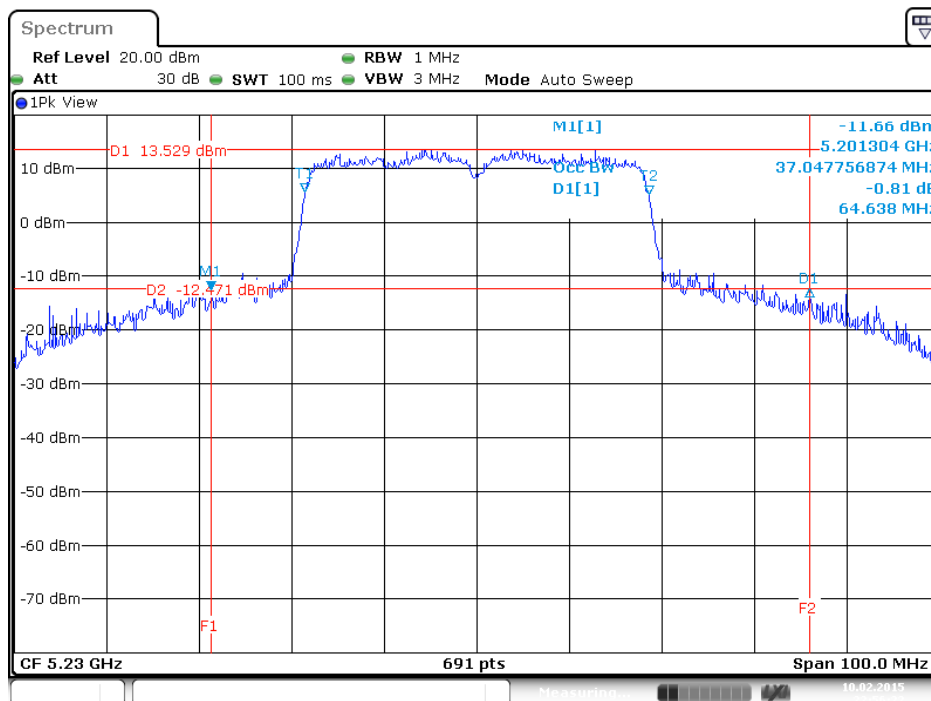
Date: 10 FEB 2015 22:55:01

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 46 / Ant. 2



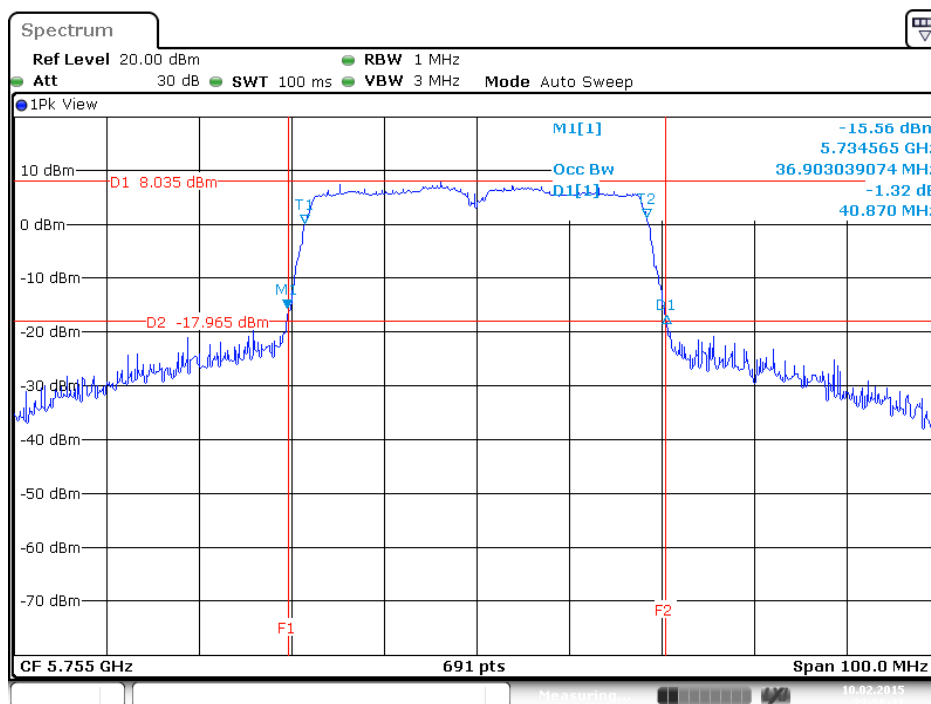
Date: 10 FEB 2015 22:55:41

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 46 / Ant. 3



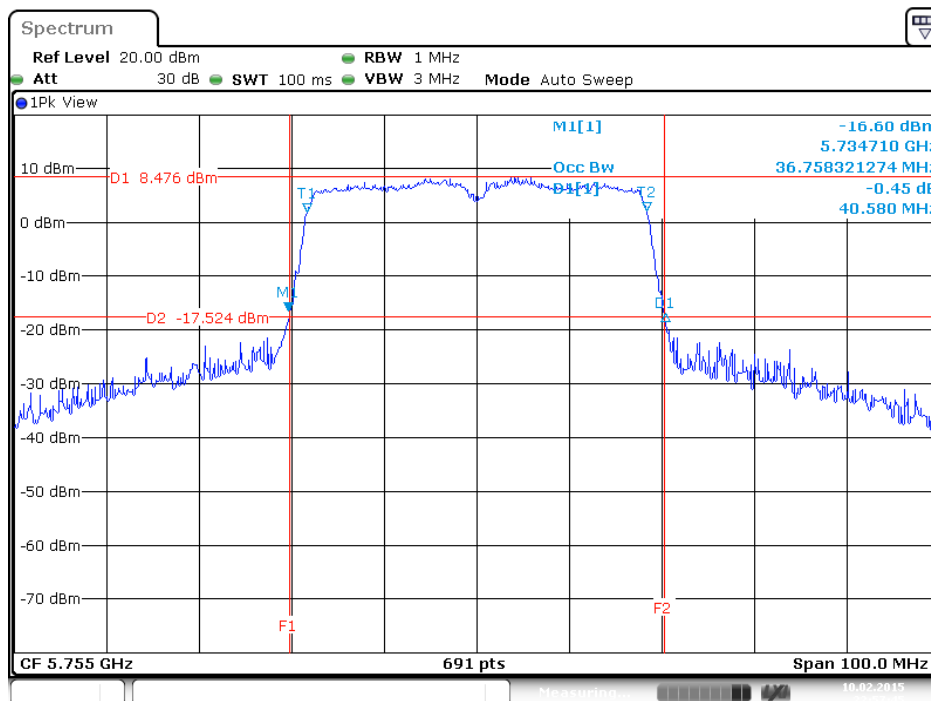
Date: 10 FEB 2015 22:56:22

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 151 / Ant. 1



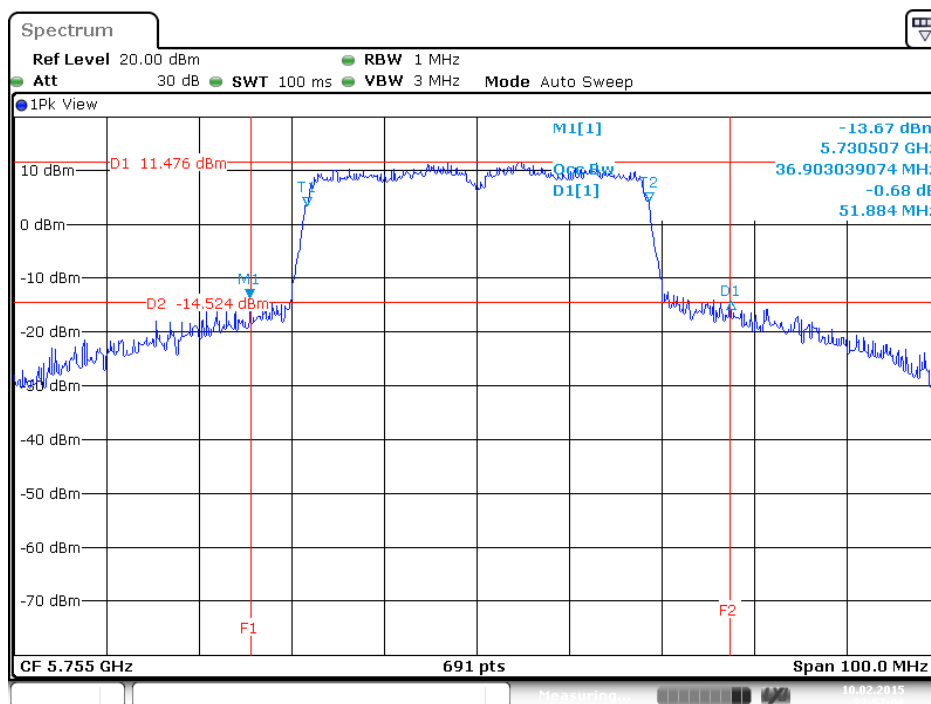
Date:10.FEB.2015 22:58:22

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 151 / Ant. 2

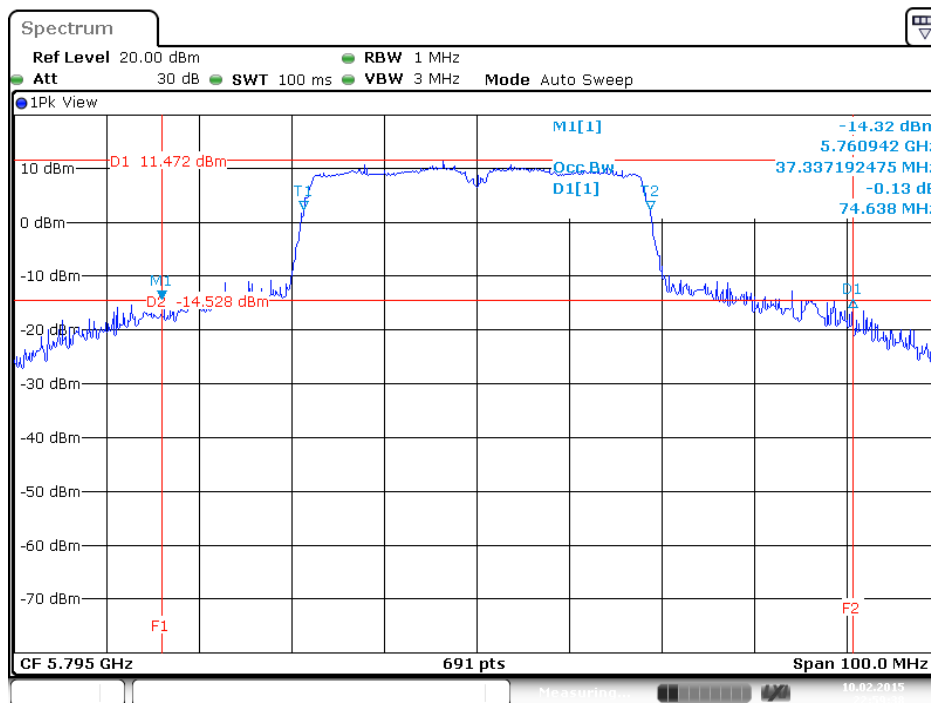


Date:10.FEB.2015 22:57:46

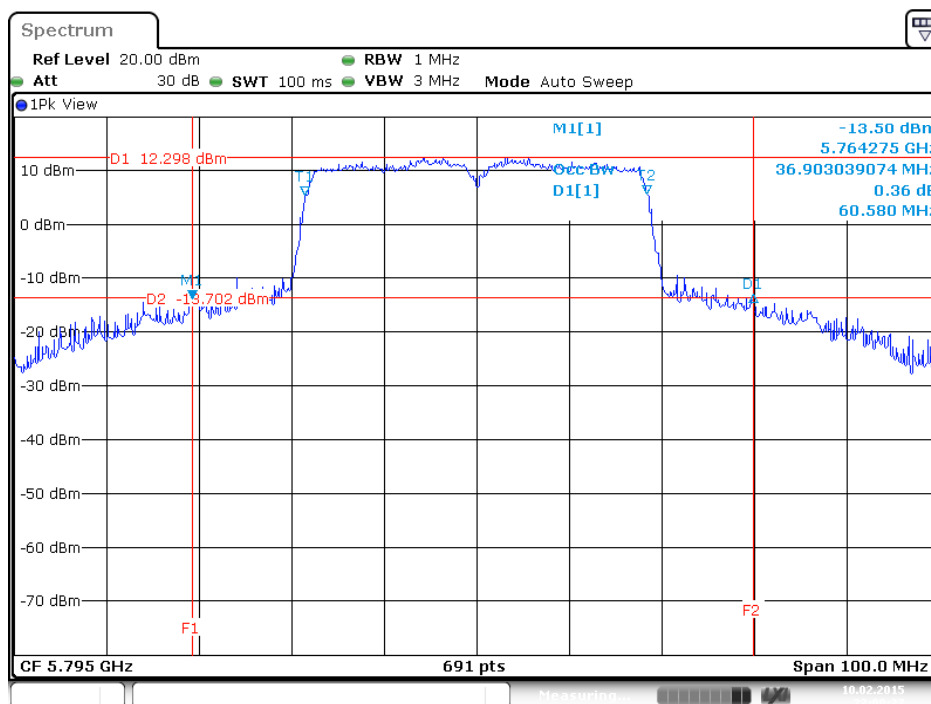
26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 151 / Ant. 3



26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 159 / Ant. 1

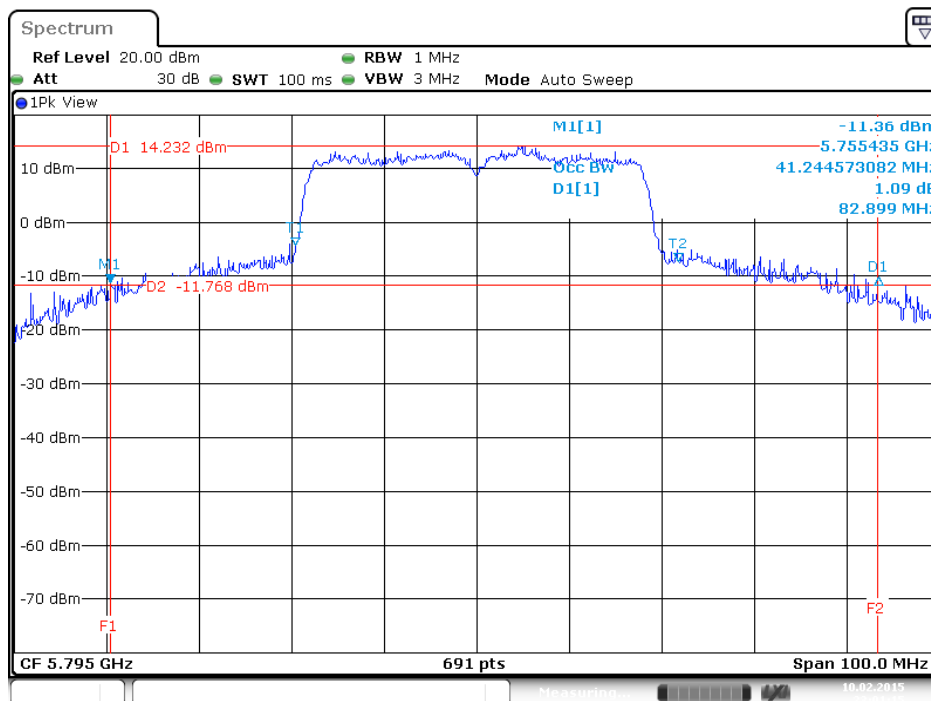


26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 159 / Ant. 2



Date: 10 FEB 2015 23:00:27

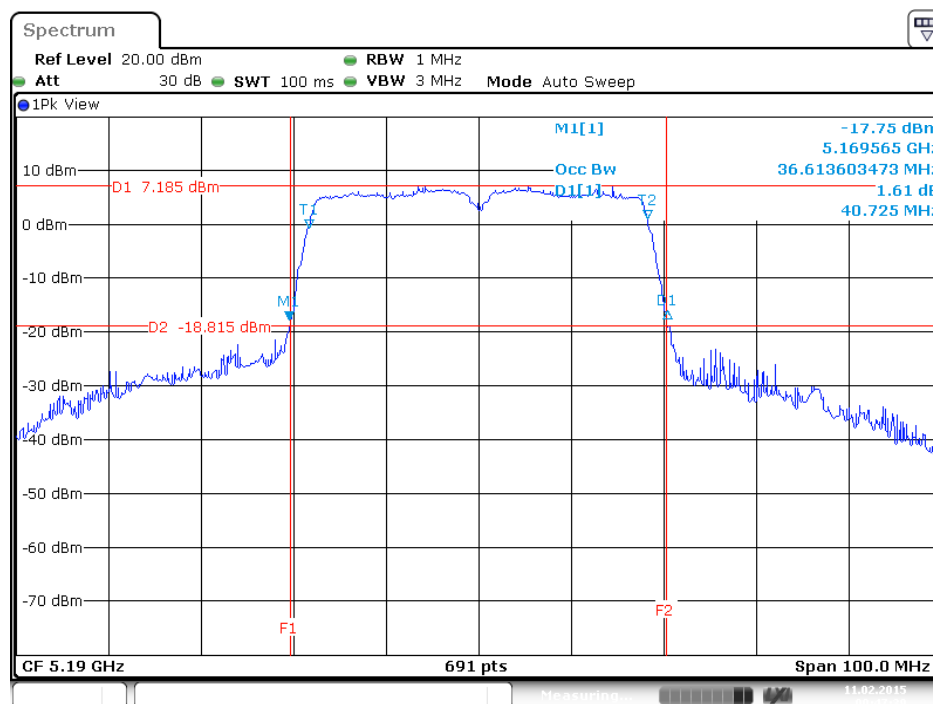
26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 159 / Ant. 3



Date: 10 FEB 2015 23:01:15

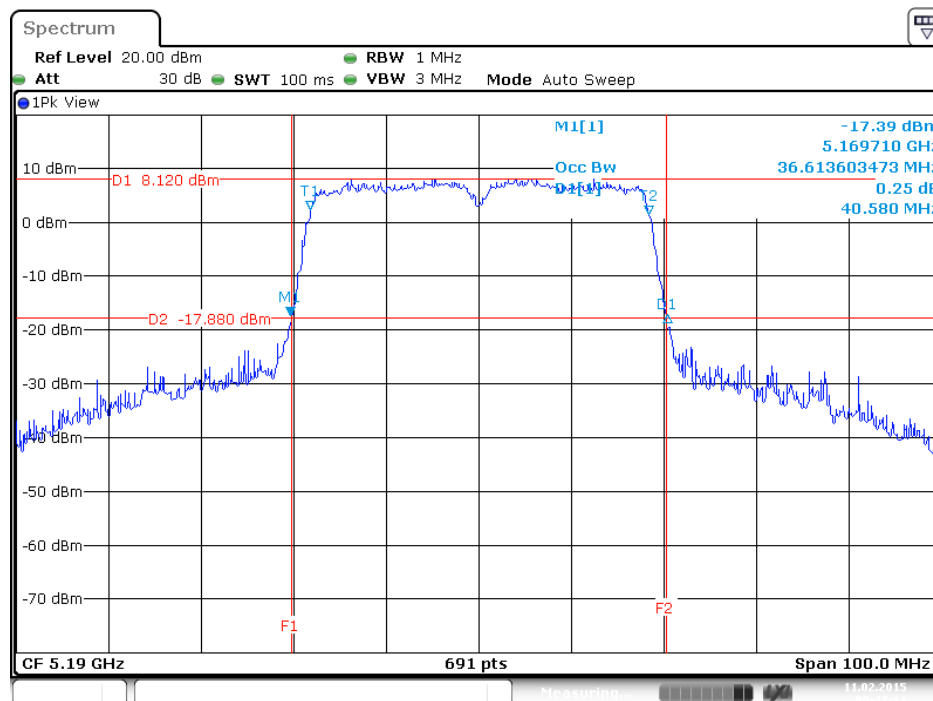
<Nss1MCS0, 1S3T, TXBF>:

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 38 / Ant. 1



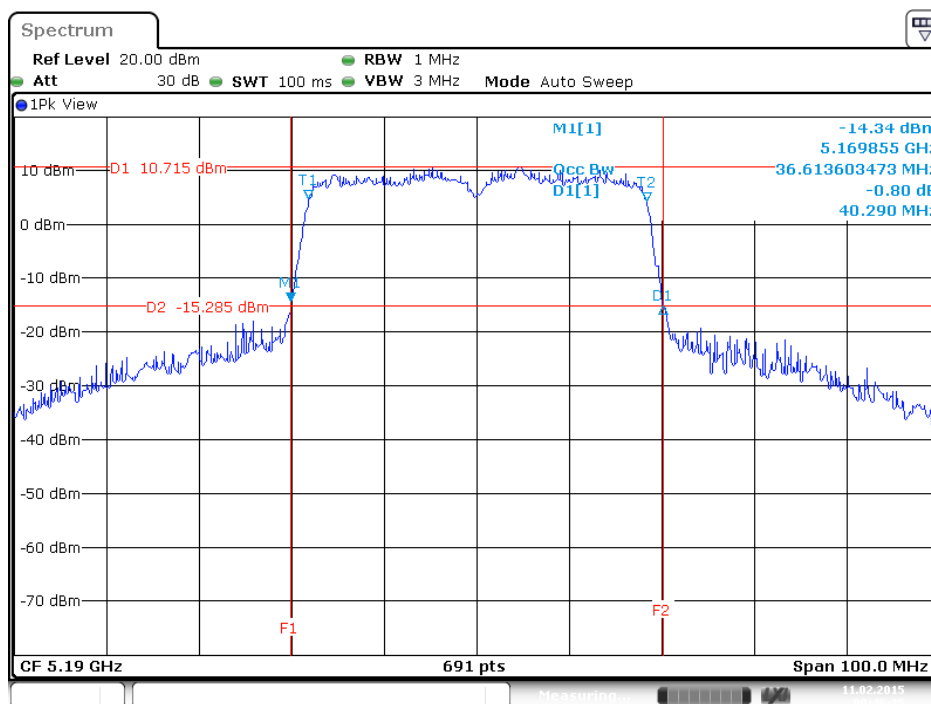
Date: 11.FEB.2015 00:47:39

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 38 / Ant. 2



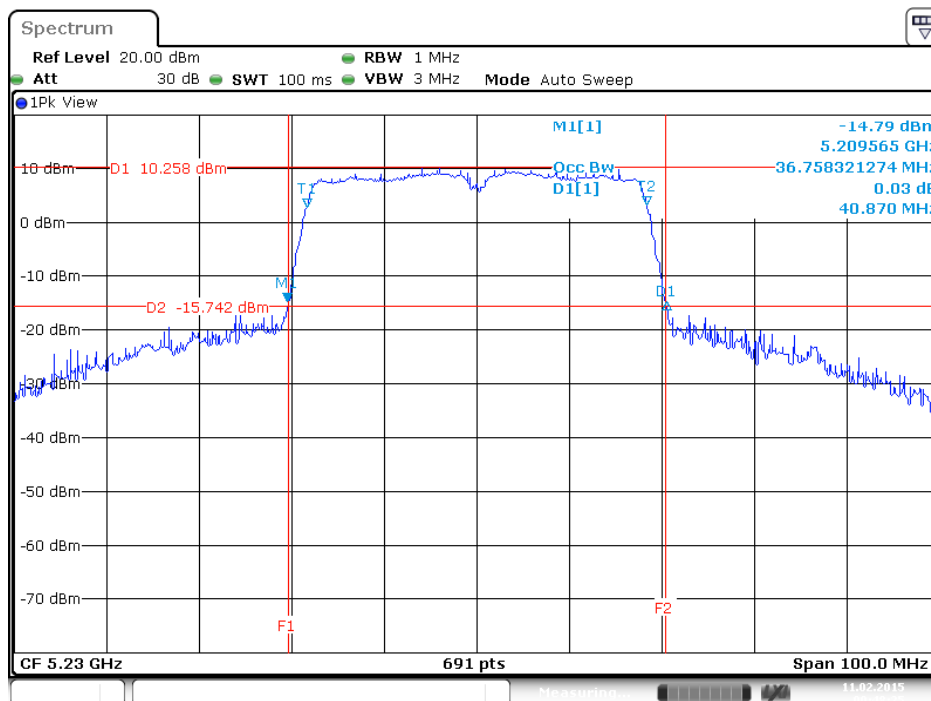
Date: 11.FEB.2015 00:47:11

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 38 / Ant. 3



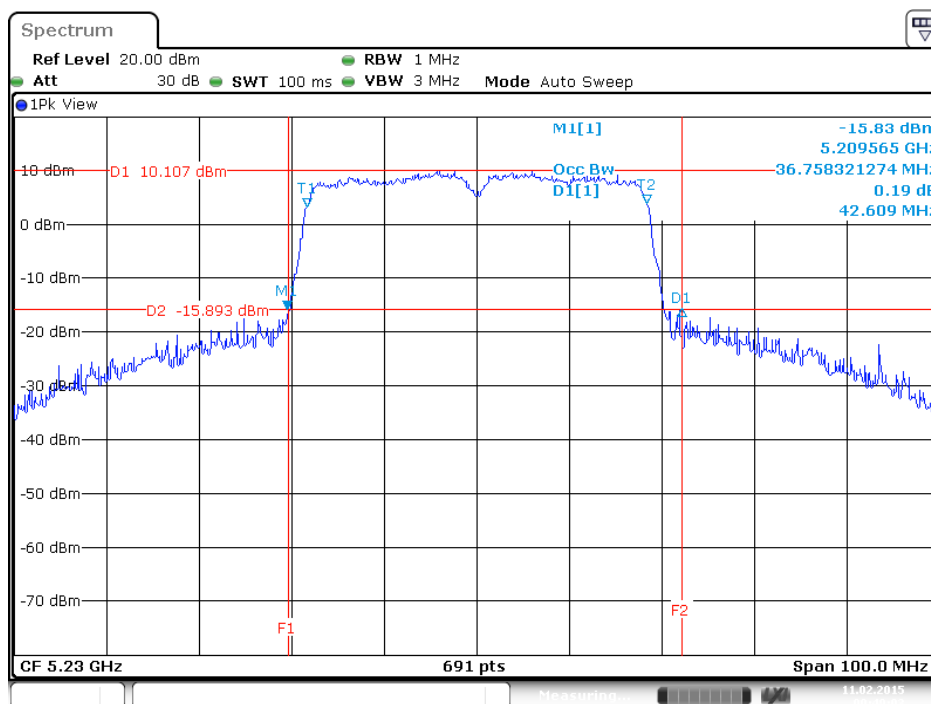
Date: 11.FEB.2015 00:46:26

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 46 / Ant. 1



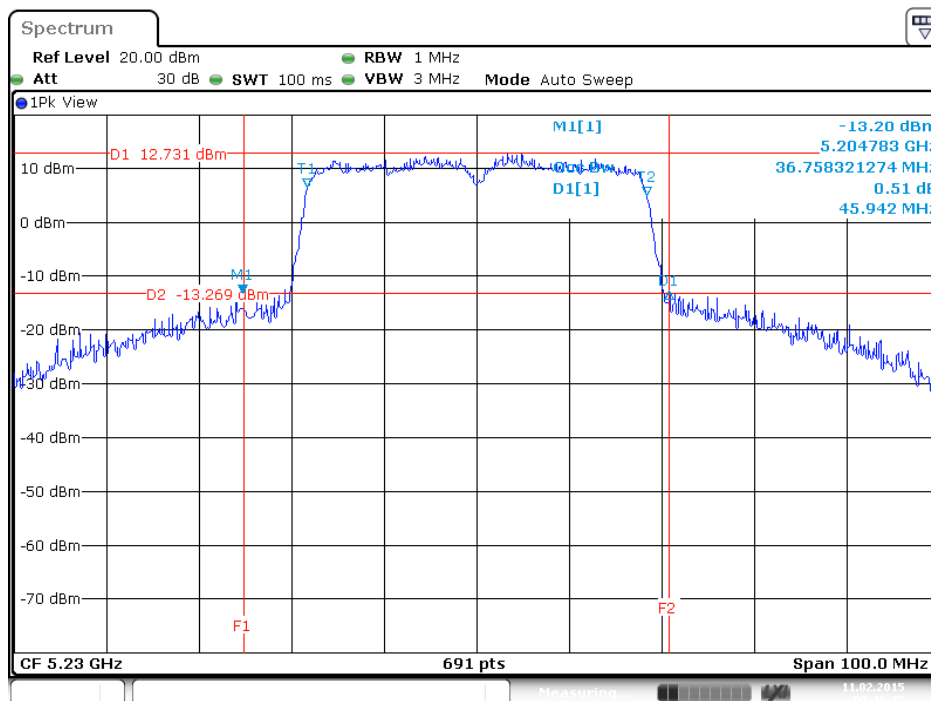
Date: 11.FEB.2015 00:48:26

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 46 / Ant. 2



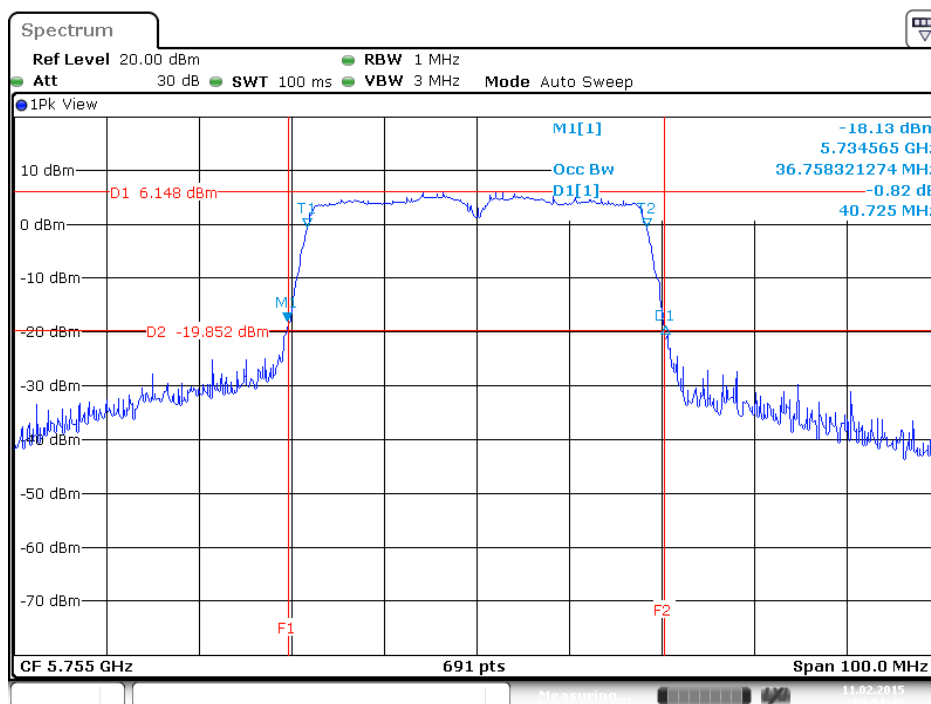
Date: 11.FEB.2015 00:49:03

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 46 / Ant. 3



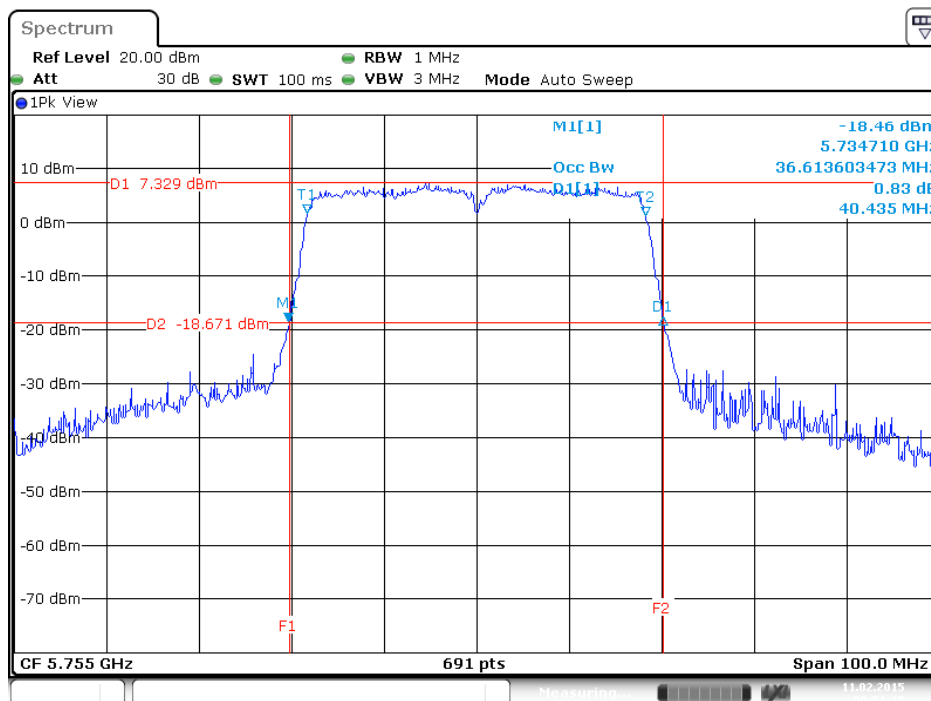
Date: 11.FEB.2015 00:49:47

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 151 / Ant. 1



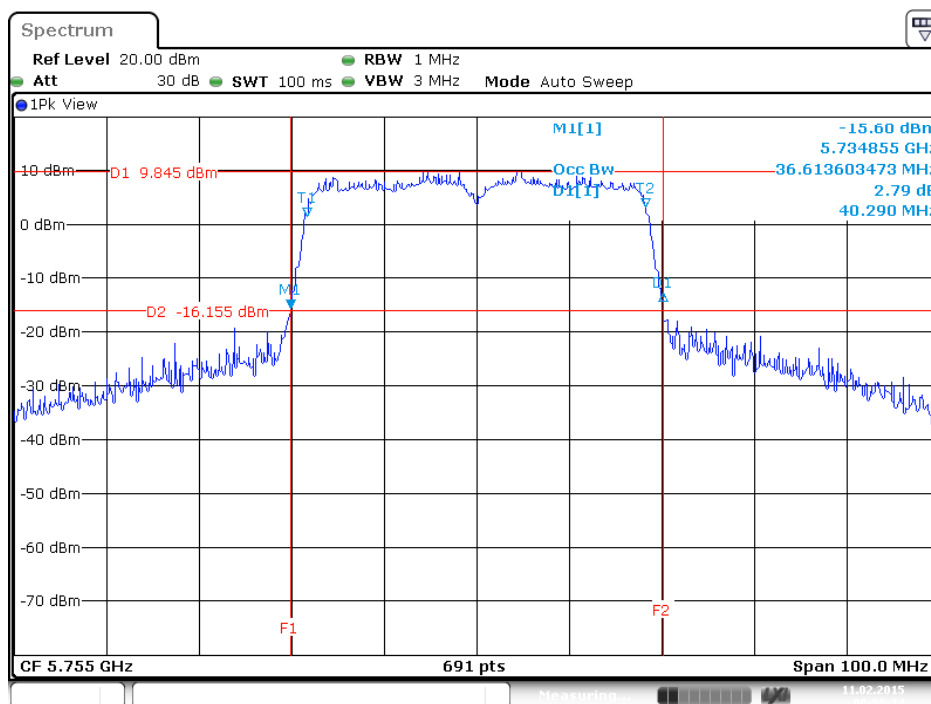
Date: 11.FEB.2015 00:51:45

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 151 / Ant. 2



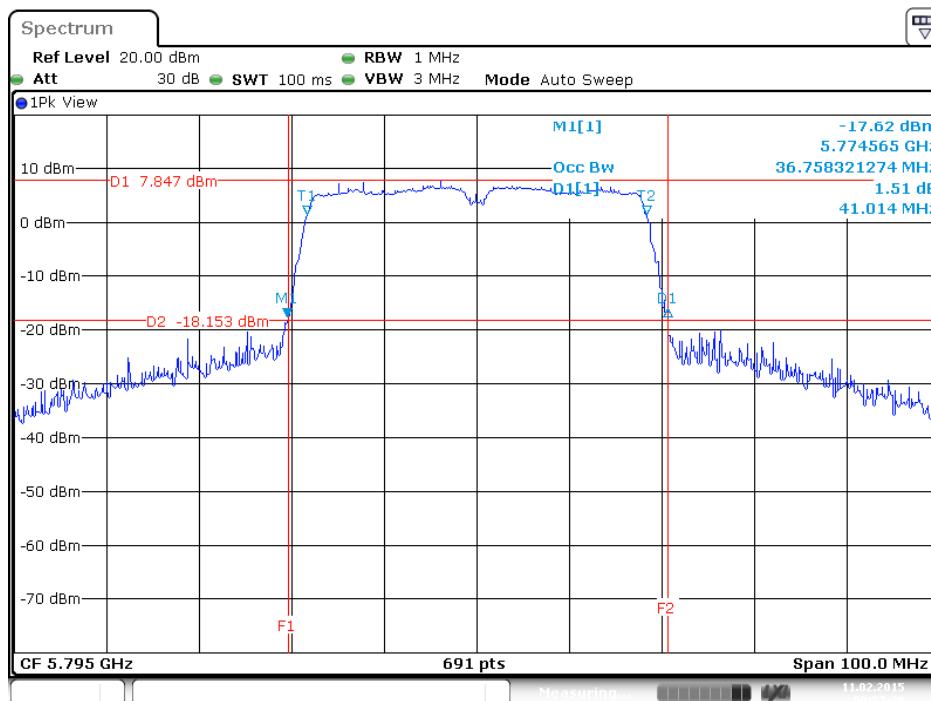
Date: 11.FEB.2015 00:51:15

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 151 / Ant. 3



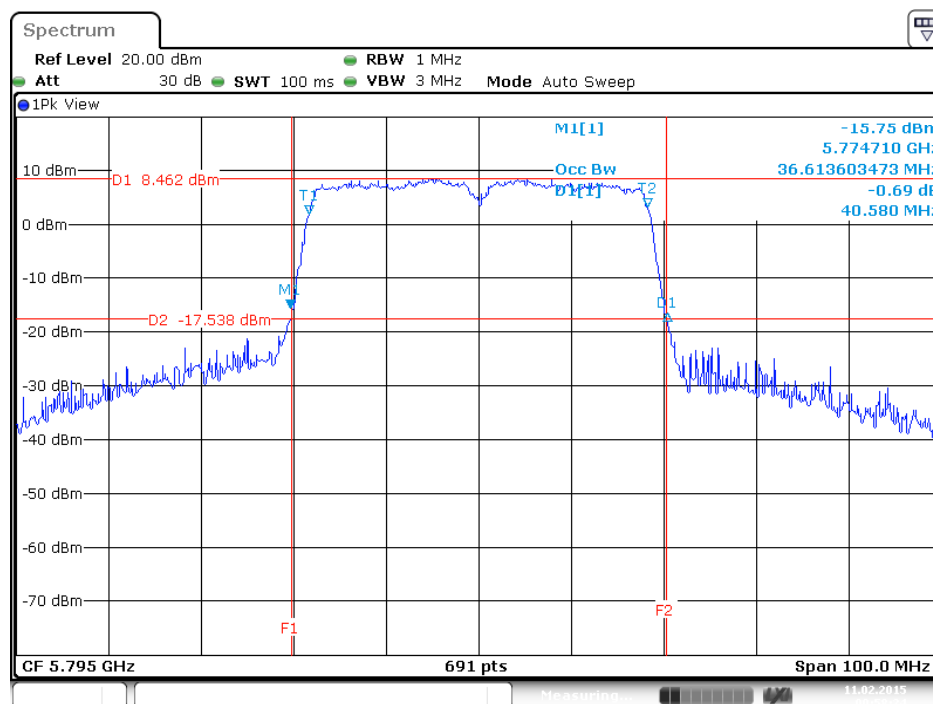
Date: 11.FEB.2015 00:50:34

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 159 / Ant. 1



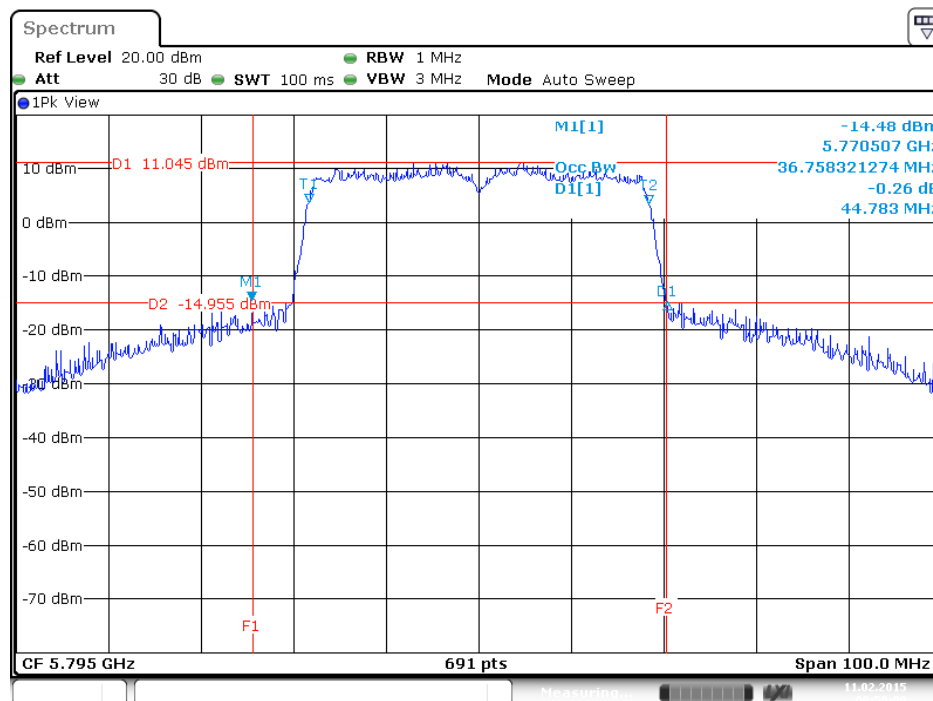
Date: 11.FEB.2015 00:57:39

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 159 / Ant. 2



Date: 11.FEB.2015 00:58:25

26dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 159 / Ant. 3



Date: 11.FEB.2015 00:59:10

Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Configuration	802.11ac 80MHz
Duty Cycle	<Nss1MCS0, Ant. 1>: 95.45% <Nss1MCS0, 1S3T, CDD>: 95.10% <Nss1MCS0, 1S3T, TXBF>: 95.10%		

Configuration IEEE 802.11ac 80MHz

<Nss1MCS0, Ant. 1>

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Data Rate / MCS
42	5210 MHz	82.32	75.83	Nss1MCS0
155	5775 MHz	83.19	75.83	Nss1MCS0

<Nss1MCS0, 1S3T, CDD>

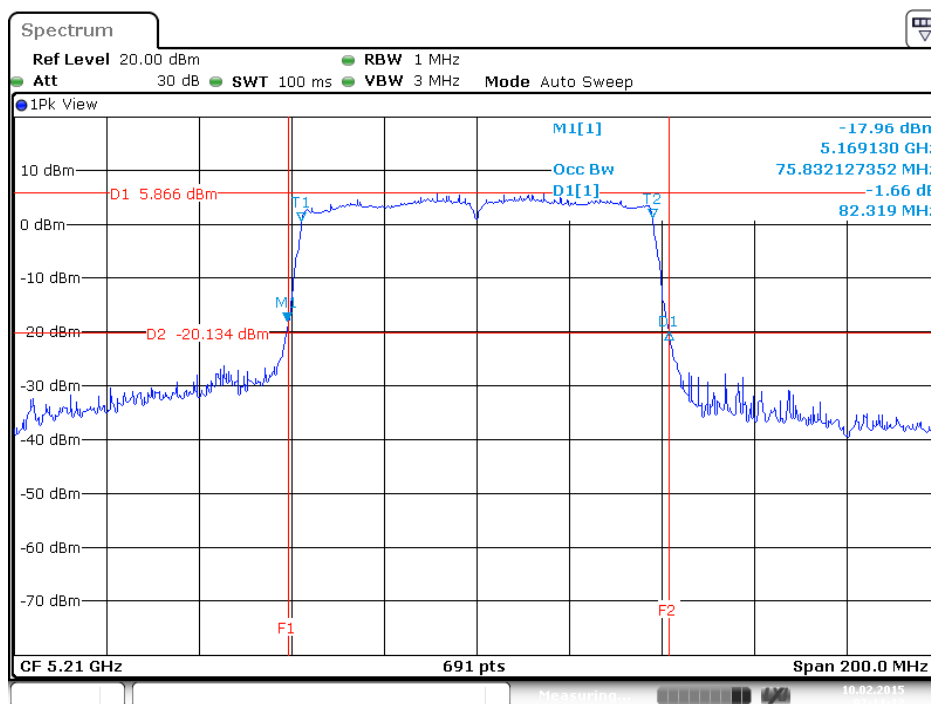
Channel	Frequency	26dB Bandwidth (MHz)			99% Occupied Bandwidth (MHz)			Data Rate / MCS
		Ant. 1	Ant. 2	Ant. 3	Ant. 1	Ant. 2	Ant. 3	
42	5210 MHz	82.90	82.61	82.61	75.83	75.83	75.83	Nss1MCS0
155	5775 MHz	82.90	82.03	81.74	76.12	75.83	75.83	Nss1MCS0

<Nss1MCS0, 1S3T, TXBF>

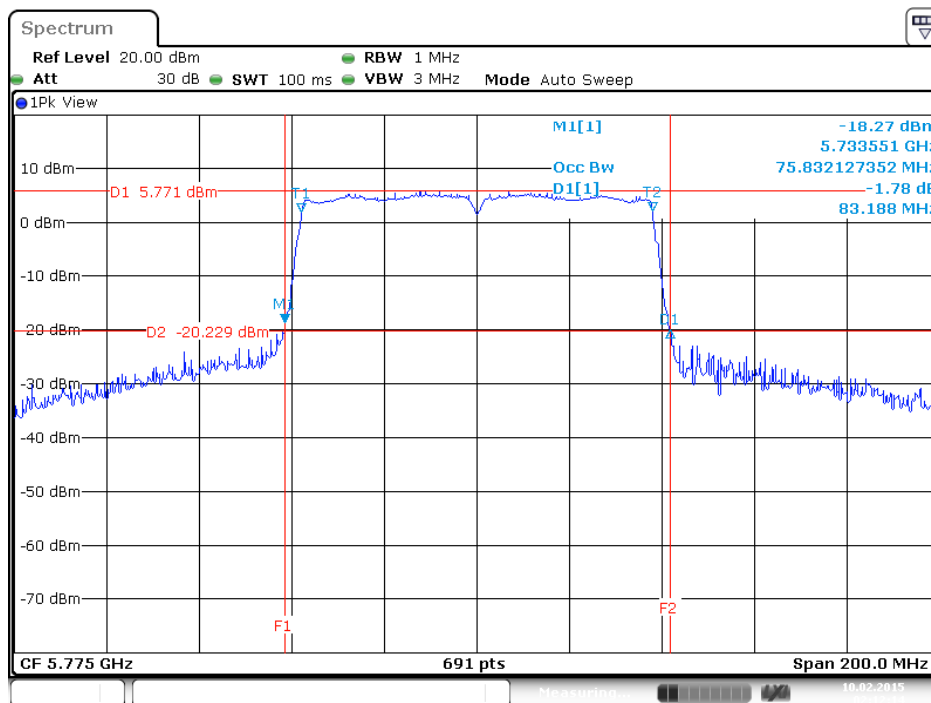
Channel	Frequency	26dB Bandwidth (MHz)			99% Occupied Bandwidth (MHz)			Data Rate / MCS
		Ant. 1	Ant. 2	Ant. 3	Ant. 1	Ant. 2	Ant. 3	
42	5210 MHz	83.19	81.74	81.45	75.83	75.54	75.83	Nss1MCS0
155	5775 MHz	82.90	82.32	81.74	75.83	75.83	75.83	Nss1MCS0

<Nss1MCS0, Ant. 1>:

26dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 42 / Ant. 1

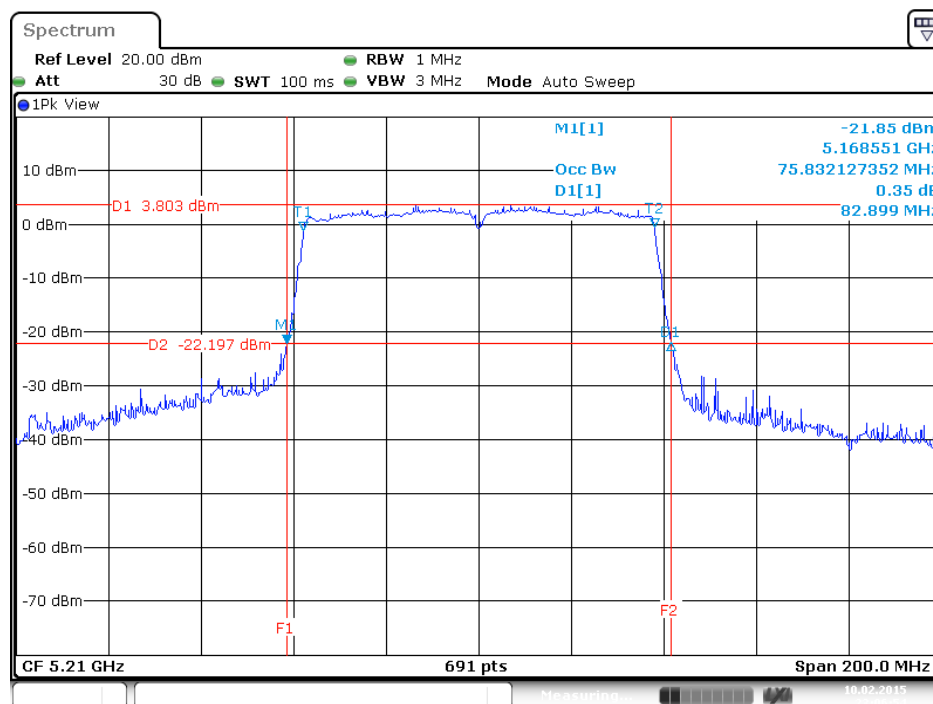


26dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 155 / Ant. 1



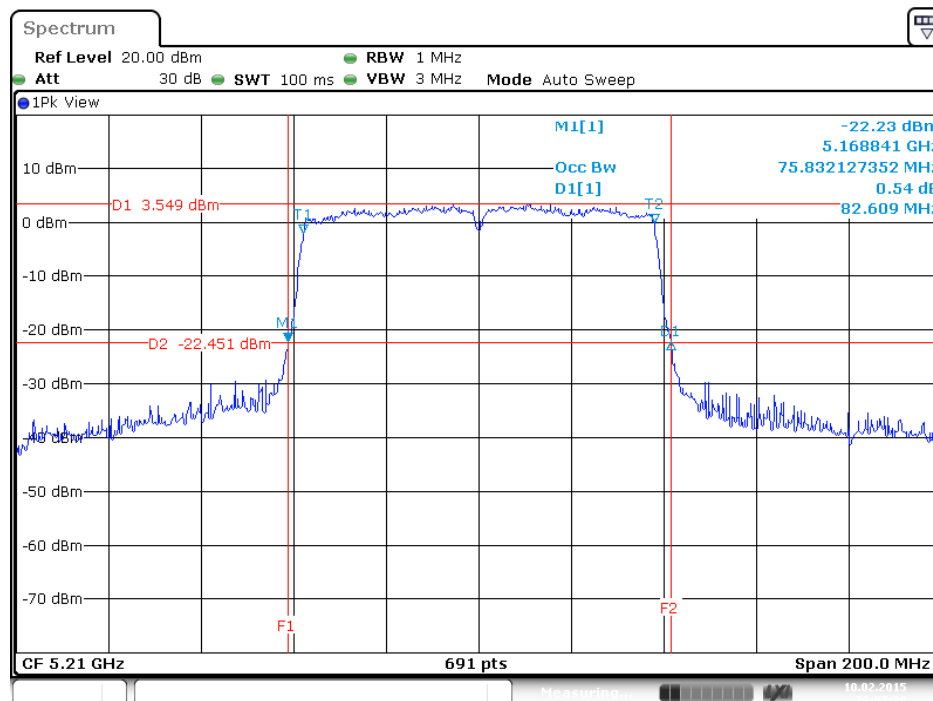
<Nss1MCS0, 1S3T, CDD>:

26dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 42 / Ant. 1



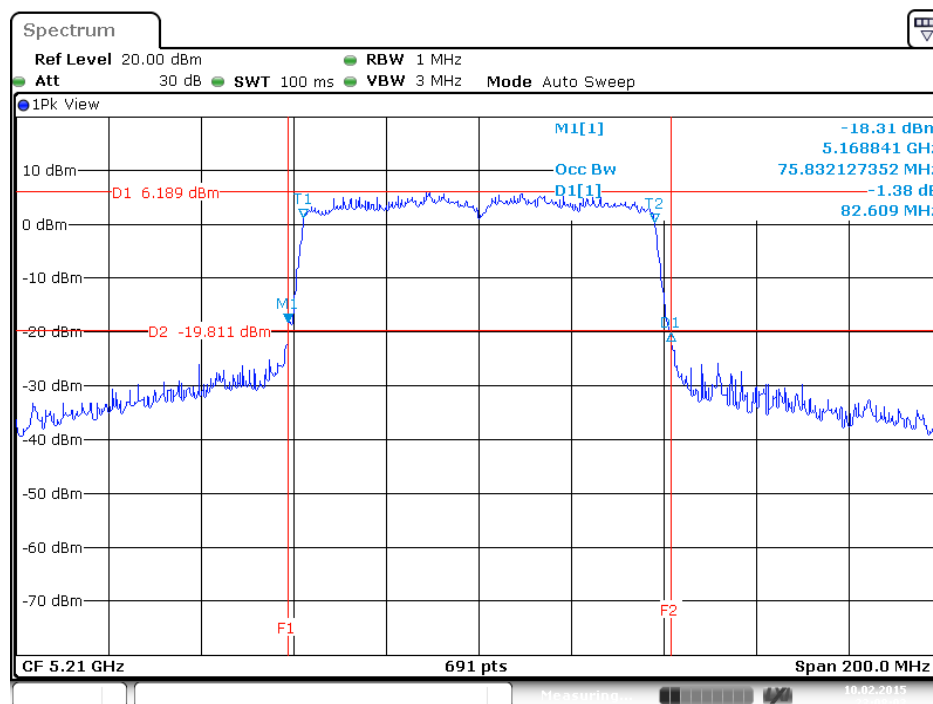
Date: 10 FEB 2015 23:06:54

26dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 42 / Ant. 2



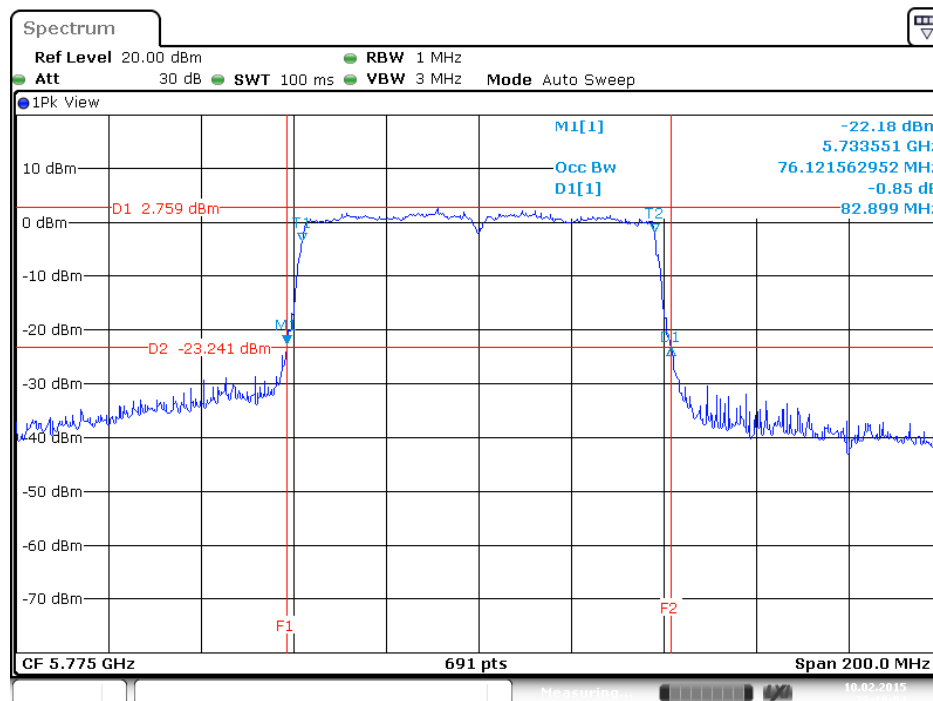
Date: 10 FEB 2015 23:07:38

26dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 42 / Ant. 3



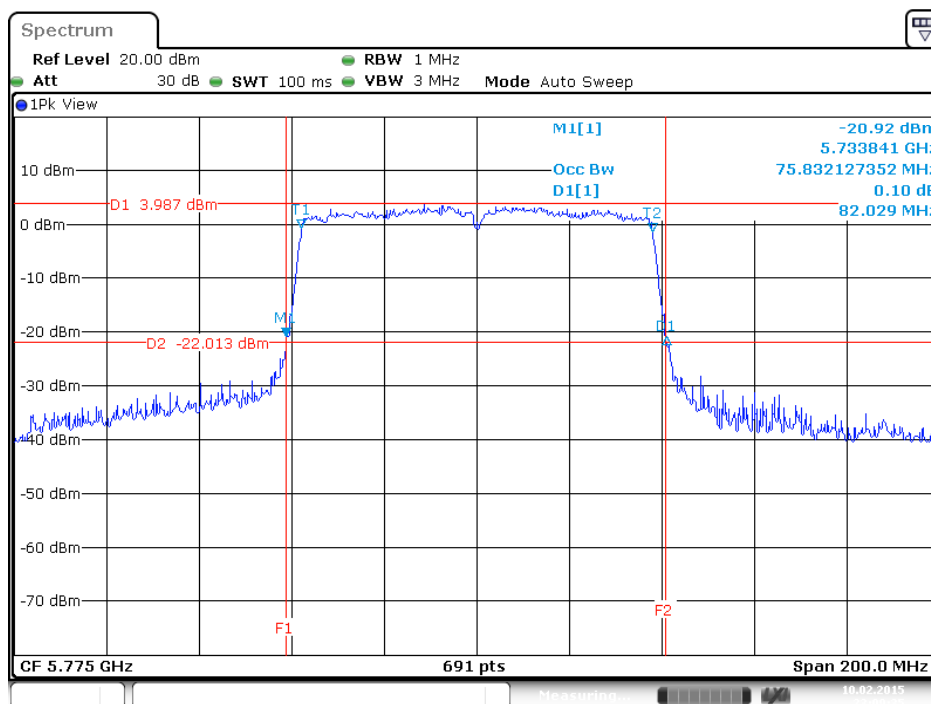
Date: 10.FEB.2015 23:08:03

26dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 155 / Ant. 1

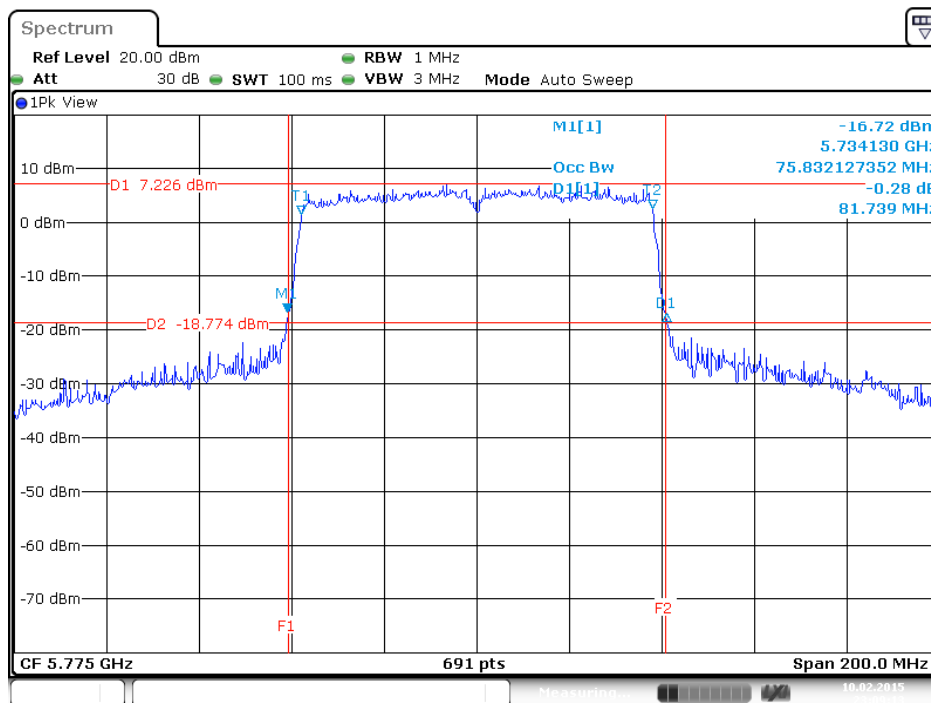


Date: 10.FEB.2015 23:10:04

26dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 155 / Ant. 2

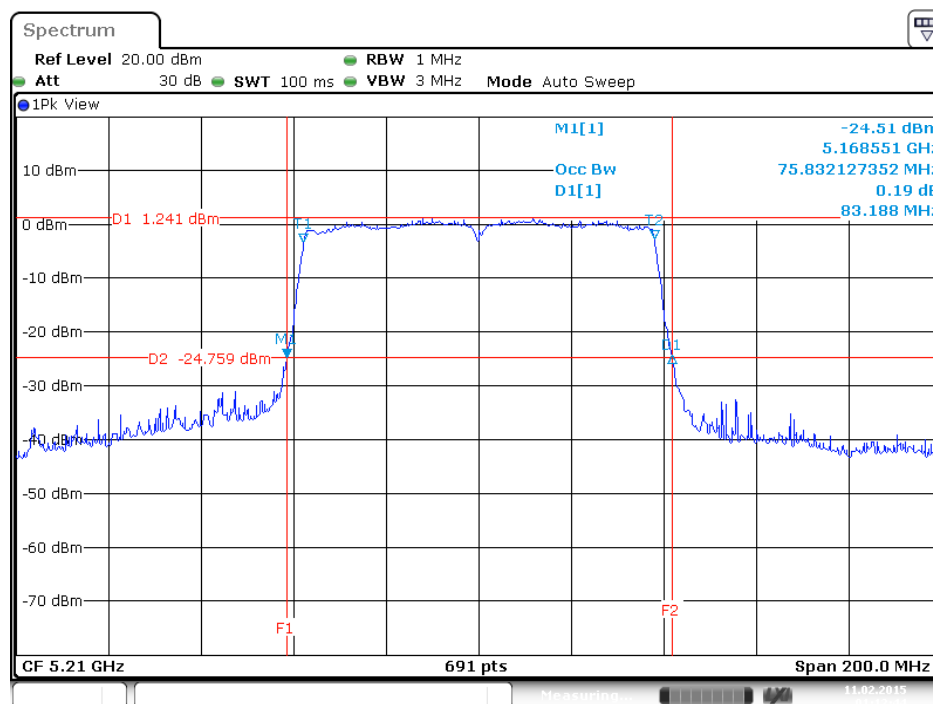


26dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 155 / Ant. 3



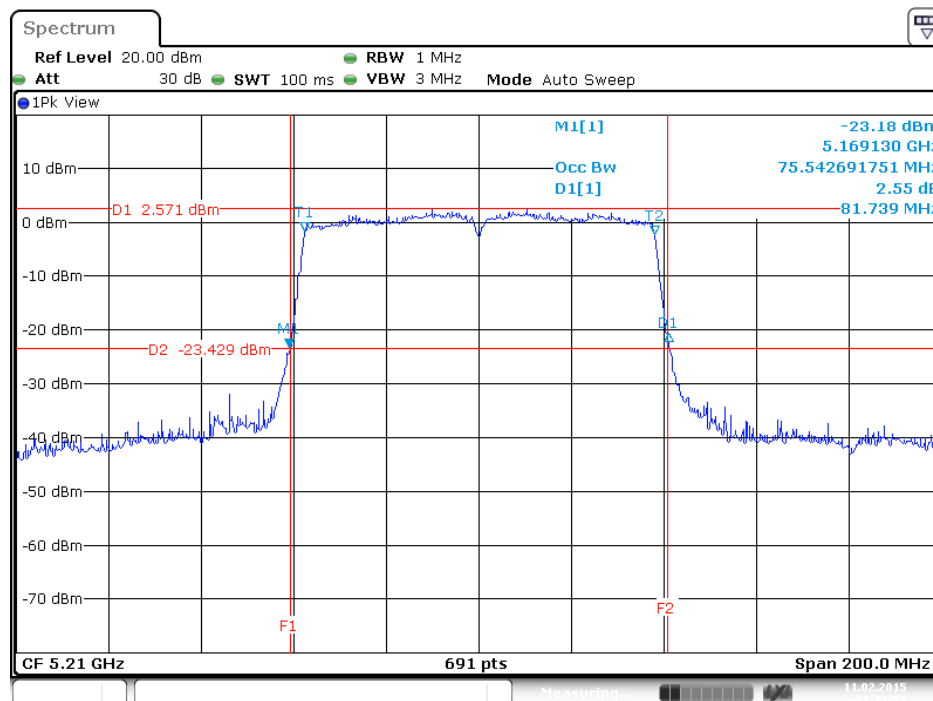
<Nss1MCS0, 1S3T, TXBF>:

26dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 42 / Ant. 1



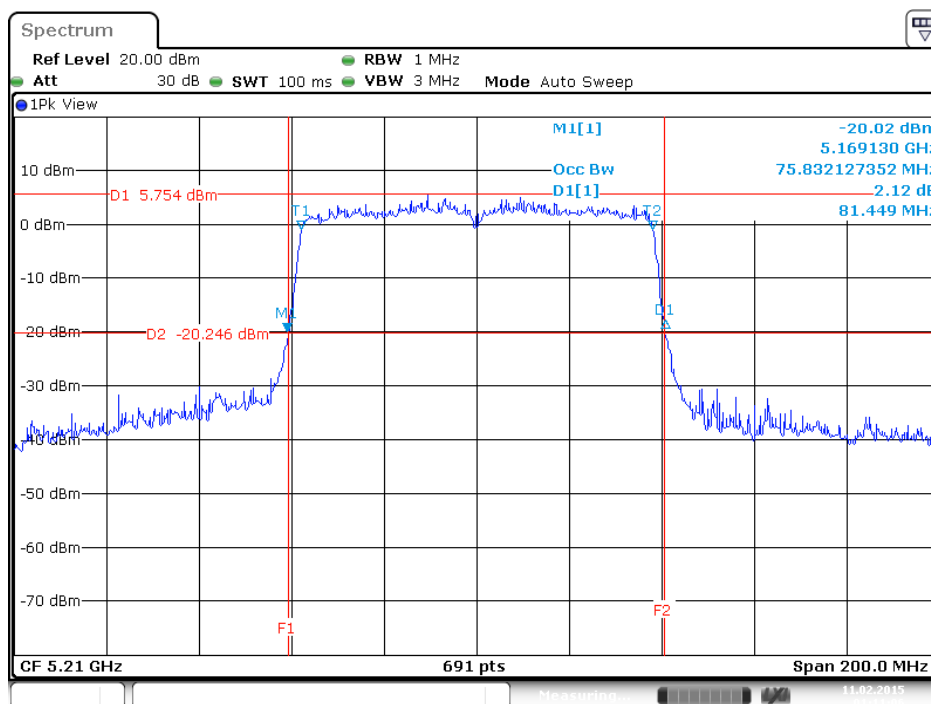
Date: 11.FEB.2015 01:12:44

26dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 42 / Ant. 2



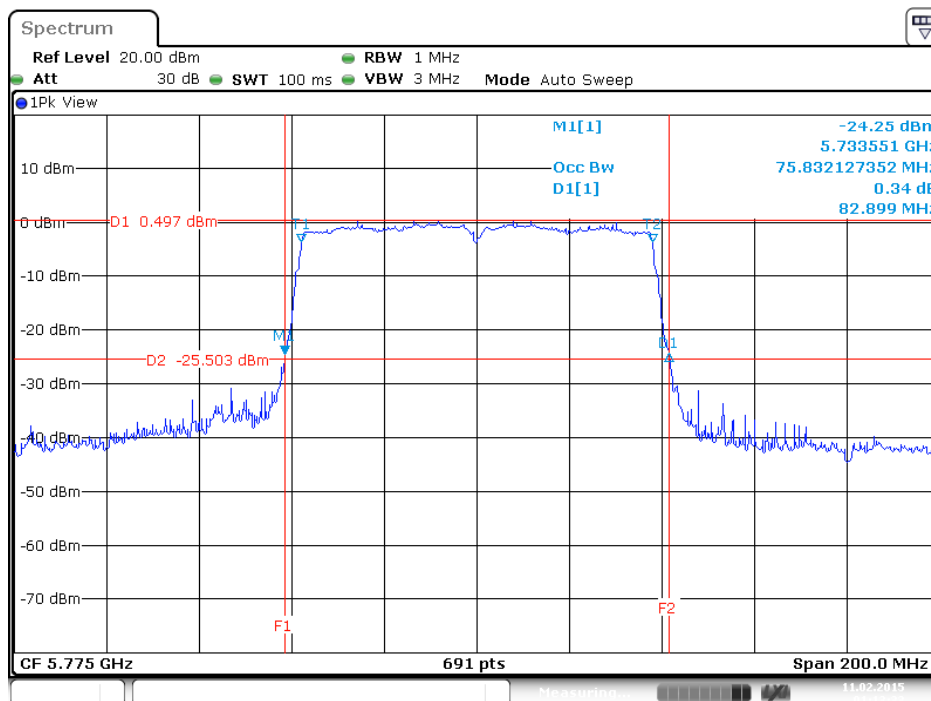
Date: 11.FEB.2015 01:11:53

26dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 42 / Ant. 3



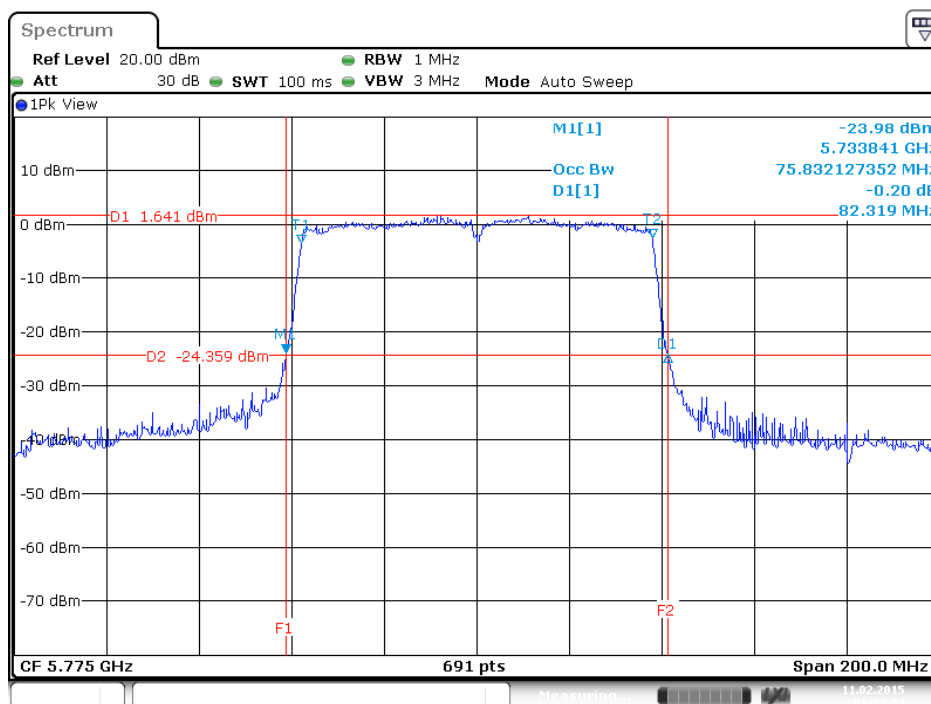
Date: 11.FEB.2015 01:11:06

26dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 155 / Ant. 1



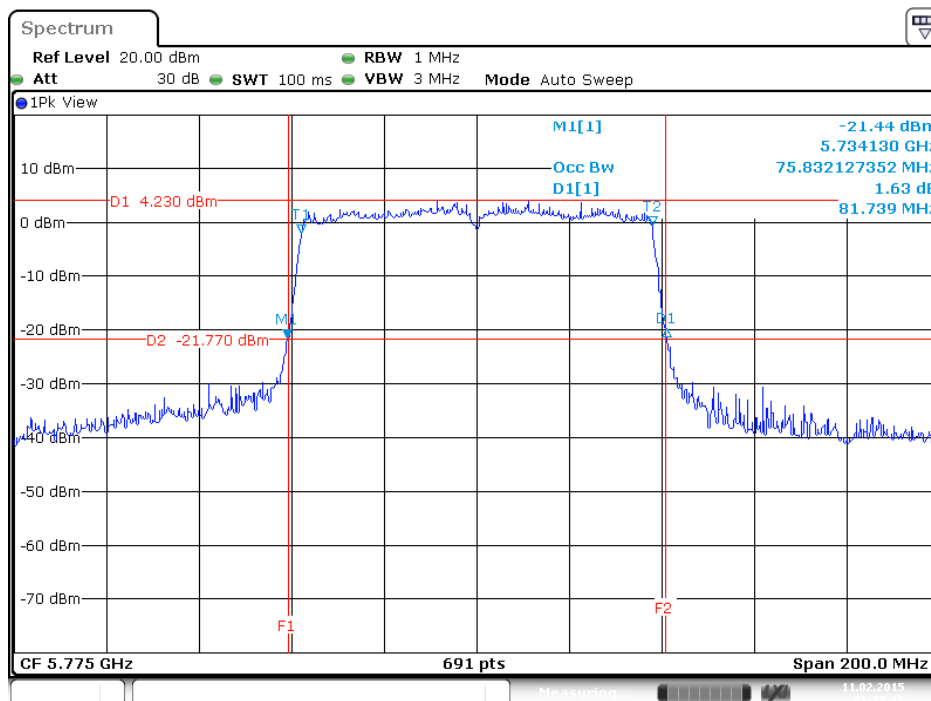
Date: 11.FEB.2015 01:13:33

26dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 155 / Ant. 2



Date: 11.FEB.2015 01:14:33

26dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 155 / Ant. 3



Date: 11.FEB.2015 01:15:17

3.2.8 Minimum Emission Bandwidth for the band 5.725-5.85 GHz

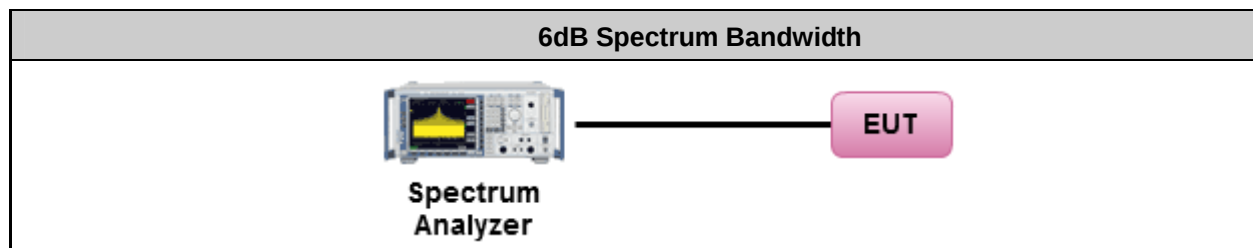
The following table is the setting of the spectrum analyzer.

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> 6dB Bandwidth
RBW	100 kHz
VBW	$\geq 3 \times \text{RBW}$
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

3.2.9 Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer in peak hold mode.
2. Test was performed in accordance with Measurement of Digital Transmission Systems Operating under KDB789033 D02 General UNII Test Procedures New Rules v01, in section "Emission bandwidth (C)(2)", 06/06/2014
3. Measured the spectrum width with power higher than 6dB account by this measurement.

3.2.10 Test Setup Layout



3.2.11 Test Deviation

There is no deviation with the original standard.

3.2.12 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.2.13 Test Result of 6dB Spectrum Bandwidth

Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Configuration	802.11a
Duty Cycle	<6Mbps, ANT1 >: 99.04% <6Mbps, 1S3T, CDD>: 98.89%		

Configuration IEEE 802.11a

<6Mbps, ANT1 >

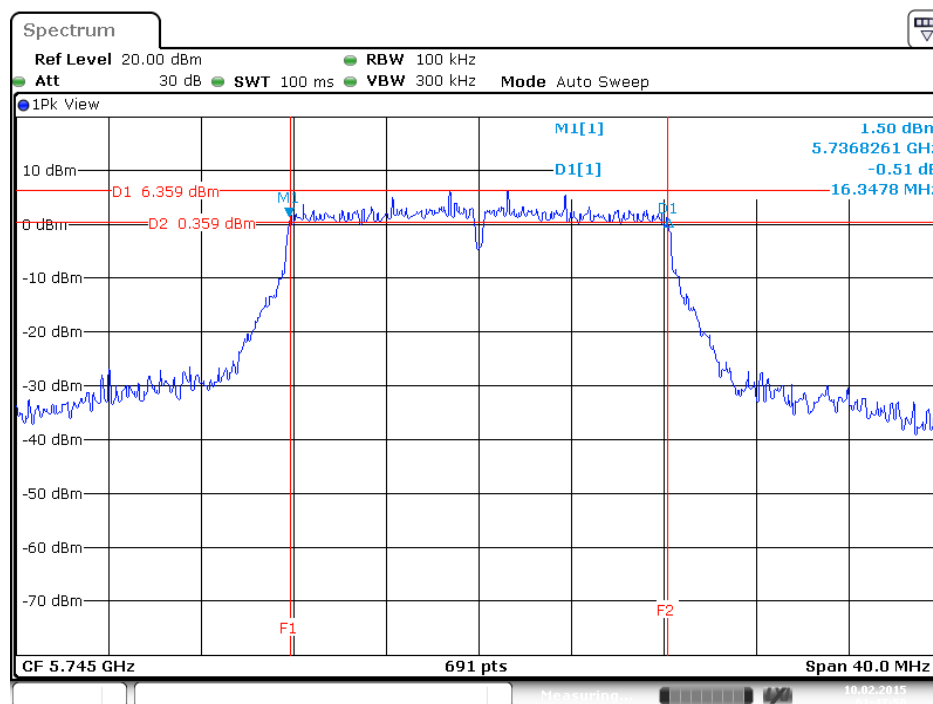
Channel	Frequency	6dB Bandwidth (MHz)	Max. Limit (kHz)	Result
149	5745 MHz	16.35	≥ 500	Complies
157	5785 MHz	16.35	≥ 500	Complies
165	5825 MHz	16.35	≥ 500	Complies

<6Mbps, 1S3T, CDD>

Channel	Frequency	6dB Bandwidth (MHz)			Max. Limit (kHz)	Result
		Ant. 1	Ant. 2	Ant. 3		
149	5745 MHz	16.41	16.29	16.35	≥ 500	Complies
157	5785 MHz	16.35	16.35	16.32	≥ 500	Complies
165	5825 MHz	16.35	16.46	16.35	≥ 500	Complies

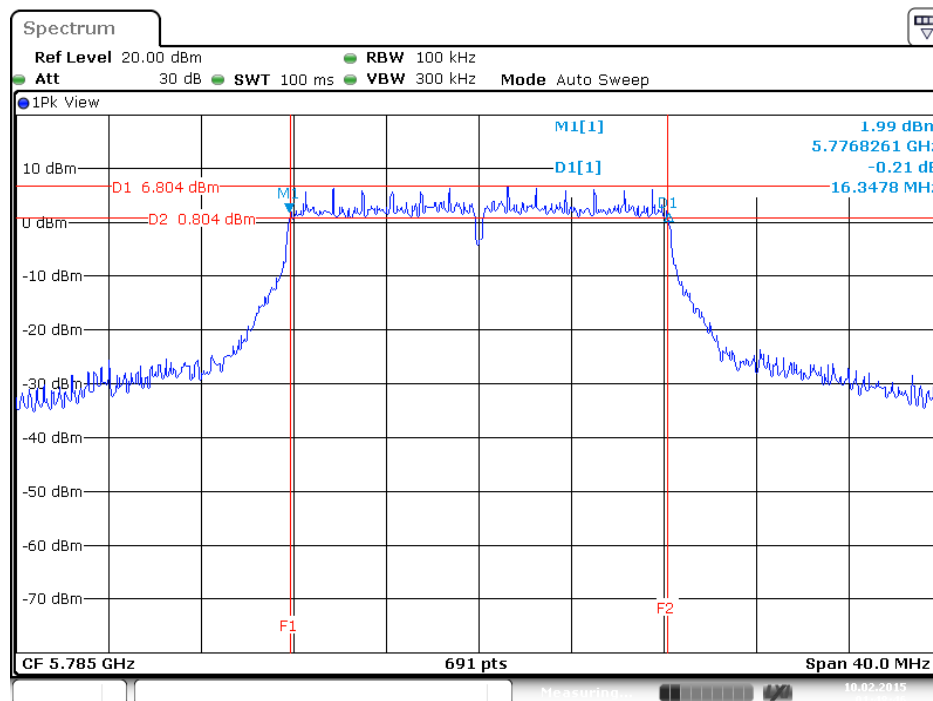
<6Mbps, ANT1 >:

6dB Bandwidth Plot on Configuration IEEE 802.11a / CH 149 / Ant. 1



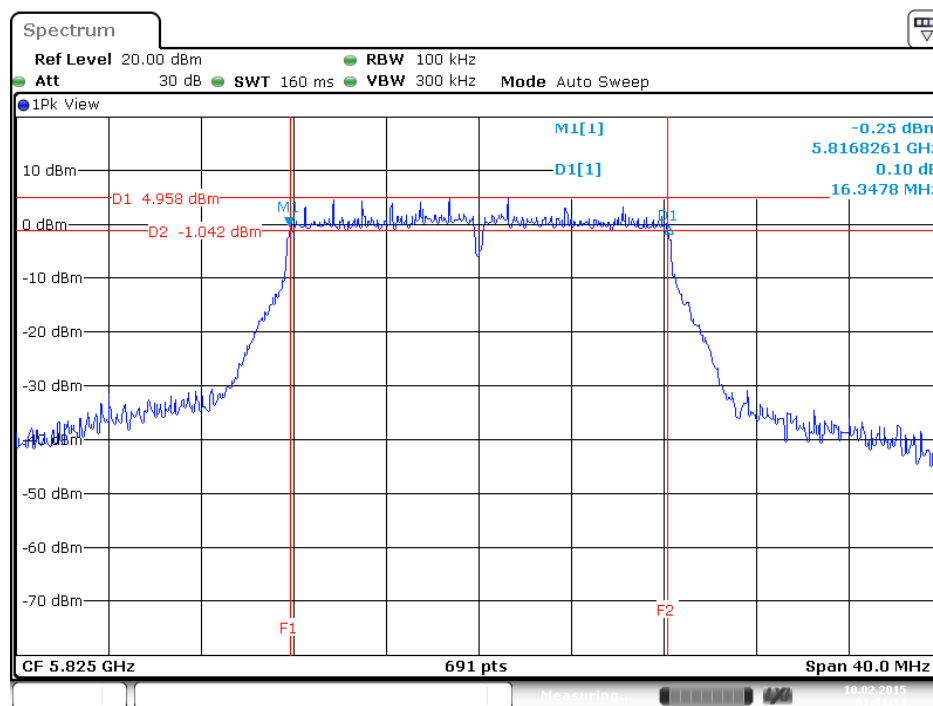
Date: 10 FEB 2015 01:47:50

6dB Bandwidth Plot on Configuration IEEE 802.11a / CH 157 / Ant. 1



Date: 10 FEB 2015 01:48:47

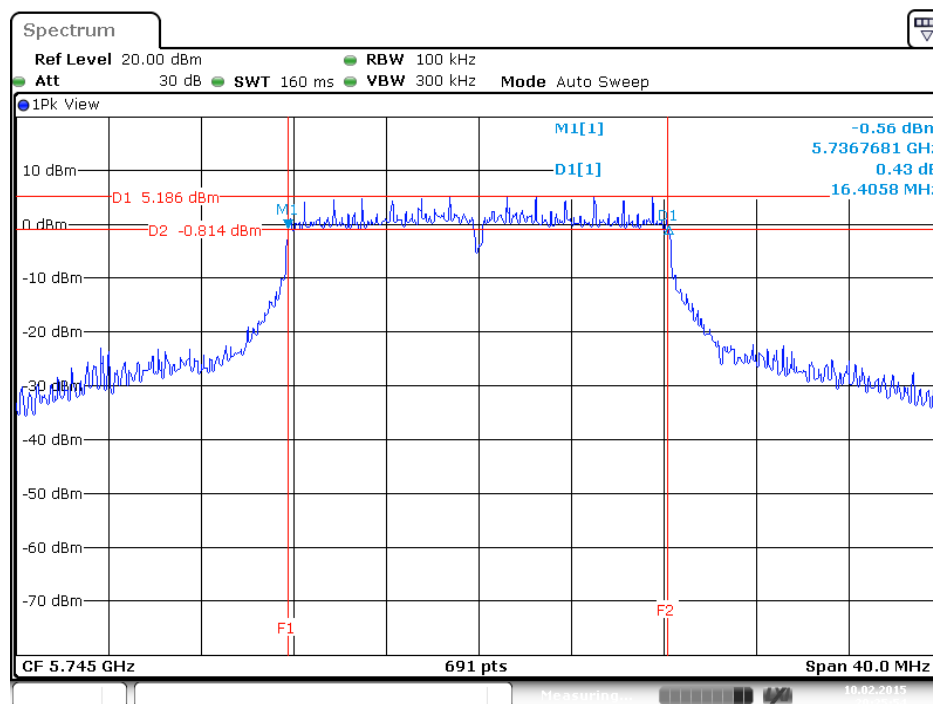
6dB Bandwidth Plot on Configuration IEEE 802.11a / CH 165 / Ant. 1



Date: 10 FEB 2015 01:51:12

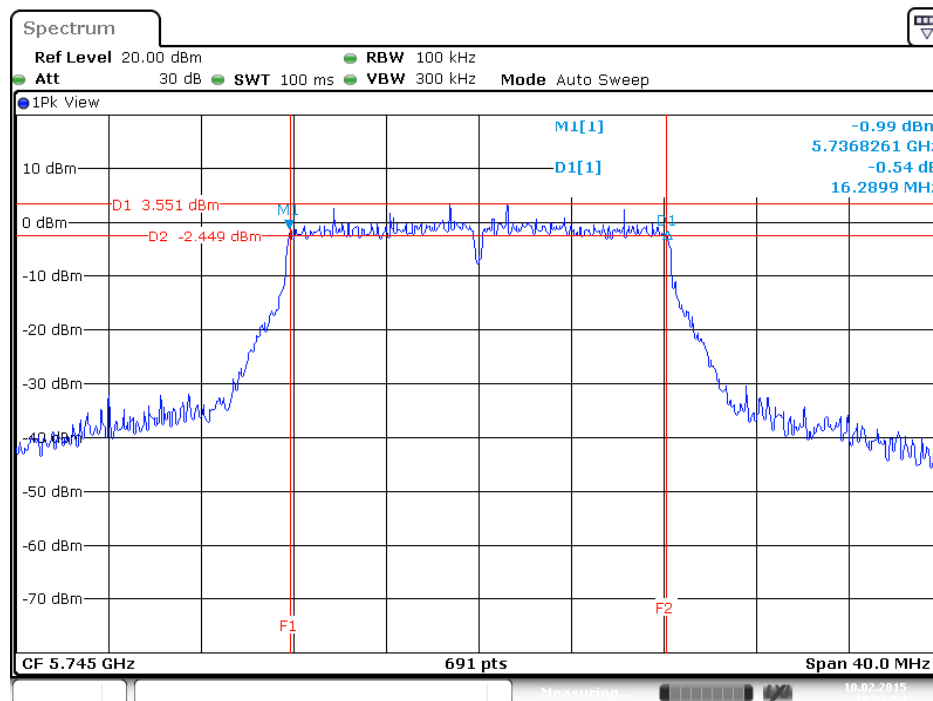
<6Mbps, 1S3T, CDD>:

6dB Bandwidth Plot on Configuration IEEE 802.11a / CH 149 / Ant. 1



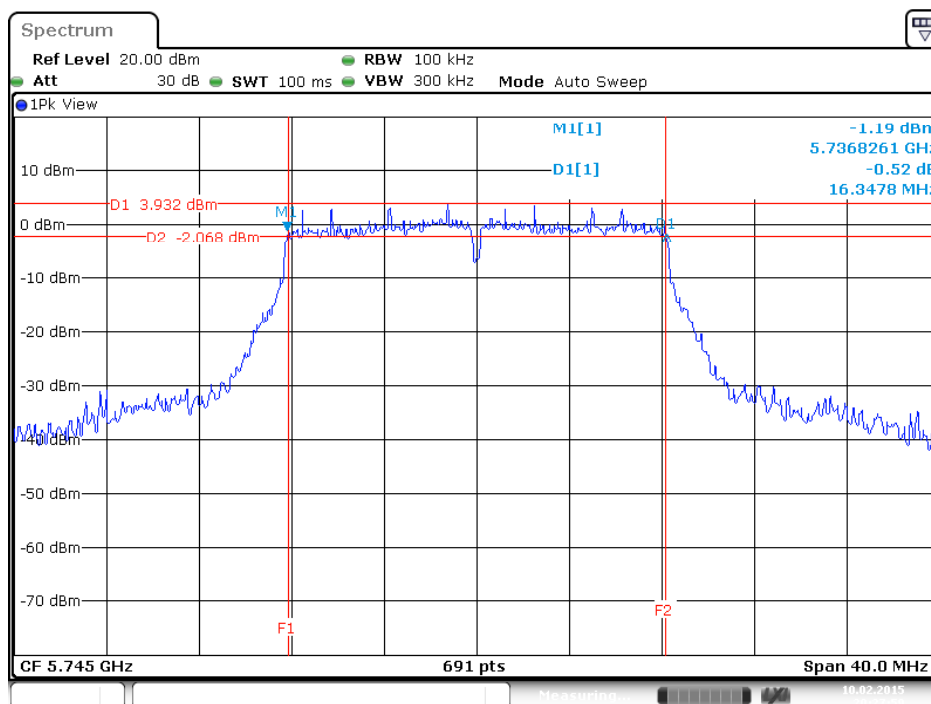
Date: 10.FEB.2015 20:25:54

6dB Bandwidth Plot on Configuration IEEE 802.11a / CH 149 / Ant. 2



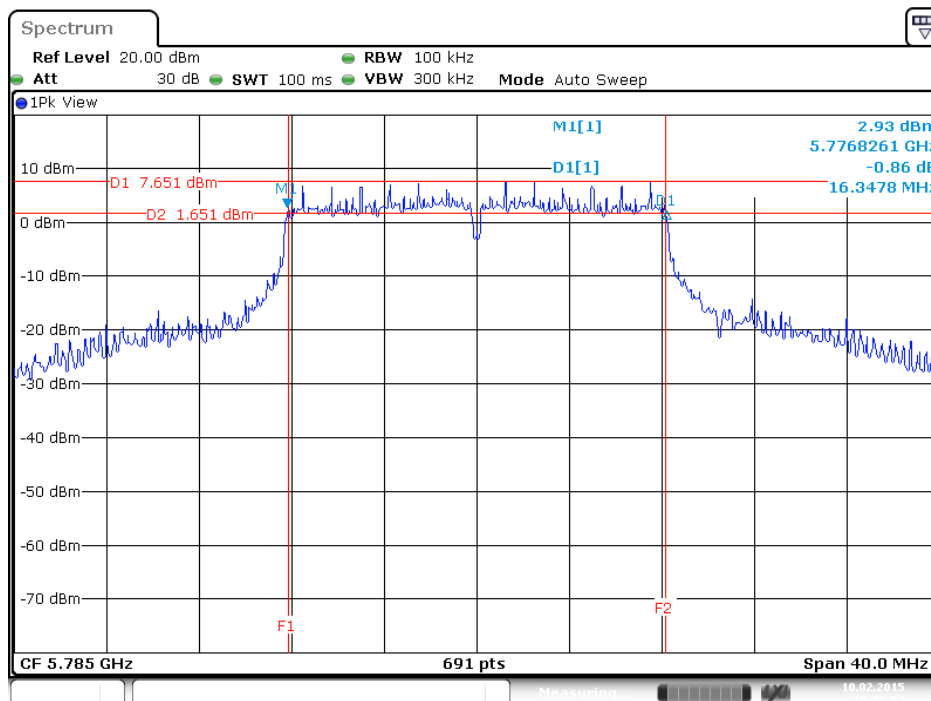
Date: 10.FEB.2015 20:26:54

6dB Bandwidth Plot on Configuration IEEE 802.11a / CH 149 / Ant. 3



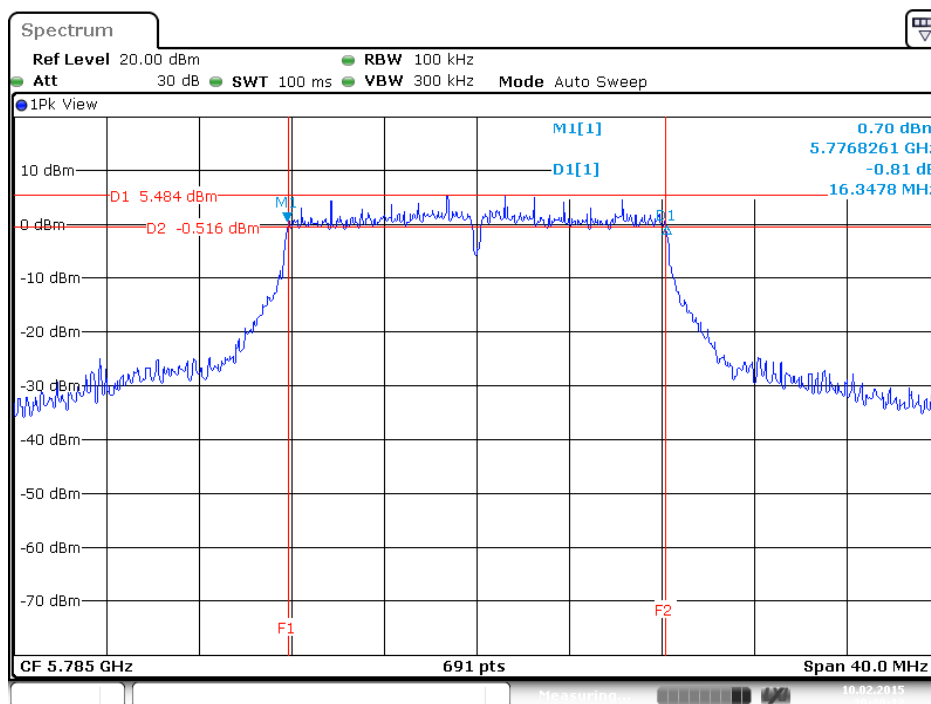
Date: 10 FEB 2015 20:27:59

6dB Bandwidth Plot on Configuration IEEE 802.11a / CH 157 / Ant. 1



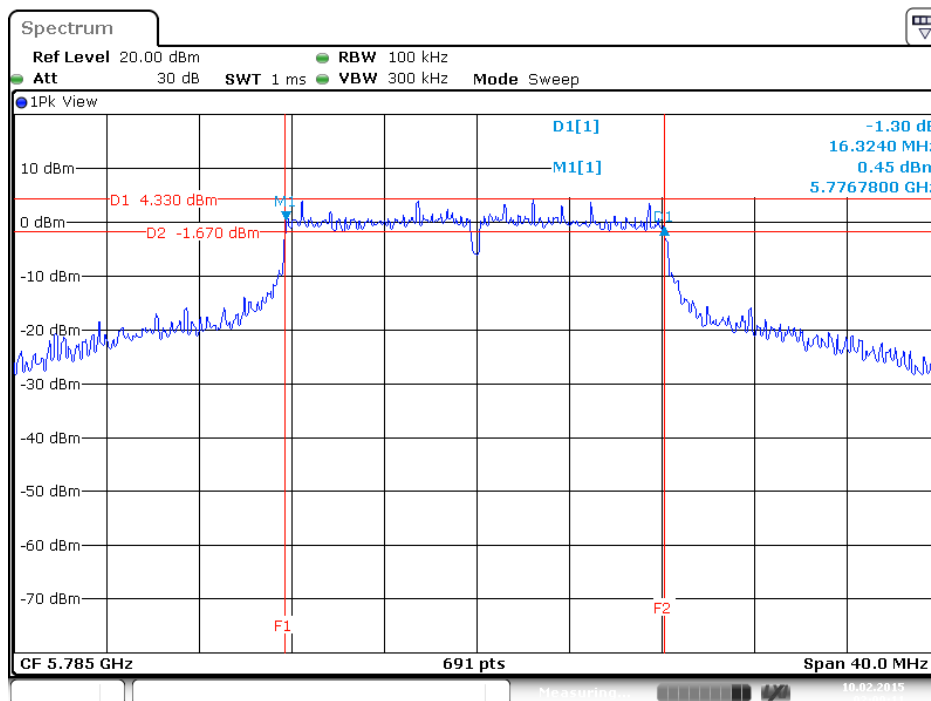
Date: 10 FEB 2015 20:30:53

6dB Bandwidth Plot on Configuration IEEE 802.11a / CH 157 / Ant. 2



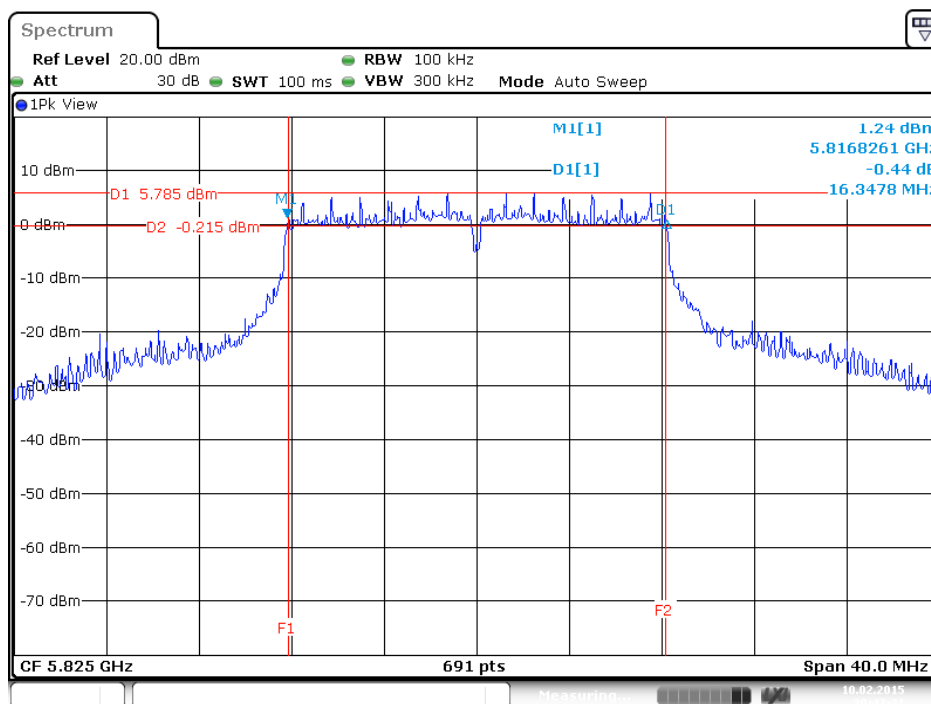
Date: 10 FEB 2015 20:30:13

6dB Bandwidth Plot on Configuration IEEE 802.11a / CH 157 / Ant. 3

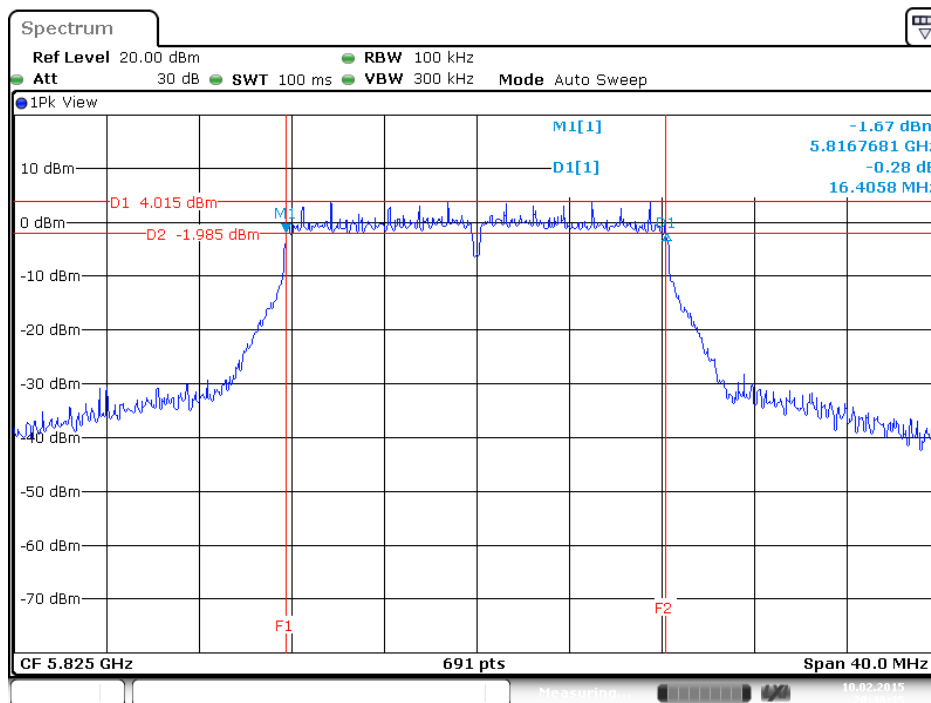


Date: 10 FEB 2015 02:09:12

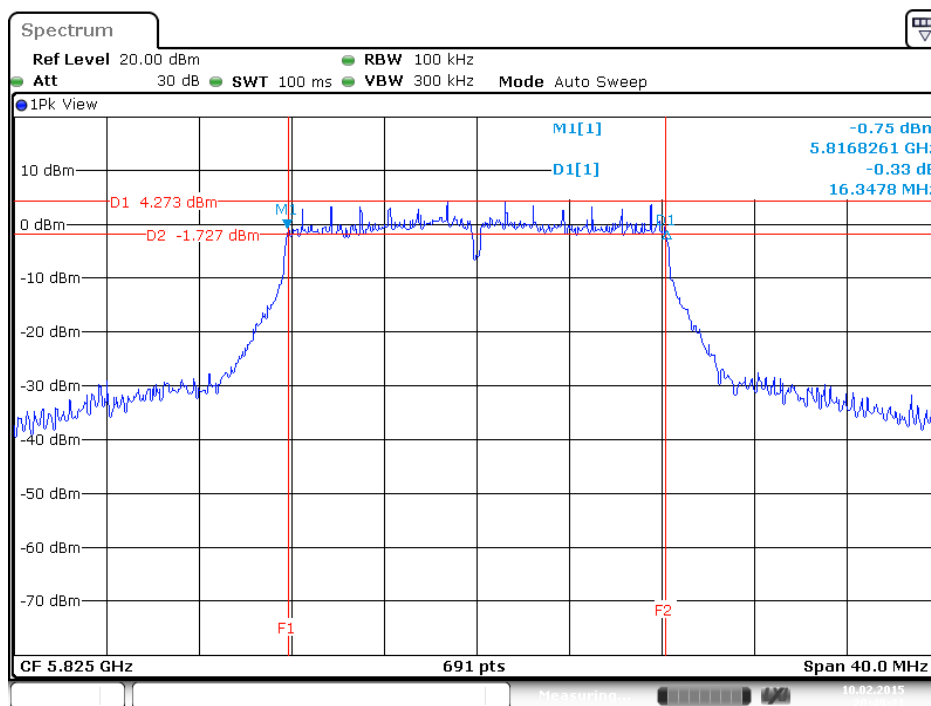
6dB Bandwidth Plot on Configuration IEEE 802.11a / CH 165 / Ant. 1



