FCC RADIO TEST REPORT

FCC ID	:	MSQ-RTGW00
Equipment	:	Wireless-AC3100 Dual Band Gigabit Router
Brand Name	:	ASUS
Model Name	:	RT-AC3100, RT-AC88R, RT-AC88U
Applicant	:	ASUSTeK COMPUTER INC. 4F, No. 150, Li-Te Rd., Peitou, Taipei 112, Taiwan
Manufacturer (1)	:	ASKEY TECHNOLOGY (JIANG SU) LTD NO1388, Jiao Tong Road, Wujiang Economic Technological Development Area Jiangsu Province 215200 China
Manufacturer (2)	:	Compal Networking (KunShan) Co., LTD. No. 520, Nabbang Rd., Economic & Technical Development Zone Kunshan, Jiangsu Province China
Standard	:	47 CFR FCC Part 15.407

The product was received on Nov. 29, 2018, and testing was started from Dec. 11, 2018 and completed on Jan. 29, 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 variant 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: Cliff Chang

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

Table of Contents

History of this test report

Report No.	Version	Description	Issued Date
FR531828-15AB	01	Initial issue of report.	Feb. 01, 2019
FR531828-15AB	02	Revising the typo to “Nss1” from “Nss2” for 802.11ac (VHT80+80) mode.	Feb. 25, 2019

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.3	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:
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)	5180-5240	36-48 [4]
5250-5350		5260-5320	52-64 [4]
5470-5725		5500-5720	100-144 [12]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40)	5190-5230	38-46 [2]
5250-5350		5270-5310	54-62 [2]
5470-5725		5510-5710	102-142 [6]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80)	5210	42 [1]
5250-5350		5290	58 [1]
5470-5725		5530-5690	106-138 [3]
5725-5850		5775	155 [1]

<For 3TX>

Band	Mode	BWch (MHz)	Nant
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	802.11n 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	802.11ac VHT80	80	3TX
5.15-5.25GHz	802.11ac VHT80-BF	80	3TX
5.25-5.35GHz	802.11a	20	3TX
5.25-5.35GHz	802.11n HT20	20	3TX
5.25-5.35GHz	802.11n HT20-BF	20	3TX
5.25-5.35GHz	802.11ac VHT20	20	3TX
5.25-5.35GHz	802.11ac VHT20-BF	20	3TX
5.25-5.35GHz	802.11n HT40	40	3TX
5.25-5.35GHz	802.11n HT40-BF	40	3TX
5.25-5.35GHz	802.11ac VHT40	40	3TX
5.25-5.35GHz	802.11ac VHT40-BF	40	3TX
5.25-5.35GHz	802.11ac VHT80	80	3TX
5.25-5.35GHz	802.11ac VHT80-BF	80	3TX
5.47-5.725GHz	802.11a	20	3TX
5.47-5.725GHz	802.11n HT20	20	3TX
5.47-5.725GHz	802.11n HT20-BF	20	3TX
5.47-5.725GHz	802.11ac VHT20	20	3TX
5.47-5.725GHz	802.11ac VHT20-BF	20	3TX
5.47-5.725GHz	802.11n HT40	40	3TX
5.47-5.725GHz	802.11n HT40-BF	40	3TX
5.47-5.725GHz	802.11ac VHT40	40	3TX
5.47-5.725GHz	802.11ac VHT40-BF	40	3TX
5.47-5.725GHz	802.11ac VHT80	80	3TX
5.47-5.725GHz	802.11ac VHT80-BF	80	3TX
5.725-5.85GHz	802.11a	20	3TX

Band	Mode	BWch (MHz)	Nant
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	802.11n 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	802.11ac VHT80	80	3TX
5.725-5.85GHz	802.11ac VHT80-BF	80	3TX

<For 4TX>

Band	Mode	BWch (MHz)	Nant
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	802.11n 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	802.11ac VHT80	80	4TX
5.15-5.25GHz	802.11ac VHT80-BF	80	4TX
5.25-5.35GHz	802.11a	20	4TX
5.25-5.35GHz	802.11n HT20	20	4TX
5.25-5.35GHz	802.11n HT20-BF	20	4TX
5.25-5.35GHz	802.11ac VHT20	20	4TX
5.25-5.35GHz	802.11ac VHT20-BF	20	4TX
5.25-5.35GHz	802.11n HT40	40	4TX
5.25-5.35GHz	802.11n HT40-BF	40	4TX
5.25-5.35GHz	802.11ac VHT40	40	4TX
5.25-5.35GHz	802.11ac VHT40-BF	40	4TX
5.25-5.35GHz	802.11ac VHT80	80	4TX
5.25-5.35GHz	802.11ac VHT80-BF	80	4TX
5.47-5.725GHz	802.11a	20	4TX
5.47-5.725GHz	802.11n HT20	20	4TX
5.47-5.725GHz	802.11n HT20-BF	20	4TX
5.47-5.725GHz	802.11ac VHT20	20	4TX
5.47-5.725GHz	802.11ac VHT20-BF	20	4TX
5.47-5.725GHz	802.11n HT40	40	4TX
5.47-5.725GHz	802.11n HT40-BF	40	4TX
5.47-5.725GHz	802.11ac VHT40	40	4TX
5.47-5.725GHz	802.11ac VHT40-BF	40	4TX
5.47-5.725GHz	802.11ac VHT80	80	4TX
5.47-5.725GHz	802.11ac VHT80-BF	80	4TX
5.725-5.85GHz	802.11a	20	4TX

Band	Mode	BWch (MHz)	Nant
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	802.11n 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	802.11ac VHT80	80	4TX
5.725-5.85GHz	802.11ac VHT80-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.
- 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 Table for 80+80 MHz Mode

Type	Channel No.	Frequency
1	42+58	5210+5290 MHz
2	106+122	5530+5610 MHz

1.1.3 Antenna Information

Set	Brand	P/N	Antenna Type	Connector	Gain (dBi)		Color Ring
					2.4GHz	5GHz	
1	PSA	RFDPA171300SBLB809	Dipole Antenna	Reversed-SMA	2.25	3.37	Red
2	PSA	RFDPA171300SBLB810	Dipole Antenna	Reversed-SMA	2.25	3.37	Black
3	PSA	RFDPA171300SBLB811	Dipole Antenna	Reversed-SMA	2.20	3.36	Black
4	PSA	RFDPA171300SBLB812	Dipole Antenna	Reversed-SMA	2.18	3.19	Black
5	PSA	RFDPA171300SBLB813	Dipole Antenna	Reversed-SMA	2.20	3.36	Red
6	PSA	RFDPA171300SBLB814	Dipole Antenna	Reversed-SMA	2.18	3.19	Red
7	WHA YU	C660-510345-A(SRF2015719)	Dipole Antenna	Reversed-SMA	2.25	3.20	Red
8	WHA YU	C660-510346-A(SRF2015720)	Dipole Antenna	Reversed-SMA	2.25	3.20	Black
9	WHA YU	C660-510364-A(SRF20151386)	Dipole Antenna	Reversed-SMA	1.9	3.3	Black
10	WHA YU	C660-510365-A(SRF20151717)	Dipole Antenna	Reversed-SMA	1.9	3.3	Red

Note1: The above information was declared by manufacturer.

Note2: 1. The EUT has ten sets of antenna and there are four antennas for each set.

2. Both antennas above are the same type. Besides, only set 1 antenna was selected to perform the test and written in this report due to the highest gain.

For IEEE 802.11a/b/g/n/ac mode:

For 2.4GHz and 5GHz (3TX/3RX) function:

Port 1, Port 2 and Port 3 can be used as transmitting/receiving antenna.

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

For 2.4GHz and 5GHz (4TX/4RX) function:

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

1.1.4 Mode Test Duty Cycle

For Nss1:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11a	0.953	0.209	2.068m	1k
802.11ac VHT20	0.986	0.061	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT20-BF	0.961	0.173	3.84m	300
802.11ac VHT40	0.971	0.128	953.75u	3k
802.11ac VHT40-BF	0.937	0.283	3.695m	300
802.11ac VHT80	0.941	0.264	461.25u	3k
802.11ac VHT80-BF	0.91	0.41	5.1m	300

For Nss2:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ac VHT20-BF	0.75	1.249	1.012m	1k
802.11ac VHT40-BF	0.628	2.02	512.5u	3k
802.11ac VHT80-BF	0.43	3.665	268.75u	10k

For 802.11ac (VHT80+80) mode, Nss1:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ac VHT80+80	0.893	0.491	252.167u	10k

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

1.1.5 EUT Operational Condition

EUT Power Type	From power adapter			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for 802.11n/ac in 2.4GHz/5GHz.			
Weather Band	☒	With 5600~5650MHz	☐	Without 5600~5650MHz
Function	☐	Outdoor P2M	☒	Indoor P2M
	☐	Fixed P2P	☐	Client
TPC Function	☒	With TPC	☐	Without TPC
Test Software Version	For non-beamforming mode: MTool_3.1.0.1			
	For beamforming mode: Telnet V5.1.2600			

Note: The above information was declared by manufacturer.

1.1.6 Table for Multiple Listing

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

Model No.	LAN Port	Heat sink color
RT-AC88U	8 LAN ports	Silver, Red
RT-AC3100	4 LAN ports	Silver, Black
RT-AC88R	8 LAN ports	Silver, Red

From the above models, model: RT-AC88U was selected as representative model for the test and its data was recorded in this report.

1.1.7 Table for Adapter detail

(1) The difference between adapter 1 and adapter 4 as below:

Adapter1 (model: ADP-45BW B)			
Design No	**MFG TITLE**	**MFG PART**	**DESCRIPTION**
Q1	AUK	SMK0760F	FET 600V 7A 1.2ohm TO-220F-3P
Q1	ST	STP6NK60ZFP	FET 600V 6A 1.2ohm TO-220FP-3P
Q1	TOSHIBA	TK10A60DR(STA4,X)	FET 600V 10A 750mohm TO-220SIS-3P
D101	ST	STPS20S100CT	DIO SBD 20A 100V TO-220AB-3P C.C.
D101	ST	STPS20SM100ST	DIO SBD 20A 100V TO-220AB-3P
D101	ST	STPS30SM100ST	DIO SBD 30A 100V TO-220AB-3P
IC31	ON	DAP022ASN65T1G	IC ASIC PWM CURRENT MODE TSOP-6P SMD
IC131	TI	TL432BIDBZR	IC VOL REF ADJ 2.495V 100mA 0.5%
IC131	NXP	TL431BMFDT	IC VOL REF ADJ 2.495V 100mA 0.5%
IC131	DIODES	AS431ANTR-G1	IC VOL REF ADJ 2.5V 100mA 0.5% SOT-23-3P
IC32	EVERLIGHT	EL816M(Y)(D)-VG	PHOTO TR 50mA 80V DIP-4P 150%-300%
IC32	SHARP	PC123Y92FZ0F	PHOTO TR 50mA 70V DIP-4P 160%-300%
IC32	Renesas	PS2561DL1-1Y-V-A(G)	EOL PHOTO TR 40mA 80V DIP-4P 150%-300%
CX1	EUROPTRONIC	MPX2224K30B15LXD20	CAP X2 MP PC 305VAC 0.22uF K S15
CX1	OKAYA	LE224-MX-30-C3.2	CAP X2 MP PC 300VAC 0.22uF K S15
CX1	HUA	MKP-224K0275AB115S-G	CAP X2 MP PC 275VAC 0.22uF K S15
FL1	DELTA	HFV-MP13202	LINE FILTER T14 14mH MIN
FL101	DELTA	LFV-MP13303	LINE FILTER T10 17uH MIN
T1	DELTA	MV-MP13167	TRANSFORMER MAIN RM10 1mH +/-5%
C1	NICHICON	UPT2G680MHD3	CAP AL 400V 68uF M 16*25 P7.5
C1	NCC	EKMG401ELL680ML25S	CAP AL 400V 68uF M 16*25 P7.5
C1	L-Tec	TYJ2GM680K25O	CAP AL 400V 68uF M 16*25 P7.5
CY1	MURATA	DE1B3KX221KNHAN99F	CAP Y1/X1 CD 250VAC 220pF K B TP VI10
CY1	TDK	CD70-B2GA221KYVK	CAP Y1/X1 CD 250VAC 220pF K B TP VI10
CY1	WALSIN	YP0AH221K061DASDAB	CAP Y1/X1 CD 250VAC 220pF K B TP VI10

Adapter4 (model: ADP-45BW B)			
Design No	**MFG TITLE**	**MFG PART**	**DESCRIPTION**
Q1	TOSHIBA	TK10A60DR(STA4,X)	FET 600V 10A 750mohm TO-220SIS-3P
Q1	FUJI	FMV11N60ES	FET 600V 11A 750mohm TO-220F-3P
D101	ST	STPS20S100CT	DIO SBD 20A 100V TO-220AB-3P C.C.
D101	ST	STPS20H100CT	DIO SBD 20A 100V TO-220AB-3P C.C.
D101	ST	STPS30H100CT	DIO SBD 30A 100V TO-220AB-3P C.C.
IC31	NeoEnergy	DAP022AT	IC ASIC PWM CURRENT MODE SOT-26-6P SMD
IC131	LITE-ON	LA431OCRPA	IC REGU ADJ 2.495V 100mA 0.4% SOT-23R-3P
IC131	TI	TL432BIDBZR	IC VOL REF ADJ 2.495V 100mA 0.5%
IC131	NXP	TL431BMFDT	IC VOL REF ADJ 2.495V 100mA 0.5%
IC32	EVERLIGHT	EL816M(Y)(D)-VG	PHOTO TR 50mA 80V DIP-4P 150%-300%
IC32	SHARP	PC123Y92FZ0F	PHOTO TR 50mA 70V DIP-4P 160%-300%
IC32	TOSHIBA	TLP785F(D4-GRH,F	PHOTO TR 60mA 80V DIP-4P 150%-300%
CX1	HUA	MKP-334K0275AB115S-G	CAP X2 MP PC 275VAC 0.33uF K S15
CX1	HUA	MKP-334K0275AB115S-P	CAP X2 MP PC 275VAC 0.33uF K S15
CX1	EUROPTRONIC	MPX2334K30B15LXD31	CAP X2 MP PC 305VAC 0.33uF K S15
FL1	DELTA	HFV-MP15027	LINE FILTER T16 12.7mH MIN
FL101	DELTA	LFV-MP13171	LINE FILTER T6 1.55uH MIN
T1	DELTA	MV-MP15037	TRANSFORMER MAIN RM10 1000uH +/-5%
C1	NCC	EKMG401ELL680ML25S	CAP AL 400V 68uF M 16*25 P7.5
CY1	MURATA	DE1B3KX221KNHAN99F	CAP Y1/X1 CD 250VAC 220pF K B TP VI10
CY1	WALSIN	YP0AH221K061DASDAB	CAP Y1/X1 CD 250VAC 220pF K B TP VI10

(2) The difference between adapter 2 and adapter 5 as below:

Adapter 2 (model: AD883J20)	**Adapter 5 (model: AD883J20)**
Type: 010KLF BAH	Type: 010K-3LF

(3) The difference between adapter 3 and adapter 6 as below:

Adapter 3 (model: ADP-65DW B)			
Design No	**MFG TITLE**	**MFG PART**	**DESCRIPTION**
Q1	AUK	SMK0760F	FET 600V 7A 1.2ohm TO-220F-3P
Q1	ST	STP6NK60ZFP	FET 600V 6A 1.2ohm TO-220FP-3P
Q1	TOSHIBA	TK10A60DR(STA4,X)	FET 600V 10A 750mohm TO-220SIS-3P
D101	ST	STPS20S100CT	DIO SBD 20A 100V TO-220AB-3P C.C.
D101	ST	STPS20SM100ST	DIO SBD 20A 100V TO-220AB-3P
D101	ST	STPS30SM100ST	DIO SBD 30A 100V TO-220AB-3P
IC31	ON	DAP022ASN65T1G	IC ASIC PWM CURRENT MODE TSOP-6P SMD
IC131	TI	TL432BIDBZR	IC VOL REF ADJ 2.495V 100mA 0.5%
IC131	NXP	TL431BMFDT	IC VOL REF ADJ 2.495V 100mA 0.5%
IC131	DIODES	AS431ANTR-G1	IC VOL REF ADJ 2.5V 100mA 0.5% SOT-23-3P
IC32	EVERLIGHT	EL816M(Y)(D)-VG	PHOTO TR 50mA 80V DIP-4P 150%-300%

IC32	SHARP	PC123Y92FZ0F	PHOTO TR 50mA 70V DIP-4P 160%-300%
IC32	Renesas	PS2561DL1-1Y-V-A(G)	EOL PHOTO TR 40mA 80V DIP-4P 150%-300%
CX1	EUROPTRONIC	MPX2224K30B15LXD20	CAP X2 MP PC 305VAC 0.22uF K S15
CX1	OKAYA	LE224-MX-30-C3.2	CAP X2 MP PC 300VAC 0.22uF K S15
CX1	HUA	MKP-224K0275AB115S-G	CAP X2 MP PC 275VAC 0.22uF K S15
FL1	DELTA	HFV-MP13202	LINE FILTER T14 14mH MIN
FL101	DELTA	LFV-MP13303	LINE FILTER T10 17uH MIN
T1	DELTA	MV-MP13167	TRANSFORMER MAIN RM10 1mH +/-5%
C1	NICHICON	UPT2G680MHD3	CAP AL 400V 68uF M 16*25 P7.5
C1	NCC	EKMG401ELL680ML25S	CAP AL 400V 68uF M 16*25 P7.5
C1	L-Tec	TYJ2GM680K25O	CAP AL 400V 68uF M 16*25 P7.5
CY1	MURATA	DE1B3KX221KNHAN99F	CAP Y1/X1 CD 250VAC 220pF K B TP VI10
CY1	TDK	CD70-B2GA221KYVK	CAP Y1/X1 CD 250VAC 220pF K B TP VI10
CY1	WALSIN	YP0AH221K061DASDAB	CAP Y1/X1 CD 250VAC 220pF K B TP VI10
Adapter 6 (model: ADP-65DW B)			
Design No	**MFG TITLE**	**MFG PART**	**DESCRIPTION**
Q1	TOSHIBA	TK10A60DR(STA4,X)	FET 600V 10A 750mohm TO-220SIS-3P
Q1	FUJI	FMV11N60ES	FET 600V 11A 750mohm TO-220F-3P
D101	ST	STPS20S100CT	DIO SBD 20A 100V TO-220AB-3P C.C.
D101	ST	STPS20H100CT	DIO SBD 20A 100V TO-220AB-3P C.C.
D101	ST	STPS30H100CT	DIO SBD 30A 100V TO-220AB-3P C.C.
IC31	NeoEnergy	DAP022AT	IC ASIC PWM CURRENT MODE SOT-26-6P SMD
IC131	LITE-ON	LA431OCRPA	IC REGU ADJ 2.495V 100mA 0.4% SOT-23R-3P
IC131	TI	TL432BIDBZR	IC VOL REF ADJ 2.495V 100mA 0.5%
IC131	NXP	TL431BMFDT	IC VOL REF ADJ 2.495V 100mA 0.5%
IC32	EVERLIGHT	EL816M(Y)(D)-VG	PHOTO TR 50mA 80V DIP-4P 150%-300%
IC32	SHARP	PC123Y92FZ0F	PHOTO TR 50mA 70V DIP-4P 160%-300%
IC32	TOSHIBA	TLP785F(D4-GRH,F	PHOTO TR 60mA 80V DIP-4P 150%-300%
CX1	HUA	MKP-334K0275AB115S-G	CAP X2 MP PC 275VAC 0.33uF K S15
CX1	HUA	MKP-334K0275AB115S-P	CAP X2 MP PC 275VAC 0.33uF K S15
CX1	EUROPTRONIC	MPX2334K30B15LXD31	CAP X2 MP PC 305VAC 0.33uF K S15
FL1	DELTA	HFV-MP15027	LINE FILTER T16 12.7mH MIN
FL101	DELTA	LFV-MP13171	LINE FILTER T6 1.55uH MIN
T1	DELTA	MV-MP15037	TRANSFORMER MAIN RM10 1000uH +/-5%
C1	NCC	EKMG401ELL680ML25S	CAP AL 400V 68uF M 16*25 P7.5
CY1	MURATA	DE1B3KX221KNHAN99F	CAP Y1/X1 CD 250VAC 220pF K B TP VI10
CY1	WALSIN	YP0AH221K061DASDAB	CAP Y1/X1 CD 250VAC 220pF K B TP VI10

1.1.8 Table for Class II Change

This product is an extension of original one reported under Sporton project number: FR531828-13AB

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

Modifications	Performance Checking
1. Adding two adapters “Adapter 7, Model Name: AD2066320 and Adapter 8, Model Name: ADP-45BW Y”.	1. AC Power-line Conducted Emissions. 2. Unwanted Emissions Below 1GHz.
2. Adding two types for 802.11ac (VHT80+80) mode “Type 1, 5210+5290 MHz and Type 2, 5530+5610 MHz”. 3. Adding 5GHz band 2 and band 3 (5250~5350 MHz, 5470~5725 MHz) for this device.	1. Emission Bandwidth. 2. Maximum Conducted Output Power. 3. Peak Power Spectral Density. 4. Unwanted Emissions Above 1GHz.

1.2 Testing Applied 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	Brian Sun	23°C / 53%	Dec. 14, 2018~Dec. 23, 2018
Radiated Below 1GHz	03CH01-CB	KJ Chang	22°C / 54%	Jan. 26, 2019
Radiated Above 1GHz	03CH01-CB	KJ Chang	22°C / 54%	Dec. 11, 2018~Jan. 22, 2019
AC Conduction	CO02-CB	Max Lin	22°C / 61%	Jan. 29, 2019

Test site Designation No. TW0006 with FCC
Test site registered number IC 4086D 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)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74×10^{-8}	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

For Nss1:

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5260MHz	53
5300MHz	53
5320MHz	53
5500MHz	55
5580MHz	55
5700MHz	55
5720MHz Straddle 5.47-5.725GHz	55
5720MHz Straddle 5.725-5.85GHz	55
802.11ac VHT20_Nss1,(MCS0)_4TX	-
5260MHz	54
5300MHz	54
5320MHz	54
5500MHz	56
5580MHz	56
5700MHz	56
5720MHz Straddle 5.47-5.725GHz	56
5720MHz Straddle 5.725-5.85GHz	56
802.11ac VHT40_Nss1,(MCS0)_4TX	-
5270MHz	66
5310MHz	62
5510MHz	65
5550MHz	68
5670MHz	68
5710MHz Straddle 5.47-5.725GHz	69
5710MHz Straddle 5.725-5.85GHz	69
802.11ac VHT80_Nss1,(MCS0)_4TX	-
5290MHz	56
5530MHz	59
5610MHz	70

Mode	Power Setting
5690MHz Straddle 5.47-5.725GHz	70
5690MHz Straddle 5.725-5.85GHz	70
5775MHz	
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-
5260MHz	52
5300MHz	52
5320MHz	52
5500MHz	54
5580MHz	54
5700MHz	54
5720MHz Straddle 5.47-5.725GHz	54
5720MHz Straddle 5.725-5.85GHz	54
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-
5270MHz	52
5310MHz	53
5510MHz	55
5550MHz	55
5670MHz	54
5710MHz Straddle 5.47-5.725GHz	55
5710MHz Straddle 5.725-5.85GHz	55
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-
5290MHz	54
5530MHz	53
5610MHz	55
5690MHz Straddle 5.47-5.725GHz	55
5690MHz Straddle 5.725-5.85GHz	55

For Nss2:

Mode	Power Setting
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-
5260MHz	62
5300MHz	63
5320MHz	63
5500MHz	66
5580MHz	65
5700MHz	66
5720MHz Straddle 5.47-5.725GHz	70
5720MHz Straddle 5.725-5.85GHz	70
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-
5270MHz	65
5310MHz	66
5510MHz	66
5550MHz	66
5670MHz	66
5710MHz Straddle 5.47-5.725GHz	80
5710MHz Straddle 5.725-5.85GHz	80
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-
5290MHz	61
5530MHz	64
5610MHz	67
5690MHz Straddle 5.47-5.725GHz	80
5690MHz Straddle 5.725-5.85GHz	80

For 802.11ac (VHT80+80) mode, Nss1:

Mode	Power Setting
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-
5210MHz,#5290MHz	62
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-
#5530MHz,#5610MHz	64

Note:
- VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.
- There are two modes of EUT for 802.11n/ac in 2.4GHz/5GHz. One is beamforming mode, and the other is non-beamforming mode. Both modes have been tested and recorded in this test 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	CTX
There are two modes of EUT, one is “WLAN 5GHz” and the other is “WLAN 2.4GHz”. “WLAN 5GHz” has been evaluated to be the worst case of original test report, so the measurement will follow this same test configuration.	
1	EUT With Adapter 7 - WLAN 5GHz
2	EUT With Adapter 8 - WLAN 5GHz
For operating mode 1 is the worst case and it was record in this test report.	

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	CTX
1	EUT With Adapter 7 - WLAN 5GHz
2	EUT With Adapter 7 - WLAN 2.4GHz
3	EUT With Adapter 8 - WLAN 5GHz
4	EUT With Adapter 8 - WLAN 2.4GHz
For operating mode 3 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX

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
Refer to Sporton Test Report No.: FA531828-15 for Co-location RF Exposure Evaluation.	

Note: The EUT can only be used at laying position.

2.3 EUT Operation during Test

For non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

For beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated 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%.

2.4 Accessories

Power	Brand	Model	Rating
Adapter 1	ASUS	ADP-45BW B	Input: 100-240V ~ 50-60Hz, 1.2A Output: 19V, 2.37A
Adapter 2	ASUS	AD883J20	Input: 100-240V ~ 50-60Hz, 1.0A Output: 19V, 2.37A
Adapter 3	ASUS	ADP-65DW B	Input: 100-240V ~ 50-60Hz, 1.5A Output: 19V, 3.42A
Adapter 4	ASUS	ADP-45BW B	Input: 100-240V ~ 50-60Hz, 1.2A Output: 19V, 2.37A
Adapter 5	ASUS	AD883J20	Input: 100-240V ~ 50-60Hz, 1.0A Output: 19V, 2.37A
Adapter 6	ASUS	ADP-65DW B	Input: 100-240V ~ 50-60Hz, 1.5A Output: 19V, 3.42A
Adapter 7	ASUS	AD2066320	Input: 100-240V ~ 50/60Hz 1.0A Output: 19V, 2.37A
Adapter 8	ASUS	ADP-45BW Y	Input: 100-240V ~ 50-60Hz 1.2A Output: 19V, 2.37A
Other			
RJ-45 cable*1: Non-shielded, 1.5m			

Note: The power adapter does not affect the test result of RF tests, so only adapter 1 was tested and recorded in this report.

2.5 Support Equipment

For Test Site No: CO02-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E6430	N/A
B	Flash disk3.0	Transcend	JetFlash-700	N/A
C	Flash disk3.0	Transcend	JetFlash-700	N/A

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

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

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

For non-beamforming mode:

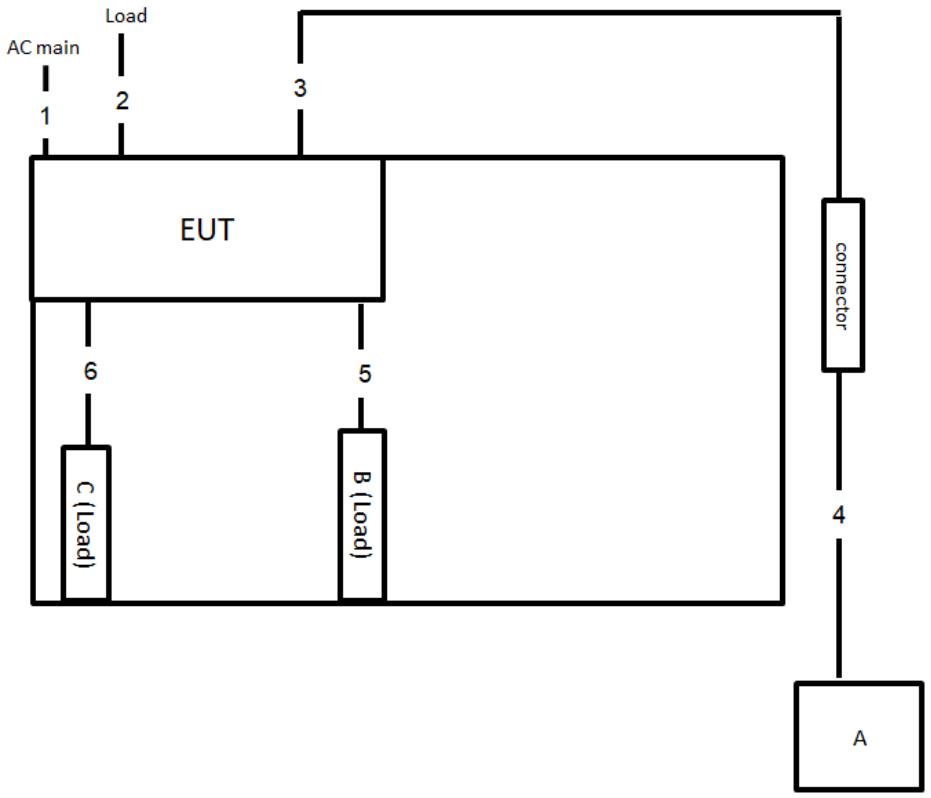
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A

For beamforming mode:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	PC	DELL	T3400	N/A
C	WLAN Card (RX Device)	ASUS	PCE-AC88	MSQ-PCIE0U00

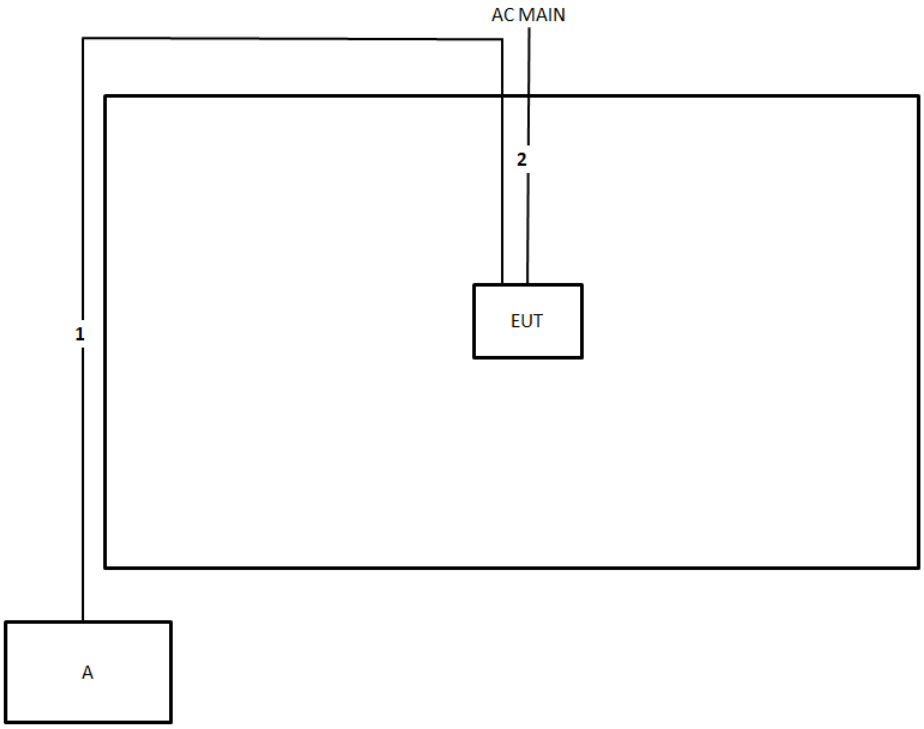
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length
1	Power cable	No	2.2m
2	RJ-45 cable*8	No	1.5m
3	RJ-45 cable	No	1m
4	RJ-45 cable	No	3m
5	USB cable	Yes	1.8m
6	USB cable	Yes	1.8m

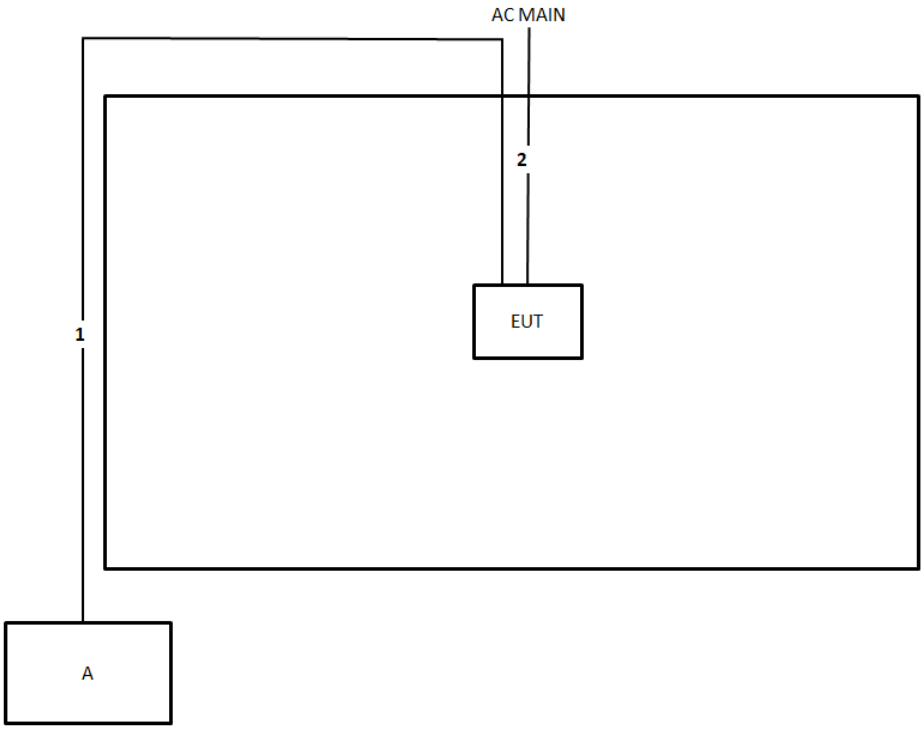
Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	2.2m

Test Setup Diagram - Radiated Test > 1GHz

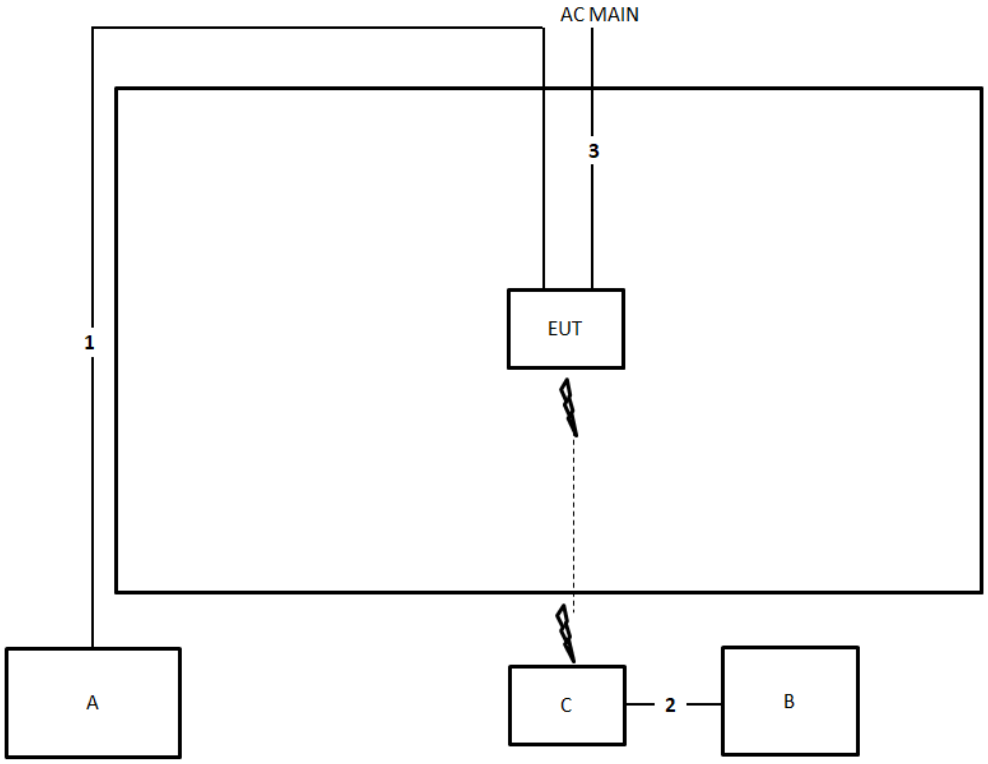
For non-beamforming mode:



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	2.2m

Test Setup Diagram - Radiated Test > 1GHz

For beamforming mode:



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	1.5m
3	Power cable	No	2.2m

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

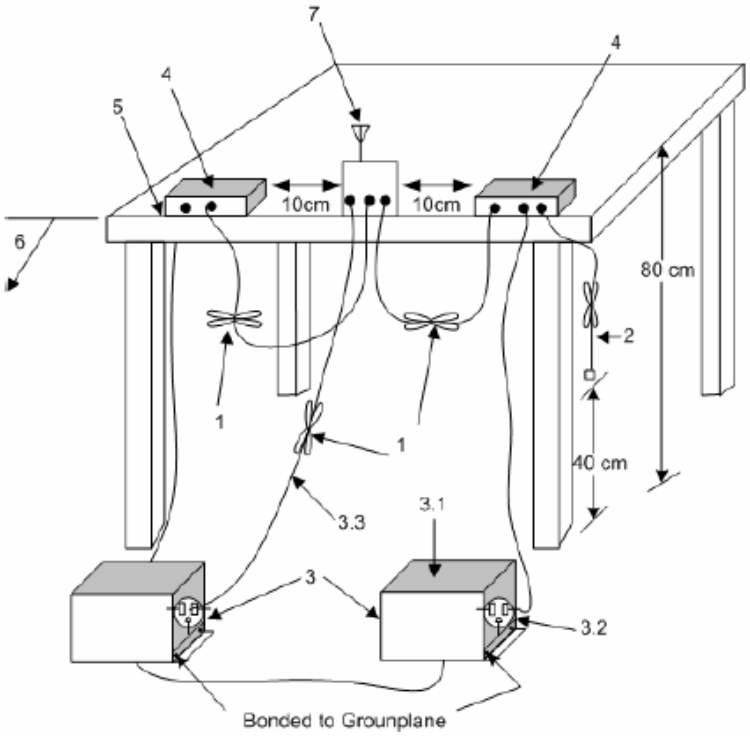
Refer a test equipment and calibration data table in this test report.

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

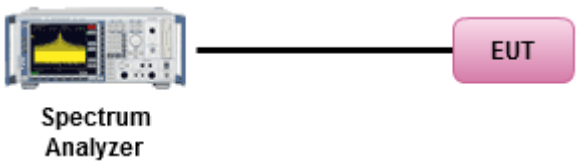
Refer a test equipment and calibration data table in this test report.

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

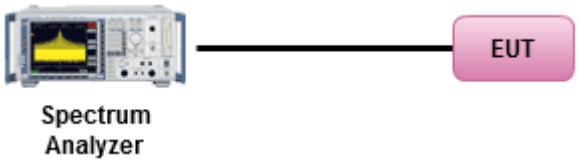
Refer a test equipment and calibration data table in this test report.

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) for straddle channel.
	☐ 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 other channel.
▪ 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

For straddle channel:

RF Output Power (Spectrum Analyzer)


For other channel:

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.	

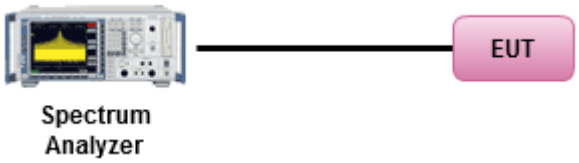
3.4.2 Measuring Instruments

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.

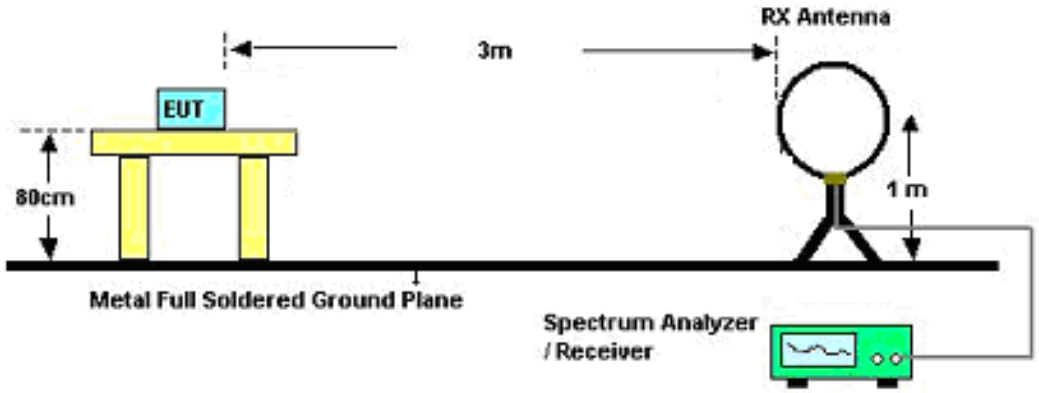
3.5.3 Test Procedures

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.			

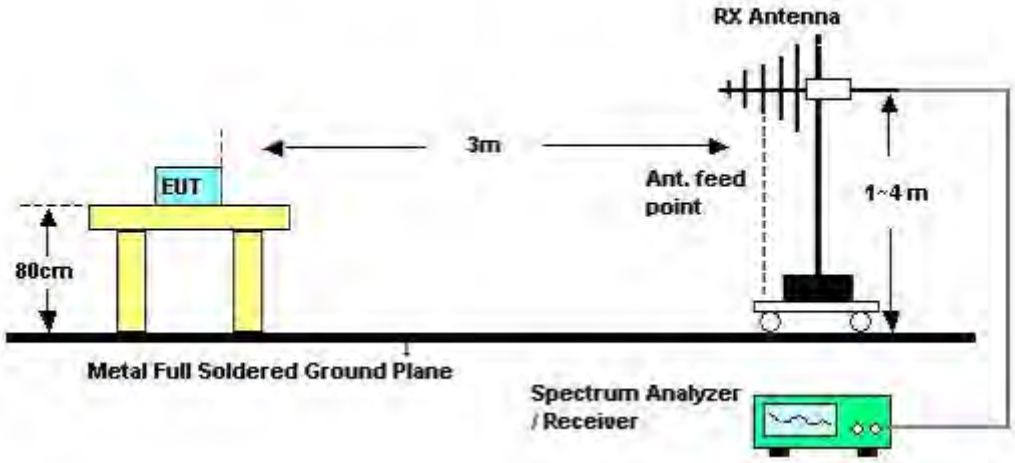
3.5.4 Test Setup

Transmitter Radiated Unwanted Emissions

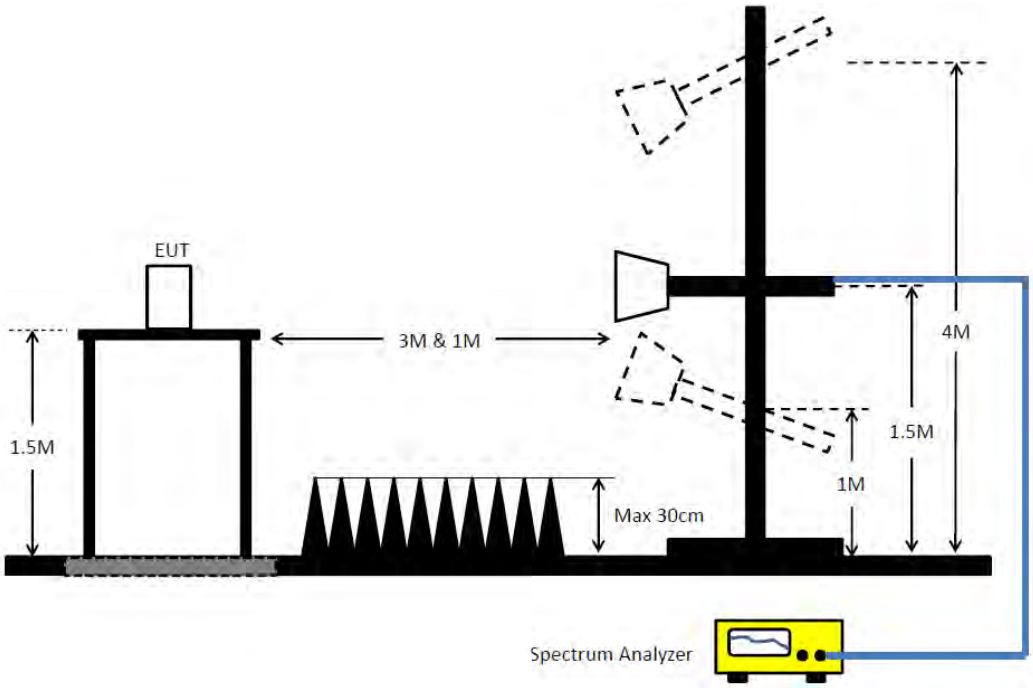
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.5.5 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.

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E

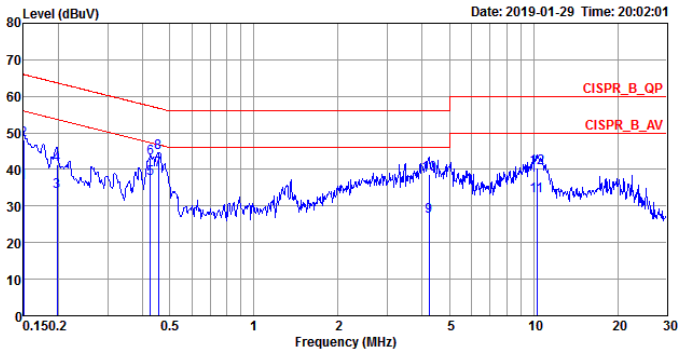
4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Nov. 21, 2018	Nov. 20, 2019	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 05, 2018	Nov. 04, 2019	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	Jan. 16, 2019	Jan. 15, 2020	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Nov. 06, 2018	Nov. 05, 2019	Conduction (CO02-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2018	Mar. 15, 2019	Radiation (03CH01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 27, 2018	Aug. 26, 2019	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 13, 2018	Nov. 12, 2019	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 28, 2018	Jun. 27, 2019	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2018	May 01, 2019	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 09, 2018	Jan. 08, 2019	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 08, 2019	Jan. 07, 2020	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 04, 2018	Jul. 03, 2019	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Oct. 03, 2018	Oct. 02, 2019	Radiation (03CH01-CB)
EMI Test Receiver	R&S	ESCS	100359	9kHz ~ 2.75GHz	Jul. 03, 2018	Jul. 02, 2019	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	101027	9kHz~40GHz	Jun. 22, 2018	Jun. 21, 2019	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)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
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)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 05, 2018	Nov. 04, 2019	Conducted (TH01-CB)

Note: Calibration Interval of instruments listed above is one year.
N.C.R. means Non-Calibration required.

