



FCC Test Report

Equipment : Linksys Tri-Band Wireless-AC Router
Brand Name : Linksys
Model No. : EA8300, EA8250
FCC ID : Q87-EA8300
Standard : 47 CFR FCC Part 15.407
Operating Band : 5150 MHz – 5250 MHz
5725 MHz – 5850 MHz
Applicant : Linksys LLC
121 Theory, Irvine CA 92617, United States
Function : ☐ Outdoor; ☒ Indoor; ☐ Fixed P2P
☐ Client

The product sample received on Dec. 07, 2016 and completely tested on Feb. 21, 2017. We, SPORTON, 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 test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

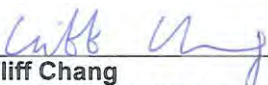

Cliff Chang
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Table of Contents

1	GENERAL DESCRIPTION	5
1.1	Information.....	5
1.2	Testing Applied Standards	8
1.3	Testing Location Information	8
1.4	Measurement Uncertainty	9
2	TEST CONFIGURATION OF EUT	10
2.1	Test Channel Mode	10
2.2	The Worst Case Measurement Configuration.....	11
2.3	EUT Operation during Test	13
2.4	Accessories	14
2.5	Support Equipment.....	14
2.6	Test Setup Diagram	15
3	TRANSMITTER TEST RESULT	19
3.1	AC Power-line Conducted Emissions	19
3.2	Emission Bandwidth	21
3.3	Maximum Conducted Output Power	22
3.4	Peak Power Spectral Density.....	24
3.5	Unwanted Emissions.....	27
3.6	Frequency Stability.....	31
4	TEST EQUIPMENT AND CALIBRATION DATA	32
APPENDIX A. TEST RESULTS OF AC POWER-LINE CONDUCTED EMISSIONS		
APPENDIX B. TEST RESULTS OF EMISSION BANDWIDTH		
APPENDIX C. TEST RESULTS OF MAXIMUM CONDUCTED OUTPUT POWER		
APPENDIX D. TEST RESULTS OF PEAK POWER SPECTRAL DENSITY		
APPENDIX E. TEST RESULTS OF UNWANTED EMISSIONS		
APPENDIX F. TEST RESULTS OF FREQUENCY STABILITY		
APPENDIX G. TEST RESULTS OF RADIATED EMISSION CO-LOCATION		
APPENDIX H. TEST PHOTOS		
PHOTOGRAPHS OF EUT V01		

Summary of Test Result

Conformance Test Specifications			
Report Clause	Ref. Std. Clause	Description	Result
1.1.2	15.203	Antenna Requirement	Complied
3.1	15.207	AC Power-line Conducted Emissions	Complied
3.2	15.407(a)	Emission Bandwidth	Complied
3.3	15.407(a)	Maximum Conducted Output Power	Complied
3.4	15.407(a)	Peak Power Spectral Density	Complied
3.5	15.407(b)	Unwanted Emissions	Complied
3.6	15.407(g)	Frequency Stability	Complied



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FCC ID: Q87-EA8300

1 General Description

1.1 Information

1.1.1 RF General Information

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

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11a	20	2TX
5.15-5.25GHz	802.11a-BF	20	2TX
5.15-5.25GHz	802.11n HT20	20	2TX
5.15-5.25GHz	802.11n HT20-BF	20	2TX
5.15-5.25GHz	802.11ac VHT20	20	2TX
5.15-5.25GHz	802.11ac VHT20-BF	20	2TX
5.15-5.25GHz	802.11n HT40	40	2TX
5.15-5.25GHz	802.11n HT40-BF	40	2TX
5.15-5.25GHz	802.11ac VHT40	40	2TX
5.15-5.25GHz	802.11ac VHT40-BF	40	2TX
5.15-5.25GHz	802.11ac VHT80	80	2TX
5.15-5.25GHz	802.11ac VHT80-BF	80	2TX
5.725-5.85GHz	802.11a	20	2TX
5.725-5.85GHz	802.11a-BF	20	2TX
5.725-5.85GHz	802.11n HT20	20	2TX
5.725-5.85GHz	802.11n HT20-BF	20	2TX
5.725-5.85GHz	802.11ac VHT20	20	2TX
5.725-5.85GHz	802.11ac VHT20-BF	20	2TX
5.725-5.85GHz	802.11n HT40	40	2TX
5.725-5.85GHz	802.11n HT40-BF	40	2TX
5.725-5.85GHz	802.11ac VHT40	40	2TX
5.725-5.85GHz	802.11ac VHT40-BF	40	2TX
5.725-5.85GHz	802.11ac VHT80	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	P/N	Type	Connector	Gain (dBi)	
					2.4GHz	5GHz Band 4
1	ARISTOTLE	RFA-52-F90S-240-165	Dipole	I-PEX	2.70	3.14
2	ARISTOTLE	RFA-52-F90-195-105	Dipole	I-PEX	2.06	3.47
Ant.	Brand	P/N	Type	Connector	5GHz Band 1	
3	ARISTOTLE	RFA-05-F90-120	Dipole	I-PEX	3.59	
4	ARISTOTLE	RFA-05-F90S-165	Dipole	I-PEX	3.49	
Ant.	Brand	P/N	Type	Connector	Bluetooth	
5	PSA	RFMTA271200NNAB003	PIFA	N/A	2.54	

Note: The EUT has five antennas.

For WLAN 2.4GHz (2TX/2RX):

Ant. 1 (Port 1) and Ant. 2 (Port 2) could transmit/receive simultaneously.

For WLAN 5GHz (2TX/2RX):

For 5GHz Band 4: Ant. 1 (Port 1) and Ant. 2 (Port 2) could transmit/receive simultaneously.

For 5GHz Band 1: Ant. 3 (Port 1) and Ant. 4 (Port 2) could transmit/receive simultaneously.

For Bluetooth (1TX/1RX):

Only Ant. 5 (Port 1) can be used as transmitting/receiving antenna.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)
802.11a-BF	0.815	0.888
802.11ac VHT20-BF	0.868	0.615
802.11ac VHT40-BF	0.887	0.521
802.11ac VHT80-BF	0.873	0.59

1.1.4 EUT Operational Condition

EUT Power Type	From power adapter		
Beamforming Function	☒	With beamforming	☐ Without beamforming
	The product has beamforming function for 802.11a/g/n/ac.		

1.1.5 Table for Multiple Listing

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

Model No.	Description
EA8300	All models are identical except for the EA8300 supports 256QAM and the EA8250 disable 256QAM.
EA8250	

From the above models, model: EA8300 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 v01r03
- ◆ FCC KDB 644545 D03 v01
- ◆ FCC KDB 662911 D01 v02r01

1.3 Testing Location Information

Testing Location				
☐	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.	TEL : 886-3-327-3456	FAX : 886-3-318-0055
☒	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	Andy Tsai, Peter Lin	20°C / 58%	Feb. 06, 2017~Feb. 08, 2017
Radiated	03CH01-CB	Jay Luo, Jeff Wu, Steven Liang	25°C / 58%	Dec. 07, 2016~Feb. 21, 2017
AC Conduction	CO01-CB	Da Deng	22°C / 59%	Feb. 20, 2017~Feb. 21, 2017

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	9.74×10^{-8}	Confidence levels of 95%
Frequency Stability	6.06×10^{-8}	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11a-BF_(6Mbps)_2TX	-
5180MHz	21
5200MHz	25.5
5240MHz	25.5
5745MHz	25.5
5785MHz	25.5
5825MHz	25.5
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-
5180MHz	21
5200MHz	25.5
5240MHz	25.5
5745MHz	25.5
5785MHz	25.5
5825MHz	25.5
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-
5190MHz	19.5
5230MHz	25.5
5755MHz	25.5
5795MHz	25.5
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-
5210MHz	19
5775MHz	21.5

Note:

- ♦ VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.
- ♦ There are two modes of EUT, one is beamforming mode, and the other is non-beamforming mode for 802.11a/g/n/ac, after evaluating, beamforming mode has been evaluated to be the worst case, so it was selected to test and record in this test report.

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	CTX
1	WLAN 2.4GHz + Adapter 2
2	WLAN 5GHz + Adapter 2
3	Bluetooth + Adapter 2
Mode 2 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4~5 will follow this same test mode.	
4	WLAN 5GHz + Adapter 1
5	WLAN 5GHz + Adapter 3
For operating mode 2 is the worst case and it was record in this test report.	

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	CTX
1	EUT Z axis + WLAN 2.4GHz + Adapter 1
2	EUT Y axis + WLAN 2.4GHz + Adapter 1
Mode 1 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3~4 will follow this same test mode.	
3	EUT Z axis + WLAN 5GHz + Adapter 1
4	EUT Z axis + Bluetooth + Adapter 1
Mode 1 has been evaluated to be the worst case among Mode 1~4, thus measurement for Mode 5~6 will follow this same test mode.	
5	EUT Z axis + WLAN 2.4GHz + Adapter 2
6	EUT Z axis + WLAN 2.4GHz + Adapter 3
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
1	EUT Z axis
2	EUT Y axis
Mode 1 has been evaluated to be the worst case after evaluating. Consequently, measurement will follow this same test mode.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Test Condition	Radiated measurement
Operating Mode	Normal Link
1	EUT Z axis + WLAN 2.4GHz + WLAN 5GHz
2	EUT Y axis + WLAN 2.4GHz + WLAN 5GHz
For operating mode 1 is the worst case and it was record in this test report.	
Refer to Appendix G for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz
2	WLAN 5GHz + Bluetooth
Refer to Sporton Test Report No.: FA710901 for Co-location RF Exposure Evaluation	

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 98%.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories			
Power	Brand	Model	Rating
Adapter 1 (Fixed plug)	LEI	MU24-Y120200-A1	Input: 100-240Vac, 50/60Hz, 0.7A Output: 12Vdc, 2.0A
Adapter 2 (Fixed plug)	DVE	DSA-24PFM-12 FUS 120200	Input: 100-240Vac, 50/60Hz, 0.8A Output: 12Vdc, 2A
Adapter 3 (Interchangeable plug)	DVE	DSA-24PFM-12 FCA 120200	Input: 100-240Vac, 50/60Hz, 0.8A Output: 12Vdc, 2A
Others			
Plug*1 (for adapter 3 use only)			
RJ-45 cable: Non-shielded, 0.9m			

Note: Adapter does not affect the radio tests, there is only adapter 1 tested and recorded in this report.

2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E6430	DoC
2	Flash disk3.0	Transcend	JetFlash-700	DoC

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

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC

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

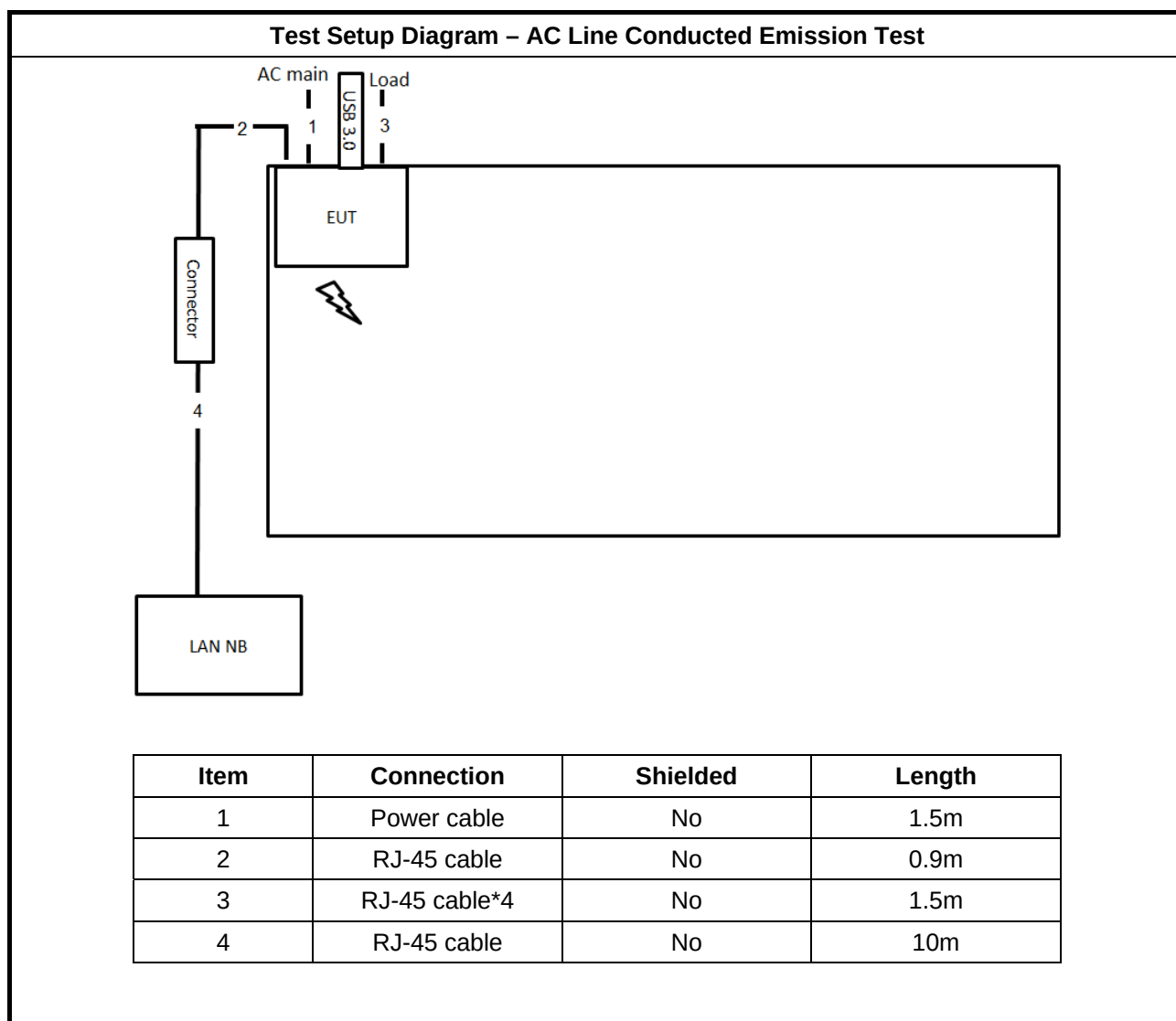
Non-beamforming mode:

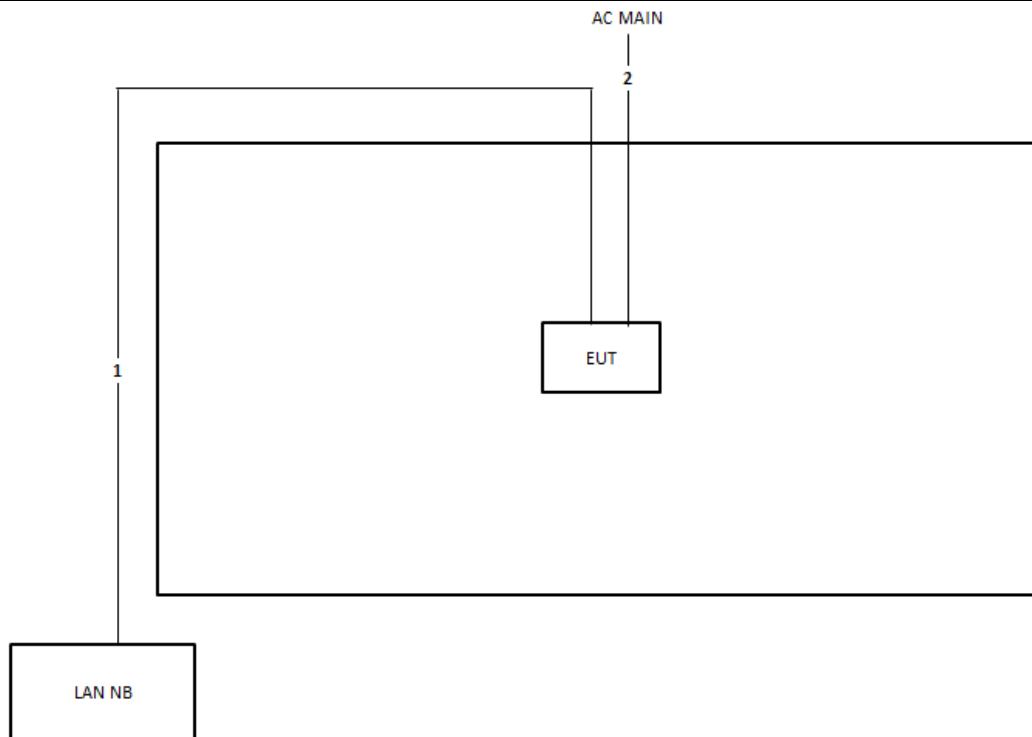
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC

Beamforming mode:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*2	DELL	E4300	DoC
2	RX Device (WLAN AP)	LINKSYS	1117-2253	DoC

2.6 Test Setup Diagram

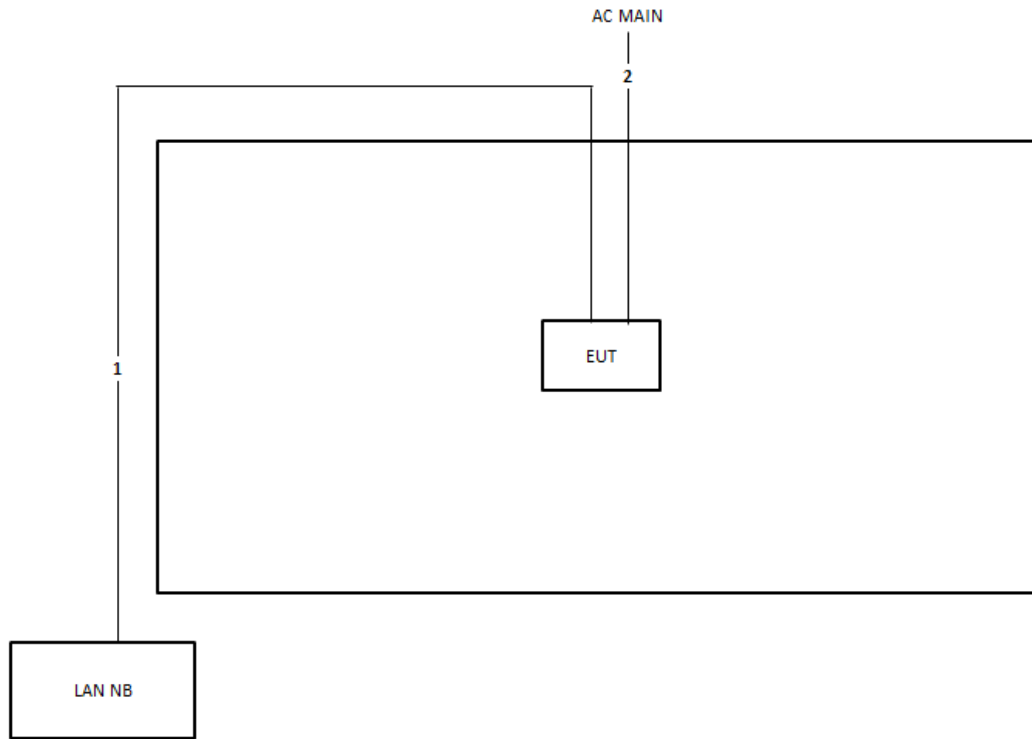


Test Setup Diagram - Radiated Test < 1GHz


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

Test Setup Diagram - Radiated Test > 1GHz

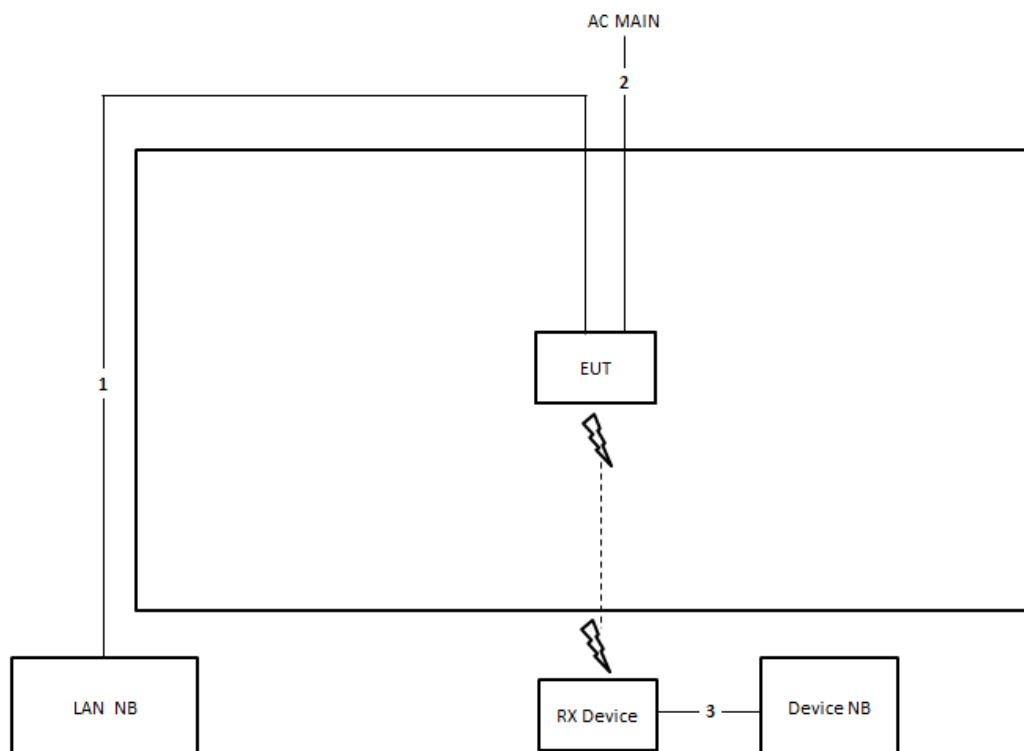
Non-beamforming mode:



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

Test Setup Diagram - Radiated Test > 1GHz

Beamforming mode:



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

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

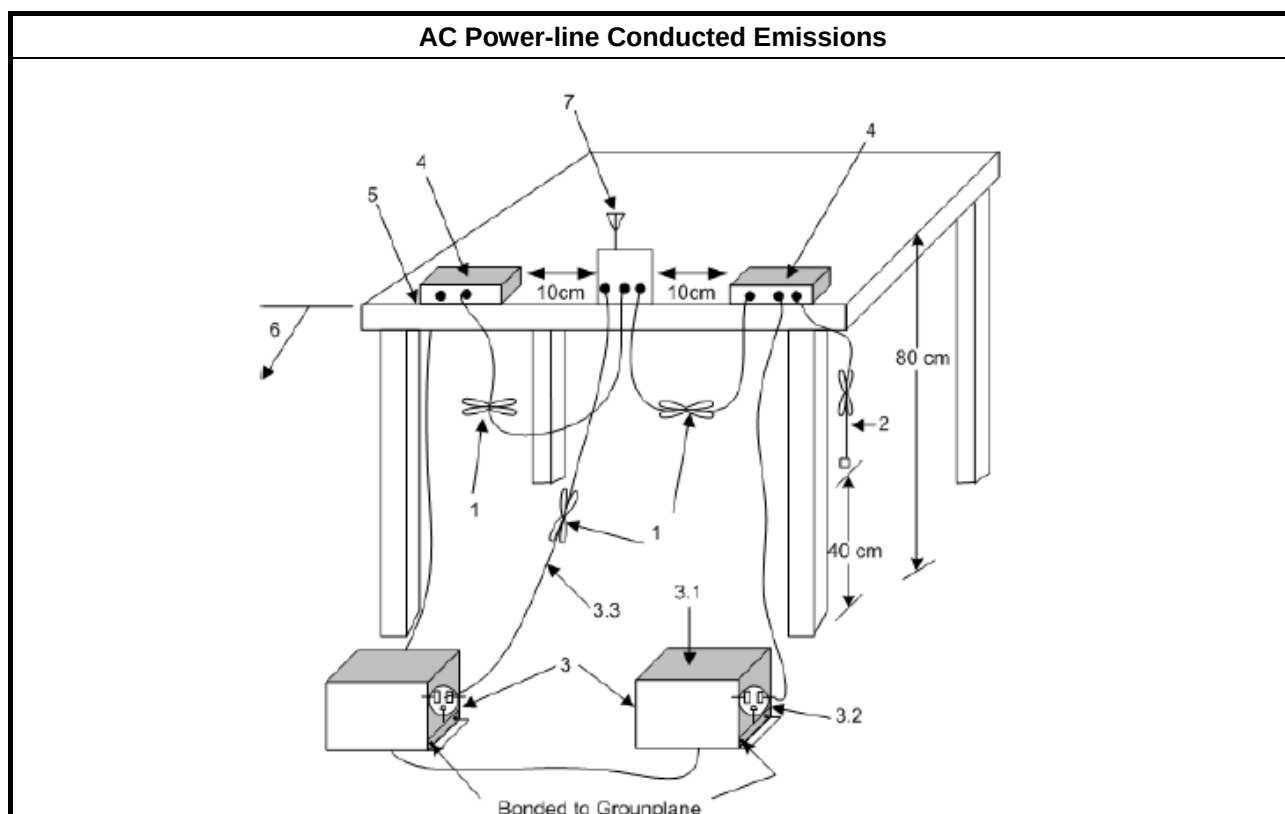
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup





3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

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

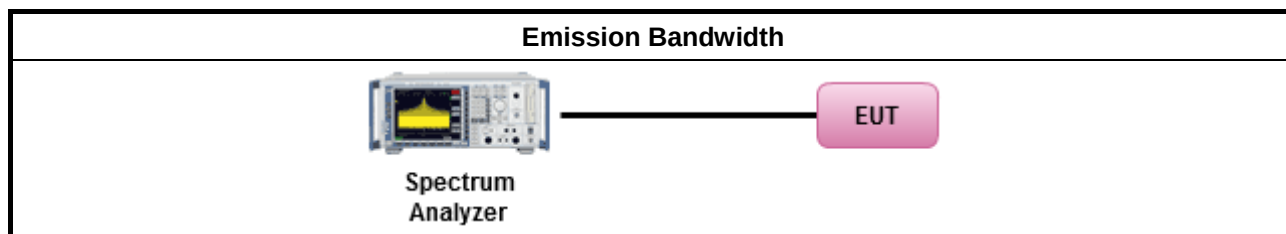
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

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

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

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

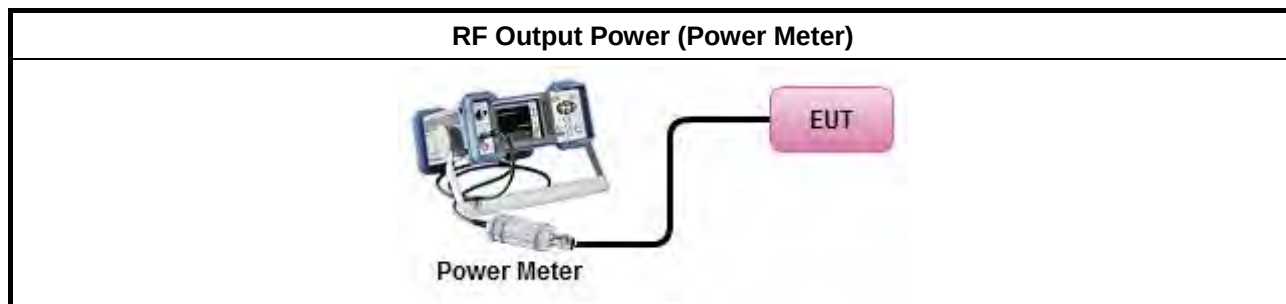
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
Maximum Conducted Output Power	
Average over on/off periods with duty factor	
☐	Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
☐	Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
Wideband RF power meter and average over on/off periods with duty factor	
☒	Refer as FCC KDB 789033, clause E Method PM-G (using an RF average power meter).
For conducted measurement.	
If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.	
If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (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	
☒ For the 5.15-5.25 GHz band:	
	- Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. - Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. - Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$. - Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.
☐ For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
☐ For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
☒ For the 5.725-5.85 GHz band:	
	- Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
LE-LAN Devices	
☐ For the 5.15-5.25 GHz band, the peak power spectral density (PPSD) ≤ 4 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.	
☐ For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.	
	e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for $0^\circ \leq \theta < 8^\circ$; -13 - 0.716 (θ-8) dBW/MHz for $8^\circ \leq \theta < 40^\circ$ -35.9 - 1.22 (θ-40) dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$
☐ For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.	
☐ For the 5.725-5.85 GHz band:	
	- Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz G_{TX} = the maximum transmitting antenna directional gain in dBi.	

