



# FCC RADIO TEST REPORT

FCC ID : 2AHKM-HIVE2200  
Equipment : 2x2 DBCC WiFi Extender  
Brand Name : hitron  
Model Name : HIXE12AWR  
Applicant : Hitron Technologies Inc.  
No. 1-8, Li-Hsin 1st Rd. Hsinchu Science Park,  
Hsinchu 30078, Taiwan  
Manufacturer : Hitron Technologies Inc.  
No. 1-8, Li-Hsin 1st Rd. Hsinchu Science Park,  
Hsinchu 30078, Taiwan  
Standard : 47 CFR FCC Part 15.407

The product was received on Jul. 25, 2018, and testing was started from Oct. 05, 2018 and completed on Oct. 31, 2018. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

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

  
Approved by: Sam Chen

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



# Table of Contents

**History of this test report.....3**

**Summary of Test Result.....4**

**1 General Description .....5**

1.1 Information.....5

1.2 Testing Applied Standards .....8

1.3 Testing Location Information.....8

1.4 Measurement Uncertainty .....8

**2 Test Configuration of EUT .....9**

2.1 Test Channel Mode .....9

2.2 The Worst Case Measurement Configuration.....10

2.3 EUT Operation during Test .....12

2.4 Accessories .....12

2.5 Support Equipment.....12

2.6 Test Setup Diagram .....13

**3 Transmitter Test Result .....16**

3.1 AC Power-line Conducted Emissions .....16

3.2 Emission Bandwidth.....18

3.3 Maximum Conducted Output Power .....19

3.4 Peak Power Spectral Density.....21

3.5 Unwanted Emissions.....24

**4 Test Equipment and Calibration Data .....28**

**Appendix A. Test Results of AC Power-line Conducted Emissions**

**Appendix B. Test Results of Emission Bandwidth**

**Appendix C. Test Results of Maximum Conducted Output Power**

**Appendix D. Test Results of Peak Power Spectral Density**

**Appendix E. Test Results of Unwanted Emissions**

**Appendix F. Test Results of Radiated Emission Co-location**

**Appendix G. Test Photos**

**Photographs of EUT v01**



### History of this test report

Report No.	Version	Description	Issued Date
FR862827AB	01	Initial issue of report	Nov. 12, 2018



### Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.407(a)	Emission Bandwidth	PASS	-
3.3	15.407(a)	Maximum Conducted Output Power	PASS	-
3.4	15.407(a)	Peak Power Spectral Density	PASS	-
3.5	15.407(b)	Unwanted Emissions	PASS	-

Reviewed by: **Sam Chen**

Report Producer: **Viola Huang**



# 1 General Description

## 1.1 Information

### 1.1.1 RF General Information

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

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11a	20	2TX
5.15-5.25GHz	802.11n HT20	20	2TX
5.15-5.25GHz	802.11ac VHT20	20	2TX
5.15-5.25GHz	802.11n HT40	40	2TX
5.15-5.25GHz	802.11ac VHT40	40	2TX
5.15-5.25GHz	802.11ac VHT80	80	2TX
5.725-5.85GHz	802.11a	20	2TX
5.725-5.85GHz	802.11n HT20	20	2TX
5.725-5.85GHz	802.11ac VHT20	20	2TX
5.725-5.85GHz	802.11n HT40	40	2TX
5.725-5.85GHz	802.11ac VHT40	40	2TX
5.725-5.85GHz	802.11ac VHT80	80	2TX

Note:

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



1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	P/N	Antenna Type	Connector	Gain (dBi)
1	1	Ethertronics	XE1v2	-	PCB Antenna	I-PEX	Note
2	2	Ethertronics	XE1v2	-	PCB Antenna	I-PEX	
3	1	PSA	-	RFECA3216060A1T	CERAMIC Antenna	N/A	

Note 1:

Ant.	Port	Gain (dBi)			
		WLAN 2.4G	WLAN 5G Band 1	WLAN 5G Band 4	BT
1	1	4.4	4.8	5.5	-
2	2	3.1	3.8	3.8	-
3	1	-	-	-	2.09

Note 2: The EUT has three antennas.

<For 2.4GHz Band>

For IEEE 802.11b/g/n 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 Band>

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.

<For Bluetooth>

For BT function (1TX/1RX)

Only Port 1 can be used as transmitting/receiving antenna.



### 1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11a	0.972	0.123	2.068m	1k
802.11ac VHT20	0.987	0.057	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT40	0.976	0.106	2.44m	1k
802.11ac VHT80	0.991	0.039	n/a (DC>=0.98)	n/a (DC>=0.98)

Note:

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

### 1.1.4 EUT Operational Condition

<b>EUT Power Type</b>	Internal power supply		
<b>Beamforming Function</b>	<input type="checkbox"/> With beamforming	<input checked="" type="checkbox"/> Without beamforming	
<b>Function</b>	<input type="checkbox"/> Outdoor P2M	<input checked="" type="checkbox"/> Indoor P2M	
	<input type="checkbox"/> Fixed P2P	<input type="checkbox"/> Client	
<b>Test Software Version</b>	QRCT(Version3.0.187.0)		

### 1.1.5 Table for EUT support type

Function	support type
AP Router	Master
Extender	Master + Slave
Mesh	Master + Slave



### 1.2 Testing Applied Standards

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

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

### 1.3 Testing Location Information

Testing Location		
<input type="checkbox"/>	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL : 886-3-327-3456 FAX : 886-3-327-0973
<input checked="" type="checkbox"/>	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Paul Chen	25°C / 65%	Oct. 16, 2018~Oct. 23, 2018
Radiated below 1GHz	03CH01-CB	Welson Chen	22°C / 54%	Oct. 31, 2018
Radiated above 1GHz	03CH01-CB	Welson Chen	22°C / 54%	Oct. 19, 2018~Oct. 22, 2018
AC Conduction	CO01-CB	GN Hou	23°C / 59%	Oct. 31, 2018

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

### 1.4 Measurement Uncertainty

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

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





## 2 Test Configuration of EUT

### 2.1 Test Channel Mode

Mode	PowerSetting
802.11a_Nss1,(6Mbps)_2TX	-
5180MHz	24
5200MHz	24
5240MHz	24
5745MHz	24
5785MHz	24
5825MHz	24
802.11ac VHT20_Nss1,(MCS0)_2TX	-
5180MHz	23.5
5200MHz	24
5240MHz	24
5745MHz	24
5785MHz	24
5825MHz	24
802.11ac VHT40_Nss1,(MCS0)_2TX	-
5190MHz	21
5230MHz	24
5755MHz	24
5795MHz	24
802.11ac VHT80_Nss1,(MCS0)_2TX	-
5210MHz	23
5775MHz	24

Note:

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



## 2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	AC power-line conducted emissions
<b>Condition</b>	AC power-line conducted measurement for line and neutral
<b>Operating Mode</b>	Normal Link
1	AP Router mode

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

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	Unwanted Emissions
<b>Test Condition</b>	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.
<b>Operating Mode &lt; 1GHz</b>	Normal Link
1	AP Router mode - EUT in Z axis
2	AP Router mode - EUT in Y axis
For operating mode 1 is the worst case and it was record in this test report.	
<b>Operating Mode &gt; 1GHz</b>	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



The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
	The EUT was performed at Y axis and Z axis position for Radiated emission above 1GHz test, and the worst case was found at Y axis. So the measurement will follow this same test configuration.
1	EUT in Y axis - WLAN 2.4GHz + WLAN 5GHz

Refer to Appendix F for Radiated Emission Co-location.

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz

Refer to Sporton Test Report No.: FA862827 for Co-location RF Exposure Evaluation.

Note1: The EUT supports AP Router 、Extender and Mesh mode, only AP Router mode was tested and recorded in this test report for customer's request.

Note2: All the specification of test configurations and test modes were based on customer's request. For normal link mode, the bluetooth function doesn't work.



### 2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

### 2.4 Accessories

N/A

### 2.5 Support Equipment

For Test Site No: CO01-CB

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

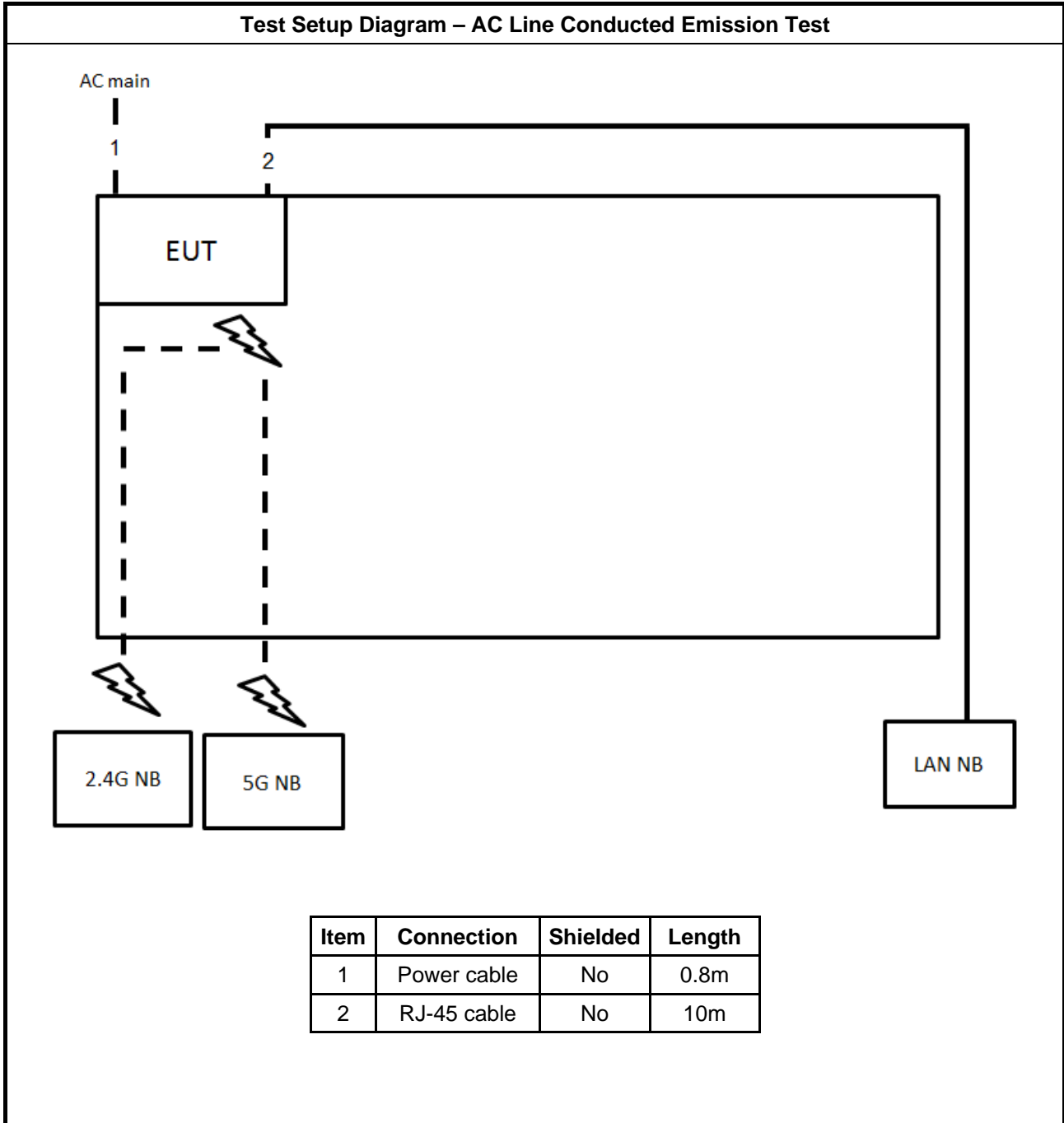
For Test Site No: 03CH01-CB (below 1GHz)

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*3	DELL	E4300	N/A

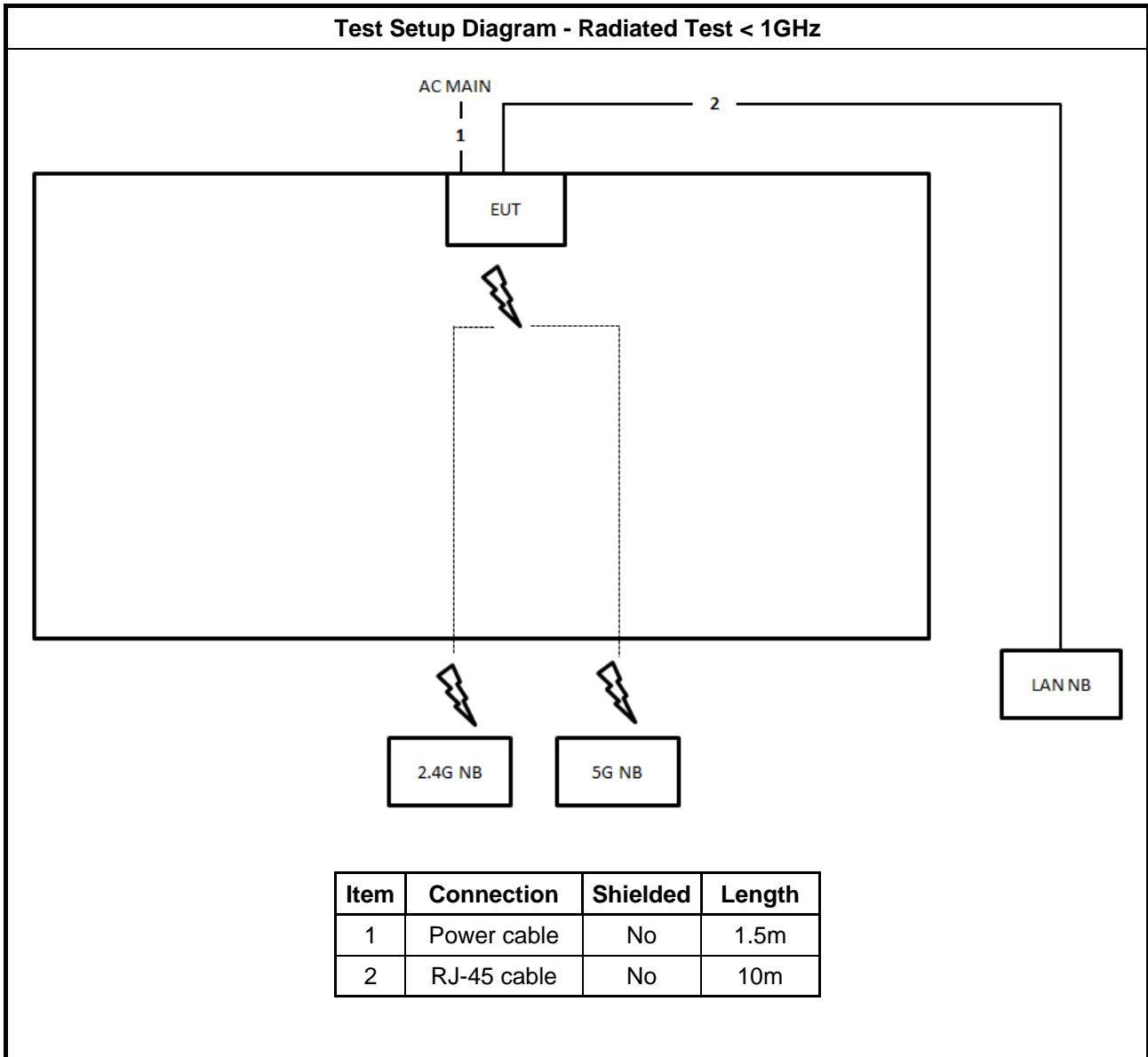
For Test Site No: 03CH01-CB (above 1GHz) and TH01-CB

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

## 2.6 Test Setup Diagram

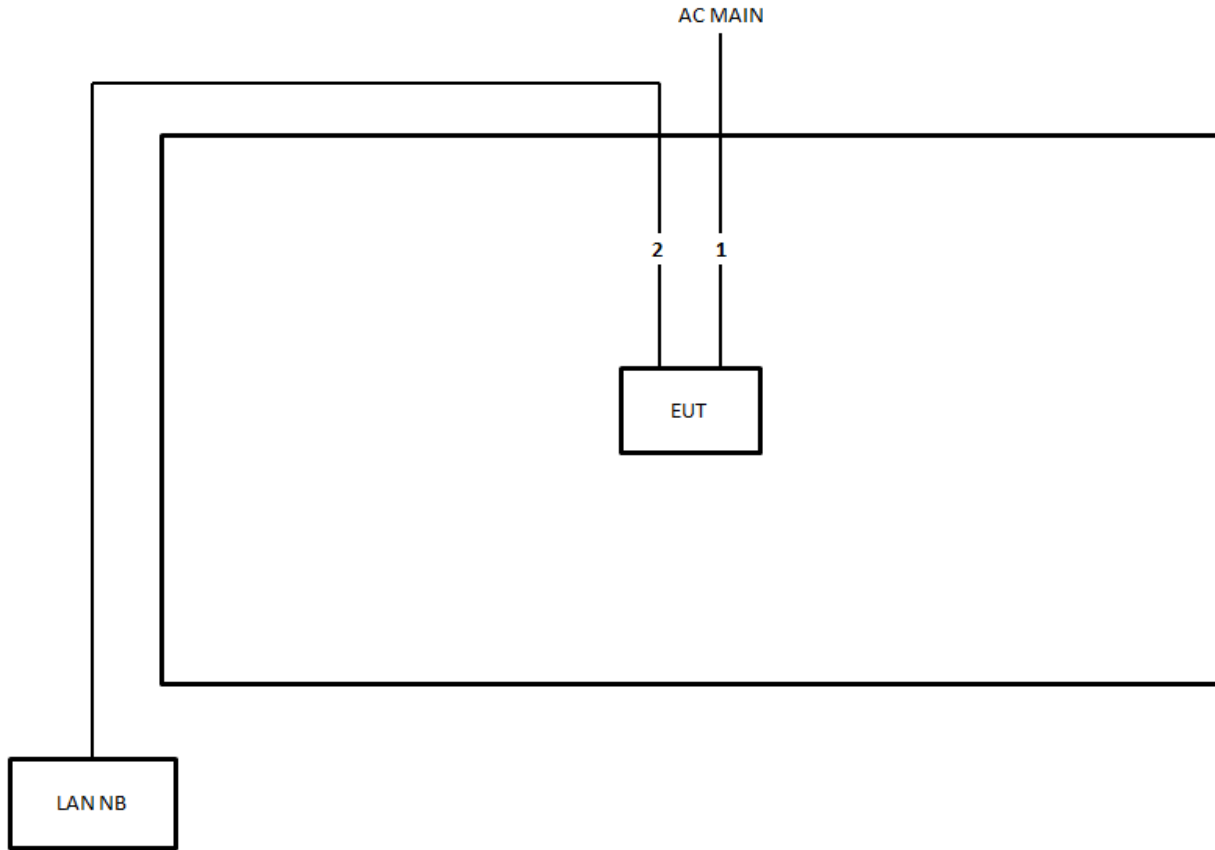


**Test Setup Diagram - Radiated Test < 1GHz**





Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	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

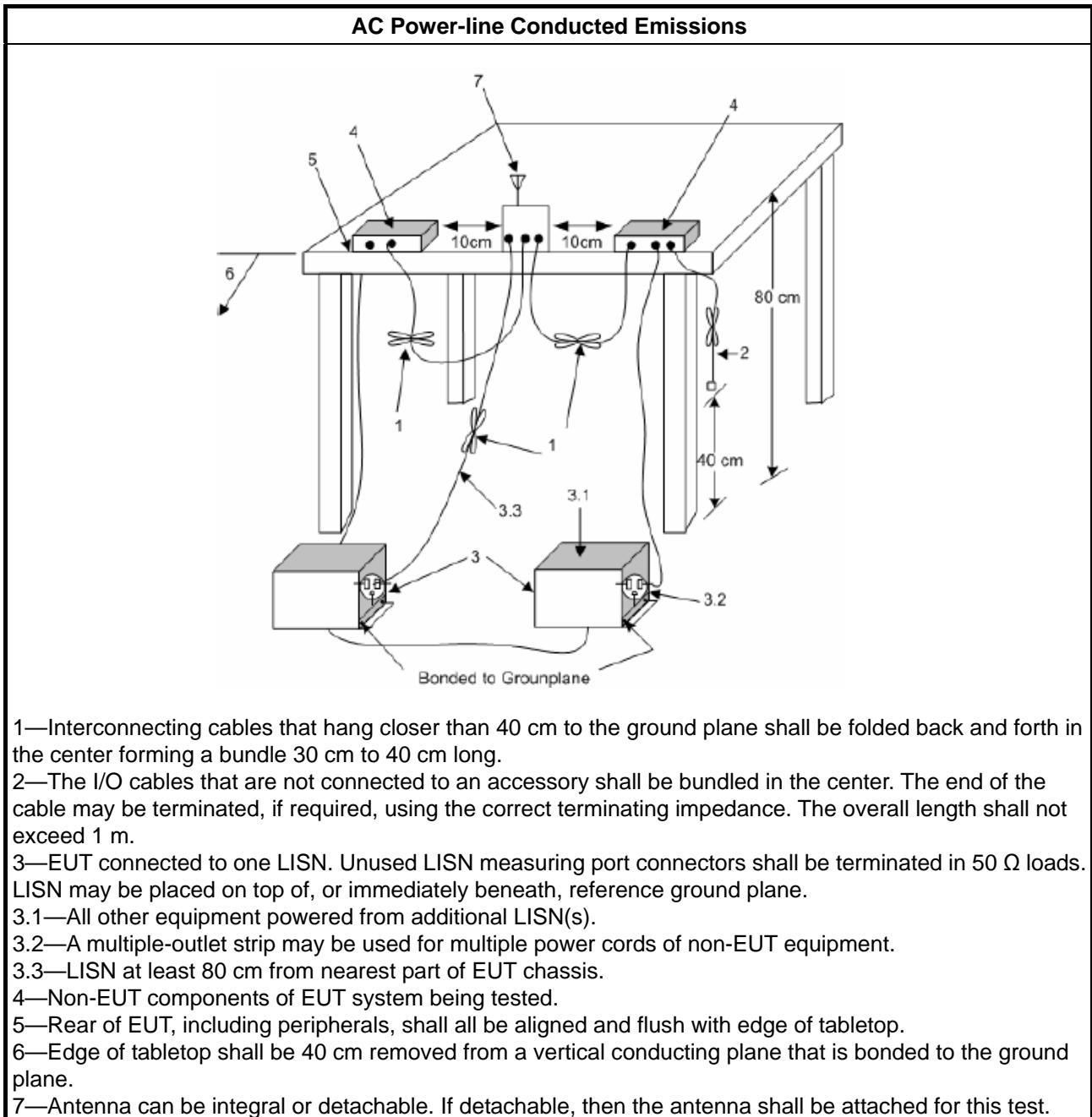
Refer a test equipment and calibration data table in this test report.

##### 3.1.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.



### 3.1.4 Test Setup



### 3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

### 3.2 Emission Bandwidth

#### 3.2.1 Emission Bandwidth Limit

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

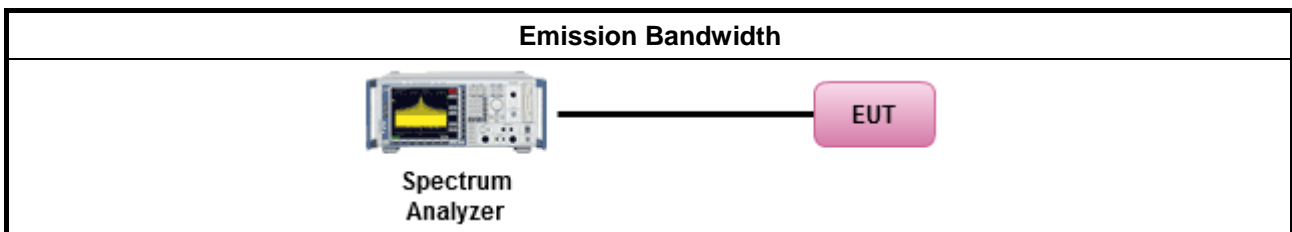
#### 3.2.2 Measuring Instruments

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

#### 3.2.3 Test Procedures

Test Method							
<ul style="list-style-type: none"> <li>▪ For the emission bandwidth shall be measured using one of the options below:               <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30px;"><input checked="" type="checkbox"/></td> <td>Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.</td> </tr> </table> </li> </ul>		<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.	<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.	<input type="checkbox"/>	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.						
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.						
<input type="checkbox"/>	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.						

#### 3.2.4 Test Setup



#### 3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B



### 3.3 Maximum Conducted Output Power

#### 3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
<b>UNII Devices</b>	
<input checked="" type="checkbox"/> For the 5.15-5.25 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Outdoor AP: the maximum conducted output power (<math>P_{Out}</math>) shall not exceed the lesser of 1 W. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)</math>. e.i.r.p. at any elevation angle above 30 degrees <math>\leq 125mW</math> [21dBm]</li> <li>Indoor AP: the maximum conducted output power (<math>P_{Out}</math>) shall not exceed the lesser of 1 W. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)</math></li> <li>Point-to-point AP: the maximum conducted output power (<math>P_{Out}</math>) shall not exceed the lesser of 1 W. If <math>G_{TX} &gt; 23</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 23)</math>.</li> <li>Mobile or Portable Client: the maximum conducted output power (<math>P_{Out}</math>) shall not exceed the lesser of 250 mW. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 24 - (G_{TX} - 6)</math>.</li> </ul>
<input type="checkbox"/>	For the 5.25-5.35 GHz band, the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$ , where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$ .
<input type="checkbox"/>	For the 5.47-5.725 GHz band, the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$ , where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$ .
<input checked="" type="checkbox"/> For the 5.725-5.85 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Point-to-multipoint systems (P2M): the maximum conducted output power (<math>P_{Out}</math>) shall not exceed the lesser of 1 W. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)</math>.</li> <li>Point-to-point systems (P2P): the maximum conducted output power (<math>P_{Out}</math>) shall not exceed the lesser of 1 W.</li> </ul>
<b>LE-LAN Devices</b>	
<input type="checkbox"/>	For the 5.15-5.25 GHz band, the maximum e.i.r.p. shall not exceed 200 mW or $10 + 10 \log B$ , dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
<input type="checkbox"/>	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log B$ , dBm, whichever power is less. B is the 99% emission bandwidth in MHz
<input type="checkbox"/>	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log B$ , dBm, whichever power is less. B is the 99% emission bandwidth in MHz
<input type="checkbox"/> For the 5.725-5.85 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Point-to-multipoint systems (P2M): the maximum conducted output power (<math>P_{Out}</math>) shall not exceed the lesser of 1 W. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)</math>.</li> <li>Point-to-point systems (P2P): the maximum conducted output power (<math>P_{Out}</math>) shall not exceed the lesser of 1 W.</li> </ul>
$P_{Out}$ = maximum conducted output power in dBm, $G_{TX}$ = the maximum transmitting antenna directional gain in dBi.	

