



FCC RADIO TEST REPORT

FCC ID : 2ABLP-RE1XYZN
Equipment : Viasat Smart Home WiFi Extender
Brand Name : Viasat
Model Name : RE1XXXN-030 (Where "X", may be 0~9, A~Z, blank or dash) 、 RE1111N-030 、 RE1121N-030
Applicant : Viasat, Inc.
6155 El Camino Real Carlsbad, CA 92009 USA
Manufacturer : CyberTAN Technology, Inc.
No. 99, Park Avenue III, Science-based Industrial Park, Hsinchu, 308 Taiwan
Standard : 47 CFR FCC Part 15.407

The product was received on Jul. 24, 2018, and testing was started from Jul. 24, 2018 and completed on Nov. 01, 2018. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

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



Approved by: Sam Chen

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



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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	-

Reviewed by: Sam Chen

Report Producer: Vicky Huang



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-Non BF	20	2TX
5.15-5.25GHz	802.11a-BF	20	2TX
5.15-5.25GHz	802.11n HT20-Non BF	20	2TX
5.15-5.25GHz	802.11n HT20-BF	20	2TX
5.15-5.25GHz	802.11ac VHT20-Non BF	20	2TX
5.15-5.25GHz	802.11ac VHT20-BF	20	2TX
5.15-5.25GHz	802.11n HT40-Non BF	40	2TX
5.15-5.25GHz	802.11n HT40-BF	40	2TX
5.15-5.25GHz	802.11ac VHT40-Non BF	40	2TX
5.15-5.25GHz	802.11ac VHT40-BF	40	2TX
5.15-5.25GHz	802.11ac VHT80-Non BF	80	2TX
5.15-5.25GHz	802.11ac VHT80-BF	80	2TX
5.725-5.85GHz	802.11a-Non BF	20	2TX
5.725-5.85GHz	802.11a-BF	20	2TX
5.725-5.85GHz	802.11n HT20-Non BF	20	2TX
5.725-5.85GHz	802.11n HT20-BF	20	2TX
5.725-5.85GHz	802.11ac VHT20-Non BF	20	2TX
5.725-5.85GHz	802.11ac VHT20-BF	20	2TX
5.725-5.85GHz	802.11n HT40-Non BF	40	2TX
5.725-5.85GHz	802.11n HT40-BF	40	2TX



5.725-5.85GHz	802.11ac VHT40-Non BF	40	2TX
5.725-5.85GHz	802.11ac VHT40-BF	40	2TX
5.725-5.85GHz	802.11ac VHT80-Non BF	80	2TX
5.725-5.85GHz	802.11ac VHT80-BF	80	2TX

Note:

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

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)		
					2.4GHz	5GHz Band 1	5GHz Band 4
1	N/A	N/A	PIFA Antenna	N/A	2.7	2.9	3.2
2	Airgain	N2420DCBL	Dipole Antenna	I-PEX	3.9	5.1	4.9

Note: The EUT has two antennas.

For 2.4GHz function:

For IEEE 802.11 b/g/n/ac mode (2TX, 2RX):

Ant. 1(Port 1) and Ant. 2(Port 2) will transmit/receive the same signal simultaneously.

Ant. 1(Port 1) and Ant. 2(Port 2) can be used as transmitting/receiving antennas.

For 5GHz function:

For IEEE 802.11 a/n/ac mode (2TX, 2RX):

Ant. 1(Port 1) and Ant. 2(Port 2) will transmit/receive the same signal simultaneously.

Ant. 1(Port 1) and Ant. 2(Port 2) can be used as transmitting/receiving antennas



1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11a-BF	0.88	0.555	1.46m	1k
802.11ac VHT20-BF	0.816	0.883	1.76m	1k
802.11ac VHT40-BF	0.883	0.54	1.958m	1k
802.11ac VHT80-BF	0.89	0.506	1.948m	1k

Note:

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

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter			
Beamforming Function	<input checked="" type="checkbox"/> With beamforming	<input type="checkbox"/> Without beamforming		
Function	<input type="checkbox"/> Outdoor P2M	<input checked="" type="checkbox"/> Indoor P2M		
	<input type="checkbox"/> Fixed P2P	<input type="checkbox"/> Client		
Test Software Version	3.0.187.0			

Note: The product has beamforming function for 802.11a/g/n/ac in 2.4GHz and 5GHz.

1.1.5 Table for Multiple Listing

The model number detail information for the following table

Model Name	Description
RE1XXXN-030	All the models are identical, the difference model served as marketing strategy. (The "X" in model name can be 0 to 9, A to Z, blank or dash, for marking purpose)

Model Name	Power Module	Match Adapter
RE1111N-030	Custom Power Module	Adapter 1(Without DC power cable)
		Adapter 1(With DC power cable)
RE1121N-030	Standard Power Module	Adapter 2

For AC Power-line Conducted Emissions and Emissions in Unwanted Emissions(below 1GHz) tests:

From the above models, model name: RE1121N-030 and RE1111N-030 was selected as representative model for the test and its data was recorded in this report.

For other tests:

From the above models, model name: RE1121N-030 was selected as representative model for the test and its data was recorded in this report.



1.2 Testing Applied Standards

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

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

1.3 Testing Location Information

Testing Location		
<input type="checkbox"/>	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
<input checked="" type="checkbox"/>	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Serway Li	22°C / 54%	Sep. 01, 2018~Sep. 03, 2018
Radiated below 1GHz	03CH01-CB	Lance Wu	24°C / 56%	Jul. 24, 2018~Oct. 31, 2018
Radiated above 1GHz	03CH01-CB	Lance Wu	24°C / 56%	Jul. 24, 2018~Sep. 26, 2018
AC Conduction	CO02-CB	Wei Li	23°C / 60%	Sep. 26, 2018~Nov. 01, 2018

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

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74 x10 ⁻⁸	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11a-BF_Nss1,(6Mbps)_2TX	-
5180MHz	21.5
5200MHz	25
5240MHz	25
5745MHz	25
5785MHz	25
5825MHz	25
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-
5180MHz	21.5
5200MHz	25
5240MHz	25
5745MHz	25
5785MHz	25
5825MHz	25
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-
5190MHz	18.5
5230MHz	25
5755MHz	23
5795MHz	23.5
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-
5210MHz	18
5775MHz	21

Note1:The product has beamforming function for 802.11a/g/n/ac in 2.4GHz and 5GHz. One is beamforming mode, and the other is non-beamforming mode, after evaluating, beamforming mode has been evaluated to be the worst case, so it was selected to test and record in this test report.

Note2:VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.



2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	Normal Link
1	AP Router mode-EUT(model:RE1111N-030)+Adapter1(With DC power cable)
2	AP Router mode-EUT(model:RE1121N-030)+Adapter2
3	AP Router mode-EUT(model:RE1111N-030)+Adapter1(Without DC power cable)

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
Operating Mode	CTX
1	EUT(model:RE1121N-0300)+Adapter2

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link
1	AP Router mode-EUT at Y-axis(model:RE1111N-030)+Adapter1(With DC power cable)
2	AP Router mode-EUT at Z-axis(model:RE1111N-030)+Adapter1(With DC power cable)
Mode 2 has been evaluated to be the worst case between Mode 1~2, thus measurement for Mode 3~4 will follow this same test mode.	
3	AP Router mode-EUT at Z-axis(model:RE1121N-030)+Adapter2
4	AP Router mode-EUT at Z-axis(model:RE1111N-030)+Adapter1(Without DC power cable)
For operating mode 2、mode 3 and mode 4 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
The EUT was performed at Y axis and Z axis position. The worst case was found at Y axis, so it was selected to perform test and its test result was written in the report.	
1	EUT at Y-axis(model:RE1121N-030)+Adapter2



The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
The EUT was performed at Y axis and Z axis position for Unwanted Emissions below 1GHz. The worst case was found at Z axis, so it was selected to perform test and its test result was written in the report.	
1	EUT at Z-axis(model:RE1121N-030)+Adapter2-WLAN 2.4GHz + WLAN 5GHz
Refer to Appendix F for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	EUT(model:RE1121N-030)-WLAN 2.4GHz + WLAN 5GHz
Refer to Sporton Test Report No.: FA750330-05 for Co-location RF Exposure Evaluation.	

Note: The EUT supports AP Router、Extender and Mesh mode, only AP Router mode was tested and recorded in this test report for customer's request.



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 7 were executed.

The program was executed as follows:

1. During the test, the EUT operation to normal function.
2. Executed command fixed test channel under Telnet.
3. Executed "Lantest.exe" to link with the remote workstation to transmit and receive packet by RX Device and transmit duty cycle no less than 98%.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories			
Equipment Name	Brand Name	Model Name	Rating
Adapter 1	LEI	MU13-3050250-A1	Input: 100-240V~50/60Hz, 0.3A Output: 5V, 2.5A
Adapter 2	DVE	DSA-13PFD-05 FUS 050250	Input: 100-240V~50/60Hz, 0.5A Output: 5V, 2.5A
Other			
DC power cable*1, non-shielded 1.8m (for Adapter 1 use only)			



2.5 Support Equipment

For Test Site No: CO02-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*3	DELL	E6430	N/A

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

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	N/A
2	NB*2	Apple	Mac Book	N/A

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

For non-beamforming mode

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

For beamforming mode

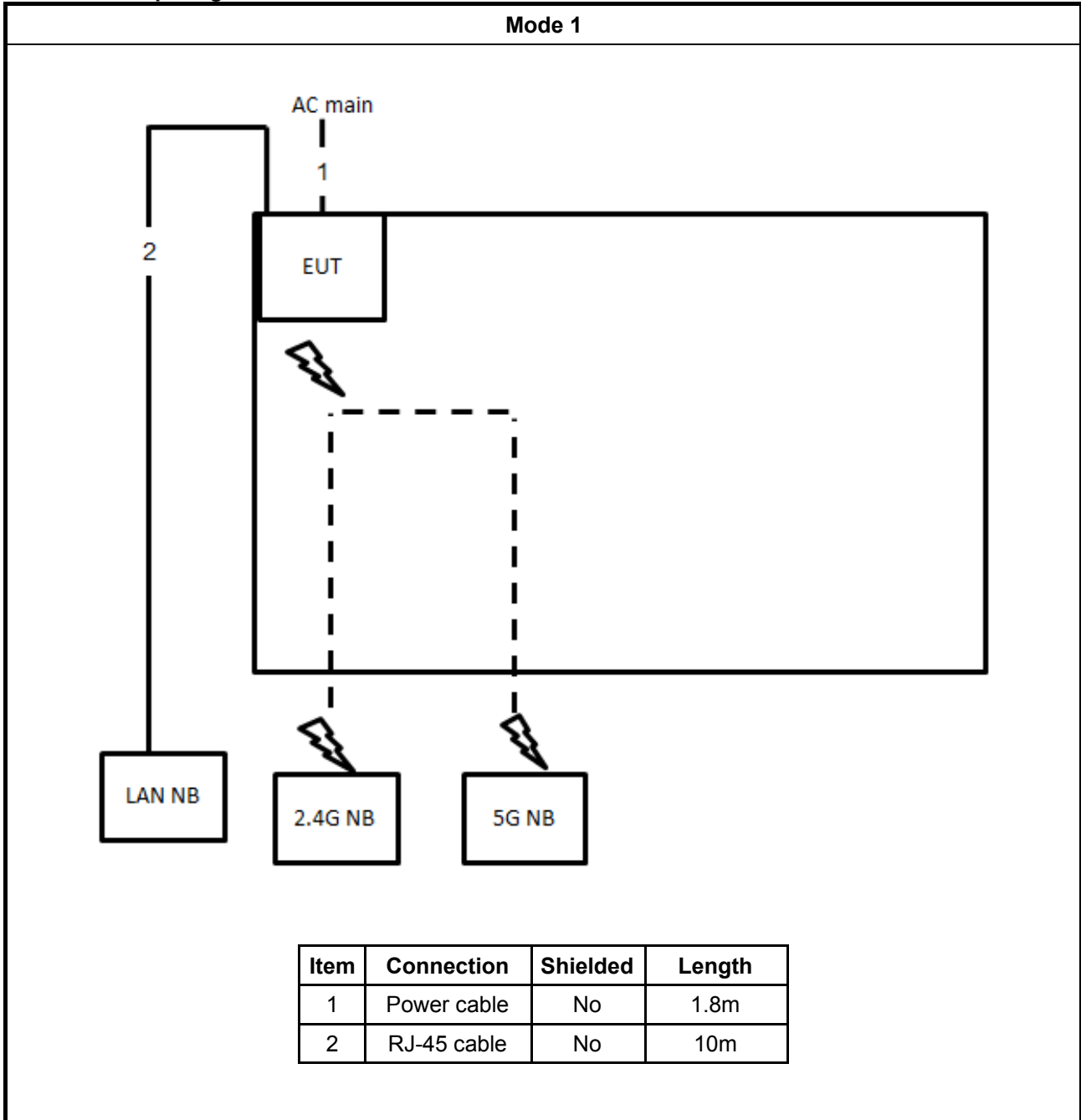
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	N/A
2	Afterburner Wireless Home Gateway (RX Device)	Viasat	RE1121N-030	2ABLP-RE1XYZN

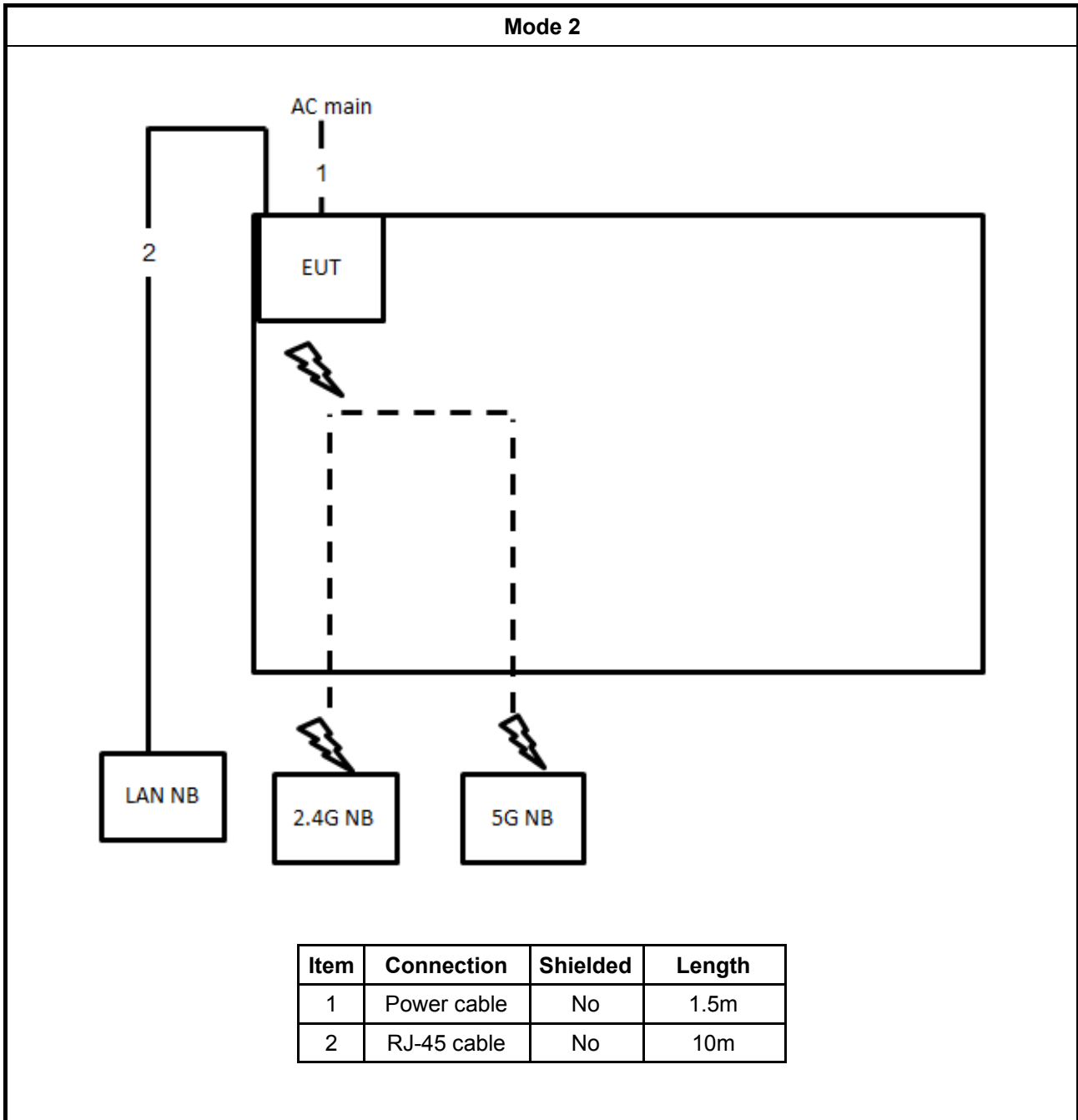
For Test Site No: TH01-CB

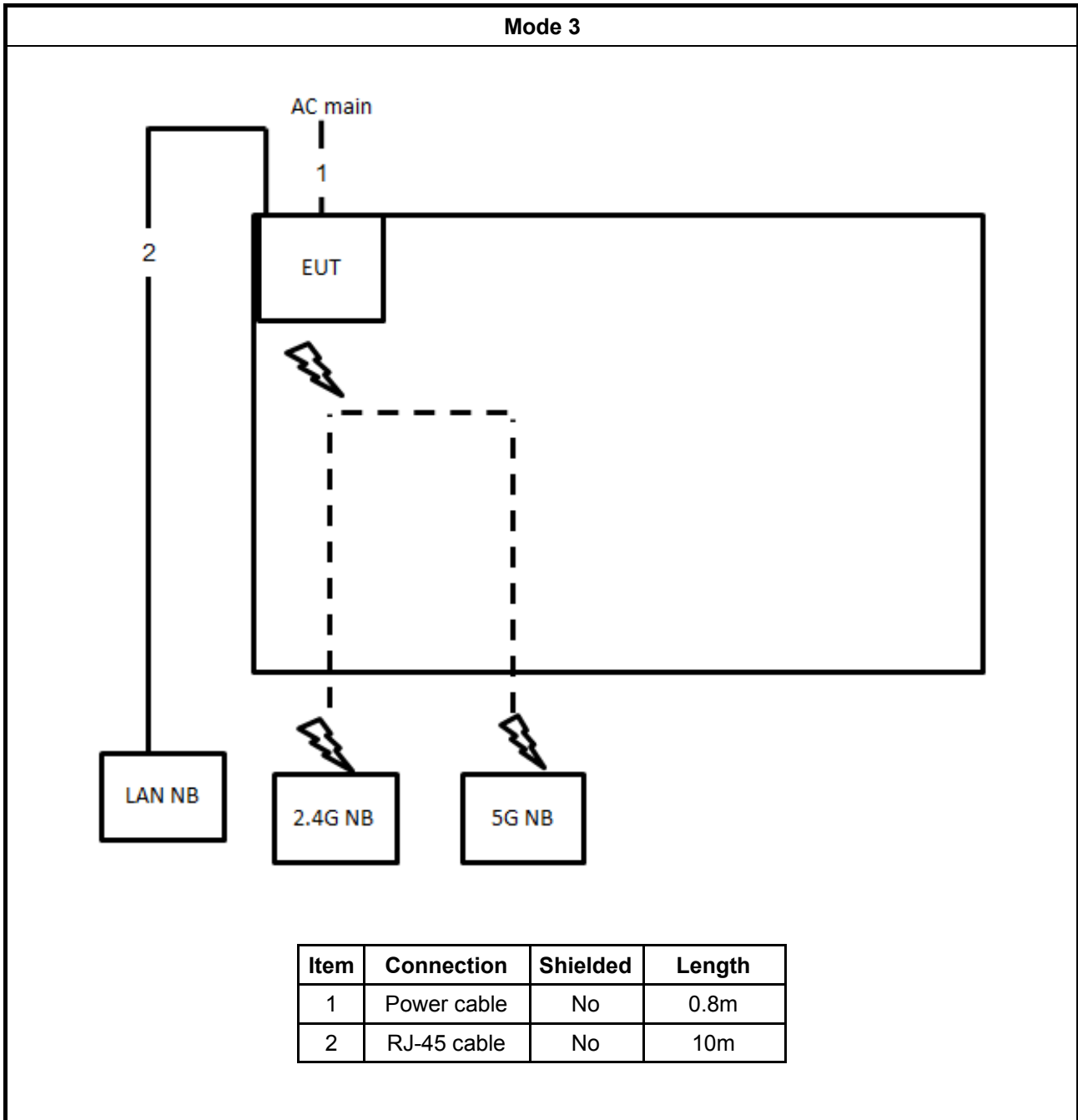
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	N/A

2.6 Test Setup Diagram

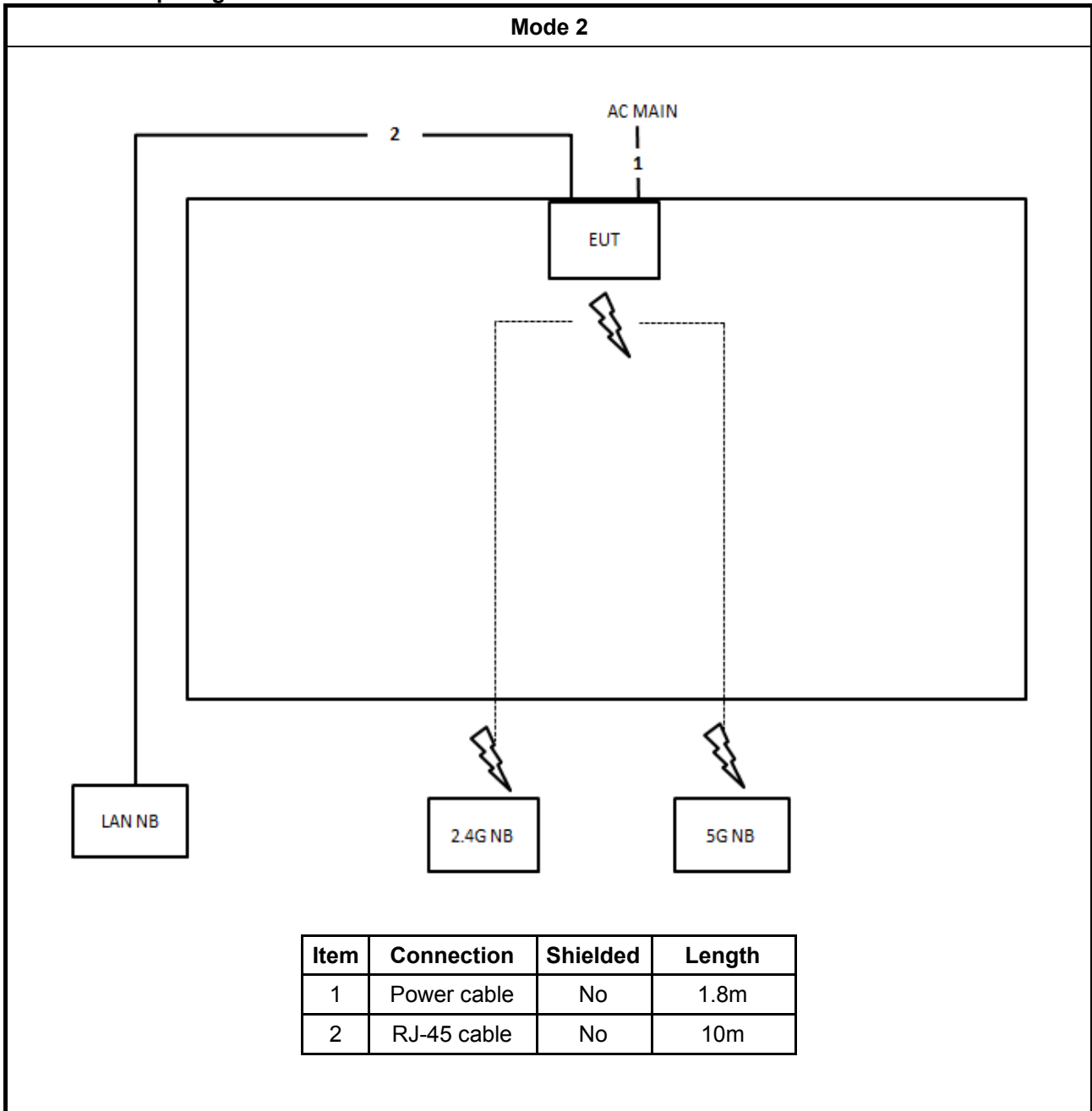
For Test Setup Diagram – AC Line Conducted Emission Test:

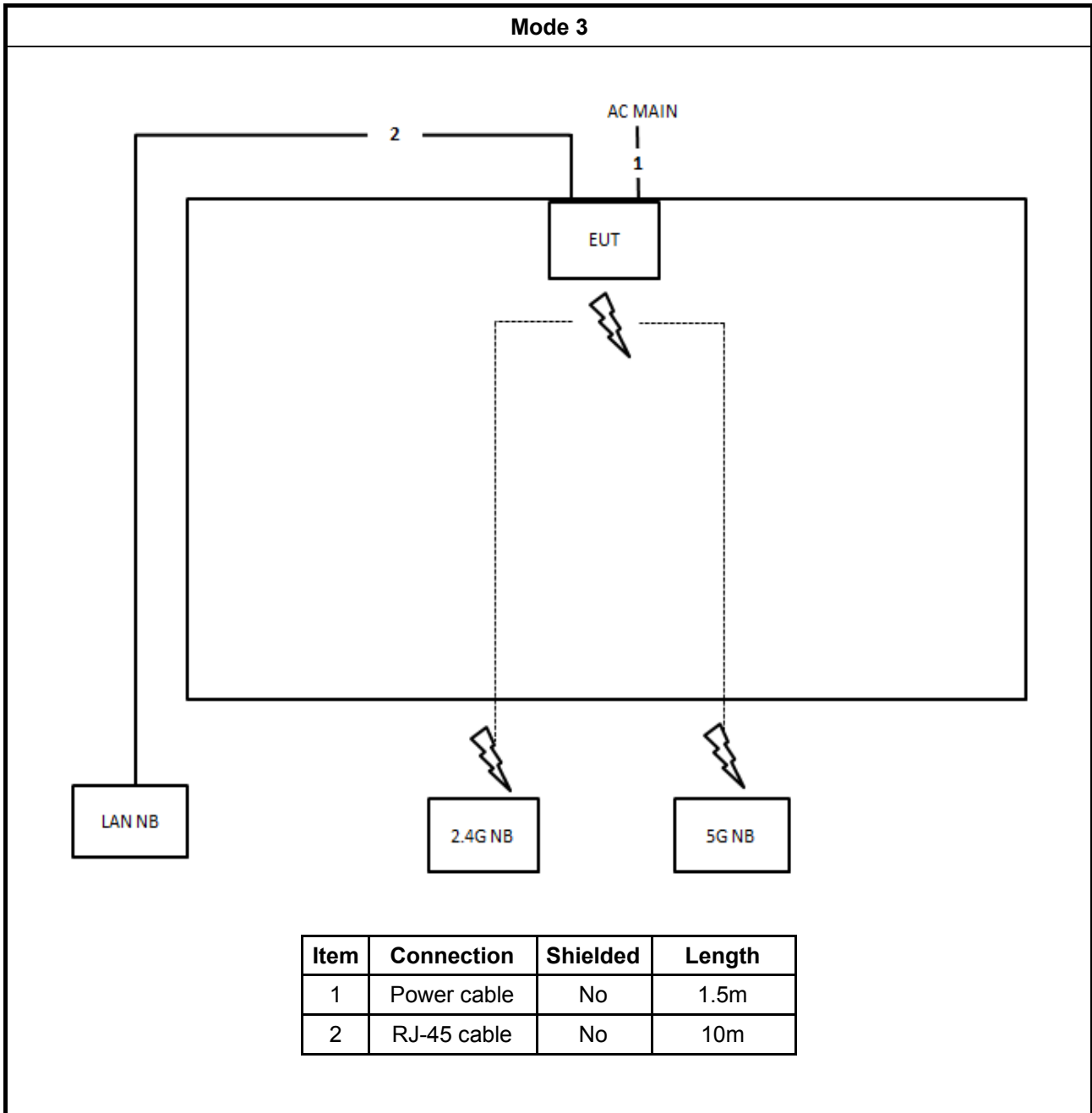


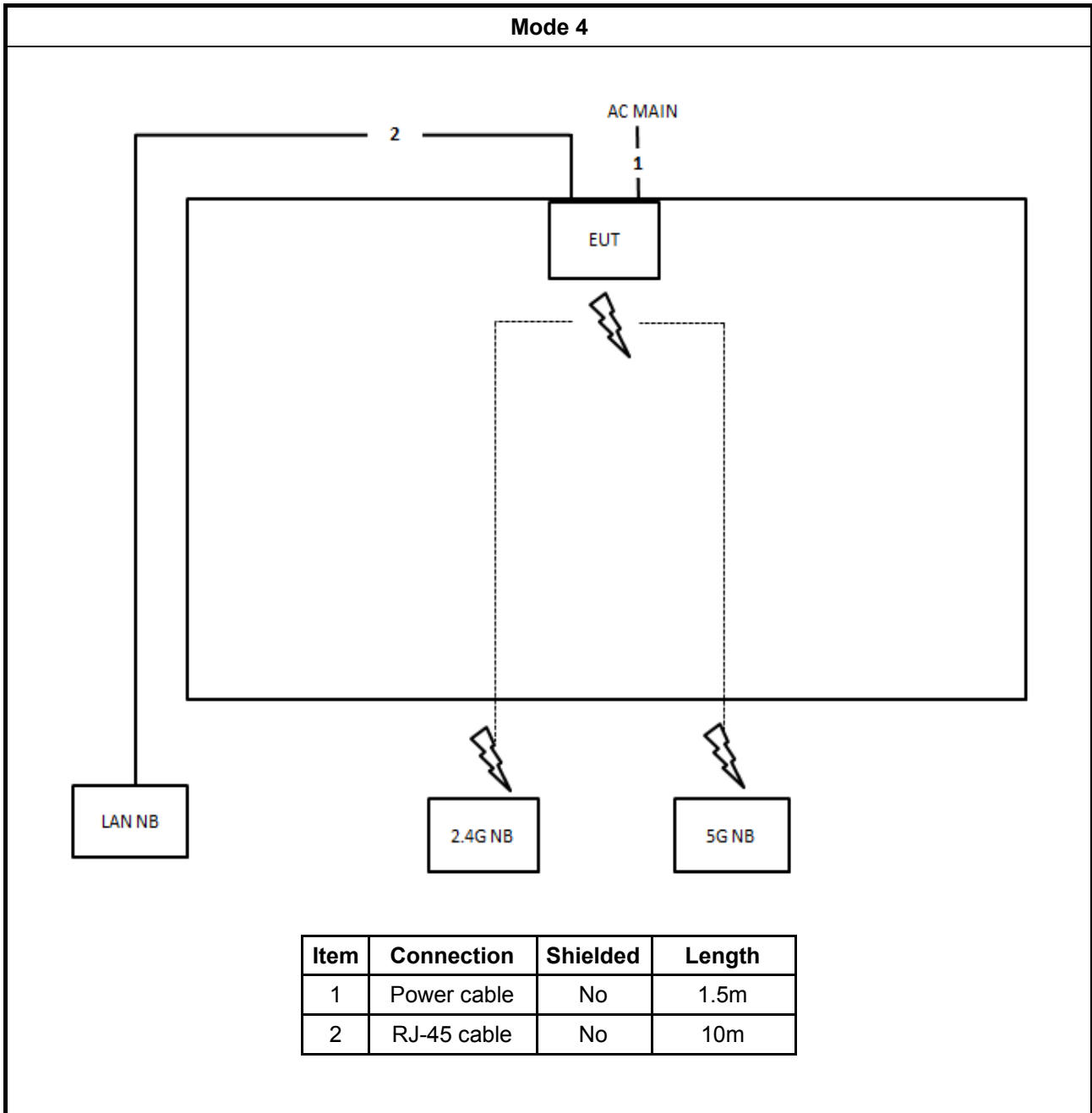




For Test Setup Diagram - Radiated Test < 1GHz:

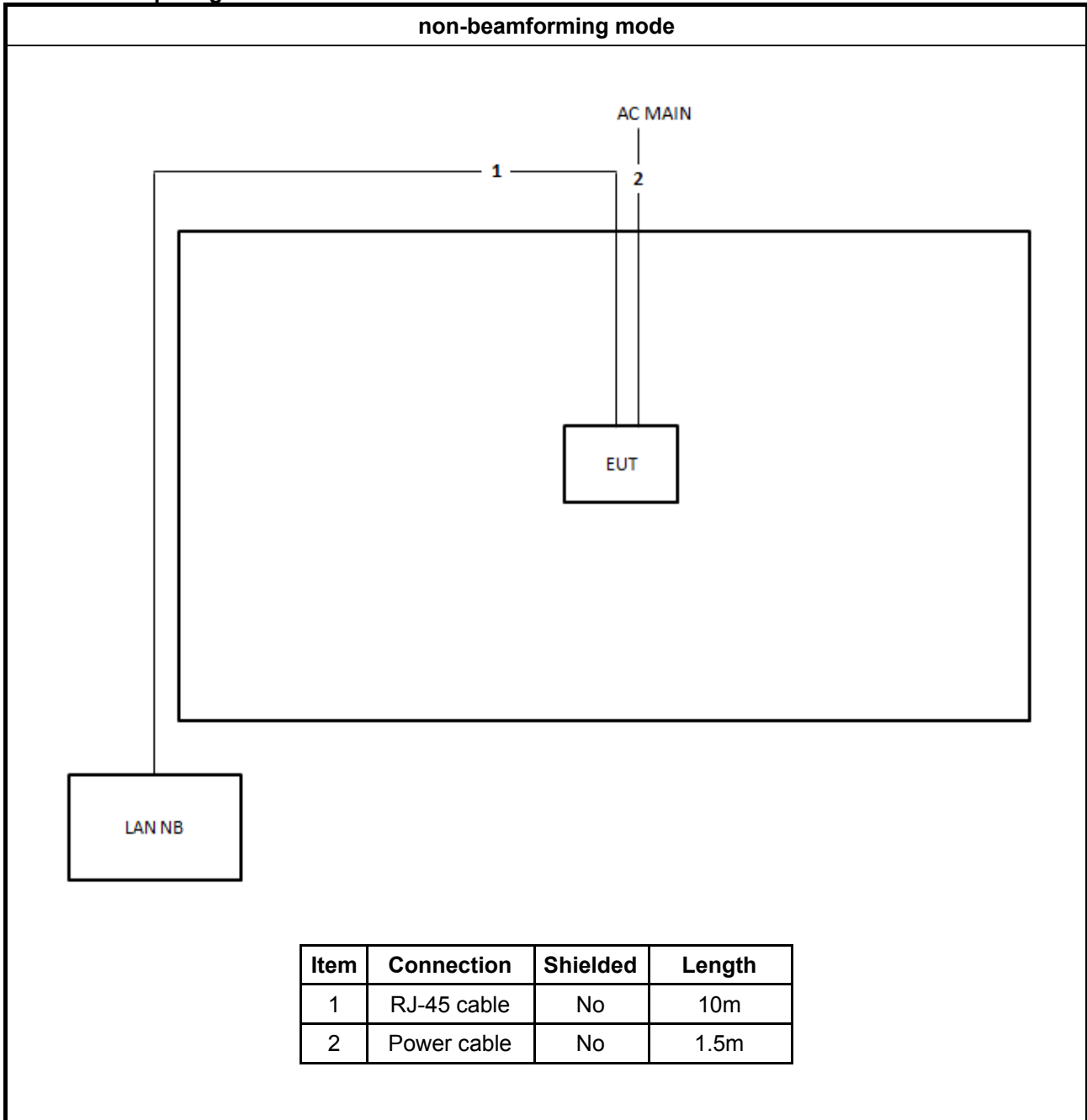


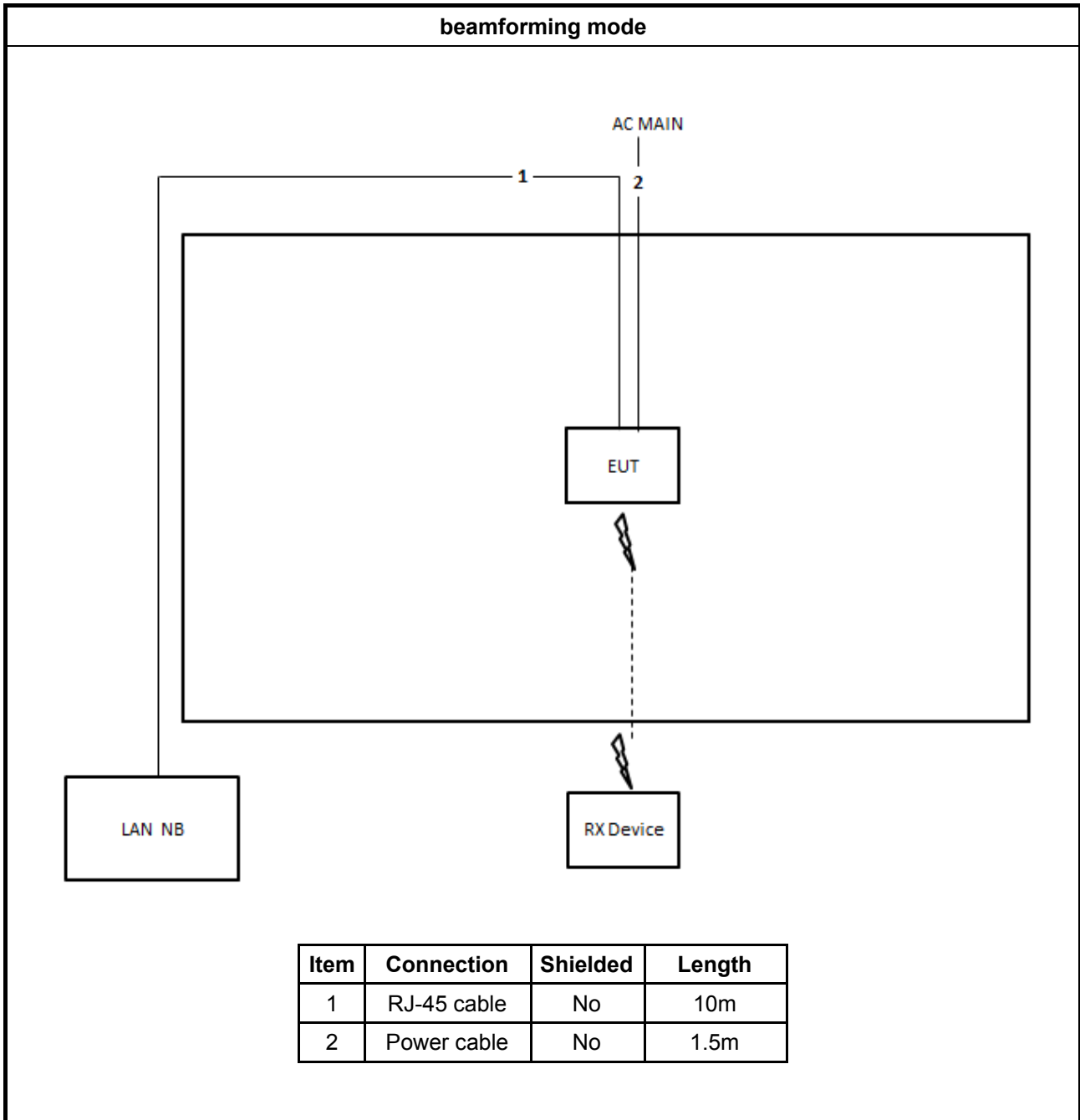






For Test Setup Diagram - Radiated Test > 1GHz:







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.

