

FCC RADIO TEST REPORT

FCC ID : MSQ-RTAC68UV2
Equipment : Wireless-AC1900 Dual Band Gigabit Router
Brand Name : ASUS
Model Name : RT-AC68U, RT-AC68R, RT-AC68W, RT-AC68P,
TM-AC1900, RT-AC1900, RT-AC68U V2,
RT-AC1900P
Applicant : ASUSTeK COMPUTER INC.
4F, No. 150, Li-Te Rd., Peitou, Taipei 112, Taiwan
Manufacturer (1) : Compal Networking (KunShan) Co., LTD.
No. 520, Nabbang Rd., Economic & Technical
Development Zone Kunshan, Jiangsu Province
China
Manufacturer (2) : Askey Technology (Jiangsu) Ltd.
1388, Jiao Tong Road, Wujiang Economic
Technological Development Area, Jiang Su
Province, P.R.C
Manufacturer (3) : Arcadyan Technology (Vietnam) Co., Ltd.
Ba Thien Industrial Park, Ba Hien commune, Binh
Xuyen district, Vinh Phuc Province, Viet Nam
Standard : 47 CFR FCC Part 15.407

The product was received on Oct. 16, 2019 , and testing was started from Oct. 16, 2019 and completed on Dec. 04, 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.)



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TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A12_1 Ver1.0



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	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: Wendy Pan



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]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40)	5190-5230	38-46 [2]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80)	5210	42 [1]
5725-5850		5775	155 [1]

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
5.725-5.85GHz	802.11a	20	3TX
5.725-5.85GHz	802.11n HT20	20	3TX
5.725-5.85GHz	802.11n HT20-BF	20	3TX
5.725-5.85GHz	802.11ac VHT20	20	3TX
5.725-5.85GHz	802.11ac VHT20-BF	20	3TX
5.725-5.85GHz	802.11n 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



Note:

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

1.1.2 Antenna Information

Set	Brand	Model Name	Antenna Type	Connector	Gain (dBi)		
					WLAN 2.4GHz	WLAN 5GHz B1	WLAN 5GHz B4
1	PSA	RFDPA141000SBLB802	Dipole	Reverse SMA	1.91	4.04	3.94
2	M.gear	C660-510333-A	Dipole	Reverse SMA	1.51	2.76	3.29
3	PSA	RFDPA161300SBLB803	Dipole	Reverse SMA	1.61	2.63	3.47

Note: The above information was declared by manufacturer.

The EUT has three set of antenna and each set has three antennas.

Because above antennas are the same type, only the highest gain of antenna "Set 1" was tested.

For WLAN 2.4GHz and WLAN 5GHz 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.

1.1.3 Mode Test Duty Cycle

For 3T1S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.981	0.08	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ac VHT20	0.987	0.06	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ac VHT20-BF	0.933	0.3	3.848m	300
802.11ac VHT40	0.973	0.12	952.5u	3k
802.11ac VHT40-BF	0.952	0.21	4.62m	300
802.11ac VHT80	0.946	0.24	461.25u	3k
802.11ac VHT80-BF	0.908	0.42	5.11m	300

For 3T2S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ac VHT20-BF	0.95	0.22	4.804m	300
802.11ac VHT40-BF	0.935	0.29	5.085m	300
802.11ac VHT80-BF	0.891	0.5	5.332m	300

Note:

- ♦ DC is Duty Cycle.
- ♦ DCF is Duty Cycle Factor.

**1.1.4 EUT Operational Condition**

EUT Power Type	From Power Adapter			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for 802.11n/ac			
Function	☐	Outdoor P2M	☒	Indoor P2M
	☐	Fixed P2P	☐	Client
Test Software Version				

Note: The above information was declared by manufacturer.

1.1.5 Table for Multiple Listing

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

Brand Name	Model Name	Description
ASUS	RT-AC68U	All the models are identical; the different model numbers served as marketing strategy.
	RT-AC68R	
	RT-AC68W	
	RT-AC68P	
	TM-AC1900	
	RT-AC1900	
	RT-AC68U V2	
	RT-AC1900P	

From the above models, model: RT-AC68U was selected as representative model for the test and its data was recorded in this report.

1.2 Table for SKU information

SKU 3 information			
Vendor	LAN port transformer (Model No.)	WAN port transformer (Model No.)	Spec
NET SWAPN(FCE)	FCE_NS773602	FCE_NS771802	DIP 10/100/1000 BASE-T



1.2.1 Table for Class II Change

This product is an extension of original one reported under Sporton project number: FR3D0426-09

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

Modifications	Performance Checking
1. Adding two adapters (Model: ADP-33AW Y and AD2088320)	1. AC Power-line Conducted Emissions 2. Unwanted Emissions Below 1GHz
2. Update the test rule of 5GHz Band 4 to "15.407 (b)(4)(i)" from "15.407 (b)(4)(ii)".	1. Emission Bandwidth 2. Maximum Conducted Output Power 3. Peak Power Spectral Density 4. Unwanted Emissions Above 1GHz
3. Add a manufacturer and address: Arcadyan Technology (Vietnam) Co., Ltd. / Ba Thien Industrial Park, Ba Hien commune, Binh Xuyen district, Vinh Phuc Province, Viet Nam.	Do not affect the test results.



1.3 Applicable Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013
- ♦ FCC KDB 789033 D02 v02r01
- ♦ FCC KDB 662911 D01 v02r01
- ♦ FCC KDB 412172 D01 v01r01
- ♦ FCC KDB 414788 D01 v01r01

1.4 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	TH03-CB	Serway Li	21.8~23.6°C / 59~65%	Nov. 28, 2019 ~ Nov. 29, 2019
Radiated<1GHz	03CH05-CB	Eason Chen	24.1~25.6°C / 61~63%	Oct. 16, 2019 ~ Nov. 08, 2019
Radiated>1GHz	03CH04-CB	Eason Chen	23.8~25°C / 53~56%	Oct. 16, 2019 ~ Nov. 08, 2019
AC Conduction	CO02-CB	Peter Wu	25~26°C / 55~56%	Dec. 04, 2019

Test site Designation No. TW0006 with FCC

Test site registered number IC 4086D with Industry Canada.

1.5 Measurement Uncertainty

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

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

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	PowerSetting
802.11a_Nss1,(6Mbps)_3TX	-
5745MHz	92
5785MHz	84
5825MHz	83
802.11ac VHT20_Nss1,(MCS0)_3TX	-
5745MHz	94
5785MHz	85
5825MHz	84
802.11ac VHT40_Nss1,(MCS0)_3TX	-
5755MHz	95
5795MHz	96
802.11ac VHT80_Nss1,(MCS0)_3TX	-
5775MHz	84
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	-
5745MHz	86
5785MHz	84
5825MHz	80
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	-
5755MHz	83
5795MHz	84
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	-
5775MHz	84
802.11ac VHT20-BF_Nss2,(MCS0)_3TX	-
5745MHz	92
5785MHz	85
5825MHz	81
802.11ac VHT40-BF_Nss2,(MCS0)_3TX	-
5755MHz	90
5795MHz	92
802.11ac VHT80-BF_Nss2,(MCS0)_3TX	-
5775MHz	84

Note: There are two modes of EUT 802.11n/ac. 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
1	EUT with Adapter 3
2	EUT with Adapter 4
For operating mode 2 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 3
2	EUT with Adapter 4
For operating mode 2 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.: FA3D0426-19 for Co-location RF Exposure Evaluation.	

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



2.3 EUT Operation during Test

For CTX Mode:

non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

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 XP 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

Accessories			
Equipment Name	Brand Name	Model Name	Rating
Adapter 1	PIE	AD890326	Input: 100-240V~50/60Hz, 0.8A Output: 19V, 1.75A
Adapter 2	Delta	ADP-33AW B	Input: 100-240V~1A, 50-60Hz Output: 19V, 1.75A
Adapter 3	Delta	ADP-33AW Y	Input: 100-240V~1A, 50-60Hz Output: 19V, 1.75A
Adapter 4	PIE	AD2088320	Input: 100-240V~50/60Hz, 0.8A Output: 19V, 1.75A
Other			
RJ-45 cable*1: Shielded, 1.5m			



2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Flash disk	Silicon Power	I-Series	N/A
B	Flash disk3.0	Transcend	JetFlash-700	N/A
C	LAN NB	DELL	E6430	N/A

For Radiated (below 1GHz):

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

For Radiated (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
C	RX Device	ASUS	RT-AX88U	MSQ-RTAXHP00
D	Notebook	DELL	E4300	N/A

For RF Conducted:

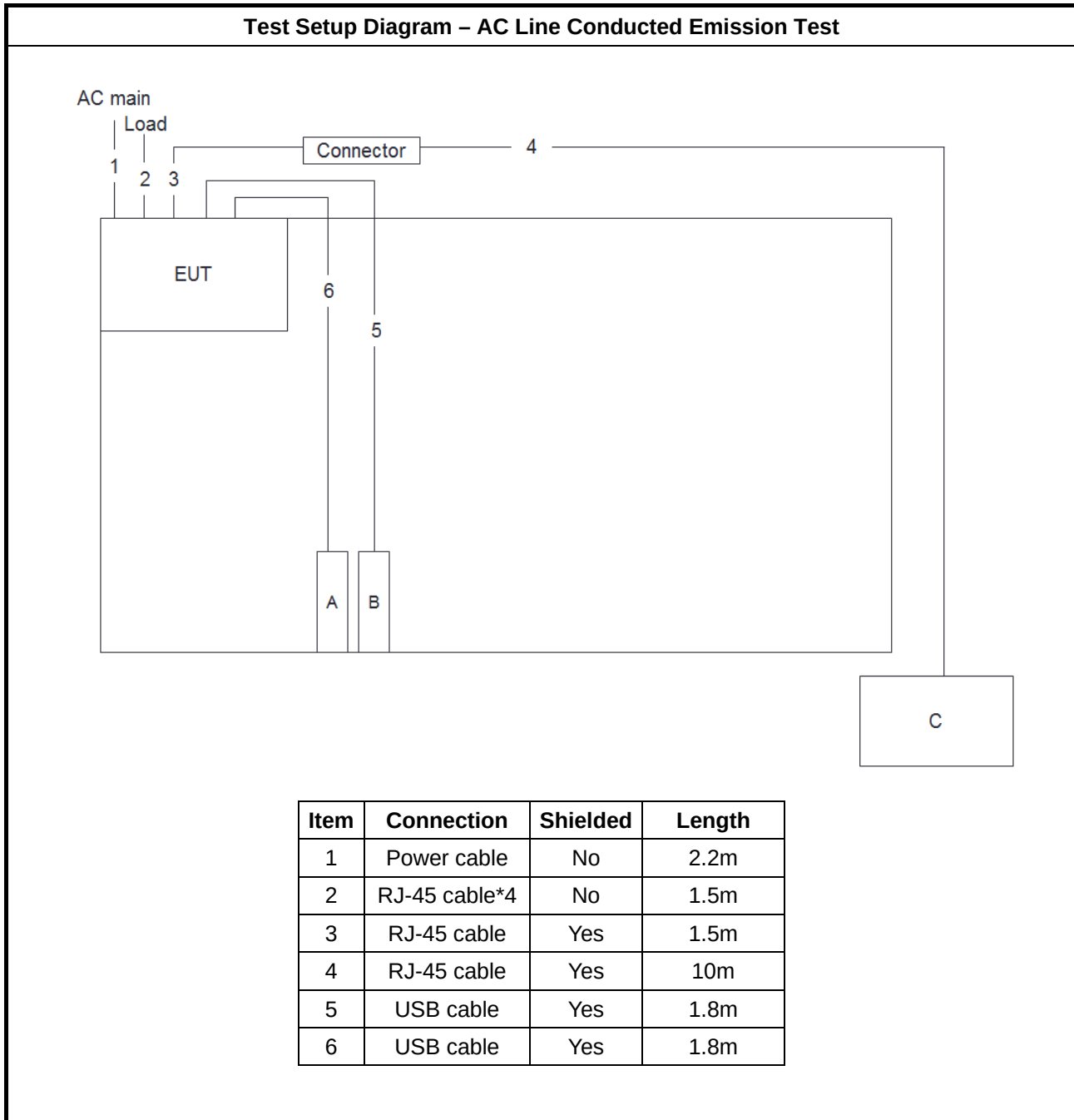
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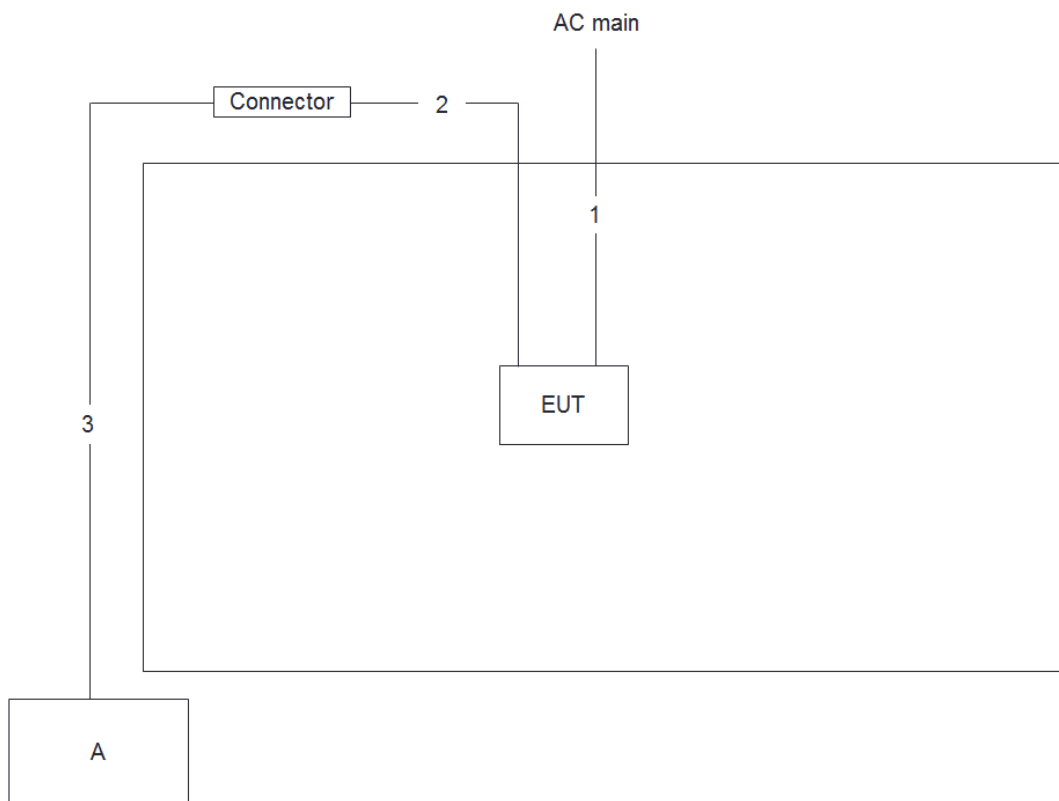
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A

<For Beamforming Mode>

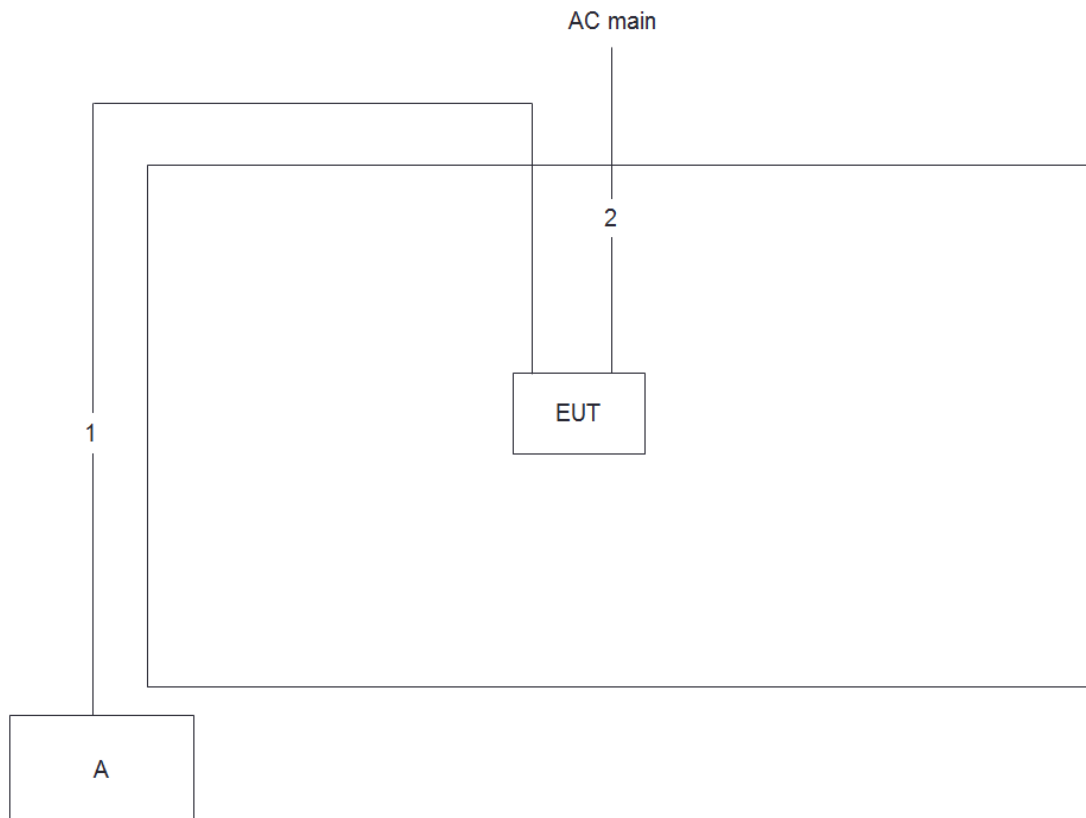
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	Notebook	DELL	E4300	N/A
C	RX Device	ASUS	RT-AX88U	MSQ-RTAXHP00

2.6 Test Setup Diagram

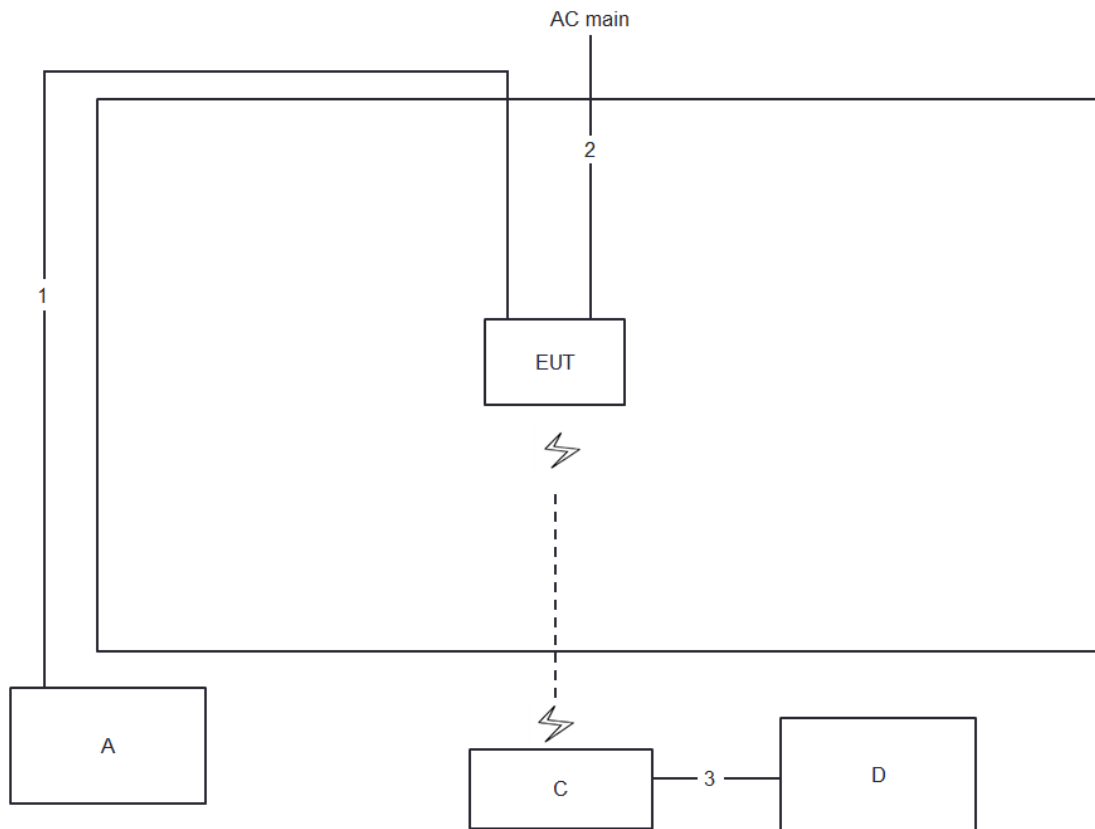


Test Setup Diagram - Radiated Test < 1GHz


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

Test Setup Diagram - Radiated Test > 1GHz / 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 / Beamforming Mode


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



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.		

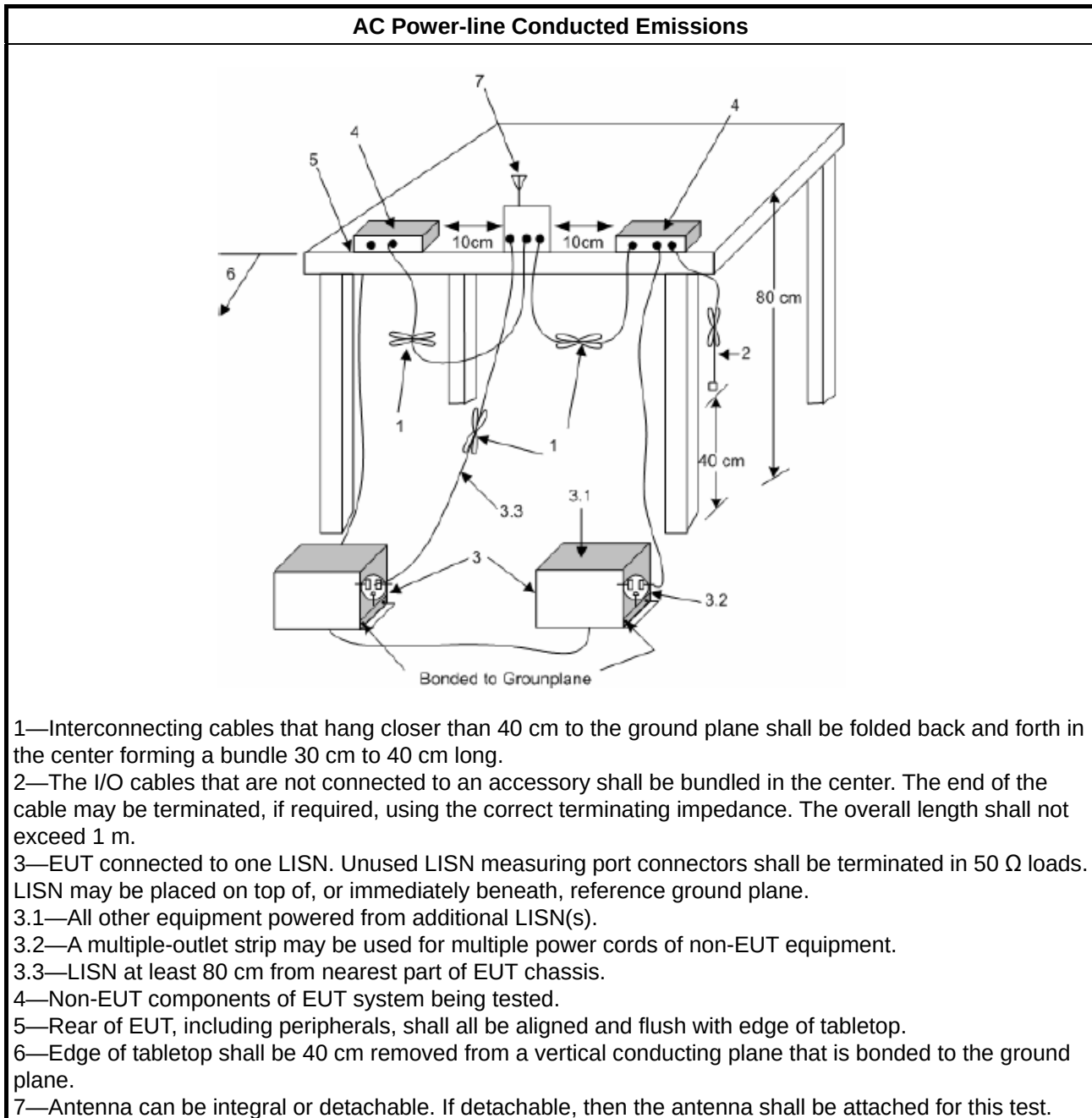
3.1.2 Measuring Instruments

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



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 $\geq$ 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 $\geq$ 500kHz.

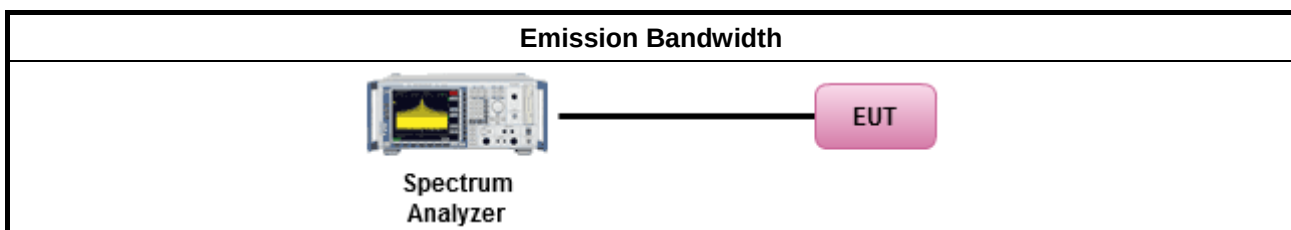
3.2.2 Measuring Instruments

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



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

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

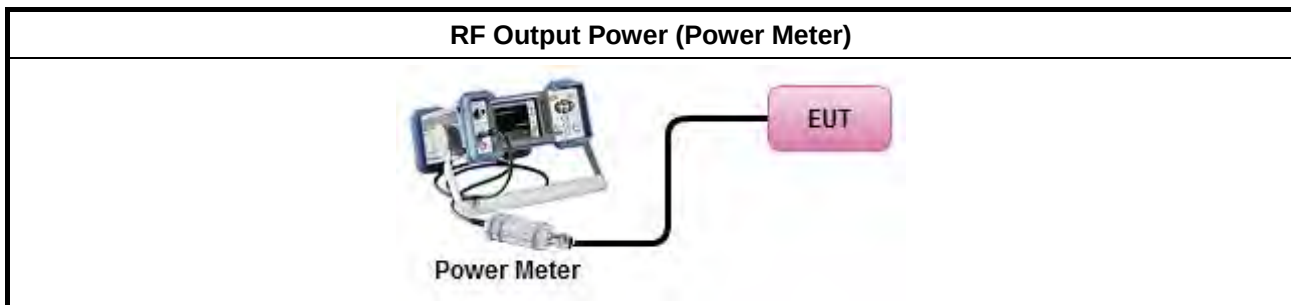
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

3.3.4 Test Setup



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 $0^\circ \leq \theta < 8^\circ$; -13 - 0.716 (θ-8) dBW/MHz for $8^\circ \leq \theta < 40^\circ$ -35.9 - 1.22 (θ-40) dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$
☐ 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.	

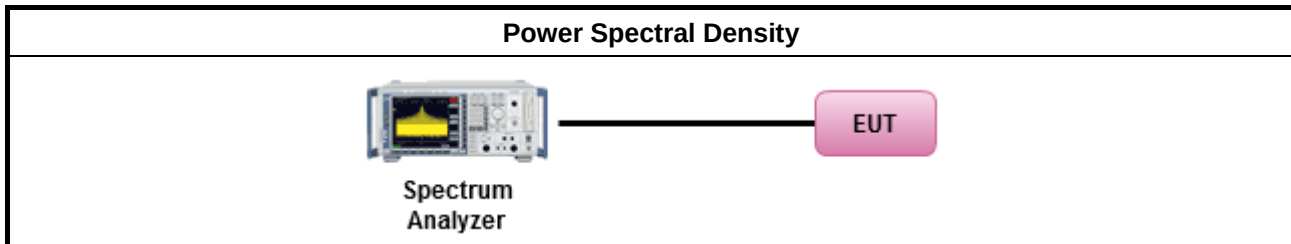
3.4.2 Measuring Instruments

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: $PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$

3.4.4 Test Setup



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).

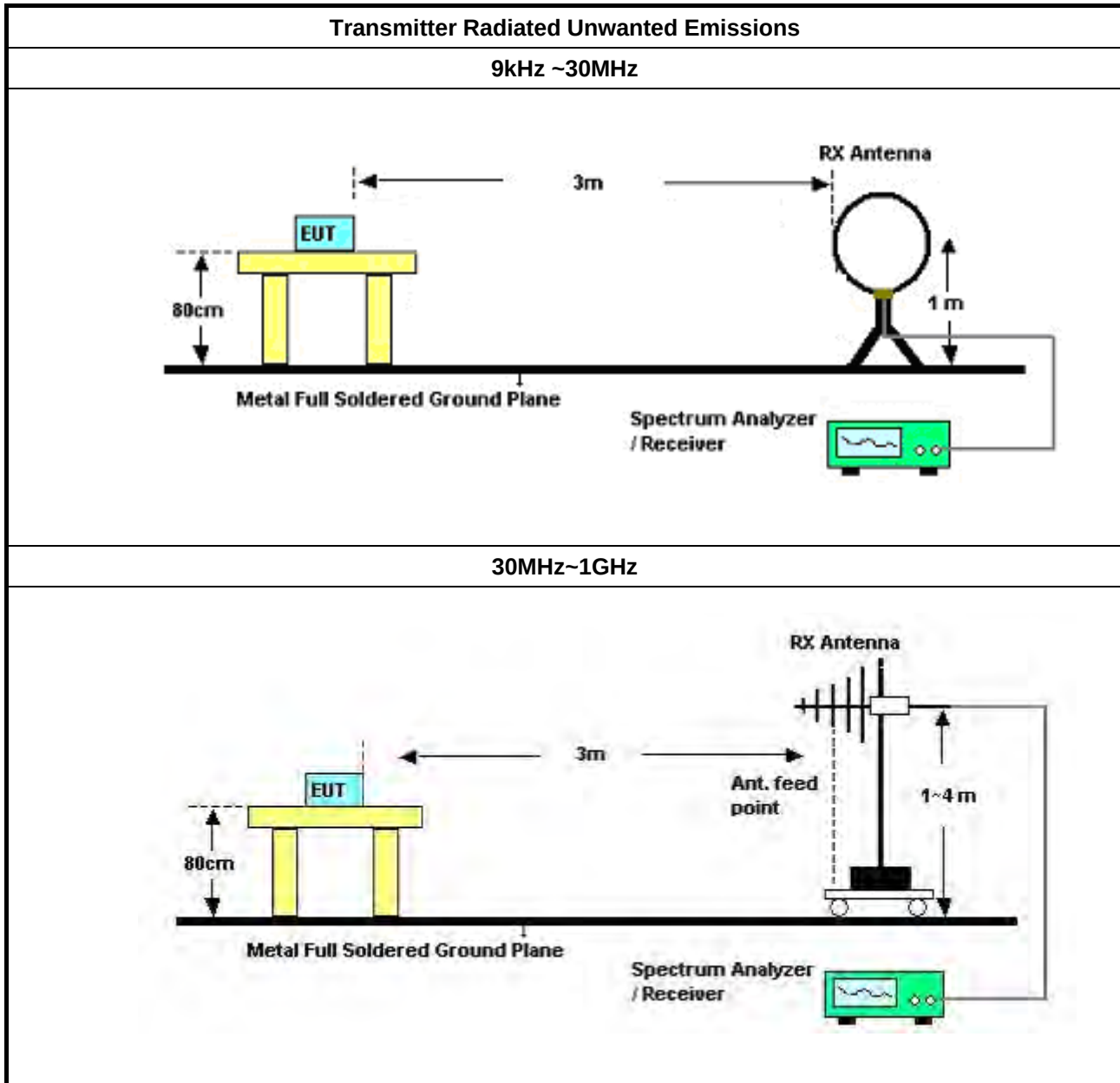
3.5.2 Measuring Instruments

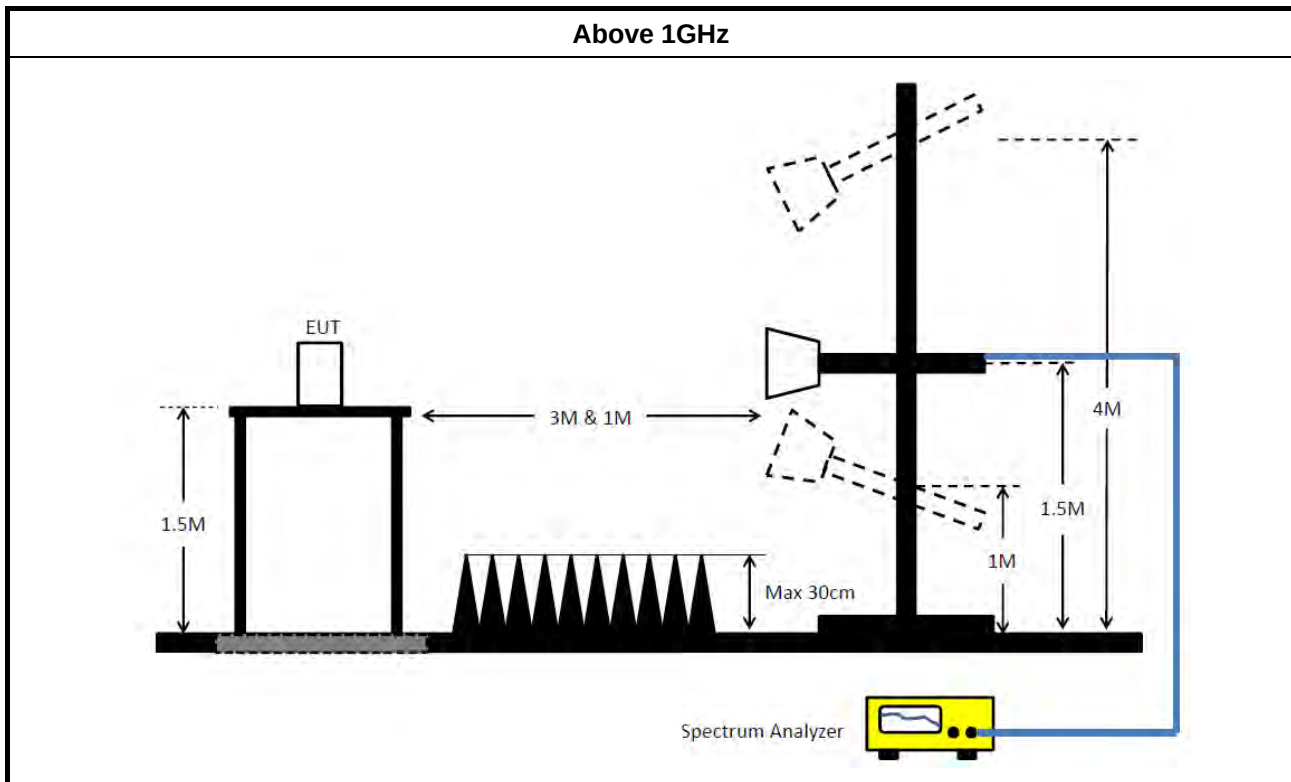
Refer a test equipment and calibration data table in this test report.