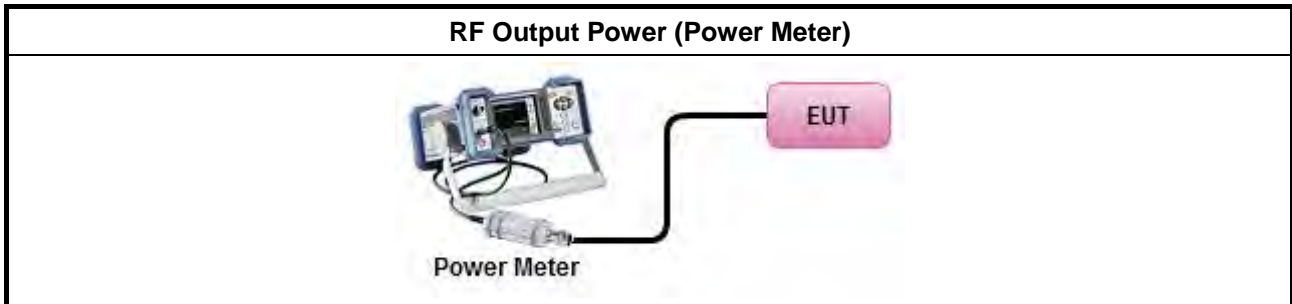
### 3.3.2 Measuring Instruments

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

### 3.3.3 Test Procedures

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

### 3.3.4 Test Setup



### 3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C



### 3.4 Peak Power Spectral Density

#### 3.4.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
<b>UNII Devices</b>	
<input checked="" type="checkbox"/> For the 5.15-5.25 GHz band:	
	<ul style="list-style-type: none"> <li>▪ Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 17 - (G_{TX} - 6)</math>.</li> <li>▪ Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 17 - (G_{TX} - 6)</math>.</li> <li>▪ Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If <math>G_{TX} &gt; 23</math> dBi, then <math>P_{Out} = 17 - (G_{TX} - 23)</math>.</li> <li>▪ Mobile or Portable Client: the peak power spectral density (PPSD) <math>\leq 11</math> dBm/MHz. If <math>G_{TX} &gt; 6</math> dBi, then <math>PPSD = 11 - (G_{TX} - 6)</math>.</li> </ul>
<input type="checkbox"/> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) $\leq 11$ dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$ .	
<input type="checkbox"/> For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) $\leq 11$ dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$ .	
<input checked="" type="checkbox"/> For the 5.725-5.85 GHz band:	
	<ul style="list-style-type: none"> <li>▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) <math>\leq 30</math> dBm/500kHz. If <math>G_{TX} &gt; 6</math> dBi, then <math>PPSD = 30 - (G_{TX} - 6)</math>.</li> <li>▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) <math>\leq 30</math> dBm/500kHz.</li> </ul>
<b>LE-LAN Devices</b>	
<input type="checkbox"/> For the 5.15-5.25 GHz band, the e.i.r.p. peak power spectral density (PPSD) $\leq 10$ dBm/MHz.	
<input type="checkbox"/> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) $\leq 11$ dBm/MHz.	
	<ul style="list-style-type: none"> <li>▪ e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where <math>\theta</math> is the angle above the local horizontal plane (of the Earth) as shown below:            -13 dBW/MHz for <math>0^\circ \leq \theta &lt; 8^\circ</math> ; -13 - 0.716 (<math>\theta-8</math>) dBW/MHz for <math>8^\circ \leq \theta &lt; 40^\circ</math>            -35.9 - 1.22 (<math>\theta-40</math>) dBW/MHz for <math>40^\circ \leq \theta \leq 45^\circ</math> ; -42 dBW/MHz for <math>\theta &gt; 45^\circ</math></li> </ul>
<input type="checkbox"/> For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) $\leq 11$ dBm/MHz.	
<input type="checkbox"/> For the 5.725-5.85 GHz band:	
	<ul style="list-style-type: none"> <li>▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) <math>\leq 30</math> dBm/500kHz. If <math>G_{TX} &gt; 6</math> dBi, then <math>PPSD = 30 - (G_{TX} - 6)</math>.</li> <li>▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) <math>\leq 30</math> dBm/500kHz.</li> </ul>
<p><b>PPSD</b> = 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  <b><math>G_{TX}</math></b> = the maximum transmitting antenna directional gain in dBi.</p>	

#### 3.4.2 Measuring Instruments

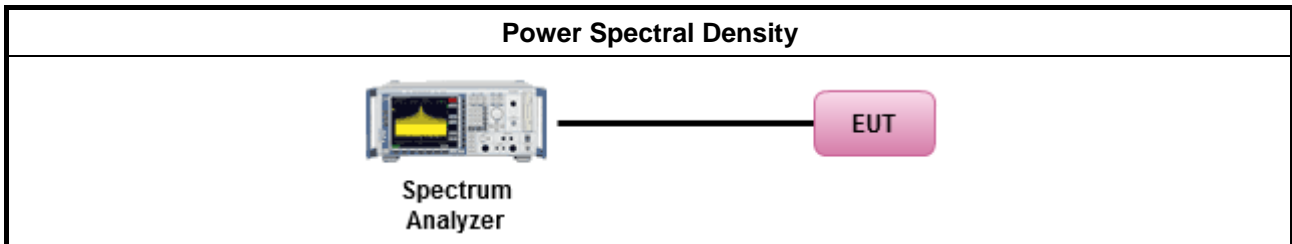
Refer a test equipment and calibration data table in this test report.



3.4.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> <li>▪ 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:</li> </ul>	
<input type="checkbox"/>	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]	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)
duty cycle < 98% and average over on/off periods with duty factor	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
<ul style="list-style-type: none"> <li>▪ For conducted measurement.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ If the EUT supports multiple transmit chains using options given below:</li> </ul>	
<input checked="" type="checkbox"/>	Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
<input type="checkbox"/>	Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
<input type="checkbox"/>	Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.
<ul style="list-style-type: none"> <li>▪ If multiple transmit chains, EIRP PPSD calculation could be following as methods:  <math>PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n</math>            (calculated in linear unit [mW] and transfer to log unit [dBm])  <math>EIRP_{total} = PPSD_{total} + DG</math> </li> </ul>	

### 3.4.4 Test Setup



### 3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix D



### 3.5 Unwanted Emissions

#### 3.5.1 Transmitter Radiated Unwanted Emissions Limit

Unwanted emissions below 1 GHz and restricted band emissions above 1GHz limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

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

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





linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

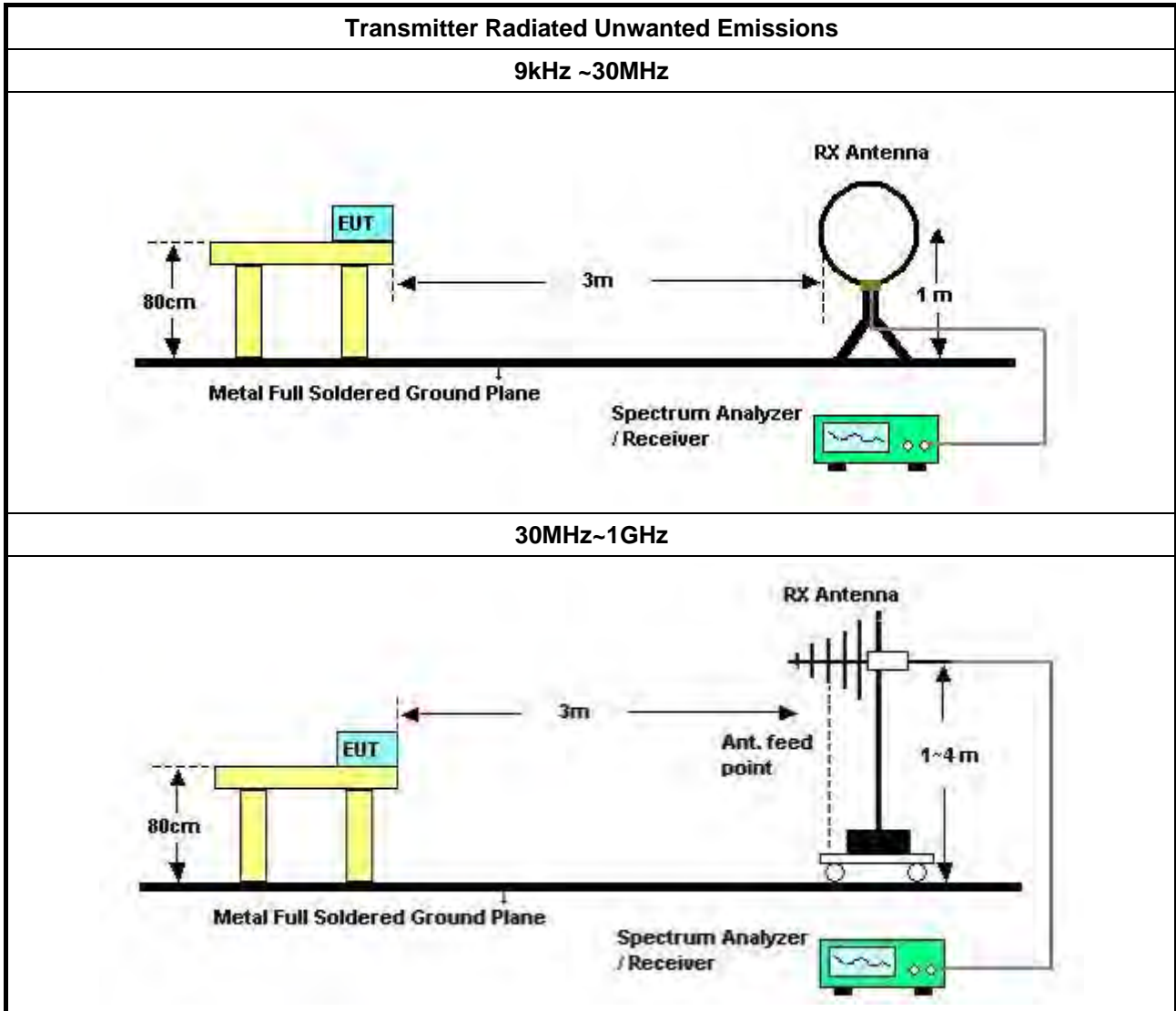
**3.5.2 Measuring Instruments**

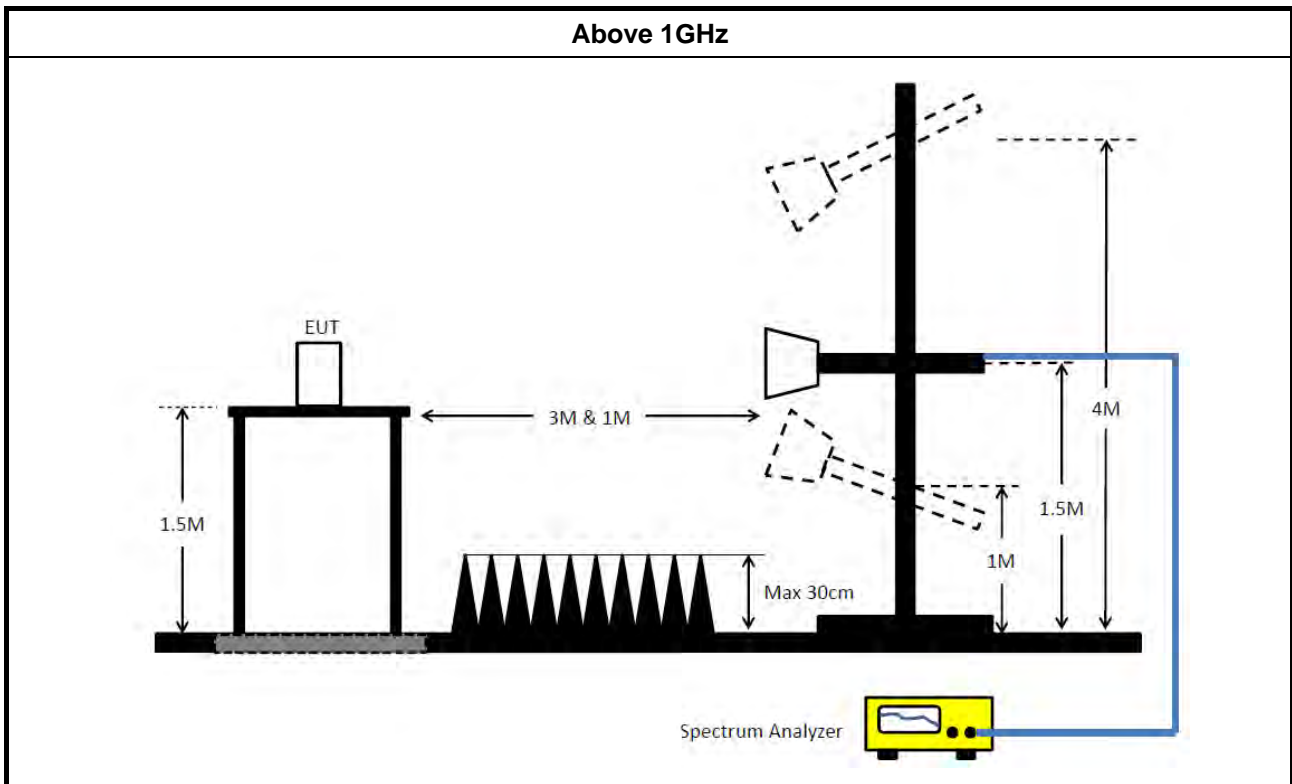
Refer a test equipment and calibration data table in this test report.

**3.5.3 Test Procedures**

Test Method	
	<ul style="list-style-type: none"> <li>▪ 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).</li> </ul>
	<ul style="list-style-type: none"> <li>▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].</li> </ul>
	<ul style="list-style-type: none"> <li>▪ For the transmitter unwanted emissions shall be measured using following options below:               <ul style="list-style-type: none"> <li>▪ Refer as FCC KDB 789033, clause H)2) for unwanted emissions into non-restricted bands.</li> <li>▪ Refer as FCC KDB 789033, clause H)1) for unwanted emissions into restricted bands.                   <ul style="list-style-type: none"> <li><input type="checkbox"/> Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging).</li> <li><input checked="" type="checkbox"/> Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW).</li> <li><input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.</li> <li><input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.</li> <li><input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause H)5) measurement procedure peak limit.</li> <li><input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.</li> </ul> </li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>▪ For radiated measurement.               <ul style="list-style-type: none"> <li>▪ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.</li> <li>▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.</li> <li>▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>▪ The any unwanted emissions level shall not exceed the fundamental emission level.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.</li> </ul>

### 3.5.4 Test Setup





**3.5.5 Transmitter Unwanted Emissions (Below 30MHz)**

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

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

**3.5.6 Test Result of Transmitter Unwanted Emissions**

Refer as Appendix E



## 4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 31, 2018	Jan. 30, 2019	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz~100MHz	Dec. 20, 2017	Dec. 19, 2018	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 29, 2017	Dec. 28, 2018	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	150kHz ~ 30MHz	May 22, 2018	May 21, 2019	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 27, 2018	Aug. 26, 2019	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2018	Mar. 15, 2019	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 20, 2017	Nov. 19, 2018	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 28, 2018	Jun. 27, 2019	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2018	May 01, 2019	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 09, 2018	Jan. 08, 2019	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 04, 2018	Jul. 03, 2019	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 23, 2017	Nov. 22, 2018	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100354	9kHz ~ 2.75GHz	Dec. 08, 2017	Dec. 07, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)



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	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 21, 2017	Dec. 20, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 20, 2017	Nov. 19, 2018	Conducted (TH01-CB)

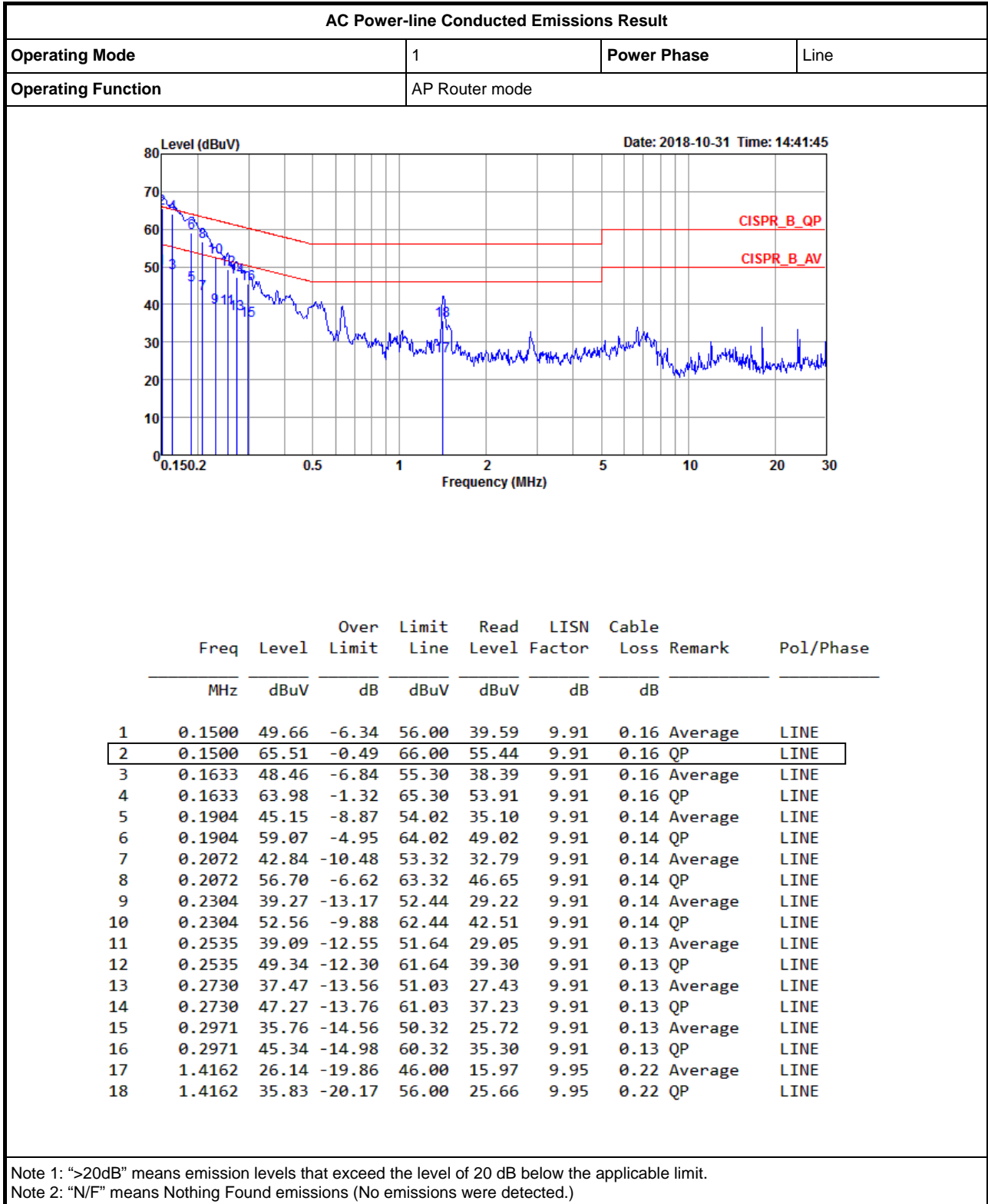
Note: Calibration Interval of instruments listed above is one year.

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



# AC Power-line Conducted Emissions Result

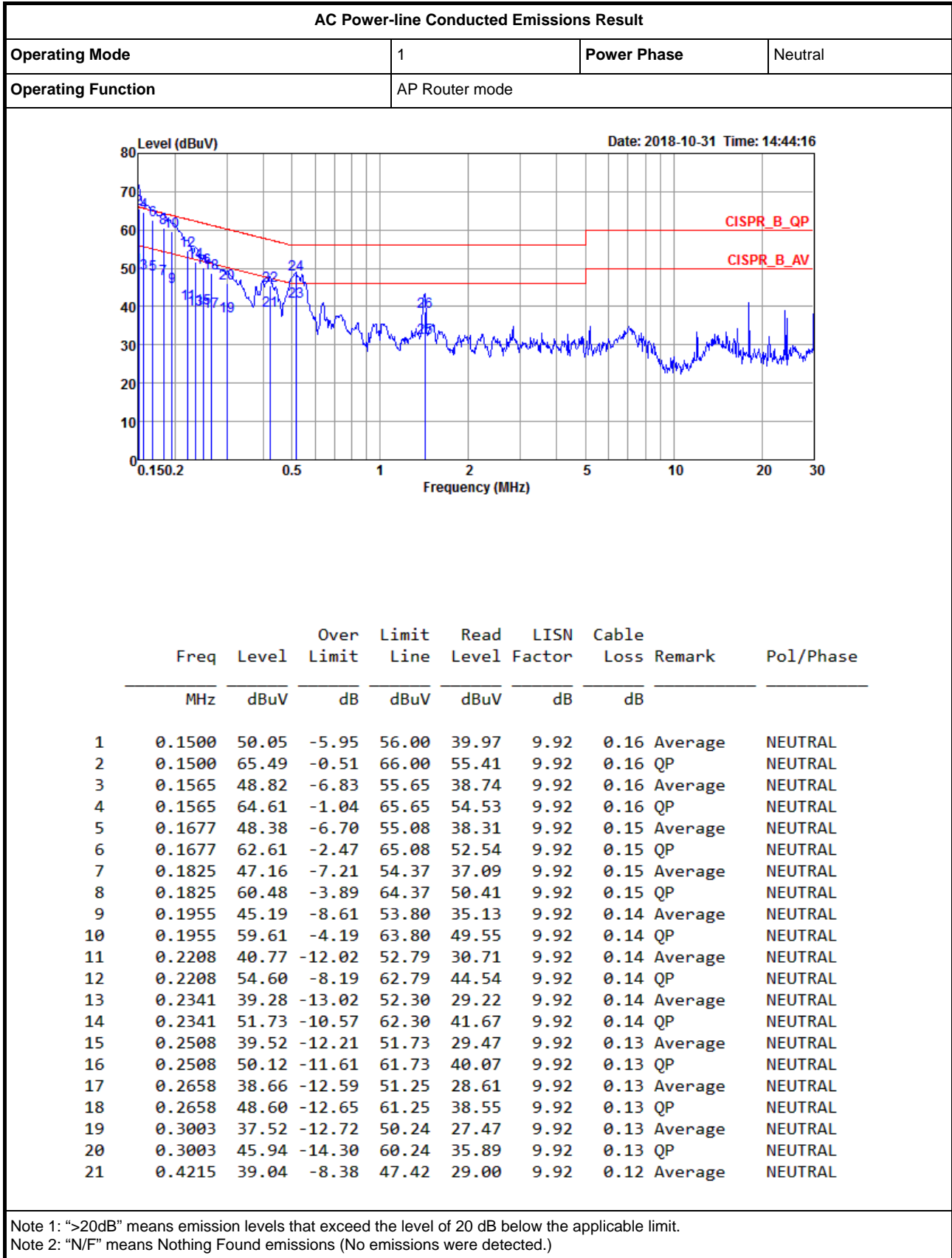
Appendix A





# AC Power-line Conducted Emissions Result

Appendix A





# AC Power-line Conducted Emissions Result

Appendix A

AC Power-line Conducted Emissions Result									
Operating Mode		1			Power Phase		Neutral		
Operating Function		AP Router mode							
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
22	0.4215	45.34	-12.08	57.42	35.30	9.92	0.12	QP	NEUTRAL
23	0.5182	41.22	-4.78	46.00	31.16	9.92	0.14	Average	NEUTRAL
24	0.5182	48.39	-7.61	56.00	38.33	9.92	0.14	Peak	NEUTRAL
25	1.4182	31.92	-14.08	46.00	21.75	9.95	0.22	Average	NEUTRAL
26	1.4182	38.65	-17.35	56.00	28.48	9.95	0.22	QP	NEUTRAL

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





Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	21.2M	16.492M	16M5D1D	19.075M	16.417M
802.11ac VHT20_Nss1,(MCS0)_2TX	20.65M	17.691M	17M7D1D	19.75M	17.591M
802.11ac VHT40_Nss1,(MCS0)_2TX	40M	35.982M	36M0D1D	39.7M	35.832M
802.11ac VHT80_Nss1,(MCS0)_2TX	83.2M	75.962M	76M0D1D	83.2M	75.762M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	16.3M	16.942M	16M9D1D	14.4M	16.342M
802.11ac VHT20_Nss1,(MCS0)_2TX	17.575M	17.841M	17M8D1D	13.75M	17.516M
802.11ac VHT40_Nss1,(MCS0)_2TX	35.65M	36.582M	36M6D1D	31.25M	36.082M
802.11ac VHT80_Nss1,(MCS0)_2TX	75M	75.762M	75M8D1D	74.9M	75.562M