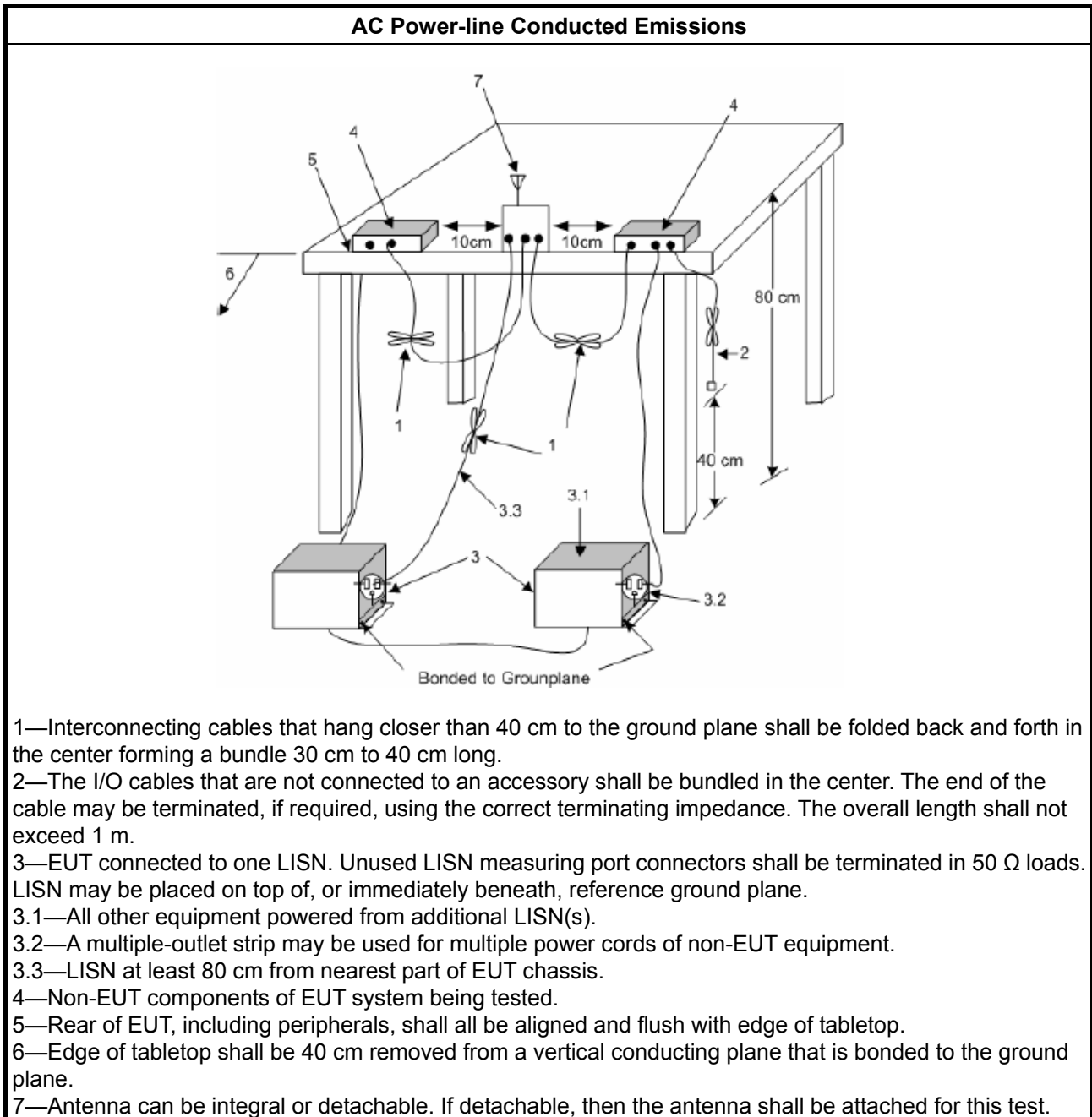
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> 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	
<input checked="" type="checkbox"/>	For the 5.15-5.25 GHz band, N/A
<input type="checkbox"/>	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.
<input type="checkbox"/>	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.
<input checked="" type="checkbox"/>	For the 5.725-5.85 GHz band, 6 dB emission bandwidth \geq 500kHz.
LE-LAN Devices	
<input type="checkbox"/>	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.
<input type="checkbox"/>	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
<input type="checkbox"/>	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
<input type="checkbox"/>	For the 5.725-5.85 GHz band, 6 dB emission bandwidth \geq 500kHz.

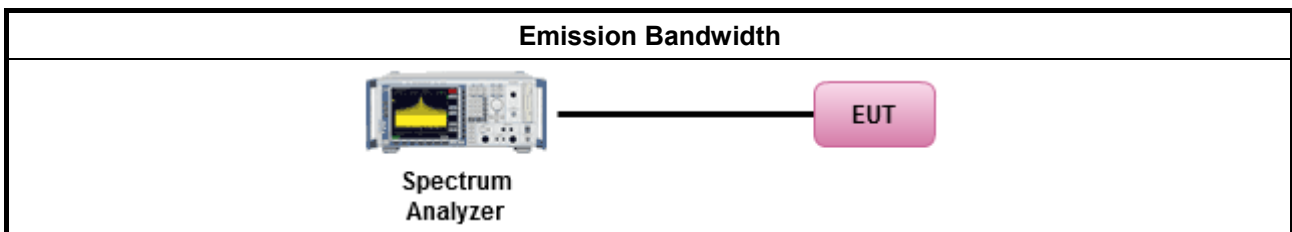
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method							
<ul style="list-style-type: none"> ▪ For the emission bandwidth shall be measured using one of the options below: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px;"><input checked="" type="checkbox"/></td> <td>Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.</td> </tr> </table> 		<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.	<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.	<input type="checkbox"/>	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.						
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.						
<input type="checkbox"/>	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	
<input checked="" type="checkbox"/> For the 5.15-5.25 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> 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 $\leq 125mW$ [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 $P_{Out} = 24 - (G_{TX} - 6)$.
<input type="checkbox"/> 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 $P_{Out} = 24 - (G_{TX} - 6)$.	
<input type="checkbox"/> 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 $P_{Out} = 24 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.725-5.85 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> 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	
<input type="checkbox"/> 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.	
<input type="checkbox"/> 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	
<input type="checkbox"/> 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	
<input type="checkbox"/> For the 5.725-5.85 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> 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.	

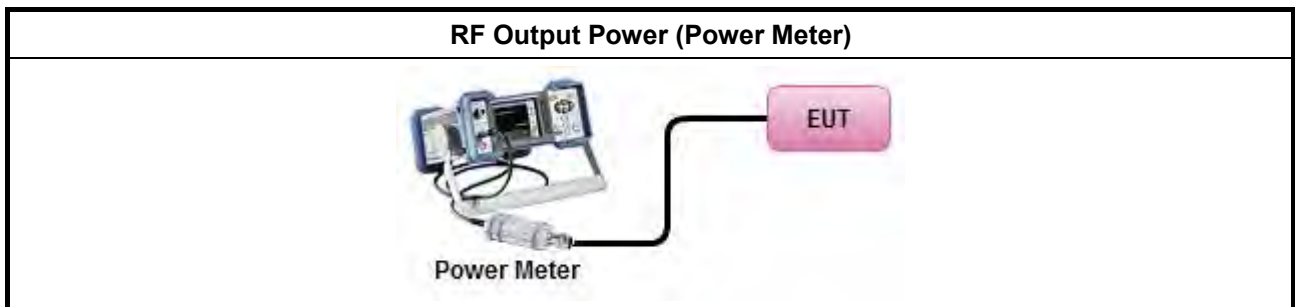
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ Maximum Conducted Output Power 	
Average over on/off periods with duty factor	
<input type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
<input type="checkbox"/>	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	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause E Method PM-G (using an RF average power meter).
<ul style="list-style-type: none"> ▪ For conducted measurement. 	
<ul style="list-style-type: none"> ▪ 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. 	
<ul style="list-style-type: none"> ▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$ 	

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	
<input checked="" type="checkbox"/> For the 5.15-5.25 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> ▪ 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 $PPSD = 11 - (G_{TX} - 6)$.
<input type="checkbox"/> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
<input type="checkbox"/> For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.725-5.85 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> ▪ 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	
<input type="checkbox"/> For the 5.15-5.25 GHz band, the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.	
<input type="checkbox"/> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.	
<input type="checkbox"/>	<ul style="list-style-type: none"> ▪ 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 ($\theta-8$) dBW/MHz for $8^\circ \leq \theta < 40^\circ$ -35.9 - 1.22 ($\theta-40$) dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$
<input type="checkbox"/> For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.	
<input type="checkbox"/> For the 5.725-5.85 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> ▪ 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.
<p>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.</p>	



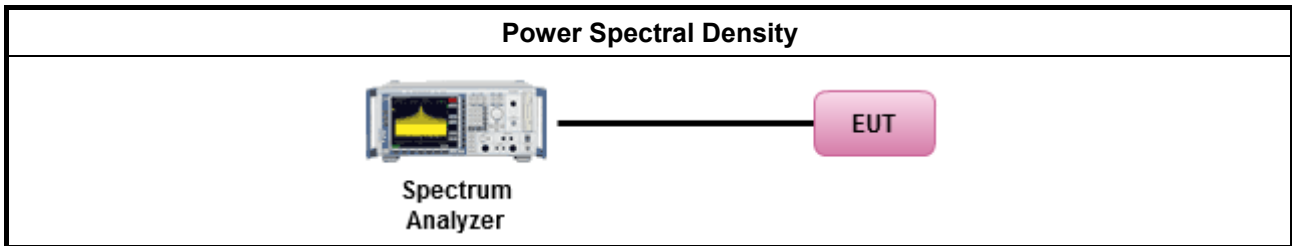
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ 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: 	
	<input type="checkbox"/> 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]
	<input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).
	<input type="checkbox"/> 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
	<input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
	<input type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
<ul style="list-style-type: none"> ▪ For conducted measurement. 	
	<ul style="list-style-type: none"> ▪ If the EUT supports multiple transmit chains using options given below:
	<input checked="" type="checkbox"/> 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.
	<input type="checkbox"/> 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,
	<input type="checkbox"/> 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.
	<ul style="list-style-type: none"> ▪ 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 Radiated 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
<input checked="" type="checkbox"/> 5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input type="checkbox"/> 5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input type="checkbox"/> 5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input checked="" type="checkbox"/> 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).

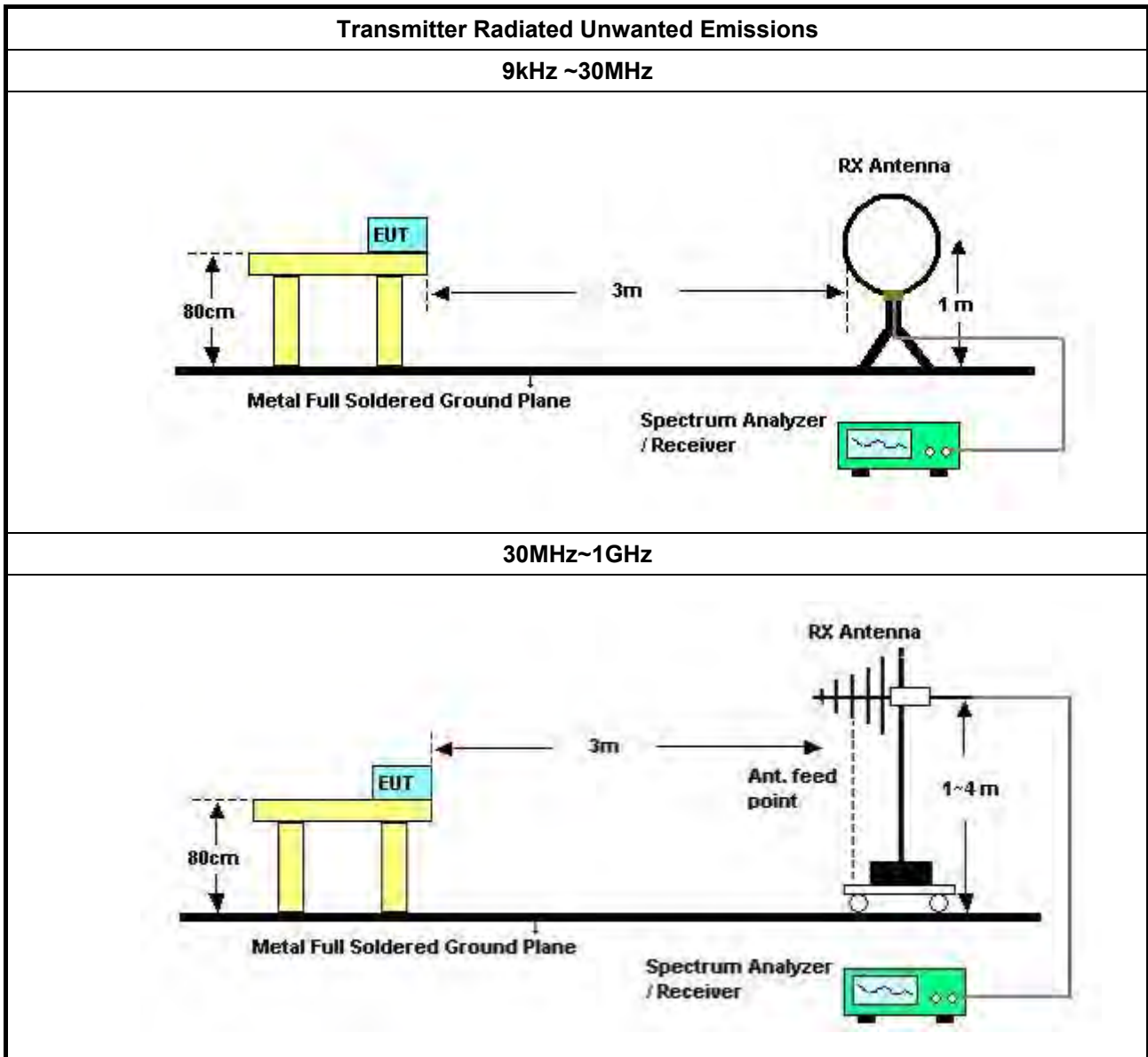
3.5.2 Measuring Instruments

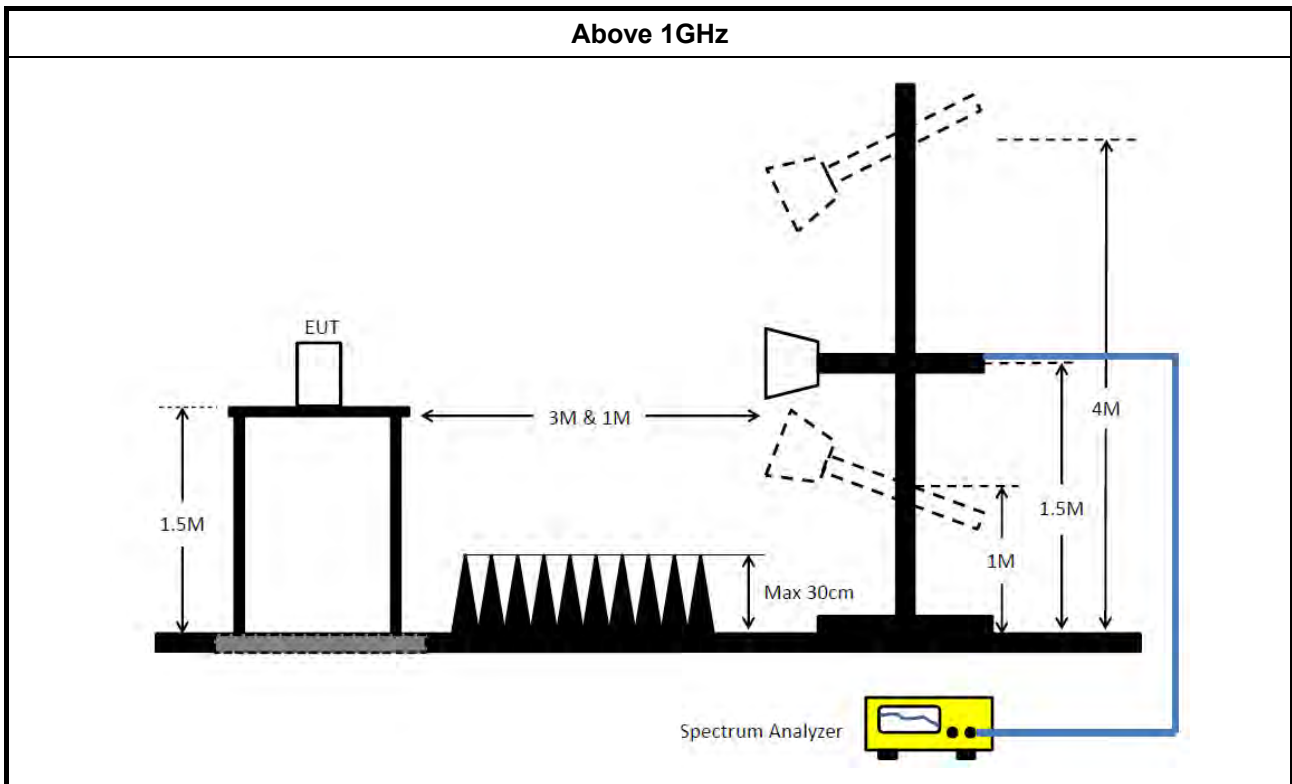
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method	
	<ul style="list-style-type: none"> 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).
	<ul style="list-style-type: none"> The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
	<ul style="list-style-type: none"> For the transmitter unwanted emissions shall be measured using following options below: <ul style="list-style-type: none"> Refer as FCC KDB 789033, clause H)2) for unwanted emissions into non-restricted bands. Refer as FCC KDB 789033, clause H)1) for unwanted emissions into restricted bands. <ul style="list-style-type: none"> <input type="checkbox"/> Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging). <input checked="" type="checkbox"/> Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW). <input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time. <input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions. <input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause H)5) measurement procedure peak limit. <input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.
	<ul style="list-style-type: none"> For radiated measurement. <ul style="list-style-type: none"> 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.
	<ul style="list-style-type: none"> The any unwanted emissions level shall not exceed the fundamental emission level.
	<ul style="list-style-type: none"> 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 Transmitter Unwanted Emissions (Below 30MHz)

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

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

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Nov. 24, 2017	Nov. 23, 2018	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 13, 2017	Nov. 12, 2018	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	Jan. 17, 2018	Jan. 16, 2019	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Nov. 10, 2017	Nov. 09, 2018	Conduction (CO02-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2017	Aug. 29, 2018	Radiation (03CH01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 27, 2018	Aug. 26, 2019	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2018	Mar. 15, 2019	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 20, 2017	Nov. 19, 2018	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 28, 2018	Jun. 27, 2019	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2018	May 01, 2019	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 09, 2018	Jan. 08, 2019	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 04, 2018	Jul. 03, 2019	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 23, 2017	Nov. 22, 2018	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100354	9kHz ~ 2.75GHz	Dec. 08, 2017	Dec. 07, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~1 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)



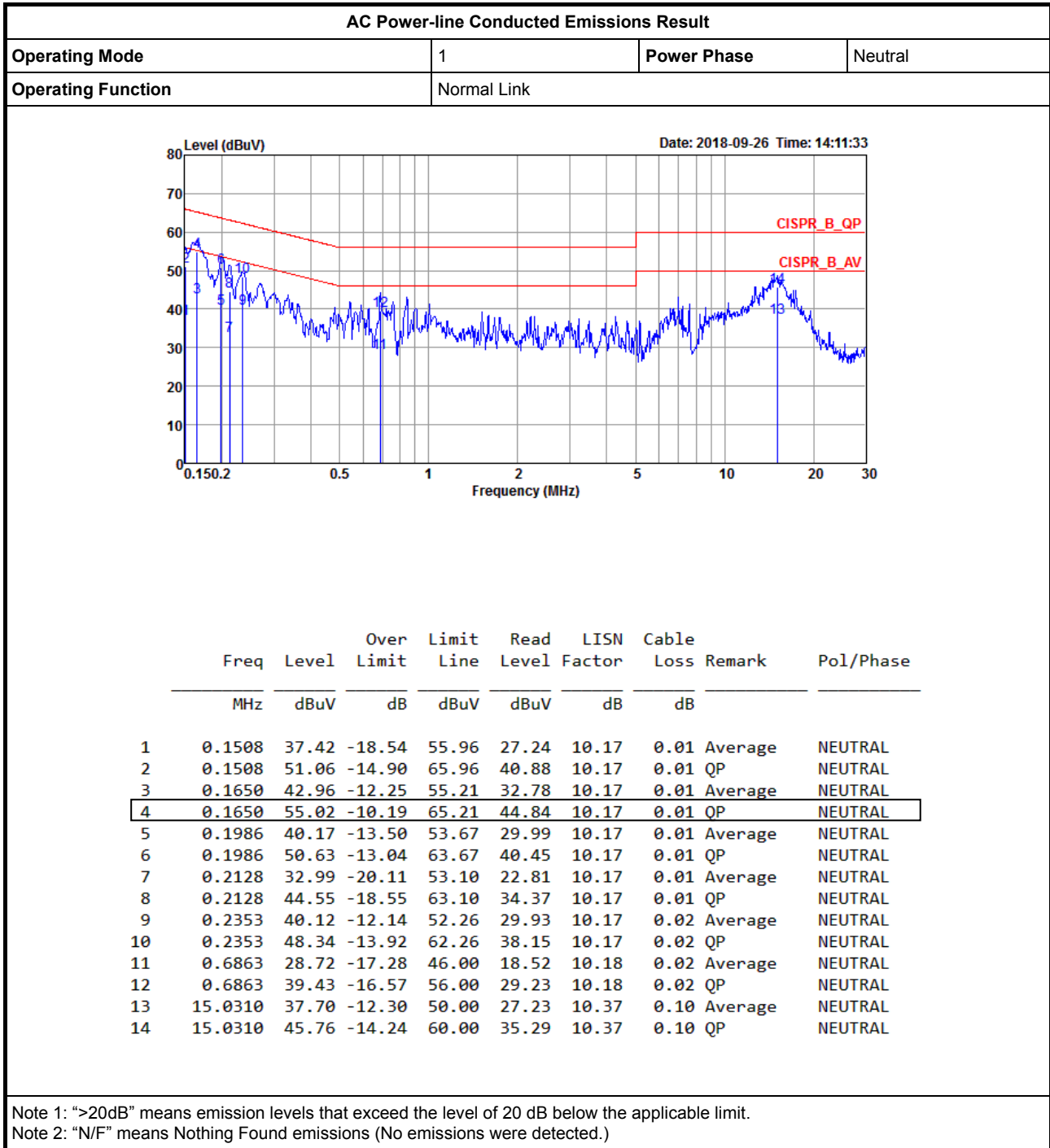
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz~40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 21, 2017	Dec. 20, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 20, 2017	Nov. 19, 2018	Conducted (TH01-CB)

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



AC Power-line Conducted Emissions Result

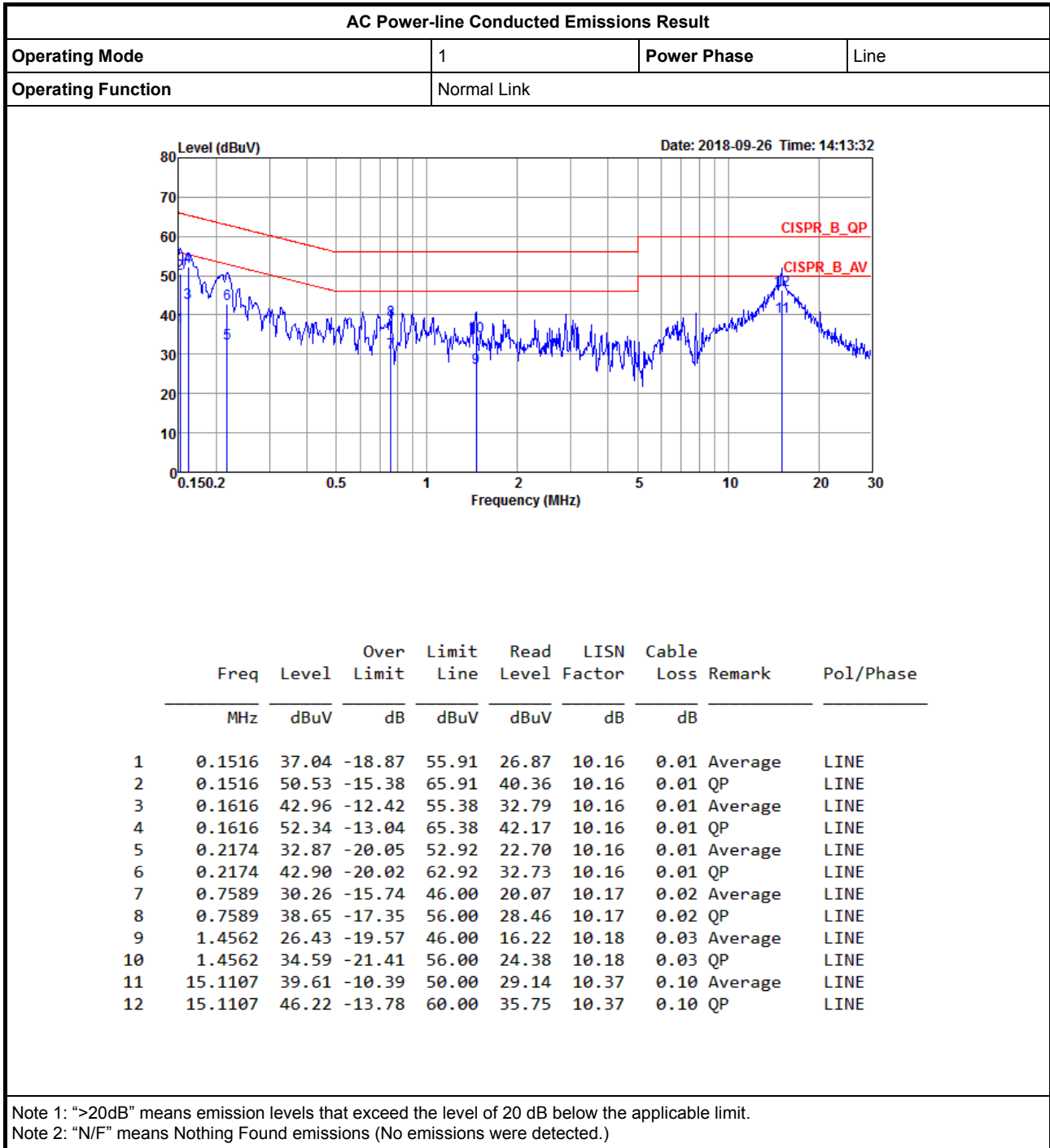
Appendix A





AC Power-line Conducted Emissions Result

Appendix A





AC Power-line Conducted Emissions Result

Appendix A

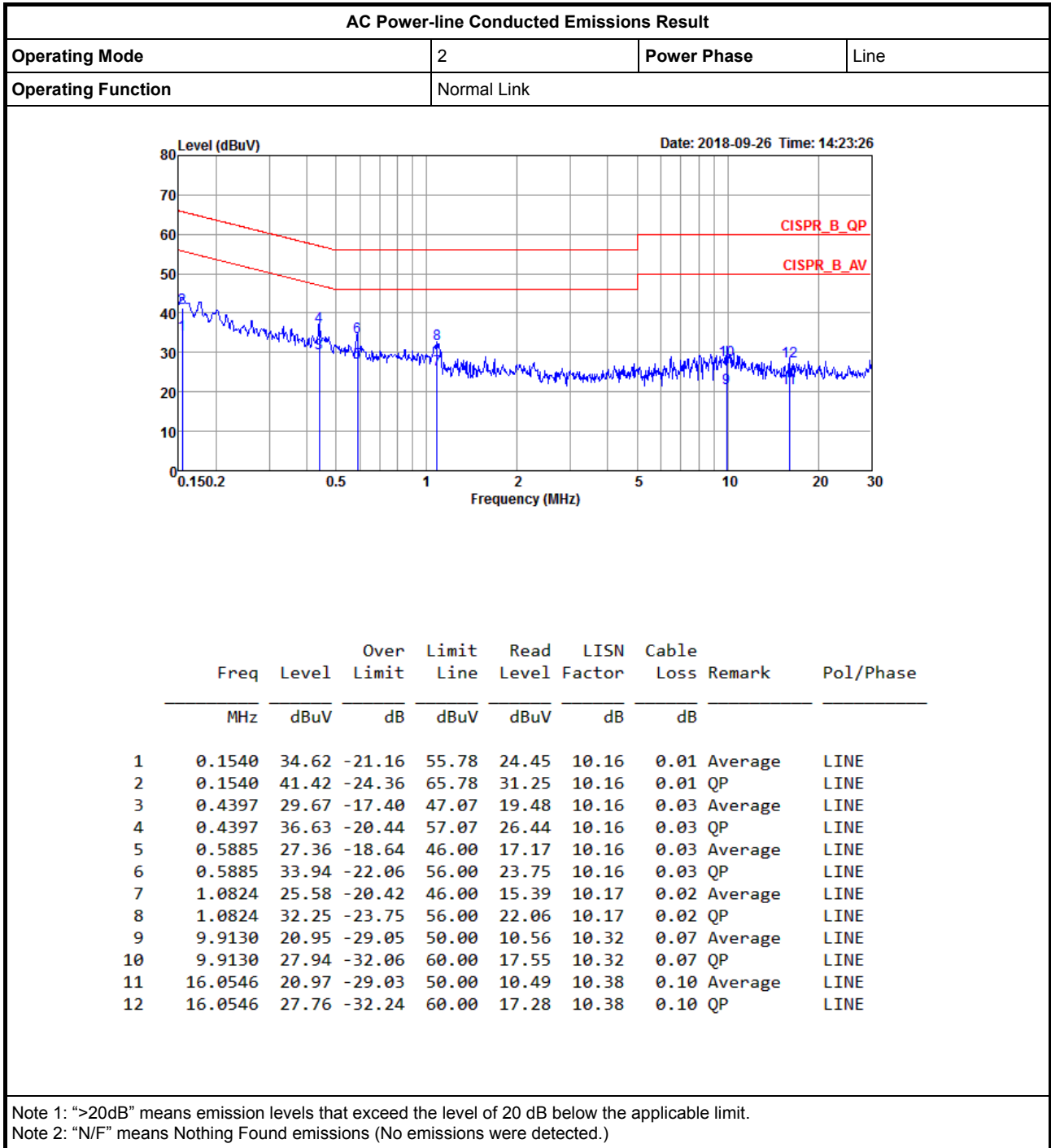
AC Power-line Conducted Emissions Result								
Operating Mode	2	Power Phase	Neutral					
Operating Function	Normal Link							
<p>The graph displays the AC power-line conducted emissions. The y-axis represents Level in dBUV, ranging from 0 to 80. The x-axis represents Frequency in MHz, ranging from 0.1502 to 30. Two red lines indicate the CISPR limits: CISPR_B_QP (Quasi-Peak) and CISPR_B_AV (Average). A blue line shows the measured emission levels. Several peaks are marked with vertical lines and numbered 1 through 12.</p>								
			Date: 2018-09-26 Time: 14:21:33					
Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1565	34.34	-21.31	55.65	24.16	10.17	Average	NEUTRAL
2	0.1565	42.55	-23.10	65.65	32.37	10.17	QP	NEUTRAL
3	0.3392	31.28	-17.94	49.22	21.09	10.17	Average	NEUTRAL
4	0.3392	38.41	-20.81	59.22	28.22	10.17	QP	NEUTRAL
5	0.9087	26.55	-19.45	46.00	16.35	10.18	Average	NEUTRAL
6	0.9087	33.23	-22.77	56.00	23.03	10.18	QP	NEUTRAL
7	1.0211	25.91	-20.09	46.00	15.71	10.18	Average	NEUTRAL
8	1.0211	32.67	-23.33	56.00	22.47	10.18	QP	NEUTRAL
9	10.2332	23.67	-26.33	50.00	13.28	10.32	Average	NEUTRAL
10	10.2332	30.55	-29.45	60.00	20.16	10.32	QP	NEUTRAL
11	19.9500	22.12	-27.88	50.00	11.60	10.40	Average	NEUTRAL
12	19.9500	28.76	-31.24	60.00	18.24	10.40	QP	NEUTRAL

