FCC RADIO TEST REPORT

FCC ID	:	G954331X
Equipment Name	:	DOCSIS Cable Gateway
Trade Name	:	Technicolor
Model Number	:	CGM4331COM
Applicant / Manufacturer	:	Technicolor Connected Home USA LLC 5030 Sugarloaf Parkway,Building 6, Lawrenceville Georgia,United States,30044
Standard	:	47 CFR FCC Part 15.407

The product was received on Jun. 26, 2019, and testing was started from Jun. 28, 2019 and completed on Jul. 26, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

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Photographs of EUT v01

History of this test report

Report No.	Version	Description	Issued Date
FR971031AD	01	Initial issue of report	Jul. 31, 2019

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
0	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.407(a)	Emission Bandwidth	PASS	-
3.3	15.407(a)	Maximum Conducted Output Power	PASS	-
3.4	15.407(a)	Peak Power Spectral Density	PASS	-
3.5	15.407(b)	Unwanted Emissions	PASS	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

1. The test configuration, test mode and test software were written in this test report are declared by the manufacturer.
2. The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen

Report Producer: Cindy Peng

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5150-5250	a, n (HT20), ac (VHT20), ax (HEW20)	5180-5240	36-48 [4]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40), ax (HEW40)	5190-5230	38-46 [2]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80), ax (HEW80)	5210	42 [1]
5725-5850		5775	155 [1]

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11a	20	1TX
5.15-5.25GHz	802.11n HT20	20	1TX
5.15-5.25GHz	802.11ac VHT20	20	1TX
5.15-5.25GHz	802.11ax HEW20	20	1TX
5.15-5.25GHz	802.11n HT40	40	1TX
5.15-5.25GHz	802.11ac VHT40	40	1TX
5.15-5.25GHz	802.11ax HEW40	40	1TX
5.15-5.25GHz	802.11ac VHT80	80	1TX
5.15-5.25GHz	802.11ax HEW80	80	1TX
5.15-5.25GHz	802.11a	20	2TX
5.15-5.25GHz	802.11n HT20	20	2TX
5.15-5.25GHz	802.11n HT20-BF	20	2TX
5.15-5.25GHz	802.11ac VHT20	20	2TX
5.15-5.25GHz	802.11ac VHT20-BF	20	2TX
5.15-5.25GHz	802.11ax HEW20	20	2TX
5.15-5.25GHz	802.11ax HEW20-BF	20	2TX
5.15-5.25GHz	802.11n HT40	40	2TX
5.15-5.25GHz	802.11n HT40-BF	40	2TX
5.15-5.25GHz	802.11ac VHT40	40	2TX
5.15-5.25GHz	802.11ac VHT40-BF	40	2TX
5.15-5.25GHz	802.11ax HEW40	40	2TX

5.15-5.25GHz	802.11ax HEW40-BF	40	2TX
5.15-5.25GHz	802.11ac VHT80	80	2TX
5.15-5.25GHz	802.11ac VHT80-BF	80	2TX
5.15-5.25GHz	802.11ax HEW80	80	2TX
5.15-5.25GHz	802.11ax HEW80-BF	80	2TX
5.15-5.25GHz	802.11a	20	3TX
5.15-5.25GHz	802.11n HT20	20	3TX
5.15-5.25GHz	802.11n HT20-BF	20	3TX
5.15-5.25GHz	802.11ac VHT20	20	3TX
5.15-5.25GHz	802.11ac VHT20-BF	20	3TX
5.15-5.25GHz	802.11ax HEW20	20	3TX
5.15-5.25GHz	802.11ax HEW20-BF	20	3TX
5.15-5.25GHz	802.11n HT40	40	3TX
5.15-5.25GHz	802.11n HT40-BF	40	3TX
5.15-5.25GHz	802.11ac VHT40	40	3TX
5.15-5.25GHz	802.11ac VHT40-BF	40	3TX
5.15-5.25GHz	802.11ax HEW40	40	3TX
5.15-5.25GHz	802.11ax HEW40-BF	40	3TX
5.15-5.25GHz	802.11ac VHT80	80	3TX
5.15-5.25GHz	802.11ac VHT80-BF	80	3TX
5.15-5.25GHz	802.11ax HEW80	80	3TX
5.15-5.25GHz	802.11ax HEW80-BF	80	3TX
5.15-5.25GHz	802.11a	20	4TX
5.15-5.25GHz	802.11n HT20	20	4TX
5.15-5.25GHz	802.11n HT20-BF	20	4TX
5.15-5.25GHz	802.11ac VHT20	20	4TX
5.15-5.25GHz	802.11ac VHT20-BF	20	4TX
5.15-5.25GHz	802.11ax HEW20	20	4TX
5.15-5.25GHz	802.11ax HEW20-BF	20	4TX
5.15-5.25GHz	802.11n HT40	40	4TX
5.15-5.25GHz	802.11n HT40-BF	40	4TX
5.15-5.25GHz	802.11ac VHT40	40	4TX
5.15-5.25GHz	802.11ac VHT40-BF	40	4TX
5.15-5.25GHz	802.11ax HEW40	40	4TX
5.15-5.25GHz	802.11ax HEW40-BF	40	4TX

5.15-5.25GHz	802.11ac VHT80	80	4TX
5.15-5.25GHz	802.11ac VHT80-BF	80	4TX
5.15-5.25GHz	802.11ax HEW80	80	4TX
5.15-5.25GHz	802.11ax HEW80-BF	80	4TX
5.725-5.85GHz	802.11a	20	1TX
5.725-5.85GHz	802.11n HT20	20	1TX
5.725-5.85GHz	802.11ac VHT20	20	1TX
5.725-5.85GHz	802.11ax HEW20	20	1TX
5.725-5.85GHz	802.11n HT40	40	1TX
5.725-5.85GHz	802.11ac VHT40	40	1TX
5.725-5.85GHz	802.11ax HEW40	40	1TX
5.725-5.85GHz	802.11ac VHT80	80	1TX
5.725-5.85GHz	802.11ax HEW80	80	1TX
5.725-5.85GHz	802.11a	20	2TX
5.725-5.85GHz	802.11n HT20	20	2TX
5.725-5.85GHz	802.11n HT20-BF	20	2TX
5.725-5.85GHz	802.11ac VHT20	20	2TX
5.725-5.85GHz	802.11ac VHT20-BF	20	2TX
5.725-5.85GHz	802.11ax HEW20	20	2TX
5.725-5.85GHz	802.11ax HEW20-BF	20	2TX
5.725-5.85GHz	802.11n HT40	40	2TX
5.725-5.85GHz	802.11n HT40-BF	40	2TX
5.725-5.85GHz	802.11ac VHT40	40	2TX
5.725-5.85GHz	802.11ac VHT40-BF	40	2TX
5.725-5.85GHz	802.11ax HEW40	40	2TX
5.725-5.85GHz	802.11ax HEW40-BF	40	2TX
5.725-5.85GHz	802.11ac VHT80	80	2TX
5.725-5.85GHz	802.11ac VHT80-BF	80	2TX
5.725-5.85GHz	802.11ax HEW80	80	2TX
5.725-5.85GHz	802.11ax HEW80-BF	80	2TX
5.725-5.85GHz	802.11a	20	3TX
5.725-5.85GHz	802.11n HT20	20	3TX
5.725-5.85GHz	802.11n HT20-BF	20	3TX
5.725-5.85GHz	802.11ac VHT20	20	3TX
5.725-5.85GHz	802.11ac VHT20-BF	20	3TX

5.725-5.85GHz	802.11ax HEW20	20	3TX
5.725-5.85GHz	802.11ax HEW20-BF	20	3TX
5.725-5.85GHz	802.11n HT40	40	3TX
5.725-5.85GHz	802.11n HT40-BF	40	3TX
5.725-5.85GHz	802.11ac VHT40	40	3TX
5.725-5.85GHz	802.11ac VHT40-BF	40	3TX
5.725-5.85GHz	802.11ax HEW40	40	3TX
5.725-5.85GHz	802.11ax HEW40-BF	40	3TX
5.725-5.85GHz	802.11ac VHT80	80	3TX
5.725-5.85GHz	802.11ac VHT80-BF	80	3TX
5.725-5.85GHz	802.11ax HEW80	80	3TX
5.725-5.85GHz	802.11ax HEW80-BF	80	3TX
5.725-5.85GHz	802.11a	20	4TX
5.725-5.85GHz	802.11n HT20	20	4TX
5.725-5.85GHz	802.11n HT20-BF	20	4TX
5.725-5.85GHz	802.11ac VHT20	20	4TX
5.725-5.85GHz	802.11ac VHT20-BF	20	4TX
5.725-5.85GHz	802.11ax HEW20	20	4TX
5.725-5.85GHz	802.11ax HEW20-BF	20	4TX
5.725-5.85GHz	802.11n HT40	40	4TX
5.725-5.85GHz	802.11n HT40-BF	40	4TX
5.725-5.85GHz	802.11ac VHT40	40	4TX
5.725-5.85GHz	802.11ac VHT40-BF	40	4TX
5.725-5.85GHz	802.11ax HEW40	40	4TX
5.725-5.85GHz	802.11ax HEW40-BF	40	4TX
5.725-5.85GHz	802.11ac VHT80	80	4TX
5.725-5.85GHz	802.11ac VHT80-BF	80	4TX
5.725-5.85GHz	802.11ax HEW80	80	4TX
5.725-5.85GHz	802.11ax HEW80-BF	80	4TX

Note:
- 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40 and VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- HEW20, HEW40 and HEW80 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- BWch is the nominal channel bandwidth.
- Nss-Min is the minimum number of spatial streams.
- Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector
1	1	-	-	-	-
2	2	-	-	-	-
3	3	-	-	-	-
4	4	-	-	-	-

Number of Transmit Antennas & Bandwidth

Number of Transmit Antennas	1TX			2TX			3TX			4TX		
Bandwidth Mode	20MHz	40MHz	80MHz	20MHz	40MHz	80MHz	20MHz	40MHz	80MHz	20MHz	40MHz	80MHz
802.11a	V	X	X	V	X	X	V	X	X	V	X	X
802.11n	V	V	X	V	V	X	V	V	X	V	V	X
802.11ac	V	V	V	V	V	V	V	V	V	V	V	V
802.11ax	V	V	V	V	V	V	V	V	V	V	V	V

Directional Gain (dBi) for TxBF & SDM mode					
Bandwidth Mode	Frequency	1 Stream 4 TX for TxBF mode	2 Stream 4 TX for TxBF mode	3 Stream 4 TX for TxBF mode	4 Stream 4 TX for SDM mode
20MHz	5180MHz	8.2	5.6	5.1	2.6
	5200MHz	8.2	5.6	5.1	2.6
	5240MHz	8.2	5.6	5.1	2.6
	5745MHz	8.7	6.0	5.4	3.0
	5785MHz	7.8	5.5	5.2	2.6
	5825MHz	7.8	5.5	5.2	2.6
40MHz	5190MHz	8.2	5.6	5.1	2.6
	5230MHz	8.2	5.6	5.1	2.6
	5755MHz	7.8	5.5	5.2	2.6
	5795MHz	7.8	5.5	5.2	2.6
80MHz	5210MHz	8.2	5.6	5.1	2.6
	5775MHz	7.8	5.5	5.2	2.6

Note: The above information was declared by manufacturer.

1.1.3 Mode Test Duty Cycle

For non-beamforming mode:
4 Stream 4 TX for SDM mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ac VHT20	0.989	0.05	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT40	0.971	0.13	952.5u	3k
802.11ac VHT80	0.852	0.7	161.25u	10k
802.11ax HEW20	0.931	0.31	437.5u	3k
802.11ax HEW40	0.898	0.47	261.25u	10k
802.11ax HEW80	0.844	0.74	170u	10k

For beamforming mode:
1 Stream 4 TX for TxBF mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ac VHT20-BF	0.954	0.2	3.84m	300
802.11ac VHT40-BF	0.959	0.18	3.695m	300
802.11ac VHT80-BF	0.943	0.25	5.105m	300
802.11ax HEW20-BF	0.928	0.32	2.928m	1k
802.11ax HEW40-BF	0.968	0.14	4.36m	300
802.11ax HEW80-BF	0.962	0.17	4.85m	300

2 Stream 4 TX for TxBF mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ac VHT20-BF	0.956	0.2	3.84m	300
802.11ac VHT40-BF	0.943	0.25	4.61m	300
802.11ac VHT80-BF	0.955	0.2	5.103m	300
802.11ax HEW20-BF	0.953	0.21	4.368m	300
802.11ax HEW40-BF	0.945	0.25	5.085m	300
802.11ax HEW80-BF	0.912	0.4	5.198m	300

Note:
- DC is Duty Cycle.
- DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

EUT Power Type	From power adapter			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for 11n, VHT, 11ax in 2.4GHz and 11n, 11ac, 11ax in 5GHz.			
Function	☐	Outdoor P2M	☒	Indoor P2M
	☐	Fixed P2P	☐	Client
Test Software Version	For non-beamforming mode: accessMTool_3.1.0.1			
	For beamforming mode: Telnet			

Note: The above information was declared by manufacturer.

1.2 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR FCC Part 15
- ANSI C63.10-2013
- FCC KDB 789033 D02 v02r01
- FCC KDB 662911 D01 v02r01
- FCC KDB 412172 D01 v01r01

1.3 Testing Location Information

Testing Location							
☐	HWA YA	ADD	:	No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)			
		TEL	:	886-3-327-3456	FAX	:	886-3-327-0973
☒	JHUBEI	ADD	:	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 Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Eddie Weng	26~27.7°C / 62~64%	Jul. 23, 2019~Jul. 26, 2019
Radiated below 1GHz	03CH05-CB	Cola Fan	26~27.3°C / 62~66%	Jul. 25, 2019
Radiated above 1GHz	03CH03-CB	Mason Chen	27.4~28.1°C / 62~66%	Jun. 28, 2019~Jul. 10, 2019
AC Conduction	CO01-CB	Max Lin	24.1~24.6°C / 58~59%	Jul. 26, 2019

Test site Designation No. TW0006 with FCC
Test site registered number IC 4086B with Industry Canada.

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	5.1 dB	Confidence levels of 95%
Conducted Emission	2.4 dB	Confidence levels of 95%
Output Power Measurement	1.5 dB	Confidence levels of 95%
Power Density Measurement	2.4 dB	Confidence levels of 95%
Bandwidth Measurement	2%	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

For non-beamforming mode:
4 Stream 4 TX for SDM mode:

Mode	Power Setting
802.11ac VHT20_Nss4,(MCS0)_4TX	-
5180MHz	77
5200MHz	91
5240MHz	94
5745MHz	93
5785MHz	94
5825MHz	94
802.11ax HEW20_Nss4,(MCS0)_4TX	-
5180MHz	77
5200MHz	91
5240MHz	94
5745MHz	93
5785MHz	94
5825MHz	94
802.11ac VHT40_Nss4,(MCS0)_4TX	-
5190MHz	68
5230MHz	86
5755MHz	92
5795MHz	92
802.11ax HEW40_Nss4,(MCS0)_4TX	-
5190MHz	68
5230MHz	86
5755MHz	92
5795MHz	92
802.11ac VHT80_Nss4,(MCS0)_4TX	-
5210MHz	68
5775MHz	81
802.11ax HEW80_Nss4,(MCS0)_4TX	-
5210MHz	68
5775MHz	81

For beamforming mode:
1 Stream 4 TX for TxBF mode:

Mode	Power Setting
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-
5180MHz	73
5200MHz	87
5240MHz	86
5745MHz	85
5785MHz	89
5825MHz	89
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
5180MHz	73
5200MHz	87
5240MHz	86
5745MHz	85
5785MHz	89
5825MHz	89
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-
5190MHz	69
5230MHz	85
5755MHz	88
5795MHz	88
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
5190MHz	69
5230MHz	85
5755MHz	88
5795MHz	88
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-
5210MHz	67
5775MHz	80
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-
5210MHz	67
5775MHz	80

2 Stream 4 TX for TxBF mode:

Mode	Power Setting
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-
5180MHz	76
5200MHz	90
5240MHz	91
5745MHz	95
5785MHz	95
5825MHz	95
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-
5190MHz	69
5230MHz	87
5755MHz	92
5795MHz	92
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-
5210MHz	68
5775MHz	86
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	-
5180MHz	76
5200MHz	90
5240MHz	91
5745MHz	95
5785MHz	95
5825MHz	95
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	-
5190MHz	69
5230MHz	87
5755MHz	92
5795MHz	92
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	-
5210MHz	68
5775MHz	86

Note:
- 11a CDD、SDM modes can be covered by 11ac 20M SDM 4T/4S mode.
- 4T3S TxBF modes can be covered by 4T/2S TxBF mode.
- VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.
- There are two functions of EUT, one is beamforming function, and the other is non-beamforming function for for 11n, VHT, 11ax in 2.4GHz and 11n, 11ac, 11ax in 5GHz. All test results were recorded in the report.

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	Normal Link
1	EUT + Adapter 1
2	EUT + Adapter 2

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth Maximum Conducted Output Power Peak Power Spectral Density
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link
1	EUT + Adapter 1
2	EUT + Adapter 2
Operating Mode > 1GHz	CTX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
1	WLAN 2.4GHz + WLAN 5GHz
Refer to Appendix F for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz
2	WLAN 5GHz + Zigbee + Bluetooth
Refer to Sporton Test Report No.: FA971031 for Co-location RF Exposure Evaluation.	

Note: The EUT can only be used at Y axis position.

2.3 EUT Operation during Test

For CTX Mode:

For non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

For beamforming mode:

During the test, the following programs under WIN 7 were executed.
The program was executed as follows:
1. During the test, the EUT operation to normal function.
2. Executed command fixed test channel under Telnet.
3. Executed "Lantest.exe" to link with the remote workstation to transmit and receive packet by RX Device and transmit duty cycle no less than 98%.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories				
No.	**Equipment Name**	**Brand Name**	**Model Name**	**Rating**
1	Adapter 1	AcBel	ADK002	INPUT: 100-120V ~50/60Hz, 1.5A, OUTPUT: 12V, 4.6A
2	Adapter 2	Netbit	NBC56A120460VU	INPUT: 100-120V ~50/60Hz, 1.5A, OUTPUT: 12V, 4.6A

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	LAN NB	DELL	E6430	N/A
B	2.4G NB	DELL	E6430	N/A
C	5G NB	DELL	E6430	N/A
D	Phone1	SAMPO	HT-B 907WL	N/A
E	Phone2	SAMPO	HT-B 907WL	N/A
F	Terminal system	HUAWEI	SmartAX ma5633	N/A
G	Server	HUAWEI	ETP48200-C5A3	N/A
H	Terminal system NB	DELL	INSPIRON 3576	N/A
I	2.5G PC	DELL	T3400	N/A
J	SPLITTER	N/A	N/A	N/A
K	MoCA	Standalone	B2140	N/A
L	MoCA NB	DELL	E6430	N/A

For Radiated (below 1GHz):

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	N/A
B	NB	DELL	E4300	N/A
C	NB	DELL	E4300	N/A
D	NB	DELL	E4300	N/A
E	Phone	PHILIPS	M20	N/A
F	Phone	H-T-T	F-689	N/A
G	Terminal system	HUAWEI	SmartAX MA5633	N/A
H	MoCA	Standalone	B2140	N/A
I	NB	DELL	E4300	N/A
J	Server	HUAWEI	ETP48200-C5A3	N/A
K	NB	DELL	Inspiron 15	N/A

For Radiated (above 1GHz) and RF Conducted:

For non-beamforming mode:

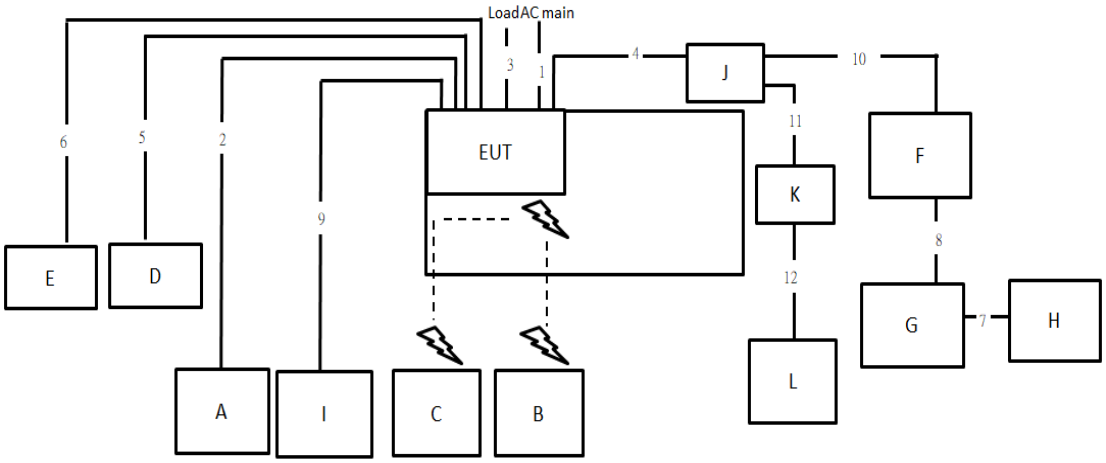
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	N/A

For beamforming mode:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	NA
B	NB	DELL	E4300	NA
C	AP (RX Device)	ASUS	RT-AX88U	N/A

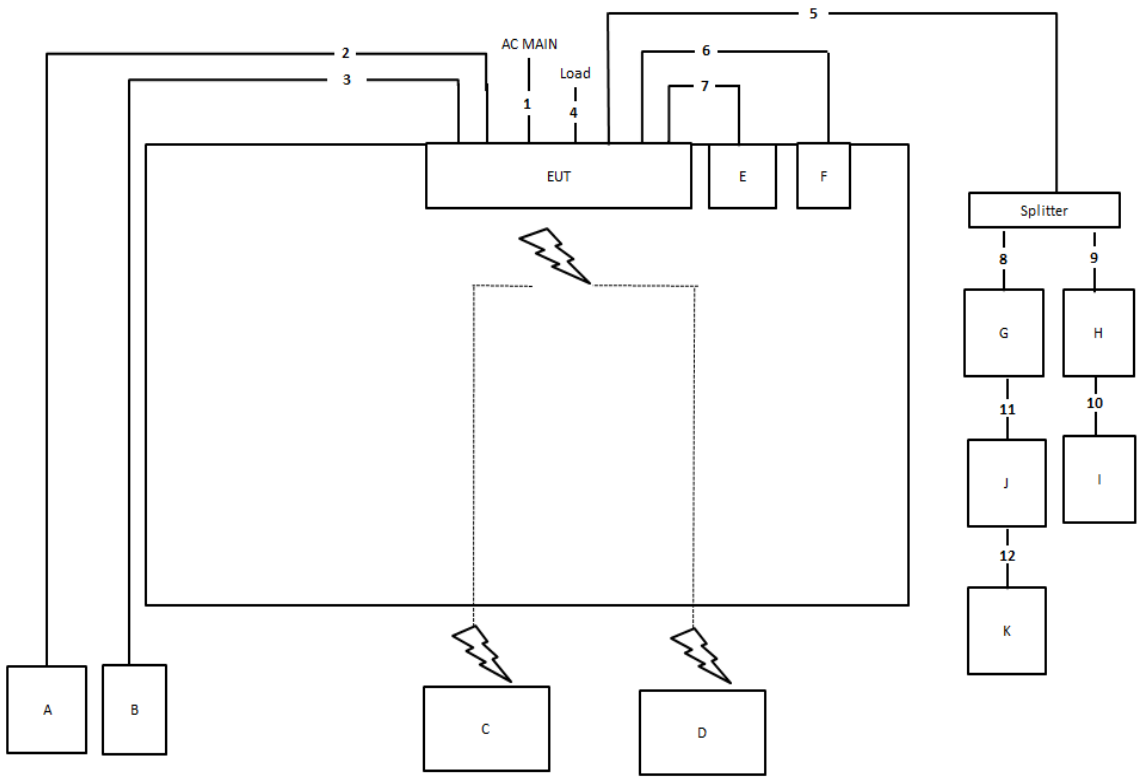
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	RJ-45 cable	No	10m
3	RJ-45 cable*2	No	1.5m
4	Coaxial cable	Yes	10m
5	RJ-11 cable	No	3m
6	RJ-11 cable	No	3m
7	RJ-45 cable	No	1.5m
8	Fiber cable	No	10m
9	RJ-45 cable	No	10m
10	Coaxial cable	Yes	10m
11	Coaxial cable	Yes	1.5m
12	RJ-45 cable	No	3m

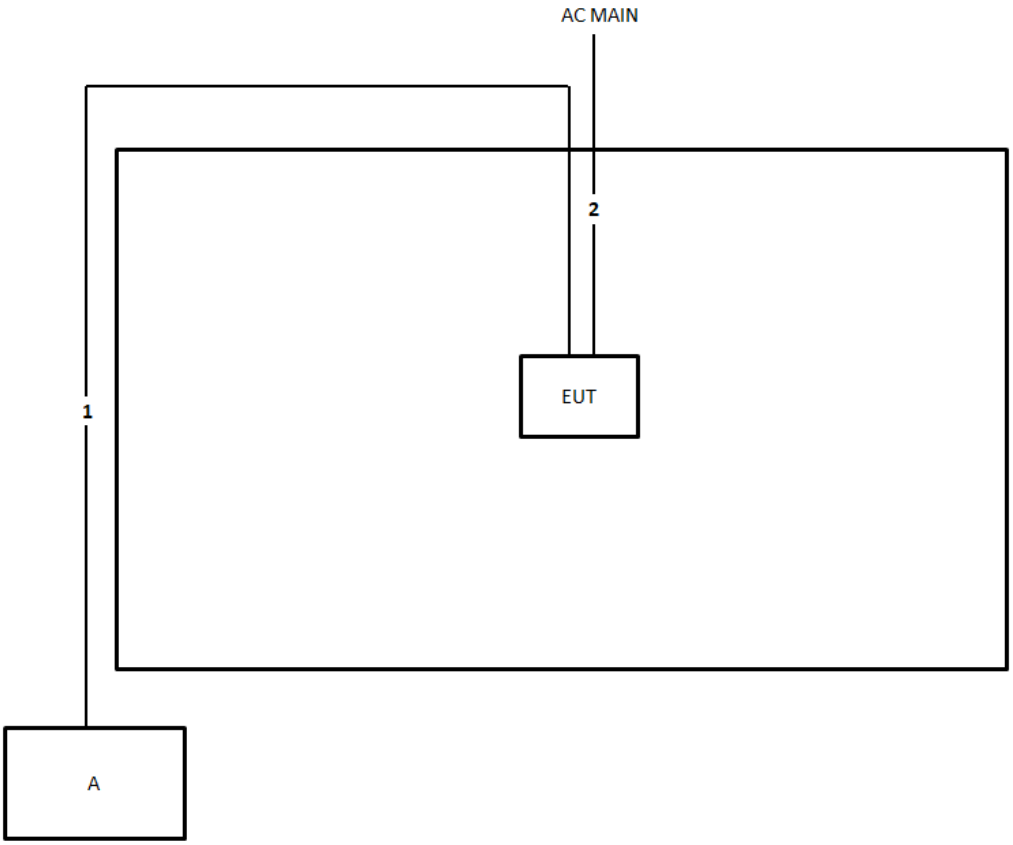
Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	1.5m
5	Coaxial cable	Yes	10m
6	RJ-11 cable	No	1.5m
7	RJ-11 cable	No	1.5m
8	Coaxial cable	Yes	1.5m
9	Coaxial cable	Yes	1.5m
10	RJ-45 cable	No	1.5m
11	Fiber cable	No	10m
12	RJ-45 cable	No	1.5m

Test Setup Diagram - Radiated Test > 1GHz

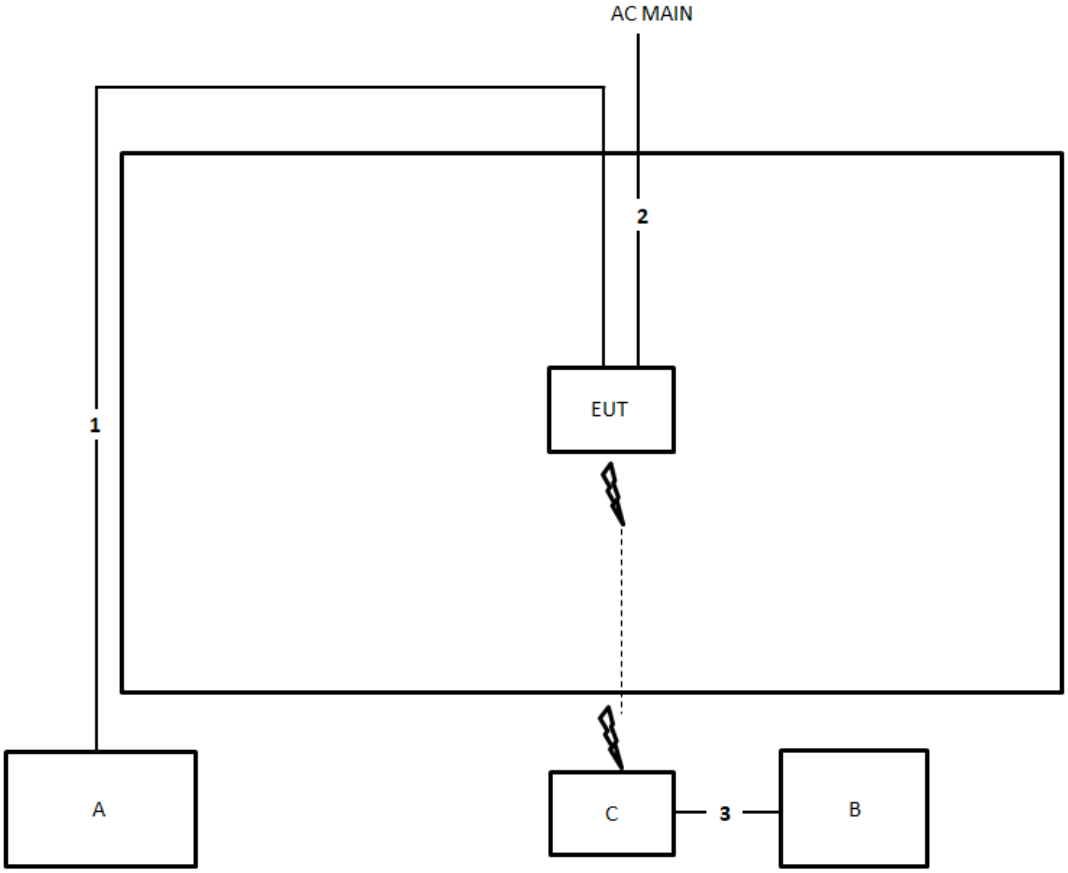
For non-beamforming mode:



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	1.8m

Test Setup Diagram - Radiated Test > 1GHz

For beamforming mode:



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	1.8m
3	RJ-45 cable	No	10m

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Measuring Instruments

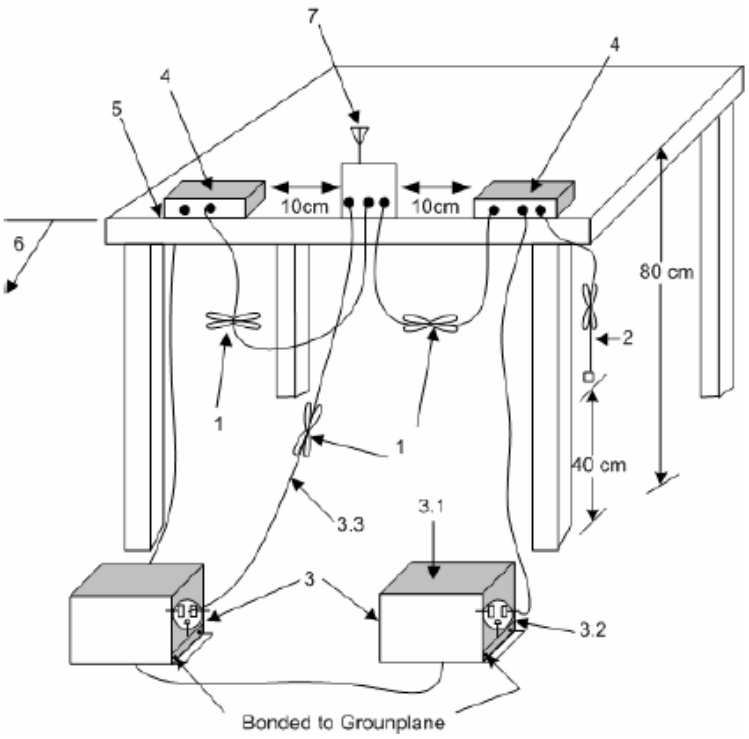
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method
☒ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup

AC Power-line Conducted Emissions



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 cm to 40 cm long.
2—The I/O cables that are not connected to an accessory 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 loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
3.1—All other equipment powered from additional LISN(s).
3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
3.3—LISN at least 80 cm from nearest part of EUT chassis.
4—Non-EUT components of EUT system being tested.
5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
☒	For the 5.15-5.25 GHz band, N/A
☐	For the 5.25-5.35 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
☐	For the 5.47-5.725 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
☒	For the 5.725-5.85 GHz band, 6 dB emission bandwidth ≥ 500kHz.
LE-LAN Devices	
☐	For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
☐	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.725-5.85 GHz band, 6 dB emission bandwidth ≥ 500kHz.

3.2.2 Measuring Instruments

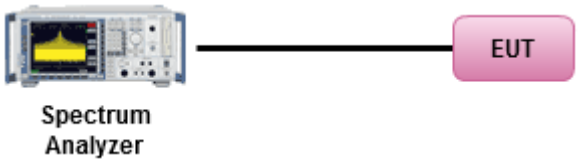
Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

Test Method		
▪	For the emission bandwidth shall be measured using one of the options below:	
	☒	Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.
	☐	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
	☐	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.

3.2.4 Test Setup

Emission Bandwidth



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
UNII Devices	
☒	For the 5.15-5.25 GHz band:
	▪ Outdoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6). e.i.r.p. at any elevation angle above 30 degrees ≤ 125mW [21dBm]
	▪ Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6)
	▪ Point-to-point AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W If G_{TX} > 23 dBi, then P_{Out} = 30 – (G_{TX} – 23).
	▪ Mobile or Portable Client: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6).
☐	For the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6).
☐	For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6).
☒	For the 5.725-5.85 GHz band:
	▪ Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
LE-LAN Devices	
☐	For the 5.15-5.25 GHz band, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
☐	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.725-5.85 GHz band:
	▪ Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
P_{Out} = maximum conducted output power in dBm, **G_{TX}** = the maximum transmitting antenna directional gain in dBi.	

3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method	
▪ Maximum Conducted Output Power	
	Average over on/off periods with duty factor
	☐ Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
	☐ Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods with duty factor
	☒ Refer as FCC KDB 789033, clause E Method PM-G (using an RF average power meter).
▪ For conducted measurement.	
	▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

RF Output Power (Power Meter)

3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Peak Power Spectral Density

3.4.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
UNII Devices	
☒	For the 5.15-5.25 GHz band:
	▪ Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 6 dBi, then P_{Out} = 17 – (G_{TX} – 6).
	▪ Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 6 dBi, then P_{Out} = 17 – (G_{TX} – 6).
	▪ Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 23 dBi, then P_{Out} = 17 – (G_{TX} – 23).
	▪ Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6)..
☐	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6).
☐	For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6).
☒	For the 5.725-5.85 GHz band:
	▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If G_{TX} > 6 dBi, then PPSD= 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
LE-LAN Devices	
☐	For the 5.15-5.25 GHz band, the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.
☐	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.
	▪ e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for 0° ≤ θ < 8° ; -13 − 0.716 (θ-8) dBW/MHz for 8° ≤ θ < 40° -35.9 − 1.22 (θ-40) dBW/MHz for 40° ≤ θ ≤ 45° ; -42 dBW/MHz for θ > 45°
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.
☐	For the 5.725-5.85 GHz band:
	▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If G_{TX} > 6 dBi, then PPSD= 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz **G_{TX}** = the maximum transmitting antenna directional gain in dBi.	

3.4.2 Measuring Instruments

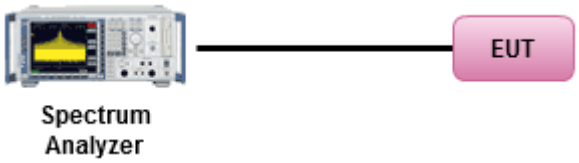
Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method		
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options:		
	☐ Refer as FCC KDB 789033, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth	
	[duty cycle ≥ 98% or external video / power trigger]	
	☒ Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).	
	☐ Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)	
	duty cycle < 98% and average over on/off periods with duty factor	
	☒ Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).	
	☐ Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)	
▪ For conducted measurement.		
	▪ If the EUT supports multiple transmit chains using options given below:	
		☒ Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the 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 NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
		☐ Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
		☐ Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.
	▪	If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \ldots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$

3.4.4 Test Setup

Power Spectral Density



3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix D

3.5 Unwanted Emissions

3.5.1 Transmitter Unwanted Emissions Limit

Unwanted emissions below 1 GHz and restricted band emissions above 1GHz limit			
Frequency Range (MHz)	**Field Strength (uV/m)**	**Field Strength (dBuV/m)**	**Measure Distance (m)**
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

Un-restricted band emissions above 1GHz Limit	
Operating Band	**Limit**
☒ 5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☐ 5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☐ 5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☒ 5.725 - 5.85 GHz	all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Note 1: Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of

linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

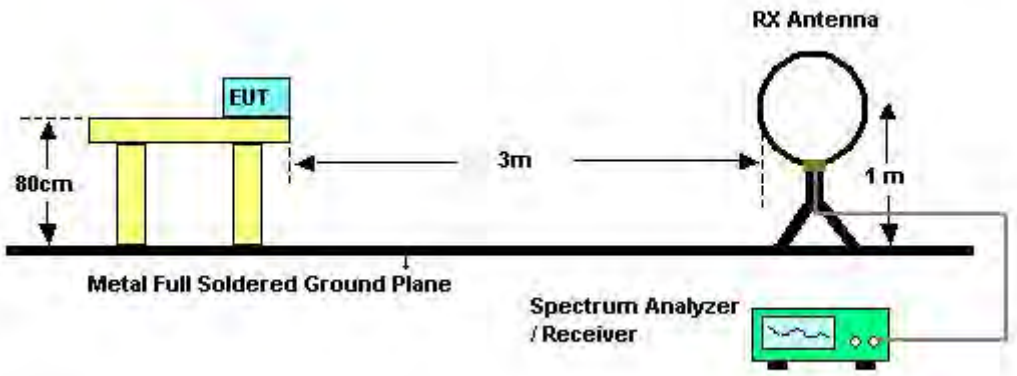
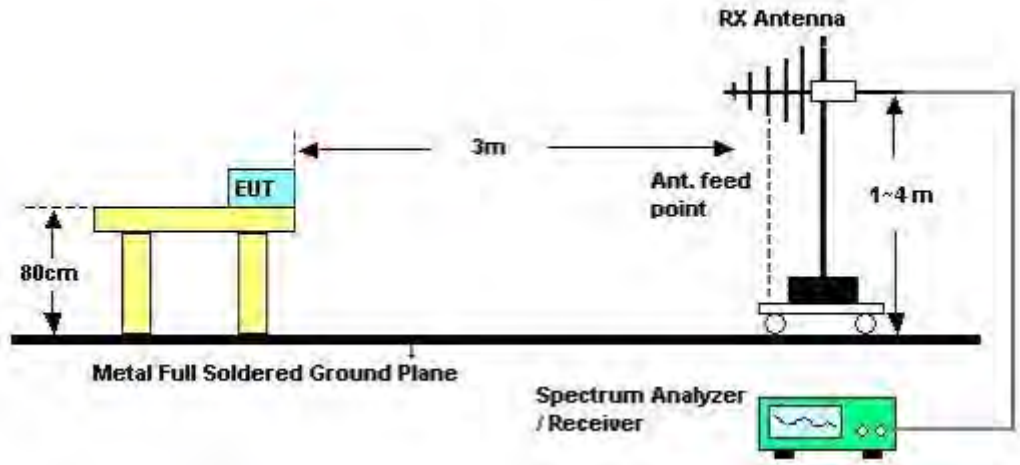
3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

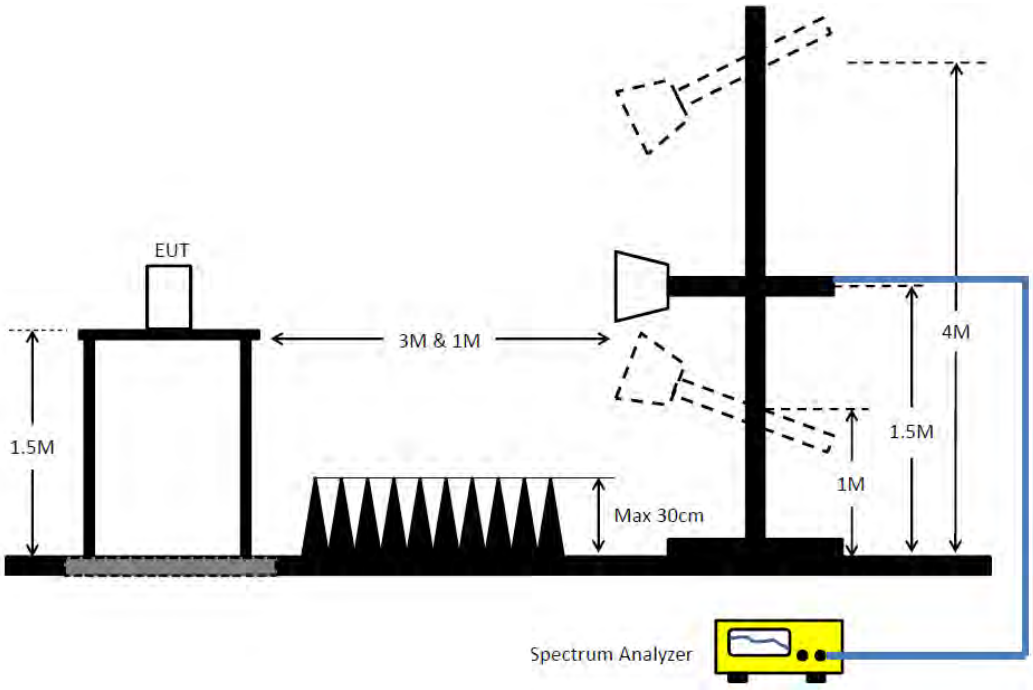
3.5.3 Test Procedures

Test Method		
▪ Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).		
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].		
▪ For the transmitter unwanted emissions shall be measured using following options below:		
	▪ Refer as FCC KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.	
	▪ Refer as FCC KDB 789033, clause G)1) for unwanted emissions into restricted bands.	
		☐ Refer as FCC KDB 789033, G)6) Method AD (Trace Averaging).
		☒ Refer as FCC KDB 789033, G)6) Method VB (Reduced VBW).
		☐ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
		☐ Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
		☒ Refer as FCC KDB 789033, clause G)5) measurement procedure peak limit.
		☐ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
▪ For radiated measurement.		
	▪ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.	
	▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.	
	▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.	
▪ The any unwanted emissions level shall not exceed the fundamental emission level.		
▪ All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.		

3.5.4 Test Setup

Transmitter Radiated Unwanted Emissions
9kHz ~30MHz

30MHz~1GHz


Above 1GHz



3.5.5 Measurement Results Calculation

The measured Level is calculated using:
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

3.5.6 Transmitter Unwanted Emissions (Below 30MHz)

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.
The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10 harmonic or 40 GHz, whichever is appropriate.

