



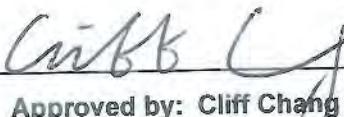
FCC RADIO TEST REPORT

FCC ID : Z3WAIR4921
Equipment : Home Wi-Fi Solution Kit, Air4921 3x3 11ac Smart Mesh Access Point, AT&T SMART WI-FI EXTENDER, AIRTIES WIFI EXTENDER
Brand Name : AirTies
Model Name : Air 4921
Applicant : AirTies Wireless Networks
Mithat Uluunlu Sokak No. 23 Esentepe, Sisli
İstanbul, 34394 Turkey
Manufacturer : AirTies Wireless Networks
Mithat Uluunlu Sokak No. 23 Esentepe, Sisli
İstanbul, 34394 Turkey
Standard : 47 CFR FCC Part 15.407

The product was received on Nov. 21, 2018, and testing was started from Nov. 21, 2018 and completed on Nov. 30, 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: Cliff Chang

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	9
1.3 Testing Location Information.....	9
1.4 Measurement Uncertainty	9
2 Test Configuration of EUT.....	10
2.1 Test Channel Mode	10
2.2 The Worst Case Measurement Configuration.....	12
2.3 EUT Operation during Test	13
2.4 Accessories	14
2.5 Support Equipment.....	14
2.6 Test Setup Diagram	15
3 Transmitter Test Result	19
3.1 AC Power-line Conducted Emissions	19
3.2 Emission Bandwidth	21
3.3 Maximum Conducted Output Power	22
3.4 Peak Power Spectral Density.....	24
3.5 Unwanted Emissions	27
4 Test Equipment and Calibration Data	31

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



Summary of Test Result

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

Declaration of Conformity:

The judgment of conformity in the report is based on the measurement results excluding the measurement uncertainty.

Comments and Explanations:

The EUT supports AP Router and Mesh mode, only AP Router mode was tested and recorded in this test report for applicant request.

Reviewed by: Cliff Chang

Report Producer: Vicky Huang



1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5150-5250	a, n (HT20), ac (VHT20)	5180-5240	36-48 [4]
5250-5350		5260-5320	52-64 [4]
5470-5725		5500-5720	100-144 [9]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40)	5190-5230	38-46 [2]
5250-5350		5270-5310	54-62 [2]
5470-5725		5510-5710	102-142 [4]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80)	5210	42 [1]
5250-5350		5290	58 [1]
5470-5725		5530-5690	106-138 [2]
5725-5850		5775	155 [1]

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11a	20	3TX
5.15-5.25GHz	802.11n HT20	20	3TX
5.15-5.25GHz	802.11n HT20-BF	20	3TX
5.15-5.25GHz	802.11ac VHT20	20	3TX
5.15-5.25GHz	802.11ac VHT20-BF	20	3TX
5.15-5.25GHz	802.11n HT40	40	3TX
5.15-5.25GHz	802.11n HT40-BF	40	3TX
5.15-5.25GHz	802.11ac VHT40	40	3TX
5.15-5.25GHz	802.11ac VHT40-BF	40	3TX
5.15-5.25GHz	802.11ac VHT80	80	3TX
5.15-5.25GHz	802.11ac VHT80-BF	80	3TX
5.25-5.35GHz	802.11a	20	3TX
5.25-5.35GHz	802.11n HT20	20	3TX
5.25-5.35GHz	802.11n HT20-BF	20	3TX
5.25-5.35GHz	802.11ac VHT20	20	3TX
5.25-5.35GHz	802.11ac VHT20-BF	20	3TX



Band	Mode	BWch (MHz)	Nant
5.25-5.35GHz	802.11n HT40	40	3TX
5.25-5.35GHz	802.11n HT40-BF	40	3TX
5.25-5.35GHz	802.11ac VHT40	40	3TX
5.25-5.35GHz	802.11ac VHT40-BF	40	3TX
5.25-5.35GHz	802.11ac VHT80	80	3TX
5.25-5.35GHz	802.11ac VHT80-BF	80	3TX
5.47-5.725GHz	802.11a	20	3TX
5.47-5.725GHz	802.11n HT20	20	3TX
5.47-5.725GHz	802.11n HT20-BF	20	3TX
5.47-5.725GHz	802.11ac VHT20	20	3TX
5.47-5.725GHz	802.11ac VHT20-BF	20	3TX
5.47-5.725GHz	802.11n HT40	40	3TX
5.47-5.725GHz	802.11n HT40-BF	40	3TX
5.47-5.725GHz	802.11ac VHT40	40	3TX
5.47-5.725GHz	802.11ac VHT40-BF	40	3TX
5.47-5.725GHz	802.11ac VHT80	80	3TX
5.47-5.725GHz	802.11ac VHT80-BF	80	3TX
5.725-5.85GHz	802.11a	20	3TX
5.725-5.85GHz	802.11n HT20	20	3TX
5.725-5.85GHz	802.11n HT20-BF	20	3TX
5.725-5.85GHz	802.11ac VHT20	20	3TX
5.725-5.85GHz	802.11ac VHT20-BF	20	3TX
5.725-5.85GHz	802.11n HT40	40	3TX
5.725-5.85GHz	802.11n HT40-BF	40	3TX
5.725-5.85GHz	802.11ac VHT40	40	3TX
5.725-5.85GHz	802.11ac VHT40-BF	40	3TX
5.725-5.85GHz	802.11ac VHT80	80	3TX
5.725-5.85GHz	802.11ac VHT80-BF	80	3TX

Note:

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



1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	-	-	Printed Antenna	Murata	2.4GHz Antenna
2	2	Airgain	N2420S	PIFA Antenna	I-PEX	2.4GHz Antenna
3	1	-	-	Printed Antenna	Murata	5GHz Antenna
4	2	-	-	Printed Antenna	Murata	5GHz Antenna
5	3	-	-	Printed Antenna	Murata	5GHz Antenna

2.4GHz Antenna Gain (dBi)			
Ant.	Port	2390-2440MHz	2440-2470MHz
Ant. 1	1	3.24	3.71
Ant. 2	2	3.24	3.71

5GHz Antenna Gain (dBi)						
Ant.	Port	5150-5350MHz	5470-5600MHz	5650-5725MHz	5725-5815MHz	5815-5850MHz
Ant. 3	1	4.2	4.9	4.2	4.1	3.2
Ant. 4	2	4.2	4.9	4.2	4.1	3.2
Ant. 5	3	4.2	4.9	4.2	4.1	3.2

Note: The EUT has five antennas.

For 2.4GHz function:

For IEEE 802.11b mode (1TX/1RX):

The EUT supports the antenna with TX and RX diversity functions.

Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.

The Port 1 generated the worst case, so it was selected to test and record in the report.

For IEEE 802.11g/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 function:

For IEEE 802.11a/n/ac mode (3TX/3RX):

Port 1、Port 2 and Port 3 can be used as transmitting/receiving antenna.

Port 1、Port 2 and Port 3 could transmit/receive simultaneously.



1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.986	0.061	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT20-BF	0.986	0.061	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT40-BF	0.973	0.119	953.75u	3k
802.11ac VHT80-BF	0.946	0.241	461.25u	3k

Note:

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

1.1.4 EUT Operational Condition

EUT Power Type	From power adapter		
Beamforming Function	<input checked="" type="checkbox"/>	With beamforming for 802.11n/ac in 5GHz	<input type="checkbox"/> Without beamforming
Weather Band	<input type="checkbox"/>	With 5600~5650MHz	<input checked="" type="checkbox"/> Without 5600~5650MHz
Function	<input type="checkbox"/>	Outdoor P2M	<input checked="" type="checkbox"/> Indoor P2M
TPC Function	<input type="checkbox"/>	Fixed P2P	<input type="checkbox"/> Client
Test Software Version	Mtool_3.0.0.2		

1.1.5 Table for Multiple Listing

The equipment names in the following table are all refer to the identical product.

Equipment Name	Description
Home Wi-Fi Solution Kit	
Air4921 3x3 11ac Smart Mesh Access Point	
AT&T SMART WI-FI EXTENDER	
AIRTIES WIFI EXTENDER	All the equipment are identical, the difference equipment served as marketing strategy.

From the above, equipment name: Home Wi-Fi Solution Kit was selected as representative for the test and its data was recorded in this report.

1.1.6 Table for EUT support function

Function
AP Router mode
Mesh mode

Note:

The EUT supports AP Router and Mesh mode, only AP Router mode was tested and recorded in this test report for applicant request.



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	Owen Hsu	22°C / 54%	Nov. 21, 2018~ Nov. 30, 2018
Radiated	03CH01-CB	RJ Huang	22°C / 54%	Nov. 21, 2018~ Nov. 26, 2018
AC Conduction	CO01-CB	Rick Yeh	22°C / 58%	Nov. 26, 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)	2.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74×10^{-8}	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11a_Nss1,(6Mbps)_3TX	-
5180MHz	74
5200MHz	80
5240MHz	100
5260MHz	64
5300MHz	64
5320MHz	64
5500MHz	58
5580MHz	58
5700MHz	67
5720MHz Straddle 5.47-5.725GHz	66
5720MHz Straddle 5.725-5.85GHz	61
5745MHz	100
5785MHz	100
5825MHz	100
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	-
5180MHz	70
5200MHz	65
5240MHz	100
5260MHz	61
5300MHz	59
5320MHz	61
5500MHz	58
5580MHz	58
5700MHz	62
5720MHz Straddle 5.47-5.725GHz	61
5720MHz Straddle 5.725-5.85GHz	61
5745MHz	82
5785MHz	82
5825MHz	100
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	-



Mode	Power Setting
5190MHz	63
5230MHz	83
5270MHz	63
5310MHz	63
5510MHz	62
5550MHz	63
5670MHz	66
5710MHz Straddle 5.47-5.725GHz	67
5710MHz Straddle 5.725-5.85GHz	67
5755MHz	85
5795MHz	85
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	-
5210MHz	52
5290MHz	60
5530MHz	58
5690MHz Straddle 5.47-5.725GHz	66
5690MHz Straddle 5.725-5.85GHz	66
5775MHz	80

Note:

- VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.
- There are two modes of EUT for 802.11ac in 5GHz. One is beamforming mode, and the other is non-beamforming mode, after evaluating, beamforming mode has been evaluated to be the worst case, so it was selected to test and record in this test report.



2.2 The Worst Case Measurement Configuration

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

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link
1	AP Router mode - EUT in Y axis
Operating Mode > 1GHz	CTX
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
1	AP Router mode - 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.: FA8N2027 for Co-location RF Exposure Evaluation.

Note: The EUT only be used at Y axis.



2.3 EUT Operation during Test

For CTX Mode:

non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

During the test, the following programs under WIN 7 were executed.

The program was executed as follows:

1. During the test, the EUT operation to normal function.
2. Executed command fixed test channel under LanTest20、Telnet.
3. Executed "Lantest.exe" to link with the remote workstation to transmit and receive packet by WLAN module and transmit duty cycle no less than 98%.

For Normal Link:

During the test, the EUT operation to normal function.



2.4 Accessories

Accessories				
Equipment Name	Brand Name	Model Name	Rating	
Adapter	MOSO	MSA-C1000IC12.0-12W-US	Input: 100-240V~50/60Hz, 0.5A max. Output: 12.0V, 1A	

2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	LAN NB	DELL	E6430	N/A
B	2.4G NB	DELL	E6430	N/A
C	5G NB	DELL	E6430	N/A

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

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	LAN NB	DELL	E4300	N/A
B	2.4G NB	DELL	E4300	N/A
C	5G NB	DELL	E4300	N/A

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

For non-beamforming mode:

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

For beamforming mode:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	LAN NB	DELL	E4300	N/A
B	Device NB	DELL	E4300	N/A
C	WLAN module	Boardcom	BCM943162ZP	QDS-BRCM1075

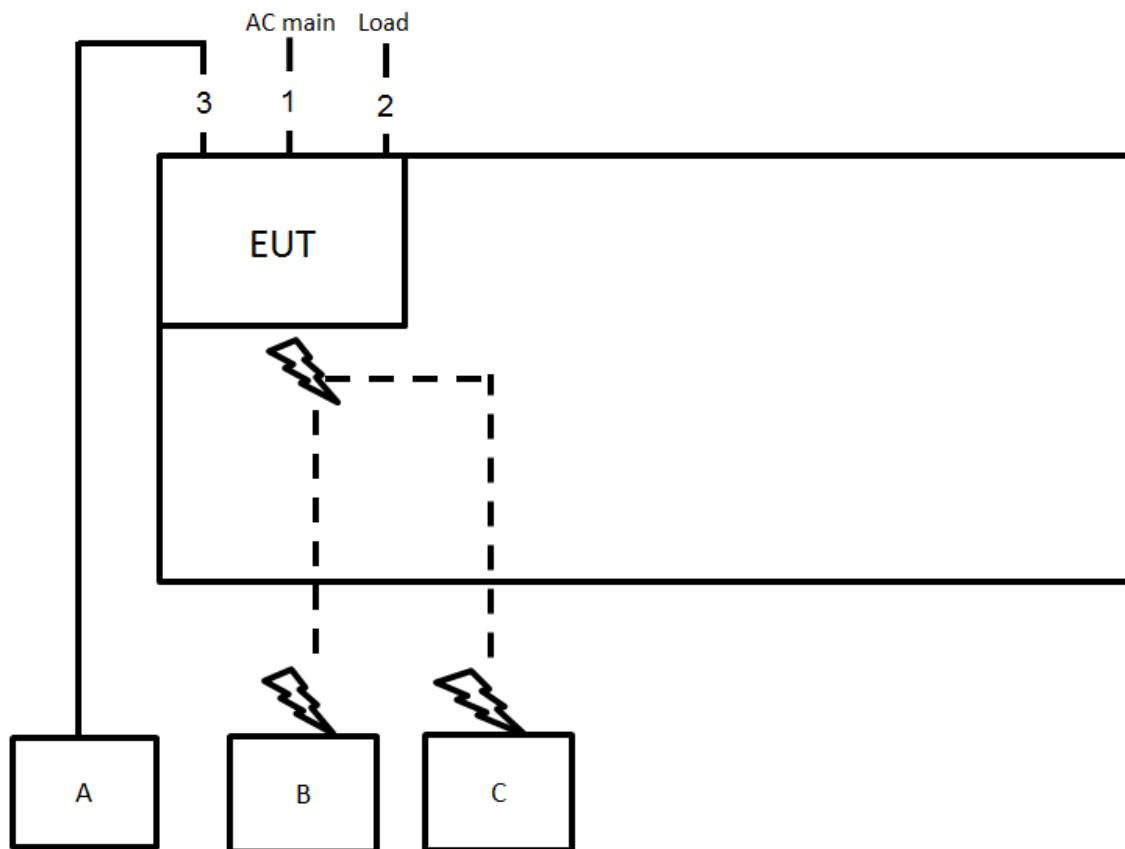
For Test Site No: TH01-CB

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



2.6 Test Setup Diagram

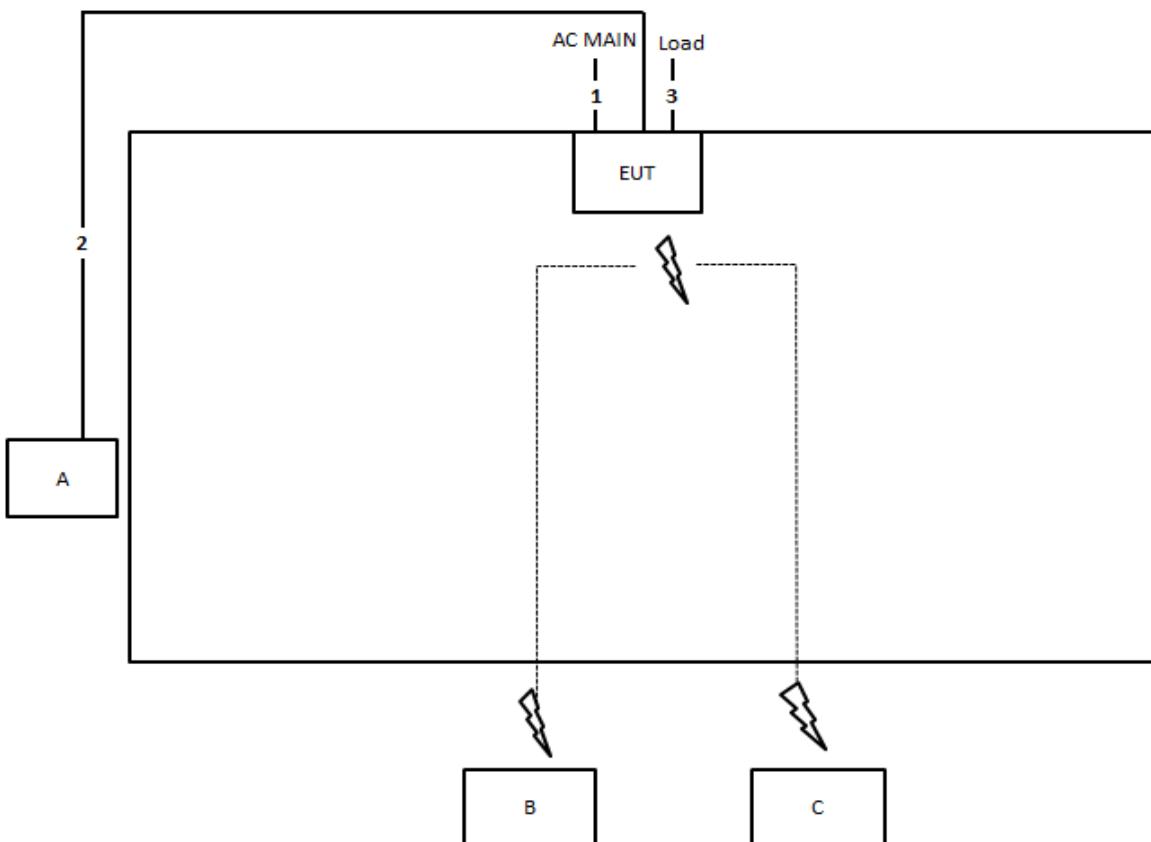
Test Setup Diagram – AC Line Conducted Emission Test



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



Test Setup Diagram - Radiated Test < 1GHz

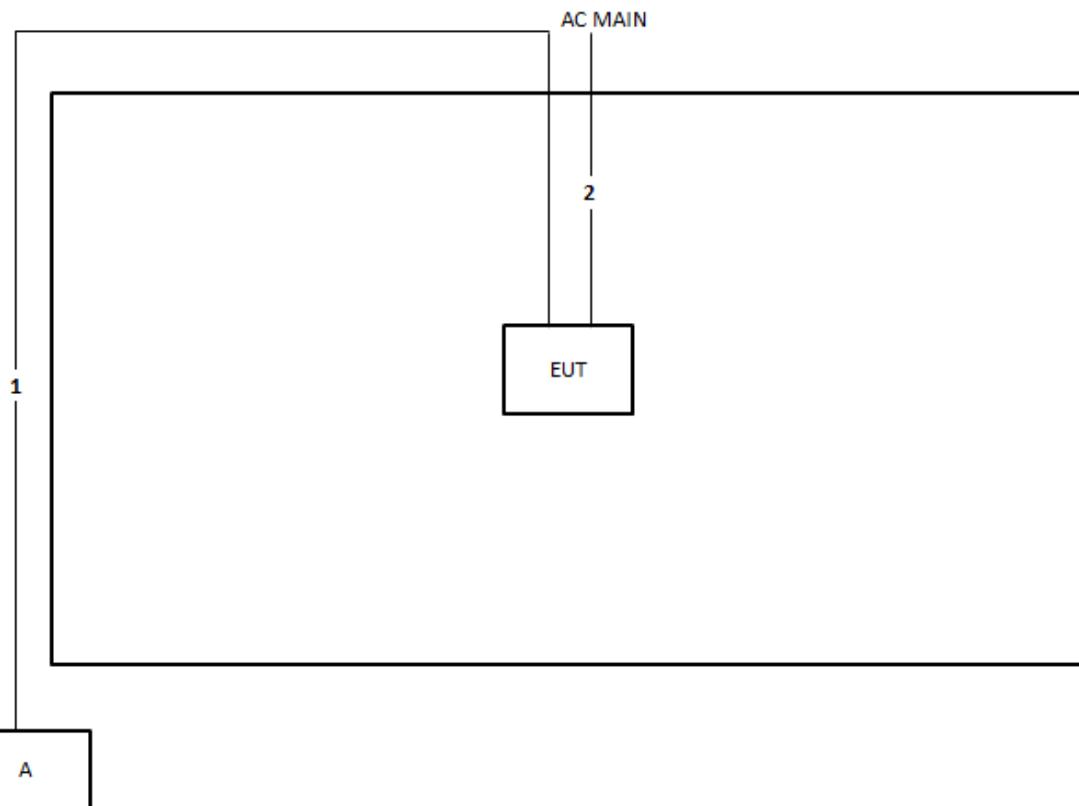


Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	1.5m



Test Setup Diagram - Radiated Test > 1GHz

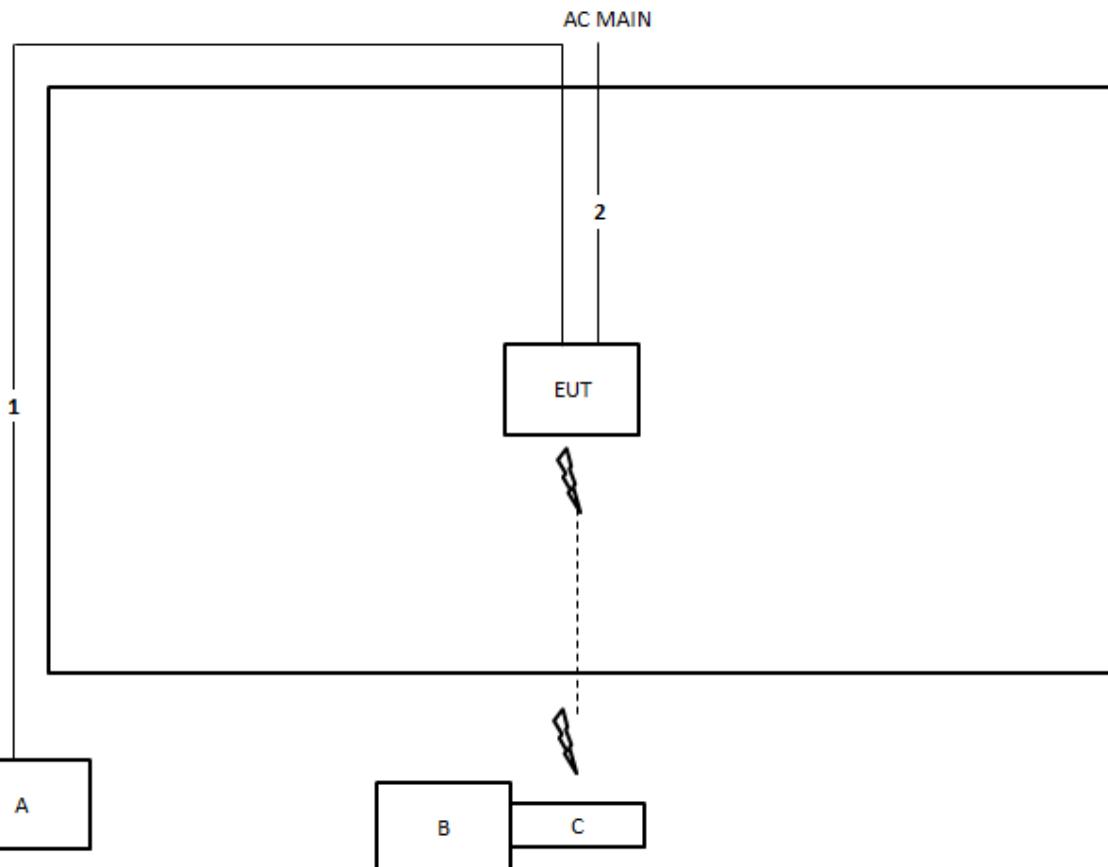
For non-beamforming mode:



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



For beamforming mode:



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



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

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

3.1.2 Measuring Instruments

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

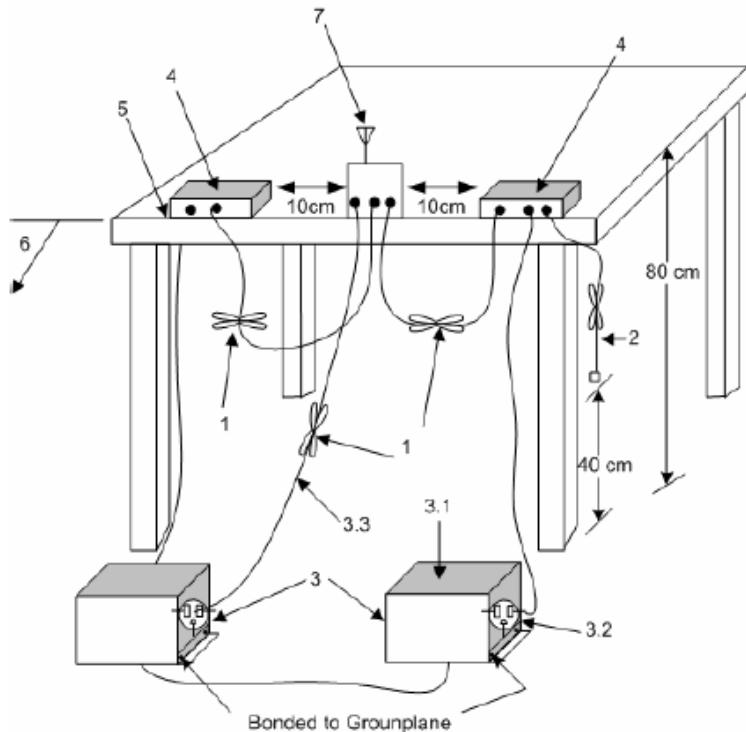
3.1.3 Test Procedures

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



3.1.4 Test Setup

AC Power-line Conducted Emissions



- 1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
- 2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- 3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
- 3.1—All other equipment powered from additional LISN(s).
- 3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
- 3.3—LISN at least 80 cm from nearest part of EUT chassis.
- 4—Non-EUT components of EUT system being tested.
- 5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
- 6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
- 7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A



3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

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

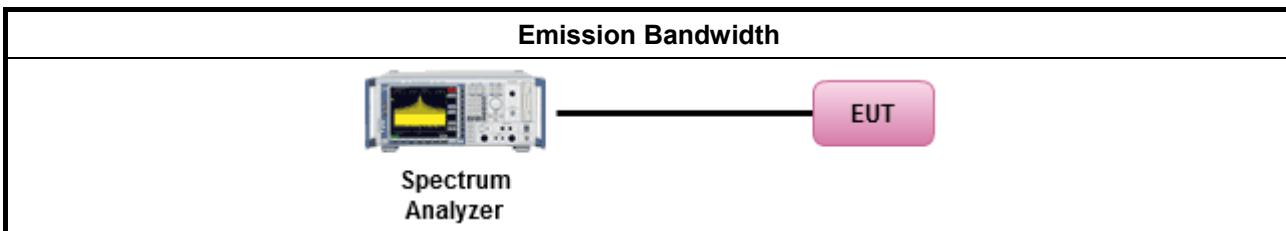
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪	For the emission bandwidth shall be measured using one of the options below:
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
<input type="checkbox"/>	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B



3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

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



3.3.2 Measuring Instruments

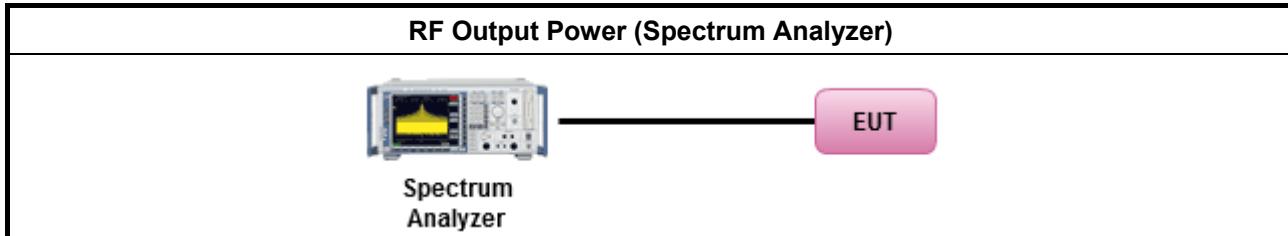
Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

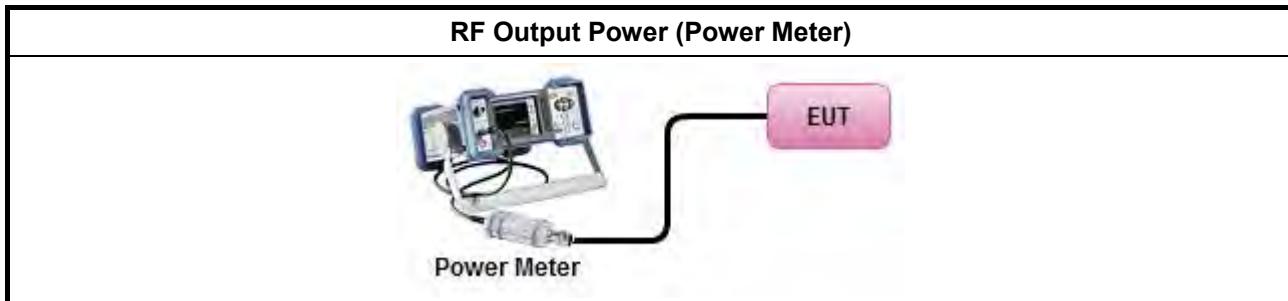
Test Method	
▪ Maximum Conducted Output Power	
	Average over on/off periods with duty factor
	<input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
	<input type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	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).
▪ For conducted measurement.	
	<ul style="list-style-type: none">▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

For straddle channel:



For other channel:



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C



3.4 Peak Power Spectral Density

3.4.1 Peak Power Spectral Density Limit

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

3.4.2 Measuring Instruments

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

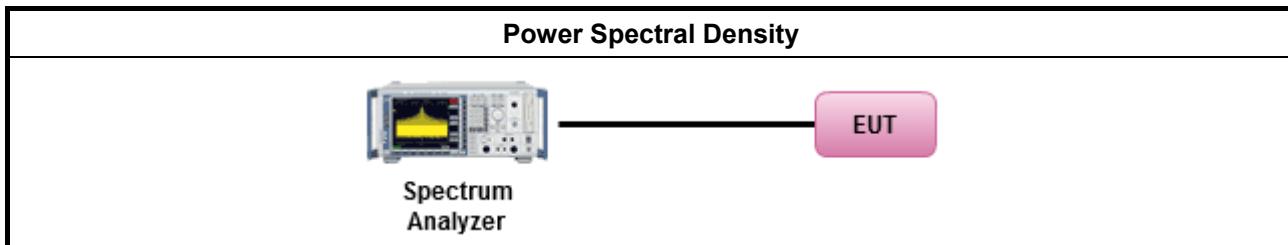


3.4.3 Test Procedures

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



3.4.4 Test Setup



3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix D



3.5 Unwanted Emissions

3.5.1 Transmitter 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 checked="" type="checkbox"/> 5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input checked="" 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).



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

3.5.2 Measuring Instruments

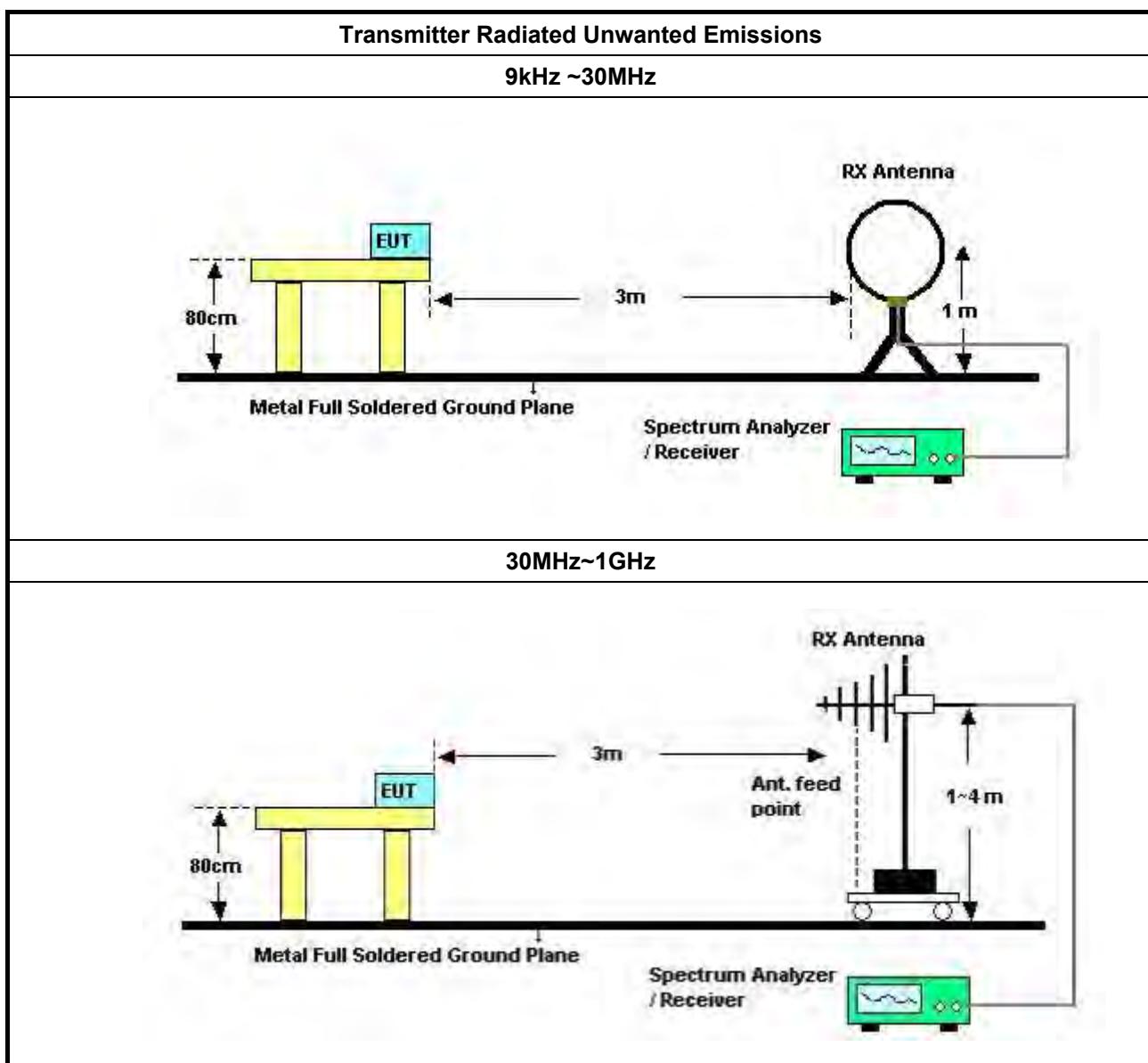
Refer a test equipment and calibration data table in this test report.

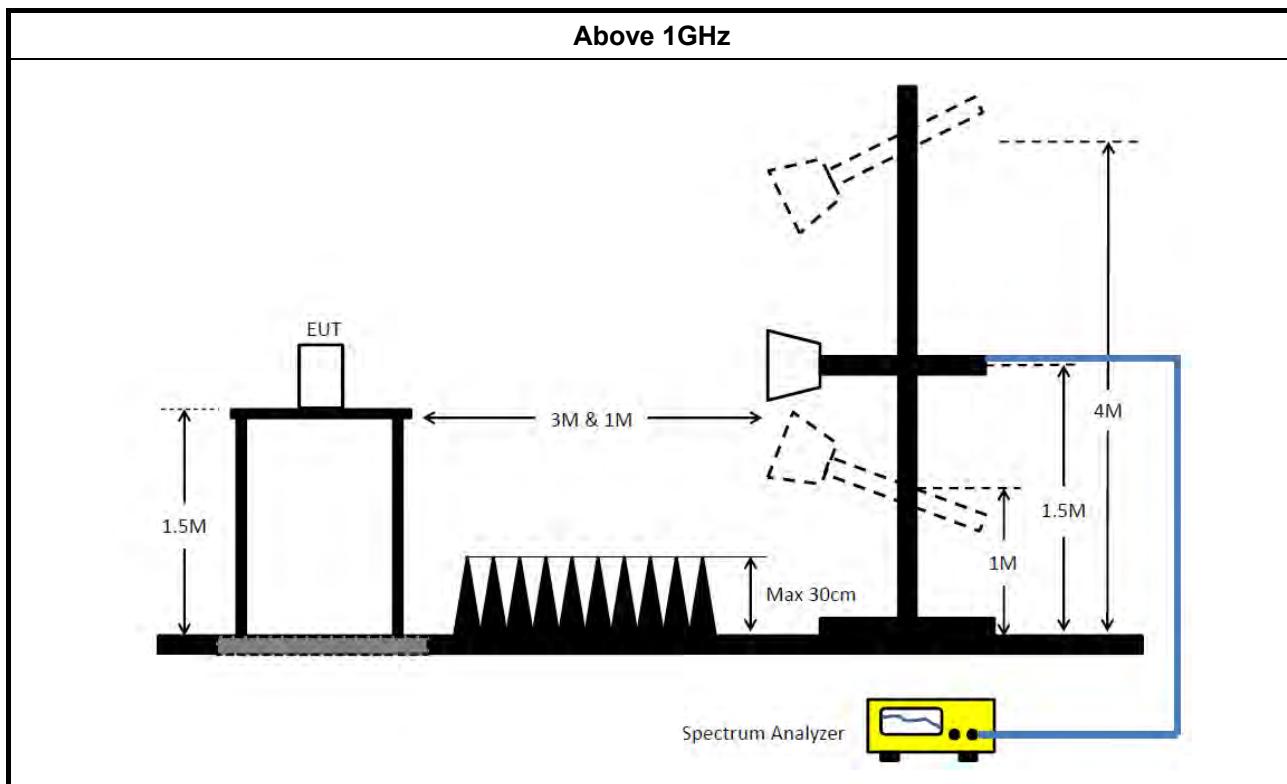
3.5.3 Test Procedures

Test Method
<ul style="list-style-type: none">▪ Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).
<ul style="list-style-type: none">▪ The average emission levels shall be measured in [duty cycle \geq 98 or duty factor].
<ul style="list-style-type: none">▪ For the transmitter unwanted emissions shall be measured using following options below:
<ul style="list-style-type: none">▪ Refer as FCC KDB 789033, clause G2) for unwanted emissions into non-restricted bands.▪ Refer as FCC KDB 789033, clause G1) for unwanted emissions into restricted bands.<ul style="list-style-type: none"><input type="checkbox"/> Refer as FCC KDB 789033, G)6) Method AD (Trace Averaging).<input checked="" type="checkbox"/> Refer as FCC KDB 789033, G)6) Method VB (Reduced VBW).<input type="checkbox"/> Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW \geq 1/T, where T is pulse time.<input type="checkbox"/> Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.<input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause G)5) measurement procedure peak limit.<input type="checkbox"/> Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
<ul style="list-style-type: none">▪ For radiated measurement.
<ul style="list-style-type: none">▪ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
<ul style="list-style-type: none">▪ The any unwanted emissions level shall not exceed the fundamental emission level.
<ul style="list-style-type: none">▪ All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.



3.5.4 Test Setup





3.5.5 Transmitter Unwanted Emissions (Below 30MHz)

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

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

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
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)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 13, 2018	Nov. 12, 2019	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 28, 2018	Jun. 27, 2019	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2018	May 01, 2019	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 09, 2018	Jan. 08, 2019	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 04, 2018	Jul. 03, 2019	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Oct. 03, 2018	Oct. 02, 2019	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)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)

**FCC RADIO TEST REPORT**

Report No. : FR8N2027AB

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2018	Mar. 15, 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)
RF Cable-high	Woken	RG402	High Cable-28	1 GHz – 26.5 GHz	Nov. 19, 2018	Nov. 18, 2019	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 05, 2018	Nov. 04, 2019	Conducted (TH01-CB)

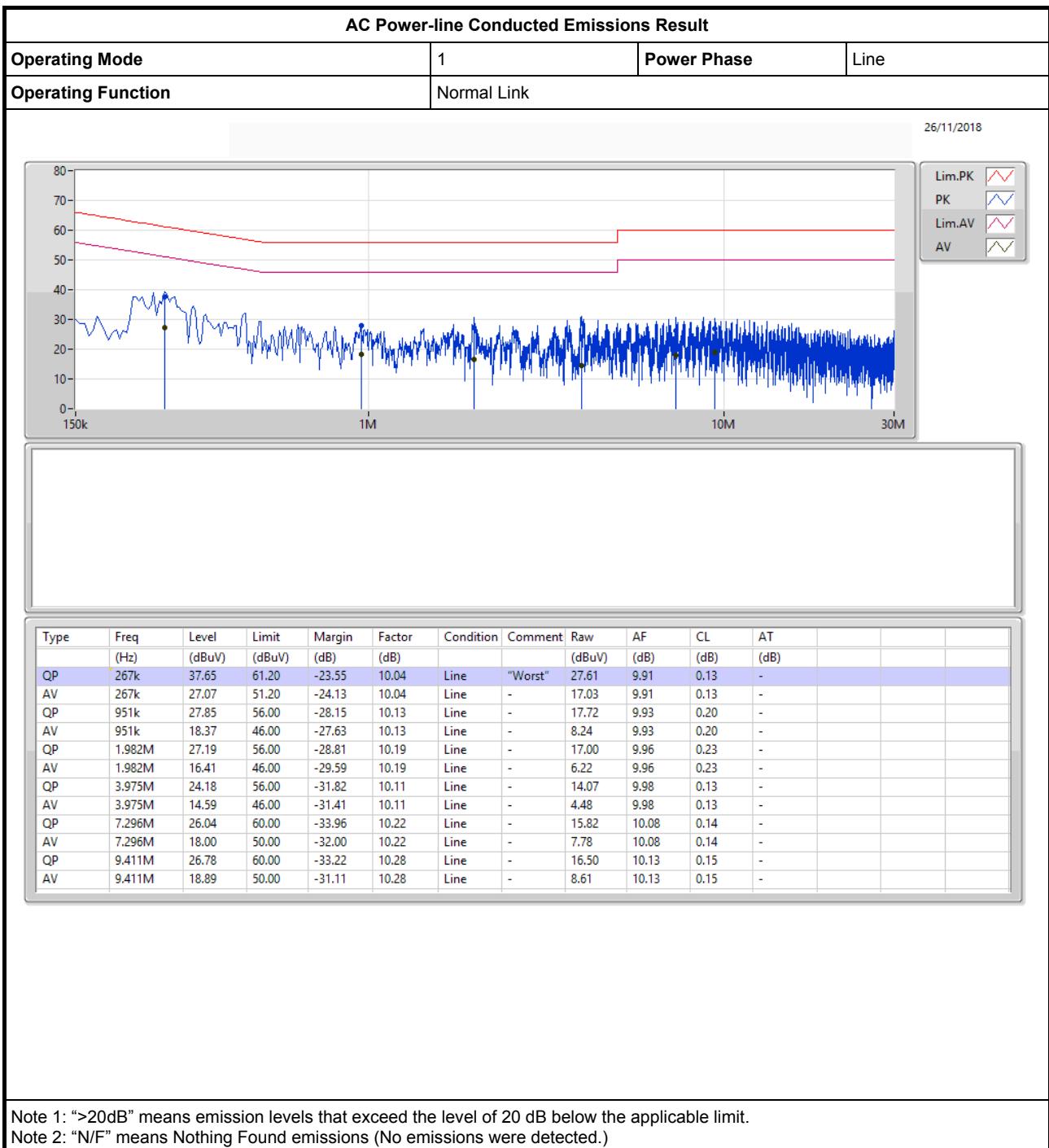
Note: Calibration Interval of instruments listed above is one year.

NCR means Non-Calibration required.



AC Power-line Conducted Emissions Result

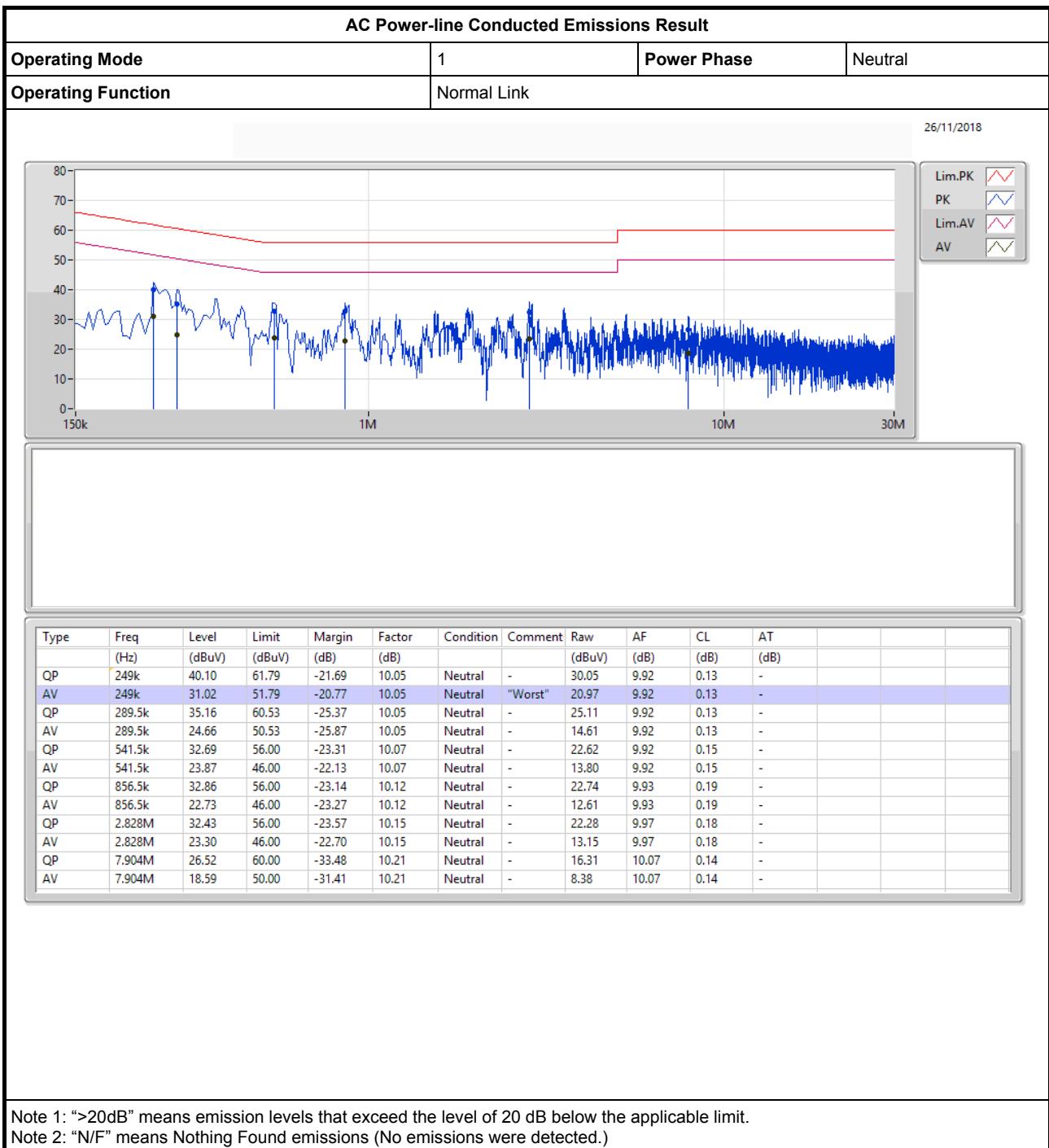
Appendix A





AC Power-line Conducted Emissions Result

Appendix A





EBW Result

Appendix B

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)_3TX	40.725M	18.166M	18M2D1D	20.35M	16.542M
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	41.825M	17.991M	18M0D1D	20.325M	17.666M
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	76.9M	36.432M	36M4D1D	39.45M	36.182M
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	82.4M	75.662M	75M7D1D	81.8M	75.562M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_3TX	20.6M	16.725M	16M7D1D	20.05M	16.6M
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	20.85M	17.875M	17M9D1D	20.3M	17.75M
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	41.4M	36.65M	36M6D1D	40.55M	36.55M
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	82.5M	75.762M	75M8D1D	82.1M	75.662M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_3TX	20.475M	16.75M	16M7D1D	14.91M	13.238M
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	20.7M	17.85M	17M8D1D	15.15M	13.838M
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	41.4M	36.7M	36M7D1D	34.615M	32.989M
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	82.5M	75.662M	75M7D1D	75.9M	72.339M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_3TX	16.325M	25.662M	25M7D1D	3.14M	3.558M
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	17.575M	25.662M	25M7D1D	3.76M	4.018M
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	36.35M	37.3M	37M3D1D	3.12M	3.418M
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	75.5M	76.062M	76M1D1D	3.12M	3.658M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;



EBW Result

Appendix B

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)
802.11a_Nss1,(6Mbps)_3TX	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.2M	16.617M	20.4M	16.542M	20.35M	16.542M
5200MHz	Pass	Inf	30.225M	16.742M	21.375M	16.592M	26.2M	16.592M
5240MHz	Pass	Inf	40.725M	17.941M	29.325M	16.592M	38.7M	18.166M
5260MHz	Pass	Inf	20.45M	16.725M	20.275M	16.725M	20.325M	16.675M
5300MHz	Pass	Inf	20.6M	16.675M	20.225M	16.675M	20.05M	16.65M
5320MHz	Pass	Inf	20.4M	16.725M	20.3M	16.6M	20.4M	16.625M
5500MHz	Pass	Inf	20.475M	16.7M	20.25M	16.65M	20.4M	16.7M
5580MHz	Pass	Inf	20.4M	16.65M	20.3M	16.6M	20.45M	16.625M
5700MHz	Pass	Inf	20.4M	16.75M	20.25M	16.65M	20.4M	16.65M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.09M	13.298M	14.91M	13.268M	14.955M	13.238M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.14M	3.678M	3.14M	3.558M	3.16M	3.678M
5745MHz	Pass	500k	16.325M	24.388M	16.325M	17.266M	16.325M	22.914M
5785MHz	Pass	500k	16.3M	25.662M	16.3M	17.016M	16.325M	21.814M
5825MHz	Pass	500k	16.3M	23.988M	16.3M	17.091M	16.325M	22.489M
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	20.775M	17.716M	20.425M	17.691M	21.375M	17.691M
5200MHz	Pass	Inf	20.65M	17.666M	20.325M	17.666M	20.625M	17.666M
5240MHz	Pass	Inf	41.05M	17.991M	26.1M	17.716M	41.825M	17.966M
5260MHz	Pass	Inf	20.65M	17.775M	20.475M	17.775M	20.4M	17.775M
5300MHz	Pass	Inf	20.85M	17.825M	20.575M	17.75M	20.4M	17.8M
5320MHz	Pass	Inf	20.7M	17.875M	20.35M	17.775M	20.3M	17.75M
5500MHz	Pass	Inf	20.7M	17.8M	20.4M	17.825M	20.425M	17.775M
5580MHz	Pass	Inf	20.675M	17.8M	20.4M	17.775M	20.425M	17.775M
5700MHz	Pass	Inf	20.6M	17.8M	20.45M	17.85M	20.475M	17.775M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.21M	13.838M	15.15M	13.883M	15.18M	13.853M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.78M	4.038M	3.76M	4.018M	3.76M	4.038M
5745MHz	Pass	500k	17.575M	18.175M	17.55M	18.3M	17.575M	18.175M
5785MHz	Pass	500k	17.575M	18.025M	17.55M	18.2M	17.55M	18.125M
5825MHz	Pass	500k	17.55M	25.662M	17.55M	18.141M	17.55M	24.113M
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40.25M	36.232M	39.45M	36.232M	39.45M	36.182M
5230MHz	Pass	Inf	76.9M	36.432M	43.2M	36.332M	61.1M	36.332M
5270MHz	Pass	Inf	41.4M	36.6M	40.9M	36.55M	40.55M	36.6M
5310MHz	Pass	Inf	41.35M	36.65M	41.1M	36.65M	40.85M	36.6M
5510MHz	Pass	Inf	41.3M	36.6M	40.9M	36.65M	40.65M	36.7M
5550MHz	Pass	Inf	41.4M	36.55M	41M	36.6M	40.85M	36.65M
5670MHz	Pass	Inf	41.15M	36.6M	41.05M	36.65M	40.9M	36.55M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.035M	33.023M	34.615M	32.989M	34.825M	33.023M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	3.478M	3.14M	3.458M	3.14M	3.418M
5755MHz	Pass	500k	36.35M	37.15M	36.3M	37.15M	36.3M	37.2M
5795MHz	Pass	500k	36.05M	37.15M	36.3M	37.3M	36.3M	37.25M
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-



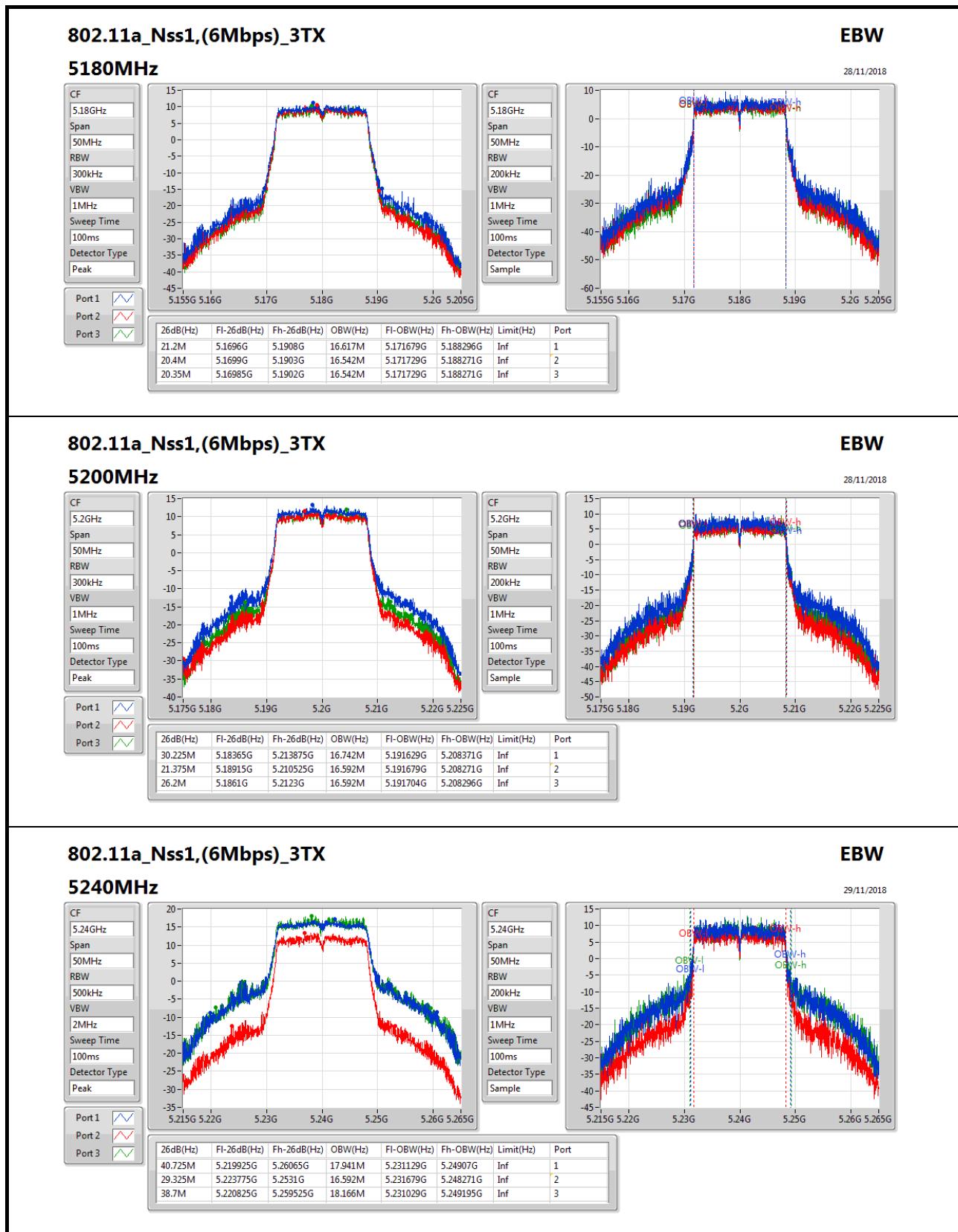
EBW Result

Appendix B

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)
5210MHz	Pass	Inf	82.2M	75.562M	82.4M	75.662M	81.8M	75.562M
5290MHz	Pass	Inf	82.5M	75.762M	82.4M	75.662M	82.1M	75.762M
5530MHz	Pass	Inf	82.5M	75.662M	82.3M	75.662M	82.3M	75.662M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	76.5M	72.339M	76.2M	72.489M	75.9M	72.564M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	3.678M	3.12M	3.758M	3.14M	3.658M
5775MHz	Pass	500k	75.5M	76.062M	75.3M	75.962M	75.2M	76.062M

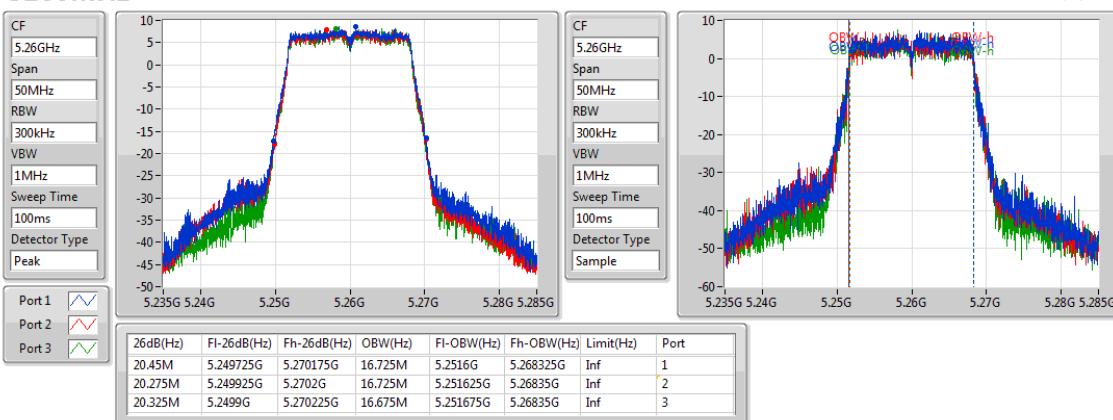
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