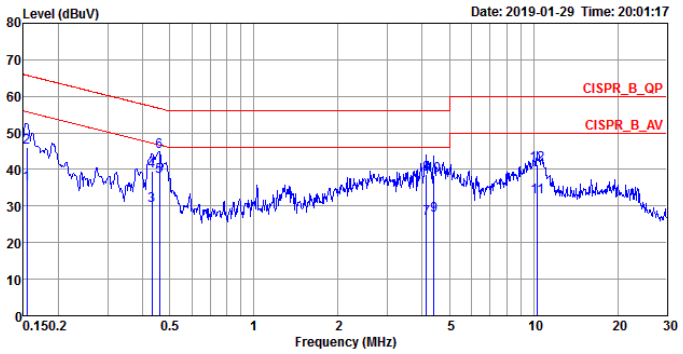
AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Line
Operating Function	CTX		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1500	36.35	-19.65	56.00	26.18	10.15	0.02	Average	LINE
2	0.1500	48.10	-17.90	66.00	37.93	10.15	0.02	QP	LINE
3	0.1976	34.02	-19.69	53.71	23.85	10.15	0.02	Average	LINE
4	0.1976	41.47	-22.24	63.71	31.30	10.15	0.02	QP	LINE
5	0.4260	37.59	-9.74	47.33	27.41	10.16	0.02	Average	LINE
6	0.4260	43.20	-14.13	57.33	33.02	10.16	0.02	QP	LINE
7	0.4564	39.75	-7.01	46.76	29.57	10.16	0.02	Average	LINE
8	0.4564	44.54	-12.22	56.76	34.36	10.16	0.02	QP	LINE
9	4.2242	27.02	-18.98	46.00	16.73	10.22	0.07	Average	LINE
10	4.2242	38.79	-17.21	56.00	28.50	10.22	0.07	QP	LINE
11	10.2876	32.85	-17.15	50.00	22.47	10.31	0.07	Average	LINE
12	10.2876	40.49	-19.51	60.00	30.11	10.31	0.07	QP	LINE

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	CTX		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1540	35.97	-19.81	55.78	25.82	10.13	0.02	Average	NEUTRAL
2	0.1540	46.12	-19.66	65.78	35.97	10.13	0.02	QP	NEUTRAL
3	0.4328	30.23	-16.97	47.20	20.07	10.14	0.02	Average	NEUTRAL
4	0.4328	39.67	-17.53	57.20	29.51	10.14	0.02	QP	NEUTRAL
5	0.4588	38.16	-8.55	46.71	28.00	10.14	0.02	Average	NEUTRAL
6	0.4588	44.74	-11.97	56.71	34.58	10.14	0.02	QP	NEUTRAL
7	4.1356	26.63	-19.37	46.00	16.38	10.18	0.07	Average	NEUTRAL
8	4.1356	38.57	-17.43	56.00	28.32	10.18	0.07	QP	NEUTRAL
9	4.4071	27.60	-18.40	46.00	17.34	10.19	0.07	Average	NEUTRAL
10	4.4071	38.47	-17.53	56.00	28.21	10.19	0.07	QP	NEUTRAL
11	10.3422	32.46	-17.54	50.00	22.12	10.27	0.07	Average	NEUTRAL
12	10.3422	41.42	-18.58	60.00	31.08	10.27	0.07	QP	NEUTRAL

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 Nss1:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	21.625M	16.617M	16M6D1D	21.375M	16.517M
802.11ac VHT20_Nss1,(MCS0)_4TX	21.975M	17.791M	17M8D1D	21.4M	17.716M
802.11ac VHT40_Nss1,(MCS0)_4TX	85.5M	36.832M	36M8D1D	39.65M	36.182M
802.11ac VHT80_Nss1,(MCS0)_4TX	82M	75.862M	75M9D1D	81.3M	75.662M
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	21.875M	17.816M	17M8D1D	21.4M	17.691M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	40.3M	36.282M	36M3D1D	39.65M	36.182M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	82.1M	75.862M	75M9D1D	81.6M	75.662M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	21.65M	16.642M	16M6D1D	15.675M	13.298M
802.11ac VHT20_Nss1,(MCS0)_4TX	21.925M	17.791M	17M8D1D	15.765M	13.913M
802.11ac VHT40_Nss1,(MCS0)_4TX	49.4M	36.332M	36M3D1D	35.035M	32.989M
802.11ac VHT80_Nss1,(MCS0)_4TX	82.4M	75.962M	76M0D1D	75.675M	72.564M
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	21.9M	17.791M	17M8D1D	15.63M	13.898M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	40.35M	36.282M	36M3D1D	34.79M	33.023M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	82.2M	75.962M	76M0D1D	75.825M	72.414M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	3.22M	3.958M	3M96D1D	3.14M	3.818M
802.11ac VHT20_Nss1,(MCS0)_4TX	3.76M	4.258M	4M26D1D	3.76M	4.218M
802.11ac VHT40_Nss1,(MCS0)_4TX	3.14M	3.678M	3M68D1D	3.12M	3.538M
802.11ac VHT80_Nss1,(MCS0)_4TX	3.12M	3.738M	3M74D1D	3.1M	3.618M
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	3.82M	4.298M	4M30D1D	3.76M	4.218M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	3.14M	3.518M	3M52D1D	3.12M	3.478M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	3.12M	3.638M	3M64D1D	3.12M	3.558M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% 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)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.55M	16.617M	21.6M	16.617M	21.45M	16.592M	21.4M	16.567M
5300MHz	Pass	Inf	21.625M	16.567M	21.375M	16.592M	21.375M	16.542M	21.375M	16.567M
5320MHz	Pass	Inf	21.6M	16.617M	21.5M	16.592M	21.5M	16.567M	21.45M	16.517M
5500MHz	Pass	Inf	21.55M	16.567M	21.525M	16.567M	21.35M	16.542M	21.4M	16.542M
5580MHz	Pass	Inf	21.65M	16.642M	21.6M	16.592M	21.35M	16.592M	21.575M	16.617M
5700MHz	Pass	Inf	21.275M	16.567M	21.45M	16.592M	21.425M	16.592M	21.475M	16.567M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.705M	13.343M	15.72M	13.298M	15.675M	13.313M	15.69M	13.328M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.14M	3.958M	3.22M	3.898M	3.22M	3.918M	3.14M	3.818M
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.875M	17.741M	21.575M	17.791M	21.6M	17.766M	21.525M	17.766M
5300MHz	Pass	Inf	21.925M	17.741M	21.75M	17.766M	21.65M	17.716M	21.5M	17.741M
5320MHz	Pass	Inf	21.975M	17.766M	21.5M	17.791M	21.575M	17.741M	21.4M	17.766M
5500MHz	Pass	Inf	21.7M	17.766M	21.7M	17.766M	21.575M	17.791M	21.7M	17.766M
5580MHz	Pass	Inf	21.825M	17.791M	21.375M	17.741M	21.4M	17.791M	21.45M	17.766M
5700MHz	Pass	Inf	21.925M	17.791M	21.55M	17.766M	21.325M	17.741M	21.675M	17.766M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.81M	13.943M	15.765M	13.928M	15.795M	13.928M	15.765M	13.913M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.76M	4.218M	3.76M	4.218M	3.76M	4.258M	3.76M	4.238M
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	85.5M	36.632M	83.9M	36.632M	74.65M	36.482M	81.95M	36.832M
5310MHz	Pass	Inf	40.15M	36.182M	39.65M	36.332M	39.8M	36.282M	39.85M	36.232M
5510MHz	Pass	Inf	40.2M	36.232M	39.85M	36.232M	39.95M	36.232M	39.85M	36.282M
5550MHz	Pass	Inf	49.4M	36.282M	39.85M	36.332M	39.95M	36.182M	45.25M	36.282M
5670MHz	Pass	Inf	40.1M	36.232M	39.65M	36.232M	39.8M	36.182M	39.9M	36.282M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.28M	33.023M	35.035M	32.989M	35.105M	33.023M	35.07M	33.023M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	3.538M	3.14M	3.538M	3.14M	3.598M	3.14M	3.678M
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	81.9M	75.862M	82M	75.662M	81.7M	75.762M	81.3M	75.862M
5530MHz	Pass	Inf	82M	75.862M	81.6M	75.762M	81.3M	75.762M	81.4M	75.862M
5610MHz	Pass	Inf	82.1M	75.962M	82.2M	75.762M	81.7M	75.762M	82.4M	75.662M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	76.5M	72.564M	75.825M	72.564M	75.675M	72.564M	75.75M	72.714M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	3.618M	3.12M	3.718M	3.12M	3.658M	3.1M	3.738M
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.875M	17.816M	21.675M	17.741M	21.775M	17.766M	21.6M	17.791M
5300MHz	Pass	Inf	21.875M	17.791M	21.6M	17.716M	21.4M	17.766M	21.7M	17.766M
5320MHz	Pass	Inf	21.825M	17.791M	21.45M	17.691M	21.675M	17.766M	21.725M	17.766M
5500MHz	Pass	Inf	21.9M	17.766M	21.45M	17.741M	21.5M	17.791M	21.65M	17.766M
5580MHz	Pass	Inf	21.875M	17.741M	21.575M	17.791M	21.45M	17.766M	21.525M	17.766M
5700MHz	Pass	Inf	21.85M	17.766M	21.425M	17.741M	21.45M	17.791M	21.8M	17.766M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.81M	13.898M	15.63M	13.913M	15.765M	13.928M	15.75M	13.898M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.82M	4.238M	3.76M	4.238M	3.82M	4.218M	3.76M	4.298M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-

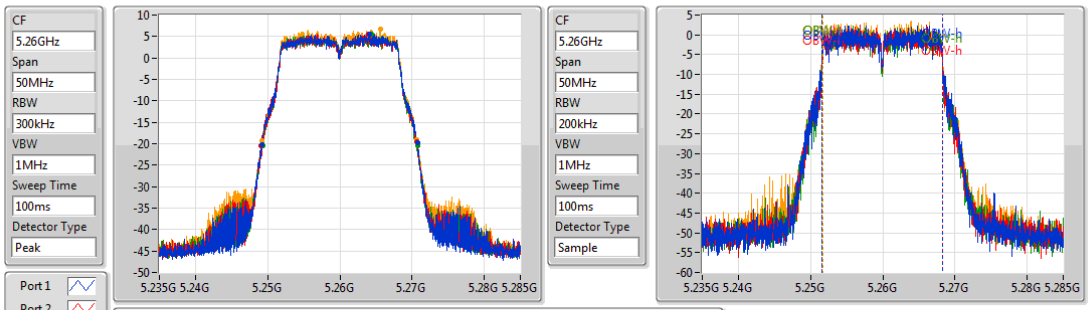
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
5270MHz	Pass	Inf	40M	36.232M	39.75M	36.182M	40.3M	36.182M	39.85M	36.232M
5310MHz	Pass	Inf	40.1M	36.232M	39.8M	36.232M	39.65M	36.282M	39.7M	36.282M
5510MHz	Pass	Inf	40.35M	36.232M	39.85M	36.282M	39.6M	36.282M	40.1M	36.282M
5550MHz	Pass	Inf	40.3M	36.182M	39.6M	36.232M	40.1M	36.182M	39.7M	36.232M
5670MHz	Pass	Inf	40.3M	36.182M	39.75M	36.182M	40M	36.282M	39.6M	36.282M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.245M	33.093M	34.79M	33.023M	34.93M	33.023M	35.035M	33.023M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.14M	3.478M	3.12M	3.478M	3.12M	3.518M	3.14M	3.478M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	82.1M	75.762M	82.1M	75.862M	81.7M	75.762M	81.6M	75.662M
5530MHz	Pass	Inf	82.2M	75.762M	81.6M	75.762M	82.2M	75.762M	81.7M	75.962M
5610MHz	Pass	Inf	82.2M	75.762M	81.8M	75.862M	81.7M	75.762M	81.6M	75.762M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	76.05M	72.489M	75.975M	72.564M	75.825M	72.489M	75.825M	72.414M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	3.598M	3.12M	3.638M	3.12M	3.558M	3.12M	3.638M

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;

802.11a_Nss1,(6Mbps)_4TX **EBW**

5260MHz

14/12/2018

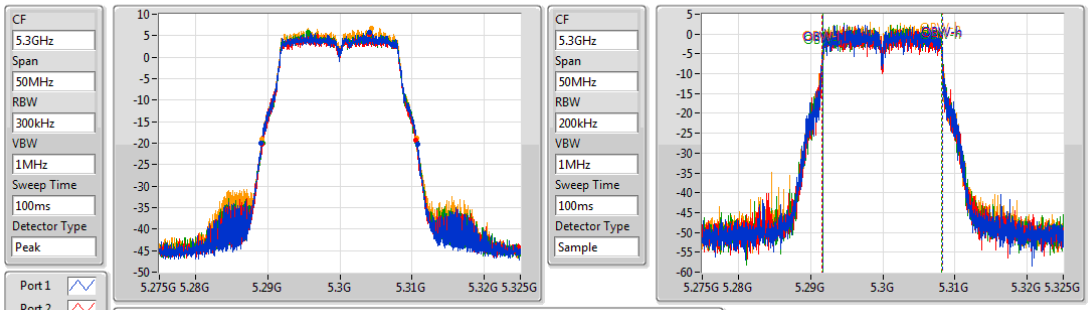


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.55M	5.249175G	5.270725G	16.617M	5.251604G	5.268221G	Inf	1
21.6M	5.249075G	5.270675G	16.617M	5.251629G	5.268246G	Inf	2
21.45M	5.2493G	5.27075G	16.592M	5.251629G	5.268221G	Inf	3
21.4M	5.249225G	5.270625G	16.567M	5.251654G	5.268221G	Inf	4

802.11a_Nss1,(6Mbps)_4TX **EBW**

5300MHz

14/12/2018

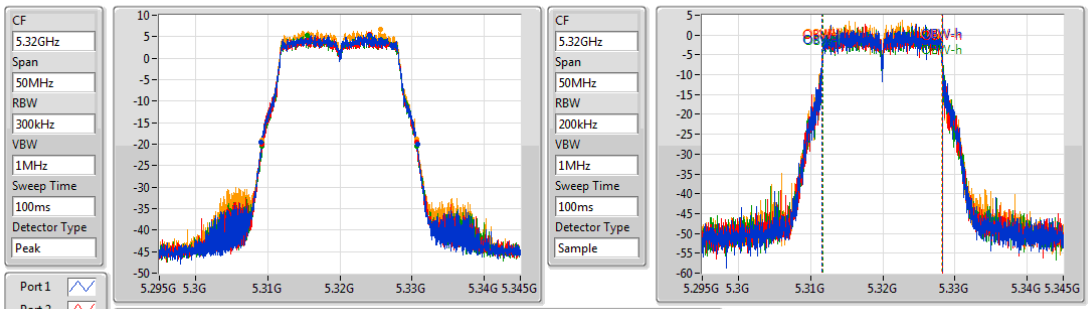


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.625M	5.2891G	5.310725G	16.567M	5.291654G	5.308221G	Inf	1
21.375M	5.2892G	5.310575G	16.592M	5.291629G	5.308221G	Inf	2
21.375M	5.2893G	5.310675G	16.542M	5.291654G	5.308196G	Inf	3
21.375M	5.28925G	5.310625G	16.567M	5.291629G	5.308196G	Inf	4

802.11a_Nss1,(6Mbps)_4TX **EBW**

5320MHz

14/12/2018

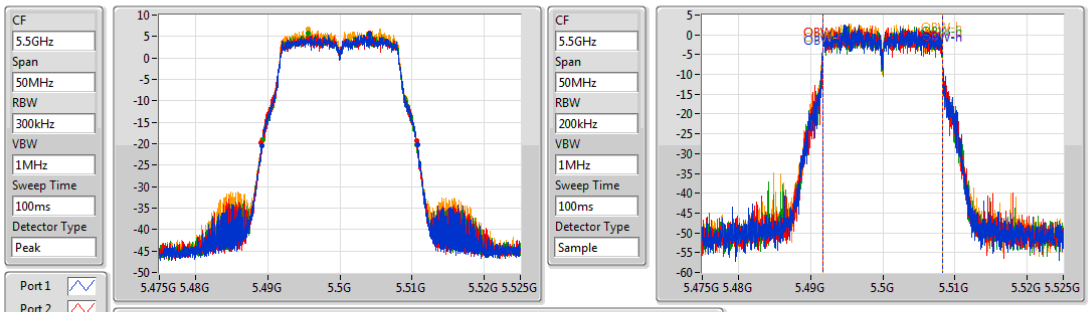


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.6M	5.309125G	5.330725G	16.617M	5.311629G	5.328246G	Inf	1
21.5M	5.30915G	5.33065G	16.592M	5.311629G	5.328221G	Inf	2
21.5M	5.3092G	5.3307G	16.567M	5.311654G	5.328221G	Inf	3
21.45M	5.3092G	5.33065G	16.517M	5.311654G	5.328171G	Inf	4

802.11a_Nss1,(6Mbps)_4TX **EBW**

5500MHz

14/12/2018

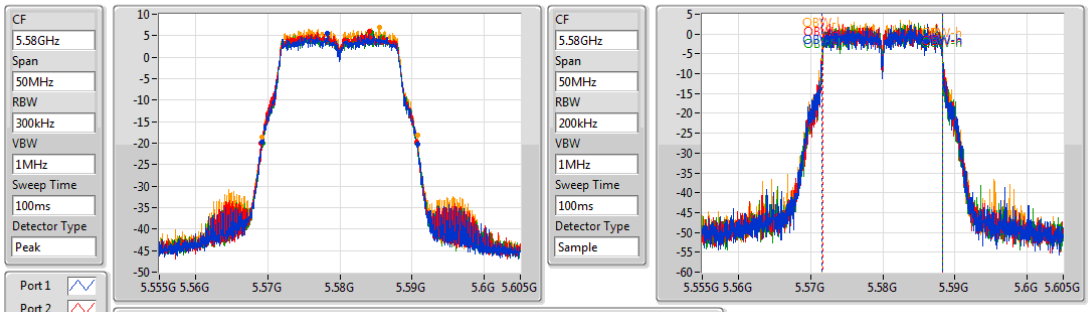


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.55M	5.489175G	5.510725G	16.567M	5.491654G	5.508221G	Inf	1
21.525M	5.489125G	5.51065G	16.567M	5.491679G	5.508246G	Inf	2
21.35M	5.48935G	5.5107G	16.542M	5.491679G	5.508221G	Inf	3
21.4M	5.489225G	5.510625G	16.542M	5.491679G	5.508221G	Inf	4

802.11a_Nss1,(6Mbps)_4TX **EBW**

5580MHz

14/12/2018

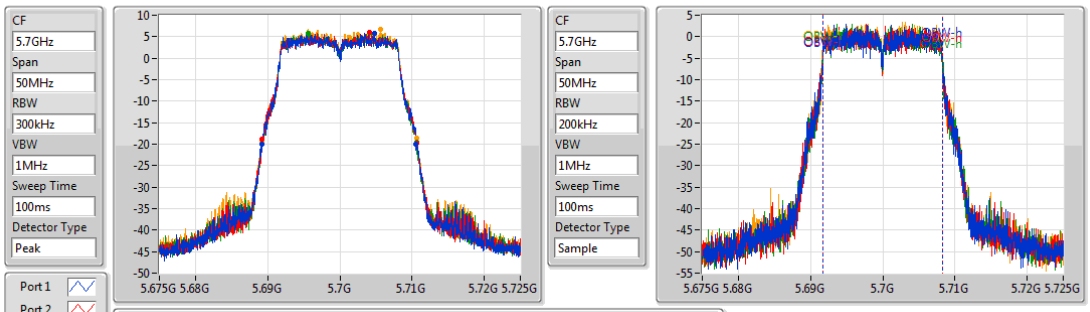


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.65M	5.56915G	5.5908G	16.642M	5.571629G	5.588271G	Inf	1
21.6M	5.5691G	5.5907G	16.592M	5.571654G	5.588246G	Inf	2
21.35M	5.56935G	5.5907G	16.592M	5.571654G	5.588246G	Inf	3
21.575M	5.569275G	5.59085G	16.617M	5.571629G	5.588246G	Inf	4

802.11a_Nss1,(6Mbps)_4TX **EBW**

5700MHz

14/12/2018

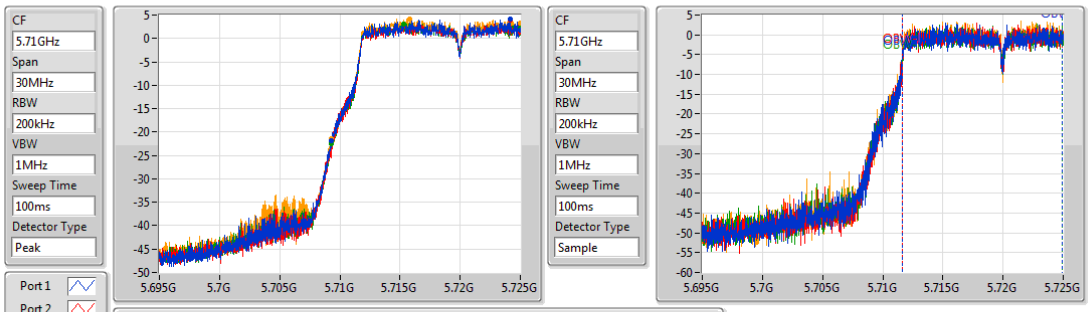


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.275M	5.689275G	5.71055G	16.567M	5.691679G	5.708246G	Inf	1
21.45M	5.68925G	5.7107G	16.592M	5.691654G	5.708246G	Inf	2
21.425M	5.6892G	5.710625G	16.592M	5.691679G	5.708271G	Inf	3
21.475M	5.689175G	5.71065G	16.567M	5.691654G	5.708221G	Inf	4

802.11a_Nss1,(6Mbps)_4TX **EBW**

5720MHz Straddle 5.47-5.725GHz

14/12/2018

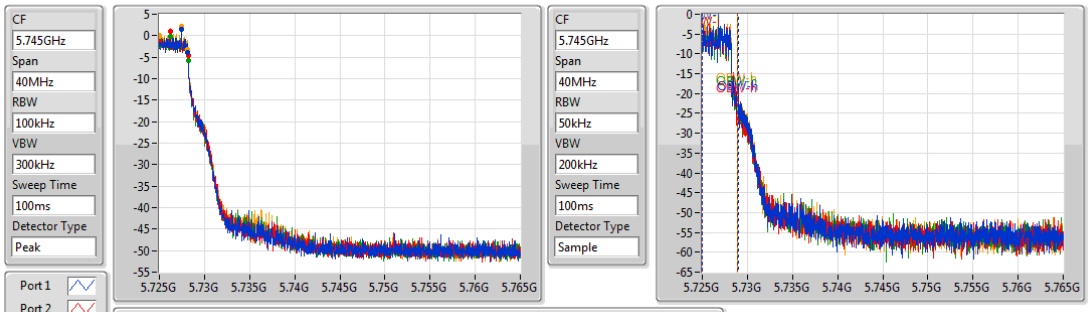


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.705M	5.709295G	5.725G	13.343M	5.711604G	5.724948G	Inf	1
15.72M	5.70928G	5.725G	13.298M	5.711634G	5.724933G	Inf	2
15.675M	5.709325G	5.725G	13.313M	5.711619G	5.724933G	Inf	3
15.69M	5.70931G	5.725G	13.328M	5.711619G	5.724948G	Inf	4

802.11a_Nss1,(6Mbps)_4TX **EBW**

5720MHz Straddle 5.725-5.85GHz

14/12/2018

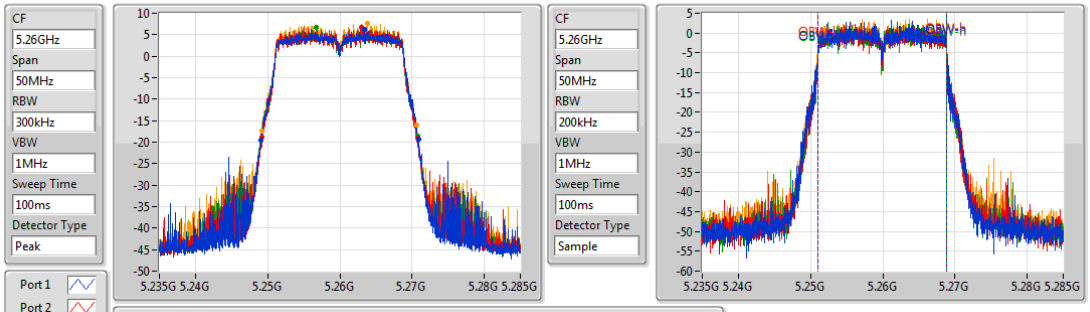


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
3.14M	5.725G	5.72814G	3.958M	5.72501G	5.728968G	500k	1
3.22M	5.725G	5.72822G	3.898M	5.72501G	5.728908G	500k	2
3.22M	5.725G	5.72822G	3.918M	5.72501G	5.728928G	500k	3
3.14M	5.725G	5.72814G	3.818M	5.72503G	5.728848G	500k	4

802.11ac VHT20_Nss1,(MCS0)_4TX **EBW**

5260MHz

14/12/2018

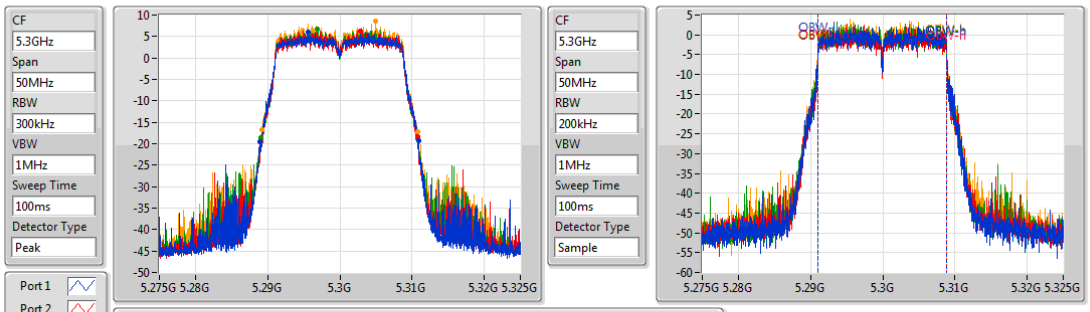


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.875M	5.24905G	5.270925G	17.741M	5.251054G	5.268796G	Inf	1
21.575M	5.249175G	5.27075G	17.791M	5.251054G	5.268846G	Inf	2
21.6M	5.249175G	5.270775G	17.766M	5.251054G	5.268821G	Inf	3
21.525M	5.249175G	5.2707G	17.766M	5.251054G	5.268821G	Inf	4

802.11ac VHT20_Nss1,(MCS0)_4TX **EBW**

5300MHz

14/12/2018

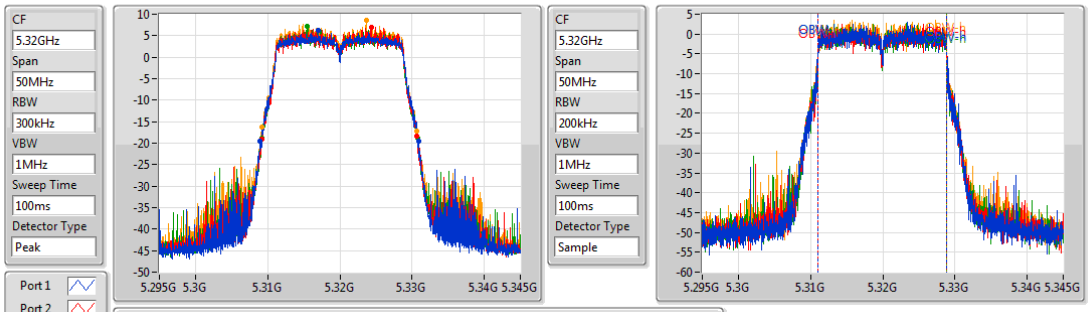


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.925M	5.28895G	5.310875G	17.741M	5.291054G	5.308796G	Inf	1
21.75M	5.2891G	5.31085G	17.766M	5.291054G	5.308821G	Inf	2
21.65M	5.289125G	5.310775G	17.716M	5.291079G	5.308796G	Inf	3
21.5M	5.28925G	5.31075G	17.741M	5.291054G	5.308796G	Inf	4

802.11ac VHT20_Nss1,(MCS0)_4TX **EBW**

5320MHz

14/12/2018

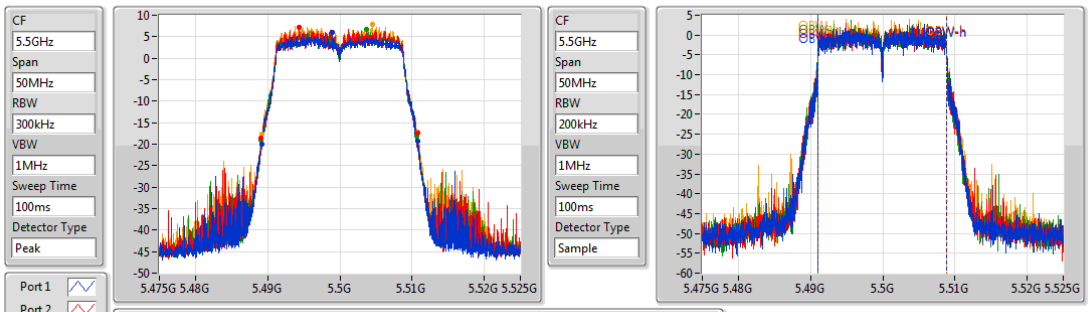


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.975M	5.308925G	5.3309G	17.766M	5.311054G	5.328821G	Inf	1
21.5M	5.309175G	5.330675G	17.791M	5.311054G	5.328846G	Inf	2
21.575M	5.3092G	5.330775G	17.741M	5.311079G	5.328821G	Inf	3
21.4M	5.30925G	5.33065G	17.766M	5.311054G	5.328821G	Inf	4

802.11ac VHT20_Nss1,(MCS0)_4TX **EBW**

5500MHz

14/12/2018

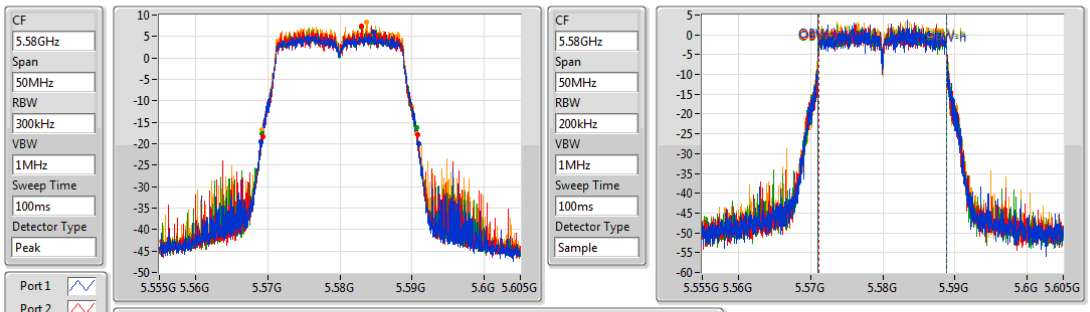


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.7M	5.48915G	5.51085G	17.766M	5.491054G	5.508821G	Inf	1
21.7M	5.4891G	5.5108G	17.766M	5.491054G	5.508821G	Inf	2
21.575M	5.489125G	5.5107G	17.791M	5.491054G	5.508846G	Inf	3
21.7M	5.48915G	5.51085G	17.766M	5.491079G	5.508846G	Inf	4

802.11ac VHT20_Nss1,(MCS0)_4TX **EBW**

5580MHz

14/12/2018

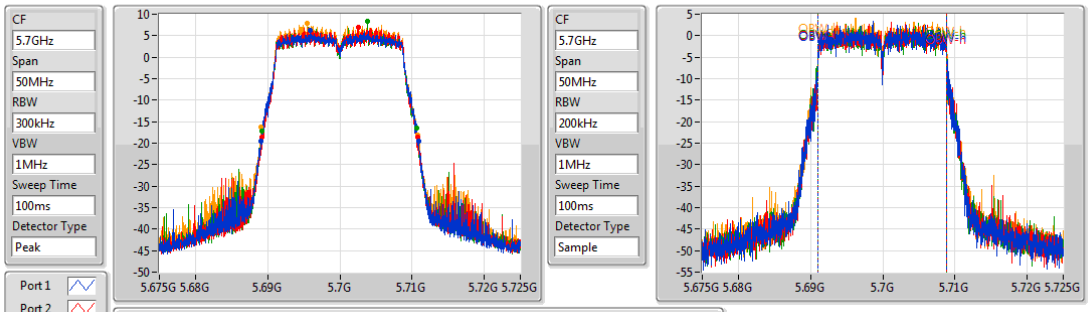


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.825M	5.569075G	5.5909G	17.791M	5.571054G	5.588846G	Inf	1
21.375M	5.56935G	5.590725G	17.741M	5.571104G	5.588846G	Inf	2
21.4M	5.56925G	5.59065G	17.791M	5.571054G	5.588846G	Inf	3
21.45M	5.56925G	5.5907G	17.766M	5.571079G	5.588846G	Inf	4

802.11ac VHT20_Nss1,(MCS0)_4TX **EBW**

5700MHz

14/12/2018

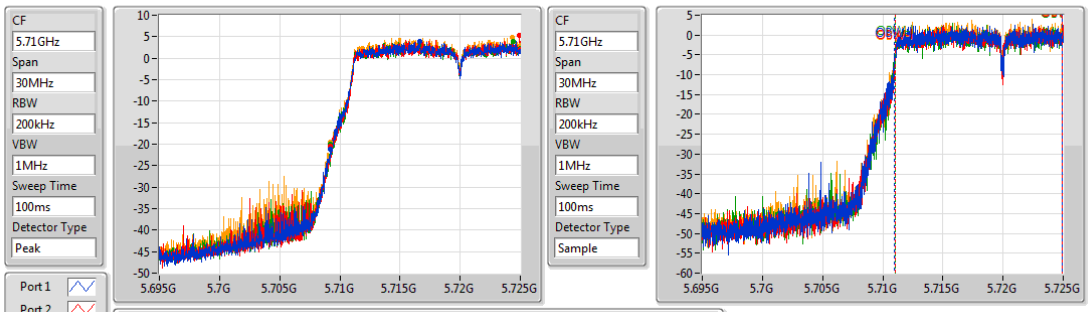


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.925M	5.689025G	5.71095G	17.791M	5.691079G	5.708871G	Inf	1
21.55M	5.6892G	5.71075G	17.766M	5.691079G	5.708846G	Inf	2
21.325M	5.689275G	5.7106G	17.741M	5.691079G	5.708821G	Inf	3
21.675M	5.68905G	5.710725G	17.766M	5.691079G	5.708846G	Inf	4

802.11ac VHT20_Nss1,(MCS0)_4TX **EBW**

5720MHz Straddle 5.47-5.725GHz

14/12/2018

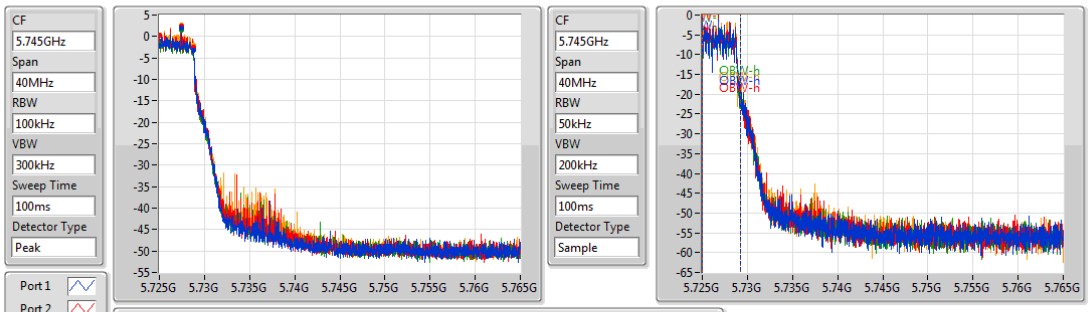


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.81M	5.70919G	5.725G	13.943M	5.71099G	5.724933G	Inf	1
15.765M	5.709235G	5.725G	13.928M	5.711019G	5.724948G	Inf	2
15.795M	5.709205G	5.725G	13.928M	5.711019G	5.724948G	Inf	3
15.765M	5.709235G	5.725G	13.913M	5.711034G	5.724948G	Inf	4

802.11ac VHT20_Nss1,(MCS0)_4TX **EBW**

5720MHz Straddle 5.725-5.85GHz

14/12/2018

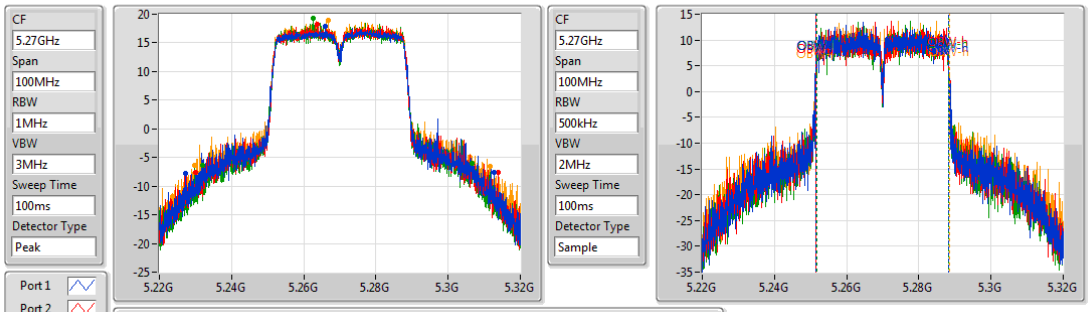


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
3.76M	5.725G	5.72876G	4.218M	5.72503G	5.729248G	500k	1
3.76M	5.725G	5.72876G	4.218M	5.72503G	5.729248G	500k	2
3.76M	5.725G	5.72876G	4.258M	5.72501G	5.729268G	500k	3
3.76M	5.725G	5.72876G	4.238M	5.72501G	5.729248G	500k	4

802.11ac VHT40_Nss1,(MCS0)_4TX **EBW**

5270MHz

14/12/2018

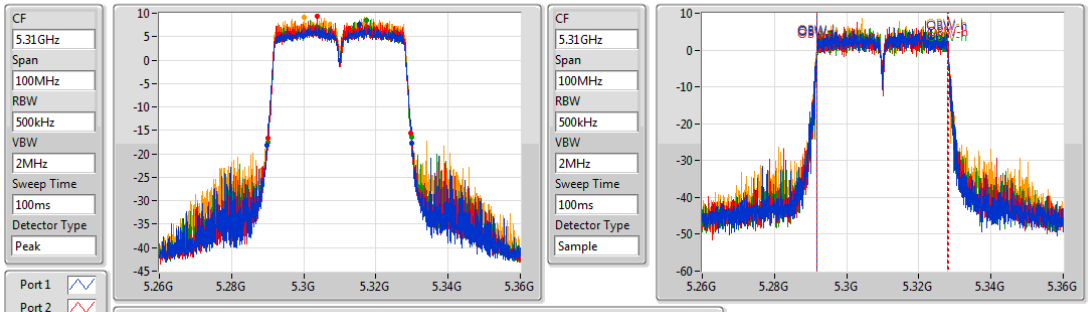


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
85.5M	5.22725G	5.31275G	36.632M	5.251609G	5.288241G	Inf	1
83.9M	5.22995G	5.31385G	36.632M	5.251609G	5.288241G	Inf	2
74.65M	5.2321G	5.30675G	36.482M	5.251709G	5.288191G	Inf	3
81.95M	5.22965G	5.3116G	36.832M	5.251559G	5.288391G	Inf	4

802.11ac VHT40_Nss1,(MCS0)_4TX **EBW**

5310MHz

14/12/2018

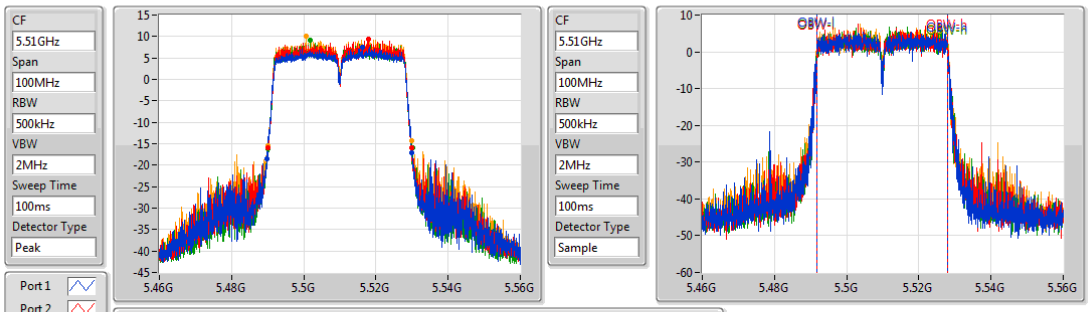


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.15M	5.28985G	5.33G	36.182M	5.291859G	5.328041G	Inf	1
39.65M	5.29005G	5.3297G	36.332M	5.291809G	5.328141G	Inf	2
39.8M	5.29G	5.3298G	36.282M	5.291809G	5.328091G	Inf	3
39.85M	5.29G	5.32985G	36.232M	5.291809G	5.328041G	Inf	4

802.11ac VHT40_Nss1,(MCS0)_4TX **EBW**

5510MHz

14/12/2018

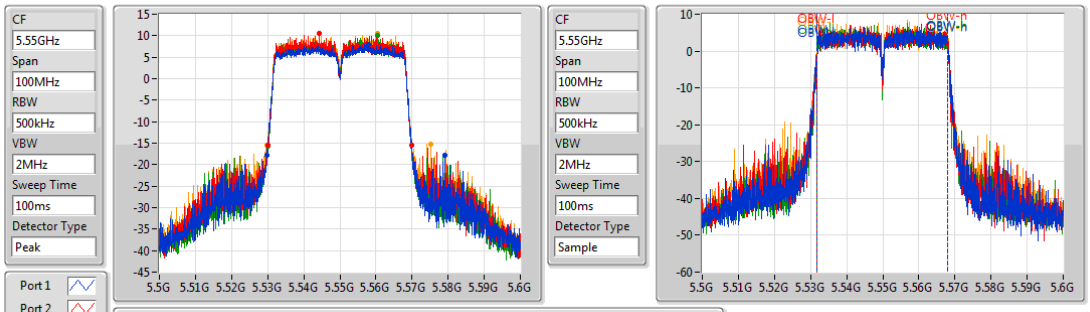


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.2M	5.48985G	5.53005G	36.232M	5.491809G	5.528041G	Inf	1
39.85M	5.49005G	5.5299G	36.232M	5.491859G	5.528091G	Inf	2
39.95M	5.49015G	5.5301G	36.232M	5.491809G	5.528041G	Inf	3
39.85M	5.49G	5.52985G	36.282M	5.491809G	5.528091G	Inf	4

802.11ac VHT40_Nss1,(MCS0)_4TX **EBW**

5550MHz

14/12/2018

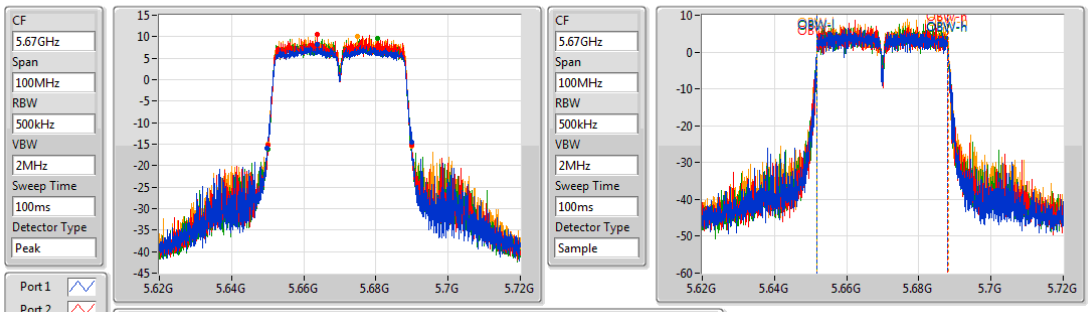


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
49.4M	5.5298G	5.5792G	36.282M	5.531809G	5.568091G	Inf	1
39.85M	5.5301G	5.56995G	36.332M	5.531759G	5.568091G	Inf	2
39.95M	5.53005G	5.57G	36.182M	5.531859G	5.568041G	Inf	3
45.25M	5.52985G	5.5751G	36.282M	5.531809G	5.568091G	Inf	4

802.11ac VHT40_Nss1,(MCS0)_4TX **EBW**

5670MHz

14/12/2018

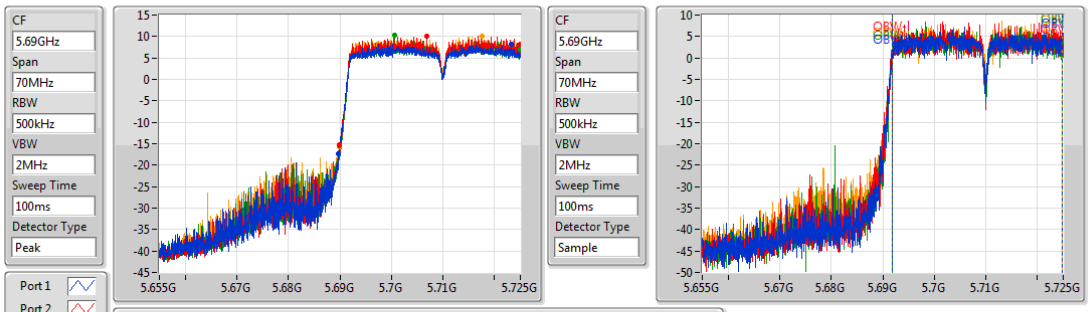


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.1M	5.6499G	5.69G	36.232M	5.651809G	5.688041G	Inf	1
39.65M	5.65015G	5.6898G	36.232M	5.651809G	5.688041G	Inf	2
39.8M	5.65005G	5.68985G	36.182M	5.651859G	5.688041G	Inf	3
39.9M	5.65G	5.6899G	36.282M	5.651859G	5.688141G	Inf	4

802.11ac VHT40_Nss1,(MCS0)_4TX **EBW**

5710MHz Straddle 5.47-5.725GHz

14/12/2018

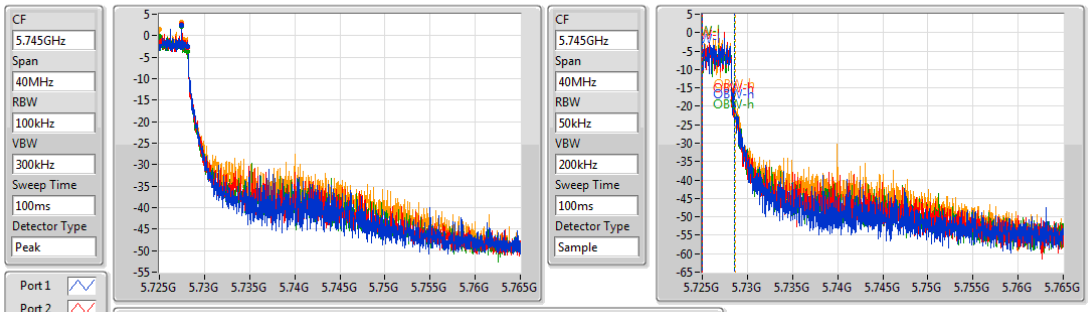


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.28M	5.68972G	5.725G	33.023M	5.691784G	5.724808G	Inf	1
35.035M	5.689965G	5.725G	32.989M	5.691819G	5.724808G	Inf	2
35.105M	5.689895G	5.725G	33.023M	5.691784G	5.724808G	Inf	3
35.07M	5.68993G	5.725G	33.023M	5.691784G	5.724808G	Inf	4