3.5.7 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E

4 Test Equipment and Calibration Data

For AC Conduction:

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 28, 2019	Jan. 29, 2020	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 24, 2018	Dec. 23, 2019	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Jan. 11, 2019	Jan. 10, 2020	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 21, 2019	May 20, 2020	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)

For Radiated (below 1GHz):

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 29, 2019	Mar. 28, 2020	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESE & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 28, 2019	Mar. 27, 2020	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 01, 2019	Apr. 30, 2020	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Jan. 31, 2019	Jan. 30, 2020	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 15, 2019	May 14, 2020	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	LOW Cable-04+23	30MHz~1GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH05-CB)

For Radiated (above 1GHz):

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Horn Antenna	ETS・Lindgren	3115	6821	750MHz~18GHz	Jan. 24, 2019	Jan. 23, 2020	Radiation (03CH03-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 27, 2019	Jun. 26, 2020	Radiation (03CH03-CB)
Pre-Amplifier	Agilent	8449B	3008A02097	1GHz ~ 26.5GHz	Dec. 20, 2018	Dec. 19, 2019	Radiation (03CH03-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 04, 2018	Jul. 03, 2019	Radiation (03CH03-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 03, 2019	Jul. 02, 2020	Radiation (03CH03-CB)
Spectrum Analyzer	R&S	FSP-40	100019	9kHz ~ 40GHz	Jun. 19, 2019	Jun. 18, 2020	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-20+27	1GHz ~ 18GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-27	1GHz ~ 18GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH03-CB)

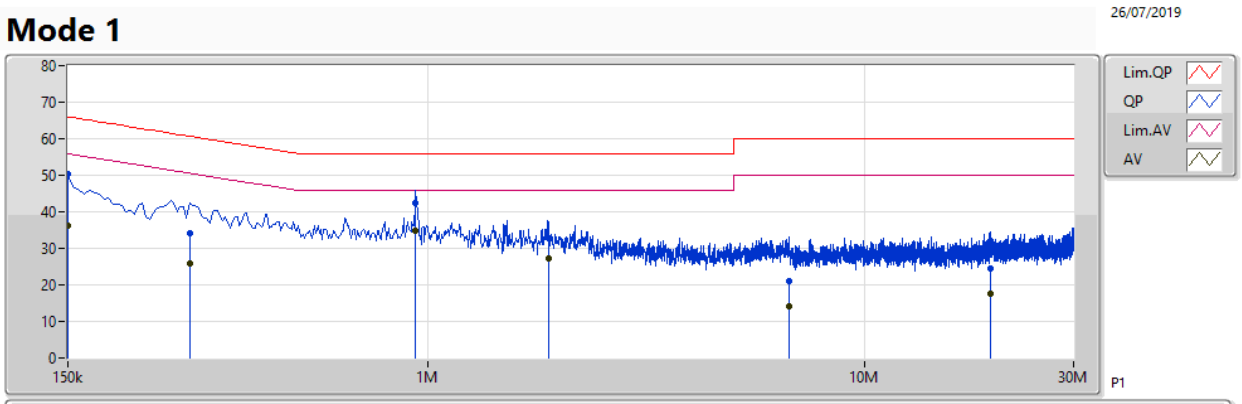
For RF Conducted:

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Feb. 25, 2019	Feb. 24, 2020	Conducted (TH01-CB)
Power Sensor	Agilent	E9327A	US40442088	50MHz~18GHz	Jan. 15, 2019	Jan. 14, 2020	Conducted (TH01-CB)
Power Meter	Agilent	E4416A	GB41291199	50MHz~18GHz	Jan. 15, 2019	Jan. 14, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-28	1 GHz –26.5 GHz	Nov. 19, 2018	Nov. 18, 2019	Conducted (TH01-CB)

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

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

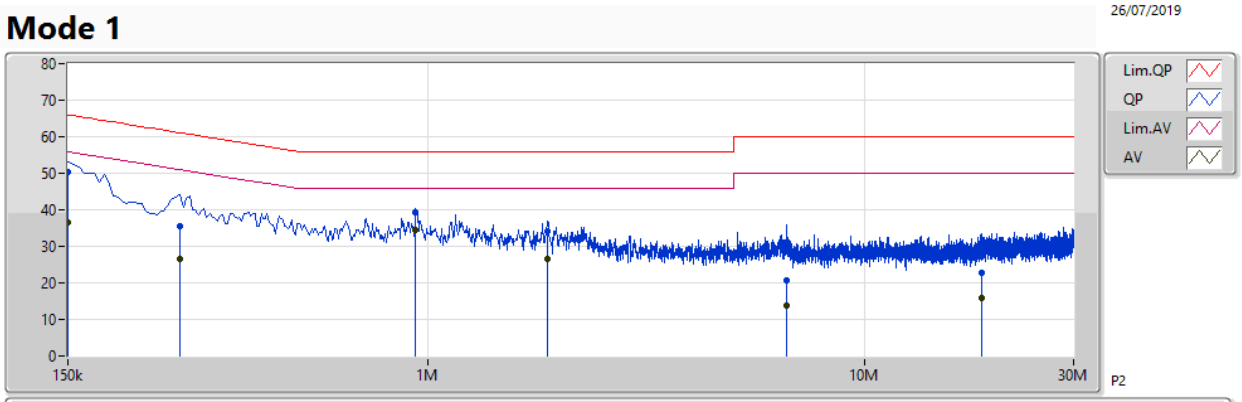
AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Line
Operating Function	Normal Link		



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	AF	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	150k	50.47	66.00	-15.53	9.90	Line	-	40.57	0.05	0.06	9.79
AV	150k	36.33	56.00	-19.67	9.90	Line	-	26.43	0.05	0.06	9.79
QP	285k	34.22	60.67	-26.45	9.92	Line	-	24.30	0.06	0.06	9.80
AV	285k	25.71	50.67	-24.96	9.92	Line	-	15.79	0.06	0.06	9.80
QP	937.5k	42.51	56.00	-13.49	9.98	Line	-	32.53	0.07	0.09	9.82
AV	937.5k	34.85	46.00	-11.15	9.98	Line	"Worst"	24.87	0.07	0.09	9.82
QP	1.883M	32.64	56.00	-23.36	10.04	Line	-	22.60	0.09	0.12	9.83
AV	1.883M	27.21	46.00	-18.79	10.04	Line	-	17.17	0.09	0.12	9.83
QP	6.707M	21.10	60.00	-38.90	10.24	Line	-	10.86	0.17	0.20	9.87
AV	6.707M	14.12	50.00	-35.88	10.24	Line	-	3.88	0.17	0.20	9.87
QP	19.374M	24.40	60.00	-35.60	10.52	Line	-	13.88	0.29	0.25	9.98
AV	19.374M	17.54	50.00	-32.46	10.52	Line	-	7.02	0.29	0.25	9.98

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

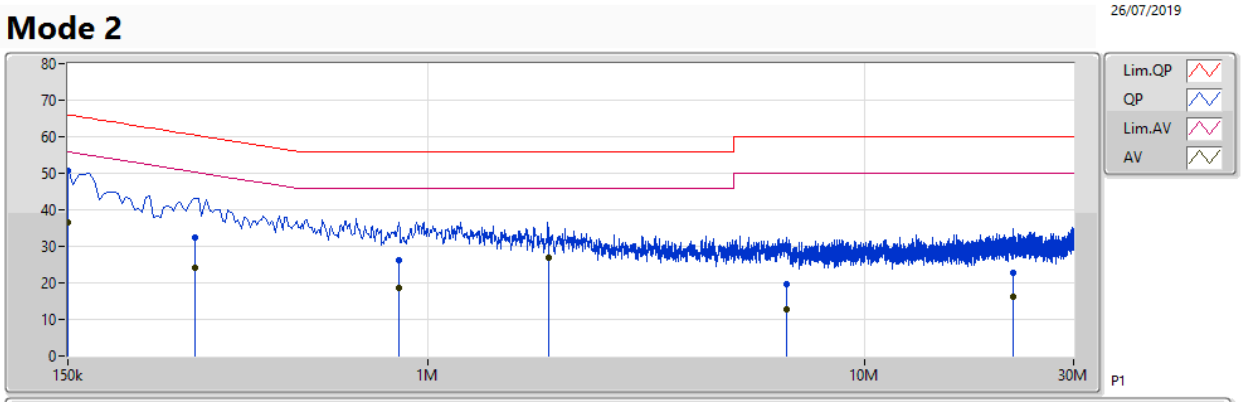
AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Neutral
Operating Function	Normal Link		



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	AF	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	150k	50.30	66.00	-15.70	9.89	Neutral	-	40.41	0.04	0.06	9.79
AV	150k	36.48	56.00	-19.52	9.89	Neutral	-	26.59	0.04	0.06	9.79
QP	271.5k	35.40	61.07	-25.67	9.90	Neutral	-	25.50	0.04	0.06	9.80
AV	271.5k	26.48	51.07	-24.59	9.90	Neutral	-	16.58	0.04	0.06	9.80
QP	937.5k	39.35	56.00	-16.65	9.97	Neutral	-	29.38	0.06	0.09	9.82
AV	937.5k	34.47	46.00	-11.53	9.97	Neutral	"Worst"	24.50	0.06	0.09	9.82
QP	1.874M	34.07	56.00	-21.93	10.02	Neutral	-	24.05	0.07	0.12	9.83
AV	1.874M	26.63	46.00	-19.37	10.02	Neutral	-	16.61	0.07	0.12	9.83
QP	6.621M	20.76	60.00	-39.24	10.22	Neutral	-	10.54	0.15	0.20	9.87
AV	6.621M	13.82	50.00	-36.18	10.22	Neutral	-	3.60	0.15	0.20	9.87
QP	18.519M	22.76	60.00	-37.24	10.45	Neutral	-	12.31	0.24	0.24	9.97
AV	18.519M	15.81	50.00	-34.19	10.45	Neutral	-	5.36	0.24	0.24	9.97

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

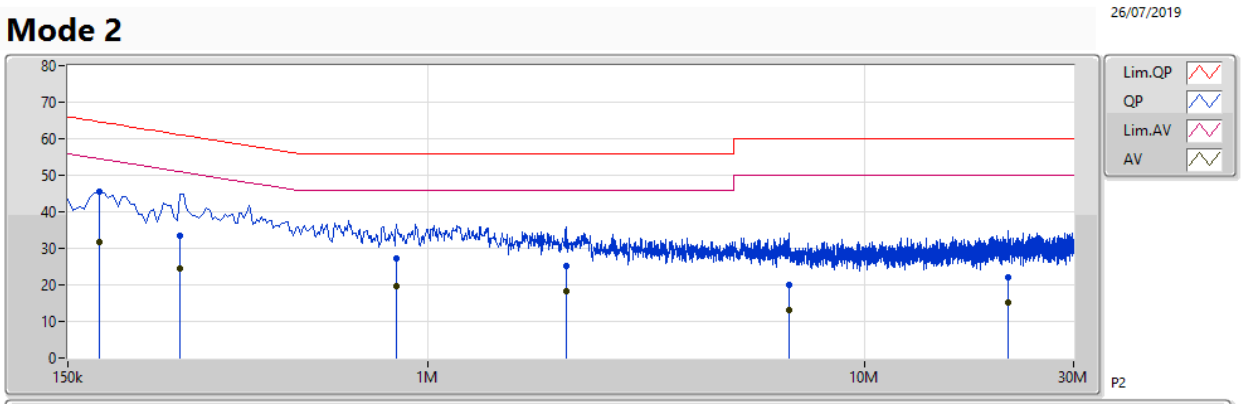
AC Power-line Conducted Emissions Result			
Operating Mode	2	**Power Phase**	Line
Operating Function	Normal Link		



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	AF	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	150k	50.85	66.00	-15.15	9.90	Line	"Worst"	40.95	0.05	0.06	9.79
AV	150k	36.55	56.00	-19.45	9.90	Line	-	26.65	0.05	0.06	9.79
QP	294k	32.47	60.42	-27.95	9.92	Line	-	22.55	0.06	0.06	9.80
AV	294k	24.03	50.42	-26.39	9.92	Line	-	14.11	0.06	0.06	9.80
QP	856.5k	26.27	56.00	-29.73	9.97	Line	-	16.30	0.07	0.08	9.82
AV	856.5k	18.57	46.00	-27.43	9.97	Line	-	8.60	0.07	0.08	9.82
QP	1.883M	31.77	56.00	-24.23	10.04	Line	-	21.73	0.09	0.12	9.83
AV	1.883M	26.81	46.00	-19.19	10.04	Line	-	16.77	0.09	0.12	9.83
QP	6.612M	19.75	60.00	-40.25	10.24	Line	-	9.51	0.17	0.20	9.87
AV	6.612M	12.86	50.00	-37.14	10.24	Line	-	2.62	0.17	0.20	9.87
QP	21.867M	22.66	60.00	-37.34	10.60	Line	-	12.06	0.31	0.29	10.00
AV	21.867M	16.11	50.00	-33.89	10.60	Line	-	5.51	0.31	0.29	10.00

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

AC Power-line Conducted Emissions Result			
Operating Mode	2	**Power Phase**	Neutral
Operating Function	Normal Link		



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	AF	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	177k	45.63	64.62	-18.99	9.89	Neutral	"Worst"	35.74	0.04	0.06	9.79
AV	177k	31.62	54.62	-23.00	9.89	Neutral	-	21.73	0.04	0.06	9.79
QP	271.5k	33.35	61.07	-27.72	9.90	Neutral	-	23.45	0.04	0.06	9.80
AV	271.5k	24.62	51.07	-26.45	9.90	Neutral	-	14.72	0.04	0.06	9.80
QP	847.5k	27.18	56.00	-28.82	9.96	Neutral	-	17.22	0.06	0.08	9.82
AV	847.5k	19.51	46.00	-26.49	9.96	Neutral	-	9.55	0.06	0.08	9.82
QP	2.067M	25.32	56.00	-30.68	10.02	Neutral	-	15.30	0.07	0.12	9.83
AV	2.067M	18.30	46.00	-27.70	10.02	Neutral	-	8.28	0.07	0.12	9.83
QP	6.716M	20.13	60.00	-39.87	10.22	Neutral	-	9.91	0.15	0.20	9.87
AV	6.716M	13.21	50.00	-36.79	10.22	Neutral	-	2.99	0.15	0.20	9.87
QP	21.269M	22.22	60.00	-37.78	10.55	Neutral	-	11.67	0.27	0.28	10.00
AV	21.269M	15.26	50.00	-34.74	10.55	Neutral	-	4.71	0.27	0.28	10.00

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

For non-beamforming mode:
4 Stream 4 TX for SDM mode:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT20_Nss4,(MCS0)_4TX	41.76M	18.291M	18M3D1D	21.51M	17.661M
802.11ax HEW20_Nss4,(MCS0)_4TX	42.48M	19.28M	19M3D1D	21.45M	18.951M
802.11ac VHT40_Nss4,(MCS0)_4TX	75.96M	36.282M	36M3D1D	39.72M	36.162M
802.11ax HEW40_Nss4,(MCS0)_4TX	48.84M	37.781M	37M8D1D	39.9M	37.481M
802.11ac VHT80_Nss4,(MCS0)_4TX	81.48M	77.241M	77M2D1D	81.24M	76.882M
802.11ax HEW80_Nss4,(MCS0)_4TX	81.6M	77.001M	77M0D1D	81.36M	76.642M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20_Nss4,(MCS0)_4TX	17.61M	17.931M	17M9D1D	17.55M	17.781M
802.11ax HEW20_Nss4,(MCS0)_4TX	18.9M	19.16M	19M2D1D	18.36M	19.07M
802.11ac VHT40_Nss4,(MCS0)_4TX	36.36M	36.462M	36M5D1D	35.88M	36.282M
802.11ax HEW40_Nss4,(MCS0)_4TX	37.74M	37.841M	37M8D1D	36.36M	37.601M
802.11ac VHT80_Nss4,(MCS0)_4TX	77.4M	77.121M	77M1D1D	76.08M	76.882M
802.11ax HEW80_Nss4,(MCS0)_4TX	77.28M	77.361M	77M4D1D	76.08M	77.001M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth;

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.66M	17.751M	21.66M	17.751M	21.78M	17.721M	21.51M	17.661M
5200MHz	Pass	Inf	36.93M	17.841M	37.47M	17.931M	37.41M	17.931M	35.58M	17.871M
5240MHz	Pass	Inf	37.59M	17.841M	41.76M	18.231M	41.64M	18.291M	38.37M	17.871M
5745MHz	Pass	500k	17.58M	17.841M	17.58M	17.871M	17.58M	17.901M	17.55M	17.781M
5785MHz	Pass	500k	17.55M	17.931M	17.61M	17.901M	17.58M	17.931M	17.55M	17.811M
5825MHz	Pass	500k	17.55M	17.841M	17.61M	17.841M	17.58M	17.931M	17.55M	17.841M
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.45M	18.951M	21.87M	19.01M	21.45M	19.01M	21.75M	18.981M
5200MHz	Pass	Inf	28.89M	19.04M	36.06M	19.07M	38.01M	19.16M	40.02M	19.13M
5240MHz	Pass	Inf	37.38M	19.13M	42.24M	19.28M	42.48M	19.28M	40.47M	19.13M
5745MHz	Pass	500k	18.84M	19.1M	18.39M	19.13M	18.72M	19.16M	18.84M	19.07M
5785MHz	Pass	500k	18.84M	19.07M	18.51M	19.07M	18.63M	19.07M	18.87M	19.07M
5825MHz	Pass	500k	18.81M	19.07M	18.36M	19.07M	18.66M	19.16M	18.9M	19.1M
802.11ac VHT40_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40.08M	36.162M	39.84M	36.222M	39.72M	36.162M	40.02M	36.282M
5230MHz	Pass	Inf	51.6M	36.222M	75.96M	36.282M	45.96M	36.282M	40.26M	36.282M
5755MHz	Pass	500k	36.36M	36.462M	36.3M	36.282M	35.88M	36.462M	36.36M	36.462M
5795MHz	Pass	500k	36.36M	36.342M	36.3M	36.342M	36M	36.402M	36.36M	36.402M
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40.08M	37.541M	39.9M	37.481M	39.9M	37.481M	40.08M	37.541M
5230MHz	Pass	Inf	46.14M	37.721M	48.84M	37.781M	41.22M	37.601M	40.08M	37.661M
5755MHz	Pass	500k	37.74M	37.721M	37.56M	37.781M	36.36M	37.601M	37.44M	37.841M
5795MHz	Pass	500k	37.26M	37.721M	37.62M	37.781M	37.68M	37.781M	37.44M	37.721M
802.11ac VHT80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.36M	76.882M	81.24M	77.241M	81.36M	77.001M	81.48M	77.121M
5775MHz	Pass	500k	76.08M	76.882M	77.04M	77.121M	77.04M	77.121M	77.4M	77.001M
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.36M	76.642M	81.36M	77.001M	81.36M	76.882M	81.6M	76.882M
5775MHz	Pass	500k	76.08M	77.001M	77.04M	77.121M	77.28M	77.361M	77.04M	77.121M

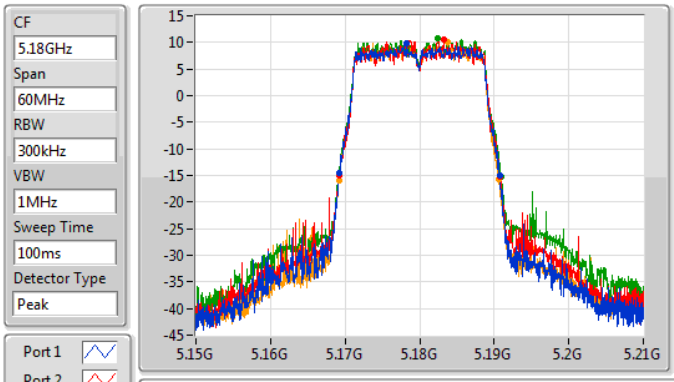
Port X-N dB = Port **X** 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port **X** 99% occupied bandwidth;

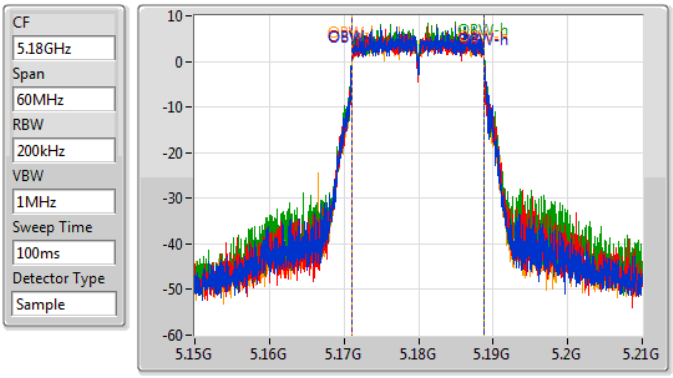
802.11ac VHT20_Nss4,(MCS0)_4TX

EBW

5180MHz

19/07/2019





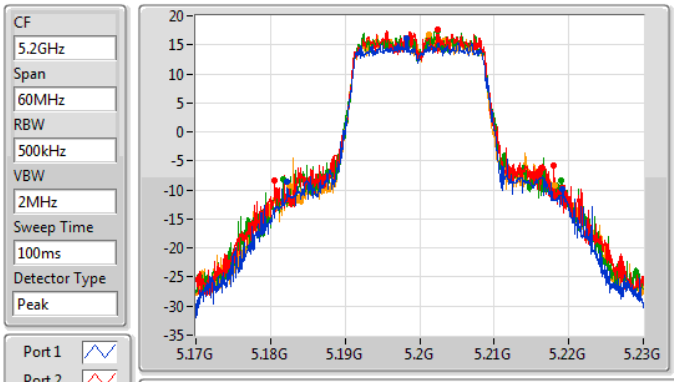
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.66M	5.16914G	5.1908G	17.751M	5.171094G	5.188846G	Inf	1
21.66M	5.16917G	5.19083G	17.751M	5.171094G	5.188846G	Inf	2
21.78M	5.16914G	5.19092G	17.721M	5.171094G	5.188816G	Inf	3
21.51M	5.16914G	5.19065G	17.661M	5.171124G	5.188786G	Inf	4

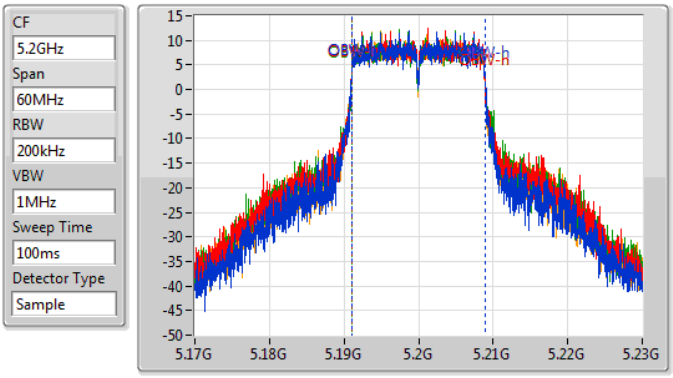
802.11ac VHT20_Nss4,(MCS0)_4TX

EBW

5200MHz

19/07/2019



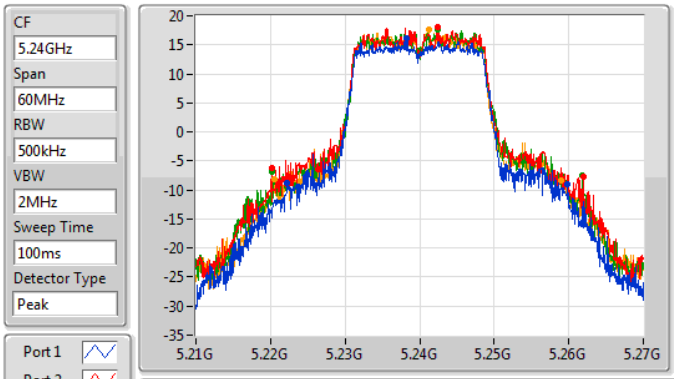


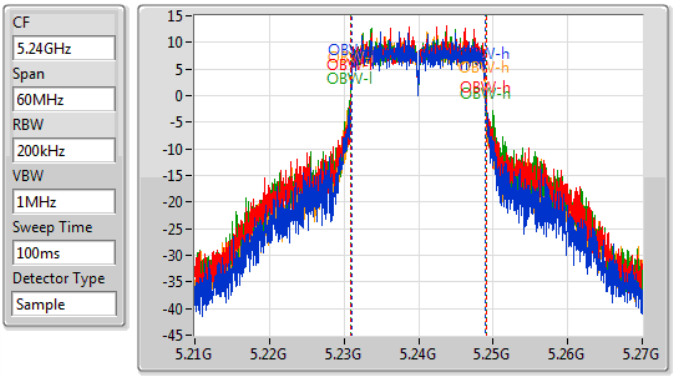
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.93M	5.18227G	5.2192G	17.841M	5.191034G	5.208876G	Inf	1
37.47M	5.18056G	5.21803G	17.931M	5.191004G	5.208936G	Inf	2
37.41M	5.18164G	5.21905G	17.931M	5.191004G	5.208936G	Inf	3
35.58M	5.18254G	5.21812G	17.871M	5.191004G	5.208876G	Inf	4

802.11ac VHT20_Nss4,(MCS0)_4TX EBW

5240MHz

19/07/2019



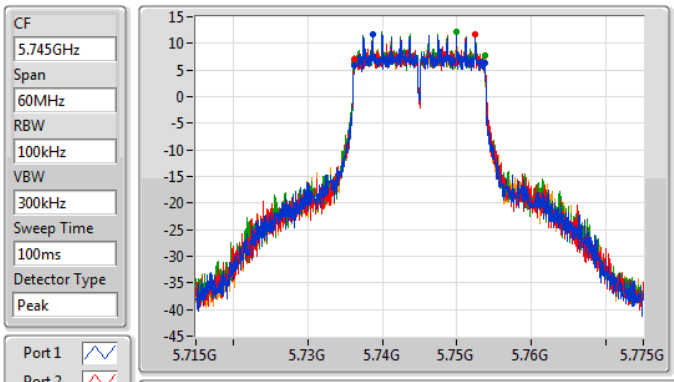


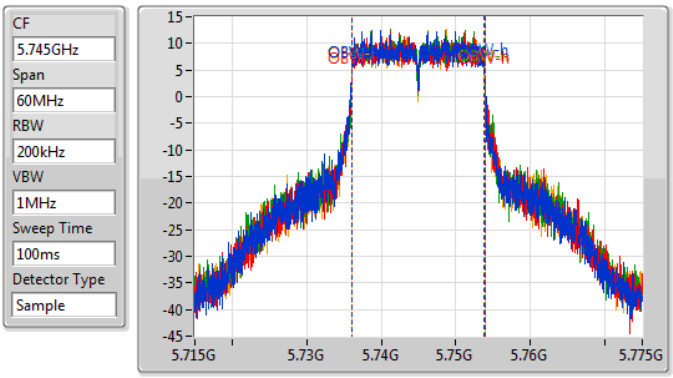
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.59M	5.22227G	5.25986G	17.841M	5.231034G	5.248876G	Inf	1
41.76M	5.22014G	5.2619G	18.231M	5.230885G	5.249115G	Inf	2
41.64M	5.22014G	5.26178G	18.291M	5.230885G	5.249175G	Inf	3
38.37M	5.22056G	5.25893G	17.871M	5.231034G	5.248906G	Inf	4

802.11ac VHT20_Nss4,(MCS0)_4TX EBW

5745MHz

19/07/2019



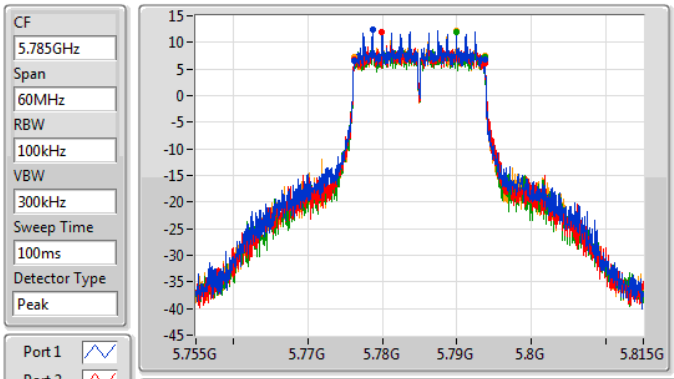


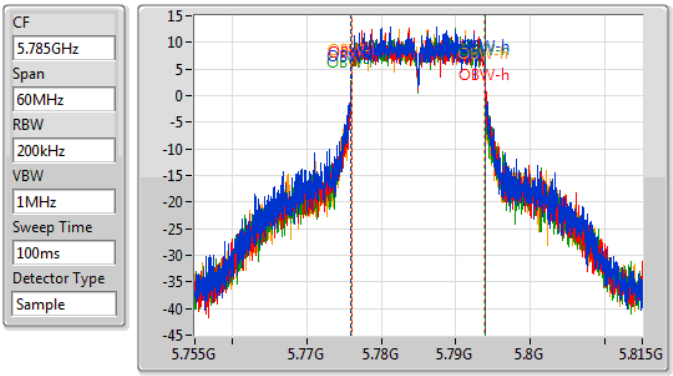
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.58M	5.73618G	5.75376G	17.841M	5.736004G	5.753846G	500k	1
17.58M	5.73618G	5.75376G	17.871M	5.736004G	5.753876G	500k	2
17.58M	5.73615G	5.75373G	17.901M	5.736004G	5.753906G	500k	3
17.55M	5.73618G	5.75373G	17.781M	5.736064G	5.753846G	500k	4

802.11ac VHT20_Nss4,(MCS0)_4TX EBW

5785MHz

19/07/2019



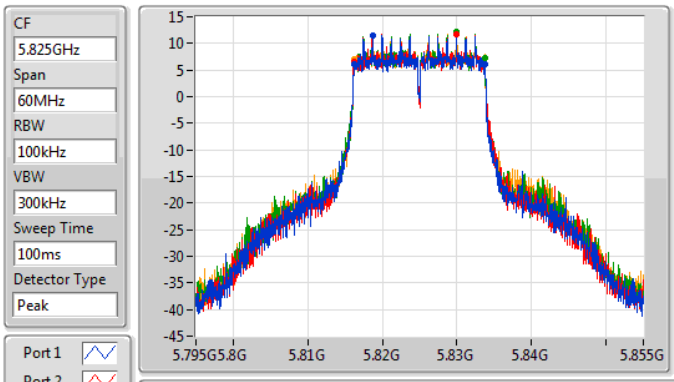


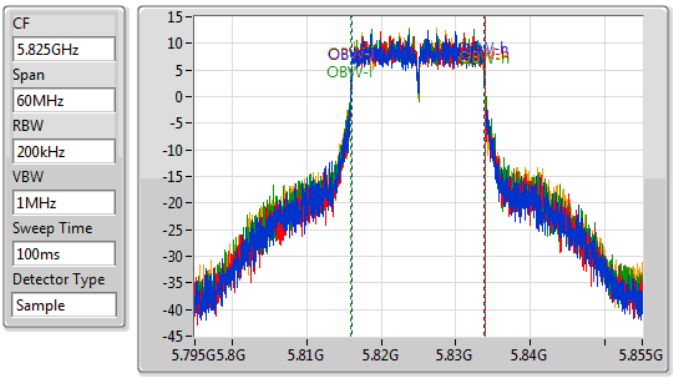
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.55M	5.77618G	5.79373G	17.931M	5.775975G	5.793906G	500k	1
17.61M	5.77615G	5.79376G	17.901M	5.776034G	5.793936G	500k	2
17.58M	5.77615G	5.79373G	17.931M	5.775975G	5.793906G	500k	3
17.55M	5.77618G	5.79373G	17.811M	5.776034G	5.793846G	500k	4

802.11ac VHT20_Nss4,(MCS0)_4TX EBW

5825MHz

19/07/2019



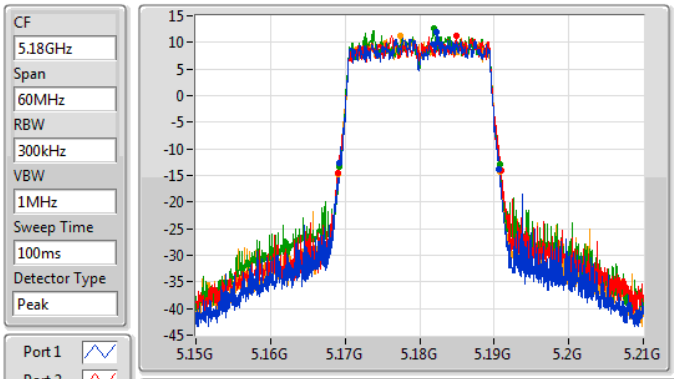


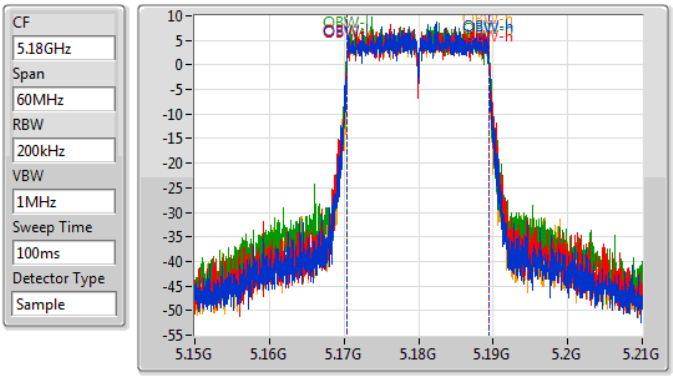
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.55M	5.81618G	5.83373G	17.841M	5.816004G	5.833846G	500k	1
17.61M	5.81615G	5.83376G	17.841M	5.816034G	5.833876G	500k	2
17.58M	5.81615G	5.83373G	17.931M	5.815975G	5.833906G	500k	3
17.55M	5.81618G	5.83373G	17.841M	5.816034G	5.833876G	500k	4

802.11ax HEW20_Nss4,(MCS0)_4TX EBW

5180MHz

19/07/2019



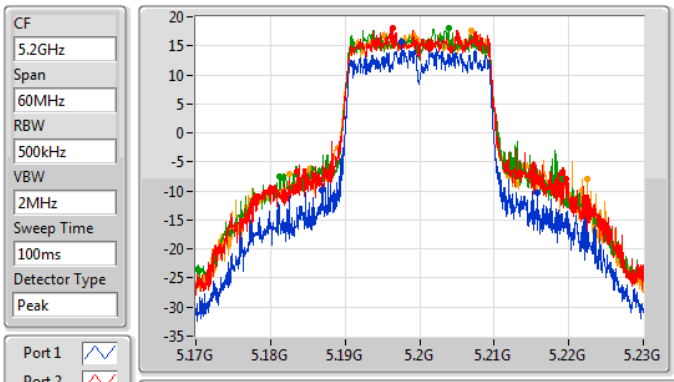


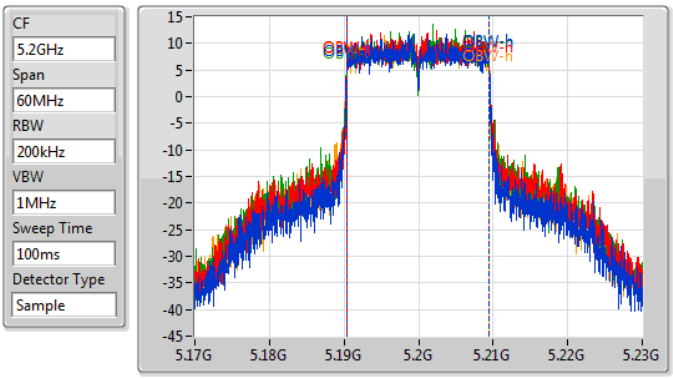
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.45M	5.16917G	5.19062G	18.951M	5.170465G	5.189415G	Inf	1
21.87M	5.16902G	5.19089G	19.01M	5.170435G	5.189445G	Inf	2
21.45M	5.16929G	5.19074G	19.01M	5.170435G	5.189445G	Inf	3
21.75M	5.16908G	5.19083G	18.981M	5.170435G	5.189415G	Inf	4

802.11ax HEW20_Nss4,(MCS0)_4TX EBW

5200MHz

19/07/2019



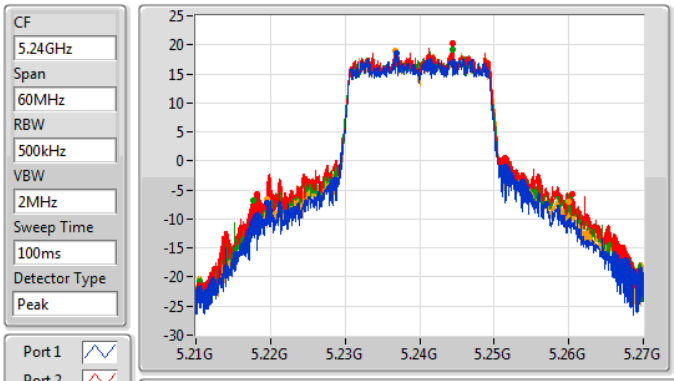


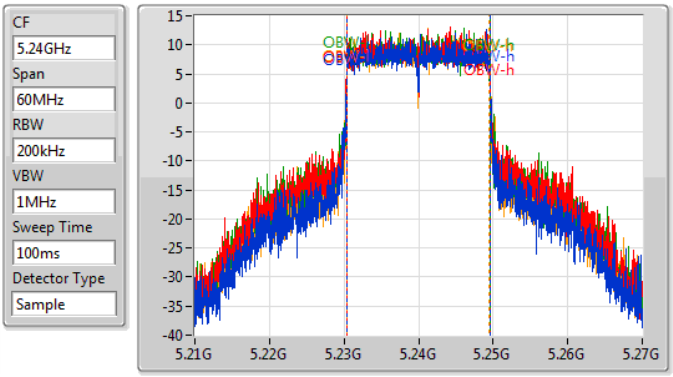
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
28.89M	5.18686G	5.21575G	19.04M	5.190405G	5.209445G	Inf	1
36.06M	5.18359G	5.21965G	19.07M	5.190435G	5.209505G	Inf	2
38.01M	5.18119G	5.2192G	19.16M	5.190345G	5.209505G	Inf	3
40.02M	5.18248G	5.2225G	19.13M	5.190375G	5.209505G	Inf	4

802.11ax HEW20_Nss4,(MCS0)_4TX EBW

5240MHz

19/07/2019



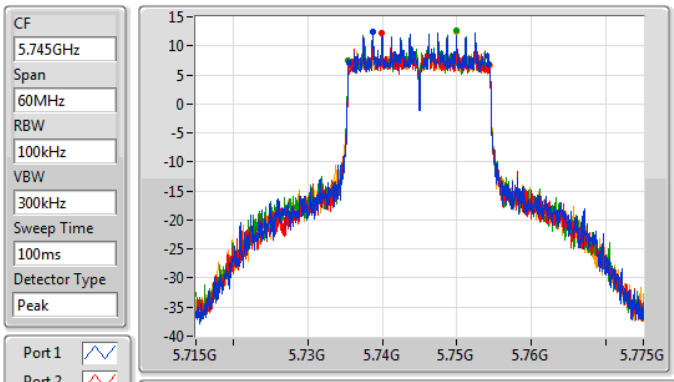


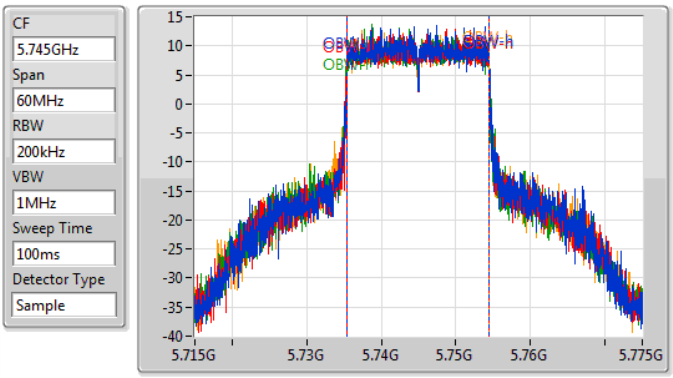
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.38M	5.2196G	5.25698G	19.13M	5.230405G	5.249535G	Inf	1
42.24M	5.21816G	5.2604G	19.28M	5.230345G	5.249625G	Inf	2
42.48M	5.21777G	5.26025G	19.28M	5.230345G	5.249625G	Inf	3
40.47M	5.21954G	5.26001G	19.13M	5.230375G	5.249505G	Inf	4

802.11ax HEW20_Nss4,(MCS0)_4TX EBW

5745MHz

19/07/2019



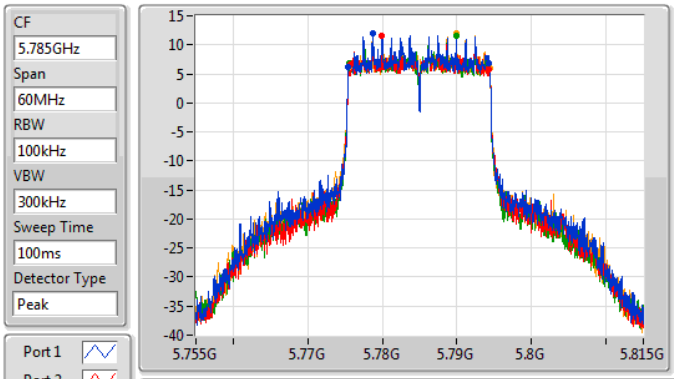


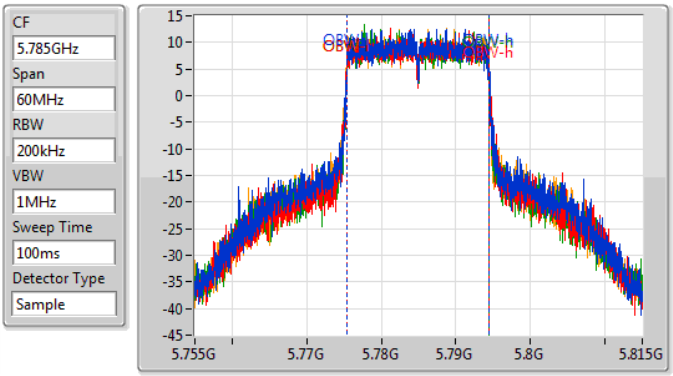
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.84M	5.73549G	5.75433G	19.1M	5.735405G	5.754505G	500k	1
18.39M	5.73579G	5.75418G	19.13M	5.735345G	5.754475G	500k	2
18.72M	5.73546G	5.75418G	19.16M	5.735315G	5.754475G	500k	3
18.84M	5.73552G	5.75436G	19.07M	5.735405G	5.754475G	500k	4

802.11ax HEW20_Nss4,(MCS0)_4TX EBW

5785MHz

19/07/2019



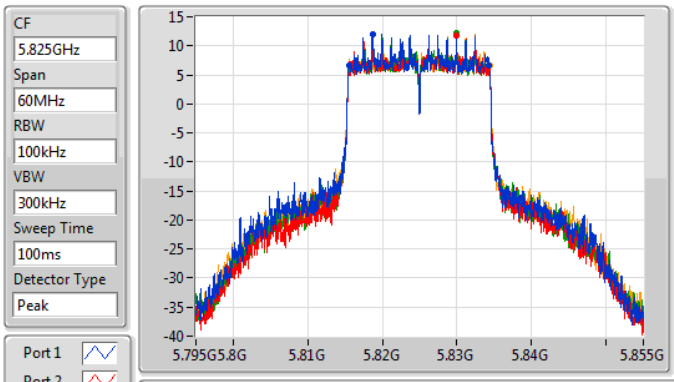


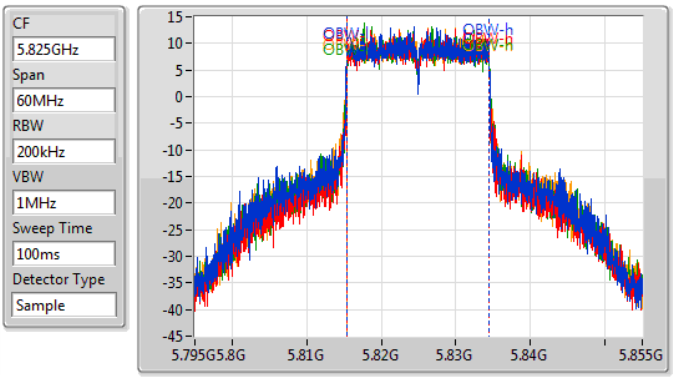
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.84M	5.77546G	5.7943G	19.07M	5.775405G	5.794475G	500k	1
18.51M	5.77579G	5.7943G	19.07M	5.775405G	5.794475G	500k	2
18.63M	5.77549G	5.79412G	19.07M	5.775375G	5.794445G	500k	3
18.87M	5.77549G	5.79436G	19.07M	5.775375G	5.794445G	500k	4