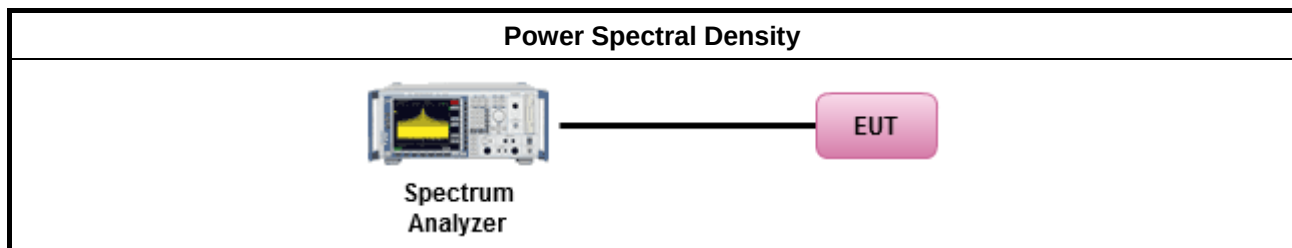
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options:	
☐ Refer as FCC KDB 789033, F5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth [duty cycle ≥ 98% or external video / power trigger]	
☒ Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).	
☐ Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed) duty cycle < 98% and average over on/off periods with duty factor	
☒ Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).	
☐ Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)	
For conducted measurement.	
If the EUT supports multiple transmit chains using options given below:	
☒ Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.	
☐ Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,	
☐ Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.	
If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$	

3.4.4 Test Setup





3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix D

3.5 Unwanted Emissions

3.5.1 Transmitter 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.

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

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

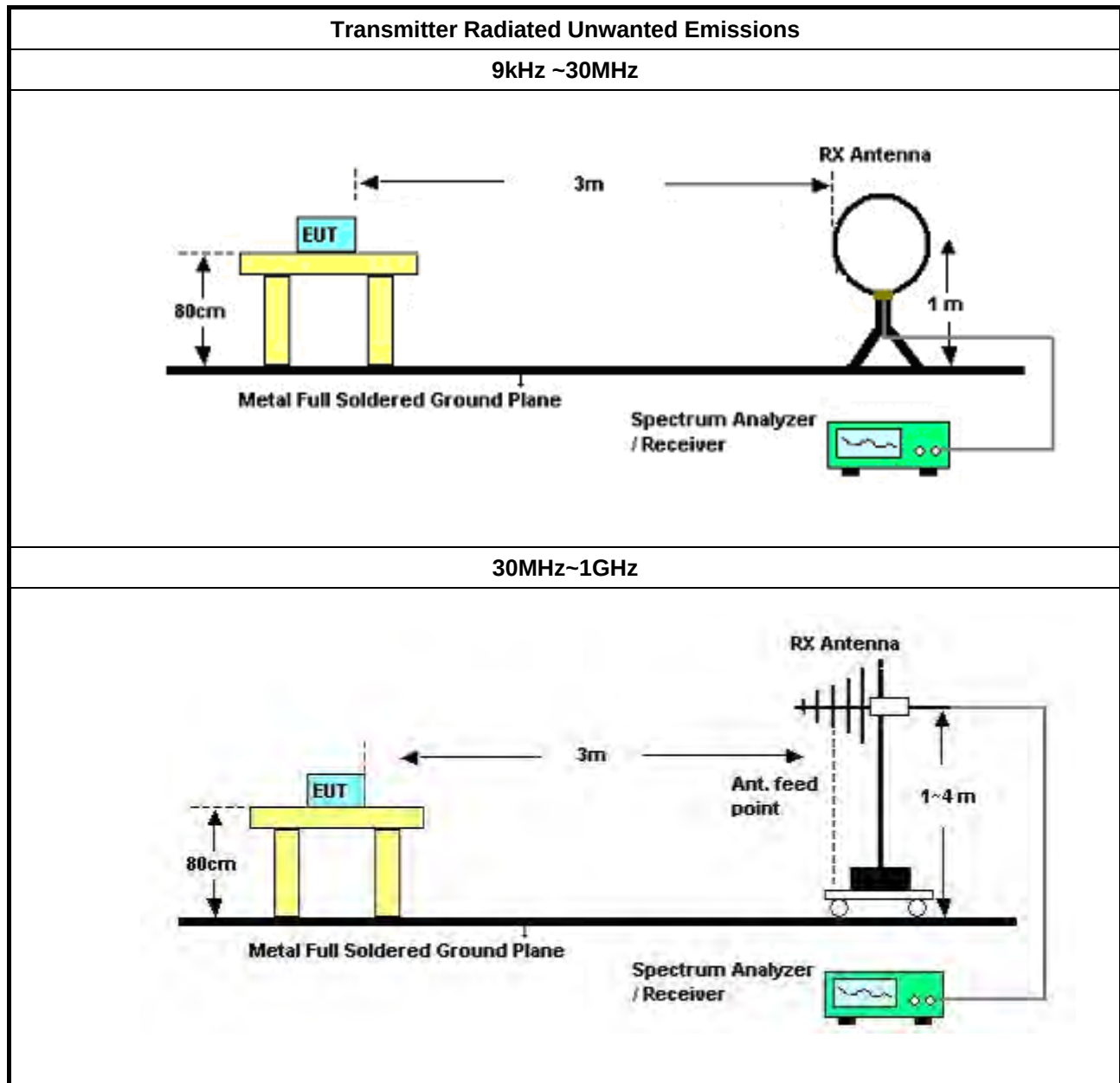
3.5.2 Measuring Instruments

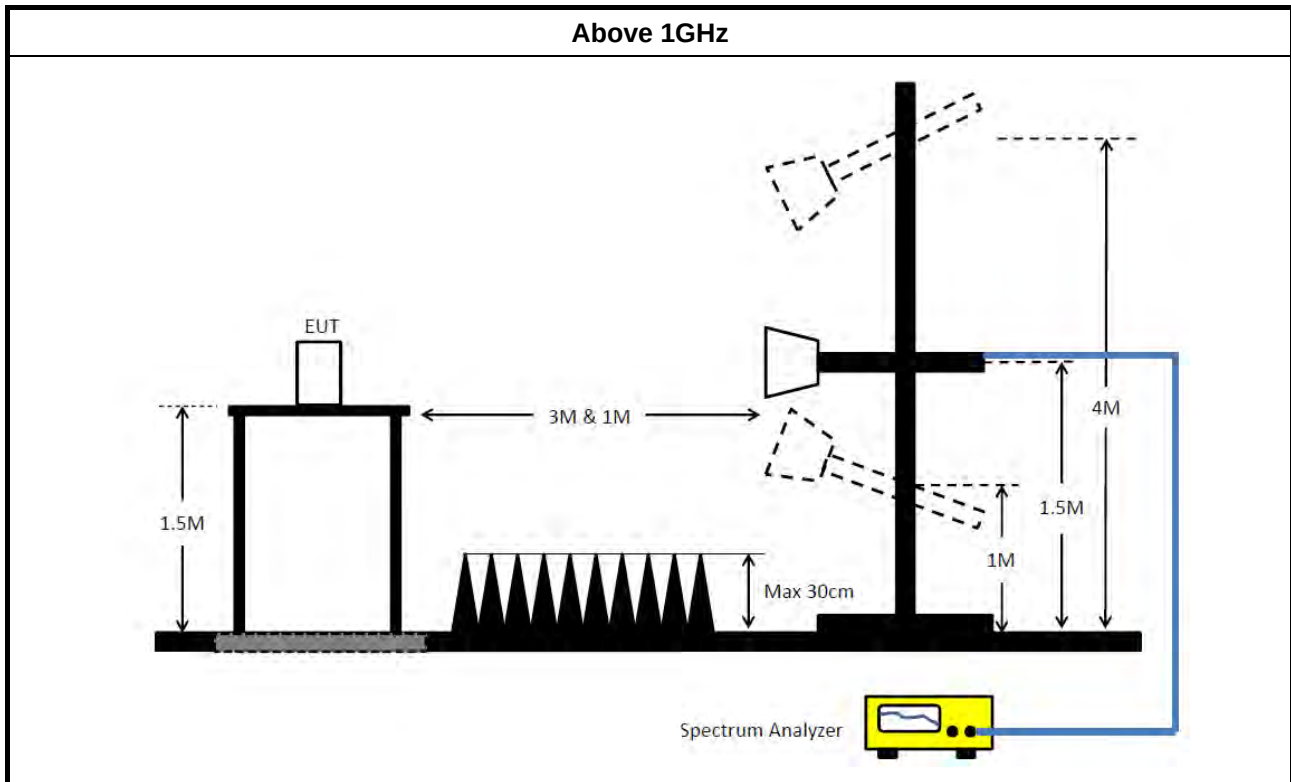
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method	
Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
For the transmitter unwanted emissions shall be measured using following options below:	
	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.
	☐ Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging).
	☒ Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW).
	☐ Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW $\geq$ 1/T, where T is pulse time.
	☐ Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
	☒ Refer as FCC KDB 789033, clause H)5) measurement procedure peak limit.
	☐ Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.
	For radiated measurement.
	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
	The any unwanted emissions level shall not exceed the fundamental emission level.
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.	

3.5.4 Test Setup





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.

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E

3.6 Frequency Stability

3.6.1 Frequency Stability Limit

Frequency Stability Limit	
UNII Devices	
In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.	
LE-LAN Devices	
N/A	
IEEE Std. 802.11	
The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band and ± 25 ppm maximum for the 2.4 GHz band.	

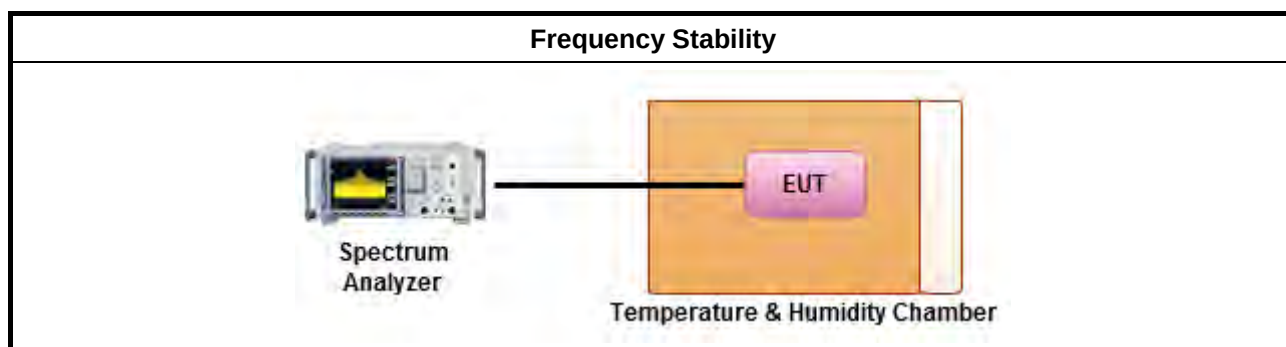
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

Test Method	
Refer as ANSI C63.10, clause 6.8 for frequency stability tests	
	Frequency stability with respect to ambient temperature
	Frequency stability when varying supply voltage
	Extreme temperature is 0°C~40°C.

3.6.4 Test Setup



3.6.5 Test Result of Frequency Stability

Refer as Appendix F



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 23, 2017	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 14, 2016	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 21, 2016	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 24, 2016	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCi	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2016	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 25, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Mar. 15, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 18, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jun. 28, 2016	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 21, 2016	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 16, 2016	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-I0-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 03, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz ~ 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)

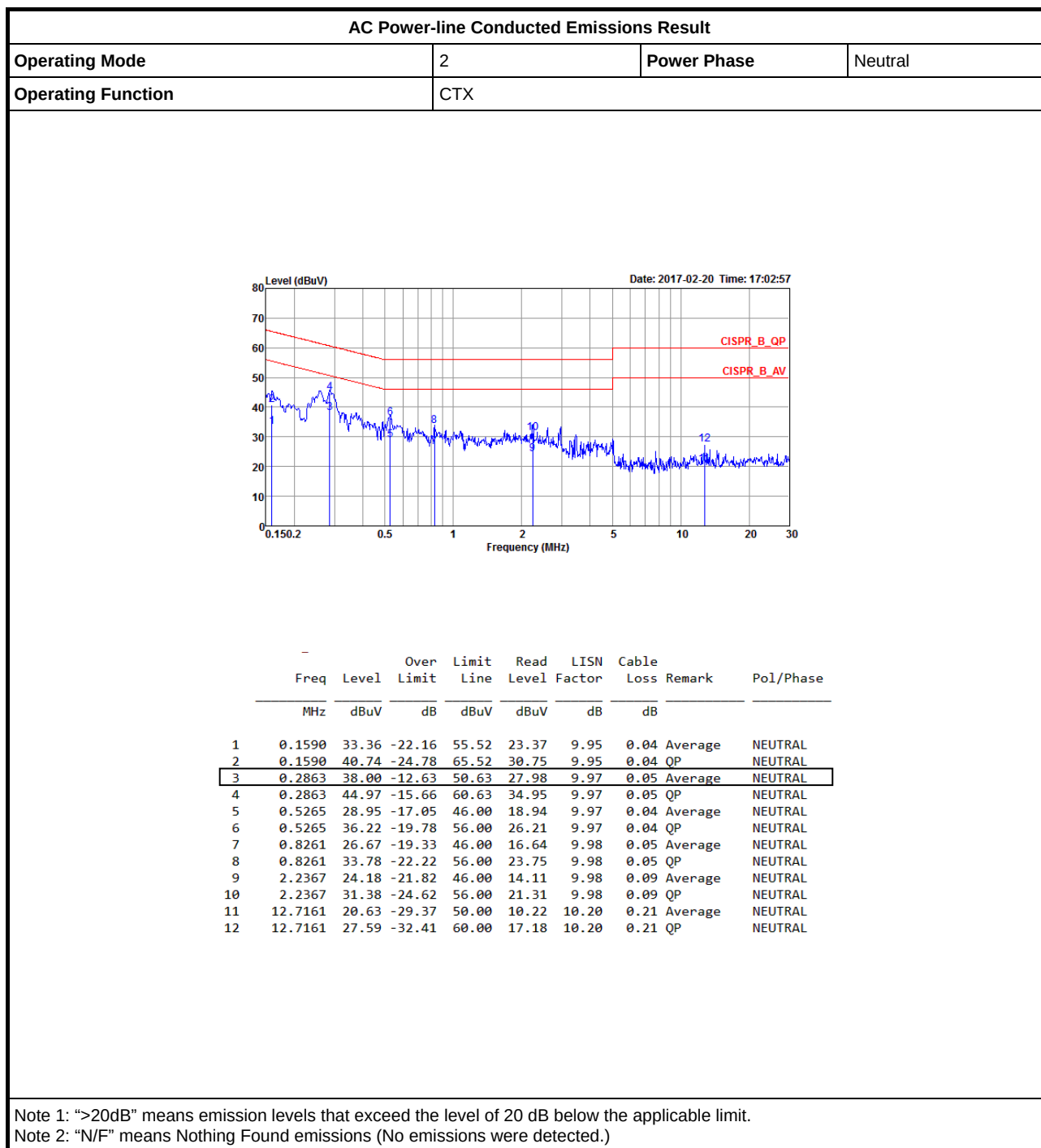


Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	RG402	High Cable-7	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 22, 2016	Conducted (TH01-CB)

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

“*” Calibration Interval of instruments listed above is two years.

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





AC Power-line Conducted Emissions Result

Appendix A

AC Power-line Conducted Emissions Result																																																																																																																																																			
Operating Mode		2			Power Phase			Line																																																																																																																																											
Operating Function		CTX																																																																																																																																																	
Level (dBuV) Date: 2017-02-20 Time: 17:01:16 <table><tr><th></th><th>Freq</th><th>Level</th><th>Over</th><th>Limit</th><th>Read</th><th>LISN</th><th>Cable</th><th rowspan="2">Remark</th><th rowspan="2">Pol/Phase</th></tr><tr><th></th><th>MHz</th><th>dBuV</th><th>Limit</th><th>Line</th><th>Level</th><th>Factor</th><th>Loss</th></tr><tr><td>1</td><td>0.2924</td><td>36.88</td><td>-13.58</td><td>50.46</td><td>26.92</td><td>9.91</td><td>0.05</td><td>Average</td><td>LINE</td></tr><tr><td>2</td><td>0.2924</td><td>44.29</td><td>-16.17</td><td>60.46</td><td>34.33</td><td>9.91</td><td>0.05</td><td>QP</td><td>LINE</td></tr><tr><td>3</td><td>0.6826</td><td>27.21</td><td>-18.79</td><td>46.00</td><td>17.22</td><td>9.94</td><td>0.05</td><td>Average</td><td>LINE</td></tr><tr><td>4</td><td>0.6826</td><td>34.38</td><td>-21.62</td><td>56.00</td><td>24.39</td><td>9.94</td><td>0.05</td><td>QP</td><td>LINE</td></tr><tr><td>5</td><td>1.5684</td><td>24.07</td><td>-21.93</td><td>46.00</td><td>14.00</td><td>10.00</td><td>0.07</td><td>Average</td><td>LINE</td></tr><tr><td>6</td><td>1.5684</td><td>30.81</td><td>-25.19</td><td>56.00</td><td>20.74</td><td>10.00</td><td>0.07</td><td>QP</td><td>LINE</td></tr><tr><td>7</td><td>3.4722</td><td>21.37</td><td>-24.63</td><td>46.00</td><td>11.29</td><td>9.96</td><td>0.12</td><td>Average</td><td>LINE</td></tr><tr><td>8</td><td>3.4722</td><td>28.24</td><td>-27.76</td><td>56.00</td><td>18.16</td><td>9.96</td><td>0.12</td><td>QP</td><td>LINE</td></tr><tr><td>9</td><td>9.2532</td><td>20.31</td><td>-29.69</td><td>50.00</td><td>10.08</td><td>10.05</td><td>0.18</td><td>Average</td><td>LINE</td></tr><tr><td>10</td><td>9.2532</td><td>27.21</td><td>-32.79</td><td>60.00</td><td>16.98</td><td>10.05</td><td>0.18</td><td>QP</td><td>LINE</td></tr><tr><td>11</td><td>16.6612</td><td>20.57</td><td>-29.43</td><td>50.00</td><td>10.16</td><td>10.18</td><td>0.23</td><td>Average</td><td>LINE</td></tr><tr><td>12</td><td>16.6612</td><td>27.32</td><td>-32.68</td><td>60.00</td><td>16.91</td><td>10.18</td><td>0.23</td><td>QP</td><td>LINE</td></tr></table>											Freq	Level	Over	Limit	Read	LISN	Cable	Remark	Pol/Phase		MHz	dBuV	Limit	Line	Level	Factor	Loss	1	0.2924	36.88	-13.58	50.46	26.92	9.91	0.05	Average	LINE	2	0.2924	44.29	-16.17	60.46	34.33	9.91	0.05	QP	LINE	3	0.6826	27.21	-18.79	46.00	17.22	9.94	0.05	Average	LINE	4	0.6826	34.38	-21.62	56.00	24.39	9.94	0.05	QP	LINE	5	1.5684	24.07	-21.93	46.00	14.00	10.00	0.07	Average	LINE	6	1.5684	30.81	-25.19	56.00	20.74	10.00	0.07	QP	LINE	7	3.4722	21.37	-24.63	46.00	11.29	9.96	0.12	Average	LINE	8	3.4722	28.24	-27.76	56.00	18.16	9.96	0.12	QP	LINE	9	9.2532	20.31	-29.69	50.00	10.08	10.05	0.18	Average	LINE	10	9.2532	27.21	-32.79	60.00	16.98	10.05	0.18	QP	LINE	11	16.6612	20.57	-29.43	50.00	10.16	10.18	0.23	Average	LINE	12	16.6612	27.32	-32.68	60.00	16.91	10.18	0.23	QP	LINE
	Freq	Level	Over	Limit	Read	LISN	Cable	Remark	Pol/Phase																																																																																																																																										
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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.)																																																																																																																																																			

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
802.11a-BF_(6Mbps)_2TX	-	-	-	-	-
5.15-5.25GHz	35.875M	16.867M	16M9D1D	19.075M	16.392M
5.725-5.85GHz	16.325M	16.517M	16M5D1D	16.275M	16.442M
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-
5.15-5.25GHz	39.375M	17.941M	17M9D1D	28.025M	17.691M
5.725-5.85GHz	17.525M	17.691M	17M7D1D	16.925M	17.641M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-
5.15-5.25GHz	71.35M	36.282M	36M3D1D	39.3M	35.982M
5.725-5.85GHz	35M	36.382M	36M4D1D	29.35M	36.282M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-
5.15-5.25GHz	83.1M	75.862M	75M9D1D	82.9M	75.662M
5.725-5.85GHz	75.5M	75.762M	75M8D1D	74.4M	75.762M

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

Max-OBW = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

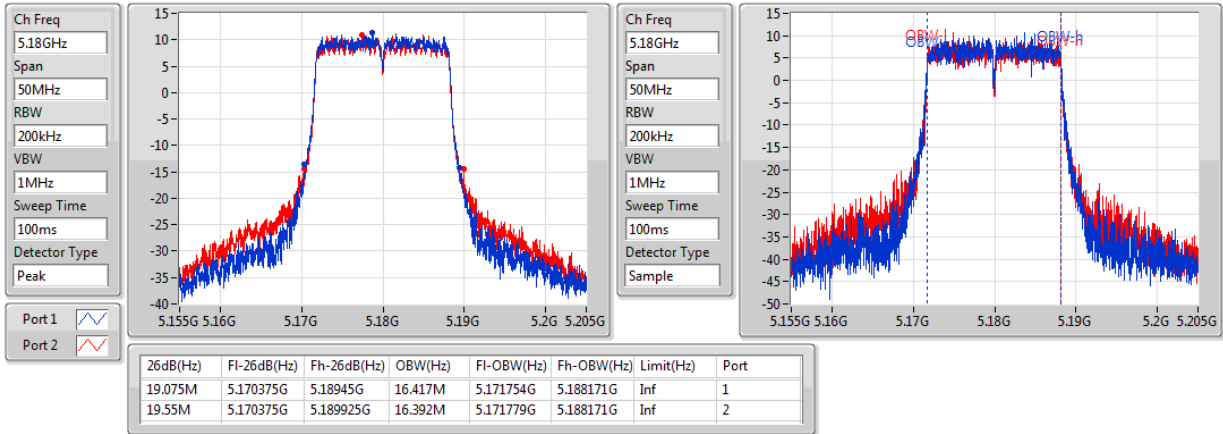
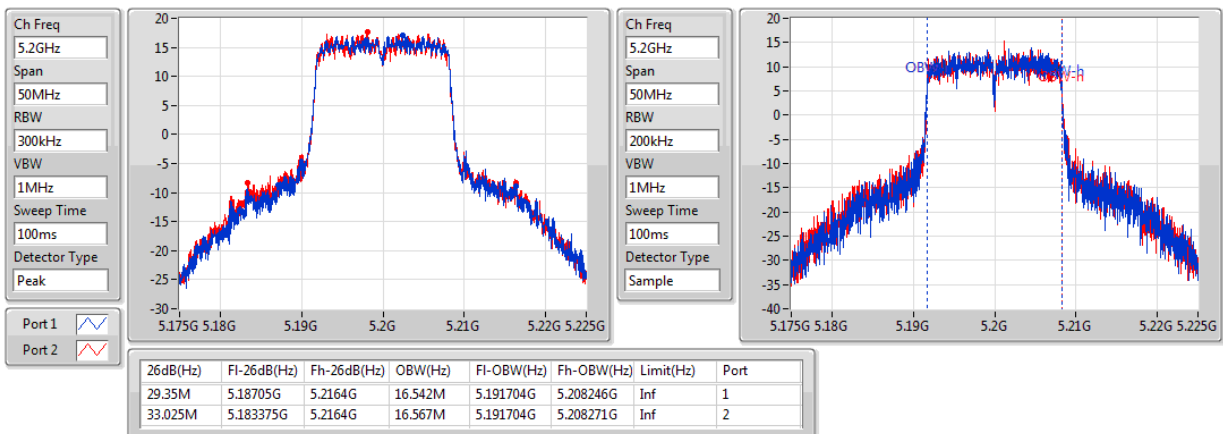
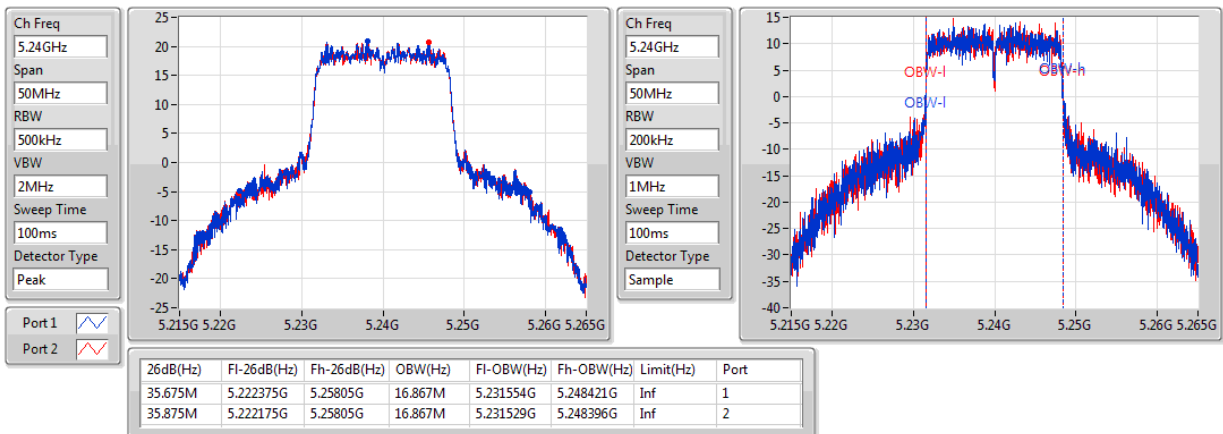
Min-OBW = Minimum 99% occupied bandwidth;

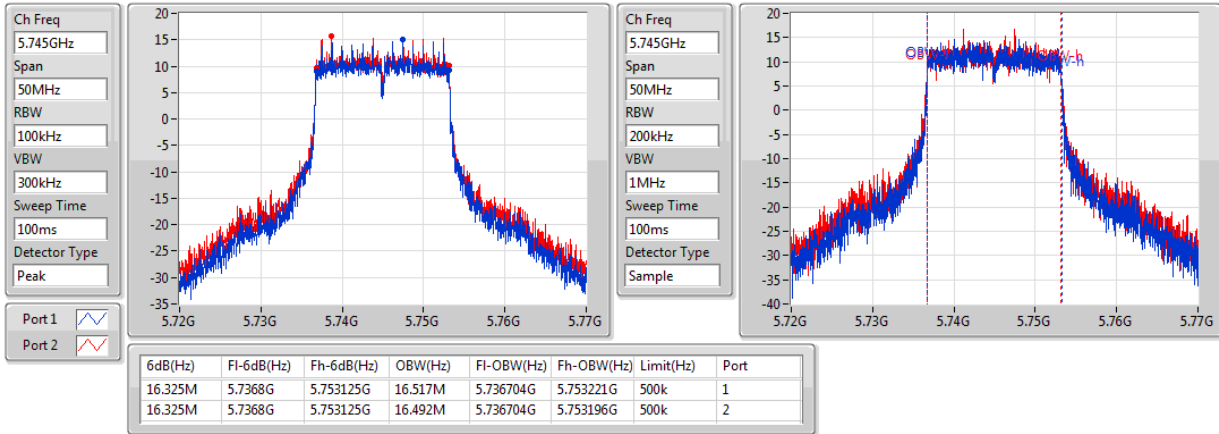
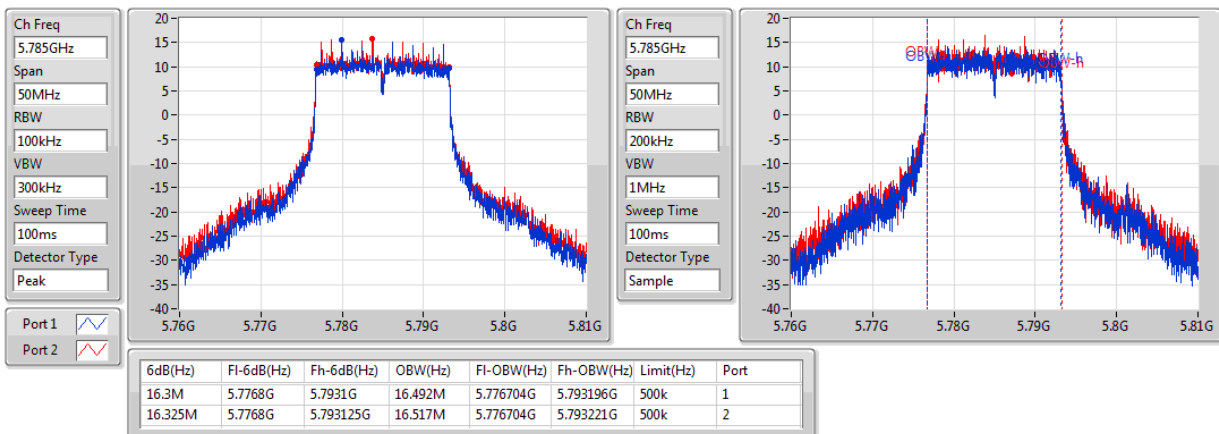
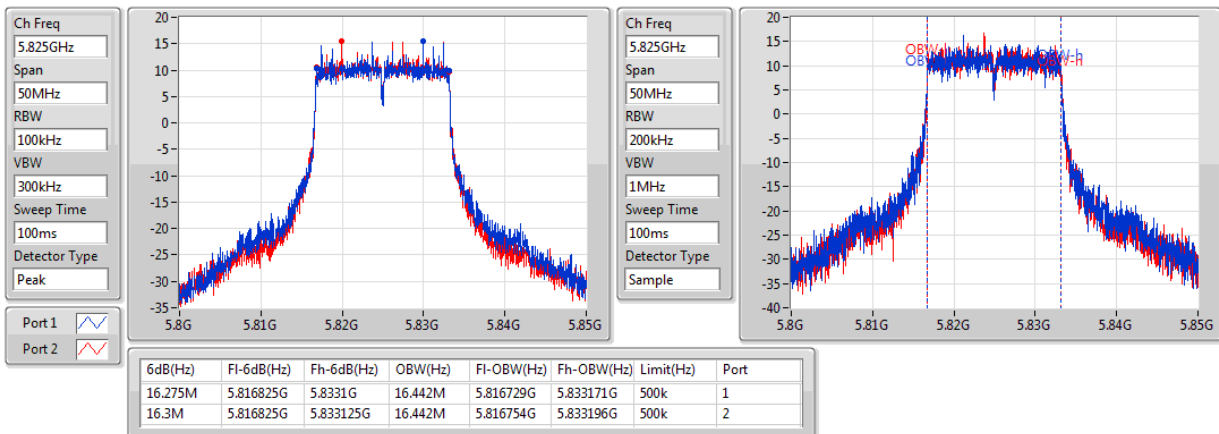
Result