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

**Max-OBW** = Maximum 99% occupied bandwidth;

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

**Min-OBW** = Minimum 99% occupied bandwidth;

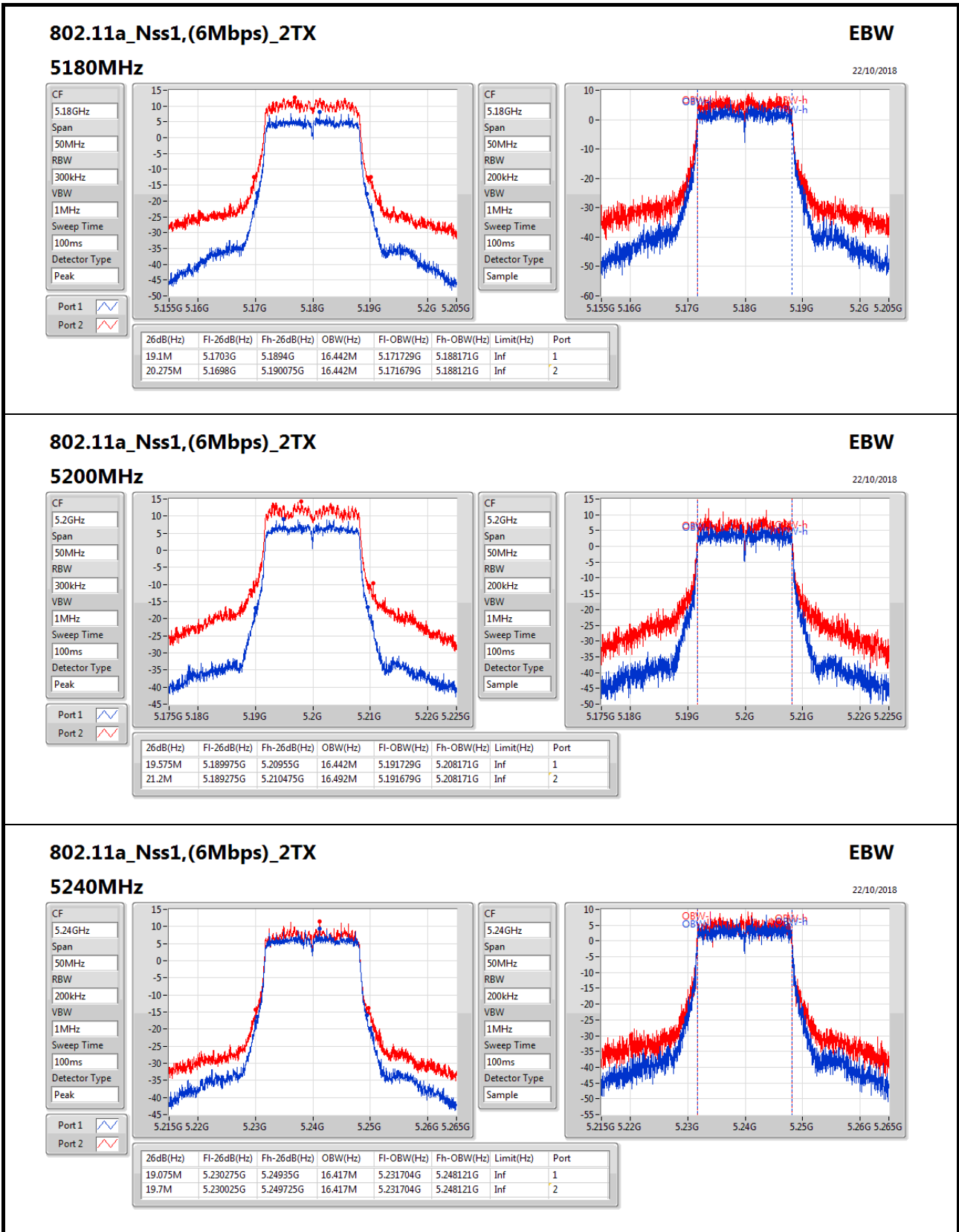


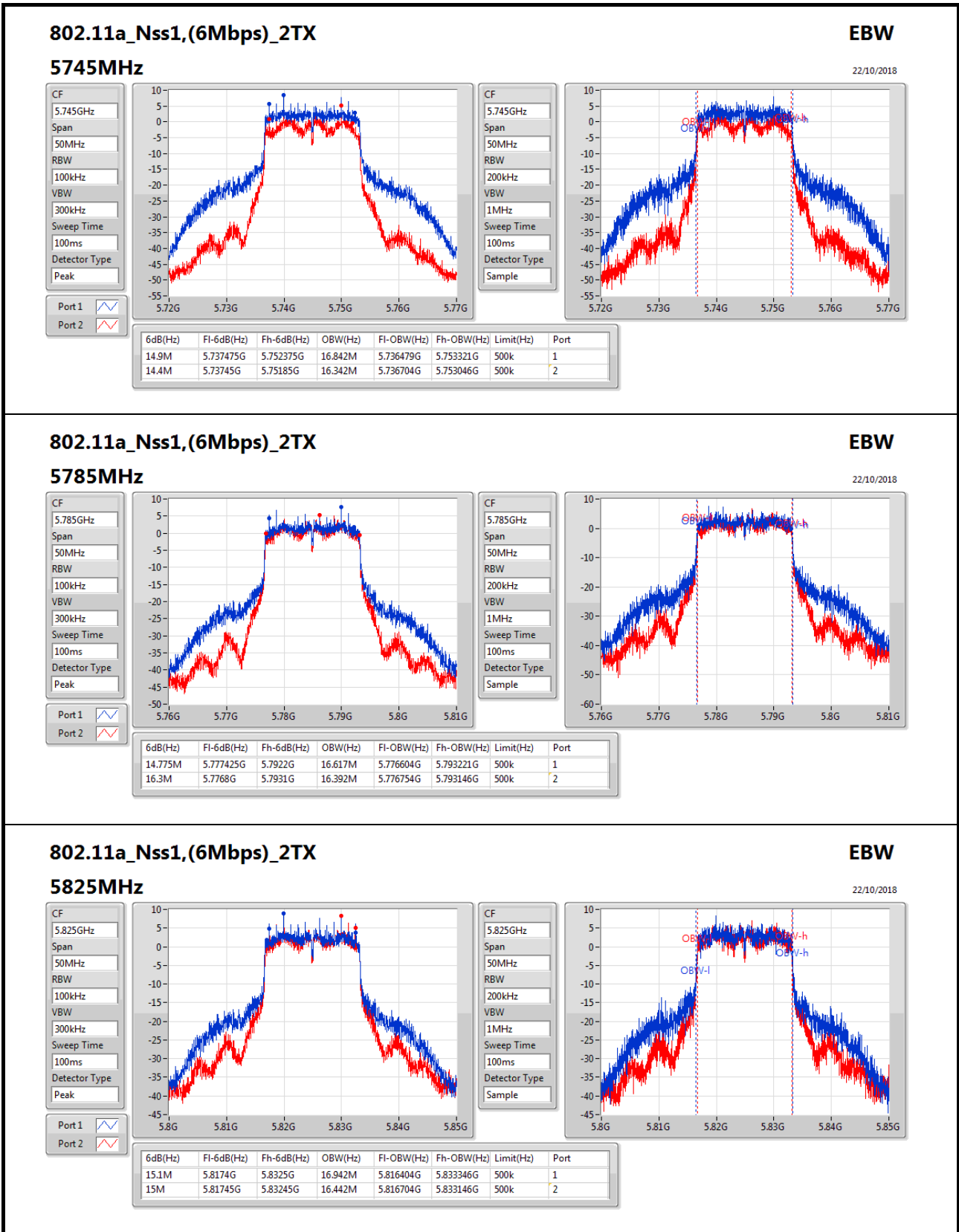
**Result**

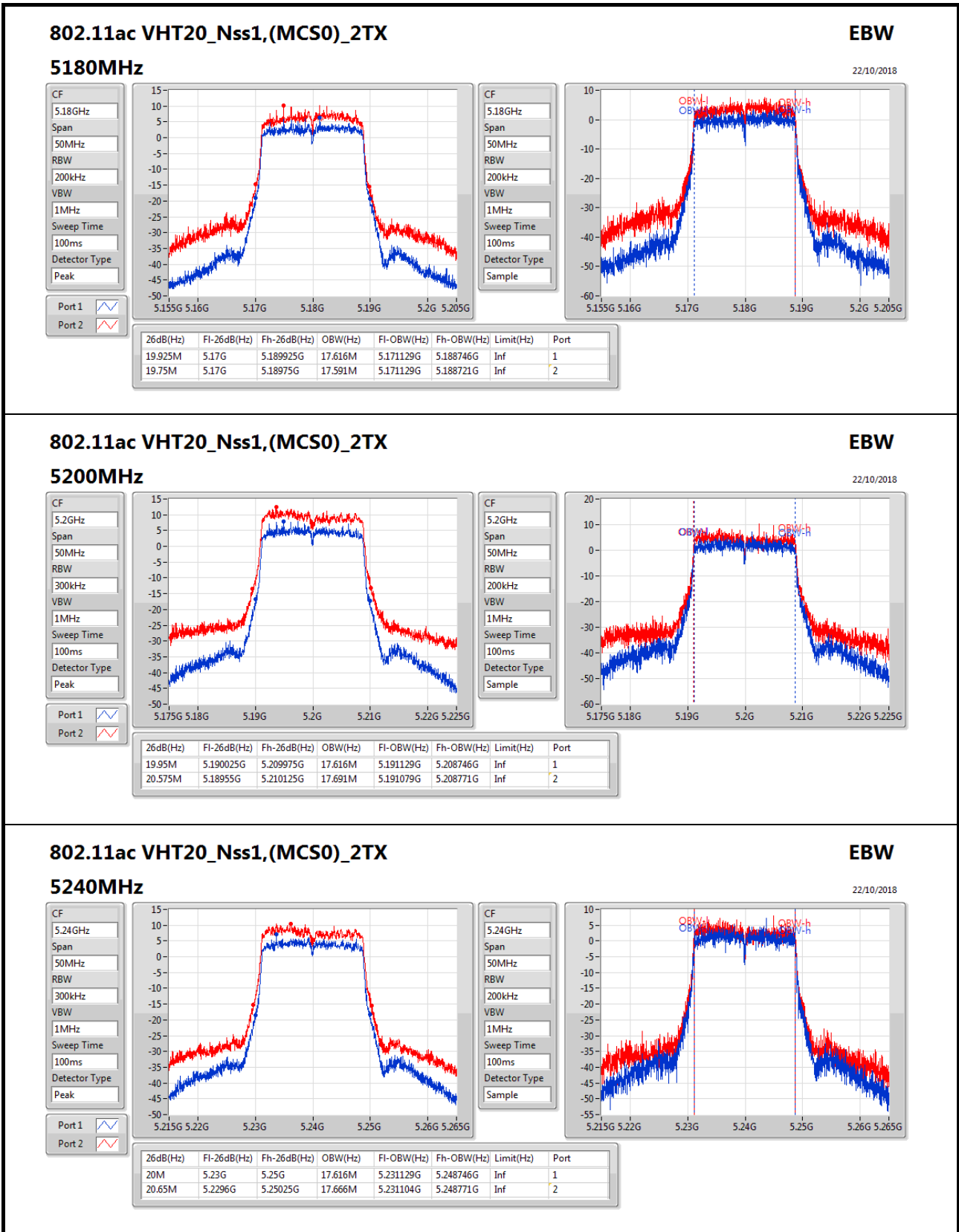
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	19.1M	16.442M	20.275M	16.442M
5200MHz	Pass	Inf	19.575M	16.442M	21.2M	16.492M
5240MHz	Pass	Inf	19.075M	16.417M	19.7M	16.417M
5745MHz	Pass	500k	14.9M	16.842M	14.4M	16.342M
5785MHz	Pass	500k	14.775M	16.617M	16.3M	16.392M
5825MHz	Pass	500k	15.1M	16.942M	15M	16.442M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	19.925M	17.616M	19.75M	17.591M
5200MHz	Pass	Inf	19.95M	17.616M	20.575M	17.691M
5240MHz	Pass	Inf	20M	17.616M	20.65M	17.666M
5745MHz	Pass	500k	17.55M	17.841M	17.575M	17.741M
5785MHz	Pass	500k	17.175M	17.766M	13.75M	17.516M
5825MHz	Pass	500k	17.575M	17.841M	17.55M	17.716M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	39.7M	35.932M	39.8M	35.832M
5230MHz	Pass	Inf	40M	35.982M	39.95M	35.832M
5755MHz	Pass	500k	32.55M	36.582M	35.65M	36.182M
5795MHz	Pass	500k	31.25M	36.082M	31.25M	36.132M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	83.2M	75.762M	83.2M	75.962M
5775MHz	Pass	500k	75M	75.762M	74.9M	75.562M

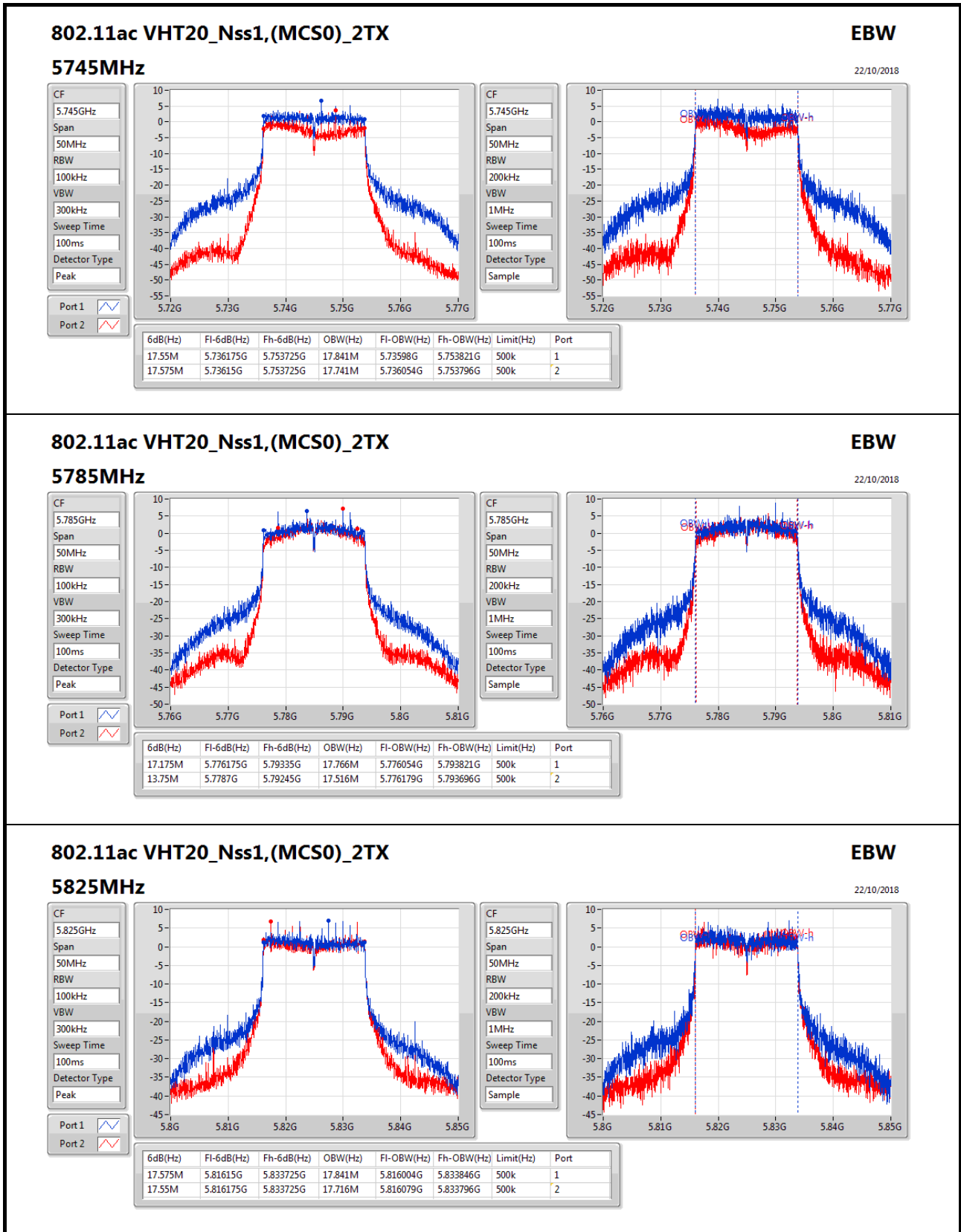
**Port X-N dB** = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

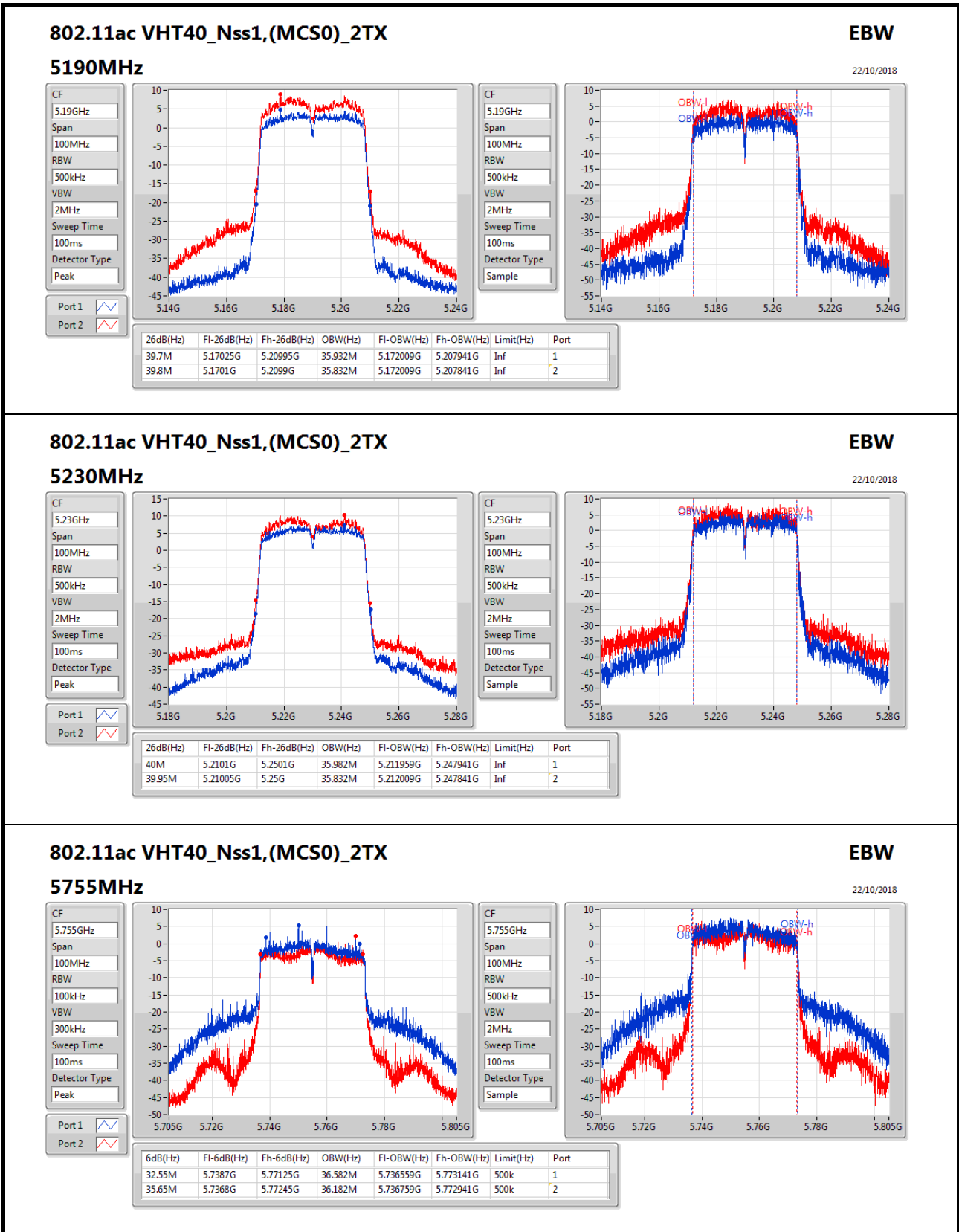
**Port X-OBW** = Port X 99% occupied bandwidth;

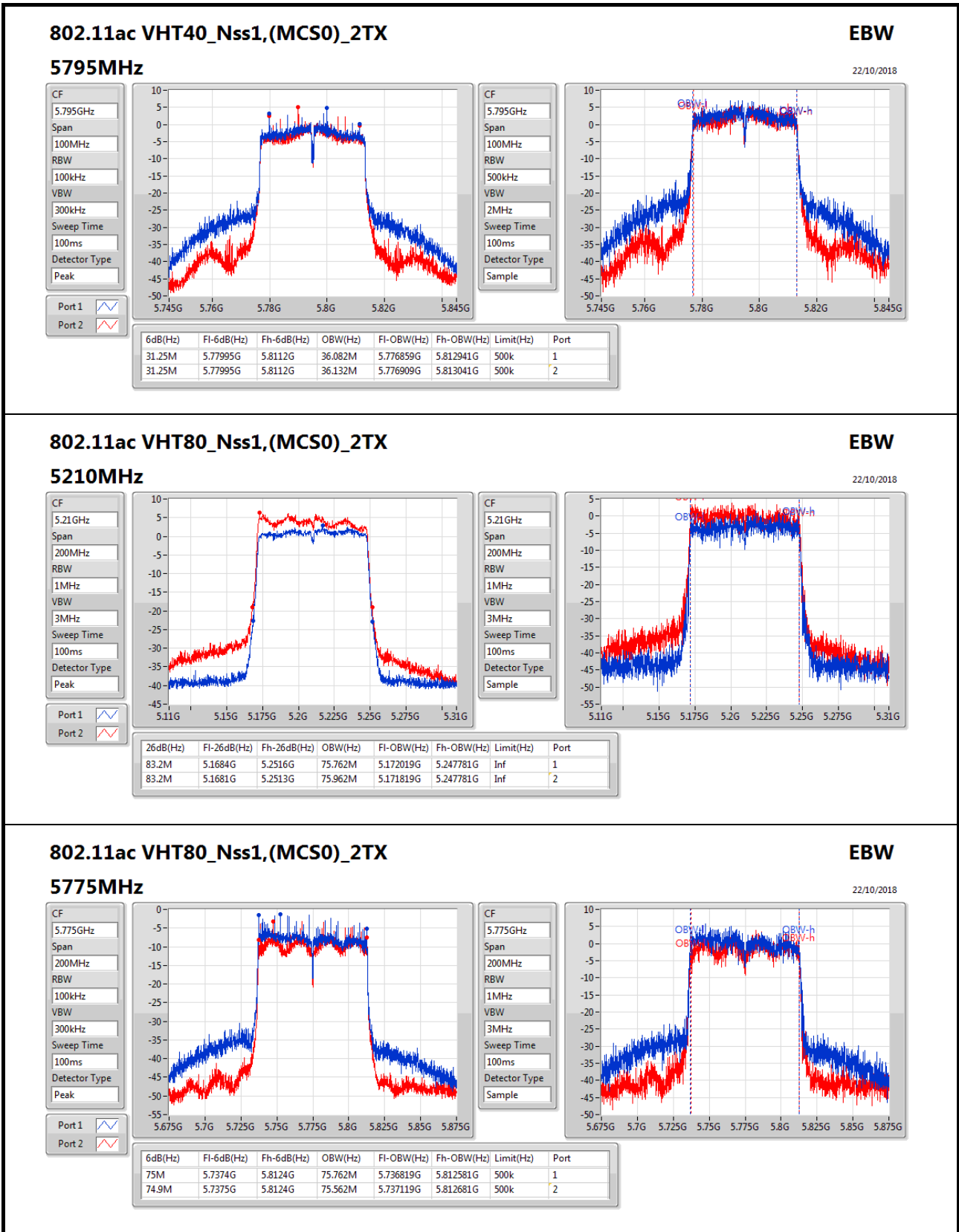
















**Summary**

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	23.30	0.21380
802.11ac VHT20_Nss1,(MCS0)_2TX	22.74	0.18793
802.11ac VHT40_Nss1,(MCS0)_2TX	21.44	0.13932
802.11ac VHT80_Nss1,(MCS0)_2TX	16.88	0.04875
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	21.68	0.14723
802.11ac VHT20_Nss1,(MCS0)_2TX	21.52	0.14191
802.11ac VHT40_Nss1,(MCS0)_2TX	21.07	0.12794
802.11ac VHT80_Nss1,(MCS0)_2TX	18.09	0.06442



**Result**

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	4.80	18.52	21.55	23.30	30.00
5200MHz	Pass	4.80	18.80	21.16	23.15	30.00
5240MHz	Pass	4.80	18.21	19.68	22.02	30.00
5745MHz	Pass	5.50	18.71	15.41	20.38	30.00
5785MHz	Pass	5.50	18.27	17.55	20.94	30.00
5825MHz	Pass	5.50	18.99	18.33	21.68	30.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	4.80	16.48	20.07	21.65	30.00
5200MHz	Pass	4.80	18.31	20.80	22.74	30.00
5240MHz	Pass	4.80	17.82	19.39	21.69	30.00
5745MHz	Pass	5.50	18.40	14.98	20.03	30.00
5785MHz	Pass	5.50	18.06	17.21	20.67	30.00
5825MHz	Pass	5.50	18.79	18.21	21.52	30.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	4.80	14.71	18.02	19.68	30.00
5230MHz	Pass	4.80	17.48	19.21	21.44	30.00
5755MHz	Pass	5.50	18.80	17.17	21.07	30.00
5795MHz	Pass	5.50	18.06	17.14	20.63	30.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	4.80	12.29	15.03	16.88	30.00
5775MHz	Pass	5.50	15.89	14.09	18.09	30.00

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



Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11a_Nss1,(6Mbps)_2TX	10.47
802.11ac VHT20_Nss1,(MCS0)_2TX	9.48
802.11ac VHT40_Nss1,(MCS0)_2TX	5.64
802.11ac VHT80_Nss1,(MCS0)_2TX	-2.35
5.725-5.85GHz	-
802.11a_Nss1,(6Mbps)_2TX	7.53
802.11ac VHT20_Nss1,(MCS0)_2TX	6.85
802.11ac VHT40_Nss1,(MCS0)_2TX	3.80
802.11ac VHT80_Nss1,(MCS0)_2TX	-2.25

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

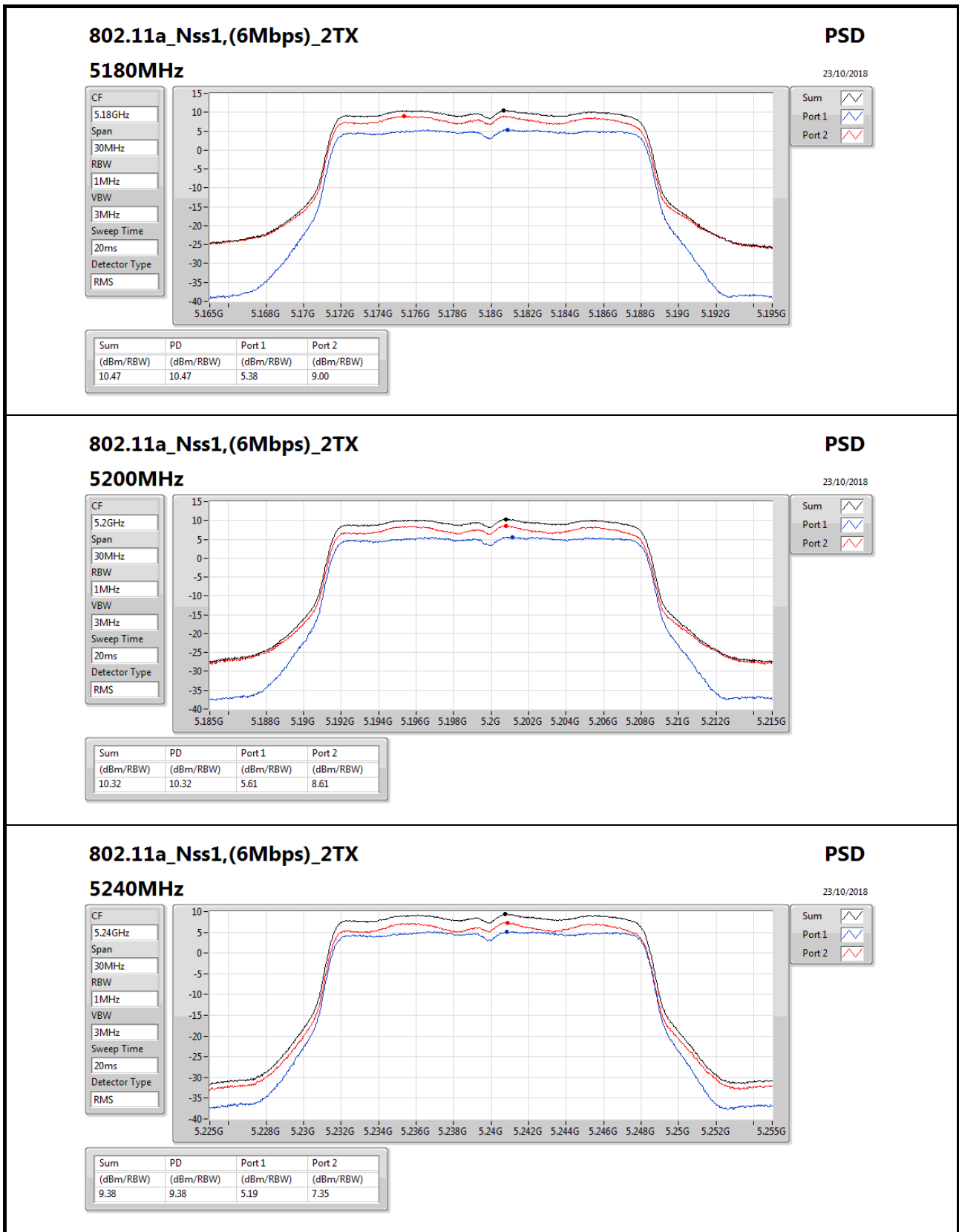


Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	7.32	5.38	9.00	10.47	15.68
5200MHz	Pass	7.32	5.61	8.61	10.32	15.68
5240MHz	Pass	7.32	5.19	7.35	9.38	15.68
5745MHz	Pass	7.70	4.23	2.08	6.21	28.30
5785MHz	Pass	7.70	4.09	3.93	6.96	28.30
5825MHz	Pass	7.70	4.77	4.41	7.53	28.30
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	7.32	3.30	7.37	8.75	15.68
5200MHz	Pass	7.32	4.82	7.82	9.48	15.68
5240MHz	Pass	7.32	4.45	6.60	8.61	15.68
5745MHz	Pass	7.70	3.38	1.21	5.39	28.30
5785MHz	Pass	7.70	3.10	2.82	5.90	28.30
5825MHz	Pass	7.70	3.94	3.87	6.85	28.30
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	7.32	-1.46	2.58	3.95	15.68
5230MHz	Pass	7.32	1.48	3.67	5.64	15.68
5755MHz	Pass	7.70	1.35	0.45	3.80	28.30
5795MHz	Pass	7.70	0.80	0.44	3.59	28.30
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	7.32	-7.41	-3.97	-2.35	15.68
5775MHz	Pass	7.70	-4.38	-6.30	-2.25	28.30

