

NCC Test Report

Equipment : 無線接入器
Brand Name : CISCO
Model No. : GR10-HW, GR10-HW-US, GR10-HW-INTL, MR20-HW
Standard : LP0002 Section 4.7 (2016-08-23)
Operating Band : 5150 MHz – 5250 MHz
5725 MHz – 5850 MHz
Applicant : 台灣思科系統股份有限公司
台北市信義區信義路四段 460 號 12 樓
Manufacturer : Cisco Systems, Inc.
170 West Tasman Drive, San Jose, CA 95134 USA
Function : ☐ Outdoor; ☒ Indoor; ☐ Fixed P2P
☐ Client

The product sample received on May 23, 2017 and completely tested on Nov. 30, 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
SPORTON INTERNATIONAL INC.



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Summary of Test Result

Conformance Test Specifications			
Report Clause	Ref. Std. Clause	Description	Result
1.1.2	4.7.8	Antenna Requirement	Complied
3.1	2.3	AC Power-line Conducted Emissions	Complied
3.2	4.7.3	Emission Bandwidth	Complied
3.3	4.7.3	Maximum Conducted Output Power	Complied
3.4	4.7.3	Peak Power Spectral Density	Complied
3.5	4.7.4	Unwanted Emissions	Complied
3.6	-	Frequency Stability	Complied



SPORTON INTERNATIONAL INC.
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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	11a	20	2TX
5.15-5.25GHz	HT20	20	2TX
5.15-5.25GHz	HT20-BF	20	2TX
5.15-5.25GHz	VHT20	20	2TX
5.15-5.25GHz	VHT20-BF	20	2TX
5.15-5.25GHz	HT40	40	2TX
5.15-5.25GHz	HT40-BF	40	2TX
5.15-5.25GHz	VHT40	40	2TX
5.15-5.25GHz	VHT40-BF	40	2TX
5.15-5.25GHz	VHT80	80	2TX
5.15-5.25GHz	VHT80-BF	80	2TX
5.725-5.85GHz	11a	20	2TX
5.725-5.85GHz	HT20	20	2TX
5.725-5.85GHz	HT20-BF	20	2TX
5.725-5.85GHz	VHT20	20	2TX
5.725-5.85GHz	VHT20-BF	20	2TX
5.725-5.85GHz	HT40	40	2TX
5.725-5.85GHz	HT40-BF	40	2TX
5.725-5.85GHz	VHT40	40	2TX
5.725-5.85GHz	HT40-BF	40	2TX
5.725-5.85GHz	VHT80	80	2TX
5.725-5.85GHz	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.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	
						2.4GHz	5GHz
1	1	WNC	95XKAA15.GDX	PIFA Antenna	I-PEX	5.63	5.31
2	2	WNC	95XKAA15.GDX	PIFA Antenna	I-PEX	3.29	5.08
Composite Gain Un-Correlated (dBi)						3.43	4.26
Composite Gain Correlated (dBi)						5.70	7.27

Note: The EUT has two antennas.

For 2.4GHz function:

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

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

Port 1 and Port 2 could transmit/receive simultaneously.

For 5GHz function:

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

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

Port 1 and Port 2 could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
11a	0.966	0.15	2.033m	1k
VHT20	0.983	0.074	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
VHT40	0.967	0.146	2.418m	1k
VHT80	0.914	0.391	1.108m	1k
VHT20-BF	0.604	2.19	687.5u	3k
VHT40-BF	0.465	3.325	862.5u	3k
VHT80-BF	0.271	5.67	200u	10k

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter or PoE			
Beamforming Function	☒	With beamforming for 802.11n/ac in 2.4GHz/5GHz.	☐	Without beamforming

1.1.5 Table for Multiple Listing

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

Brand Name	Model Name	Description
CISCO	GR10-HW, GR10-HW-US, GR10-HW-INTL MR20-HW	All the models are identical, the difference model name for difference served as marketing strategy.

From the above models, model: GR10-HW 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:

- ♦ NCC LP0002 (2016-08-23)
- ♦ ANSI C63.10-2013
- ♦ FCC KDB 789033 D02 v02
- ♦ 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	Gino Huang, Gary Chu	23°C / 55%	Jun. 27, 2017 ~ Jun. 30, 2017
Radiated (Others test)	03CH01-CB	Justin Lin	22°C / 54%	Jun. 20, 2017 ~ Jul. 04, 2017
Radiated (Intentional – CTX Below 1GHz test)	03CH01-CB	Welson Chen, Paul Chen, Joy Tesng	22°C / 54%	Sep. 14, 2017 ~ Nov. 29, 2017
Radiated (Unintentional – Normal Link test)	03CH01-CB	Justin Lin, Joy Tseng	22°C / 54%	Jun. 20, 2017 ~ Nov. 29, 2017
AC Conduction	CO01-CB	Ryo Fan, Deven Huang	23°C / 55%	Sep. 26, 2017 ~ Nov. 30, 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
11a_Nss1_2TX	-
5180MHz	18
5200MHz	21.5
5240MHz	21.5
5745MHz	21.5
5785MHz	21.5
5825MHz	21.5
VHT20_Nss1_2TX	-
5180MHz	18
5200MHz	21.5
5240MHz	21.5
5745MHz	21.5
5785MHz	21.5
5825MHz	21.5
VHT40_Nss1_2TX	-
5190MHz	16.5
5230MHz	21
5755MHz	21
5795MHz	21
VHT80_Nss1_2TX	-
5210MHz	16
5775MHz	20

Mode	Power Setting
VHT20-BF_Nss1_2TX	-
5180MHz	18
5200MHz	24
5240MHz	24
5745MHz	20
5785MHz	20
5825MHz	20
VHT40-BF_Nss1_2TX	-
5190MHz	17
5230MHz	19
5755MHz	20
5795MHz	20
VHT80-BF_Nss1_2TX	-
5210MHz	17
5775MHz	20

Note: 1.VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.

2. There are two modes of EUT, one is beamforming mode, and the other is non-beamforming mode for 802.11n/ac. All test results were recorded in the report.

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	Normal Link
1	EUT Normal Link with Adapter 1
2	EUT Normal Link with Adapter 2
3	EUT Normal Link with Adapter 3
4	EUT Normal Link with Adapter 4
For operating mode 2 is the worst case and it was record in this test report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth Maximum Conducted Output Power Peak Power Spectral Density 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	Unintentional – Normal Link
1	EUT in Z axis - Normal Link with Adapter 1
2	EUT in Y axis - Normal Link with Adapter 1
Mode 2 has been evaluated to be the worst case between Mode 1~2, thus measurement for Mode 3 ~ Mode 6 will follow this same test mode.	
3	EUT in Y axis - Normal Link with Adapter 2
4	EUT in Y axis - Normal Link with Adapter 3
5	EUT in Y axis - Normal Link with PoE
6	EUT in Y axis - Normal Link with Adapter 4
For operating mode 5 is the worst case and it was record in this test report.	
Operating Mode < 1GHz	Intentional – CTX
The EUT was performed at Y axis and Z axis position for Radiated emission Below 1GHz Unintentional – Normal Link test, and the worst case was found at Y axis. So the measurement will follow this same test configuration.	
1	EUT in Y axis - CTX WLAN 2.4GHz with Adapter 1
2	EUT in Y axis - CTX WLAN 5GHz with Adapter 1
3	EUT in Y axis - CTX WLAN 2.4GHz with Adapter 2
4	EUT in Y axis - CTX WLAN 5GHz with Adapter 2
5	EUT in Y axis - CTX WLAN 2.4GHz with Adapter 3
6	EUT in Y axis - CTX WLAN 5GHz with Adapter 3
7	EUT in Y axis - CTX WLAN 2.4GHz with PoE
8	EUT in Y axis - CTX WLAN 5GHz with PoE
9	EUT in Y axis - CTX WLAN 2.4GHz with Adapter 4
10	EUT in Y axis - CTX WLAN 5GHz with Adapter 4
For operating mode 8 is the worst case and it was record in this test report.	
Operating Mode > 1GHz (1~5th Harmonic)	Unintentional – Normal Link
EUT in Y axis with PoE generated the worst test result for Emissions in Restricted Frequency Bands unintentional below 1GHz test, thus the measurement for Emissions in Restricted Frequency Bands unintentional 1GHz~5th Harmonic test will follow this same test configuration.	
1	EUT in Y axis - Normal Link with PoE
Operating Mode > 1GHz (1~10th Harmonic)	Intentional – CTX

The EUT was performed at Y axis and Z axis position for Radiated emission test, and the worst case was found at Y axis. So the measurement will follow this same test configuration.

1	EUT in Y axis
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Note: The PoE is for measurement only, would not be marketed.

PoE information as below:

Power	Brand	Model
PoE	CISCO	MA-INJ-4

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				
Equipment Name	Brand Name	PSU Vendor P/N	Meraki Model	Rating
Adapter 1	CISCO	KSAS0361200250HU	MA-PWR-30W-US	Input: 100-240V ~ 50/60Hz, 1.0A Output: 12V, 2.5A
Adapter 2	CISCO	GA-PWR-12W-US	GA-PWR-12W, GA-PWR-12W-US, GA-PWR-12W-INTL	Input: 100-240V ~ 50/60Hz, 0.4A MAX. Output: +12V, 1A 12W MAX.
Adapter 3	CISCO	GA-PWR-18WAC	GA-PWR-18WAC	Input: 100-240V ~ 0.4A, 50/60Hz Output: 12V, 1.5A
Adapter 4	DELTA	ADP-30KR B	N/A	Input: 100-240V ~ 1A, 50-60Hz Output: 12V, 2.5A
Other				
Wall-mounted rack*1				

2.5 Support Equipment

For Test Site No: CO01-CB

For Adapter Mode:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*3	DELL	E6430	DoC

For PoE Mode:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*3	DELL	E6430	DoC
2	PoE	Meraki	POE20U-560 (G)	DoC

For Test Site No: 03CH01-CB (below 1GHz and Above 1GHz) / Unintentional – Normal Link

For Adapter Mode:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC
2	NB	Apple	Mac Book	DoC
3	NB	Apple	Mac Book	DoC

For PoE Mode:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC
2	NB	Apple	Mac Book	DoC
3	NB	Apple	Mac Book	DoC



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4	PoE	CISCO	MA-INJ-4	DoC
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For Test Site No: 03CH01-CB (below 1GHz) / Intentional – CTX
For Adapter Mode:

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

For PoE Mode:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC
2	PoE	CISCO	MA-INJ-4	DoC

For Test Site No: 03CH01-CB (above 1GHz) / Intentional – CTX
<For Non-Beamforming Mode>

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

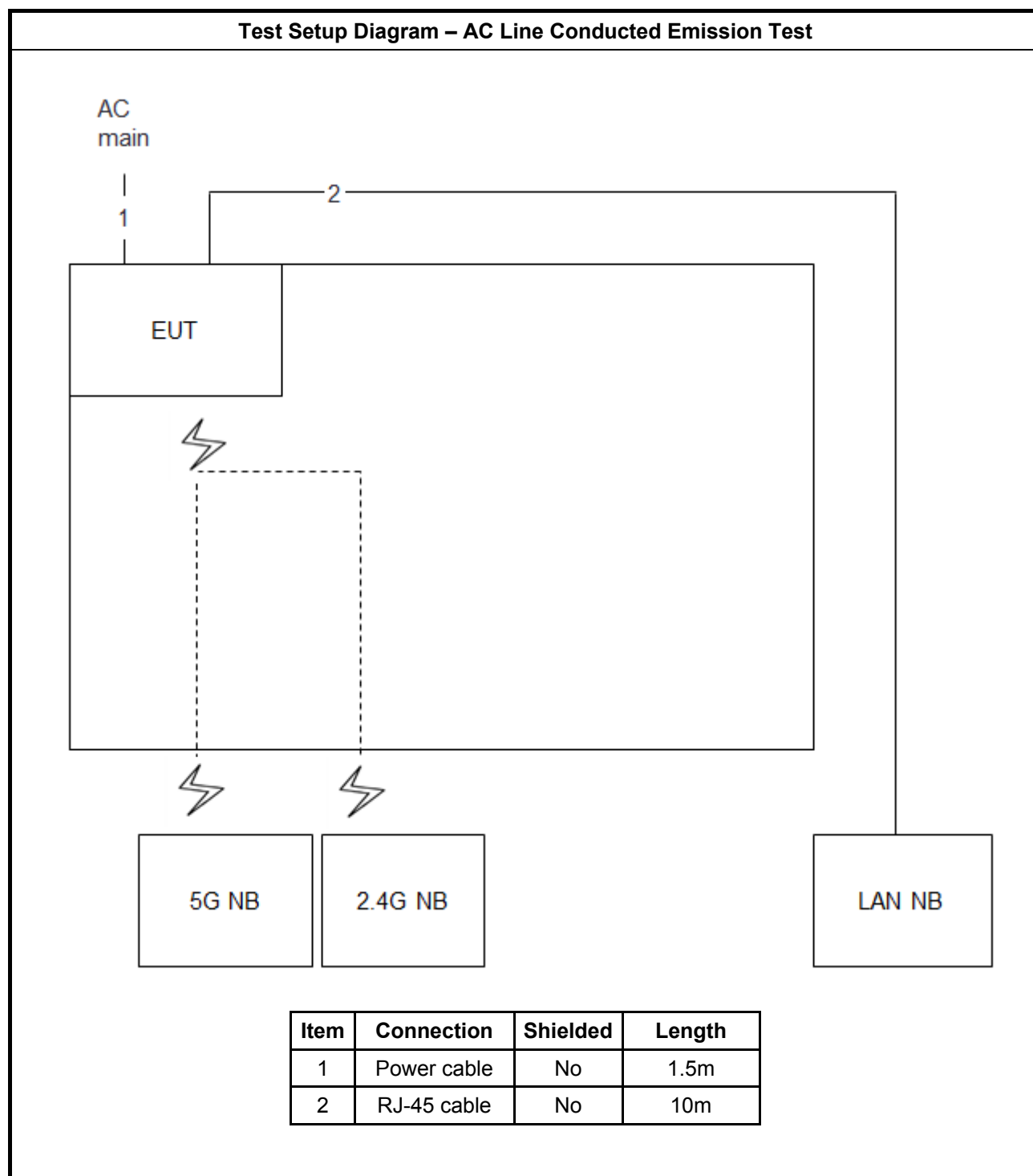
<For Beamforming Mode>

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC
2	NB	DELL	E4300	DoC
3	RX Device	CISCO	Maggot	DoC

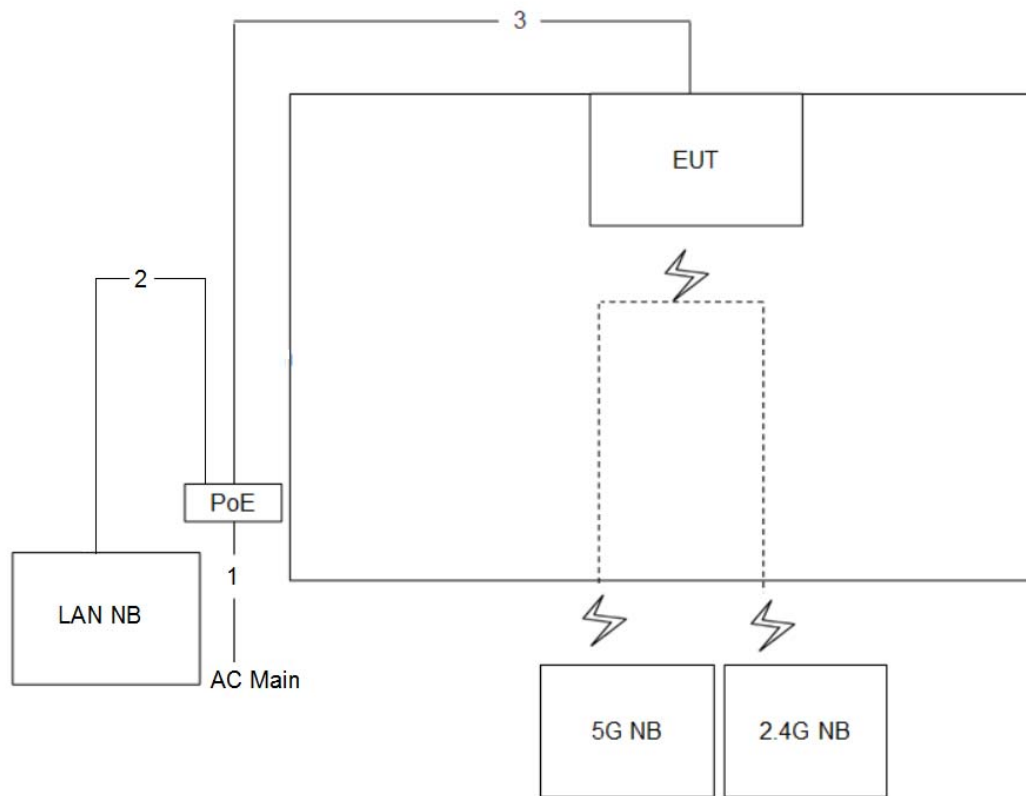
For Test Site No: TH01-CB

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

2.6 Test Setup Diagram

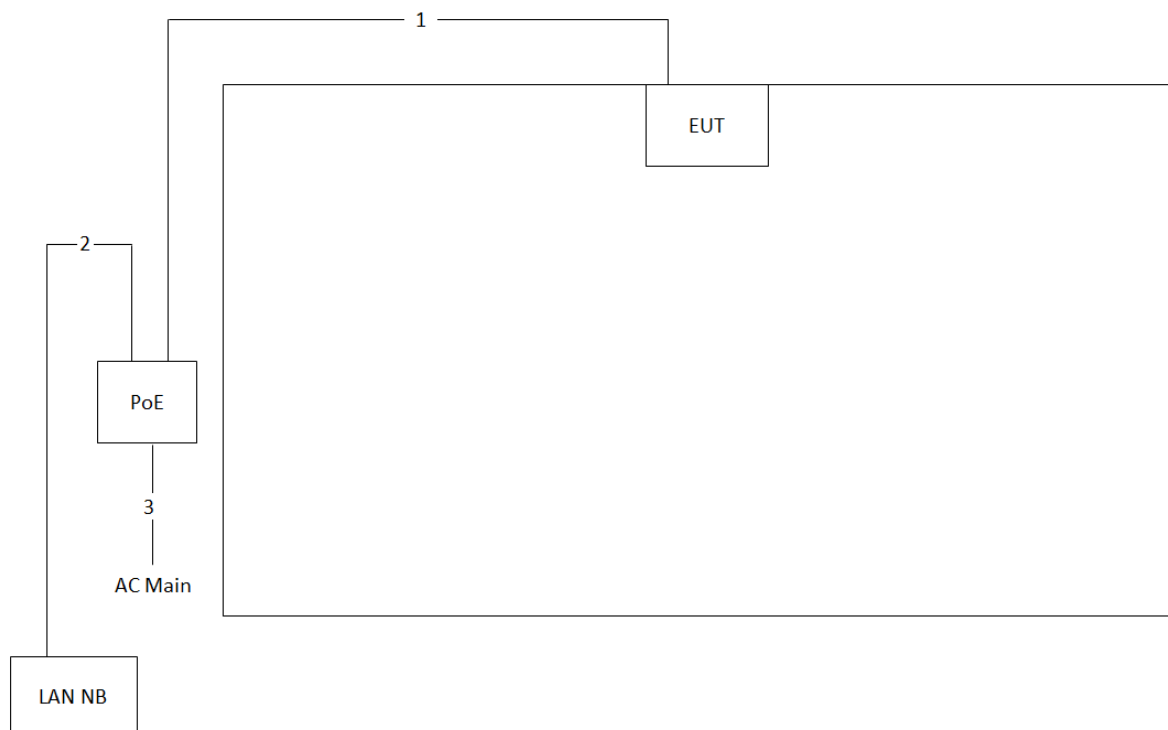


Test Setup Diagram - Radiated Test < 1GHz / Unintentional – Normal Link and > 1GHz Unintentional – Normal Link

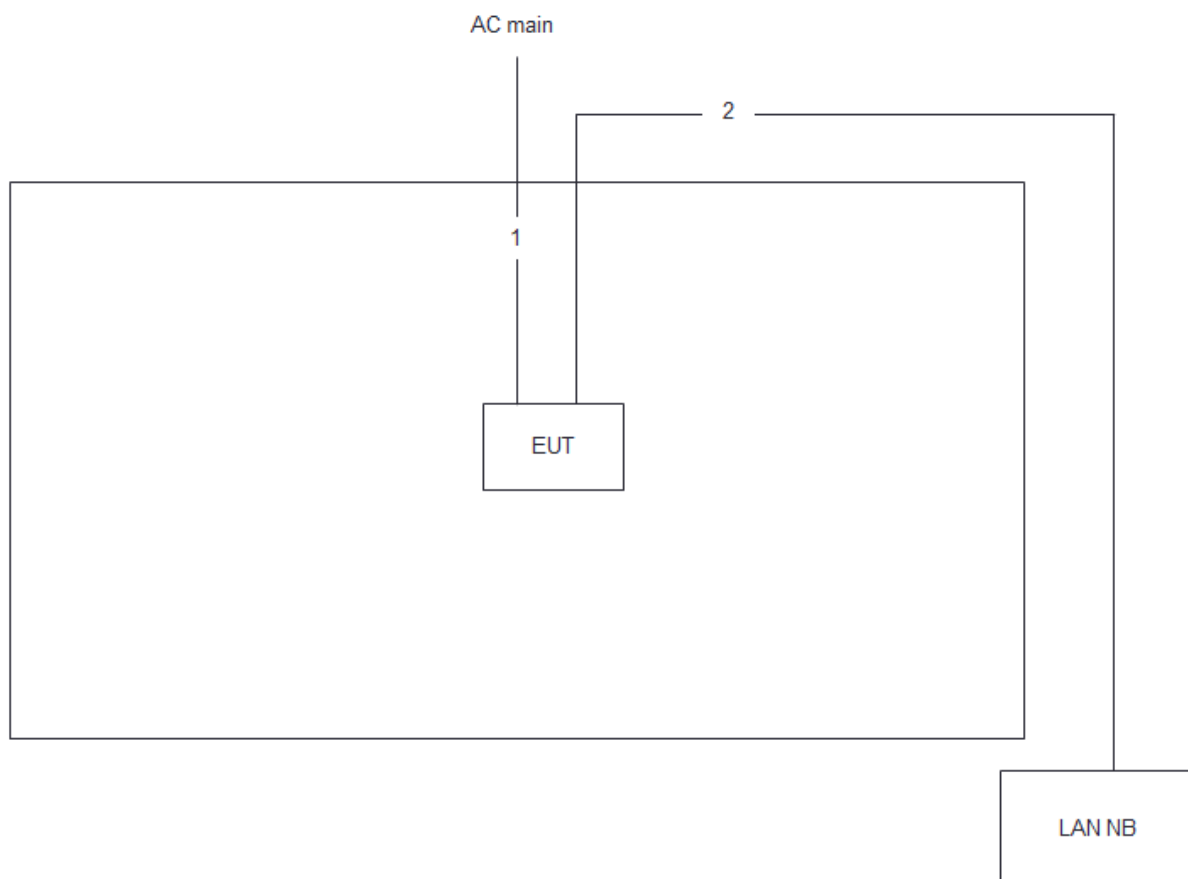


Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	RJ-45 cable	No	1m
3	RJ-45 cable	No	10m

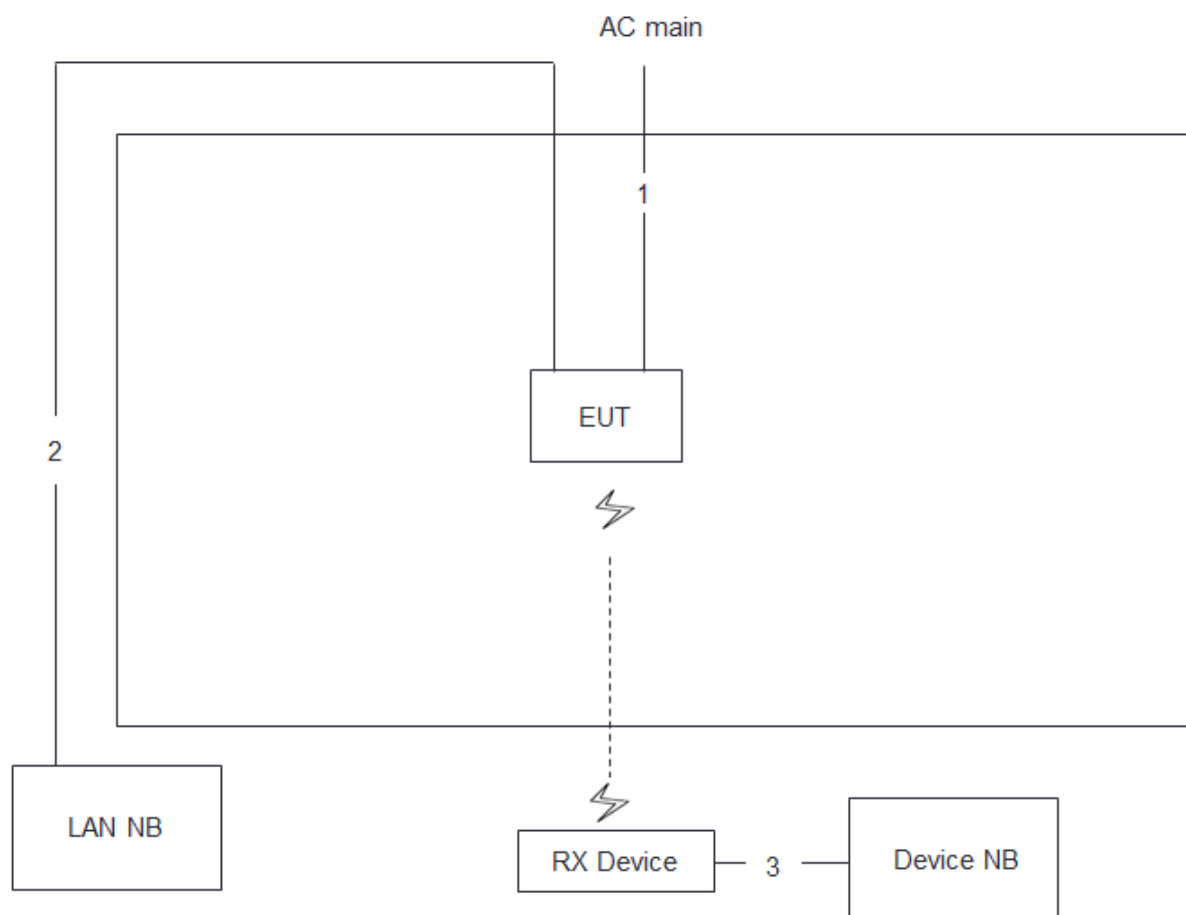
Test Setup Diagram - Radiated Test < 1GHz / Intentional – CTX



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

Test Setup Diagram - Radiated Test > 1GHz / Intentional – CTX - Non-Beamforming Mode


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

Test Setup Diagram - Radiated Test > 1GHz / Intentional – CTX- Beamforming Mode


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

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

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

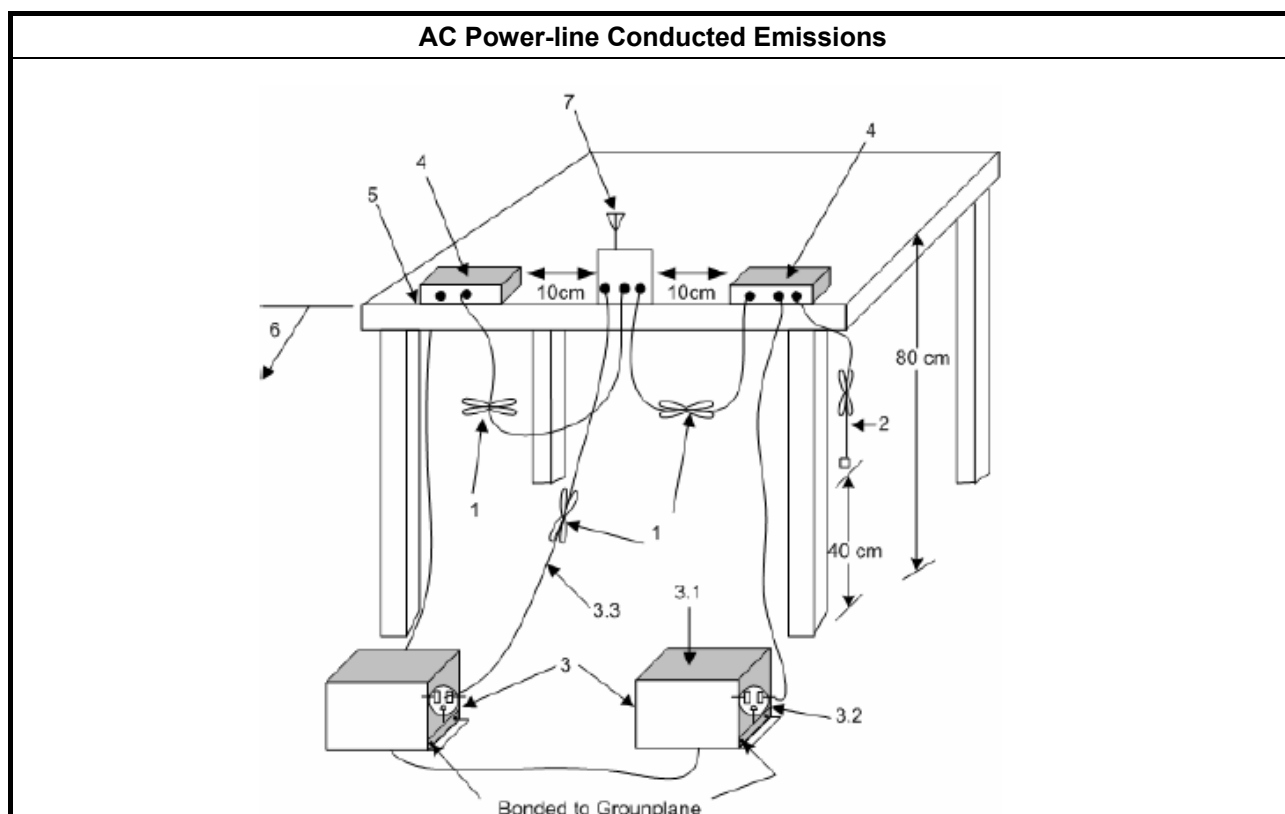
3.1.2 Measuring Instruments

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

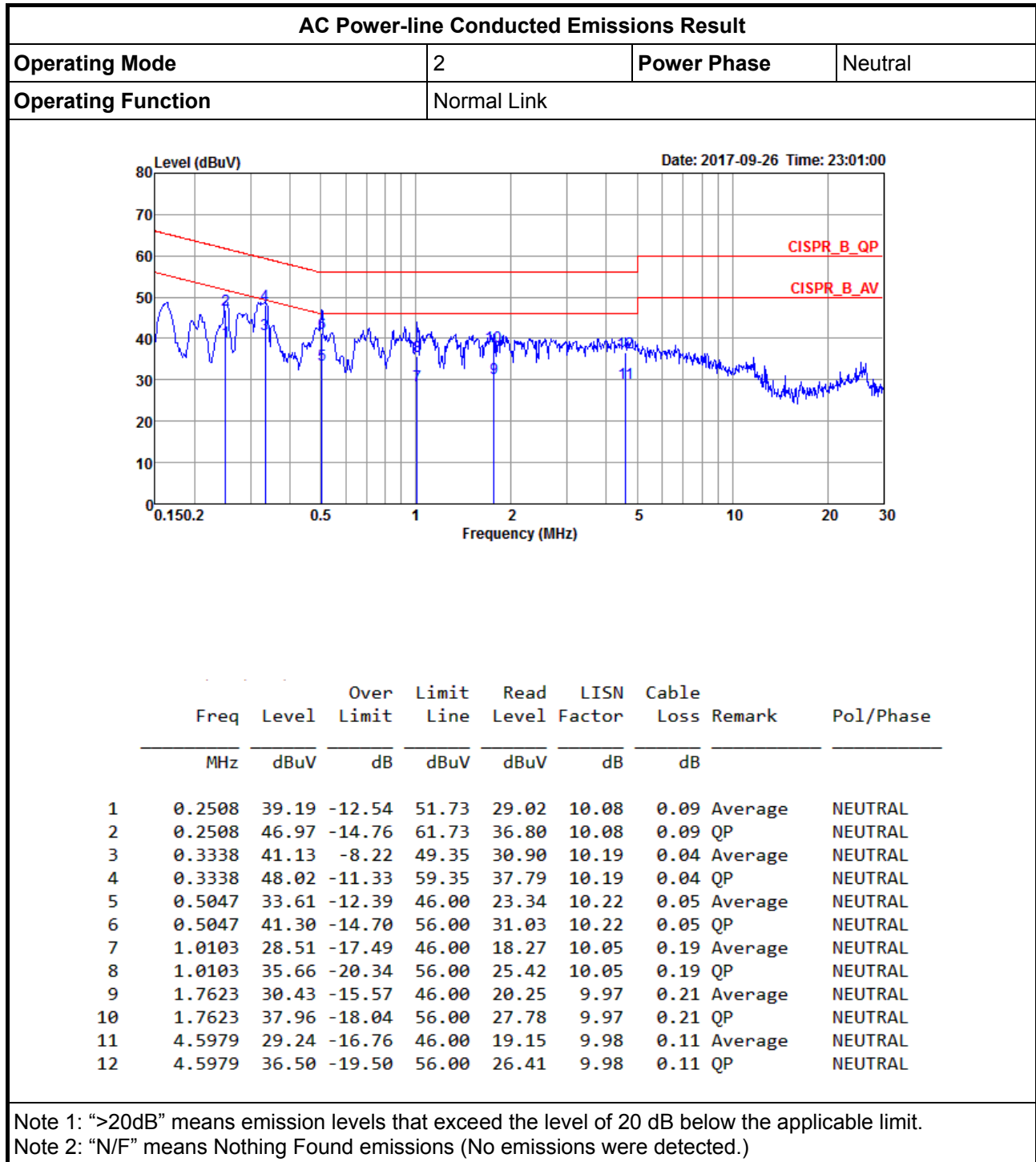
3.1.3 Test Procedures

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

3.1.4 Test Setup

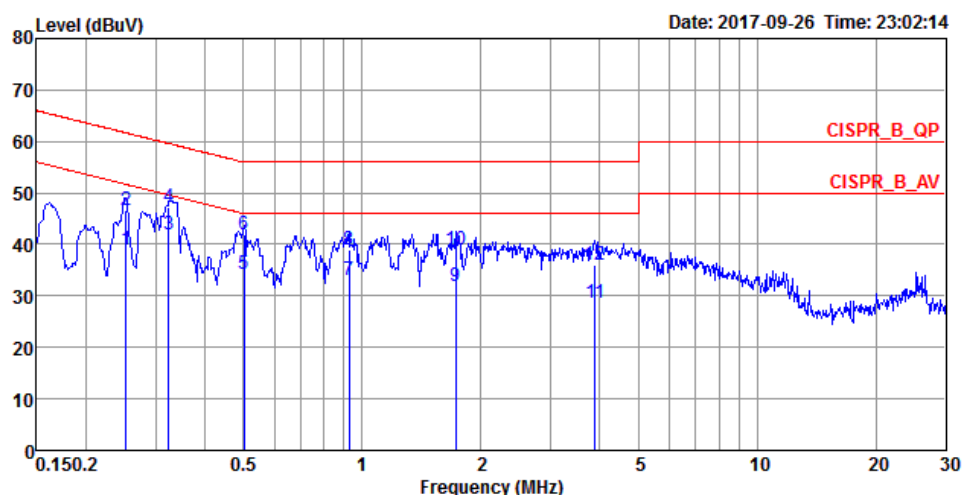


3.1.5 Test Result of AC Power-line Conducted Emissions



AC Power-line Conducted Emissions Result

Operating Mode	2	Power Phase	Line
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.2521	38.83	-12.86	51.69	28.82	9.92	0.09	Average	LINE
2	0.2521	46.64	-15.05	61.69	36.63	9.92	0.09	QP	LINE
3	0.3234	41.78	-7.84	49.62	31.80	9.93	0.05	Average	LINE
4	0.3234	47.32	-12.30	59.62	37.34	9.93	0.05	QP	LINE
5	0.5020	34.15	-11.85	46.00	24.15	9.95	0.05	Average	LINE
6	0.5020	41.80	-14.20	56.00	31.80	9.95	0.05	QP	LINE
7	0.9282	32.97	-13.03	46.00	22.83	9.96	0.18	Average	LINE
8	0.9282	39.05	-16.95	56.00	28.91	9.96	0.18	QP	LINE
9	1.7253	31.99	-14.01	46.00	21.82	9.96	0.21	Average	LINE
10	1.7253	38.91	-17.09	56.00	28.74	9.96	0.21	QP	LINE
11	3.8808	28.70	-17.30	46.00	18.62	9.97	0.11	Average	LINE
12	3.8808	36.04	-19.96	56.00	25.96	9.97	0.11	QP	LINE

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

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.

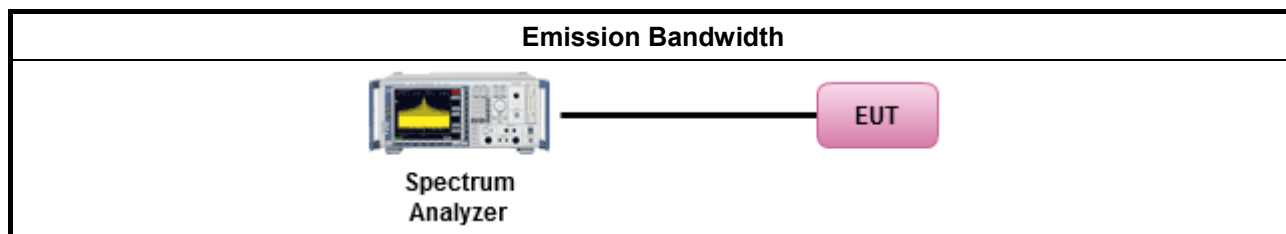
3.2.2 Measuring Instruments

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

<For Non-Beamforming Mode>

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
11a_Nss1_2TX	-	-	-	-	-
5.15-5.25GHz	45.2M	25.762M	25M8D1D	19.725M	16.417M
5.725-5.85GHz	16.3M	24.588M	24M6D1D	16.275M	18.666M
VHT20_Nss1_2TX	-	-	-	-	-
5.15-5.25GHz	47.05M	27.136M	27M1D1D	21.025M	17.641M
5.725-5.85GHz	17.575M	26.337M	26M3D1D	17.275M	19.765M
VHT40_Nss1_2TX	-	-	-	-	-
5.15-5.25GHz	98.75M	54.823M	54M8D1D	39.65M	35.932M
5.725-5.85GHz	36.25M	56.522M	56M5D1D	33.7M	41.829M
VHT80_Nss1_2TX	-	-	-	-	-
5.15-5.25GHz	83.7M	75.762M	75M8D1D	82.8M	75.662M
5.725-5.85GHz	75.2M	77.561M	77M6D1D	74.1M	76.262M

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)
11a_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	22.275M	16.492M	19.725M	16.417M
5200MHz	Pass	Inf	45.2M	24.788M	40.75M	17.866M
5240MHz	Pass	Inf	44.825M	25.762M	41.725M	19.04M
5745MHz	Pass	500k	16.3M	22.839M	16.275M	18.666M
5785MHz	Pass	500k	16.3M	24.138M	16.3M	19.84M
5825MHz	Pass	500k	16.3M	24.588M	16.3M	22.089M
VHT20_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	25M	17.641M	21.025M	17.641M
5200MHz	Pass	Inf	46.575M	25.487M	40.925M	18.516M
5240MHz	Pass	Inf	47.05M	27.136M	42.775M	19.615M
5745MHz	Pass	500k	17.275M	25.362M	17.275M	19.765M
5785MHz	Pass	500k	17.575M	26.337M	17.5M	20.915M
5825MHz	Pass	500k	17.55M	25.737M	17.575M	22.964M
VHT40_Nss1_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	40M	36.132M	39.65M	35.932M
5230MHz	Pass	Inf	98.75M	54.823M	90.9M	38.081M
5755MHz	Pass	500k	35.7M	53.673M	33.7M	41.829M
5795MHz	Pass	500k	36.25M	56.522M	34.75M	42.529M
VHT80_Nss1_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	82.8M	75.662M	83.7M	75.762M
5775MHz	Pass	500k	74.1M	77.561M	75.2M	76.262M

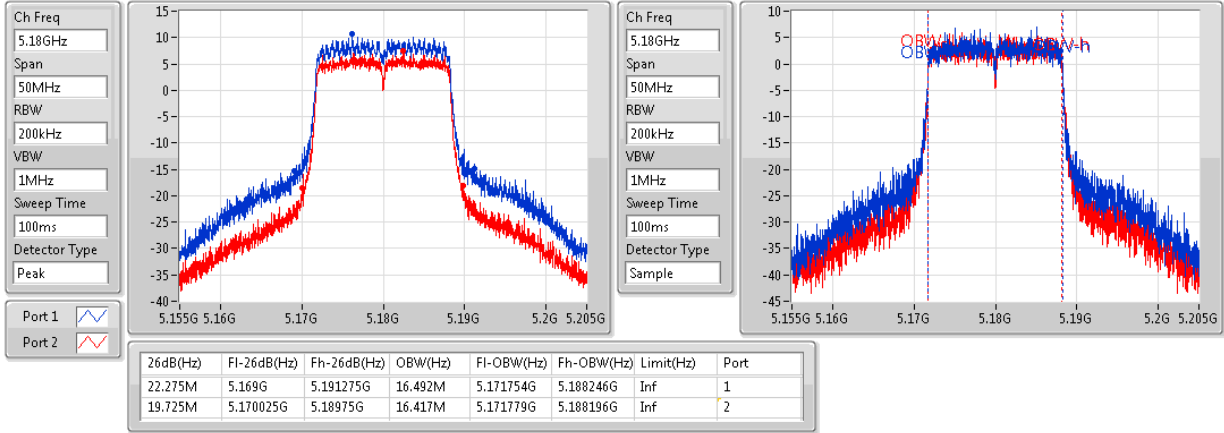
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

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

11a_Nss1_2TX

EBW

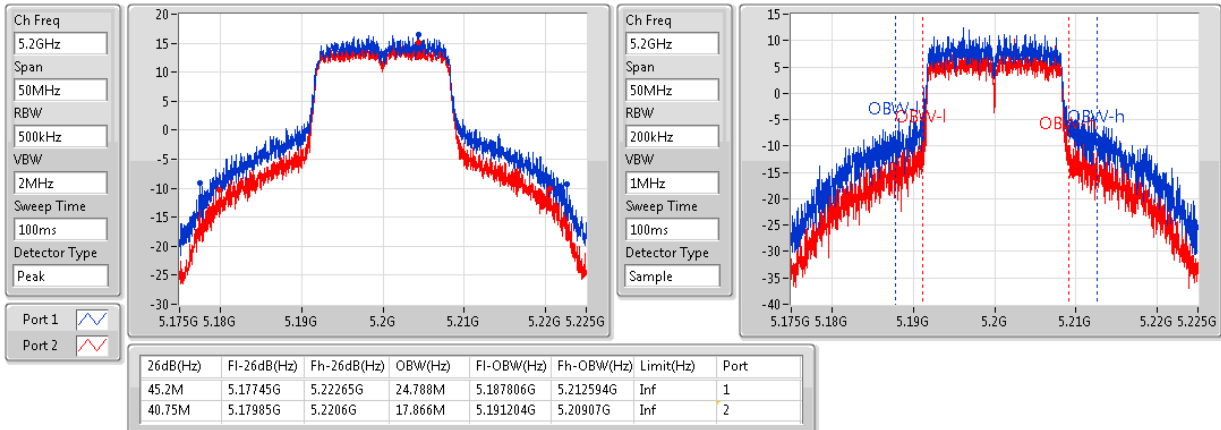
5180MHz



11a_Nss1_2TX

EBW

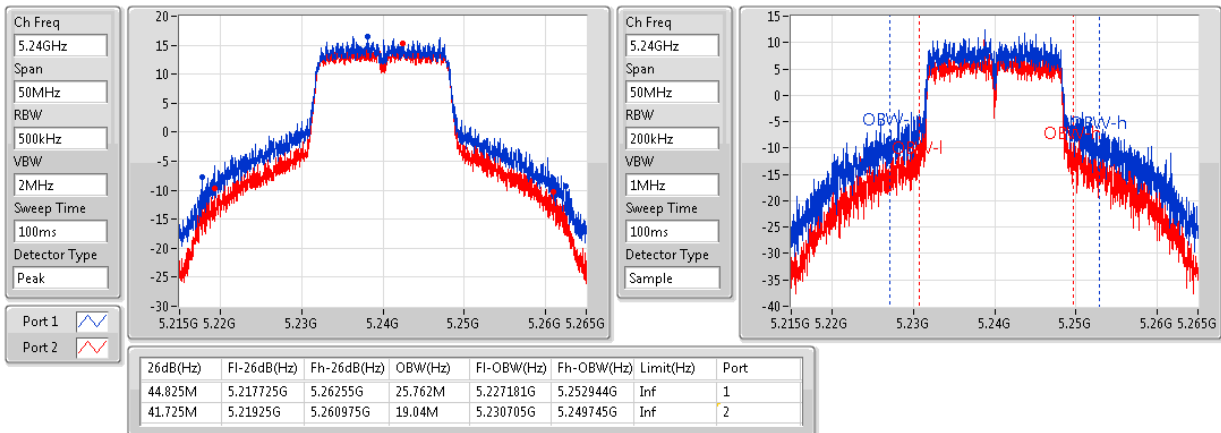
5200MHz



11a_Nss1_2TX

EBW

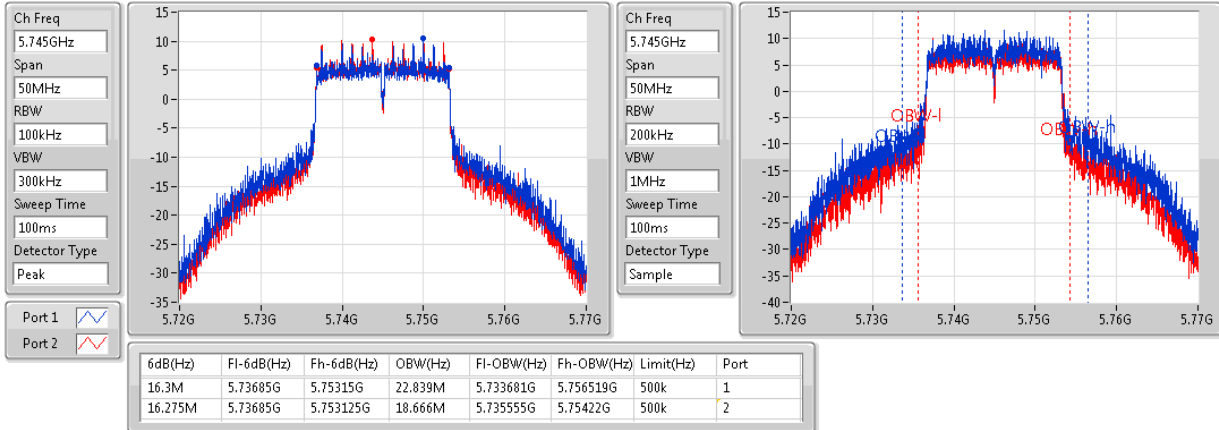
5240MHz



11a_Nss1_2TX

EBW

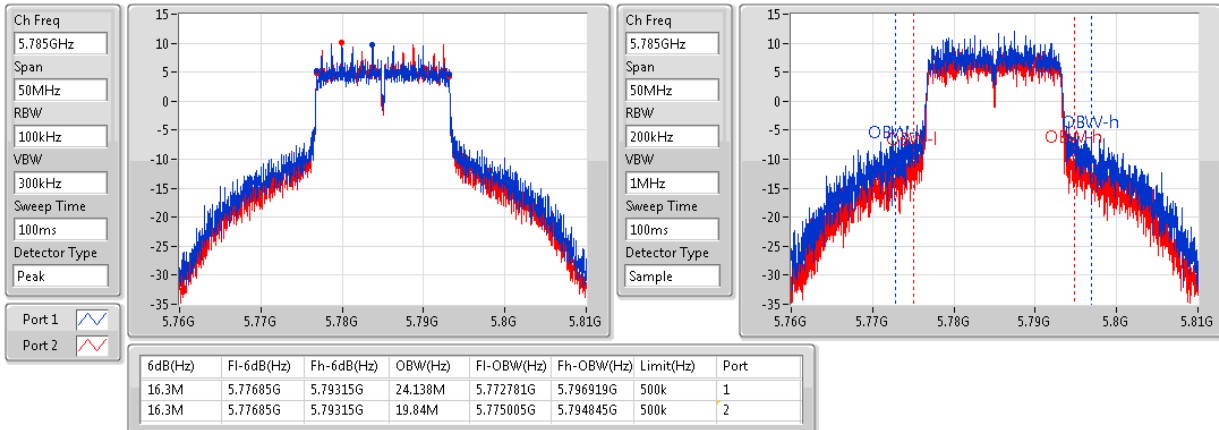
5745MHz



11a_Nss1_2TX

EBW

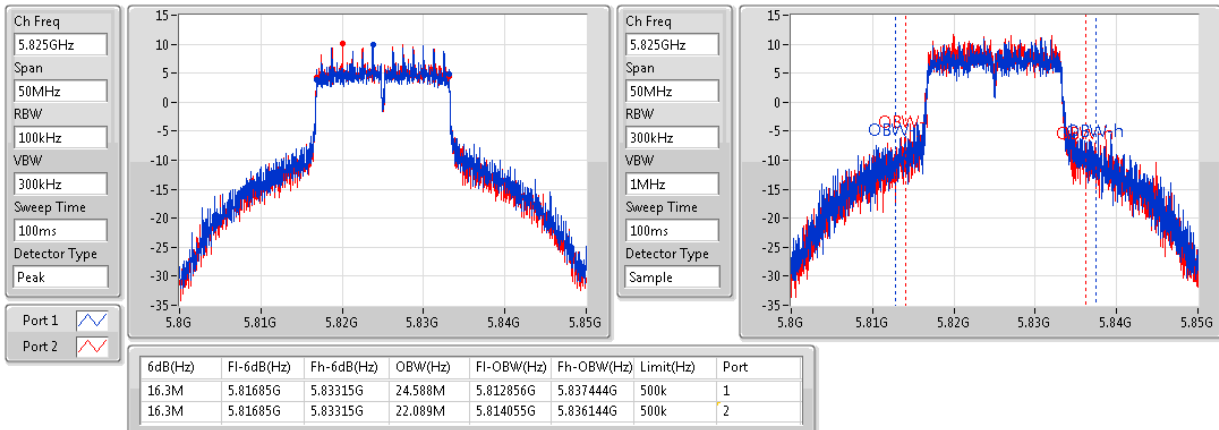
5785MHz



11a_Nss1_2TX

EBW

5825MHz



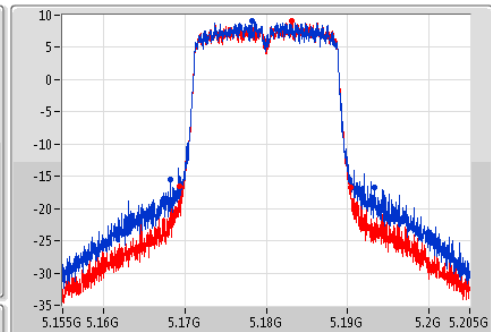
VHT20_Nss1_2TX

EBW

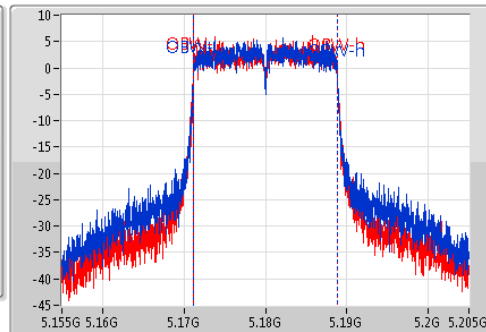
5180MHz

Ch Freq
5.18GHz
Span
50MHz
RBW
300kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak

Port 1
Port 2



Ch Freq
5.18GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
25M	5.16825G	5.19325G	17.641M	5.171179G	5.188821G	Inf	1
21.025M	5.16935G	5.190375G	17.641M	5.171179G	5.188821G	Inf	2