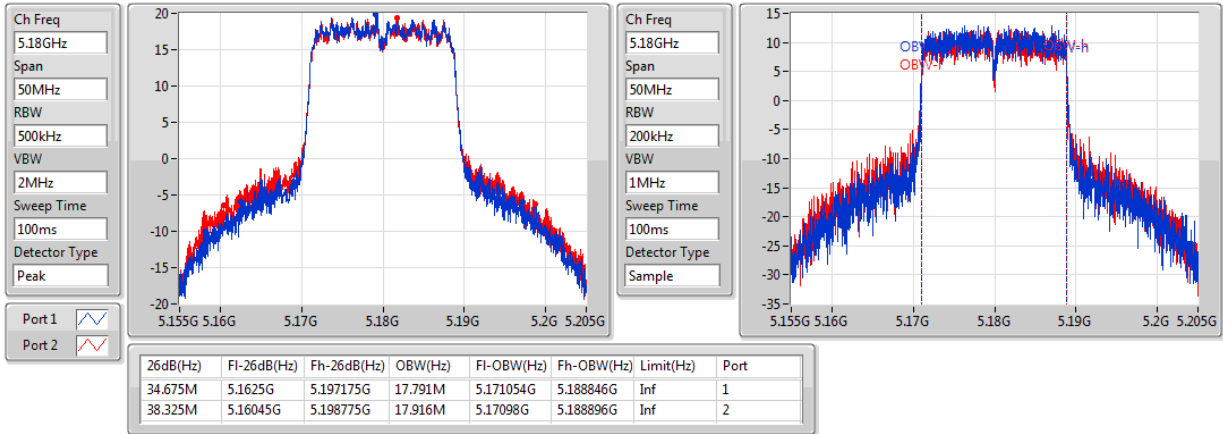
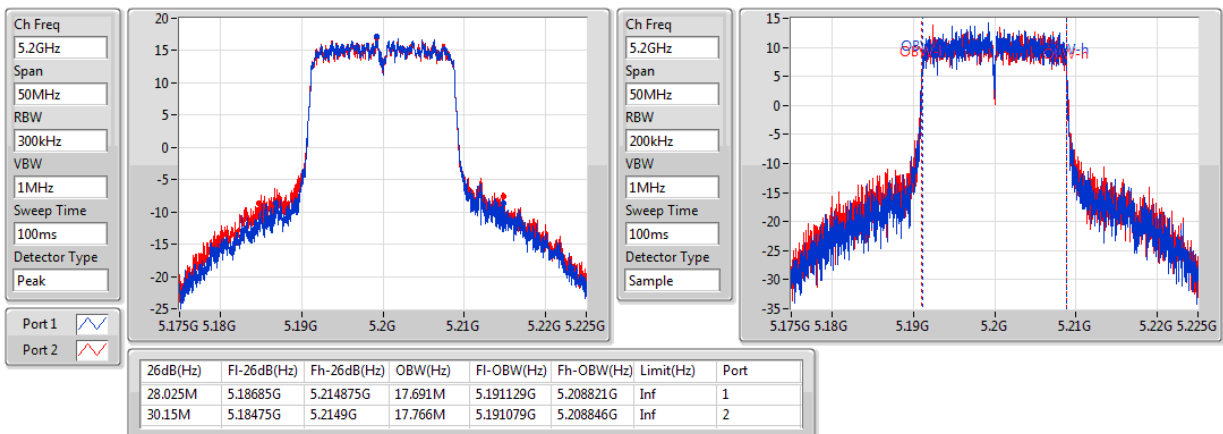
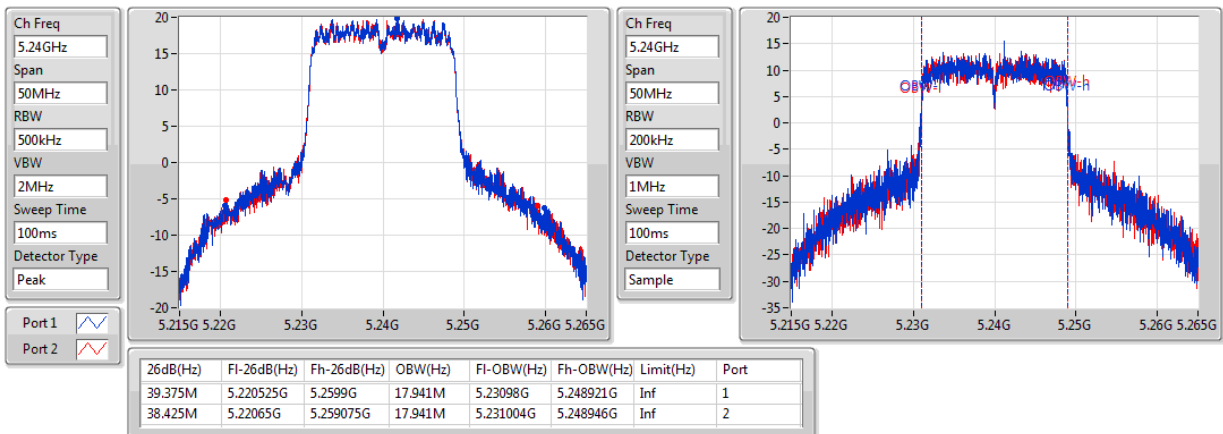
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11a-BF_(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	19.075M	16.417M	19.55M	16.392M
5200MHz	Pass	Inf	29.35M	16.542M	33.025M	16.567M
5240MHz	Pass	Inf	35.675M	16.867M	35.875M	16.867M
5745MHz	Pass	500k	16.325M	16.517M	16.325M	16.492M
5785MHz	Pass	500k	16.3M	16.492M	16.325M	16.517M
5825MHz	Pass	500k	16.275M	16.442M	16.3M	16.442M
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	34.675M	17.791M	38.325M	17.916M
5200MHz	Pass	Inf	28.025M	17.691M	30.15M	17.766M
5240MHz	Pass	Inf	39.375M	17.941M	38.425M	17.941M
5745MHz	Pass	500k	17.225M	17.666M	17.5M	17.666M
5785MHz	Pass	500k	17.525M	17.641M	16.925M	17.691M
5825MHz	Pass	500k	17.525M	17.666M	17.3M	17.641M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	39.3M	35.982M	39.55M	35.982M
5230MHz	Pass	Inf	56.45M	36.082M	71.35M	36.282M
5755MHz	Pass	500k	29.35M	36.332M	32.15M	36.382M
5795MHz	Pass	500k	29.4M	36.282M	35M	36.382M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	82.9M	75.662M	83.1M	75.862M
5775MHz	Pass	500k	74.4M	75.762M	75.5M	75.762M

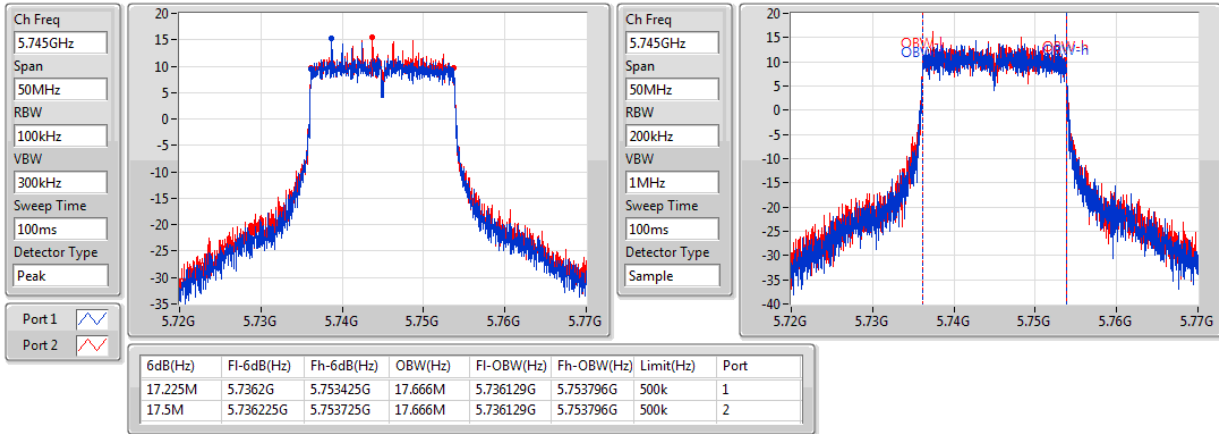
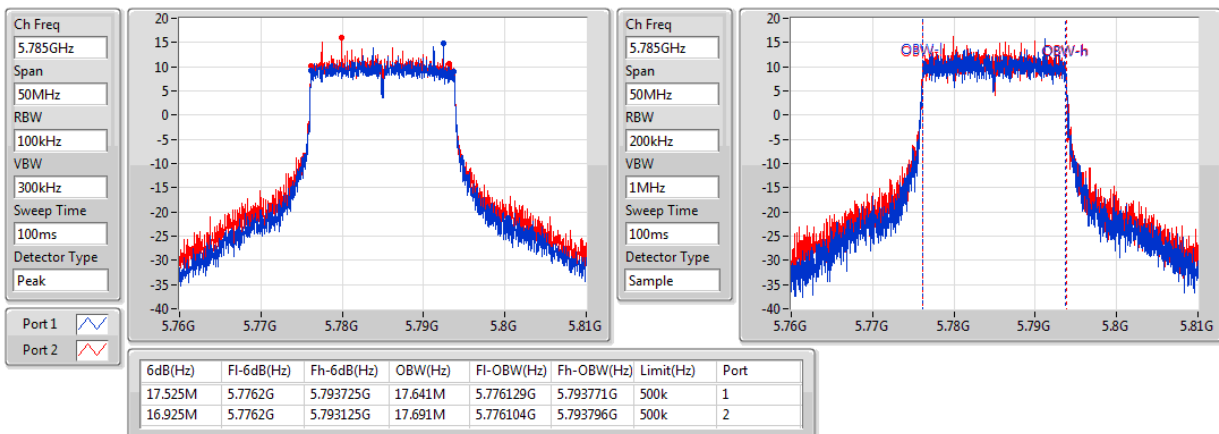
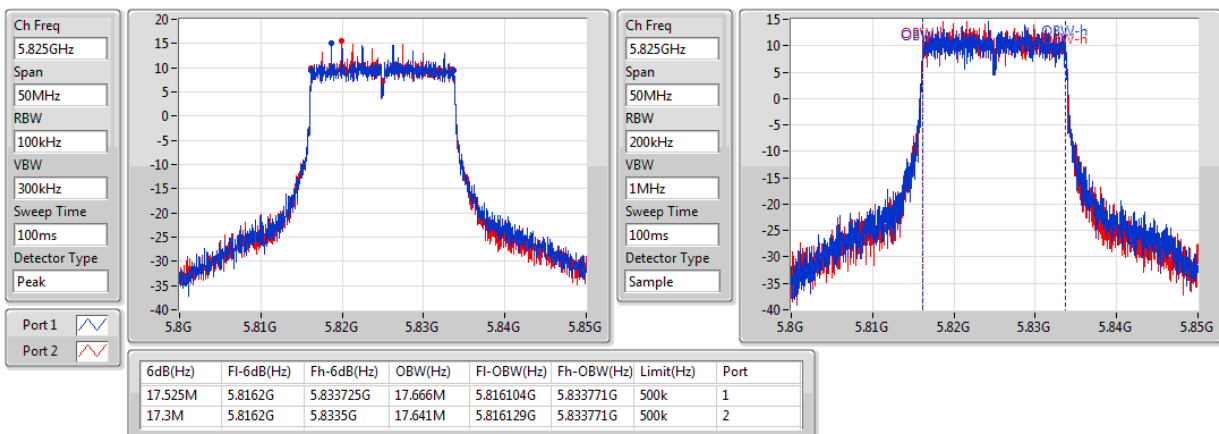
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

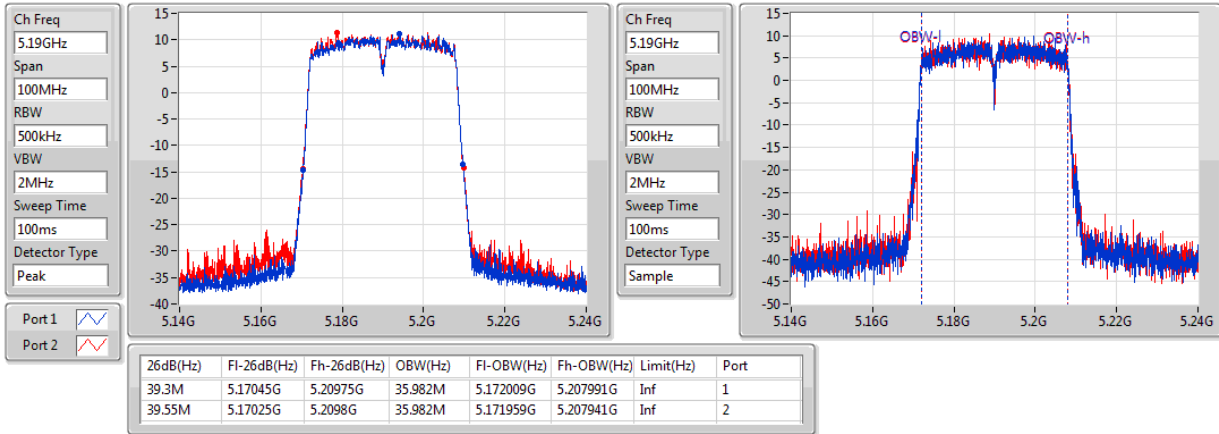
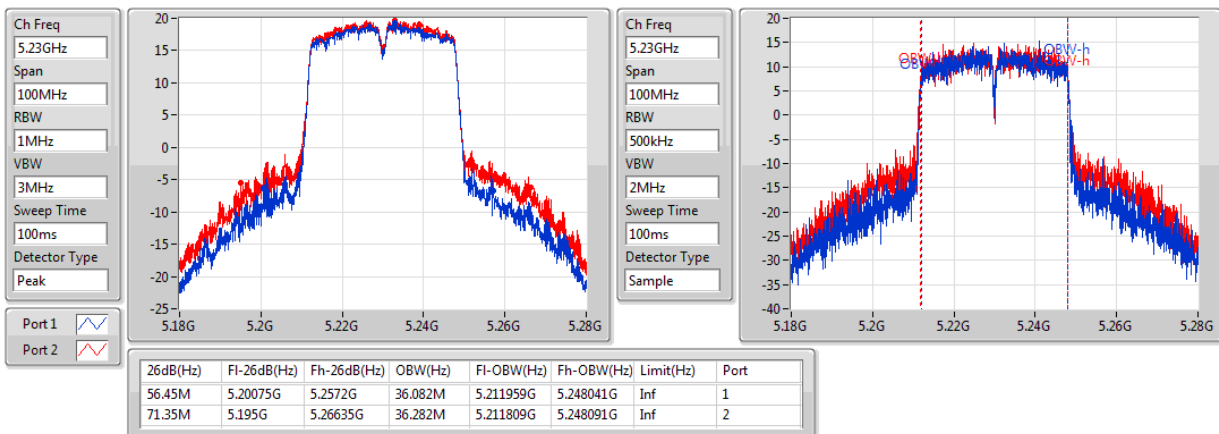
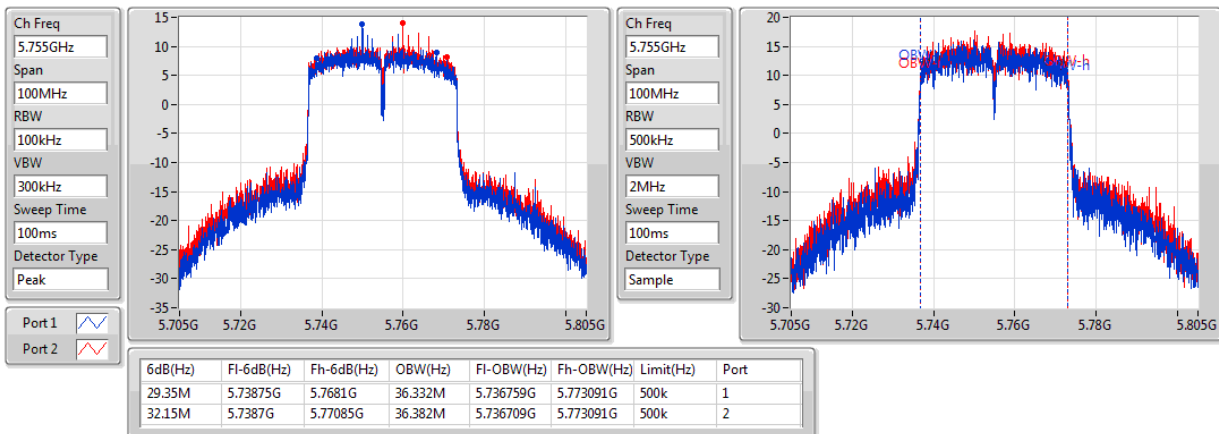
Port X-OBW = Port X 99% occupied bandwidth;

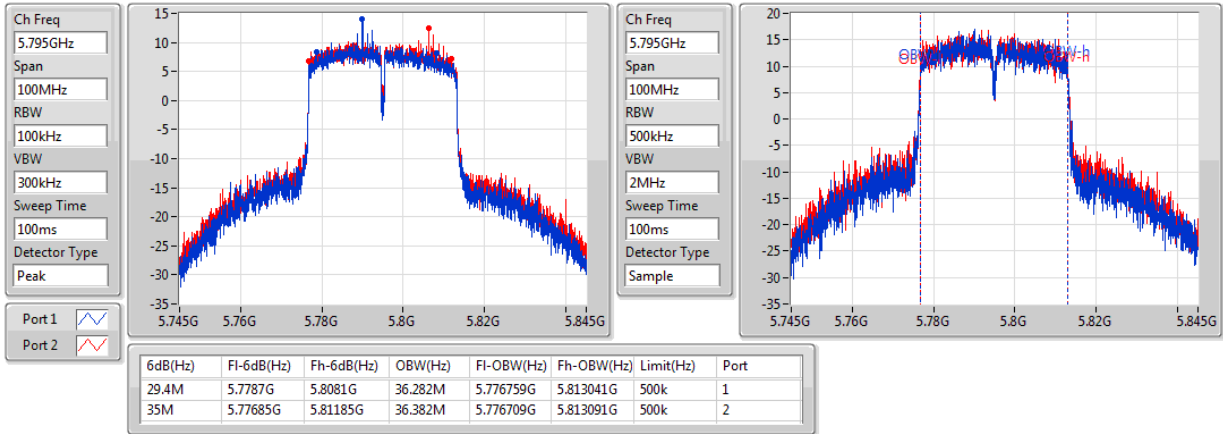
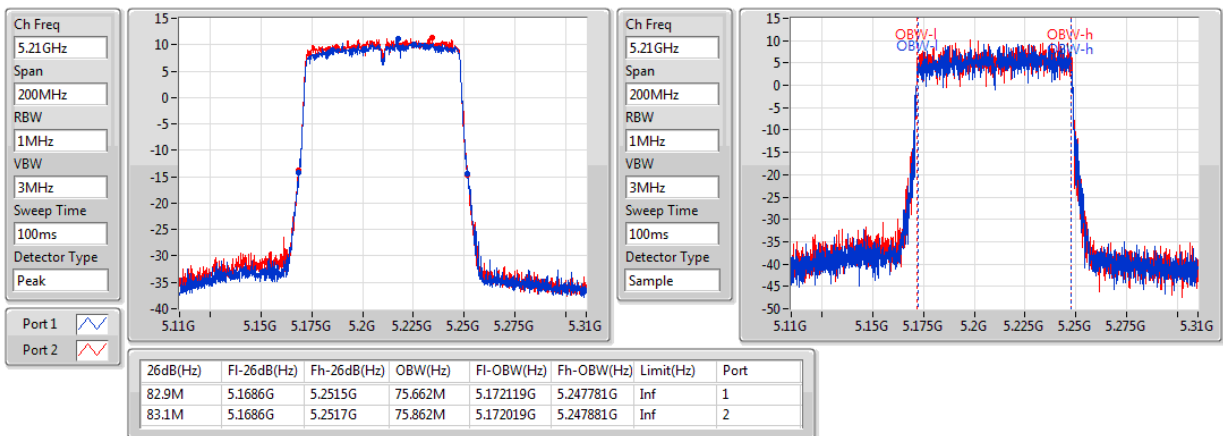
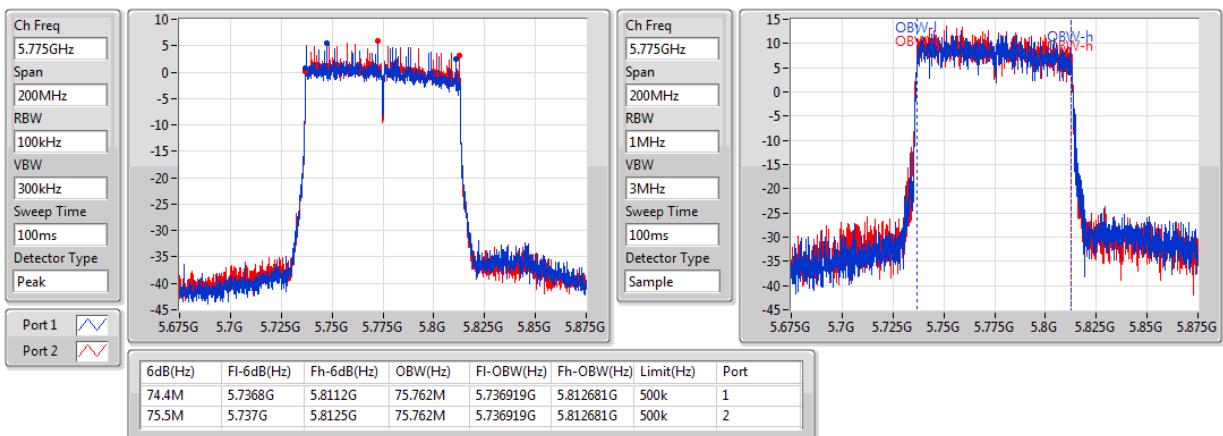
802.11a-BF_(6Mbps)_2TX
EBW
5180MHz

802.11a-BF_(6Mbps)_2TX
EBW
5200MHz

802.11a-BF_(6Mbps)_2TX
EBW
5240MHz


802.11a-BF_(6Mbps)_2TX
EBW
5745MHz

802.11a-BF_(6Mbps)_2TX
EBW
5785MHz

802.11a-BF_(6Mbps)_2TX
EBW
5825MHz


802.11ac VHT20-BF_Nss1,(MCS0)_2TX
EBW
5180MHz

802.11ac VHT20-BF_Nss1,(MCS0)_2TX
EBW
5200MHz

802.11ac VHT20-BF_Nss1,(MCS0)_2TX
EBW
5240MHz


802.11ac VHT20-BF_Nss1,(MCS0)_2TX
EBW
5745MHz

802.11ac VHT20-BF_Nss1,(MCS0)_2TX
EBW
5785MHz

802.11ac VHT20-BF_Nss1,(MCS0)_2TX
EBW
5825MHz


802.11ac VHT40-BF_Nss1,(MCS0)_2TX
EBW
5190MHz

802.11ac VHT40-BF_Nss1,(MCS0)_2TX
EBW
5230MHz

802.11ac VHT40-BF_Nss1,(MCS0)_2TX
EBW
5755MHz


802.11ac VHT40-BF_Nss1,(MCS0)_2TX
EBW
5795MHz

802.11ac VHT80-BF_Nss1,(MCS0)_2TX
EBW
5210MHz

802.11ac VHT80-BF_Nss1,(MCS0)_2TX
EBW
5775MHz


Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
802.11a-BF_(6Mbps)_2TX	-	-	-	-
5.15-5.25GHz	29.27	0.84528	35.82	3.81944
5.725-5.85GHz	28.95	0.78524	35.27	3.36512
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-
5.15-5.25GHz	29.28	0.84723	35.83	3.82825
5.725-5.85GHz	28.94	0.78343	35.26	3.35738
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-
5.15-5.25GHz	29.24	0.83946	35.79	3.79315
5.725-5.85GHz	29.60	0.91201	35.92	3.90841
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-
5.15-5.25GHz	23.34	0.21577	29.89	0.97499
5.725-5.85GHz	25.85	0.38459	32.17	1.64816

Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Port 1 (dBm)	Port 2 (dBm)
802.11a-BF_(6Mbps)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	6.55	25.57	29.45	32.12	36.00	22.8	22.3
5200MHz	Pass	6.55	29.27	29.45	35.82	36.00	26.03	26.47
5240MHz	Pass	6.55	28.71	29.45	35.26	36.00	25.68	25.71
5745MHz	Pass	6.32	28.84	29.68	35.16	36.00	25.48	26.15
5785MHz	Pass	6.32	28.95	29.68	35.27	36.00	25.55	26.3
5825MHz	Pass	6.32	28.80	29.68	35.12	36.00	25.71	25.87
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	6.55	25.39	29.45	31.94	36.00	22.38	22.37
5200MHz	Pass	6.55	29.28	29.45	35.83	36.00	26.12	26.41
5240MHz	Pass	6.55	29.04	29.45	35.59	36.00	25.65	26.37
5745MHz	Pass	6.32	28.84	29.68	35.15	36.00	25.59	26.05
5785MHz	Pass	6.32	28.94	29.68	35.26	36.00	25.49	26.33
5825MHz	Pass	6.32	28.82	29.68	35.14	36.00	25.49	26.11
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	6.55	24.46	29.45	31.01	36.00	21.37	21.53
5230MHz	Pass	6.55	29.24	29.45	35.79	36.00	26.14	26.32
5755MHz	Pass	6.32	29.60	29.68	35.92	36.00	26.45	26.73
5795MHz	Pass	6.32	29.46	29.68	35.77	36.00	26.54	26.35
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz	Pass	6.55	23.34	29.45	29.89	36.00	19.83	20.78
5775MHz	Pass	6.32	25.85	29.68	32.17	36.00	22.67	23

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

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
802.11a-BF_(6Mbps)_2TX	-	-
5.15-5.25GHz	16.42	22.97
5.725-5.85GHz	15.66	21.98
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-
5.15-5.25GHz	15.97	22.52
5.725-5.85GHz	15.03	21.35
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-
5.15-5.25GHz	12.90	19.45
5.725-5.85GHz	13.05	19.37
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-
5.15-5.25GHz	4.12	10.67
5.725-5.85GHz	5.51	11.82

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

Result

Mode	Result	DG (dBi)	Sum (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)
802.11a-BF_(6Mbps)_2TX	-	-	-	-	-	-	-
5180MHz	Pass	6.55	12.58	12.58	16.45	9.78	9.49
5200MHz	Pass	6.55	16.41	16.41	16.45	13.65	13.30
5240MHz	Pass	6.55	16.42	16.42	16.45	13.37	13.55
5745MHz	Pass	6.32	15.59	15.59	29.68	12.35	12.96
5785MHz	Pass	6.32	15.66	15.66	29.68	12.55	12.99
5825MHz	Pass	6.32	15.54	15.54	29.68	12.52	12.70
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-
5180MHz	Pass	6.55	15.75	15.75	16.45	12.93	12.65
5200MHz	Pass	6.55	15.95	15.95	16.45	13.09	12.84
5240MHz	Pass	6.55	15.97	15.97	16.45	12.94	13.22
5745MHz	Pass	6.32	15.03	15.03	29.68	11.90	12.14
5785MHz	Pass	6.32	14.92	14.92	29.68	11.52	12.39
5825MHz	Pass	6.32	14.72	14.72	29.68	11.78	11.96
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-
5190MHz	Pass	6.55	8.06	8.06	16.45	5.04	5.15
5230MHz	Pass	6.55	12.90	12.90	16.45	9.87	10.09
5755MHz	Pass	6.32	12.92	12.92	29.68	9.60	10.23
5795MHz	Pass	6.32	13.05	13.05	29.68	9.89	10.19
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-
5210MHz	Pass	6.55	4.12	4.12	16.45	1.07	1.32
5775MHz	Pass	6.32	5.51	5.51	29.68	2.45	2.75

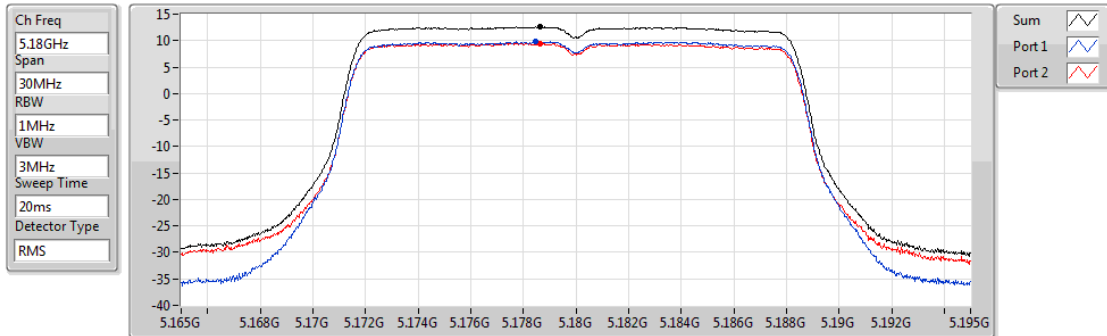
DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