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



AC Power-line Conducted Emissions Result

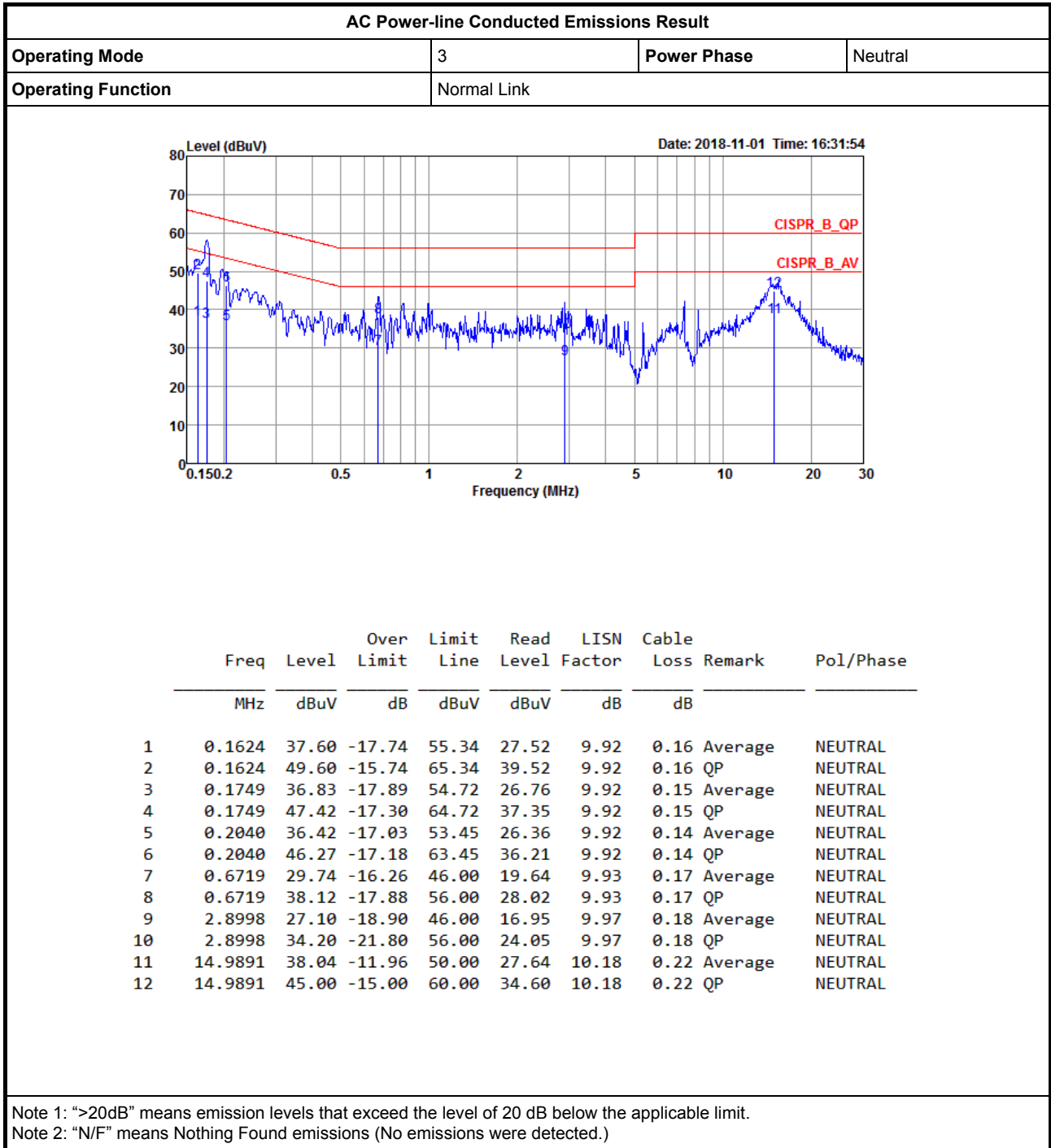
Appendix A





AC Power-line Conducted Emissions Result

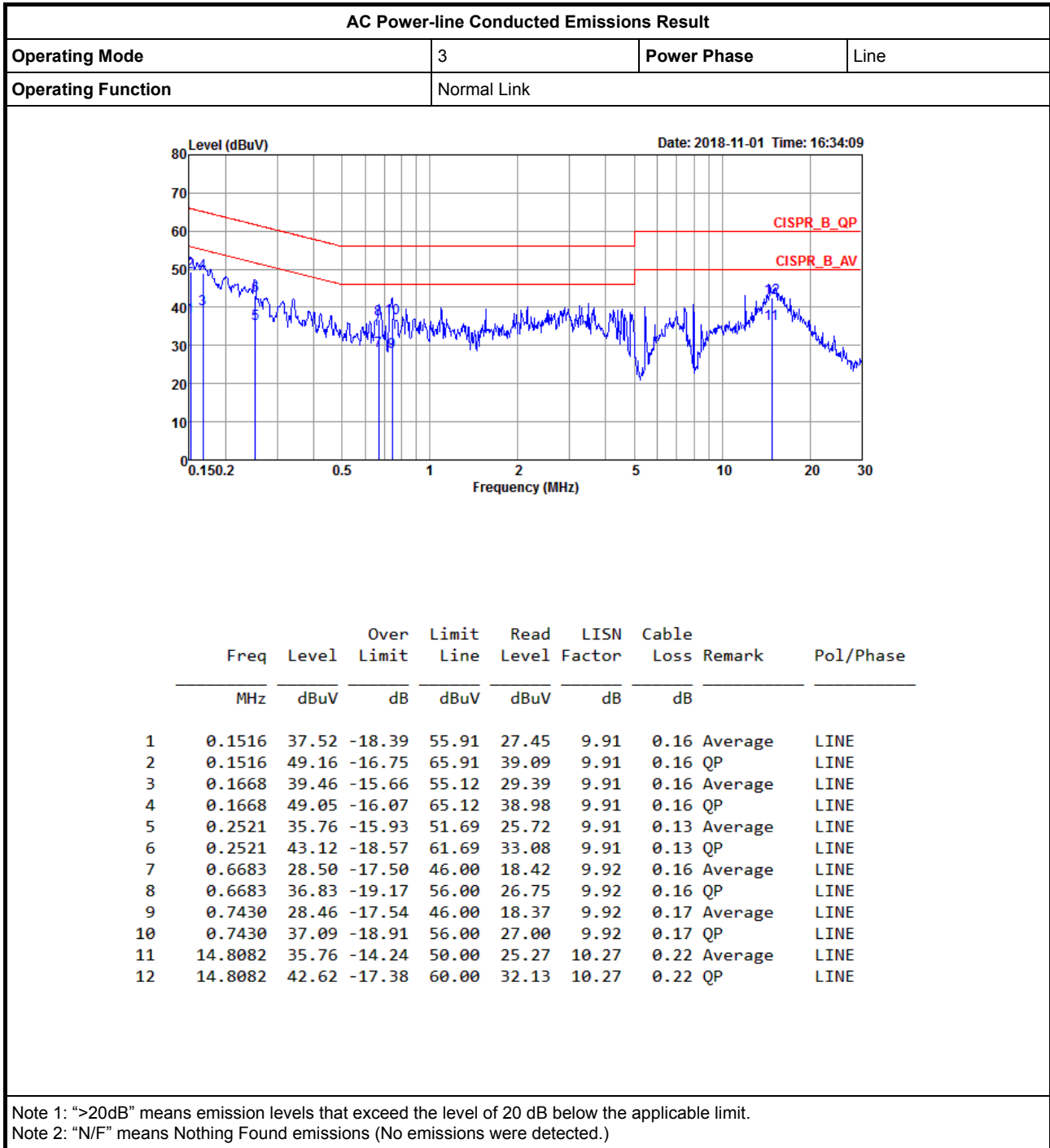
Appendix A





AC Power-line Conducted Emissions Result

Appendix A





Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a-BF_Nss1,(6Mbps)_2TX	39M	17.416M	17M4D1D	34.8M	16.817M
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	43.125M	18.416M	18M4D1D	35.675M	17.916M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	77.15M	36.732M	36M7D1D	44.9M	36.332M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	91M	76.062M	76M1D1D	89.7M	76.062M
5.725-5.85GHz	-	-	-	-	-
802.11a-BF_Nss1,(6Mbps)_2TX	16.3M	21.864M	21M9D1D	15.65M	17.391M
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	17.55M	22.239M	22M2D1D	16.925M	18.216M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	36.3M	46.777M	46M8D1D	36.1M	36.782M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	76.1M	77.261M	77M3D1D	76M	76.562M

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;



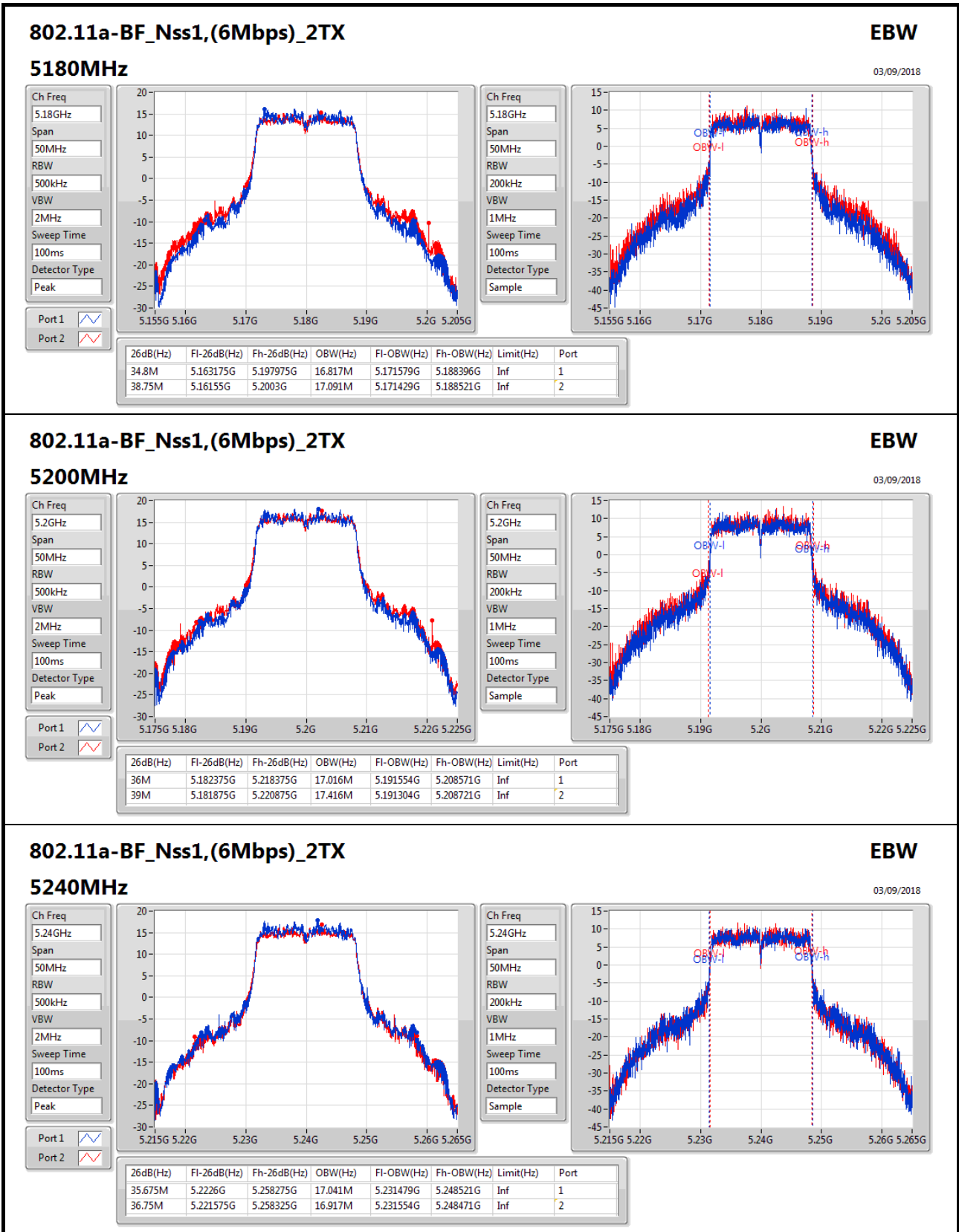
EBW Result

Appendix B

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11a-BF_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	34.8M	16.817M	38.75M	17.091M
5200MHz	Pass	Inf	36M	17.016M	39M	17.416M
5240MHz	Pass	Inf	35.675M	17.041M	36.75M	16.917M
5745MHz	Pass	500k	15.675M	21.464M	16.3M	21.439M
5785MHz	Pass	500k	16.3M	21.864M	16.05M	19.99M
5825MHz	Pass	500k	15.65M	17.391M	16.3M	21.864M
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	35.675M	17.916M	43.125M	18.091M
5200MHz	Pass	Inf	39.65M	18.141M	43.125M	18.416M
5240MHz	Pass	Inf	40.45M	18.016M	39.6M	18.016M
5745MHz	Pass	500k	17.325M	22.239M	17.55M	21.989M
5785MHz	Pass	500k	17.5M	21.989M	17.55M	20.365M
5825MHz	Pass	500k	16.925M	18.216M	17.55M	22.214M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	44.9M	36.332M	52.3M	36.382M
5230MHz	Pass	Inf	75.2M	36.682M	77.15M	36.732M
5755MHz	Pass	500k	36.3M	44.528M	36.3M	43.278M
5795MHz	Pass	500k	36.1M	36.782M	36.3M	46.777M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	89.7M	76.062M	91M	76.062M
5775MHz	Pass	500k	76.1M	76.562M	76M	77.261M

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-BF_Nss1,(6Mbps)_2TX
EBW

03/09/2018

5240MHz

Ch Freq: 5.24GHz

Span: 50MHz

RBW: 500kHz

VBW: 2MHz

Sweep Time: 100ms

Detector Type: Peak

Port 1:

Port 2:

Ch Freq: 5.24GHz

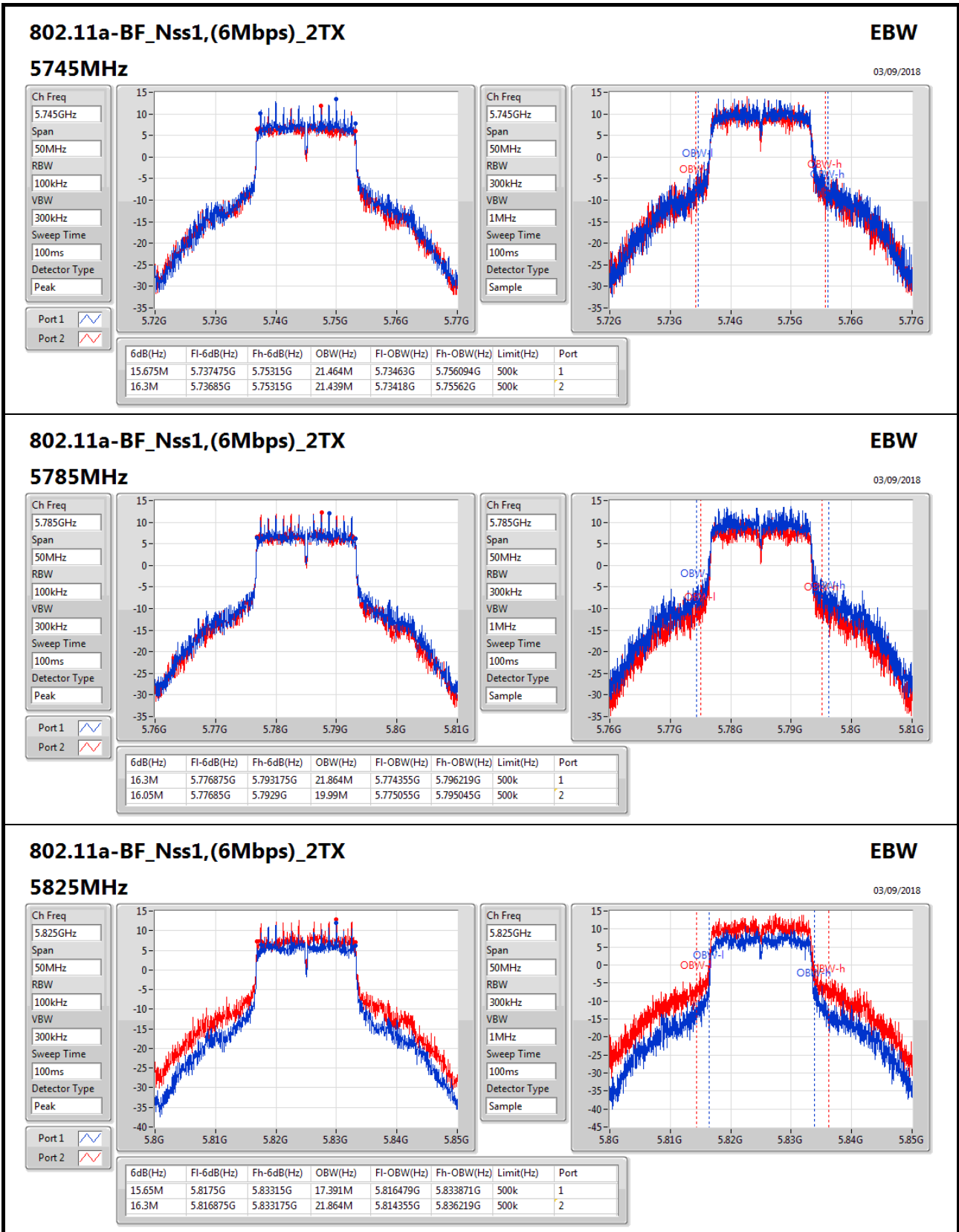
Span: 50MHz

RBW: 200kHz

VBW: 1MHz

Sweep Time: 100ms

Detector Type: Sample


802.11a-BF_Nss1,(6Mbps)_2TX
EBW

03/09/2018

5825MHz

Ch Freq: 5.825GHz

Span: 50MHz

RBW: 100kHz

VBW: 300kHz

Sweep Time: 100ms

Detector Type: Peak

Port 1:

Port 2:

Ch Freq: 5.825GHz

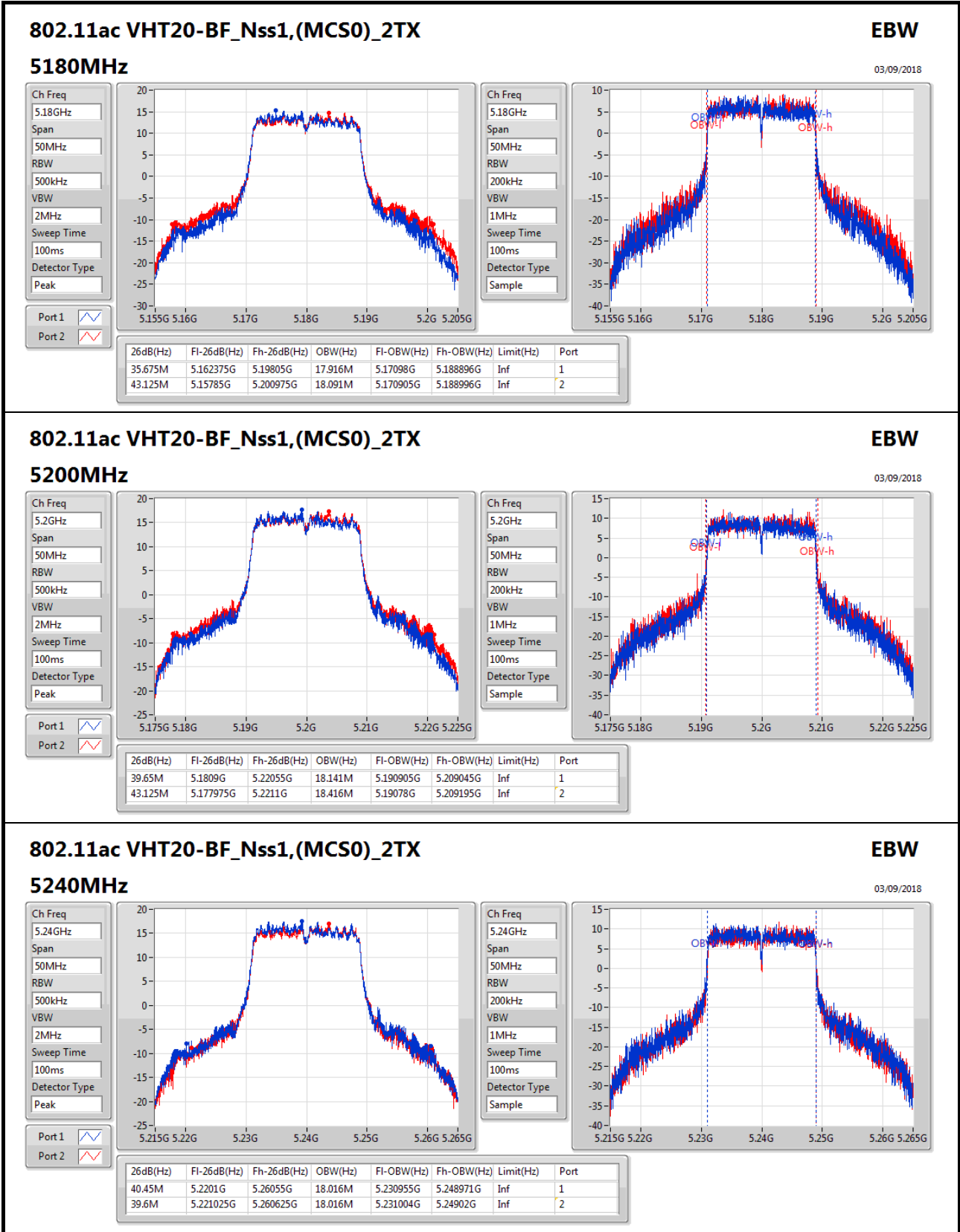
Span: 50MHz

RBW: 300kHz

VBW: 1MHz

Sweep Time: 100ms

Detector Type: Sample


802.11ac VHT20-BF_Nss1,(MCS0)_2TX
EBW
5240MHz
03/09/2018

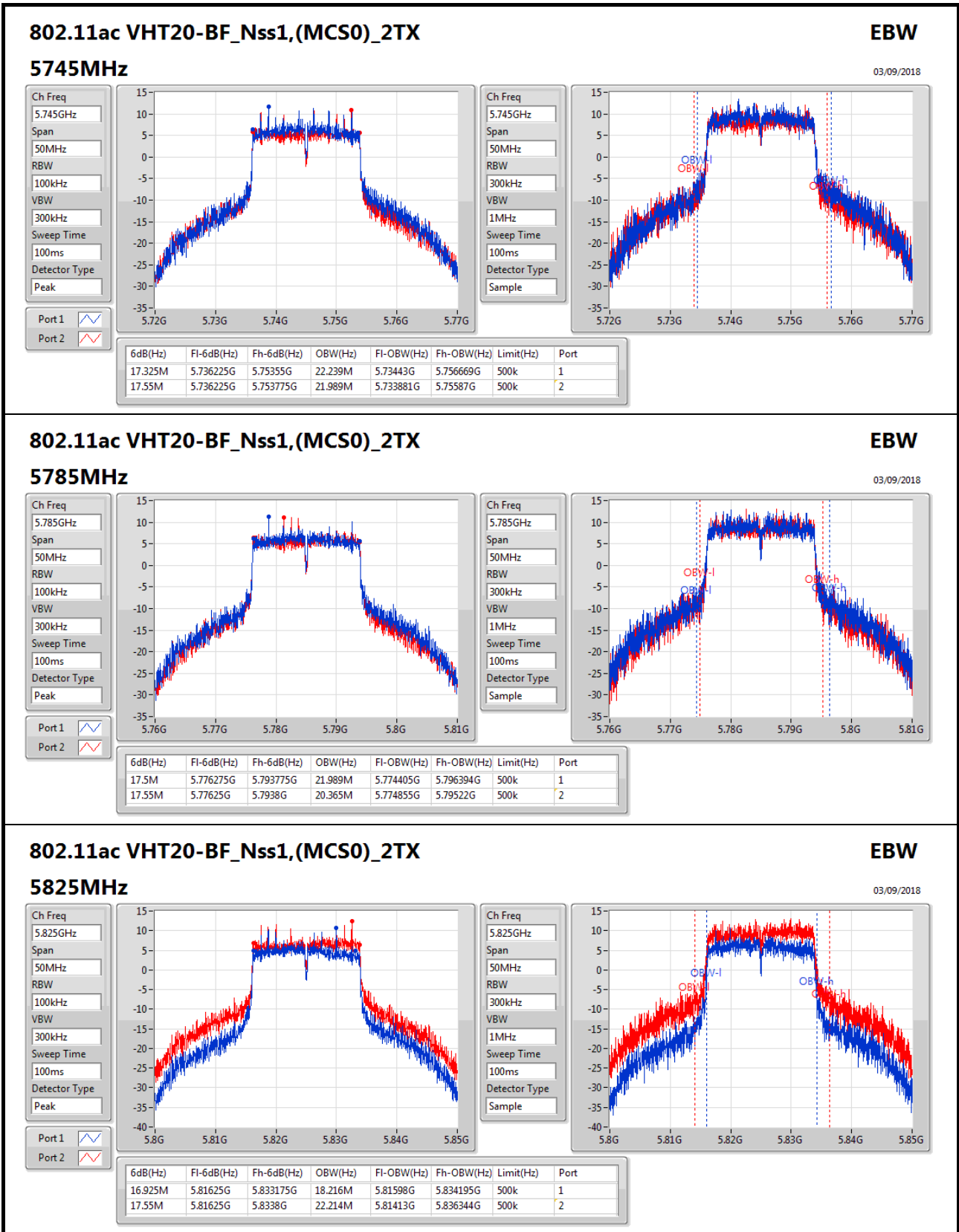
Ch Freq: 5.24GHz
Span: 50MHz
RBW: 500kHz
VBW: 2MHz
Sweep Time: 100ms
Detector Type: Peak

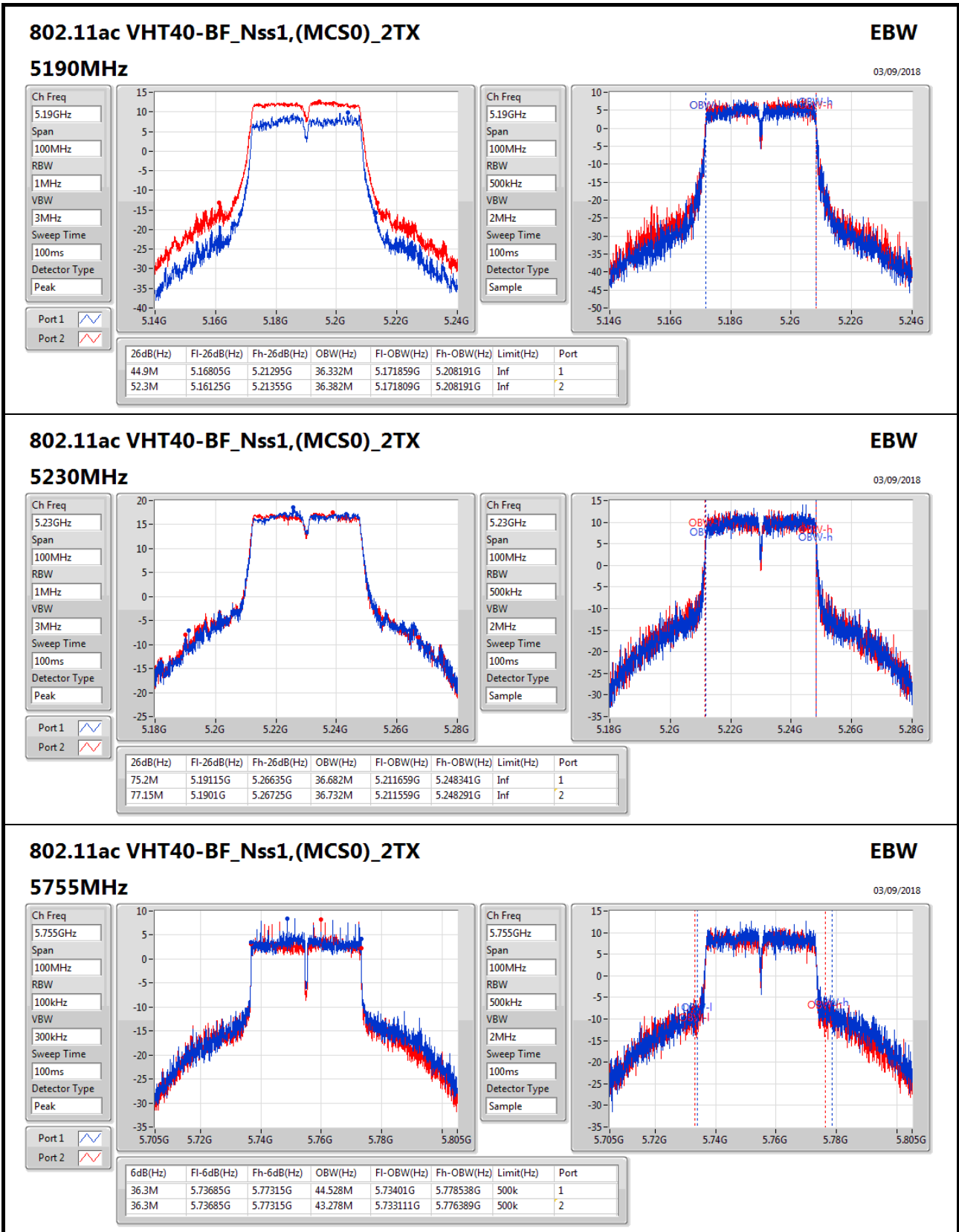
Port 1:
Port 2:

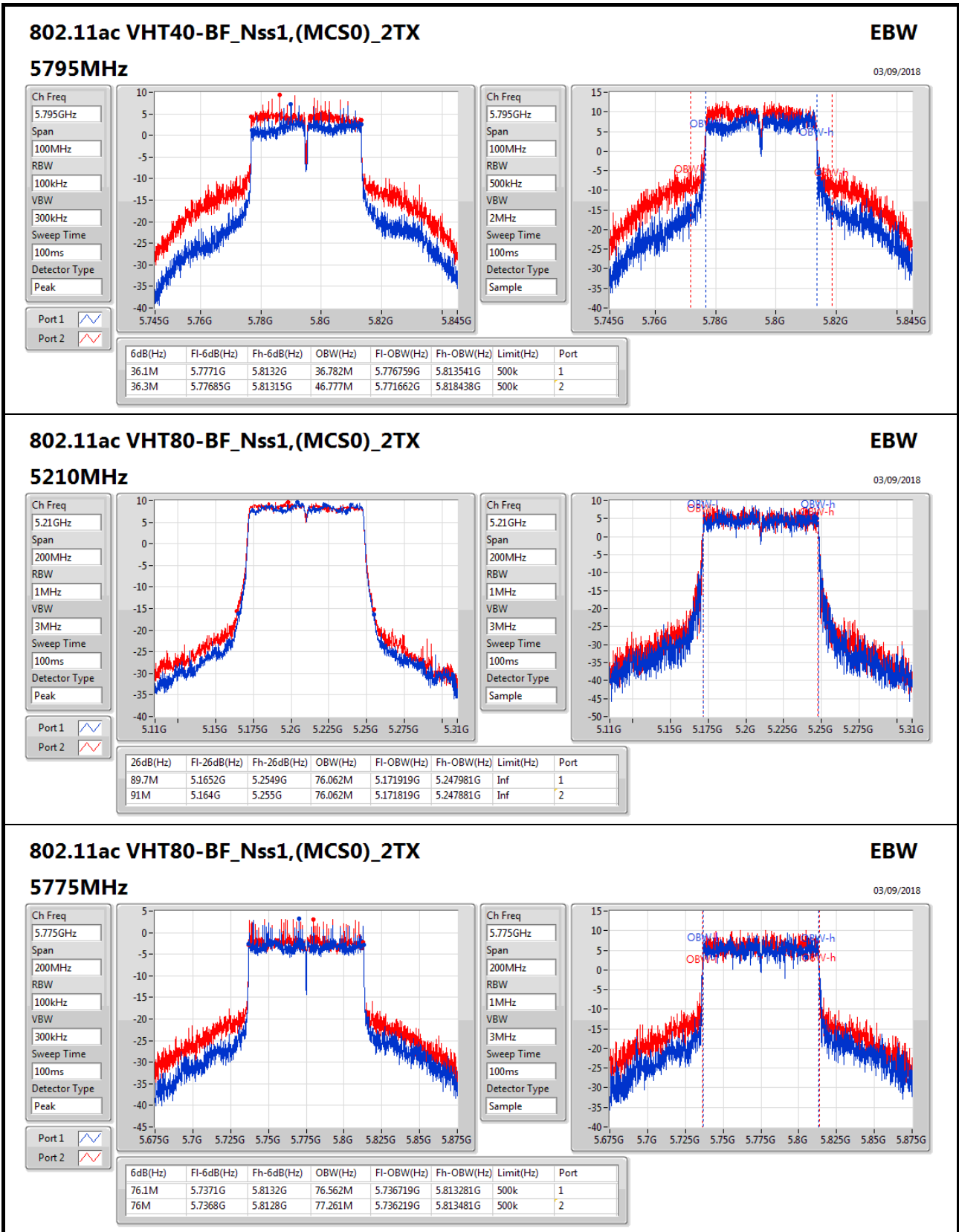
Ch Freq: 5.24GHz
Span: 50MHz
RBW: 200kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Sample

26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.45M	5.2201G	5.26055G	18.016M	5.230955G	5.248971G	Inf	1
39.6M	5.221025G	5.260625G	18.016M	5.231004G	5.24902G	Inf	2

26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.45M	5.2201G	5.26055G	18.016M	5.230955G	5.248971G	Inf	1
39.6M	5.221025G	5.260625G	18.016M	5.231004G	5.24902G	Inf	2









Power Result

Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11a-BF_Nss1,(6Mbps)_2TX	27.51	0.56364
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	27.51	0.56364
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	27.20	0.52481
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	21.77	0.15031
5.725-5.85GHz	-	-
802.11a-BF_Nss1,(6Mbps)_2TX	27.09	0.51168
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	27.04	0.50582
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	26.81	0.47973
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	24.36	0.27289



Power Result

Appendix C

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a-BF_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	7.08	21.80	22.21	25.02	28.92
5200MHz	Pass	7.08	23.34	24.99	27.25	28.92
5240MHz	Pass	7.08	24.36	24.63	27.51	28.92
5745MHz	Pass	7.10	23.90	24.26	27.09	28.90
5785MHz	Pass	7.10	23.80	24.29	27.06	28.90
5825MHz	Pass	7.10	23.78	24.07	26.94	28.90
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	7.08	21.43	22.02	24.75	28.92
5200MHz	Pass	7.08	24.50	24.49	27.51	28.92
5240MHz	Pass	7.08	24.11	24.43	27.28	28.92
5745MHz	Pass	7.10	23.75	24.17	26.98	28.90
5785MHz	Pass	7.10	23.77	24.28	27.04	28.90
5825MHz	Pass	7.10	23.84	23.98	26.92	28.90
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	7.08	19.64	19.86	22.76	28.92
5230MHz	Pass	7.08	24.04	24.34	27.20	28.92
5755MHz	Pass	7.10	23.67	22.99	26.35	28.90
5795MHz	Pass	7.10	23.81	23.79	26.81	28.90
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	7.08	18.42	19.07	21.77	28.92
5775MHz	Pass	7.10	21.03	21.65	24.36	28.90

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



Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11a-BF_Nss1,(6Mbps)_2TX	14.29
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	14.14
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	11.16
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	2.74
5.725-5.85GHz	-
802.11a-BF_Nss1,(6Mbps)_2TX	11.77
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	11.27
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	8.18
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	1.81

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

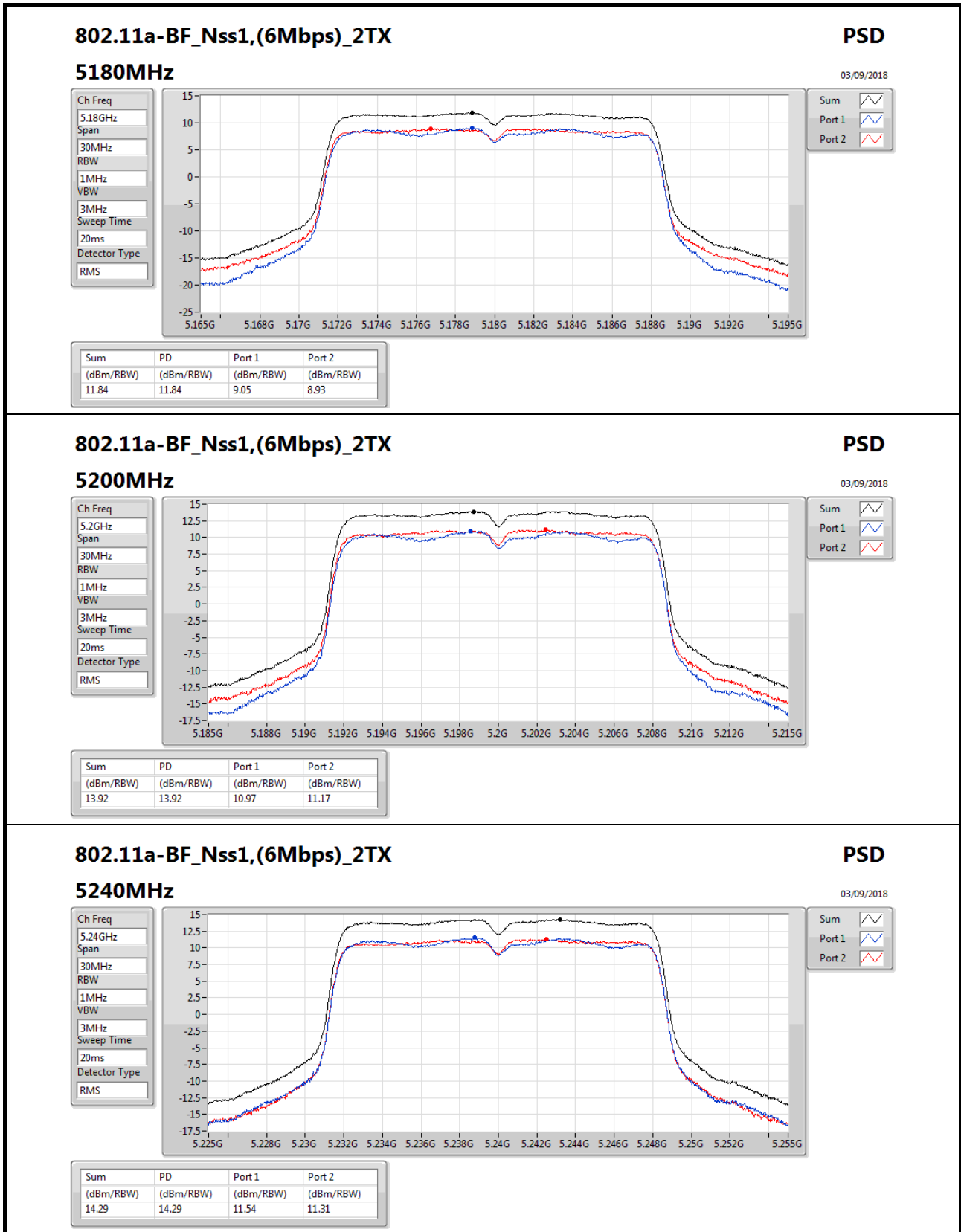


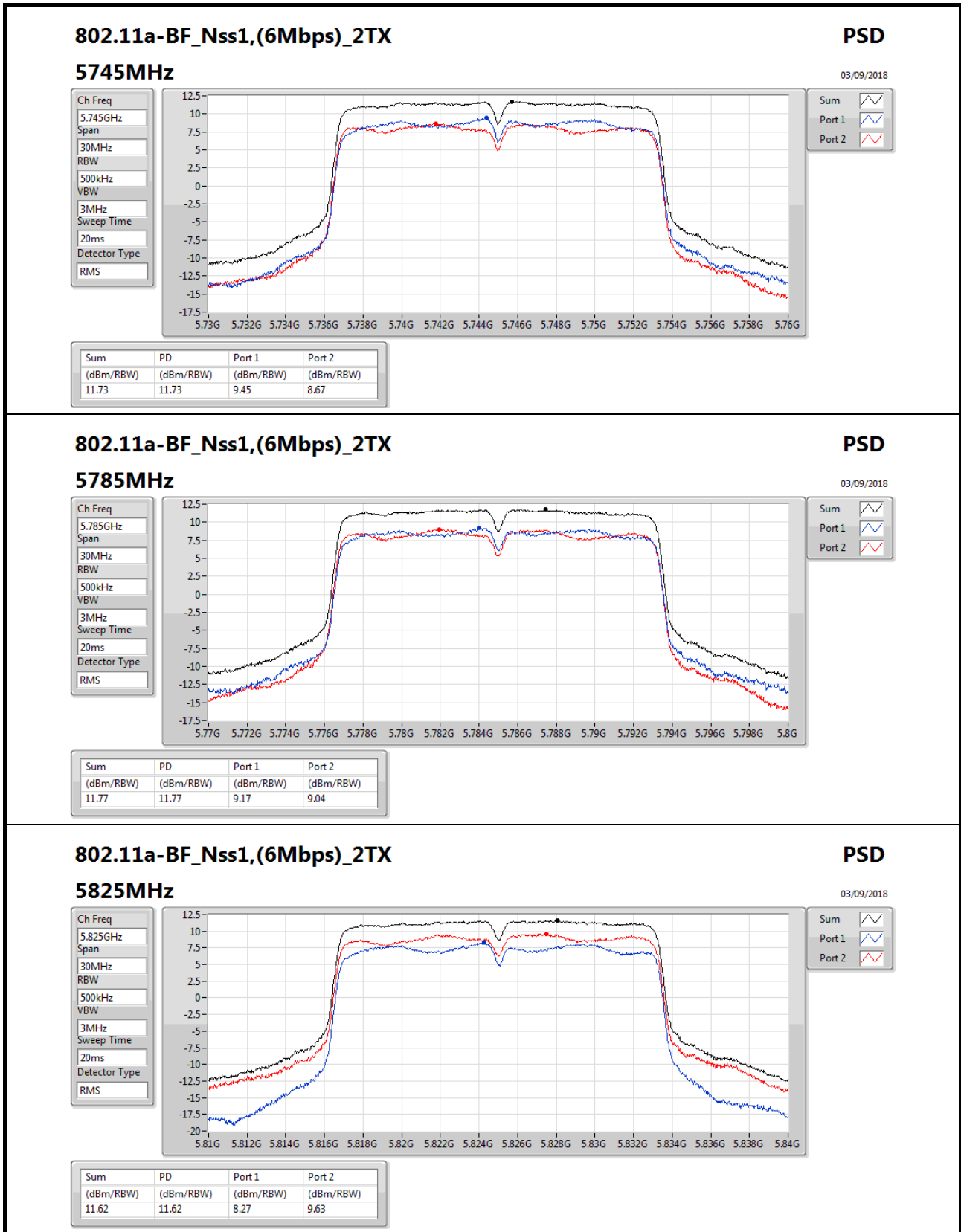
PSD Result

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a-BF_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	7.08	9.05	8.93	11.84	15.92
5200MHz	Pass	7.08	10.97	11.17	13.92	15.92
5240MHz	Pass	7.08	11.54	11.31	14.29	15.92
5745MHz	Pass	7.10	9.45	8.67	11.73	28.90
5785MHz	Pass	7.10	9.17	9.04	11.77	28.90
5825MHz	Pass	7.10	8.27	9.63	11.62	28.90
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	7.08	8.88	8.62	11.64	15.92
5200MHz	Pass	7.08	11.31	11.35	14.14	15.92
5240MHz	Pass	7.08	11.39	11.04	13.98	15.92
5745MHz	Pass	7.10	8.88	7.92	11.24	28.90
5785MHz	Pass	7.10	8.76	8.29	11.27	28.90
5825MHz	Pass	7.10	7.60	9.06	11.11	28.90
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	7.08	3.47	3.51	6.31	15.92
5230MHz	Pass	7.08	8.54	8.11	11.16	15.92
5755MHz	Pass	7.10	5.40	5.03	7.83	28.90
5795MHz	Pass	7.10	4.87	6.09	8.18	28.90
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	7.08	-0.29	-0.10	2.74	15.92
5775MHz	Pass	7.10	-1.20	-0.23	1.81	28.90