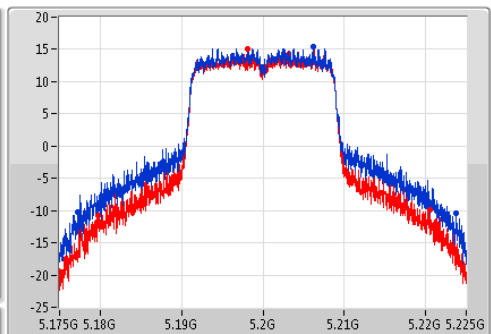
VHT20_Nss1_2TX

EBW

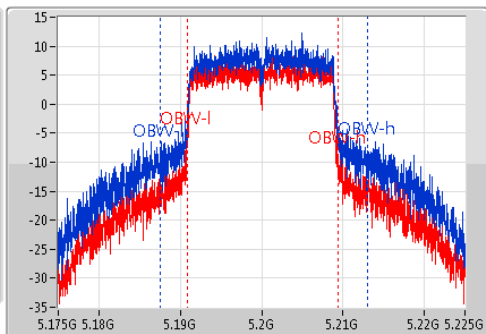
5200MHz

Ch Freq
5.2GHz
Span
50MHz
RBW
500kHz
VBW
2MHz
Sweep Time
100ms
Detector Type
Peak

Port 1
Port 2



Ch Freq
5.2GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
46.575M	5.177225G	5.2230G	25.487M	5.187501G	5.213068G	Inf	1
40.925M	5.179675G	5.2206G	18.516M	5.190855G	5.20937G	Inf	2

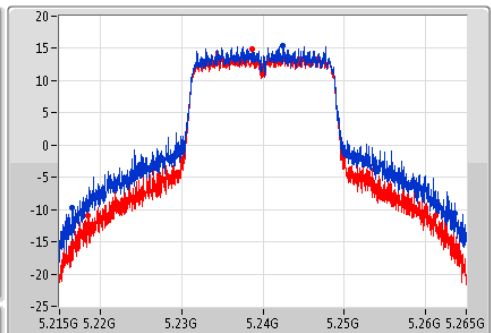
VHT20_Nss1_2TX

EBW

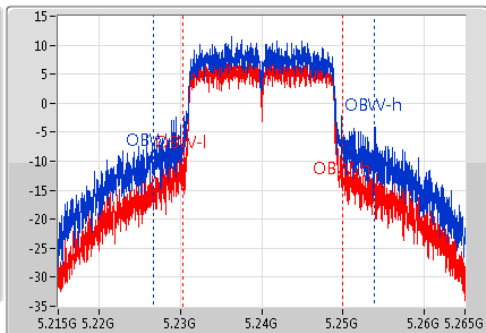
5240MHz

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

Port 1
Port 2



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

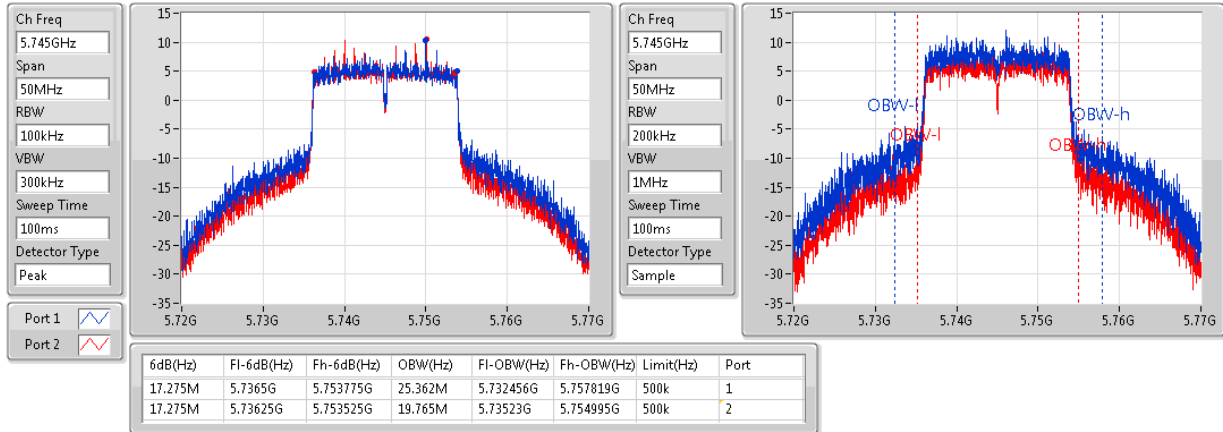


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
47.05M	5.216575G	5.263625G	27.136M	5.226732G	5.253868G	Inf	1
42.775M	5.21845G	5.261225G	19.615M	5.230355G	5.24997G	Inf	2

VHT20_Nss1_2TX

EBW

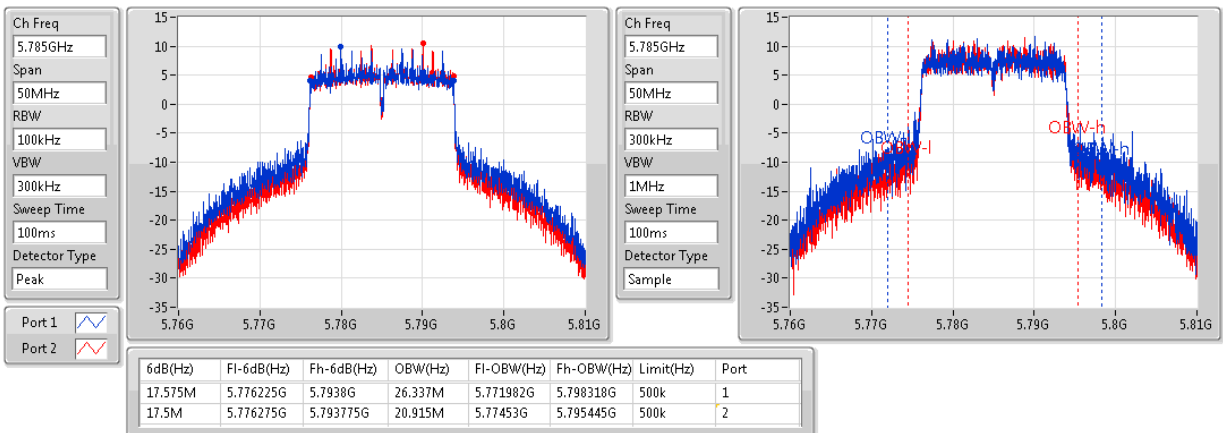
5745MHz



VHT20_Nss1_2TX

EBW

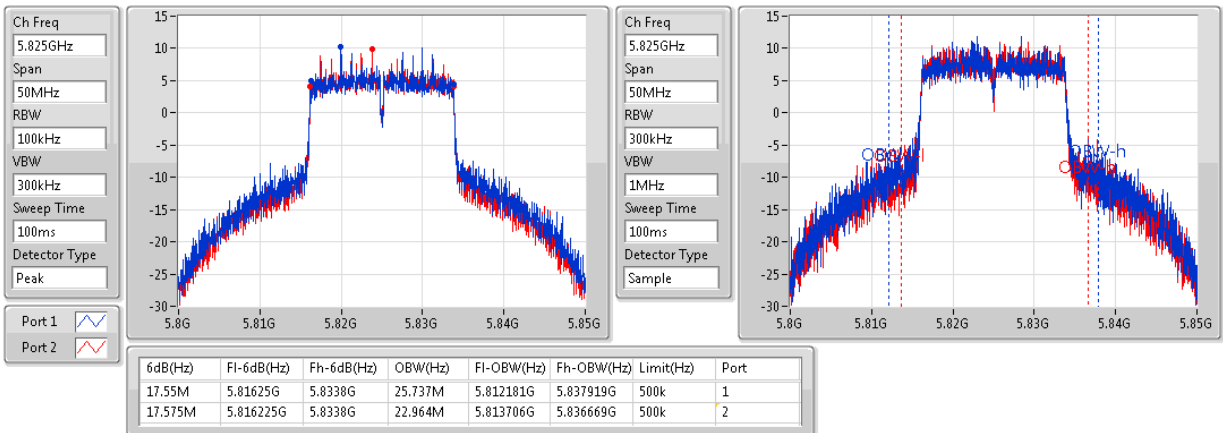
5785MHz



VHT20_Nss1_2TX

EBW

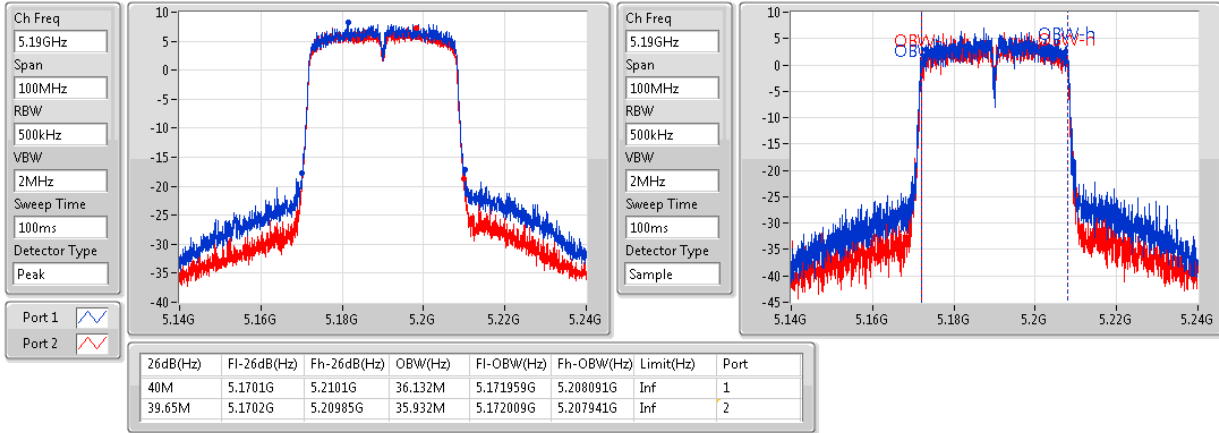
5825MHz



VHT40_Nss1_2TX

EBW

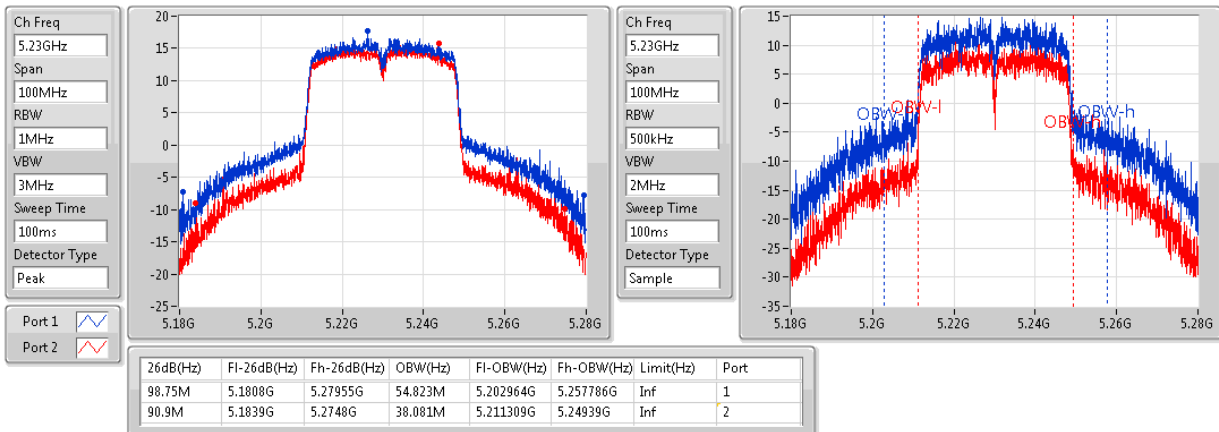
5190MHz



VHT40_Nss1_2TX

EBW

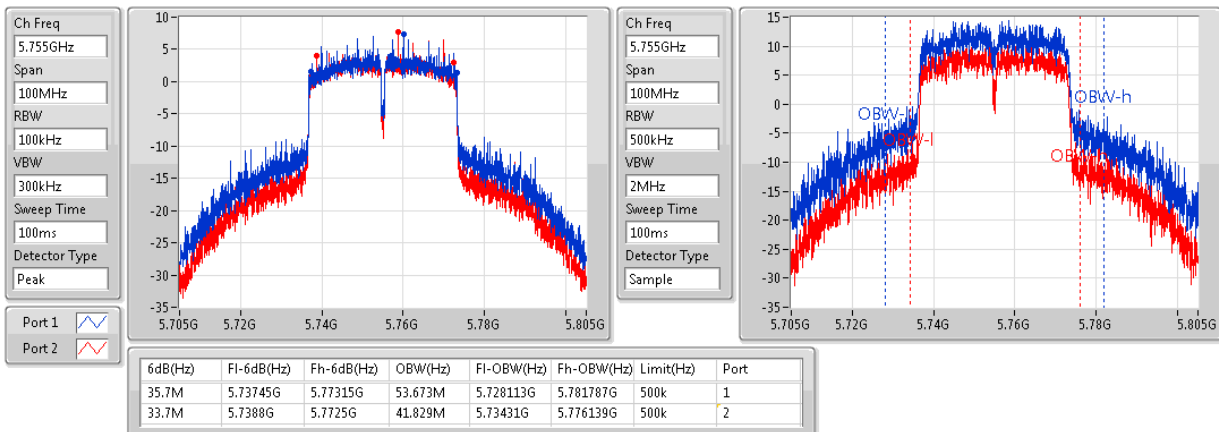
5230MHz



VHT40_Nss1_2TX

EBW

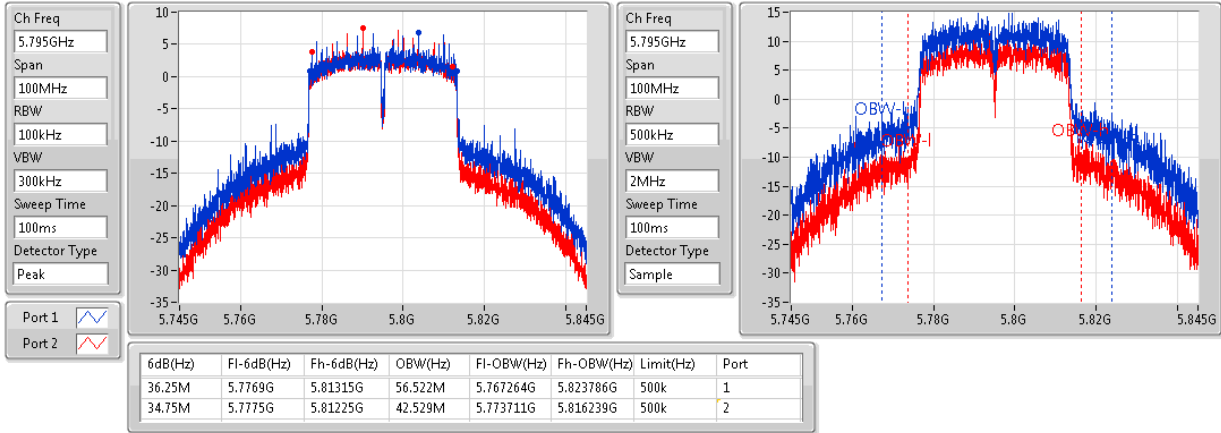
5755MHz



VHT40_Nss1_2TX

EBW

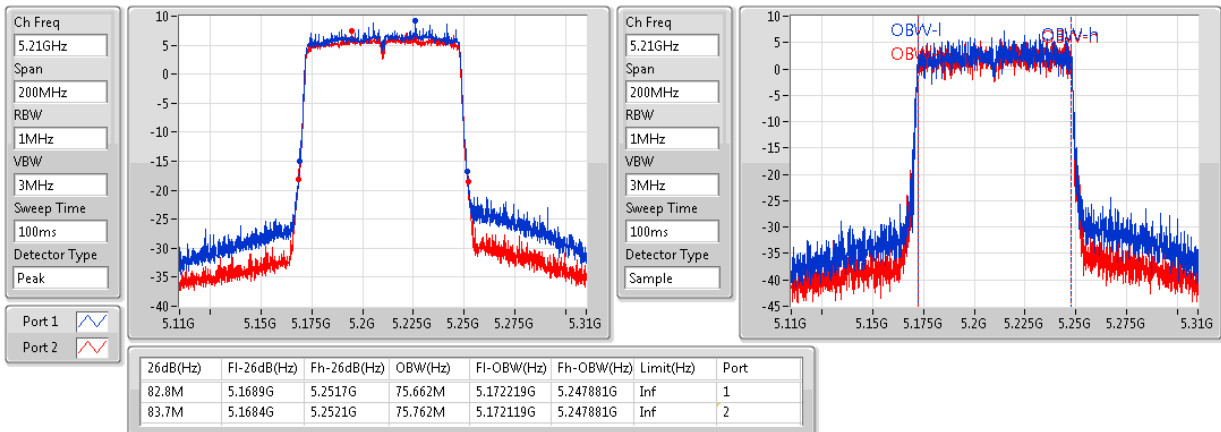
5795MHz



VHT80_Nss1_2TX

EBW

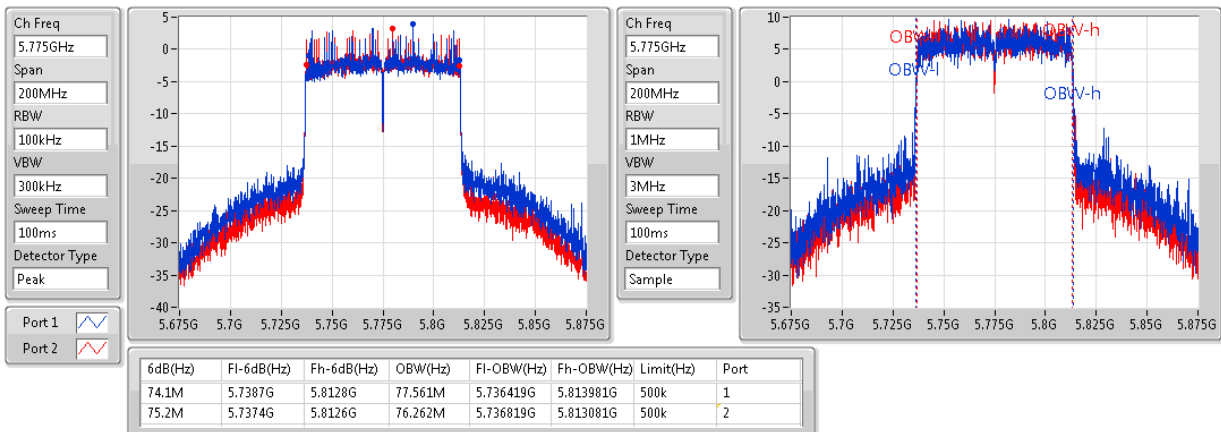
5210MHz



VHT80_Nss1_2TX

EBW

5775MHz



<For Beamforming Mode>
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
VHT20-BF_Nss1_2TX	-	-	-	-	-
5.15-5.25GHz	33.45M	17.841M	17M8D1D	23.125M	17.691M
5.725-5.85GHz	17.7M	17.791M	17M8D1D	17.575M	17.666M
VHT40-BF_Nss1_2TX	-	-	-	-	-
5.15-5.25GHz	68.4M	36.482M	36M5D1D	40.75M	36.182M
5.725-5.85GHz	36.3M	36.382M	36M4D1D	34.35M	36.282M
VHT80-BF_Nss1_2TX	-	-	-	-	-
5.15-5.25GHz	82.7M	75.562M	75M6D1D	82.5M	75.562M
5.725-5.85GHz	76.1M	76.262M	76M3D1D	73.5M	76.062M

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)
VHT20-BF_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	23.25M	17.691M	24.125M	17.741M
5200MHz	Pass	Inf	23.125M	17.716M	28.075M	17.741M
5240MHz	Pass	Inf	23.4M	17.716M	33.45M	17.841M
5745MHz	Pass	500k	17.6M	17.666M	17.575M	17.691M
5785MHz	Pass	500k	17.7M	17.741M	17.625M	17.791M
5825MHz	Pass	500k	17.65M	17.741M	17.625M	17.741M
VHT40-BF_Nss1_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	40.75M	36.182M	41.15M	36.182M
5230MHz	Pass	Inf	42.8M	36.182M	68.4M	36.482M
5755MHz	Pass	500k	34.35M	36.332M	36.25M	36.382M
5795MHz	Pass	500k	36M	36.282M	36.3M	36.382M
VHT80-BF_Nss1_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	82.5M	75.562M	82.7M	75.562M
5775MHz	Pass	500k	73.5M	76.062M	76.1M	76.262M

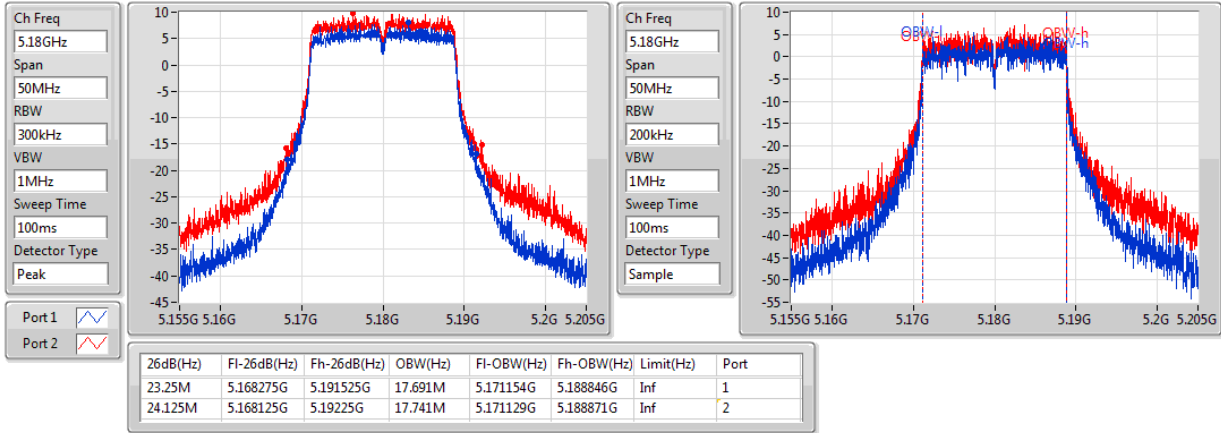
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

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

VHT20-BF_Nss1_2TX

EBW

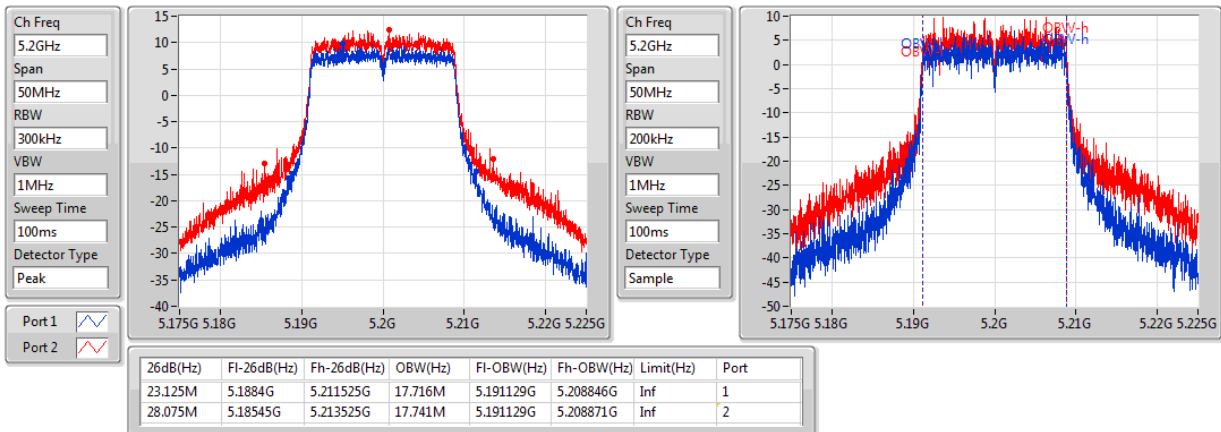
5180MHz



VHT20-BF_Nss1_2TX

EBW

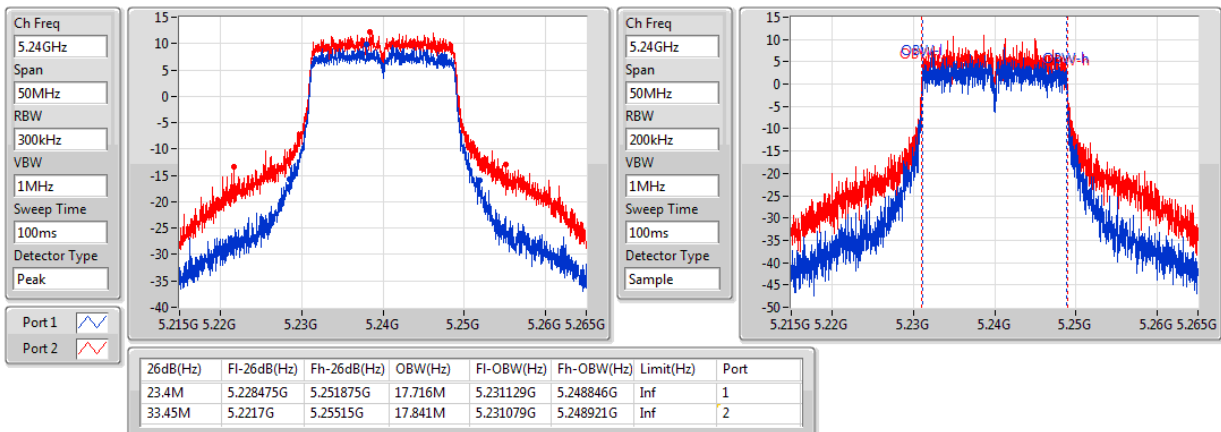
5200MHz



VHT20-BF_Nss1_2TX

EBW

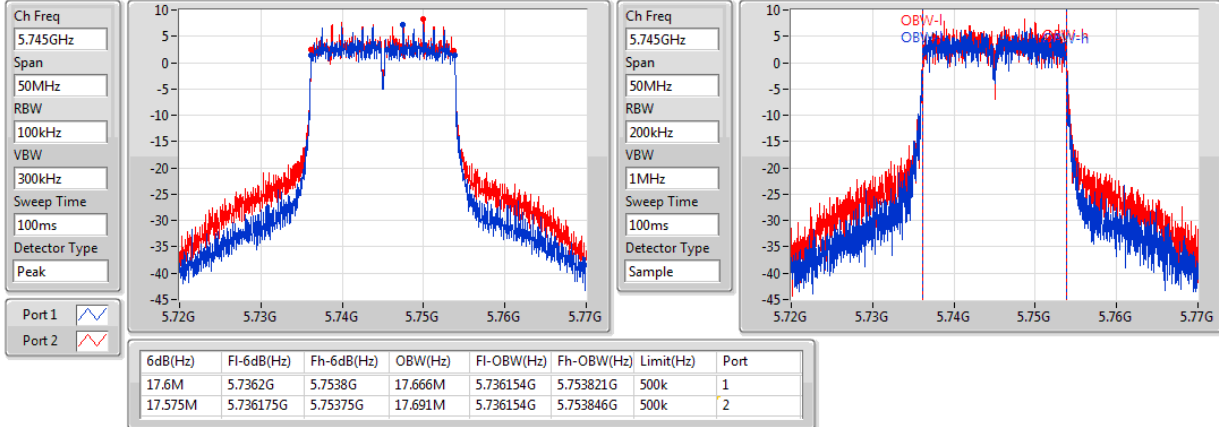
5240MHz



VHT20-BF_Nss1_2TX

EBW

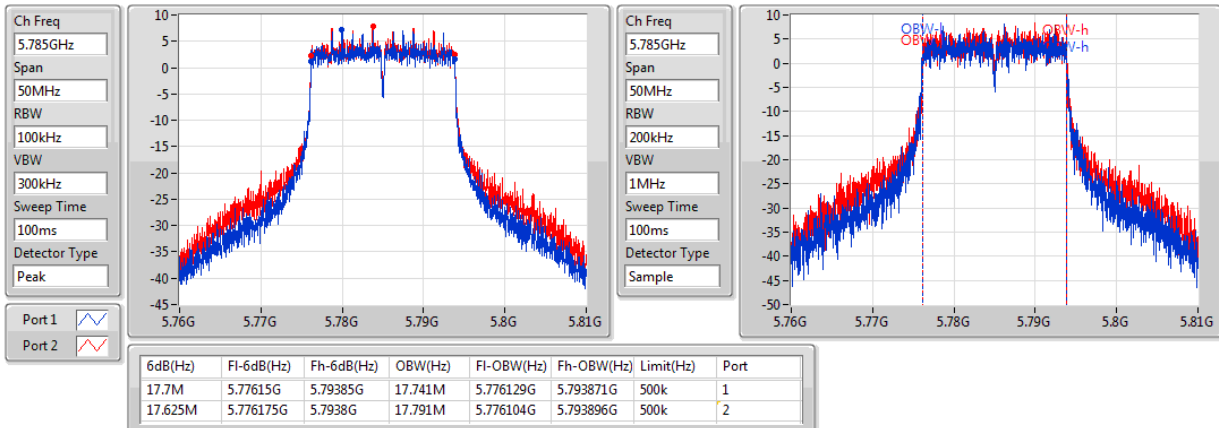
5745MHz



VHT20-BF_Nss1_2TX

EBW

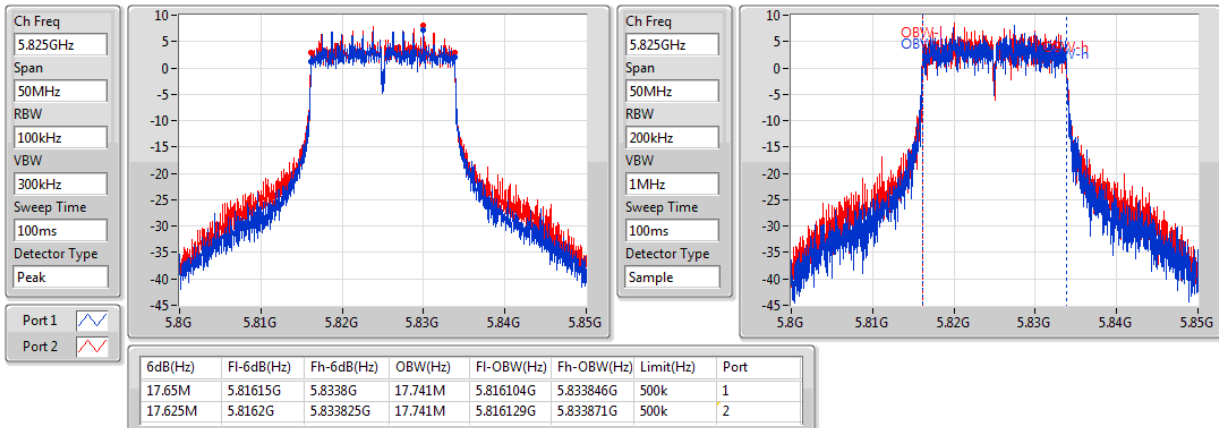
5785MHz



VHT20-BF_Nss1_2TX

EBW

5825MHz



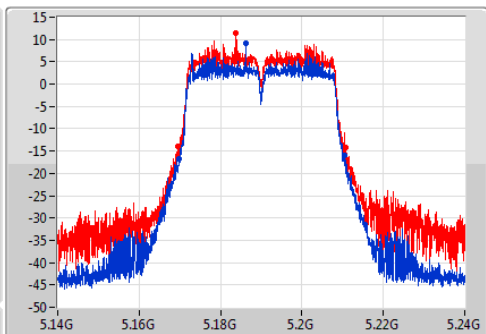
VHT40-BF_Nss1_2TX

EBW

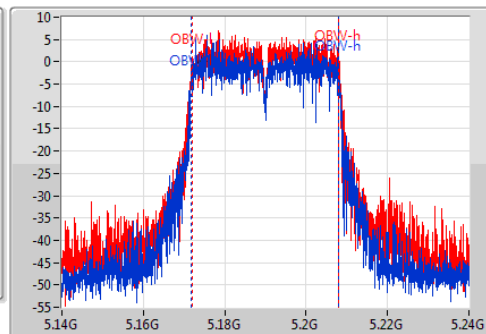
5190MHz

Ch Freq
5.19GHz
Span
100MHz
RBW
500kHz
VBW
2MHz
Sweep Time
100ms
Detector Type
Peak

Port 1
Port 2



Ch Freq
5.19GHz
Span
100MHz
RBW
500kHz
VBW
2MHz
Sweep Time
100ms
Detector Type
Sample



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.75M	5.16975G	5.2105G	36.182M	5.171859G	5.208041G	Inf	1
41.15M	5.1696G	5.21075G	36.182M	5.171909G	5.208091G	Inf	2

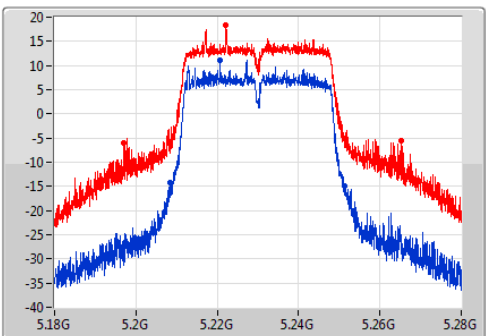
VHT40-BF_Nss1_2TX

EBW

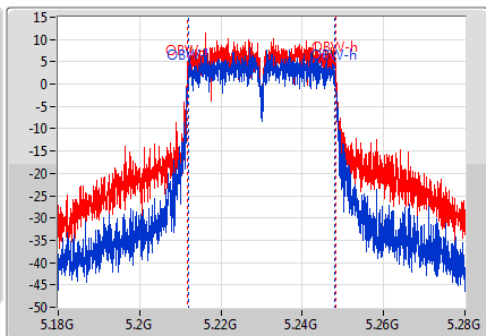
5230MHz

Ch Freq
5.23GHz
Span
100MHz
RBW
1MHz
VBW
3MHz
Sweep Time
100ms
Detector Type
Peak

Port 1
Port 2



Ch Freq
5.23GHz
Span
100MHz
RBW
500kHz
VBW
2MHz
Sweep Time
100ms
Detector Type
Sample



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
42.8M	5.2084G	5.2512G	36.182M	5.211909G	5.248091G	Inf	1
68.4M	5.19695G	5.26535G	36.482M	5.211809G	5.248291G	Inf	2

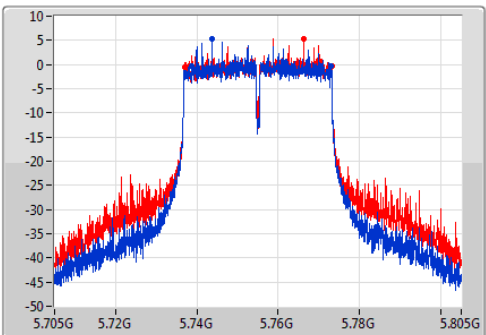
VHT40-BF_Nss1_2TX

EBW

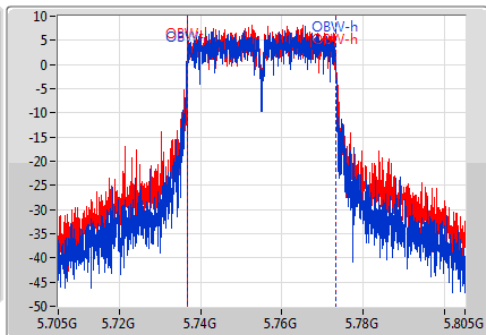
5755MHz

Ch Freq
5.755GHz
Span
100MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak

Port 1
Port 2



Ch Freq
5.755GHz
Span
100MHz
RBW
500kHz
VBW
2MHz
Sweep Time
100ms
Detector Type
Sample

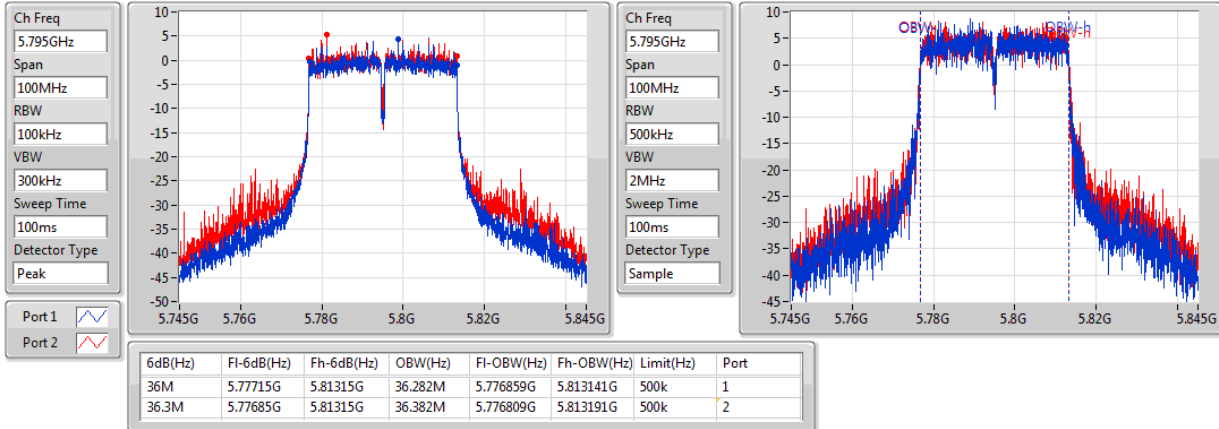


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
34.35M	5.7387G	5.77305G	36.332M	5.736809G	5.773141G	500k	1
36.25M	5.7369G	5.77315G	36.382M	5.736809G	5.773191G	500k	2

VHT40-BF_Nss1_2TX

EBW

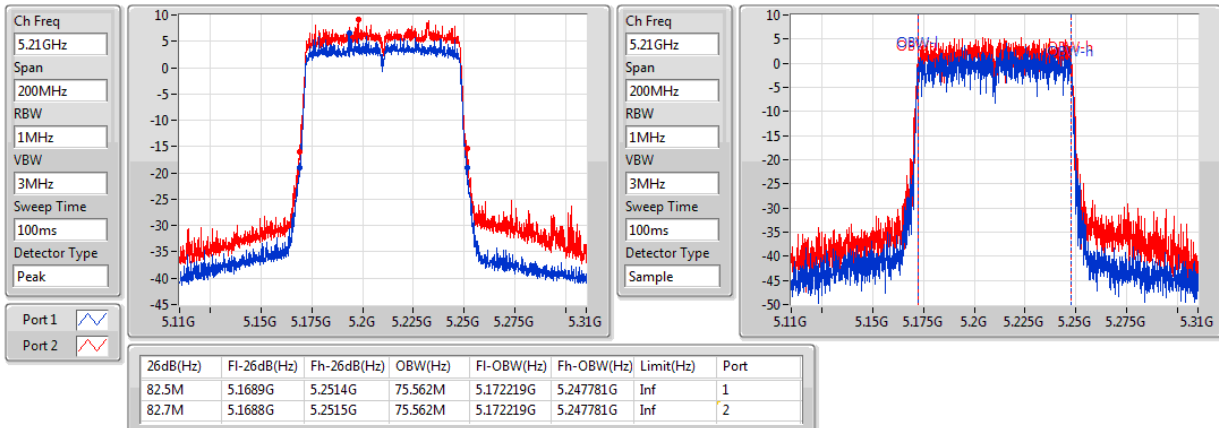
5795MHz



VHT80-BF_Nss1_2TX

EBW

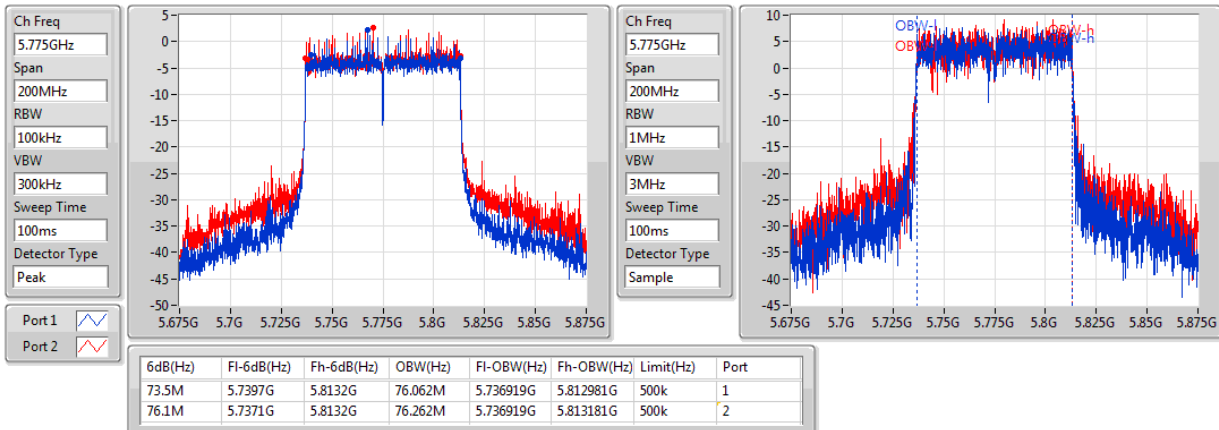
5210MHz



VHT80-BF_Nss1_2TX

EBW

5775MHz



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 ≤ 125 mW [21 dBm] - 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 $11 \text{ dBm} + 10 \log B$, 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 $11 \text{ dBm} + 10 \log B$, 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.	

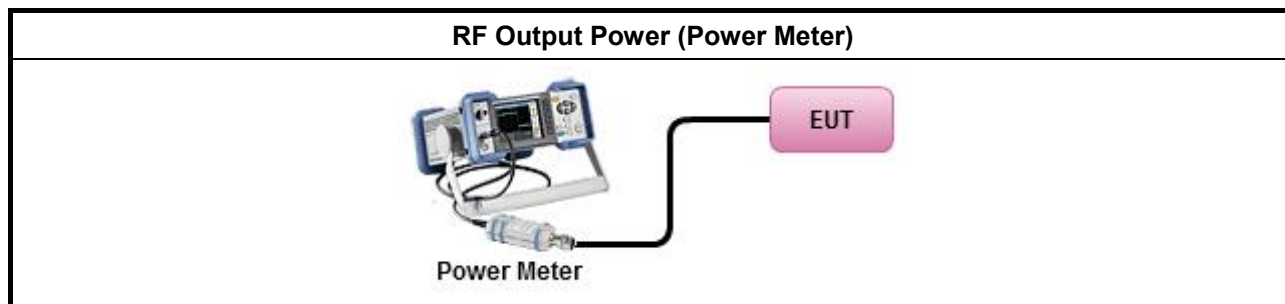
3.3.2 Measuring Instruments

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

<For Non-Beamforming Mode>

Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
11a_Nss1_2TX	-	-	-	-
5.15-5.25GHz	24.47	0.27990	29.78	0.95060
5.725-5.85GHz	24.44	0.27797	29.75	0.94406
VHT20_Nss1_2TX	-	-	-	-
5.15-5.25GHz	24.37	0.27353	29.68	0.92897
5.725-5.85GHz	24.51	0.28249	29.82	0.95940
VHT40_Nss1_2TX	-	-	-	-
5.15-5.25GHz	24.69	0.29444	30.00	1.00000
5.725-5.85GHz	24.73	0.29717	30.04	1.00925
VHT80_Nss1_2TX	-	-	-	-
5.15-5.25GHz	19.53	0.08974	24.84	0.30479
5.725-5.85GHz	23.31	0.21429	28.62	0.72778

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
11a_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	5.31	18.74	18.47	21.62	30.00
5200MHz	Pass	5.31	21.65	21.27	24.47	30.00
5240MHz	Pass	5.31	21.64	21.12	24.40	30.00
5745MHz	Pass	5.31	21.27	21.58	24.44	30.00
5785MHz	Pass	5.31	21.13	21.53	24.34	30.00
5825MHz	Pass	5.31	21.01	21.54	24.29	30.00
VHT20_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	5.31	18.44	18.33	21.40	30.00
5200MHz	Pass	5.31	21.53	21.19	24.37	30.00
5240MHz	Pass	5.31	21.52	21.16	24.35	30.00
5745MHz	Pass	5.31	21.46	21.54	24.51	30.00
5785MHz	Pass	5.31	21.29	21.56	24.44	30.00
5825MHz	Pass	5.31	21.24	21.58	24.42	30.00
VHT40_Nss1_2TX	-	-	-	-	-	-
5190MHz	Pass	5.31	17.35	17.10	20.24	30.00
5230MHz	Pass	5.31	21.91	21.43	24.69	30.00
5755MHz	Pass	5.31	21.80	21.64	24.73	30.00
5795MHz	Pass	5.31	21.72	21.41	24.58	30.00
VHT80_Nss1_2TX	-	-	-	-	-	-
5210MHz	Pass	5.31	16.83	16.18	19.53	30.00
5775MHz	Pass	5.31	20.29	20.31	23.31	30.00

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

<For Beamforming Mode>
Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
VHT20-BF_Nss1_2TX	-	-	-	-
5.15-5.25GHz	21.68	0.14723	28.95	0.78524
5.725-5.85GHz	20.86	0.12190	28.13	0.65013
VHT40-BF_Nss1_2TX	-	-	-	-
5.15-5.25GHz	20.48	0.11169	27.75	0.59566
5.725-5.85GHz	20.34	0.10814	27.61	0.57677
VHT80-BF_Nss1_2TX	-	-	-	-
5.15-5.25GHz	17.86	0.06109	25.13	0.32584
5.725-5.85GHz	20.42	0.11015	27.69	0.58749

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
VHT20-BF_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	7.27	16.48	16.28	19.39	28.73
5200MHz	Pass	7.27	18.73	18.49	21.62	28.73
5240MHz	Pass	7.27	18.75	18.58	21.68	28.73
5745MHz	Pass	7.27	17.74	17.96	20.86	28.73
5785MHz	Pass	7.27	17.54	17.71	20.64	28.73
5825MHz	Pass	7.27	17.42	17.63	20.54	28.73
VHT40-BF_Nss1_2TX	-	-	-	-	-	-
5190MHz	Pass	7.27	14.91	15.22	18.08	28.73
5230MHz	Pass	7.27	17.36	17.58	20.48	28.73
5755MHz	Pass	7.27	17.25	17.41	20.34	28.73
5795MHz	Pass	7.27	17.06	17.33	20.21	28.73
VHT80-BF_Nss1_2TX	-	-	-	-	-	-
5210MHz	Pass	7.27	14.72	14.97	17.86	28.73
5775MHz	Pass	7.27	17.39	17.42	20.42	28.73

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

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.	