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

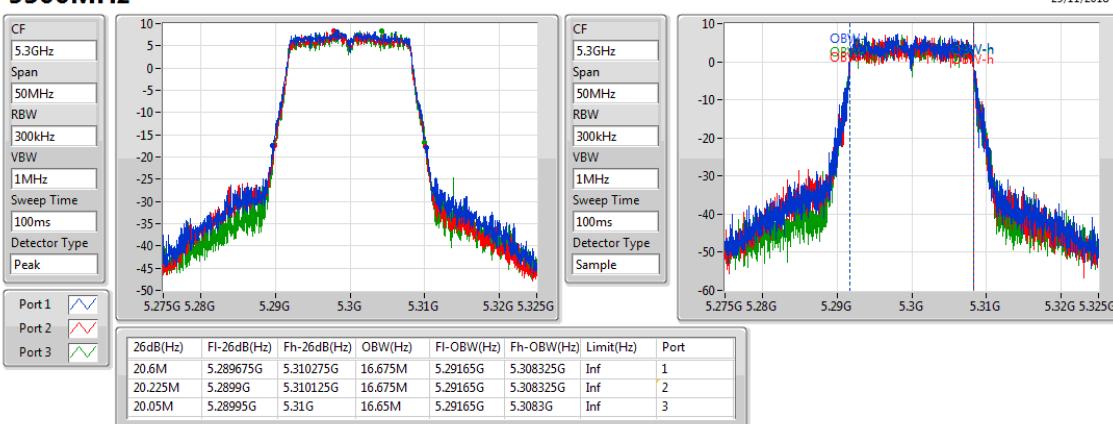


802.11a_Nss1,(6Mbps)_3TX
EBW
5260MHz

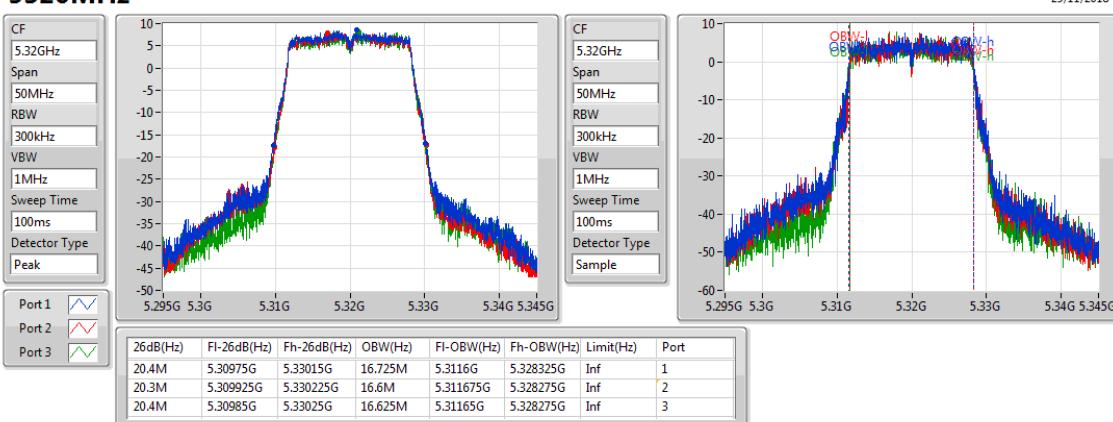
29/11/2018

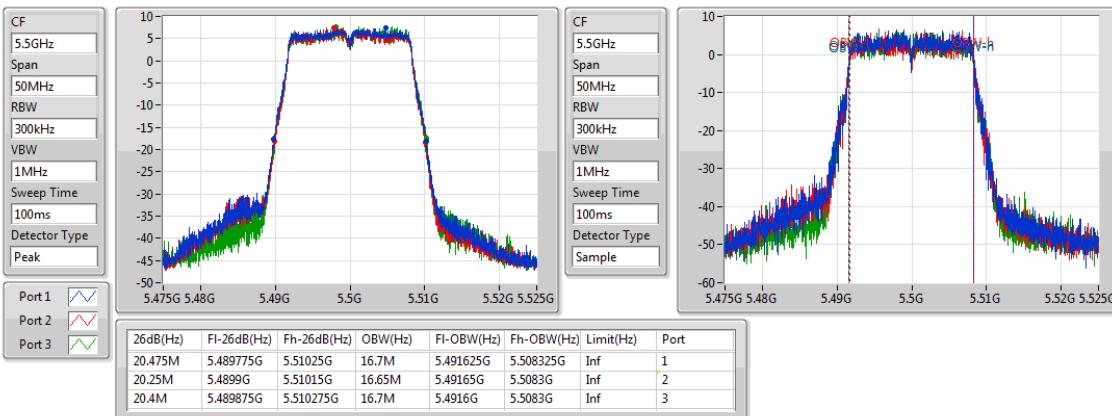
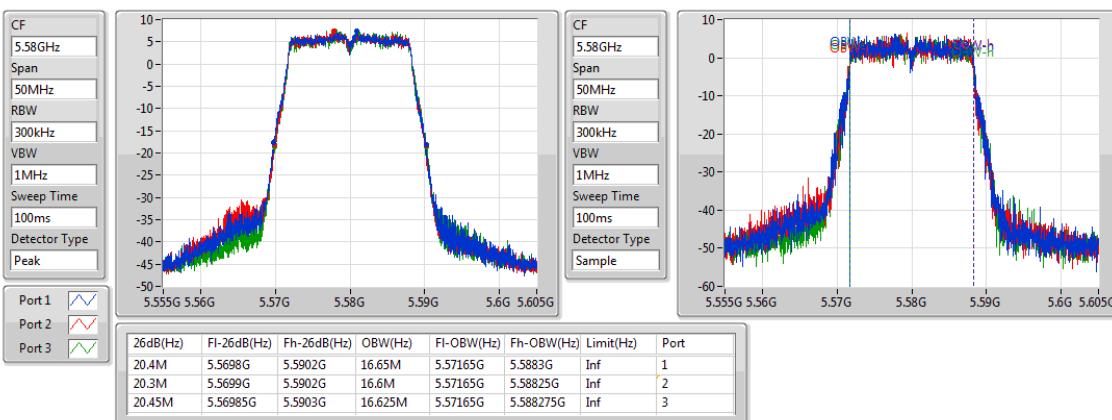
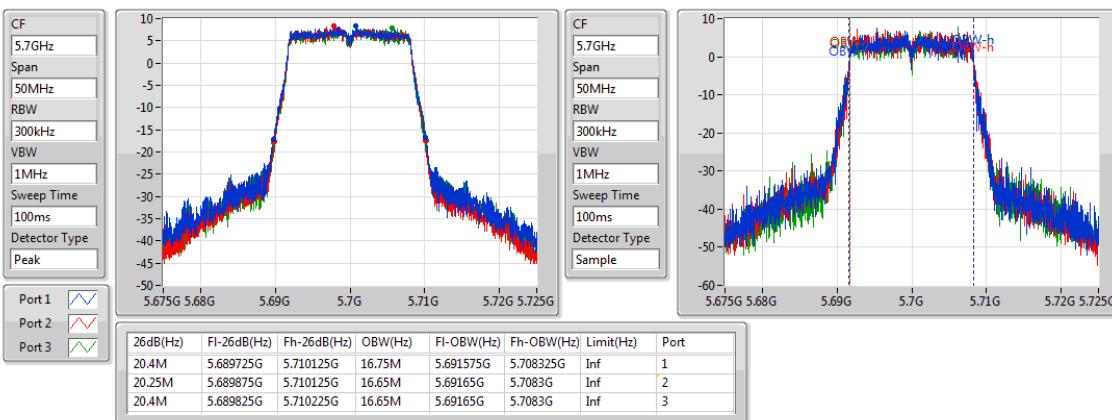

802.11a_Nss1,(6Mbps)_3TX
EBW
5300MHz

29/11/2018


802.11a_Nss1,(6Mbps)_3TX
EBW
5320MHz

29/11/2018

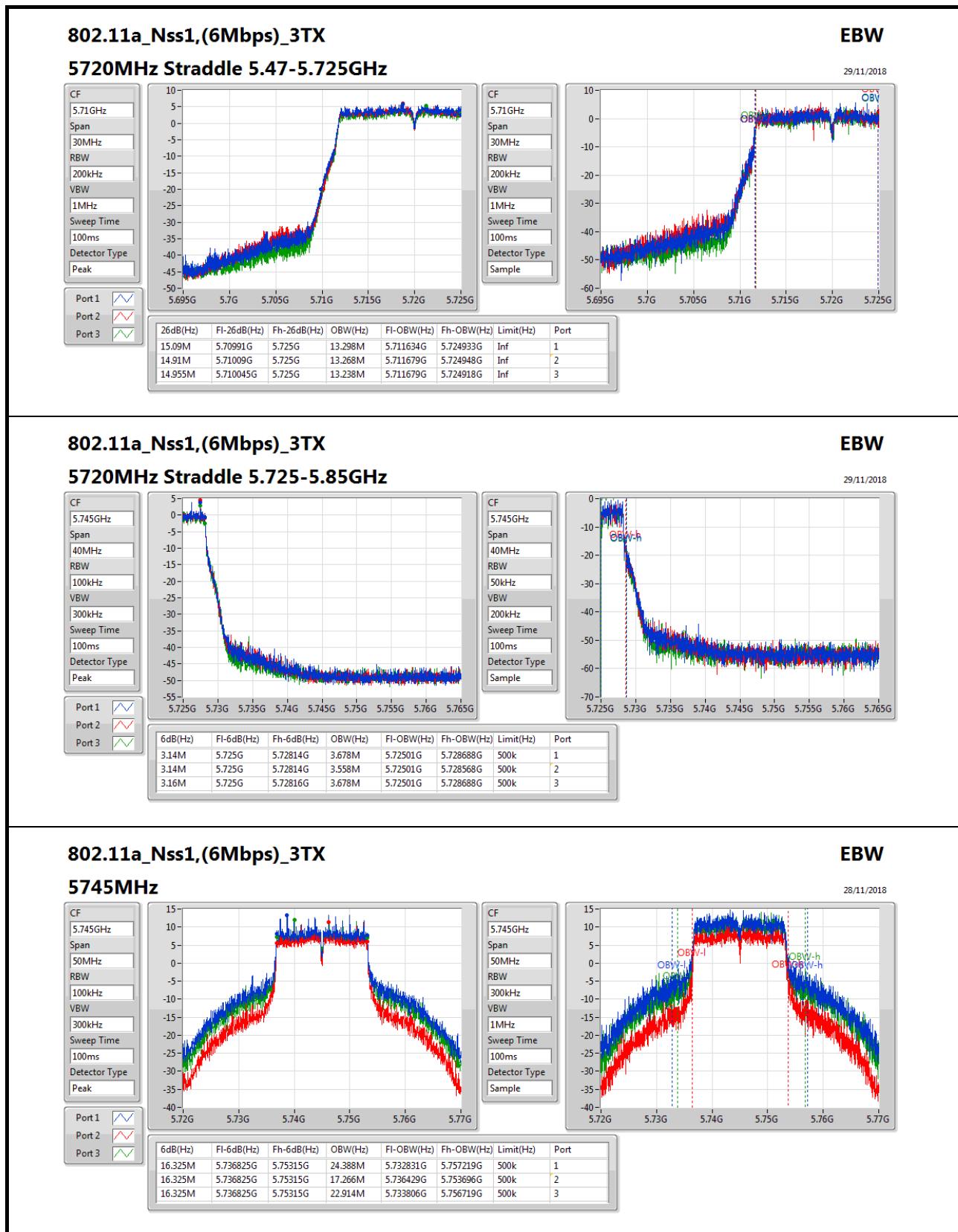


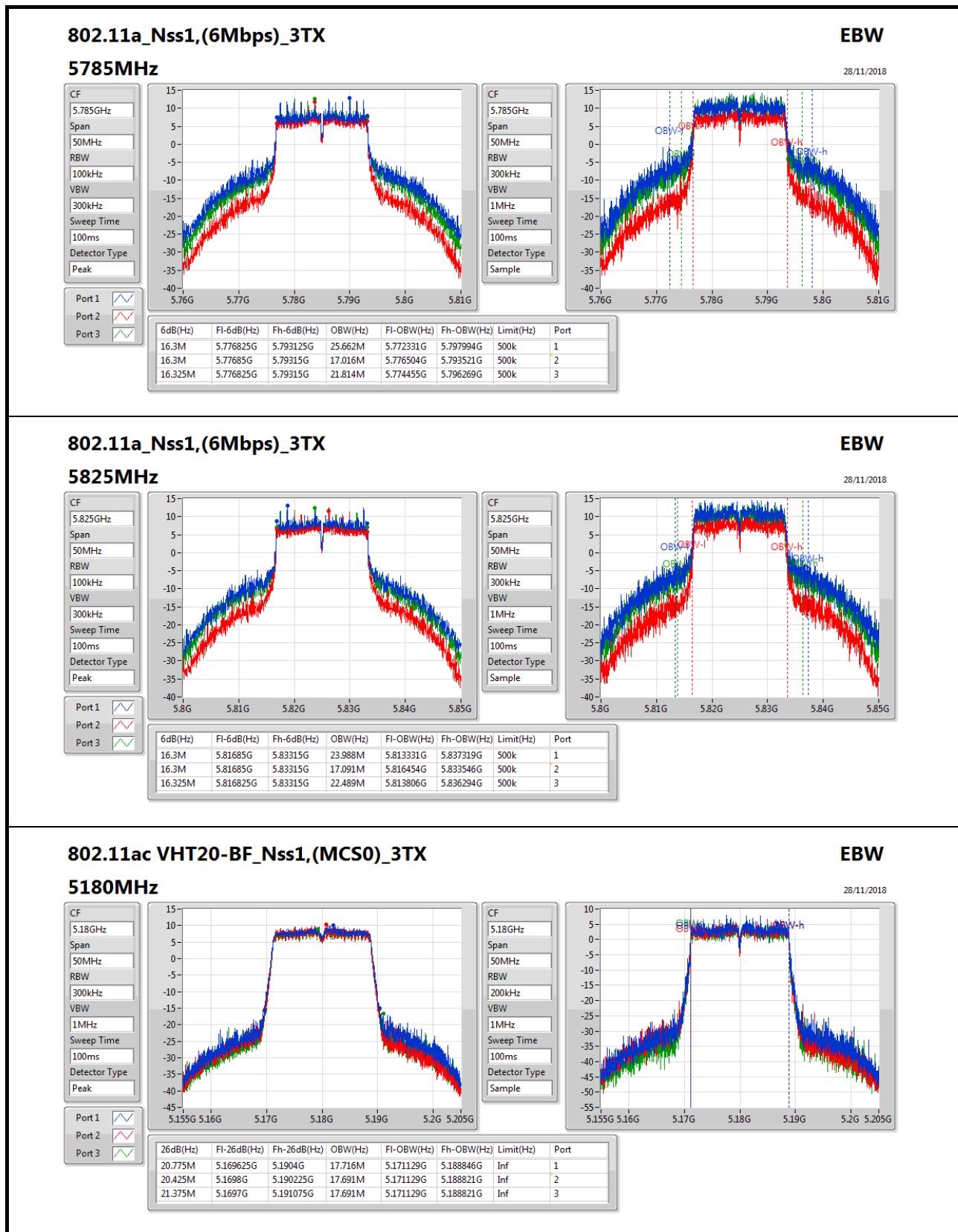
802.11a_Nss1,(6Mbps)_3TX
EBW
5500MHz

802.11a_Nss1,(6Mbps)_3TX
EBW
5580MHz

802.11a_Nss1,(6Mbps)_3TX
EBW
5700MHz


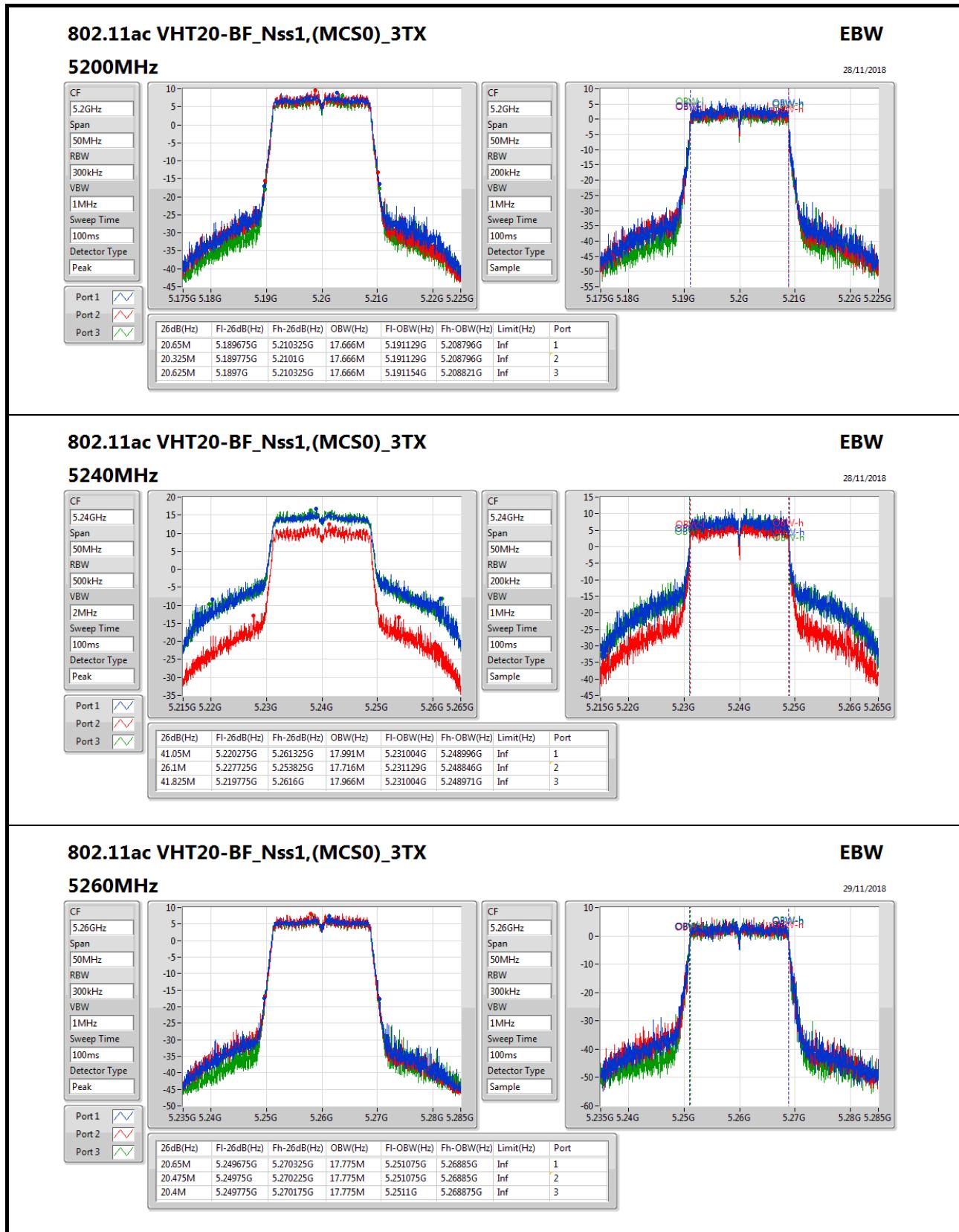


EBW Result

Appendix B

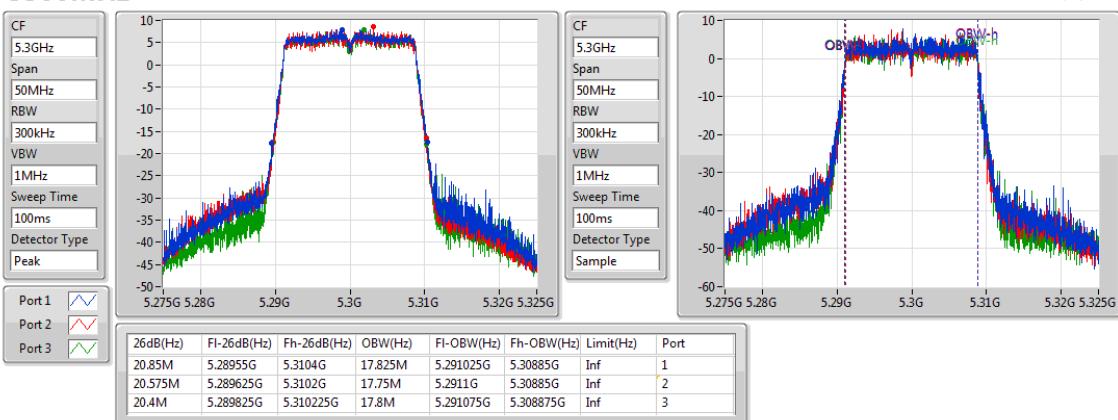




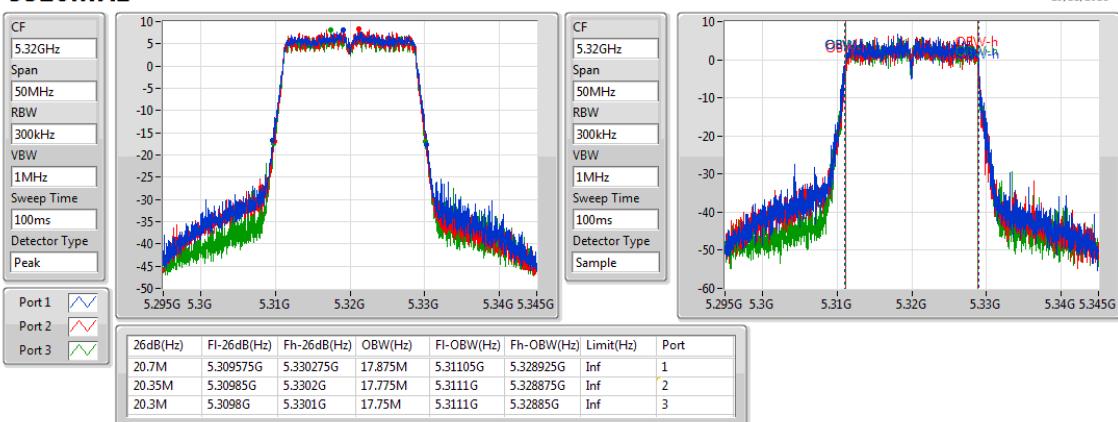


802.11ac VHT20-BF_Nss1,(MCS0)_3TX
EBW
5300MHz

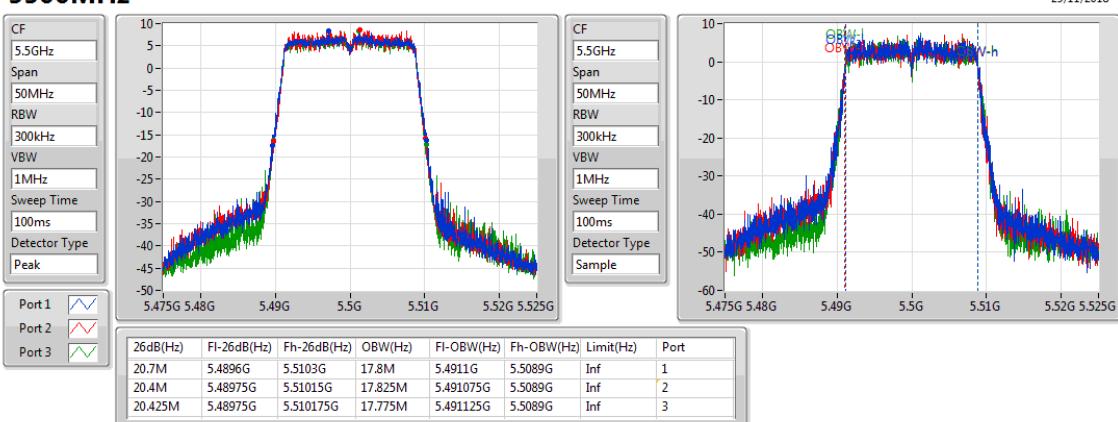
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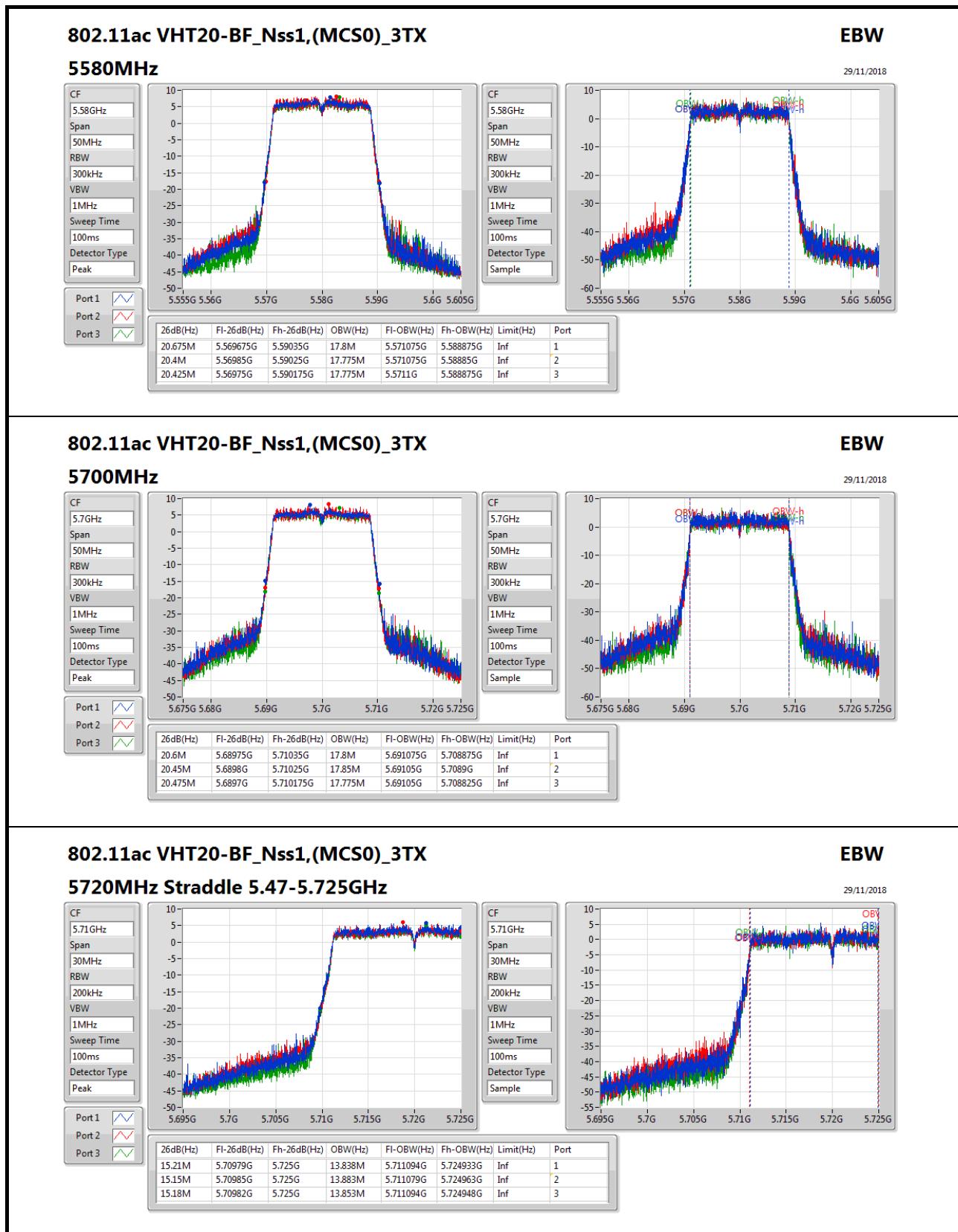

802.11ac VHT20-BF_Nss1,(MCS0)_3TX
EBW
5320MHz

29/11/2018


802.11ac VHT20-BF_Nss1,(MCS0)_3TX
EBW
5500MHz

29/11/2018

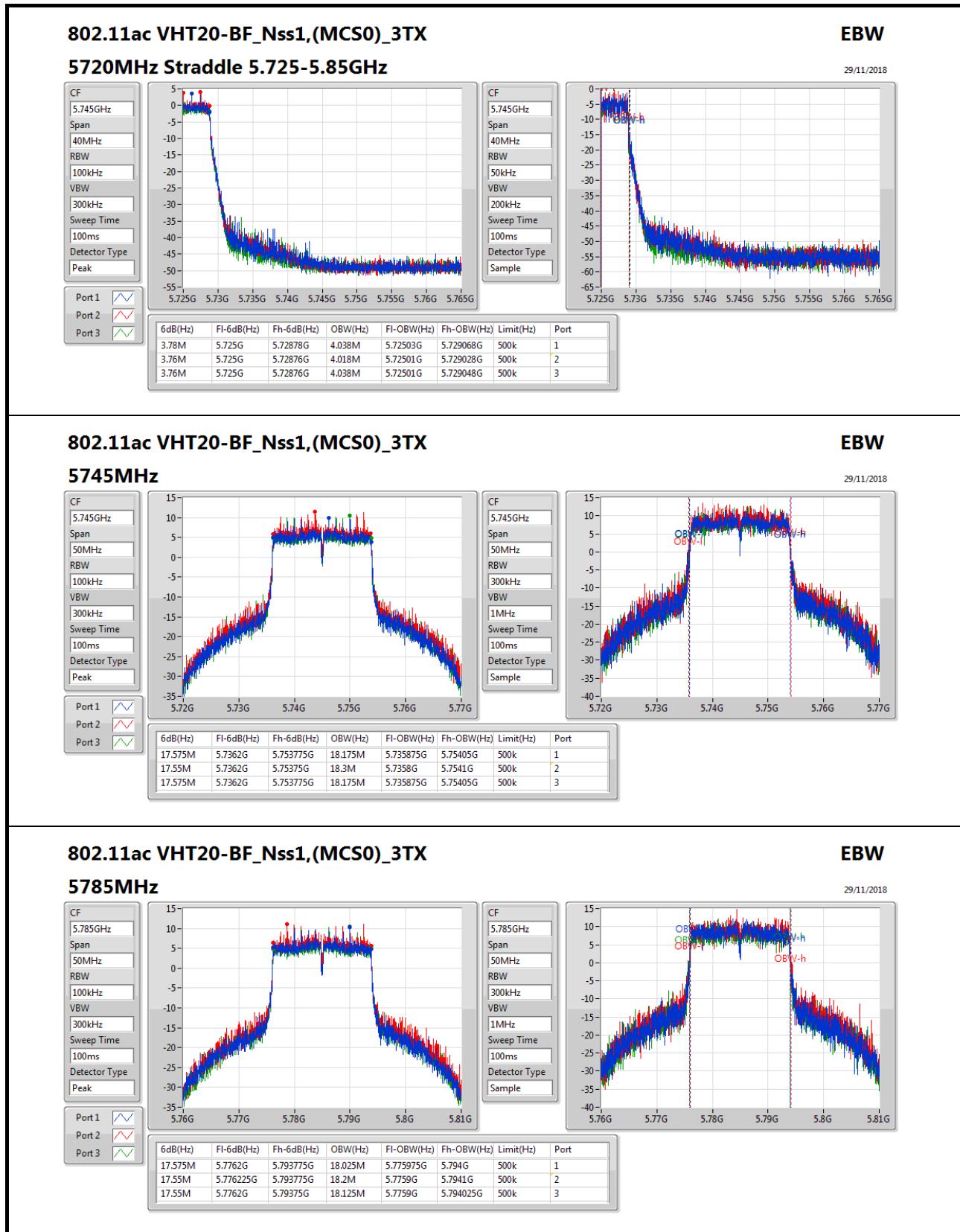






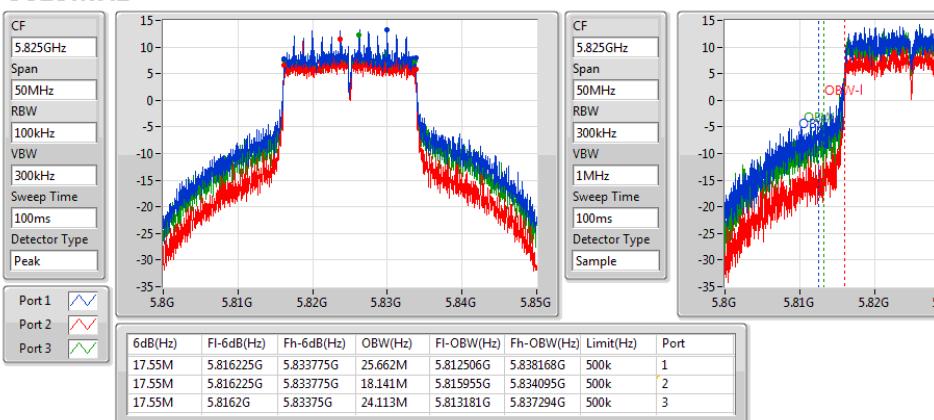
EBW Result

Appendix B

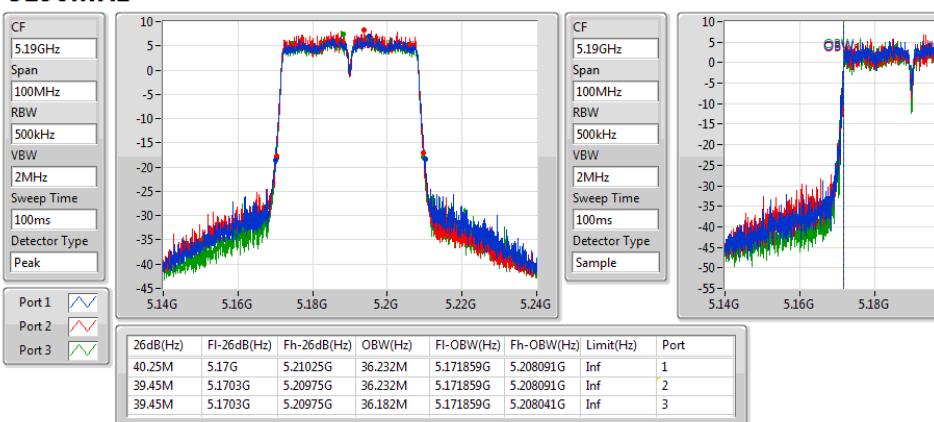


802.11ac VHT20-BF_Nss1,(MCS0)_3TX
EBW
5825MHz

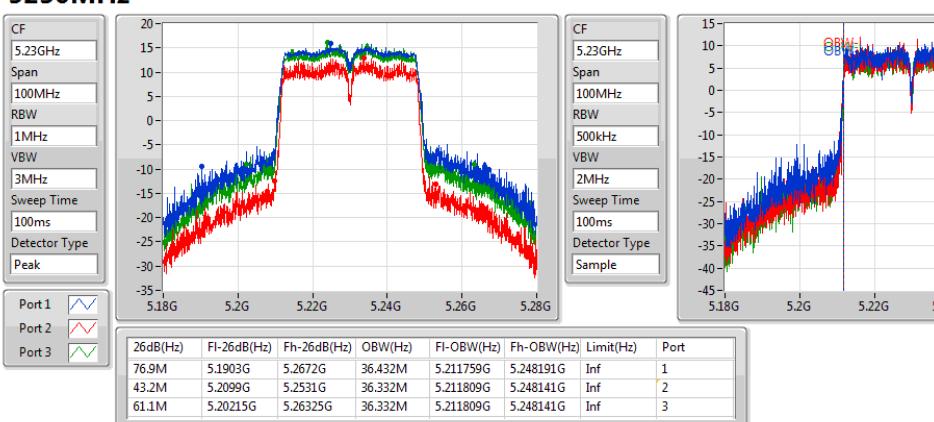
28/11/2018

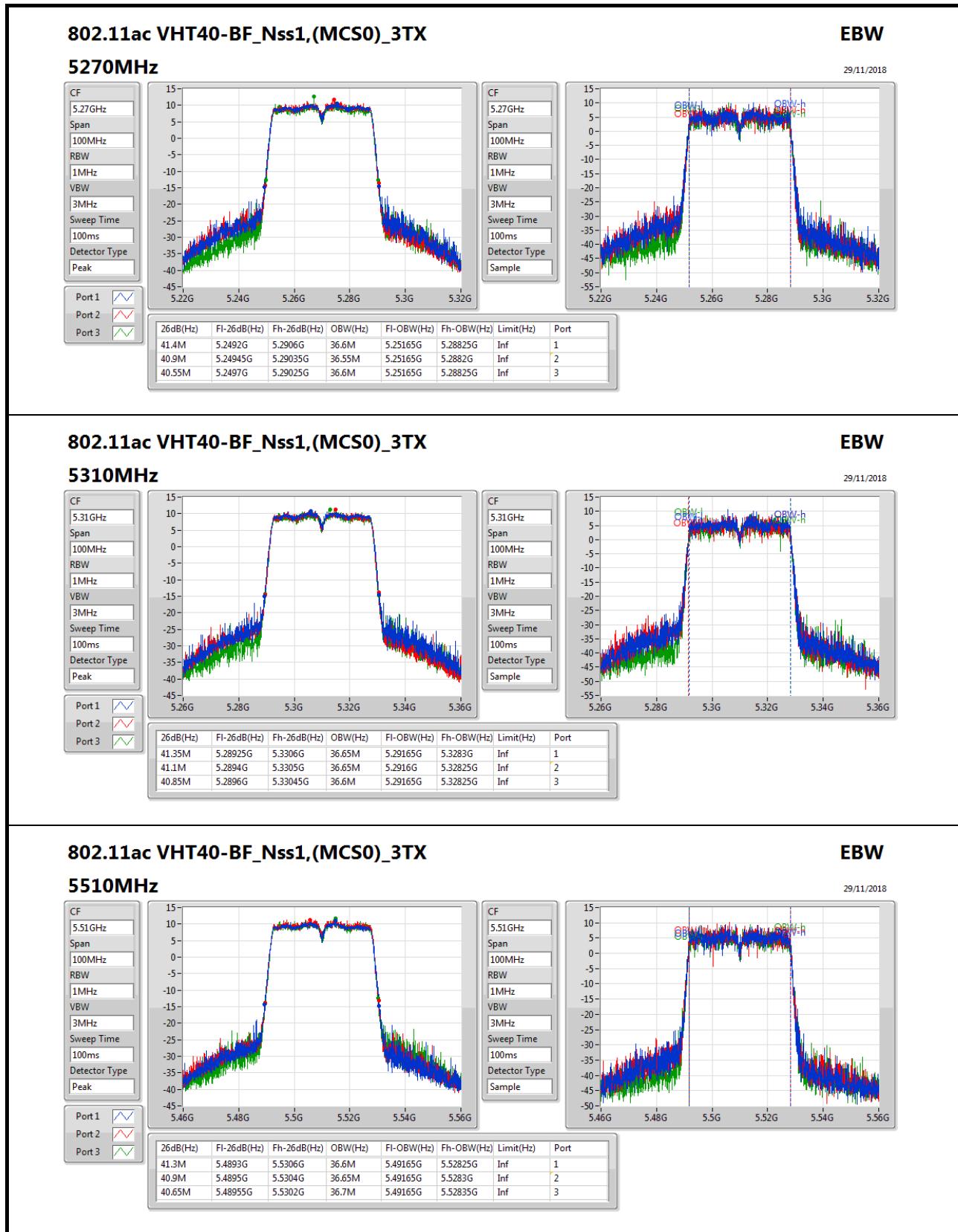

802.11ac VHT40-BF_Nss1,(MCS0)_3TX
EBW
5190MHz

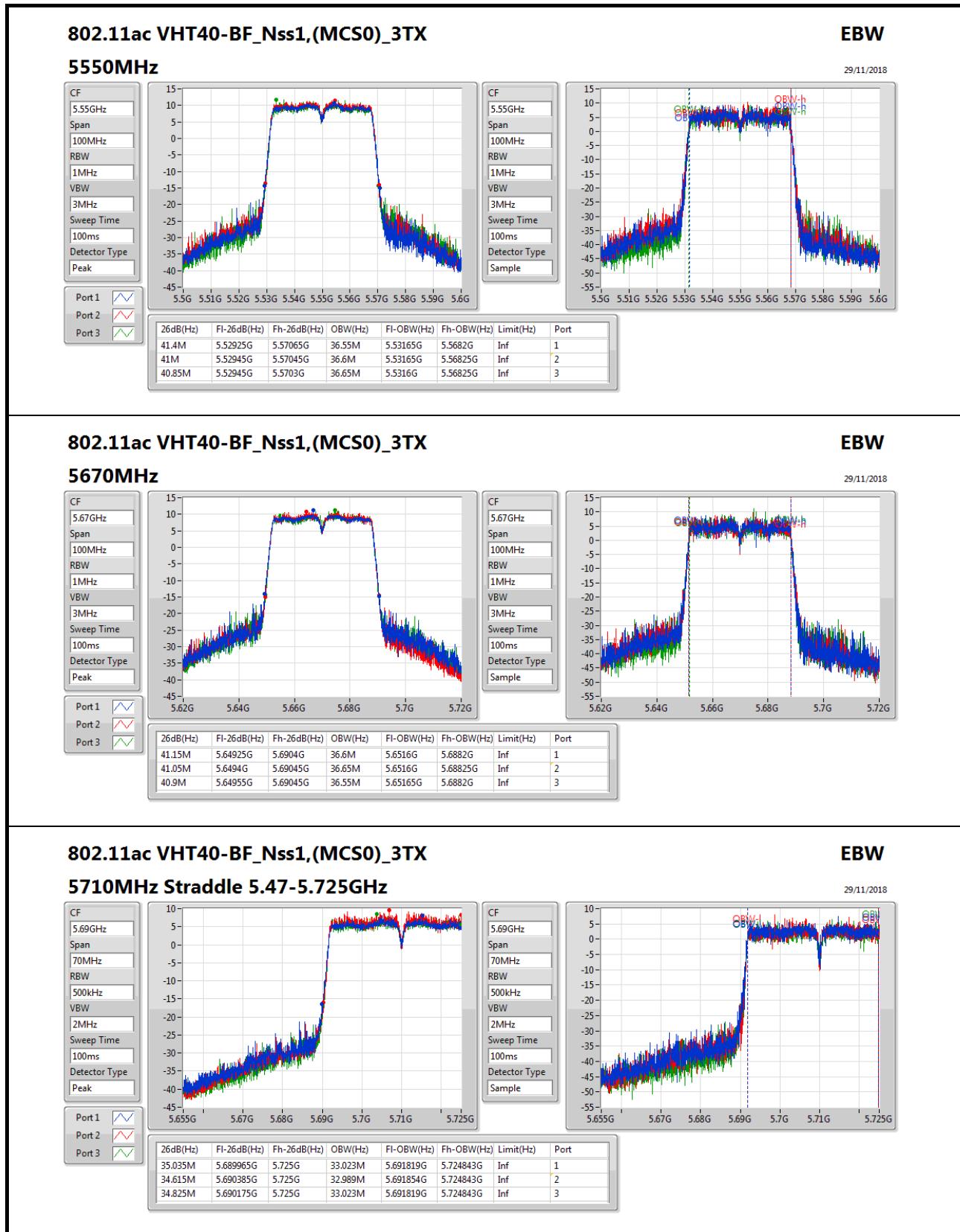
28/11/2018


802.11ac VHT40-BF_Nss1,(MCS0)_3TX
EBW
5230MHz

28/11/2018



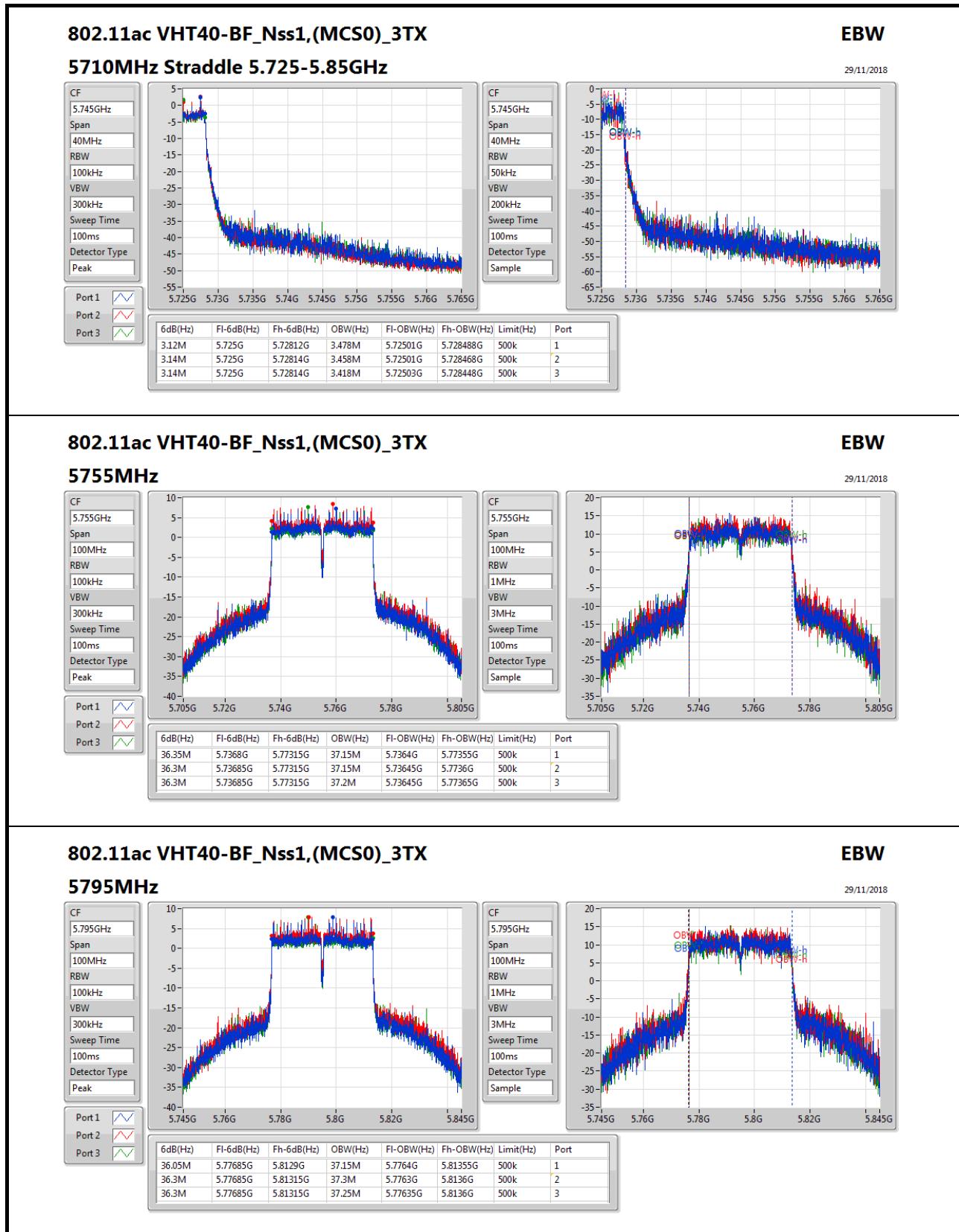






EBW Result

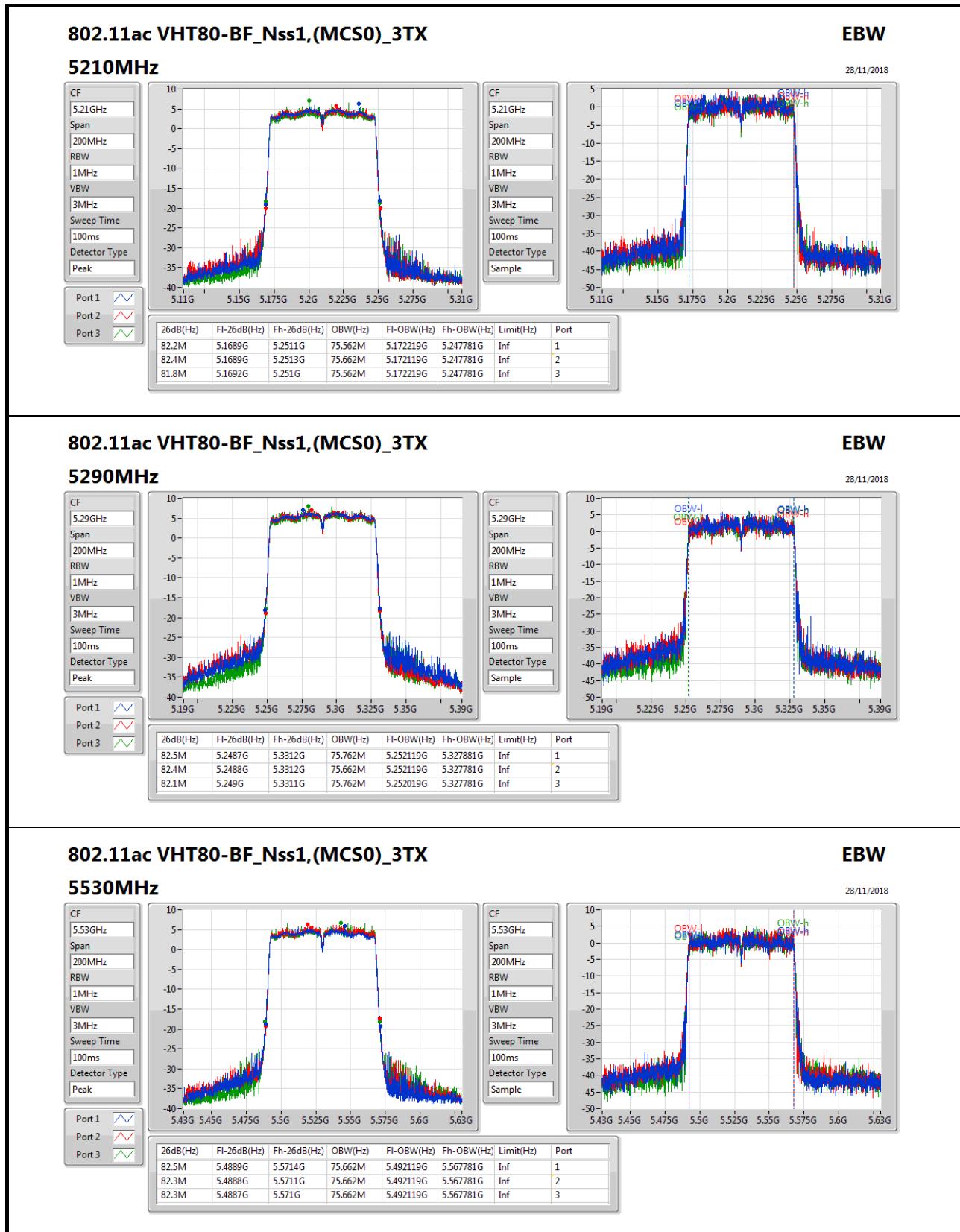
Appendix B





EBW Result

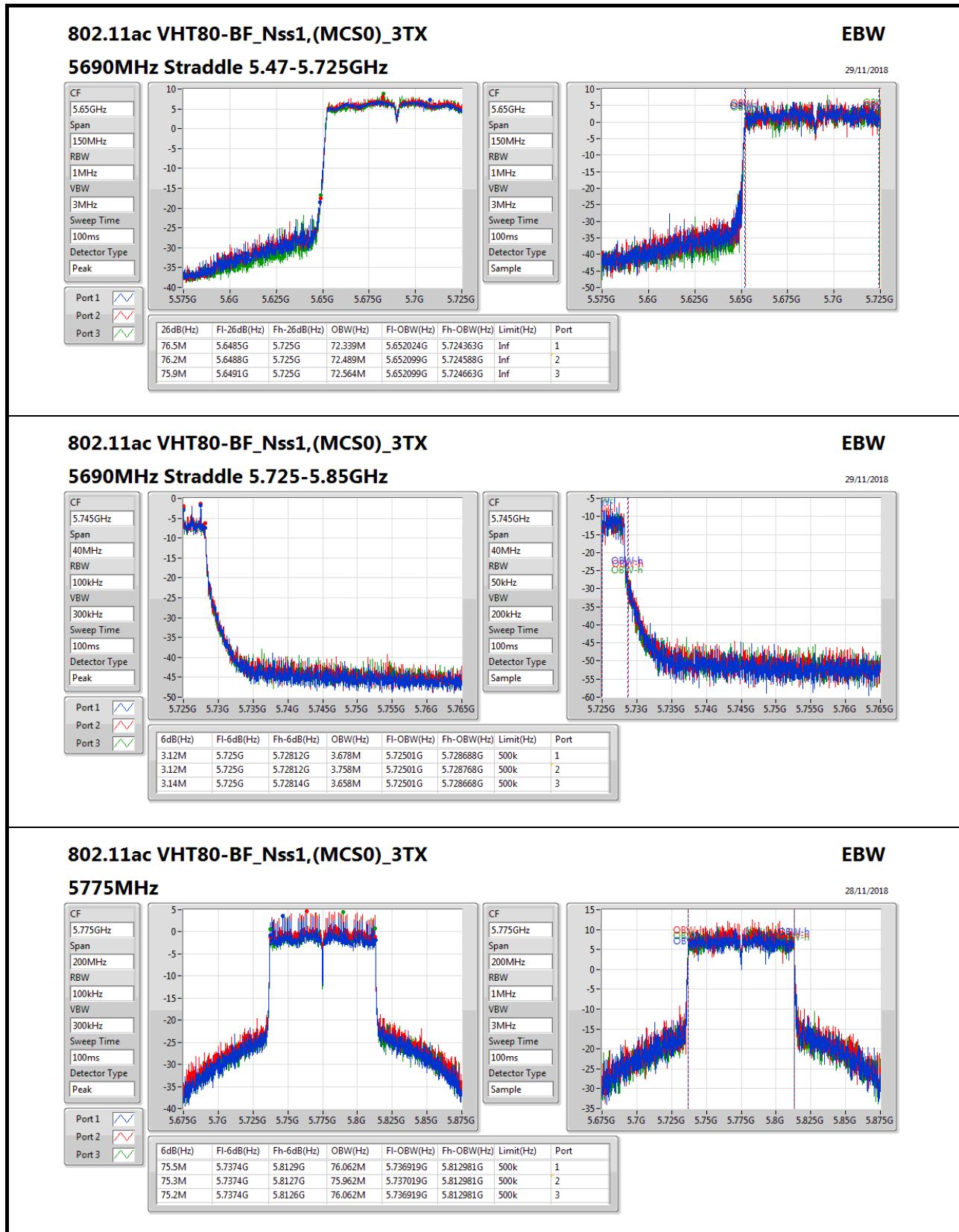
Appendix B





EBW Result

Appendix B





Power Result

Appendix C

Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_3TX	26.27	0.42364
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	26.70	0.46774
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	25.41	0.34754
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	18.59	0.07228
5.25-5.35GHz	-	-
802.11a_Nss1,(6Mbps)_3TX	21.73	0.14894
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	20.95	0.12445
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	20.92	0.12359
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	20.18	0.10423
5.47-5.725GHz	-	-
802.11a_Nss1,(6Mbps)_3TX	22.02	0.15922
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	20.90	0.12303
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	21.00	0.12589
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	20.90	0.12303
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_3TX	28.06	0.63973
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	27.99	0.62951
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	27.08	0.51050
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	25.61	0.36392



Power Result

Appendix C

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_3TX	-	-	-	-	-	-	-
5180MHz	Pass	4.20	19.91	19.08	18.86	24.08	30.00
5200MHz	Pass	4.20	21.59	20.32	20.4	25.58	30.00
5240MHz	Pass	4.20	22.26	20.19	21.8	26.27	30.00
5260MHz	Pass	4.20	16.82	16.67	16.45	21.42	23.98
5300MHz	Pass	4.20	17.02	16.71	16.46	21.51	23.98
5320MHz	Pass	4.20	17.41	16.97	16.45	21.73	23.98
5500MHz	Pass	4.90	15.53	14.97	14.96	19.93	23.98
5580MHz	Pass	4.90	15.17	15.10	14.77	19.79	23.98
5700MHz	Pass	4.20	17.47	17.37	16.89	22.02	23.98
5720MHz Straddle 5.47-5.725GHz	Pass	4.20	14.97	15.04	14.55	19.63	22.73
5720MHz Straddle 5.725-5.85GHz	Pass	4.20	8.98	8.94	8.34	13.53	30.00
5745MHz	Pass	4.10	23.99	22.45	23.29	28.06	30.00
5785MHz	Pass	4.10	23.42	22.52	23.63	27.99	30.00
5825MHz	Pass	3.20	24.02	22.47	23.24	28.06	30.00
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5180MHz	Pass	8.97	18.89	18.05	17.81	23.05	27.03
5200MHz	Pass	8.97	17.67	17.11	16.53	21.90	27.03
5240MHz	Pass	8.97	22.66	20.68	22.2	26.70	27.03
5260MHz	Pass	8.97	16.49	15.97	15.70	20.84	21.01
5300MHz	Pass	8.97	15.77	15.23	15.10	20.15	21.01
5320MHz	Pass	8.97	16.64	16.15	15.70	20.95	21.01
5500MHz	Pass	9.67	15.19	15.01	14.64	19.72	20.31
5580MHz	Pass	9.67	15.41	15.24	15.21	20.06	20.31
5700MHz	Pass	8.97	16.25	16.40	15.70	20.90	21.01
5720MHz Straddle 5.47-5.725GHz	Pass	8.97	15.18	14.94	14.59	19.68	19.83
5720MHz Straddle 5.725-5.85GHz	Pass	8.97	9.44	9.46	8.94	14.06	27.03
5745MHz	Pass	8.87	22.24	22.86	21.90	27.12	27.13
5785MHz	Pass	8.87	22.15	22.74	22.03	27.09	27.13
5825MHz	Pass	7.97	23.92	22.45	23.17	27.99	28.03
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5190MHz	Pass	8.97	16.22	15.66	15.44	20.56	27.03
5230MHz	Pass	8.97	21.37	20.32	20.12	25.41	27.03
5270MHz	Pass	8.97	16.50	16.20	15.61	20.89	21.01
5310MHz	Pass	8.97	16.56	16.07	15.77	20.92	21.01
5510MHz	Pass	9.67	15.50	15.34	15.32	20.16	20.31
5550MHz	Pass	9.67	15.86	15.65	14.98	20.28	20.31
5670MHz	Pass	8.97	16.33	16.30	16.04	21.00	21.01
5710MHz Straddle 5.47-5.725GHz	Pass	8.97	16.38	16.40	15.88	21.00	21.01
5710MHz Straddle 5.725-5.85GHz	Pass	8.97	6.34	6.28	5.96	10.97	27.03
5755MHz	Pass	8.87	22.22	22.74	21.92	27.08	27.13
5795MHz	Pass	8.87	22.05	22.74	21.85	27.00	27.13
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-

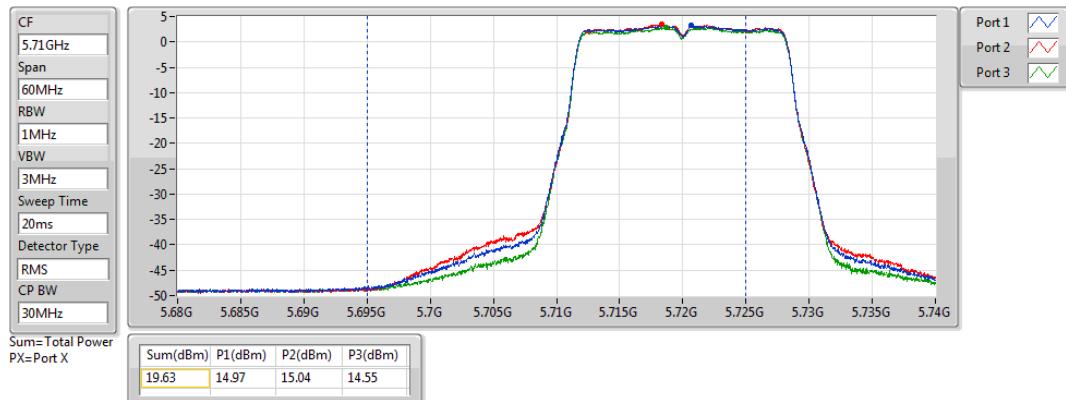
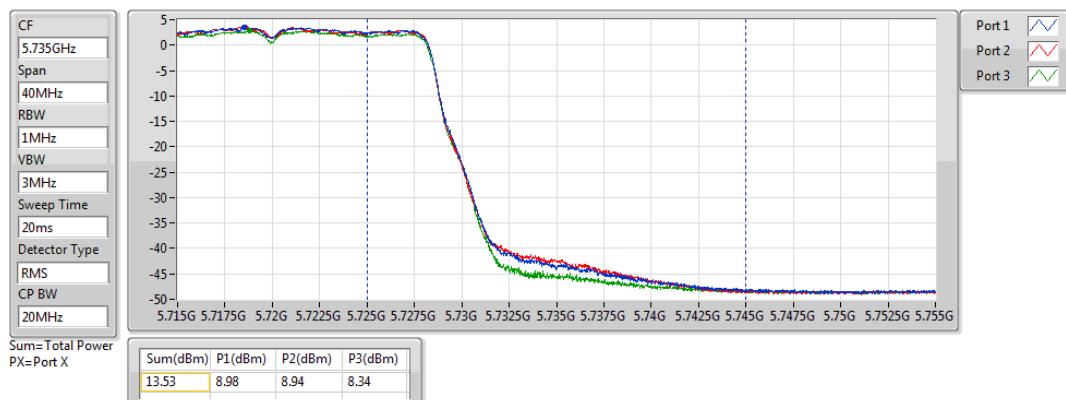
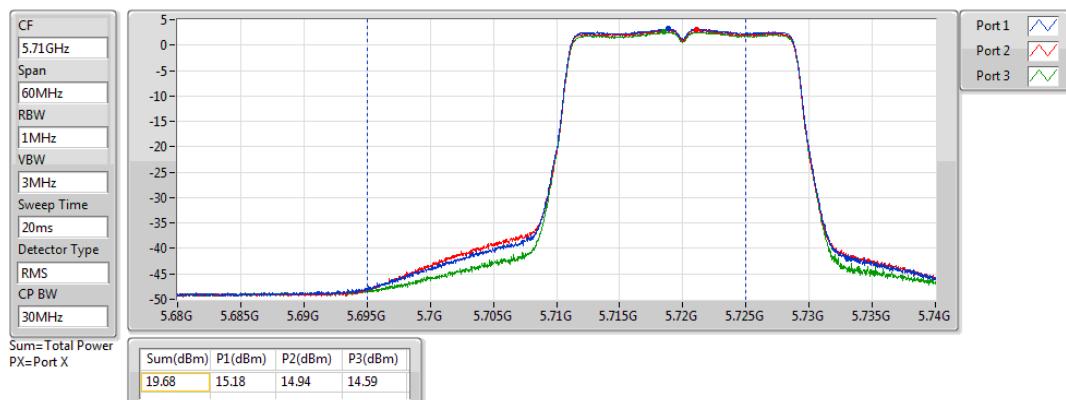