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

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



### 802.11a\_Nss1,(6Mbps)\_2TX

#### 5240MHz

### PSD

23/10/2018

CF  
5.24GHz

Span  
30MHz

RBW  
1MHz

VBW  
3MHz

Sweep Time  
20ms

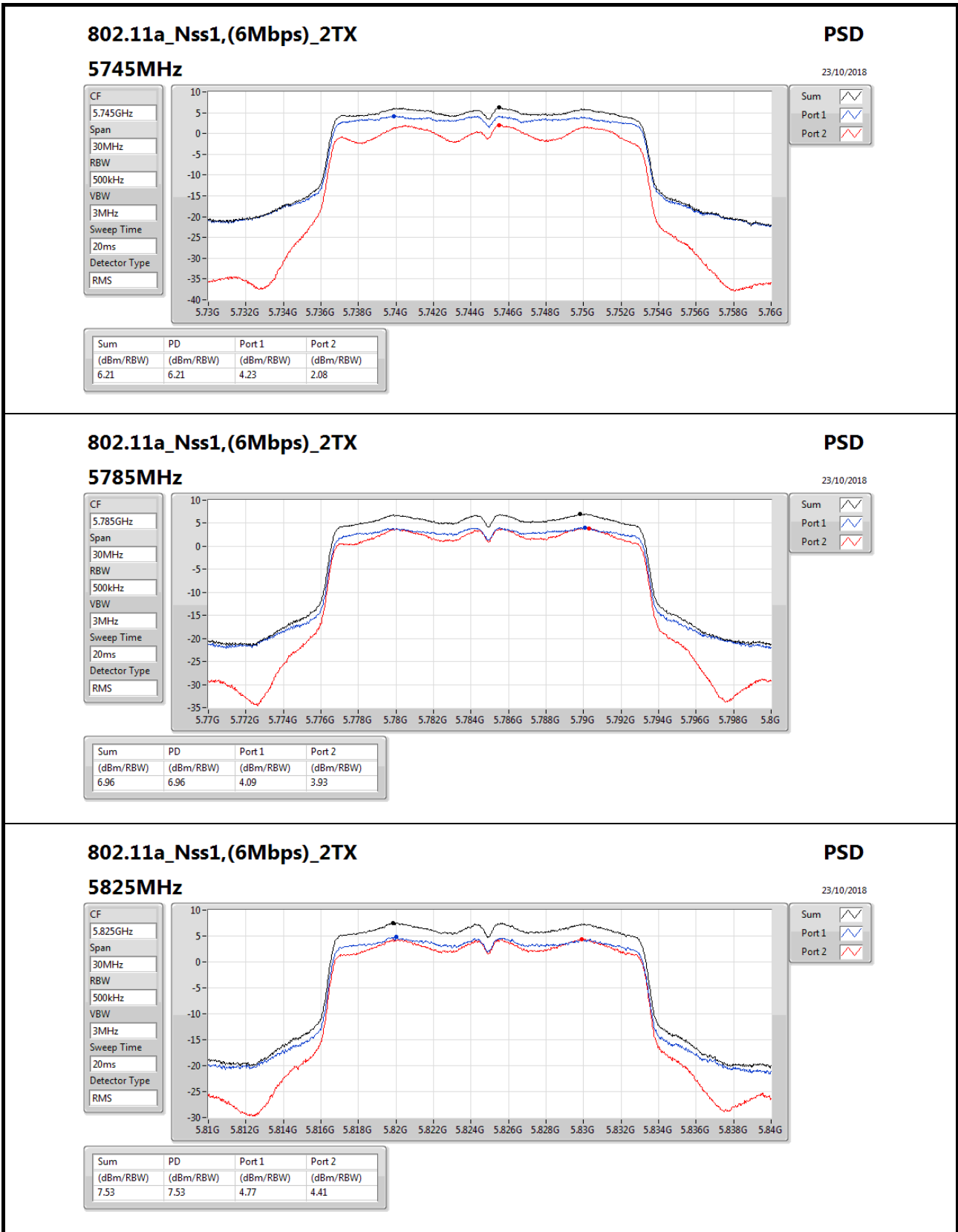
Detector Type  
RMS

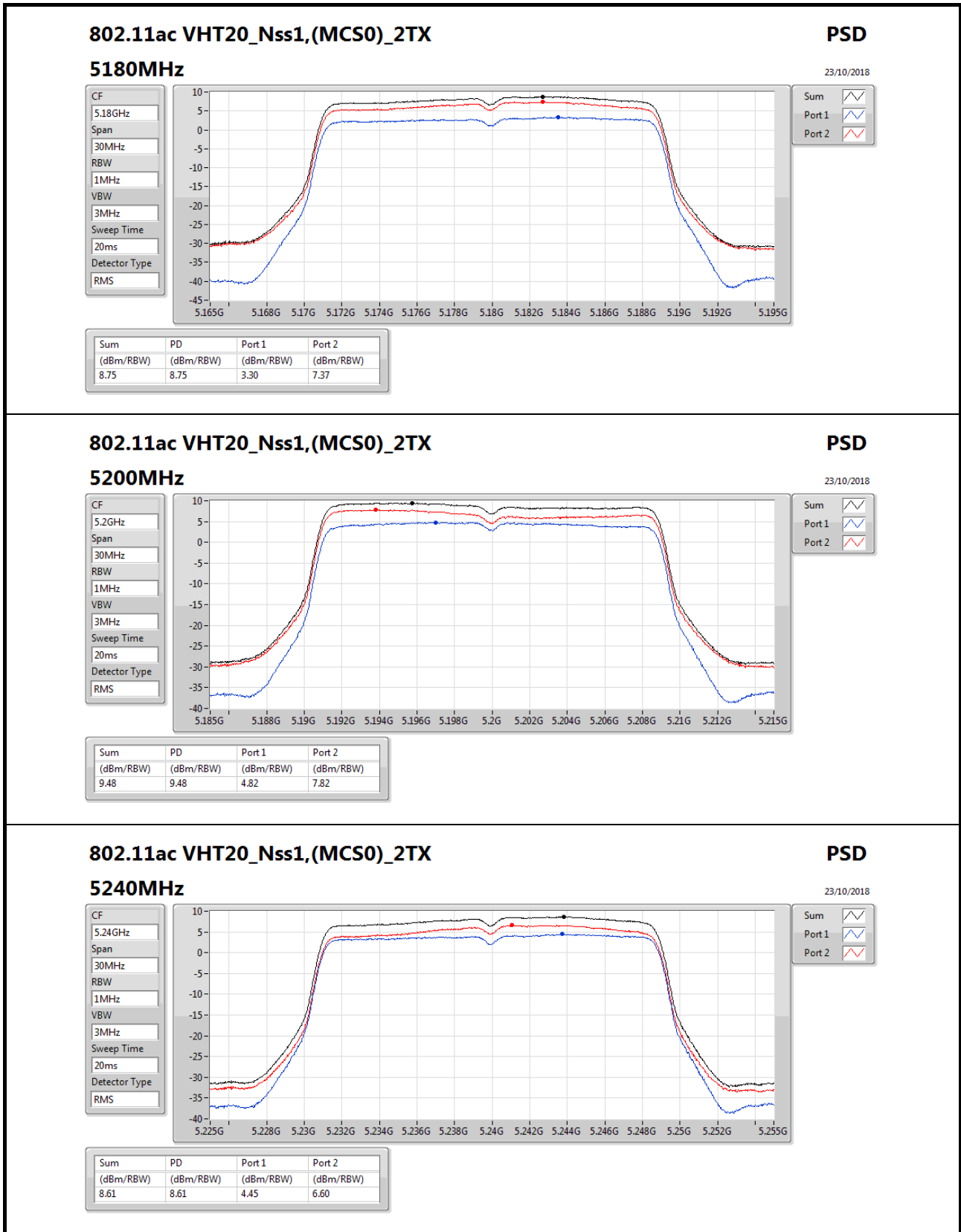
Sum

Port 1

Port 2

Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.38	9.38	5.19	7.35





### 802.11ac VHT20\_Nss1,(MCS0)\_2TX

#### 5240MHz

PSD

23/10/2018

CF

5.24GHz

Span

30MHz

RBW

1MHz

VBW

3MHz

Sweep Time

20ms

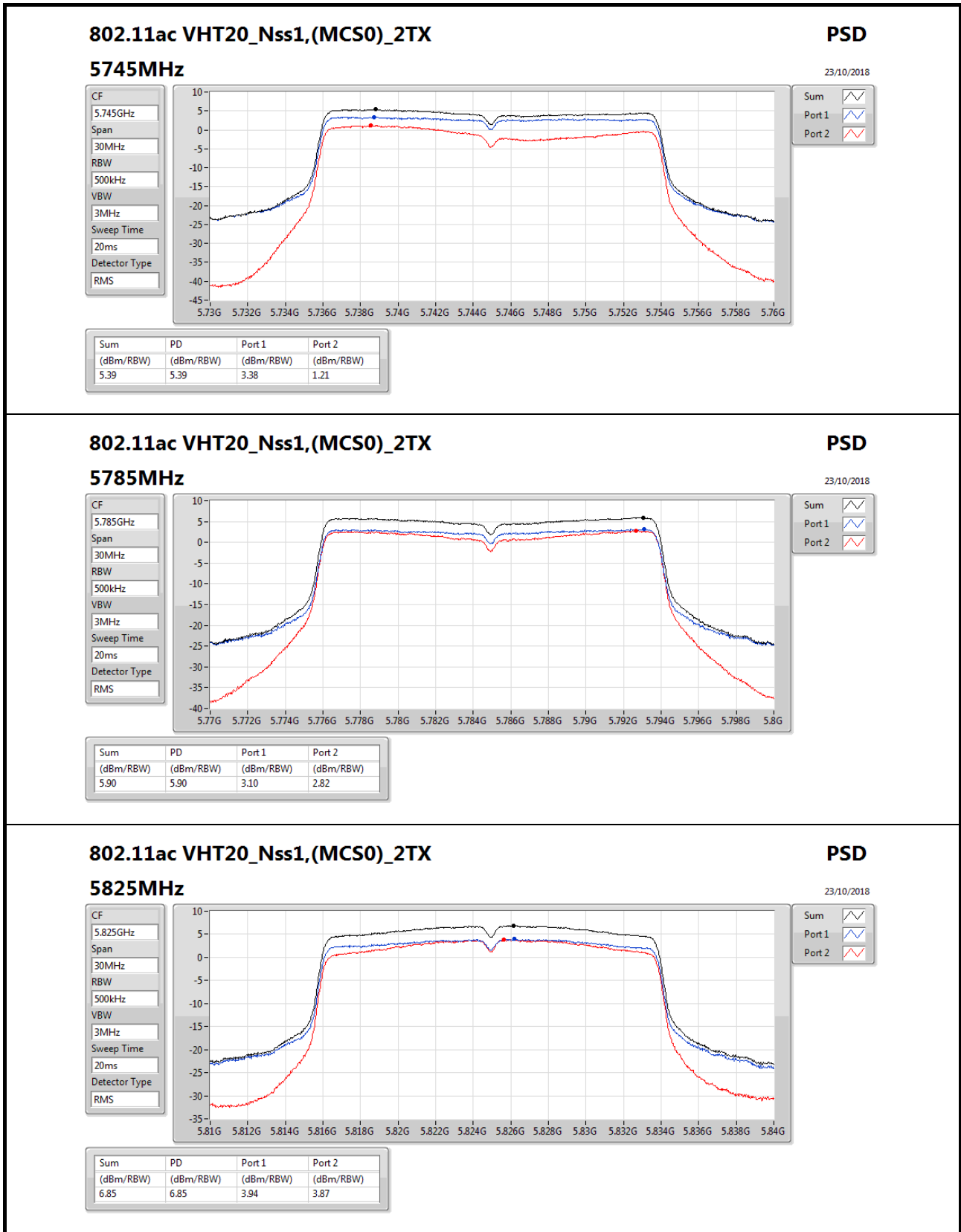
Detector Type

RMS

Sum

Port 1

Port 2



### 802.11ac VHT20\_Nss1,(MCS0)\_2TX

#### 5825MHz

**PSD**

23/10/2018

CF

5.825GHz

Span

30MHz

RBW

500kHz

VBW

3MHz

Sweep Time

20ms

Detector Type

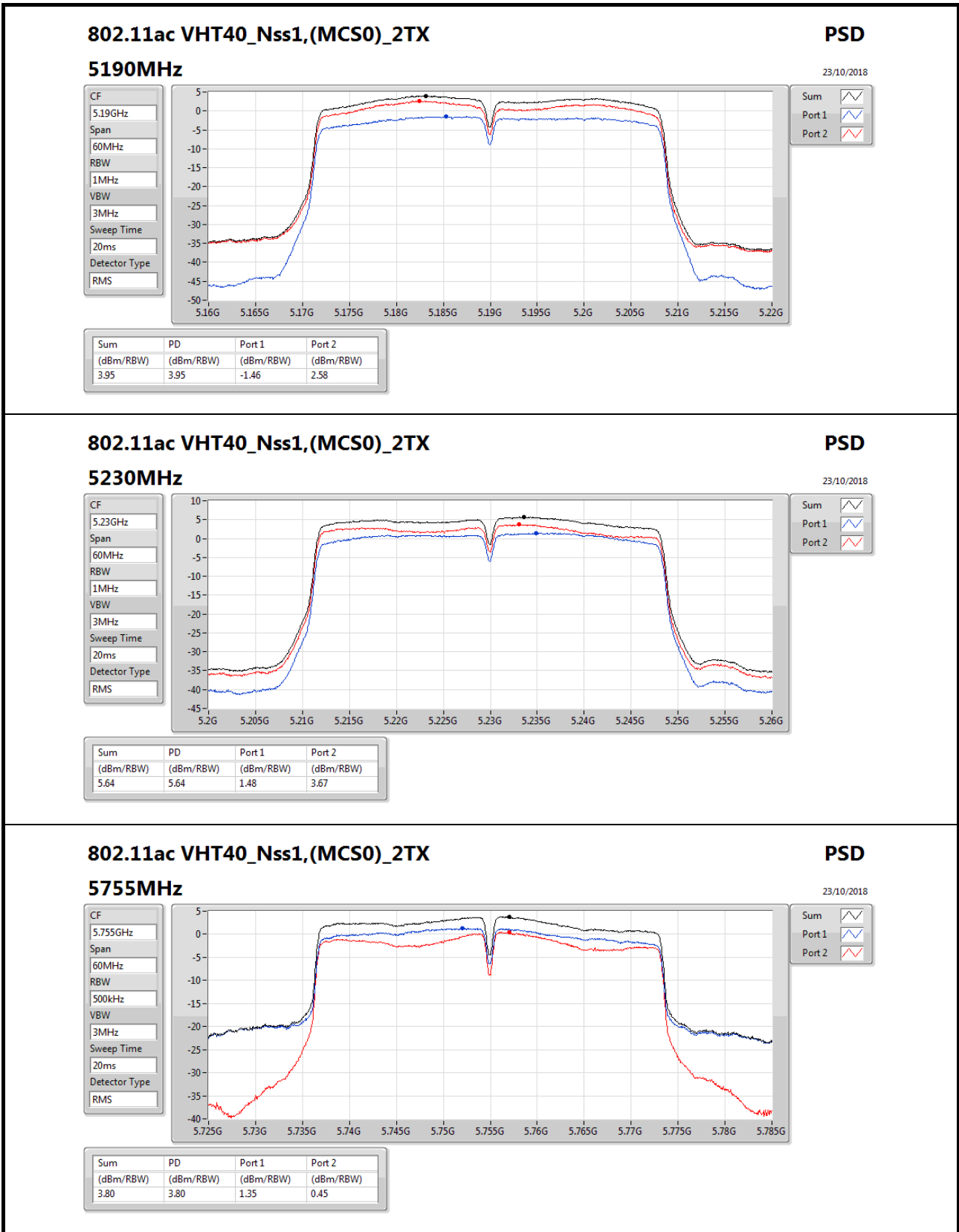
RMS

Sum

Port 1

Port 2





### 802.11ac VHT40\_Nss1,(MCS0)\_2TX

#### 5755MHz

PSD

23/10/2018

CF

5.755GHz

Span

60MHz

RBW

500kHz

VBW

3MHz

Sweep Time

20ms

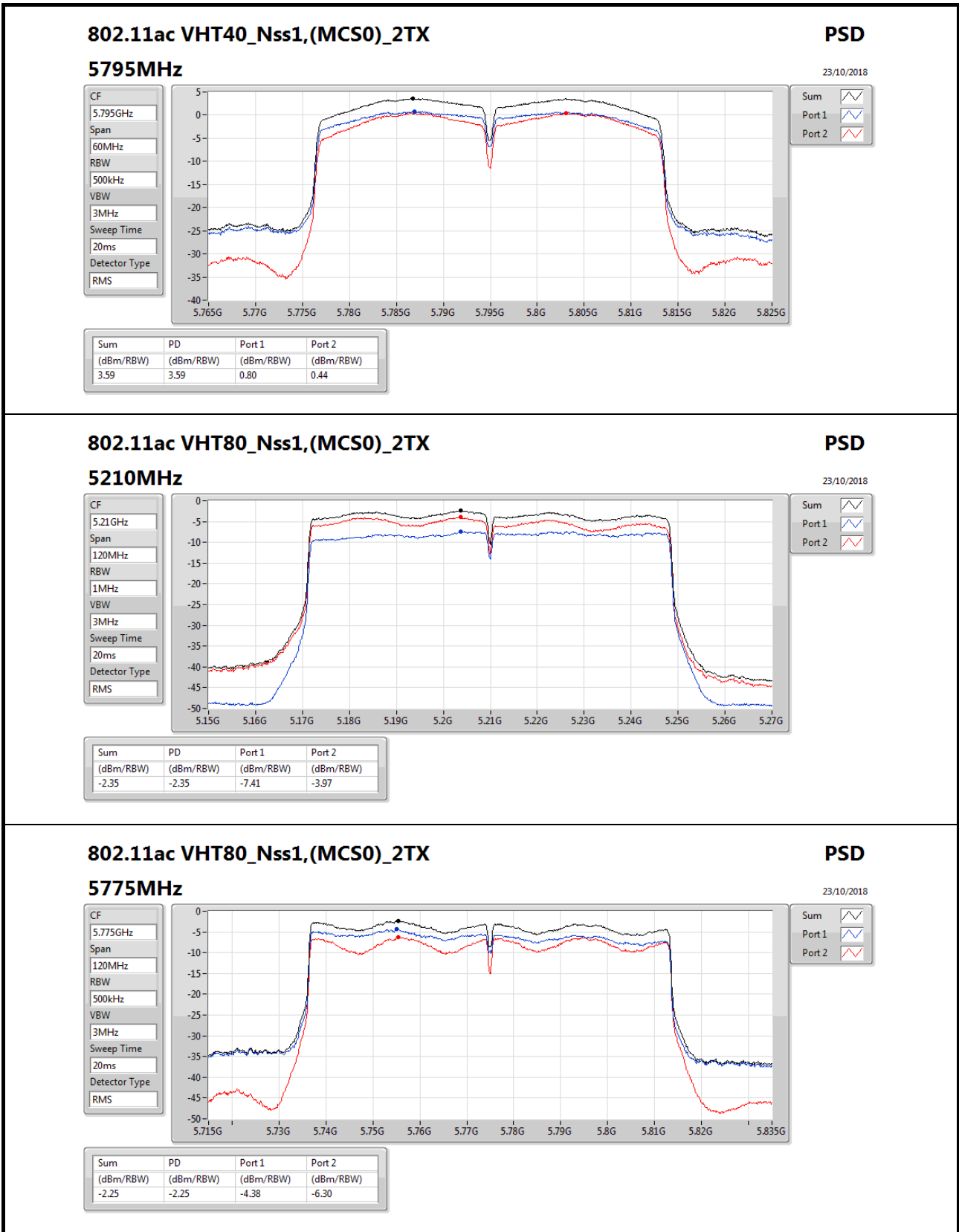
Detector Type

RMS

Sum

Port 1

Port 2



### 802.11ac VHT80\_Nss1,(MCS0)\_2TX

#### 5775MHz

PSD

23/10/2018

CF

5.775GHz

Span

120MHz

RBW

500kHz

VBW

3MHz

Sweep Time

20ms

Detector Type

RMS

Sum

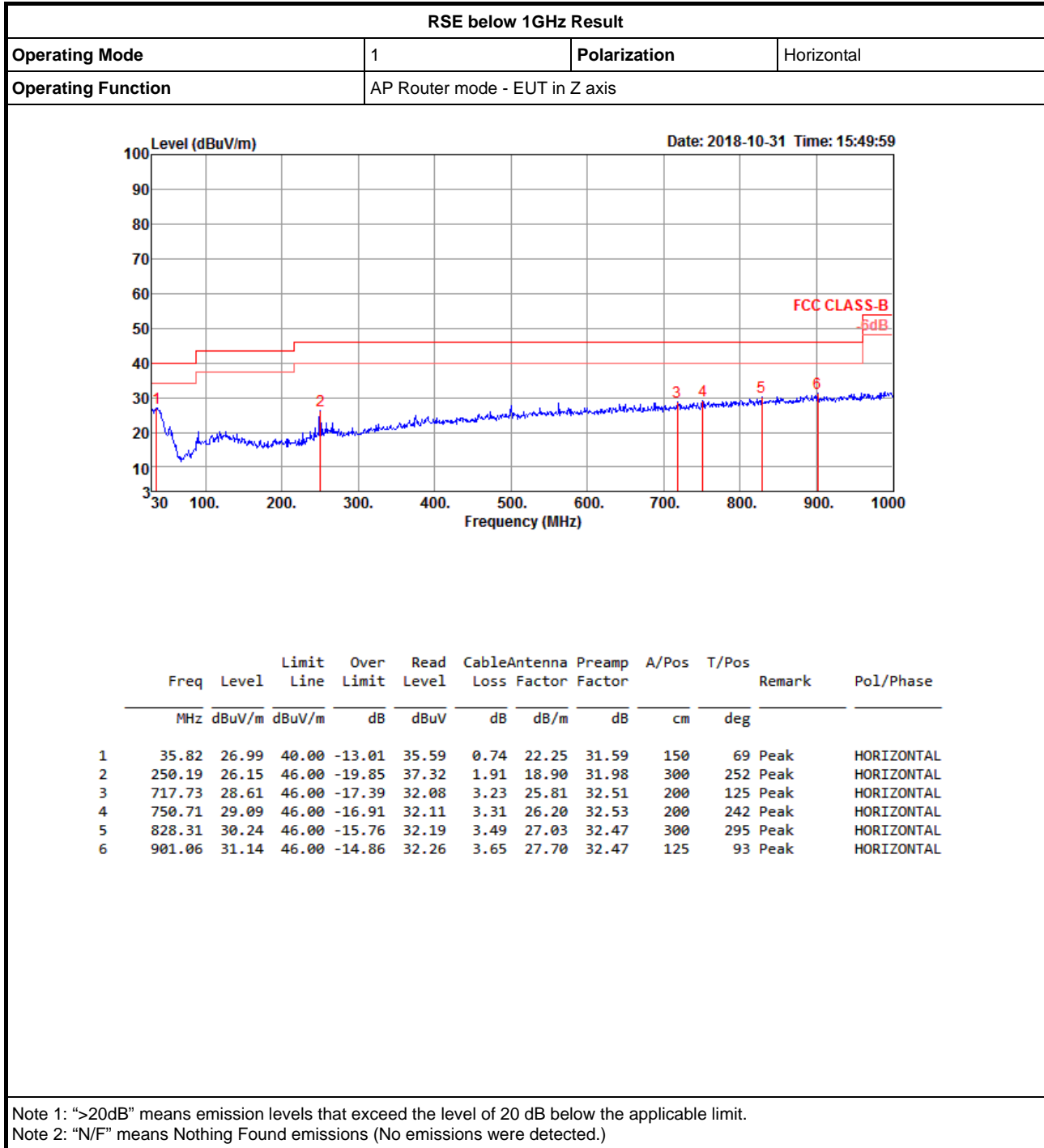
Port 1

Port 2



## RSE below 1GHz Result

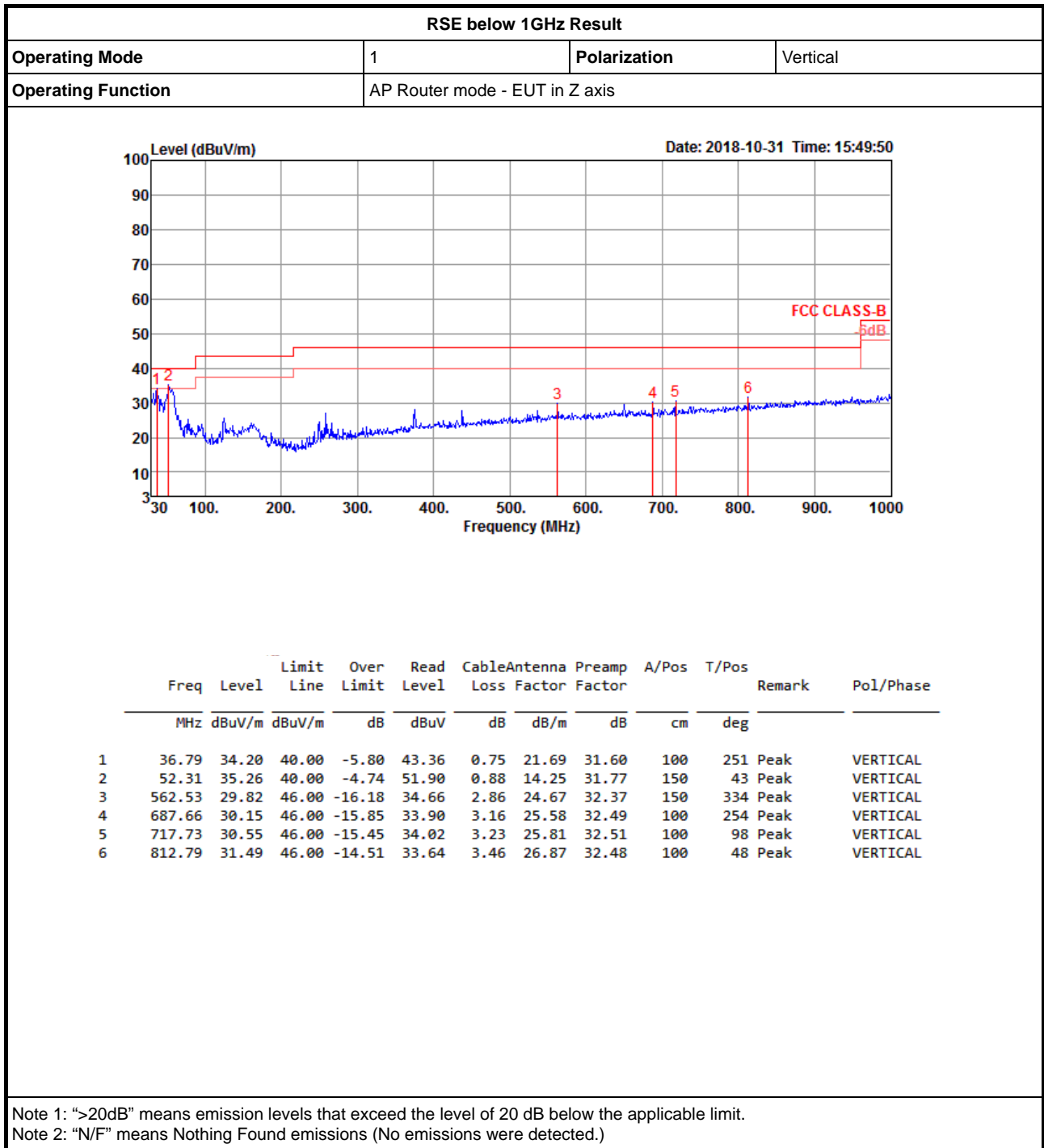
Appendix E.1





# RSE below 1GHz Result

Appendix E.1





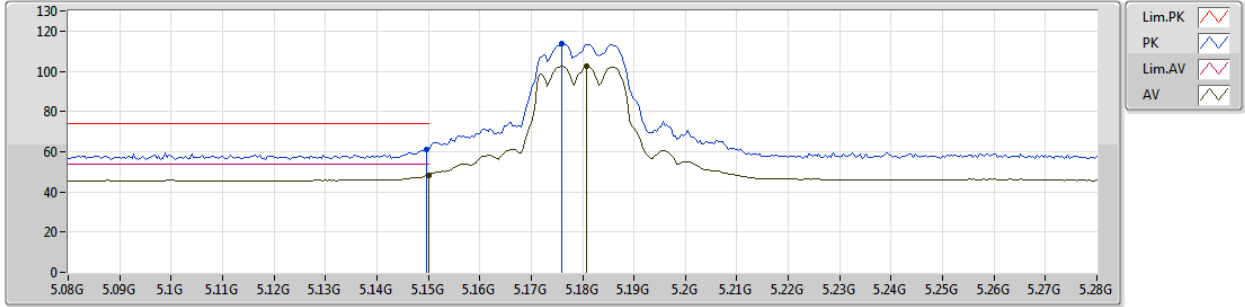
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
5.15-5.25GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT80_Nss1,(MCS0)_2TX	Pass	AV	5.144G	53.43	54.00	-0.57	8.56	3	Horizontal	25	2.22	-

802.11a\_Nss1,(6Mbps)\_2TX

20/10/2018

5180MHz\_TX



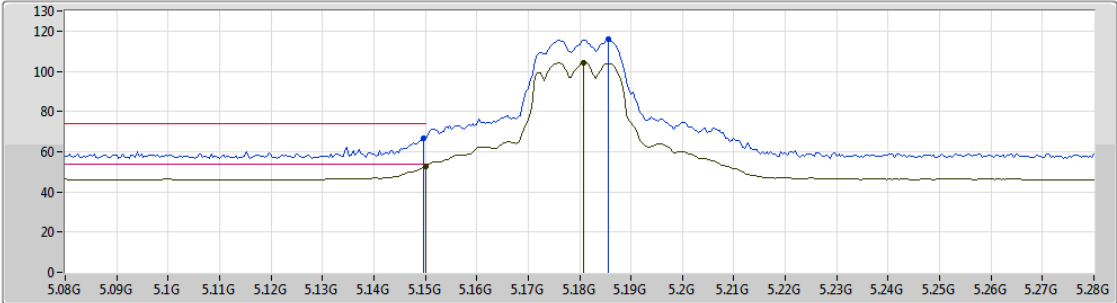
EUT Y\_2TX  
Setting 24  
04-E-3-10  
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)	
PK	5.1496G	61.10	74.00	-12.90	6.27	3	Vertical	192	2.26	-
AV	5.15G	48.26	54.00	-5.74	6.27	3	Vertical	192	2.26	-
PK	5.176G	113.73	Inf	-Inf	6.34	3	Vertical	192	2.26	-
AV	5.1808G	102.44	Inf	-Inf	6.35	3	Vertical	192	2.26	-

802.11a\_Nss1,(6Mbps)\_2TX

20/10/2018

5180MHz\_TX



Lim.PK  
 PK  
 Lim.AV  
 AV

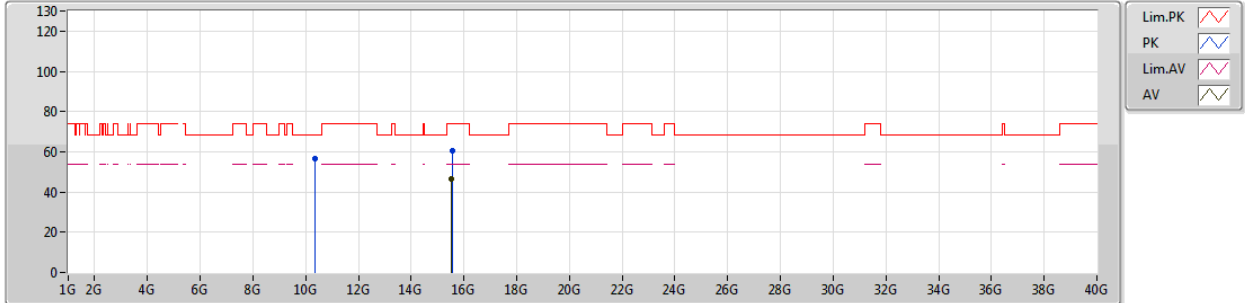
EUT Y\_2TX  
 Setting 24  
 04-E-3-10  
 FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1496G	66.75	74.00	-7.25	6.27	3	Horizontal	201	2.19	-
AV	5.15G	52.85	54.00	-1.15	6.27	3	Horizontal	201	2.19	-
PK	5.1856G	115.73	Inf	-Inf	6.37	3	Horizontal	201	2.19	-
AV	5.1808G	104.47	Inf	-Inf	6.35	3	Horizontal	201	2.19	-