802.11ac VHT40_Nss1,(MCS0)_4TX **EBW**

5710MHz Straddle 5.725-5.85GHz

14/12/2018

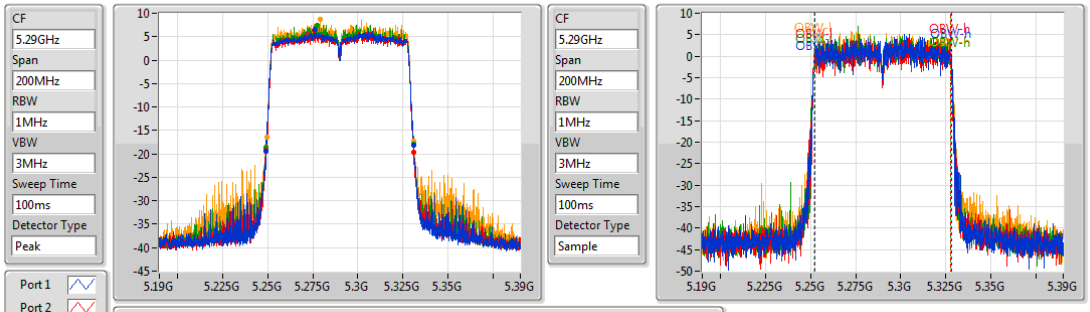


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
3.12M	5.725G	5.72812G	3.538M	5.72503G	5.728568G	500k	1
3.14M	5.725G	5.72814G	3.538M	5.72501G	5.728548G	500k	2
3.14M	5.725G	5.72814G	3.598M	5.72501G	5.728608G	500k	3
3.14M	5.725G	5.72814G	3.678M	5.72501G	5.728688G	500k	4

802.11ac VHT80_Nss1,(MCS0)_4TX **EBW**

5290MHz

14/12/2018

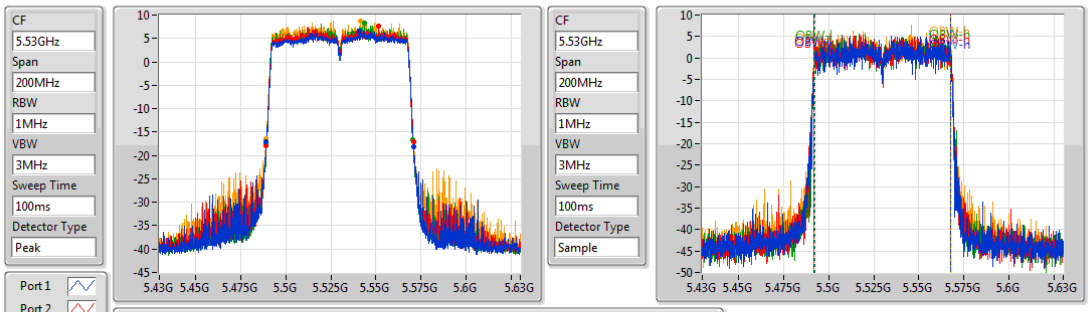


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
81.9M	5.2489G	5.3308G	75.862M	5.252119G	5.327981G	Inf	1
82M	5.249G	5.331G	75.662M	5.252119G	5.327781G	Inf	2
81.7M	5.2492G	5.3309G	75.762M	5.252119G	5.327881G	Inf	3
81.3M	5.2494G	5.3307G	75.862M	5.252019G	5.327881G	Inf	4

802.11ac VHT80_Nss1,(MCS0)_4TX **EBW**

5530MHz

14/12/2018

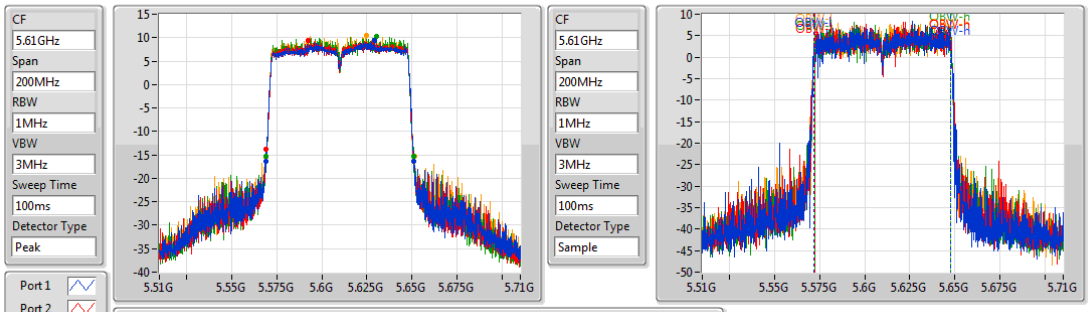


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
82M	5.4891G	5.5711G	75.862M	5.492019G	5.567881G	Inf	1
81.6M	5.4892G	5.5708G	75.762M	5.492019G	5.567781G	Inf	2
81.3M	5.4893G	5.5706G	75.762M	5.492119G	5.567881G	Inf	3
81.4M	5.4893G	5.5707G	75.862M	5.492019G	5.567881G	Inf	4

802.11ac VHT80_Nss1,(MCS0)_4TX **EBW**

5610MHz

14/12/2018

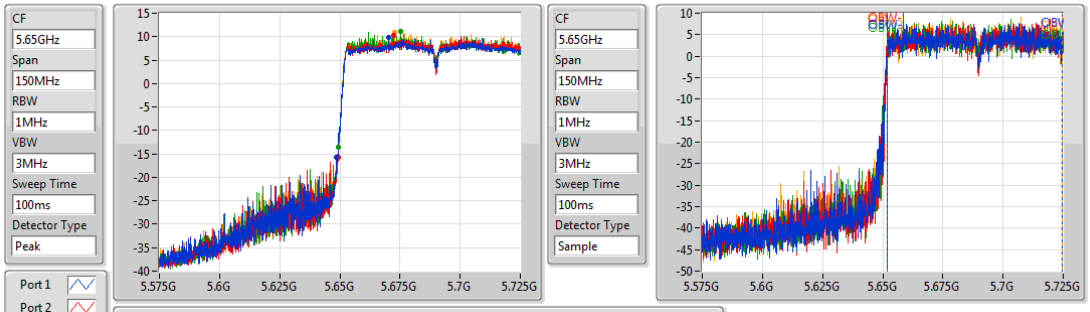


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
82.1M	5.5689G	5.651G	75.962M	5.571919G	5.647881G	Inf	1
82.2M	5.569G	5.6512G	75.762M	5.572119G	5.647881G	Inf	2
81.7M	5.5691G	5.6508G	75.762M	5.572119G	5.647881G	Inf	3
82.4M	5.5689G	5.6513G	75.662M	5.572119G	5.647781G	Inf	4

802.11ac VHT80_Nss1,(MCS0)_4TX **EBW**

5690MHz Straddle 5.47-5.725GHz

14/12/2018

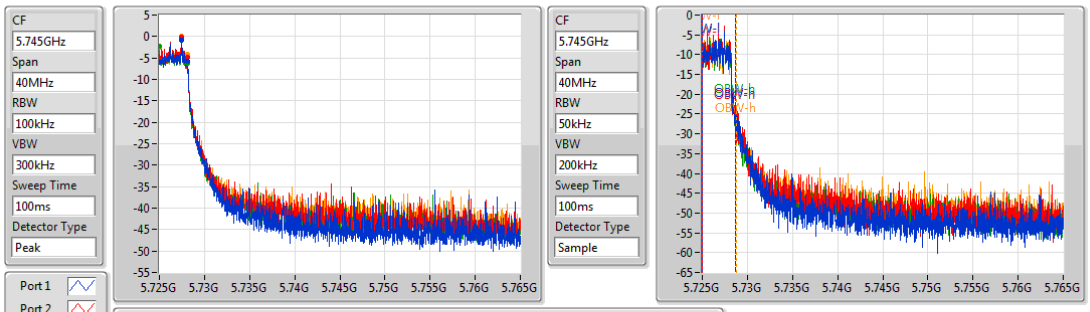


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
76.5M	5.6485G	5.725G	72.564M	5.652024G	5.724588G	Inf	1
75.825M	5.649175G	5.725G	72.564M	5.652024G	5.724588G	Inf	2
75.675M	5.649325G	5.725G	72.564M	5.651949G	5.724513G	Inf	3
75.75M	5.64925G	5.725G	72.714M	5.651949G	5.724663G	Inf	4

802.11ac VHT80_Nss1,(MCS0)_4TX **EBW**

5690MHz Straddle 5.725-5.85GHz

14/12/2018

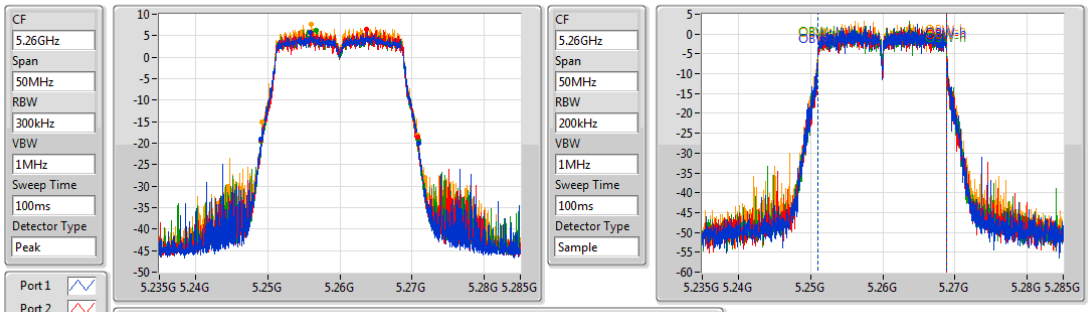


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
3.12M	5.725G	5.72812G	3.618M	5.72501G	5.728628G	500k	1
3.12M	5.725G	5.72812G	3.718M	5.72501G	5.728728G	500k	2
3.12M	5.725G	5.72812G	3.658M	5.72501G	5.728668G	500k	3
3.1M	5.725G	5.7281G	3.738M	5.72501G	5.728748G	500k	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX **EBW**

5260MHz

14/12/2018

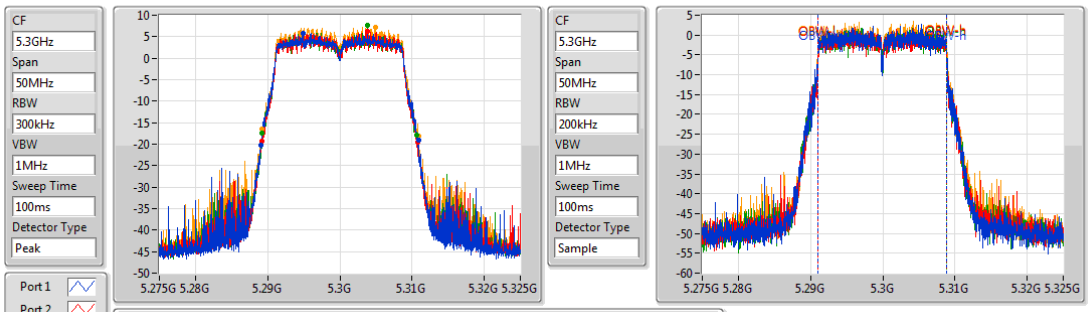


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.875M	5.249025G	5.2709G	17.816M	5.251029G	5.268846G	Inf	1
21.675M	5.24905G	5.270725G	17.741M	5.251079G	5.268821G	Inf	2
21.775M	5.2491G	5.270875G	17.766M	5.251054G	5.268821G	Inf	3
21.6M	5.249175G	5.270775G	17.791M	5.251029G	5.268821G	Inf	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX **EBW**

5300MHz

14/12/2018

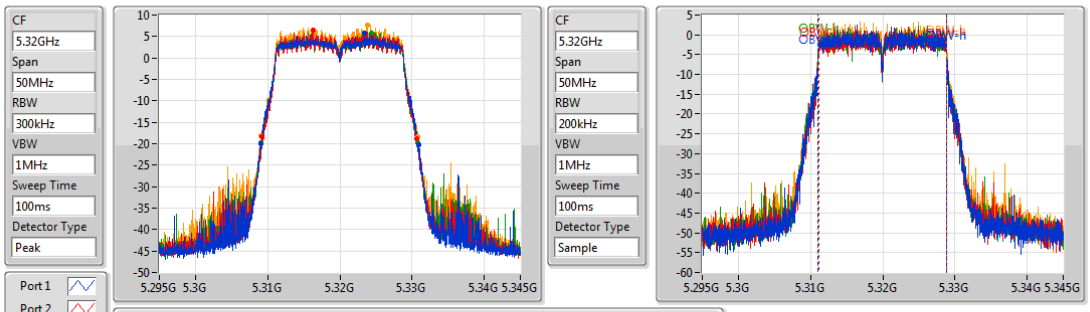


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.875M	5.289025G	5.3109G	17.791M	5.291029G	5.308821G	Inf	1
21.6M	5.28915G	5.31075G	17.716M	5.291079G	5.308796G	Inf	2
21.4M	5.289225G	5.310625G	17.766M	5.291054G	5.308821G	Inf	3
21.7M	5.289175G	5.310875G	17.766M	5.291054G	5.308821G	Inf	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX EBW

5320MHz

14/12/2018

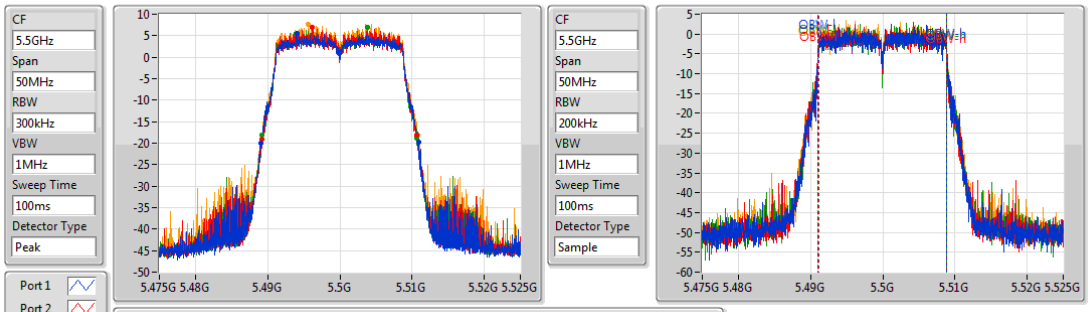


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.825M	5.309125G	5.33095G	17.791M	5.311029G	5.328821G	Inf	1
21.45M	5.309225G	5.330675G	17.691M	5.311104G	5.328796G	Inf	2
21.675M	5.3091G	5.330775G	17.766M	5.311079G	5.328846G	Inf	3
21.725M	5.309025G	5.33075G	17.766M	5.311054G	5.328821G	Inf	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX EBW

5500MHz

14/12/2018

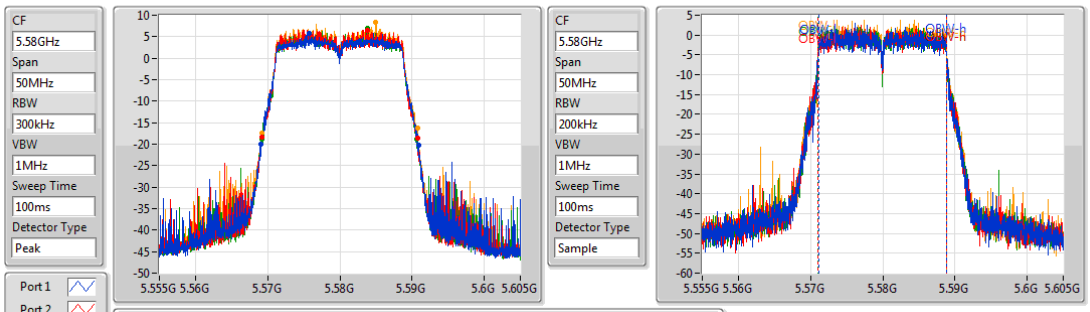


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.9M	5.489G	5.5109G	17.766M	5.491079G	5.508846G	Inf	1
21.45M	5.48925G	5.5107G	17.741M	5.491104G	5.508846G	Inf	2
21.5M	5.489175G	5.510675G	17.791M	5.491054G	5.508846G	Inf	3
21.65M	5.4892G	5.51085G	17.766M	5.491079G	5.508846G	Inf	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX EBW

5580MHz

14/12/2018

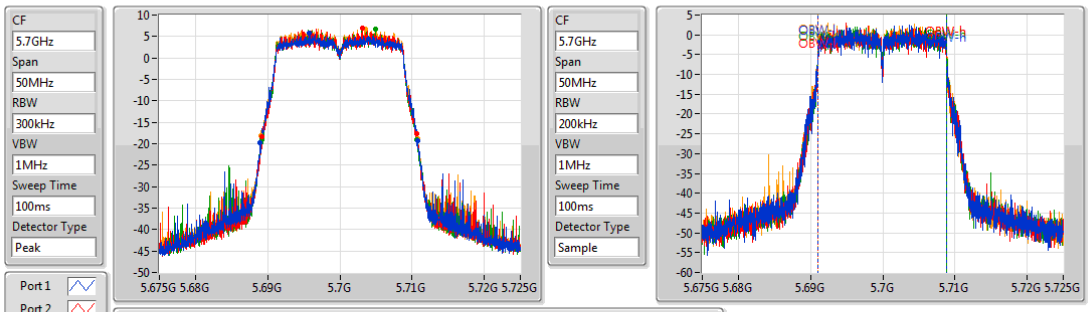


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.875M	5.569075G	5.59095G	17.741M	5.571104G	5.588846G	Inf	1
21.575M	5.56915G	5.590725G	17.791M	5.571054G	5.588846G	Inf	2
21.45M	5.5692G	5.59065G	17.766M	5.571079G	5.588846G	Inf	3
21.525M	5.5692G	5.590725G	17.766M	5.571079G	5.588846G	Inf	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX **EBW**

5700MHz

14/12/2018

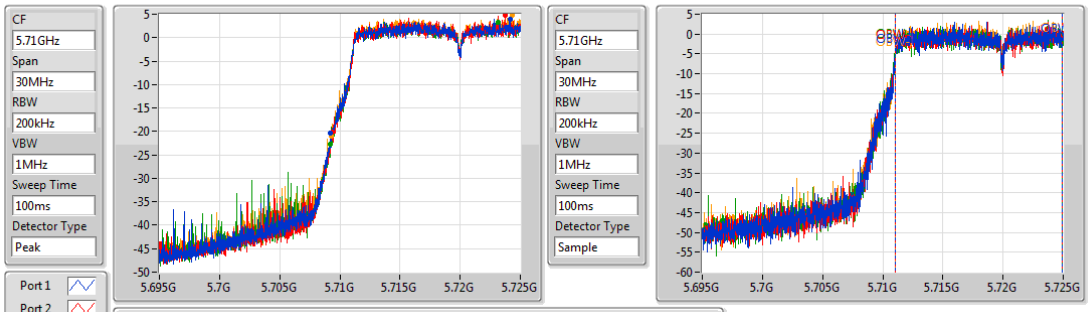


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.85M	5.68895G	5.7108G	17.766M	5.691054G	5.708821G	Inf	1
21.425M	5.689225G	5.71065G	17.741M	5.691079G	5.708821G	Inf	2
21.45M	5.6892G	5.71065G	17.791M	5.691054G	5.708846G	Inf	3
21.8M	5.68905G	5.71085G	17.766M	5.691054G	5.708821G	Inf	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX **EBW**

5720MHz Straddle 5.47-5.725GHz

14/12/2018

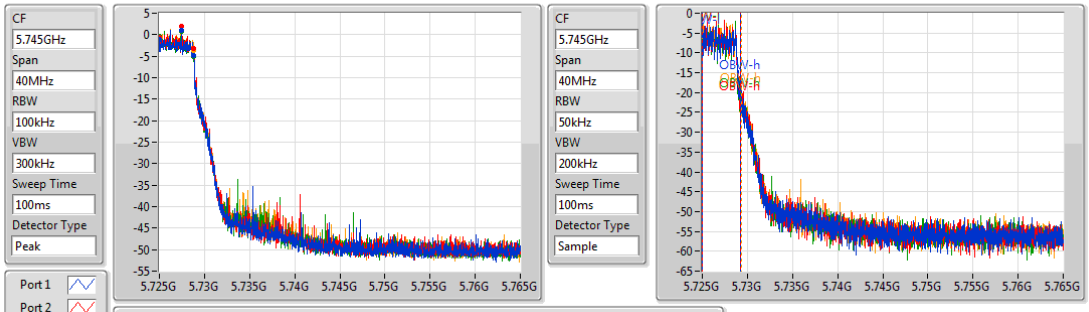


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.81M	5.70919G	5.725G	13.898M	5.711034G	5.724933G	Inf	1
15.63M	5.70937G	5.725G	13.913M	5.711034G	5.724948G	Inf	2
15.765M	5.709235G	5.725G	13.928M	5.711004G	5.724933G	Inf	3
15.75M	5.70925G	5.725G	13.898M	5.711034G	5.724933G	Inf	4

802.11ac VHT20-BF_Nss1,(MCS0)_4TX **EBW**

5720MHz Straddle 5.725-5.85GHz

14/12/2018

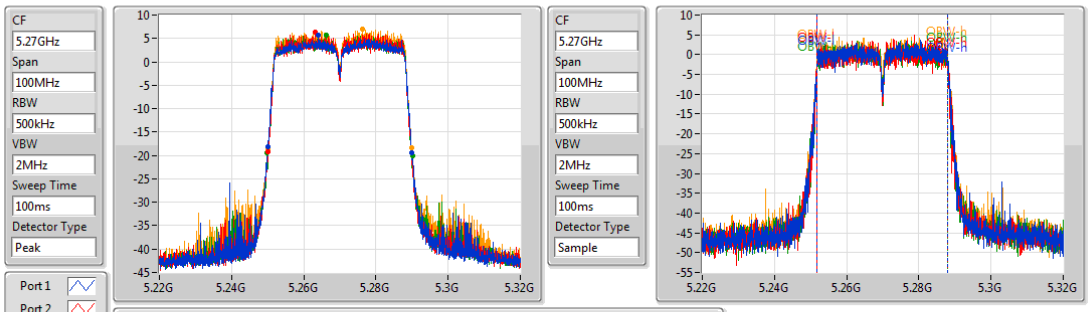


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
3.82M	5.725G	5.72882G	4.238M	5.72501G	5.729248G	500k	1
3.76M	5.725G	5.72876G	4.238M	5.72501G	5.729248G	500k	2
3.82M	5.725G	5.72882G	4.218M	5.72501G	5.729228G	500k	3
3.76M	5.725G	5.72876G	4.298M	5.72501G	5.729308G	500k	4

802.11ac VHT40-BF_Nss1,(MCS0)_4TX **EBW**

5270MHz

14/12/2018

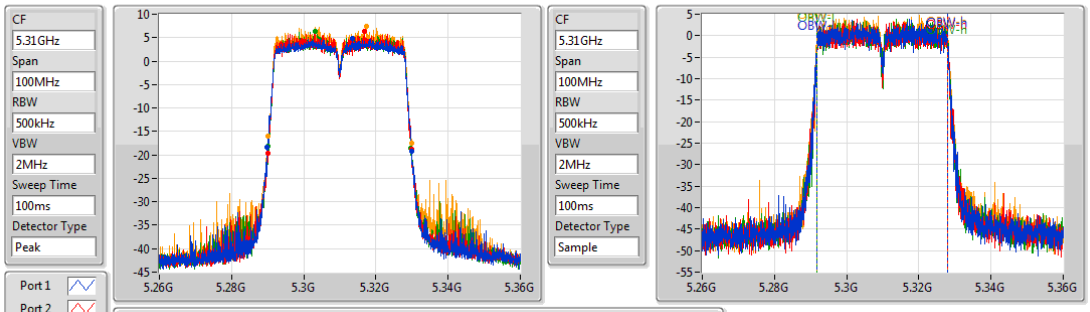


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40M	5.24995G	5.28995G	36.232M	5.251859G	5.288091G	Inf	1
39.75M	5.25015G	5.2899G	36.182M	5.251859G	5.288041G	Inf	2
40.3M	5.2498G	5.2901G	36.182M	5.251859G	5.288041G	Inf	3
39.85M	5.25G	5.28985G	36.232M	5.251809G	5.288041G	Inf	4

802.11ac VHT40-BF_Nss1,(MCS0)_4TX **EBW**

5310MHz

14/12/2018

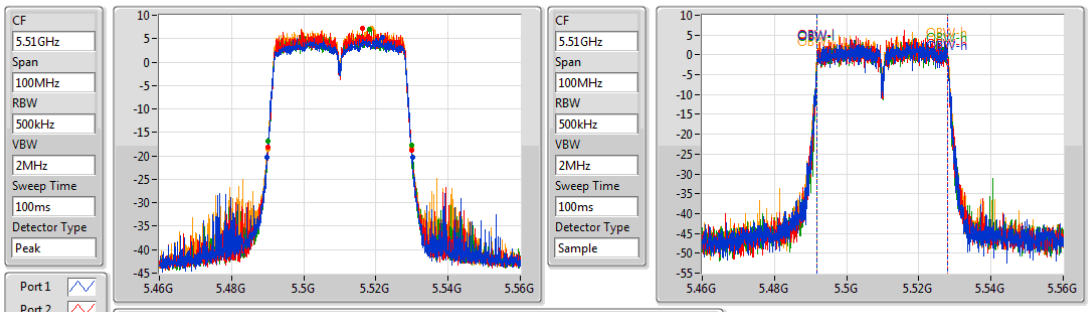


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.1M	5.2899G	5.33G	36.232M	5.291809G	5.328041G	Inf	1
39.8M	5.29005G	5.32985G	36.232M	5.291809G	5.328041G	Inf	2
39.65M	5.29005G	5.3297G	36.282M	5.291759G	5.328041G	Inf	3
39.7M	5.29015G	5.32985G	36.282M	5.291809G	5.328091G	Inf	4

802.11ac VHT40-BF_Nss1,(MCS0)_4TX **EBW**

5510MHz

14/12/2018

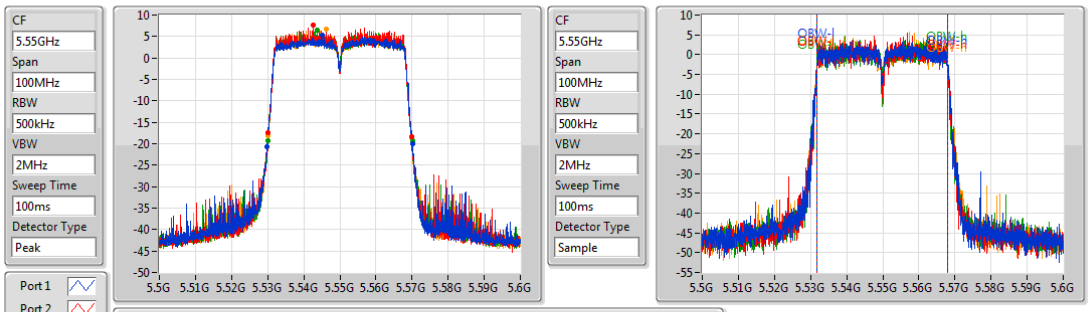


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.35M	5.48975G	5.5301G	36.232M	5.491859G	5.528091G	Inf	1
39.85M	5.49G	5.52985G	36.282M	5.491759G	5.528041G	Inf	2
39.6M	5.4902G	5.5298G	36.282M	5.491809G	5.528091G	Inf	3
40.1M	5.48995G	5.53005G	36.282M	5.491809G	5.528091G	Inf	4

802.11ac VHT40-BF_Nss1,(MCS0)_4TX **EBW**

5550MHz

14/12/2018

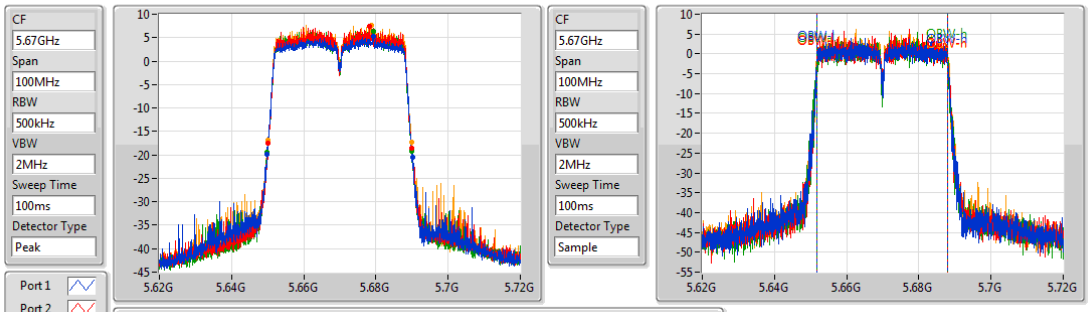


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.3M	5.5298G	5.5701G	36.182M	5.531859G	5.568041G	Inf	1
39.6M	5.5302G	5.5698G	36.232M	5.531809G	5.568041G	Inf	2
40.1M	5.53005G	5.57015G	36.182M	5.531859G	5.568041G	Inf	3
39.7M	5.5301G	5.5698G	36.232M	5.531809G	5.568041G	Inf	4

802.11ac VHT40-BF_Nss1,(MCS0)_4TX **EBW**

5670MHz

14/12/2018

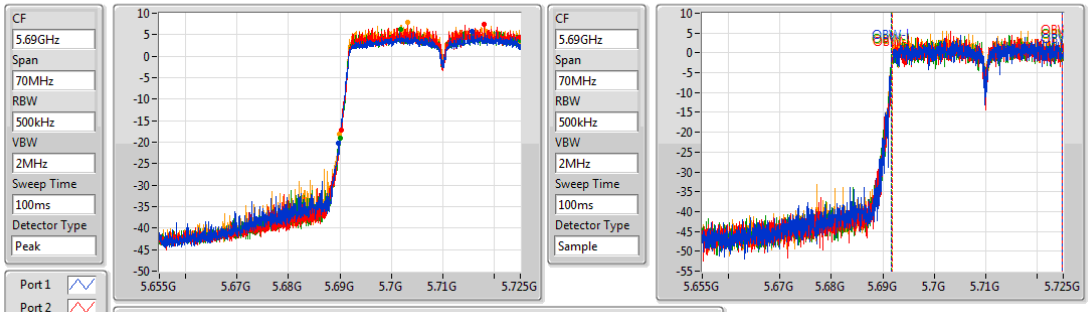


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.3M	5.64985G	5.69015G	36.182M	5.651859G	5.688041G	Inf	1
39.75M	5.6501G	5.68985G	36.182M	5.651859G	5.688041G	Inf	2
40M	5.6499G	5.6899G	36.282M	5.651809G	5.688091G	Inf	3
39.6M	5.6502G	5.6898G	36.282M	5.651809G	5.688091G	Inf	4

802.11ac VHT40-BF_Nss1,(MCS0)_4TX **EBW**

5710MHz Straddle 5.47-5.725GHz

14/12/2018

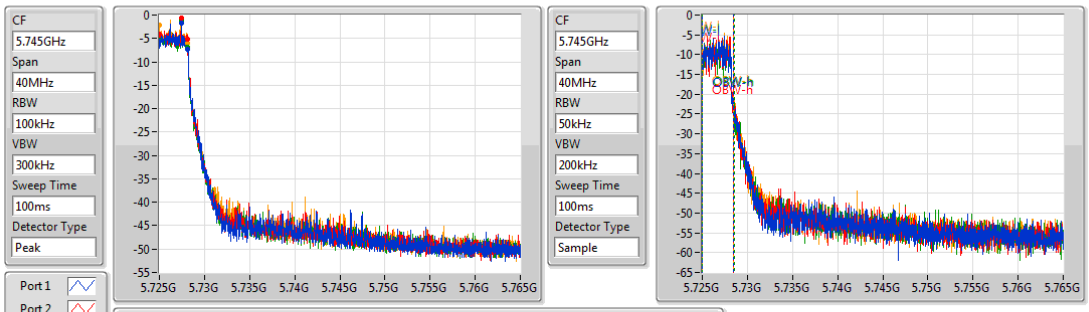


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.245M	5.689755G	5.725G	33.093M	5.691714G	5.724808G	Inf	1
34.79M	5.69021G	5.725G	33.023M	5.691819G	5.724843G	Inf	2
34.93M	5.69007G	5.725G	33.023M	5.691749G	5.724773G	Inf	3
35.035M	5.689965G	5.725G	33.023M	5.691819G	5.724843G	Inf	4

802.11ac VHT40-BF_Nss1,(MCS0)_4TX **EBW**

5710MHz Straddle 5.725-5.85GHz

14/12/2018

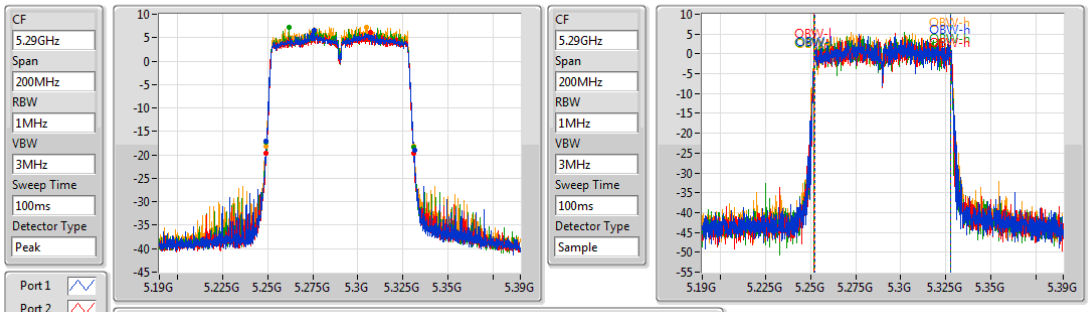


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
3.14M	5.725G	5.72814G	3.478M	5.72501G	5.728488G	500k	1
3.12M	5.725G	5.72812G	3.478M	5.72503G	5.728508G	500k	2
3.12M	5.725G	5.72812G	3.518M	5.72501G	5.728528G	500k	3
3.14M	5.725G	5.72814G	3.478M	5.72501G	5.728488G	500k	4

802.11ac VHT80-BF_Nss1,(MCS0)_4TX **EBW**

5290MHz

14/12/2018

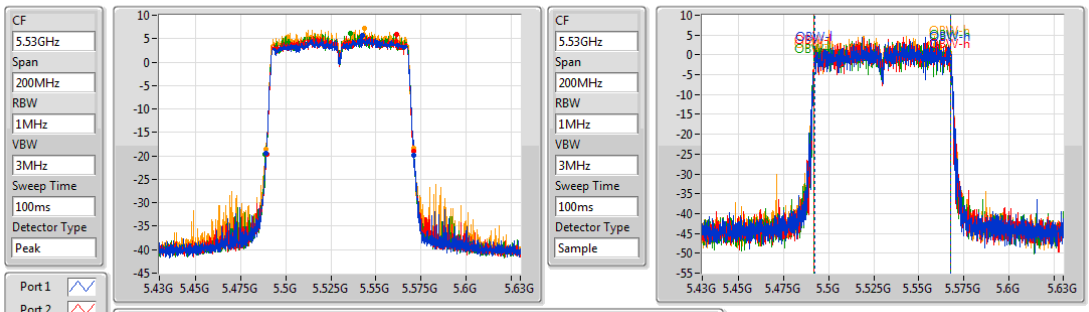


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
82.1M	5.2492G	5.3313G	75.762M	5.252119G	5.327881G	Inf	1
82.1M	5.2491G	5.3312G	75.862M	5.252019G	5.327881G	Inf	2
81.7M	5.2493G	5.331G	75.762M	5.252019G	5.327781G	Inf	3
81.6M	5.2493G	5.3309G	75.662M	5.252119G	5.327781G	Inf	4

802.11ac VHT80-BF_Nss1,(MCS0)_4TX **EBW**

5530MHz

14/12/2018

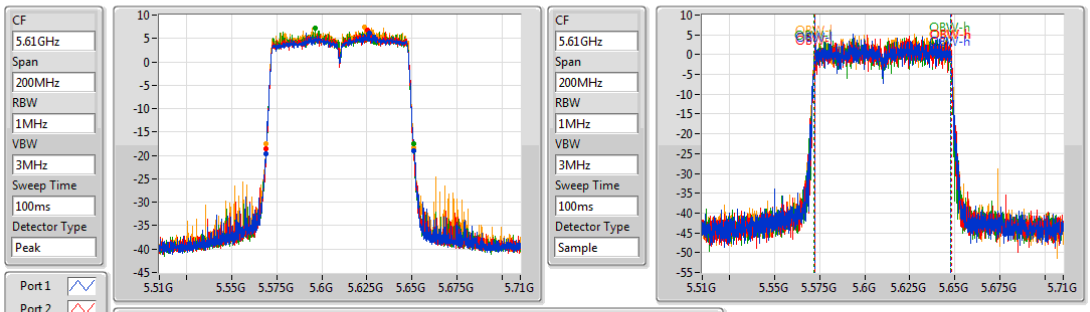


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
82.2M	5.4888G	5.571G	75.762M	5.492119G	5.567881G	Inf	1
81.6M	5.4894G	5.571G	75.762M	5.492019G	5.567781G	Inf	2
82.2M	5.4887G	5.5709G	75.762M	5.492019G	5.567781G	Inf	3
81.7M	5.4892G	5.5709G	75.962M	5.491919G	5.567881G	Inf	4

802.11ac VHT80-BF_Nss1,(MCS0)_4TX **EBW**

5610MHz

14/12/2018

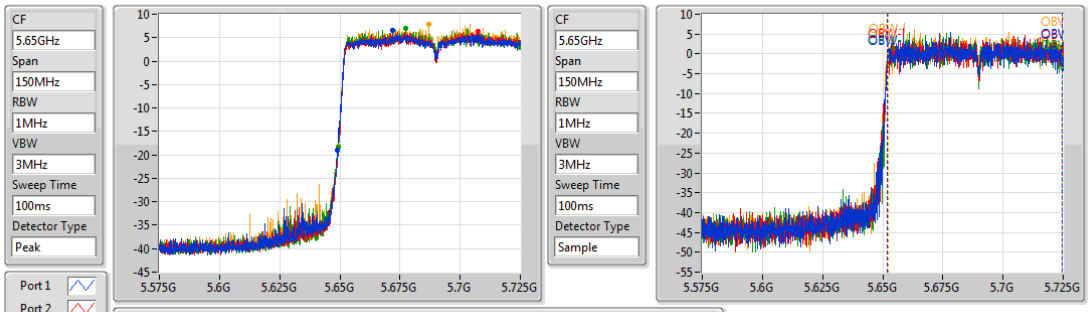


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
82.2M	5.569G	5.6512G	75.762M	5.572119G	5.647881G	Inf	1
81.8M	5.5692G	5.651G	75.862M	5.572119G	5.647981G	Inf	2
81.7M	5.5691G	5.6508G	75.762M	5.572019G	5.647781G	Inf	3
81.6M	5.5692G	5.6508G	75.762M	5.572119G	5.647881G	Inf	4

802.11ac VHT80-BF_Nss1,(MCS0)_4TX **EBW**

5690MHz Straddle 5.47-5.725GHz

14/12/2018

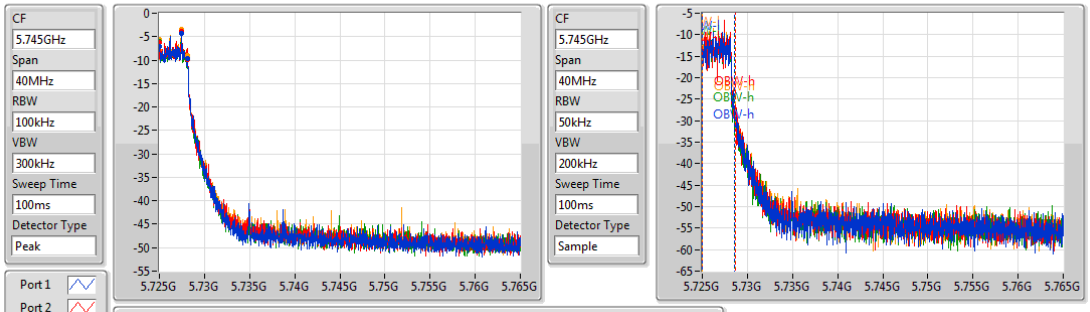


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
76.05M	5.64895G	5.725G	72.489M	5.652024G	5.724513G	Inf	1
75.975M	5.649025G	5.725G	72.564M	5.652024G	5.724588G	Inf	2
75.825M	5.649175G	5.725G	72.489M	5.652024G	5.724513G	Inf	3
75.825M	5.649175G	5.725G	72.414M	5.652099G	5.724513G	Inf	4

802.11ac VHT80-BF_Nss1,(MCS0)_4TX **EBW**

5690MHz Straddle 5.725-5.85GHz

14/12/2018



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
3.12M	5.725G	5.72812G	3.598M	5.72501G	5.728608G	500k	1
3.12M	5.725G	5.72812G	3.638M	5.72503G	5.728668G	500k	2
3.12M	5.725G	5.72812G	3.558M	5.72501G	5.728568G	500k	3
3.12M	5.725G	5.72812G	3.638M	5.72501G	5.728648G	500k	4

For Nss2:

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.25-5.35GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	21.975M	17.9M	17M9D1D	21.475M	17.85M
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	46.75M	36.65M	36M6D1D	40.75M	36.45M
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	82.1M	75.9M	75M9D1D	81.2M	75.8M
5.47-5.725GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	21.875M	17.925M	17M9D1D	15.795M	13.965M
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	56.6M	36.75M	36M7D1D	40.9M	33.215M
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	104.475M	76.1M	76M1D1D	81.6M	72.525M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	3.82M	4.34M	4M34D1D	3.74M	4.3M
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	3.16M	4.26M	4M26D1D	3.12M	3.9M
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	3.12M	11.2M	11M2D1D	3.1M	4.98M

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

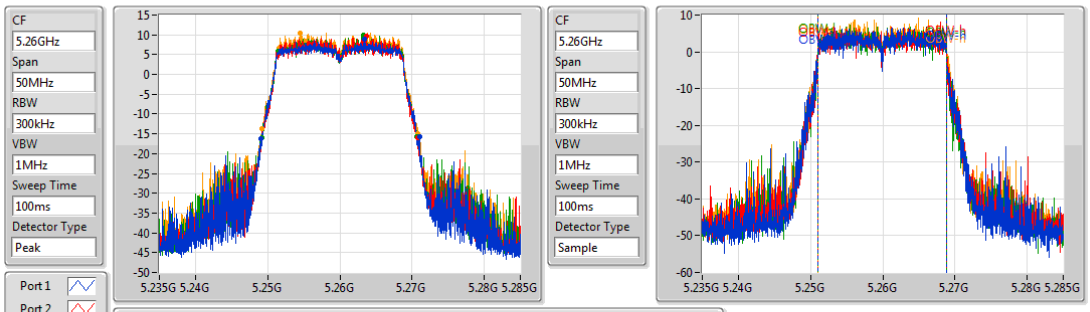
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.975M	17.875M	21.625M	17.875M	21.475M	17.85M	21.7M	17.9M
5300MHz	Pass	Inf	21.975M	17.9M	21.775M	17.9M	21.625M	17.875M	21.525M	17.85M
5320MHz	Pass	Inf	21.925M	17.9M	21.6M	17.9M	21.85M	17.9M	21.8M	17.875M
5500MHz	Pass	Inf	21.875M	17.875M	21.675M	17.875M	21.4M	17.875M	21.675M	17.8M
5580MHz	Pass	Inf	21.825M	17.8M	21.5M	17.925M	21.8M	17.875M	21.575M	17.85M
5700MHz	Pass	Inf	21.7M	17.925M	21.675M	17.875M	21.525M	17.925M	21.55M	17.85M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	16.005M	14.01M	15.975M	14.085M	15.855M	13.965M	15.795M	14.04M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.74M	4.34M	3.76M	4.3M	3.82M	4.3M	3.74M	4.3M
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	45.4M	36.6M	40.85M	36.65M	40.75M	36.45M	40.95M	36.65M
5310MHz	Pass	Inf	41.3M	36.55M	46.75M	36.5M	40.8M	36.55M	40.8M	36.65M
5510MHz	Pass	Inf	56.6M	36.55M	41.15M	36.55M	49.5M	36.55M	46.2M	36.6M
5550MHz	Pass	Inf	43.2M	36.5M	41M	36.6M	41.1M	36.6M	46.1M	36.5M
5670MHz	Pass	Inf	41.3M	36.6M	45.8M	36.65M	40.9M	36.5M	41M	36.75M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	50.12M	33.355M	47.425M	33.355M	44.66M	33.25M	44.695M	33.215M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	3.9M	3.16M	4.1M	3.12M	3.94M	3.14M	4.26M
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	81.9M	75.8M	81.8M	75.9M	81.2M	75.9M	82.1M	75.9M
5530MHz	Pass	Inf	82.1M	75.8M	82.3M	75.9M	81.6M	75.9M	81.9M	75.8M
5610MHz	Pass	Inf	82.4M	75.8M	82.1M	75.8M	81.9M	75.9M	81.9M	76.1M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	104.475M	72.6M	99M	72.525M	94.725M	72.675M	99.525M	72.9M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	4.98M	3.12M	6.12M	3.12M	5.04M	3.1M	11.2M

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**

5260MHz

26/12/2018

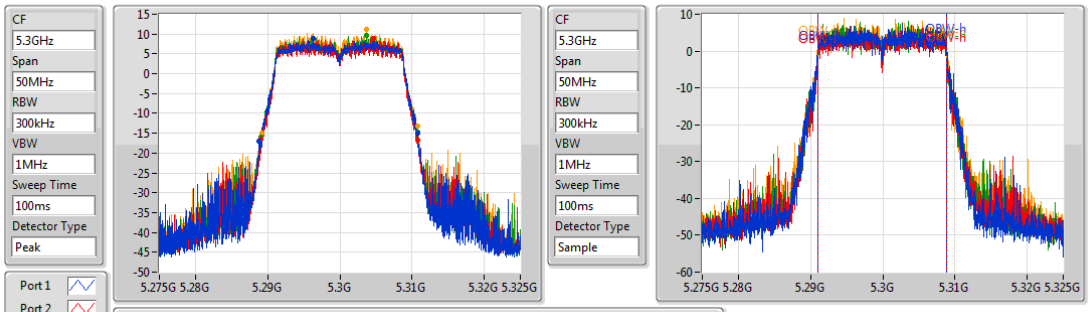


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.975M	5.24905G	5.271025G	17.875M	5.250975G	5.26885G	Inf	1
21.625M	5.2491G	5.270725G	17.875M	5.251G	5.268875G	Inf	2
21.475M	5.249175G	5.27065G	17.85M	5.251025G	5.268875G	Inf	3
21.7M	5.24915G	5.27085G	17.9M	5.250975G	5.268875G	Inf	4

802.11ac VHT20-BF_Nss2,(MCS0)_4TX **EBW**

5300MHz

26/12/2018

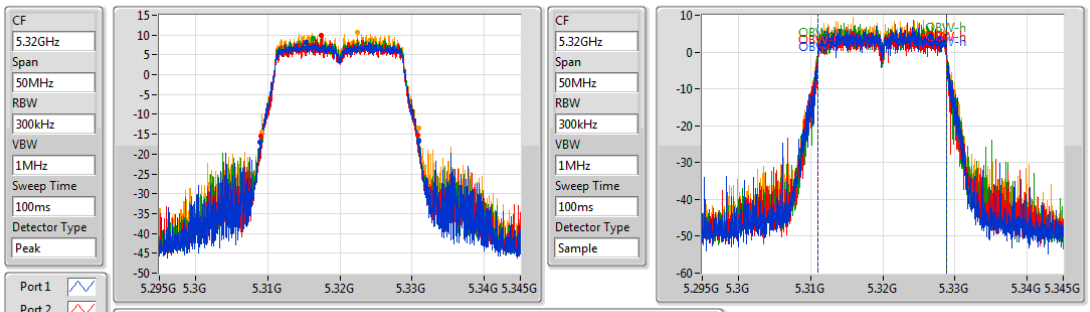


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.975M	5.28885G	5.310825G	17.9M	5.291G	5.3089G	Inf	1
21.775M	5.289075G	5.31085G	17.9M	5.290975G	5.308875G	Inf	2
21.625M	5.2891G	5.310725G	17.875M	5.291G	5.308875G	Inf	3
21.525M	5.289225G	5.31075G	17.85M	5.291G	5.30885G	Inf	4