802.11ax HEW20_Nss4,(MCS0)_4TX EBW

5825MHz

19/07/2019



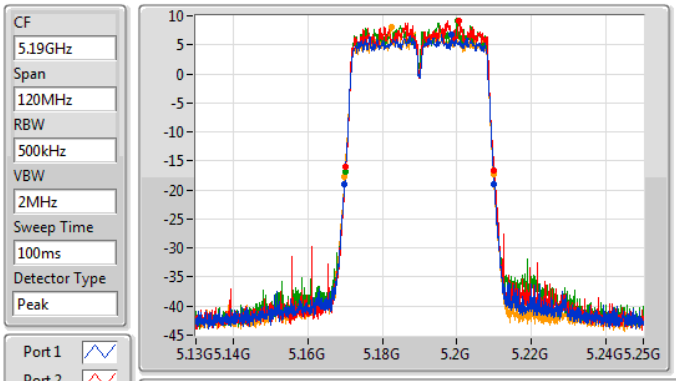


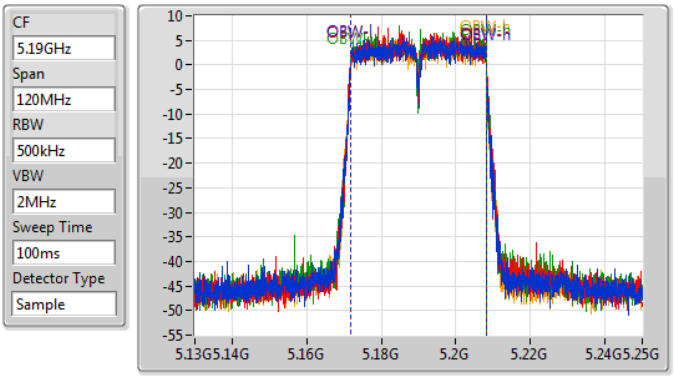
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.81M	5.81549G	5.8343G	19.07M	5.815375G	5.834445G	500k	1
18.36M	5.81579G	5.83415G	19.07M	5.815405G	5.834475G	500k	2
18.66M	5.81549G	5.83415G	19.16M	5.815345G	5.834505G	500k	3
18.9M	5.81549G	5.83439G	19.1M	5.815345G	5.834445G	500k	4

802.11ac VHT40_Nss4,(MCS0)_4TX EBW

5190MHz

19/07/2019



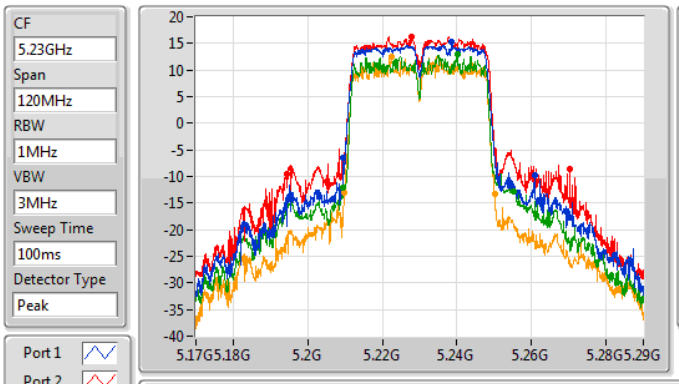


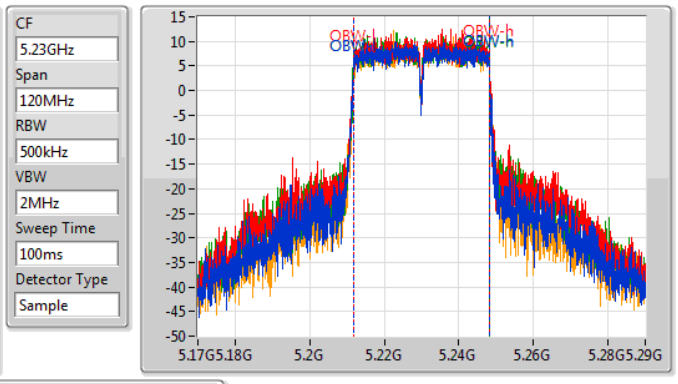
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.08M	5.1699G	5.20998G	36.162M	5.171889G	5.208051G	Inf	1
39.84M	5.17014G	5.20998G	36.222M	5.171829G	5.208051G	Inf	2
39.72M	5.17014G	5.20986G	36.162M	5.171889G	5.208051G	Inf	3
40.02M	5.1699G	5.20992G	36.282M	5.171769G	5.208051G	Inf	4

802.11ac VHT40_Nss4,(MCS0)_4TX EBW

5230MHz

19/07/2019



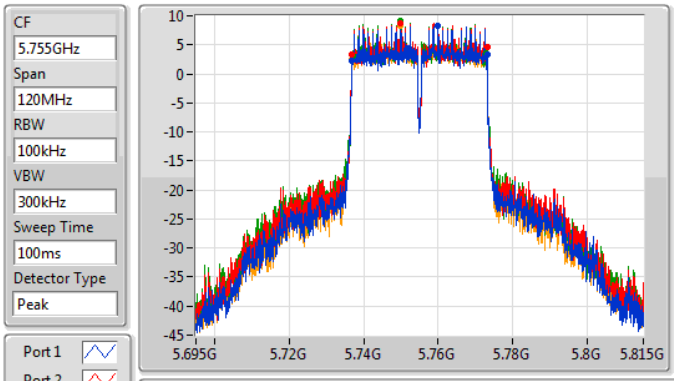


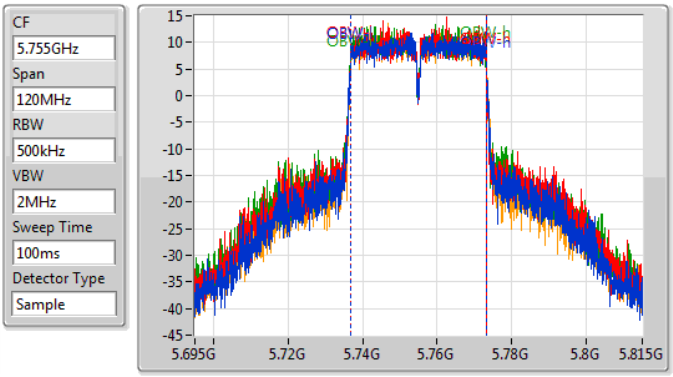
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
51.6M	5.20942G	5.26102G	36.222M	5.211829G	5.248051G	Inf	1
75.96M	5.19424G	5.2702G	36.282M	5.211769G	5.248051G	Inf	2
45.96M	5.20942G	5.25538G	36.282M	5.211829G	5.248111G	Inf	3
40.26M	5.20984G	5.2501G	36.282M	5.211829G	5.248111G	Inf	4

802.11ac VHT40_Nss4,(MCS0)_4TX EBW

5755MHz

19/07/2019



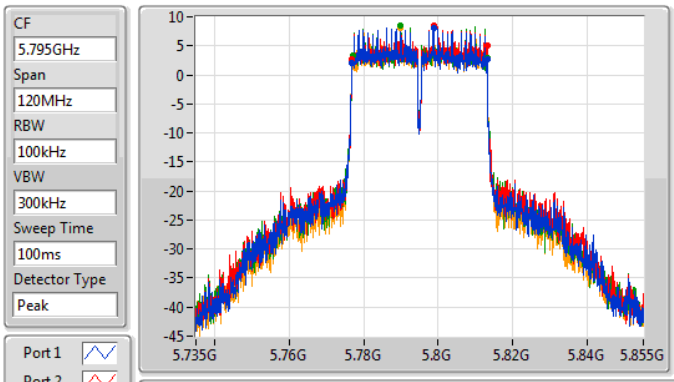


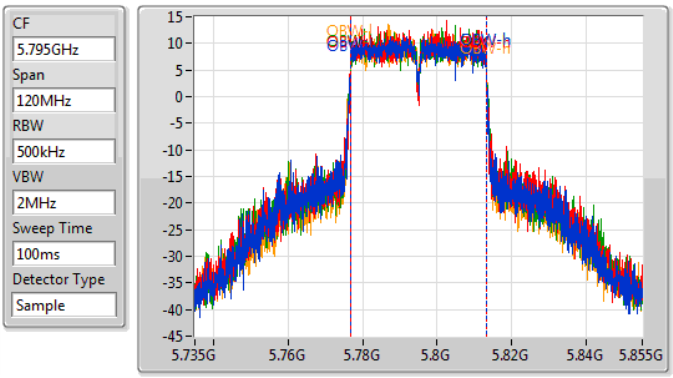
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.36M	5.73676G	5.77312G	36.462M	5.736709G	5.773171G	500k	1
36.3M	5.73682G	5.77312G	36.282M	5.736769G	5.773051G	500k	2
35.88M	5.737G	5.77288G	36.462M	5.736709G	5.773171G	500k	3
36.36M	5.73676G	5.77312G	36.462M	5.736709G	5.773171G	500k	4

802.11ac VHT40_Nss4,(MCS0)_4TX EBW

5795MHz

19/07/2019



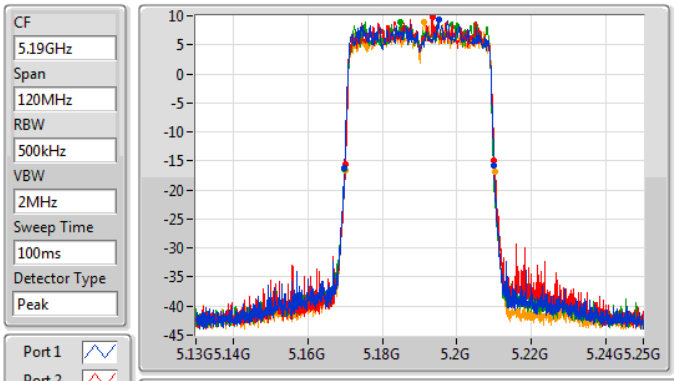


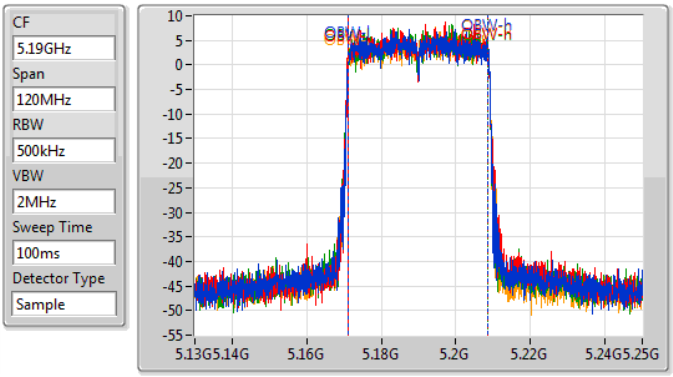
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.36M	5.77676G	5.81312G	36.342M	5.776709G	5.813051G	500k	1
36.3M	5.77682G	5.81312G	36.342M	5.776769G	5.813111G	500k	2
36M	5.77706G	5.81306G	36.402M	5.776769G	5.813171G	500k	3
36.36M	5.77676G	5.81312G	36.402M	5.776769G	5.813171G	500k	4

802.11ax HEW40_Nss4,(MCS0)_4TX EBW

5190MHz

19/07/2019



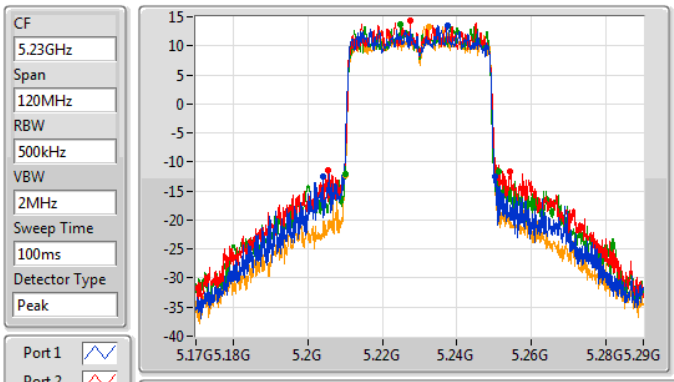


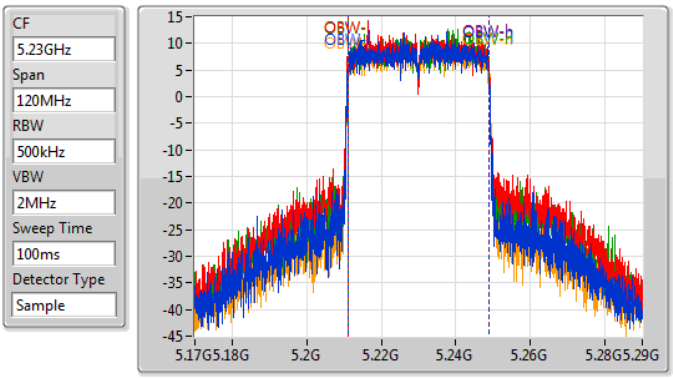
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.08M	5.16984G	5.20992G	37.541M	5.171169G	5.208711G	Inf	1
39.9M	5.17014G	5.21004G	37.481M	5.171229G	5.208711G	Inf	2
39.9M	5.1699G	5.2098G	37.481M	5.171229G	5.208711G	Inf	3
40.08M	5.17002G	5.2101G	37.541M	5.171169G	5.208711G	Inf	4

802.11ax HEW40_Nss4,(MCS0)_4TX EBW

5230MHz

19/07/2019



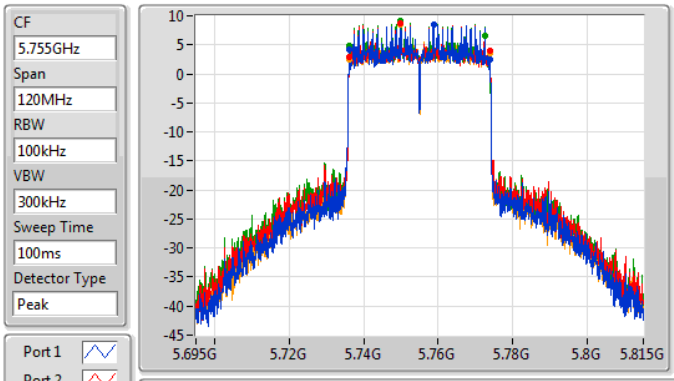


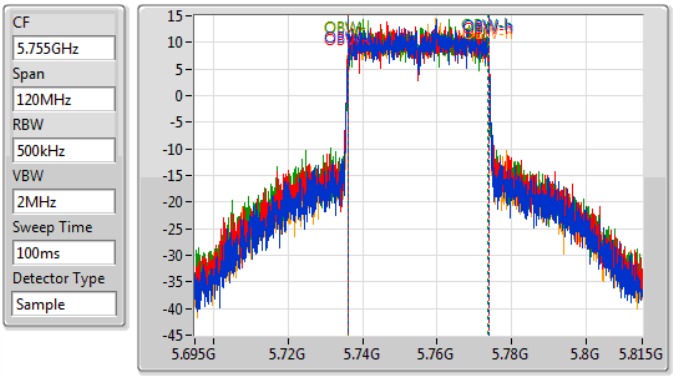
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
46.14M	5.20402G	5.25016G	37.721M	5.211109G	5.248831G	Inf	1
48.84M	5.20546G	5.2543G	37.781M	5.211049G	5.248831G	Inf	2
41.22M	5.20996G	5.25118G	37.601M	5.211169G	5.248771G	Inf	3
40.08M	5.21002G	5.2501G	37.661M	5.211109G	5.248771G	Inf	4

802.11ax HEW40_Nss4,(MCS0)_4TX EBW

5755MHz

19/07/2019



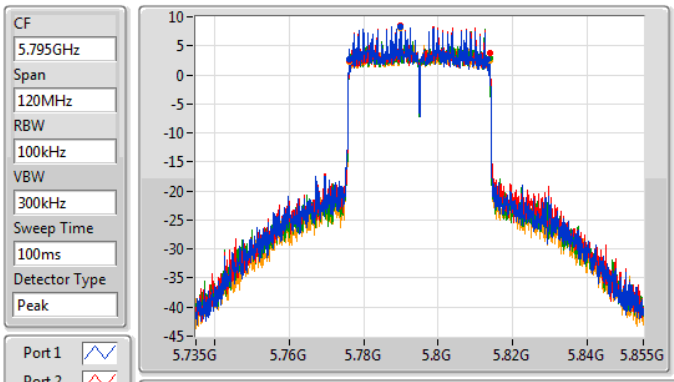


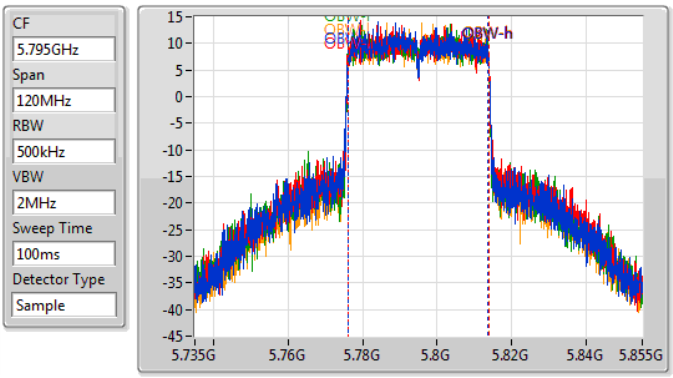
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.74M	5.73616G	5.7739G	37.721M	5.736109G	5.773831G	500k	1
37.56M	5.73616G	5.77372G	37.781M	5.736049G	5.773831G	500k	2
36.36M	5.73616G	5.77252G	37.601M	5.736109G	5.773711G	500k	3
37.44M	5.73628G	5.77372G	37.841M	5.73599G	5.773831G	500k	4

802.11ax HEW40_Nss4,(MCS0)_4TX EBW

5795MHz

19/07/2019



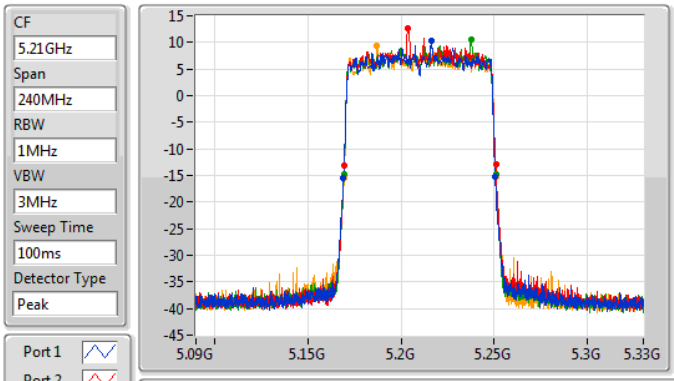


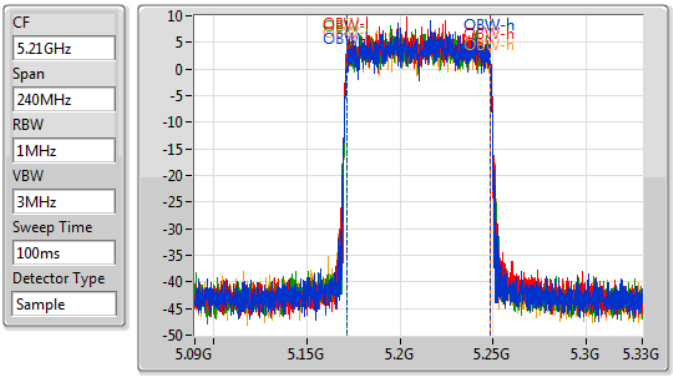
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.26M	5.7761G	5.81336G	37.721M	5.77599G	5.813711G	500k	1
37.62M	5.7761G	5.81372G	37.781M	5.77599G	5.813771G	500k	2
37.68M	5.7761G	5.81378G	37.781M	5.77599G	5.813771G	500k	3
37.44M	5.77628G	5.81372G	37.721M	5.776109G	5.813831G	500k	4

802.11ac VHT80_Nss4,(MCS0)_4TX EBW

5210MHz

19/07/2019



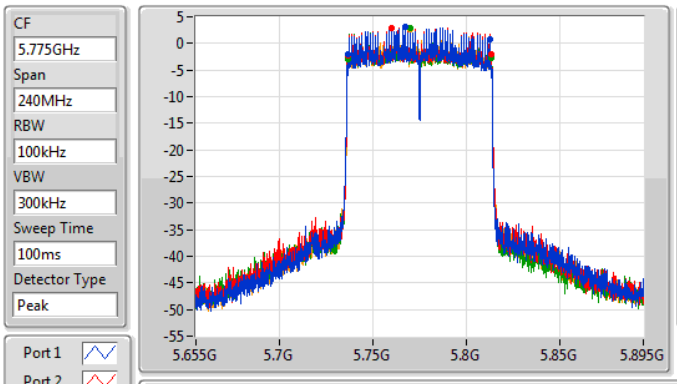


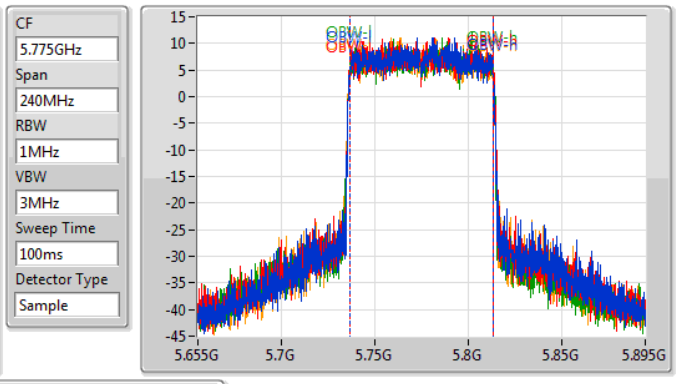
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
81.36M	5.1692G	5.25056G	76.882M	5.171499G	5.248381G	Inf	1
81.24M	5.16956G	5.2508G	77.241M	5.171259G	5.248501G	Inf	2
81.36M	5.16944G	5.2508G	77.001M	5.171379G	5.248381G	Inf	3
81.48M	5.16944G	5.25092G	77.121M	5.171379G	5.248501G	Inf	4

802.11ac VHT80_Nss4,(MCS0)_4TX EBW

5775MHz

19/07/2019



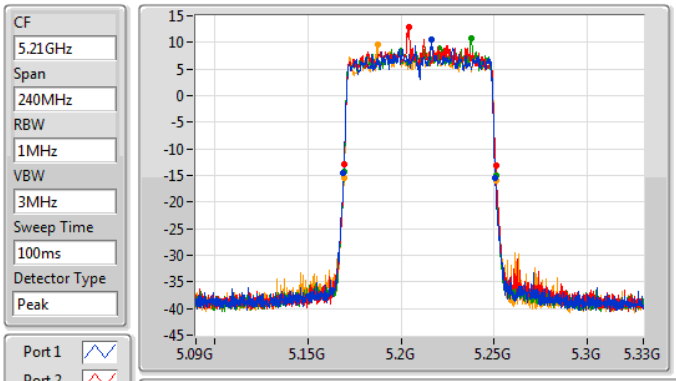


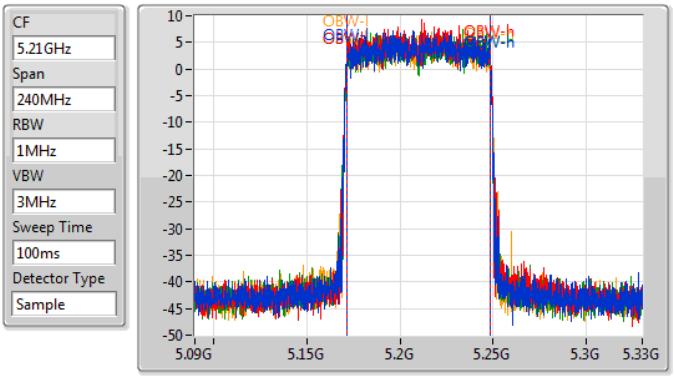
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
76.08M	5.73648G	5.81256G	76.882M	5.736379G	5.813261G	500k	1
77.04M	5.73624G	5.81328G	77.121M	5.736379G	5.813501G	500k	2
77.04M	5.73636G	5.8134G	77.121M	5.736379G	5.813501G	500k	3
77.4M	5.73624G	5.81364G	77.001M	5.736379G	5.813381G	500k	4

802.11ax HEW80_Nss4,(MCS0)_4TX EBW

5210MHz

19/07/2019



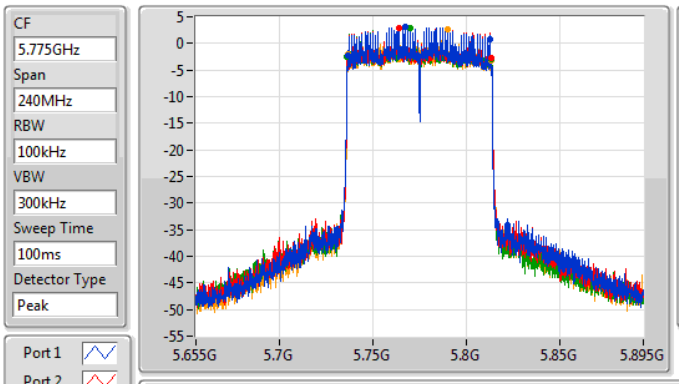


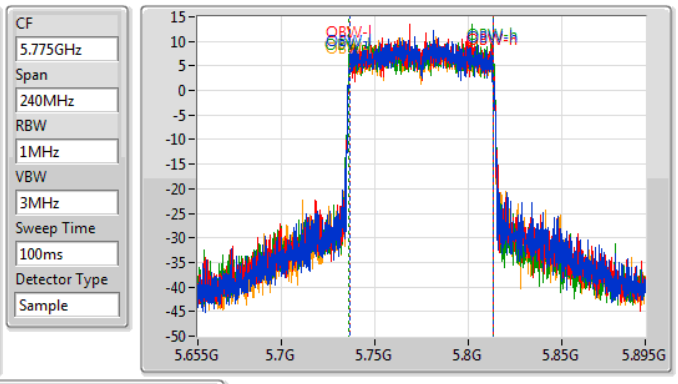
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
81.36M	5.1692G	5.25056G	76.642M	5.171619G	5.248261G	Inf	1
81.36M	5.16944G	5.2508G	77.001M	5.171499G	5.248501G	Inf	2
81.36M	5.16944G	5.2508G	76.882M	5.171499G	5.248381G	Inf	3
81.6M	5.16944G	5.25104G	76.882M	5.171619G	5.248501G	Inf	4

802.11ax HEW80_Nss4,(MCS0)_4TX EBW

5775MHz

19/07/2019





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
76.08M	5.73648G	5.81256G	77.001M	5.736379G	5.813381G	500k	1
77.04M	5.73624G	5.81328G	77.121M	5.736259G	5.813381G	500k	2
77.28M	5.73612G	5.8134G	77.361M	5.736139G	5.813501G	500k	3
77.04M	5.73624G	5.81328G	77.121M	5.736379G	5.813501G	500k	4

For beamforming mode:
1 Stream 4 TX for TxBF mode:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	41.28M	18.12M	18M1D1D	21.84M	17.94M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	33.18M	19.04M	19M0D1D	21.45M	18.951M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	64.2M	36.84M	36M8D1D	40.98M	36.54M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	58.92M	38.1M	38M1D1D	41.4M	37.8M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	82.68M	75.84M	75M8D1D	81.12M	75.72M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	82.32M	77.16M	77M2D1D	81.36M	77.04M
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	81.04M	76M	76M0D1D	80.4M	75.68M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	81.52M	76.64M	76M6D1D	80.4M	75.68M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	17.67M	18.12M	18M1D1D	3.74M	4.22M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	18.99M	19.14M	19M1D1D	4.42M	4.498M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	36.3M	36.84M	36M8D1D	3.12M	3.5M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	37.92M	38.28M	38M3D1D	3.86M	4.04M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	76.32M	75.84M	75M8D1D	3.04M	3.72M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	76.68M	77.28M	77M3D1D	3.86M	4.04M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth;

Result

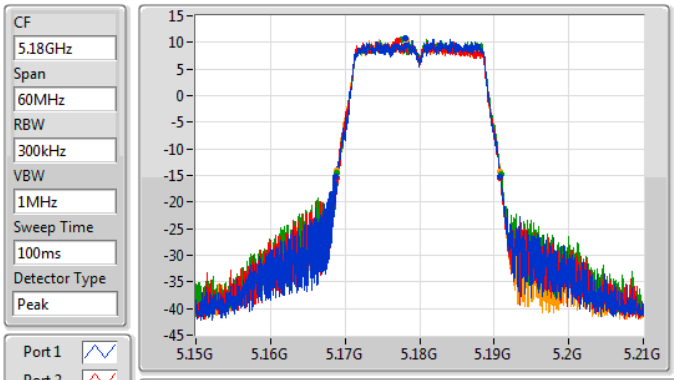
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	22.14M	17.94M	21.96M	18M	22.08M	17.94M	21.84M	18M
5200MHz	Pass	Inf	40.56M	18.12M	39.96M	18.12M	40.17M	18.06M	41.28M	18.09M
5240MHz	Pass	Inf	27.36M	18.09M	27.63M	18M	29.58M	18.03M	27.84M	18M
5745MHz	Pass	500k	17.67M	18.06M	17.58M	17.94M	17.58M	17.94M	17.52M	17.91M
5785MHz	Pass	500k	17.61M	18.12M	17.58M	18.12M	17.55M	18.12M	17.58M	17.97M
5825MHz	Pass	500k	17.58M	18.12M	17.61M	18.09M	17.58M	17.94M	17.55M	18M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.45M	18.951M	21.45M	18.981M	21.63M	19.01M	21.63M	18.981M
5200MHz	Pass	Inf	21.84M	18.981M	26.88M	19.04M	33.18M	19.01M	22.59M	18.951M
5240MHz	Pass	Inf	26.19M	18.981M	27.54M	19.01M	30.42M	18.981M	24.87M	18.981M
5745MHz	Pass	500k	18.99M	19.05M	18.81M	19.08M	18.93M	19.05M	18.93M	19.02M
5785MHz	Pass	500k	18.87M	19.08M	18.81M	19.08M	18.93M	19.08M	18.93M	18.99M
5825MHz	Pass	500k	18.96M	19.14M	18.84M	19.11M	18.87M	19.05M	18.9M	19.11M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	41.04M	36.54M	40.98M	36.6M	41.28M	36.54M	41.1M	36.66M
5230MHz	Pass	Inf	52.26M	36.54M	61.38M	36.84M	64.2M	36.6M	45.12M	36.78M
5755MHz	Pass	500k	36.3M	36.72M	36.3M	36.84M	33.72M	36.72M	33.78M	36.6M
5795MHz	Pass	500k	33.72M	36.66M	35.64M	36.72M	34.98M	36.78M	35.7M	36.48M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	41.4M	37.92M	41.4M	37.98M	41.58M	37.8M	41.52M	37.86M
5230MHz	Pass	Inf	53.1M	37.92M	56.58M	38.04M	58.92M	38.1M	43.68M	37.92M
5755MHz	Pass	500k	37.92M	37.98M	37.92M	38.28M	37.44M	37.98M	36.96M	37.92M
5795MHz	Pass	500k	37.5M	37.92M	34.32M	38.04M	35.16M	38.04M	37.38M	37.68M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.72M	75.72M	82.68M	75.84M	81.24M	75.72M	81.12M	75.72M
5775MHz	Pass	500k	74.28M	75.84M	76.32M	75.84M	74.28M	75.72M	74.52M	75.6M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.36M	77.04M	81.36M	77.16M	81.84M	77.04M	82.32M	77.16M
5775MHz	Pass	500k	76.68M	76.68M	74.4M	77.28M	45.12M	77.04M	76.32M	76.68M

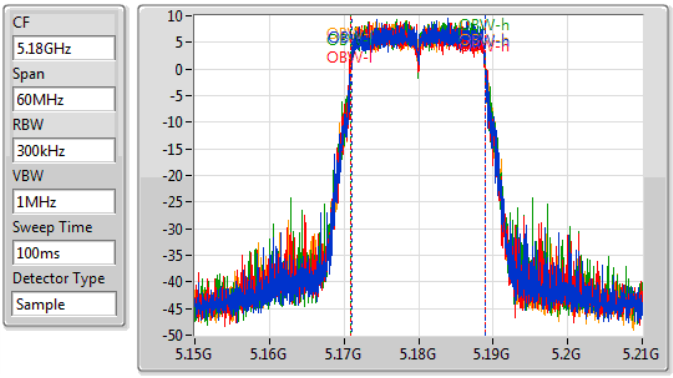
Port X-N dB = Port **X** 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port **X** 99% occupied bandwidth;

802.11ac VHT20-BF_Nss1,(MCS0)_4TX EBW

5180MHz

23/07/2019



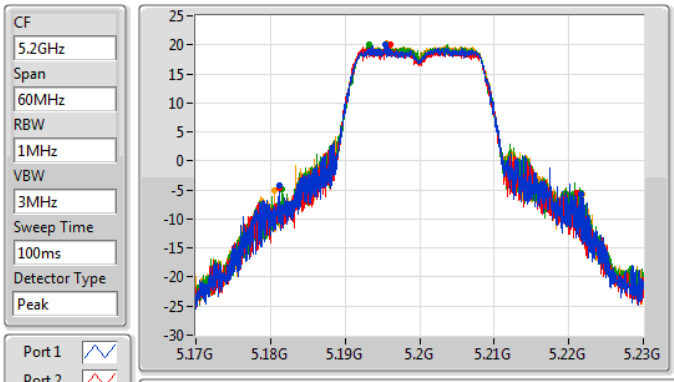


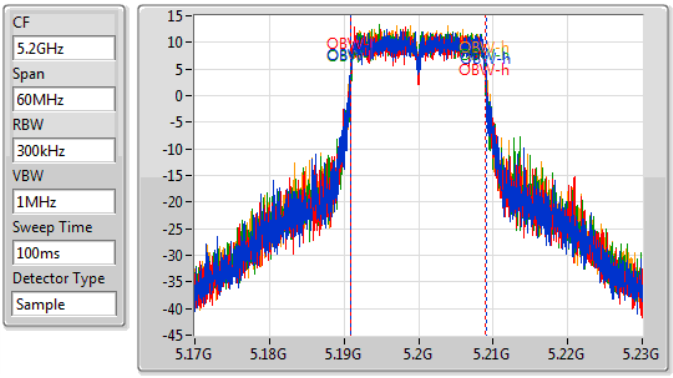
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.14M	5.16872G	5.19086G	17.94M	5.171G	5.18894G	Inf	1
21.96M	5.16887G	5.19083G	18M	5.17091G	5.18891G	Inf	2
22.08M	5.16893G	5.19101G	17.94M	5.17097G	5.18891G	Inf	3
21.84M	5.16896G	5.1908G	18M	5.17094G	5.18894G	Inf	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX EBW

5200MHz

23/07/2019



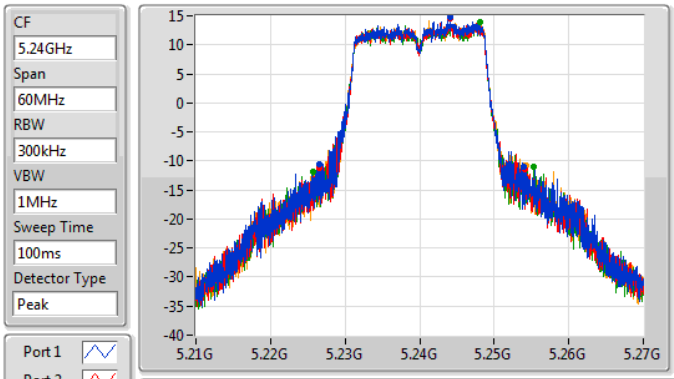


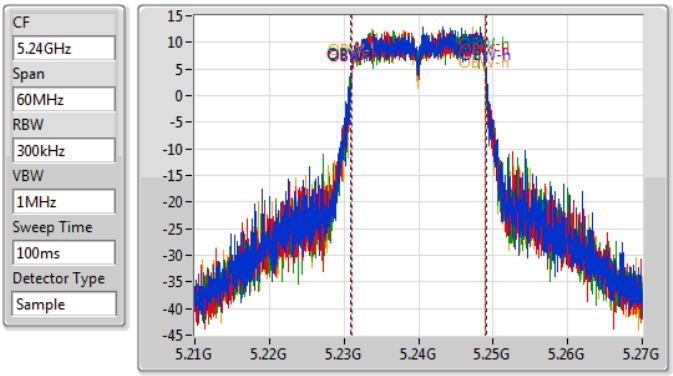
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.56M	5.18113G	5.22169G	18.12M	5.19091G	5.20903G	Inf	1
39.96M	5.18119G	5.22115G	18.12M	5.19088G	5.209G	Inf	2
40.17M	5.18152G	5.22169G	18.06M	5.19094G	5.209G	Inf	3
41.28M	5.1805G	5.22178G	18.09M	5.19091G	5.209G	Inf	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX EBW

5240MHz

23/07/2019



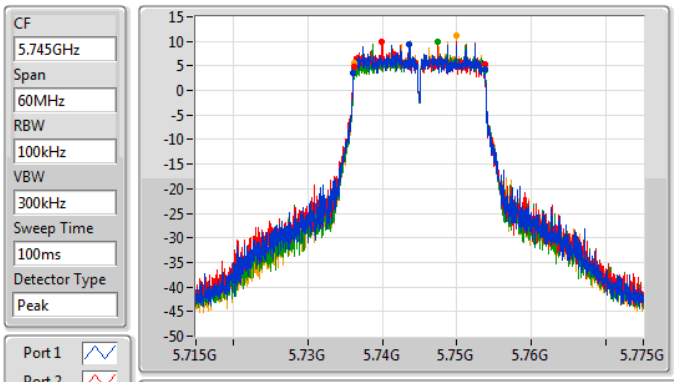


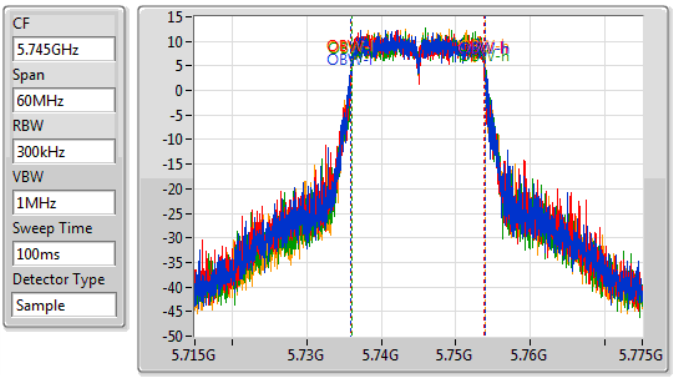
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
27.36M	5.22659G	5.25395G	18.09M	5.23097G	5.24906G	Inf	1
27.63M	5.22653G	5.25416G	18M	5.231G	5.249G	Inf	2
29.58M	5.22572G	5.2553G	18.03M	5.23094G	5.24897G	Inf	3
27.84M	5.22653G	5.25437G	18M	5.231G	5.249G	Inf	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX EBW

5745MHz

24/07/2019



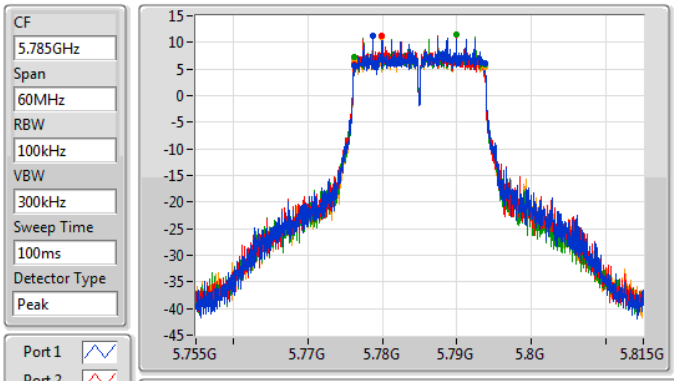


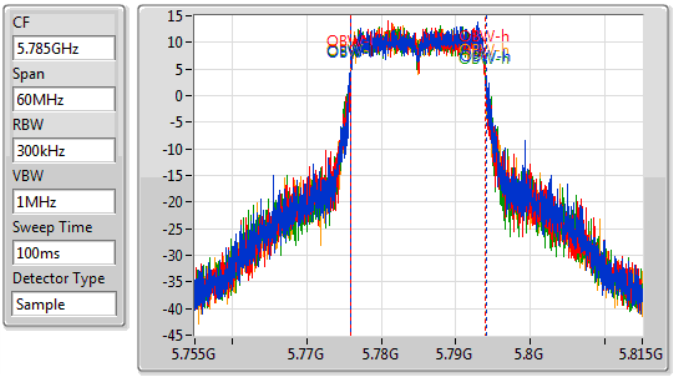
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.67M	5.73609G	5.75376G	18.06M	5.73585G	5.75391G	500k	1
17.58M	5.73615G	5.75373G	17.94M	5.73591G	5.75385G	500k	2
17.58M	5.73618G	5.75376G	17.94M	5.736G	5.75394G	500k	3
17.52M	5.73621G	5.75373G	17.91M	5.736G	5.75391G	500k	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX EBW

5785MHz

24/07/2019



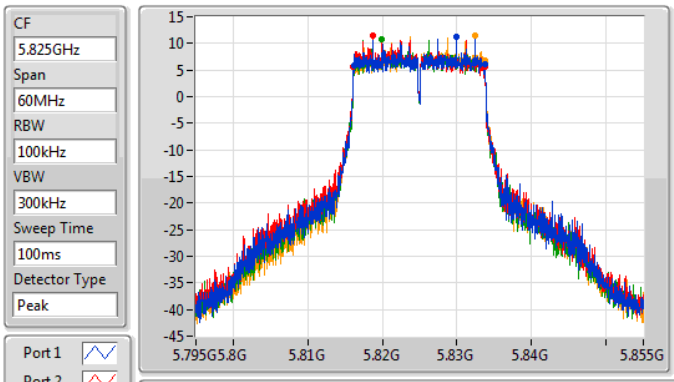


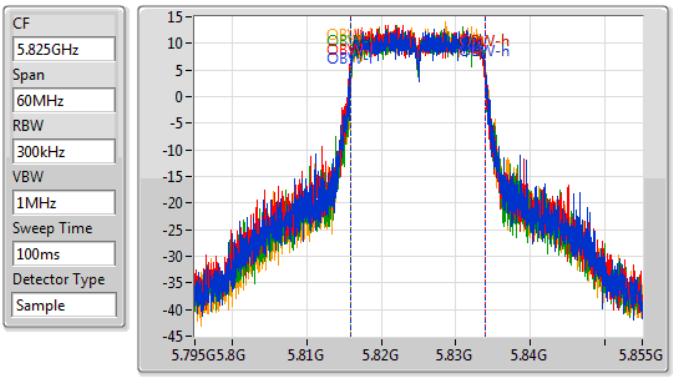
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.61M	5.77615G	5.79376G	18.12M	5.77591G	5.79403G	500k	1
17.58M	5.77615G	5.79373G	18.12M	5.77585G	5.79397G	500k	2
17.55M	5.77618G	5.79373G	18.12M	5.77588G	5.794G	500k	3
17.58M	5.77618G	5.79376G	17.97M	5.77594G	5.79391G	500k	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX EBW

5825MHz

24/07/2019



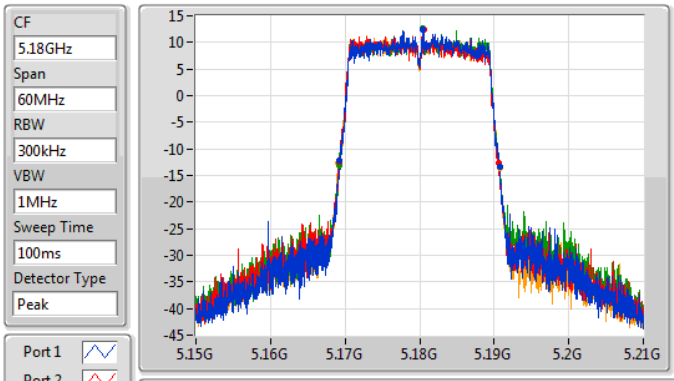


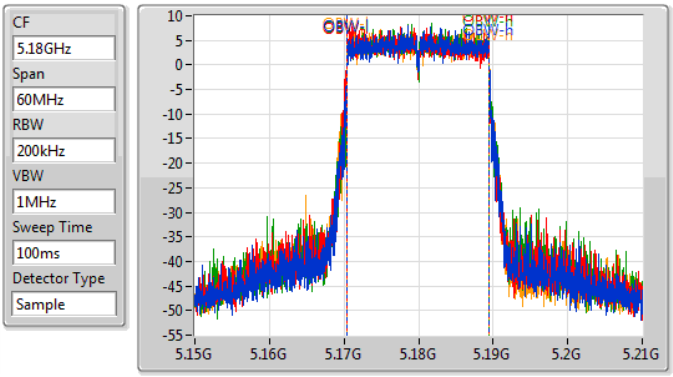
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.58M	5.81615G	5.83373G	18.12M	5.81585G	5.83397G	500k	1
17.61M	5.81612G	5.83373G	18.09M	5.81582G	5.83391G	500k	2
17.58M	5.81615G	5.83373G	17.94M	5.81597G	5.83391G	500k	3
17.55M	5.81618G	5.83373G	18M	5.81597G	5.83397G	500k	4