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 $\geq$ 98 or duty factor].	
For the transmitter unwanted emissions shall be measured using following options below:	
For radiated measurement.	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 $\geq$ 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.
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.	☐ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
For radiated measurement.	
The any unwanted emissions level shall not exceed the fundamental emission level.	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





3.5.5 Measurement Results Calculation

The measured Level is calculated using:

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

3.5.6 Transmitter Unwanted Emissions (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.

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

The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10 harmonic or 40 GHz, whichever is appropriate.

3.5.7 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Nov. 21, 2019	Nov. 20, 2020	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Oct. 30, 2019	Oct. 29, 2020	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	Oct. 21, 2019	Oct. 20, 2020	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. 29, 2019	Mar. 28, 2020	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESE & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 28, 2019	Mar. 27, 2020	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	May 01, 2019	Apr. 30, 2020	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Aug. 15, 2019	Aug. 14, 2020	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 15, 2019	May 14, 2020	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	LOW Cable-04+23	30MHz~1GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH05-CB)
Horn Antenna	ETS • Lindgren	3115	00143147	750MHz~18GHz	Oct. 22, 2019	Oct. 21, 2020	Radiation (03CH04-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 12, 2019	Jun. 11, 2020	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	83017A	MY53270063	0.5GHz ~ 26.5GHz	Mar. 19, 2019	Mar. 18, 2020	Radiation (03CH04-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 03, 2019	Jul. 02, 2020	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Dec. 26, 2018	Dec. 25, 2019	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21+22	1GHz - 18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH04-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Nov. 01, 2019	Oct. 31, 2020	Conducted (TH03-CB)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Power Sensor	Anritsu	MA2411B	1726195	300MHz~40GHz	Aug. 13, 2019	Aug. 12, 2020	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Aug. 13, 2019	Aug. 12, 2020	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-11	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-13	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH03-CB)

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

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

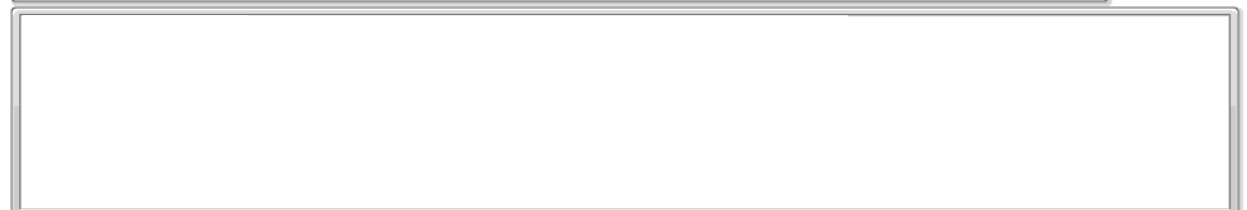
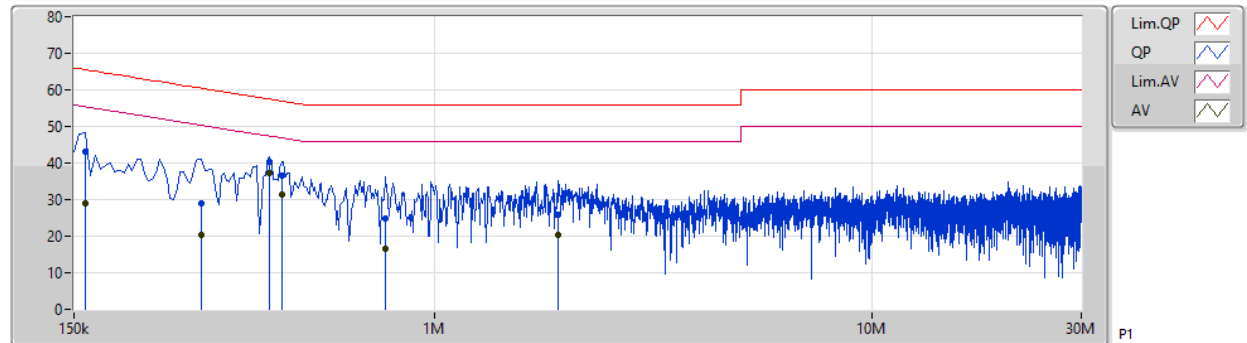


Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition
Mode 2	Pass	AV	420k	37.26	47.45	-10.19	9.93	Line

Mode 2

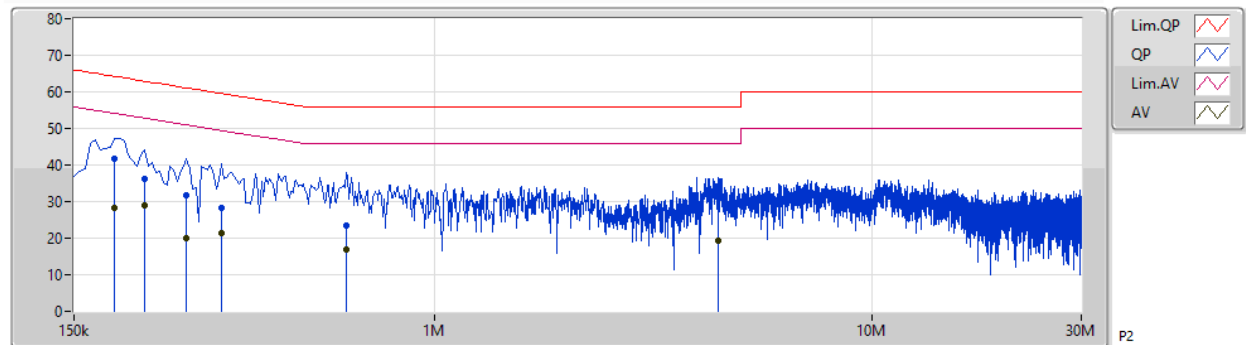
04/12/2019



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	159k	43.26	65.52	-22.26	9.90	Line	-	33.36	0.05	0.06	9.79			
AV	159k	28.84	55.52	-26.68	9.90	Line	-	18.94	0.05	0.06	9.79			
QP	294k	29.12	60.42	-31.30	9.92	Line	-	19.20	0.06	0.06	9.80			
AV	294k	20.43	50.42	-29.99	9.92	Line	-	10.51	0.06	0.06	9.80			
QP	420k	40.32	57.45	-17.13	9.93	Line	-	30.39	0.06	0.06	9.81			
AV	420k	37.26	47.45	-10.19	9.93	Line	"Worst"	27.33	0.06	0.06	9.81			
QP	447k	36.71	56.94	-20.23	9.93	Line	-	26.78	0.06	0.06	9.81			
AV	447k	31.33	46.94	-15.61	9.93	Line	-	21.40	0.06	0.06	9.81			
QP	771k	24.69	56.00	-31.31	9.97	Line	-	14.72	0.07	0.08	9.82			
AV	771k	16.63	46.00	-29.37	9.97	Line	-	6.66	0.07	0.08	9.82			
QP	1.919M	25.72	56.00	-30.28	10.04	Line	-	15.68	0.09	0.12	9.83			
AV	1.919M	20.33	46.00	-25.67	10.04	Line	-	10.29	0.09	0.12	9.83			

Mode 2

04/12/2019



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	186k	41.69	64.20	-22.51	9.89	Neutral	"Worst"	31.80	0.04	0.06	9.79			
AV	186k	28.12	54.20	-26.08	9.89	Neutral	-	18.23	0.04	0.06	9.79			
QP	217.5k	36.11	62.92	-26.81	9.89	Neutral	-	26.22	0.04	0.06	9.79			
AV	217.5k	28.89	52.92	-24.03	9.89	Neutral	-	19.00	0.04	0.06	9.79			
QP	271.5k	31.58	61.07	-29.49	9.90	Neutral	-	21.68	0.04	0.06	9.80			
AV	271.5k	20.02	51.07	-31.05	9.90	Neutral	-	10.12	0.04	0.06	9.80			
QP	325.5k	28.35	59.56	-31.21	9.90	Neutral	-	18.45	0.04	0.06	9.80			
AV	325.5k	21.42	49.56	-28.14	9.90	Neutral	-	11.52	0.04	0.06	9.80			
QP	627k	23.47	56.00	-32.53	9.93	Neutral	-	13.54	0.05	0.07	9.81			
AV	627k	16.92	46.00	-29.08	9.93	Neutral	-	6.99	0.05	0.07	9.81			
QP	4.434M	31.45	56.00	-24.55	10.11	Neutral	-	21.34	0.11	0.18	9.82			
AV	4.434M	19.14	46.00	-26.86	10.11	Neutral	-	9.03	0.11	0.18	9.82			

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_3TX	16.38M	16.732M	16M7D1D	16.32M	16.552M
802.11ac VHT20_Nss1,(MCS0)_3TX	17.61M	17.991M	18M0D1D	17.55M	17.721M
802.11ac VHT40_Nss1,(MCS0)_3TX	36.36M	37.361M	37M4D1D	36.3M	36.642M
802.11ac VHT80_Nss1,(MCS0)_3TX	76.32M	75.802M	75M8D1D	75.84M	75.802M
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	17.61M	17.781M	17M8D1D	17.55M	17.661M
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	36.36M	36.342M	36M3D1D	36.3M	36.222M
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	76.32M	75.922M	75M9D1D	76.08M	75.802M

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

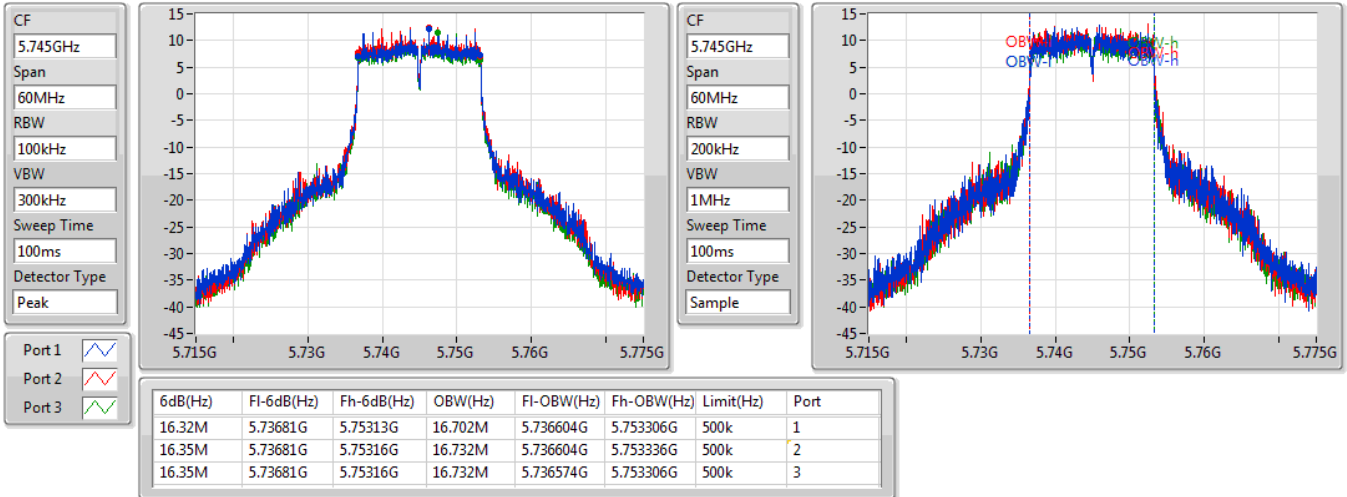
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)
802.11a_Nss1,(6Mbps)_3TX	-	-	-	-	-	-	-	-
5745MHz	Pass	500k	16.32M	16.702M	16.35M	16.732M	16.35M	16.732M
5785MHz	Pass	500k	16.35M	16.642M	16.38M	16.582M	16.35M	16.582M
5825MHz	Pass	500k	16.35M	16.612M	16.38M	16.552M	16.35M	16.612M
802.11ac VHT20_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5745MHz	Pass	500k	17.58M	17.991M	17.61M	17.931M	17.58M	17.901M
5785MHz	Pass	500k	17.58M	17.721M	17.58M	17.751M	17.61M	17.751M
5825MHz	Pass	500k	17.55M	17.781M	17.58M	17.751M	17.61M	17.721M
802.11ac VHT40_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5755MHz	Pass	500k	36.3M	36.882M	36.3M	36.642M	36.3M	36.822M
5795MHz	Pass	500k	36.36M	37.361M	36.3M	36.942M	36.36M	37.121M
802.11ac VHT80_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5775MHz	Pass	500k	75.84M	75.802M	75.84M	75.802M	76.32M	75.802M
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5745MHz	Pass	500k	17.55M	17.781M	17.58M	17.721M	17.61M	17.721M
5785MHz	Pass	500k	17.58M	17.751M	17.61M	17.691M	17.61M	17.751M
5825MHz	Pass	500k	17.55M	17.661M	17.61M	17.691M	17.61M	17.721M
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5755MHz	Pass	500k	36.3M	36.342M	36.3M	36.282M	36.36M	36.282M
5795MHz	Pass	500k	36.3M	36.342M	36.3M	36.222M	36.3M	36.342M
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5775MHz	Pass	500k	76.08M	75.922M	76.08M	75.802M	76.32M	75.802M

Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

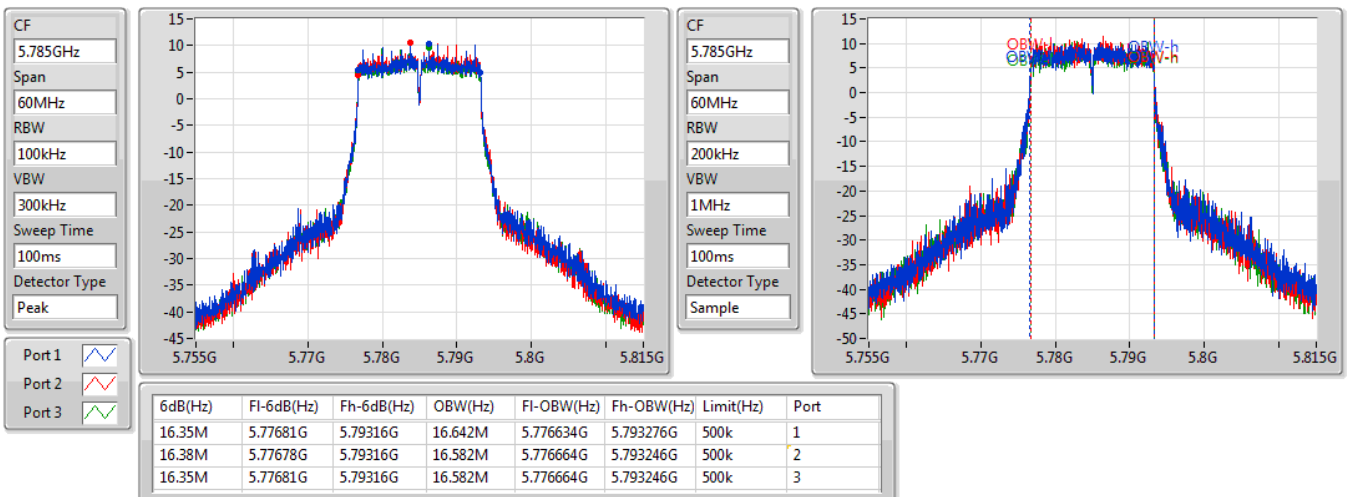
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_3TX
EBW
5745MHz