802.11ac VHT20-BF_Nss2,(MCS0)_4TX **EBW**

5320MHz

26/12/2018

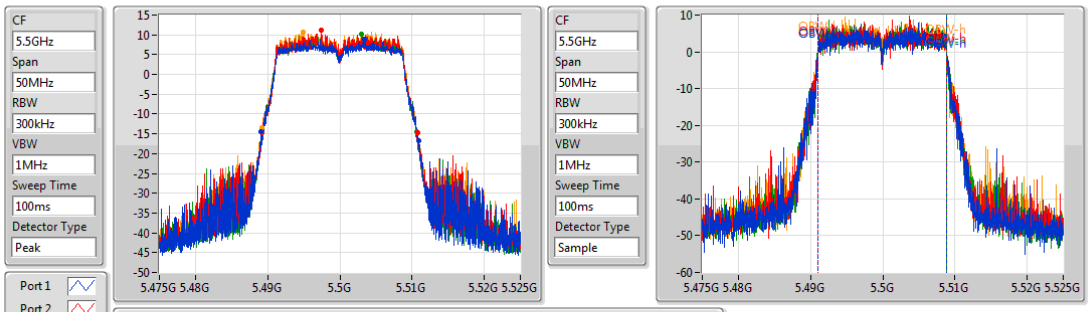


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.925M	5.308975G	5.3309G	17.9M	5.311G	5.3289G	Inf	1
21.6M	5.309125G	5.330725G	17.9M	5.310975G	5.328875G	Inf	2
21.85M	5.309025G	5.330875G	17.9M	5.310975G	5.328875G	Inf	3
21.8M	5.30915G	5.33095G	17.875M	5.311G	5.328875G	Inf	4

802.11ac VHT20-BF_Nss2,(MCS0)_4TX **EBW**

5500MHz

26/12/2018

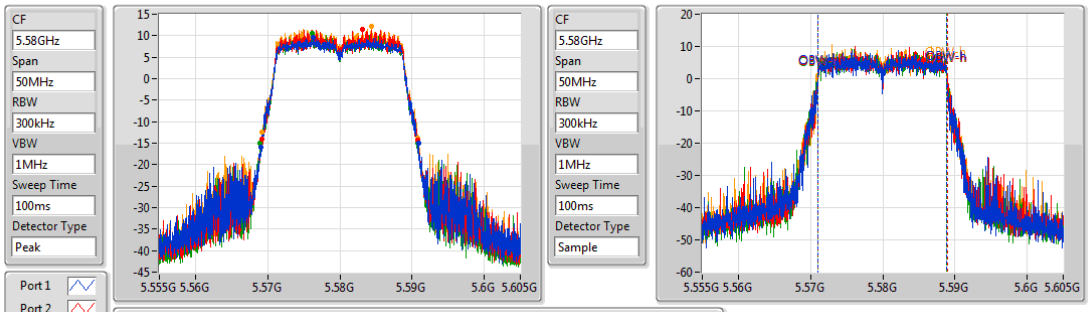


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.875M	5.48905G	5.510925G	17.875M	5.491025G	5.5089G	Inf	1
21.675M	5.489175G	5.51085G	17.875M	5.491025G	5.5089G	Inf	2
21.4M	5.48925G	5.51065G	17.875M	5.491025G	5.5089G	Inf	3
21.675M	5.489175G	5.51085G	17.8M	5.49105G	5.50885G	Inf	4

802.11ac VHT20-BF_Nss2,(MCS0)_4TX **EBW**

5580MHz

26/12/2018

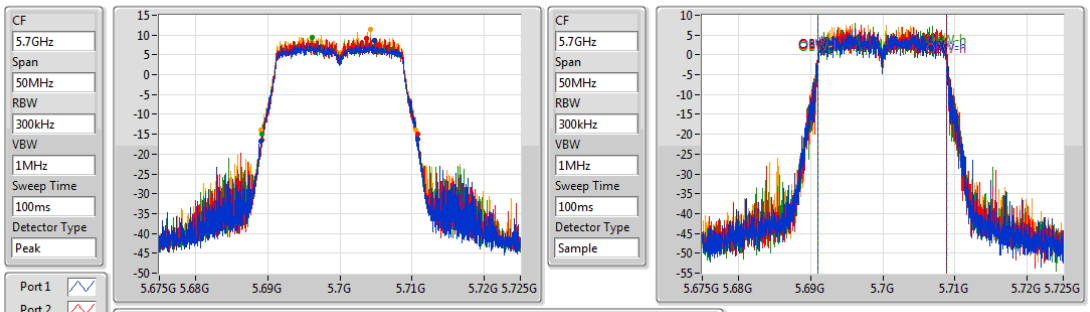


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.825M	5.569125G	5.59095G	17.8M	5.571025G	5.588825G	Inf	1
21.5M	5.569225G	5.590725G	17.925M	5.571G	5.588925G	Inf	2
21.8M	5.56895G	5.59075G	17.875M	5.571G	5.588875G	Inf	3
21.575M	5.56925G	5.590825G	17.85M	5.571G	5.58885G	Inf	4

802.11ac VHT20-BF_Nss2,(MCS0)_4TX **EBW**

5700MHz

26/12/2018

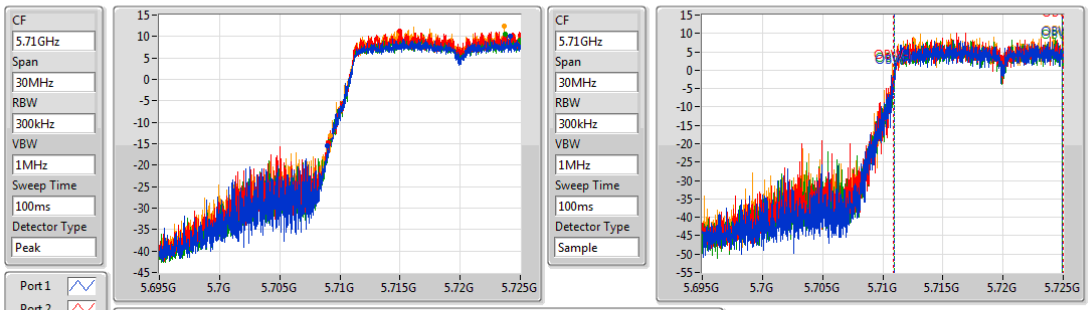


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.7M	5.6891G	5.7108G	17.925M	5.690975G	5.7089G	Inf	1
21.675M	5.689175G	5.71085G	17.875M	5.691025G	5.7089G	Inf	2
21.525M	5.689225G	5.71075G	17.925M	5.690975G	5.7089G	Inf	3
21.55M	5.689025G	5.710575G	17.85M	5.691G	5.70885G	Inf	4

802.11ac VHT20-BF_Nss2,(MCS0)_4TX **EBW**

5720MHz Straddle 5.47-5.725GHz

26/12/2018

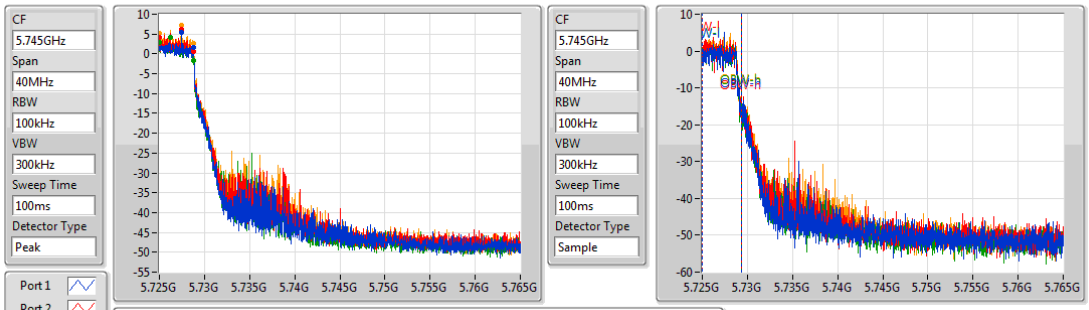


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.005M	5.708995G	5.725G	14.01M	5.710945G	5.724955G	Inf	1
15.975M	5.709025G	5.725G	14.085M	5.710885G	5.72497G	Inf	2
15.855M	5.709145G	5.725G	13.965M	5.71096G	5.724925G	Inf	3
15.795M	5.709205G	5.725G	14.04M	5.71093G	5.72497G	Inf	4

802.11ac VHT20-BF_Nss2,(MCS0)_4TX **EBW**

5720MHz Straddle 5.725-5.85GHz

26/12/2018

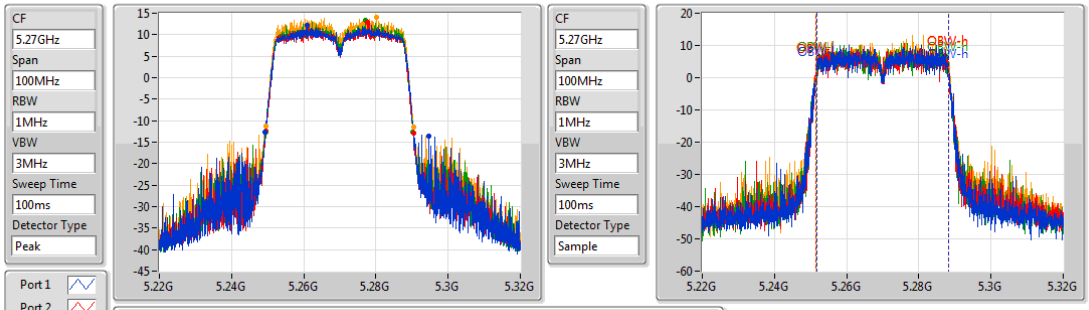


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
3.74M	5.725G	5.72874G	4.34M	5.725G	5.72934G	500k	1
3.76M	5.725G	5.72876G	4.3M	5.72502G	5.72932G	500k	2
3.82M	5.725G	5.72882G	4.3M	5.725G	5.7293G	500k	3
3.74M	5.725G	5.72874G	4.3M	5.72502G	5.72932G	500k	4

802.11ac VHT40-BF_Nss2,(MCS0)_4TX **EBW**

5270MHz

26/12/2018

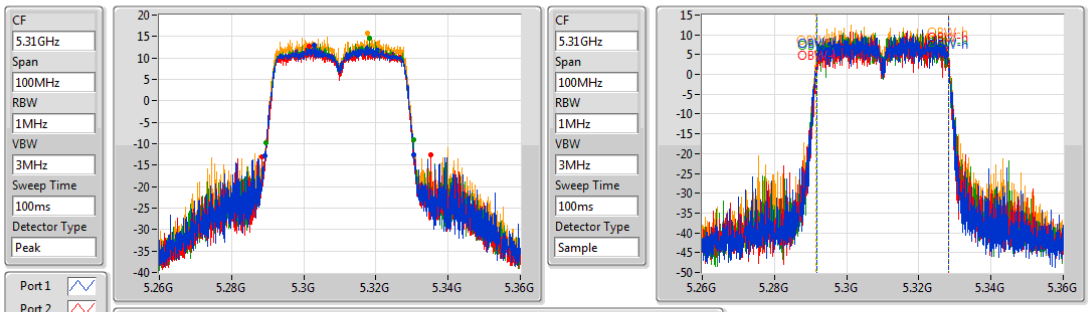


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
45.4M	5.24935G	5.29475G	36.6M	5.25165G	5.28825G	Inf	1
40.85M	5.24955G	5.2904G	36.65M	5.2516G	5.28825G	Inf	2
40.75M	5.24955G	5.2903G	36.45M	5.2517G	5.28815G	Inf	3
40.95M	5.24945G	5.2904G	36.65M	5.2516G	5.28825G	Inf	4

802.11ac VHT40-BF_Nss2,(MCS0)_4TX **EBW**

5310MHz

26/12/2018

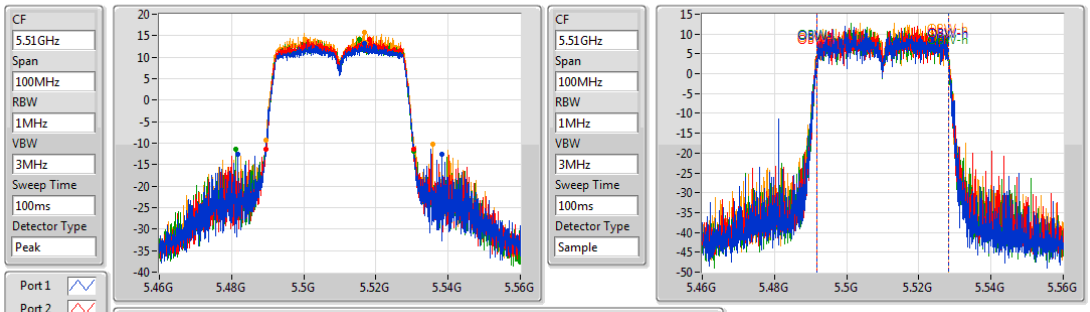


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
41.3M	5.28915G	5.33045G	36.55M	5.29165G	5.3282G	Inf	1
46.75M	5.28835G	5.3351G	36.5M	5.29175G	5.32825G	Inf	2
40.8M	5.28955G	5.33035G	36.55M	5.2917G	5.32825G	Inf	3
40.8M	5.28955G	5.33035G	36.65M	5.2916G	5.32825G	Inf	4

802.11ac VHT40-BF_Nss2,(MCS0)_4TX **EBW**

5510MHz

26/12/2018

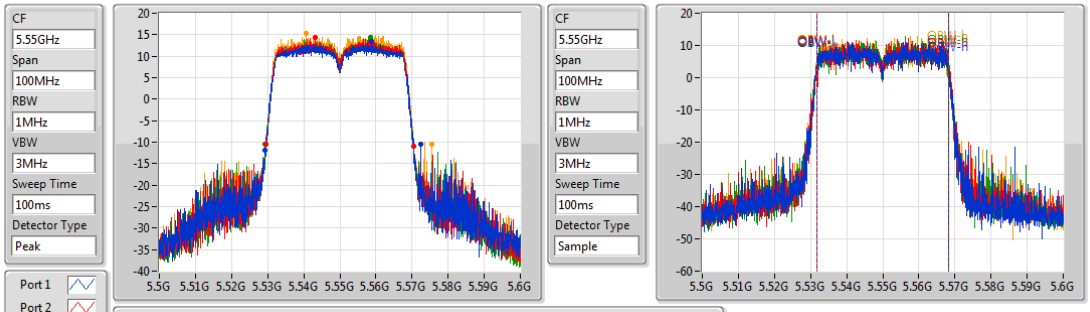


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
56.6M	5.48165G	5.53825G	36.55M	5.49165G	5.5282G	Inf	1
41.15M	5.4894G	5.53055G	36.55M	5.49165G	5.5282G	Inf	2
49.5M	5.48105G	5.53055G	36.55M	5.49165G	5.5282G	Inf	3
46.2M	5.48955G	5.53575G	36.6M	5.49165G	5.52825G	Inf	4

802.11ac VHT40-BF_Nss2,(MCS0)_4TX **EBW**

5550MHz

26/12/2018

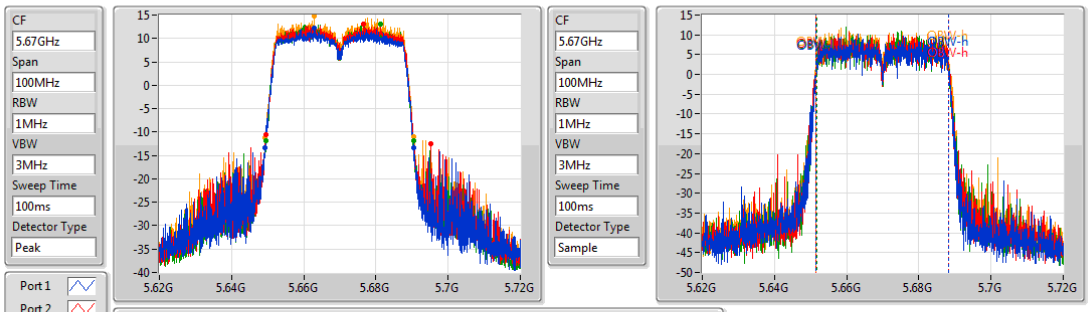


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
43.2M	5.5293G	5.5725G	36.5M	5.5317G	5.5682G	Inf	1
41M	5.52945G	5.57045G	36.6M	5.5317G	5.5683G	Inf	2
41.1M	5.52935G	5.57045G	36.6M	5.5317G	5.5683G	Inf	3
46.1M	5.52925G	5.57535G	36.5M	5.5317G	5.5682G	Inf	4

802.11ac VHT40-BF_Nss2,(MCS0)_4TX **EBW**

5670MHz

26/12/2018

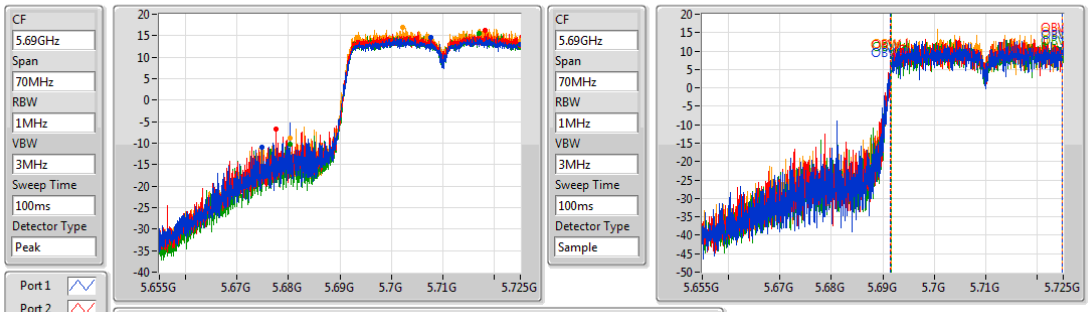


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
41.3M	5.64925G	5.69055G	36.6M	5.6516G	5.6882G	Inf	1
45.8M	5.6494G	5.6952G	36.65M	5.6516G	5.68825G	Inf	2
40.9M	5.6495G	5.6904G	36.5M	5.6517G	5.6882G	Inf	3
41M	5.64935G	5.69035G	36.75M	5.65155G	5.6883G	Inf	4

802.11ac VHT40-BF_Nss2,(MCS0)_4TX **EBW**

5710MHz Straddle 5.47-5.725GHz

26/12/2018

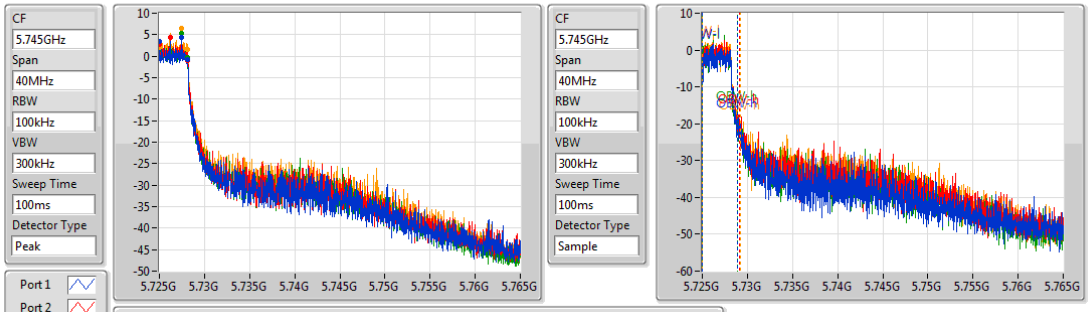


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
50.12M	5.67488G	5.725G	33.355M	5.69154G	5.724895G	Inf	1
47.425M	5.677575G	5.725G	33.355M	5.69154G	5.724895G	Inf	2
44.66M	5.68034G	5.725G	33.25M	5.691575G	5.724825G	Inf	3
44.695M	5.680305G	5.725G	33.215M	5.69161G	5.724825G	Inf	4

802.11ac VHT40-BF_Nss2,(MCS0)_4TX **EBW**

5710MHz Straddle 5.725-5.85GHz

26/12/2018

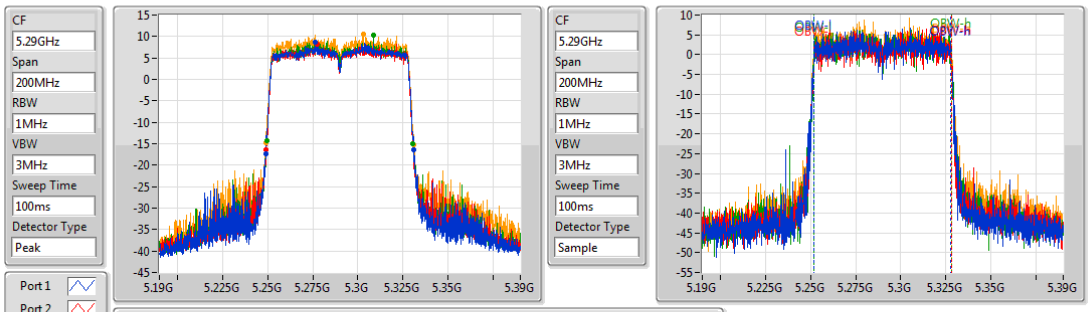


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
3.12M	5.725G	5.72812G	3.9M	5.725G	5.7289G	500k	1
3.16M	5.725G	5.72816G	4.1M	5.725G	5.7291G	500k	2
3.12M	5.725G	5.72812G	3.94M	5.725G	5.72894G	500k	3
3.14M	5.725G	5.72814G	4.26M	5.72502G	5.72928G	500k	4

802.11ac VHT80-BF_Nss2,(MCS0)_4TX **EBW**

5290MHz

26/12/2018

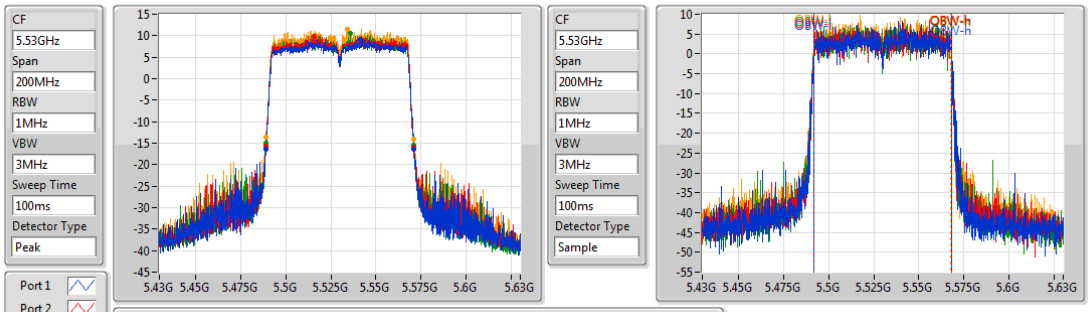


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
81.9M	5.249G	5.3309G	75.8M	5.252G	5.3278G	Inf	1
81.8M	5.2491G	5.3309G	75.9M	5.252G	5.3279G	Inf	2
81.2M	5.2494G	5.3306G	75.9M	5.252G	5.3279G	Inf	3
82.1M	5.2489G	5.331G	75.9M	5.252G	5.3279G	Inf	4

802.11ac VHT80-BF_Nss2,(MCS0)_4TX **EBW**

5530MHz

26/12/2018

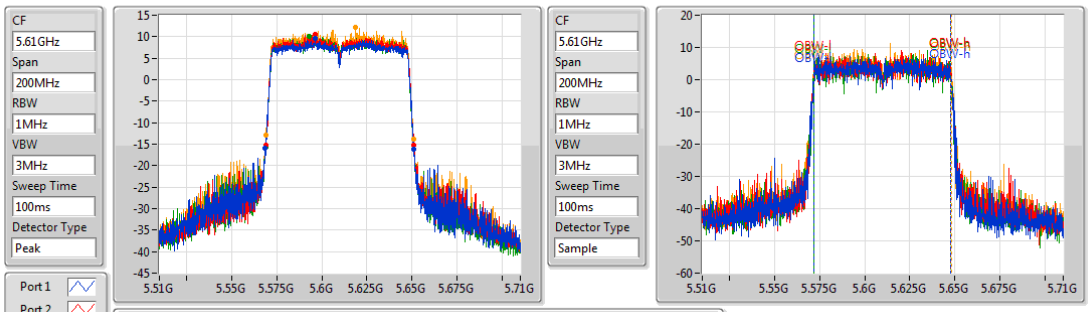


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
82.1M	5.4891G	5.5712G	75.8M	5.4921G	5.5679G	Inf	1
82.3M	5.4889G	5.5712G	75.9M	5.492G	5.5679G	Inf	2
81.6M	5.4892G	5.5708G	75.9M	5.492G	5.5679G	Inf	3
81.9M	5.4892G	5.5711G	75.8M	5.492G	5.5678G	Inf	4

802.11ac VHT80-BF_Nss2,(MCS0)_4TX **EBW**

5610MHz

26/12/2018

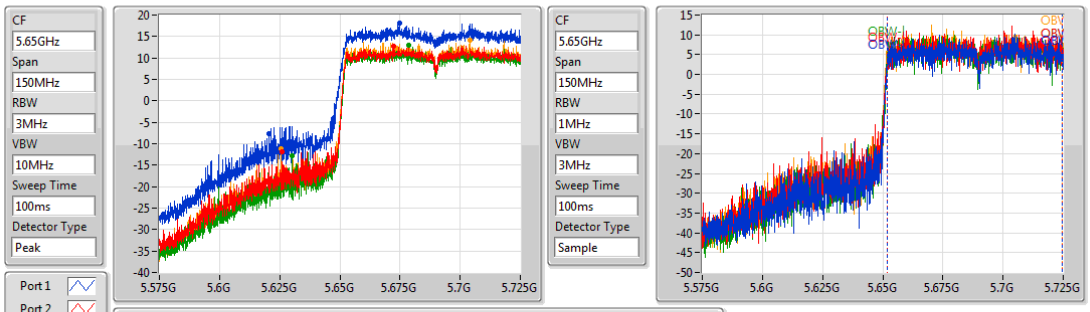


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
82.4M	5.5687G	5.6511G	75.8M	5.572G	5.6478G	Inf	1
82.1M	5.569G	5.6511G	75.8M	5.572G	5.6478G	Inf	2
81.9M	5.5689G	5.6508G	75.9M	5.5719G	5.6478G	Inf	3
81.9M	5.5691G	5.651G	76.1M	5.5719G	5.648G	Inf	4

802.11ac VHT80-BF_Nss2,(MCS0)_4TX **EBW**

5690MHz Straddle 5.47-5.725GHz

26/12/2018

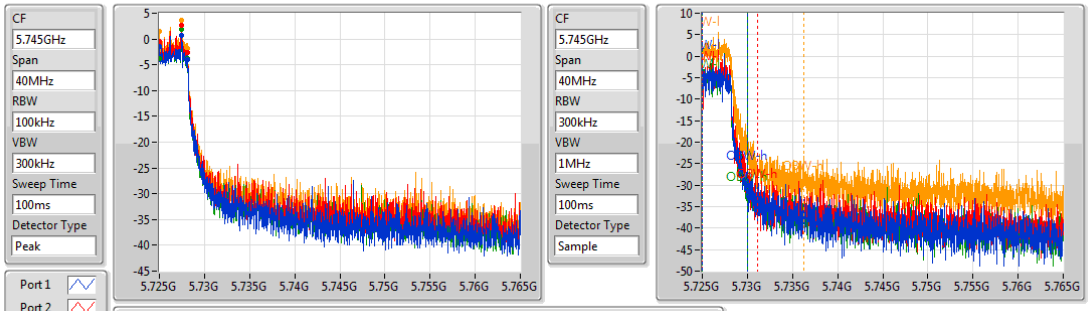


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
104.475M	5.620525G	5.725G	72.6M	5.65195G	5.72455G	Inf	1
99M	5.626G	5.725G	72.525M	5.652025G	5.72455G	Inf	2
94.725M	5.630275G	5.725G	72.675M	5.652025G	5.7247G	Inf	3
99.525M	5.625475G	5.725G	72.9M	5.6518G	5.7247G	Inf	4

802.11ac VHT80-BF_Nss2,(MCS0)_4TX **EBW**

5690MHz Straddle 5.725-5.85GHz

26/12/2018



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
3.12M	5.725G	5.72812G	4.98M	5.72502G	5.73G	500k	1
3.12M	5.725G	5.72812G	6.12M	5.72502G	5.73114G	500k	2
3.12M	5.725G	5.72812G	5.04M	5.72502G	5.73006G	500k	3
3.1M	5.725G	5.7281G	11.2M	5.72502G	5.73622G	500k	4

For 802.11ac (VHT80+80) mode, Nss1:

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT80+80_NSS1,(MCS0)_4TX	82.3M	75.762M	75M8D1D	81.8M	75.762M
5.25-5.35GHz	-	-	-	-	-
802.11ac VHT80+80_NSS1,(MCS0)_4TX	82M	5.327781G	5G33D1D	82M	5.327781G
5.47-5.725GHz	-	-	-	-	-
802.11ac VHT80+80_NSS1,(MCS0)_4TX	82.65M	75.862M	75M9D1D	81.45M	75.712M

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

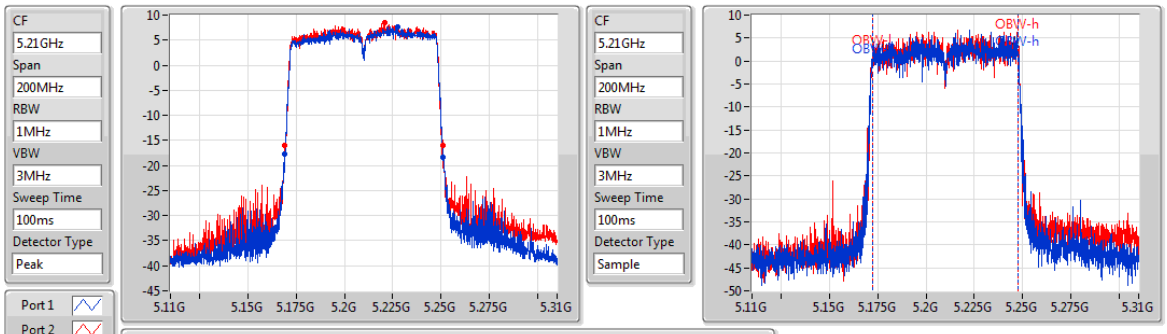
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT80+80_NSS1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5210MHz,5290MHz	Pass	Inf	82.3M	75.762M	81.8M	75.762M				
802.11ac VHT80+80_NSS1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz,#5290MHz	Pass	75.662M			82M	5.327781G				
802.11ac VHT80+80_NSS1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5530MHz,#5610MHz	Pass	Inf	82.35M	75.862M	81.6M	75.712M	82.65M	75.862M	81.45M	75.712M

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 VHT80+80_Nss1,(MCS0)_4TX #5210MHz,5290MHz

EBW

23/01/2019

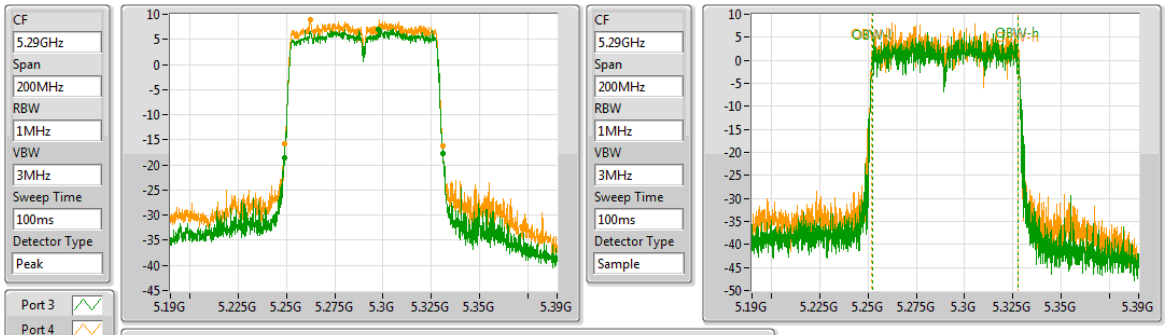


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
82.3M	5.1689G	5.2512G	75.762M	5.172119G	5.247881G	Inf	1
81.8M	5.1692G	5.251G	75.762M	5.172119G	5.247881G	Inf	2

802.11ac VHT80+80_Nss1,(MCS0)_4TX 5210MHz,#5290MHz

EBW

23/01/2019

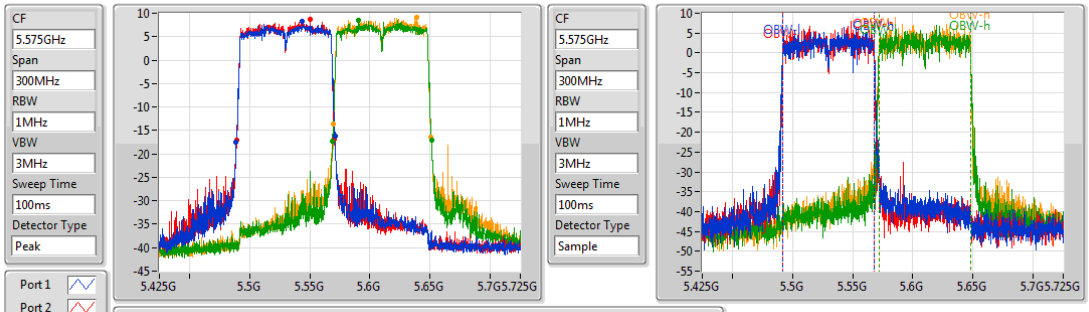


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
82M	5.249G	5.331G	75.662M	5.252119G	5.327781G	Inf	3
81.6M	5.2493G	5.3309G	75.862M	5.252019G	5.327881G	Inf	4

802.11ac VHT80+80_Nss1,(MCS0)_4TX #5530MHz,#5610MHz

EBW

23/01/2019



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
82.35M	5.4889G	5.57125G	75.862M	5.492091G	5.567954G	Inf	1
81.6M	5.48905G	5.57065G	75.712M	5.492091G	5.567804G	Inf	2
82.65M	5.56885G	5.6515G	75.862M	5.572001G	5.647864G	Inf	3
81.45M	5.56945G	5.6509G	75.712M	5.572151G	5.647864G	Inf	4

For Nss1:
Summary

Mode	Total Power (dBm)	Total Power (W)
5.25-5.35GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	20.50	0.11220
802.11ac VHT20_Nss1,(MCS0)_4TX	20.73	0.11830
802.11ac VHT40_Nss1,(MCS0)_4TX	23.76	0.23768
802.11ac VHT80_Nss1,(MCS0)_4TX	21.02	0.12647
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	20.43	0.11041
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	20.52	0.11272
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	20.44	0.11066
5.47-5.725GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	20.69	0.11722
802.11ac VHT20_Nss1,(MCS0)_4TX	20.92	0.12359
802.11ac VHT40_Nss1,(MCS0)_4TX	23.76	0.23768
802.11ac VHT80_Nss1,(MCS0)_4TX	23.92	0.24660
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	20.50	0.11220
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	20.54	0.11324
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	20.51	0.11246
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	13.42	0.02198
802.11ac VHT20_Nss1,(MCS0)_4TX	14.27	0.02673
802.11ac VHT40_Nss1,(MCS0)_4TX	13.38	0.02178
802.11ac VHT80_Nss1,(MCS0)_4TX	10.12	0.01028
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	13.91	0.02460
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	10.22	0.01052
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	6.75	0.00473

Result

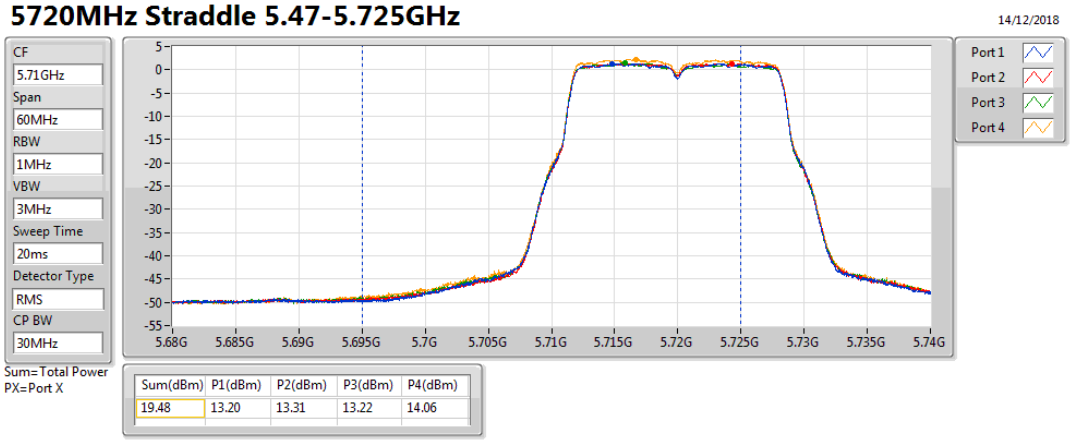
Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	3.37	14.27	14.20	14.32	15.07	20.50	23.98
5300MHz	Pass	3.37	14.12	13.97	14.26	15.18	20.43	23.98
5320MHz	Pass	3.37	14.16	13.96	14.03	15.16	20.38	23.98
5500MHz	Pass	3.37	14.12	14.31	14.29	15.30	20.55	23.98
5580MHz	Pass	3.37	14.31	14.51	14.41	15.37	20.69	23.98
5700MHz	Pass	3.37	14.74	14.35	14.35	15.09	20.66	23.98
5720MHz Straddle 5.47-5.725GHz	Pass	3.37	13.20	13.31	13.22	14.06	19.48	22.95
5720MHz Straddle 5.725-5.85GHz	Pass	3.37	7.27	7.28	7.11	7.91	13.42	30.00
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	3.37	14.62	14.45	14.57	15.17	20.73	23.98
5300MHz	Pass	3.37	14.37	14.22	14.47	15.21	20.61	23.98
5320MHz	Pass	3.37	14.42	14.39	14.43	15.38	20.70	23.98
5500MHz	Pass	3.37	14.34	14.35	14.69	15.38	20.73	23.98
5580MHz	Pass	3.37	14.54	14.60	14.66	15.68	20.92	23.98
5700MHz	Pass	3.37	14.56	14.65	14.50	15.52	20.85	23.98
5720MHz Straddle 5.47-5.725GHz	Pass	3.37	13.56	13.52	13.33	14.36	19.73	22.98
5720MHz Straddle 5.725-5.85GHz	Pass	3.37	8.04	8.22	7.84	8.83	14.27	30.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	3.37	17.57	17.19	17.49	18.58	23.76	23.98
5310MHz	Pass	3.37	16.45	16.18	16.38	17.49	22.68	23.98
5510MHz	Pass	3.37	16.56	16.69	16.60	17.36	22.84	23.98
5550MHz	Pass	3.37	17.48	17.58	17.59	18.25	23.76	23.98
5670MHz	Pass	3.37	17.56	17.50	17.56	18.23	23.74	23.98
5710MHz Straddle 5.47-5.725GHz	Pass	3.37	17.62	17.62	17.47	18.21	23.76	23.98
5710MHz Straddle 5.725-5.85GHz	Pass	3.37	7.32	7.27	6.98	7.84	13.38	30.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	3.37	14.80	14.30	15.09	15.70	21.02	23.98
5530MHz	Pass	3.37	15.22	15.34	15.29	16.06	21.51	23.98
5610MHz	Pass	3.37	17.78	17.91	17.93	17.97	23.92	23.98
5690MHz Straddle 5.47-5.725GHz	Pass	3.37	17.65	17.92	17.76	18.02	23.86	23.98
5690MHz Straddle 5.725-5.85GHz	Pass	3.37	3.94	4.41	3.85	4.18	10.12	30.00
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	9.39	14.22	13.93	14.00	15.14	20.37	20.59
5300MHz	Pass	9.39	14.13	14.19	13.91	15.27	20.43	20.59
5320MHz	Pass	9.39	14.21	13.78	13.95	15.41	20.41	20.59
5500MHz	Pass	9.39	13.95	14.34	14.27	15.24	20.50	20.59
5580MHz	Pass	9.39	14.36	14.07	14.11	15.01	20.42	20.59
5700MHz	Pass	9.39	14.14	14.56	14.10	14.73	20.41	20.59
5720MHz Straddle 5.47-5.725GHz	Pass	9.39	13.27	13.29	13.14	13.94	19.44	19.55
5720MHz Straddle 5.725-5.85GHz	Pass	9.39	7.71	7.69	7.72	8.41	13.91	26.61
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	9.39	14.39	14.00	14.04	14.87	20.36	20.59

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
5310MHz	Pass	9.39	14.42	14.22	14.15	15.14	20.52	20.59
5510MHz	Pass	9.39	14.44	14.49	13.97	15.10	20.54	20.59
5550MHz	Pass	9.39	14.65	14.51	14.53	14.14	20.48	20.59
5670MHz	Pass	9.39	14.05	14.26	14.26	15.20	20.49	20.59
5710MHz Straddle 5.47-5.725GHz	Pass	9.39	14.11	14.24	14.26	15.04	20.45	20.59
5710MHz Straddle 5.725-5.85GHz	Pass	9.39	3.99	4.14	3.95	4.67	10.22	26.61
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	9.39	14.39	13.80	14.45	14.95	20.44	20.59
5530MHz	Pass	9.39	13.67	13.85	13.83	14.42	19.97	20.59
5610MHz	Pass	9.39	14.25	14.21	14.42	15.03	20.51	20.59
5690MHz Straddle 5.47-5.725GHz	Pass	9.39	14.17	14.34	14.39	14.84	20.46	20.59
5690MHz Straddle 5.725-5.85GHz	Pass	9.39	0.58	0.71	0.54	1.06	6.75	26.61

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

802.11a_Nss1,(6Mbps)_4TX **AV Power**

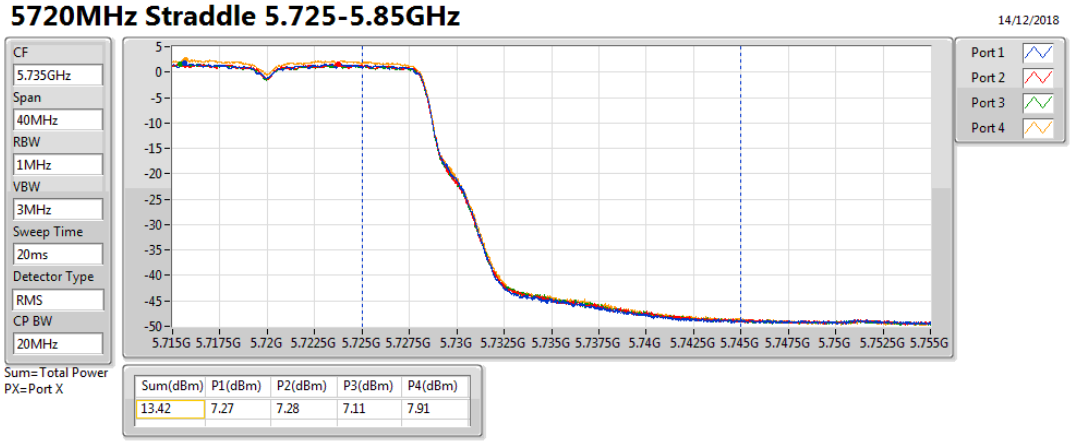
5720MHz Straddle 5.47-5.725GHz



Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
19.48	13.20	13.31	13.22	14.06

802.11a_Nss1,(6Mbps)_4TX **AV Power**

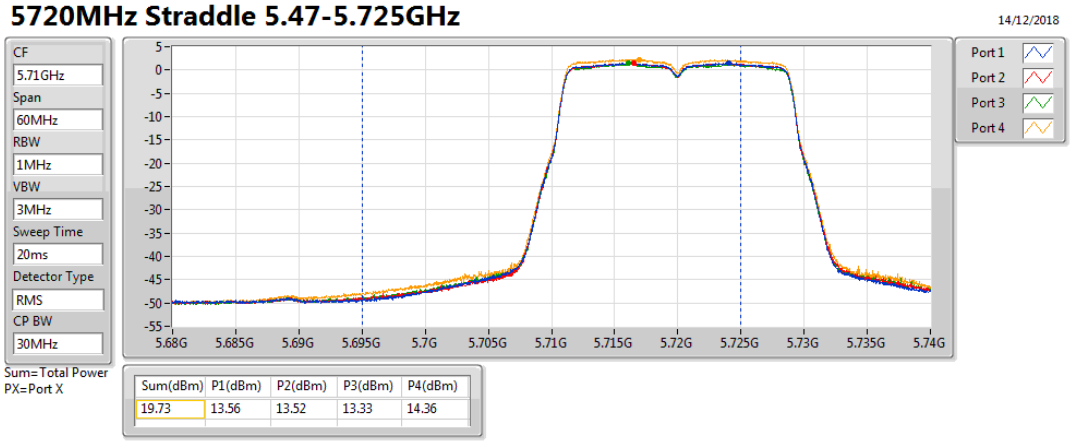
5720MHz Straddle 5.725-5.85GHz



Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
13.42	7.27	7.28	7.11	7.91

802.11ac VHT20_Nss1,(MCS0)_4TX **AV Power**

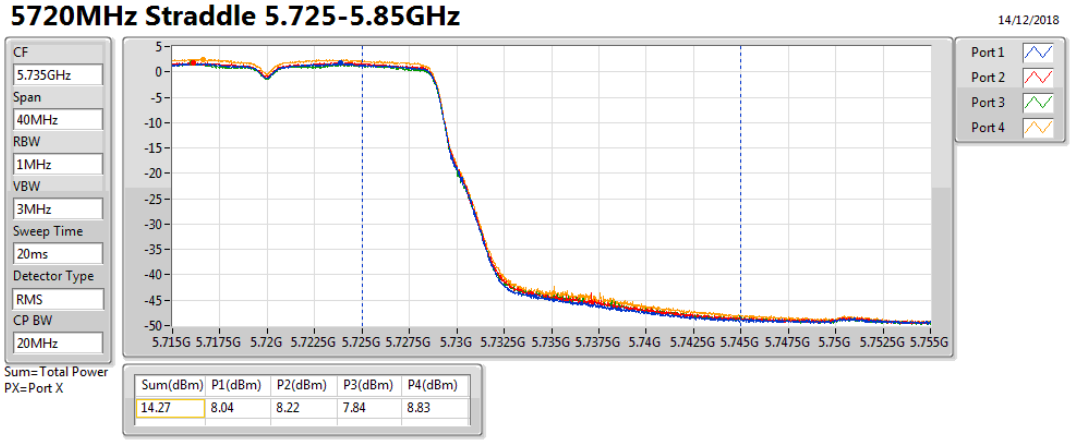
5720MHz Straddle 5.47-5.725GHz



Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
19.73	13.56	13.52	13.33	14.36