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

802.11a-BF_(6Mbps)_2TX

PSD

5180MHz

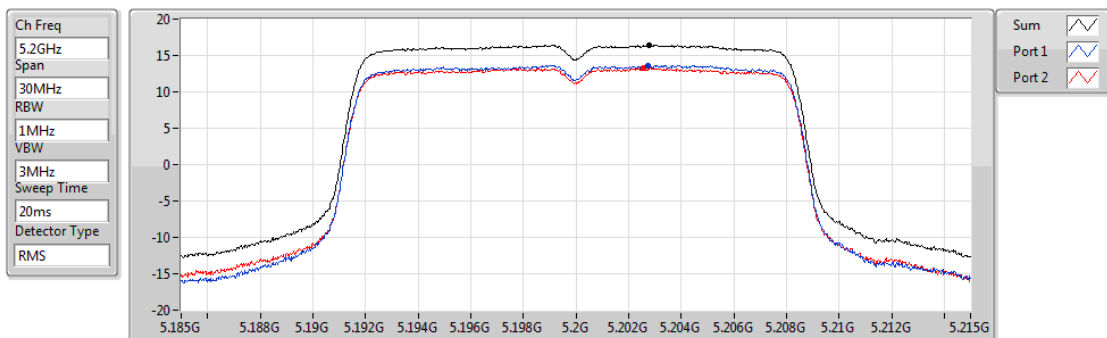


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.58	12.58	9.78	9.49

802.11a-BF_(6Mbps)_2TX

PSD

5200MHz

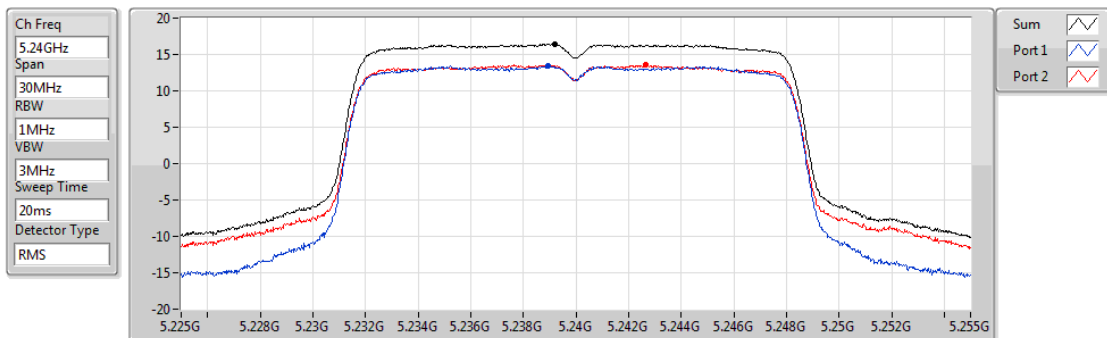


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
16.41	16.41	13.65	13.30

802.11a-BF_(6Mbps)_2TX

PSD

5240MHz

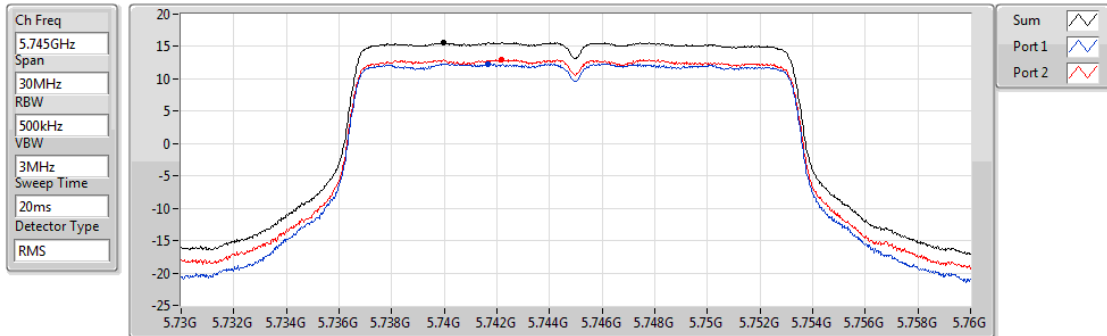


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
16.42	16.42	13.37	13.55

802.11a-BF_(6Mbps)_2TX

PSD

5745MHz

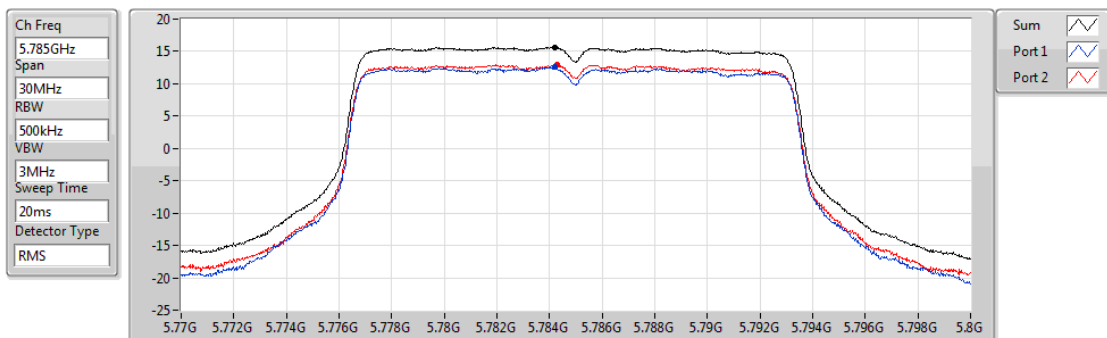


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.59	15.59	12.35	12.96

802.11a-BF_(6Mbps)_2TX

PSD

5785MHz

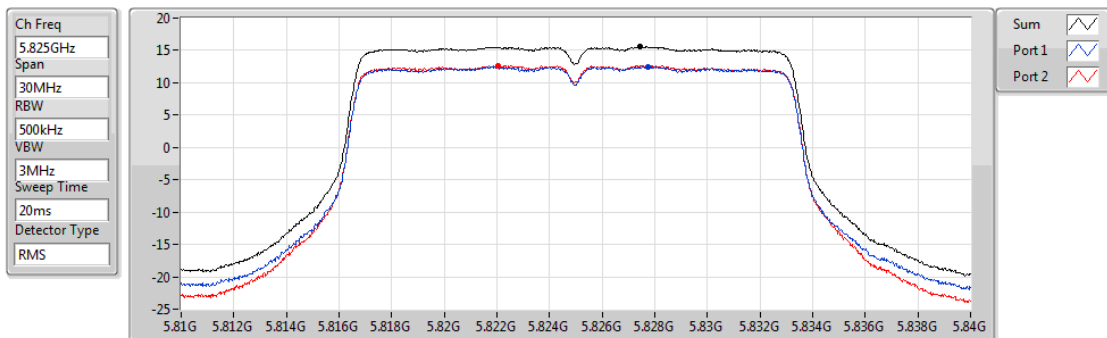


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.66	15.66	12.55	12.99

802.11a-BF_(6Mbps)_2TX

PSD

5825MHz

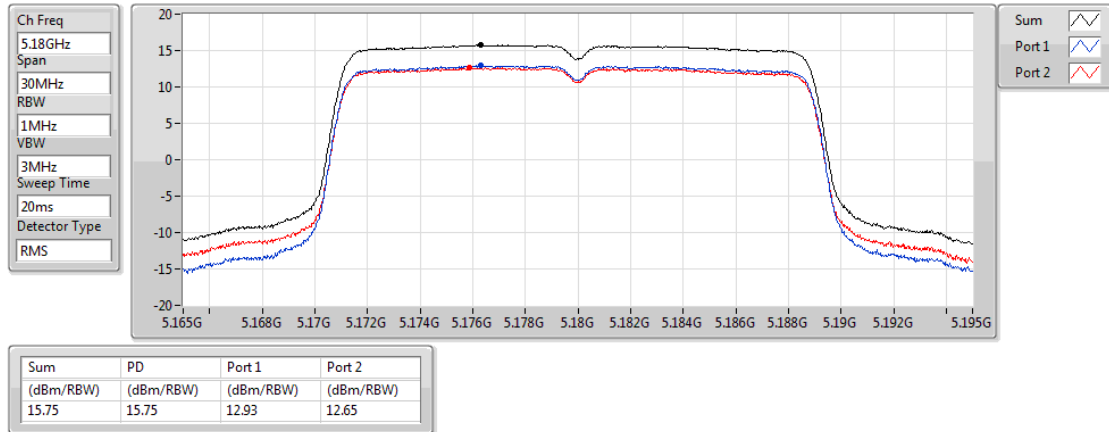


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.54	15.54	12.52	12.70

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

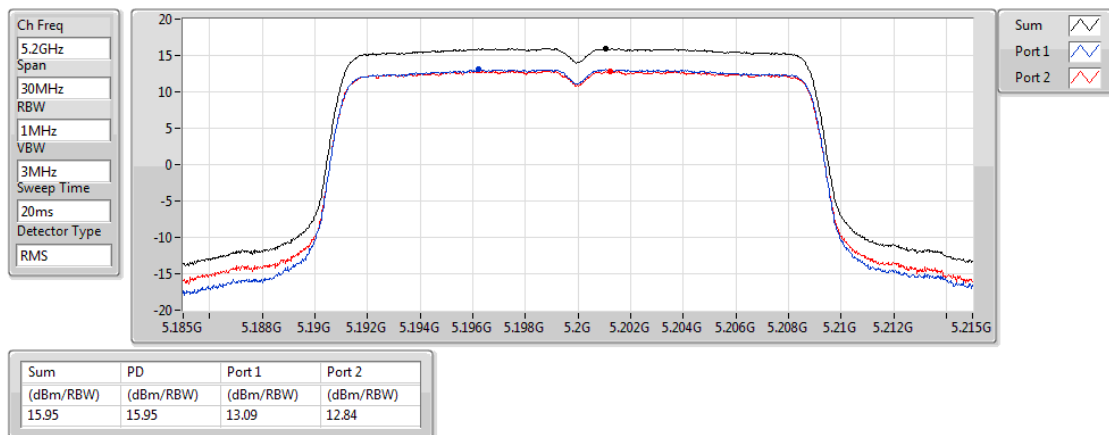
5180MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

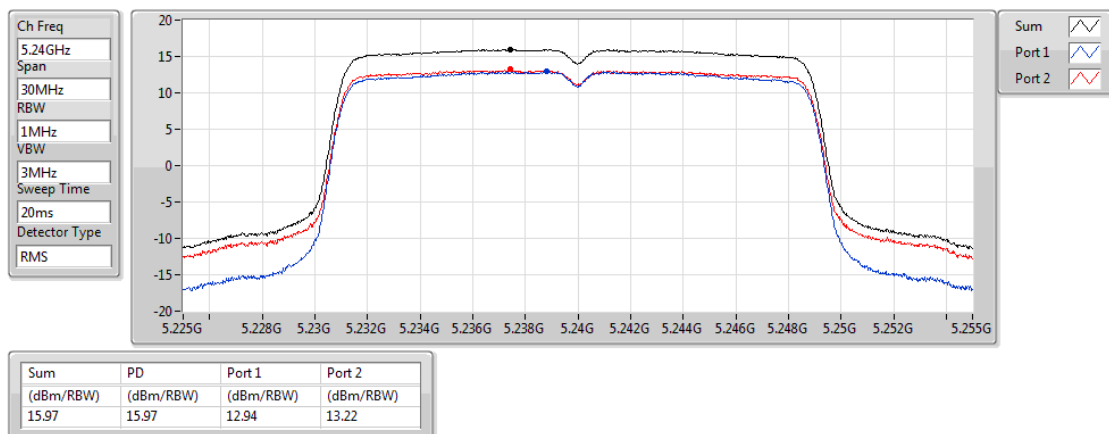
5200MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

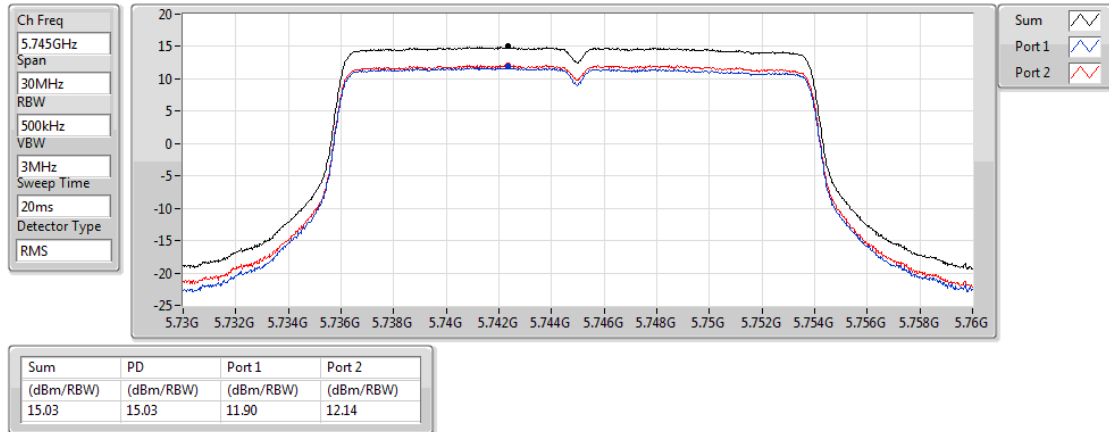
5240MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

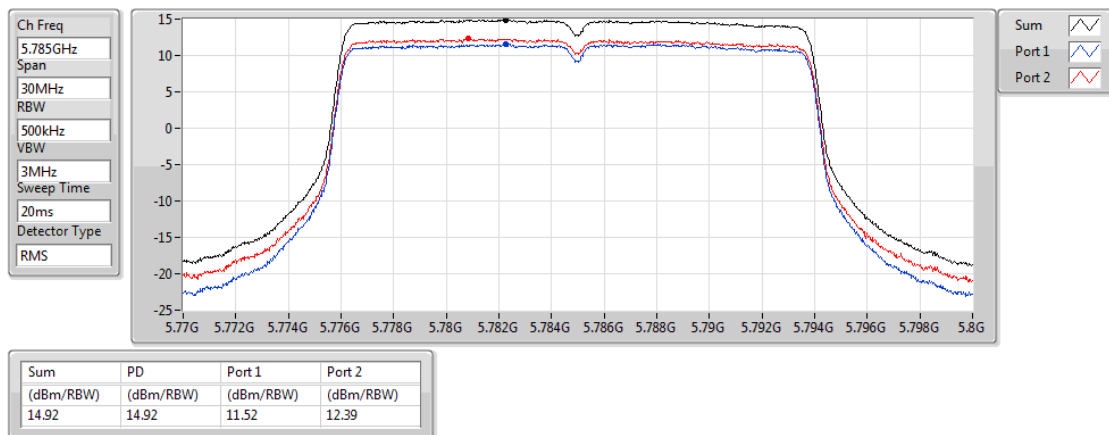
5745MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

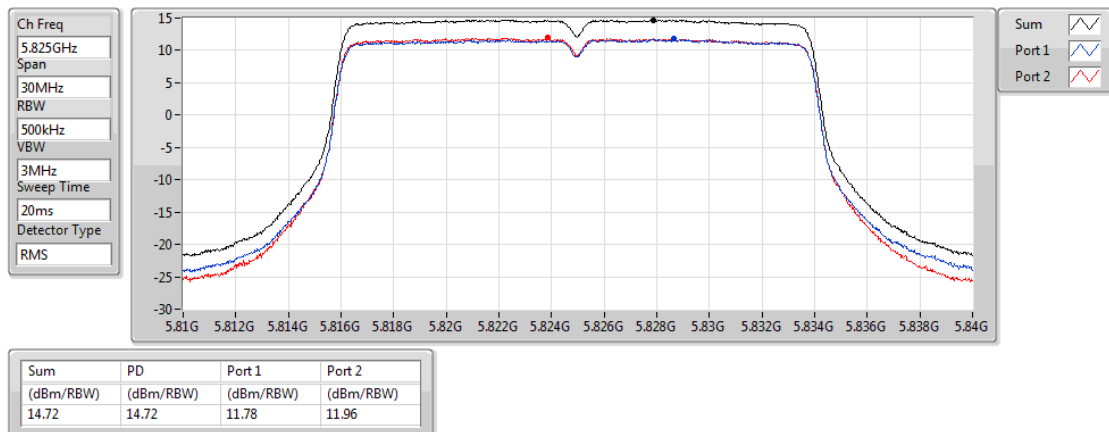
5785MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

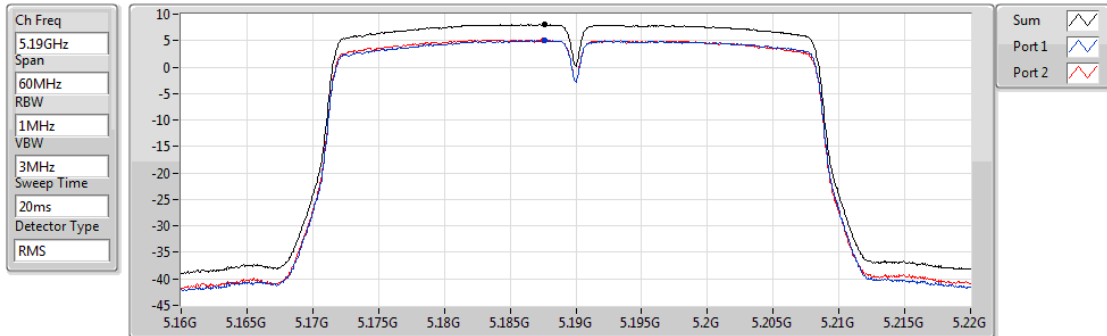
5825MHz



802.11ac VHT40-BF_Nss1,(MCS0)_2TX

PSD

5190MHz

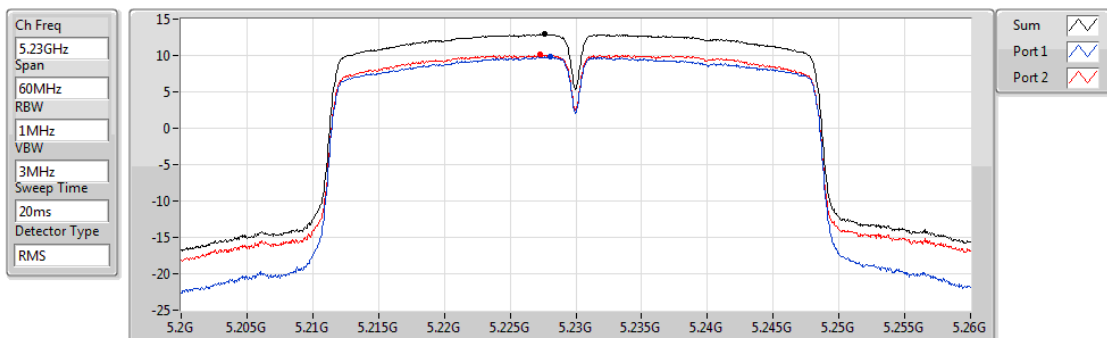


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.06	8.06	5.04	5.15

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

PSD

5230MHz

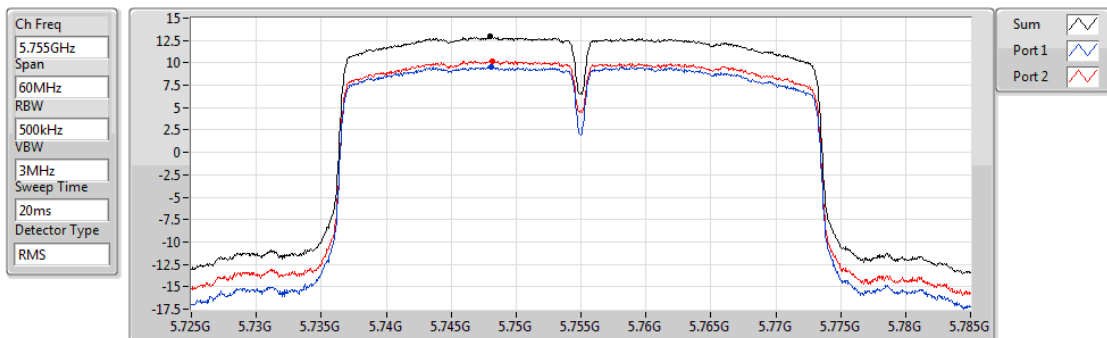


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.90	12.90	9.87	10.09

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

PSD

5755MHz

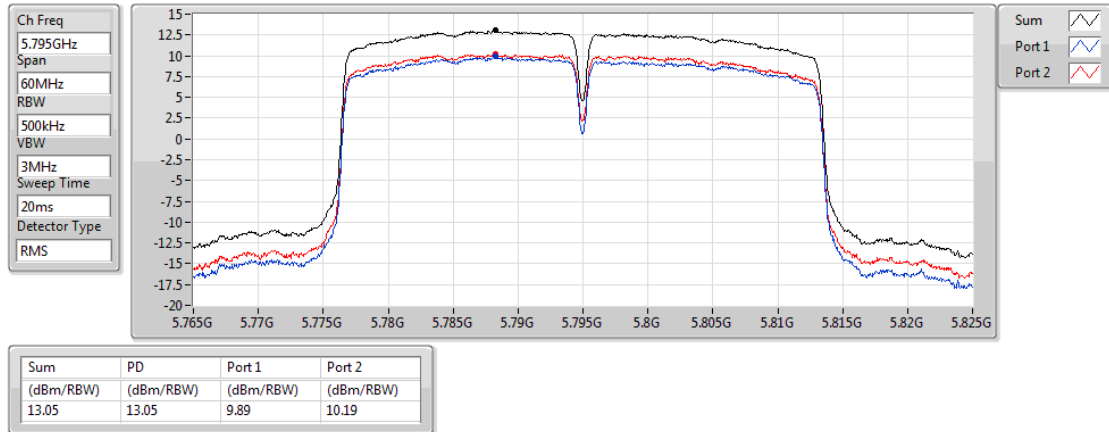


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.92	12.92	9.60	10.23

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

PSD

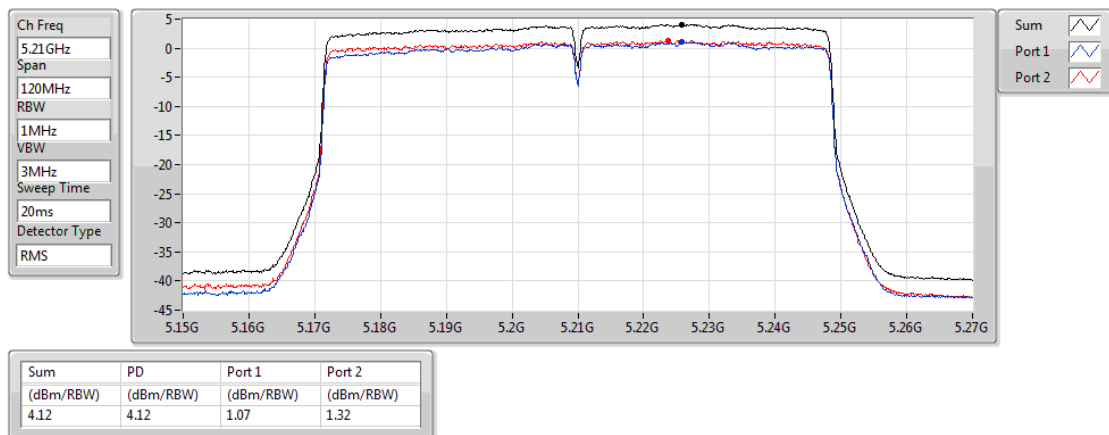
5795MHz



802.11ac VHT80-BF_Nss1,(MCS0)_2TX

PSD

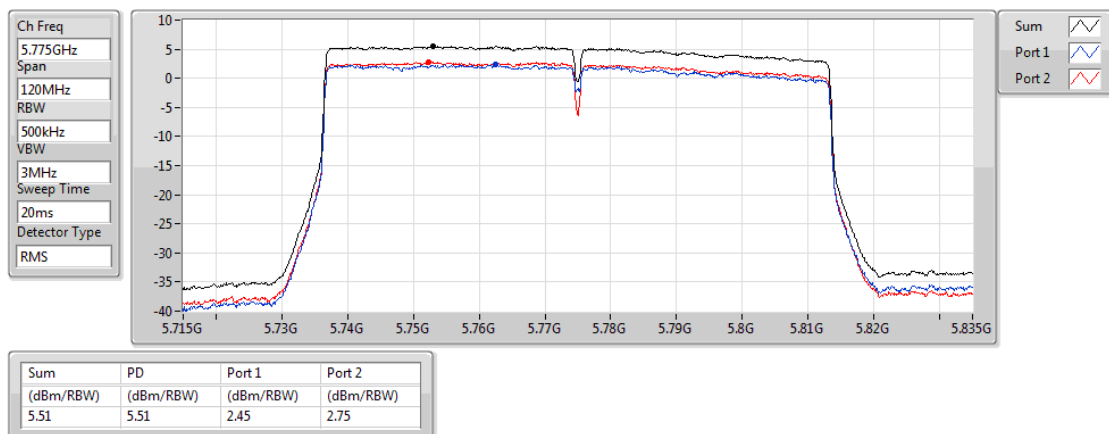
5210MHz

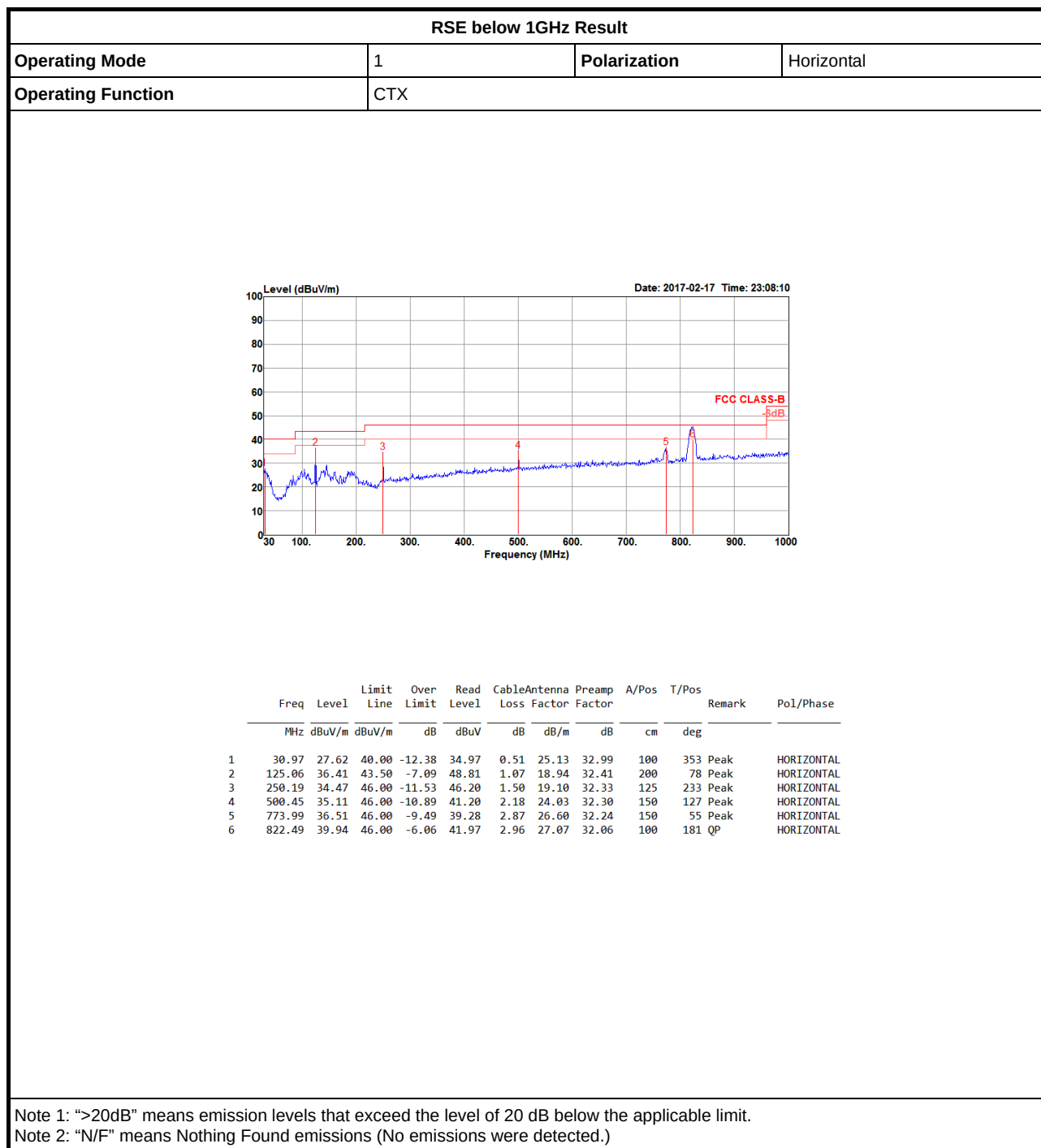


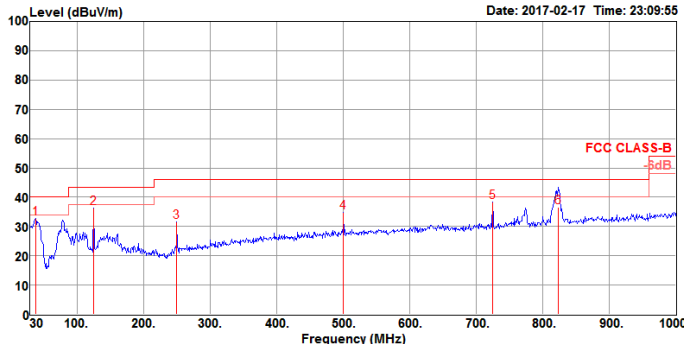
802.11ac VHT80-BF_Nss1,(MCS0)_2TX

PSD

5775MHz





RSE below 1GHz Result																																																																																																											
Operating Mode	1				Polarization				Vertical																																																																																																		
Operating Function	CTX																																																																																																										
Level (dBuV/m) Date: 2017-02-17 Time: 23:09:55  <table><tr><th></th><th>Freq</th><th>Level</th><th>Limit</th><th>Over</th><th>Read</th><th>CableAntenna</th><th>Preamp</th><th>A/Pos</th><th>T/Pos</th><th>Remark</th><th>Pol/Phase</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dBuV/m</th><th>dB</th><th>dBuV</th><th>dB</th><th>dB/m</th><th>dB</th><th>cm</th><th>deg</th><th></th></tr><tr><td>1</td><td>37.76</td><td>32.80</td><td>40.00</td><td>-7.20</td><td>43.44</td><td>0.58</td><td>21.51</td><td>32.73</td><td>100</td><td>7 Peak</td><td>VERTICAL</td></tr><tr><td>2</td><td>125.06</td><td>36.25</td><td>43.50</td><td>-7.25</td><td>48.65</td><td>1.07</td><td>18.94</td><td>32.41</td><td>100</td><td>354 Peak</td><td>VERTICAL</td></tr><tr><td>3</td><td>250.19</td><td>31.67</td><td>46.00</td><td>-14.33</td><td>43.40</td><td>1.50</td><td>19.10</td><td>32.33</td><td>100</td><td>0 Peak</td><td>VERTICAL</td></tr><tr><td>4</td><td>500.45</td><td>34.85</td><td>46.00</td><td>-11.15</td><td>40.94</td><td>2.18</td><td>24.03</td><td>32.30</td><td>125</td><td>114 Peak</td><td>VERTICAL</td></tr><tr><td>5</td><td>724.52</td><td>38.46</td><td>46.00</td><td>-7.54</td><td>42.00</td><td>2.64</td><td>26.15</td><td>32.33</td><td>100</td><td>300 Peak</td><td>VERTICAL</td></tr><tr><td>6</td><td>822.49</td><td>36.63</td><td>46.00</td><td>-9.37</td><td>38.66</td><td>2.96</td><td>27.07</td><td>32.06</td><td>125</td><td>1 QP</td><td>VERTICAL</td></tr></table>													Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		1	37.76	32.80	40.00	-7.20	43.44	0.58	21.51	32.73	100	7 Peak	VERTICAL	2	125.06	36.25	43.50	-7.25	48.65	1.07	18.94	32.41	100	354 Peak	VERTICAL	3	250.19	31.67	46.00	-14.33	43.40	1.50	19.10	32.33	100	0 Peak	VERTICAL	4	500.45	34.85	46.00	-11.15	40.94	2.18	24.03	32.30	125	114 Peak	VERTICAL	5	724.52	38.46	46.00	-7.54	42.00	2.64	26.15	32.33	100	300 Peak	VERTICAL	6	822.49	36.63	46.00	-9.37	38.66	2.96	27.07	32.06	125	1 QP	VERTICAL
	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase																																																																																																
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg																																																																																																	
1	37.76	32.80	40.00	-7.20	43.44	0.58	21.51	32.73	100	7 Peak	VERTICAL																																																																																																
2	125.06	36.25	43.50	-7.25	48.65	1.07	18.94	32.41	100	354 Peak	VERTICAL																																																																																																
3	250.19	31.67	46.00	-14.33	43.40	1.50	19.10	32.33	100	0 Peak	VERTICAL																																																																																																
4	500.45	34.85	46.00	-11.15	40.94	2.18	24.03	32.30	125	114 Peak	VERTICAL																																																																																																
5	724.52	38.46	46.00	-7.54	42.00	2.64	26.15	32.33	100	300 Peak	VERTICAL																																																																																																
6	822.49	36.63	46.00	-9.37	38.66	2.96	27.07	32.06	125	1 QP	VERTICAL																																																																																																
Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit. Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)																																																																																																											