Power Result

Appendix C

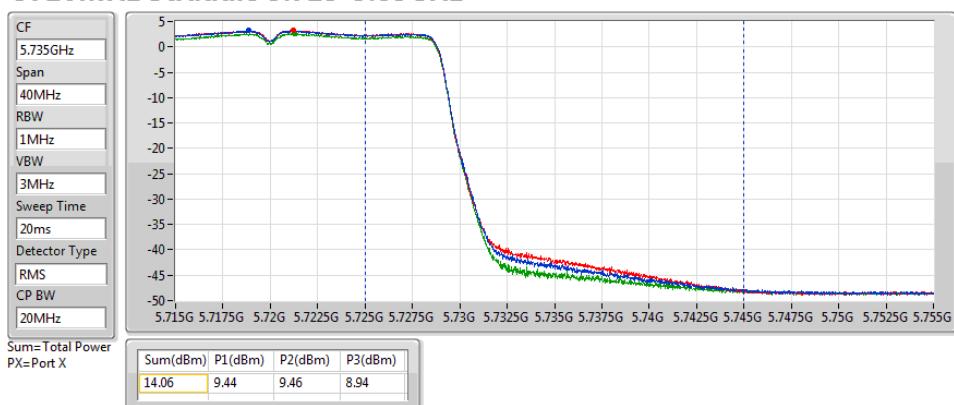
Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Total Power (dBm)	Power Limit (dBm)
5210MHz	Pass	8.97	14.32	13.67	13.4	18.59	27.03
5290MHz	Pass	8.97	15.81	15.35	15.04	20.18	21.01
5530MHz	Pass	9.67	14.42	14.38	14.1	19.07	20.31
5690MHz Straddle 5.47-5.725GHz	Pass	8.97	16.41	16.20	15.74	20.90	21.01
5690MHz Straddle 5.725-5.85GHz	Pass	8.97	2.25	2.34	2.03	6.98	27.03
5775MHz	Pass	8.87	20.47	21.27	20.74	25.61	27.13

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

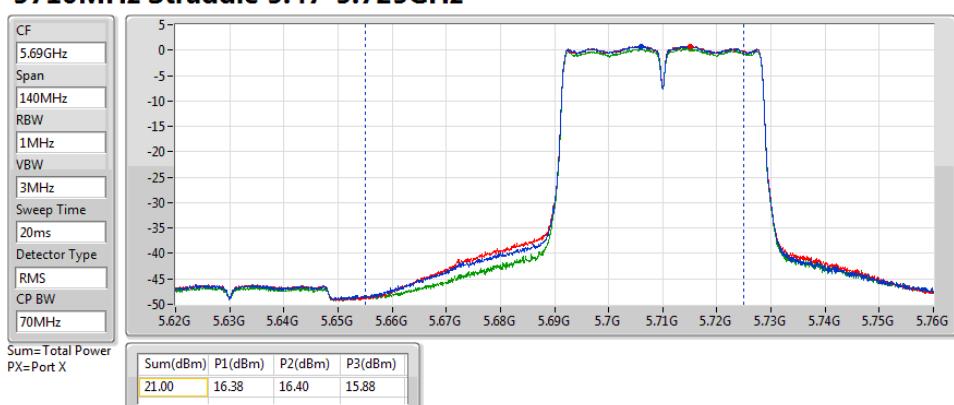
802.11a_Nss1,(6Mbps)_3TX
5720MHz Straddle 5.47-5.725GHz

802.11a_Nss1,(6Mbps)_3TX
5720MHz Straddle 5.725-5.85GHz

802.11ac VHT20-BF_Nss1,(MCS0)_3TX
5720MHz Straddle 5.47-5.725GHz


802.11ac VHT20-BF_Nss1,(MCS0)_3TX
AV Power
5720MHz Straddle 5.725-5.85GHz

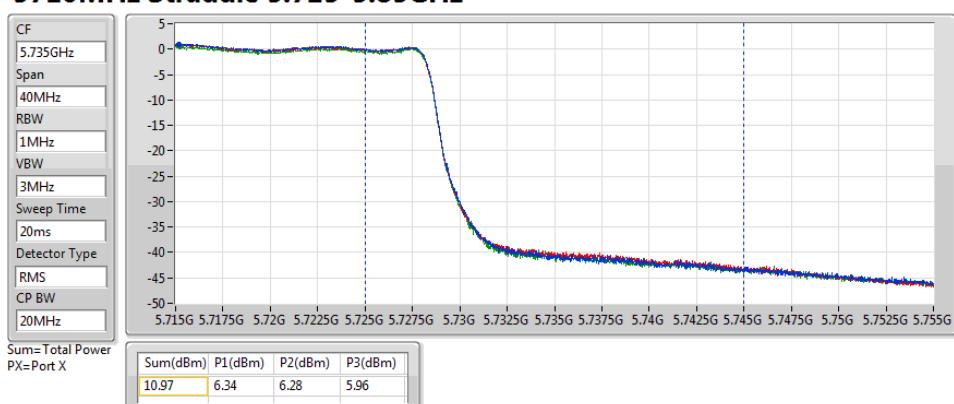
29/11/2018


802.11ac VHT40-BF_Nss1,(MCS0)_3TX
AV Power
5710MHz Straddle 5.47-5.725GHz

29/11/2018


802.11ac VHT40-BF_Nss1,(MCS0)_3TX
AV Power
5710MHz Straddle 5.725-5.85GHz

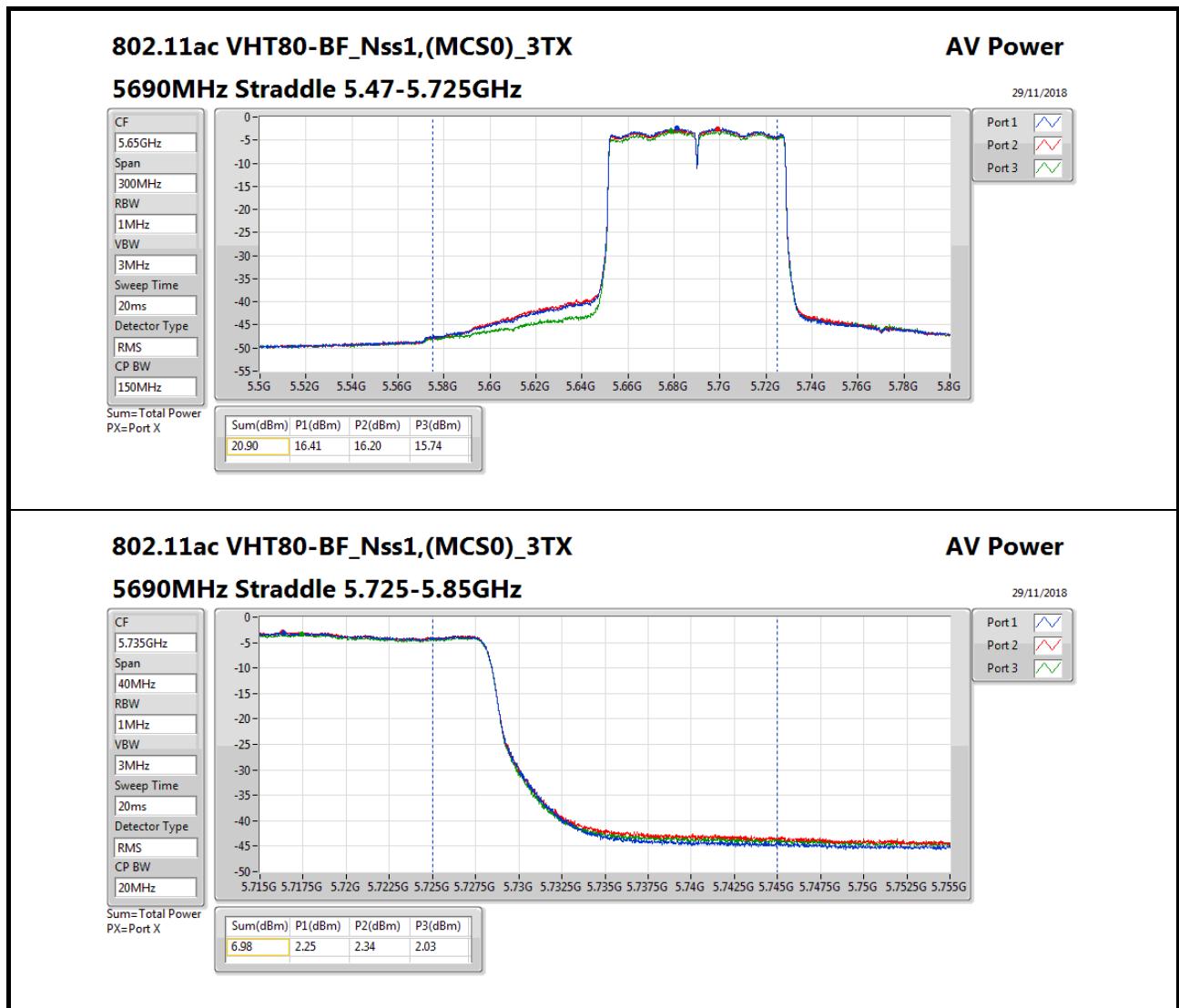
29/11/2018





Power Result

Appendix C





PSD Result

Appendix D

Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11a_Nss1,(6Mbps)_3TX	13.25
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	13.31
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	9.37
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	-0.43
5.25-5.35GHz	-
802.11a_Nss1,(6Mbps)_3TX	8.00
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	7.05
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	4.12
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	1.09
5.47-5.725GHz	-
802.11a_Nss1,(6Mbps)_3TX	7.91
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	7.61
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	5.37
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	1.94
5.725-5.85GHz	-
802.11a_Nss1,(6Mbps)_3TX	13.64
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	13.33
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	7.17
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	5.23

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



PSD Result

Appendix D

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_3TX	-	-	-	-	-	-	-
5180MHz	Pass	8.97	7.01	6.37	5.94	11.16	14.03
5200MHz	Pass	8.97	8.72	7.41	7.45	12.62	14.03
5240MHz	Pass	8.97	9.23	7.28	8.83	13.25	14.03
5260MHz	Pass	8.97	3.49	3.10	2.83	7.83	8.03
5300MHz	Pass	8.97	3.74	3.28	2.96	8.00	8.03
5320MHz	Pass	8.97	3.72	3.38	2.74	8.00	8.03
5500MHz	Pass	9.67	2.82	2.64	2.25	7.23	7.33
5580MHz	Pass	9.67	2.66	2.53	2.21	7.11	7.33
5700MHz	Pass	8.97	3.52	3.36	2.85	7.91	8.03
5720MHz Straddle 5.47-5.725GHz	Pass	8.97	3.34	3.49	2.78	7.87	8.03
5720MHz Straddle 5.725-5.85GHz	Pass	8.97	1.35	1.26	0.62	5.80	27.03
5745MHz	Pass	8.87	9.59	8.24	8.79	13.55	27.13
5785MHz	Pass	8.87	8.96	8.14	9.16	13.46	27.13
5825MHz	Pass	7.97	9.63	8.26	8.89	13.64	28.03
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5180MHz	Pass	8.97	5.71	4.99	4.59	9.88	14.03
5200MHz	Pass	8.97	4.56	4.01	3.36	8.72	14.03
5240MHz	Pass	8.97	9.28	7.30	8.90	13.31	14.03
5260MHz	Pass	8.97	2.54	2.31	1.94	6.98	8.03
5300MHz	Pass	8.97	2.60	2.10	1.91	6.92	8.03
5320MHz	Pass	8.97	2.63	2.46	1.90	7.05	8.03
5500MHz	Pass	9.67	2.63	2.40	2.21	7.16	7.33
5580MHz	Pass	9.67	2.78	2.61	2.17	7.26	7.33
5700MHz	Pass	8.97	2.18	1.95	1.44	6.57	8.03
5720MHz Straddle 5.47-5.725GHz	Pass	8.97	3.09	3.12	2.45	7.61	8.03
5720MHz Straddle 5.725-5.85GHz	Pass	8.97	0.93	1.05	0.48	5.54	27.03
5745MHz	Pass	8.87	5.24	6.12	5.00	10.16	27.13
5785MHz	Pass	8.87	5.38	6.01	5.20	10.24	27.13
5825MHz	Pass	7.97	9.37	7.88	8.61	13.33	28.03
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5190MHz	Pass	8.97	0.17	-0.22	-0.55	4.54	14.03
5230MHz	Pass	8.97	5.33	4.34	4.19	9.37	14.03
5270MHz	Pass	8.97	-0.25	-0.56	-1.13	4.12	8.03
5310MHz	Pass	8.97	-0.23	-0.64	-0.97	4.11	8.03
5510MHz	Pass	9.67	0.02	0.06	-0.39	4.64	7.33
5550MHz	Pass	9.67	0.13	0.10	-0.42	4.66	7.33
5670MHz	Pass	8.97	-0.75	-0.64	-0.99	3.98	8.03
5710MHz Straddle 5.47-5.725GHz	Pass	8.97	1.00	0.71	0.31	5.37	8.03
5710MHz Straddle 5.725-5.85GHz	Pass	8.97	-1.11	-1.09	-1.34	3.53	27.03
5755MHz	Pass	8.87	2.13	3.05	2.14	7.17	27.13
5795MHz	Pass	8.87	2.10	2.83	2.11	7.03	27.13
802.11ac VHT80-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-



PSD Result

Appendix D

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
5210MHz	Pass	8.97	-4.65	-5.19	-5.58	-0.43	14.03
5290MHz	Pass	8.97	-3.18	-3.71	-3.93	1.09	8.03
5530MHz	Pass	9.67	-4.48	-4.56	-4.96	-0.02	7.33
5690MHz Straddle 5.47-5.725GHz	Pass	8.97	-2.50	-2.61	-3.12	1.94	8.03
5690MHz Straddle 5.725-5.85GHz	Pass	8.97	-5.29	-5.07	-5.44	-0.65	27.03
5775MHz	Pass	8.87	0.16	0.97	0.56	5.23	27.13

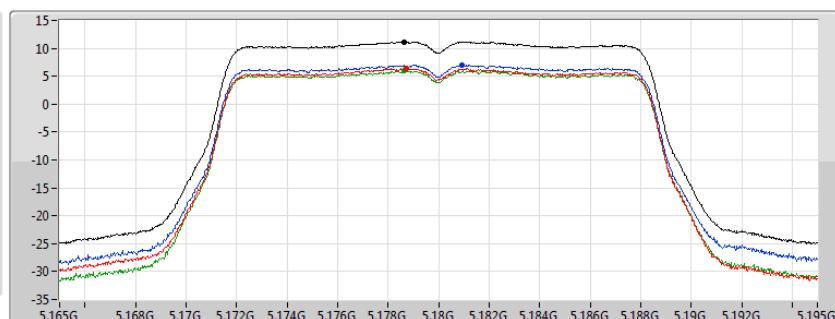
DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

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)_3TX
PSD
5180MHz

28/11/2018

CF
5.18GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



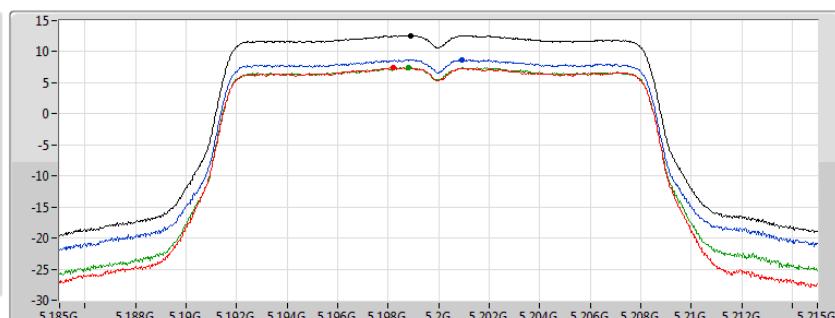
- Sum
- Port 1
- Port 2
- Port 3

Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.16	11.16	7.01	6.37	5.94

802.11a_Nss1,(6Mbps)_3TX
PSD
5200MHz

28/11/2018

CF
5.2GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



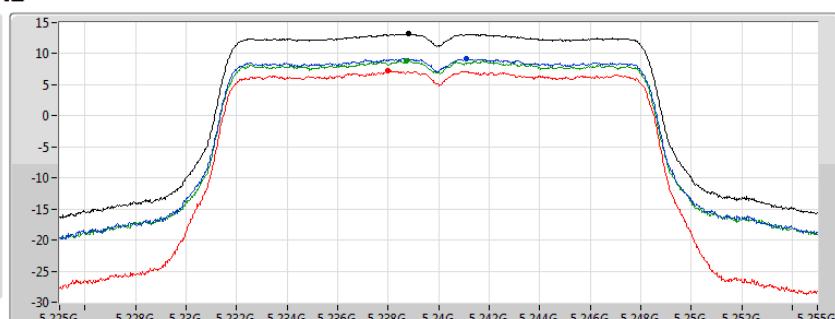
- Sum
- Port 1
- Port 2
- Port 3

Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.62	12.62	8.72	7.41	7.45

802.11a_Nss1,(6Mbps)_3TX
PSD
5240MHz

28/11/2018

CF
5.24GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



- Sum
- Port 1
- Port 2
- Port 3

Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.25	13.25	9.23	7.28	8.83



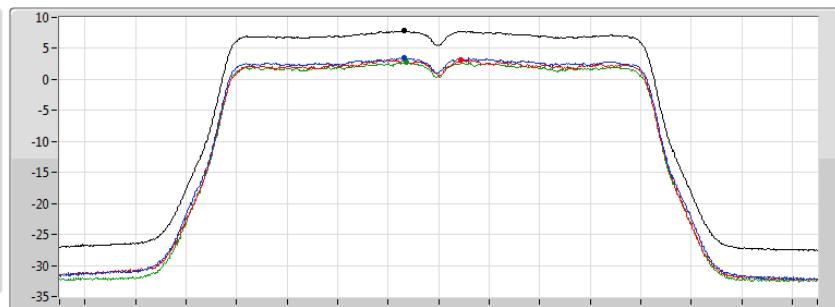
PSD Result

Appendix D

802.11a_Nss1,(6Mbps)_3TX

5260MHz

CF
5.26GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

29/11/2018

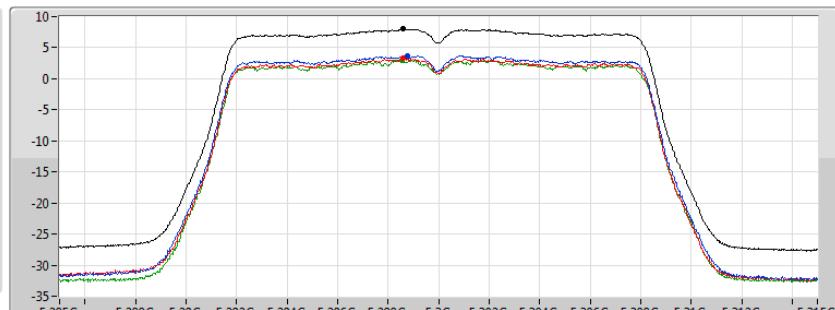
Sum
Port 1
Port 2
Port 3

Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.83	7.83	3.49	3.10	2.83

802.11a_Nss1,(6Mbps)_3TX

5300MHz

CF
5.3GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

29/11/2018

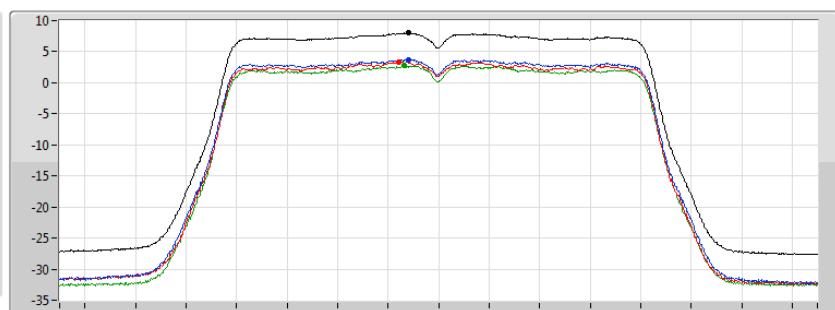
Sum
Port 1
Port 2
Port 3

Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.00	8.00	3.74	3.28	2.96

802.11a_Nss1,(6Mbps)_3TX

5320MHz

CF
5.32GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

29/11/2018

Sum
Port 1
Port 2
Port 3

Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.00	8.00	3.72	3.38	2.74



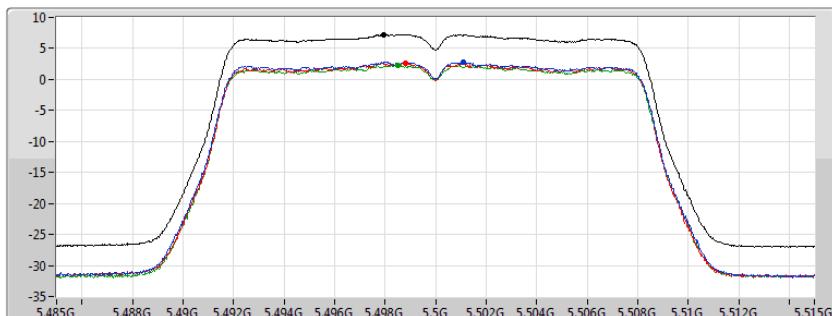
PSD Result

Appendix D

802.11a_Nss1,(6Mbps)_3TX

5500MHz

CF
5.5GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

29/11/2018

Sum
Port 1
Port 2
Port 3

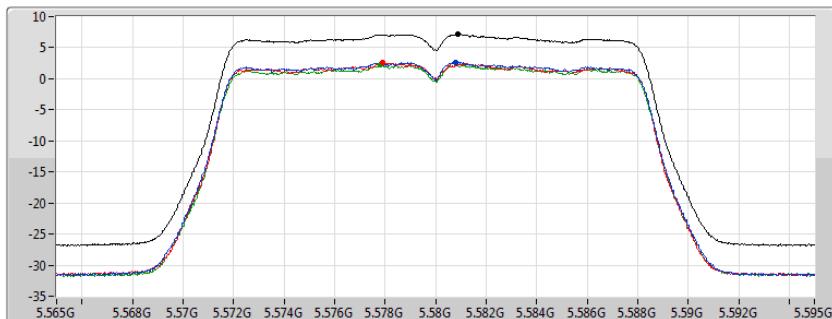
Sum
(dBm/RBW)
PD
(dBm/RBW)
Port 1
(dBm/RBW)
Port 2
(dBm/RBW)
Port 3
(dBm/RBW)

7.23
7.23
2.82
2.64
2.25

802.11a_Nss1,(6Mbps)_3TX

5580MHz

CF
5.58GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

29/11/2018

Sum
Port 1
Port 2
Port 3

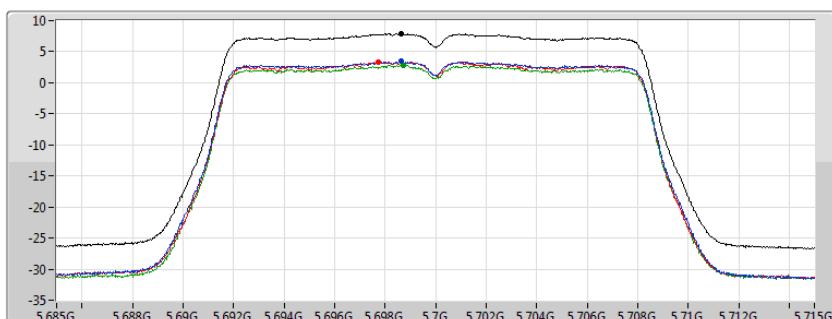
Sum
(dBm/RBW)
PD
(dBm/RBW)
Port 1
(dBm/RBW)
Port 2
(dBm/RBW)
Port 3
(dBm/RBW)

7.11
7.11
2.66
2.53
2.21

802.11a_Nss1,(6Mbps)_3TX

5700MHz

CF
5.7GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

29/11/2018

Sum
Port 1
Port 2
Port 3

Sum
(dBm/RBW)
PD
(dBm/RBW)
Port 1
(dBm/RBW)
Port 2
(dBm/RBW)
Port 3
(dBm/RBW)

7.91
7.91
3.52
3.36
2.85



PSD Result

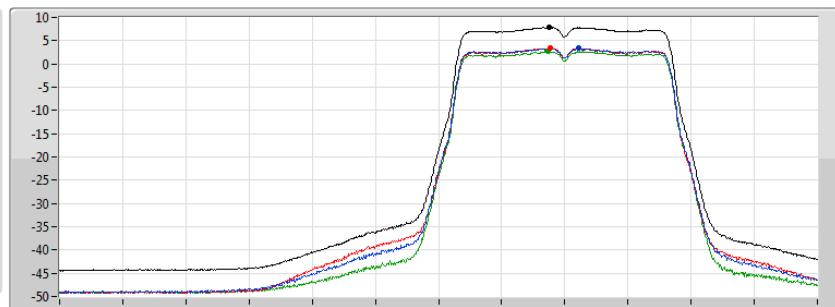
Appendix D

802.11a_Nss1,(6Mbps)_3TX 5720MHz Straddle 5.47-5.725GHz

PSD

29/11/2018

CF
5.71GHz
Span
60MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3

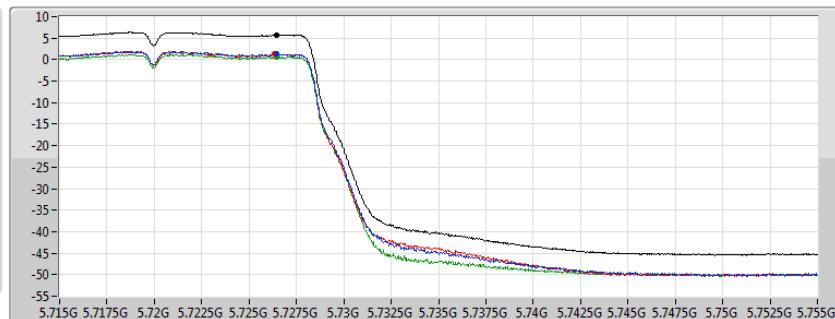
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.87	7.87	3.34	3.49	2.78

PSD

29/11/2018

802.11a_Nss1,(6Mbps)_3TX 5720MHz Straddle 5.725-5.85GHz

CF
5.735GHz
Span
40MHz
RBW
500kHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3

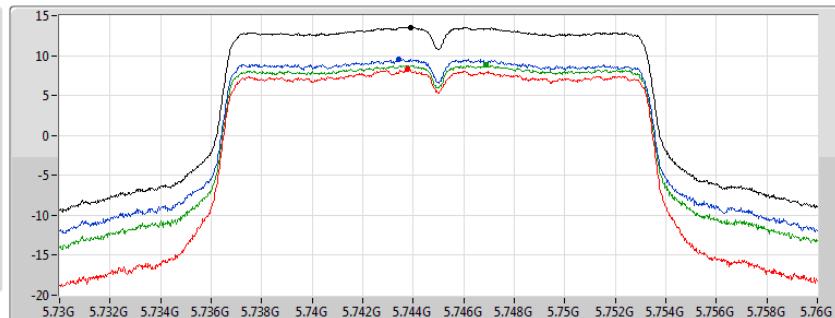
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.80	5.80	1.35	1.26	0.62

PSD

28/11/2018

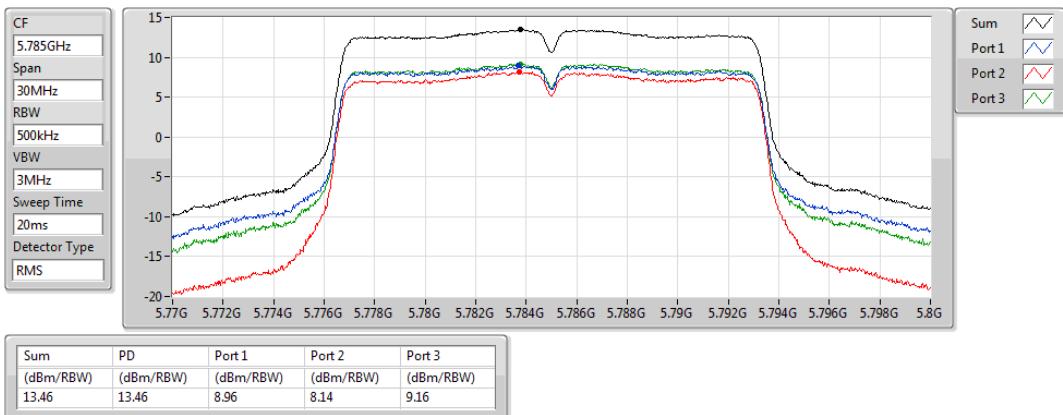
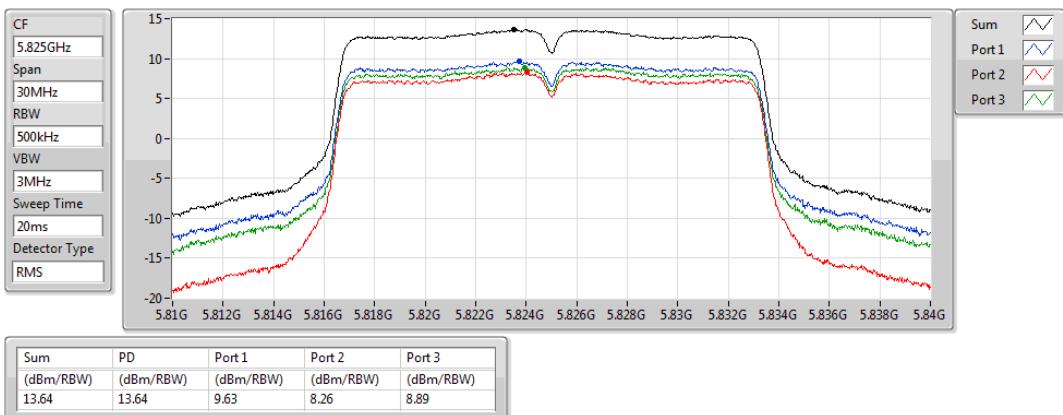
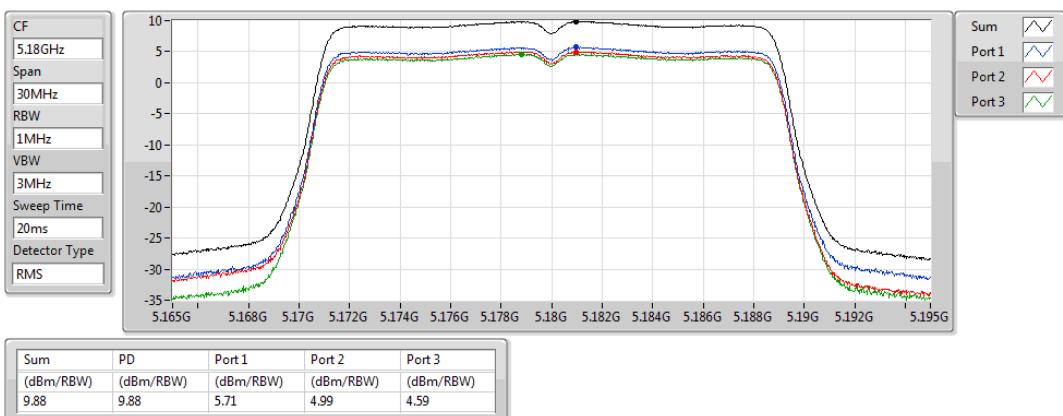
802.11a_Nss1,(6Mbps)_3TX 5745MHz

CF
5.745GHz
Span
30MHz
RBW
500kHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3

Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.55	13.55	9.59	8.24	8.79

802.11a_Nss1,(6Mbps)_3TX
5785MHz

802.11a_Nss1,(6Mbps)_3TX
5825MHz

802.11ac VHT20-BF_Nss1,(MCS0)_3TX
5180MHz




PSD Result

Appendix D

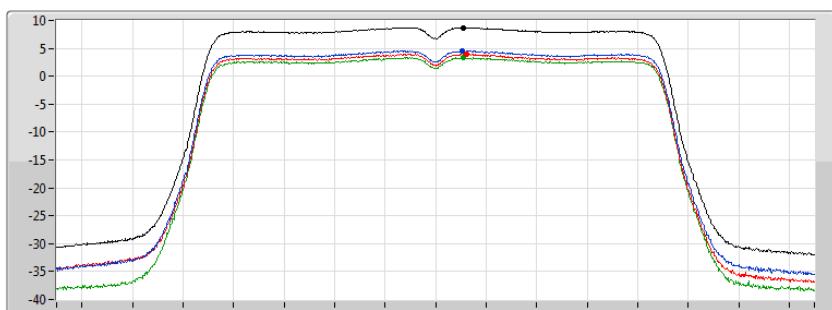
802.11ac VHT20-BF_Nss1,(MCS0)_3TX

PSD

28/11/2018

5200MHz

CF
5.2GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3

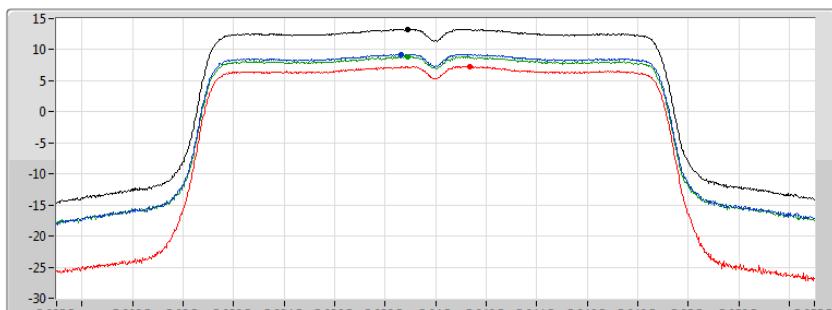
802.11ac VHT20-BF_Nss1,(MCS0)_3TX

PSD

28/11/2018

5240MHz

CF
5.24GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3

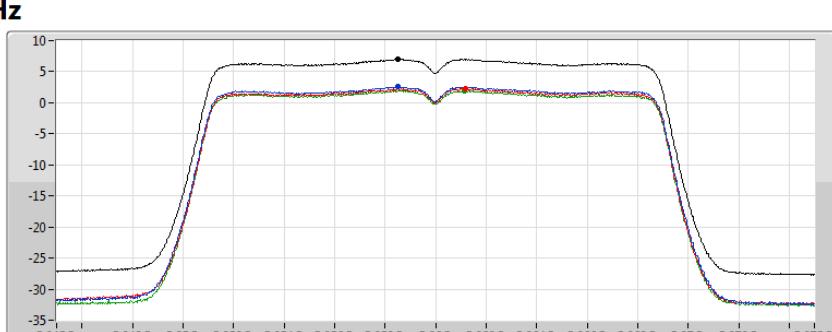
802.11ac VHT20-BF_Nss1,(MCS0)_3TX

PSD

29/11/2018

5260MHz

CF
5.26GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3

Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.98	6.98	2.54	2.31	1.94



PSD Result

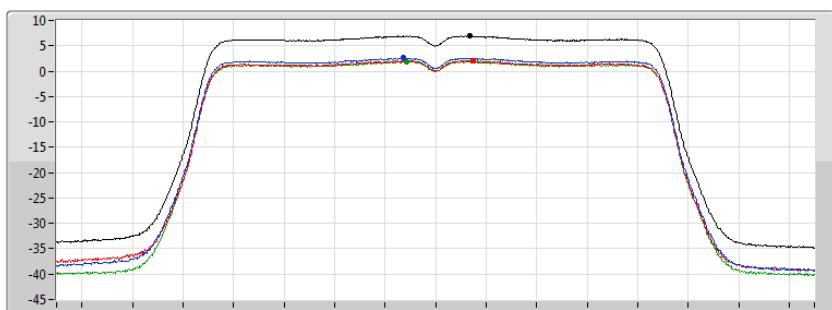
Appendix D

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

PSD

5300MHz

CF
5.3GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



28/11/2018

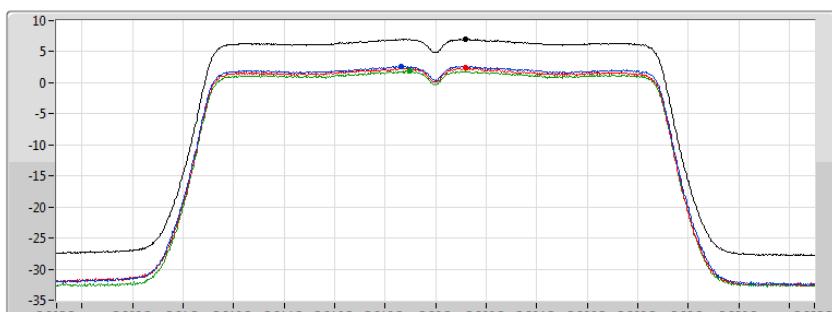
Sum
Port 1
Port 2
Port 3

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

PSD

5320MHz

CF
5.32GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



29/11/2018

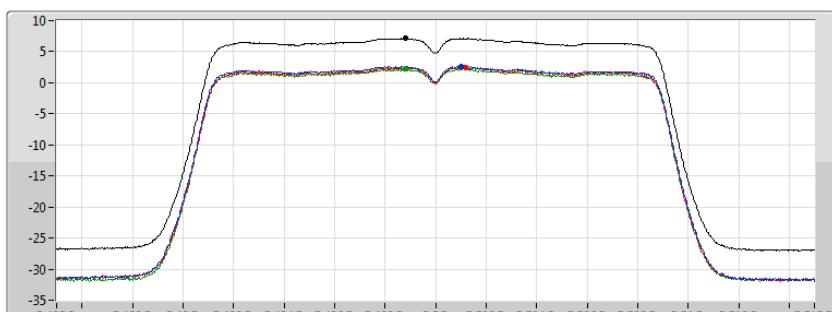
Sum
Port 1
Port 2
Port 3

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

PSD

5500MHz

CF
5.5GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



29/11/2018

Sum
Port 1
Port 2
Port 3



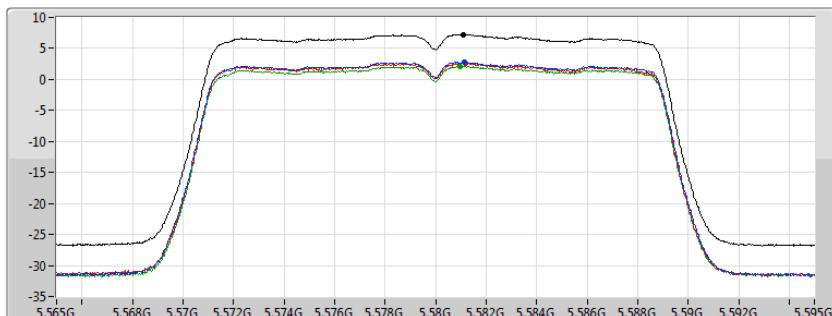
PSD Result

Appendix D

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

5580MHz

CF
5.58GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

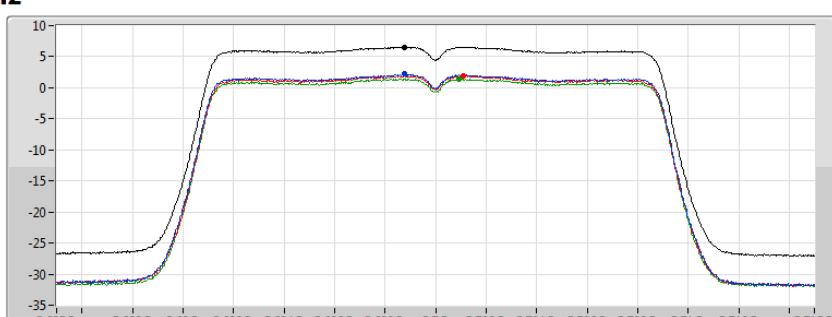
29/11/2018

Sum
Port 1
Port 2
Port 3

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

5700MHz

CF
5.7GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

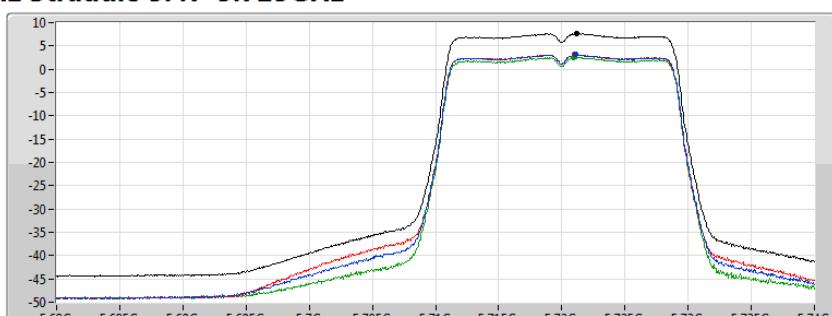
29/11/2018

Sum
Port 1
Port 2
Port 3

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

5720MHz Straddle 5.47-5.725GHz

CF
5.71GHz
Span
60MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

29/11/2018

Sum
Port 1
Port 2
Port 3

Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.61	7.61	3.09	3.12	2.45



PSD Result

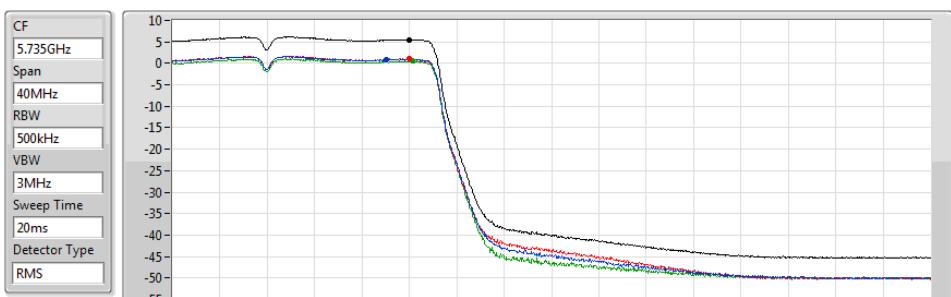
Appendix D

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

PSD

5720MHz Straddle 5.725-5.85GHz

29/11/2018



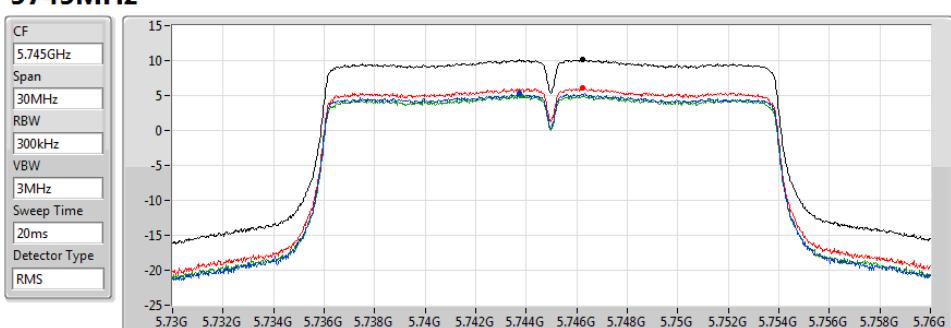
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.54	5.54	0.93	1.05	0.48

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

PSD

5745MHz

29/11/2018



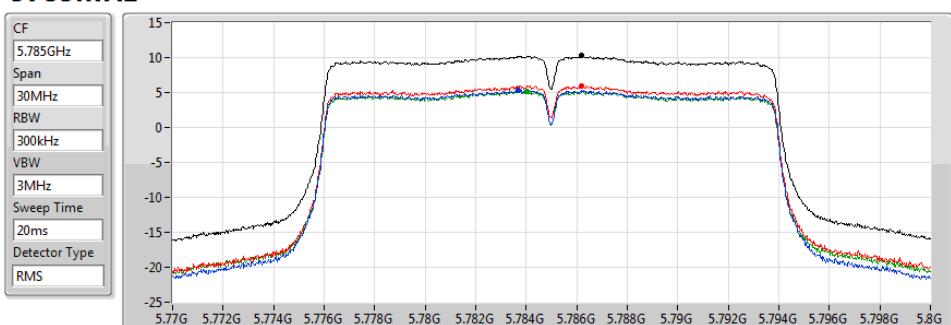
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.16	10.16	5.24	6.12	5.00

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

PSD

5785MHz

29/11/2018



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.24	10.24	5.38	6.01	5.20



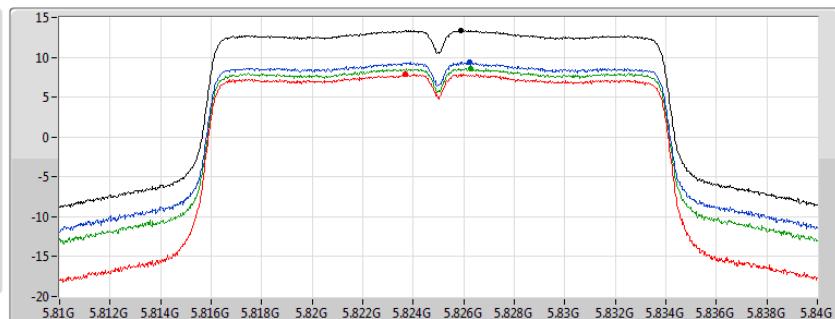
PSD Result

Appendix D

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

5825MHz

CF
5.825GHz
Span
30MHz
RBW
500kHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

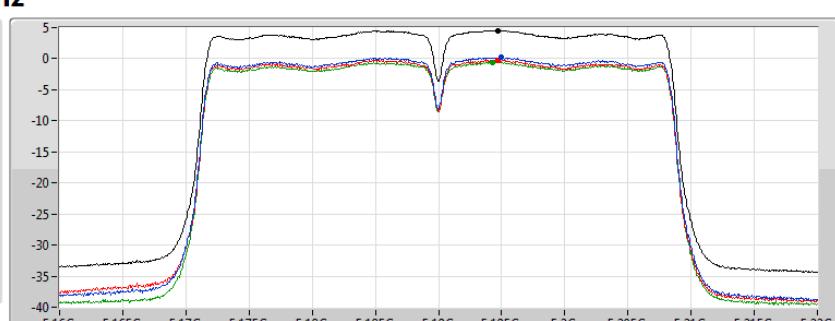
28/11/2018

Sum
Port 1
Port 2
Port 3

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

5190MHz

CF
5.19GHz
Span
60MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

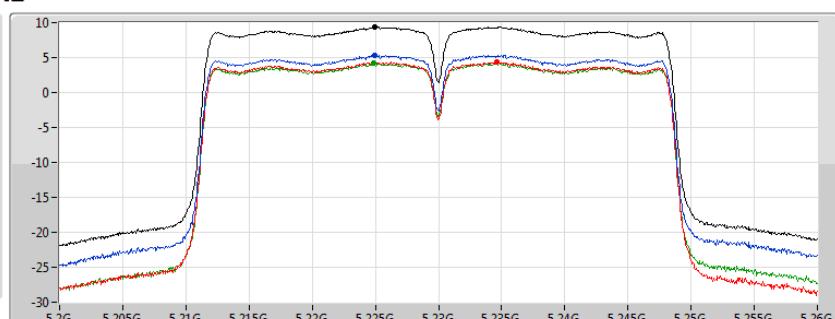
28/11/2018

Sum
Port 1
Port 2
Port 3

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

5230MHz

CF
5.23GHz
Span
60MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

28/11/2018

Sum
Port 1
Port 2
Port 3



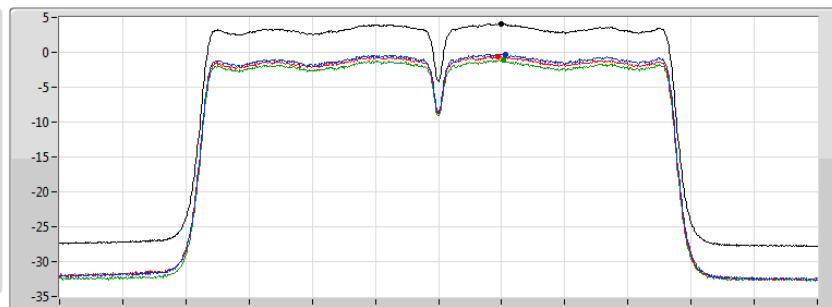
PSD Result

Appendix D

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

5270MHz

CF
5.27GHz
Span
60MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

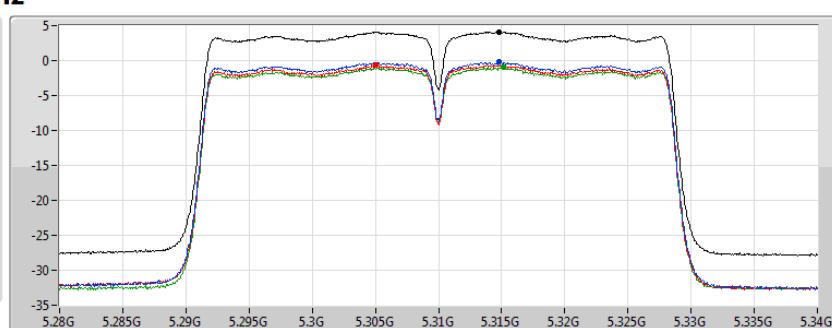
29/11/2018

Sum
Port 1
Port 2
Port 3

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

5310MHz

CF
5.31GHz
Span
60MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

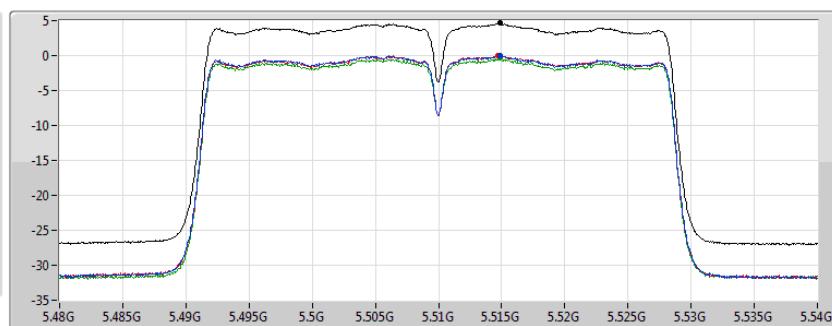
29/11/2018

Sum
Port 1
Port 2
Port 3

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

5510MHz

CF
5.51GHz
Span
60MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

29/11/2018

Sum
Port 1
Port 2
Port 3



PSD Result

Appendix D

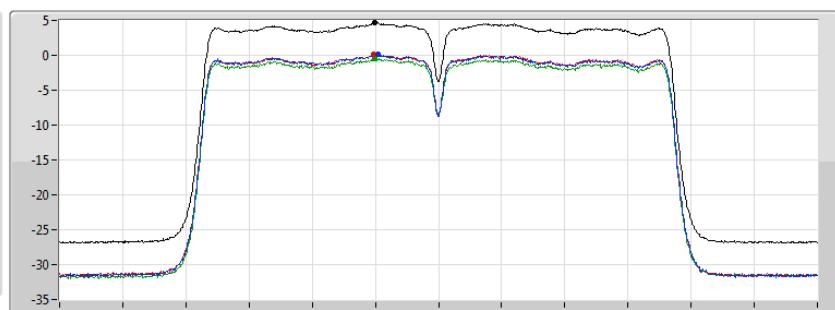
802.11ac VHT40-BF_Nss1,(MCS0)_3TX

PSD

5550MHz

29/11/2018

CF
5.55GHz
Span
60MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3

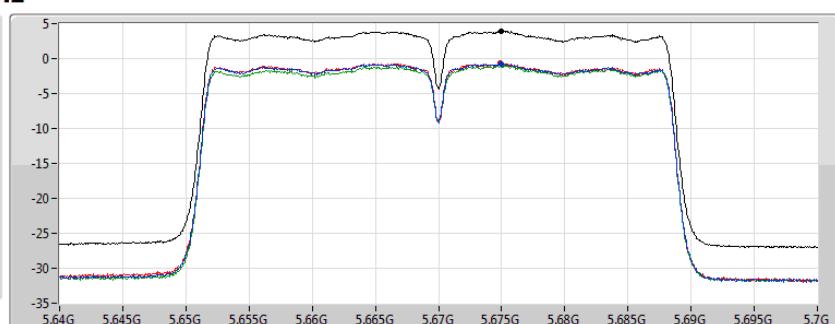
802.11ac VHT40-BF_Nss1,(MCS0)_3TX

PSD

5670MHz

29/11/2018

CF
5.67GHz
Span
60MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3

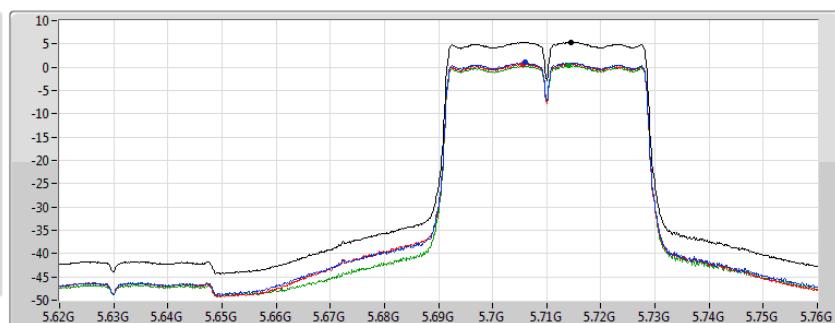
802.11ac VHT40-BF_Nss1,(MCS0)_3TX

PSD

5710MHz Straddle 5.47-5.725GHz

29/11/2018

CF
5.69GHz
Span
140MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3

Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.37	5.37	1.00	0.71	0.31



PSD Result

Appendix D

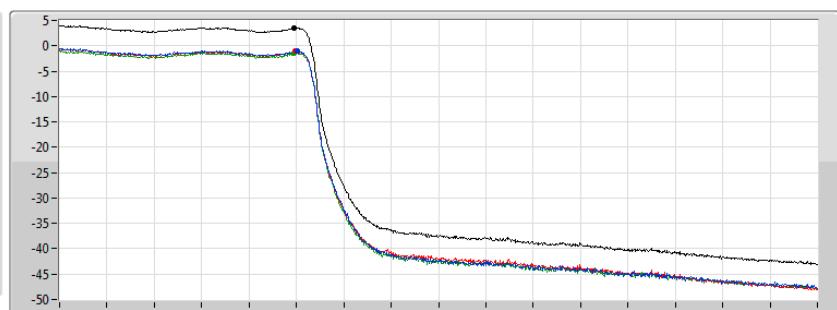
802.11ac VHT40-BF_Nss1,(MCS0)_3TX

PSD

5710MHz Straddle 5.725-5.85GHz

29/11/2018

CF
5.735GHz
Span
40MHz
RBW
500kHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Sum

Port 1

Port 2

Port 3

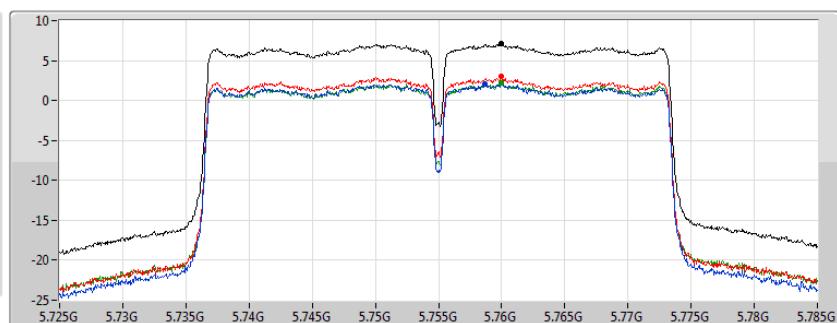
802.11ac VHT40-BF_Nss1,(MCS0)_3TX

PSD

5755MHz

29/11/2018

CF
5.755GHz
Span
60MHz
RBW
300kHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Sum

Port 1

Port 2

Port 3

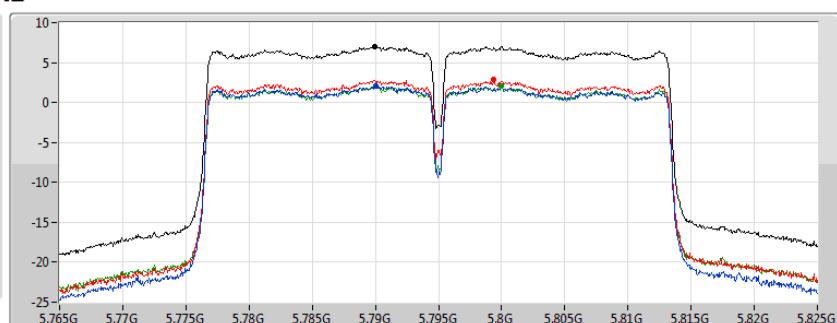
802.11ac VHT40-BF_Nss1,(MCS0)_3TX

PSD

5795MHz

29/11/2018

CF
5.795GHz
Span
60MHz
RBW
300kHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Sum

Port 1

Port 2

Port 3



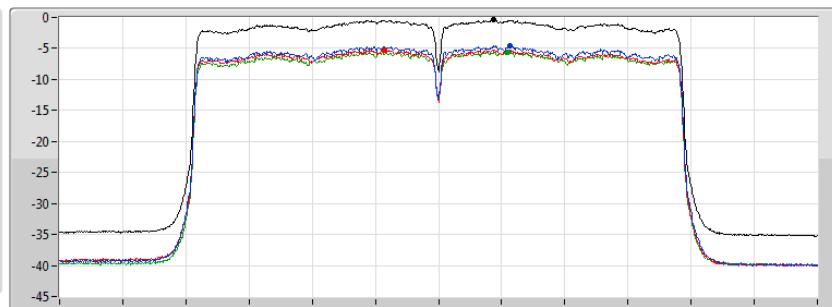
PSD Result

Appendix D

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

5210MHz

CF
5.21GHz
Span
120MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

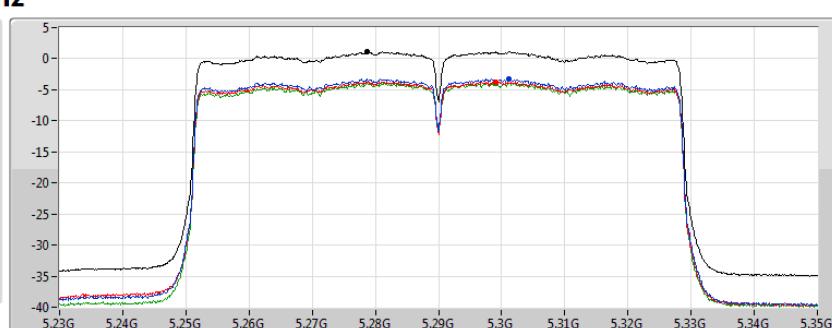
28/11/2018

Sum
Port 1
Port 2
Port 3

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

5290MHz

CF
5.29GHz
Span
120MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

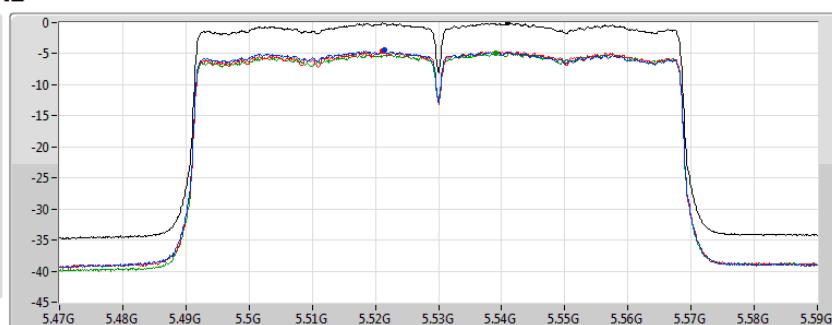
28/11/2018

Sum
Port 1
Port 2
Port 3

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

5530MHz

CF
5.53GHz
Span
120MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

28/11/2018

Sum
Port 1
Port 2
Port 3



PSD Result

Appendix D

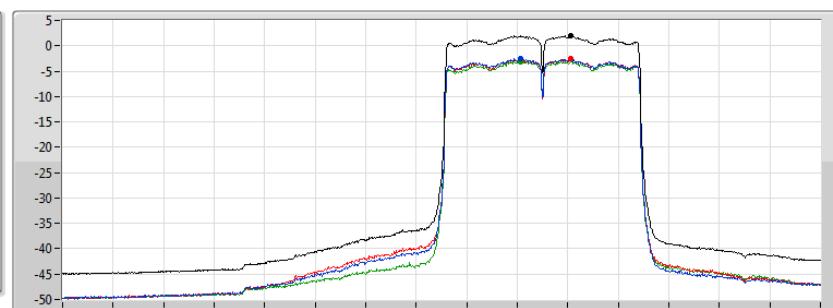
802.11ac VHT80-BF_Nss1,(MCS0)_3TX

PSD

5690MHz Straddle 5.47-5.725GHz

29/11/2018

CF
5.65GHz
Span
300MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Sum /
Port 1 /
Port 2 /
Port 3 /