802.11ax HEW20-BF_Nss1,(MCS0)_4TX EBW

5180MHz

23/07/2019



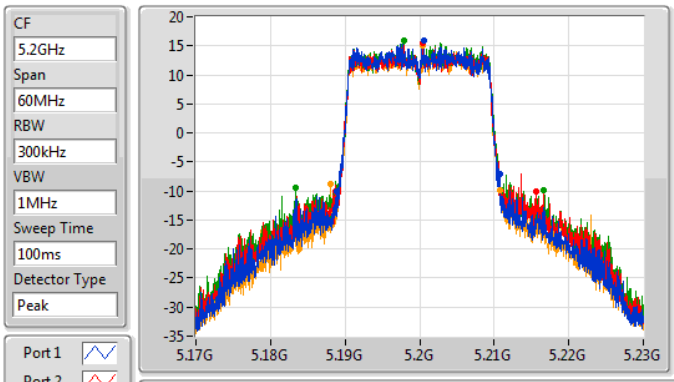


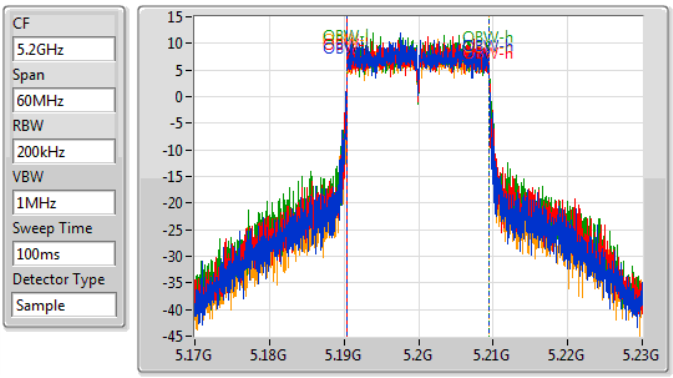
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.45M	5.16926G	5.19071G	18.951M	5.170465G	5.189415G	Inf	1
21.45M	5.16917G	5.19062G	18.981M	5.170405G	5.189385G	Inf	2
21.63M	5.16914G	5.19077G	19.01M	5.170435G	5.189445G	Inf	3
21.63M	5.16911G	5.19074G	18.981M	5.170435G	5.189415G	Inf	4

802.11ax HEW20-BF_Nss1,(MCS0)_4TX EBW

5200MHz

23/07/2019



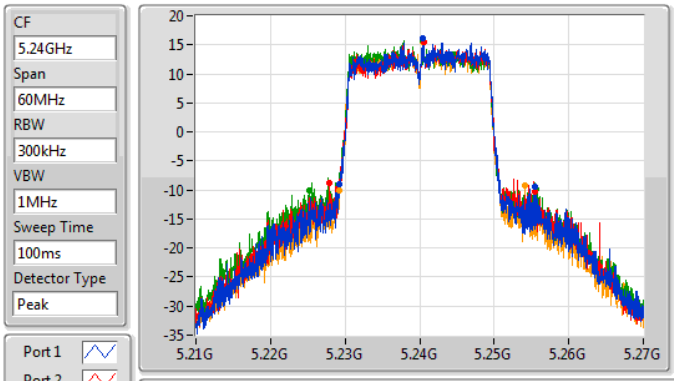


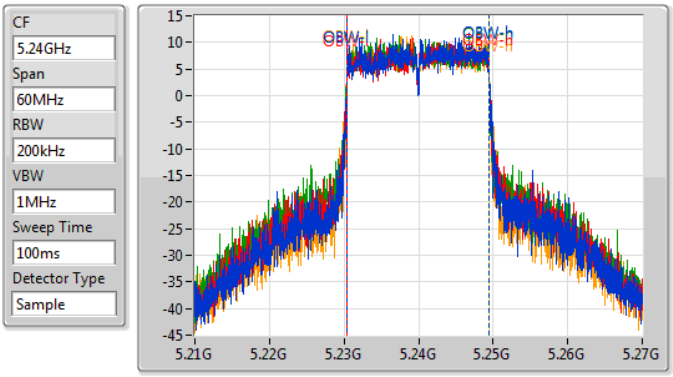
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.84M	5.18887G	5.21071G	18.981M	5.190435G	5.209415G	Inf	1
26.88M	5.18872G	5.2156G	19.04M	5.190405G	5.209445G	Inf	2
33.18M	5.18344G	5.21662G	19.01M	5.190435G	5.209445G	Inf	3
22.59M	5.18812G	5.21071G	18.951M	5.190465G	5.209415G	Inf	4

802.11ax HEW20-BF_Nss1,(MCS0)_4TX EBW

5240MHz

23/07/2019



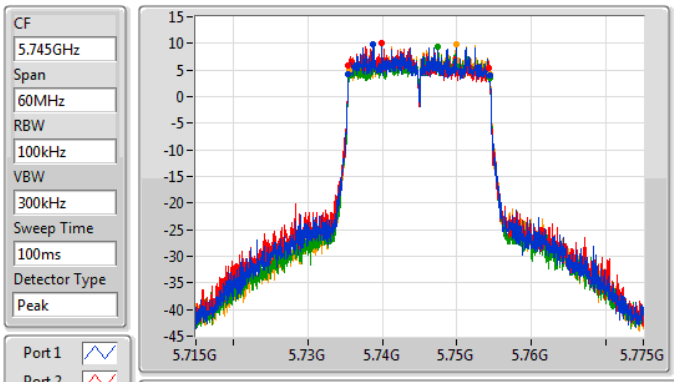


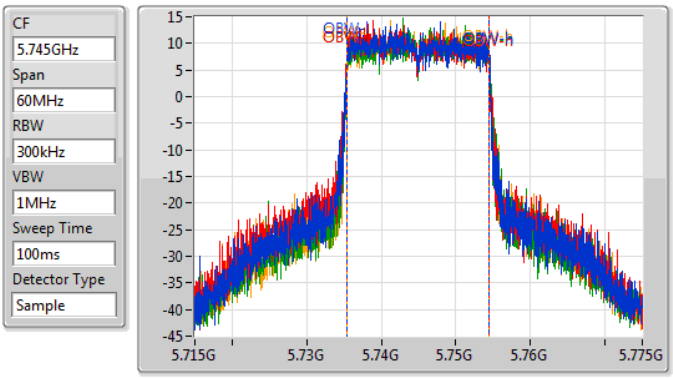
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
26.19M	5.22923G	5.25542G	18.981M	5.230465G	5.249445G	Inf	1
27.54M	5.22794G	5.25548G	19.01M	5.230465G	5.249475G	Inf	2
30.42M	5.22521G	5.25563G	18.981M	5.230435G	5.249415G	Inf	3
24.87M	5.2292G	5.25407G	18.981M	5.230435G	5.249415G	Inf	4

802.11ax HEW20-BF_Nss1,(MCS0)_4TX EBW

5745MHz

23/07/2019



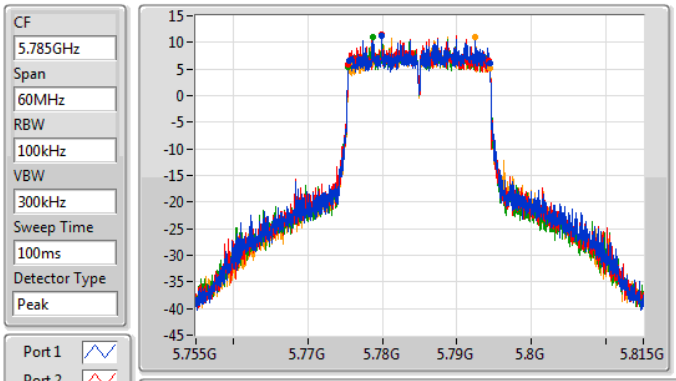


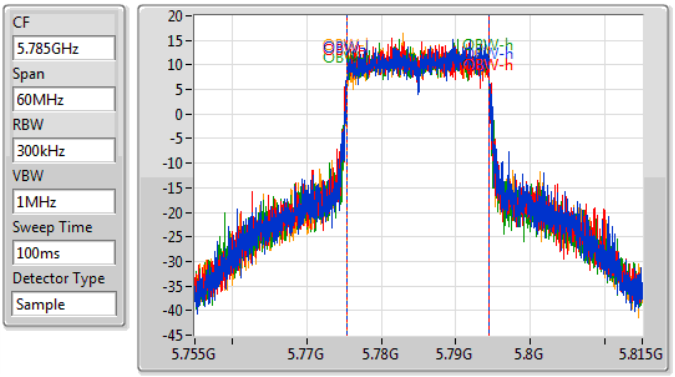
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.99M	5.73546G	5.75445G	19.05M	5.73543G	5.75448G	500k	1
18.81M	5.73546G	5.75427G	19.08M	5.73537G	5.75445G	500k	2
18.93M	5.73552G	5.75445G	19.05M	5.73543G	5.75448G	500k	3
18.93M	5.73549G	5.75442G	19.02M	5.73543G	5.75445G	500k	4

802.11ax HEW20-BF_Nss1,(MCS0)_4TX EBW

5785MHz

23/07/2019



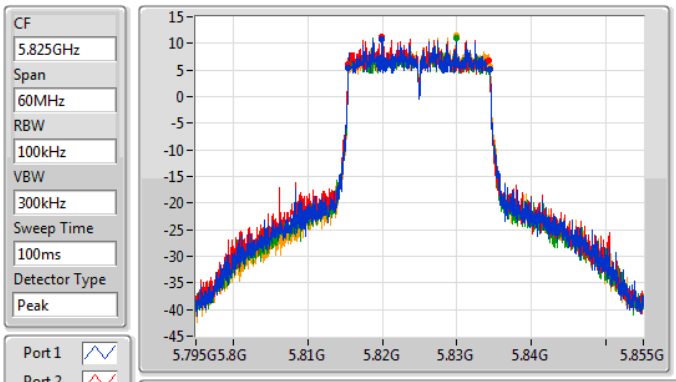


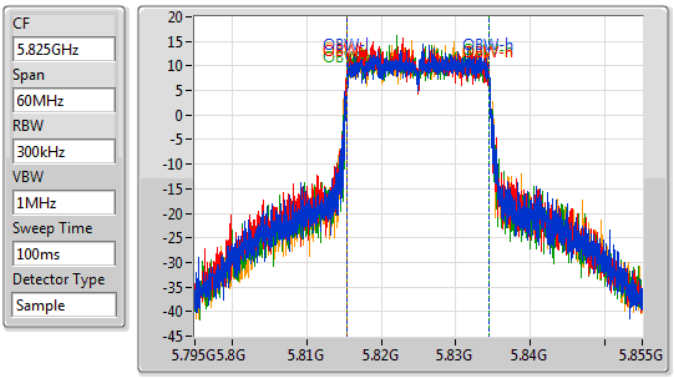
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.87M	5.77549G	5.79436G	19.08M	5.7754G	5.79448G	500k	1
18.81M	5.77546G	5.79427G	19.08M	5.77537G	5.79445G	500k	2
18.93M	5.77546G	5.79439G	19.08M	5.7754G	5.79448G	500k	3
18.93M	5.77549G	5.79442G	18.99M	5.77546G	5.79445G	500k	4

802.11ax HEW20-BF_Nss1,(MCS0)_4TX EBW

5825MHz

23/07/2019



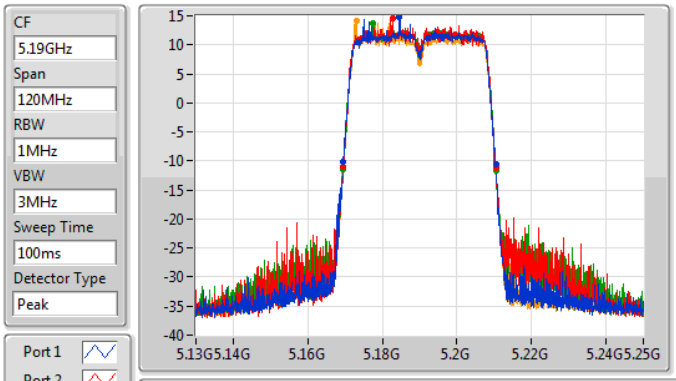


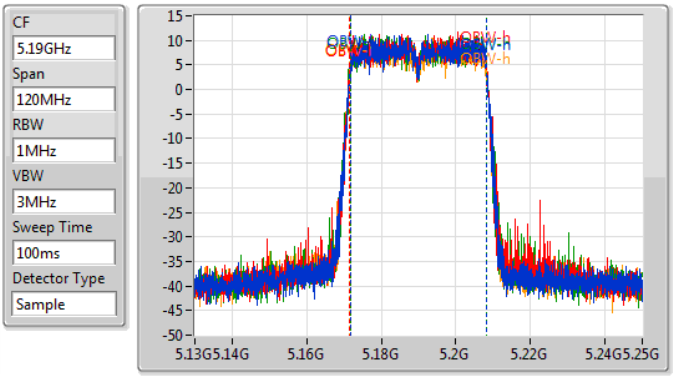
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.96M	5.8154G	5.83436G	19.14M	5.81537G	5.83451G	500k	1
18.84M	5.81543G	5.83427G	19.11M	5.81537G	5.83448G	500k	2
18.87M	5.81549G	5.83436G	19.05M	5.8154G	5.83445G	500k	3
18.9M	5.81552G	5.83442G	19.11M	5.81537G	5.83448G	500k	4

802.11ac VHT40-BF_Nss1,(MCS0)_4TX EBW

5190MHz

24/07/2019



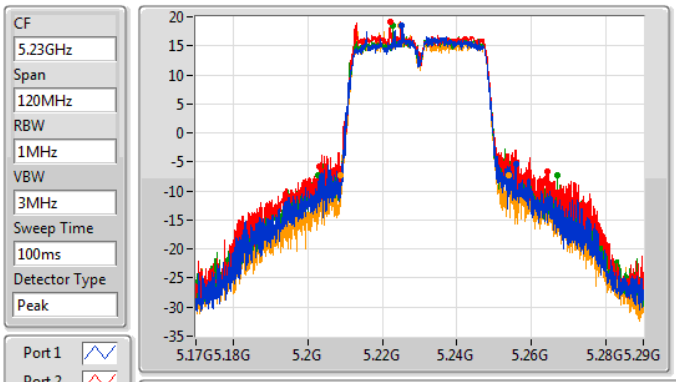


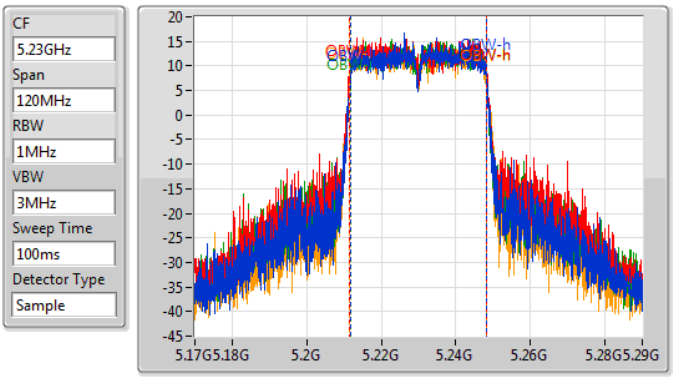
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
41.04M	5.16942G	5.21046G	36.54M	5.17164G	5.20818G	Inf	1
40.98M	5.16942G	5.2104G	36.6M	5.17158G	5.20818G	Inf	2
41.28M	5.1693G	5.21058G	36.54M	5.17164G	5.20818G	Inf	3
41.1M	5.1693G	5.2104G	36.66M	5.17158G	5.20824G	Inf	4

802.11ac VHT40-BF_Nss1,(MCS0)_4TX EBW

5230MHz

24/07/2019



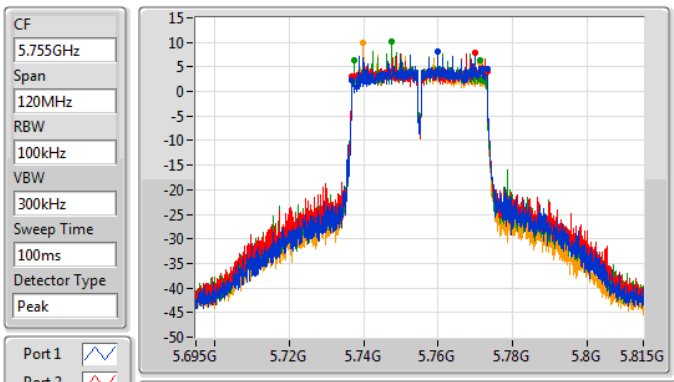


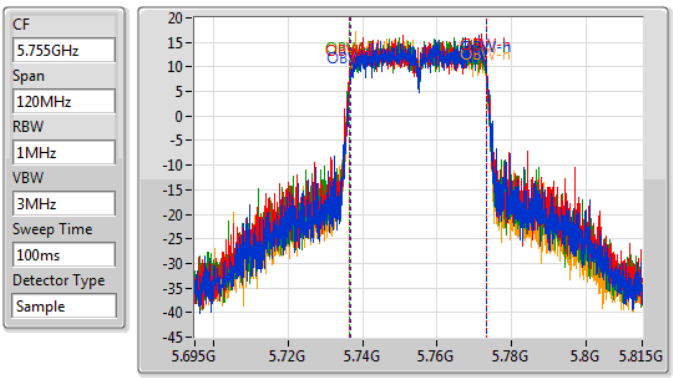
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
52.26M	5.2036G	5.25586G	36.54M	5.2117G	5.24824G	Inf	1
61.38M	5.203G	5.26438G	36.84M	5.21152G	5.24836G	Inf	2
64.2M	5.20282G	5.26702G	36.6M	5.21164G	5.24824G	Inf	3
45.12M	5.20882G	5.25394G	36.78M	5.21158G	5.24836G	Inf	4

802.11ac VHT40-BF_Nss1,(MCS0)_4TX EBW

5755MHz

24/07/2019



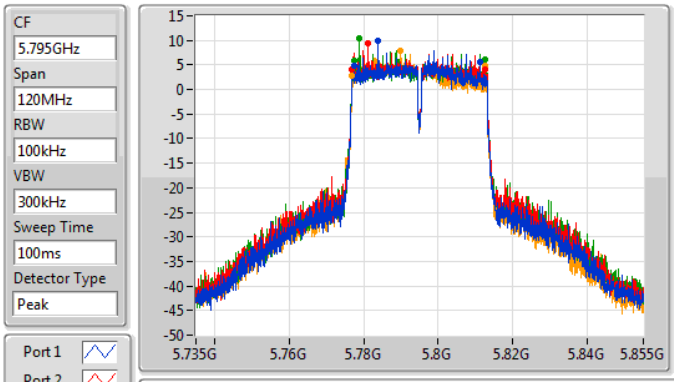


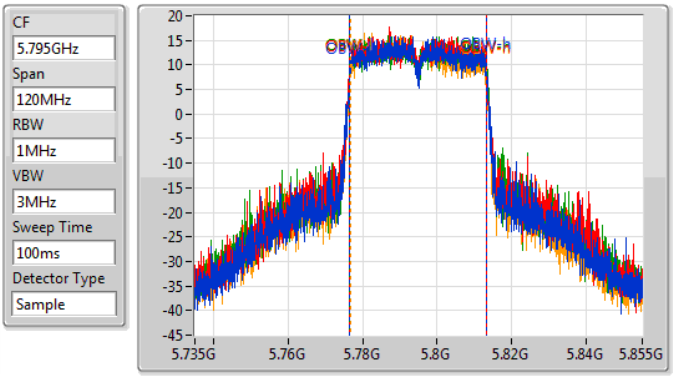
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.3M	5.73682G	5.77312G	36.72M	5.73664G	5.77336G	500k	1
36.3M	5.73682G	5.77312G	36.84M	5.73652G	5.77336G	500k	2
33.72M	5.73748G	5.7712G	36.72M	5.73658G	5.7733G	500k	3
33.78M	5.73748G	5.77126G	36.6M	5.73658G	5.77318G	500k	4

802.11ac VHT40-BF_Nss1,(MCS0)_4TX EBW

5795MHz

24/07/2019



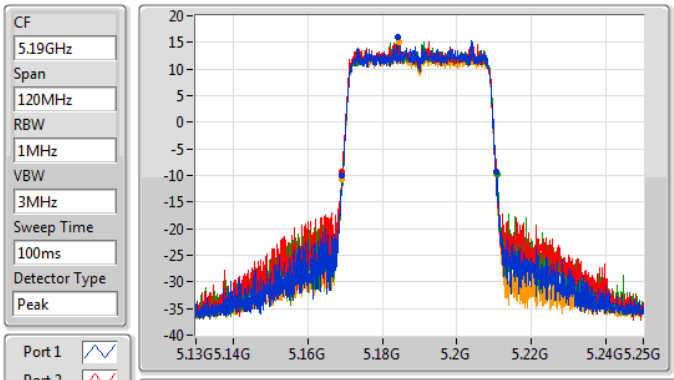


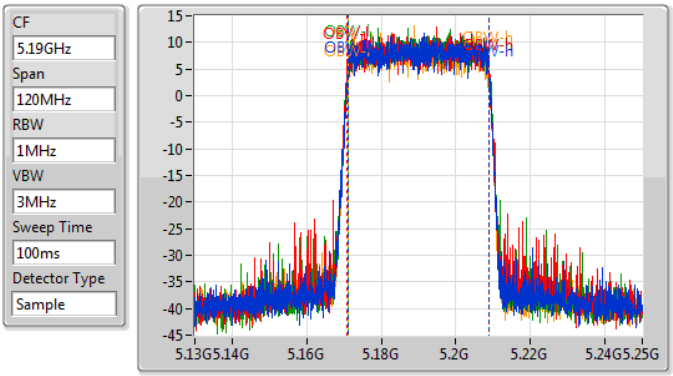
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
33.72M	5.77748G	5.8112G	36.66M	5.77652G	5.81318G	500k	1
35.64M	5.77682G	5.81246G	36.72M	5.77652G	5.81324G	500k	2
34.98M	5.77742G	5.8124G	36.78M	5.77658G	5.81336G	500k	3
35.7M	5.77682G	5.81252G	36.48M	5.77664G	5.81312G	500k	4

802.11ax HEW40-BF_Nss1,(MCS0)_4TX EBW

5190MHz

23/07/2019



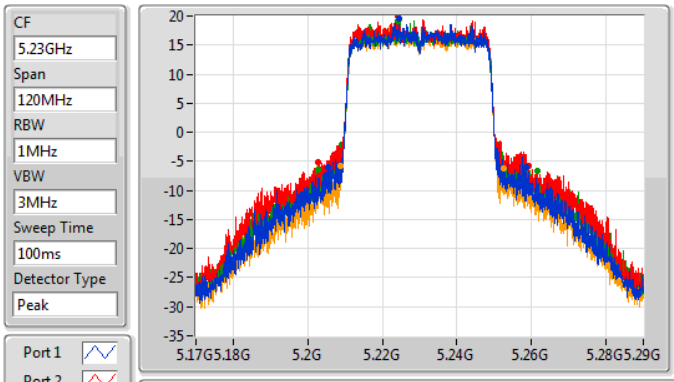


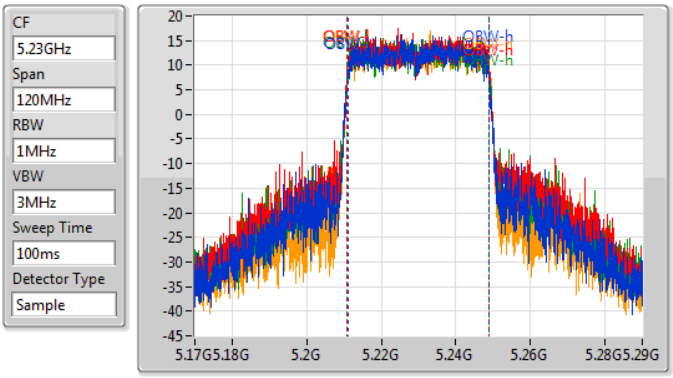
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
41.4M	5.16918G	5.21058G	37.92M	5.17098G	5.2089G	Inf	1
41.4M	5.16918G	5.21058G	37.98M	5.17086G	5.20884G	Inf	2
41.58M	5.16918G	5.21076G	37.8M	5.17104G	5.20884G	Inf	3
41.52M	5.169G	5.21052G	37.86M	5.17098G	5.20884G	Inf	4

802.11ax HEW40-BF_Nss1,(MCS0)_4TX EBW

5230MHz

23/07/2019



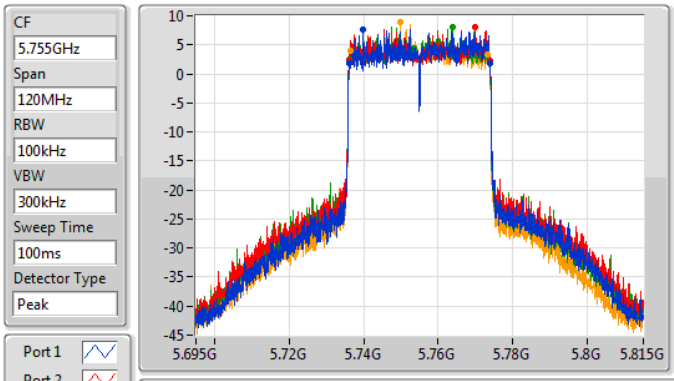


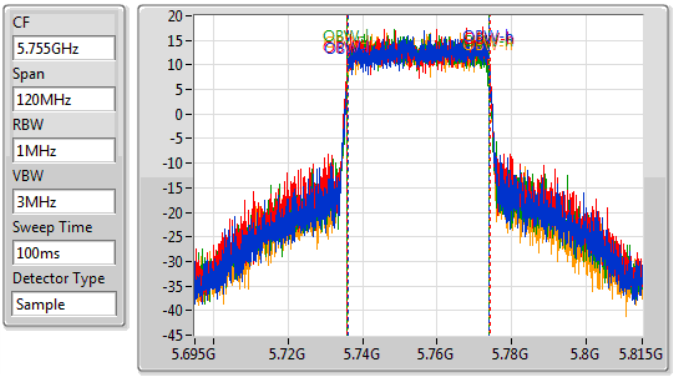
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
53.1M	5.20552G	5.25862G	37.92M	5.21098G	5.2489G	Inf	1
56.58M	5.20264G	5.25922G	38.04M	5.21092G	5.24896G	Inf	2
58.92M	5.2027G	5.26162G	38.1M	5.21092G	5.24902G	Inf	3
43.68M	5.20882G	5.2525G	37.92M	5.21104G	5.24896G	Inf	4

802.11ax HEW40-BF_Nss1,(MCS0)_4TX EBW

5755MHz

23/07/2019



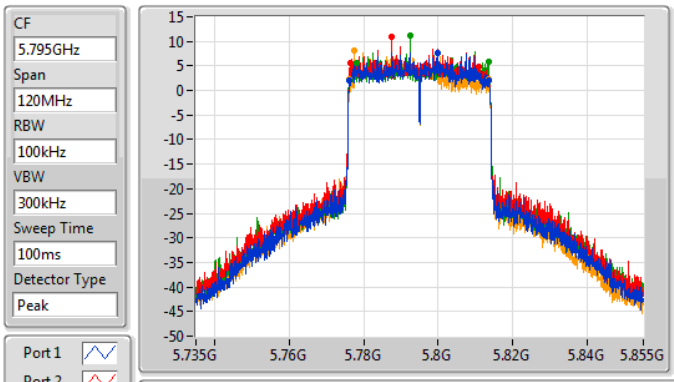


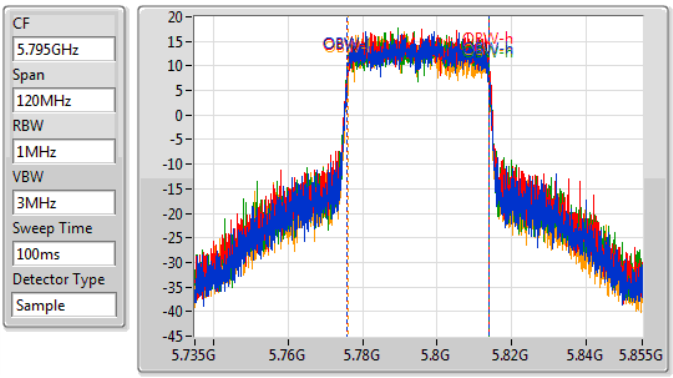
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.92M	5.73604G	5.77396G	37.98M	5.73604G	5.77402G	500k	1
37.92M	5.73604G	5.77396G	38.28M	5.7358G	5.77408G	500k	2
37.44M	5.73628G	5.77372G	37.98M	5.73592G	5.7739G	500k	3
36.96M	5.7364G	5.77336G	37.92M	5.73598G	5.7739G	500k	4

802.11ax HEW40-BF_Nss1,(MCS0)_4TX EBW

5795MHz

23/07/2019



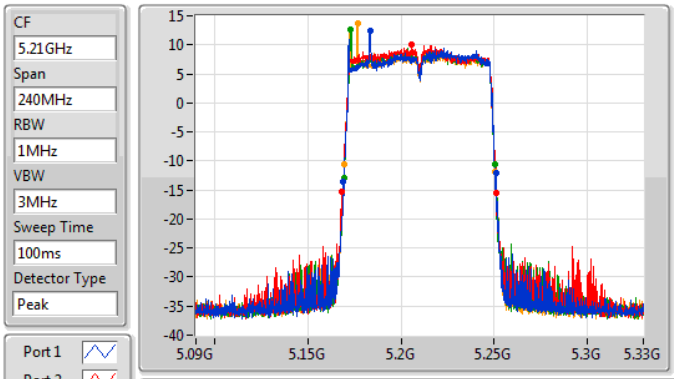


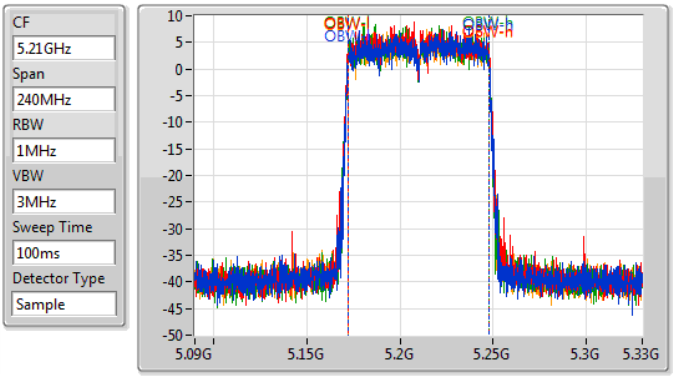
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.5M	5.7761G	5.8136G	37.92M	5.77592G	5.81384G	500k	1
34.32M	5.77652G	5.81084G	38.04M	5.77586G	5.8139G	500k	2
35.16M	5.77826G	5.81342G	38.04M	5.77592G	5.81396G	500k	3
37.38M	5.77616G	5.81354G	37.68M	5.7761G	5.81378G	500k	4

802.11ac VHT80-BF_Nss1,(MCS0)_4TX EBW

5210MHz

24/07/2019



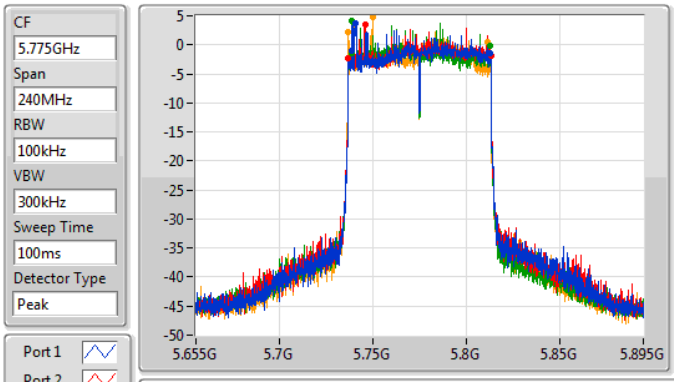


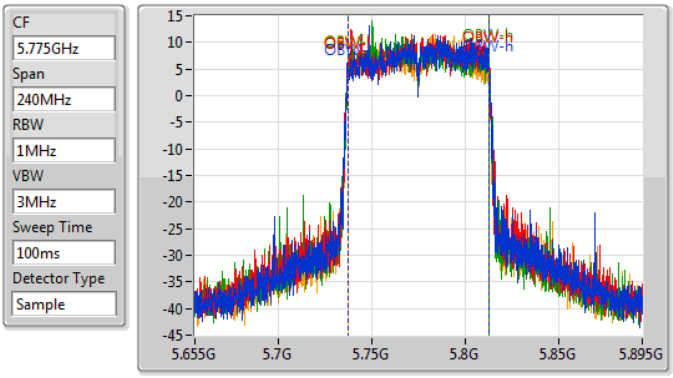
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
81.72M	5.1692G	5.25092G	75.72M	5.17208G	5.2478G	Inf	1
82.68M	5.16836G	5.25104G	75.84M	5.17196G	5.2478G	Inf	2
81.24M	5.16944G	5.25068G	75.72M	5.17208G	5.2478G	Inf	3
81.12M	5.16944G	5.25056G	75.72M	5.17208G	5.2478G	Inf	4

802.11ac VHT80-BF_Nss1,(MCS0)_4TX EBW

5775MHz

24/07/2019





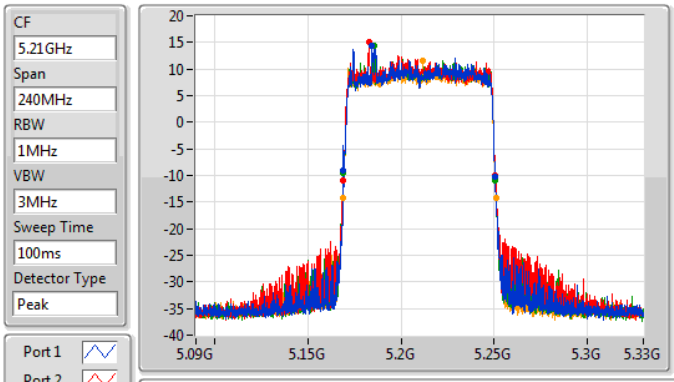
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
74.28M	5.73852G	5.8128G	75.84M	5.73696G	5.8128G	500k	1
76.32M	5.73684G	5.81316G	75.84M	5.73696G	5.8128G	500k	2
74.28M	5.73828G	5.81256G	75.72M	5.73708G	5.8128G	500k	3
74.52M	5.73672G	5.81124G	75.6M	5.73696G	5.81256G	500k	4

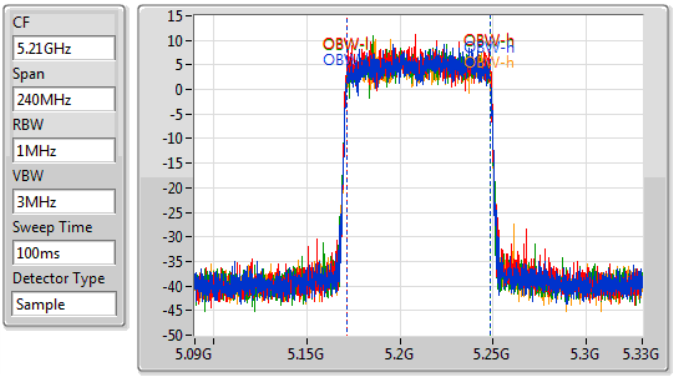
802.11ax HEW80-BF_Nss1,(MCS0)_4TX

EBW

5210MHz

23/07/2019





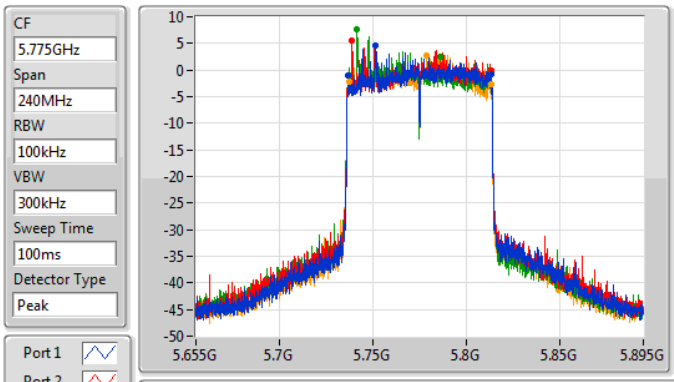
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
81.36M	5.16896G	5.25032G	77.04M	5.17136G	5.2484G	Inf	1
81.36M	5.1692G	5.25056G	77.16M	5.17136G	5.24852G	Inf	2
81.84M	5.16872G	5.25056G	77.04M	5.17136G	5.2484G	Inf	3
82.32M	5.16884G	5.25116G	77.16M	5.17136G	5.24852G	Inf	4

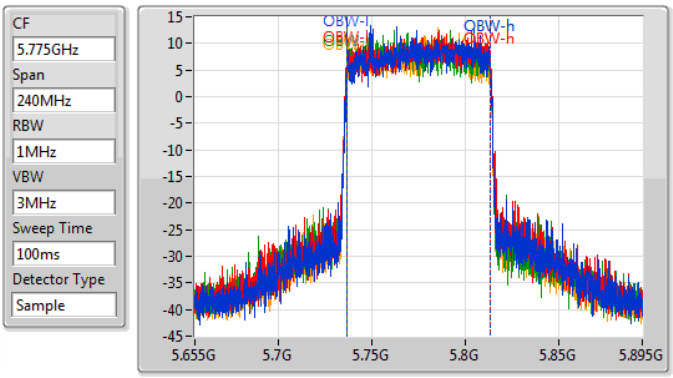
802.11ax HEW80-BF_Nss1,(MCS0)_4TX

EBW

5775MHz

23/07/2019





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
76.68M	5.73648G	5.81316G	76.68M	5.73672G	5.8134G	500k	1
74.4M	5.73876G	5.81316G	77.28M	5.73636G	5.81364G	500k	2
45.12M	5.74116G	5.78628G	77.04M	5.73624G	5.81328G	500k	3
76.32M	5.73708G	5.8134G	76.68M	5.73648G	5.81316G	500k	4

2 Stream 4 TX for TxBF mode:

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	42.66M	18.111M	18M1D1D	21.81M	17.781M
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	68.28M	36.342M	36M3D1D	39.72M	36.222M
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	81.24M	75.922M	75M9D1D	80.16M	75.562M
802.11ac VHT160-BF_Nss2,(MCS0)_4TX	80.32M	75.882M	75M9D1D	79.92M	75.722M
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	41.22M	19.16M	19M2D1D	21.45M	18.951M
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	82.26M	37.781M	37M8D1D	39.96M	37.481M
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	81.48M	77.121M	77M1D1D	80.76M	76.882M
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	81.12M	77.241M	77M2D1D	80.32M	77.081M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	17.61M	18.021M	18M0D1D	17.55M	17.871M
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	36.36M	36.342M	36M3D1D	35.52M	36.162M
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	74.88M	75.922M	75M9D1D	51.96M	75.682M
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	18.96M	19.13M	19M1D1D	18.81M	19.01M
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	37.5M	37.721M	37M7D1D	36M	37.541M
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	75.96M	77.241M	77M2D1D	2.88M	77.001M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth;

Result

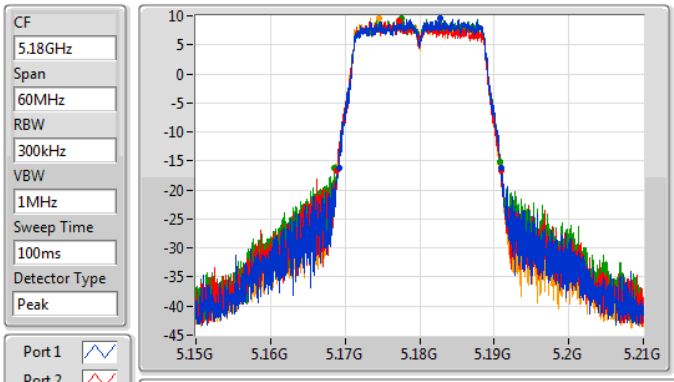
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.81M	17.811M	21.99M	17.781M	22.26M	17.781M	21.87M	17.811M
5200MHz	Pass	Inf	39.12M	18.021M	39.24M	17.961M	39.6M	18.021M	41.01M	17.961M
5240MHz	Pass	Inf	41.07M	17.901M	41.67M	18.111M	42.66M	18.051M	38.13M	17.841M
5745MHz	Pass	500k	17.61M	17.961M	17.58M	17.961M	17.55M	17.931M	17.58M	17.961M
5785MHz	Pass	500k	17.58M	18.021M	17.58M	18.021M	17.55M	17.961M	17.55M	17.931M
5825MHz	Pass	500k	17.58M	17.931M	17.55M	18.021M	17.58M	18.021M	17.55M	17.871M
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.96M	36.222M	39.9M	36.282M	39.9M	36.222M	39.72M	36.282M
5230MHz	Pass	Inf	59.46M	36.282M	65.04M	36.342M	68.28M	36.342M	64.02M	36.222M
5755MHz	Pass	500k	36.3M	36.222M	35.52M	36.342M	36.3M	36.342M	36.12M	36.222M
5795MHz	Pass	500k	36.36M	36.222M	36.36M	36.342M	36.36M	36.342M	35.52M	36.162M
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.24M	75.562M	80.16M	75.802M	80.88M	75.922M	80.76M	75.802M
5775MHz	Pass	500k	74.88M	75.802M	51.96M	75.922M	73.8M	75.682M	65.76M	75.802M
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.48M	19.04M	21.63M	19.01M	21.54M	18.981M	21.45M	18.951M
5200MHz	Pass	Inf	36.48M	19.01M	41.1M	19.16M	39.03M	19.07M	37.08M	19.01M
5240MHz	Pass	Inf	40.77M	19.1M	41.22M	19.07M	40.83M	19.13M	40.95M	19.1M
5745MHz	Pass	500k	18.9M	19.1M	18.96M	19.1M	18.9M	19.1M	18.96M	19.04M
5785MHz	Pass	500k	18.93M	19.13M	18.87M	19.1M	18.93M	19.13M	18.87M	19.13M
5825MHz	Pass	500k	18.87M	19.01M	18.87M	19.13M	18.93M	19.01M	18.81M	19.04M
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.96M	37.481M	40.26M	37.541M	40.74M	37.541M	40.14M	37.481M
5230MHz	Pass	Inf	52.92M	37.541M	65.76M	37.781M	82.26M	37.721M	68.04M	37.721M
5755MHz	Pass	500k	37.32M	37.601M	37.5M	37.541M	37.44M	37.541M	36.42M	37.601M
5795MHz	Pass	500k	37.32M	37.601M	37.2M	37.721M	36M	37.661M	36.66M	37.601M
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.48M	76.882M	81.36M	77.121M	81.12M	77.121M	80.76M	77.001M
5775MHz	Pass	500k	72.48M	77.001M	2.88M	77.241M	74.88M	77.001M	75.96M	77.121M

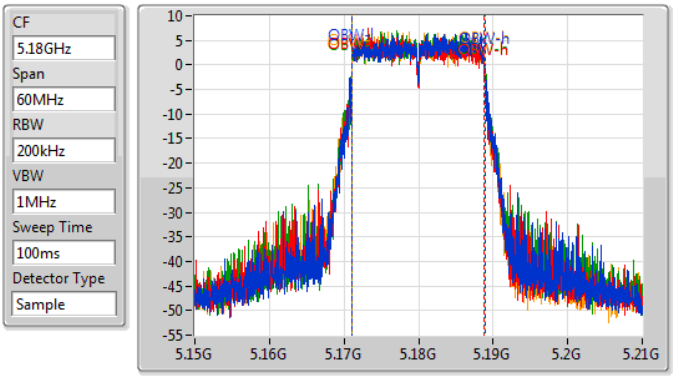
Port X-N dB = Port **X** 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port **X** 99% occupied bandwidth;