29/11/2019

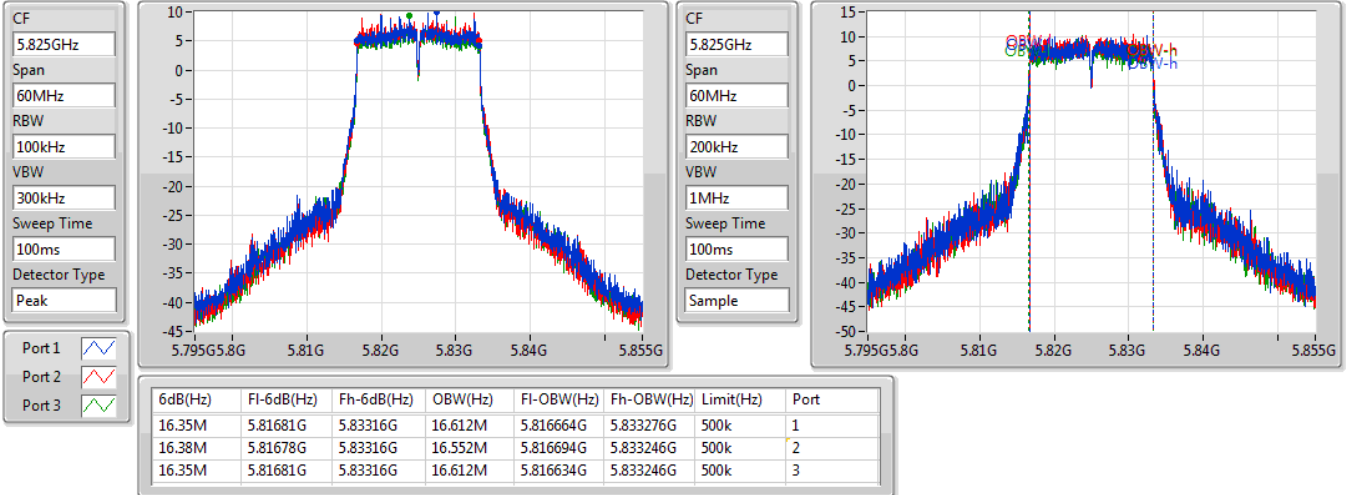

802.11a_Nss1,(6Mbps)_3TX
EBW
5785MHz

29/11/2019

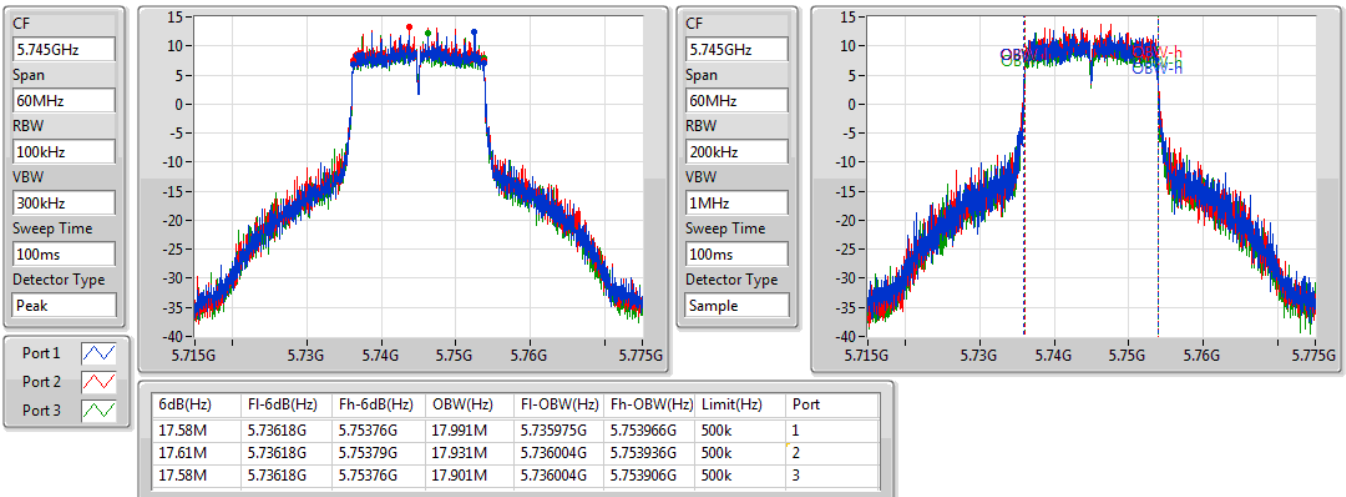


802.11a_Nss1,(6Mbps)_3TX
EBW
5825MHz

29/11/2019

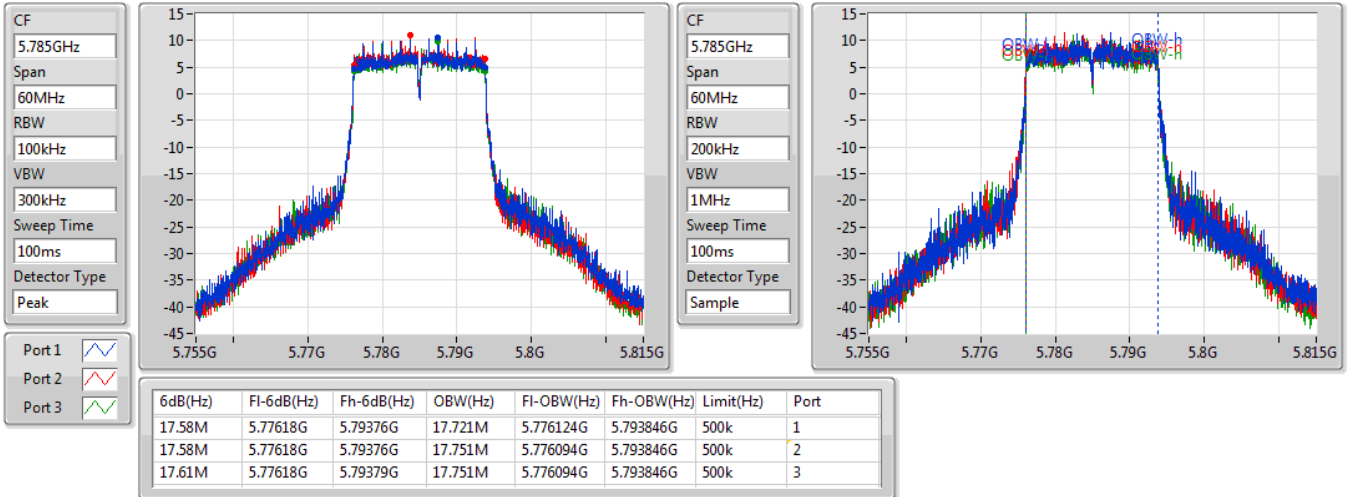

802.11ac VHT20_Nss1,(MCS0)_3TX
EBW
5745MHz

29/11/2019

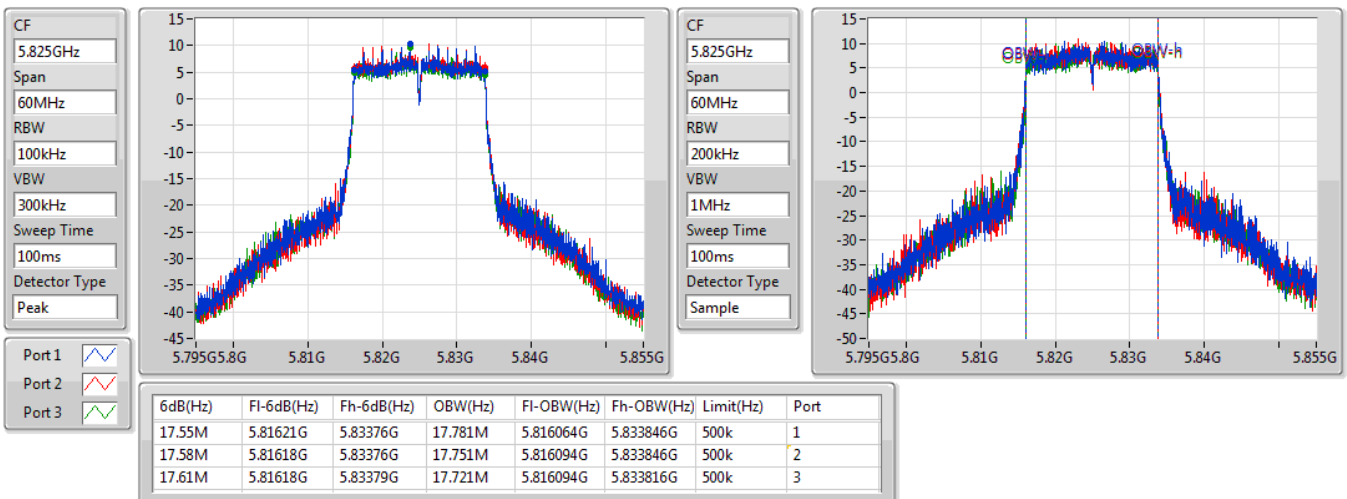


802.11ac VHT20_Nss1,(MCS0)_3TX
EBW
5785MHz

29/11/2019

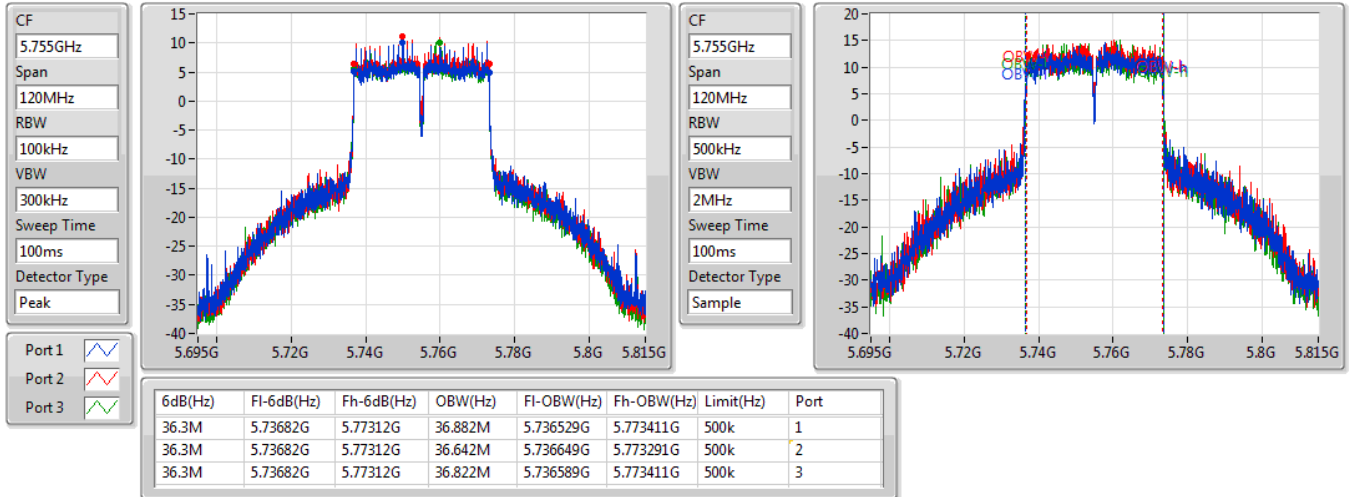

802.11ac VHT20_Nss1,(MCS0)_3TX
EBW
5825MHz

29/11/2019

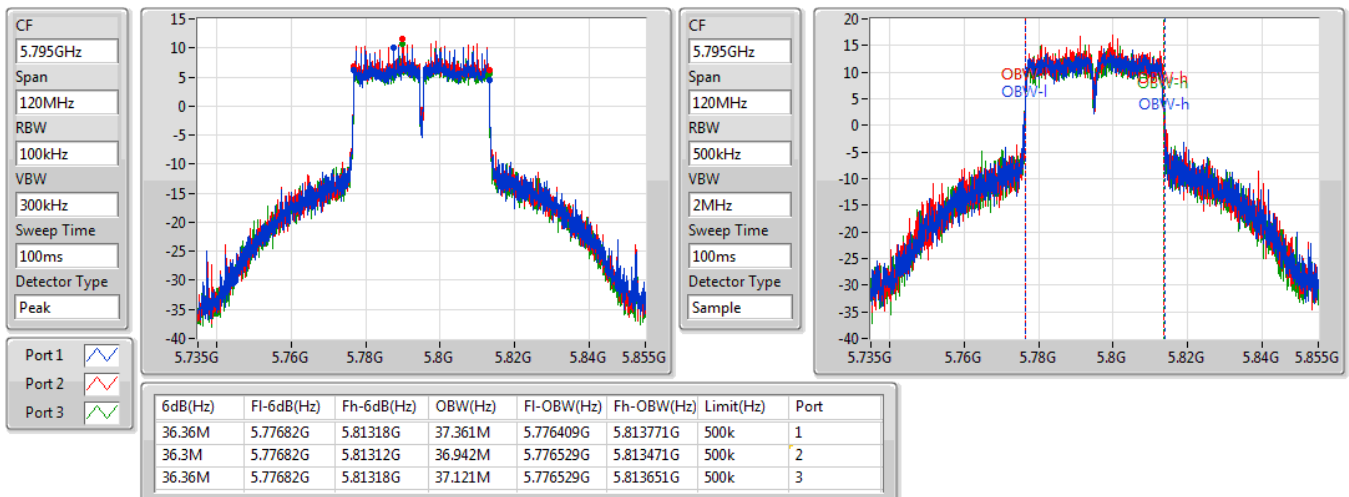


802.11ac VHT40_Nss1,(MCS0)_3TX
EBW
5755MHz

29/11/2019

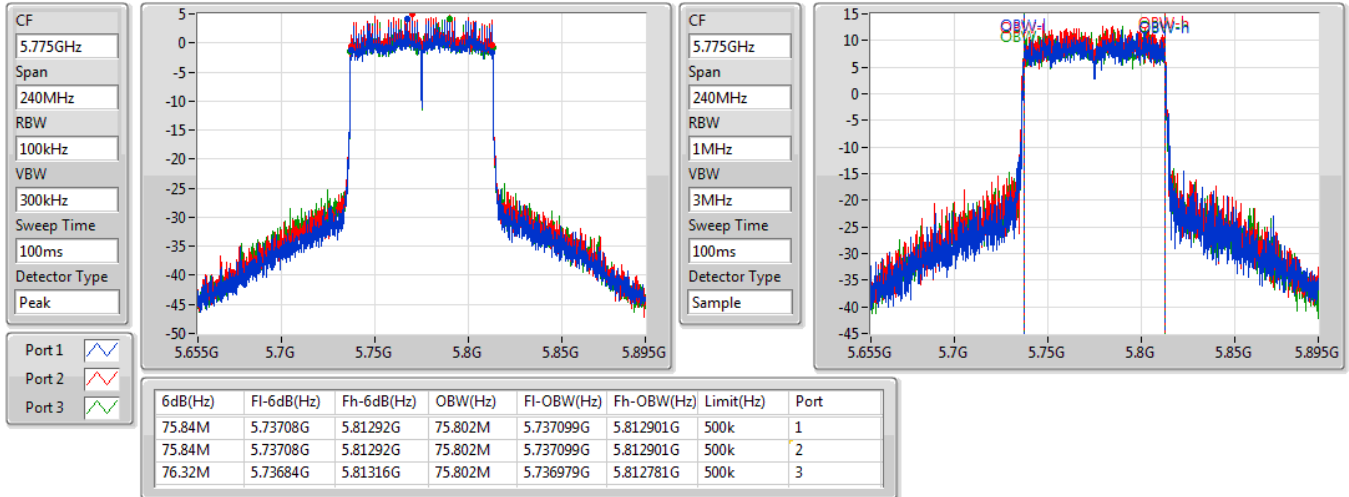

802.11ac VHT40_Nss1,(MCS0)_3TX
EBW
5795MHz

29/11/2019

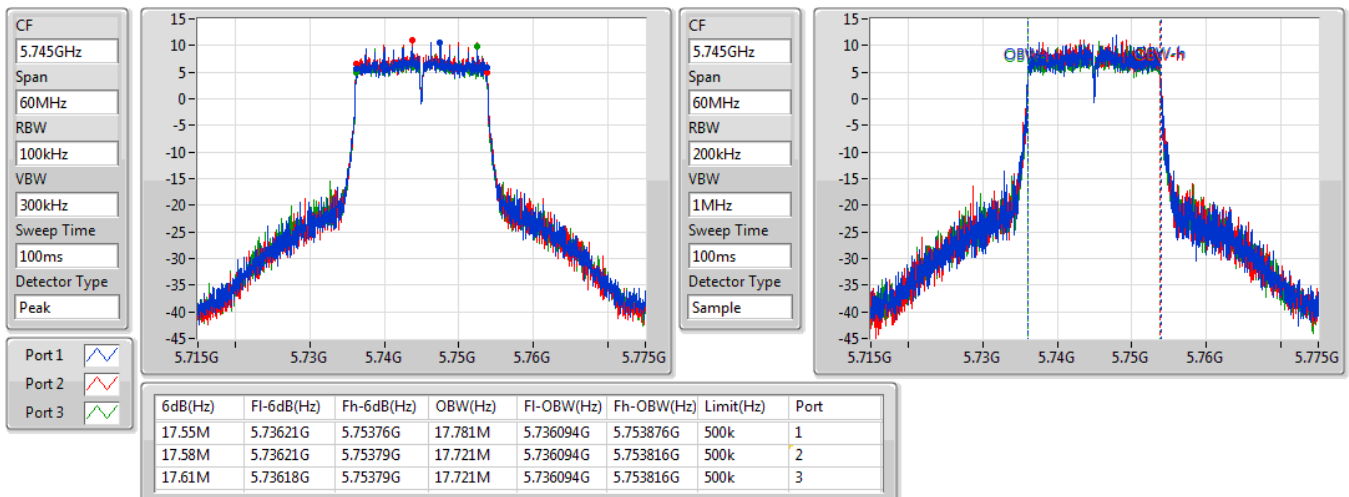


802.11ac VHT80_Nss1,(MCS0)_3TX
EBW
5775MHz

29/11/2019

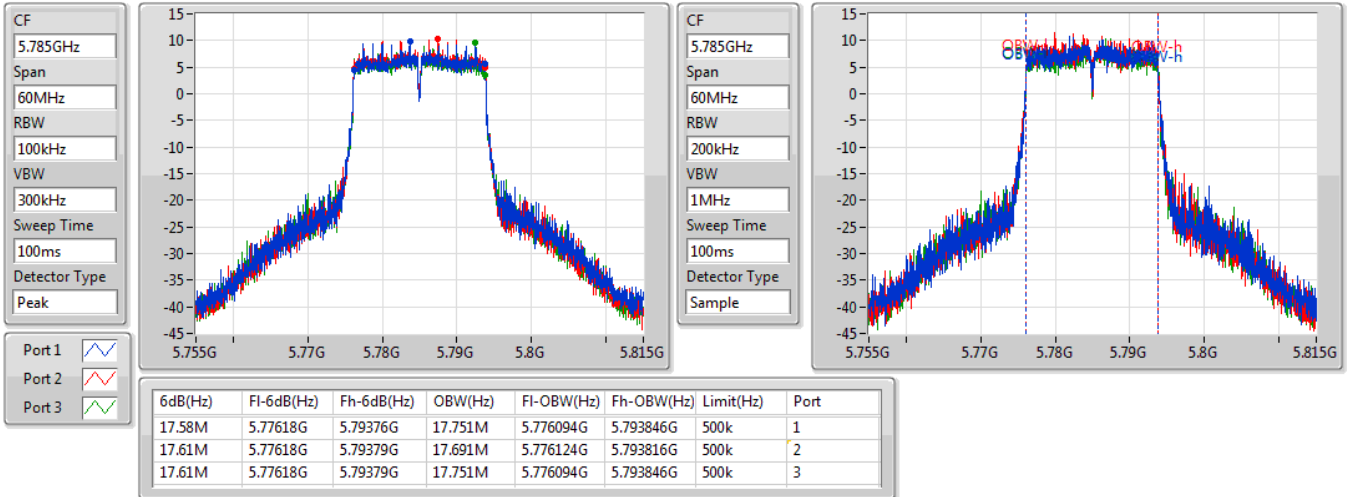

802.11ac VHT20-BF_Nss1,(MCS0)_3TX
EBW
5745MHz

29/11/2019

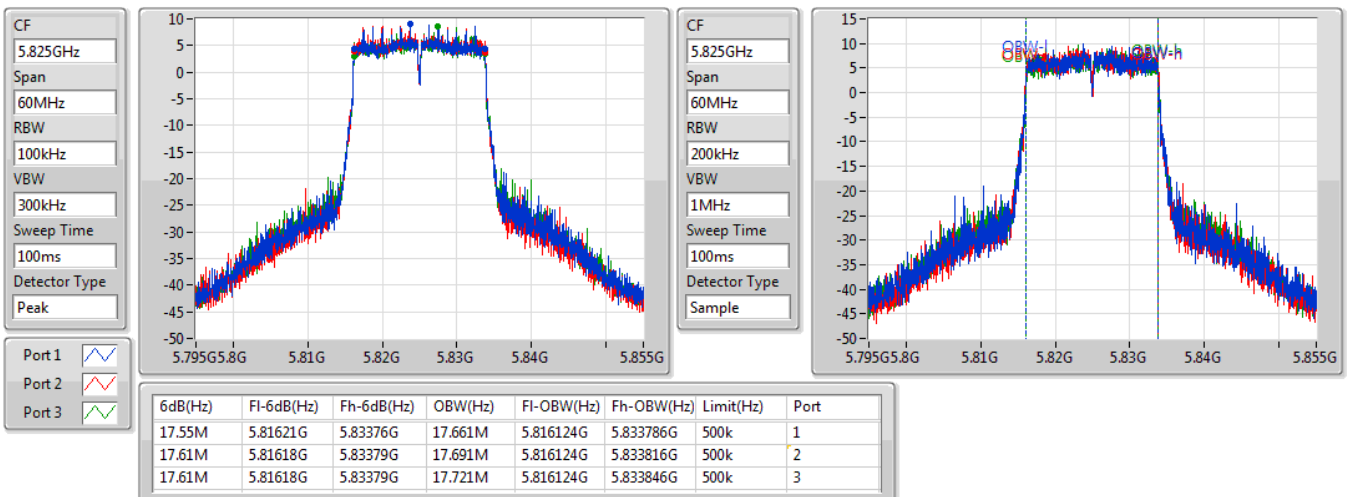


802.11ac VHT20-BF_Nss1,(MCS0)_3TX
EBW
5785MHz

29/11/2019

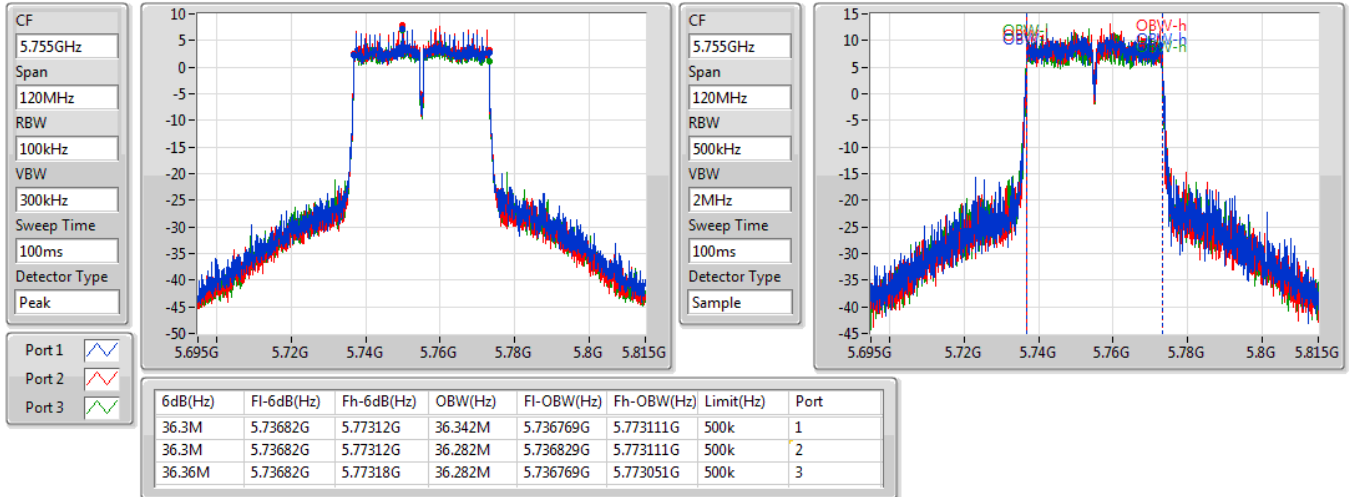

802.11ac VHT20-BF_Nss1,(MCS0)_3TX
EBW
5825MHz

29/11/2019

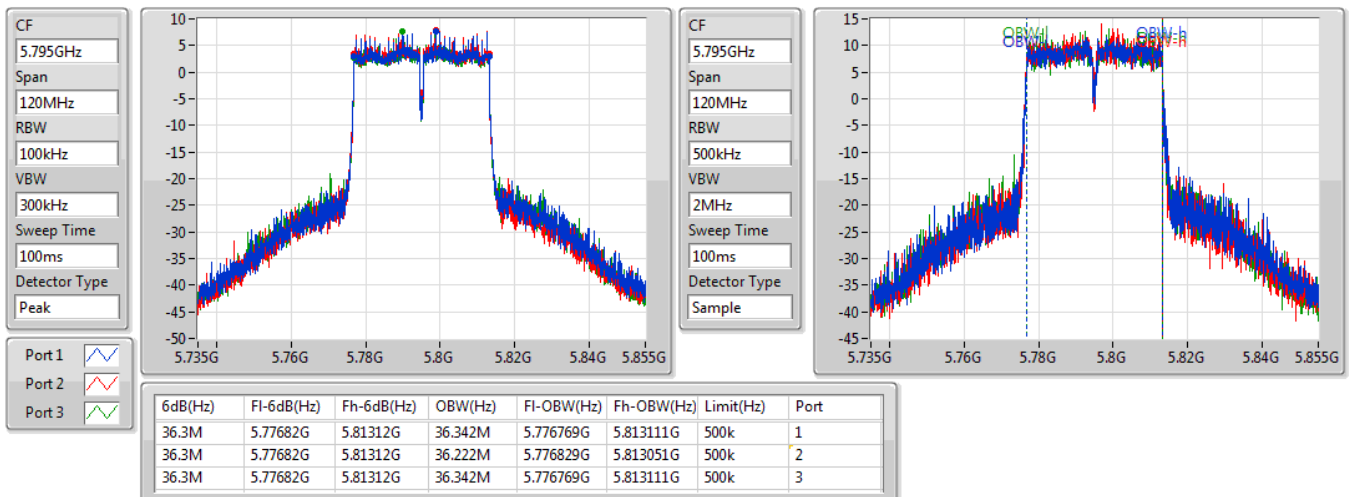


802.11ac VHT40-BF_Nss1,(MCS0)_3TX
EBW
5755MHz

29/11/2019


802.11ac VHT40-BF_Nss1,(MCS0)_3TX
EBW
5795MHz

29/11/2019

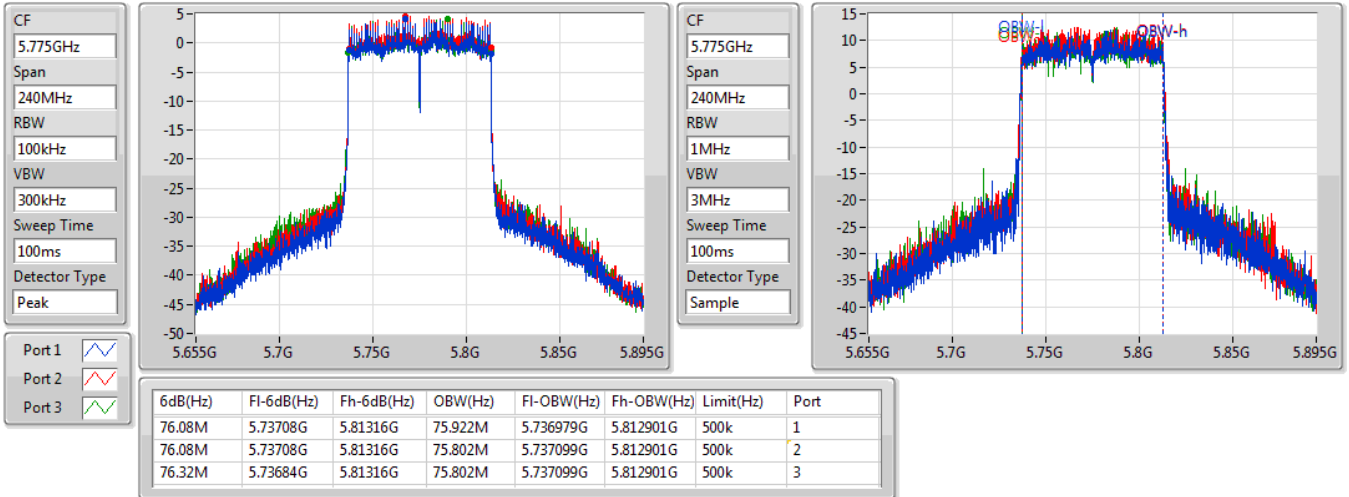


802.11ac VHT80-BF_Nss1,(MCS0)_3TX

EBW

5775MHz

29/11/2019



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_3TX	17.775M	18.066M	18M1D1D	16.9M	17.616M
802.11ac VHT40-BF_Nss2,(MCS0)_3TX	36.4M	36.482M	36M5D1D	35.6M	36.332M
802.11ac VHT80-BF_Nss2,(MCS0)_3TX	76.3M	75.862M	75M9D1D	76.3M	75.762M

Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

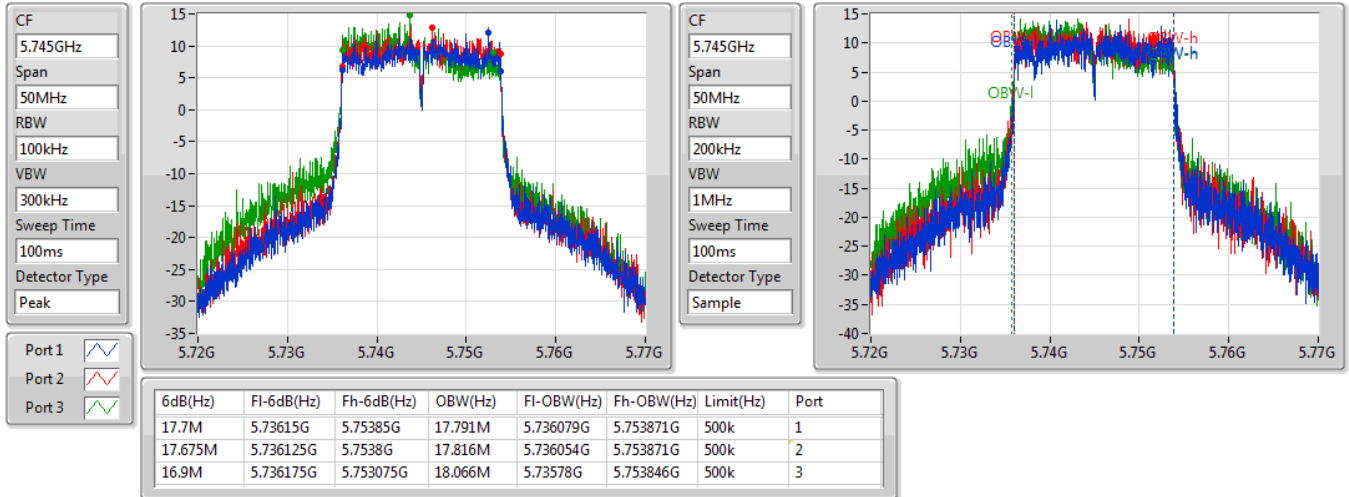
Result

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)
802.11ac VHT20-BF_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-	-
5745MHz	Pass	500k	17.7M	17.791M	17.675M	17.816M	16.9M	18.066M
5785MHz	Pass	500k	17.65M	17.741M	17.675M	17.716M	17.6M	17.741M
5825MHz	Pass	500k	17.75M	17.716M	17.775M	17.741M	17.6M	17.616M
802.11ac VHT40-BF_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-	-
5755MHz	Pass	500k	35.6M	36.432M	36.4M	36.432M	36.2M	36.332M
5795MHz	Pass	500k	36.35M	36.432M	36.35M	36.482M	36.35M	36.482M
802.11ac VHT80-BF_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-	-
5775MHz	Pass	500k	76.3M	75.862M	76.3M	75.762M	76.3M	75.862M

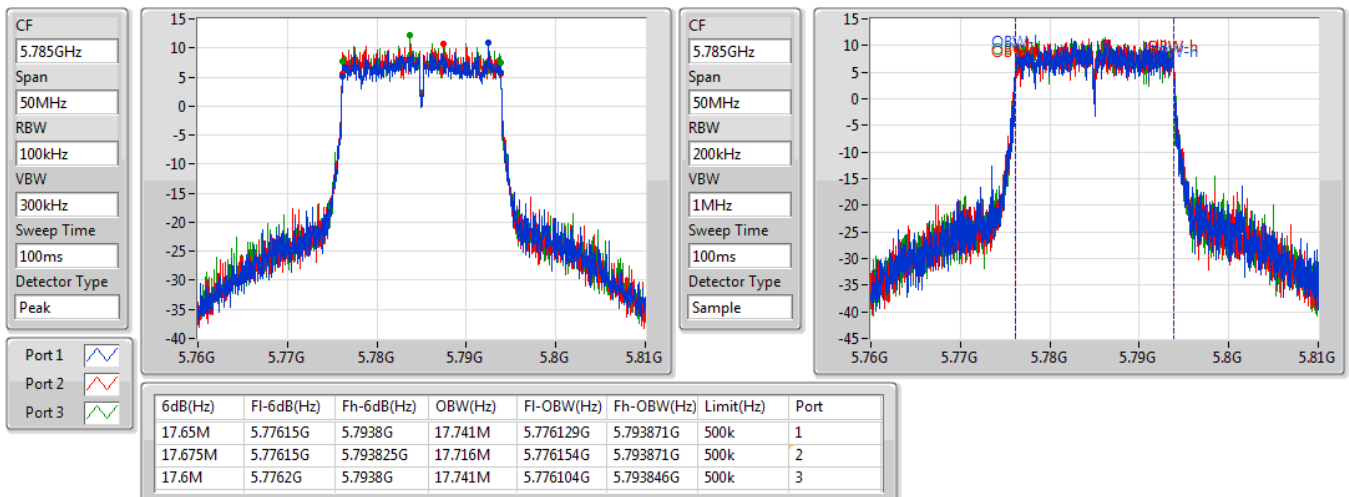
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11ac VHT20-BF_Nss2,(MCS0)_3TX
EBW
5745MHz

28/11/2019

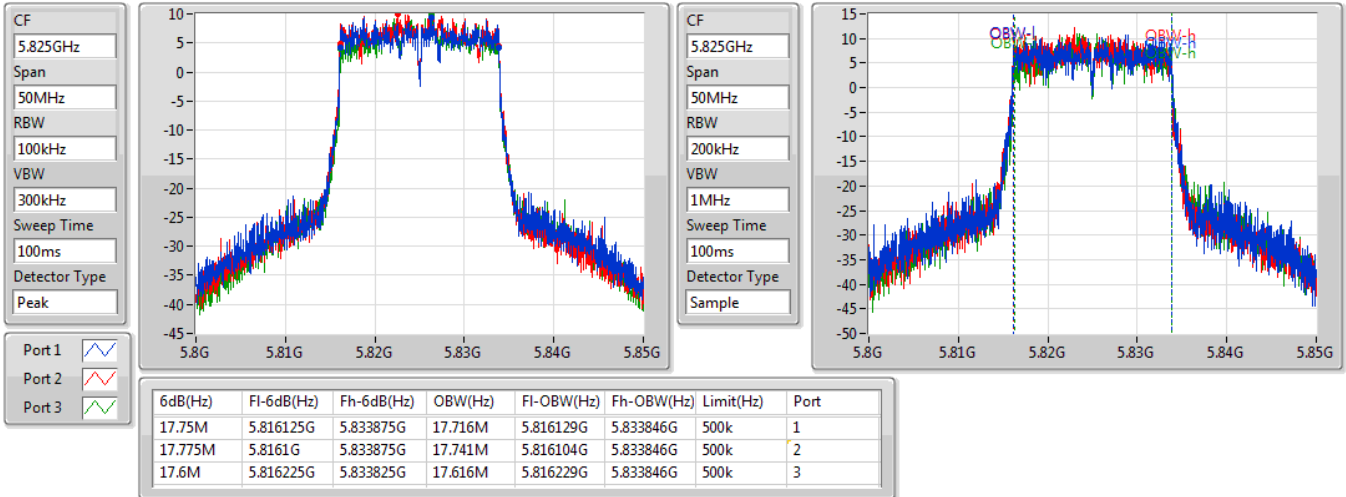

802.11ac VHT20-BF_Nss2,(MCS0)_3TX
EBW
5785MHz

28/11/2019

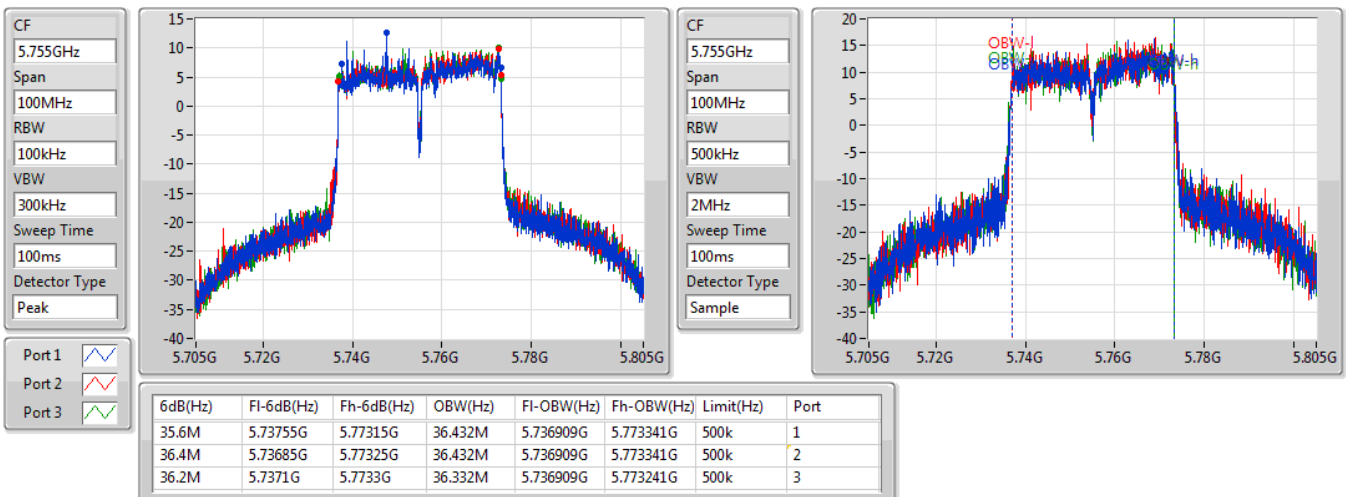


802.11ac VHT20-BF_Nss2,(MCS0)_3TX
EBW
5825MHz

28/11/2019

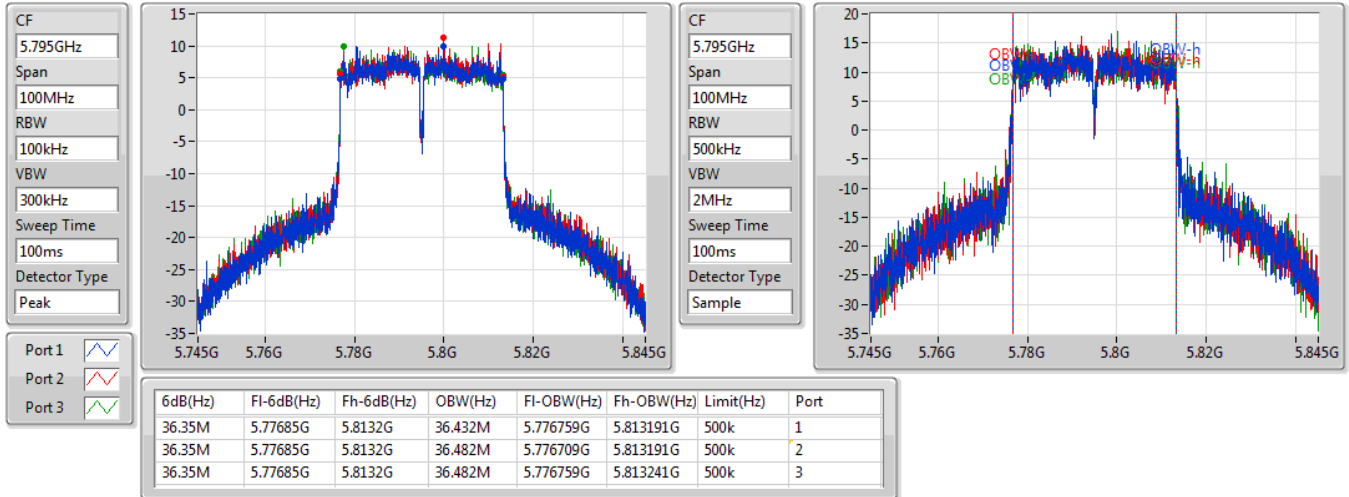

802.11ac VHT40-BF_Nss2,(MCS0)_3TX
EBW
5755MHz

28/11/2019

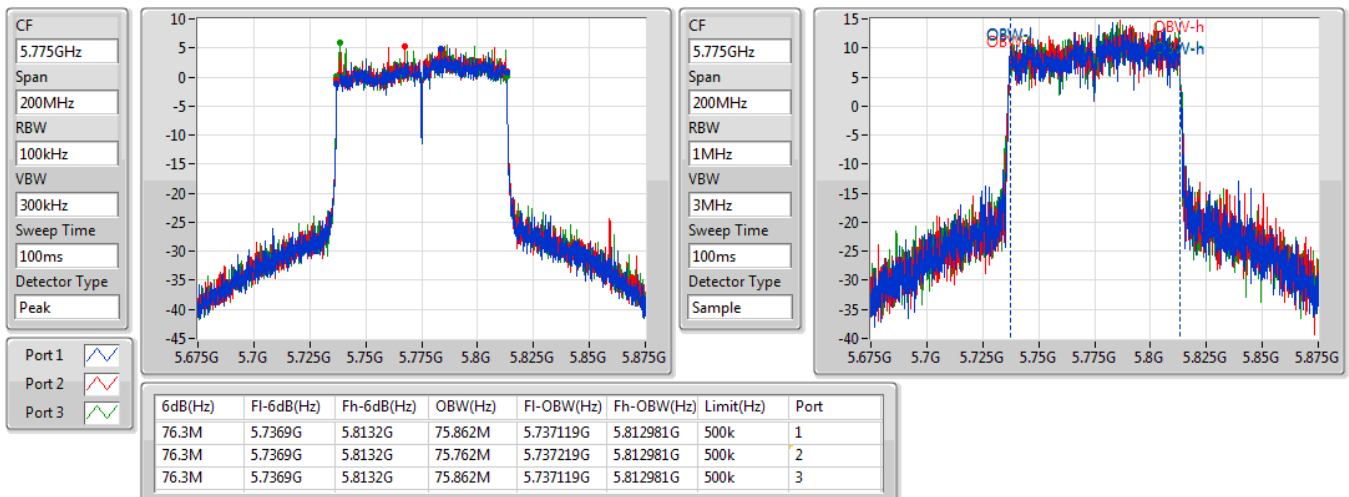


802.11ac VHT40-BF_Nss2,(MCS0)_3TX
EBW
5795MHz

28/11/2019


802.11ac VHT80-BF_Nss2,(MCS0)_3TX
EBW
5775MHz

28/11/2019





Summary

Mode	Total Power (dBm)	Total Power (W)
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_3TX	28.61	0.72611
802.11ac VHT20_Nss1,(MCS0)_3TX	29.03	0.79983
802.11ac VHT40_Nss1,(MCS0)_3TX	29.63	0.91833
802.11ac VHT80_Nss1,(MCS0)_3TX	26.52	0.44875
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	27.05	0.50699
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	26.84	0.48306
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	26.52	0.44875



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_3TX	-	-	-	-	-	-	-
5745MHz	Pass	3.94	23.77	24.16	23.57	28.61	30.00
5785MHz	Pass	3.94	21.94	22.25	21.79	26.77	30.00
5825MHz	Pass	3.94	21.53	22.01	21.31	26.40	30.00
802.11ac VHT20_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5745MHz	Pass	3.94	24.24	24.58	23.94	29.03	30.00
5785MHz	Pass	3.94	22.03	22.54	21.90	26.94	30.00
5825MHz	Pass	3.94	21.91	22.12	21.58	26.65	30.00
802.11ac VHT40_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5755MHz	Pass	3.94	24.39	25.03	24.16	29.31	30.00
5795MHz	Pass	3.94	24.69	25.39	24.43	29.63	30.00
802.11ac VHT80_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5775MHz	Pass	3.94	21.48	22.19	21.53	26.52	30.00
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5745MHz	Pass	8.71	22.34	22.51	21.96	27.05	27.29
5785MHz	Pass	8.71	21.79	22.21	21.65	26.66	27.29
5825MHz	Pass	8.71	20.73	21.28	20.53	25.63	27.29
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5755MHz	Pass	8.71	21.84	22.06	21.32	26.52	27.29
5795MHz	Pass	8.71	22.06	22.29	21.84	26.84	27.29
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5775MHz	Pass	8.71	21.48	22.19	21.53	26.52	27.29

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



Average Power

Appendix C.2

Summary

Mode	Total Power (dBm)	Total Power (W)
5.725-5.85GHz	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_3TX	29.80	0.95499
802.11ac VHT40-BF_Nss2,(MCS0)_3TX	29.32	0.85507
802.11ac VHT80-BF_Nss2,(MCS0)_3TX	26.87	0.48641



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ac VHT20-BF_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-
5745MHz	Pass	5.85	24.68	25.24	25.16	29.80	30.00
5785MHz	Pass	5.85	22.73	22.41	22.87	27.45	30.00
5825MHz	Pass	5.85	21.92	21.24	21.66	26.39	30.00
802.11ac VHT40-BF_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-
5755MHz	Pass	5.85	24.12	24.53	24.56	29.18	30.00
5795MHz	Pass	5.85	24.86	24.30	24.46	29.32	30.00
802.11ac VHT80-BF_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-
5775MHz	Pass	5.85	22.30	21.74	22.24	26.87	30.00

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

Summary

Mode	PD (dBm/RBW)
5.725-5.85GHz	-
802.11a_Nss1,(6Mbps)_3TX	14.56
802.11ac VHT20_Nss1,(MCS0)_3TX	14.71
802.11ac VHT40_Nss1,(MCS0)_3TX	12.36
802.11ac VHT80_Nss1,(MCS0)_3TX	6.30
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	12.77
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	9.75
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	6.33

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

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_3TX	-	-	-	-	-	-	-
5745MHz	Pass	8.71	9.84	10.16	9.59	14.56	27.29
5785MHz	Pass	8.71	8.01	8.35	7.85	12.80	27.29
5825MHz	Pass	8.71	7.65	8.14	7.44	12.50	27.29
802.11ac VHT20_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5745MHz	Pass	8.71	9.91	10.45	9.63	14.71	27.29
5785MHz	Pass	8.71	7.83	8.35	7.75	12.68	27.29
5825MHz	Pass	8.71	7.60	7.86	7.40	12.31	27.29
802.11ac VHT40_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5755MHz	Pass	8.71	7.18	7.84	6.85	12.03	27.29
5795MHz	Pass	8.71	7.47	8.21	7.27	12.36	27.29
802.11ac VHT80_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5775MHz	Pass	8.71	1.27	2.04	1.31	6.30	27.29
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5745MHz	Pass	8.71	8.13	8.33	7.78	12.77	27.29
5785MHz	Pass	8.71	7.80	7.96	7.52	12.45	27.29
5825MHz	Pass	8.71	6.67	6.98	6.43	11.38	27.29
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5755MHz	Pass	8.71	4.63	4.99	4.15	9.31	27.29
5795MHz	Pass	8.71	4.98	5.39	4.75	9.75	27.29
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5775MHz	Pass	8.71	1.30	2.17	1.38	6.33	27.29