6dB Bandwidth Plot on Configuration IEEE 802.11a / CH 165 / Ant. 2



6dB Bandwidth Plot on Configuration IEEE 802.11a / CH 165 / Ant. 3



Date: 10 FEB 2015 20:49:22

Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Configuration	802.11ac 20MHz
Duty Cycle	<Nss1MCS0, Ant. 1>: 98.97% <Nss1MCS0, 1S3T, CDD>: 98.85% <Nss1MCS0, 1S3T, TXBF>: 98.85%		

Configuration IEEE 802.11ac 20MHz

<Nss1MCS0, Ant. 1>

Channel	Frequency	6dB Bandwidth (MHz)	Max. Limit (kHz)	Result
149	5745 MHz	17.62	≥ 500	Complies
157	5785 MHz	17.62	≥ 500	Complies
165	5825 MHz	17.62	≥ 500	Complies

<Nss1MCS0, 1S3T, CDD>

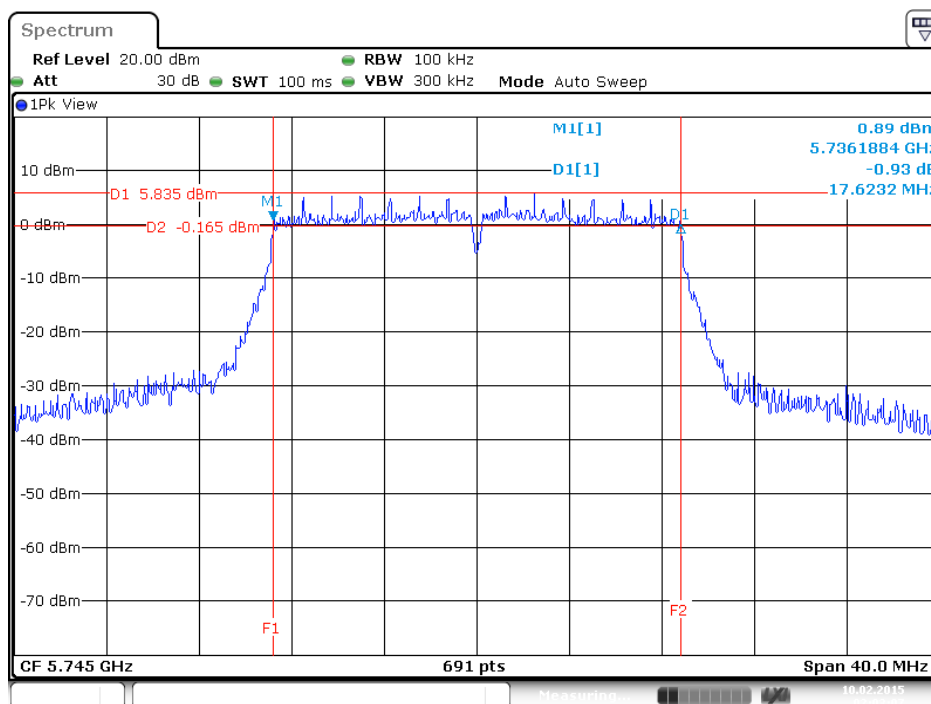
Channel	Frequency	6dB Bandwidth (MHz)			Max. Limit (kHz)	Result
		Ant. 1	Ant. 2	Ant. 3		
149	5745 MHz	17.57	17.57	17.57	≥ 500	Complies
157	5785 MHz	17.57	17.62	17.57	≥ 500	Complies
165	5825 MHz	17.57	17.57	17.57	≥ 500	Complies

<Nss1MCS0, 1S3T, TXBF>

Channel	Frequency	6dB Bandwidth (MHz)			Max. Limit (kHz)	Result
		Ant. 1	Ant. 2	Ant. 3		
149	5745 MHz	17.57	17.57	17.57	≥ 500	Complies
157	5785 MHz	17.57	17.57	17.57	≥ 500	Complies
165	5825 MHz	17.62	17.57	17.57	≥ 500	Complies

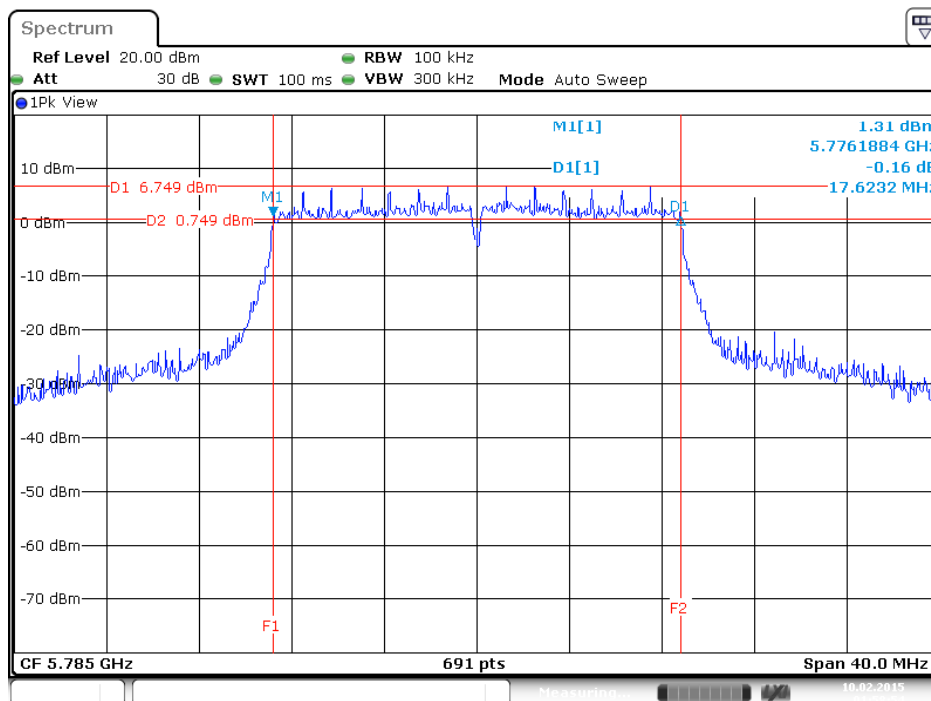
<Nss1MCS0, Ant. 1>:

6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 149 / Ant. 1



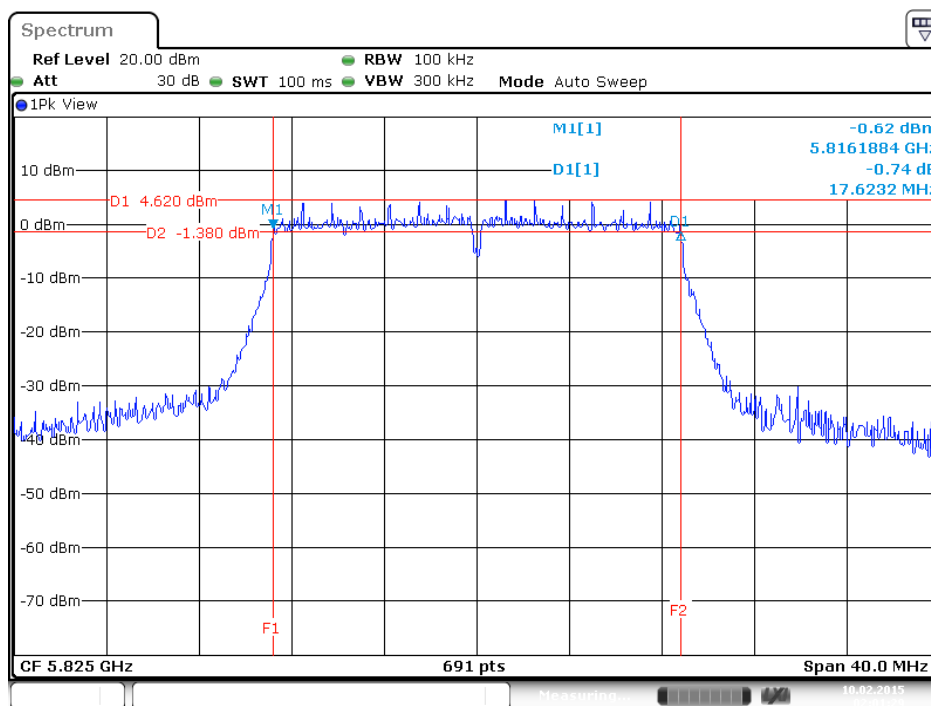
Date: 10 FEB 2015 02:03:08

6dB Bandwidth Plot on Configuration IEEE 802.11 ac 20MHz / CH 157 / Ant. 1



Date: 10 FEB 2015 01:58:54

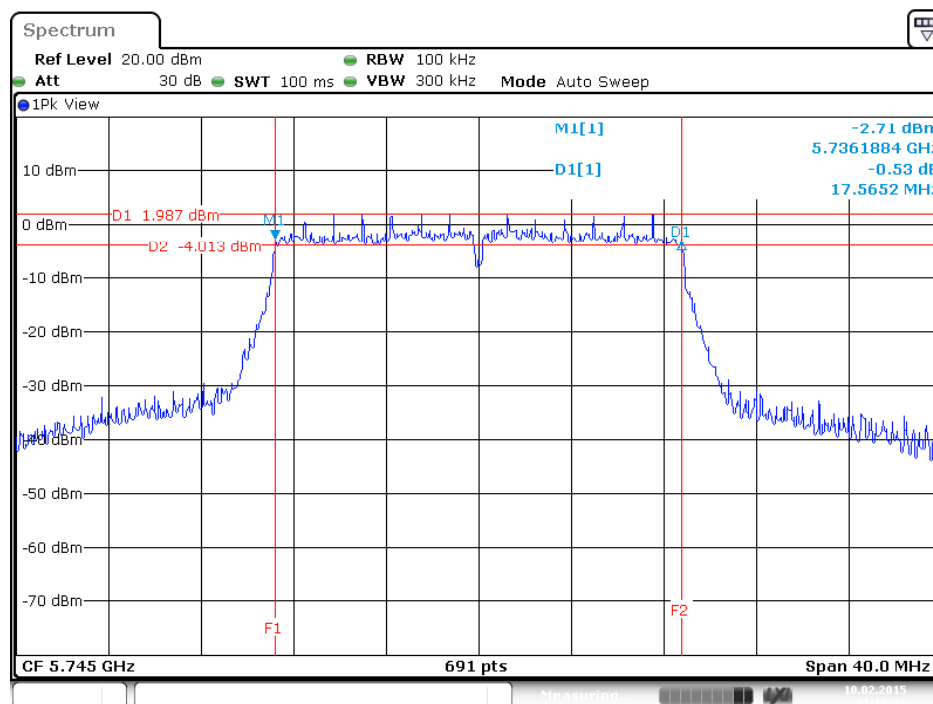
6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 165 / Ant. 1



Date: 10 FEB 2015 02:01:29

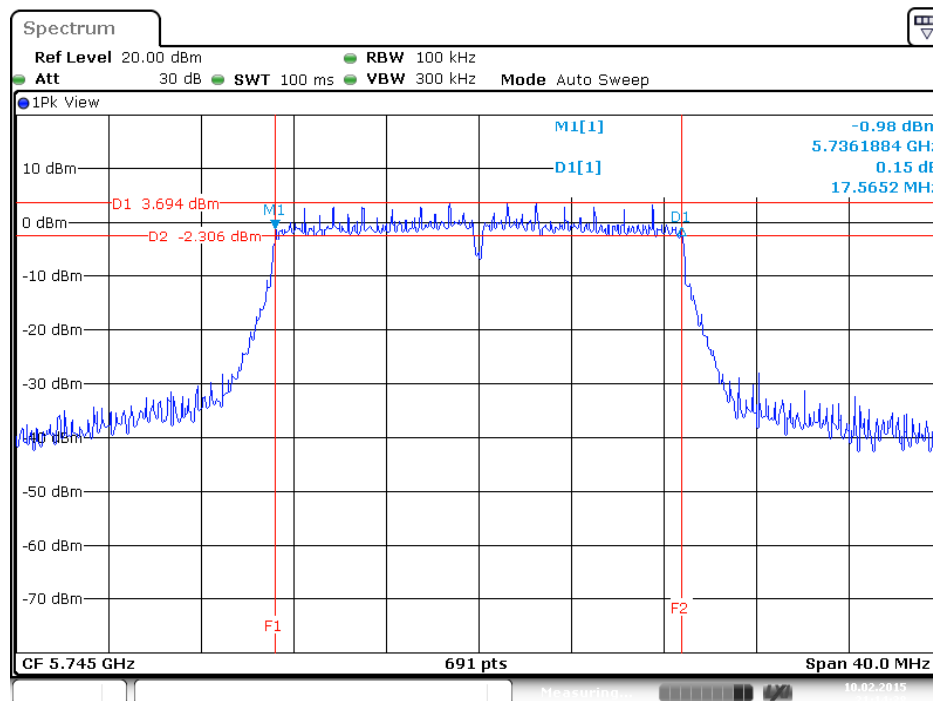
<Nss1MCS0, 1S3T, CDD>:

6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 149 / Ant. 1



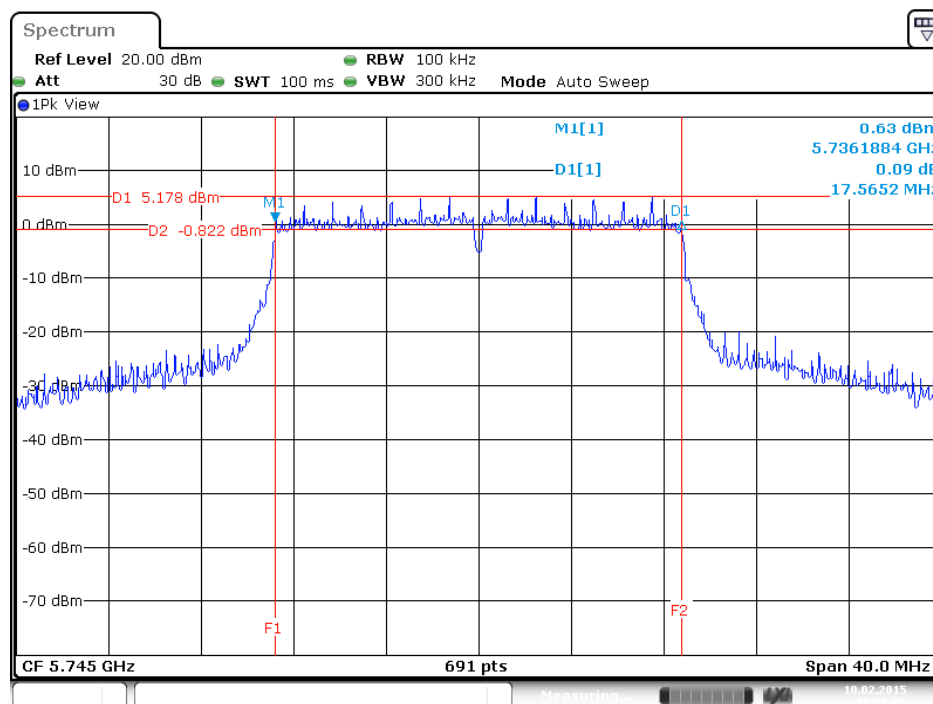
Date: 10.FEB.2015 21:15:25

6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 149 / Ant. 2

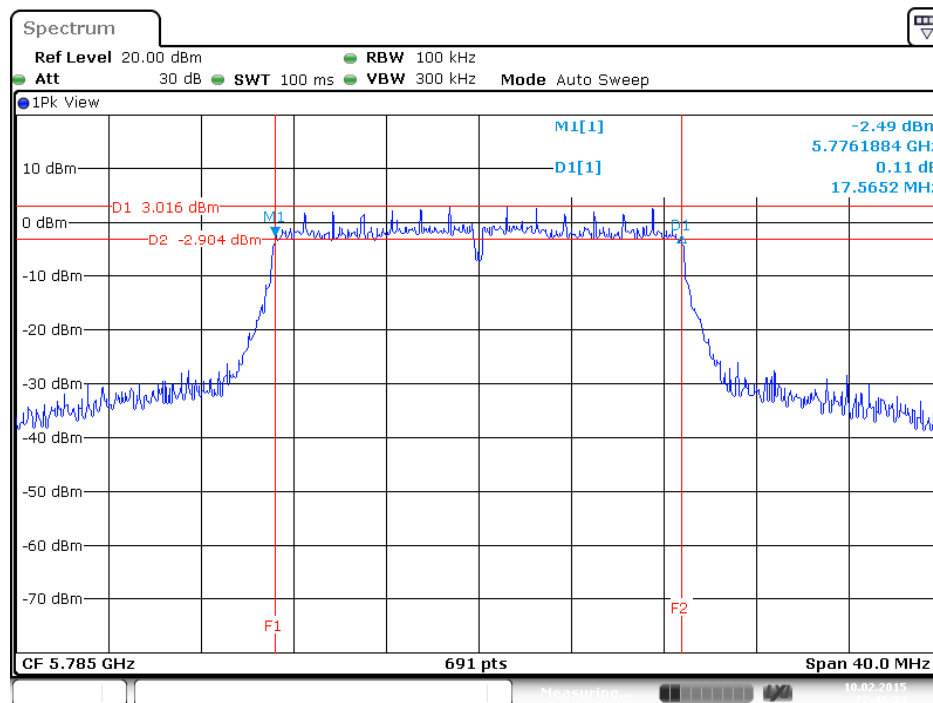


Date: 10.FEB.2015 21:14:38

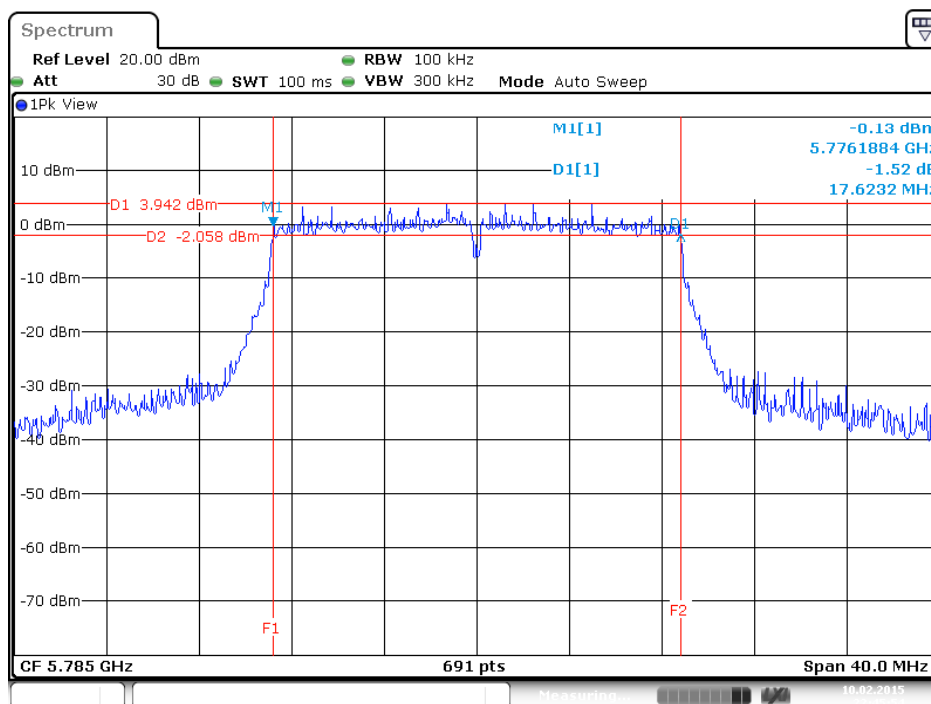
6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 149 / Ant. 3



6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 157 / Ant. 1

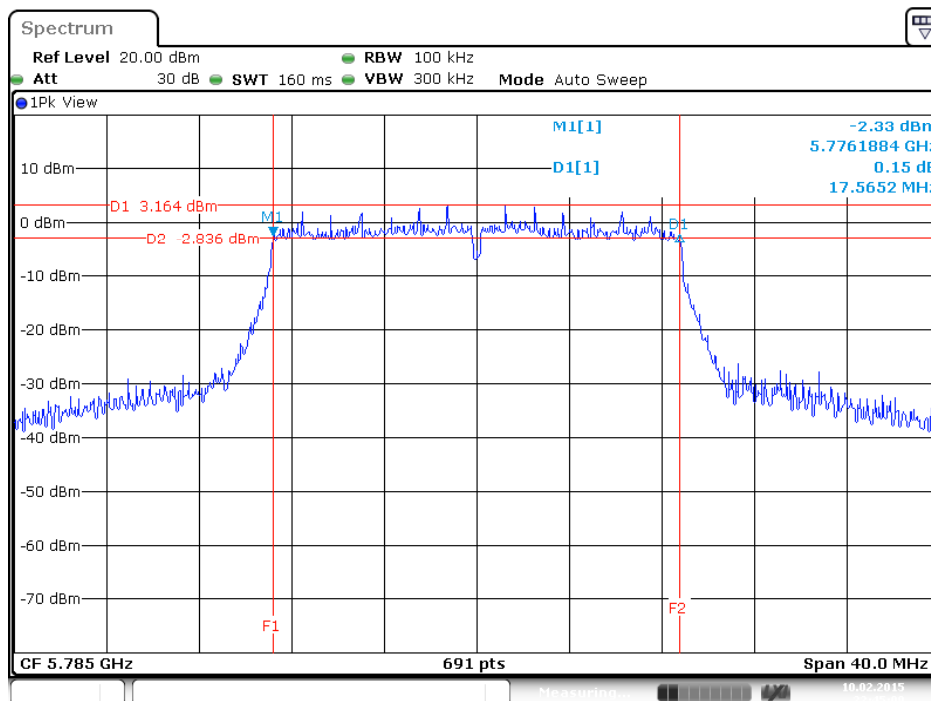


6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 157 / Ant. 2



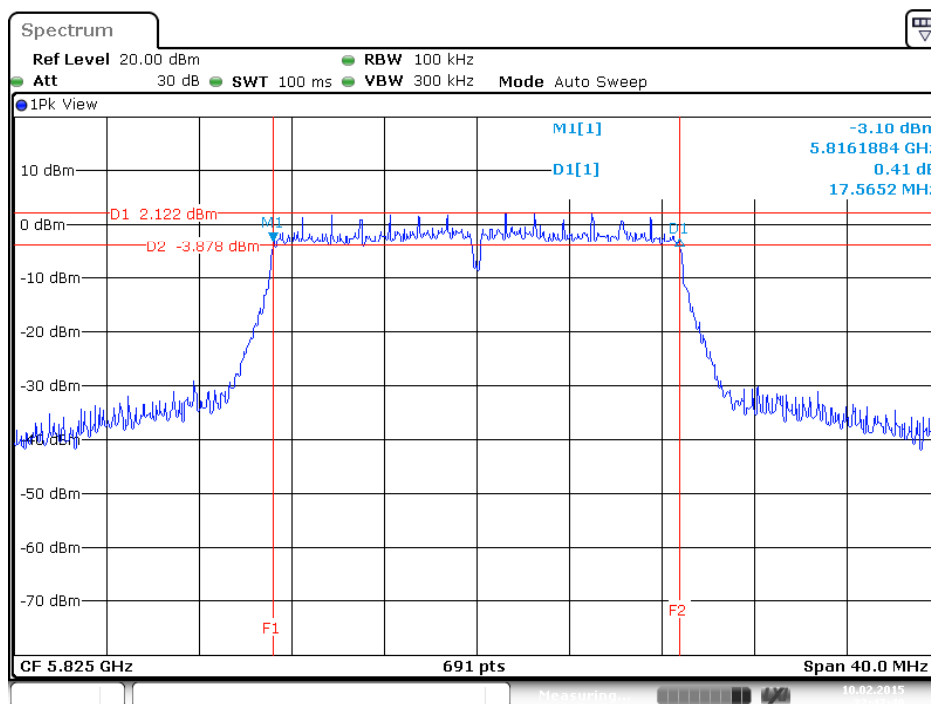
Date: 10 FEB 2015 22:45:54

6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 157 / Ant. 3



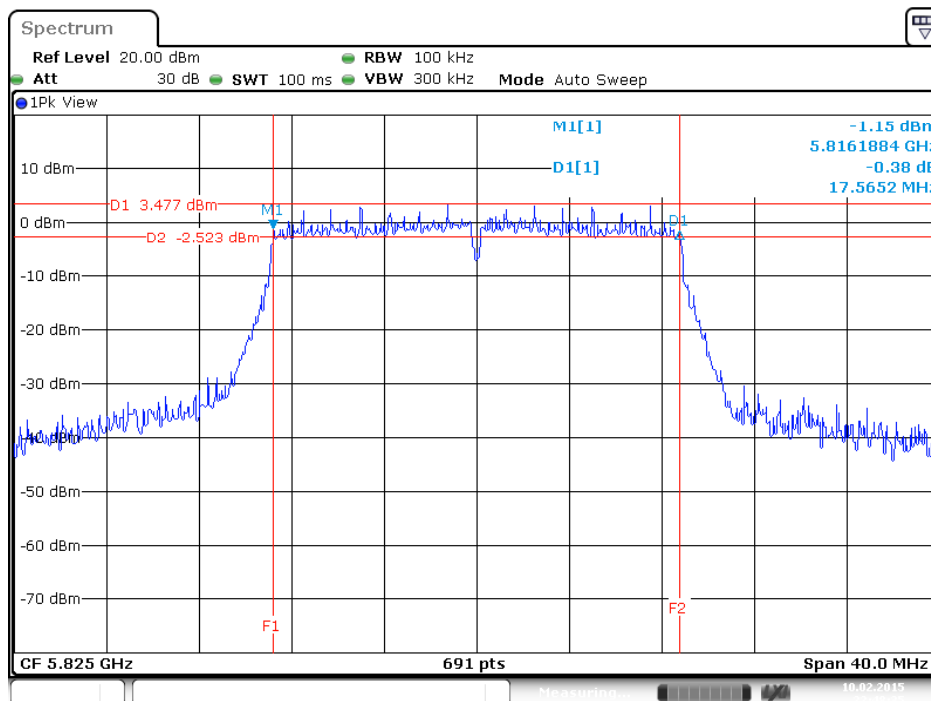
Date: 10 FEB 2015 22:45:09

6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 165 / Ant. 1



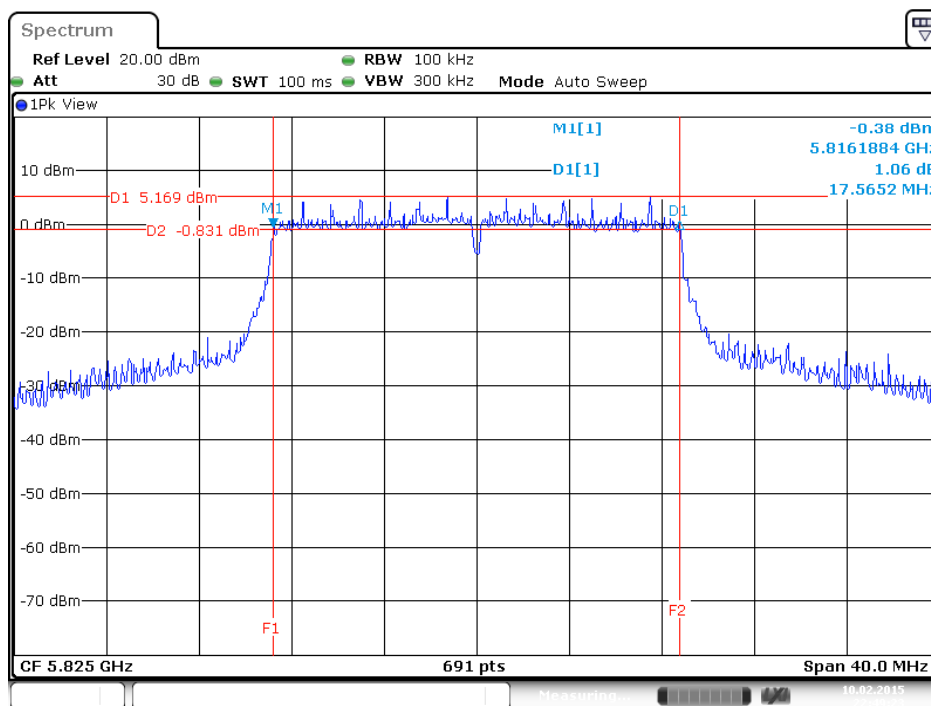
Date: 10.FEB.2015 22:47:49

6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 165 / Ant. 2



Date: 10.FEB.2015 22:48:35

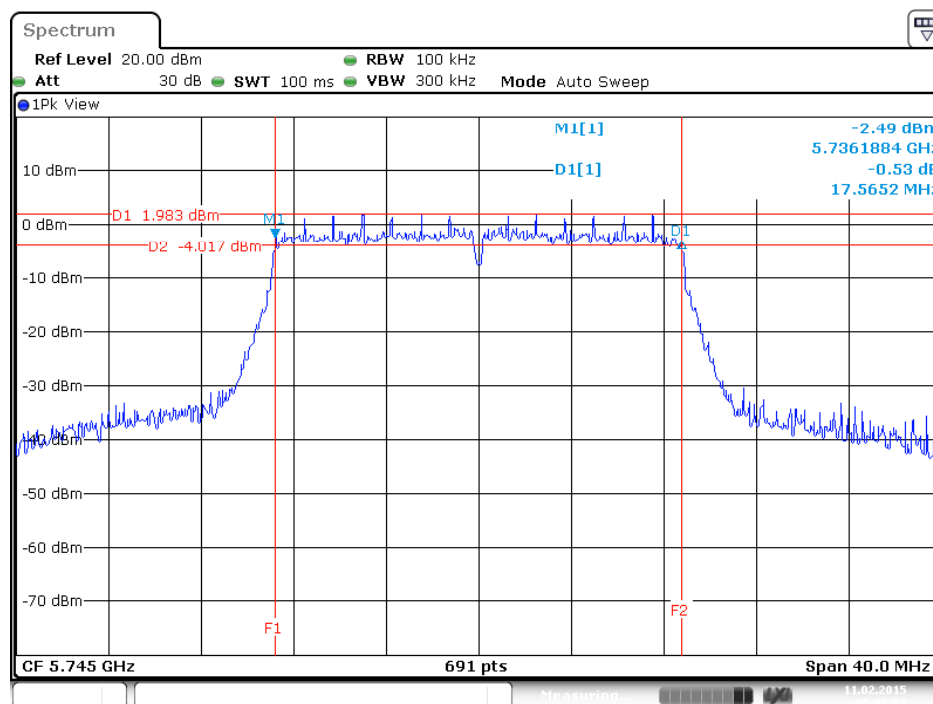
6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 165 / Ant. 3



Date: 10 FEB 2015 22:49:24

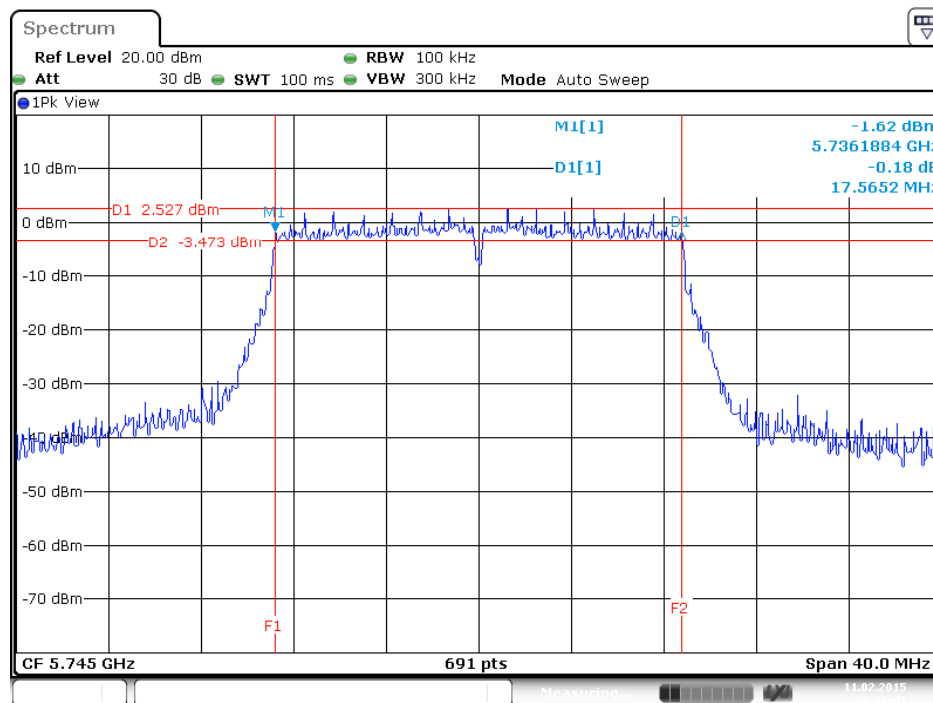
<Nss1MCS0, 1S3T, TXBF>:

6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 149 / Ant. 1



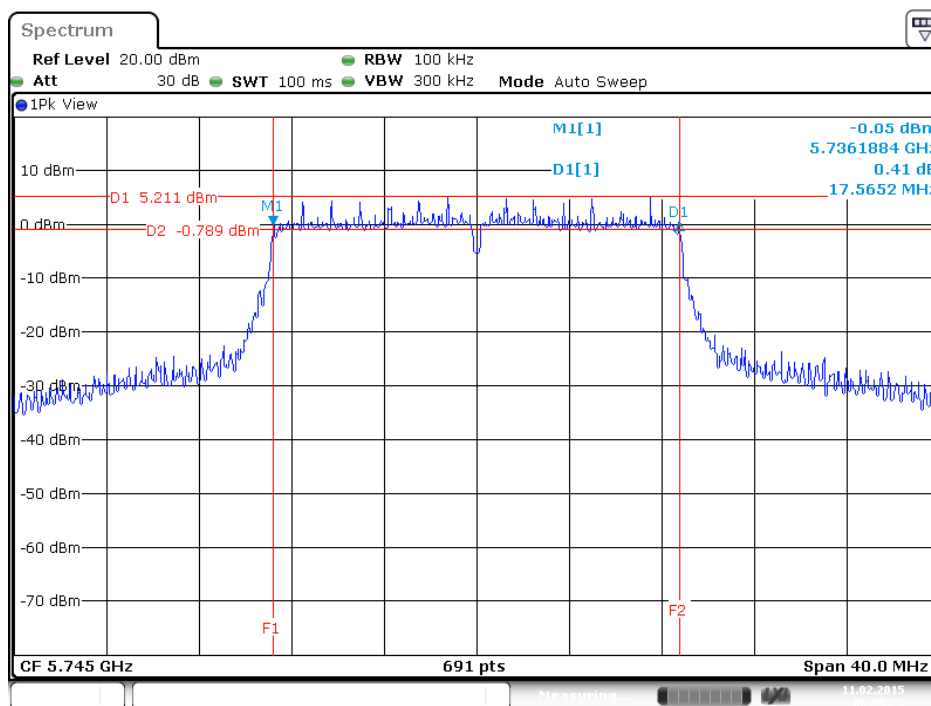
Date: 11.FEB.2015 00:08:32

6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 149 / Ant. 2

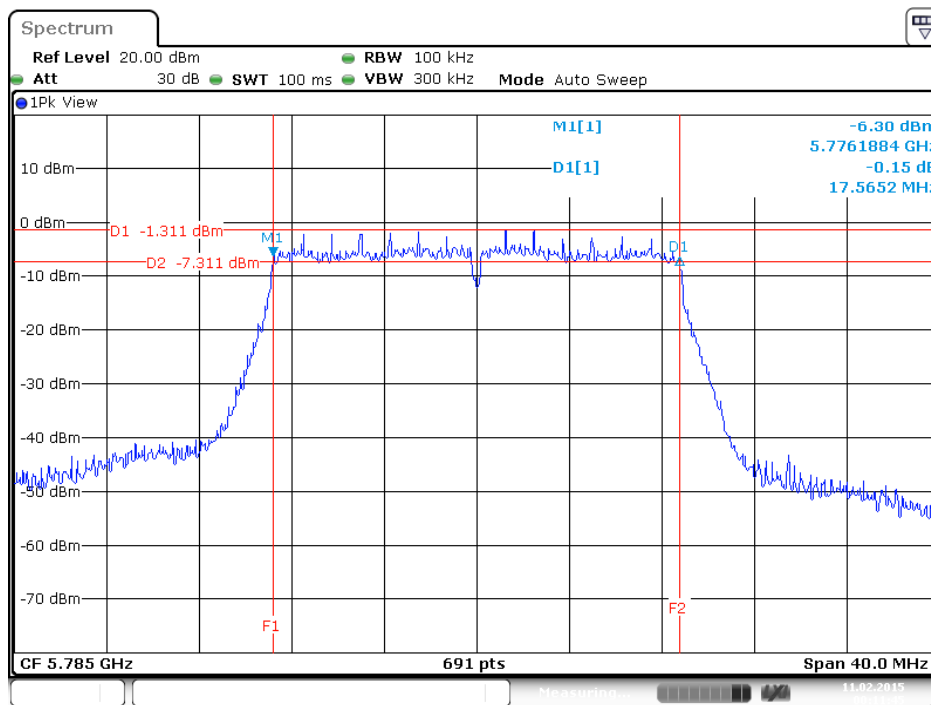


Date: 11.FEB.2015 00:08:41

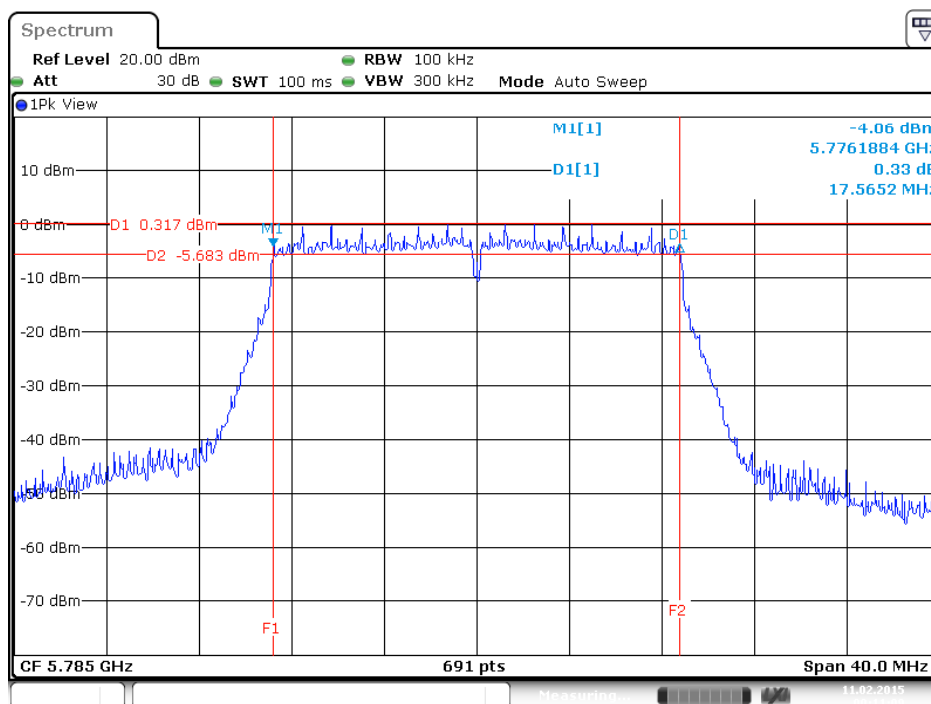
6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 149 / Ant. 3



6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 157 / Ant. 1

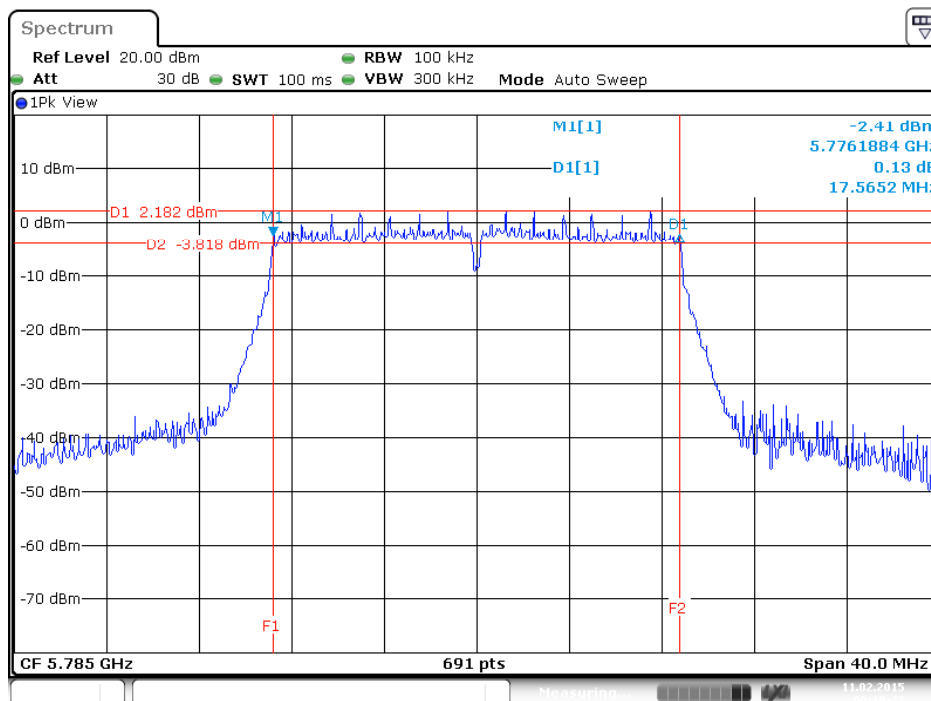


6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 157 / Ant. 2



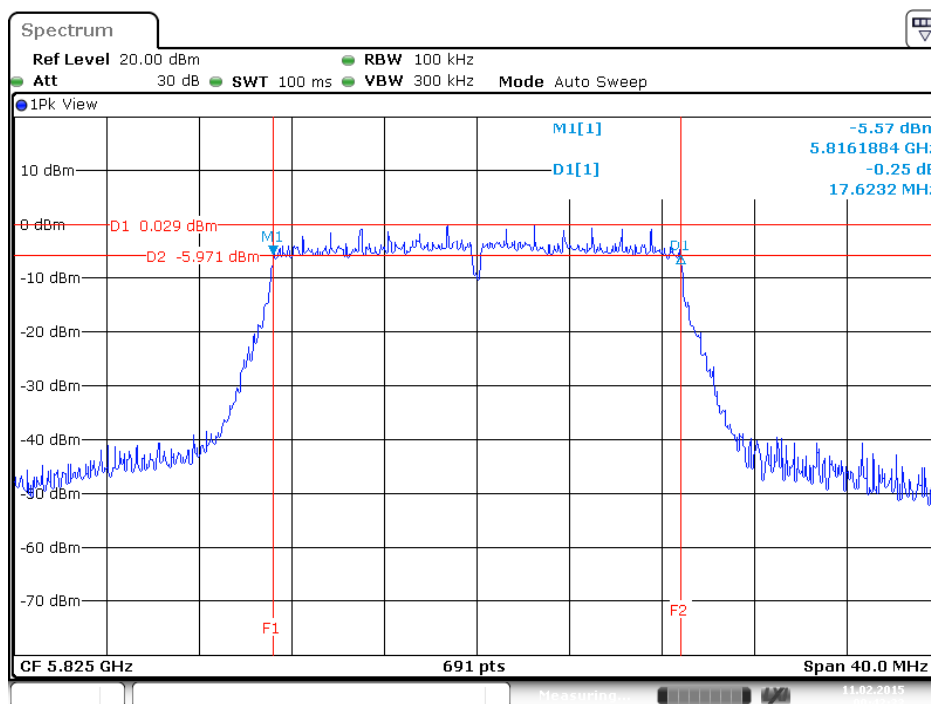
Date: 11.FEB.2015 00:11:10

6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 157 / Ant. 3



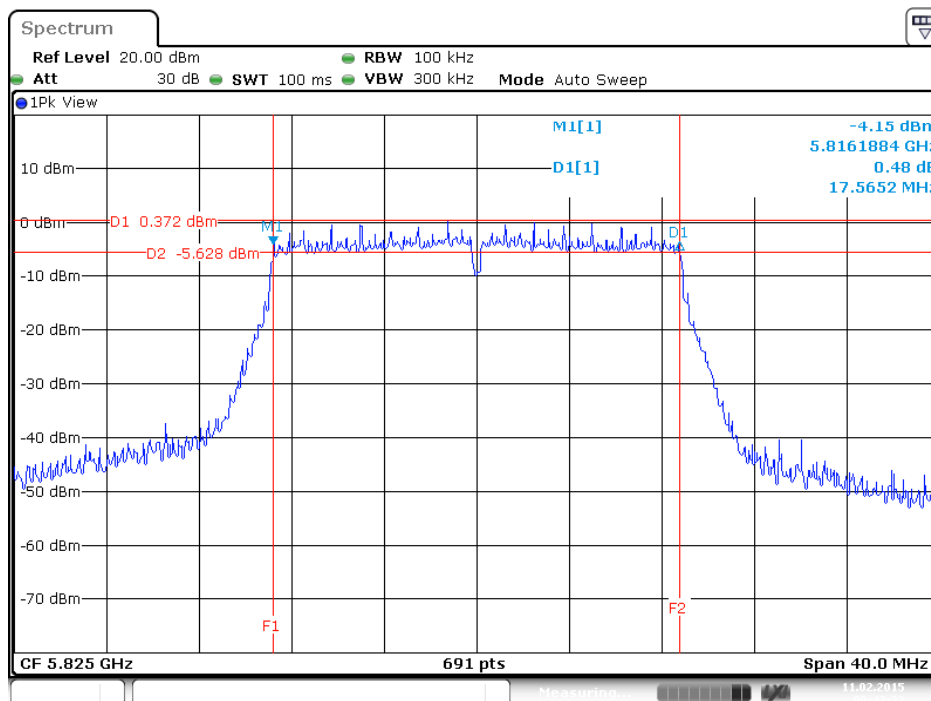
Date: 11.FEB.2015 00:10:27

6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 165 / Ant. 1



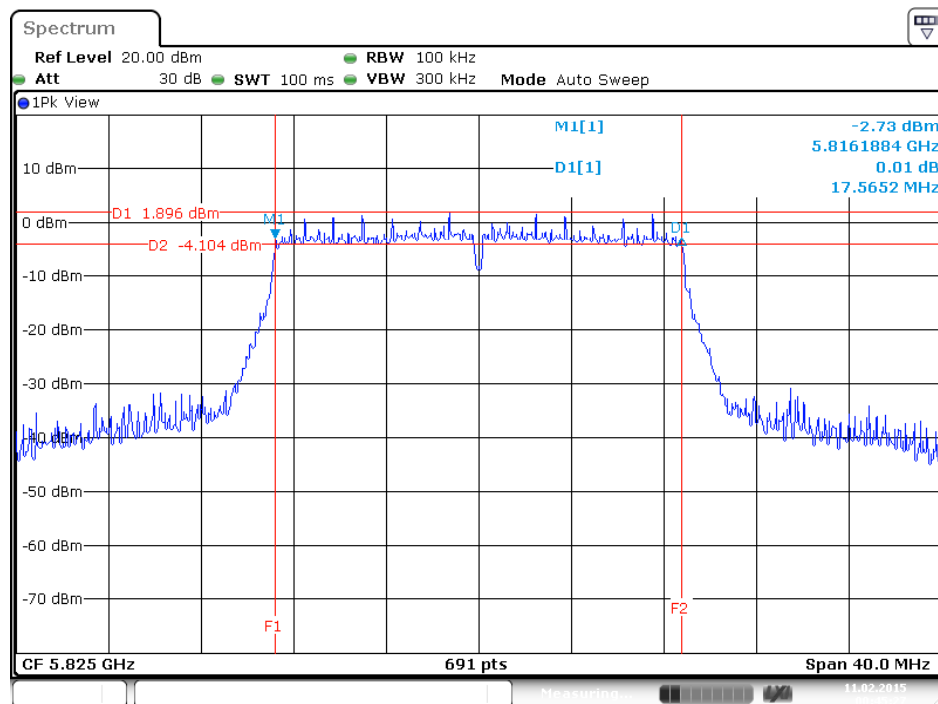
Date: 11.FEB.2015 00:42:34

6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 165 / Ant. 2



Date: 11.FEB.2015 00:43:33

6dB Bandwidth Plot on Configuration IEEE 802.11ac 20MHz / CH 165 / Ant. 3



Date: 11.FEB.2015 00:45:27

Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Configuration	802.11ac 40MHz
Duty Cycle	<Nss1MCS0, Ant. 1>: 97.84% <Nss1MCS0, 1S3T, CDD>: 98.00% <Nss1MCS0, 1S3T, TXBF>: 98.00%		

Configuration IEEE 802.11ac 40MHz

<Nss1MCS0, Ant. 1>

Channel	Frequency	6dB Bandwidth (MHz)	Max. Limit (kHz)	Result
151	5755 MHz	36.41	≥ 500	Complies
159	5795 MHz	36.06	≥ 500	Complies

<Nss1MCS0, 1S3T, CDD>

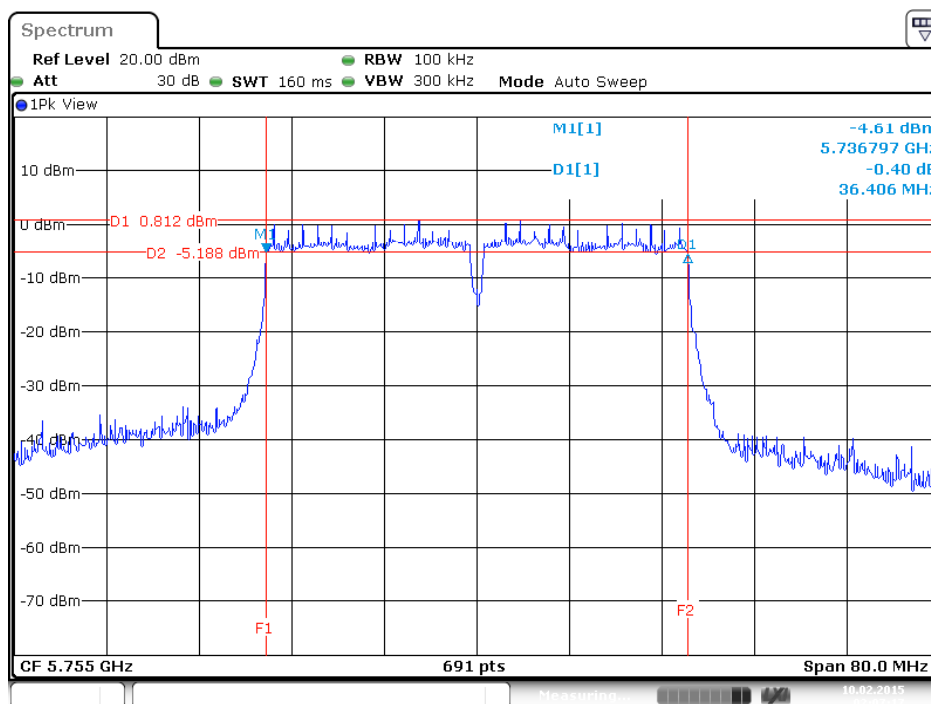
Channel	Frequency	6dB Bandwidth (MHz)			Max. Limit (kHz)	Result
		Ant. 1	Ant. 2	Ant. 3		
151	5755 MHz	36.06	36.41	36.41	≥ 500	Complies
159	5795 MHz	36.41	36.41	36.41	≥ 500	Complies

<Nss1MCS0, 1S3T, TXBF>

Channel	Frequency	6dB Bandwidth (MHz)			Max. Limit (kHz)	Result
		Ant. 1	Ant. 2	Ant. 3		
151	5755 MHz	35.94	36.41	36.41	≥ 500	Complies
159	5795 MHz	36.41	36.41	36.29	≥ 500	Complies

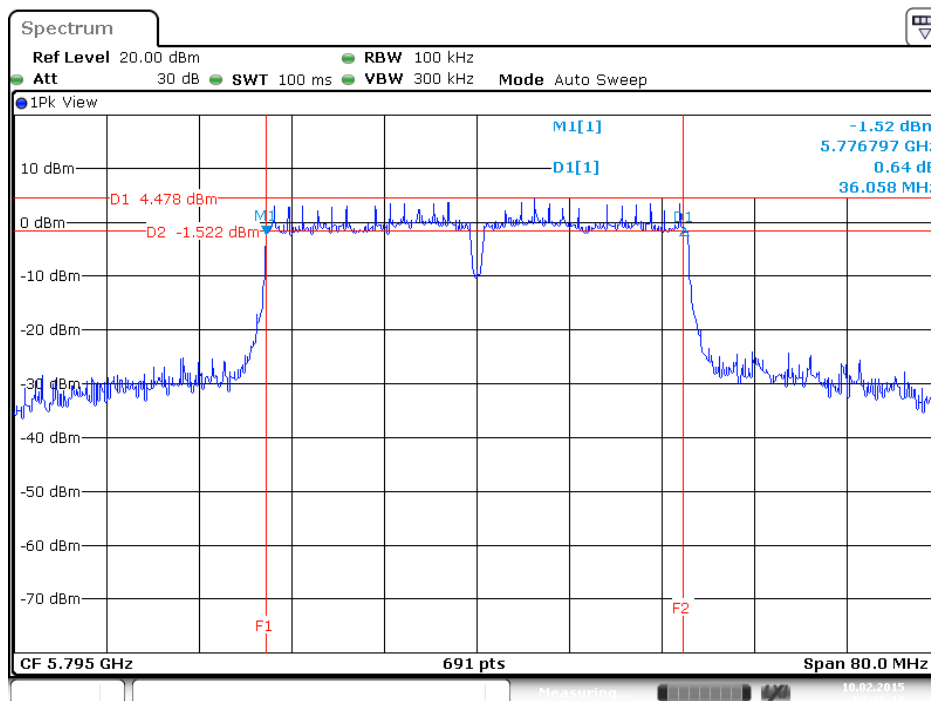
<Nss1MCS0, Ant. 1>:

6dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 151 / Ant. 1



Date: 10.FEB.2015 02:07:17

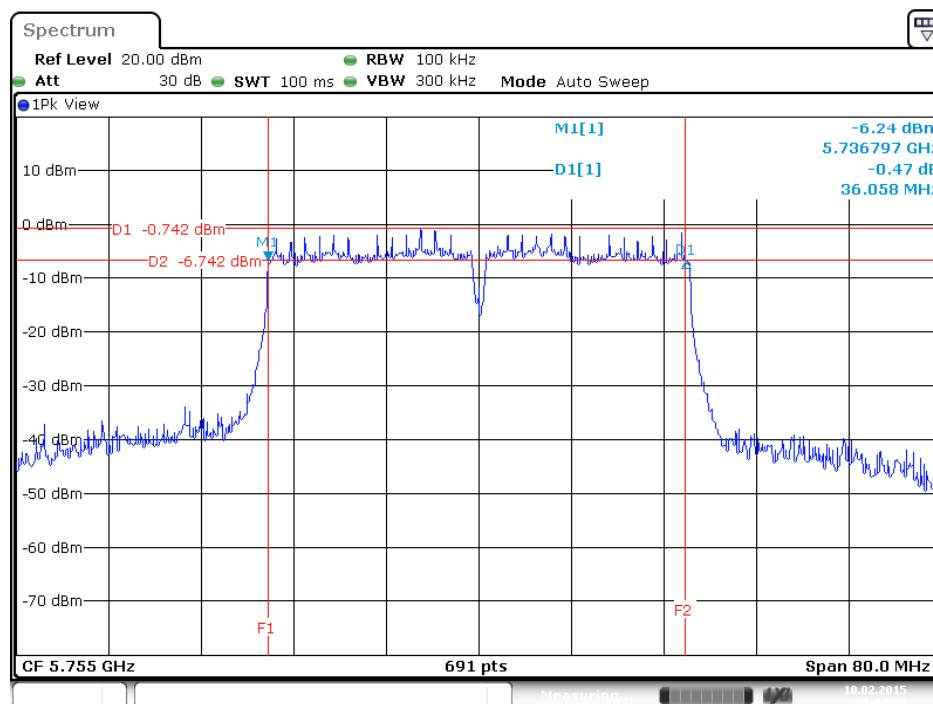
6dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 159 / Ant. 1



Date: 10.FEB.2015 02:08:18

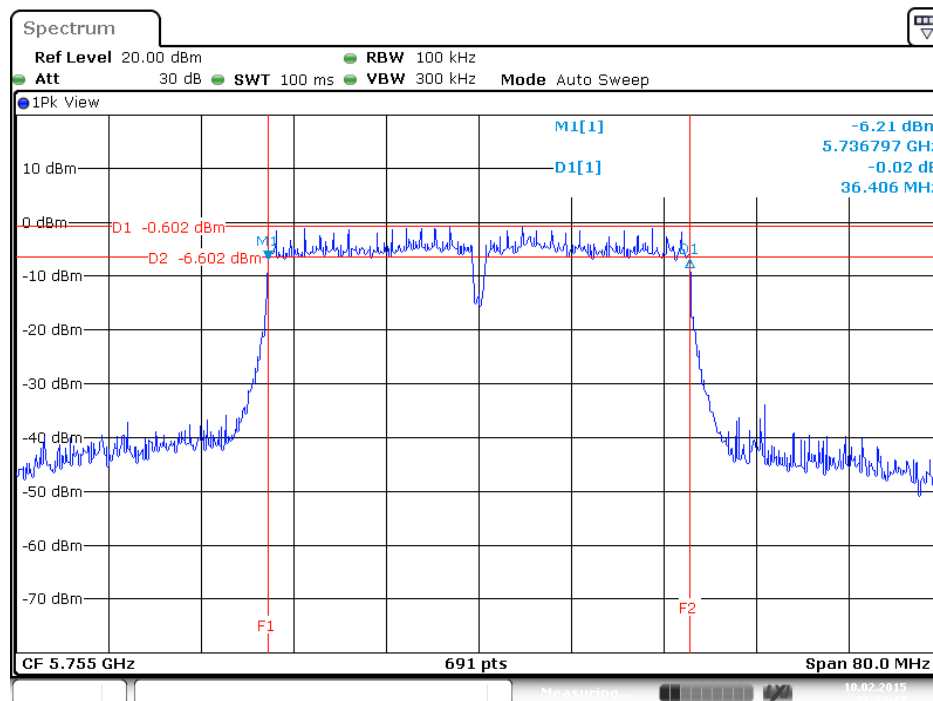
<Nss1MCS0, 1S3T, CDD>:

6dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 151 / Ant. 1



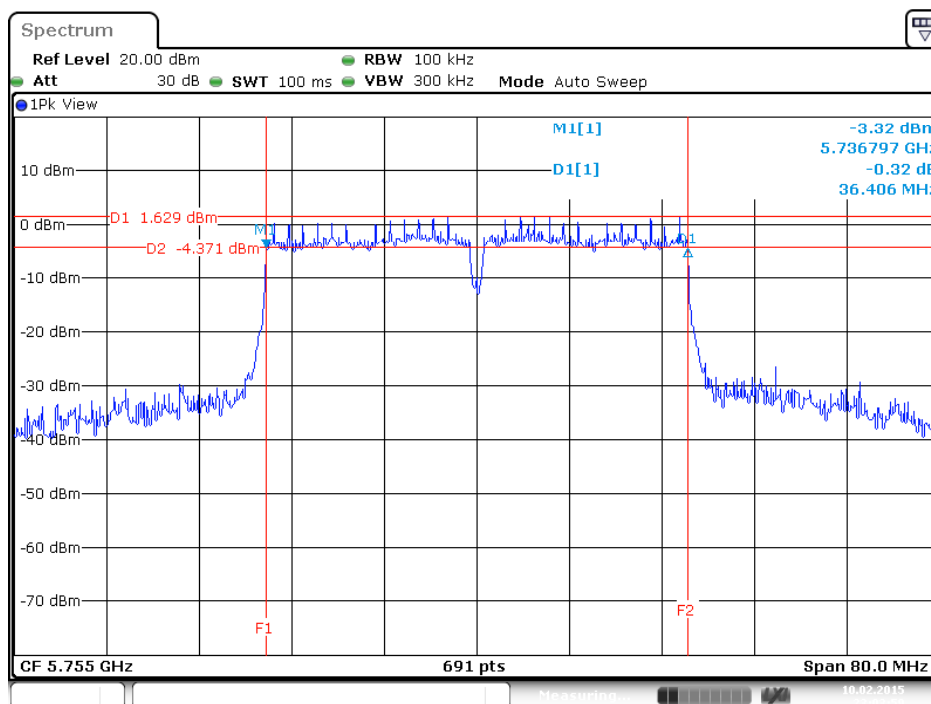
Date: 10.FEB.2015 23:04:33

6dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 151 / Ant. 2



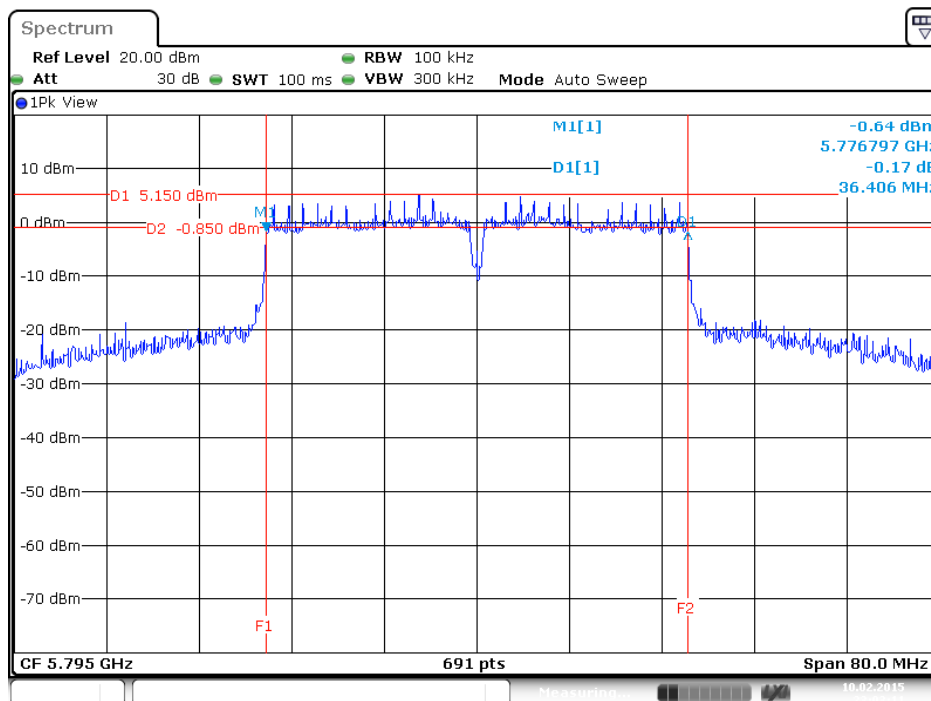
Date: 10.FEB.2015 23:04:17

6dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 151 / Ant. 3



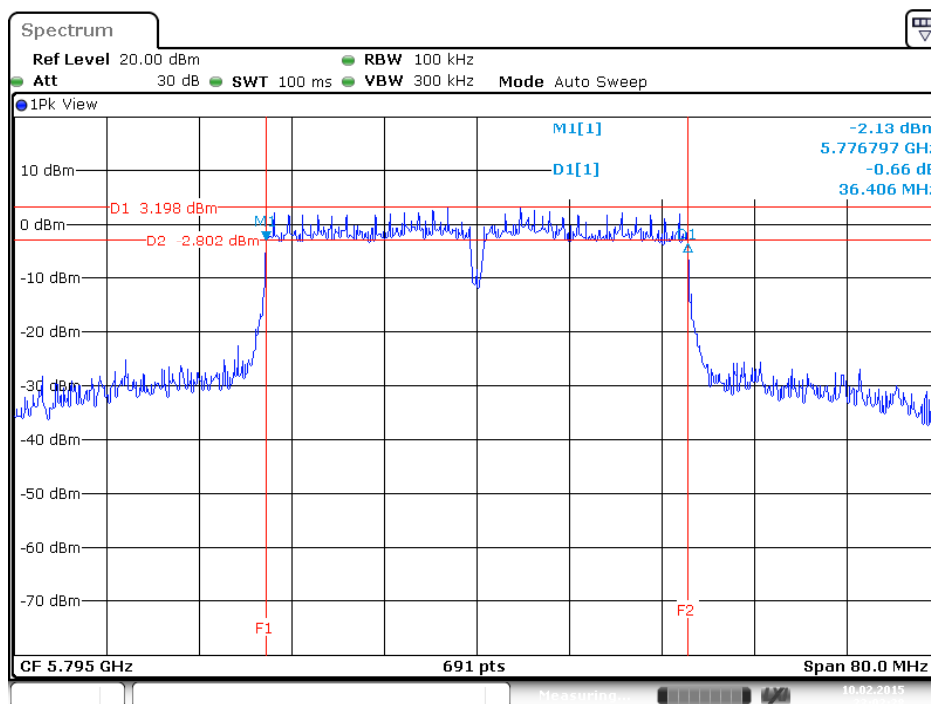
Date: 10 FEB 2015 23:03:59

6dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 159 / Ant. 1



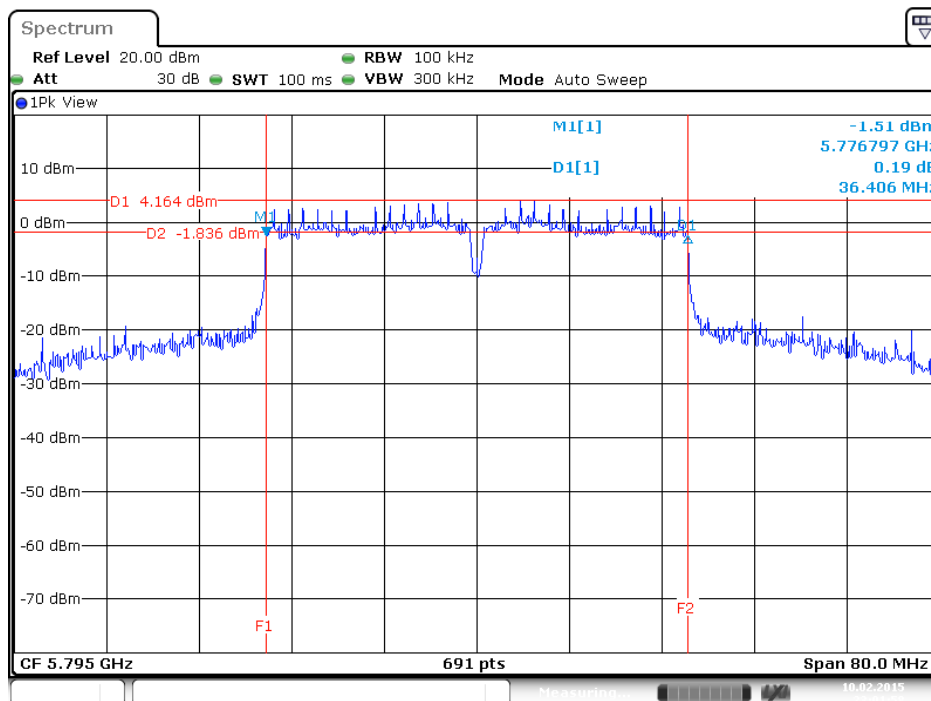
Date: 10 FEB 2015 23:03:11

6dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 159 / Ant. 2



Date: 10.FEB.2015 23:02:29

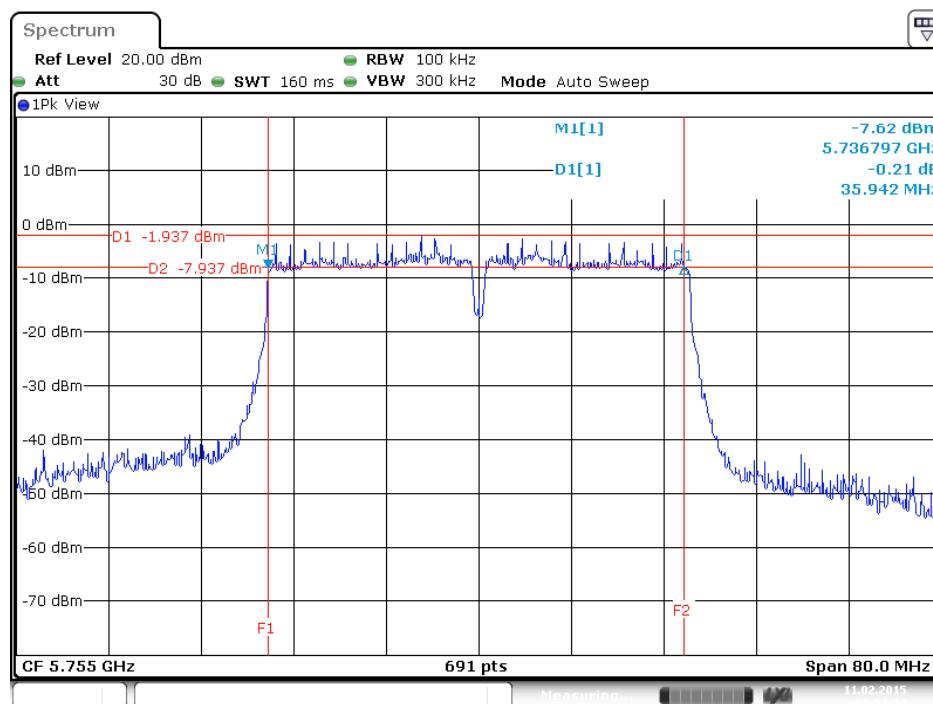
6dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 159 / Ant. 3



Date: 10.FEB.2015 23:01:58

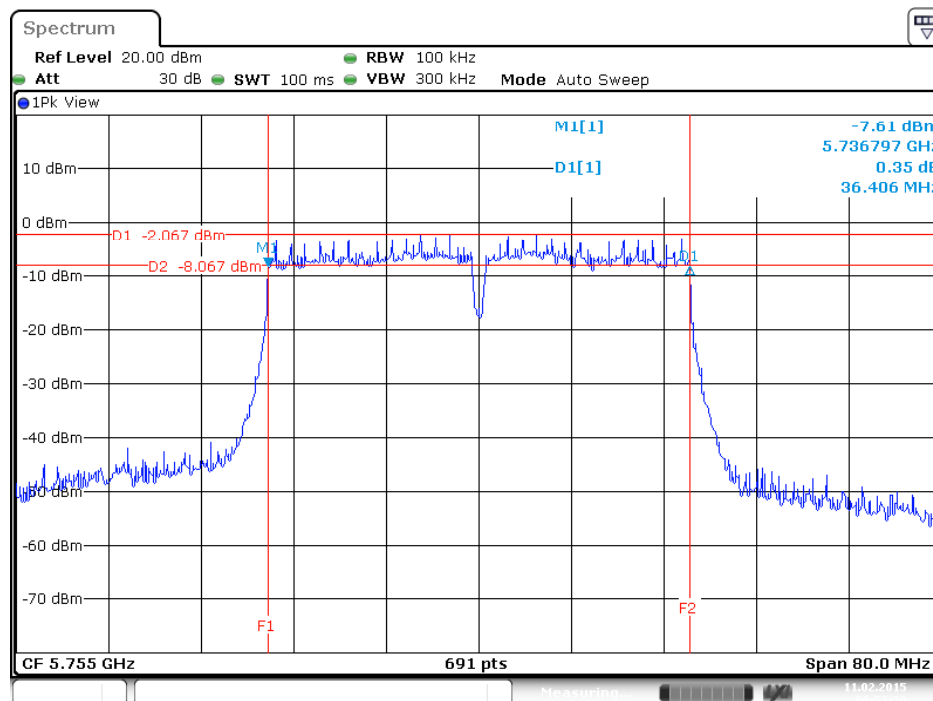
<Nss1MCS0, 1S3T, TXBF>:

6dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 151 / Ant. 1



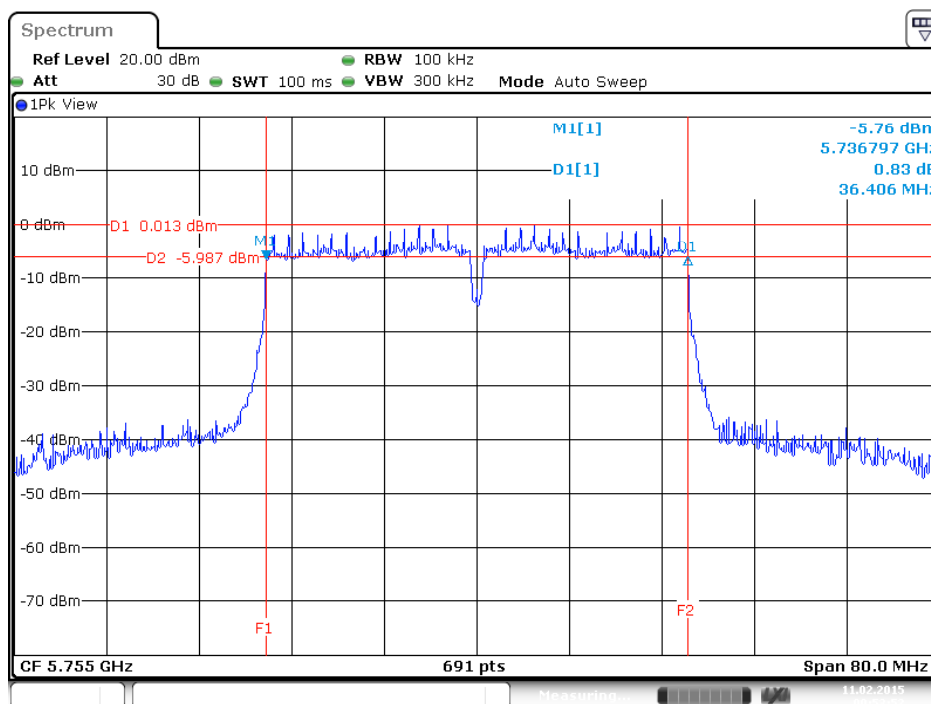
Date: 11.FEB.2015 00:52:33

6dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 151 / Ant. 2



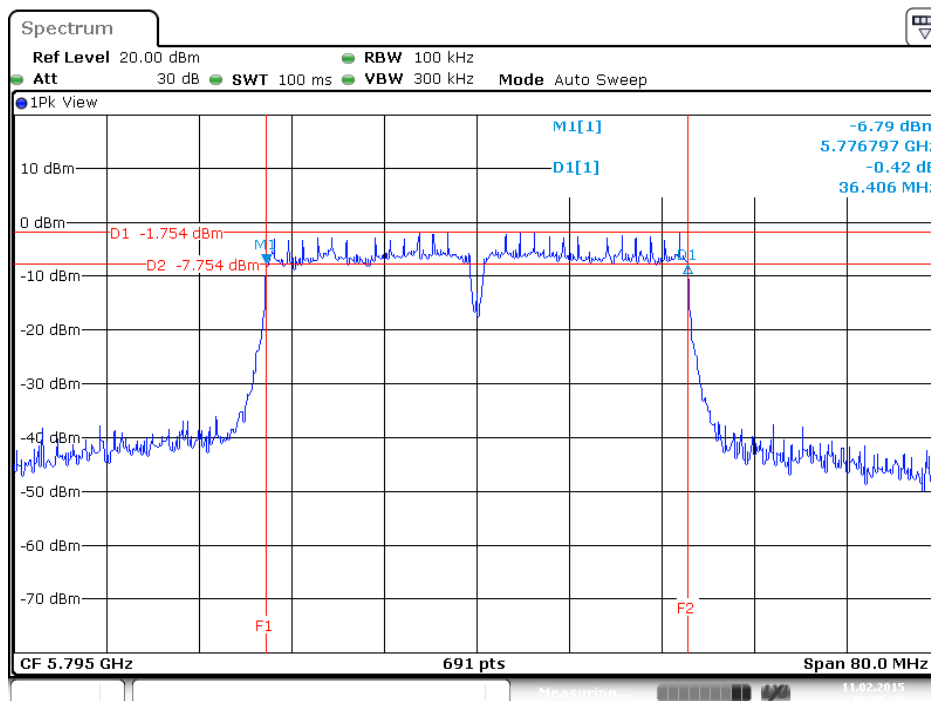
Date: 11.FEB.2015 00:53:20

6dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 151 / Ant. 3



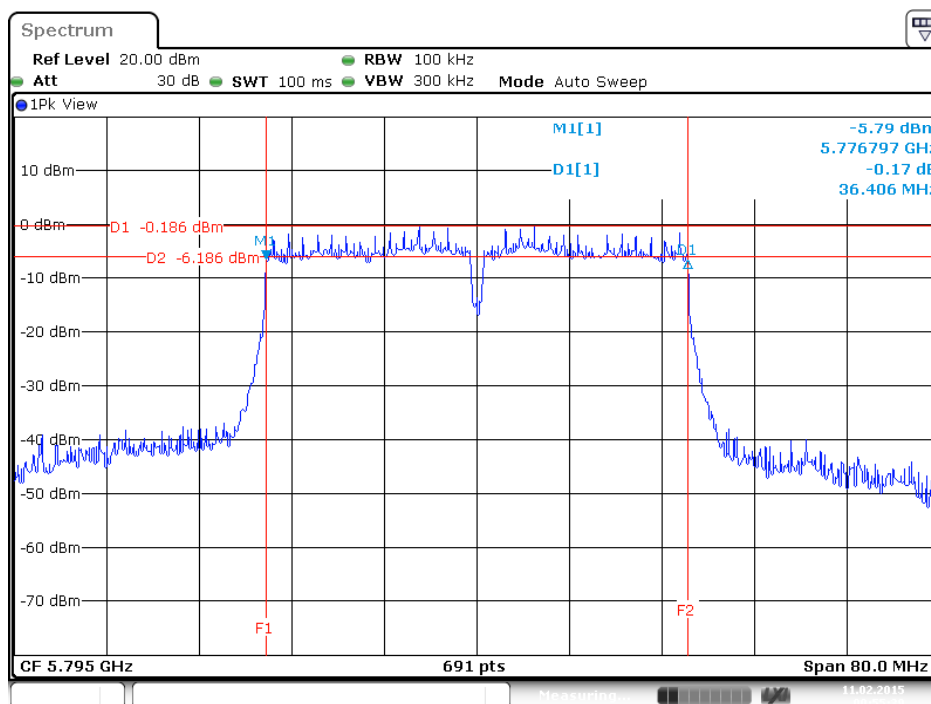
Date: 11.FEB.2015 00:53:51

6dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 159 / Ant. 1



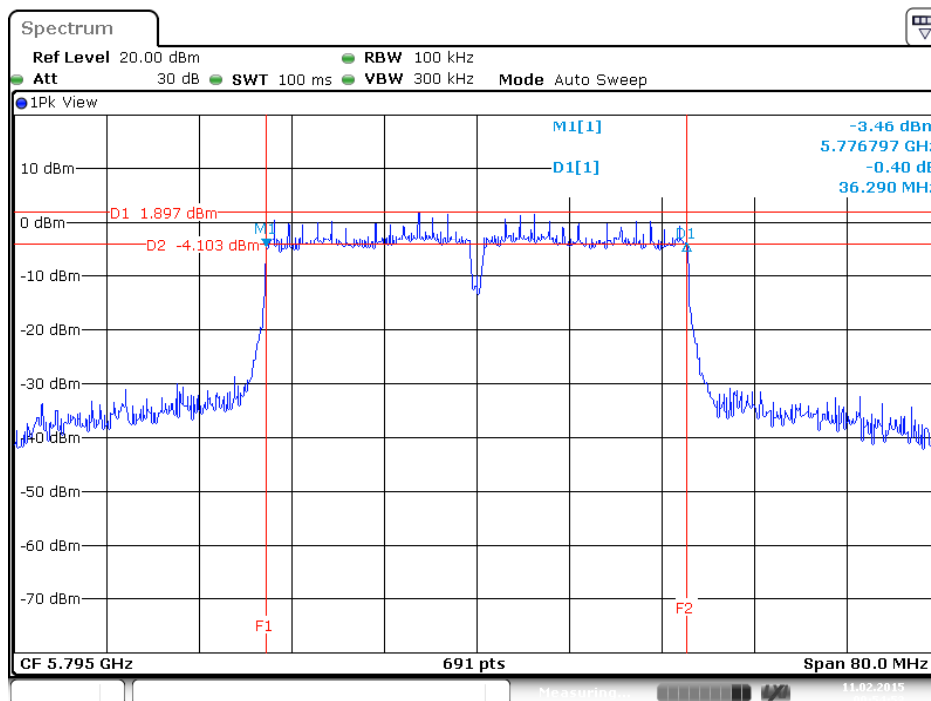
Date: 11.FEB.2015 00:56:25

6dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 159 / Ant. 2



Date: 11.FEB.2015 00:55:39

6dB Bandwidth Plot on Configuration IEEE 802.11ac 40MHz / CH 159 / Ant. 3



Date: 11.FEB.2015 00:54:54

Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Configuration	802.11ac 80MHz
Duty Cycle	<Nss1MCS0, Ant. 1>: 95.45% <Nss1MCS0, 1S3T, CDD>: 95.10% <Nss1MCS0, 1S3T, TXBF>: 95.10%		

Configuration IEEE 802.11ac 80MHz

<Nss1MCS0, Ant. 1>

Channel	Frequency	6dB Bandwidth (MHz)	Max. Limit (kHz)	Result
155	5775 MHz	75.36	≥ 500	Complies

<Nss1MCS0, 1S3T, CDD>

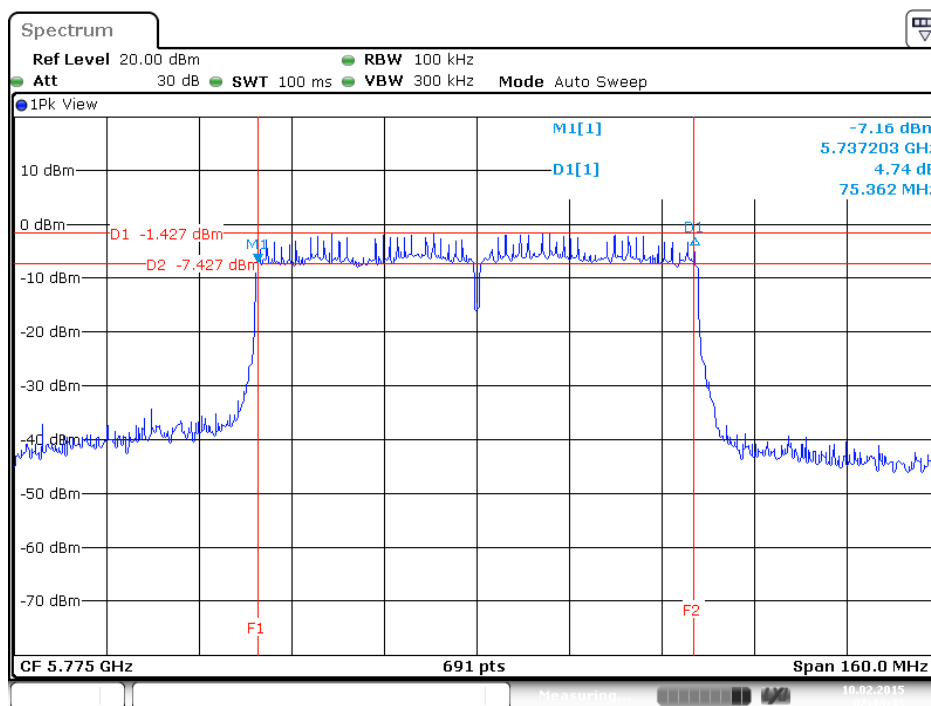
Channel	Frequency	6dB Bandwidth (MHz)			Max. Limit (kHz)	Result
		Ant. 1	Ant. 2	Ant. 3		
155	5775 MHz	75.13	76.06	75.83	≥ 500	Complies

<Nss1MCS0, 1S3T, TXBF>

Channel	Frequency	6dB Bandwidth (MHz)			Max. Limit (kHz)	Result
		Ant. 1	Ant. 2	Ant. 3		
155	5775 MHz	75.59	75.59	75.36	≥ 500	Complies

<Nss1MCS0, Ant. 1>:

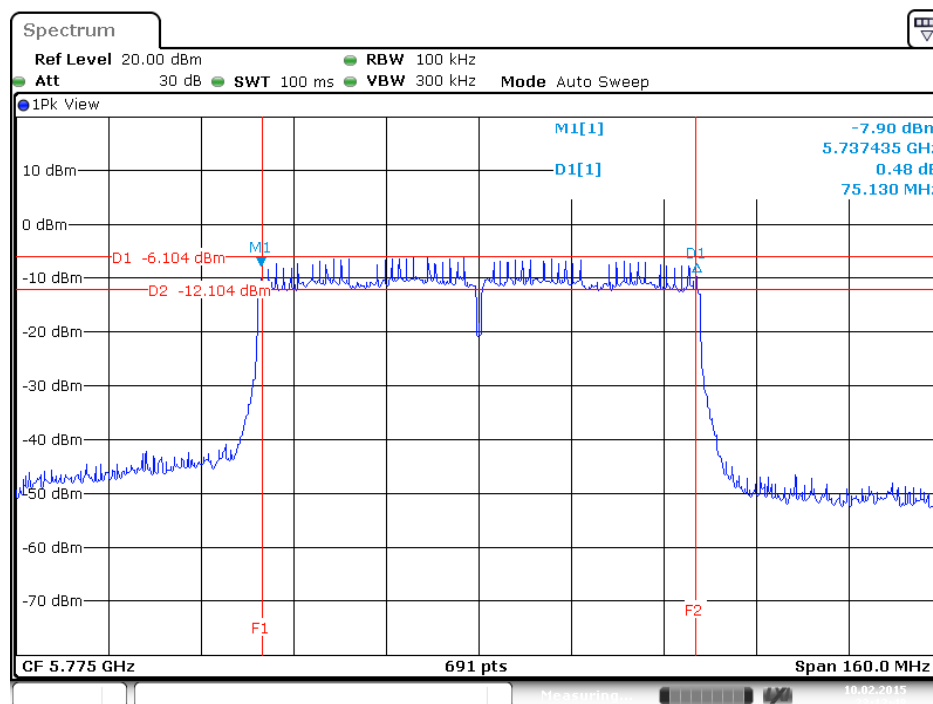
6dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 155 / Ant. 1



Date: 10 FEB 2015 02:13:43

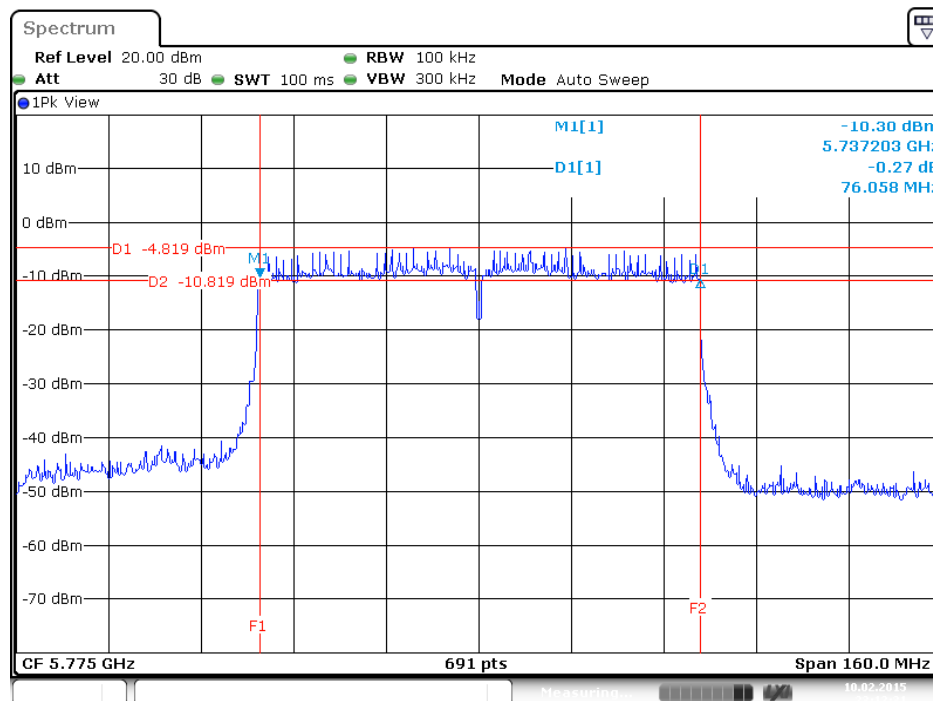
<Nss1MCS0, 1S3T, CDD>:

6dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 155 / Ant. 1



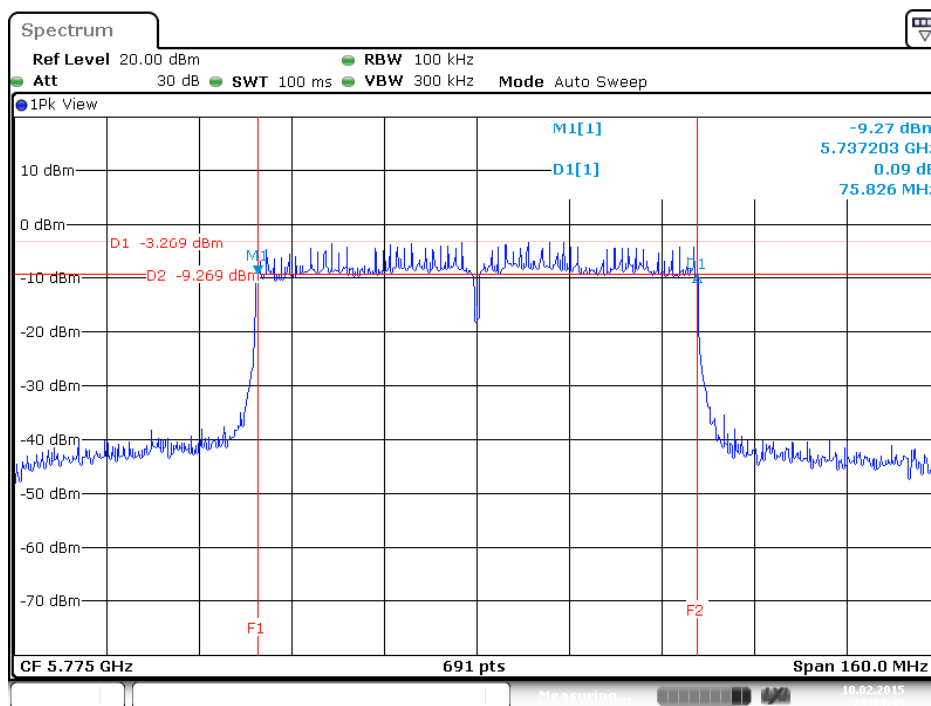
Date: 10 FEB 2015 23:12:48

6dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 155 / Ant. 2



Date: 10 FEB 2015 23:12:31

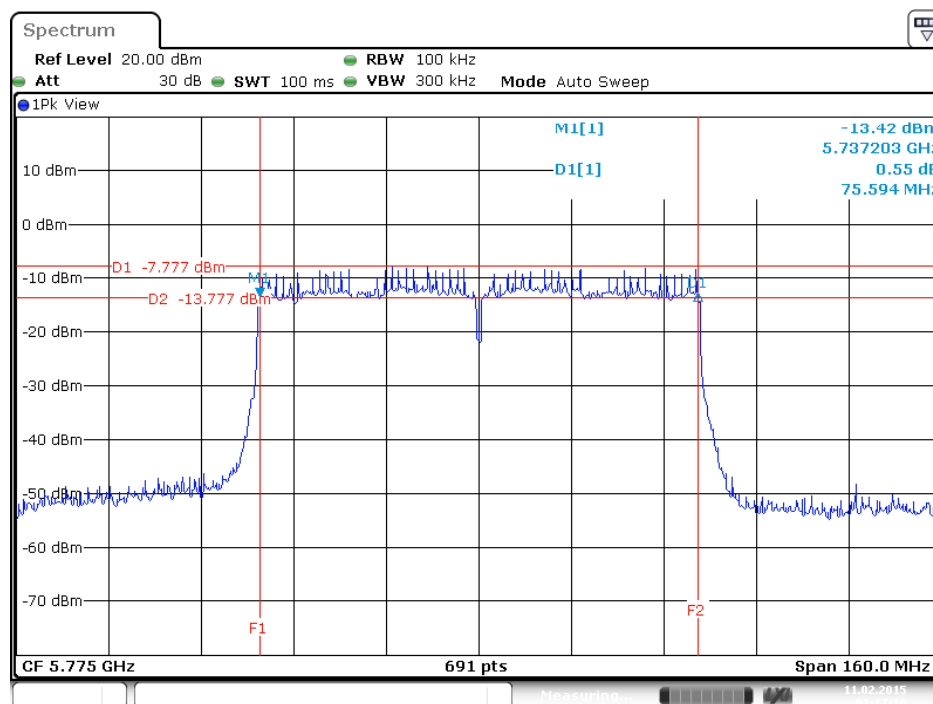
6dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 155 / Ant. 3



Date: 10 FEB 2015 23:13:43

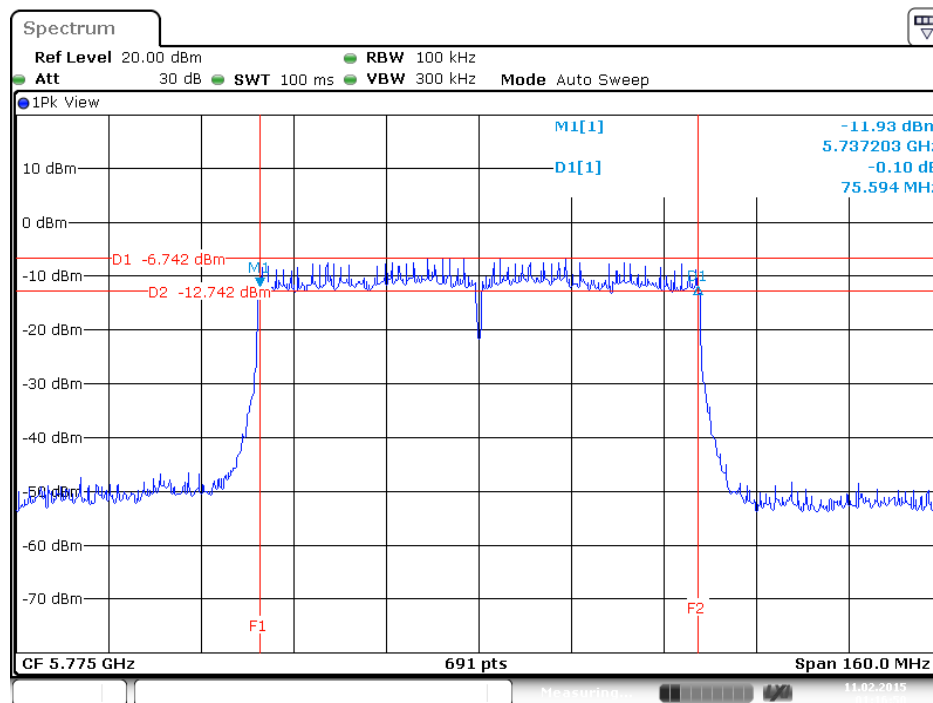
<Nss1MCS0, 1S3T, TXBF>:

6dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 155 / Ant. 1



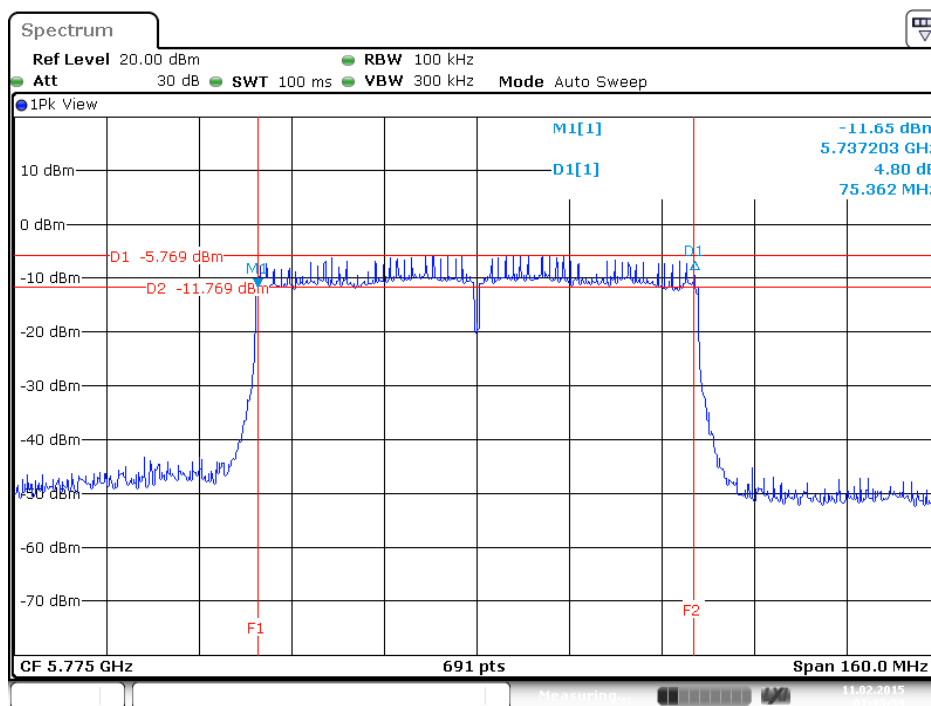
Date: 11.FEB.2015 01:17:10

6dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 155 / Ant. 2



Date: 11.FEB.2015 01:16:50

6dB Bandwidth Plot on Configuration IEEE 802.11ac 80MHz / CH 155 / Ant. 3



Date: 11.FEB.2015 01:15:59

3.3 Maximum Conducted Output Power Measurement

3.3.1 Limit

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 125mW (21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
	v	Indoor Access Point	1 Watt (30 dBm)
		Mobile and Portable client device	250mW (24 dBm)
U-NII-2A	v	---	250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	v	---	250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	v	---	1 Watt (30 dBm)

Note: *B is the 26 dB emission bandwidth in megahertz

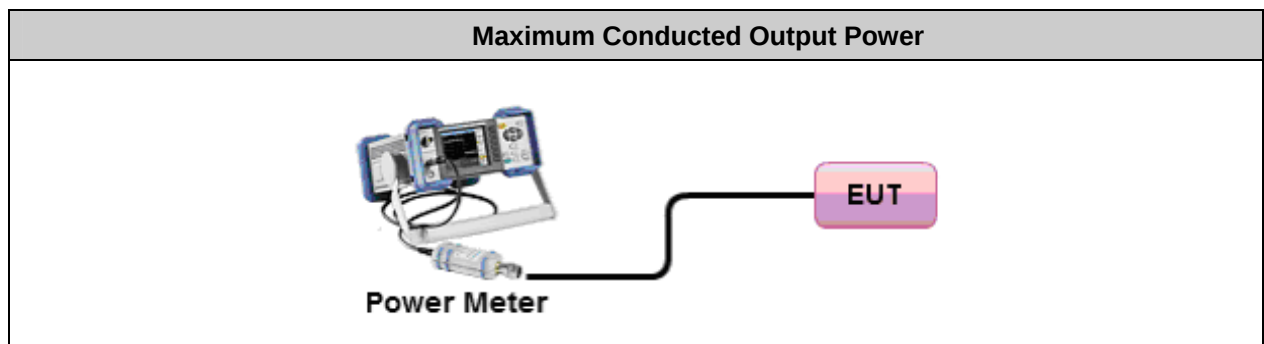
3.3.2 Measuring Instruments and Setting

Please refer to section 4 of equipments list in this report. The following table is the setting of Power Meter

Power Meter Parameter	Setting
Filter No.	Auto
Measurement time	0.135 s ~ 26 s
Power Sensor	MA2411B

3.3.3 Test Procedures

1. Test was performed in accordance with Measurement of Digital Transmission Systems Operating under KDB789033 D02 General UNII Test Procedures New Rules v01, in section "Maximum conducted output power Method (3)", 06/06/2014
2. The average power sensor was used on the output port of the EUT. A power meter was used to read the response of the average power sensor to get the all on time transmission. Record the average power level.
3. When measuring maximum conducted output power with multiple antenna systems, add every result of the values by mathematic formula.
4. Adjust the measurement in dBm by adding 10 log(1/x) where x is the duty cycle. Record the average power level.