802.11ac VHT20-BF_Nss2,(MCS0)_4TX EBW

5180MHz

24/07/2019



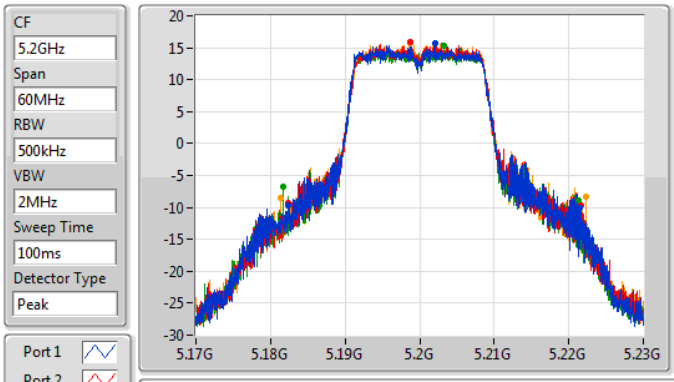


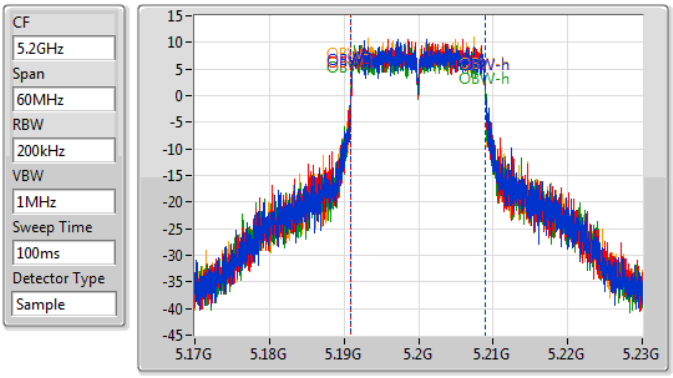
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.81M	5.16914G	5.19095G	17.811M	5.171064G	5.188876G	Inf	1
21.99M	5.1689G	5.19089G	17.781M	5.171064G	5.188846G	Inf	2
22.26M	5.1686G	5.19086G	17.781M	5.171064G	5.188846G	Inf	3
21.87M	5.1689G	5.19077G	17.811M	5.171064G	5.188876G	Inf	4

802.11ac VHT20-BF_Nss2,(MCS0)_4TX EBW

5200MHz

24/07/2019



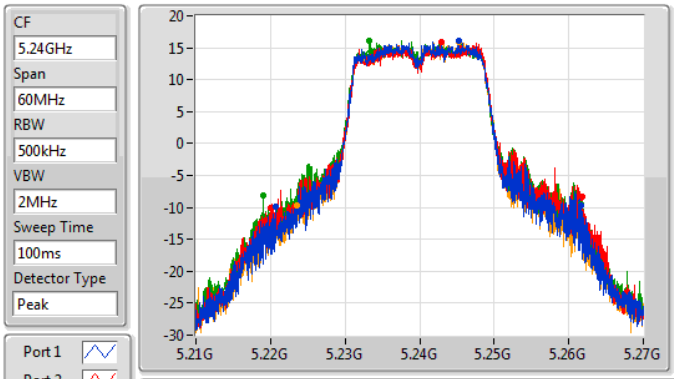


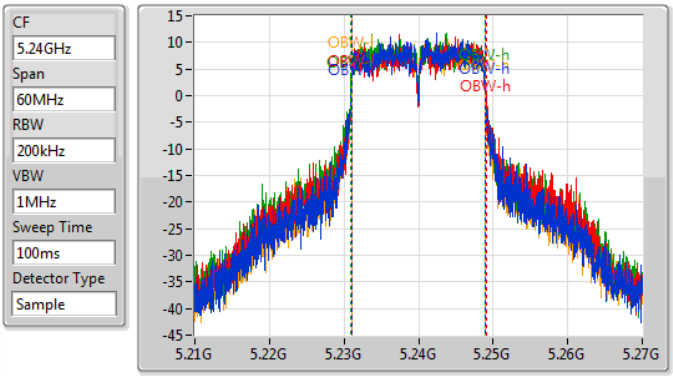
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
39.12M	5.18239G	5.22151G	18.021M	5.190975G	5.208996G	Inf	1
39.24M	5.18239G	5.22163G	17.961M	5.190975G	5.208936G	Inf	2
39.6M	5.18173G	5.22133G	18.021M	5.190975G	5.208996G	Inf	3
41.01M	5.18134G	5.22235G	17.961M	5.190975G	5.208936G	Inf	4

802.11ac VHT20-BF_Nss2,(MCS0)_4TX EBW

5240MHz

24/07/2019



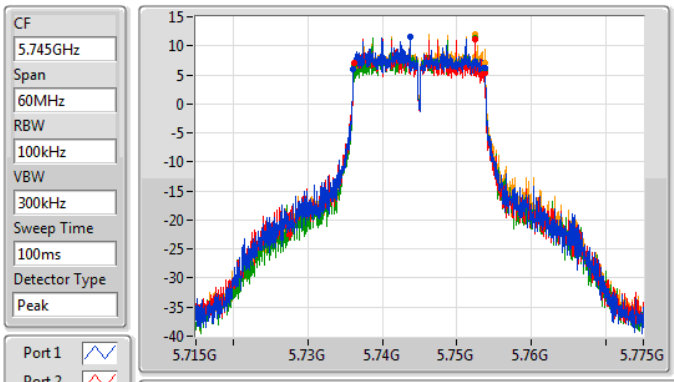


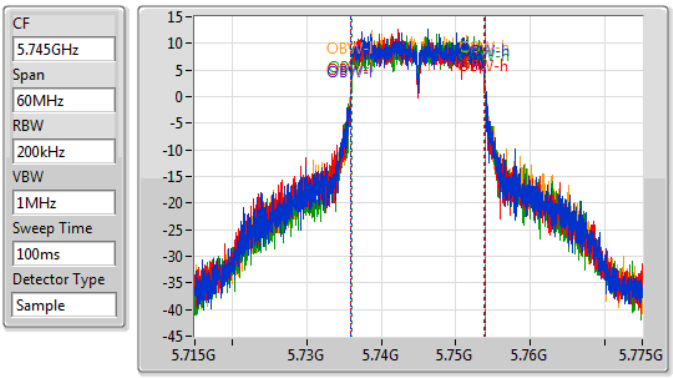
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
41.07M	5.22065G	5.26172G	17.901M	5.231004G	5.248906G	Inf	1
41.67M	5.22011G	5.26178G	18.111M	5.231004G	5.249115G	Inf	2
42.66M	5.21906G	5.26172G	18.051M	5.230945G	5.248996G	Inf	3
38.13M	5.22353G	5.26166G	17.841M	5.231034G	5.248876G	Inf	4

802.11ac VHT20-BF_Nss2,(MCS0)_4TX EBW

5745MHz

24/07/2019



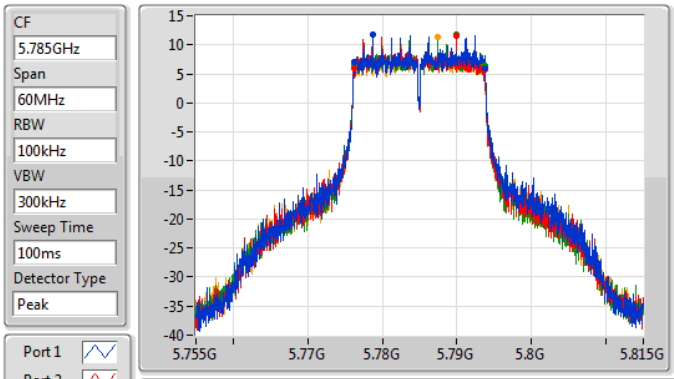


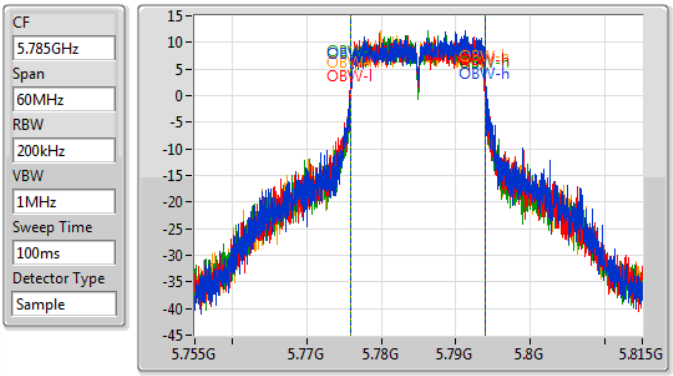
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.61M	5.73612G	5.75373G	17.961M	5.735975G	5.753936G	500k	1
17.58M	5.73615G	5.75373G	17.961M	5.735885G	5.753846G	500k	2
17.55M	5.73618G	5.75373G	17.931M	5.736004G	5.753936G	500k	3
17.58M	5.73618G	5.75376G	17.961M	5.735975G	5.753936G	500k	4

802.11ac VHT20-BF_Nss2,(MCS0)_4TX EBW

5785MHz

24/07/2019



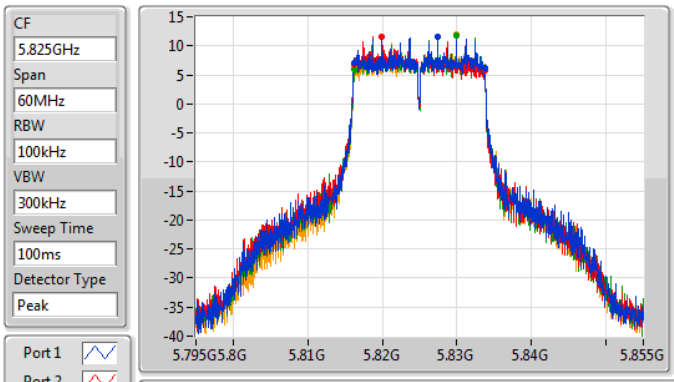


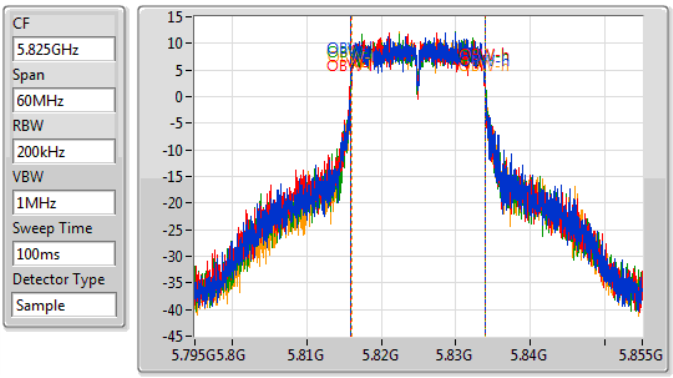
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.58M	5.77618G	5.79376G	18.021M	5.775975G	5.793996G	500k	1
17.58M	5.77615G	5.79373G	18.021M	5.775915G	5.793936G	500k	2
17.55M	5.77615G	5.7937G	17.961M	5.775945G	5.793906G	500k	3
17.55M	5.77618G	5.79373G	17.931M	5.775975G	5.793906G	500k	4

802.11ac VHT20-BF_Nss2,(MCS0)_4TX EBW

5825MHz

24/07/2019



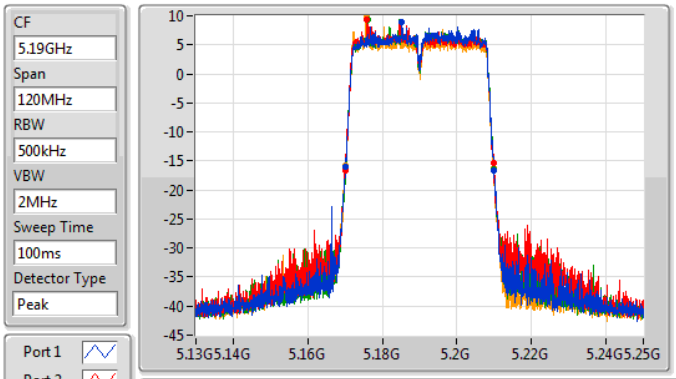


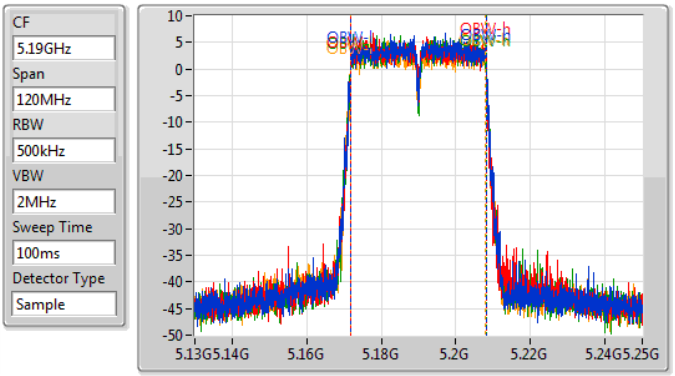
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.58M	5.81615G	5.83373G	17.931M	5.815975G	5.833906G	500k	1
17.55M	5.81615G	5.8337G	18.021M	5.815855G	5.833876G	500k	2
17.58M	5.81615G	5.83373G	18.021M	5.815975G	5.833996G	500k	3
17.55M	5.81618G	5.83373G	17.871M	5.816034G	5.833906G	500k	4

802.11ac VHT40-BF_Nss2,(MCS0)_4TX EBW

5190MHz

24/07/2019



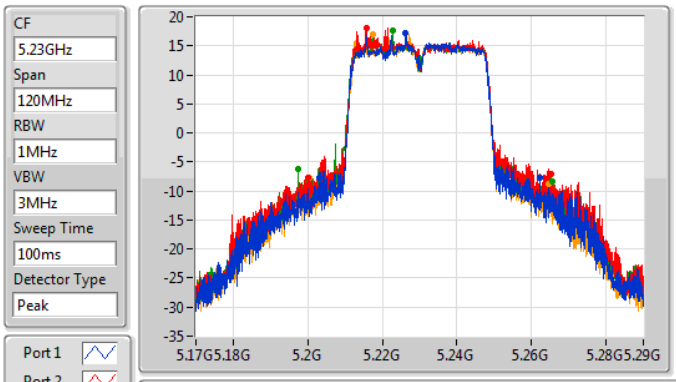


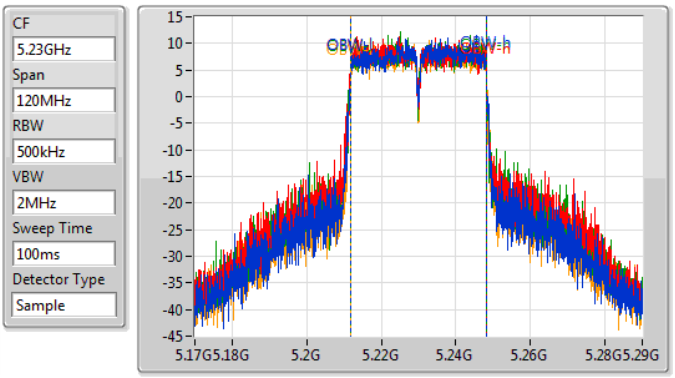
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
39.96M	5.17008G	5.21004G	36.222M	5.171829G	5.208051G	Inf	1
39.9M	5.16996G	5.20986G	36.282M	5.171769G	5.208051G	Inf	2
39.9M	5.17008G	5.20998G	36.222M	5.171829G	5.208051G	Inf	3
39.72M	5.17008G	5.2098G	36.282M	5.171709G	5.207991G	Inf	4

802.11ac VHT40-BF_Nss2,(MCS0)_4TX EBW

5230MHz

24/07/2019



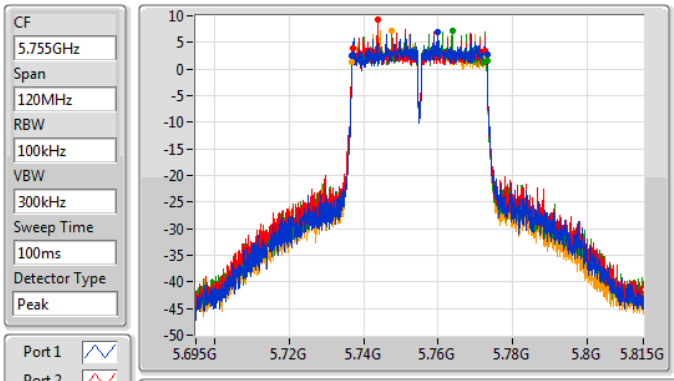


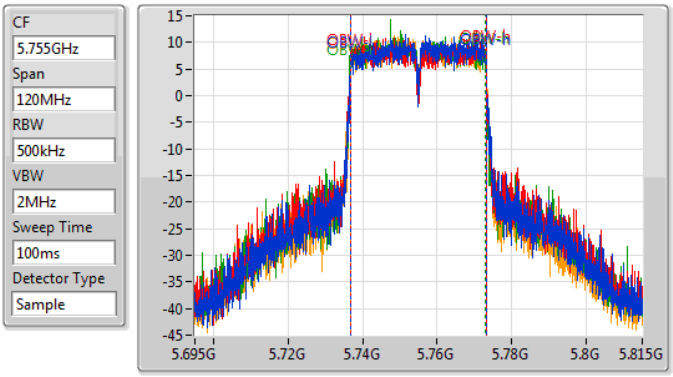
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
59.46M	5.20294G	5.2624G	36.282M	5.211829G	5.248111G	Inf	1
65.04M	5.20006G	5.2651G	36.342M	5.211769G	5.248111G	Inf	2
68.28M	5.19748G	5.26576G	36.342M	5.211769G	5.248111G	Inf	3
64.02M	5.20042G	5.26444G	36.222M	5.211829G	5.248051G	Inf	4

802.11ac VHT40-BF_Nss2,(MCS0)_4TX EBW

5755MHz

24/07/2019



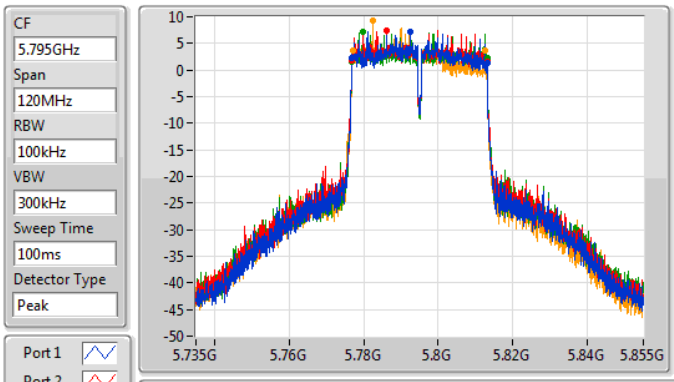


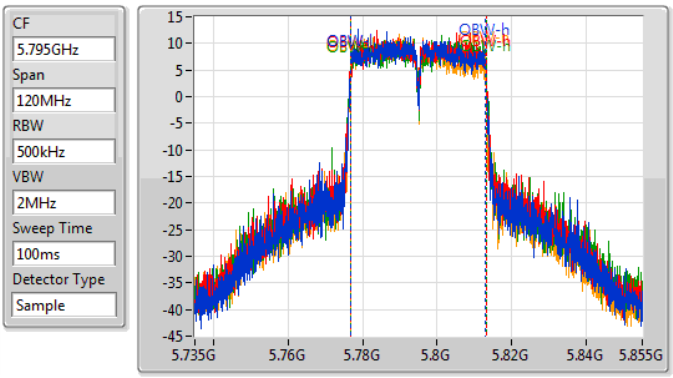
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.3M	5.73682G	5.77312G	36.222M	5.736829G	5.773051G	500k	1
35.52M	5.73718G	5.7727G	36.342M	5.736769G	5.773111G	500k	2
36.3M	5.73682G	5.77312G	36.342M	5.736649G	5.772991G	500k	3
36.12M	5.73676G	5.77288G	36.222M	5.736769G	5.772991G	500k	4

802.11ac VHT40-BF_Nss2,(MCS0)_4TX EBW

5795MHz

24/07/2019



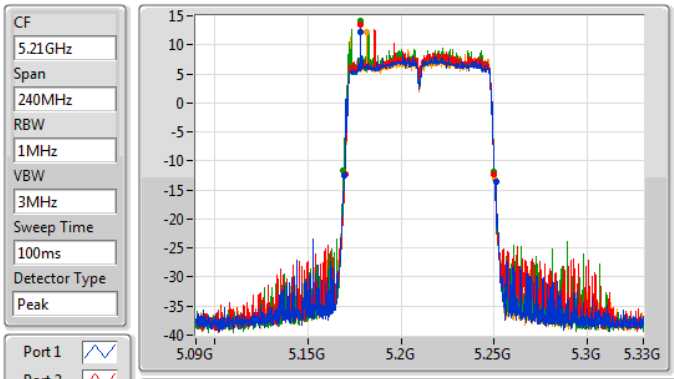


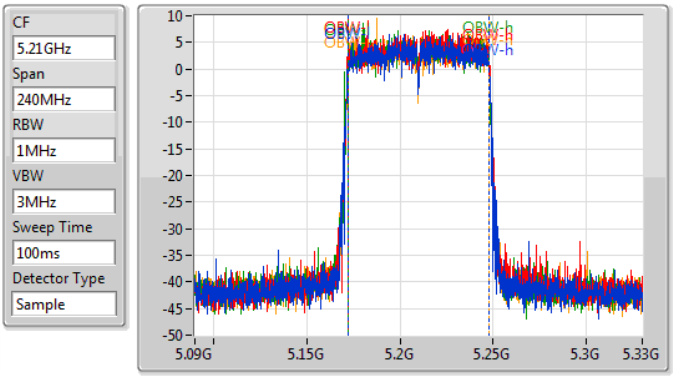
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.36M	5.77676G	5.81312G	36.222M	5.776769G	5.812991G	500k	1
36.36M	5.77676G	5.81312G	36.342M	5.776709G	5.813051G	500k	2
36.36M	5.77676G	5.81312G	36.342M	5.776769G	5.813111G	500k	3
35.52M	5.777G	5.81252G	36.162M	5.776769G	5.812931G	500k	4

802.11ac VHT80-BF_Nss2,(MCS0)_4TX EBW

5210MHz

24/07/2019



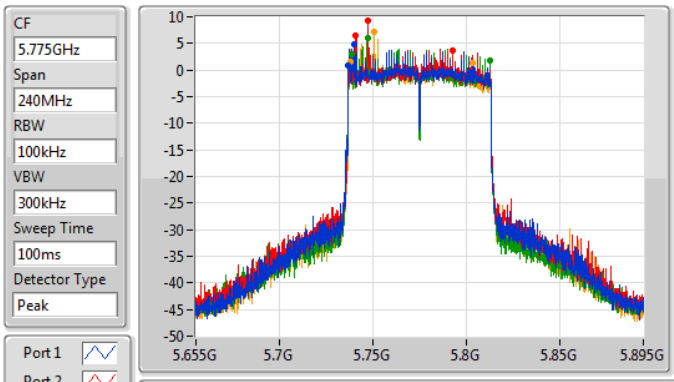


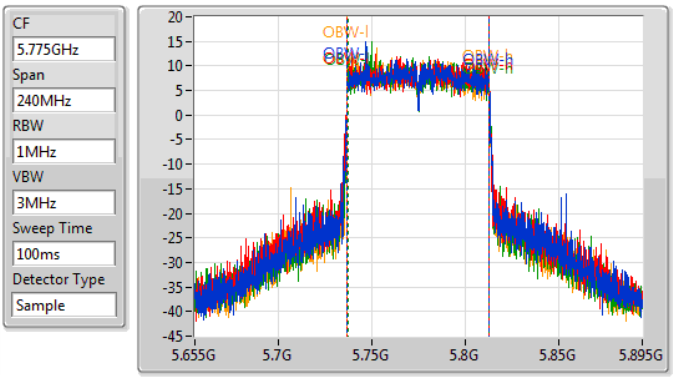
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
81.24M	5.16956G	5.2508G	75.562M	5.172099G	5.247661G	Inf	1
80.16M	5.16992G	5.25008G	75.802M	5.171979G	5.247781G	Inf	2
80.88M	5.16908G	5.24996G	75.922M	5.171979G	5.247901G	Inf	3
80.76M	5.1698G	5.25056G	75.802M	5.172099G	5.247901G	Inf	4

802.11ac VHT80-BF_Nss2,(MCS0)_4TX EBW

5775MHz

24/07/2019



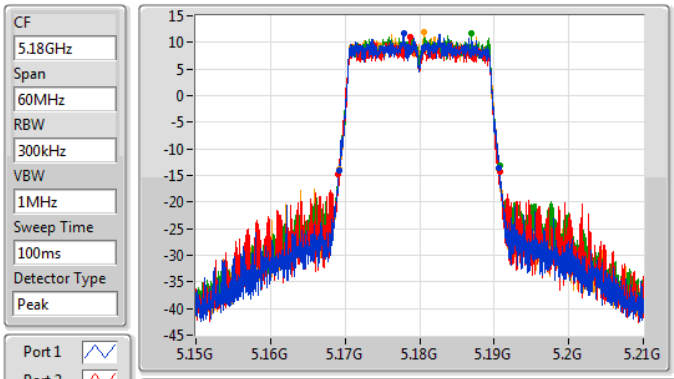


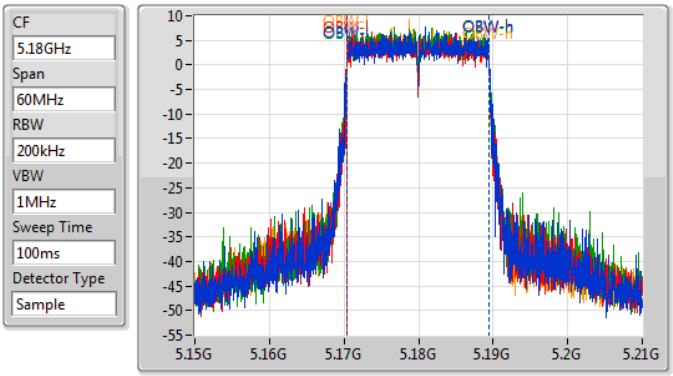
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
74.88M	5.73672G	5.8116G	75.802M	5.736859G	5.812661G	500k	1
51.96M	5.74056G	5.79252G	75.922M	5.736859G	5.812781G	500k	2
73.8M	5.73864G	5.81244G	75.682M	5.737099G	5.812781G	500k	3
65.76M	5.73792G	5.80368G	75.802M	5.736859G	5.812661G	500k	4

802.11ax HEW20-BF_Nss2,(MCS0)_4TX EBW

5180MHz

24/07/2019



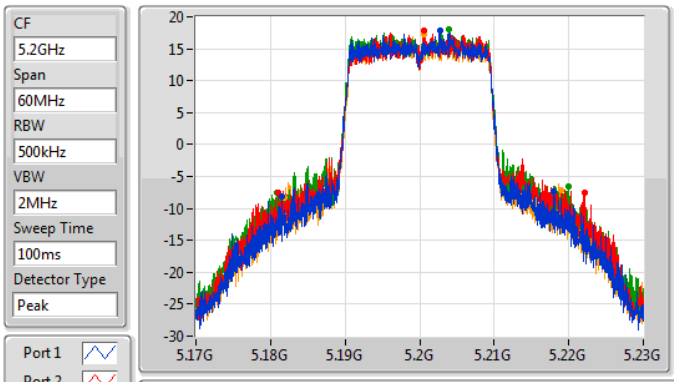


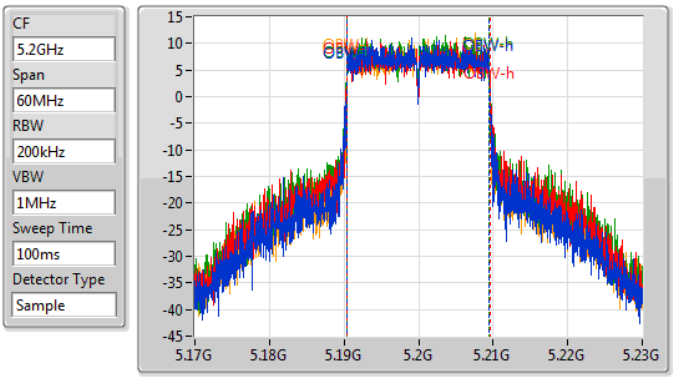
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.48M	5.16917G	5.19065G	19.04M	5.170405G	5.189445G	Inf	1
21.63M	5.16908G	5.19071G	19.01M	5.170435G	5.189445G	Inf	2
21.54M	5.16917G	5.19071G	18.981M	5.170435G	5.189415G	Inf	3
21.45M	5.1692G	5.19065G	18.951M	5.170465G	5.189415G	Inf	4

802.11ax HEW20-BF_Nss2,(MCS0)_4TX EBW

5200MHz

24/07/2019



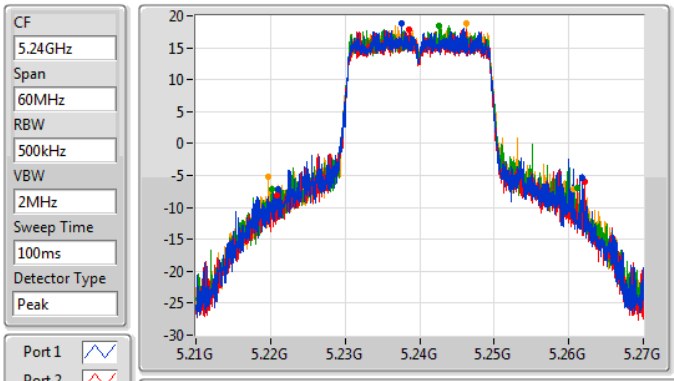


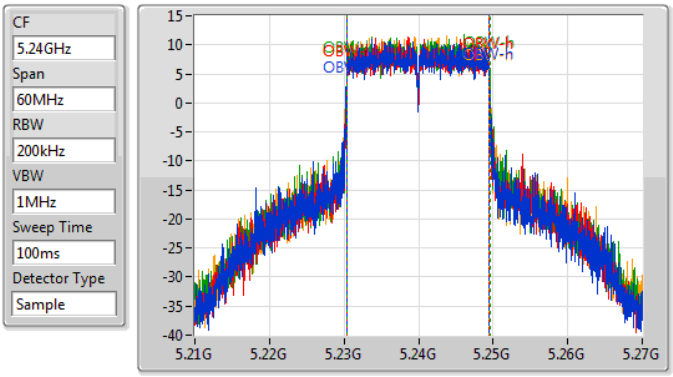
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.48M	5.18155G	5.21803G	19.01M	5.190435G	5.209445G	Inf	1
41.1M	5.18104G	5.22214G	19.16M	5.190405G	5.209565G	Inf	2
39.03M	5.18092G	5.21995G	19.07M	5.190405G	5.209475G	Inf	3
37.08M	5.18188G	5.21896G	19.01M	5.190435G	5.209445G	Inf	4

802.11ax HEW20-BF_Nss2,(MCS0)_4TX EBW

5240MHz

24/07/2019



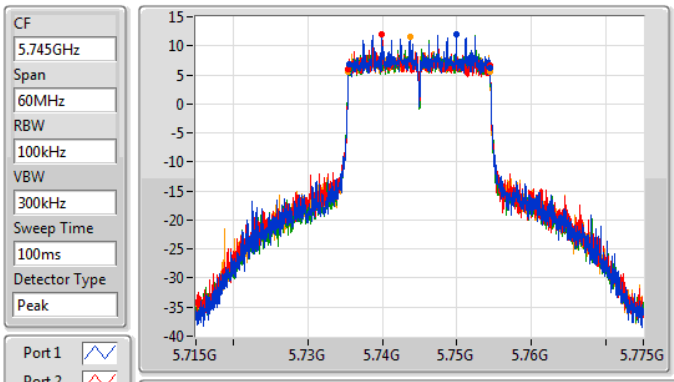


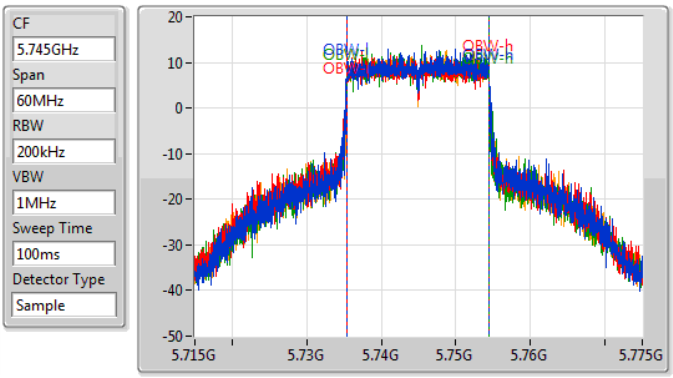
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.77M	5.22107G	5.26184G	19.1M	5.230375G	5.249475G	Inf	1
41.22M	5.22089G	5.26211G	19.07M	5.230405G	5.249475G	Inf	2
40.83M	5.22026G	5.26109G	19.13M	5.230405G	5.249535G	Inf	3
40.95M	5.21975G	5.2607G	19.1M	5.230405G	5.249505G	Inf	4

802.11ax HEW20-BF_Nss2,(MCS0)_4TX EBW

5745MHz

24/07/2019



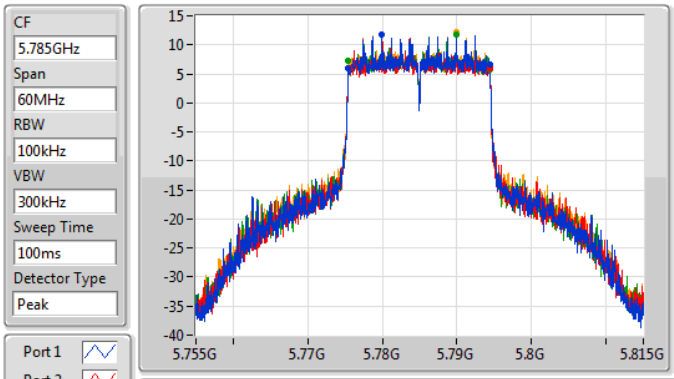


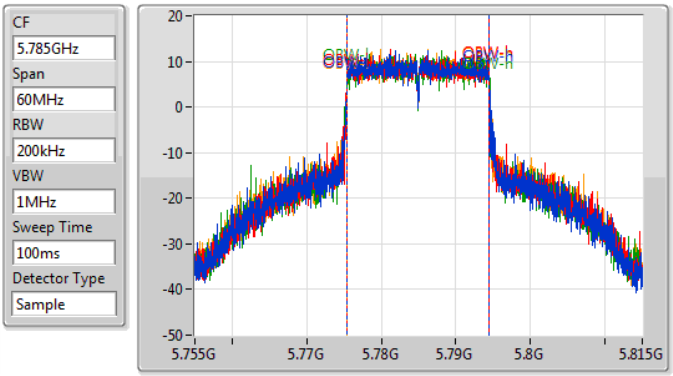
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.9M	5.73549G	5.75439G	19.1M	5.735375G	5.754475G	500k	1
18.96M	5.73546G	5.75442G	19.1M	5.735345G	5.754445G	500k	2
18.9M	5.73552G	5.75442G	19.1M	5.735405G	5.754505G	500k	3
18.96M	5.73546G	5.75442G	19.04M	5.735435G	5.754475G	500k	4

802.11ax HEW20-BF_Nss2,(MCS0)_4TX EBW

5785MHz

24/07/2019



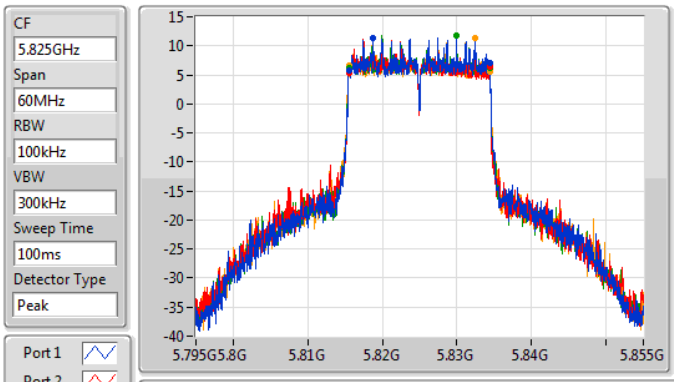


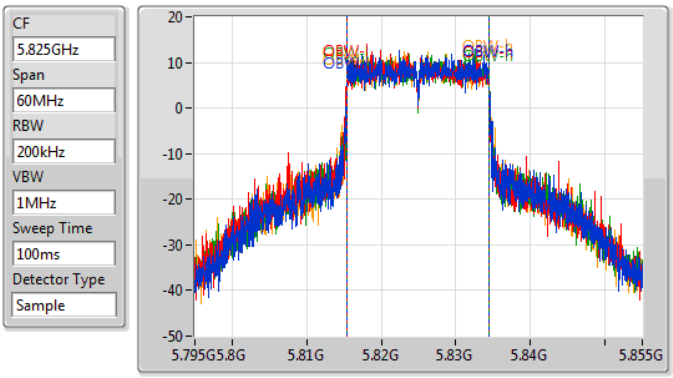
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.93M	5.77543G	5.79436G	19.13M	5.775375G	5.794505G	500k	1
18.87M	5.77555G	5.79442G	19.1M	5.775375G	5.794475G	500k	2
18.93M	5.77546G	5.79439G	19.13M	5.775375G	5.794505G	500k	3
18.87M	5.77552G	5.79439G	19.13M	5.775375G	5.794505G	500k	4

802.11ax HEW20-BF_Nss2,(MCS0)_4TX EBW

5825MHz

24/07/2019



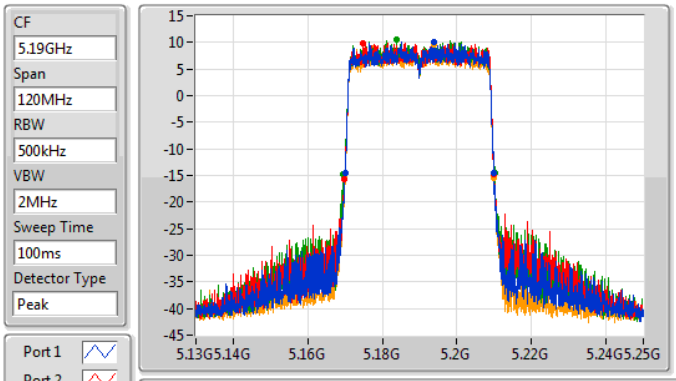


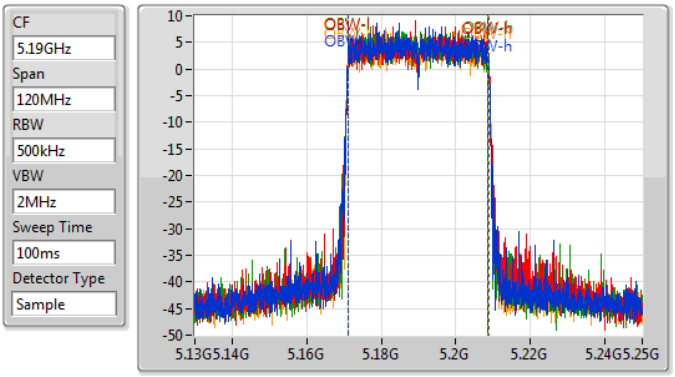
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.87M	5.81549G	5.83436G	19.01M	5.815435G	5.834445G	500k	1
18.87M	5.81549G	5.83436G	19.13M	5.815315G	5.834445G	500k	2
18.93M	5.81549G	5.83442G	19.01M	5.815435G	5.834445G	500k	3
18.81M	5.81561G	5.83442G	19.04M	5.815405G	5.834445G	500k	4

802.11ax HEW40-BF_Nss2,(MCS0)_4TX EBW

5190MHz

24/07/2019



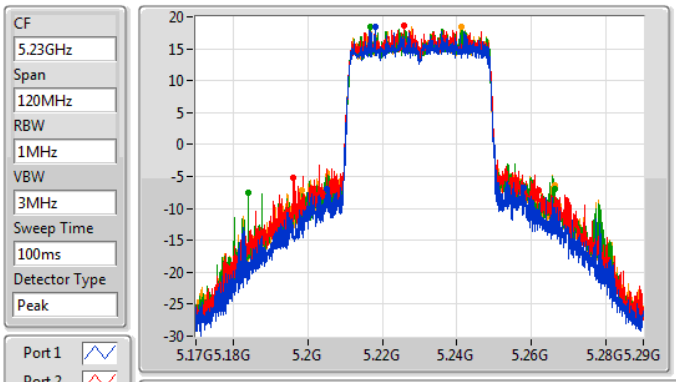


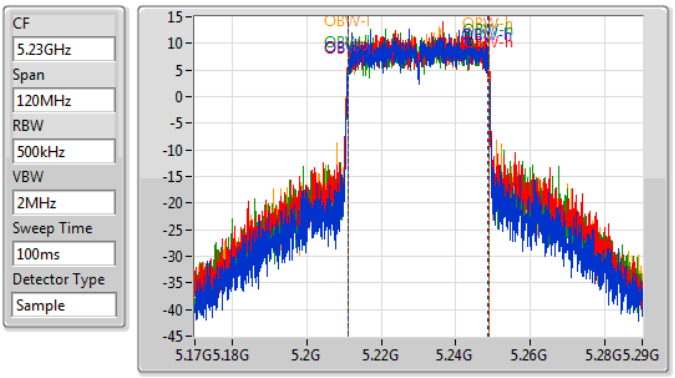
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
39.96M	5.16996G	5.20992G	37.481M	5.171169G	5.208651G	Inf	1
40.26M	5.16978G	5.21004G	37.541M	5.171169G	5.208711G	Inf	2
40.74M	5.16948G	5.21022G	37.541M	5.171229G	5.208771G	Inf	3
40.14M	5.16984G	5.20998G	37.481M	5.171169G	5.208651G	Inf	4

802.11ax HEW40-BF_Nss2,(MCS0)_4TX EBW

5230MHz

24/07/2019



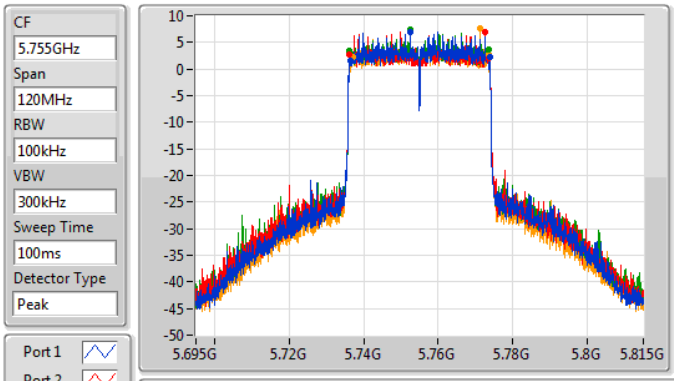


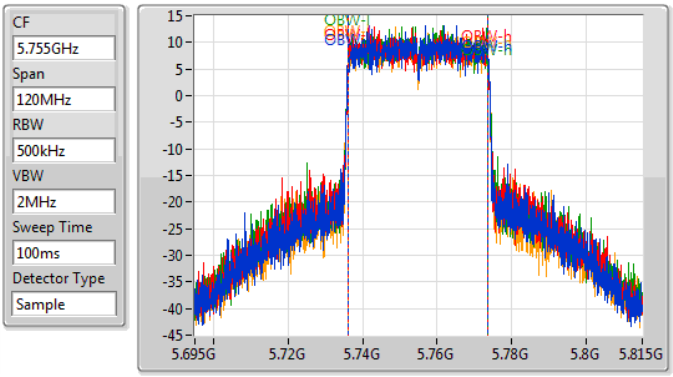
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
52.92M	5.2051G	5.25802G	37.541M	5.211169G	5.248711G	Inf	1
65.76M	5.19622G	5.26198G	37.781M	5.211049G	5.248831G	Inf	2
82.26M	5.1841G	5.26636G	37.721M	5.211109G	5.248831G	Inf	3
68.04M	5.19826G	5.2663G	37.721M	5.211109G	5.248831G	Inf	4

802.11ax HEW40-BF_Nss2,(MCS0)_4TX EBW

5755MHz

24/07/2019



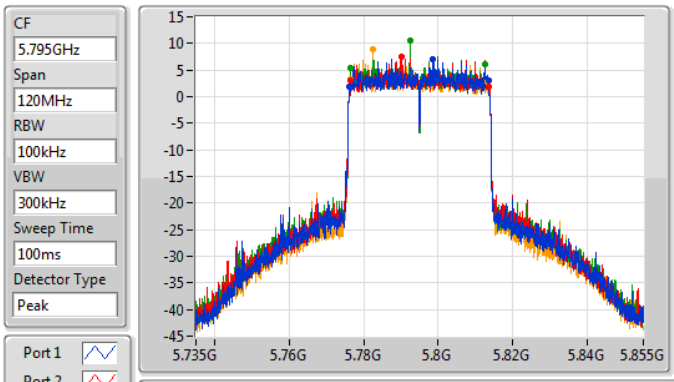


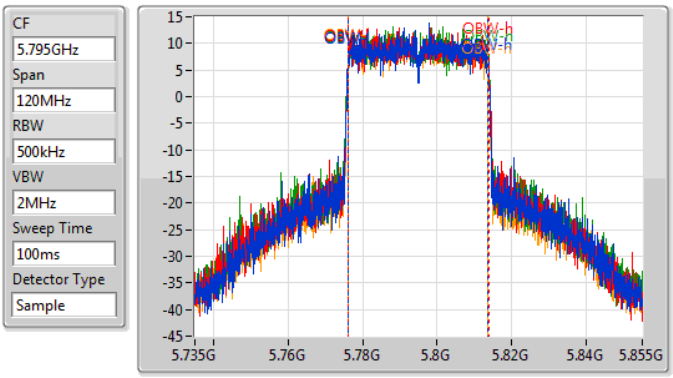
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.32M	5.7364G	5.77372G	37.601M	5.736109G	5.773711G	500k	1
37.5M	5.73616G	5.77366G	37.541M	5.736169G	5.773711G	500k	2
37.44M	5.73616G	5.7736G	37.541M	5.736169G	5.773711G	500k	3
36.42M	5.737G	5.77342G	37.601M	5.736109G	5.773711G	500k	4