DG = Directional Gain; **RBW** = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

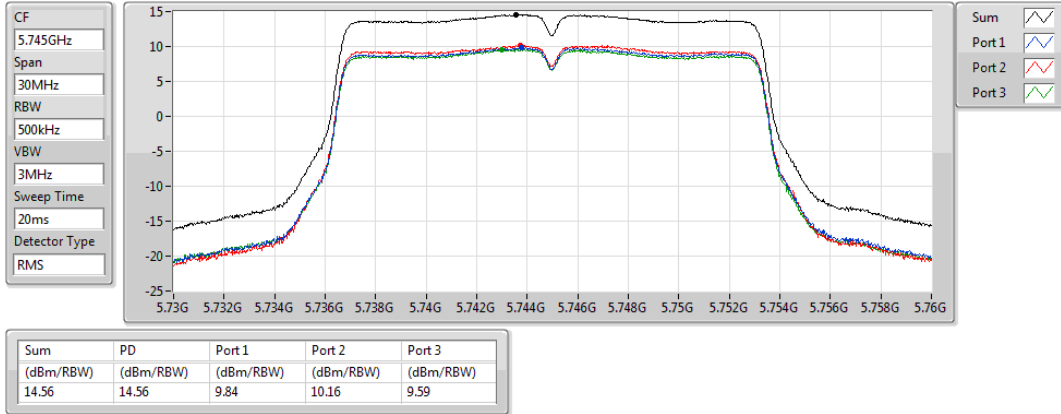
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11a_Nss1,(6Mbps)_3TX

PSD

5745MHz

29/11/2019

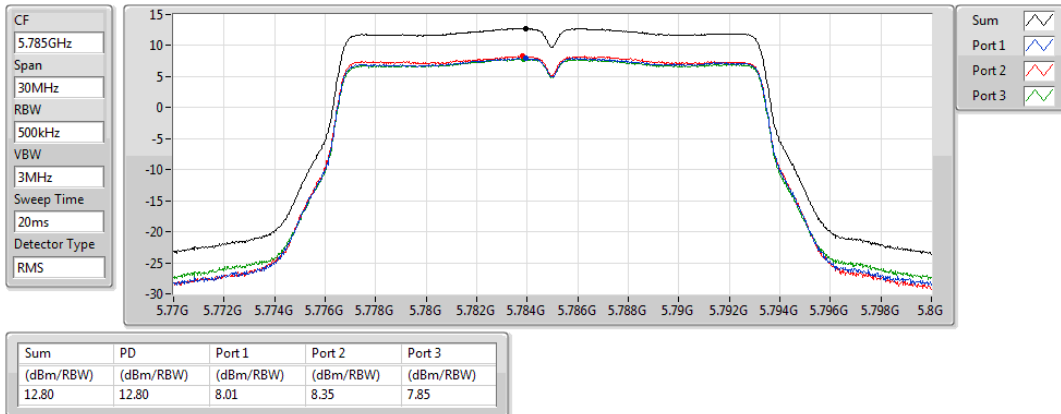


802.11a_Nss1,(6Mbps)_3TX

PSD

5785MHz

29/11/2019

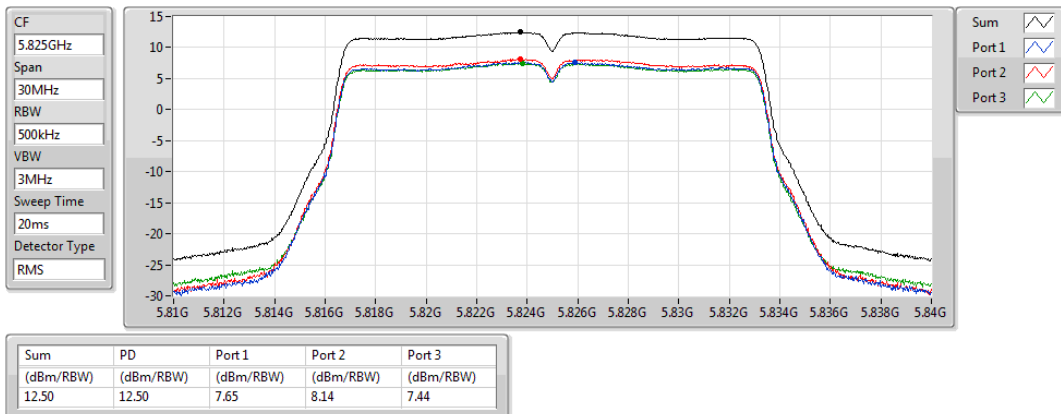


802.11a_Nss1,(6Mbps)_3TX

PSD

5825MHz

29/11/2019

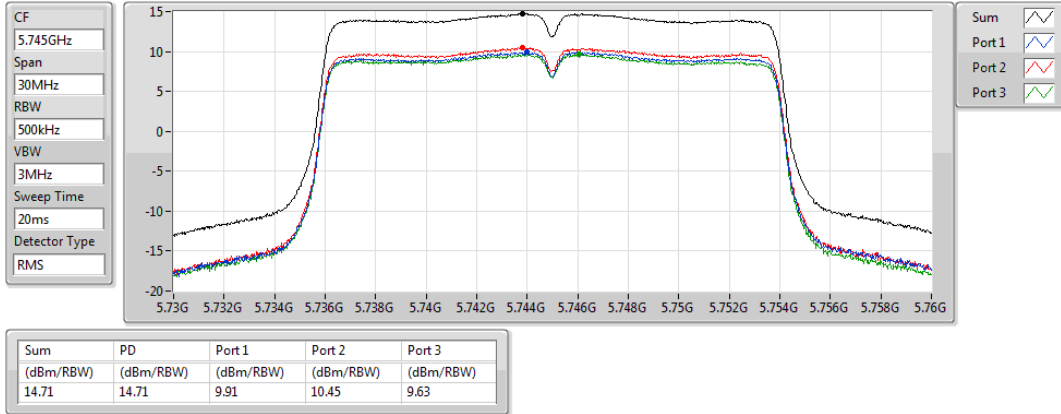


802.11ac VHT20_Nss1,(MCS0)_3TX

PSD

5745MHz

29/11/2019

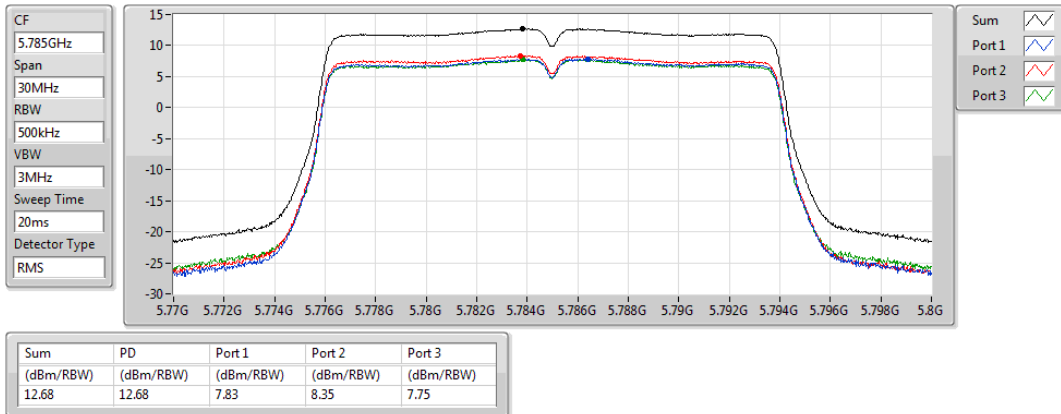


802.11ac VHT20_Nss1,(MCS0)_3TX

PSD

5785MHz

29/11/2019

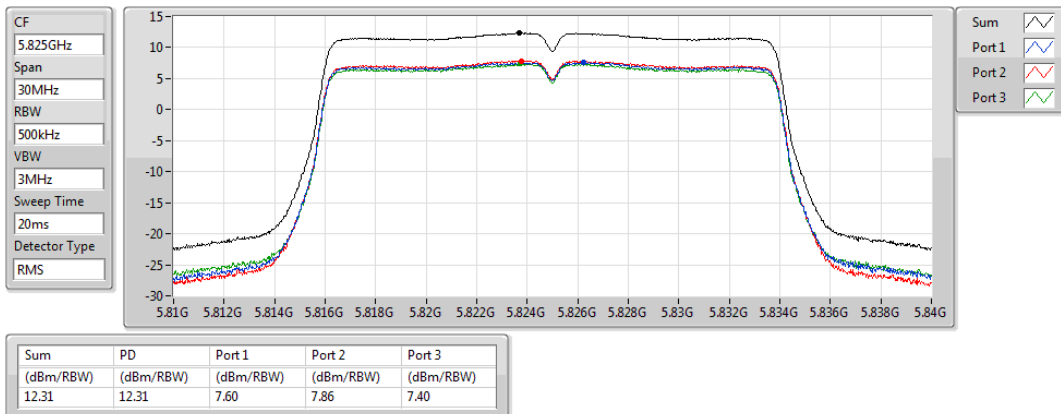


802.11ac VHT20_Nss1,(MCS0)_3TX

PSD

5825MHz

29/11/2019

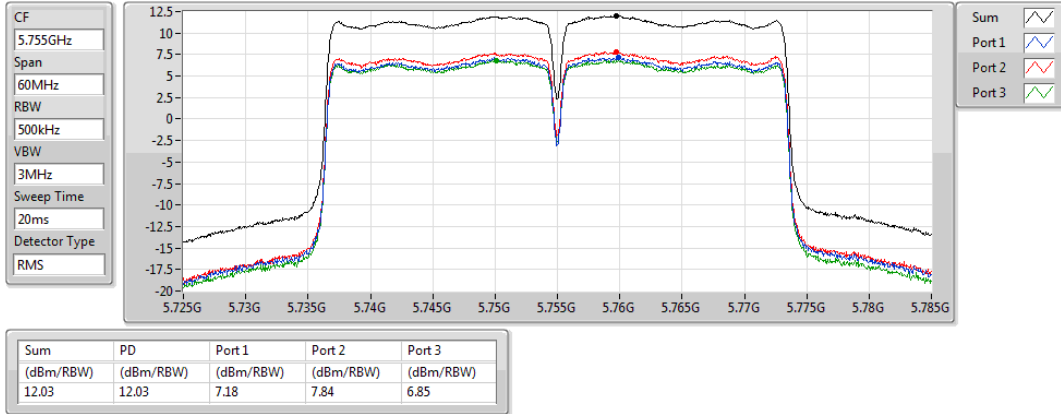


802.11ac VHT40_Nss1,(MCS0)_3TX

PSD

5755MHz

29/11/2019

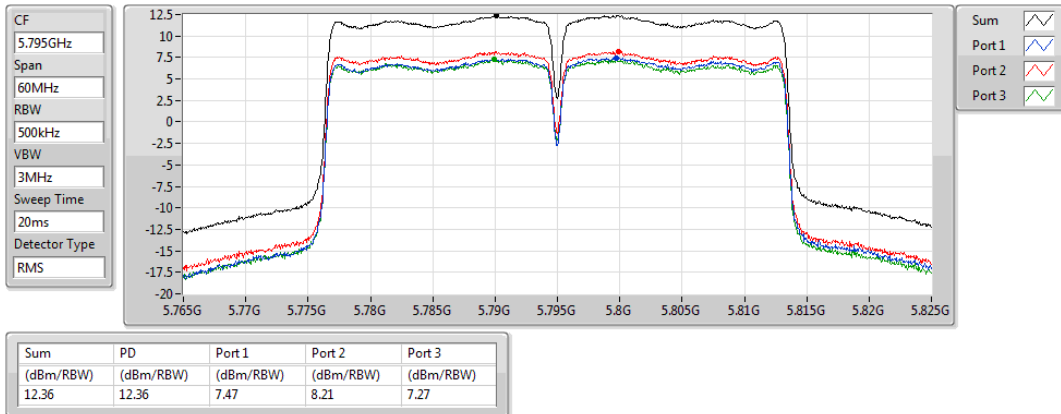


802.11ac VHT40_Nss1,(MCS0)_3TX

PSD

5795MHz

29/11/2019

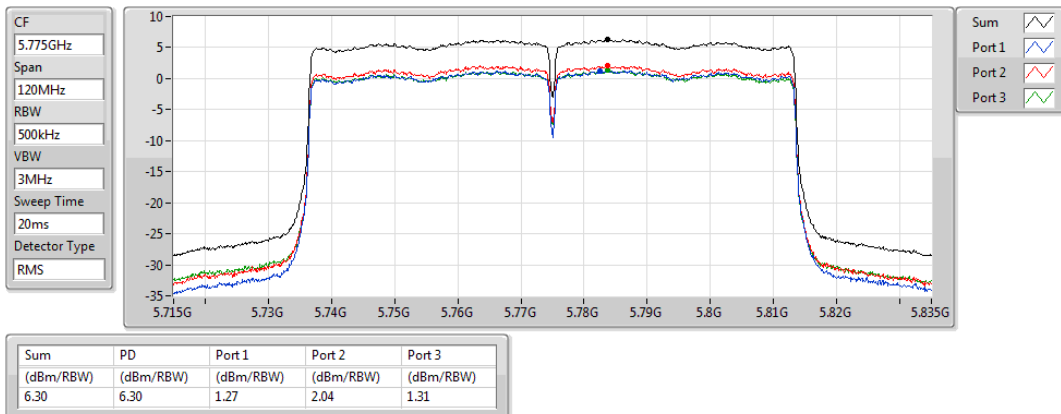


802.11ac VHT80_Nss1,(MCS0)_3TX

PSD

5775MHz

29/11/2019

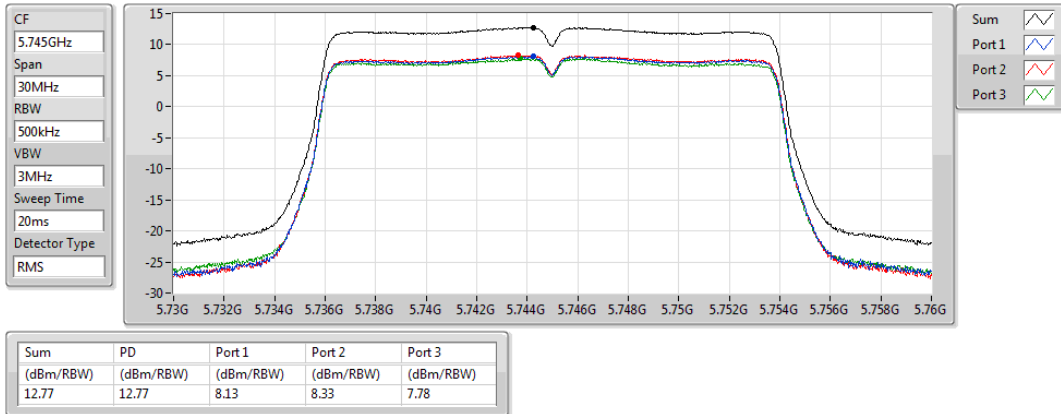


802.11ac VHT20-BF_Nss1,(MCS0)_3TX

PSD

5745MHz

29/11/2019

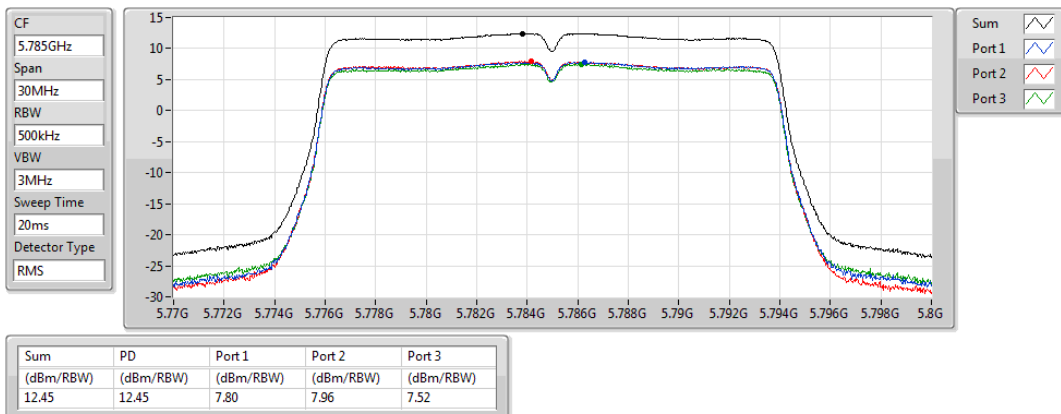


802.11ac VHT20-BF_Nss1,(MCS0)_3TX

PSD

5785MHz

29/11/2019

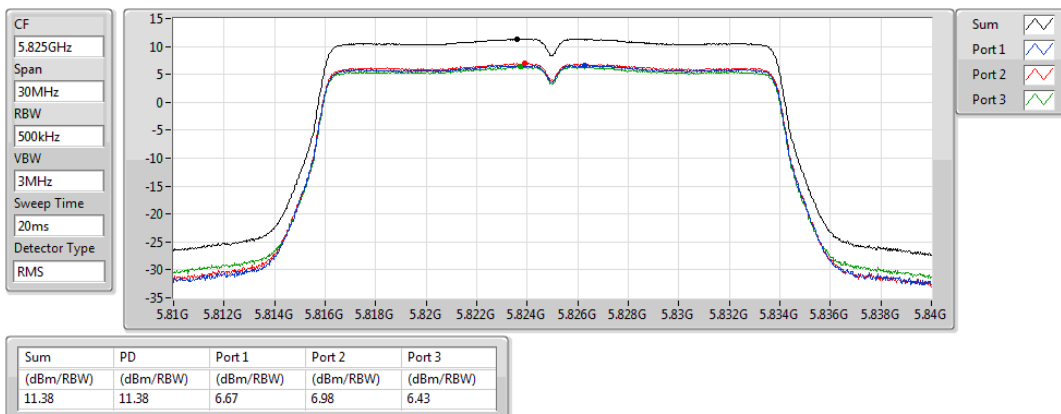


802.11ac VHT20-BF_Nss1,(MCS0)_3TX

PSD

5825MHz

29/11/2019

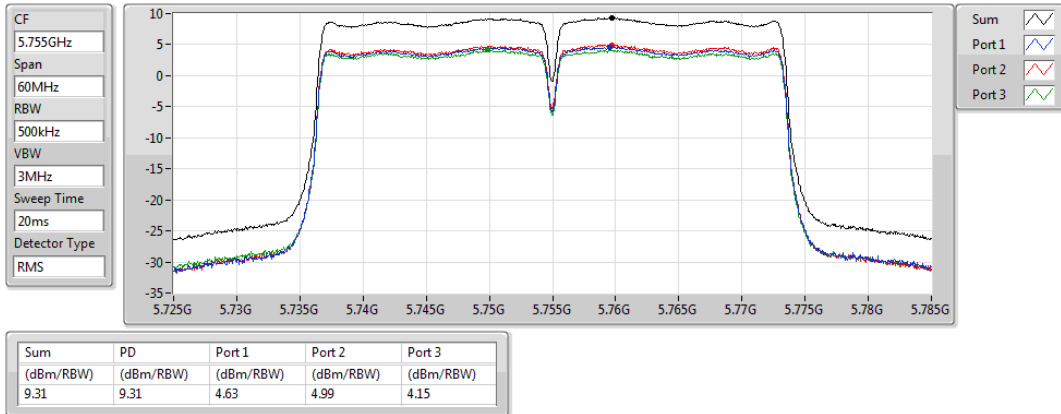


802.11ac VHT40-BF_Nss1,(MCS0)_3TX

PSD

5755MHz

29/11/2019

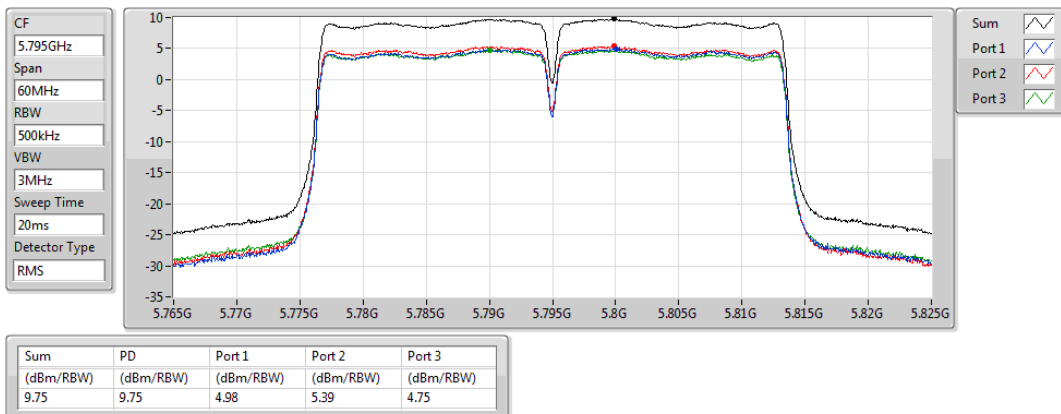


802.11ac VHT40-BF_Nss1,(MCS0)_3TX

PSD

5795MHz

29/11/2019

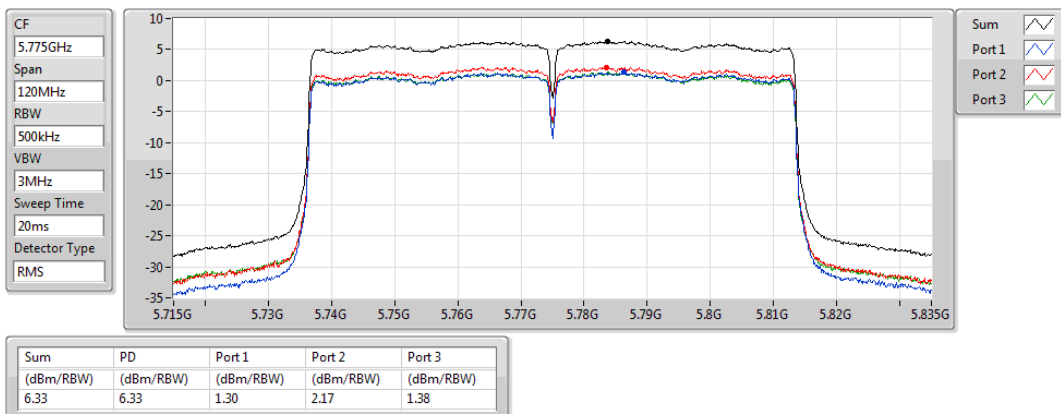


802.11ac VHT80-BF_Nss1,(MCS0)_3TX

PSD

5775MHz

29/11/2019



Summary

Mode	PD (dBm/RBW)
5.725-5.85GHz	-
802.11ac VHT20-BF_Nss2,(MCS0)_3TX	15.09
802.11ac VHT40-BF_Nss2,(MCS0)_3TX	13.06
802.11ac VHT80-BF_Nss2,(MCS0)_3TX	7.98

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

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ac VHT20-BF_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-
5745MHz	Pass	6.16	10.63	10.86	10.62	15.09	29.84
5785MHz	Pass	6.16	8.86	9.00	8.99	13.56	29.84
5825MHz	Pass	6.16	8.78	8.76	8.94	13.50	29.84
802.11ac VHT40-BF_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-
5755MHz	Pass	6.16	8.11	8.65	8.33	13.06	29.84
5795MHz	Pass	6.16	7.78	8.22	8.30	12.80	29.84
802.11ac VHT80-BF_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-
5775MHz	Pass	6.16	3.18	3.32	3.41	7.98	29.84

DG = Directional Gain; **RBW** = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

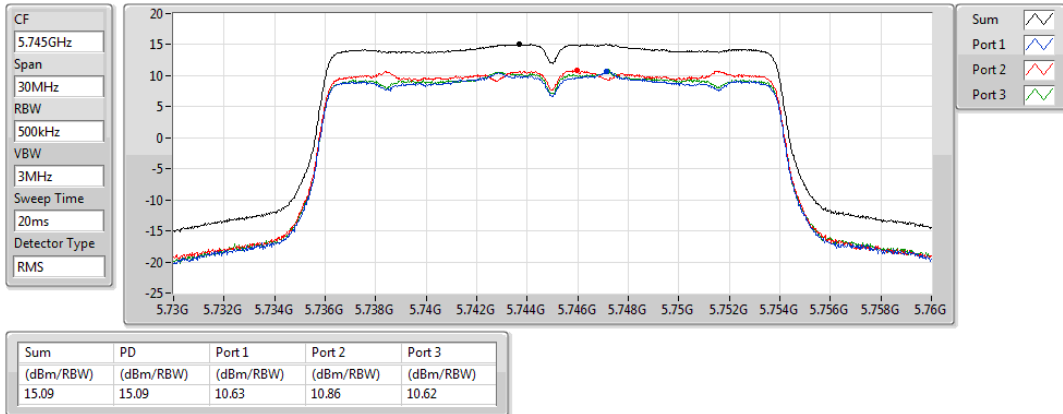
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11ac VHT20-BF_Nss2,(MCS0)_3TX