3.3.4 Test Setup Layout**3.3.5 Test Deviation**

There is no deviation with the original standard.

3.3.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.3.7 Test Result for Maximum Conducted Output Power

Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Configuration	802.11a
Duty Cycle	<6Mbps, Ant. 1 >: 99.04% <6Mbps, 1S3T, CDD>: 98.89%		

Configuration IEEE 802.11a

<6Mbps, Ant. 1 >

Channel	Frequency	Conducted Power (dBm)		Antenna Gain	Max. Limit (dBm)	Result
		Ant. 1	Total			
36	5180 MHz	17.12	17.16	5.86	30.00	Complies
40	5200 MHz	19.14	19.18	5.93	30.00	Complies
48	5240 MHz	23.45	23.49	6.21	29.79	Complies
149	5745 MHz	19.58	19.62	5.65	30.00	Complies
157	5785 MHz	20.05	20.09	4.93	30.00	Complies
165	5825 MHz	18.14	18.18	4.18	30.00	Complies

Note:

5180 MHz= Antenna Gain= 5.86dBi <6dBi, so the limit doesn't reduce.

5200 MHz= Antenna Gain= 5.93dBi <6dBi, so the limit doesn't reduce.

5240 MHz= Antenna Gain= 6.21dBi >6dBi, so Limit=30-(6.21-6)=29.79dBm

5745 MHz= Antenna Gain= 5.65dBi <6dBi, so the limit doesn't reduce.

5785 MHz= Antenna Gain= 4.93dBi <6dBi, so the limit doesn't reduce.

5825 MHz= Antenna Gain= 4.18dBi <6dBi, so the limit doesn't reduce.

<6Mbps, 1S3T, CDD>

Channel	Frequency	Conducted Power (dBm)				Antenna Gain	Max. Limit (dBm)	Result
		Ant. 1	Ant. 2	Ant. 3	Total			
36	5180 MHz	17.14	16.68	18.30	22.25	6.10	29.90	Complies
40	5200 MHz	16.53	16.23	17.98	21.80	6.34	29.66	Complies
48	5240 MHz	19.97	19.73	21.51	25.30	6.36	29.64	Complies
149	5745 MHz	18.88	18.19	20.61	24.17	5.65	30.00	Complies
157	5785 MHz	20.07	19.58	22.19	25.59	4.93	30.00	Complies
165	5825 MHz	19.17	18.52	20.96	24.50	5.03	30.00	Complies

Note:

5180 MHz= Antenna Gain= 6.10dBi >6dBi, so Limit=30-(6.10-6)=29.90dBm.

5200 MHz= Antenna Gain= 6.34dBi >6dBi, so Limit=30-(6.34-6)=29.66dBm.

5240 MHz= Antenna Gain= 6.36dBi >6dBi, so Limit=30-(6.36-6)=29.64dBm.

5745 MHz= Antenna Gain= 5.65dBi <6dBi, so the limit doesn't reduce.

5785 MHz= Antenna Gain= 4.93dBi <6dBi, so the limit doesn't reduce.

5825 MHz= Antenna Gain= 5.03dBi <6dBi, so the limit doesn't reduce.

Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Configuration	802.11ac 20MHz
Duty Cycle	<Nss1MCS0, Ant. 1>: 98.97% <Nss1MCS0, 1S3T, CDD>: 98.85% <Nss1MCS0, 1S3T, TXBF>: 98.85%		

Configuration IEEE 802.11ac 20MHz

<Nss1MCS0, Ant. 1>

Channel	Frequency	Conducted Power (dBm)		Antenna Gain	Max. Limit (dBm)	Result
		Ant. 1	Total			
36	5180 MHz	17.75	17.79	5.86	30.00	Complies
40	5200 MHz	19.56	19.60	5.93	30.00	Complies
48	5240 MHz	23.26	23.30	6.21	29.79	Complies
149	5745 MHz	18.92	18.96	5.65	30.00	Complies
157	5785 MHz	20.21	20.25	4.93	30.00	Complies
165	5825 MHz	17.87	17.91	4.18	30.00	Complies

Note:

5180 MHz= Antenna Gain= 5.86dBi <6dBi, so the limit doesn't reduce.

5200 MHz= Antenna Gain= 5.93dBi <6dBi, so the limit doesn't reduce.

5240 MHz= Antenna Gain= 6.21dBi >6dBi, so Limit=30-(6.21-6)=29.79dBm

5745 MHz= Antenna Gain= 5.65dBi <6dBi, so the limit doesn't reduce.

5785 MHz= Antenna Gain= 4.93dBi <6dBi, so the limit doesn't reduce.

5825 MHz= Antenna Gain= 4.18dBi <6dBi, so the limit doesn't reduce.

<Nss1MCS0, 1S3T, CDD>

Channel	Frequency	Conducted Power (dBm)				Antenna Gain	Max. Limit (dBm)	Result
		Ant. 1	Ant. 2	Ant. 3	Total			
36	5180 MHz	16.40	16.38	18.23	21.91	6.10	29.90	Complies
40	5200 MHz	18.02	17.91	19.56	23.39	6.34	29.66	Complies
48	5240 MHz	20.09	19.88	21.56	25.40	6.36	29.64	Complies
149	5745 MHz	18.31	17.67	20.08	23.63	5.65	30.00	Complies
157	5785 MHz	19.21	18.52	21.01	24.53	4.93	30.00	Complies
165	5825 MHz	17.97	17.41	19.87	23.37	5.03	30.00	Complies

Note:

5180 MHz= Antenna Gain= 6.10dBi >6dBi, so Limit=30-(6.10-6)=29.90dBm.

5200 MHz= Antenna Gain= 6.34dBi >6dBi, so Limit=30-(6.34-6)=29.66dBm.

5240 MHz= Antenna Gain= 6.36dBi >6dBi, so Limit=30-(6.36-6)=29.64dBm.

5745 MHz= Antenna Gain= 5.65dBi <6dBi, so the limit doesn't reduce.

5785 MHz= Antenna Gain= 4.93dBi <6dBi, so the limit doesn't reduce.

5825 MHz= Antenna Gain= 5.03dBi <6dBi, so the limit doesn't reduce.

<Nss1MCS0, 1S3T, TXBF >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Result
		Ant. 1	Ant. 2	Ant. 3	Total			
36	5180 MHz	15.84	15.46	17.15	21.03	6.80	29.20	Complies
40	5200 MHz	15.53	15.38	17.28	20.97	6.96	29.04	Complies
48	5240 MHz	17.91	17.67	19.28	23.17	7.07	28.93	Complies
149	5745 MHz	17.93	17.38	19.82	23.33	7.25	28.75	Complies
157	5785 MHz	15.37	14.62	16.68	20.46	6.80	29.20	Complies
165	5825 MHz	15.84	15.12	17.56	21.12	6.68	29.32	Complies

Note:

$$\begin{aligned}
 5180 \text{ MHz} &= \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ant}}} \left\{ \sum_{k=1}^{N_{\text{freq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.80 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (6.80 - 6) = 29.20 \text{ dBm}. \\
 5200 \text{ MHz} &= \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ant}}} \left\{ \sum_{k=1}^{N_{\text{freq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.96 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (6.96 - 6) = 29.04 \text{ dBm}. \\
 5240 \text{ MHz} &= \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ant}}} \left\{ \sum_{k=1}^{N_{\text{freq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.07 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (7.07 - 6) = 28.93 \text{ dBm}. \\
 5745 \text{ MHz} &= \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ant}}} \left\{ \sum_{k=1}^{N_{\text{freq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.25 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (7.25 - 6) = 28.75 \text{ dBm}. \\
 5785 \text{ MHz} &= \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ant}}} \left\{ \sum_{k=1}^{N_{\text{freq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.80 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (6.80 - 6) = 29.20 \text{ dBm}. \\
 5825 \text{ MHz} &= \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ant}}} \left\{ \sum_{k=1}^{N_{\text{freq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.68 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (6.68 - 6) = 29.32 \text{ dBm}.
 \end{aligned}$$

Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Configuration	802.11ac 40MHz
Duty Cycle	<Nss1MCS0, Ant. 1>: 97.84% <Nss1MCS0, 1S3T, CDD>: 98.00% <Nss1MCS0, 1S3T, TXBF>: 98.00%		

Configuration IEEE 802.11ac 40MHz

<Nss1MCS0, Ant. 1>

Channel	Frequency	Conducted Power (dBm)		Antenna Gain	Max. Limit (dBm)	Result
		Ant. 1	Total			
38	5190 MHz	17.49	17.58	5.90	30.00	Complies
46	5230 MHz	21.56	21.65	6.07	29.93	Complies
151	5755 MHz	17.15	17.24	5.79	30.00	Complies
159	5795 MHz	20.28	20.37	5.12	30.00	Complies

Note:

5190 MHz= Antenna Gain= 5.90dBi <6dBi, so the limit doesn't reduce.

5230 MHz= Antenna Gain= 6.07dBi >6dBi, so Limit=30-(6.07-6)=29.93dBm.

5755 MHz= Antenna Gain= 5.79dBi <6dBi, so the limit doesn't reduce.

5795 MHz= Antenna Gain= 5.12dBi <6dBi, so the limit doesn't reduce.

<Nss1MCS0, 1S3T, CDD>

Channel	Frequency	Conducted Power (dBm)				Antenna Gain	Max. Limit (dBm)	Result
		Ant. 1	Ant. 2	Ant. 3	Total			
38	5190 MHz	16.43	16.03	17.98	21.76	6.04	29.96	Complies
46	5230 MHz	19.47	19.38	21.14	24.94	6.44	29.56	Complies
151	5755 MHz	17.43	16.61	19.22	22.75	5.79	30.00	Complies
159	5795 MHz	20.67	19.96	22.20	25.91	5.20	30.00	Complies

Note:

5190 MHz= Antenna Gain= 6.04dBi >6dBi, so Limit=30-(6.04-6)=29.96dBm.

5230 MHz= Antenna Gain= 6.44dBi >6dBi, so Limit=30-(6.44-6)=29.56dBm.

5755 MHz= Antenna Gain= 5.79dBi <6dBi, so the limit doesn't reduce.

5795 MHz= Antenna Gain= 5.20dBi <6dBi, so the limit doesn't reduce.

<Nss1MCS0, 1S3T, TXBF >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Result
		Ant. 1	Ant. 2	Ant. 3	Total			
38	5190 MHz	16.18	15.89	17.63	21.50	6.82	29.18	Complies
46	5230 MHz	18.17	18.08	19.78	23.61	7.18	28.82	Complies
151	5755 MHz	15.82	14.87	17.30	20.97	7.68	28.32	Complies
159	5795 MHz	16.94	16.58	18.78	22.41	7.07	28.93	Complies

Note:

$$\begin{aligned}
 5190 \text{ MHz} &= \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{AQ}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.82 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (6.82 - 6) = 29.18 \text{ dBm}. \\
 5230 \text{ MHz} &= \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{AQ}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.18 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (7.18 - 6) = 28.82 \text{ dBm}. \\
 5755 \text{ MHz} &= \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{AQ}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.68 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (7.68 - 6) = 28.32 \text{ dBm}. \\
 5795 \text{ MHz} &= \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{AQ}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.07 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (7.07 - 6) = 28.93 \text{ dBm}.
 \end{aligned}$$

Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Configuration	802.11ac 80MHz
Duty Cycle	<Nss1MCS0, Ant. 1>: 95.45% <Nss1MCS0, 1S3T, CDD>: 95.10% <Nss1MCS0, 1S3T, TXBF>: 95.10%		

Configuration IEEE 802.11ac 80MHz

<Nss1MCS0, Ant. 1>

Channel	Frequency	Conducted Power (dBm)		Antenna Gain	Max. Limit (dBm)	Result
		Ant. 1	Total			
42	5210 MHz	16.01	16.21	5.94	30.00	Complies
155	5775 MHz	17.84	18.04	5.19	30.00	Complies

Note:

5190 MHz= Antenna Gain= 5.94dBi <6dBi, so the limit doesn't reduce.

5775 MHz= Antenna Gain= 5.19dBi <6dBi, so the limit doesn't reduce.

<Nss1MCS0, 1S3T, CDD>

Channel	Frequency	Conducted Power (dBm)				Antenna Gain	Max. Limit (dBm)	Result
		Ant. 1	Ant. 2	Ant. 3	Total			
42	5210 MHz	15.04	14.83	16.69	20.59	6.02	29.98	Complies
155	5775 MHz	15.87	15.61	17.54	21.42	5.19	30.00	Complies

Note:

5210 MHz= Antenna Gain= 6.02dBi >6dBi, so Limit=30-(6.02-6)=29.98dBm.

5775 MHz= Antenna Gain= 5.19dBi <6dBi, so the limit doesn't reduce.

<Nss1MCS0, 1S3T, TXBF >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Result
		Ant. 1	Ant. 2	Ant. 3	Total			
42	5210 MHz	13.55	12.96	14.83	18.84	6.72	29.28	Complies
155	5775 MHz	13.65	12.93	15.15	19.00	7.28	28.72	Complies

Note:

$$5210 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{AQ}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.72 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (6.72 - 6) = 29.28 \text{ dBm}.$$

$$5775 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{AQ}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.28 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (7.28 - 6) = 28.72 \text{ dBm}.$$

3.4 Power Spectral Density Measurement

3.4.1 Limit

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	17dBm/MHz
		Fixed point-to-point Access Point	
	v	Indoor Access Point	
		Mobile and Portable client device	11dBm/MHz
U-NII-2A	v	---	11dBm/MHz
U-NII-2C	v	---	11dBm/MHz
U-NII-3	v	---	30 dBm/500kHz (=23.01 dBm/100kHz)

Note: $23.01\text{dBm}/100\text{kHz} = 30\text{dBm}/500\text{kHz} - 10\log\left(\frac{500\text{kHz}}{100\text{kHz}}\right)$

3.4.2 Measuring Instruments and Setting

Please refer to section 4 of equipments list in this report. The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	1 MHz
VBW	≥ 3 MHz
Detector	RMS
Trace	Average
Sweep Time	Auto, trigger set to "free run"
Trace Average	100 times

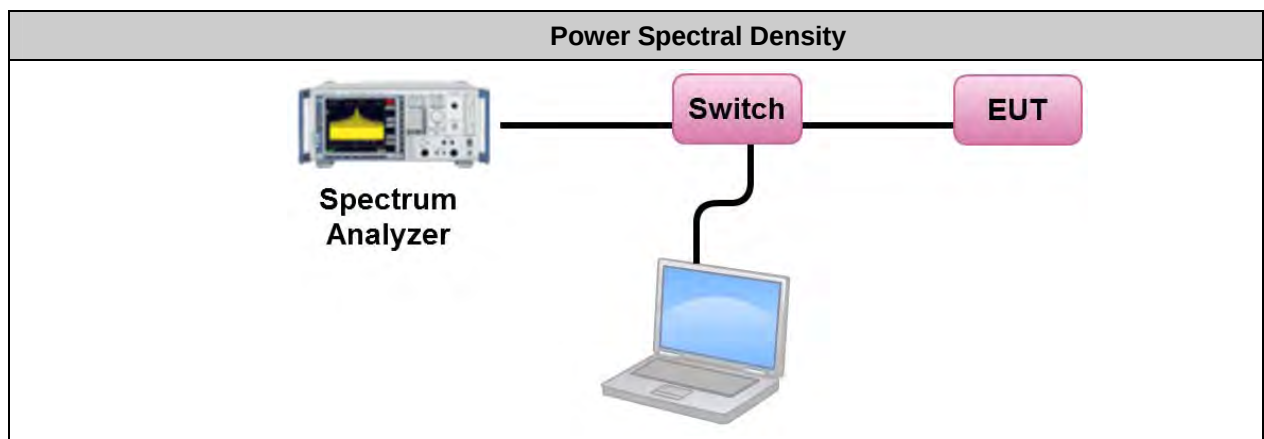
For U-NII-3 band:

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	100kHz
VBW	≥ 3 RBW
Detector	RMS
Trace	Average
Sweep Time	Auto, trigger set to "free run"
Trace average	100 times

3.4.3 Test Procedures

1. The transmitter output (antenna port) was connected RF switch to the spectrum analyzer.
2. For U-NII-1, U-NII-2A & U-NII-2C Bands, PSD Measure was performed in accordance with KDB789033 D02 General UNII Test Procedures New Rules v01, in section "Maximum conducted output power (E)(2)(d) Method SA-2", 06/06/2014
3. For U-NII-3 Band, PSD Measure was performed in accordance with KDB789033 D02 General UNII Test Procedures New Rules v01, in section "Maximum Power Spectral Density (F)(5)", 10/31/2013
4. Multiple antenna systems was performed in accordance 662911 D01 Multiple Transmitter Output v02r01 in-Band Power Spectral Density (PSD) Measurements (a) Measure and sum the spectra across the outputs (bin-by-bin summing).
5. When measuring first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3 and so on up to the Nth output to obtain the value for the first
6. frequency bin of the summed spectrum. The summed spectrum value for each of the other frequency bins is computed in the same way.

3.4.4 Test Setup Layout



3.4.5 Test Deviation

There is no deviation with the original standard.

3.4.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.4.7 Test Result of Power Spectral Density

Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Configuration	802.11a
Duty Cycle	<6Mbps, Ant. 1 >: 99.04% <6Mbps, 1S3T, CDD>: 98.89%		

Configuration IEEE 802.11a for U-NII-1 band

<6Mbps, Ant. 1 >

Channel	Frequency	Power Density (dBm/MHz)	Duty Factor	Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)	Result
36	5180 MHz	3.54	0.04	3.58	5.86	17.00	Complies
40	5200 MHz	5.73	0.04	5.77	5.93	17.00	Complies
48	5240 MHz	10.15	0.04	10.19	6.21	16.79	Complies

Note:

$$5180 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 5.86 \text{ dBi} < 6 \text{ dBi, so the limit doesn't reduce.}$$

$$5200 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 5.93 \text{ dBi} < 6 \text{ dBi, so the limit doesn't reduce.}$$

$$5240 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.21 \text{ dBi} > 6 \text{ dBi, so Limit} = 17 - (6.21 - 6) = 16.79 \text{ dBm/MHz.}$$

<6Mbps, 1S3T, CDD>

Channel	Frequency	Power Density (dBm/MHz)	Duty Factor	Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)	Result
36	5180 MHz	8.79	0.05	8.84	6.80	16.20	Complies
40	5200 MHz	8.30	0.05	8.35	6.96	16.04	Complies
48	5240 MHz	12.20	0.05	12.25	7.07	15.93	Complies

Note:

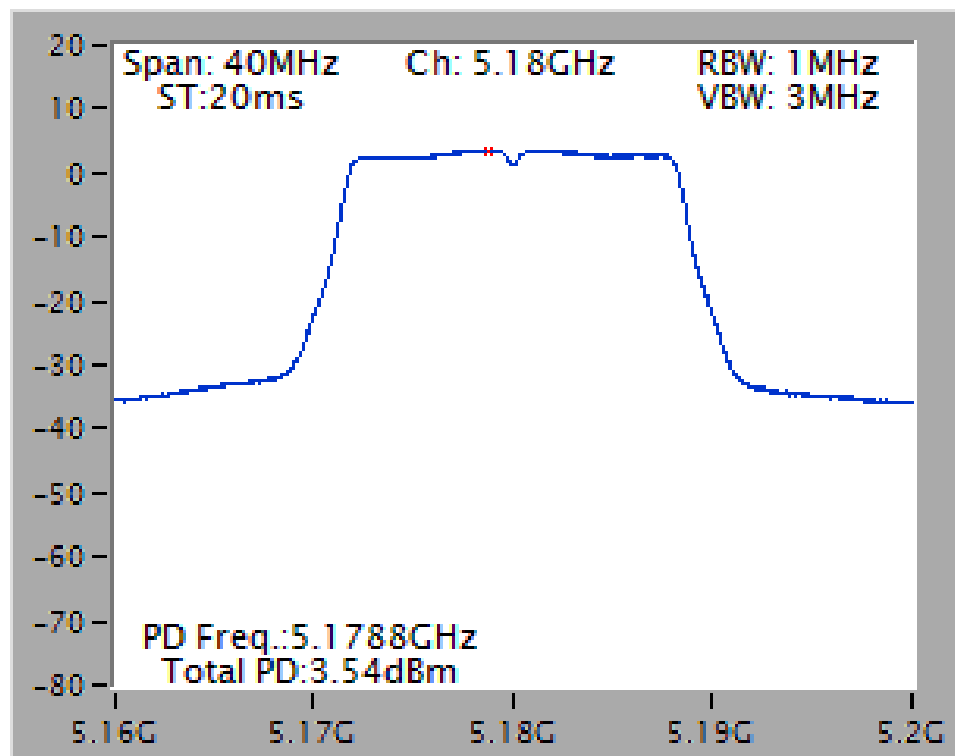
$$5180 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.80 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 17 - (6.80 - 6) = 16.20 \text{ dBm/MHz}.$$

$$5200 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.96 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 17 - (6.96 - 6) = 16.04 \text{ dBm/MHz}.$$

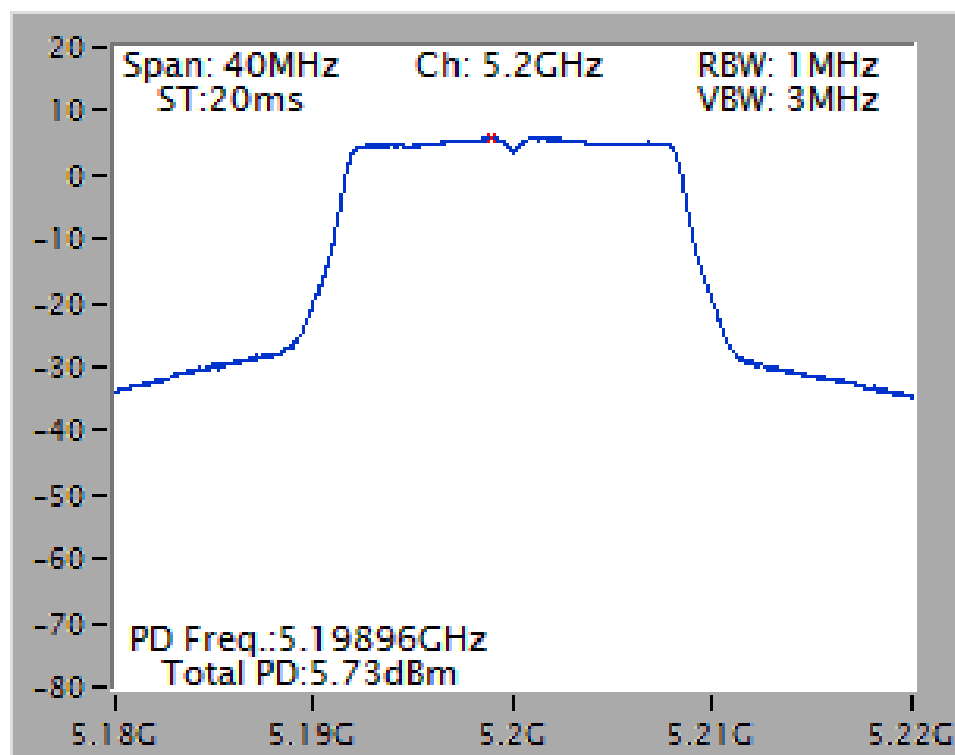
$$5240 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.07 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 17 - (7.07 - 6) = 15.93 \text{ dBm/MHz}.$$

<6Mbps, ANT1 >:

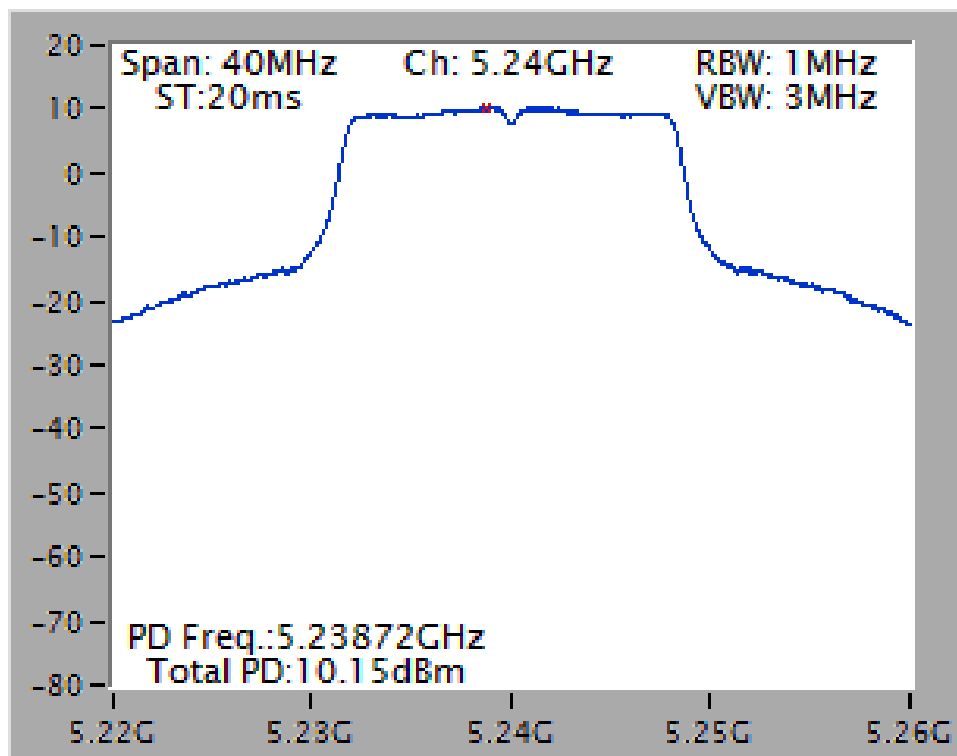
Power Density Plot on Configuration IEEE 802.11a / CH 36 / Ant. 1



Power Density Plot on Configuration IEEE 802.11a / CH 40 / Ant. 1

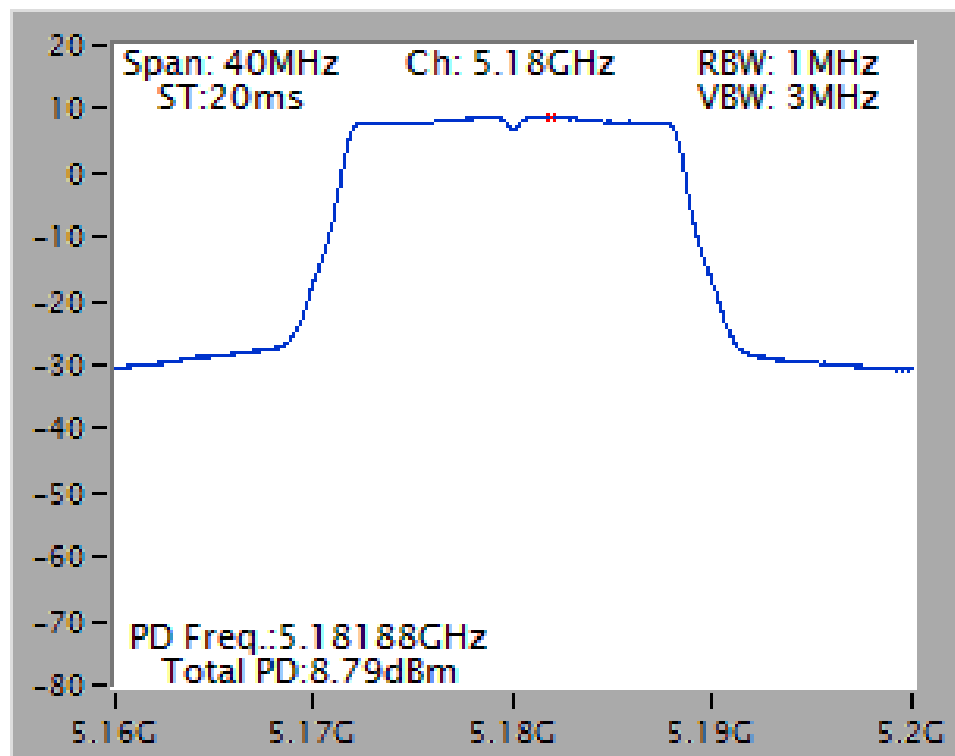


Power Density Plot on Configuration IEEE 802.11a / CH 48 / Ant. 1

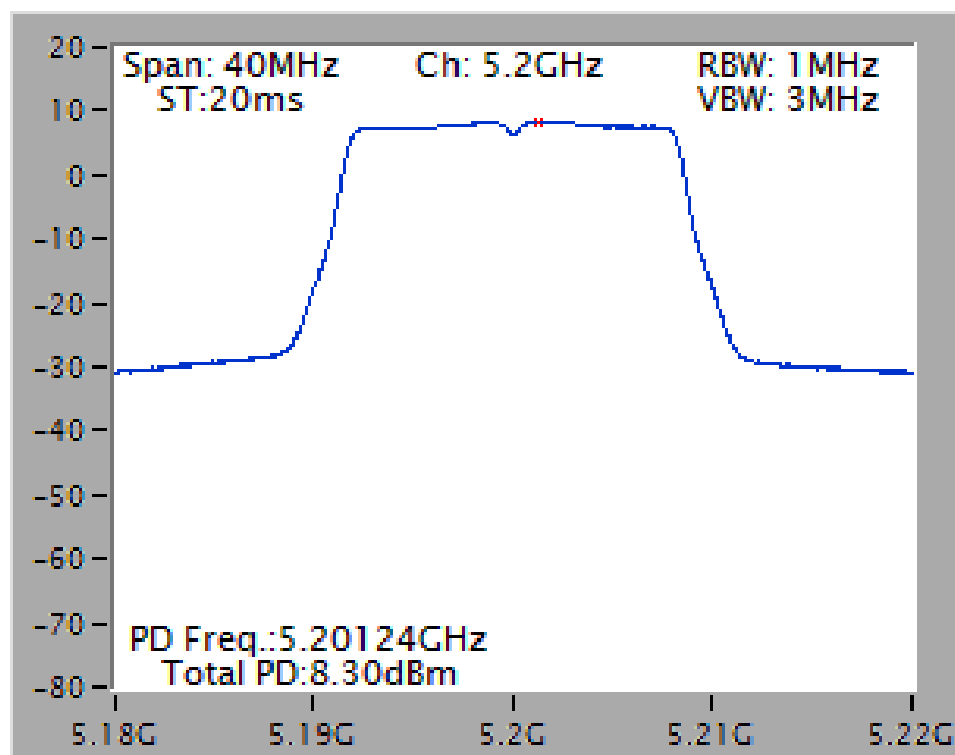


<6Mbps, 1S3T, CDD>:

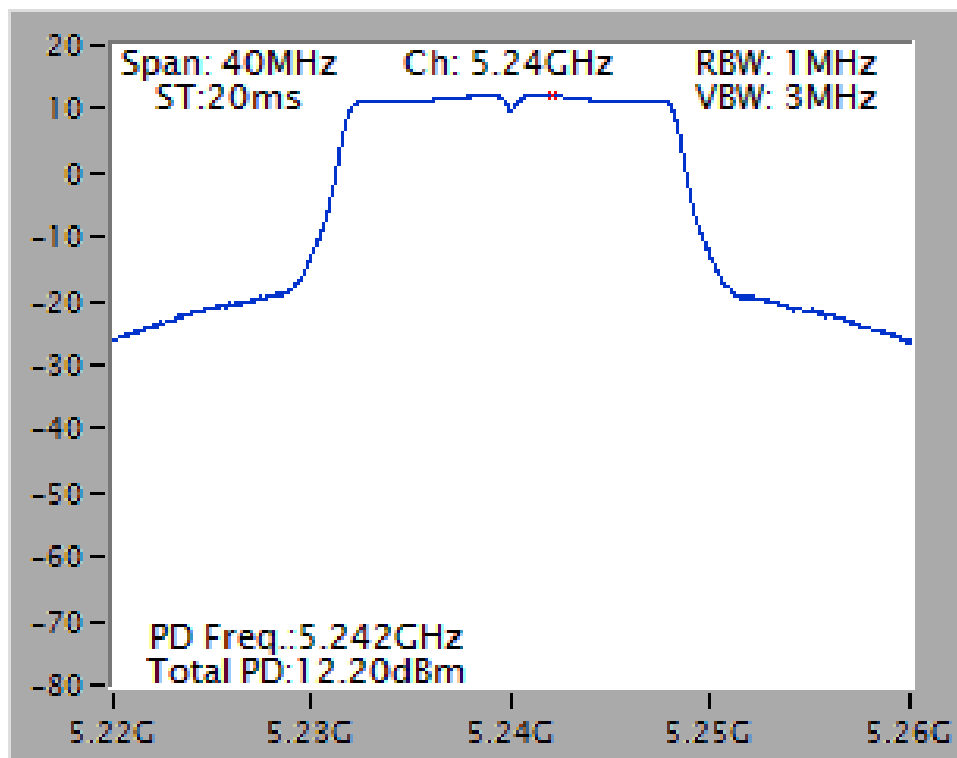
Power Density Plot on Configuration IEEE 802.11a / CH 36 / Ant. 1+2+3



Power Density Plot on Configuration IEEE 802.11a / CH 40 / Ant. 1+2+3



Power Density Plot on Configuration IEEE 802.11a / CH 48 / Ant. 1+2+3



Configuration IEEE 802.11a for U-NII-3 band

<6Mbps, ANT1 >

Channel	Frequency	Power Density (dBm/MHz)	10log (500kHz /RBW) Factor (dB)	Power Density (dBm/500kHz)	Duty Factor	Total Power Density (dBm/500kHz)	Directional Gain	Power Density Limit (dBm/500kHz)	Result
149	5745 MHz	6.21	-3.01	3.20	0.04	3.24	5.65	30.00	Complies
157	5785 MHz	6.47	-3.01	3.46	0.04	3.50	4.93	30.00	Complies
165	5825 MHz	4.78	-3.01	1.77	0.04	1.81	4.18	30.00	Complies

Note:

$$5745 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 5.65\text{dBi} < 6\text{dBi}, \text{ so the limit doesn't reduce.}$$

$$5785 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 4.93\text{dBi} < 6\text{dBi}, \text{ so the limit doesn't reduce.}$$

$$5825 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 4.18\text{dBi} < 6\text{dBi}, \text{ so the limit doesn't reduce.}$$

<6Mbps, 1S3T, CDD>

Channel	Frequency	Power Density (dBm/MHz)	10log (500kHz /RBW) Factor (dB)	Power Density (dBm/500kHz)	Duty Factor	Total Power Density (dBm/500kHz)	Directional Gain	Power Density Limit (dBm/500kHz)	Result
149	5745 MHz	10.56	-3.01	7.55	0.05	7.60	7.25	28.75	Complies
157	5785 MHz	11.56	-3.01	8.55	0.05	8.60	6.80	29.20	Complies
165	5825 MHz	11.18	-3.01	8.17	0.05	8.22	6.68	29.32	Complies

Note:

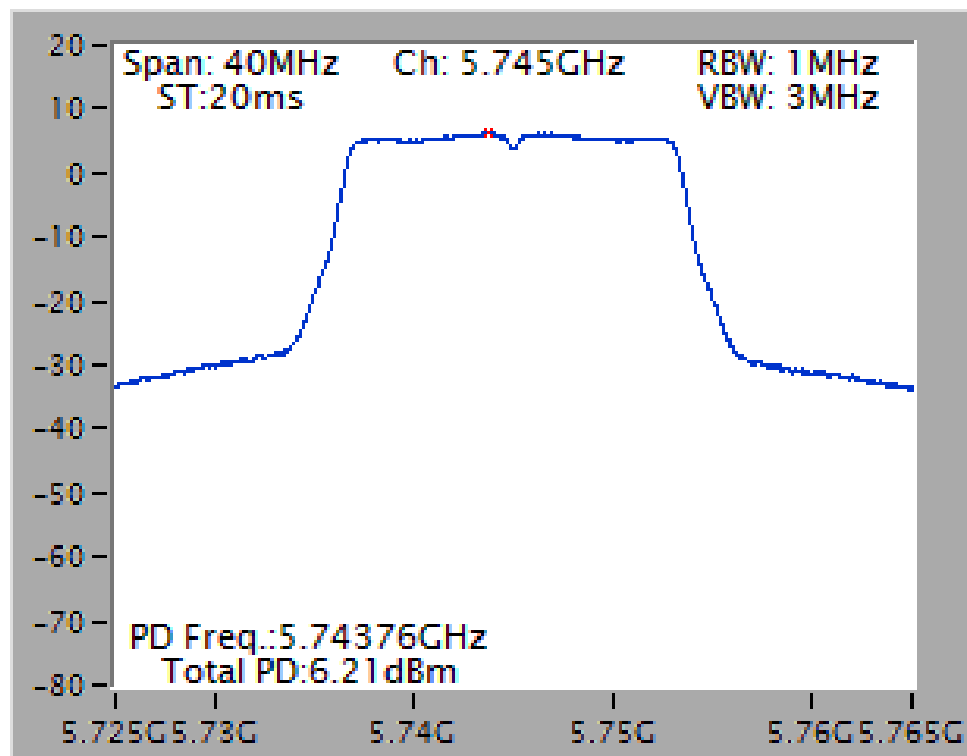
$$5745 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.25\text{dBi} > 6\text{dBi}, \text{ so Limit} = 30 - (7.25 - 6) = 28.75\text{dBm}/500\text{kHz}.$$

$$5785 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.80\text{dBi} > 6\text{dBi}, \text{ so Limit} = 30 - (6.80 - 6) = 29.20\text{dBm}/500\text{kHz}.$$

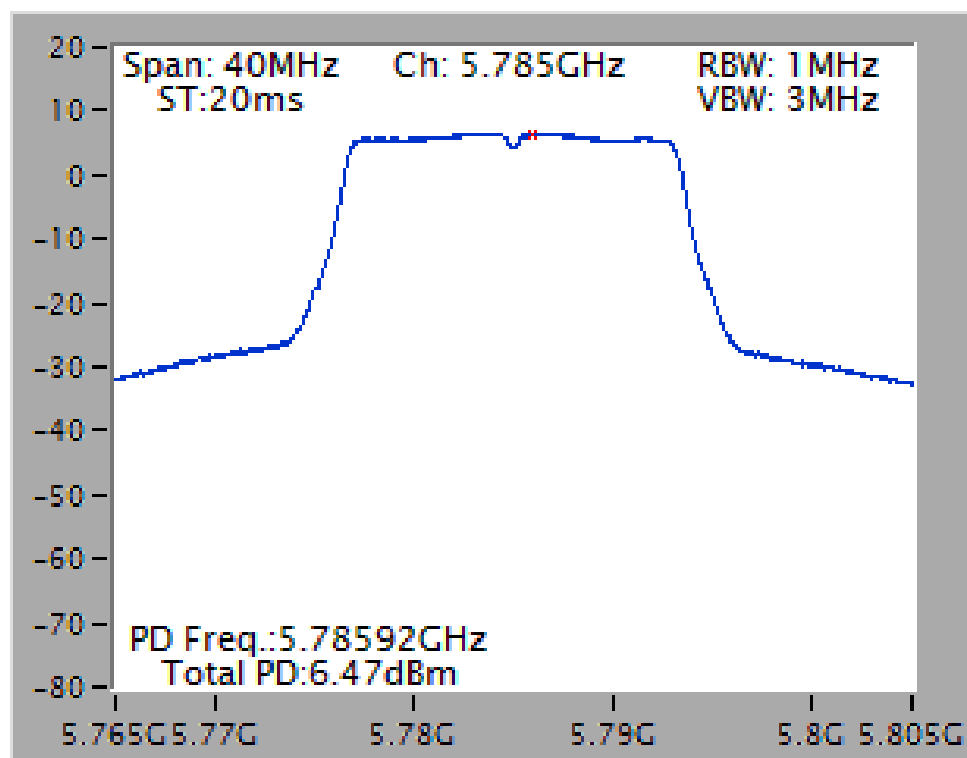
$$5825 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.68\text{dBi} > 6\text{dBi}, \text{ so Limit} = 30 - (6.68 - 6) = 29.32\text{dBm}/500\text{kHz}.$$

<6Mbps, ANT1 >:

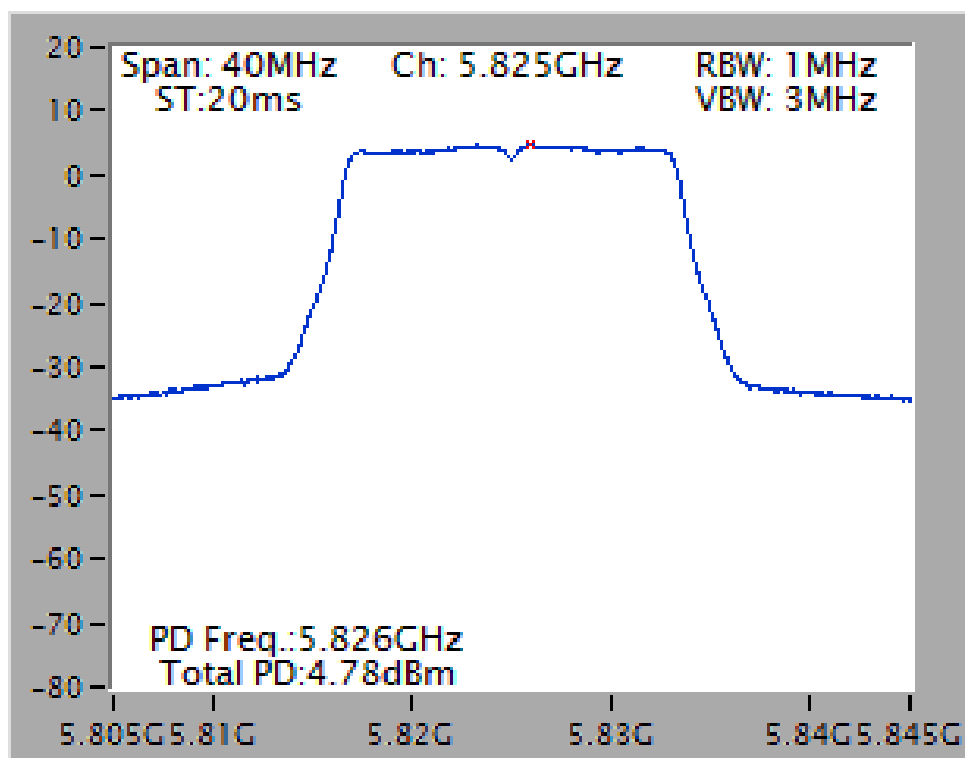
Power Density Plot on Configuration IEEE 802.11a / CH 149 / Ant. 1



Power Density Plot on Configuration IEEE 802.11a / CH 157 / Ant. 1

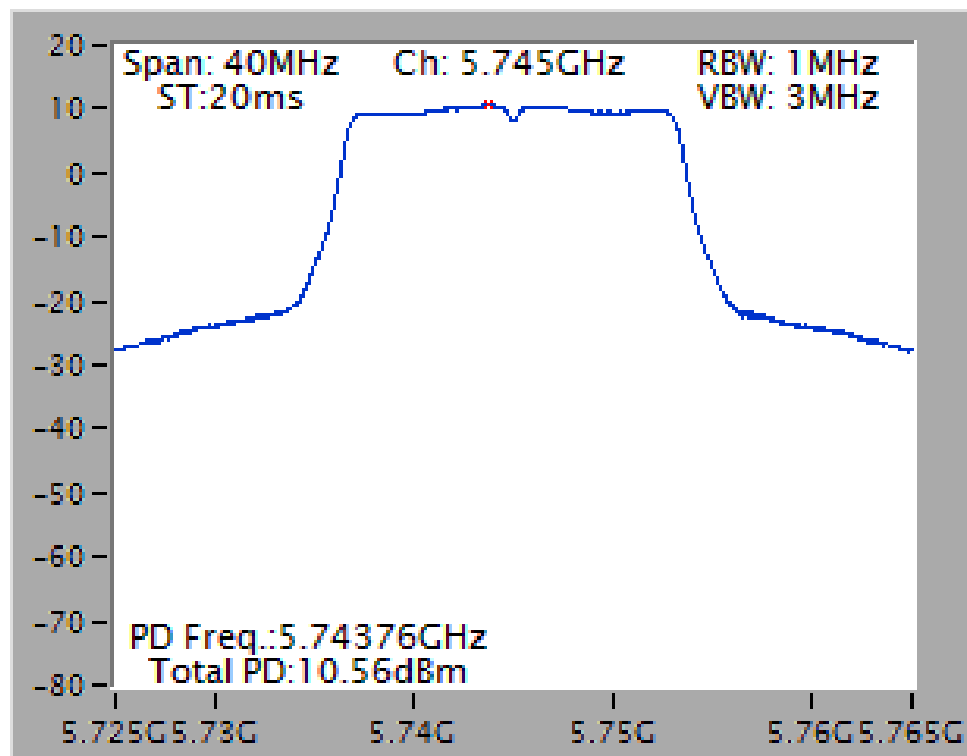


Power Density Plot on Configuration IEEE 802.11a / CH 165 / Ant. 1

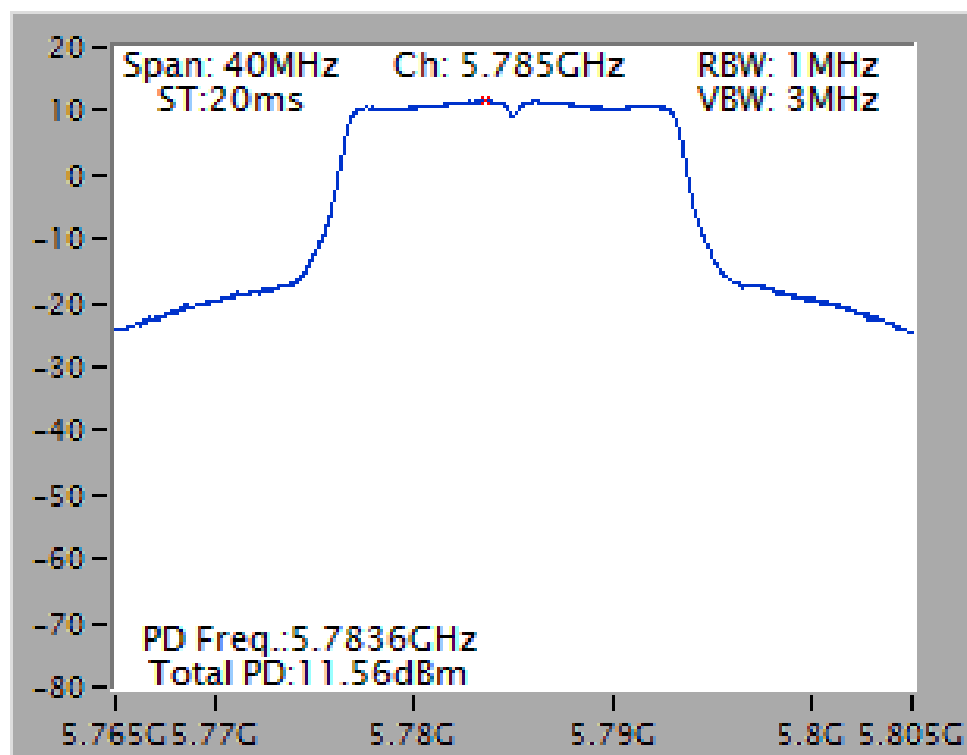


<6Mbps, 1S3T, CDD>:

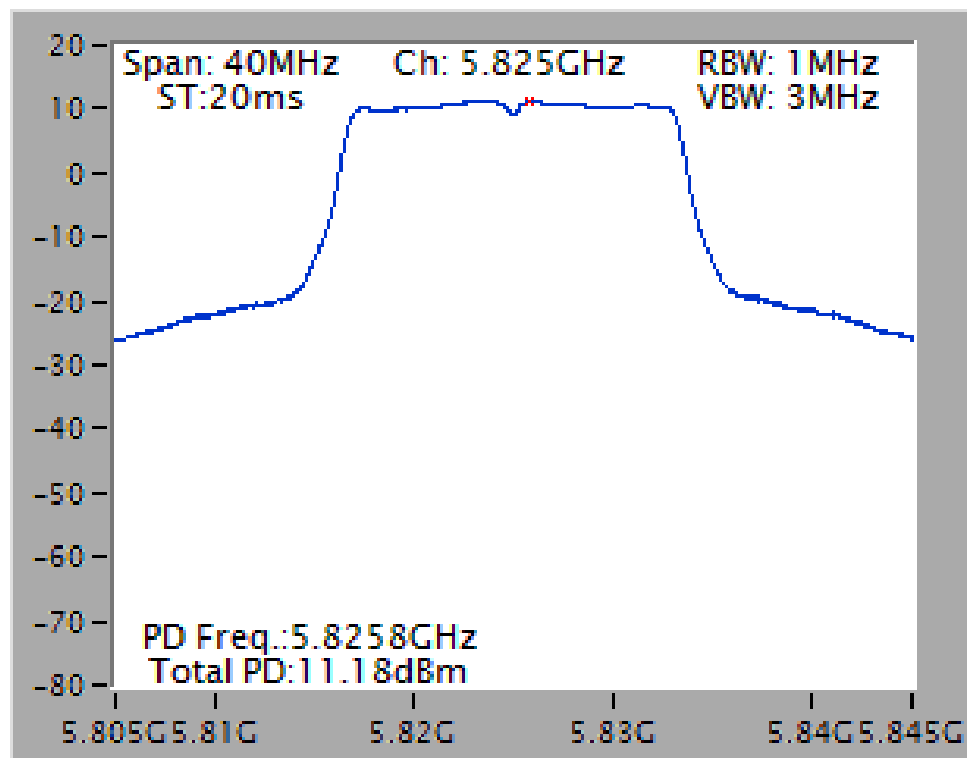
Power Density Plot on Configuration IEEE 802.11a / CH 149 / Ant. 1+2+3



Power Density Plot on Configuration IEEE 802.11a / CH 157 / Ant. 1+2+3



Power Density Plot on Configuration IEEE 802.11a / CH 165 / Ant. 1+2+3



Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Configuration	802.11ac 20MHz
Duty Cycle	<Nss1MCS0, Ant. 1>: 98.97% <Nss1MCS0, 1S3T, CDD>: 98.85% <Nss1MCS0, 1S3T, TXBF>: 98.85%		

Configuration IEEE 802.11ac 20MHz for U-NII-1 band

<Nss1MCS0, Ant. 1>

Channel	Frequency	Power Density (dBm/MHz)	Duty Factor	Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)	Result
36	5180 MHz	3.90	0.04	3.94	5.86	17.00	Complies
40	5200 MHz	5.82	0.04	5.86	5.93	17.00	Complies
48	5240 MHz	9.80	0.04	9.84	6.21	16.79	Complies

Note:

$$5180 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{sub}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 5.86 \text{ dBi} < 6 \text{ dBi}, \text{ so the limit doesn't reduce.}$$

$$5200 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{sub}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 5.93 \text{ dBi} < 6 \text{ dBi}, \text{ so the limit doesn't reduce.}$$

$$5240 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{sub}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.21 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 17 - (6.21 - 6) = 16.79 \text{ dBm/MHz.}$$

<Nss1MCS0, 1S3T, CDD>

Channel	Frequency	Power Density (dBm/MHz)	Duty Factor	Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)	Result
36	5180 MHz	7.93	0.05	7.98	6.80	16.20	Complies
40	5200 MHz	9.44	0.05	9.49	6.96	16.04	Complies
48	5240 MHz	11.87	0.05	11.92	7.07	15.93	Complies

Note:

$$5180\text{MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.80\text{dBi} > 6\text{dBi}, \text{ so Limit} = 17 - (6.80 - 6) = 16.20\text{dBm/MHz}.$$

$$5200\text{MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.96\text{dBi} > 6\text{dBi}, \text{ so Limit} = 17 - (6.96 - 6) = 16.04\text{dBm/MHz}.$$

$$5240 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.07\text{dBi} > 6\text{dBi}, \text{ so Limit} = 17 - (7.07 - 6) = 15.93\text{dBm/MHz}.$$

<Nss1MCS0, 1S3T, TXBF>

Channel	Frequency	Power Density (dBm/MHz)	Duty Factor	Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)	Result
36	5180 MHz	7.12	0.05	7.17	6.80	16.20	Complies
40	5200 MHz	7.23	0.05	7.28	6.96	16.04	Complies
48	5240 MHz	9.72	0.05	9.77	7.07	15.93	Complies

Note:

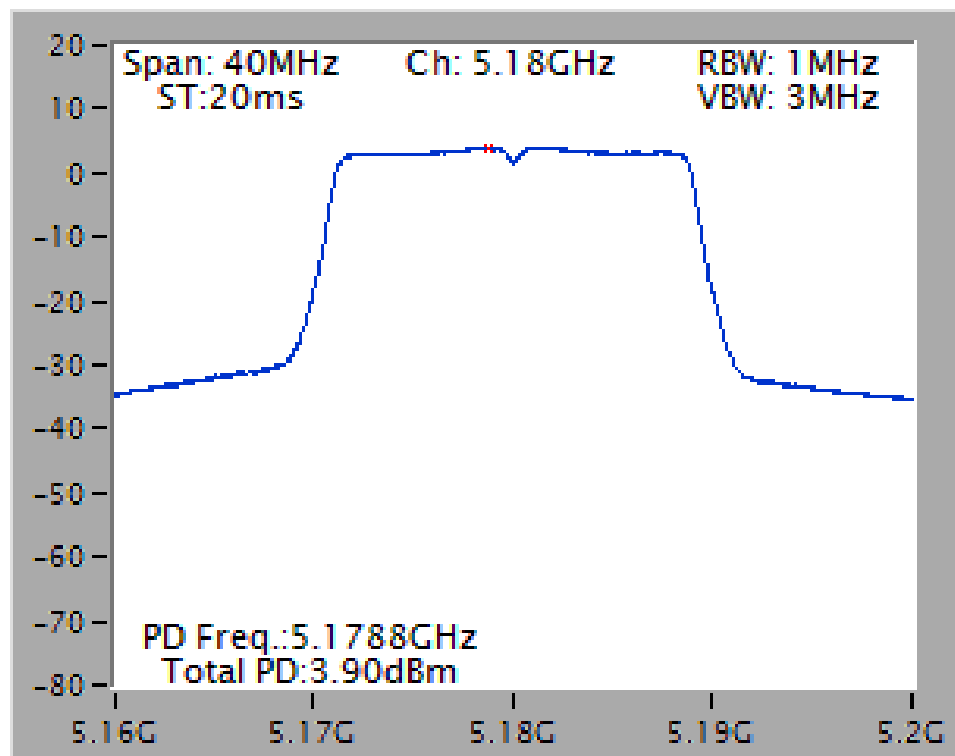
$$5180\text{MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.80\text{dBi} > 6\text{dBi}, \text{ so Limit} = 17 - (6.80 - 6) = 16.20\text{dBm/MHz}.$$

$$5200\text{MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.96\text{dBi} > 6\text{dBi}, \text{ so Limit} = 17 - (6.96 - 6) = 16.04\text{dBm/MHz}.$$

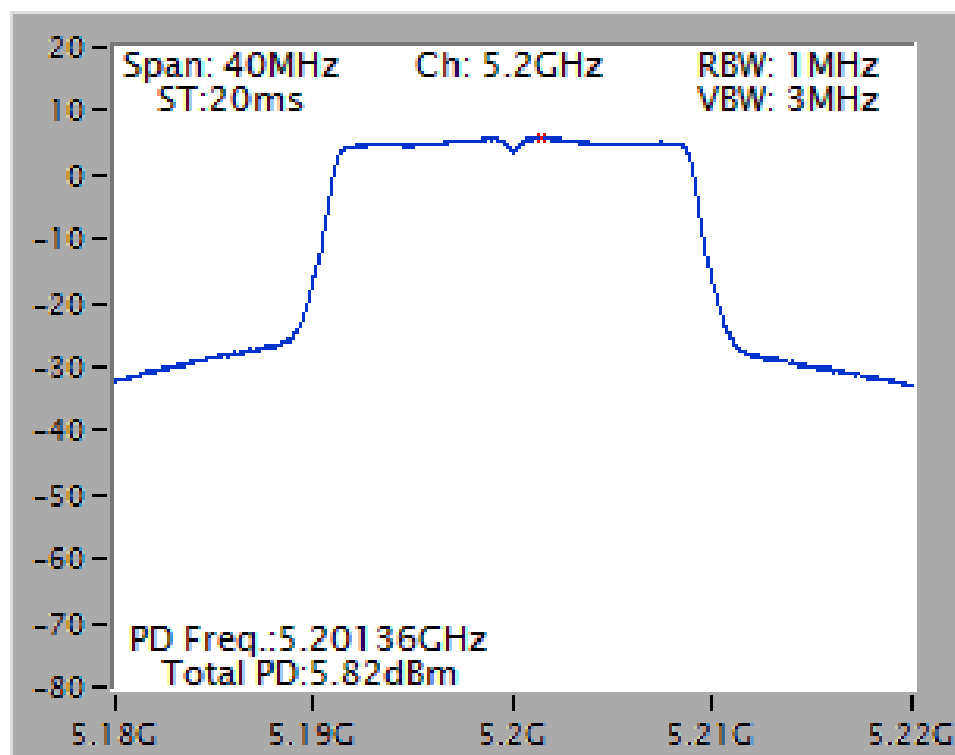
$$5240 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.07\text{dBi} > 6\text{dBi}, \text{ so Limit} = 17 - (7.07 - 6) = 15.93\text{dBm/MHz}.$$

<Nss1MCS0, Ant. 1>:

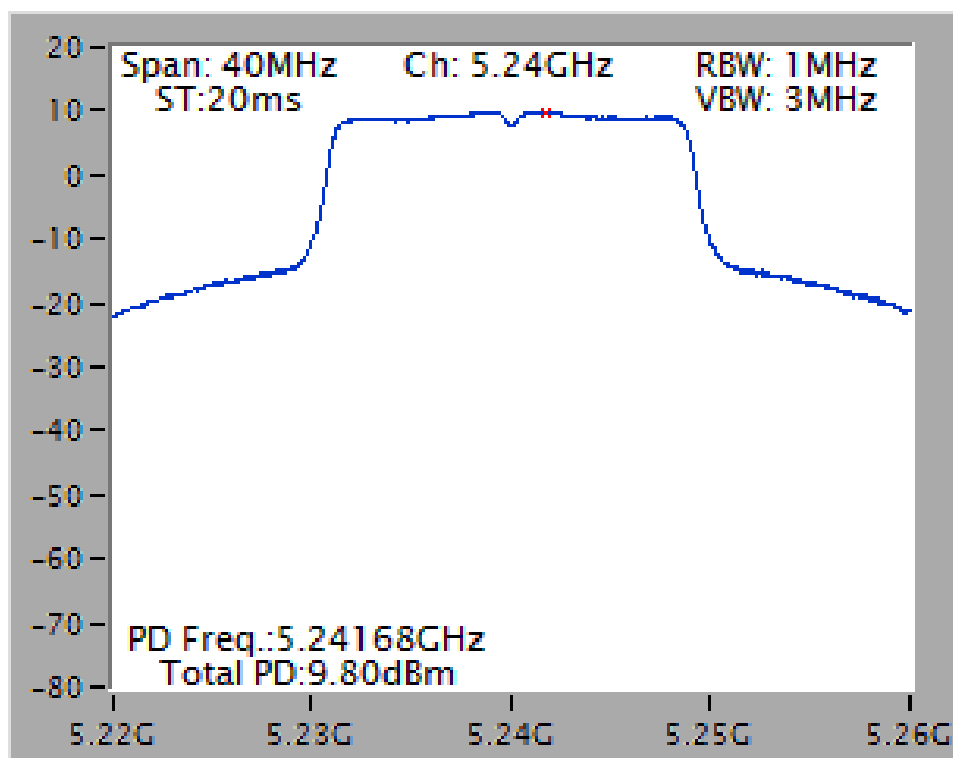
Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 36 / Ant. 1



Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 40 / Ant. 1

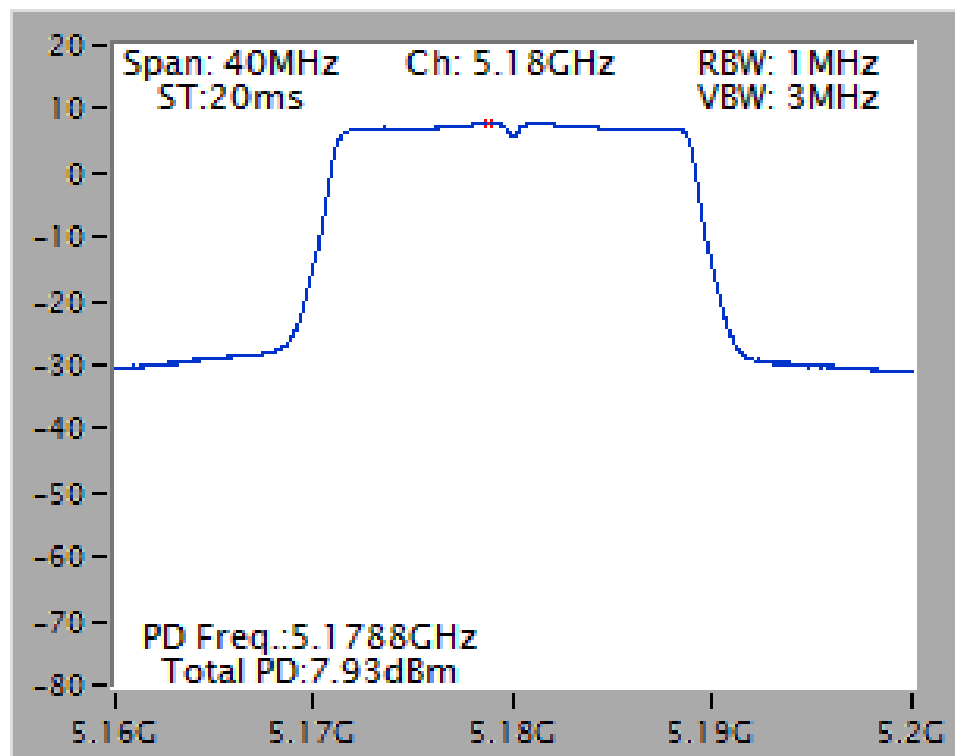


Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 48 / Ant. 1

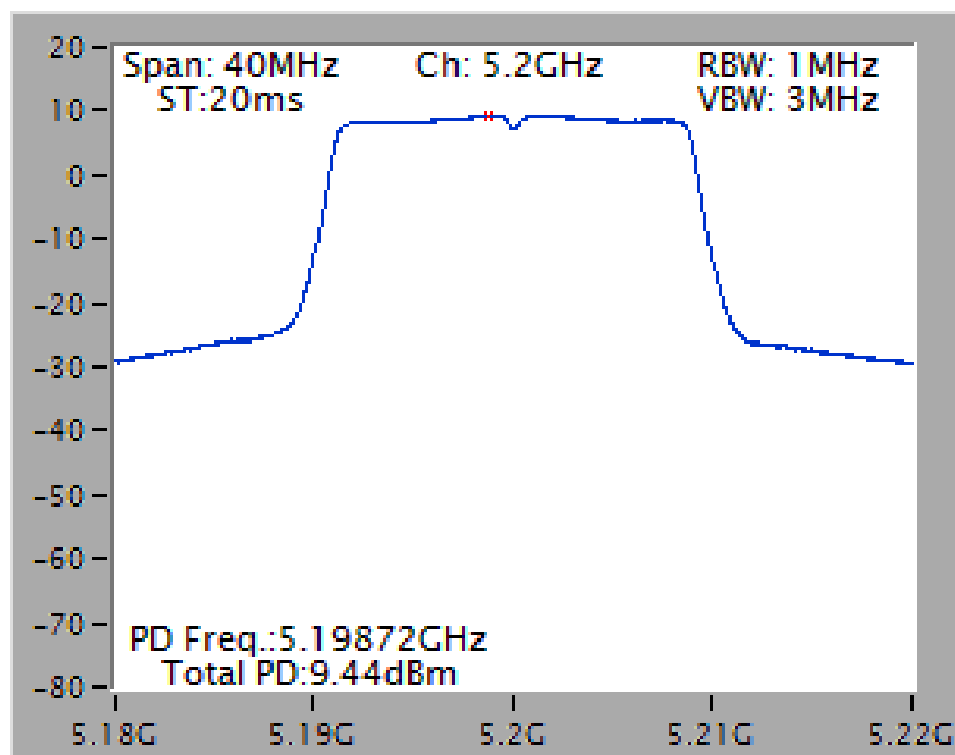


<Nss1MCS0, 1S3T, CDD>:

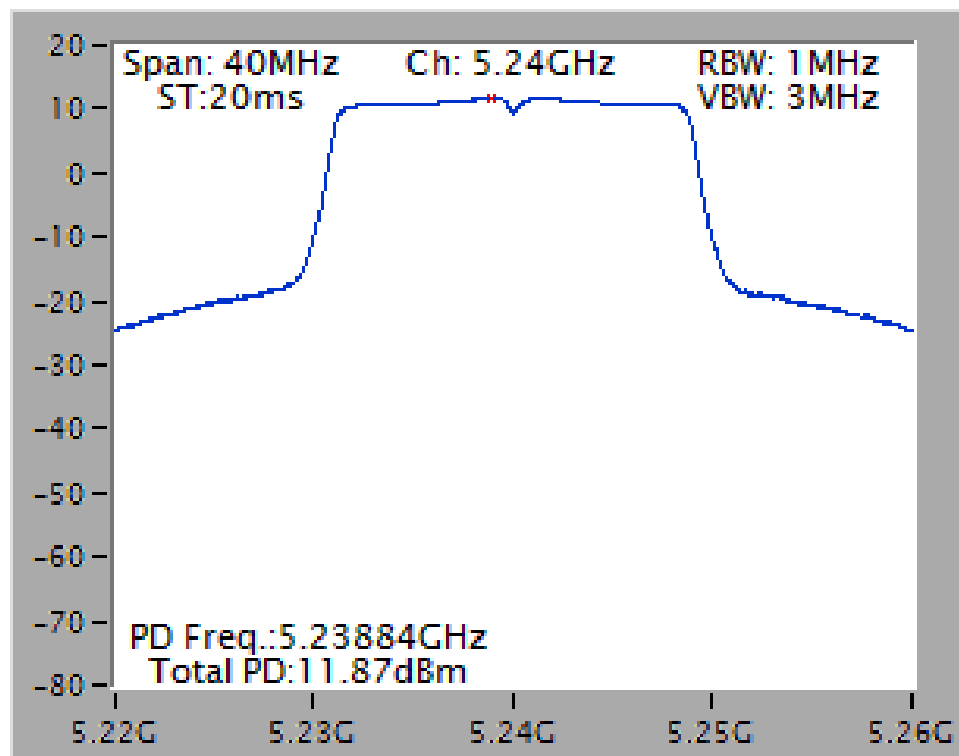
Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 36 / Ant. 1+2+3



Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 40 / Ant. 1+2+3

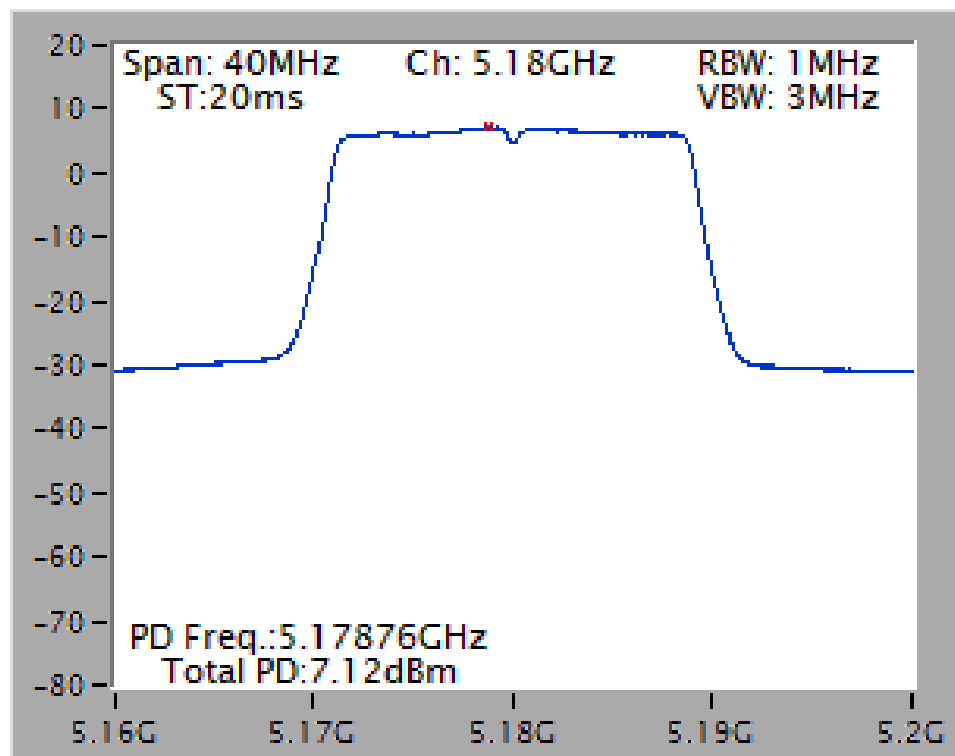


Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 48 / Ant. 1+2+3

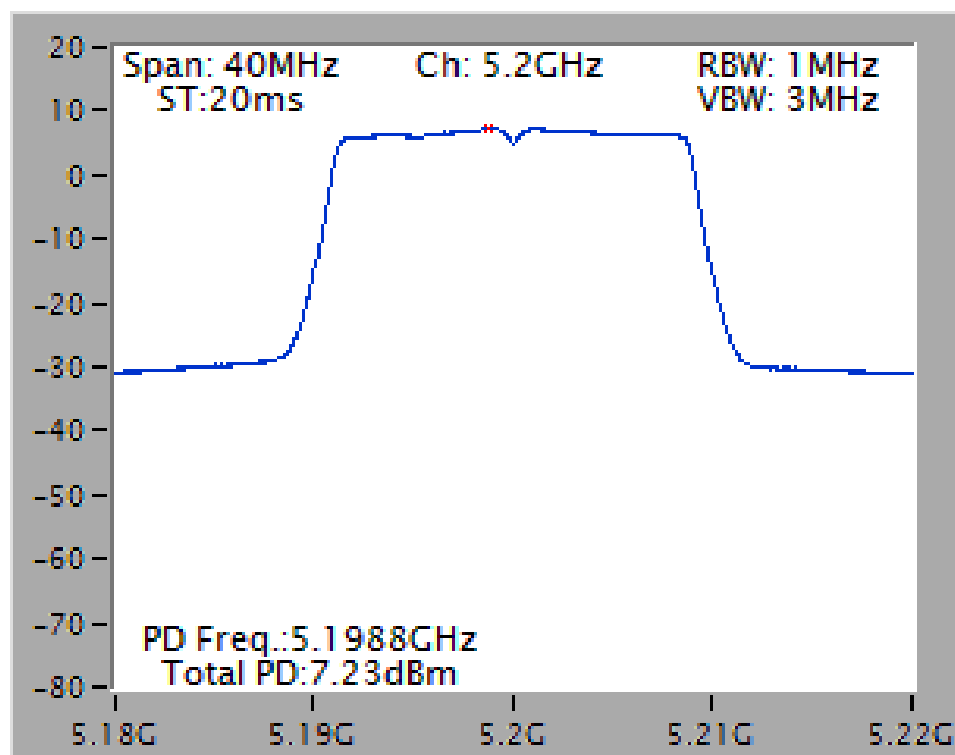


<Nss1MCS0, 1S3T, TXBF>:

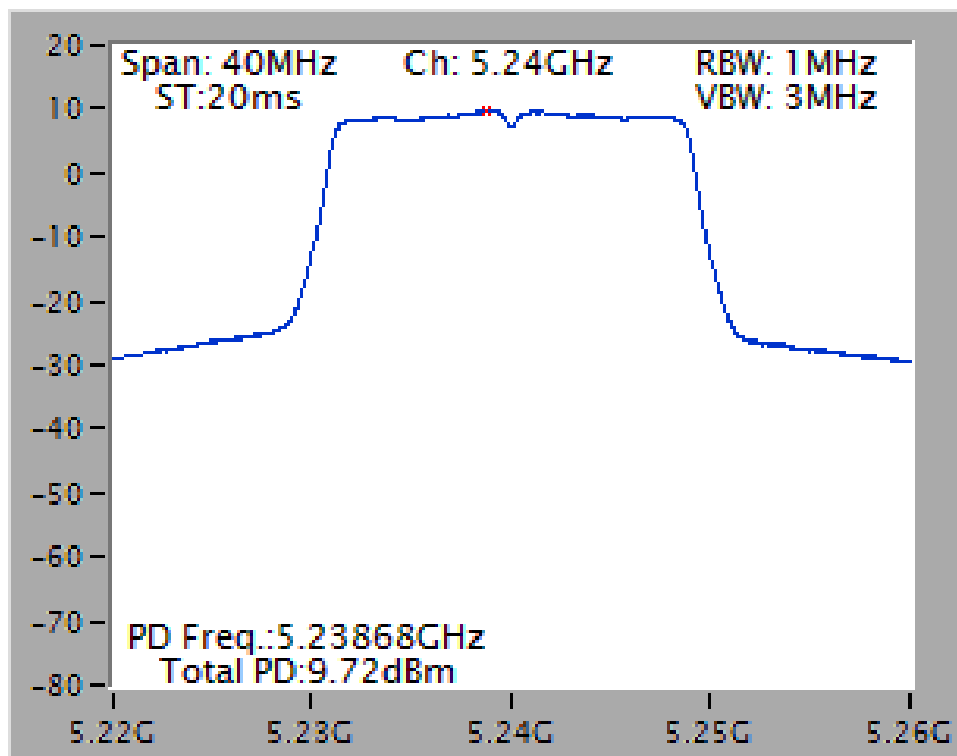
Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 36 / Ant. 1+2+3



Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 40 / Ant. 1+2+3



Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 48 / Ant. 1+2+3



Configuration IEEE 802.11ac 20MHz for U-NII-3 band

<Nss1MCS0, Ant. 1>

Channel	Frequency	Power Density (dBm/MHz)	10log (500kHz /RBW) Factor (dB)	Power Density (dBm/500kHz)	Duty Factor	Total Power Density (dBm/500kHz)	Directional Gain	Power Density Limit (dBm/500kHz)	Result
149	5745 MHz	4.99	-3.01	1.98	0.04	2.02	5.65	30.00	Complies
157	5785 MHz	6.38	-3.01	3.37	0.04	3.41	4.93	30.00	Complies
165	5825 MHz	4.57	-3.01	1.56	0.04	1.60	4.18	30.00	Complies

Note:

$$5745 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 5.65\text{dBi} < 6\text{dBi}, \text{ so the limit doesn't reduce.}$$

$$5785 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 4.93\text{dBi} < 6\text{dBi}, \text{ so the limit doesn't reduce.}$$

$$5825 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 4.18\text{dBi} < 6\text{dBi}, \text{ so the limit doesn't reduce.}$$

<Nss1MCS0, 1S3T, CDD>

Channel	Frequency	Power Density (dBm/MHz)	10log (500kHz /RBW) Factor (dB)	Power Density (dBm/500kHz)	Duty Factor	Total Power Density (dBm/500kHz)	Directional Gain	Power Density Limit (dBm/500kHz)	Result
149	5745 MHz	9.64	-3.01	6.63	0.05	6.68	7.25	28.75	Complies
157	5785 MHz	10.68	-3.01	7.67	0.05	7.72	6.80	29.20	Complies
165	5825 MHz	9.82	-3.01	6.81	0.05	6.86	6.68	29.32	Complies

Note:

$$5745 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.25\text{dBi} > 6\text{dBi}, \text{ so Limit} = 30 - (7.25 - 6) = 28.75\text{dBm}/500\text{kHz}.$$

$$5785 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.80\text{dBi} > 6\text{dBi}, \text{ so Limit} = 30 - (6.80 - 6) = 29.20\text{dBm}/500\text{kHz}.$$

$$5825 \text{ MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.68\text{dBi} > 6\text{dBi}, \text{ so Limit} = 30 - (6.68 - 6) = 29.32\text{dBm}/500\text{kHz}.$$

<Nss1MCS0, 1S3T, TXBF>

Channel	Frequency	Power Density (dBm/MHz)	10log (500kHz /RBW) Factor (dB)	Power Density (dBm/500kHz)	Duty Factor	Total Power Density (dBm/500kHz)	Directional Gain	Power Density Limit (dBm/500kHz)	Result
149	5745 MHz	10.12	-3.01	7.11	0.05	7.16	7.25	28.75	Complies
157	5785 MHz	6.92	-3.01	3.91	0.05	3.96	6.80	29.20	Complies
165	5825 MHz	8.01	-3.01	5.00	0.05	5.05	6.68	29.32	Complies

Note:

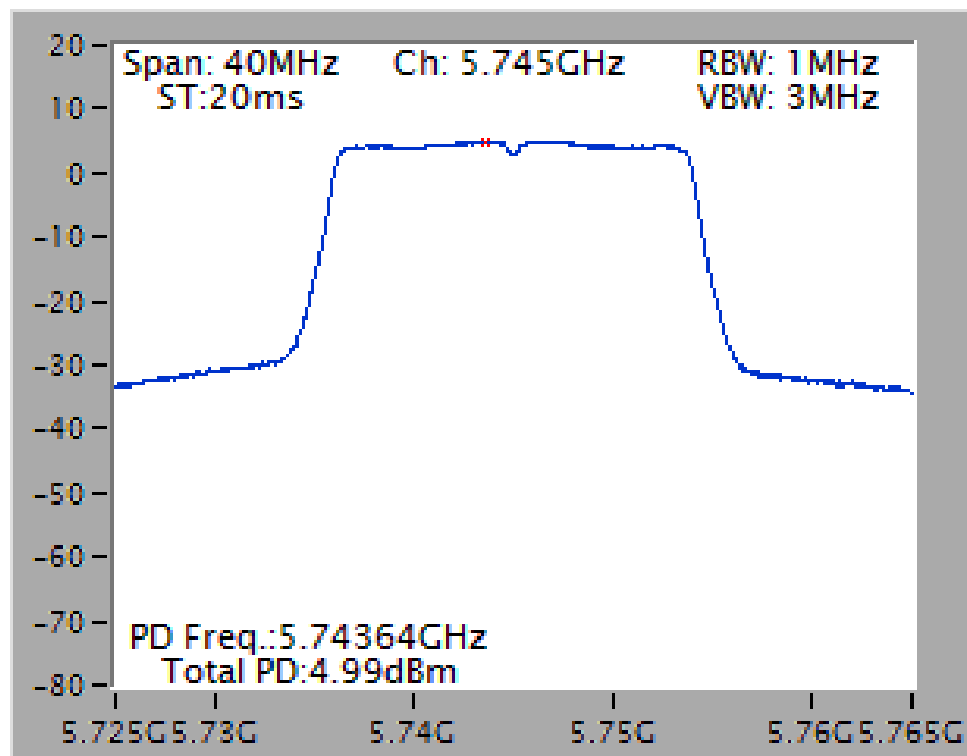
$$5745 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.25 \text{dBi} > 6 \text{dBi}, \text{ so Limit} = 30 - (7.25 - 6) = 28.75 \text{dBm/500kHz}.$$

$$5785 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.80 \text{dBi} > 6 \text{dBi}, \text{ so Limit} = 30 - (6.80 - 6) = 29.20 \text{dBm/500kHz}.$$

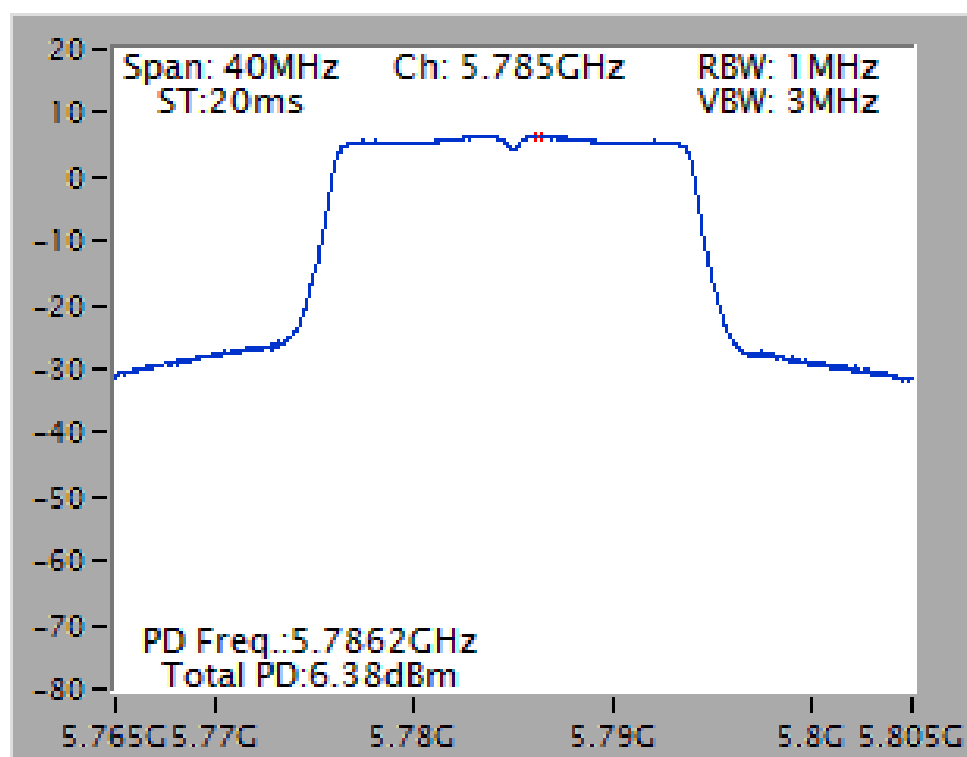
$$5825 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.68 \text{dBi} > 6 \text{dBi}, \text{ so Limit} = 30 - (6.68 - 6) = 29.32 \text{dBm/500kHz}.$$

<Nss1MCS0, Ant. 1>:

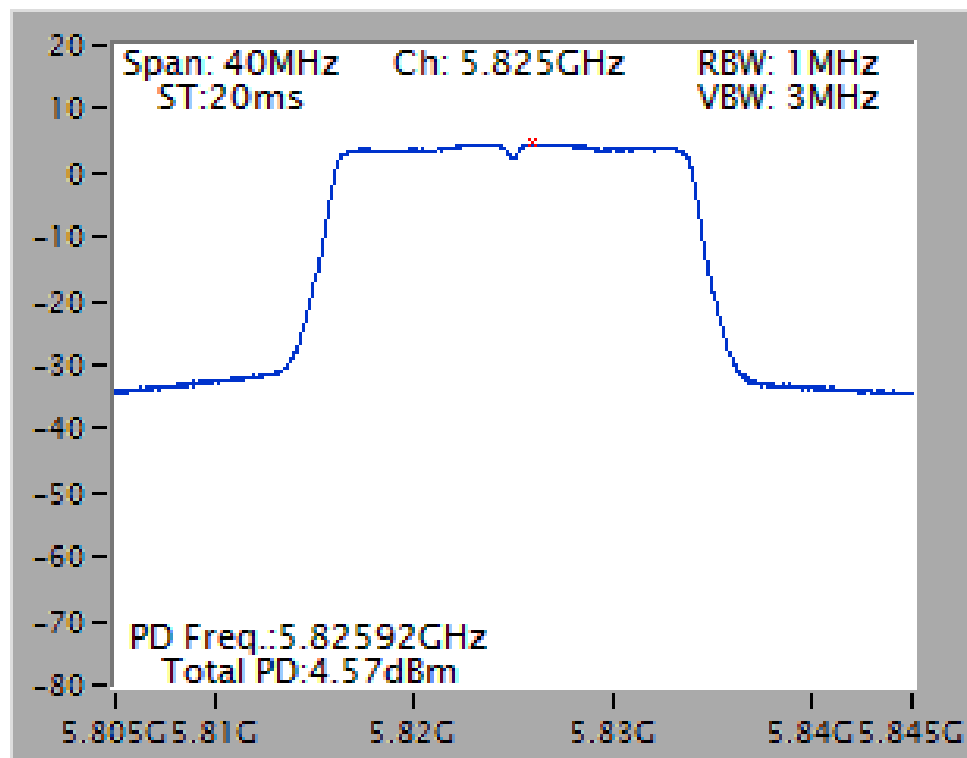
Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 149 / Ant. 1



Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 157 / Ant. 1

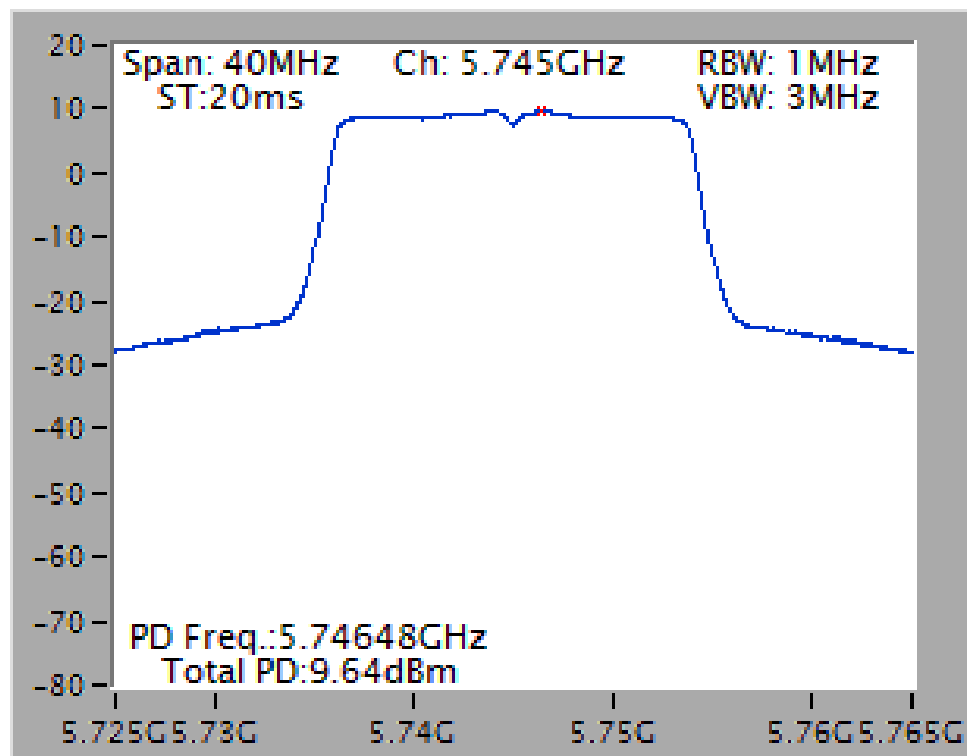


Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 165 / Ant. 1

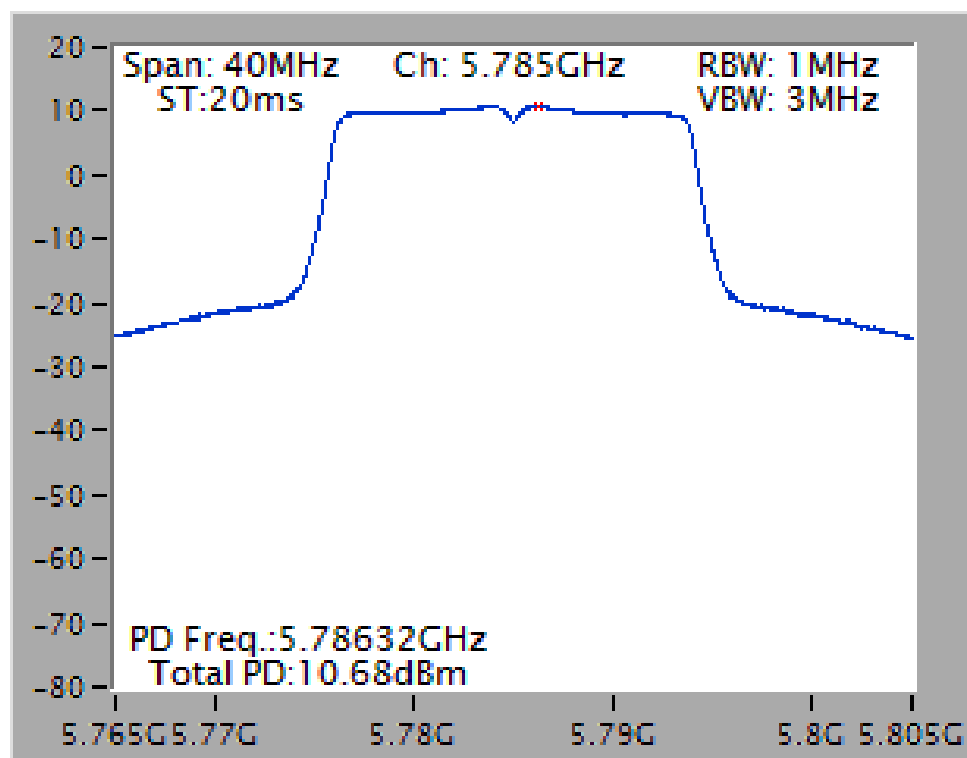


<Nss1MCS0, 1S3T, CDD>:

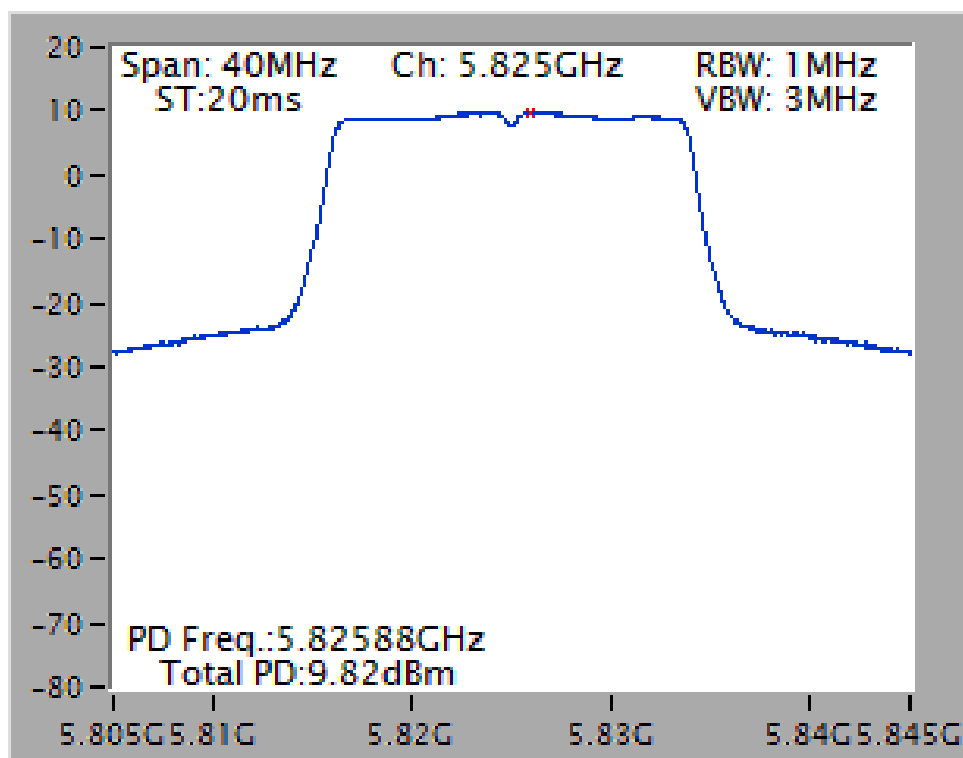
Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 149 / Ant. 1+2+3



Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 157 / Ant. 1+2+3

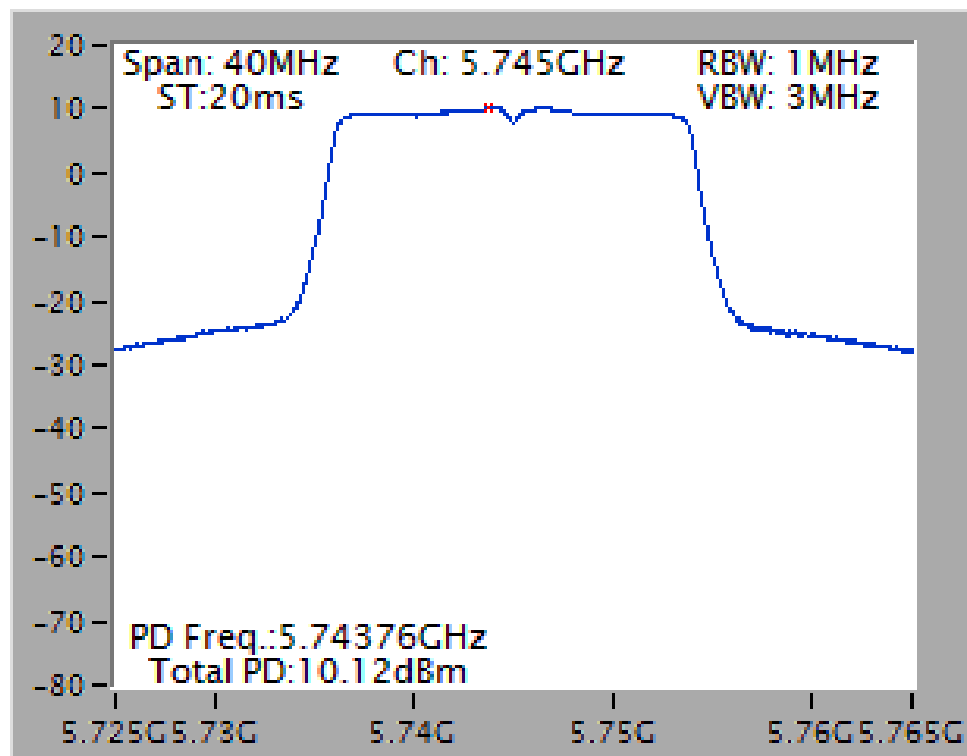


Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 165 / Ant. 1+2+3

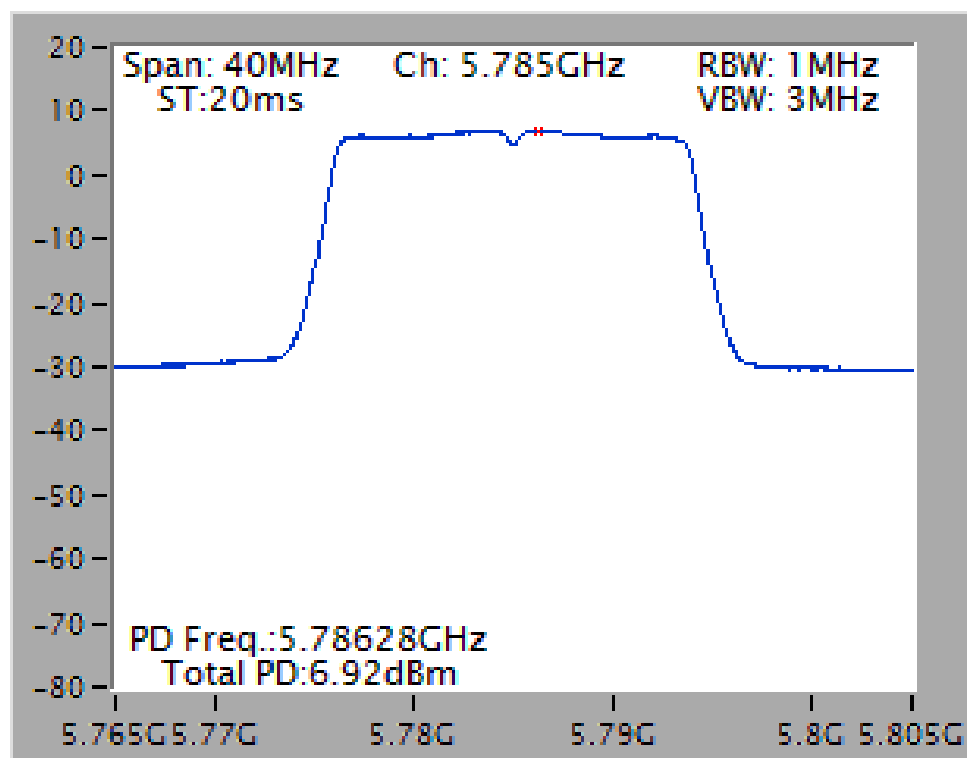


<Nss1MCS0, 1S3T, TXBF>:

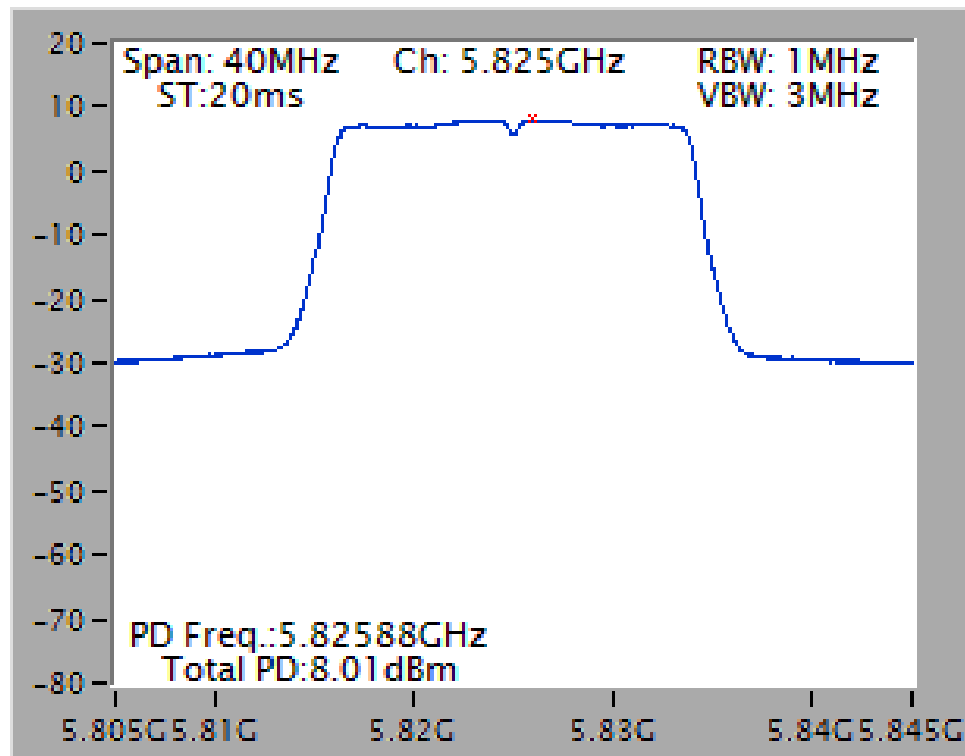
Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 149 / Ant. 1+2+3



Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 157 / Ant. 1+2+3



Power Density Plot on Configuration IEEE 802.11ac 20MHz / CH 165 / Ant. 1+2+3



Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Configuration	802.11ac 40MHz
Duty Cycle	<Nss1MCS0, Ant. 1>: 97.84% <Nss1MCS0, 1S3T, CDD>: 98.00% <Nss1MCS0, 1S3T, TXBF>: 98.00%		

Configuration IEEE 802.11ac 40MHz for U-NII-1 band

<Nss1MCS0, Ant. 1>

Channel	Frequency	Power Density (dBm/MHz)	Duty Factor	Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)	Result
38	5190 MHz	0.87	0.09	0.96	5.90	17.00	Complies
46	5230 MHz	5.51	0.09	5.60	6.07	16.93	Complies

Note:

$$5190\text{MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{sub}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 5.90\text{dBi} < 6\text{dBi}, \text{ so the limit doesn't reduce.}$$

$$5230\text{MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{sub}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.07\text{dBi} > 6\text{dBi}, \text{ so Limit} = 17 - (6.07 - 6) = 16.93\text{dBm/MHz.}$$

<Nss1MCS0, 1S3T, CDD>

Channel	Frequency	Power Density (dBm/MHz)	Duty Factor	Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)	Result
38	5190 MHz	5.06	0.09	5.15	6.82	16.18	Complies
46	5230 MHz	8.61	0.09	8.70	7.18	15.82	Complies

Note:

$$5190\text{MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{sub}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.82\text{dBi} > 6\text{dBi}, \text{ so Limit} = 17 - (6.82 - 6) = 16.18\text{dBm/MHz.}$$

$$5230\text{MHz} = \text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{sub}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.18\text{dBi} > 6\text{dBi}, \text{ so Limit} = 17 - (7.18 - 6) = 15.82\text{dBm/MHz.}$$

<Nss1MCS0, 1S3T, TXBF>

Channel	Frequency	Power Density (dBm/MHz)	Duty Factor	Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)	Result
38	5190 MHz	5.08	0.09	5.17	6.82	16.18	Complies
46	5230 MHz	7.43	0.09	7.52	7.18	15.82	Complies