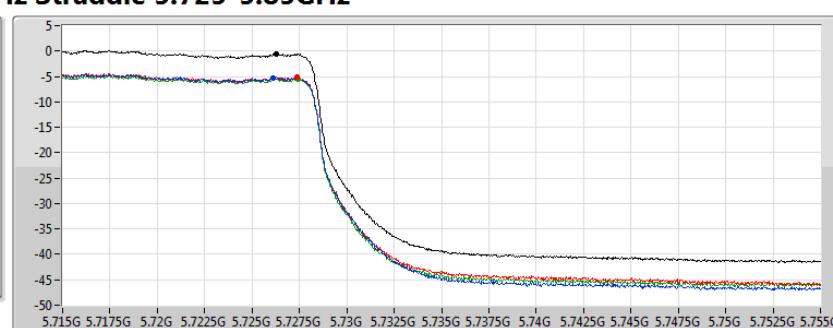
802.11ac VHT80-BF_Nss1,(MCS0)_3TX

PSD

5690MHz Straddle 5.725-5.85GHz

29/11/2018

CF
5.735GHz
Span
40MHz
RBW
500kHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Sum /
Port 1 /
Port 2 /
Port 3 /

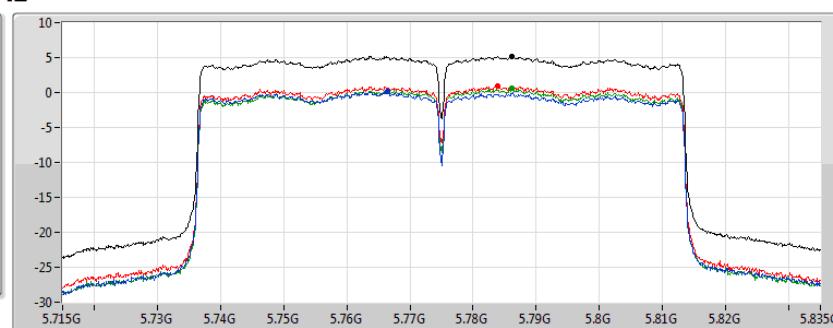
802.11ac VHT80-BF_Nss1,(MCS0)_3TX

PSD

5775MHz

28/11/2018

CF
5.775GHz
Span
120MHz
RBW
500kHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS

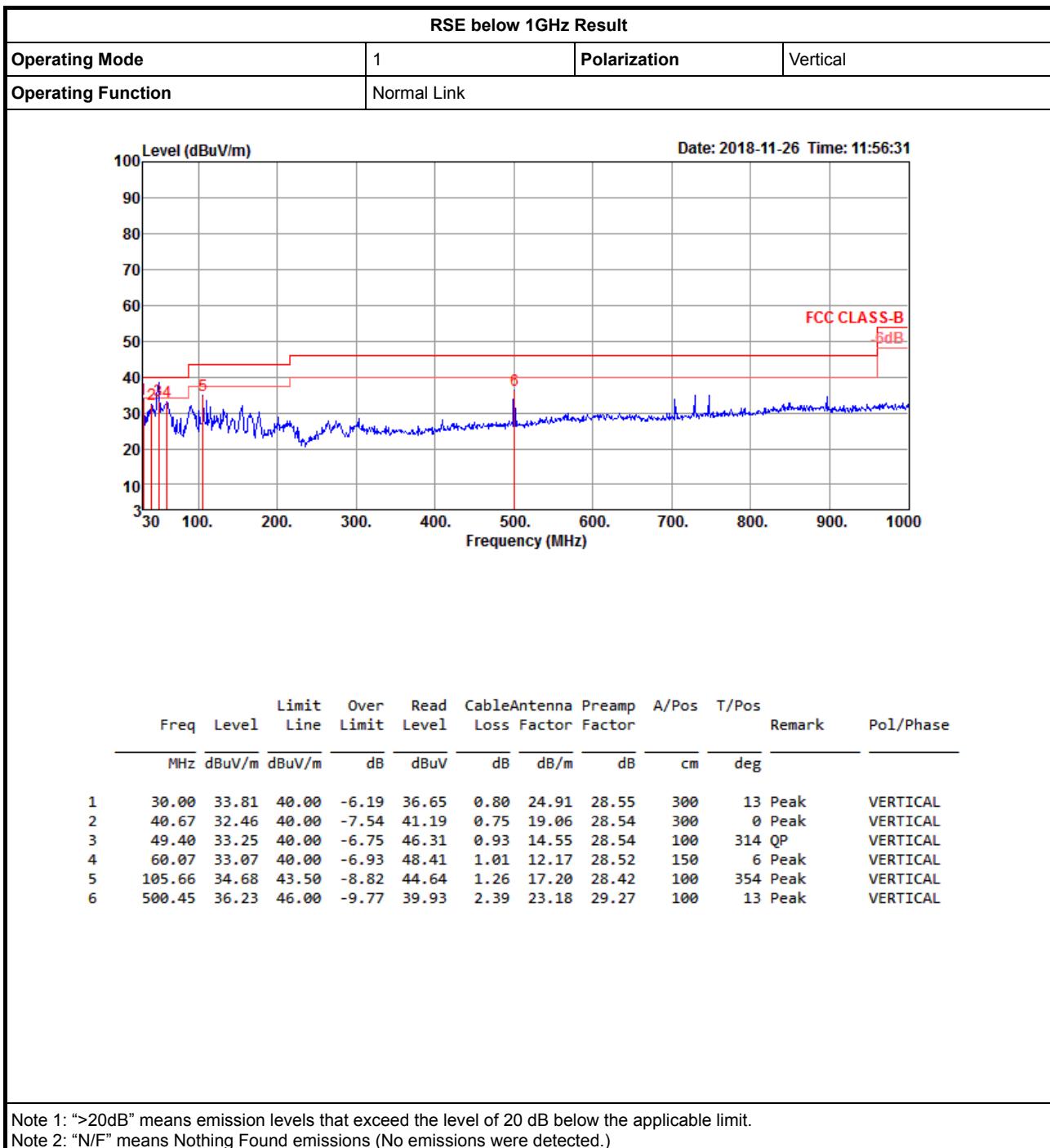


Sum /
Port 1 /
Port 2 /
Port 3 /



RSE below 1GHz Result

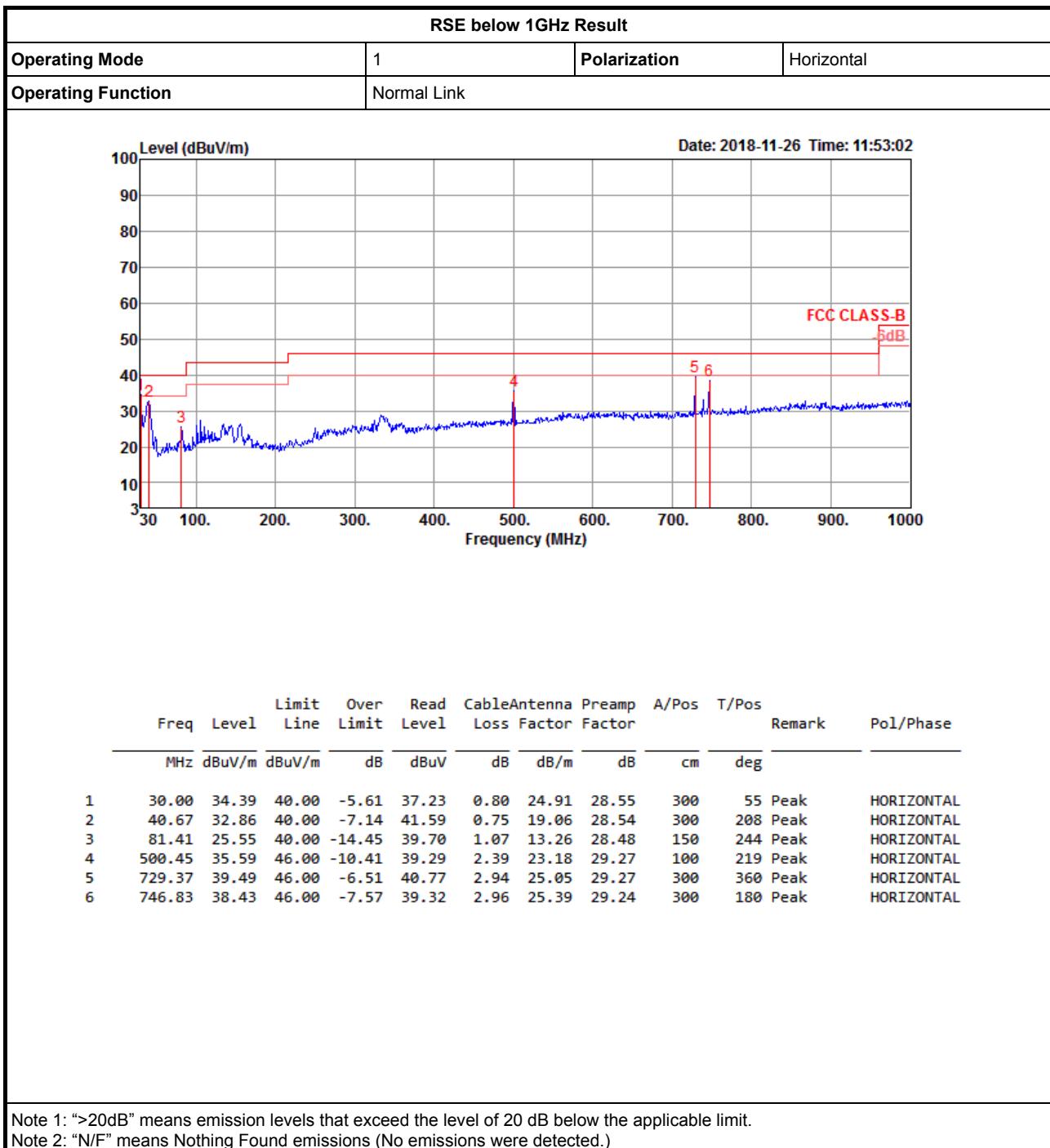
Appendix E.1





RSE below 1GHz Result

Appendix E.1





RSE TX above 1GHz Result

Appendix E.2

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.47-5.725GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	Pass	AV	5.457G	53.99	54.00	-0.01	6.63	3	Horizontal	332	2.08	-



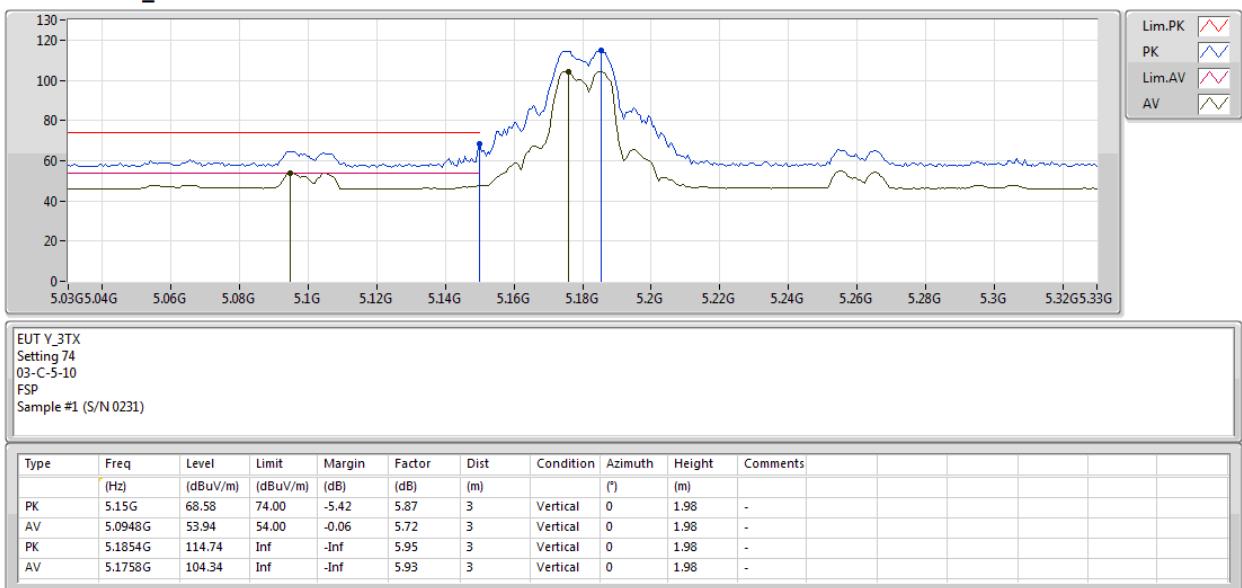
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

22/11/2018

5180MHz_TX





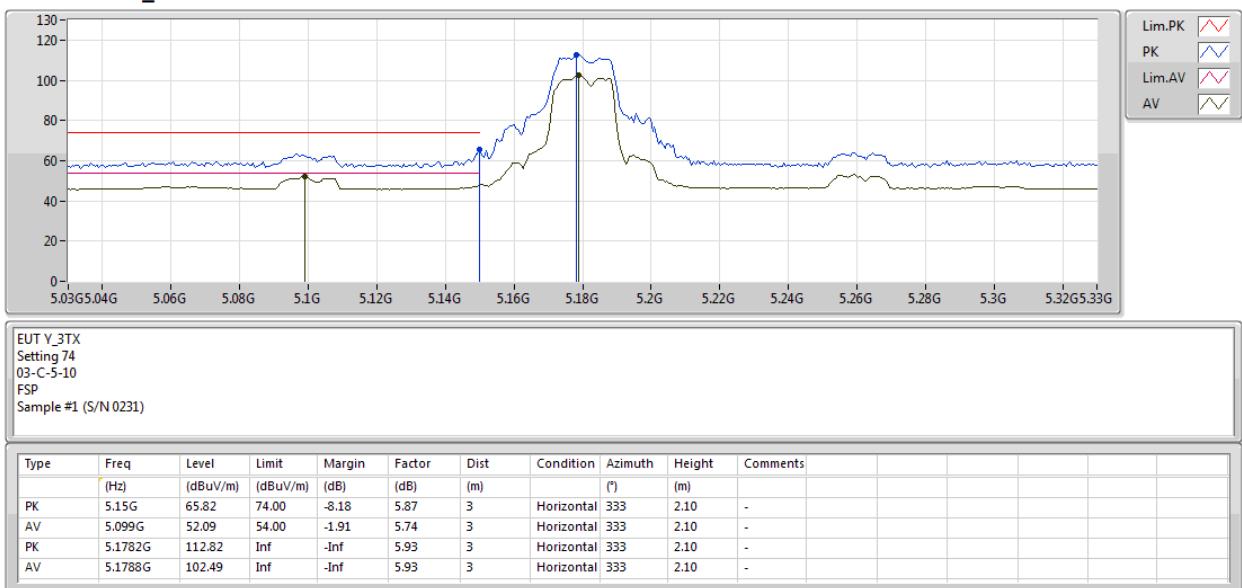
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

22/11/2018

5180MHz_TX





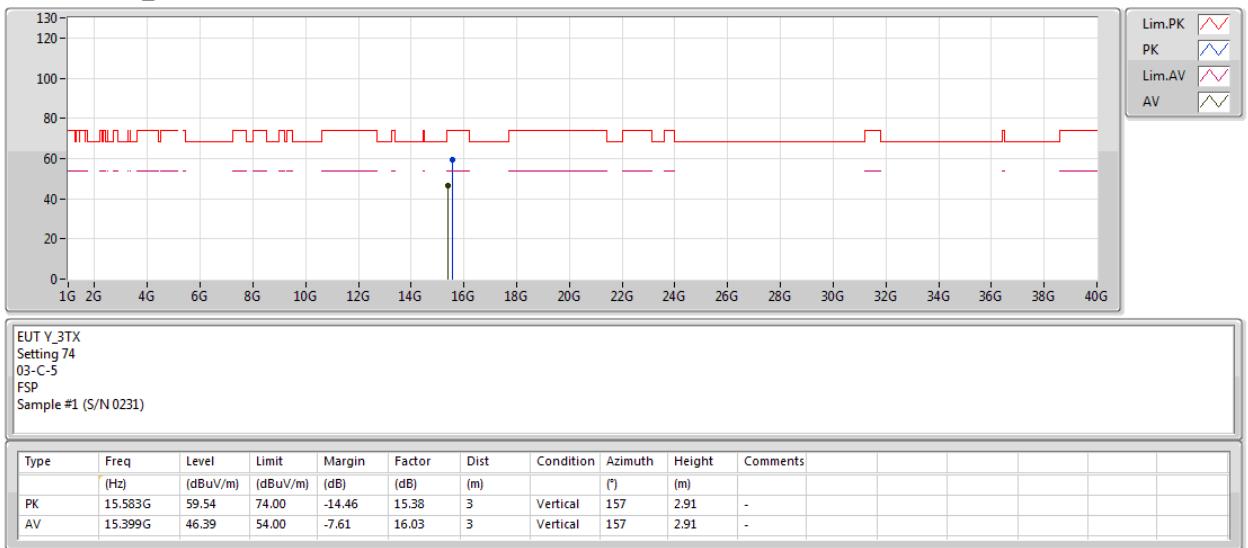
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

22/11/2018

5180MHz_TX





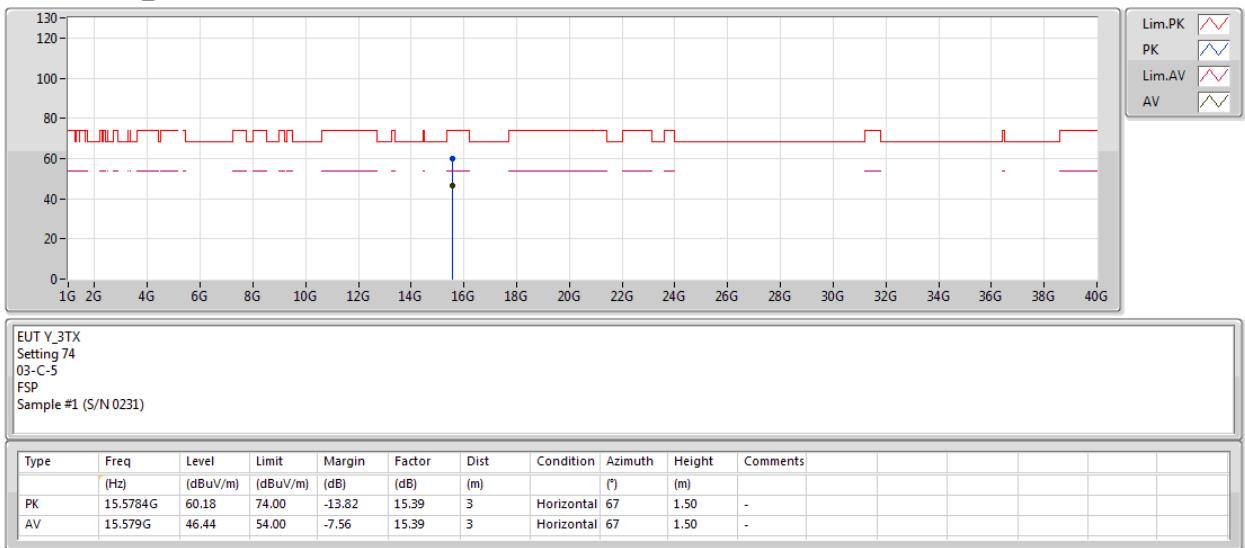
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

22/11/2018

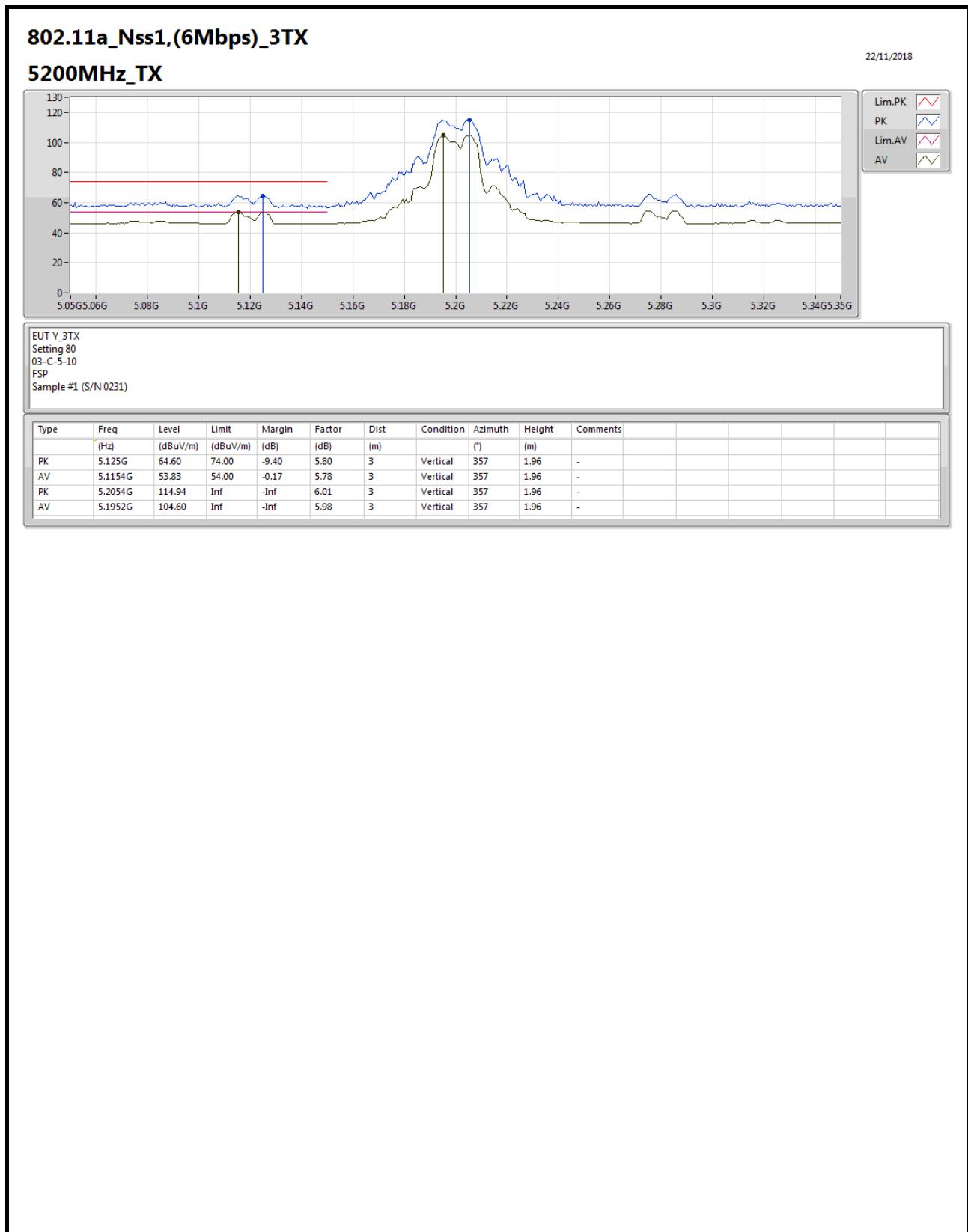
5180MHz_TX





RSE TX above 1GHz Result

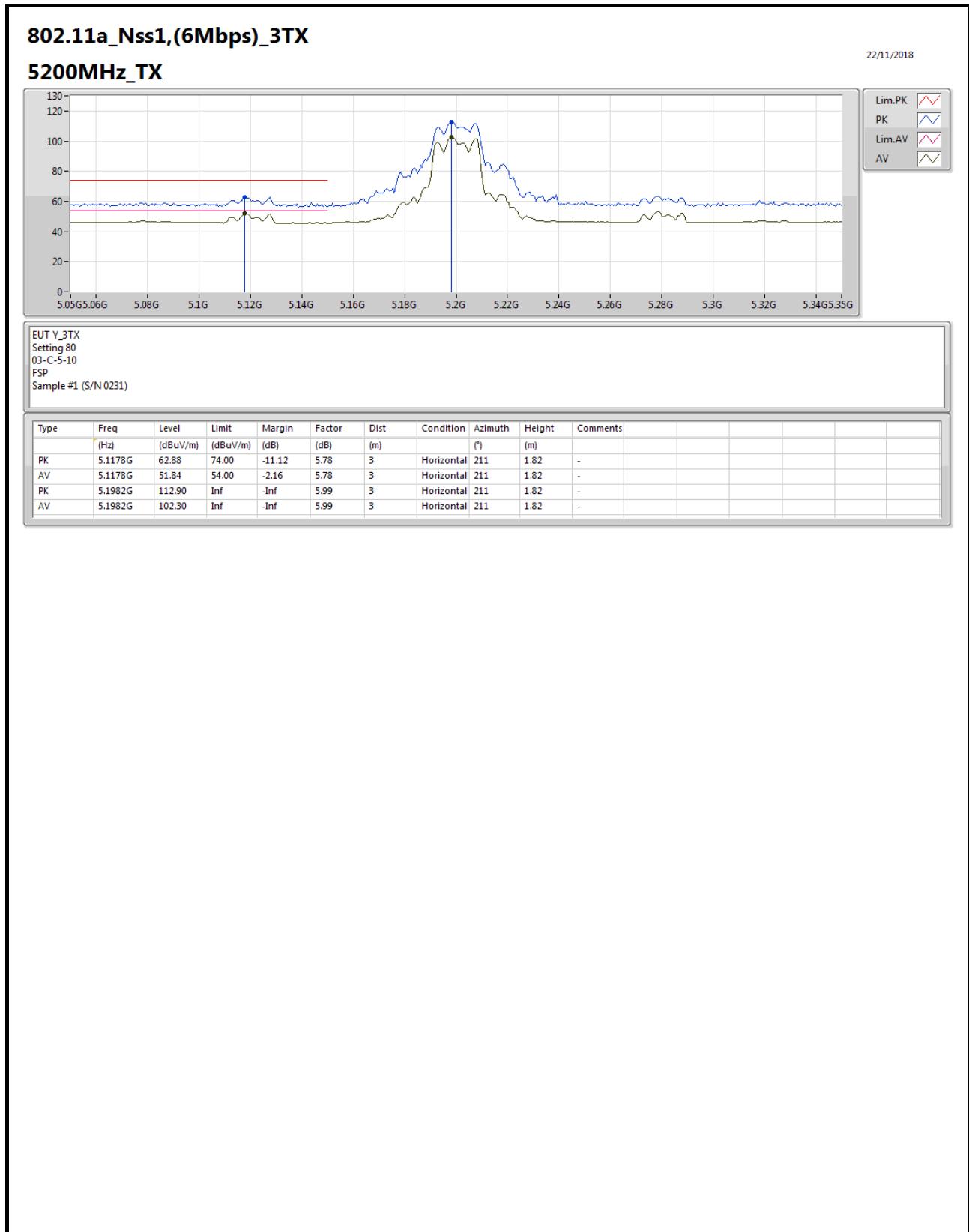
Appendix E.2





RSE TX above 1GHz Result

Appendix E.2





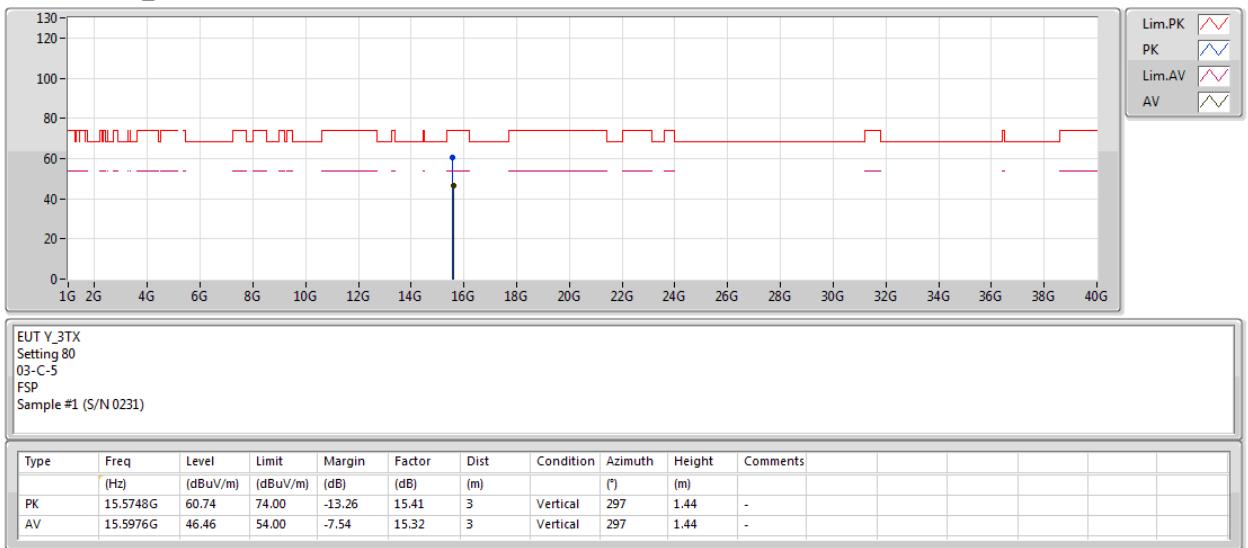
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

22/11/2018

5200MHz_TX





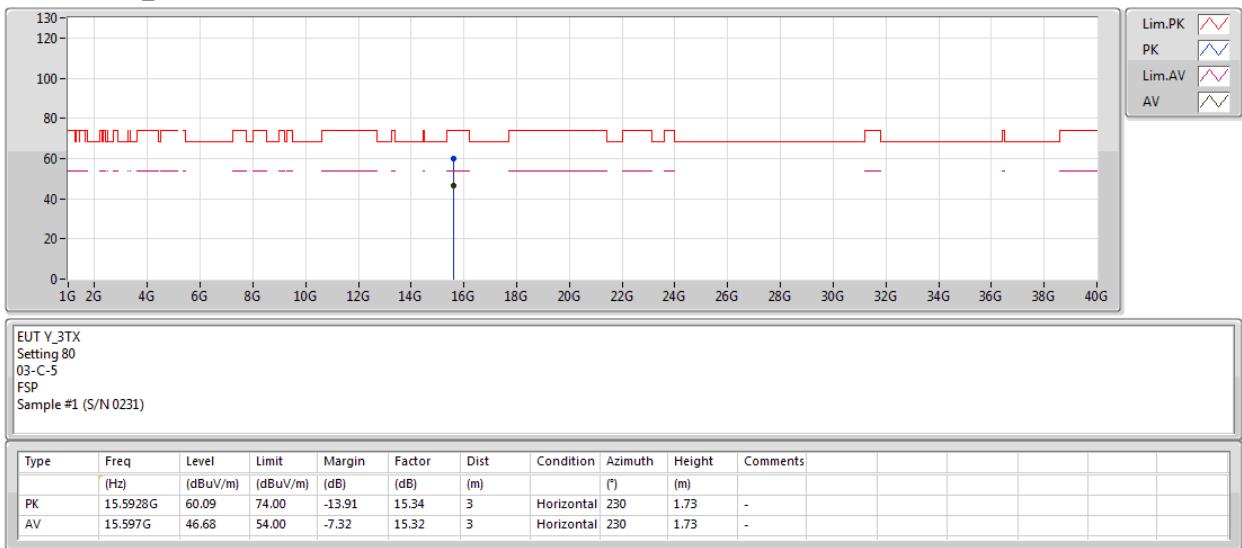
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

22/11/2018

5200MHz_TX





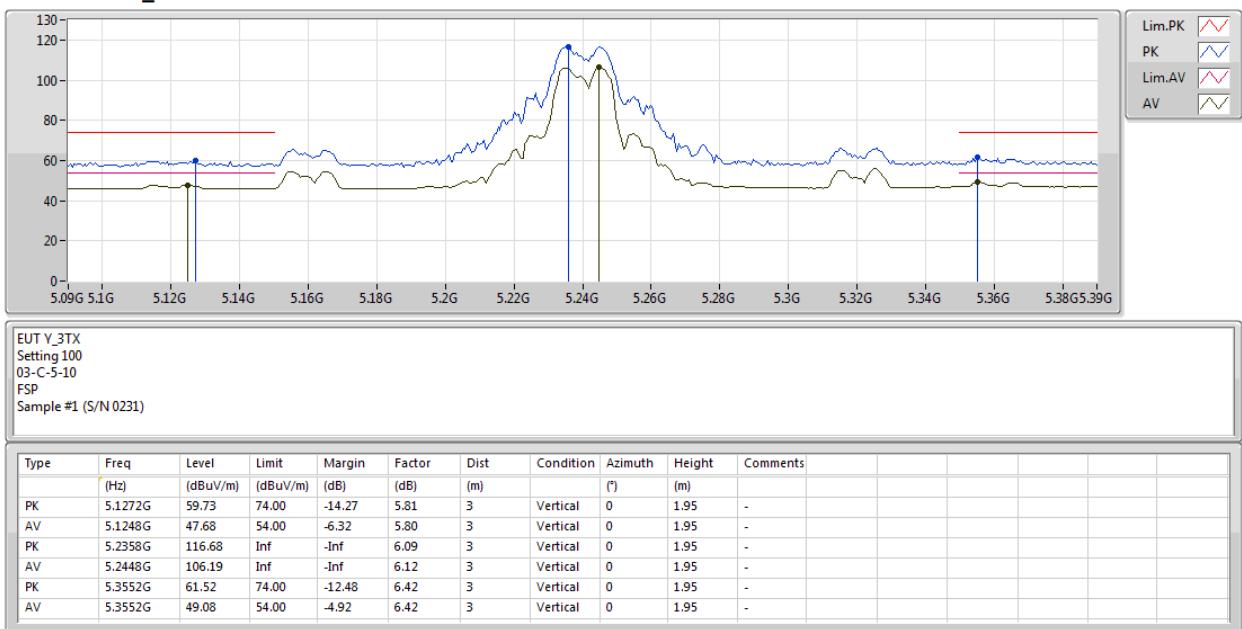
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5240MHz_TX





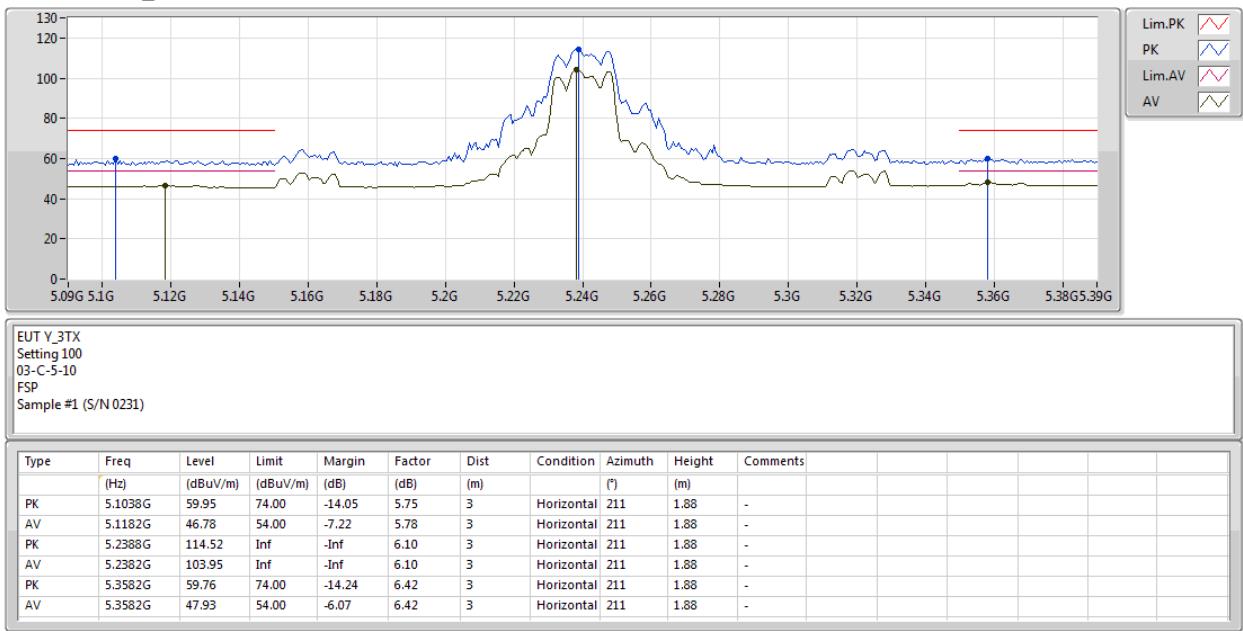
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5240MHz_TX





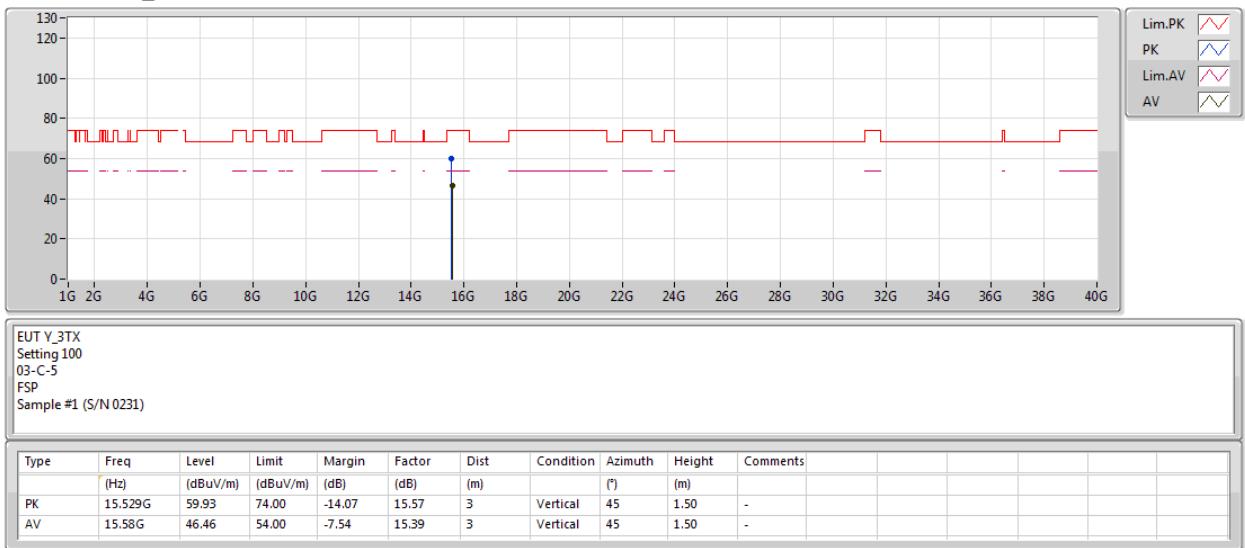
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5240MHz_TX





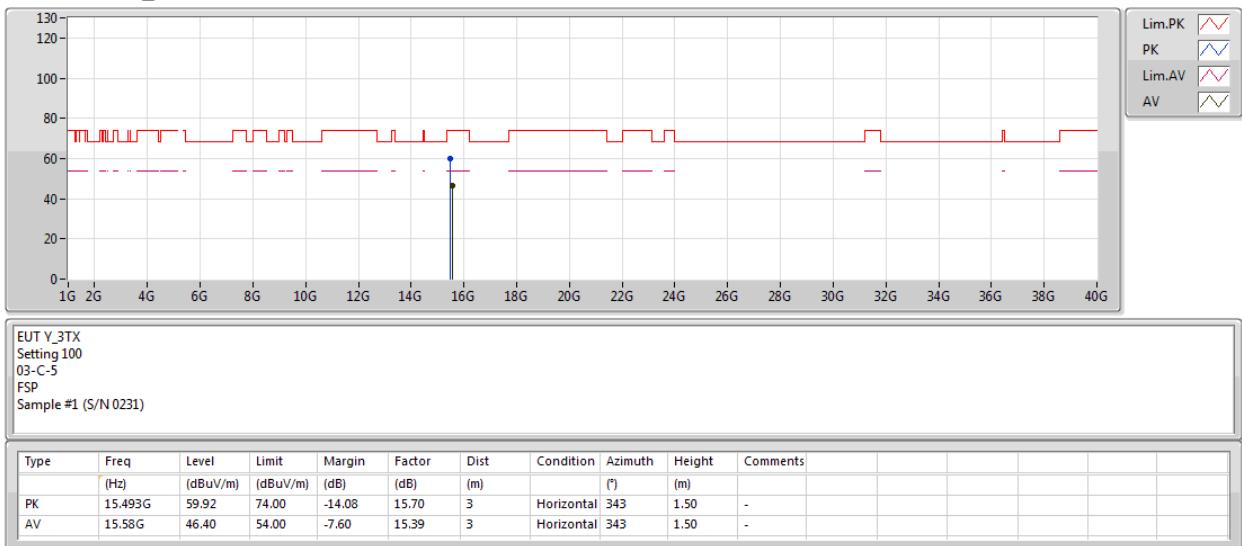
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5240MHz_TX





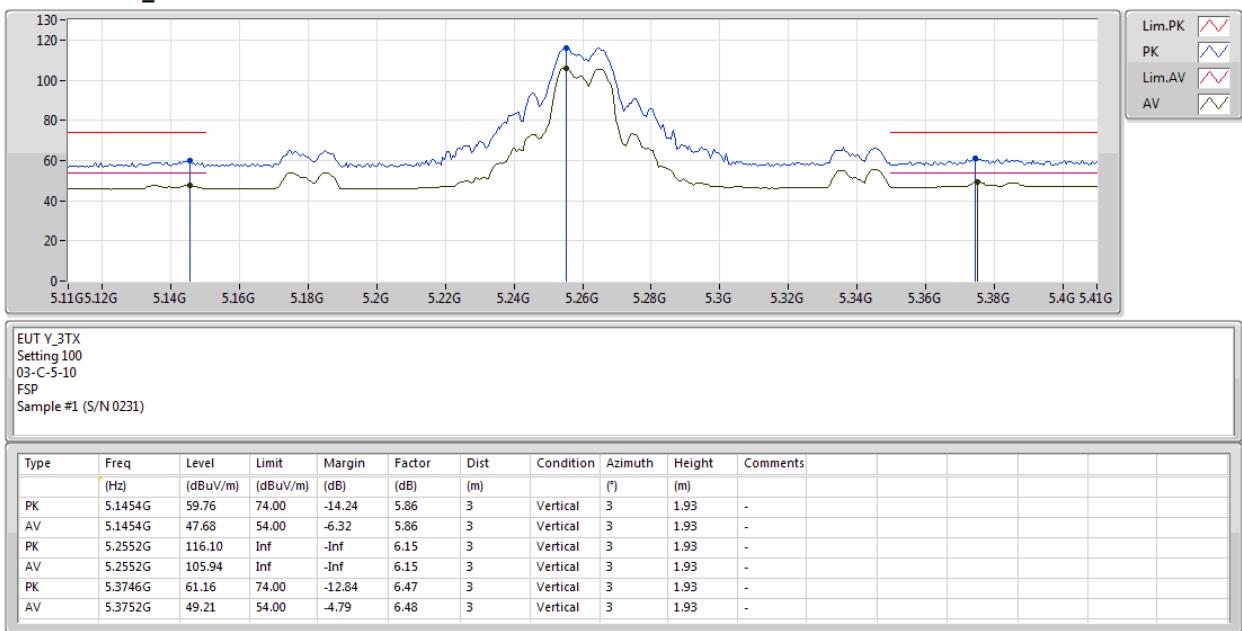
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5260MHz_TX





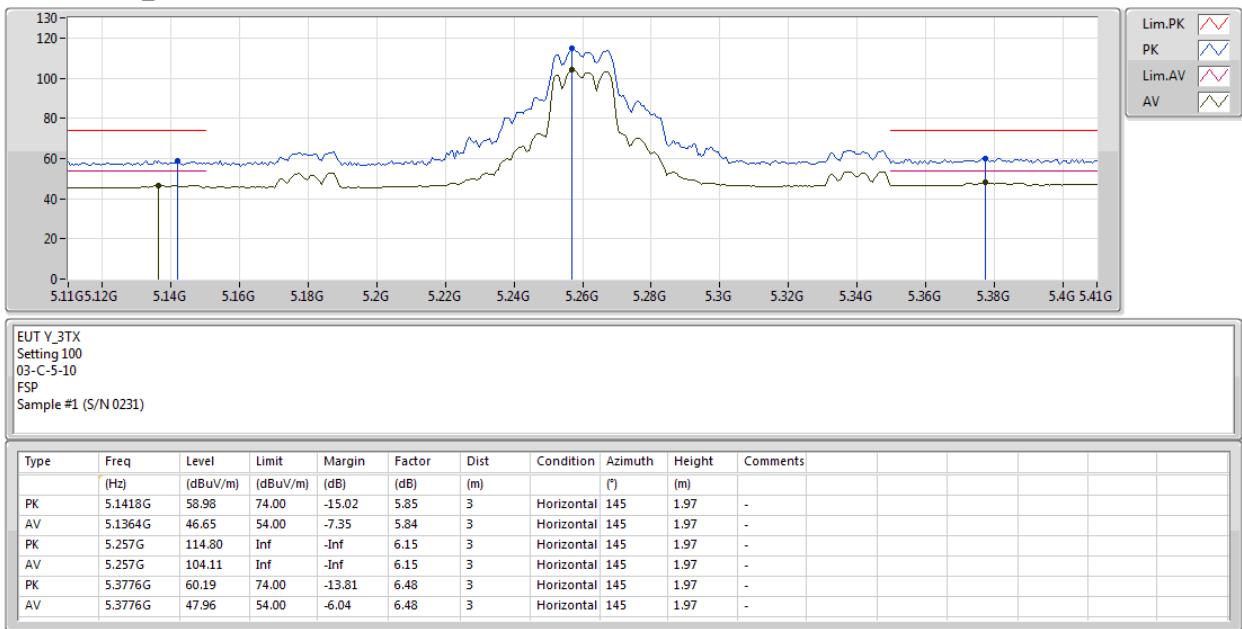
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5260MHz_TX





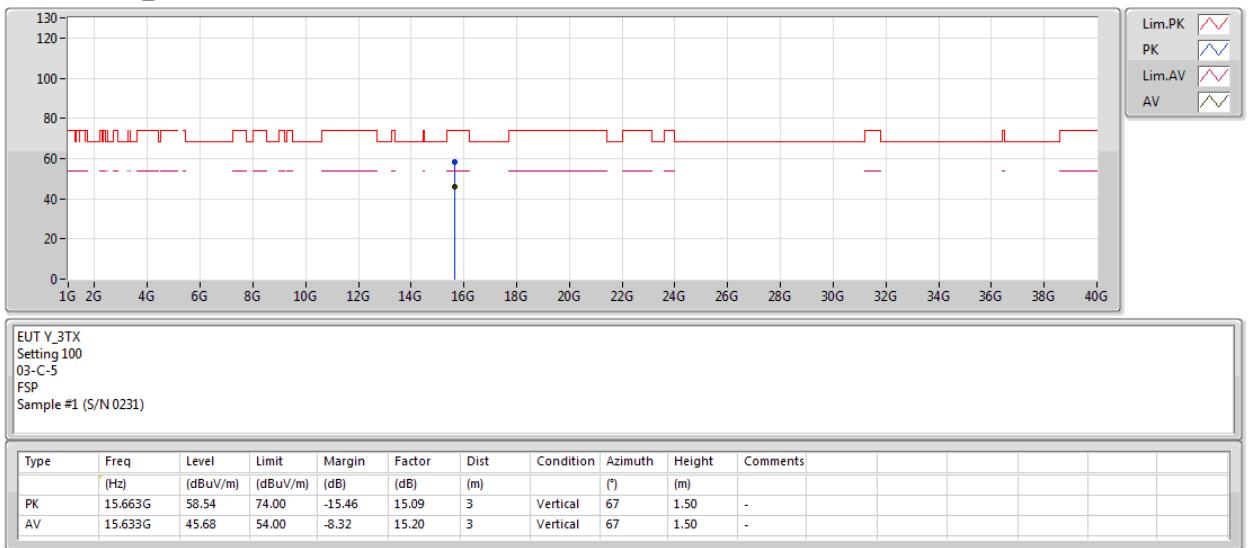
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5260MHz_TX





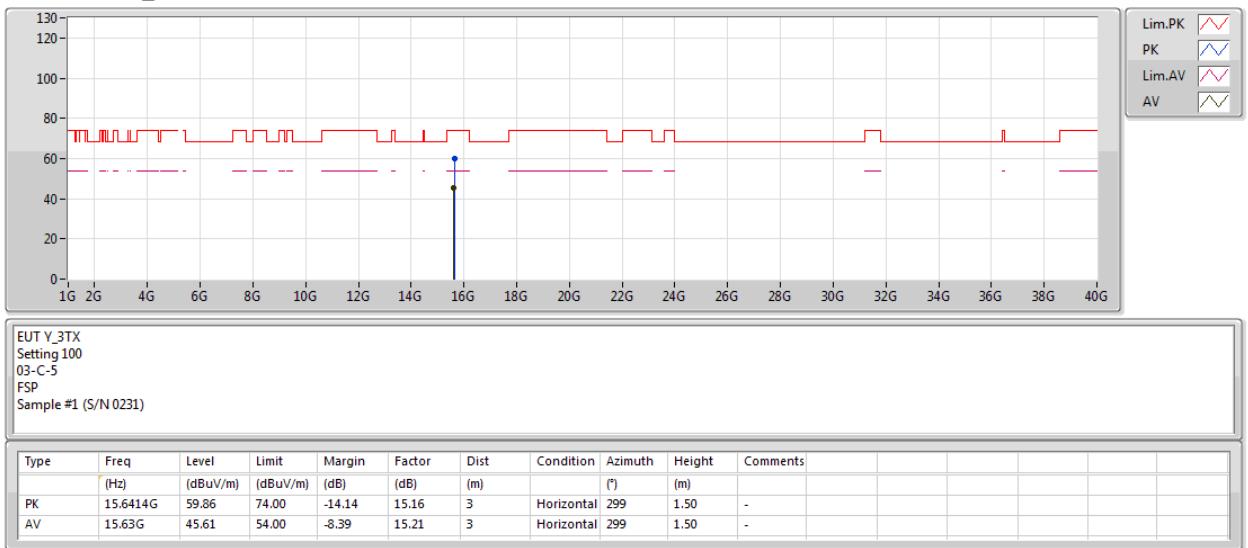
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5260MHz_TX





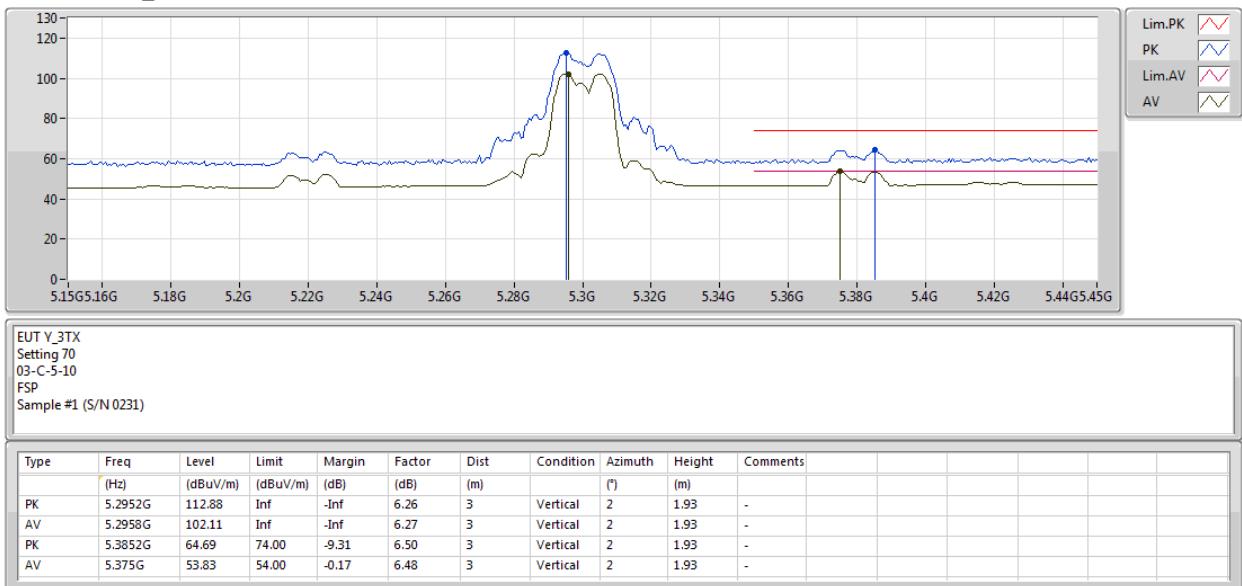
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

22/11/2018

5300MHz_TX





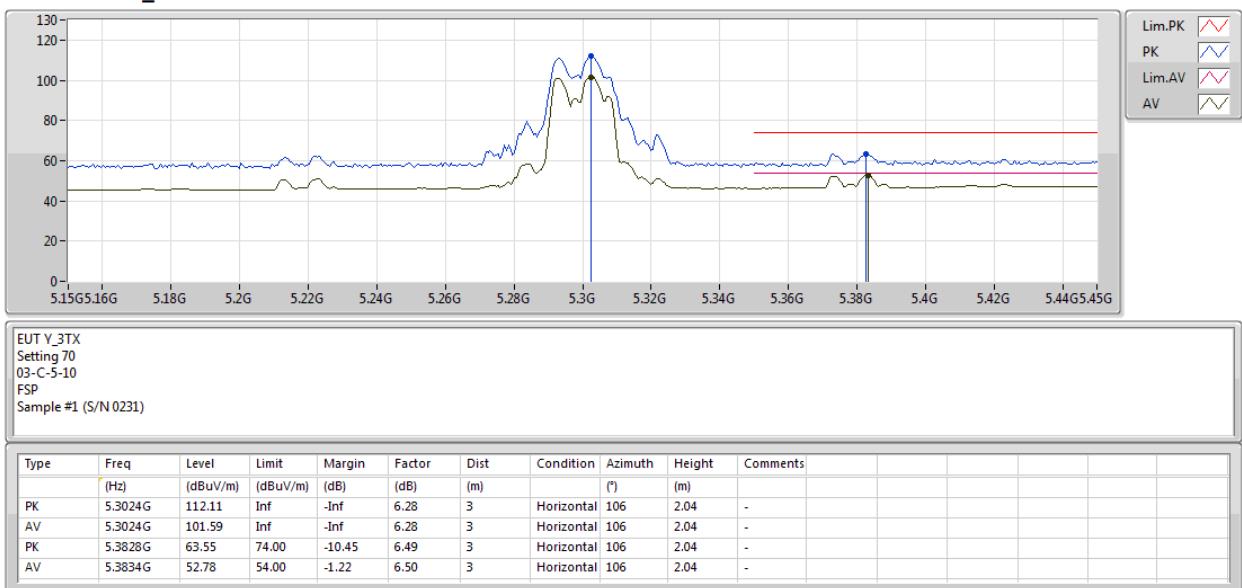
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

22/11/2018

5300MHz_TX





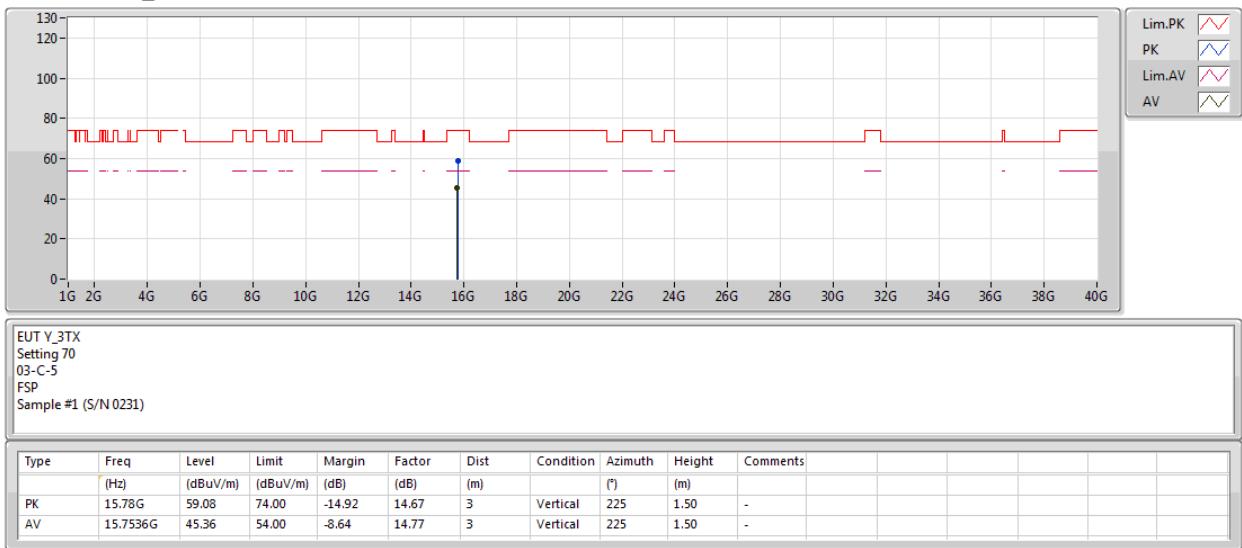
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

22/11/2018

5300MHz_TX





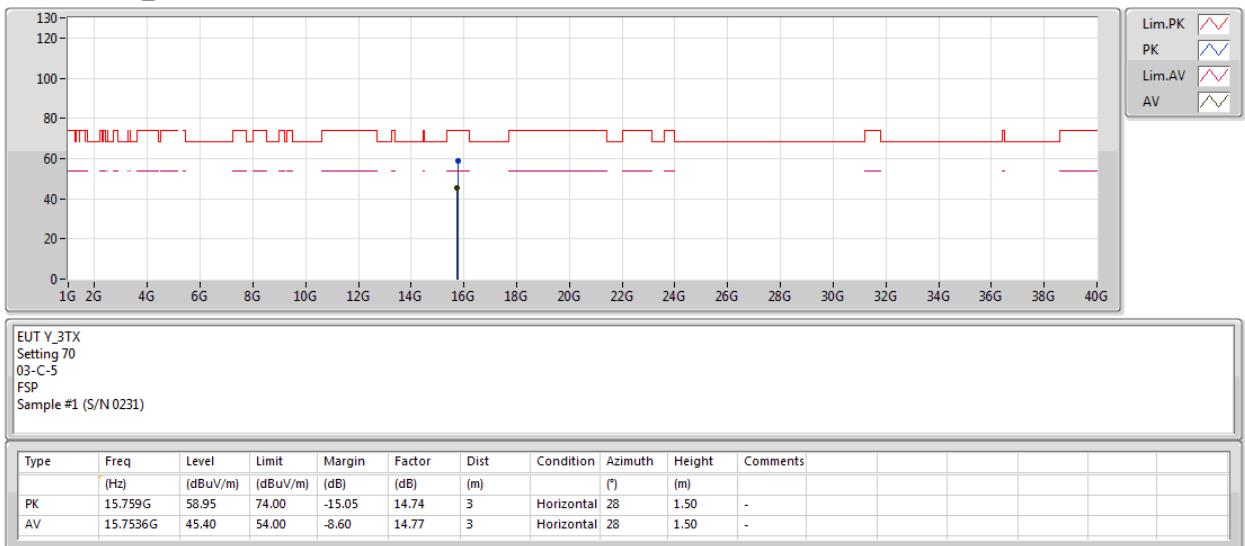
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