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





802.11a-BF_Nss1,(6Mbps)_2TX

5825MHz

PSD

03/09/2018

Ch Freq
5.825GHz

Span
30MHz

RBW
500kHz

VBW
3MHz

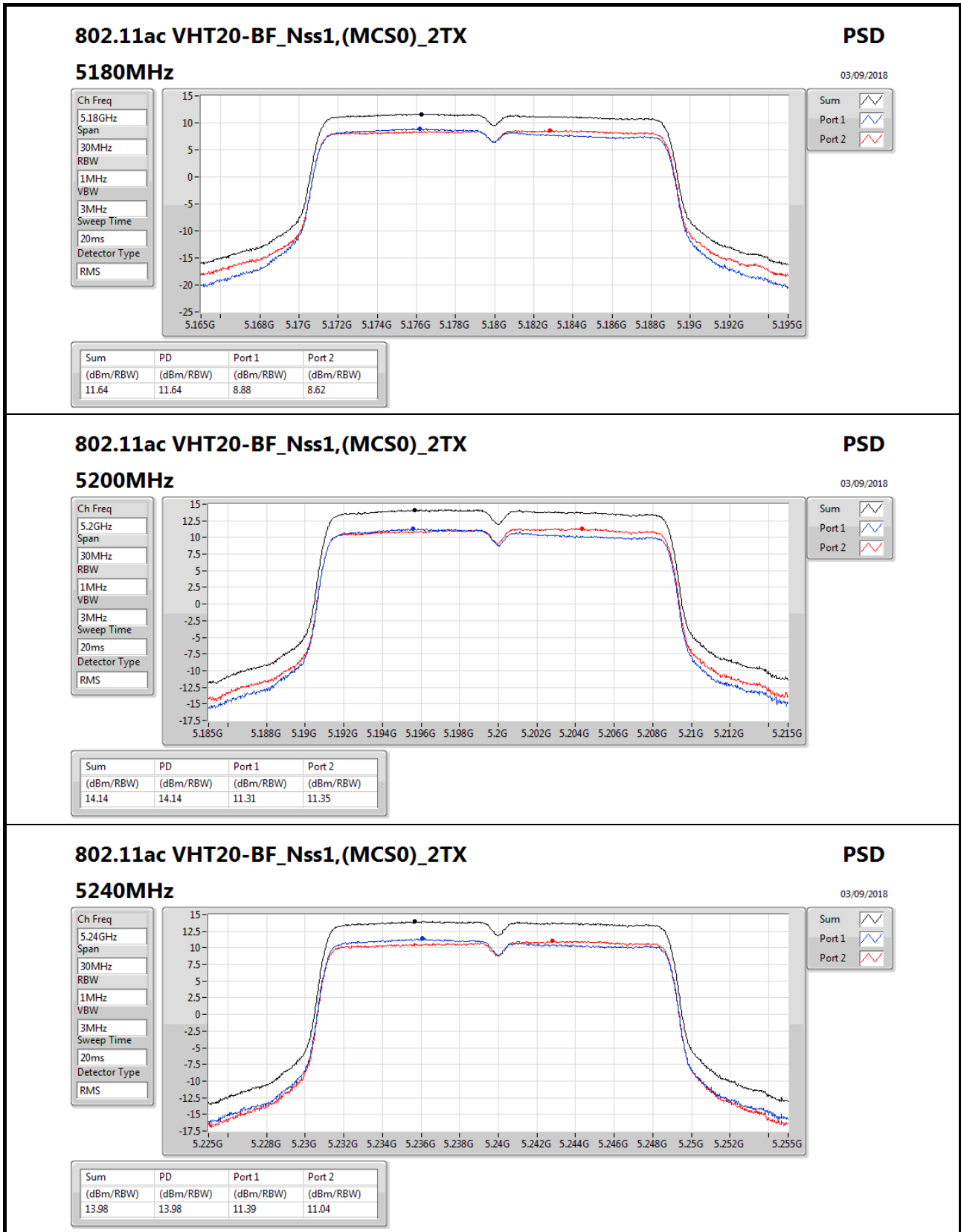
Sweep Time
20ms

Detector Type
RMS

Sum

Port 1

Port 2



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz

PSD
03/09/2018

Ch Freq
5.24GHz

Span
30MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

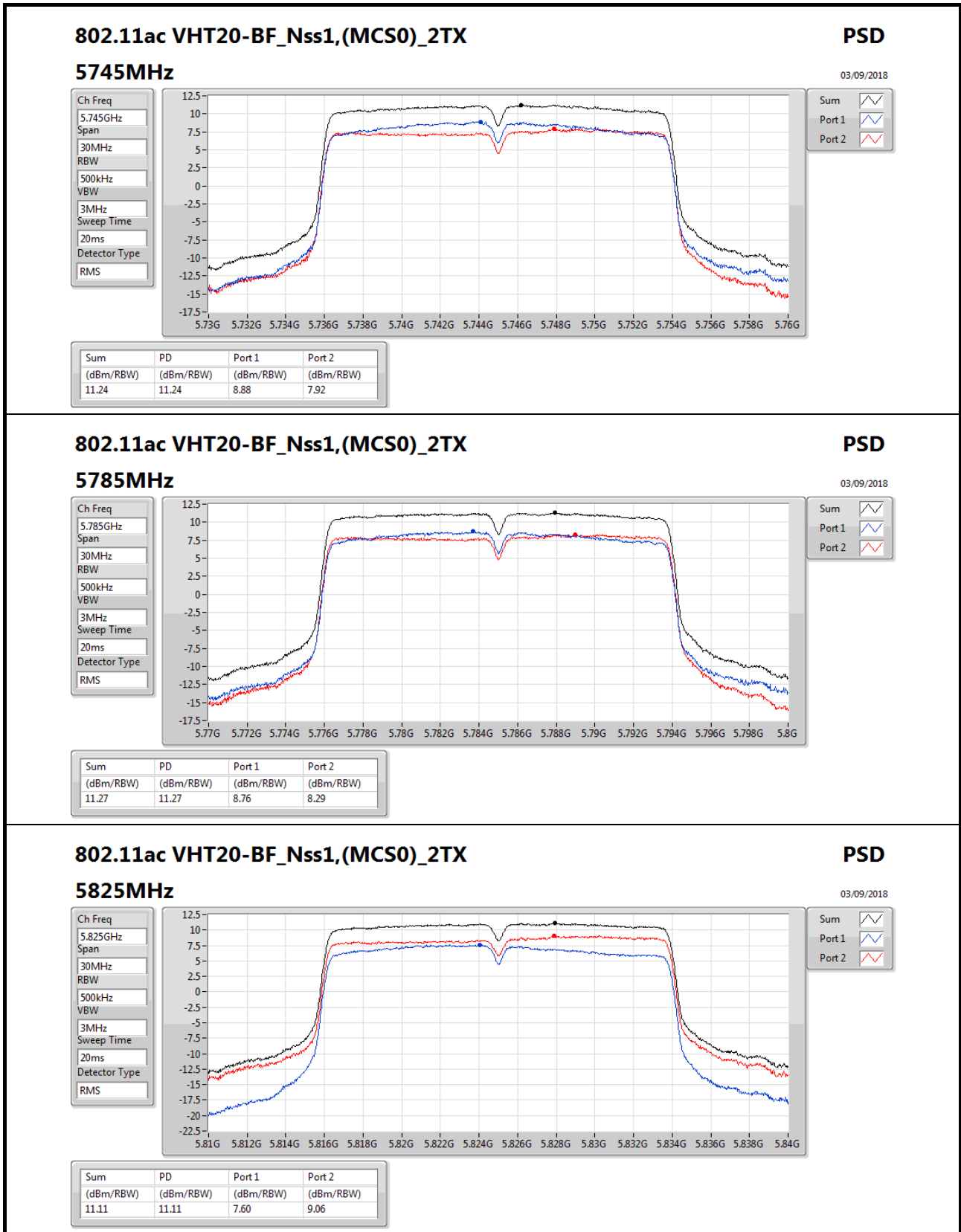


Sum

Port 1

Port 2

Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.98	13.98	11.39	11.04



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5825MHz

PSD

03/09/2018

Ch Freq
5.825GHz

Span
30MHz

RBW
500kHz

VBW
3MHz

Sweep Time
20ms

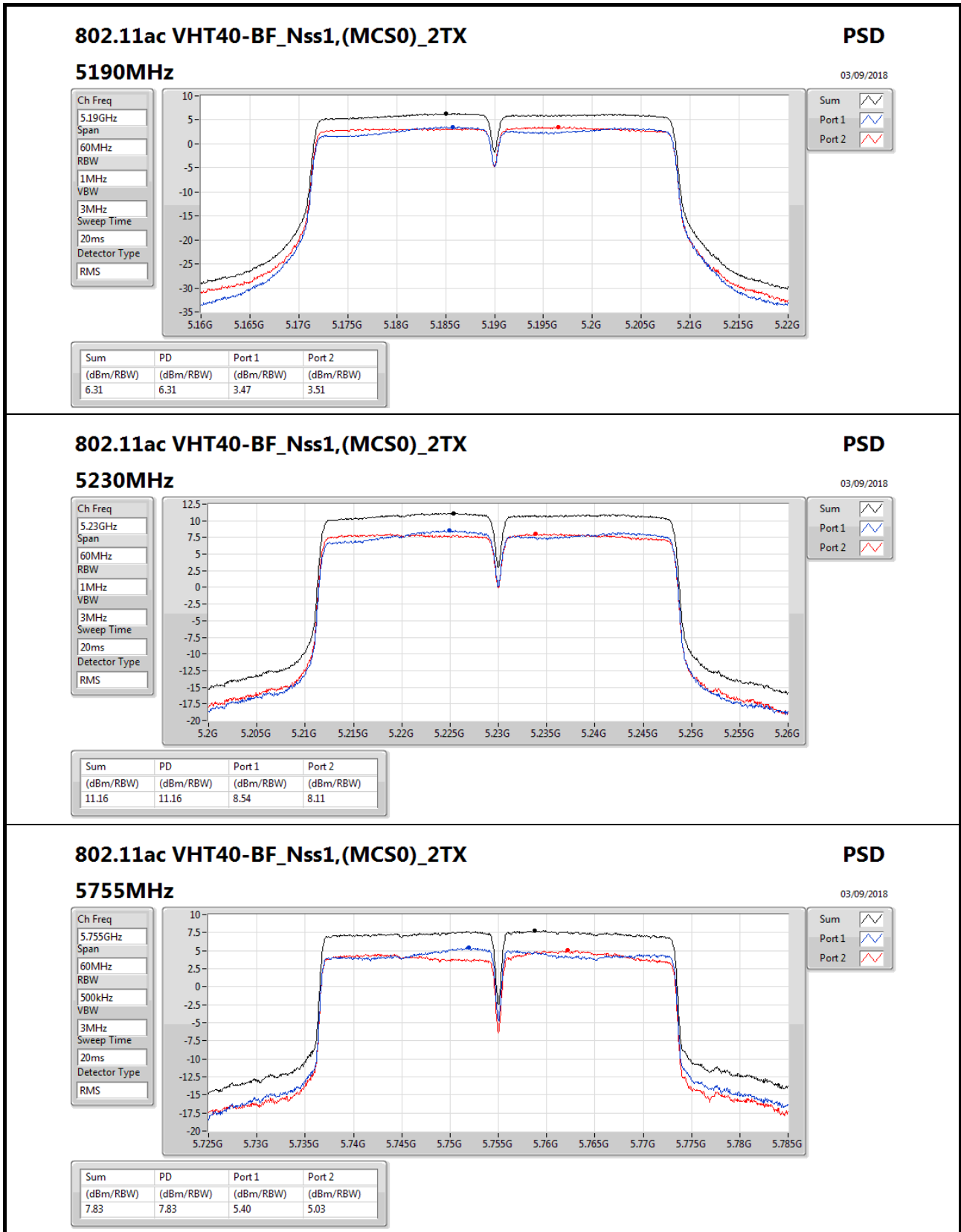
Detector Type
RMS

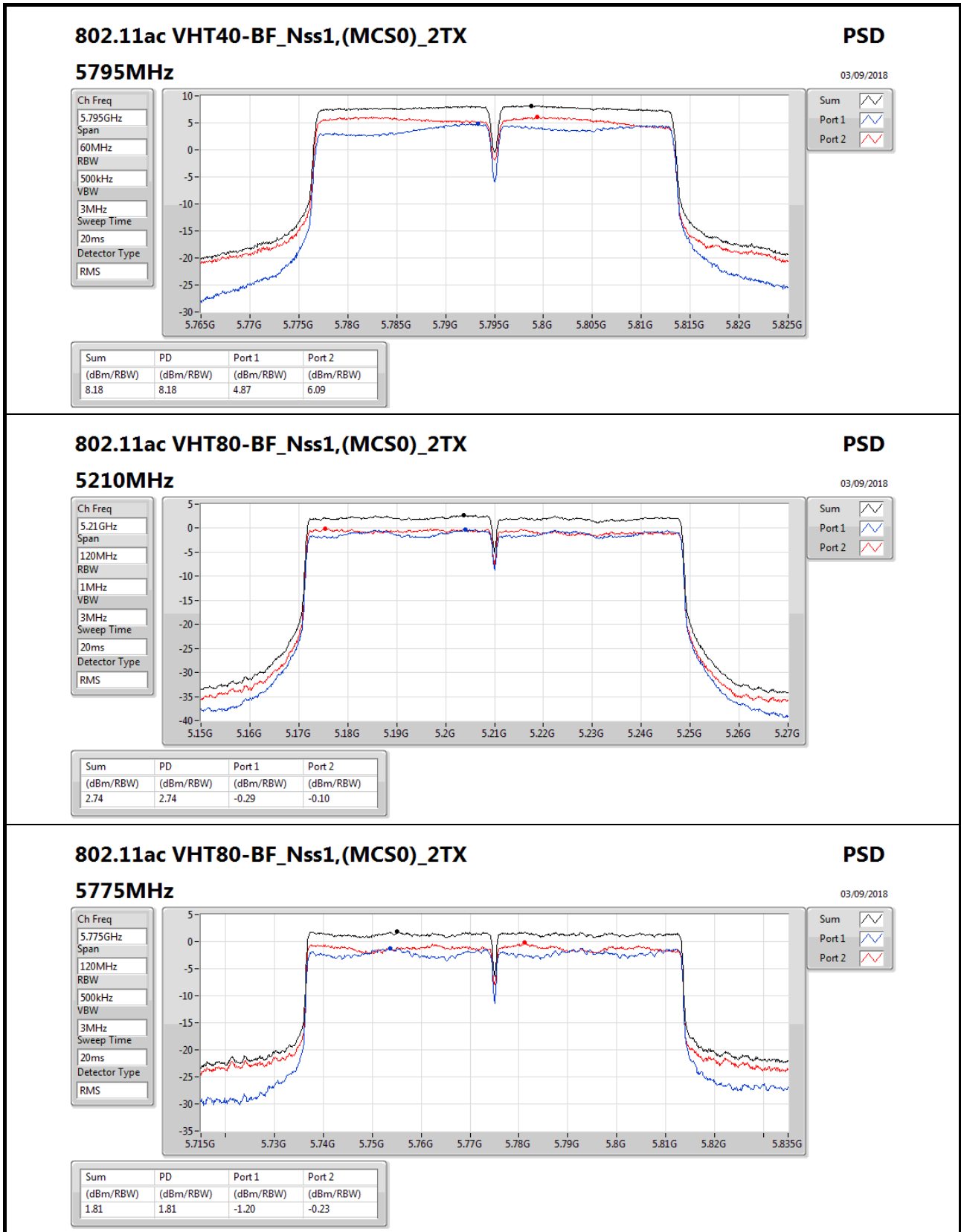


Sum

Port 1

Port 2





802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz

PSD
03/09/2018

Ch Freq
5.775GHz

Span
120MHz

RBW
500kHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

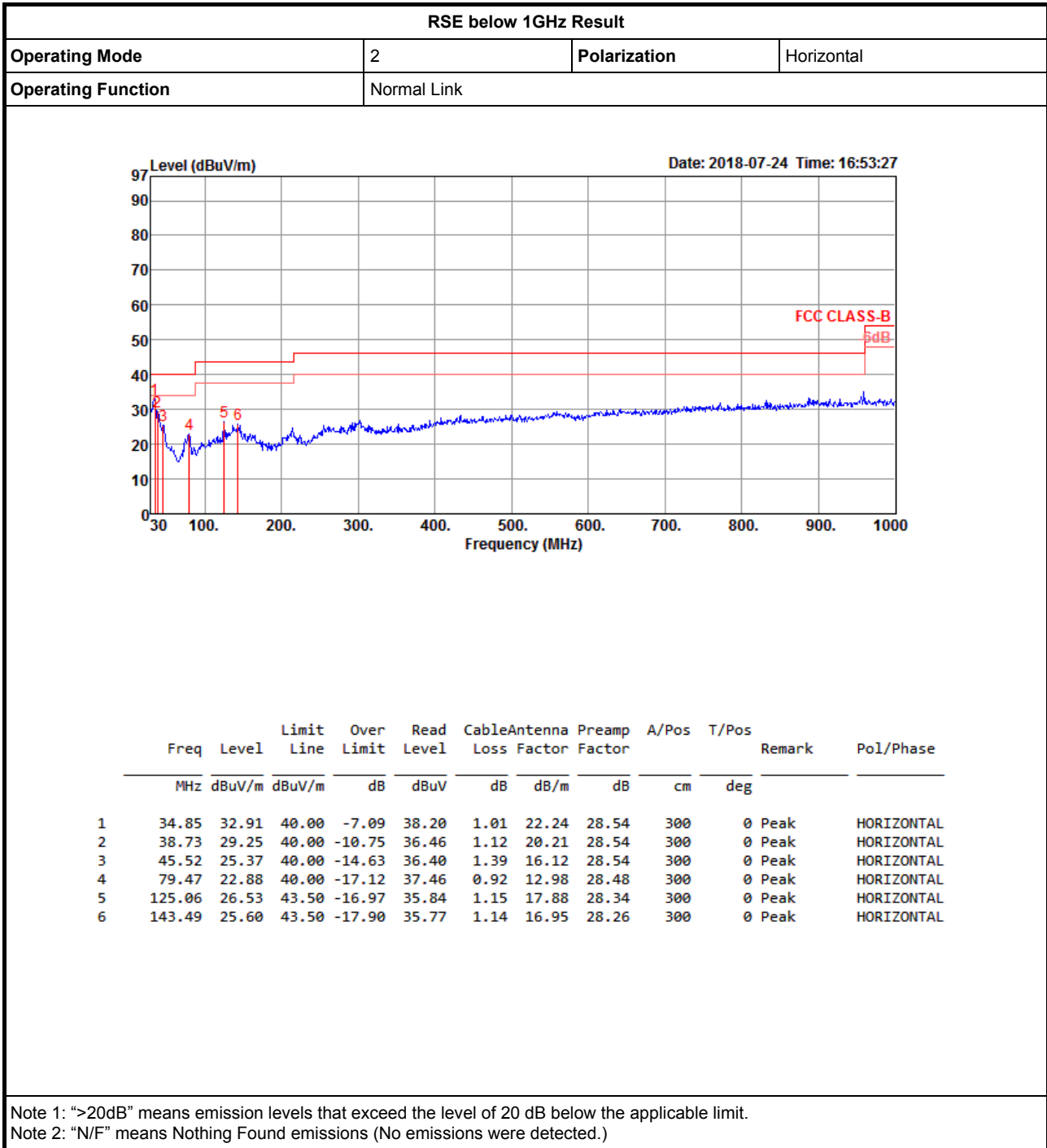


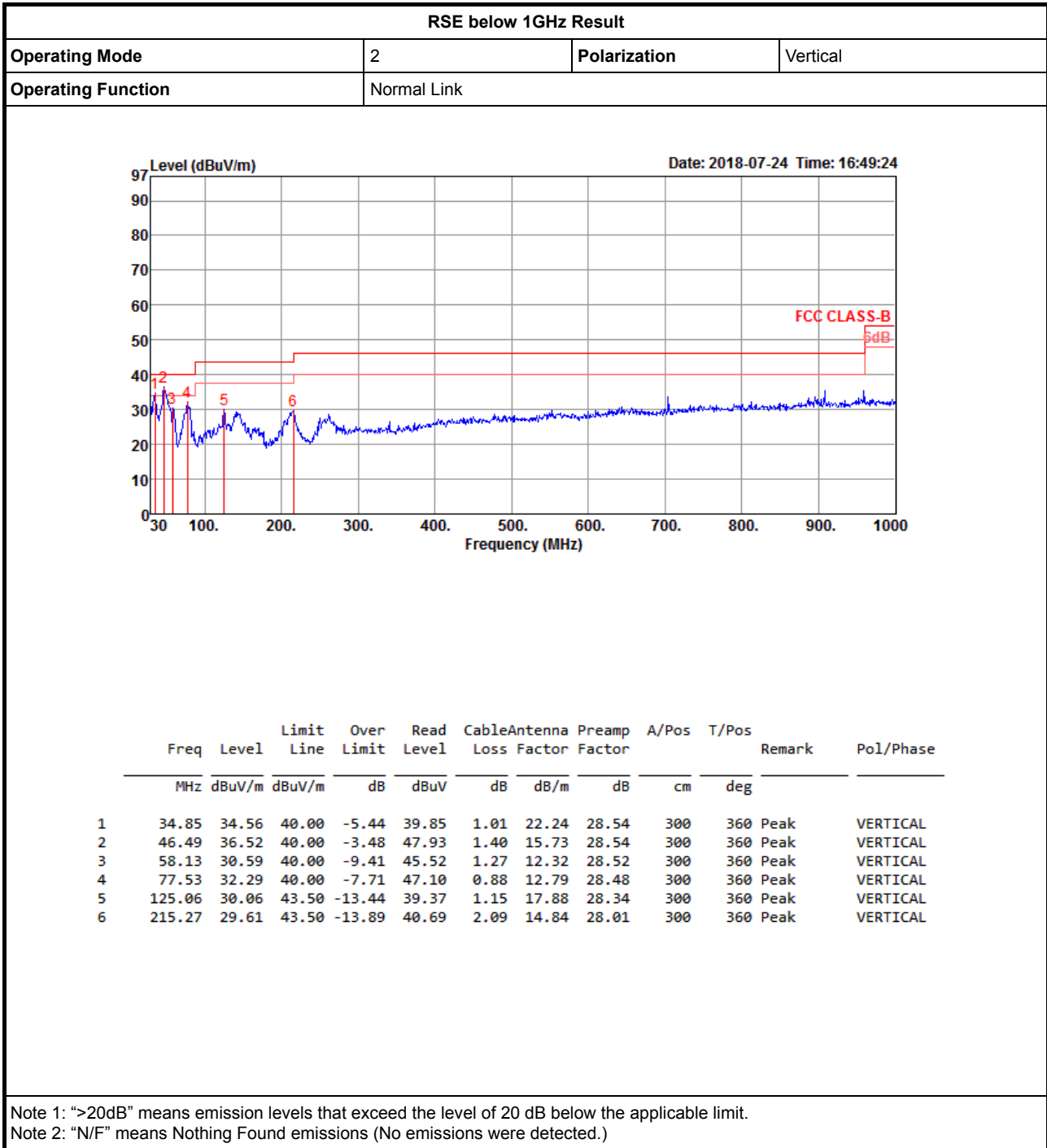
Sum

Port 1

Port 2

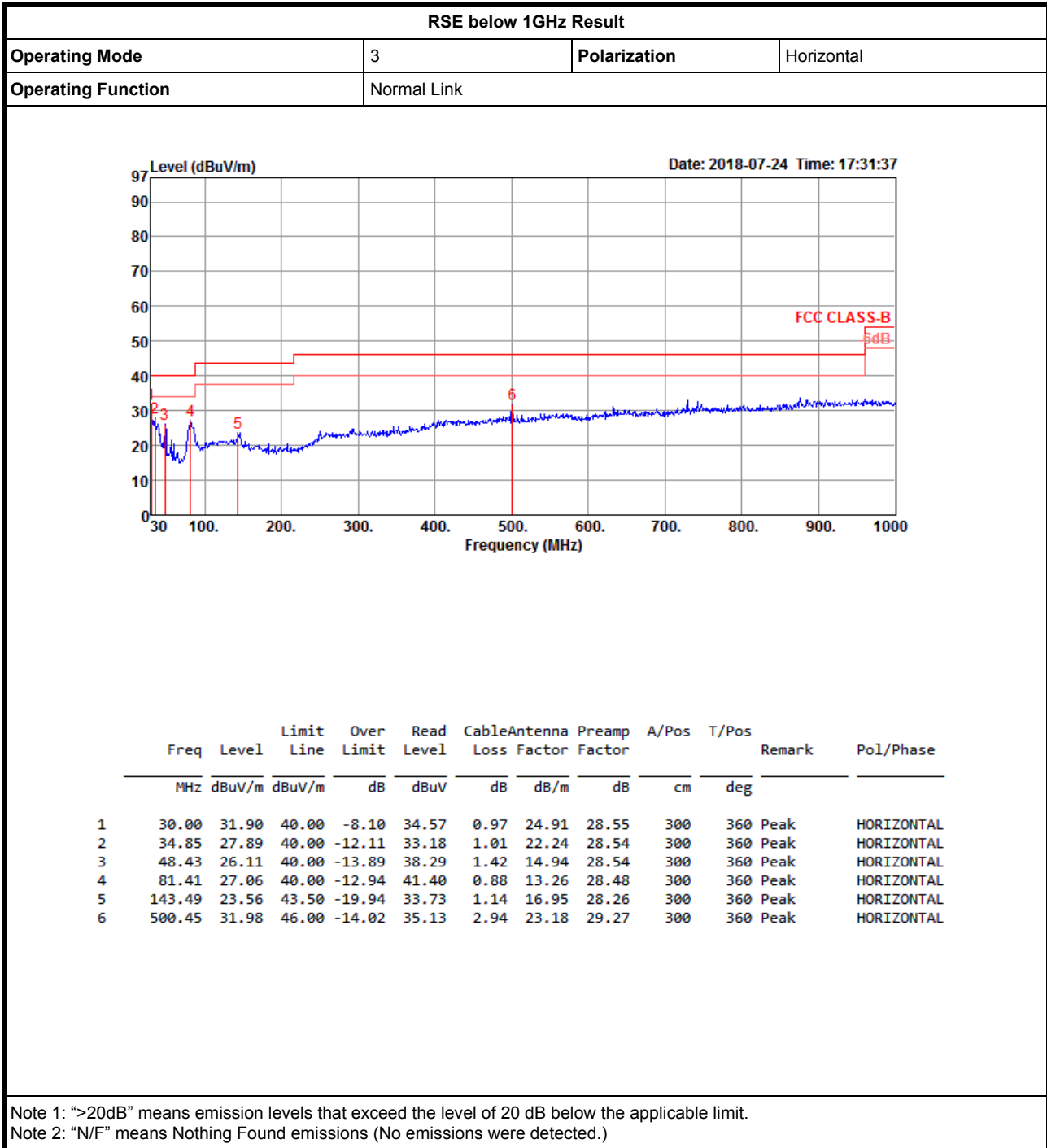
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.81	1.81	-1.20	-0.23