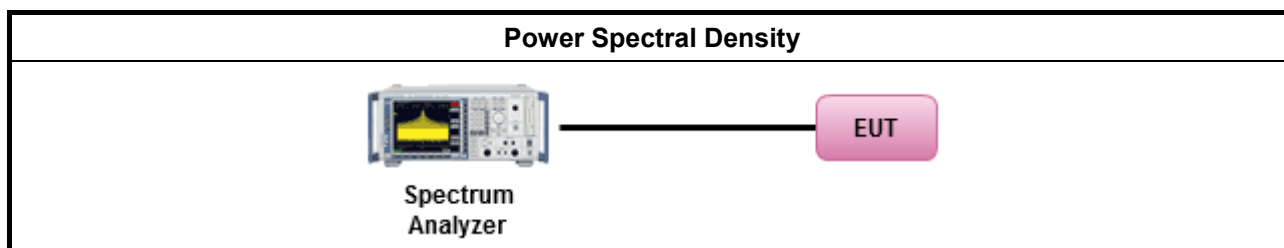
3.4.2 Measuring Instruments

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

<For Non-Beamforming Mode>

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
11a_Nss1_2TX	-	-
5.15-5.25GHz	12.28	19.55
5.725-5.85GHz	9.44	16.71
VHT20_Nss1_2TX	-	-
5.15-5.25GHz	11.97	19.24
5.725-5.85GHz	9.25	16.52
VHT40_Nss1_2TX	-	-
5.15-5.25GHz	9.72	16.99
5.725-5.85GHz	6.85	14.12
VHT80_Nss1_2TX	-	-
5.15-5.25GHz	1.42	8.69
5.725-5.85GHz	2.27	9.54

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

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
11a_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	7.27	6.54	6.26	9.32	15.73
5200MHz	Pass	7.27	9.63	9.13	12.28	15.73
5240MHz	Pass	7.27	9.31	9.14	12.18	15.73
5745MHz	Pass	7.27	6.38	6.81	9.44	28.73
5785MHz	Pass	7.27	6.19	6.64	9.25	28.73
5825MHz	Pass	7.27	6.08	6.63	9.23	28.73
VHT20_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	7.27	6.15	5.91	9.01	15.73
5200MHz	Pass	7.27	9.20	8.85	11.97	15.73
5240MHz	Pass	7.27	9.22	8.78	11.96	15.73
5745MHz	Pass	7.27	6.29	6.23	9.25	28.73
5785MHz	Pass	7.27	6.19	6.14	9.12	28.73
5825MHz	Pass	7.27	6.05	6.19	9.10	28.73
VHT40_Nss1_2TX	-	-	-	-	-	-
5190MHz	Pass	7.27	2.58	2.15	5.30	15.73
5230MHz	Pass	7.27	7.21	6.41	9.72	15.73
5755MHz	Pass	7.27	4.08	3.74	6.85	28.73
5795MHz	Pass	7.27	3.86	3.59	6.71	28.73
VHT80_Nss1_2TX	-	-	-	-	-	-
5210MHz	Pass	7.27	-1.20	-1.81	1.42	15.73
5775MHz	Pass	7.27	-0.60	-0.57	2.27	28.73

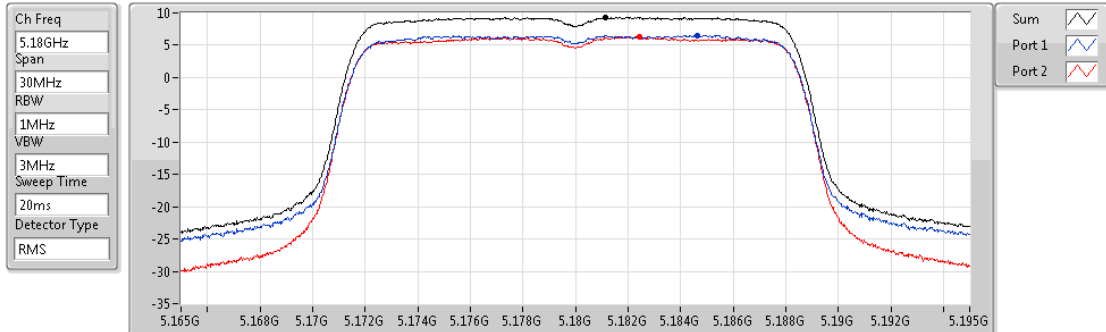
DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

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

11a_Nss1_2TX

PSD

5180MHz

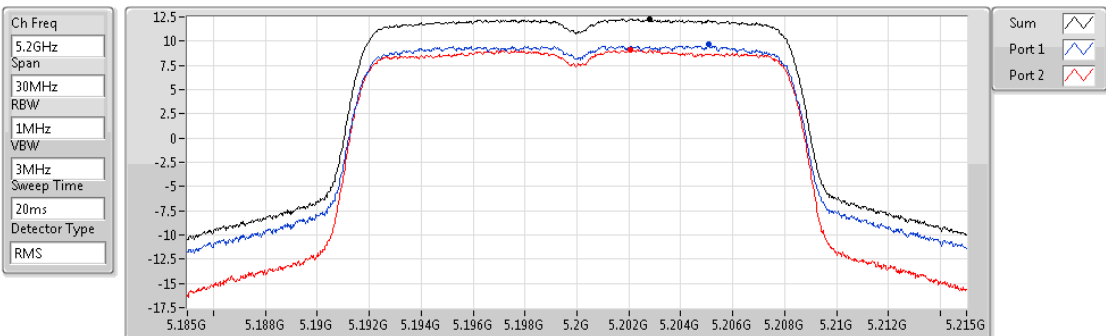


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.32	9.32	6.54	6.26

11a_Nss1_2TX

PSD

5200MHz

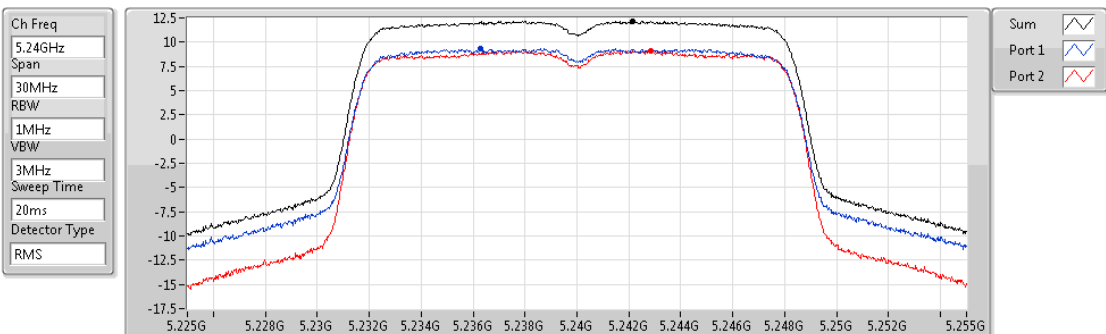


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.28	12.28	9.63	9.13

11a_Nss1_2TX

PSD

5240MHz

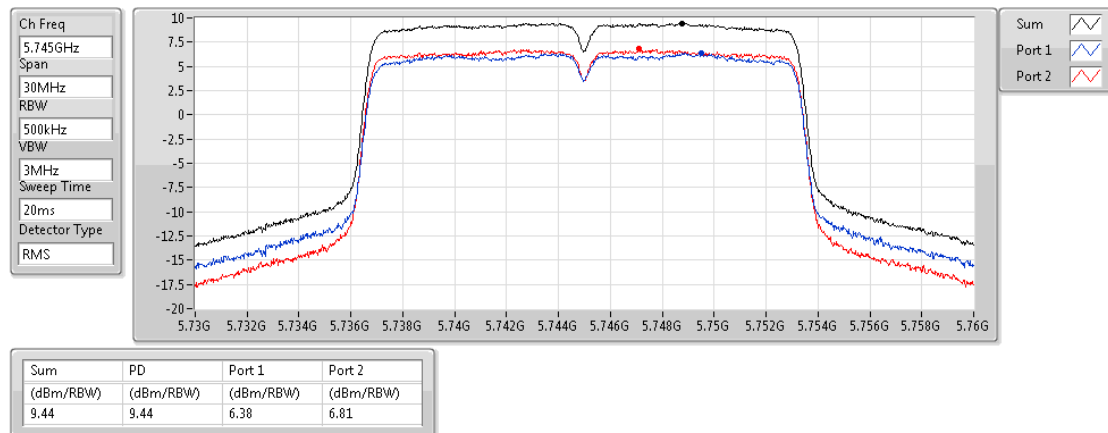


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.18	12.18	9.31	9.14

11a_Nss1_2TX

PSD

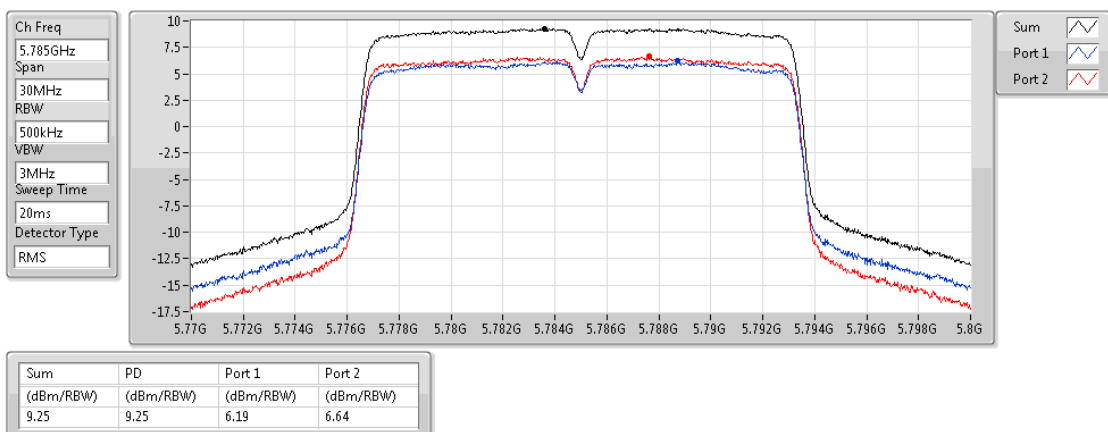
5745MHz



11a_Nss1_2TX

PSD

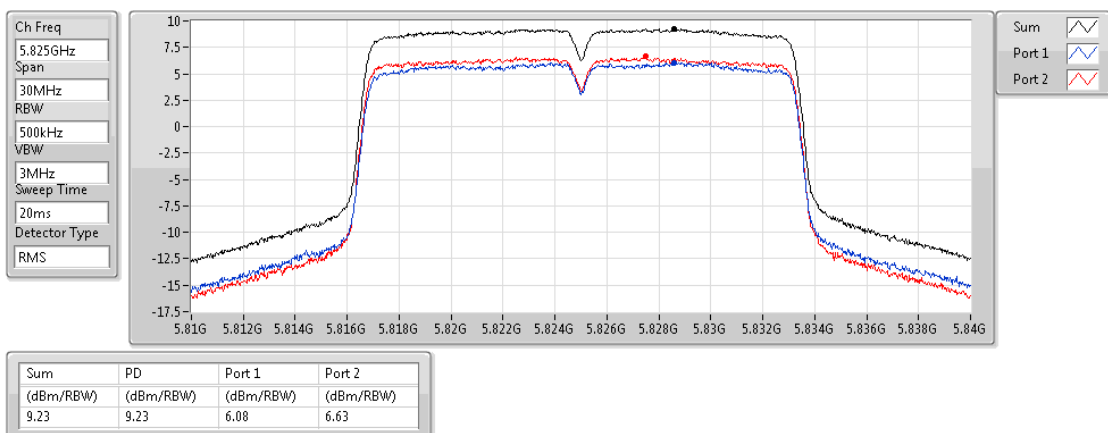
5785MHz



11a_Nss1_2TX

PSD

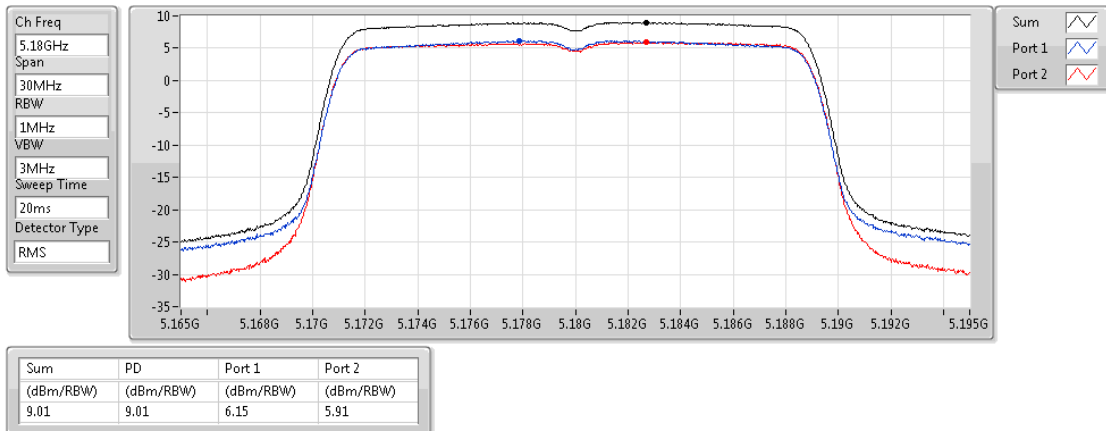
5825MHz



VHT20_Nss1_2TX

PSD

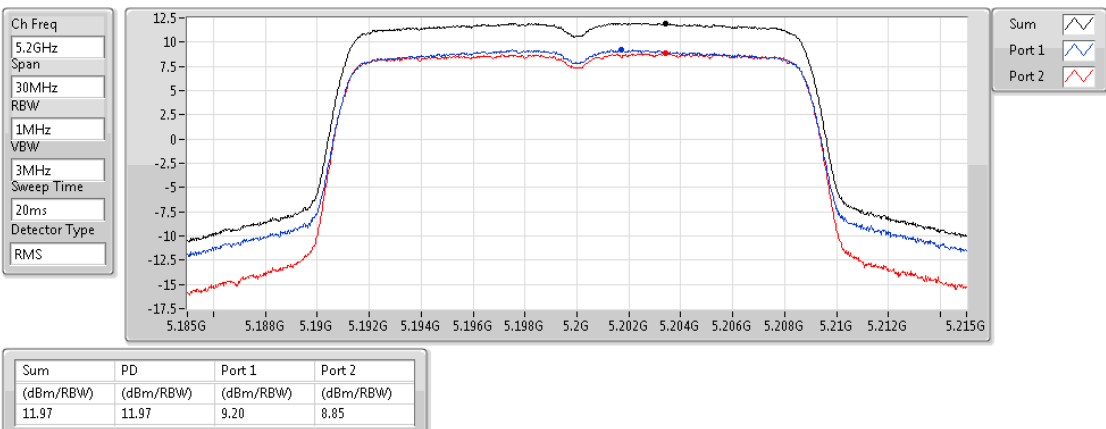
5180MHz



VHT20_Nss1_2TX

PSD

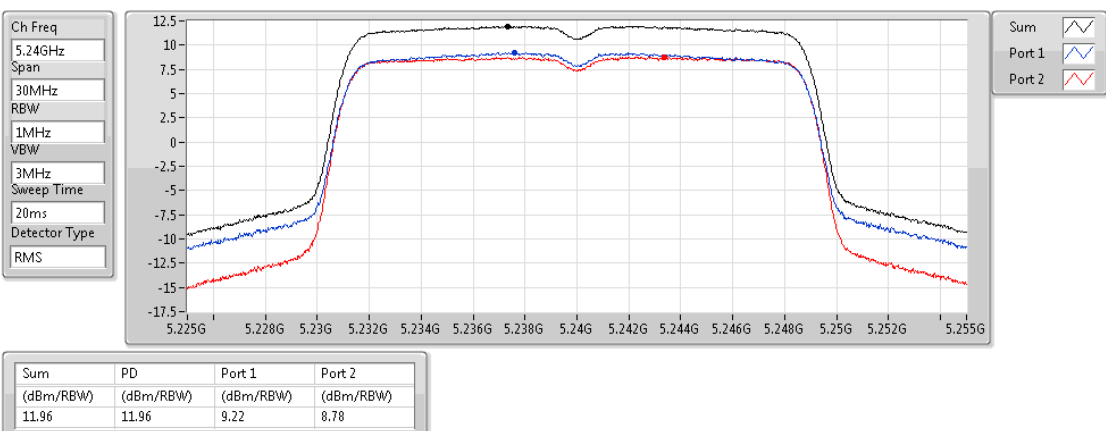
5200MHz



VHT20_Nss1_2TX

PSD

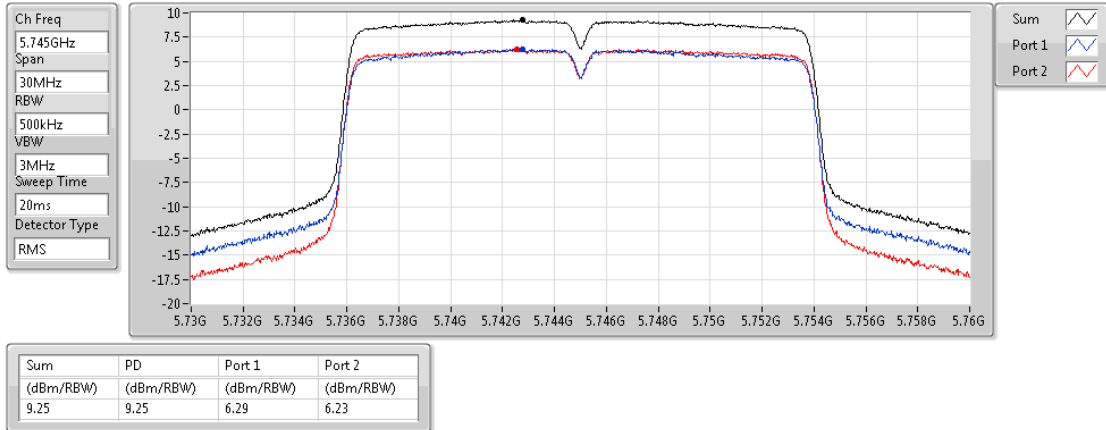
5240MHz



VHT20_Nss1_2TX

PSD

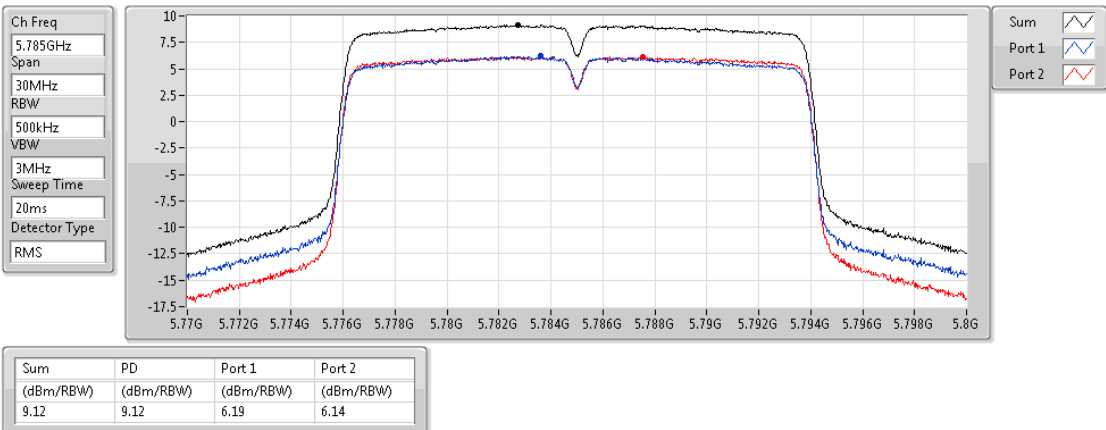
5745MHz



VHT20_Nss1_2TX

PSD

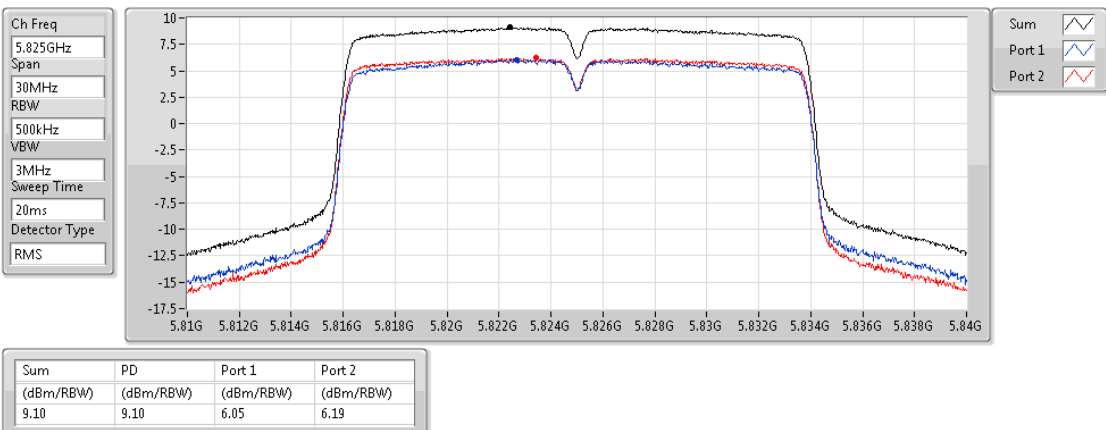
5785MHz



VHT20_Nss1_2TX

PSD

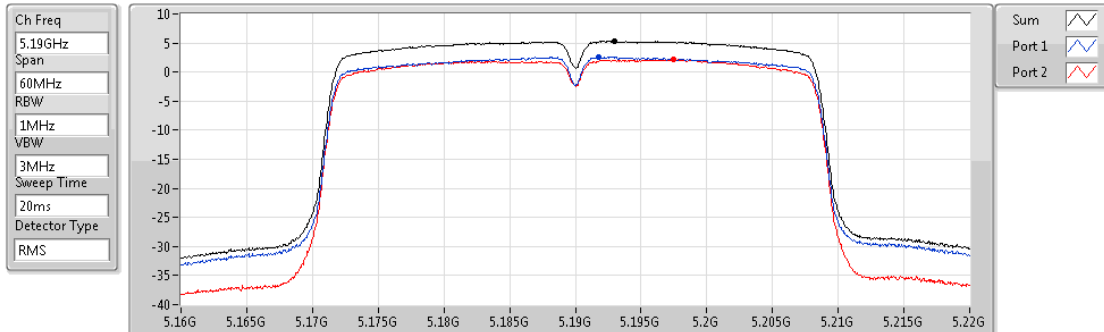
5825MHz



VHT40_Nss1_2TX

PSD

5190MHz

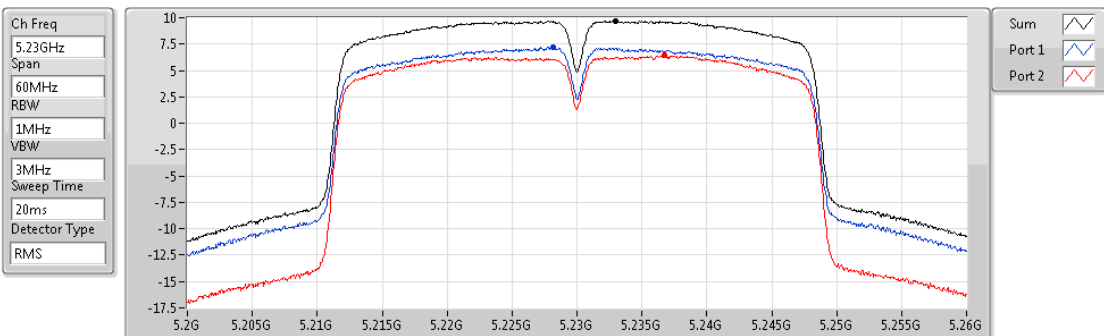


Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
5.30	5.30	2.58	2.15

VHT40_Nss1_2TX

PSD

5230MHz

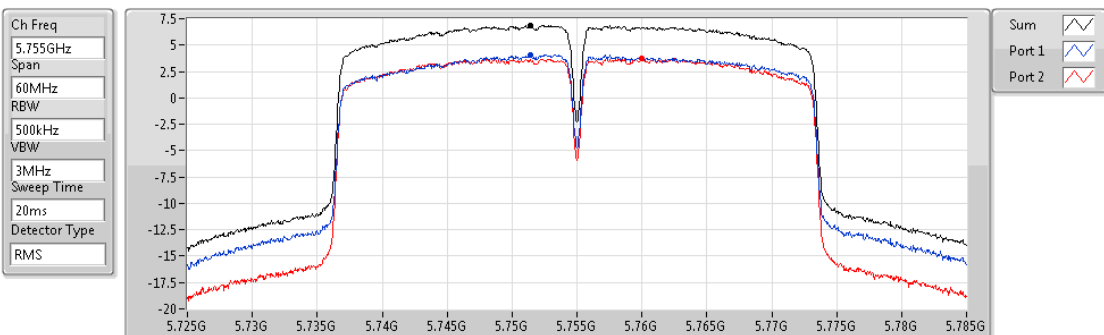


Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
9.72	9.72	7.21	6.41

VHT40_Nss1_2TX

PSD

5755MHz

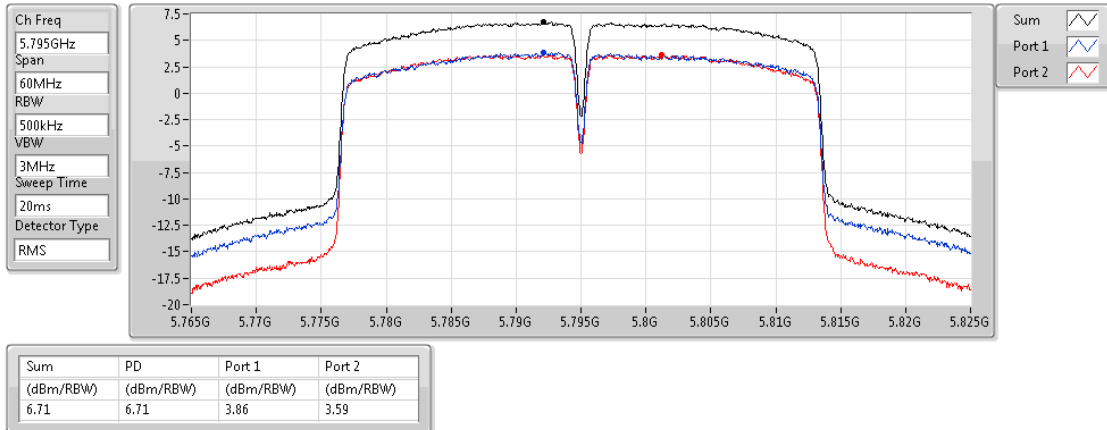


Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
6.85	6.85	4.08	3.74

VHT40_Nss1_2TX

PSD

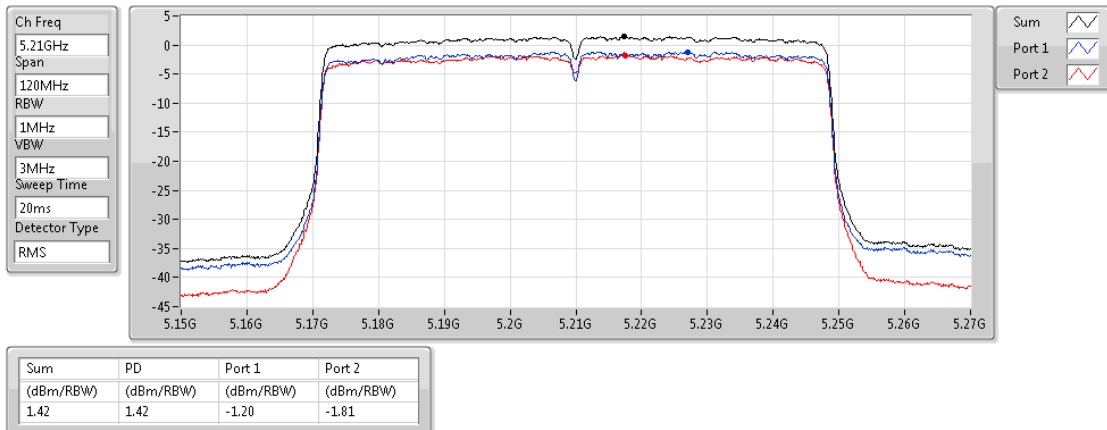
5795MHz



VHT80_Nss1_2TX

PSD

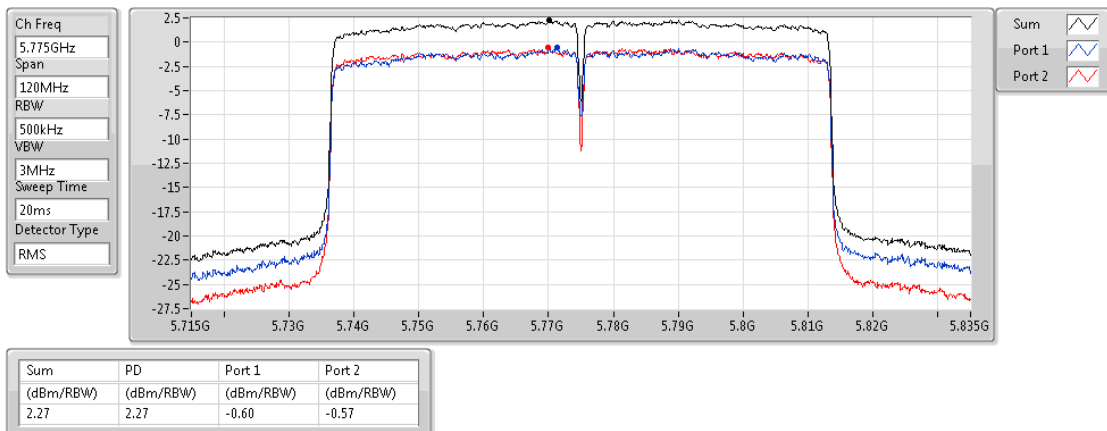
5210MHz



VHT80_Nss1_2TX

PSD

5775MHz



<For Beamforming Mode>
Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
VHT20-BF_Nss1_2TX	-	-
5.15-5.25GHz	8.69	15.96
5.725-5.85GHz	7.93	15.20
VHT40-BF_Nss1_2TX	-	-
5.15-5.25GHz	4.76	12.03
5.725-5.85GHz	4.43	11.70
VHT80-BF_Nss1_2TX	-	-
5.15-5.25GHz	-1.47	5.80
5.725-5.85GHz	1.80	9.07

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

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
VHT20-BF_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	7.27	1.66	3.56	5.62	15.73
5200MHz	Pass	7.27	4.17	6.60	8.49	15.73
5240MHz	Pass	7.27	4.54	6.68	8.69	15.73
5745MHz	Pass	7.27	4.54	4.94	7.68	28.73
5785MHz	Pass	7.27	4.64	5.30	7.93	28.73
5825MHz	Pass	7.27	4.47	5.09	7.69	28.73
VHT40-BF_Nss1_2TX	-	-	-	-	-	-
5190MHz	Pass	7.27	-2.52	-0.00	1.59	15.73
5230MHz	Pass	7.27	0.34	2.86	4.76	15.73
5755MHz	Pass	7.27	1.25	1.57	4.24	28.73
5795MHz	Pass	7.27	1.22	1.80	4.43	28.73
VHT80-BF_Nss1_2TX	-	-	-	-	-	-
5210MHz	Pass	7.27	-5.72	-3.30	-1.47	15.73
5775MHz	Pass	7.27	-1.52	-0.19	1.80	28.73

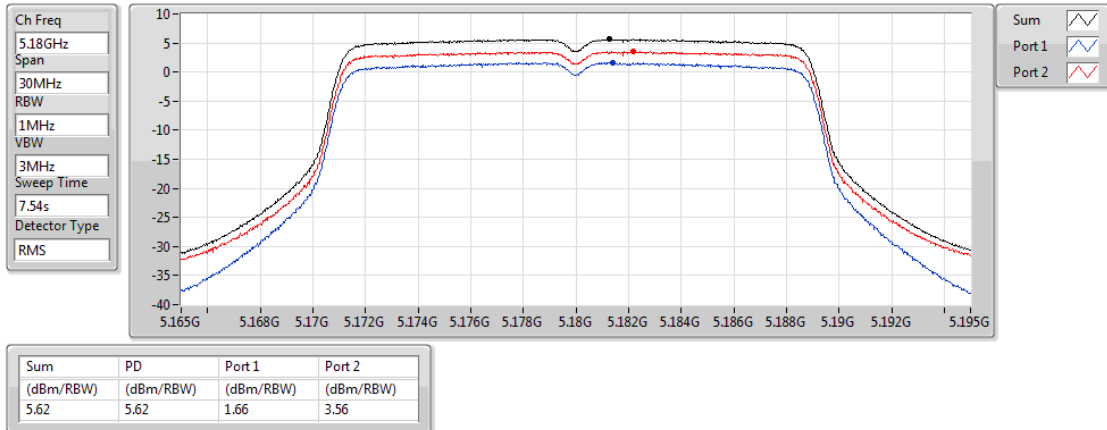
DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

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

VHT20-BF_Nss1_2TX

PSD

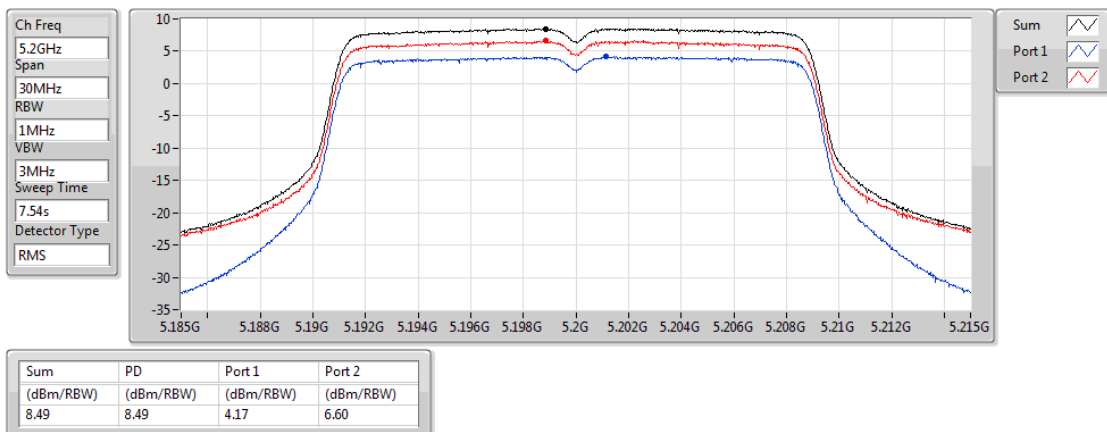
5180MHz



VHT20-BF_Nss1_2TX

PSD

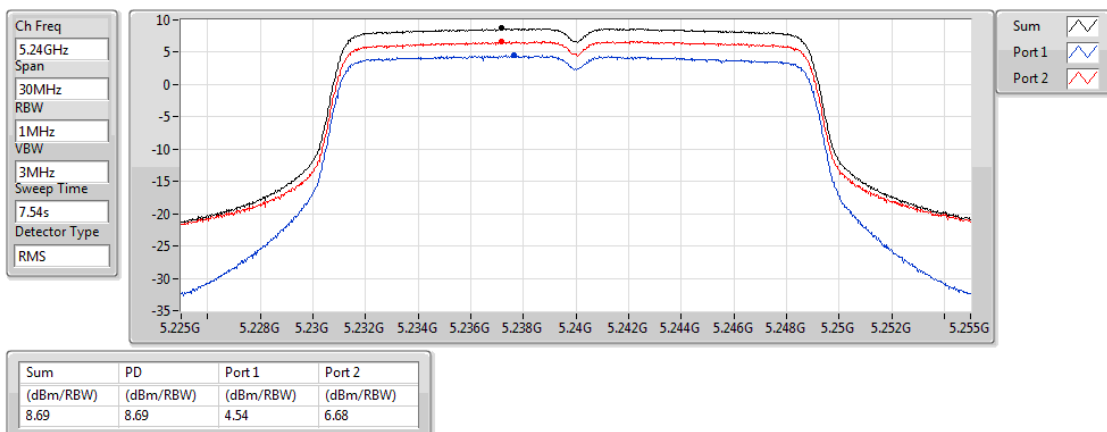
5200MHz



VHT20-BF_Nss1_2TX

PSD

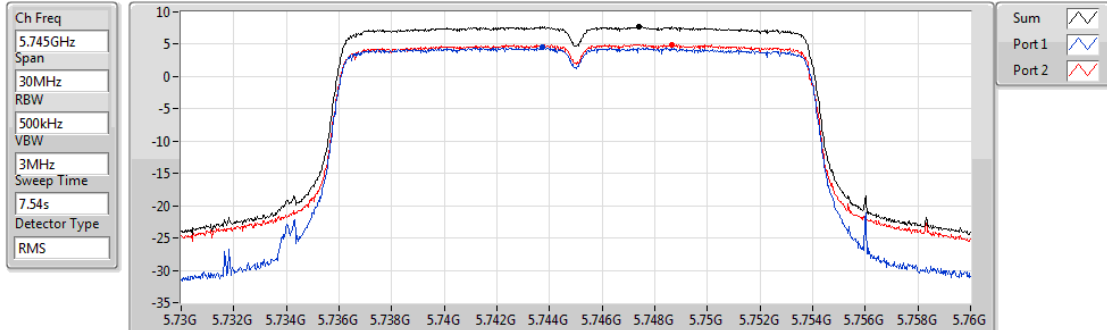
5240MHz



VHT20-BF_Nss1_2TX

PSD

5745MHz

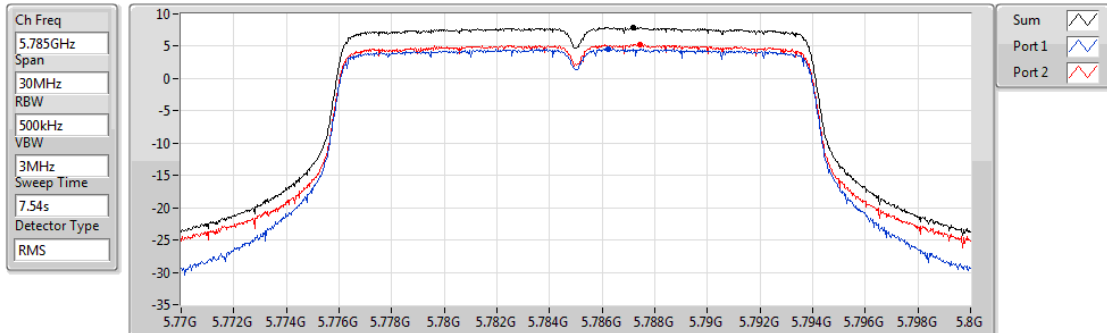


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.68	7.68	4.54	4.94

VHT20-BF_Nss1_2TX

PSD

5785MHz

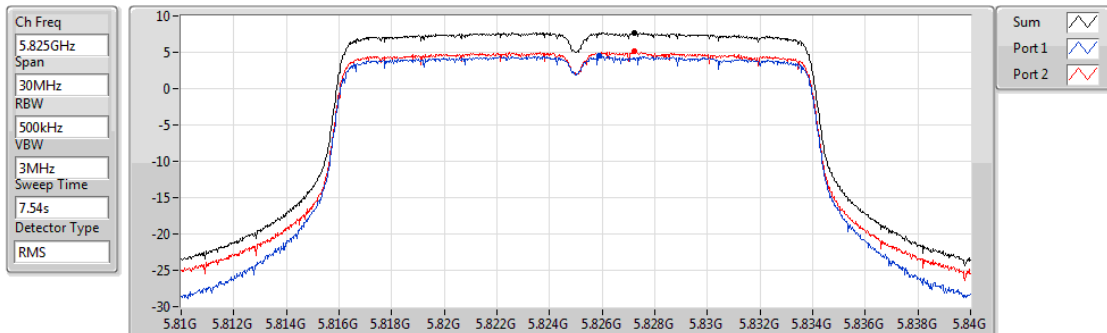


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.93	7.93	4.64	5.30

VHT20-BF_Nss1_2TX

PSD

5825MHz

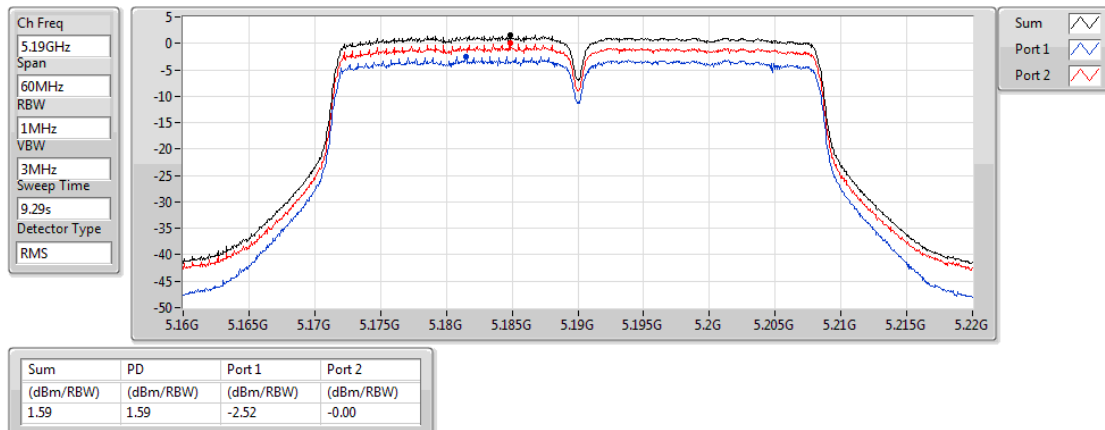


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.69	7.69	4.47	5.09

VHT40-BF_Nss1_2TX

PSD

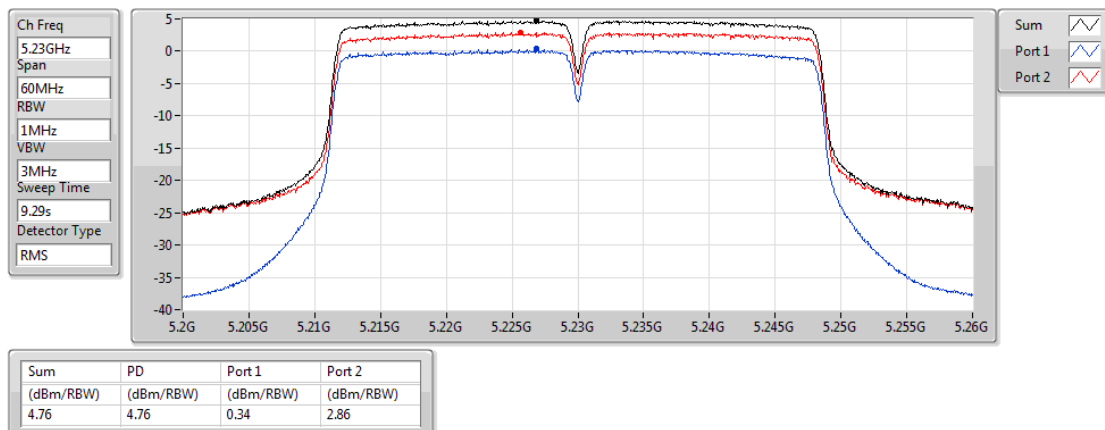
5190MHz



VHT40-BF_Nss1_2TX

PSD

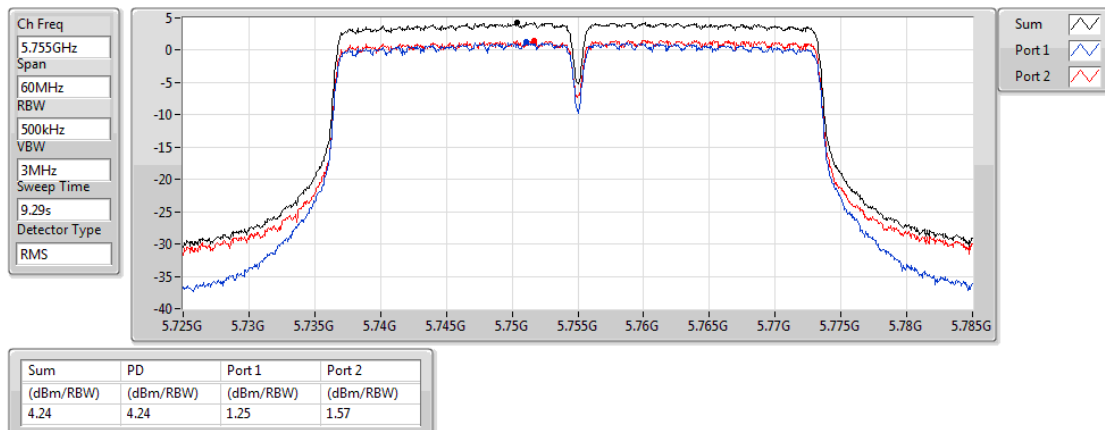
5230MHz



VHT40-BF_Nss1_2TX

PSD

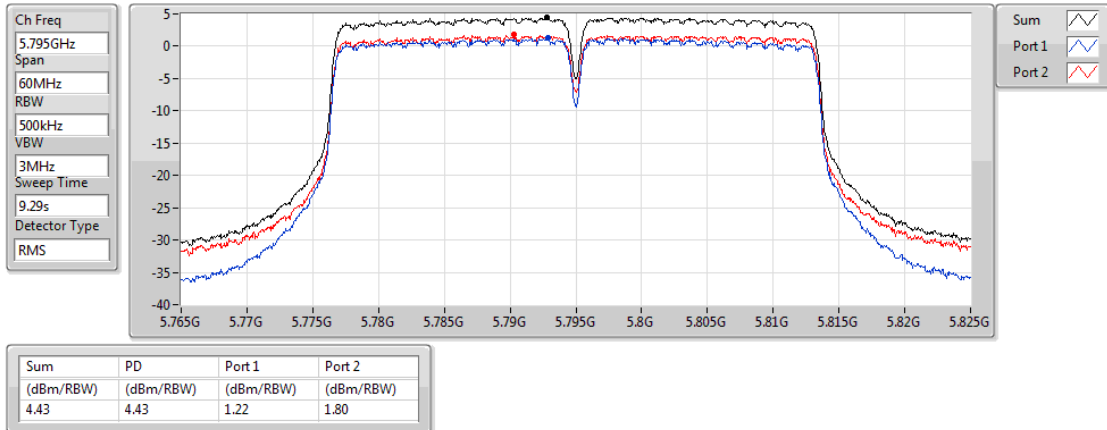
5755MHz



VHT40-BF_Nss1_2TX

PSD

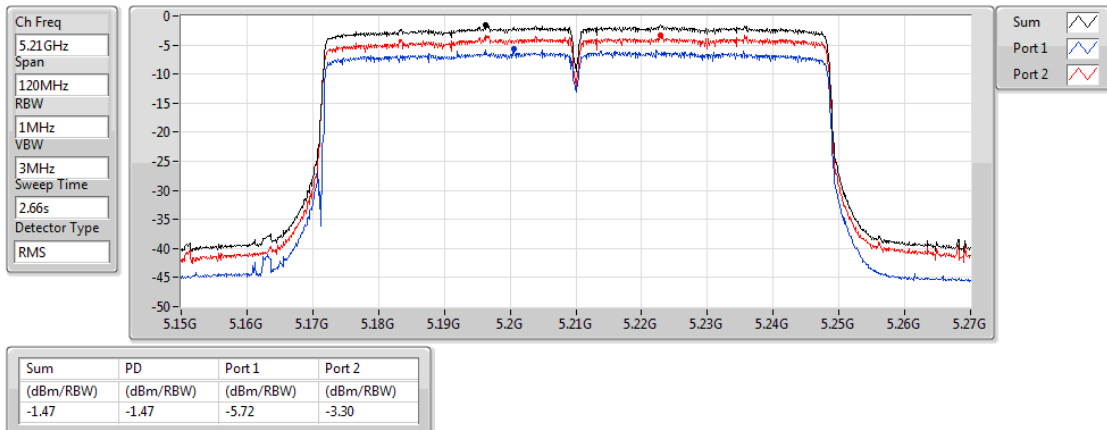
5795MHz



VHT80-BF_Nss1_2TX

PSD

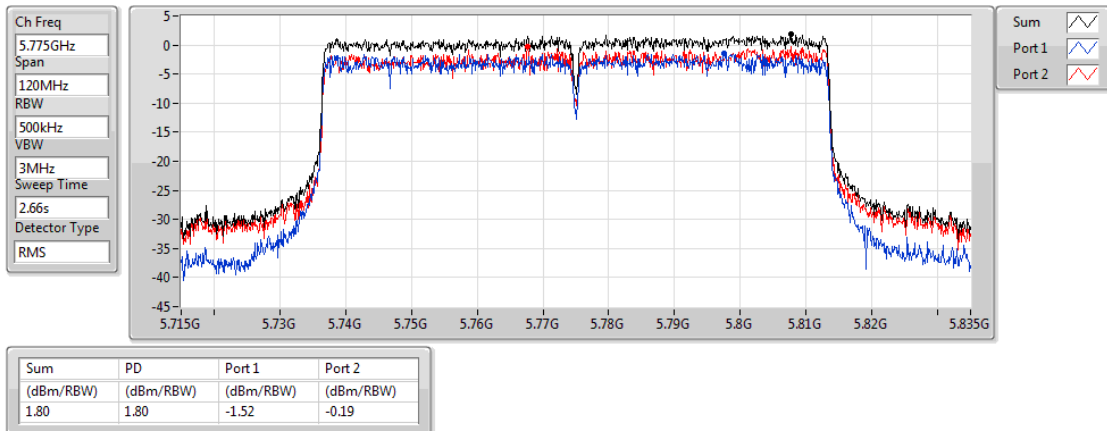
5210MHz



VHT80-BF_Nss1_2TX

PSD

5775MHz



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).

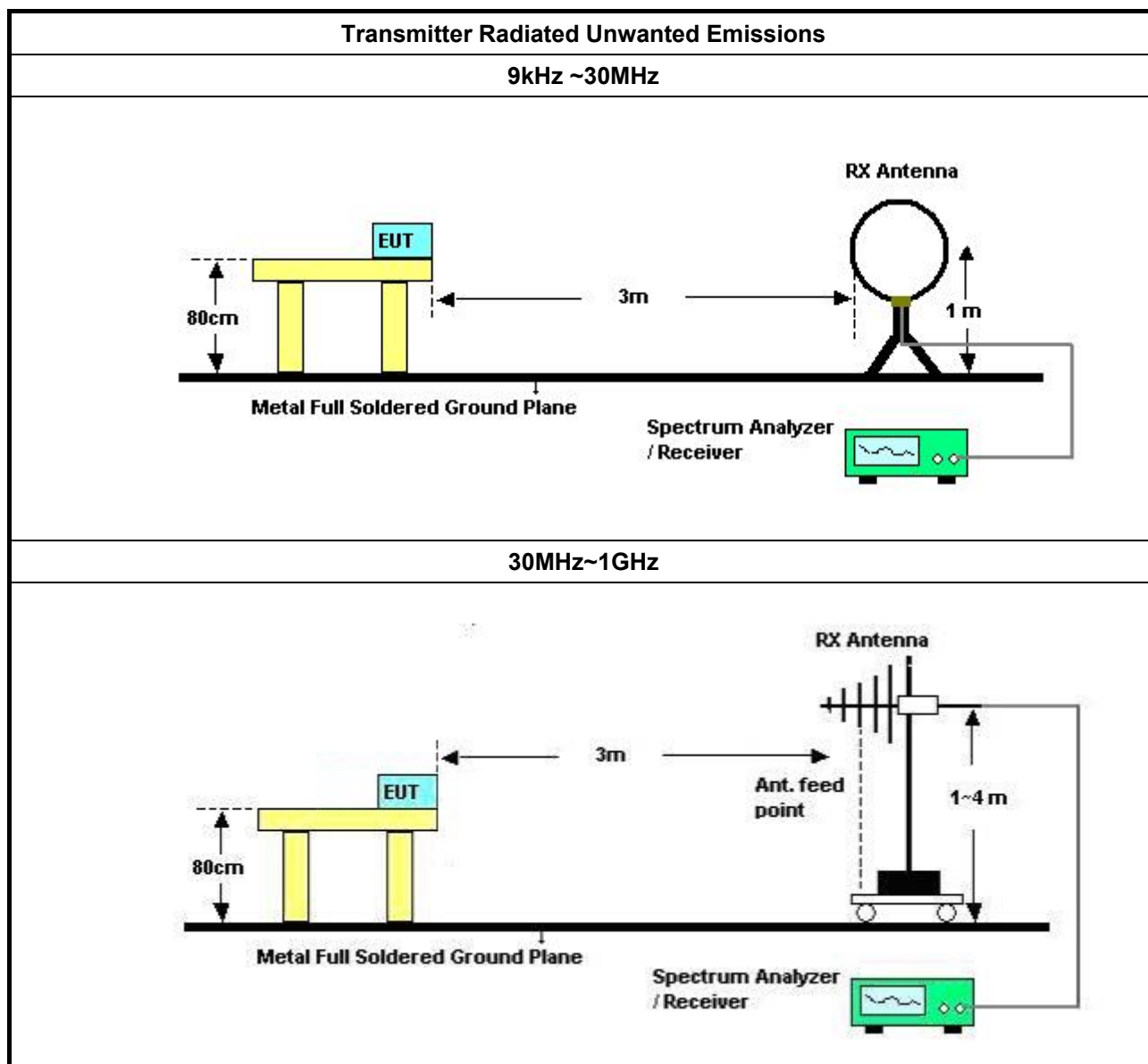
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

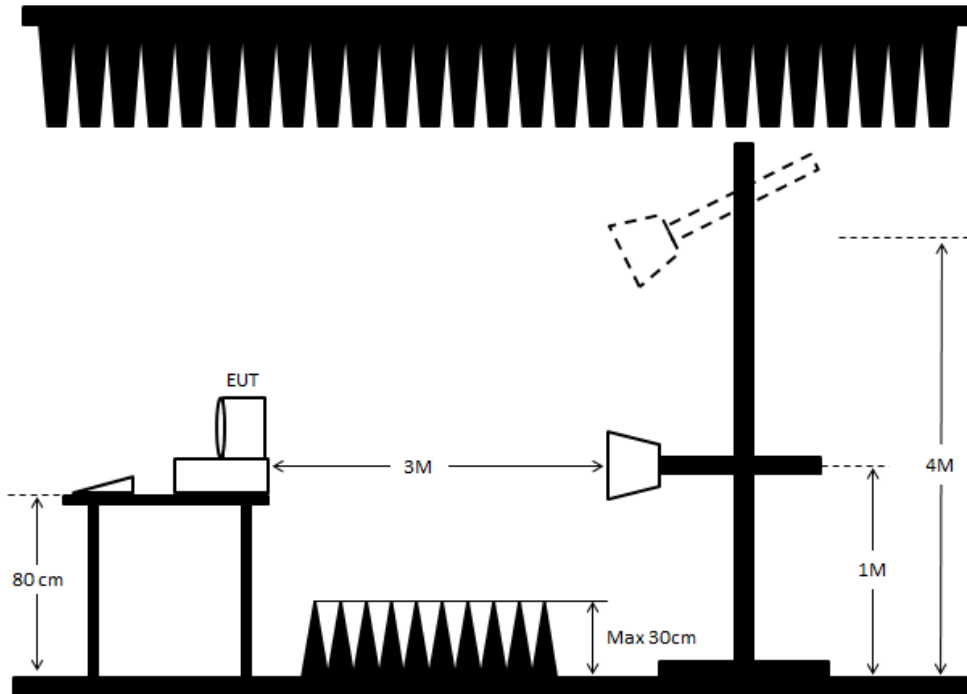
Test Method	
Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 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

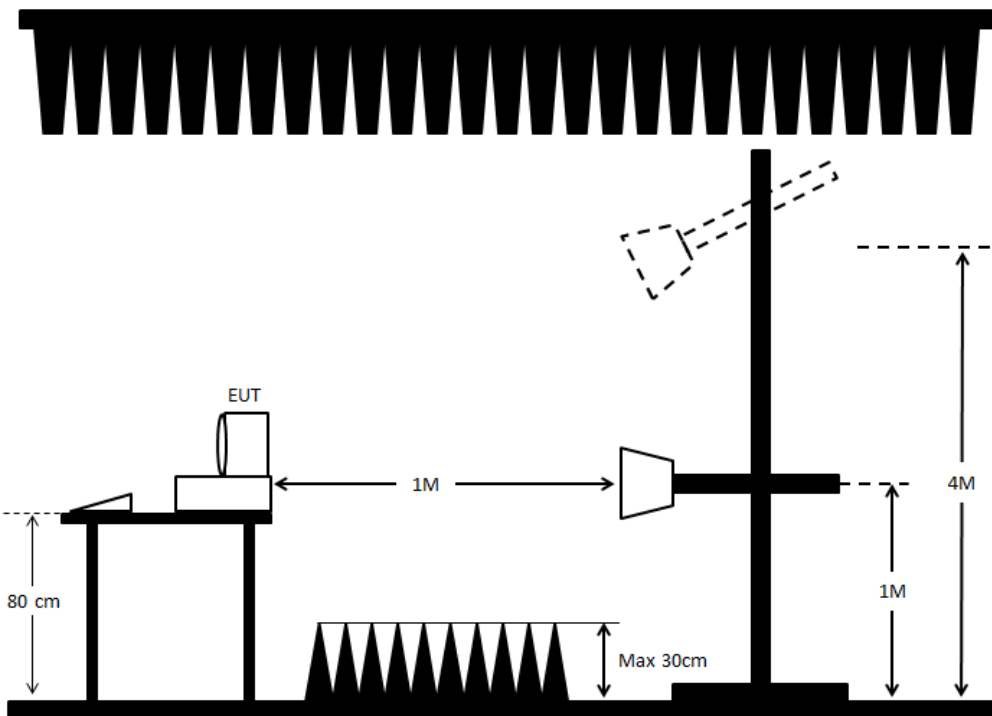


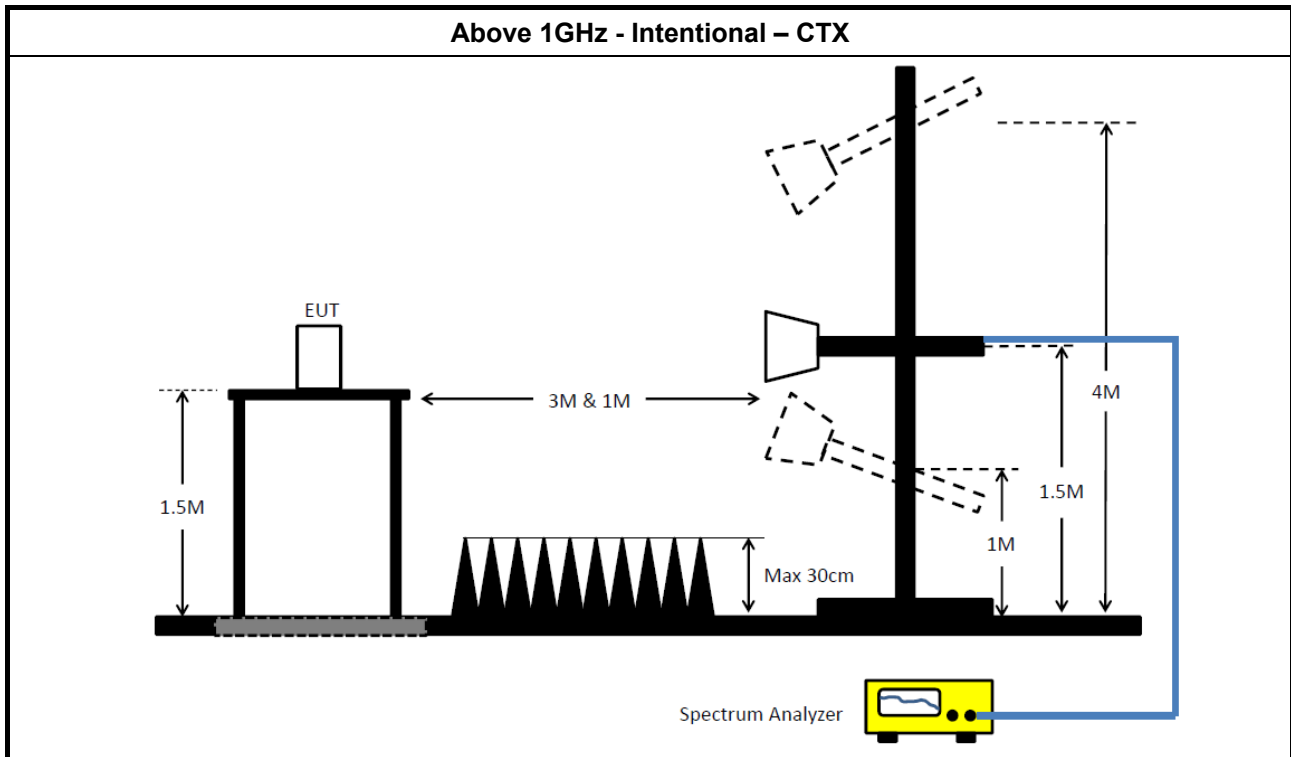
Above 1GHz - Unintentional – Normal Link