22/11/2018

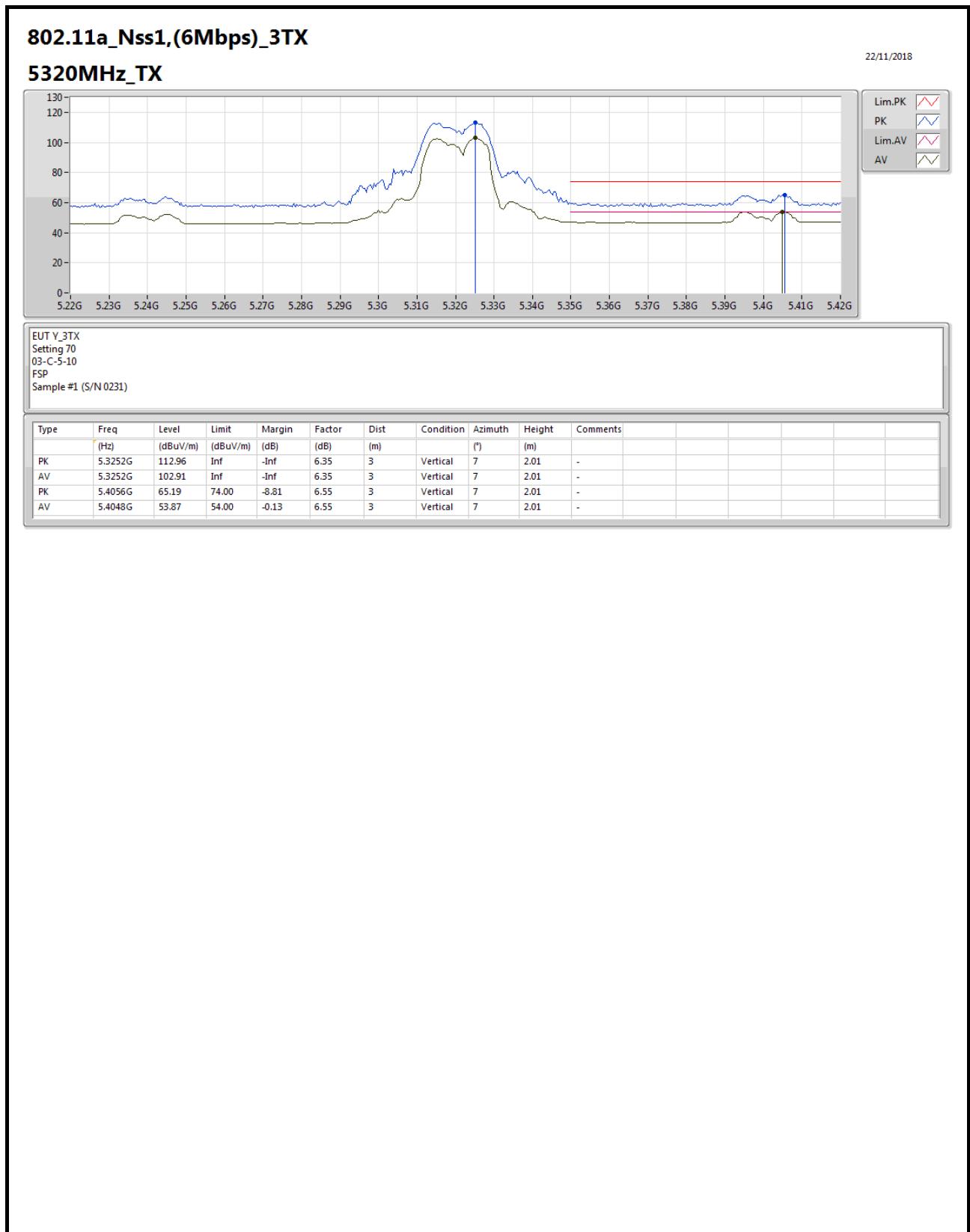
5300MHz_TX





RSE TX above 1GHz Result

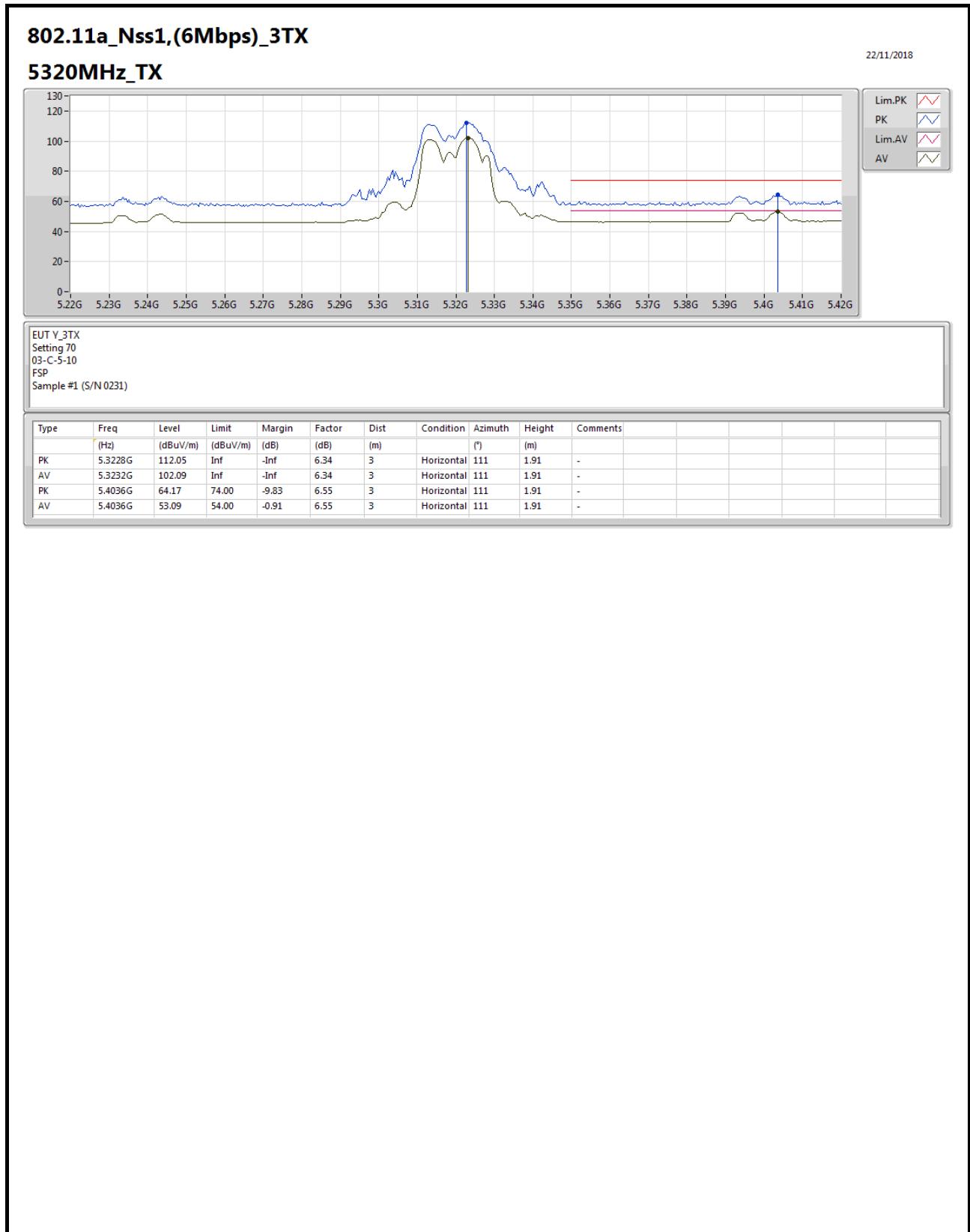
Appendix E.2





RSE TX above 1GHz Result

Appendix E.2





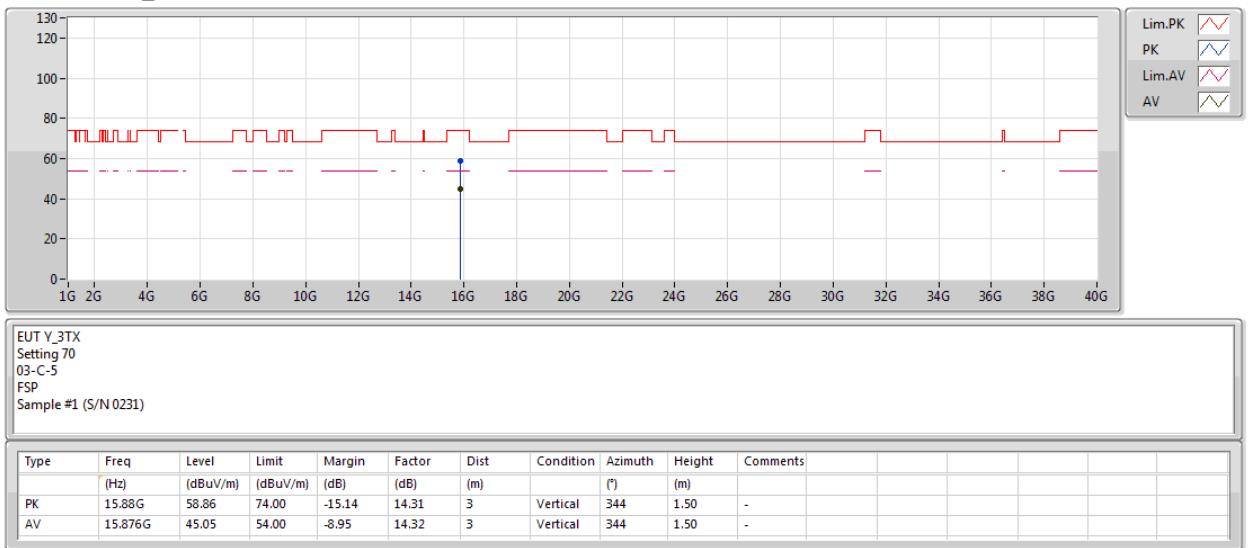
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

22/11/2018

5320MHz_TX





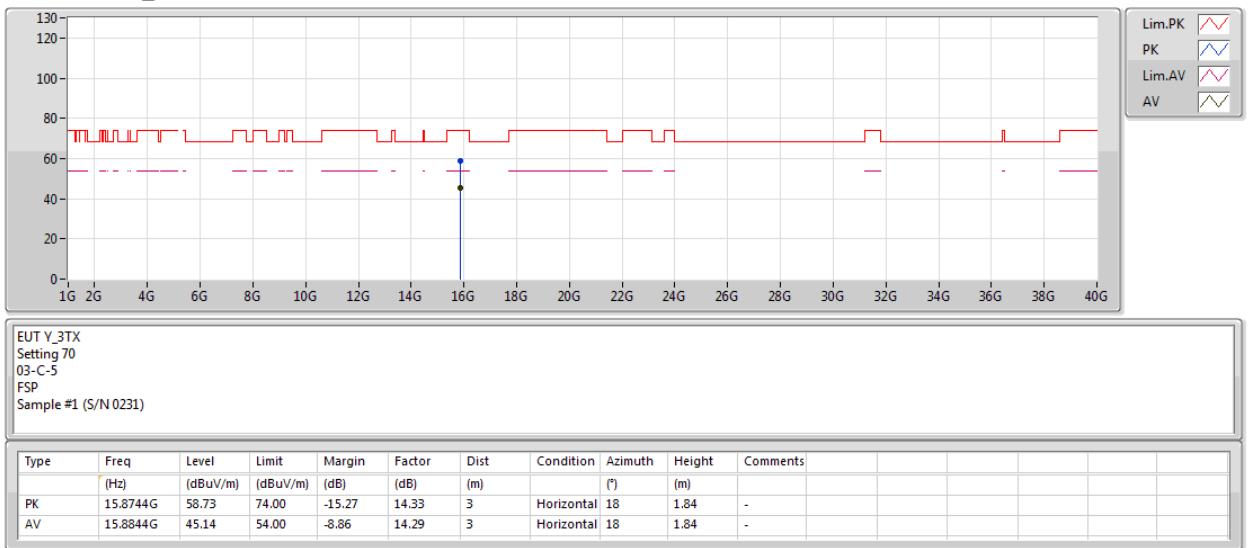
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

22/11/2018

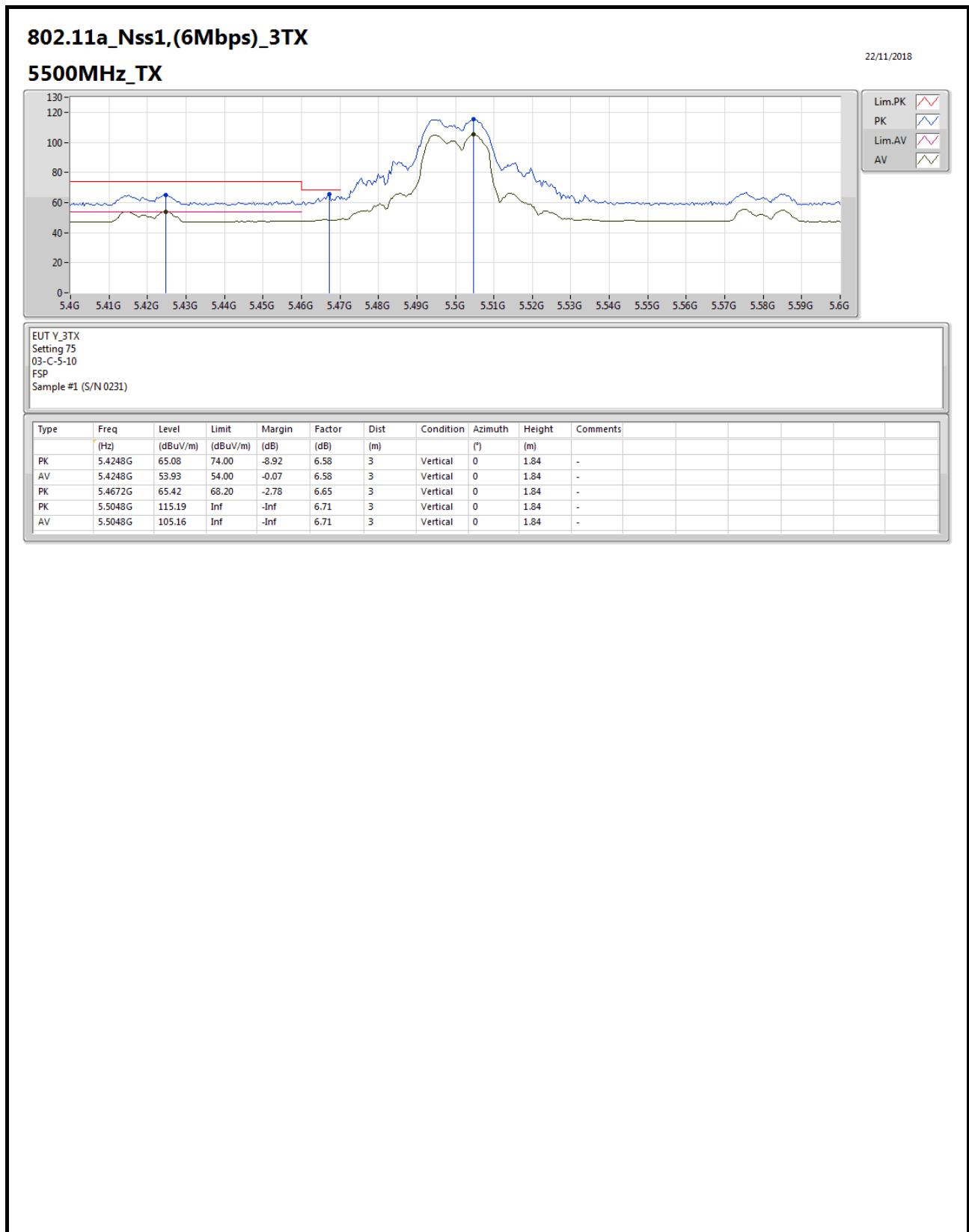
5320MHz_TX





RSE TX above 1GHz Result

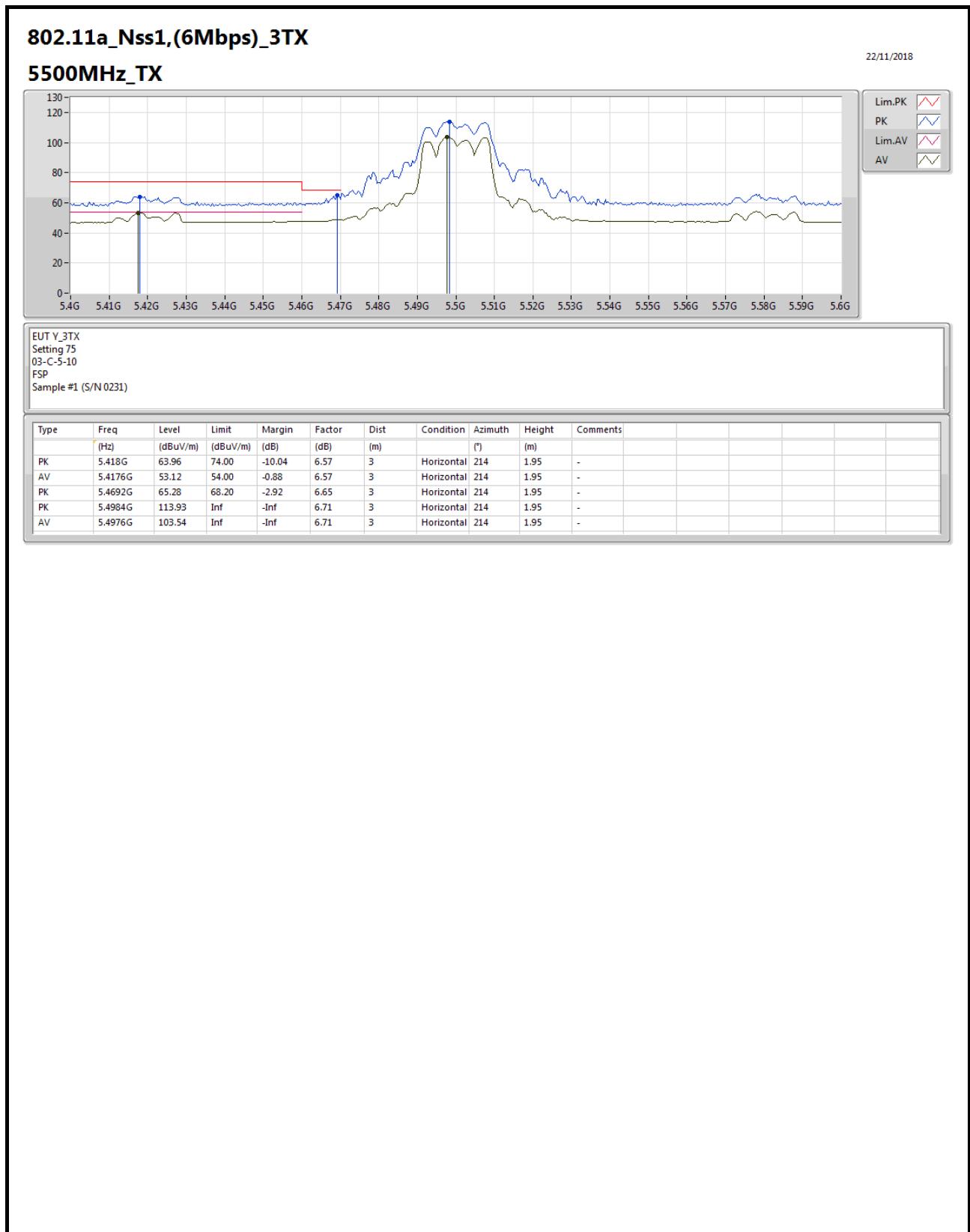
Appendix E.2





RSE TX above 1GHz Result

Appendix E.2





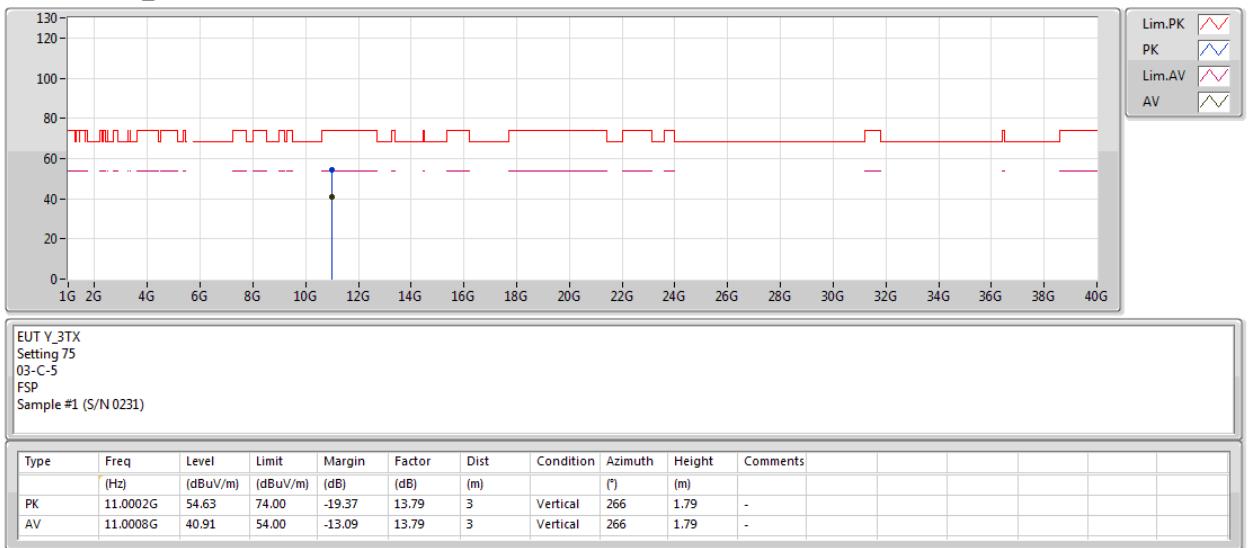
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

22/11/2018

5500MHz_TX





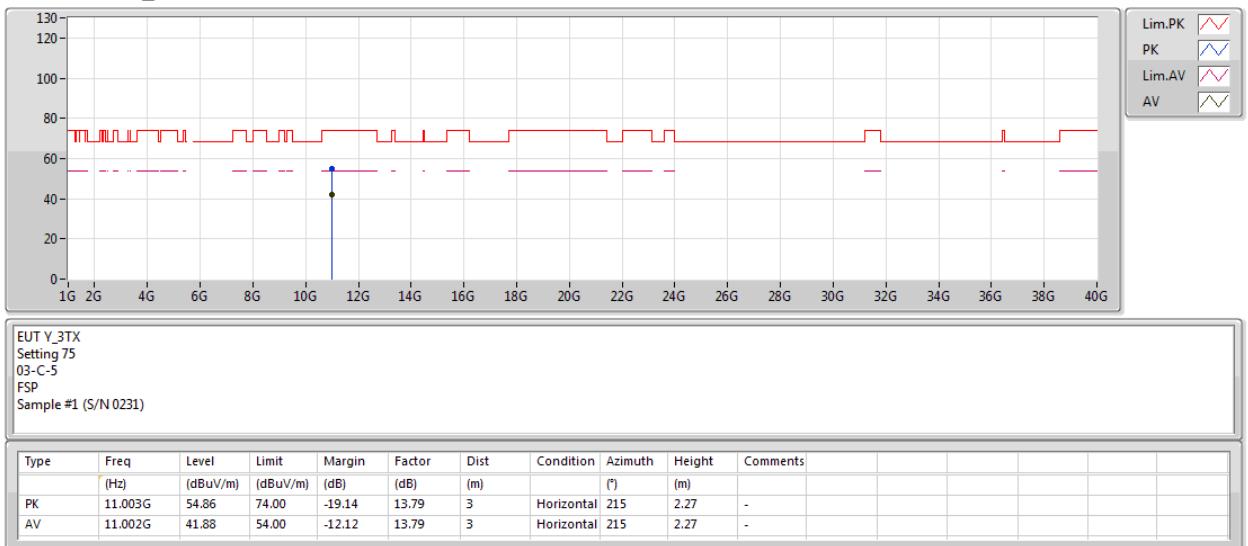
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

22/11/2018

5500MHz_TX





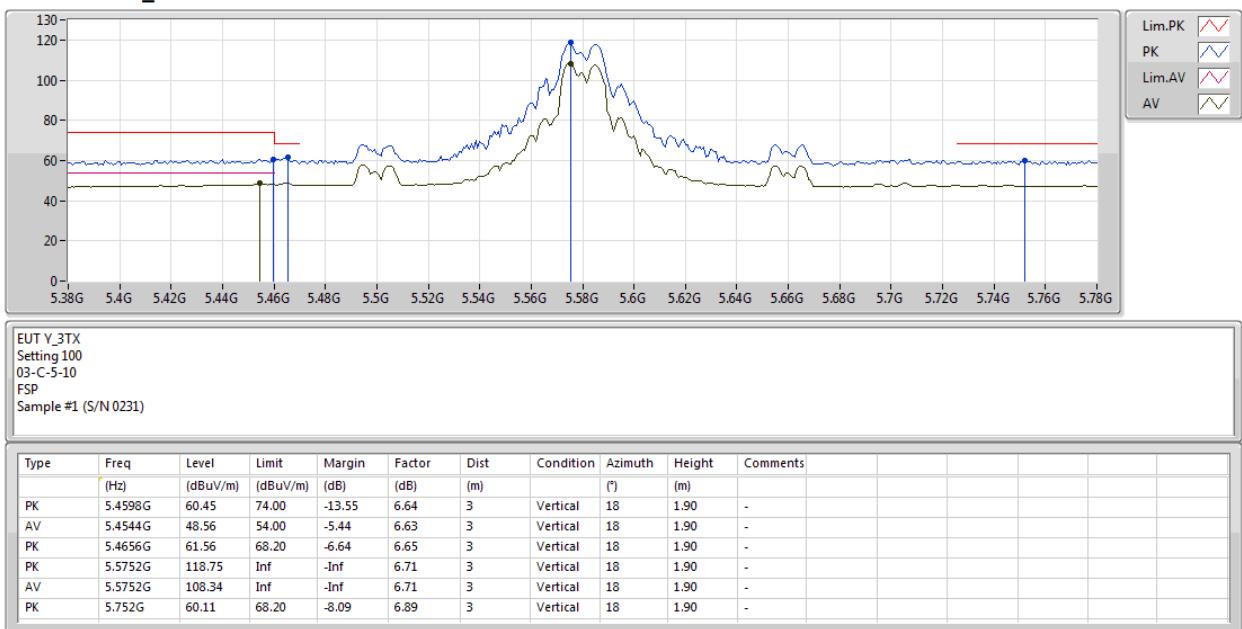
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5580MHz_TX





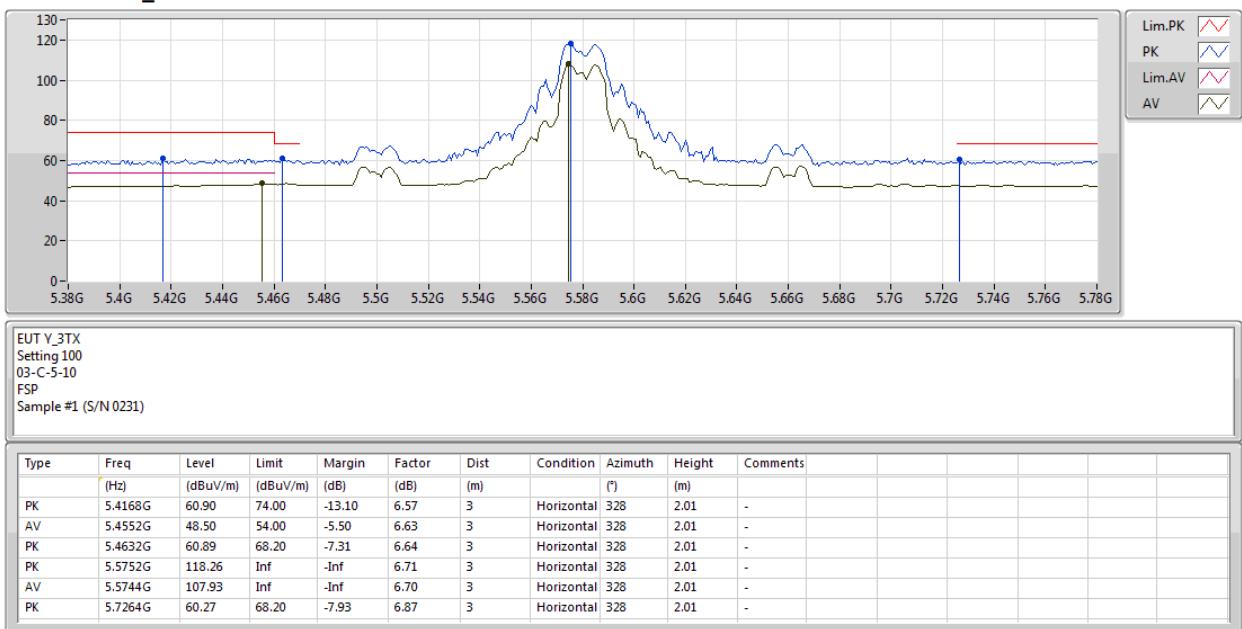
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5580MHz_TX





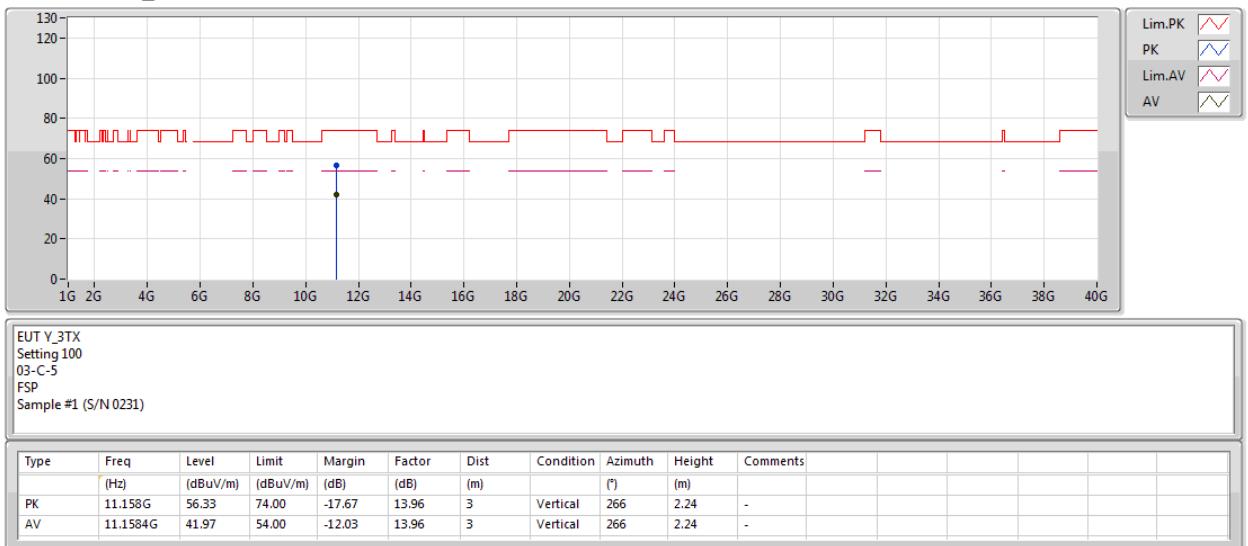
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5580MHz_TX





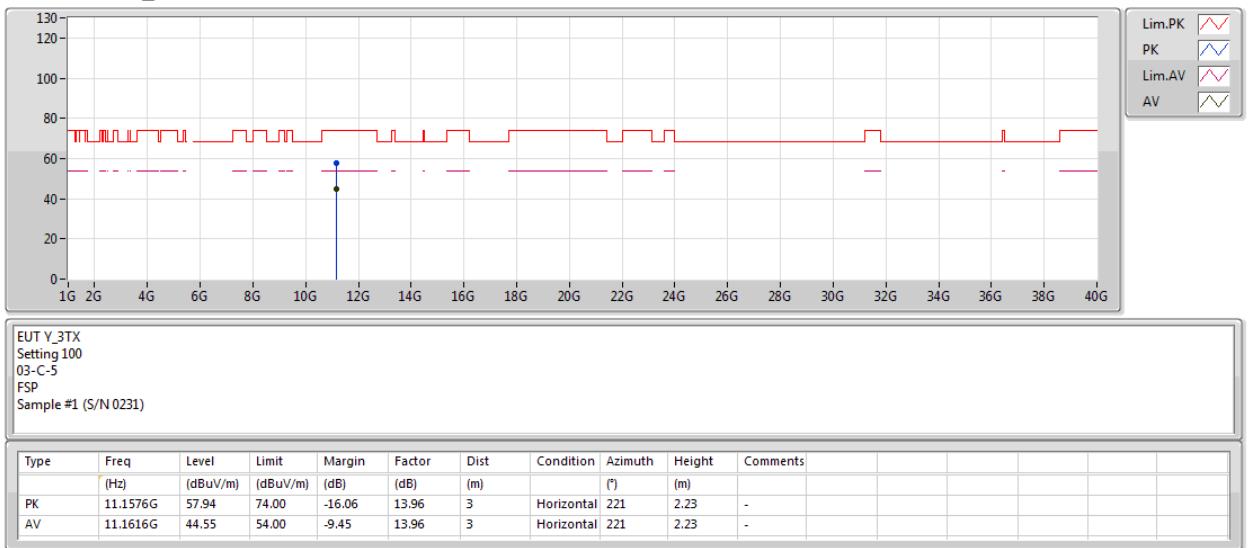
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

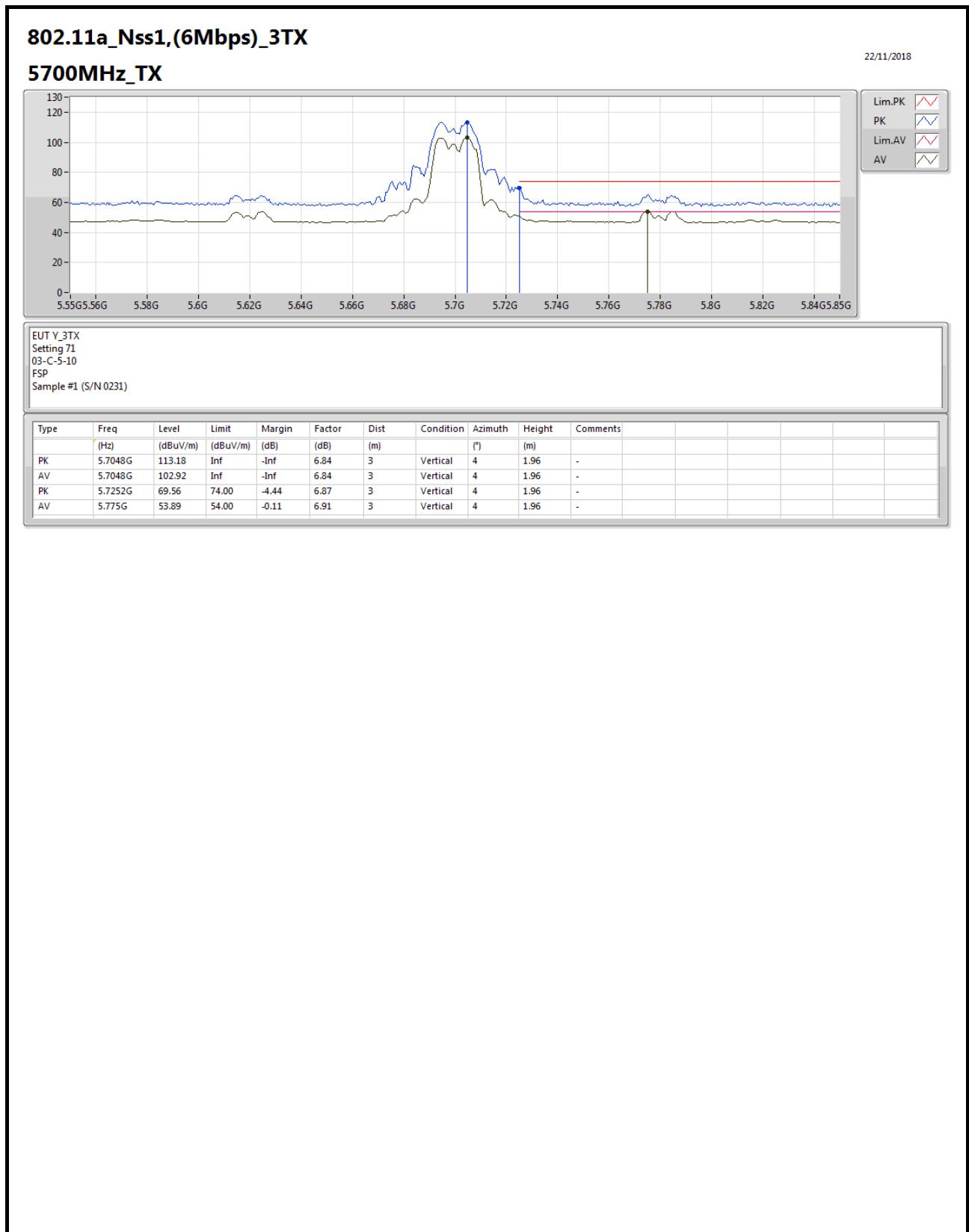
5580MHz_TX





RSE TX above 1GHz Result

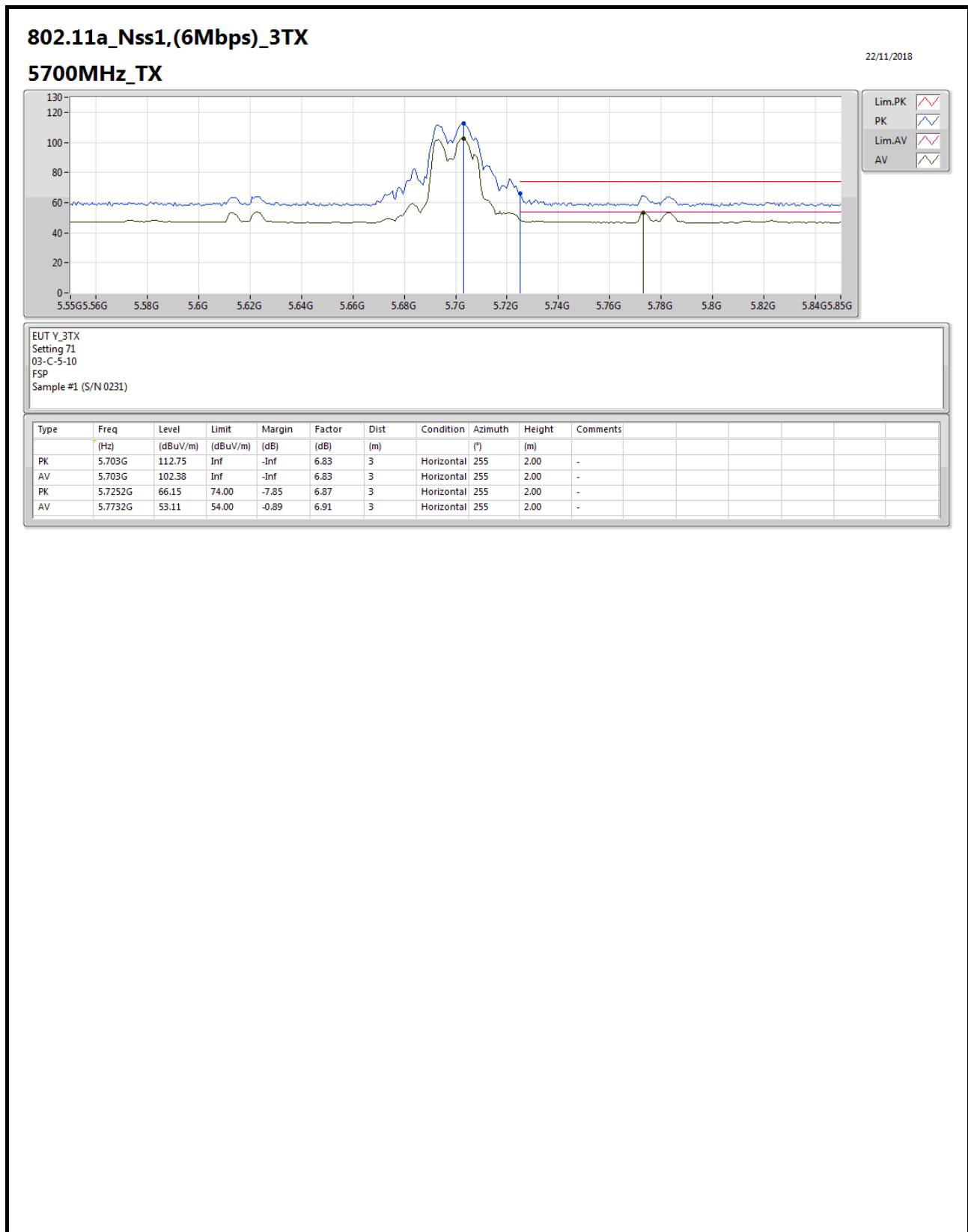
Appendix E.2





RSE TX above 1GHz Result

Appendix E.2





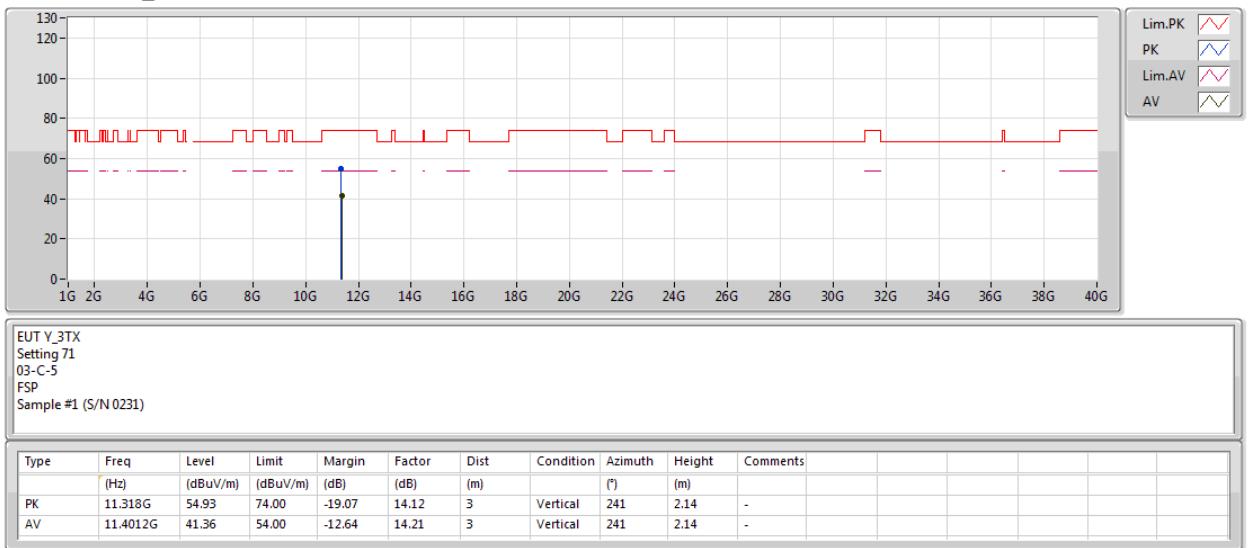
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

22/11/2018

5700MHz_TX





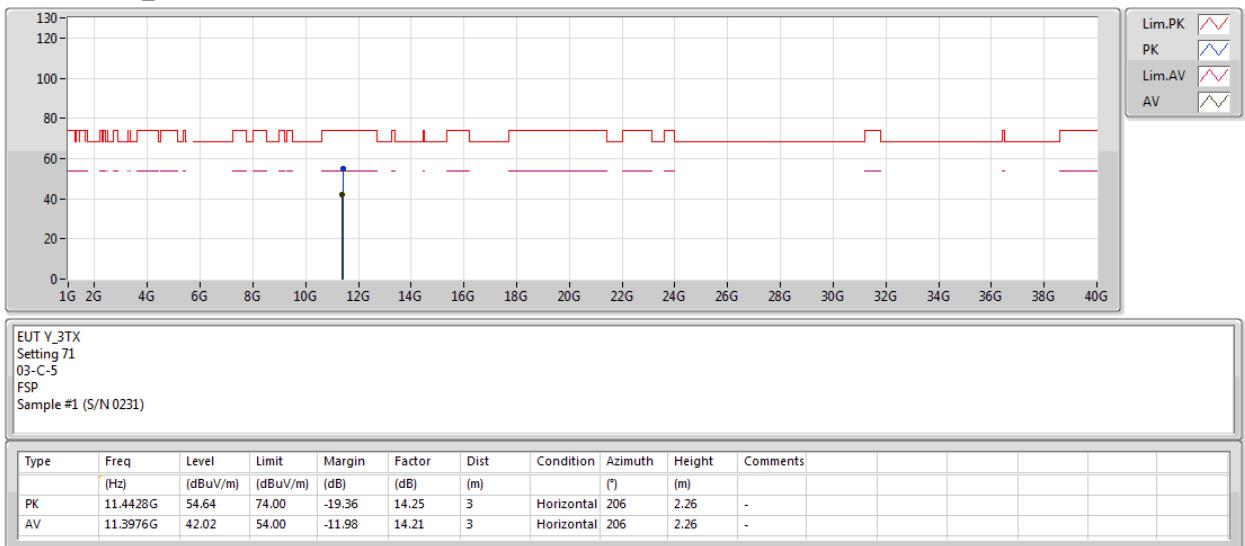
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

22/11/2018

5700MHz_TX





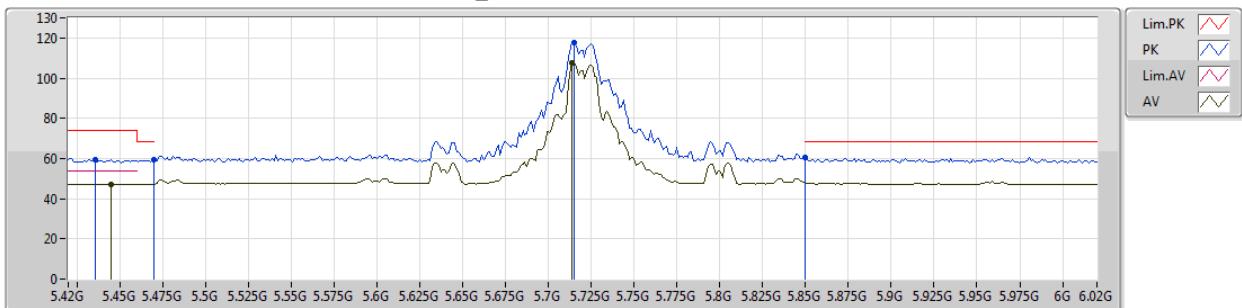
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5720MHz Straddle 5.47-5.725GHz_TX



EUT Y_3TX
Setting 100
03-C-5-10
FSP
Sample #1 (S/N 0231)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth	Height (m)	Comments									
PK	5.4356G	59.64	74.00	-14.36	6.60	3	Vertical	2	1.83	-									
AV	5.4452G	47.31	54.00	-6.69	6.62	3	Vertical	2	1.83	-									
PK	5.4699G	59.18	68.20	-9.02	6.66	3	Vertical	2	1.83	-									
PK	5.7152G	117.80	Inf	-Inf	6.85	3	Vertical	2	1.83	-									
AV	5.714G	107.67	Inf	-Inf	6.85	3	Vertical	2	1.83	-									
PK	5.8501G	60.39	68.20	-7.81	6.99	3	Vertical	2	1.83	-									



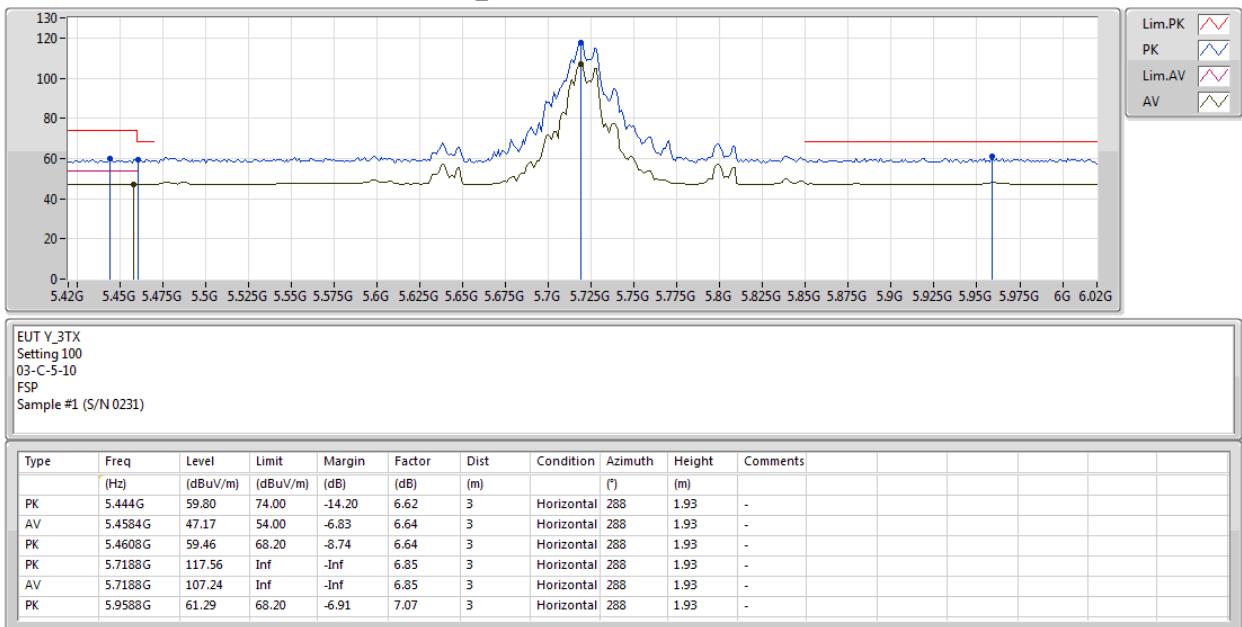
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5720MHz Straddle 5.47-5.725GHz_TX





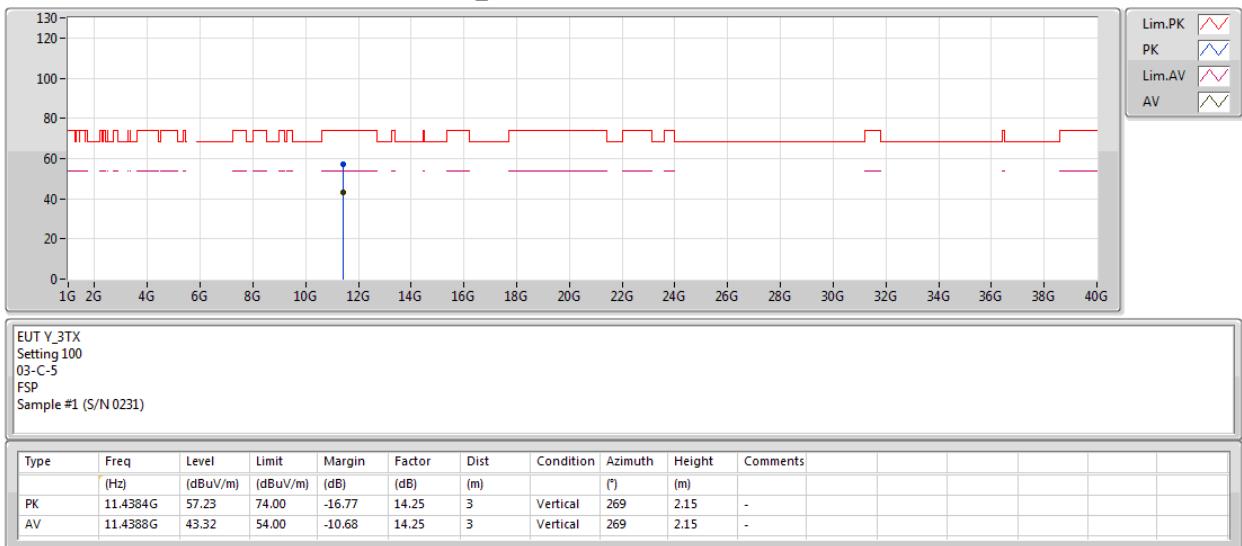
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5720MHz Straddle 5.47-5.725GHz_TX





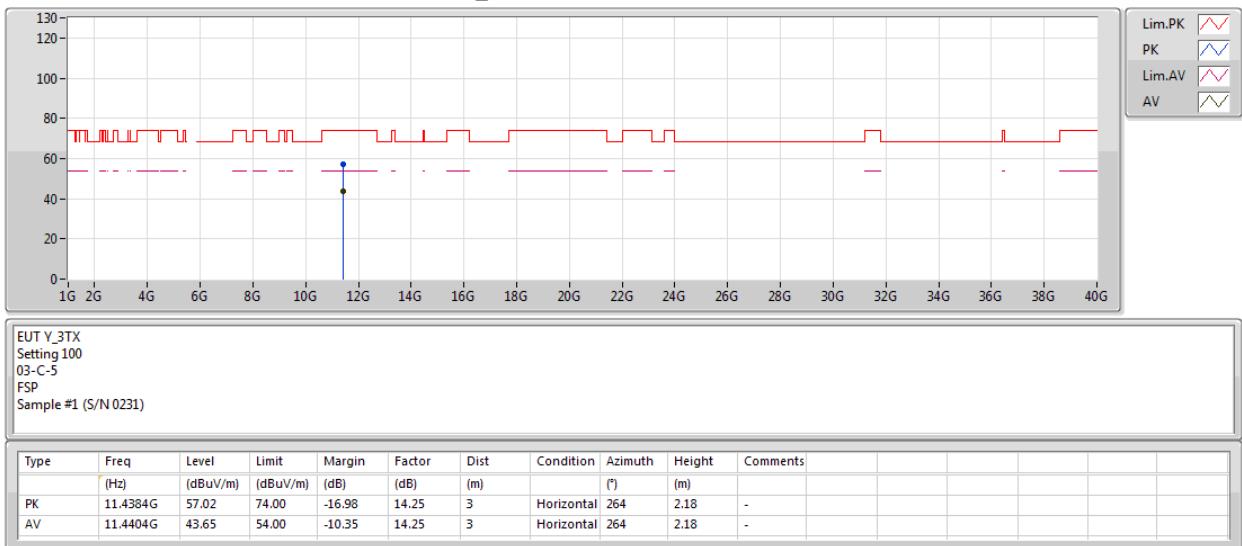
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

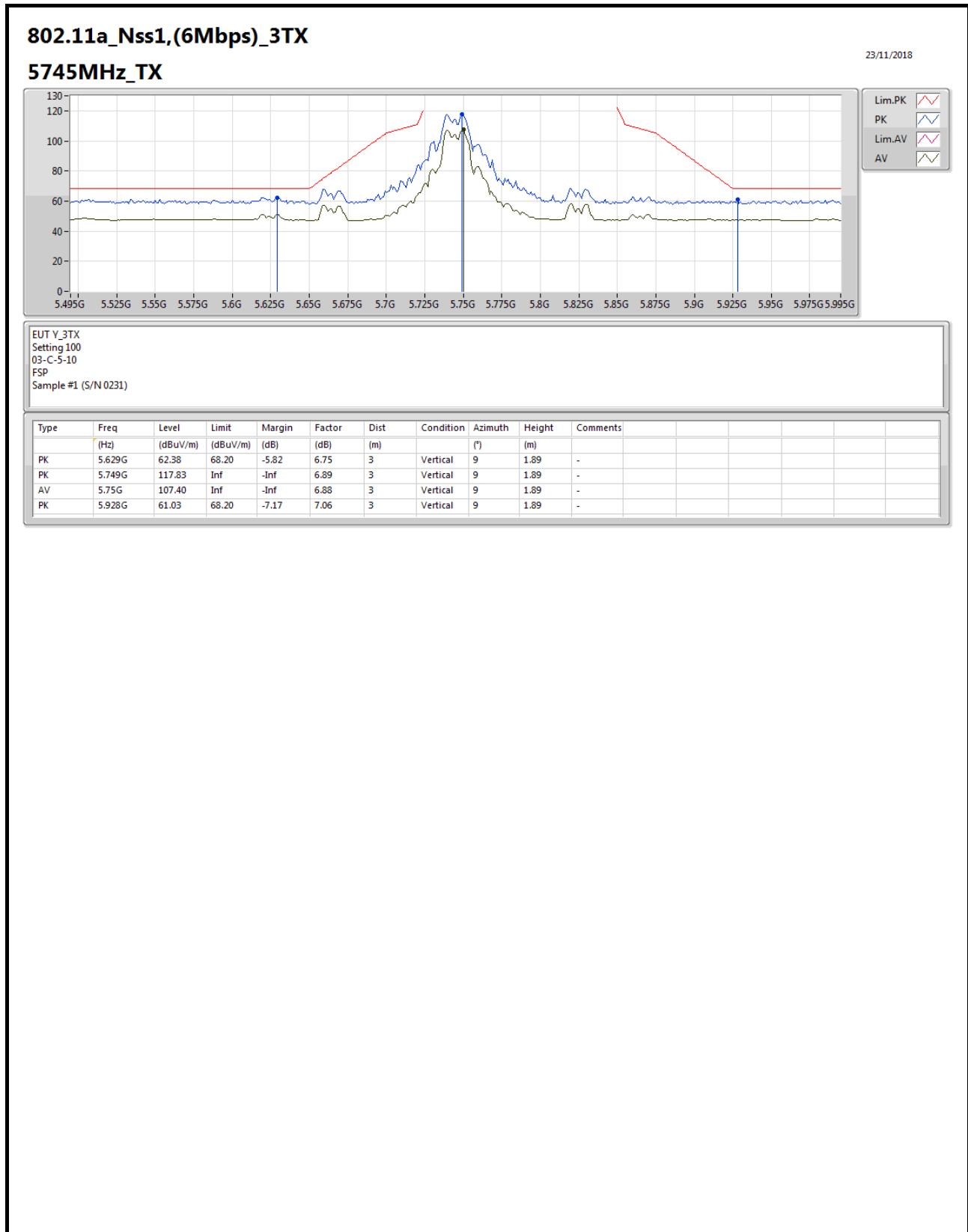
5720MHz Straddle 5.47-5.725GHz_TX





RSE TX above 1GHz Result

Appendix E.2





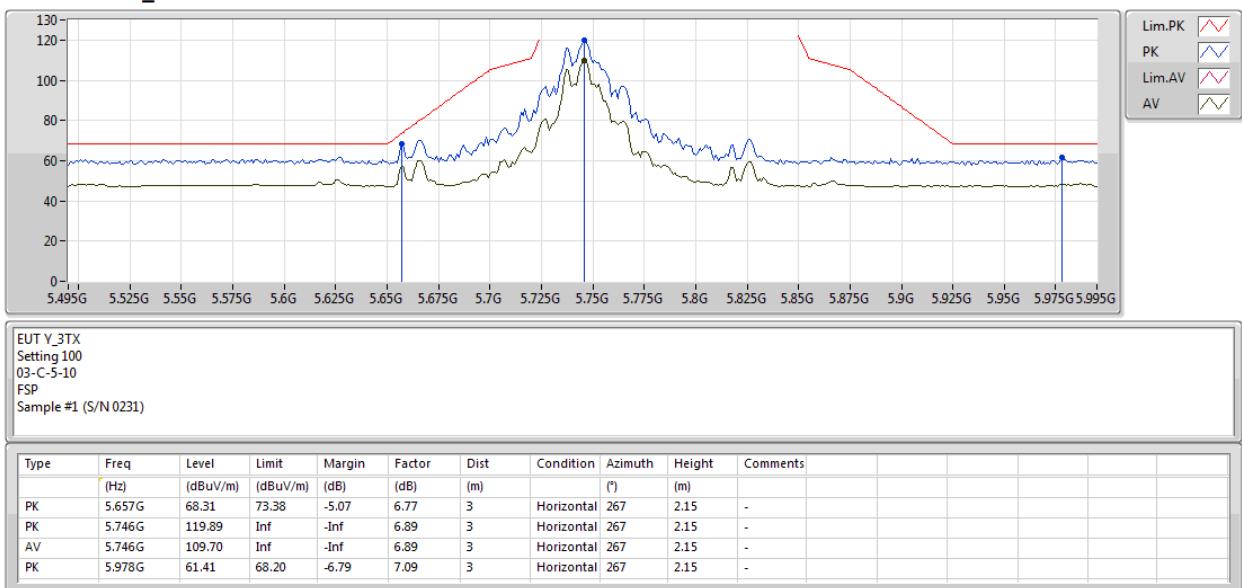
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5745MHz_TX