RSE TX above 1GHz Result

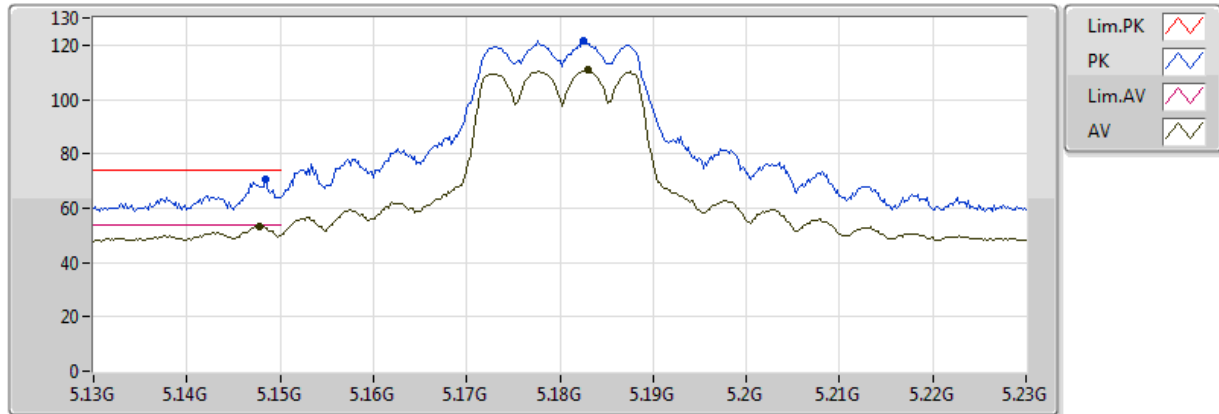
Appendix E.2

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
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
5.15-5.25GHz	Pass	AV	5.149G	53.39	54.00	-0.61	7.28	3	V	124	1.74	-

802.11a-BF_(6Mbps)_2TX

5180MHz_TX

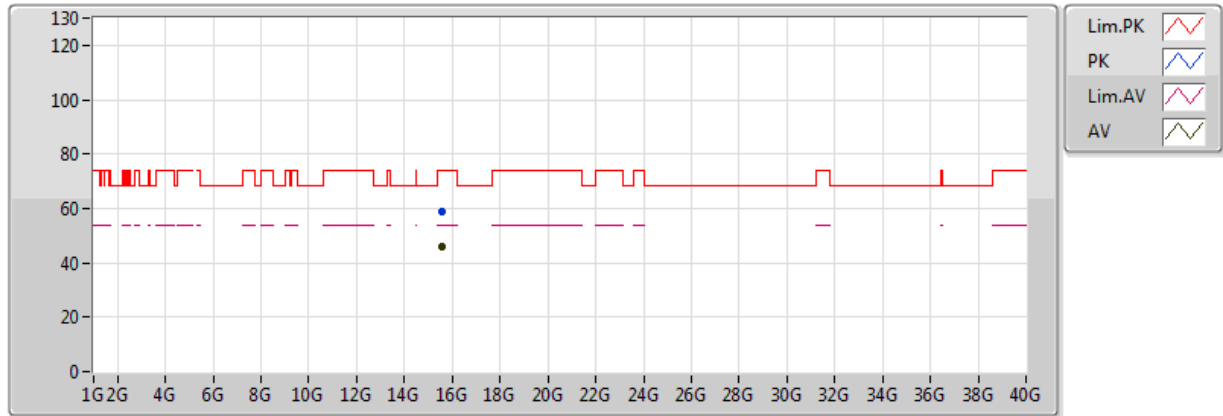


20161227
EUT Z 2TX_TXBF
Setting 21
02-M-1-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1478G	53.25	54.00	-0.75	7.27	3	V	149	1.70	-
AV	5.183G	110.74	Inf	-Inf	7.37	3	V	149	1.70	-
PK	5.1484G	70.52	74.00	-3.48	7.28	3	V	149	1.70	-
PK	5.1826G	121.52	Inf	-Inf	7.37	3	V	149	1.70	-

802.11a-BF_(6Mbps)_2TX

5180MHz_TX

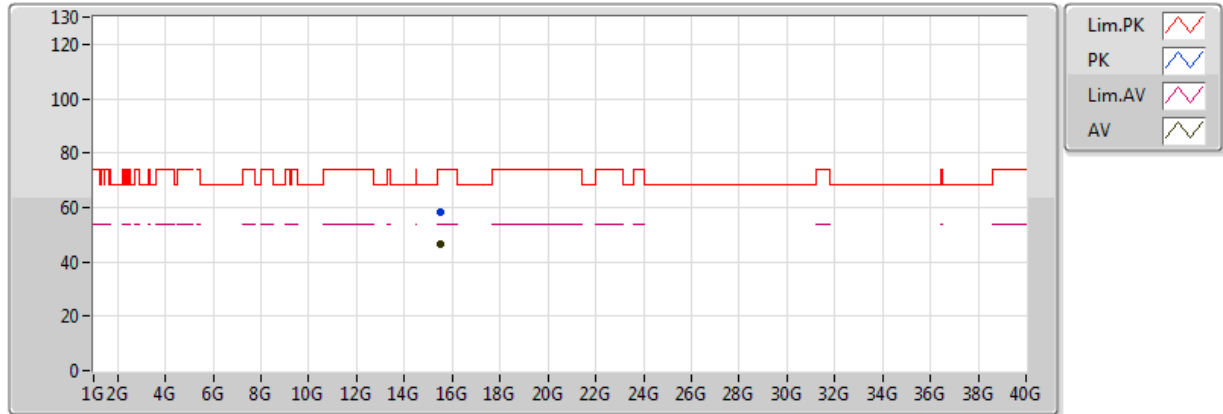


20170202
EUT Z 2TX_TXBF
Setting 21
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.54174G	46.03	54.00	-7.97	15.99	3	V	241	2.24	-
PK	15.54828G	58.59	74.00	-15.41	15.97	3	V	241	2.24	-

802.11a-BF_(6Mbps)_2TX

5180MHz_TX

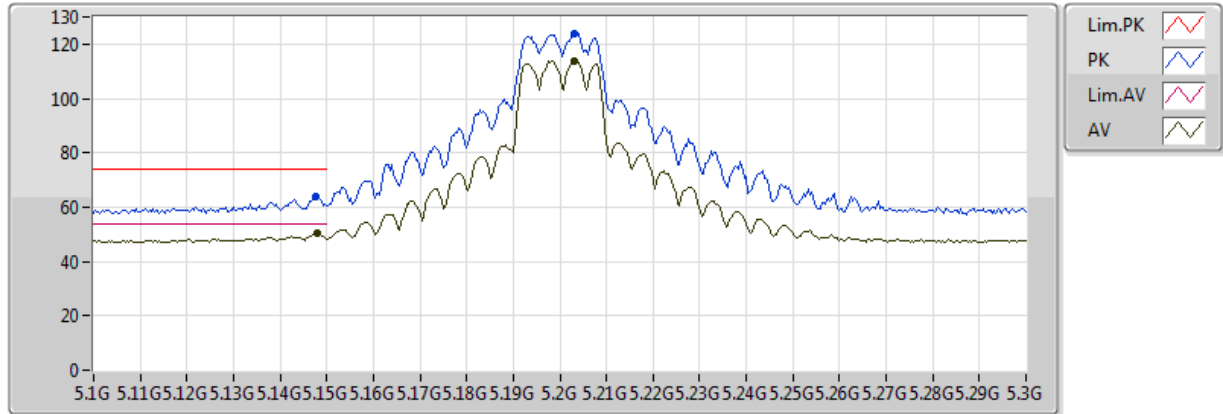


20170202
EUT Z 2TX_TXBF
Setting 21
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.53322G	46.42	54.00	-7.58	16.10	3	H	42	2.30	-
PK	15.53244G	58.52	74.00	-15.48	16.10	3	H	42	2.30	-

802.11a-BF_(6Mbps)_2TX

5200MHz_TX

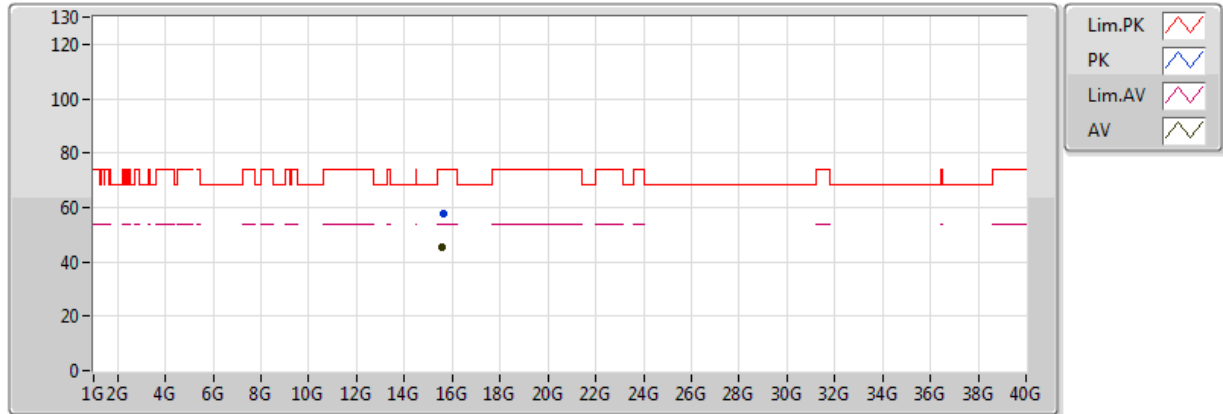


20161227
EUT Z 2TX_TXBF
Setting 25.5
02-M-1-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.148G	50.42	54.00	-3.58	7.27	3	V	118	1.76	-
AV	5.2032G	113.93	Inf	-Inf	7.43	3	V	118	1.76	-
PK	5.1476G	63.98	74.00	-10.02	7.27	3	V	118	1.76	-
PK	5.2032G	123.80	Inf	-Inf	7.43	3	V	118	1.76	-

802.11a-BF_(6Mbps)_2TX

5200MHz_TX

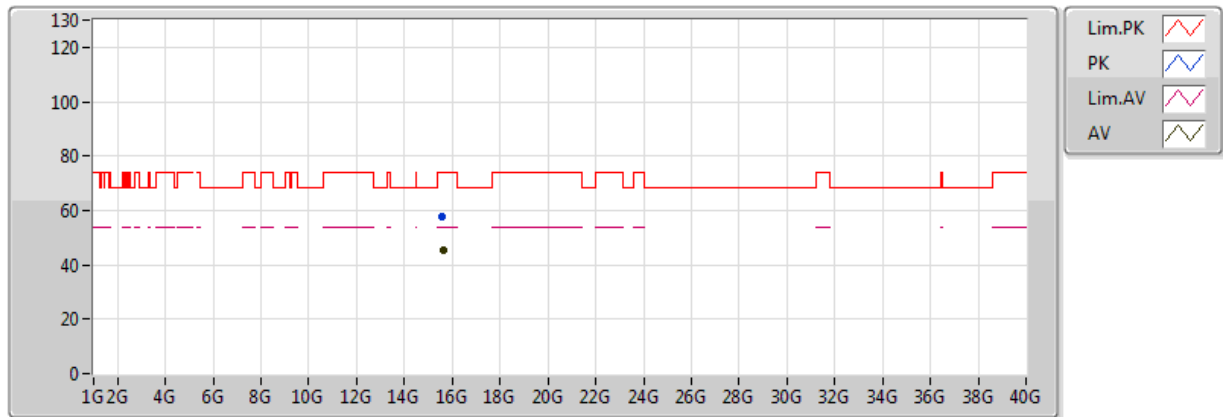


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.585G	45.60	54.00	-8.40	15.87	3	V	89	1.75	-
PK	15.60576G	57.48	74.00	-16.52	15.81	3	V	89	1.75	-

802.11a-BF_(6Mbps)_2TX

5200MHz_TX

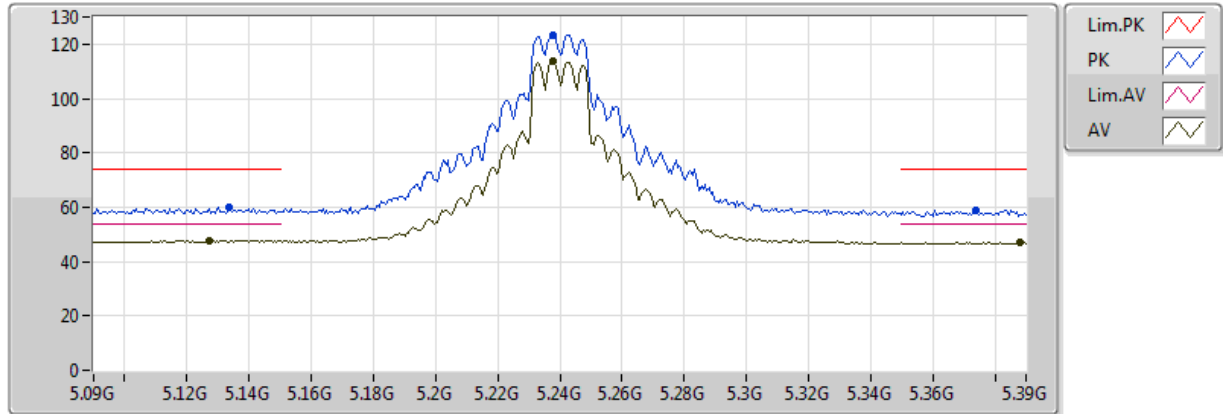


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.61242G	45.55	54.00	-8.45	15.85	3	H	35	2.03	-
PK	15.60006G	57.95	74.00	-16.05	15.89	3	H	35	2.03	-

802.11a-BF_(6Mbps)_2TX

5240MHz_TX

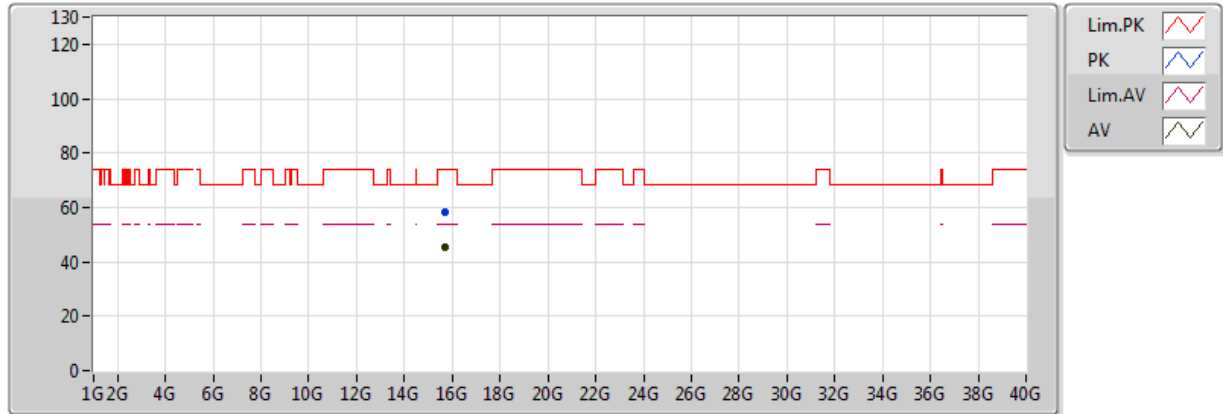


20161227
EUT Z 2TX_TXBF
Setting 25.5
02-M-1-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1272G	47.73	54.00	-6.27	7.22	3	V	115	1.68	-
AV	5.2376G	113.55	Inf	-Inf	7.50	3	V	115	1.68	-
AV	5.3882G	47.10	54.00	-6.90	7.82	3	V	115	1.68	-
PK	5.1338G	59.76	74.00	-14.24	7.23	3	V	115	1.68	-
PK	5.2376G	123.10	Inf	-Inf	7.50	3	V	115	1.68	-
PK	5.3738G	59.02	74.00	-14.98	7.79	3	V	115	1.68	-

802.11a-BF_(6Mbps)_2TX

5240MHz_TX

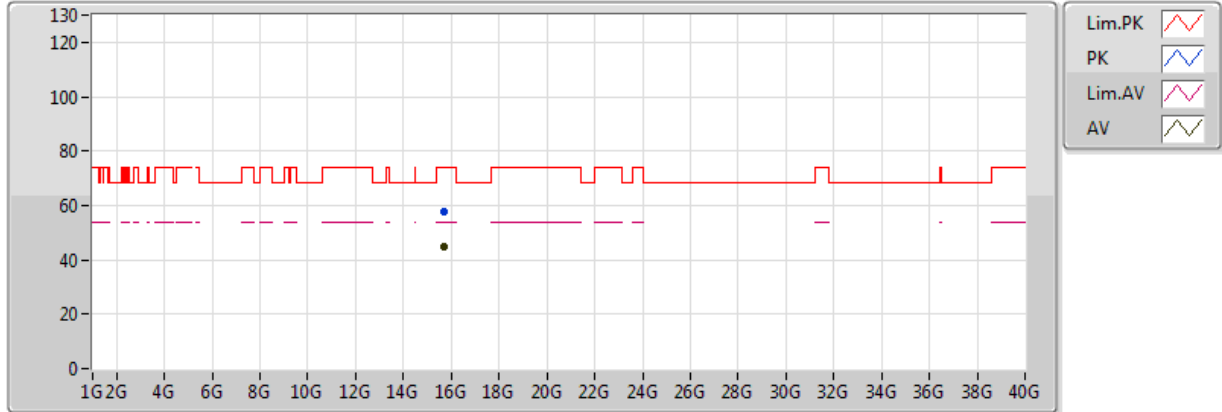


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.71358G	45.52	54.00	-8.48	15.53	3	V	185	1.01	-
PK	15.7191G	58.22	74.00	-15.78	15.52	3	V	185	1.01	-

802.11a-BF_(6Mbps)_2TX

5240MHz_TX

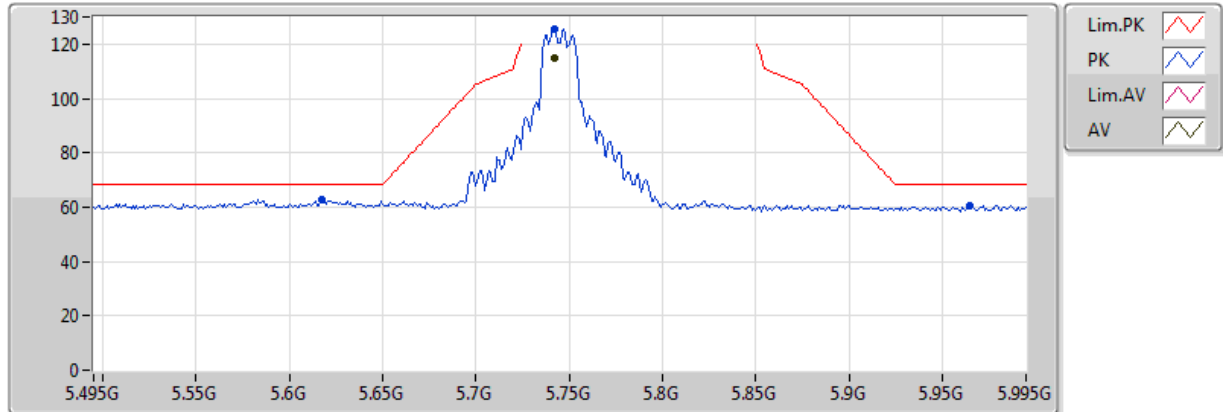


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.70686G	44.96	54.00	-9.04	15.55	3	H	295	2.07	-
PK	15.7269G	57.79	74.00	-16.21	15.49	3	H	295	2.07	-

802.11a-BF_(6Mbps)_2TX

5745MHz_TX

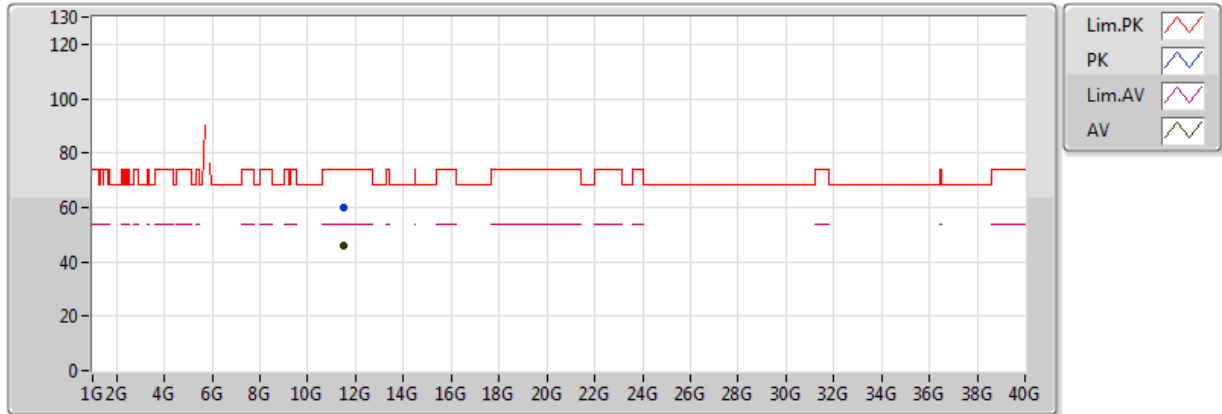


20161230
EUT Z 2TX_TXBF_Dipole 90度
Setting_25.5
02-M-1-10-FSU26

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.742G	114.96	Inf	-Inf	8.38	3	V	280	1.28	-
PK	5.617G	63.01	68.20	-5.19	8.29	3	V	280	1.28	-
PK	5.742G	125.59	Inf	-Inf	8.38	3	V	280	1.28	-
PK	5.965G	60.76	68.20	-7.44	8.73	3	V	280	1.28	-

802.11a-BF_(6Mbps)_2TX

5745MHz_TX

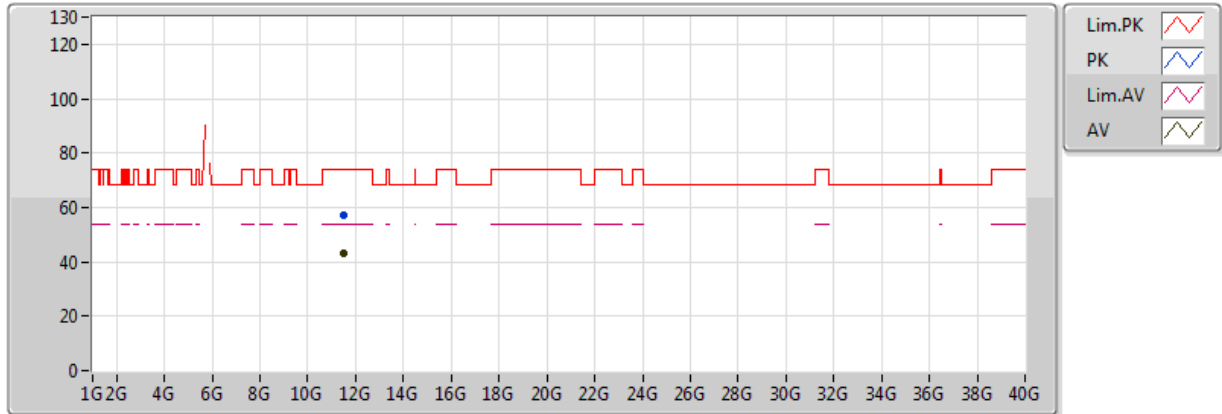


20161230
EUT Z 2TX_TXBF_Dipole 90度
Setting_25.5
02-M-1-FSU26

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.48628G	46.16	54.00	-7.84	14.57	3	V	322	1.11	-
PK	11.48682G	59.99	74.00	-14.01	14.57	3	V	322	1.11	-

802.11a-BF_(6Mbps)_2TX

5745MHz_TX

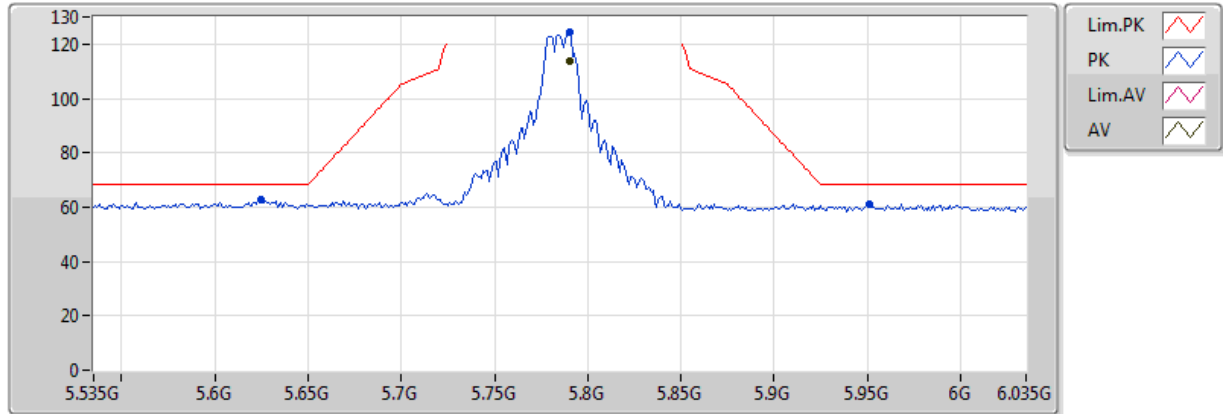


20161230
EUT Z 2TX_TXBF_Dipole 90度
Setting_25.5
02-M-1-FSU26

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.48742G	43.30	54.00	-10.70	14.57	3	H	326	1.50	-
PK	11.4882G	57.11	74.00	-16.89	14.57	3	H	326	1.50	-