1,000~18,000 MHz



18,000~30,000 MHz

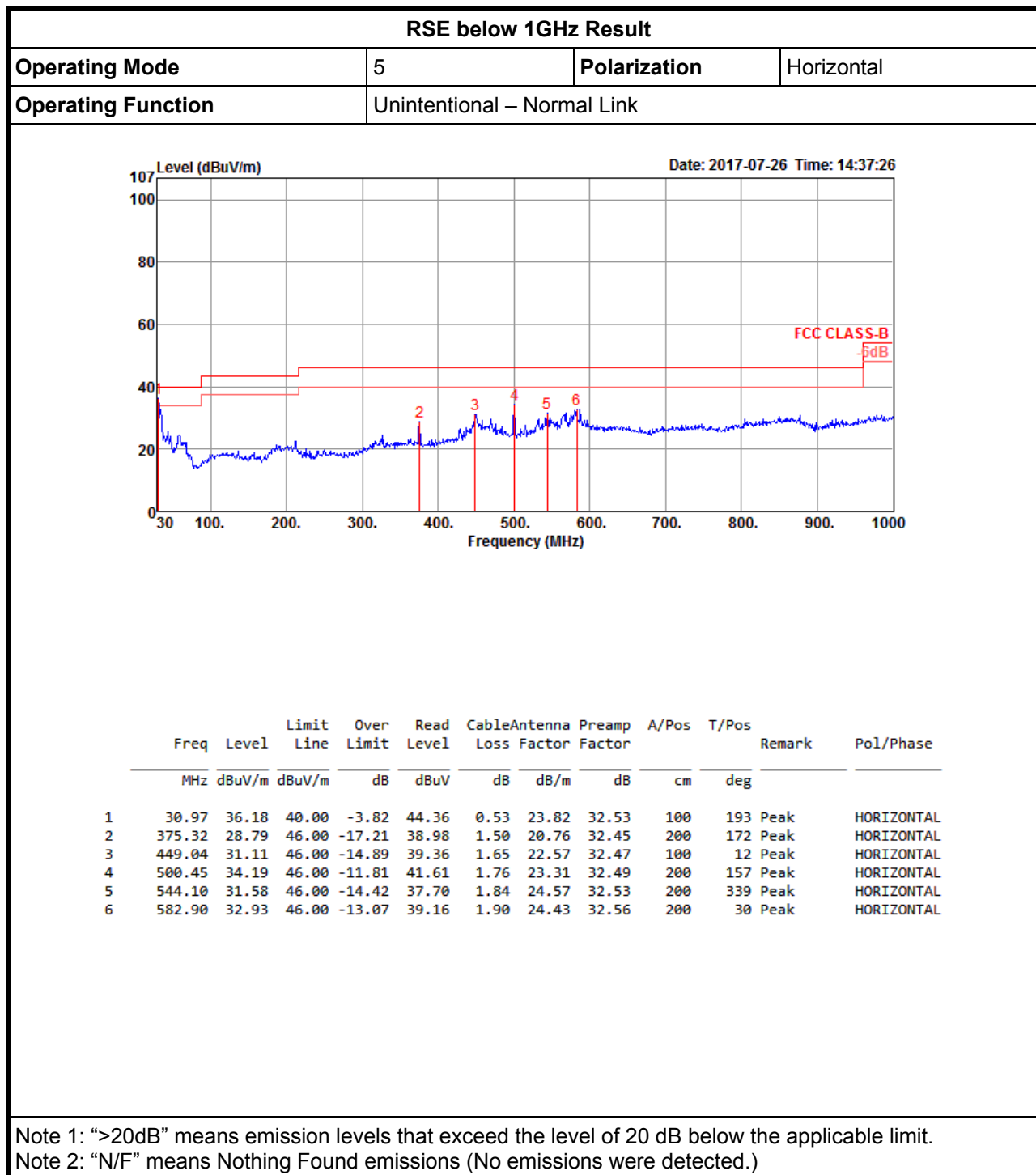




3.5.5 Transmitter Unwanted Emissions (Below 30MHz)

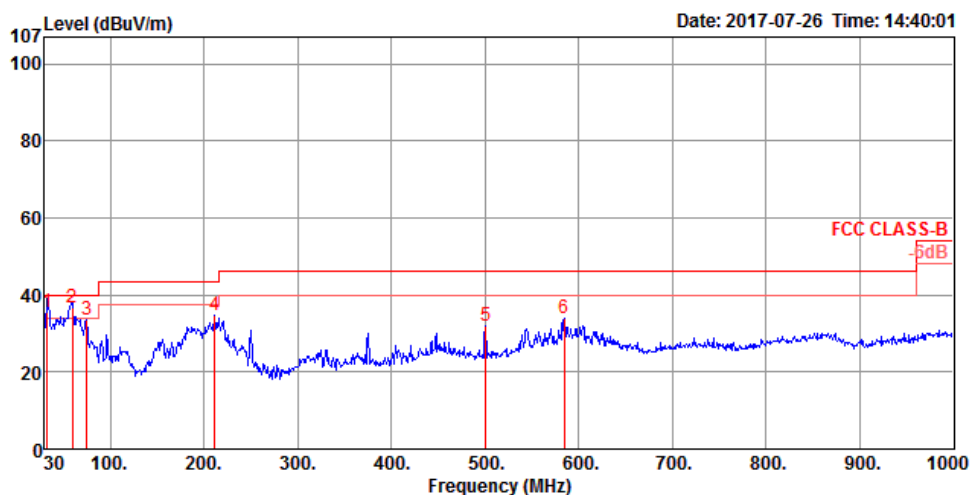
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

3.5.6 Test Result of Transmitter Unwanted Emissions



RSE below 1GHz Result

Operating Mode	5	Polarization	Vertical
Operating Function	Unintentional – Normal Link		

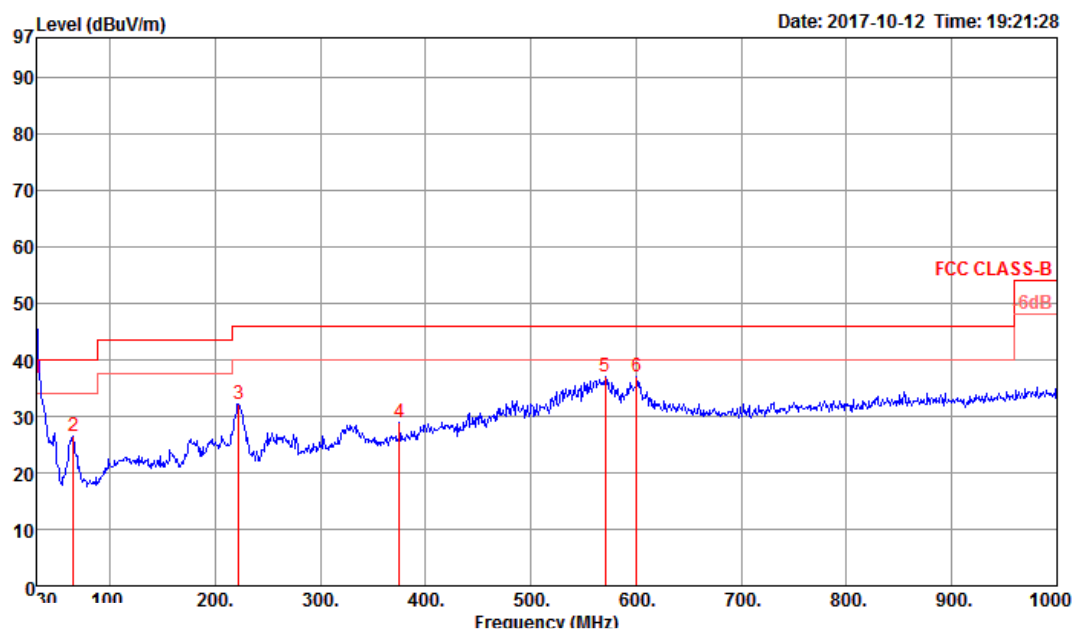


	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	32.91	35.43	40.00	-4.57	44.81	0.53	22.62	32.53	102	169 QP	VERTICAL
2	59.10	36.88	40.00	-3.12	56.29	0.61	12.49	32.51	107	193 QP	VERTICAL
3	74.62	33.56	40.00	-6.44	53.18	0.75	12.16	32.53	100	132 Peak	VERTICAL
4	211.39	34.79	43.50	-8.71	50.88	1.16	15.23	32.48	100	231 Peak	VERTICAL
5	500.45	31.87	46.00	-14.13	39.29	1.76	23.31	32.49	100	197 Peak	VERTICAL
6	584.84	34.08	46.00	-11.92	40.26	1.91	24.47	32.56	200	266 Peak	VERTICAL

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

RSE below 1GHz Result

Operating Mode	8	Polarization	Horizontal
Operating Function	Intentional – CTX		



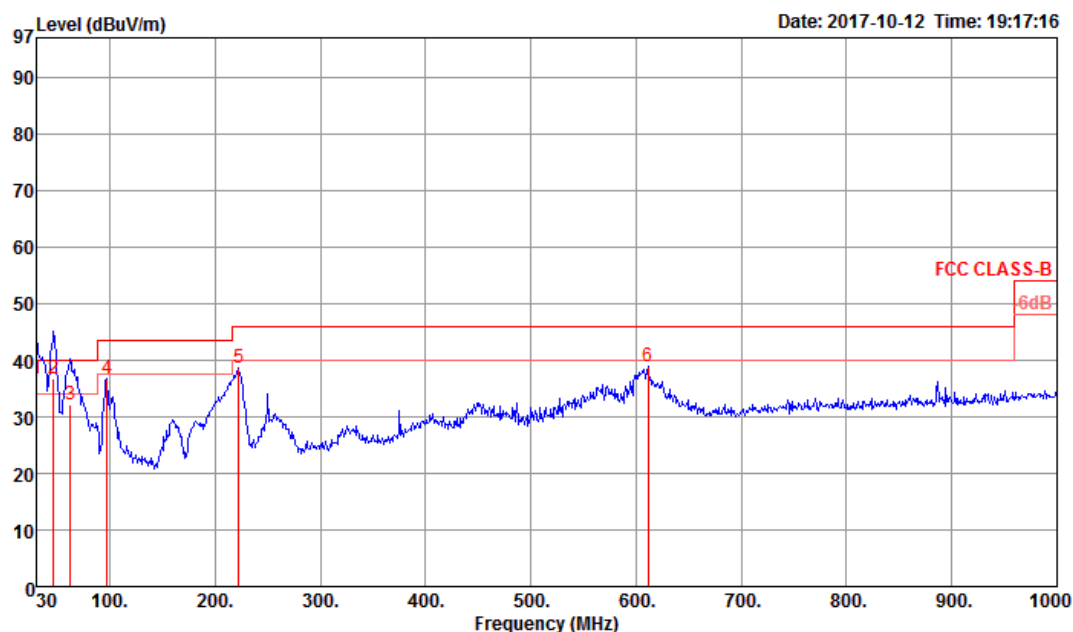
	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	30.00	36.76	40.00	-3.24	42.57	0.20	25.40	31.41	165	314 QP	HORIZONTAL
2	64.92	26.49	40.00	-13.51	44.98	0.47	12.80	31.76	100	167 Peak	HORIZONTAL
3	222.06	32.25	46.00	-13.75	46.25	1.22	16.64	31.86	100	99 Peak	HORIZONTAL
4	375.32	29.02	46.00	-16.98	37.43	1.73	21.88	32.02	100	187 Peak	HORIZONTAL
5	570.29	36.90	46.00	-9.10	42.18	2.22	24.77	32.27	100	198 Peak	HORIZONTAL
6	600.36	37.08	46.00	-8.92	42.09	2.28	25.00	32.29	100	122 Peak	HORIZONTAL

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

RSE below 1GHz Result

Operating Mode	8	Polarization	Vertical
Operating Function	Intentional – CTX		



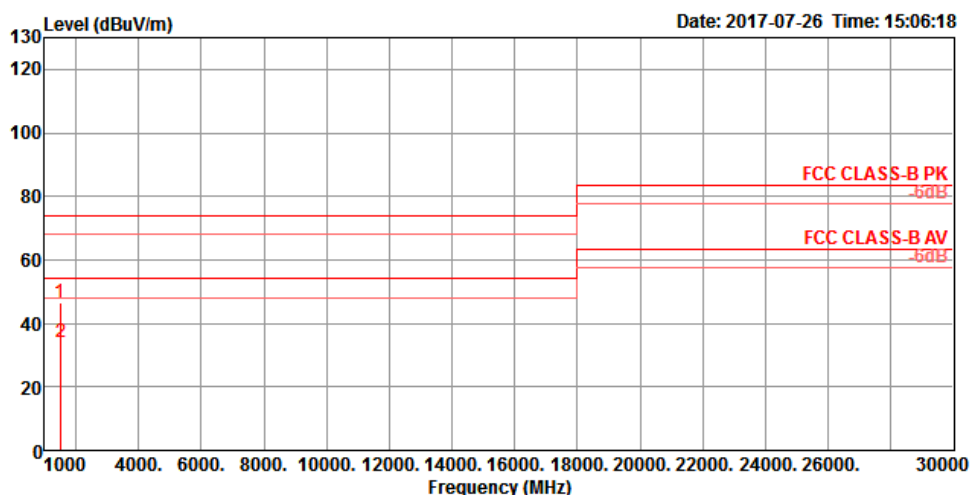
	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	30.00	36.86	40.00	-3.14	42.67	0.20	25.40	31.41	145	197 QP	VERTICAL
2	46.49	36.76	40.00	-3.24	51.60	0.34	16.50	31.68	100	360 QP	VERTICAL
3	62.01	32.06	40.00	-7.94	50.55	0.46	12.80	31.75	149	152 QP	VERTICAL
4	96.93	36.79	43.50	-6.71	51.13	0.67	16.80	31.81	100	251 Peak	VERTICAL
5	222.06	38.53	46.00	-7.47	52.53	1.22	16.64	31.86	100	175 Peak	VERTICAL
6	611.03	38.78	46.00	-7.22	43.65	2.32	25.13	32.32	100	269 Peak	VERTICAL

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

Unintentional RSE above 1GHz Result

Operating Mode	1	Polarization	Horizontal
Operating Function	Unintentional – Normal Link		

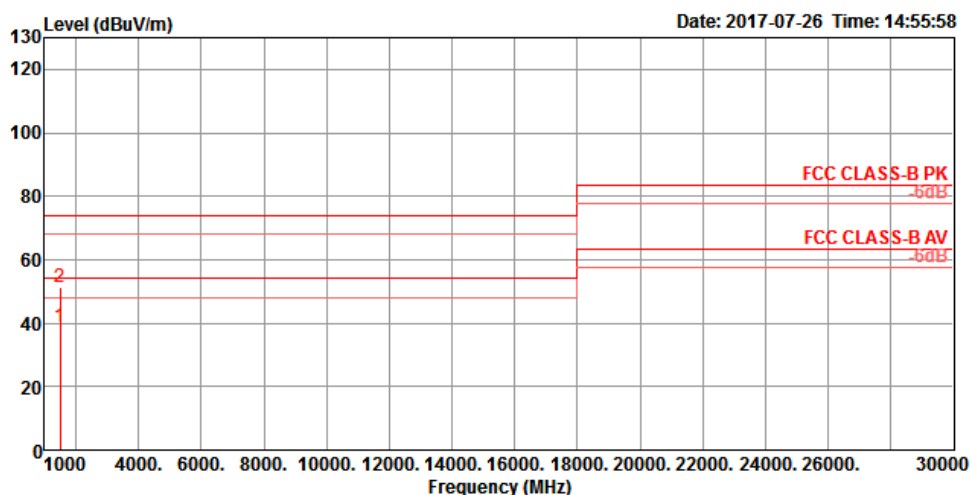


	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	1503.52	46.73	74.00	-27.27	54.43	4.10	25.63	37.43	181	209 Peak	HORIZONTAL
2	1509.34	34.02	54.00	-19.98	41.68	4.10	25.67	37.43	181	209 Average	HORIZONTAL

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

Unintentional RSE above 1GHz Result

Operating Mode	1	Polarization	Vertical
Operating Function	Unintentional – Normal Link		



	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	1501.66	38.71	54.00	-15.29	46.41	4.10	25.63	37.43	148	217 Average	VERTICAL
2	1502.54	51.20	74.00	-22.80	58.90	4.10	25.63	37.43	148	217 Peak	VERTICAL

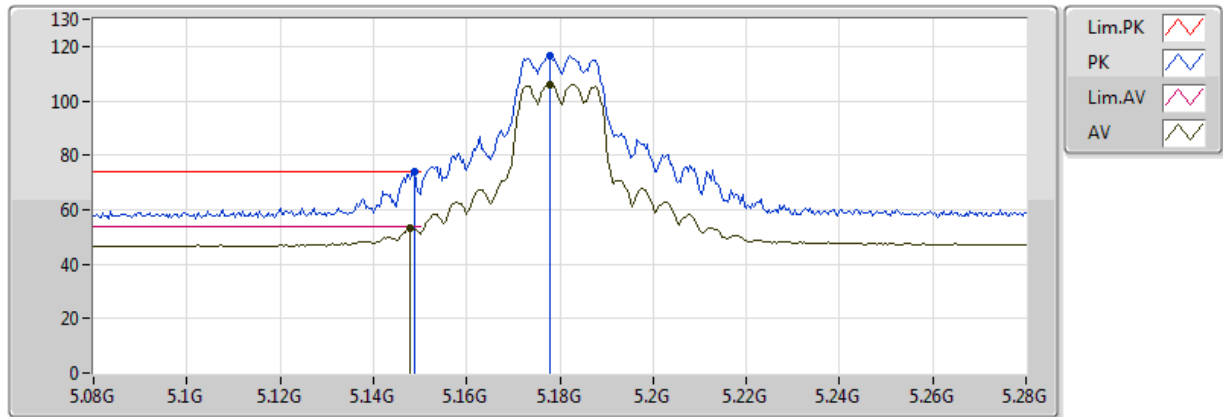
Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

Intentional RSE Above 1GHz Result
<For Non-Beamforming Mode>
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
VHT20_Nss1_2TX	-	-	-	-	-	-	-	-	-	-	-	-
5.15-5.25GHz	Pass	AV	5.149995G	53.99	54.00	-0.01	5.31	3	Horizontal	331	1.98	-

11a_Nss1_2TX

5180MHz_TX

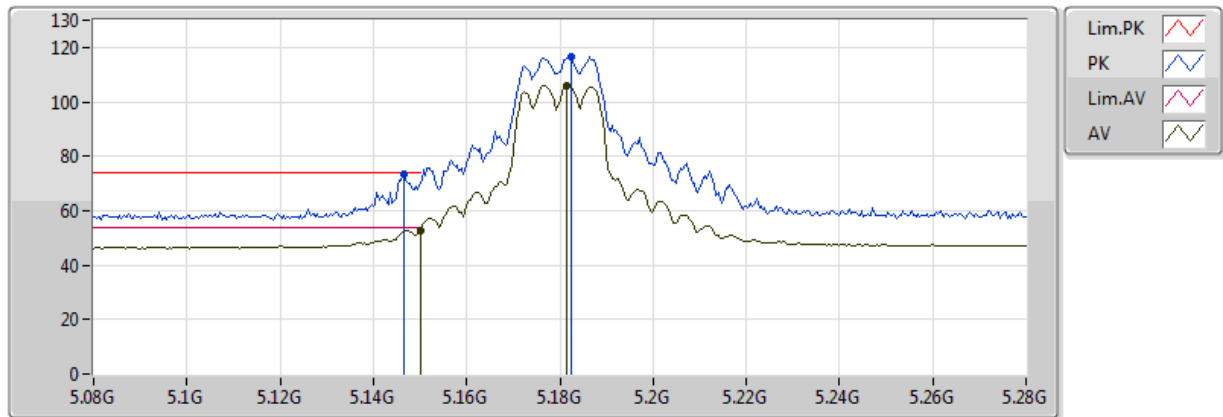


20170621
EUT_Y_2TX
Setting 18
01-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.148G	53.30	54.00	-0.70	4.27	3	Vertical	249	1.46
AV	5.178G	106.18	Inf	-Inf	4.33	3	Vertical	249	1.46
PK	5.1488G	73.94	74.00	-0.06	4.27	3	Vertical	249	1.46
PK	5.178G	116.36	Inf	-Inf	4.33	3	Vertical	249	1.46

11a_Nss1_2TX

5180MHz_TX

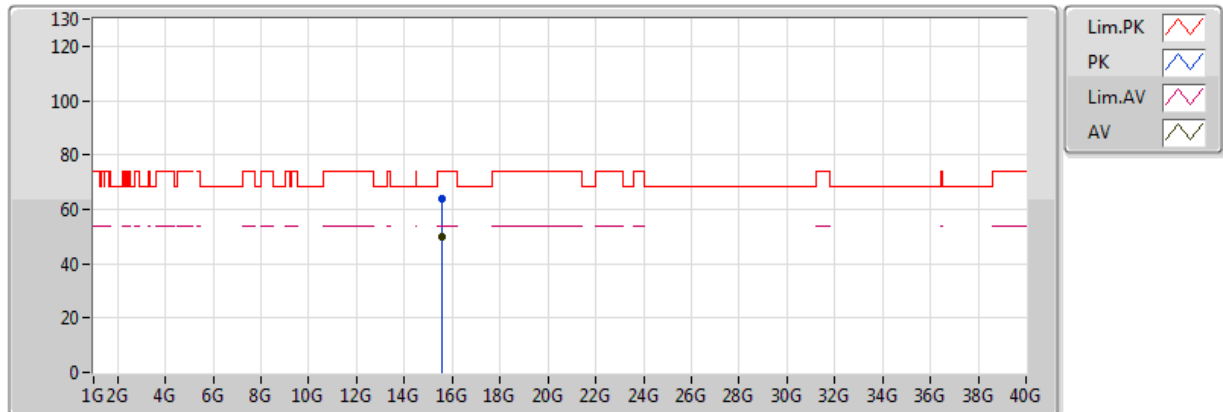


20170621
EUT_Y_2TX
Setting 18
01-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.149995G	52.76	54.00	-1.24	4.27	3	Horizontal	208	1.95
AV	5.1816G	105.83	Inf	-Inf	4.34	3	Horizontal	208	1.95
PK	5.1464G	73.14	74.00	-0.86	4.26	3	Horizontal	208	1.95
PK	5.1824G	116.64	Inf	-Inf	4.34	3	Horizontal	208	1.95

11a_Nss1_2TX

5180MHz_TX

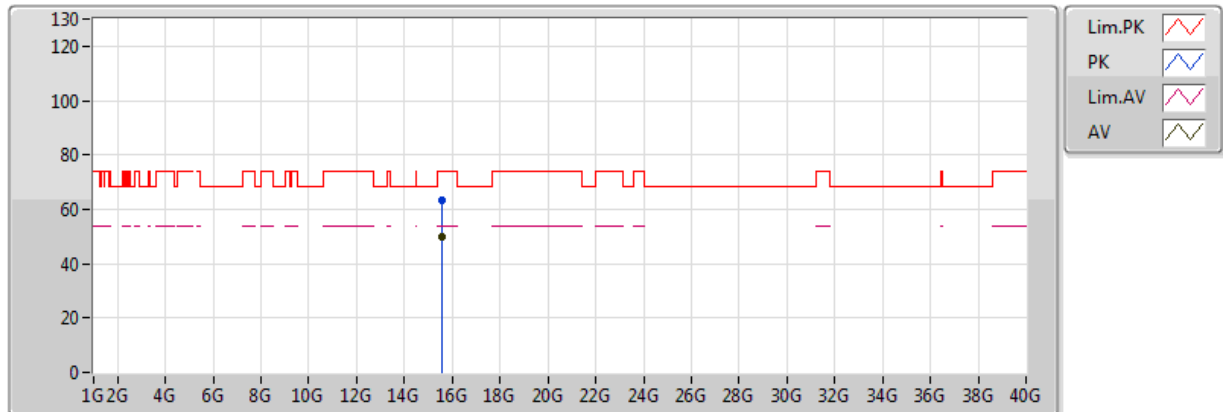


20170621
EUT Y_2TX
Setting 18
01-M-0
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.53882G	49.83	54.00	-4.17	17.80	3	Vertical	140	1.50
PK	15.53931G	64.10	74.00	-9.90	17.80	3	Vertical	140	1.50

11a_Nss1_2TX

5180MHz_TX

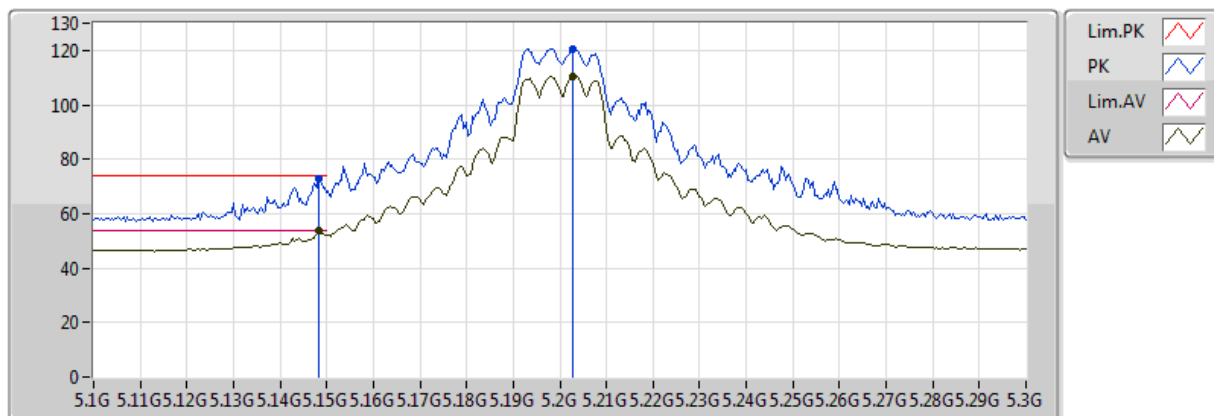


20170621
EUT Y_2TX
Setting 18
01-M-0
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.54038G	49.87	54.00	-4.13	17.80	3	Horizontal	228	1.50
PK	15.5385G	63.46	74.00	-10.54	17.80	3	Horizontal	228	1.50

11a_Nss1_2TX

5200MHz_TX

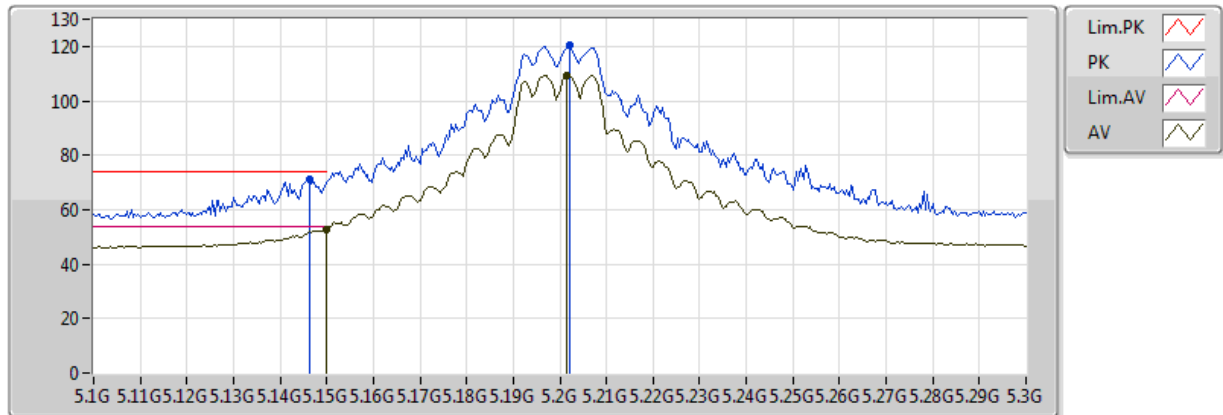


20170621
EUT_Y_2TX
Setting 22
01-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.1484G	53.88	54.00	-0.12	4.27	3	Vertical	241	1.23
AV	5.2028G	110.35	Inf	-Inf	4.39	3	Vertical	241	1.23
PK	5.1484G	72.58	74.00	-1.42	4.27	3	Vertical	241	1.23
PK	5.2028G	120.65	Inf	-Inf	4.39	3	Vertical	241	1.23

11a_Nss1_2TX

5200MHz_TX

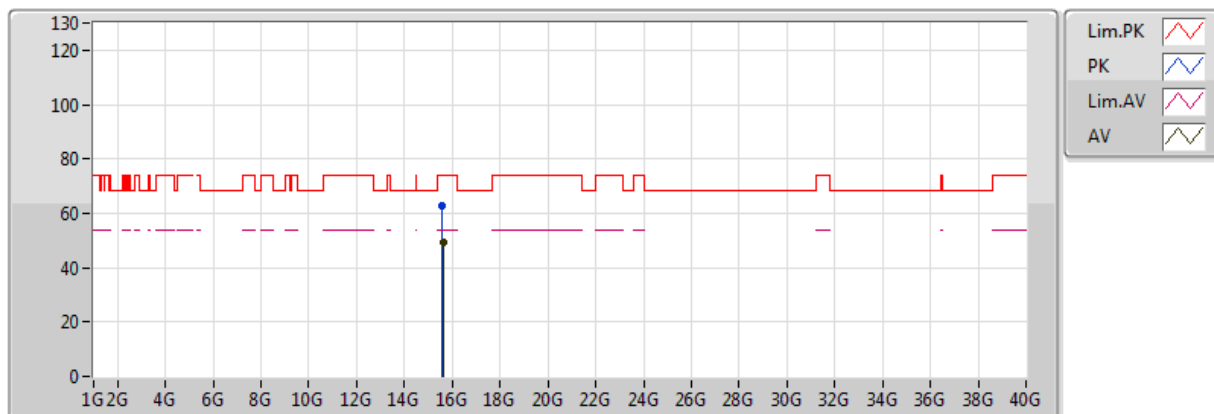


20170621
EUT_Y_2TX
Setting 22
01-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.149995G	52.52	54.00	-1.48	4.27	3	Horizontal	206	1.92
AV	5.2016G	109.41	Inf	-Inf	4.38	3	Horizontal	206	1.92
PK	5.1464G	71.02	74.00	-2.98	4.26	3	Horizontal	206	1.92
PK	5.202G	120.29	Inf	-Inf	4.38	3	Horizontal	206	1.92

11a_Nss1_2TX

5200MHz_TX

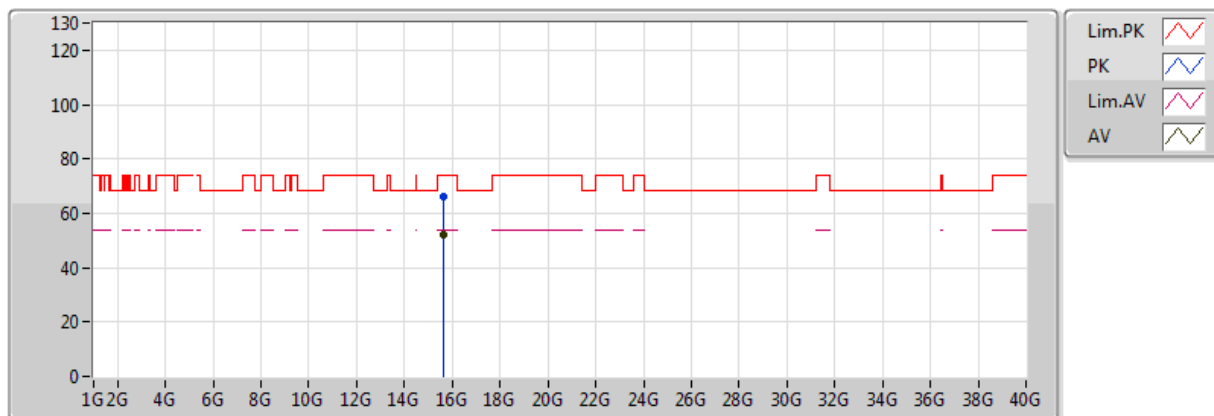


20170622
EUT Y_2TX
Setting 22
04-R-2
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	15.60141G	49.49	54.00	-4.51	17.85	3	Vertical	200	1.50
PK	15.59958G	62.96	74.00	-11.04	17.85	3	Vertical	200	1.50

11a_Nss1_2TX

5200MHz_TX

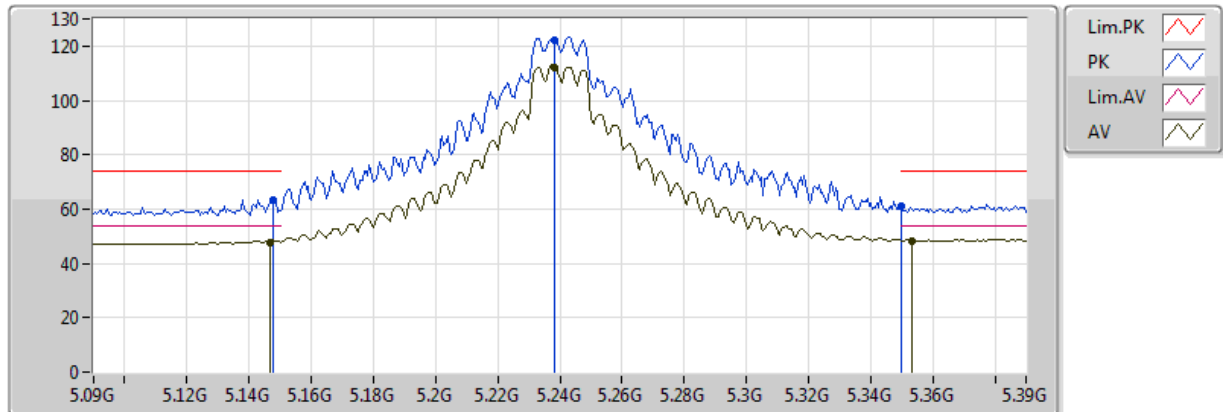


20170622
EUT Y_2TX
Setting 22
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.6032G	52.24	54.00	-1.76	17.85	3	Horizontal	25	2.14
PK	15.6024G	66.38	74.00	-7.62	17.85	3	Horizontal	25	2.14

11a_Nss1_2TX

5240MHz_TX

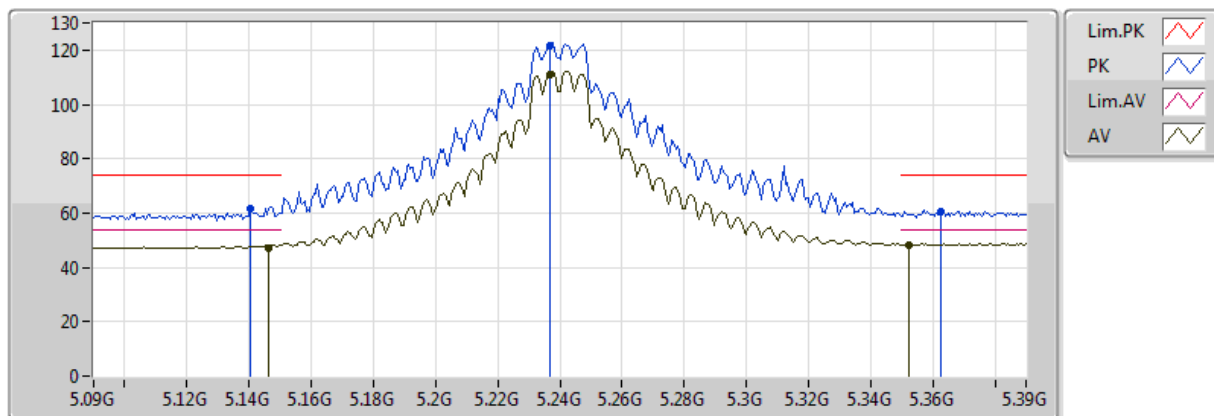


20170621
EUT Y_2TX
Setting 24
01-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.147G	47.57	54.00	-6.43	4.26	3	Vertical	233	1.39
AV	5.2382G	112.14	Inf	-Inf	4.46	3	Vertical	233	1.39
AV	5.3534G	47.98	54.00	-6.02	4.69	3	Vertical	233	1.39
PK	5.1476G	63.08	74.00	-10.92	4.26	3	Vertical	233	1.39
PK	5.2382G	122.27	Inf	-Inf	4.46	3	Vertical	233	1.39
PK	5.350005G	60.91	74.00	-13.09	4.68	3	Vertical	233	1.39

11a_Nss1_2TX

5240MHz_TX

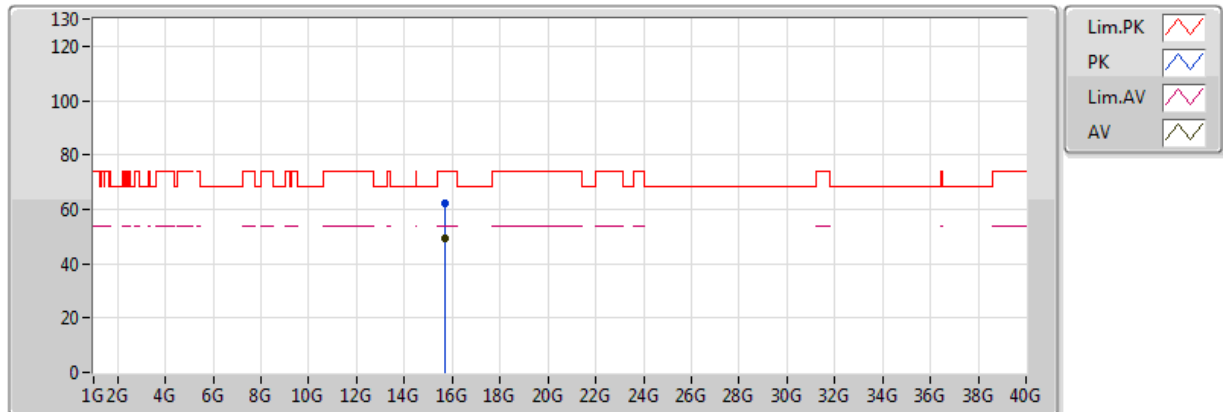


20170621
EUT_Y_2TX
Setting 24
01-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.1464G	47.24	54.00	-6.76	4.26	3	Horizontal	207	1.97
AV	5.237G	111.12	Inf	-Inf	4.46	3	Horizontal	207	1.97
AV	5.3522G	47.97	54.00	-6.03	4.68	3	Horizontal	207	1.97
PK	5.1404G	61.60	74.00	-12.40	4.25	3	Horizontal	207	1.97
PK	5.237G	121.78	Inf	-Inf	4.46	3	Horizontal	207	1.97
PK	5.3624G	60.41	74.00	-13.59	4.70	3	Horizontal	207	1.97

11a_Nss1_2TX

5240MHz_TX

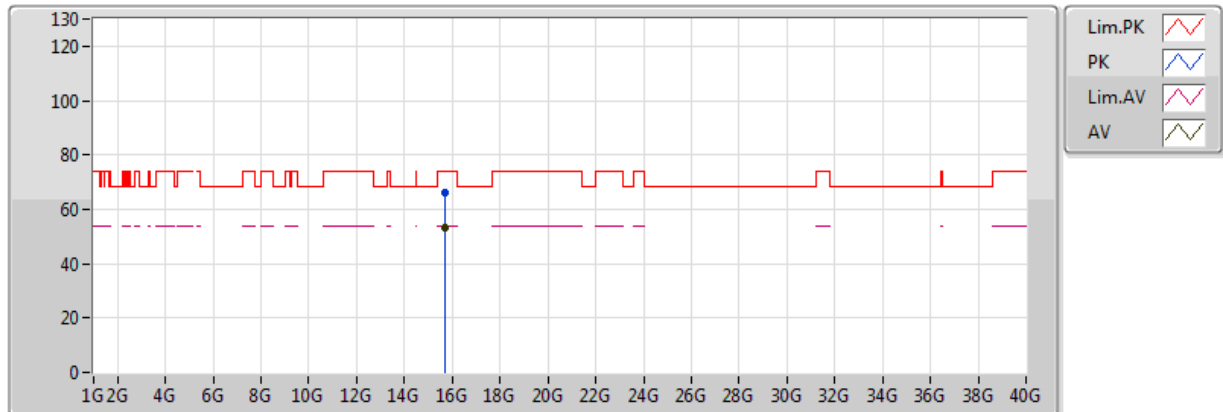


20170622
EUT Y_2TX
Setting 24
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.71868G	49.13	54.00	-4.87	17.94	3	Vertical	173	1.50
PK	15.71912G	62.28	74.00	-11.72	17.94	3	Vertical	173	1.50

11a_Nss1_2TX

5240MHz_TX

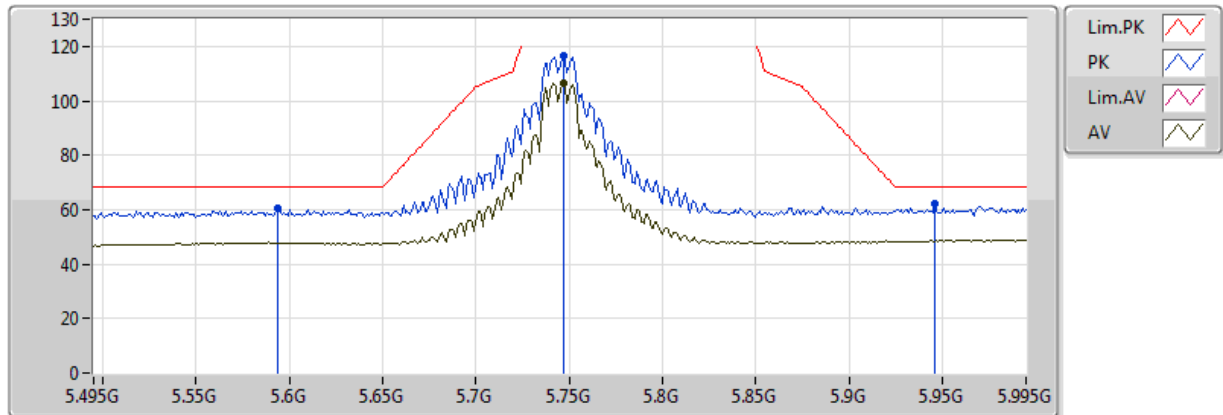


20170622
EUT Y_2TX
Setting 24
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.724G	53.20	54.00	-0.80	17.95	3	Horizontal	318	2.49
PK	15.7138G	65.93	74.00	-8.07	17.94	3	Horizontal	318	2.49

11a_Nss1_2TX

5745MHz_TX

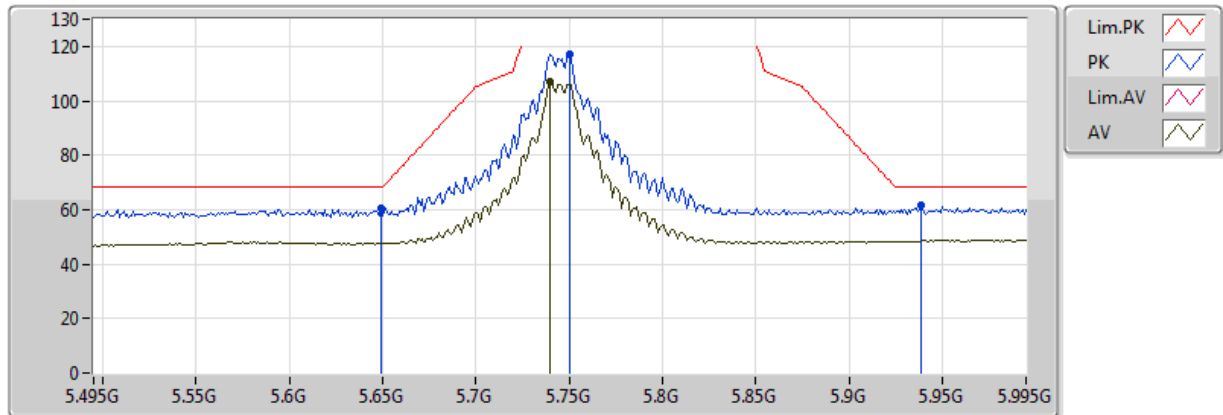


20170621
EUT_Y_2TX
Setting 24
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.747G	106.30	Inf	-Inf	7.07	3	Vertical	51	2.00
PK	5.594G	60.33	68.20	-7.87	6.74	3	Vertical	51	2.00
PK	5.747G	116.35	Inf	-Inf	7.07	3	Vertical	51	2.00
PK	5.946G	62.36	68.20	-5.84	8.13	3	Vertical	51	2.00

11a_Nss1_2TX

5745MHz_TX

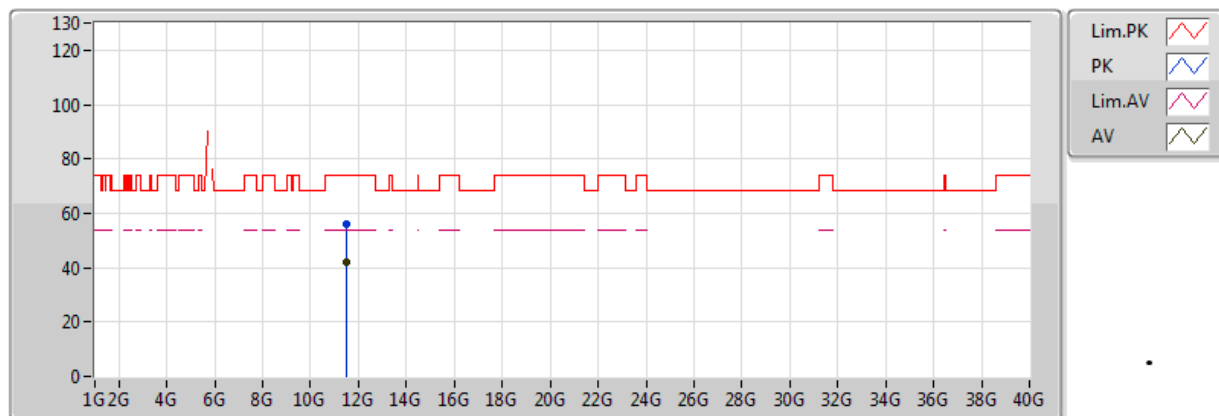


20170621
EUT_Y_2TX
Setting 24
01-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.74G	106.92	Inf	-Inf	7.05	3	Horizontal	3	1.98
PK	5.649G	60.53	68.20	-7.67	6.87	3	Horizontal	3	1.98
PK	5.75G	117.36	Inf	-Inf	7.08	3	Horizontal	3	1.98
PK	5.939G	61.41	68.20	-6.79	8.08	3	Horizontal	3	1.98

11a_Nss1_2TX

5745MHz_TX

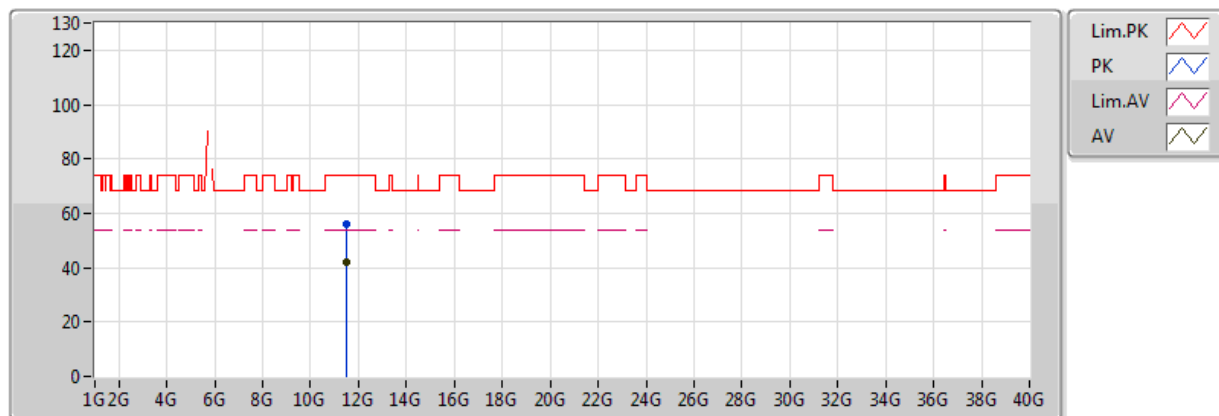


20170621
EUT Y_2TX
Setting 24
01-M-0
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.4919G	42.10	54.00	-11.90	16.12	3	Vertical	83	1.50
PK	11.49047G	56.14	74.00	-17.86	16.12	3	Vertical	83	1.50

11a_Nss1_2TX

5745MHz_TX

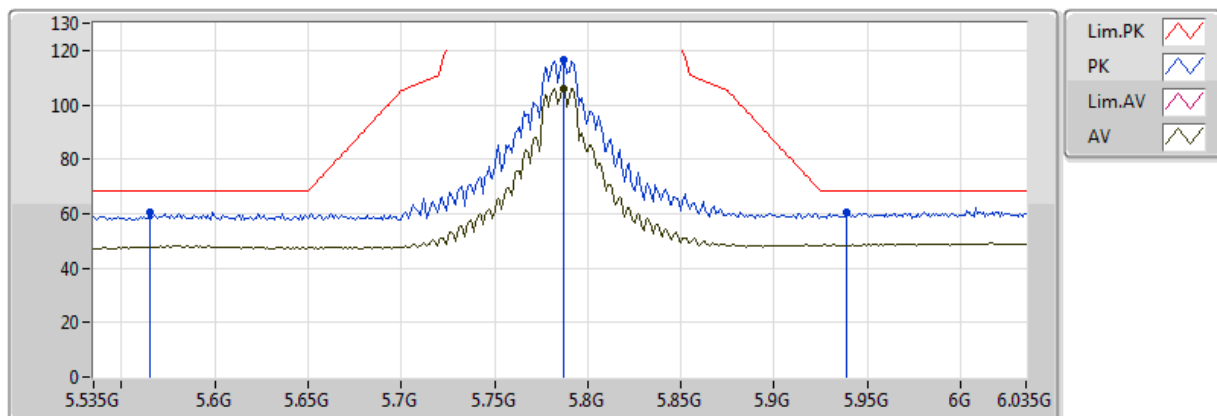


20170621
EUT Y_2TX
Setting 24
01-M-0
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.48844G	42.24	54.00	-11.76	16.12	3	Horizontal	114	1.50
PK	11.48991G	55.95	74.00	-18.05	16.12	3	Horizontal	114	1.50