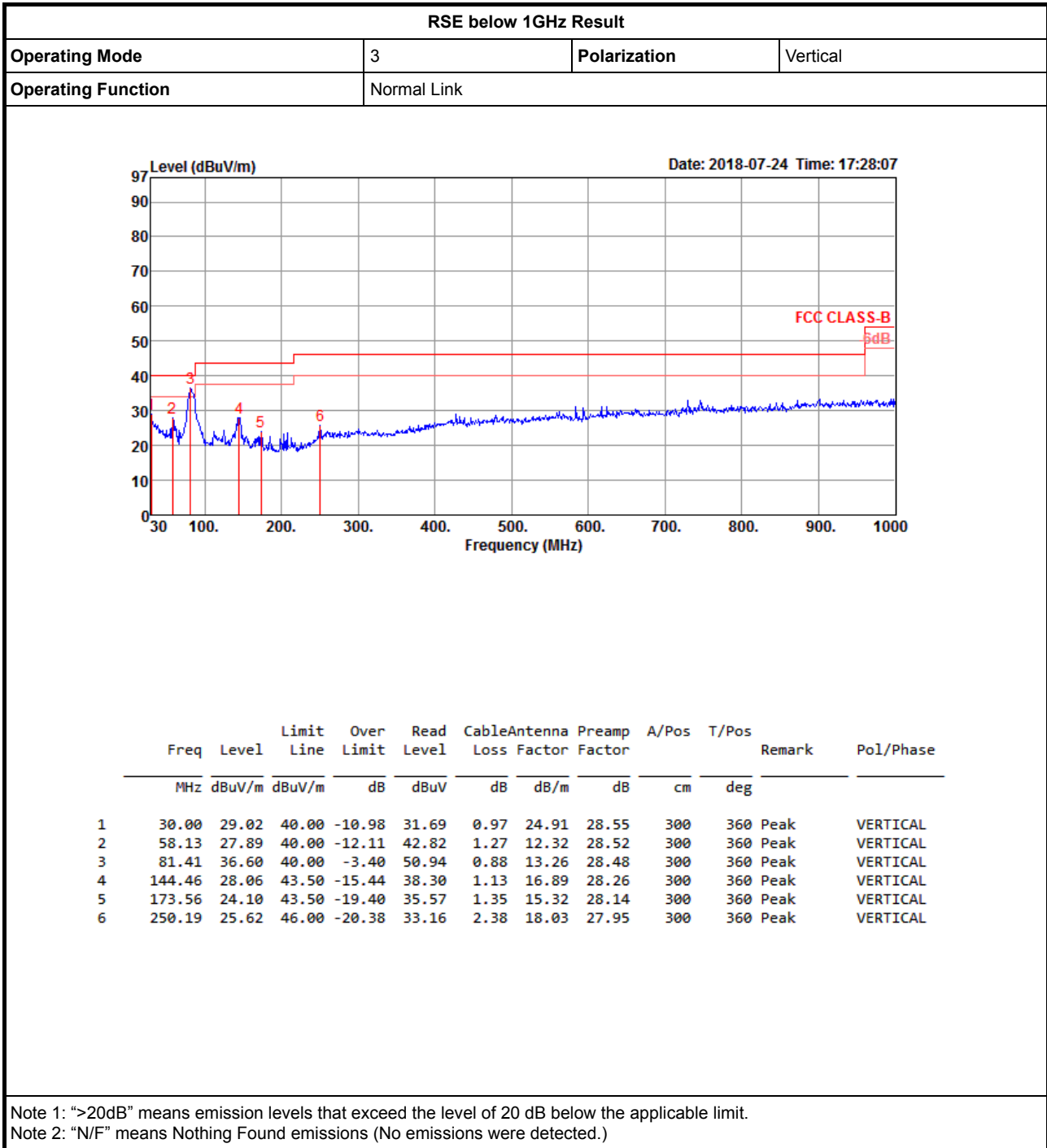


RSE below 1GHz Result



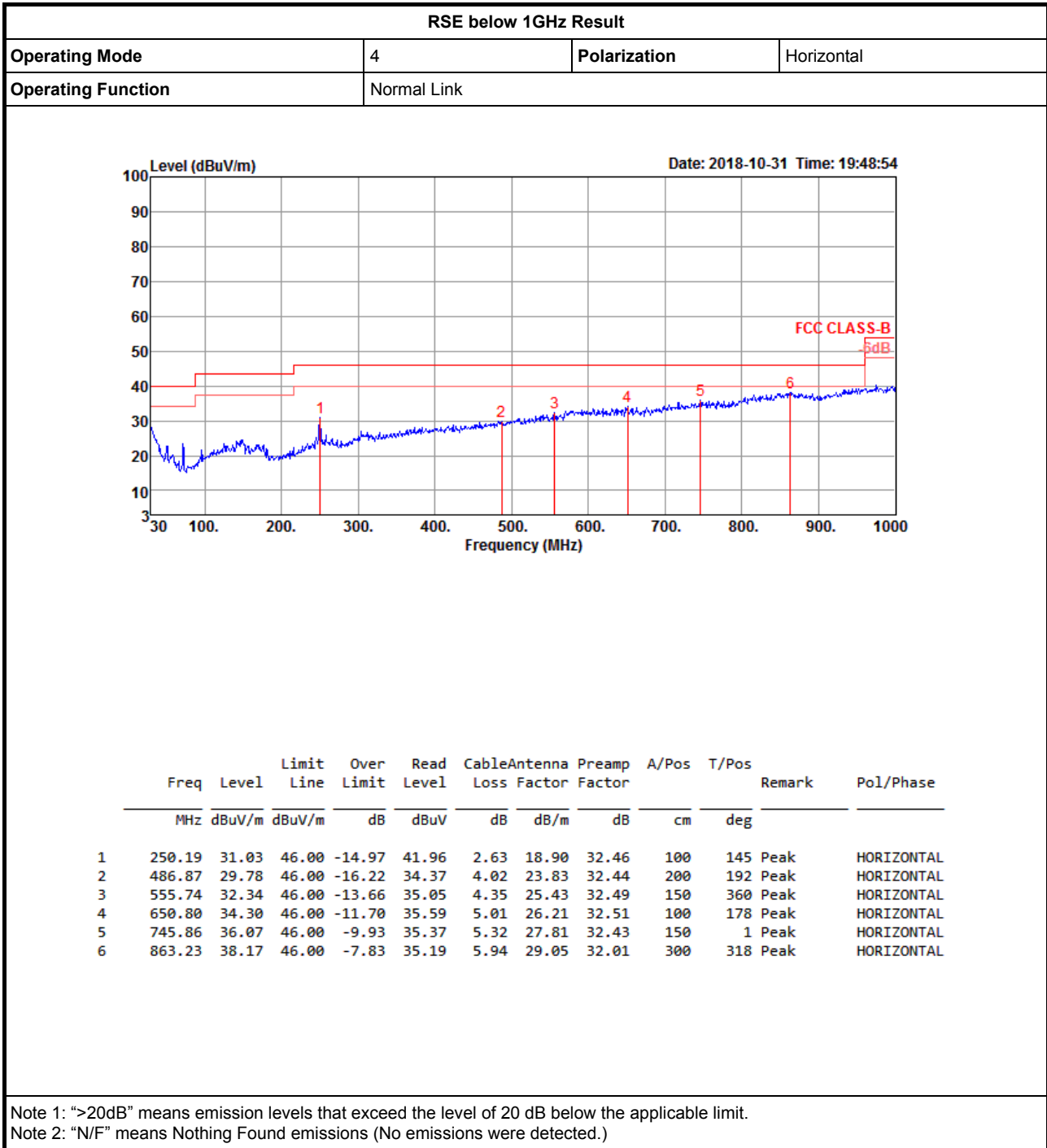


RSE below 1GHz Result



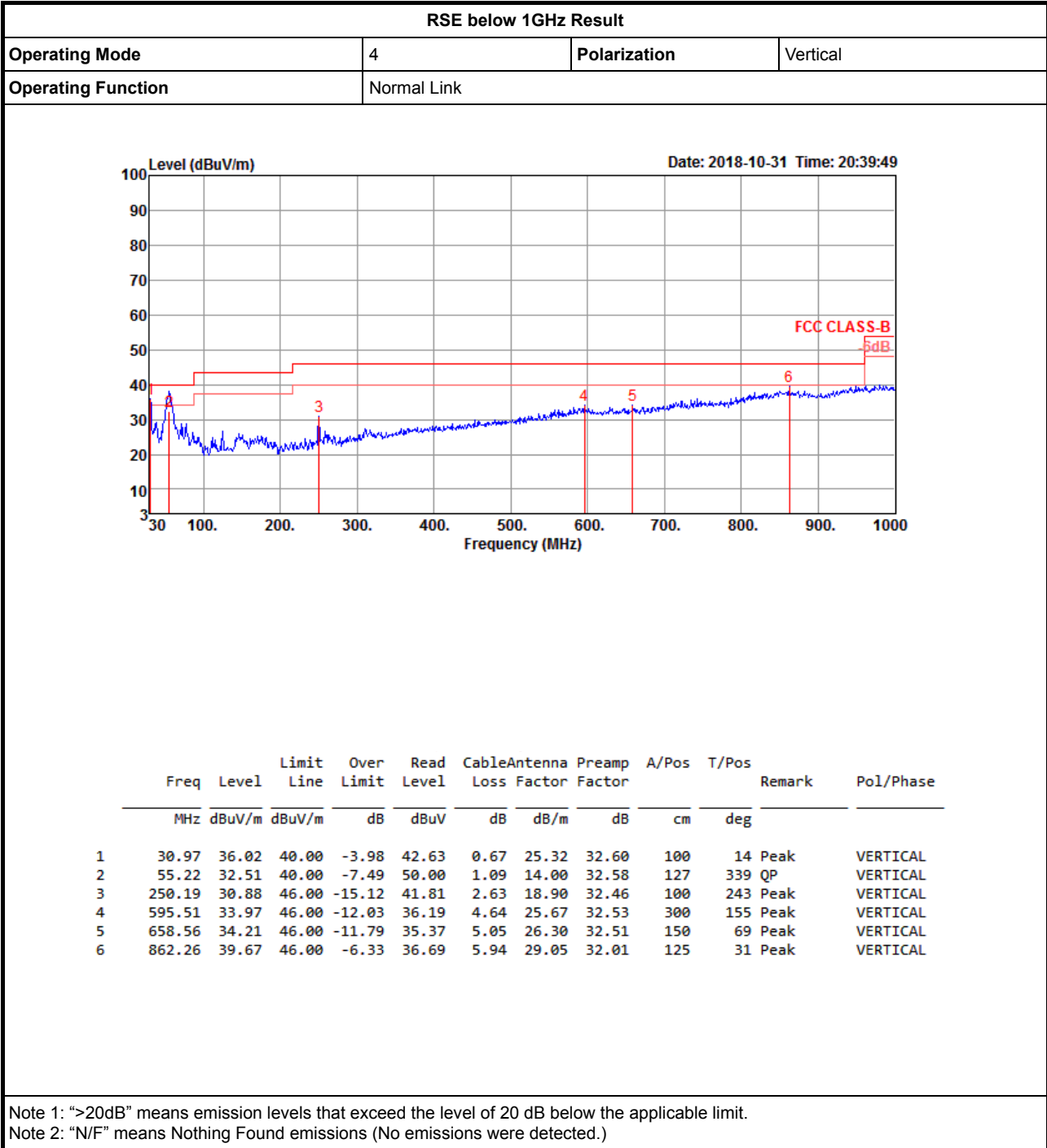


RSE below 1GHz Result





RSE below 1GHz Result





RSE TX above 1GHz Result

Appendix E.2

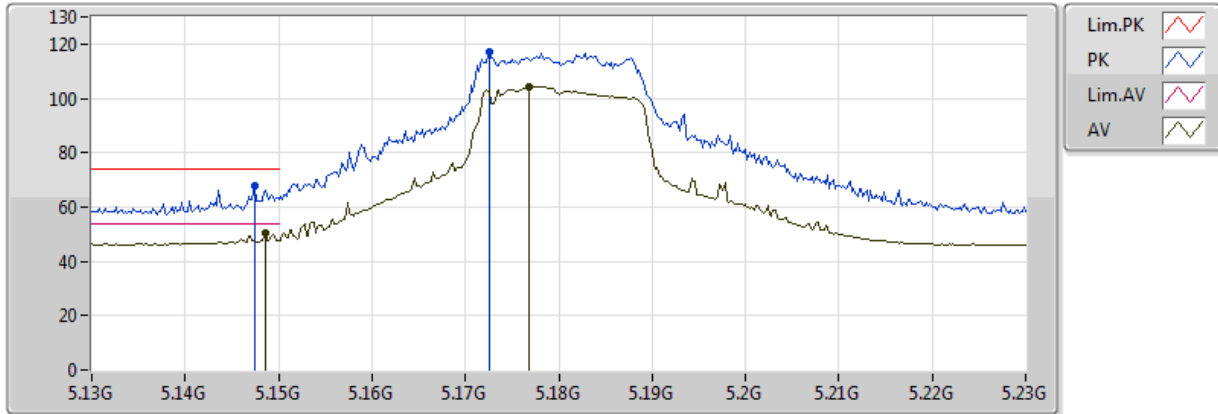
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	Pass	PK	5.648G	67.12	68.20	-1.08	6.46	3	Horizontal	282	1.50	-

802.11a-BF_Nss1,(6Mbps)_2TX

5180MHz_TX

03/08/2018



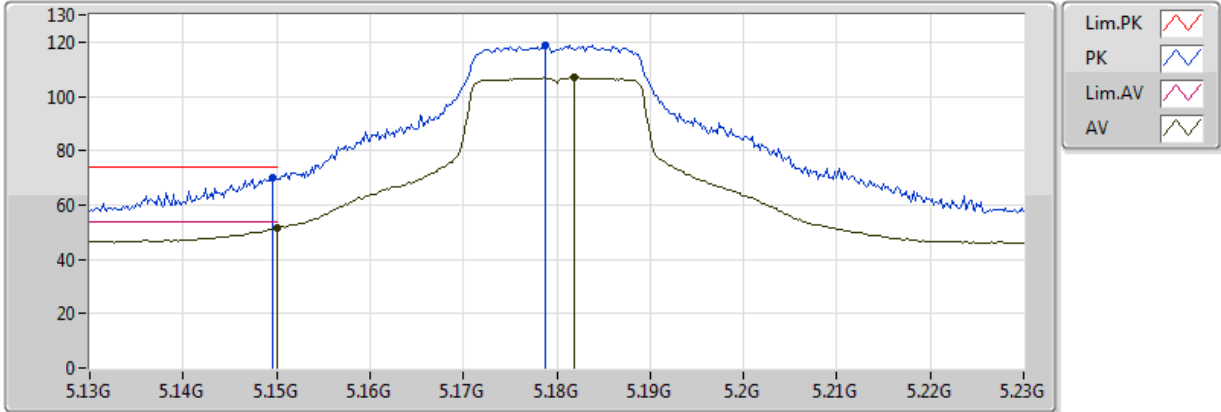
EUT Y_2TX
Setting 21.5
01-C-4-10
FSP(100304)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1474G	68.03	74.00	-5.97	4.90	3	Vertical	266	1.81	-
AV	5.1486G	50.51	54.00	-3.49	4.90	3	Vertical	266	1.81	-
PK	5.1726G	116.92	Inf	-Inf	4.93	3	Vertical	266	1.81	-
AV	5.1768G	104.36	Inf	-Inf	4.93	3	Vertical	266	1.81	-

802.11a-BF_Nss1,(6Mbps)_2TX

5180MHz_TX

03/08/2018



EUT_Y_2TX
Setting 21.5
01-C-4-10
FSP(100304)

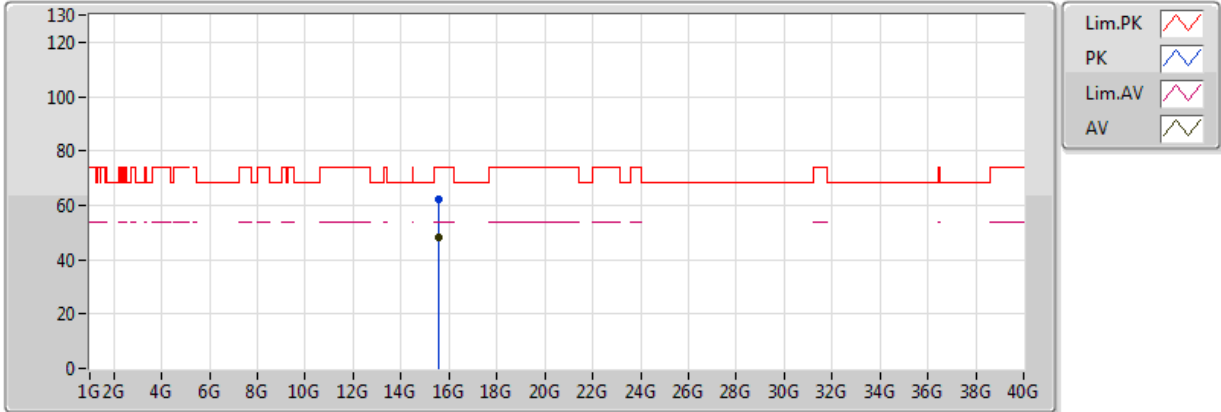
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1496G	70.31	74.00	-3.69	4.90	3	Horizontal	308	1.92	-
AV	5.149995G	51.65	54.00	-2.35	4.90	3	Horizontal	308	1.92	-
PK	5.1788G	119.04	Inf	-Inf	4.93	3	Horizontal	308	1.92	-
AV	5.1818G	106.88	Inf	-Inf	4.94	3	Horizontal	308	1.92	-



802.11a-BF_Nss1,(6Mbps)_2TX

5180MHz_TX

03/08/2018



EUT_Y_2TX
 Setting 21.5
 01-C-4
 FSP(100304)

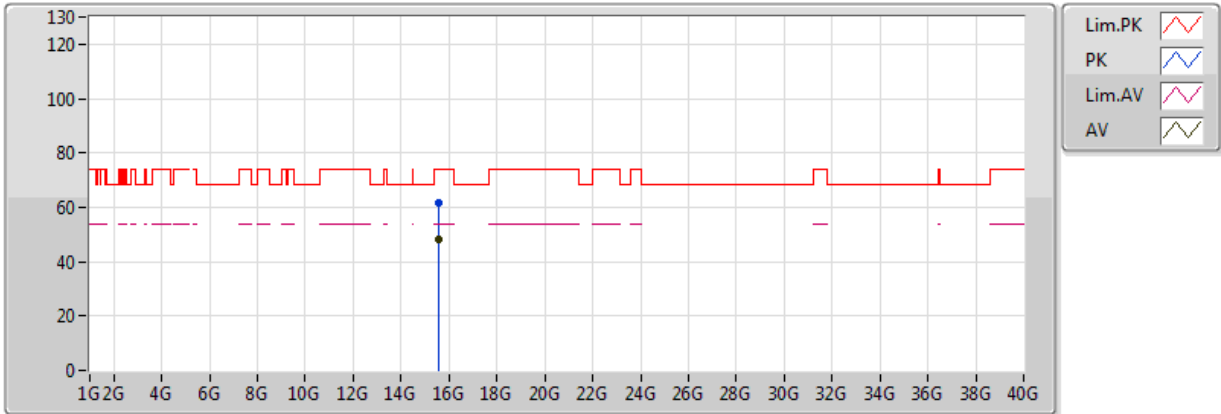
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.54408G	62.18	74.00	-11.82	15.92	3	Vertical	110	1.59	-
AV	15.54282G	48.14	54.00	-5.86	15.93	3	Vertical	110	1.59	-



802.11a-BF_Nss1,(6Mbps)_2TX

5180MHz_TX

03/08/2018



EUT_Y_2TX
 Setting 21.5
 01-C-4
 FSP(100304)

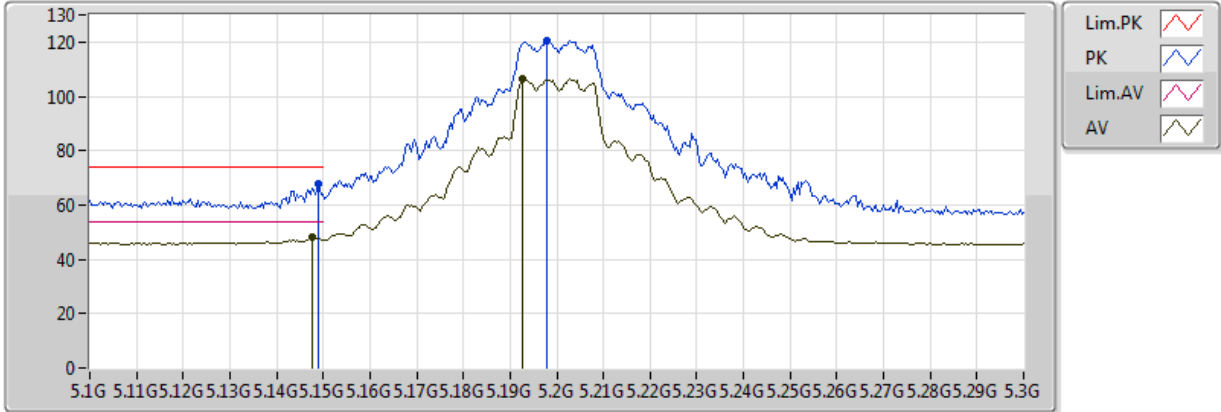
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.546G	61.50	74.00	-12.50	15.92	3	Horizontal	86	2.19	-
AV	15.5502G	48.33	54.00	-5.67	15.92	3	Horizontal	86	2.19	-



802.11a-BF_Nss1,(6Mbps)_2TX

5200MHz_TX

03/08/2018



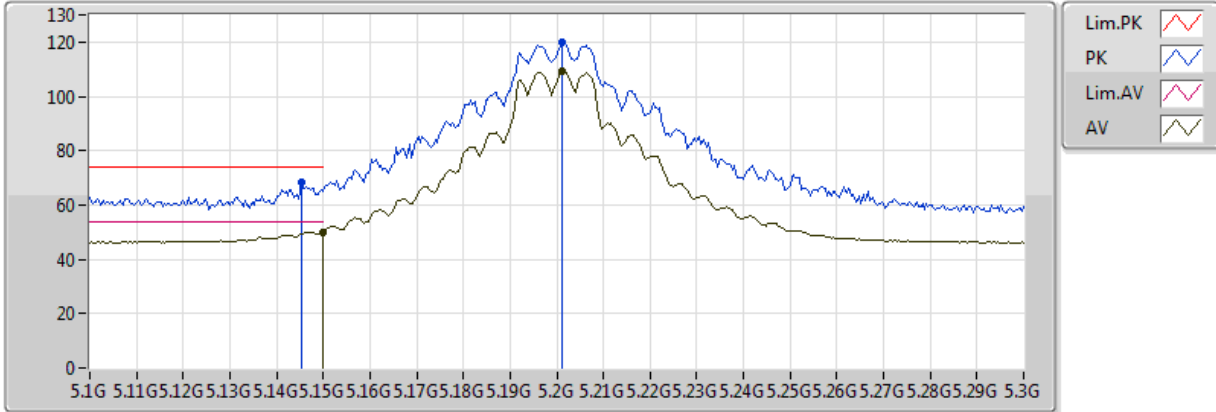
EUT Y_2TX
 Setting 25
 01-C-4-10
 FSP(100304)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1488G	67.89	74.00	-6.11	4.90	3	Vertical	247	2.24	-
AV	5.1476G	47.96	54.00	-6.04	4.90	3	Vertical	247	2.24	-
PK	5.198G	120.47	Inf	-Inf	4.96	3	Vertical	247	2.24	-
AV	5.1928G	106.68	Inf	-Inf	4.95	3	Vertical	247	2.24	-

802.11a-BF_Nss1,(6Mbps)_2TX

5200MHz_TX

03/08/2018



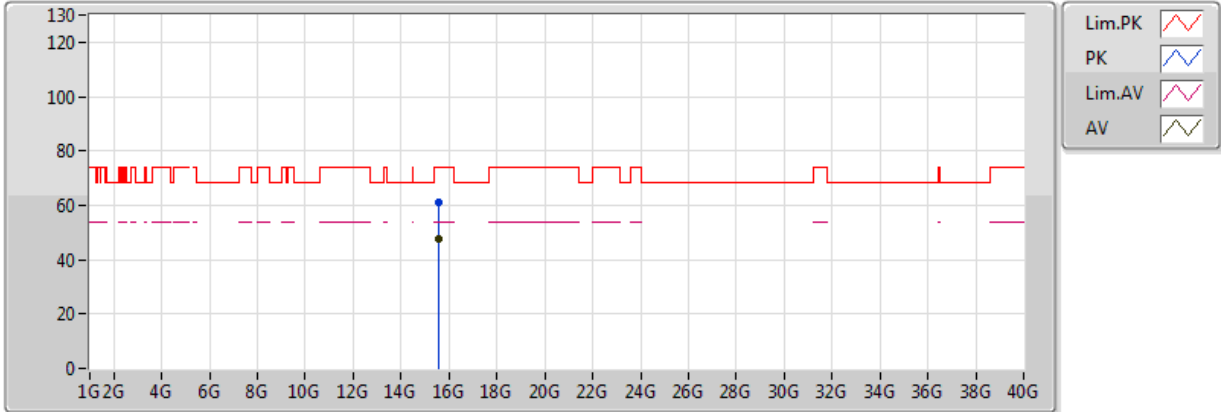
EUT_Y_2TX
Setting 25
02-R-4-10
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1452G	68.31	74.00	-5.69	8.54	3	Horizontal	241	1.50	-
AV	5.149995G	50.12	54.00	-3.88	8.54	3	Horizontal	241	1.50	-
PK	5.2012G	119.90	Inf	-Inf	8.64	3	Horizontal	241	1.50	-
AV	5.2012G	109.04	Inf	-Inf	8.64	3	Horizontal	241	1.50	-

802.11a-BF_Nss1,(6Mbps)_2TX

5200MHz_TX

16/08/2018



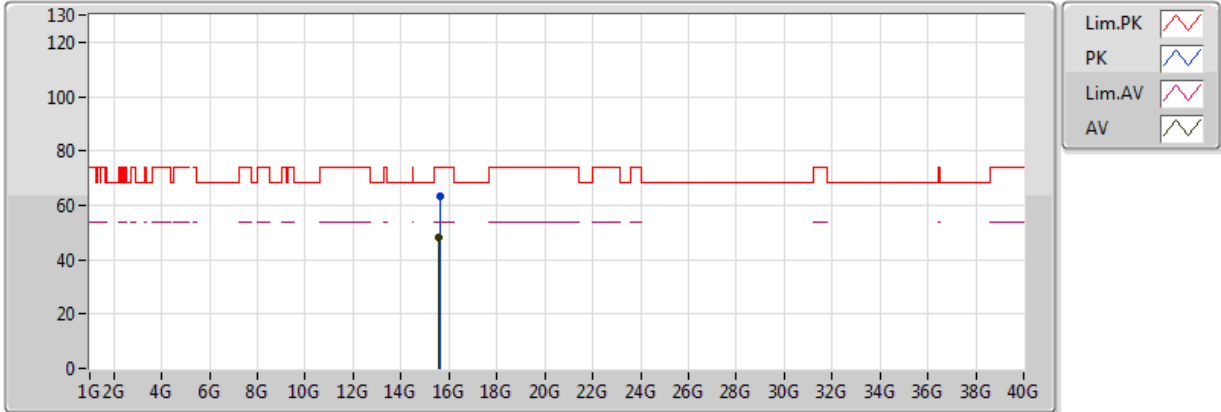
EUT_Y_2TX
Setting 25
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.59832G	61.31	74.00	-12.69	16.05	3	Vertical	174	2.67	-
AV	15.59946G	47.86	54.00	-6.14	16.04	3	Vertical	174	2.67	-

802.11a-BF_Nss1,(6Mbps)_2TX

5200MHz_TX

16/08/2018



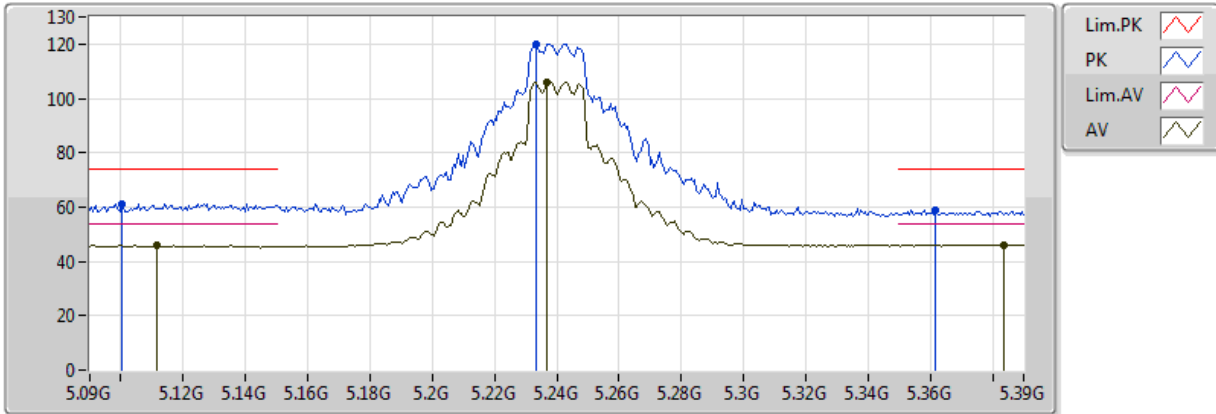
EUT Y_2TX
Setting 25
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.60138G	63.43	74.00	-10.57	16.04	3	Horizontal	62	1.65	-
AV	15.5952G	48.39	54.00	-5.61	16.06	3	Horizontal	62	1.65	-

802.11a-BF_Nss1,(6Mbps)_2TX

5240MHz_TX

03/08/2018



EUT Y_2TX
Setting 25
01-C-4-10
FSP(100304)

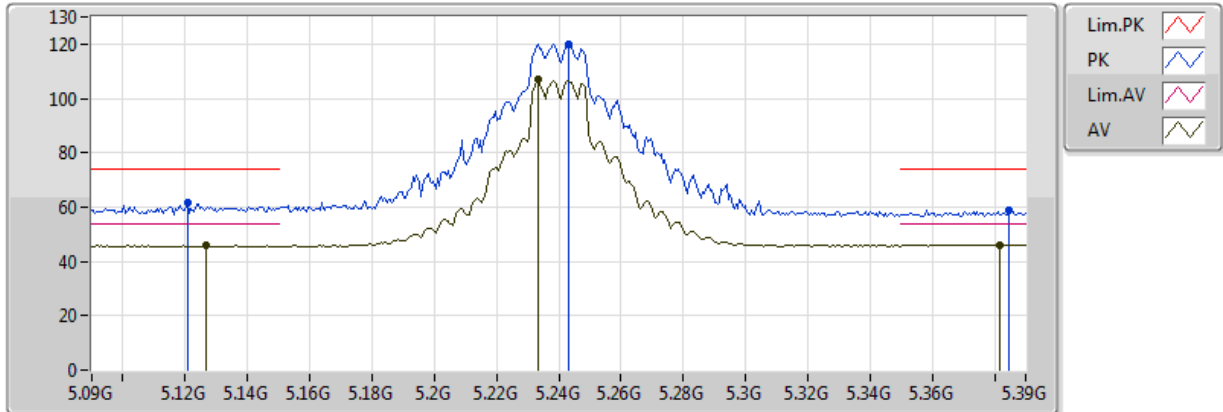
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1002G	61.24	74.00	-12.76	4.84	3	Vertical	266	1.95	-
AV	5.1116G	45.82	54.00	-8.18	4.86	3	Vertical	266	1.95	-
PK	5.2334G	120.17	Inf	-Inf	5.11	3	Vertical	266	1.95	-
AV	5.237G	106.10	Inf	-Inf	5.13	3	Vertical	266	1.95	-
PK	5.3618G	58.86	74.00	-15.14	5.65	3	Vertical	266	1.95	-
AV	5.3834G	46.22	54.00	-7.78	5.72	3	Vertical	266	1.95	-



802.11a-BF_Nss1,(6Mbps)_2TX

5240MHz_TX

03/08/2018



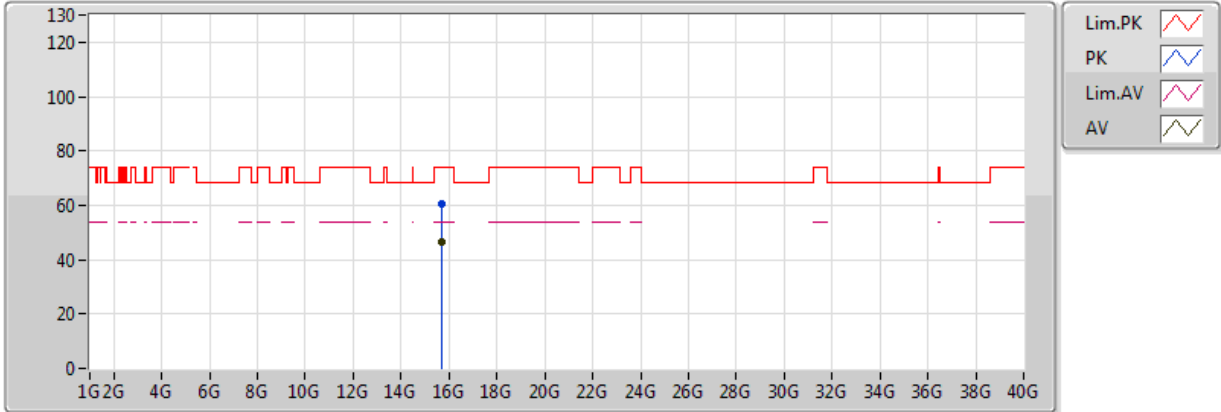
EUT_Y_2TX
Setting 25
01-C-4-10
FSP(100304)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1206G	61.74	74.00	-12.26	4.86	3	Horizontal	282	2.09	-
AV	5.1266G	45.89	54.00	-8.11	4.87	3	Horizontal	282	2.09	-
PK	5.243G	119.85	Inf	-Inf	5.15	3	Horizontal	282	2.09	-
AV	5.2334G	106.86	Inf	-Inf	5.11	3	Horizontal	282	2.09	-
PK	5.3846G	58.90	74.00	-15.10	5.74	3	Horizontal	282	2.09	-
AV	5.3816G	46.19	54.00	-7.81	5.72	3	Horizontal	282	2.09	-

802.11a-BF_Nss1,(6Mbps)_2TX

5240MHz_TX

16/08/2018



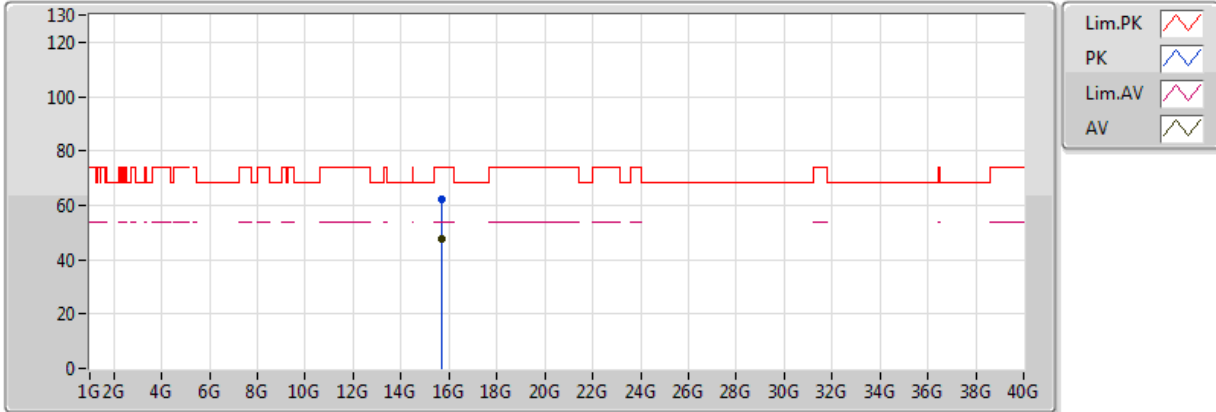
EUT Y_2TX
Setting 25
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.7122G	60.25	74.00	-13.75	15.66	3	Vertical	248	1.50	-
AV	15.72276G	46.78	54.00	-7.22	15.63	3	Vertical	248	1.50	-

802.11a-BF_Nss1,(6Mbps)_2TX

5240MHz_TX

16/08/2018



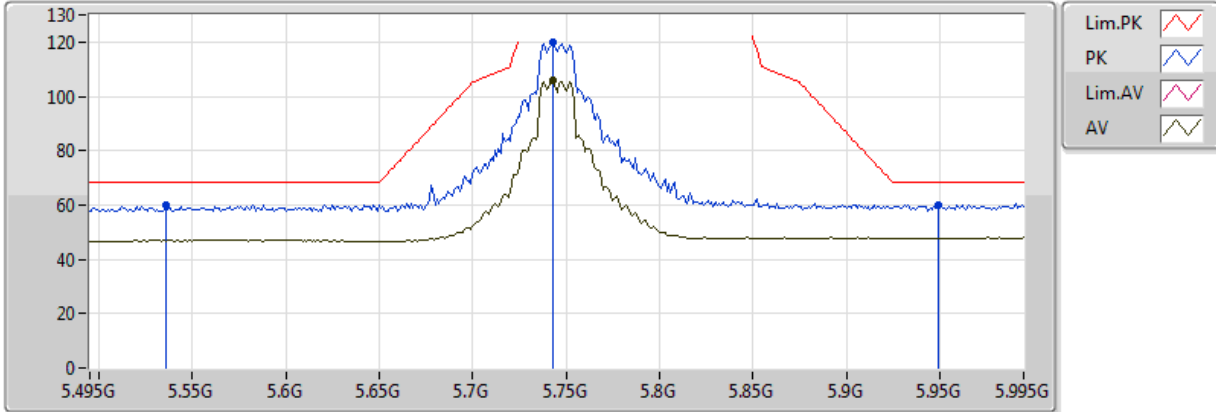
EUT Y_2TX
 Setting 25
 03-R-5
 FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.71568G	62.18	74.00	-11.82	15.65	3	Horizontal	64	1.61	-
AV	15.7206G	47.60	54.00	-6.40	15.64	3	Horizontal	64	1.61	-

802.11a-BF_Nss1,(6Mbps)_2TX

5745MHz_TX

03/08/2018



EUT Y_2TX
Setting 25
01-C-4-10
FSP(100304)

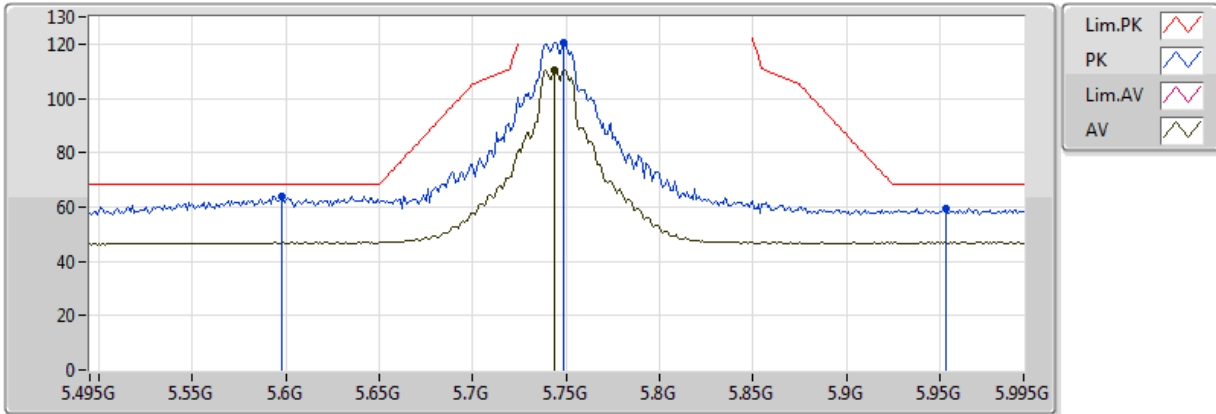
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.536G	60.14	68.20	-8.06	6.09	3	Vertical	262	1.96	-
PK	5.743G	119.97	Inf	-Inf	6.86	3	Vertical	262	1.96	-
AV	5.743G	105.64	Inf	-Inf	6.86	3	Vertical	262	1.96	-
PK	5.949G	60.16	68.20	-8.04	7.39	3	Vertical	262	1.96	-



802.11a-BF_Nss1,(6Mbps)_2TX

5745MHz_TX

03/08/2018



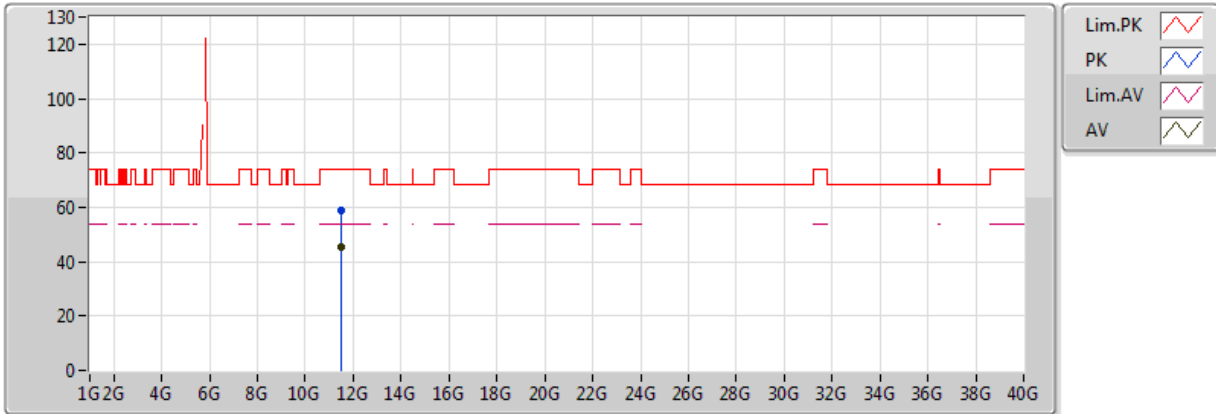
EUT_Y_2TX
Setting 25
02-R-4-10
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.598G	63.96	68.20	-4.24	9.19	3	Horizontal	283	1.50	-
PK	5.749G	120.48	Inf	-Inf	9.22	3	Horizontal	283	1.50	-
AV	5.744G	110.63	Inf	-Inf	9.22	3	Horizontal	283	1.50	-
PK	5.953G	59.30	68.20	-8.90	9.36	3	Horizontal	283	1.50	-

802.11a-BF_Nss1,(6Mbps)_2TX

5745MHz_TX

16/08/2018



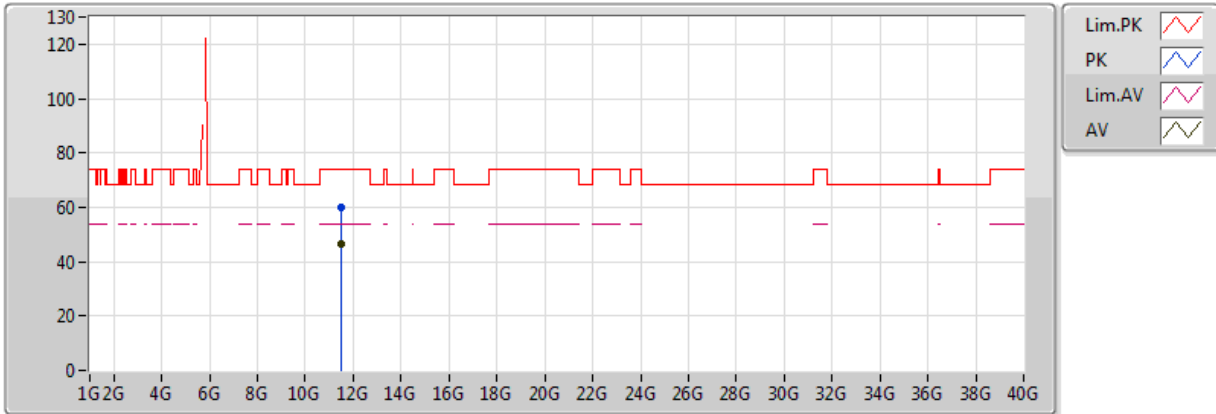
EUT_Y_2TX
 Setting 25
 03-R-5
 FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.48676G	58.89	74.00	-15.11	14.25	3	Vertical	65	1.77	-
AV	11.49042G	45.58	54.00	-8.42	14.26	3	Vertical	65	1.77	-