PSD

5745MHz

28/11/2019

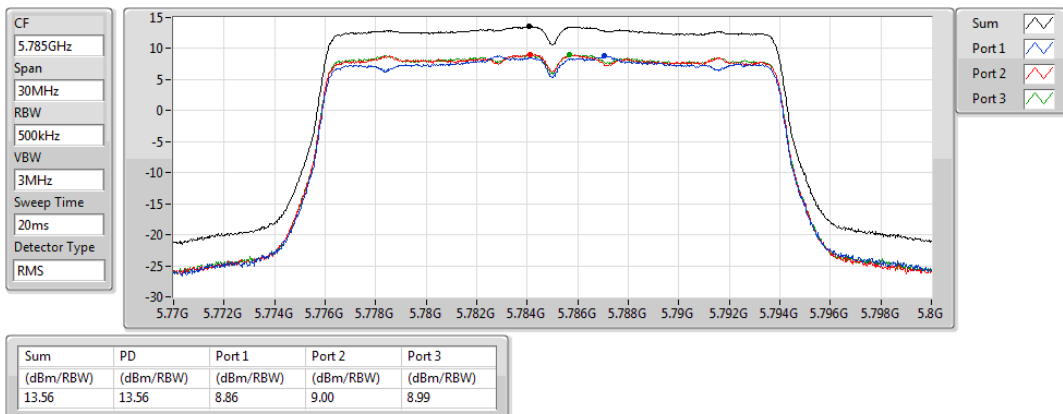


802.11ac VHT20-BF_Nss2,(MCS0)_3TX

PSD

5785MHz

28/11/2019

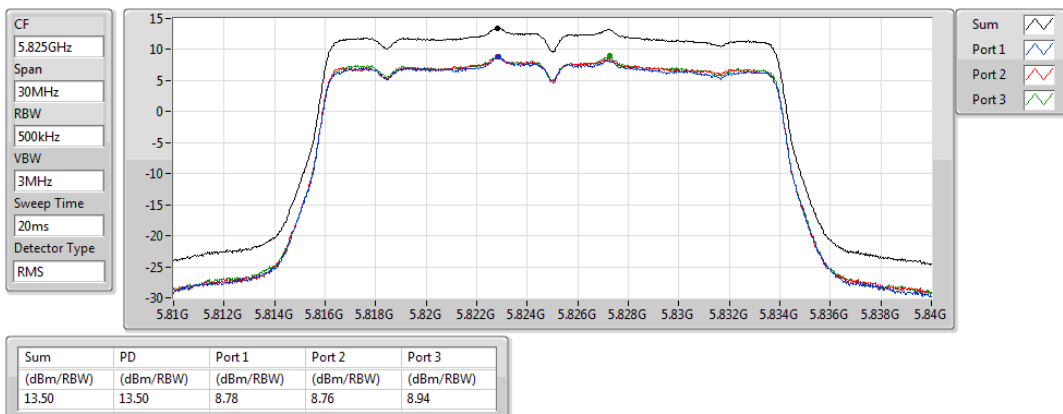


802.11ac VHT20-BF_Nss2,(MCS0)_3TX

PSD

5825MHz

28/11/2019

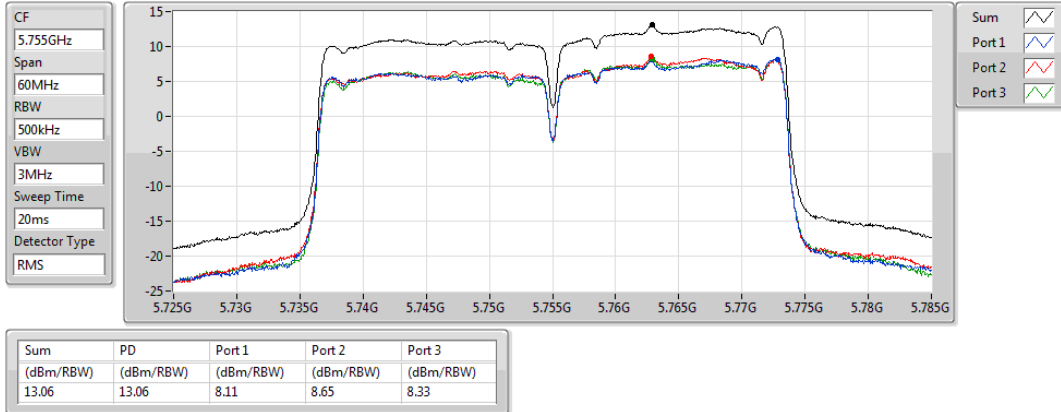


802.11ac VHT40-BF_Nss2,(MCS0)_3TX

PSD

5755MHz

28/11/2019

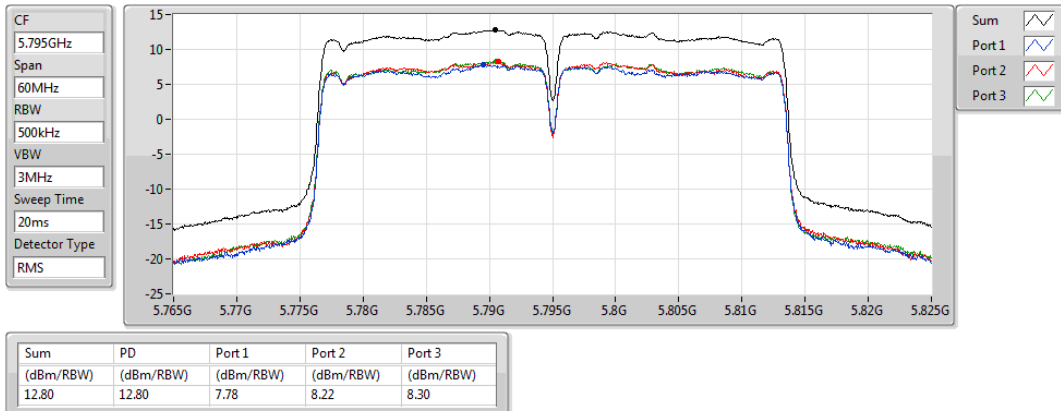


802.11ac VHT40-BF_Nss2,(MCS0)_3TX

PSD

5795MHz

28/11/2019

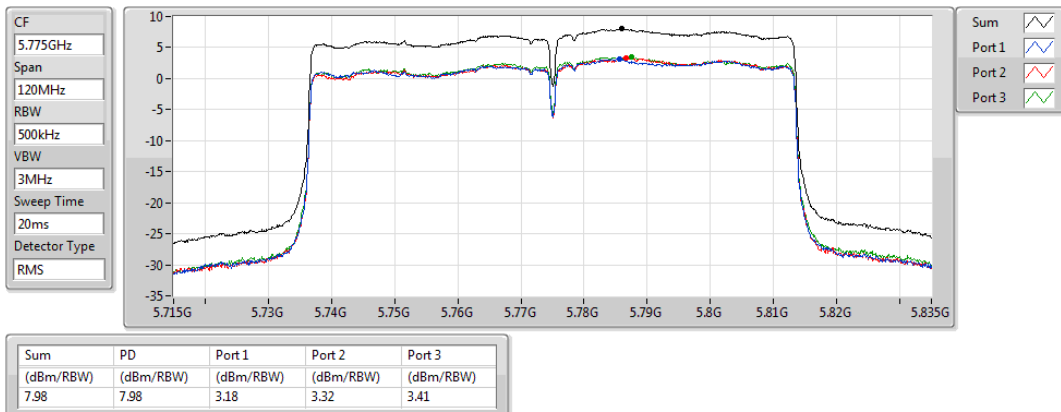


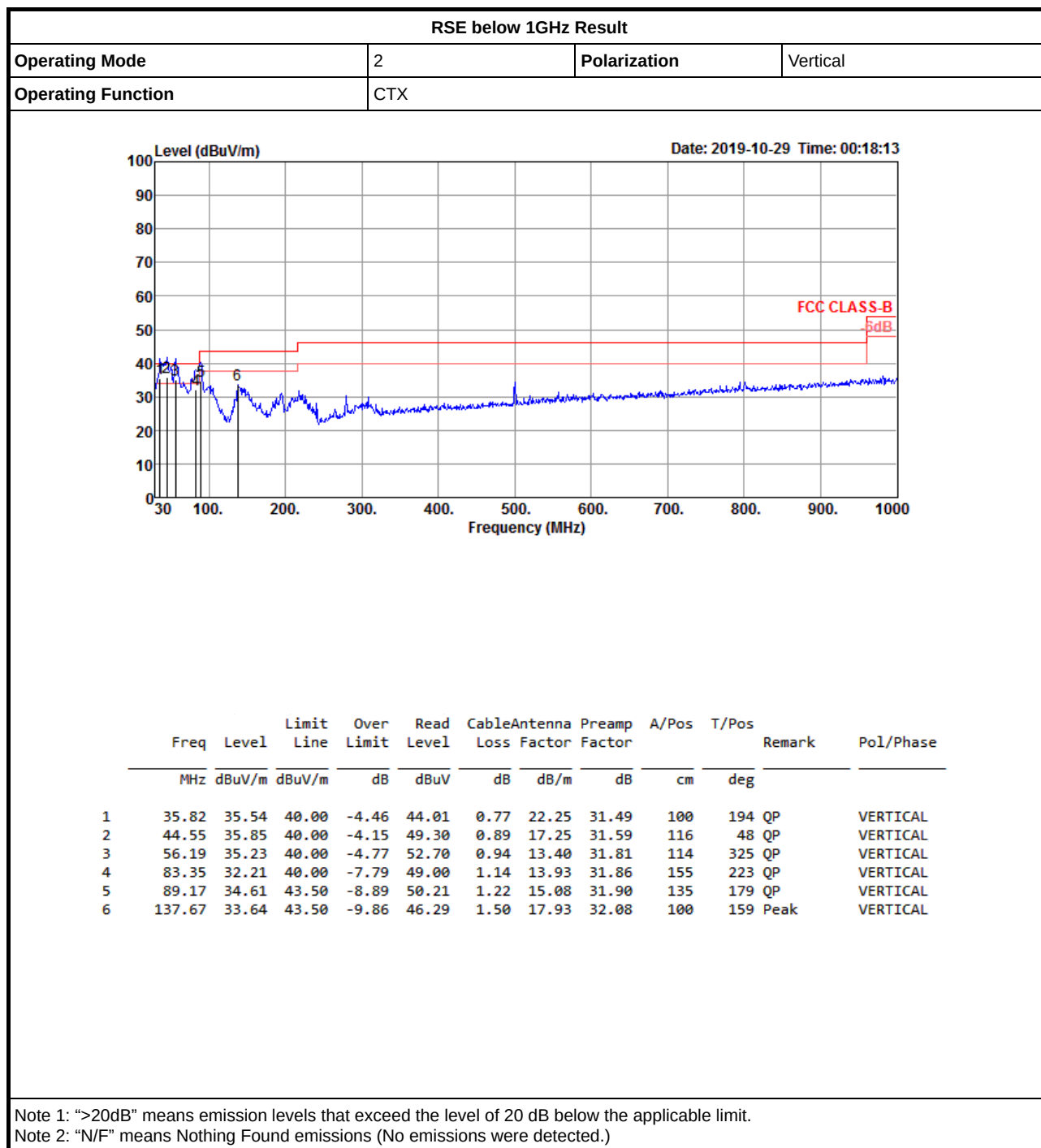
802.11ac VHT80-BF_Nss2,(MCS0)_3TX

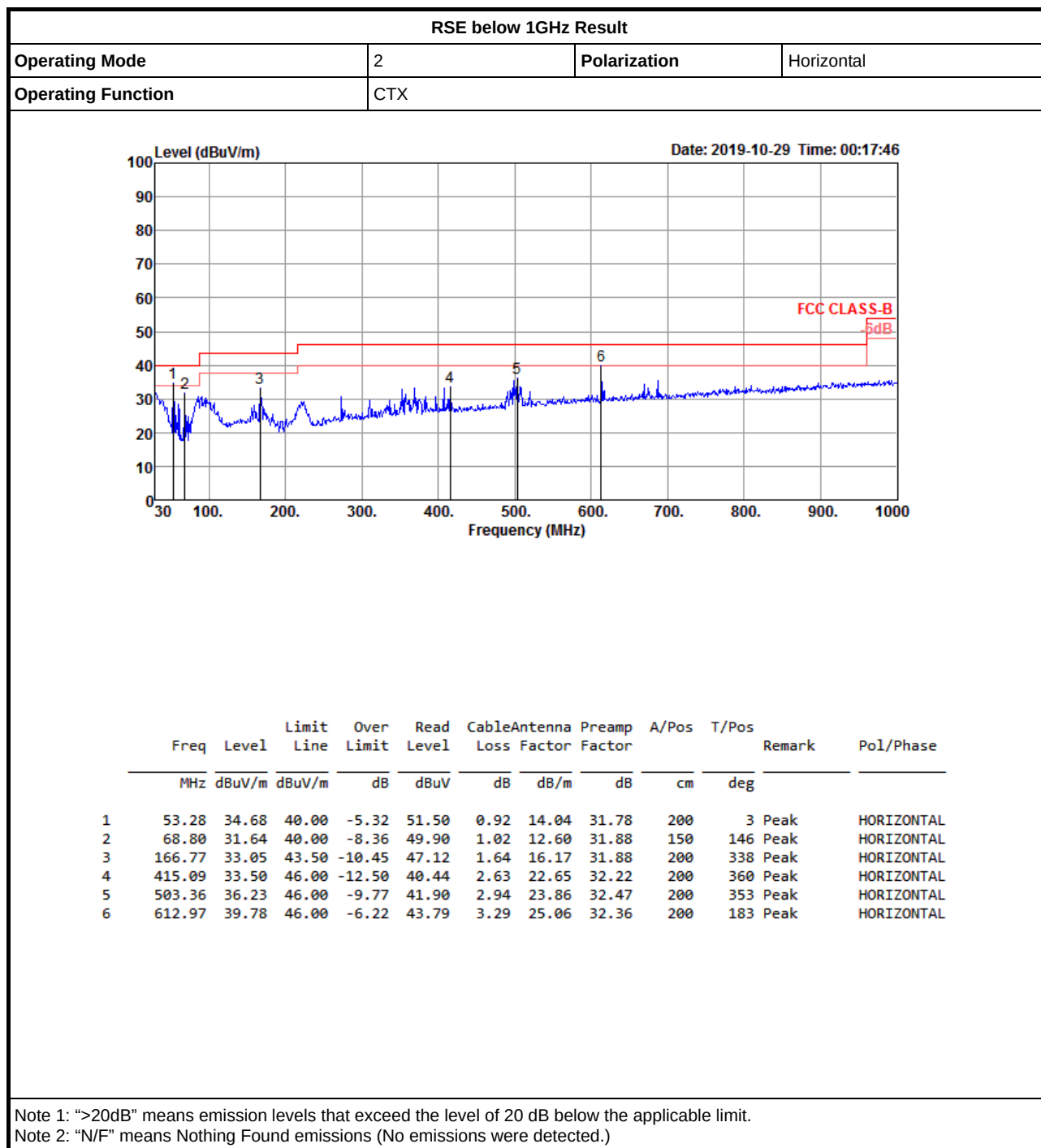
PSD

5775MHz

28/11/2019









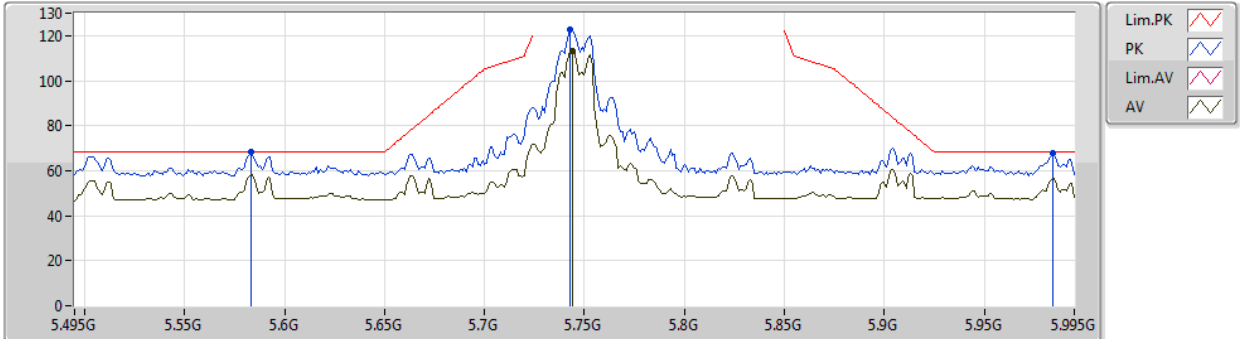
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	Pass	PK	5.926G	68.18	68.20	-0.02	5.79	3	Vertical	179	1.28	-

802.11a_Nss1,(6Mbps)_3TX

5745MHz_TX

21/10/2019



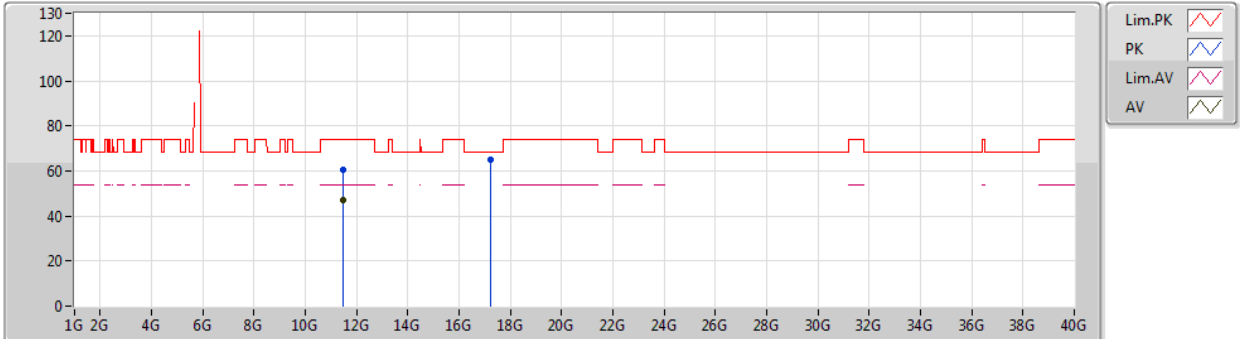
EUT Y_3TX
Setting 92
06-S-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	5.583G	68.10	68.20	-0.10	4.94	3	Vertical	224	1.42	-	63.16			
PK	5.743G	122.85	Inf	-Inf	5.23	3	Vertical	224	1.42	-	117.62			
AV	5.744G	113.25	Inf	-Inf	5.25	3	Vertical	224	1.42	-	108.00			
PK	5.984G	67.68	68.20	-0.52	5.79	3	Vertical	224	1.42	-	61.89			

802.11a_Nss1,(6Mbps)_3TX

5745MHz_TX

21/10/2019



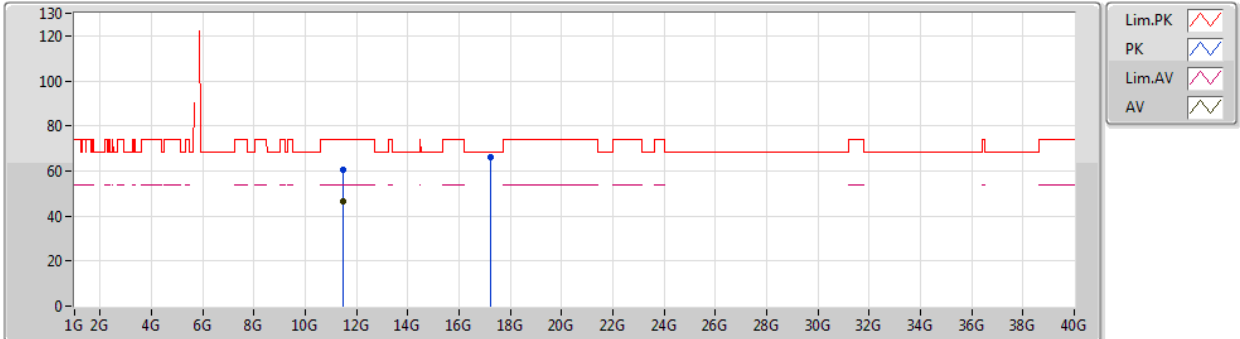
EUT V_3TX
Setting 92
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.48844G	60.37	74.00	-13.63	13.31	3	Vertical	0	1.50	-	47.06			
AV	11.48884G	47.05	54.00	-6.95	13.31	3	Vertical	0	1.50	-	33.74			
PK	17.23808G	65.18	68.20	-3.02	18.91	3	Vertical	351	1.87	-	46.27			

802.11a_Nss1,(6Mbps)_3TX

5745MHz_TX

21/10/2019



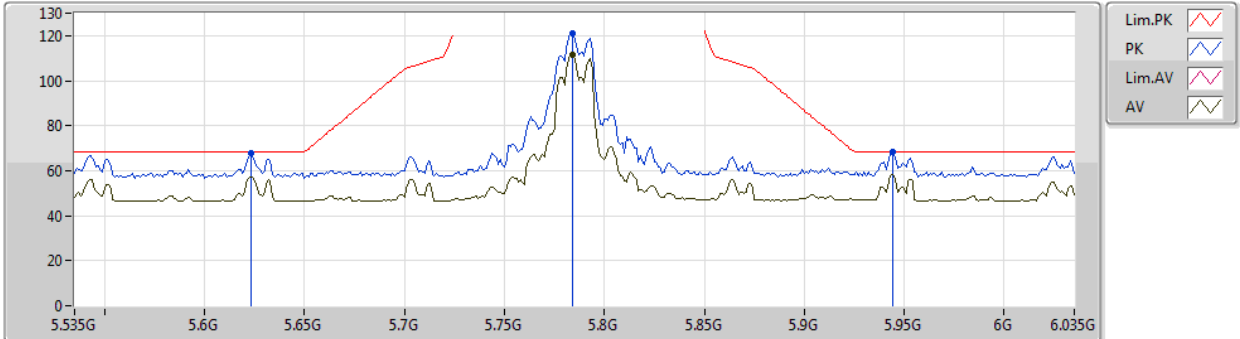
EUT Y_3TX
Setting 92
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.48868G	60.34	74.00	-13.66	13.31	3	Horizontal	343	2.04	-	47.03			
AV	11.48844G	46.62	54.00	-7.38	13.31	3	Horizontal	343	2.04	-	33.31			
PK	17.23204G	66.11	68.20	-2.09	18.85	3	Horizontal	290	1.50	-	47.26			

802.11a_Nss1,(6Mbps)_3TX

21/10/2019

5785MHz_TX



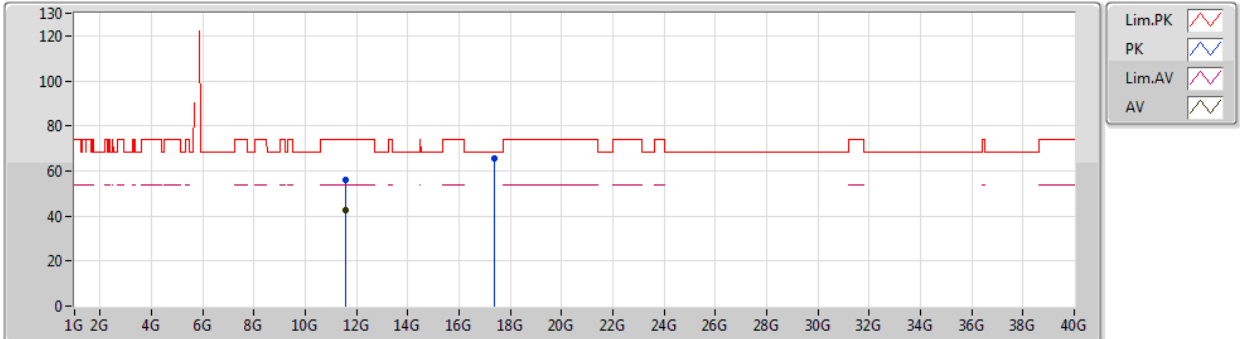
EUT V_3TX
Setting 84
06-S-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	5.623G	67.85	68.20	-0.35	4.94	3	Vertical	226	1.50	-	62.91			
PK	5.784G	121.17	Inf	-Inf	5.42	3	Vertical	226	1.50	-	115.75			
AV	5.784G	111.44	Inf	-Inf	5.42	3	Vertical	226	1.50	-	106.02			
PK	5.944G	68.09	68.20	-0.11	5.79	3	Vertical	226	1.50	-	62.30			

802.11a_Nss1,(6Mbps)_3TX

5785MHz_TX

21/10/2019



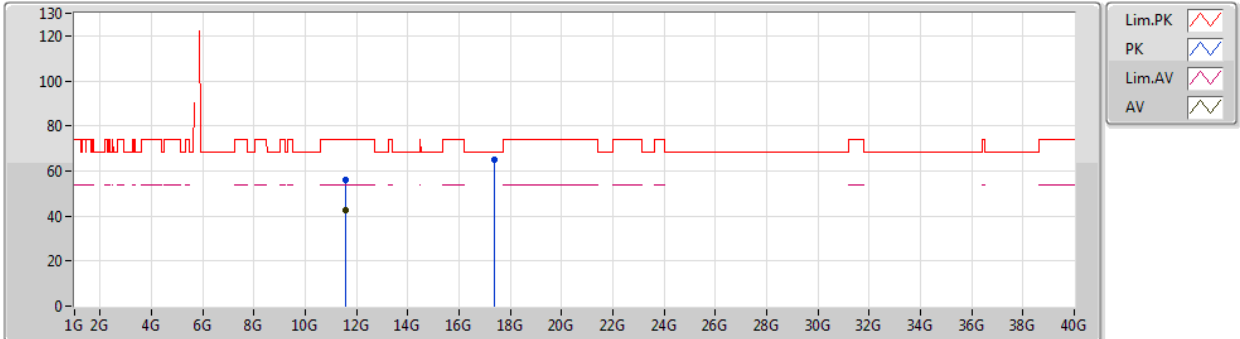
EUT V_3TX
Setting 84
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.56932G	56.00	74.00	-18.00	13.16	3	Vertical	13	2.43	-	42.84			
AV	11.56904G	42.53	54.00	-11.47	13.16	3	Vertical	13	2.43	-	29.37			
PK	17.35568G	65.51	68.20	-2.69	20.16	3	Vertical	211	1.17	-	45.35			

802.11a_Nss1,(6Mbps)_3TX

5785MHz_TX

21/10/2019



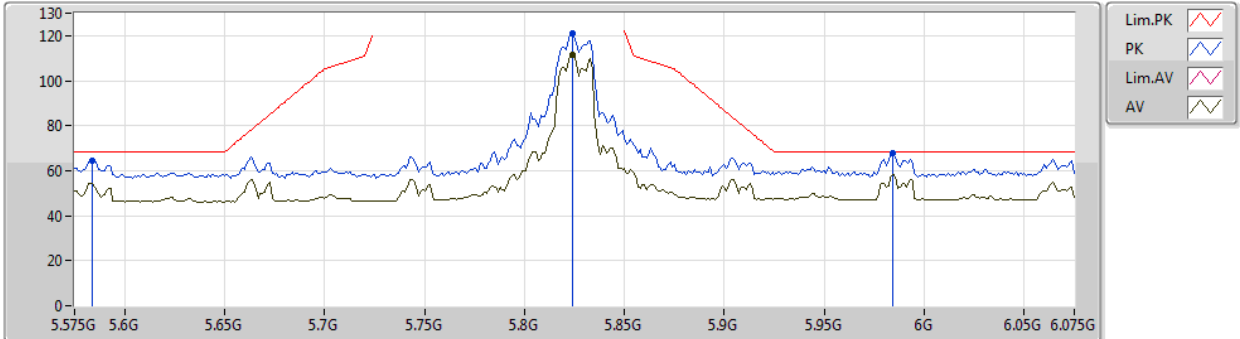
EUT V_3TX
Setting 84
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.57436G	55.89	74.00	-18.11	13.15	3	Horizontal	28	1.48	-	42.74			
AV	11.56756G	42.65	54.00	-11.35	13.17	3	Horizontal	28	1.48	-	29.48			
PK	17.36184G	65.13	68.20	-3.07	20.22	3	Horizontal	154	1.50	-	44.91			

802.11a_Nss1,(6Mbps)_3TX

21/10/2019

5825MHz_TX



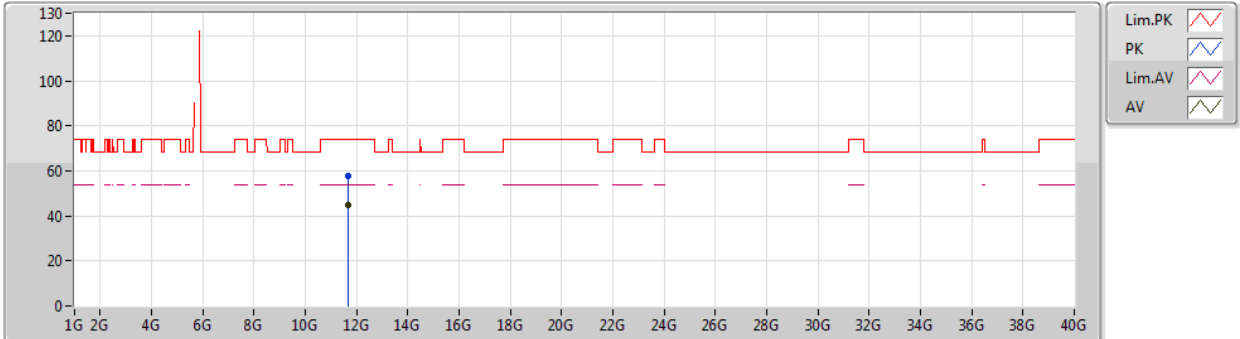
EUT Y_3TX
Setting 83
06-S-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	5.584G	64.62	68.20	-3.58	4.94	3	Vertical	222	1.50	-	59.68			
PK	5.824G	120.96	Inf	-Inf	5.55	3	Vertical	222	1.50	-	115.41			
AV	5.824G	111.56	Inf	-Inf	5.55	3	Vertical	222	1.50	-	106.01			
PK	5.984G	67.98	68.20	-0.22	5.79	3	Vertical	222	1.50	-	62.19			

802.11a_Nss1,(6Mbps)_3TX

5825MHz_TX

21/10/2019



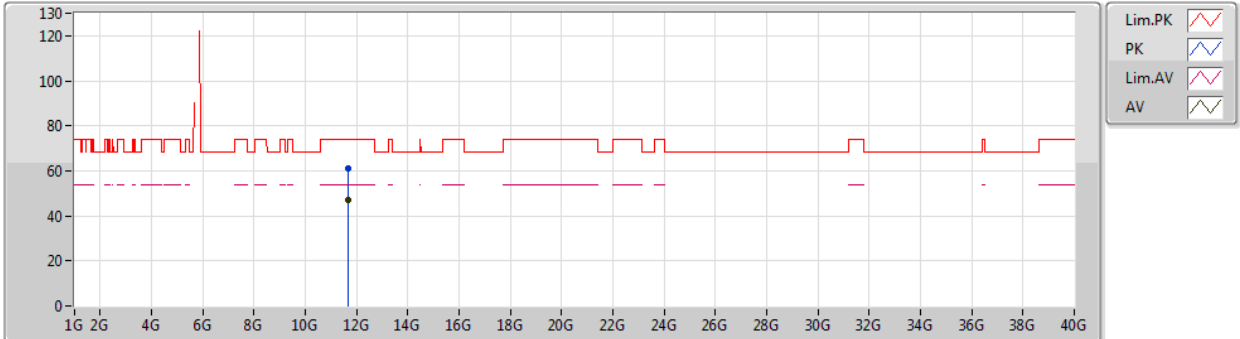
EUT V_3TX
Setting 83
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	11.6488G	57.89	74.00	-16.11	13.03	3	Vertical	358	1.50	-	44.86
AV	11.64804G	44.71	54.00	-9.29	13.03	3	Vertical	358	1.50	-	31.68

802.11a_Nss1,(6Mbps)_3TX

5825MHz_TX

21/10/2019



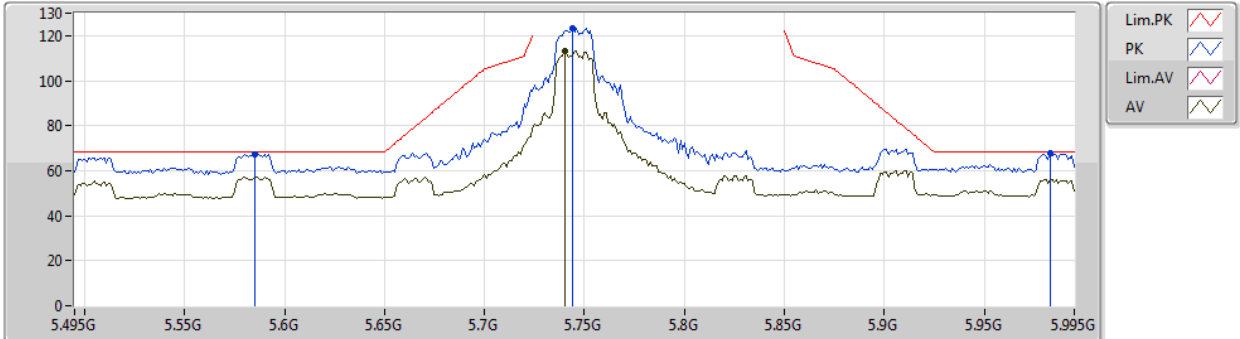
EUT V_3TX
Setting 83
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.64904G	60.93	74.00	-13.07	13.03	3	Horizontal	329	2.06	-	47.90			
AV	11.64996G	47.03	54.00	-6.97	13.03	3	Horizontal	329	2.06	-	34.00			

802.11ac VHT20_Nss1,(MCS0)_3TX

21/10/2019

5745MHz_TX



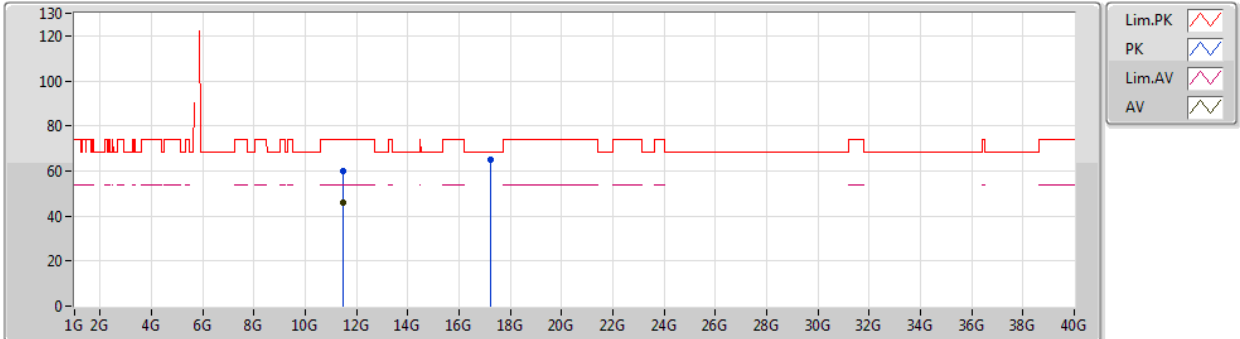
EUT Y_3TX
Setting 94
06-S-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	5.585G	67.51	68.20	-0.69	4.94	3	Vertical	219	1.40	-	62.57			
PK	5.744G	123.18	Inf	-Inf	5.25	3	Vertical	219	1.40	-	117.93			
AV	5.74G	113.14	Inf	-Inf	5.22	3	Vertical	219	1.40	-	107.92			
PK	5.983G	67.63	68.20	-0.57	5.79	3	Vertical	219	1.40	-	61.84			

802.11ac VHT20_Nss1,(MCS0)_3TX

21/10/2019

5745MHz_TX



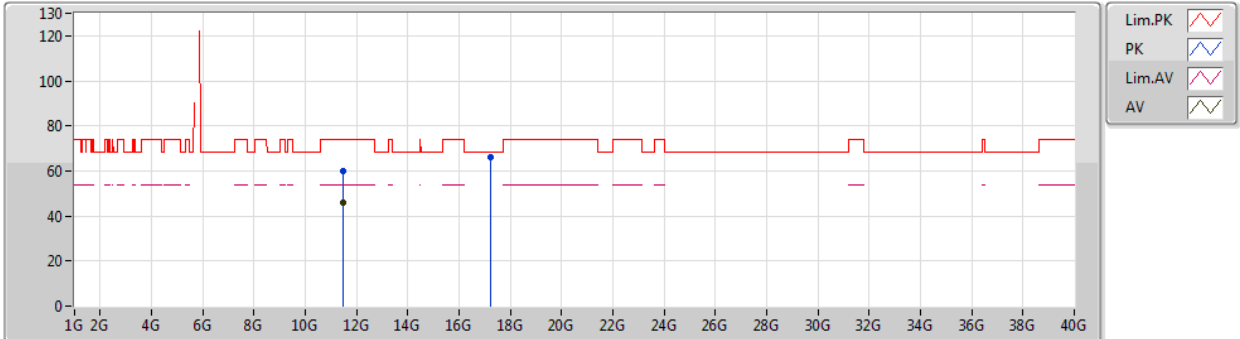
EUT V_3TX
Setting 94
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.4814G	59.82	74.00	-14.18	13.32	3	Vertical	280	1.32	-	46.50			
AV	11.48628G	45.97	54.00	-8.03	13.31	3	Vertical	280	1.32	-	32.66			
PK	17.23912G	64.79	68.20	-3.41	18.92	3	Vertical	358	1.90	-	45.87			

802.11ac VHT20_Nss1,(MCS0)_3TX

21/10/2019

5745MHz_TX



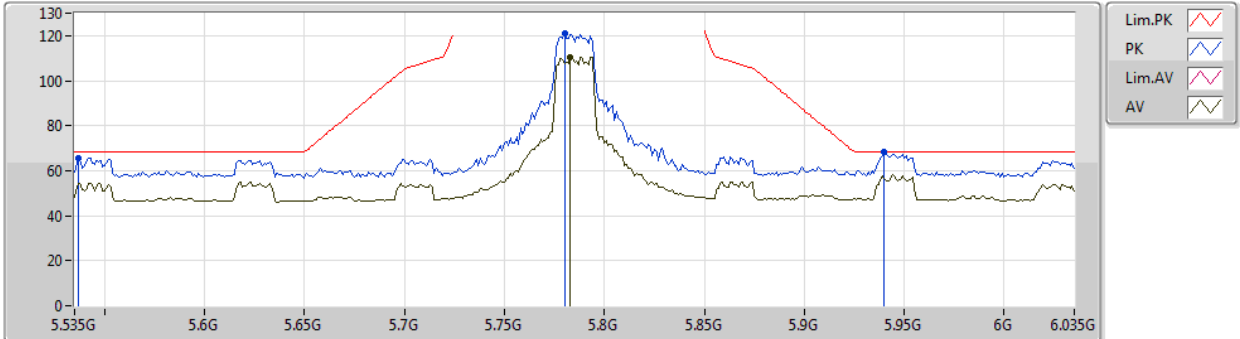
EUT V_3TX
Setting 94
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.49268G	59.85	74.00	-14.15	13.30	3	Horizontal	334	1.53	-	46.55			
AV	11.48788G	46.21	54.00	-7.79	13.31	3	Horizontal	334	1.53	-	32.90			
PK	17.24184G	66.37	68.20	-1.83	18.95	3	Horizontal	289	1.50	-	47.42			