11a_Nss1_2TX

5785MHz_TX

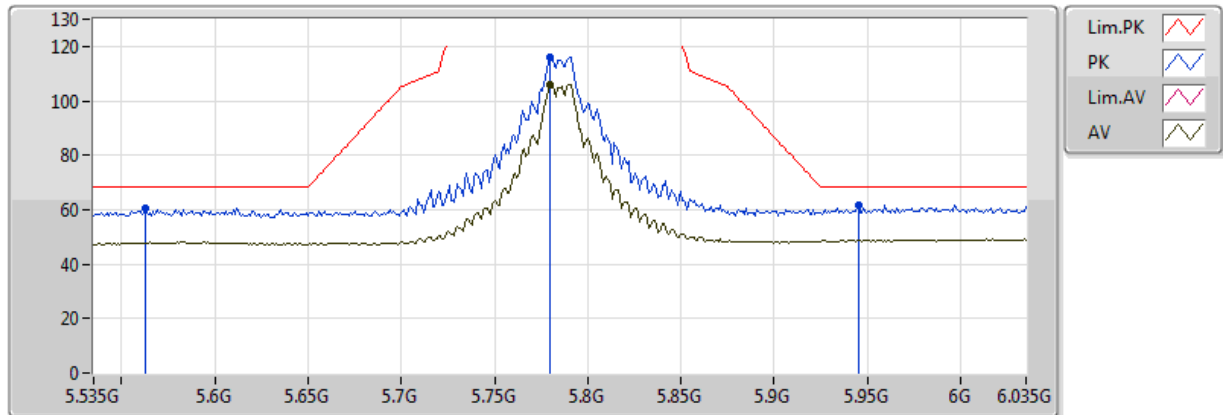


20170621
EUT_Y_2TX
Setting 24
04-M-0
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.787G	105.95	Inf	-Inf	7.15	3	Vertical	51	2.00
PK	5.565G	60.41	68.20	-7.79	6.56	3	Vertical	51	2.00
PK	5.787G	116.35	Inf	-Inf	7.15	3	Vertical	51	2.00
PK	5.939G	60.50	68.20	-7.70	8.08	3	Vertical	51	2.00

11a_Nss1_2TX

5785MHz_TX

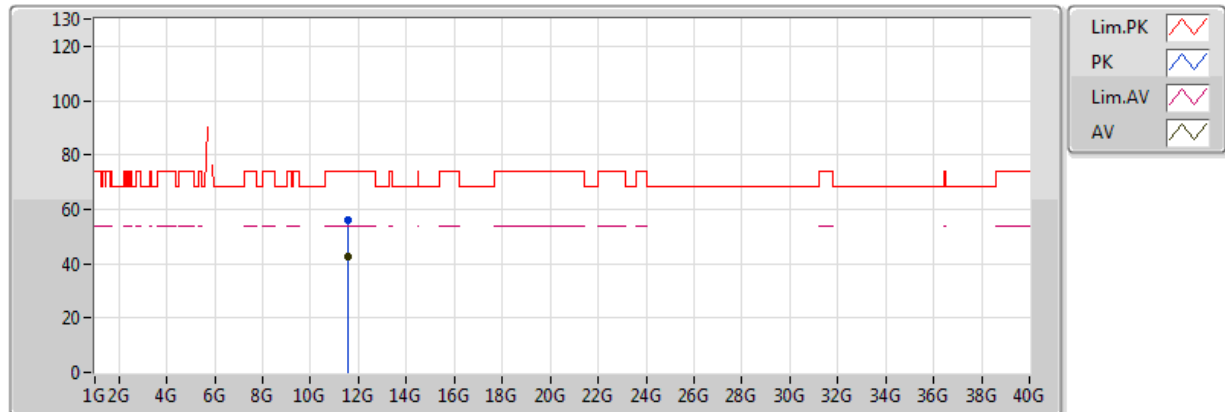


20170621
EUT_Y_2TX
Setting 24
01-M-0
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.78G	105.94	Inf	-Inf	7.14	3	Horizontal	4	1.99
PK	5.563G	60.35	68.20	-7.85	6.55	3	Horizontal	4	1.99
PK	5.78G	116.05	Inf	-Inf	7.14	3	Horizontal	4	1.99
PK	5.945G	61.63	68.20	-6.57	8.12	3	Horizontal	4	1.99

11a_Nss1_2TX

5785MHz_TX

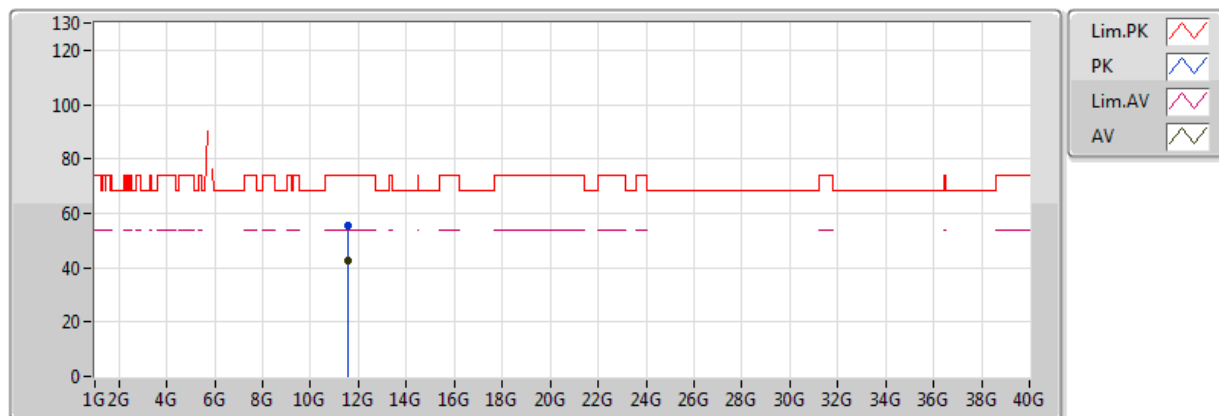


20170621
EUT Y_2TX
Setting 24
01-M-0
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.56891G	42.33	54.00	-11.67	16.18	3	Vertical	44	1.50
PK	11.56898G	56.06	74.00	-17.94	16.18	3	Vertical	44	1.50

11a_Nss1_2TX

5785MHz_TX

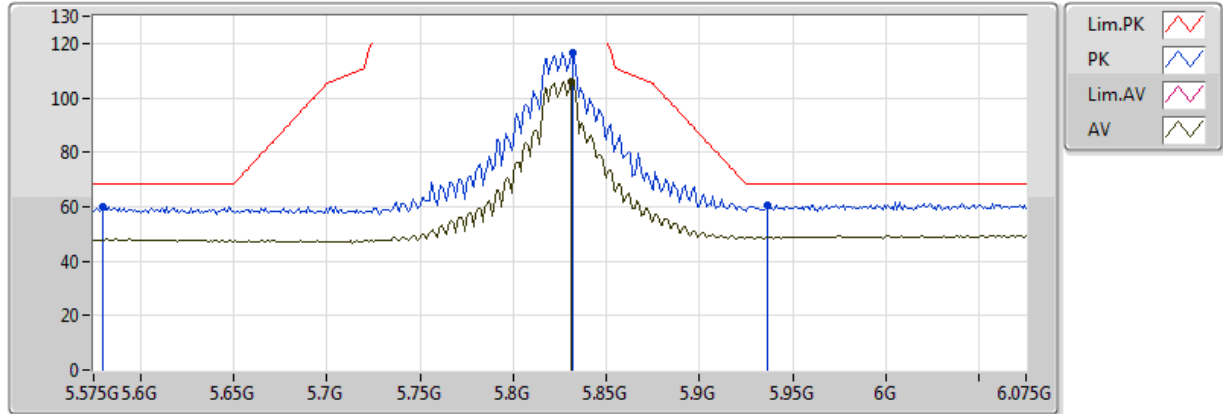


20170621
EUT Y_2TX
Setting 24
01-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	11.56964G	42.39	54.00	-11.61	16.18	3	Horizontal	83	1.50
PK	11.57199G	55.62	74.00	-18.38	16.18	3	Horizontal	83	1.50

11a_Nss1_2TX

5825MHz_TX

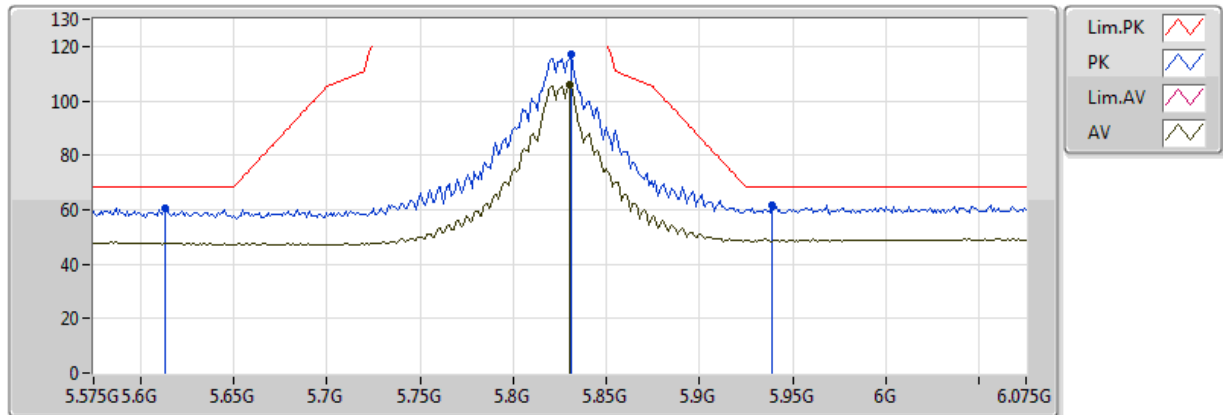


20170621
EUT Y_2TX
Setting 24
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.831G	105.83	Inf	-Inf	7.38	3	Vertical	39	1.92
PK	5.58G	59.89	68.20	-8.31	6.66	3	Vertical	39	1.92
PK	5.832G	116.58	Inf	-Inf	7.39	3	Vertical	39	1.92
PK	5.936G	60.56	68.20	-7.64	8.06	3	Vertical	39	1.92

11a_Nss1_2TX

5825MHz_TX

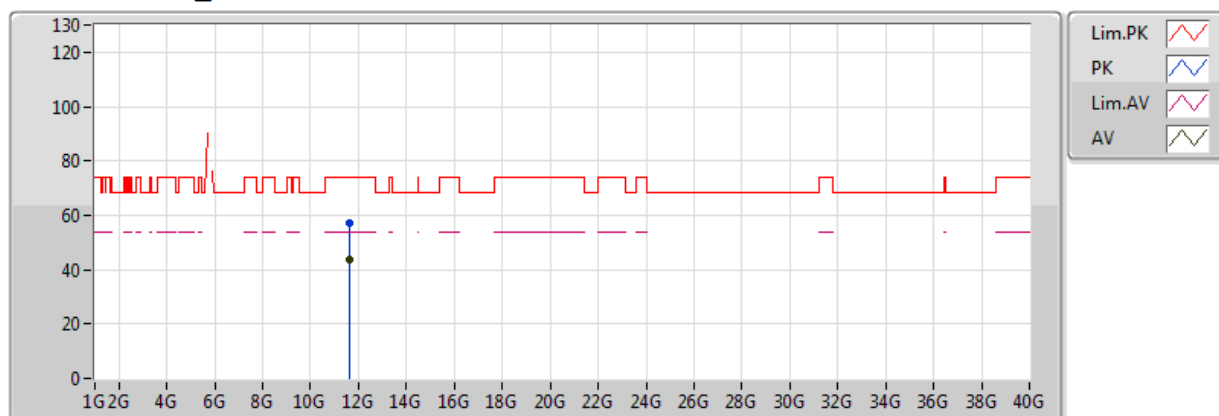


20170621
EUT_Y_2TX
Setting 24
01-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.83G	105.63	Inf	-Inf	7.37	3	Horizontal	4	1.99
PK	5.613G	60.46	68.20	-7.74	6.80	3	Horizontal	4	1.99
PK	5.831G	117.04	Inf	-Inf	7.38	3	Horizontal	4	1.99
PK	5.939G	61.56	68.20	-6.64	8.08	3	Horizontal	4	1.99

11a_Nss1_2TX

5825MHz_TX

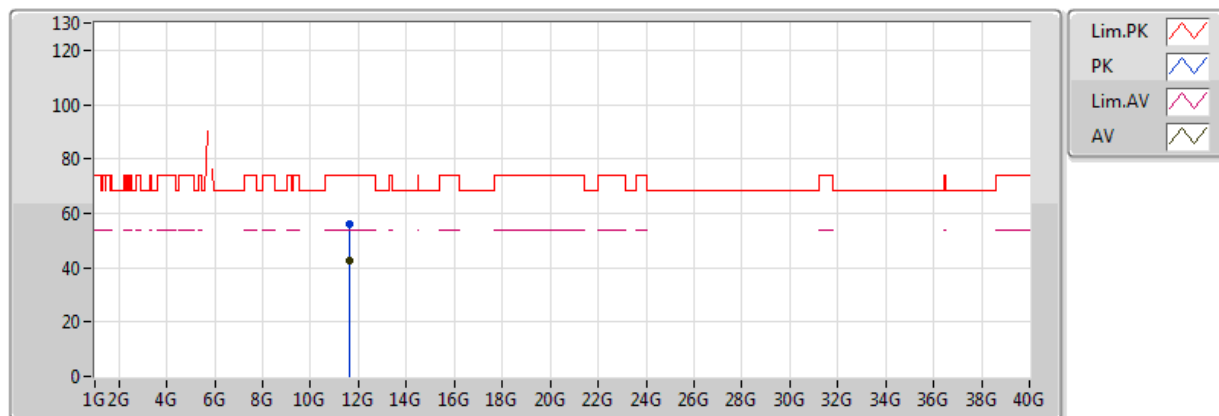


20170621
EUT Y_2TX
Setting 24
01-M-0
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.65245G	43.56	54.00	-10.44	16.23	3	Vertical	5	1.50
PK	11.6477G	56.91	74.00	-17.09	16.23	3	Vertical	5	1.50

11a_Nss1_2TX

5825MHz_TX

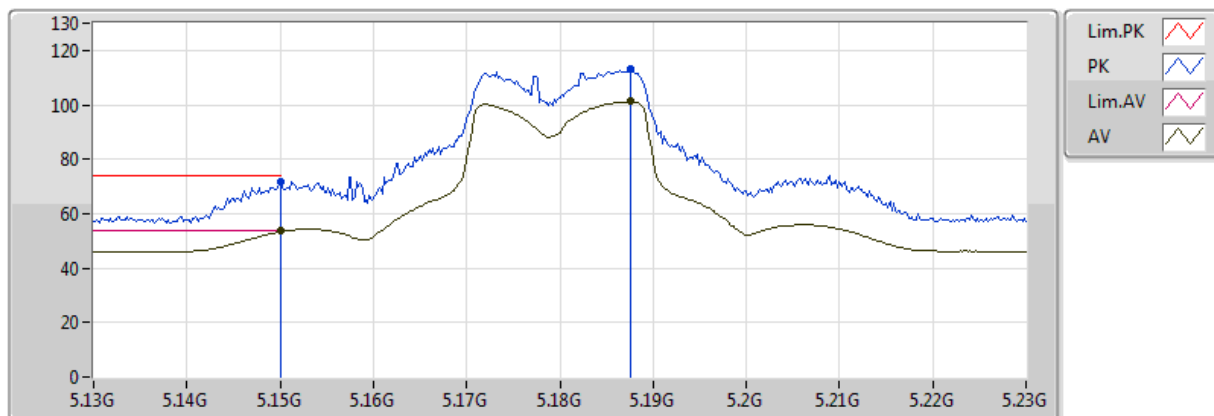


20170621
EUT Y_2TX
Setting 24
01-M-0
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.65151G	42.46	54.00	-11.54	16.23	3	Horizontal	44	1.50
PK	11.64925G	55.97	74.00	-18.03	16.23	3	Horizontal	44	1.50

VHT20_Nss1_2TX

5180MHz_TX

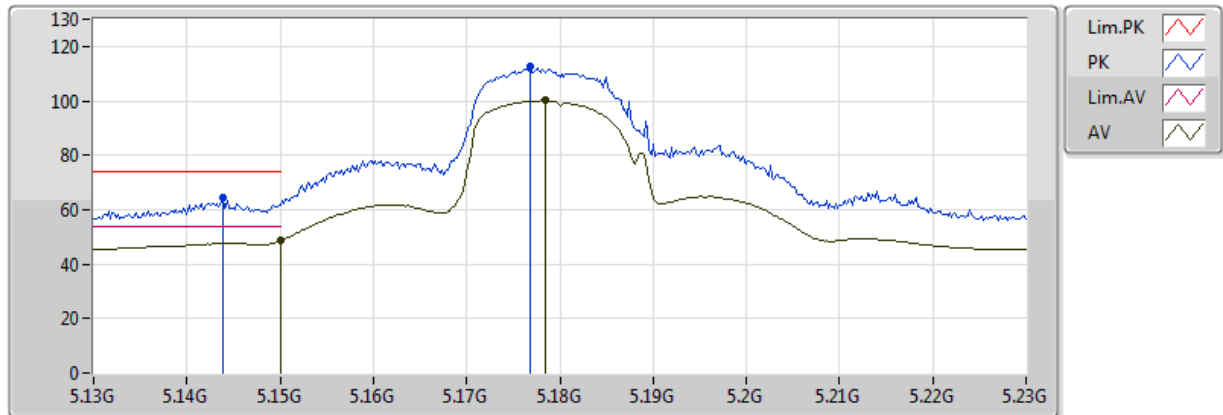


20170621
EUT_Y_2TX
Setting 18
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.149995G	53.95	54.00	-0.05	5.31	3	Vertical	37	1.05
AV	5.1876G	101.16	Inf	-Inf	5.45	3	Vertical	37	1.05
PK	5.149995G	71.60	74.00	-2.40	5.31	3	Vertical	37	1.05
PK	5.1876G	112.96	Inf	-Inf	5.45	3	Vertical	37	1.05

VHT20_Nss1_2TX

5180MHz_TX

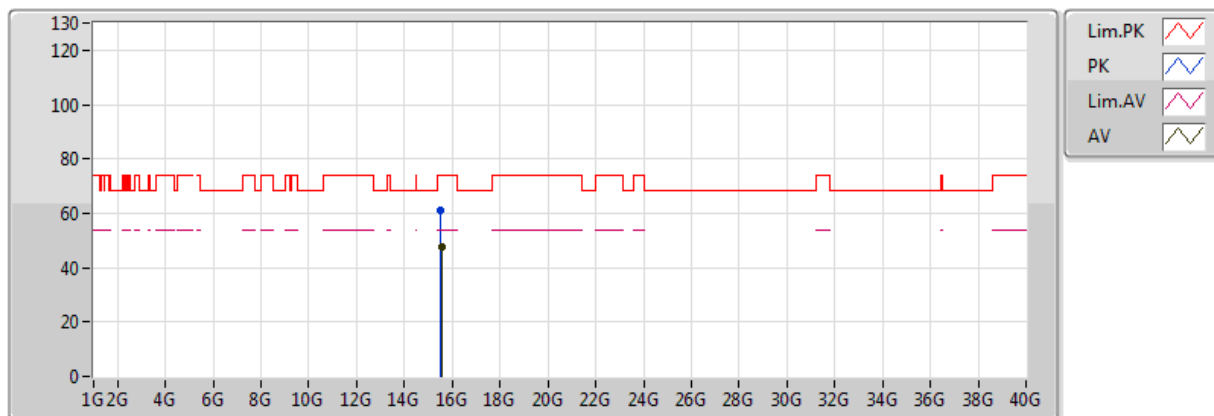


20170621
EUT_Y_2TX
Setting 18
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.149995G	48.58	54.00	-5.42	5.31	3	Horizontal	353	1.99
AV	5.1784G	100.09	Inf	-Inf	5.41	3	Horizontal	353	1.99
PK	5.1438G	64.58	74.00	-9.42	5.29	3	Horizontal	353	1.99
PK	5.1768G	112.88	Inf	-Inf	5.41	3	Horizontal	353	1.99

VHT20_Nss1_2TX

5180MHz_TX

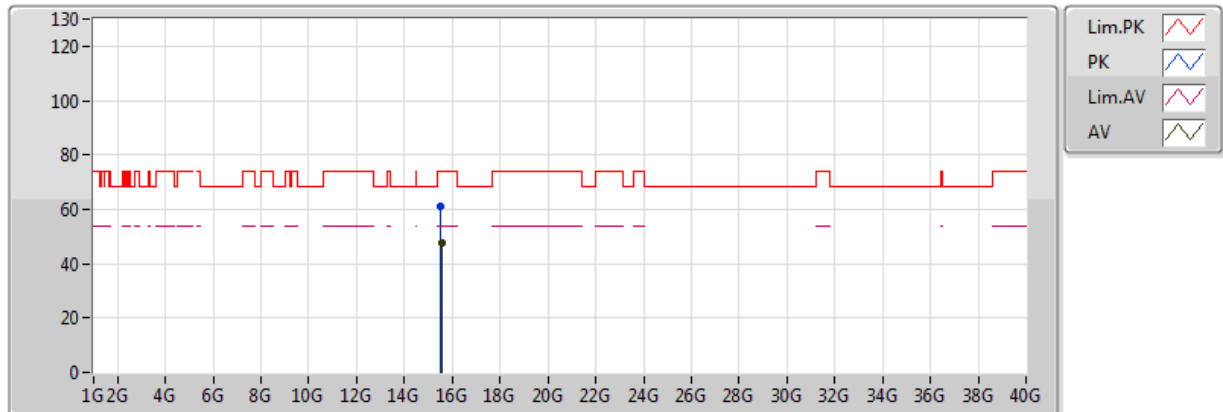


20170622
EUT Y_2TX
Setting 18
04-R-2
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	15.5382G	47.49	54.00	-6.51	17.80	3	Vertical	30	2.00
PK	15.53196G	61.33	74.00	-12.67	17.79	3	Vertical	30	2.00

VHT20_Nss1_2TX

5180MHz_TX

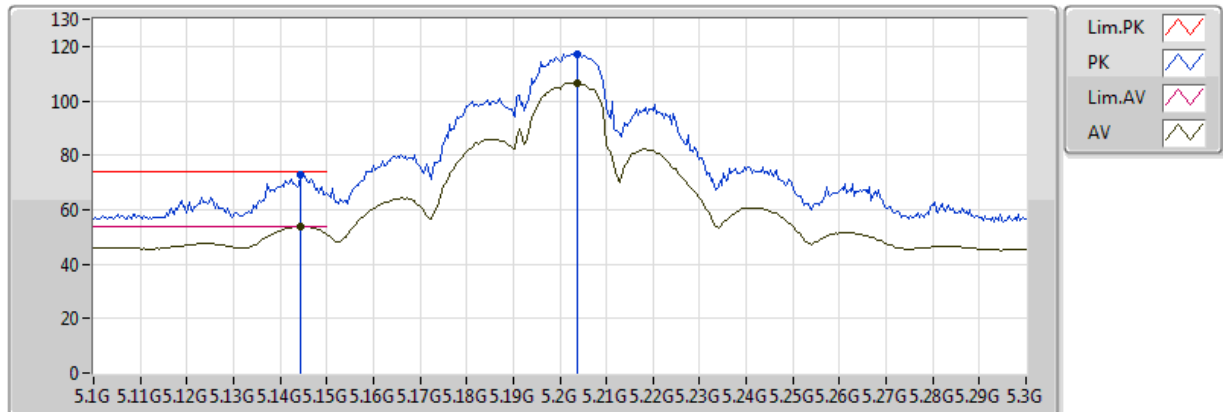


20170622
EUT Y_2TX
Setting 18
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.53766G	47.44	54.00	-6.56	17.80	3	Horizontal	21	1.50
PK	15.53358G	61.06	74.00	-12.94	17.79	3	Horizontal	21	1.50

VHT20_Nss1_2TX

5200MHz_TX

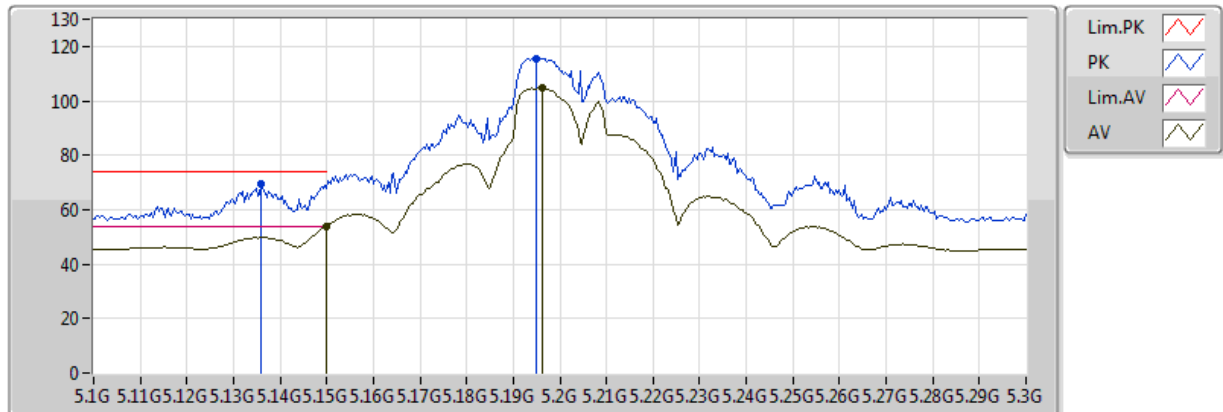


20170621
EUT_Y_2TX
Setting 18
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.1444G	53.98	54.00	-0.02	5.30	3	Vertical	31	1.99
AV	5.2036G	106.64	Inf	-Inf	5.49	3	Vertical	31	1.99
PK	5.1444G	72.68	74.00	-1.32	5.30	3	Vertical	31	1.99
PK	5.2036G	117.22	Inf	-Inf	5.49	3	Vertical	31	1.99

VHT20_Nss1_2TX

5200MHz_TX

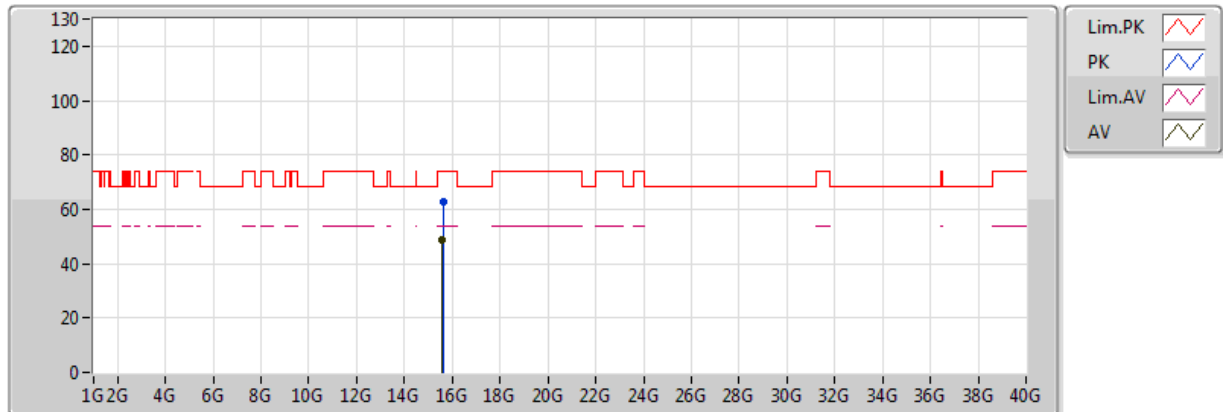


20170621
EUT Y_2TX
Setting 23.5
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.149995G	53.99	54.00	-0.01	5.31	3	Horizontal	331	1.98
AV	5.1964G	104.63	Inf	-Inf	5.48	3	Horizontal	331	1.98
PK	5.136G	69.53	74.00	-4.47	5.27	3	Horizontal	331	1.98
PK	5.1948G	115.67	Inf	-Inf	5.47	3	Horizontal	331	1.98

VHT20_Nss1_2TX

5200MHz_TX

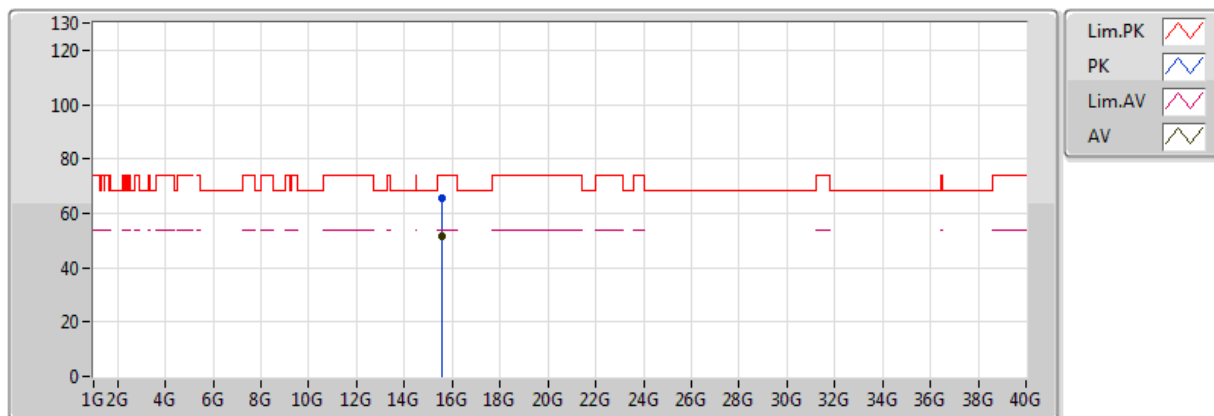


20170622
EUT Y_2TX
Setting 23.5
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.5987G	48.82	54.00	-5.18	17.84	3	Vertical	38	1.74
PK	15.6012G	62.53	74.00	-11.47	17.85	3	Vertical	38	1.74

VHT20_Nss1_2TX

5200MHz_TX

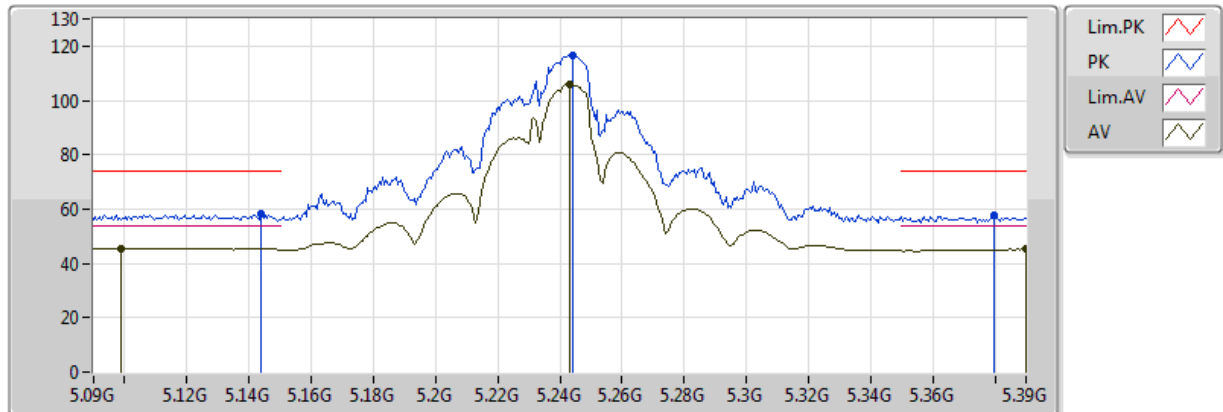


20170622
EUT Y_2TX
Setting 23.5
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.5924G	51.80	54.00	-2.20	17.84	3	Horizontal	55	1.73
PK	15.5949G	65.38	74.00	-8.62	17.84	3	Horizontal	55	1.73

VHT20_Nss1_2TX

5240MHz_TX

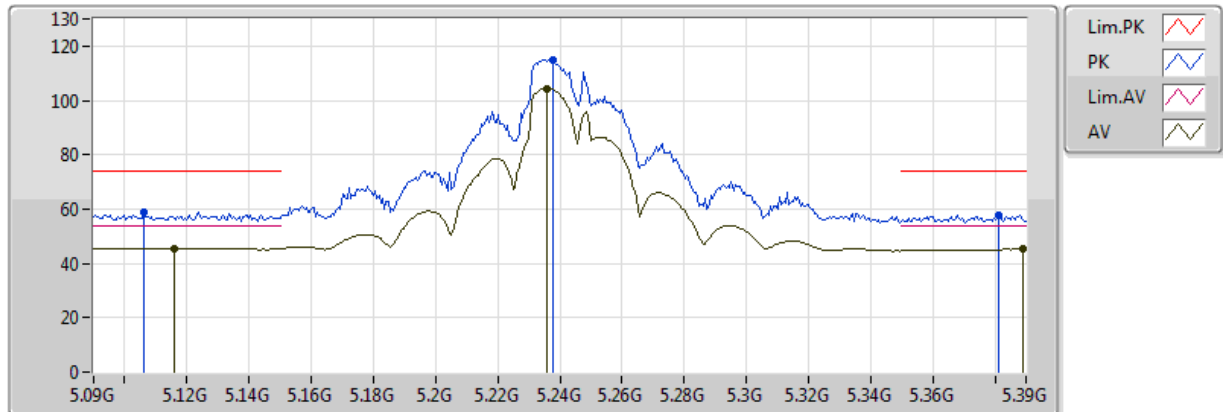


20170621
EUT_Y_2TX
Setting 24
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.099G	45.60	54.00	-8.40	5.14	3	Vertical	32	1.99
AV	5.243G	105.88	Inf	-Inf	5.54	3	Vertical	32	1.99
AV	5.39G	45.25	54.00	-8.75	5.69	3	Vertical	32	1.99
PK	5.144G	58.34	74.00	-15.66	5.29	3	Vertical	32	1.99
PK	5.2442G	116.71	Inf	-Inf	5.54	3	Vertical	32	1.99
PK	5.3798G	57.58	74.00	-16.42	5.68	3	Vertical	32	1.99

VHT20_Nss1_2TX

5240MHz_TX

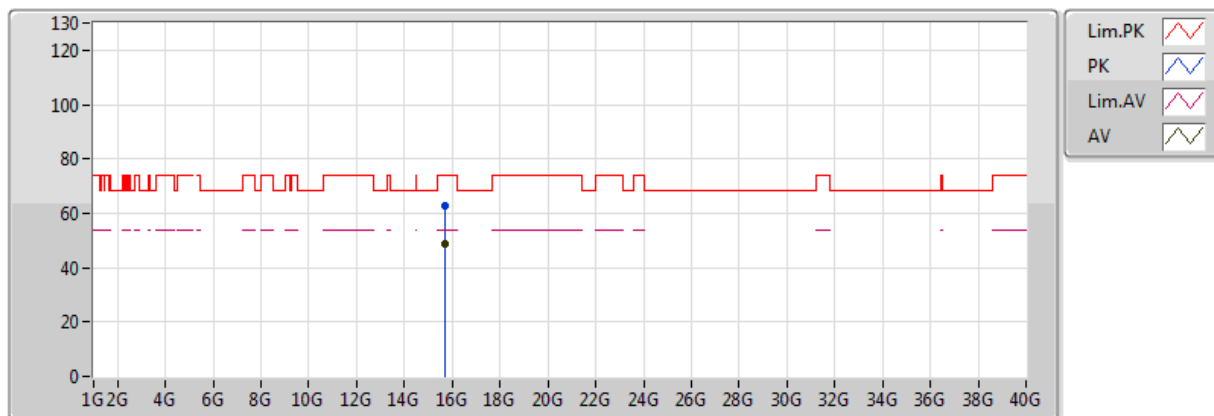


20170621
EUT Y_2TX
Setting 24
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.1158G	45.58	54.00	-8.42	5.20	3	Horizontal	331	1.98
AV	5.2358G	104.36	Inf	-Inf	5.53	3	Horizontal	331	1.98
AV	5.3888G	45.32	54.00	-8.68	5.69	3	Horizontal	331	1.98
PK	5.1062G	58.67	74.00	-15.33	5.16	3	Horizontal	331	1.98
PK	5.2376G	115.15	Inf	-Inf	5.53	3	Horizontal	331	1.98
PK	5.381G	57.90	74.00	-16.10	5.68	3	Horizontal	331	1.98

VHT20_Nss1_2TX

5240MHz_TX

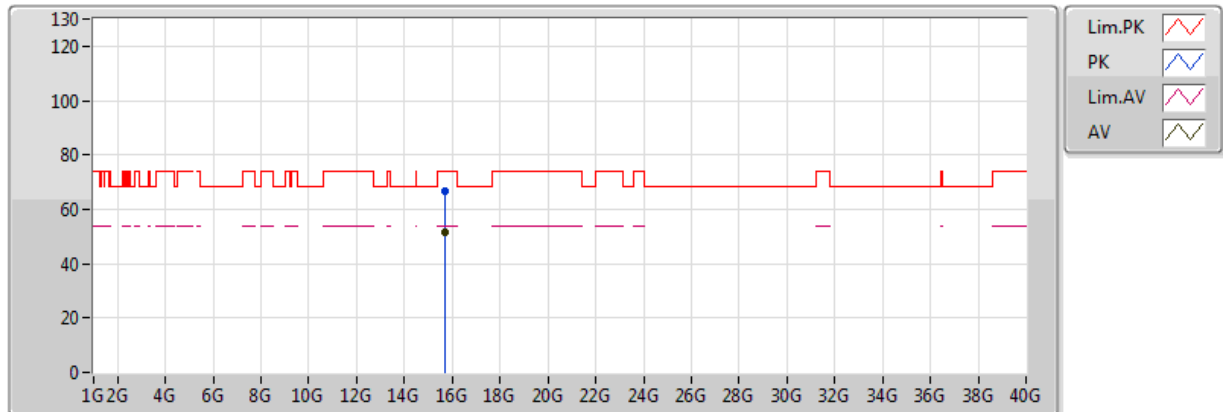


20170622
EUT Y_2TX
Setting 24
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.7248G	49.01	54.00	-4.99	17.95	3	Vertical	325	1.99
PK	15.72324G	62.50	74.00	-11.50	17.95	3	Vertical	325	1.99

VHT20_Nss1_2TX

5240MHz_TX

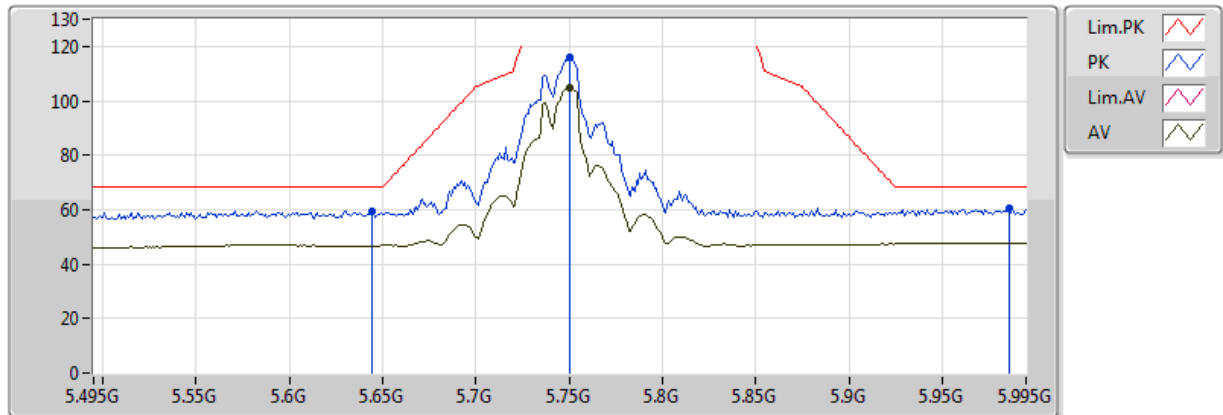


20170622
EUT Y_2TX
Setting 24
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.71394G	51.66	54.00	-2.34	17.94	3	Horizontal	51	1.78
PK	15.71562G	66.68	74.00	-7.32	17.94	3	Horizontal	51	1.78

VHT20_Nss1_2TX

5745MHz_TX

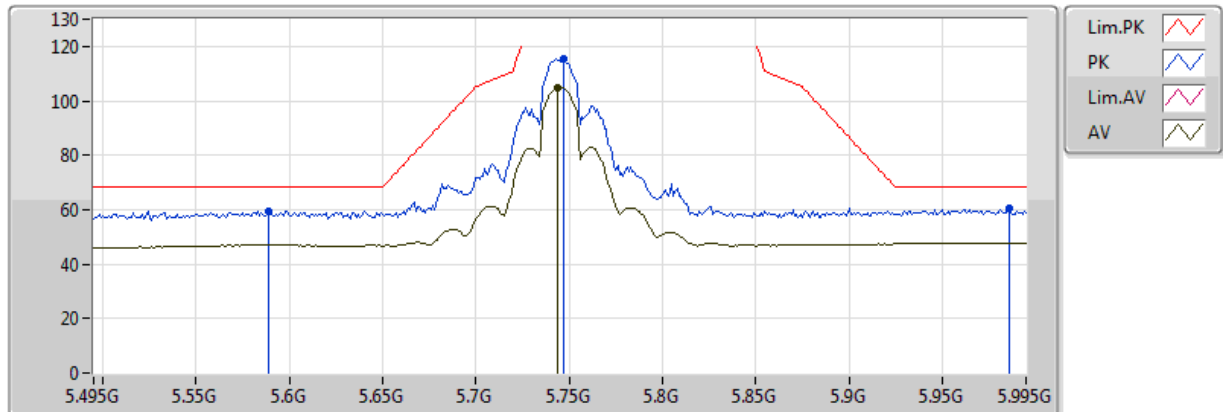


20170621
EUT_Y_2TX
Setting 24
04-M-0
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.75G	104.54	Inf	-Inf	7.08	3	Vertical	44	1.99
PK	5.644G	59.59	68.20	-8.61	6.86	3	Vertical	44	1.99
PK	5.75G	116.04	Inf	-Inf	7.08	3	Vertical	44	1.99
PK	5.986G	60.25	68.20	-7.95	8.39	3	Vertical	44	1.99

VHT20_Nss1_2TX

5745MHz_TX

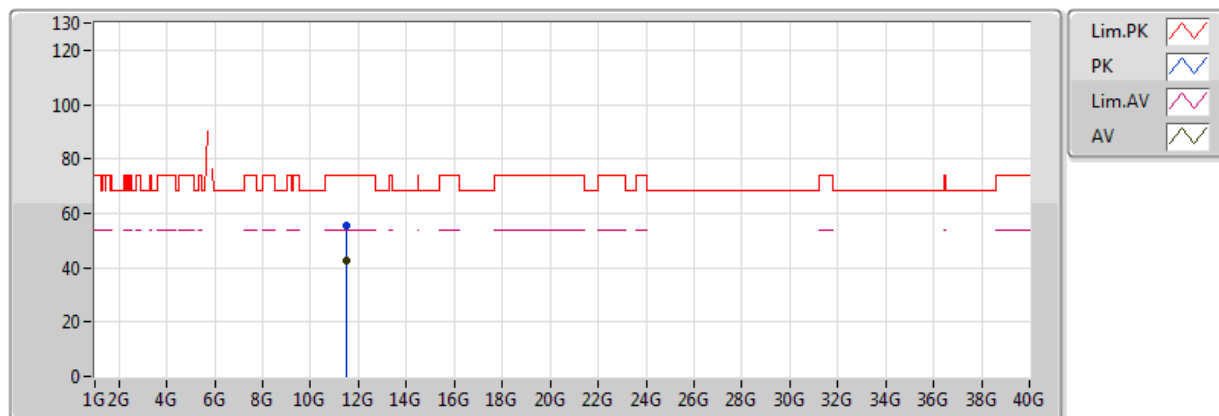


20170621
EUT_Y_2TX
Setting 24
04-M-0
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.744G	104.89	Inf	-Inf	7.06	3	Horizontal	5	1.98
PK	5.589G	59.38	68.20	-8.82	6.71	3	Horizontal	5	1.98
PK	5.747G	115.35	Inf	-Inf	7.07	3	Horizontal	5	1.98
PK	5.986G	60.55	68.20	-7.65	8.39	3	Horizontal	5	1.98

VHT20_Nss1_2TX

5745MHz_TX

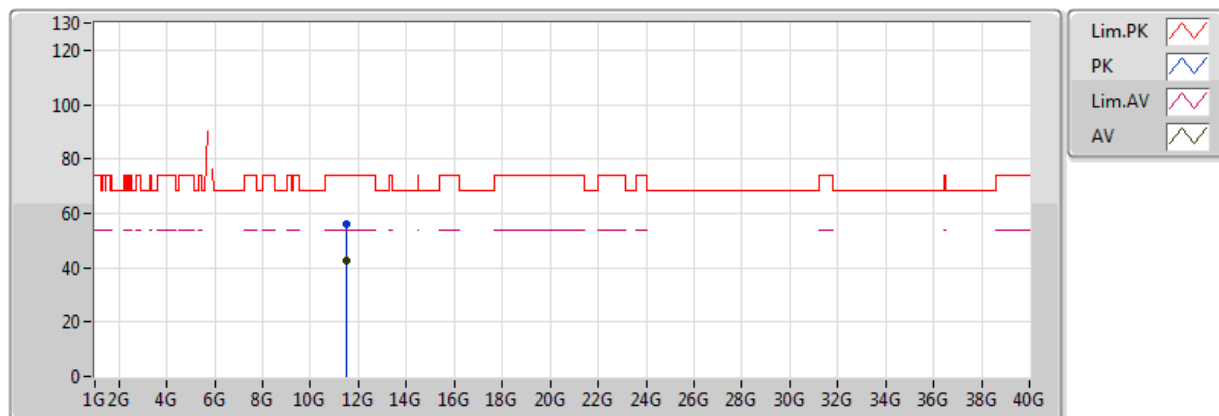


20170622
EUT Y_2TX
Setting 24
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.4697G	42.41	54.00	-11.59	16.11	3	Vertical	99	2.23
PK	11.4676G	55.59	74.00	-18.41	16.11	3	Vertical	99	2.23

VHT20_Nss1_2TX

5745MHz_TX

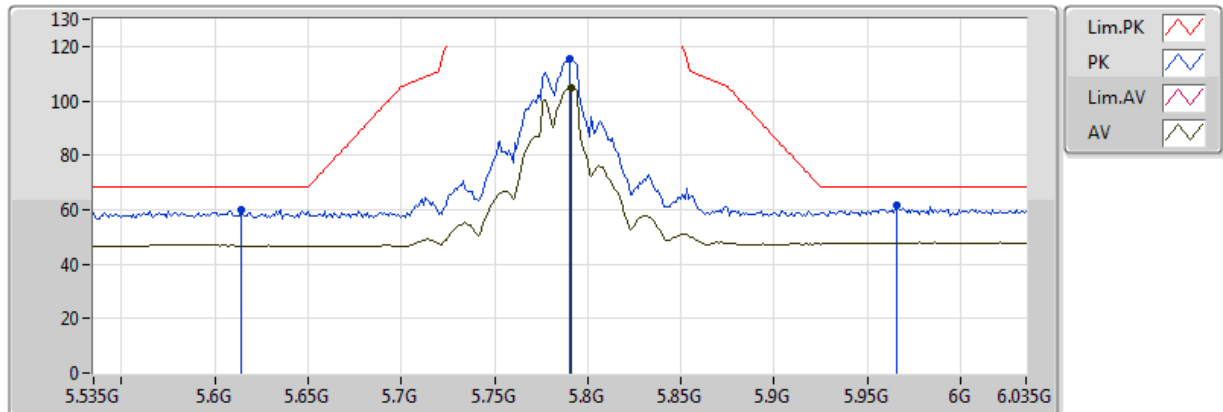


20170622
EUT Y_2TX
Setting 24
04-R-2
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	11.4664G	42.40	54.00	-11.60	16.11	3	Horizontal	268	1.53
PK	11.4766G	55.97	74.00	-18.03	16.11	3	Horizontal	268	1.53

VHT20_Nss1_2TX

5785MHz_TX

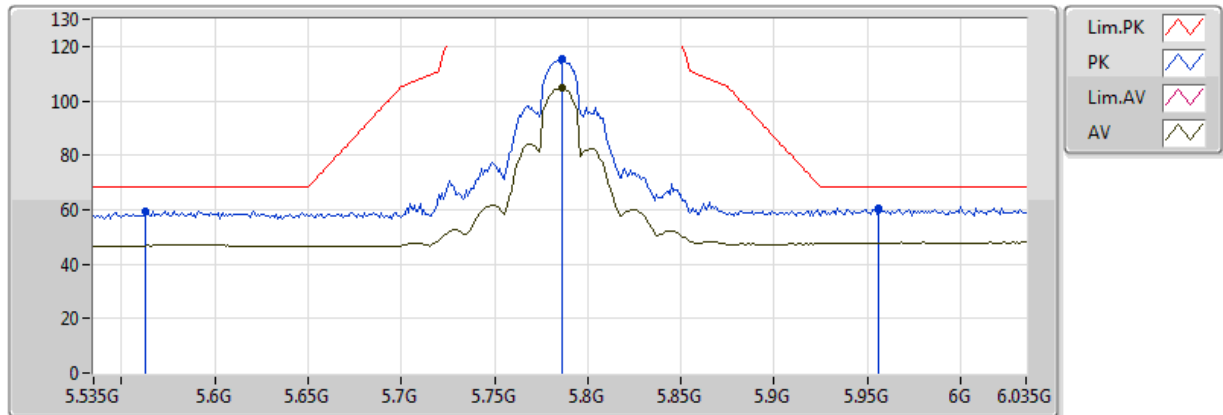


20170621
EUT_Y_2TX
Setting 24
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.791G	104.69	Inf	-Inf	7.16	3	Vertical	44	1.99
PK	5.614G	59.84	68.20	-8.36	6.81	3	Vertical	44	1.99
PK	5.79G	115.63	Inf	-Inf	7.16	3	Vertical	44	1.99
PK	5.966G	61.51	68.20	-6.69	8.26	3	Vertical	44	1.99

VHT20_Nss1_2TX

5785MHz_TX

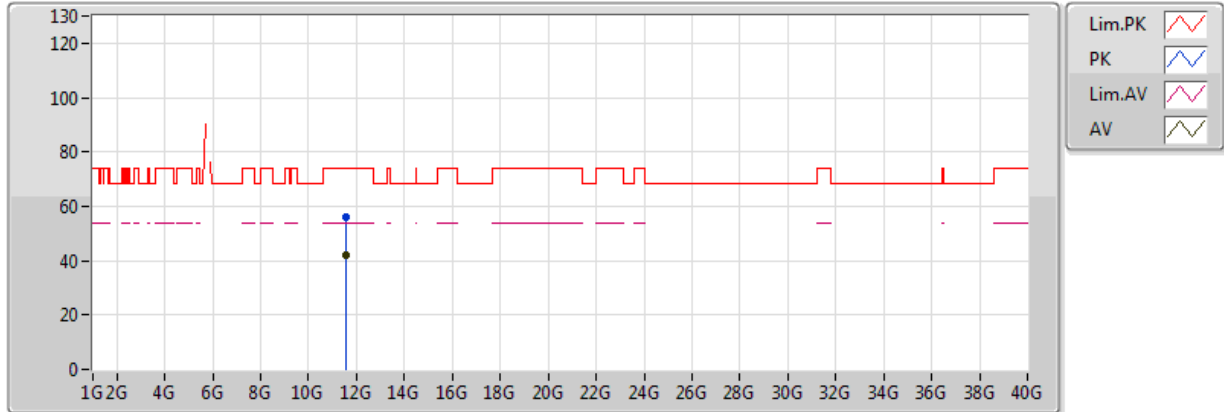


20170621
EUT_Y_2TX
Setting 24
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.786G	104.57	Inf	-Inf	7.15	3	Horizontal	3	1.99
PK	5.563G	59.61	68.20	-8.59	6.55	3	Horizontal	3	1.99
PK	5.786G	115.19	Inf	-Inf	7.15	3	Horizontal	3	1.99
PK	5.956G	60.68	68.20	-7.52	8.19	3	Horizontal	3	1.99

VHT20_Nss1_2TX

5785MHz_TX

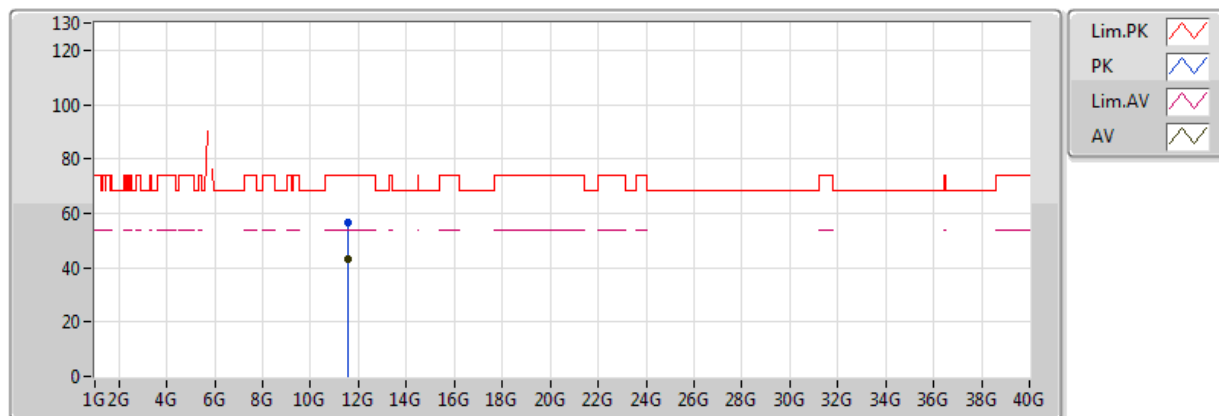


20170622
EUT Y_2TX
Setting 24
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.5913G	42.07	54.00	-11.93	16.19	3	Vertical	217	1.50
PK	11.581G	55.91	74.00	-18.09	16.18	3	Vertical	217	1.50