802.11a-BF_(6Mbps)_2TX

5785MHz_TX

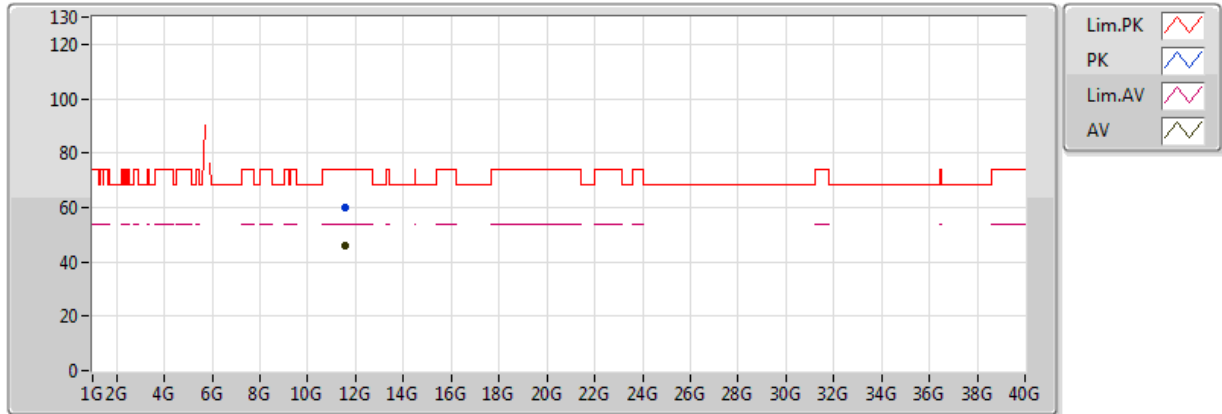


20161230
EUT Z 2TX_TXBF_Dipole 90度
Setting_25.5
02-M-1-FSU26

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.79G	113.88	Inf	-Inf	8.41	3	V	301	1.43	-
PK	5.625G	62.73	68.20	-5.47	8.30	3	V	301	1.43	-
PK	5.79G	124.22	Inf	-Inf	8.41	3	V	301	1.43	-
PK	5.951G	61.30	68.20	-6.90	8.71	3	V	301	1.43	-

802.11a-BF_(6Mbps)_2TX

5785MHz_TX

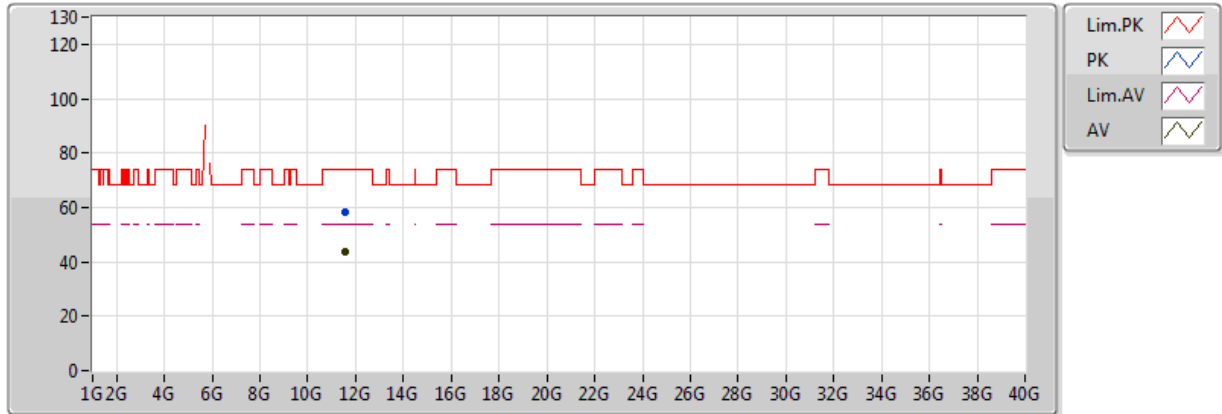


20161230
EUT Z 2TX_TXBF_Dipole 90度
Setting_25.5
02-M-1-FSU26

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.57116G	45.89	54.00	-8.11	14.64	3	V	316	1.19	-
PK	11.57192G	59.88	74.00	-14.12	14.64	3	V	316	1.19	-

802.11a-BF_(6Mbps)_2TX

5785MHz_TX

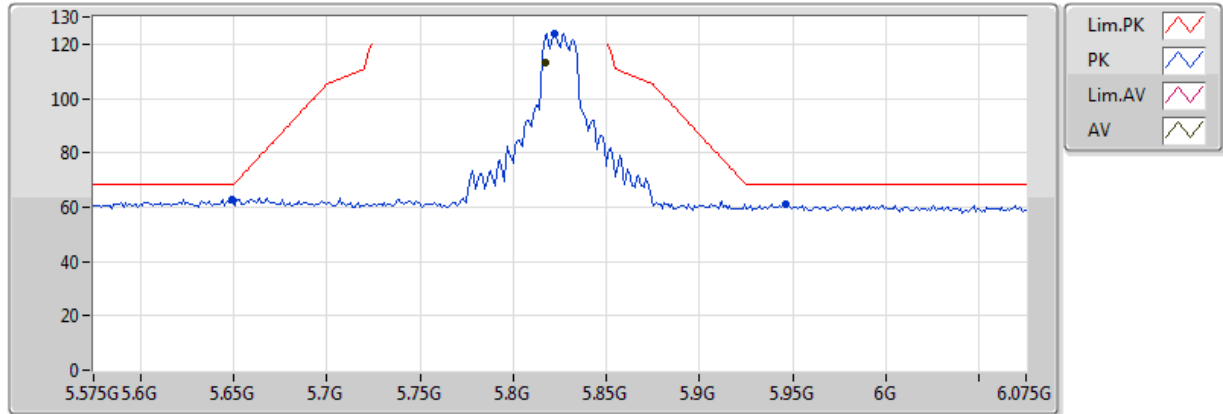


20161230
EUT Z 2TX_TXBF_Dipole 90度
Setting_25.5
02-M-1-FSU26

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.57132G	43.43	54.00	-10.57	14.64	3	H	117	1.31	-
PK	11.5634G	58.15	74.00	-15.85	14.63	3	H	117	1.31	-

802.11a-BF_(6Mbps)_2TX

5825MHz_TX

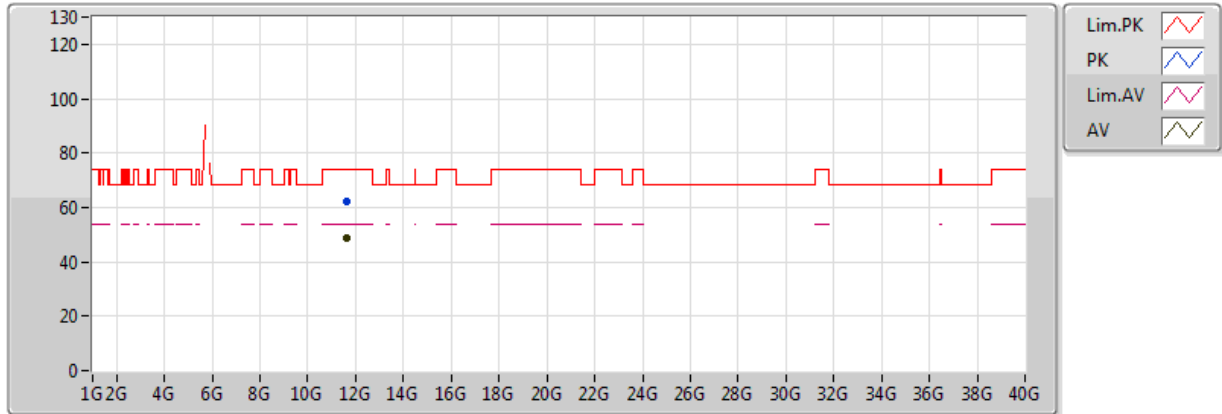


20161230
EUT Z 2TX_TXBF_Dipole 90度
Setting_25.5
02-M-1-FSU26

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.817G	113.41	Inf	-Inf	8.45	3	V	276	1.30	-
PK	5.649G	63.00	68.20	-5.20	8.31	3	V	276	1.30	-
PK	5.822G	123.90	Inf	-Inf	8.46	3	V	276	1.30	-
PK	5.946G	61.20	68.20	-7.00	8.70	3	V	276	1.30	-

802.11a-BF_(6Mbps)_2TX

5825MHz_TX

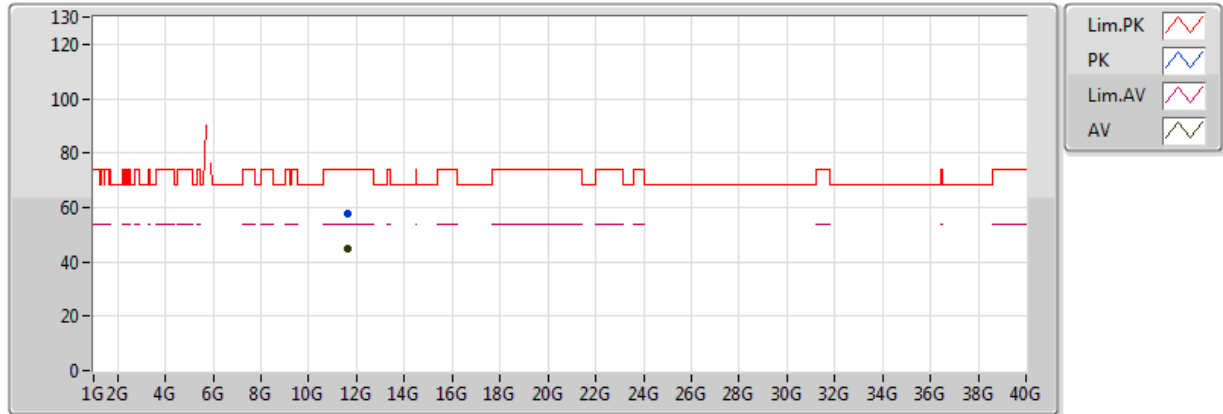


20161230
EUT Z 2TX_TXBF_Dipole 90度
Setting_25.5
02-M-1-FSU26

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.65132G	48.63	54.00	-5.37	14.71	3	V	321	1.00	-
PK	11.65112G	61.94	74.00	-12.06	14.71	3	V	321	1.00	-

802.11a-BF_(6Mbps)_2TX

5825MHz_TX

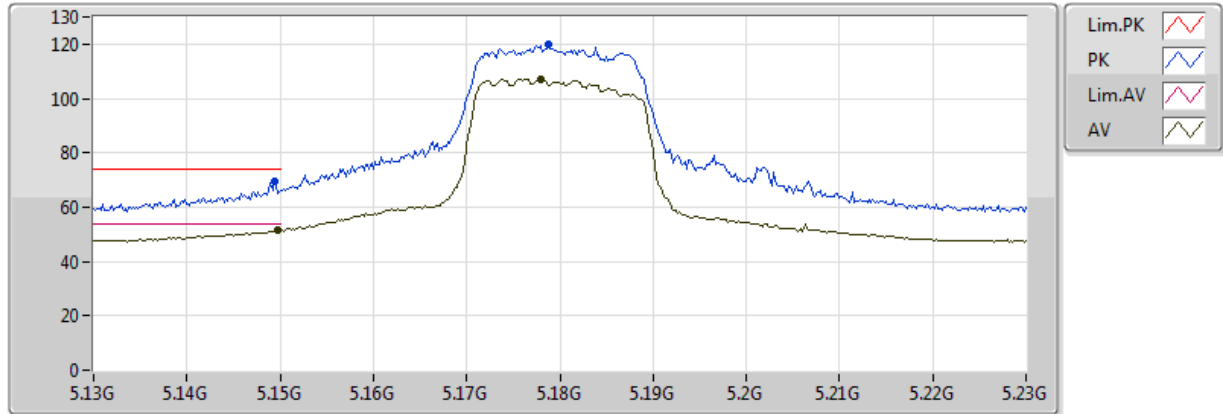


20161230
EUT Z 2TX_TXBF_Dipole 90度
Setting_25.5
02-M-1-FSU26

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.6522G	44.75	54.00	-9.25	14.71	3	H	120	1.50	-
PK	11.65592G	57.67	74.00	-16.33	14.71	3	H	120	1.50	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5180MHz_TX

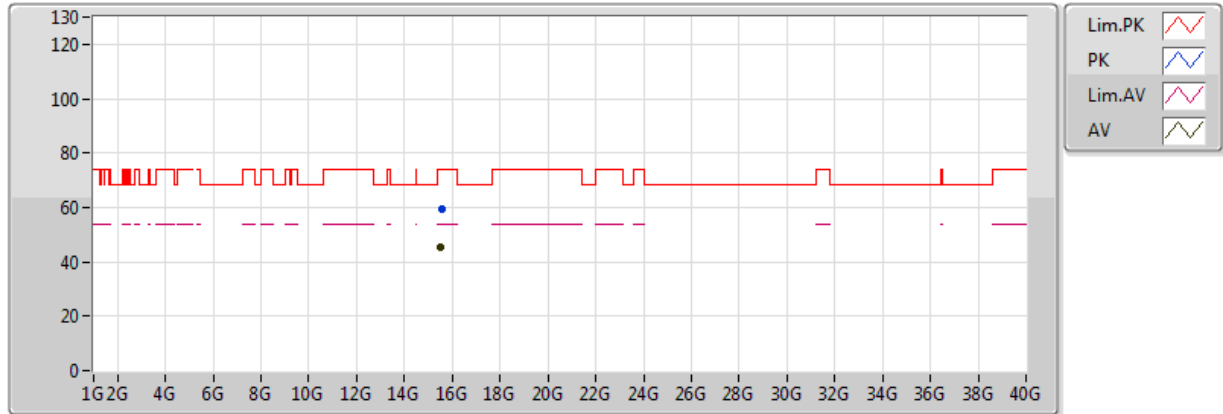


20161227
EUT Z 2TX_TXBF
Setting 21
02-M-1-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1498G	51.50	54.00	-2.50	7.28	3	V	197	1.50	-
AV	5.178G	107.19	Inf	-Inf	7.36	3	V	197	1.50	-
PK	5.1494G	69.29	74.00	-4.71	7.28	3	V	197	1.50	-
PK	5.1788G	119.79	Inf	-Inf	7.36	3	V	197	1.50	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5180MHz_TX

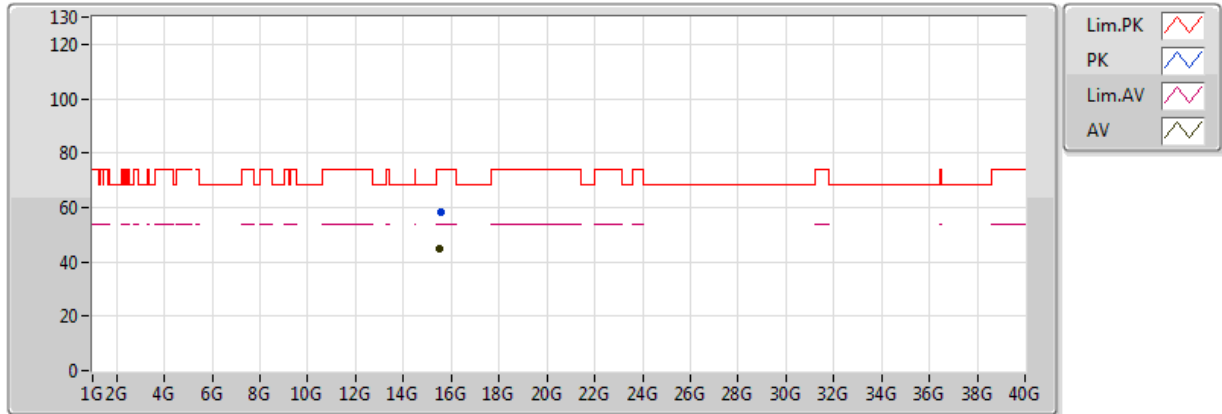


20170202
EUT Z 2TX_TXBF
Setting 21
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.5286G	45.54	54.00	-8.46	16.11	3	V	247	1.92	-
PK	15.53778G	59.19	74.00	-14.81	16.08	3	V	247	1.92	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5180MHz_TX

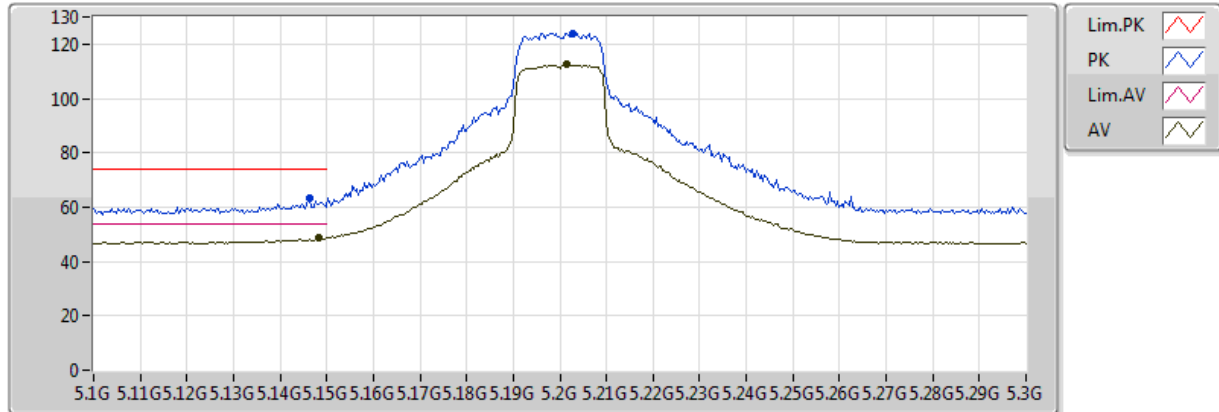


20170202
EUT Z 2TX_TXBF
Setting 21
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.52566G	44.91	54.00	-9.09	16.12	3	H	57	1.80	-
PK	15.54678G	58.34	74.00	-15.66	16.05	3	H	57	1.80	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5200MHz_TX

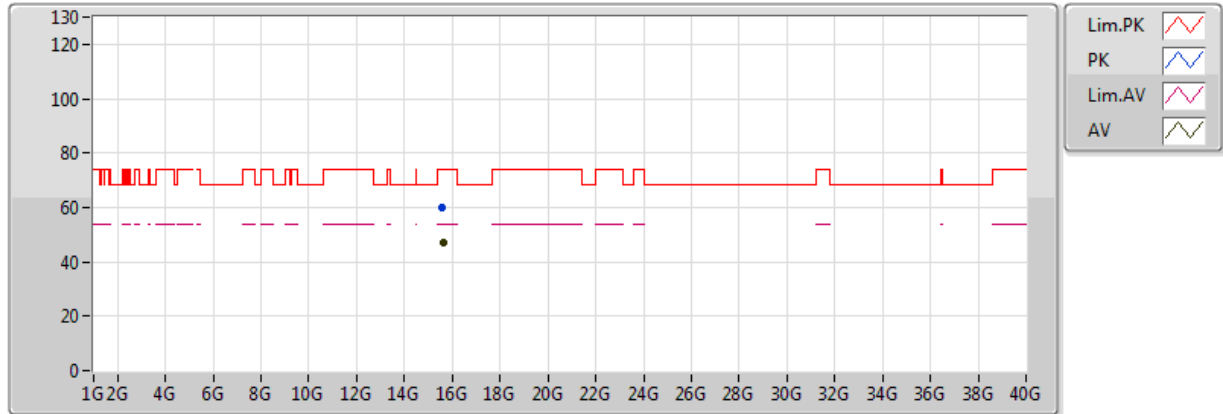


20161227
EUT Z 2TX_TXBF
Setting 25.5
02-M-1-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1484G	48.52	54.00	-5.48	7.28	3	V	114	1.30	-
AV	5.2016G	112.38	Inf	-Inf	7.42	3	V	114	1.30	-
PK	5.1464G	63.13	74.00	-10.87	7.27	3	V	114	1.30	-
PK	5.2028G	124.10	Inf	-Inf	7.43	3	V	114	1.30	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5200MHz_TX

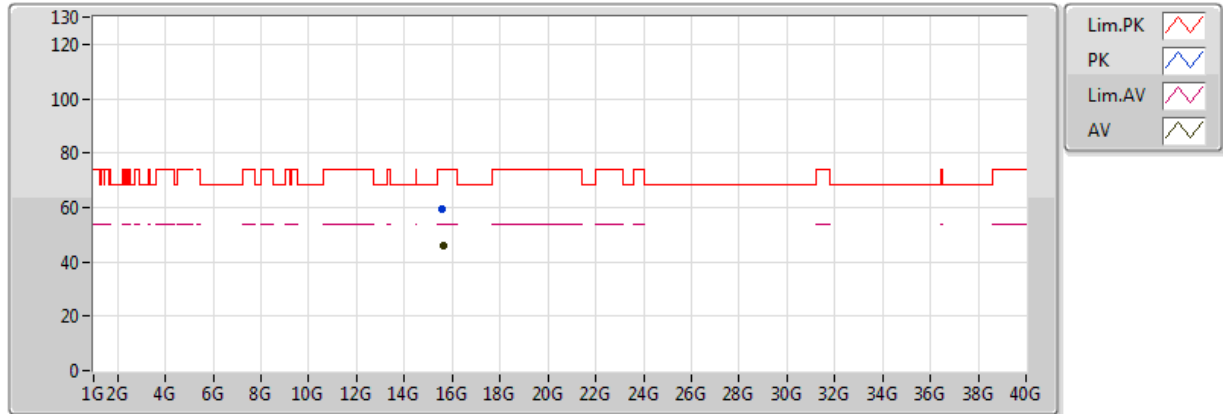


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.60276G	46.86	54.00	-7.14	15.82	3	V	9	2.43	-
PK	15.6003G	59.91	74.00	-14.09	15.83	3	V	9	2.43	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5200MHz_TX

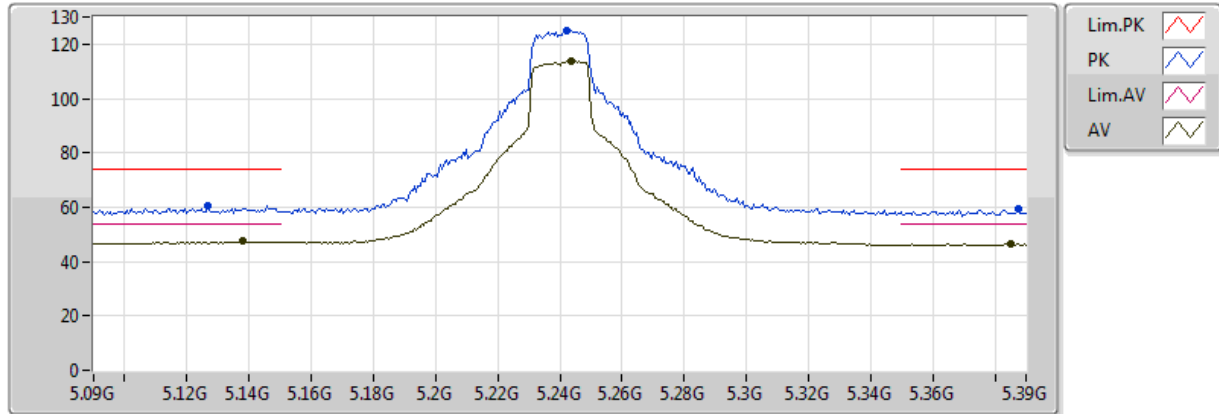


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.60444G	45.96	54.00	-8.04	15.87	3	H	161	1.17	-
PK	15.59052G	59.26	74.00	-14.74	15.92	3	H	161	1.17	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz_TX

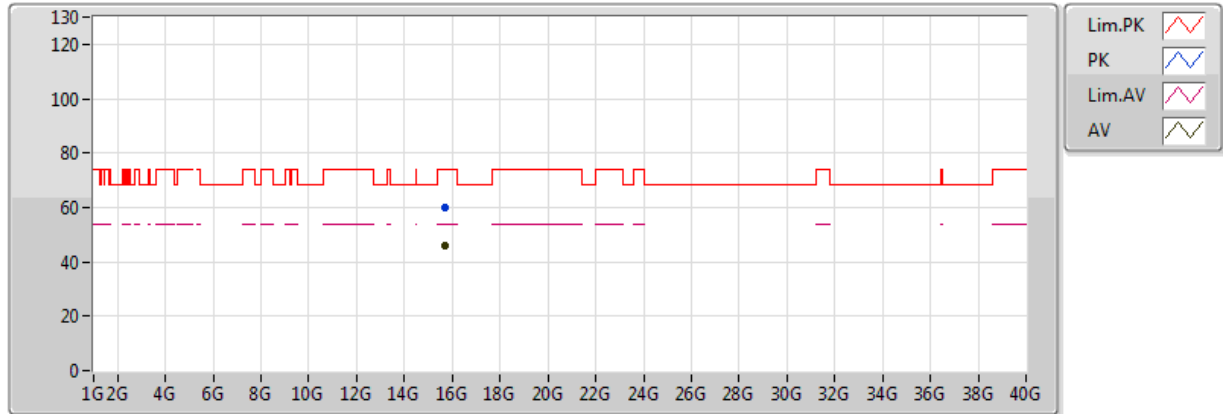


20161227
EUT Z 2TX_TXBF
Setting 25.5
02-M-1-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.138G	47.39	54.00	-6.61	7.25	3	V	120	1.77	-
AV	5.2436G	113.61	Inf	-Inf	7.52	3	V	120	1.77	-
AV	5.3852G	46.36	54.00	-7.64	7.81	3	V	120	1.77	-
PK	5.1266G	60.72	74.00	-13.28	7.21	3	V	120	1.77	-
PK	5.2424G	125.05	Inf	-Inf	7.51	3	V	120	1.77	-
PK	5.3876G	59.30	74.00	-14.70	7.82	3	V	120	1.77	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz_TX

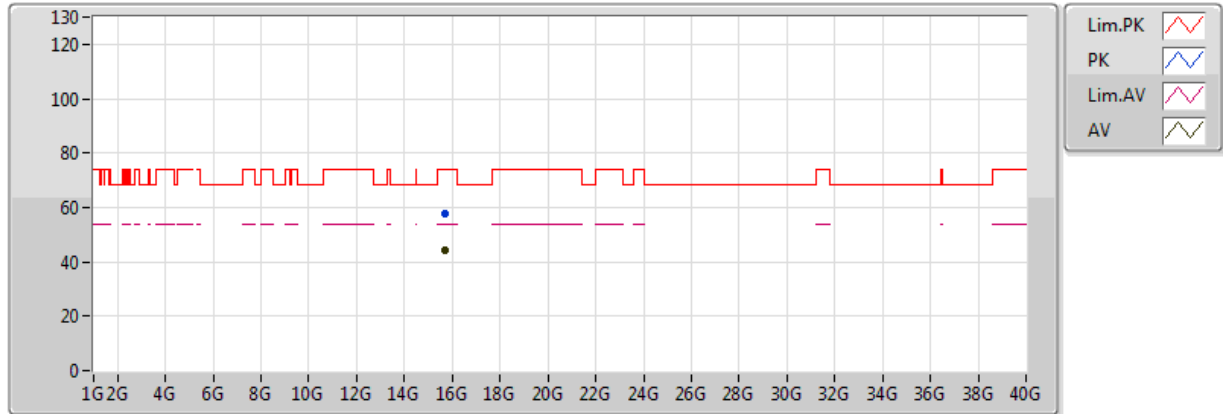


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.70662G	45.88	54.00	-8.12	15.54	3	V	244	2.19	-
PK	15.72576G	59.84	74.00	-14.16	15.49	3	V	244	2.19	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz_TX

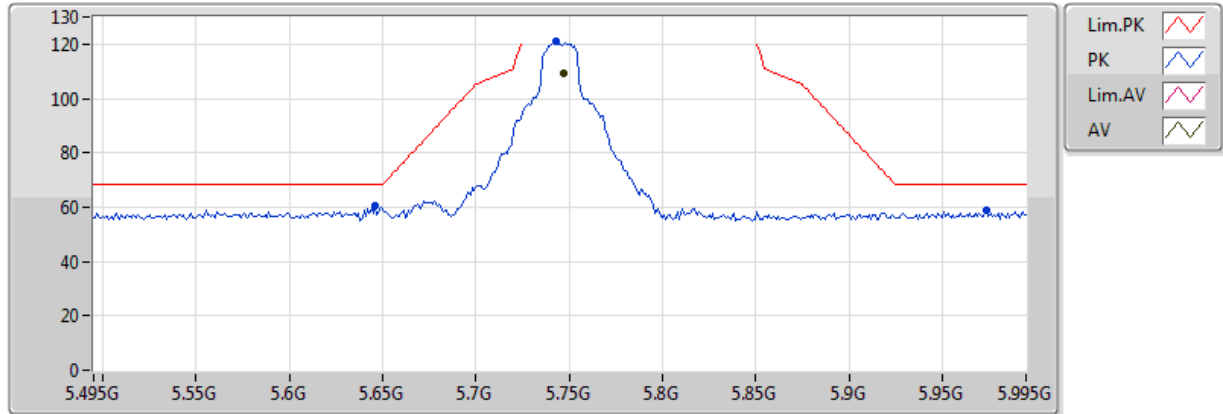


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.7083G	44.07	54.00	-9.93	15.55	3	H	310	2.15	-
PK	15.7134G	57.48	74.00	-16.52	15.53	3	H	310	2.15	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5745MHz_TX