802.11a-BF_Nss1,(6Mbps)_2TX

5745MHz_TX

16/08/2018



EUT Y_2TX
 Setting 25
 03-R-5
 FSP

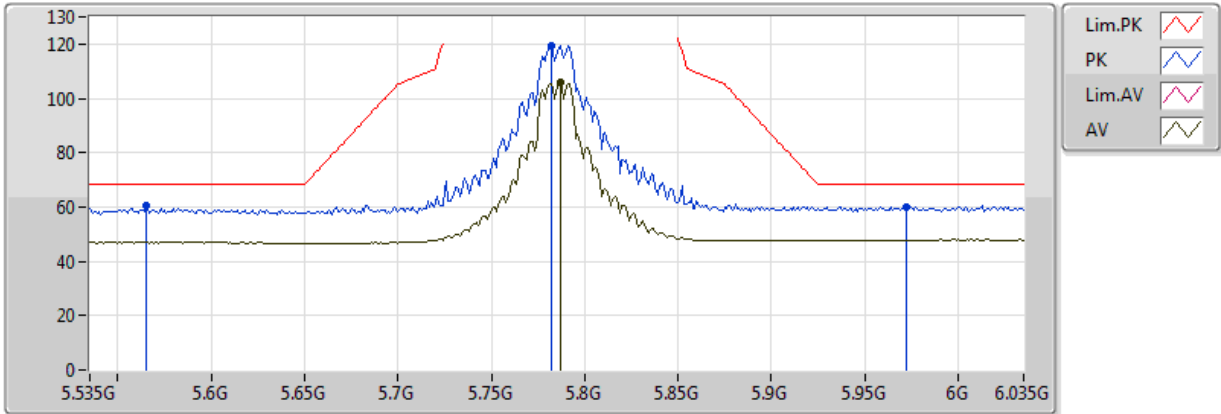
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.49174G	59.87	74.00	-14.13	14.26	3	Horizontal	153	1.72	-
AV	11.49162G	46.45	54.00	-7.55	14.26	3	Horizontal	153	1.72	-



802.11a-BF_Nss1,(6Mbps)_2TX

5785MHz_TX

03/08/2018



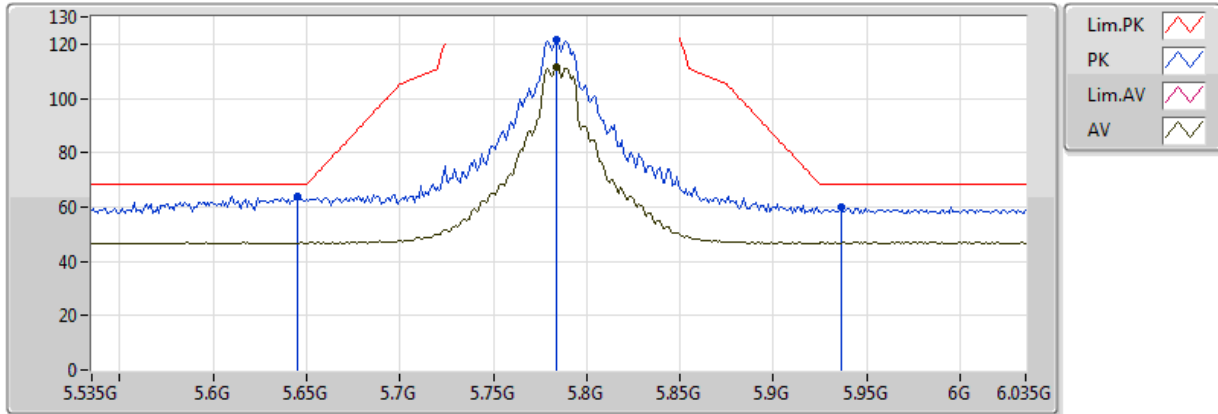
EUT Y_2TX
 Setting 25
 01-C-4-10
 FSP(100304))

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.565G	60.68	68.20	-7.52	6.18	3	Vertical	292	2.98	-
PK	5.782G	119.30	Inf	-Inf	7.02	3	Vertical	292	2.98	-
AV	5.787G	105.83	Inf	-Inf	7.05	3	Vertical	292	2.98	-
PK	5.972G	60.12	68.20	-8.08	7.43	3	Vertical	292	2.98	-

802.11a-BF_Nss1,(6Mbps)_2TX

5785MHz_TX

27/07/2018



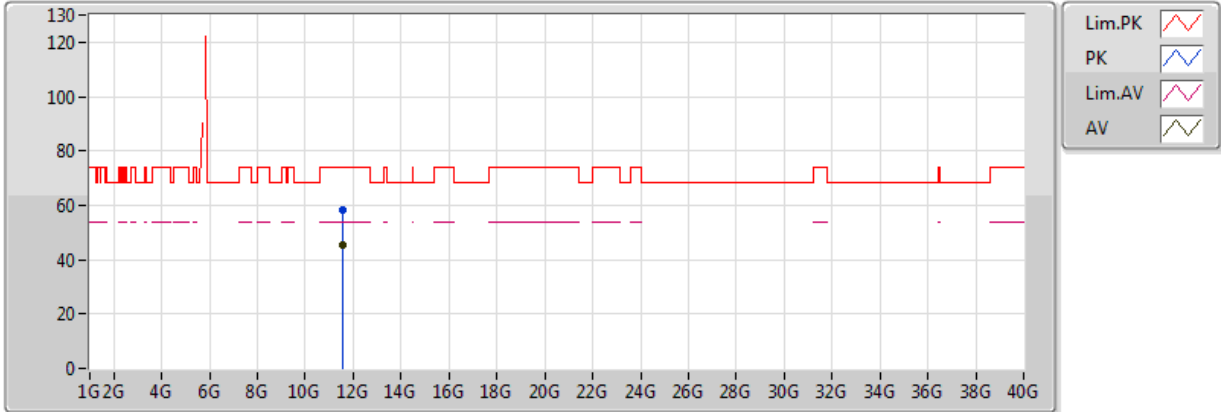
EUT_Y_2TX
Setting 25
02-R-4-10
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.645G	63.98	68.20	-4.22	9.20	3	Horizontal	286	1.50	-
PK	5.784G	121.48	Inf	-Inf	9.24	3	Horizontal	286	1.50	-
AV	5.784G	111.57	Inf	-Inf	9.24	3	Horizontal	286	1.50	-
PK	5.936G	60.05	68.20	-8.15	9.36	3	Horizontal	286	1.50	-

802.11a-BF_Nss1,(6Mbps)_2TX

5785MHz_TX

16/08/2018



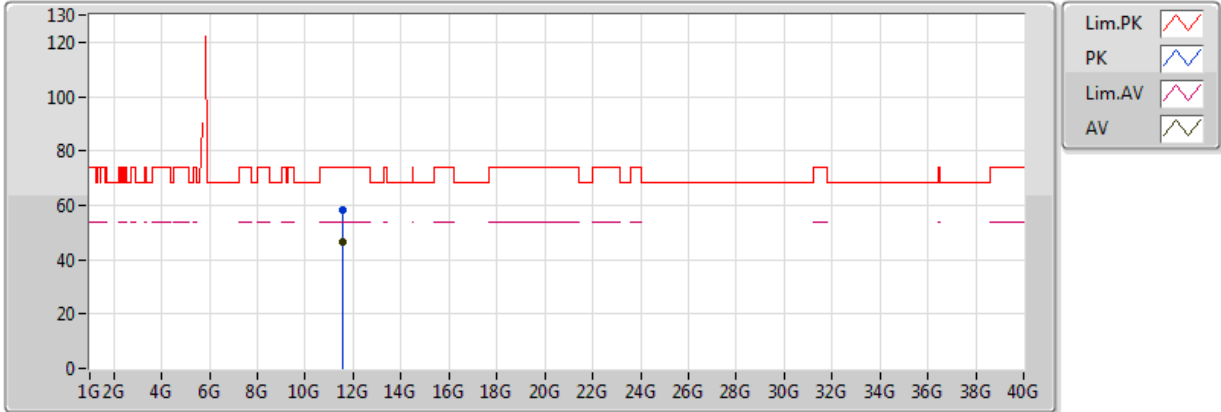
EUT_Y_2TX
Setting 25
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.56682G	58.55	74.00	-15.45	14.29	3	Vertical	65	1.75	-
AV	11.57156G	45.46	54.00	-8.54	14.29	3	Vertical	65	1.75	-

802.11a-BF_Nss1,(6Mbps)_2TX

5785MHz_TX

16/08/2018



EUT Y_2TX
Setting 25
03-R-5
FSP

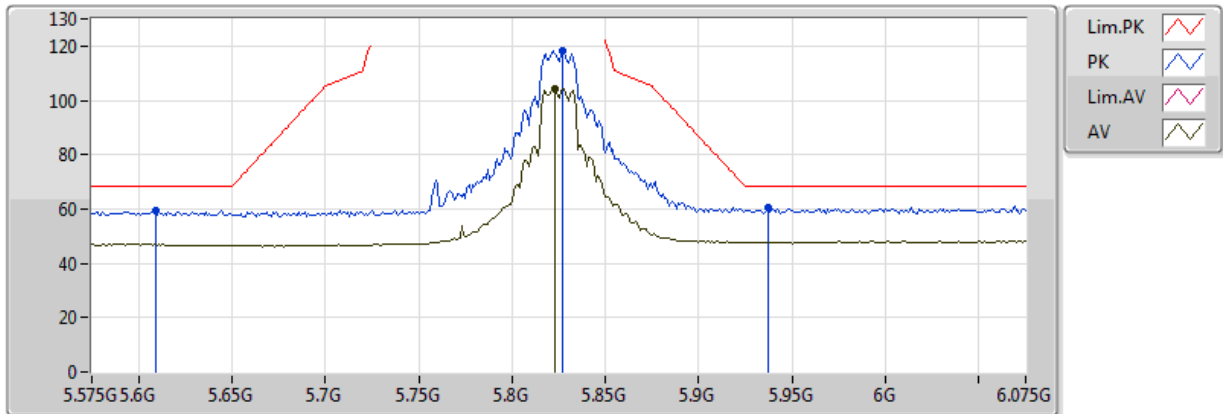
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.56622G	58.23	74.00	-15.77	14.29	3	Horizontal	157	1.71	-
AV	11.57168G	46.43	54.00	-7.57	14.29	3	Horizontal	157	1.71	-



802.11a-BF_Nss1,(6Mbps)_2TX

5825MHz_TX

03/08/2018



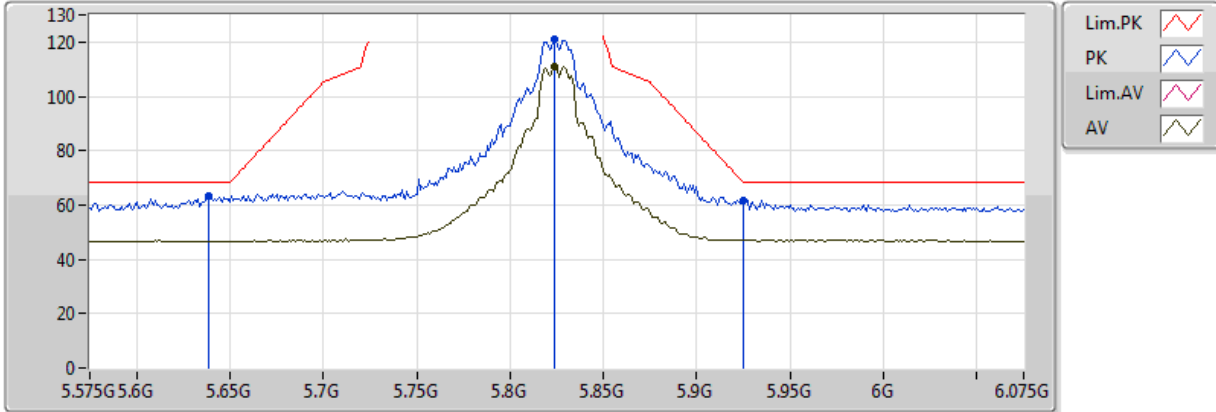
EUT Y_2TX
 Setting 25
 01-C-4-10
 FSP(100304)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.609G	59.48	68.20	-8.72	6.31	3	Vertical	263	1.43	-
PK	5.827G	118.50	Inf	-Inf	7.15	3	Vertical	263	1.43	-
AV	5.823G	104.43	Inf	-Inf	7.14	3	Vertical	263	1.43	-
PK	5.937G	60.34	68.20	-7.86	7.35	3	Vertical	263	1.43	-

802.11a-BF_Nss1,(6Mbps)_2TX

5825MHz_TX

03/08/2018



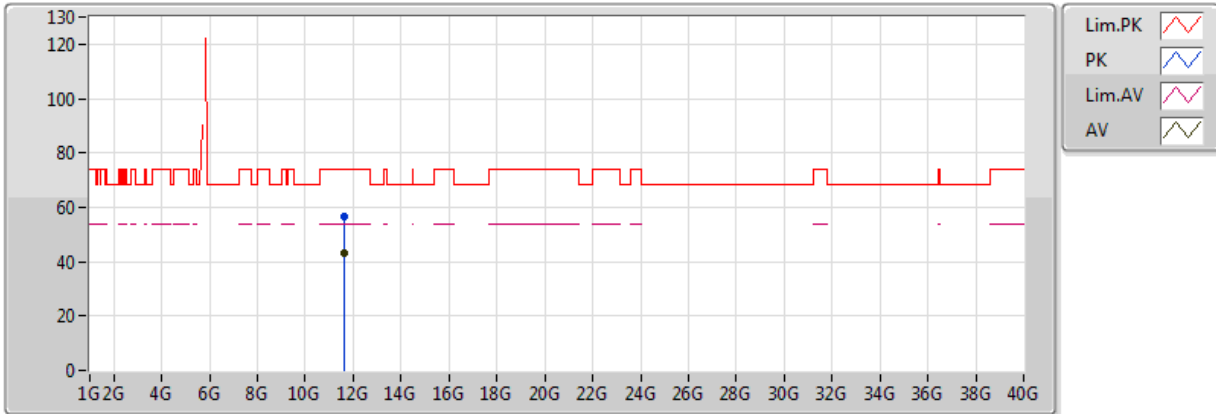
EUT_Y_2TX
Setting 25
02-R-4-10
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.639G	63.12	68.20	-5.08	9.20	3	Horizontal	283	1.50	-
PK	5.824G	120.78	Inf	-Inf	9.26	3	Horizontal	283	1.50	-
AV	5.824G	110.89	Inf	-Inf	9.26	3	Horizontal	283	1.50	-
PK	5.925G	61.84	68.20	-6.36	9.35	3	Horizontal	283	1.50	-

802.11a-BF_Nss1,(6Mbps)_2TX

5825MHz_TX

16/08/2018



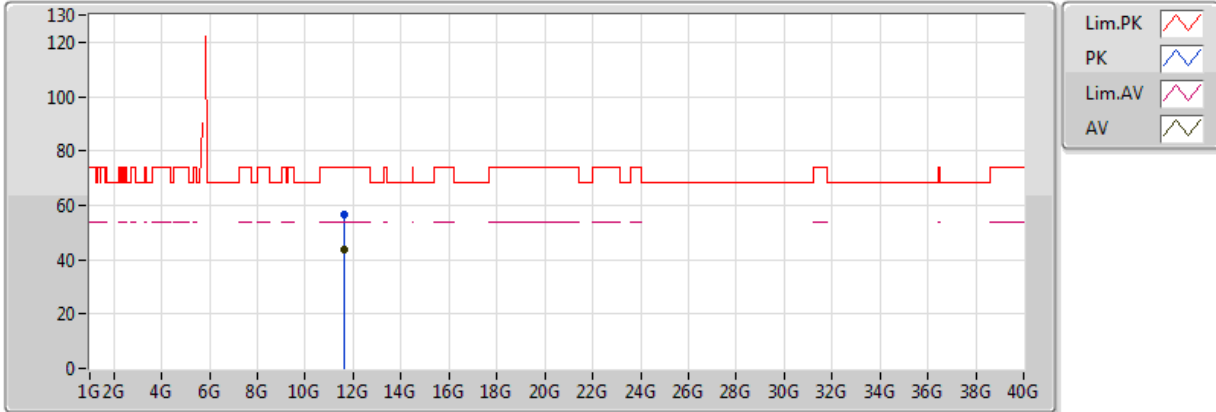
EUT Y_2TX
 Setting 25
 04-C-4
 FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.655G	56.78	74.00	-17.22	13.64	3	Vertical	157	1.82	-
AV	11.65016G	43.41	54.00	-10.59	13.64	3	Vertical	157	1.82	-

802.11a-BF_Nss1,(6Mbps)_2TX

5825MHz_TX

16/08/2018



EUT_Y_2TX
Setting 25
04-C-4
FSP(100019)

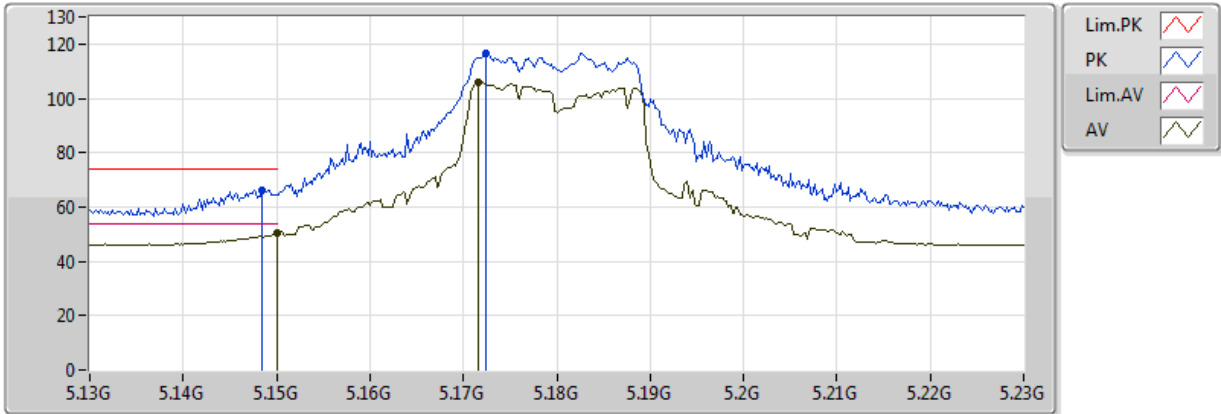
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.65224G	56.76	74.00	-17.24	13.64	3	Horizontal	250	1.50	-
AV	11.65216G	43.66	54.00	-10.34	13.64	3	Horizontal	250	1.50	-



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5180MHz_TX

03/08/2018



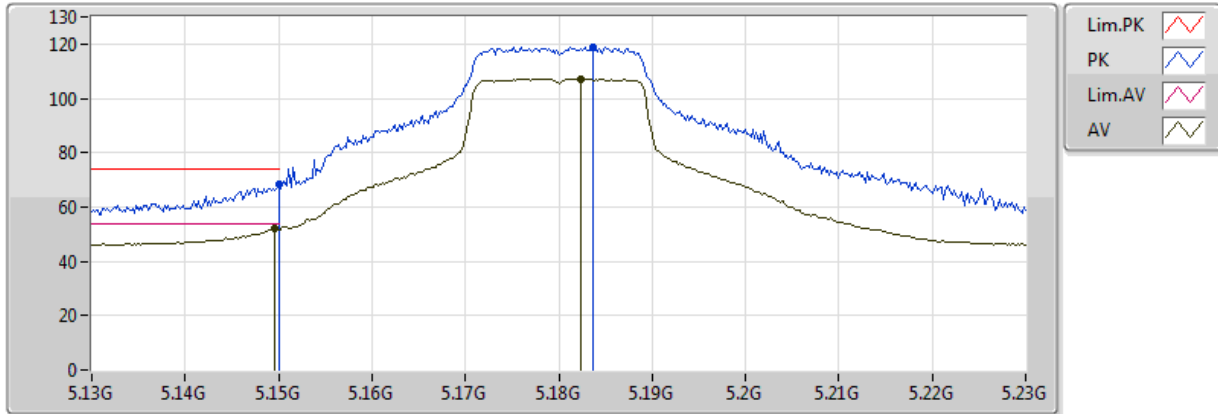
EUT Y_2TX
 Setting 21.5
 01-C-4-10
 FSP(100304)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1484G	66.39	74.00	-7.61	4.90	3	Vertical	262	1.99	-
AV	5.149995G	50.69	54.00	-3.31	4.90	3	Vertical	262	1.99	-
PK	5.1724G	116.65	Inf	-Inf	4.93	3	Vertical	262	1.99	-
AV	5.1716G	105.88	Inf	-Inf	4.93	3	Vertical	262	1.99	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5180MHz_TX

03/08/2018



EUT_Y_2TX
Setting 21.5
01-C-4-10
FSP(100304)

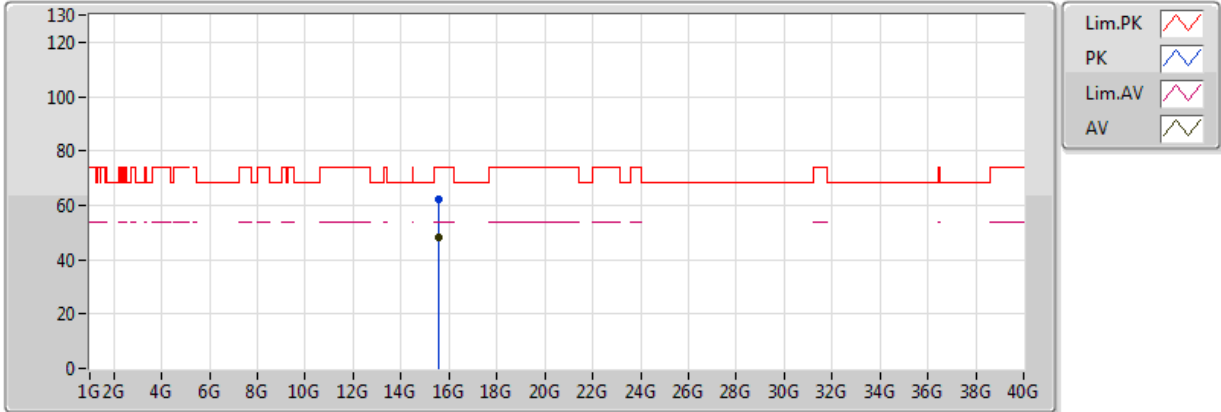
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.149995G	68.42	74.00	-5.58	4.90	3	Horizontal	290	1.93	-
AV	5.1496G	51.93	54.00	-2.07	4.90	3	Horizontal	290	1.93	-
PK	5.1836G	118.94	Inf	-Inf	4.94	3	Horizontal	290	1.93	-
AV	5.1824G	107.29	Inf	-Inf	4.94	3	Horizontal	290	1.93	-



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5180MHz_TX

16/08/2018



EUT Y_2TX
 Setting 21.5
 03-R-5
 FSP

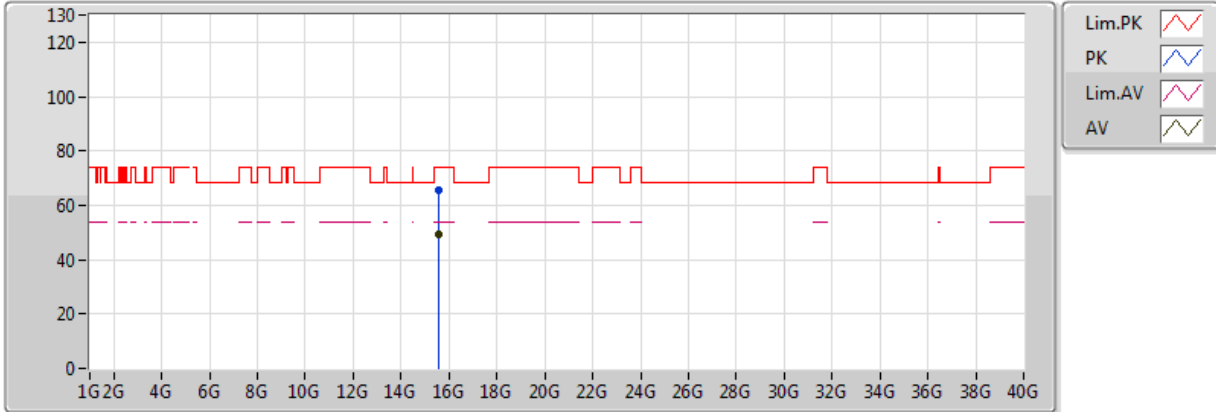
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.54156G	62.45	74.00	-11.55	16.24	3	Vertical	0	1.50	-
AV	15.53988G	47.94	54.00	-6.06	16.24	3	Vertical	0	1.50	-



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5180MHz_TX

16/08/2018



EUT Y_2TX
 Setting 21.5
 03-R-5
 FSP

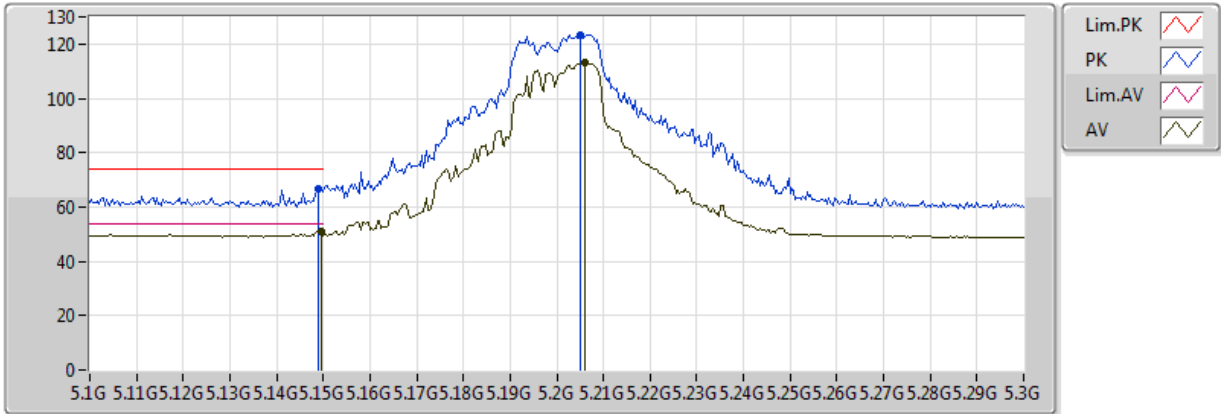
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.54924G	65.30	74.00	-8.70	16.21	3	Horizontal	63	1.48	-
AV	15.54486G	49.55	54.00	-4.45	16.22	3	Horizontal	63	1.48	-



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5200MHz_TX

03/08/2018



EUT Y_2TX
Setting 25
01-C-4-10
FSP(100304)

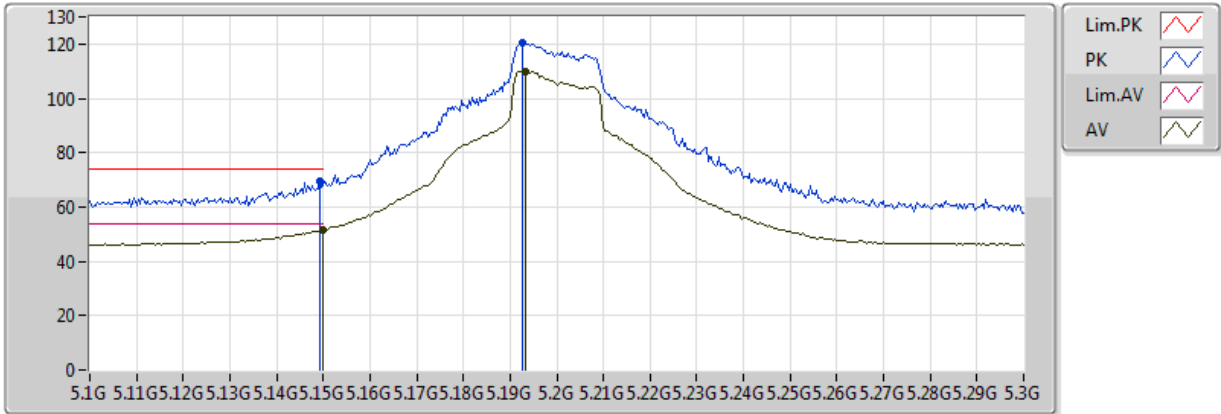
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1488G	66.60	74.00	-7.40	8.54	3	Vertical	269	1.79	-
AV	5.1496G	51.19	54.00	-2.81	8.54	3	Vertical	269	1.79	-
PK	5.2052G	123.45	Inf	-Inf	8.65	3	Vertical	269	1.79	-
AV	5.206G	112.97	Inf	-Inf	8.65	3	Vertical	269	1.79	-



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5200MHz_TX

03/08/2018



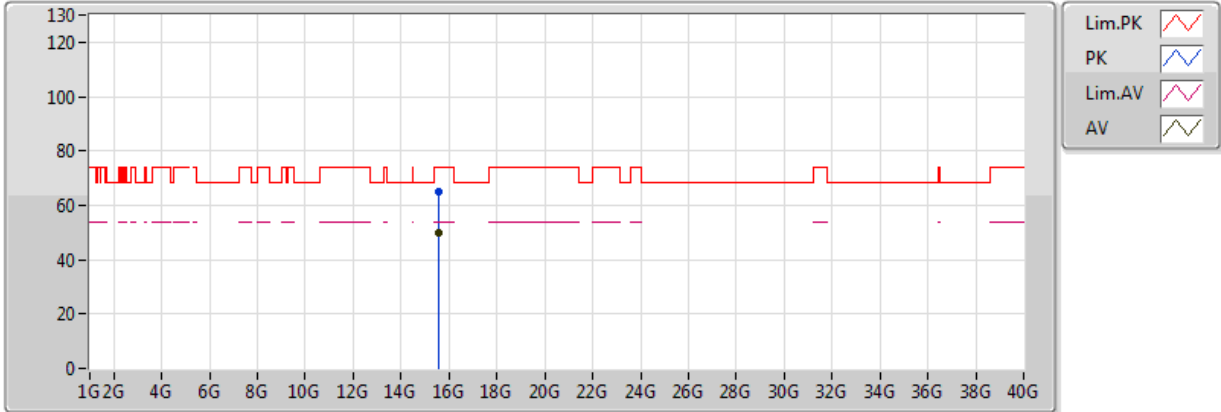
EUT_Y_2TX
Setting 25
02-R-4-10
FSU(100015)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1492G	69.67	74.00	-4.33	8.54	3	Horizontal	267	1.46	-
AV	5.149995G	51.49	54.00	-2.51	8.54	3	Horizontal	267	1.46	-
PK	5.1928G	120.35	Inf	-Inf	8.63	3	Horizontal	267	1.46	-
AV	5.1932G	109.79	Inf	-Inf	8.63	3	Horizontal	267	1.46	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5200MHz_TX

16/08/2018



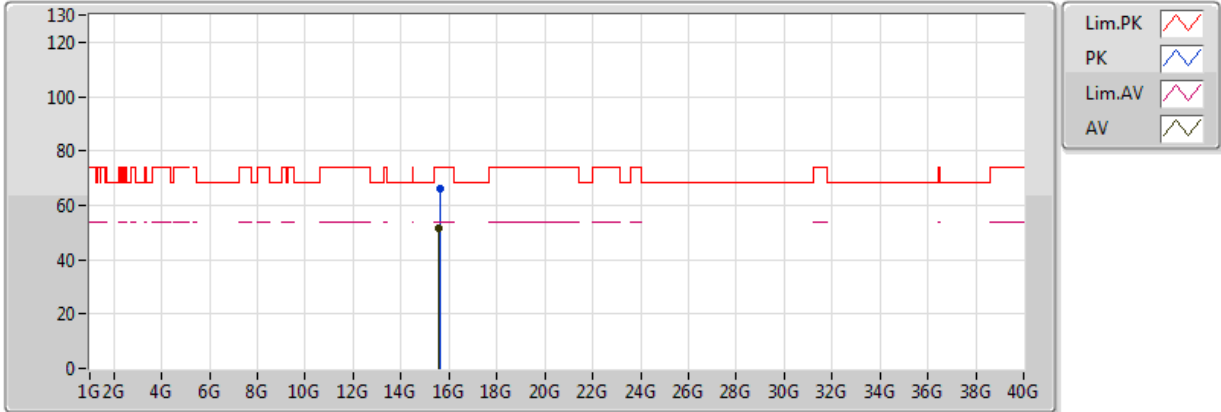
EUT Y_2TX
 Setting 25
 03-R-5
 FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.59574G	64.93	74.00	-9.07	16.05	3	Vertical	90	2.73	-
AV	15.59814G	50.11	54.00	-3.89	16.05	3	Vertical	90	2.73	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5200MHz_TX

16/08/2018



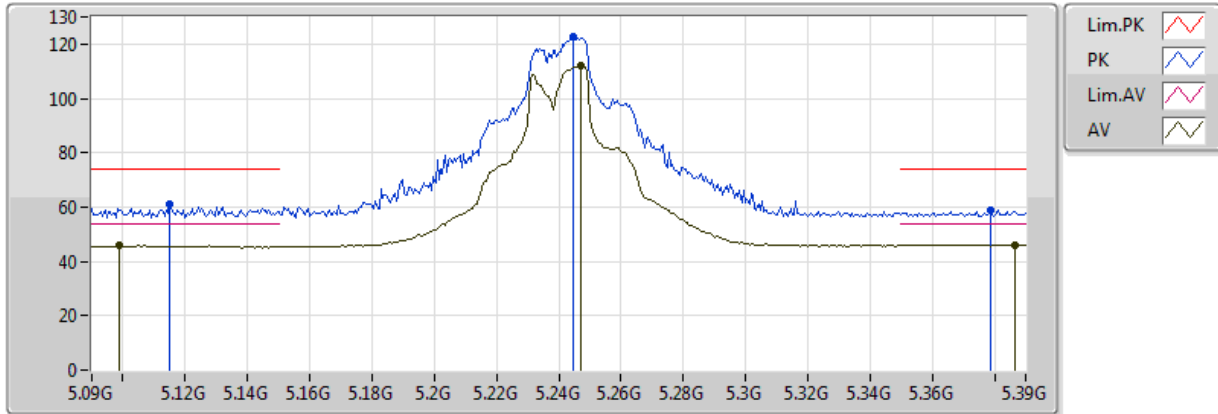
EUT Y_2TX
Setting 25
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.60378G	66.31	74.00	-7.69	16.03	3	Horizontal	64	1.48	-
AV	15.60072G	51.67	54.00	-2.33	16.04	3	Horizontal	64	1.48	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz_TX

03/08/2018



EUT Y_2TX
Setting 25
01-C-4-10
FSP(100304)

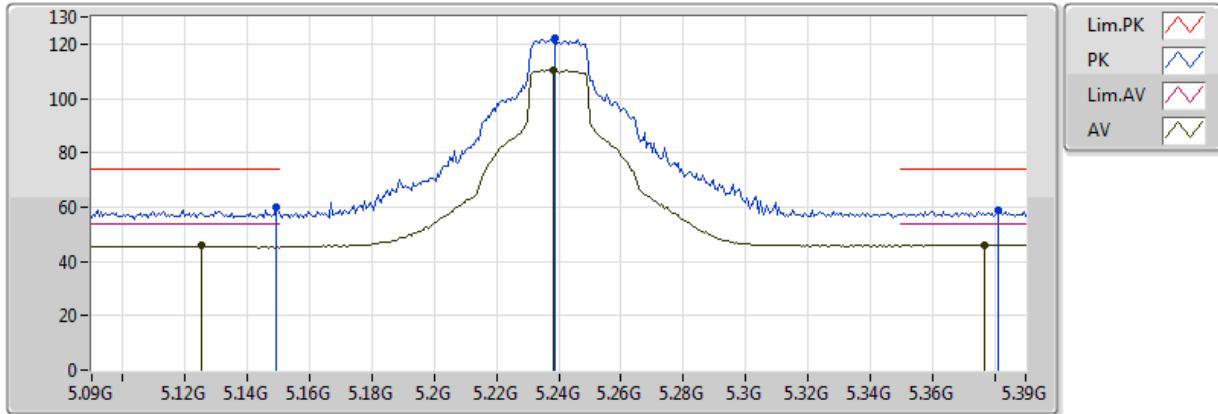
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1152G	61.03	74.00	-12.97	4.85	3	Vertical	266	2.03	-
AV	5.099G	45.81	54.00	-8.19	4.84	3	Vertical	266	2.03	-
PK	5.2448G	122.97	Inf	-Inf	5.16	3	Vertical	266	2.03	-
AV	5.2472G	111.80	Inf	-Inf	5.17	3	Vertical	266	2.03	-
PK	5.3786G	58.97	74.00	-15.03	5.71	3	Vertical	266	2.03	-
AV	5.3864G	46.13	54.00	-7.87	5.74	3	Vertical	266	2.03	-



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz_TX

03/08/2018



EUT_Y_2TX
Setting 25
01-C-4-10
FSP(100304)

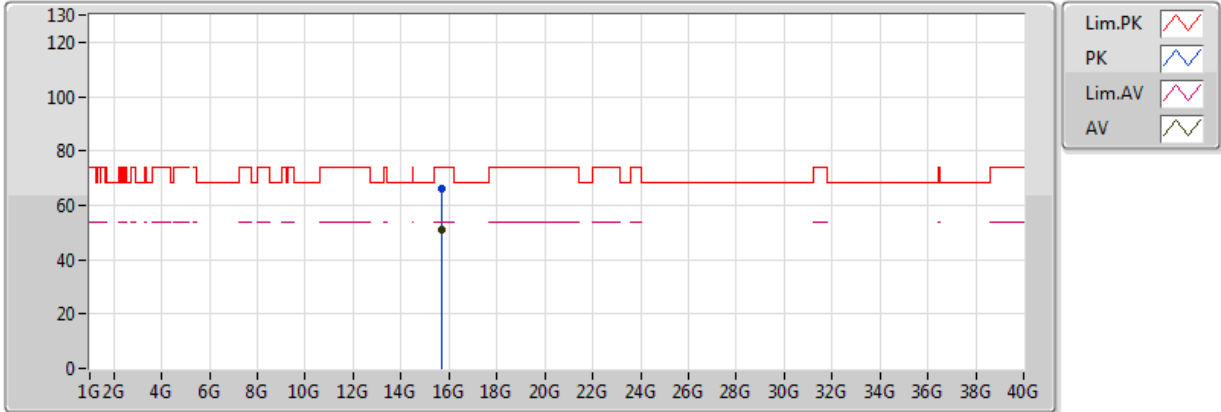
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1494G	59.89	74.00	-14.11	4.90	3	Horizontal	301	2.00	-
AV	5.1254G	45.72	54.00	-8.28	4.87	3	Horizontal	301	2.00	-
PK	5.2388G	122.29	Inf	-Inf	5.13	3	Horizontal	301	2.00	-
AV	5.2382G	110.45	Inf	-Inf	5.13	3	Horizontal	301	2.00	-
PK	5.381G	58.64	74.00	-15.36	5.72	3	Horizontal	301	2.00	-
AV	5.3768G	46.10	54.00	-7.90	5.70	3	Horizontal	301	2.00	-