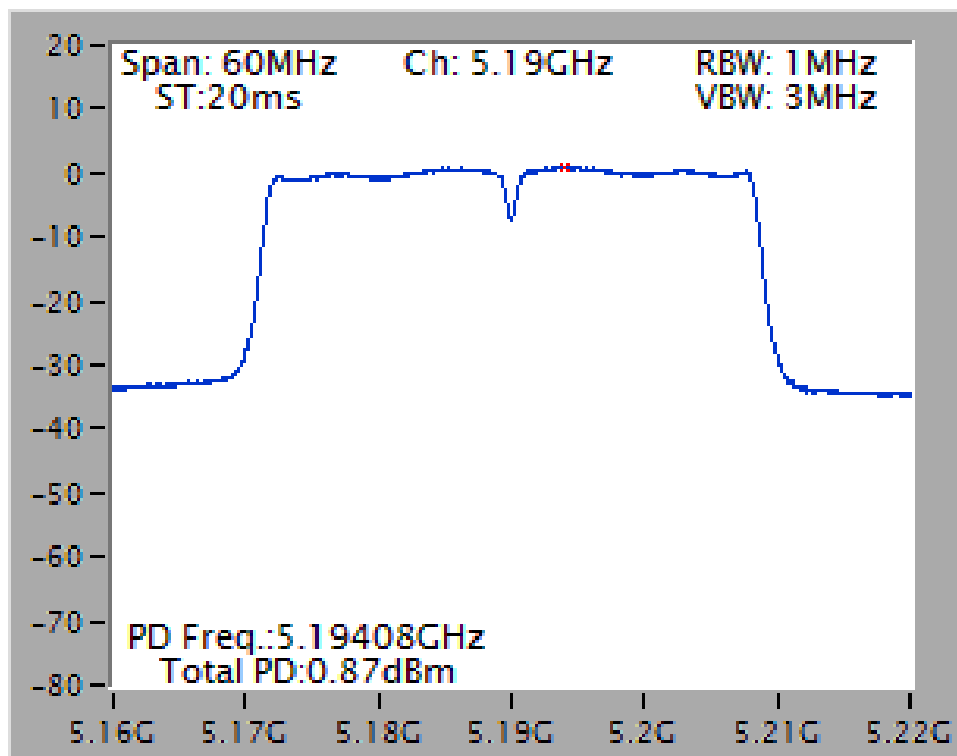
Note:

$$5190\text{MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{sub}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.82\text{dBi} > 6\text{dBi}, \text{ so Limit} = 17 - (6.82 - 6) = 16.18\text{dBm/MHz}.$$

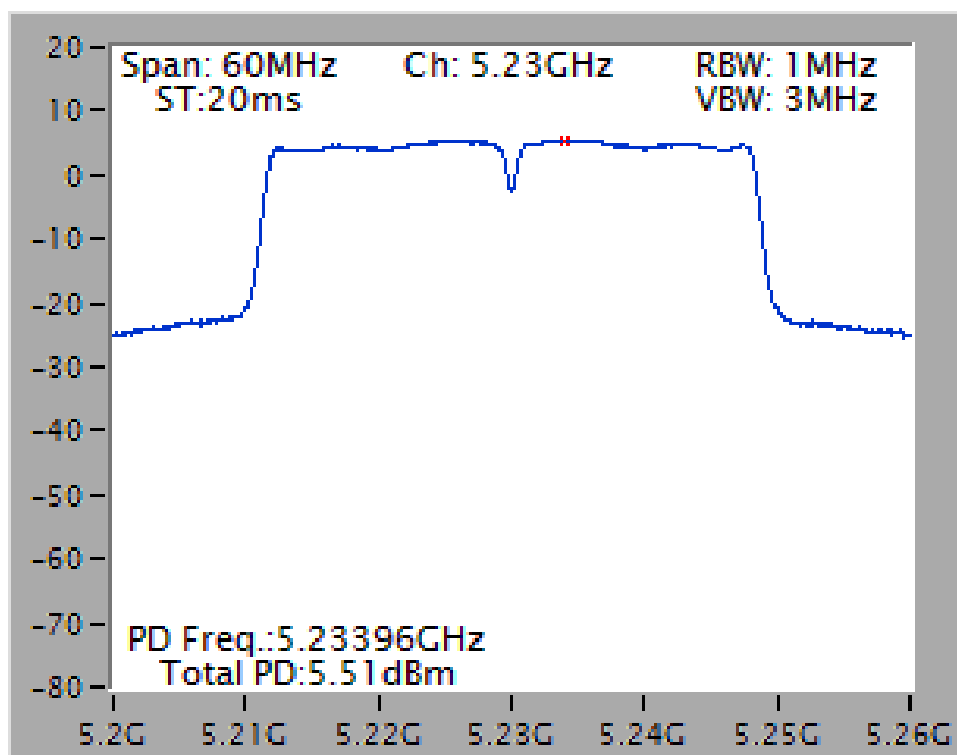
$$5230\text{MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{sub}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.18\text{dBi} > 6\text{dBi}, \text{ so Limit} = 17 - (7.18 - 6) = 15.82\text{dBm/MHz}.$$

<Nss1MCS0, Ant. 1>:

Power Density Plot on Configuration IEEE 802.11ac 40MHz / CH 38 / Ant. 1

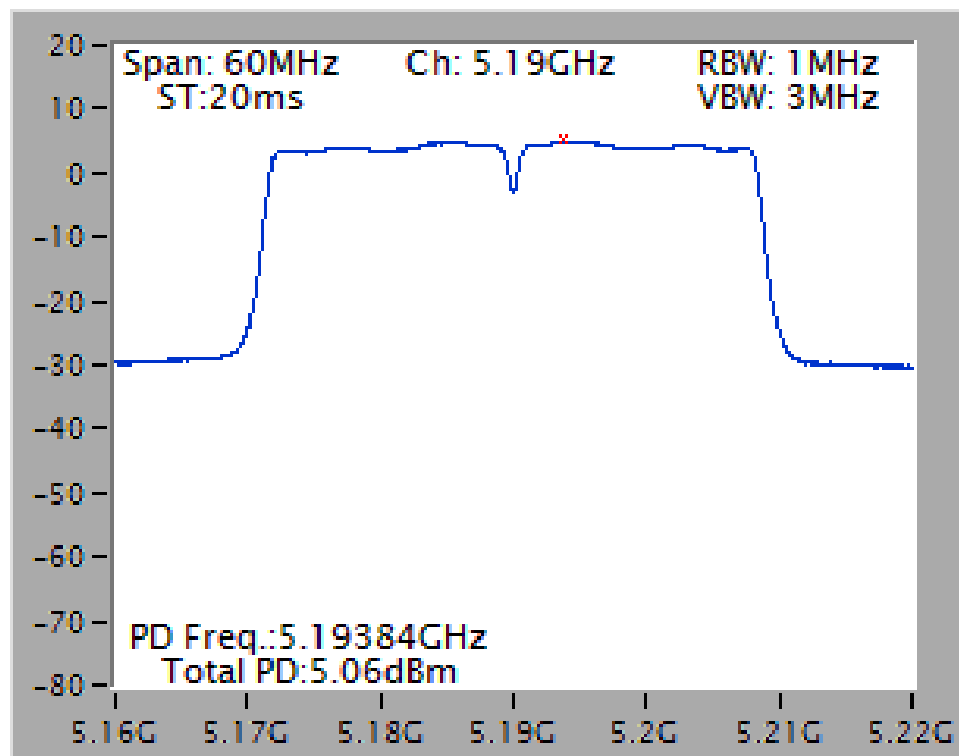


Power Density Plot on Configuration IEEE 802.11ac 40MHz / CH 46 / Ant. 1

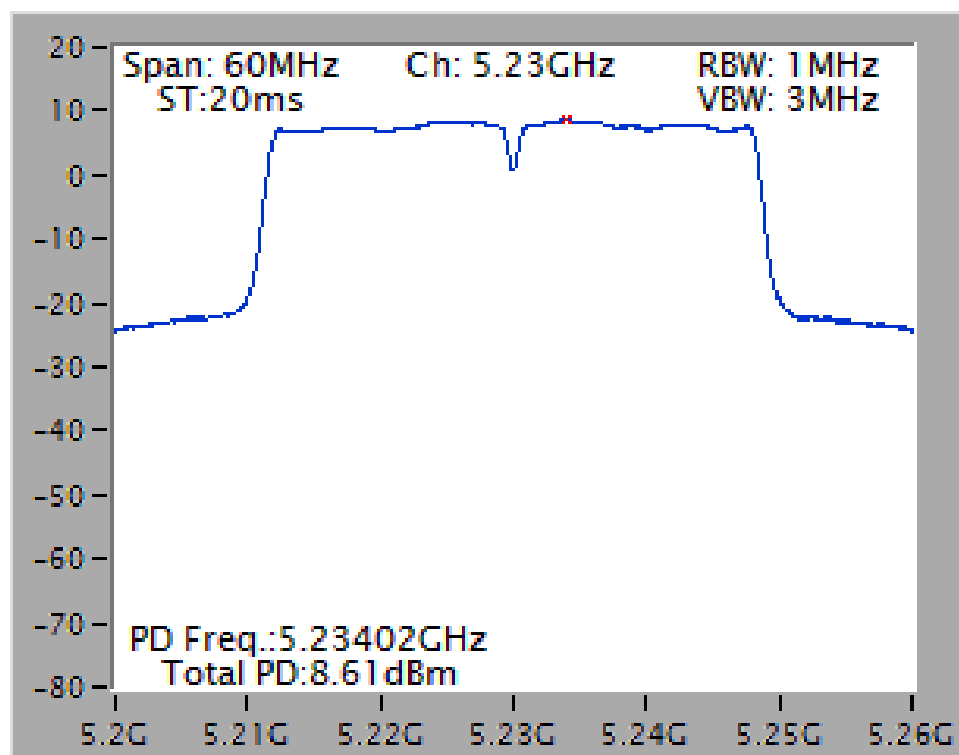


<Nss1MCS0, 1S3T, CDD>:

Power Density Plot on Configuration IEEE 802.11ac 40MHz / CH 38 / Ant. 1+2+3

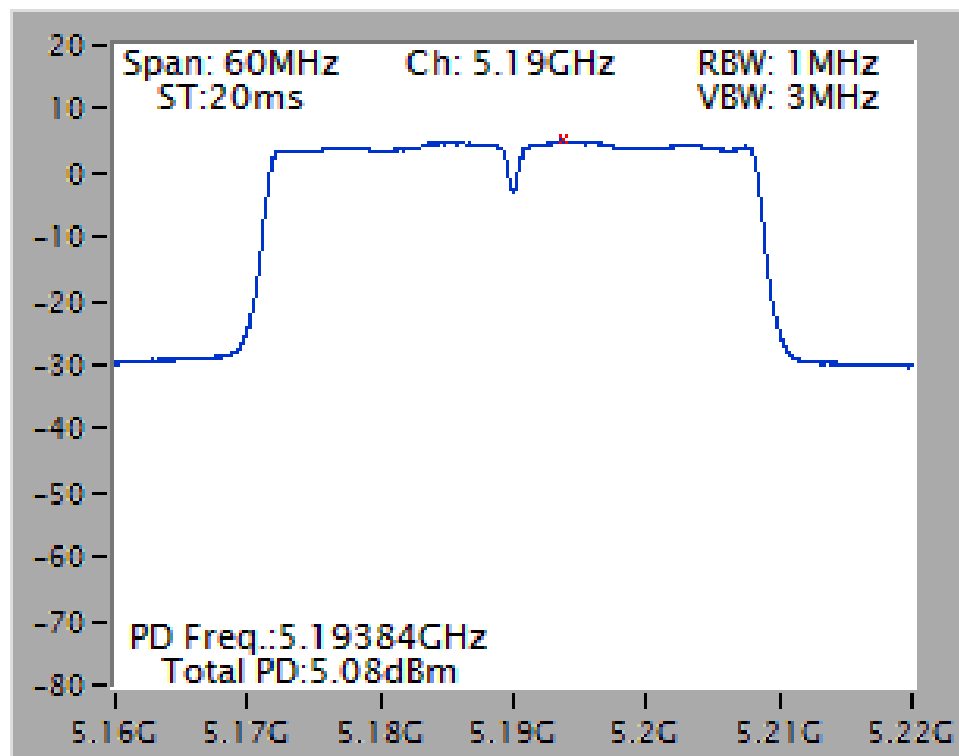


Power Density Plot on Configuration IEEE 802.11ac 40MHz / CH 46 / Ant. 1+2+3

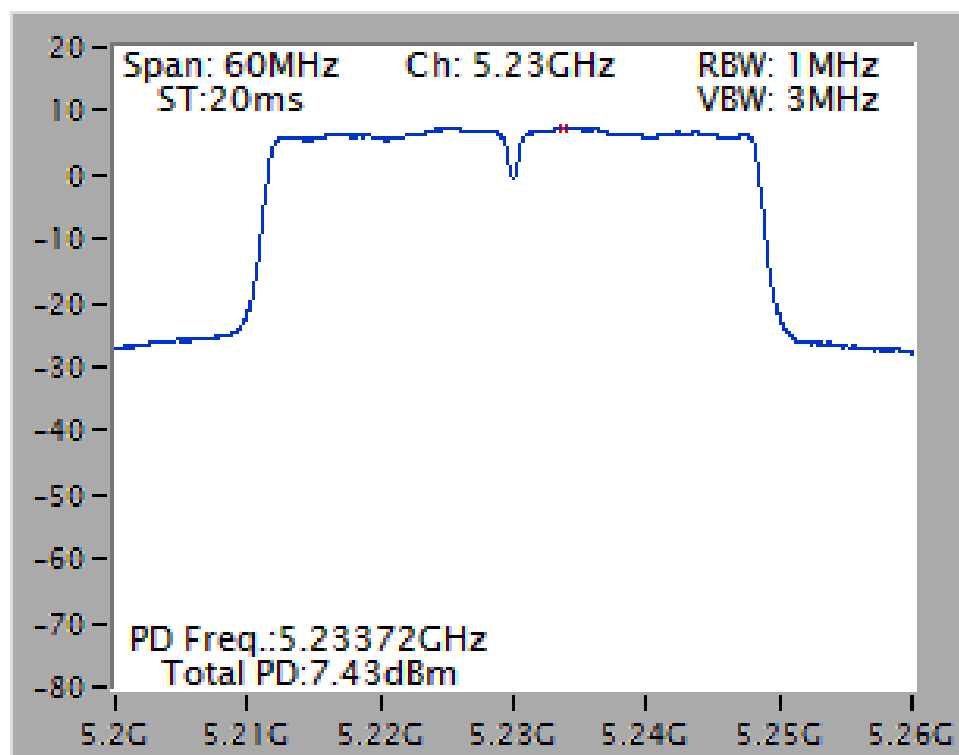


<Nss1MCS0, 1S3T, TXBF>:

Power Density Plot on Configuration IEEE 802.11ac 40MHz / CH 38 / Ant. 1+2+3



Power Density Plot on Configuration IEEE 802.11ac 40MHz / CH 46 / Ant. 1+2+3



Configuration IEEE 802.11ac 40MHz for U-NII-3 band

<Nss1MCS0, Ant. 1>

Channel	Frequency	Power Density (dBm/MHz)	10log (500kHz /RBW) Factor (dB)	Power Density (dBm/500kHz)	Duty Factor	Total Power Density (dBm/500kHz)	Directional Gain	Power Density Limit (dBm/500kHz)	Result
151	5755 MHz	0.52	-3.01	-2.49	0.09	-2.40	5.79	30.00	Complies
159	5795 MHz	3.49	-3.01	0.48	0.09	0.57	5.12	30.00	Complies

Note:

$$5755 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{sub}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 5.79 \text{ dBi} < 6 \text{ dBi}, \text{ so the limit doesn't reduce.}$$

$$5795 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{sub}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 5.12 \text{ dBi} < 6 \text{ dBi}, \text{ so the limit doesn't reduce.}$$

<Nss1MCS0, 1S3T, CDD>

Channel	Frequency	Power Density (dBm/MHz)	10log (500kHz /RBW) Factor (dB)	Power Density (dBm/500kHz)	Duty Factor	Total Power Density (dBm/500kHz)	Directional Gain	Power Density Limit (dBm/500kHz)	Result
151	5755 MHz	5.99	-3.01	2.98	0.09	3.07	7.68	28.32	Complies
159	5795 MHz	8.97	-3.01	5.96	0.09	6.05	7.07	28.93	Complies

Note:

$$5755 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{sub}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.68 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (7.68 - 6) = 28.32 \text{ dBm/500kHz.}$$

$$5795 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{sub}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.07 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (7.07 - 6) = 28.93 \text{ dBm/500kHz.}$$

<Nss1MCS0, 1S3T, TXBF>

Channel	Frequency	Power Density (dBm/MHz)	10log (500kHz /RBW) Factor (dB)	Power Density (dBm/500kHz)	Duty Factor	Total Power Density (dBm/500kHz)	Directional Gain	Power Density Limit (dBm/500kHz)	Result
151	5755 MHz	4.41	-3.01	1.40	0.09	1.49	7.68	28.32	Complies
159	5795 MHz	5.71	-3.01	2.70	0.09	2.79	7.07	28.93	Complies

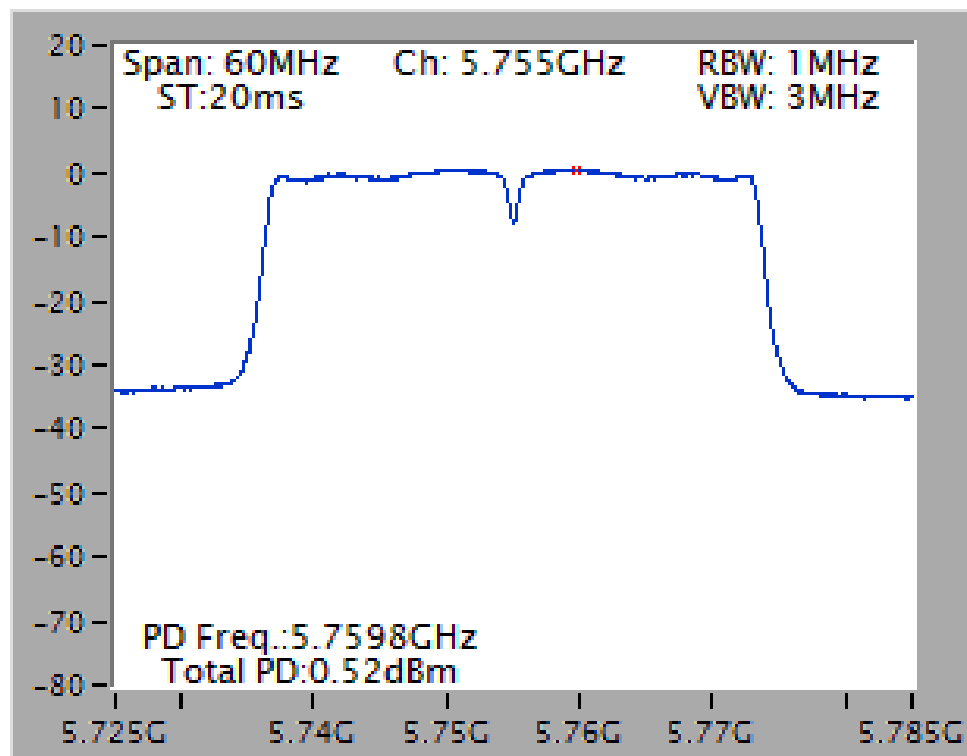
Note:

$$5755 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{tot}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.68 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (7.68 - 6) = 28.32 \text{ dBm/500kHz}.$$

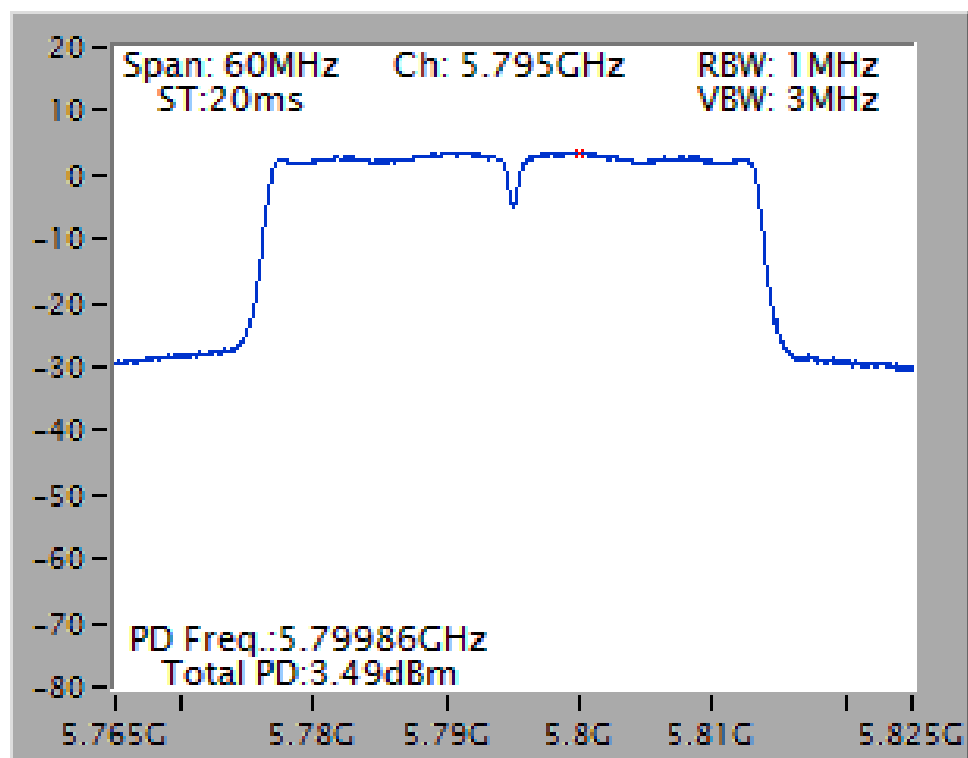
$$5795 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{tot}}} \left\{ \sum_{k=1}^{N_{\text{ant}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.07 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (7.07 - 6) = 28.93 \text{ dBm/500kHz}.$$

<Nss1MCS0, Ant. 1>:

Power Density Plot on Configuration IEEE 802.11ac 40MHz / CH 151 / Ant. 1

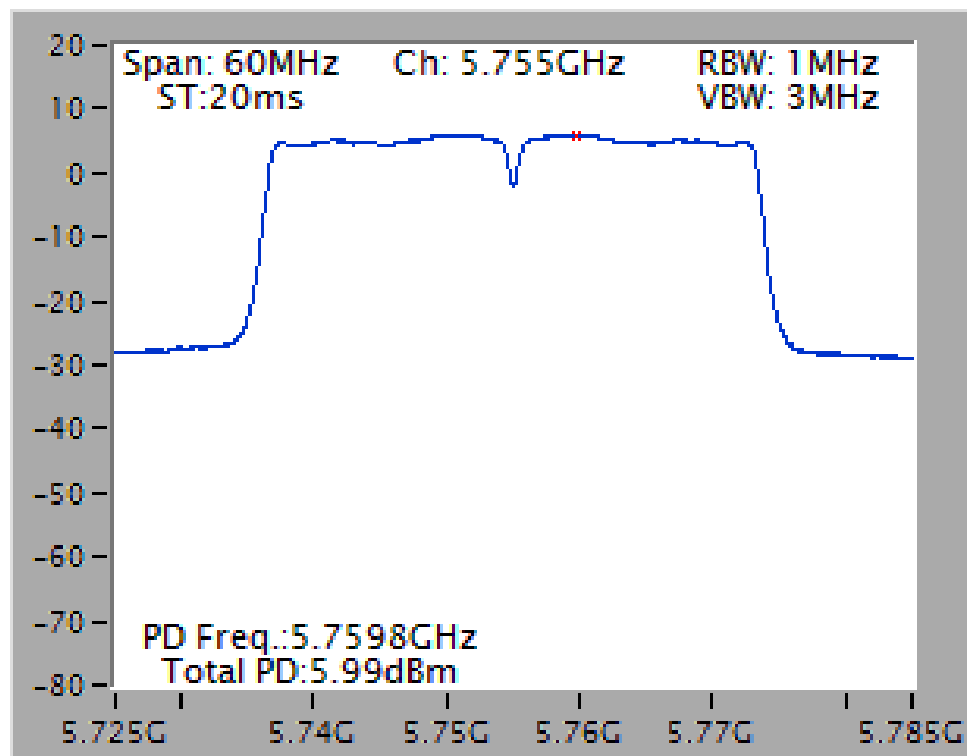


Power Density Plot on Configuration IEEE 802.11ac 40MHz / CH 159 / Ant. 1

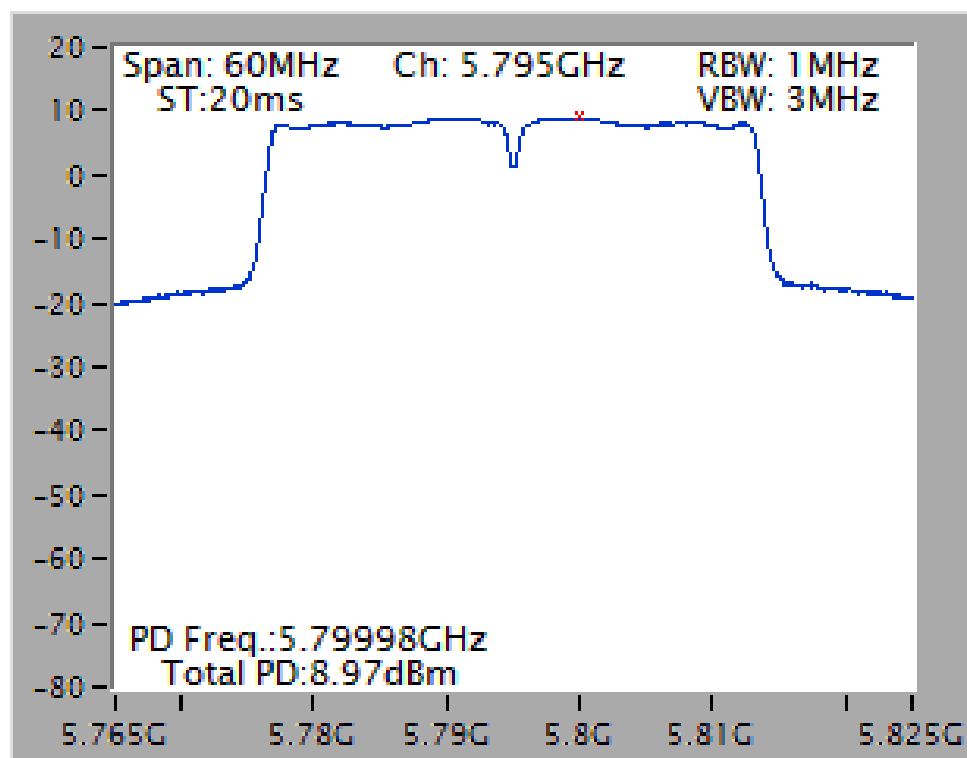


<Nss1MCS0, 1S3T, CDD>:

Power Density Plot on Configuration IEEE 802.11ac 40MHz / CH 151 / Ant. 1+2+3

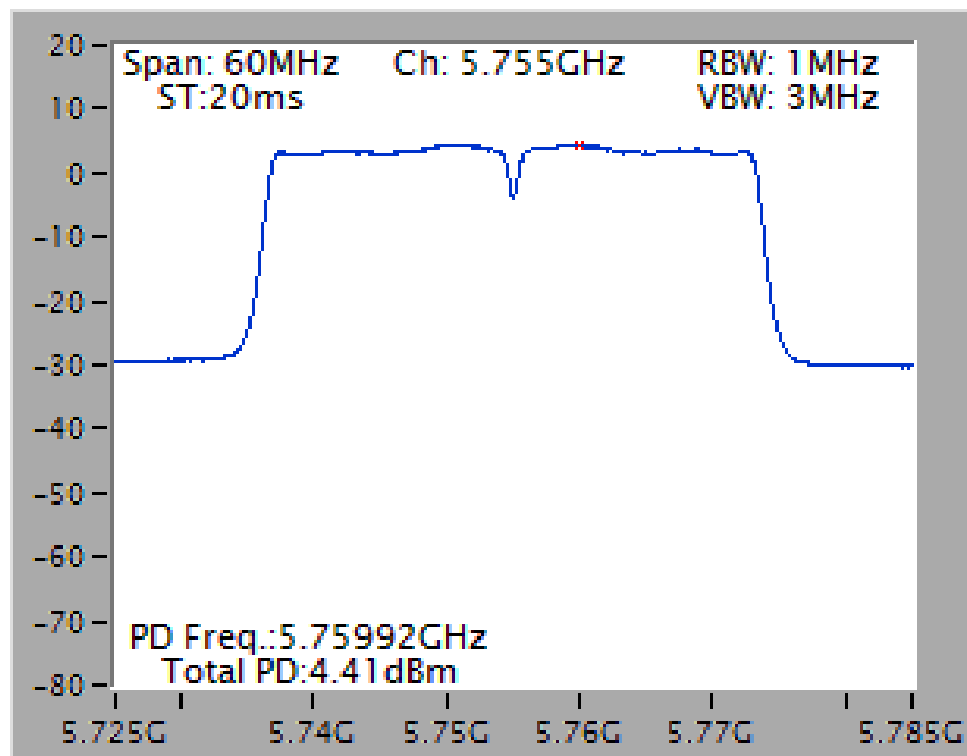


Power Density Plot on Configuration IEEE 802.11ac 40MHz / CH 159 / Ant. 1+2+3

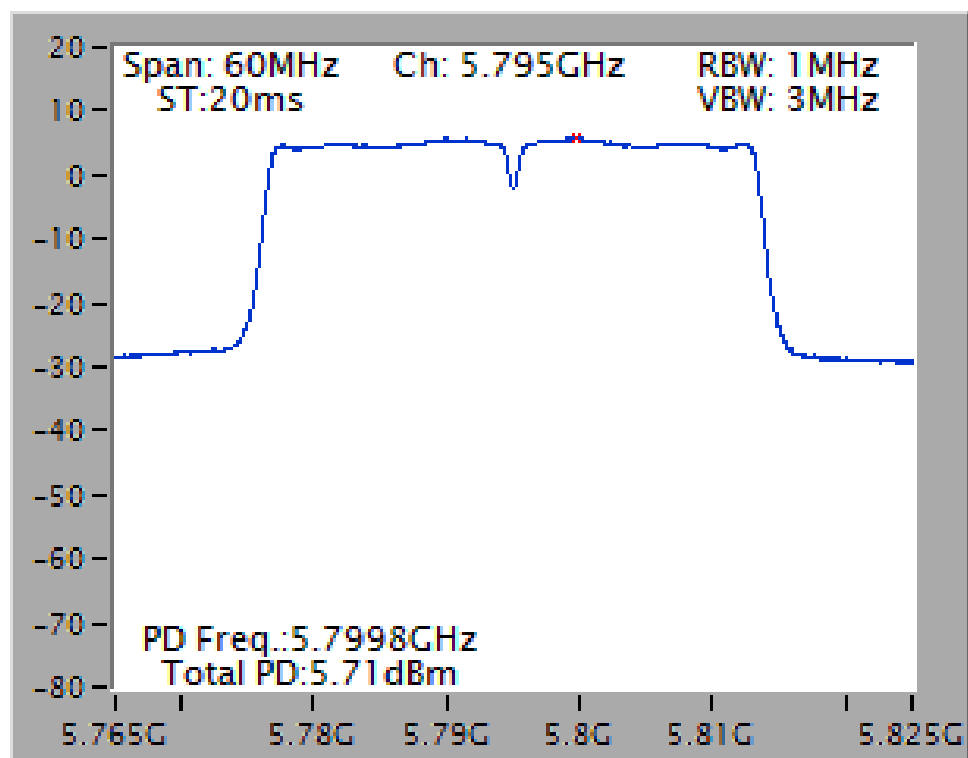


<Nss1MCS0, 1S3T, TXBF>:

Power Density Plot on Configuration IEEE 802.11ac 40MHz / CH 151 / Ant. 1+2+3



Power Density Plot on Configuration IEEE 802.11ac 40MHz / CH 159 / Ant. 1+2+3



Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Configuration	802.11ac 80MHz
Duty Cycle	<Nss1MCS0, Ant. 1>: 95.45% <Nss1MCS0, 1S3T, CDD>: 95.10% <Nss1MCS0, 1S3T, TXBF>: 95.10%		

Configuration IEEE 802.11ac 80MHz for U-NII-1 band

<Nss1MCS0, Ant. 1>

Channel	Frequency	Power Density (dBm/MHz)	Duty Factor	Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-3.50	0.02	-3.30	5.94	17.00	Complies

Note:

$$5210 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{sub}}} \left\{ \sum_{k=1}^{N_{\text{sub}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 5.94 \text{ dBi} < 6 \text{ dBi, so the limit doesn't reduce.}$$

<Nss1MCS0, 1S3T, CDD>

Channel	Frequency	Power Density (dBm/MHz)	Duty Factor	Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)	Result
42	5210 MHz	0.49	0.22	0.71	6.72	16.28	Complies

Note:

$$5210 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{sub}}} \left\{ \sum_{k=1}^{N_{\text{sub}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.72 \text{ dBi} > 6 \text{ dBi, so Limit} = 17 - (6.72 - 6) = 16.28 \text{ dBm/MHz.}$$

<Nss1MCS0, 1S3T, TXBF>

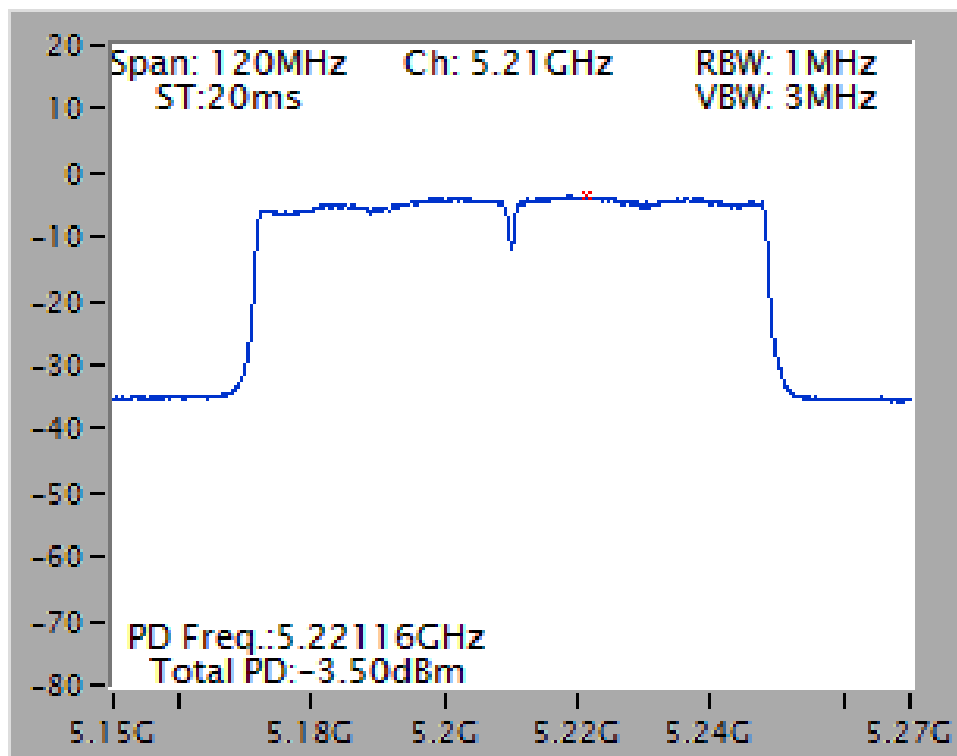
Channel	Frequency	Power Density (dBm/MHz)	Duty Factor	Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-0.76	0.22	-0.54	6.72	16.28	Complies

Note:

$$5210 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{sub}}} \left\{ \sum_{k=1}^{N_{\text{sub}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 6.72 \text{ dBi} > 6 \text{ dBi, so Limit} = 17 - (6.72 - 6) = 16.28 \text{ dBm/MHz.}$$

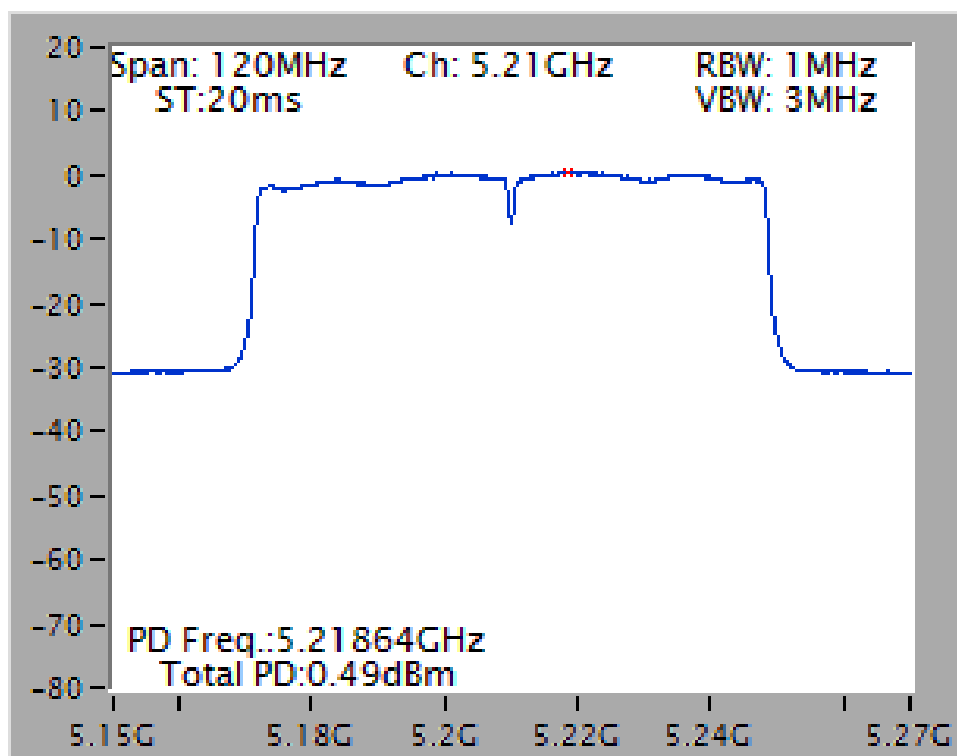
<Nss1MCS0, Ant. 1>:

Power Density Plot on Configuration IEEE 802.11ac 80MHz / CH 42 / Ant. 1



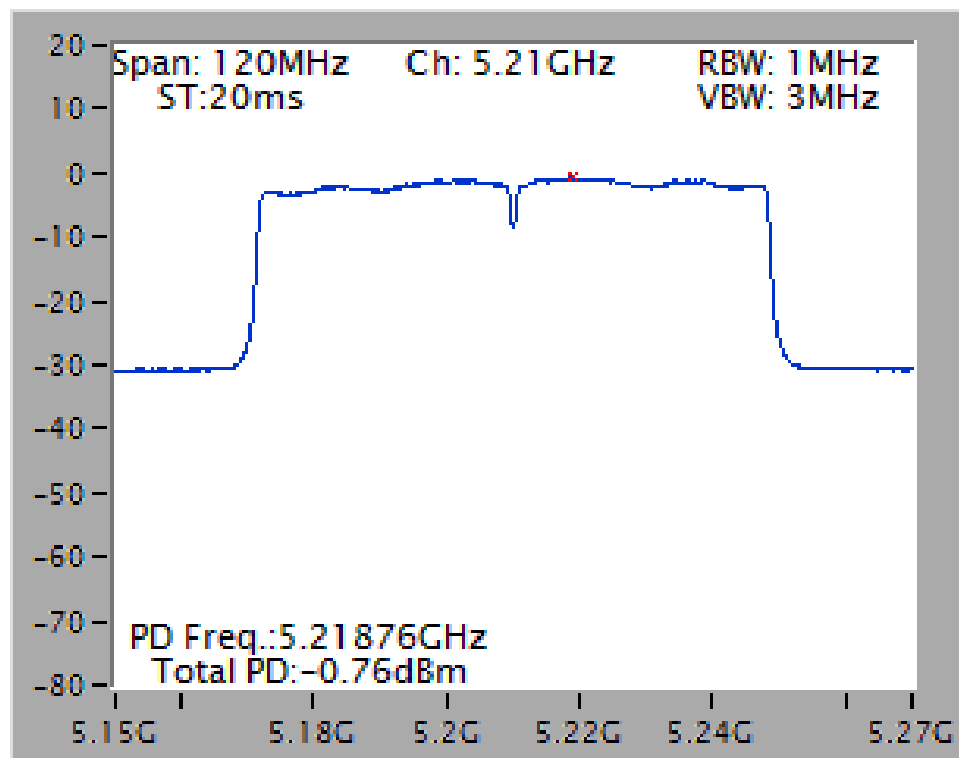
<Nss1MCS0, 1S3T, CDD>:

Power Density Plot on Configuration IEEE 802.11ac 80MHz / CH 42 / Ant. 1+2+3



<Nss1MCS0, 1S3T, TXBF>:

Power Density Plot on Configuration IEEE 802.11ac 80MHz / CH 42 / Ant. 1+2+3



Configuration IEEE 802.11ac 80MHz for U-NII-3 band

<Nss1MCS0, Ant. 1>

Channel	Frequency	Power Density (dBm/MHz)	10log (500kHz /RBW) Factor (dB)	Power Density (dBm/500kHz)	Duty Factor	Total Power Density (dBm/500kHz)	Directional Gain	Power Density Limit (dBm/500kHz)	Result
155	5775 MHz	-2.07	-3.01	-5.08	0.2	-4.88	5.19	30.00	Complies

Note:

$$5775 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 5.19 \text{ dBi} < 6 \text{ dBi}, \text{ so the limit doesn't reduce.}$$

<Nss1MCS0, 1S3T, CDD>

Channel	Frequency	Power Density (dBm/MHz)	10log (500kHz /RBW) Factor (dB)	Power Density (dBm/500kHz)	Duty Factor	Total Power Density (dBm/500kHz)	Directional Gain	Power Density Limit (dBm/500kHz)	Result
155	5775 MHz	1.25	-3.01	-1.76	0.22	-1.54	7.28	28.72	Complies

Note:

$$5775 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.28 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (7.28 - 6) = 28.72 \text{ dBm/500kHz.}$$

<Nss1MCS0, 1S3T, TXBF>

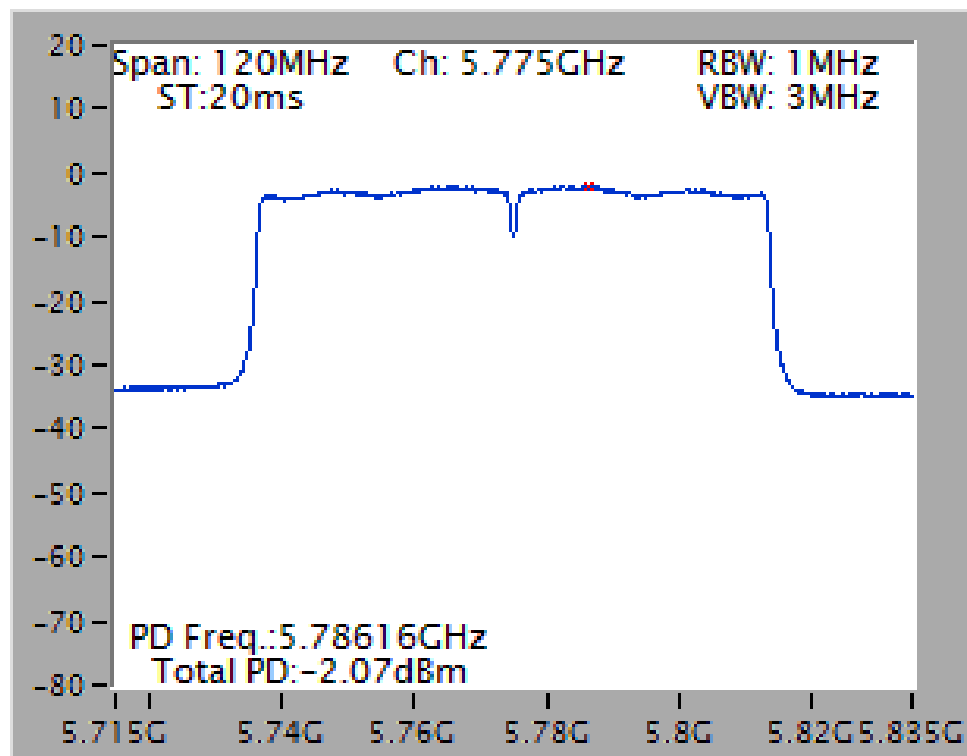
Channel	Frequency	Power Density (dBm/MHz)	10log (500kHz /RBW) Factor (dB)	Power Density (dBm/500kHz)	Duty Factor	Total Power Density (dBm/500kHz)	Directional Gain	Power Density Limit (dBm/500kHz)	Result
155	5775 MHz	-1.16	-3.01	-4.17	0.22	-3.95	7.28	28.72	Complies

Note:

$$5775 \text{ MHz} = \text{Directional Gain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{\text{ch}}} \left\{ \sum_{k=1}^{N_{\text{eq}}} g_{j,k} \right\}^2}{N_{\text{ANT}}} \right] = 7.28 \text{ dBi} > 6 \text{ dBi}, \text{ so Limit} = 30 - (7.28 - 6) = 28.72 \text{ dBm/500kHz.}$$

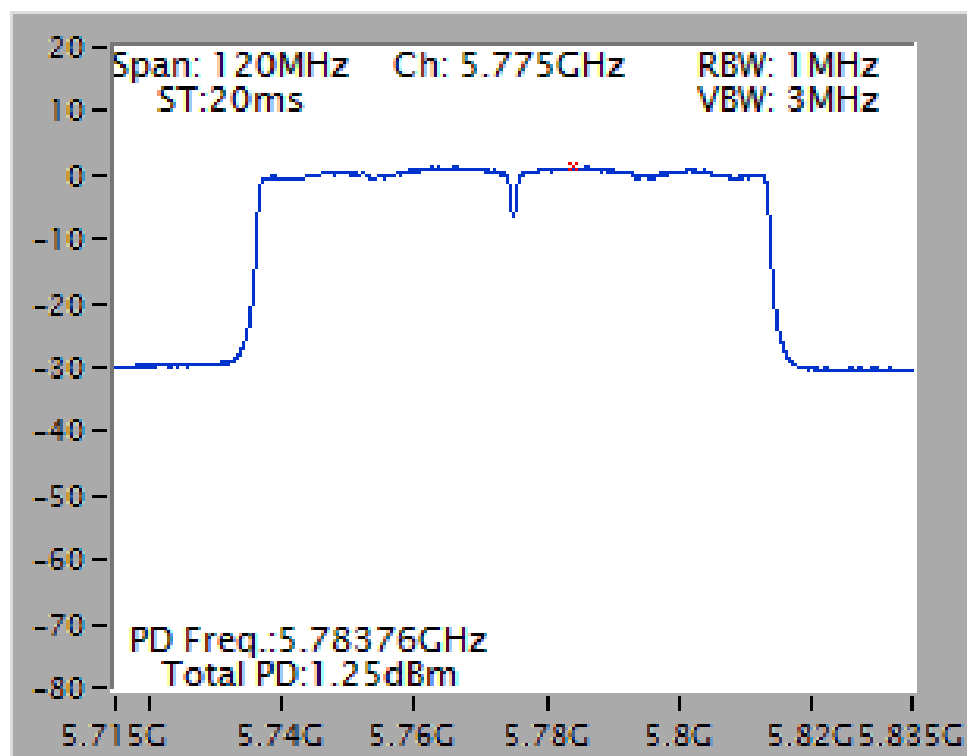
<Nss1MCS0, Ant. 1>:

Power Density Plot on Configuration IEEE 802.11ac 80MHz / CH 155 / Ant. 1



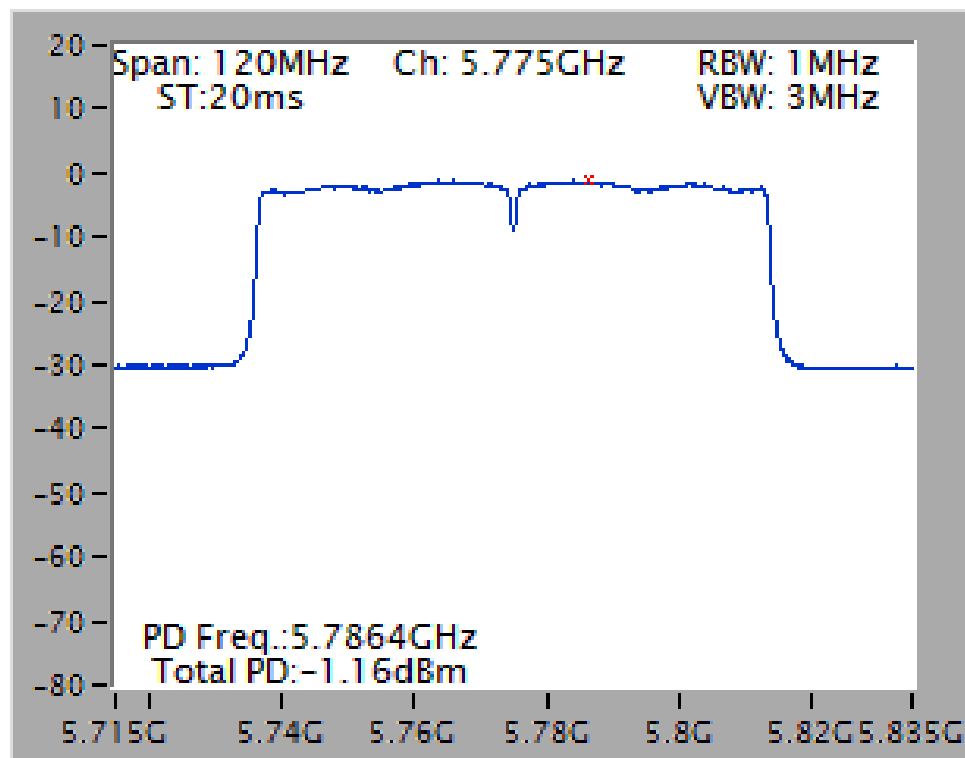
<Nss1MCS0, 1S3T, CDD>:

Power Density Plot on Configuration IEEE 802.11ac 80MHz / CH 155 / Ant. 1+2+3



<Nss1MCS0, 1S3T, TXBF>:

Power Density Plot on Configuration IEEE 802.11ac 80MHz / CH 155 / Ant. 1+2+3



3.5 Radiated Emissions Measurement

3.5.1 Limit of Unwanted emissions in the restricted bands

Radiated emissions which fall within the restricted band specified on 15.205(a) must comply with the radiated emission limits specified as below table:

Frequencies (MHz)	Field Strength (microvolts/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

Note:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBμV/m) = 20 log Emission level (μV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

3.5.2 Limits of Unwanted Emission out of the restricted bands

APPLICABLE TO	EIRP LIMIT (dBm)	EQUIVALENT FIELD STRENGTH AT 3m (dBμV/m)	
U-NII-1 5150~5250MHz	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m)	-27dBm/MHz can be substituted by PK: 74 (dBμV/m) AV: 54 (dBμV/m)
U-NII-3 5725~5850MHz	PK: -27 (dBm/MHz) *1 PK: -17 (dBm/MHz) *2	PK: 68.2 (dBμV/m) *1 PK: 78.2 (dBμV/m) *2	

Note: *1 beyond 10MHz of the band edge ; *2 within 10 MHz of band edge

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{100000\sqrt{30P}}{3} \mu\text{V/m, where } P \text{ is the eirp (Watts).}$$

3.5.3 Measuring Instruments and Setting

Please refer to section 4 of equipments list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1GHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 10Hz for Average (Method VB)
RBW / VBW (Emission in non-restricted band)	1MHz / 3MHz for Peak
Detector	Peak
Trace mode	Max hold.

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~1GHz / RBW 120kHz for QP

3.5.4 Test Procedures

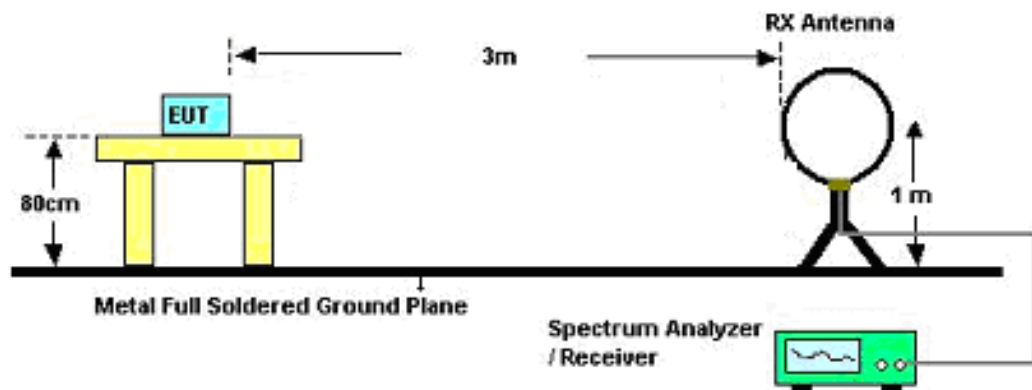
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting 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 10Hz VBW for average reading in spectrum analyzer.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases

where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.

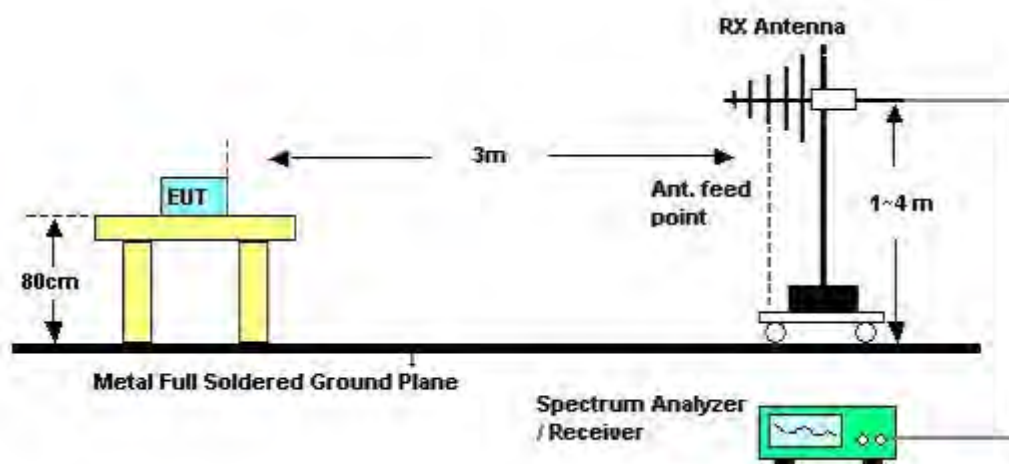
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For 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.
10. 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.

3.5.5 Test Setup Layout

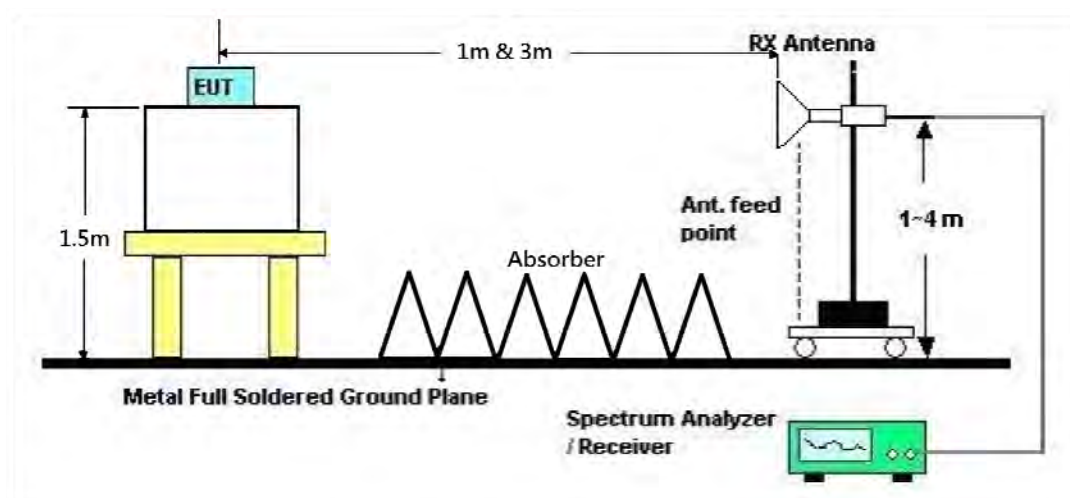
For Radiated Emissions below 1GHz (9kHz~30MHz)



For Radiated Emissions below 1GHz (30MHz~1GHz)



For Radiated Emissions above 1GHz



3.5.6 Test Deviation

There is no deviation with the original standard.

3.5.7 EUT Operation during Test

For Non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

For beamforming mode:

The EUT was programmed to be in beamforming transmitting mode.

3.5.8 Results of Radiated Emissions (9kHz~30MHz)

Frequency Range	9kHz~30MHz	Test Site No.	03CH01-CB
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Configurations	CTX
Test Date	Feb. 09, 2015		

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

Note:

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

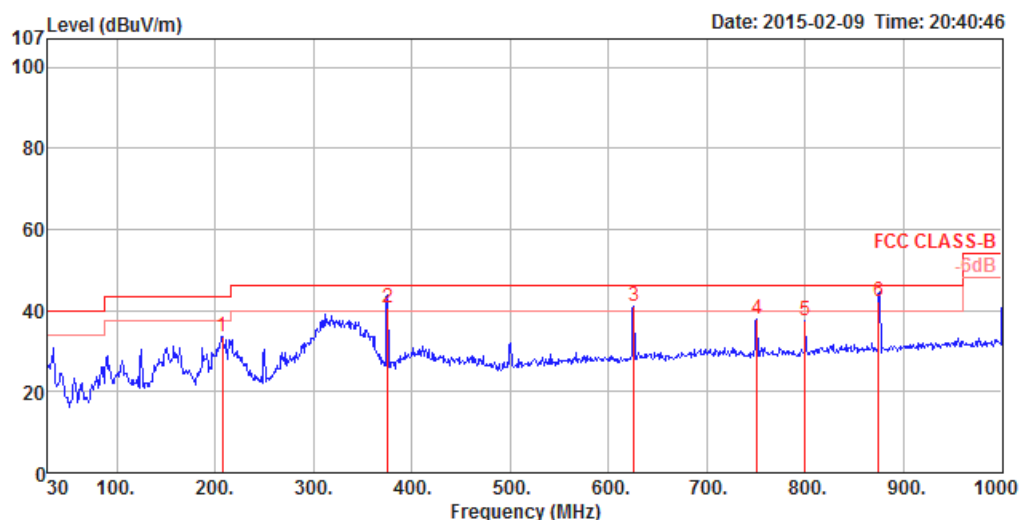
Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB);

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

3.5.9 Results of Radiated Emissions (30MHz~1GHz)

Frequency Range	30MHz~1GHz	Test Site No.	03CH01-CB
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Configurations	CTX

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna		A/Pos	T/Pos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	Pol/Phase	cm	deg	
1	207.51	33.63	43.50	-9.87	53.87	1.42	32.26	10.60	HORIZONTAL	200	276	Peak
2	375.32	40.74	46.00	-5.26	55.20	1.93	32.32	15.93	HORIZONTAL	100	280	QP
3	625.58	41.09	46.00	-4.91	51.90	2.46	32.53	19.26	HORIZONTAL	150	280	Peak
4	750.71	37.73	46.00	-8.27	47.23	2.71	32.42	20.21	HORIZONTAL	125	318	Peak
5	800.18	37.45	46.00	-8.55	46.47	2.81	32.43	20.60	HORIZONTAL	125	55	Peak
6	874.87	42.35	46.00	-3.65	50.10	2.95	32.05	21.35	HORIZONTAL	100	310	QP

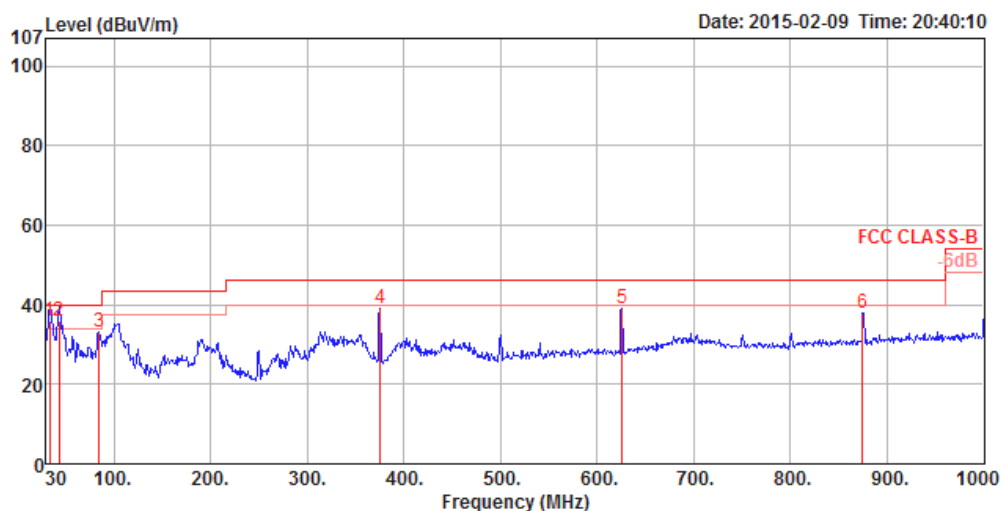
Note:

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

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

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

Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna		A/Pos	T/Pos	
	MHz	dBuV/m	dBuV/m	Limit	Level	Loss	Factor	Factor	Pol/Phase	cm	deg	Remark
1	33.88	36.08	40.00	-3.92	50.30	0.59	32.41	17.60	VERTICAL	100	75	QP
2	43.58	35.92	40.00	-4.08	55.90	0.68	32.44	11.78	VERTICAL	100	284	QP
3	84.32	33.13	40.00	-6.87	56.40	0.92	32.43	8.24	VERTICAL	100	230	Peak
4	375.32	39.03	46.00	-6.97	53.51	1.93	32.32	15.91	VERTICAL	125	203	Peak
5	625.58	39.17	46.00	-6.83	49.99	2.46	32.53	19.25	VERTICAL	100	247	Peak
6	874.87	38.04	46.00	-7.96	45.79	2.95	32.05	21.35	VERTICAL	100	317	Peak

Note:

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

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

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

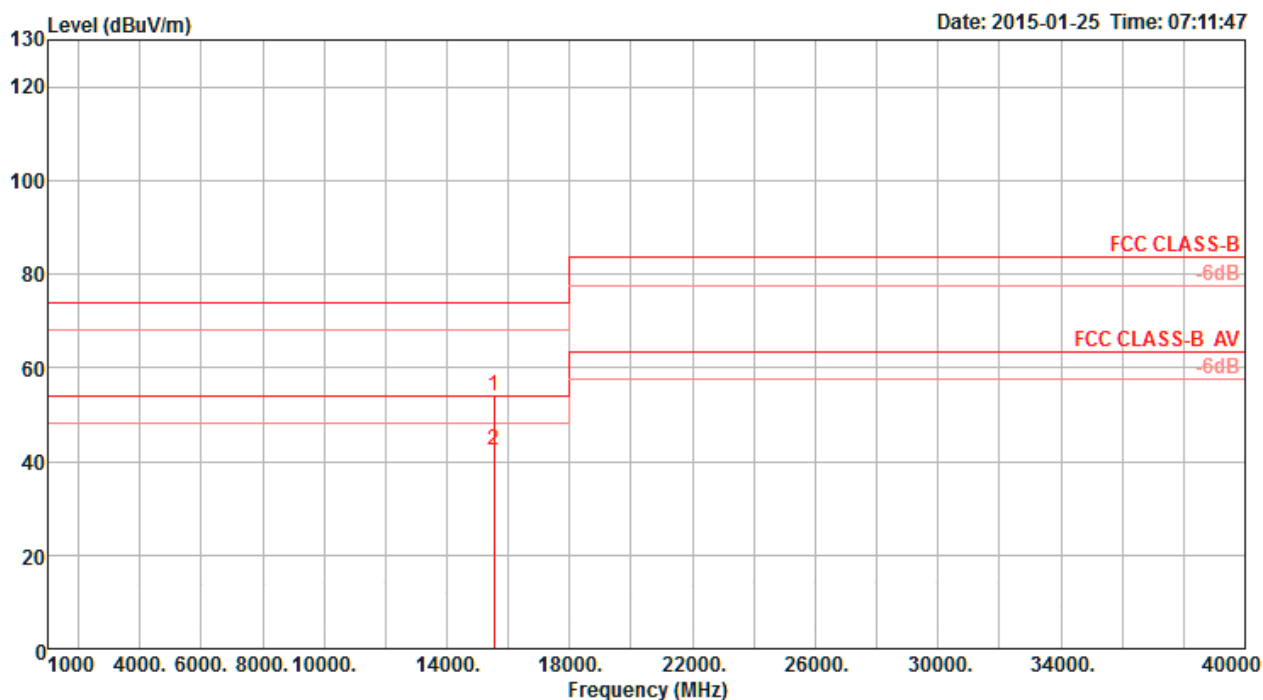
3.5.10 Results of Emission not in Restricted Bands

Following channel(s) was (were) selected for the final test as listed below.

Mode	TX Antenna	Test Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	Ant.1	36, 40, 48 149, 157, 165	OFDM	BPSK	6
802.11a	Ant.1+2+3 (1S3T, CDD)	36, 40, 48 149, 157, 165	OFDM	BPSK	6
802.11ac 20MHz	Ant.1	36, 40, 48 149, 157, 165	OFDM	BPSK	Nss1MCS0 (6.5)
802.11ac 20MHz	Ant.1+2+3 (1S3T, CDD)	36, 40, 48 149, 157, 165	OFDM	BPSK	Nss1MCS0 (6.5)
802.11ac 20MHz	Ant.1+2+3 (1S3T, TXBF)	36, 40, 48 149, 157, 165	OFDM	BPSK	Nss1MCS0 (6.5)
802.11ac 40MHz	Ant.1	38, 46 151, 159	OFDM	BPSK	Nss1MCS0 (13.5)
802.11ac 40MHz	Ant.1+2+3 (1S3T, CDD)	38, 46 151, 159	OFDM	BPSK	Nss1MCS0 (13.5)
802.11ac 40MHz	Ant.1+2+3 (1S3T, TXBF)	38, 46 151, 159	OFDM	BPSK	Nss1MCS0 (13.5)
802.11ac 80MHz	Ant.1	42 155	OFDM	BPSK	Nss1MCS0 (29.5)
802.11ac 80MHz	Ant.1+2+3 (1S3T, CDD)	42 155	OFDM	BPSK	Nss1MCS0 (29.5)
802.11ac 80MHz	Ant.1+2+3 (1S3T, TXBF)	42 155	OFDM	BPSK	Nss1MCS0 (29.5)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH36 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	15539.46	53.88	74.00	-20.12	42.37	7.56	38.67	34.72	Peak	255	162	HORIZONTAL
2	15539.82	42.29	54.00	-11.71	30.78	7.56	38.67	34.72	Average	255	162	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

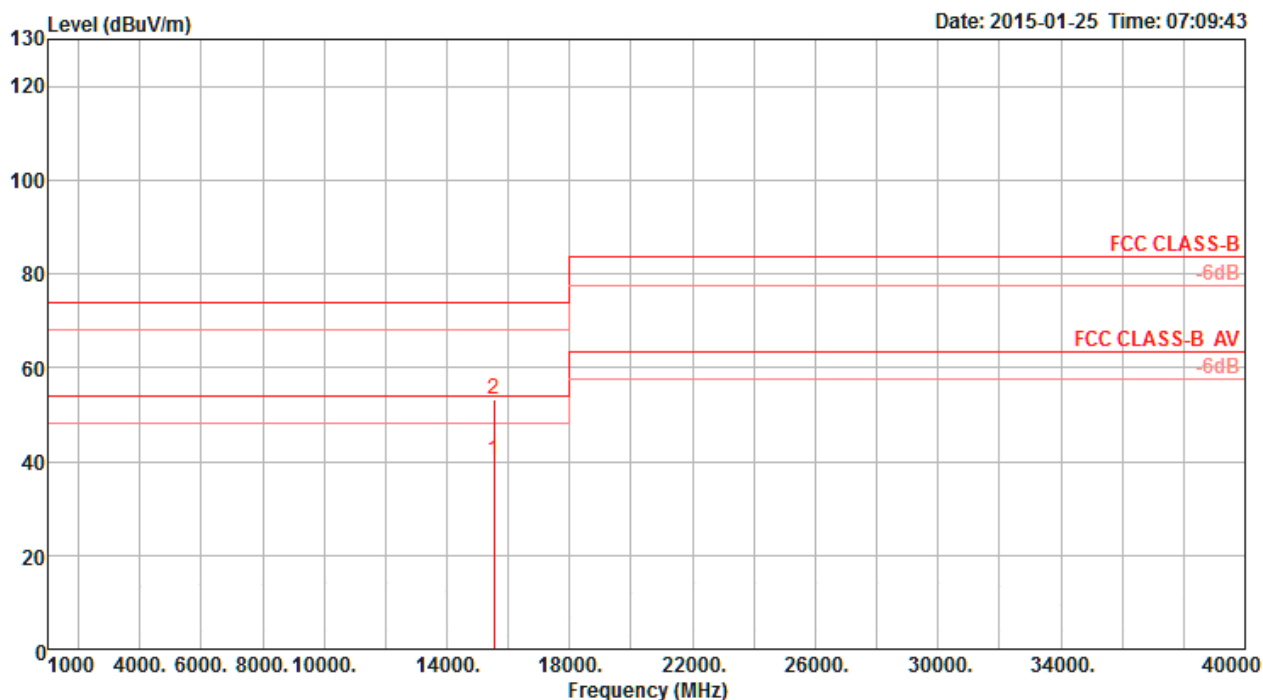
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH36 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	15539.04	40.24	54.00	-13.76	28.73	7.56	38.67	34.72	Average	29	166	VERTICAL
2	15539.52	53.36	74.00	-20.64	41.85	7.56	38.67	34.72	Peak	29	166	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

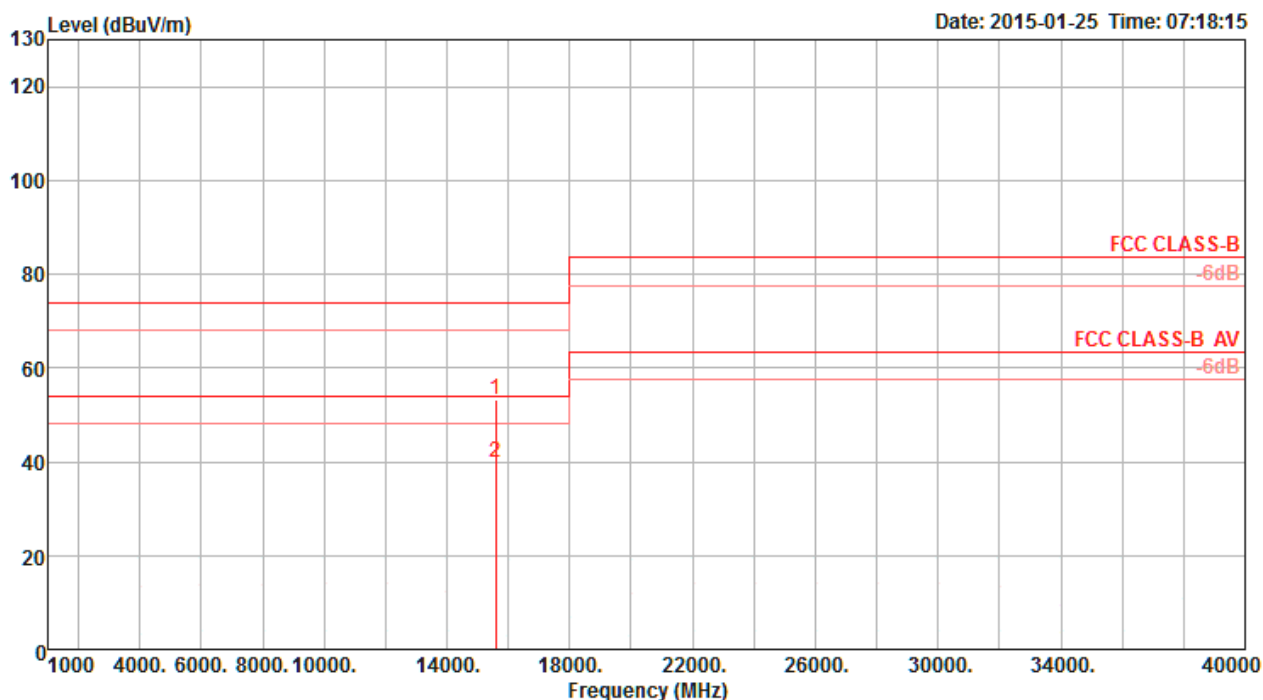
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH40 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	15599.50	53.23	74.00	-20.77	41.82	7.58	38.62	34.79	Peak	295	159	HORIZONTAL
2	15599.90	39.99	54.00	-14.01	28.58	7.58	38.62	34.79	Average	295	159	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

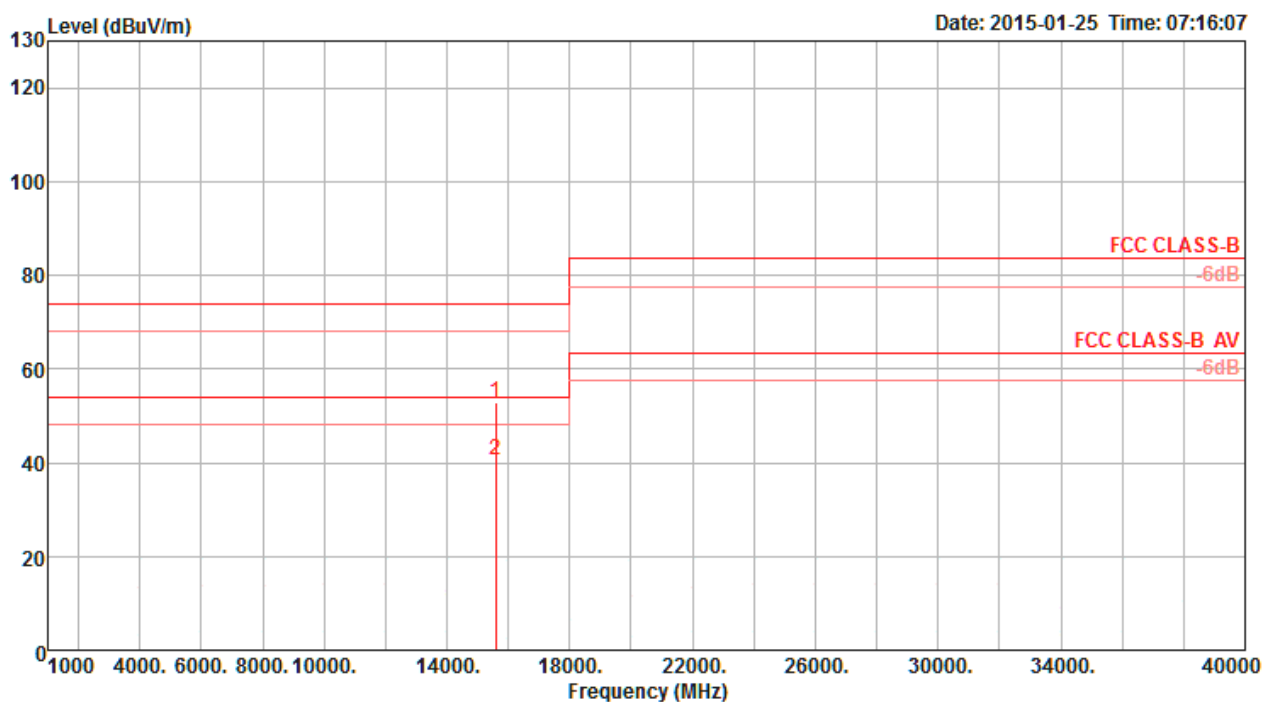
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH40 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	15597.89	53.00	74.00	-21.00	41.57	7.58	38.62	34.77	Peak	306	162	VERTICAL
2	15601.31	40.40	54.00	-13.60	28.99	7.58	38.62	34.79	Average	306	162	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

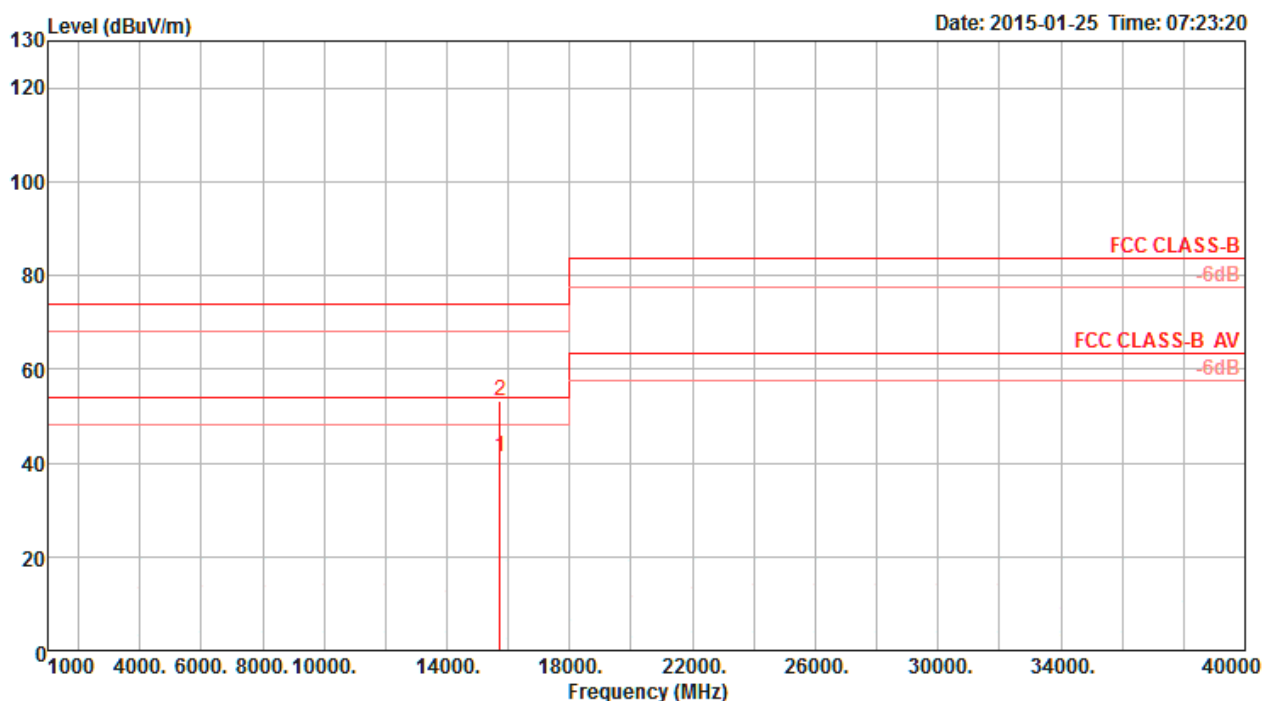
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH48 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	15719.84	41.31	54.00	-12.69	30.05	7.62	38.52	34.88	Average	289	154	HORIZONTAL
2	15722.01	53.21	74.00	-20.79	41.95	7.62	38.52	34.88	Peak	289	154	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

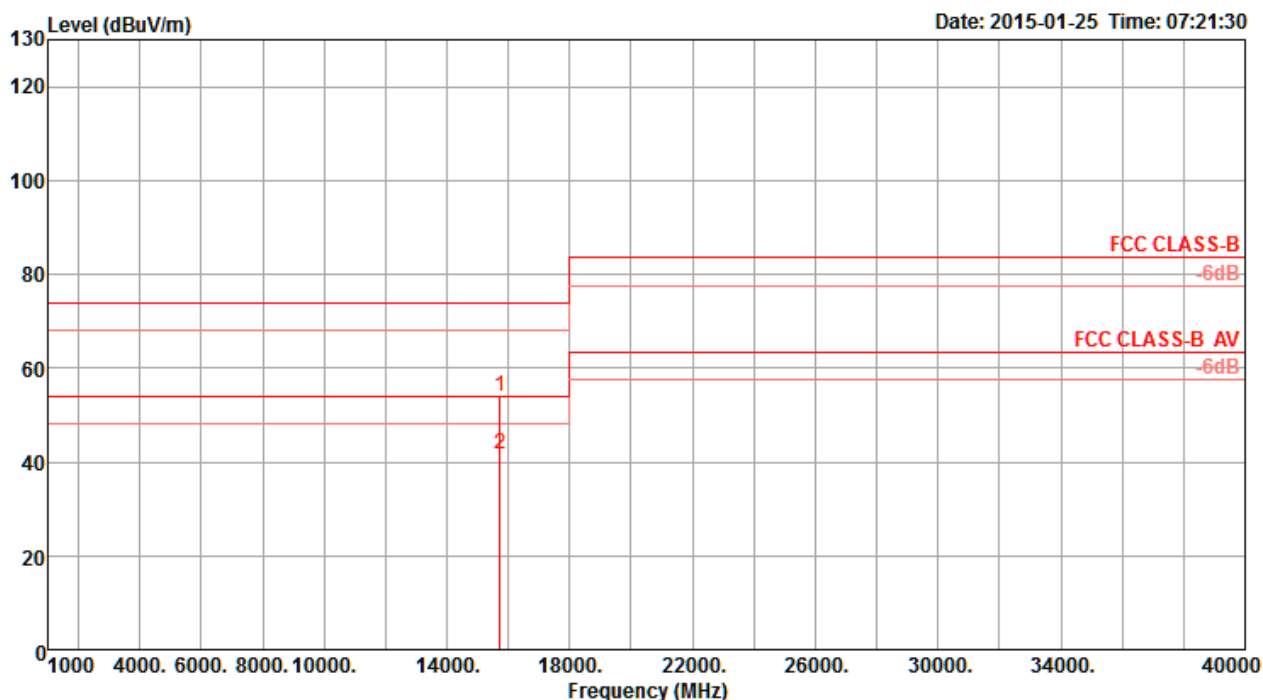
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH48 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	15717.99	54.11	74.00	-19.89	42.85	7.62	38.52	34.88	Peak	46	154	VERTICAL
2	15719.49	41.55	54.00	-12.45	30.29	7.62	38.52	34.88	Average	46	154	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

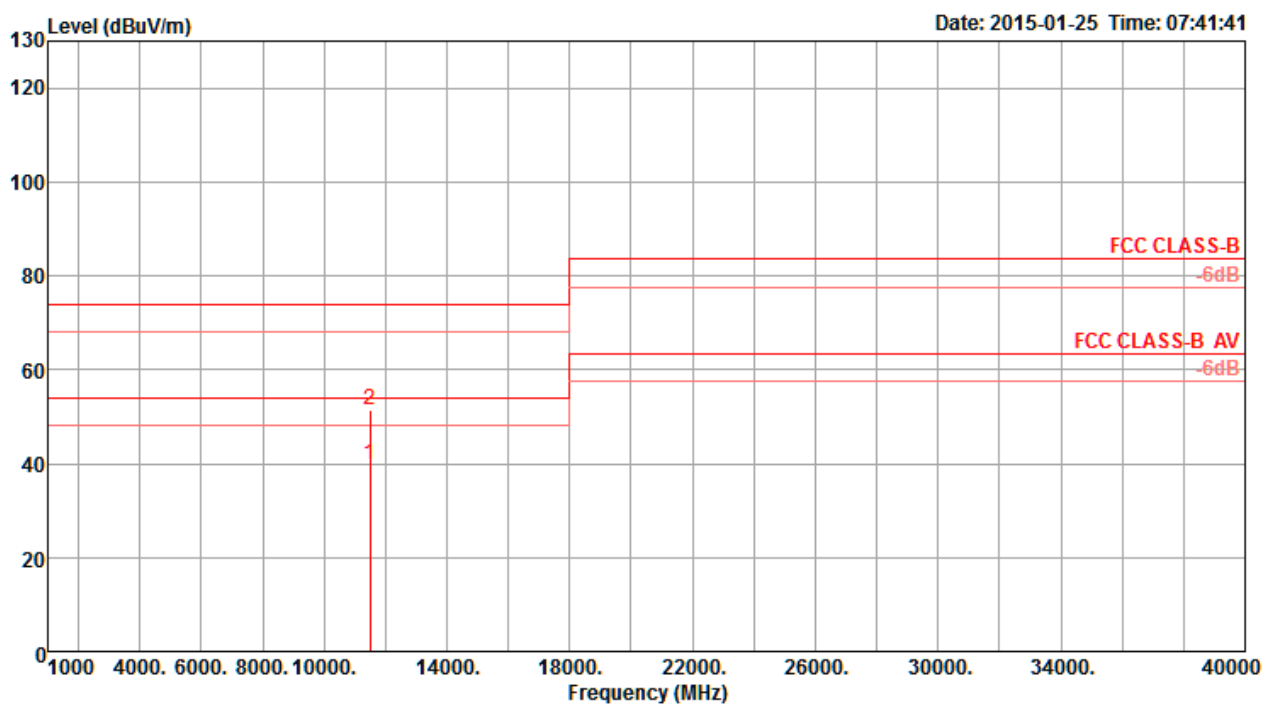
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH149 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11490.42	39.84	54.00	-14.16	29.67	6.53	38.30	34.66	Average	353	160	HORIZONTAL
2	11490.80	51.58	74.00	-22.42	41.41	6.53	38.30	34.66	Peak	353	160	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

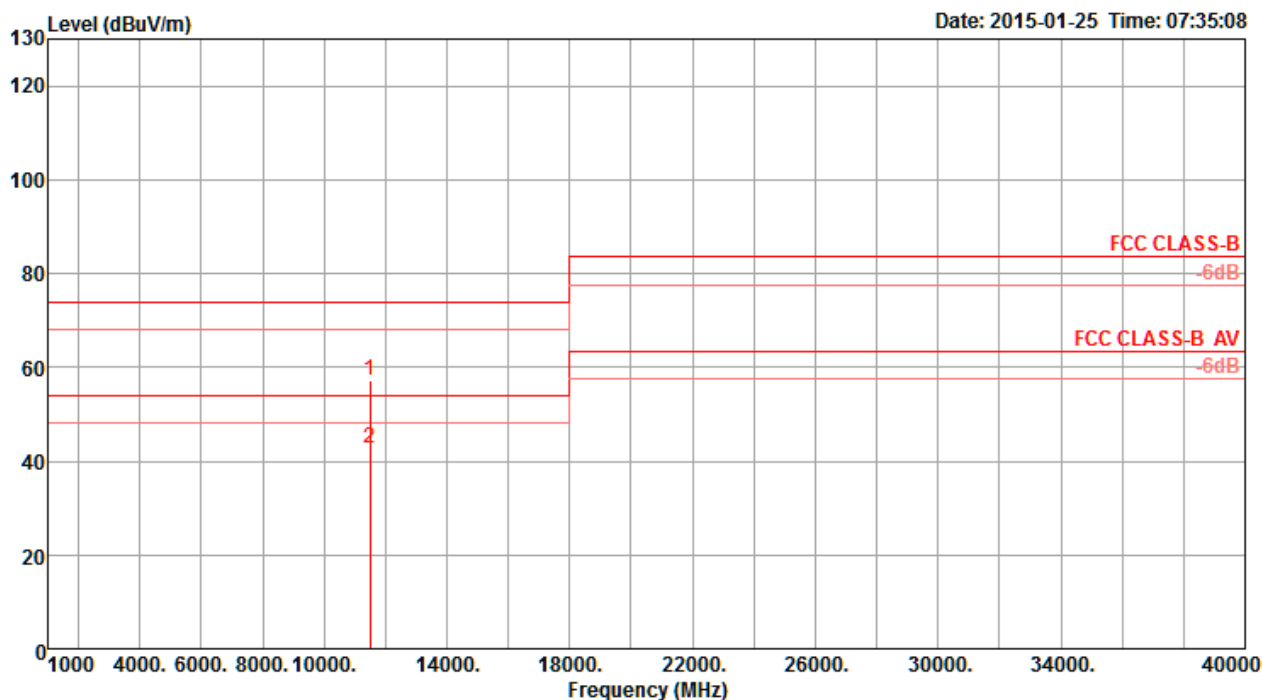
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH149 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11490.52	57.34	74.00	-16.66	47.17	6.53	38.30	34.66	Peak	175	187	VERTICAL
2	11490.62	42.74	54.00	-11.26	32.57	6.53	38.30	34.66	Average	175	187	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

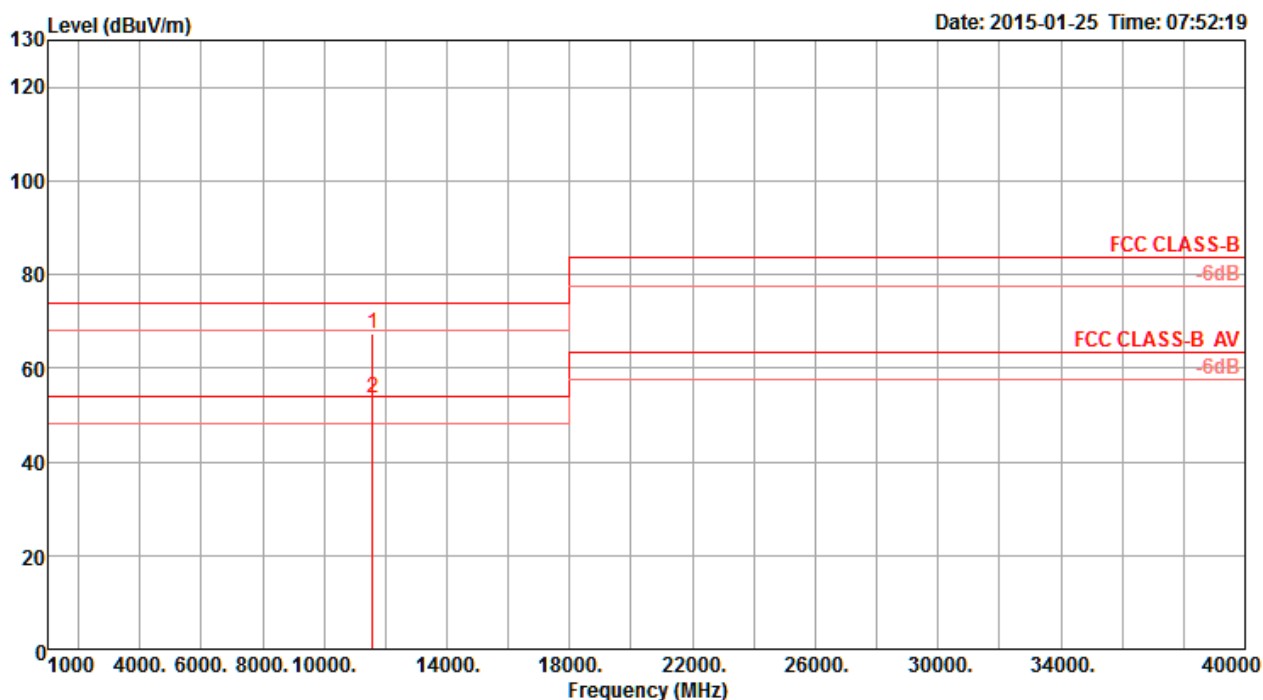
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH157 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp			T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11570.45	67.44	74.00	-6.56	57.25	6.55	38.33	34.69	Peak	181	149	HORIZONTAL
2	11572.50	53.68	54.00	-0.32	43.49	6.55	38.33	34.69	Average	181	149	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

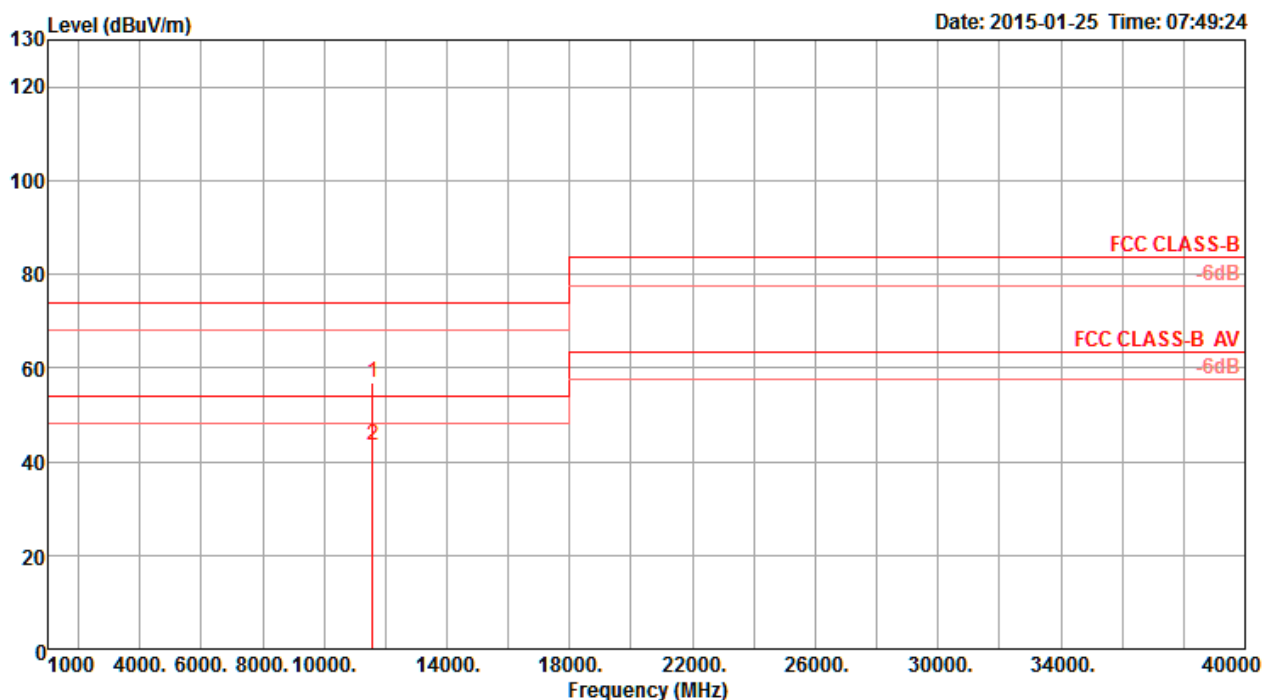
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH157 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11569.42	56.74	74.00	-17.26	46.54	6.55	38.33	34.68	Peak	195	181	VERTICAL
2	11572.17	43.41	54.00	-10.59	33.22	6.55	38.33	34.69	Average	195	181	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

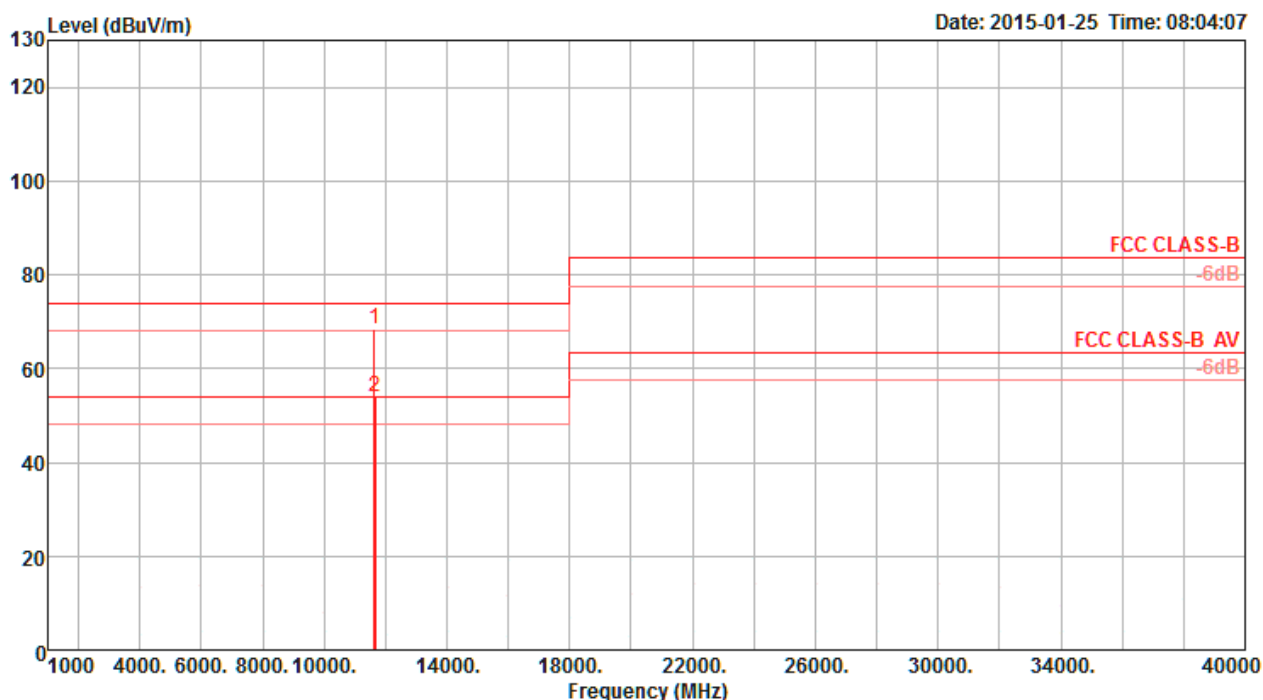
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH165 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	11648.82	68.44	74.00	-5.56	58.24	6.56	38.36	34.72	Peak	181	149	HORIZONTAL
2	11651.41	53.93	54.00	-0.07	43.73	6.56	38.36	34.72	Average	181	149	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

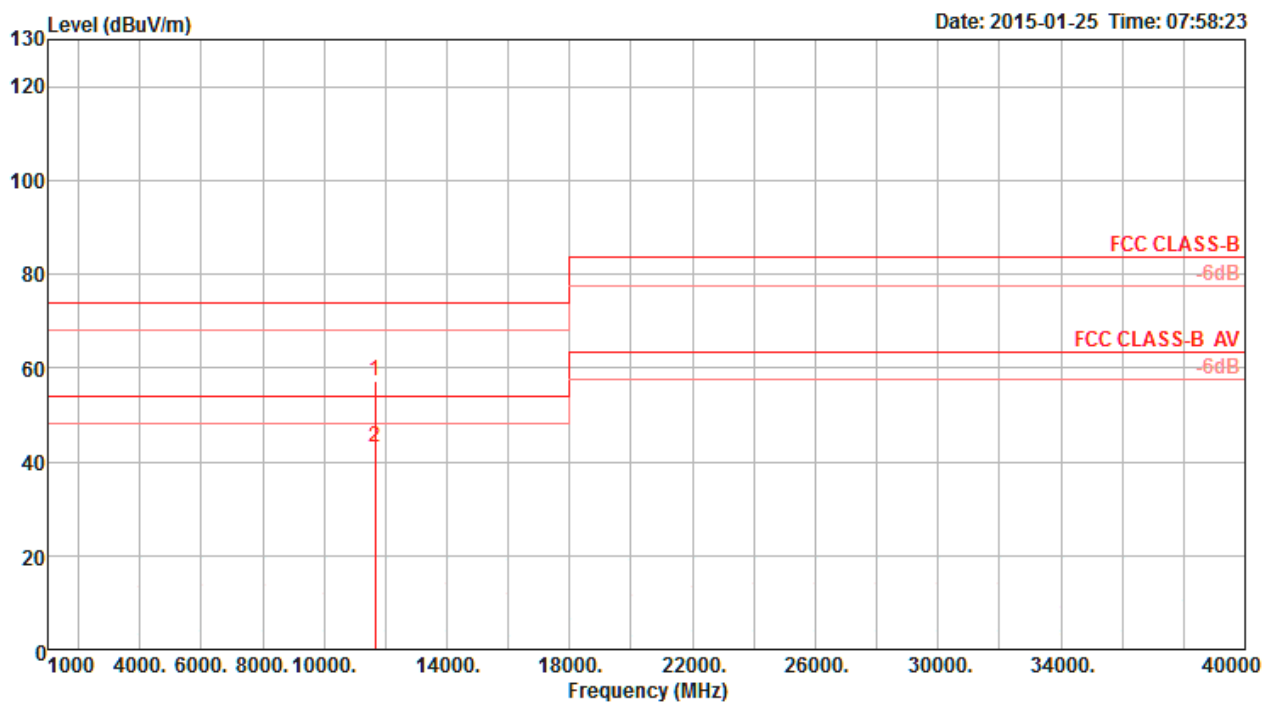
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH165 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	11650.40	57.33	74.00	-16.67	47.13	6.56	38.36	34.72	Peak	253	149	VERTICAL
2	11650.76	43.21	54.00	-10.79	33.01	6.56	38.36	34.72	Average	253	149	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