802.11a\_Nss1,(6Mbps)\_2TX

20/10/2018

5180MHz\_TX



EUT Y\_2TX  
Setting 24  
04-E-3  
FSP(100142)

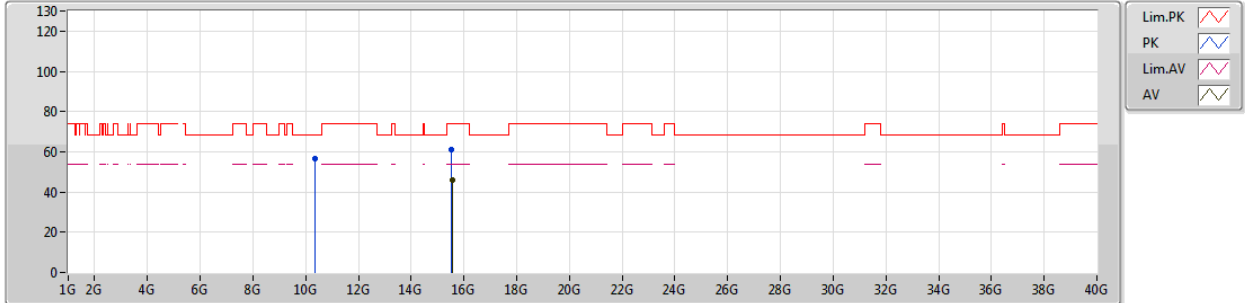
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	10.37044G	56.42	68.20	-11.78	14.89	3	Vertical	159	1.50	-
PK	15.55398G	60.30	74.00	-13.70	15.07	3	Vertical	19	2.48	-
AV	15.53874G	46.53	54.00	-7.47	15.13	3	Vertical	19	2.48	-



802.11a\_Nss1,(6Mbps)\_2TX

20/10/2018

5180MHz\_TX



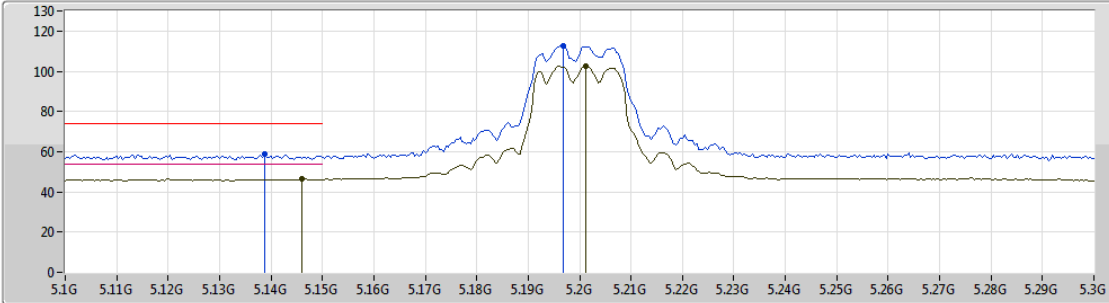
EUT Y\_2TX  
Setting 24  
04-E-3  
FSP(100142)





Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	10.3597G	56.50	68.20	-11.70	14.89	3	Horizontal	215	2.36	-
PK	15.53964G	61.19	74.00	-12.81	15.13	3	Horizontal	257	1.51	-
AV	15.549G	46.12	54.00	-7.88	15.09	3	Horizontal	257	1.51	-

802.11a\_Nss1,(6Mbps)\_2TX

19/10/2018

5200MHz\_TX



Lim.PK    
 PK    
 Lim.AV    
 AV  

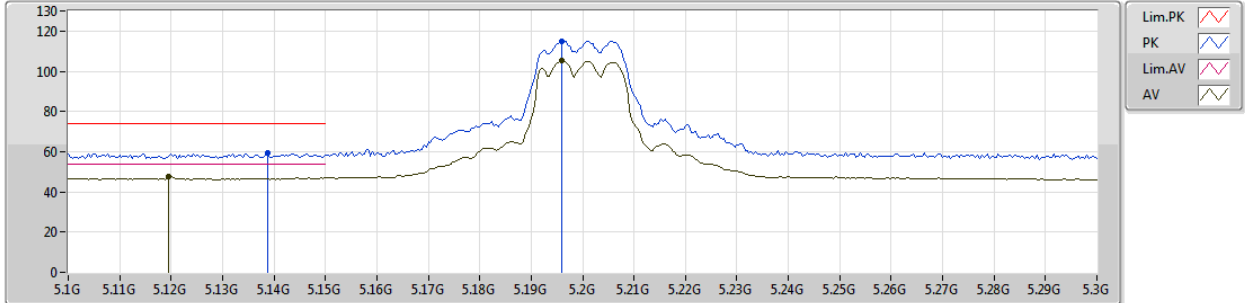
EUT Y\_2TX  
Setting 24  
04-E-3-10  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1388G	58.79	74.00	-15.21	6.25	3	Vertical	194	2.23	-
AV	5.146G	46.34	54.00	-7.66	6.27	3	Vertical	194	2.23	-
PK	5.1968G	112.76	Inf	-Inf	6.40	3	Vertical	194	2.23	-
AV	5.2012G	102.42	Inf	-Inf	6.40	3	Vertical	194	2.23	-

802.11a\_Nss1,(6Mbps)\_2TX

19/10/2018

5200MHz\_TX



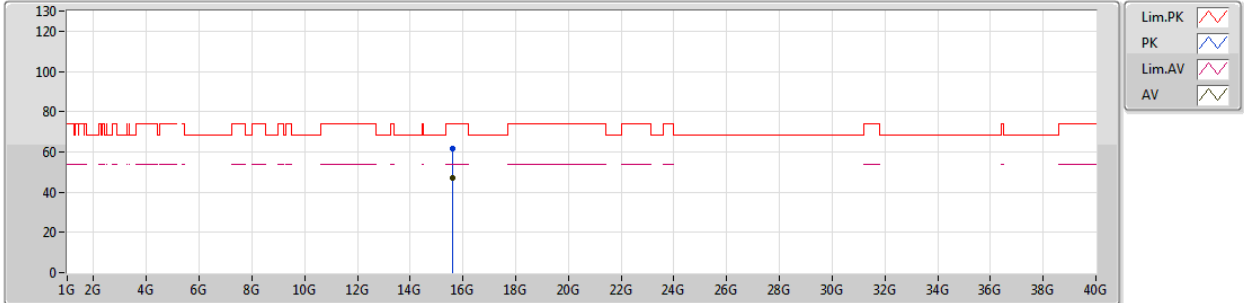
EUT Y\_2TX  
Setting 24  
04-E-3-10  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1388G	59.44	74.00	-14.56	6.25	3	Horizontal	206	2.16	-
AV	5.196G	47.80	54.00	-6.20	6.22	3	Horizontal	206	2.16	-
PK	5.196G	115.11	Inf	-Inf	6.40	3	Horizontal	206	2.16	-
AV	5.196G	105.08	Inf	-Inf	6.40	3	Horizontal	206	2.16	-

802.11a\_Nss1,(6Mbps)\_2TX

19/10/2018

5200MHz\_TX



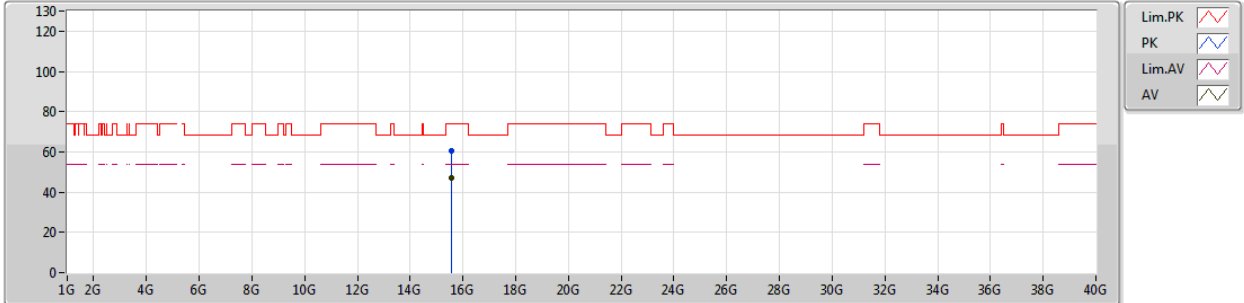
EUT Y\_2TX  
Setting 24  
04-E-3  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.61284G	61.47	74.00	-12.53	14.85	3	Vertical	299	1.50	-
AV	15.59724G	46.97	54.00	-7.03	14.91	3	Vertical	299	1.50	-

802.11a\_Nss1,(6Mbps)\_2TX

19/10/2018

5200MHz\_TX



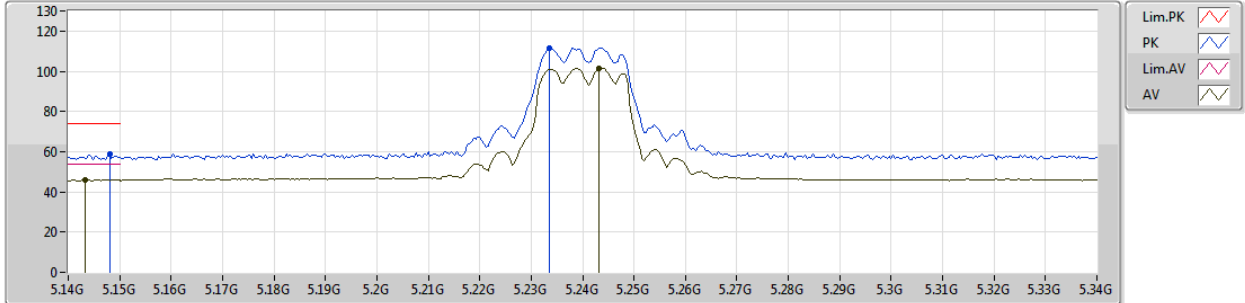
EUT Y\_2TX  
Setting 24  
04-E-3  
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)	
PK	15.58656G	60.25	74.00	-13.75	14.96	3	Horizontal	185	2.11	-
AV	15.58602G	47.00	54.00	-7.00	14.96	3	Horizontal	185	2.11	-

802.11a\_Nss1,(6Mbps)\_2TX

19/10/2018

5240MHz\_TX



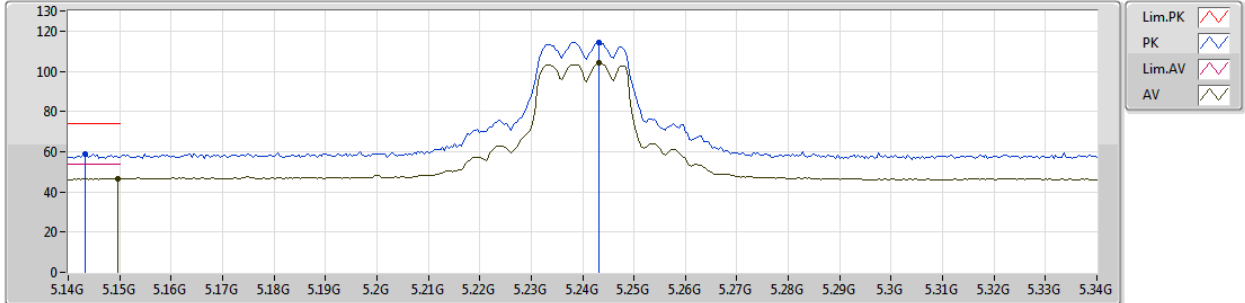
EUT Y\_2TX  
Setting 24  
04-E-3-10  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.148G	58.93	74.00	-15.07	6.27	3	Vertical	242	2.13	-
AV	5.1432G	46.20	54.00	-7.80	6.27	3	Vertical	242	2.13	-
PK	5.2336G	111.63	Inf	-Inf	6.44	3	Vertical	242	2.13	-
AV	5.2432G	101.44	Inf	-Inf	6.45	3	Vertical	242	2.13	-

802.11a\_Nss1,(6Mbps)\_2TX

19/10/2018

5240MHz\_TX



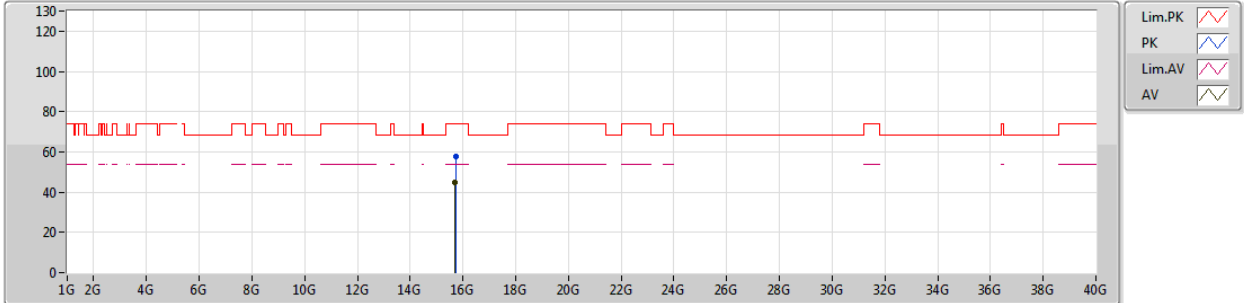
EUT Y\_2TX  
Setting 24  
04-E-3-10  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1432G	59.09	74.00	-14.91	6.27	3	Horizontal	194	2.19	-
AV	5.1496G	46.72	54.00	-7.28	6.27	3	Horizontal	194	2.19	-
PK	5.2432G	114.29	Inf	-Inf	6.45	3	Horizontal	194	2.19	-
AV	5.2432G	104.05	Inf	-Inf	6.45	3	Horizontal	194	2.19	-

802.11a\_Nss1,(6Mbps)\_2TX

19/10/2018

5240MHz\_TX



EUT Y\_2TX  
Setting 24  
04-E-3  
FSP(100142)

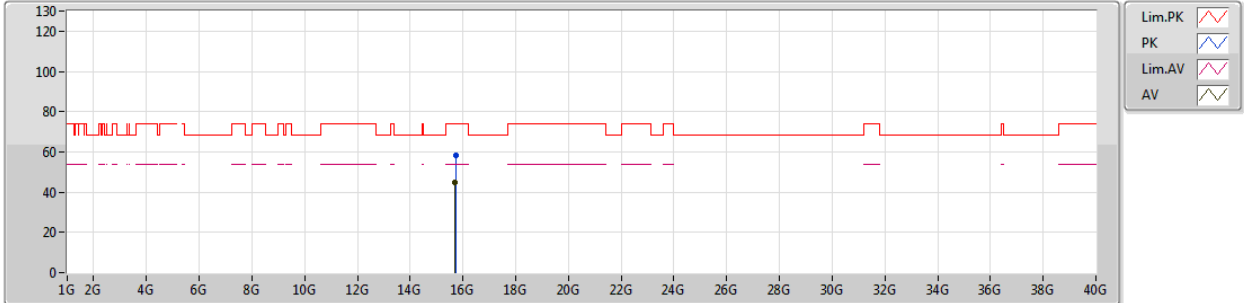
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	15.72036G	57.64	74.00	-16.36	14.45	3	Vertical	180	2.36	-
AV	15.70806G	44.65	54.00	-9.35	14.49	3	Vertical	180	2.36	-



802.11a\_Nss1,(6Mbps)\_2TX

19/10/2018

5240MHz\_TX



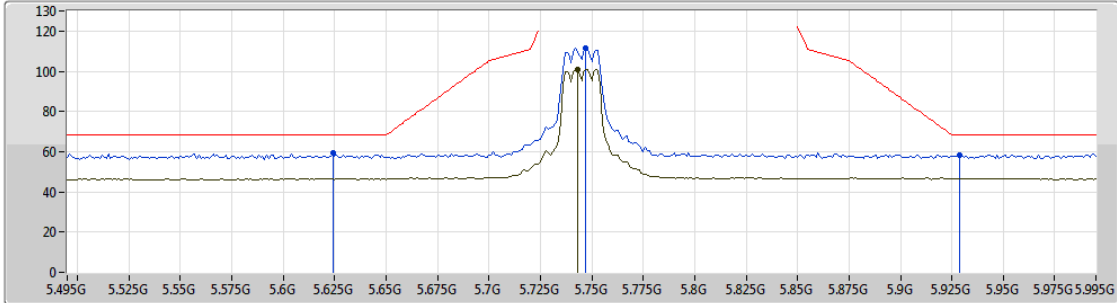
EUT Y\_2TX  
Setting 24  
04-E-3  
FSP(100142)




Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)	
PK	15.72624G	58.20	74.00	-15.80	14.42	3	Horizontal	139	1.79	-
AV	15.70698G	44.85	54.00	-9.15	14.50	3	Horizontal	139	1.79	-

802.11a\_Nss1,(6Mbps)\_2TX

19/10/2018

5745MHz\_TX



Lim.PK    
 PK    
 Lim.AV    
 AV  

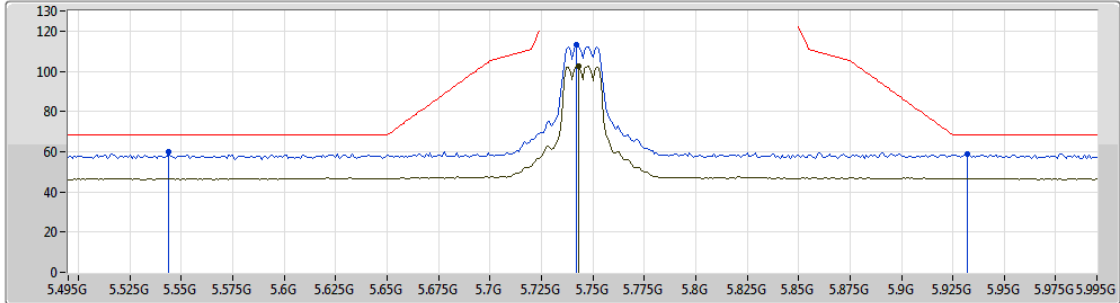
EUT Y\_2TX  
 Setting 24  
 04-E-3-10  
 FSP(100142)





Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.624G	59.15	68.20	-9.05	6.86	3	Vertical	144	2.17	-
PK	5.747G	111.72	Inf	-Inf	7.07	3	Vertical	144	2.17	-
AV	5.743G	101.07	Inf	-Inf	7.06	3	Vertical	144	2.17	-
PK	5.929G	58.55	68.20	-9.65	7.36	3	Vertical	144	2.17	-

802.11a\_Nss1,(6Mbps)\_2TX

19/10/2018

5745MHz\_TX



Lim.PK    
 PK    
 Lim.AV    
 AV  

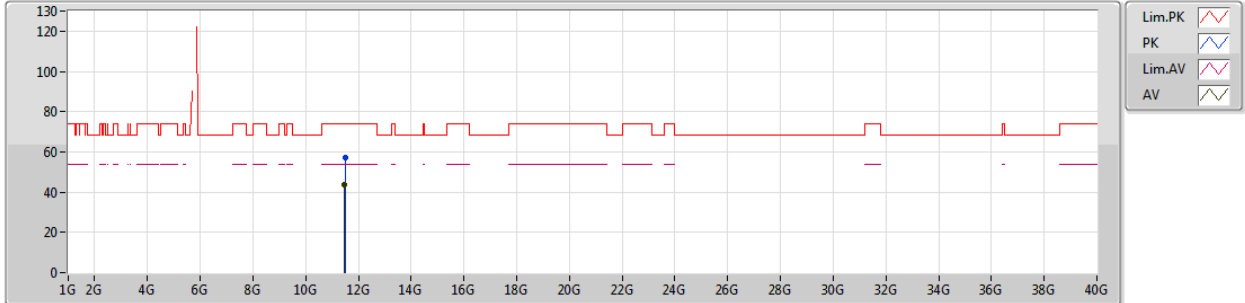
EUT Y\_2TX  
 Setting 24  
 04-E-3-10  
 FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.544G	59.85	68.20	-8.35	6.77	3	Horizontal	149	2.22	-
PK	5.742G	113.08	Inf	-Inf	7.06	3	Horizontal	149	2.22	-
AV	5.743G	102.61	Inf	-Inf	7.06	3	Horizontal	149	2.22	-
PK	5.932G	58.78	68.20	-9.42	7.36	3	Horizontal	149	2.22	-

802.11a\_Nss1,(6Mbps)\_2TX

19/10/2018

5745MHz\_TX



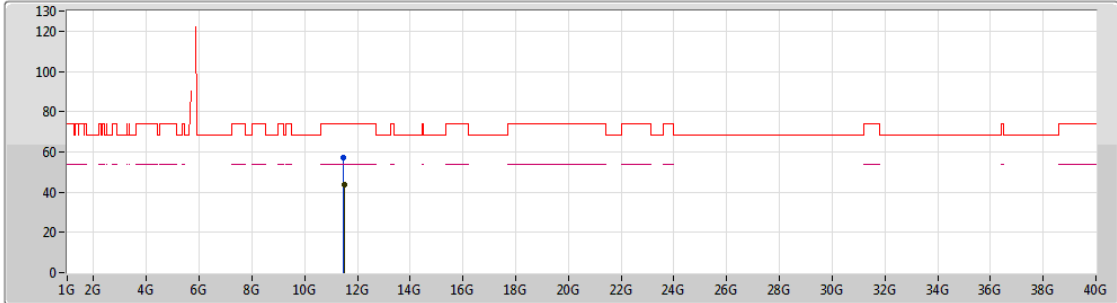
EUT Y\_2TX  
Setting 24  
04-E-3  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.50464G	57.11	74.00	-16.89	14.55	3	Vertical	22	2.47	-
AV	11.48514G	43.51	54.00	-10.49	14.58	3	Vertical	22	2.47	-

802.11a\_Nss1,(6Mbps)\_2TX

19/10/2018

5745MHz\_TX



Lim.PK  
 PK  
 Lim.AV  
 AV

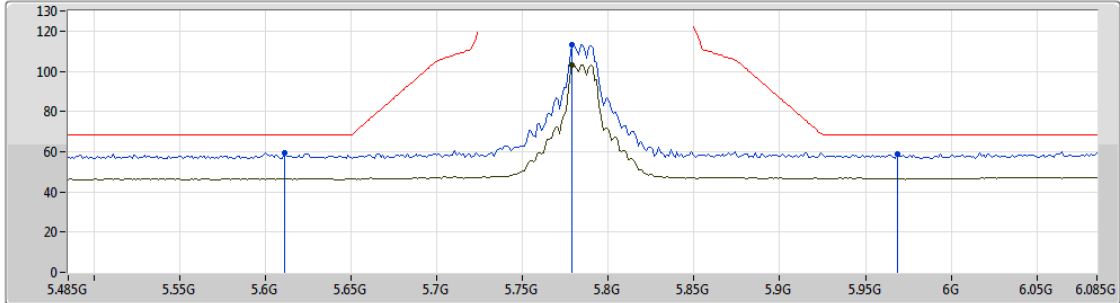
EUT Y\_2TX  
 Setting 24  
 04-E-3  
 FSP(100142)


Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)	
PK	11.48226G	56.94	74.00	-17.06	14.58	3	Horizontal	197	2.12	-
AV	11.49246G	43.52	54.00	-10.48	14.56	3	Horizontal	197	2.12	-

802.11a\_Nss1,(6Mbps)\_2TX

20/10/2018

5785MHz\_TX



Lim.PK    
 PK    
 Lim.AV    
 AV  

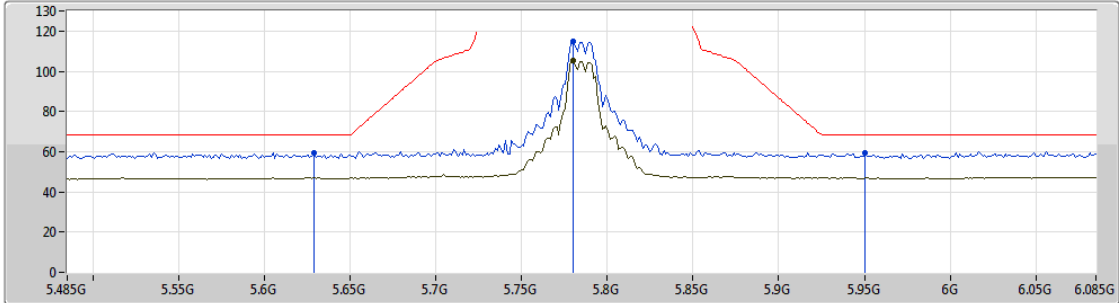
EUT Y\_2TX  
Setting 24  
04-E-3-10  
FSP(100142)


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.611G	59.54	68.20	-8.66	6.84	3	Vertical	146	2.27	-
PK	5.779G	113.37	Inf	-Inf	7.12	3	Vertical	146	2.27	-
AV	5.779G	103.36	Inf	-Inf	7.12	3	Vertical	146	2.27	-
PK	5.9686G	58.88	68.20	-9.32	7.42	3	Vertical	146	2.27	-

802.11a\_Nss1,(6Mbps)\_2TX

20/10/2018

5785MHz\_TX



Lim.PK    
 PK    
 Lim.AV    
 AV  

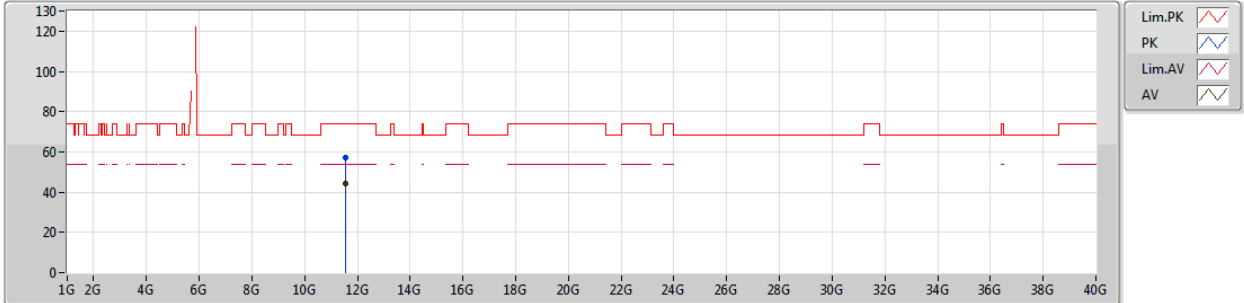
EUT Y\_2TX  
 Setting 24  
 04-E-3-10  
 FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.629G	59.27	68.20	-8.93	6.87	3	Horizontal	152	2.08	-
PK	5.7802G	114.97	Inf	-Inf	7.12	3	Horizontal	152	2.08	-
AV	5.7802G	105.38	Inf	-Inf	7.12	3	Horizontal	152	2.08	-
PK	5.9506G	59.17	68.20	-9.03	7.39	3	Horizontal	152	2.08	-

802.11a\_Nss1,(6Mbps)\_2TX

20/10/2018

5785MHz\_TX



EUT Y\_2TX  
Setting 24  
04-E-3  
FSP(100142)

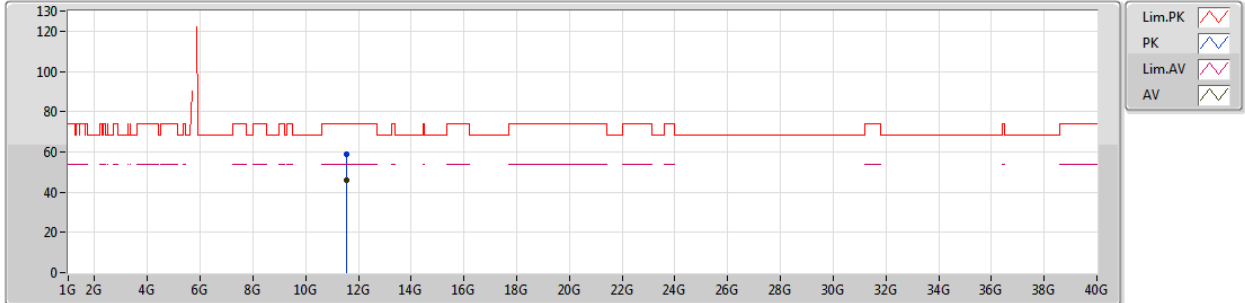
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.56814G	57.20	74.00	-16.80	14.47	3	Vertical	283	2.20	-
AV	11.56808G	44.04	54.00	-9.96	14.47	3	Vertical	283	2.20	-