802.11ac VHT20_Nss1,(MCS0)_3TX

21/10/2019

5785MHz_TX



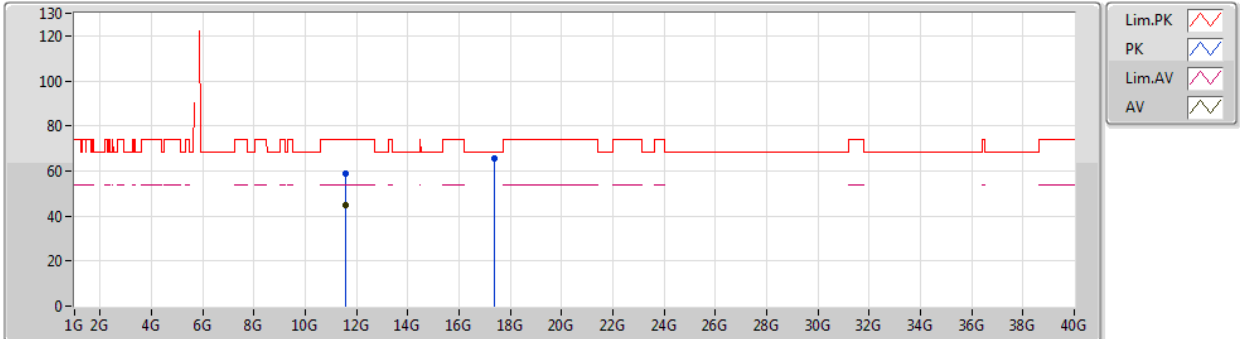
EUT V_3TX
Setting 85
06-S-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	5.537G	65.59	68.20	-2.61	5.04	3	Vertical	142	1.48	-	60.55			
PK	5.78G	120.84	Inf	-Inf	5.39	3	Vertical	142	1.48	-	115.45			
AV	5.783G	110.46	Inf	-Inf	5.41	3	Vertical	142	1.48	-	105.05			
PK	5.94G	68.10	68.20	-0.10	5.79	3	Vertical	142	1.48	-	62.31			

802.11ac VHT20_Nss1,(MCS0)_3TX

21/10/2019

5785MHz_TX



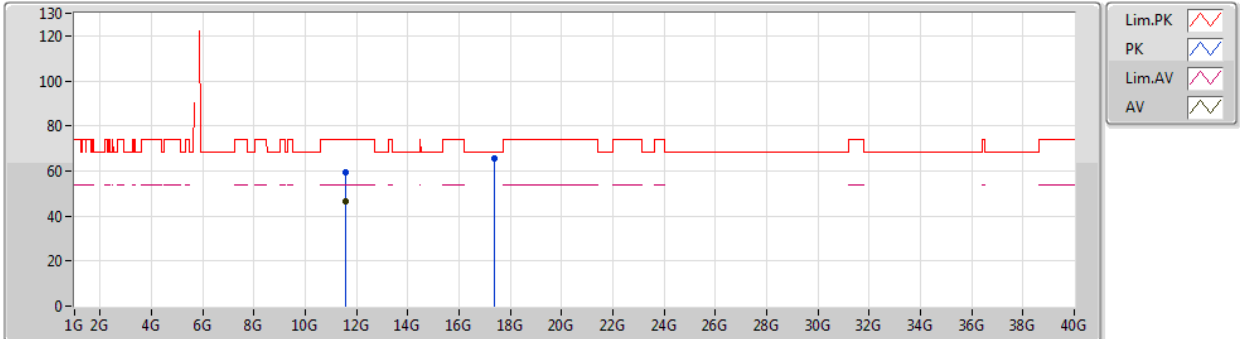
EUT V_3TX
Setting 85
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.57172G	59.06	74.00	-14.94	13.15	3	Vertical	276	1.38	-	45.91			
AV	11.56732G	44.97	54.00	-9.03	13.17	3	Vertical	276	1.38	-	31.80			
PK	17.35272G	65.45	68.20	-2.75	20.13	3	Vertical	21	1.50	-	45.32			

802.11ac VHT20_Nss1,(MCS0)_3TX

21/10/2019

5785MHz_TX



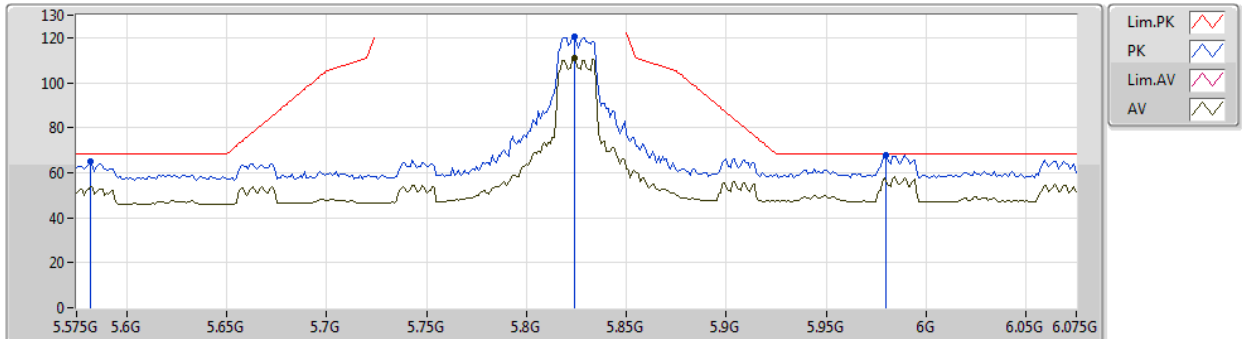
EUT V_3TX
Setting 85
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.56644G	59.67	74.00	-14.33	13.17	3	Horizontal	38	1.58	-	46.50			
AV	11.57108G	46.29	54.00	-7.71	13.15	3	Horizontal	38	1.58	-	33.14			
PK	17.36304G	65.39	68.20	-2.81	20.23	3	Horizontal	300	1.67	-	45.16			

802.11ac VHT20_Nss1,(MCS0)_3TX

21/10/2019

5825MHz_TX



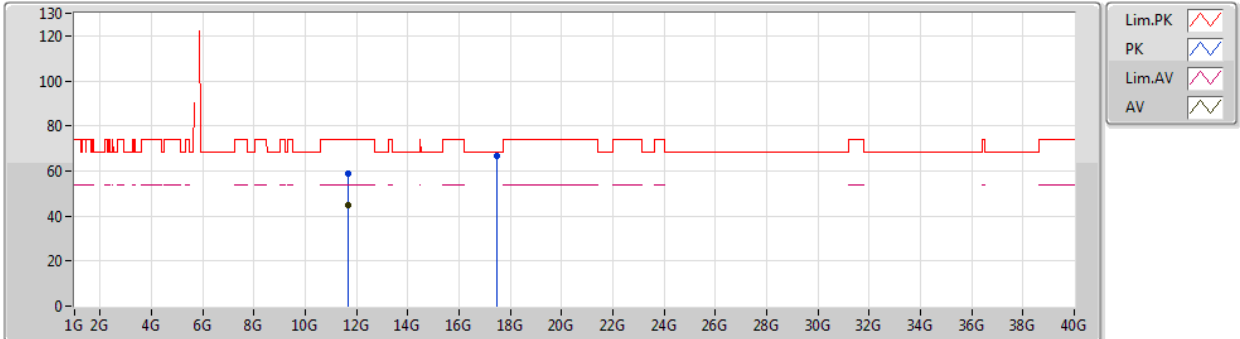
EUT Y_3TX
Setting 84
06-S-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	5.582G	64.95	68.20	-3.25	4.95	3	Vertical	142	1.29	-	60.00			
PK	5.824G	120.64	Inf	-Inf	5.55	3	Vertical	142	1.29	-	115.09			
AV	5.824G	110.68	Inf	-Inf	5.55	3	Vertical	142	1.29	-	105.13			
PK	5.98G	68.06	68.20	-0.14	5.79	3	Vertical	142	1.29	-	62.27			

802.11ac VHT20_Nss1,(MCS0)_3TX

21/10/2019

5825MHz_TX



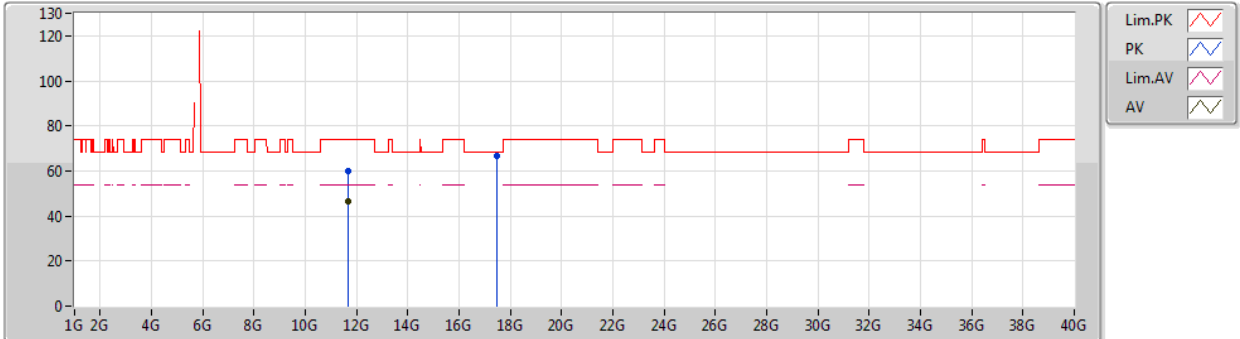
EUT V_3TX
Setting 84
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.65308G	58.76	74.00	-15.24	13.02	3	Vertical	327	1.50	-	45.74			
AV	11.6484G	44.61	54.00	-9.39	13.03	3	Vertical	327	1.50	-	31.58			
PK	17.48396G	66.60	68.20	-1.60	21.51	3	Vertical	2	1.50	-	45.09			

802.11ac VHT20_Nss1,(MCS0)_3TX

21/10/2019

5825MHz_TX



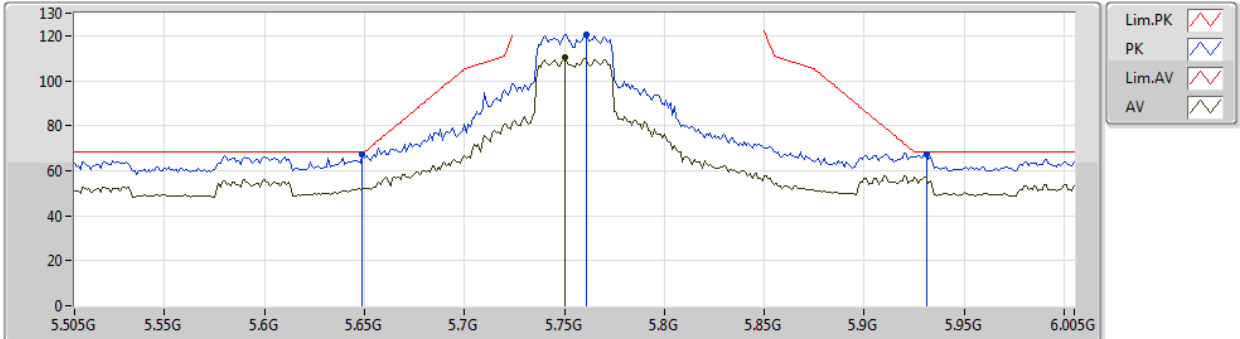
EUT V_3TX
Setting 84
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.65564G	59.82	74.00	-14.18	13.02	3	Horizontal	39	1.59	-	46.80			
AV	11.65084G	46.33	54.00	-7.67	13.02	3	Horizontal	39	1.59	-	33.31			
PK	17.46728G	66.46	68.20	-1.74	21.34	3	Horizontal	285	2.20	-	45.12			

802.11ac VHT40_Nss1,(MCS0)_3TX

21/10/2019

5755MHz_TX



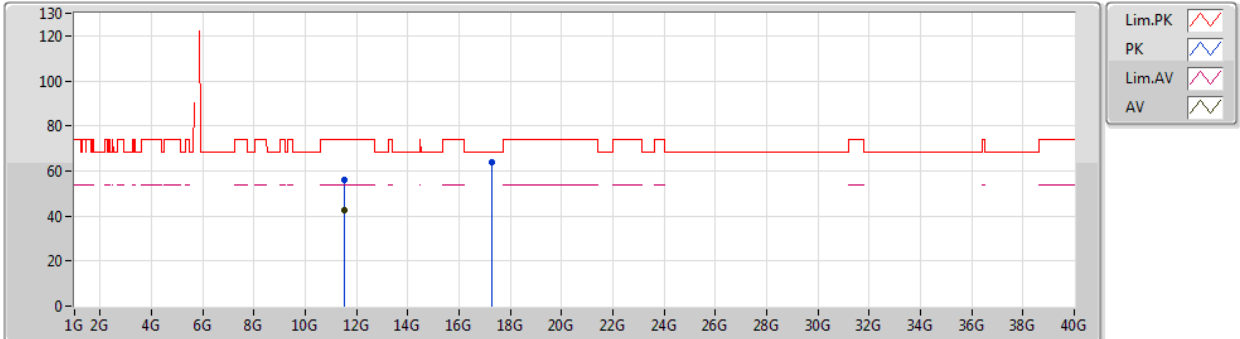
EUT Y_3TX
Setting 95
06-S-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	5.649G	67.52	68.20	-0.68	4.98	3	Vertical	222	1.50	-	62.54
PK	5.761G	120.56	Inf	-Inf	5.31	3	Vertical	222	1.50	-	115.25
AV	5.75G	110.22	Inf	-Inf	5.27	3	Vertical	222	1.50	-	104.95
PK	5.931G	67.06	68.20	-1.14	5.79	3	Vertical	222	1.50	-	61.27

802.11ac VHT40_Nss1,(MCS0)_3TX

21/10/2019

5755MHz_TX



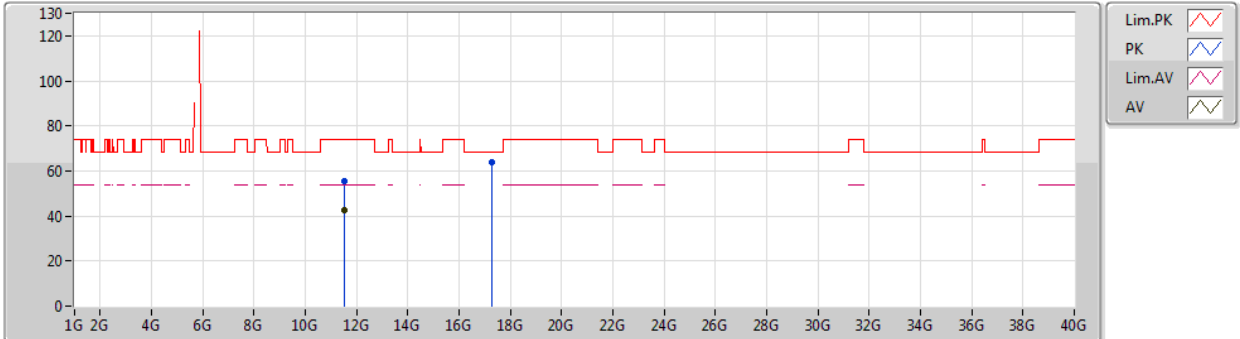
EUT V_3TX
Setting 95
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.50056G	55.85	74.00	-18.15	13.28	3	Vertical	311	1.91	-	42.57			
AV	11.51616G	42.54	54.00	-11.46	13.26	3	Vertical	311	1.91	-	29.28			
PK	17.27308G	63.95	68.20	-4.25	19.28	3	Vertical	268	1.93	-	44.67			

802.11ac VHT40_Nss1,(MCS0)_3TX

21/10/2019

5755MHz_TX



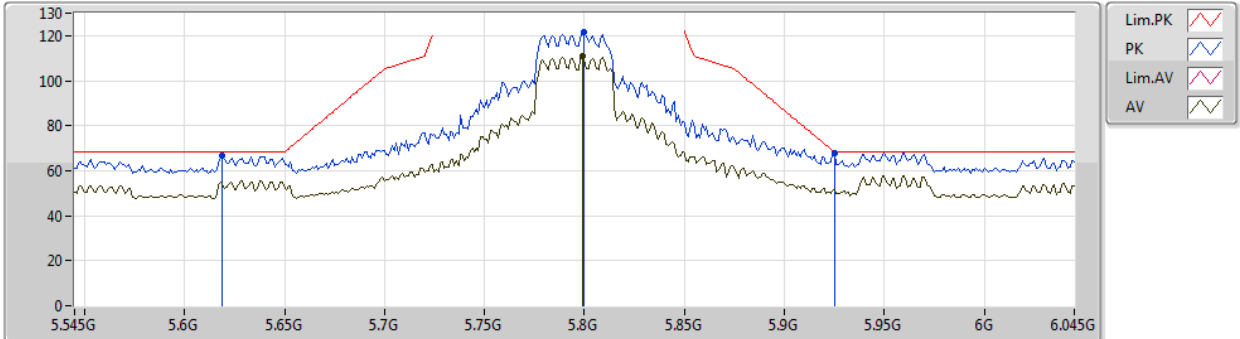
EUT V_3TX
Setting 95
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.51252G	55.54	74.00	-18.46	13.26	3	Horizontal	229	2.51	-	42.28			
AV	11.51992G	42.47	54.00	-11.53	13.25	3	Horizontal	229	2.51	-	29.22			
PK	17.26436G	63.71	68.20	-4.49	19.19	3	Horizontal	192	2.44	-	44.52			

802.11ac VHT40_Nss1,(MCS0)_3TX

21/10/2019

5795MHz_TX



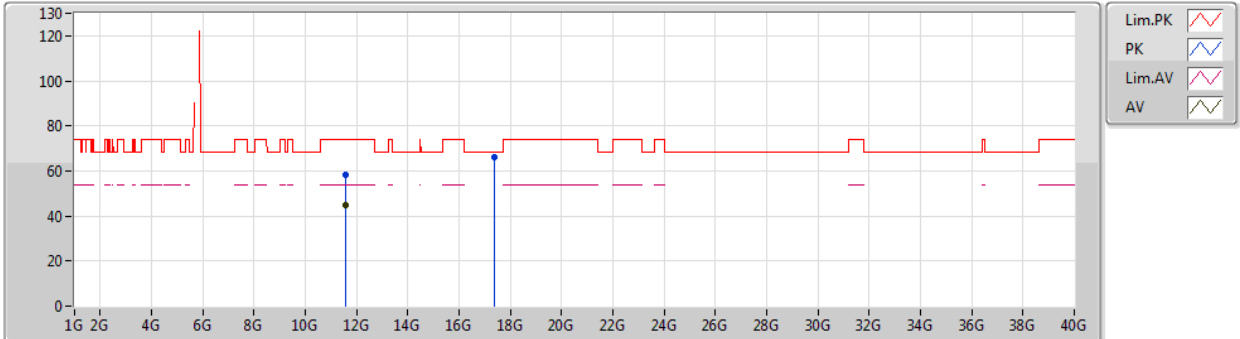
EUT Y_3TX
Setting 96
06-S-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	5.619G	66.61	68.20	-1.59	4.94	3	Vertical	137	1.45	-	61.67			
PK	5.8G	121.55	Inf	-Inf	5.48	3	Vertical	137	1.45	-	116.07			
AV	5.799G	111.05	Inf	-Inf	5.48	3	Vertical	137	1.45	-	105.57			
PK	5.925G	68.03	68.20	-0.17	5.79	3	Vertical	137	1.45	-	62.24			

802.11ac VHT40_Nss1,(MCS0)_3TX

21/10/2019

5795MHz_TX



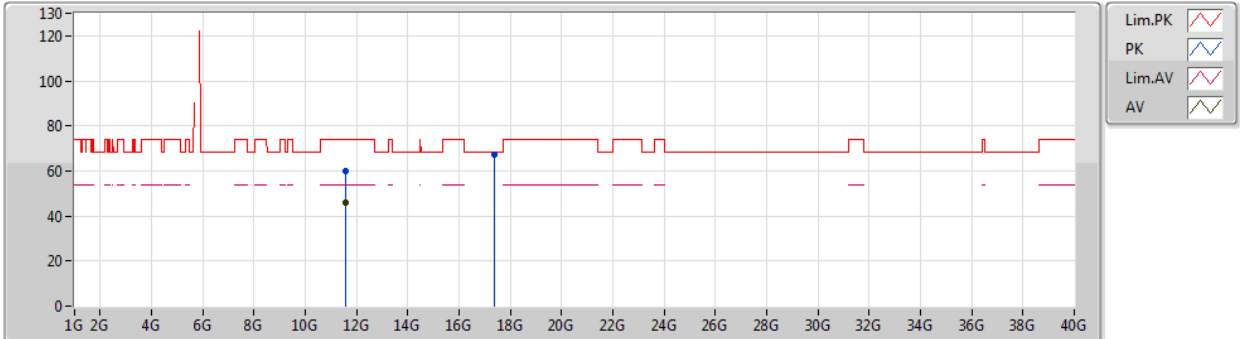
EUT Y_3TX
Setting 96
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.58824G	58.46	74.00	-15.54	13.13	3	Vertical	325	1.62	-	45.33			
AV	11.59308G	45.09	54.00	-8.91	13.12	3	Vertical	325	1.62	-	31.97			
PK	17.3772G	66.00	68.20	-2.20	20.38	3	Vertical	15	1.63	-	45.62			

802.11ac VHT40_Nss1,(MCS0)_3TX

5795MHz_TX

21/10/2019



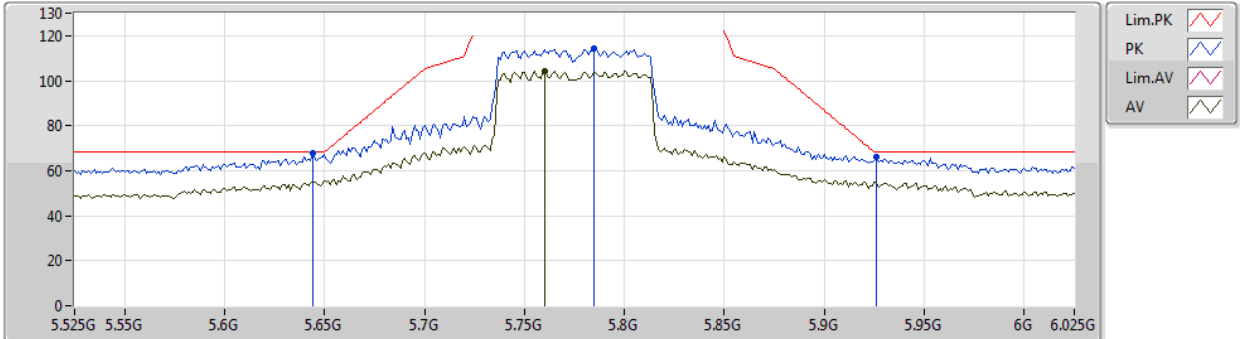
EUT V_3TX
Setting 96
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.58648G	59.85	74.00	-14.15	13.13	3	Horizontal	37	2.08	-	46.72			
AV	11.59232G	45.72	54.00	-8.28	13.12	3	Horizontal	37	2.08	-	32.60			
PK	17.38912G	67.12	68.20	-1.08	20.51	3	Horizontal	299	1.41	-	46.61			

802.11ac VHT80_Nss1,(MCS0)_3TX

21/10/2019

5775MHz_TX



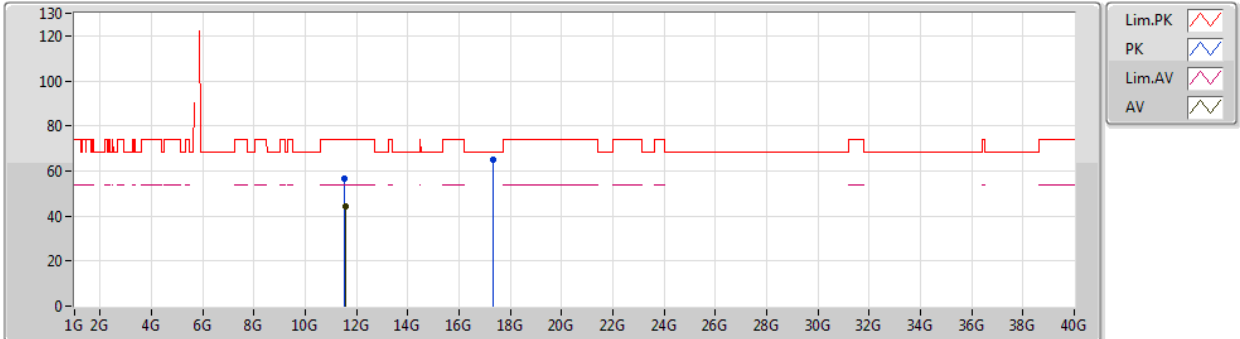
EUT V_3TX
Setting 84
06-S-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	5.644G	67.75	68.20	-0.45	4.97	3	Vertical	223	1.46	-	62.78			
PK	5.785G	114.45	Inf	-Inf	5.42	3	Vertical	223	1.46	-	109.03			
AV	5.76G	104.34	Inf	-Inf	5.31	3	Vertical	223	1.46	-	99.03			
PK	5.926G	66.35	68.20	-1.85	5.79	3	Vertical	223	1.46	-	60.56			

802.11ac VHT80_Nss1,(MCS0)_3TX

21/10/2019

5775MHz_TX



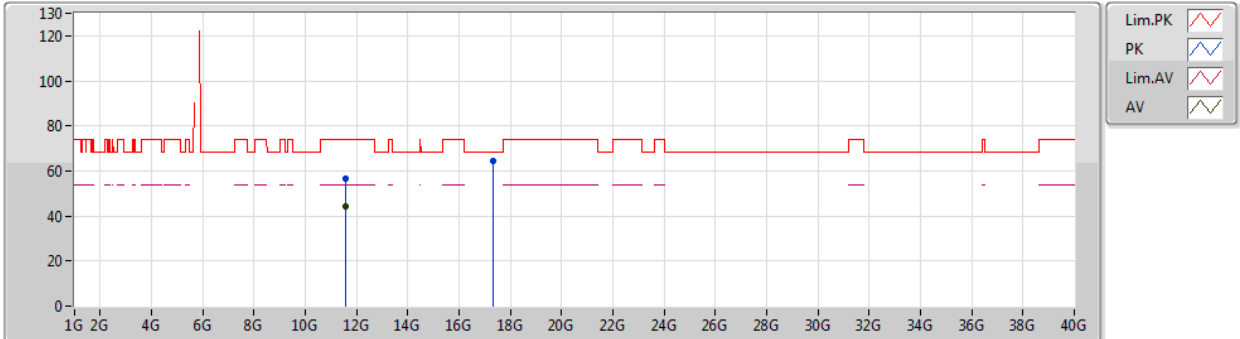
EUT V_3TX
Setting 84
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.54752G	56.40	74.00	-17.60	13.20	3	Vertical	281	2.97	-	43.20			
AV	11.55024G	44.06	54.00	-9.94	13.19	3	Vertical	281	2.97	-	30.87			
PK	17.33408G	64.85	68.20	-3.35	19.92	3	Vertical	301	2.01	-	44.93			

802.11ac VHT80_Nss1,(MCS0)_3TX

21/10/2019

5775MHz_TX



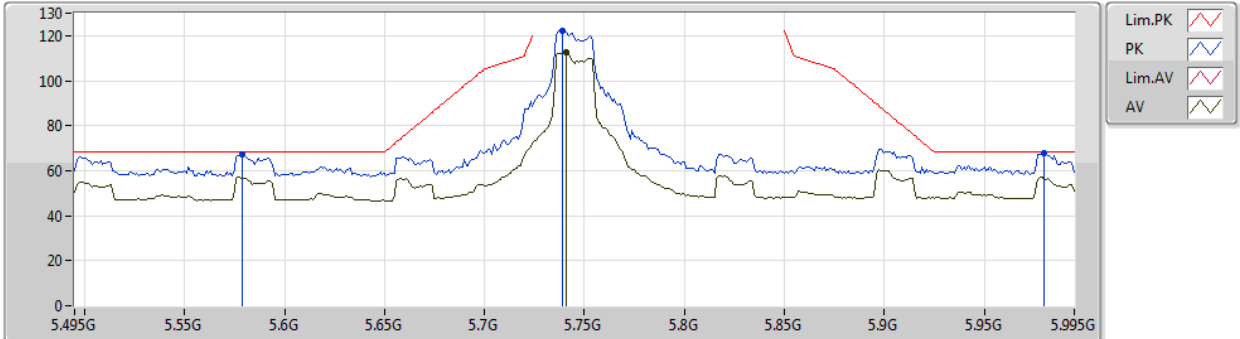
EUT V_3TX
Setting 84
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.55592G	56.40	74.00	-17.60	13.19	3	Horizontal	25	1.50	-	43.21			
AV	11.55024G	44.43	54.00	-9.57	13.19	3	Horizontal	25	1.50	-	31.24			
PK	17.32724G	64.38	68.20	-3.82	19.85	3	Horizontal	269	1.50	-	44.53			

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

21/10/2019

5745MHz_TX



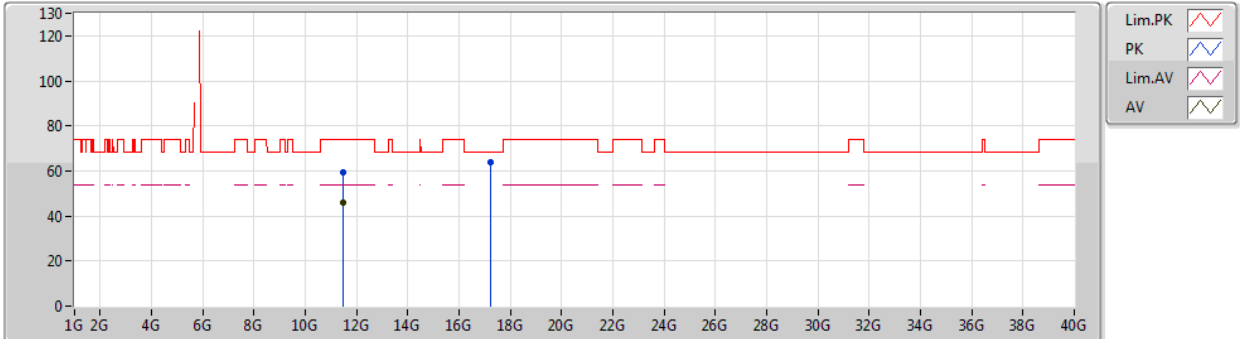
EUT V_3TX
Setting 92
06-S-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	5.579G	67.36	68.20	-0.84	4.95	3	Vertical	357	1.50	-	62.41			
PK	5.739G	122.25	Inf	-Inf	5.22	3	Vertical	357	1.50	-	117.03			
AV	5.741G	112.54	Inf	-Inf	5.22	3	Vertical	357	1.50	-	107.32			
PK	5.98G	67.92	68.20	-0.28	5.79	3	Vertical	357	1.50	-	62.13			

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

5745MHz_TX

16/10/2019



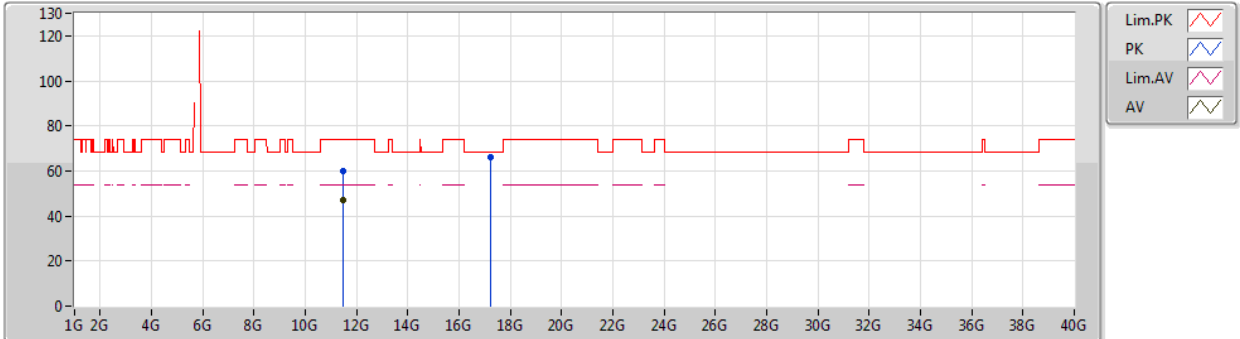
EUT V_3TX
Setting 92
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.48892G	59.27	74.00	-14.73	13.31	3	Vertical	359	1.50	-	45.96			
AV	11.48888G	45.74	54.00	-8.26	13.31	3	Vertical	359	1.50	-	32.43			
PK	17.23388G	64.02	68.20	-4.18	18.87	3	Vertical	347	1.85	-	45.15			

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

5745MHz_TX

16/10/2019



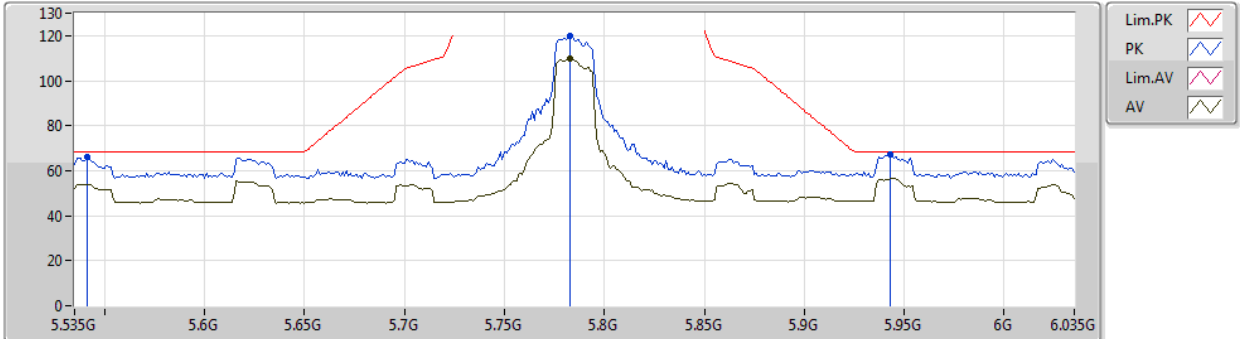
EUT Y_3TX
Setting 92
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.48284G	60.09	74.00	-13.91	13.32	3	Horizontal	32	1.69	-	46.77			
AV	11.48348G	46.83	54.00	-7.17	13.31	3	Horizontal	32	1.69	-	33.52			
PK	17.2416G	66.15	68.20	-2.05	18.95	3	Horizontal	290	1.50	-	47.20			