802.11ac VHT20_Nss1,(MCS0)_4TX — AV Power

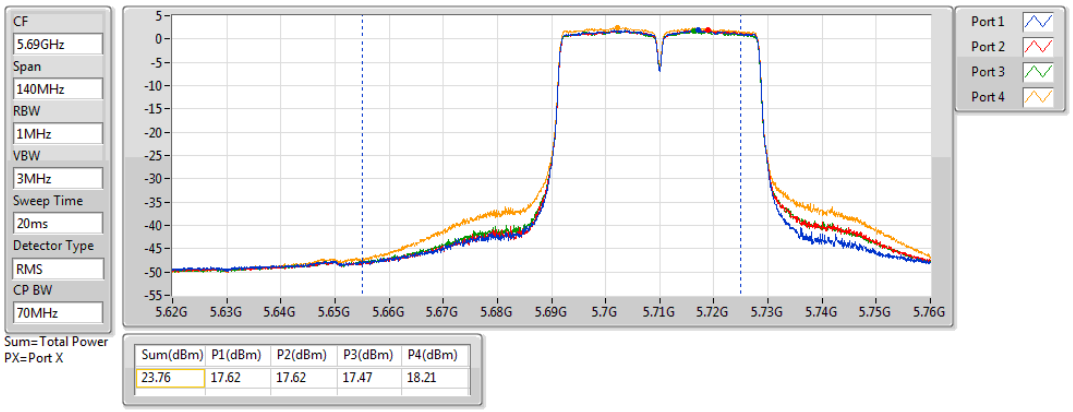
5720MHz Straddle 5.725-5.85GHz



Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
14.27	8.04	8.22	7.84	8.83

802.11ac VHT40_Nss1,(MCS0)_4TX — AV Power

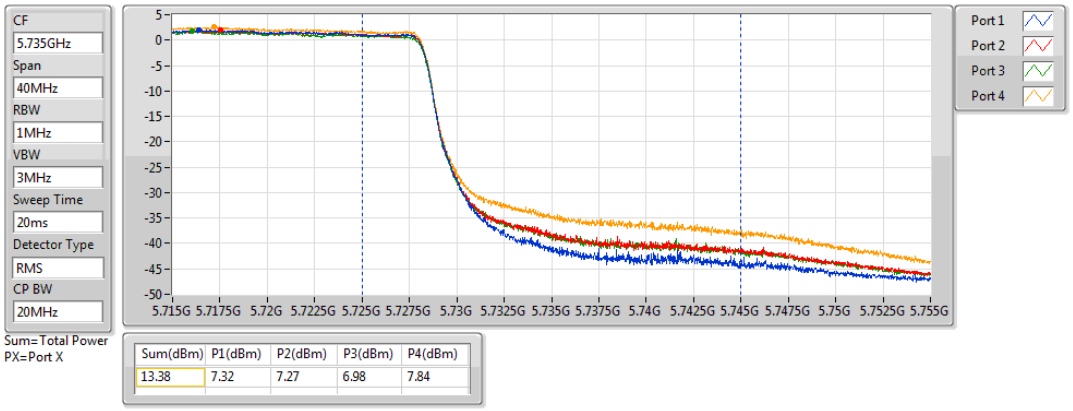
5710MHz Straddle 5.47-5.725GHz



Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
23.76	17.62	17.62	17.47	18.21

802.11ac VHT40_Nss1,(MCS0)_4TX — AV Power

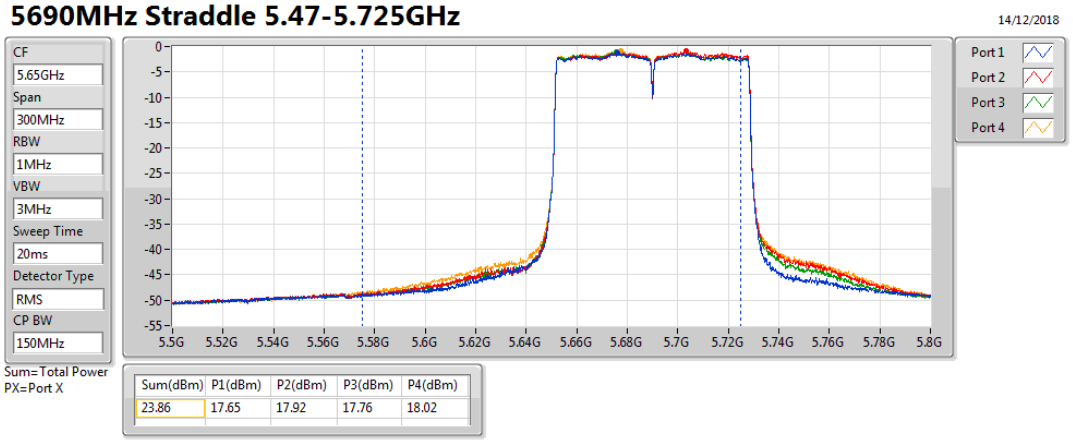
5710MHz Straddle 5.725-5.85GHz



Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
13.38	7.32	7.27	6.98	7.84

802.11ac VHT80_Nss1,(MCS0)_4TX **AV Power**

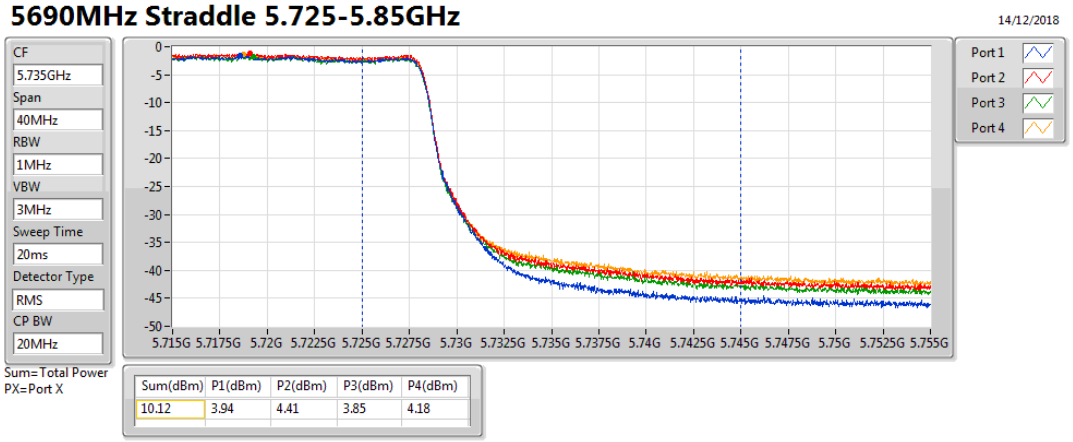
5690MHz Straddle 5.47-5.725GHz



Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
23.86	17.65	17.92	17.76	18.02

802.11ac VHT80_Nss1,(MCS0)_4TX **AV Power**

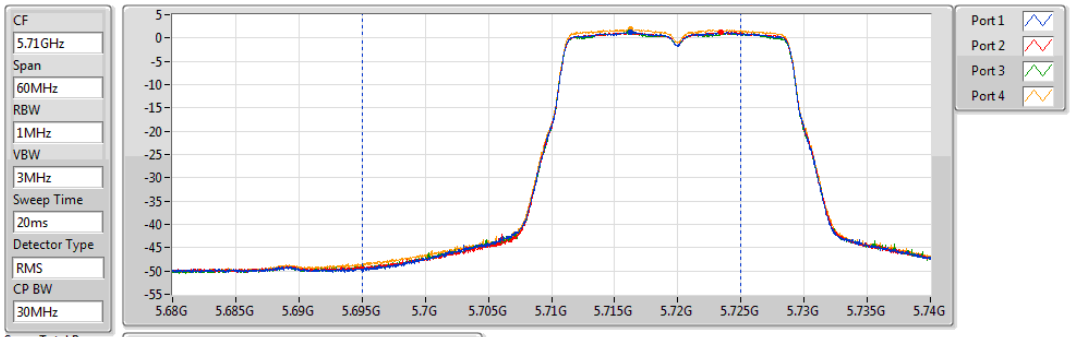
5690MHz Straddle 5.725-5.85GHz



Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
10.12	3.94	4.41	3.85	4.18

802.11ac VHT20-BF_Nss1,(MCS0)_4TX **AV Power**

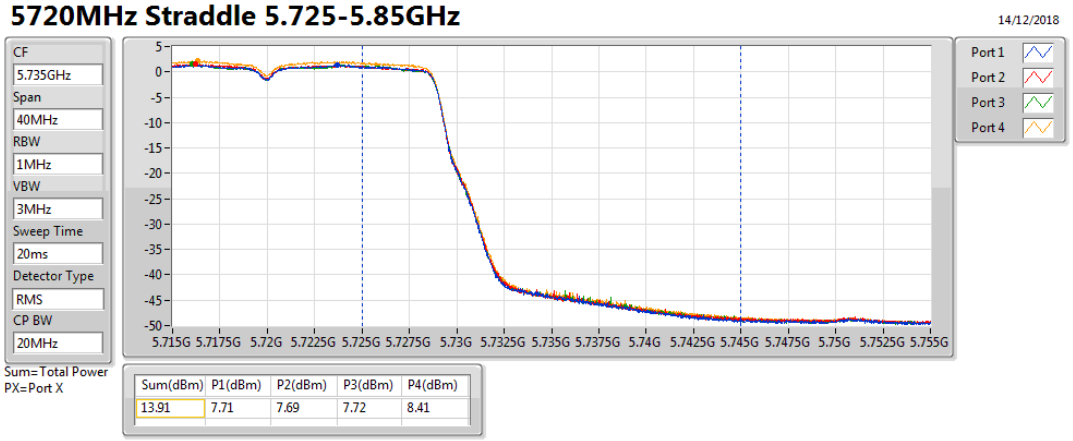
5720MHz Straddle 5.47-5.725GHz



Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
19.44	13.27	13.29	13.14	13.94

802.11ac VHT20-BF_Nss1,(MCS0)_4TX **AV Power**

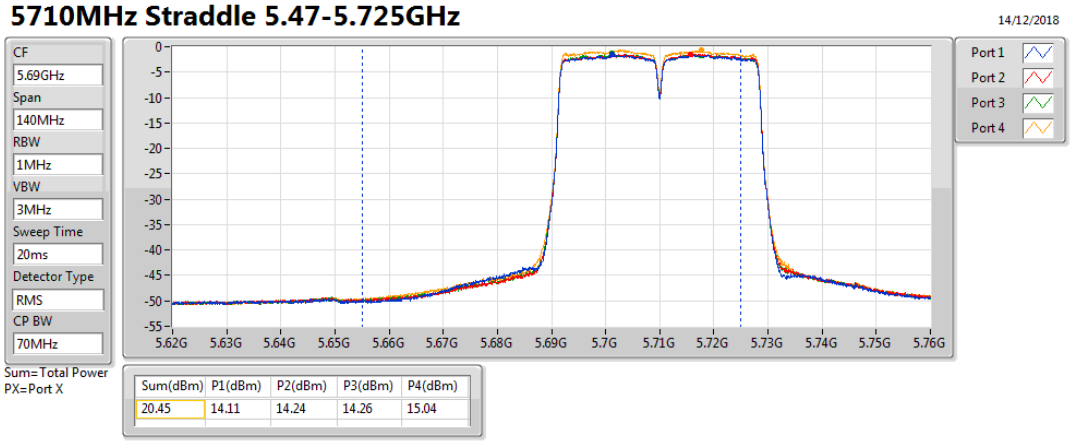
5720MHz Straddle 5.725-5.85GHz



Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
13.91	7.71	7.69	7.72	8.41

802.11ac VHT40-BF_Nss1,(MCS0)_4TX **AV Power**

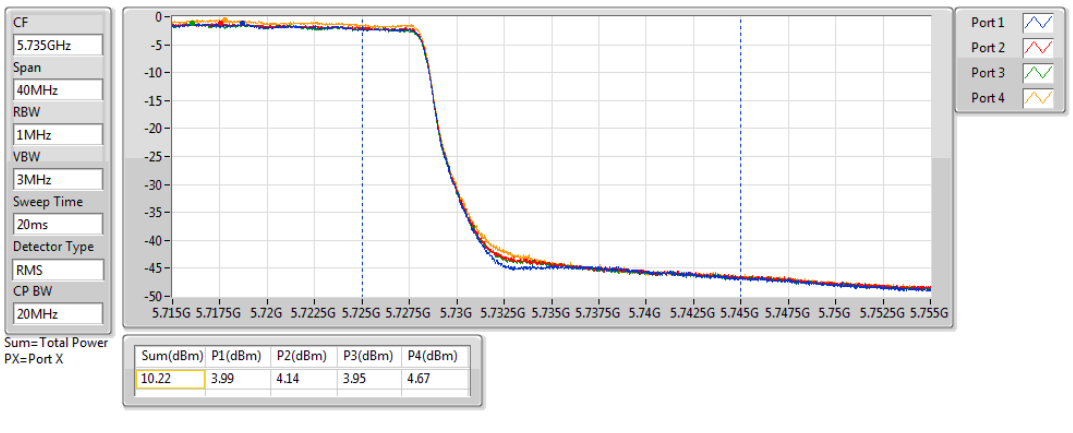
5710MHz Straddle 5.47-5.725GHz



Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
20.45	14.11	14.24	14.26	15.04

802.11ac VHT40-BF_Nss1,(MCS0)_4TX **AV Power**

5710MHz Straddle 5.725-5.85GHz

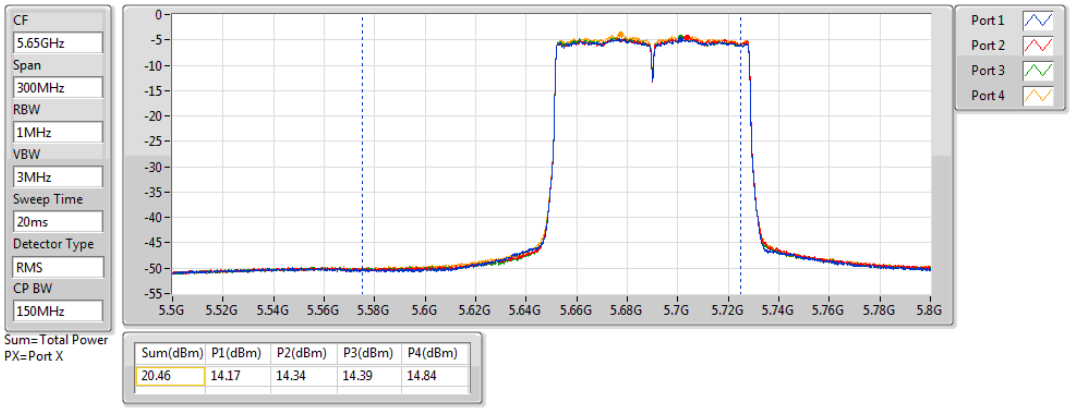


Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
10.22	3.99	4.14	3.95	4.67

802.11ac VHT80-BF_Nss1,(MCS0)_4TX **AV Power**

5690MHz Straddle 5.47-5.725GHz

14/12/2018

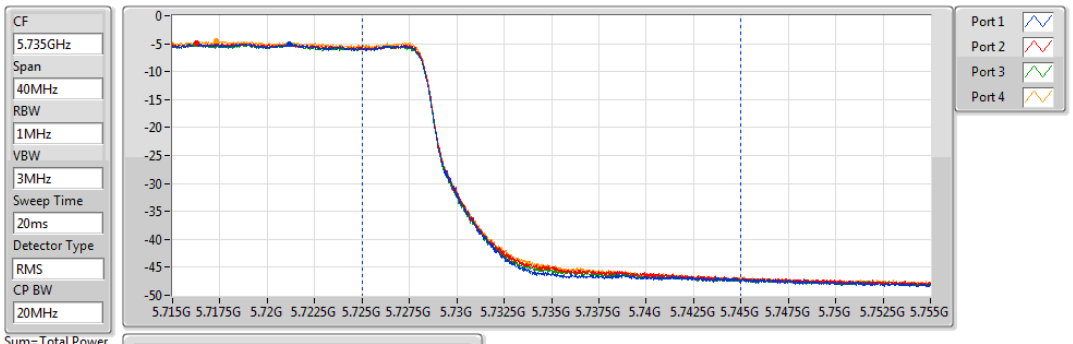


Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
20.46	14.17	14.34	14.39	14.84

802.11ac VHT80-BF_Nss1,(MCS0)_4TX **AV Power**

5690MHz Straddle 5.725-5.85GHz

14/12/2018



Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
6.75	0.58	0.71	0.54	1.06

For Nss2:

Summary

Mode	Total Power (dBm)	Total Power (W)
5.25-5.35GHz	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	22.71	0.18664
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	23.40	0.21878
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	22.03	0.15959
5.47-5.725GHz	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	23.56	0.22699
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	23.55	0.22646
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	23.57	0.22751
5.725-5.85GHz	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	15.33	0.03412
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	13.46	0.02218
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	10.04	0.01009

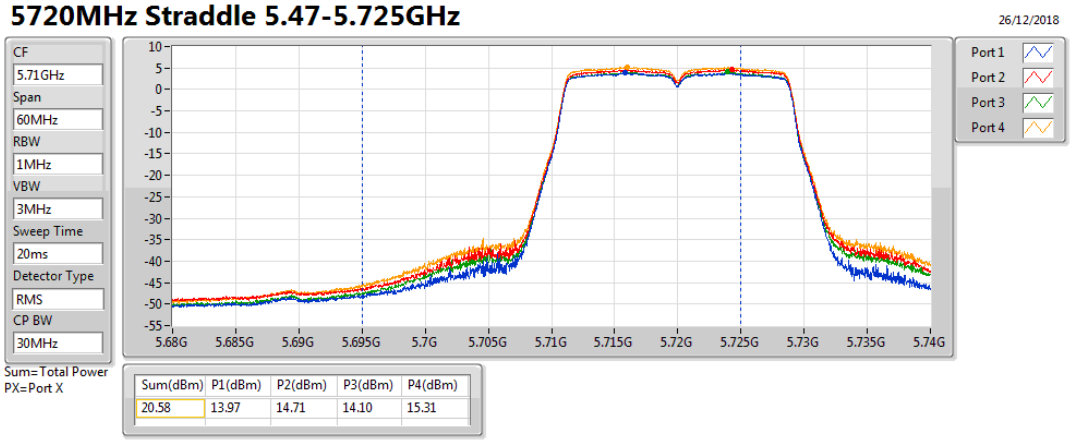
Result

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	-	-	-	-	-	-	-	-
5260MHz	Pass	6.38	16.13	16.26	16.40	17.54	22.64	23.60
5300MHz	Pass	6.38	16.45	16.09	16.58	17.51	22.71	23.60
5320MHz	Pass	6.38	16.17	15.89	16.51	17.46	22.57	23.60
5500MHz	Pass	6.38	16.75	17.35	16.96	18.00	23.31	23.60
5580MHz	Pass	6.38	16.91	17.33	16.95	18.08	23.36	23.60
5700MHz	Pass	6.38	17.06	17.45	17.07	18.43	23.56	23.60
5720MHz Straddle 5.47-5.725GHz	Pass	6.38	13.97	14.71	14.10	15.31	20.58	22.61
5720MHz Straddle 5.725-5.85GHz	Pass	6.38	8.55	9.41	8.60	10.41	15.33	29.62
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	6.38	16.89	16.64	17.26	18.40	23.37	23.60
5310MHz	Pass	6.38	17.04	16.69	17.22	18.38	23.40	23.60
5510MHz	Pass	6.38	16.90	17.49	17.19	18.28	23.52	23.60
5550MHz	Pass	6.38	16.75	17.32	17.04	18.19	23.38	23.60
5670MHz	Pass	6.38	16.73	17.40	17.20	18.10	23.41	23.60
5710MHz Straddle 5.47-5.725GHz	Pass	6.38	17.00	17.67	17.20	18.14	23.55	23.60
5710MHz Straddle 5.725-5.85GHz	Pass	6.38	6.78	7.56	6.95	8.31	13.46	29.62
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	6.38	15.55	15.32	15.82	17.11	22.03	23.60
5530MHz	Pass	6.38	16.02	16.47	16.38	17.67	22.70	23.60
5610MHz	Pass	6.38	16.87	17.54	17.32	18.19	23.53	23.60
5690MHz Straddle 5.47-5.725GHz	Pass	6.38	16.93	17.66	17.24	18.26	23.57	23.60
5690MHz Straddle 5.725-5.85GHz	Pass	6.38	3.30	4.16	3.59	4.85	10.04	29.62

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

802.11ac VHT20-BF_Nss2,(MCS0)_4TX **AV Power**

5720MHz Straddle 5.47-5.725GHz

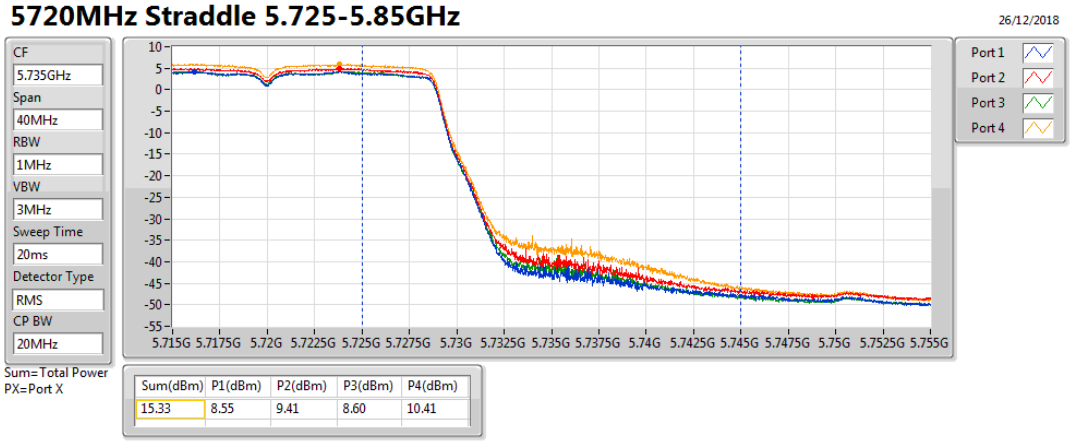


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
20.58	13.97	14.71	14.10	15.31

802.11ac VHT20-BF_Nss2,(MCS0)_4TX **AV Power**

5720MHz Straddle 5.725-5.85GHz

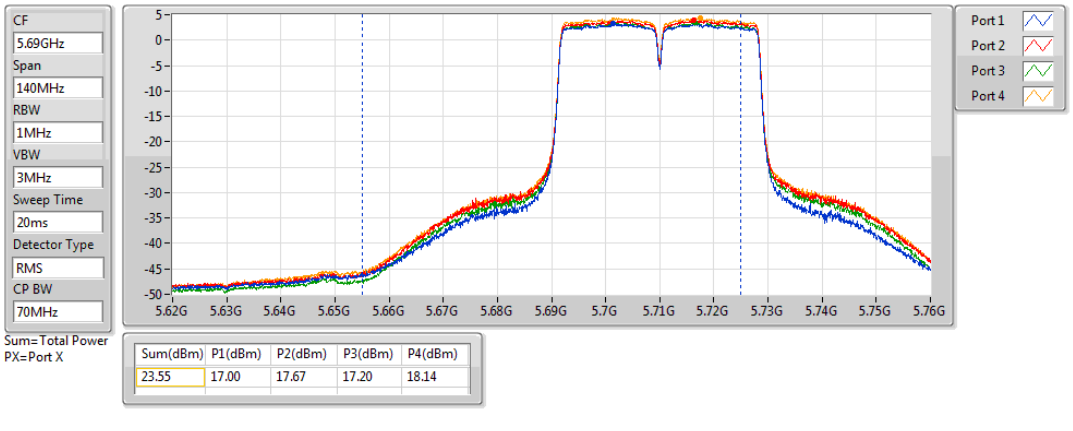


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
15.33	8.55	9.41	8.60	10.41

802.11ac VHT40-BF_Nss2,(MCS0)_4TX **AV Power**

5710MHz Straddle 5.47-5.725GHz

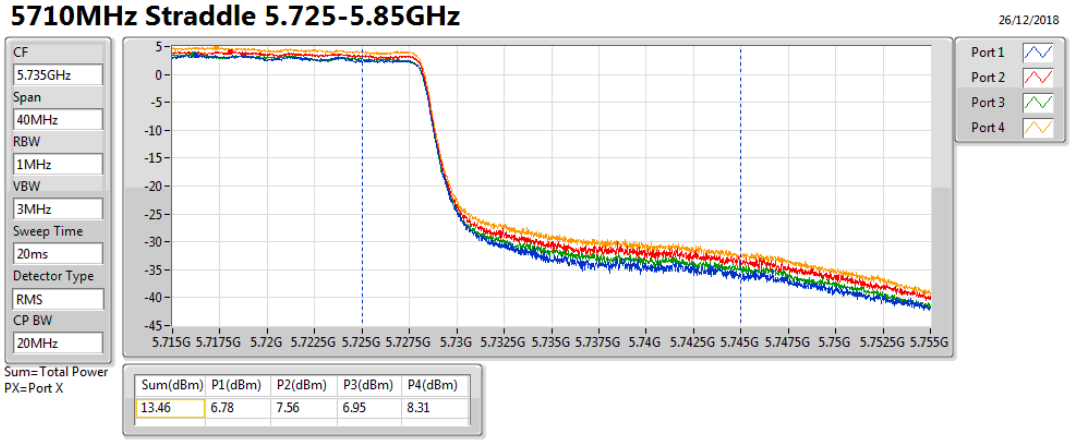


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
23.55	17.00	17.67	17.20	18.14

802.11ac VHT40-BF_Nss2,(MCS0)_4TX — AV Power

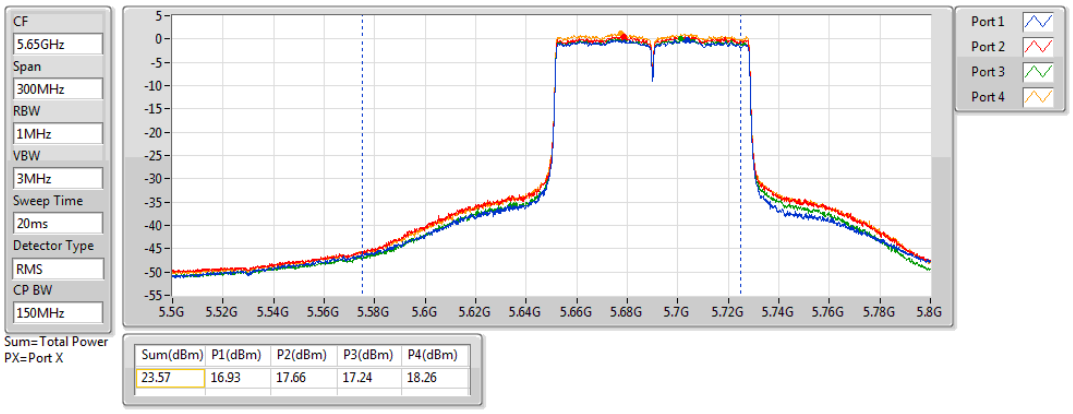
5710MHz Straddle 5.725-5.85GHz



Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
13.46	6.78	7.56	6.95	8.31

802.11ac VHT80-BF_Nss2,(MCS0)_4TX — AV Power

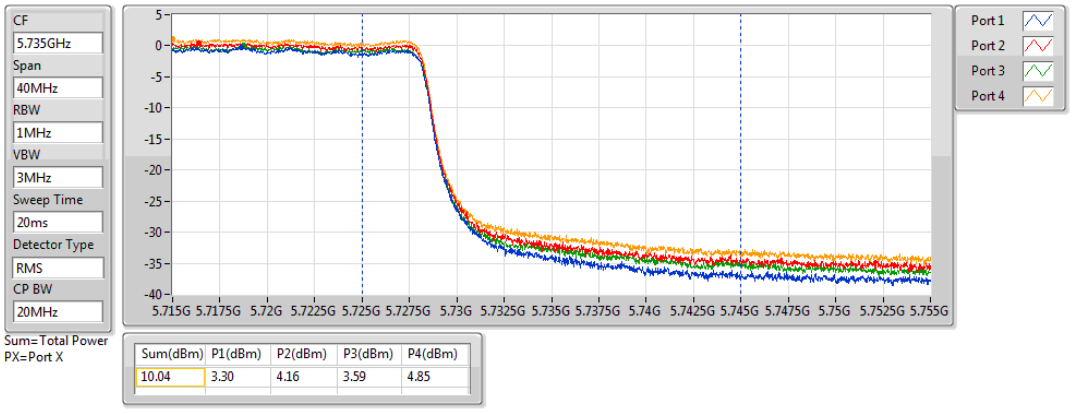
5690MHz Straddle 5.47-5.725GHz



Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
23.57	16.93	17.66	17.24	18.26

802.11ac VHT80-BF_Nss2,(MCS0)_4TX — AV Power

5690MHz Straddle 5.725-5.85GHz



Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
10.04	3.30	4.16	3.59	4.85

For 802.11ac (VHT80+80) mode, Nss1:

Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11ac VHT80+80_NSS1,(MCS0)_4TX	19.26	0.08433
5.25-5.35GHz	-	-
802.11ac VHT80+80_NSS1,(MCS0)_4TX	19.34	0.08590
5.47-5.725GHz	-	-
802.11ac VHT80+80_NSS1,(MCS0)_4TX	22.61	0.18239

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 VHT80+80_NSS1,(MCS0)_4TX	-	-	-	-	-	-	-	-
#5210MHz,5290MHz	Pass	3.37	16.24	16.26			19.26	30.00
802.11ac VHT80+80_NSS1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz,#5290MHz	Pass	3.37			15.77	16.83	19.34	23.98
802.11ac VHT80+80_NSS1,(MCS0)_4TX	-	-	-	-	-	-	-	-
#5530MHz,#5610MHz	Pass	3.37	16.39	16.50	16.55	16.90	22.61	23.98

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

For Nss1:
Summary

Mode	PD (dBm/RBW)
5.25-5.35GHz	-
802.11a_Nss1,(6Mbps)_4TX	7.47
802.11ac VHT20_Nss1,(MCS0)_4TX	7.56
802.11ac VHT40_Nss1,(MCS0)_4TX	7.47
802.11ac VHT80_Nss1,(MCS0)_4TX	1.85
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	7.26
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	4.46
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	1.58
5.47-5.725GHz	-
802.11a_Nss1,(6Mbps)_4TX	7.57
802.11ac VHT20_Nss1,(MCS0)_4TX	7.60
802.11ac VHT40_Nss1,(MCS0)_4TX	7.44
802.11ac VHT80_Nss1,(MCS0)_4TX	4.75
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	7.41
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	4.57
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	1.64
5.725-5.85GHz	-
802.11a_Nss1,(6Mbps)_4TX	5.72
802.11ac VHT20_Nss1,(MCS0)_4TX	6.06
802.11ac VHT40_Nss1,(MCS0)_4TX	5.70
802.11ac VHT80_Nss1,(MCS0)_4TX	2.55
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	5.69
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	2.48
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-0.81

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

Result

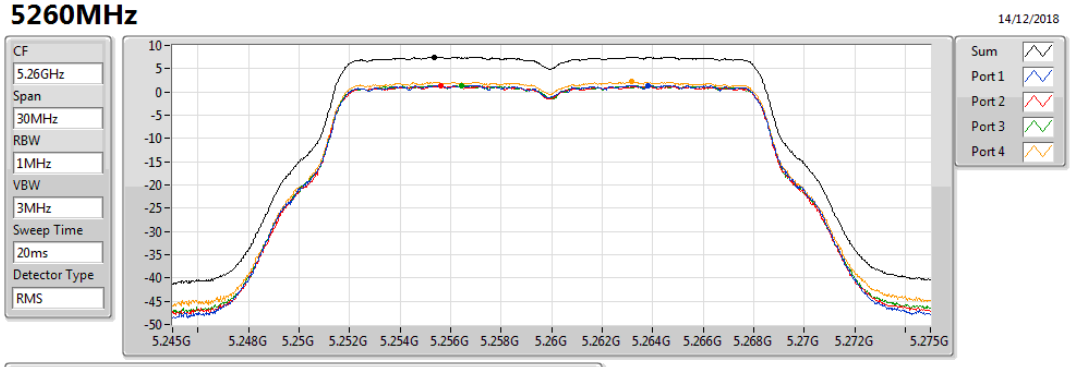
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	9.39	1.39	1.30	1.39	2.20	7.47	7.61
5300MHz	Pass	9.39	1.30	1.08	1.34	2.21	7.44	7.61
5320MHz	Pass	9.39	1.34	1.17	1.28	2.33	7.45	7.61
5500MHz	Pass	9.39	1.25	1.39	1.40	2.25	7.47	7.61
5580MHz	Pass	9.39	1.28	1.48	1.42	2.52	7.57	7.61
5700MHz	Pass	9.39	1.43	1.43	1.39	2.28	7.54	7.61
5720MHz Straddle 5.47-5.725GHz	Pass	9.39	1.40	1.30	1.43	2.21	7.52	7.61
5720MHz Straddle 5.725-5.85GHz	Pass	9.39	-0.39	-0.37	-0.58	0.32	5.72	26.61
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	9.39	1.41	1.26	1.42	2.28	7.56	7.61
5300MHz	Pass	9.39	1.22	1.11	1.40	2.30	7.45	7.61
5320MHz	Pass	9.39	1.21	1.21	1.30	2.40	7.50	7.61
5500MHz	Pass	9.39	1.09	1.36	1.55	2.40	7.54	7.61
5580MHz	Pass	9.39	1.33	1.43	1.45	2.48	7.60	7.61
5700MHz	Pass	9.39	1.43	1.51	1.39	2.34	7.59	7.61
5720MHz Straddle 5.47-5.725GHz	Pass	9.39	1.40	1.41	1.26	2.19	7.57	7.61
5720MHz Straddle 5.725-5.85GHz	Pass	9.39	-0.05	0.04	-0.33	0.64	6.06	26.61
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	9.39	1.44	1.34	1.33	2.00	7.47	7.61
5310MHz	Pass	9.39	0.34	0.02	0.21	1.33	6.43	7.61
5510MHz	Pass	9.39	0.40	0.55	0.64	1.21	6.66	7.61
5550MHz	Pass	9.39	1.23	1.37	1.42	1.99	7.43	7.61
5670MHz	Pass	9.39	1.40	1.30	1.39	2.04	7.44	7.61
5710MHz Straddle 5.47-5.725GHz	Pass	9.39	1.26	1.48	1.32	1.99	7.42	7.61
5710MHz Straddle 5.725-5.85GHz	Pass	9.39	-0.41	-0.34	-0.64	0.34	5.70	26.61
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	9.39	-4.32	-4.82	-4.00	-3.40	1.85	7.61
5530MHz	Pass	9.39	-3.87	-3.77	-3.84	-3.00	2.30	7.61
5610MHz	Pass	9.39	-1.23	-1.29	-1.31	-0.95	4.75	7.61
5690MHz Straddle 5.47-5.725GHz	Pass	9.39	-1.32	-1.06	-1.16	-1.01	4.71	7.61
5690MHz Straddle 5.725-5.85GHz	Pass	9.39	-3.54	-3.11	-3.74	-3.27	2.55	26.61
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	9.39	1.14	0.93	0.95	2.02	7.26	7.61
5300MHz	Pass	9.39	1.13	0.85	0.90	2.24	7.24	7.61
5320MHz	Pass	9.39	1.03	0.71	0.74	2.20	7.14	7.61
5500MHz	Pass	9.39	0.82	1.18	1.23	2.14	7.29	7.61
5580MHz	Pass	9.39	1.18	1.25	1.28	2.16	7.41	7.61
5700MHz	Pass	9.39	1.13	1.05	1.18	1.80	7.24	7.61
5720MHz Straddle 5.47-5.725GHz	Pass	9.39	1.17	1.25	1.24	1.70	7.27	7.61
5720MHz Straddle 5.725-5.85GHz	Pass	9.39	-0.54	-0.51	-0.37	0.20	5.69	26.61
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	9.39	-1.61	-1.98	-1.89	-0.82	4.42	7.61

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)
5310MHz	Pass	9.39	-1.47	-1.80	-1.71	-0.89	4.46	7.61
5510MHz	Pass	9.39	-1.59	-1.55	-1.61	-0.69	4.57	7.61
5550MHz	Pass	9.39	-1.48	-1.63	-1.46	-1.73	4.36	7.61
5670MHz	Pass	9.39	-1.77	-1.53	-1.58	-0.71	4.56	7.61
5710MHz Straddle 5.47-5.725GHz	Pass	9.39	-1.66	-1.58	-1.61	-0.80	4.52	7.61
5710MHz Straddle 5.725-5.85GHz	Pass	9.39	-3.73	-3.50	-3.63	-2.90	2.48	26.61
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	9.39	-4.40	-4.84	-4.27	-3.68	1.58	7.61
5530MHz	Pass	9.39	-4.98	-4.84	-4.95	-4.31	1.06	7.61
5610MHz	Pass	9.39	-4.39	-4.46	-4.52	-3.80	1.64	7.61
5690MHz Straddle 5.47-5.725GHz	Pass	9.39	-4.84	-4.79	-4.55	-4.08	1.35	7.61
5690MHz Straddle 5.725-5.85GHz	Pass	9.39	-6.95	-6.61	-6.95	-6.38	-0.81	26.61

DG = Directional Gain; **RBW** = 500kHz 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 Xpower density;

802.11a_Nss1,(6Mbps)_4TX **PSD**

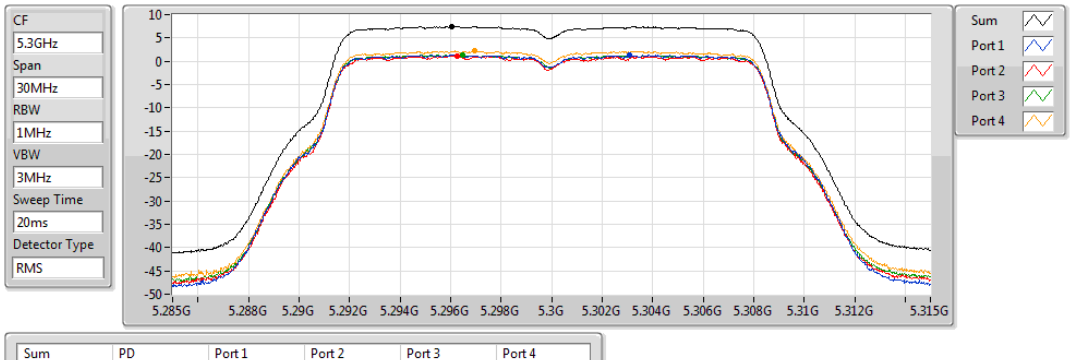
5260MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.47	7.47	1.39	1.30	1.39	2.20

802.11a_Nss1,(6Mbps)_4TX **PSD**

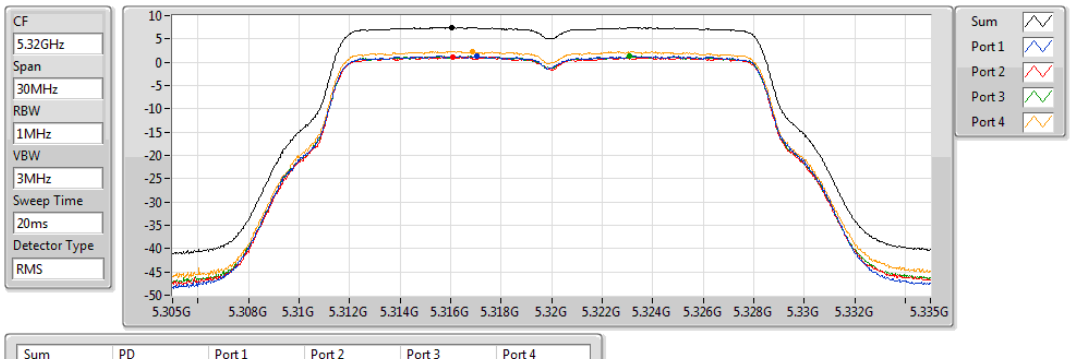
5300MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.44	7.44	1.30	1.08	1.34	2.21

802.11a_Nss1,(6Mbps)_4TX **PSD**

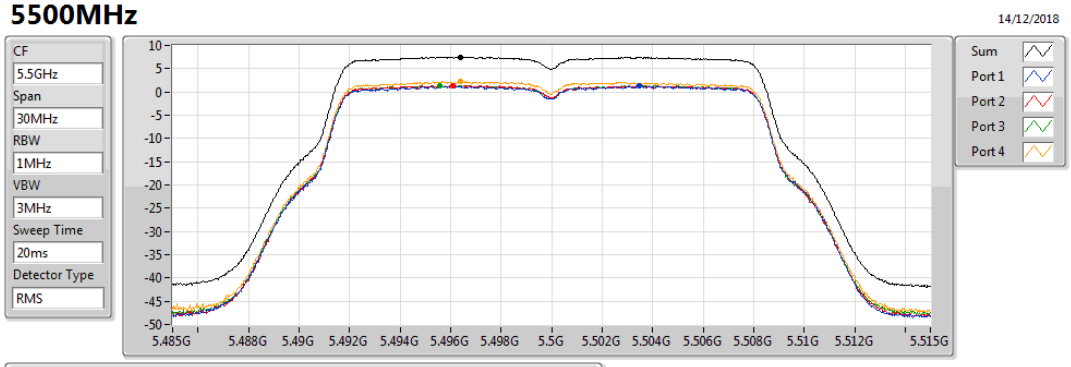
5320MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.45	7.45	1.34	1.17	1.28	2.33

802.11a_Nss1,(6Mbps)_4TX **PSD**

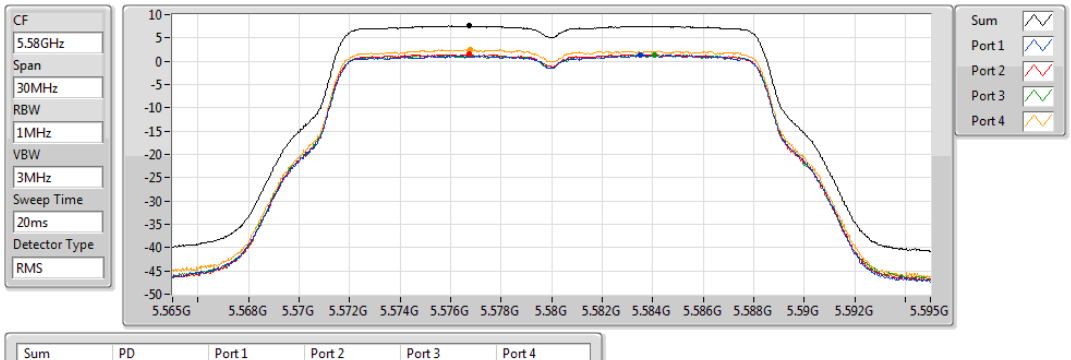
5500MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.47	7.47	1.25	1.39	1.40	2.25

802.11a_Nss1,(6Mbps)_4TX **PSD**

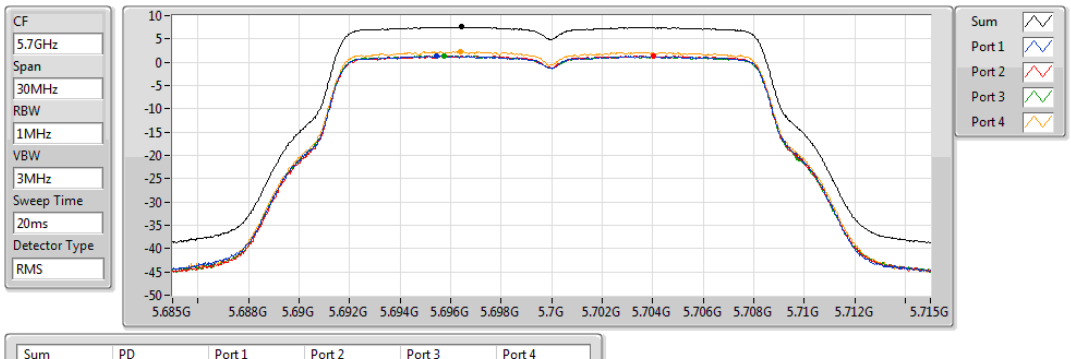
5580MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.57	7.57	1.28	1.48	1.42	2.52

802.11a_Nss1,(6Mbps)_4TX **PSD**

5700MHz

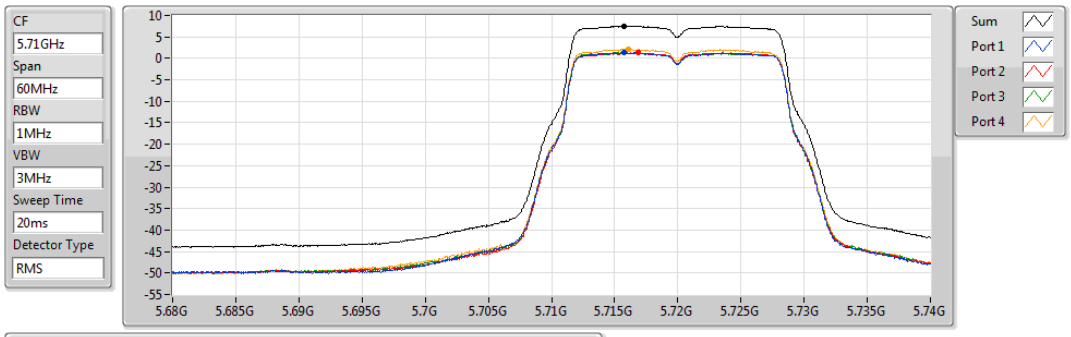


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.54	7.54	1.43	1.43	1.39	2.28

802.11a_Nss1,(6Mbps)_4TX **PSD**

5720MHz Straddle 5.47-5.725GHz

14/12/2018

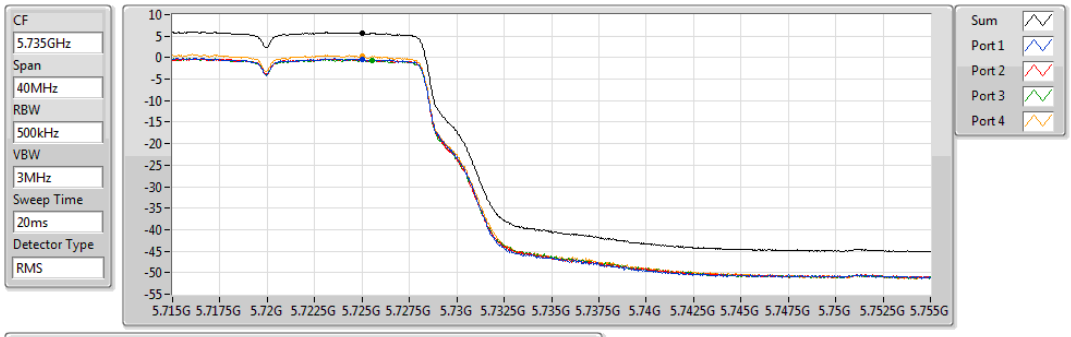


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.52	7.52	1.40	1.30	1.43	2.21

802.11a_Nss1,(6Mbps)_4TX **PSD**

5720MHz Straddle 5.725-5.85GHz

14/12/2018

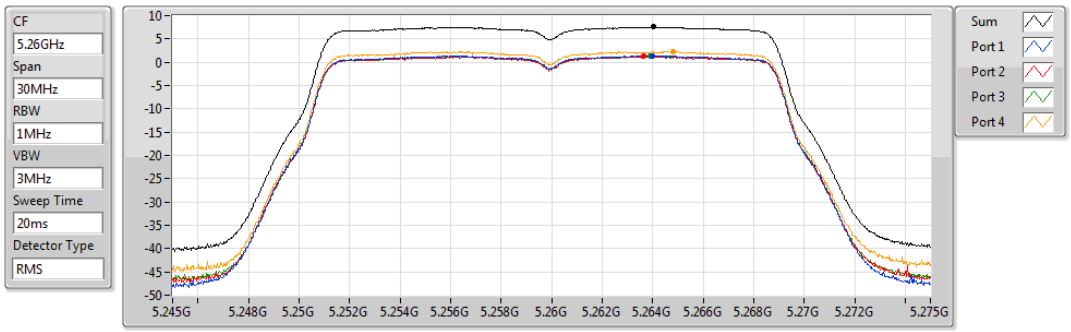


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.72	5.72	-0.39	-0.37	-0.58	0.32