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz_TX

16/08/2018



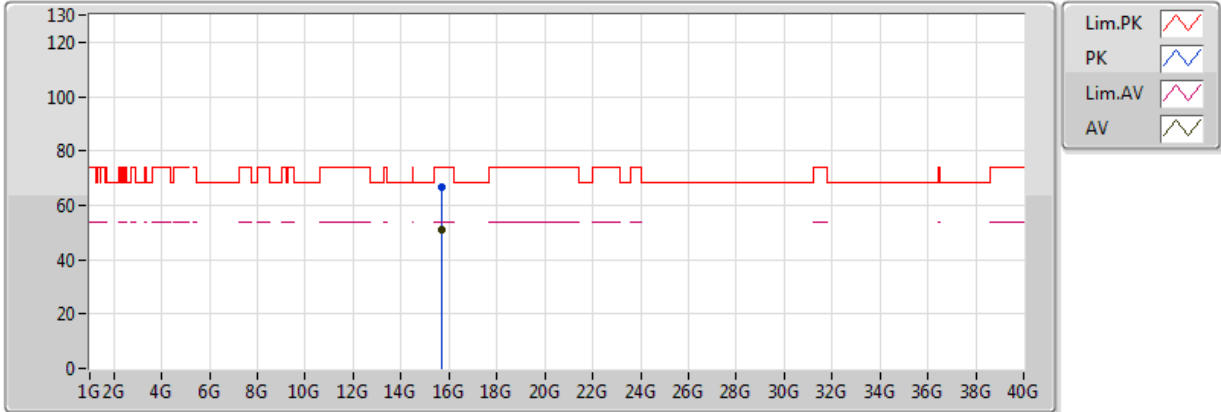
EUT Y_2TX
 Setting 25
 03-R-5
 FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.72318G	66.11	74.00	-7.89	15.63	3	Vertical	97	2.68	-
AV	15.72516G	50.77	54.00	-3.23	15.62	3	Vertical	97	2.68	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz_TX

16/08/2018



EUT Y_2TX
Setting 25
03-R-5
FSP

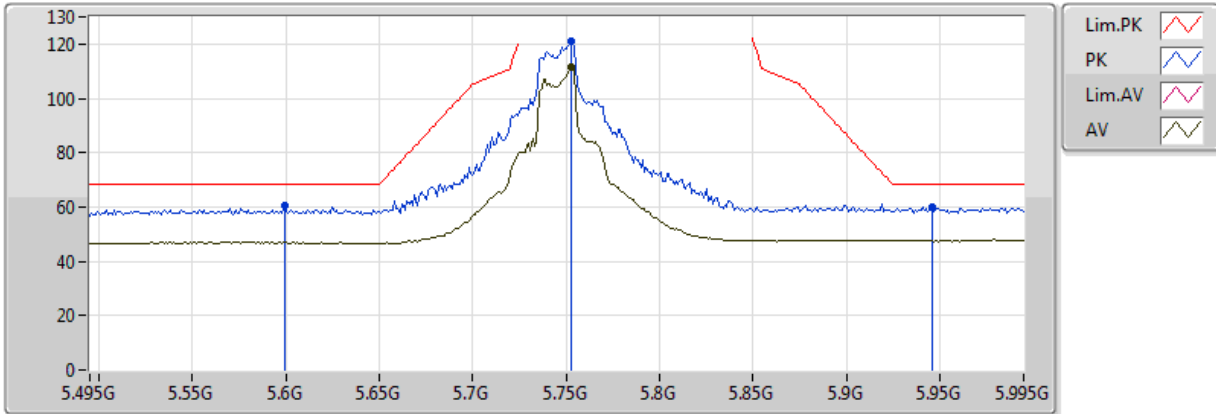
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PK	15.70506G	66.53	74.00	-7.47	15.69	3	Horizontal	65	1.68	-
AV	15.71058G	51.06	54.00	-2.94	15.67	3	Horizontal	65	1.68	-



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5745MHz_TX

03/08/2018



EUT Y_2TX
Setting 25
01-C-4-10
FSP(100304)

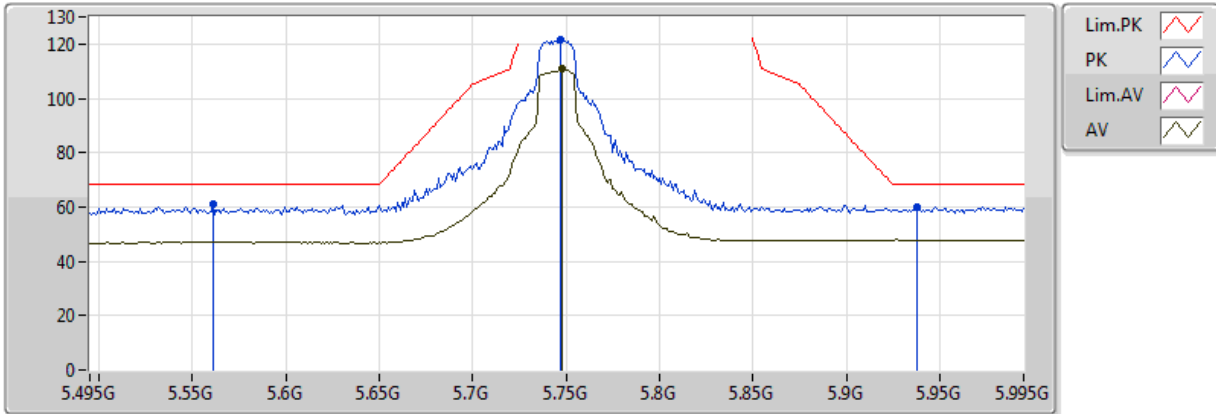
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.599G	60.40	68.20	-7.80	6.27	3	Vertical	246	1.78	-
PK	5.753G	120.92	Inf	-Inf	6.90	3	Vertical	246	1.78	-
AV	5.753G	111.38	Inf	-Inf	6.90	3	Vertical	246	1.78	-
PK	5.946G	59.97	68.20	-8.23	7.38	3	Vertical	246	1.78	-



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5745MHz_TX

03/08/2018



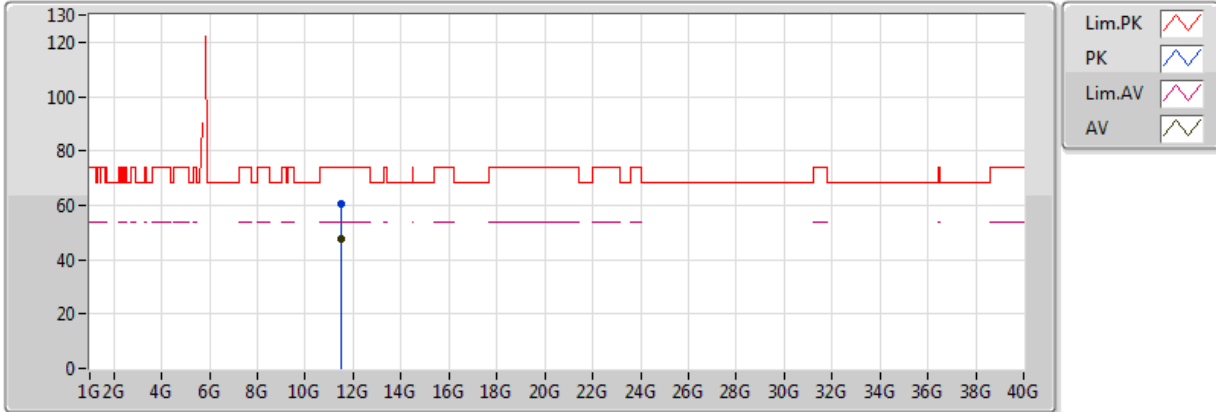
EUT Y_2TX
 Setting 25
 01-C-4-10
 FSP(100304)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.561G	61.35	68.20	-6.85	6.17	3	Horizontal	290	1.96	-
PK	5.747G	121.51	Inf	-Inf	6.88	3	Horizontal	290	1.96	-
AV	5.748G	110.84	Inf	-Inf	6.88	3	Horizontal	290	1.96	-
PK	5.938G	60.20	68.20	-8.00	7.36	3	Horizontal	290	1.96	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5745MHz_TX

16/08/2018



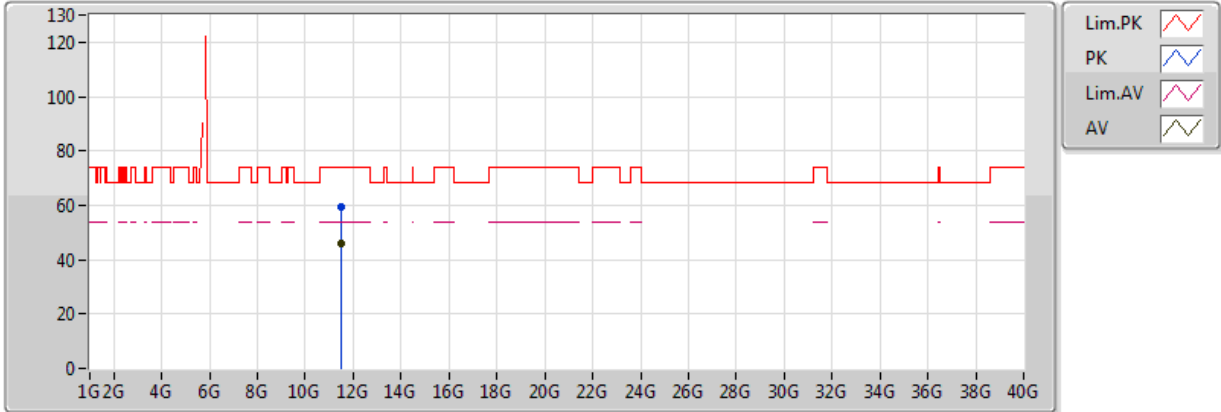
EUT Y_2TX
 Setting 25
 03-R-5
 FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.5017G	60.26	74.00	-13.74	14.26	3	Vertical	66	2.17	-
AV	11.50242G	47.40	54.00	-6.60	14.26	3	Vertical	66	2.17	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5745MHz_TX

16/08/2018



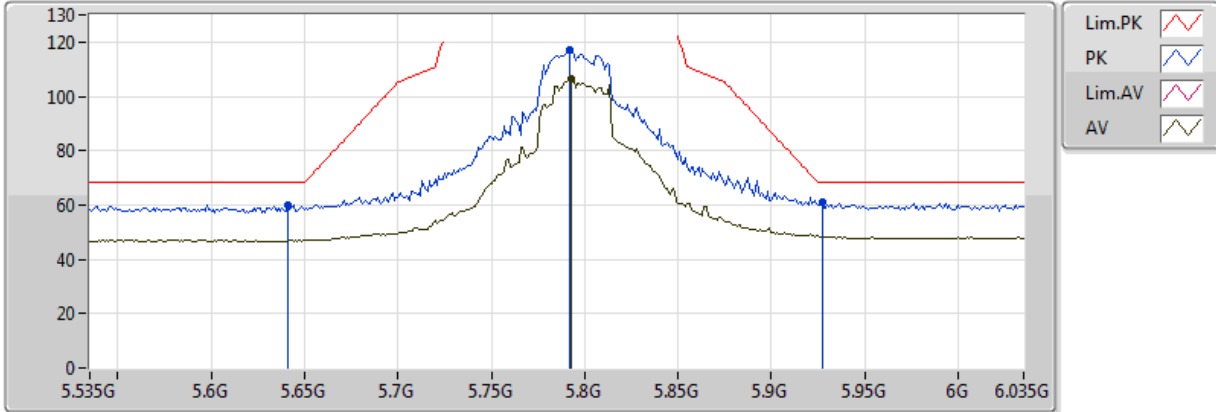
EUT_Y_2TX
Setting 25
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.4872G	59.19	74.00	-14.81	14.25	3	Horizontal	156	1.79	-
AV	11.4889G	45.67	54.00	-8.33	14.25	3	Horizontal	156	1.79	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5785MHz_TX

03/08/2018



EUT Y_2TX
Setting 25
01-C-4-10
FSP(100304)

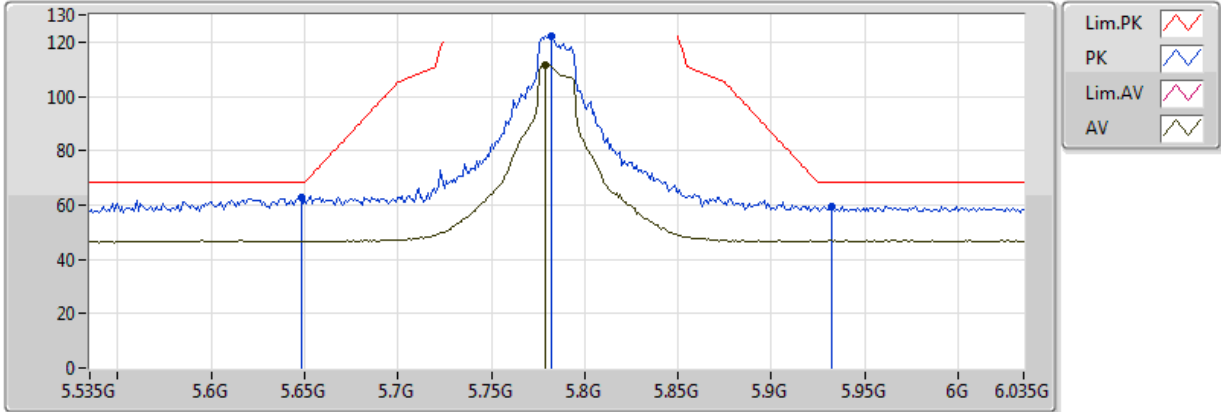
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.641G	60.11	68.20	-8.09	6.43	3	Vertical	261	1.55	-
PK	5.792G	117.24	Inf	-Inf	7.07	3	Vertical	261	1.55	-
AV	5.793G	106.43	Inf	-Inf	7.07	3	Vertical	261	1.55	-
PK	5.927G	60.84	68.20	-7.36	7.34	3	Vertical	261	1.55	-



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5785MHz_TX

03/08/2018



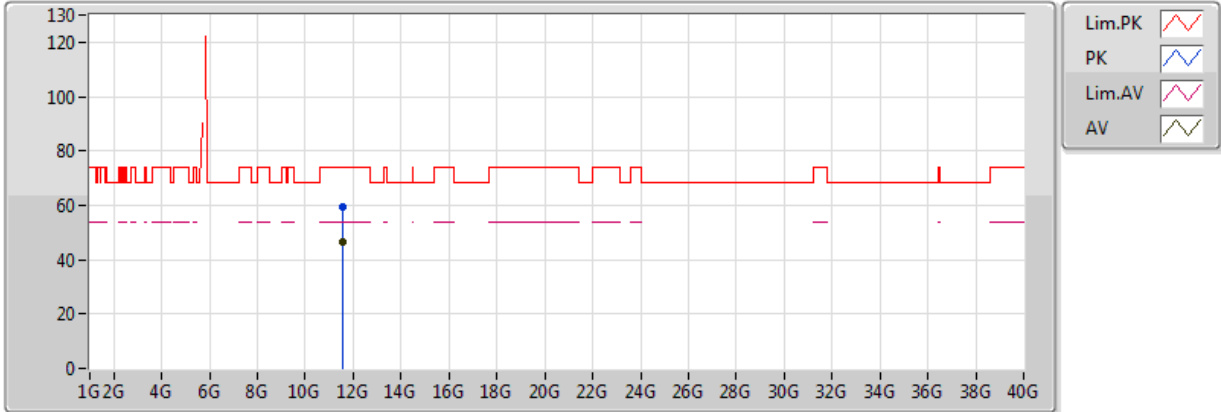
EUT_Y_2TX
 Setting 25
 02-R-4-10
 FSU(100015)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.648G	62.49	68.20	-5.71	9.20	3	Horizontal	303	1.43	-
PK	5.782G	122.07	Inf	-Inf	9.23	3	Horizontal	303	1.43	-
AV	5.779G	111.42	Inf	-Inf	9.23	3	Horizontal	303	1.43	-
PK	5.932G	59.47	68.20	-8.73	9.35	3	Horizontal	303	1.43	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5785MHz_TX

16/08/2018



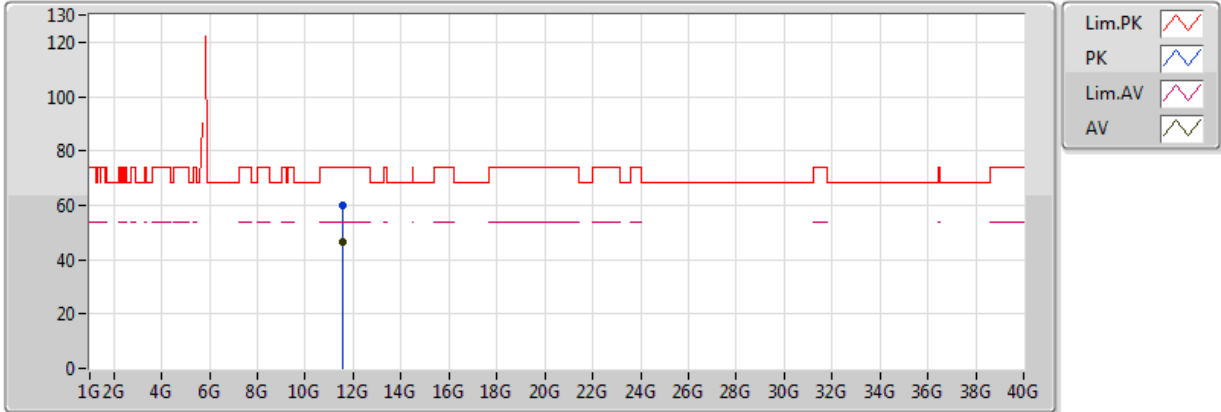
EUT Y_2TX
 Setting 25
 03-R-5
 FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.5823G	59.56	74.00	-14.44	14.30	3	Vertical	64	1.76	-
AV	11.5795G	46.61	54.00	-7.39	14.30	3	Vertical	64	1.76	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5785MHz_TX

16/08/2018



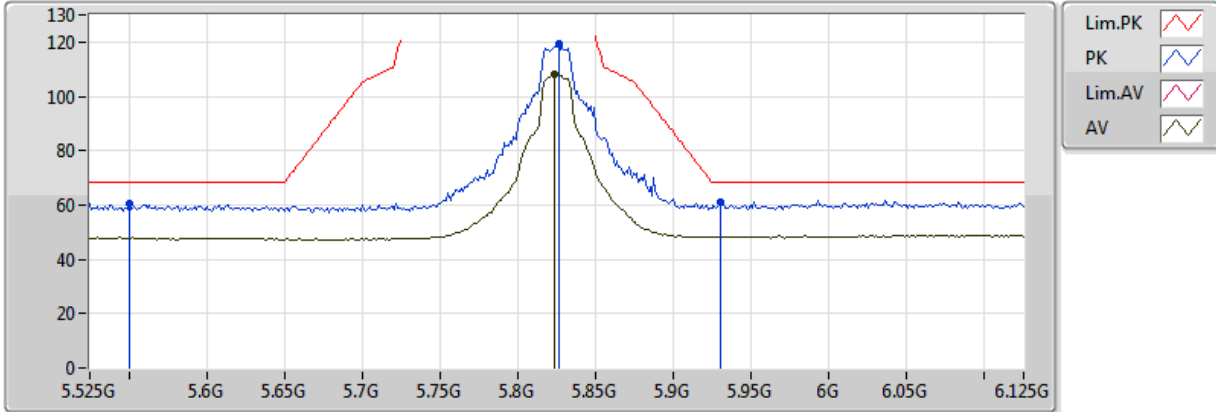
EUT Y_2TX
 Setting 25
 03-R-5
 FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.5656G	60.19	74.00	-13.81	14.29	3	Horizontal	157	2.31	-
AV	11.5676G	46.47	54.00	-7.53	14.29	3	Horizontal	157	2.31	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5825MHz_TX

27/07/2018



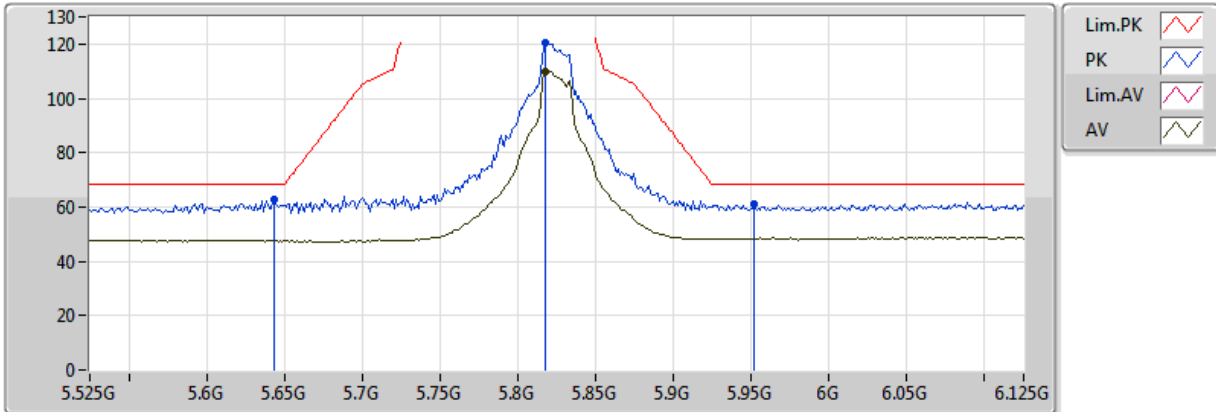
EUT Y_2TX
Setting 25
04-C-4-10
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.5502G	60.32	68.20	-7.88	8.66	3	Vertical	102	2.94	-
PK	5.8262G	119.17	Inf	-Inf	9.51	3	Vertical	102	2.94	-
AV	5.8238G	108.20	Inf	-Inf	9.51	3	Vertical	102	2.94	-
PK	5.9306G	61.16	68.20	-7.04	9.85	3	Vertical	102	2.94	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5825MHz_TX

27/07/2018



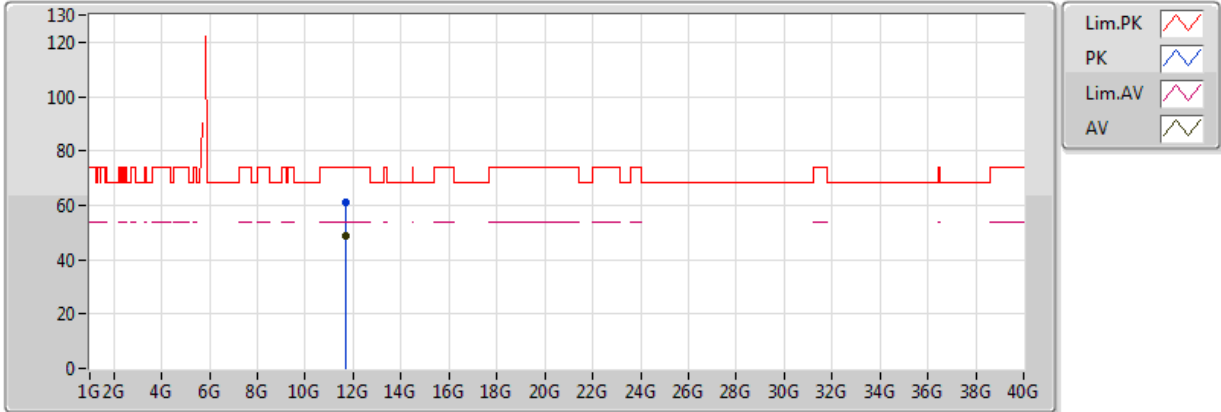
EUT_Y_2TX
Setting 25
04-C-4-10
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.6438G	63.02	68.20	-5.18	8.92	3	Horizontal	100	1.40	-
PK	5.8178G	120.47	Inf	-Inf	9.49	3	Horizontal	100	1.40	-
AV	5.8178G	110.05	Inf	-Inf	9.49	3	Horizontal	100	1.40	-
PK	5.9522G	61.02	68.20	-7.18	9.92	3	Horizontal	100	1.40	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5825MHz_TX

16/08/2018



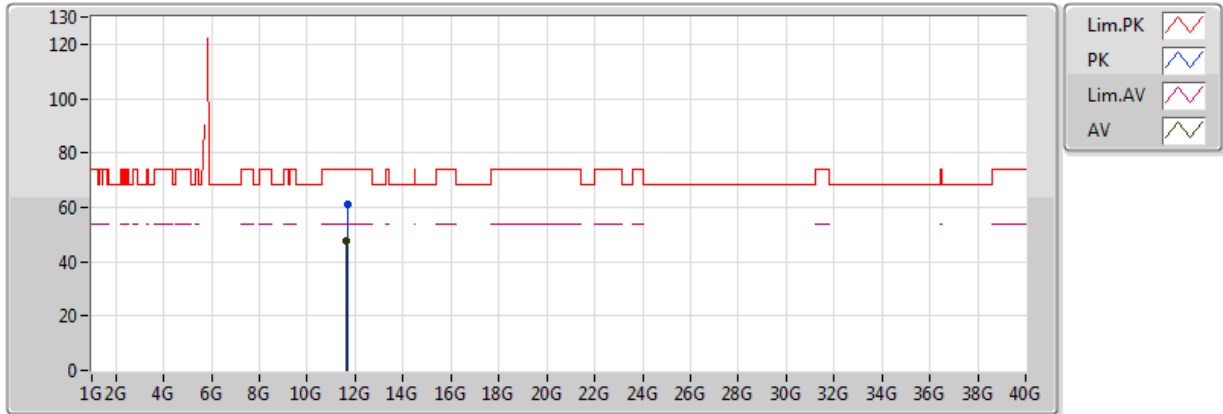
EUT Y_2TX
Setting 25
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.6597G	61.31	74.00	-12.69	14.34	3	Vertical	92	2.92	-
AV	11.6603G	48.82	54.00	-5.18	14.34	3	Vertical	92	2.92	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5825MHz_TX

16/08/2018



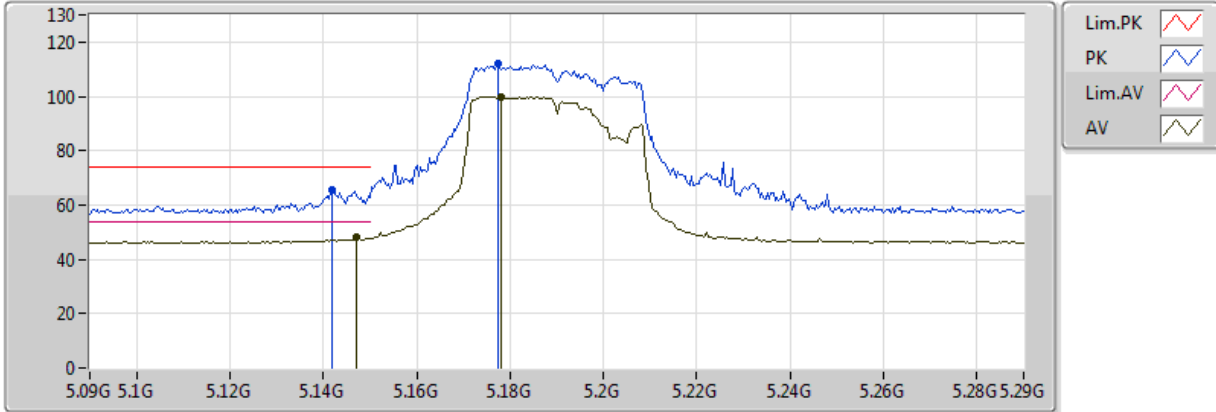
EUT Y_2TX
Setting 25
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.6578G	61.07	74.00	-12.93	14.34	3	Horizontal	158	1.89	-
AV	11.6496G	47.45	54.00	-6.55	14.33	3	Horizontal	158	1.89	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5190MHz_TX

03/08/2018



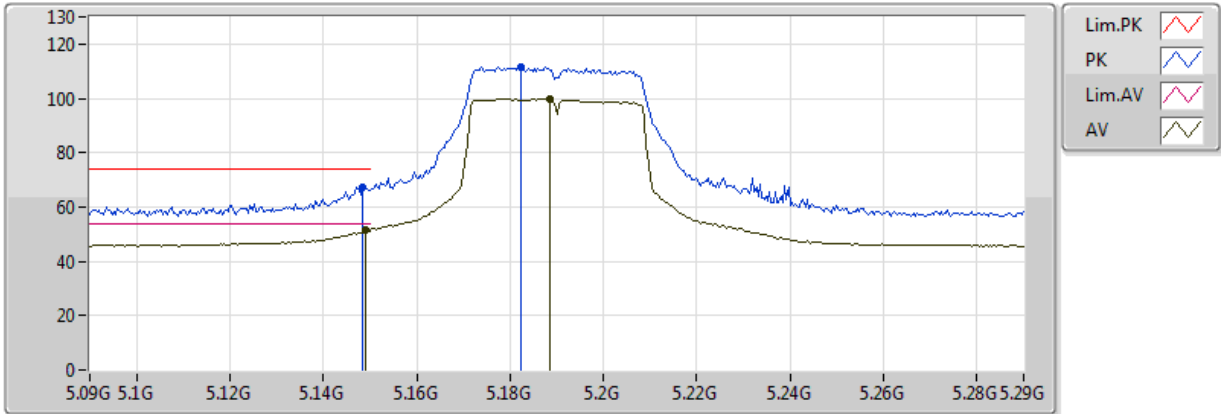
EUT Y_2TX
Setting 18.5
01-C-4-10
FSP(100304)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.142G	65.81	74.00	-8.19	4.89	3	Vertical	267	2.32	-
AV	5.1472G	48.18	54.00	-5.82	4.90	3	Vertical	267	2.32	-
PK	5.1776G	111.84	Inf	-Inf	4.93	3	Vertical	267	2.32	-
AV	5.178G	99.75	Inf	-Inf	4.93	3	Vertical	267	2.32	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5190MHz_TX

03/08/2018



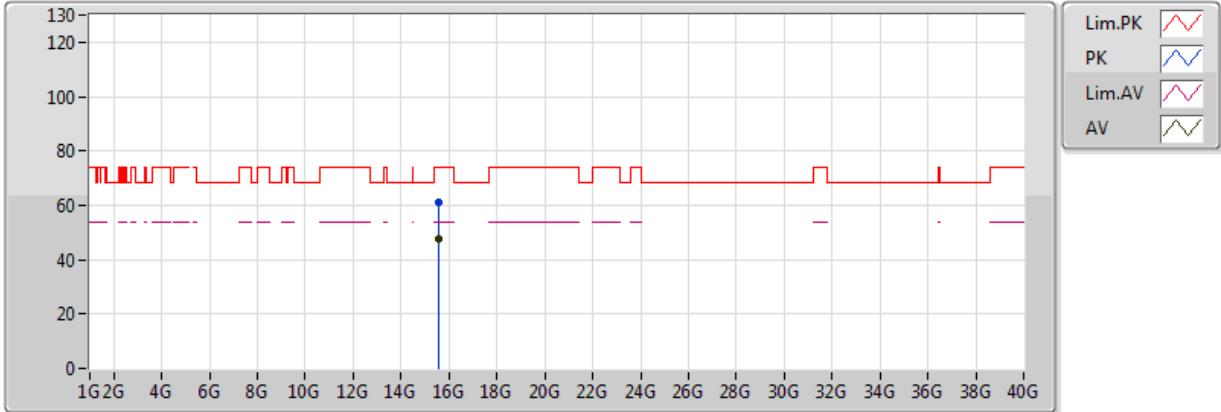
EUT_Y_2TX
Setting 18.5
01-C-4-10
FSP(100304)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1484G	67.50	74.00	-6.50	4.90	3	Horizontal	298	2.21	-
AV	5.1492G	51.37	54.00	-2.63	4.90	3	Horizontal	298	2.21	-
PK	5.1824G	111.38	Inf	-Inf	4.94	3	Horizontal	298	2.21	-
AV	5.1884G	99.75	Inf	-Inf	4.95	3	Horizontal	298	2.21	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5190MHz_TX

16/08/2018



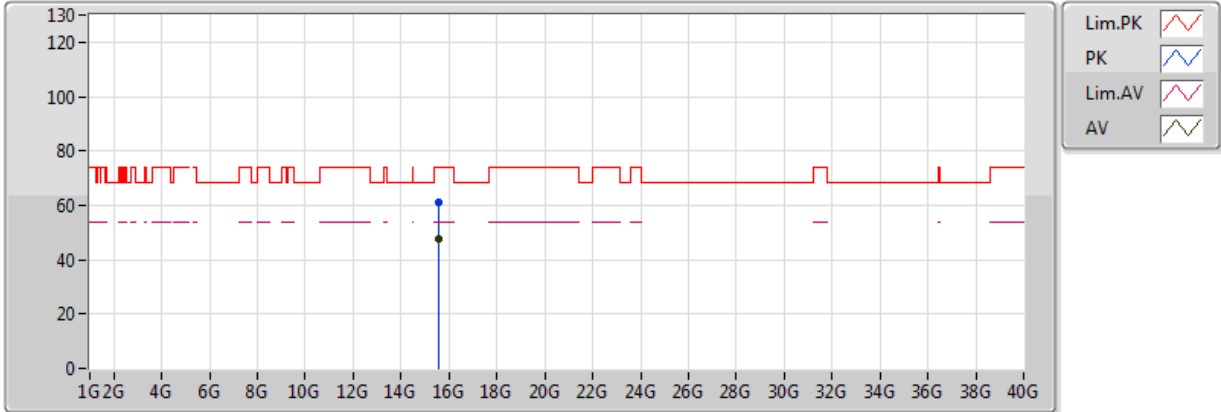
EUT_Y_2TX
Setting 18.5
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.56844G	60.98	74.00	-13.02	16.15	3	Vertical	358	1.50	-
AV	15.58398G	47.85	54.00	-6.15	16.09	3	Vertical	358	1.50	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5190MHz_TX

16/08/2018



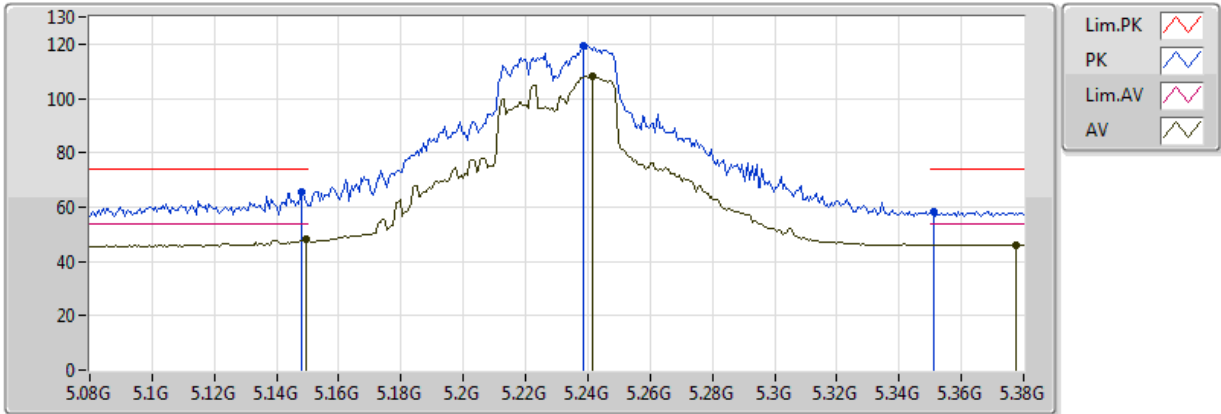
EUT Y_2TX
Setting 18.5
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.58038G	61.09	74.00	-12.91	16.11	3	Horizontal	218	1.50	-
AV	15.57948G	47.76	54.00	-6.24	16.11	3	Horizontal	218	1.50	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5230MHz_TX

03/08/2018



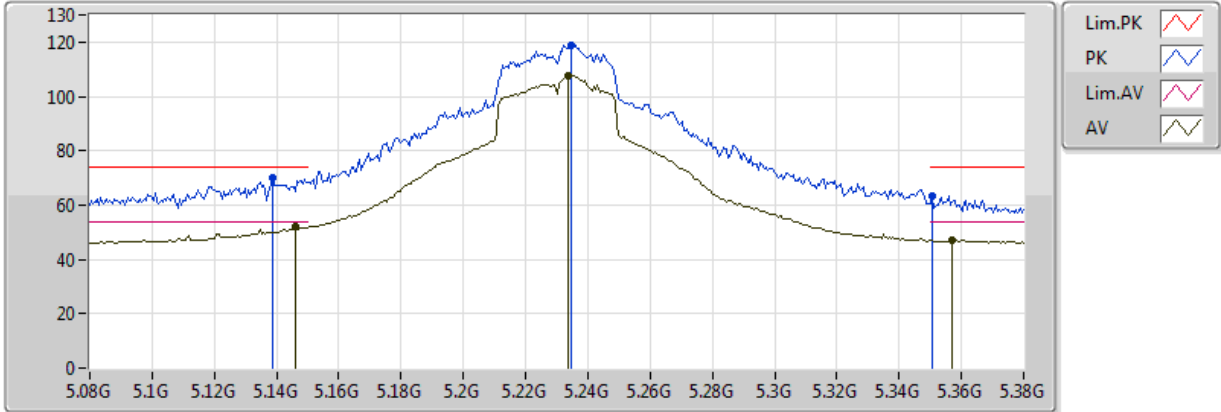
EUT Y_2TX
Setting 25
01-C-4-10
FSP(100304)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1478G	65.66	74.00	-8.34	4.90	3	Vertical	261	2.14	-
AV	5.1496G	48.28	54.00	-5.72	4.90	3	Vertical	261	2.14	-
PK	5.2384G	119.36	Inf	-Inf	5.13	3	Vertical	261	2.14	-
AV	5.2414G	108.19	Inf	-Inf	5.15	3	Vertical	261	2.14	-
PK	5.3512G	58.41	74.00	-15.59	5.60	3	Vertical	261	2.14	-
AV	5.3776G	46.21	54.00	-7.79	5.70	3	Vertical	261	2.14	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5230MHz_TX