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

21/10/2019

5785MHz_TX



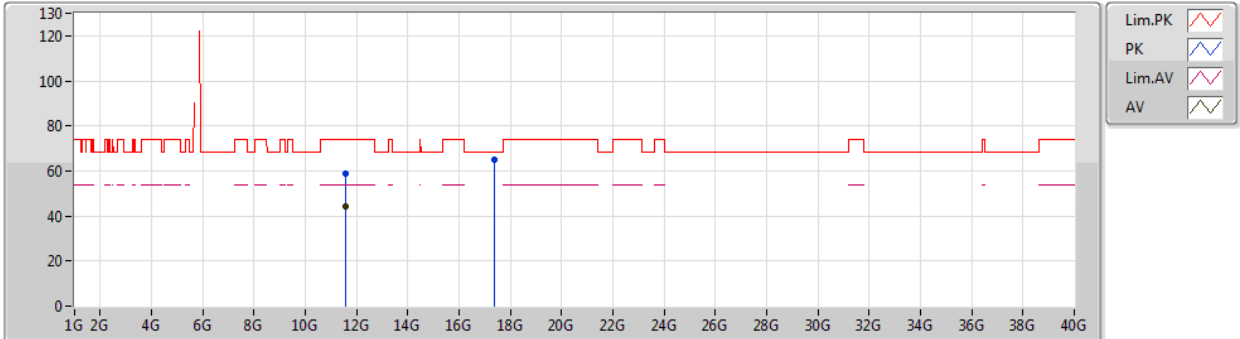
EUT V_3TX
Setting 84
06-S-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	5.541G	66.14	68.20	-2.06	5.02	3	Vertical	37	1.50	-	61.12			
PK	5.783G	119.64	Inf	-Inf	5.41	3	Vertical	37	1.50	-	114.23			
AV	5.783G	109.58	Inf	-Inf	5.41	3	Vertical	37	1.50	-	104.17			
PK	5.943G	67.49	68.20	-0.71	5.79	3	Vertical	37	1.50	-	61.70			

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

21/10/2019

5785MHz_TX



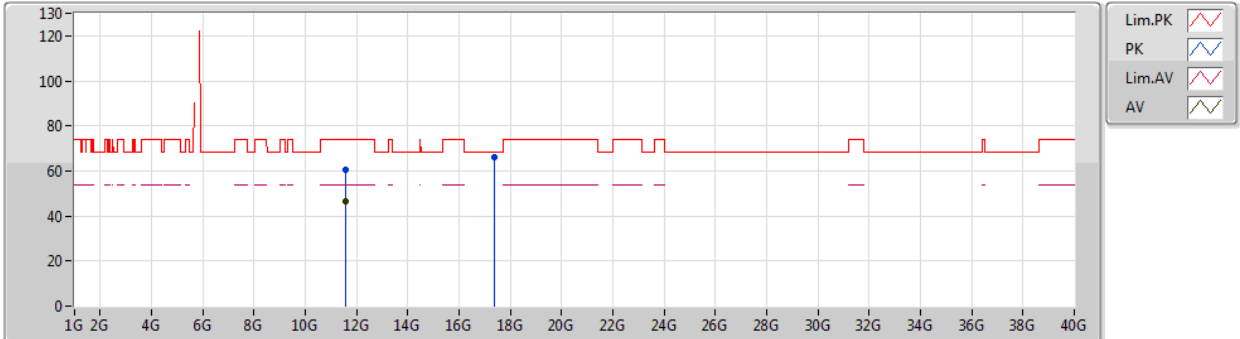
EUT Y_3TX
Setting 84
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.57276G	58.64	74.00	-15.36	13.15	3	Vertical	354	1.60	-	45.49			
AV	11.5706G	44.24	54.00	-9.76	13.15	3	Vertical	354	1.60	-	31.09			
PK	17.35436G	65.27	68.20	-2.93	20.14	3	Vertical	359	2.97	-	45.13			

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

21/10/2019

5785MHz_TX



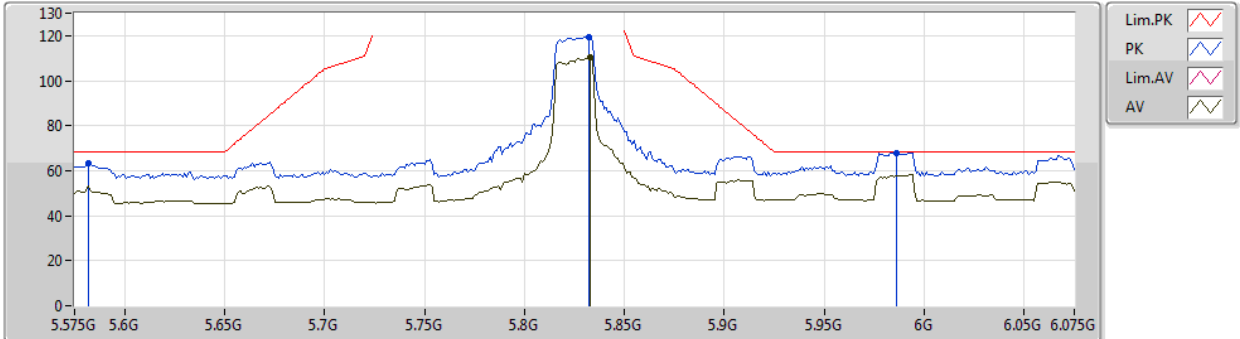
EUT V_3TX
Setting 84
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.57712G	60.56	74.00	-13.44	13.14	3	Horizontal	33	1.57	-	47.42			
AV	11.57724G	46.46	54.00	-7.54	13.14	3	Horizontal	33	1.57	-	33.32			
PK	17.358G	65.93	68.20	-2.27	20.18	3	Horizontal	294	1.50	-	45.75			

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

21/10/2019

5825MHz_TX



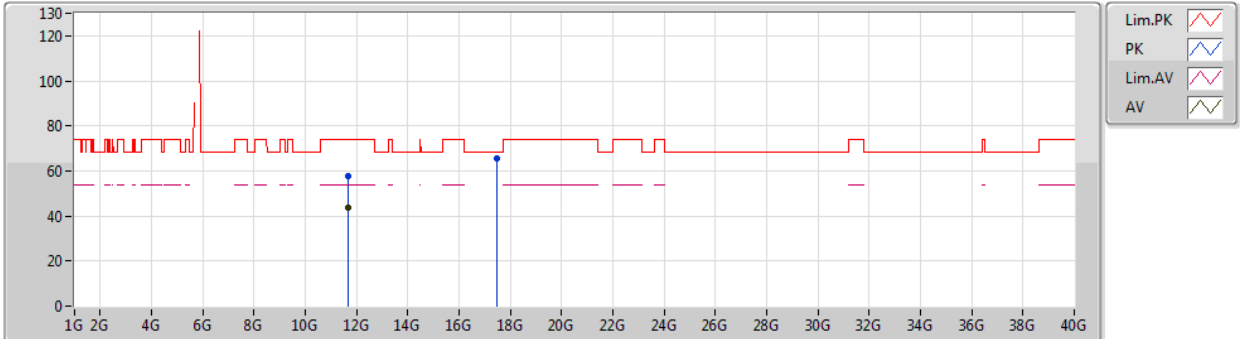
EUT V_3TX
Setting 80
06-S-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	5.582G	63.29	68.20	-4.91	4.95	3	Vertical	146	1.34	-	58.34			
PK	5.832G	119.61	Inf	-Inf	5.59	3	Vertical	146	1.34	-	114.02			
AV	5.833G	110.34	Inf	-Inf	5.59	3	Vertical	146	1.34	-	104.75			
PK	5.986G	67.86	68.20	-0.34	5.79	3	Vertical	146	1.34	-	62.07			

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

21/10/2019

5825MHz_TX



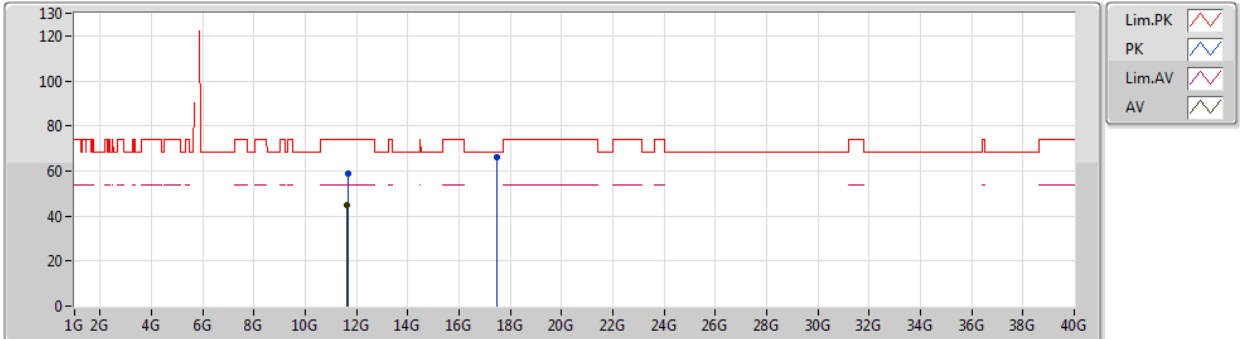
EUT V_3TX
Setting 80
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.64956G	57.66	74.00	-16.34	13.03	3	Vertical	325	1.89	-	44.63			
AV	11.65112G	43.71	54.00	-10.29	13.02	3	Vertical	325	1.89	-	30.69			
PK	17.46852G	65.33	68.20	-2.87	21.36	3	Vertical	313	1.50	-	43.97			

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

21/10/2019

5825MHz_TX



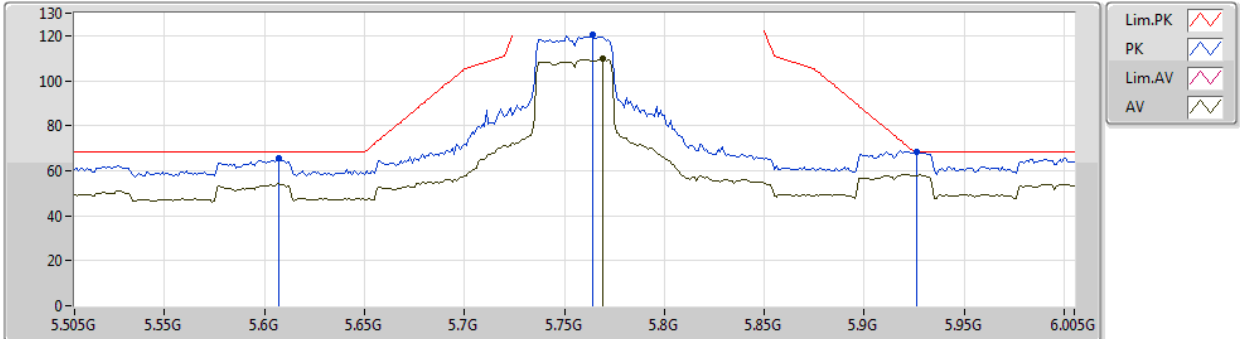
EUT V_3TX
Setting 80
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.65316G	59.06	74.00	-14.94	13.02	3	Horizontal	31	1.50	-	46.04			
AV	11.641G	44.79	54.00	-9.21	13.04	3	Horizontal	31	1.50	-	31.75			
PK	17.47832G	66.10	68.20	-2.10	21.45	3	Horizontal	290	1.50	-	44.65			

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

04/11/2019

5755MHz_TX



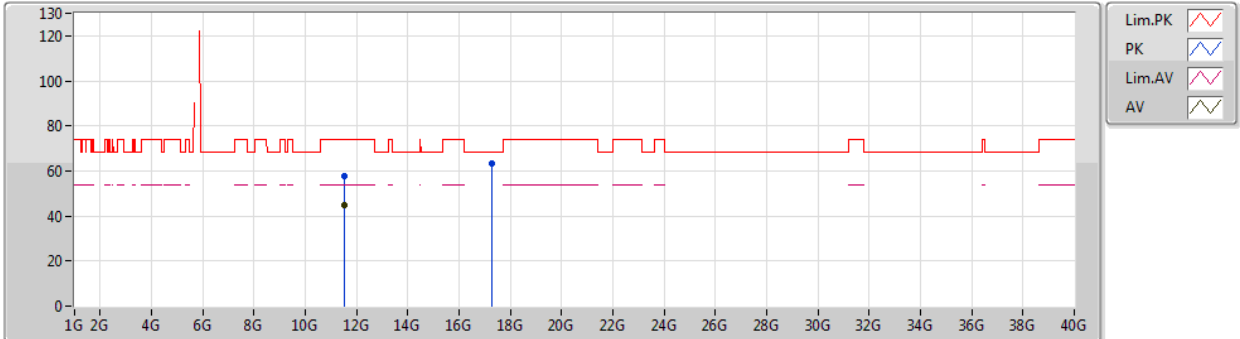
EUT V_3TX
Setting 83
06-S-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	5.607G	65.69	68.20	-2.51	4.93	3	Vertical	179	1.28	-	60.76			
PK	5.764G	120.51	Inf	-Inf	5.33	3	Vertical	179	1.28	-	115.18			
AV	5.769G	109.92	Inf	-Inf	5.36	3	Vertical	179	1.28	-	104.56			
PK	5.926G	68.18	68.20	-0.02	5.79	3	Vertical	179	1.28	-	62.39			

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

21/10/2019

5755MHz_TX



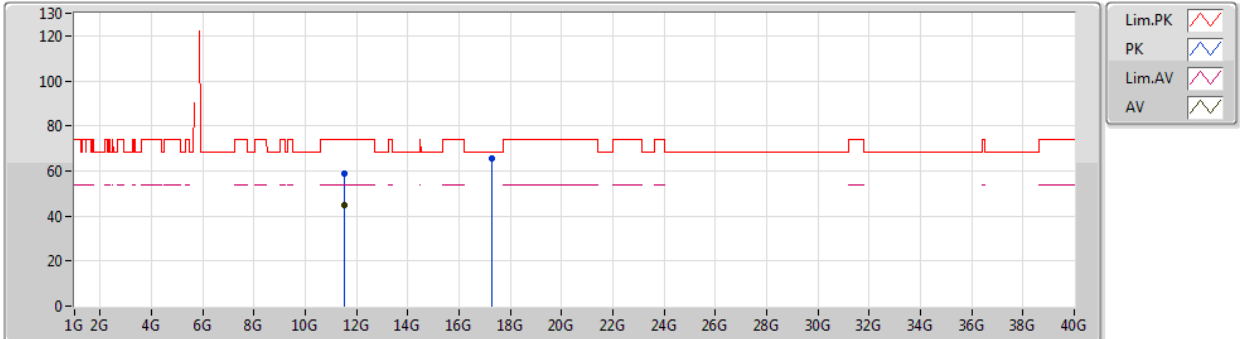
EUT V_3TX
Setting 83
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.51764G	57.85	74.00	-16.15	13.25	3	Vertical	272	1.40	-	44.60			
AV	11.52G	44.69	54.00	-9.31	13.25	3	Vertical	272	1.40	-	31.44			
PK	17.26864G	63.58	68.20	-4.62	19.24	3	Vertical	1	1.50	-	44.34			

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

21/10/2019

5755MHz_TX



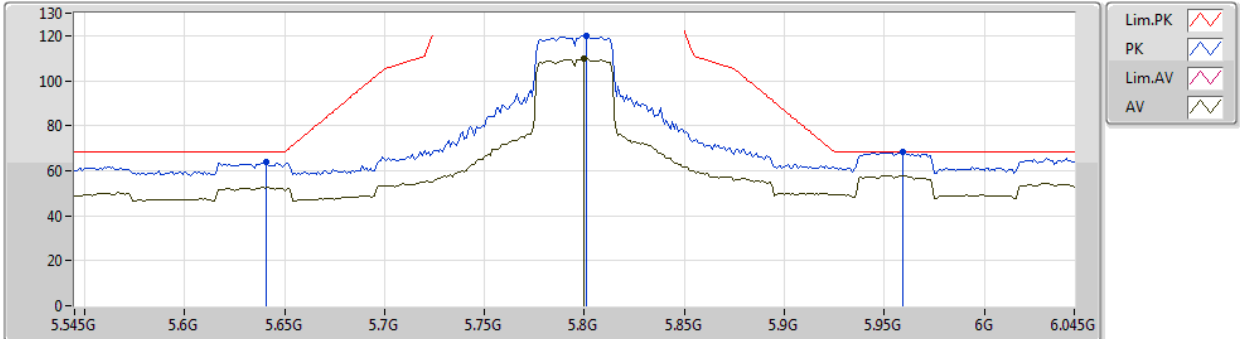
EUT V_3TX
Setting 83
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.5174G	58.56	74.00	-15.44	13.25	3	Horizontal	29	1.70	-	45.31			
AV	11.51956G	44.86	54.00	-9.14	13.25	3	Horizontal	29	1.70	-	31.61			
PK	17.27436G	65.30	68.20	-2.90	19.29	3	Horizontal	292	1.49	-	46.01			

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

5795MHz_TX

04/11/2019



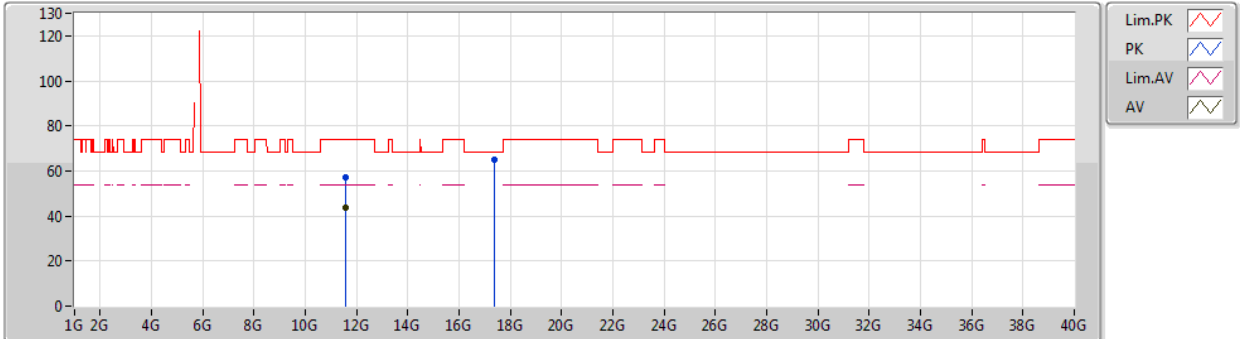
EUT Y_3TX
Setting 84
06-S-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	5.641G	63.64	68.20	-4.56	4.96	3	Vertical	141	1.42	-	58.68			
PK	5.801G	119.82	Inf	-Inf	5.48	3	Vertical	141	1.42	-	114.34			
AV	5.8G	109.85	Inf	-Inf	5.48	3	Vertical	141	1.42	-	104.37			
PK	5.959G	68.18	68.20	-0.02	5.79	3	Vertical	141	1.42	-	62.39			

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

04/11/2019

5795MHz_TX



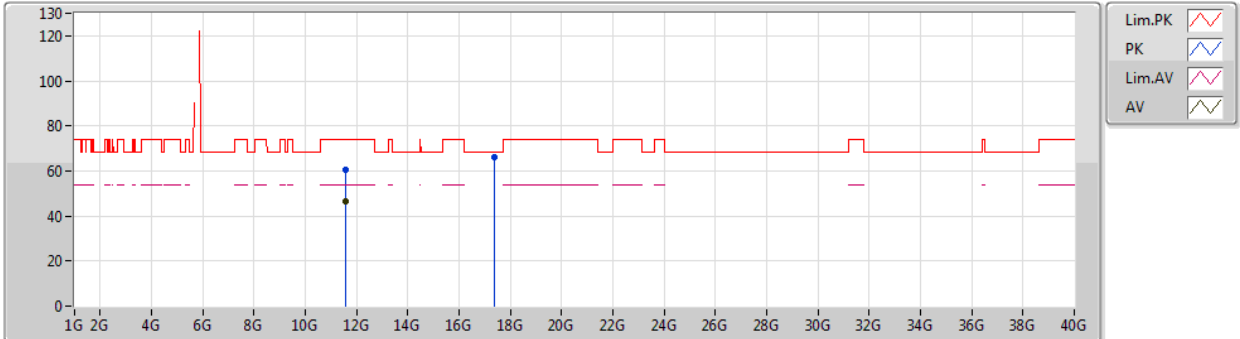
EUT V_3TX
Setting 84
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.58G	56.95	74.00	-17.05	13.14	3	Vertical	113	1.04	-	43.81			
AV	11.58G	43.61	54.00	-10.39	13.14	3	Vertical	113	1.04	-	30.47			
PK	17.38304G	65.18	68.20	-3.02	20.45	3	Vertical	308	1.69	-	44.73			

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

04/11/2019

5795MHz_TX



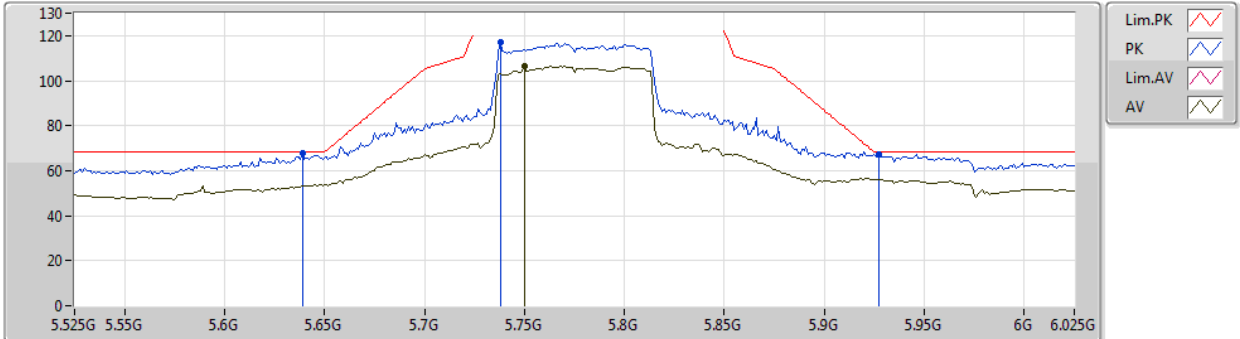
EUT V_3TX
Setting 84
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.5822G	60.72	74.00	-13.28	13.14	3	Horizontal	35	1.73	-	47.58			
AV	11.5804G	46.71	54.00	-7.29	13.14	3	Horizontal	35	1.73	-	33.57			
PK	17.37512G	66.19	68.20	-2.01	20.36	3	Horizontal	280	1.50	-	45.83			

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

5775MHz_TX

16/10/2019



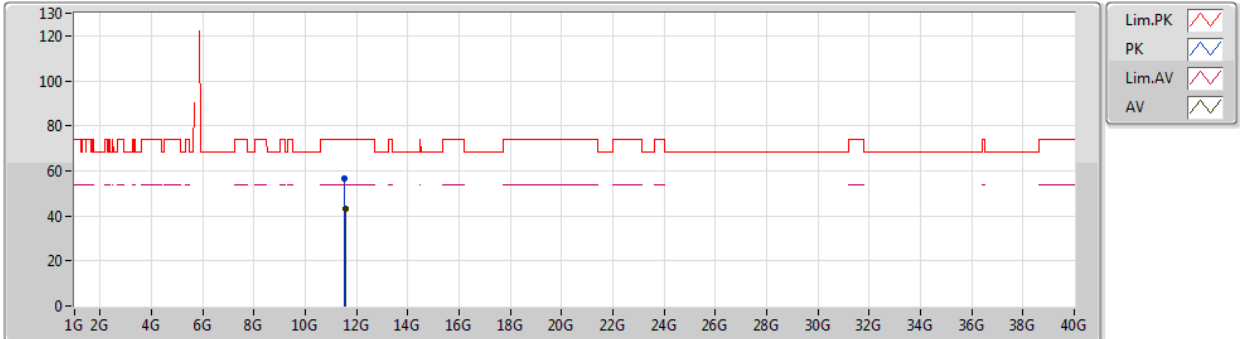
EUT Y_3TX
Setting 84
06-S-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	5.639G	67.73	68.20	-0.47	4.96	3	Vertical	137	1.40	-	62.77			
PK	5.738G	117.15	Inf	-Inf	5.21	3	Vertical	137	1.40	-	111.94			
AV	5.75G	106.66	Inf	-Inf	5.27	3	Vertical	137	1.40	-	101.39			
PK	5.927G	67.34	68.20	-0.86	5.79	3	Vertical	137	1.40	-	61.55			

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

5775MHz_TX

16/10/2019



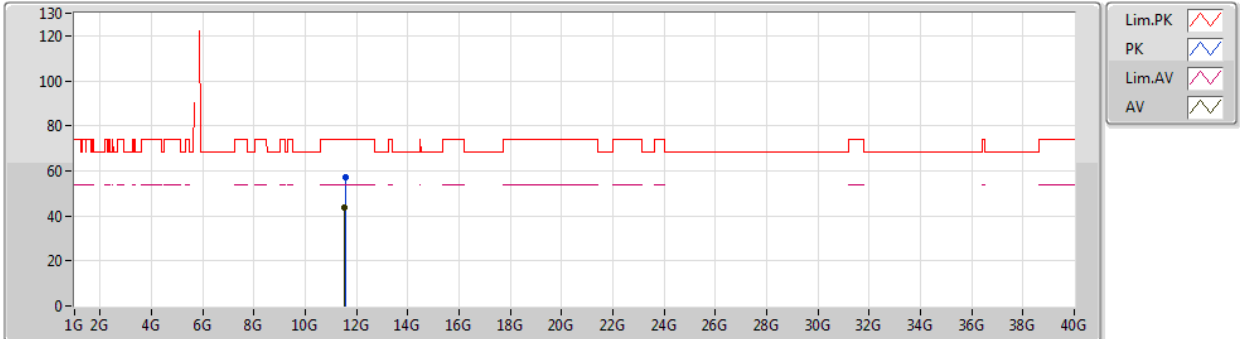
EUT V_3TX
Setting 84
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.54512G	56.80	74.00	-17.20	13.20	3	Vertical	270	1.49	-	43.60			
AV	11.5524G	43.42	54.00	-10.58	13.19	3	Vertical	270	1.49	-	30.23			

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

16/10/2019

5775MHz_TX



EUT V_3TX
Setting 84
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.54964G	57.37	74.00	-16.63	13.20	3	Horizontal	32	1.54	-	44.17			
AV	11.54428G	43.76	54.00	-10.24	13.20	3	Horizontal	32	1.54	-	30.56			



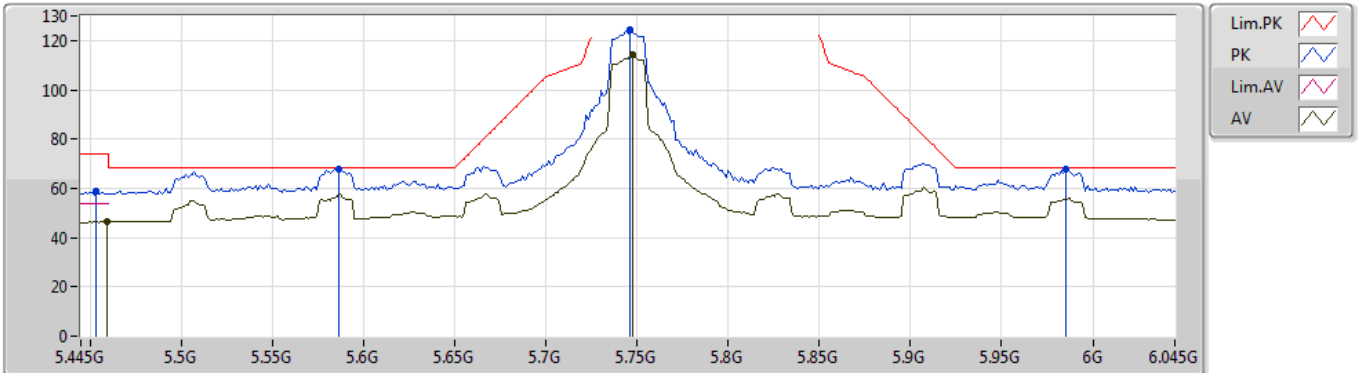
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_3TX	Pass	PK	5.9518G	68.18	68.20	-0.02	8.92	3	Vertical	209	1.15	-

802.11ac VHT20-BF_Nss2,(MCS0)_3TX

07/11/2019

5745MHz_TX



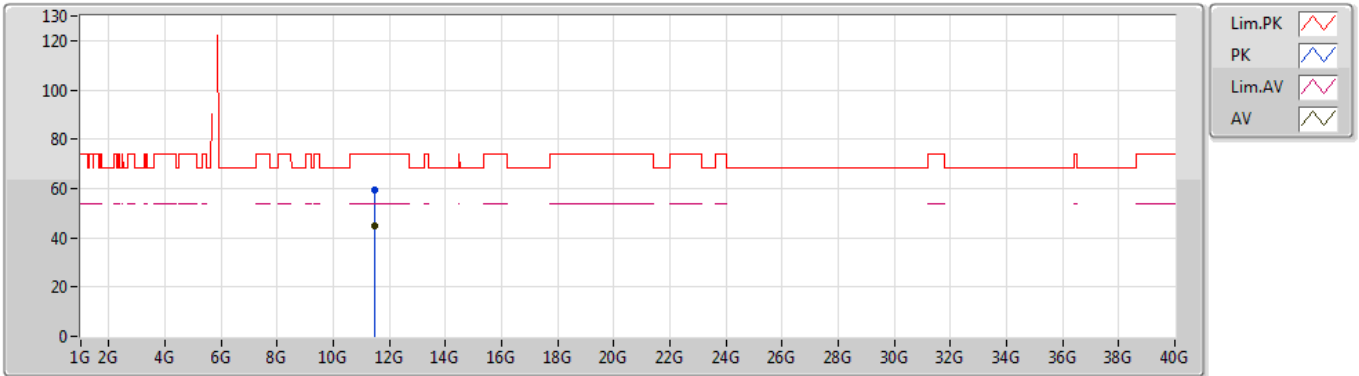
EUT Y_3TX
Setting 92
02-J-5-10
FSU(100015)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	5.4534G	58.79	74.00	-15.21	8.44	3	Vertical	212	1.49	-	50.35
AV	5.4594G	46.52	54.00	-7.48	8.45	3	Vertical	212	1.49	-	38.07
PK	5.5866G	68.03	68.20	-0.17	8.57	3	Vertical	212	1.49	-	59.46
PK	5.7462G	124.38	Inf	-Inf	8.82	3	Vertical	212	1.49	-	115.56
AV	5.7474G	114.40	Inf	-Inf	8.82	3	Vertical	212	1.49	-	105.58
PK	5.985G	67.72	68.20	-0.48	8.93	3	Vertical	212	1.49	-	58.79

802.11ac VHT20-BF_Nss2,(MCS0)_3TX

08/11/2019

5745MHz_TX



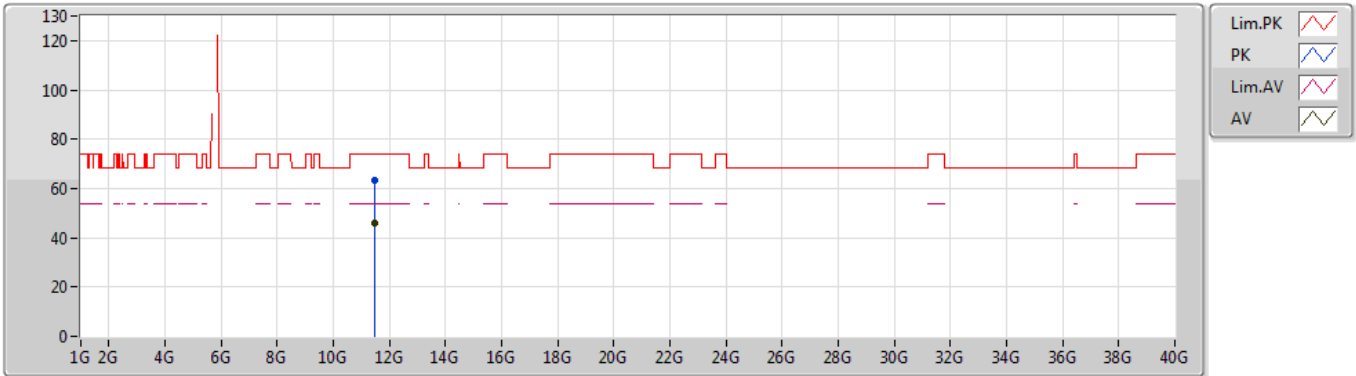
EUT Y_3TX
Setting 92
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.48664G	59.45	74.00	-14.55	13.31	3	Vertical	272	1.43	-	46.14			
AV	11.48752G	44.93	54.00	-9.07	13.31	3	Vertical	272	1.43	-	31.62			