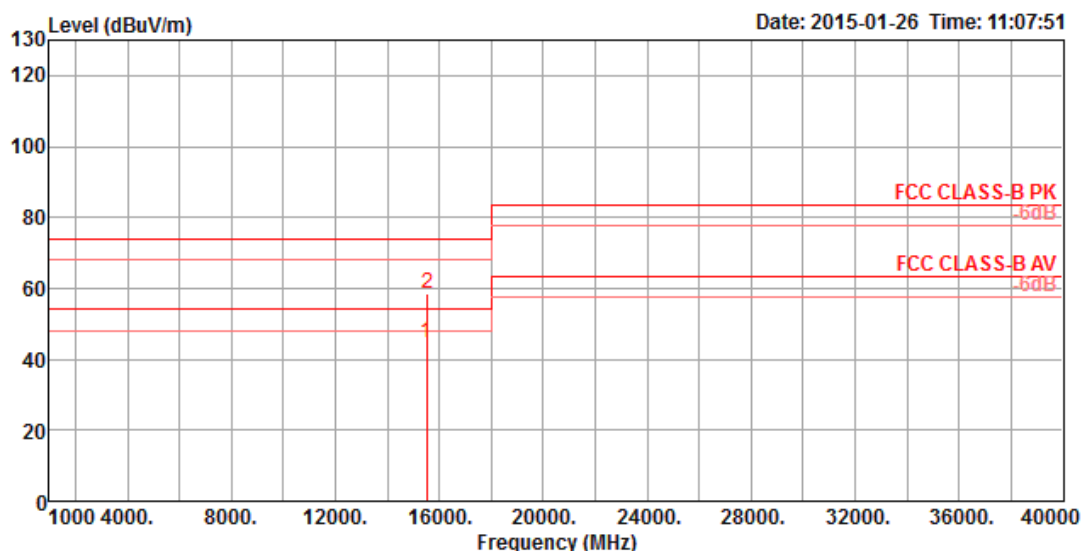
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH36 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	15520.54	44.72	54.00	-9.28	30.35	38.37	10.72	34.72	162	228	HORIZONTAL Average
2	15541.01	58.34	74.00	-15.66	44.01	38.34	10.72	34.73	162	228	HORIZONTAL Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

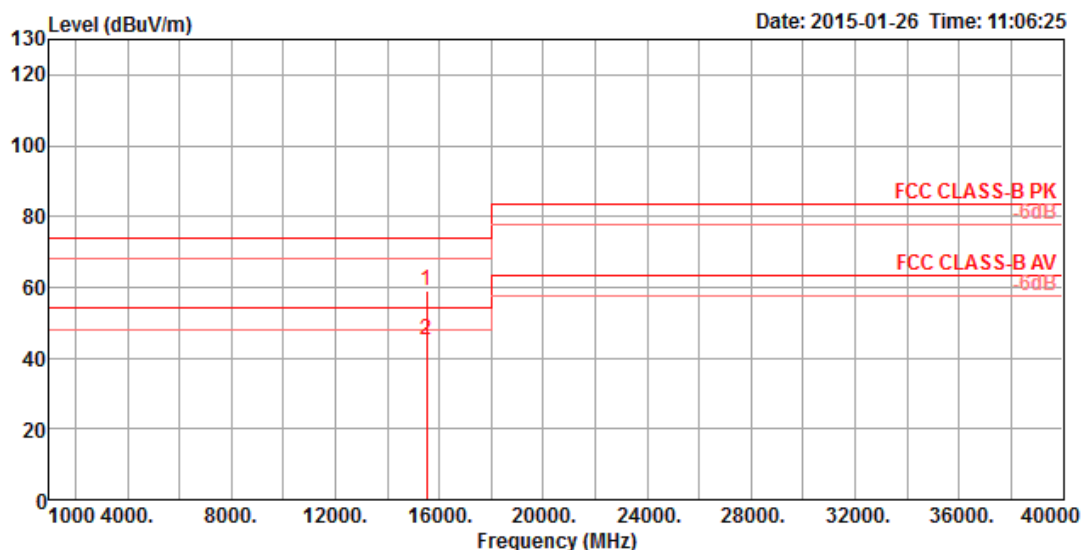
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH36 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	15524.44	58.94	74.00	-15.06	44.60	38.34	10.72	34.72	189	169	VERTICAL Peak
2	15528.64	44.96	54.00	-9.04	30.62	38.34	10.72	34.72	189	169	VERTICAL Average

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

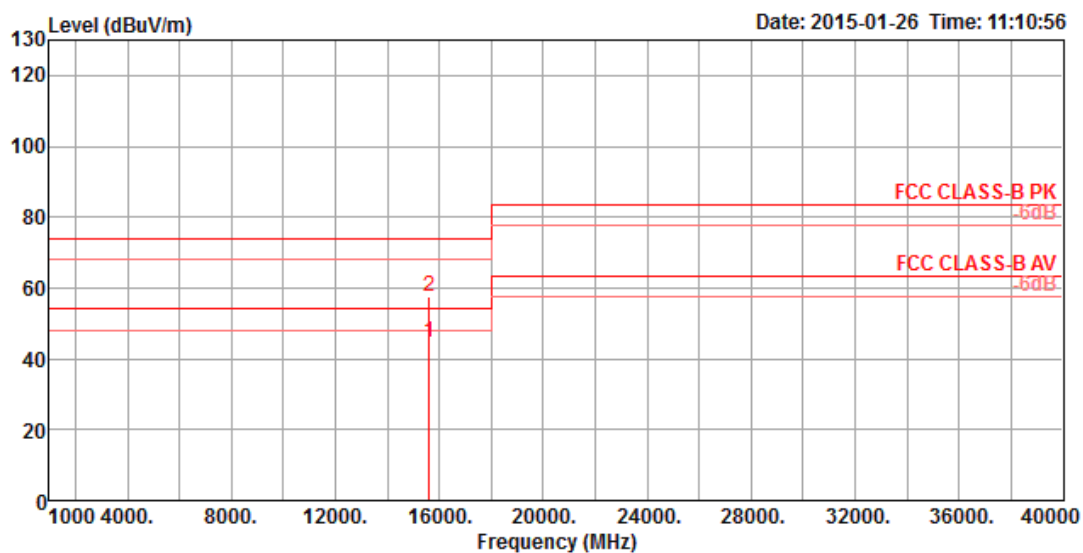
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH40 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	15606.01	44.52	54.00	-9.48	30.26	38.25	10.76	34.75	125	57	HORIZONTAL Average
2	15612.88	57.68	74.00	-16.32	43.43	38.24	10.76	34.75	125	57	HORIZONTAL Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

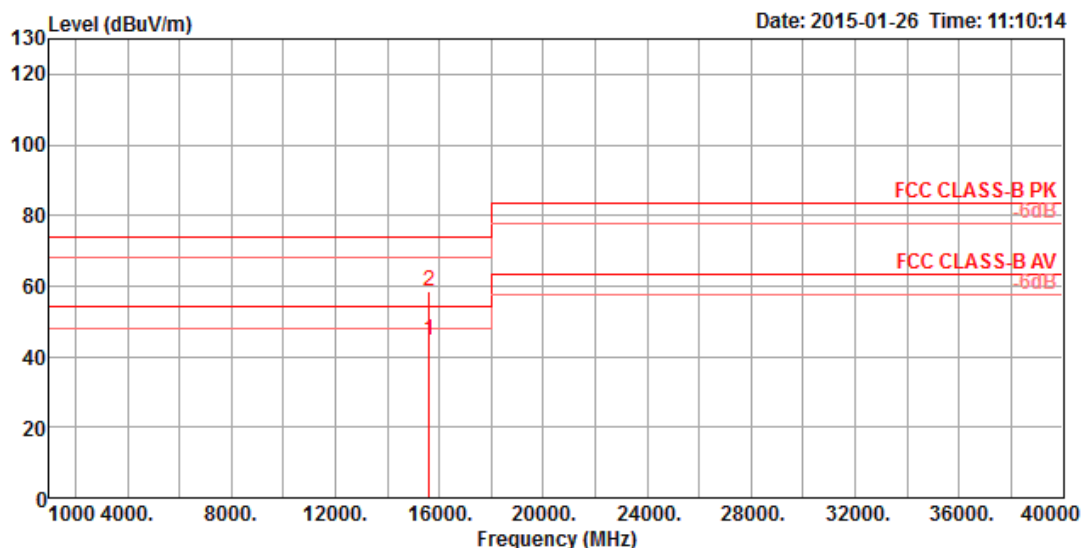
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH40 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	15600.07	44.59	54.00	-9.41	30.31	38.27	10.76	34.75	198	194 VERTICAL	Average
2	15612.52	58.33	74.00	-15.67	44.11	38.21	10.76	34.75	198	194 VERTICAL	Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

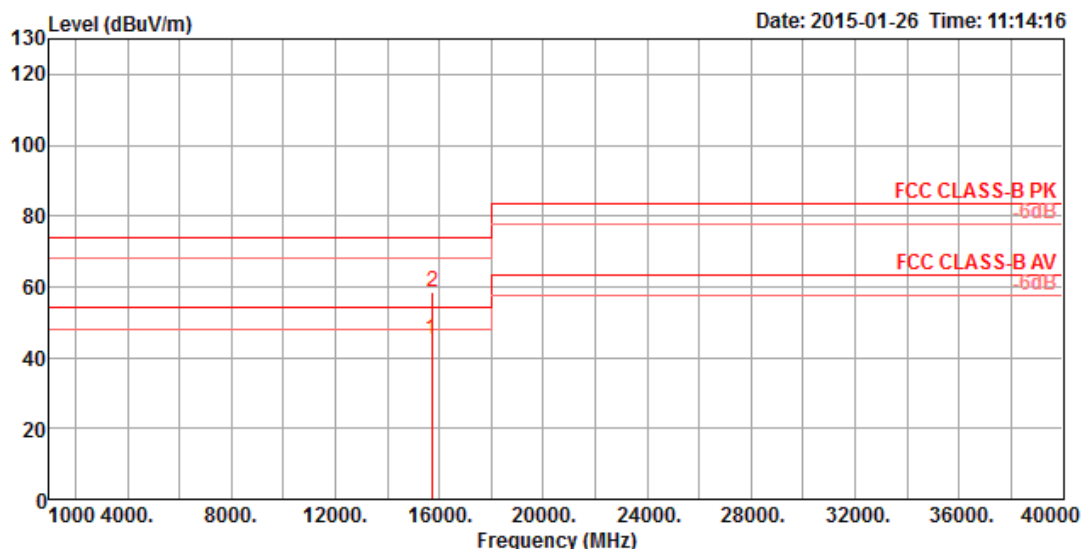
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH48 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	15712.40	45.13	54.00	-8.87	31.02	38.10	10.80	34.79	183	150	HORIZONTAL Average
2	15740.55	58.63	74.00	-15.37	44.58	38.06	10.80	34.81	183	150	HORIZONTAL Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

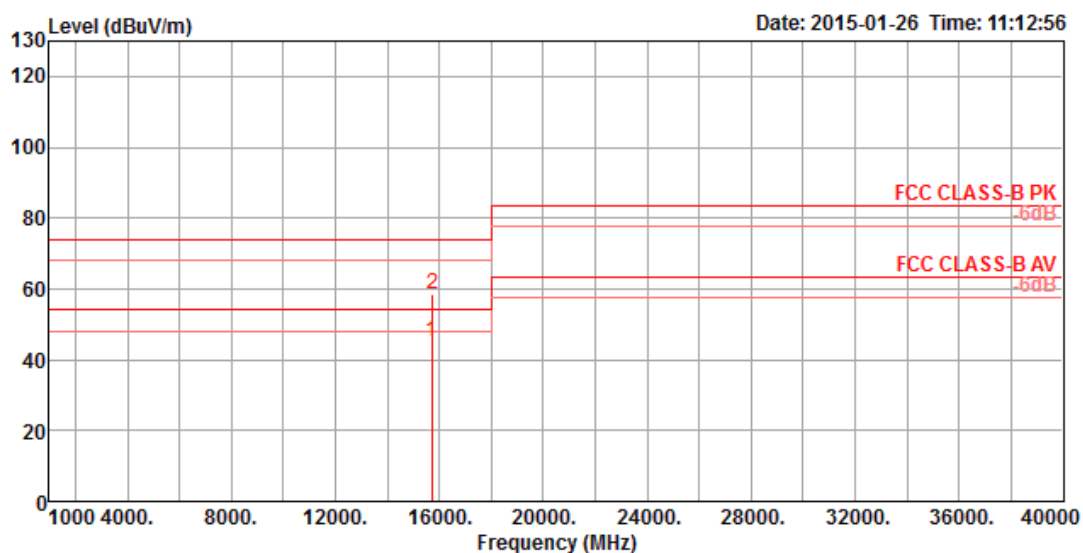
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH48 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	15722.82	45.02	54.00	-8.98	30.94	38.08	10.80	34.80	163	221	VERTICAL Average
2	15737.37	58.33	74.00	-15.67	44.31	38.02	10.80	34.80	163	221	VERTICAL Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

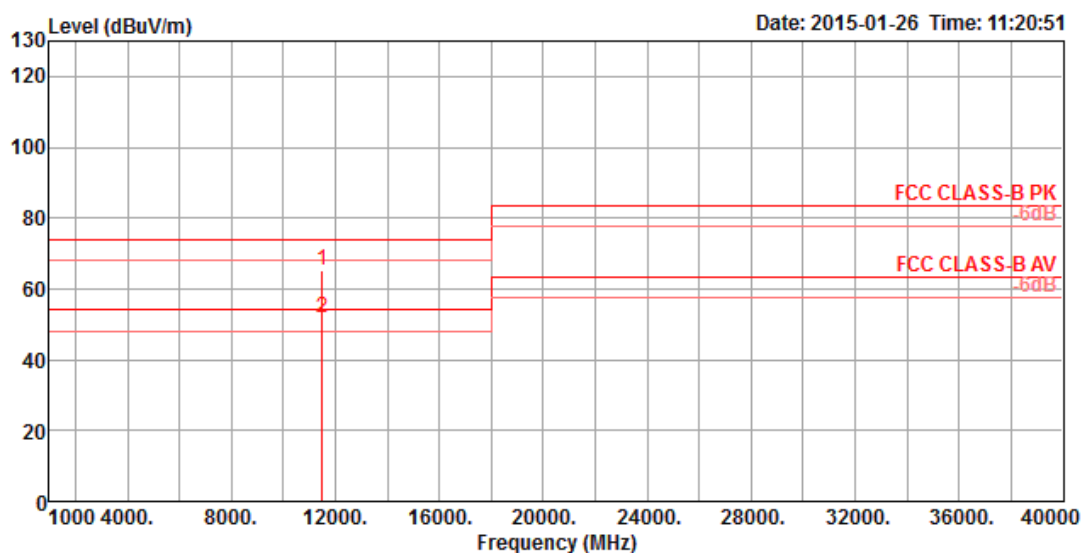
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH149 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit Line	Over Limit	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg		
1	11490.29	65.33	74.00	-8.67	51.38	39.91	9.07	35.03	100	102	HORIZONTAL	Peak
2	11491.16	51.62	54.00	-2.38	37.67	39.91	9.07	35.03	100	102	HORIZONTAL	Average

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

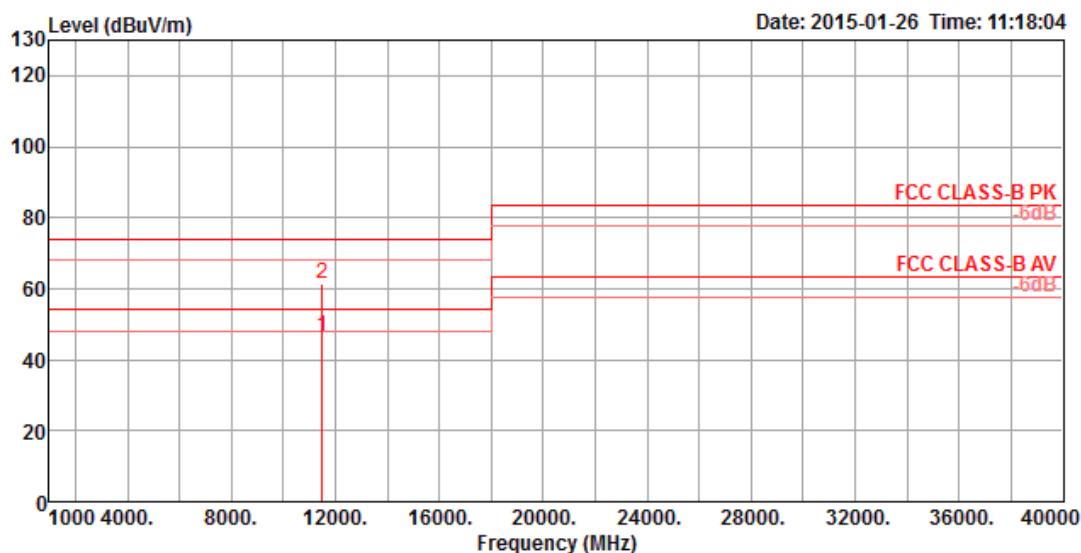
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH149 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit Line	Over Limit	ReadAntenna Level Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg		
1	11487.76	46.73	54.00	-7.27	32.79	39.90	9.07	35.03	100	178	VERTICAL	Average
2	11488.34	61.31	74.00	-12.69	47.37	39.90	9.07	35.03	100	178	VERTICAL	Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

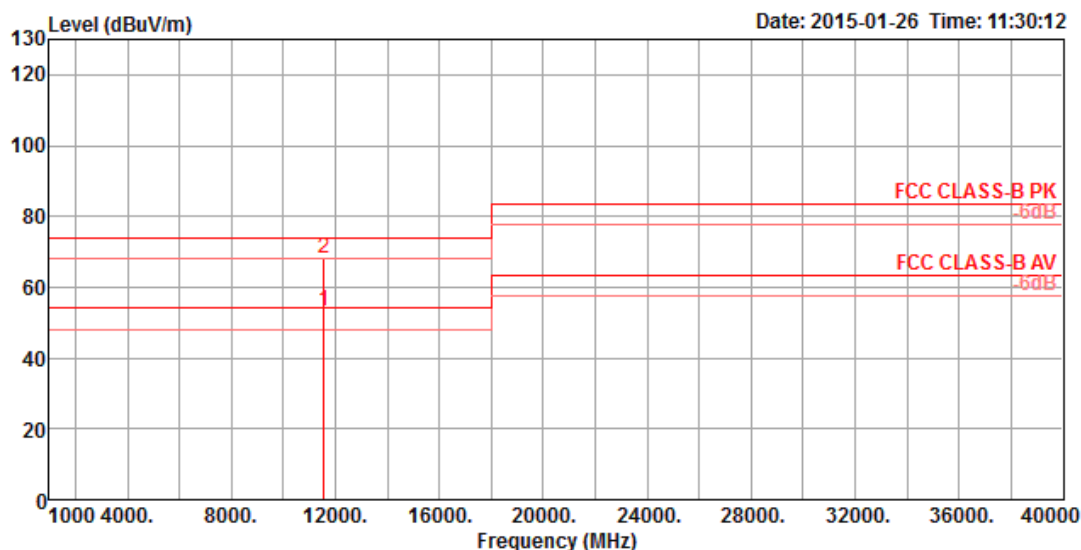
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH157 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	11566.24	53.29	54.00	-0.71	39.45	39.77	9.10	35.03	214	101	HORIZONTAL Average
2	11575.72	68.10	74.00	-5.90	54.28	39.75	9.10	35.03	214	101	HORIZONTAL Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

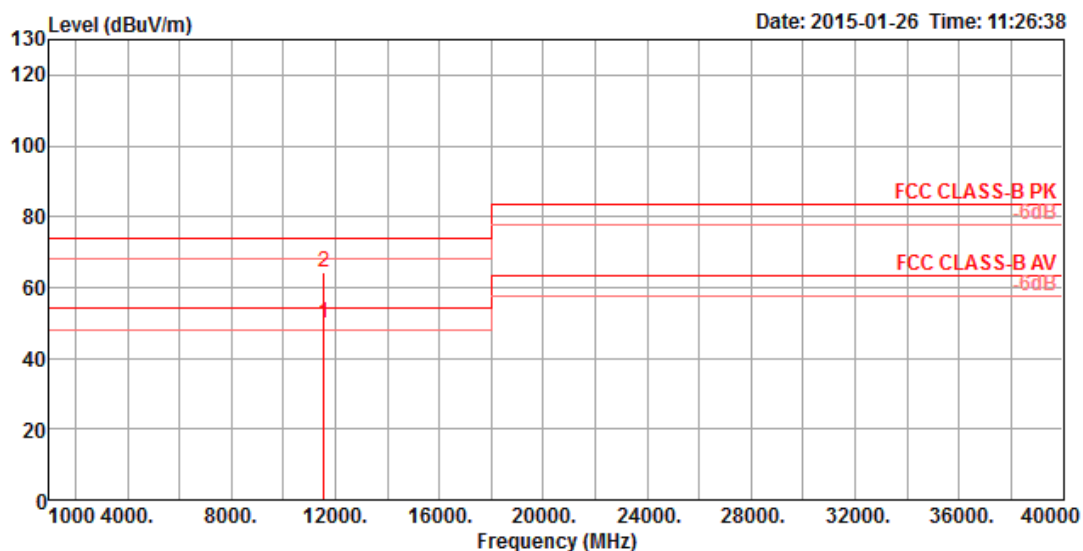
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH157 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit Line	Over Limit	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg		
1	11569.86	50.06	54.00	-3.94	36.22	39.77	9.10	35.03	114	182	VERTICAL	Average
2	11575.72	64.13	74.00	-9.87	50.29	39.77	9.10	35.03	114	182	VERTICAL	Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

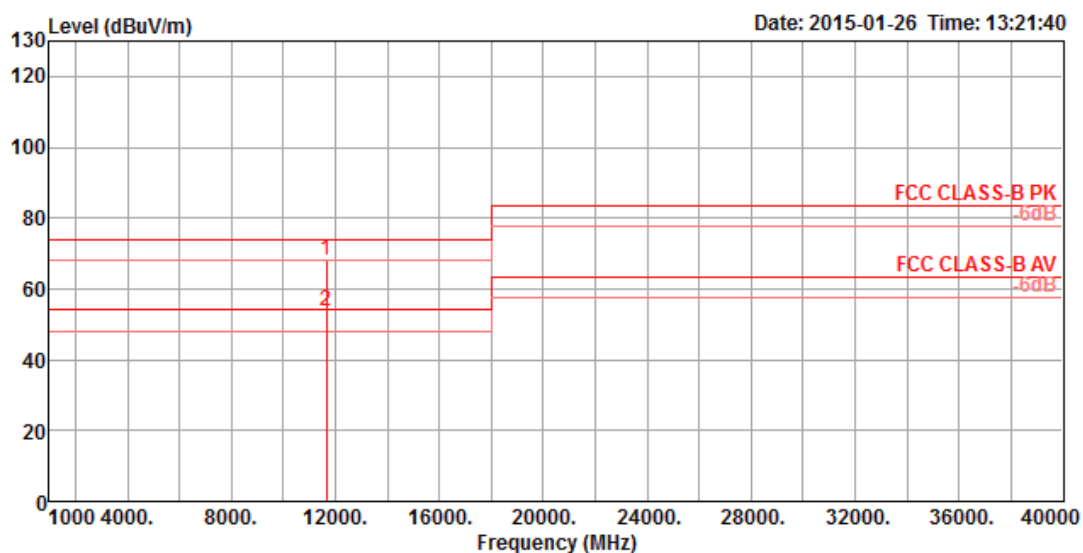
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH165 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	11649.20	67.98	74.00	-6.02	54.30	39.60	9.12	35.04	100	116	HORIZONTAL Peak
2	11649.78	53.80	54.00	-0.20	40.12	39.60	9.12	35.04	100	116	HORIZONTAL Average

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

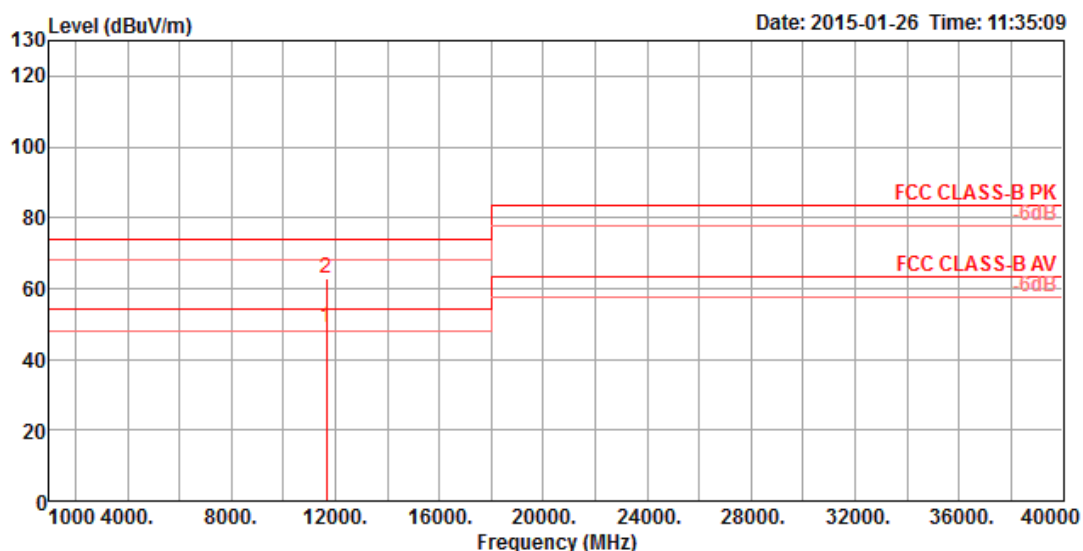
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11a 6Mbps / CH165 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit Line	Over Limit	ReadAntenna Level Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg		
1	11650.14	48.82	54.00	-5.18	35.11	39.63	9.12	35.04	211	158	VERTICAL	Average
2	11655.79	62.91	74.00	-11.09	49.26	39.57	9.12	35.04	211	158	VERTICAL	Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

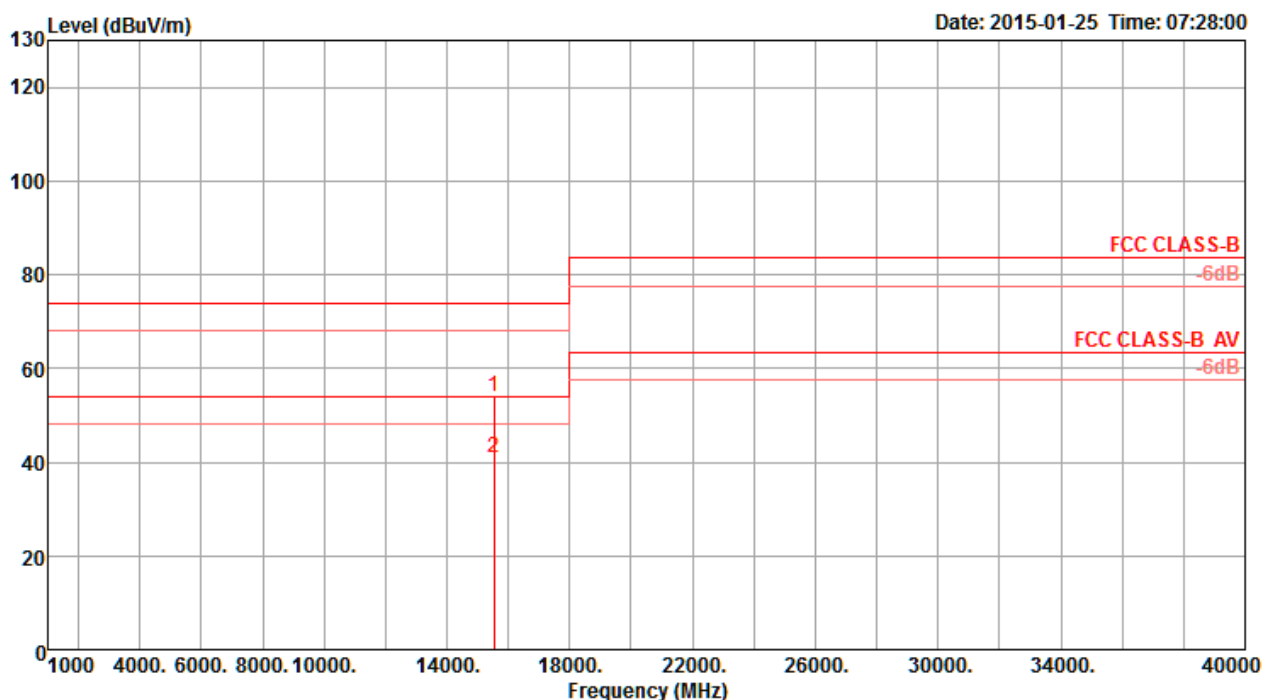
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH36 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	deg	cm	
1	15541.72	53.78	74.00	-20.22	42.27	7.56	38.67	34.72	Peak	8	154	HORIZONTAL
2	15542.01	40.76	54.00	-13.24	29.25	7.56	38.67	34.72	Average	8	154	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

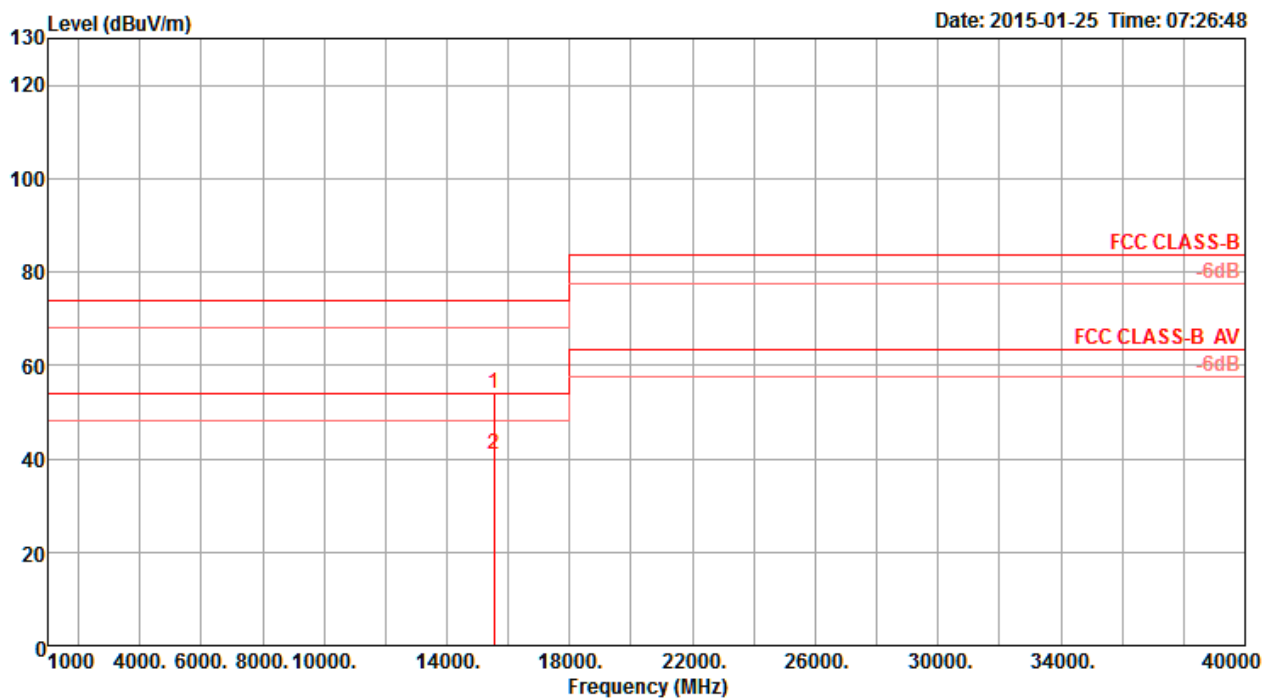
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH36 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	15541.76	54.02	74.00	-19.98	42.51	7.56	38.67	34.72	Peak	108	163	VERTICAL
2	15542.15	40.93	54.00	-13.07	29.42	7.56	38.67	34.72	Average	108	163	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

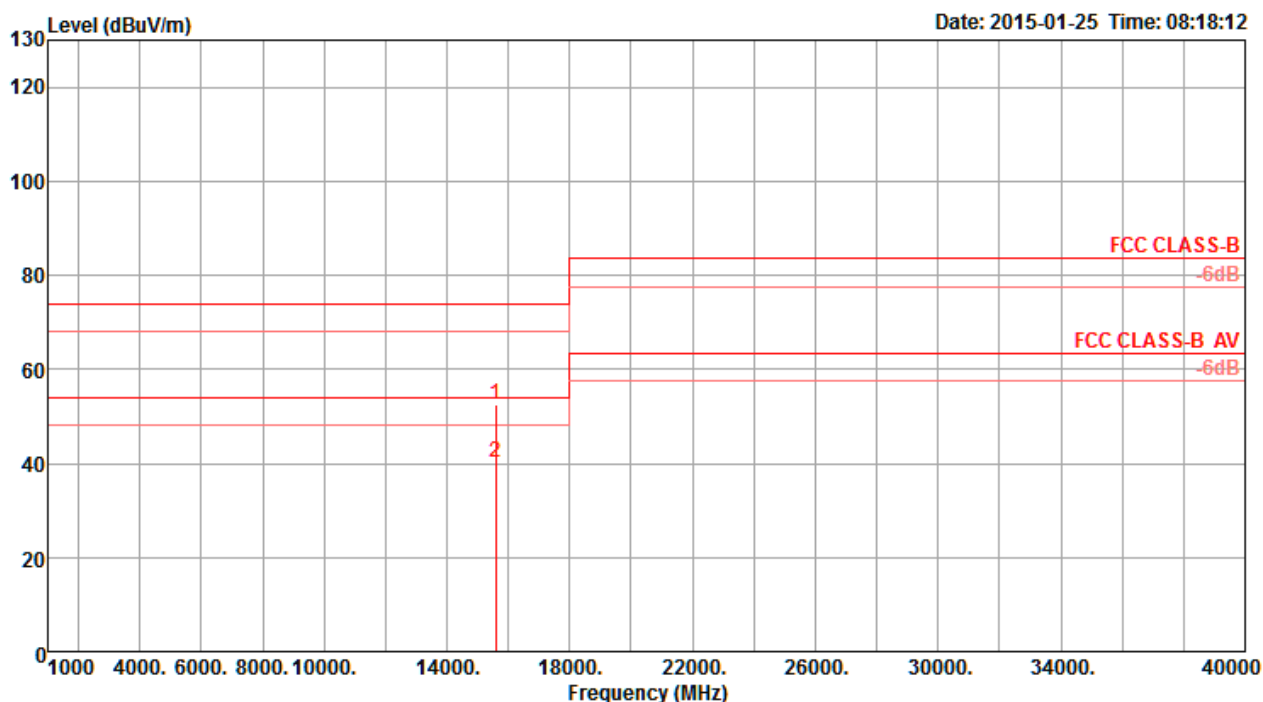
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH40 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	15597.62	52.40	74.00	-21.60	40.97	7.58	38.62	34.77	Peak	130	149	HORIZONTAL
2	15600.57	40.02	54.00	-13.98	28.61	7.58	38.62	34.79	Average	130	149	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

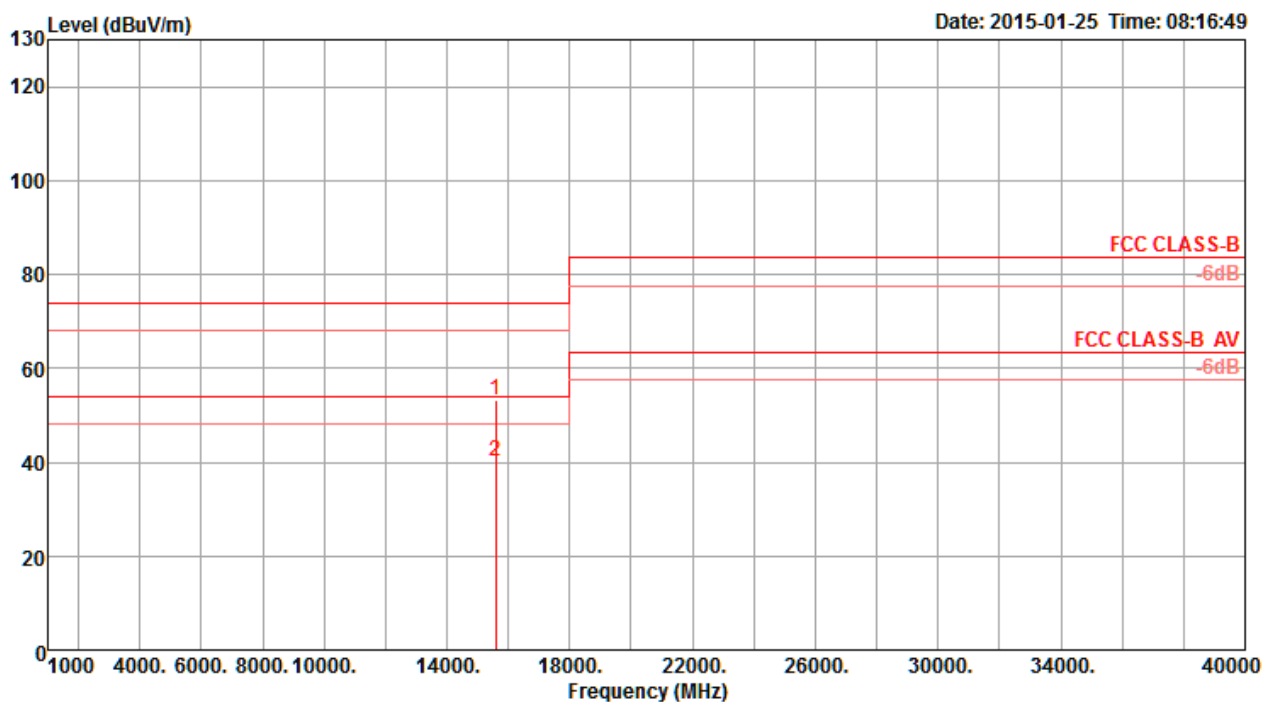
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH40 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	15597.51	53.11	74.00	-20.89	41.68	7.58	38.62	34.77	Peak	356	173	VERTICAL
2	15600.58	40.25	54.00	-13.75	28.84	7.58	38.62	34.79	Average	356	173	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

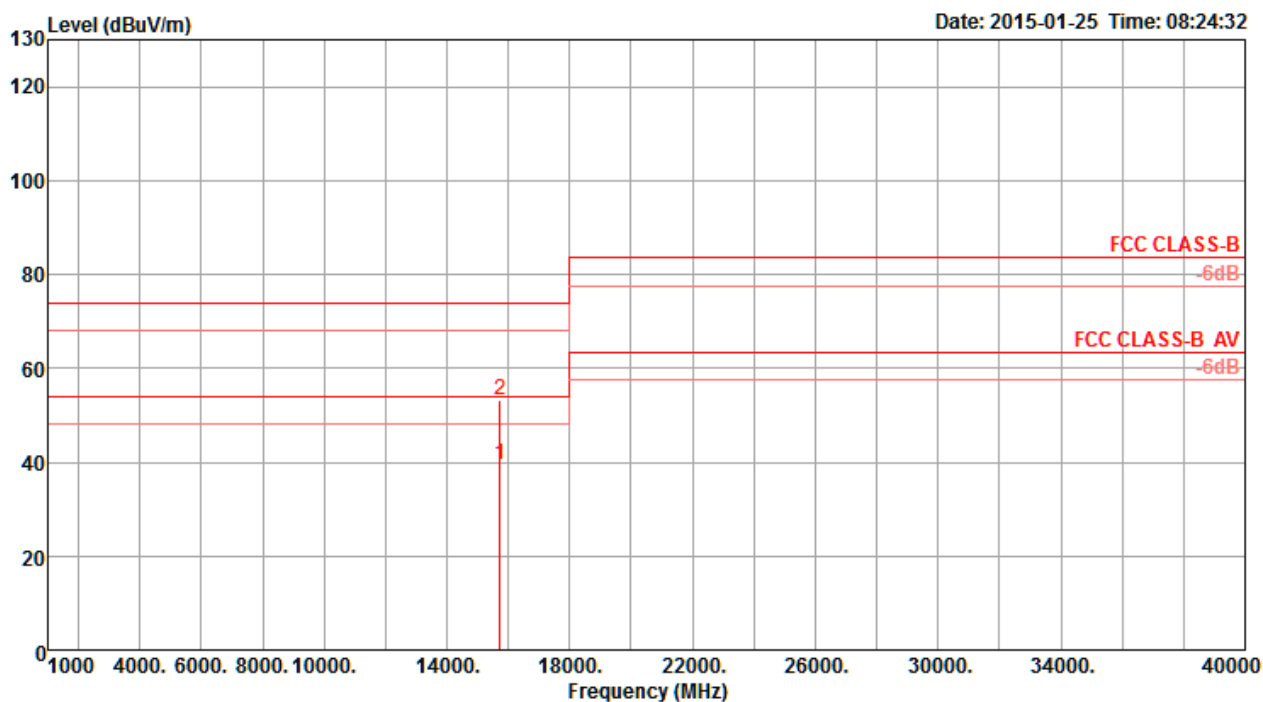
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH48 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	15719.48	39.64	54.00	-14.36	28.38	7.62	38.52	34.88	Average	36	171	HORIZONTAL
2	15719.70	53.09	74.00	-20.91	41.83	7.62	38.52	34.88	Peak	36	171	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

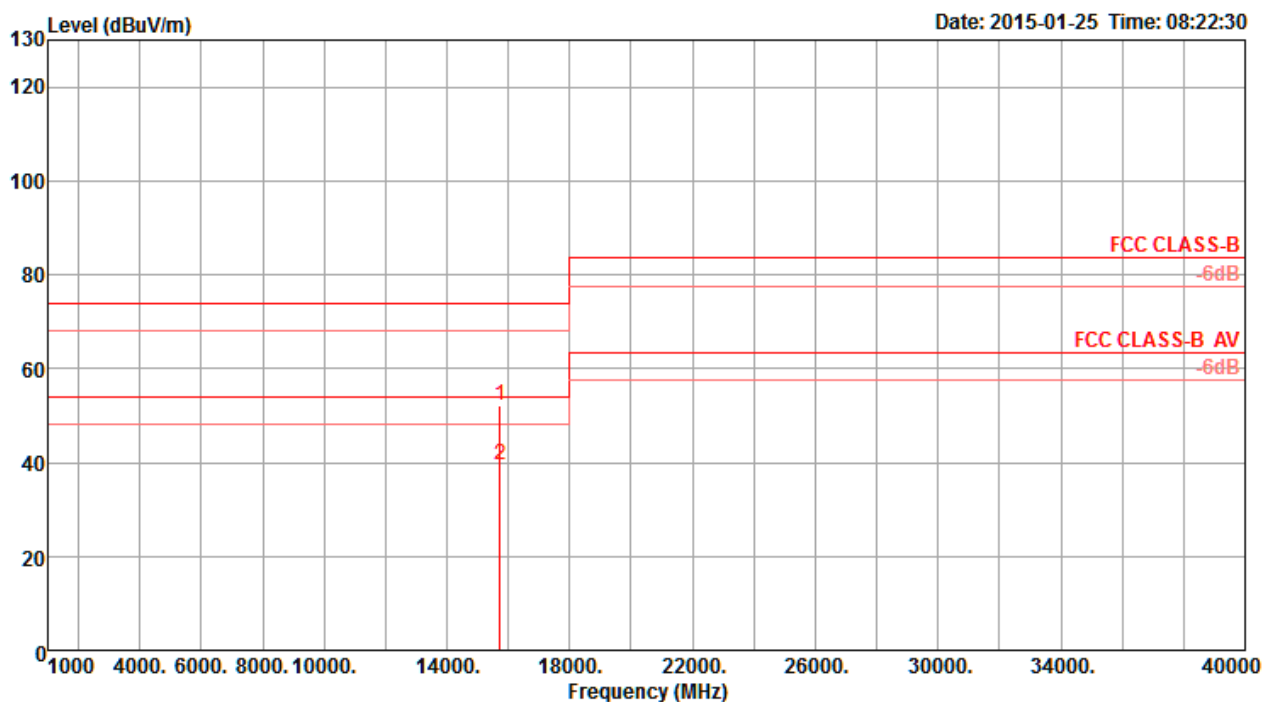
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH48 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	15717.50	52.30	74.00	-21.70	41.04	7.62	38.52	34.88	Peak	274	176	VERTICAL
2	15719.88	39.36	54.00	-14.64	28.10	7.62	38.52	34.88	Average	274	176	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

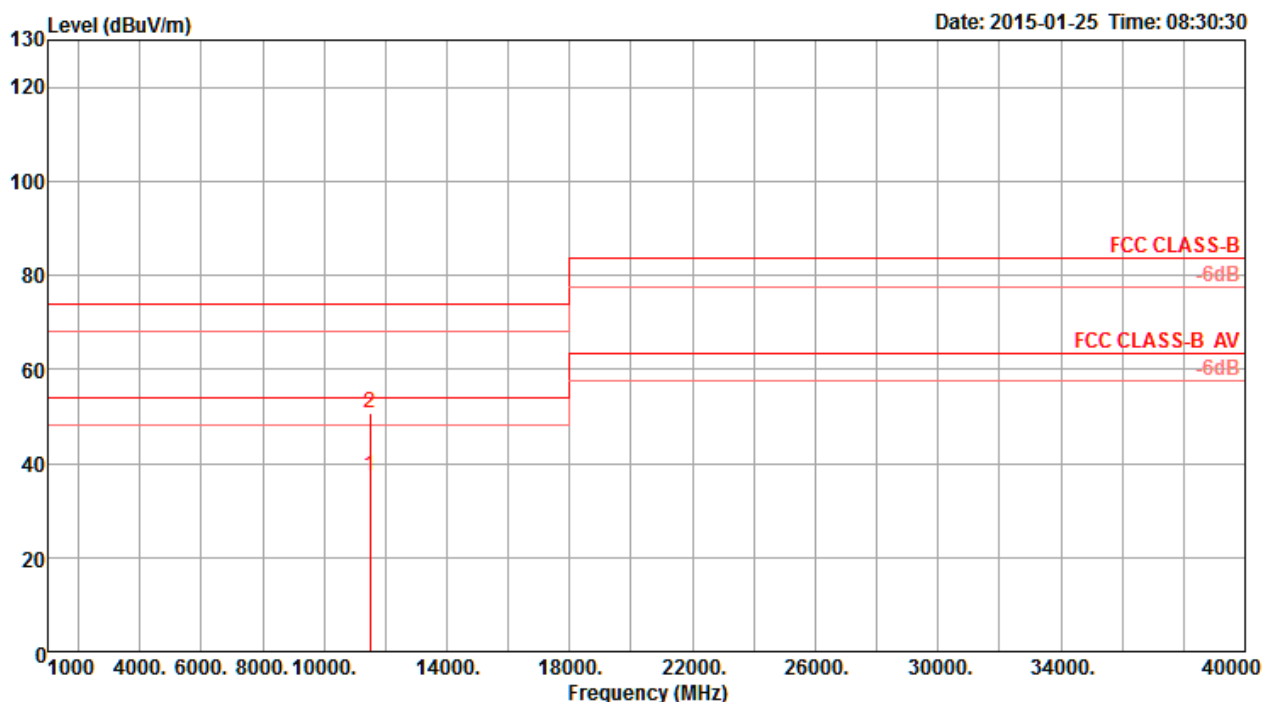
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH149 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11490.60	37.44	54.00	-16.56	27.27	6.53	38.30	34.66	Average	7	189	HORIZONTAL
2	11491.08	50.71	74.00	-23.29	40.54	6.53	38.30	34.66	Peak	7	189	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

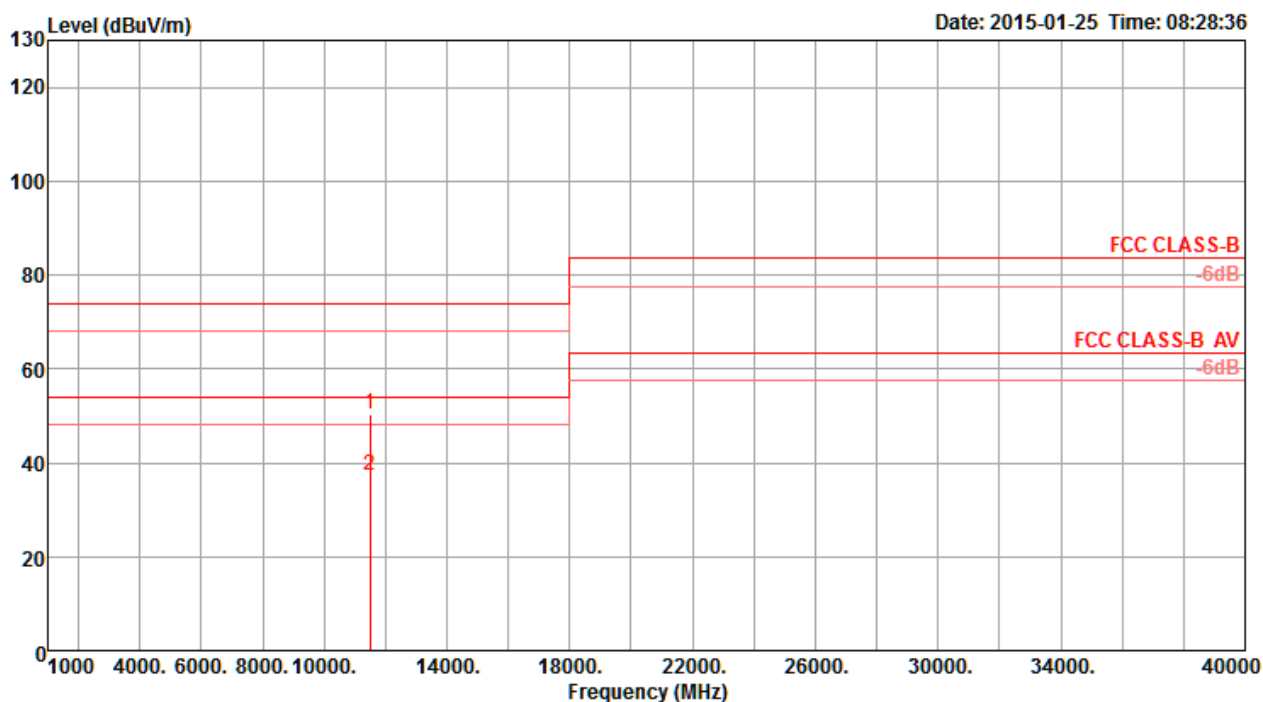
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH149 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11490.62	50.34	74.00	-23.66	40.17	6.53	38.30	34.66	Peak	340	163	VERTICAL
2	11490.72	37.36	54.00	-16.64	27.19	6.53	38.30	34.66	Average	340	163	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

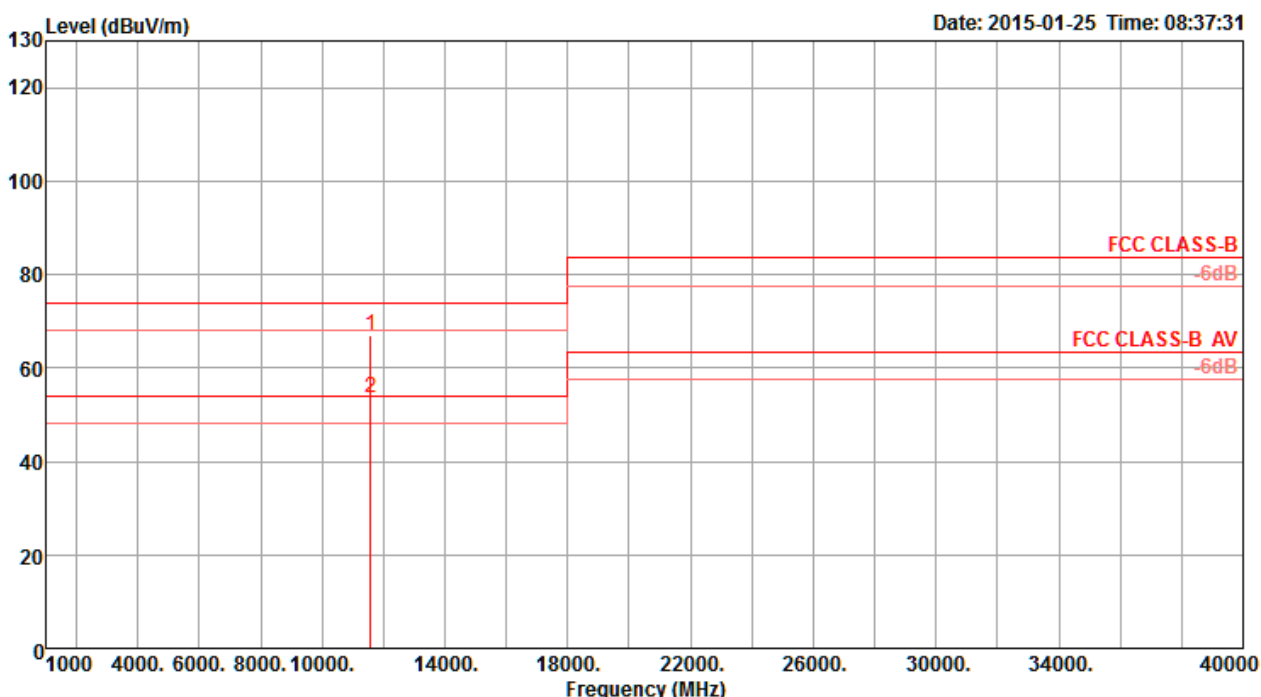
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH157 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11569.93	66.81	74.00	-7.19	56.62	6.55	38.33	34.69	Peak	184	146	HORIZONTAL
2	11570.70	53.56	54.00	-0.44	43.37	6.55	38.33	34.69	Average	184	146	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

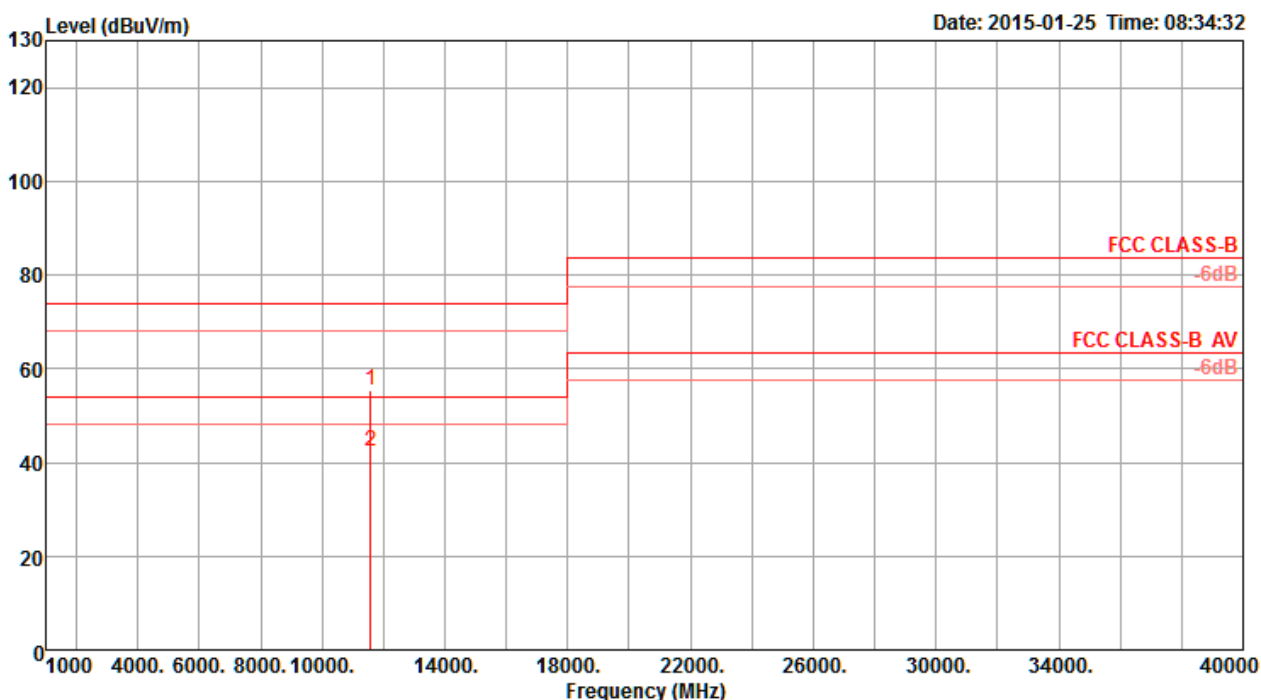
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH157 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	deg	cm	Pol/Phase
1	11571.04	55.48	74.00	-18.52	45.29	6.55	38.33	34.69	Peak	246	150	VERTICAL
2	11572.31	42.52	54.00	-11.48	32.33	6.55	38.33	34.69	Average	246	150	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

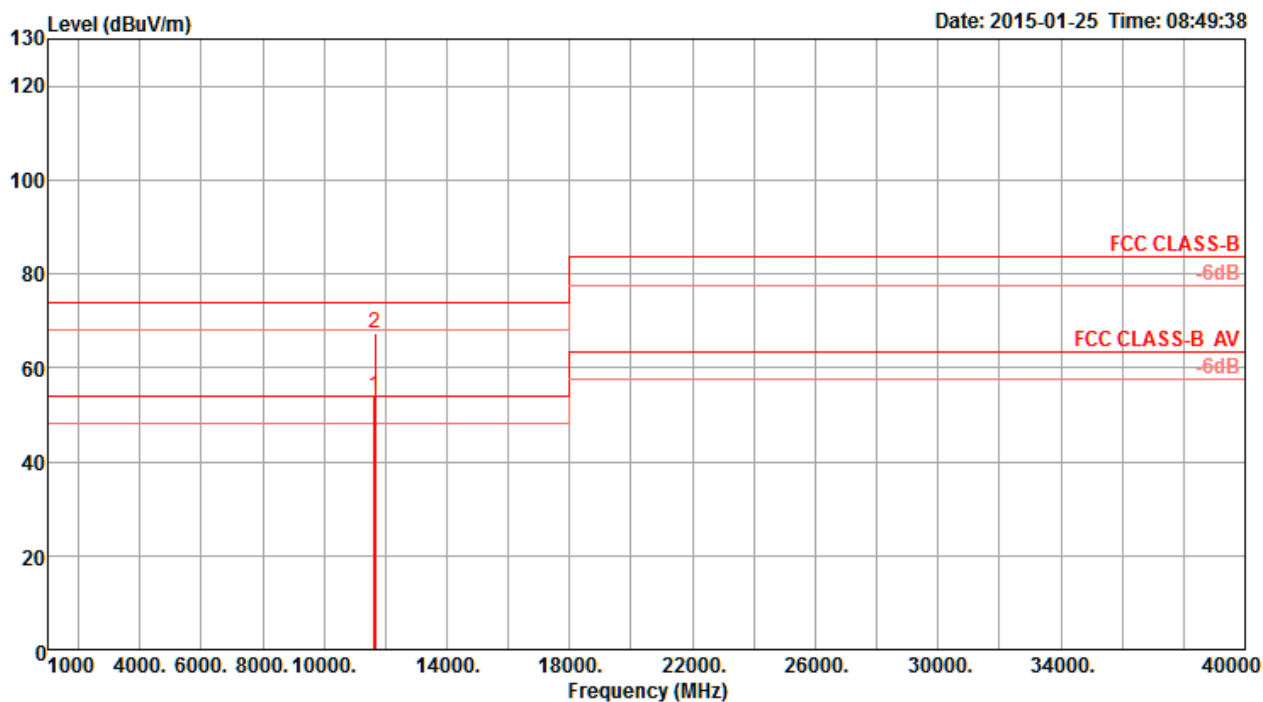
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH165 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11648.78	53.82	54.00	-0.18	43.62	6.56	38.36	34.72	Average	181	146	HORIZONTAL
2	11650.59	67.46	74.00	-6.54	57.26	6.56	38.36	34.72	Peak	181	146	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

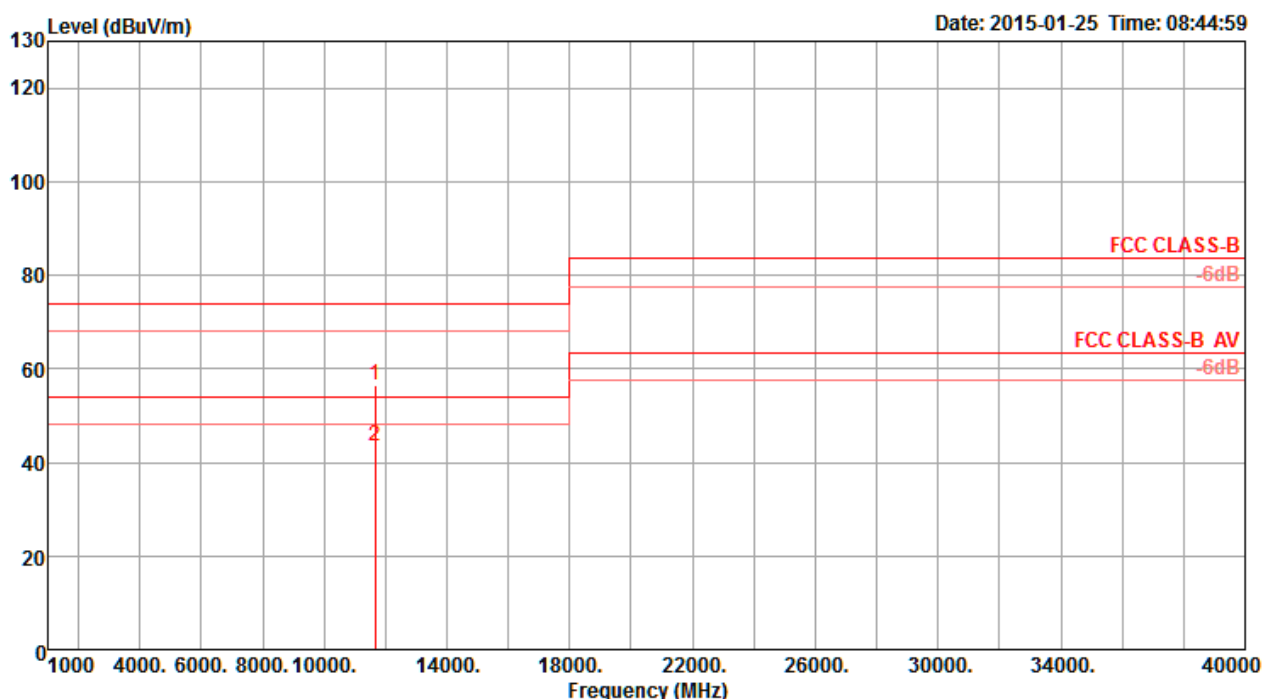
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH165 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11649.38	56.67	74.00	-17.33	46.47	6.56	38.36	34.72	Peak	208	152	VERTICAL
2	11650.32	43.50	54.00	-10.50	33.30	6.56	38.36	34.72	Average	208	152	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

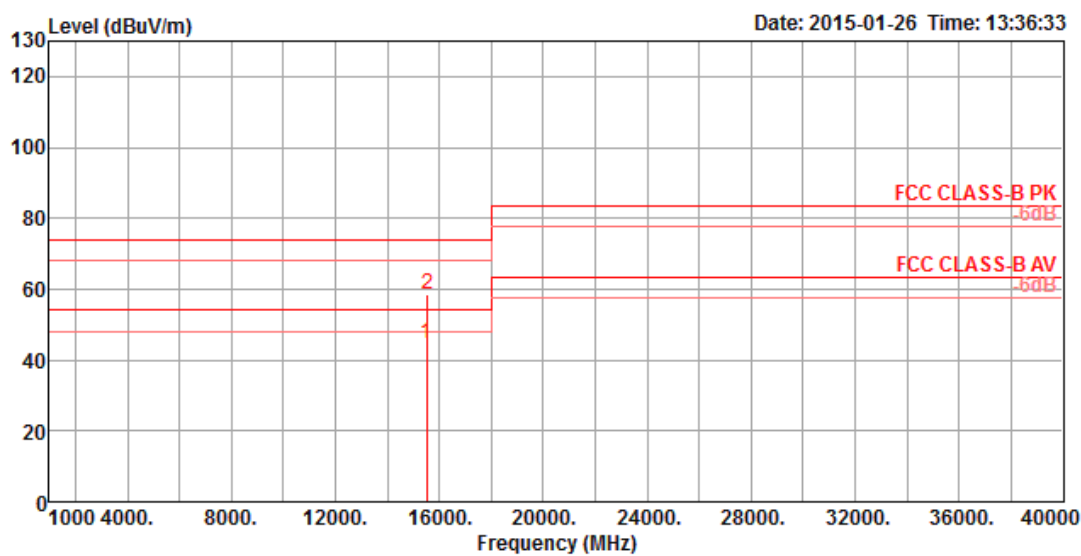
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH36 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	15528.35	44.70	54.00	-9.30	30.34	38.36	10.72	34.72	150	56 HORIZONTAL	Average
2	15550.42	58.76	74.00	-15.24	44.44	38.33	10.72	34.73	150	56 HORIZONTAL	Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

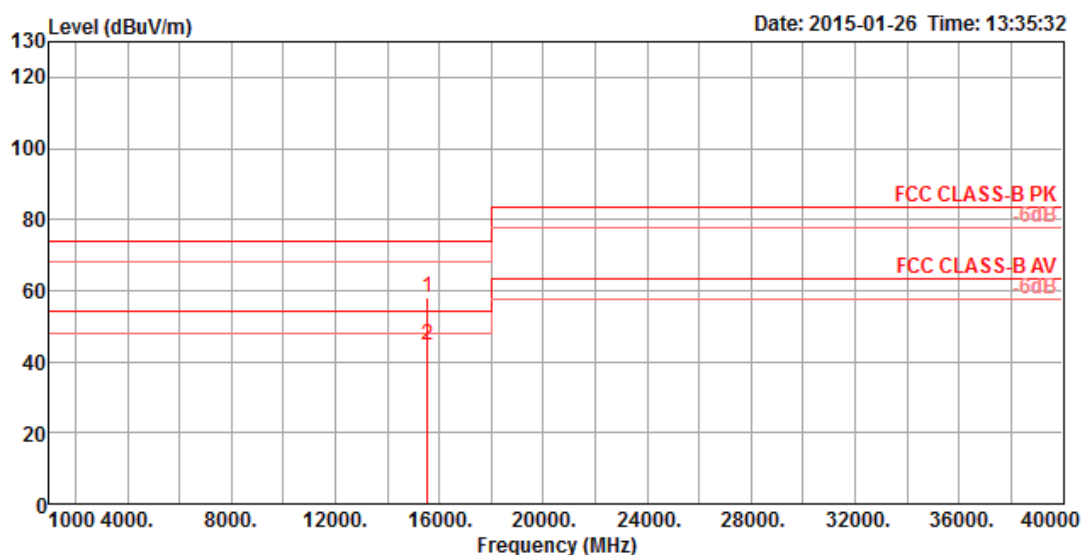
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH36 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	15553.24	58.03	74.00	-15.97	43.70	38.34	10.72	34.73	125	121 VERTICAL	Peak
2	15560.33	44.65	54.00	-9.35	30.39	38.27	10.72	34.73	125	121 VERTICAL	Average

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

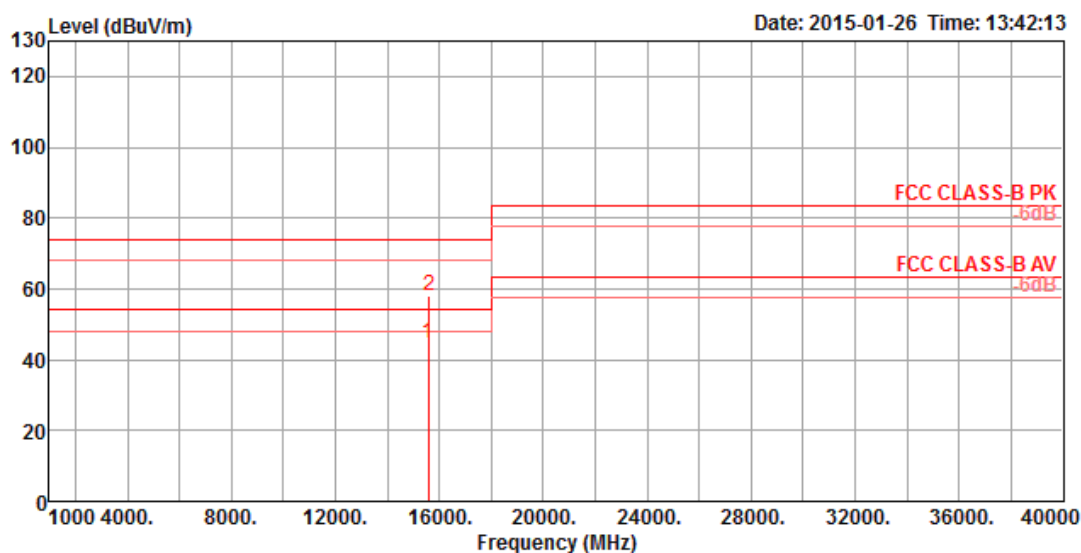
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH40 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	15581.40	44.54	54.00	-9.46	30.28	38.28	10.72	34.74	173	184 HORIZONTAL	Average
2	15618.96	57.91	74.00	-16.09	43.68	38.23	10.76	34.76	173	184 HORIZONTAL	Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

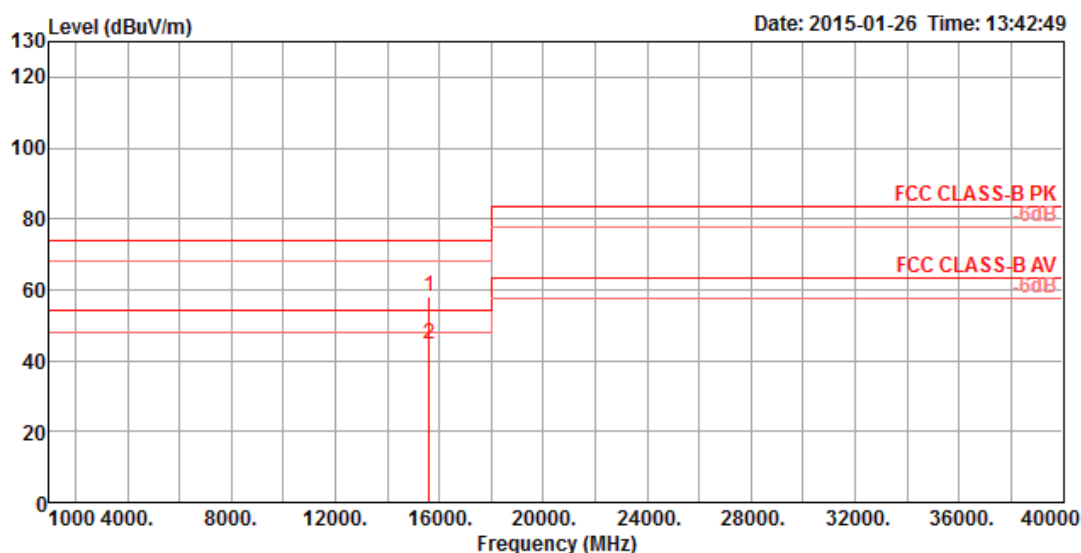
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH40 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit Line	Over Limit	ReadAntenna Level Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg		
1	15599.42	57.91	74.00	-16.09	43.63	38.27	10.76	34.75	183	124	VERTICAL	Peak
2	15620.98	44.56	54.00	-9.44	30.35	38.21	10.76	34.76	183	124	VERTICAL	Average

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

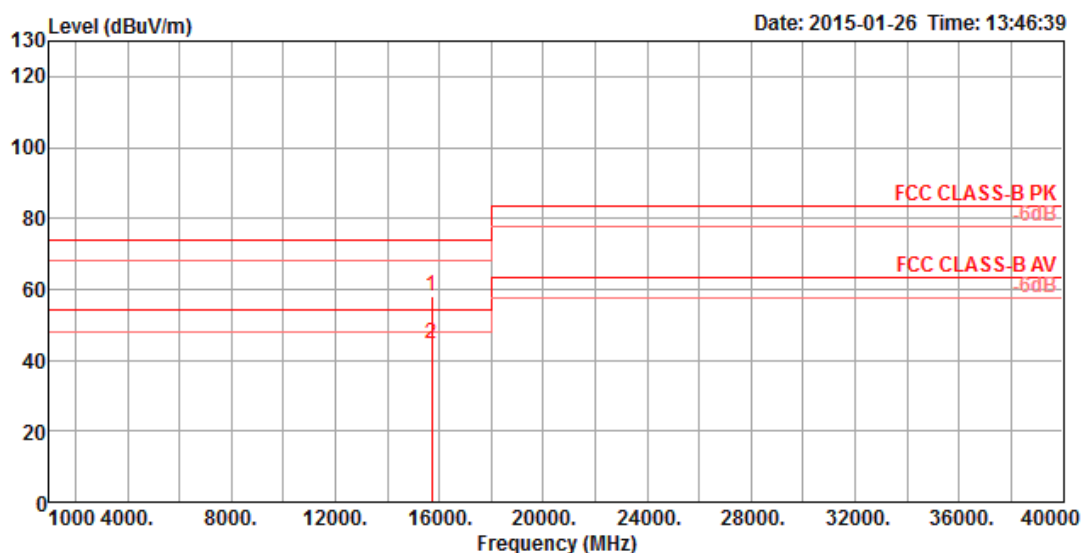
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH48 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	15705.60	57.98	74.00	-16.02	43.86	38.11	10.80	34.79	161	181	HORIZONTAL Peak
2	15719.93	44.61	54.00	-9.39	30.52	38.09	10.80	34.80	161	181	HORIZONTAL Average

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

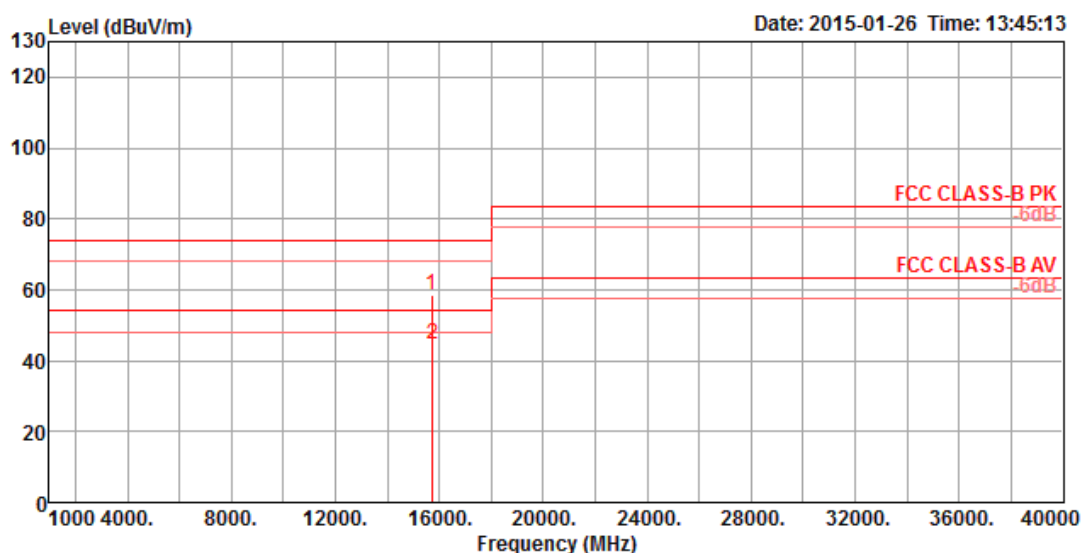
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH48 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	15715.01	58.43	74.00	-15.57	44.35	38.08	10.80	34.80	157	223	VERTICAL Peak
2	15737.08	44.82	54.00	-9.18	30.80	38.02	10.80	34.80	157	223	VERTICAL Average

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

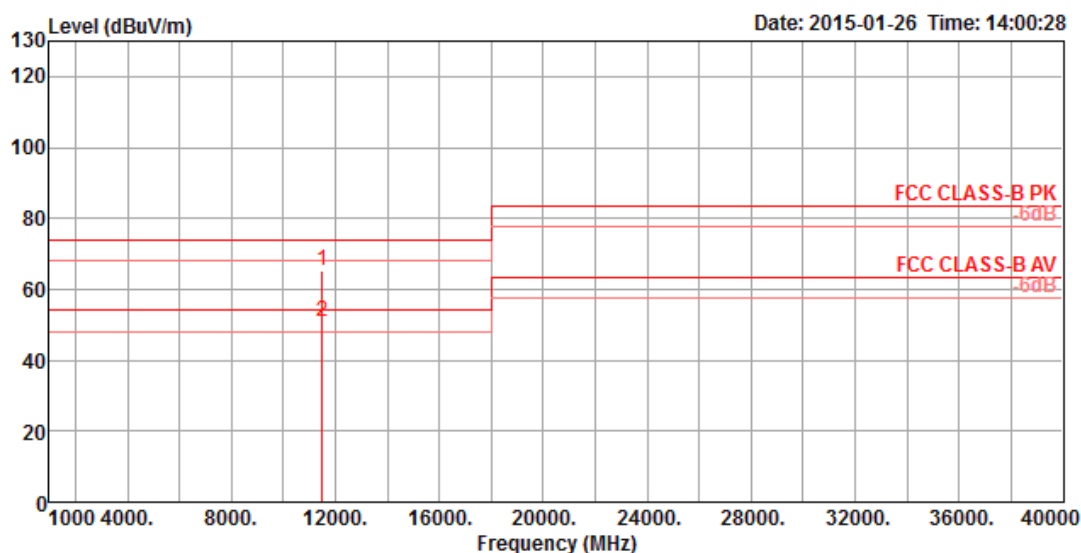
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH149 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	11490.87	65.26	74.00	-8.74	51.31	39.91	9.07	35.03	100	102	HORIZONTAL Peak
2	11490.87	50.62	54.00	-3.38	36.67	39.91	9.07	35.03	100	102	HORIZONTAL Average

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

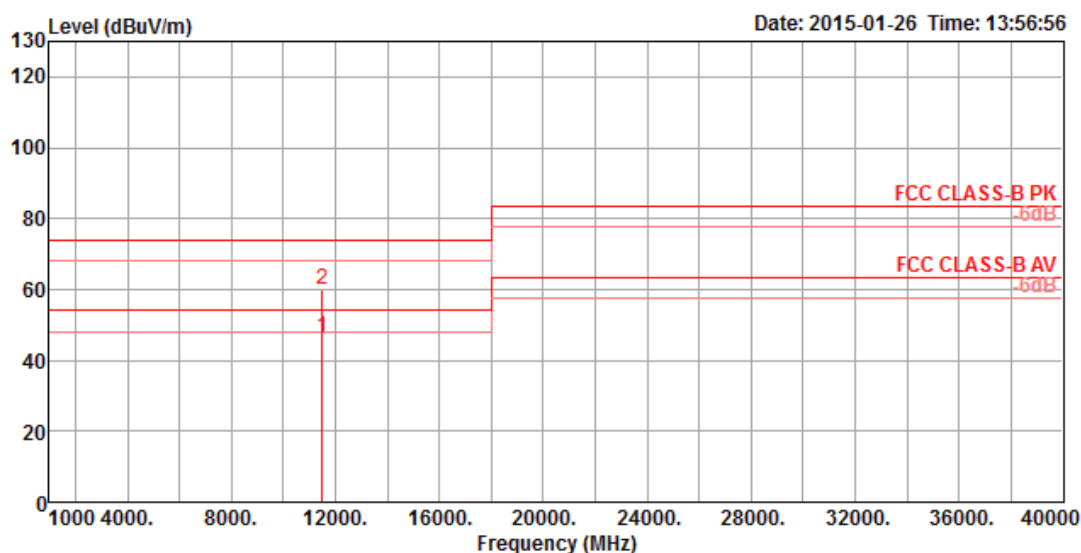
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH149 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit Line	Over Limit	ReadAntenna Level Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg		
1	11489.06	46.65	54.00	-7.35	32.71	39.90	9.07	35.03	104	217	VERTICAL	Average
2	11489.13	59.92	74.00	-14.08	45.98	39.90	9.07	35.03	104	217	VERTICAL	Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

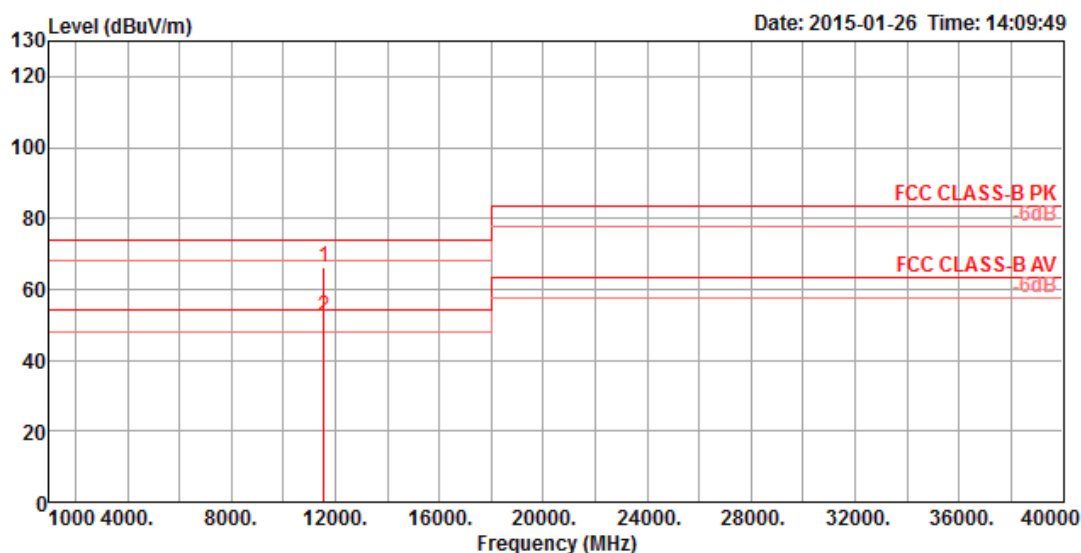
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH157 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	11566.53	66.38	74.00	-7.62	52.55	39.76	9.10	35.03	214	101	HORIZONTAL Peak
2	11571.23	52.13	54.00	-1.87	38.31	39.75	9.10	35.03	214	101	HORIZONTAL Average

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

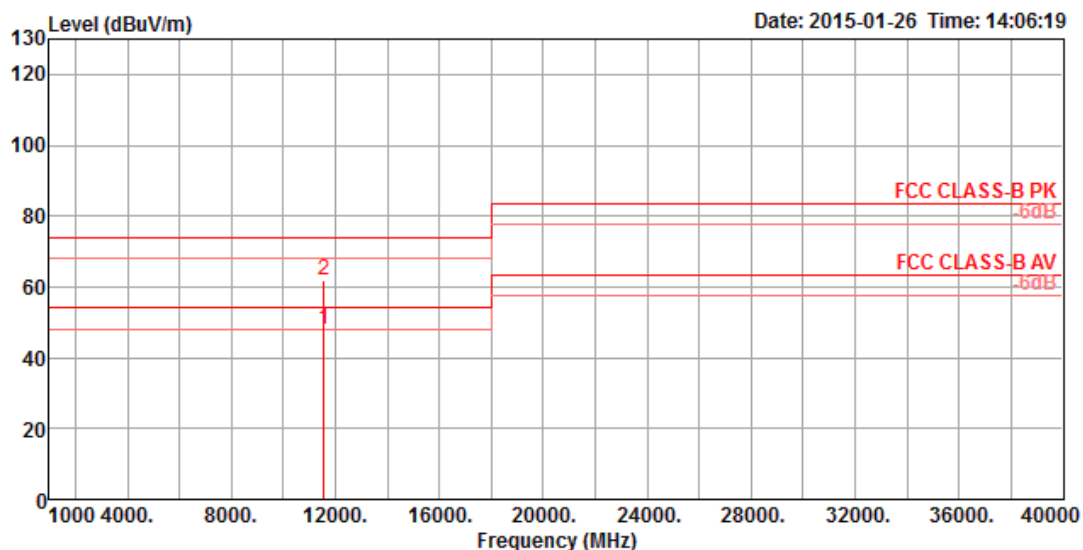
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH157 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	11569.78	48.02	54.00	-5.98	34.18	39.77	9.10	35.03	107	216 VERTICAL	Average
2	11574.34	61.82	74.00	-12.18	47.98	39.77	9.10	35.03	107	216 VERTICAL	Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

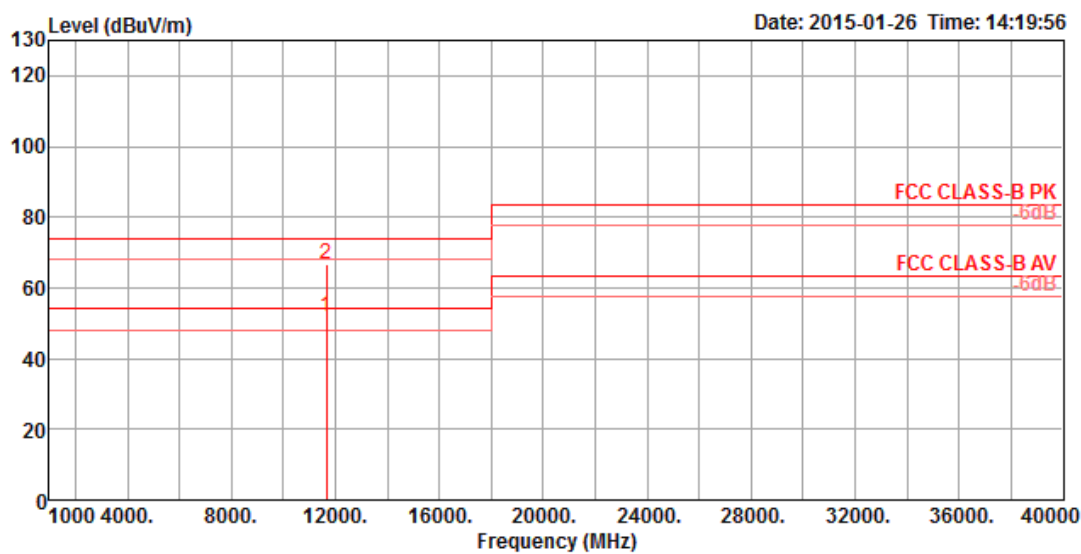
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH165 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	11649.49	52.04	54.00	-1.96	38.36	39.60	9.12	35.04	100	116 HORIZONTAL	Average
2	11649.78	66.81	74.00	-7.19	53.13	39.60	9.12	35.04	100	116 HORIZONTAL	Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

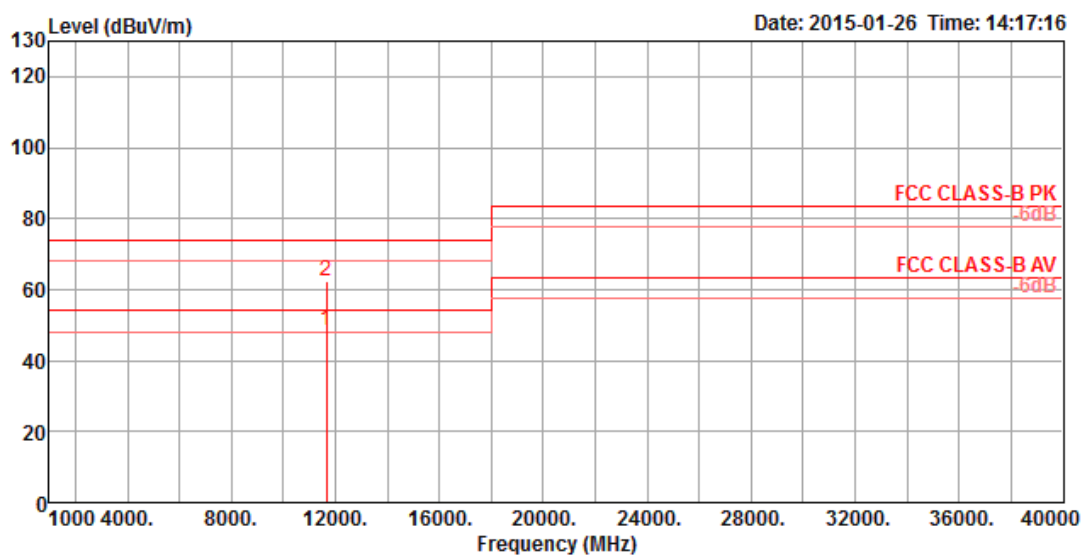
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH165 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	11649.49	48.37	54.00	-5.63	34.66	39.63	9.12	35.04	100	157 VERTICAL	Average
2	11654.56	62.48	74.00	-11.52	48.83	39.57	9.12	35.04	100	157 VERTICAL	Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

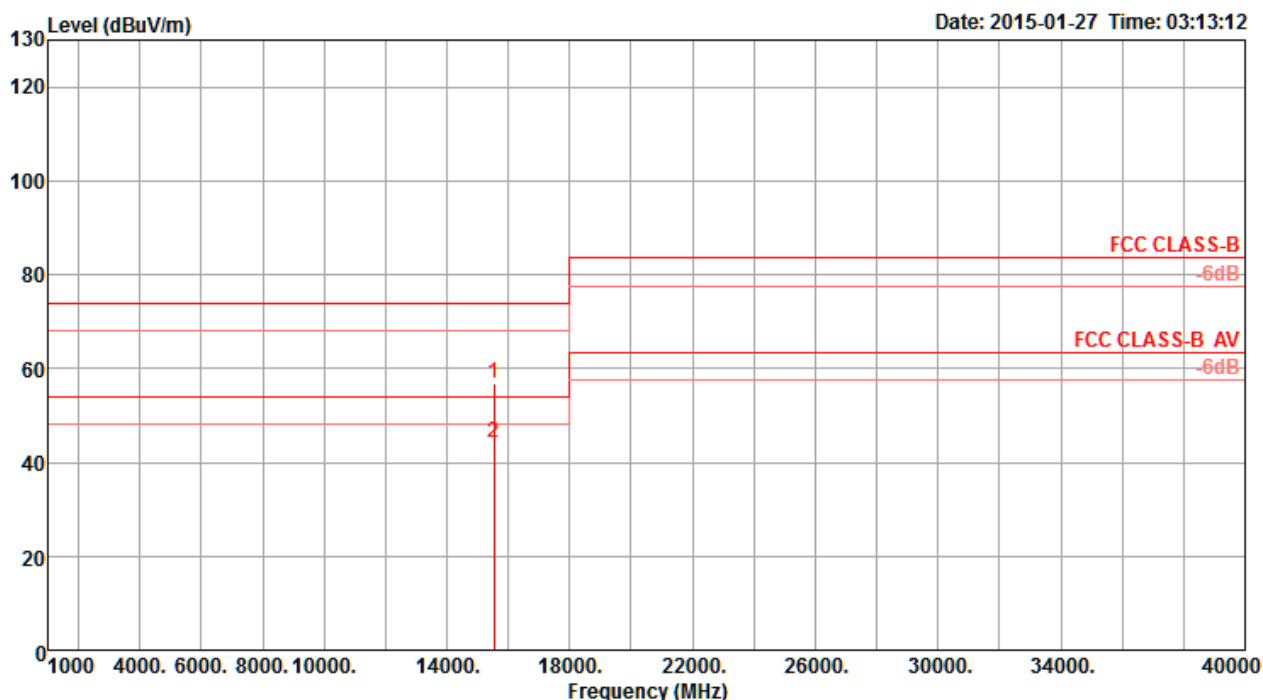
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH36 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	15535.82	56.78	74.00	-17.22	45.27	7.56	38.67	34.72	Peak	133	158	HORIZONTAL
2	15535.94	44.05	54.00	-9.95	32.54	7.56	38.67	34.72	Average	133	158	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

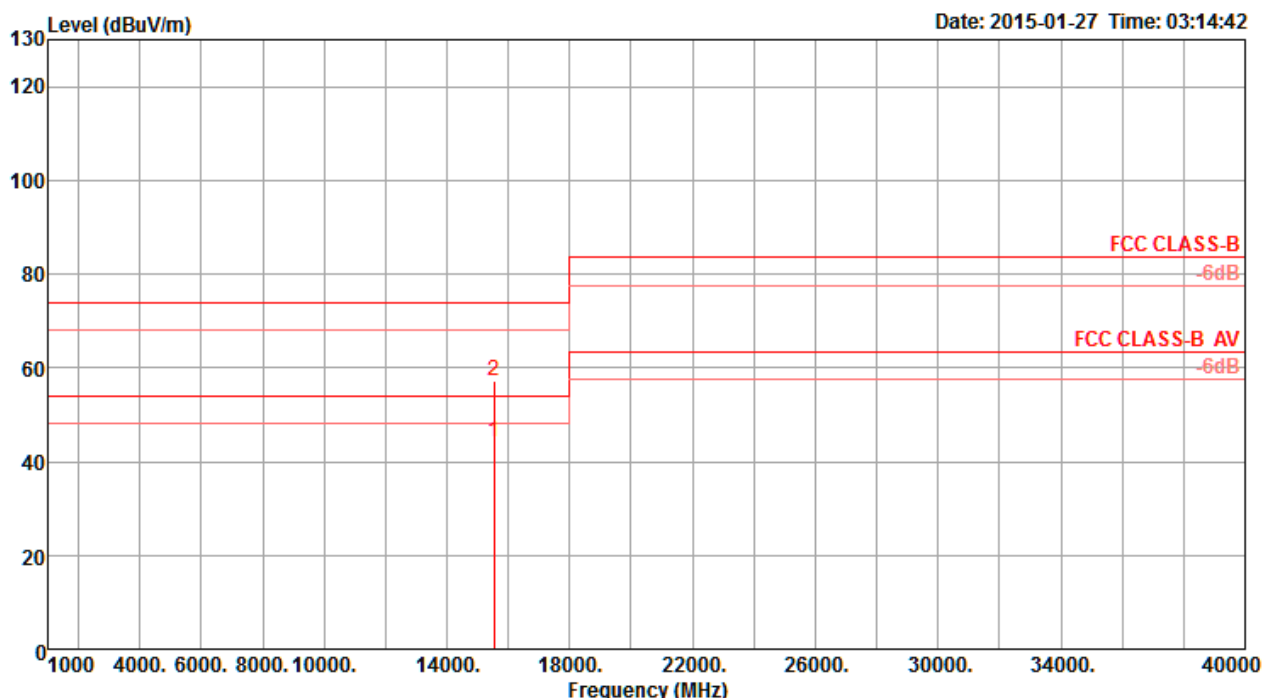
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH36 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	deg	cm	Pol/Phase
1	15537.32	44.01	54.00	-9.99	32.50	7.56	38.67	34.72	Average	292	155	VERTICAL
2	15544.26	57.13	74.00	-16.87	45.63	7.56	38.66	34.72	Peak	292	155	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

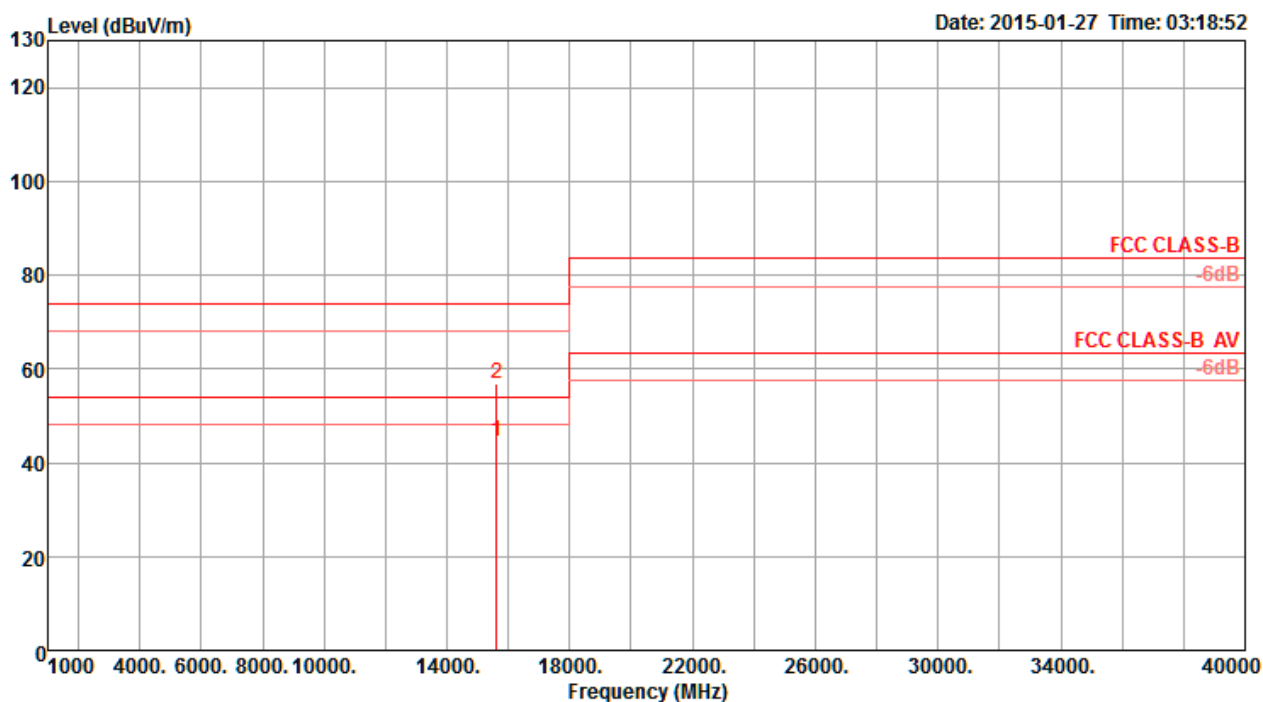
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH40 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	15604.46	44.41	54.00	-9.59	33.00	7.58	38.62	34.79	Average	3	151	HORIZONTAL
2	15604.92	57.00	74.00	-17.00	45.59	7.58	38.62	34.79	Peak	3	151	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

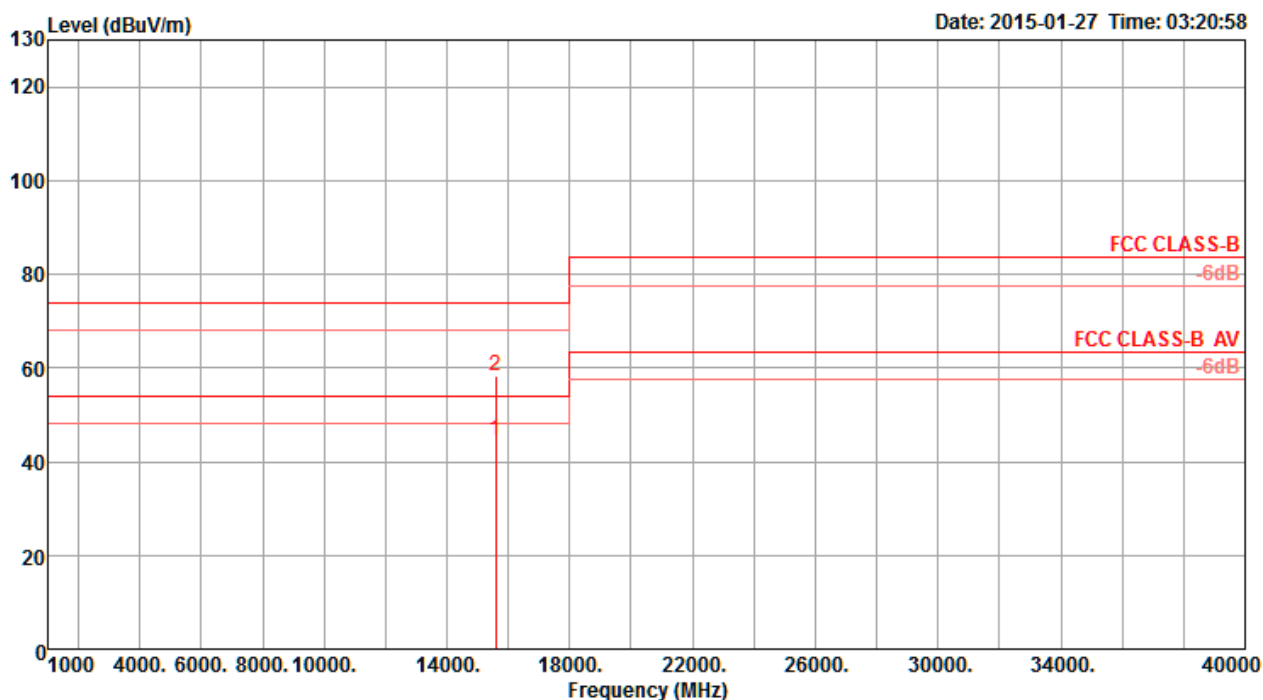
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH40 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	deg	cm	Pol/Phase
1	15596.78	44.36	54.00	-9.64	32.93	7.58	38.62	34.77	Average	235	188	VERTICAL
2	15597.62	58.22	74.00	-15.78	46.79	7.58	38.62	34.77	Peak	235	184	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

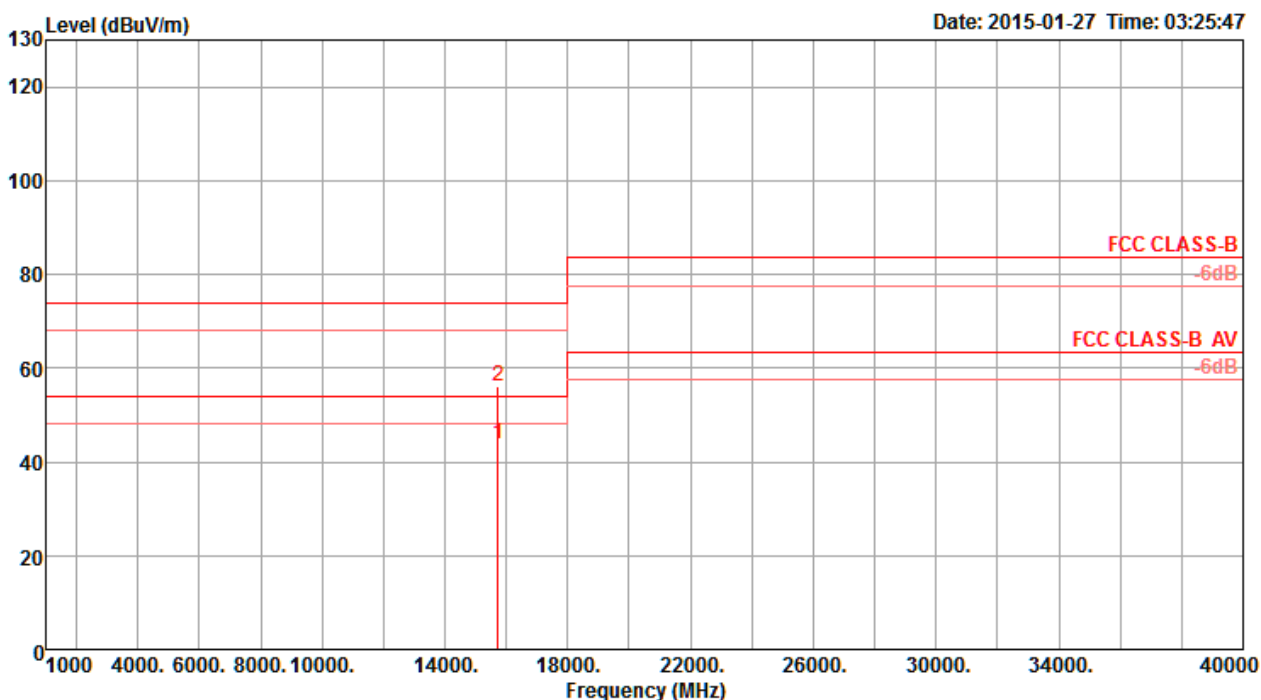
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH48 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	15717.14	43.73	54.00	-10.27	32.47	7.62	38.52	34.88	Average	68	157	HORIZONTAL
2	15717.24	56.13	74.00	-17.87	44.87	7.62	38.52	34.88	Peak	68	157	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