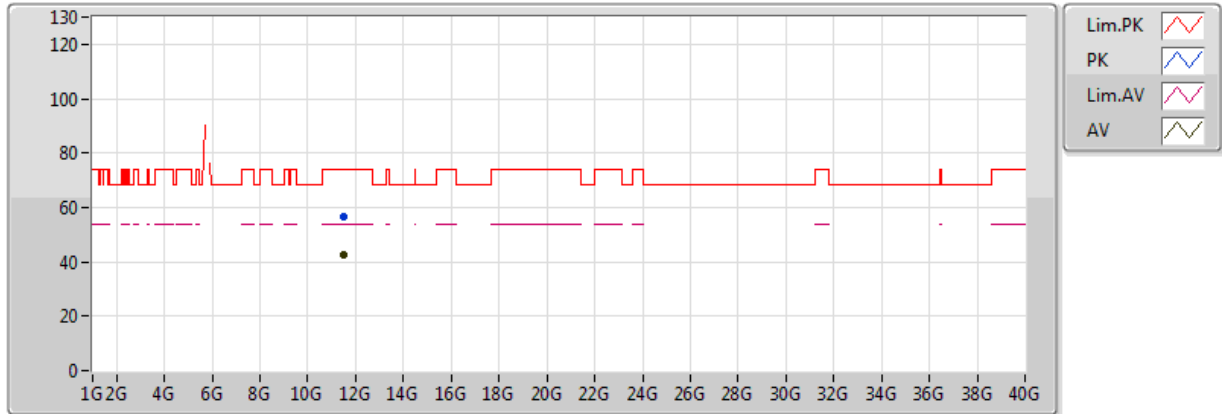


20161230
EUT Z 2TX Dipole TXBF
Setting:25.5
04-N-2-10(ATT-20)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.747G	109.38	Inf	-Inf	-6.62	3	V	199	1.50	-
PK	5.646G	60.38	68.20	-7.82	-6.69	3	V	199	1.50	-
PK	5.743G	120.90	Inf	-Inf	-6.62	3	V	199	1.50	-
PK	5.974G	58.86	68.20	-9.34	-5.67	3	V	199	1.50	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5745MHz_TX

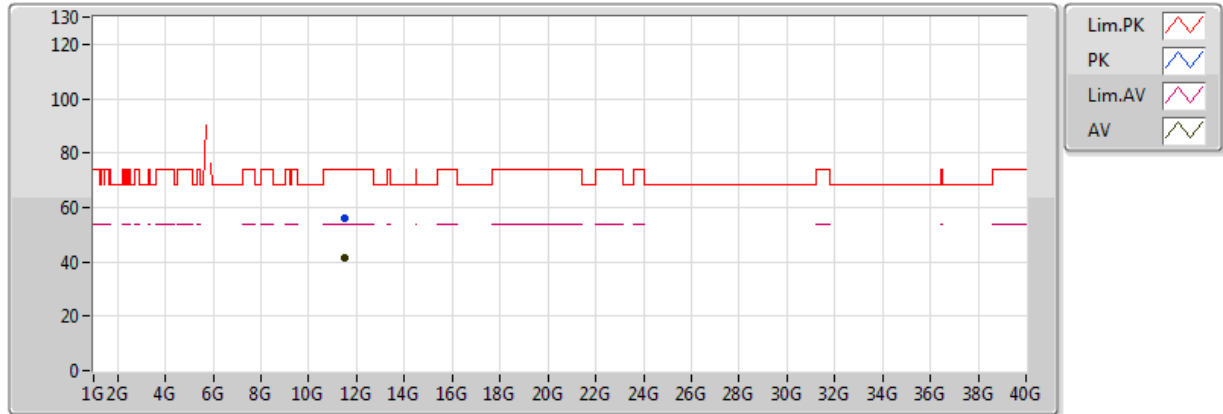


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.48184G	42.43	54.00	-11.57	14.47	3	V	247	2.40	-
PK	11.48238G	56.61	74.00	-17.39	14.47	3	V	247	2.40	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5745MHz_TX

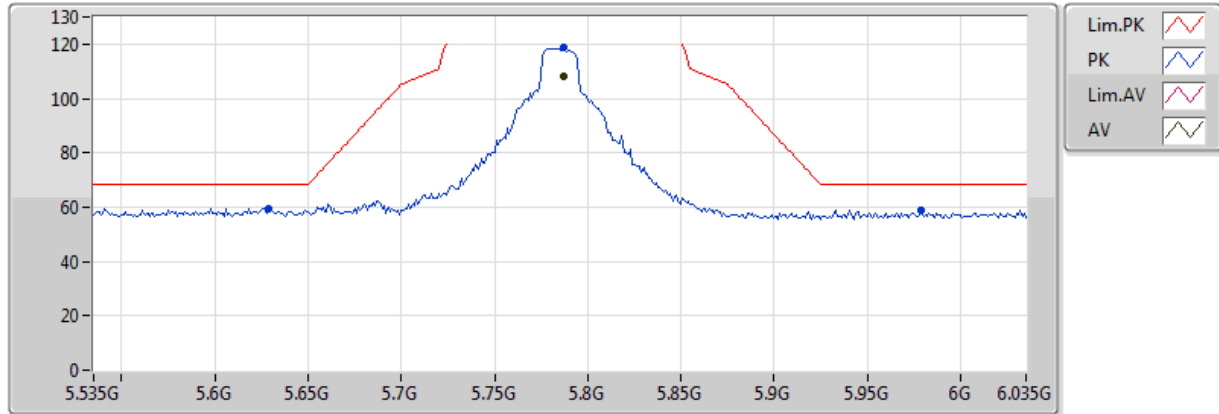


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.50158G	41.52	54.00	-12.48	13.76	3	H	10	2.20	-
PK	11.48736G	55.92	74.00	-18.08	13.75	3	H	10	2.20	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5785MHz_TX

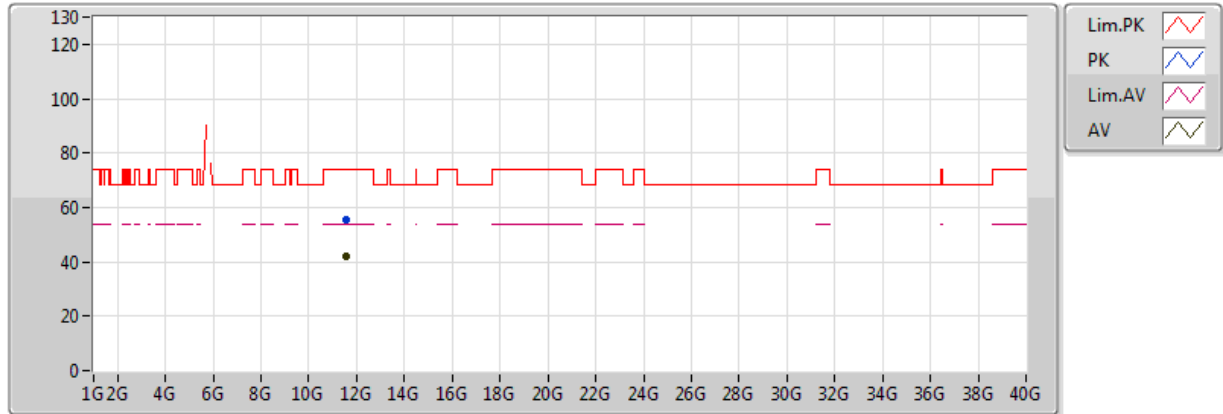


20161230
EUT Z 2TX Dipole TXBF
Setting:25.5
04-N-2-10(ATT-20)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.787G	108.18	Inf	-Inf	-6.59	3	V	293	1.50	-
PK	5.629G	59.57	68.20	-8.63	-6.70	3	V	293	1.50	-
PK	5.787G	118.60	Inf	-Inf	-6.59	3	V	293	1.50	-
PK	5.979G	59.09	68.20	-9.11	-5.64	3	V	293	1.50	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5785MHz_TX

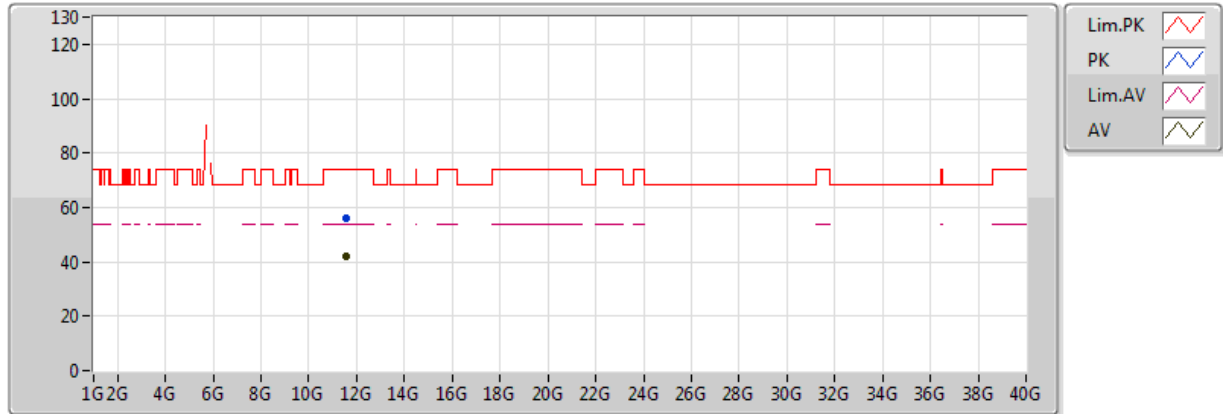


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.576G	42.07	54.00	-11.93	13.81	3	V	8	2.00	-
PK	11.55794G	55.64	74.00	-18.36	13.80	3	V	8	2.00	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5785MHz_TX

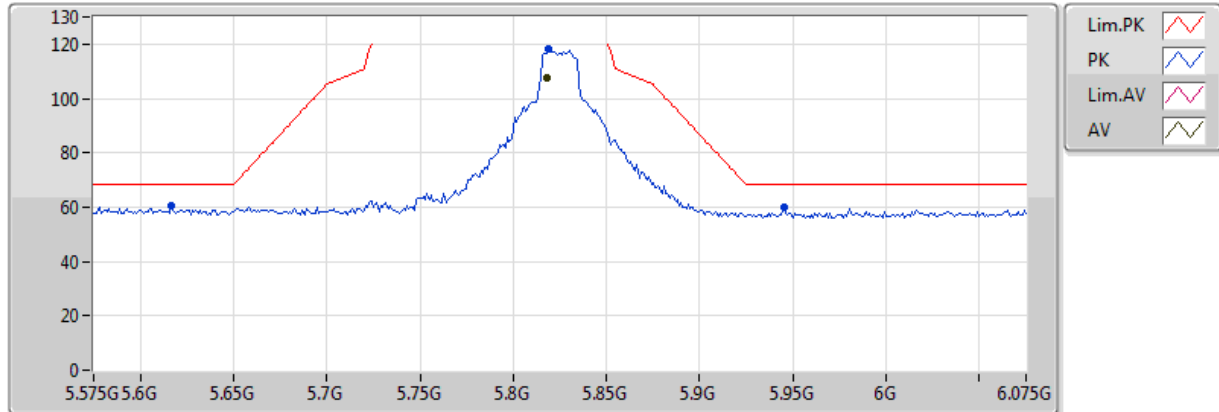


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.5841G	41.76	54.00	-12.24	13.81	3	H	2	2.47	-
PK	11.57048G	55.86	74.00	-18.14	13.80	3	H	2	2.47	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

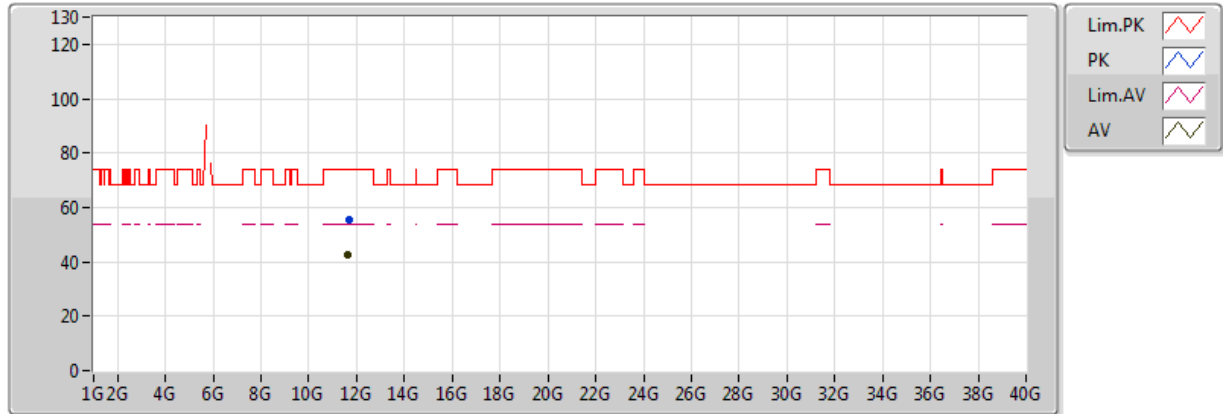
5825MHz_TX



Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.818G	107.32	Inf	-Inf	-6.49	3	V	273	1.50	-
PK	5.617G	60.29	68.20	-7.91	-6.71	3	V	273	1.50	-
PK	5.819G	118.07	Inf	-Inf	-6.48	3	V	273	1.50	-
PK	5.945G	59.73	68.20	-8.47	-5.82	3	V	273	1.50	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5825MHz_TX

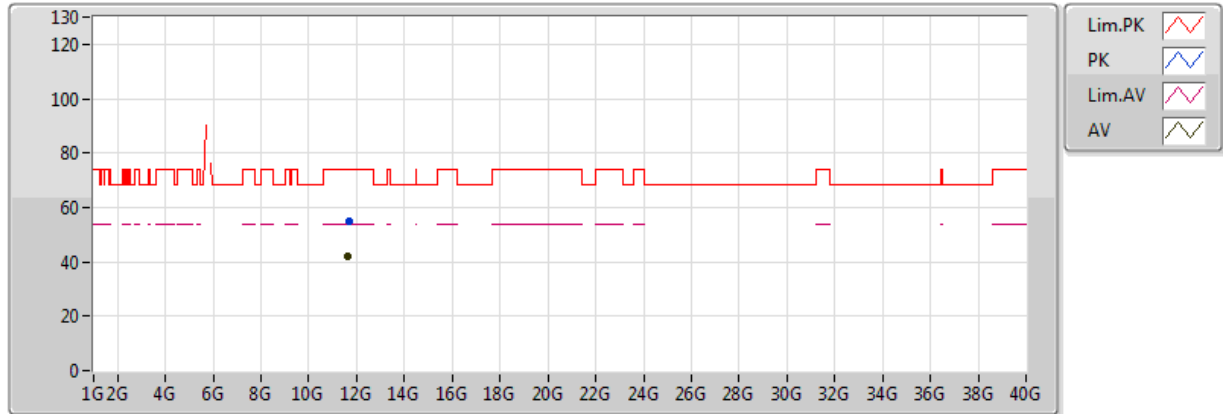


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.65102G	42.56	54.00	-11.44	13.85	3	V	226	2.42	-
PK	11.6608G	55.33	74.00	-18.67	13.86	3	V	226	2.42	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5825MHz_TX

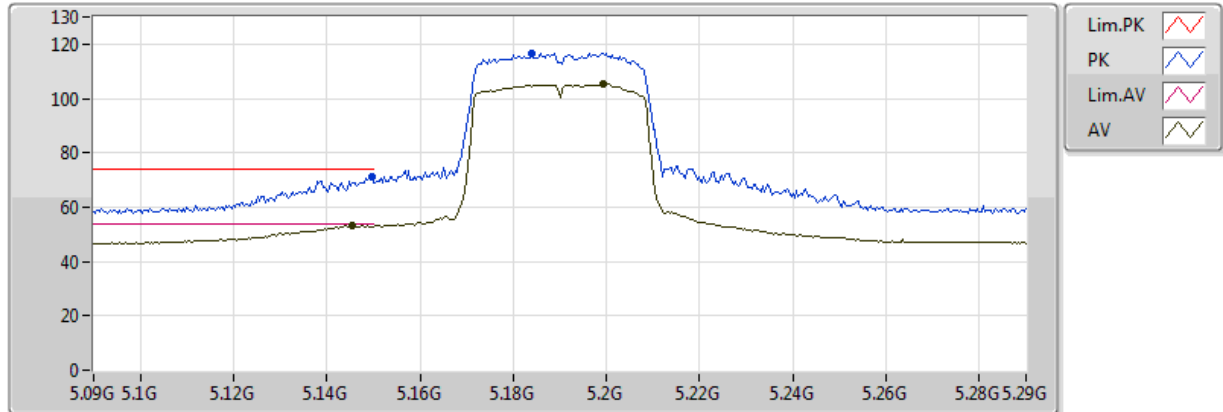


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.65468G	41.94	54.00	-12.06	13.86	3	H	157	1.15	-
PK	11.65678G	55.11	74.00	-18.89	13.86	3	H	157	1.15	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5190MHz_TX

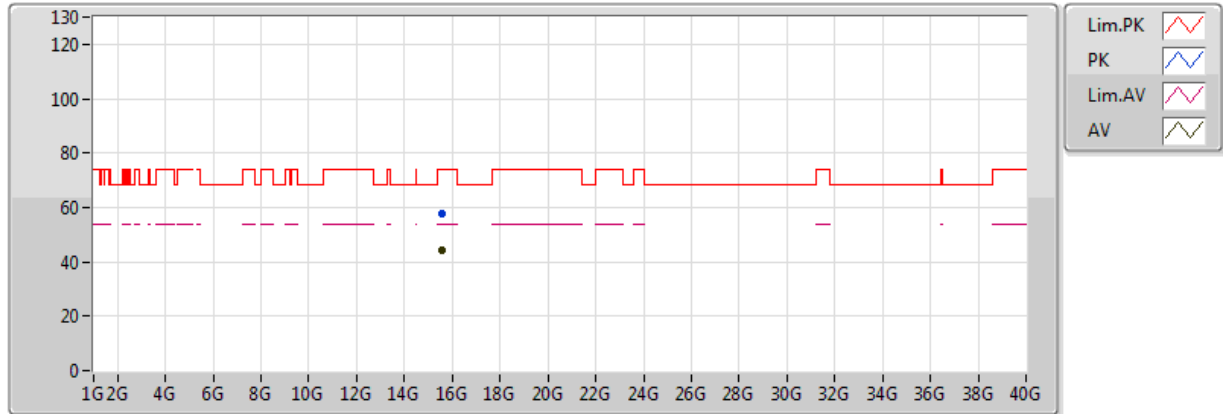


20161227
EUT Z 2TX_TXBF
Setting 19.5
02-M-1-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1456G	53.15	54.00	-0.85	7.27	3	V	121	1.36	-
AV	5.1992G	105.25	Inf	-Inf	7.42	3	V	121	1.36	-
PK	5.1496G	71.19	74.00	-2.81	7.28	3	V	121	1.36	-
PK	5.184G	116.55	Inf	-Inf	7.38	3	V	121	1.36	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5190MHz_TX

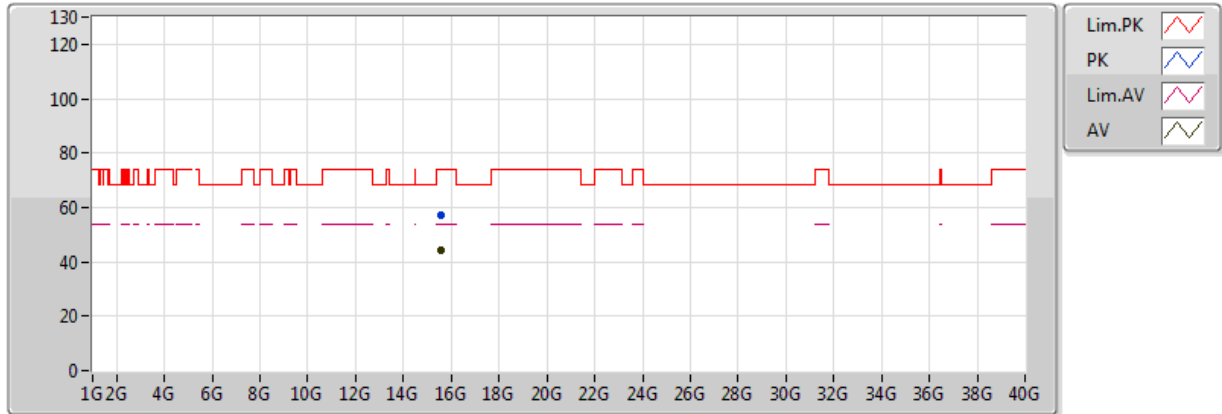


20170202
EUT Z 2TX_TXBF
Setting 19.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.58482G	44.27	54.00	-9.73	15.94	3	V	128	1.74	-
PK	15.5736G	57.54	74.00	-16.46	15.97	3	V	128	1.74	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5190MHz_TX

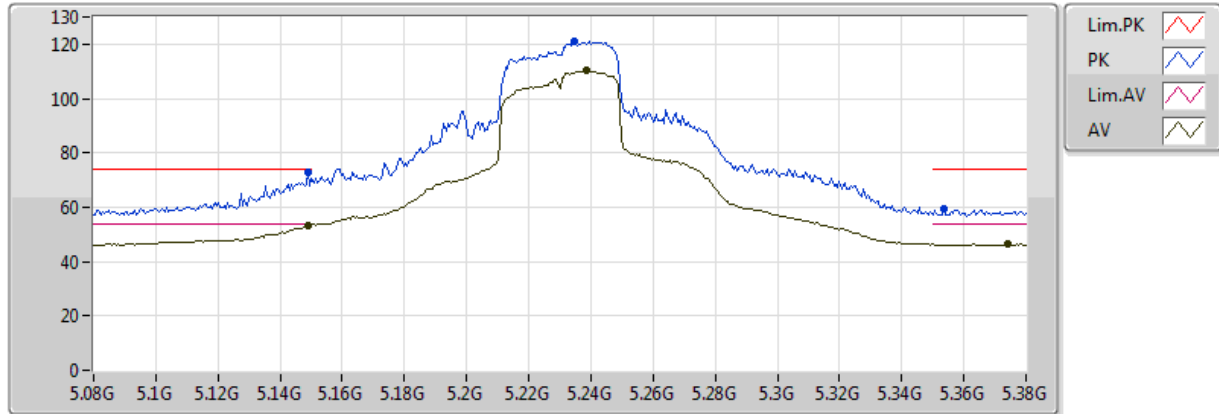


20170202
EUT Z 2TX_TXBF
Setting 19.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.56256G	44.27	54.00	-9.73	16.00	3	H	168	1.08	-
PK	15.56436G	57.35	74.00	-16.65	16.00	3	H	168	1.08	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5230MHz_TX

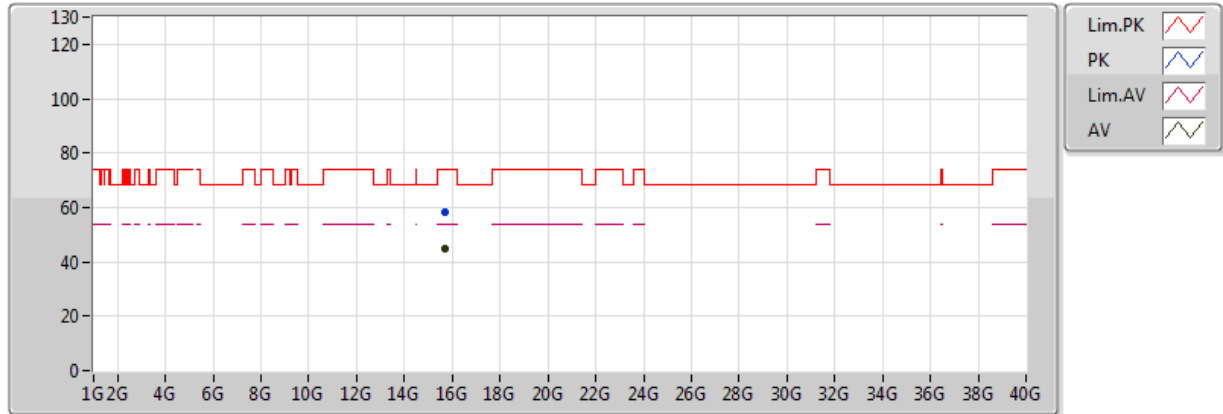


20161227
EUT Z 2TX_TXBF
Setting 25.5
02-M-1-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149G	53.39	54.00	-0.61	7.28	3	V	124	1.74	-
AV	5.2384G	110.14	Inf	-Inf	7.50	3	V	124	1.74	-
AV	5.374G	46.43	54.00	-7.57	7.79	3	V	124	1.74	-
PK	5.149G	72.83	74.00	-1.17	7.28	3	V	124	1.74	-
PK	5.2348G	121.08	Inf	-Inf	7.50	3	V	124	1.74	-
PK	5.3536G	59.24	74.00	-14.76	7.75	3	V	124	1.74	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5230MHz_TX

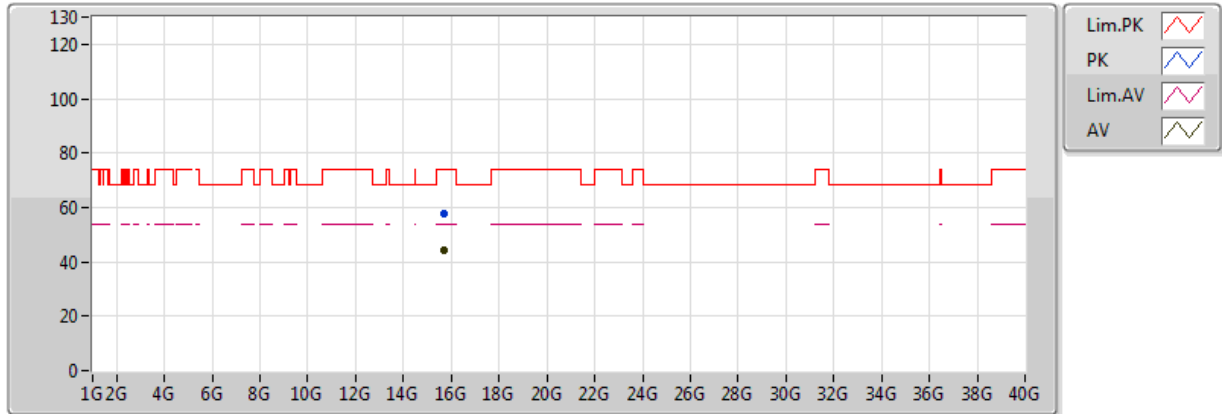


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.68916G	44.83	54.00	-9.17	15.61	3	V	267	1.55	-
PK	15.687G	58.30	74.00	-15.70	15.62	3	V	267	1.55	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5230MHz_TX

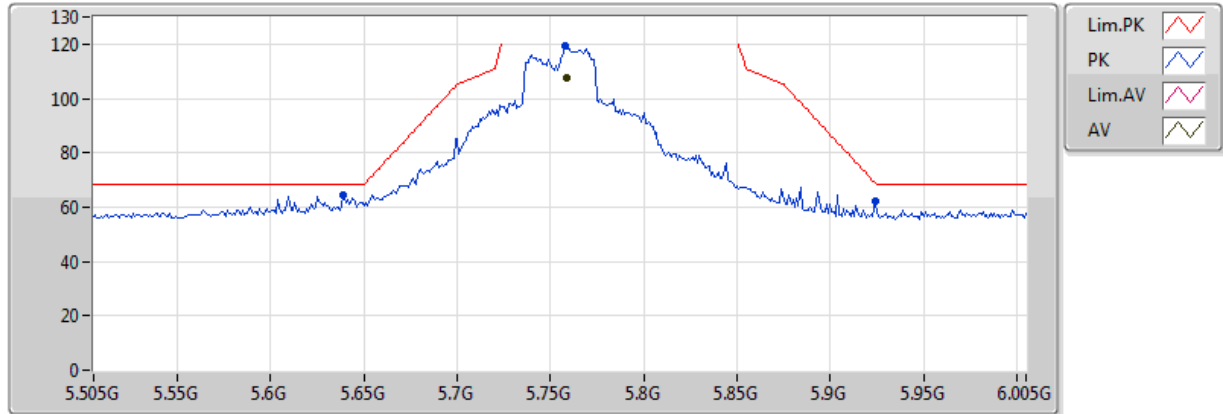


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.69528G	44.24	54.00	-9.76	15.59	3	H	77	2.38	-
PK	15.68034G	57.53	74.00	-16.47	15.64	3	H	77	2.38	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5755MHz_TX