802.11ac VHT20_Nss1,(MCS0)_4TX **PSD**

5260MHz

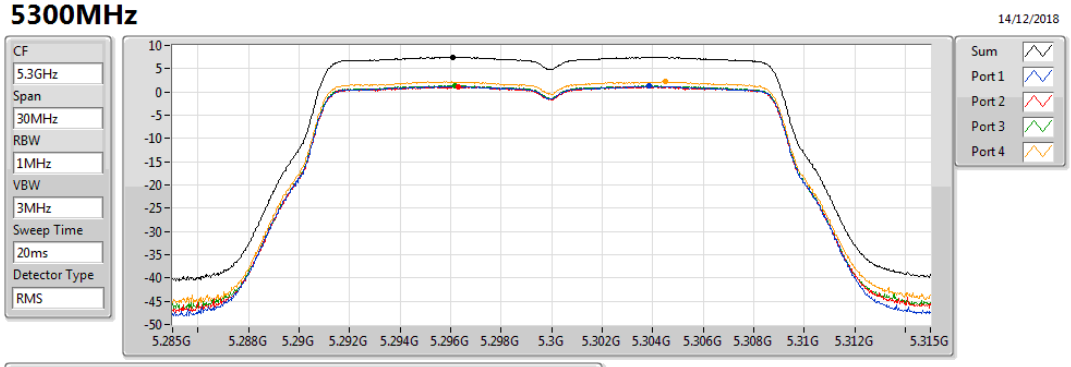
14/12/2018



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.56	7.56	1.41	1.26	1.42	2.28

802.11ac VHT20_Nss1,(MCS0)_4TX **PSD**

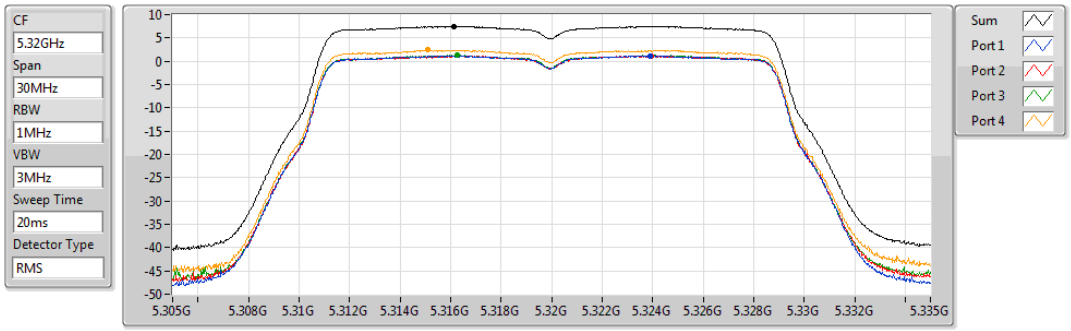
5300MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.45	7.45	1.22	1.11	1.40	2.30

802.11ac VHT20_Nss1,(MCS0)_4TX **PSD**

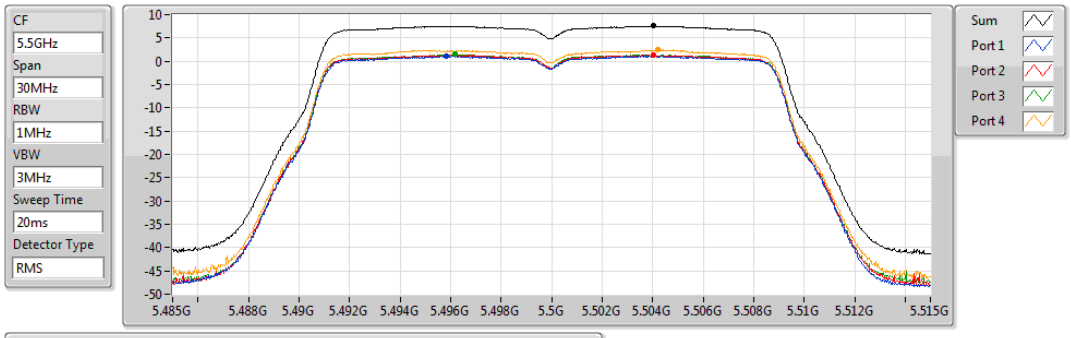
5320MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.50	7.50	1.21	1.21	1.30	2.40

802.11ac VHT20_Nss1,(MCS0)_4TX **PSD**

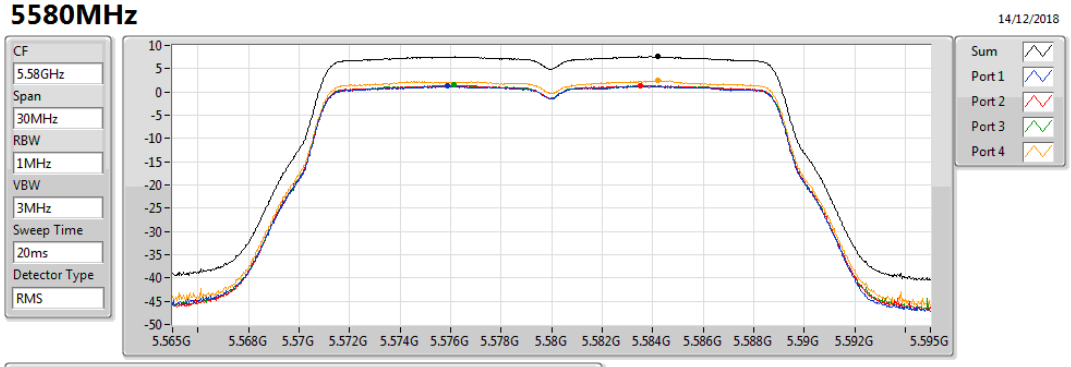
5500MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.54	7.54	1.09	1.36	1.55	2.40

802.11ac VHT20_Nss1,(MCS0)_4TX PSD

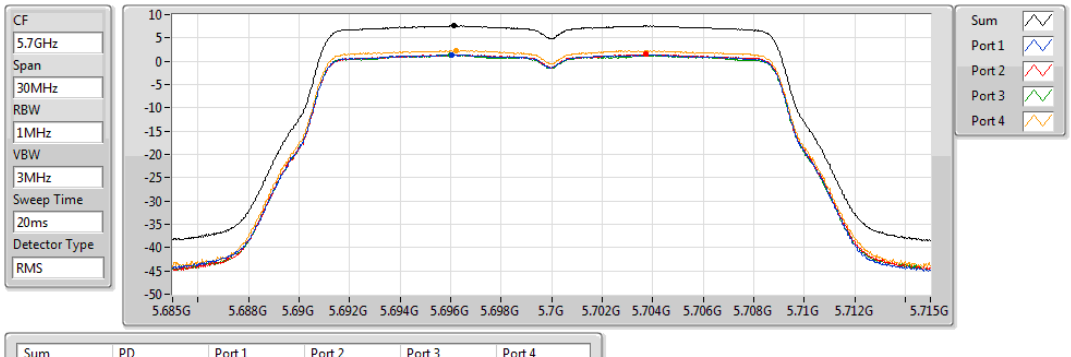
5580MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.60	7.60	1.33	1.43	1.45	2.48

802.11ac VHT20_Nss1,(MCS0)_4TX PSD

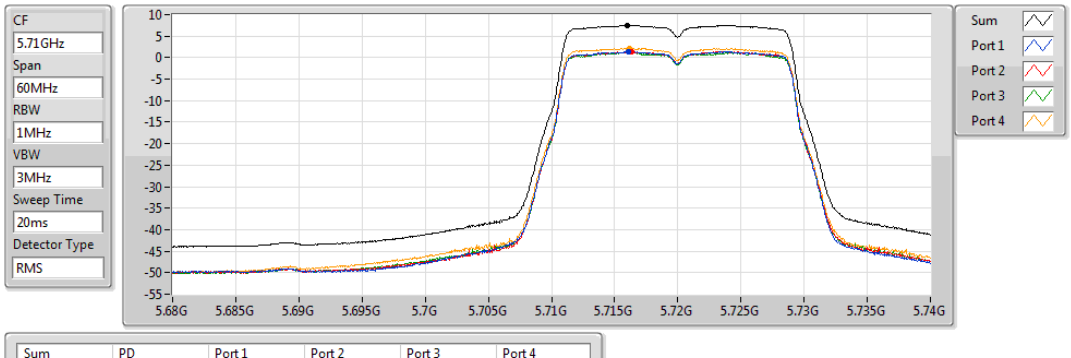
5700MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.59	7.59	1.43	1.51	1.39	2.34

802.11ac VHT20_Nss1,(MCS0)_4TX PSD

5720MHz Straddle 5.47-5.725GHz

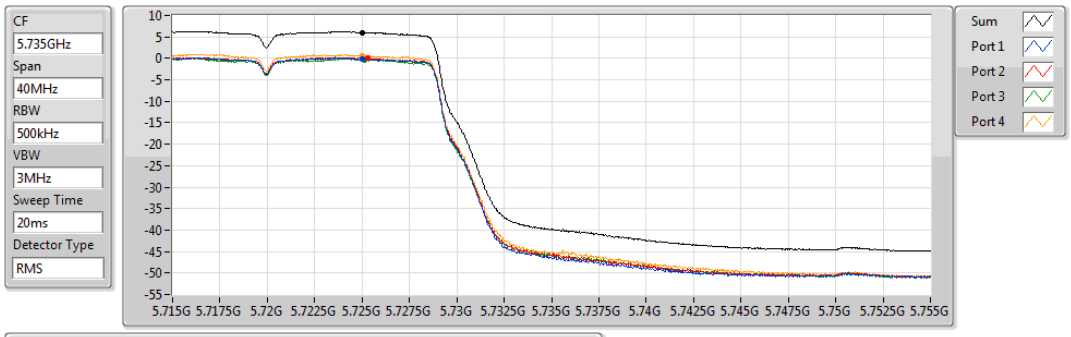


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.57	7.57	1.40	1.41	1.26	2.19

802.11ac VHT20_Nss1,(MCS0)_4TX **PSD**

5720MHz Straddle 5.725-5.85GHz

14/12/2018

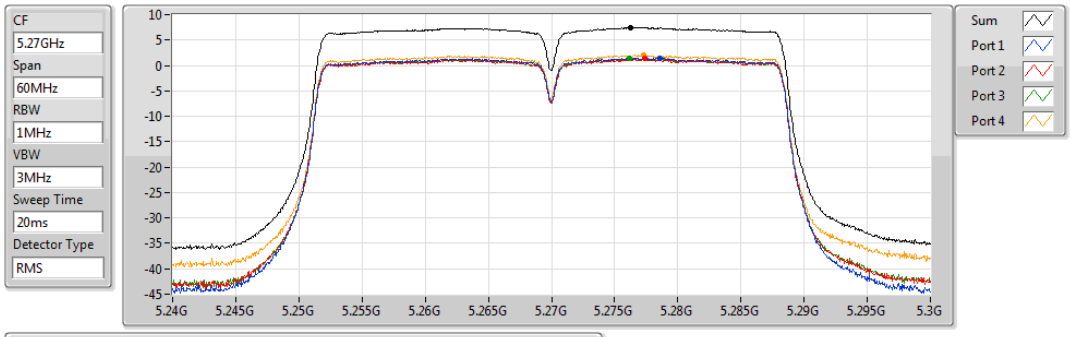


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.06	6.06	-0.05	0.04	-0.33	0.64

802.11ac VHT40_Nss1,(MCS0)_4TX **PSD**

5270MHz

14/12/2018

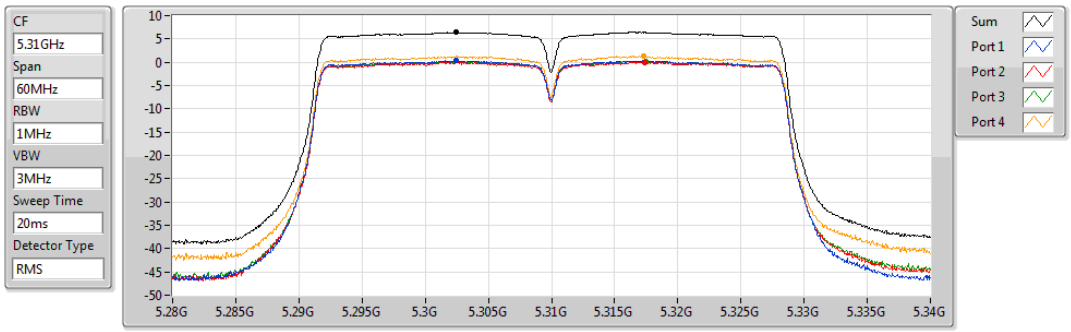


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.47	7.47	1.44	1.34	1.33	2.00

802.11ac VHT40_Nss1,(MCS0)_4TX **PSD**

5310MHz

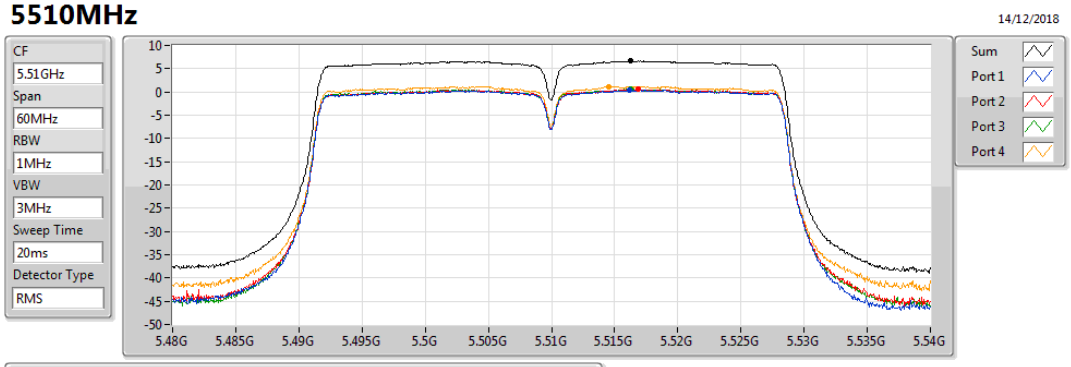
14/12/2018



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	0.34	0.02	0.21	1.33

802.11ac VHT40_Nss1,(MCS0)_4TX **PSD**

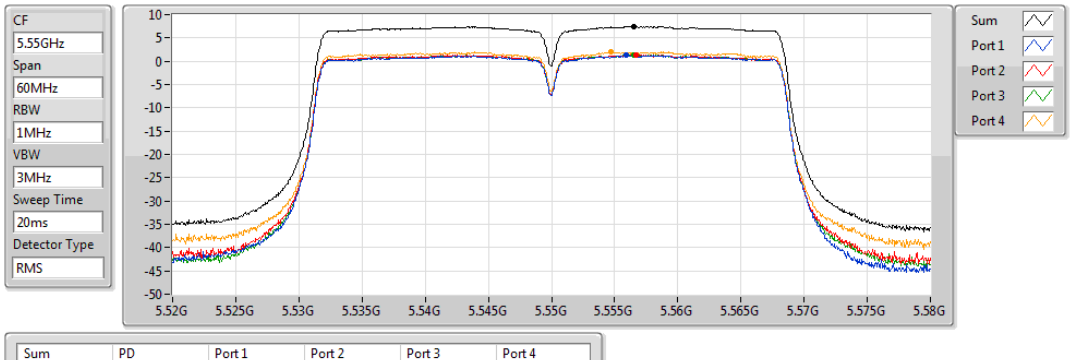
5510MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.66	6.66	0.40	0.55	0.64	1.21

802.11ac VHT40_Nss1,(MCS0)_4TX **PSD**

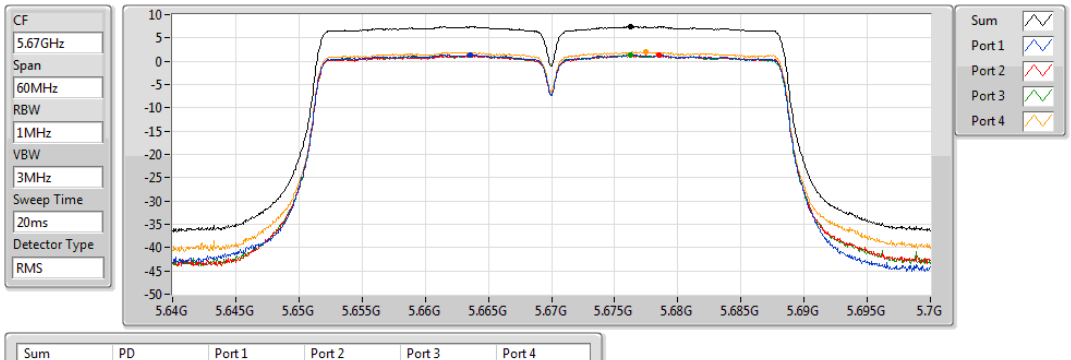
5550MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.43	7.43	1.23	1.37	1.42	1.99

802.11ac VHT40_Nss1,(MCS0)_4TX **PSD**

5670MHz

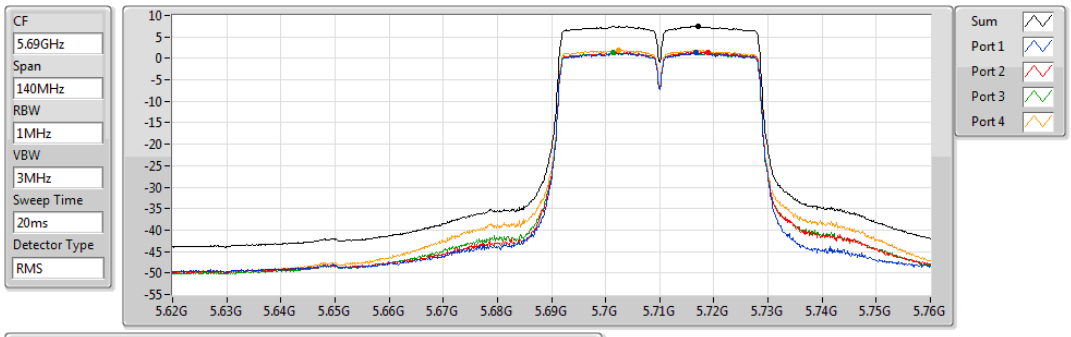


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.44	7.44	1.40	1.30	1.39	2.04

802.11ac VHT40_Nss1,(MCS0)_4TX **PSD**

5710MHz Straddle 5.47-5.725GHz

14/12/2018

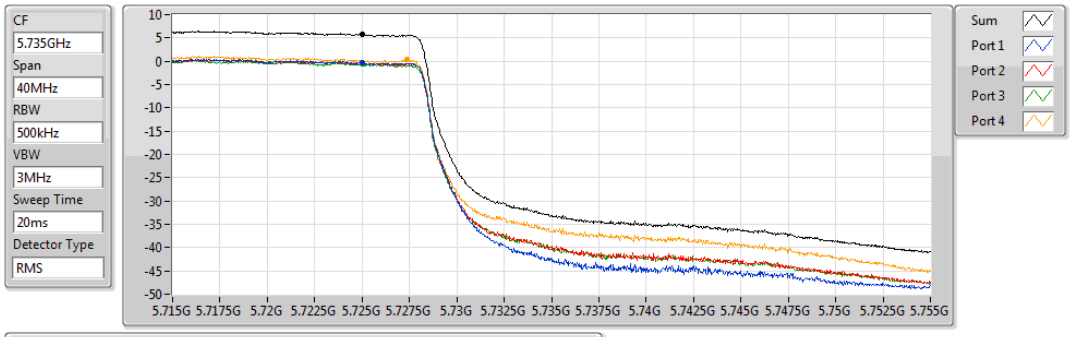


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.42	7.42	1.26	1.48	1.32	1.99

802.11ac VHT40_Nss1,(MCS0)_4TX **PSD**

5710MHz Straddle 5.725-5.85GHz

14/12/2018

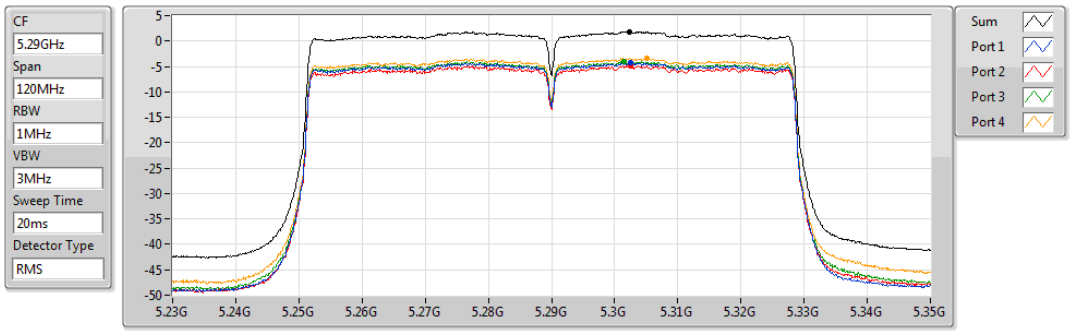


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.70	5.70	-0.41	-0.34	-0.64	0.34

802.11ac VHT80_Nss1,(MCS0)_4TX **PSD**

5290MHz

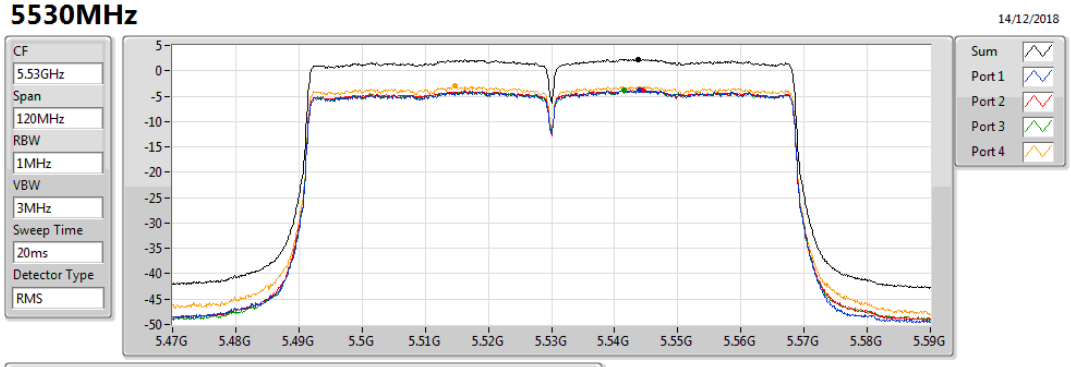
14/12/2018



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.85	1.85	-4.32	-4.82	-4.00	-3.40

802.11ac VHT80_Nss1,(MCS0)_4TX **PSD**

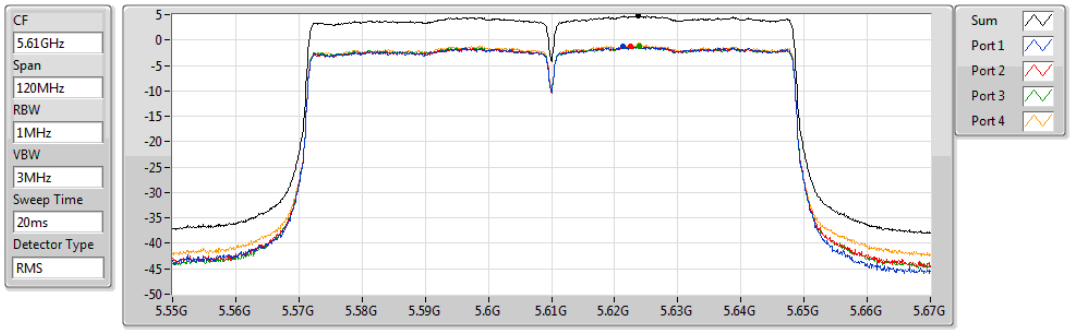
5530MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.30	2.30	-3.87	-3.77	-3.84	-3.00

802.11ac VHT80_Nss1,(MCS0)_4TX **PSD**

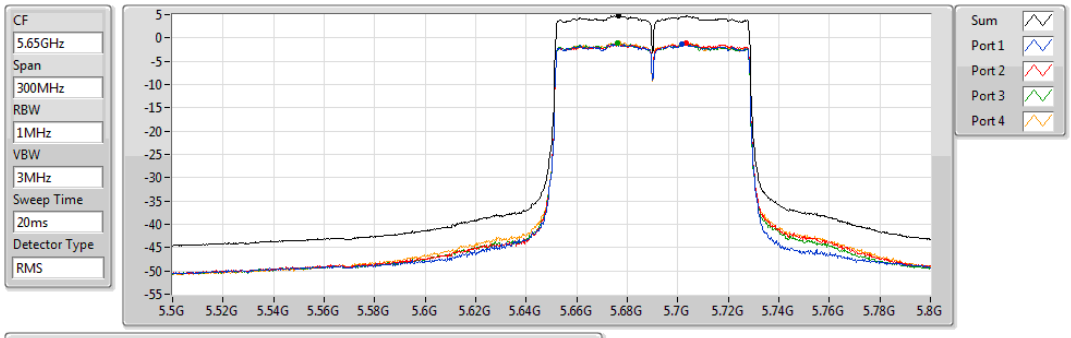
5610MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.75	4.75	-1.23	-1.29	-1.31	-0.95

802.11ac VHT80_Nss1,(MCS0)_4TX **PSD**

5690MHz Straddle 5.47-5.725GHz

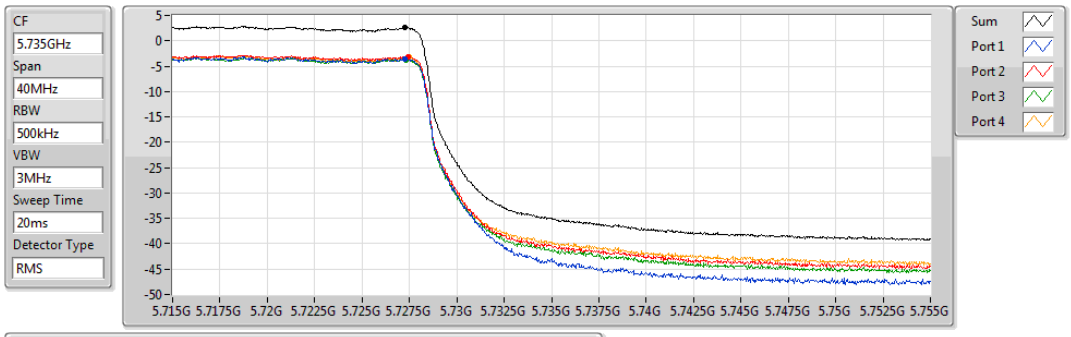


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.71	4.71	-1.32	-1.06	-1.16	-1.01

802.11ac VHT80_Nss1,(MCS0)_4TX PSD

5690MHz Straddle 5.725-5.85GHz

14/12/2018

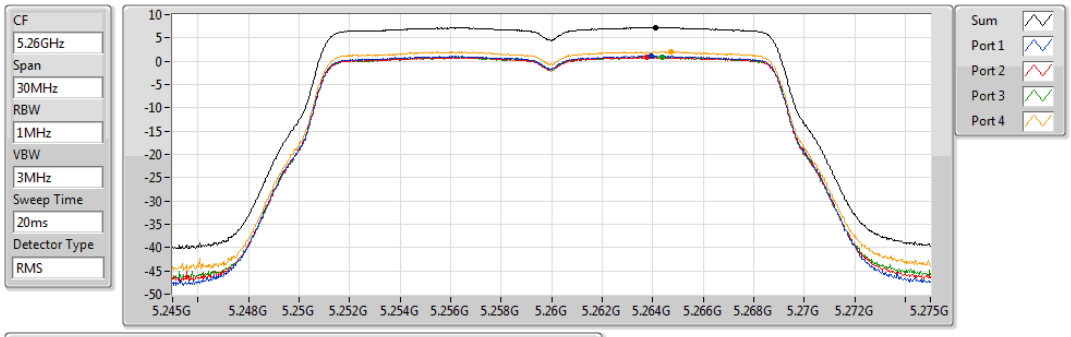


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.55	2.55	-3.54	-3.11	-3.74	-3.27

802.11ac VHT20-BF_Nss1,(MCS0)_4TX PSD

5260MHz

14/12/2018

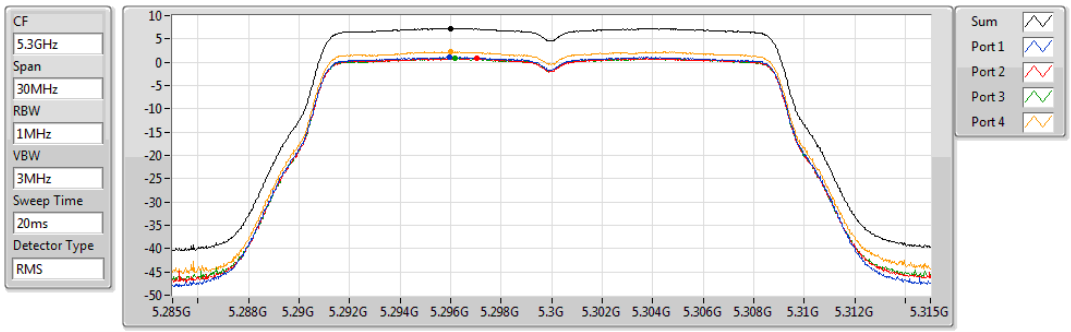


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.26	7.26	1.14	0.93	0.95	2.02

802.11ac VHT20-BF_Nss1,(MCS0)_4TX PSD

5300MHz

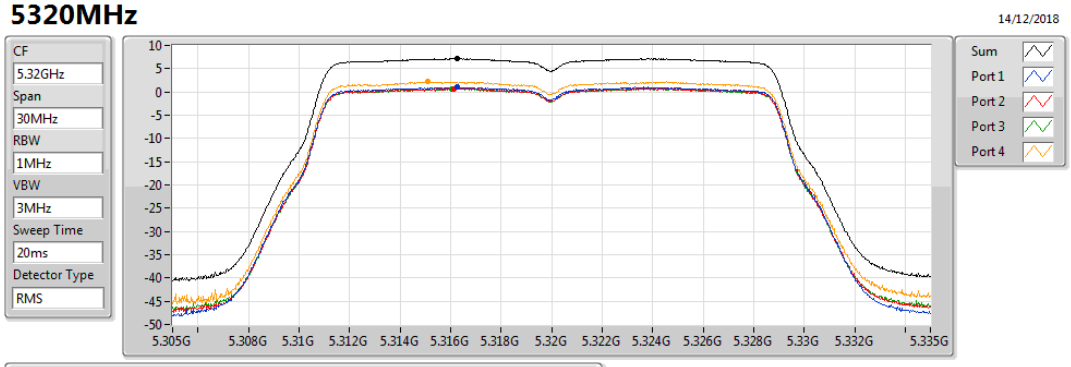
14/12/2018



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.24	7.24	1.13	0.85	0.90	2.24

802.11ac VHT20-BF_Nss1,(MCS0)_4TX **PSD**

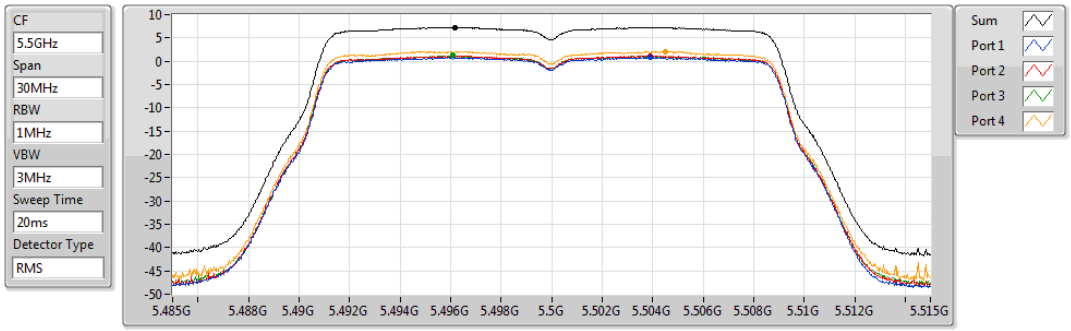
5320MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.14	7.14	1.03	0.71	0.74	2.20

802.11ac VHT20-BF_Nss1,(MCS0)_4TX **PSD**

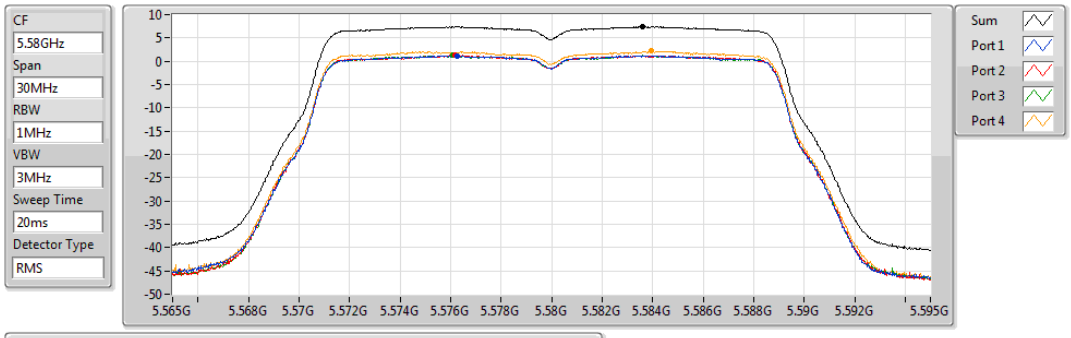
5500MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.29	7.29	0.82	1.18	1.23	2.14

802.11ac VHT20-BF_Nss1,(MCS0)_4TX **PSD**

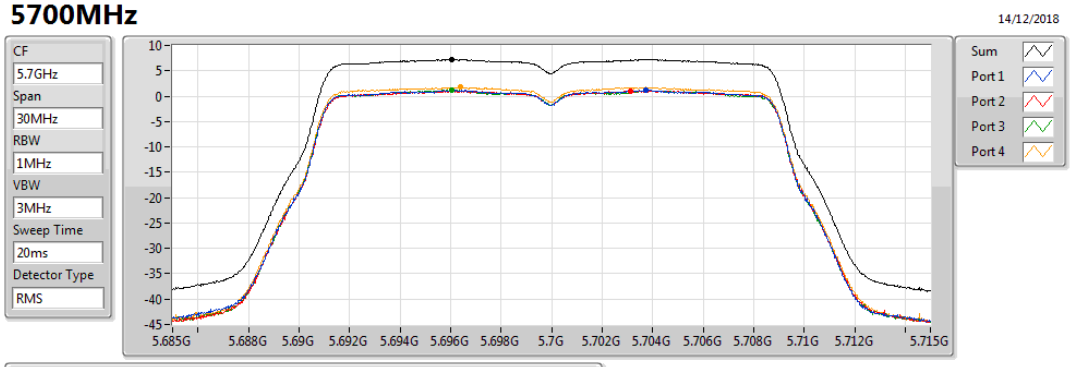
5580MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.41	7.41	1.18	1.25	1.28	2.16

802.11ac VHT20-BF_Nss1,(MCS0)_4TX **PSD**

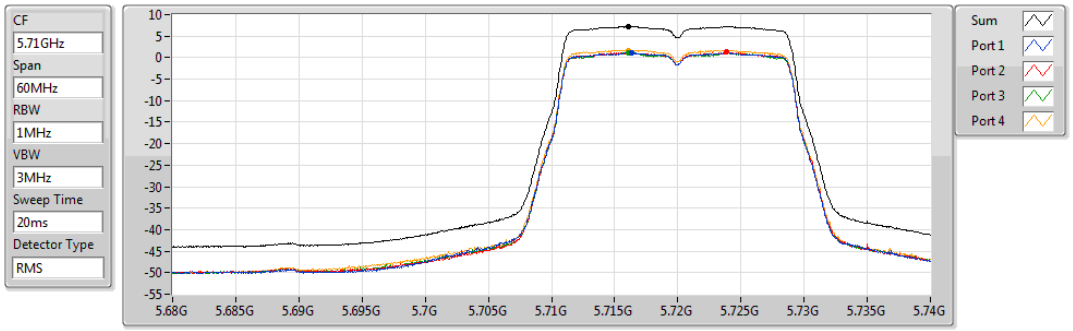
5700MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.24	7.24	1.13	1.05	1.18	1.80

802.11ac VHT20-BF_Nss1,(MCS0)_4TX **PSD**

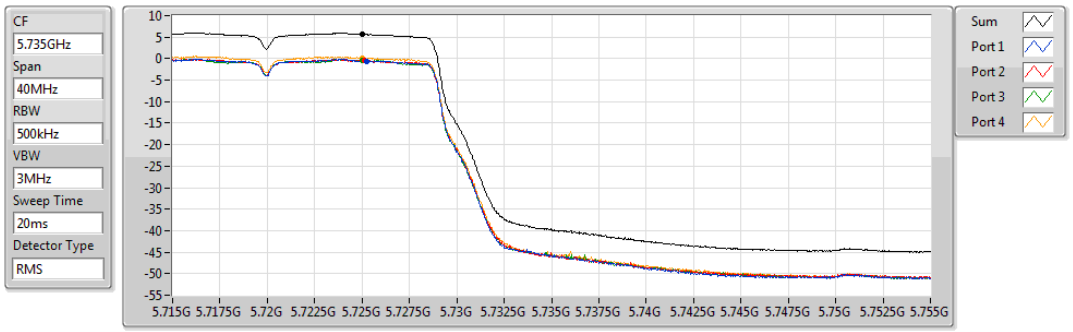
5720MHz Straddle 5.47-5.725GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.27	7.27	1.17	1.25	1.24	1.70

802.11ac VHT20-BF_Nss1,(MCS0)_4TX **PSD**

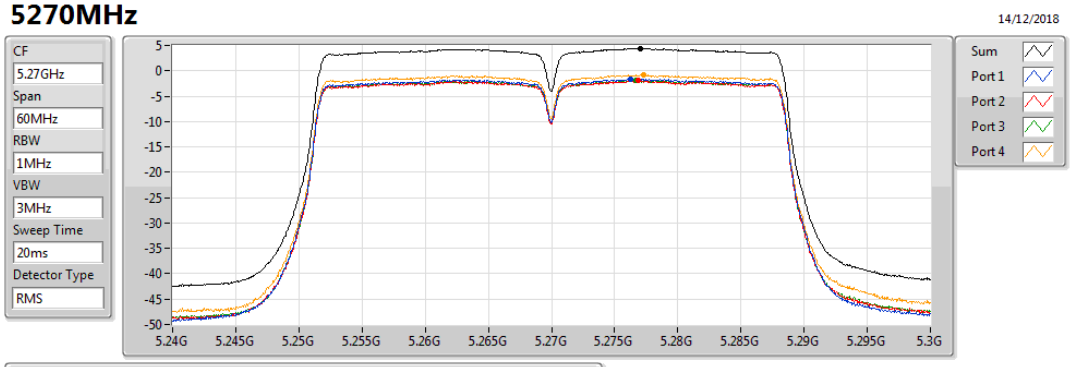
5720MHz Straddle 5.725-5.85GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.69	5.69	-0.54	-0.51	-0.37	0.20

802.11ac VHT40-BF_Nss1,(MCS0)_4TX **PSD**

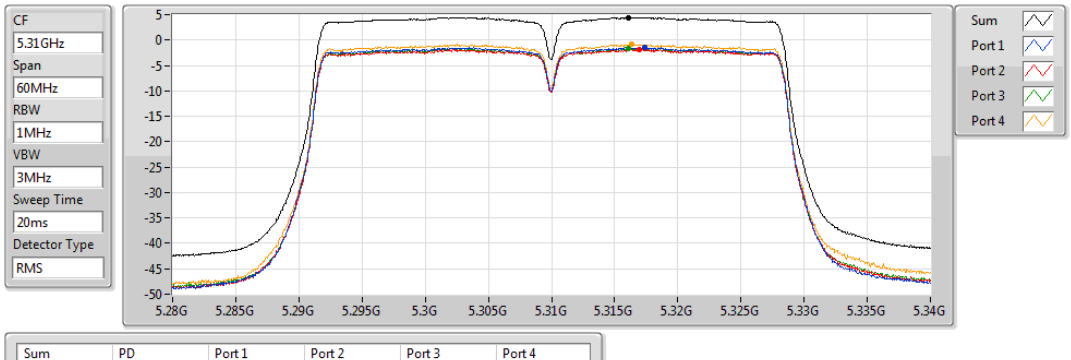
5270MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.42	4.42	-1.61	-1.98	-1.89	-0.82

802.11ac VHT40-BF_Nss1,(MCS0)_4TX **PSD**

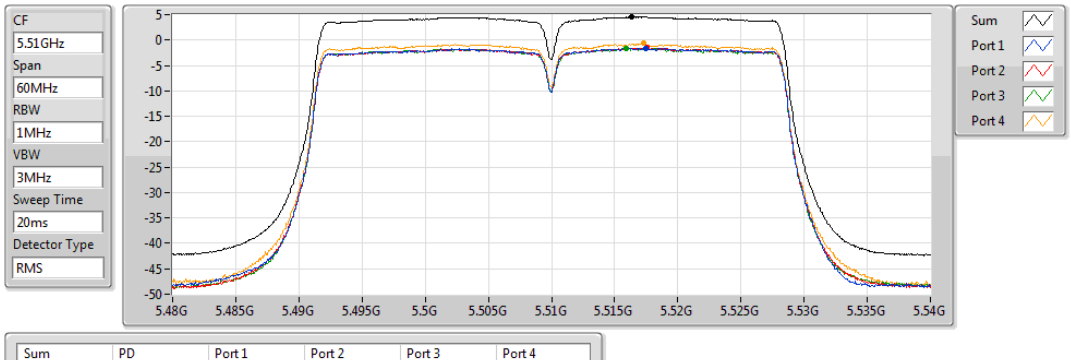
5310MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.46	4.46	-1.47	-1.80	-1.71	-0.89

802.11ac VHT40-BF_Nss1,(MCS0)_4TX **PSD**

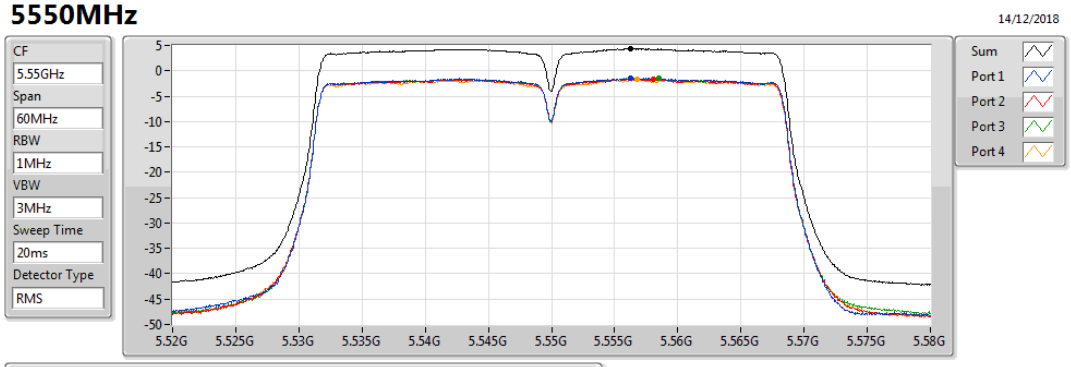
5510MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.57	4.57	-1.59	-1.55	-1.61	-0.69

802.11ac VHT40-BF_Nss1,(MCS0)_4TX PSD

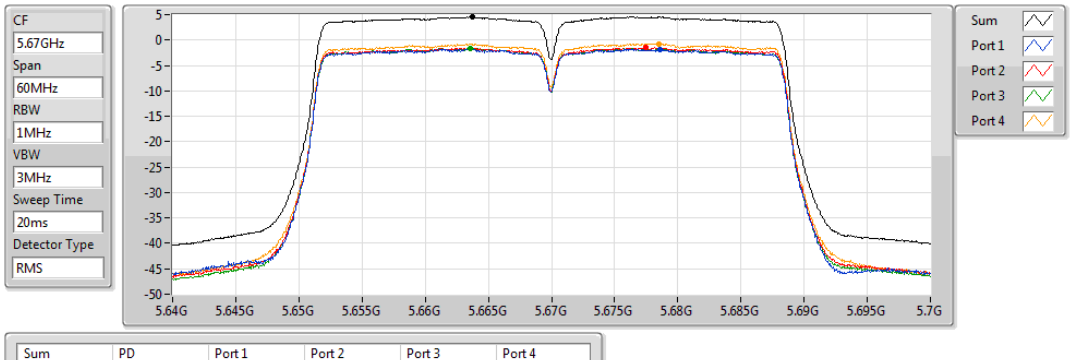
5550MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.36	4.36	-1.48	-1.63	-1.46	-1.73

802.11ac VHT40-BF_Nss1,(MCS0)_4TX PSD

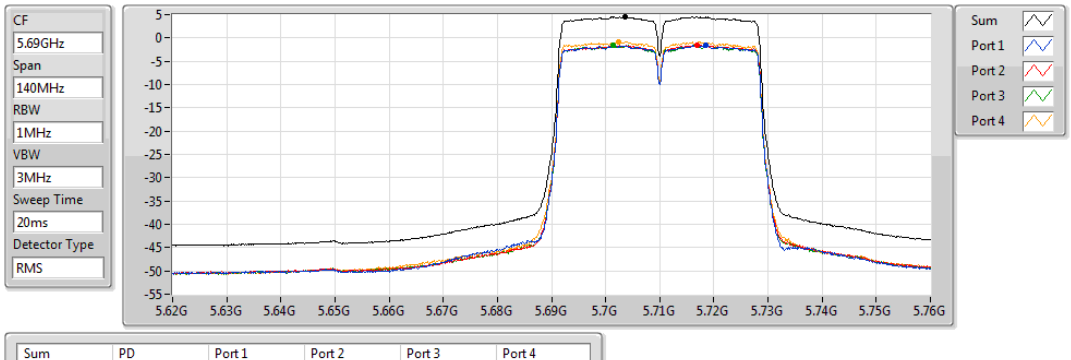
5670MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.56	4.56	-1.77	-1.53	-1.58	-0.71

802.11ac VHT40-BF_Nss1,(MCS0)_4TX PSD

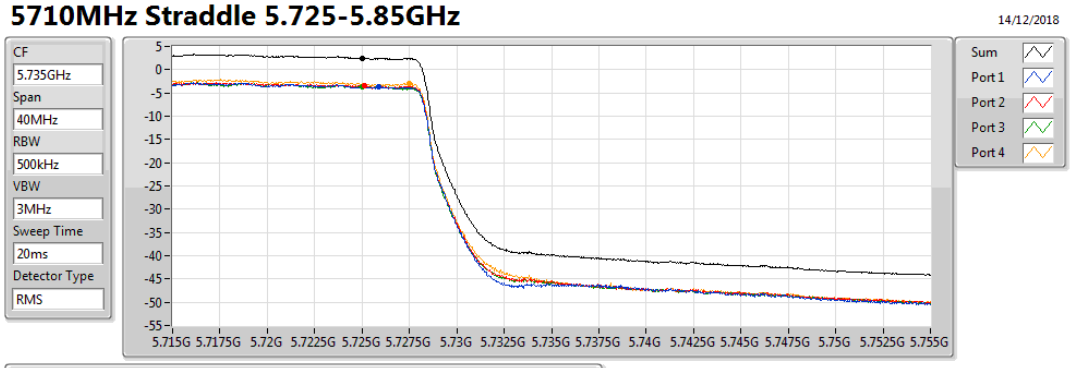
5710MHz Straddle 5.47-5.725GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.52	4.52	-1.66	-1.58	-1.61	-0.80