802.11ax HEW40-BF_Nss2,(MCS0)_4TX EBW

5795MHz

24/07/2019



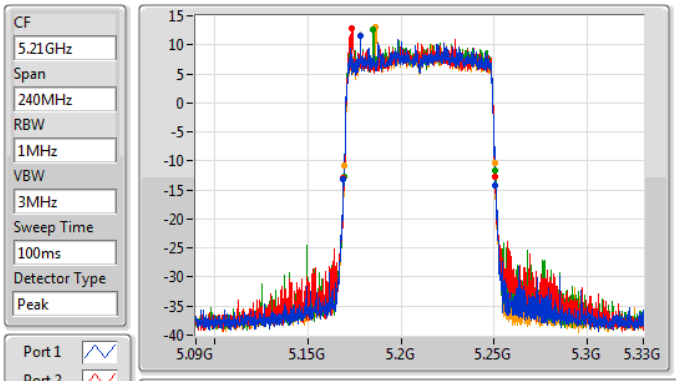


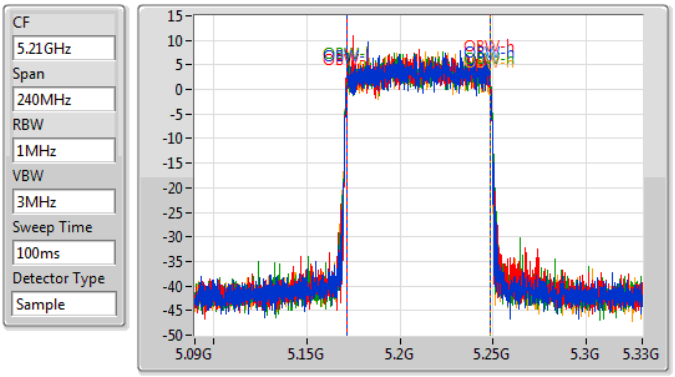
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.32M	5.77628G	5.8136G	37.601M	5.776109G	5.813711G	500k	1
37.2M	5.77646G	5.81366G	37.721M	5.776049G	5.813771G	500k	2
36M	5.77646G	5.81246G	37.661M	5.776109G	5.813771G	500k	3
36.66M	5.77652G	5.81318G	37.601M	5.776109G	5.813711G	500k	4

802.11ax HEW80-BF_Nss2,(MCS0)_4TX EBW

5210MHz

24/07/2019



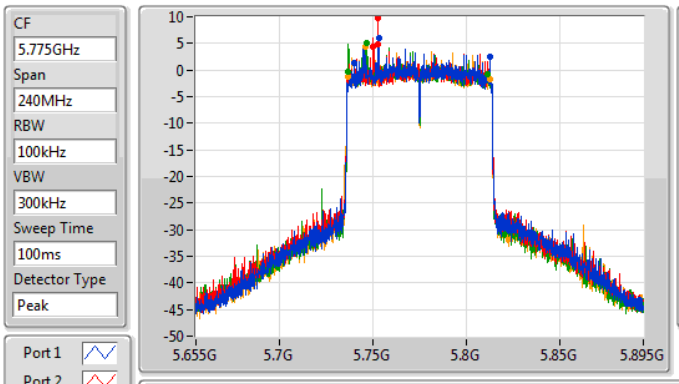


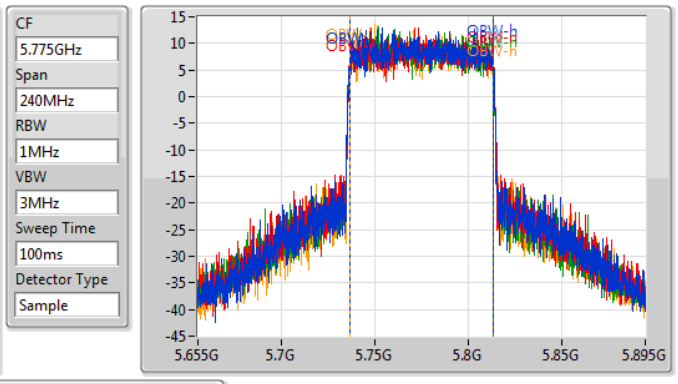
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
81.48M	5.1692G	5.25068G	76.882M	5.171499G	5.248381G	Inf	1
81.36M	5.1692G	5.25056G	77.121M	5.171379G	5.248501G	Inf	2
81.12M	5.16944G	5.25056G	77.121M	5.171379G	5.248501G	Inf	3
80.76M	5.16968G	5.25044G	77.001M	5.171379G	5.248381G	Inf	4

802.11ax HEW80-BF_Nss2,(MCS0)_4TX EBW

5775MHz

24/07/2019





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
72.48M	5.73996G	5.81244G	77.001M	5.736379G	5.813381G	500k	1
2.88M	5.7498G	5.75268G	77.241M	5.736379G	5.813621G	500k	2
74.88M	5.7366G	5.81148G	77.001M	5.736379G	5.813381G	500k	3
75.96M	5.73672G	5.81268G	77.121M	5.736259G	5.813381G	500k	4

For non-beamforming mode:
4 Stream 4 TX for SDM mode:
Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11ac VHT20_Nss4,(MCS0)_4TX	29.76	0.94624
802.11ax HEW20_Nss4,(MCS0)_4TX	29.95	0.98855
802.11ac VHT40_Nss4,(MCS0)_4TX	27.55	0.56885
802.11ax HEW40_Nss4,(MCS0)_4TX	27.74	0.59429
802.11ac VHT80_Nss4,(MCS0)_4TX	23.03	0.20091
802.11ax HEW80_Nss4,(MCS0)_4TX	22.97	0.19815
5.725-5.85GHz	-	-
802.11ac VHT20_Nss4,(MCS0)_4TX	29.76	0.94624
802.11ax HEW20_Nss4,(MCS0)_4TX	29.90	0.97724
802.11ac VHT40_Nss4,(MCS0)_4TX	29.21	0.83368
802.11ax HEW40_Nss4,(MCS0)_4TX	29.40	0.87096
802.11ac VHT80_Nss4,(MCS0)_4TX	26.36	0.43251
802.11ax HEW80_Nss4,(MCS0)_4TX	26.36	0.43251

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ac VHT20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	2.60	18.90	19.24	19.60	18.91	25.19	30.00
5200MHz	Pass	2.60	22.66	23.04	23.25	22.71	28.94	30.00
5240MHz	Pass	2.60	23.17	23.93	24.07	23.74	29.76	30.00
5745MHz	Pass	3.00	23.86	23.67	23.88	23.50	29.75	30.00
5785MHz	Pass	2.60	24.16	23.43	23.63	23.70	29.76	30.00
5825MHz	Pass	2.60	23.64	23.63	23.89	23.78	29.76	30.00
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	2.60	19.14	19.36	19.88	19.19	25.42	30.00
5200MHz	Pass	2.60	22.74	22.87	23.19	23.01	28.98	30.00
5240MHz	Pass	2.60	23.53	24.21	24.16	23.77	29.95	30.00
5745MHz	Pass	3.00	23.85	23.70	23.87	23.75	29.81	30.00
5785MHz	Pass	2.60	23.69	23.70	23.85	23.84	29.79	30.00
5825MHz	Pass	2.60	23.84	23.78	24.04	23.85	29.90	30.00
802.11ac VHT40_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	2.60	16.70	17.18	17.23	16.40	22.91	30.00
5230MHz	Pass	2.60	21.21	21.94	21.72	21.21	27.55	30.00
5755MHz	Pass	2.60	23.04	23.29	23.49	22.92	29.21	30.00
5795MHz	Pass	2.60	22.87	23.07	22.98	22.77	28.94	30.00
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	2.60	16.96	17.24	17.22	16.75	23.07	30.00
5230MHz	Pass	2.60	21.52	22.24	21.81	21.25	27.74	30.00
5755MHz	Pass	2.60	23.16	23.41	23.68	23.24	29.40	30.00
5795MHz	Pass	2.60	23.03	23.15	23.14	22.89	29.07	30.00
802.11ac VHT80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	2.60	16.84	17.35	17.11	16.73	23.03	30.00
5775MHz	Pass	2.60	20.37	20.44	20.37	20.18	26.36	30.00
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	2.60	16.68	17.21	17.08	16.79	22.97	30.00
5775MHz	Pass	2.60	20.48	20.36	20.44	20.08	26.36	30.00

DG = Directional Gain; **Port X** = Port X output power

For beamforming mode:
1 Stream 4 TX for TxBF mode:
Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	27.43	0.55335
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	27.78	0.59979
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	27.19	0.52360
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	27.55	0.56885
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	22.75	0.18836
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	23.22	0.20989
5.725-5.85GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	27.79	0.60117
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	28.12	0.64863
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	28.01	0.63241
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	28.13	0.65013
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	25.20	0.33113
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	25.81	0.38107

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	8.20	17.90	17.84	18.37	18.21	24.11	27.80
5200MHz	Pass	8.20	20.25	21.28	21.93	20.35	27.03	27.80
5240MHz	Pass	8.20	21.59	21.38	21.38	21.30	27.43	27.80
5745MHz	Pass	8.70	20.01	21.18	20.74	21.32	26.86	27.30
5785MHz	Pass	7.80	22.07	22.15	20.88	21.85	27.79	28.20
5825MHz	Pass	7.80	21.01	22.18	21.71	21.97	27.76	28.20
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	8.20	18.17	17.71	18.82	18.77	24.41	27.80
5200MHz	Pass	8.20	21.12	21.65	22.56	21.58	27.78	27.80
5240MHz	Pass	8.20	22.14	21.96	21.11	21.61	27.74	27.80
5745MHz	Pass	8.70	21.04	20.88	20.88	21.61	27.13	27.30
5785MHz	Pass	7.80	21.93	22.46	22.13	21.85	28.12	28.20
5825MHz	Pass	7.80	21.85	22.33	21.87	22.17	28.08	28.20
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	8.20	17.04	17.44	16.52	15.85	22.77	27.80
5230MHz	Pass	8.20	21.21	21.78	21.32	20.21	27.19	27.80
5755MHz	Pass	7.80	20.81	21.93	21.88	20.85	27.42	28.20
5795MHz	Pass	7.80	20.64	22.03	21.90	23.04	28.01	28.20
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	8.20	16.33	17.70	16.83	17.34	23.10	27.80
5230MHz	Pass	8.20	21.85	22.18	21.19	20.78	27.55	27.80
5755MHz	Pass	7.80	22.12	22.17	21.96	22.12	28.11	28.20
5795MHz	Pass	7.80	22.24	22.19	21.76	22.23	28.13	28.20
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	8.20	16.44	17.01	16.94	16.50	22.75	27.80
5775MHz	Pass	7.80	18.87	19.29	19.46	19.09	25.20	28.20
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	8.20	17.05	17.54	17.31	16.86	23.22	27.80
5775MHz	Pass	7.80	19.75	19.84	19.62	19.96	25.81	28.20

DG = Directional Gain; **Port X** = Port X output power

2 Stream 4 TX for TxBF mode:

Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	28.54	0.71450
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	27.66	0.58345
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	22.83	0.19187
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	28.71	0.74302
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	27.82	0.60534
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	23.16	0.20701
5.725-5.85GHz	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	29.91	0.97949
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	29.22	0.83560
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	27.07	0.50933
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	29.98	0.99541
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	29.52	0.89536
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	27.20	0.52481

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	5.60	18.98	18.60	19.19	18.84	24.93	30.00
5200MHz	Pass	5.60	22.50	22.36	21.90	22.11	28.24	30.00
5240MHz	Pass	5.60	22.17	22.21	22.89	22.75	28.54	30.00
5745MHz	Pass	6.00	23.86	23.96	23.81	23.93	29.91	30.00
5785MHz	Pass	5.50	24.12	24.37	23.71	23.00	29.85	30.00
5825MHz	Pass	5.50	24.14	23.79	23.78	23.73	29.88	30.00
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	5.60	17.56	17.34	16.89	17.53	23.36	30.00
5230MHz	Pass	5.60	21.43	21.79	21.76	21.55	27.66	30.00
5755MHz	Pass	5.50	22.46	23.53	22.84	23.47	29.12	30.00
5795MHz	Pass	5.50	23.36	23.24	23.33	22.83	29.22	30.00
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	5.60	16.80	16.91	16.62	16.89	22.83	30.00
5775MHz	Pass	5.50	21.31	21.18	20.93	20.77	27.07	30.00
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	5.60	19.02	18.80	19.19	19.27	25.09	30.00
5200MHz	Pass	5.60	22.45	22.40	22.69	22.32	28.49	30.00
5240MHz	Pass	5.60	22.55	22.59	22.93	22.67	28.71	30.00
5745MHz	Pass	6.00	24.00	23.06	23.58	24.80	29.93	30.00
5785MHz	Pass	5.50	24.16	24.14	23.64	23.86	29.98	30.00
5825MHz	Pass	5.50	23.80	24.44	23.34	23.96	29.92	30.00
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	5.60	17.53	17.61	17.37	17.44	23.51	30.00
5230MHz	Pass	5.60	21.98	22.10	21.44	21.64	27.82	30.00
5755MHz	Pass	5.50	23.22	23.09	23.93	23.51	29.47	30.00
5795MHz	Pass	5.50	23.37	23.93	23.69	22.94	29.52	30.00
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	5.60	16.89	17.26	17.21	17.18	23.16	30.00
5775MHz	Pass	5.50	21.07	21.12	20.94	21.57	27.20	30.00

DG = Directional Gain; **Port X** = Port X output power

For non-beamforming mode:
4 Stream 4 TX for SDM mode:
Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11ac VHT20_Nss4,(MCS0)_4TX	15.81	18.41
802.11ax HEW20_Nss4,(MCS0)_4TX	15.94	18.54
802.11ac VHT40_Nss4,(MCS0)_4TX	11.06	13.66
802.11ax HEW40_Nss4,(MCS0)_4TX	11.31	13.91
802.11ac VHT80_Nss4,(MCS0)_4TX	4.26	6.86
802.11ax HEW80_Nss4,(MCS0)_4TX	4.26	6.86
5.725-5.85GHz	-	-
802.11ac VHT20_Nss4,(MCS0)_4TX	14.50	17.49
802.11ax HEW20_Nss4,(MCS0)_4TX	14.71	17.69
802.11ac VHT40_Nss4,(MCS0)_4TX	11.15	13.75
802.11ax HEW40_Nss4,(MCS0)_4TX	11.48	14.08
802.11ac VHT80_Nss4,(MCS0)_4TX	6.25	8.85
802.11ax HEW80_Nss4,(MCS0)_4TX	6.22	8.82

RBW = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

Result

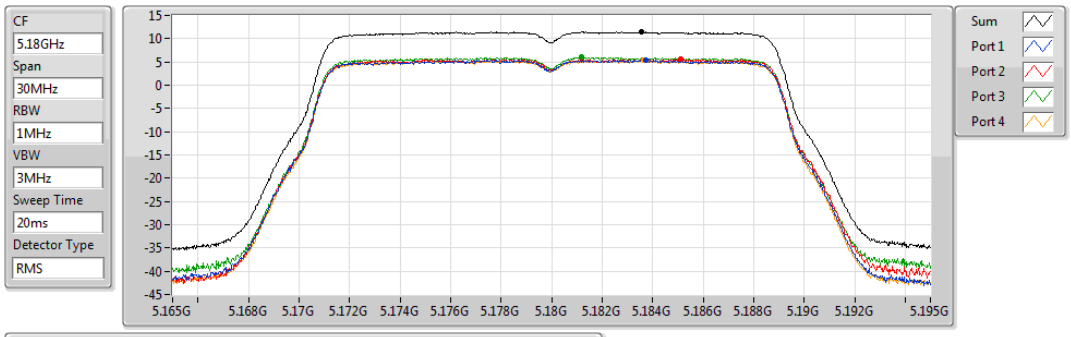
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11ac VHT20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	2.60	5.38	5.53	6.01	5.33	11.42	17.00	14.02	Inf
5200MHz	Pass	2.60	9.15	9.55	9.63	9.33	15.30	17.00	17.90	Inf
5240MHz	Pass	2.60	9.57	10.16	10.28	9.73	15.81	17.00	18.41	Inf
5745MHz	Pass	3.00	8.65	8.61	8.69	8.51	14.49	30.00	17.49	Inf
5785MHz	Pass	2.60	9.01	8.45	8.41	8.55	14.50	30.00	17.10	Inf
5825MHz	Pass	2.60	8.39	8.29	8.65	8.58	14.32	30.00	16.92	Inf
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	2.60	5.67	5.83	6.35	5.68	11.75	17.00	14.35	Inf
5200MHz	Pass	2.60	9.26	9.73	9.93	9.61	15.53	17.00	18.13	Inf
5240MHz	Pass	2.60	9.66	10.16	10.23	10.02	15.94	17.00	18.54	Inf
5745MHz	Pass	3.00	8.67	8.71	8.95	8.80	14.69	30.00	17.69	Inf
5785MHz	Pass	2.60	8.91	8.64	8.72	8.95	14.71	30.00	17.31	Inf
5825MHz	Pass	2.60	8.50	8.69	8.79	8.89	14.59	30.00	17.19	Inf
802.11ac VHT40_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	2.60	0.52	0.87	1.29	0.27	6.67	17.00	9.27	Inf
5230MHz	Pass	2.60	4.92	5.54	5.62	4.89	11.06	17.00	13.66	Inf
5755MHz	Pass	2.60	5.19	5.32	5.63	5.12	11.15	30.00	13.75	Inf
5795MHz	Pass	2.60	5.02	5.19	5.27	4.95	10.94	30.00	13.54	Inf
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	2.60	0.96	1.49	1.46	0.65	6.91	17.00	9.51	Inf
5230MHz	Pass	2.60	5.24	5.96	5.49	4.97	11.31	17.00	13.91	Inf
5755MHz	Pass	2.60	5.43	5.55	5.91	5.44	11.48	30.00	14.08	Inf
5795MHz	Pass	2.60	5.28	5.44	5.50	5.44	11.22	30.00	13.82	Inf
802.11ac VHT80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	2.60	-1.97	-1.15	-1.62	-2.09	4.26	17.00	6.86	Inf
5775MHz	Pass	2.60	0.39	0.74	0.20	0.32	6.25	30.00	8.85	Inf
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	2.60	-1.85	-1.10	-1.53	-2.04	4.26	17.00	6.86	Inf
5775MHz	Pass	2.60	0.39	0.47	0.17	0.25	6.22	30.00	8.82	Inf

DG = Directional Gain; **RBW** = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11ac VHT20_Nss4,(MCS0)_4TX PSD

5180MHz

19/07/2019

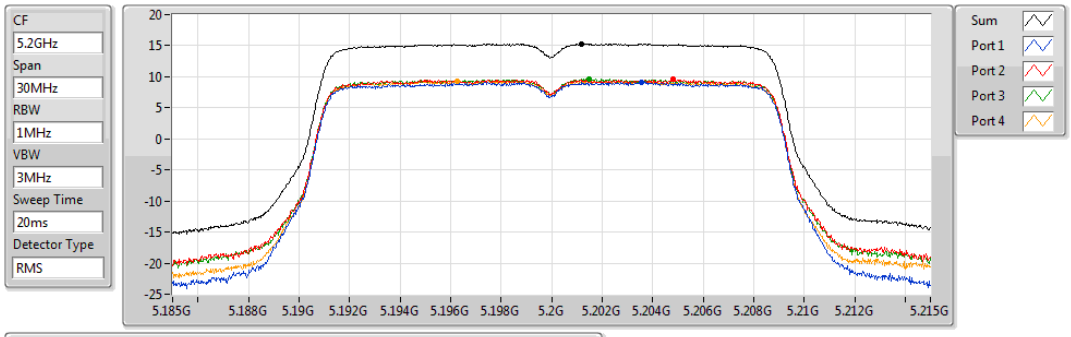


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.42	11.42	5.38	5.53	6.01	5.33

802.11ac VHT20_Nss4,(MCS0)_4TX PSD

5200MHz

19/07/2019

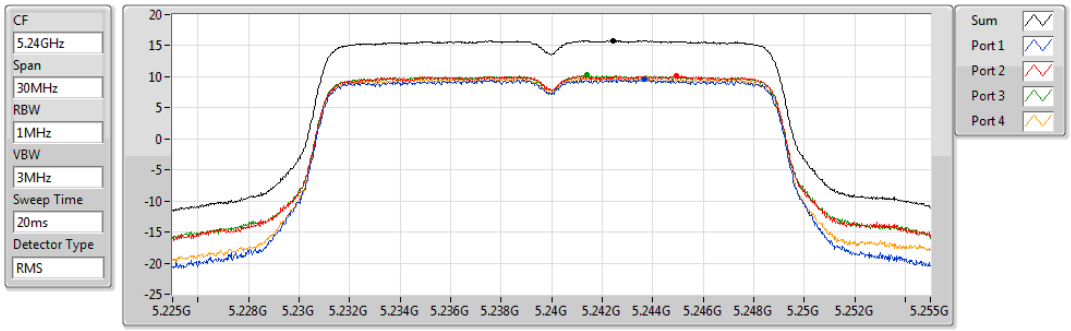


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.30	15.30	9.15	9.55	9.63	9.33

802.11ac VHT20_Nss4,(MCS0)_4TX PSD

5240MHz

19/07/2019

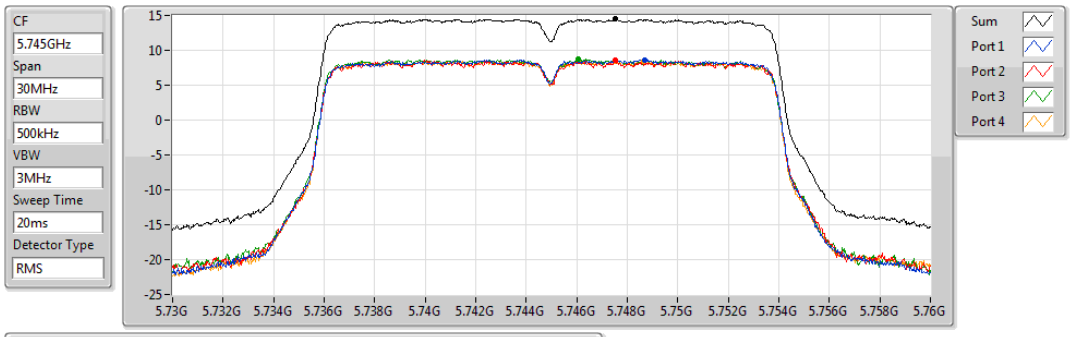


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.81	15.81	9.57	10.16	10.28	9.73

802.11ac VHT20_Nss4,(MCS0)_4TX PSD

5745MHz

19/07/2019

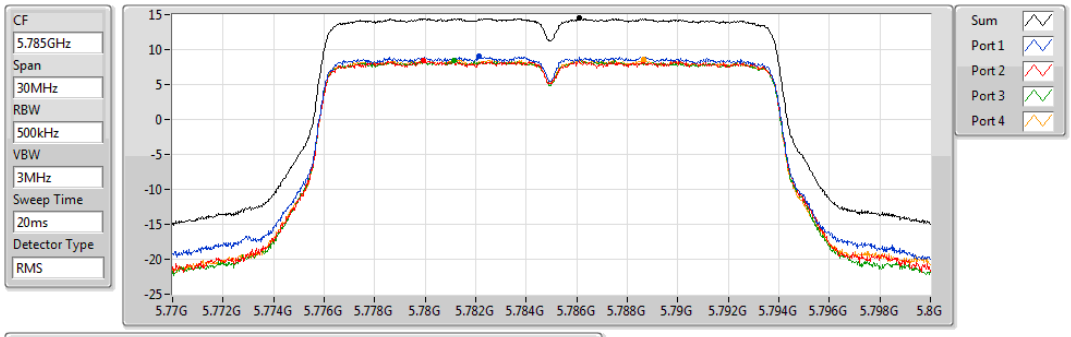


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.49	14.49	8.65	8.61	8.69	8.51

802.11ac VHT20_Nss4,(MCS0)_4TX PSD

5785MHz

19/07/2019

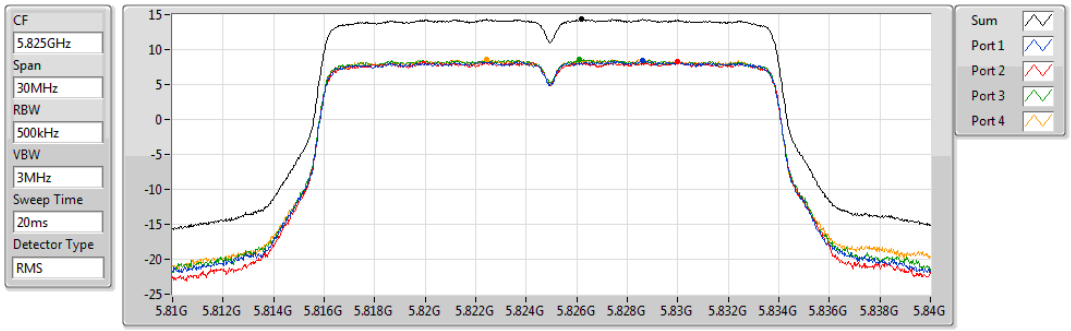


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.50	14.50	9.01	8.45	8.41	8.55

802.11ac VHT20_Nss4,(MCS0)_4TX PSD

5825MHz

19/07/2019

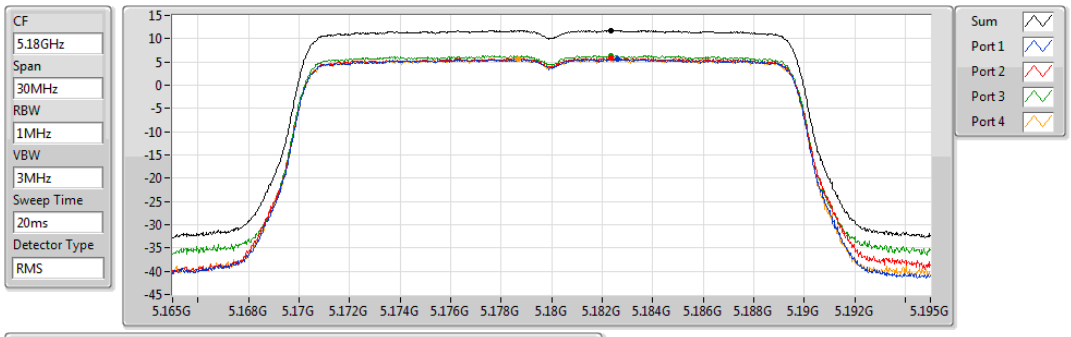


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.32	14.32	8.39	8.29	8.65	8.58

802.11ax HEW20_Nss4,(MCS0)_4TX PSD

5180MHz

19/07/2019

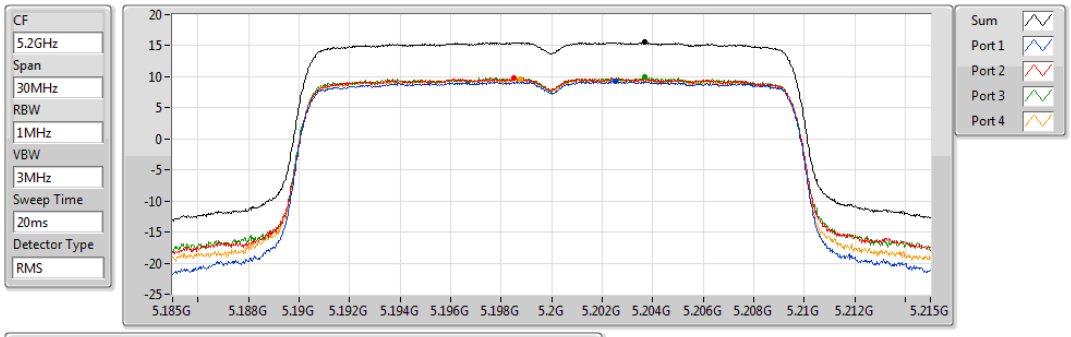


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.75	11.75	5.67	5.83	6.35	5.68

802.11ax HEW20_Nss4,(MCS0)_4TX PSD

5200MHz

19/07/2019

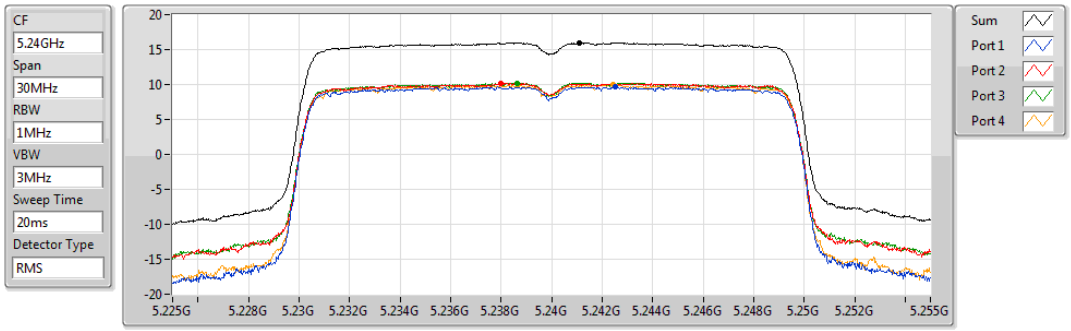


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.53	15.53	9.26	9.73	9.93	9.61

802.11ax HEW20_Nss4,(MCS0)_4TX PSD

5240MHz

19/07/2019

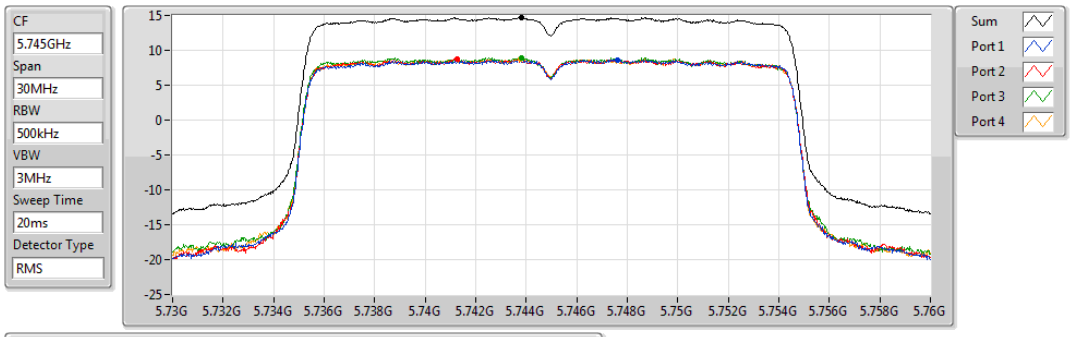


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.94	15.94	9.66	10.16	10.23	10.02

802.11ax HEW20_Nss4,(MCS0)_4TX PSD

5745MHz

19/07/2019

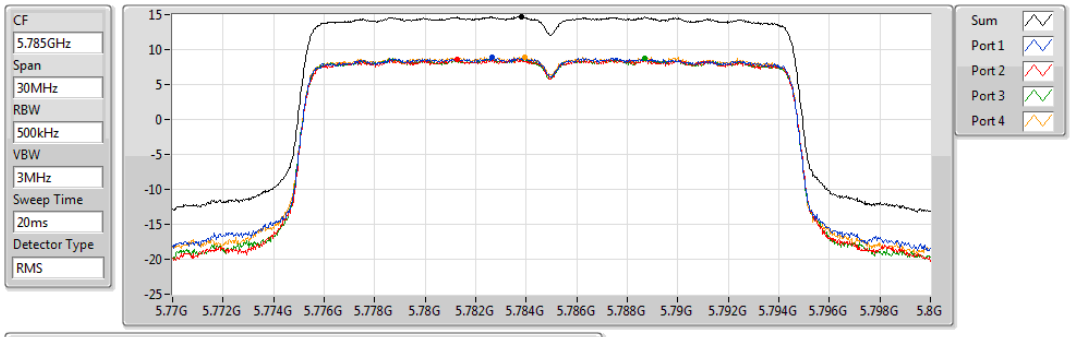


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.69	14.69	8.67	8.71	8.95	8.80

802.11ax HEW20_Nss4,(MCS0)_4TX PSD

5785MHz

19/07/2019

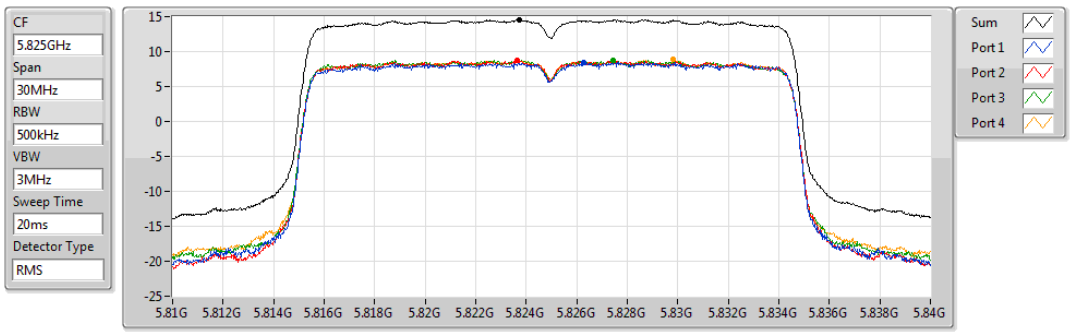


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.71	14.71	8.91	8.64	8.72	8.95

802.11ax HEW20_Nss4,(MCS0)_4TX PSD

5825MHz

19/07/2019

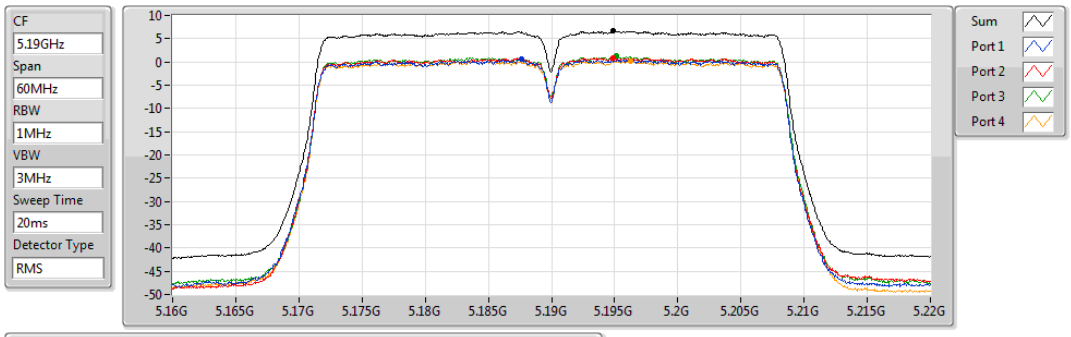


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.59	14.59	8.50	8.69	8.79	8.89

802.11ac VHT40_Nss4,(MCS0)_4TX PSD

5190MHz

19/07/2019

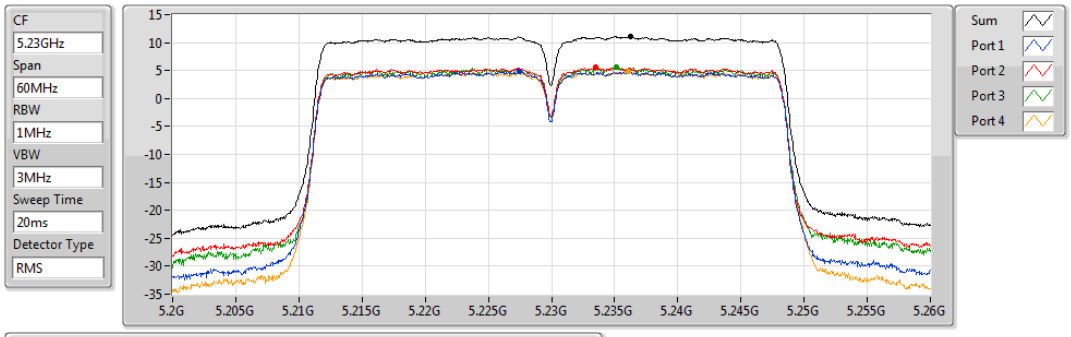


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.67	6.67	0.52	0.87	1.29	0.27

802.11ac VHT40_Nss4,(MCS0)_4TX PSD

5230MHz

19/07/2019

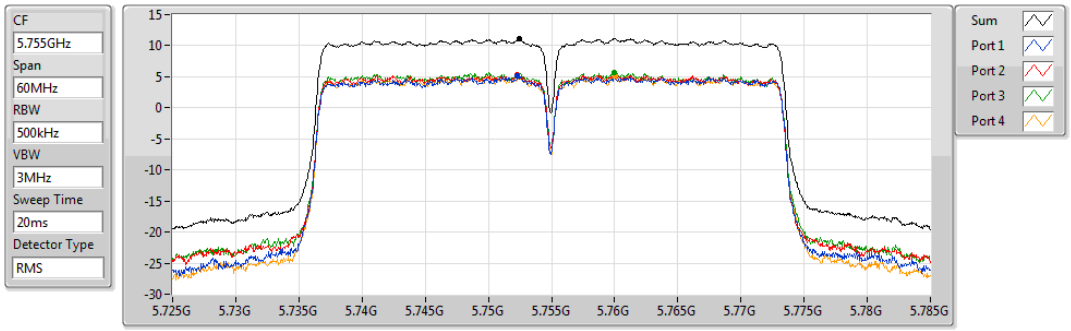


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.06	11.06	4.92	5.54	5.62	4.89

802.11ac VHT40_Nss4,(MCS0)_4TX PSD

5755MHz

19/07/2019

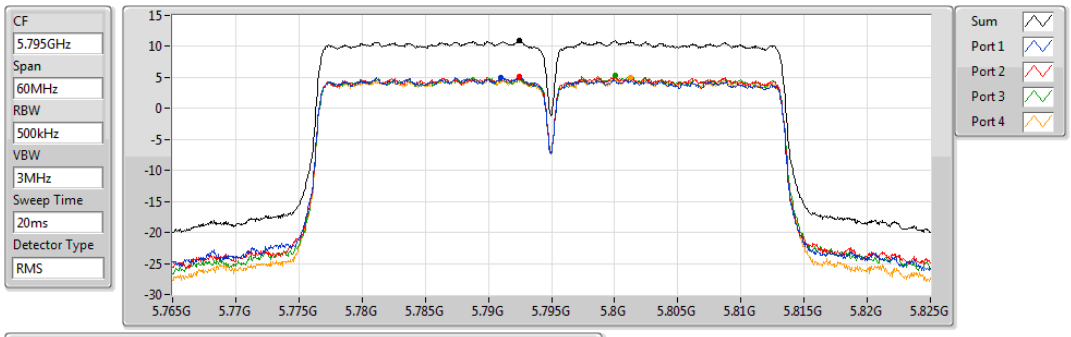


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.15	11.15	5.19	5.32	5.63	5.12

802.11ac VHT40_Nss4,(MCS0)_4TX PSD

5795MHz

19/07/2019

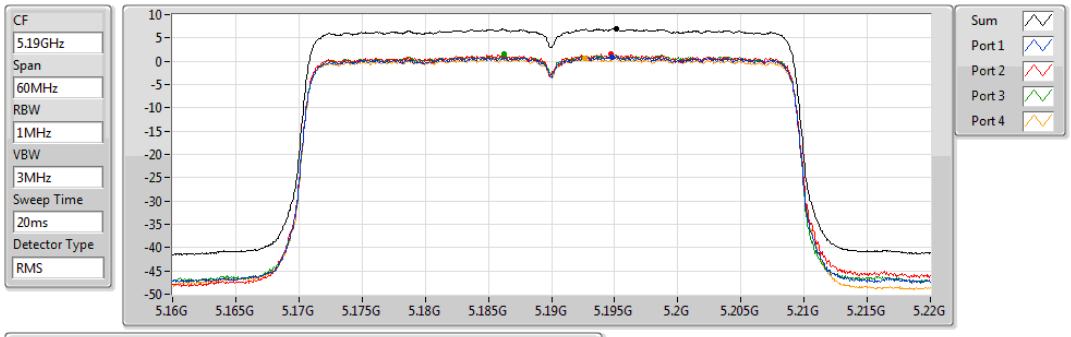


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.94	10.94	5.02	5.19	5.27	4.95

802.11ax HEW40_Nss4,(MCS0)_4TX PSD

5190MHz

19/07/2019

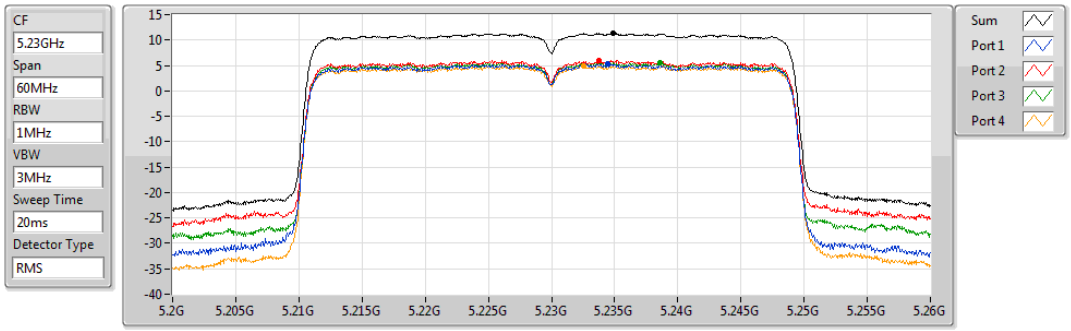


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.91	6.91	0.96	1.49	1.46	0.65

802.11ax HEW40_Nss4,(MCS0)_4TX PSD

5230MHz

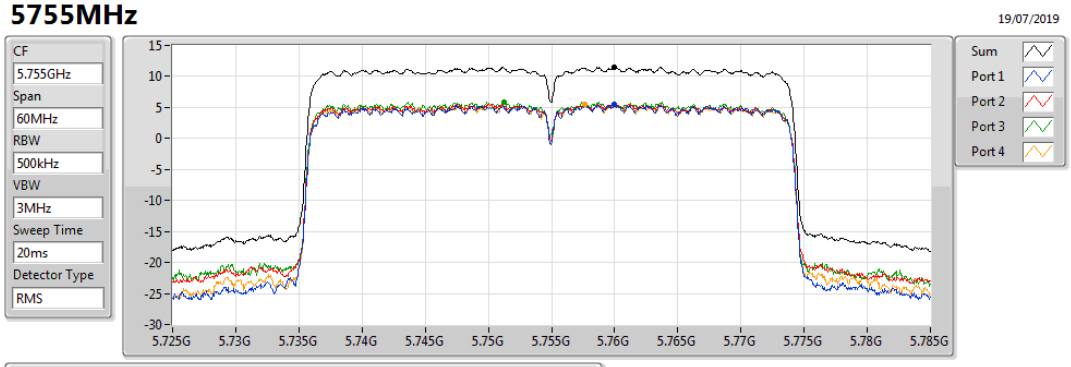
19/07/2019



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.31	11.31	5.24	5.96	5.49	4.97

802.11ax HEW40_Nss4,(MCS0)_4TX PSD

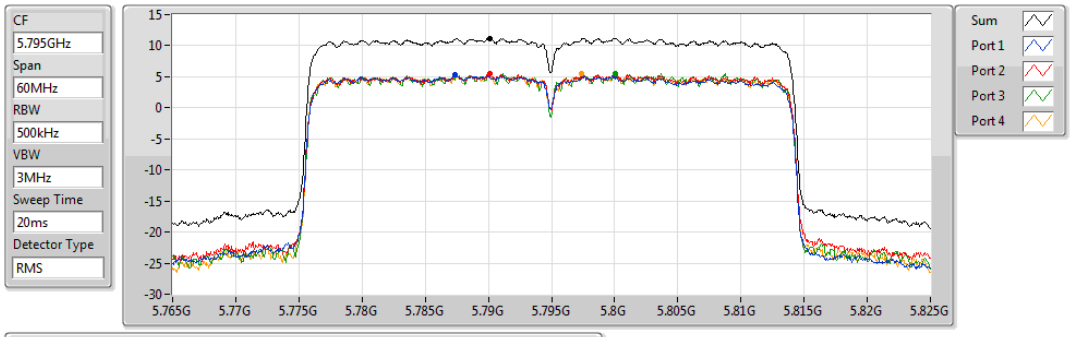
5755MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.48	11.48	5.43	5.55	5.91	5.44