03/08/2018



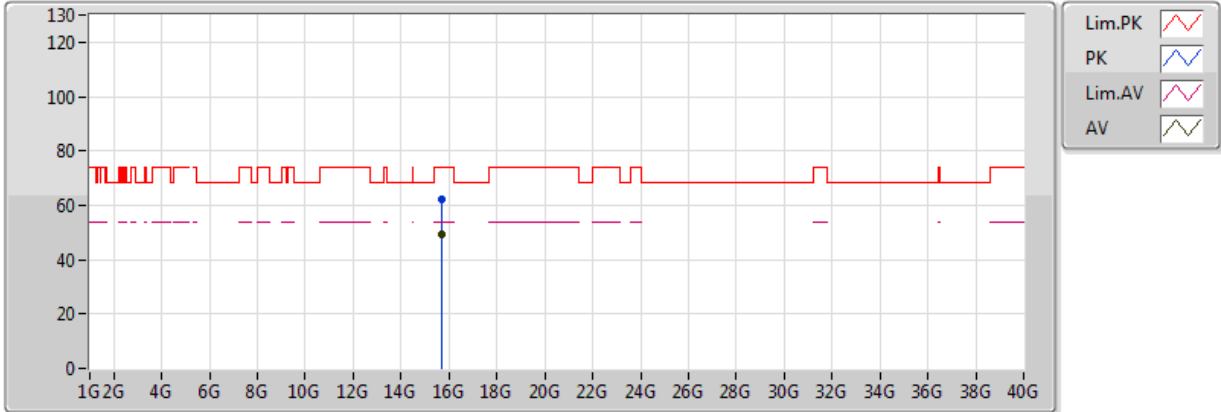
EUT Y_2TX
Setting 25
02-R-4-10
FSU(100015)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1388G	69.86	74.00	-4.14	8.53	3	Horizontal	264	1.56	-
AV	5.146G	51.92	54.00	-2.08	8.54	3	Horizontal	264	1.56	-
PK	5.2348G	118.83	Inf	-Inf	8.69	3	Horizontal	264	1.56	-
AV	5.2336G	107.52	Inf	-Inf	8.68	3	Horizontal	264	1.56	-
PK	5.3506G	63.22	74.00	-10.78	8.84	3	Horizontal	264	1.56	-
AV	5.3572G	47.09	54.00	-6.91	8.84	3	Horizontal	264	1.56	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5230MHz_TX

16/08/2018



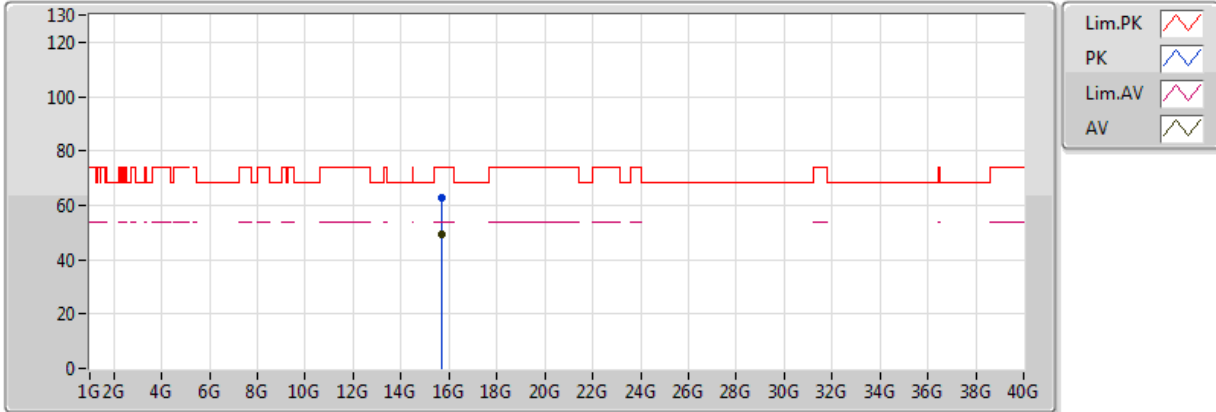
EUT Y_2TX
Setting 25
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.67728G	62.45	74.00	-11.55	15.78	3	Vertical	355	1.45	-
AV	15.67914G	49.11	54.00	-4.89	15.77	3	Vertical	355	1.45	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5230MHz_TX

16/08/2018



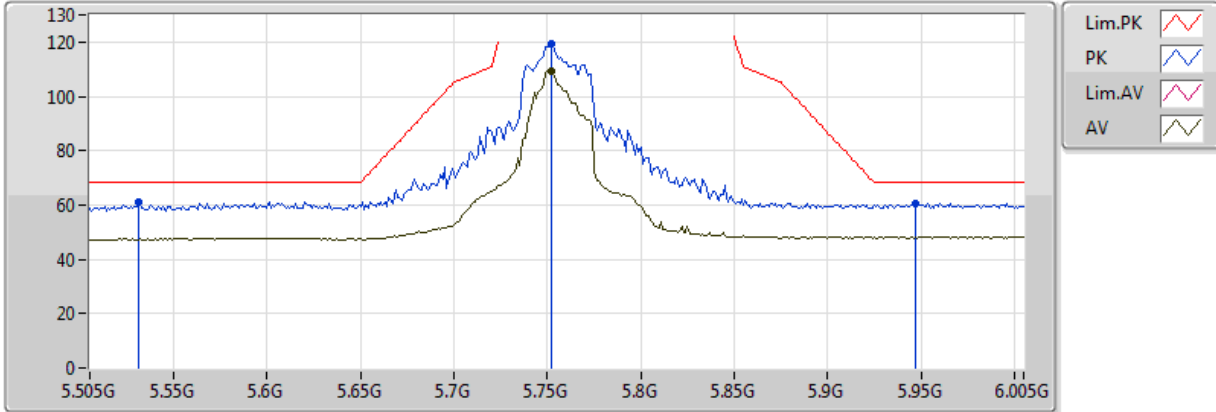
EUT Y_2TX
 Setting 25
 03-R-5
 FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.6762G	62.90	74.00	-11.10	15.78	3	Horizontal	335	1.50	-
AV	15.67524G	49.31	54.00	-4.69	15.79	3	Horizontal	335	1.50	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5755MHz_TX

30/07/2018



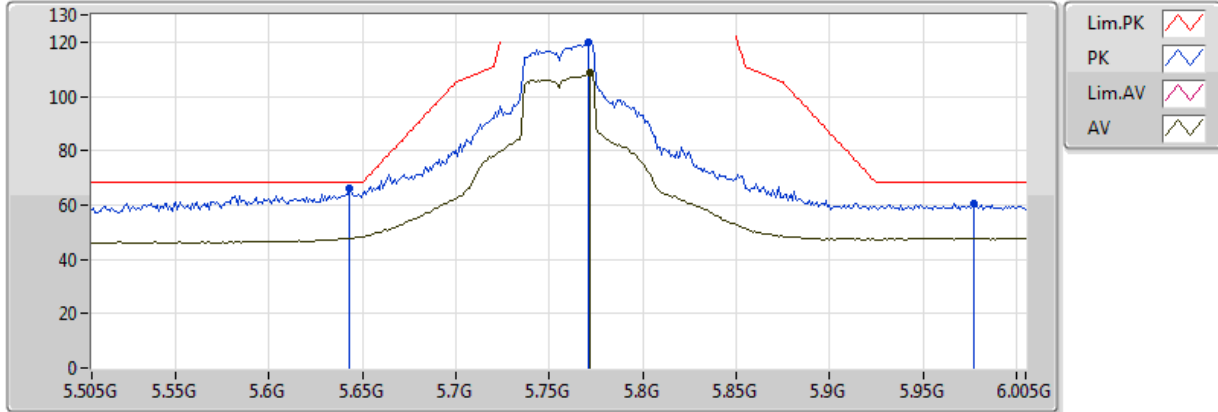
EUT_Y_2TX
Setting 23
01-C-4-10
FSP(100304)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.531G	61.35	68.20	-6.85	6.08	3	Vertical	247	2.11	-
PK	5.752G	119.24	Inf	-Inf	6.90	3	Vertical	247	2.11	-
AV	5.752G	109.14	Inf	-Inf	6.90	3	Vertical	247	2.11	-
PK	5.947G	60.78	68.20	-7.42	7.38	3	Vertical	247	2.11	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5755MHz_TX

27/07/2018



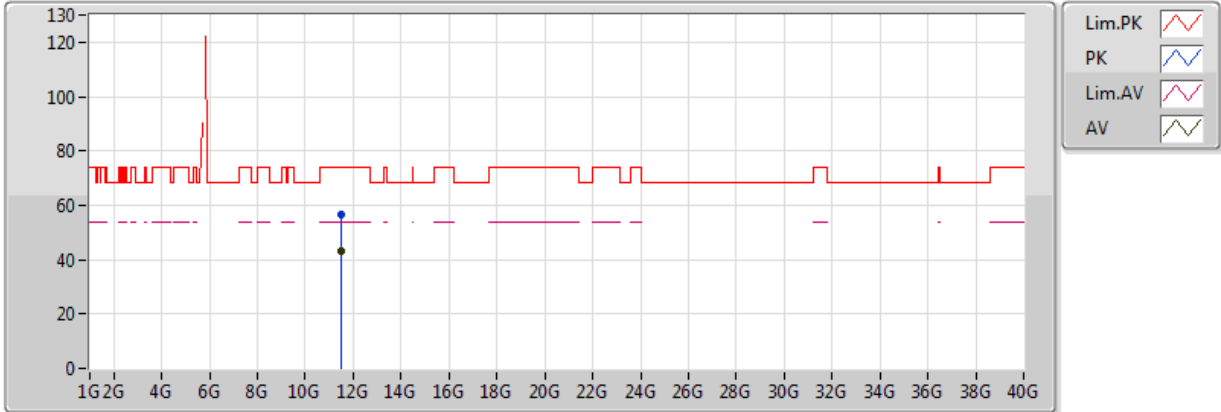
EUT_Y_2TX
Setting 23
02-R-4-10
FSU(100015)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.643G	66.23	68.20	-1.97	8.92	3	Horizontal	295	1.55	-
PK	5.771G	120.12	Inf	-Inf	9.34	3	Horizontal	295	1.55	-
AV	5.772G	108.55	Inf	-Inf	9.34	3	Horizontal	295	1.55	-
PK	5.977G	60.49	68.20	-7.71	10.00	3	Horizontal	295	1.55	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5755MHz_TX

16/08/2018



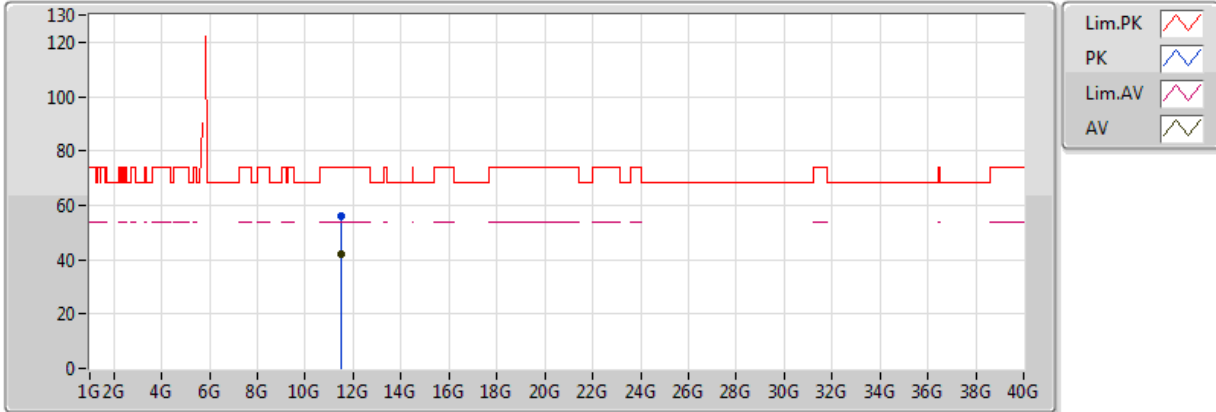
EUT Y_2TX
Setting 23
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.50676G	56.42	74.00	-17.58	14.26	3	Vertical	324	2.81	-
AV	11.51G	42.93	54.00	-11.07	14.26	3	Vertical	324	2.81	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5755MHz_TX

16/08/2018



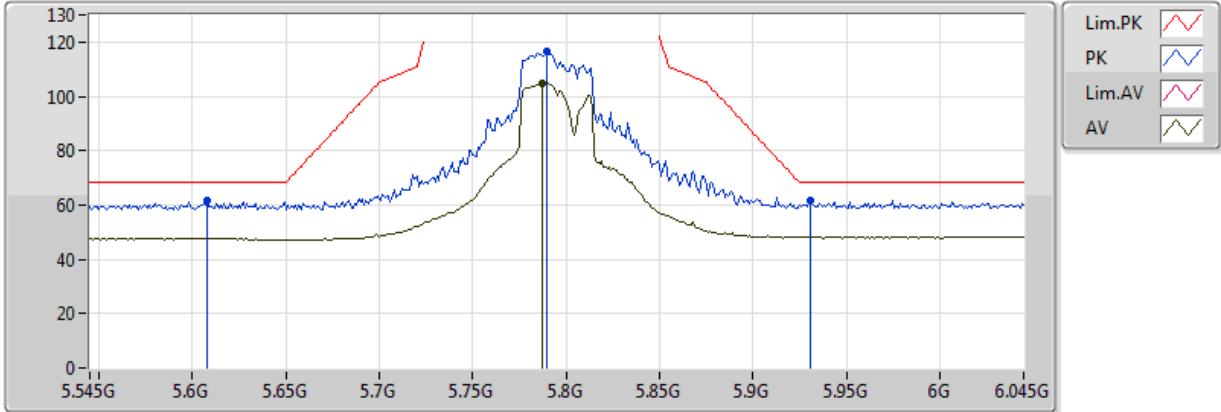
EUT_Y_2TX
Setting 23
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.50442G	56.01	74.00	-17.99	14.26	3	Horizontal	32	1.75	-
AV	11.5004G	42.29	54.00	-11.71	14.26	3	Horizontal	32	1.75	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5795MHz_TX

30/07/2018



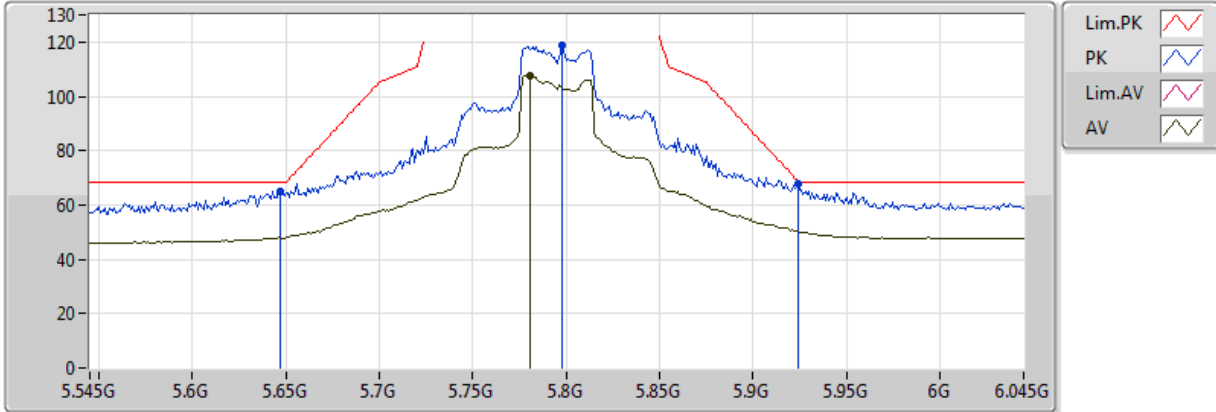
EUT Y_2TX
Setting 23.5
01-C-4-10
FSP(100304)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.608G	61.51	68.20	-6.69	6.30	3	Vertical	265	1.89	-
PK	5.79G	116.39	Inf	-Inf	7.06	3	Vertical	265	1.89	-
AV	5.787G	104.84	Inf	-Inf	7.05	3	Vertical	265	1.89	-
PK	5.931G	61.61	68.20	-6.59	7.35	3	Vertical	265	1.89	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5795MHz_TX

27/07/2018



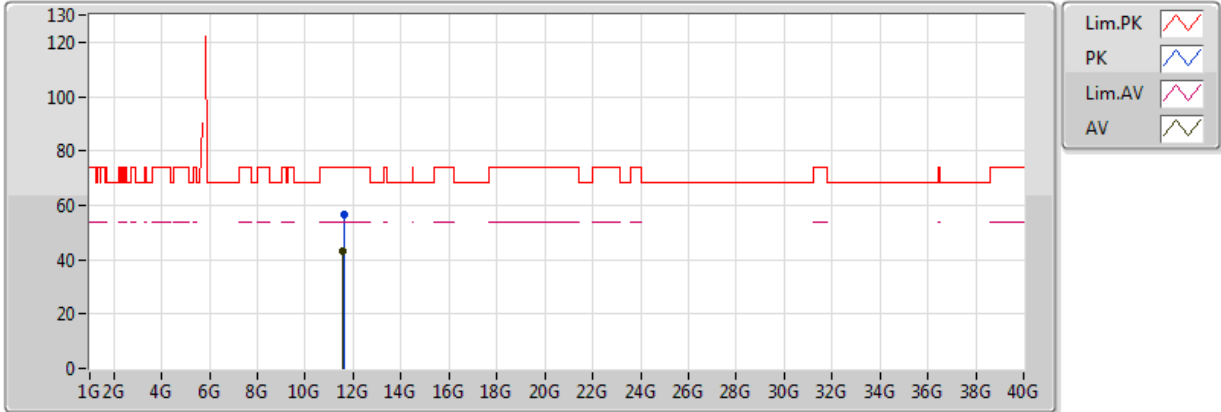
EUT_Y_2TX
Setting 23.5
02-R-4-10
FSU(100015)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.647G	65.02	68.20	-3.18	8.93	3	Horizontal	306	1.34	-
PK	5.798G	118.56	Inf	-Inf	9.42	3	Horizontal	306	1.34	-
AV	5.781G	107.64	Inf	-Inf	9.37	3	Horizontal	306	1.34	-
PK	5.924G	67.58	68.94	-1.36	9.82	3	Horizontal	306	1.34	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5795MHz_TX

16/08/2018



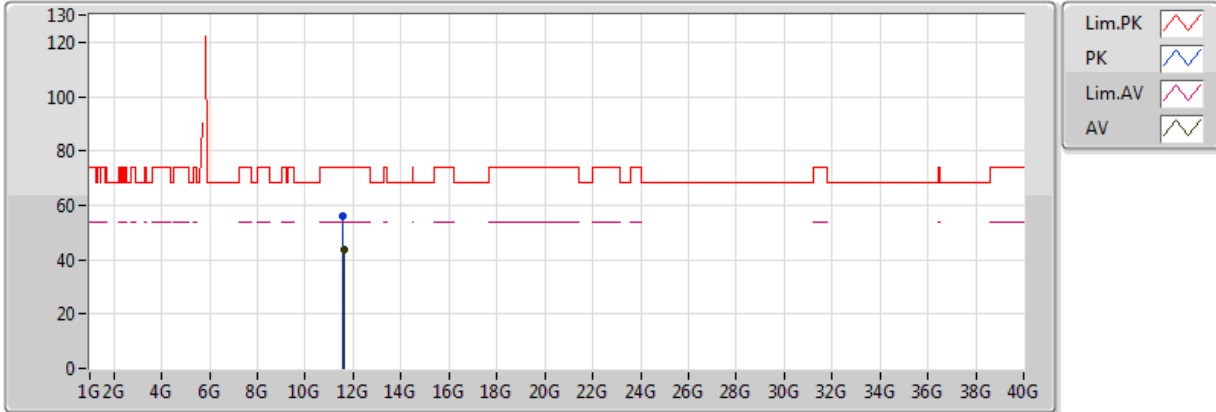
EUT Y_2TX
 Setting 23.5
 03-R-5
 FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.59612G	56.39	74.00	-17.61	14.31	3	Vertical	310	2.16	-
AV	11.5924G	43.14	54.00	-10.86	14.30	3	Vertical	310	2.16	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5795MHz_TX

16/08/2018



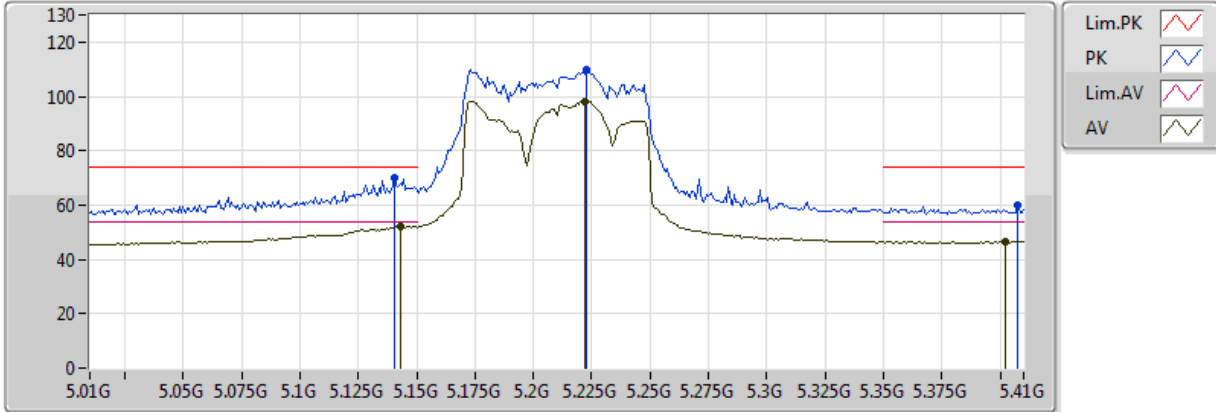
EUT Y_2TX
 Setting 23.5
 03-R-5
 FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.58952G	55.93	74.00	-18.07	14.30	3	Horizontal	1	1.63	-
AV	11.60458G	43.71	54.00	-10.29	14.31	3	Horizontal	1	1.63	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5210MHz_TX

16/08/2018



EUT Y_2TX
Setting 18
01-C-4-10
FSP(100304)

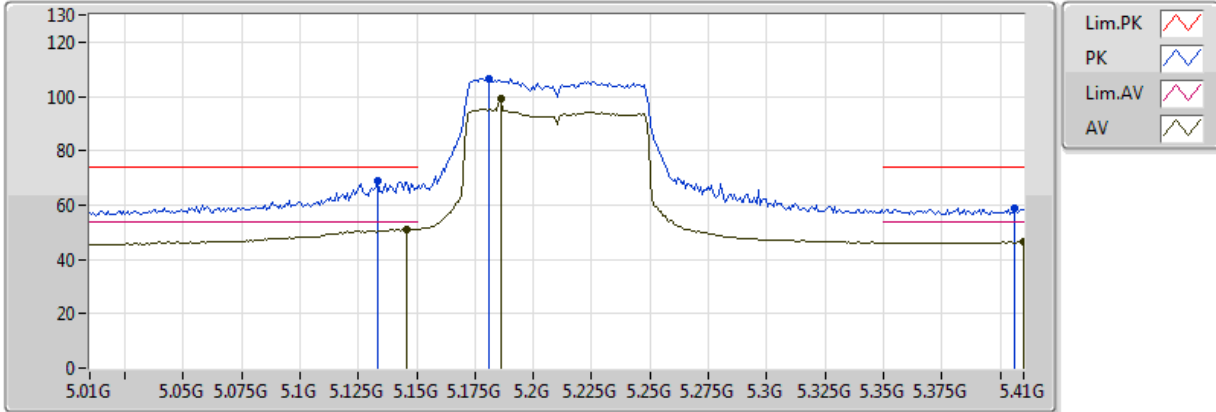
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1404G	70.21	74.00	-3.79	4.88	3	Vertical	249	1.77	-
AV	5.1428G	52.06	54.00	-1.94	4.89	3	Vertical	249	1.77	-
PK	5.2228G	109.65	Inf	-Inf	5.06	3	Vertical	249	1.77	-
AV	5.222G	98.31	Inf	-Inf	5.06	3	Vertical	249	1.77	-
PK	5.4076G	59.87	74.00	-14.13	5.80	3	Vertical	249	1.77	-
AV	5.402G	46.52	54.00	-7.48	5.79	3	Vertical	249	1.77	-



802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5210MHz_TX

16/08/2018



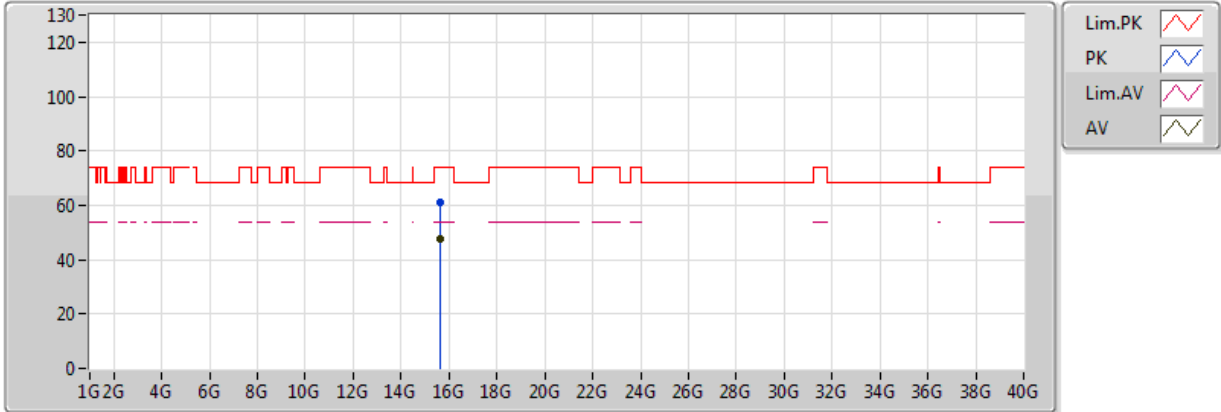
EUT_Y_2TX
Setting 18
01-C-4-10
FSP(100304)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1332G	69.11	74.00	-4.89	4.88	3	Horizontal	85	1.65	-
AV	5.146G	51.18	54.00	-2.82	4.89	3	Horizontal	85	1.65	-
PK	5.1812G	106.74	Inf	-Inf	4.94	3	Horizontal	85	1.65	-
AV	5.186G	99.09	Inf	-Inf	4.94	3	Horizontal	85	1.65	-
PK	5.406G	58.67	74.00	-15.33	5.80	3	Horizontal	85	1.65	-
AV	5.41G	46.40	54.00	-7.60	5.81	3	Horizontal	85	1.65	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5210MHz_TX

16/08/2018



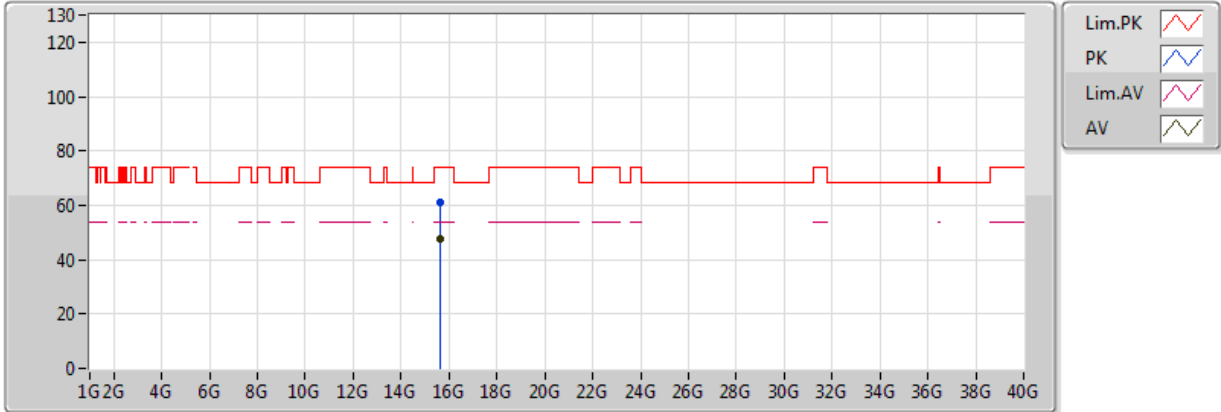
EUT_Y_2TX
Setting 18
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.6376G	61.09	74.00	-12.91	15.91	3	Vertical	317	1.50	-
AV	15.606G	47.40	54.00	-6.60	16.02	3	Vertical	317	1.50	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5210MHz_TX

16/08/2018



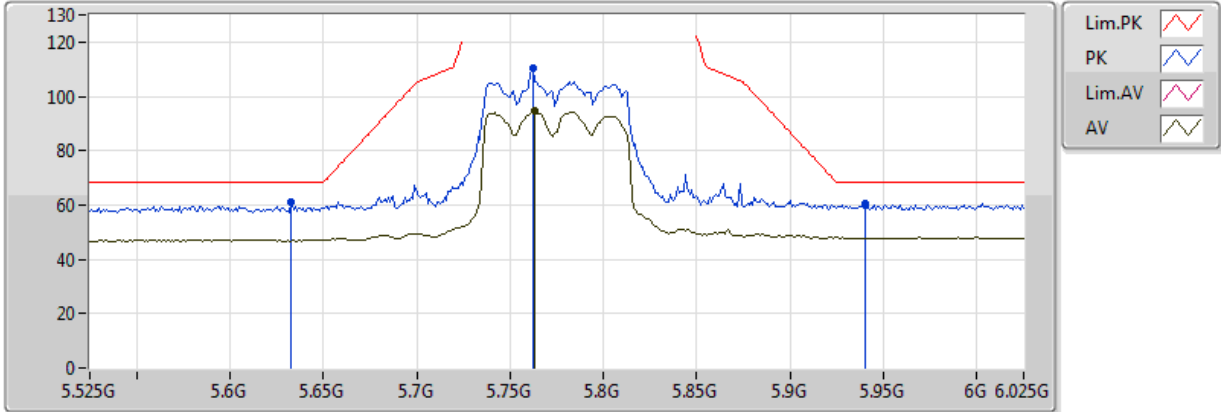
EUT Y_2TX
Setting 18
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.6071G	61.27	74.00	-12.73	16.02	3	Horizontal	108	1.50	-
AV	15.6066G	47.51	54.00	-6.49	16.02	3	Horizontal	108	1.50	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz_TX

03/08/2018



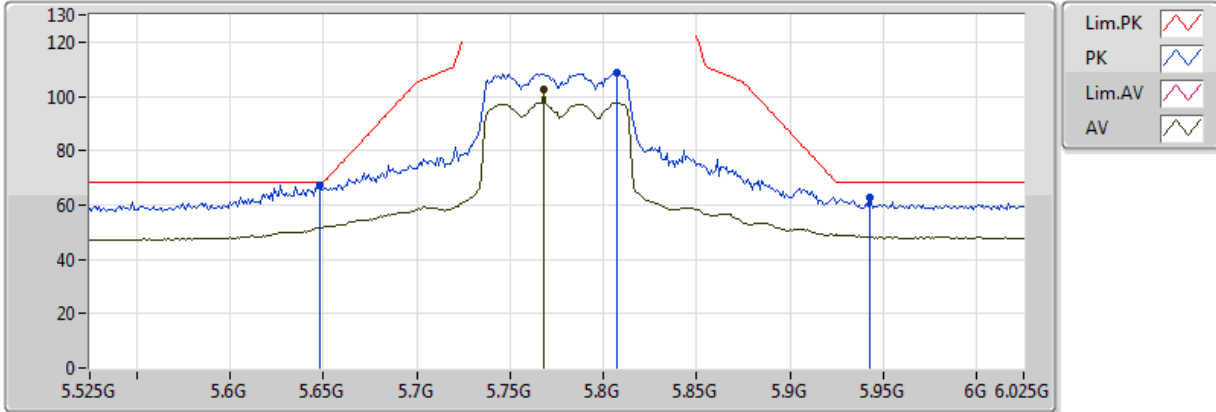
EUT Y_2TX
Setting 21
01-C-4-10
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.633G	61.10	68.20	-7.10	6.40	3	Vertical	280	1.50	-
PK	5.762G	110.56	Inf	-Inf	6.94	3	Vertical	280	1.50	-
AV	5.763G	94.42	Inf	-Inf	6.94	3	Vertical	280	1.50	-
PK	5.94G	60.49	68.20	-7.71	7.36	3	Vertical	280	1.50	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz_TX

03/08/2018



EUT Y_2TX
Setting 21
01-C-4-10
FSP(100142)

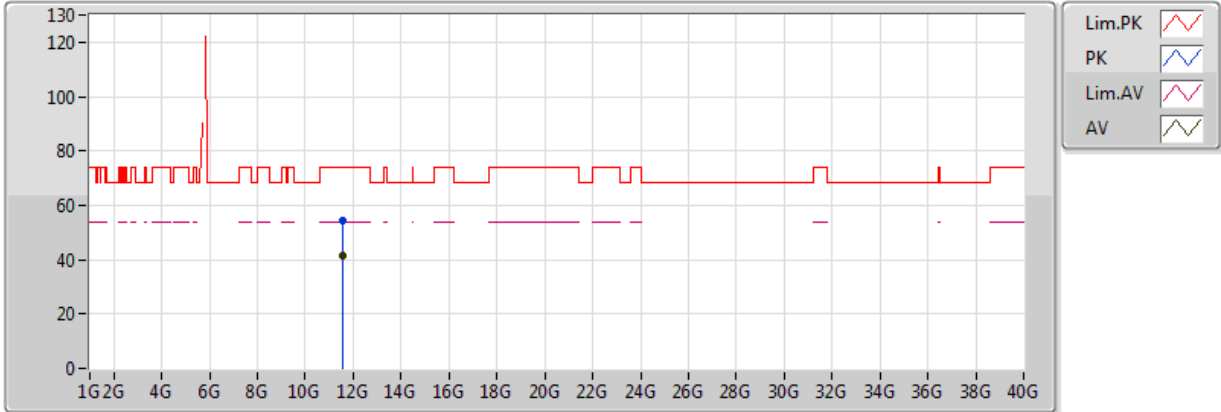
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.648G	67.12	68.20	-1.08	6.46	3	Horizontal	282	1.50	-
PK	5.807G	108.66	Inf	-Inf	7.11	3	Horizontal	282	1.50	-
AV	5.768G	102.62	Inf	-Inf	6.97	3	Horizontal	282	1.50	-
PK	5.943G	62.57	68.20	-5.63	7.37	3	Horizontal	282	1.50	-



802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz_TX

16/08/2018



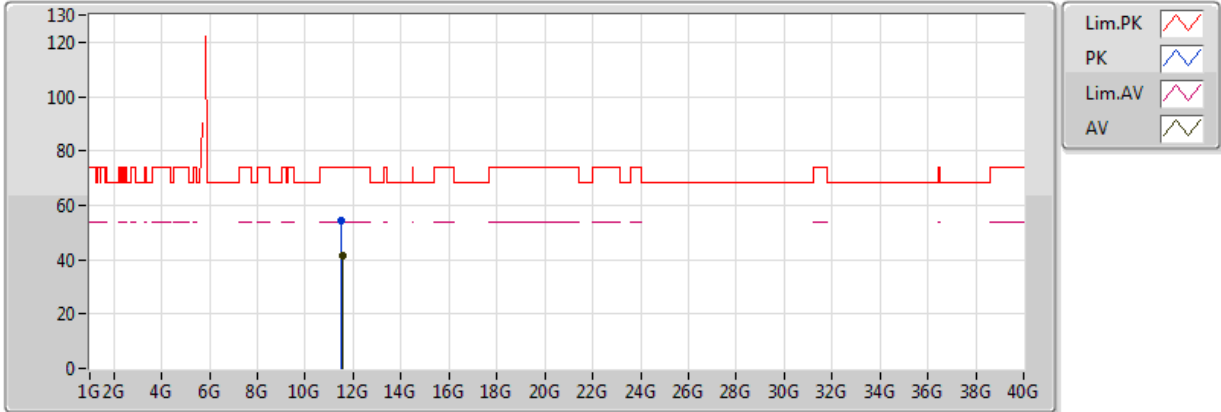
EUT_Y_2TX
 Setting 21
 03-R-5
 FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.5643G	54.61	74.00	-19.39	14.29	3	Vertical	328	1.01	-
AV	11.5697G	41.44	54.00	-12.56	14.29	3	Vertical	328	1.01	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz_TX

16/08/2018



EUT_Y_2TX
Setting 21
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.5269G	54.39	74.00	-19.61	14.27	3	Horizontal	323	2.18	-
AV	11.5699G	41.49	54.00	-12.51	14.29	3	Horizontal	323	2.18	-