802.11a\_Nss1,(6Mbps)\_2TX

20/10/2018

5785MHz\_TX



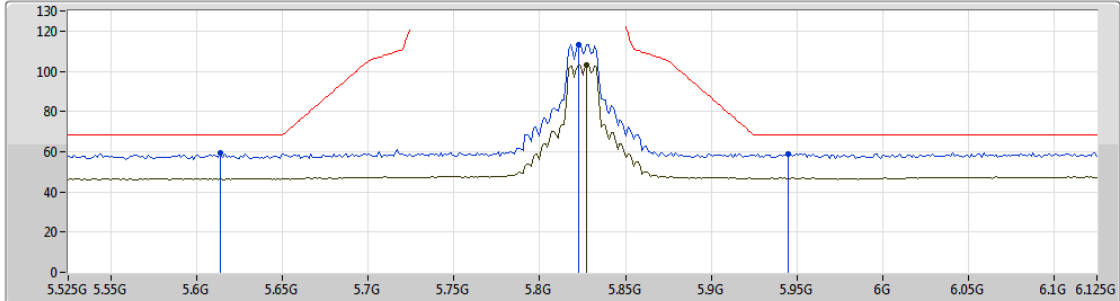
EUT Y\_2TX  
Setting 24  
04-E-3  
FSP(100142)




Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)	
PK	11.56712G	58.95	74.00	-15.05	14.47	3	Horizontal	291	2.19	-
AV	11.56982G	45.82	54.00	-8.18	14.47	3	Horizontal	291	2.19	-

802.11a\_Nss1,(6Mbps)\_2TX

20/10/2018

5825MHz\_TX



Lim.PK    
 PK    
 Lim.AV    
 AV  

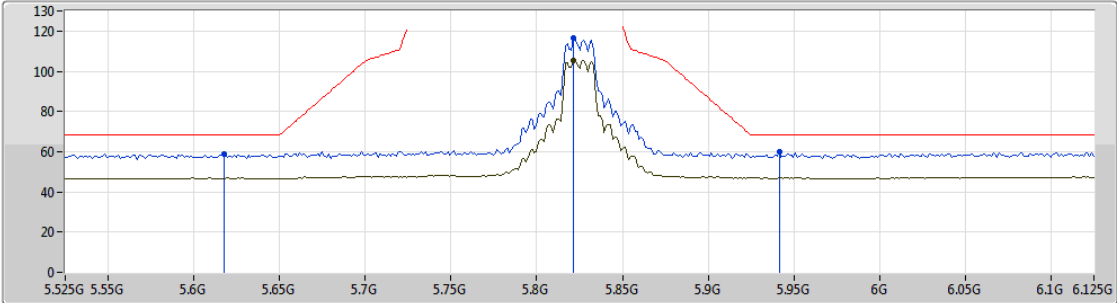
EUT Y\_2TX  
Setting 24  
04-E-3-10  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.6138G	59.61	68.20	-8.59	6.84	3	Vertical	155	2.05	-
PK	5.8226G	113.40	Inf	-Inf	7.18	3	Vertical	155	2.05	-
AV	5.8274G	103.33	Inf	-Inf	7.20	3	Vertical	155	2.05	-
PK	5.945G	59.03	68.20	-9.17	7.38	3	Vertical	155	2.05	-

802.11a\_Nss1,(6Mbps)\_2TX

20/10/2018

5825MHz\_TX



Lim.PK  
 PK  
 Lim.AV  
 AV

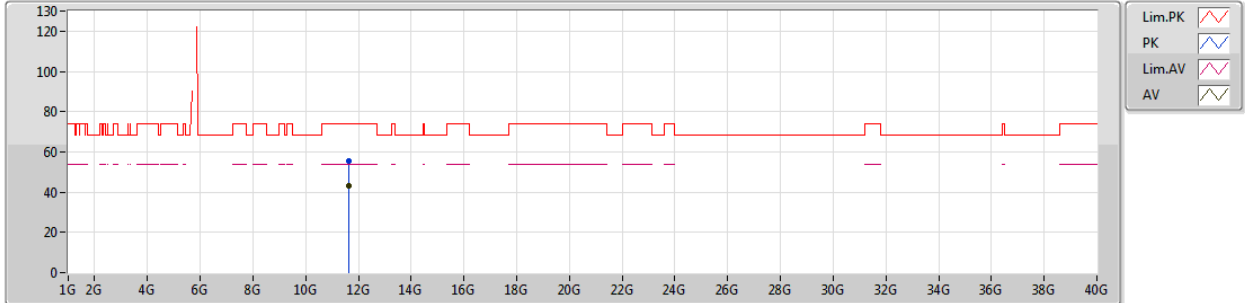
EUT Y\_2TX  
Setting 24  
04-E-3-10  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.6174G	59.00	68.20	-9.20	6.85	3	Horizontal	151	2.08	-
PK	5.8214G	116.45	Inf	-Inf	7.18	3	Horizontal	151	2.08	-
AV	5.8214G	105.48	Inf	-Inf	7.18	3	Horizontal	151	2.08	-
PK	5.9414G	60.19	68.20	-8.01	7.38	3	Horizontal	151	2.08	-

802.11a\_Nss1,(6Mbps)\_2TX

20/10/2018

5825MHz\_TX



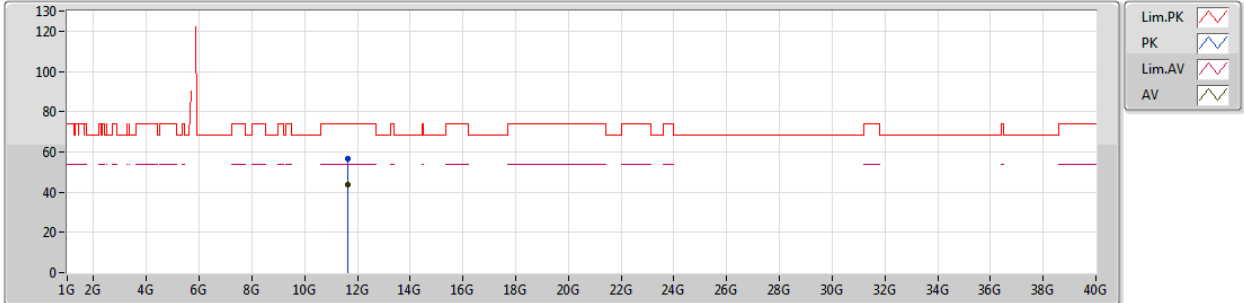
EUT Y\_2TX  
Setting 24  
04-E-3  
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)	
PK	11.6404G	55.71	74.00	-18.29	14.37	3	Vertical	316	1.50	-
AV	11.64136G	42.91	54.00	-11.09	14.37	3	Vertical	316	1.50	-

802.11a\_Nss1,(6Mbps)\_2TX

20/10/2018

5825MHz\_TX



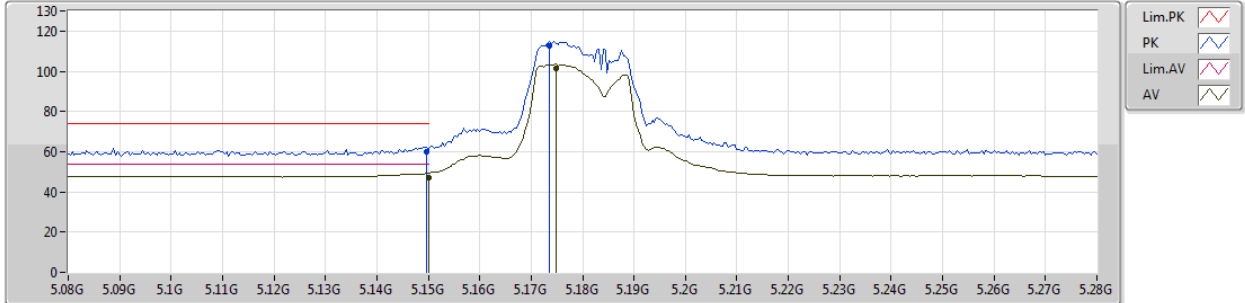
EUT Y\_2TX  
Setting 24  
04-E-3  
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)	
PK	11.6377G	56.32	74.00	-17.68	14.37	3	Horizontal	247	2.27	-
AV	11.64988G	43.75	54.00	-10.25	14.36	3	Horizontal	247	2.27	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5180MHz\_TX



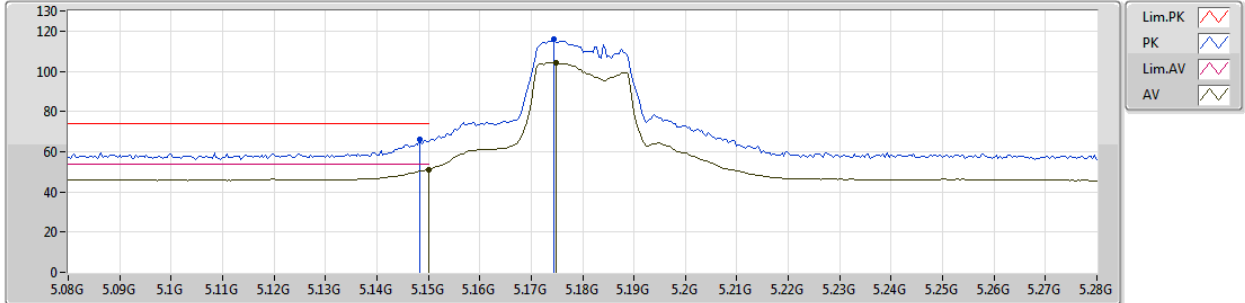
EUT Y\_2TX  
 Setting 23.5  
 04-E-4-10  
 FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1496G	60.15	74.00	-13.85	6.27	3	Vertical	9	1.50	-
AV	5.15G	47.08	54.00	-6.92	6.27	3	Vertical	9	1.50	-
PK	5.1736G	112.63	Inf	-Inf	6.34	3	Vertical	9	1.50	-
AV	5.1748G	101.16	Inf	-Inf	6.34	3	Vertical	9	1.50	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5180MHz\_TX



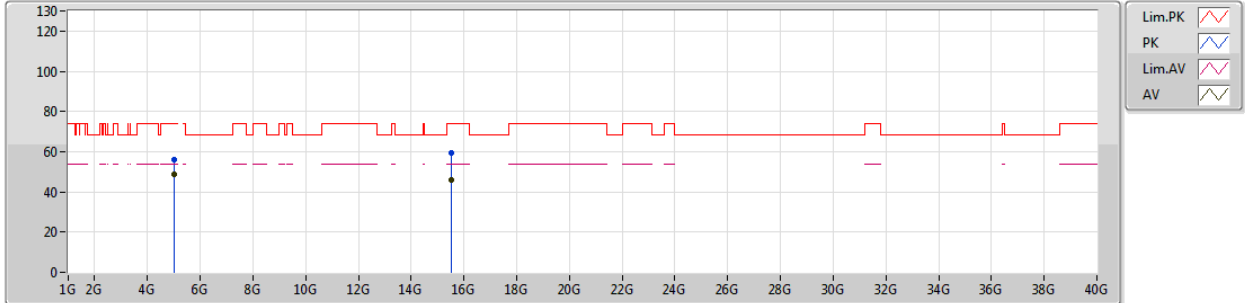
EUT Y\_2TX  
Setting 23.5  
04-E-4-10  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1484G	65.88	74.00	-8.12	6.27	3	Horizontal	36	1.82	-
AV	5.15G	51.27	54.00	-2.73	6.27	3	Horizontal	36	1.82	-
PK	5.1744G	115.77	Inf	-Inf	6.34	3	Horizontal	36	1.82	-
AV	5.1748G	104.23	Inf	-Inf	6.34	3	Horizontal	36	1.82	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5180MHz\_TX



EUT Y\_2TX  
Setting 23.5  
04-E-4  
FSP(100142)

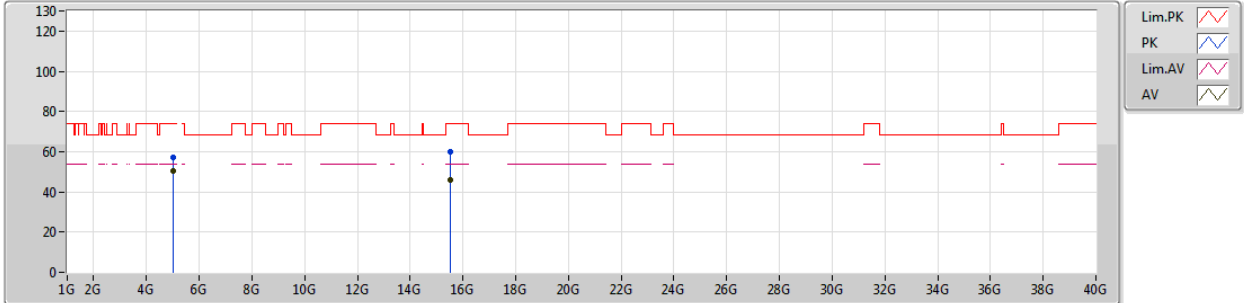
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	4.9998G	55.91	74.00	-18.09	5.90	3	Vertical	7	2.07	-
AV	4.99996G	49.01	54.00	-4.99	5.90	3	Vertical	7	2.07	-
PK	15.5249G	59.59	74.00	-14.41	15.18	3	Vertical	250	1.50	-
AV	15.5313G	46.14	54.00	-7.86	15.16	3	Vertical	250	1.50	-



802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5180MHz\_TX



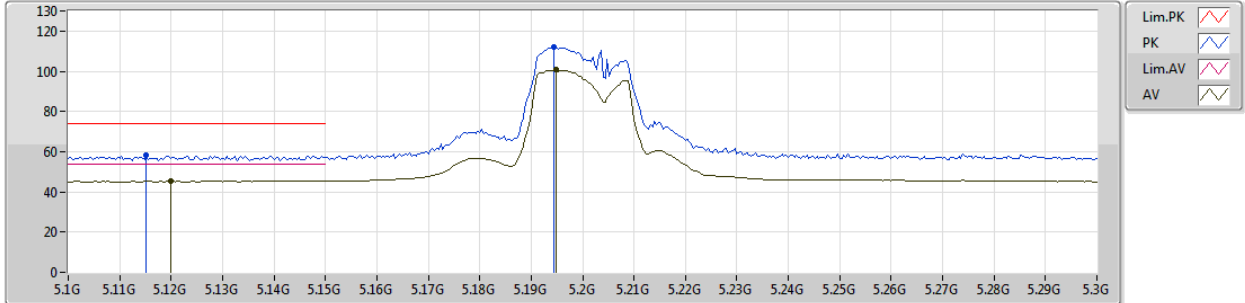
EUT Y\_2TX  
Setting 23.5  
04-E-4  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.00005G	57.39	74.00	-16.61	5.90	3	Horizontal	21	2.01	-
AV	4.99995G	50.22	54.00	-3.78	5.90	3	Horizontal	21	2.01	-
PK	15.5214G	59.70	74.00	-14.30	15.20	3	Horizontal	328	1.50	-
AV	15.5312G	45.98	54.00	-8.02	15.16	3	Horizontal	328	1.50	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5200MHz\_TX



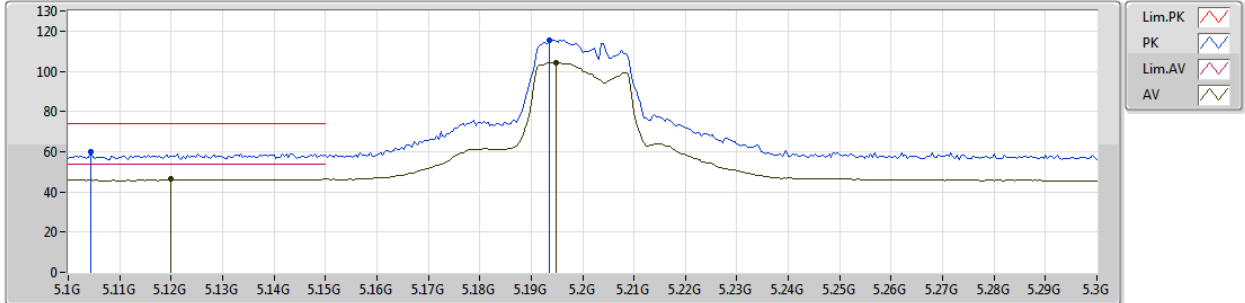
EUT Y\_2TX  
Setting 24  
04-E-4-10  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1152G	58.11	74.00	-15.89	6.20	3	Vertical	11	1.50	-
AV	5.12G	45.50	54.00	-8.50	6.22	3	Vertical	11	1.50	-
PK	5.1944G	111.91	Inf	-Inf	6.38	3	Vertical	11	1.50	-
AV	5.1948G	100.64	Inf	-Inf	6.39	3	Vertical	11	1.50	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5200MHz\_TX



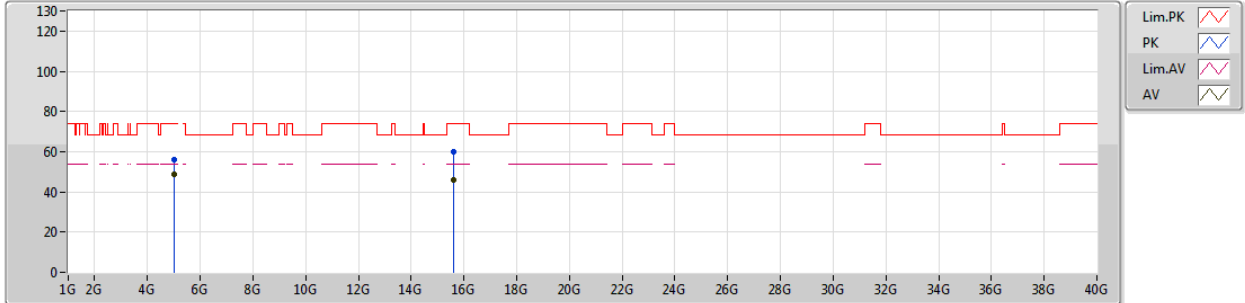
EUT Y\_2TX  
Setting 24  
04-E-4-10  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1044G	59.88	74.00	-14.12	6.17	3	Horizontal	37	1.96	-
AV	5.12G	46.59	54.00	-7.41	6.22	3	Horizontal	37	1.96	-
PK	5.1936G	115.39	Inf	-Inf	6.38	3	Horizontal	37	1.96	-
AV	5.1948G	104.27	Inf	-Inf	6.39	3	Horizontal	37	1.96	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5200MHz\_TX



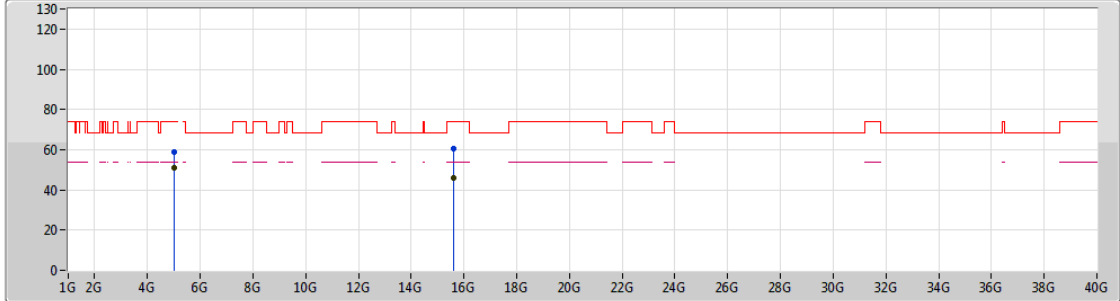
EUT Y\_2TX  
Setting 24  
04-E-4  
FSP(100142)




Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	4.99999G	55.93	74.00	-18.07	5.90	3	Vertical	4	1.85	-
AV	4.99998G	48.85	54.00	-5.15	5.90	3	Vertical	4	1.85	-
PK	15.59408G	59.93	74.00	-14.07	14.93	3	Vertical	210	1.96	-
AV	15.59144G	45.82	54.00	-8.18	14.94	3	Vertical	210	1.96	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5200MHz\_TX



Lim.PK    
 PK    
 Lim.AV    
 AV  

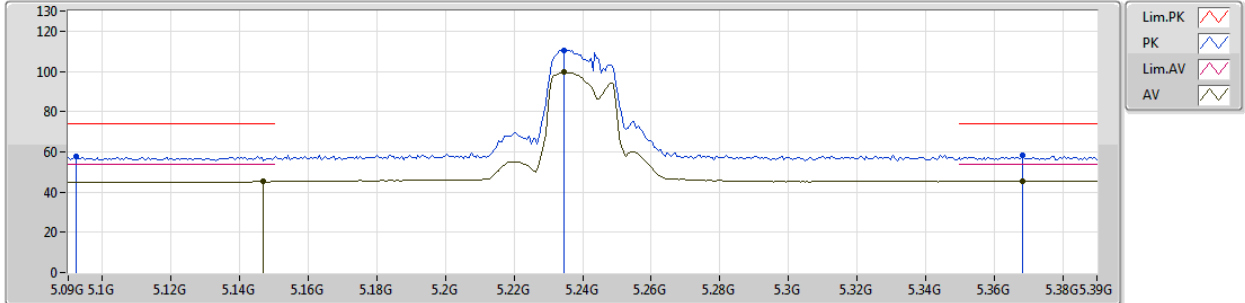
EUT Y\_2TX  
Setting 24  
04-E-4  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	4.99986G	58.76	74.00	-15.24	5.90	3	Horizontal	27	1.95	-
AV	4.99994G	51.27	54.00	-2.73	5.90	3	Horizontal	27	1.95	-
PK	15.60648G	60.32	74.00	-13.68	14.88	3	Horizontal	123	1.85	-
AV	15.59892G	45.86	54.00	-8.14	14.90	3	Horizontal	123	1.85	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5240MHz\_TX



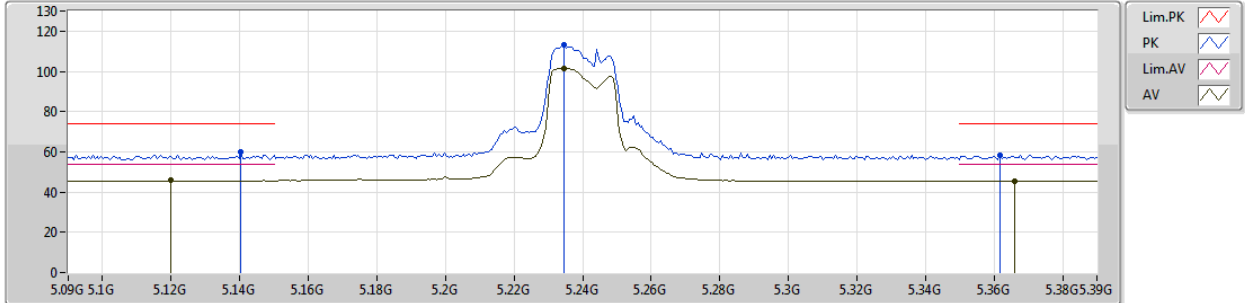
EUT Y\_2TX  
Setting 24  
04-E-4-10  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.0924G	57.70	74.00	-16.30	6.15	3	Vertical	11	1.46	-
AV	5.147G	45.17	54.00	-8.83	6.27	3	Vertical	11	1.46	-
PK	5.2346G	110.46	Inf	-Inf	6.44	3	Vertical	11	1.46	-
AV	5.2346G	99.52	Inf	-Inf	6.44	3	Vertical	11	1.46	-
PK	5.3684G	58.20	74.00	-15.80	6.62	3	Vertical	11	1.46	-
AV	5.3684G	45.47	54.00	-8.53	6.62	3	Vertical	11	1.46	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5240MHz\_TX



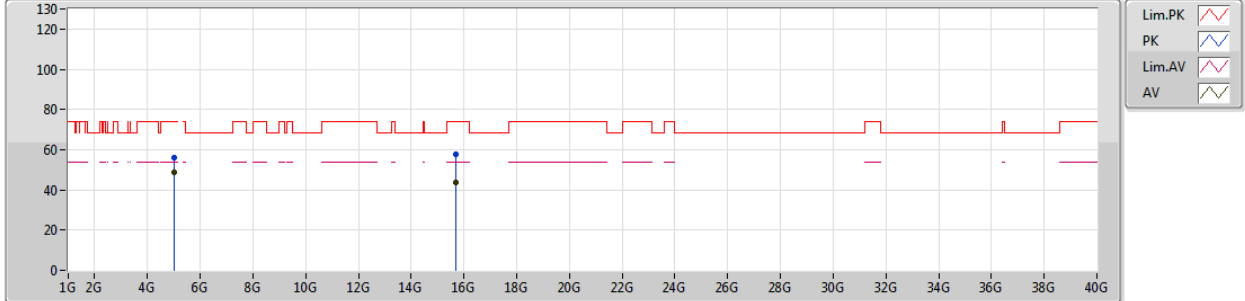
EUT Y\_2TX  
Setting 24  
04-E-4-10  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.1404G	59.73	74.00	-14.27	6.26	3	Horizontal	31	1.99	-
AV	5.12G	46.06	54.00	-7.94	6.22	3	Horizontal	31	1.99	-
PK	5.2346G	112.96	Inf	-Inf	6.44	3	Horizontal	31	1.99	-
AV	5.2346G	101.69	Inf	-Inf	6.44	3	Horizontal	31	1.99	-
PK	5.3618G	58.20	74.00	-15.80	6.62	3	Horizontal	31	1.99	-
AV	5.366G	45.58	54.00	-8.42	6.62	3	Horizontal	31	1.99	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5240MHz\_TX



EUT Y\_2TX  
Setting 24  
04-E-4  
FSP(100142)

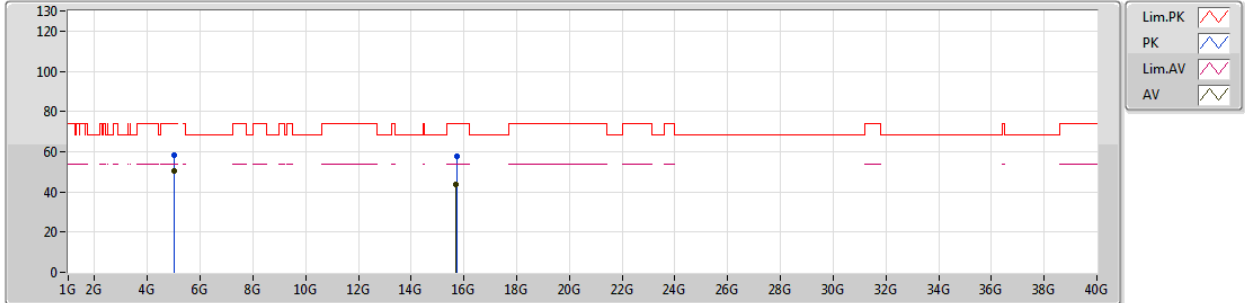
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	4.99997G	55.90	74.00	-18.10	5.90	3	Vertical	10	2.18	-
AV	4.99996G	48.87	54.00	-5.13	5.90	3	Vertical	10	2.18	-
PK	15.71136G	57.83	74.00	-16.17	14.48	3	Vertical	163	1.40	-
AV	15.71032G	43.43	54.00	-10.57	14.48	3	Vertical	163	1.40	-



802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5240MHz\_TX



EUT Y\_2TX  
Setting 24  
04-E-4  
FSP(100142)

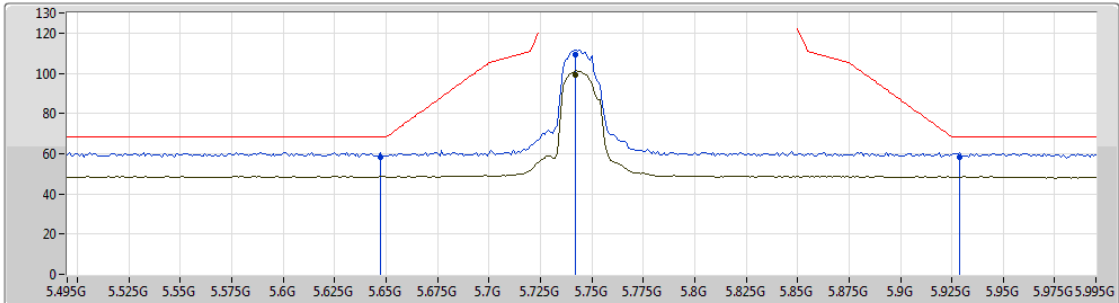
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	4.9998G	58.14	74.00	-15.86	5.90	3	Horizontal	24	2.20	-
AV	4.99996G	50.35	54.00	-3.65	5.90	3	Horizontal	24	2.20	-
PK	15.7288G	57.48	74.00	-16.52	14.41	3	Horizontal	111	1.60	-
AV	15.7104G	43.59	54.00	-10.41	14.48	3	Horizontal	111	1.60	-