802.11ax HEW40_Nss4,(MCS0)_4TX PSD

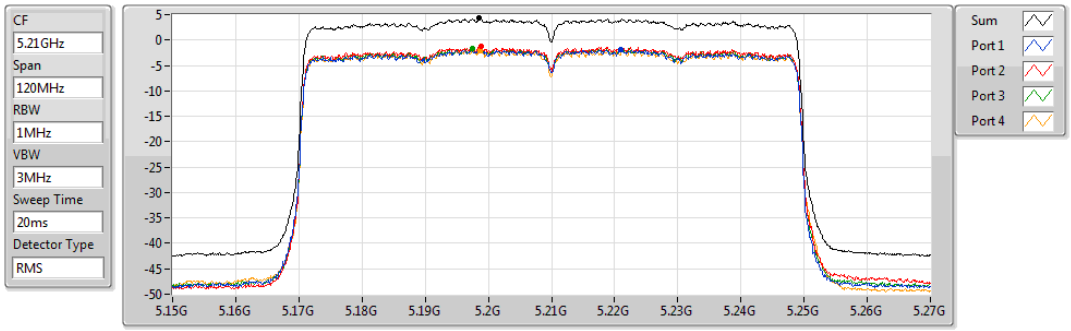
5795MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.22	11.22	5.28	5.44	5.50	5.44

802.11ac VHT80_Nss4,(MCS0)_4TX PSD

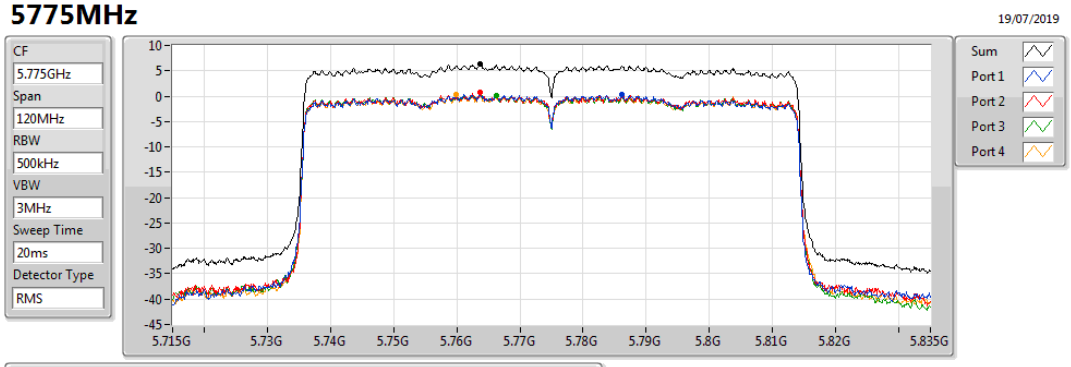
5210MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.26	4.26	-1.97	-1.15	-1.62	-2.09

802.11ac VHT80_Nss4,(MCS0)_4TX PSD

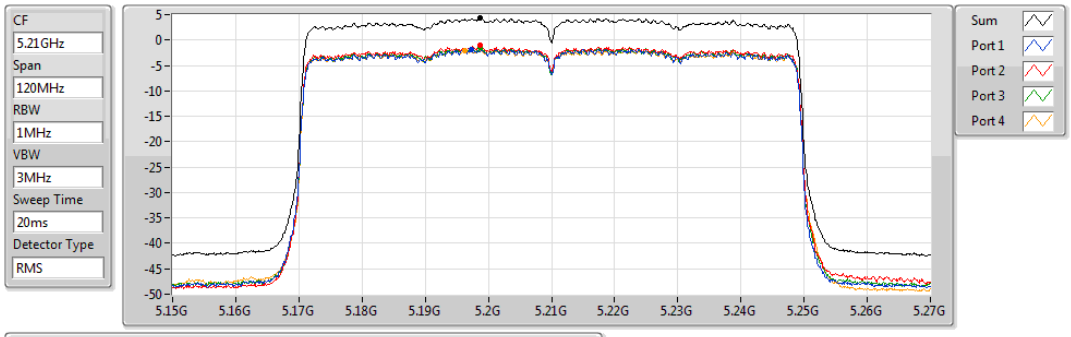
5775MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.25	6.25	0.39	0.74	0.20	0.32

802.11ax HEW80_Nss4,(MCS0)_4TX PSD

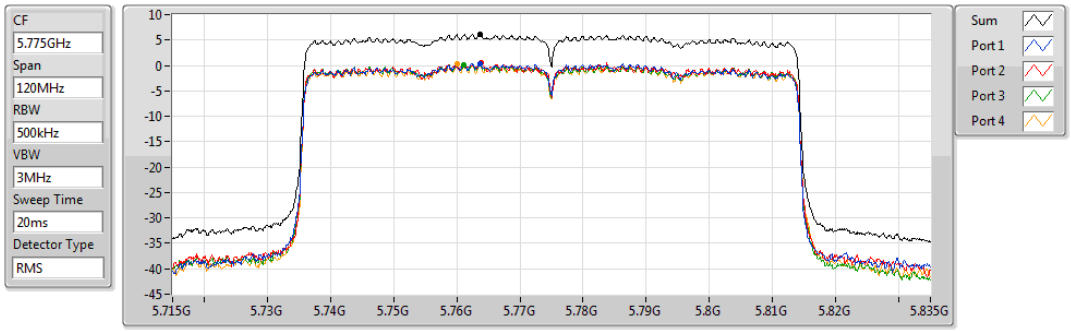
5210MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.26	4.26	-1.85	-1.10	-1.53	-2.04

802.11ax HEW80_Nss4,(MCS0)_4TX PSD

5775MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.22	6.22	0.39	0.47	0.17	0.25

For beamforming mode:
1 Stream 4 TX for TxBF mode:
Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	14.40	22.60
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	14.67	22.87
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	11.21	19.41
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	11.27	19.47
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	3.63	11.83
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	4.00	12.20
5.725-5.85GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	12.38	20.18
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	12.24	20.04
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	9.26	17.06
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	9.06	16.86
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	4.48	12.28
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	4.61	12.41

RBW = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

Result

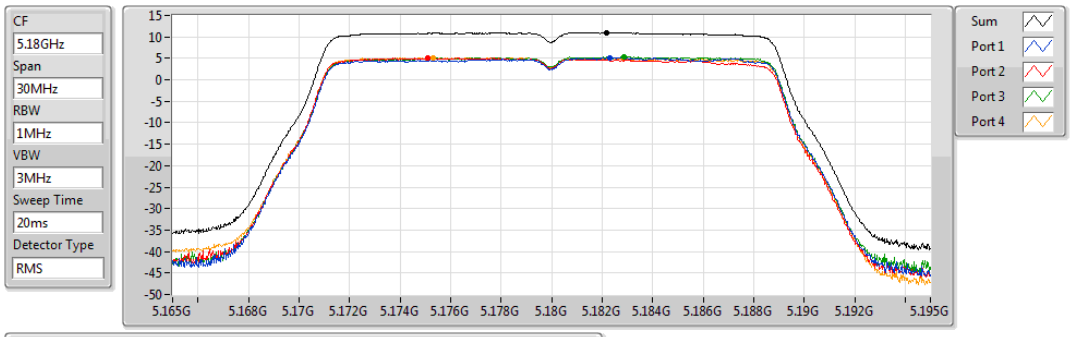
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	8.20	5.18	5.15	5.31	5.15	10.99	14.80	19.19	Inf
5200MHz	Pass	8.20	8.46	8.42	9.03	8.03	14.40	14.80	22.60	Inf
5240MHz	Pass	8.20	8.72	8.40	8.29	8.24	14.26	14.80	22.46	Inf
5745MHz	Pass	8.70	5.58	5.97	5.10	5.39	11.30	27.30	20.00	Inf
5785MHz	Pass	7.80	6.80	6.76	6.39	6.38	12.31	28.20	20.11	Inf
5825MHz	Pass	7.80	6.23	7.09	6.20	6.53	12.38	28.20	20.18	Inf
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	8.20	5.28	5.44	5.52	5.38	11.20	14.80	19.40	Inf
5200MHz	Pass	8.20	8.70	8.62	9.10	8.13	14.54	14.80	22.74	Inf
5240MHz	Pass	8.20	9.16	8.96	8.79	8.43	14.67	14.80	22.87	Inf
5745MHz	Pass	8.70	5.24	5.67	4.78	5.44	11.05	27.30	19.75	Inf
5785MHz	Pass	7.80	6.50	6.67	6.26	6.31	12.24	28.20	20.04	Inf
5825MHz	Pass	7.80	6.37	7.33	5.91	6.26	12.17	28.20	19.97	Inf
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	8.20	1.50	1.31	1.60	0.42	7.12	14.80	15.32	Inf
5230MHz	Pass	8.20	5.63	5.87	5.39	4.94	11.21	14.80	19.41	Inf
5755MHz	Pass	7.80	3.32	3.64	2.88	3.05	8.70	28.20	16.50	Inf
5795MHz	Pass	7.80	3.63	3.85	2.99	3.55	9.26	28.20	17.06	Inf
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	8.20	1.18	1.25	1.51	0.39	7.02	14.80	15.22	Inf
5230MHz	Pass	8.20	5.62	5.85	5.45	4.90	11.27	14.80	19.47	Inf
5755MHz	Pass	7.80	3.25	3.74	2.93	3.10	8.64	28.20	16.44	Inf
5795MHz	Pass	7.80	3.79	3.51	2.89	3.50	9.06	28.20	16.86	Inf
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	8.20	-2.26	-1.59	-1.95	-2.62	3.63	14.80	11.83	Inf
5775MHz	Pass	7.80	-1.61	-0.96	-1.71	-0.74	4.48	28.20	12.28	Inf
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	8.20	-1.94	-1.22	-1.78	-2.41	4.00	14.80	12.20	Inf
5775MHz	Pass	7.80	-1.63	-0.93	-1.50	-0.53	4.61	28.20	12.41	Inf

DG = Directional Gain; **RBW** = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11ac VHT20-BF_Nss1,(MCS0)_4TX PSD

5180MHz

23/07/2019

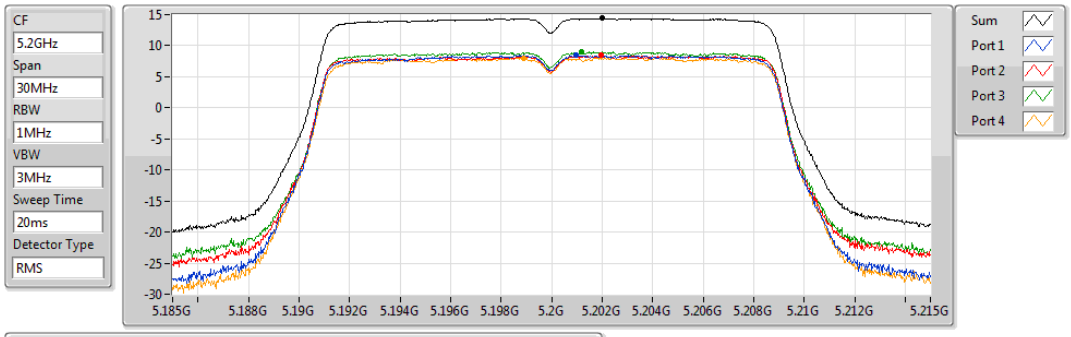


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.99	10.99	5.18	5.15	5.31	5.15

802.11ac VHT20-BF_Nss1,(MCS0)_4TX PSD

5200MHz

23/07/2019

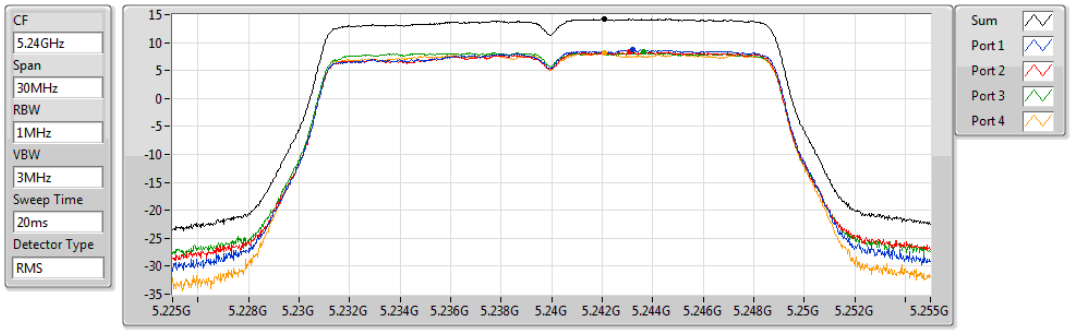


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.40	14.40	8.46	8.42	9.03	8.03

802.11ac VHT20-BF_Nss1,(MCS0)_4TX PSD

5240MHz

23/07/2019

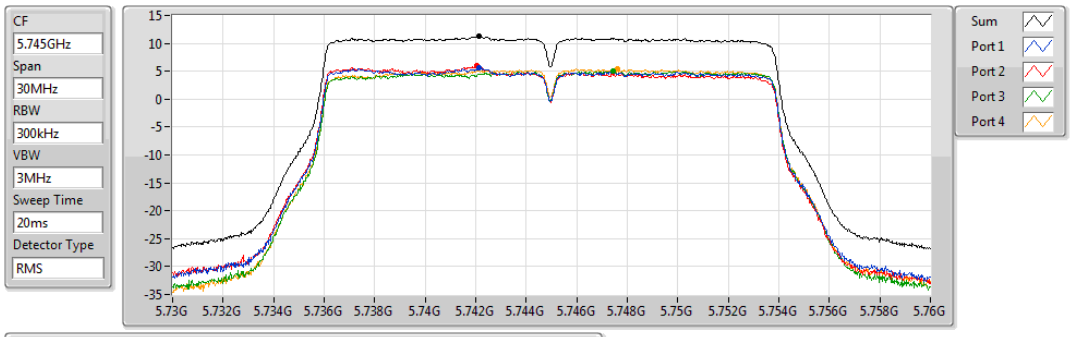


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.26	14.26	8.72	8.40	8.29	8.24

802.11ac VHT20-BF_Nss1,(MCS0)_4TX PSD

5745MHz

24/07/2019

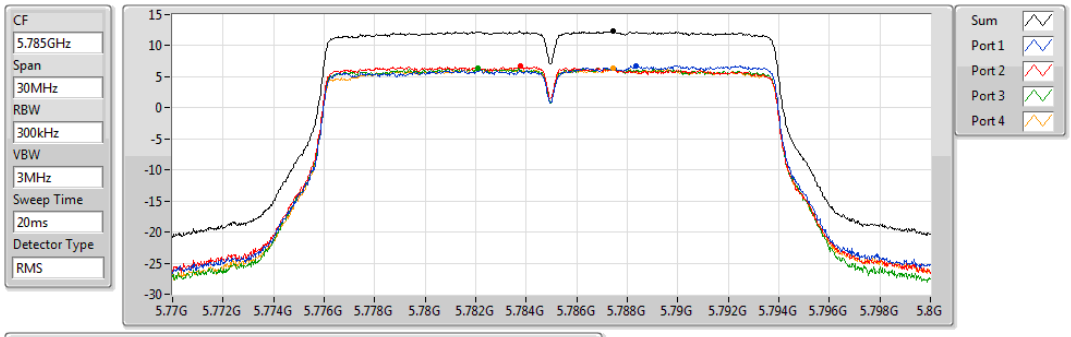


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.30	11.30	5.58	5.97	5.10	5.39

802.11ac VHT20-BF_Nss1,(MCS0)_4TX PSD

5785MHz

24/07/2019

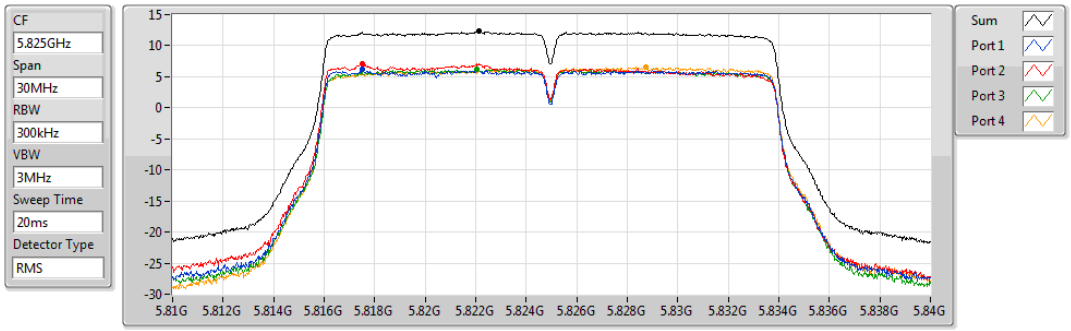


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.31	12.31	6.80	6.76	6.39	6.38

802.11ac VHT20-BF_Nss1,(MCS0)_4TX PSD

5825MHz

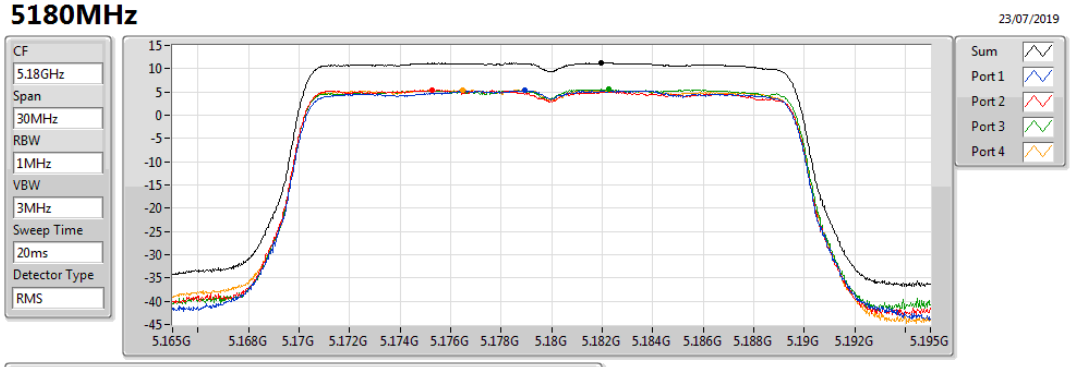
24/07/2019



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.38	12.38	6.23	7.09	6.20	6.53

802.11ax HEW20-BF_Nss1,(MCS0)_4TX PSD

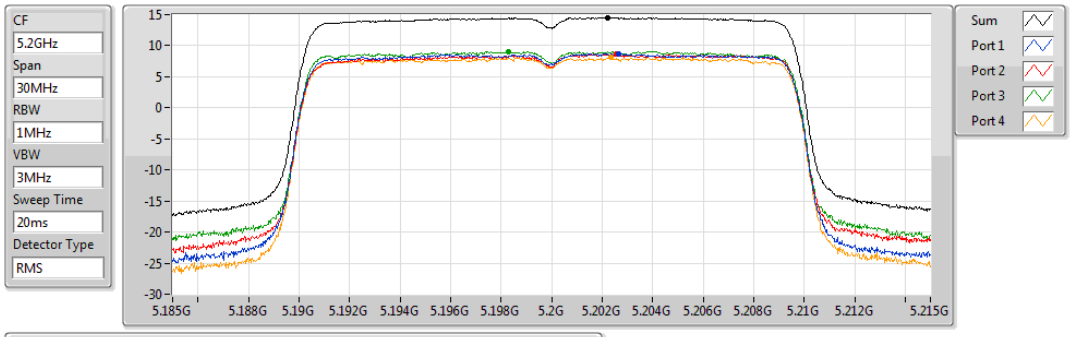
5180MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.20	11.20	5.28	5.44	5.52	5.38

802.11ax HEW20-BF_Nss1,(MCS0)_4TX PSD

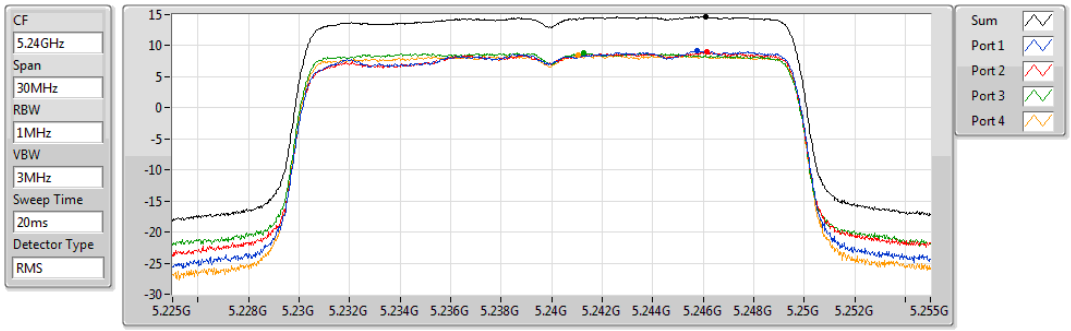
5200MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.54	14.54	8.70	8.62	9.10	8.13

802.11ax HEW20-BF_Nss1,(MCS0)_4TX PSD

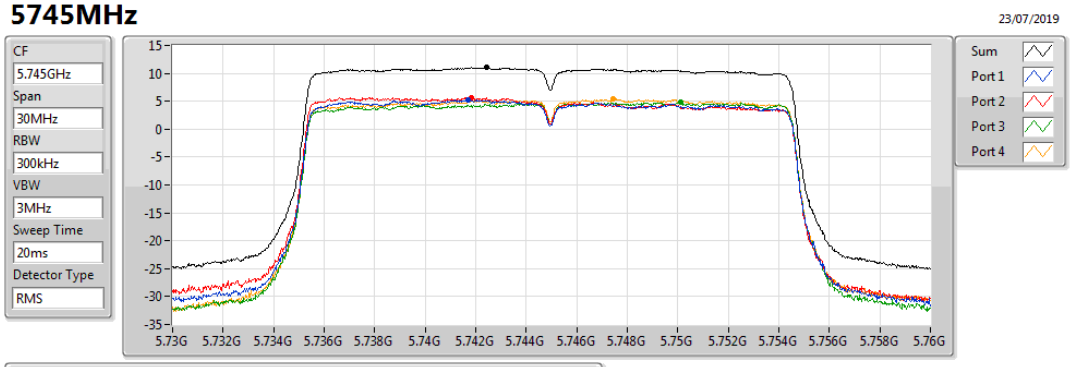
5240MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.67	14.67	9.16	8.96	8.79	8.43

802.11ax HEW20-BF_Nss1,(MCS0)_4TX PSD

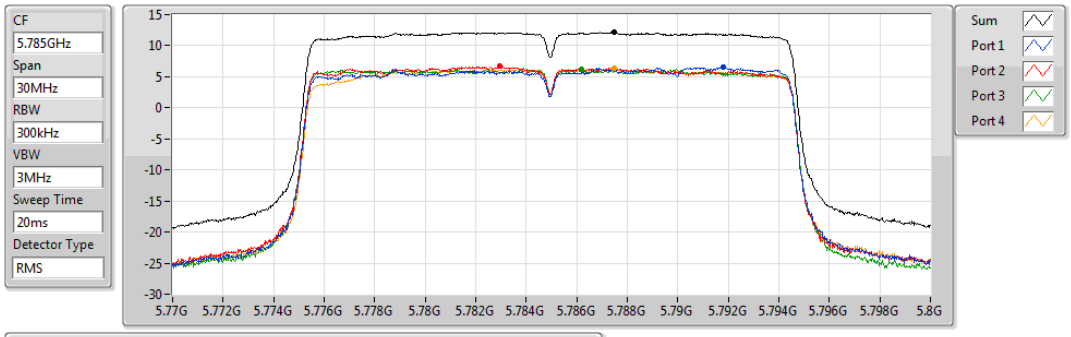
5745MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.05	11.05	5.24	5.67	4.78	5.44

802.11ax HEW20-BF_Nss1,(MCS0)_4TX PSD

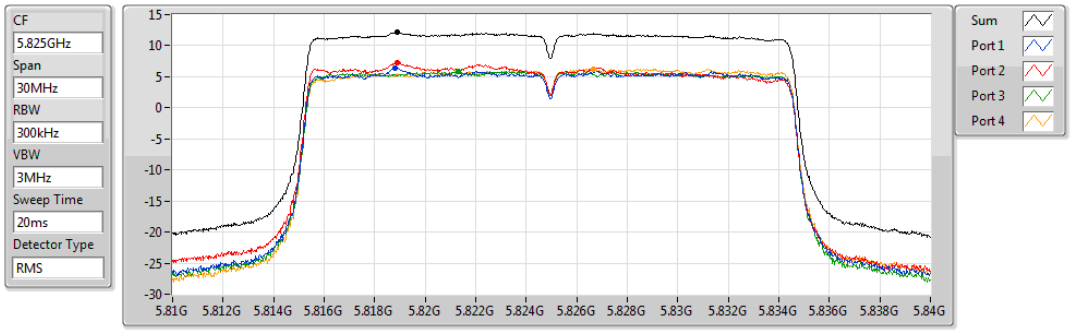
5785MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.24	12.24	6.50	6.67	6.26	6.31

802.11ax HEW20-BF_Nss1,(MCS0)_4TX PSD

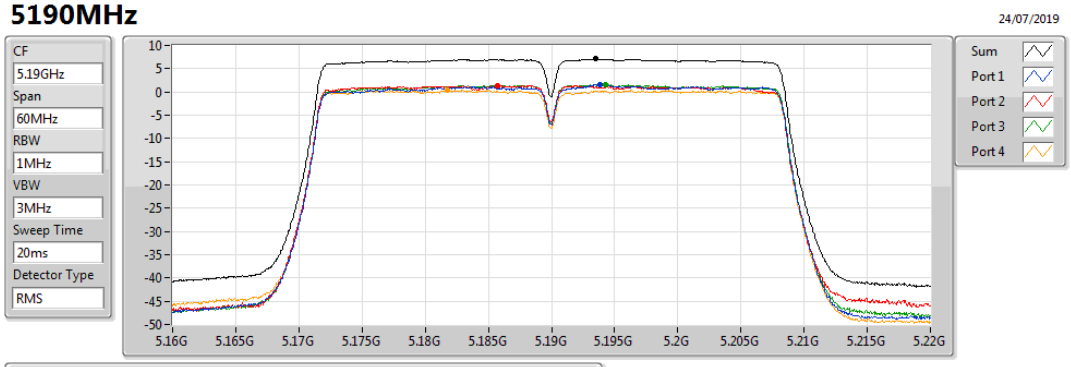
5825MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.17	12.17	6.37	7.33	5.91	6.26

802.11ac VHT40-BF_Nss1,(MCS0)_4TX PSD

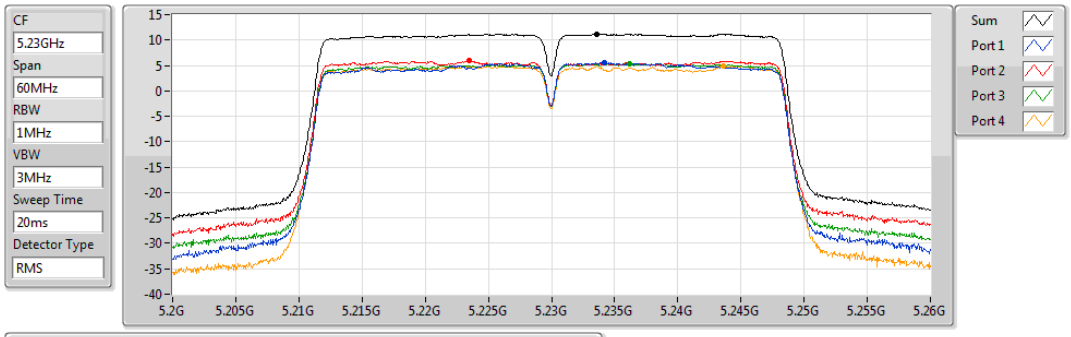
5190MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.12	7.12	1.50	1.31	1.60	0.42

802.11ac VHT40-BF_Nss1,(MCS0)_4TX PSD

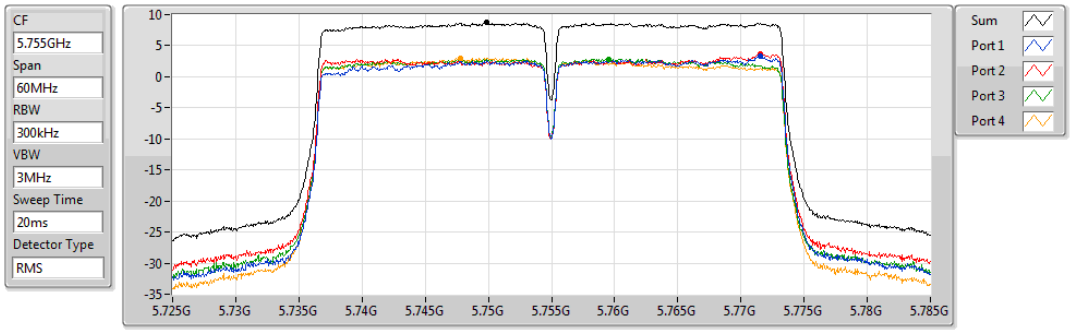
5230MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.21	11.21	5.63	5.87	5.39	4.94

802.11ac VHT40-BF_Nss1,(MCS0)_4TX PSD

5755MHz

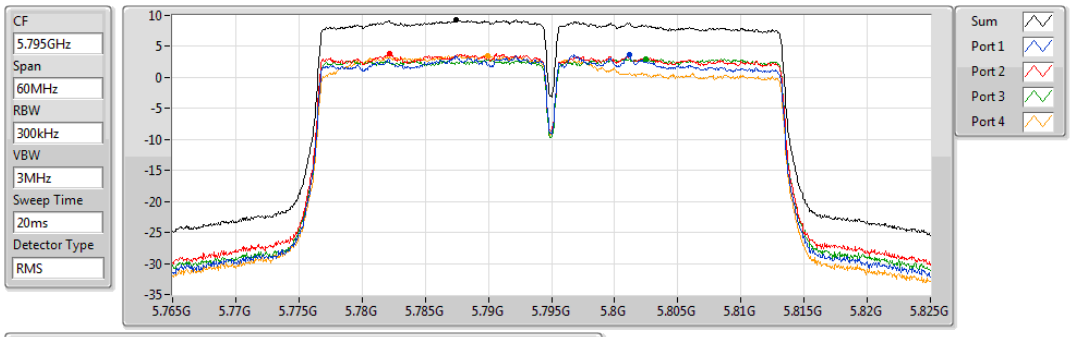


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.70	8.70	3.32	3.64	2.88	3.05

802.11ac VHT40-BF_Nss1,(MCS0)_4TX PSD

5795MHz

24/07/2019

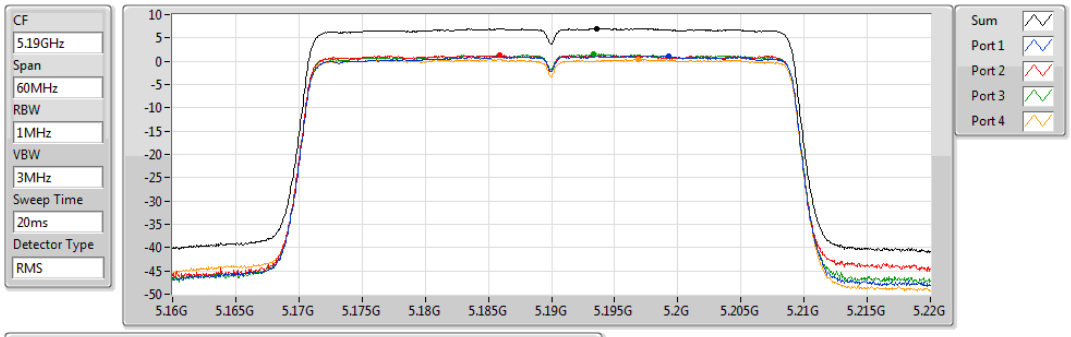


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.26	9.26	3.63	3.85	2.99	3.55

802.11ax HEW40-BF_Nss1,(MCS0)_4TX PSD

5190MHz

23/07/2019

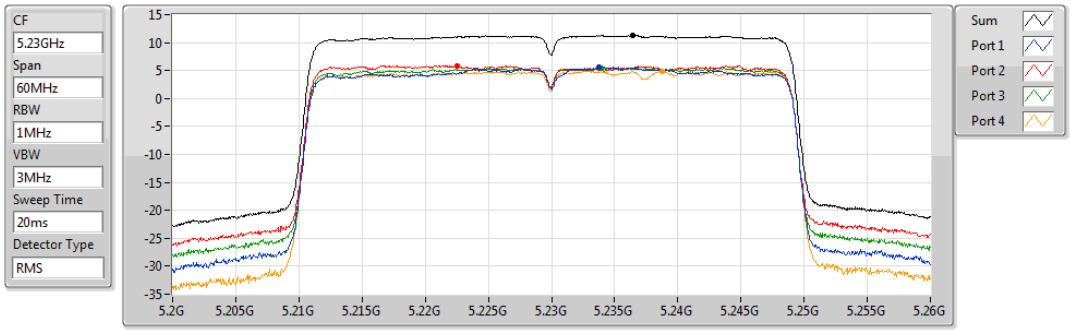


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.02	7.02	1.18	1.25	1.51	0.39

802.11ax HEW40-BF_Nss1,(MCS0)_4TX PSD

5230MHz

23/07/2019

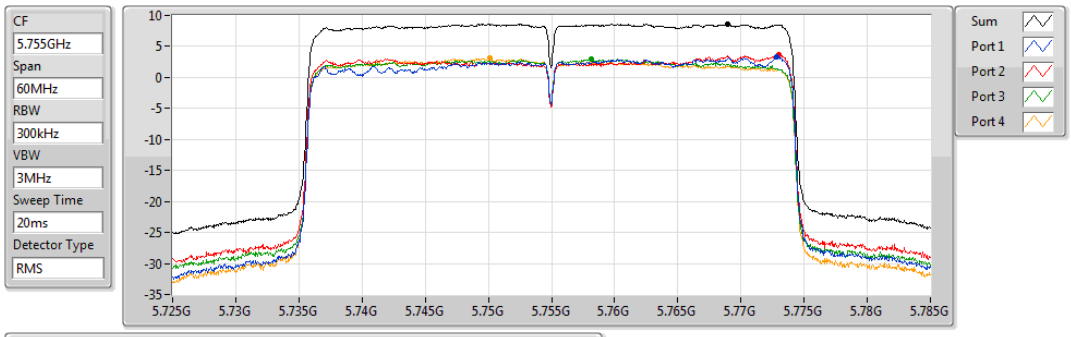


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.27	11.27	5.62	5.85	5.45	4.90

802.11ax HEW40-BF_Nss1,(MCS0)_4TX PSD

5755MHz

23/07/2019

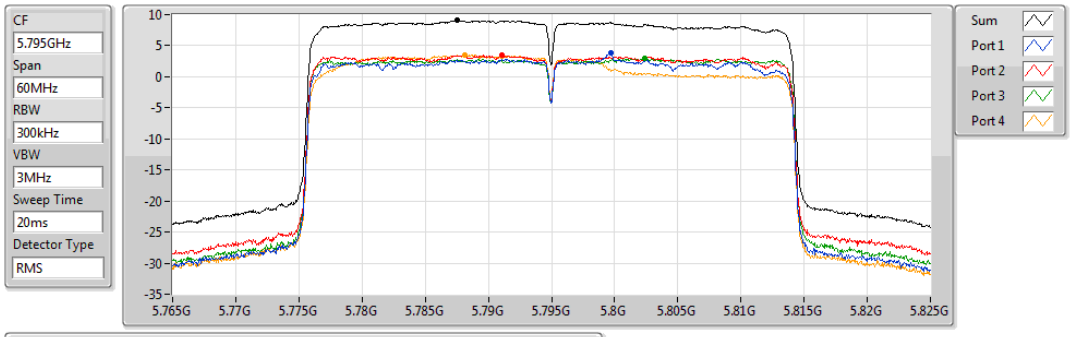


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.64	8.64	3.25	3.74	2.93	3.10

802.11ax HEW40-BF_Nss1,(MCS0)_4TX PSD

5795MHz

23/07/2019

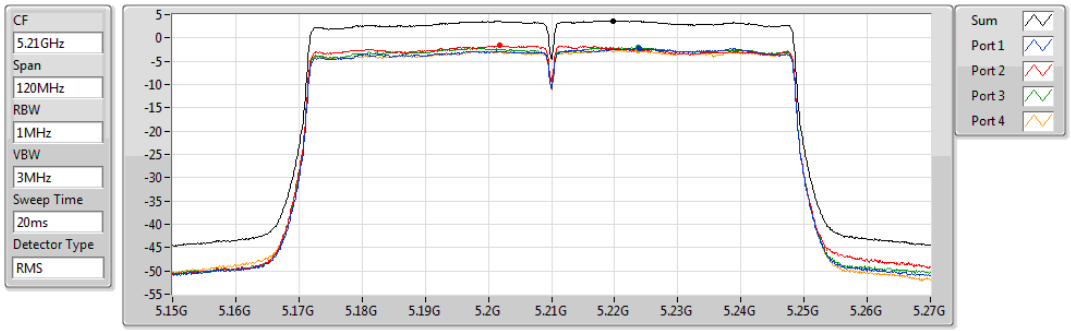


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.06	9.06	3.79	3.51	2.89	3.50

802.11ac VHT80-BF_Nss1,(MCS0)_4TX PSD

5210MHz

24/07/2019

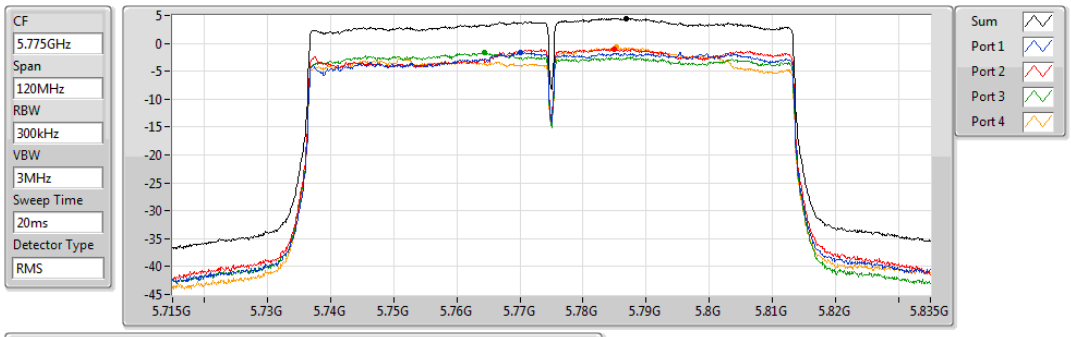


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.63	3.63	-2.26	-1.59	-1.95	-2.62

802.11ac VHT80-BF_Nss1,(MCS0)_4TX PSD

5775MHz

24/07/2019

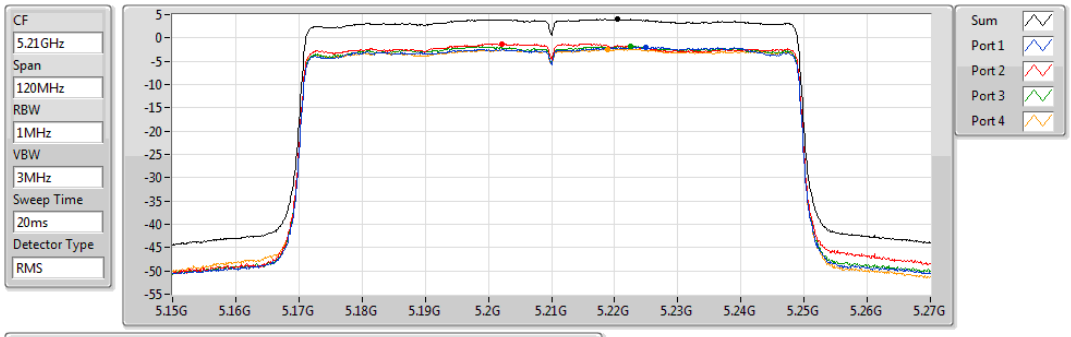


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.48	4.48	-1.61	-0.96	-1.71	-0.74

802.11ax HEW80-BF_Nss1,(MCS0)_4TX PSD

5210MHz

23/07/2019

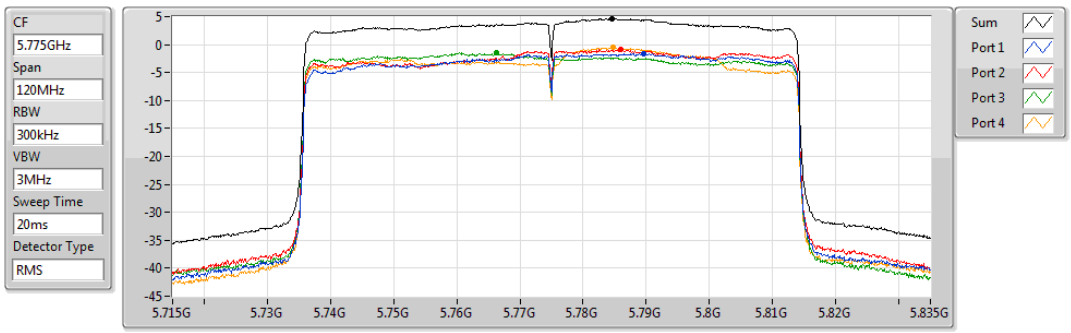


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.00	4.00	-1.94	-1.22	-1.78	-2.41

802.11ax HEW80-BF_Nss1,(MCS0)_4TX PSD

5775MHz

23/07/2019



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.61	4.61	-1.63	-0.93	-1.50	-0.53

2 Stream 4 TX for TxBF mode:

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	15.08	20.68
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	10.98	16.58
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	3.33	8.93
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	14.52	20.12
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	10.96	16.56
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	3.13	8.73
5.725-5.85GHz	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	14.90	20.90
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	11.69	17.19
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	6.27	11.77
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	13.85	19.85
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	11.47	16.97
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	6.50	12.00

RBW = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

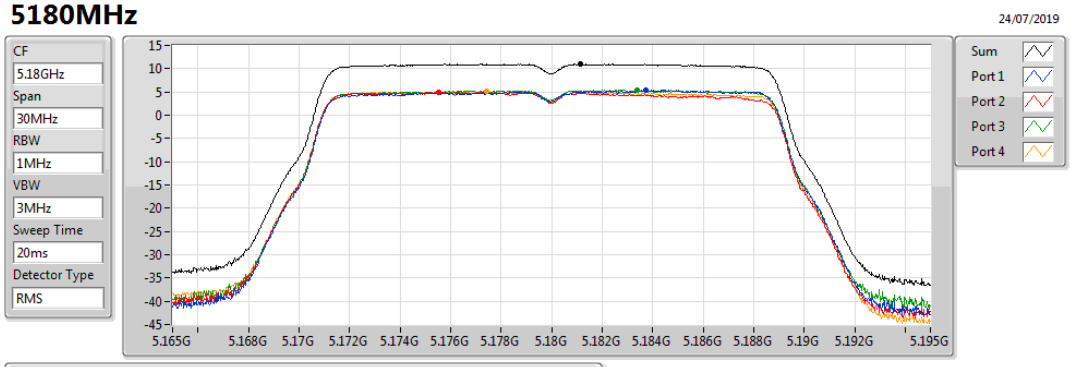
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	5.60	5.41	5.01	5.41	5.10	10.96	17.00	16.56	Inf
5200MHz	Pass	5.60	9.55	8.76	9.04	7.97	14.69	17.00	20.29	Inf
5240MHz	Pass	5.60	9.58	9.37	9.42	9.25	15.08	17.00	20.68	Inf
5745MHz	Pass	6.00	10.09	9.32	9.95	10.26	14.90	30.00	20.90	Inf
5785MHz	Pass	5.50	9.12	8.45	8.32	8.25	14.29	30.00	19.79	Inf
5825MHz	Pass	5.50	8.61	8.86	8.26	8.49	14.25	30.00	19.75	Inf
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	5.60	0.96	0.61	0.81	-0.20	6.43	17.00	12.03	Inf
5230MHz	Pass	5.60	5.31	5.39	5.38	4.65	10.98	17.00	16.58	Inf
5755MHz	Pass	5.50	6.32	6.21	6.95	6.12	11.69	30.00	17.19	Inf
5795MHz	Pass	5.50	5.90	6.46	7.45	4.70	11.23	30.00	16.73	Inf
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	5.60	-2.56	-1.89	-2.88	-2.91	3.33	17.00	8.93	Inf
5775MHz	Pass	5.50	0.68	0.57	0.60	1.01	6.27	30.00	11.77	Inf
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	5.60	4.86	4.24	5.09	4.56	10.54	17.00	16.14	Inf
5200MHz	Pass	5.60	8.49	8.21	8.60	8.39	14.24	17.00	19.84	Inf
5240MHz	Pass	5.60	8.33	8.54	9.16	8.48	14.52	17.00	20.12	Inf
5745MHz	Pass	6.00	8.18	7.92	8.04	7.93	13.85	30.00	19.85	Inf
5785MHz	Pass	5.50	6.97	7.81	7.95	7.60	13.38	30.00	18.88	Inf
5825MHz	Pass	5.50	7.21	7.40	7.26	7.17	12.94	30.00	18.44	Inf
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	5.60	0.68	0.47	1.01	0.21	6.51	17.00	12.11	Inf
5230MHz	Pass	5.60	4.98	5.57	4.72	4.83	10.96	17.00	16.56	Inf
5755MHz	Pass	5.50	5.73	5.75	6.19	5.39	11.47	30.00	16.97	Inf
5795MHz	Pass	5.50	5.09	6.36	6.22	5.31	11.00	30.00	16.50	Inf
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	5.60	-2.95	-2.55	-3.20	-2.46	3.13	17.00	8.73	Inf
5775MHz	Pass	5.50	0.43	0.44	0.90	0.88	6.50	30.00	12.00	Inf