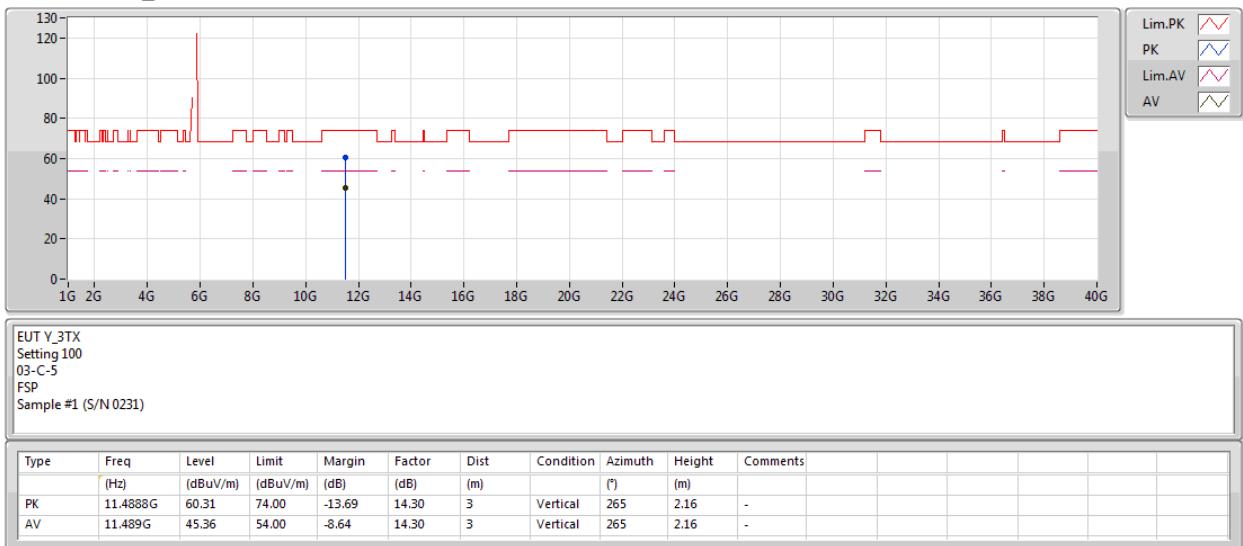
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5745MHz_TX





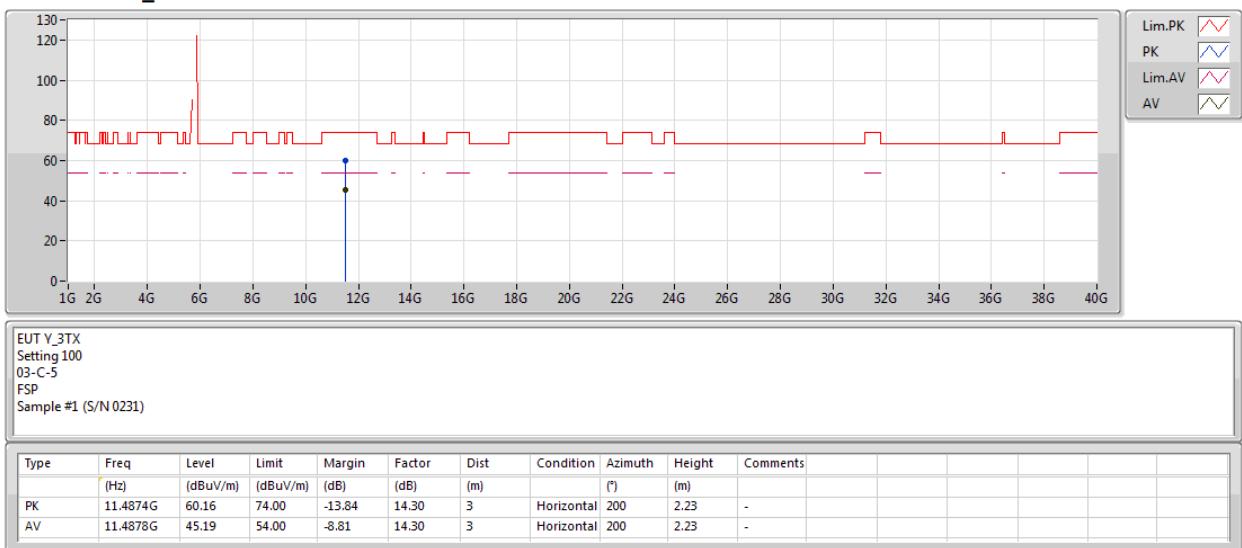
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5745MHz_TX





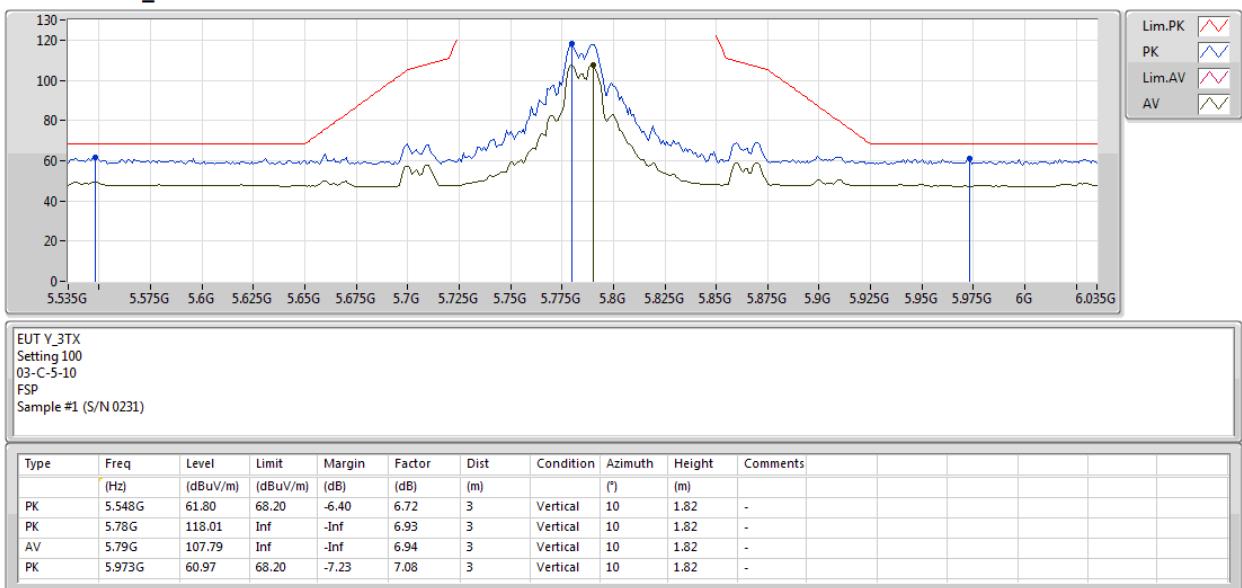
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5785MHz_TX





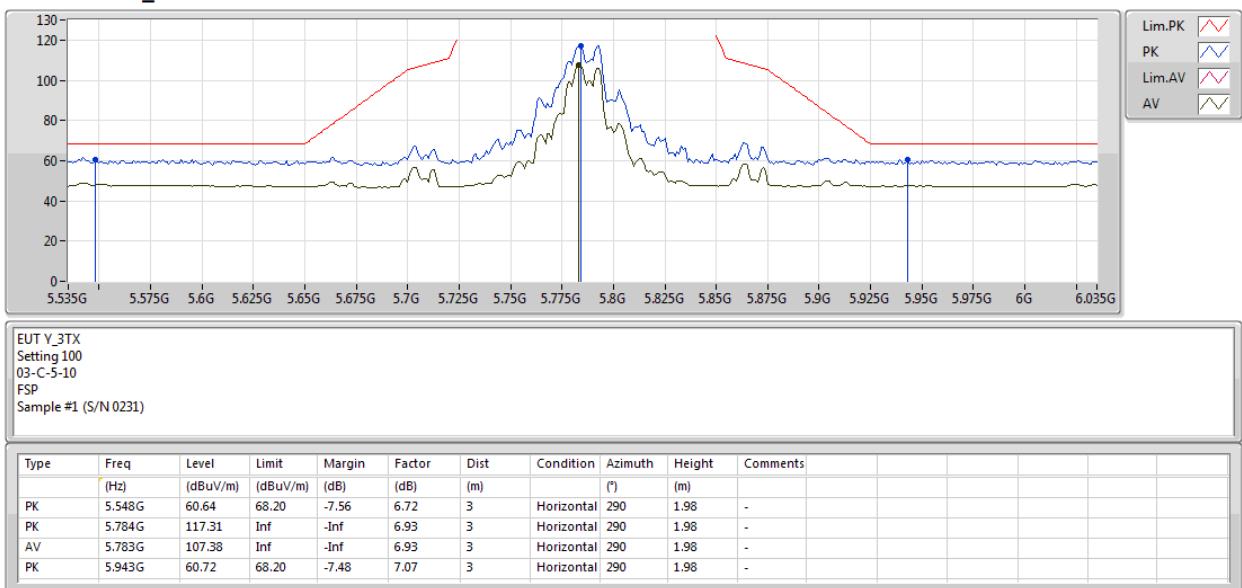
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5785MHz_TX





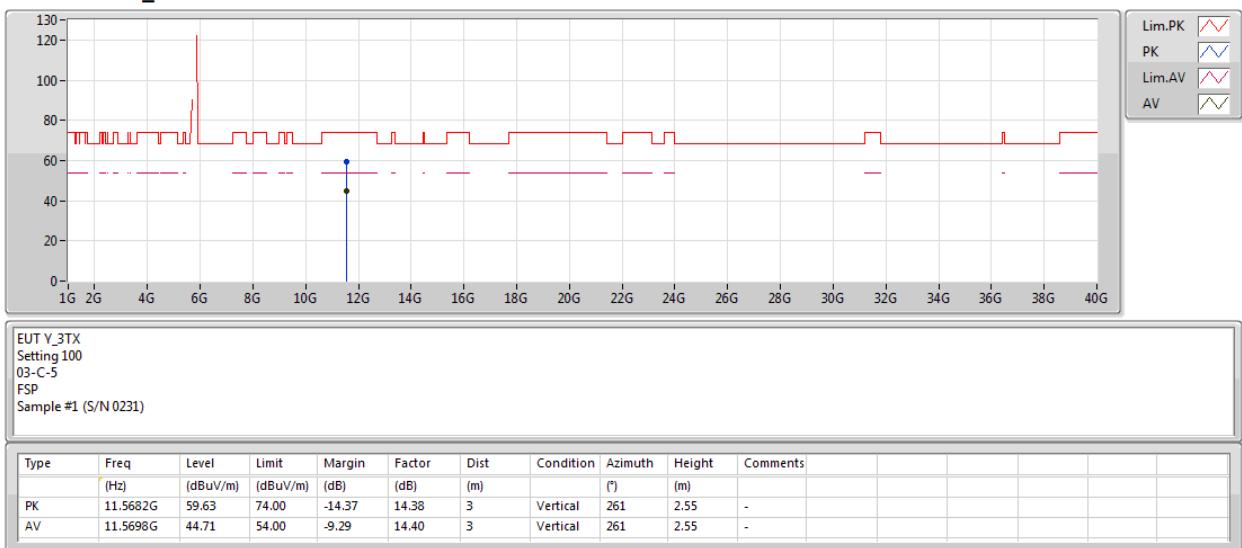
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5785MHz_TX





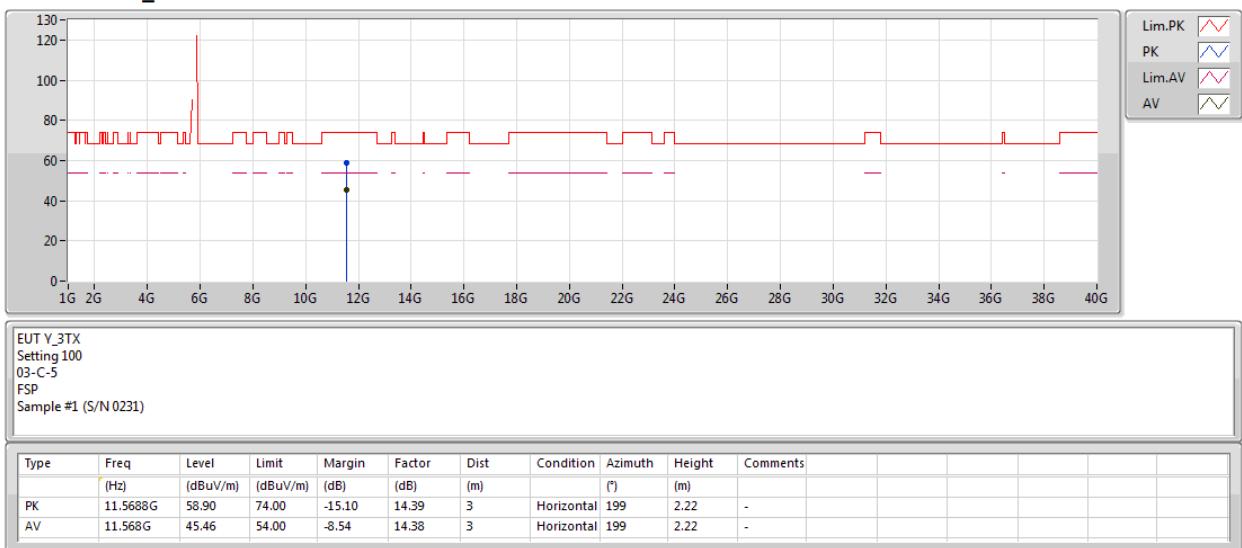
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

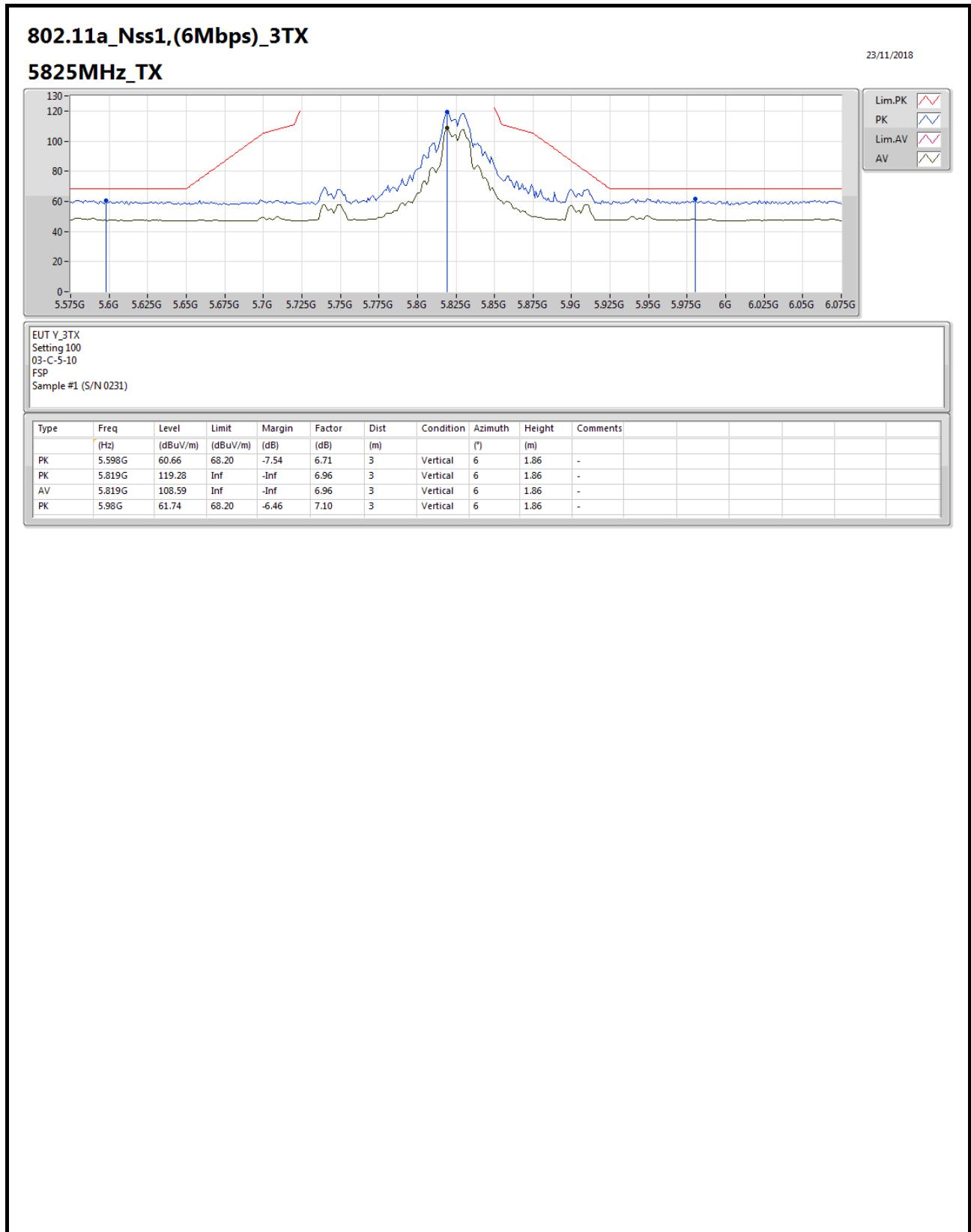
5785MHz_TX





RSE TX above 1GHz Result

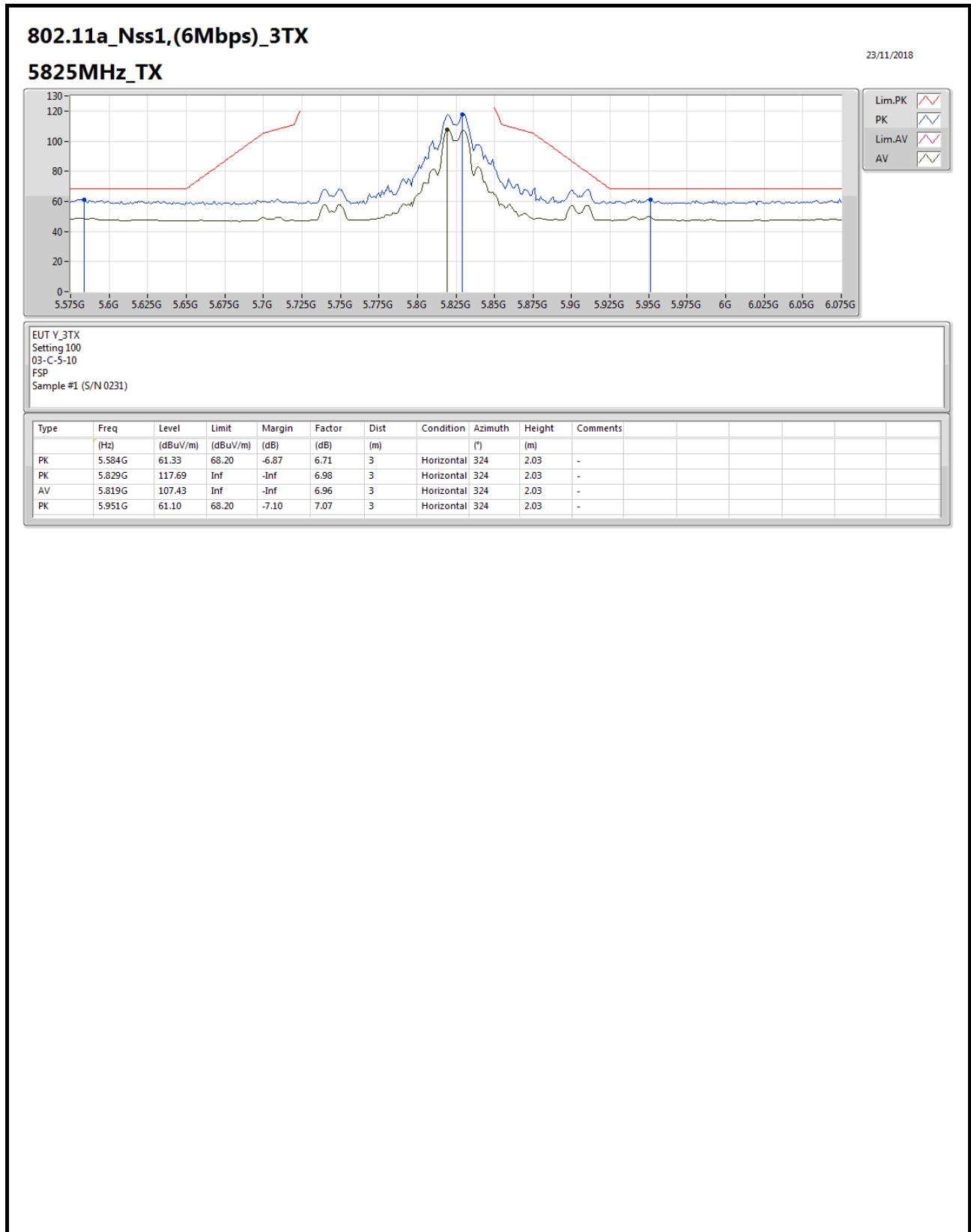
Appendix E.2





RSE TX above 1GHz Result

Appendix E.2





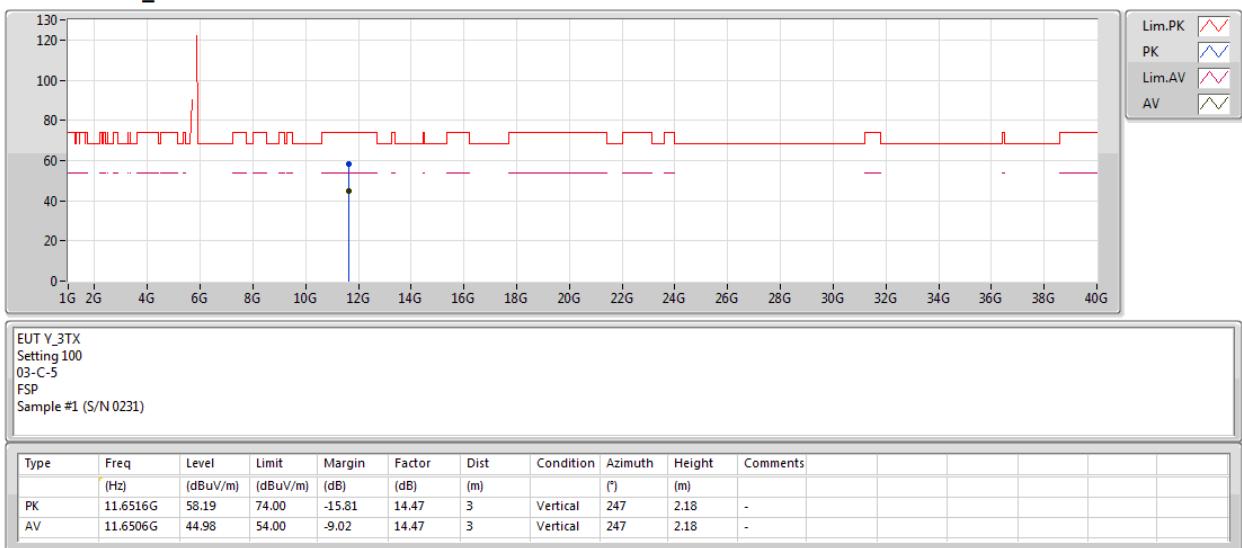
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5825MHz_TX





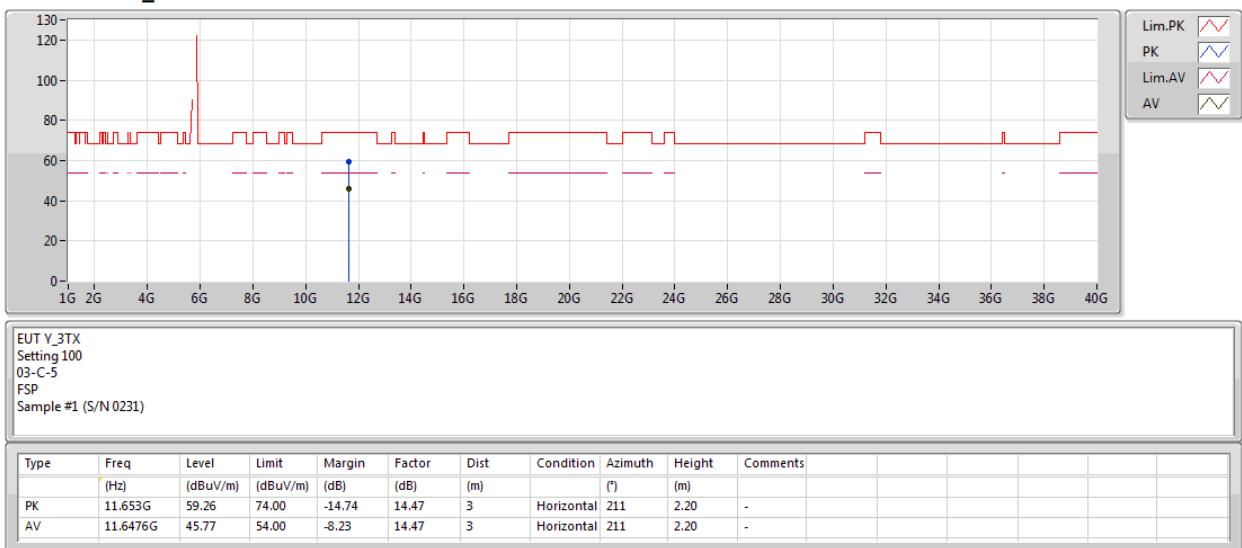
RSE TX above 1GHz Result

Appendix E.2

802.11a_Nss1,(6Mbps)_3TX

23/11/2018

5825MHz_TX





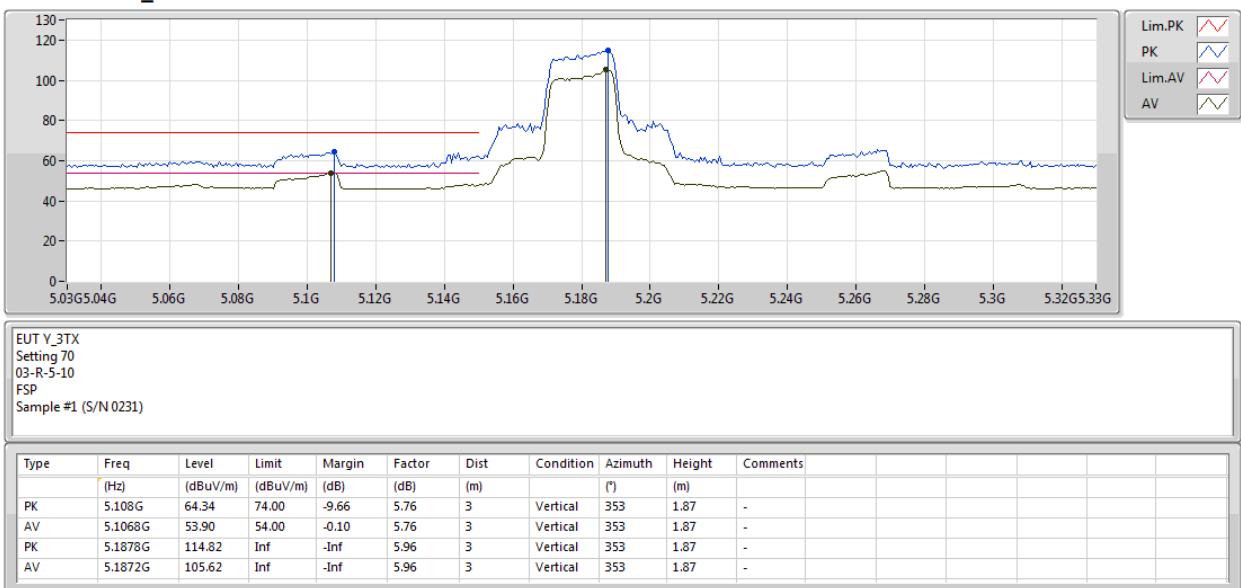
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

22/11/2018

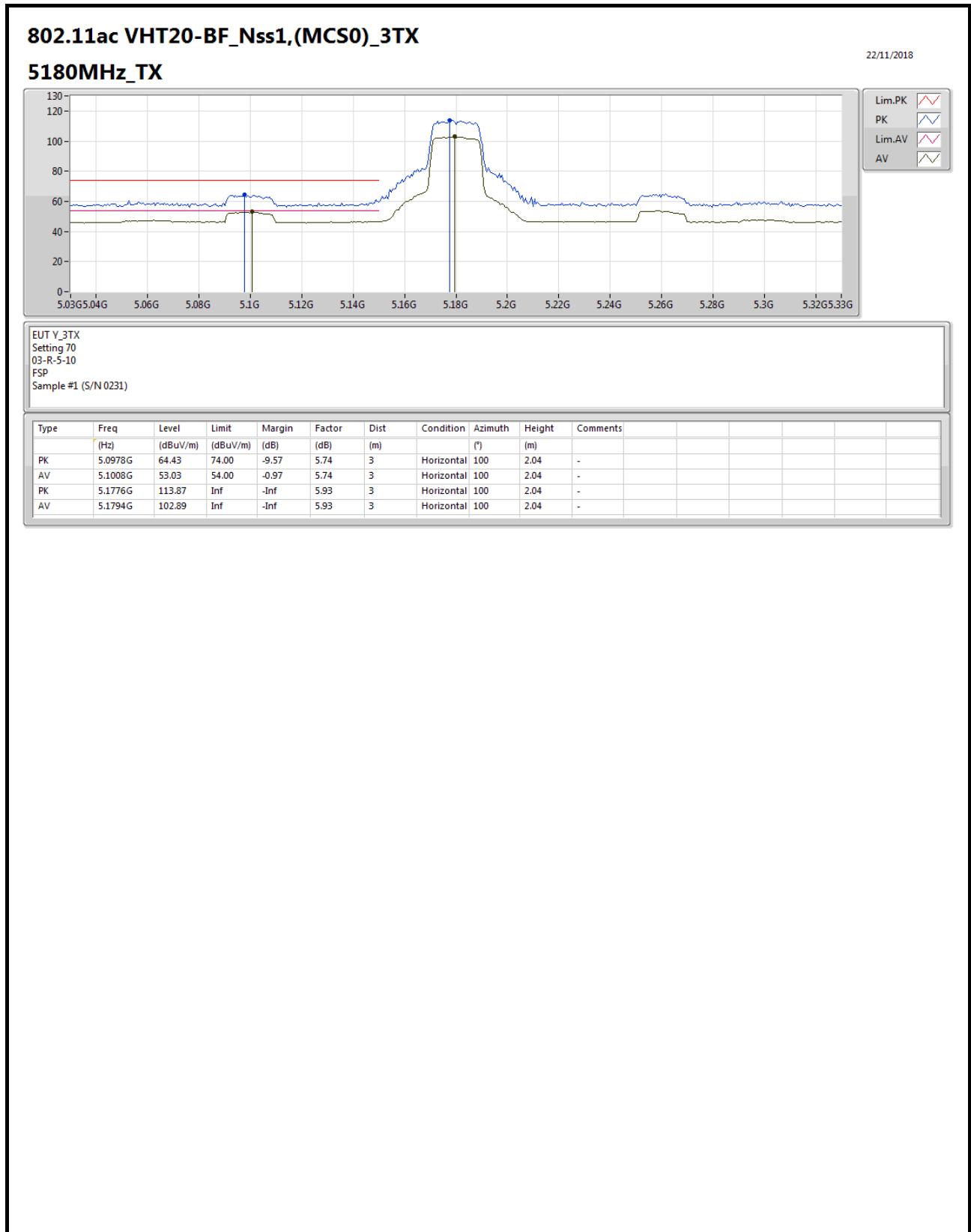
5180MHz_TX





RSE TX above 1GHz Result

Appendix E.2





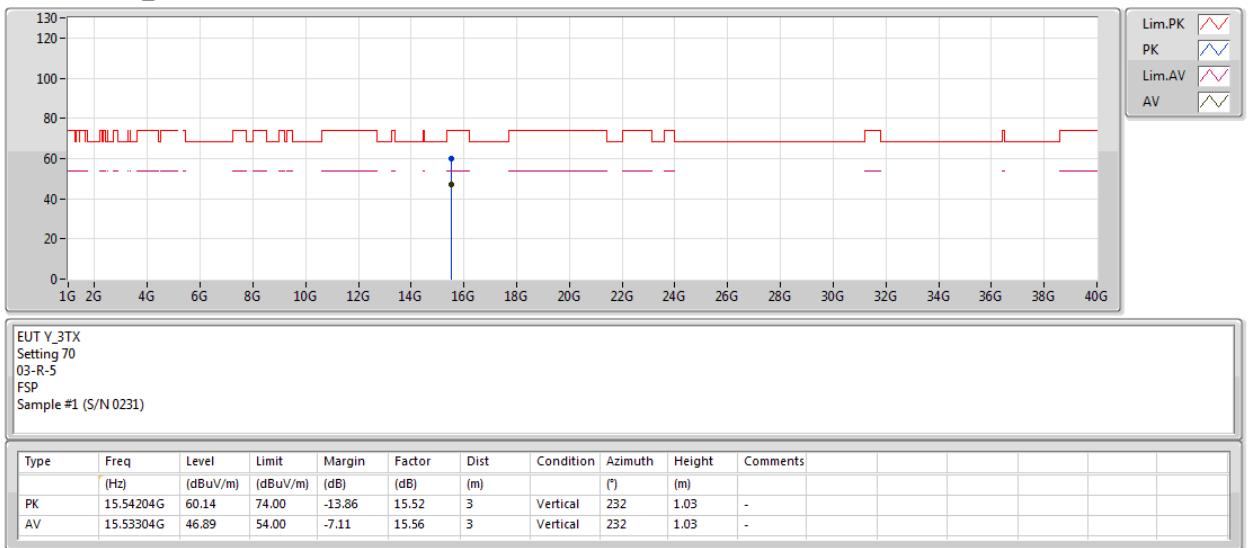
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

22/11/2018

5180MHz_TX





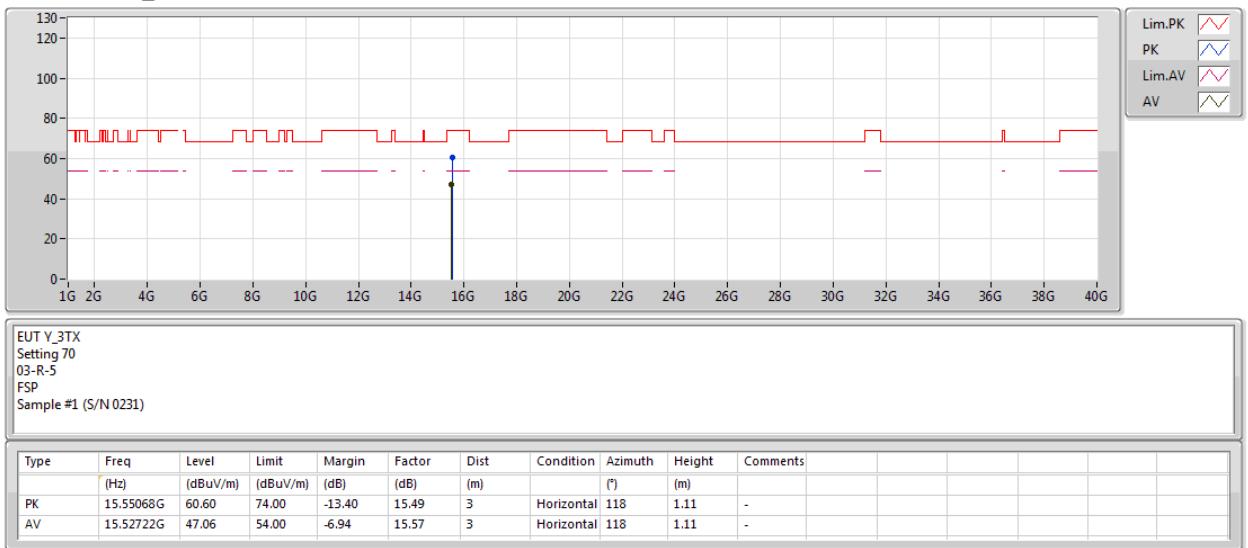
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

22/11/2018

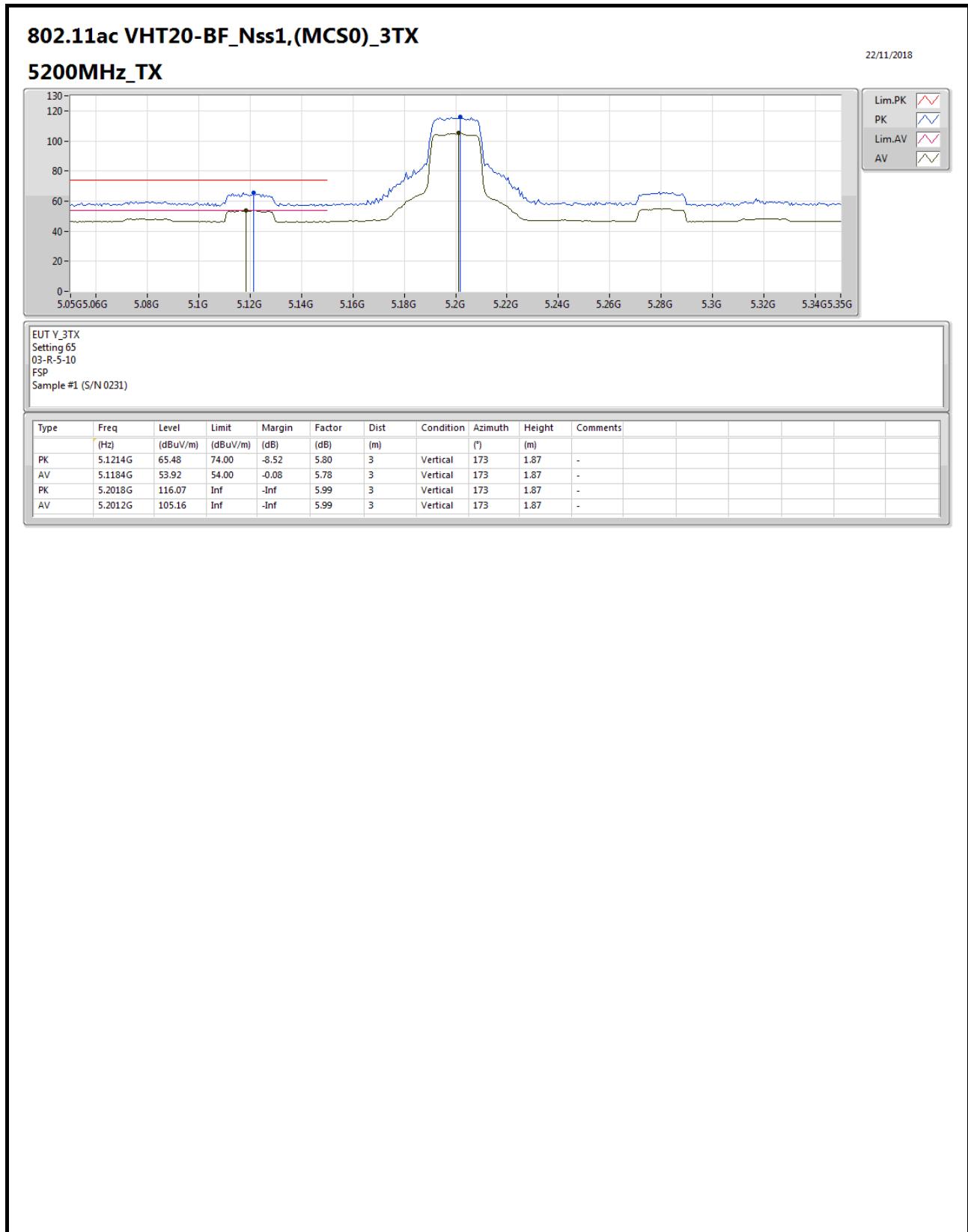
5180MHz_TX





RSE TX above 1GHz Result

Appendix E.2





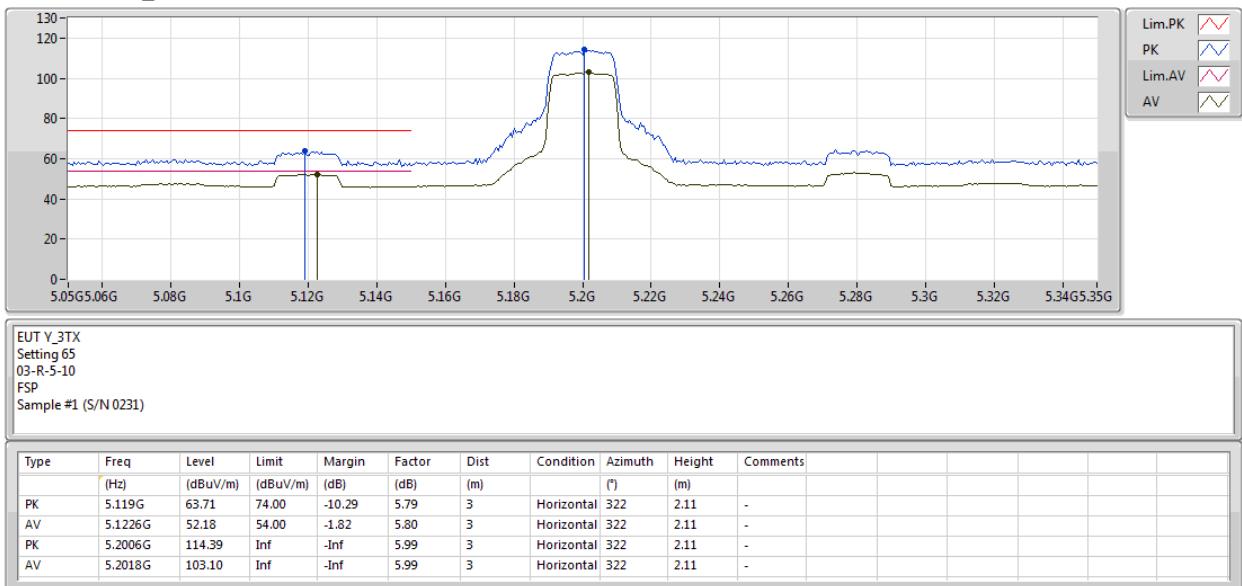
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

22/11/2018

5200MHz_TX





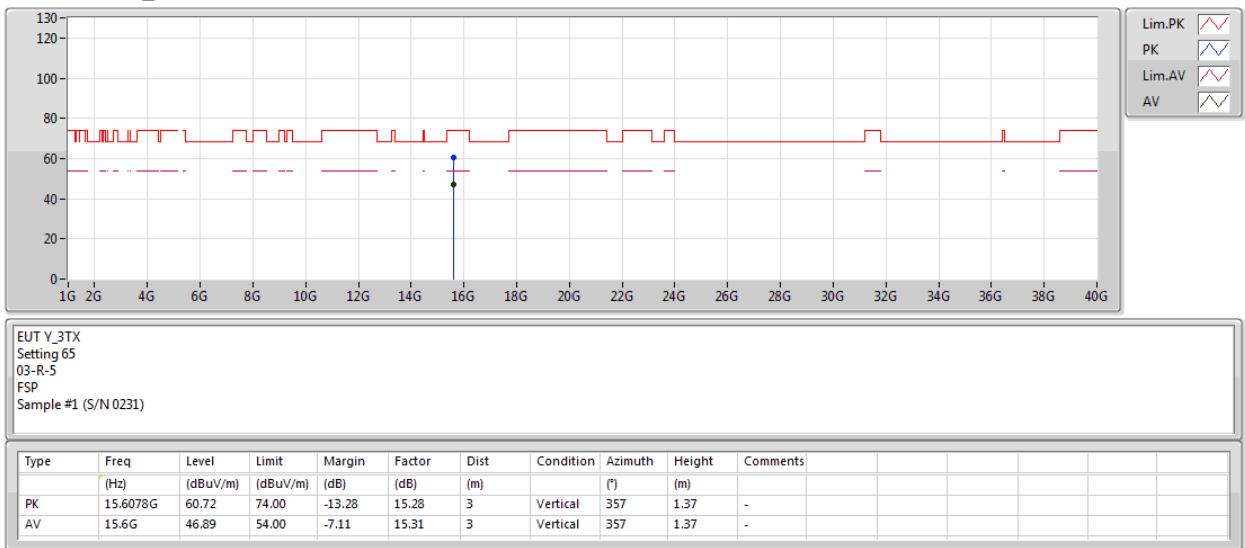
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

22/11/2018

5200MHz_TX





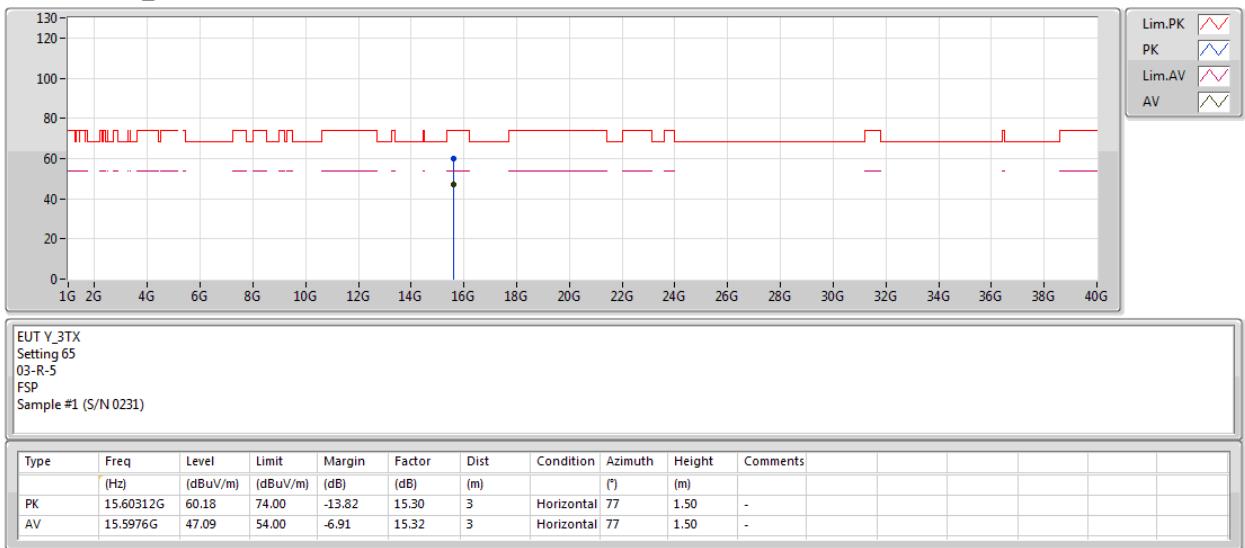
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

22/11/2018

5200MHz_TX





RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

22/11/2018

5240MHz_TX





RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

22/11/2018

5240MHz_TX





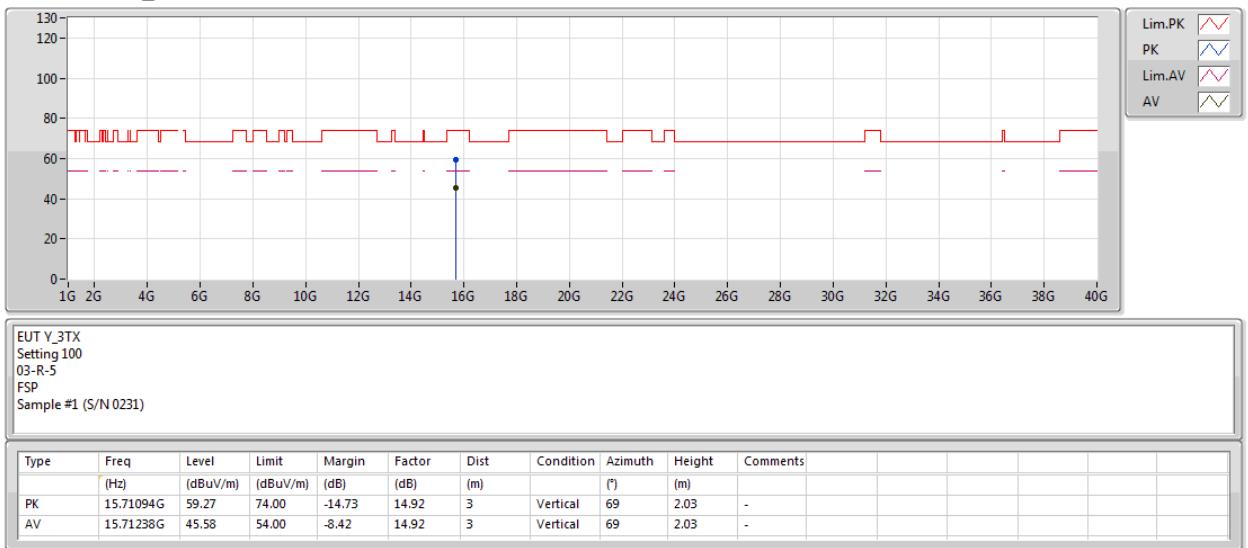
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

22/11/2018

5240MHz_TX





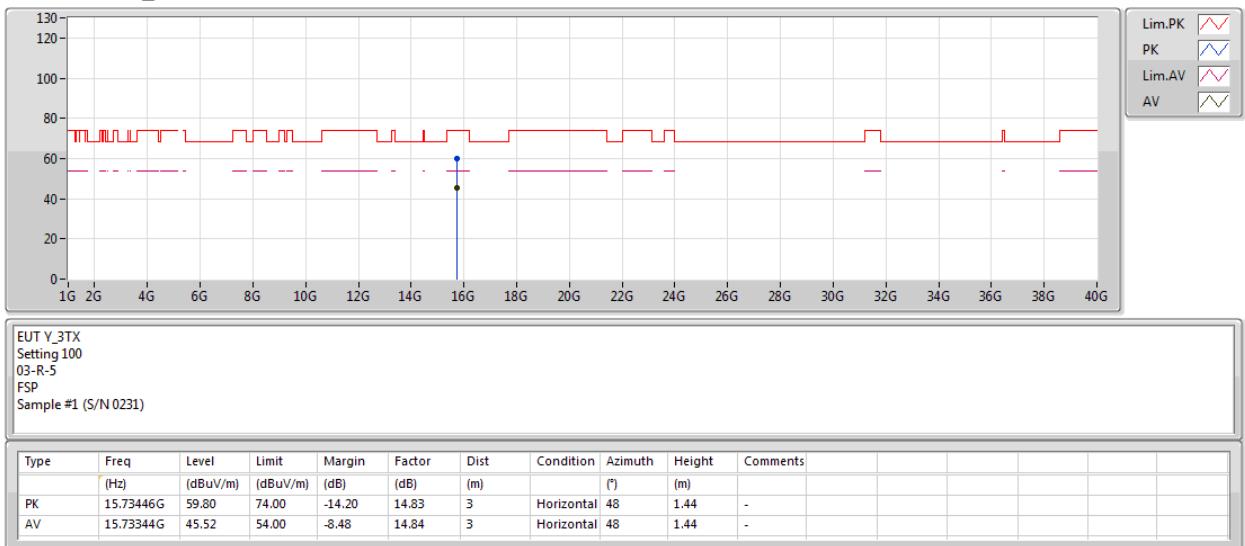
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

22/11/2018

5240MHz_TX





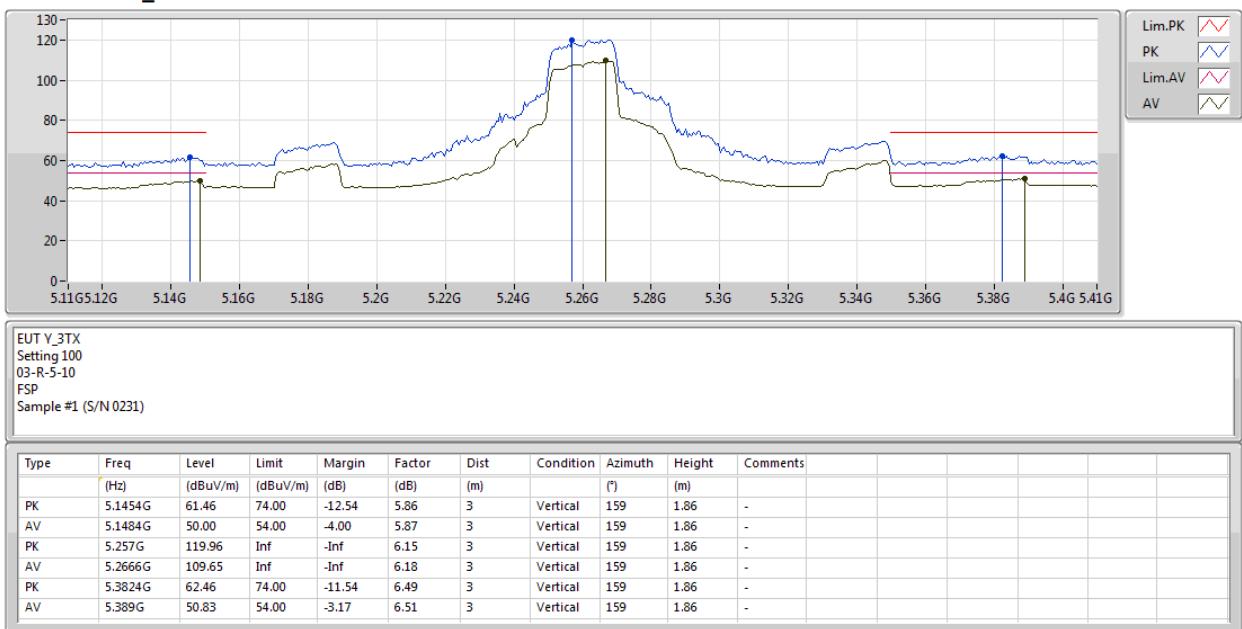
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

22/11/2018

5260MHz_TX





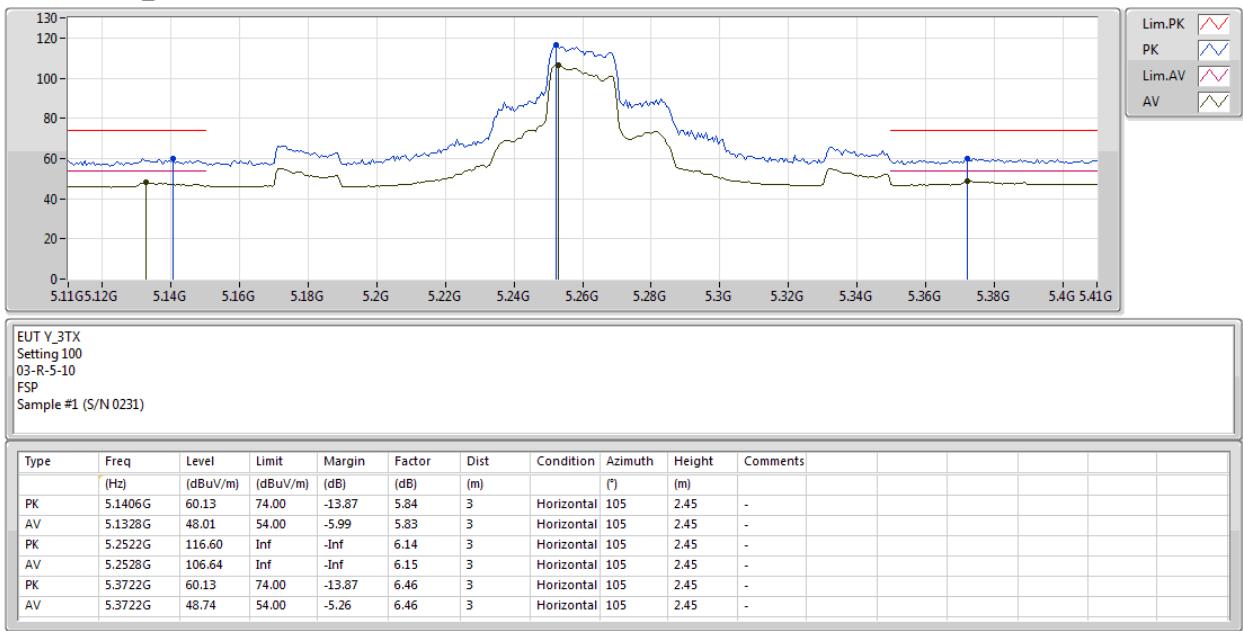
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

22/11/2018

5260MHz_TX





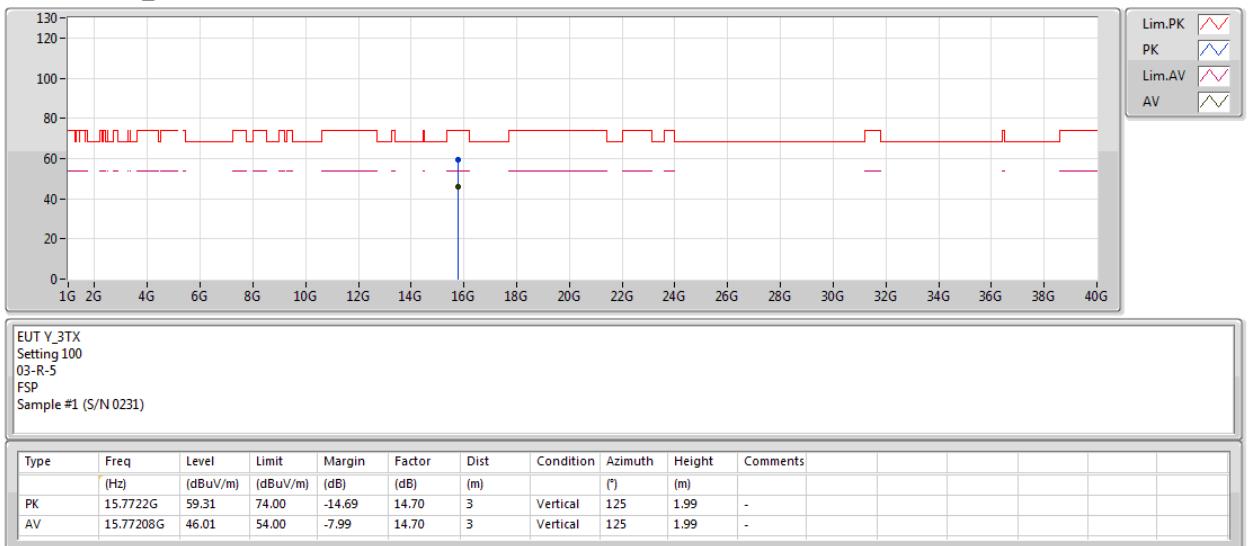
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

22/11/2018

5260MHz_TX





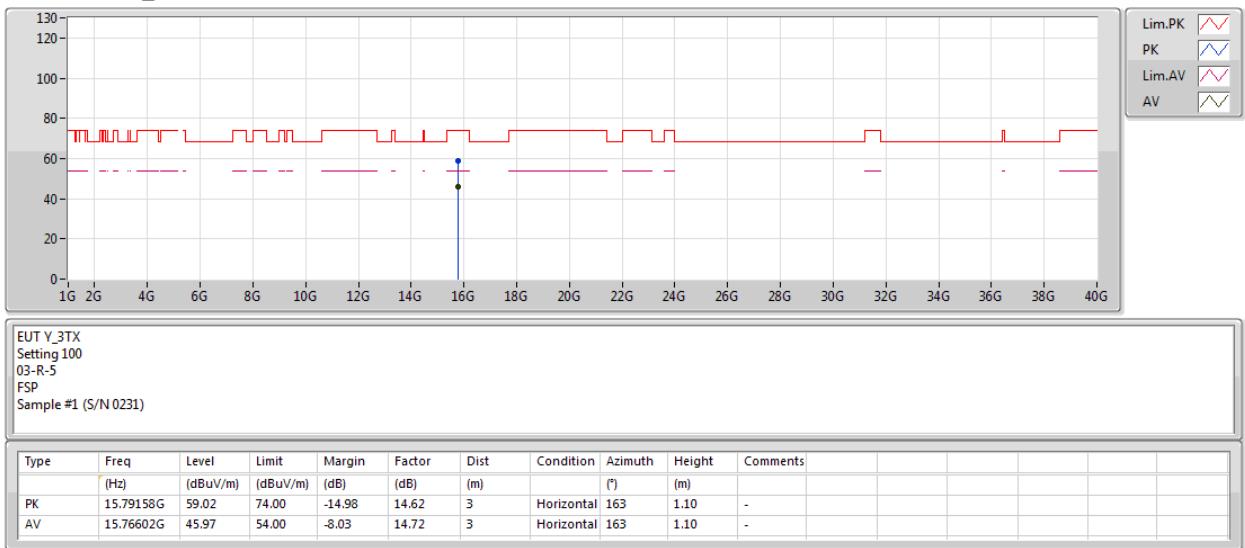
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