802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5745MHz\_TX



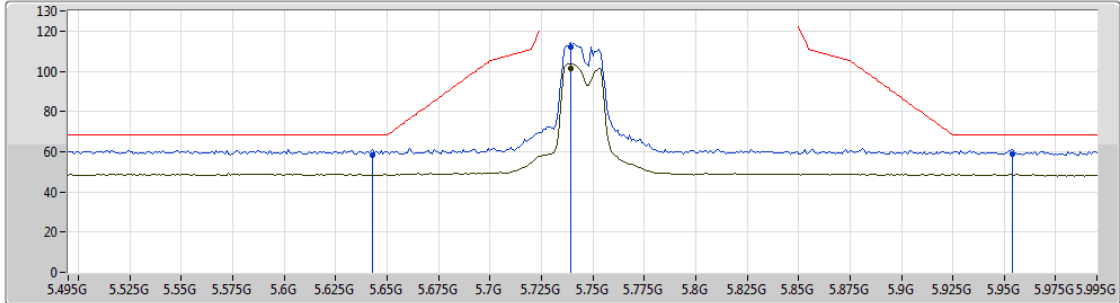
EUT Y\_2TX  
Setting 24  
04-E-4-10  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.647G	58.38	68.20	-9.82	6.90	3	Vertical	354	1.50	-
PK	5.742G	109.46	Inf	-Inf	7.06	3	Vertical	354	1.50	-
AV	5.742G	98.95	Inf	-Inf	7.06	3	Vertical	354	1.50	-
PK	5.929G	58.37	68.20	-9.83	7.36	3	Vertical	354	1.50	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5745MHz\_TX



Lim.PK  
 PK  
 Lim.AV  
 AV

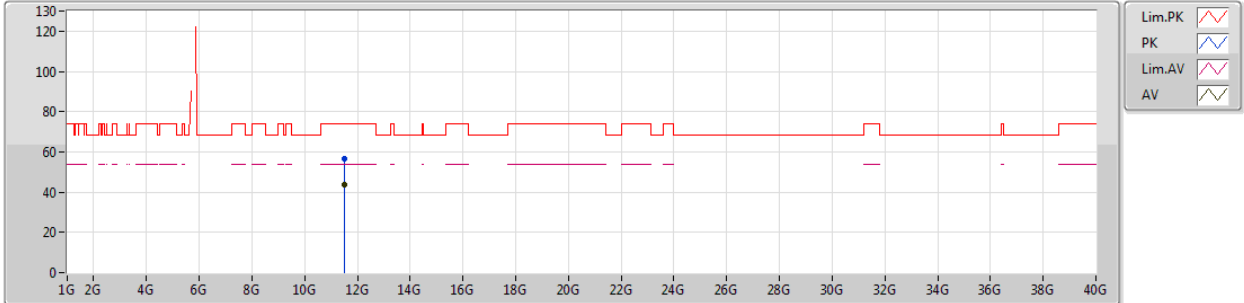
EUT Y\_2TX  
 Setting 24  
 04-E-4-10  
 FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.643G	58.47	68.20	-9.73	6.89	3	Horizontal	336	2.99	-
PK	5.739G	112.23	Inf	-Inf	7.05	3	Horizontal	336	2.99	-
AV	5.739G	101.41	Inf	-Inf	7.05	3	Horizontal	336	2.99	-
PK	5.954G	58.83	68.20	-9.37	7.40	3	Horizontal	336	2.99	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5745MHz\_TX



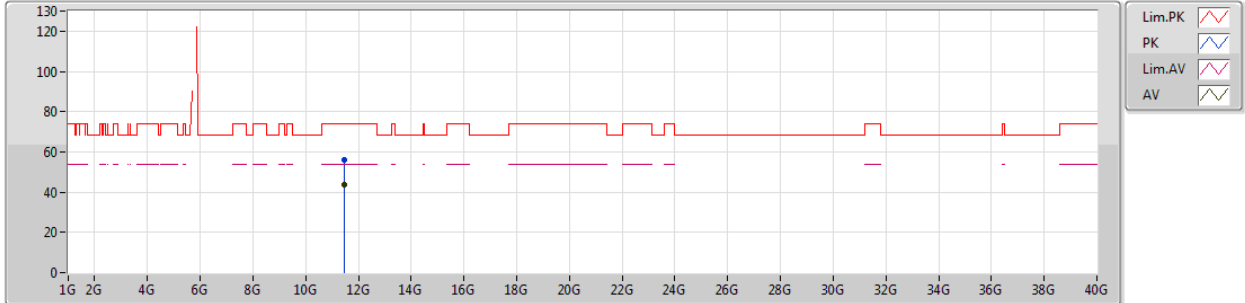
EUT Y\_2TX  
Setting 24  
04-E-4  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.49008G	56.84	74.00	-17.16	14.56	3	Vertical	279	1.56	-
AV	11.4882G	43.43	54.00	-10.57	14.57	3	Vertical	279	1.56	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5745MHz\_TX



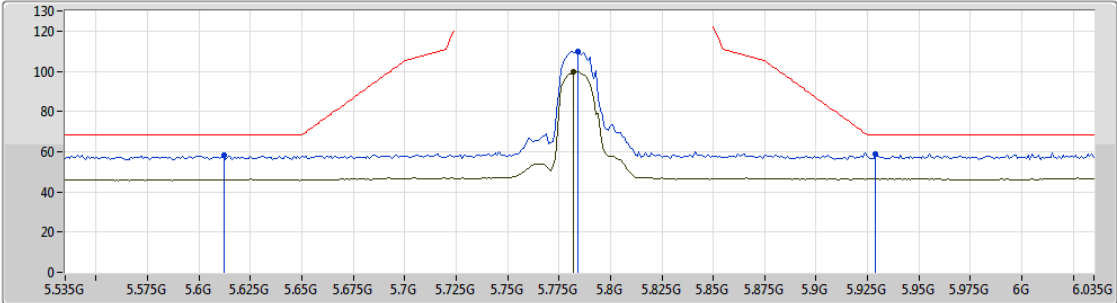
EUT Y\_2TX  
Setting 24  
04-E-4  
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)	
PK	11.4862G	56.28	74.00	-17.72	14.57	3	Horizontal	159	1.74	-
AV	11.4828G	43.46	54.00	-10.54	14.58	3	Horizontal	159	1.74	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5785MHz\_TX



Lim.PK  
 PK  
 Lim.AV  
 AV

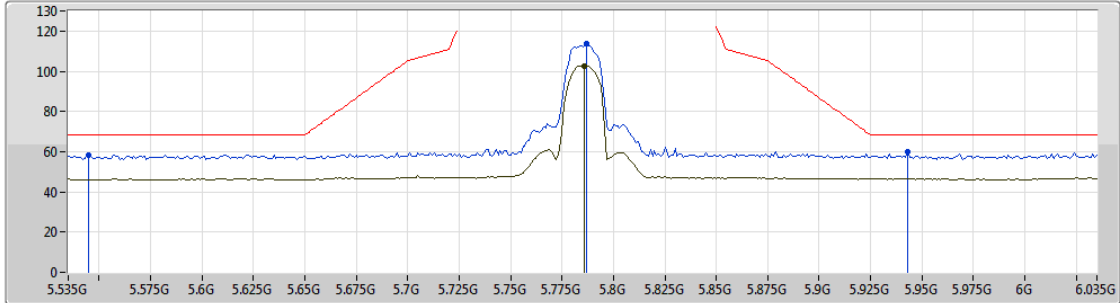
EUT Y\_2TX  
 Setting 24  
 04-E-4-10  
 FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.612G	58.29	68.20	-9.91	6.84	3	Vertical	24	1.50	-
PK	5.784G	109.98	Inf	-Inf	7.13	3	Vertical	24	1.50	-
AV	5.782G	99.90	Inf	-Inf	7.12	3	Vertical	24	1.50	-
PK	5.929G	58.94	68.20	-9.26	7.36	3	Vertical	24	1.50	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5785MHz\_TX



- Lim.PK
- PK
- Lim.AV
- AV

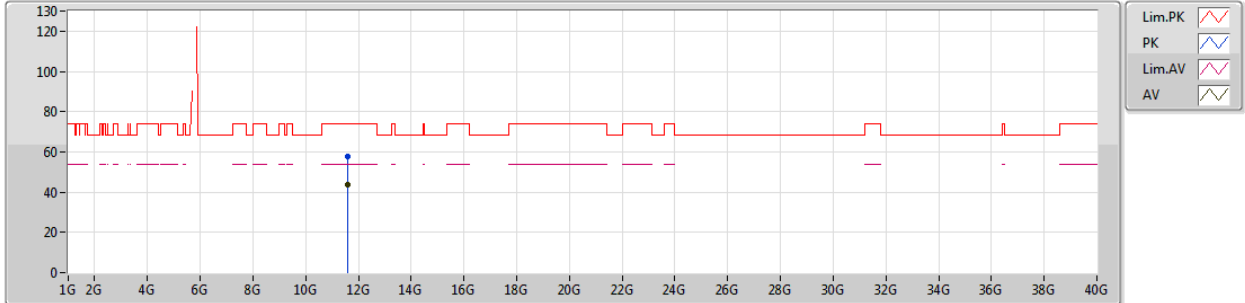
EUT Y\_2TX  
Setting 24  
04-E-4-10  
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	5.545G	58.40	68.20	-9.80	6.77	3	Horizontal	332	2.99	-
PK	5.787G	113.92	Inf	-Inf	7.13	3	Horizontal	332	2.99	-
AV	5.786G	102.82	Inf	-Inf	7.13	3	Horizontal	332	2.99	-
PK	5.943G	60.04	68.20	-8.16	7.38	3	Horizontal	332	2.99	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5785MHz\_TX



EUT Y\_2TX  
Setting 24  
04-E-4  
FSP(100142)

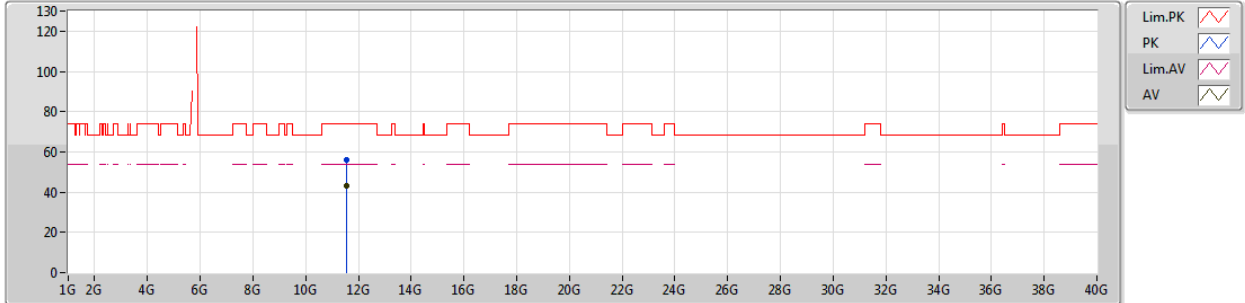
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
PK	11.57234G	57.48	74.00	-16.52	14.47	3	Vertical	71	1.52	-
AV	11.57404G	43.98	54.00	-10.02	14.45	3	Vertical	71	1.52	-



802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5785MHz\_TX



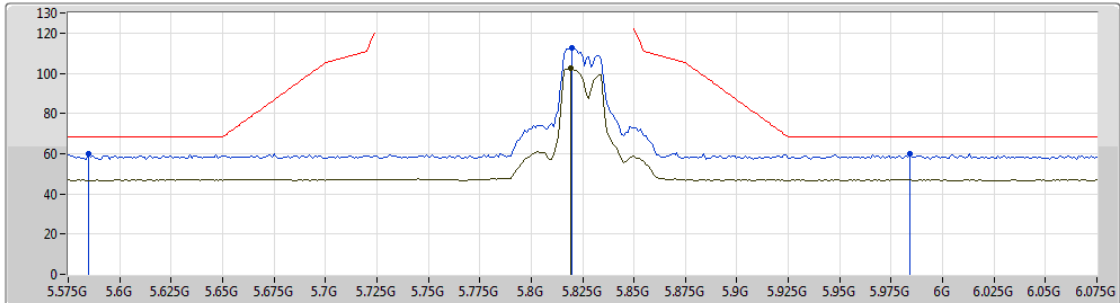
EUT\_Y\_2TX  
Setting 24  
04-E-4  
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)	
PK	11.57056G	55.90	74.00	-18.10	14.47	3	Horizontal	237	1.84	-
AV	11.57012G	43.21	54.00	-10.79	14.47	3	Horizontal	237	1.84	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5825MHz\_TX



Lim.PK  
 PK  
 Lim.AV  
 AV

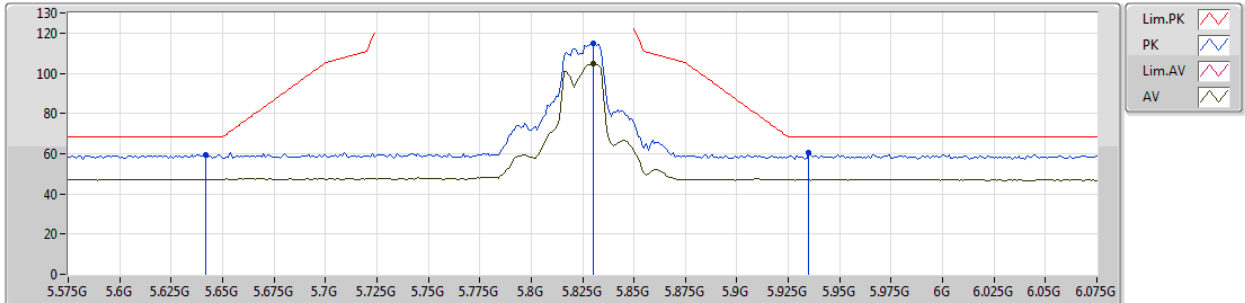
EUT Y\_4TX  
 Setting 24  
 02-M-1-10  
 FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.855G	60.09	68.20	-8.11	9.27	3	Vertical	35	1.08	-
PK	5.82G	112.86	Inf	-Inf	9.34	3	Vertical	35	1.08	-
AV	5.819G	102.45	Inf	-Inf	9.34	3	Vertical	35	1.08	-
PK	5.984G	60.10	68.20	-8.10	9.49	3	Vertical	35	1.08	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5825MHz\_TX



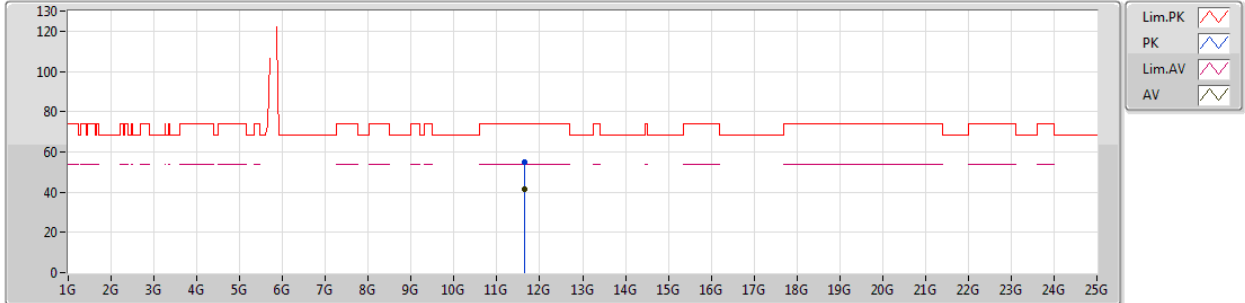
EUT\_Y\_4TX  
Setting 24  
02-M-1-10  
FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.642G	59.58	68.20	-8.62	9.30	3	Horizontal	323	2.04	-
PK	5.83G	114.81	Inf	-Inf	9.36	3	Horizontal	323	2.04	-
AV	5.83G	104.65	Inf	-Inf	9.36	3	Horizontal	323	2.04	-
PK	5.935G	60.54	68.20	-7.66	9.46	3	Horizontal	323	2.04	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5825MHz\_TX



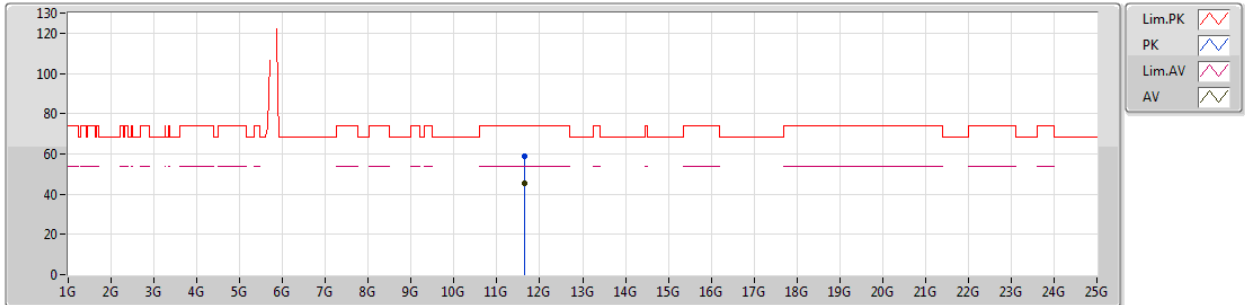
EUT\_Y\_4TX  
Setting 24  
02-M-1  
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.652G	54.76	74.00	-19.24	14.85	3	Vertical	103	1.71	-
AV	11.65016G	41.21	54.00	-12.79	14.85	3	Vertical	103	1.71	-

802.11ac VHT20\_Nss1,(MCS0)\_2TX

22/10/2018

5825MHz\_TX



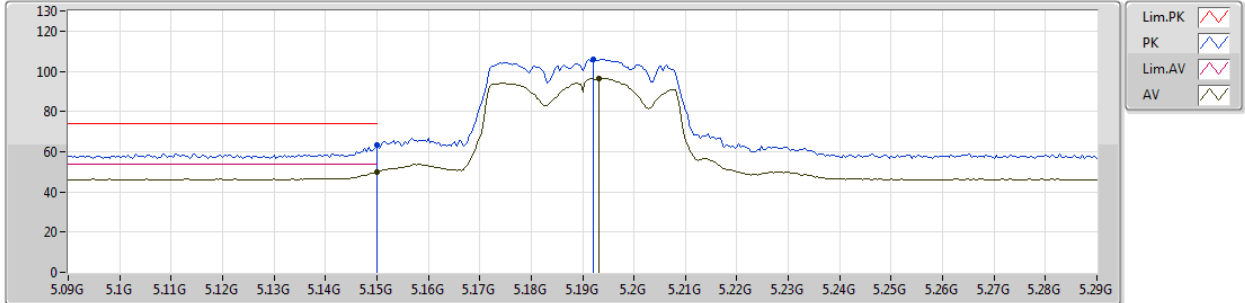
EUT Y\_4TX  
Setting 24  
02-M-1  
FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.65262G	59.06	74.00	-14.94	14.85	3	Horizontal	114	2.42	-
AV	11.64996G	45.30	54.00	-8.70	14.84	3	Horizontal	114	2.42	-

802.11ac VHT40\_Nss1,(MCS0)\_2TX

22/10/2018

5190MHz\_TX



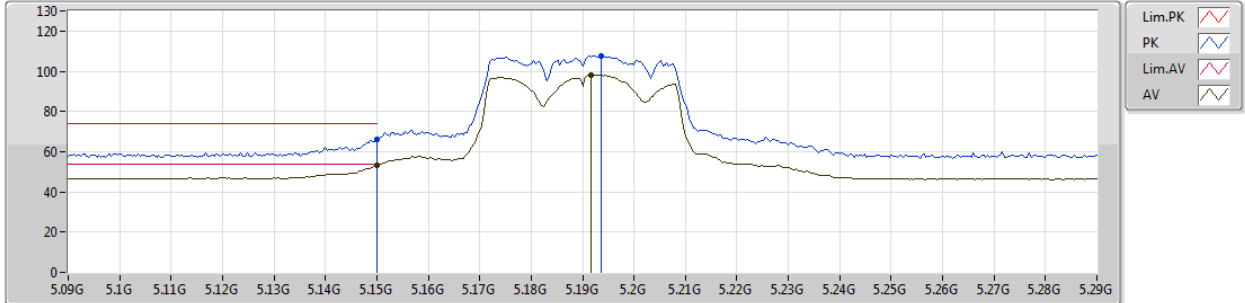
EUT\_Y\_4TX  
Setting 21  
02-M-1-10  
FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.15G	63.05	74.00	-10.95	8.56	3	Vertical	1	2.01	-
AV	5.15G	49.75	54.00	-4.25	8.56	3	Vertical	1	2.01	-
PK	5.192G	106.02	Inf	-Inf	8.65	3	Vertical	1	2.01	-
AV	5.1932G	96.27	Inf	-Inf	8.65	3	Vertical	1	2.01	-

802.11ac VHT40\_Nss1,(MCS0)\_2TX

22/10/2018

5190MHz\_TX



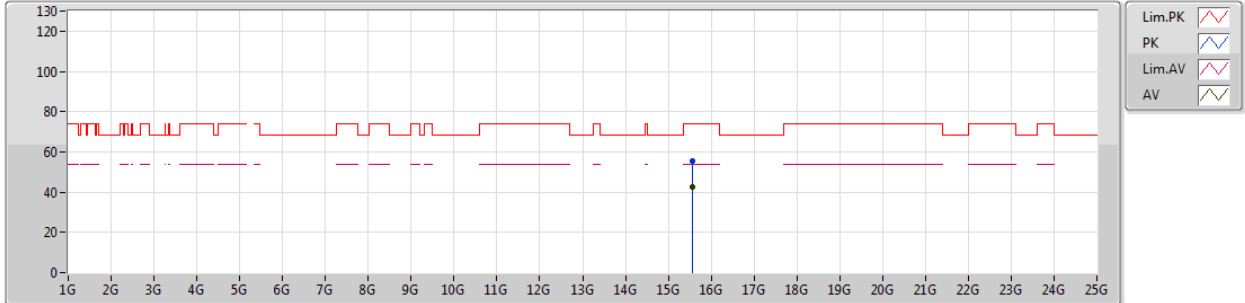
EUT\_Y\_4TX  
Setting 21  
02-M-1-10  
FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.15G	66.20	74.00	-7.80	8.56	3	Horizontal	16	2.09	-
AV	5.15G	53.40	54.00	-0.60	8.56	3	Horizontal	16	2.09	-
PK	5.1936G	107.83	Inf	-Inf	8.65	3	Horizontal	16	2.09	-
AV	5.1916G	98.24	Inf	-Inf	8.65	3	Horizontal	16	2.09	-

802.11ac VHT40\_Nss1,(MCS0)\_2TX

22/10/2018

5190MHz\_TX



EUT\_Y\_4TX  
Setting 21  
02-M-1  
FSU(100050)

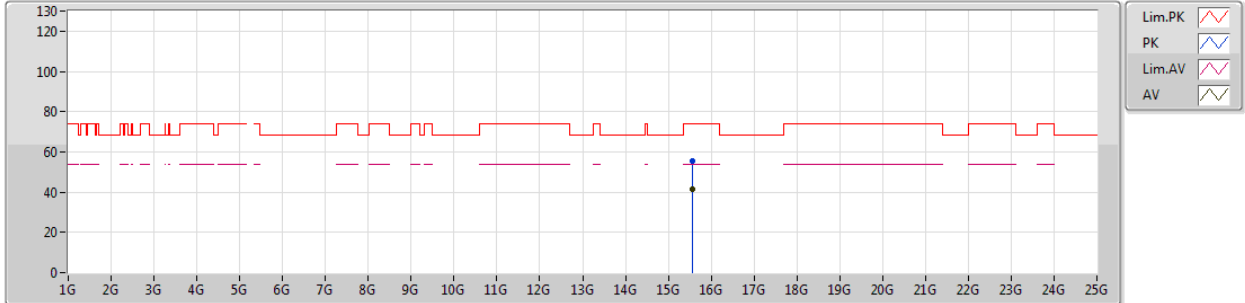
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	15.57033G	55.46	74.00	-18.54	15.97	3	Vertical	207	2.34	-
AV	15.57062G	42.35	54.00	-11.65	15.97	3	Vertical	207	2.34	-



802.11ac VHT40\_Nss1,(MCS0)\_2TX

22/10/2018

5190MHz\_TX



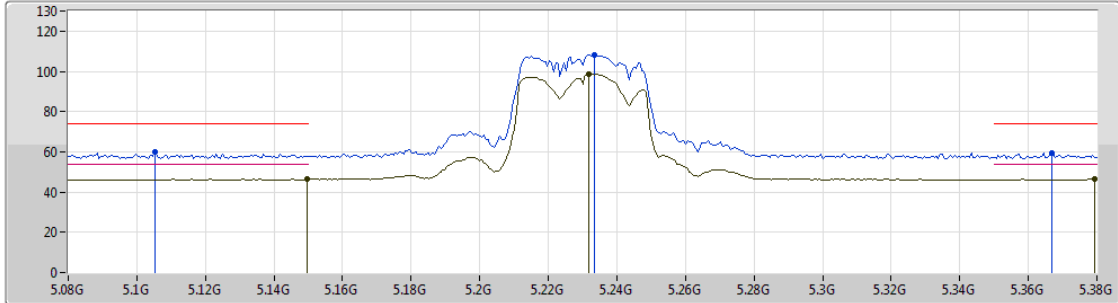
EUT\_Y\_4TX  
Setting 21  
02-M-1  
FSU(100050)





Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	15.56962G	55.55	74.00	-18.45	15.98	3	Horizontal	43	2.49	-
AV	15.56908G	41.36	54.00	-12.64	15.98	3	Horizontal	43	2.49	-

802.11ac VHT40\_Nss1,(MCS0)\_2TX

22/10/2018

5230MHz\_TX



- Lim.PK 
- PK 
- Lim.AV 
- AV 

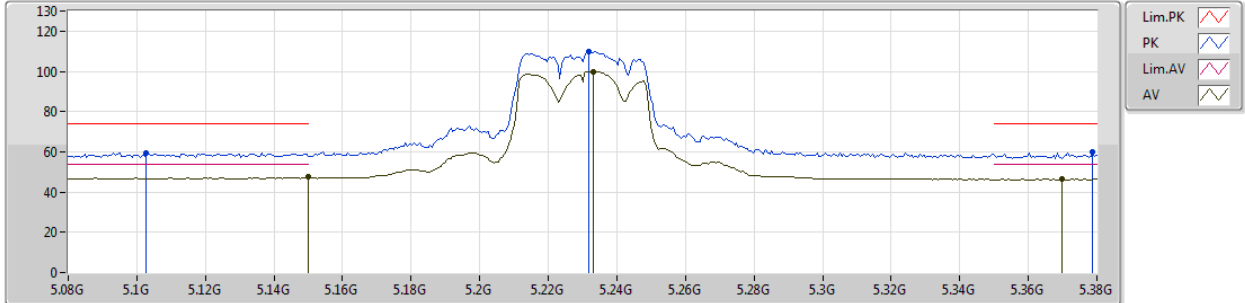
EUT\_Y\_4TX  
Setting 24  
02-M-1-10  
FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.1052G	59.71	74.00	-14.29	8.49	3	Vertical	9	2.01	-
AV	5.1496G	46.59	54.00	-7.41	8.56	3	Vertical	9	2.01	-
PK	5.2336G	107.99	Inf	-Inf	8.71	3	Vertical	9	2.01	-
AV	5.2318G	98.61	Inf	-Inf	8.71	3	Vertical	9	2.01	-
PK	5.3668G	59.42	74.00	-14.58	8.90	3	Vertical	9	2.01	-
AV	5.3794G	46.27	54.00	-7.73	8.93	3	Vertical	9	2.01	-

802.11ac VHT40\_Nss1,(MCS0)\_2TX

22/10/2018

5230MHz\_TX



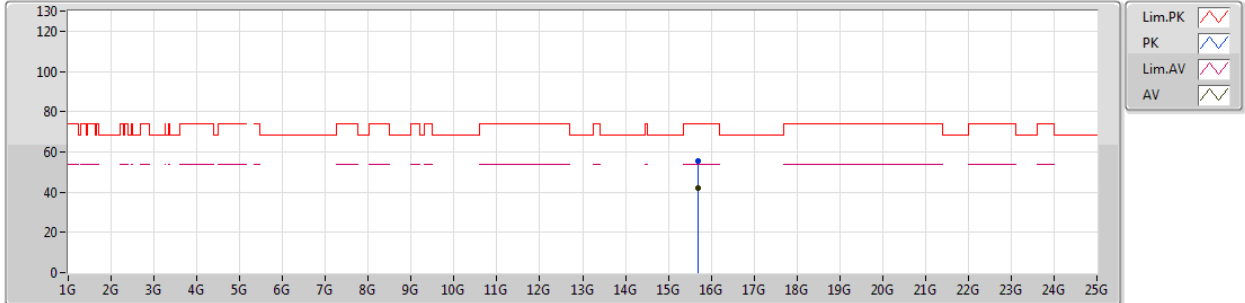
EUT\_Y\_4TX  
Setting 24  
02-M-1-10  
FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.1028G	59.61	74.00	-14.39	8.48	3	Horizontal	5	2.26	-
AV	5.15G	47.50	54.00	-6.50	8.56	3	Horizontal	5	2.26	-
PK	5.2318G	109.61	Inf	-Inf	8.71	3	Horizontal	5	2.26	-
AV	5.233G	99.97	Inf	-Inf	8.71	3	Horizontal	5	2.26	-
PK	5.3788G	59.69	74.00	-14.31	8.93	3	Horizontal	5	2.26	-
AV	5.3698G	46.38	54.00	-7.62	8.91	3	Horizontal	5	2.26	-