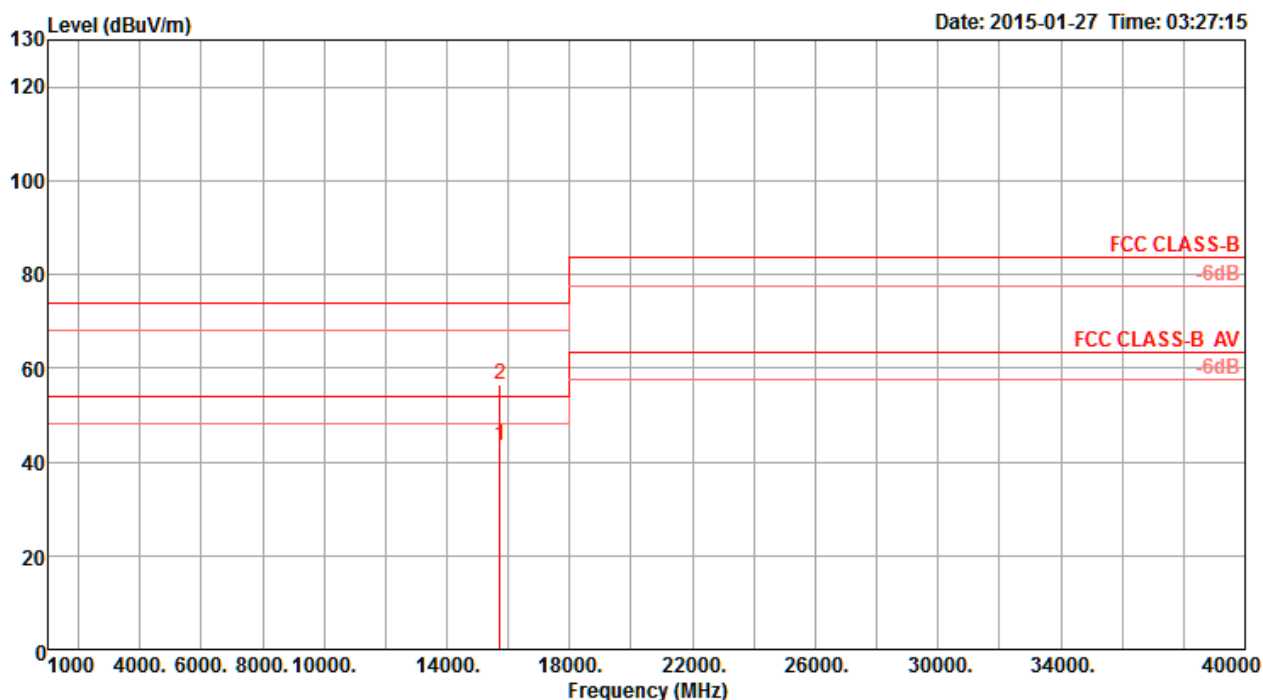
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH48 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	15720.76	43.54	54.00	-10.46	32.28	7.62	38.52	34.88	303	162	VERTICAL
2	15723.30	56.34	74.00	-17.66	45.08	7.62	38.52	34.88	304	162	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

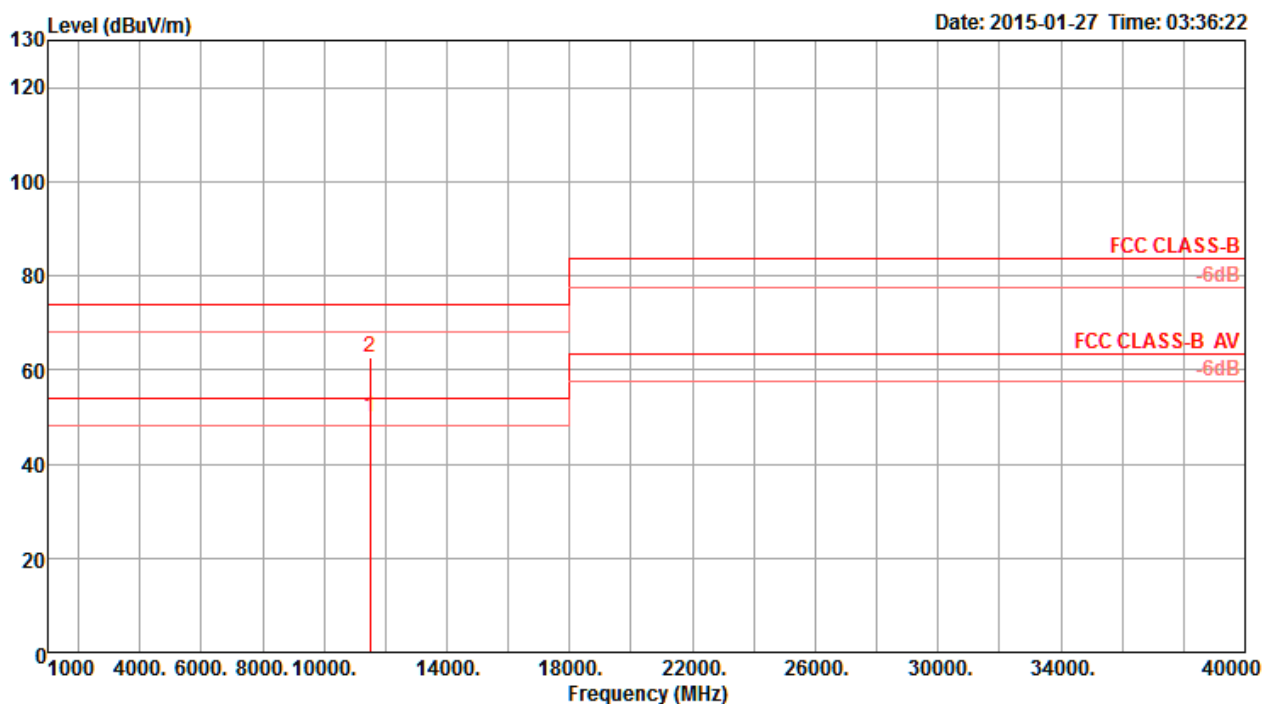
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH149 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11489.56	49.95	54.00	-4.05	39.78	6.53	38.30	34.66	Average	185	152	HORIZONTAL
2	11490.56	62.80	74.00	-11.20	52.63	6.53	38.30	34.66	Peak	185	152	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

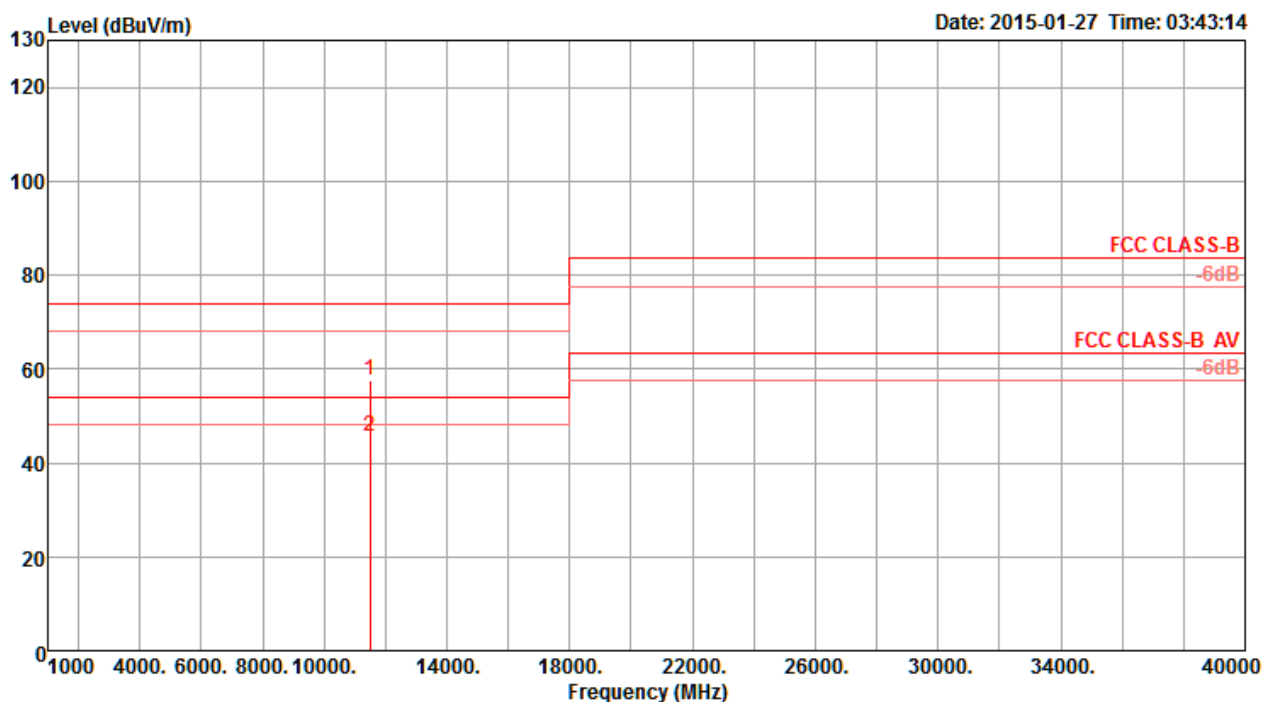
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH149 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	11490.12	57.55	74.00	-16.45	47.38	6.53	38.30	34.66	179	123	VERTICAL
2	11490.24	45.54	54.00	-8.46	35.37	6.53	38.30	34.66	179	123	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

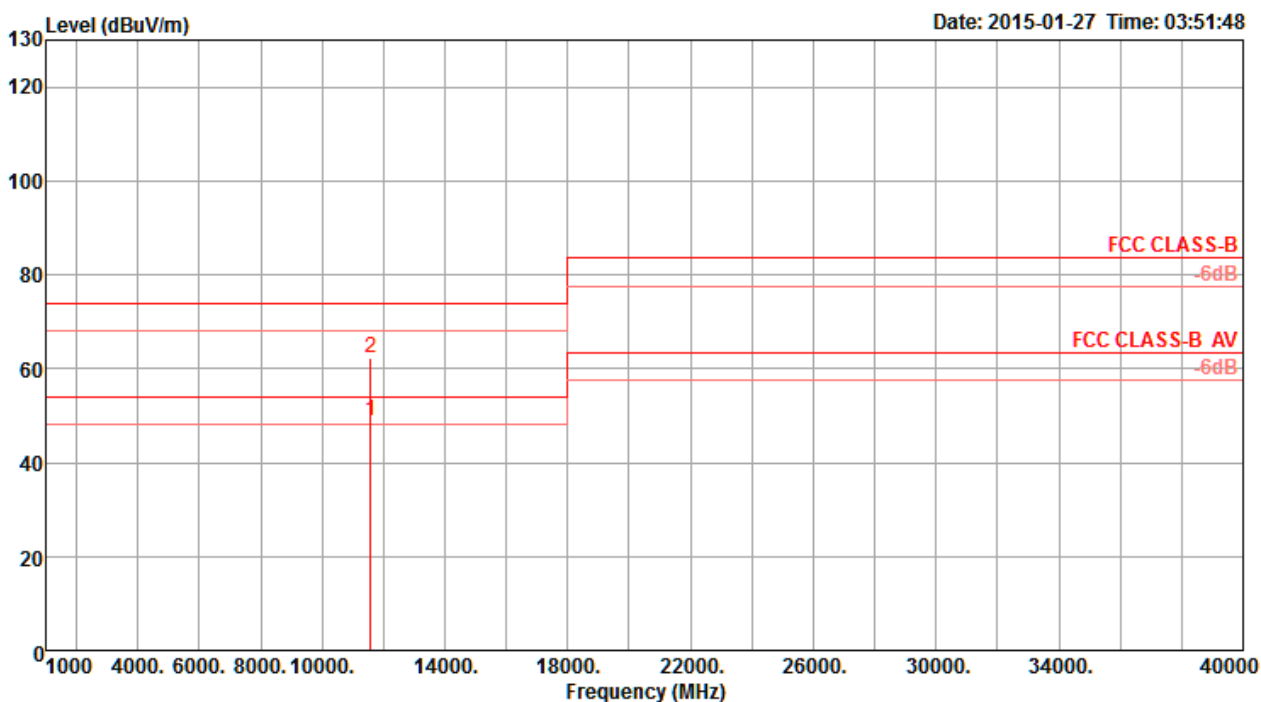
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH157 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11570.20	48.93	54.00	-5.07	38.74	6.55	38.33	34.69	Average	185	127	HORIZONTAL
2	11573.40	62.40	74.00	-11.60	52.21	6.55	38.33	34.69	Peak	185	127	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

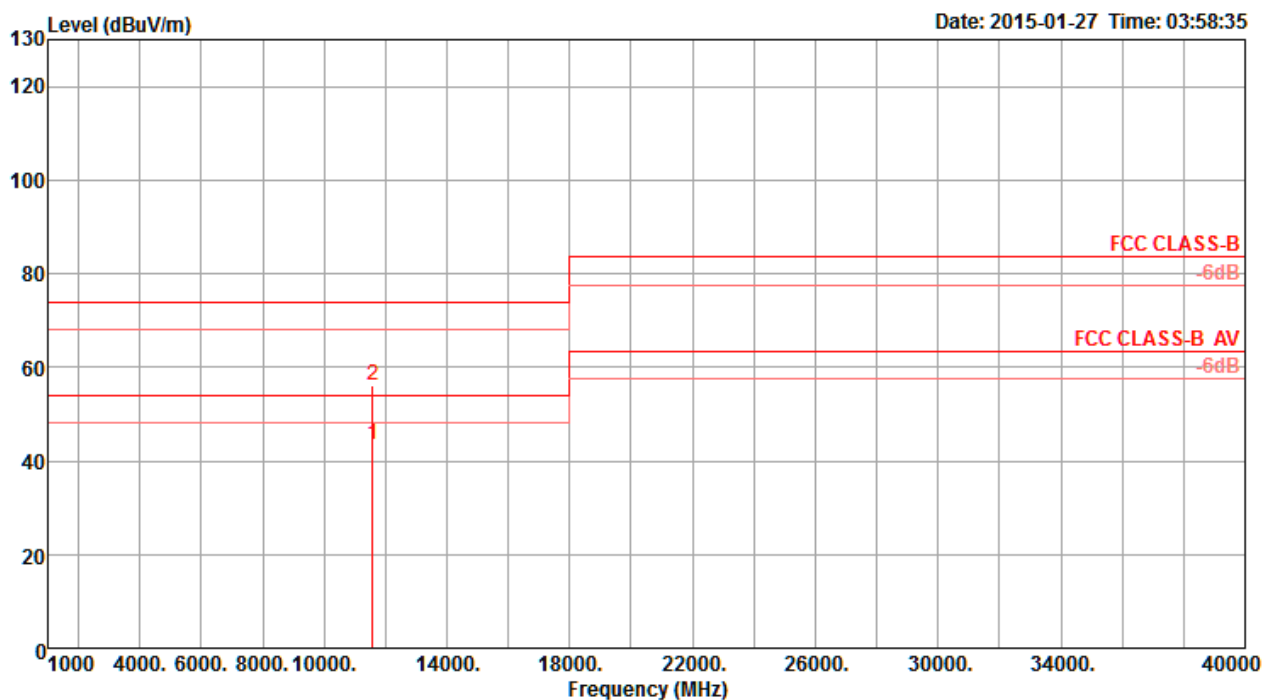
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH157 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11582.90	43.32	54.00	-10.68	33.13	6.55	38.33	34.69	Average	186	233	VERTICAL
2	11584.60	56.21	74.00	-17.79	46.02	6.55	38.33	34.69	Peak	186	233	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

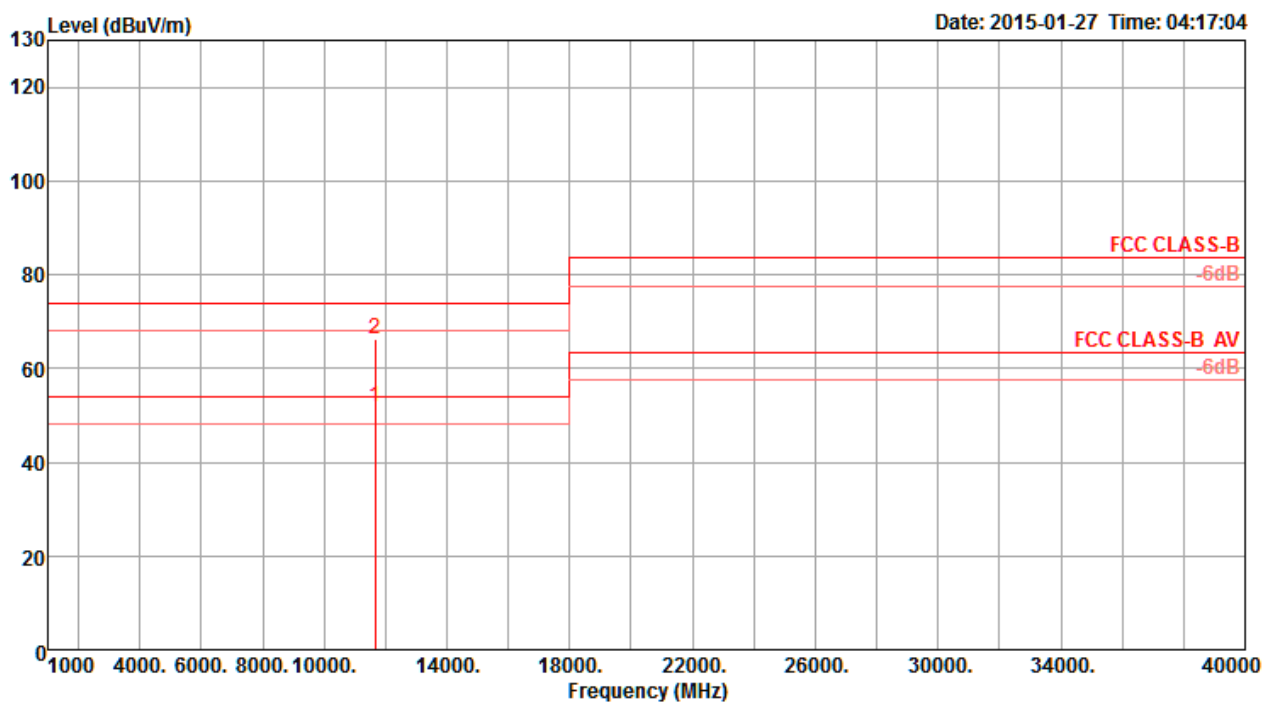
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH165 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11650.00	51.90	54.00	-2.10	41.70	6.56	38.36	34.72	Average	185	145	HORIZONTAL
2	11652.40	66.19	74.00	-7.81	55.99	6.56	38.36	34.72	Peak	185	145	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

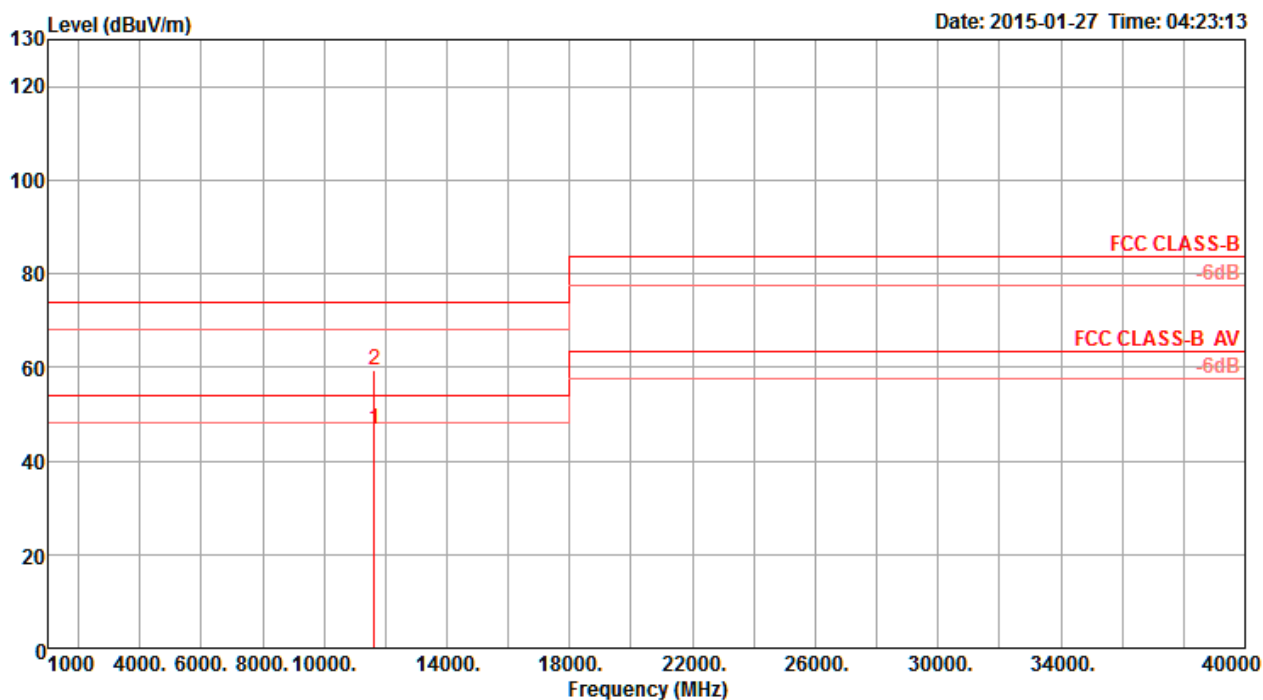
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH165 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11645.60	46.53	54.00	-7.47	36.32	6.56	38.36	34.71	Average	183	158	VERTICAL
2	11646.00	59.37	74.00	-14.63	49.16	6.56	38.36	34.71	Peak	183	158	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

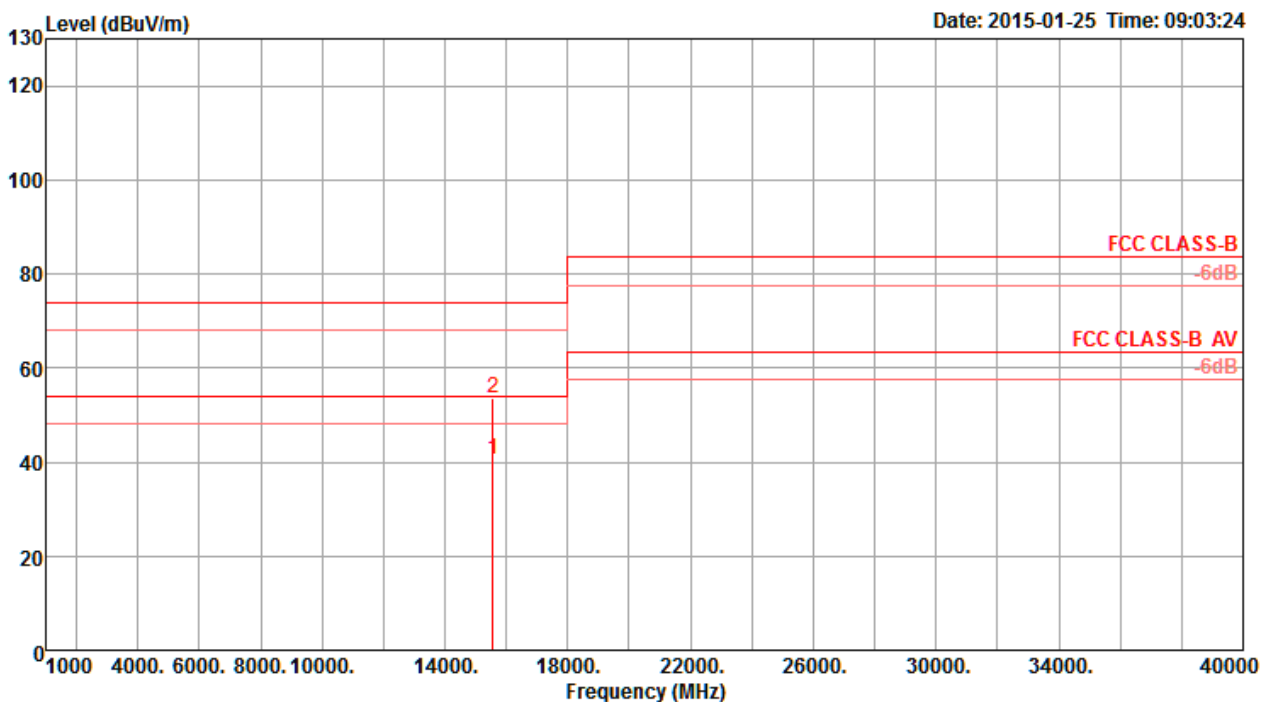
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH38 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	deg	cm	Pol/Phase
1	15567.51	40.56	54.00	-13.44	29.09	7.57	38.64	34.74	Average	32	151	HORIZONTAL
2	15571.51	53.60	74.00	-20.40	42.13	7.57	38.64	34.74	Peak	32	151	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

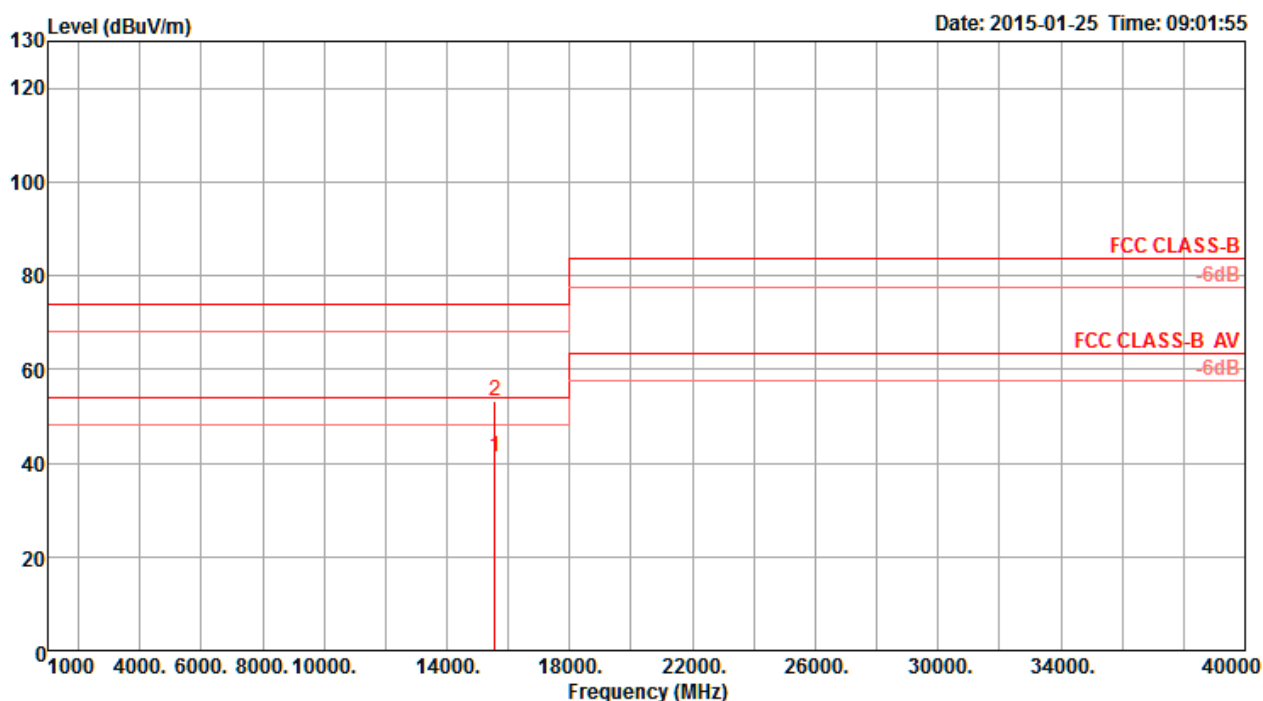
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH38 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	Pol/Phase
1	15567.55	41.14	54.00	-12.86	29.67	7.57	38.64	34.74	Average	334	157	VERTICAL
2	15571.68	53.23	74.00	-20.77	41.76	7.57	38.64	34.74	Peak	334	157	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

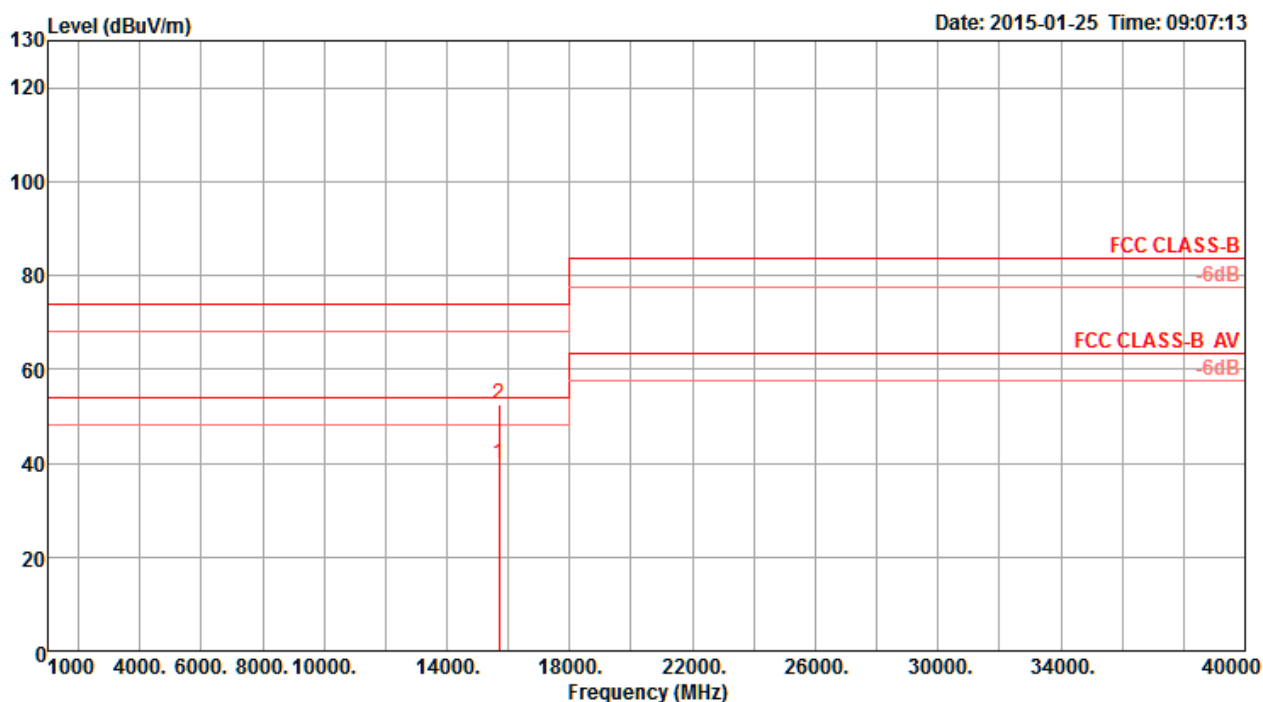
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH46 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	deg	cm	Pol/Phase
1	15690.56	39.75	54.00	-14.25	28.44	7.61	38.55	34.85	Average	322	160	HORIZONTAL
2	15692.18	52.65	74.00	-21.35	41.34	7.61	38.55	34.85	Peak	322	160	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

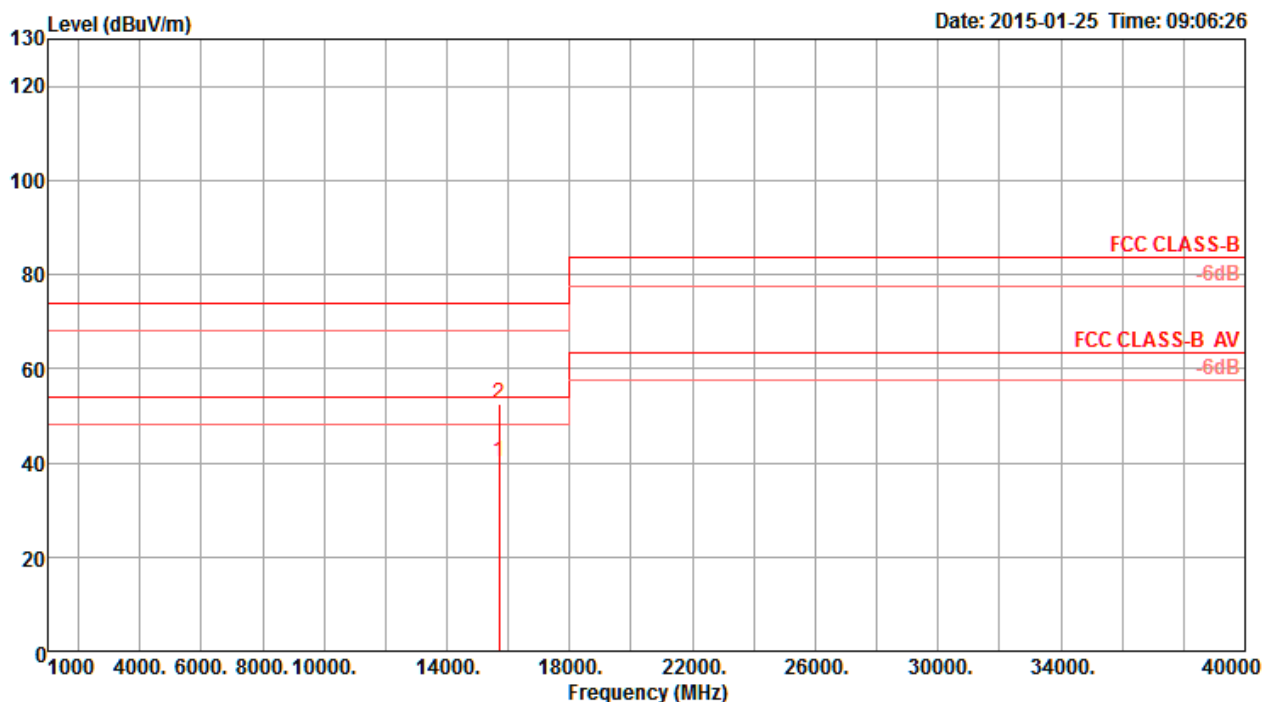
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH46 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	15690.22	40.03	54.00	-13.97	28.72	7.61	38.55	34.85	Average	259	175	VERTICAL
2	15691.30	52.49	74.00	-21.51	41.18	7.61	38.55	34.85	Peak	259	175	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

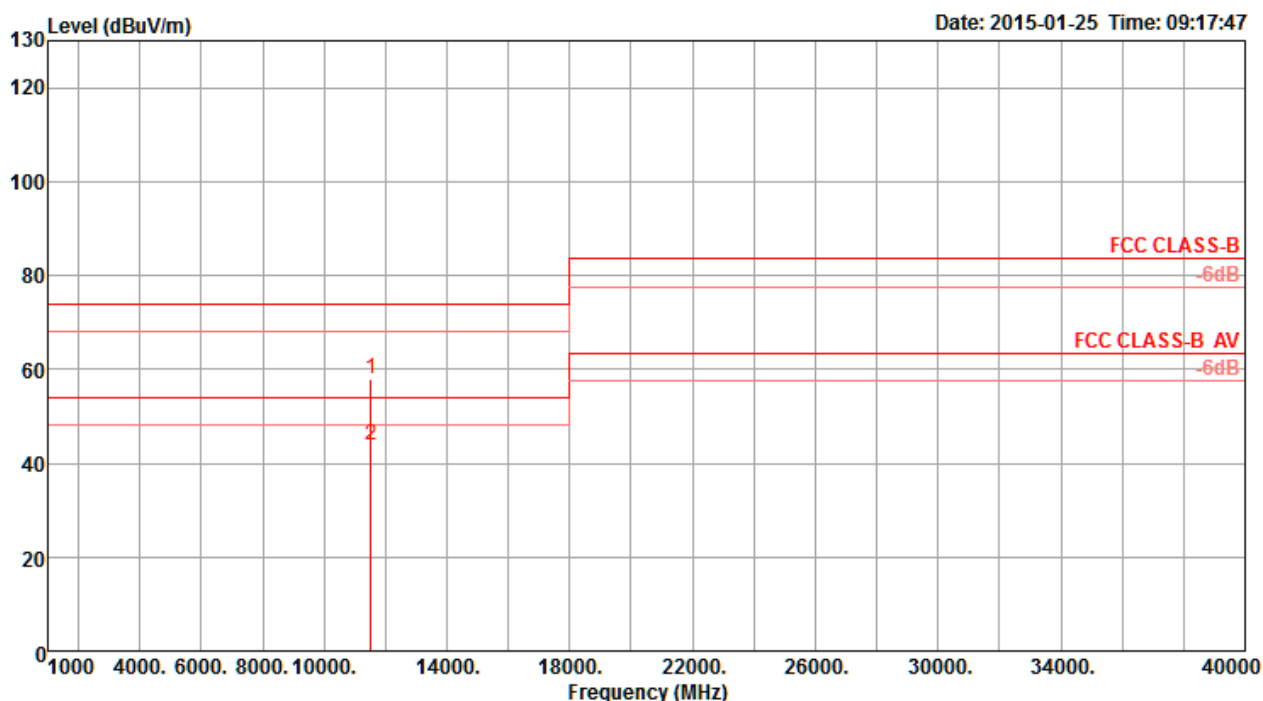
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH151 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	deg	cm	Pol/Phase
1	11514.68	58.05	74.00	-15.95	47.86	6.54	38.31	34.66	Peak	180	150	HORIZONTAL
2	11515.10	43.67	54.00	-10.33	33.48	6.54	38.31	34.66	Average	180	150	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

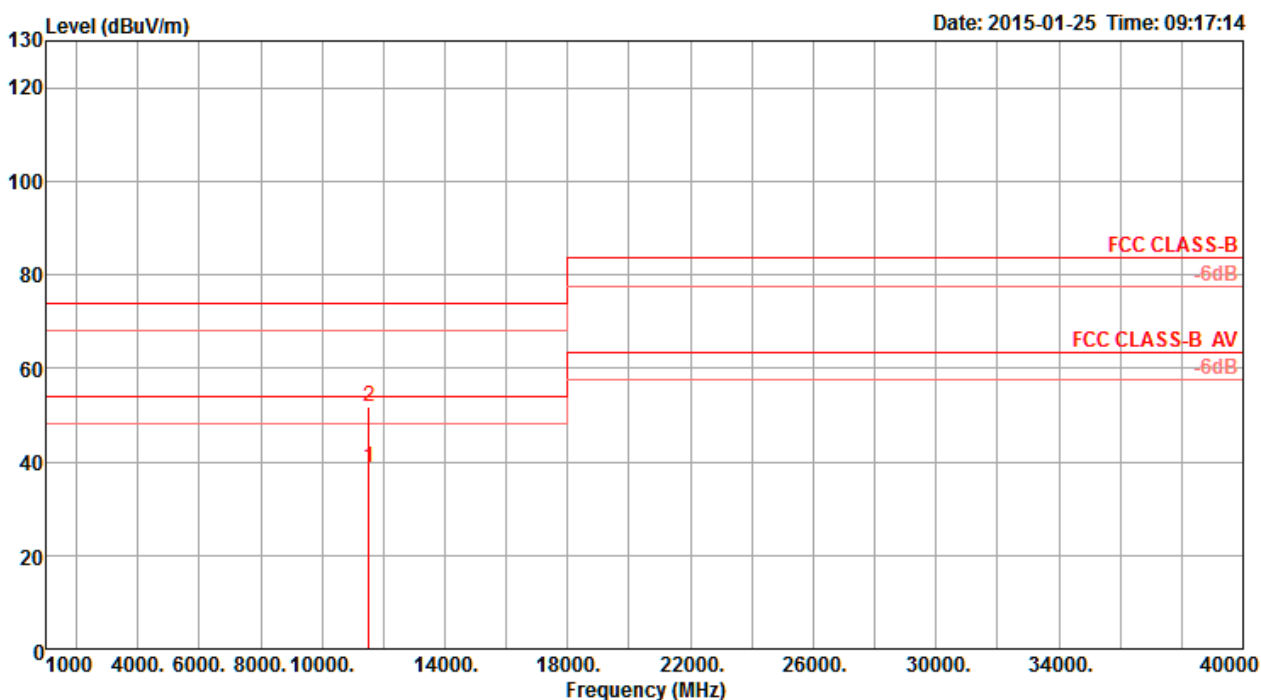
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH151 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	Pol/Phase
1	11522.42	38.59	54.00	-15.41	28.41	6.54	38.31	34.67	Average	169	207	VERTICAL
2	11523.44	51.73	74.00	-22.27	41.55	6.54	38.31	34.67	Peak	169	207	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

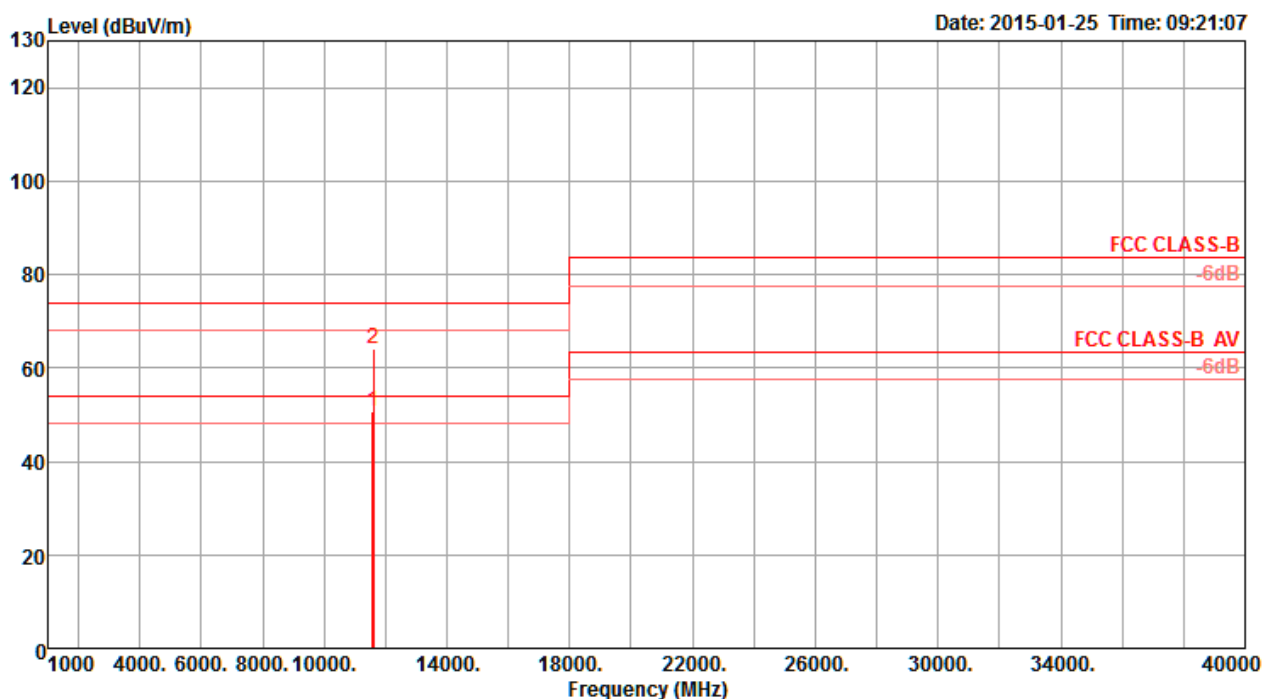
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH159 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11591.08	50.77	54.00	-3.23	40.58	6.55	38.33	34.69	Average	184	151	HORIZONTAL
2	11593.96	64.01	74.00	-9.99	53.82	6.55	38.33	34.69	Peak	184	151	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

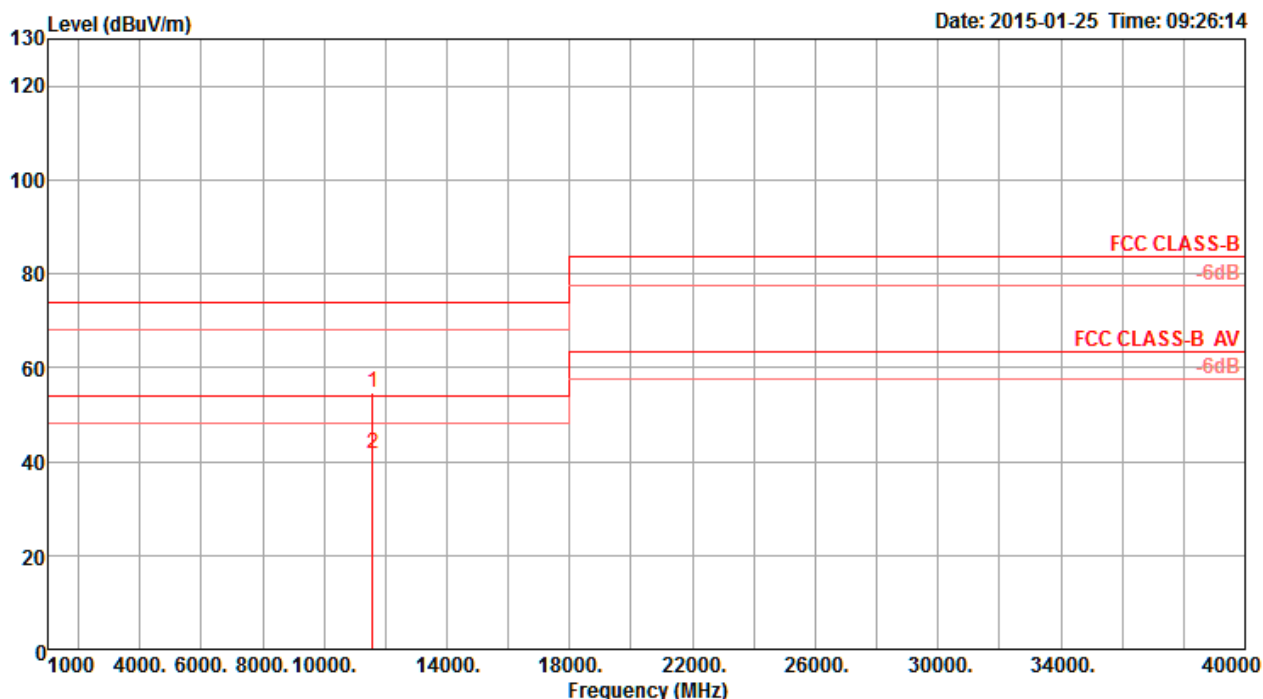
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH159 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11589.64	54.68	74.00	-19.32	44.49	6.55	38.33	34.69	Peak	251	138	VERTICAL
2	11589.88	41.59	54.00	-12.41	31.40	6.55	38.33	34.69	Average	251	138	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

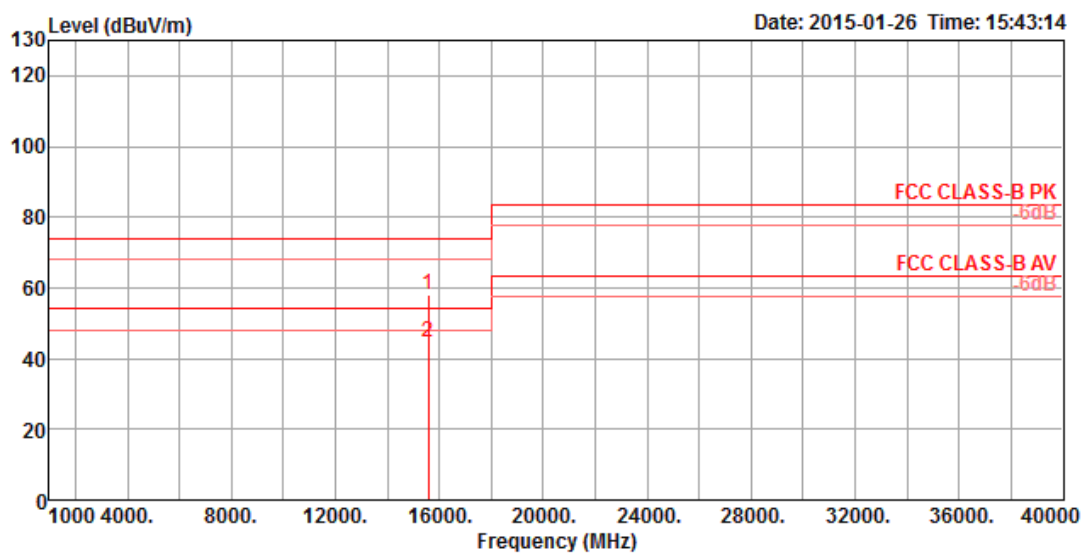
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH38 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	15575.21	58.01	74.00	-15.99	43.74	38.29	10.72	34.74	184	222	HORIZONTAL Peak
2	15580.78	44.52	54.00	-9.48	30.25	38.29	10.72	34.74	184	222	HORIZONTAL Average

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

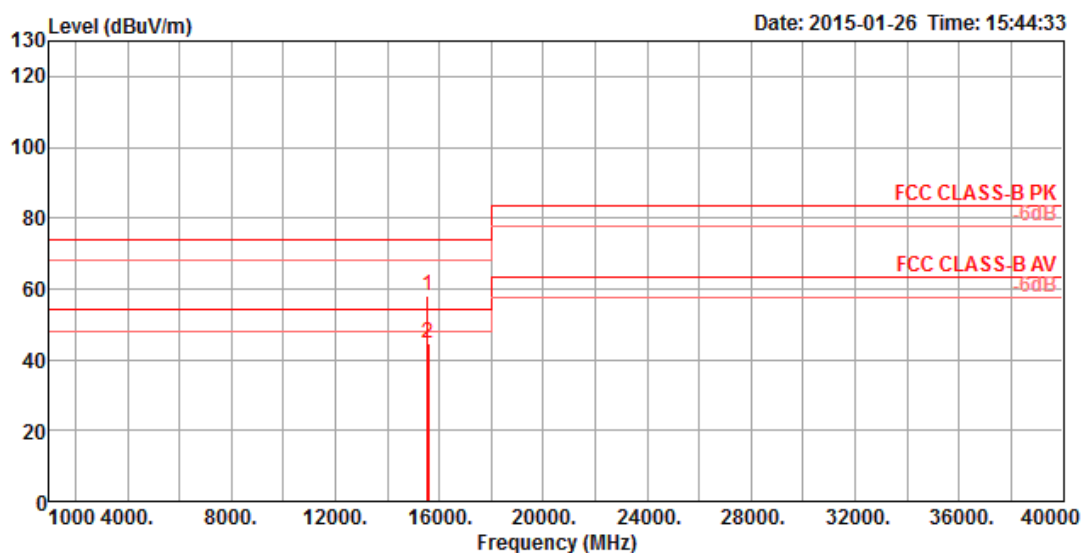
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH38 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	15563.05	58.06	74.00	-15.94	43.80	38.27	10.72	34.73	179	124	VERTICAL Peak
2	15593.59	44.43	54.00	-9.57	30.15	38.27	10.76	34.75	179	124	VERTICAL Average

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

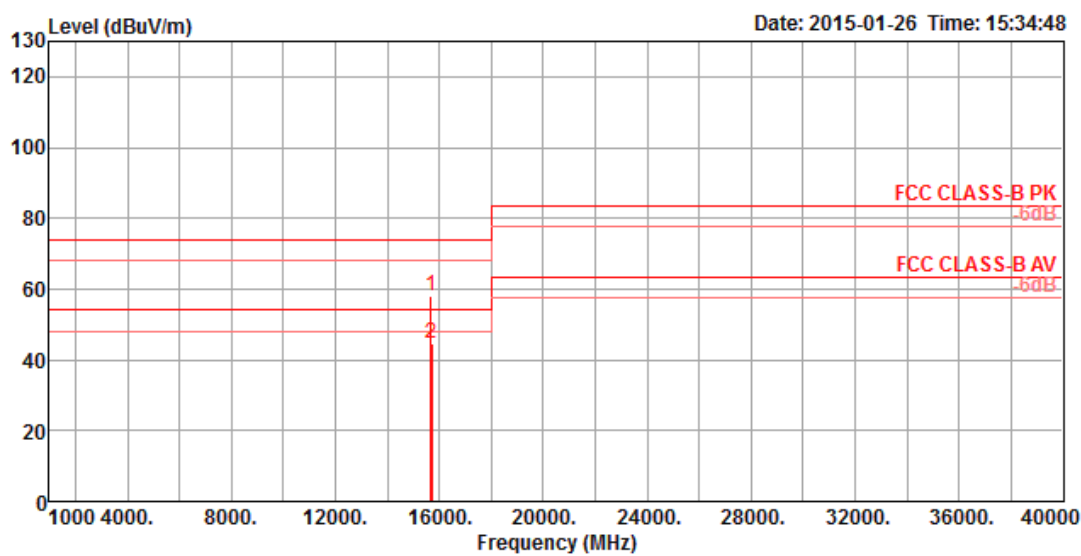
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH46 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	Level	Factor	Loss	Factor	cm	deg	
1	15692.53	57.86	74.00	-16.14	43.72	38.13	10.80	34.79	184	260	HORIZONTAL Peak
2	15713.01	44.68	54.00	-9.32	30.58	38.10	10.80	34.80	184	260	HORIZONTAL Average

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

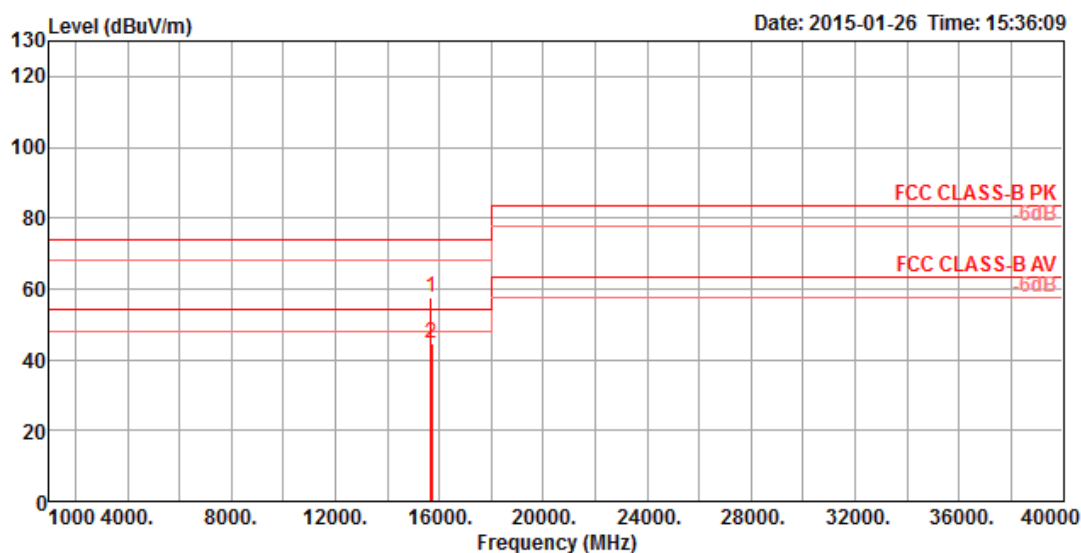
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH46 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	15677.41	57.79	74.00	-16.21	43.66	38.15	10.76	34.78	139	117 VERTICAL	Peak
2	15705.63	44.56	54.00	-9.44	30.47	38.08	10.80	34.79	139	117 VERTICAL	Average

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

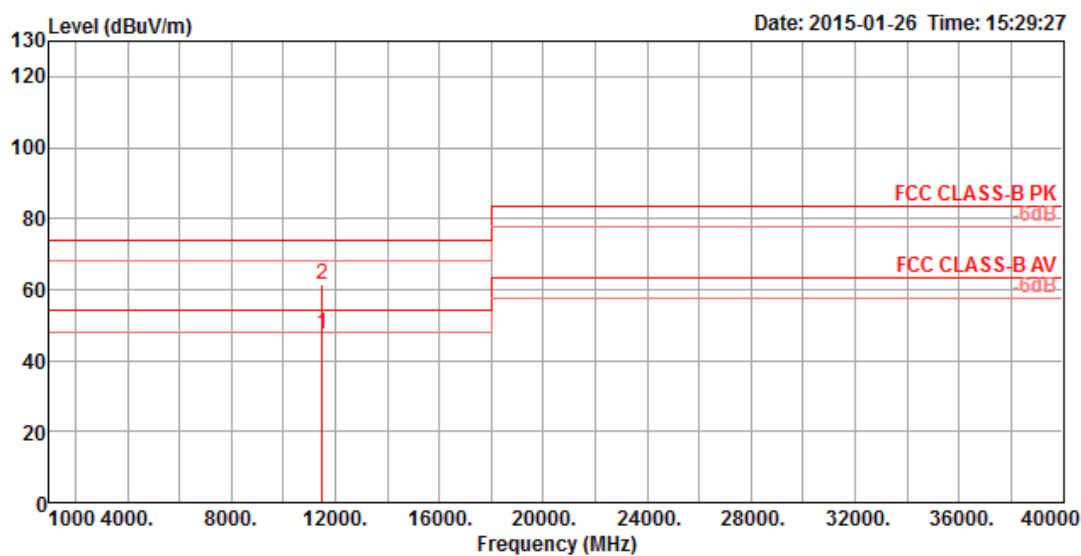
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH151 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	11510.58	47.49	54.00	-6.51	33.57	39.88	9.07	35.03	100	102	HORIZONTAL Average
2	11511.30	61.31	74.00	-12.69	47.39	39.88	9.07	35.03	100	102	HORIZONTAL Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

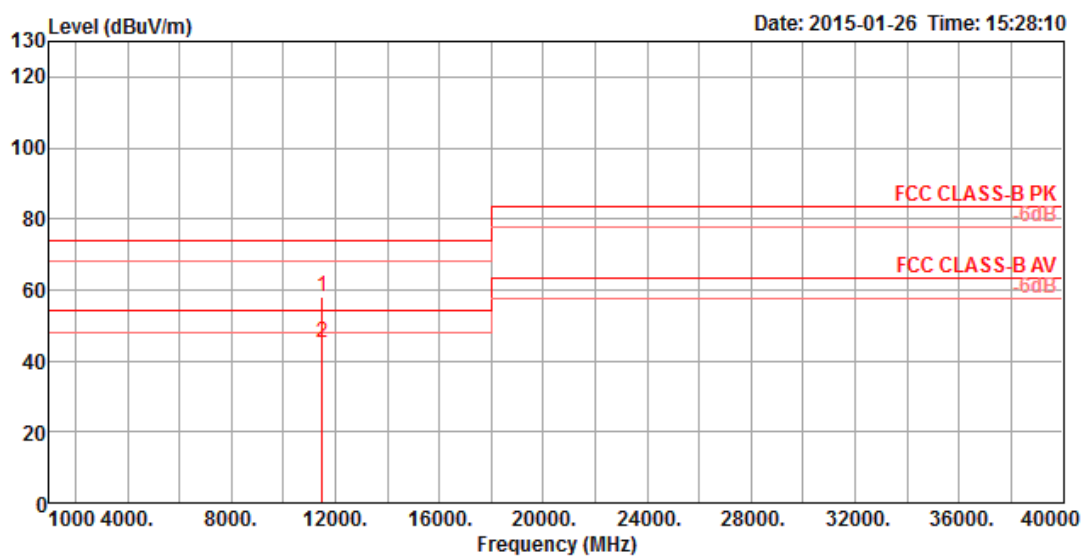
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH151 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	11507.83	58.21	74.00	-15.79	44.27	39.90	9.07	35.03	100	172 VERTICAL	Peak
2	11507.97	44.86	54.00	-9.14	30.92	39.90	9.07	35.03	100	172 VERTICAL	Average

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

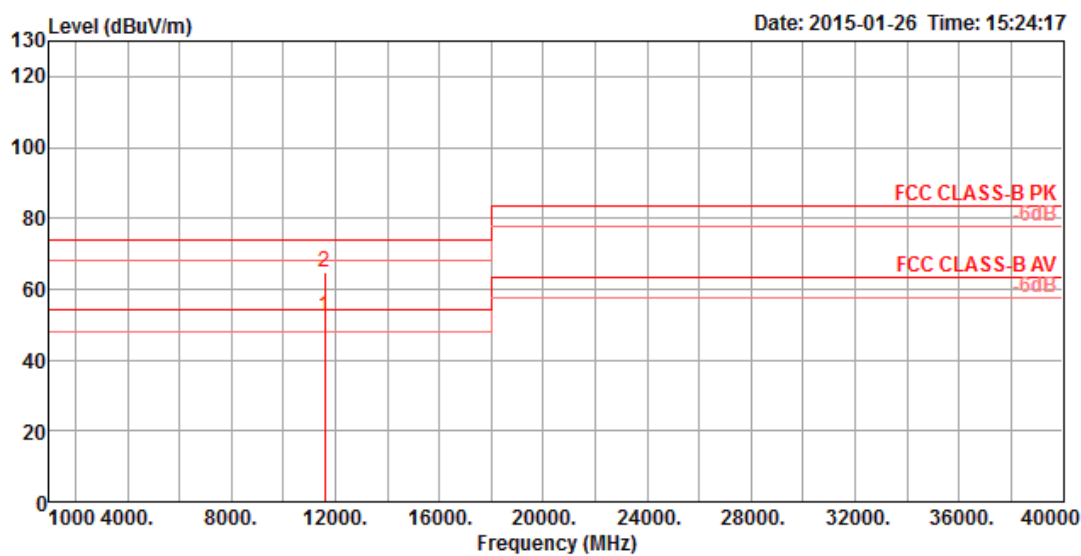
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH159 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	11590.00	52.06	54.00	-1.94	38.27	39.72	9.10	35.03	100	95 HORIZONTAL	Average
2	11590.22	64.57	74.00	-9.43	50.78	39.72	9.10	35.03	100	95 HORIZONTAL	Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

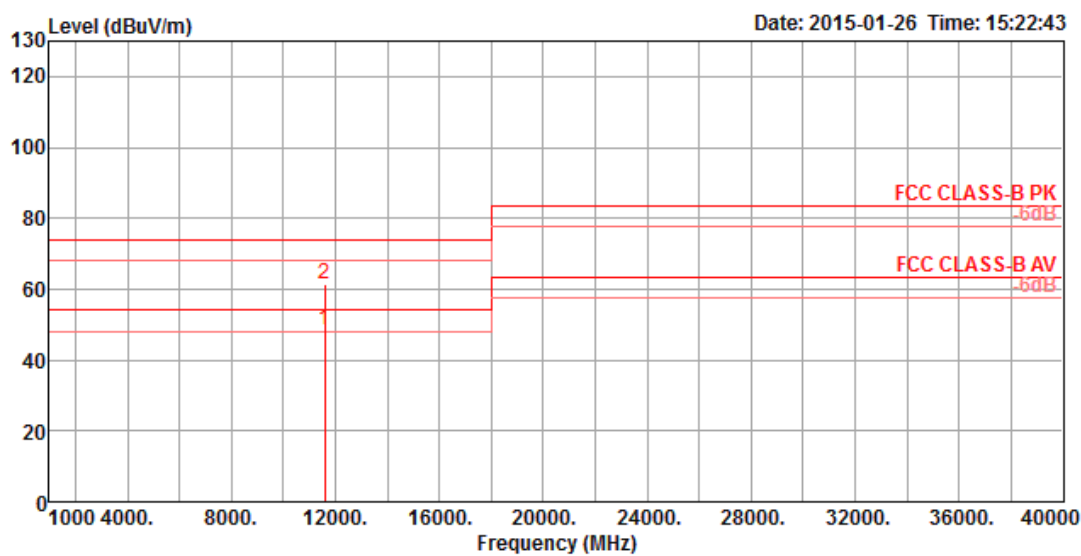
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH159 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	11589.57	48.22	54.00	-5.78	34.45	39.70	9.10	35.03	105	215 VERTICAL	Average
2	11599.26	61.63	74.00	-12.37	47.86	39.70	9.10	35.03	105	215 VERTICAL	Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

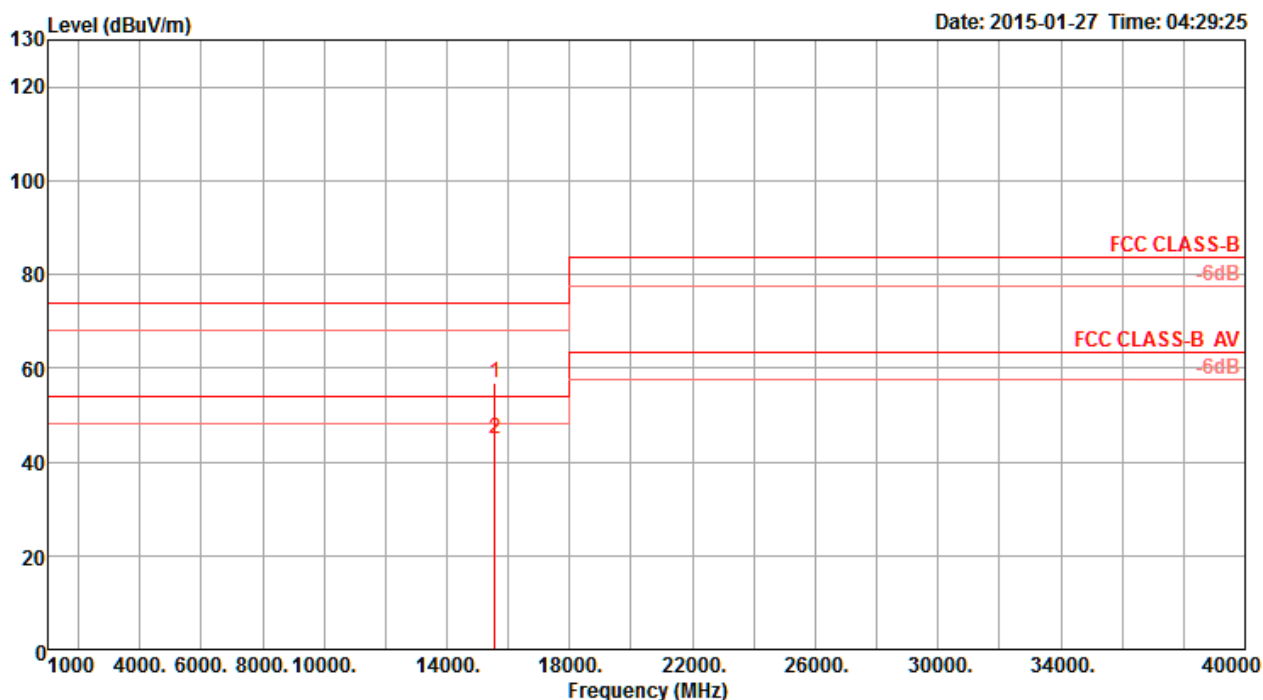
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH38 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	15571.72	56.79	74.00	-17.21	45.32	7.57	38.64	34.74	94	156	HORIZONTAL
2	15572.56	44.87	54.00	-9.13	33.40	7.57	38.64	34.74	94	156	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

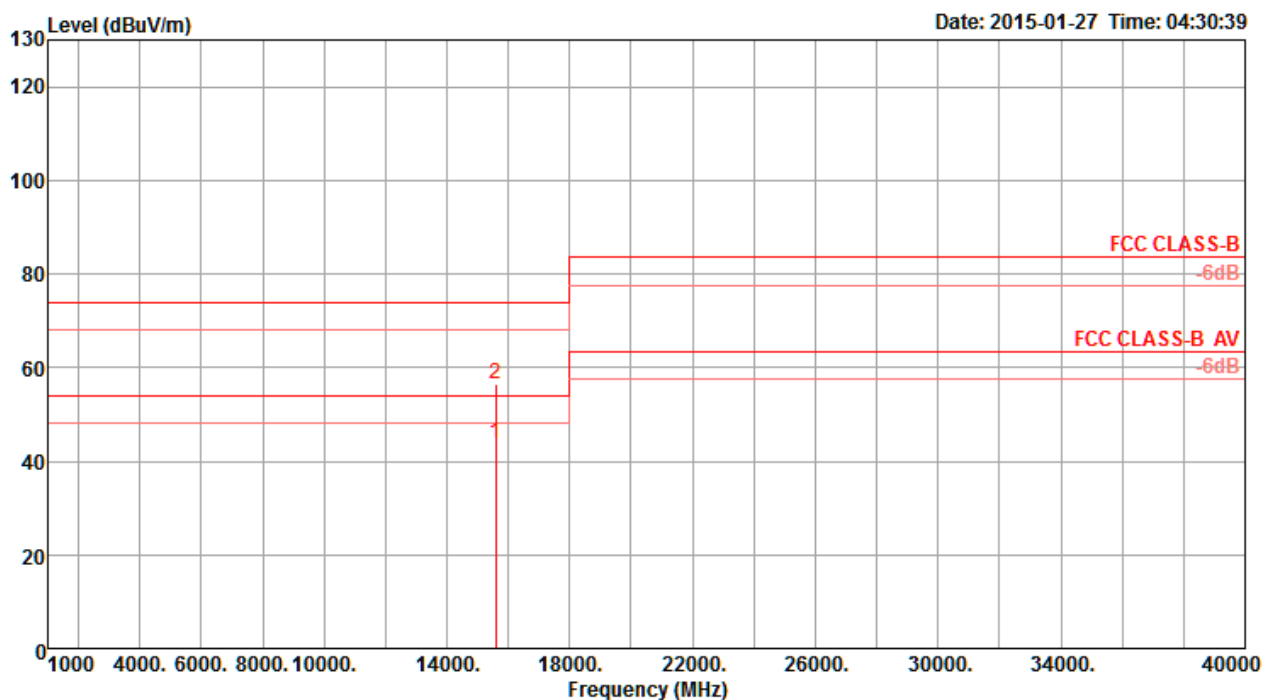
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH38 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	15578.00	43.99	54.00	-10.01	32.56	7.57	38.63	34.77	Average	223	151	VERTICAL
2	15579.00	56.36	74.00	-17.64	44.93	7.57	38.63	34.77	Peak	223	151	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

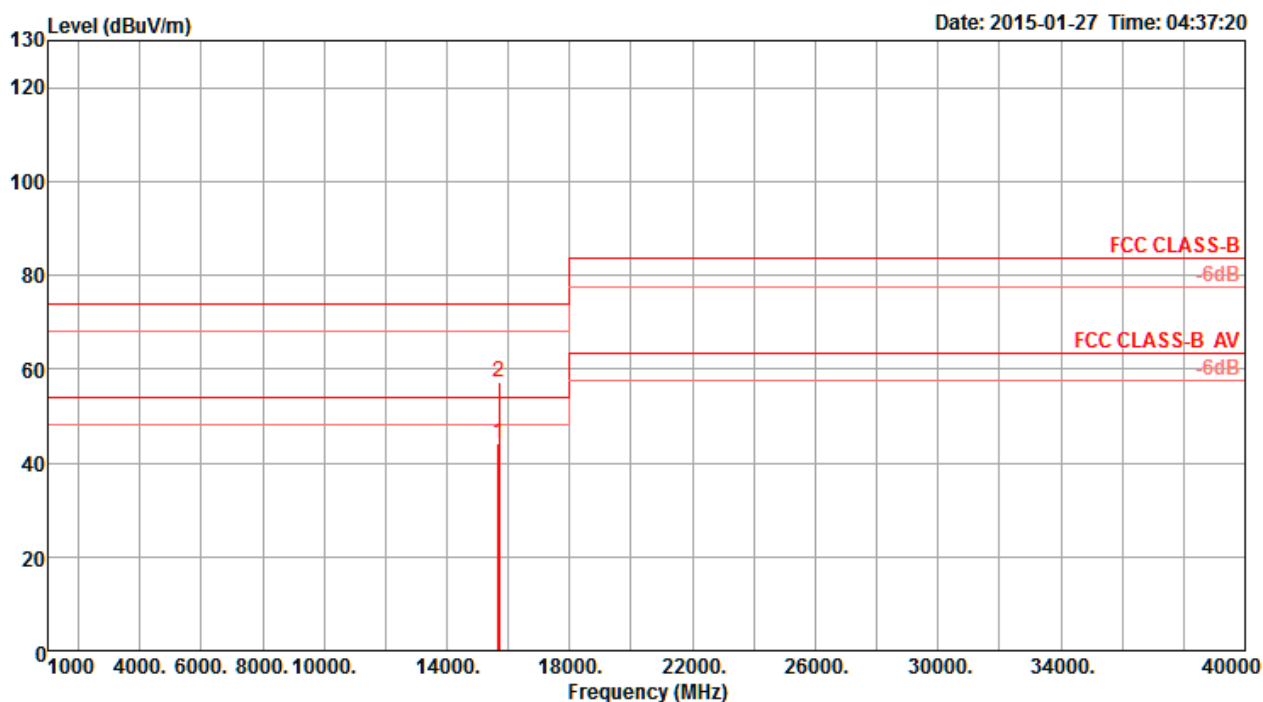
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH46 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	15683.16	44.09	54.00	-9.91	32.78	7.61	38.55	34.85	113	155	HORIZONTAL
2	15689.16	57.13	74.00	-16.87	45.82	7.61	38.55	34.85	113	155	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

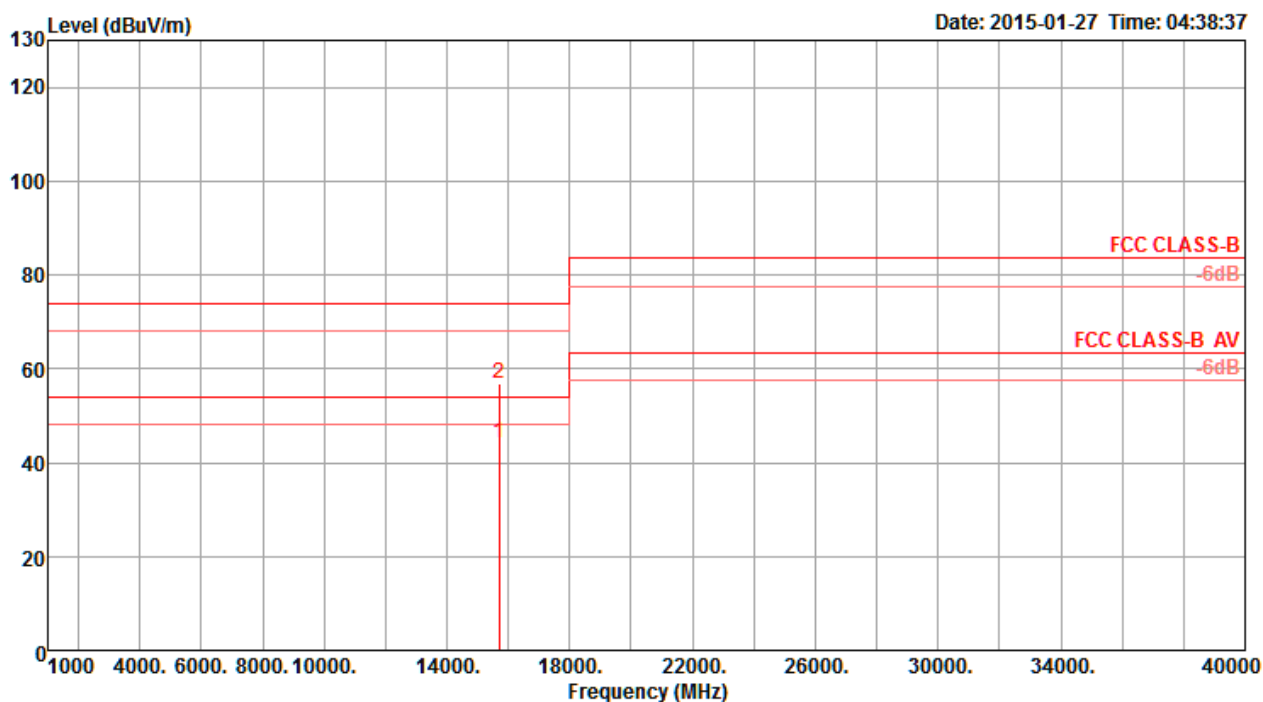
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH46 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	Pol/Phase
1	15687.54	44.04	54.00	-9.96	32.73	7.61	38.55	34.85	Average	345	147	VERTICAL
2	15691.85	56.92	74.00	-17.08	45.61	7.61	38.55	34.85	Peak	345	147	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

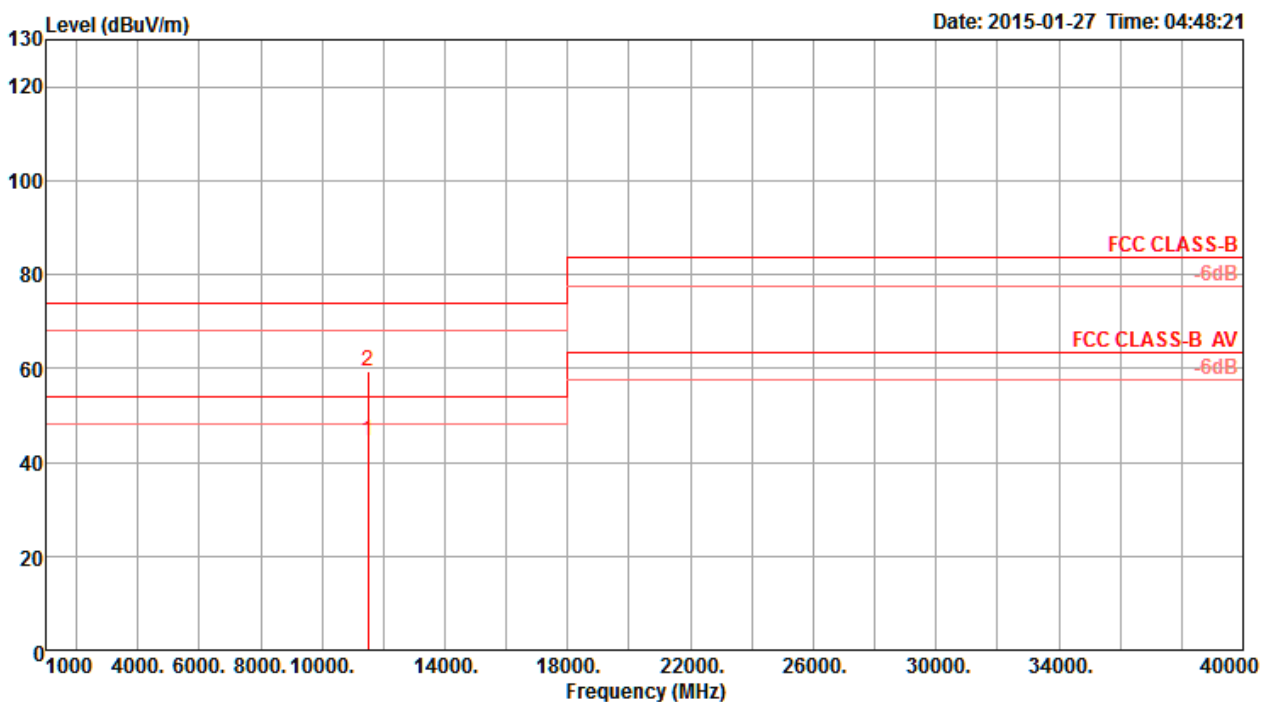
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH151 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	deg	cm	
1	11507.40	44.53	54.00	-9.47	34.35	6.54	38.30	34.66	Average	185	145	HORIZONTAL
2	11510.10	59.45	74.00	-14.55	49.27	6.54	38.30	34.66	Peak	185	145	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

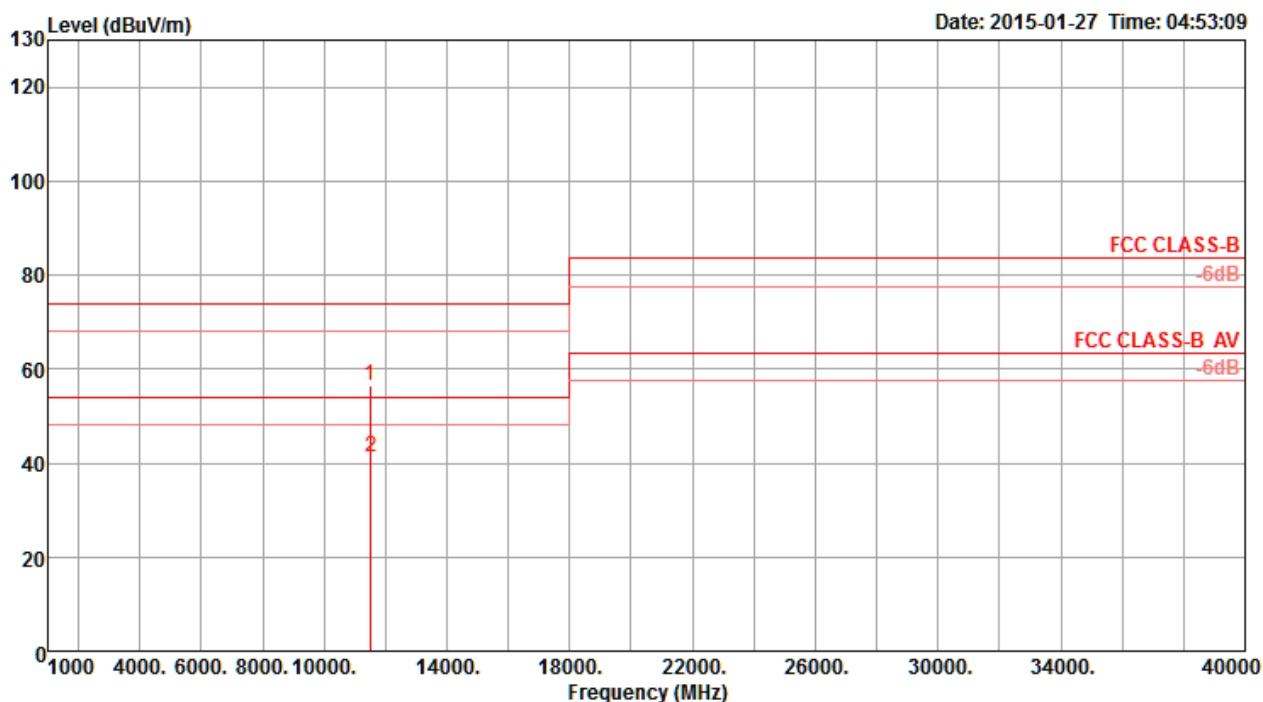
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH151 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	11510.00	56.56	74.00	-17.44	46.38	6.54	38.30	34.66	186	131	VERTICAL
2	11521.20	41.16	54.00	-12.84	30.98	6.54	38.31	34.67	186	131	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

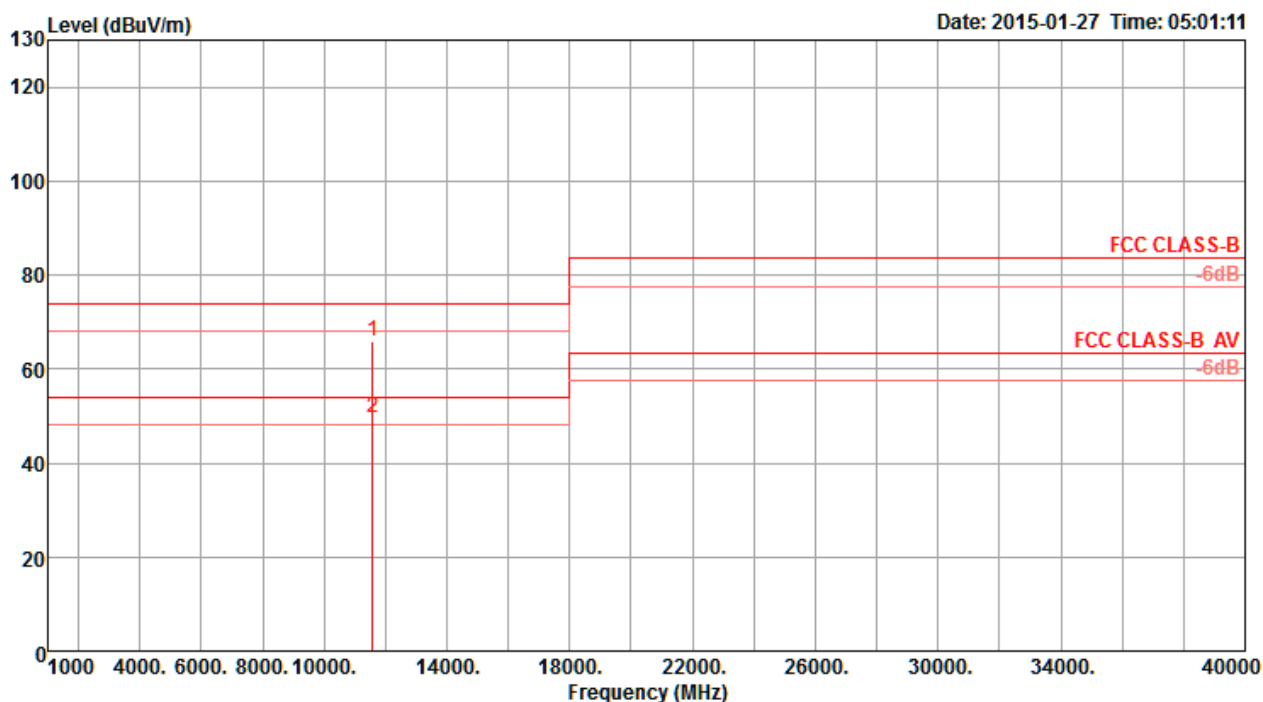
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH159 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11589.80	65.86	74.00	-8.14	55.67	6.55	38.33	34.69	Peak	184	130	HORIZONTAL
2	11592.10	49.73	54.00	-4.27	39.54	6.55	38.33	34.69	Average	184	130	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

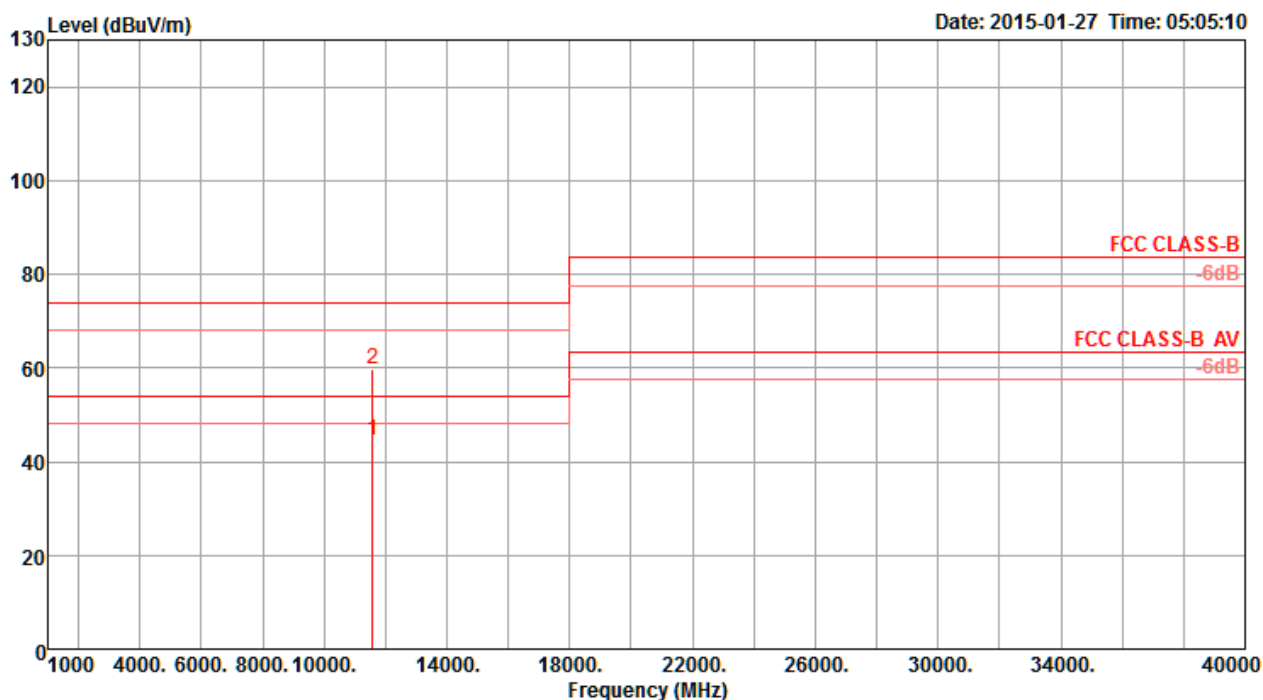
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH159 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	deg	cm	Pol/Phase
1	11585.30	44.55	54.00	-9.45	34.36	6.55	38.33	34.69	Average	186	131	VERTICAL
2	11590.20	59.83	74.00	-14.17	49.64	6.55	38.33	34.69	Peak	186	131	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

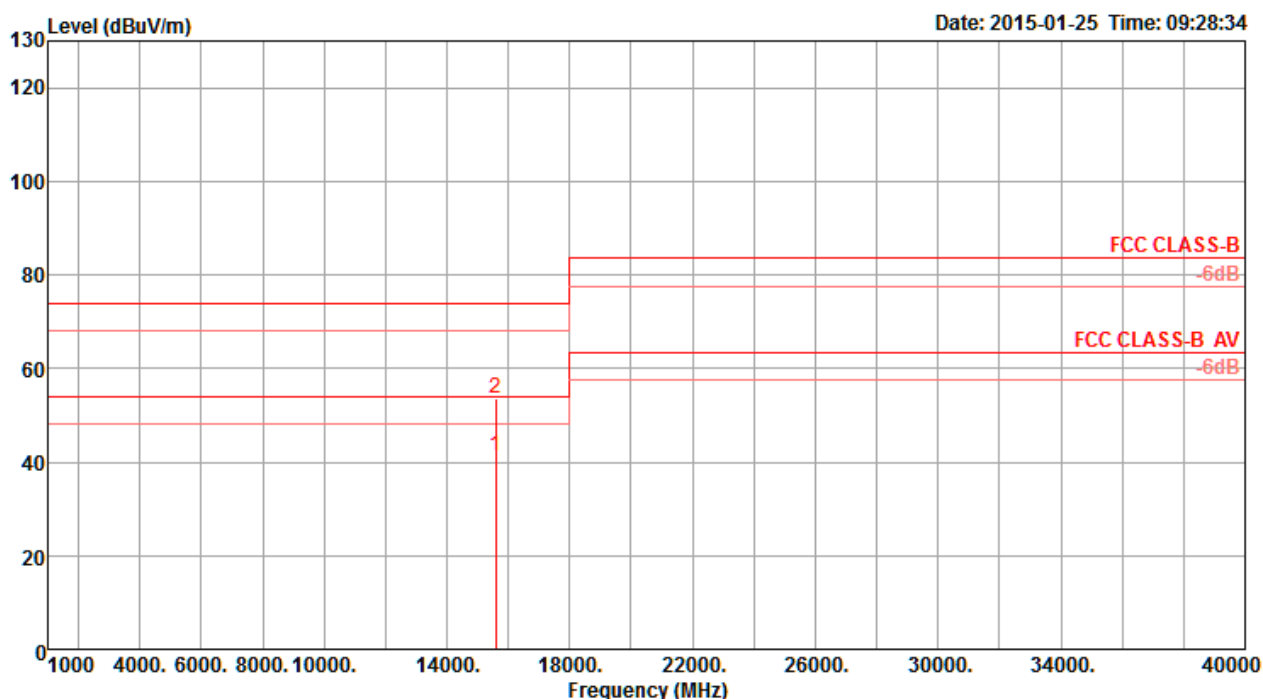
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH42 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	Pol/Phase
1	15590.48	41.43	54.00	-12.57	30.00	7.57	38.63	34.77	Average	74	150	HORIZONTAL
2	15591.12	53.56	74.00	-20.44	42.13	7.57	38.63	34.77	Peak	74	150	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

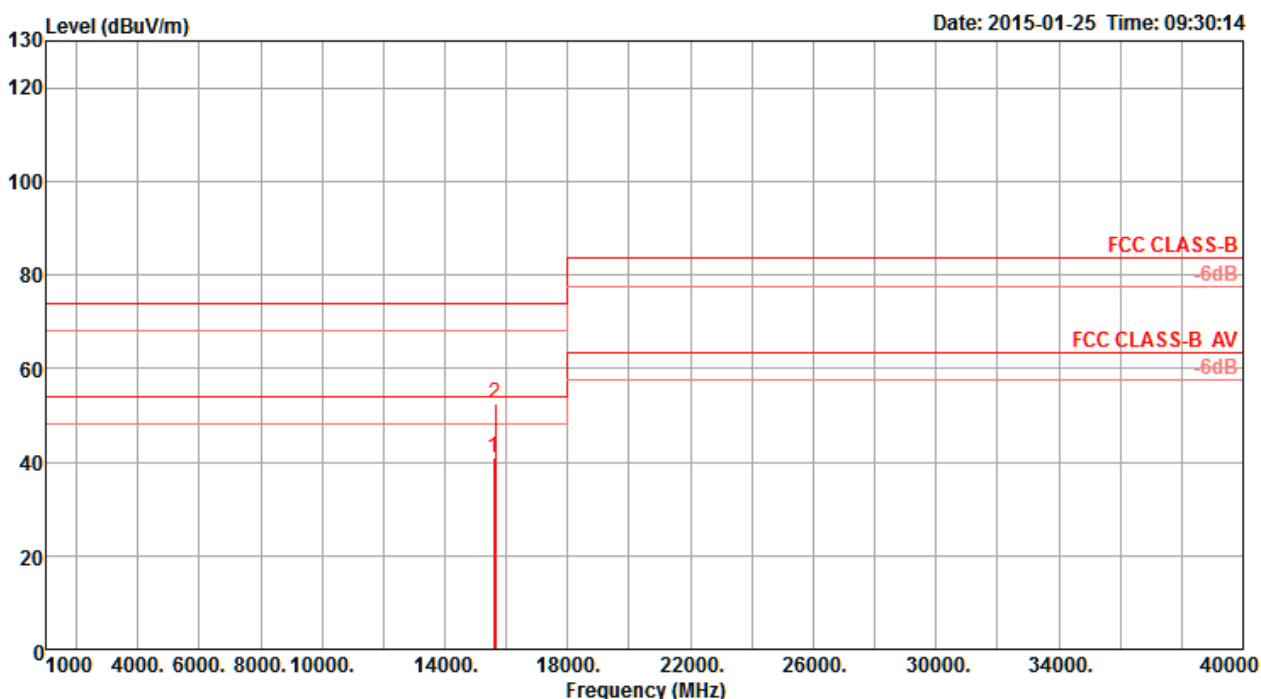
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH42 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	Pol/Phase
1	15590.32	41.09	54.00	-12.91	29.66	7.57	38.63	34.77	Average	348	150	VERTICAL
2	15635.12	52.66	74.00	-21.34	41.29	7.59	38.59	34.81	Peak	348	150	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

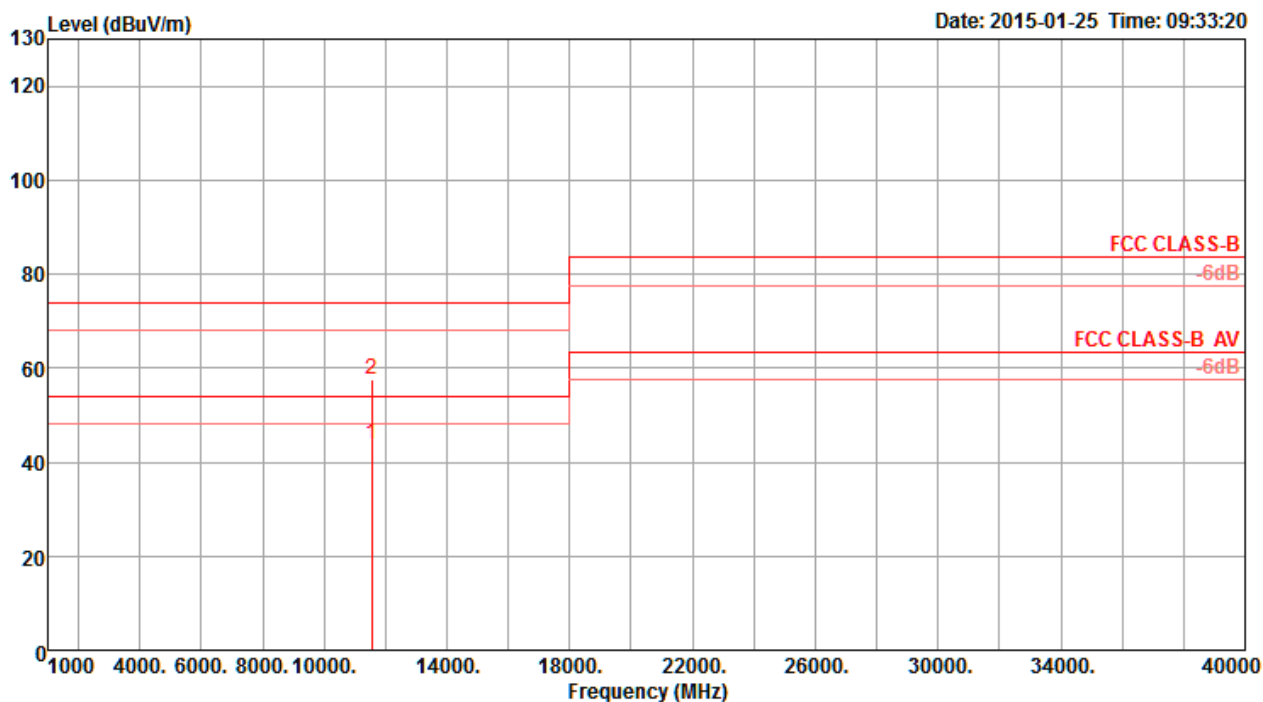
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH155 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	deg	cm	Pol/Phase
1	11559.80	43.80	54.00	-10.20	33.61	6.55	38.32	34.68	Average	184	147	HORIZONTAL
2	11563.60	57.45	74.00	-16.55	47.26	6.55	38.32	34.68	Peak	184	147	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

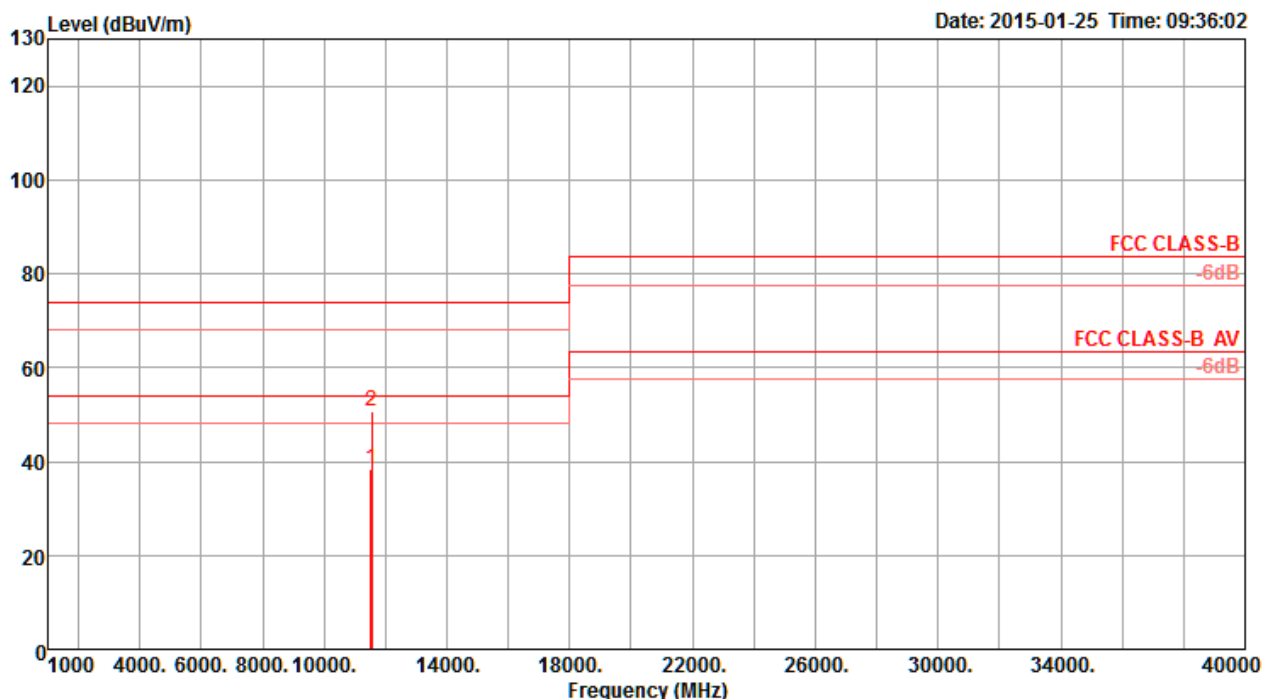
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH155 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	11522.40	38.33	54.00	-15.67	28.15	6.54	38.31	34.67	Average	70	153	VERTICAL
2	11561.80	50.63	74.00	-23.37	40.44	6.55	38.32	34.68	Peak	70	153	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