22/11/2018

5260MHz_TX





RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

22/11/2018

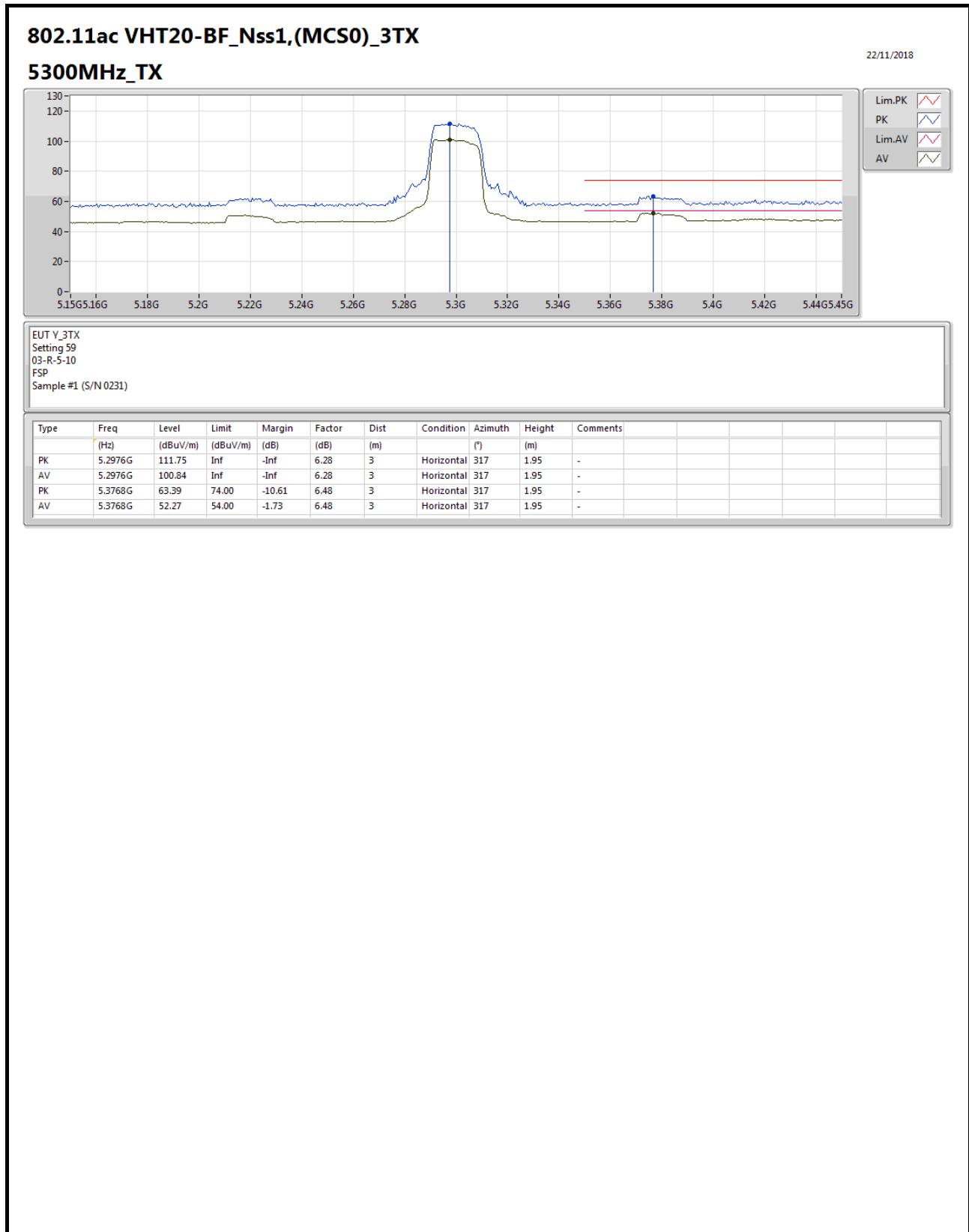
5300MHz_TX





RSE TX above 1GHz Result

Appendix E.2





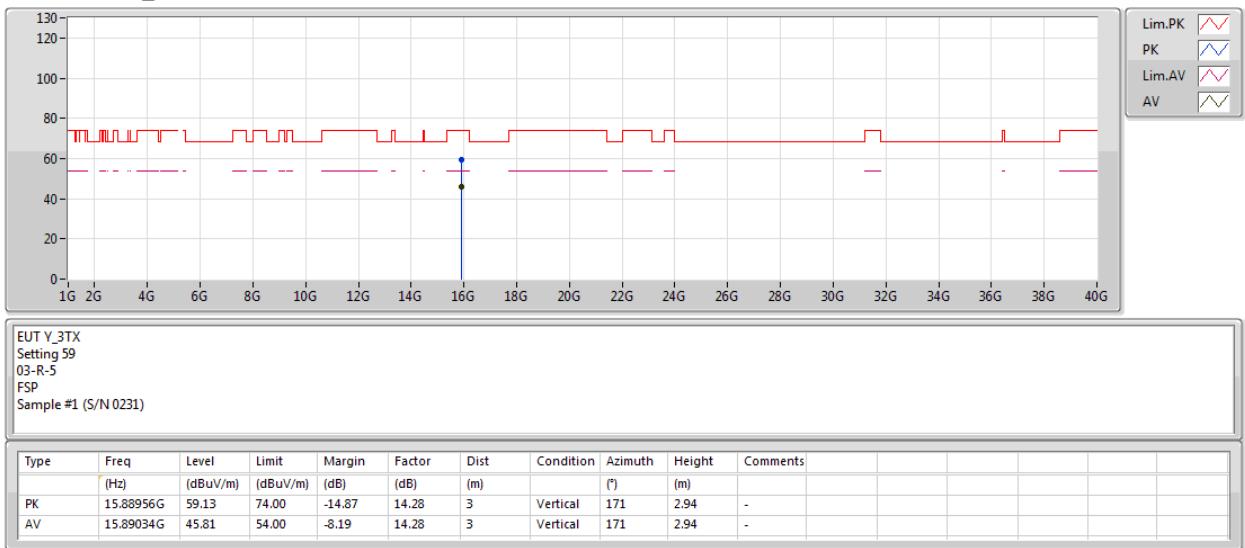
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

22/11/2018

5300MHz_TX





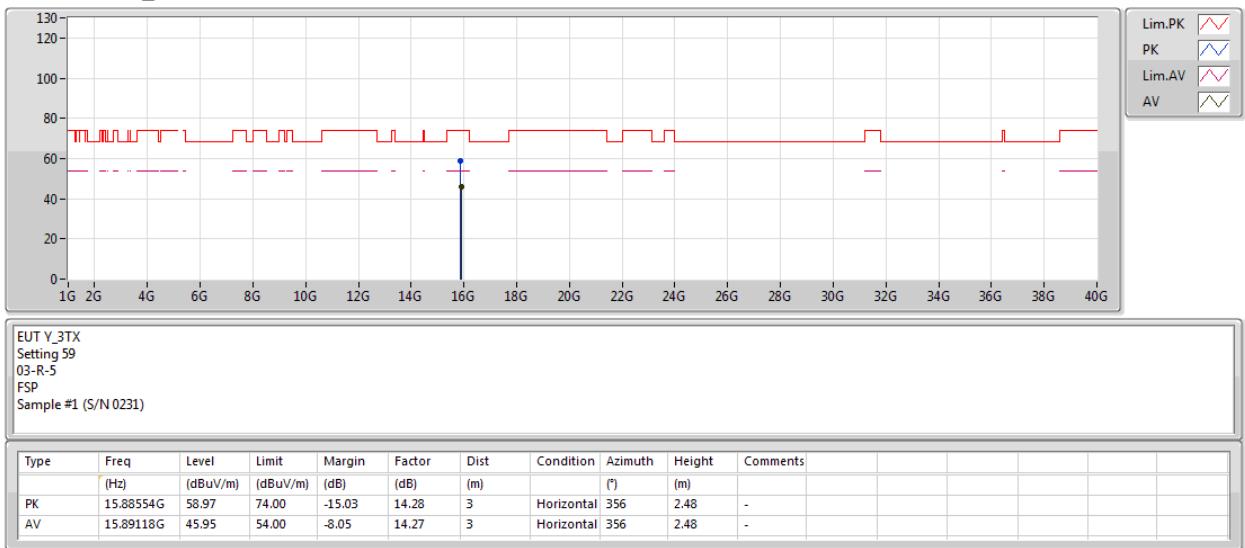
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

22/11/2018

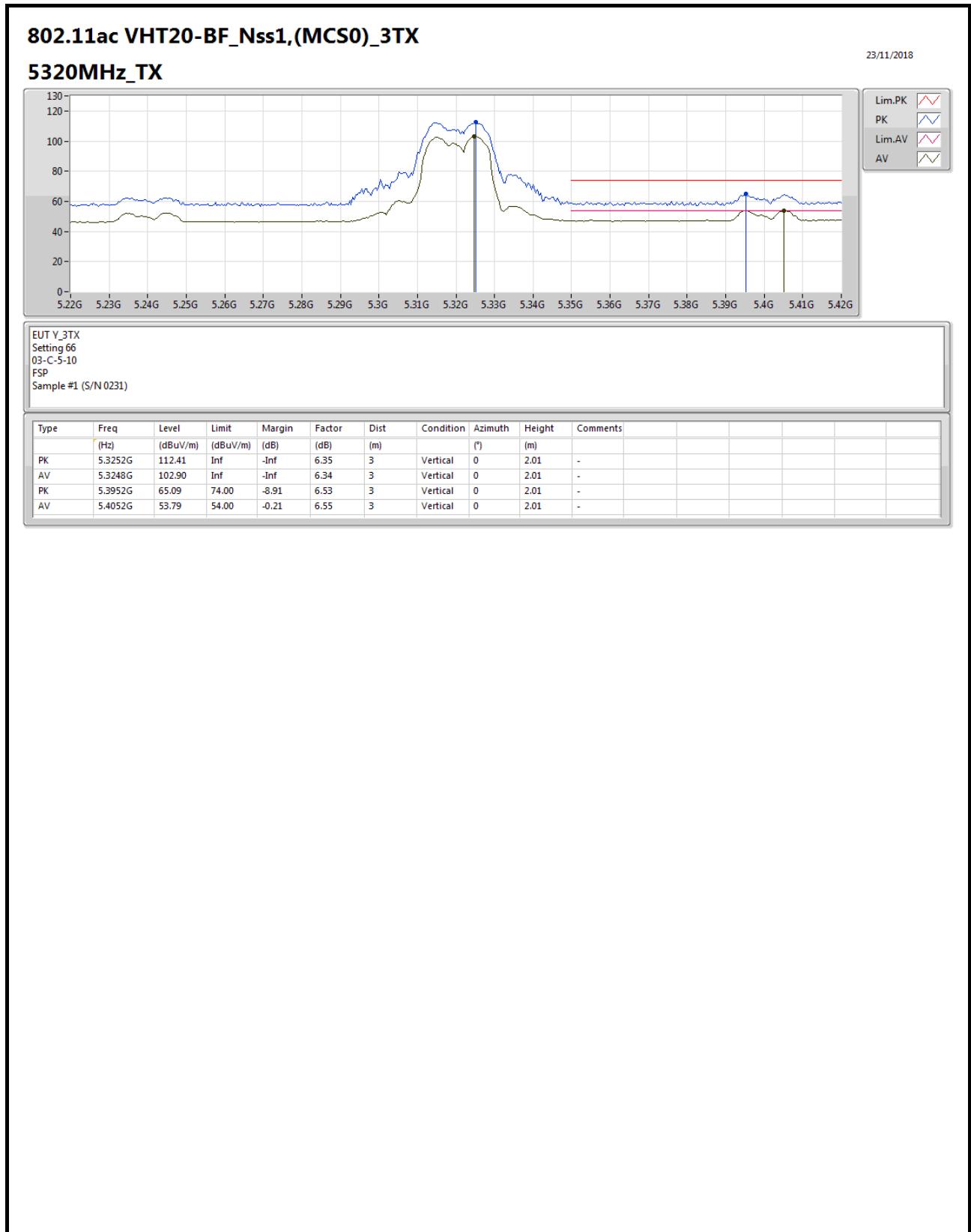
5300MHz_TX





RSE TX above 1GHz Result

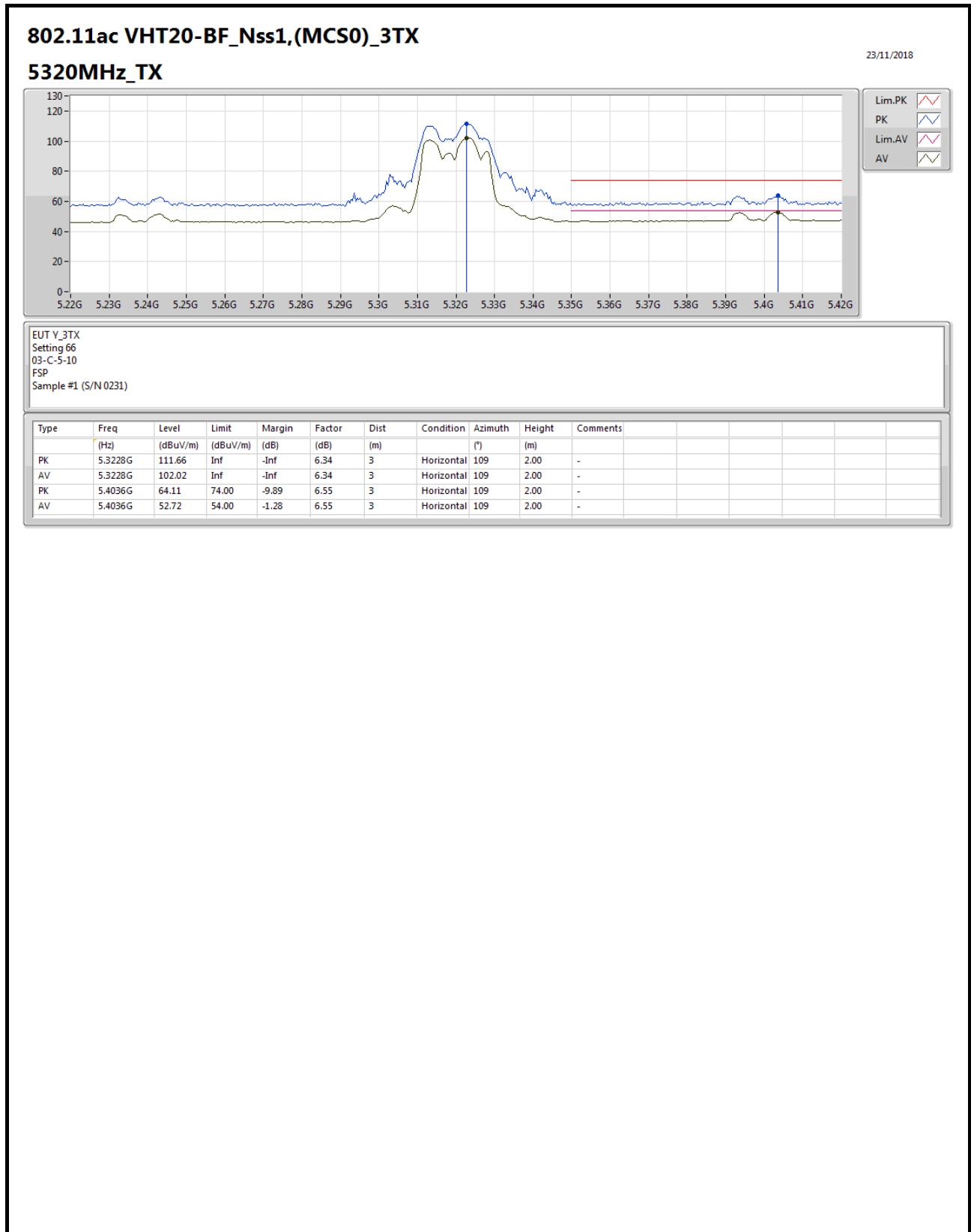
Appendix E.2





RSE TX above 1GHz Result

Appendix E.2





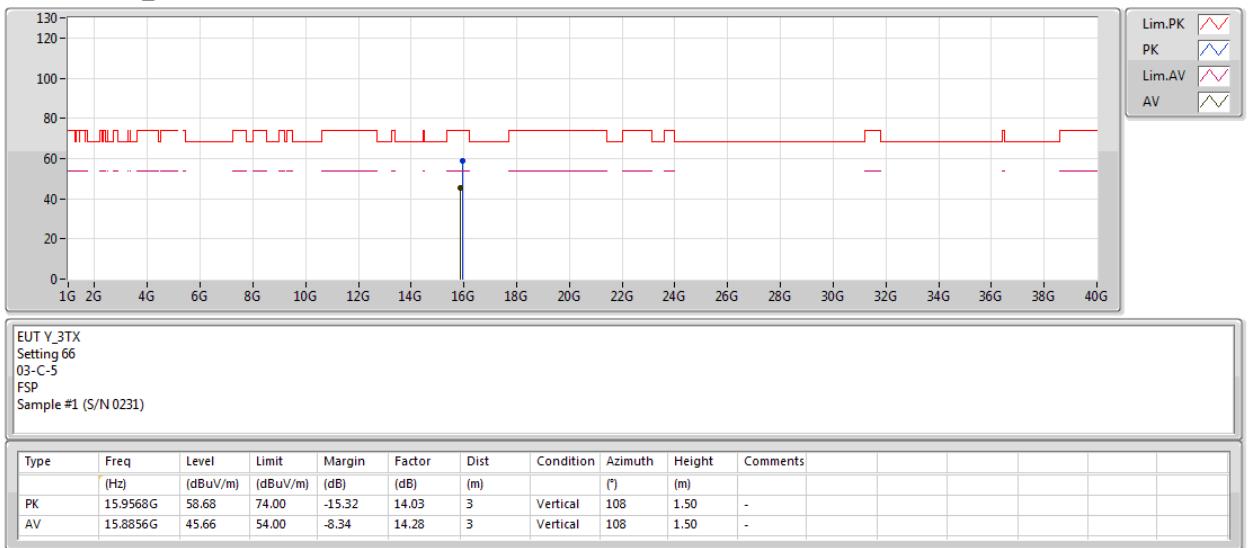
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5320MHz_TX





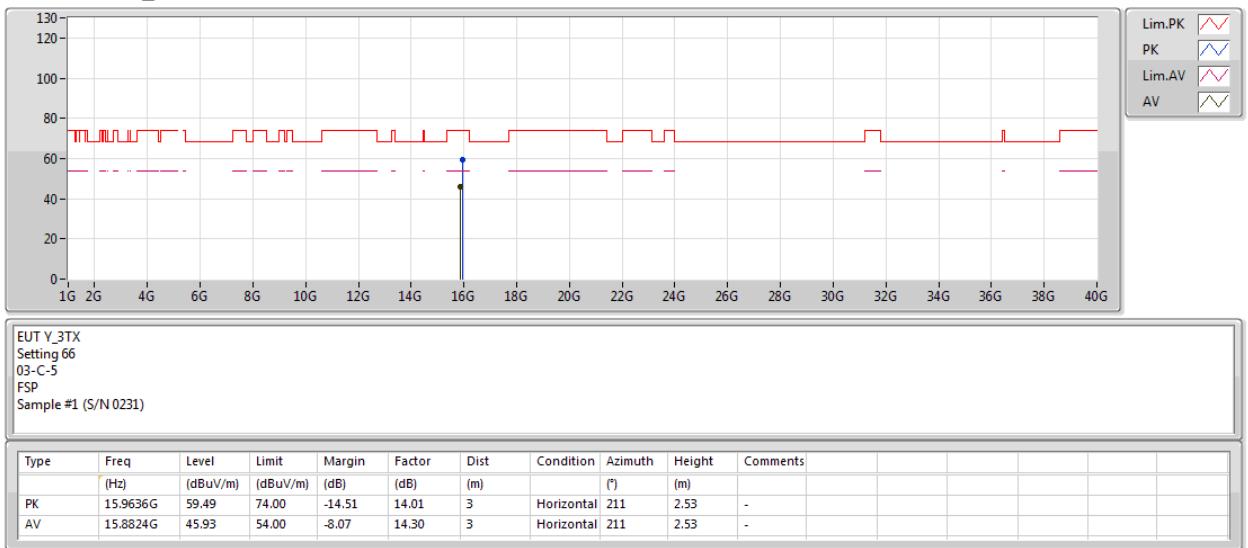
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5320MHz_TX





RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5500MHz_TX





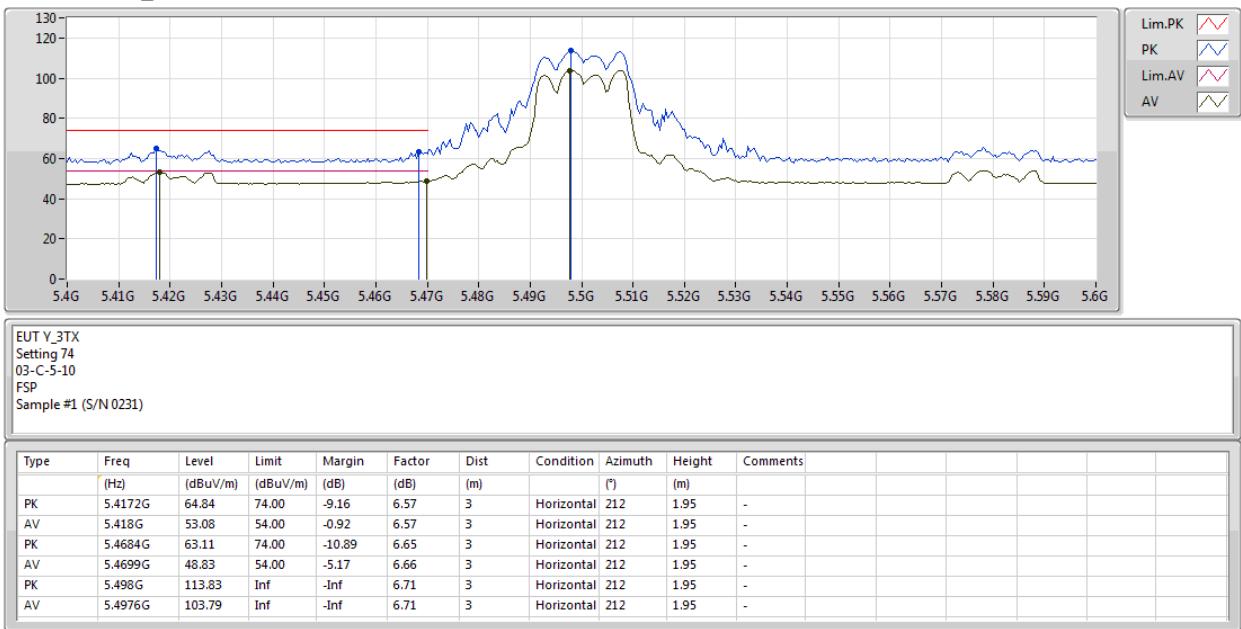
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5500MHz_TX





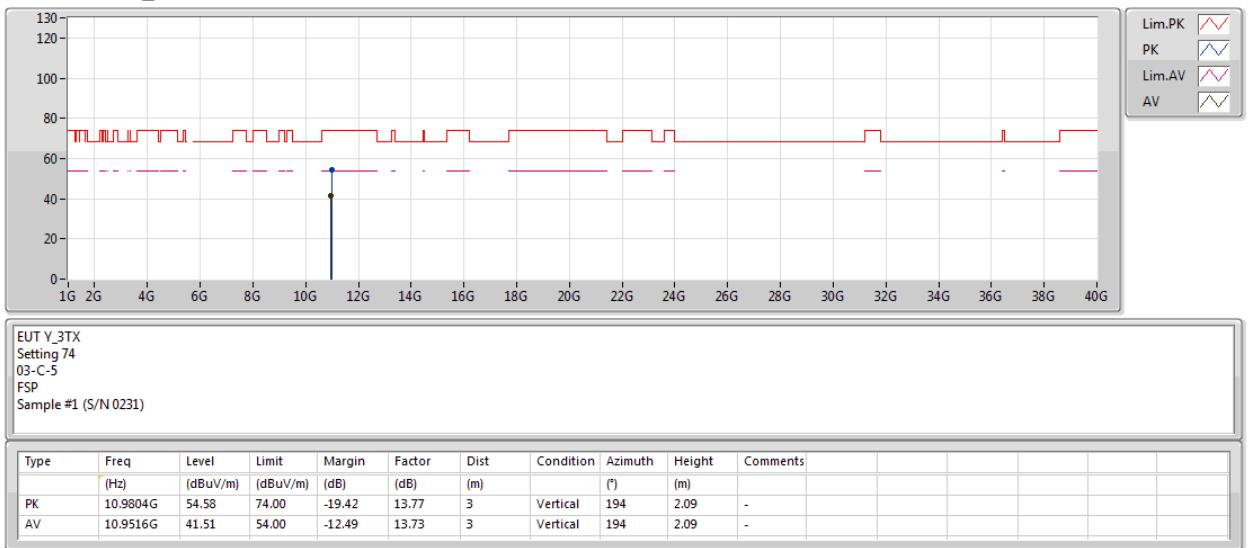
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5500MHz_TX





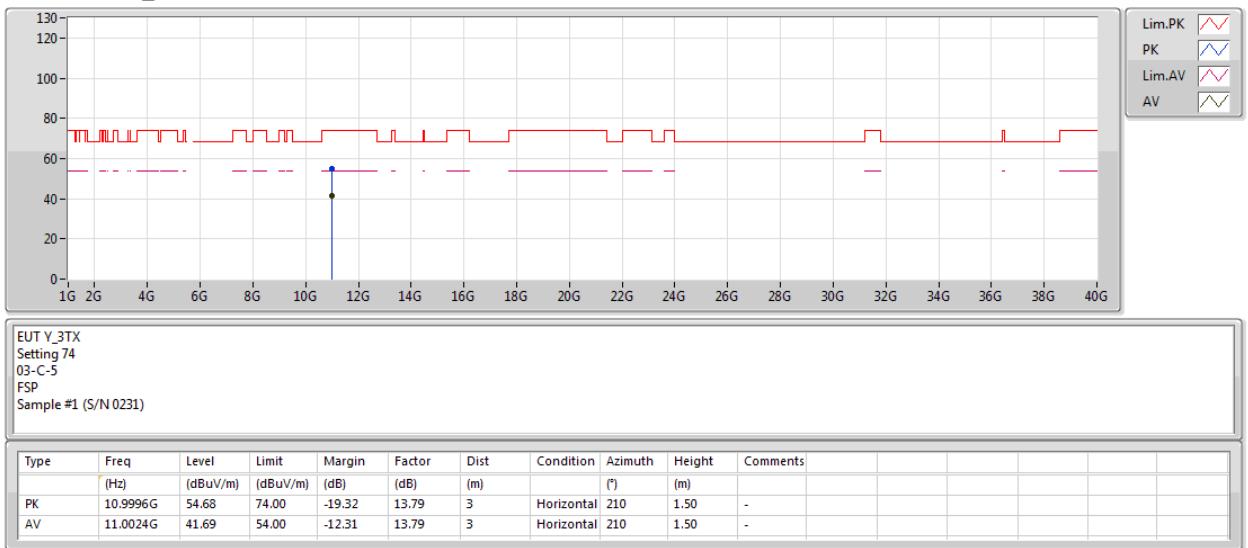
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5500MHz_TX





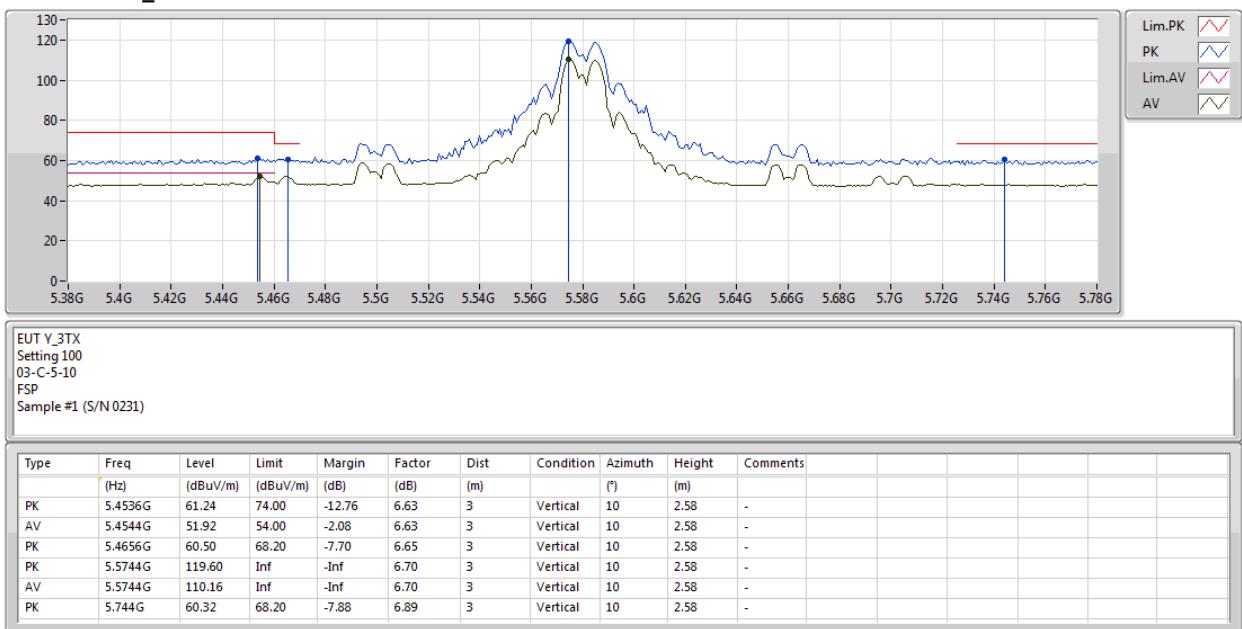
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5580MHz_TX





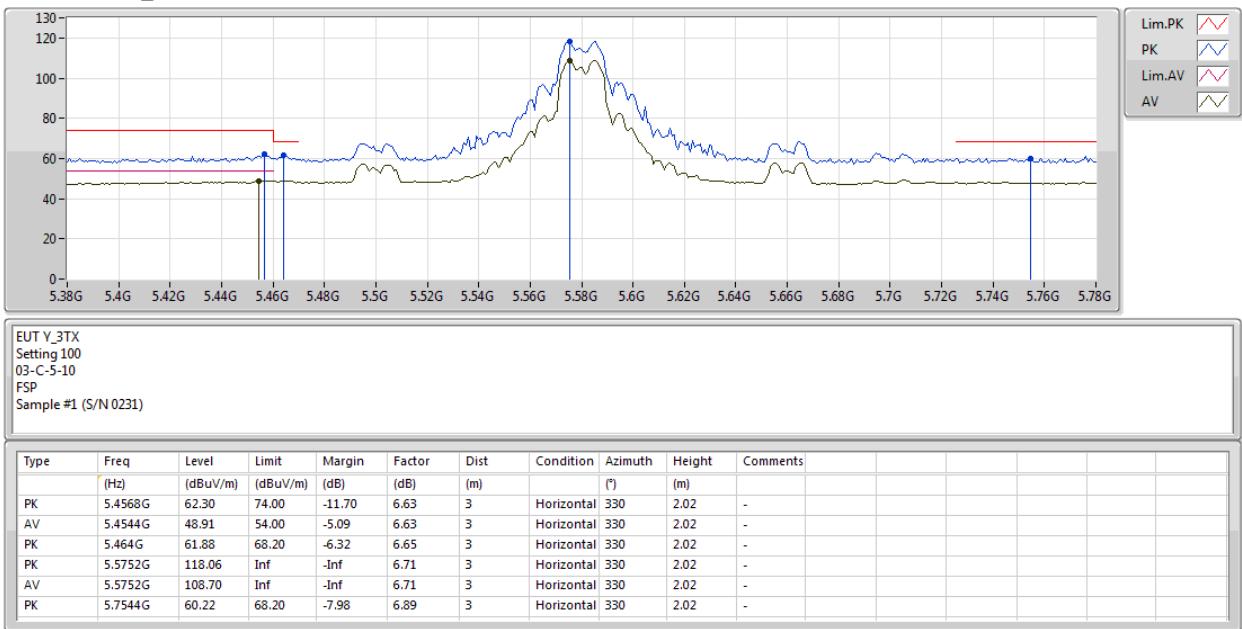
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5580MHz_TX





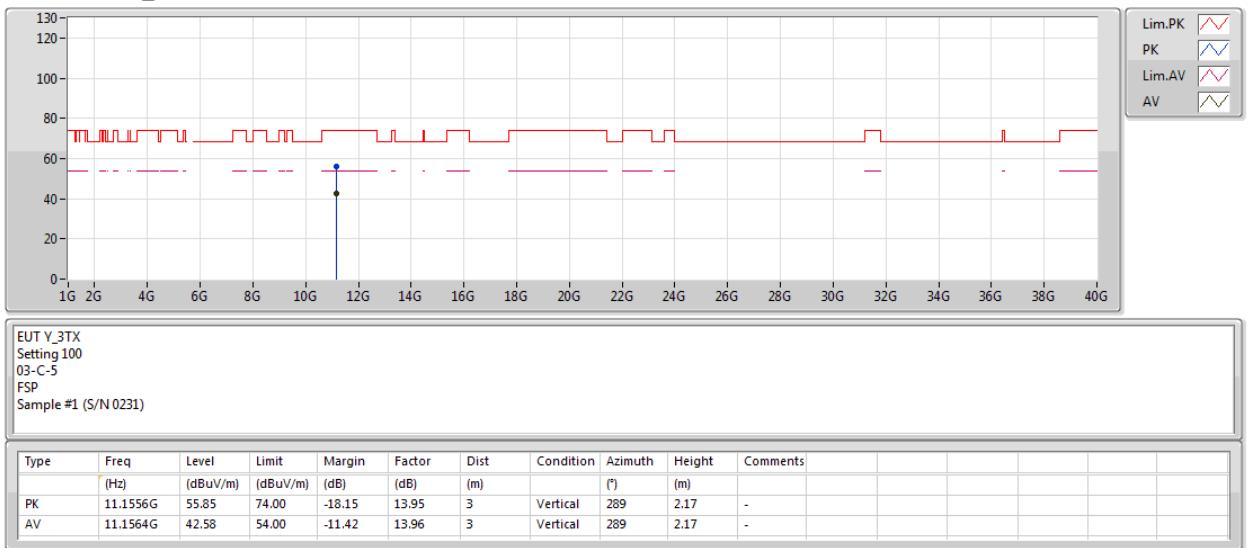
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5580MHz_TX





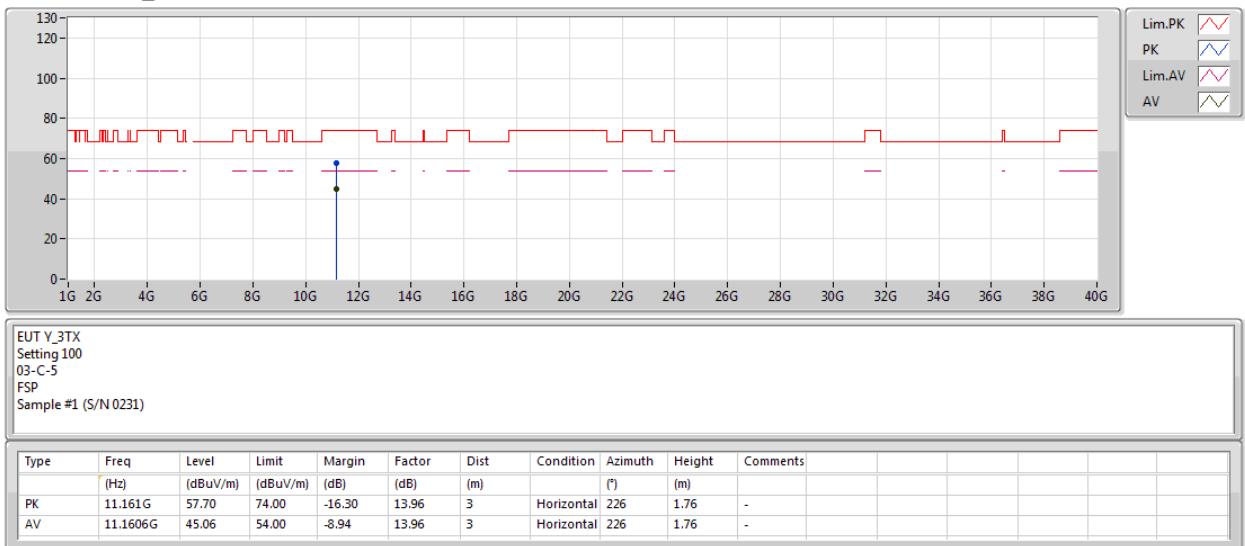
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5580MHz_TX





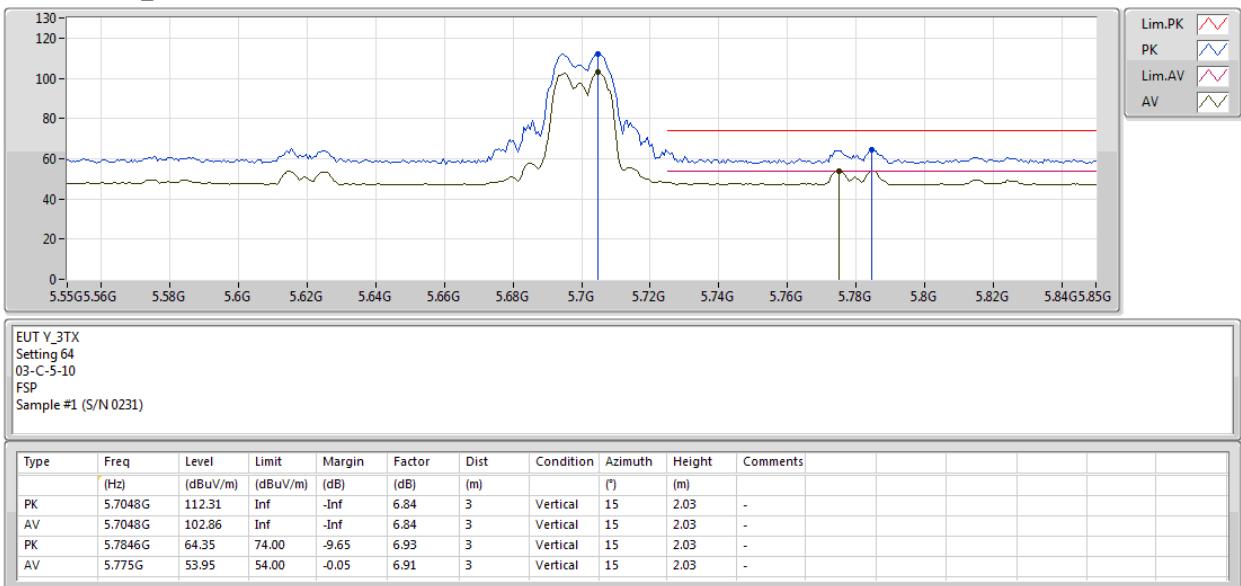
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

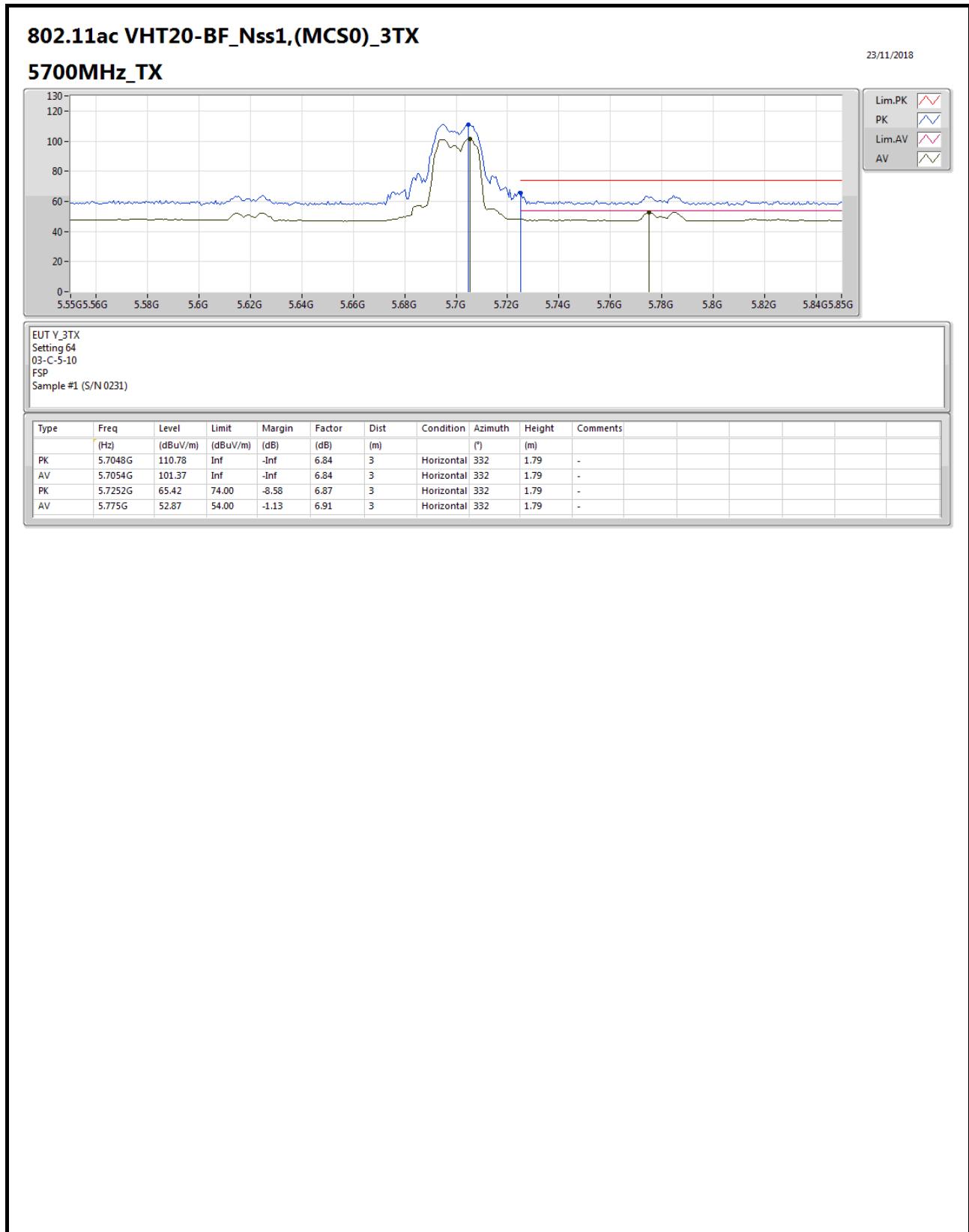
5700MHz_TX





RSE TX above 1GHz Result

Appendix E.2





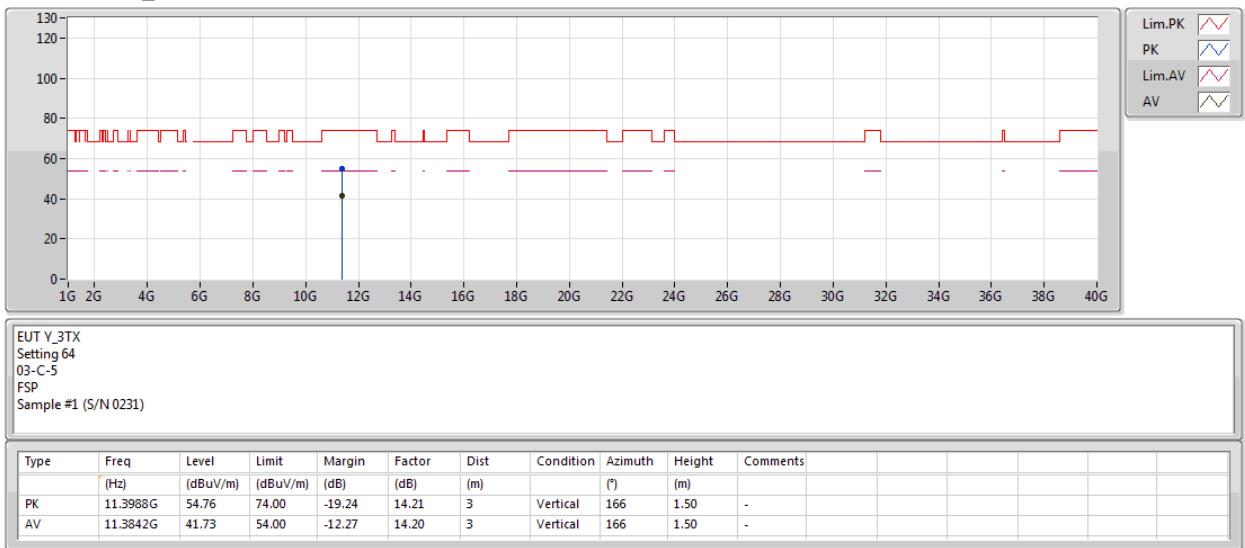
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5700MHz_TX





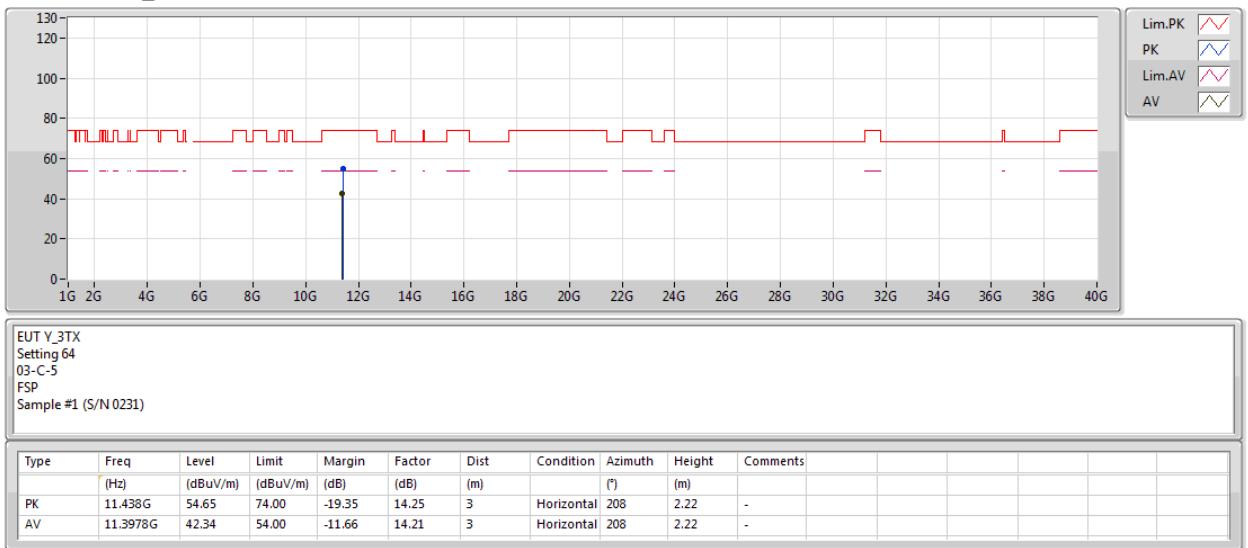
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5700MHz_TX





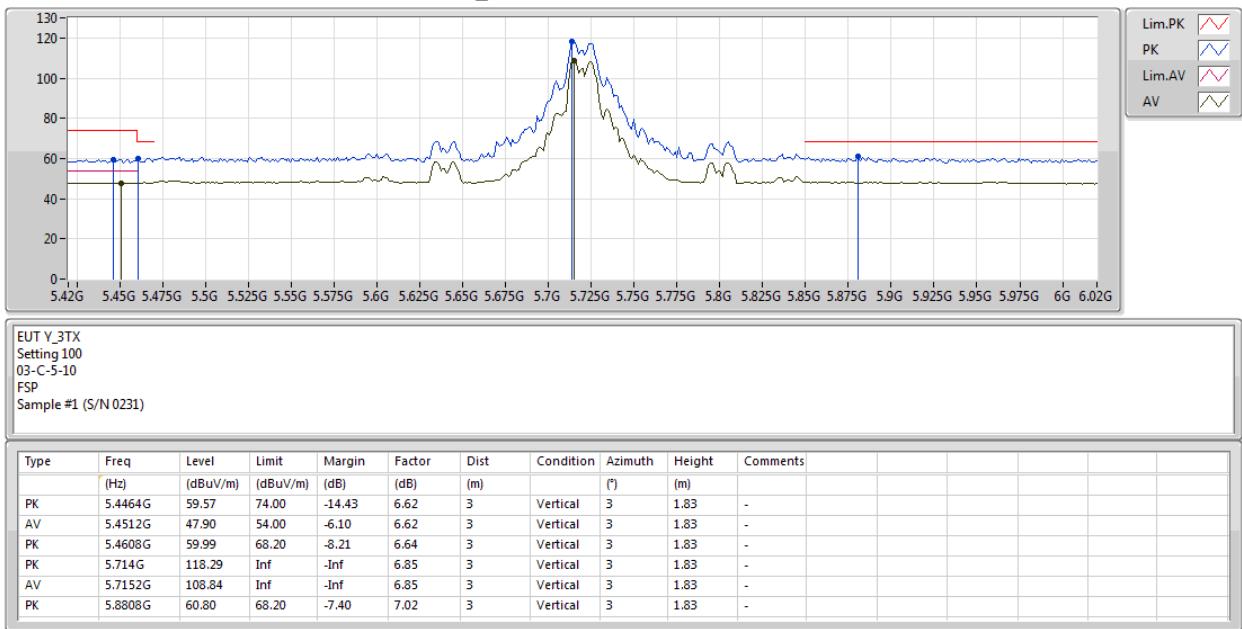
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5720MHz Straddle 5.47-5.725GHz_TX





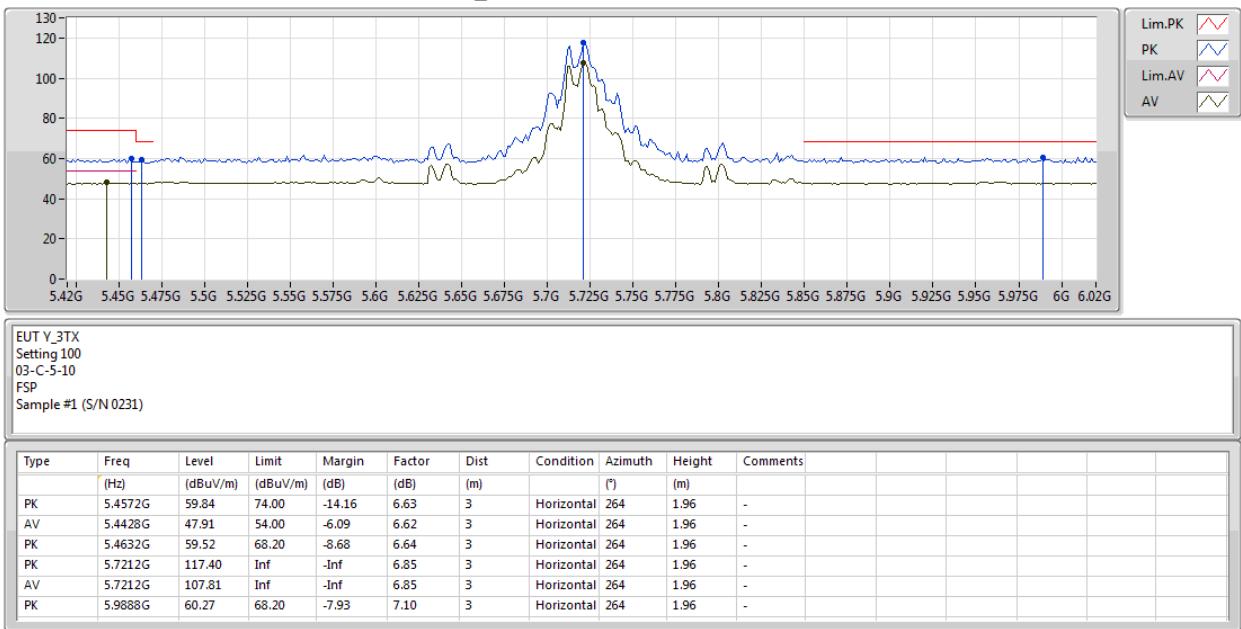
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5720MHz Straddle 5.47-5.725GHz_TX





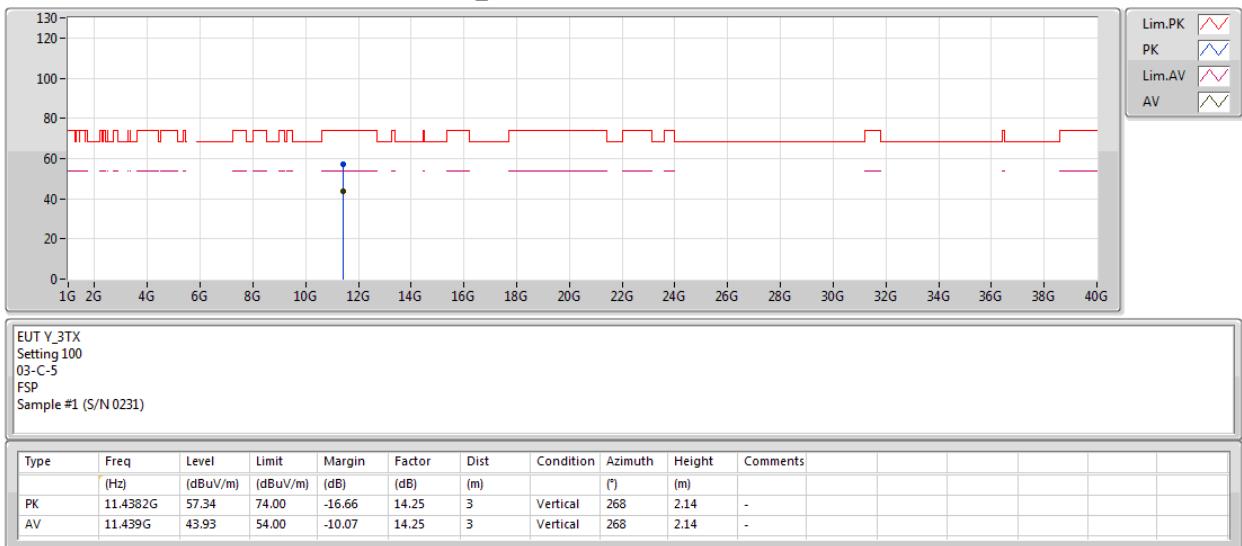
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5720MHz Straddle 5.47-5.725GHz_TX





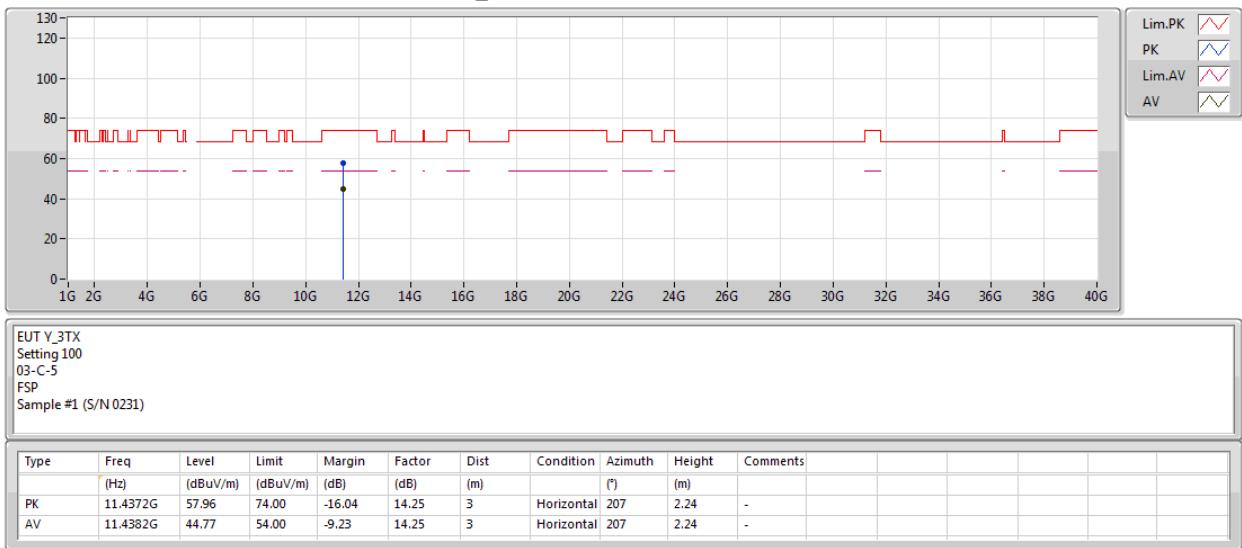
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5720MHz Straddle 5.47-5.725GHz_TX





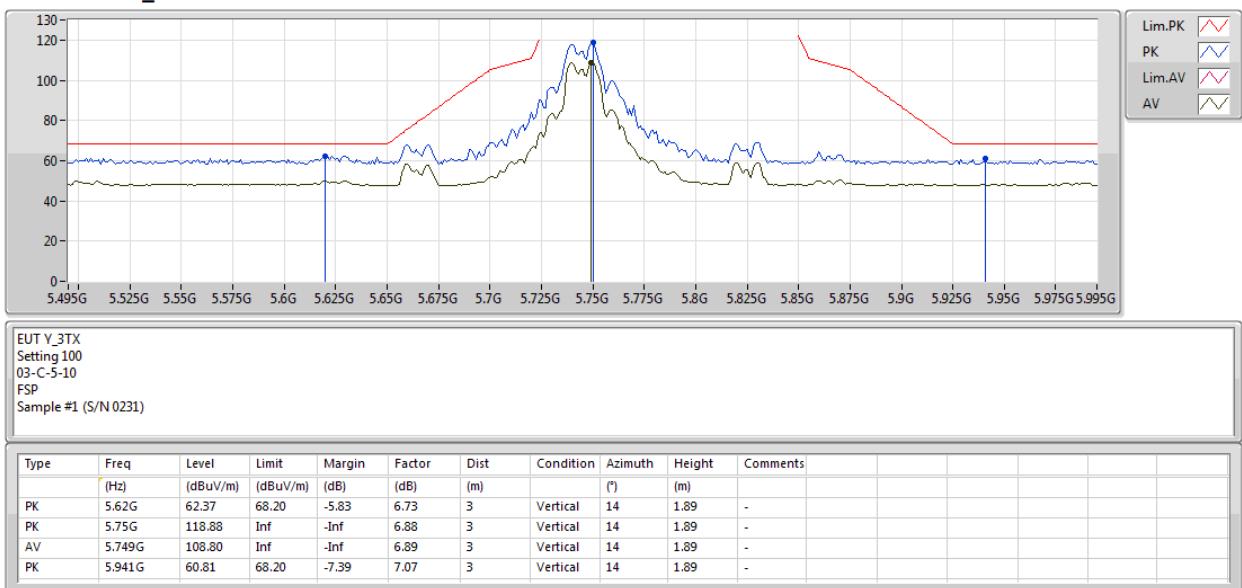
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5745MHz_TX