DG = Directional Gain; **RBW** = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11ac VHT20-BF_Nss2,(MCS0)_4TX PSD

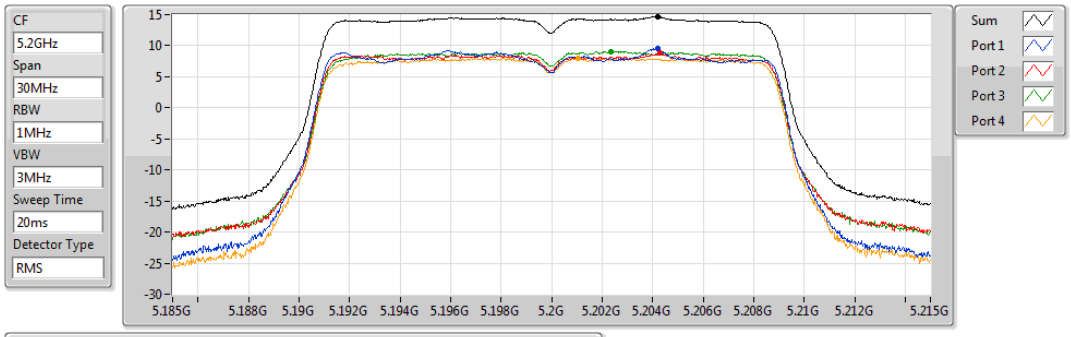
5180MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.96	10.96	5.41	5.01	5.41	5.10

802.11ac VHT20-BF_Nss2,(MCS0)_4TX PSD

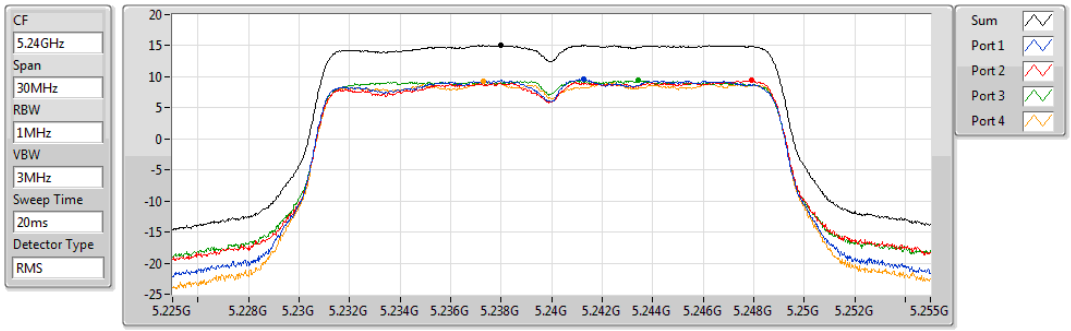
5200MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.69	14.69	9.55	8.76	9.04	7.97

802.11ac VHT20-BF_Nss2,(MCS0)_4TX PSD

5240MHz

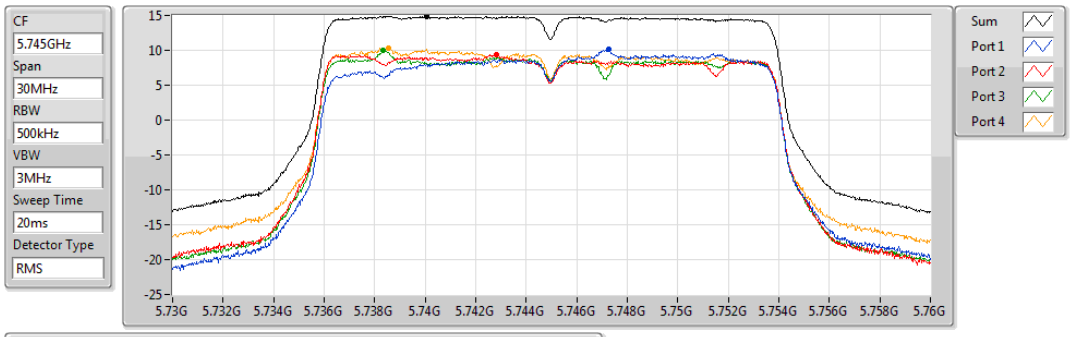


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.08	15.08	9.58	9.37	9.42	9.25

802.11ac VHT20-BF_Nss2,(MCS0)_4TX PSD

5745MHz

25/07/2019

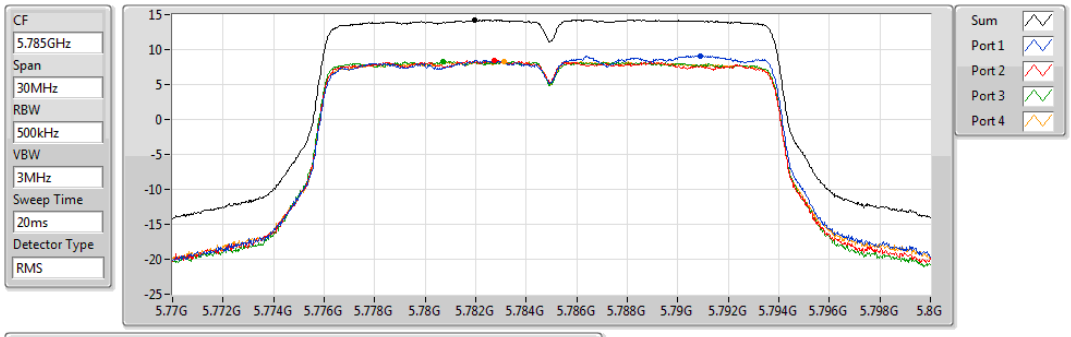


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.90	14.90	10.09	9.32	9.95	10.26

802.11ac VHT20-BF_Nss2,(MCS0)_4TX PSD

5785MHz

24/07/2019

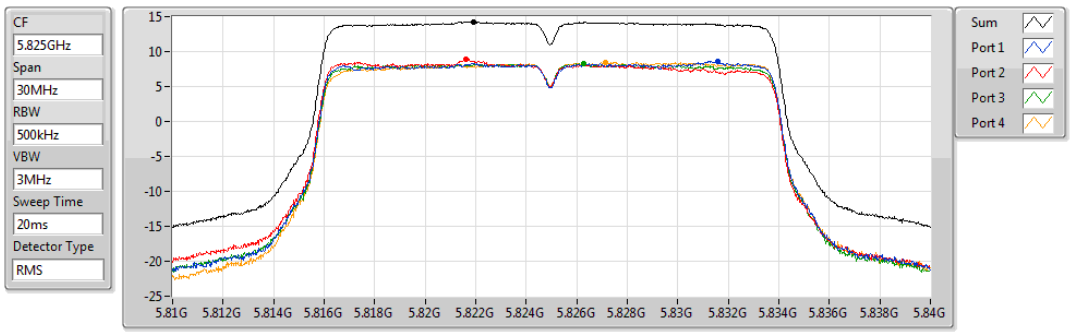


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.29	14.29	9.12	8.45	8.32	8.25

802.11ac VHT20-BF_Nss2,(MCS0)_4TX PSD

5825MHz

24/07/2019

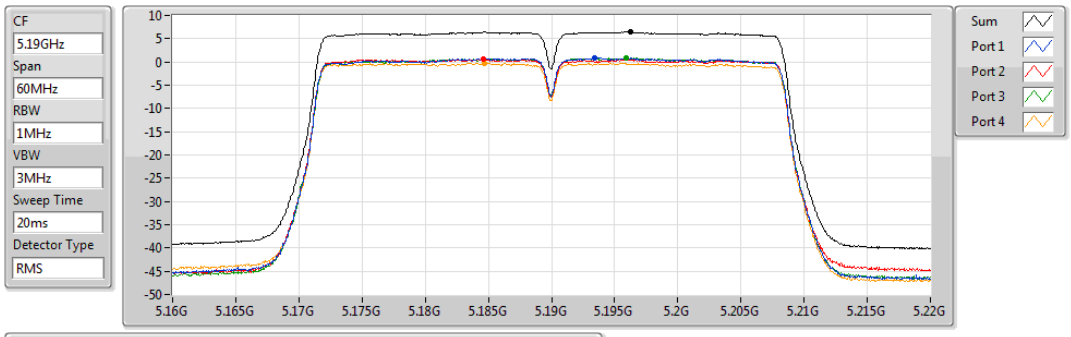


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.25	14.25	8.61	8.86	8.26	8.49

802.11ac VHT40-BF_Nss2,(MCS0)_4TX PSD

5190MHz

24/07/2019

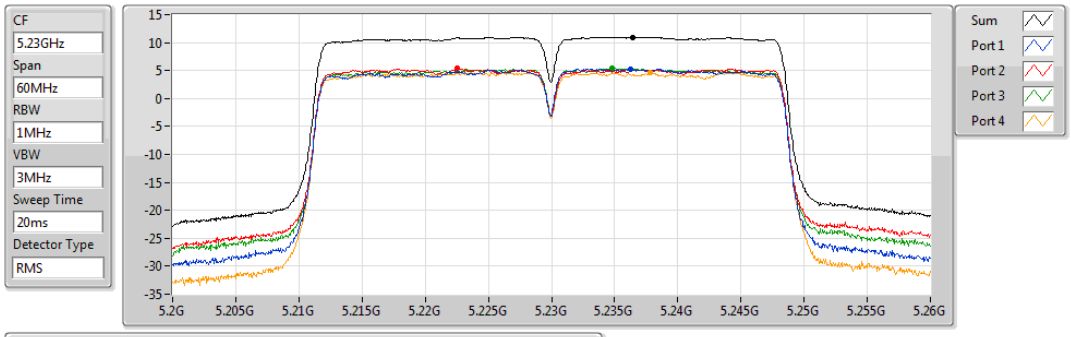


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.43	6.43	0.96	0.61	0.81	-0.20

802.11ac VHT40-BF_Nss2,(MCS0)_4TX PSD

5230MHz

24/07/2019

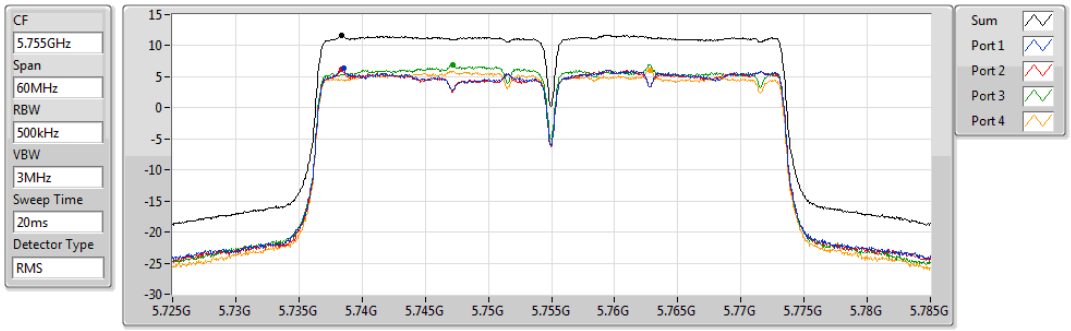


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.98	10.98	5.31	5.39	5.38	4.65

802.11ac VHT40-BF_Nss2,(MCS0)_4TX PSD

5755MHz

25/07/2019

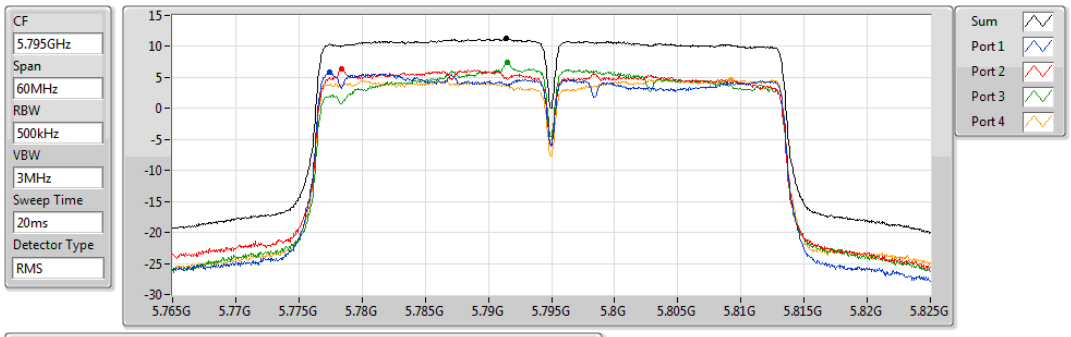


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.69	11.69	6.32	6.21	6.95	6.12

802.11ac VHT40-BF_Nss2,(MCS0)_4TX PSD

5795MHz

25/07/2019

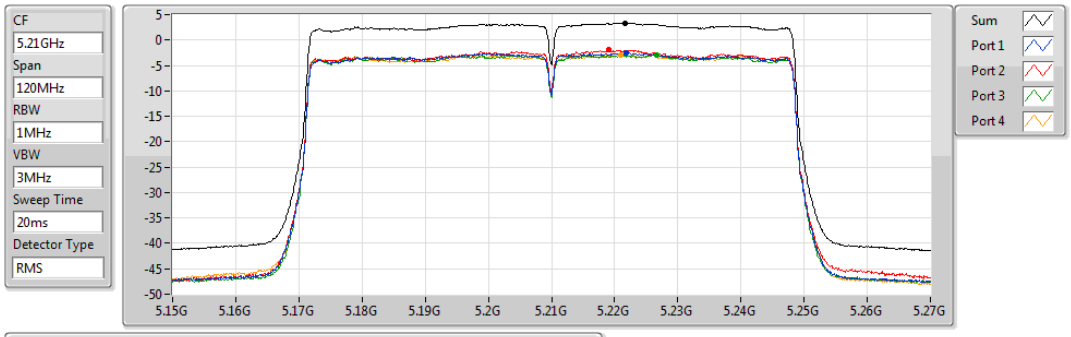


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.23	11.23	5.90	6.46	7.45	4.70

802.11ac VHT80-BF_Nss2,(MCS0)_4TX PSD

5210MHz

24/07/2019

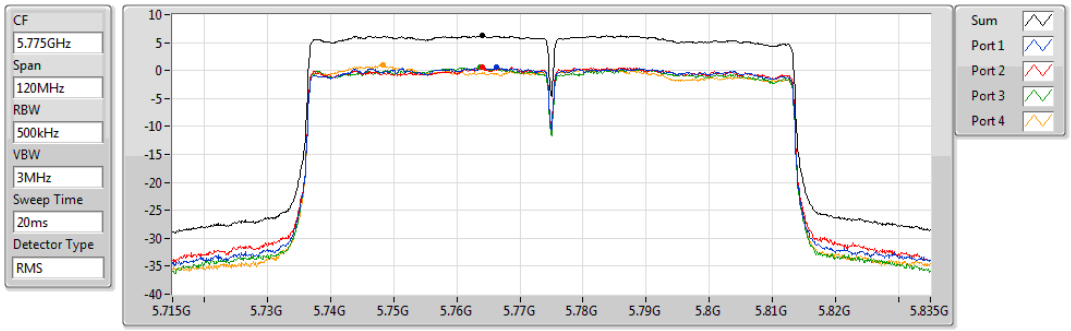


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.33	3.33	-2.56	-1.89	-2.88	-2.91

802.11ac VHT80-BF_Nss2,(MCS0)_4TX PSD

5775MHz

24/07/2019

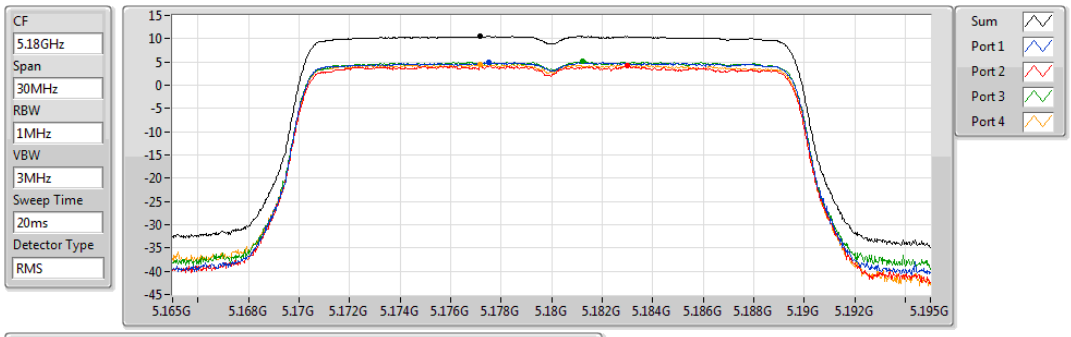


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.27	6.27	0.68	0.57	0.60	1.01

802.11ax HEW20-BF_Nss2,(MCS0)_4TX PSD

5180MHz

24/07/2019

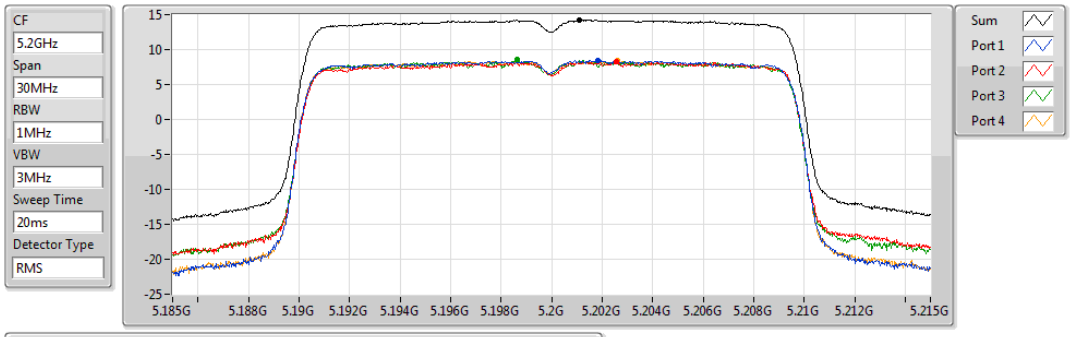


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.54	10.54	4.86	4.24	5.09	4.56

802.11ax HEW20-BF_Nss2,(MCS0)_4TX PSD

5200MHz

24/07/2019

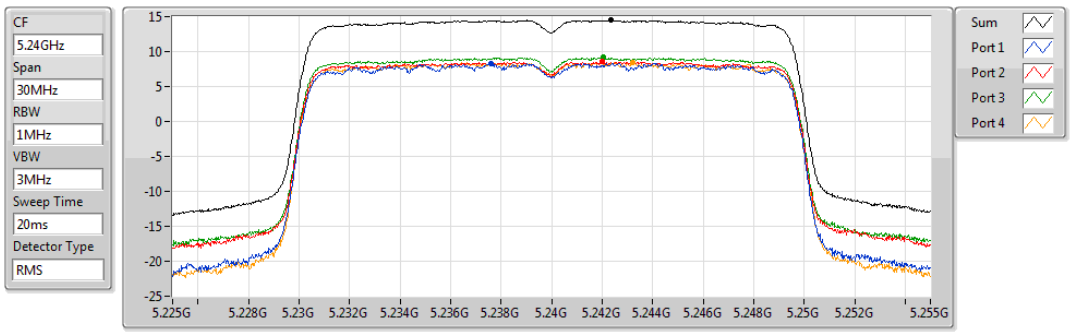


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.24	14.24	8.49	8.21	8.60	8.39

802.11ax HEW20-BF_Nss2,(MCS0)_4TX PSD

5240MHz

24/07/2019

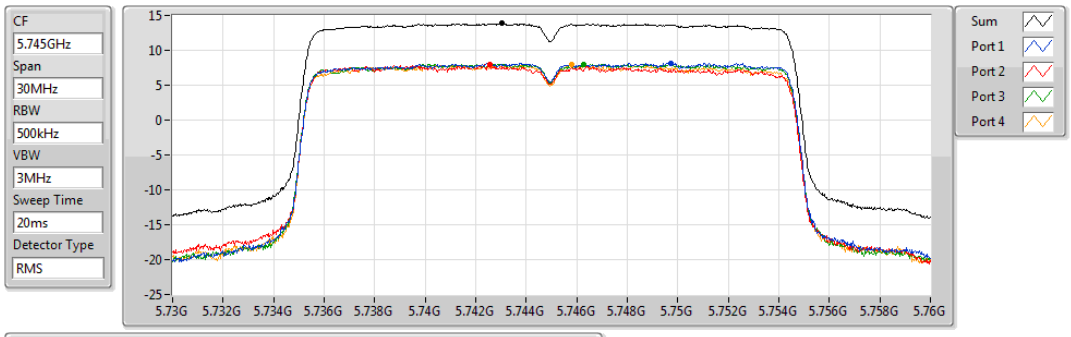


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.52	14.52	8.33	8.54	9.16	8.48

802.11ax HEW20-BF_Nss2,(MCS0)_4TX PSD

5745MHz

24/07/2019

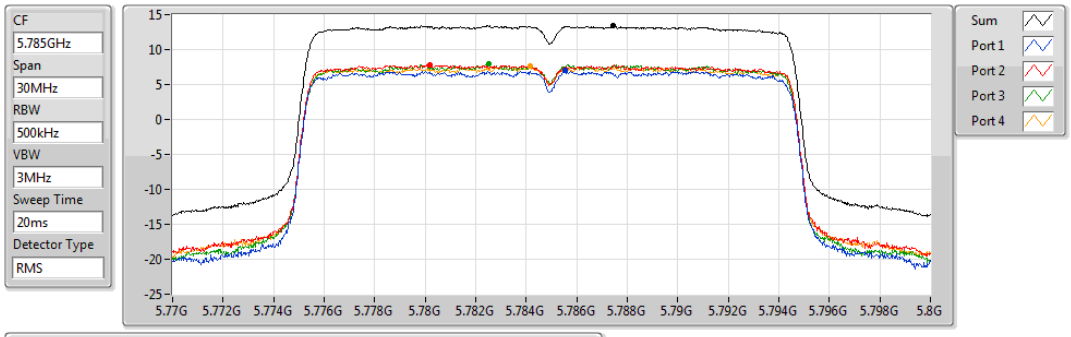


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.85	13.85	8.18	7.92	8.04	7.93

802.11ax HEW20-BF_Nss2,(MCS0)_4TX PSD

5785MHz

24/07/2019

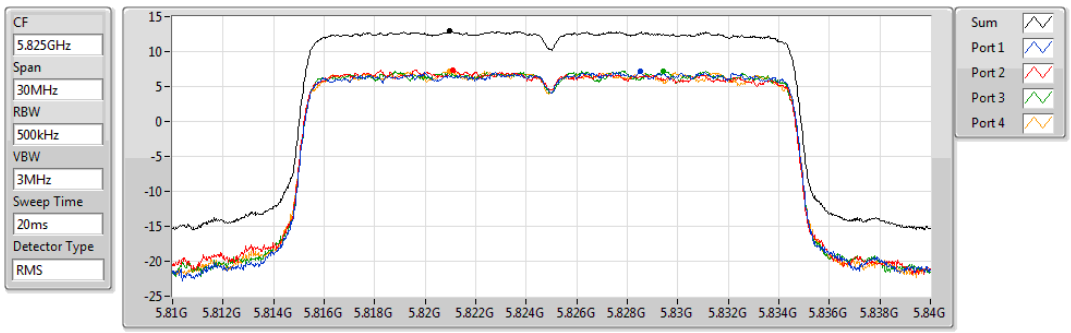


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.38	13.38	6.97	7.81	7.95	7.60

802.11ax HEW20-BF_Nss2,(MCS0)_4TX PSD

5825MHz

24/07/2019

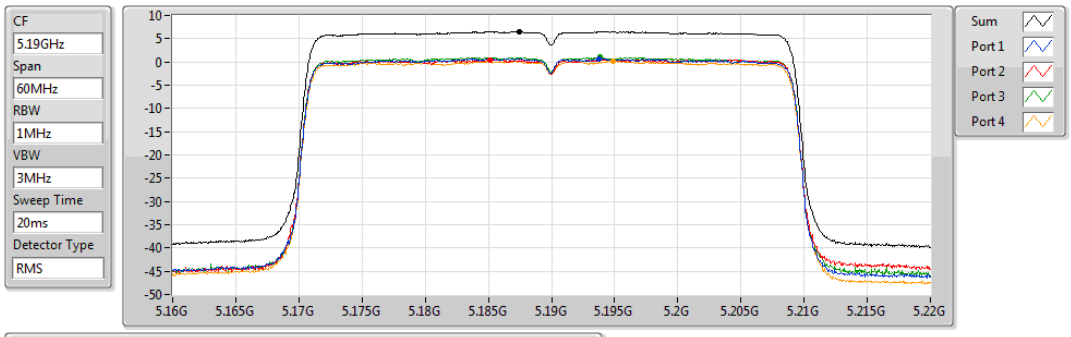


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.94	12.94	7.21	7.40	7.26	7.17

802.11ax HEW40-BF_Nss2,(MCS0)_4TX PSD

5190MHz

24/07/2019

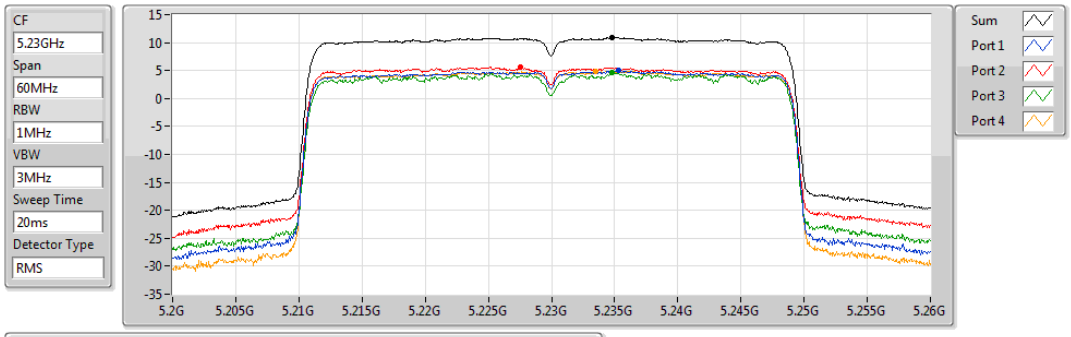


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.51	6.51	0.68	0.47	1.01	0.21

802.11ax HEW40-BF_Nss2,(MCS0)_4TX PSD

5230MHz

24/07/2019

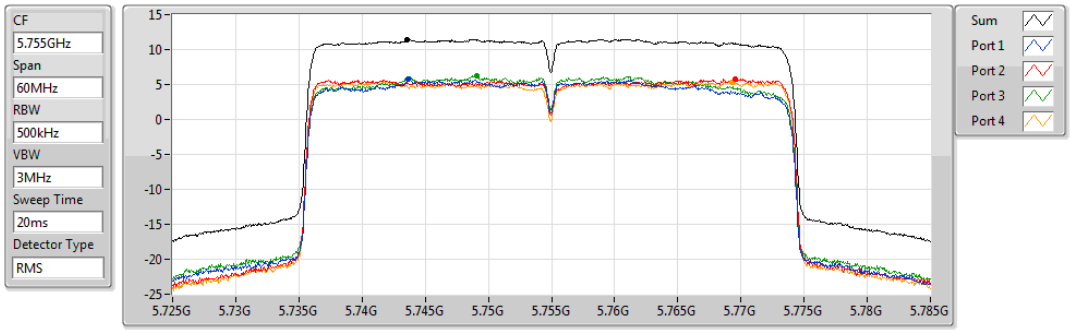


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.96	10.96	4.98	5.57	4.72	4.83

802.11ax HEW40-BF_Nss2,(MCS0)_4TX PSD

5755MHz

25/07/2019

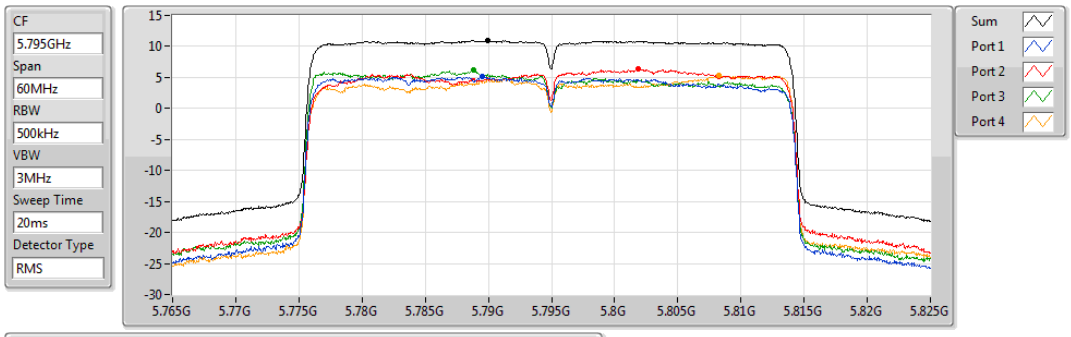


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.47	11.47	5.73	5.75	6.19	5.39

802.11ax HEW40-BF_Nss2,(MCS0)_4TX PSD

5795MHz

25/07/2019

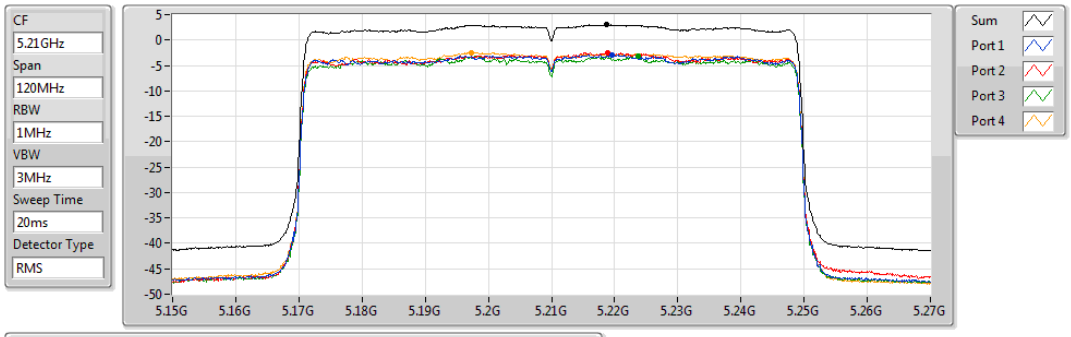


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.00	11.00	5.09	6.36	6.22	5.31

802.11ax HEW80-BF_Nss2,(MCS0)_4TX PSD

5210MHz

24/07/2019

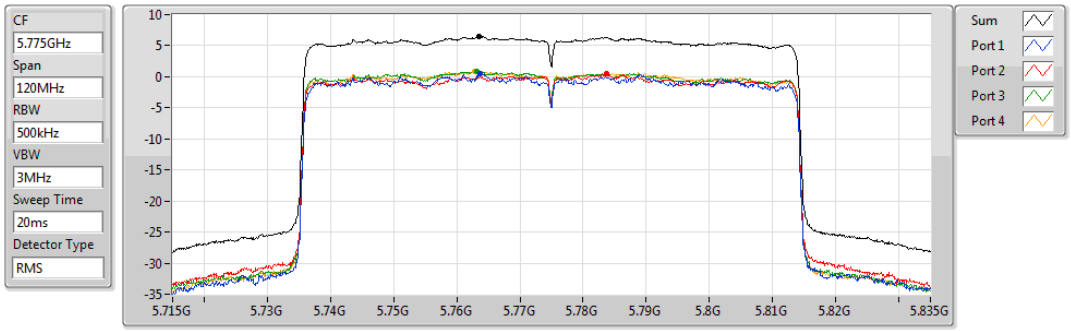


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.13	3.13	-2.95	-2.55	-3.20	-2.46

802.11ax HEW80-BF_Nss2,(MCS0)_4TX PSD

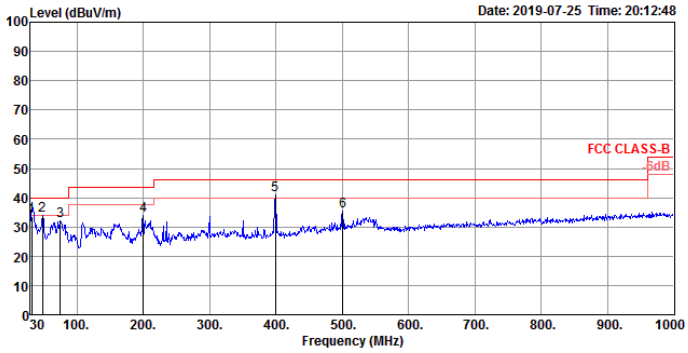
5775MHz

24/07/2019



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.50	6.50	0.43	0.44	0.90	0.88

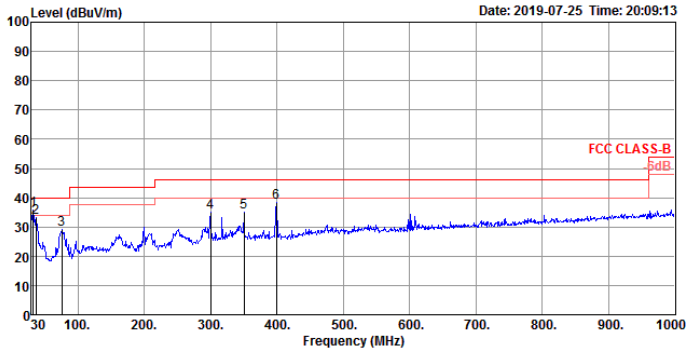
RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Vertical
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	31.94	33.68	40.00	-6.32	40.00	0.71	24.51	31.54	100	167	QP	VERTICAL
2	48.43	34.12	40.00	-5.88	49.44	0.92	15.46	31.70	100	224	Peak	VERTICAL
3	74.62	32.06	40.00	-7.94	49.89	1.12	12.93	31.88	200	360	Peak	VERTICAL
4	199.75	34.00	43.50	-9.50	48.01	1.73	16.20	31.94	100	187	Peak	VERTICAL
5	399.57	40.86	46.00	-5.14	48.02	2.56	22.47	32.19	125	172	Peak	VERTICAL
6	500.45	35.37	46.00	-10.63	41.08	2.94	23.83	32.48	100	222	Peak	VERTICAL

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

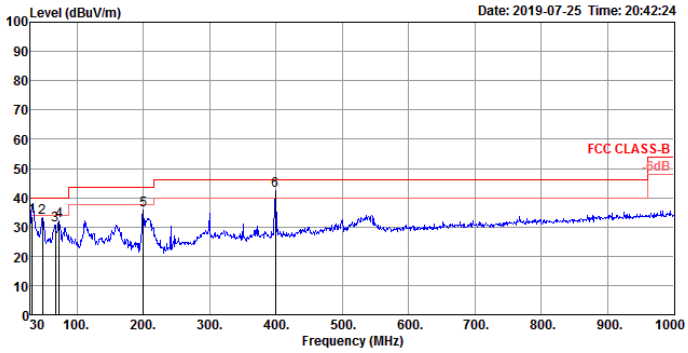
RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Horizontal
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	32.91	35.76	40.00	-4.24	42.57	0.72	23.99	31.52	200	16	Peak	HORIZONTAL
2	36.79	33.22	40.00	-6.78	42.24	0.78	21.69	31.49	200	35	Peak	HORIZONTAL
3	75.59	29.18	40.00	-10.82	46.92	1.13	13.01	31.88	300	63	Peak	HORIZONTAL
4	299.66	35.18	46.00	-10.82	45.27	2.21	19.78	32.08	100	258	Peak	HORIZONTAL
5	350.10	34.92	46.00	-11.08	43.40	2.46	21.20	32.14	100	280	Peak	HORIZONTAL
6	399.57	38.45	46.00	-7.55	45.61	2.56	22.47	32.19	100	134	Peak	HORIZONTAL

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

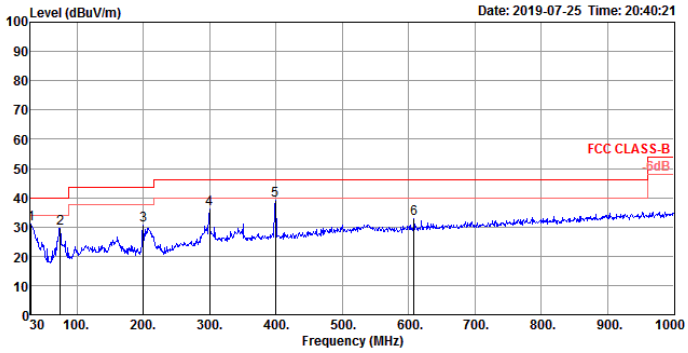
RSE below 1GHz Result			
Operating Mode	2	**Polarization**	Vertical
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	32.91	33.40	40.00	-6.60	40.21	0.72	23.99	31.52	100	143	QP	VERTICAL
2	48.43	33.04	40.00	-6.96	48.36	0.92	15.46	31.70	150	266	Peak	VERTICAL
3	67.83	30.68	40.00	-9.32	48.95	1.01	12.60	31.88	200	107	Peak	VERTICAL
4	73.65	32.10	40.00	-7.90	50.02	1.10	12.86	31.88	200	3	Peak	VERTICAL
5	199.75	35.85	43.50	-7.65	49.86	1.73	16.20	31.94	100	168	Peak	VERTICAL
6	399.57	42.45	46.00	-3.55	49.61	2.56	22.47	32.19	125	188	Peak	VERTICAL

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

RSE below 1GHz Result			
Operating Mode	2	**Polarization**	Horizontal
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	30.97	31.12	40.00	-8.88	36.88	0.69	25.11	31.56	300	204	Peak	HORIZONTAL
2	74.62	29.55	40.00	-10.45	47.38	1.12	12.93	31.88	150	0	Peak	HORIZONTAL
3	199.75	30.53	43.50	-12.97	44.54	1.73	16.20	31.94	200	87	Peak	HORIZONTAL
4	299.66	36.24	46.00	-9.76	46.33	2.21	19.78	32.08	100	251	Peak	HORIZONTAL
5	399.57	39.27	46.00	-6.73	46.43	2.56	22.47	32.19	100	259	Peak	HORIZONTAL
6	608.12	32.88	46.00	-13.12	36.92	3.30	25.00	32.34	300	0	Peak	HORIZONTAL

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

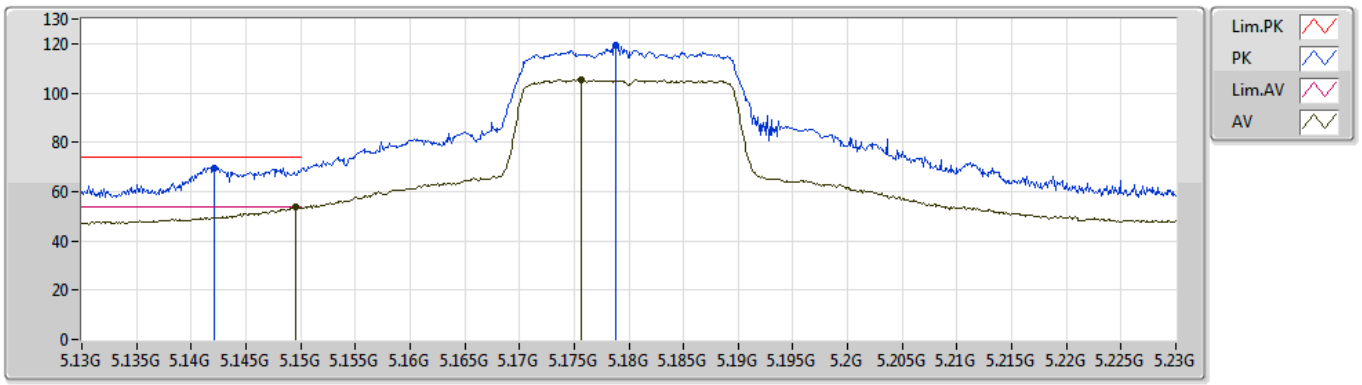
For non-beamforming mode:
4 Stream 4 TX for SDM mode:
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ax HEW80_Nss4,(MCS0)_4TX	Pass	PK	5.644G	68.18	68.20	-0.02	4.73	3	Vertical	1	1.38	-

802.11ax HEW20_Nss4,(MCS0)_4TX

5180MHz_TX

29/06/2019



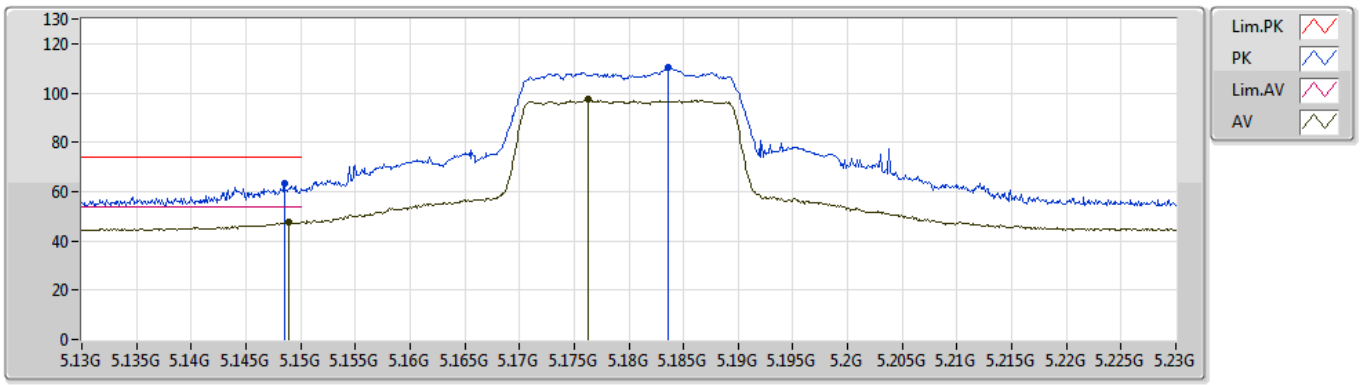
EUT Y_4TX
Setting 81
04-E-2-10
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.1421G	69.54	74.00	-4.46	3.35	3	Vertical	0	1.56	-
AV	5.1496G	53.68	54.00	-0.32	3.36	3	Vertical	0	1.56	-
PK	5.1788G	119.59	Inf	-Inf	3.39	3	Vertical	0	1.56	-
AV	5.1756G	105.40	Inf	-Inf	3.39	3	Vertical	0	1.56	-

802.11ax HEW20_Nss4,(MCS0)_4TX

5180MHz_TX

29/06/2019



EUT Y_4TX
Setting 81
04-E-2-10
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.1485G	63.17	74.00	-10.83	3.36	3	Horizontal	58	1.70	-
AV	5.1489G	47.56	54.00	-6.44	3.36	3	Horizontal	58	1.70	-
PK	5.1836G	110.40	Inf	-Inf	3.39	3	Horizontal	58	1.70	-
AV	5.1763G	97.65	Inf	-Inf	3.39	3	Horizontal	58	1.70	-