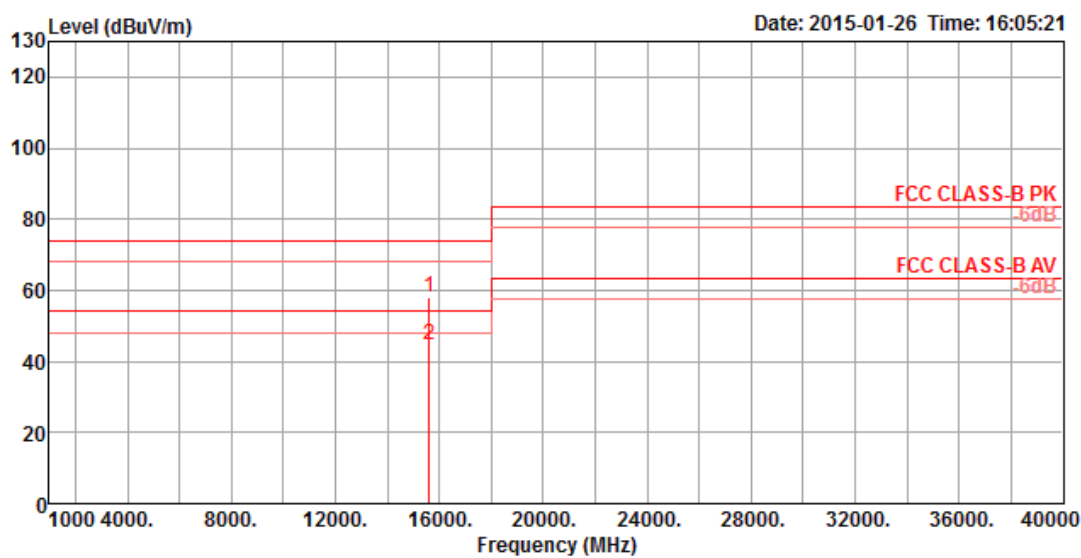
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH42 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	15630.00	57.98	74.00	-16.02	43.76	38.22	10.76	34.76	142	162	HORIZONTAL Peak
2	15630.00	44.84	54.00	-9.16	30.62	38.22	10.76	34.76	142	162	HORIZONTAL Average

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

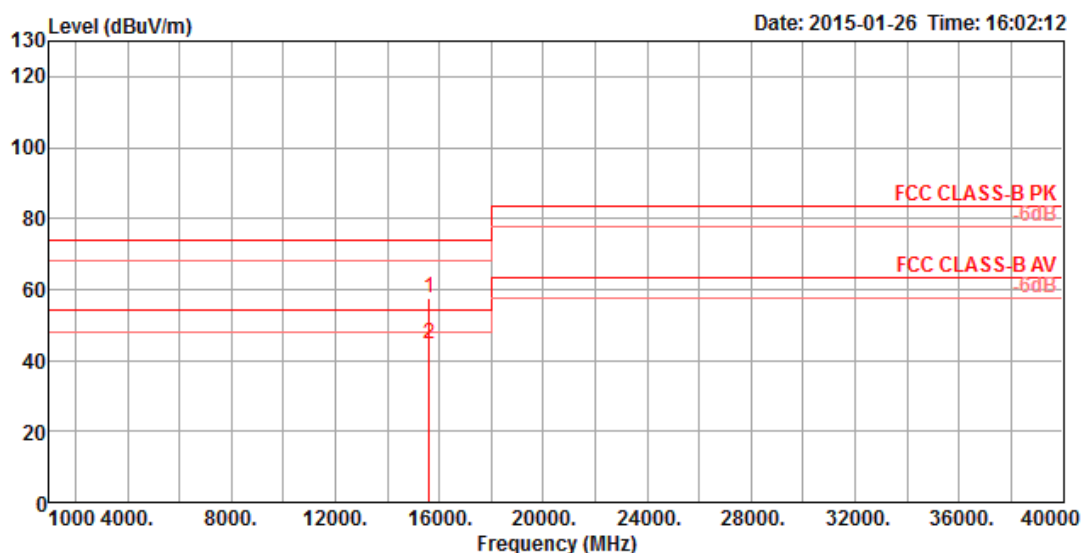
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH42 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	15630.00	57.57	74.00	-16.43	43.36	38.21	10.76	34.76	151	163 VERTICAL	Peak
2	15630.00	44.82	54.00	-9.18	30.61	38.21	10.76	34.76	151	163 VERTICAL	Average

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

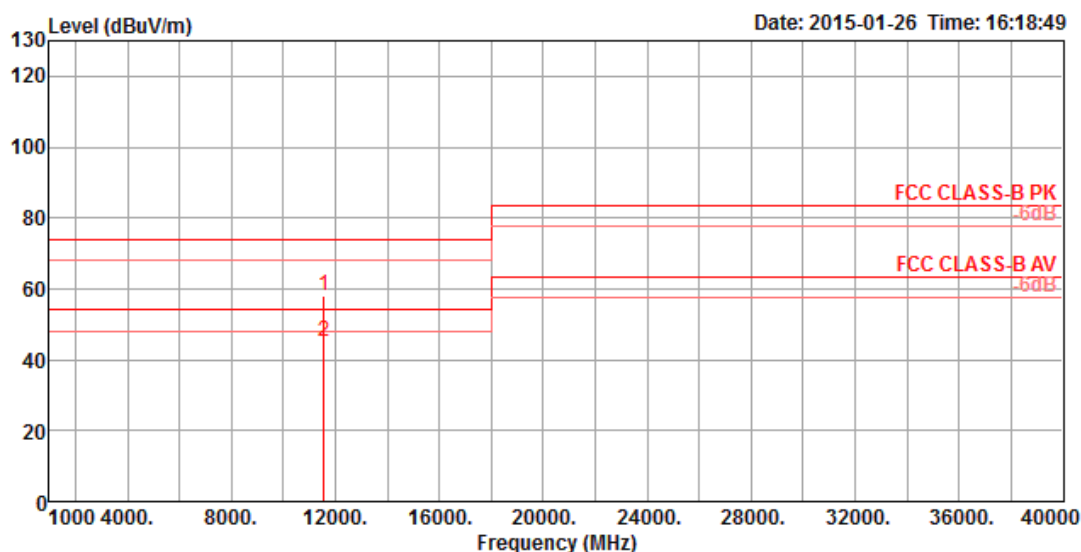
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH155 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	11555.72	57.88	74.00	-16.12	44.02	39.79	9.10	35.03	104	148	HORIZONTAL Peak
2	11560.93	45.29	54.00	-8.71	31.44	39.78	9.10	35.03	104	148	HORIZONTAL Average

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

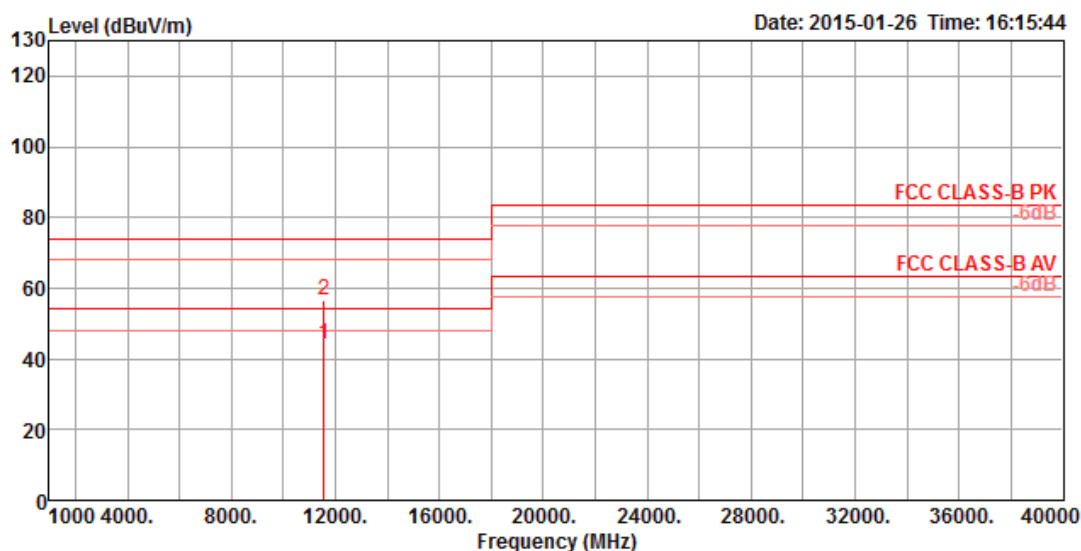
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH155 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit Line	Over Limit	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg		
1	11552.97	44.31	54.00	-9.69	30.47	39.77	9.10	35.03	100	212	VERTICAL	Average
2	11568.96	56.67	74.00	-17.33	42.83	39.77	9.10	35.03	100	212	VERTICAL	Peak

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

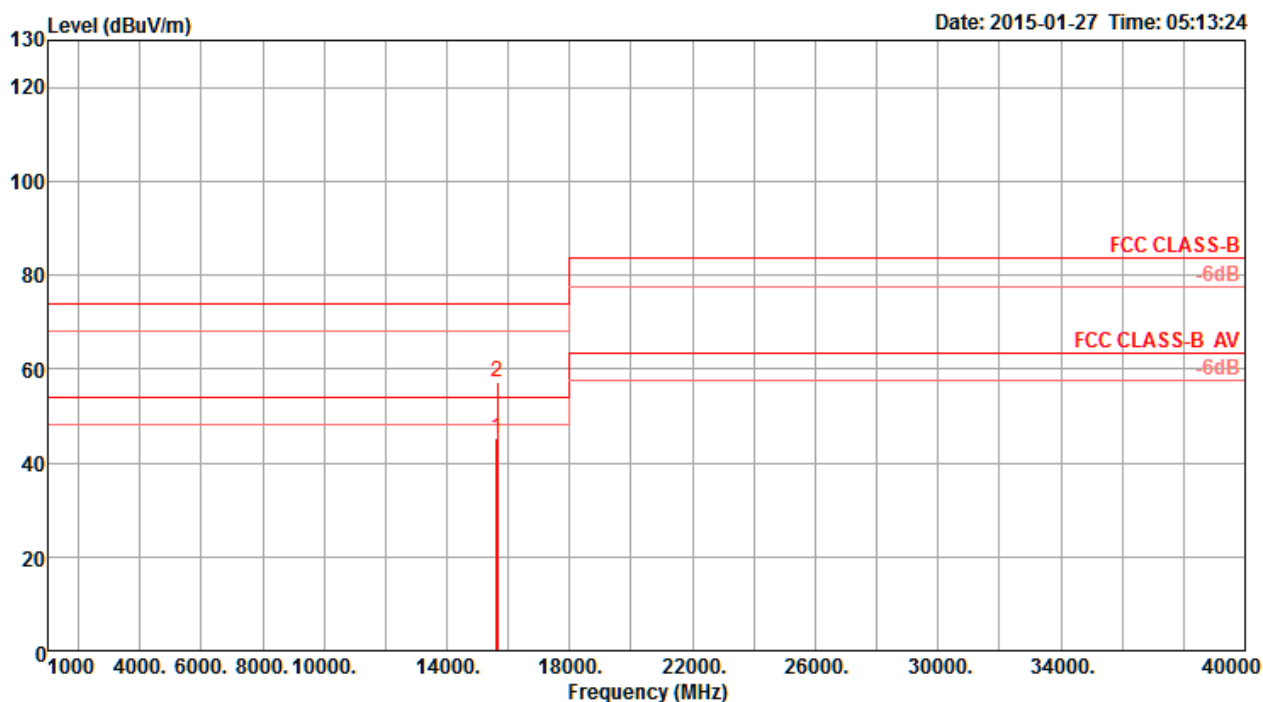
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH42 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	15607.80	45.43	54.00	-8.57	34.02	7.58	38.62	34.79	Average	247	176	HORIZONTAL
2	15635.00	57.16	74.00	-16.84	45.79	7.59	38.59	34.81	Peak	251	176	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

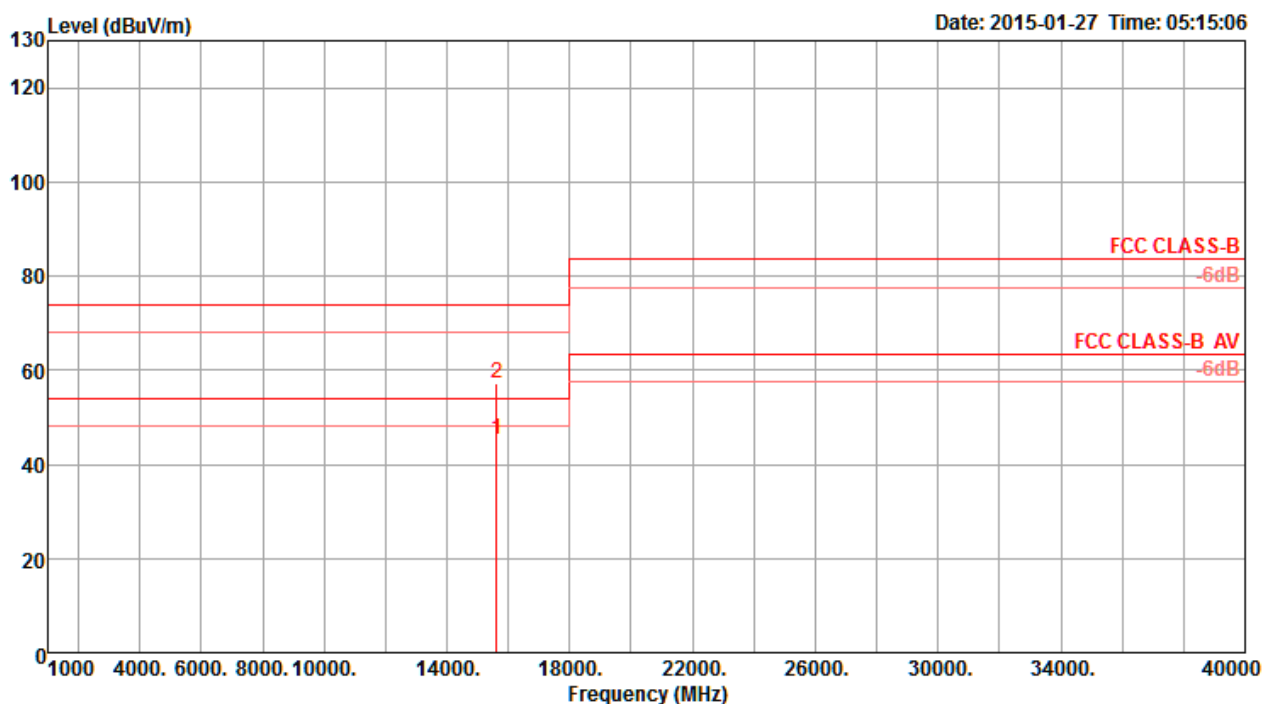
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH42 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	15624.72	45.28	54.00	-8.72	33.90	7.59	38.60	34.81	Average	26	168	VERTICAL
2	15630.48	57.14	74.00	-16.86	45.77	7.59	38.59	34.81	Peak	26	168	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

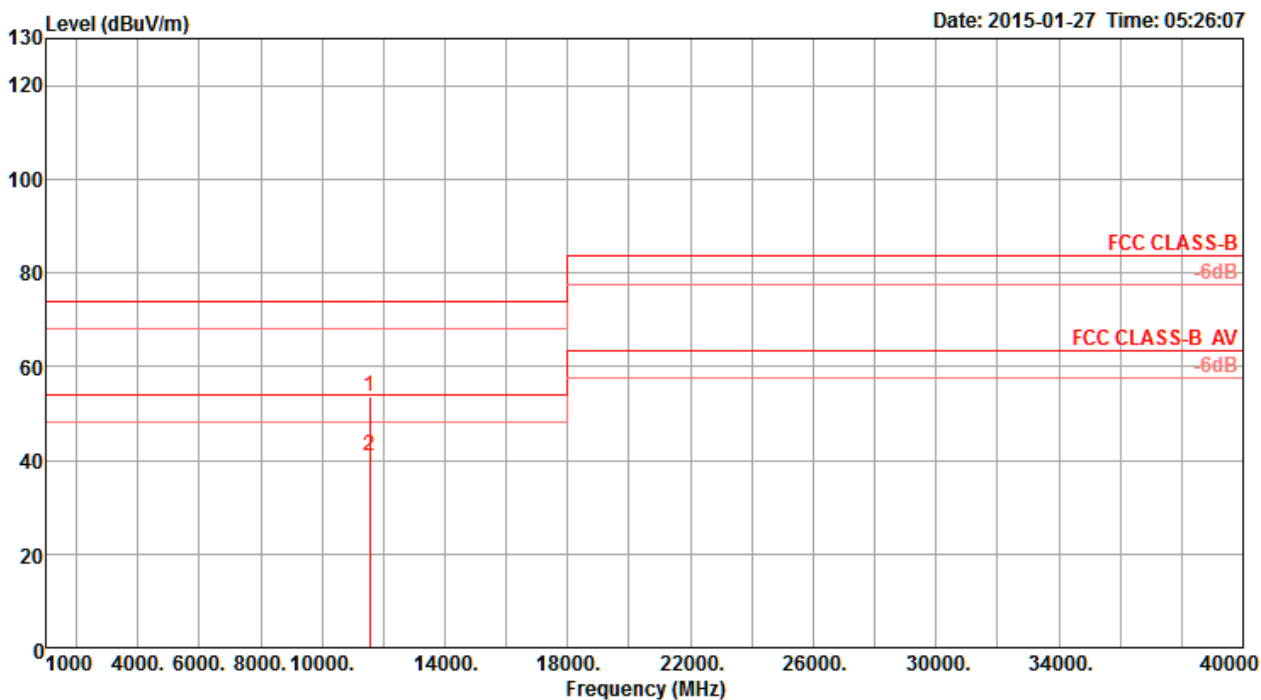
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH155 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	11557.76	53.45	74.00	-20.55	43.26	6.55	38.32	34.68	182	154	HORIZONTAL
2	11558.72	40.92	54.00	-13.08	30.73	6.55	38.32	34.68	182	154	HORIZONTAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

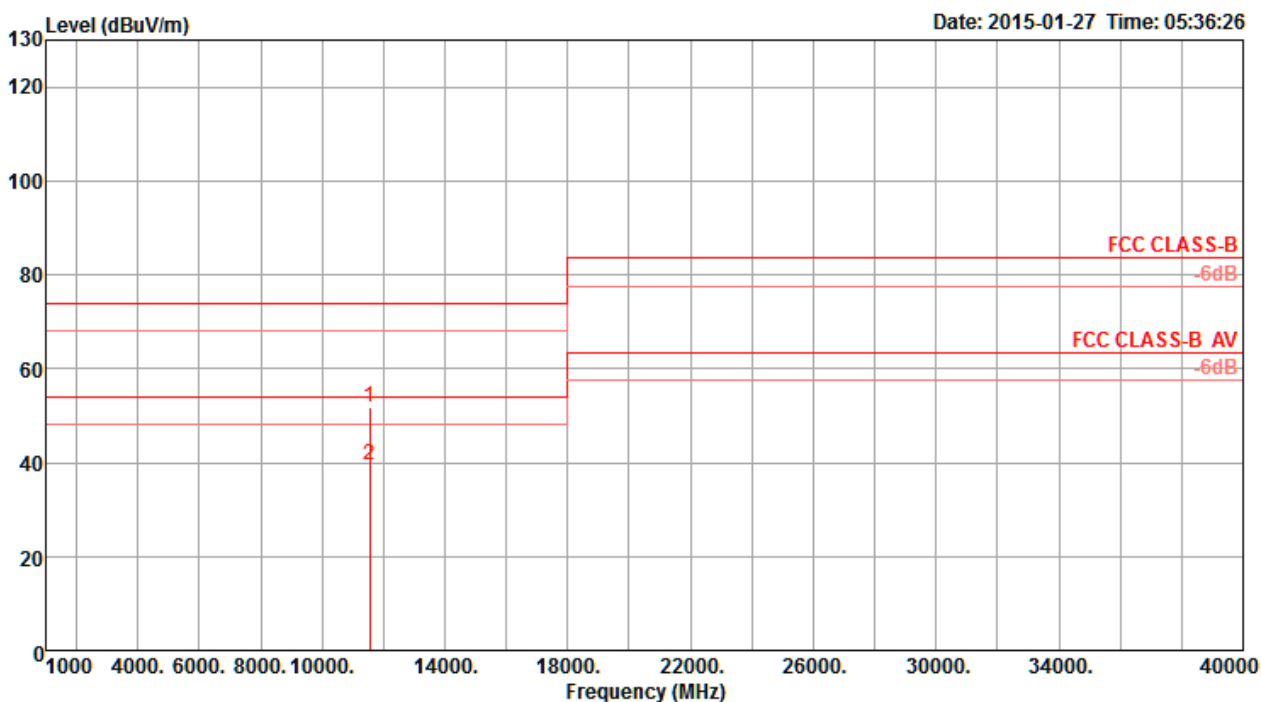
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Unwanted emissions in the restricted bands (Above 1GHz)

Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH155 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	Pol/Phase
1	11541.64	51.82	74.00	-22.18	41.64	6.54	38.31	34.67	Peak	182	145	VERTICAL
2	11541.80	39.46	54.00	-14.54	29.28	6.54	38.31	34.67	Average	182	145	VERTICAL

Note 1: The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

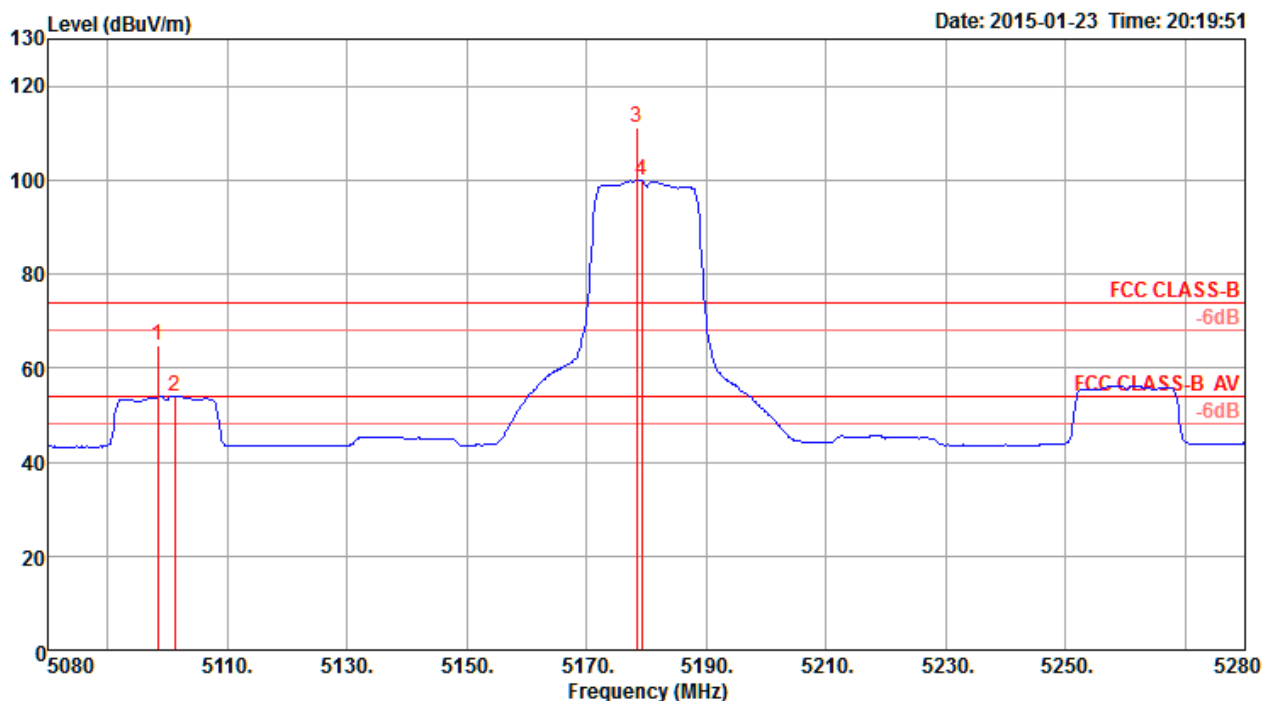
3.5.11 Test Result of Band Edge and Fundamental Emissions

Following channel(s) was (were) selected for the final test as listed below.

Mode	TX Antenna	Test Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	Ant.1	36, 40, 48 149, 157, 165	OFDM	BPSK	6
802.11a	Ant.1+2+3 (1S3T, CDD)	36, 40, 48 149, 157, 165	OFDM	BPSK	6
802.11ac 20MHz	Ant.1	36, 40, 48 149, 157, 165	OFDM	BPSK	Nss1MCS0 (6.5)
802.11ac 20MHz	Ant.1+2+3 (1S3T, CDD)	36, 40, 48 149, 157, 165	OFDM	BPSK	Nss1MCS0 (6.5)
802.11ac 20MHz	Ant.1+2+3 (1S3T, TXBF)	36, 40, 48 149, 157, 165	OFDM	BPSK	Nss1MCS0 (6.5)
802.11ac 40MHz	Ant.1	38, 46 151, 159	OFDM	BPSK	Nss1MCS0 (13.5)
802.11ac 40MHz	Ant.1+2+3 (1S3T, CDD)	38, 46 151, 159	OFDM	BPSK	Nss1MCS0 (13.5)
802.11ac 40MHz	Ant.1+2+3 (1S3T, TXBF)	38, 46 151, 159	OFDM	BPSK	Nss1MCS0 (13.5)
802.11ac 80MHz	Ant.1	42 155	OFDM	BPSK	Nss1MCS0 (29.5)
802.11ac 80MHz	Ant.1+2+3 (1S3T, CDD)	42 155	OFDM	BPSK	Nss1MCS0 (29.5)
802.11ac 80MHz	Ant.1+2+3 (1S3T, TXBF)	42 155	OFDM	BPSK	Nss1MCS0 (29.5)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 6Mbps / CH36 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	Pol/Phase
1	5098.40	64.79	74.00	-9.21	62.03	4.23	33.06	34.53	195	136	HORIZONTAL
2	5101.20	53.99	54.00	-0.01	51.23	4.23	33.06	34.53	195	136	HORIZONTAL
3	5178.40	111.00			108.07	4.27	33.19	34.53	195	136	HORIZONTAL
4	5179.20	99.84			96.91	4.27	33.19	34.53	195	136	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5180 MHz

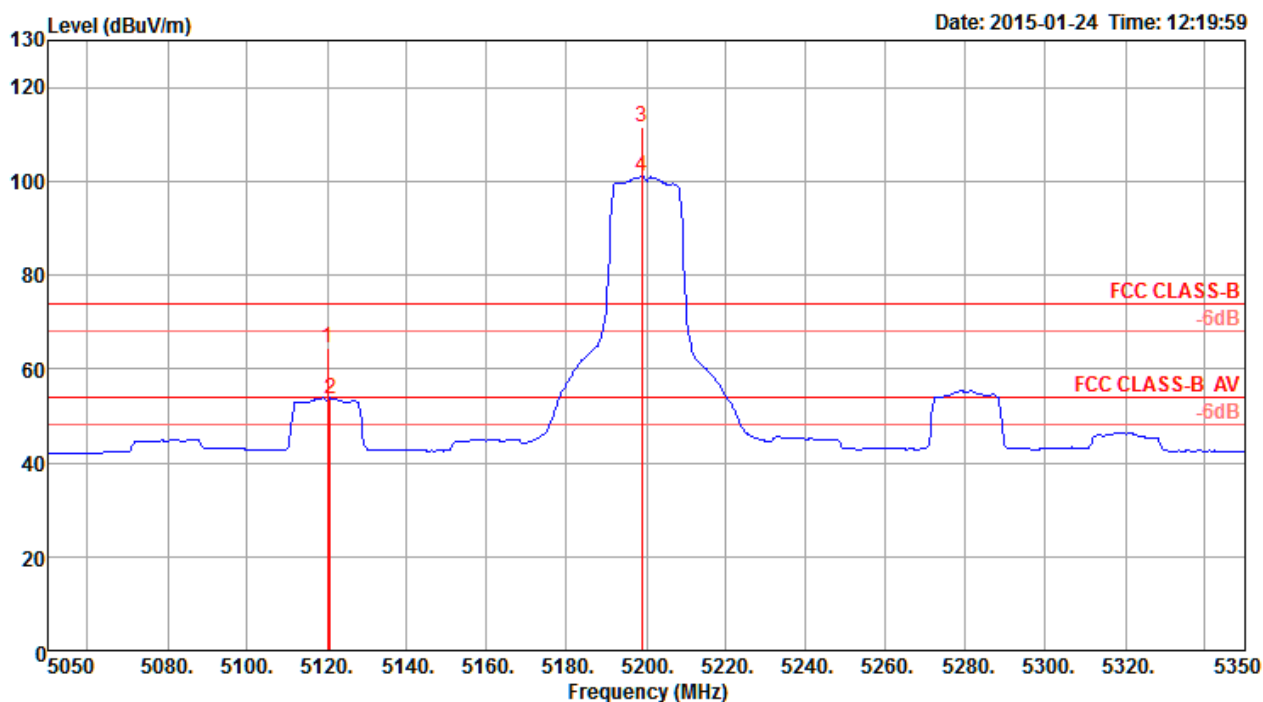
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 6Mbps / CH40 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	Pol/Phase
1	5120.20	64.62	74.00	-9.38	61.82	4.24	33.09	34.53	Peak	343	166	HORIZONTAL
2	5120.80	53.74	54.00	-0.26	50.94	4.24	33.09	34.53	Average	343	166	HORIZONTAL
3	5198.80	111.58			108.61	4.28	33.22	34.53	Peak	343	166	HORIZONTAL
4	5198.80	100.93			97.96	4.28	33.22	34.53	Average	343	166	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5200 MHz

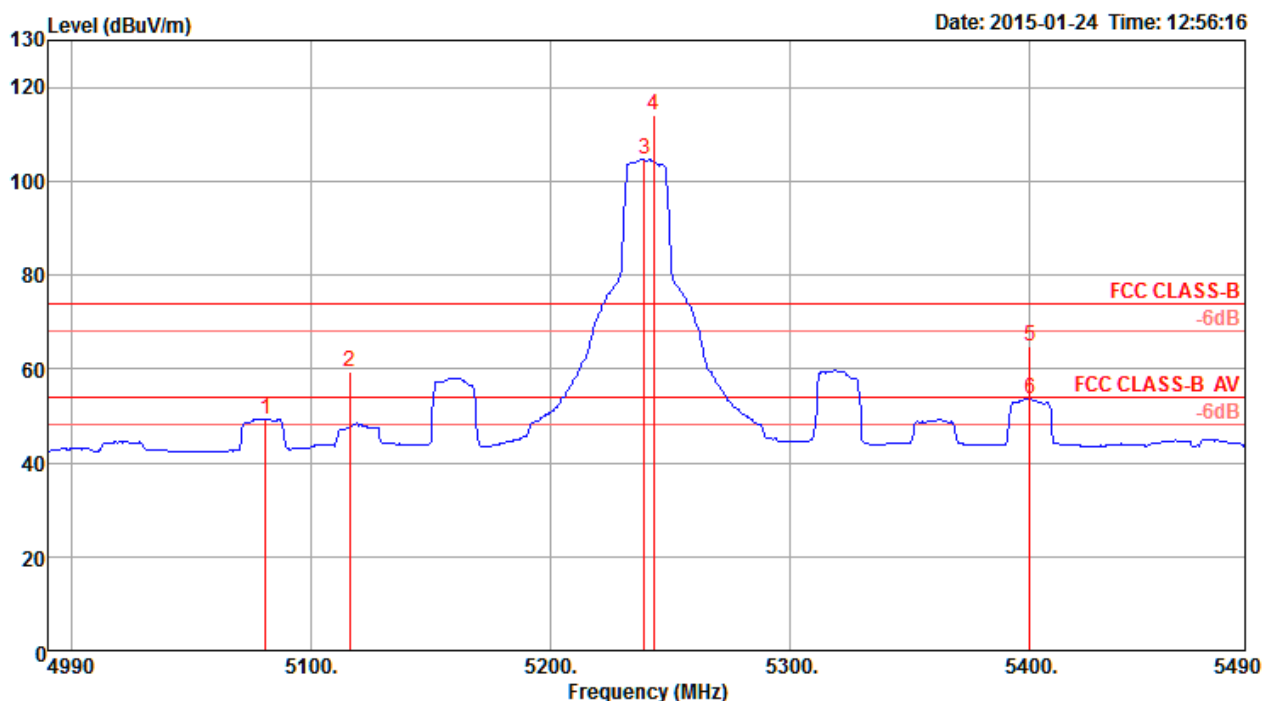
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 6Mbps / CH48 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	5081.00	49.36	54.00	-4.64	46.63	4.23	33.03	34.53	347	129	HORIZONTAL
2	5116.00	59.41	74.00	-14.59	56.61	4.24	33.09	34.53	347	129	HORIZONTAL
3	5239.00	104.69			101.65	4.30	33.27	34.53	347	129	HORIZONTAL
4	5243.00	114.25			111.18	4.30	33.30	34.53	347	129	HORIZONTAL
5	5400.00	64.86	74.00	-9.14	61.48	4.37	33.54	34.53	347	129	HORIZONTAL
6	5400.00	53.57	54.00	-0.43	50.19	4.37	33.54	34.53	347	129	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5240 MHz

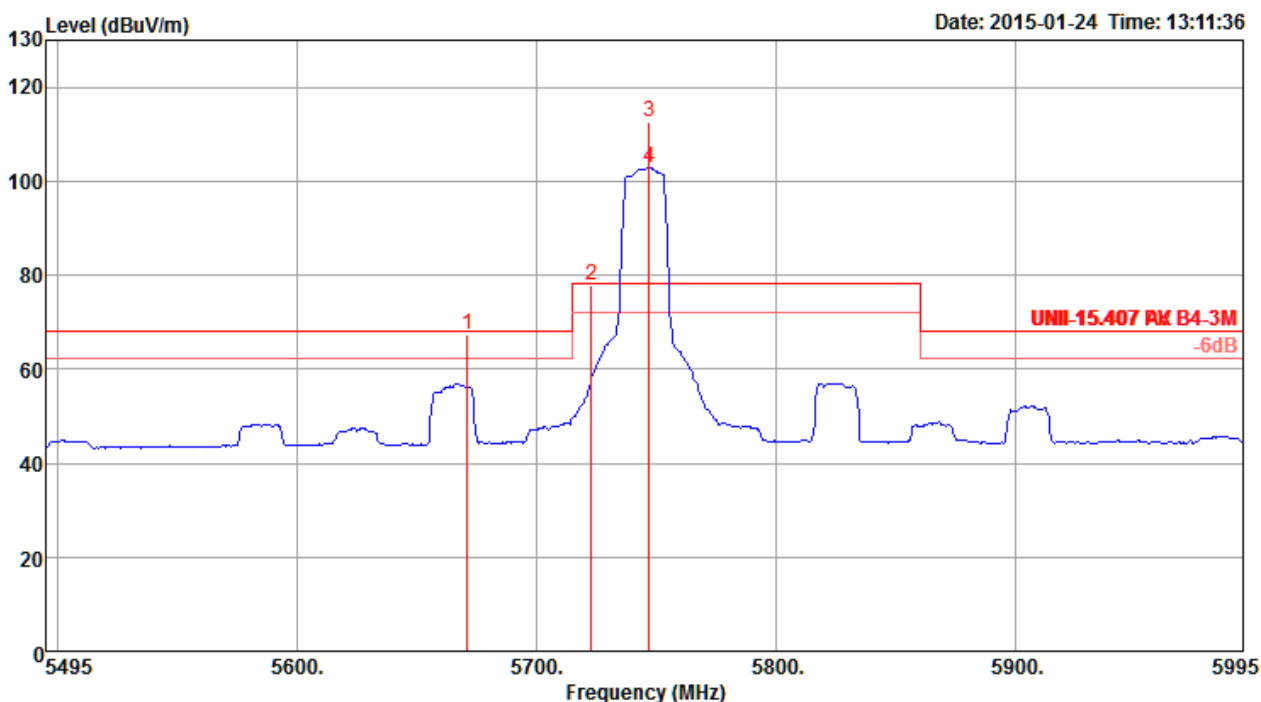
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 6Mbps / CH149 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5671.00	67.18	68.20	-1.02	63.04	4.48	34.22	34.56	Peak	0	193	HORIZONTAL
2	5723.00	77.82	78.20	-0.38	73.53	4.50	34.37	34.58	Peak	0	193	HORIZONTAL
3	5747.00	112.67			108.33	4.50	34.42	34.58	Peak	0	193	HORIZONTAL
4	5747.00	102.93			98.59	4.50	34.42	34.58	Average	0	193	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5745 MHz

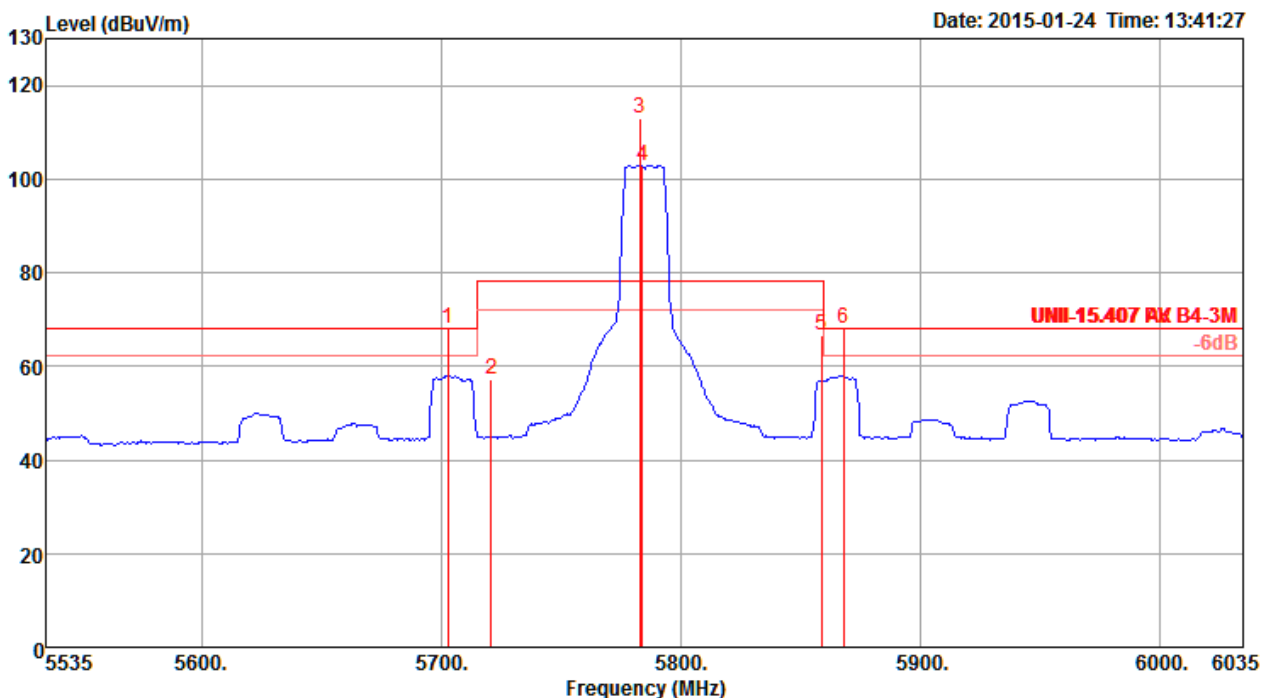
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 6Mbps / CH157 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5703.00	68.11	68.20	-0.09	63.87	4.49	34.32	34.57	Peak	360	178	HORIZONTAL
2	5721.00	57.06	78.20	-21.14	52.77	4.50	34.37	34.58	Peak	360	178	HORIZONTAL
3	5783.00	113.03			108.57	4.52	34.53	34.59	Peak	360	178	HORIZONTAL
4	5784.00	102.97			98.51	4.52	34.53	34.59	Average	360	178	HORIZONTAL
5	5859.00	66.66	78.20	-11.54	61.92	4.55	34.79	34.60	Peak	360	178	HORIZONTAL
6	5868.00	68.02	68.20	-0.18	63.28	4.55	34.79	34.60	Peak	360	178	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5785 MHz

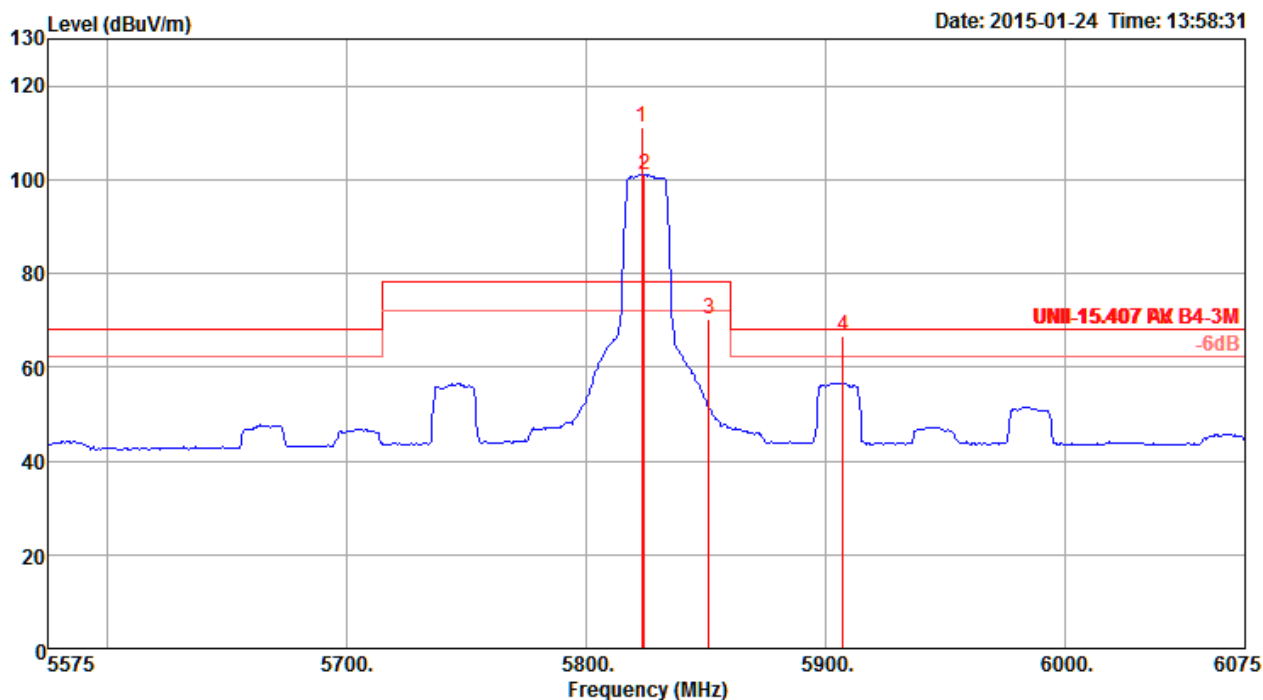
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 6Mbps / CH165 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	Pol/Phase
1	5823.00	111.28			106.67	4.53	34.68	34.60	Peak	0	164	HORIZONTAL
2	5824.00	101.05			96.44	4.53	34.68	34.60	Average	0	164	HORIZONTAL
3	5851.00	70.30	78.20	-7.90	65.63	4.54	34.73	34.60	Peak	0	164	HORIZONTAL
4	5907.00	66.68	68.20	-1.52	61.79	4.56	34.94	34.61	Peak	0	164	HORIZONTAL

Note 1: Item 1, 2 are the fundamental frequency at 5825 MHz

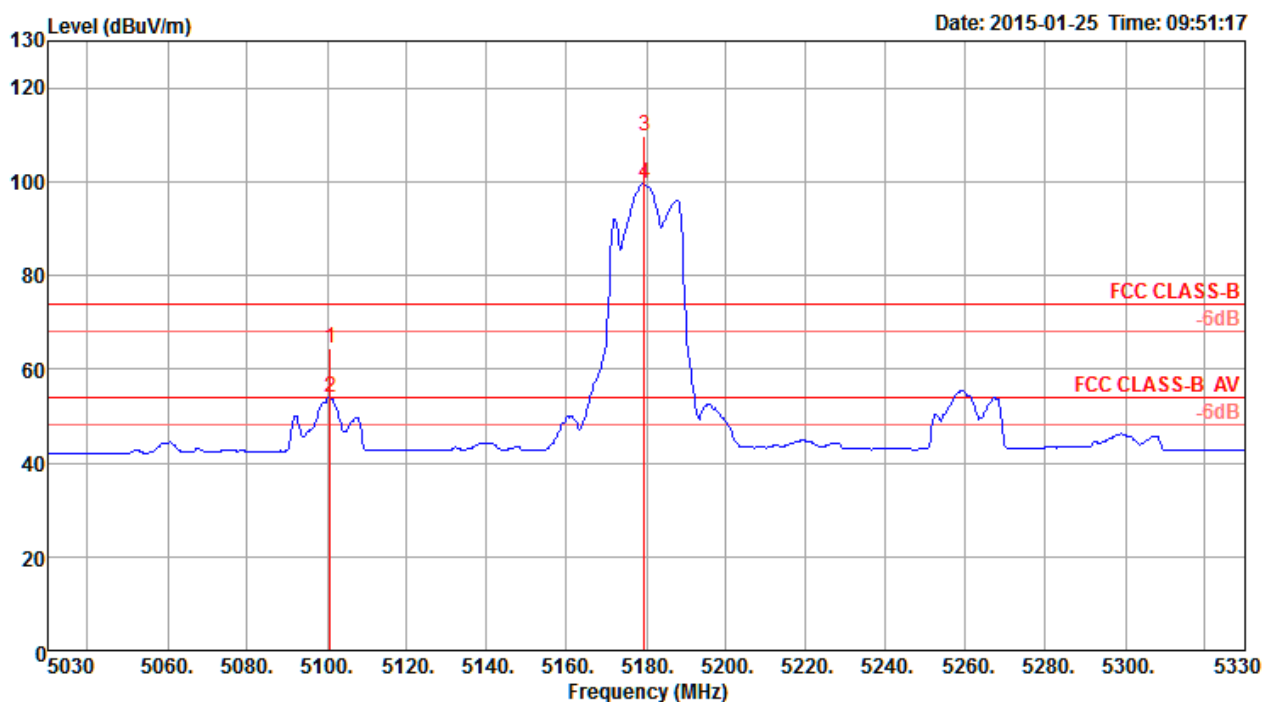
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 6Mbps / CH36 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	Pol/Phase
1	5100.80	64.34	74.00	-9.66	61.58	4.23	33.06	34.53	Peak	0	174	VERTICAL
2	5100.80	53.82	54.00	-0.18	51.06	4.23	33.06	34.53	Average	0	174	VERTICAL
3	5179.40	109.62			106.69	4.27	33.19	34.53	Peak	0	174	VERTICAL
4	5179.40	99.52			96.59	4.27	33.19	34.53	Average	0	174	VERTICAL

Note 1: Item 3, 4 are the fundamental frequency at 5180 MHz

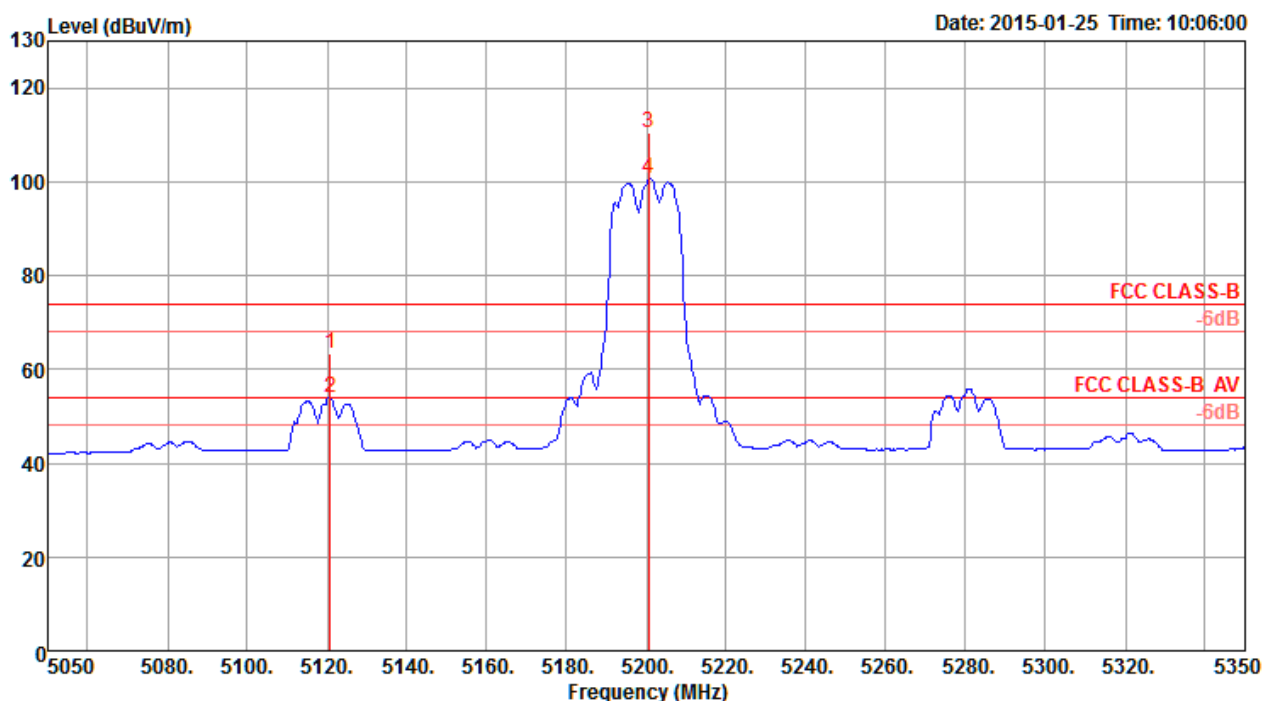
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 6Mbps / CH40 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	deg	cm	Pol/Phase
1	5120.80	63.32	74.00	-10.68	60.52	4.24	33.09	34.53	338	150	HORIZONTAL
2	5120.80	53.80	54.00	-0.20	51.00	4.24	33.09	34.53	338	150	HORIZONTAL
3	5200.60	110.62			107.65	4.28	33.22	34.53	338	150	HORIZONTAL
4	5200.60	100.56			97.59	4.28	33.22	34.53	338	150	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5200 MHz

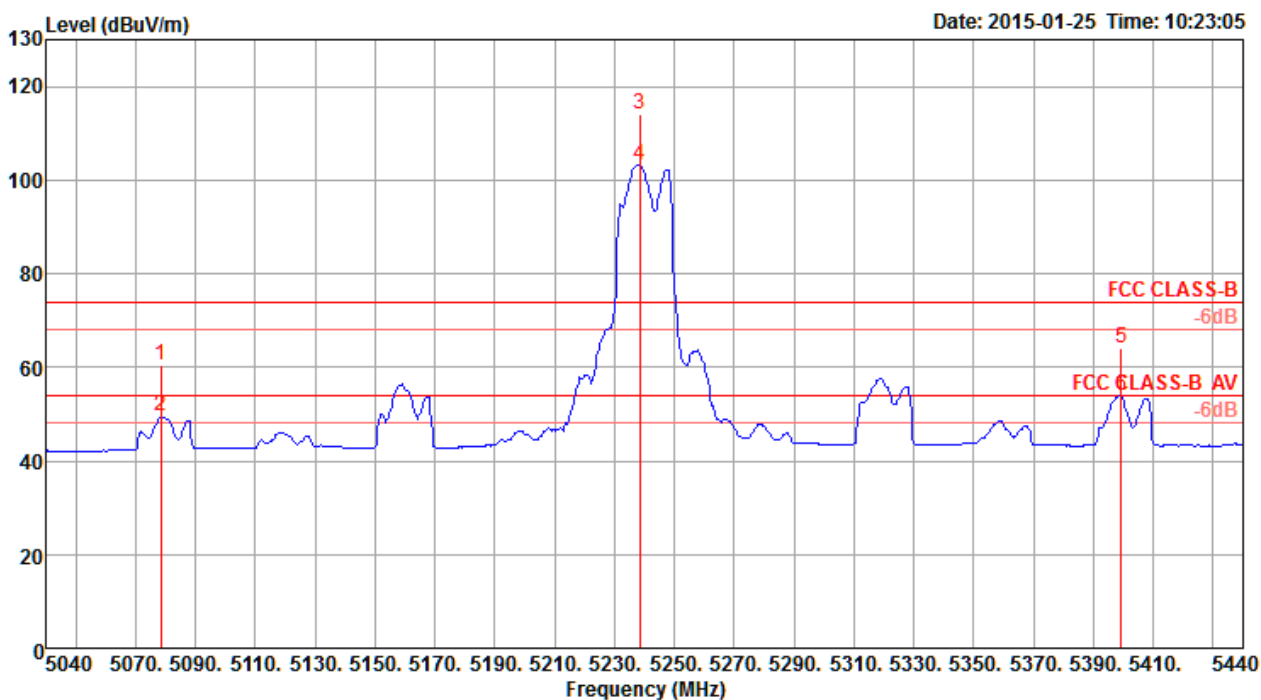
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 6Mbps / CH48 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	Pol/Phase
1	5078.40	60.50	74.00	-13.50	57.77	4.23	33.03	34.53	Peak	14	159	VERTICAL
2	5078.40	49.58	54.00	-4.42	46.85	4.23	33.03	34.53	Average	14	159	VERTICAL
3	5238.40	114.11			111.07	4.30	33.27	34.53	Peak	14	159	VERTICAL
4	5238.40	103.31			100.27	4.30	33.27	34.53	Average	14	159	VERTICAL
5	5399.20	64.09	74.00	-9.91	60.71	4.37	33.54	34.53	Peak	14	159	VERTICAL
6	5399.20	53.85	54.00	-0.15	50.47	4.37	33.54	34.53	Average	14	159	VERTICAL

Note 1: Item 3, 4 are the fundamental frequency at 5240 MHz

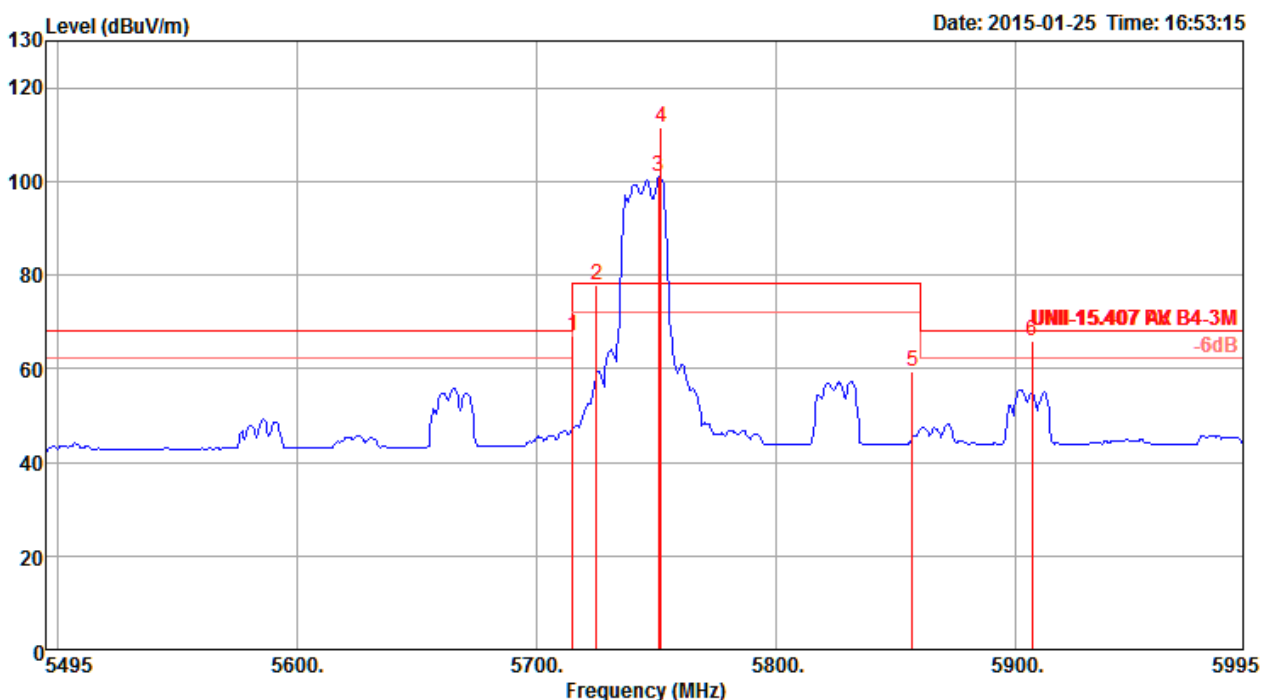
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 6Mbps / CH149 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5715.00	66.82	68.20	-1.38	62.59	4.49	34.32	34.58	Peak	177	121	HORIZONTAL
2	5725.00	77.98	78.20	-0.22	73.69	4.50	34.37	34.58	Peak	177	121	HORIZONTAL
3	5751.00	101.10			96.76	4.50	34.42	34.58	Average	177	121	HORIZONTAL
4	5752.00	111.70			107.29	4.51	34.48	34.58	Peak	177	121	HORIZONTAL
5	5857.00	59.46	78.20	-18.74	54.72	4.55	34.79	34.60	Peak	177	121	HORIZONTAL
6	5907.00	65.88	68.20	-2.32	60.99	4.56	34.94	34.61	Peak	177	121	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5745 MHz

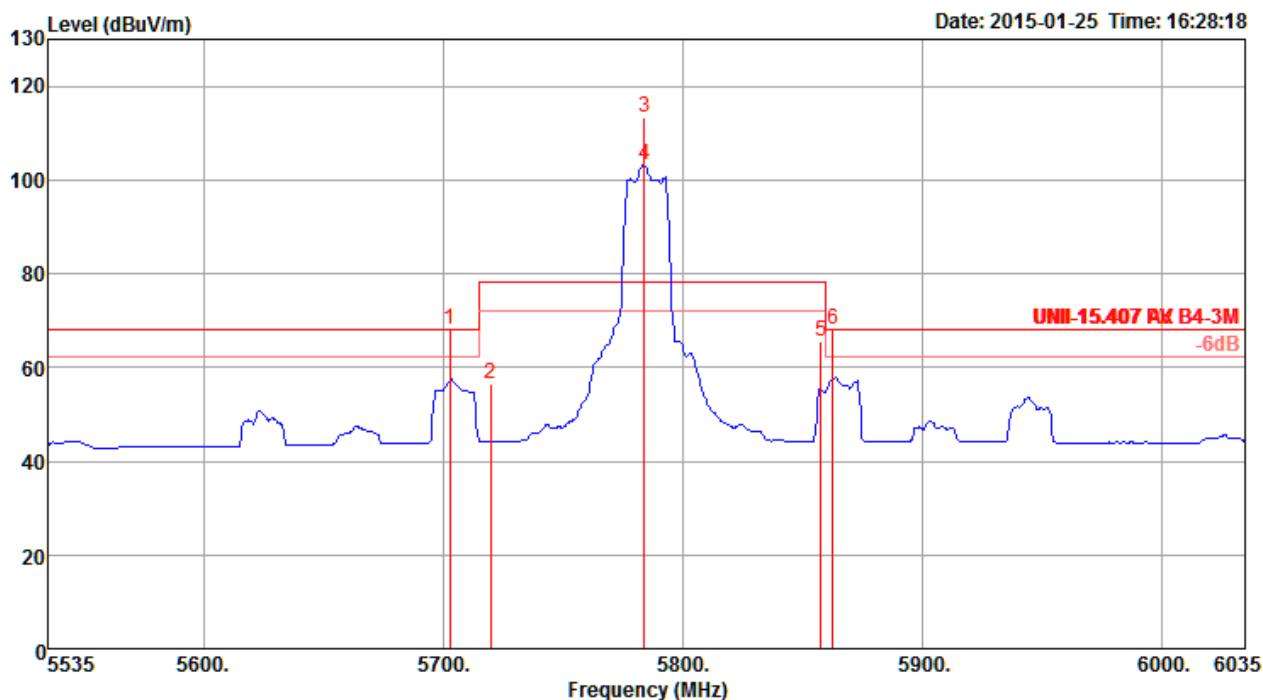
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 6Mbps / CH157 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	Pol/Phase
1	5703.00	67.97	68.20	-0.23	63.73	4.49	34.32	34.57	Peak	350	179	HORIZONTAL
2	5720.00	56.34	78.20	-21.86	52.05	4.50	34.37	34.58	Peak	350	179	HORIZONTAL
3	5784.00	113.20			108.74	4.52	34.53	34.59	Peak	350	179	HORIZONTAL
4	5784.00	103.09			98.63	4.52	34.53	34.59	Average	350	179	HORIZONTAL
5	5858.00	65.57	78.20	-12.63	60.83	4.55	34.79	34.60	Peak	350	179	HORIZONTAL
6	5863.00	68.14	68.20	-0.06	63.40	4.55	34.79	34.60	Peak	350	179	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5785 MHz

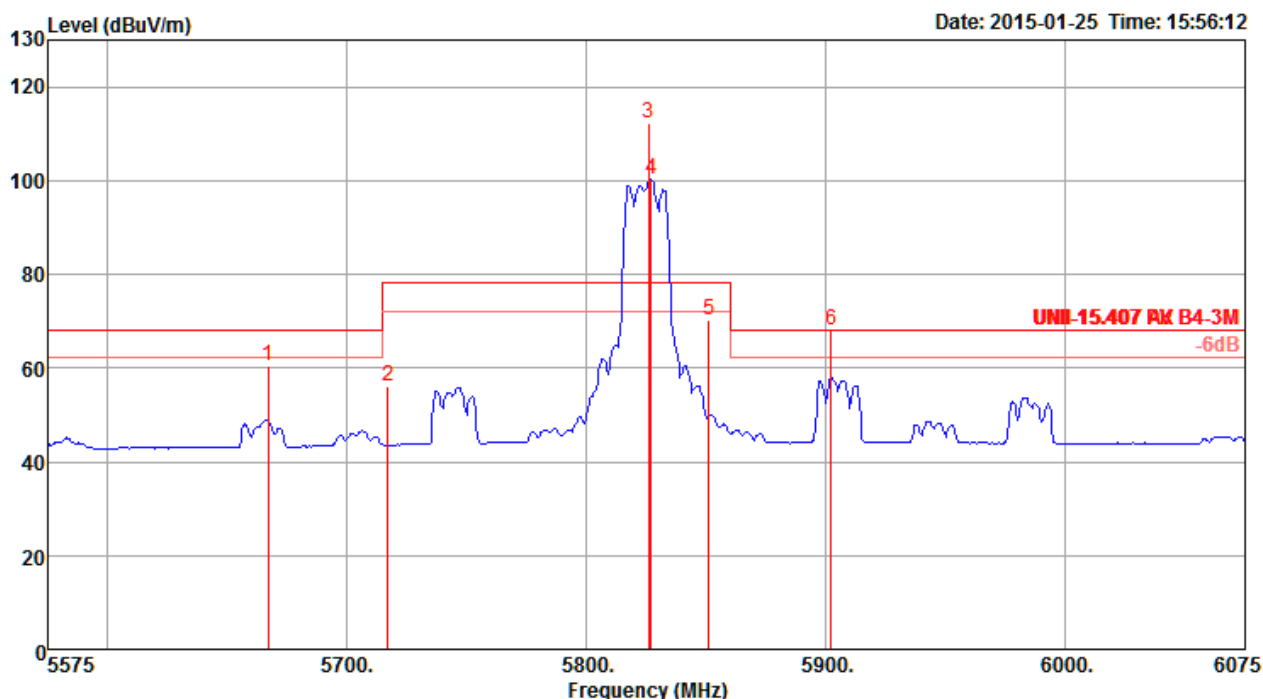
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11a 6Mbps / CH165 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	5667.00	60.41	68.20	-7.79	56.27	4.48	34.22	34.56	Peak	170	150	HORIZONTAL
2	5717.00	56.05	78.20	-22.15	51.82	4.49	34.32	34.58	Peak	170	150	HORIZONTAL
3	5826.00	112.26			107.65	4.53	34.68	34.60	Peak	170	150	HORIZONTAL
4	5827.00	100.18			95.57	4.53	34.68	34.60	Average	170	150	HORIZONTAL
5	5851.00	70.08	78.20	-8.12	65.41	4.54	34.73	34.60	Peak	170	150	HORIZONTAL
6	5902.00	68.15	68.20	-0.05	63.31	4.56	34.89	34.61	Peak	170	150	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5785 MHz

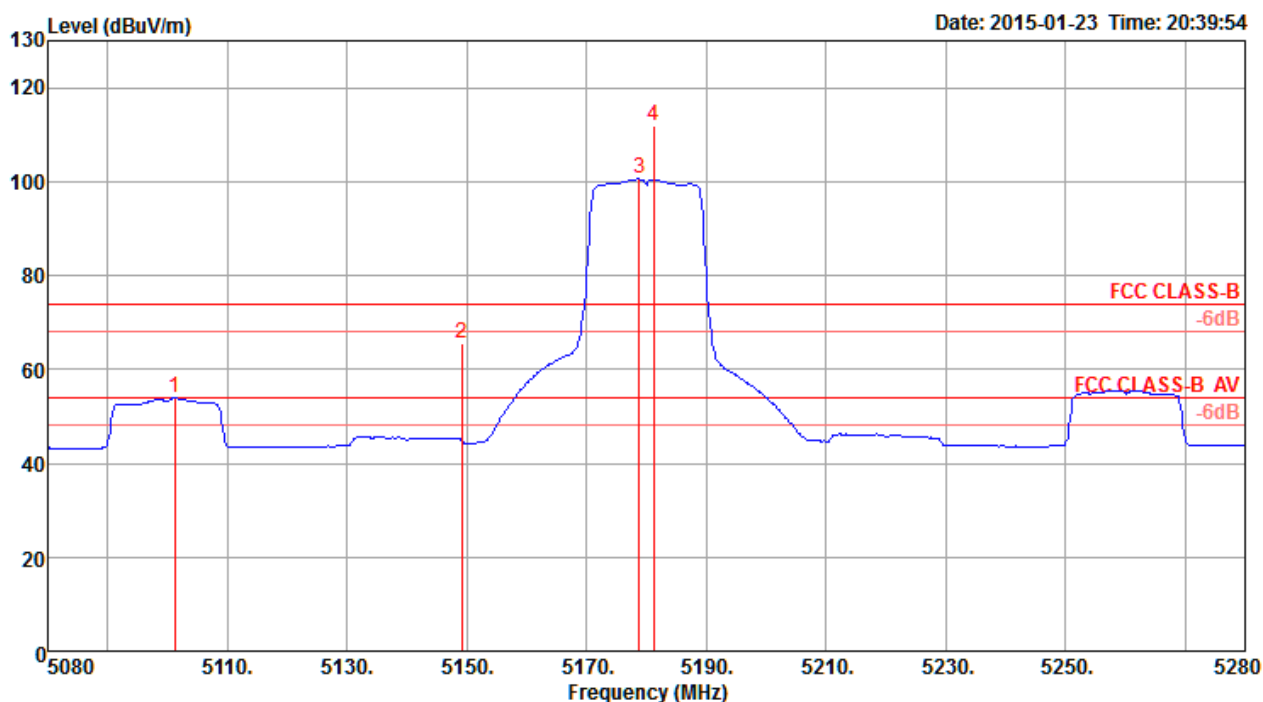
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH36 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5101.20	53.80	54.00	-0.20	51.04	4.23	33.06	34.53	Average	197	136	HORIZONTAL
2	5149.20	65.72	74.00	-8.28	62.85	4.26	33.14	34.53	Peak	197	136	HORIZONTAL
3	5178.80	100.51			97.58	4.27	33.19	34.53	Average	197	136	HORIZONTAL
4	5181.20	111.72			108.79	4.27	33.19	34.53	Peak	197	136	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5180 MHz

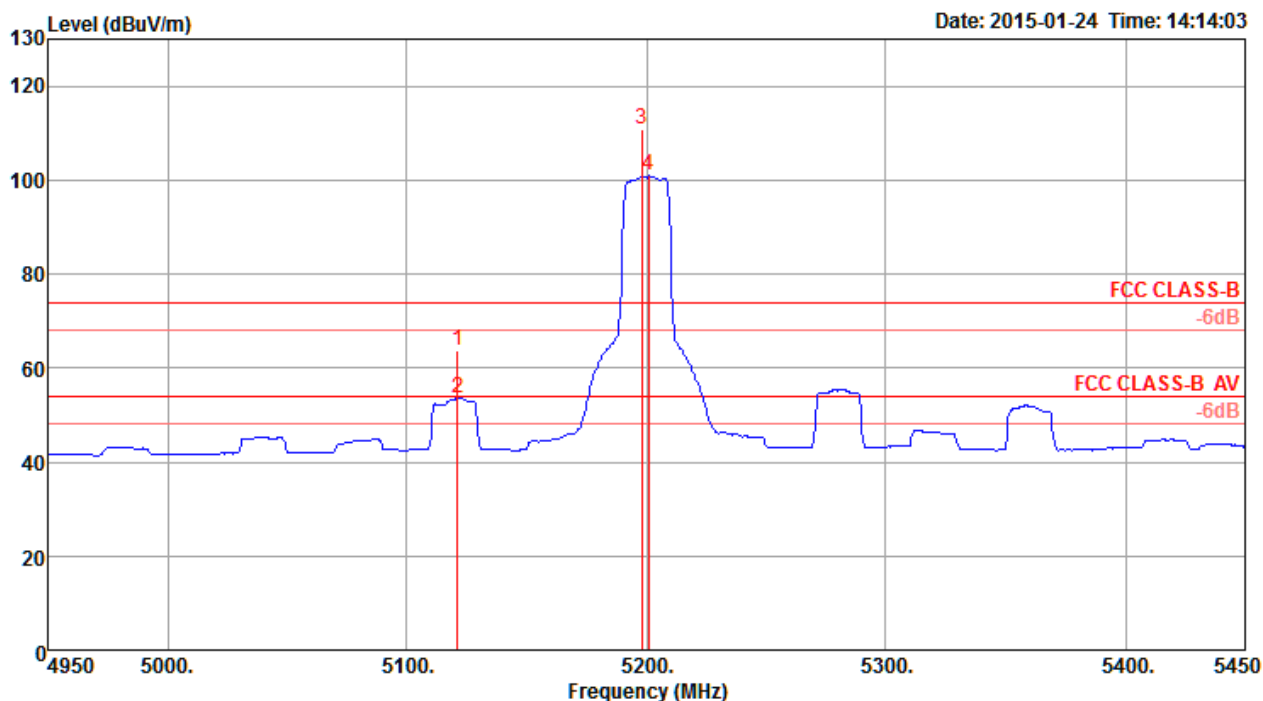
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH40 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	Pol/Phase
1	5121.00	63.67	74.00	-10.33	60.87	4.24	33.09	34.53	344	137	HORIZONTAL
2	5121.00	53.68	54.00	-0.32	50.88	4.24	33.09	34.53	344	137	HORIZONTAL
3	5198.00	110.83			107.86	4.28	33.22	34.53	344	137	HORIZONTAL
4	5201.00	100.88			97.91	4.28	33.22	34.53	344	137	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5200 MHz

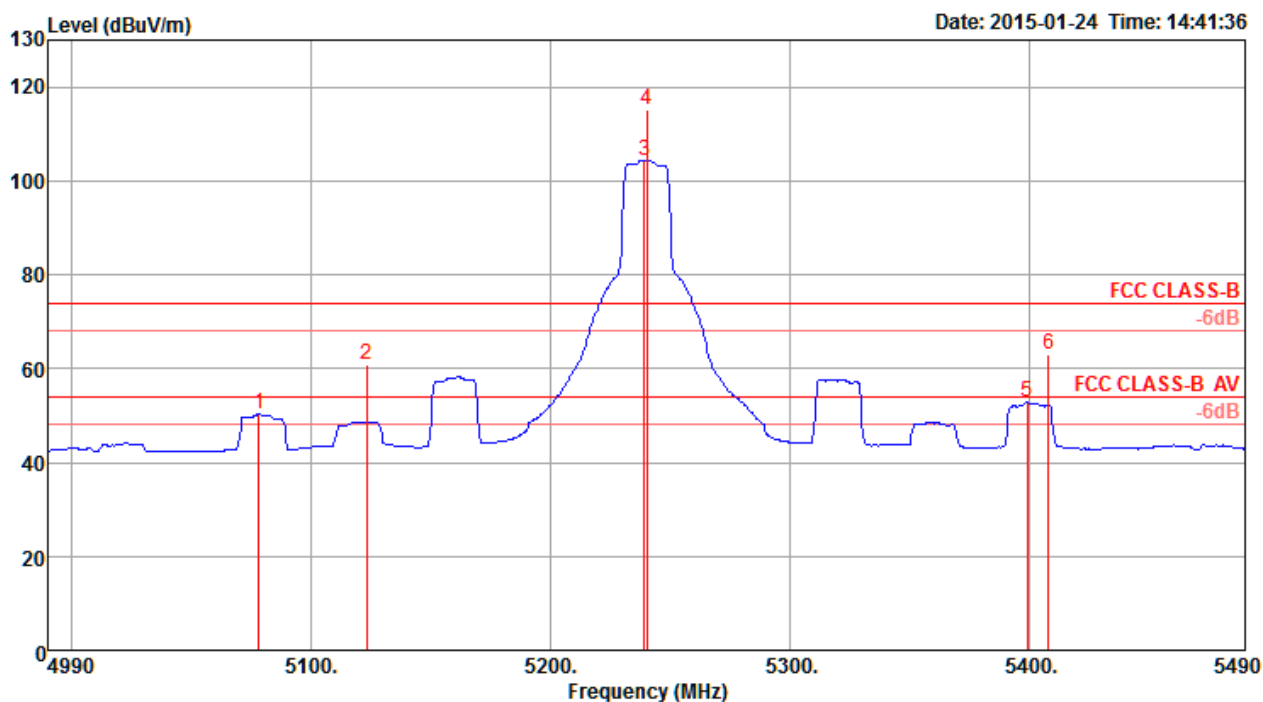
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH48 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5078.00	50.23	54.00	-3.77	47.50	4.23	33.03	34.53	Average	191	147	HORIZONTAL
2	5123.00	60.87	74.00	-13.13	58.04	4.25	33.11	34.53	Peak	191	147	HORIZONTAL
3	5239.00	104.35			101.31	4.30	33.27	34.53	Average	191	147	HORIZONTAL
4	5240.00	115.22			112.18	4.30	33.27	34.53	Peak	191	147	HORIZONTAL
5	5399.00	52.85	54.00	-1.15	49.47	4.37	33.54	34.53	Average	191	147	HORIZONTAL
6	5408.00	63.14	74.00	-10.86	59.76	4.37	33.54	34.53	Peak	191	147	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5240 MHz

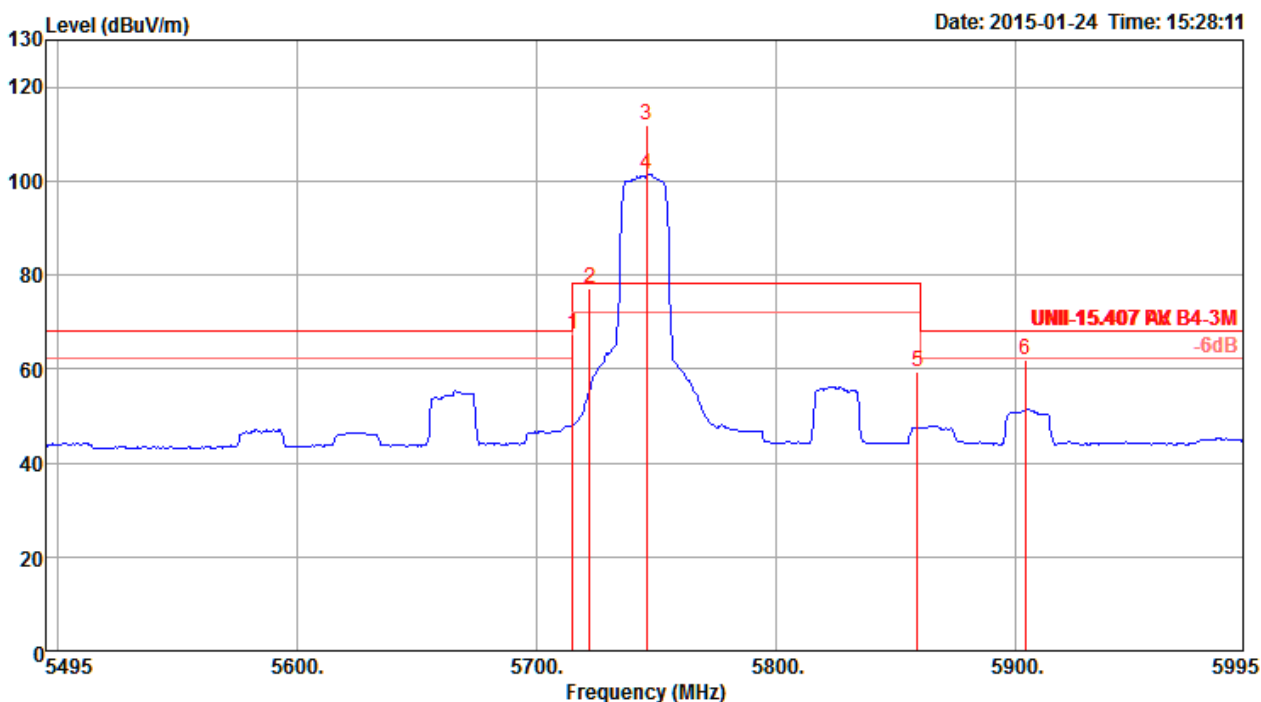
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH149 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5715.00	67.48	68.20	-0.72	63.25	4.49	34.32	34.58	Peak	355	192	HORIZONTAL
2	5722.00	77.19	78.20	-1.01	72.90	4.50	34.37	34.58	Peak	355	192	HORIZONTAL
3	5746.00	111.85			107.51	4.50	34.42	34.58	Peak	355	192	HORIZONTAL
4	5746.00	101.44			97.10	4.50	34.42	34.58	Average	355	192	HORIZONTAL
5	5859.00	59.44	78.20	-18.76	54.70	4.55	34.79	34.60	Peak	355	192	HORIZONTAL
6	5904.00	62.09	68.20	-6.11	57.25	4.56	34.89	34.61	Peak	355	192	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5745 MHz

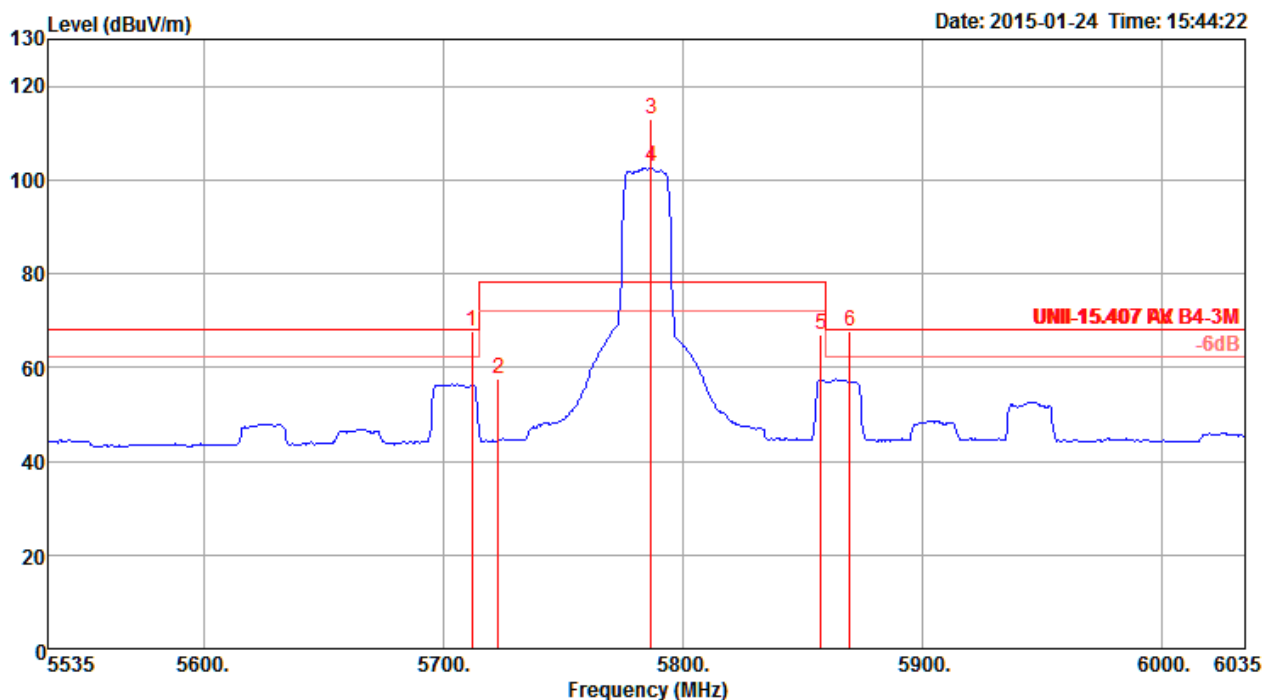
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH157 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	deg	cm	Pol/Phase
1	5712.00	67.57	68.20	-0.63	63.34	4.49	34.32	34.58	Peak	348	172	HORIZONTAL
2	5723.00	57.58	78.20	-20.62	53.29	4.50	34.37	34.58	Peak	348	172	HORIZONTAL
3	5787.00	112.81			108.30	4.52	34.58	34.59	Peak	348	172	HORIZONTAL
4	5787.00	102.80			98.29	4.52	34.58	34.59	Average	348	172	HORIZONTAL
5	5858.00	67.05	78.20	-11.15	62.31	4.55	34.79	34.60	Peak	348	172	HORIZONTAL
6	5870.00	67.82	68.20	-0.38	63.08	4.55	34.79	34.60	Peak	348	172	HORIZONTAL

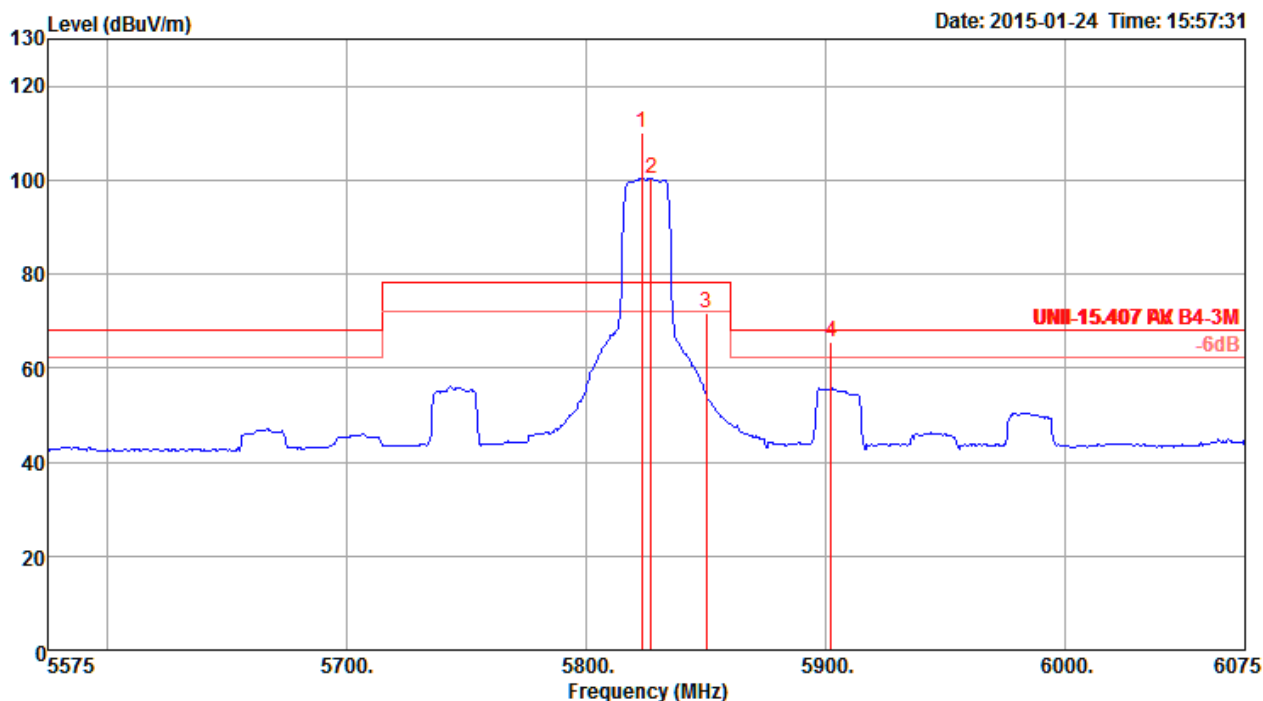
Note 1: Item 3, 4 are the fundamental frequency at 5785 MHz

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions			
Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH165 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	Pol/Phase
1	5823.00	110.23			105.62	4.53	34.68	34.60	358	165	HORIZONTAL
2	5827.00	100.44			95.83	4.53	34.68	34.60	358	165	HORIZONTAL
3	5850.00	71.57	78.20	-6.63	66.90	4.54	34.73	34.60	358	165	HORIZONTAL
4	5902.00	65.63	68.20	-2.57	60.79	4.56	34.89	34.61	358	165	HORIZONTAL

Note 1: Item 1, 2 are the fundamental frequency at 5825 MHz

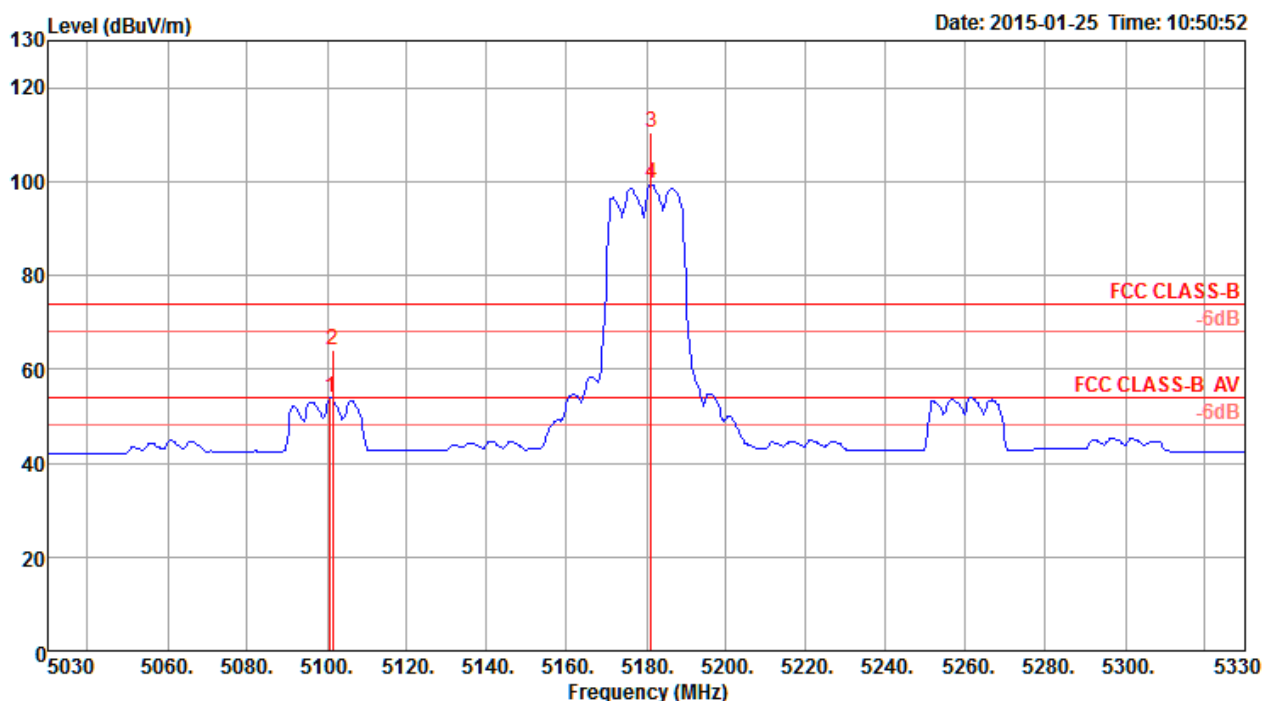
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH36 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	Pol/Phase
1	5100.80	53.87	54.00	-0.13	51.11	4.23	33.06	34.53	343	173	HORIZONTAL
2	5101.40	64.17	74.00	-9.83	61.41	4.23	33.06	34.53	343	173	HORIZONTAL
3	5181.20	110.50			107.57	4.27	33.19	34.53	343	173	HORIZONTAL
4	5181.20	99.45			96.52	4.27	33.19	34.53	343	173	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5180 MHz

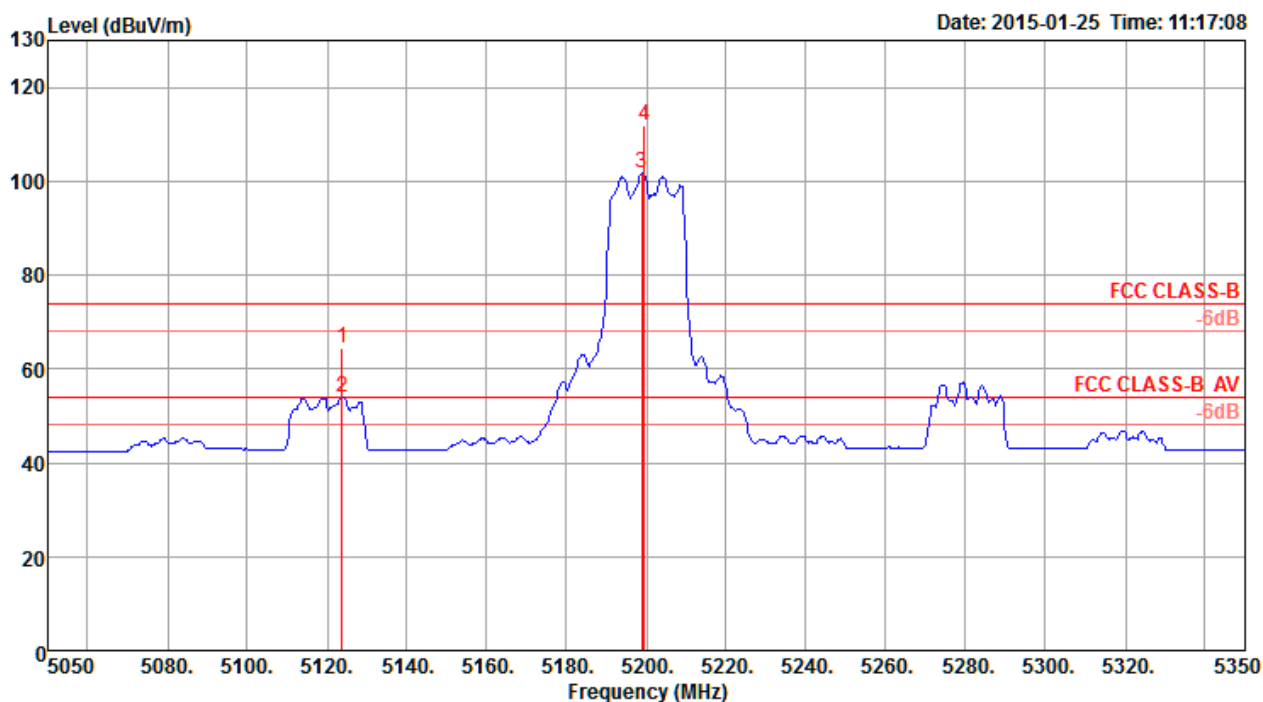
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH40 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	Limit	Level	Loss	Factor	Factor	Remark	deg	cm	Pol/Phase
1	5123.80	64.34	74.00	-9.66	61.51	4.25	33.11	34.53	Peak	204	150	HORIZONTAL
2	5123.80	53.88	54.00	-0.12	51.05	4.25	33.11	34.53	Average	204	150	HORIZONTAL
3	5198.80	101.85			98.88	4.28	33.22	34.53	Average	204	150	HORIZONTAL
4	5199.40	111.80			108.83	4.28	33.22	34.53	Peak	204	150	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5200 MHz

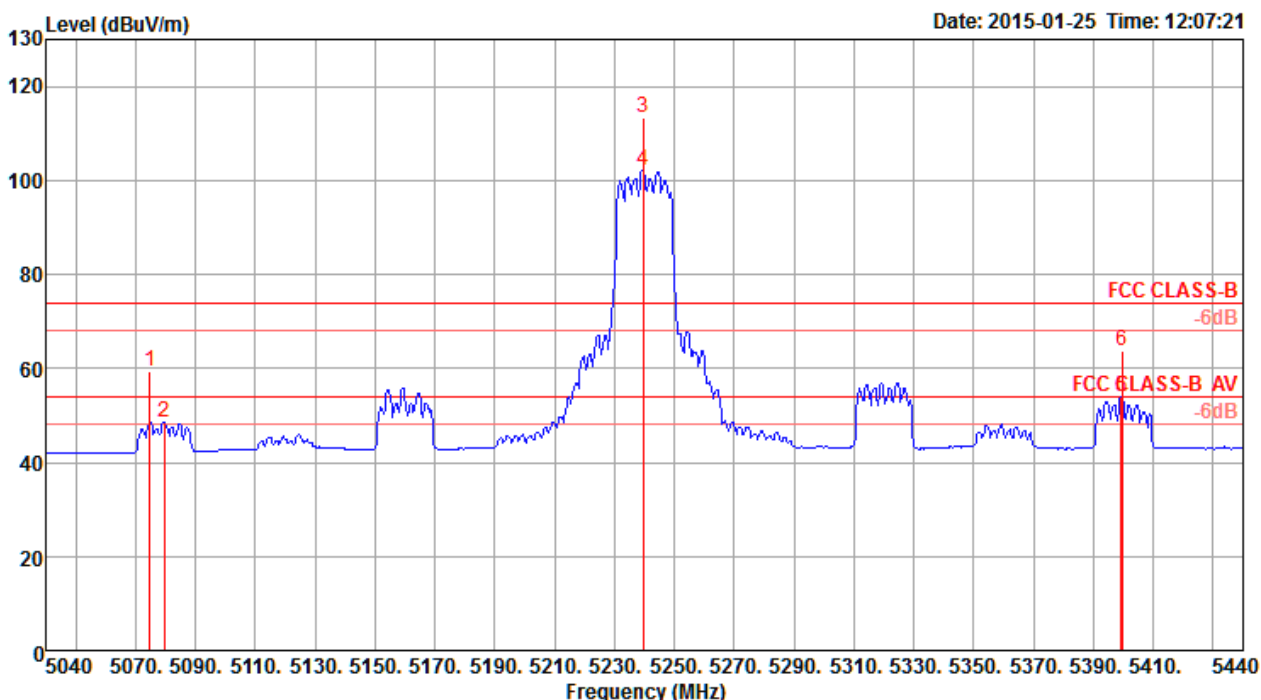
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH48 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5074.80	59.47	74.00	-14.53	56.74	4.23	33.03	34.53	Peak	355	159	VERTICAL
2	5079.60	48.67	54.00	-5.33	45.94	4.23	33.03	34.53	Average	355	159	VERTICAL
3	5239.60	113.17			110.13	4.30	33.27	34.53	Peak	355	159	VERTICAL
4	5239.60	102.14			99.10	4.30	33.27	34.53	Average	355	159	VERTICAL
5	5399.20	53.82	54.00	-0.18	50.44	4.37	33.54	34.53	Average	355	159	VERTICAL
6	5399.60	63.59	74.00	-10.41	60.21	4.37	33.54	34.53	Peak	355	159	VERTICAL

Note 1: Item 3, 4 are the fundamental frequency at 5240 MHz

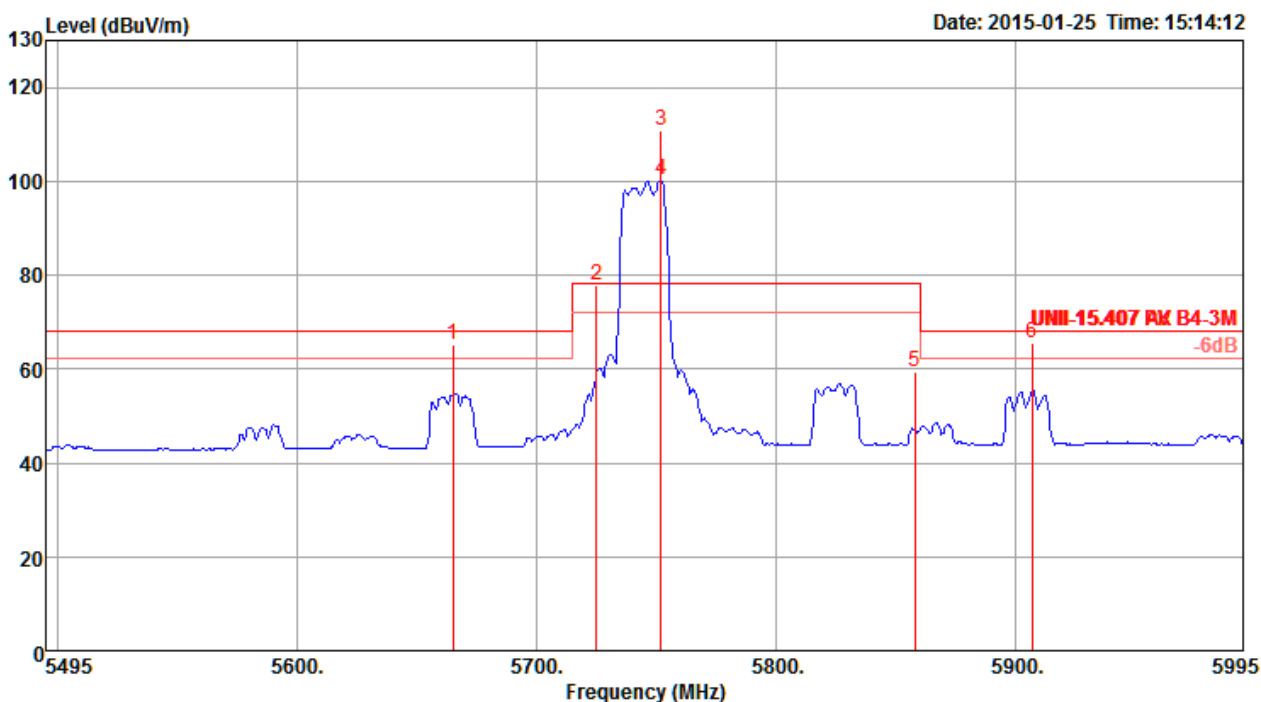
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH149 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5665.00	65.04	68.20	-3.16	60.96	4.47	34.17	34.56	Peak	177	120	HORIZONTAL
2	5725.00	77.78	78.20	-0.42	73.49	4.50	34.37	34.58	Peak	177	120	HORIZONTAL
3	5752.00	110.87			106.46	4.51	34.48	34.58	Peak	177	120	HORIZONTAL
4	5752.00	100.39			95.98	4.51	34.48	34.58	Average	177	120	HORIZONTAL
5	5858.00	59.24	78.20	-18.96	54.50	4.55	34.79	34.60	Peak	177	120	HORIZONTAL
6	5907.00	65.71	68.20	-2.49	60.82	4.56	34.94	34.61	Peak	177	120	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5745 MHz