802.11ac VHT20-BF_Nss2,(MCS0)_3TX

08/11/2019

5745MHz_TX



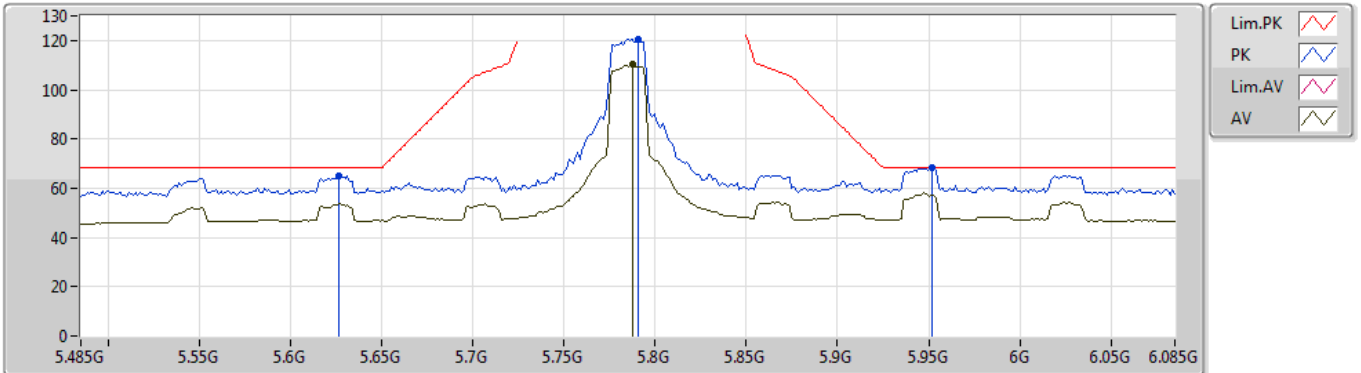
EUT Y_3TX
Setting 92
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.48996G	63.27	74.00	-10.73	13.31	3	Horizontal	34	1.62	-	49.96			
AV	11.4886G	46.17	54.00	-7.83	13.31	3	Horizontal	34	1.62	-	32.86			

802.11ac VHT20-BF_Nss2,(MCS0)_3TX

07/11/2019

5785MHz_TX



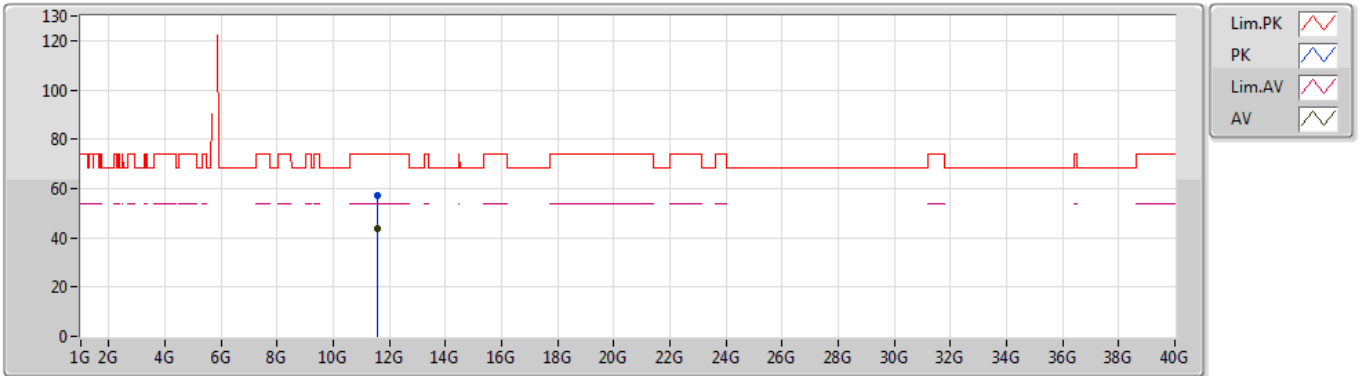
EUT Y_3TX
Setting 85
02-J-5-10
FSU(100015)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	5.6266G	65.06	68.20	-3.14	8.63	3	Vertical	209	1.15	-	56.43
PK	5.791G	120.45	Inf	-Inf	8.88	3	Vertical	209	1.15	-	111.57
AV	5.7874G	110.61	Inf	-Inf	8.88	3	Vertical	209	1.15	-	101.73
PK	5.9518G	68.18	68.20	-0.02	8.92	3	Vertical	209	1.15	-	59.26

802.11ac VHT20-BF_Nss2,(MCS0)_3TX

08/11/2019

5785MHz_TX



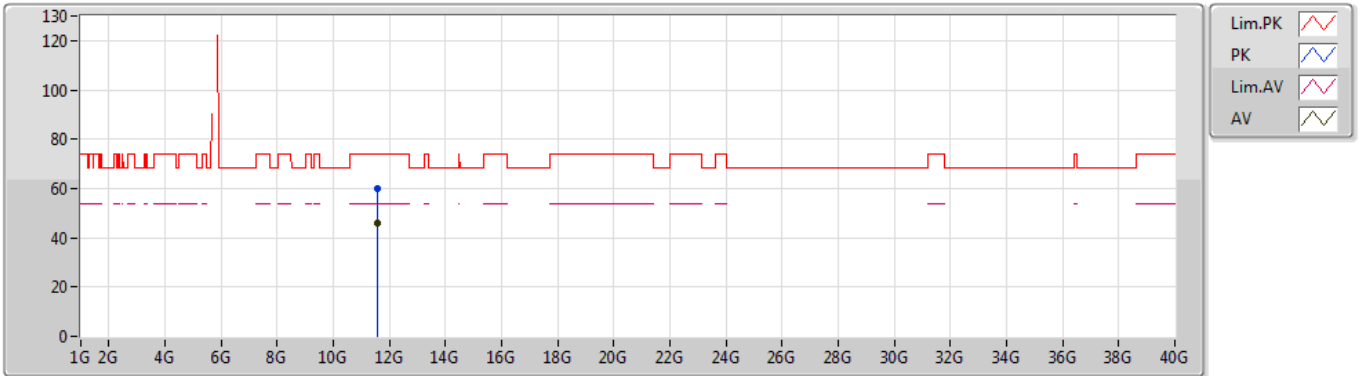
EUT Y_3TX
Setting 85
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.579G	57.30	74.00	-16.70	13.14	3	Vertical	1	1.50	-	44.16			
AV	11.56972G	43.43	54.00	-10.57	13.16	3	Vertical	1	1.50	-	30.27			

802.11ac VHT20-BF_Nss2,(MCS0)_3TX

08/11/2019

5785MHz_TX



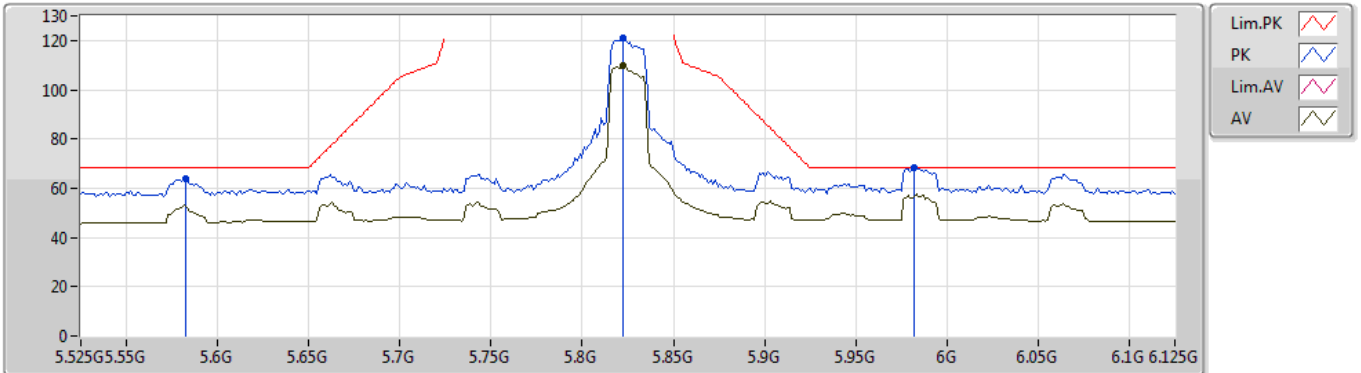
EUT Y_3TX
Setting 85
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.56524G	60.07	74.00	-13.93	13.17	3	Horizontal	37	1.66	-	46.90			
AV	11.56984G	46.13	54.00	-7.87	13.16	3	Horizontal	37	1.66	-	32.97			

802.11ac VHT20-BF_Nss2,(MCS0)_3TX

07/11/2019

5825MHz_TX



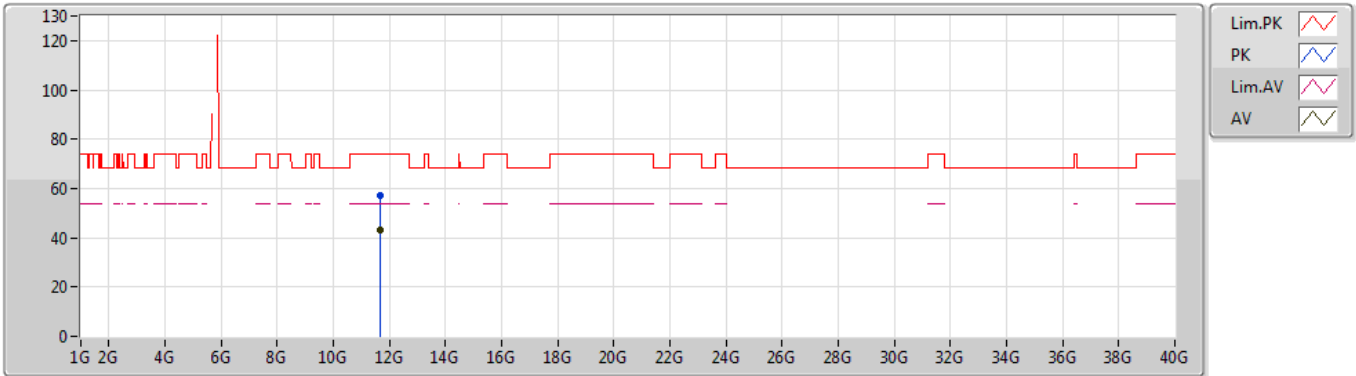
EUT_Y_3TX
Setting 81
02-J-5-10
FSU(100015)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	5.5826G	63.67	68.20	-4.53	8.57	3	Vertical	206	1.34	-	55.10			
PK	5.8226G	120.93	Inf	-Inf	8.90	3	Vertical	206	1.34	-	112.03			
AV	5.8226G	110.06	Inf	-Inf	8.90	3	Vertical	206	1.34	-	101.16			
PK	5.9822G	68.16	68.20	-0.04	8.94	3	Vertical	206	1.34	-	59.22			

802.11ac VHT20-BF_Nss2,(MCS0)_3TX

08/11/2019

5825MHz_TX



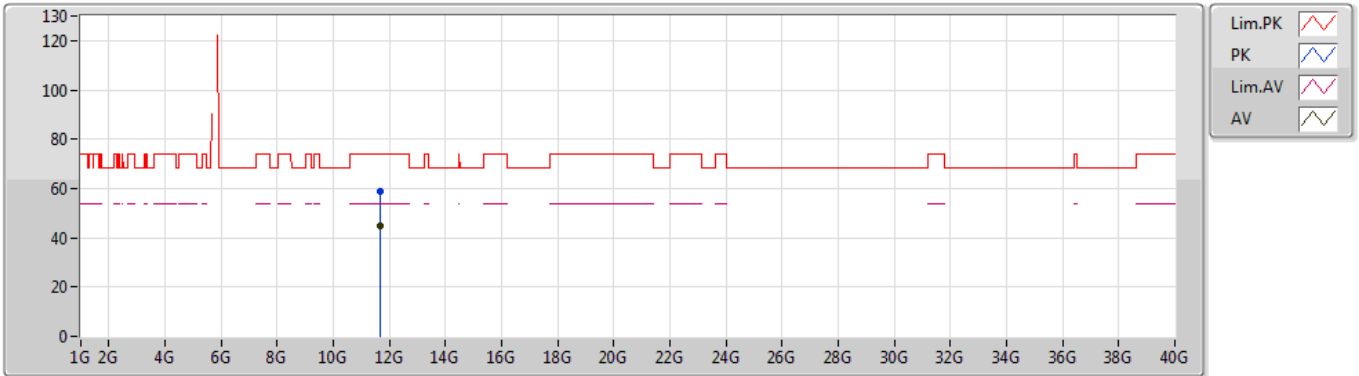
EUT Y_3TX
Setting 81
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.64884G	57.18	74.00	-16.82	13.03	3	Vertical	328	2.13	-	44.15			
AV	11.65036G	43.11	54.00	-10.89	13.02	3	Vertical	328	2.13	-	30.09			

802.11ac VHT20-BF_Nss2,(MCS0)_3TX

08/11/2019

5825MHz_TX



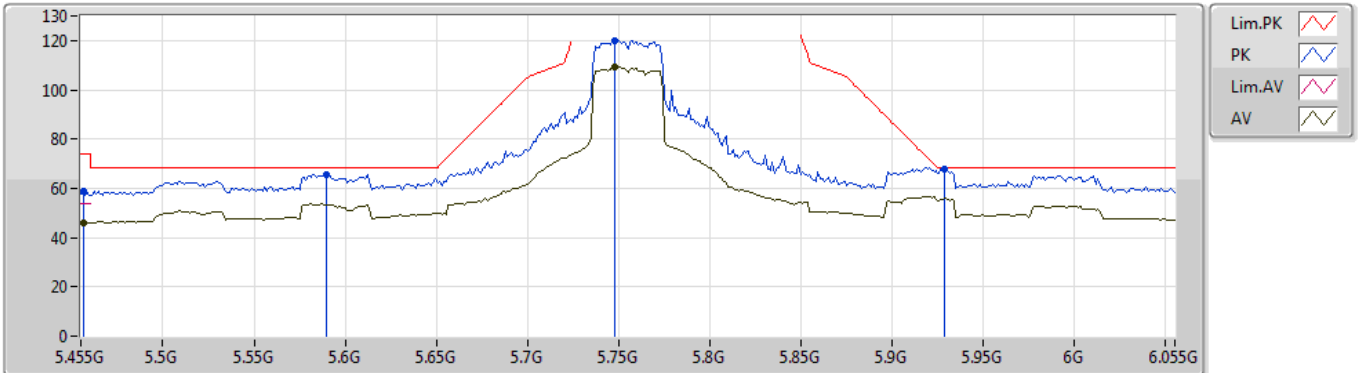
EUT Y_3TX
Setting 81
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.64964G	59.01	74.00	-14.99	13.03	3	Horizontal	32	1.68	-	45.98			
AV	11.64976G	44.69	54.00	-9.31	13.03	3	Horizontal	32	1.68	-	31.66			

802.11ac VHT40-BF_Nss2,(MCS0)_3TX

07/11/2019

5755MHz_TX



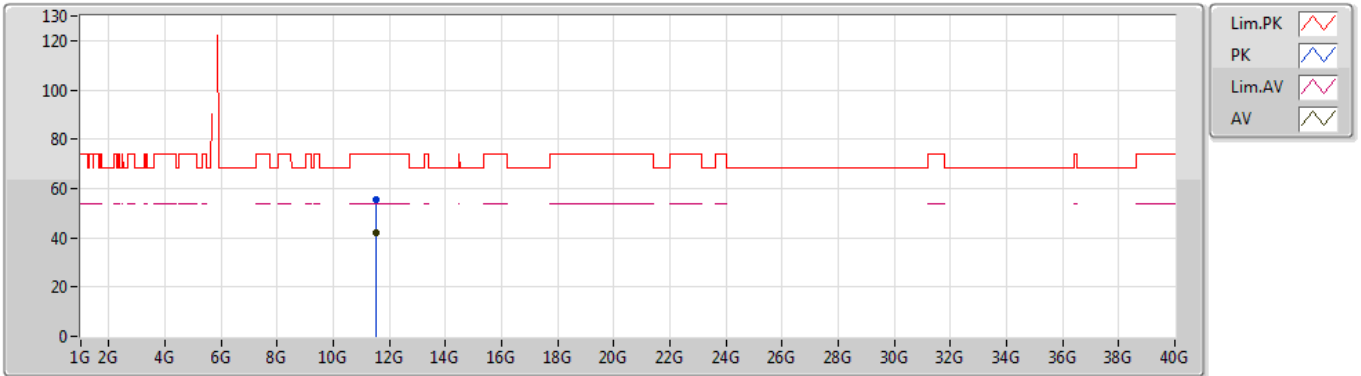
EUT Y_3TX
Setting 90
02-J-5-10
FSU(100015)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	5.4562G	58.62	74.00	-15.38	8.44	3	Vertical	134	1.17	-	50.18
AV	5.4562G	46.15	54.00	-7.85	8.44	3	Vertical	134	1.17	-	37.71
PK	5.5894G	65.64	68.20	-2.56	8.57	3	Vertical	134	1.17	-	57.07
PK	5.7478G	120.19	Inf	-Inf	8.82	3	Vertical	134	1.17	-	111.37
AV	5.7478G	109.33	Inf	-Inf	8.82	3	Vertical	134	1.17	-	100.51
PK	5.929G	68.01	68.20	-0.19	8.93	3	Vertical	134	1.17	-	59.08

802.11ac VHT40-BF_Nss2,(MCS0)_3TX

08/11/2019

5755MHz_TX



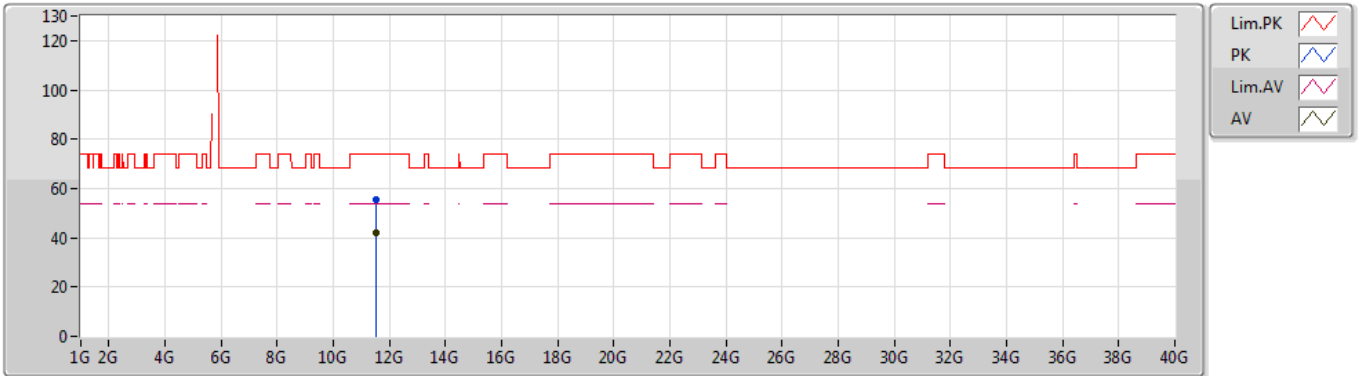
EUT Y_3TX
Setting 90
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.511G	55.56	74.00	-18.44	13.26	3	Vertical	332	1.50	-	42.30			
AV	11.51196G	41.94	54.00	-12.06	13.26	3	Vertical	332	1.50	-	28.68			

802.11ac VHT40-BF_Nss2,(MCS0)_3TX

08/11/2019

5755MHz_TX



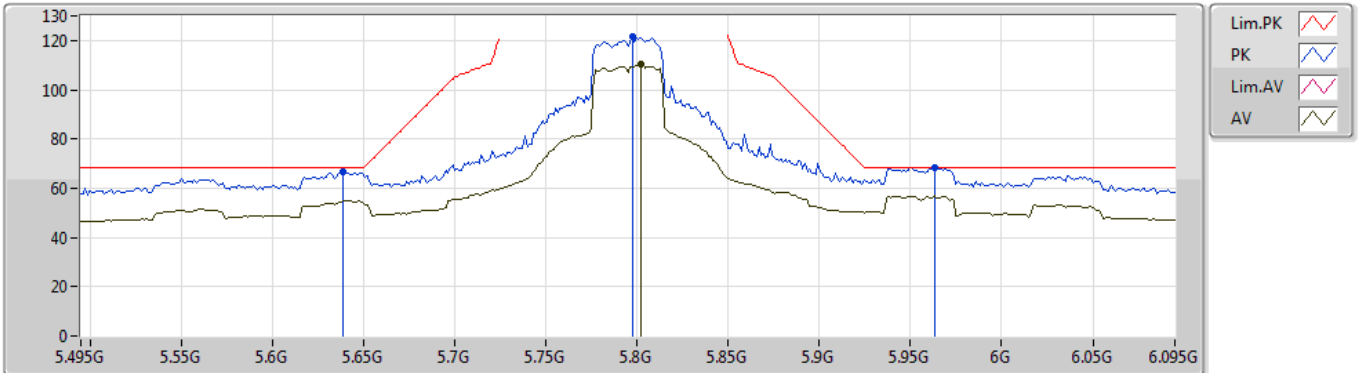
EUT Y_3TX
Setting 90
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.51452G	55.56	74.00	-18.44	13.26	3	Horizontal	111	1.50	-	42.30			
AV	11.51904G	41.91	54.00	-12.09	13.25	3	Horizontal	111	1.50	-	28.66			

802.11ac VHT40-BF_Nss2,(MCS0)_3TX

07/11/2019

5795MHz_TX



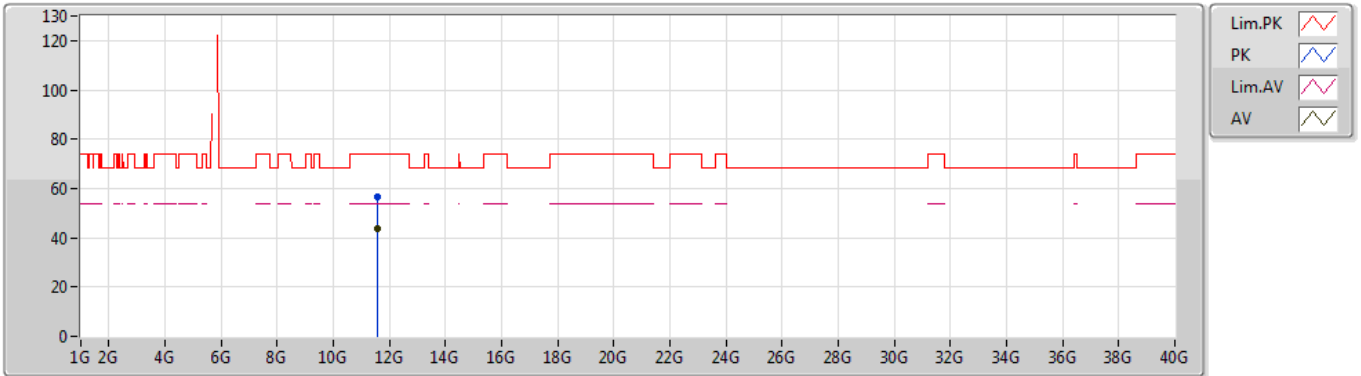
EUT Y_3TX
Setting 92
02-J-5-10
FSU(100015)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	5.639G	66.81	68.20	-1.39	8.64	3	Vertical	193	1.40	-	58.17
PK	5.7974G	121.41	Inf	-Inf	8.90	3	Vertical	193	1.40	-	112.51
AV	5.8022G	110.37	Inf	-Inf	8.90	3	Vertical	193	1.40	-	101.47
PK	5.963G	68.12	68.20	-0.08	8.93	3	Vertical	193	1.40	-	59.19

802.11ac VHT40-BF_Nss2,(MCS0)_3TX

08/11/2019

5795MHz_TX



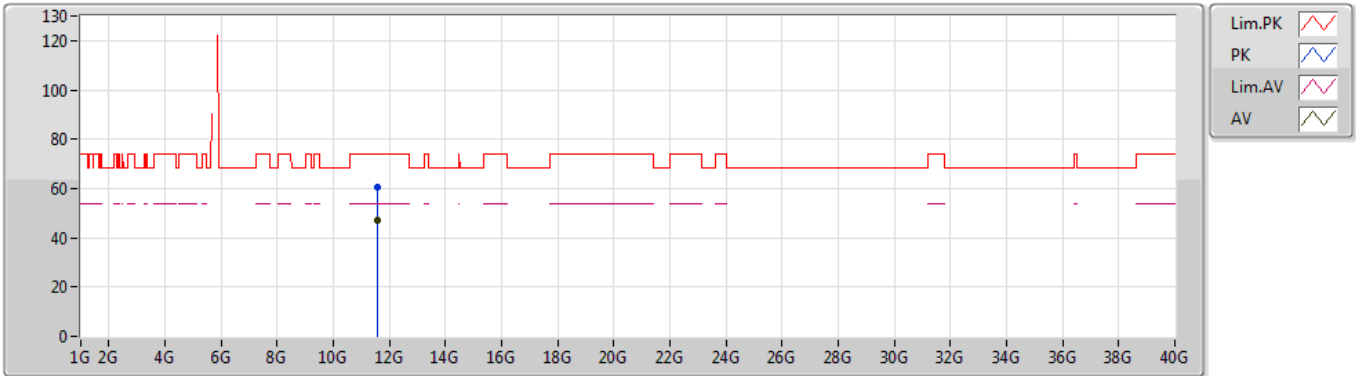
EUT Y_3TX
Setting 92
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.59128G	56.84	74.00	-17.16	13.12	3	Vertical	275	1.40	-	43.72			
AV	11.59192G	43.67	54.00	-10.33	13.12	3	Vertical	275	1.40	-	30.55			

802.11ac VHT40-BF_Nss2,(MCS0)_3TX

08/11/2019

5795MHz_TX



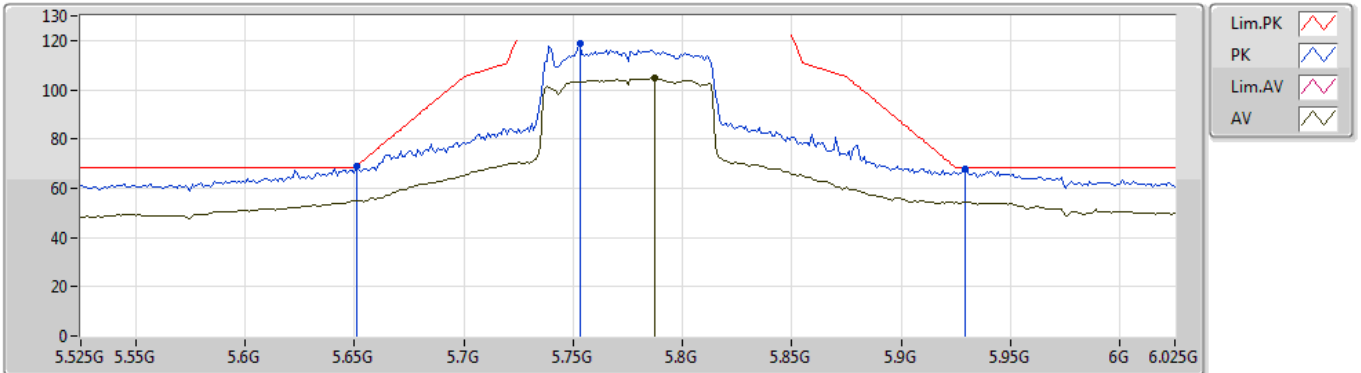
EUT Y_3TX
Setting 92
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.5902G	60.58	74.00	-13.42	13.12	3	Horizontal	36	1.60	-	47.46			
AV	11.5905G	46.94	54.00	-7.06	13.12	3	Horizontal	36	1.60	-	33.82			

802.11ac VHT80-BF_Nss2,(MCS0)_3TX

07/11/2019

5775MHz_TX



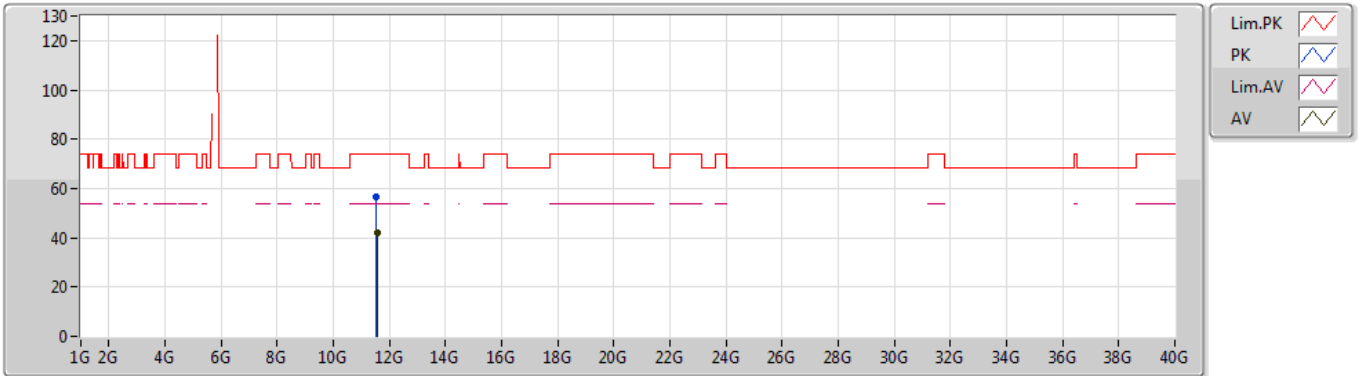
EUT_Y_3TX
Setting 84
02-J-5-10
FSU(100015)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	5.651G	68.76	68.94	-0.18	8.66	3	Vertical	139	1.47	-	60.10			
PK	5.753G	118.60	Inf	-Inf	8.83	3	Vertical	139	1.47	-	109.77			
AV	5.787G	104.96	Inf	-Inf	8.88	3	Vertical	139	1.47	-	96.08			
PK	5.929G	67.82	68.20	-0.38	8.93	3	Vertical	139	1.47	-	58.89			

802.11ac VHT80-BF_Nss2,(MCS0)_3TX

08/11/2019

5775MHz_TX



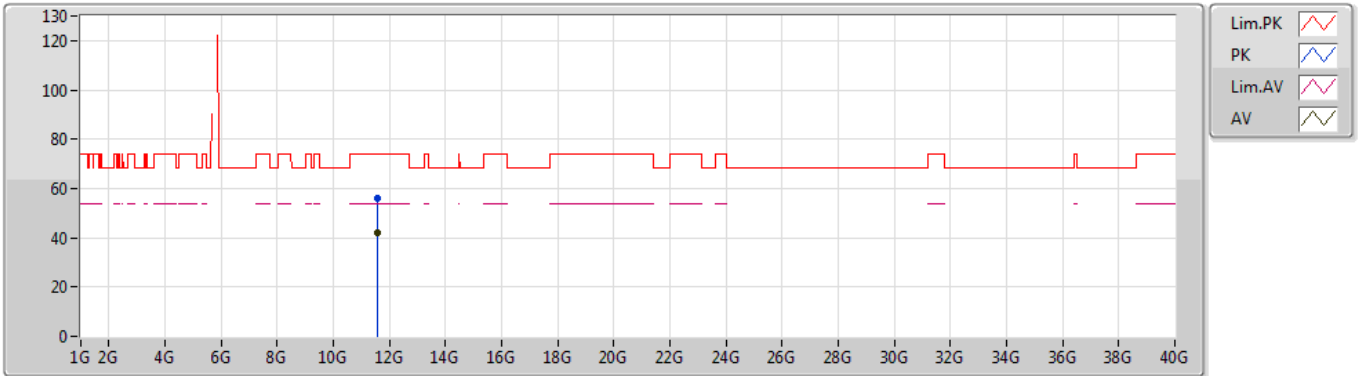
EUT Y_3TX
Setting 84
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.5412G	56.63	74.00	-17.37	13.21	3	Vertical	334	1.50	-	43.42			
AV	11.55972G	42.11	54.00	-11.89	13.18	3	Vertical	334	1.50	-	28.93			

802.11ac VHT80-BF_Nss2,(MCS0)_3TX

08/11/2019

5775MHz_TX



EUT Y_3TX
Setting 84
06-S-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)			
PK	11.55848G	56.12	74.00	-17.88	13.18	3	Horizontal	41	1.50	-	42.94			
AV	11.55688G	42.17	54.00	-11.83	13.18	3	Horizontal	41	1.50	-	28.99			