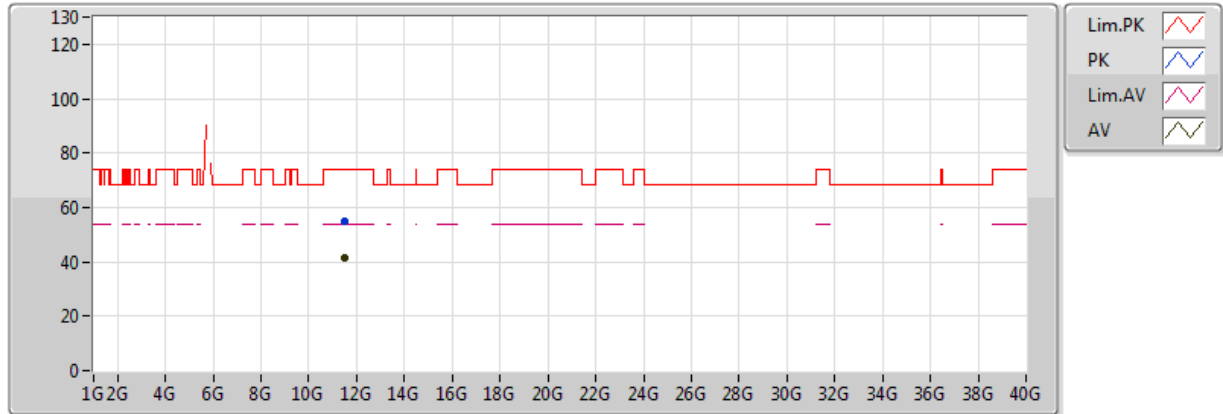


20161230
EUT Z 2TX Dipole TXBF
Setting:25.5
04-N-2-10(ATT-20)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.759G	107.45	Inf	-Inf	-6.61	3	V	279	1.49	-
PK	5.639G	64.53	68.20	-3.67	-6.69	3	V	279	1.49	-
PK	5.758G	119.48	Inf	-Inf	-6.61	3	V	279	1.49	-
PK	5.924G	62.09	68.94	-6.85	-5.93	3	V	279	1.49	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5755MHz_TX

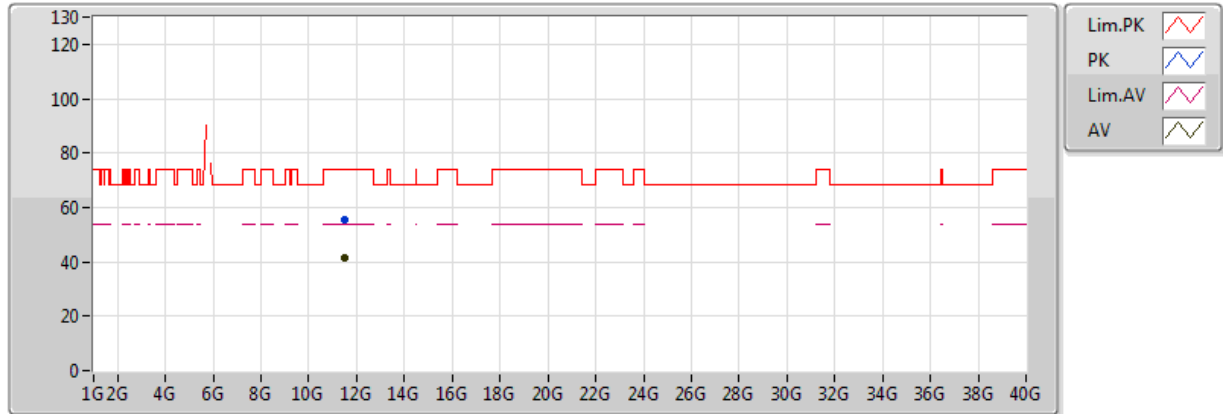


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.5217G	41.74	54.00	-12.26	13.77	3	V	166	2.09	-
PK	11.50982G	55.06	74.00	-18.94	13.77	3	V	166	2.09	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5755MHz_TX

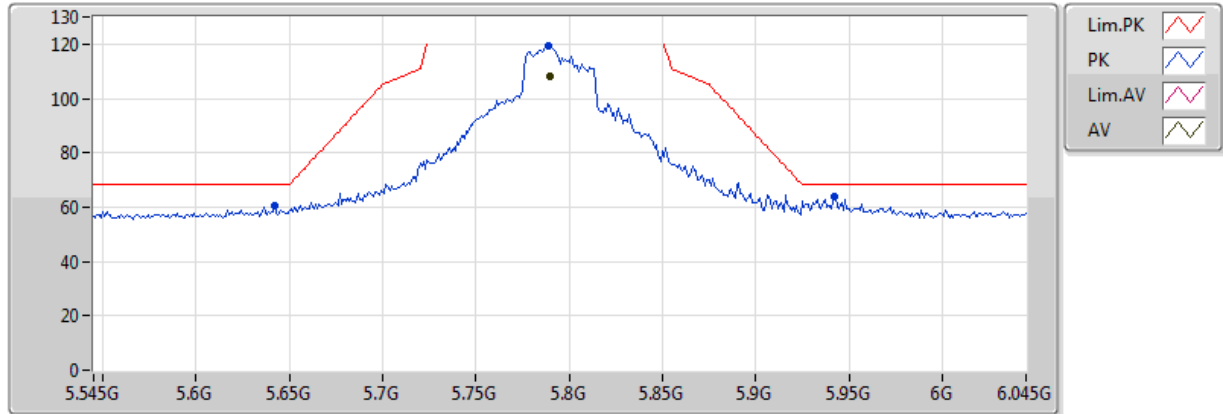


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.5097G	41.61	54.00	-12.39	13.77	3	H	271	2.10	-
PK	11.5076G	55.32	74.00	-18.68	13.76	3	H	271	2.10	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5795MHz_TX

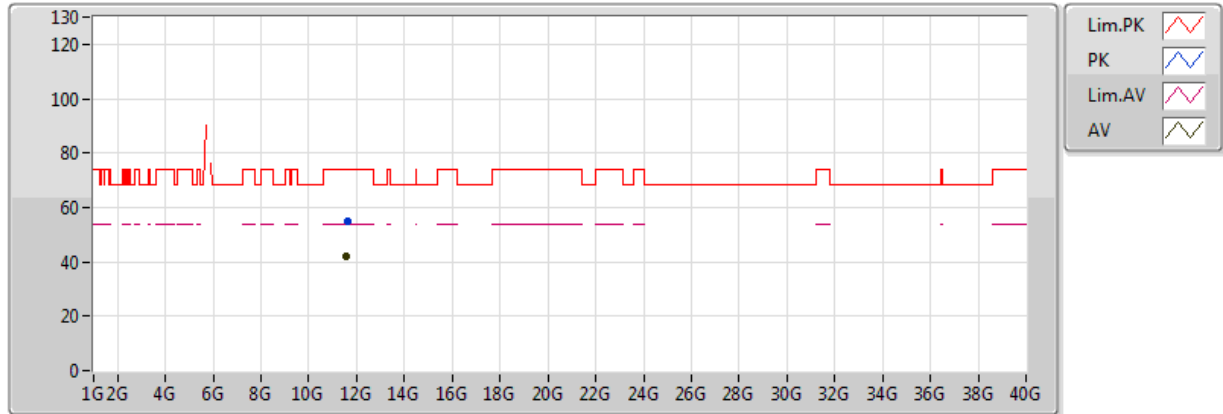


20161230
EUT Z 2TX Dipole TXBF
Setting:25.5
04-N-2-10(ATT-20)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.79G	108.38	Inf	-Inf	-6.59	3	V	216	2.05	-
PK	5.642G	60.58	68.20	-7.62	-6.69	3	V	216	2.05	-
PK	5.789G	119.55	Inf	-Inf	-6.59	3	V	216	2.05	-
PK	5.942G	64.02	68.20	-4.18	-5.84	3	V	216	2.05	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5795MHz_TX

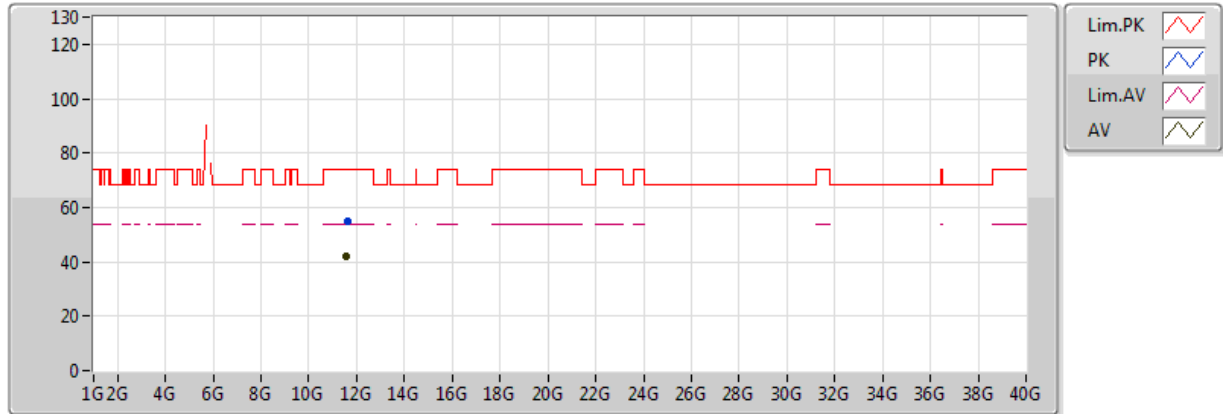


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.58772G	42.22	54.00	-11.78	13.81	3	V	349	2.22	-
PK	11.59996G	54.84	74.00	-19.16	13.82	3	V	349	2.22	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5795MHz_TX

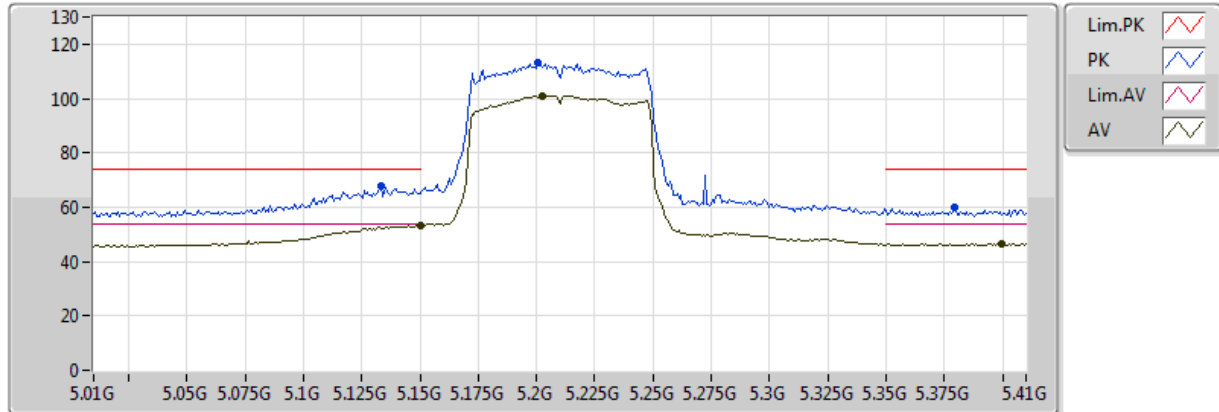


20170202
EUT Z 2TX_TXBF
Setting 25.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.58694G	41.77	54.00	-12.23	13.81	3	H	274	1.84	-
PK	11.59792G	54.90	74.00	-19.10	13.82	3	H	274	1.84	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5210MHz_TX

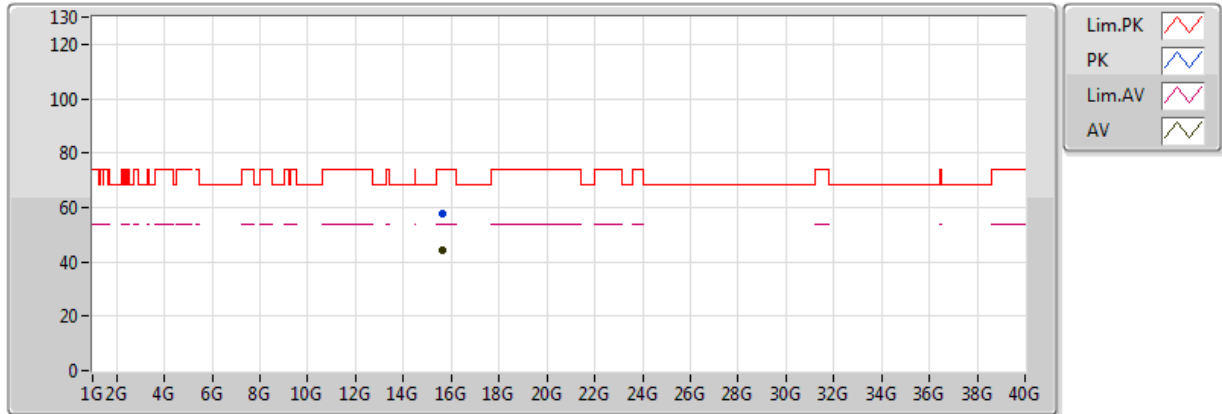


20161227
EUT Z 2TX_TXBF
Setting 19
02-M-1-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	53.32	54.00	-0.68	7.28	3	V	112	1.86	-
AV	5.2028G	101.11	Inf	-Inf	7.43	3	V	112	1.86	-
AV	5.3996G	46.44	54.00	-7.56	7.84	3	V	112	1.86	-
PK	5.1332G	67.57	74.00	-6.43	7.23	3	V	112	1.86	-
PK	5.2004G	113.00	Inf	-Inf	7.42	3	V	112	1.86	-
PK	5.3796G	59.75	74.00	-14.25	7.80	3	V	112	1.86	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5210MHz_TX

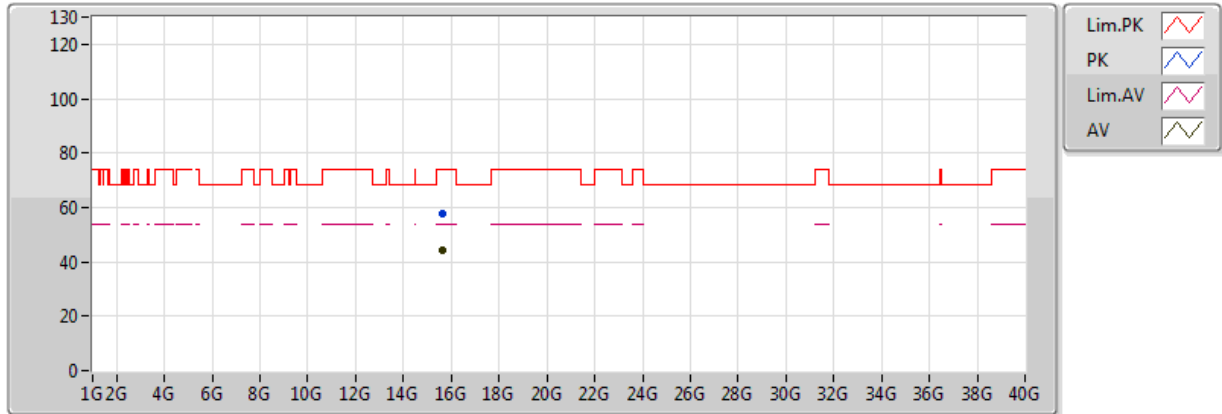


20170202
EUT Z 2TX_TXBF
Setting 19
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.61572G	44.11	54.00	-9.89	15.79	3	V	159	1.77	-
PK	15.6378G	57.57	74.00	-16.43	15.73	3	V	159	1.77	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5210MHz_TX

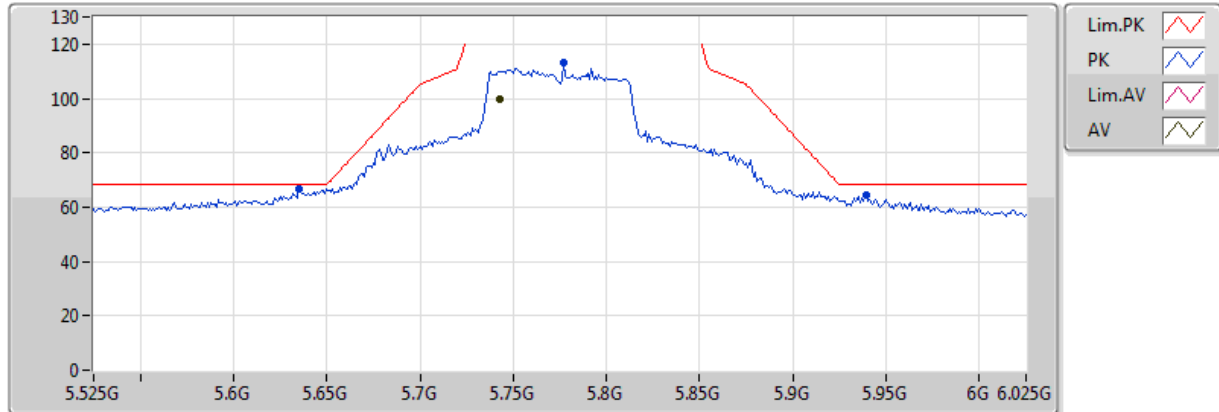


20170202
EUT Z 2TX_TXBF
Setting 19
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.63186G	44.04	54.00	-9.96	15.79	3	H	99	1.27	-
PK	15.61818G	57.54	74.00	-16.46	15.83	3	H	99	1.27	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz_TX

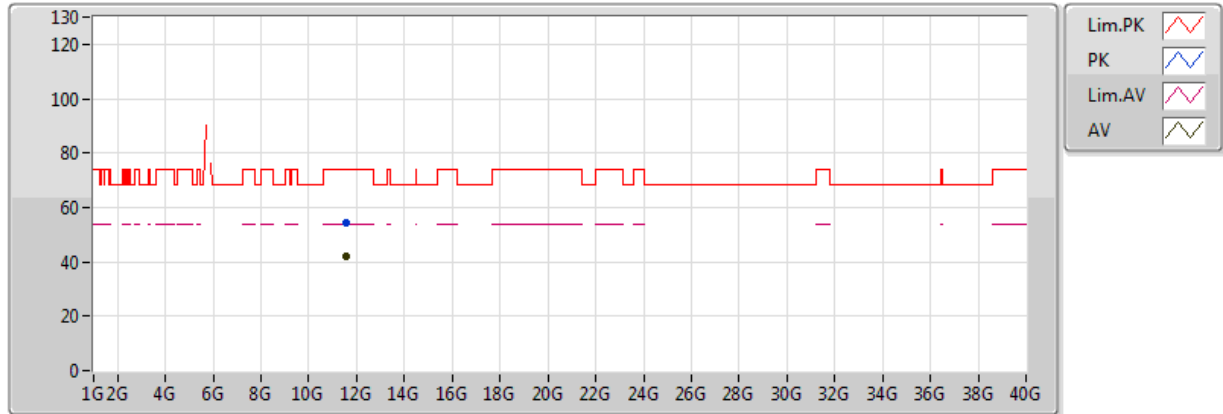


20161230
EUT Z 2TX Dipole TXBF
Setting:21.5
04-N-2-10(ATT-20)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.743G	99.85	Inf	-Inf	-6.62	3	V	265	1.50	-
PK	5.635G	66.56	68.20	-1.64	-6.70	3	V	265	1.50	-
PK	5.777G	113.27	Inf	-Inf	-6.60	3	V	265	1.50	-
PK	5.939G	64.20	68.20	-4.00	-5.85	3	V	265	1.50	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz_TX

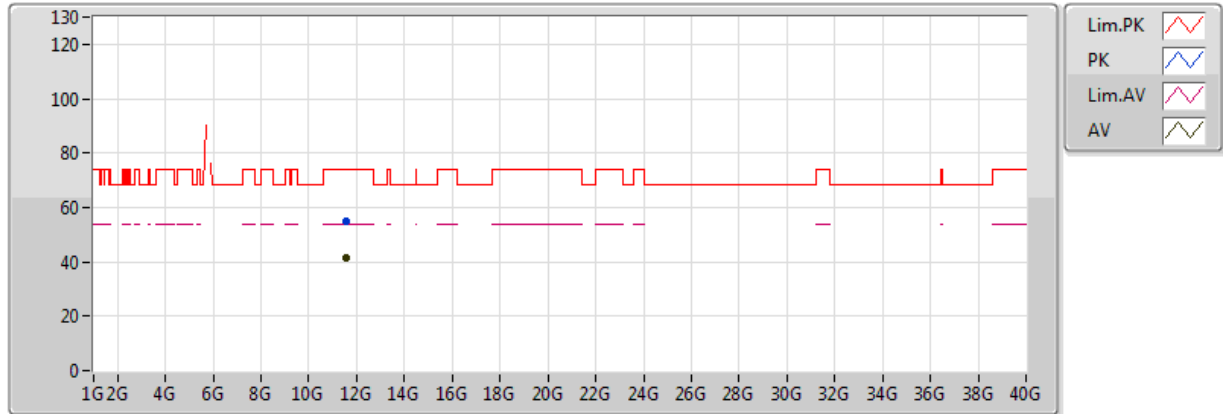


20170202
EUT Z 2TX_TXBF
Setting 21.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.56392G	41.99	54.00	-12.01	13.80	3	V	178	1.33	-
PK	11.54424G	54.54	74.00	-19.46	13.79	3	V	178	1.33	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz_TX



20170202
EUT Z 2TX_TXBF
Setting 21.5
02-J-4

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.56392G	41.72	54.00	-12.28	13.80	3	H	214	1.89	-
PK	11.54424G	54.68	74.00	-19.32	13.79	3	H	214	1.89	-

Mode: 20 MHz / Port 2

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5199.9942	5199.9935	5199.9928	5199.9921
110.00	5199.9936	5199.9935	5199.9933	5199.9927
93.50	5199.9930	5199.9923	5199.9914	5199.9907
Max. Deviation (MHz)	0.0070	0.0077	0.0086	0.0093
Max. Deviation (ppm)	1.35	1.48	1.65	1.79
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5199.9969	5199.9962	5199.9954	5199.9945
10	5199.9951	5199.9941	5199.9934	5199.9925
20	5199.9936	5199.9932	5199.9929	5199.9926
30	5199.9897	5199.9888	5199.9879	5199.9872
40	5199.9887	5199.9885	5199.9875	5199.9866
Max. Deviation (MHz)	0.0113	0.0115	0.0125	0.0134
Max. Deviation (ppm)	2.17	2.21	2.40	2.58
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5784.9937	5784.9931	5784.9922	5784.9912
110.00	5784.9936	5784.9932	5784.9930	5784.9929
93.50	5784.9931	5784.9927	5784.9917	5784.9912
Max. Deviation (MHz)	0.0069	0.0073	0.0083	0.0088
Max. Deviation (ppm)	1.19	1.26	1.43	1.52
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5784.9956	5784.9951	5784.9948	5784.9940
10	5784.9947	5784.9939	5784.9937	5784.9932
20	5784.9936	5784.9935	5784.9926	5784.9922
30	5784.9897	5784.9888	5784.9884	5784.9878
40	5784.9889	5784.9885	5784.9876	5784.9870
Max. Deviation (MHz)	0.0111	0.0115	0.0124	0.0130
Max. Deviation (ppm)	1.92	1.99	2.14	2.25
Result	Pass			

Mode: 40 MHz / Port 2

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5189.9945	5189.9936	5189.9935	5189.9932
110.00	5189.9936	5189.9932	5189.9926	5189.9916
93.50	5189.9931	5189.9924	5189.9916	5189.9912
Max. Deviation (MHz)	0.0069	0.0076	0.0084	0.0088
Max. Deviation (ppm)	1.33	1.46	1.62	1.70
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5189.9946	5189.9936	5189.9931	5189.9923
10	5189.9945	5189.9941	5189.9933	5189.9923
20	5189.9936	5189.9926	5189.9919	5189.9912
30	5189.9897	5189.9894	5189.9892	5189.9889
40	5189.9891	5189.9883	5189.9877	5189.9872
Max. Deviation (MHz)	0.0109	0.0117	0.0123	0.0128
Max. Deviation (ppm)	2.10	2.25	2.37	2.47
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5754.9945	5754.9937	5754.9935	5754.9934
110.00	5754.9936	5754.9932	5754.9927	5754.9920
93.50	5754.9934	5754.9927	5754.9924	5754.9918
Max. Deviation (MHz)	0.0066	0.0073	0.0076	0.0082
Max. Deviation (ppm)	1.15	1.27	1.32	1.42
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5754.9968	5754.9959	5754.9949	5754.9940
10	5754.9952	5754.9943	5754.9933	5754.9928
20	5754.9936	5754.9935	5754.9928	5754.9927
30	5754.9897	5754.9893	5754.9887	5754.9886
40	5754.9883	5754.9880	5754.9871	5754.9862
Max. Deviation (MHz)	0.0117	0.0120	0.0129	0.0138
Max. Deviation (ppm)	2.03	2.09	2.24	2.40
Result	Pass			

Mode: 80 MHz / Port 2

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5209.9946	5209.9942	5209.9940	5209.9930
110.00	5209.9936	5209.9935	5209.9928	5209.9924
93.50	5209.9930	5209.9920	5209.9919	5209.9915
Max. Deviation (MHz)	0.0070	0.0080	0.0081	0.0085
Max. Deviation (ppm)	1.34	1.54	1.55	1.63
Result	Pass			

Temperature vs. Frequency Stability

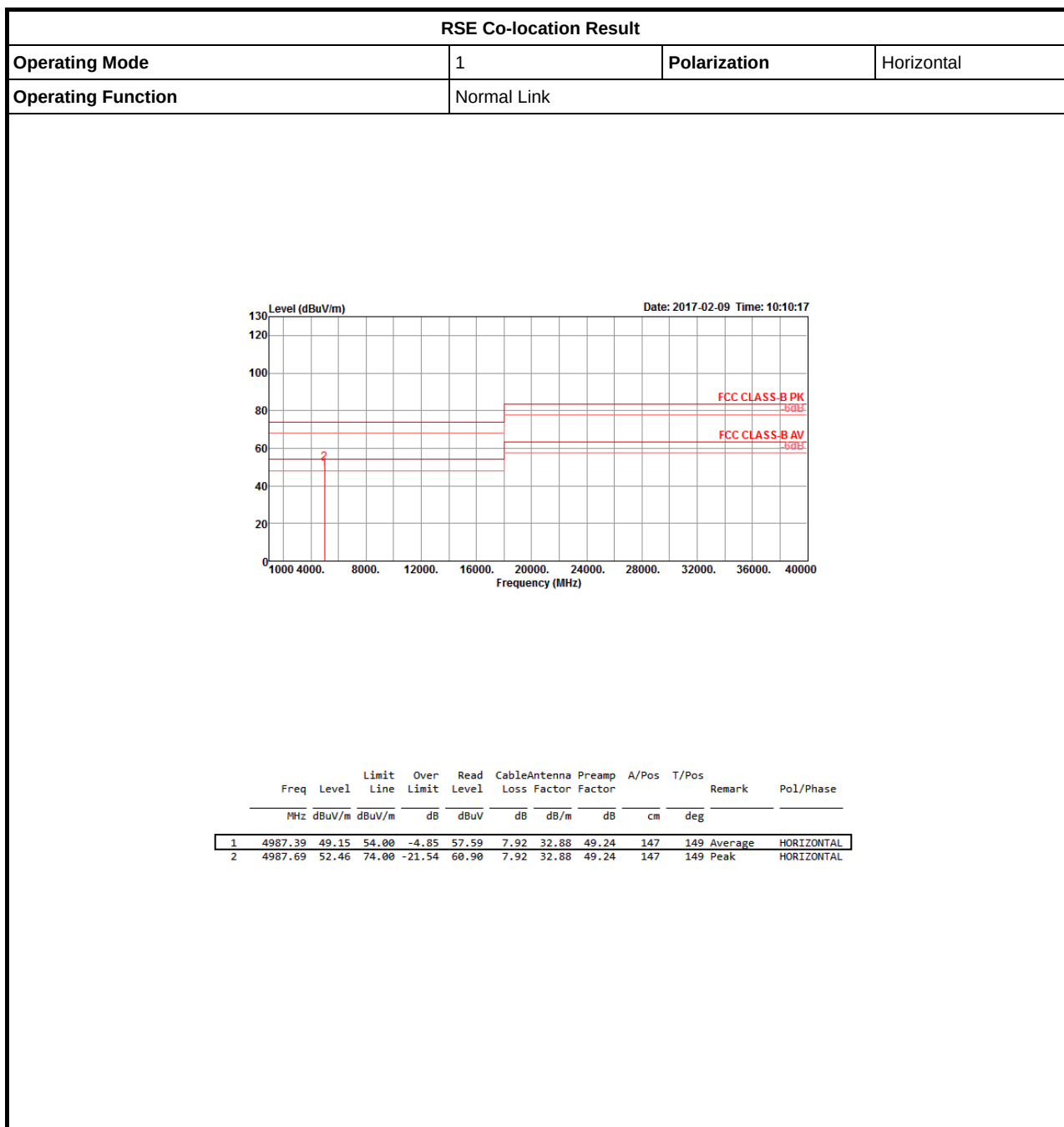
Temperature	Measurement Frequency (MHz)			
(°C)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5209.9951	5209.9946	5209.9941	5209.9940
10	5209.9944	5209.9941	5209.9939	5209.9937
20	5209.9936	5209.9930	5209.9925	5209.9921
30	5209.9897	5209.9894	5209.9884	5209.9876
40	5209.9881	5209.9871	5209.9868	5209.9864
Max. Deviation (MHz)	0.0119	0.0129	0.0132	0.0136
Max. Deviation (ppm)	2.28	2.48	2.53	2.61
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5774.9941	5774.9938	5774.9936	5774.9926
110.00	5774.9936	5774.9928	5774.9922	5774.9912
93.50	5774.9928	5774.9918	5774.9913	5774.9905
Max. Deviation (MHz)	0.0072	0.0082	0.0087	0.0095
Max. Deviation (ppm)	1.25	1.42	1.51	1.65
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5774.9951	5774.9948	5774.9946	5774.9939
10	5774.9949	5774.9943	5774.9939	5774.9932
20	5774.9936	5774.9927	5774.9919	5774.9911
30	5774.9897	5774.9896	5774.9887	5774.9881
40	5774.9887	5774.9877	5774.9868	5774.9866
Max. Deviation (MHz)	0.0119	0.0126	0.0136	0.0139
Max. Deviation (ppm)	2.06	2.18	2.35	2.41
Result	Pass			





RSE Co-location Result

Appendix G