802.11ac VHT40-BF_Nss1,(MCS0)_4TX **PSD**

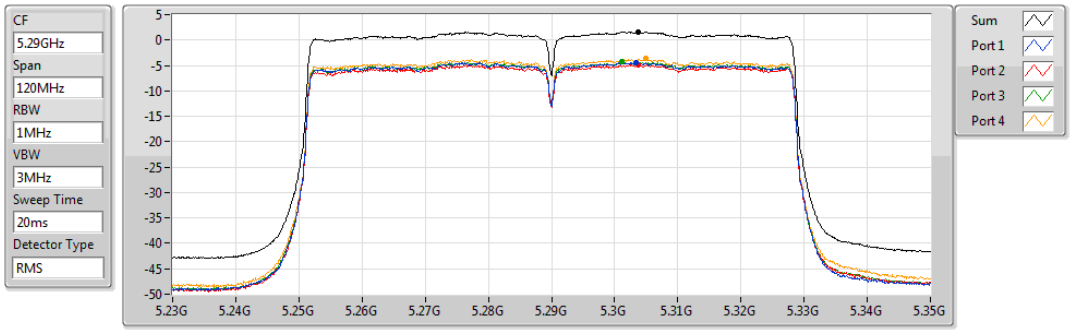
5710MHz Straddle 5.725-5.85GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.48	2.48	-3.73	-3.50	-3.63	-2.90

802.11ac VHT80-BF_Nss1,(MCS0)_4TX **PSD**

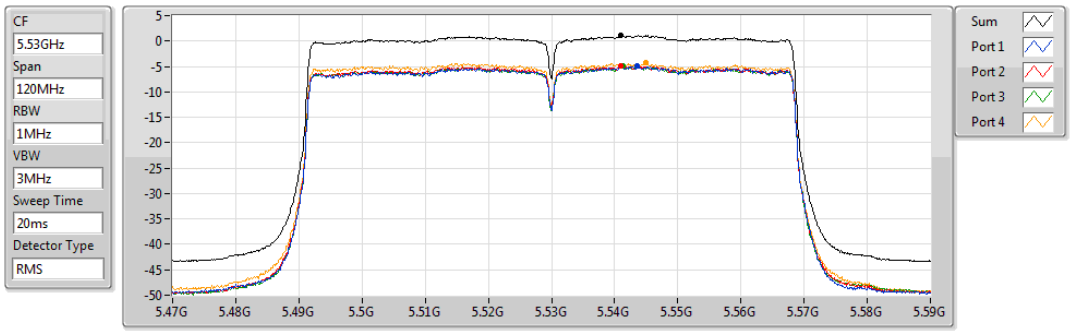
5290MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.58	1.58	-4.40	-4.84	-4.27	-3.68

802.11ac VHT80-BF_Nss1,(MCS0)_4TX **PSD**

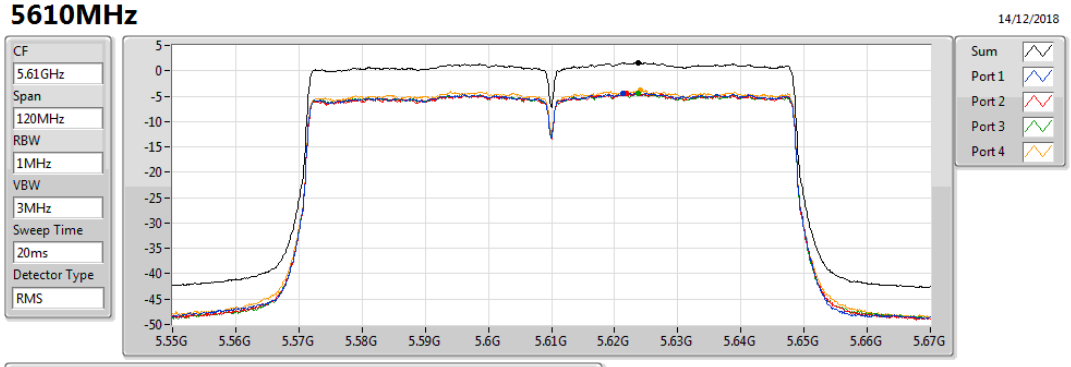
5530MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.06	1.06	-4.98	-4.84	-4.95	-4.31

802.11ac VHT80-BF_Nss1,(MCS0)_4TX PSD

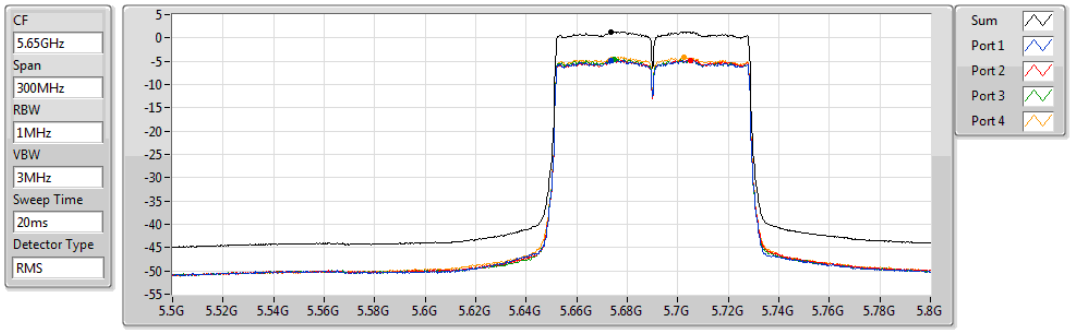
5610MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.64	1.64	-4.39	-4.46	-4.52	-3.80

802.11ac VHT80-BF_Nss1,(MCS0)_4TX PSD

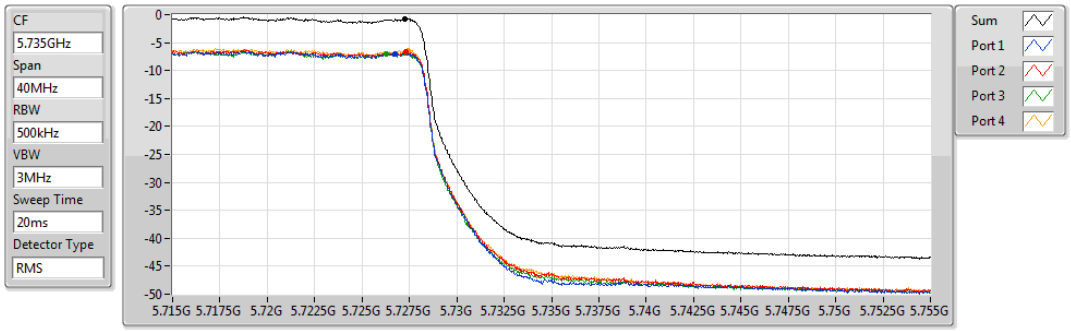
5690MHz Straddle 5.47-5.725GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.35	1.35	-4.84	-4.79	-4.55	-4.08

802.11ac VHT80-BF_Nss1,(MCS0)_4TX PSD

5690MHz Straddle 5.725-5.85GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.81	-0.81	-6.95	-6.61	-6.95	-6.38

For Nss2:

Summary

Mode	PD (dBm/RBW)
5.25-5.35GHz	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	10.60
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	9.18
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	6.36
5.47-5.725GHz	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	10.56
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	9.45
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	6.36
5.725-5.85GHz	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	7.95
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	6.43
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	3.33

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

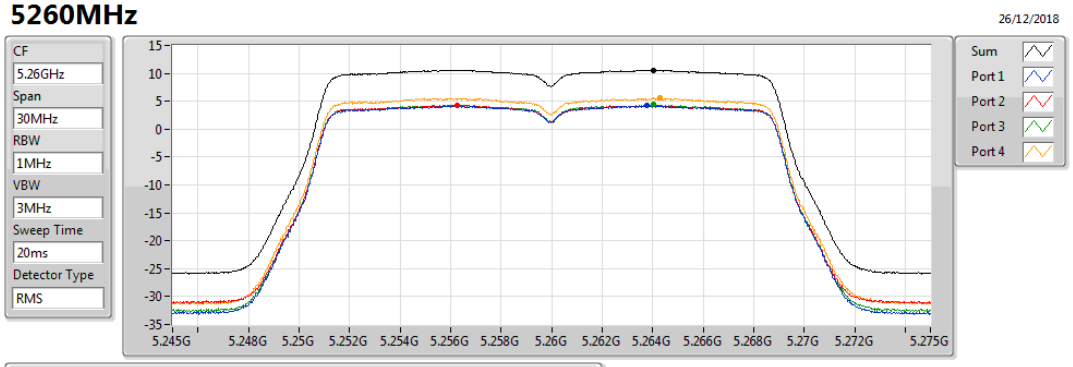
Result

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)
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	6.38	4.25	4.30	4.38	5.55	10.60	10.62
5300MHz	Pass	6.38	4.27	4.11	4.55	5.53	10.58	10.62
5320MHz	Pass	6.38	4.41	3.84	4.49	5.53	10.52	10.62
5500MHz	Pass	6.38	3.98	4.60	4.44	5.41	10.56	10.62
5580MHz	Pass	6.38	4.09	4.63	4.23	5.27	10.48	10.62
5700MHz	Pass	6.38	3.04	3.49	3.31	4.12	9.46	10.62
5720MHz Straddle 5.47-5.725GHz	Pass	6.38	3.84	4.56	3.92	5.07	10.35	10.62
5720MHz Straddle 5.725-5.85GHz	Pass	6.38	1.09	2.08	1.33	3.10	7.95	29.62
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	6.38	2.62	2.24	3.06	4.05	8.99	10.62
5310MHz	Pass	6.38	2.88	2.57	3.08	4.22	9.18	10.62
5510MHz	Pass	6.38	1.25	1.76	1.71	2.57	7.76	10.62
5550MHz	Pass	6.38	1.07	1.53	1.56	2.34	7.56	10.62
5670MHz	Pass	6.38	0.09	0.57	0.51	1.32	6.58	10.62
5710MHz Straddle 5.47-5.725GHz	Pass	6.38	3.08	3.45	3.19	4.08	9.45	10.62
5710MHz Straddle 5.725-5.85GHz	Pass	6.38	-0.33	0.54	0.10	1.63	6.43	29.62
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	6.38	0.01	-0.34	0.25	1.48	6.36	10.62
5530MHz	Pass	6.38	-2.38	-2.25	-2.22	-0.87	4.02	10.62
5610MHz	Pass	6.38	-2.16	-1.72	-2.00	-0.92	4.18	10.62
5690MHz Straddle 5.47-5.725GHz	Pass	6.38	-0.09	0.53	0.12	1.14	6.36	10.62
5690MHz Straddle 5.725-5.85GHz	Pass	6.38	-3.41	-2.42	-3.17	-1.67	3.33	29.62

DG = Directional Gain; **RBW** = 500kHz 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 Xpower density;

802.11ac VHT20-BF_Nss2,(MCS0)_4TX **PSD**

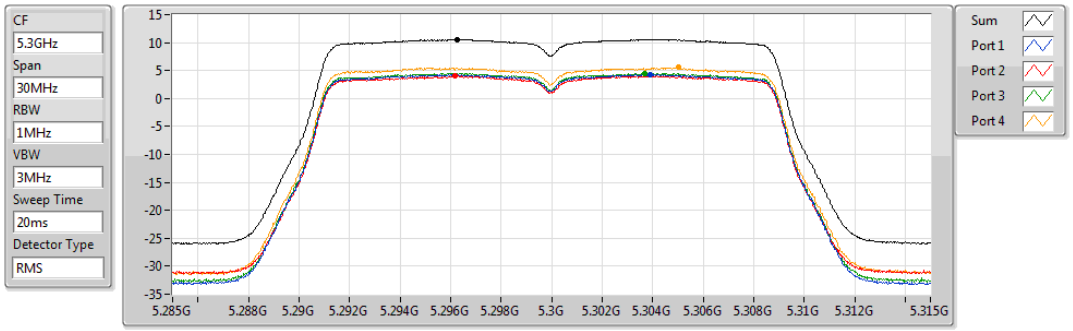
5260MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.60	10.60	4.25	4.30	4.38	5.55

802.11ac VHT20-BF_Nss2,(MCS0)_4TX **PSD**

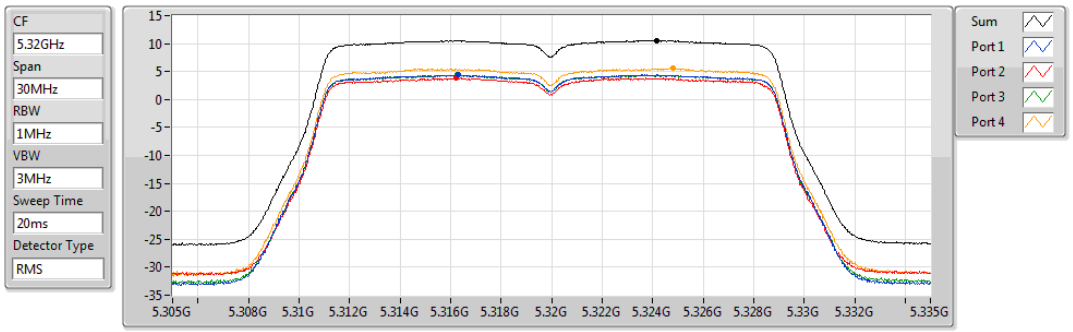
5300MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.58	10.58	4.27	4.11	4.55	5.53

802.11ac VHT20-BF_Nss2,(MCS0)_4TX **PSD**

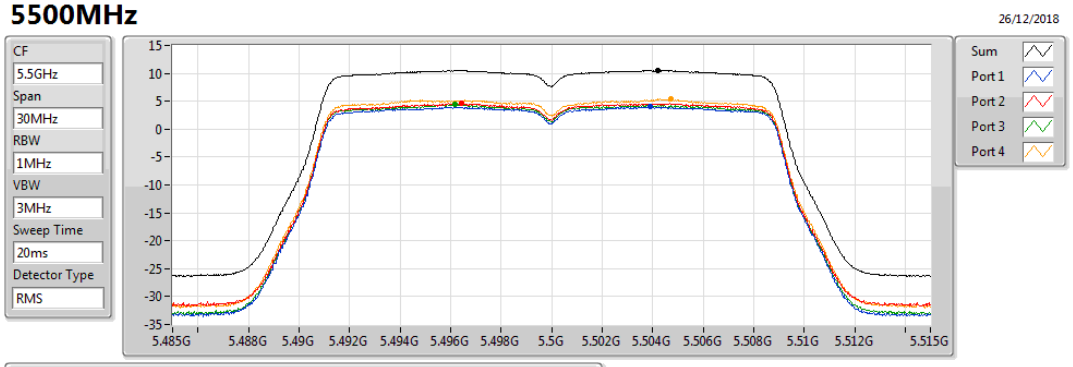
5320MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.52	10.52	4.41	3.84	4.49	5.53

802.11ac VHT20-BF_Nss2,(MCS0)_4TX PSD

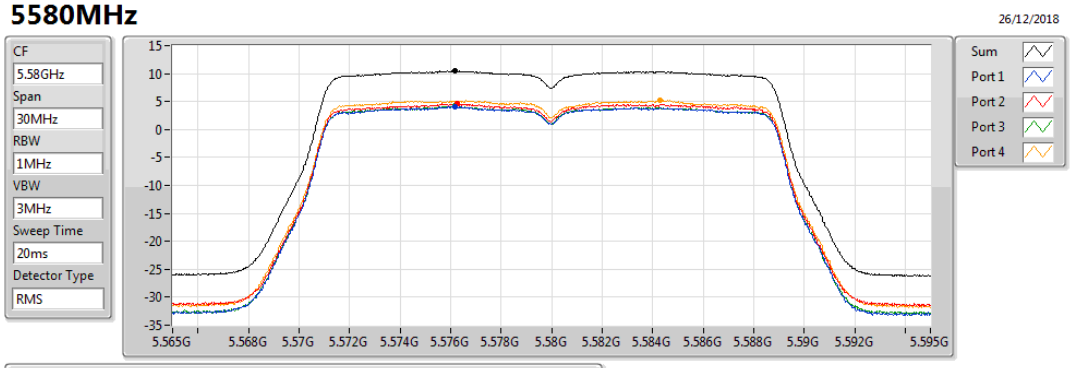
5500MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.56	10.56	3.98	4.60	4.44	5.41

802.11ac VHT20-BF_Nss2,(MCS0)_4TX PSD

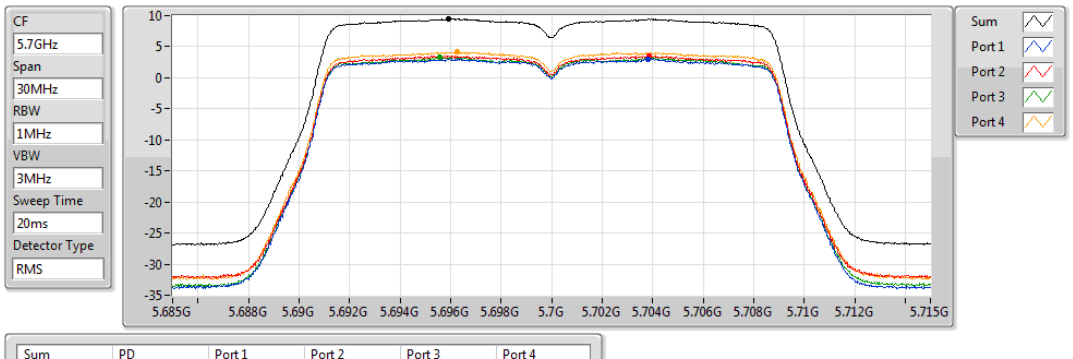
5580MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.48	10.48	4.09	4.63	4.23	5.27

802.11ac VHT20-BF_Nss2,(MCS0)_4TX PSD

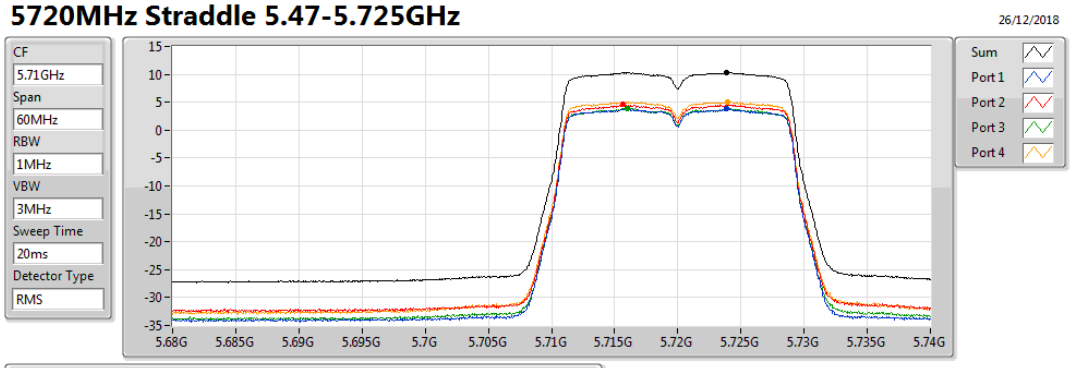
5700MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.46	9.46	3.04	3.49	3.31	4.12

802.11ac VHT20-BF_Nss2,(MCS0)_4TX **PSD**

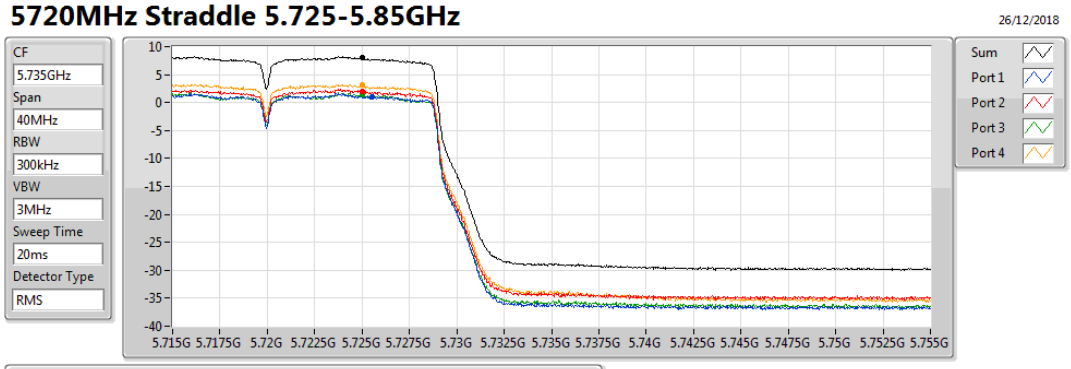
5720MHz Straddle 5.47-5.725GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.35	10.35	3.84	4.56	3.92	5.07

802.11ac VHT20-BF_Nss2,(MCS0)_4TX **PSD**

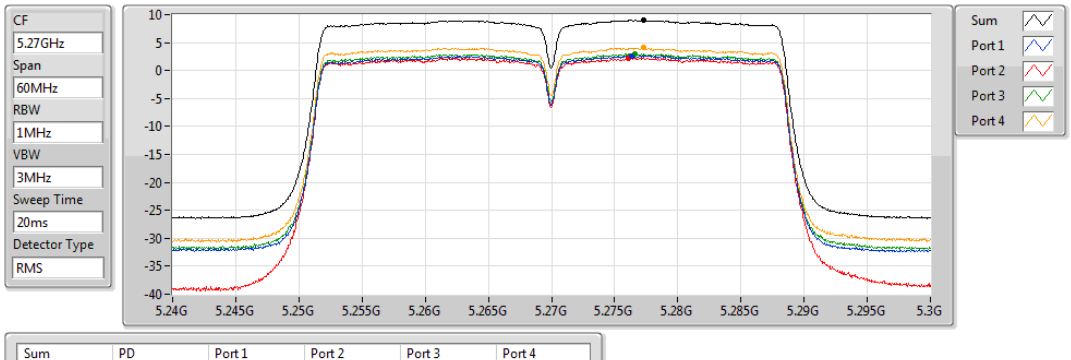
5720MHz Straddle 5.725-5.85GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.95	7.95	1.09	2.08	1.33	3.10

802.11ac VHT40-BF_Nss2,(MCS0)_4TX **PSD**

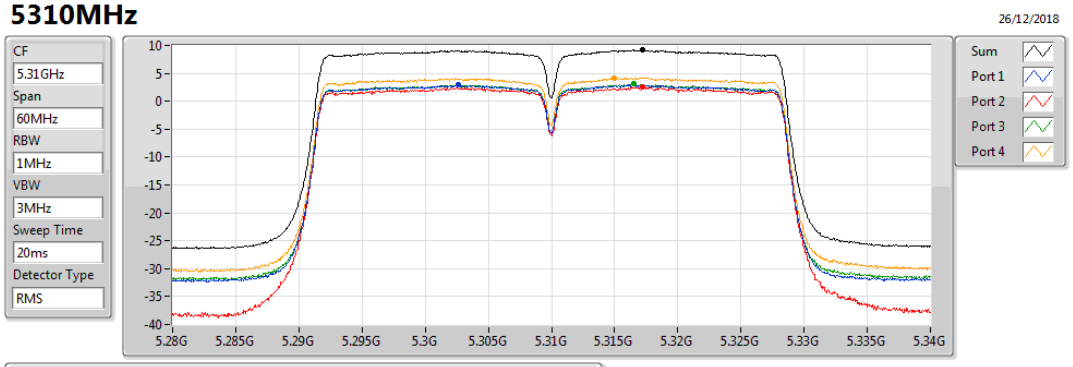
5270MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.99	8.99	2.62	2.24	3.06	4.05

802.11ac VHT40-BF_Nss2,(MCS0)_4TX **PSD**

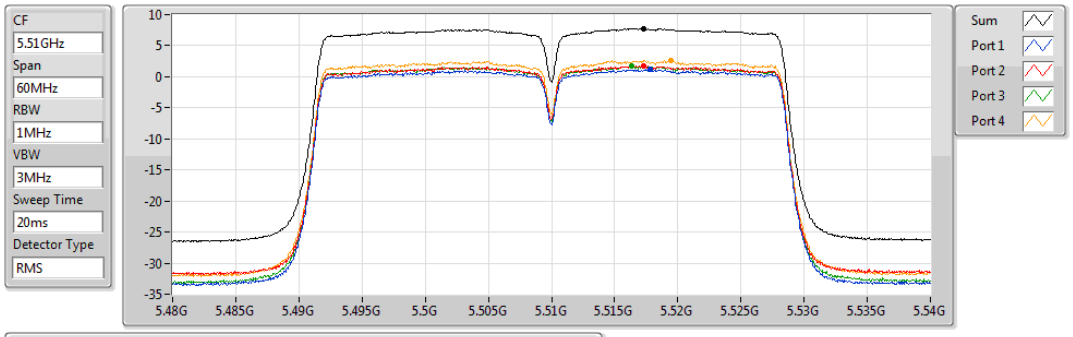
5310MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.18	9.18	2.88	2.57	3.08	4.22

802.11ac VHT40-BF_Nss2,(MCS0)_4TX **PSD**

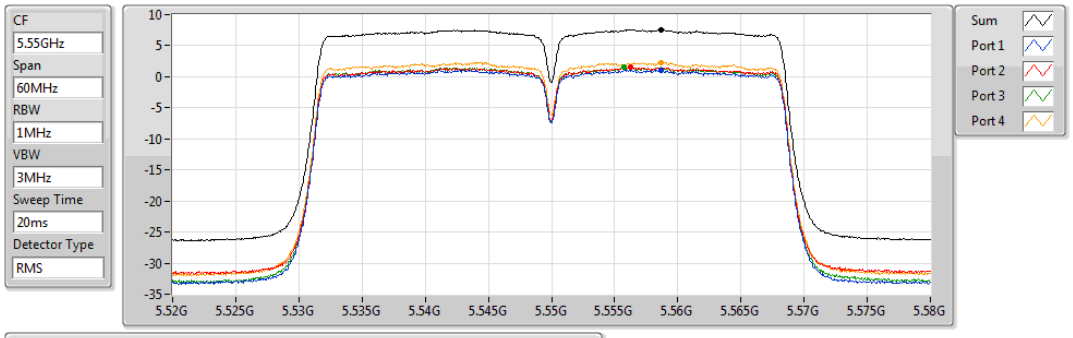
5510MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.76	7.76	1.25	1.76	1.71	2.57

802.11ac VHT40-BF_Nss2,(MCS0)_4TX **PSD**

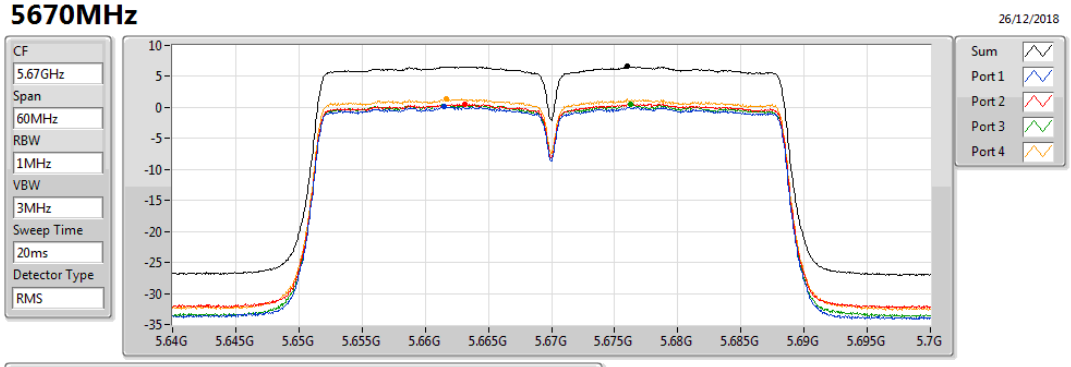
5550MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.56	7.56	1.07	1.53	1.56	2.34

802.11ac VHT40-BF_Nss2,(MCS0)_4TX **PSD**

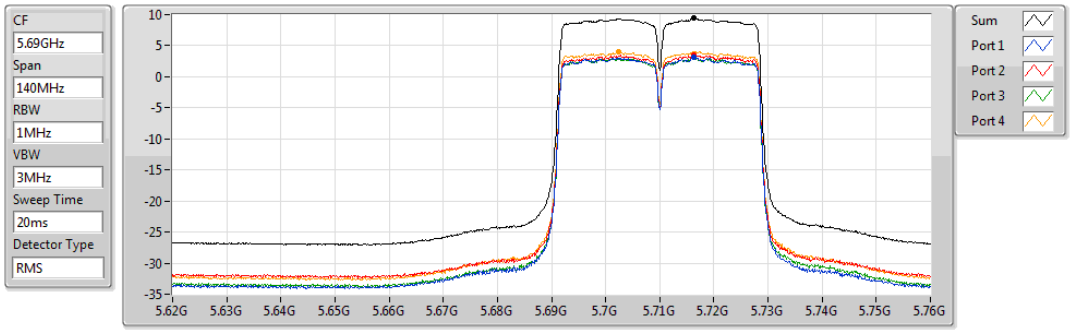
5670MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.58	6.58	0.09	0.57	0.51	1.32

802.11ac VHT40-BF_Nss2,(MCS0)_4TX **PSD**

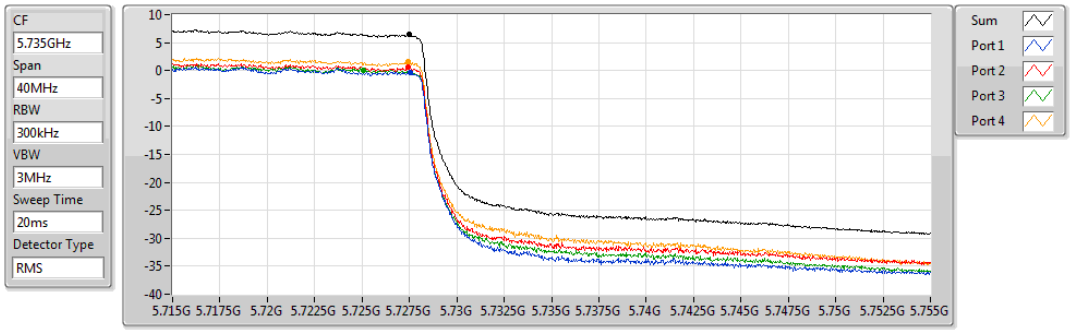
5710MHz Straddle 5.47-5.725GHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.45	9.45	3.08	3.45	3.19	4.08

802.11ac VHT40-BF_Nss2,(MCS0)_4TX **PSD**

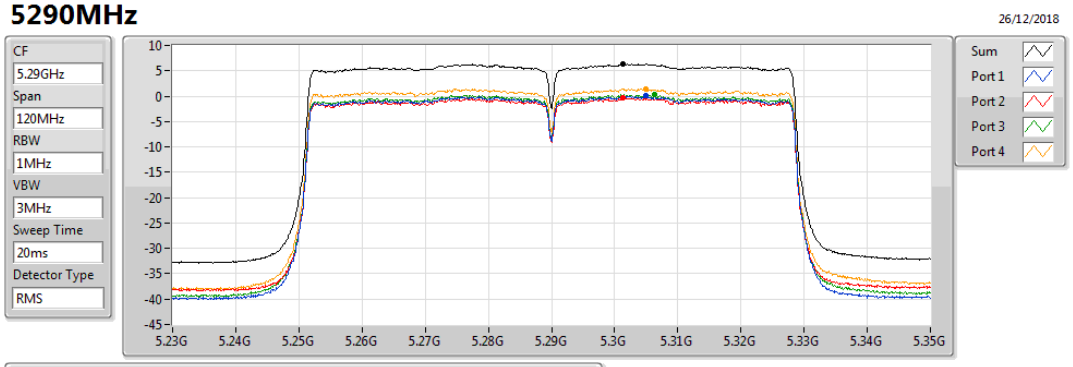
5710MHz Straddle 5.725-5.85GHz



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	-0.33	0.54	0.10	1.63

802.11ac VHT80-BF_Nss2,(MCS0)_4TX PSD

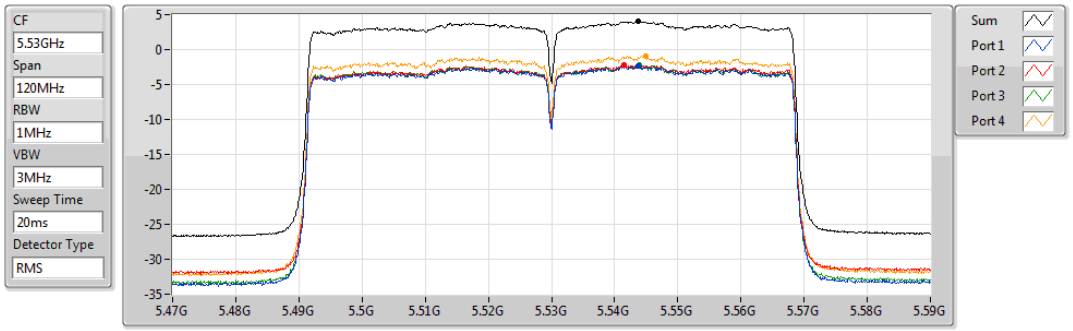
5290MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.36	6.36	0.01	-0.34	0.25	1.48

802.11ac VHT80-BF_Nss2,(MCS0)_4TX PSD

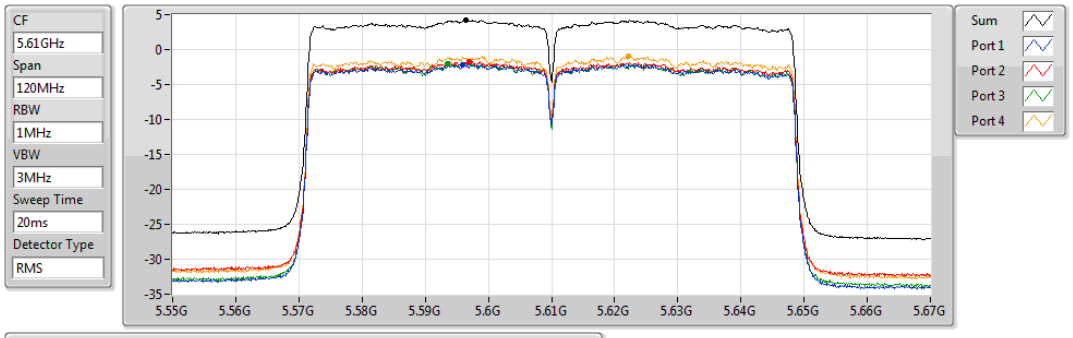
5530MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.02	4.02	-2.38	-2.25	-2.22	-0.87

802.11ac VHT80-BF_Nss2,(MCS0)_4TX PSD

5610MHz

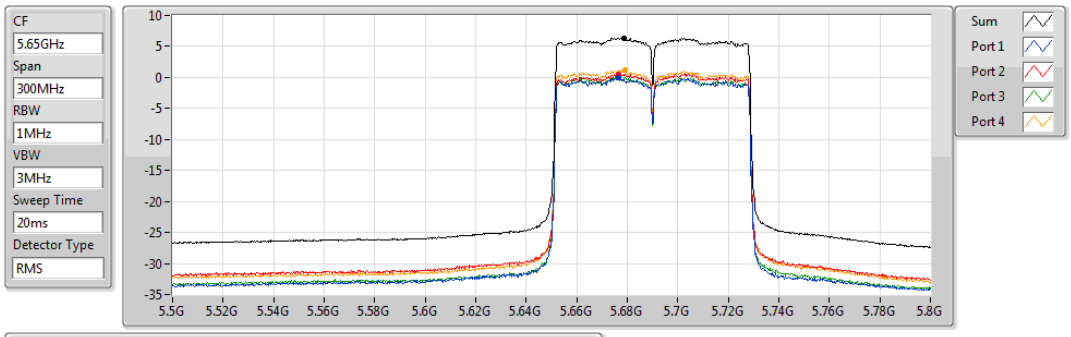


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.18	4.18	-2.16	-1.72	-2.00	-0.92

802.11ac VHT80-BF_Nss2,(MCS0)_4TX **PSD**

5690MHz Straddle 5.47-5.725GHz

26/12/2018

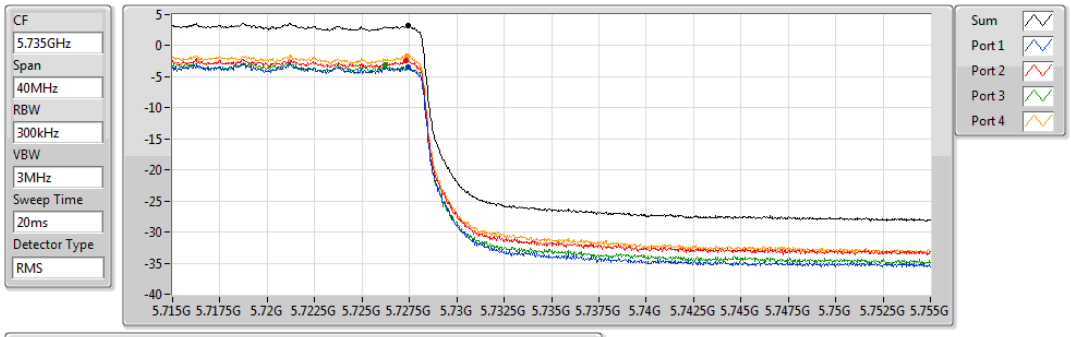


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.36	6.36	-0.09	0.53	0.12	1.14

802.11ac VHT80-BF_Nss2,(MCS0)_4TX **PSD**

5690MHz Straddle 5.725-5.85GHz

26/12/2018



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	-3.41	-2.42	-3.17	-1.67

For 802.11ac (VHT80+80) mode, Nss1:

Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-0.15
5.25-5.35GHz	-
802.11ac VHT80+80_Nss1,(MCS0)_4TX	0.20
5.47-5.725GHz	-
802.11ac VHT80+80_Nss1,(MCS0)_4TX	0.96

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

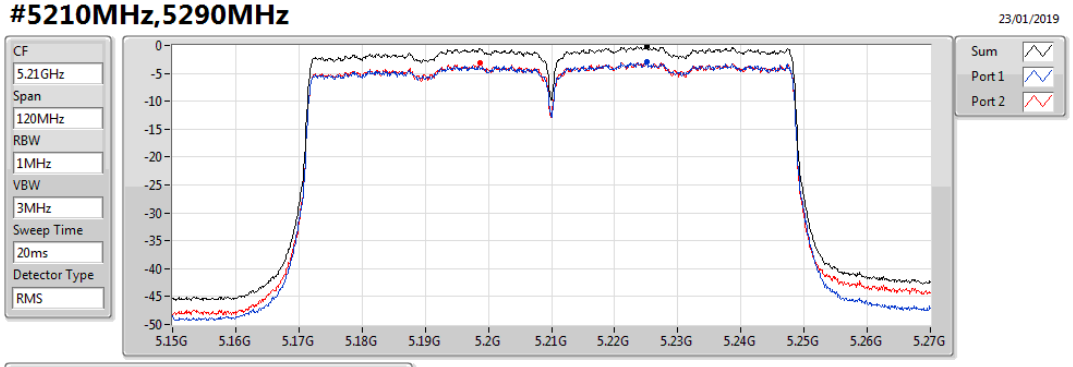
Result

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)
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
#5210MHz,5290MHz	Pass	3.37	-3.00	-3.17			-0.15	17.00
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz,#5290MHz	Pass	3.37			-3.37	-2.15	0.20	11.00
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
#5530MHz,#5610MHz	Pass	6.38	-2.44	-2.50	-2.28	-1.82	0.96	10.62

DG = Directional Gain; **RBW** = 500kHz 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 Xpower density;

802.11ac VHT80+80_Nss1,(MCS0)_4TX **PSD**

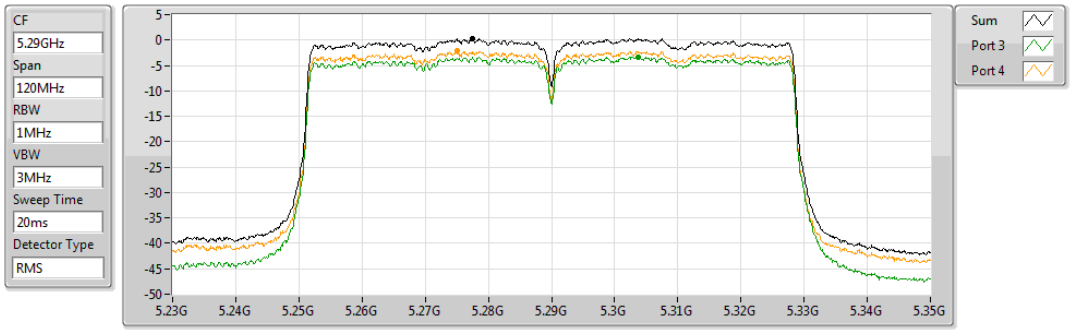
#5210MHz,5290MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.15	-0.15	-3.00	-3.17

802.11ac VHT80+80_Nss1,(MCS0)_4TX **PSD**

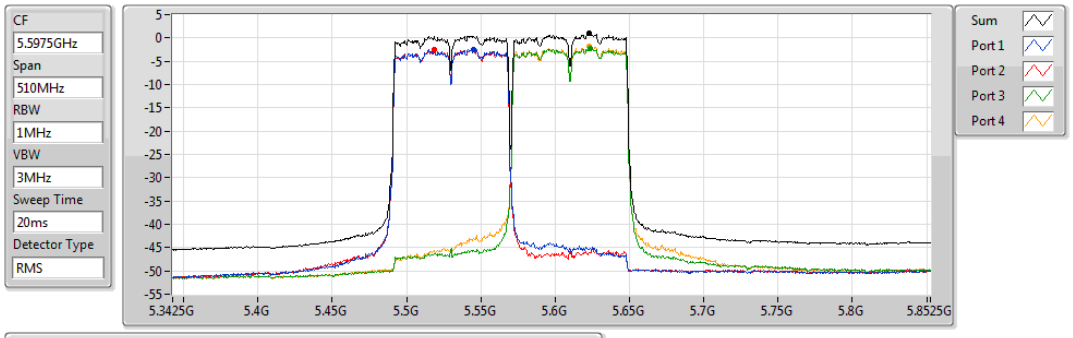
5210MHz,#5290MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.20	0.20			-3.37	-2.15

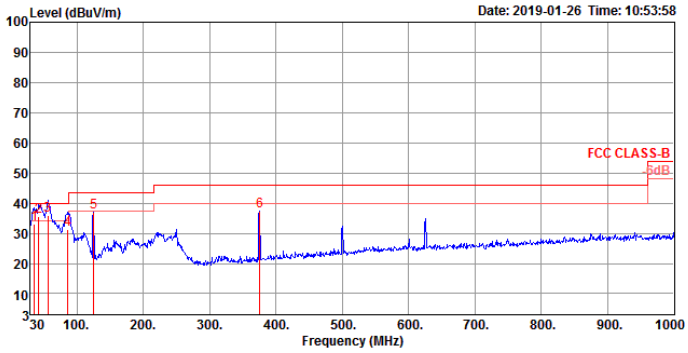
802.11ac VHT80+80_Nss1,(MCS0)_4TX **PSD**

#5530MHz,#5610MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.96	0.96	-2.44	-2.50	-2.28	-1.82

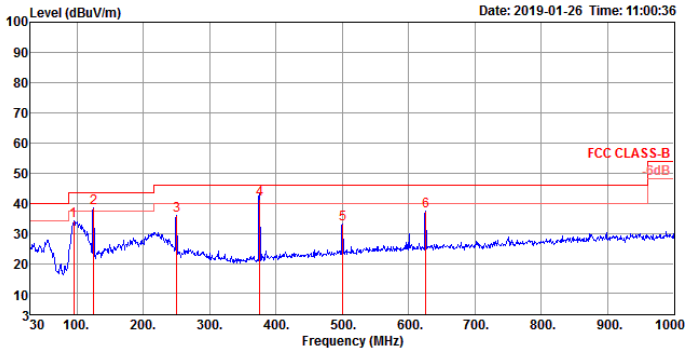
RSE below 1GHz Result			
Operating Mode	3	**Polarization**	Vertical
Operating Function	CTX		



	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	35.82	32.90	40.00	-7.10	41.47	0.77	22.25	31.59	100	120	QP	VERTICAL
2	42.61	35.57	40.00	-4.43	48.06	0.87	18.32	31.68	100	239	QP	VERTICAL
3	56.19	35.89	40.00	-4.11	53.35	0.94	13.40	31.80	100	0	QP	VERTICAL
4	86.26	31.29	40.00	-8.71	47.47	1.16	14.51	31.85	125	350	QP	VERTICAL
5	125.06	36.94	43.50	-6.56	48.79	1.44	18.60	31.89	100	90	Peak	VERTICAL
6	375.32	37.26	46.00	-8.74	44.98	2.51	21.88	32.11	150	290	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	3	**Polarization**	Horizontal
Operating Function	CTX		



	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	94.99	34.23	43.50	-9.27	48.64	1.24	16.21	31.86	200	114	Peak	HORIZONTAL
2	125.06	38.56	43.50	-4.94	50.41	1.44	18.60	31.89	300	57	Peak	HORIZONTAL
3	250.19	35.77	46.00	-10.23	46.81	2.04	18.90	31.98	100	360	Peak	HORIZONTAL
4	375.32	41.25	46.00	-4.75	48.97	2.51	21.88	32.11	100	185	QP	HORIZONTAL
5	500.45	33.21	46.00	-12.79	38.70	2.94	23.83	32.26	200	144	Peak	HORIZONTAL
6	625.58	37.21	46.00	-8.79	41.16	3.28	25.21	32.44	150	360	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.)