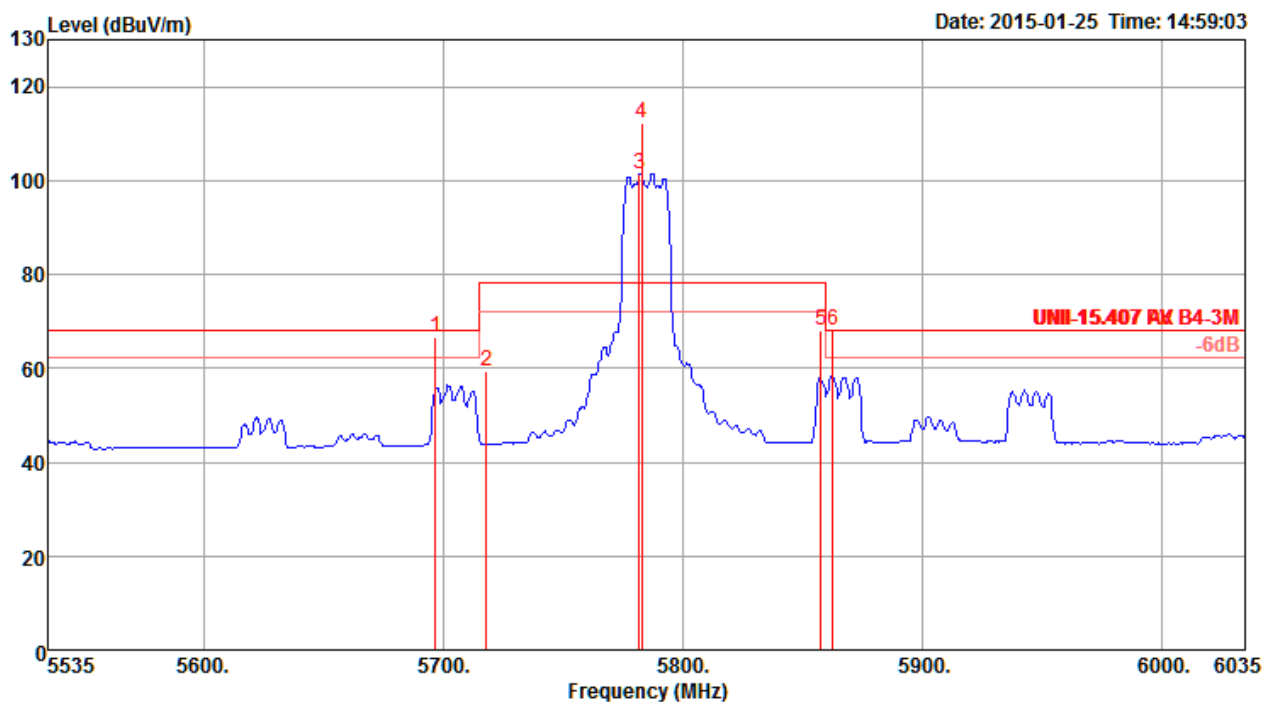
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH157 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5697.00	66.55	68.20	-1.65	62.36	4.49	34.27	34.57	Peak	173	150	HORIZONTAL
2	5718.00	59.50	78.20	-18.70	55.21	4.50	34.37	34.58	Peak	173	150	HORIZONTAL
3	5782.00	101.52			97.06	4.52	34.53	34.59	Average	173	150	HORIZONTAL
4	5783.00	112.34			107.88	4.52	34.53	34.59	Peak	173	150	HORIZONTAL
5	5858.00	67.98	78.20	-10.22	63.24	4.55	34.79	34.60	Peak	173	150	HORIZONTAL
6	5863.00	68.03	68.20	-0.17	63.29	4.55	34.79	34.60	Peak	173	150	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5785 MHz

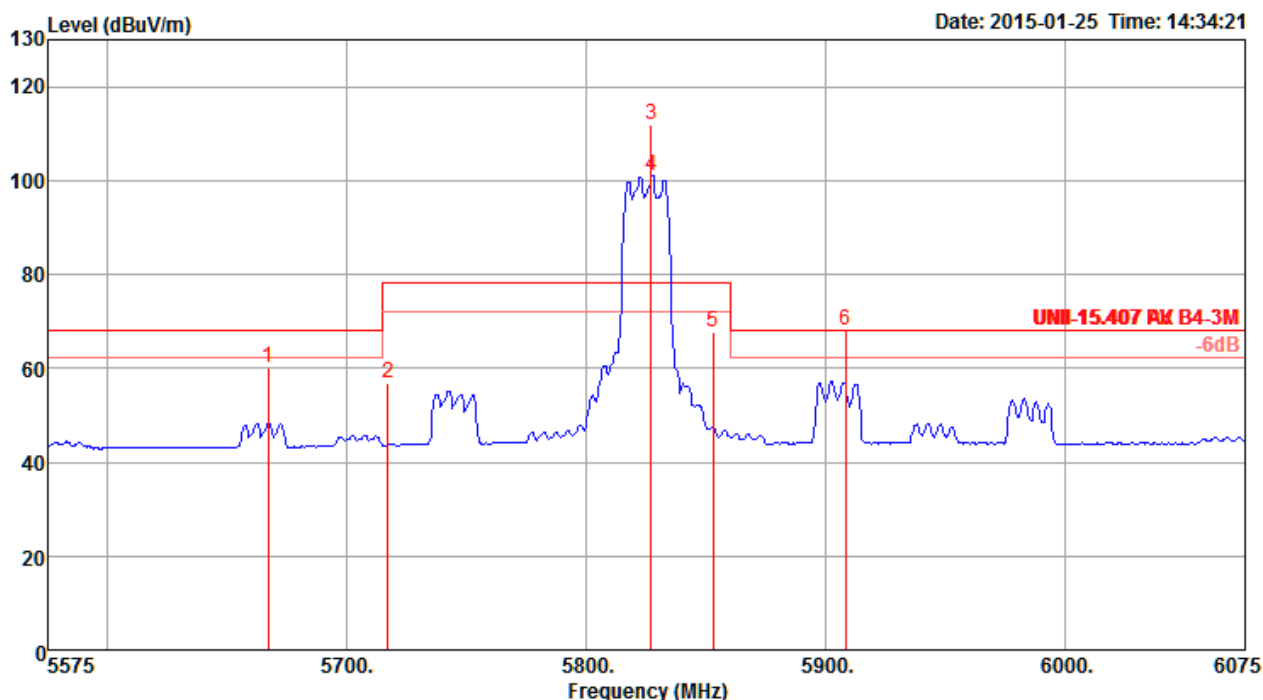
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH165 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5667.00	60.13	68.20	-8.07	55.99	4.48	34.22	34.56	Peak	168	150	HORIZONTAL
2	5717.00	56.78	78.20	-21.42	52.55	4.49	34.32	34.58	Peak	168	150	HORIZONTAL
3	5827.00	111.92			107.31	4.53	34.68	34.60	Peak	168	150	HORIZONTAL
4	5827.00	100.98			96.37	4.53	34.68	34.60	Average	168	150	HORIZONTAL
5	5853.00	67.61	78.20	-10.59	62.94	4.54	34.73	34.60	Peak	168	150	HORIZONTAL
6	5908.00	67.94	68.20	-0.26	63.05	4.56	34.94	34.61	Peak	168	150	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5825 MHz

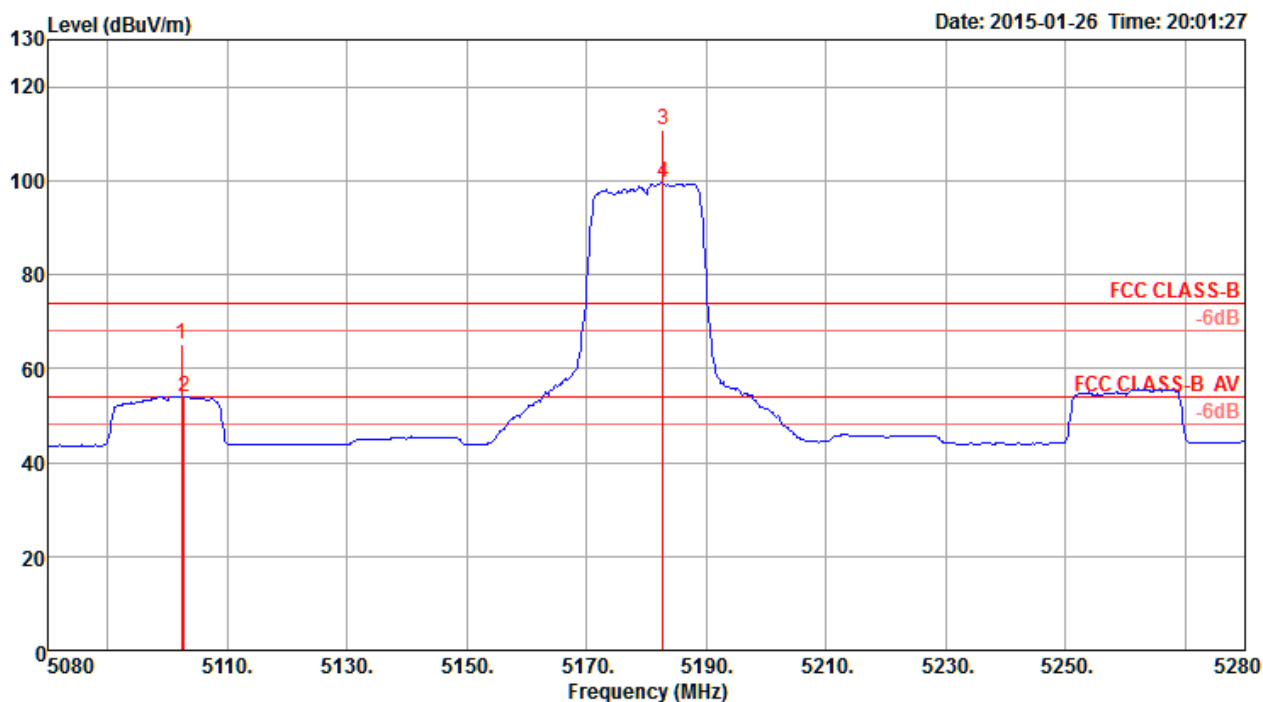
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH36 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	5102.40	65.19	74.00	-8.81	62.43	4.23	33.06	34.53	Peak	207	160	HORIZONTAL
2	5102.80	53.95	54.00	-0.05	51.19	4.23	33.06	34.53	Average	207	160	HORIZONTAL
3	5182.80	110.78			107.85	4.27	33.19	34.53	Peak	207	160	HORIZONTAL
4	5182.80	99.44			96.51	4.27	33.19	34.53	Average	207	160	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5180 MHz

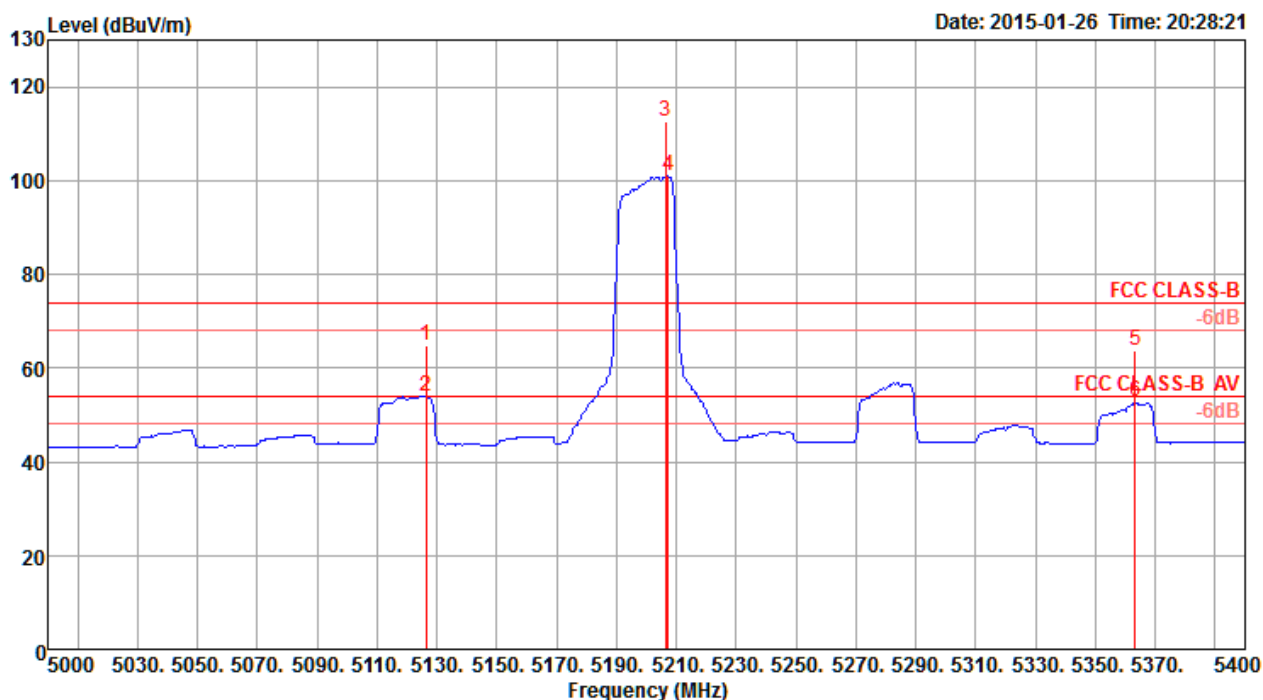
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH40 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	Remark	deg	cm	
1	5126.40	64.99	74.00	-9.01	62.16	4.25	33.11	34.53	Peak	208	157	HORIZONTAL
2	5126.40	53.92	54.00	-0.08	51.09	4.25	33.11	34.53	Average	208	157	HORIZONTAL
3	5206.40	112.74			109.77	4.28	33.22	34.53	Peak	208	157	HORIZONTAL
4	5207.20	100.87			97.90	4.28	33.22	34.53	Average	208	157	HORIZONTAL
5	5363.20	63.75	74.00	-10.25	60.43	4.36	33.49	34.53	Peak	208	157	HORIZONTAL
6	5363.20	52.70	54.00	-1.30	49.38	4.36	33.49	34.53	Average	208	157	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5200 MHz

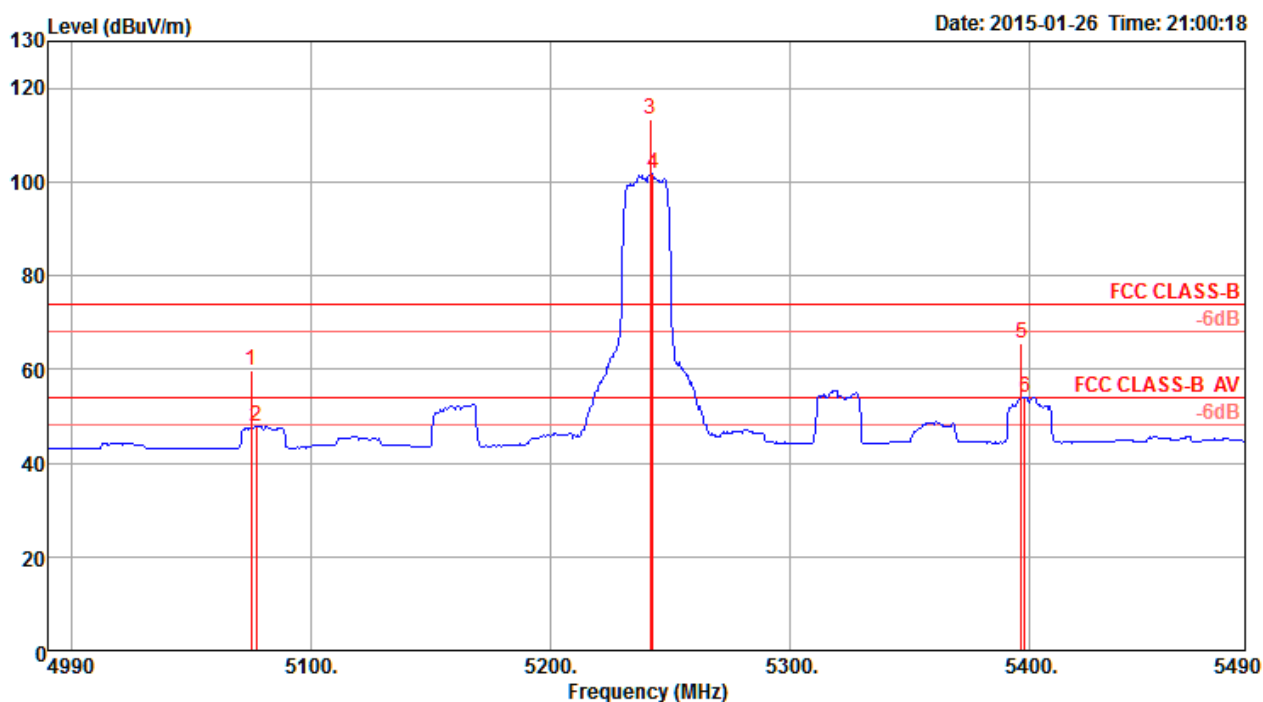
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH48 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	5075.00	59.63	74.00	-14.37	56.90	4.23	33.03	34.53	Peak	348	148	VERTICAL
2	5077.00	47.85	54.00	-6.15	45.12	4.23	33.03	34.53	Average	348	148	VERTICAL
3	5241.50	113.19			110.12	4.30	33.30	34.53	Peak	348	148	VERTICAL
4	5242.50	101.62			98.55	4.30	33.30	34.53	Average	348	148	VERTICAL
5	5396.50	65.43	74.00	-8.57	62.05	4.37	33.54	34.53	Peak	348	148	VERTICAL
6	5398.00	53.90	54.00	-0.10	50.52	4.37	33.54	34.53	Average	348	148	VERTICAL

Note 1: Item 3, 4 are the fundamental frequency at 5240 MHz

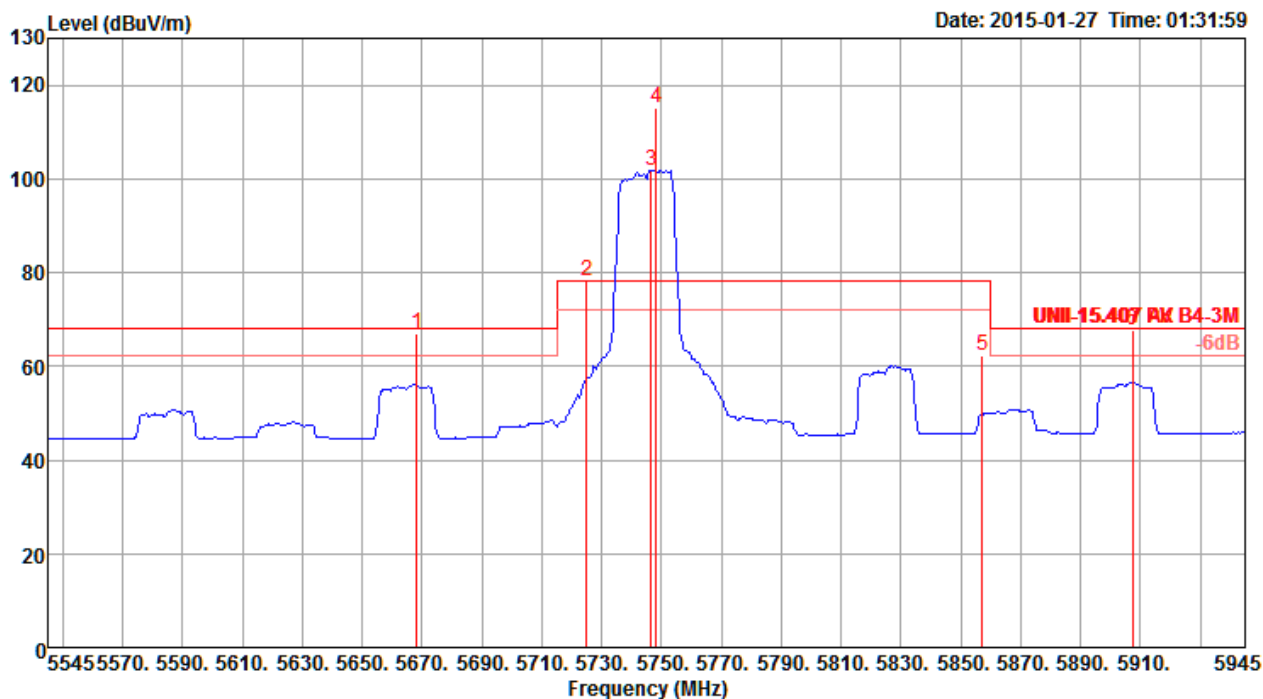
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH149 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	5668.20	66.97	68.20	-1.23	62.83	4.48	34.22	34.56	Peak	178	197	HORIZONTAL
2	5725.00	78.07	78.20	-0.13	73.78	4.50	34.37	34.58	Peak	178	197	HORIZONTAL
3	5746.60	101.87			97.53	4.50	34.42	34.58	Average	178	197	HORIZONTAL
4	5748.20	114.98			110.64	4.50	34.42	34.58	Peak	178	197	HORIZONTAL
5	5857.20	62.23	78.20	-15.97	57.49	4.55	34.79	34.60	Peak	178	197	HORIZONTAL
6	5907.40	67.54	68.20	-0.66	62.65	4.56	34.94	34.61	Peak	178	197	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5745 MHz

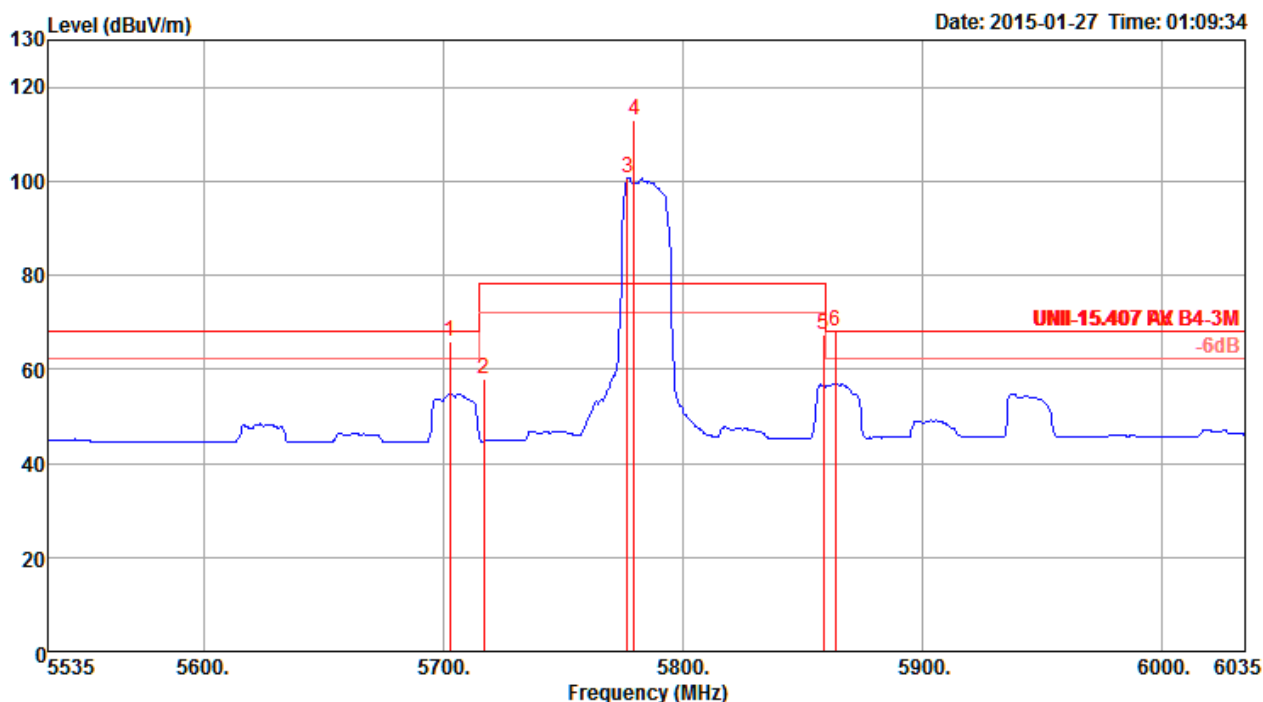
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH157 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	deg	cm	
1	5703.00	65.87	68.20	-2.33	61.63	4.49	34.32	34.57	Peak	176	152	HORIZONTAL
2	5717.00	57.94	78.20	-20.26	53.71	4.49	34.32	34.58	Peak	176	152	HORIZONTAL
3	5777.00	100.77			96.30	4.52	34.53	34.58	Average	176	152	HORIZONTAL
4	5780.00	113.07			108.60	4.52	34.53	34.58	Peak	176	152	HORIZONTAL
5	5859.00	67.19	78.20	-11.01	62.45	4.55	34.79	34.60	Peak	176	152	HORIZONTAL
6	5864.00	68.02	68.20	-0.18	63.28	4.55	34.79	34.60	Peak	176	152	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5825 MHz

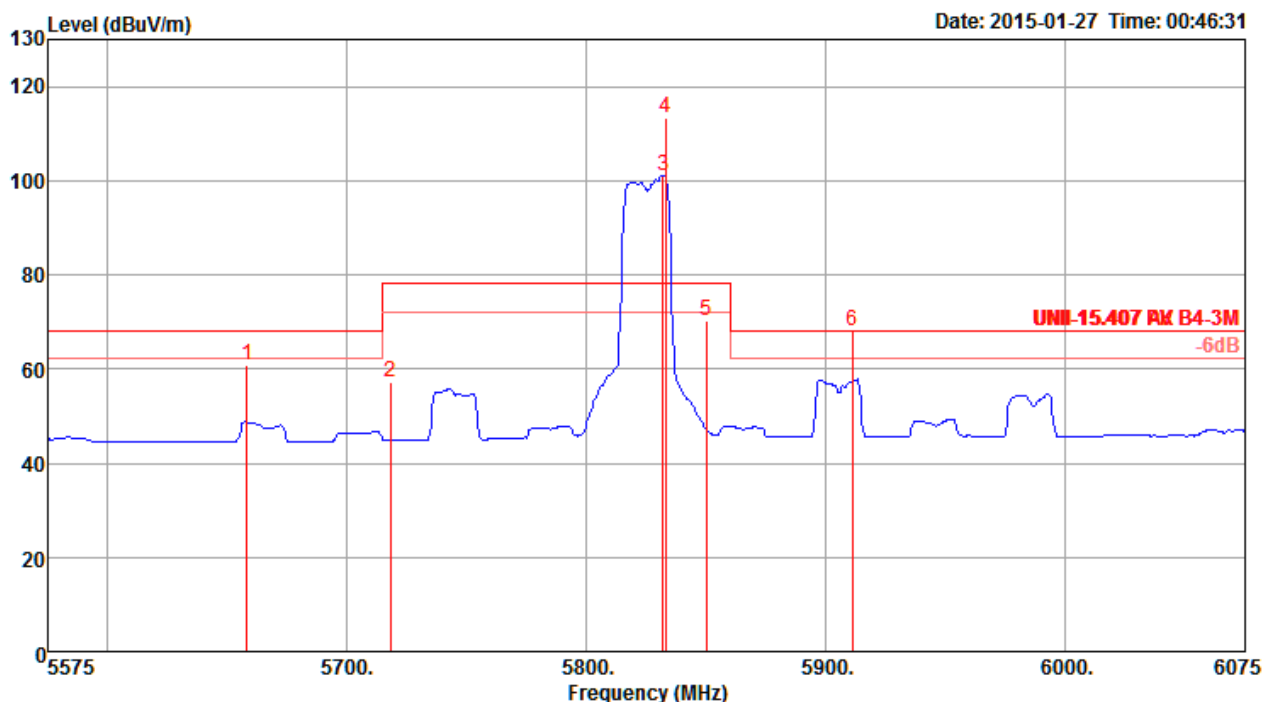
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 20MHz Nss1MCS0 / CH165 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	Limit	Level	Loss	Factor	Factor	Remark	deg	cm	
1	5658.00	60.90	68.20	-7.30	56.82	4.47	34.17	34.56	Peak	176	150	HORIZONTAL
2	5718.00	57.32	78.20	-20.88	53.03	4.50	34.37	34.58	Peak	176	150	HORIZONTAL
3	5832.00	101.00			96.39	4.53	34.68	34.60	Average	176	150	HORIZONTAL
4	5833.00	113.24			108.63	4.53	34.68	34.60	Peak	176	150	HORIZONTAL
5	5850.00	70.30	78.20	-7.90	65.63	4.54	34.73	34.60	Peak	176	150	HORIZONTAL
6	5911.00	68.08	68.20	-0.12	63.20	4.56	34.94	34.62	Peak	176	150	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5825 MHz

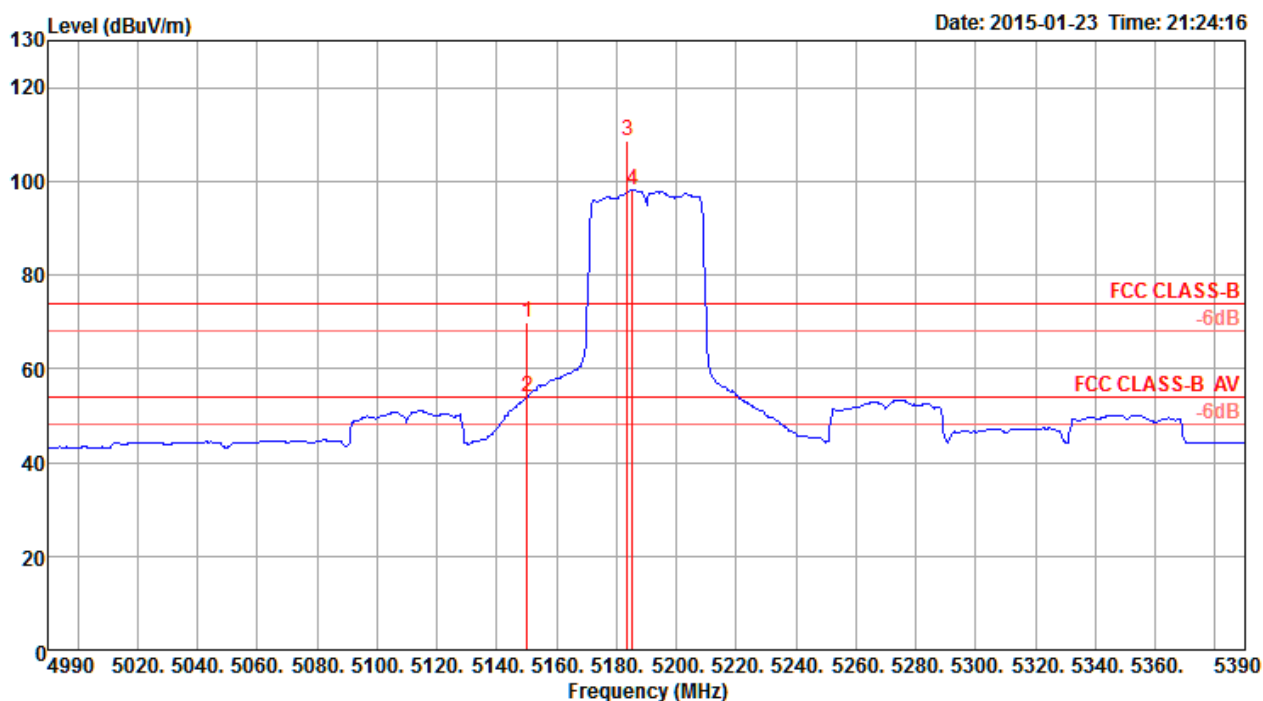
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH38 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	Pol/Phase
1	5150.00	70.01	74.00	-3.99	67.14	4.26	33.14	34.53	Peak	185	127	HORIZONTAL
2	5150.00	53.87	54.00	-0.13	51.00	4.26	33.14	34.53	Average	185	127	HORIZONTAL
3	5183.60	108.66			105.73	4.27	33.19	34.53	Peak	185	127	HORIZONTAL
4	5185.20	98.21			95.28	4.27	33.19	34.53	Average	185	127	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5190 MHz

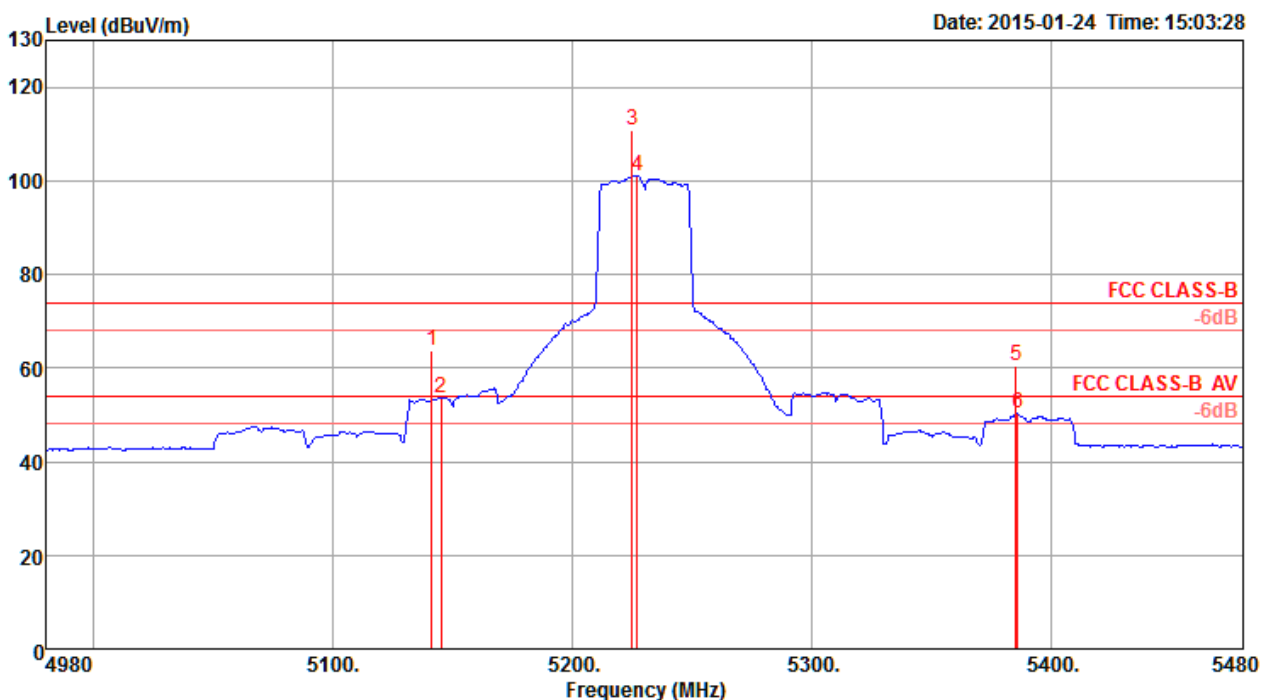
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH46 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5141.00	63.84	74.00	-10.16	60.97	4.26	33.14	34.53	Peak	192	149	HORIZONTAL
2	5145.00	53.72	54.00	-0.28	50.85	4.26	33.14	34.53	Average	192	149	HORIZONTAL
3	5225.00	110.65			107.61	4.30	33.27	34.53	Peak	192	149	HORIZONTAL
4	5227.00	101.03			97.99	4.30	33.27	34.53	Average	192	149	HORIZONTAL
5	5385.00	60.64	74.00	-13.36	57.29	4.37	33.51	34.53	Peak	192	149	HORIZONTAL
6	5386.00	50.18	54.00	-3.82	46.83	4.37	33.51	34.53	Average	192	149	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5230 MHz

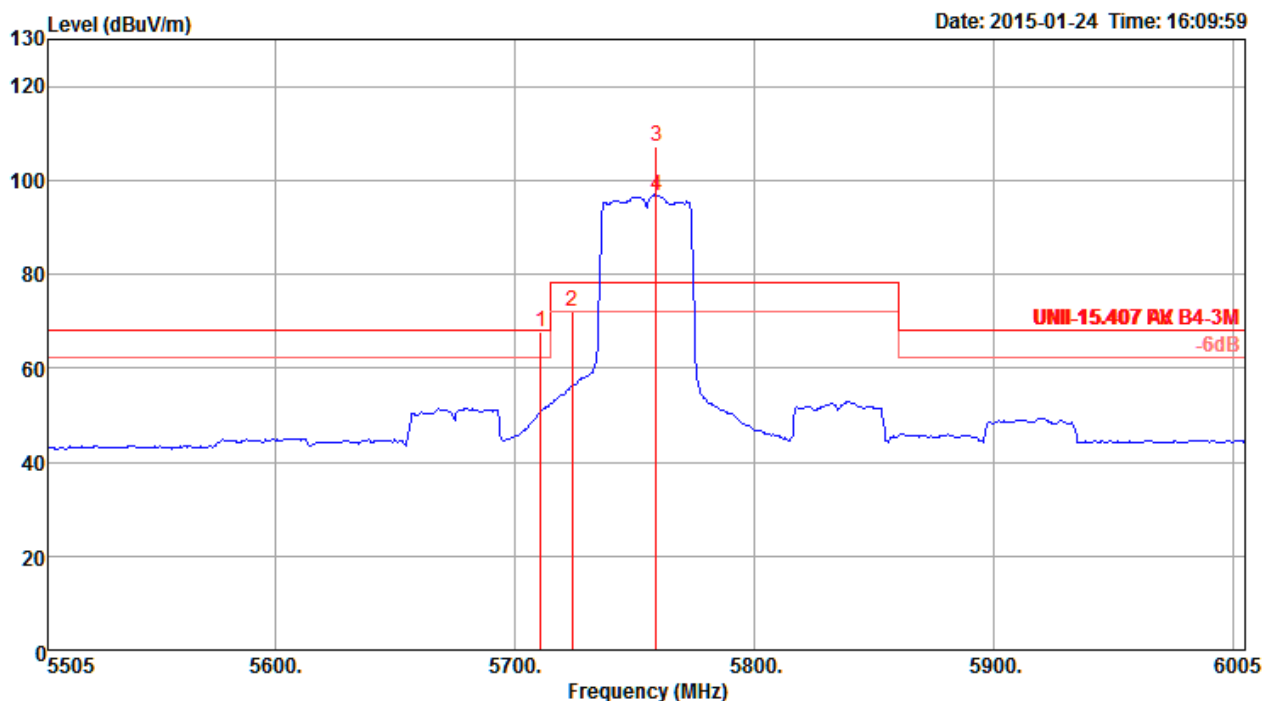
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH151 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5711.00	67.78	68.20	-0.42	63.55	4.49	34.32	34.58	Peak	359	173	HORIZONTAL
2	5724.00	71.97	78.20	-6.23	67.68	4.50	34.37	34.58	Peak	359	173	HORIZONTAL
3	5759.00	107.07			102.66	4.51	34.48	34.58	Peak	359	173	HORIZONTAL
4	5759.00	96.69			92.28	4.51	34.48	34.58	Average	359	173	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5755 MHz

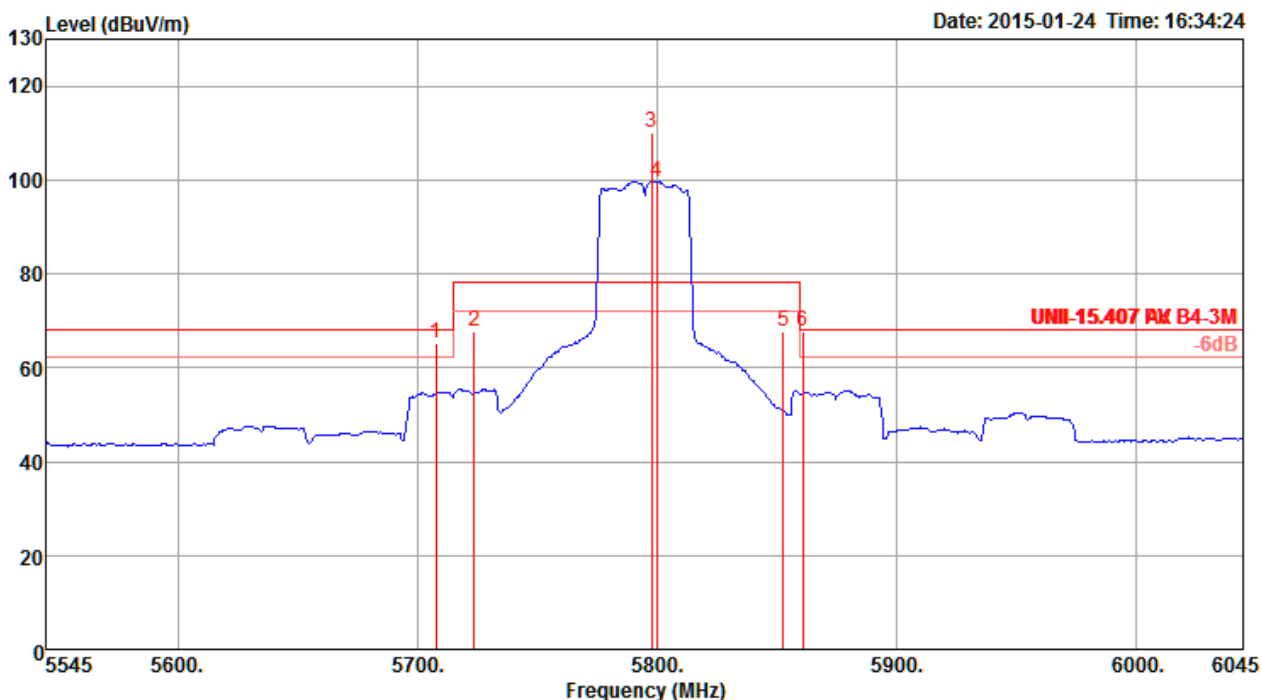
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH159 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5708.00	65.11	68.20	-3.09	60.88	4.49	34.32	34.58	Peak	360	175	HORIZONTAL
2	5724.00	67.64	78.20	-10.56	63.35	4.50	34.37	34.58	Peak	360	175	HORIZONTAL
3	5798.00	110.26			105.75	4.52	34.58	34.59	Peak	360	175	HORIZONTAL
4	5800.00	99.48			94.97	4.52	34.58	34.59	Average	360	175	HORIZONTAL
5	5853.00	67.72	78.20	-10.48	63.05	4.54	34.73	34.60	Peak	360	175	HORIZONTAL
6	5861.00	67.71	68.20	-0.49	62.97	4.55	34.79	34.60	Peak	360	175	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5795 MHz

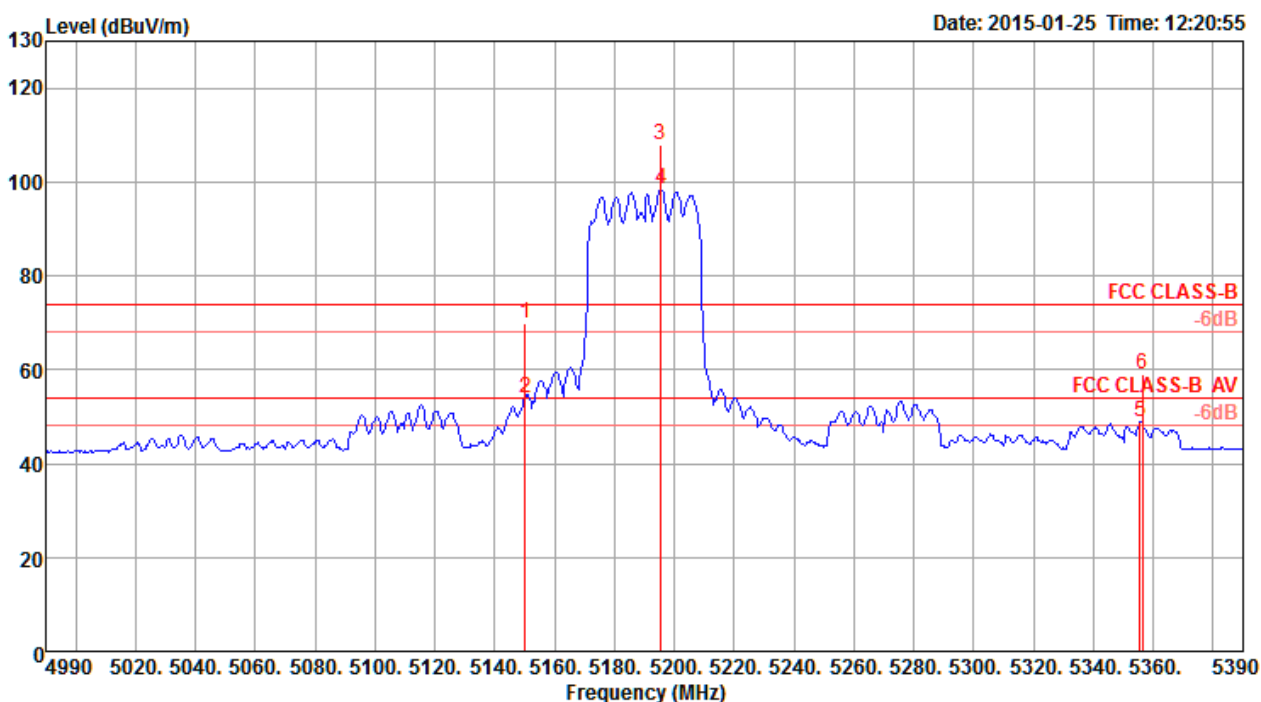
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH38 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5150.00	69.75	74.00	-4.25	66.88	4.26	33.14	34.53	Peak	340	150	HORIZONTAL
2	5150.00	53.78	54.00	-0.22	50.91	4.26	33.14	34.53	Average	340	150	HORIZONTAL
3	5195.20	107.84			104.87	4.28	33.22	34.53	Peak	340	150	HORIZONTAL
4	5195.60	98.47			95.50	4.28	33.22	34.53	Average	340	150	HORIZONTAL
5	5355.60	48.76	54.00	-5.24	45.48	4.35	33.46	34.53	Average	340	150	HORIZONTAL
6	5356.40	59.12	74.00	-14.88	55.84	4.35	33.46	34.53	Peak	340	150	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5190 MHz

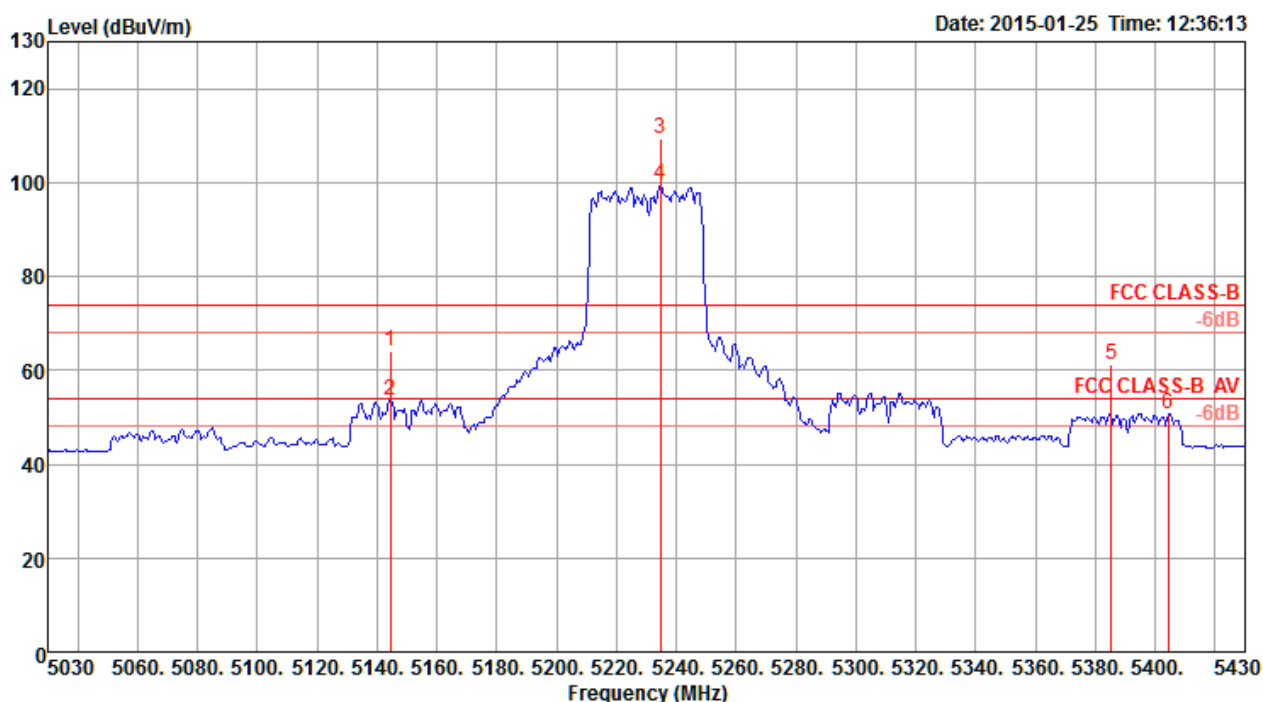
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH46 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	5144.40	64.20	74.00	-9.80	61.33	4.26	33.14	34.53	0	170	VERTICAL
2	5144.40	53.77	54.00	-0.23	50.90	4.26	33.14	34.53	0	170	VERTICAL
3	5234.80	109.37			106.33	4.30	33.27	34.53	0	170	VERTICAL
4	5234.80	99.52			96.48	4.30	33.27	34.53	0	170	VERTICAL
5	5385.20	61.05	74.00	-12.95	57.70	4.37	33.51	34.53	0	170	VERTICAL
6	5404.40	50.86	54.00	-3.14	47.48	4.37	33.54	34.53	0	170	VERTICAL

Note 1: Item 3, 4 are the fundamental frequency at 5230 MHz

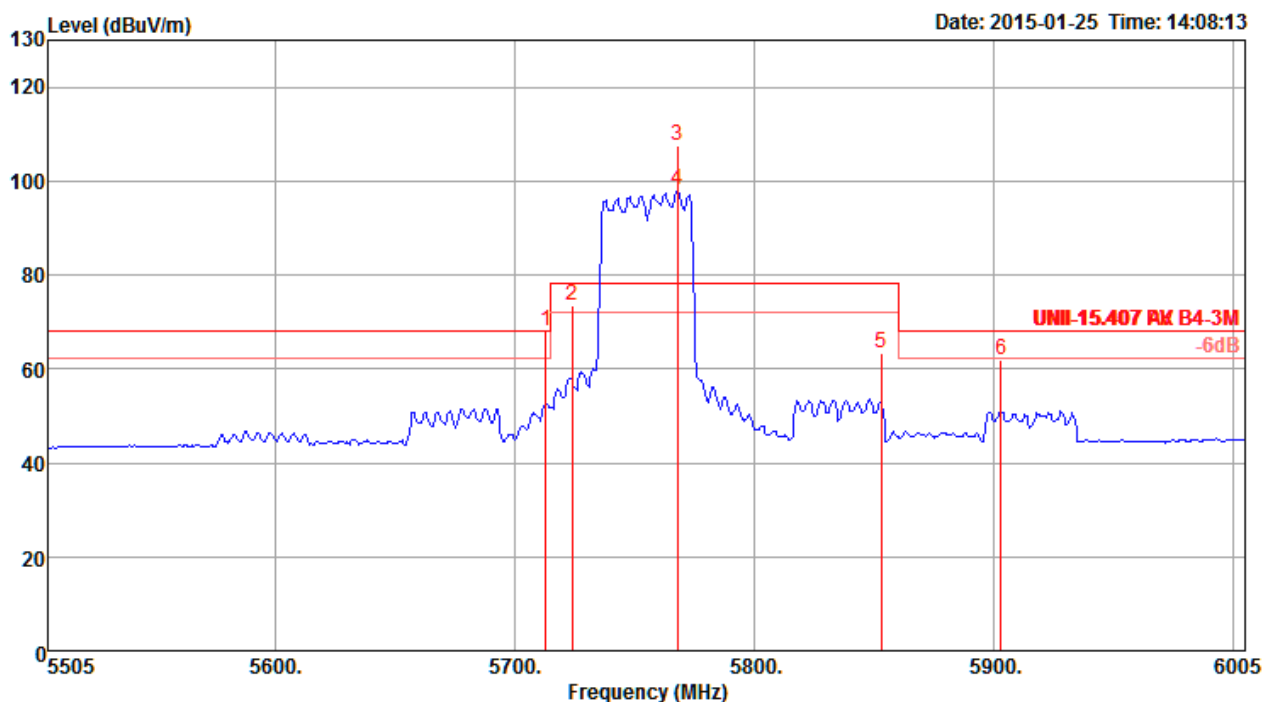
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH151 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	5713.00	68.00	68.20	-0.20	63.77	4.49	34.32	34.58	Peak	171	163	HORIZONTAL
2	5724.00	73.56	78.20	-4.64	69.27	4.50	34.37	34.58	Peak	171	163	HORIZONTAL
3	5768.00	107.50			103.09	4.51	34.48	34.58	Peak	171	163	HORIZONTAL
4	5768.00	97.97			93.56	4.51	34.48	34.58	Average	171	163	HORIZONTAL
5	5853.00	63.39	78.20	-14.81	58.72	4.54	34.73	34.60	Peak	171	163	HORIZONTAL
6	5903.00	61.80	68.20	-6.40	56.96	4.56	34.89	34.61	Peak	171	163	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5755 MHz

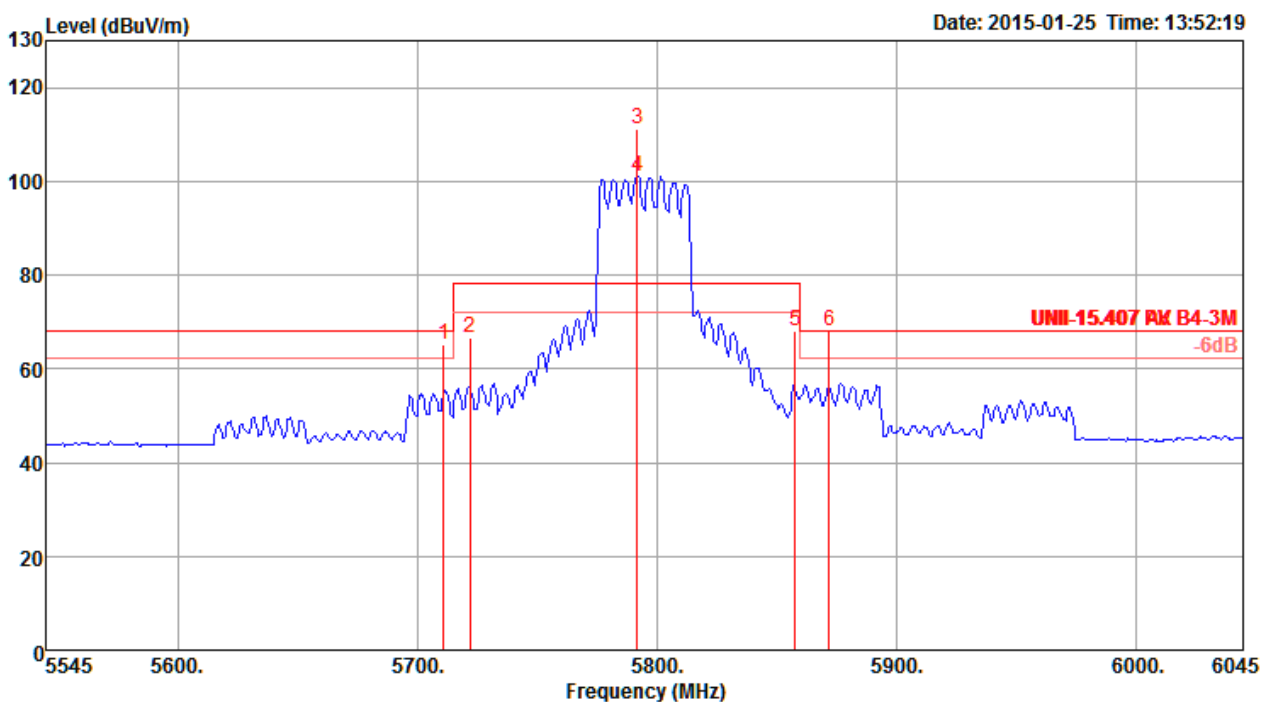
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH159 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5711.00	65.25	68.20	-2.95	61.02	4.49	34.32	34.58	Peak	173	246	HORIZONTAL
2	5722.00	66.61	78.20	-11.59	62.32	4.50	34.37	34.58	Peak	173	246	HORIZONTAL
3	5792.00	111.21			106.70	4.52	34.58	34.59	Peak	173	246	HORIZONTAL
4	5792.00	101.19			96.68	4.52	34.58	34.59	Average	173	246	HORIZONTAL
5	5858.00	68.11	78.20	-10.09	63.37	4.55	34.79	34.60	Peak	173	246	HORIZONTAL
6	5872.00	68.03	68.20	-0.17	63.24	4.55	34.84	34.60	Peak	173	246	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5795 MHz

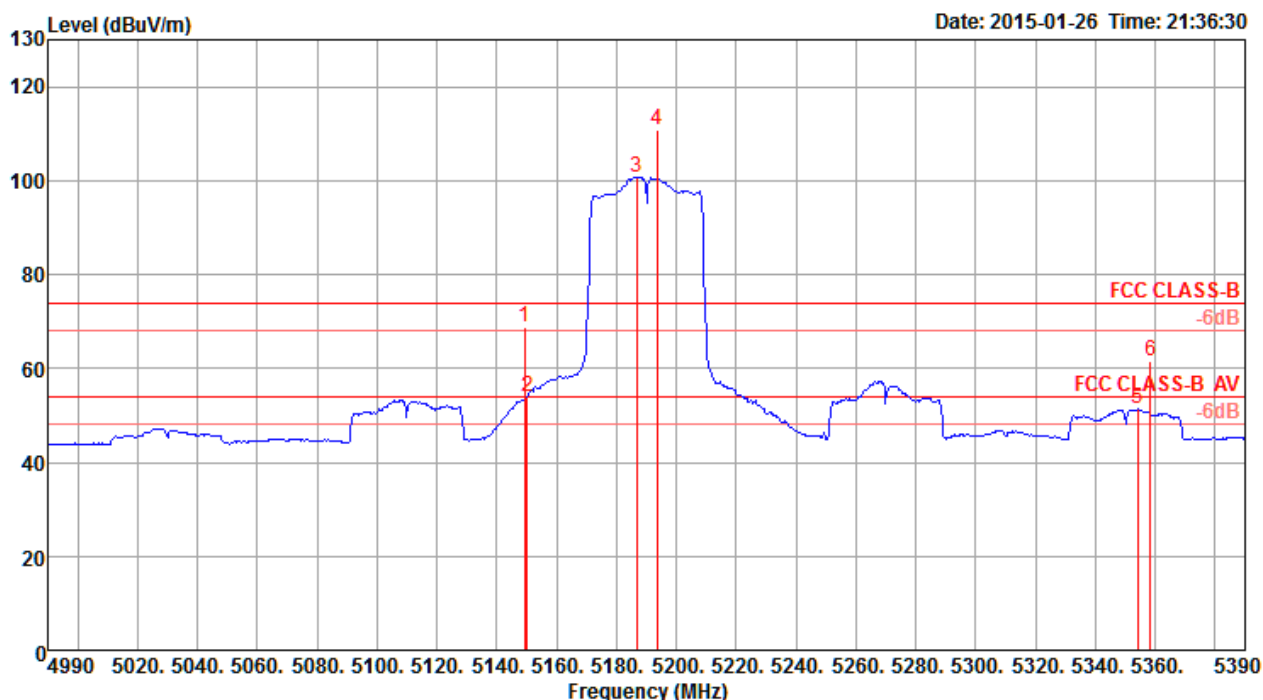
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH38 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5149.20	68.89	74.00	-5.11	66.02	4.26	33.14	34.53	Peak	209	153	HORIZONTAL
2	5150.00	53.92	54.00	-0.08	51.05	4.26	33.14	34.53	Average	209	153	HORIZONTAL
3	5186.80	100.79			97.86	4.27	33.19	34.53	Average	209	153	HORIZONTAL
4	5193.60	110.93			107.96	4.28	33.22	34.53	Peak	209	153	HORIZONTAL
5	5354.00	51.31	54.00	-2.69	48.03	4.35	33.46	34.53	Average	209	153	HORIZONTAL
6	5358.40	61.43	74.00	-12.57	58.15	4.35	33.46	34.53	Peak	209	153	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5190 MHz

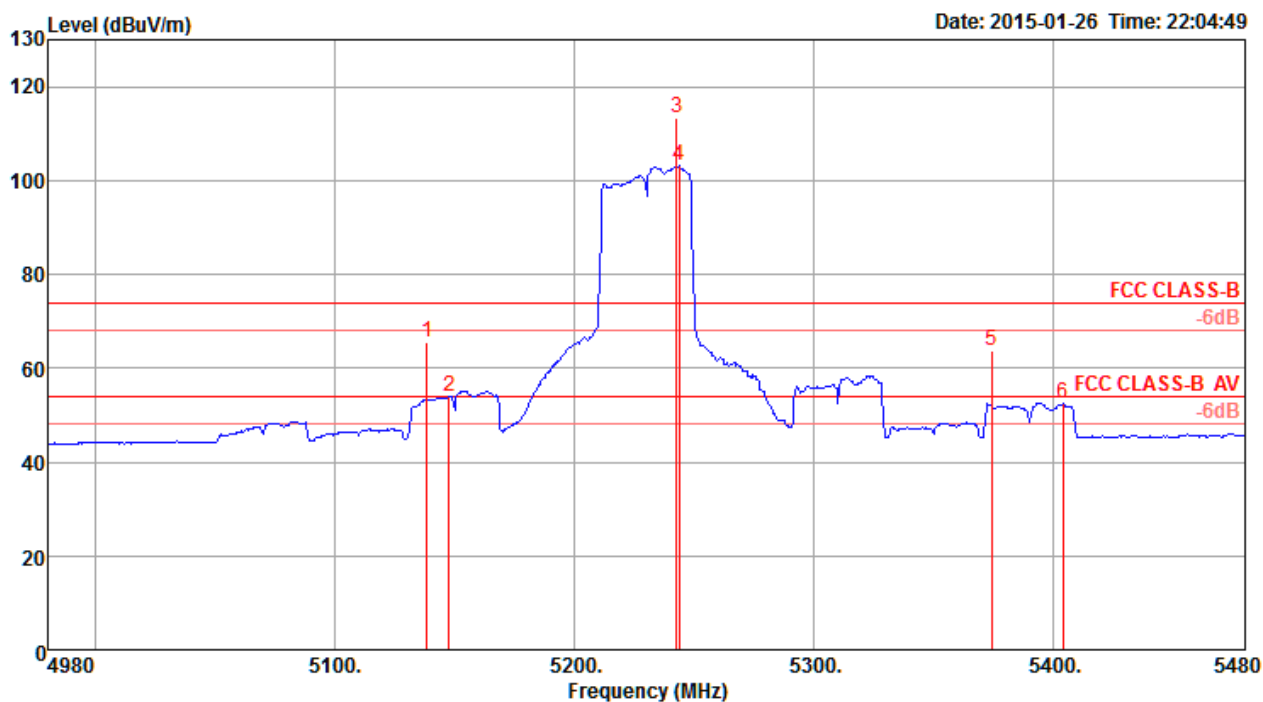
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH46 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	5138.50	65.58	74.00	-8.42	62.75	4.25	33.11	34.53	Peak	208	147	HORIZONTAL
2	5147.50	53.88	54.00	-0.12	51.01	4.26	33.14	34.53	Average	208	147	HORIZONTAL
3	5242.50	113.31			110.24	4.30	33.30	34.53	Peak	208	147	HORIZONTAL
4	5243.50	103.09			100.02	4.30	33.30	34.53	Average	208	147	HORIZONTAL
5	5374.00	63.64	74.00	-10.36	60.32	4.36	33.49	34.53	Peak	208	147	HORIZONTAL
6	5404.00	52.50	54.00	-1.50	49.12	4.37	33.54	34.53	Average	208	147	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5230 MHz

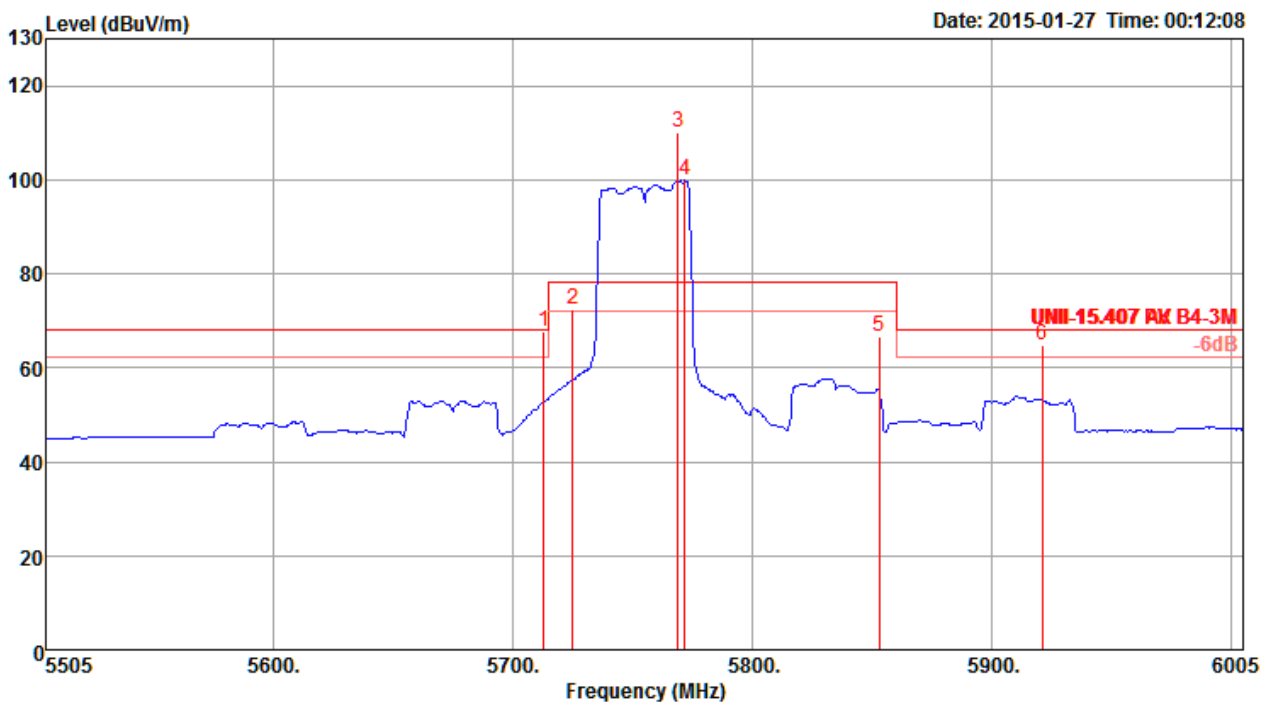
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH151 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	Remark	deg	cm
1	5713.00	67.83	68.20	-0.37	63.60	4.49	34.32	34.58	Peak	177	150
2	5725.00	72.58	78.20	-5.62	68.29	4.50	34.37	34.58	Peak	177	150
3	5769.00	110.16			105.69	4.52	34.53	34.58	Peak	177	150
4	5772.00	99.78			95.31	4.52	34.53	34.58	Average	177	150
5	5853.00	66.52	78.20	-11.68	61.85	4.54	34.73	34.60	Peak	177	150
6	5921.00	64.74	68.20	-3.46	59.86	4.56	34.94	34.62	Peak	177	150

Note 1: Item 3, 4 are the fundamental frequency at 5755 MHz

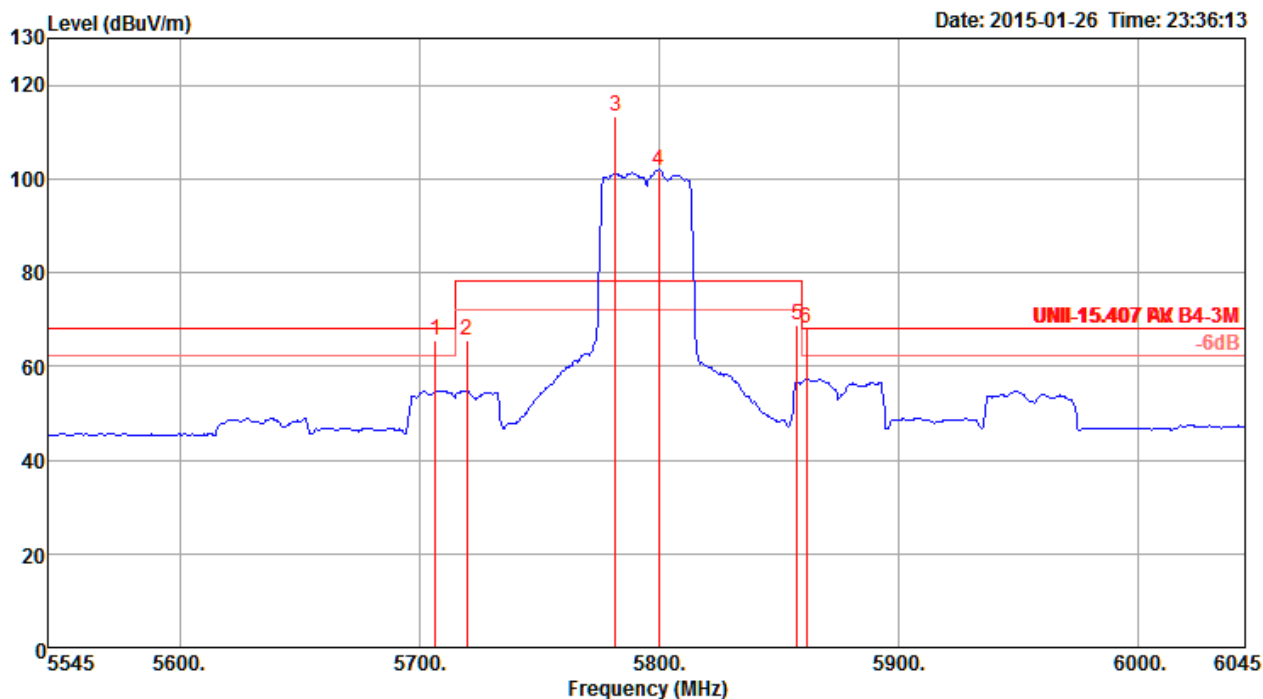
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 40MHz Nss1MCS0 / CH159 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	5707.00	65.64	68.20	-2.56	61.41	4.49	34.32	34.58	Peak	177	150	HORIZONTAL
2	5720.00	65.69	78.20	-12.51	61.40	4.50	34.37	34.58	Peak	177	150	HORIZONTAL
3	5782.00	113.21			108.75	4.52	34.53	34.59	Peak	177	150	HORIZONTAL
4	5800.00	101.75			97.24	4.52	34.58	34.59	Average	177	150	HORIZONTAL
5	5858.00	68.83	78.20	-9.37	64.09	4.55	34.79	34.60	Peak	177	150	HORIZONTAL
6	5862.00	67.99	68.20	-0.21	63.25	4.55	34.79	34.60	Peak	177	150	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5795 MHz

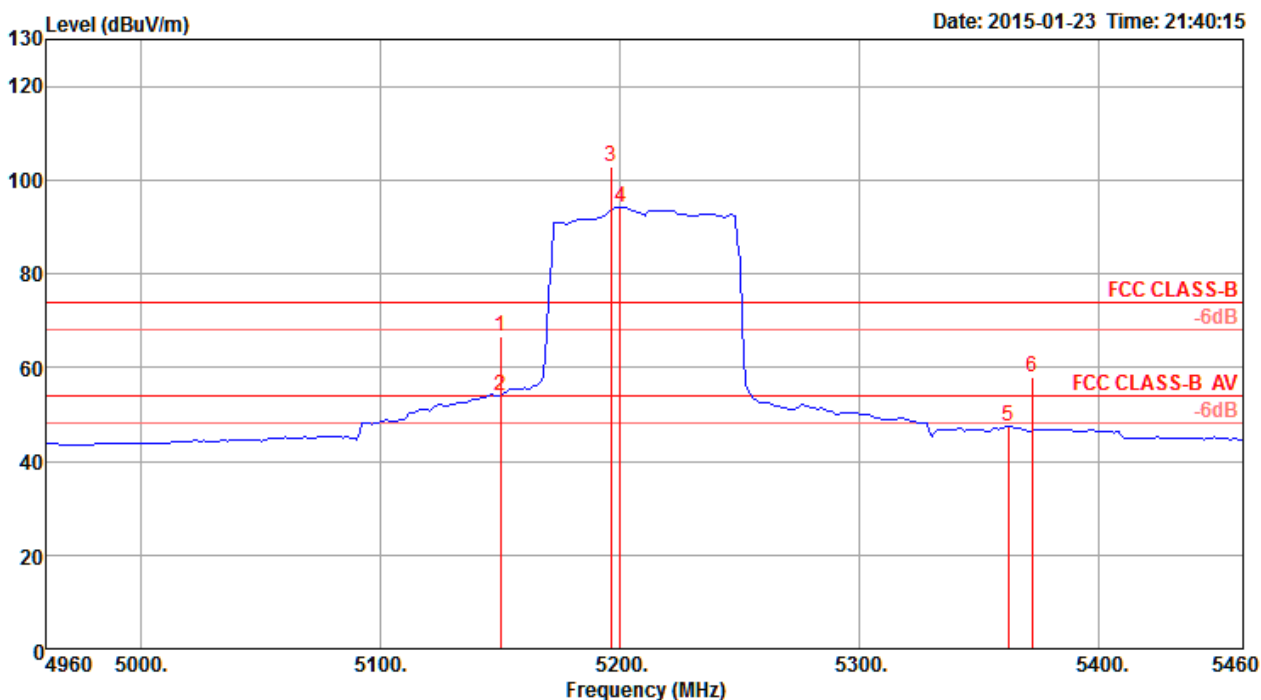
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH42 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5150.00	66.51	74.00	-7.49	63.64	4.26	33.14	34.53	Peak	189	150	HORIZONTAL
2	5150.00	53.86	54.00	-0.14	50.99	4.26	33.14	34.53	Average	189	150	HORIZONTAL
3	5196.00	102.94			99.97	4.28	33.22	34.53	Peak	189	150	HORIZONTAL
4	5200.00	94.14			91.17	4.28	33.22	34.53	Average	189	150	HORIZONTAL
5	5362.00	47.45	54.00	-6.55	44.13	4.36	33.49	34.53	Average	189	150	HORIZONTAL
6	5372.00	57.76	74.00	-16.24	54.44	4.36	33.49	34.53	Peak	189	150	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5210 MHz

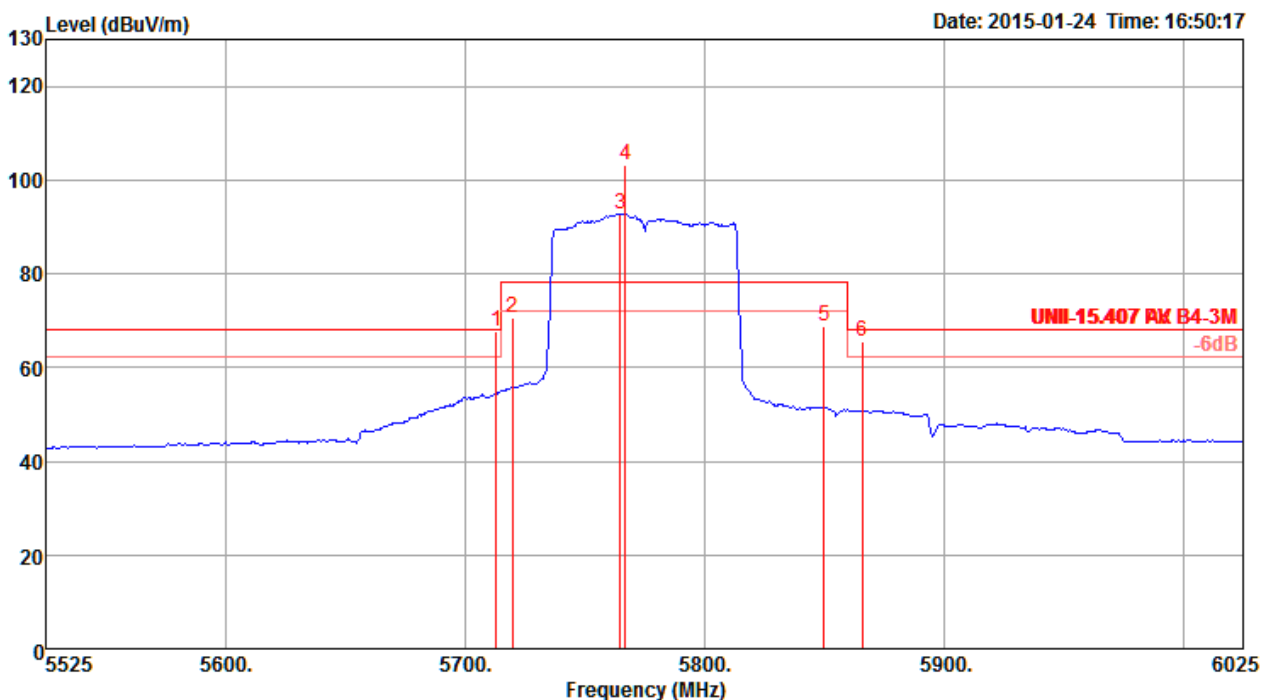
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH155 / Ant. 1		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5713.00	67.79	68.20	-0.41	63.56	4.49	34.32	34.58	Peak	172	151	HORIZONTAL
2	5720.00	70.73	78.20	-7.47	66.44	4.50	34.37	34.58	Peak	172	151	HORIZONTAL
3	5765.00	92.71			88.30	4.51	34.48	34.58	Average	172	151	HORIZONTAL
4	5767.00	103.22			98.81	4.51	34.48	34.58	Peak	172	151	HORIZONTAL
5	5850.00	68.95	78.20	-9.25	64.28	4.54	34.73	34.60	Peak	172	151	HORIZONTAL
6	5866.00	65.55	68.20	-2.65	60.81	4.55	34.79	34.60	Peak	172	151	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5775 MHz

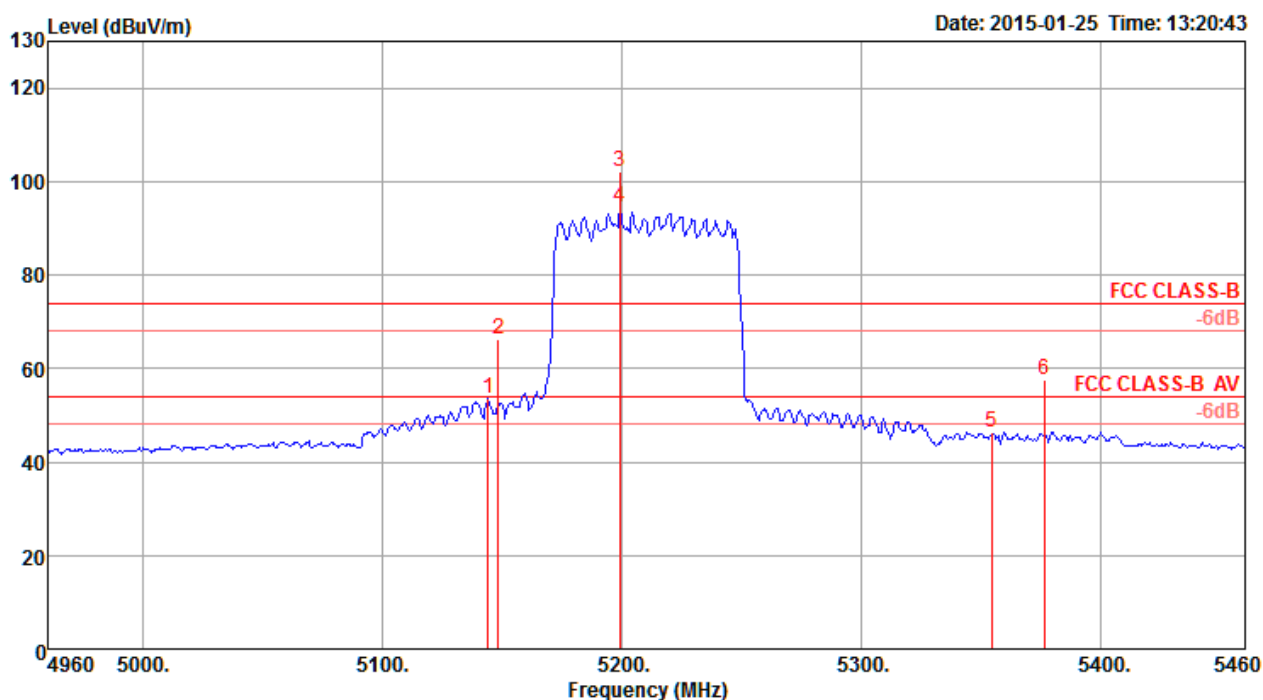
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH42 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm	
1	5144.00	53.69	54.00	-0.31	50.82	4.26	33.14	34.53	201	152	HORIZONTAL
2	5148.00	66.39	74.00	-7.61	63.52	4.26	33.14	34.53	201	152	HORIZONTAL
3	5199.00	102.28			99.31	4.28	33.22	34.53	201	152	HORIZONTAL
4	5199.00	94.41			91.44	4.28	33.22	34.53	201	152	HORIZONTAL
5	5354.00	46.22	54.00	-7.78	42.94	4.35	33.46	34.53	201	152	HORIZONTAL
6	5376.00	57.45	74.00	-16.55	54.13	4.36	33.49	34.53	201	152	HORIZONTAL

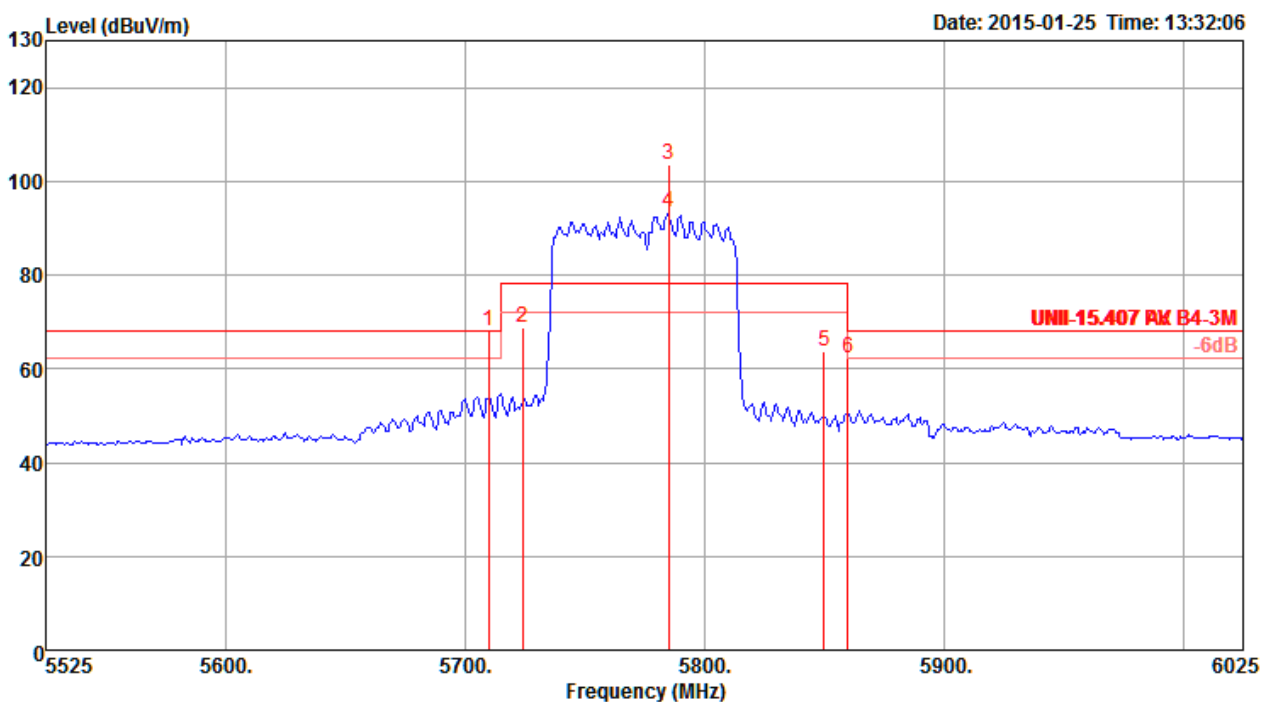
Note 1: Item 3, 4 are the fundamental frequency at 5210 MHz

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions			
Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH155 / Ant. 1+2+3 (1S3T, CDD)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	V



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5710.00	67.99	68.20	-0.21	63.76	4.49	34.32	34.58	Peak	291	248	VERTICAL
2	5724.00	68.92	78.20	-9.28	64.63	4.50	34.37	34.58	Peak	291	248	VERTICAL
3	5785.00	103.39			98.93	4.52	34.53	34.59	Peak	291	248	VERTICAL
4	5785.00	93.25			88.79	4.52	34.53	34.59	Average	291	248	VERTICAL
5	5850.00	63.57	78.20	-14.63	58.90	4.54	34.73	34.60	Peak	291	248	VERTICAL
6	5860.00	62.21	68.20	-5.99	57.47	4.55	34.79	34.60	Peak	291	248	VERTICAL

Note 1: Item 3, 4 are the fundamental frequency at 5775 MHz

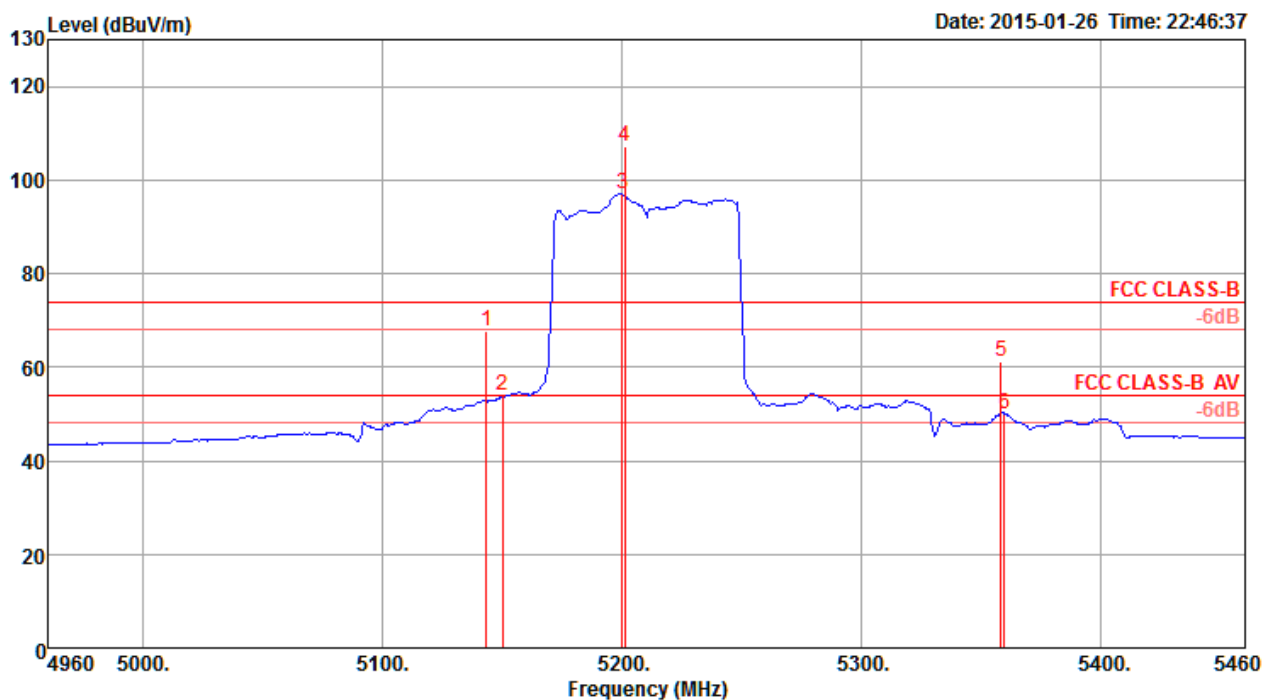
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamplifier Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH42 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		deg	cm	
1	5143.00	67.79	74.00	-6.21	64.92	4.26	33.14	34.53	Peak	114	159	HORIZONTAL
2	5150.00	53.79	54.00	-0.21	50.92	4.26	33.14	34.53	Average	114	159	HORIZONTAL
3	5200.00	96.94			93.97	4.28	33.22	34.53	Average	114	159	HORIZONTAL
4	5201.00	107.31			104.34	4.28	33.22	34.53	Peak	114	159	HORIZONTAL
5	5358.00	61.28	74.00	-12.72	58.00	4.35	33.46	34.53	Peak	114	159	HORIZONTAL
6	5359.60	49.82	54.00	-4.18	46.54	4.35	33.46	34.53	Average	114	159	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5210 MHz

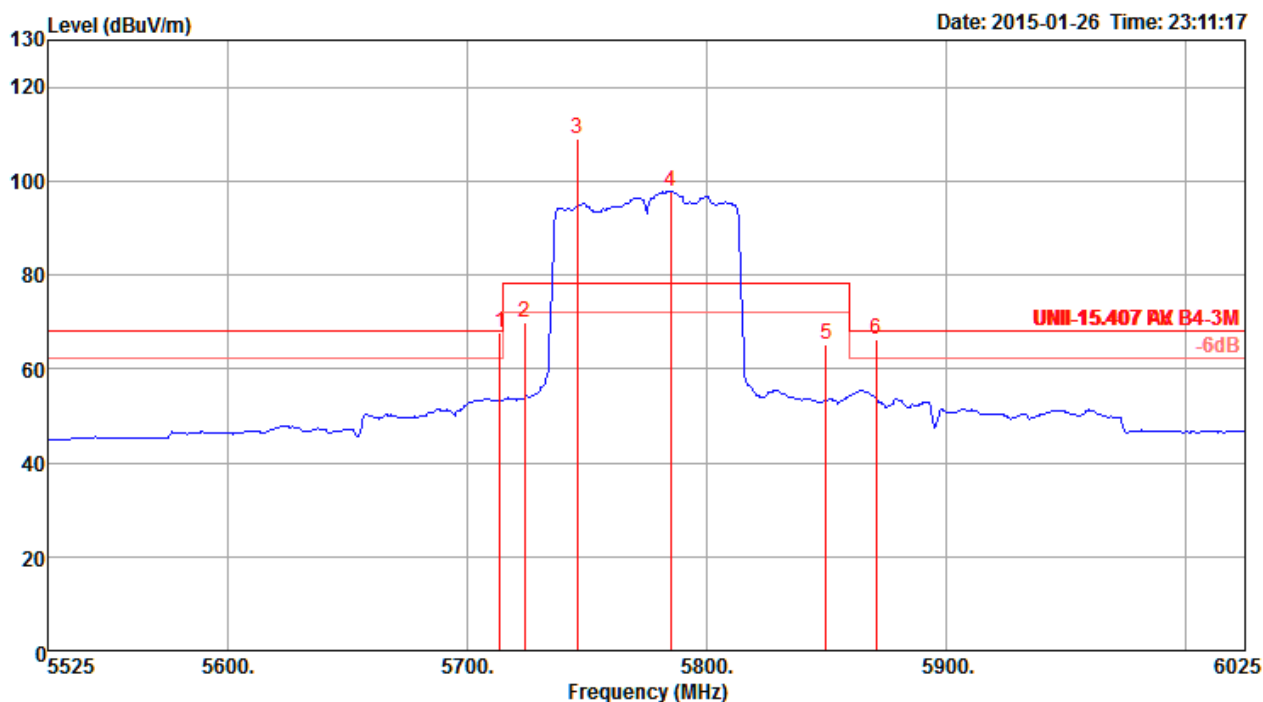
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Band Edge and Fundamental Emissions

Operating Mode	IEEE 802.11ac 80MHz Nss1MCS0 / CH155 / Ant. 1+2+3 (1S3T, TXBF)		
Temperature	24°C	Humidity	51%
Test Engineer	Peter Wu	Polarization	H



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp		T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	Remark	deg	cm	
1	5714.00	67.89	68.20	-0.31	63.66	4.49	34.32	34.58	Peak	175	150	HORIZONTAL
2	5724.00	69.92	78.20	-8.28	65.63	4.50	34.37	34.58	Peak	175	150	HORIZONTAL
3	5746.00	108.90			104.56	4.50	34.42	34.58	Peak	175	150	HORIZONTAL
4	5785.00	97.67			93.21	4.52	34.53	34.59	Average	175	150	HORIZONTAL
5	5850.00	65.28	78.20	-12.92	60.61	4.54	34.73	34.60	Peak	175	150	HORIZONTAL
6	5871.00	66.42	68.20	-1.78	61.63	4.55	34.84	34.60	Peak	175	150	HORIZONTAL

Note 1: Item 3, 4 are the fundamental frequency at 5775 MHz

Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).

Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Note 4: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

3.6 Frequency Stability Measurement

3.6.1 Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emissions is maintained within the band of operation under all conditions of normal operation as specified in the user's manual or $\pm 20\text{ppm}$ (IEEE 802.11n specification).

3.6.2 Measuring Instruments and Setting

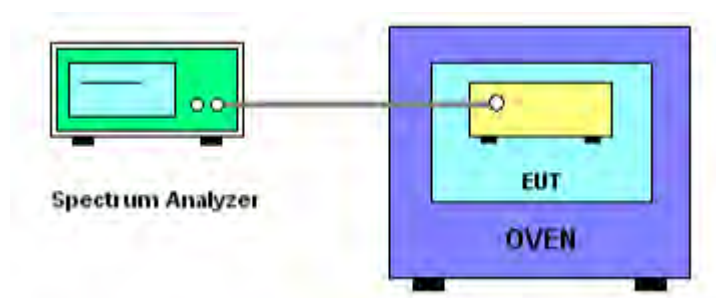
Please refer to section 4 of equipments list in this report. The following table is the setting of spectrum analyzer and receiver.

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

3.6.3 Test Procedures

1. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
2. The EUT was programmed to be in continuously un-modulation transmitting mode.
3. Set the spectrum analyzer span to view the entire un-modulation emissions bandwidth.
4. Turn the EUT on and couple its output to a spectrum analyzer.
5. Turn the EUT off and set the chamber to the highest temperature specified.
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. Extreme temperature rule is -30°C ~ 50°C .
8. Repeat step 4 and 5 with the temperature chamber set to the lowest temperature.
9. The test chamber was allowed to stabilize at $+20$ degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

3.6.4 Test Setup Layout



3.6.5 Test Deviation

There is no deviation with the original standard.

3.6.6 EUT Operation during Test

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

3.6.7 Test Result of Frequency Stability

Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Mode	20MHz

Operating frequency: 5200 MHz

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)		
	Ant. 1	Ant. 2	Ant. 3
(V)	5200	5200	5200
126.50	5199.9922	5199.9918	5199.9922
110.00	5199.9900	5199.9900	5199.9905
93.50	5199.9892	5199.9892	5199.9892
Max. Deviation (MHz)	0.010800	0.010800	0.010800
Max. Deviation (ppm)	2.0769	2.0769	2.0769

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)		
	Ant. 1	Ant. 2	Ant. 3
(°C)	5200	5200	5200
-30	5200.0504	5200.0495	5200.0495
-20	5200.0521	5200.0521	5200.0508
-10	5200.0274	5200.0143	5200.0143
0	5200.0217	5200.0187	5200.0169
10	5199.9996	5199.9996	5199.9996
20	5199.9800	5199.9796	5199.9796
30	5199.9844	5199.9839	5199.9844
40	5199.9839	5199.9839	5199.9839
50	5199.9848	5199.9852	5199.9852
Max. Deviation (MHz)	0.052100	0.052100	0.050800
Max. Deviation (ppm)	10.0192	10.0192	9.7692

Operating frequency: 5785 MHz

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)		
	Ant. 1	Ant. 2	Ant. 3
(V)	5785	5785	5785
126.50	5784.9909	5784.9905	5784.9900
110.00	5784.9979	5784.9979	5784.9979
93.50	5784.9896	5784.9896	5784.9896
Max. Deviation (MHz)	0.010400	0.010400	0.010400
Max. Deviation (ppm)	1.7978	1.7978	1.7978

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)		
	Ant. 1	Ant. 2	Ant. 3
(°C)	5785	5785	5785
-30	5785.0543	5785.0543	5785.0538
-20	5785.0577	5785.0569	5785.0569
-10	5785.0248	5785.0230	5785.0230
0	5785.0096	5785.0048	5785.0026
10	5785.0004	5785.0004	5785.0004
20	5784.9779	5784.9774	5784.9779
30	5784.9818	5784.9818	5784.9818
40	5784.9818	5784.9822	5784.9822
50	5784.9835	5784.9835	5784.9839
Max. Deviation (MHz)	0.057740	0.056870	0.056870
Max. Deviation (ppm)	9.9810	9.8306	9.8306

Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Mode	40MHz

Operating frequency: 5190 MHz

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)		
	Ant. 1	Ant. 2	Ant. 3
(V)	5190	5190	5190
126.50	5189.9922	5189.9918	5189.9922
110.00	5189.9900	5189.9900	5189.9905
93.50	5189.9892	5189.9892	5189.9892
Max. Deviation (MHz)	0.010800	0.010800	0.010800
Max. Deviation (ppm)	2.0809	2.0809	2.0809

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)		
	Ant. 1	Ant. 2	Ant. 3
(°C)	5190	5190	5190
-30	5190.0508	5190.0499	5190.0495
-20	5190.0499	5190.0491	5190.0486
-10	5190.0274	5190.0265	5190.0265
0	5189.9996	5189.9996	5189.9996
10	5189.9978	5189.9965	5189.9957
20	5189.9800	5189.9800	5189.9800
30	5189.9835	5189.9839	5189.9839
40	5189.9848	5189.9844	5189.9844
50	5189.9844	5189.9844	5189.9844
Max. Deviation (MHz)	0.050800	0.049930	0.049490
Max. Deviation (ppm)	9.7881	9.6204	9.5356

Operating frequency: 5755 MHz

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)		
	Ant. 1	Ant. 2	Ant. 3
(V)	5755	5755	5755
126.50	5754.9909	5754.9905	5754.9900
110.00	5754.9979	5754.9979	5754.9979
93.50	5754.9896	5754.9896	5754.9896
Max. Deviation (MHz)	0.010400	0.010400	0.010400
Max. Deviation (ppm)	1.8071	1.8071	1.8071

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)		
	Ant. 1	Ant. 2	Ant. 3
(°C)	5755	5755	5755
-30	5755.0590	5755.0547	5755.0543
-20	5755.0564	5755.0556	5755.0551
-10	5755.0373	5755.0373	5755.0352
0	5754.9996	5754.9996	5754.9996
10	5754.9935	5754.9926	5754.9922
20	5754.9779	5754.9779	5754.9779
30	5754.9813	5754.9818	5754.9822
40	5754.9826	5754.9826	5754.9826
50	5754.9813	5754.9818	5754.9818
Max. Deviation (MHz)	0.059000	0.055570	0.055140
Max. Deviation (ppm)	10.2520	9.6560	9.5812

Test date	Feb. 10, 2015 ~ Feb. 11, 2015	Test Site No.	TH01-CB
Temperature	26°C	Humidity	63%
Test Engineer	Lucas Huang	Mode	80MHz

Operating frequency: 5210 MHz

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)		
	Ant. 1	Ant. 2	Ant. 3
(V)	5210	5210	5210
126.50	5209.9922	5209.9918	5209.9922
110.00	5209.9900	5209.9900	5209.9905
93.50	5209.9892	5209.9892	5209.9892
Max. Deviation (MHz)	0.010800	0.010800	0.010800
Max. Deviation (ppm)	2.0729	2.0729	2.0729

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)		
	Ant. 1	Ant. 2	Ant. 3
(°C)	5210	5210	5210
-30	5210.0504	5210.0491	5210.0491
-20	5210.0482	5210.0469	5210.0465
-10	5210.0382	5210.0378	5210.0373
0	5209.9996	5209.9996	5209.9996
10	5209.9922	5209.9918	5209.9922
20	5209.9800	5209.9800	5209.9805
30	5209.9826	5209.9826	5209.9826
40	5209.9848	5209.9844	5209.9848
50	5209.9844	5209.9839	5209.9844
Max. Deviation (MHz)	0.050360	0.049060	0.049060
Max. Deviation (ppm)	9.6660	9.4165	9.4165

Operating frequency: 5775 MHz

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)		
	Ant. 1	Ant. 2	Ant. 3
(V)	5775	5775	5775
126.50	5774.9909	5774.9905	5774.9900
110.00	5774.9979	5774.9979	5774.9979
93.50	5774.9896	5774.9896	5774.9896
Max. Deviation (MHz)	0.010400	0.010400	0.010400
Max. Deviation (ppm)	1.8009	1.8009	1.8009

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)		
	Ant. 1	Ant. 2	Ant. 3
(°C)	5775	5775	5775
-30	5775.0573	5775.0560	5775.0556
-20	5775.0465	5775.0473	5775.0473
-10	5775.0460	5775.0452	5775.0452
0	5774.9996	5774.9996	5774.9996
10	5774.9909	5774.9905	5774.9900
20	5774.9779	5774.9779	5774.9779
30	5774.9813	5774.9818	5774.9818
40	5774.9826	5774.9826	5774.9831
50	5774.9831	5774.9831	5774.9835
Max. Deviation (MHz)	0.057310	0.056010	0.055570
Max. Deviation (ppm)	9.9238	9.6987	9.6225

3.7 Antenna Requirements

3.7.1 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.

3.7.2 Antenna Connector Construction

Please refer to section 2.3 in this test report; antenna connector complied with the requirements.

4 LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Test Receiver	R&S	ESCS 30	100355	9kHz ~ 2.75GHz	Apr. 23, 2014	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 02, 2014	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 02, 2014	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	Dec. 04, 2014	Conduction (CO01-CB)
Software	Audix	E3	5.410e	-	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA	Schaffner	CBL6112D	22021	20MHz ~ 2GHz	May 26, 2014	Radiation (03CH01-CB)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz - 30 MHz	Jul. 28, 2014	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz~18GHz	Oct. 28, 2014	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 22, 2014	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Nov. 15, 2014	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 12, 2015	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26GHz ~ 40GHz	Nov. 25, 2014	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSV40	101026	9kHz ~ 40GHz	Aug. 28, 2014	Radiation (03CH01-CB)
EMI Test Receiver	R&S	ESR26	101289	9kHz~26GHz	Aug. 22, 2014	Radiation (03CH01-CB)
Turn Table	INN CO	CO 2000	N/A	0 ~ 360 degree	N.C.R.	Radiation (03CH01-CB)
Antenna Mast	INN CO	CO 2000	N/A	1 m - 4 m	N.C.R.	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-1	N/A	30 MHz - 1 GHz	Nov. 15, 2014	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-3	N/A	1 GHz - 40 GHz	Nov. 15, 2014	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-4	N/A	1 GHz - 40 GHz	Nov. 15, 2014	Radiation (03CH01-CB)
Signal analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 12, 2014	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 03, 2014	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-7	-	1 GHz – 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-8	-	1 GHz – 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-9	-	1 GHz – 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-10	-	1 GHz – 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	High Cable-11	-	1 GHz – 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)
Power Sensor	Anritsu	MA2411B	1126203	300MHz~40GHz	Oct. 06, 2014	Conducted (TH01-CB)
Power Meter	Anritsu	ML2495A	1210004	300MHz~40GHz	Oct. 06, 2014	Conducted (TH01-CB)

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

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

5 MEASUREMENT UNCERTAINTY

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.4 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%