802.11ac VHT40\_Nss1,(MCS0)\_2TX

22/10/2018

5230MHz\_TX



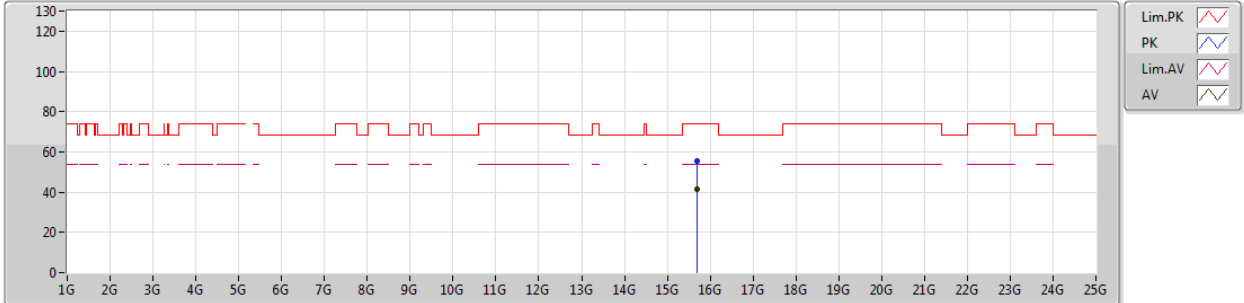
EUT\_Y\_4TX  
Setting 24  
02-M-1  
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.69047G	55.26	74.00	-18.74	15.67	3	Vertical	222	1.92	-
AV	15.69019G	42.22	54.00	-11.78	15.67	3	Vertical	222	1.92	-

802.11ac VHT40\_Nss1,(MCS0)\_2TX

22/10/2018

5230MHz\_TX



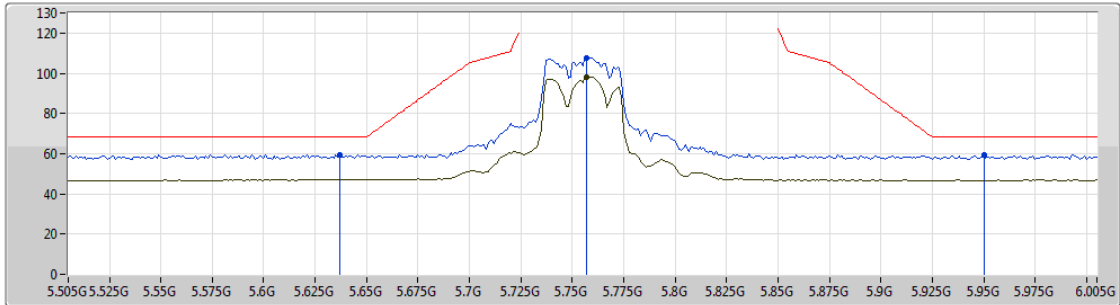
EUT\_Y\_4TX  
Setting 24  
02-M-1  
FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	15.69055G	55.62	74.00	-18.38	15.67	3	Horizontal	87	2.03	-
AV	15.6908G	41.49	54.00	-12.51	15.67	3	Horizontal	87	2.03	-

802.11ac VHT40\_Nss1,(MCS0)\_2TX

22/10/2018

5755MHz\_TX



Lim.PK  
 PK  
 Lim.AV  
 AV

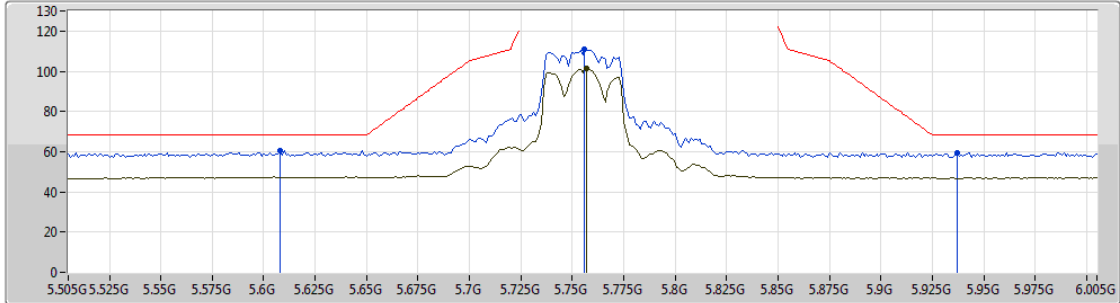
EUT\_Y\_4TX  
 Setting 24  
 02-M-1-10  
 FSU(100050)





Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.637G	59.52	68.20	-8.68	9.29	3	Vertical	40	1.04	-
PK	5.757G	107.78	Inf	-Inf	9.32	3	Vertical	40	1.04	-
AV	5.757G	98.20	Inf	-Inf	9.32	3	Vertical	40	1.04	-
PK	5.95G	59.18	68.20	-9.02	9.47	3	Vertical	40	1.04	-

802.11ac VHT40\_Nss1,(MCS0)\_2TX

22/10/2018

5755MHz\_TX



- Lim.PK 
- PK 
- Lim.AV 
- AV 

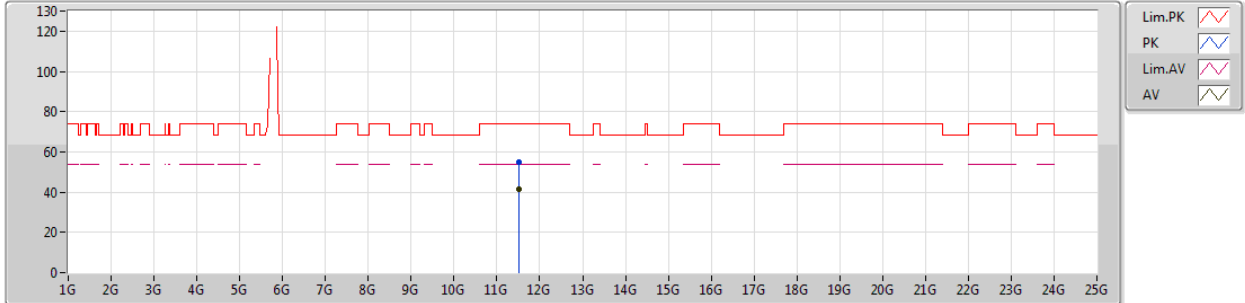
EUT\_Y\_4TX  
Setting 24  
02-M-1-10  
FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.608G	60.45	68.20	-7.75	9.28	3	Horizontal	347	2.24	-
PK	5.756G	111.10	Inf	-Inf	9.32	3	Horizontal	347	2.24	-
AV	5.757G	101.41	Inf	-Inf	9.32	3	Horizontal	347	2.24	-
PK	5.937G	59.35	68.20	-8.85	9.46	3	Horizontal	347	2.24	-

802.11ac VHT40\_Nss1,(MCS0)\_2TX

22/10/2018

5755MHz\_TX



EUT\_Y\_4TX  
Setting 24  
02-M-1  
FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.50962G	54.71	74.00	-19.29	14.69	3	Vertical	305	1.62	-
AV	11.50909G	41.53	54.00	-12.47	14.69	3	Vertical	305	1.62	-



802.11ac VHT40\_Nss1,(MCS0)\_2TX

22/10/2018

5755MHz\_TX



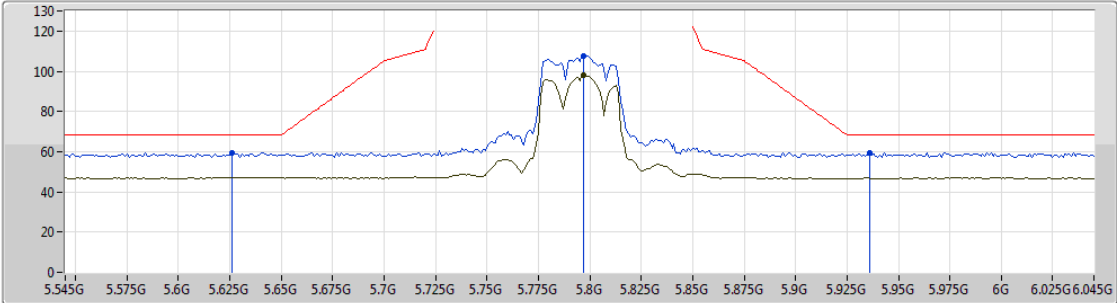
EUT\_Y\_4TX  
Setting 24  
02-M-1  
FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.5093G	54.00	74.00	-20.00	14.69	3	Horizontal	66	1.82	-
AV	11.51009G	40.41	54.00	-13.59	14.69	3	Horizontal	66	1.82	-

802.11ac VHT40\_Nss1,(MCS0)\_2TX

22/10/2018

5795MHz\_TX



Lim.PK  
 PK  
 Lim.AV  
 AV

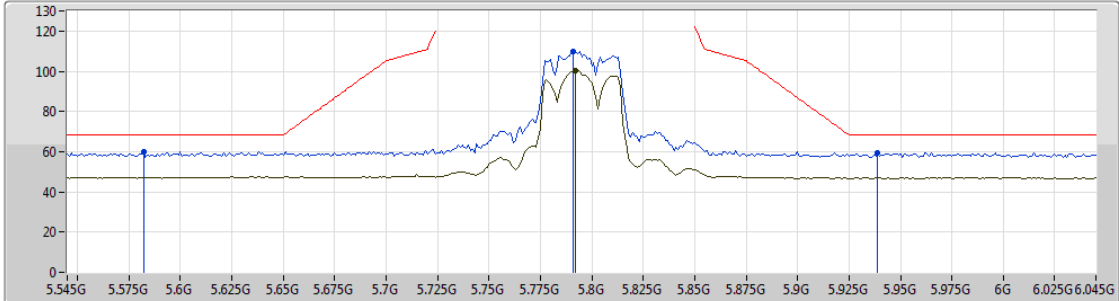
EUT\_Y\_4TX  
 Setting 24  
 02-M-1-10  
 FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.626G	59.49	68.20	-8.71	9.29	3	Vertical	32	1.01	-
PK	5.797G	107.77	Inf	-Inf	9.33	3	Vertical	32	1.01	-
AV	5.797G	98.01	Inf	-Inf	9.33	3	Vertical	32	1.01	-
PK	5.936G	59.37	68.20	-8.83	9.46	3	Vertical	32	1.01	-

802.11ac VHT40\_Nss1,(MCS0)\_2TX

22/10/2018

5795MHz\_TX



Lim.PK  
 PK  
 Lim.AV  
 AV

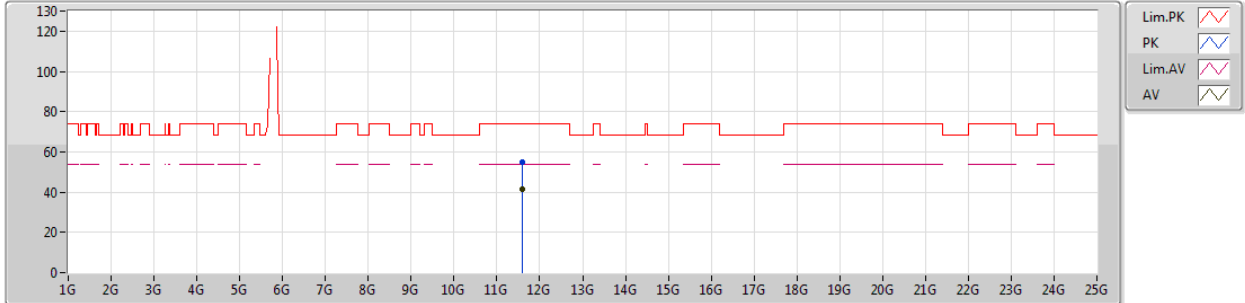
EUT\_Y\_4TX  
 Setting 24  
 02-M-1-10  
 FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.582G	60.12	68.20	-8.08	9.27	3	Horizontal	329	2.06	-
PK	5.791G	109.85	Inf	-Inf	9.33	3	Horizontal	329	2.06	-
AV	5.792G	100.23	Inf	-Inf	9.33	3	Horizontal	329	2.06	-
PK	5.939G	59.49	68.20	-8.71	9.46	3	Horizontal	329	2.06	-

802.11ac VHT40\_Nss1,(MCS0)\_2TX

22/10/2018

5795MHz\_TX



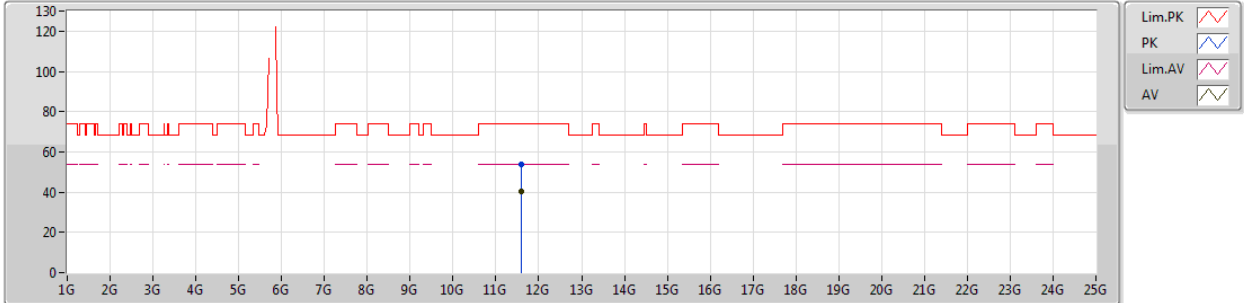
EUT Y\_4TX  
Setting 24  
02-M-1  
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.59099G	54.84	74.00	-19.16	14.78	3	Vertical	278	2.11	-
AV	11.58902G	41.59	54.00	-12.41	14.78	3	Vertical	278	2.11	-

802.11ac VHT40\_Nss1,(MCS0)\_2TX

22/10/2018

5795MHz\_TX



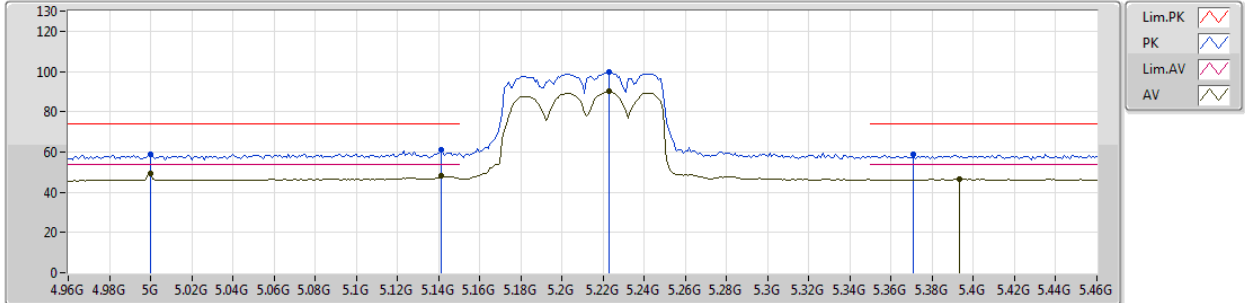
EUT Y\_4TX  
Setting 24  
02-M-1  
FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.58968G	53.94	74.00	-20.06	14.78	3	Horizontal	231	1.60	-
AV	11.59013G	40.27	54.00	-13.73	14.78	3	Horizontal	231	1.60	-

802.11ac VHT80\_Nss1,(MCS0)\_2TX

22/10/2018

5210MHz\_TX



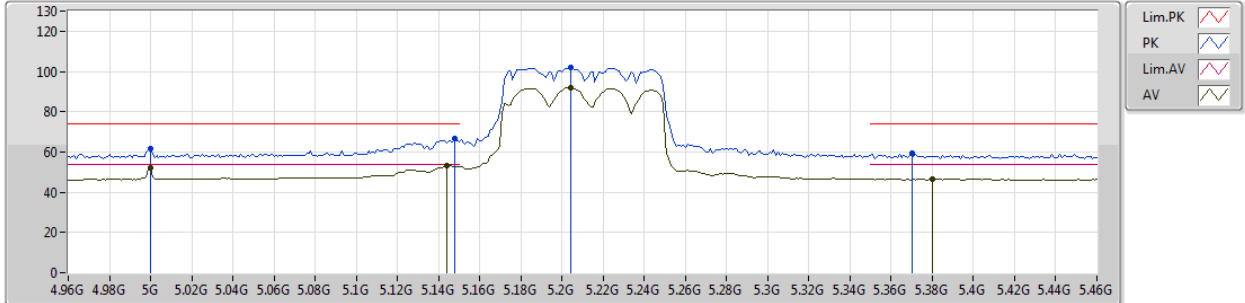
EUT\_Y\_4TX  
Setting 23  
02-M-1-10  
FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5G	58.88	74.00	-15.12	8.28	3	Vertical	1	2.10	-
AV	5G	49.35	54.00	-4.65	8.28	3	Vertical	1	2.10	-
PK	5.141G	61.16	74.00	-12.84	8.56	3	Vertical	1	2.10	-
AV	5.141G	47.99	54.00	-6.01	8.56	3	Vertical	1	2.10	-
PK	5.223G	99.94	Inf	-Inf	8.70	3	Vertical	1	2.10	-
AV	5.223G	90.27	Inf	-Inf	8.70	3	Vertical	1	2.10	-
PK	5.371G	58.99	74.00	-15.01	8.91	3	Vertical	1	2.10	-
AV	5.393G	46.34	54.00	-7.66	8.94	3	Vertical	1	2.10	-

802.11ac VHT80\_Nss1,(MCS0)\_2TX

22/10/2018

5210MHz\_TX



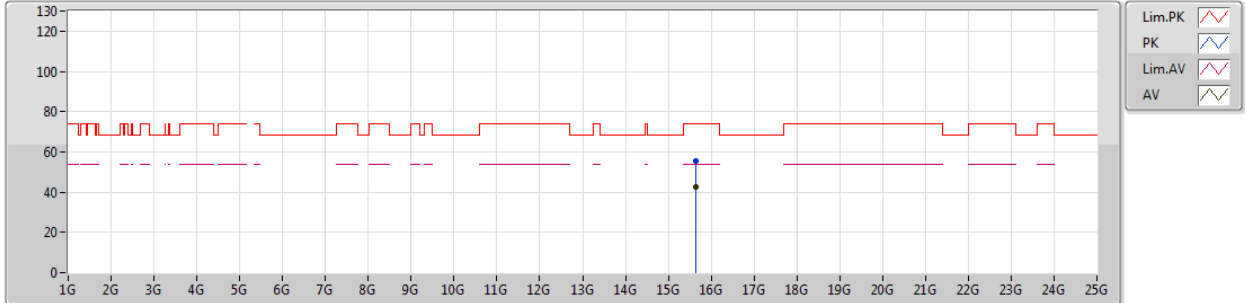
EUT\_Y\_4TX  
Setting 23  
02-M-1-10  
FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5G	61.57	74.00	-12.43	8.28	3	Horizontal	25	2.22	-
AV	5G	52.00	54.00	-2.00	8.28	3	Horizontal	25	2.22	-
PK	5.148G	66.79	74.00	-7.21	8.56	3	Horizontal	25	2.22	-
AV	5.144G	53.43	54.00	-0.57	8.56	3	Horizontal	25	2.22	-
PK	5.204G	101.81	Inf	-Inf	8.66	3	Horizontal	25	2.22	-
AV	5.204G	92.04	Inf	-Inf	8.66	3	Horizontal	25	2.22	-
PK	5.37G	59.17	74.00	-14.83	8.91	3	Horizontal	25	2.22	-
AV	5.38G	46.54	54.00	-7.46	8.93	3	Horizontal	25	2.22	-

802.11ac VHT80\_Nss1,(MCS0)\_2TX

22/10/2018

5210MHz\_TX



EUT\_Y\_4TX  
Setting 23  
02-M-1  
FSU(100050)

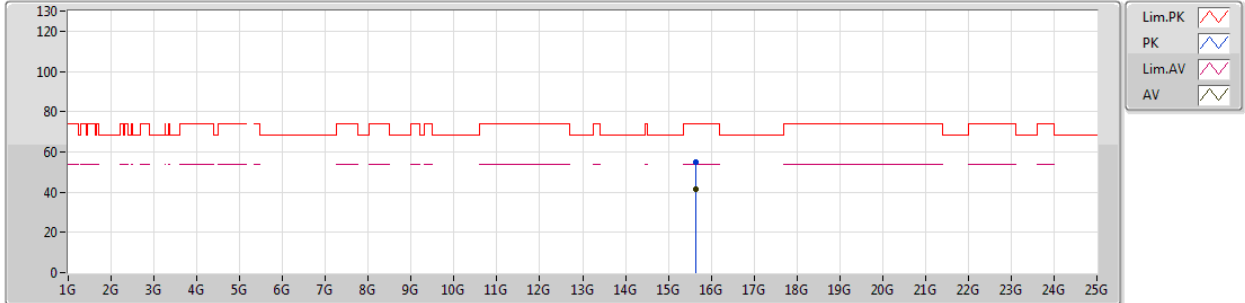
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	15.62924G	55.34	74.00	-18.66	15.82	3	Vertical	78	2.40	-
AV	15.62988G	42.36	54.00	-11.64	15.82	3	Vertical	78	2.40	-



802.11ac VHT80\_Nss1,(MCS0)\_2TX

22/10/2018

5210MHz\_TX



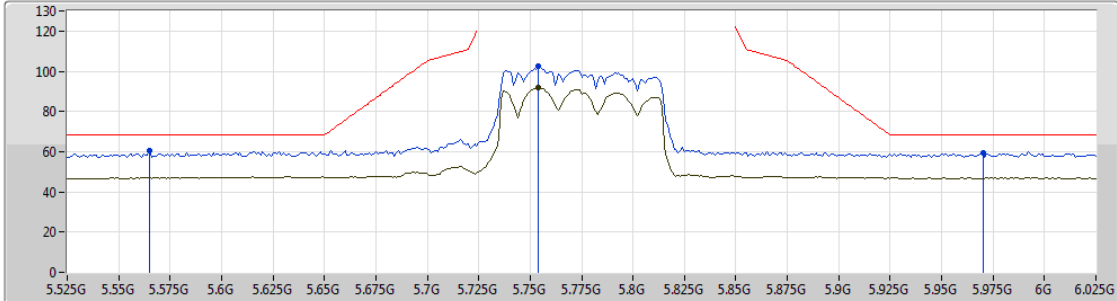
EUT\_Y\_4TX  
Setting 23  
02-M-1  
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.62937G	55.13	74.00	-18.87	15.82	3	Horizontal	356	1.87	-
AV	15.62974G	41.47	54.00	-12.53	15.82	3	Horizontal	356	1.87	-

802.11ac VHT80\_Nss1,(MCS0)\_2TX

22/10/2018

5775MHz\_TX



- Lim.PK
- PK
- Lim.AV
- AV

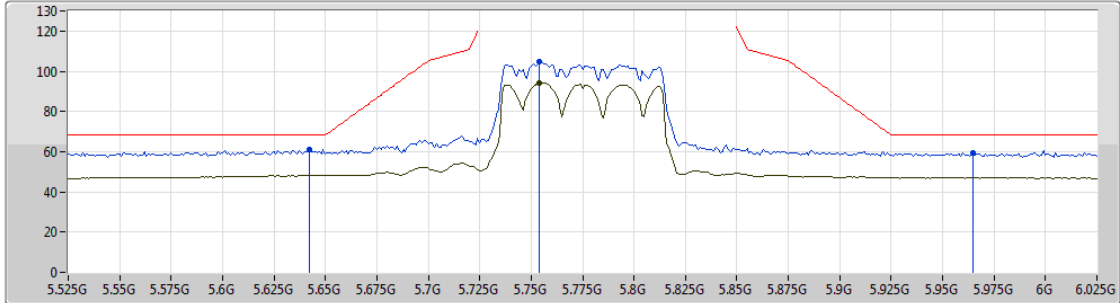
EUT\_Y\_4TX  
Setting 24  
02-M-1-10  
FSU(100050)





Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.565G	60.25	68.20	-7.95	9.25	3	Vertical	324	2.31	-
PK	5.754G	102.31	Inf	-Inf	9.32	3	Vertical	324	2.31	-
AV	5.754G	91.74	Inf	-Inf	9.32	3	Vertical	324	2.31	-
PK	5.97G	59.65	68.20	-8.55	9.48	3	Vertical	324	2.31	-

802.11ac VHT80\_Nss1,(MCS0)\_2TX

22/10/2018

5775MHz\_TX



Lim.PK    
 PK    
 Lim.AV    
 AV  

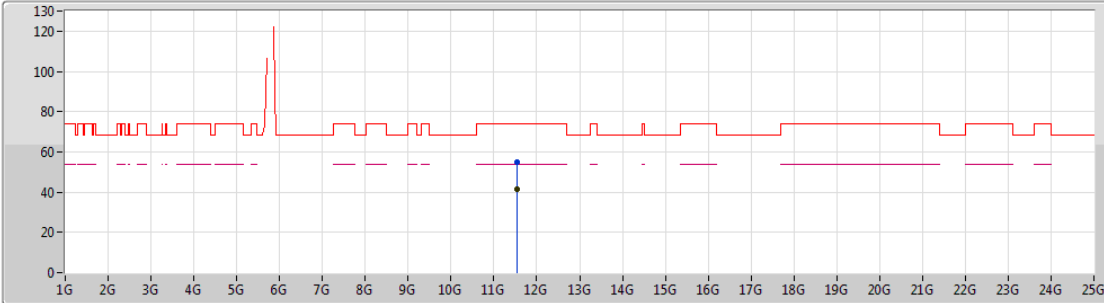
EUT\_Y\_4TX  
 Setting 24  
 02-M-1-10  
 FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.642G	61.05	68.20	-7.15	9.30	3	Horizontal	342	2.24	-
PK	5.754G	104.92	Inf	-Inf	9.32	3	Horizontal	342	2.24	-
AV	5.754G	94.30	Inf	-Inf	9.32	3	Horizontal	342	2.24	-
PK	5.965G	59.48	68.20	-8.72	9.47	3	Horizontal	342	2.24	-

802.11ac VHT80\_Nss1,(MCS0)\_2TX

22/10/2018

5775MHz\_TX



Lim.PK  
 PK  
 Lim.AV  
 AV

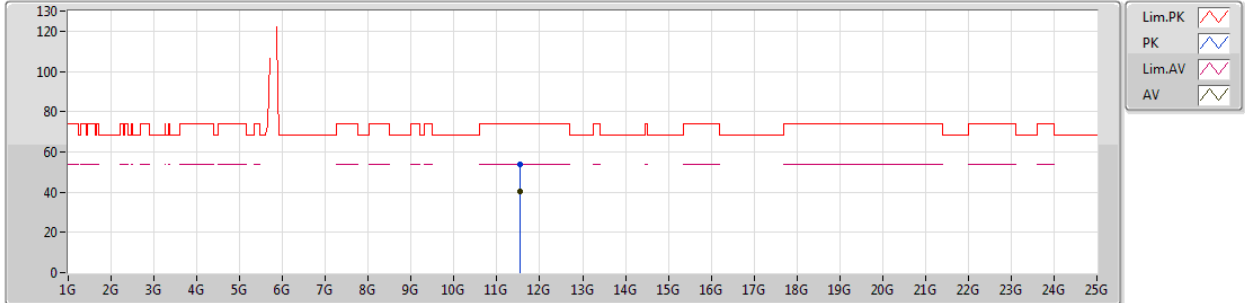
EUT\_Y\_4TX  
 Setting 24  
 02-M-1  
 FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.55096G	54.83	74.00	-19.17	14.74	3	Vertical	102	1.69	-
AV	11.55058G	41.50	54.00	-12.50	14.74	3	Vertical	102	1.69	-

802.11ac VHT80\_Nss1,(MCS0)\_2TX

22/10/2018

5775MHz\_TX



EUT\_Y\_4TX  
Setting 24  
02-M-1  
FSU(100050)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.55048G	53.81	74.00	-20.19	14.74	3	Horizontal	103	1.38	-
AV	11.5509G	40.46	54.00	-13.54	14.74	3	Horizontal	103	1.38	-



RSE Co-location Result

Appendix F