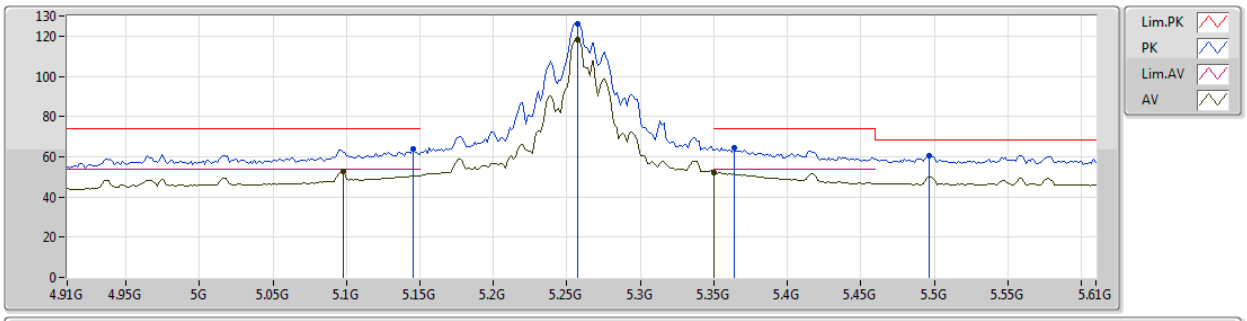
For Nss1:
Summary

Mode	Result	Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments
5.25-5.35GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	Pass	AV	5.384G	53.99	54.00	-0.01	5.00	3	Vertical	260	2.37	-

802.11a_Nss1,(6Mbps)_4TX

11/12/2018

5260MHz_TX



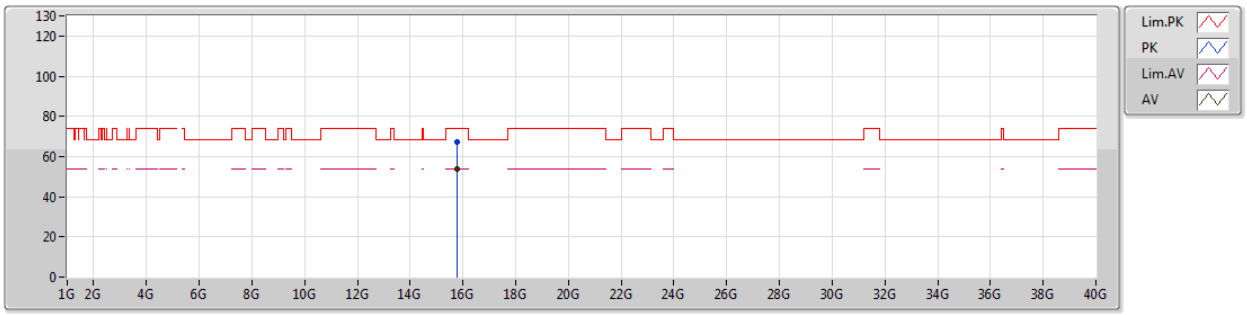
EUT Z_4TX Dipole
Setting 104
01-C-5-10
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.1452G	63.60	74.00	-10.40	4.30	3	Vertical	58	2.99	-
AV	5.0976G	52.44	54.00	-1.56	4.27	3	Vertical	58	2.99	-
PK	5.2572G	126.32	Inf	-Inf	4.54	3	Vertical	58	2.99	-
AV	5.2572G	118.42	Inf	-Inf	4.54	3	Vertical	58	2.99	-
PK	5.3636G	64.37	74.00	-9.63	4.93	3	Vertical	58	2.99	-
AV	5.35G	52.37	54.00	-1.63	4.88	3	Vertical	58	2.99	-
PK	5.4966G	60.73	68.20	-7.47	5.45	3	Vertical	58	2.99	-

802.11a_Nss1,(6Mbps)_4TX

5260MHz_TX

11/12/2018



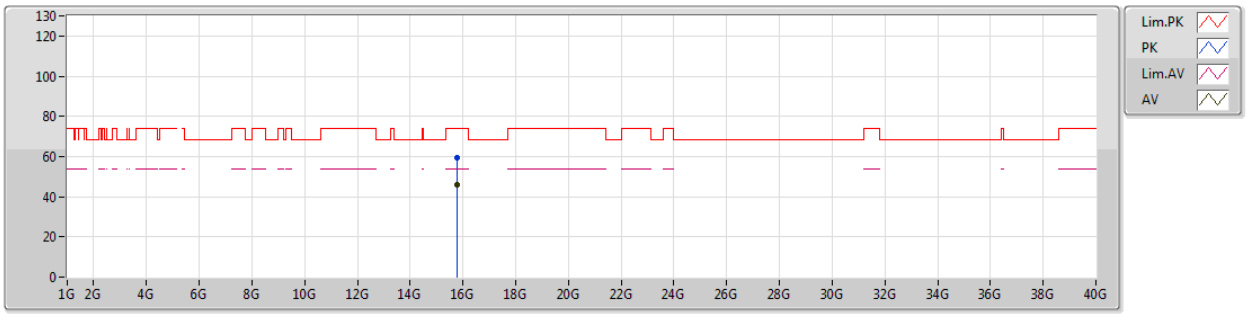
EUT Z_4TX
Setting 104
01-C-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.7803G	67.39	74.00	-6.61	14.28	3	Vertical	5	2.03	-
AV	15.77994G	53.94	54.00	-0.06	14.28	3	Vertical	5	2.03	-

802.11a_Nss1,(6Mbps)_4TX

5260MHz_TX

11/12/2018



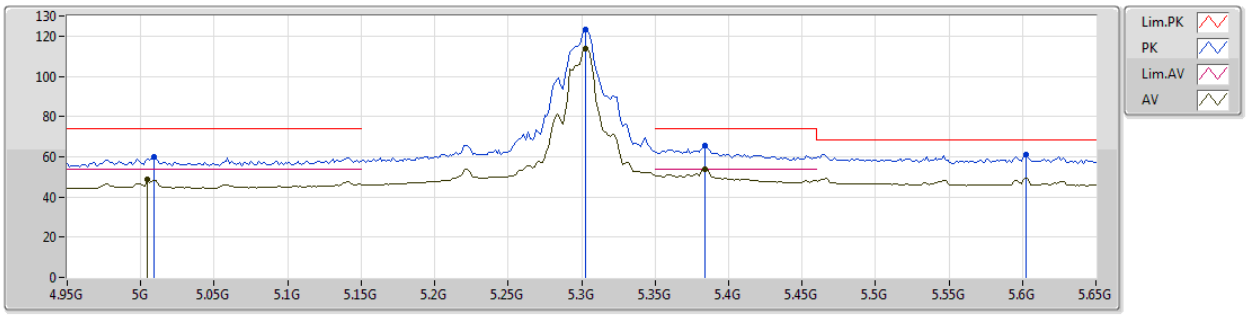
EUT Z_4TX
Setting 104
01-C-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.77592G	59.33	74.00	-14.67	14.28	3	Horizontal	244	1.91	-
AV	15.7836G	46.18	54.00	-7.82	14.28	3	Horizontal	244	1.91	-

802.11a_Nss1,(6Mbps)_4TX

5300MHz_TX

11/12/2018



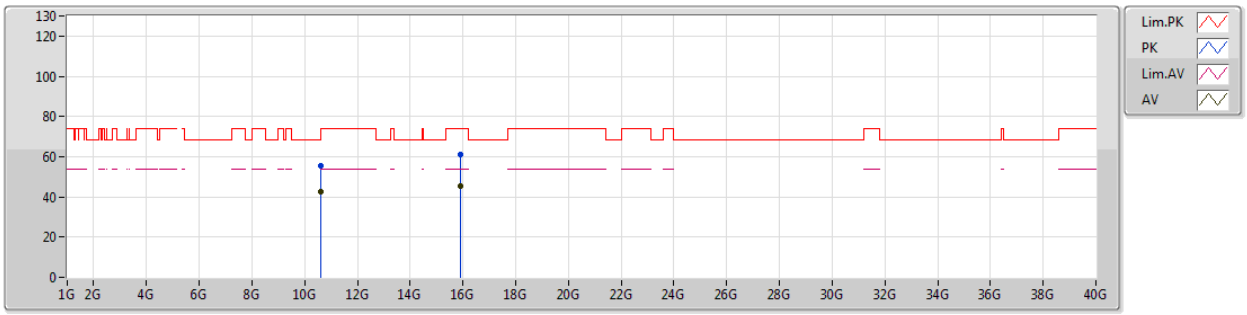
EUT Z_4TX Dipole
Setting 87
01-S-5-10
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.0088G	59.97	74.00	-14.03	4.41	3	Vertical	260	2.37	-
AV	5.0046G	48.83	54.00	-5.17	4.42	3	Vertical	260	2.37	-
PK	5.3028G	123.27	Inf	-Inf	4.71	3	Vertical	260	2.37	-
AV	5.3028G	113.95	Inf	-Inf	4.71	3	Vertical	260	2.37	-
PK	5.6024G	61.33	68.20	-6.87	5.72	3	Vertical	260	2.37	-
AV	5.384G	53.99	54.00	-0.01	5.00	3	Vertical	260	2.37	-
PK	5.384G	65.43	74.00	-8.57	5.00	3	Vertical	260	2.37	-

802.11a_Nss1,(6Mbps)_4TX

5300MHz_TX

11/12/2018



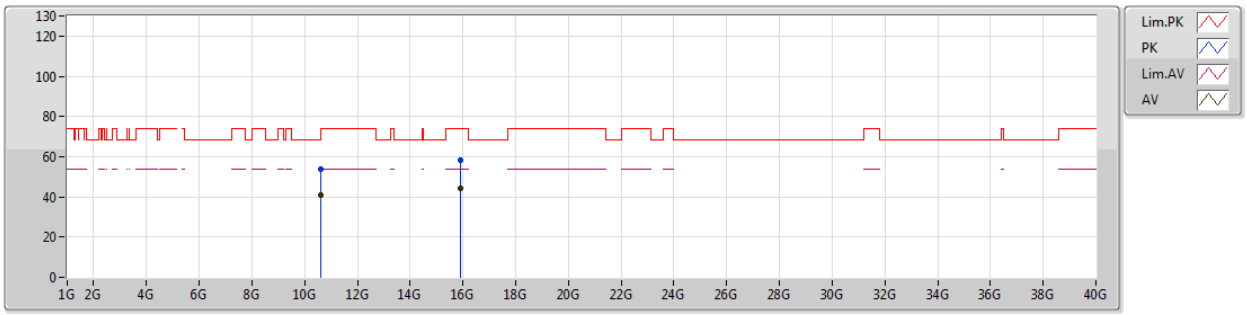
EUT Z_4TX
Setting 87
01-S-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	10.60778G	55.37	74.00	-18.63	11.39	3	Vertical	356	2.24	-
AV	10.60772G	42.75	54.00	-11.25	11.39	3	Vertical	356	2.24	-
PK	15.9022G	60.93	74.00	-13.07	14.13	3	Vertical	13	2.02	-
AV	15.90388G	45.62	54.00	-8.38	14.13	3	Vertical	13	2.02	-

802.11a_Nss1,(6Mbps)_4TX

5300MHz_TX

11/12/2018



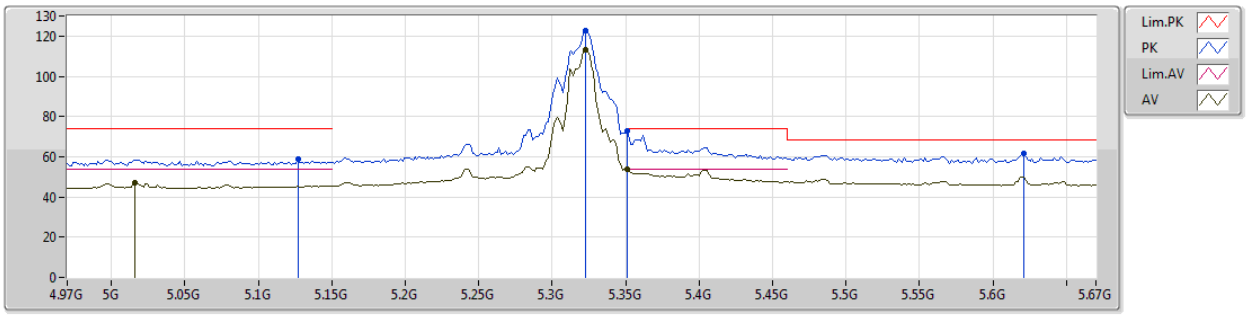
EUT Z_4TX
Setting 87
01-S-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	10.60048G	54.01	74.00	-19.99	11.37	3	Horizontal	329	1.45	-
AV	10.60992G	40.86	54.00	-13.14	11.39	3	Horizontal	329	1.45	-
PK	15.90004G	58.27	74.00	-15.73	14.13	3	Horizontal	243	2.25	-
AV	15.89572G	44.48	54.00	-9.52	14.13	3	Horizontal	243	2.25	-

802.11a_Nss1,(6Mbps)_4TX

5320MHz_TX

11/12/2018



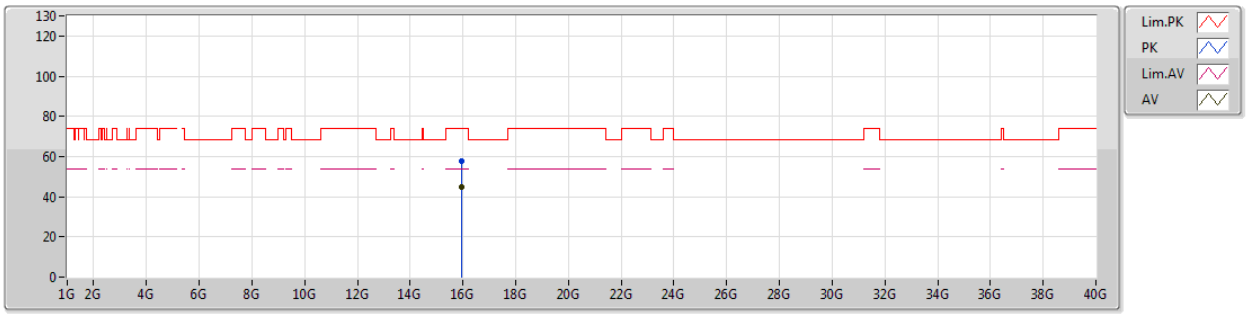
EUT Z_4TX Dipole
Setting 84
01-S-5-10
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.1268G	58.58	74.00	-15.42	4.29	3	Vertical	259	2.36	-
AV	5.0162G	46.90	54.00	-7.10	4.39	3	Vertical	259	2.36	-
PK	5.3228G	122.48	Inf	-Inf	4.78	3	Vertical	259	2.36	-
AV	5.3228G	113.07	Inf	-Inf	4.78	3	Vertical	259	2.36	-
PK	5.3508G	72.68	74.00	-1.32	4.88	3	Vertical	259	2.36	-
AV	5.3508G	53.77	54.00	-0.23	4.88	3	Vertical	259	2.36	-
PK	5.621G	61.75	68.20	-6.45	5.75	3	Vertical	259	2.36	-

802.11a_Nss1,(6Mbps)_4TX

5320MHz_TX

12/12/2018



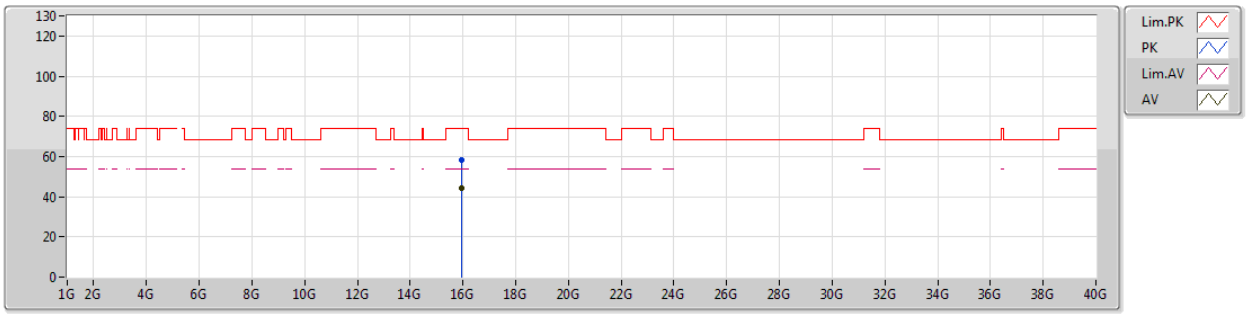
EUT Z_4TX
Setting 84
01-S-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.95388G	57.90	74.00	-16.10	14.07	3	Vertical	269	1.50	-
AV	15.95212G	44.60	54.00	-9.40	14.06	3	Vertical	269	1.50	-

802.11a_Nss1,(6Mbps)_4TX

5320MHz_TX

12/12/2018



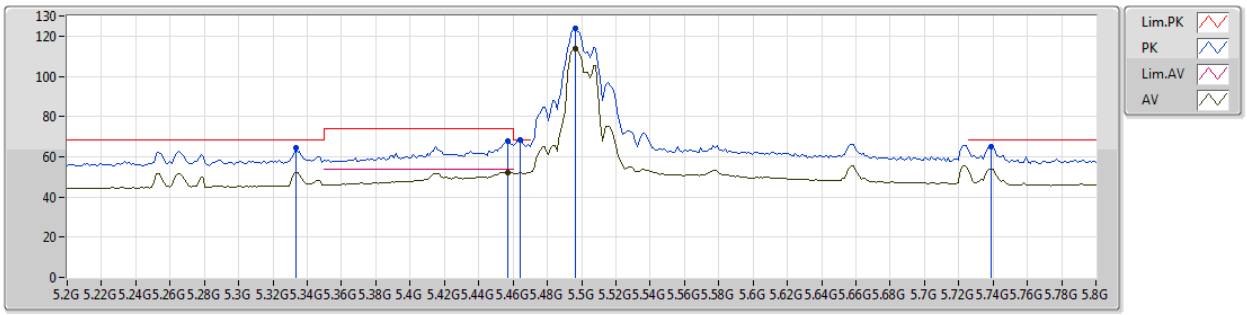
EUT Z_4TX
Setting 84
01-S-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.96836G	58.07	74.00	-15.93	14.04	3	Horizontal	239	1.50	-
AV	15.96572G	44.44	54.00	-9.56	14.04	3	Horizontal	239	1.50	-

802.11a_Nss1,(6Mbps)_4TX

5500MHz_TX

14/12/2018



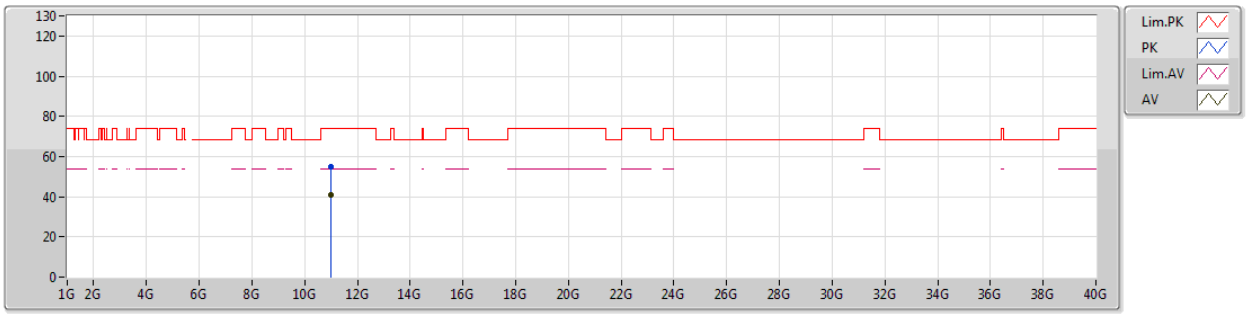
EUT Z_4TX Dipole
Setting 80
01-S-5-10
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.3332G	64.31	68.20	-3.89	4.82	3	Vertical	290	2.23	-
PK	5.4568G	67.76	74.00	-6.24	5.29	3	Vertical	290	2.23	-
AV	5.4568G	52.21	54.00	-1.79	5.29	3	Vertical	290	2.23	-
PK	5.464G	68.18	68.20	-0.02	5.31	3	Vertical	290	2.23	-
PK	5.4964G	123.75	Inf	-Inf	5.45	3	Vertical	290	2.23	-
AV	5.4964G	113.60	Inf	-Inf	5.45	3	Vertical	290	2.23	-
PK	5.7388G	65.07	68.20	-3.13	5.93	3	Vertical	290	2.23	-

802.11a_Nss1,(6Mbps)_4TX

5500MHz_TX

12/12/2018



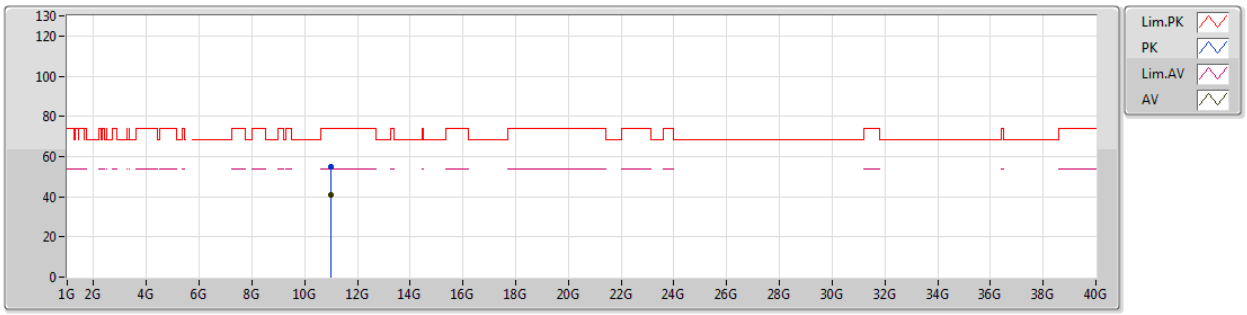
EUT Z_4TX
Setting 80
01-S-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	10.99948G	55.05	74.00	-18.95	11.92	3	Vertical	109	1.09	-
AV	10.99172G	41.01	54.00	-12.99	11.91	3	Vertical	109	1.09	-

802.11a_Nss1,(6Mbps)_4TX

5500MHz_TX

12/12/2018



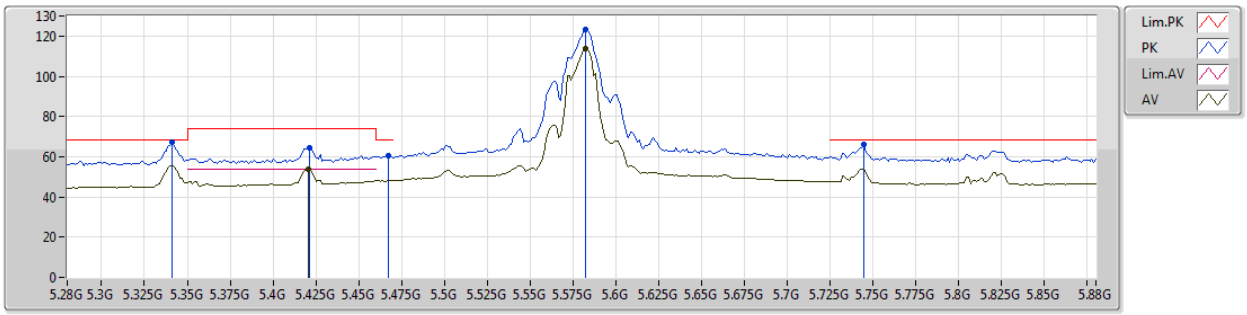
EUT Z_4TX
Setting 80
01-S-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.00416G	54.64	74.00	-19.36	11.92	3	Horizontal	6	1.58	-
AV	10.99452G	41.03	54.00	-12.97	11.92	3	Horizontal	6	1.58	-

802.11a_Nss1,(6Mbps)_4TX

5580MHz_TX

11/12/2018



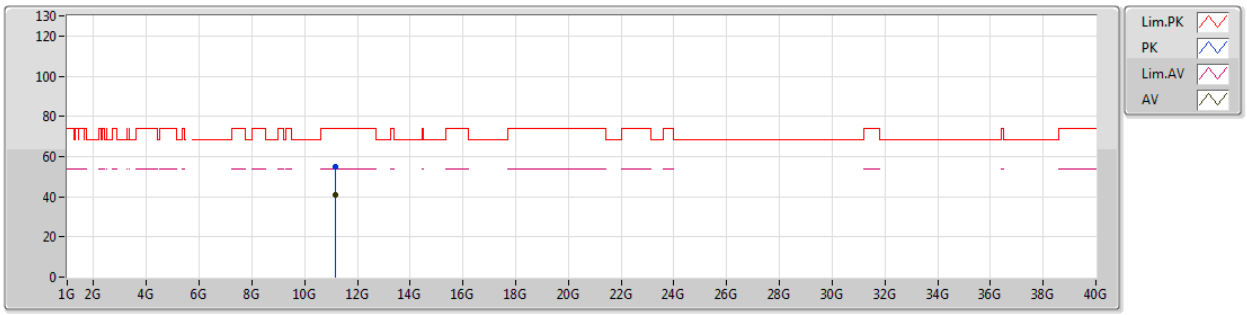
EUT Z_4TX Dipole
Setting 82
01-S-5-10
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.3412G	67.48	68.20	-0.72	4.84	3	Vertical	211	2.99	-
PK	5.4216G	64.49	74.00	-9.51	5.14	3	Vertical	211	2.99	-
AV	5.4204G	53.96	54.00	-0.04	5.14	3	Vertical	211	2.99	-
PK	5.4672G	60.79	68.20	-7.41	5.33	3	Vertical	211	2.99	-
PK	5.5824G	123.03	Inf	-Inf	5.67	3	Vertical	211	2.99	-
AV	5.5824G	113.81	Inf	-Inf	5.67	3	Vertical	211	2.99	-
PK	5.7444G	66.19	68.20	-2.01	5.94	3	Vertical	211	2.99	-

802.11a_Nss1,(6Mbps)_4TX

5580MHz_TX

12/12/2018



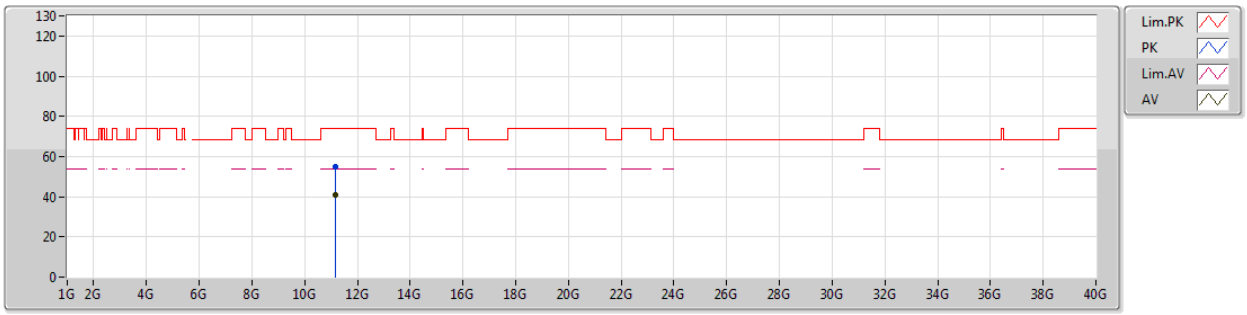
EUT Z_4TX
Setting 82
01-S-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.1604G	54.76	74.00	-19.24	11.99	3	Vertical	106	1.11	-
AV	11.1536G	40.84	54.00	-13.16	11.99	3	Vertical	106	1.11	-

802.11a_Nss1,(6Mbps)_4TX

5580MHz_TX

12/12/2018



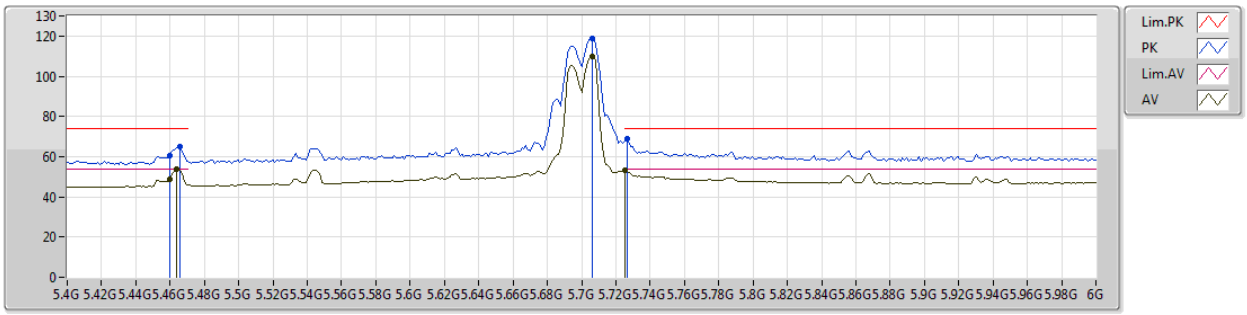
EUT Z_4TX
Setting 82
01-S-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.15172G	54.93	74.00	-19.07	11.99	3	Horizontal	314	1.53	-
AV	11.16436G	40.95	54.00	-13.05	11.99	3	Horizontal	314	1.53	-

802.11a_Nss1,(6Mbps)_4TX

5700MHz_TX

11/12/2018



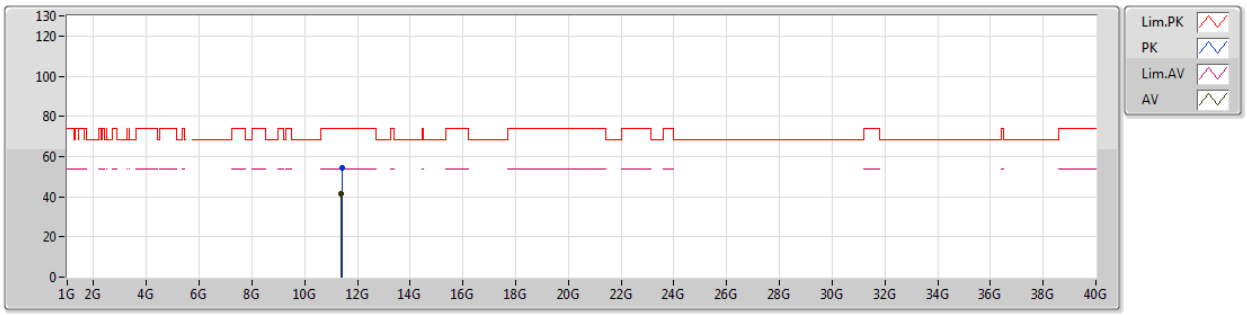
EUT Z_4TX Dipole
Setting 68
01-S-5-10
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.46G	60.29	74.00	-13.71	5.30	3	Vertical	217	2.94	-
AV	5.46G	48.75	54.00	-5.25	5.30	3	Vertical	217	2.94	-
PK	5.466G	65.20	74.00	-8.80	5.33	3	Vertical	217	2.94	-
AV	5.4636G	53.88	54.00	-0.12	5.31	3	Vertical	217	2.94	-
PK	5.706G	119.03	Inf	-Inf	5.84	3	Vertical	217	2.94	-
AV	5.706G	109.71	Inf	-Inf	5.84	3	Vertical	217	2.94	-
PK	5.7264G	68.72	74.00	-5.28	5.89	3	Vertical	217	2.94	-
AV	5.7252G	53.28	54.00	-0.72	5.89	3	Vertical	217	2.94	-

802.11a_Nss1,(6Mbps)_4TX

5700MHz_TX

12/12/2018



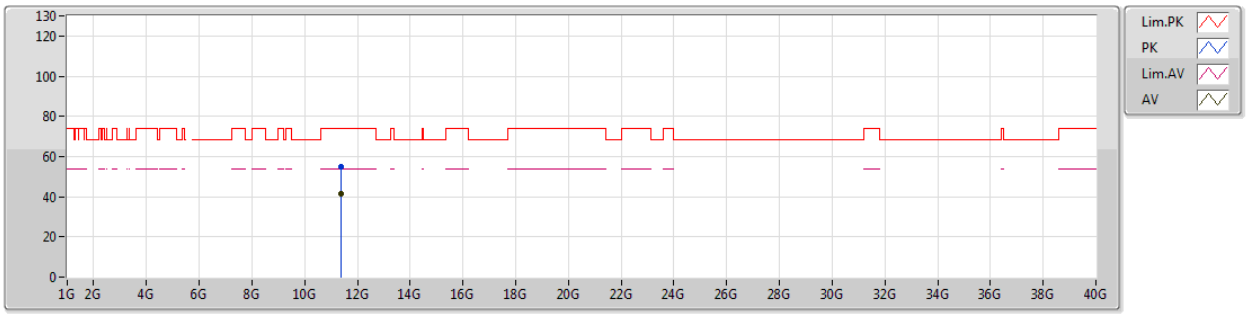
EUT Z_4TX
Setting 68
01-S-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.4096G	54.54	74.00	-19.46	12.11	3	Vertical	274	2.18	-
AV	11.39856G	41.37	54.00	-12.63	12.11	3	Vertical	274	2.18	-

802.11a_Nss1,(6Mbps)_4TX

5700MHz_TX

12/12/2018



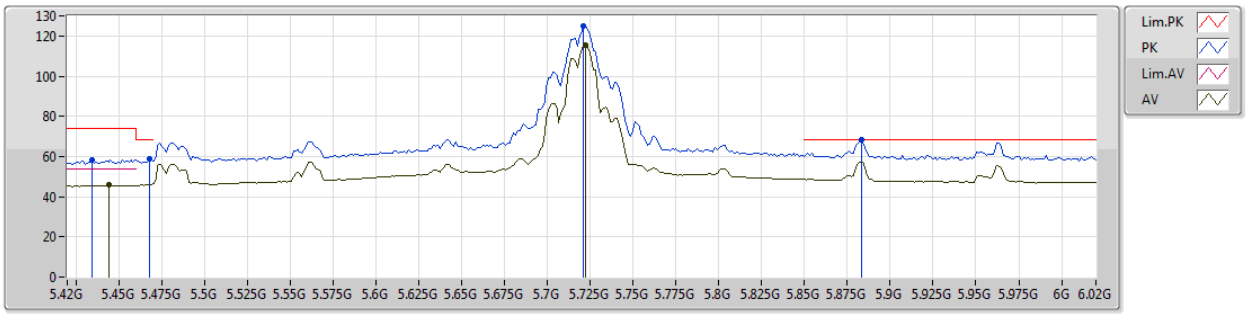
EUT Z_4TX
Setting 68
01-S-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.39244G	54.99	74.00	-19.01	12.10	3	Horizontal	132	1.44	-
AV	11.40128G	41.40	54.00	-12.60	12.11	3	Horizontal	132	1.44	-

802.11a_Nss1,(6Mbps)_4TX

5720MHz Straddle 5.47-5.725GHz_TX

11/12/2018



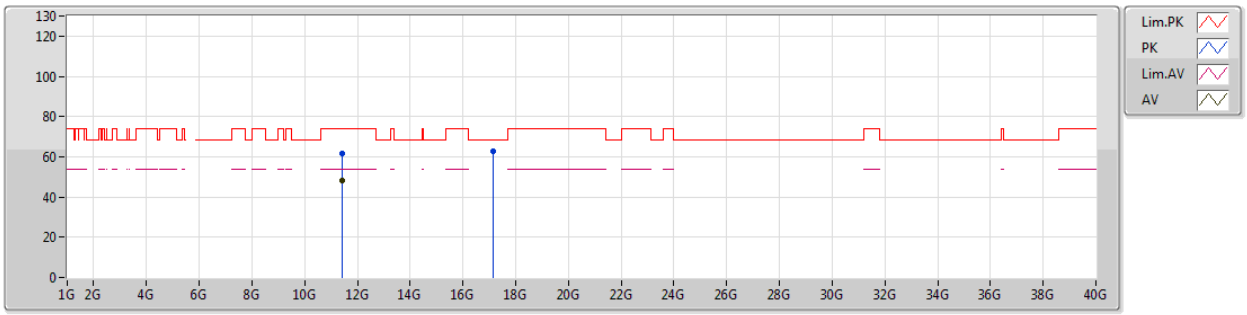
EUT Z_4TX Dipole
Setting 93
01-S-5-10
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.4344G	58.55	74.00	-15.45	5.19	3	Vertical	165	2.40	-
AV	5.444G	45.67	54.00	-8.33	5.23	3	Vertical	165	2.40	-
PK	5.468G	58.79	68.20	-9.41	5.33	3	Vertical	165	2.40	-
PK	5.7212G	125.06	Inf	-Inf	5.88	3	Vertical	165	2.40	-
AV	5.7224G	115.32	Inf	-Inf	5.88	3	Vertical	165	2.40	-
PK	5.8832G	68.11	68.20	-0.09	6.68	3	Vertical	165	2.40	-

802.11a_Nss1,(6Mbps)_4TX

12/12/2018

5720MHz Straddle 5.47-5.725GHz_TX



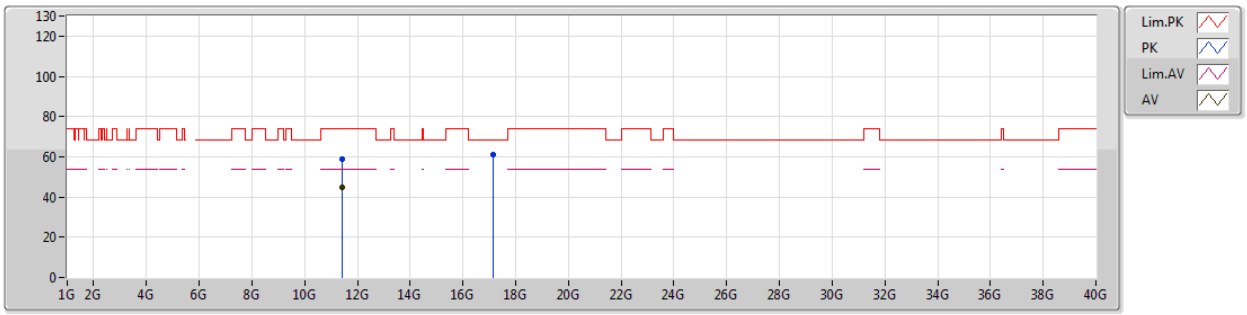
EUT Z_4TX
Setting 93
01-S-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.43984G	61.49	74.00	-12.51	12.12	3	Vertical	210	1.32	-
AV	11.4398G	48.23	54.00	-5.77	12.12	3	Vertical	210	1.32	-
PK	17.16668G	62.48	68.20	-5.72	18.06	3	Vertical	46	1.93	-

802.11a_Nss1,(6Mbps)_4TX

12/12/2018

5720MHz Straddle 5.47-5.725GHz_TX



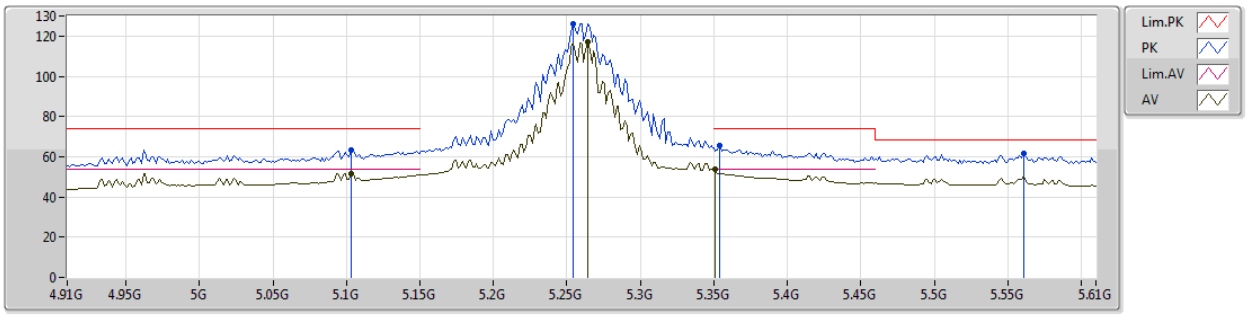
EUT Z_4TX
Setting 93
01-S-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.43824G	59.08	74.00	-14.92	12.12	3	Horizontal	118	2.96	-
AV	11.44152G	44.95	54.00	-9.05	12.12	3	Horizontal	118	2.96	-
PK	17.16384G	60.93	68.20	-7.27	18.06	3	Horizontal	192	1.50	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5260MHz_TX

12/12/2018



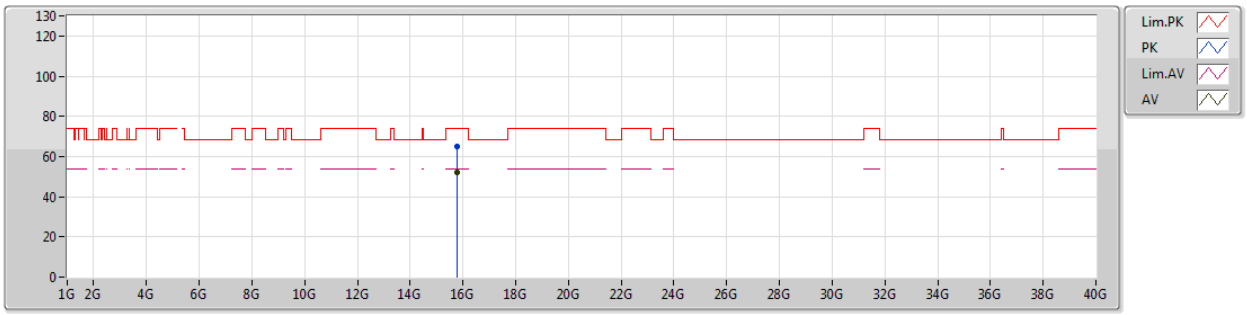
EUT Z_4TX Dipole
Setting 103
01-S-5-10
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.1032G	63.46	74.00	-10.54	4.27	3	Vertical	10	2.99	-
AV	5.1032G	51.74	54.00	-2.26	4.27	3	Vertical	10	2.99	-
PK	5.2544G	125.94	Inf	-Inf	4.53	3	Vertical	10	2.99	-
AV	5.2642G	116.87	Inf	-Inf	4.56	3	Vertical	10	2.99	-
PK	5.3538G	65.38	74.00	-8.62	4.89	3	Vertical	10	2.99	-
AV	5.351G	53.93	54.00	-0.07	4.88	3	Vertical	10	2.99	-
PK	5.561G	61.64	68.20	-6.56	5.62	3	Vertical	10	2.99	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5260MHz_TX

12/12/2018



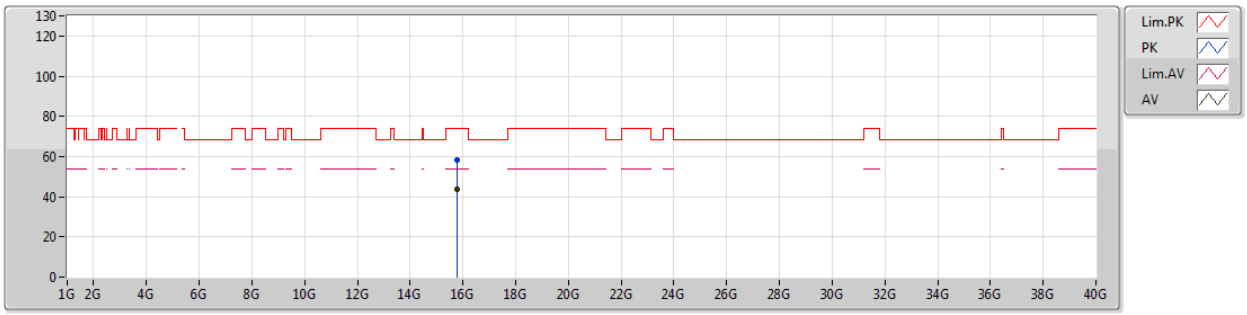
EUT Z_4TX
Setting 103
01-S-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.77472G	64.84	74.00	-9.16	14.29	3	Vertical	5	2.09	-
AV	15.77964G	51.89	54.00	-2.11	14.28	3	Vertical	5	2.09	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5260MHz_TX

12/12/2018



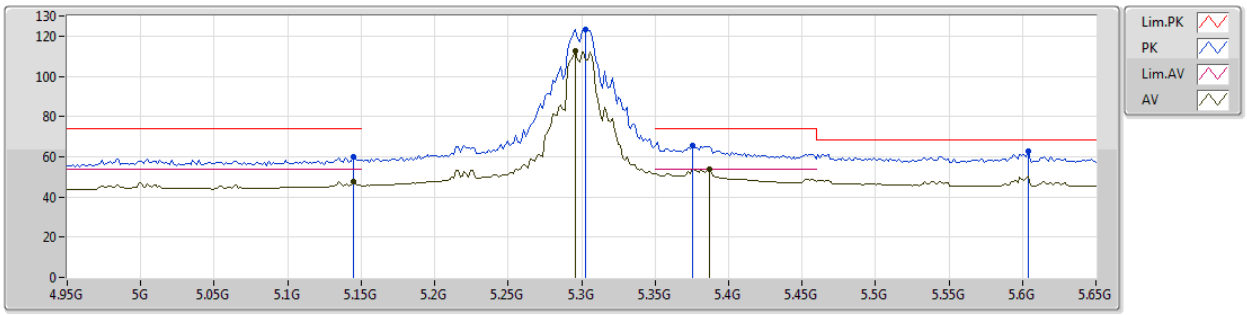
EUT Z_4TX
Setting 103
01-S-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.78868G	58.05	74.00	-15.95	14.28	3	Horizontal	198	2.46	-
AV	15.78984G	43.81	54.00	-10.19	14.27	3	Horizontal	198	2.46	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5300MHz_TX

11/12/2018



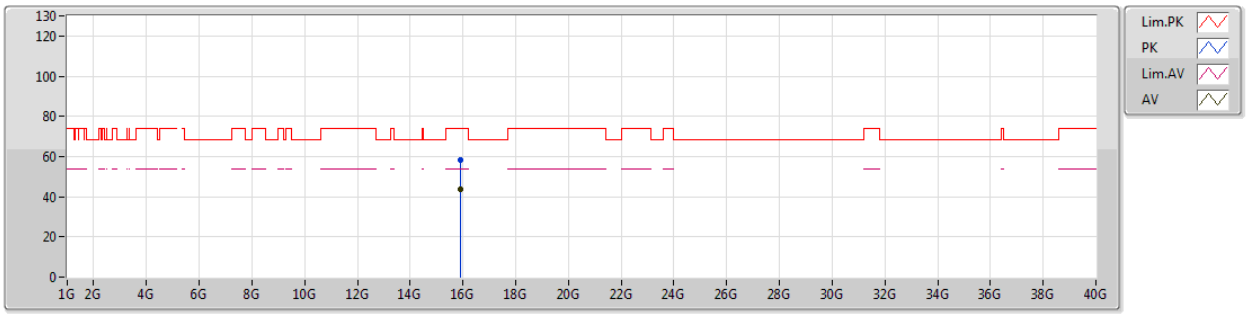
EUT Z_4TX Dipole
Setting 91
01-S-5-10
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.1446G	59.83	74.00	-14.17	4.29	3	Vertical	262	2.37	-
AV	5.1446G	47.47	54.00	-6.53	4.29	3	Vertical	262	2.37	-
PK	5.3028G	123.41	Inf	-Inf	4.71	3	Vertical	262	2.37	-
AV	5.2958G	112.48	Inf	-Inf	4.69	3	Vertical	262	2.37	-
PK	5.6038G	62.70	68.20	-5.50	5.72	3	Vertical	262	2.37	-
AV	5.3868G	53.82	54.00	-0.18	5.01	3	Vertical	262	2.37	-
PK	5.3756G	65.40	74.00	-8.60	4.98	3	Vertical	262	2.37	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5300MHz_TX

12/12/2018



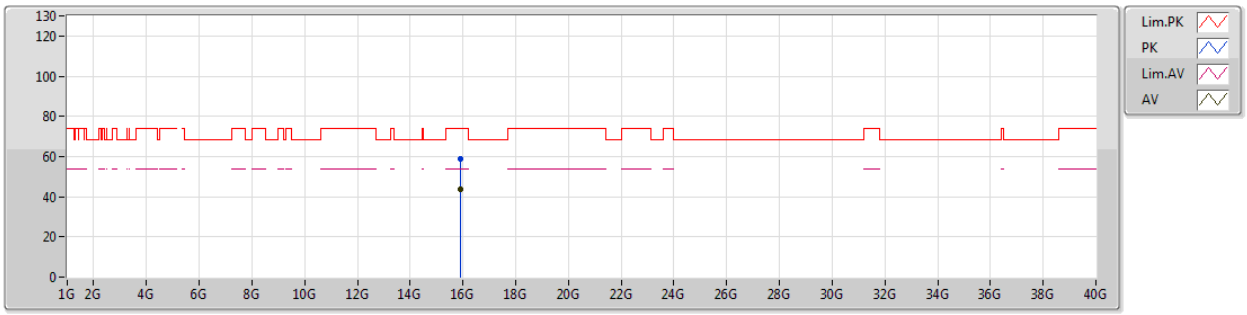
EUT Z_4TX
Setting 91
01-S-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.8904G	58.02	74.00	-15.98	14.14	3	Vertical	272	1.69	-
AV	15.90808G	43.78	54.00	-10.22	14.12	3	Vertical	272	1.69	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5300MHz_TX

12/12/2018



EUT Z_4TX
Setting 91
01-S-5
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.90604G	58.62	74.00	-15.38	14.12	3	Horizontal	223	1.58	-
AV	15.90844G	43.70	54.00	-10.30	14.11	3	Horizontal	223	1.58	-