VHT20_Nss1_2TX

5785MHz_TX

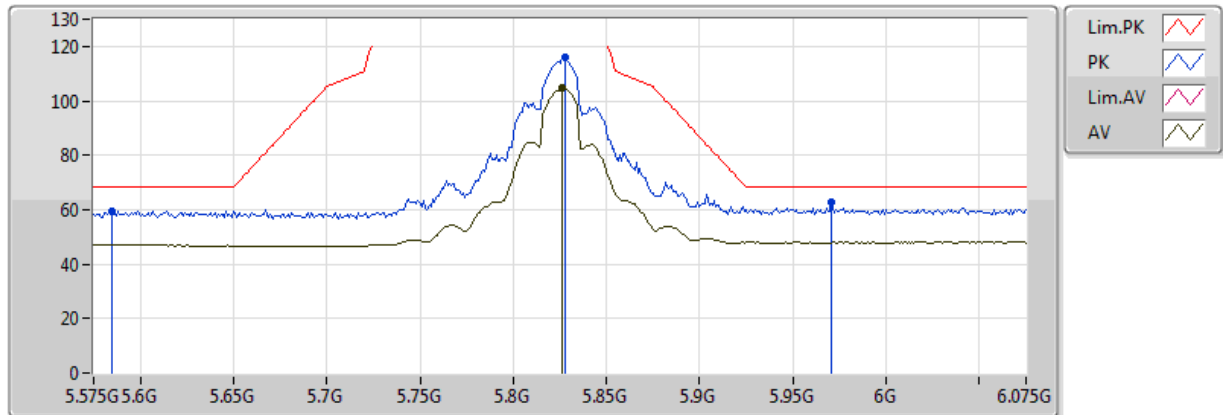


20170622
EUT Y_2TX
Setting 24
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.568G	43.13	54.00	-10.87	16.17	3	Horizontal	328	2.17
PK	11.5694G	56.64	74.00	-17.36	16.18	3	Horizontal	328	2.17

VHT20_Nss1_2TX

5825MHz_TX

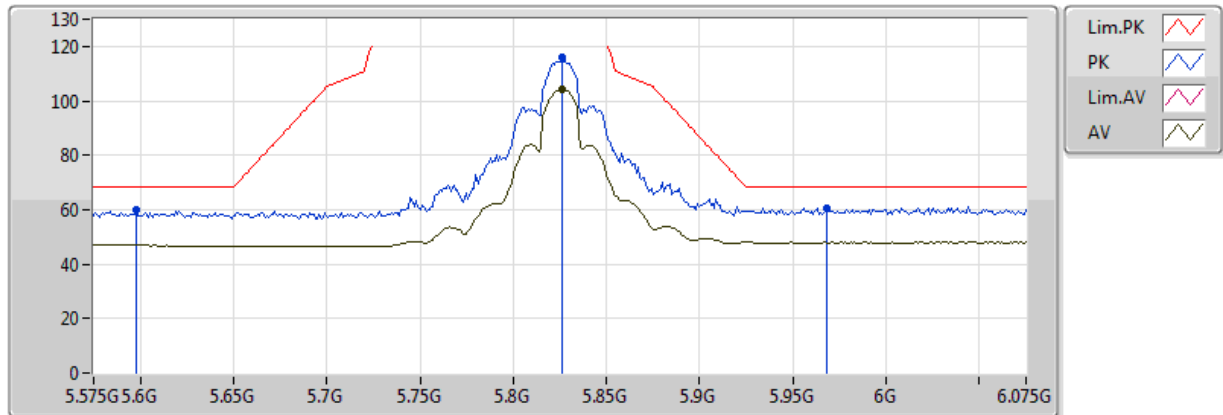


20170621
EUT_Y_2TX
Setting 24
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.826G	104.55	Inf	-Inf	7.35	3	Vertical	3	1.99
PK	5.585G	59.60	68.20	-8.60	6.69	3	Vertical	3	1.99
PK	5.828G	115.95	Inf	-Inf	7.36	3	Vertical	3	1.99
PK	5.971G	62.51	68.20	-5.69	8.29	3	Vertical	3	1.99

VHT20_Nss1_2TX

5825MHz_TX

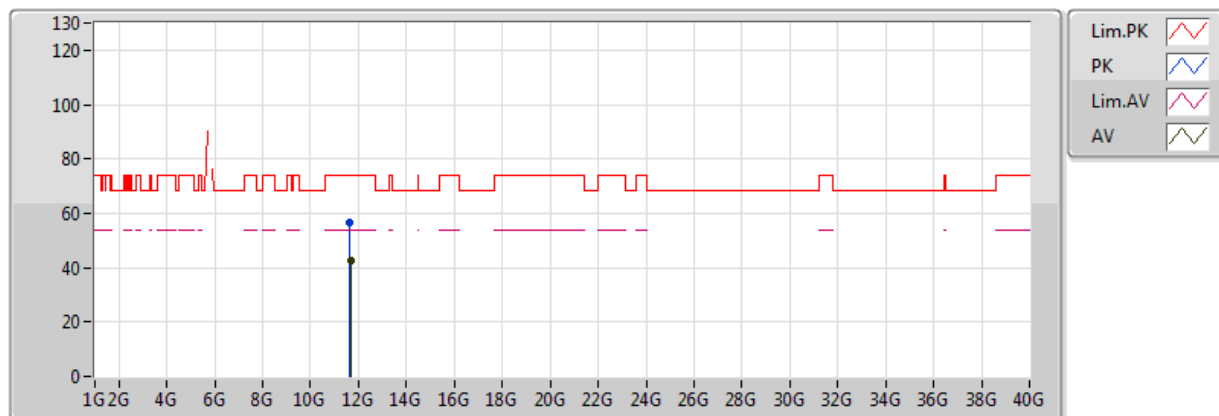


20170621
EUT_Y_2TX
Setting 24
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.826G	104.22	Inf	-Inf	7.35	3	Horizontal	0	1.97
PK	5.598G	60.06	68.20	-8.14	6.77	3	Horizontal	0	1.97
PK	5.826G	115.86	Inf	-Inf	7.35	3	Horizontal	0	1.97
PK	5.968G	60.63	68.20	-7.57	8.27	3	Horizontal	0	1.97

VHT20_Nss1_2TX

5825MHz_TX

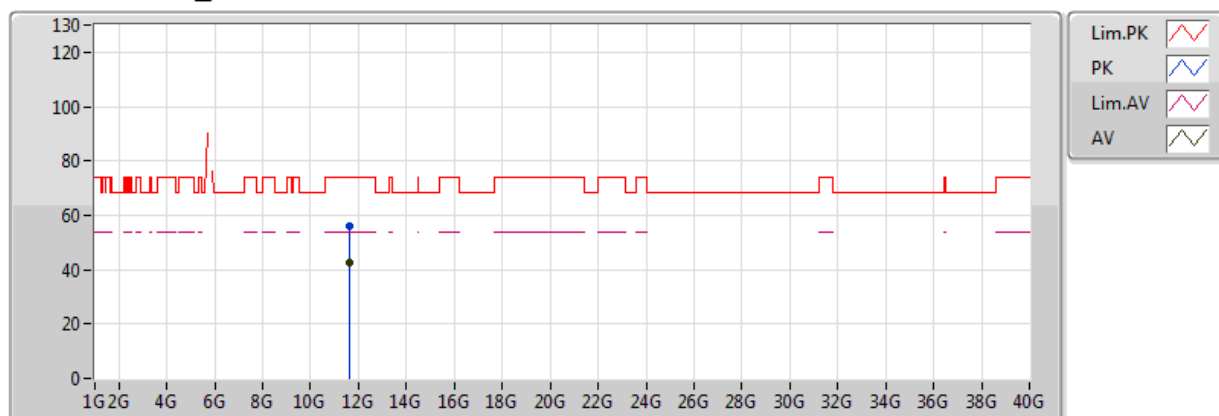


20170622
EUT Y_2TX
Setting 24
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.6636G	42.39	54.00	-11.61	16.24	3	Vertical	330	1.61
PK	11.635G	56.43	74.00	-17.57	16.22	3	Vertical	330	1.61

VHT20_Nss1_2TX

5825MHz_TX

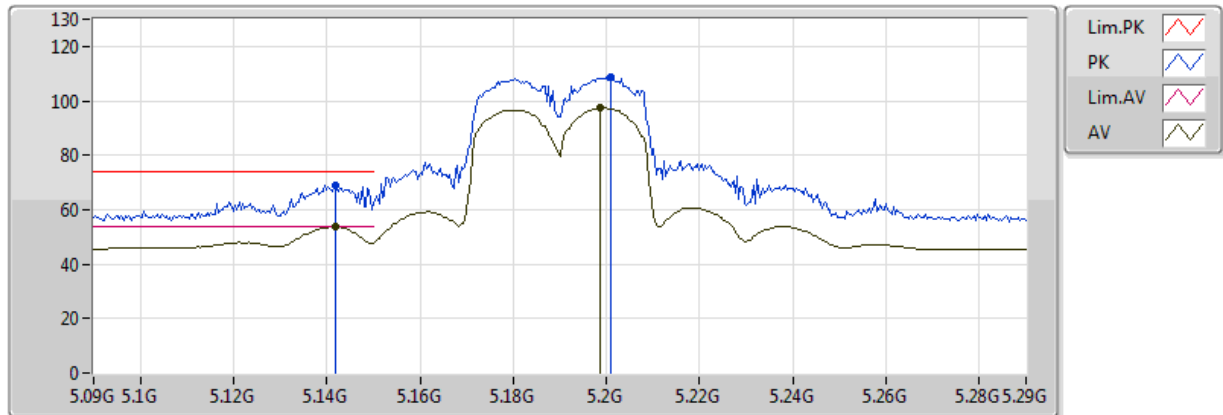


20170622
EUT Y_2TX
Setting 24
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.6333G	42.44	54.00	-11.56	16.22	3	Horizontal	332	2.00
PK	11.625G	55.90	74.00	-18.10	16.21	3	Horizontal	332	2.00

VHT40_Nss1_2TX

5190MHz_TX

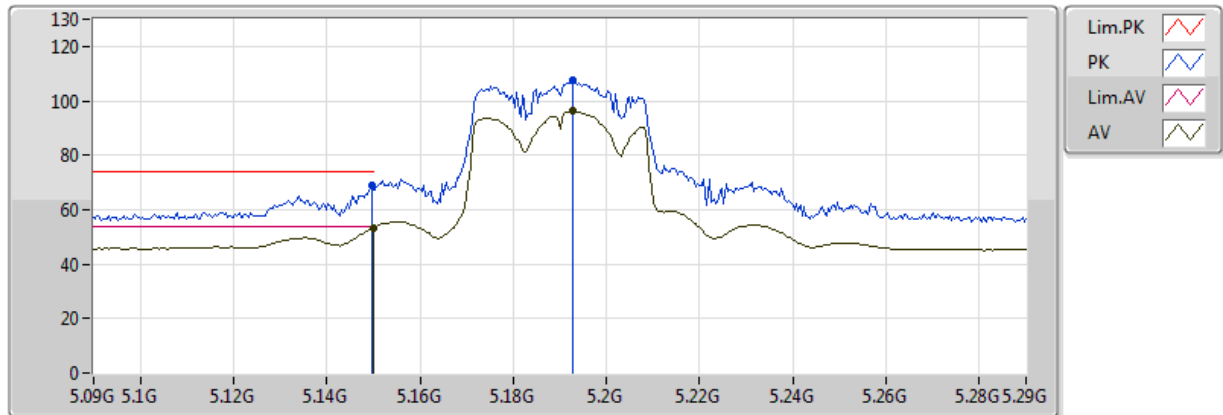


20170621
EUT_Y_2TX
Setting 16.5
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.142G	53.83	54.00	-0.17	5.29	3	Vertical	59	1.50
AV	5.1988G	97.29	Inf	-Inf	5.49	3	Vertical	59	1.50
PK	5.142G	68.82	74.00	-5.18	5.29	3	Vertical	59	1.50
PK	5.2008G	108.63	Inf	-Inf	5.49	3	Vertical	59	1.50

VHT40_Nss1_2TX

5190MHz_TX

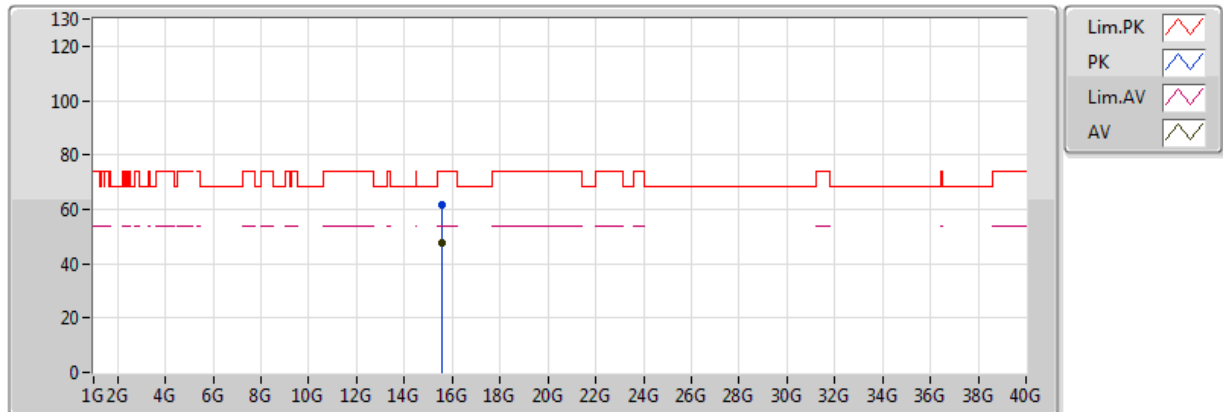


20170621
EUT_Y_2TX
Setting 16.5
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.149995G	53.32	54.00	-0.68	5.31	3	Horizontal	15	1.97
AV	5.1928G	96.20	Inf	-Inf	5.46	3	Horizontal	15	1.97
PK	5.1496G	68.68	74.00	-5.32	5.31	3	Horizontal	15	1.97
PK	5.1928G	107.49	Inf	-Inf	5.46	3	Horizontal	15	1.97

VHT40_Nss1_2TX

5190MHz_TX

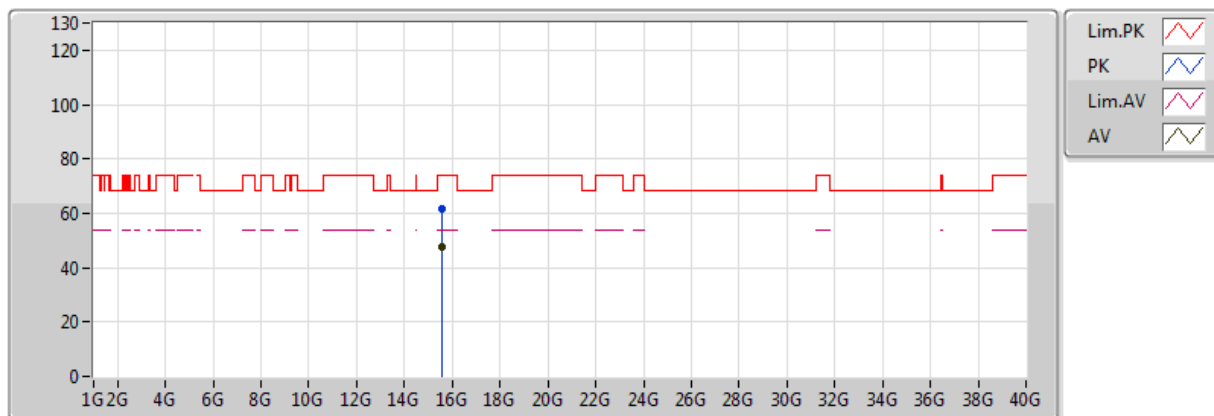


20170622
EUT_Y_2TX
Setting 16.5
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.5761G	47.51	54.00	-6.49	17.83	3	Vertical	353	1.81
PK	15.5552G	61.45	74.00	-12.55	17.81	3	Vertical	353	1.81

VHT40_Nss1_2TX

5190MHz_TX

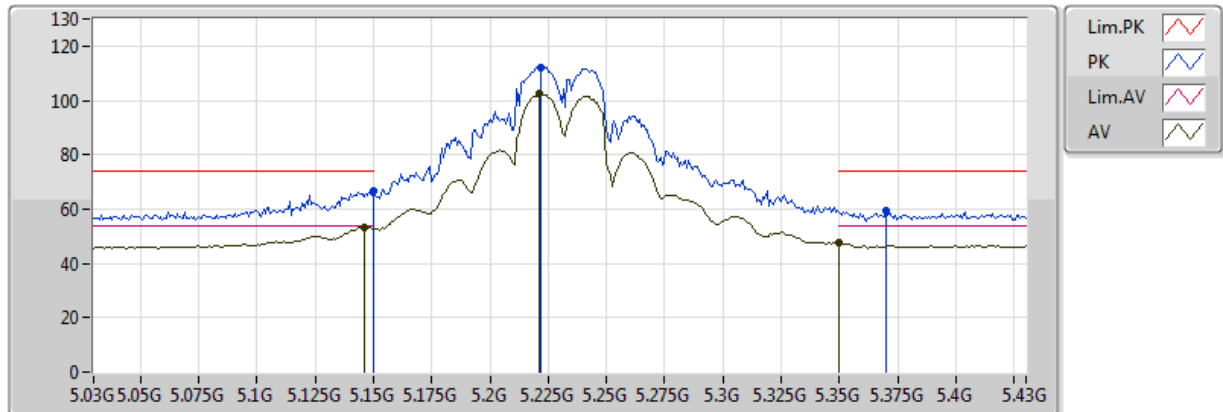


20170622
EUT Y_2TX
Setting 16.5
04-R-2
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	15.5711G	47.56	54.00	-6.44	17.82	3	Horizontal	311	1.39
PK	15.5621G	61.41	74.00	-12.59	17.82	3	Horizontal	311	1.39

VHT40_Nss1_2TX

5230MHz_TX

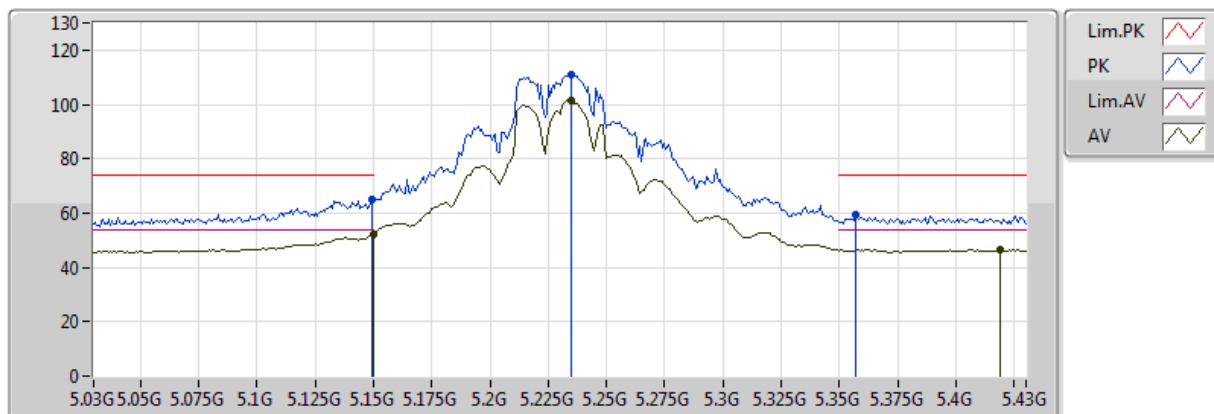


20170621
EUT_Y_2TX
Setting 21
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.146G	53.41	54.00	-0.59	5.30	3	Vertical	46	1.03
AV	5.2212G	102.45	Inf	-Inf	5.51	3	Vertical	46	1.03
AV	5.350005G	47.47	54.00	-6.53	5.65	3	Vertical	46	1.03
PK	5.149995G	66.66	74.00	-7.34	5.31	3	Vertical	46	1.03
PK	5.222G	112.32	Inf	-Inf	5.51	3	Vertical	46	1.03
PK	5.37G	59.35	74.00	-14.65	5.67	3	Vertical	46	1.03

VHT40_Nss1_2TX

5230MHz_TX

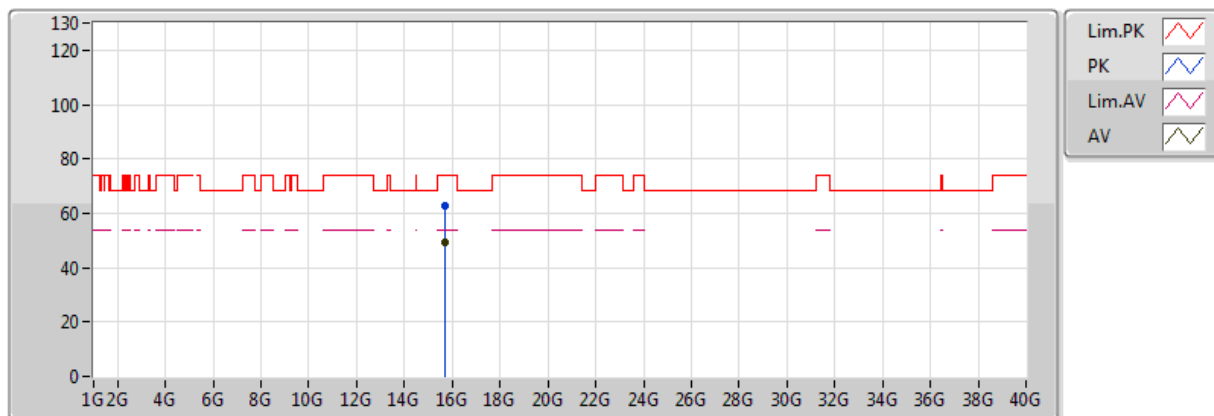


20170621
EUT_Y_2TX
Setting 21
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.149995G	52.35	54.00	-1.65	5.31	3	Horizontal	17	1.98
AV	5.2348G	101.21	Inf	-Inf	5.53	3	Horizontal	17	1.98
AV	5.4188G	46.52	54.00	-7.48	5.79	3	Horizontal	17	1.98
PK	5.1492G	65.07	74.00	-8.93	5.31	3	Horizontal	17	1.98
PK	5.2348G	110.96	Inf	-Inf	5.53	3	Horizontal	17	1.98
PK	5.3572G	59.12	74.00	-14.88	5.66	3	Horizontal	17	1.98

VHT40_Nss1_2TX

5230MHz_TX

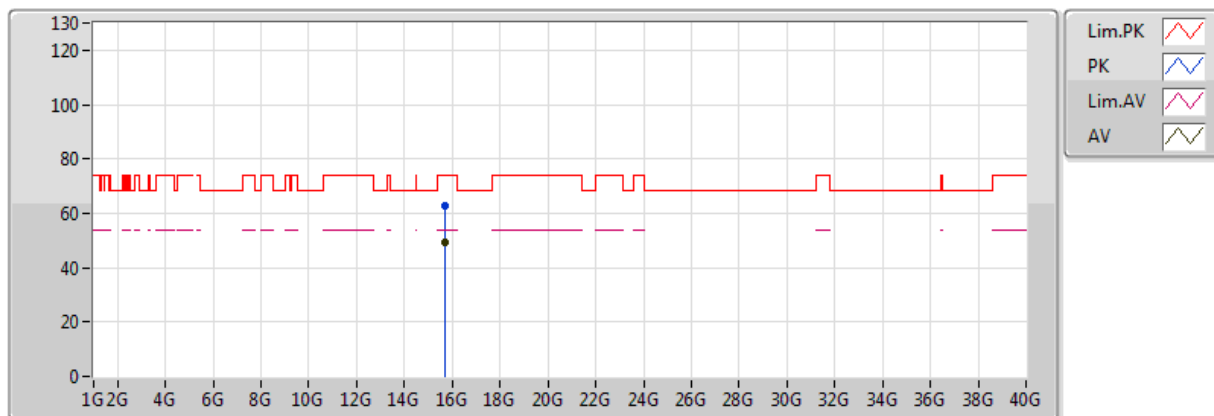


20170622
EUT Y_2TX
Setting 21
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.702G	49.28	54.00	-4.72	17.93	3	Vertical	99	1.74
PK	15.6879G	62.58	74.00	-11.42	17.92	3	Vertical	99	1.74

VHT40_Nss1_2TX

5230MHz_TX

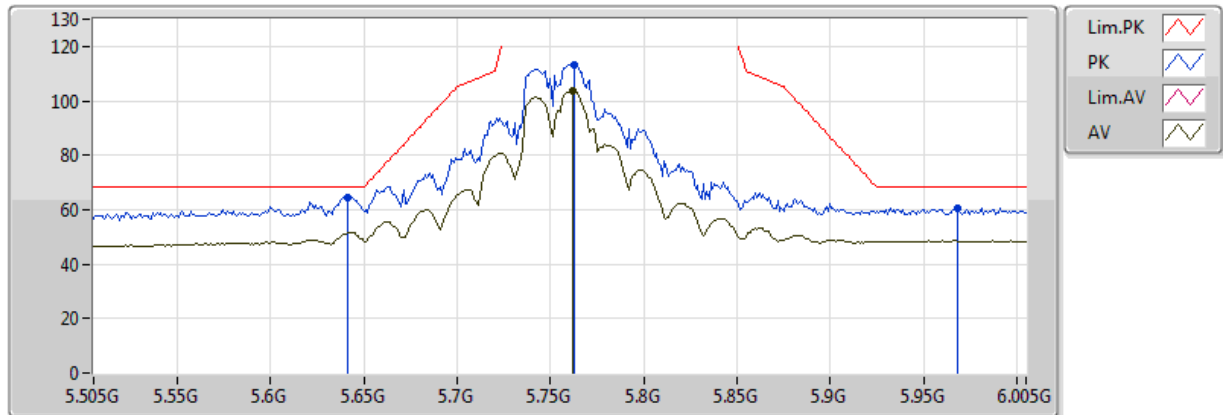


20170622
EUT_Y_2TX
Setting 21
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.7026G	49.41	54.00	-4.59	17.93	3	Horizontal	53	1.71
PK	15.6822G	62.97	74.00	-11.03	17.91	3	Horizontal	53	1.71

VHT40_Nss1_2TX

5755MHz_TX

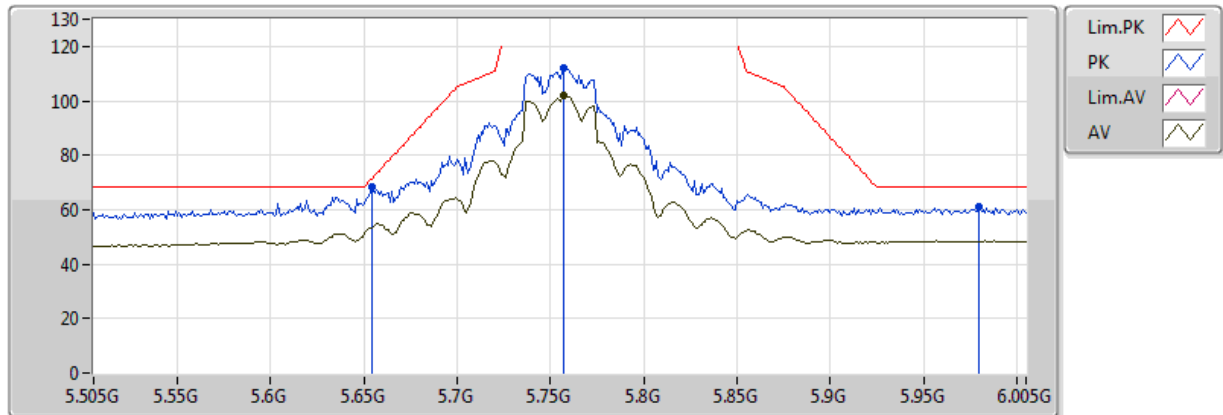


20170621
EUT_Y_2TX
Setting 24
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.762G	103.69	Inf	-Inf	7.10	3	Vertical	43	1.97
PK	5.641G	64.60	68.20	-3.60	6.86	3	Vertical	43	1.97
PK	5.763G	113.42	Inf	-Inf	7.10	3	Vertical	43	1.97
PK	5.968G	60.66	68.20	-7.54	8.27	3	Vertical	43	1.97

VHT40_Nss1_2TX

5755MHz_TX

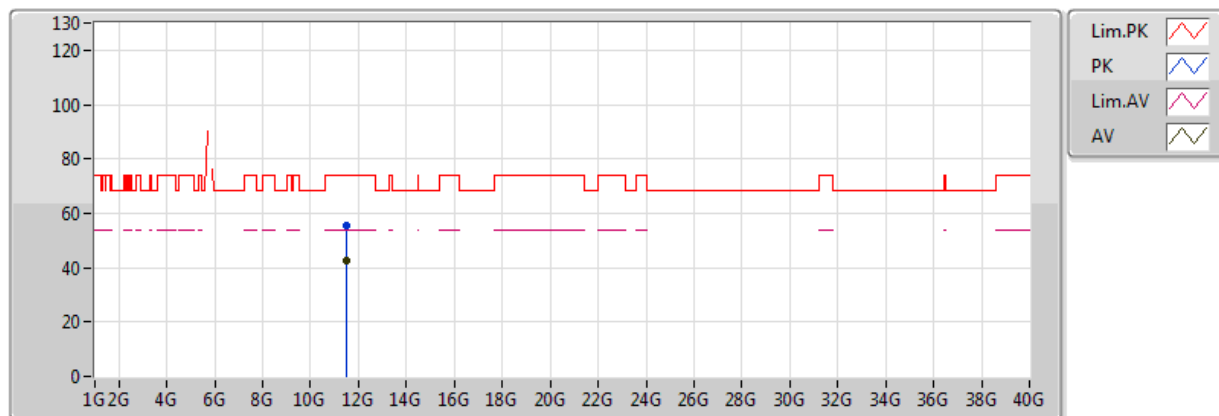


20170621
EUT_Y_2TX
Setting 24
04-M-0
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.757G	101.90	Inf	-Inf	7.09	3	Horizontal	8	1.97
PK	5.654G	68.26	71.16	-2.90	6.88	3	Horizontal	8	1.97
PK	5.757G	111.97	Inf	-Inf	7.09	3	Horizontal	8	1.97
PK	5.98G	60.99	68.20	-7.21	8.35	3	Horizontal	8	1.97

VHT40_Nss1_2TX

5755MHz_TX

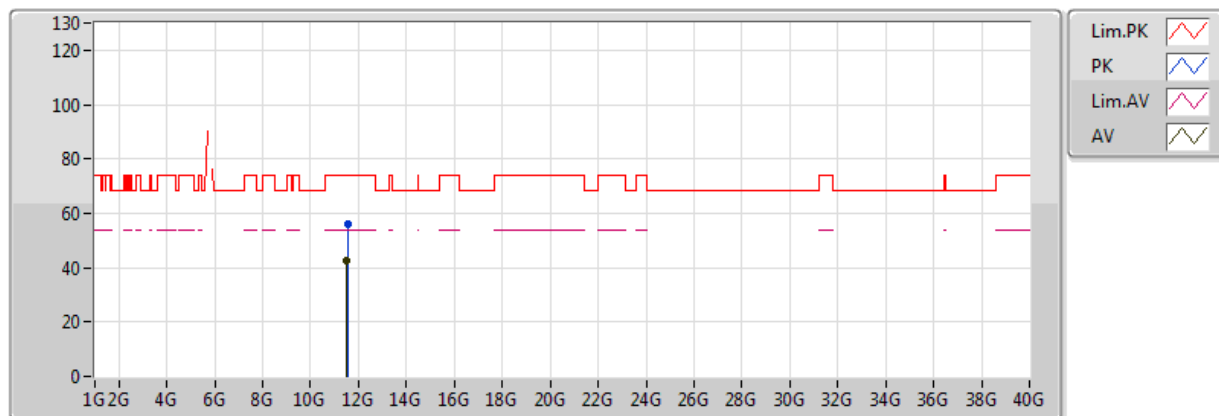


20170622
EUT Y_2TX
Setting 24
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.4891G	42.70	54.00	-11.30	16.12	3	Vertical	327	1.72
PK	11.5261G	55.28	74.00	-18.72	16.15	3	Vertical	327	1.72

VHT40_Nss1_2TX

5755MHz_TX

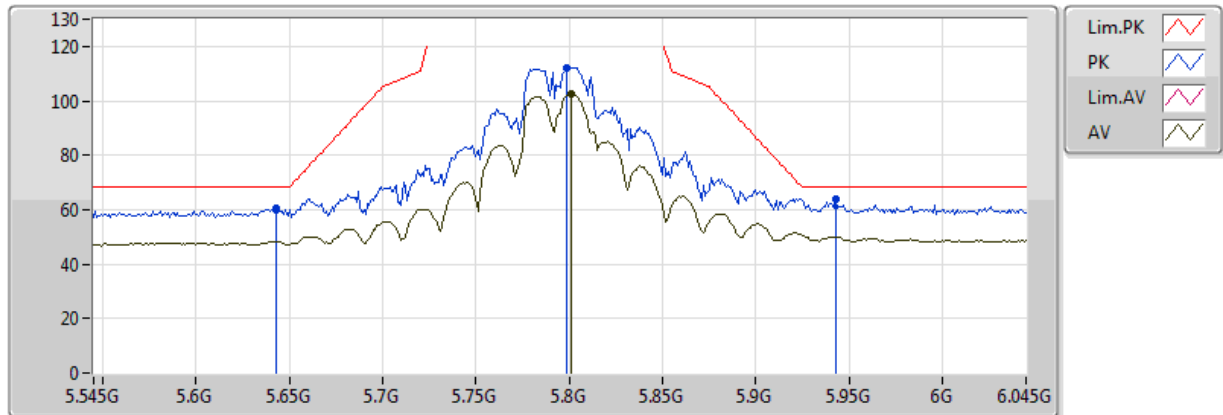


20170622
EUT Y_2TX
Setting 24
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.4867G	42.51	54.00	-11.49	16.12	3	Horizontal	117	1.91
PK	11.5297G	56.01	74.00	-17.99	16.15	3	Horizontal	117	1.91

VHT40_Nss1_2TX

5795MHz_TX

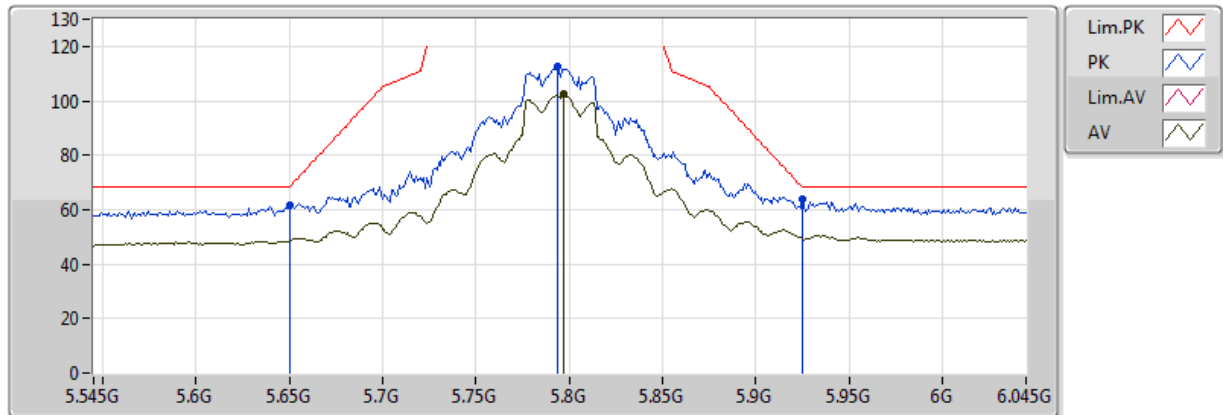


20170621
EUT_Y_2TX
Setting 24
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.801G	102.77	Inf	-Inf	7.19	3	Vertical	43	1.97
PK	5.643G	60.30	68.20	-7.90	6.86	3	Vertical	43	1.97
PK	5.799G	112.16	Inf	-Inf	7.18	3	Vertical	43	1.97
PK	5.943G	63.96	68.20	-4.24	8.11	3	Vertical	43	1.97

VHT40_Nss1_2TX

5795MHz_TX

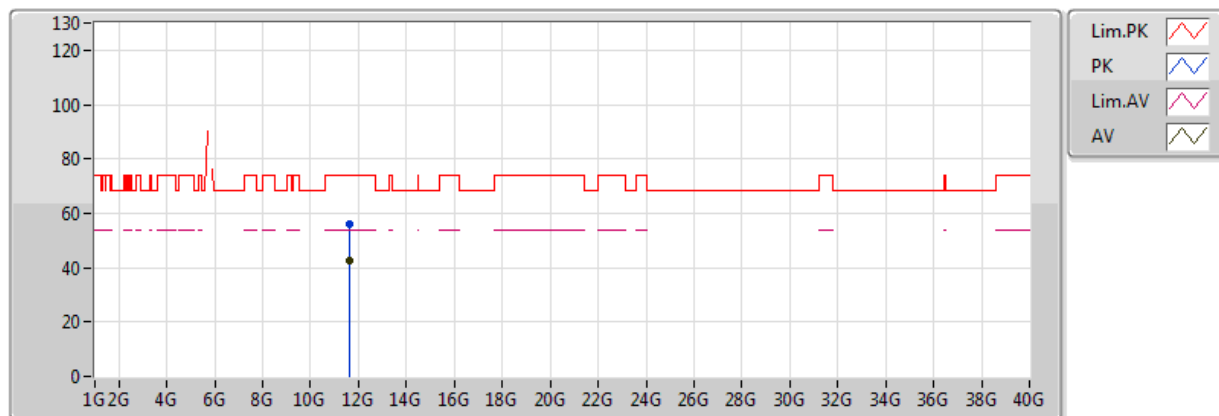


20170621
EUT_Y_2TX
Setting 24
04-M-0
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.797G	102.61	Inf	-Inf	7.17	3	Horizontal	3	1.99
PK	5.65G	61.73	68.20	-6.47	6.87	3	Horizontal	3	1.99
PK	5.794G	112.44	Inf	-Inf	7.17	3	Horizontal	3	1.99
PK	5.925G	63.67	68.20	-4.53	7.99	3	Horizontal	3	1.99

VHT40_Nss1_2TX

5795MHz_TX

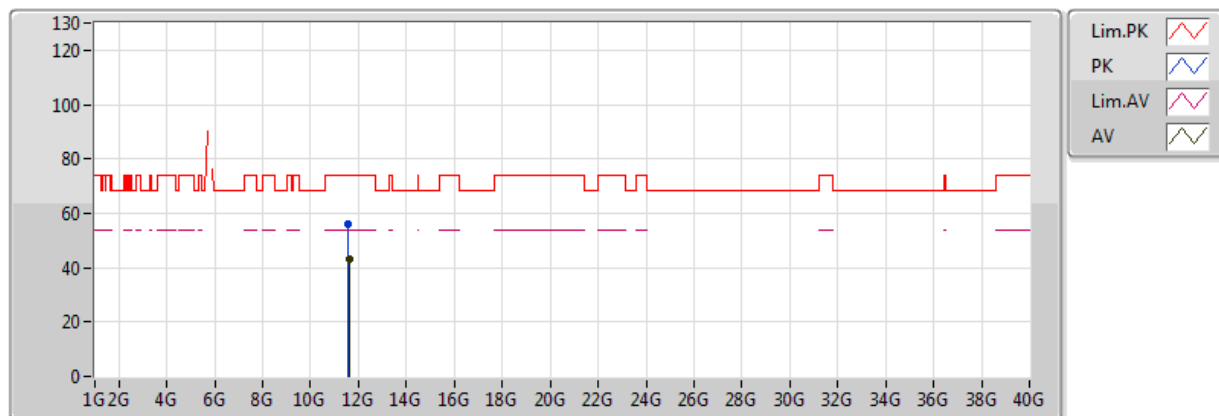


20170622
EUT Y_2TX
Setting 24
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.6134G	42.82	54.00	-11.18	16.20	3	Vertical	130	1.70
PK	11.6085G	55.88	74.00	-18.12	16.20	3	Vertical	130	1.70

VHT40_Nss1_2TX

5795MHz_TX

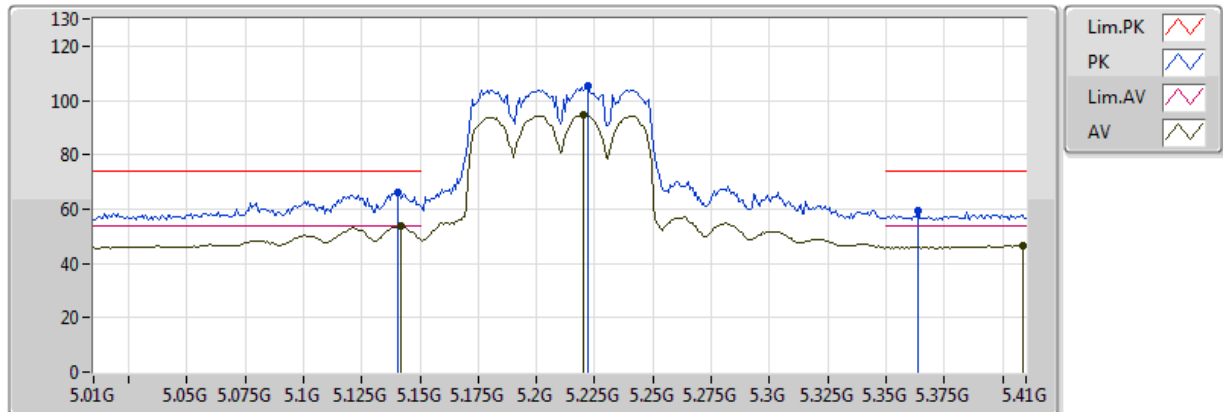


20170622
EUT Y_2TX
Setting 24
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.6138G	42.91	54.00	-11.09	16.21	3	Horizontal	221	1.02
PK	11.5782G	56.04	74.00	-17.96	16.18	3	Horizontal	221	1.02

VHT80_Nss1_2TX

5210MHz_TX

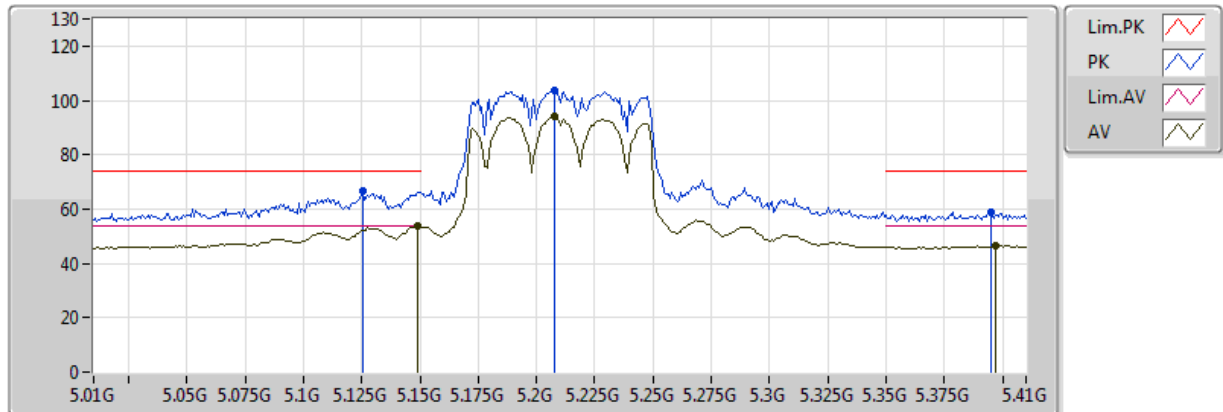


20170621
EUT_Y_2TX
Setting 16
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.142G	53.77	54.00	-0.23	5.29	3	Vertical	40	1.03
AV	5.2204G	94.90	Inf	-Inf	5.51	3	Vertical	40	1.03
AV	5.4084G	46.59	54.00	-7.41	5.74	3	Vertical	40	1.03
PK	5.1404G	66.31	74.00	-7.69	5.28	3	Vertical	40	1.03
PK	5.222G	105.18	Inf	-Inf	5.51	3	Vertical	40	1.03
PK	5.3636G	59.63	74.00	-14.37	5.66	3	Vertical	40	1.03

VHT80_Nss1_2TX

5210MHz_TX

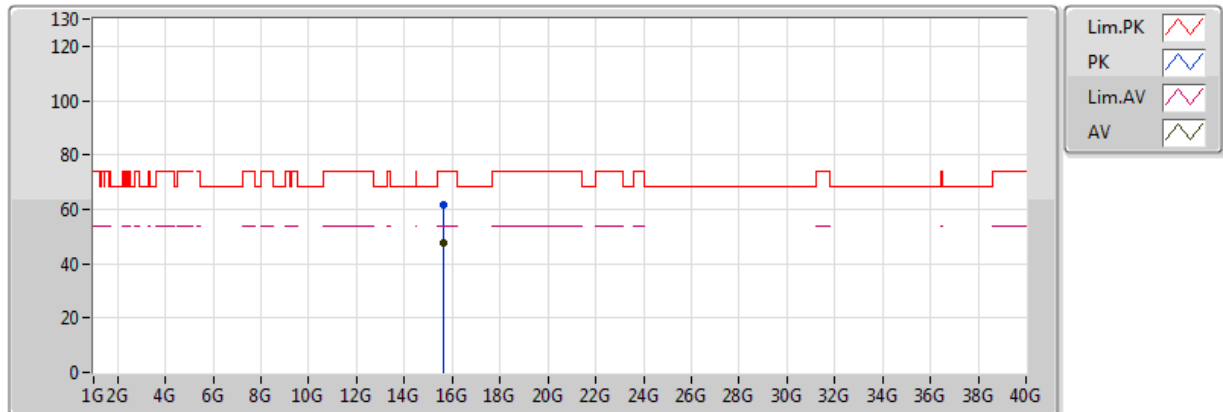


20170621
EUT Y_2TX
Setting 16
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.1492G	53.98	54.00	-0.02	5.31	3	Horizontal	353	1.97
AV	5.2076G	94.23	Inf	-Inf	5.50	3	Horizontal	353	1.97
AV	5.3972G	46.51	54.00	-7.49	5.70	3	Horizontal	353	1.97
PK	5.1252G	66.48	74.00	-7.52	5.23	3	Horizontal	353	1.97
PK	5.2076G	103.42	Inf	-Inf	5.50	3	Horizontal	353	1.97
PK	5.3948G	58.97	74.00	-15.03	5.69	3	Horizontal	353	1.97

VHT80_Nss1_2TX

5210MHz_TX

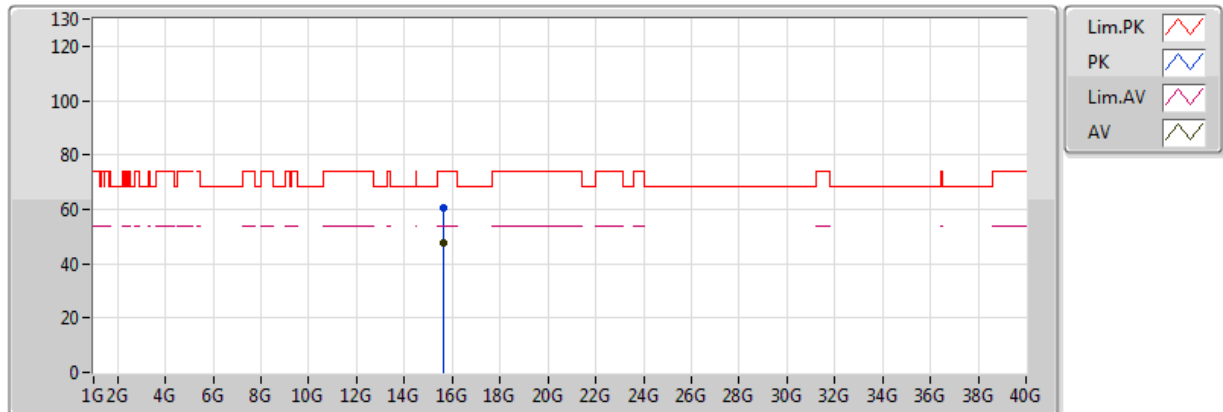


20170622
EUT_Y_2TX
Setting 16
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.608G	47.77	54.00	-6.23	17.85	3	Vertical	124	1.47
PK	15.6055G	61.50	74.00	-12.50	17.85	3	Vertical	124	1.47

VHT80_Nss1_2TX

5210MHz_TX

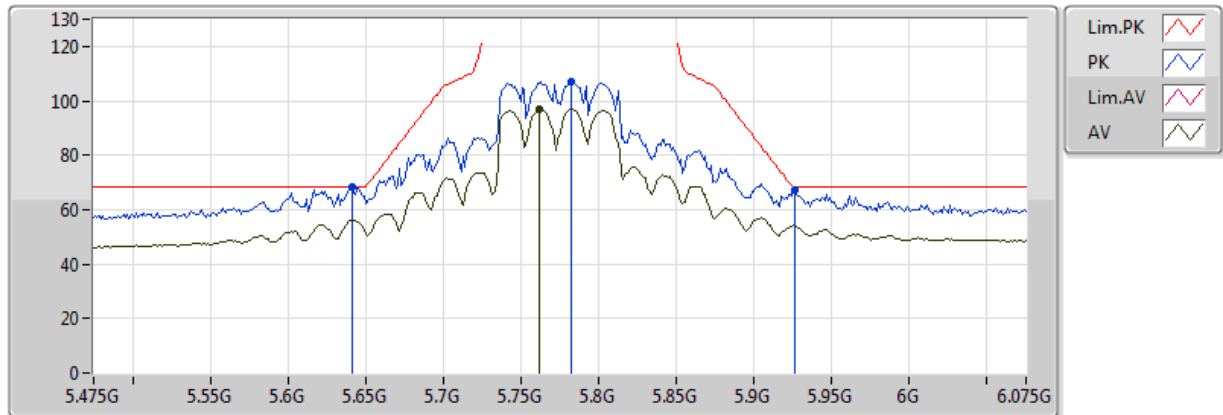


20170622
EUT_Y_2TX
Setting 16
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.6175G	47.73	54.00	-6.27	17.86	3	Horizontal	322	1.26
PK	15.638G	60.69	74.00	-13.31	17.88	3	Horizontal	322	1.26

VHT80_Nss1_2TX

5775MHz_TX

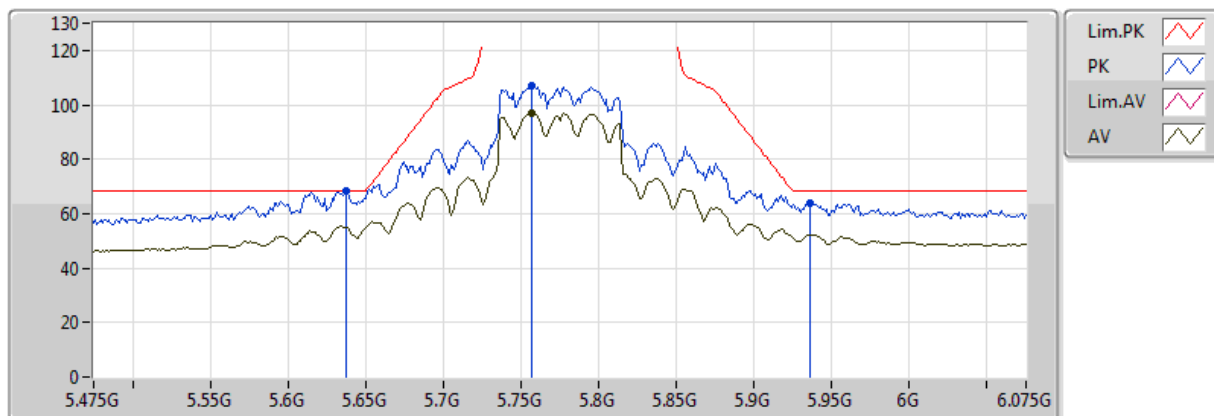


20170621
EUT_Y_2TX
Setting 20
04-M-0
FSP(100056)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	5.7618G	97.11	Inf	-Inf	7.10	3	Vertical	54	1.93
PK	5.6418G	68.15	68.20	-0.05	6.86	3	Vertical	54	1.93
PK	5.7822G	106.95	Inf	-Inf	7.14	3	Vertical	54	1.93
PK	5.9262G	67.37	68.20	-0.83	8.00	3	Vertical	54	1.93

VHT80_Nss1_2TX

5775MHz_TX

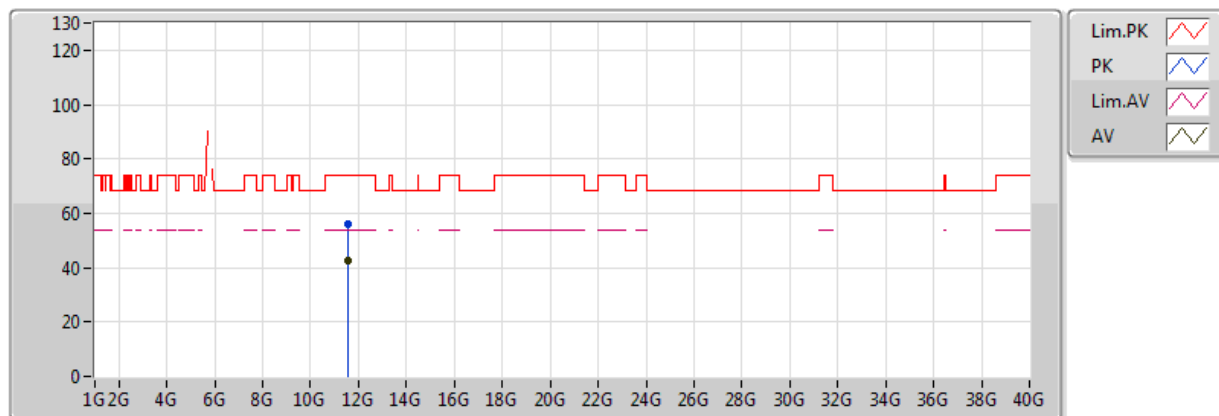


20170621
EUT_Y_2TX
Setting 20
04-M-0
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.757G	96.90	Inf	-Inf	7.09	3	Horizontal	7	1.99
PK	5.637G	68.14	68.20	-0.06	6.85	3	Horizontal	7	1.99
PK	5.757G	106.95	Inf	-Inf	7.09	3	Horizontal	7	1.99
PK	5.9358G	64.06	68.20	-4.14	8.06	3	Horizontal	7	1.99

VHT80_Nss1_2TX

5775MHz_TX

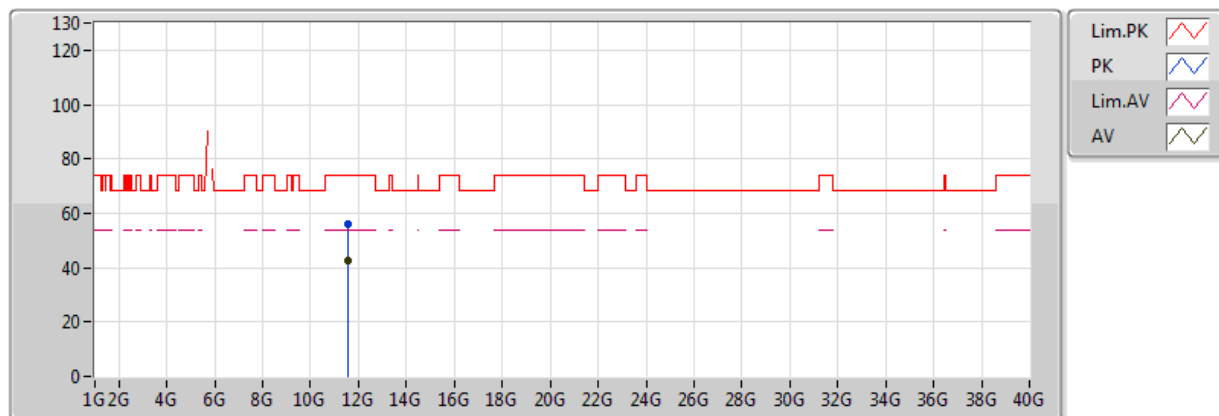


20170622
EUT Y_2TX
Setting 20
04-R-2
FSP(100056)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.5641G	42.78	54.00	-11.22	16.17	3	Vertical	244	1.61
PK	11.5631G	55.90	74.00	-18.10	16.17	3	Vertical	244	1.61

VHT80_Nss1_2TX

5775MHz_TX



20170622
EUT Y_2TX
Setting 20
04-R-2
FSP(100056)

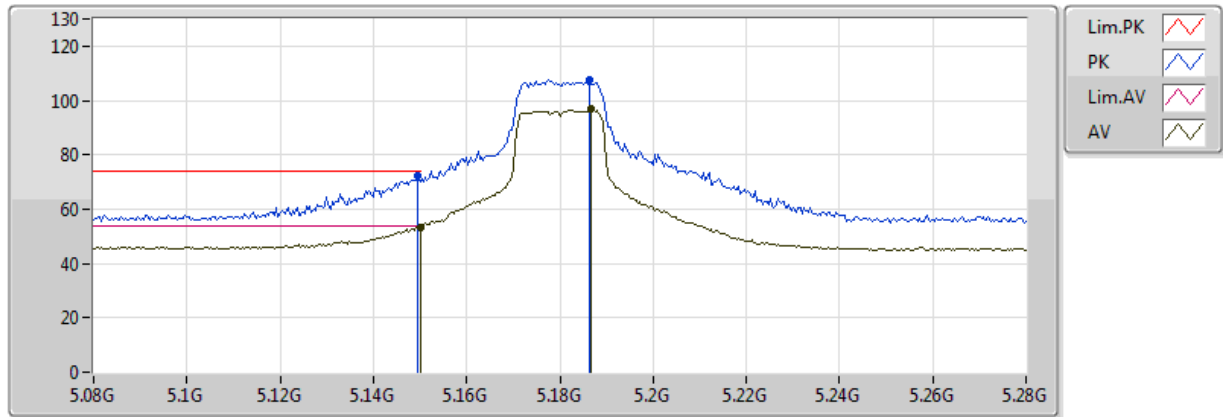
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.5444G	42.63	54.00	-11.37	16.16	3	Horizontal	33	1.93
PK	11.5592G	55.76	74.00	-18.24	16.17	3	Horizontal	33	1.93

**<For Beamforming Mode>****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 VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
5.15-5.25GHz	Pass	AV	5.149995G	53.99	54.00	-0.01	5.31	3	H	356	2.15	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5180MHz_TX

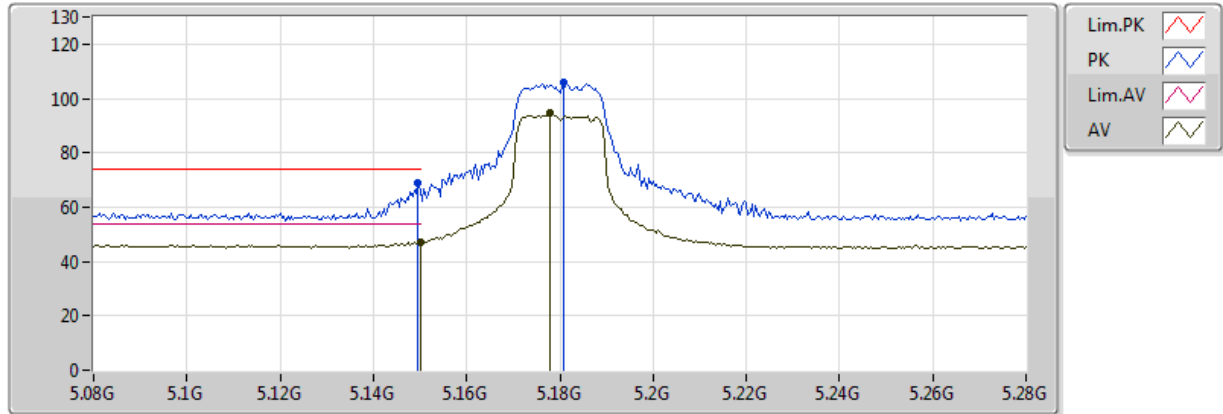


20170622
EUT_Y_2TX
Setting 18
04-E-2-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	53.51	54.00	-0.49	5.31	3	V	344	1.51	-
AV	5.1868G	96.91	Inf	-Inf	5.44	3	V	344	1.51	-
PK	5.1496G	72.56	74.00	-1.44	5.31	3	V	344	1.51	-
PK	5.1864G	107.59	Inf	-Inf	5.44	3	V	344	1.51	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5180MHz_TX

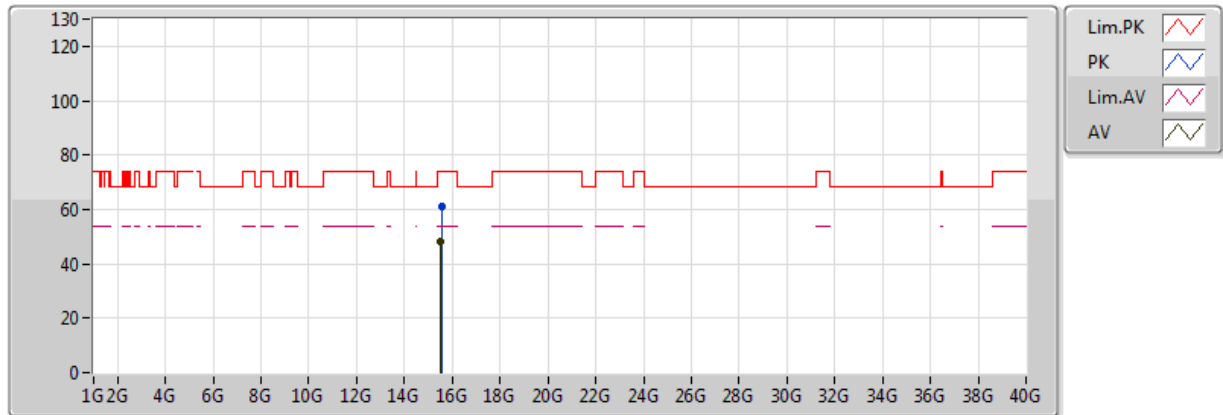


20170622
EUT_Y_2TX
Setting 18
04-E-2-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	47.24	54.00	-6.76	5.31	3	H	35	2.32	-
AV	5.178G	94.53	Inf	-Inf	5.41	3	H	35	2.32	-
PK	5.1496G	68.83	74.00	-5.17	5.31	3	H	35	2.32	-
PK	5.1808G	106.10	Inf	-Inf	5.42	3	H	35	2.32	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5180MHz_TX

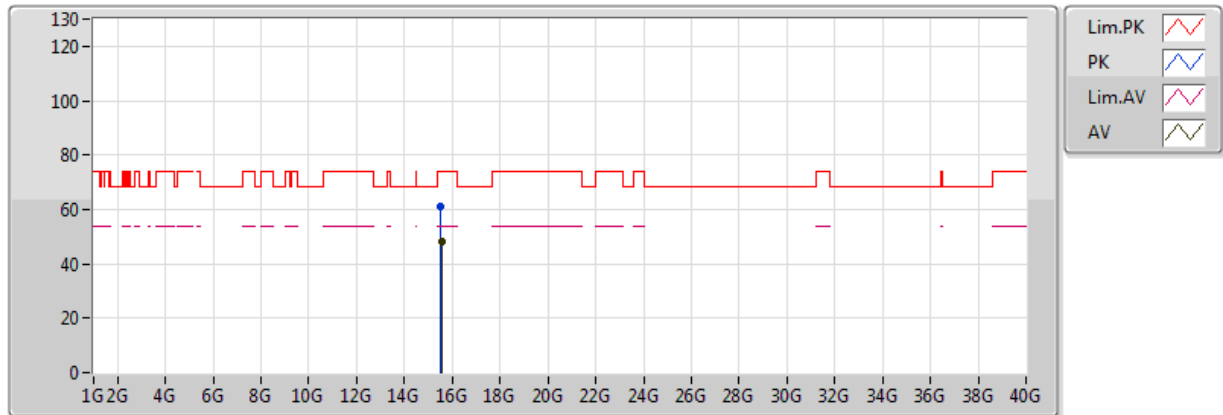


20170622
EUT_Y_2TX
Setting 18
04-E-2
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.52524G	48.41	54.00	-5.59	17.79	3	V	315	1.50	-
PK	15.53796G	60.91	74.00	-13.09	17.80	3	V	315	1.50	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5180MHz_TX

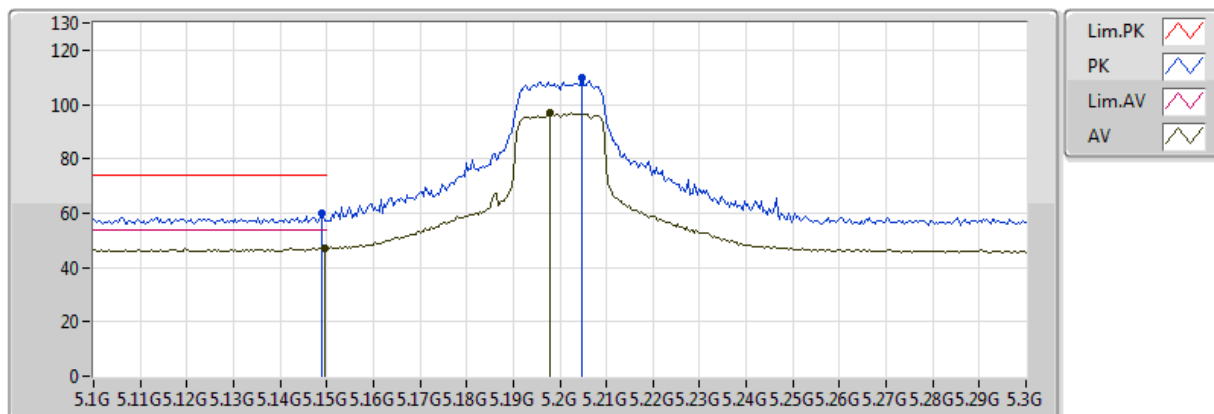


20170622
EUT_Y_2TX
Setting 18
04-E-2
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.54978G	48.41	54.00	-5.59	17.81	3	H	107	2.08	-
PK	15.53388G	60.81	74.00	-13.19	17.79	3	H	107	2.08	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5200MHz_TX

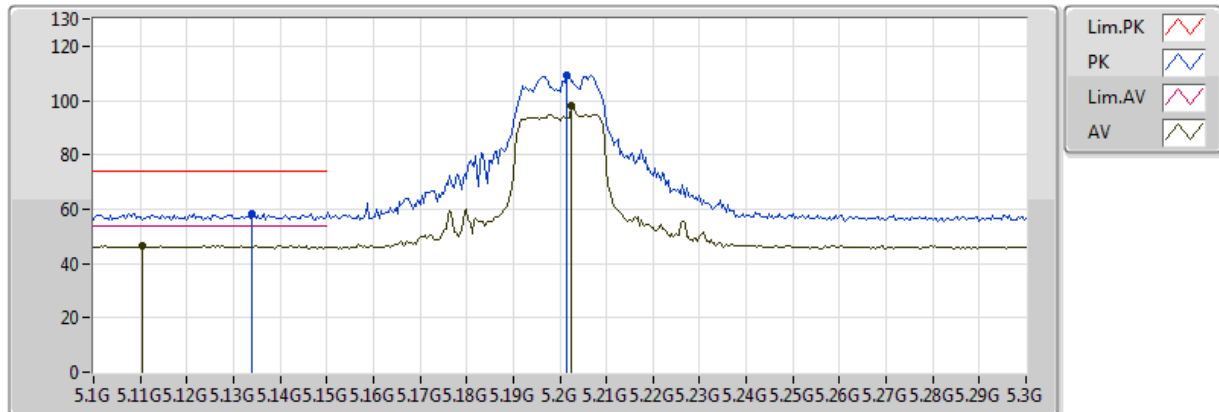


20170622
EUT_Y_2TX
Setting 24
04-E-2-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1496G	46.94	54.00	-7.06	5.31	3	V	82	2.16	-
AV	5.198G	96.83	Inf	-Inf	5.48	3	V	82	2.16	-
PK	5.1488G	60.08	74.00	-13.92	5.31	3	V	82	2.16	-
PK	5.2048G	110.03	Inf	-Inf	5.50	3	V	82	2.16	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5200MHz_TX

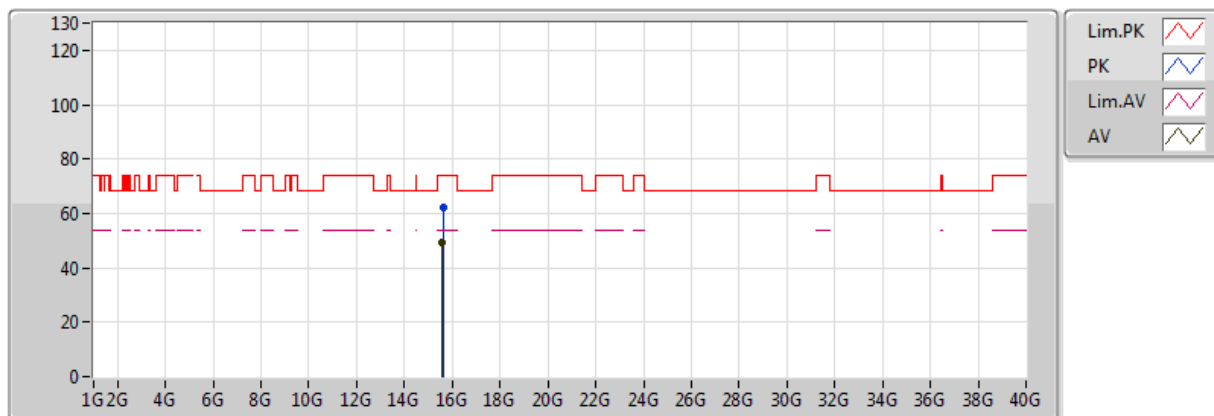


20170622
EUT_Y_2TX
Setting 24
04-E-2-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1104G	46.72	54.00	-7.28	5.18	3	H	22	1.48	-
AV	5.2024G	98.10	Inf	-Inf	5.49	3	H	22	1.48	-
PK	5.134G	58.55	74.00	-15.45	5.26	3	H	22	1.48	-
PK	5.2016G	109.50	Inf	-Inf	5.49	3	H	22	1.48	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5200MHz_TX

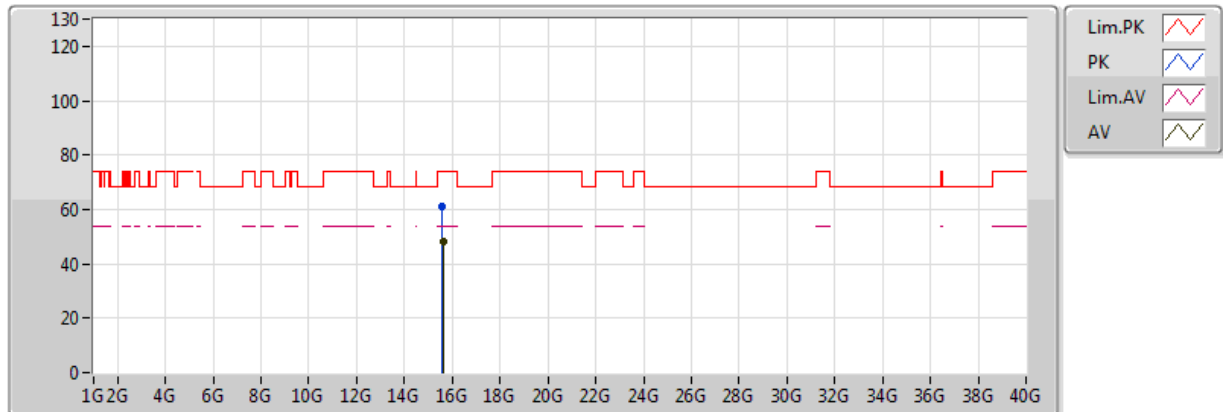


20170622
EUT_Y_2TX
Setting 24
04-E-2
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.59958G	49.26	54.00	-4.74	17.85	3	V	72	1.43	-
PK	15.60227G	62.09	74.00	-11.91	17.85	3	V	72	1.43	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5200MHz_TX

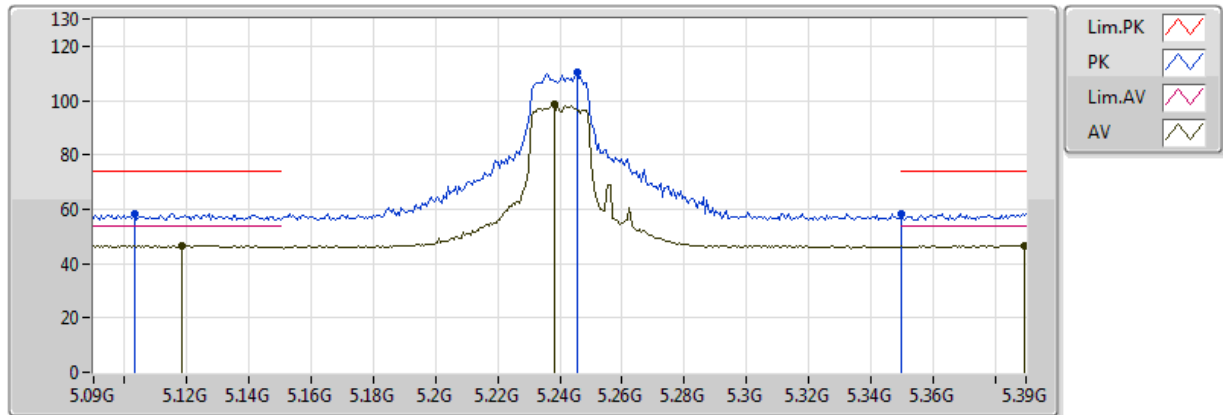


20170622
EUT_Y_2TX
Setting 24
04-E-2
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.61212G	48.31	54.00	-5.69	17.86	3	H	13	1.53	-
PK	15.59478G	61.09	74.00	-12.91	17.84	3	H	13	1.53	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz_TX

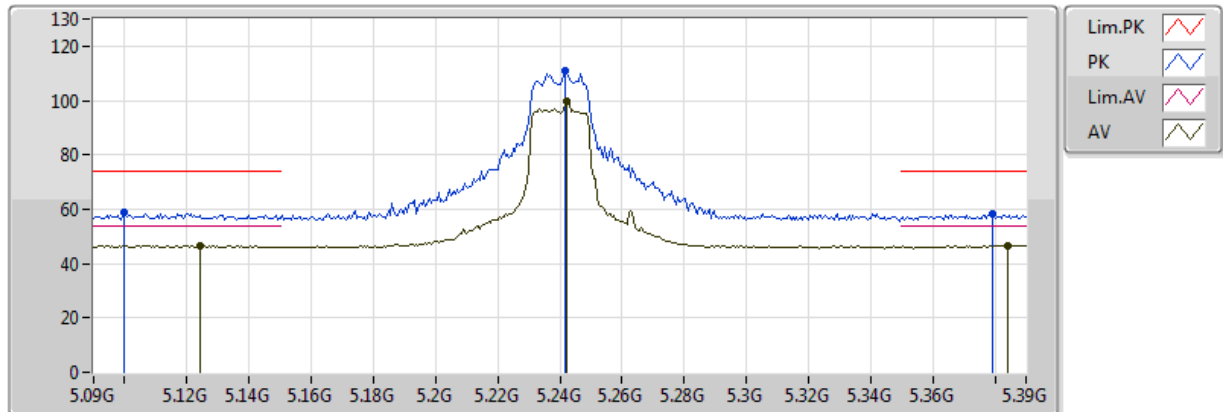


20170622
EUT_Y_2TX
Setting 24
04-E-2-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1182G	46.75	54.00	-7.25	5.20	3	V	23	1.49	-
AV	5.2382G	98.40	Inf	-Inf	5.53	3	V	23	1.49	-
AV	5.3894G	46.74	54.00	-7.26	5.69	3	V	23	1.49	-
PK	5.1032G	58.27	74.00	-15.73	5.15	3	V	23	1.49	-
PK	5.2454G	110.26	Inf	-Inf	5.54	3	V	23	1.49	-
PK	5.350005G	58.44	74.00	-15.56	5.65	3	V	23	1.49	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz_TX

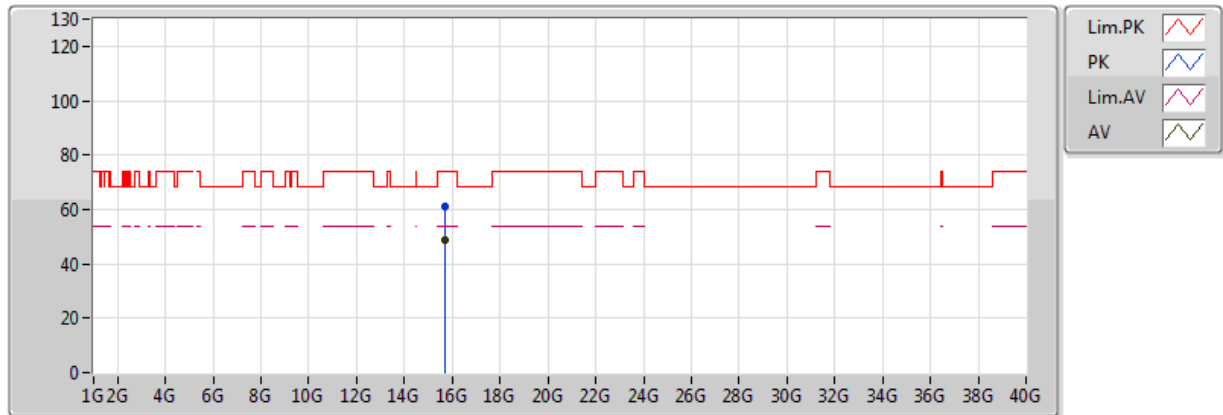


20170622
EUT_Y_2TX
Setting 24
04-E-2-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1242G	46.63	54.00	-7.37	5.22	3	H	22	1.72	-
AV	5.2424G	99.97	Inf	-Inf	5.54	3	H	22	1.72	-
AV	5.384G	46.78	54.00	-7.22	5.68	3	H	22	1.72	-
PK	5.0996G	58.64	74.00	-15.36	5.14	3	H	22	1.72	-
PK	5.2418G	110.81	Inf	-Inf	5.54	3	H	22	1.72	-
PK	5.3792G	58.53	74.00	-15.47	5.68	3	H	22	1.72	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz_TX

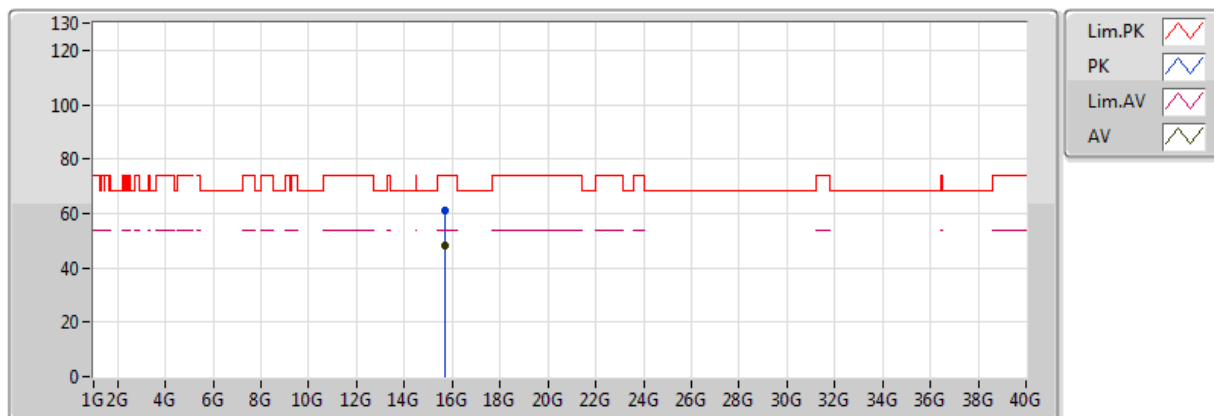


20170622
EUT_Y_2TX
Setting 24
04-E-2
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.71544G	48.53	54.00	-5.47	17.94	3	V	196	1.53	-
PK	15.72576G	60.91	74.00	-13.09	17.95	3	V	196	1.53	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz_TX

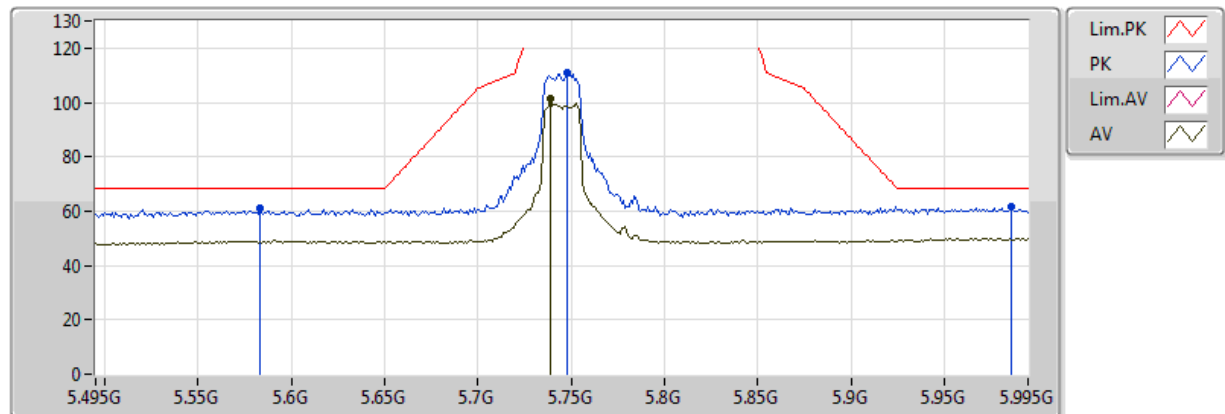


20170622
EUT_Y_2TX
Setting 24
04-E-2
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.71004G	48.45	54.00	-5.55	17.94	3	H	351	2.01	-
PK	15.71256G	60.81	74.00	-13.19	17.94	3	H	351	2.01	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5745MHz_TX

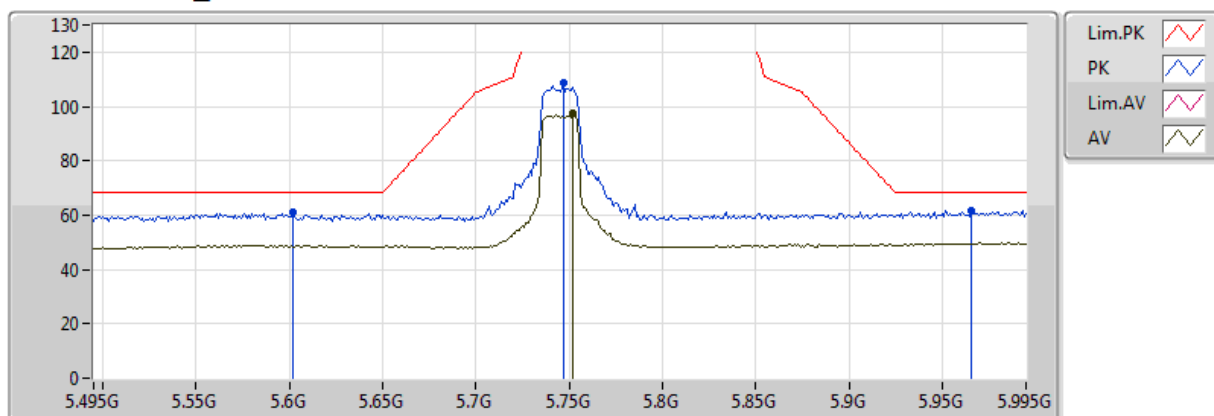


20170622
EUT_Y_2TX
Setting 24
04-B-2-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.739G	101.68	Inf	-Inf	7.05	3	V	60	1.05	-
PK	5.583G	61.00	68.20	-7.20	6.67	3	V	60	1.05	-
PK	5.748G	110.78	Inf	-Inf	7.07	3	V	60	1.05	-
PK	5.986G	61.71	68.20	-6.49	8.39	3	V	60	1.05	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5745MHz_TX

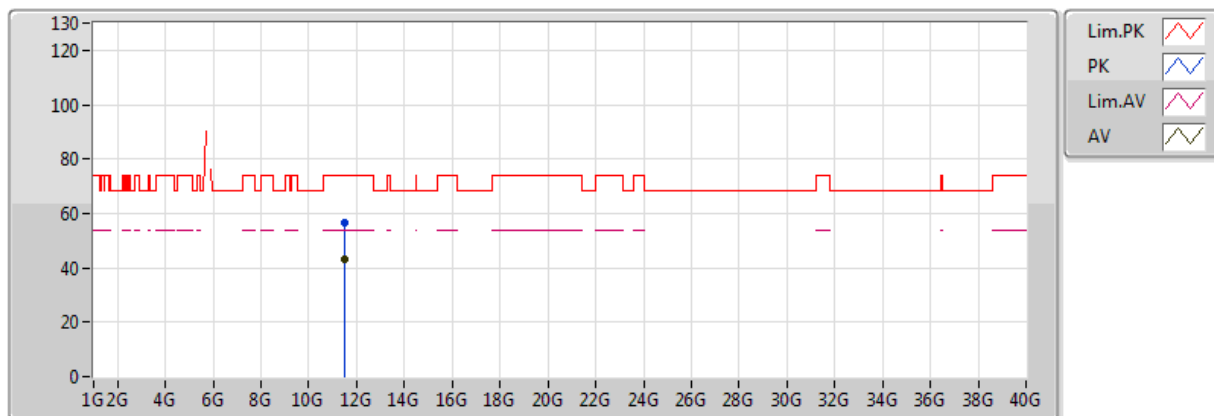


20170622
EUT_Y_2TX
Setting 24
04-B-2-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.752G	97.39	Inf	-Inf	7.08	3	H	308	1.01	-
PK	5.602G	61.31	68.20	-6.89	6.78	3	H	308	1.01	-
PK	5.747G	108.44	Inf	-Inf	7.07	3	H	308	1.01	-
PK	5.966G	61.61	68.20	-6.59	8.26	3	H	308	1.01	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5745MHz_TX

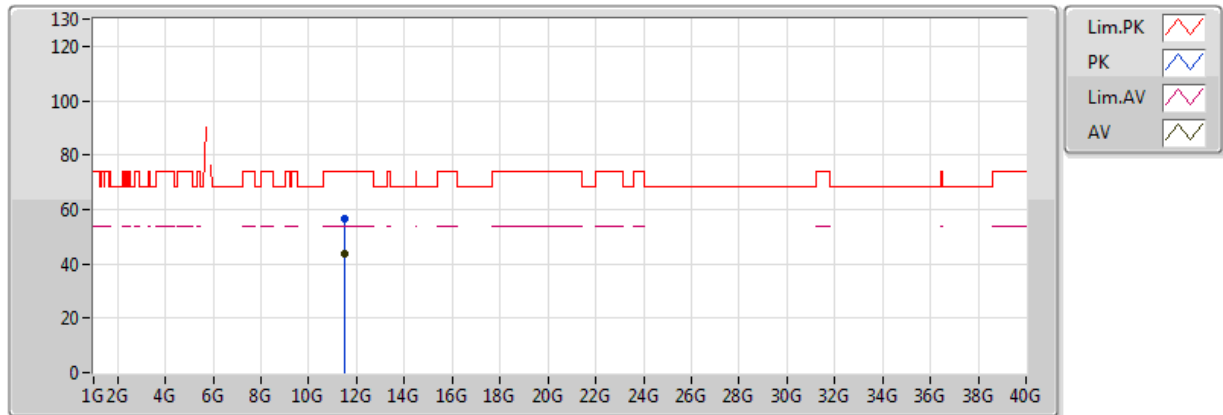


20170623
EUT Y_2TX
Setting 24
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.47788G	43.26	54.00	-10.74	16.12	3	V	216	1.13	-
PK	11.4804G	56.58	74.00	-17.42	16.12	3	V	216	1.13	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5745MHz_TX

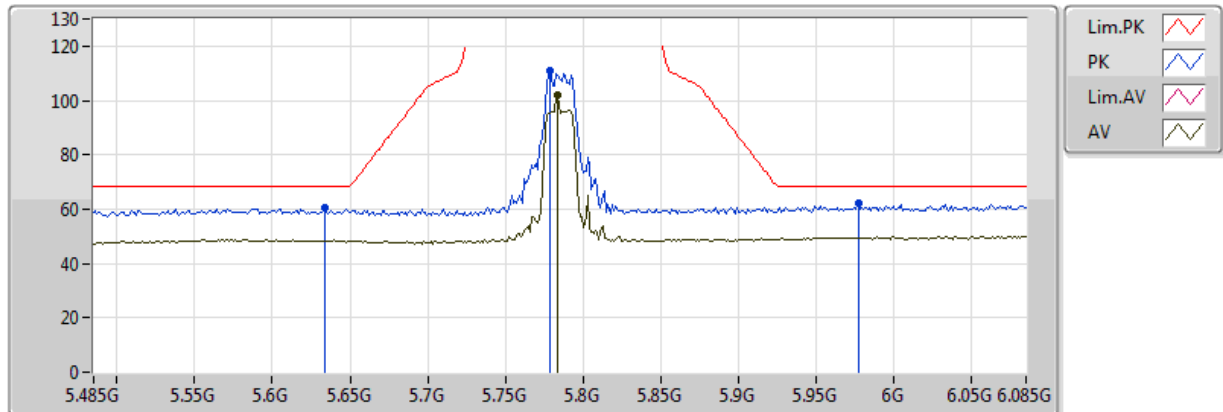


20170623
EUT Y_2TX
Setting 24
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.47944G	43.63	54.00	-10.37	16.12	3	H	199	1.84	-
PK	11.47992G	56.35	74.00	-17.65	16.12	3	H	199	1.84	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5785MHz_TX

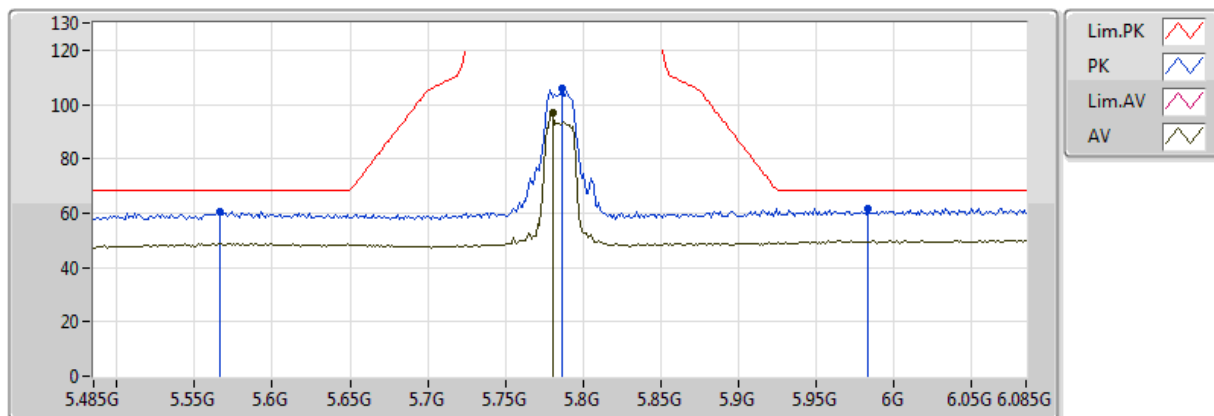


20170622
EUT_Y_2TX
Setting 24
04-B-2-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.7838G	101.71	Inf	-Inf	7.15	3	V	45	1.03	-
PK	5.6338G	60.37	68.20	-7.83	6.84	3	V	45	1.03	-
PK	5.779G	111.09	Inf	-Inf	7.14	3	V	45	1.03	-
PK	5.977G	62.01	68.20	-6.19	8.33	3	V	45	1.03	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5785MHz_TX

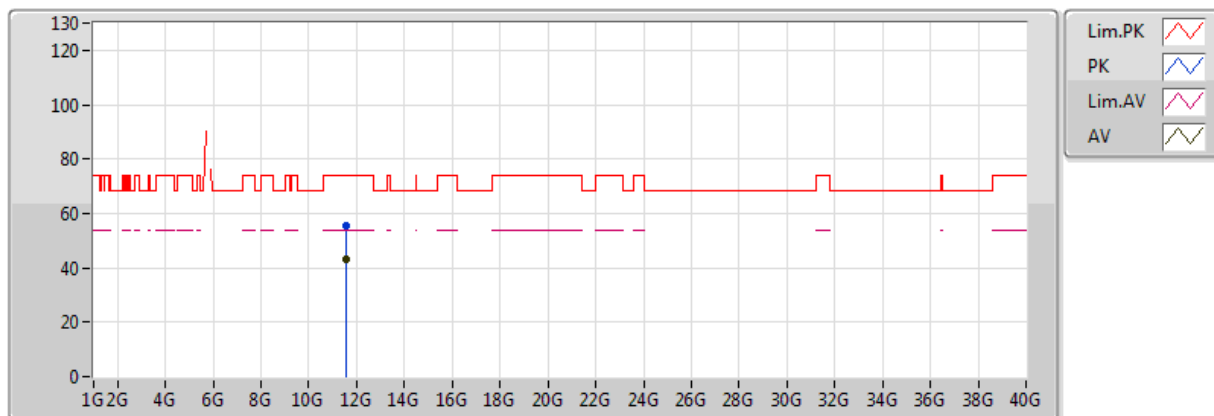


20170622
EUT Y_2TX
Setting 24
04-B-2-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.7802G	96.71	Inf	-Inf	7.14	3	H	343	1.01	-
PK	5.5666G	60.79	68.20	-7.41	6.57	3	H	343	1.01	-
PK	5.7862G	105.83	Inf	-Inf	7.15	3	H	343	1.01	-
PK	5.983G	61.59	68.20	-6.61	8.37	3	H	343	1.01	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5785MHz_TX

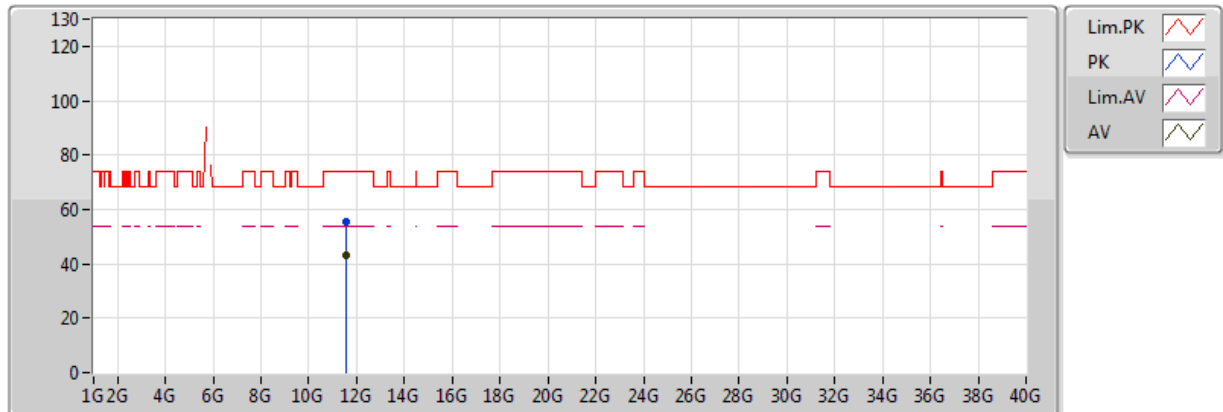


20170623
EUT Y_2TX
Setting 24
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.57558G	43.13	54.00	-10.87	16.18	3	V	51	1.07	-
PK	11.57186G	55.59	74.00	-18.41	16.18	3	V	51	1.07	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5785MHz_TX

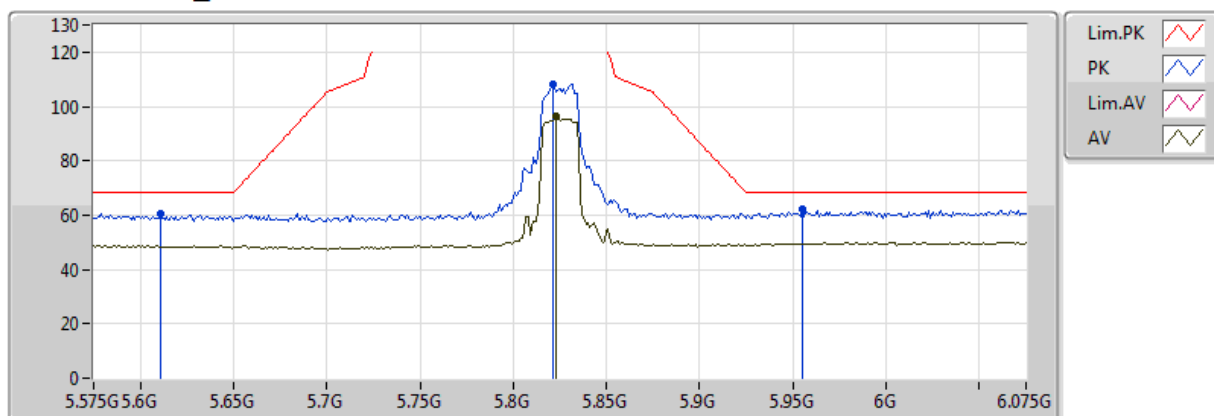


20170623
EUT_Y_2TX
Setting 24
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.55794G	43.11	54.00	-10.89	16.17	3	H	290	2.19	-
PK	11.56604G	55.47	74.00	-18.53	16.17	3	H	290	2.19	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5825MHz_TX

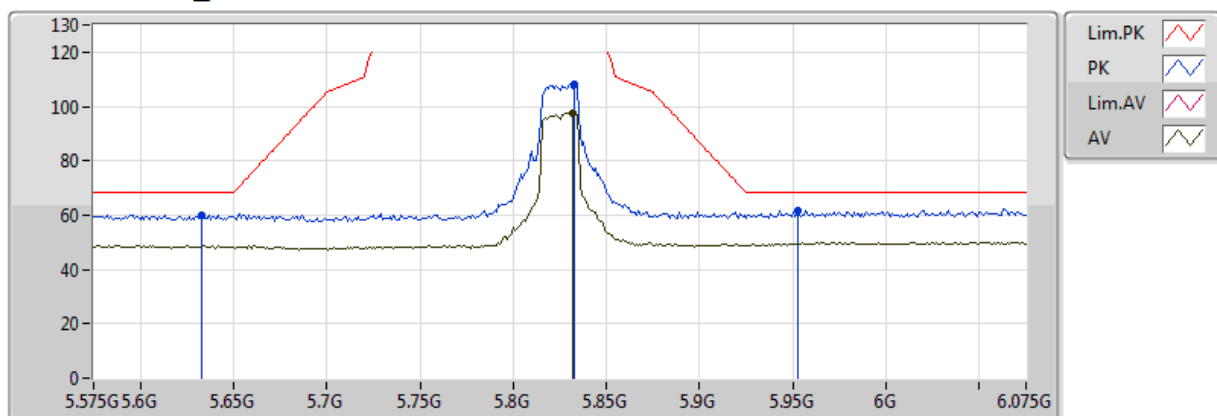


20170622
EUT_Y_2TX
Setting 24
04-B-2-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.823G	96.39	Inf	-Inf	7.33	3	V	316	1.00	-
PK	5.611G	60.35	68.20	-7.85	6.80	3	V	316	1.00	-
PK	5.821G	108.21	Inf	-Inf	7.32	3	V	316	1.00	-
PK	5.955G	61.93	68.20	-6.27	8.19	3	V	316	1.00	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5825MHz_TX

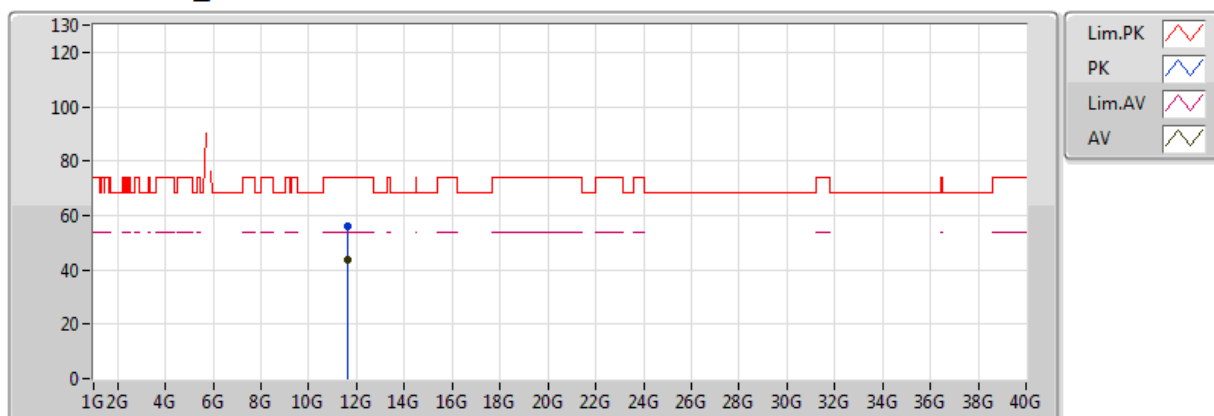


20170622
EUT_Y_2TX
Setting 24
04-B-2-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.832G	97.77	Inf	-Inf	7.39	3	H	360	1.86	-
PK	5.633G	60.12	68.20	-8.08	6.84	3	H	360	1.86	-
PK	5.833G	108.03	Inf	-Inf	7.39	3	H	360	1.86	-
PK	5.953G	61.61	68.20	-6.59	8.17	3	H	360	1.86	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5825MHz_TX

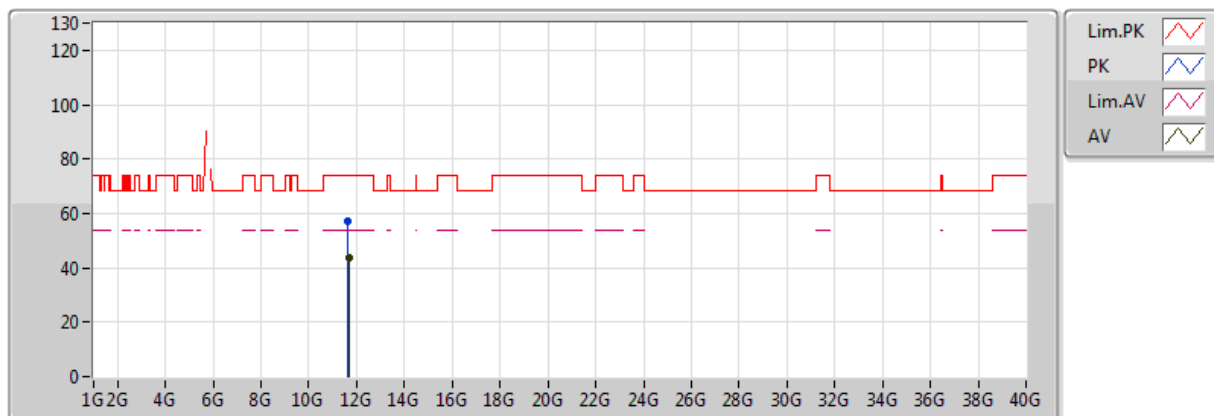


20170623
EUT_Y_2TX
Setting 24
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.64028G	43.70	54.00	-10.30	16.22	3	V	327	1.82	-
PK	11.6548G	56.16	74.00	-17.84	16.23	3	V	327	1.82	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5825MHz_TX

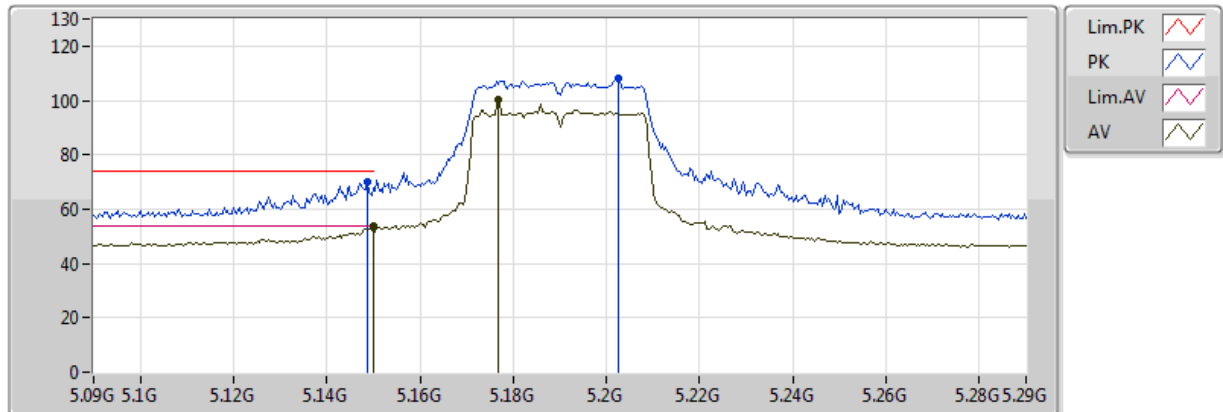


20170623
EUT Y_2TX
Setting 24
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.66092G	43.62	54.00	-10.38	16.24	3	H	99	2.06	-
PK	11.63608G	56.96	74.00	-17.04	16.22	3	H	99	2.06	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5190MHz_TX

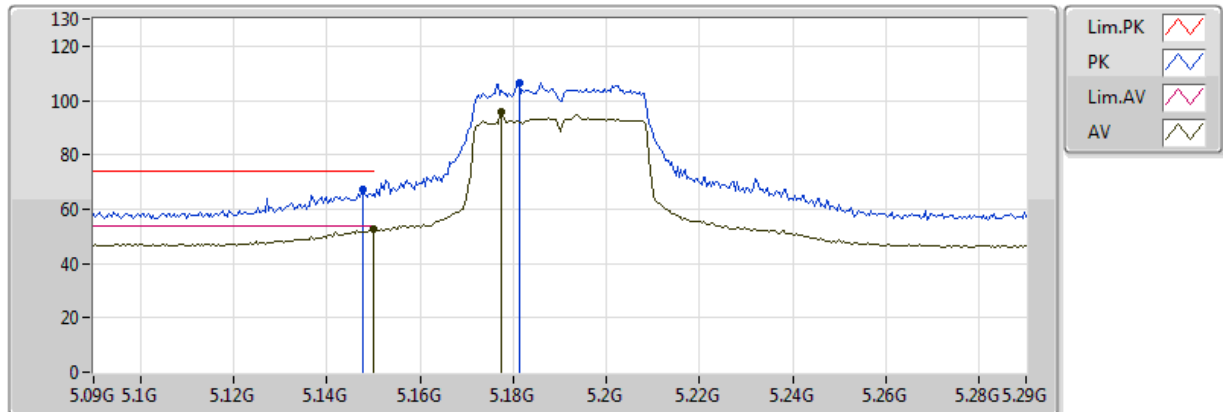


20170622
EUT_Y_2TX
Setting 18
04-B-2-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	53.93	54.00	-0.07	5.31	3	V	39	1.06	-
AV	5.1768G	100.46	Inf	-Inf	5.41	3	V	39	1.06	-
PK	5.1488G	69.87	74.00	-4.13	5.31	3	V	39	1.06	-
PK	5.2024G	108.22	Inf	-Inf	5.49	3	V	39	1.06	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5190MHz_TX

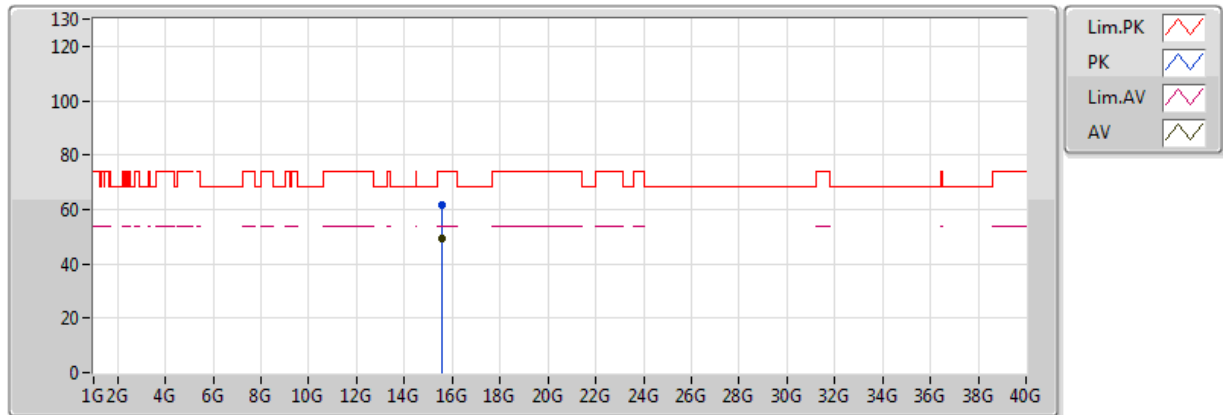


20170622
EUT_Y_2TX
Setting 18
04-B-2-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	52.43	54.00	-1.57	5.31	3	H	49	1.85	-
AV	5.1776G	95.58	Inf	-Inf	5.41	3	H	49	1.85	-
PK	5.1476G	67.25	74.00	-6.75	5.31	3	H	49	1.85	-
PK	5.1812G	106.57	Inf	-Inf	5.42	3	H	49	1.85	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5190MHz_TX

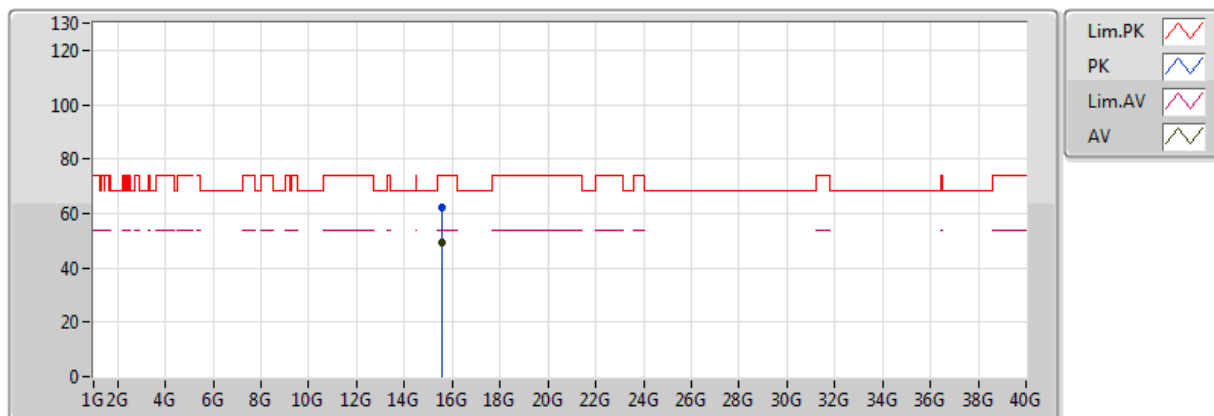


20170623
EUT_Y_2TX
Setting 18
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.56778G	49.16	54.00	-4.84	17.82	3	V	332	1.79	-
PK	15.5715G	61.54	74.00	-12.46	17.82	3	V	332	1.79	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5190MHz_TX

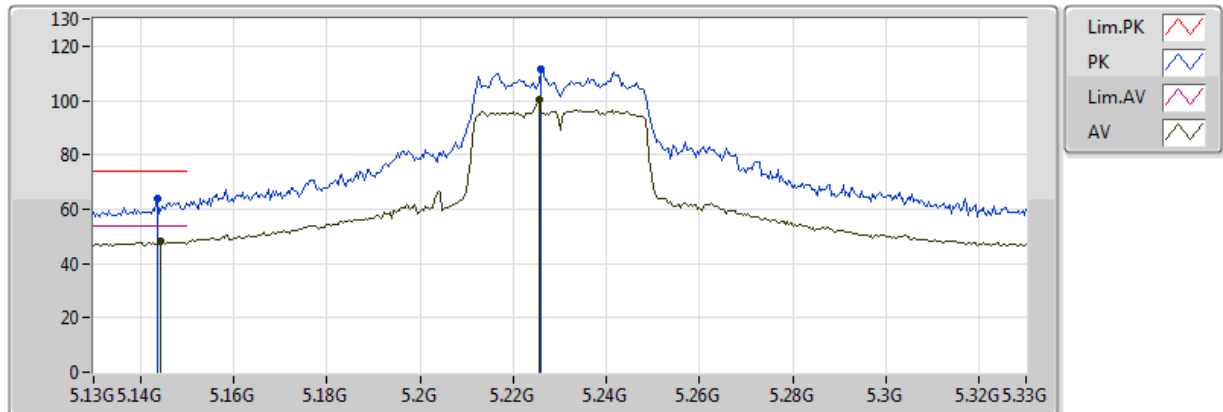


20170623
EUT_Y_2TX
Setting 18
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.57084G	49.05	54.00	-4.95	17.82	3	H	250	2.07	-
PK	15.56934G	62.05	74.00	-11.95	17.82	3	H	250	2.07	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5230MHz_TX

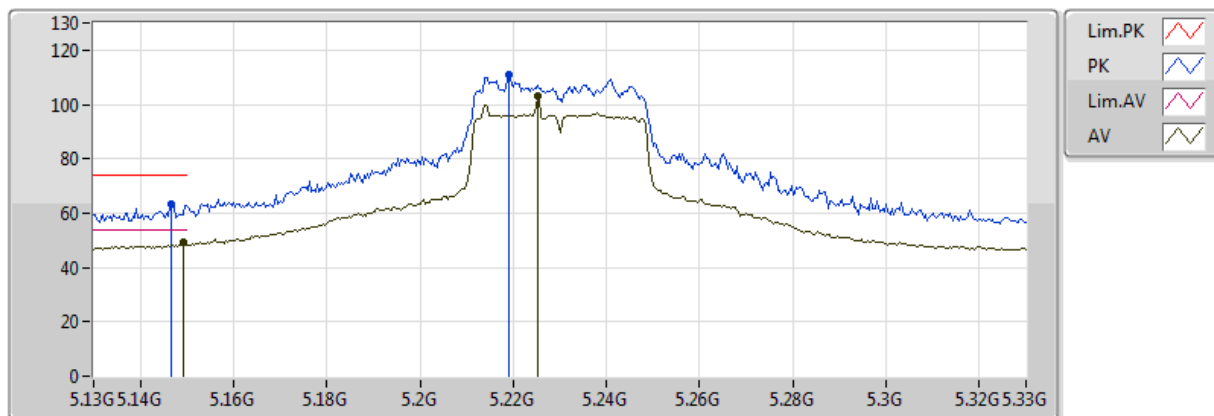


20170622
EUT_Y_2TX
Setting 24
04-B-2-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1444G	48.01	54.00	-5.99	5.30	3	V	47	1.66	-
AV	5.2256G	100.44	Inf	-Inf	5.52	3	V	47	1.66	-
PK	5.1436G	63.75	74.00	-10.25	5.29	3	V	47	1.66	-
PK	5.226G	111.73	Inf	-Inf	5.52	3	V	47	1.66	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5230MHz_TX

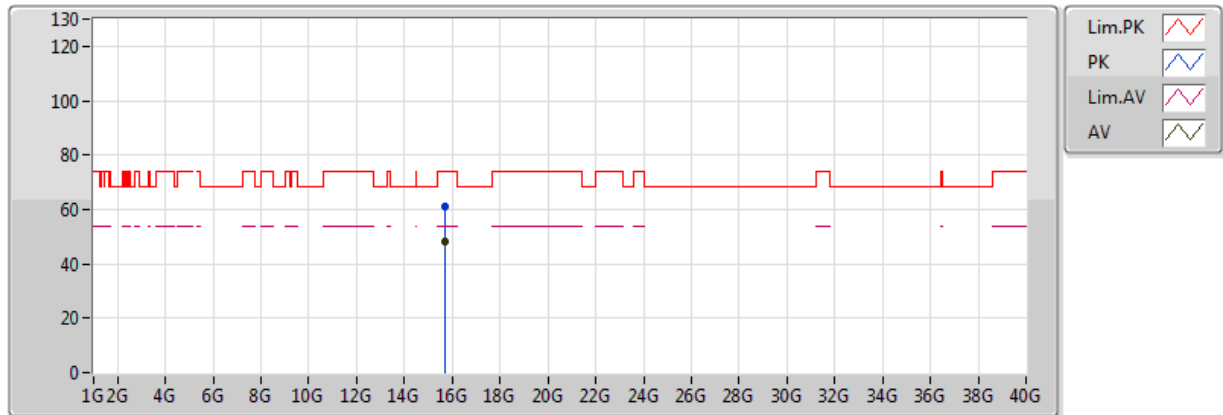


20170622
EUT_Y_2TX
Setting 24
04-B-2-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1492G	49.19	54.00	-4.81	5.31	3	H	25	2.50	-
AV	5.2252G	102.93	Inf	-Inf	5.52	3	H	25	2.50	-
PK	5.1468G	63.34	74.00	-10.66	5.30	3	H	25	2.50	-
PK	5.2192G	111.02	Inf	-Inf	5.51	3	H	25	2.50	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5230MHz_TX

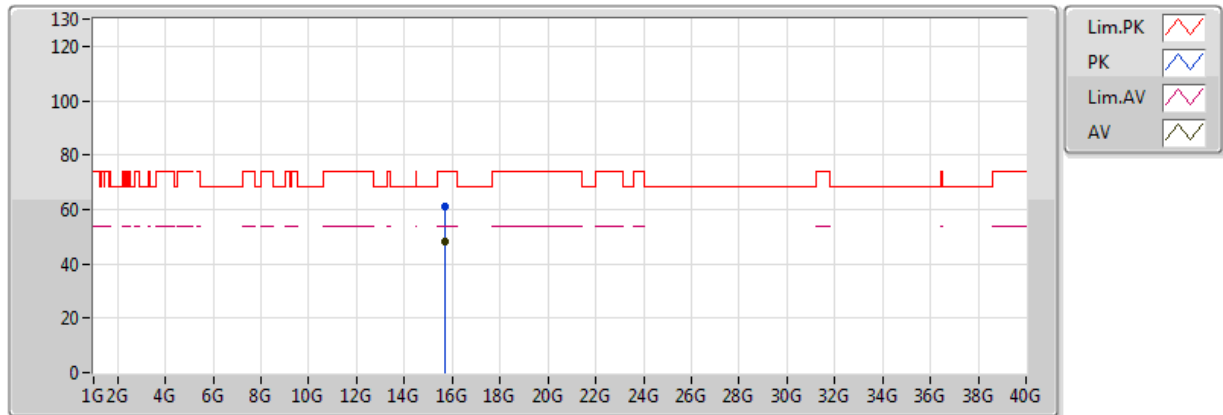


20170623
EUT Y_2TX
Setting 24
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.69828G	48.11	54.00	-5.89	17.93	3	V	308	1.43	-
PK	15.68622G	60.96	74.00	-13.04	17.92	3	V	308	1.43	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5230MHz_TX

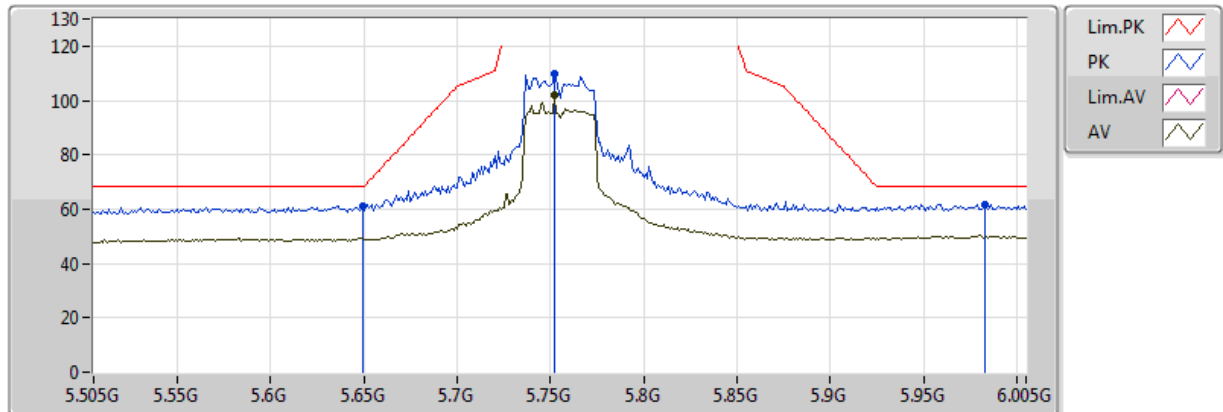


20170623
EUT_Y_2TX
Setting 24
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.67524G	48.36	54.00	-5.64	17.91	3	H	71	2.37	-
PK	15.68934G	61.05	74.00	-12.95	17.92	3	H	71	2.37	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5755MHz_TX

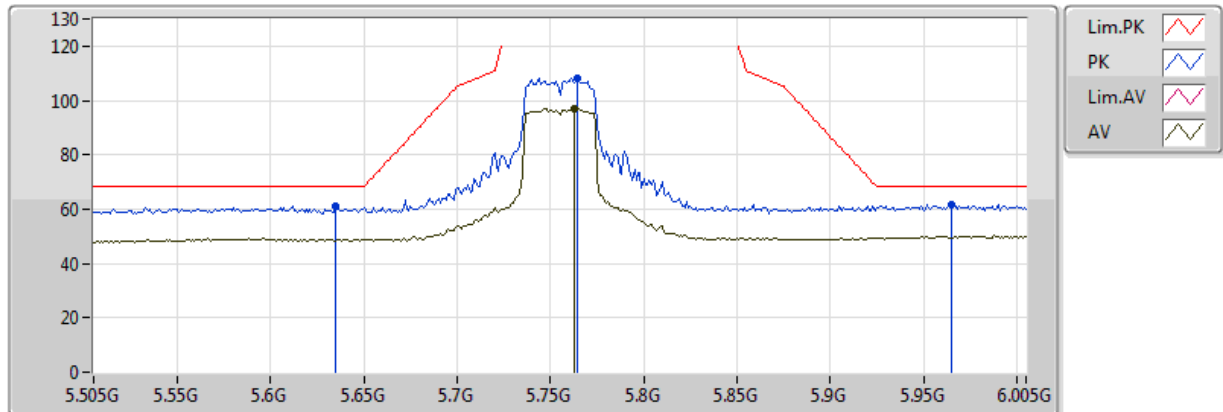


20170623
EUT_Y_2TX
Setting 24
04-J-5-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.752G	101.79	Inf	-Inf	7.08	3	V	50	1.85	-
PK	5.649G	61.02	68.20	-7.18	6.87	3	V	50	1.85	-
PK	5.752G	109.94	Inf	-Inf	7.08	3	V	50	1.85	-
PK	5.983G	61.84	68.20	-6.36	8.37	3	V	50	1.85	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5755MHz_TX

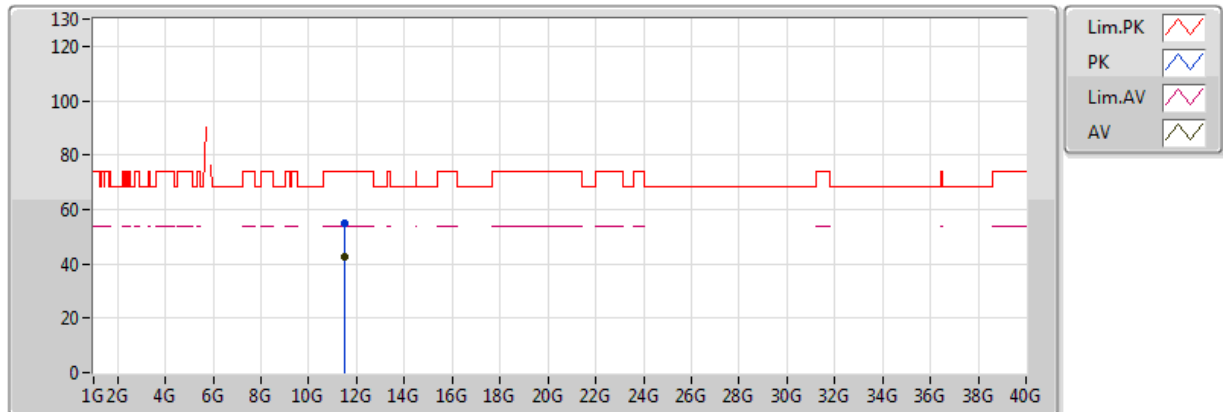


20170623
EUT_Y_2TX
Setting 24
04-J-5-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.763G	97.01	Inf	-Inf	7.10	3	H	4	2.11	-
PK	5.635G	60.98	68.20	-7.22	6.85	3	H	4	2.11	-
PK	5.764G	108.34	Inf	-Inf	7.10	3	H	4	2.11	-
PK	5.965G	61.90	68.20	-6.30	8.25	3	H	4	2.11	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5755MHz_TX

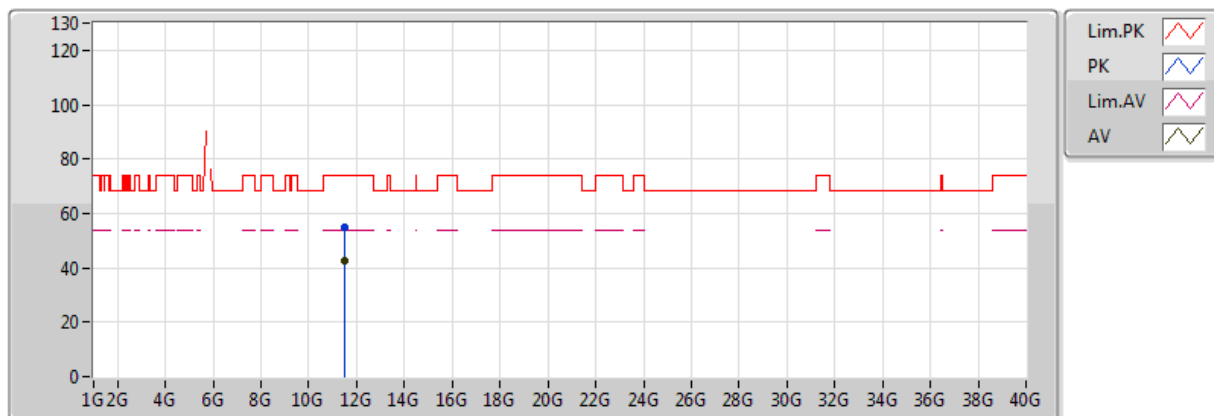


20170623
EUT Y_2TX
Setting 24
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.50082G	42.64	54.00	-11.36	16.13	3	V	246	1.35	-
PK	11.49806G	55.00	74.00	-19.00	16.13	3	V	246	1.35	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5755MHz_TX

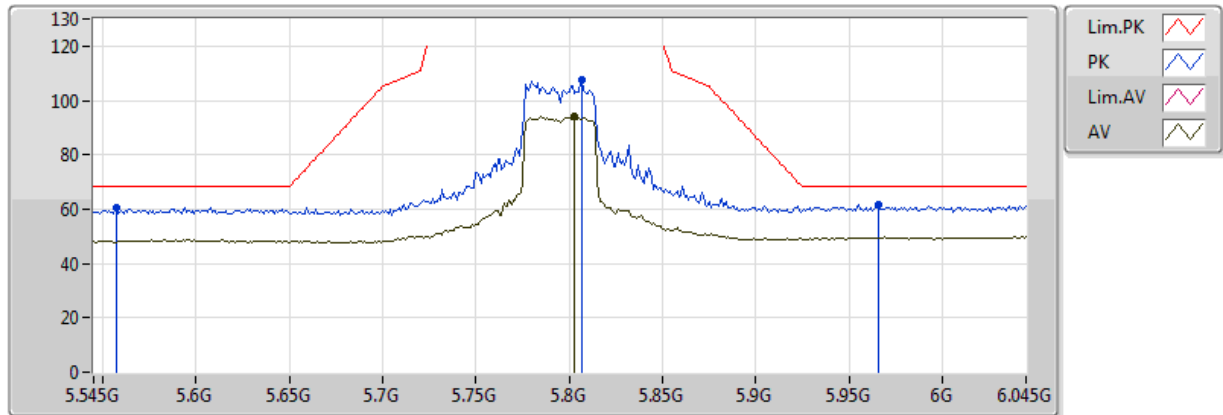


20170623
EUT Y_2TX
Setting 24
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.4962G	42.58	54.00	-11.42	16.13	3	H	3	1.77	-
PK	11.5103G	54.83	74.00	-19.17	16.14	3	H	3	1.77	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5795MHz_TX

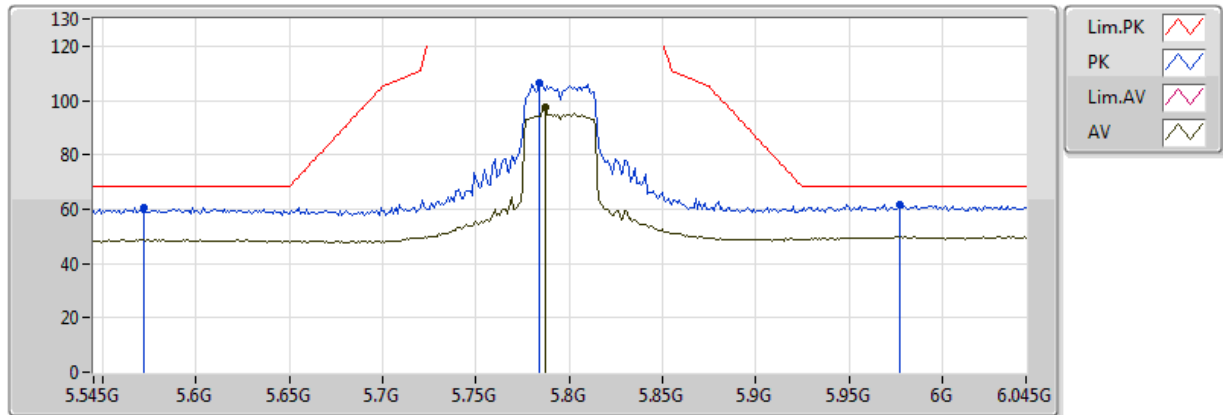


20170623
EUT_Y_2TX
Setting 24
04-J-5-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.803G	94.29	Inf	-Inf	7.20	3	V	39	2.03	-
PK	5.557G	60.71	68.20	-7.49	6.51	3	V	39	2.03	-
PK	5.807G	107.31	Inf	-Inf	7.23	3	V	39	2.03	-
PK	5.966G	61.61	68.20	-6.59	8.26	3	V	39	2.03	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5795MHz_TX

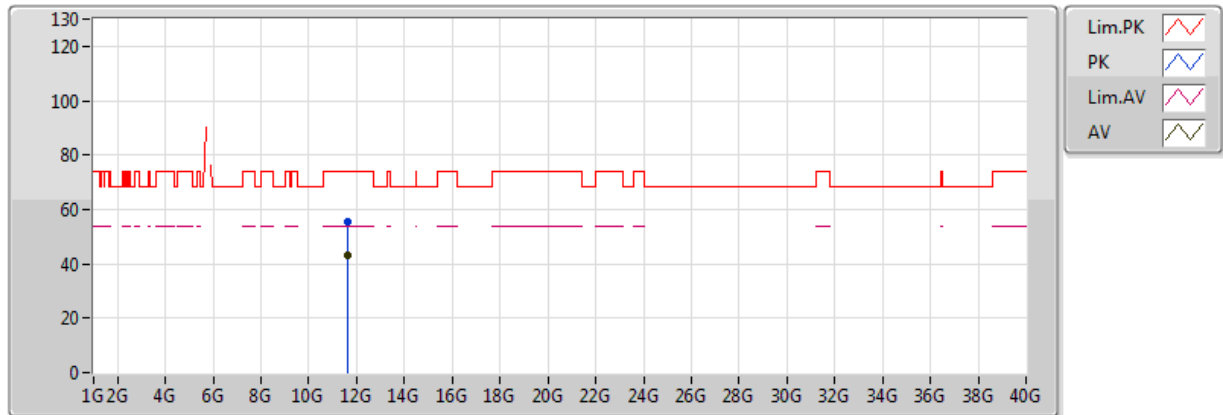


20170623
EUT_Y_2TX
Setting 24
04-J-5-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.787G	97.34	Inf	-Inf	7.15	3	H	5	2.07	-
PK	5.572G	60.58	68.20	-7.62	6.61	3	H	5	2.07	-
PK	5.784G	106.55	Inf	-Inf	7.15	3	H	5	2.07	-
PK	5.977G	61.69	68.20	-6.51	8.33	3	H	5	2.07	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5795MHz_TX

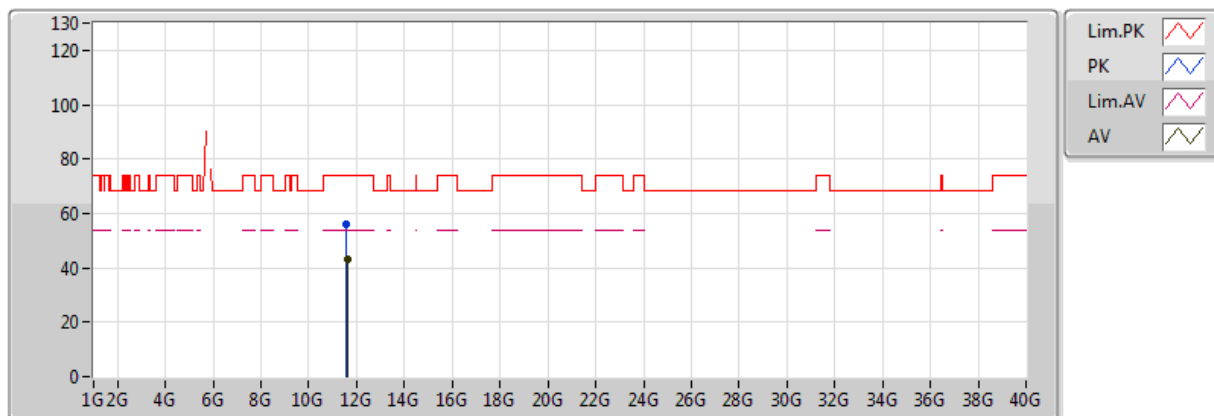


20170623
EUT Y_2TX
Setting 24
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.605G	43.32	54.00	-10.68	16.20	3	V	317	2.07	-
PK	11.6035G	55.54	74.00	-18.46	16.20	3	V	317	2.07	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5795MHz_TX

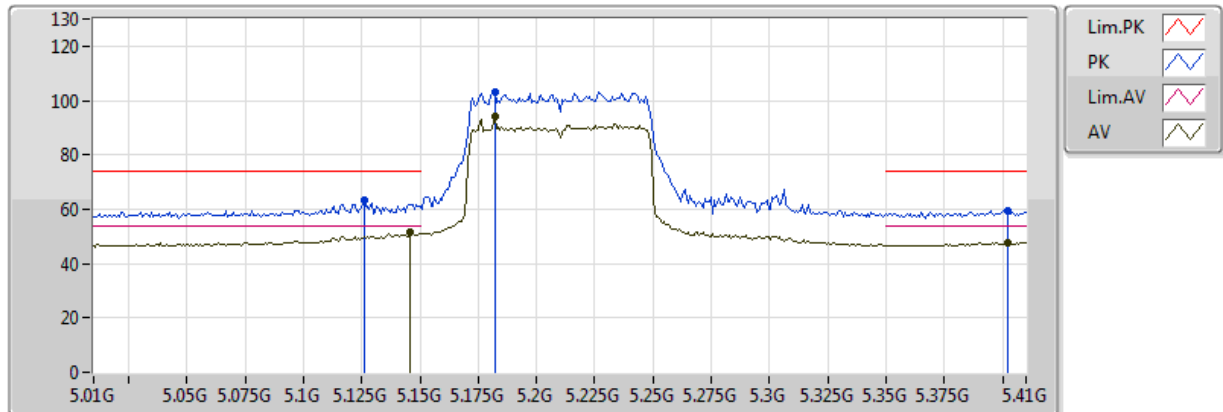


20170623
EUT Y_2TX
Setting 24
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.59876G	43.29	54.00	-10.71	16.20	3	H	278	2.24	-
PK	11.57668G	55.93	74.00	-18.07	16.18	3	H	278	2.24	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5210MHz_TX

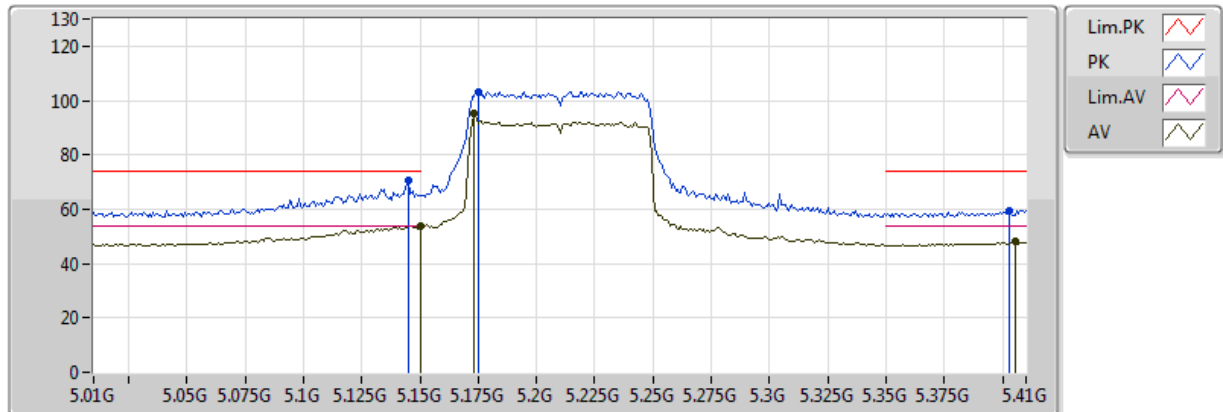


20170623
EUT_Y_2TX
Setting 17
04-J-5-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.146G	51.55	54.00	-2.45	5.30	3	V	50	1.59	-
AV	5.182G	94.30	Inf	-Inf	5.43	3	V	50	1.59	-
AV	5.402G	47.68	54.00	-6.32	5.71	3	V	50	1.59	-
PK	5.126G	63.21	74.00	-10.79	5.23	3	V	50	1.59	-
PK	5.182G	103.09	Inf	-Inf	5.43	3	V	50	1.59	-
PK	5.402G	59.63	74.00	-14.37	5.71	3	V	50	1.59	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5210MHz_TX

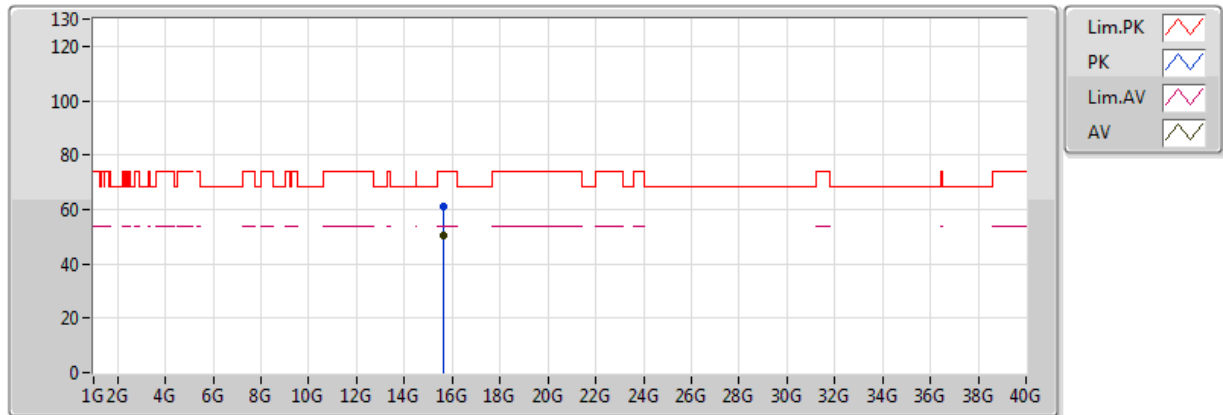


20170623
EUT_Y_2TX
Setting 17
04-J-5-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	53.99	54.00	-0.01	5.31	3	H	356	2.15	-
AV	5.1732G	95.08	Inf	-Inf	5.40	3	H	356	2.15	-
AV	5.4052G	48.02	54.00	-5.98	5.72	3	H	356	2.15	-
PK	5.1452G	70.85	74.00	-3.15	5.30	3	H	356	2.15	-
PK	5.1748G	103.28	Inf	-Inf	5.40	3	H	356	2.15	-
PK	5.4028G	59.30	74.00	-14.70	5.71	3	H	356	2.15	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5210MHz_TX

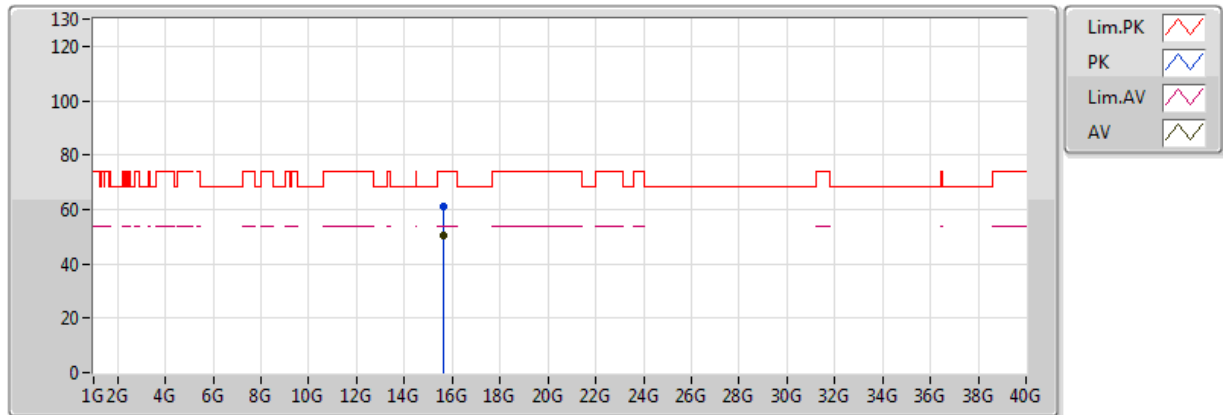


20170623
EUT_Y_2TX
Setting 17
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.62238G	50.39	54.00	-3.61	17.86	3	V	175	1.15	-
PK	15.63672G	61.24	74.00	-12.76	17.88	3	V	175	1.15	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5210MHz_TX

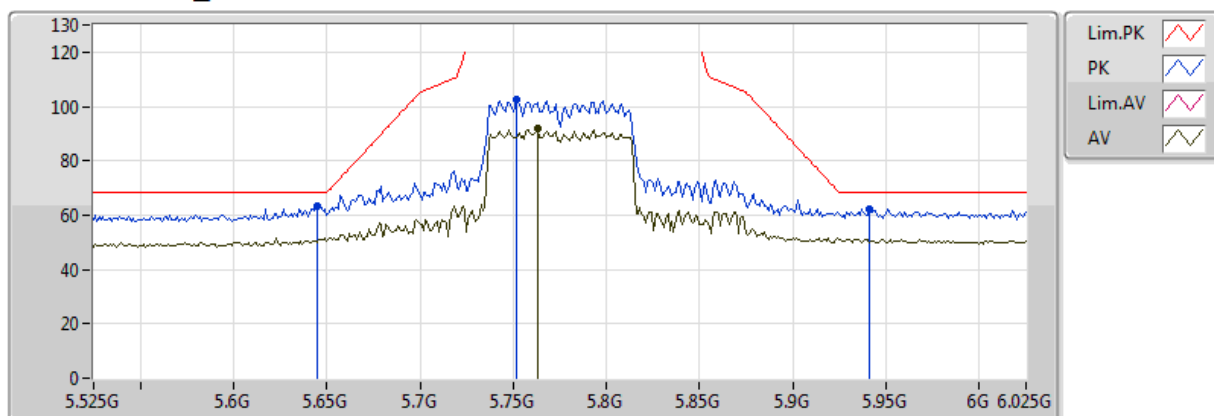


20170623
EUT Y_2TX
Setting 17
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.62244G	50.40	54.00	-3.60	17.86	3	H	130	2.05	-
PK	15.6333G	61.31	74.00	-12.69	17.87	3	H	130	2.05	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz_TX

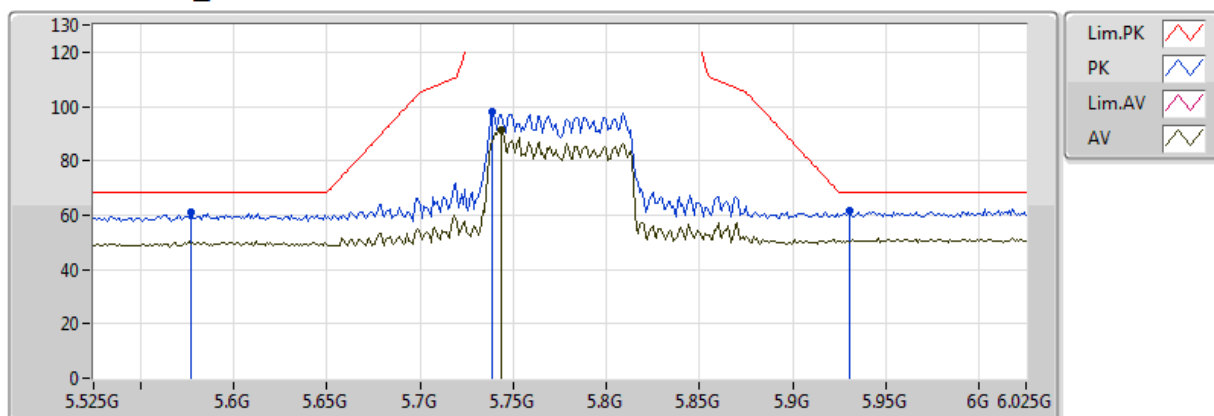


20170623
EUT_Y_2TX
Setting 24
04-J-5-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.763G	91.64	Inf	-Inf	7.10	3	V	245	1.50	-
PK	5.645G	63.33	68.20	-4.87	6.87	3	V	245	1.50	-
PK	5.752G	102.36	Inf	-Inf	7.08	3	V	245	1.50	-
PK	5.941G	62.23	68.20	-5.97	8.10	3	V	245	1.50	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz_TX

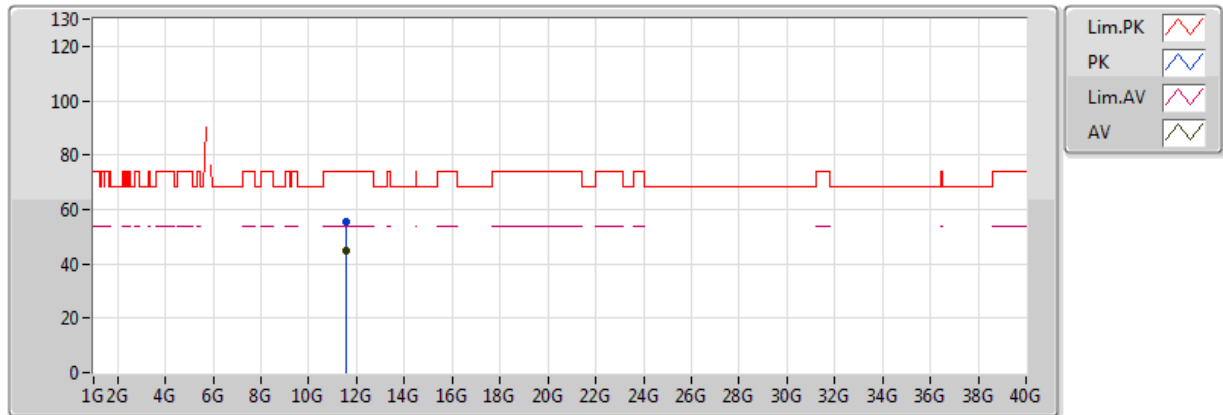


20170623
EUT Y_2TX
Setting 24
04-J-5-10
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.744G	91.47	Inf	-Inf	7.06	3	H	250	1.50	-
PK	5.777G	61.03	68.20	-7.17	6.64	3	H	250	1.50	-
PK	5.739G	98.17	Inf	-Inf	7.05	3	H	250	1.50	-
PK	5.93G	61.46	68.20	-6.74	8.02	3	H	250	1.50	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz_TX

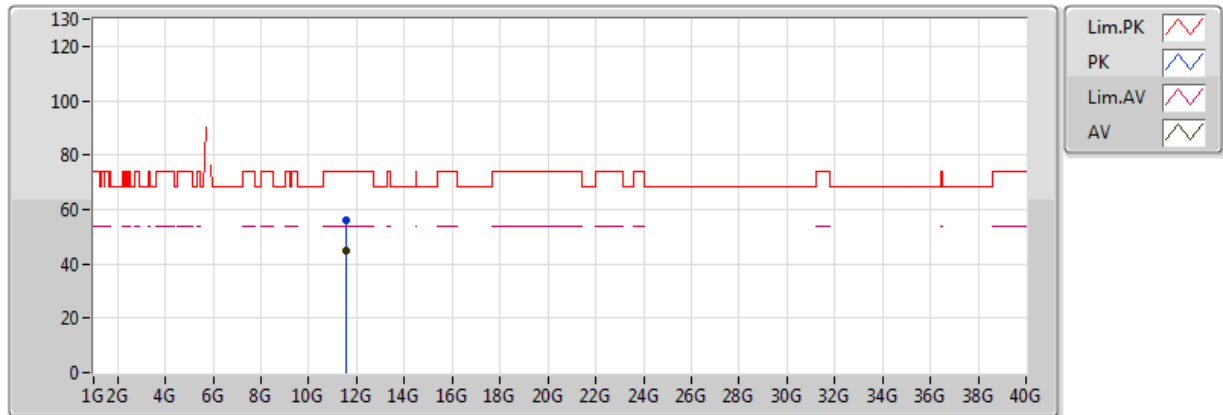


20170623
EUT Y_2TX
Setting 24
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.56224G	44.85	54.00	-9.15	16.17	3	V	195	2.49	-
PK	11.55624G	55.21	74.00	-18.79	16.17	3	V	195	2.49	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz_TX



20170623
EUT Y_2TX
Setting 24
04-J-5
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.55006G	44.77	54.00	-9.23	16.16	3	H	175	1.08	-
PK	11.54808G	55.79	74.00	-18.21	16.16	3	H	175	1.08	-

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.

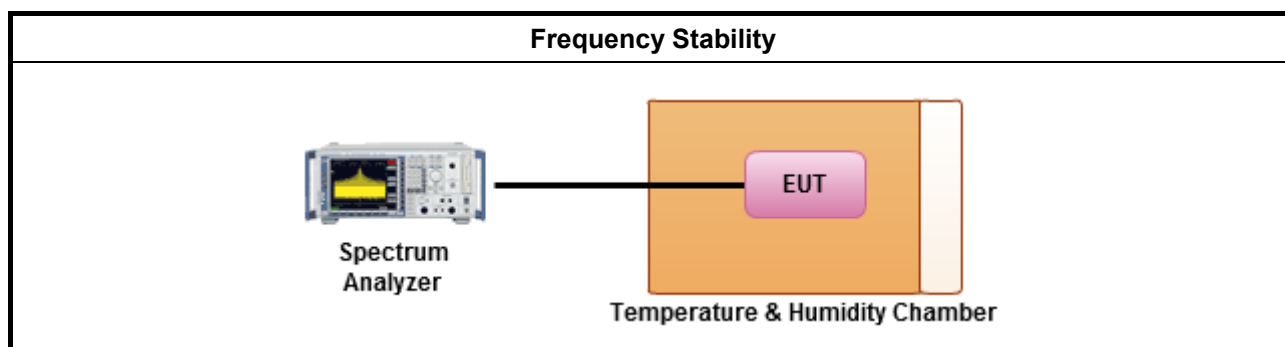
3.6.2 Measuring Instruments

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

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	5199.9938	5199.9936	5199.9930	5199.9923
110.00	5199.9934	5199.9925	5199.9922	5199.9917
93.50	5199.9928	5199.9927	5199.9923	5199.9922
Max. Deviation (MHz)	0.0072	0.0075	0.0078	0.0083
Max. Deviation (ppm)	1.38	1.44	1.50	1.60
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5199.9951	5199.9946	5199.9941	5199.9934
10	5199.9937	5199.9928	5199.9922	5199.9912
20	5199.9934	5199.9930	5199.9920	5199.9914
30	5199.9891	5199.9882	5199.9875	5199.9873
40	5199.9878	5199.9873	5199.9871	5199.9862
Max. Deviation (MHz)	0.0122	0.0127	0.0129	0.0138
Max. Deviation (ppm)	2.35	2.44	2.48	2.65
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5784.9943	5784.9936	5784.9930	5784.9921
110.00	5784.9934	5784.9931	5784.9921	5784.9913
93.50	5784.9932	5784.9922	5784.9921	5784.9919
Max. Deviation (MHz)	0.0068	0.0078	0.0079	0.0087
Max. Deviation (ppm)	1.18	1.35	1.37	1.50
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5784.9970	5784.9960	5784.9959	5784.9956
10	5784.9950	5784.9947	5784.9946	5784.9940
20	5784.9934	5784.9924	5784.9919	5784.9913
30	5784.9891	5784.9881	5784.9878	5784.9870
40	5784.9883	5784.9880	5784.9873	5784.9865
Max. Deviation (MHz)	0.0117	0.0120	0.0127	0.0135
Max. Deviation (ppm)	2.02	2.07	2.20	2.33
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	5189.9941	5189.9931	5189.9927	5189.9920
110.00	5189.9934	5189.9924	5189.9920	5189.9916
93.50	5189.9933	5189.9926	5189.9916	5189.9915
Max. Deviation (MHz)	0.0067	0.0076	0.0084	0.0085
Max. Deviation (ppm)	1.29	1.46	1.62	1.64
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5189.9940	5189.9932	5189.9923	5189.9913
10	5189.9937	5189.9930	5189.9926	5189.9919
20	5189.9934	5189.9924	5189.9916	5189.9910
30	5189.9891	5189.9883	5189.9877	5189.9872
40	5189.9877	5189.9873	5189.9865	5189.9861
Max. Deviation (MHz)	0.0123	0.0127	0.0135	0.0139
Max. Deviation (ppm)	2.37	2.45	2.60	2.68
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5754.9944	5754.9942	5754.9941	5754.9932
110.00	5754.9934	5754.9930	5754.9927	5754.9920
93.50	5754.9931	5754.9924	5754.9921	5754.9913
Max. Deviation (MHz)	0.0069	0.0076	0.0079	0.0087
Max. Deviation (ppm)	1.20	1.32	1.37	1.51
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5754.9963	5754.9958	5754.9948	5754.9944
10	5754.9954	5754.9951	5754.9941	5754.9935
20	5754.9934	5754.9931	5754.9922	5754.9914
30	5754.9891	5754.9886	5754.9879	5754.9872
40	5754.9889	5754.9884	5754.9880	5754.9879
Max. Deviation (MHz)	0.0111	0.0116	0.0121	0.0128
Max. Deviation (ppm)	1.93	2.02	2.10	2.22
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	5209.9938	5209.9928	5209.9919	5209.9913
110.00	5209.9934	5209.9926	5209.9922	5209.9921
93.50	5209.9926	5209.9920	5209.9911	5209.9908
Max. Deviation (MHz)	0.0074	0.0080	0.0089	0.0092
Max. Deviation (ppm)	1.42	1.54	1.71	1.77
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5209.9949	5209.9942	5209.9934	5209.9927
10	5209.9939	5209.9929	5209.9919	5209.9914
20	5209.9934	5209.9931	5209.9929	5209.9923
30	5209.9891	5209.9886	5209.9882	5209.9873
40	5209.9872	5209.9871	5209.9864	5209.9858
Max. Deviation (MHz)	0.0128	0.0129	0.0136	0.0142
Max. Deviation (ppm)	2.46	2.48	2.61	2.73
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5774.9935	5774.9931	5774.9927	5774.9922
110.00	5774.9934	5774.9927	5774.9920	5774.9910
93.50	5774.9930	5774.9928	5774.9925	5774.9922
Max. Deviation (MHz)	0.0070	0.0073	0.0080	0.0090
Max. Deviation (ppm)	1.21	1.26	1.39	1.56
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5774.9968	5774.9964	5774.9960	5774.9956
10	5774.9949	5774.9948	5774.9946	5774.9944
20	5774.9934	5774.9931	5774.9927	5774.9926
30	5774.9891	5774.9883	5774.9880	5774.9874
40	5774.9873	5774.9867	5774.9859	5774.9854
Max. Deviation (MHz)	0.0127	0.0133	0.0141	0.0146
Max. Deviation (ppm)	2.20	2.30	2.44	2.53
Result	Pass			

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 23, 2017	Jan. 22, 2018	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 14, 2016	Dec. 13, 2017	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 21, 2016	Dec. 20, 2017	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 23, 2017	May 22, 2018	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Bilog Antenna with 6dB Attenuator	Chase & EMCI	CBL6111A &N-6-06	1543 &AT-N0604	30MHz ~ 1GHz	Jan. 11, 2017	Jan. 10, 2018	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Mar. 15, 2018*	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Nov. 09, 2017	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 25, 2016	Jul. 24, 2017	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 05, 2017	Jul. 04, 2018	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2017	May 01, 2018	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Jan. 15, 2018	Radiation (03CH01-CB)
Amplifier	-	-	TF-130N-R1	26GHz ~ 40GHz	Jun. 20, 2017	Jun. 19, 2018	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 22, 2016	Nov. 21, 2017	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 23, 2017	Nov. 22, 2018	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 06, 2017	May 05, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Dec. 25, 2017	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 03, 2016	Jun. 02, 2017	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 02, 2017	Jun. 01, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz – 26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz – 26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz – 26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 22, 2016	Nov. 21, 2017	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.