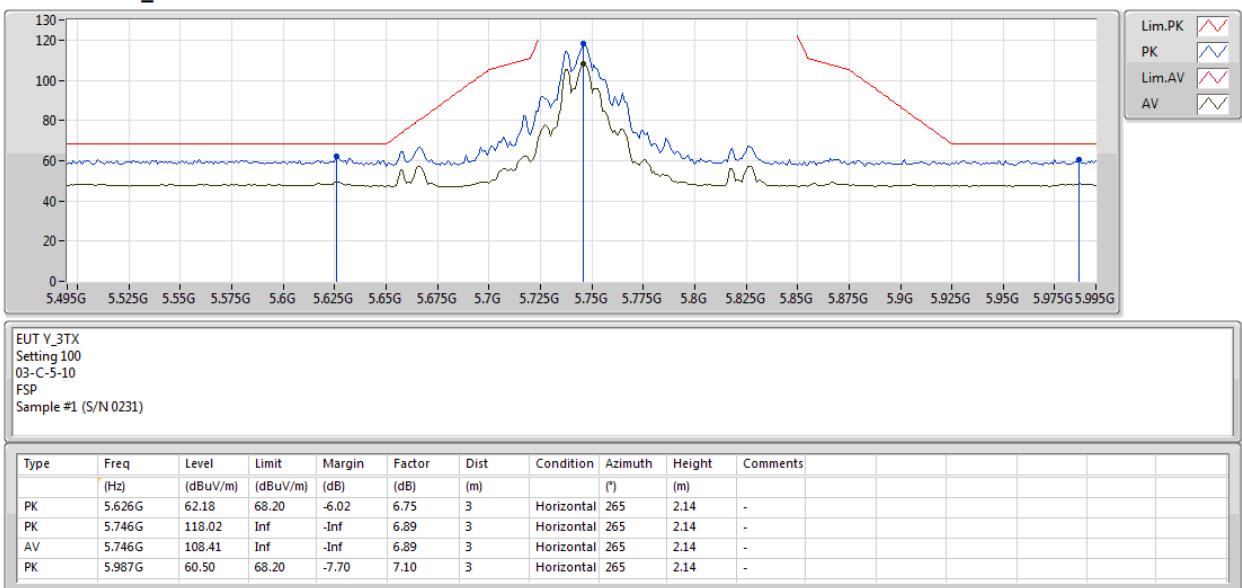
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5745MHz_TX





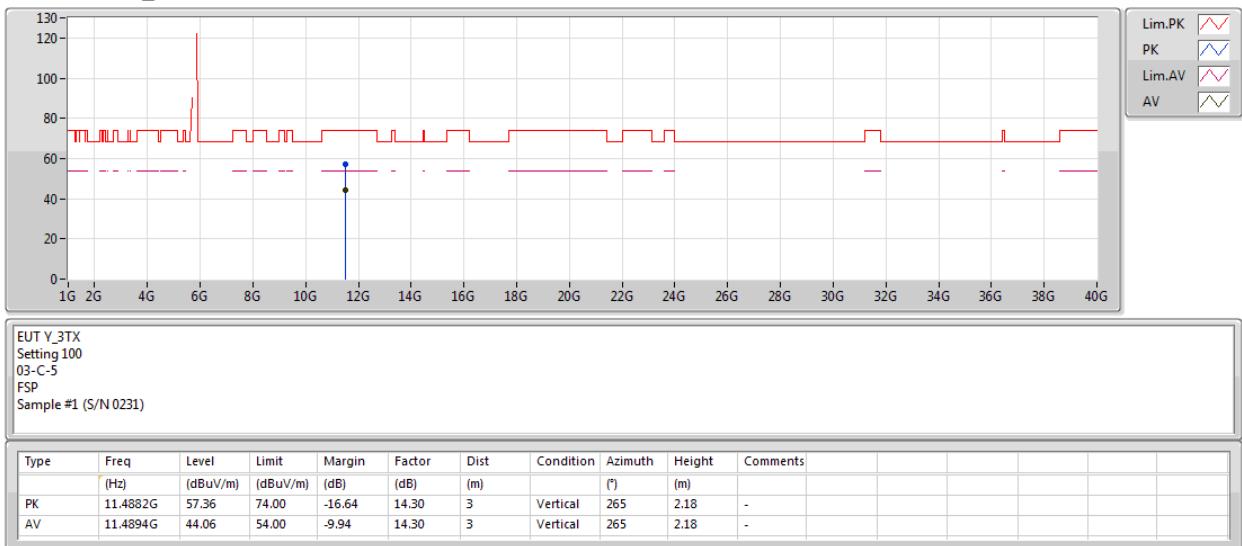
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5745MHz_TX





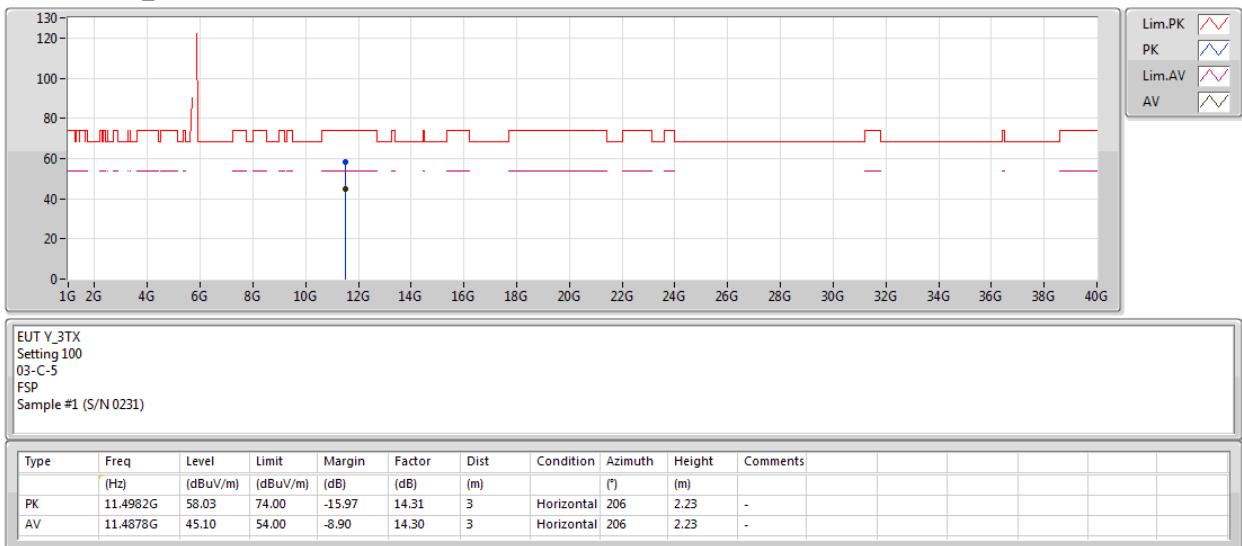
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5745MHz_TX





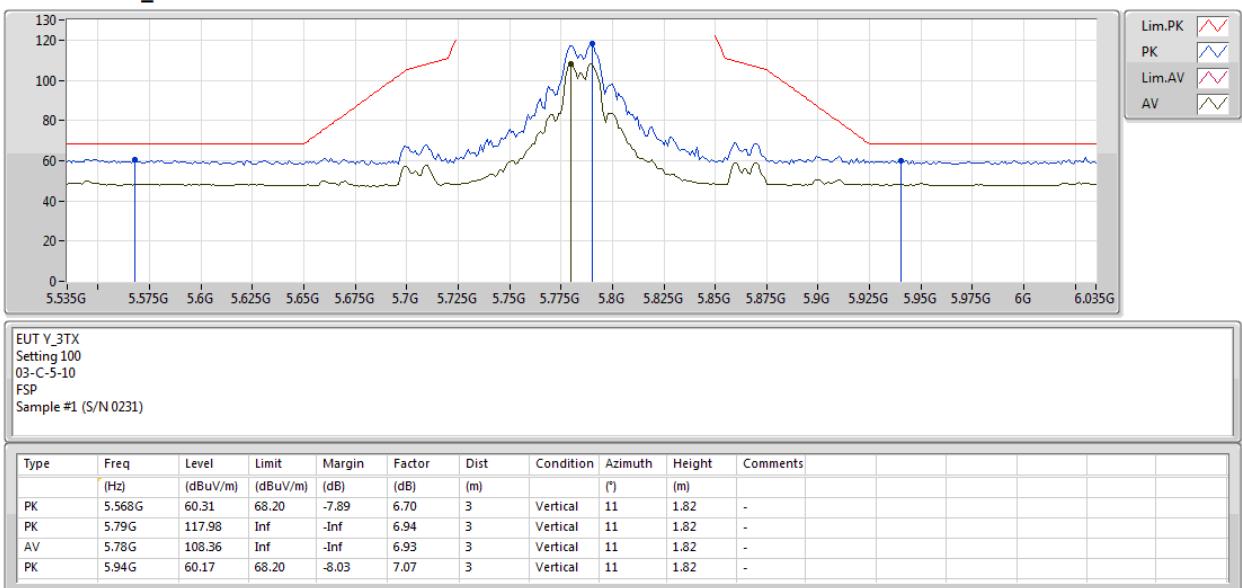
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5785MHz_TX





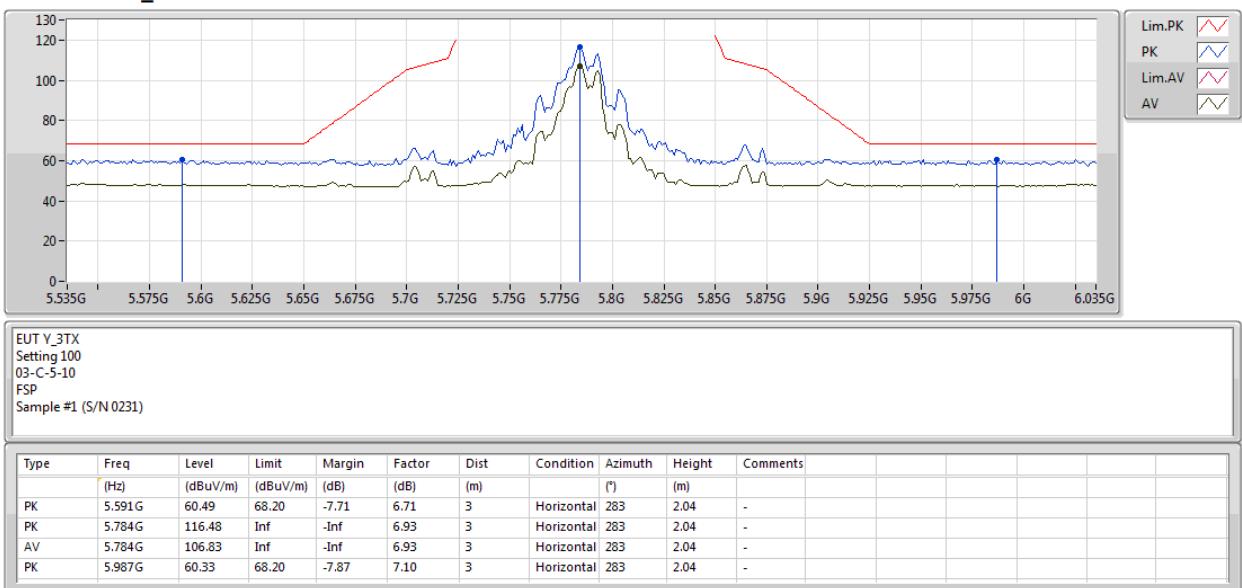
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5785MHz_TX





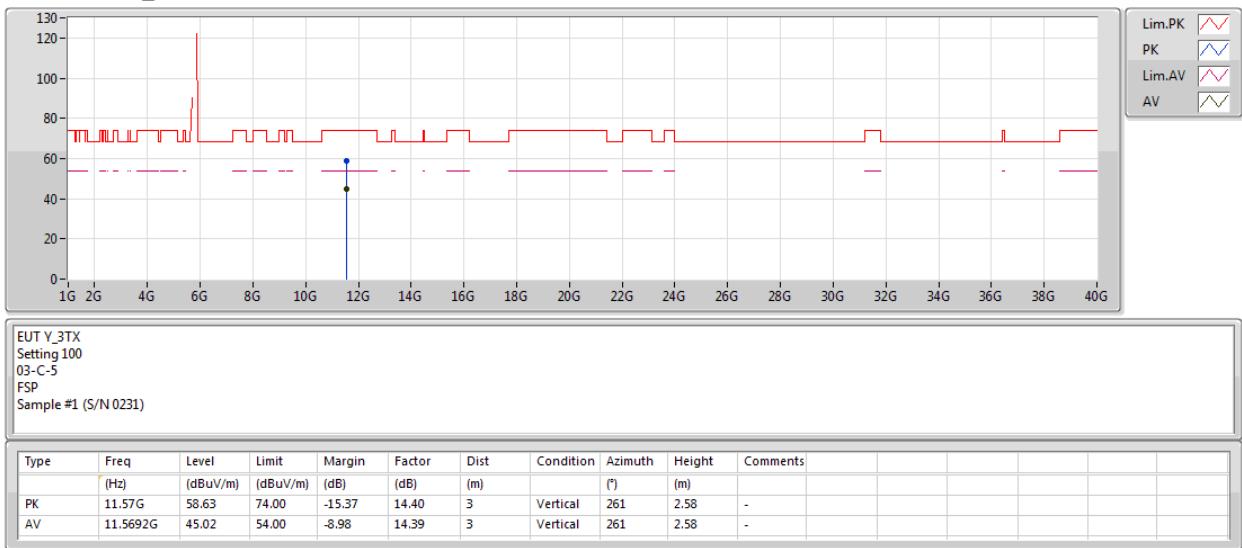
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5785MHz_TX





RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5785MHz_TX





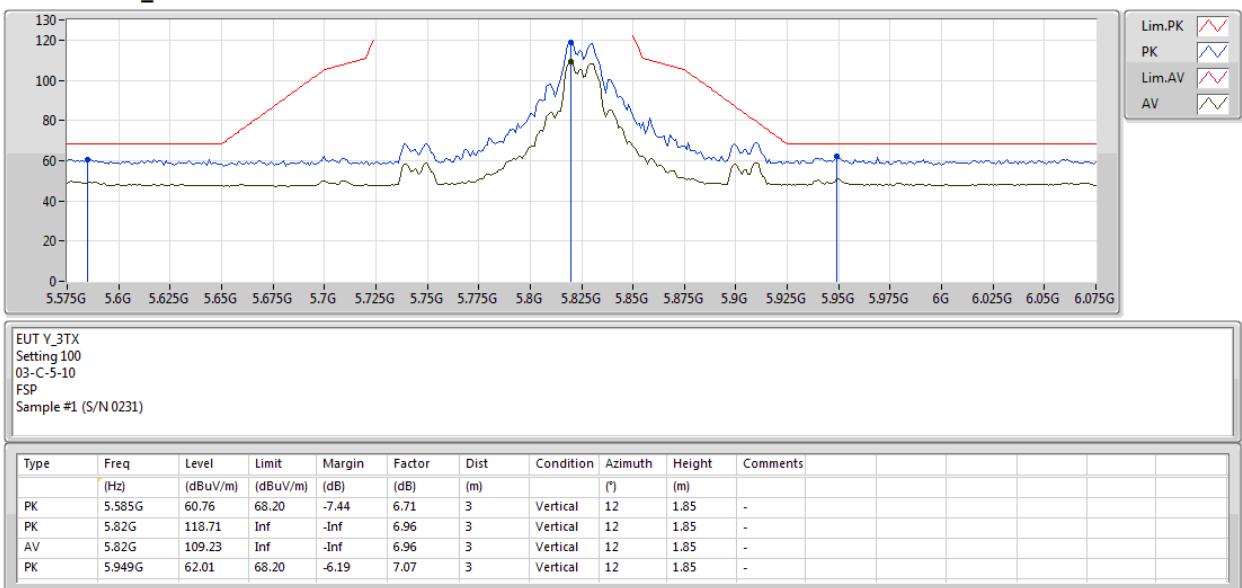
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

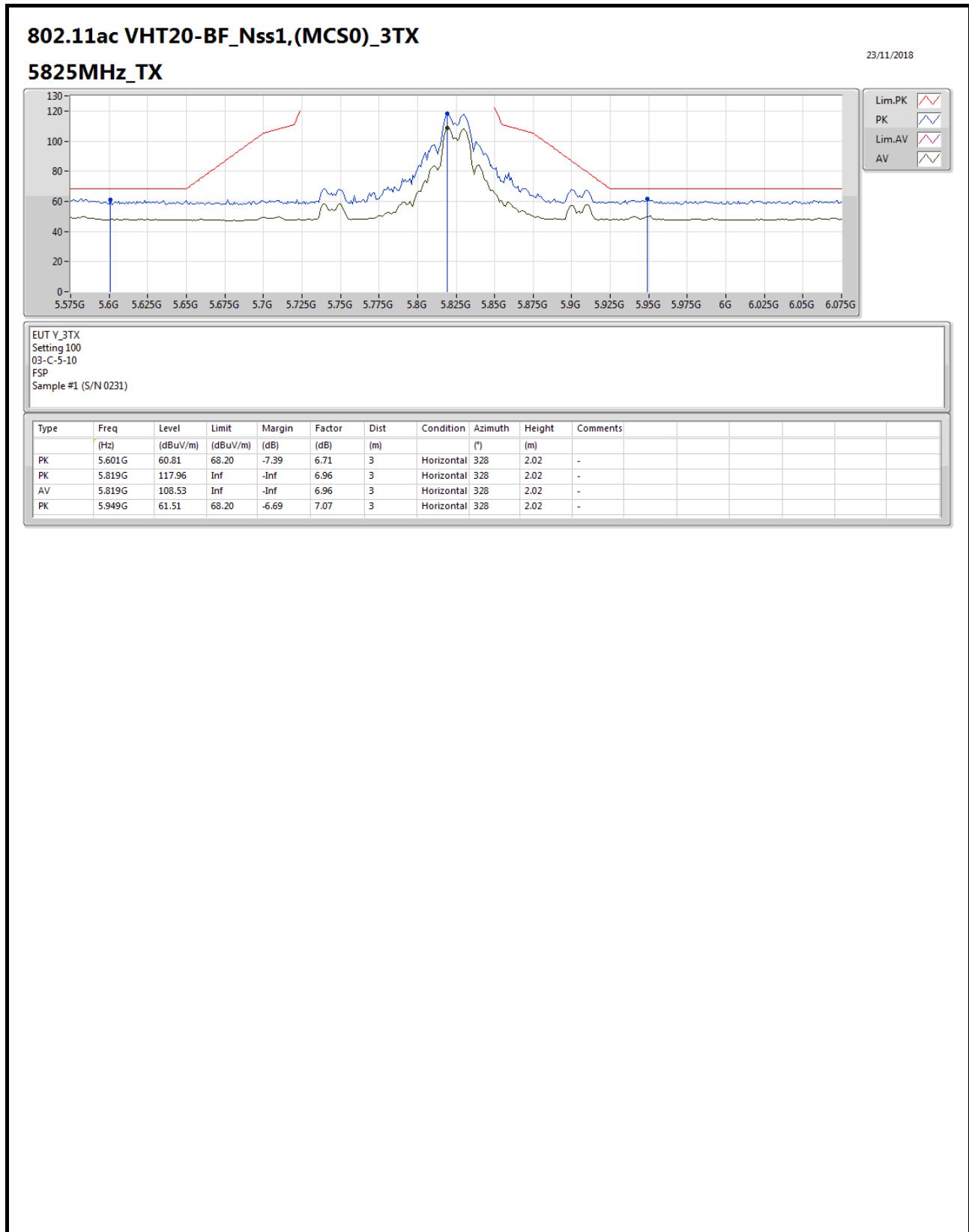
5825MHz_TX





RSE TX above 1GHz Result

Appendix E.2





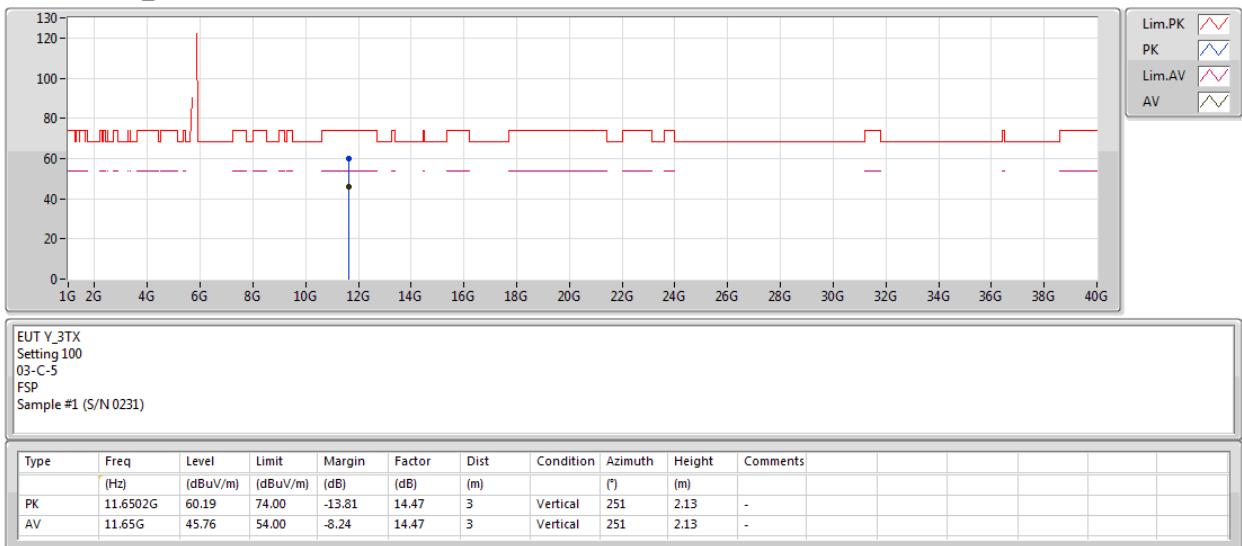
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5825MHz_TX





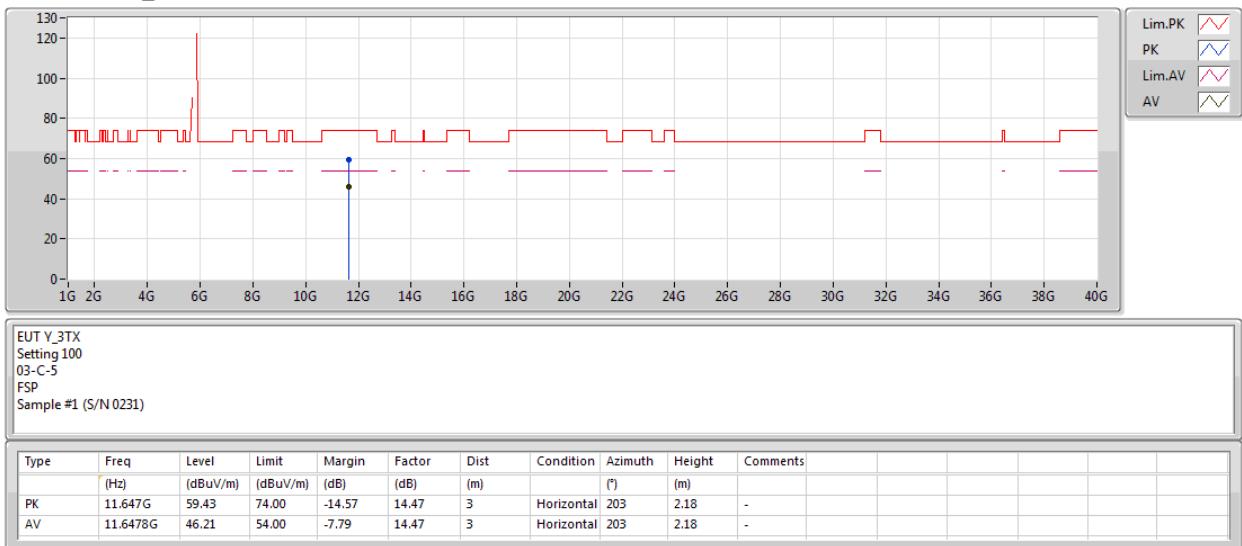
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

23/11/2018

5825MHz_TX





RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5190MHz_TX





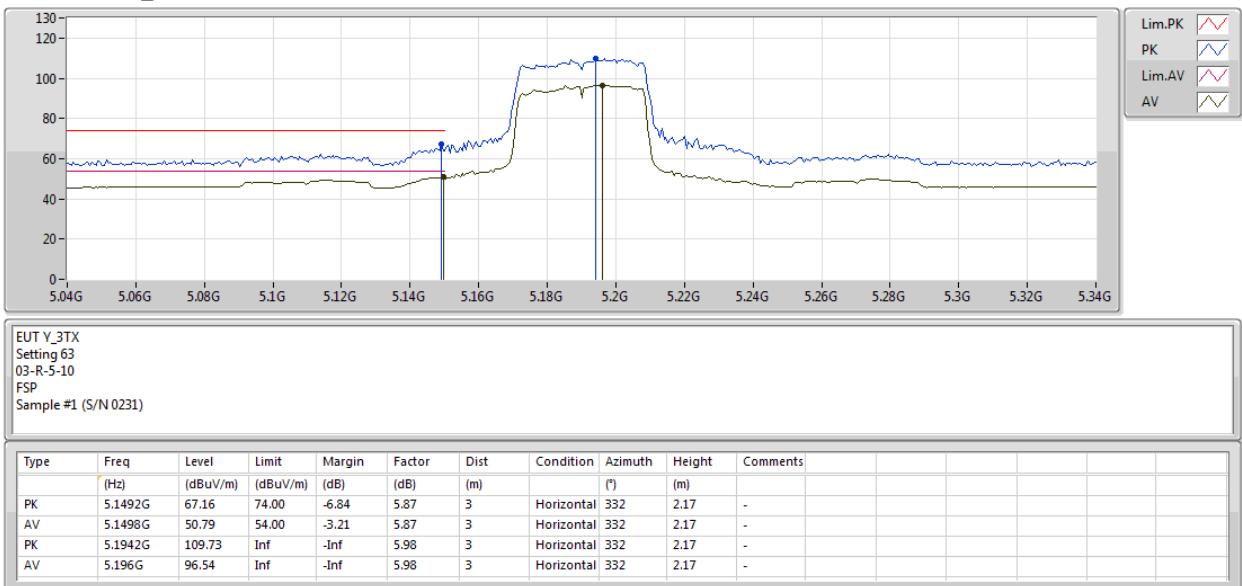
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5190MHz_TX





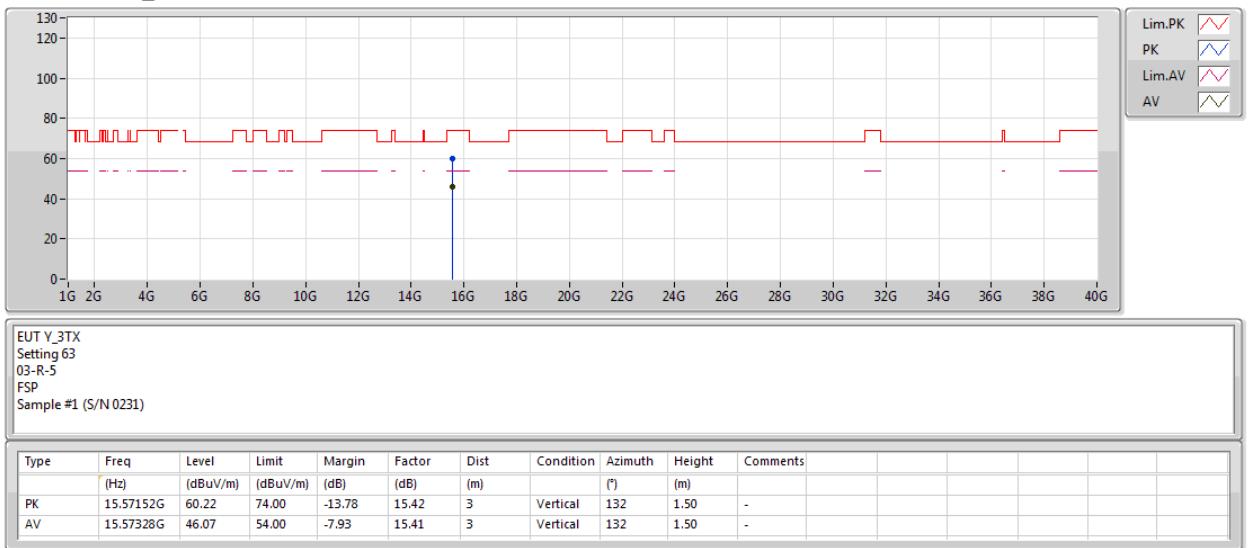
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5190MHz_TX





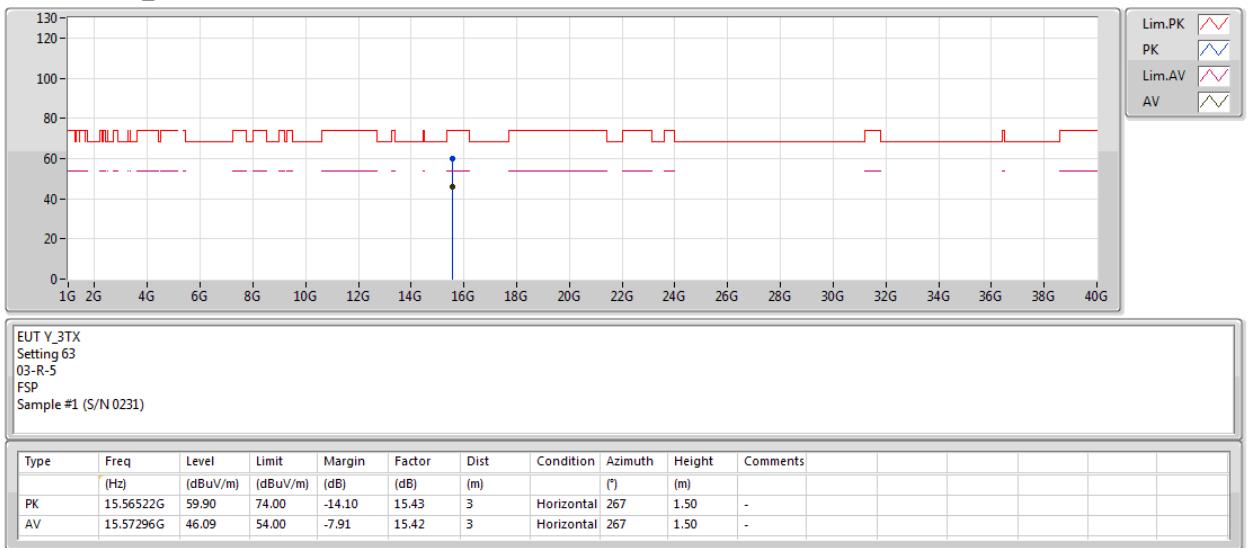
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5190MHz_TX





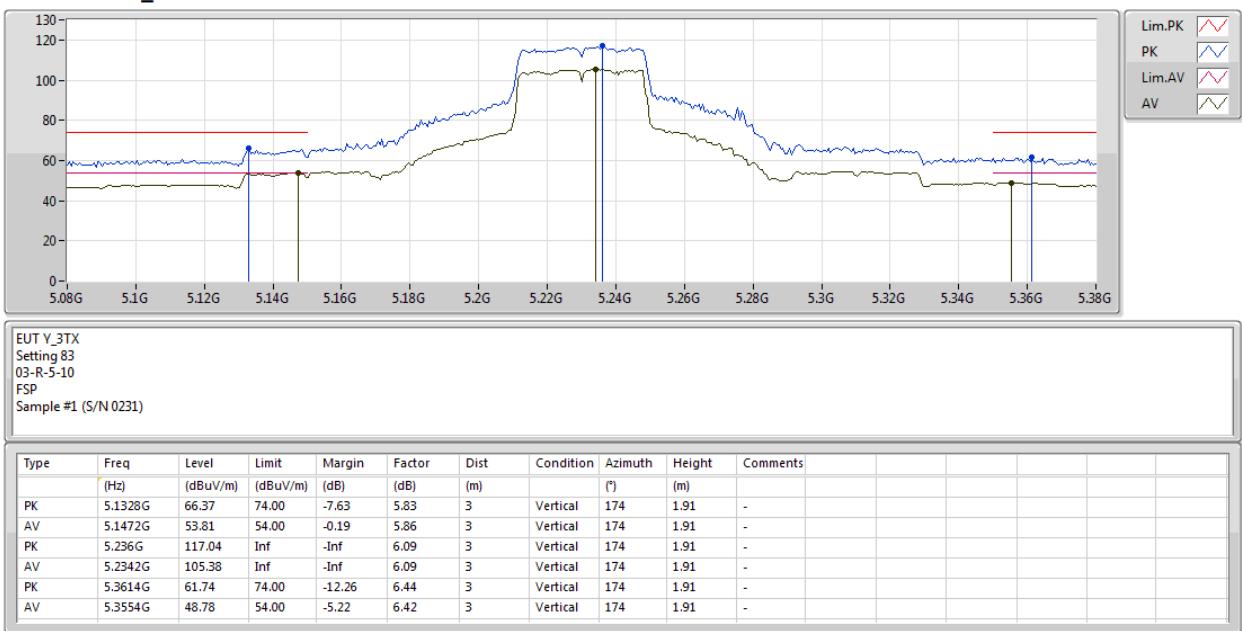
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5230MHz_TX





RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5230MHz_TX





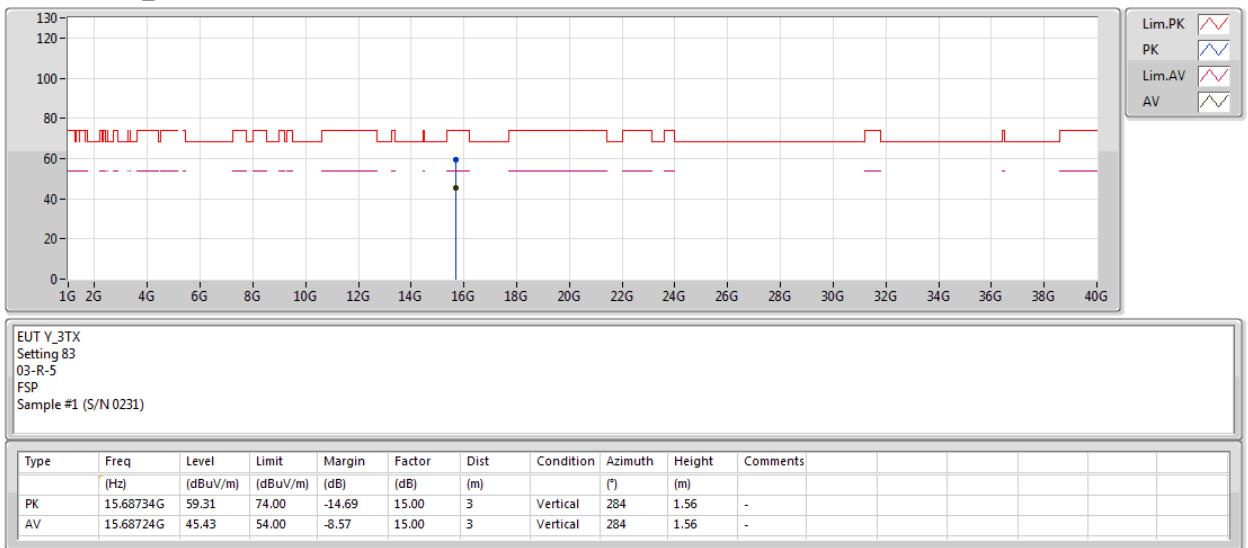
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5230MHz_TX





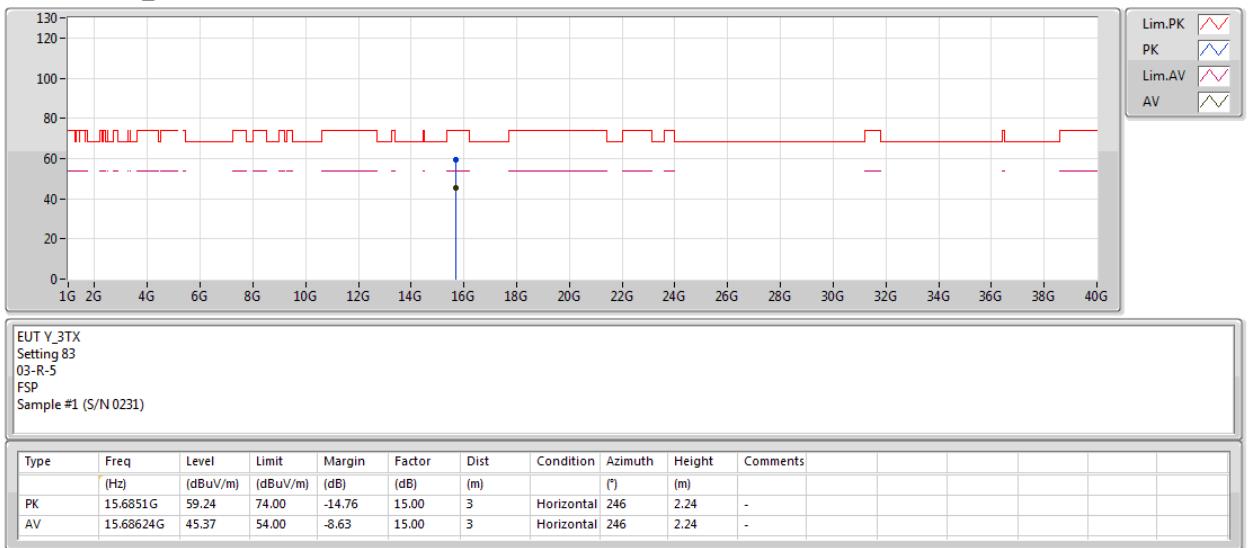
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5230MHz_TX





RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5270MHz_TX





RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5270MHz_TX





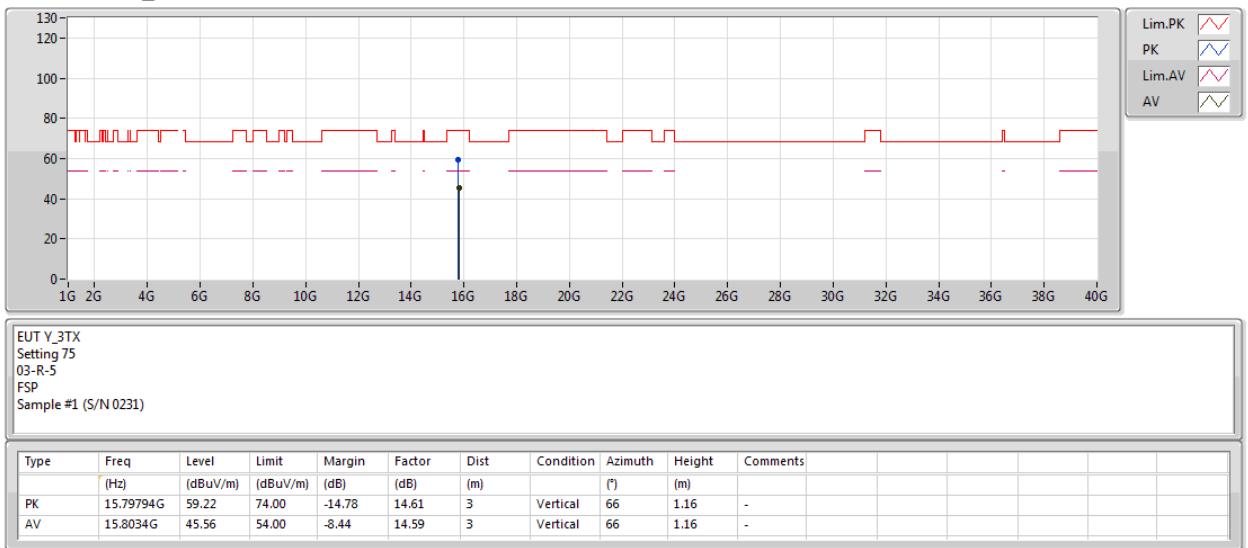
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5270MHz_TX





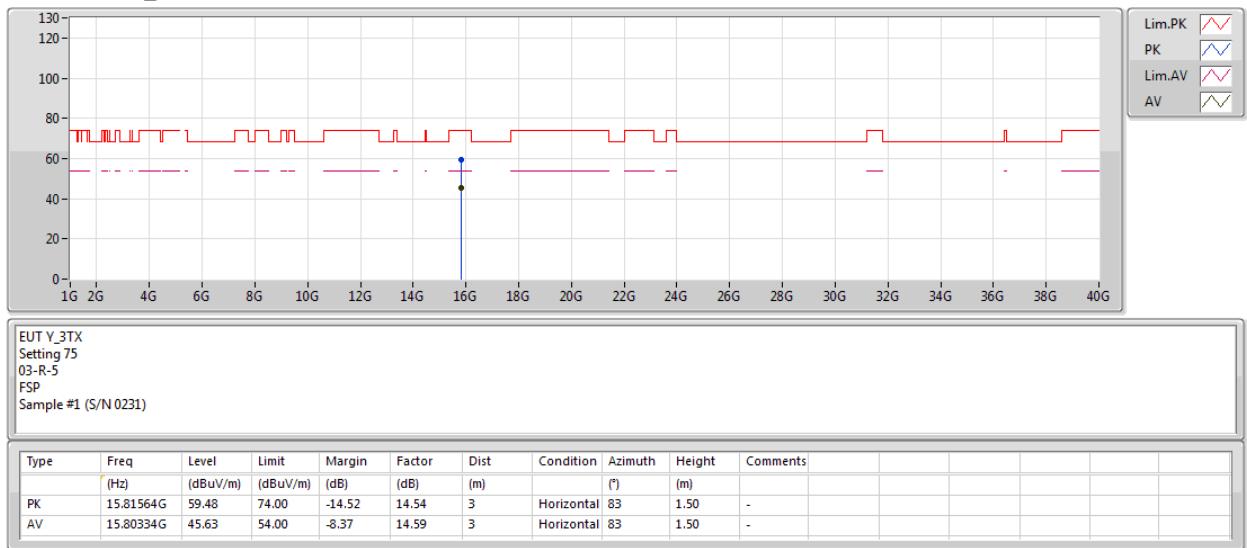
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5270MHz_TX





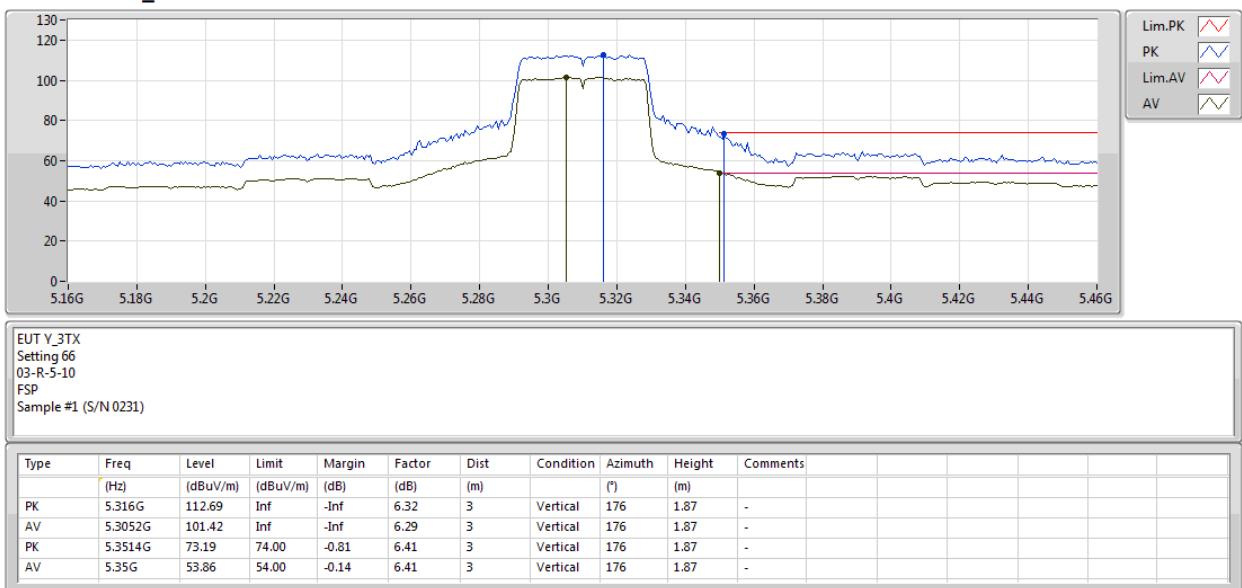
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5310MHz_TX





RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5310MHz_TX





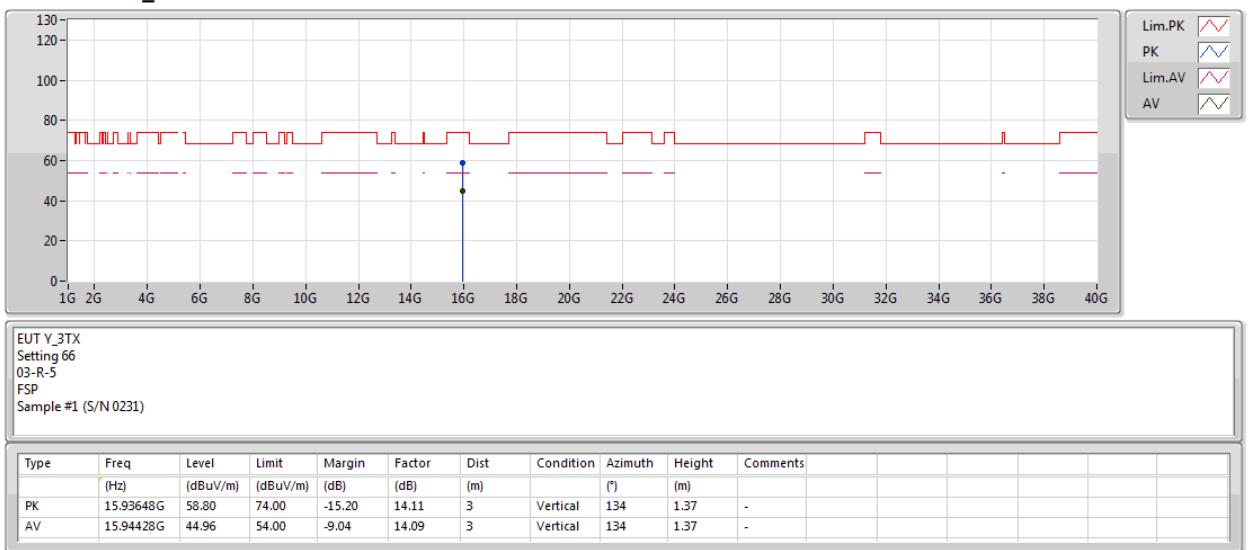
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5310MHz_TX





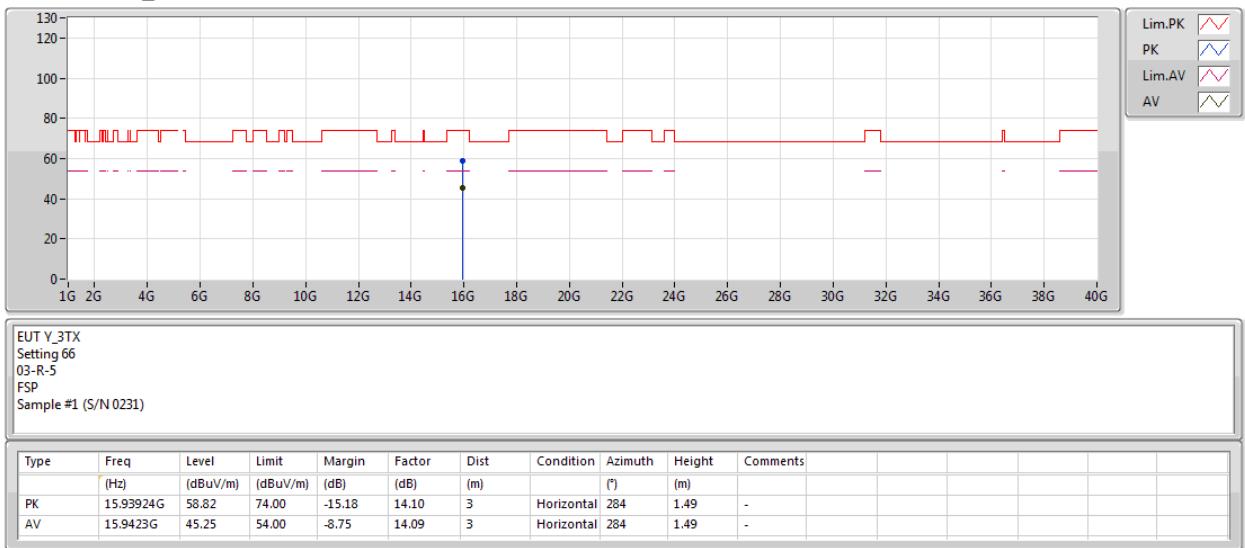
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5310MHz_TX





RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5510MHz_TX





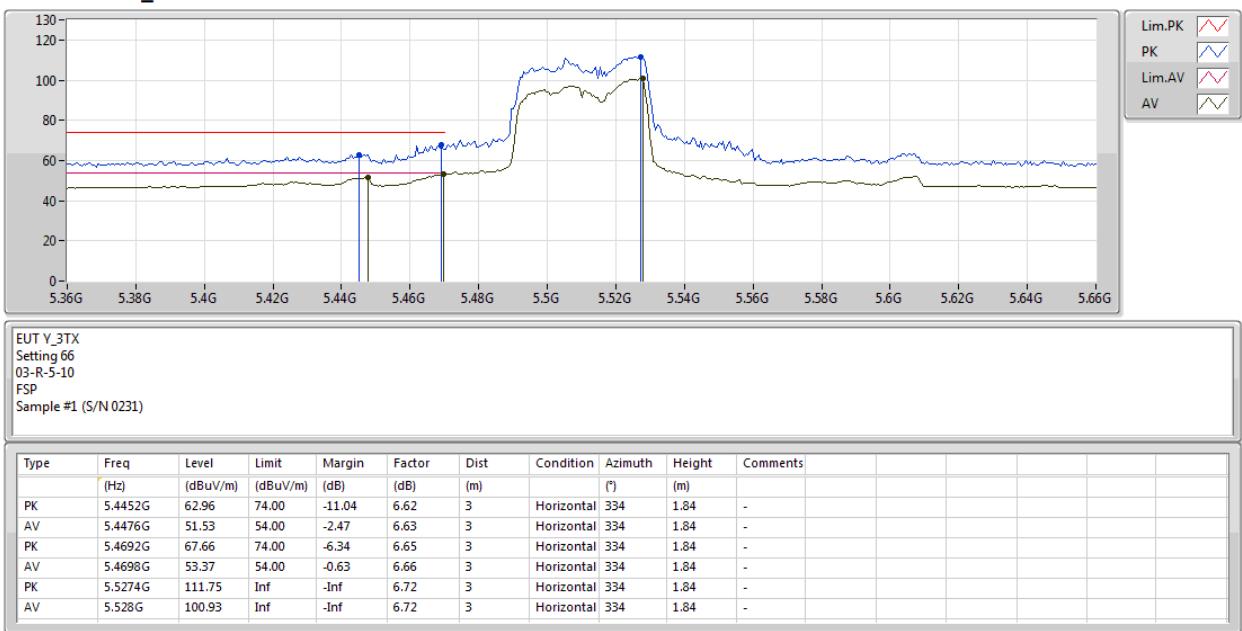
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5510MHz_TX





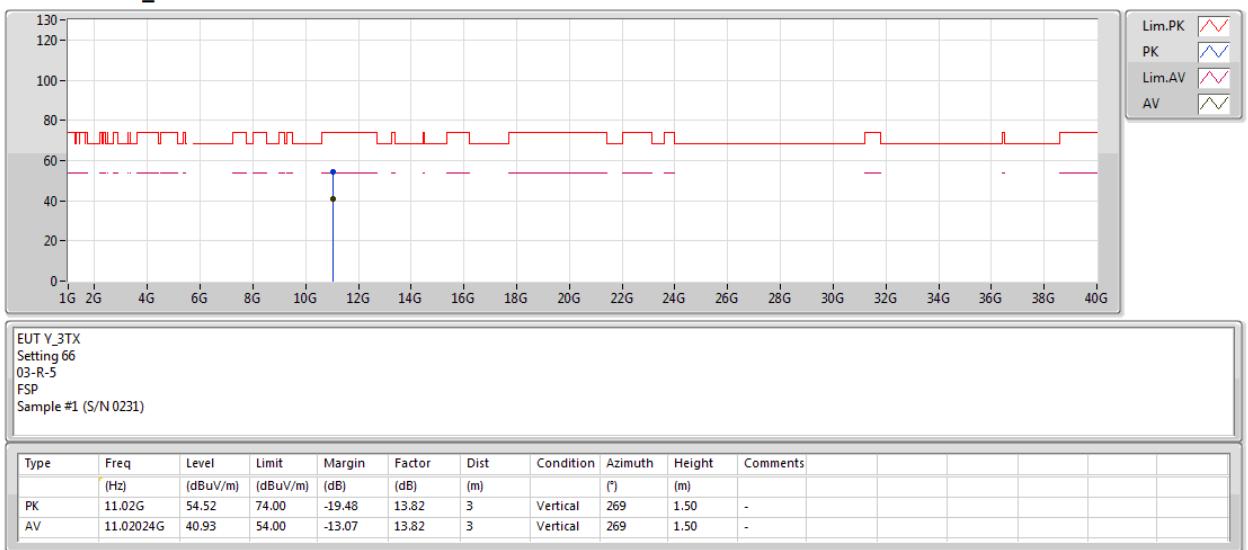
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5510MHz_TX





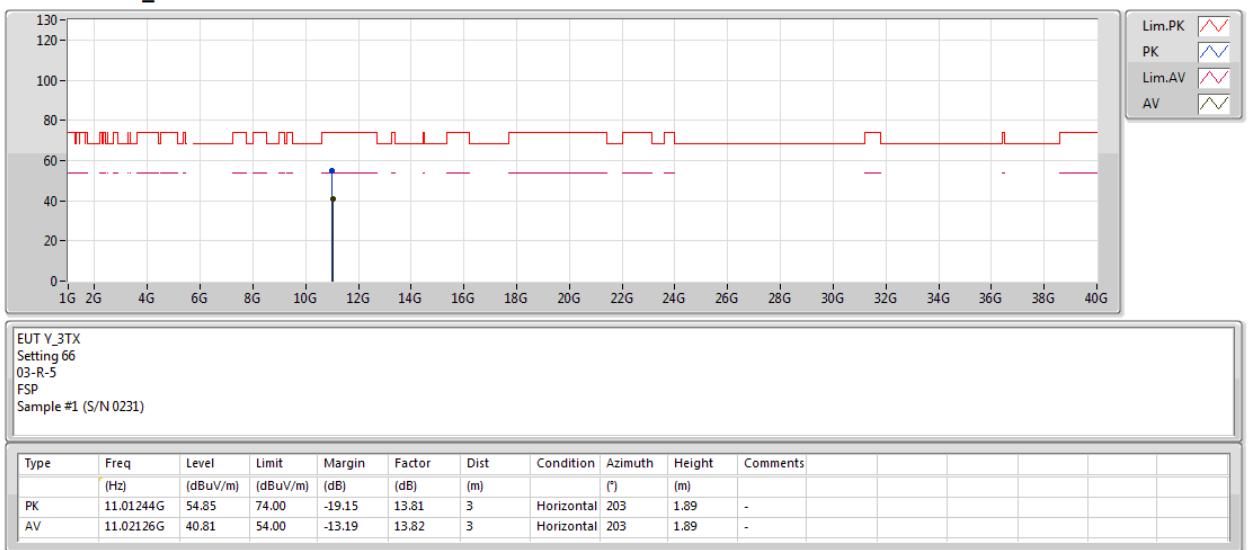
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5510MHz_TX





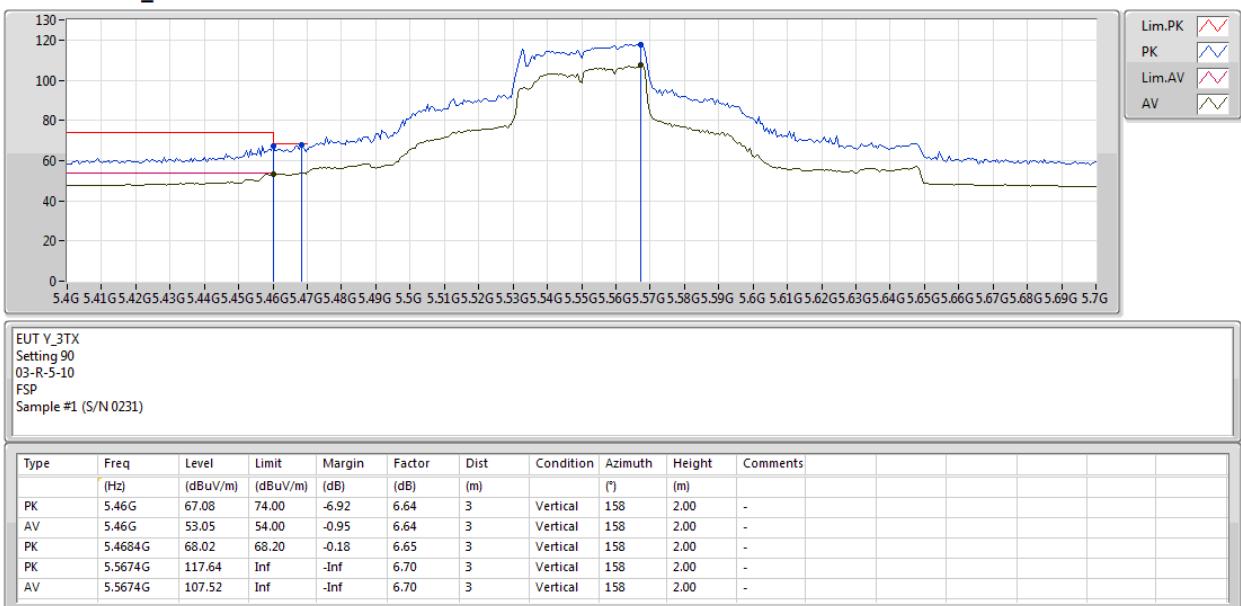
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5550MHz_TX





RSE TX above 1GHz Result

Appendix E.2





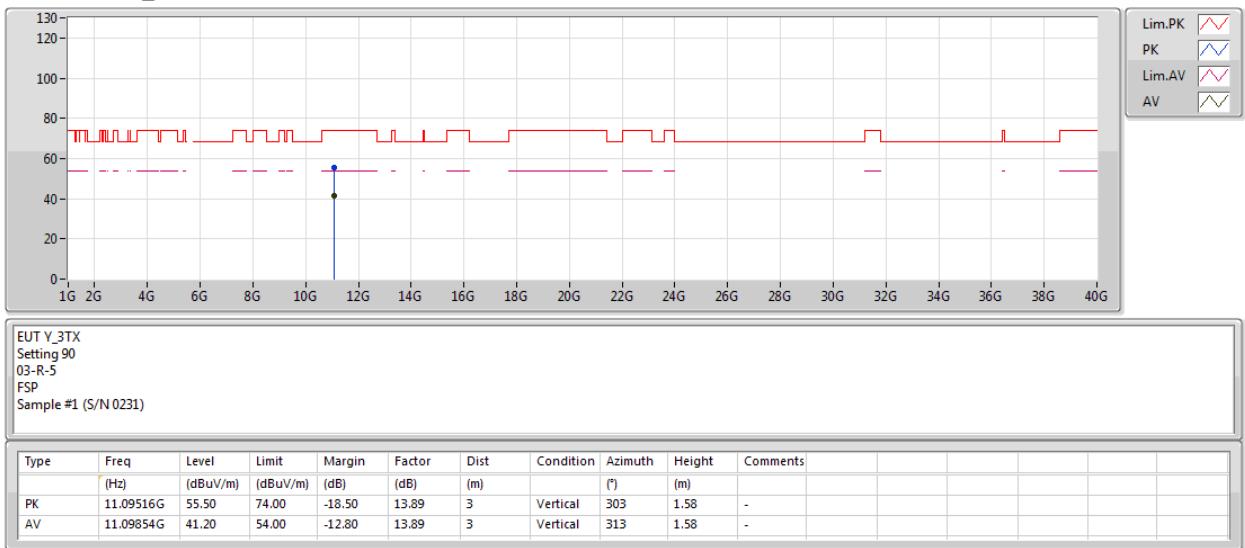
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5550MHz_TX





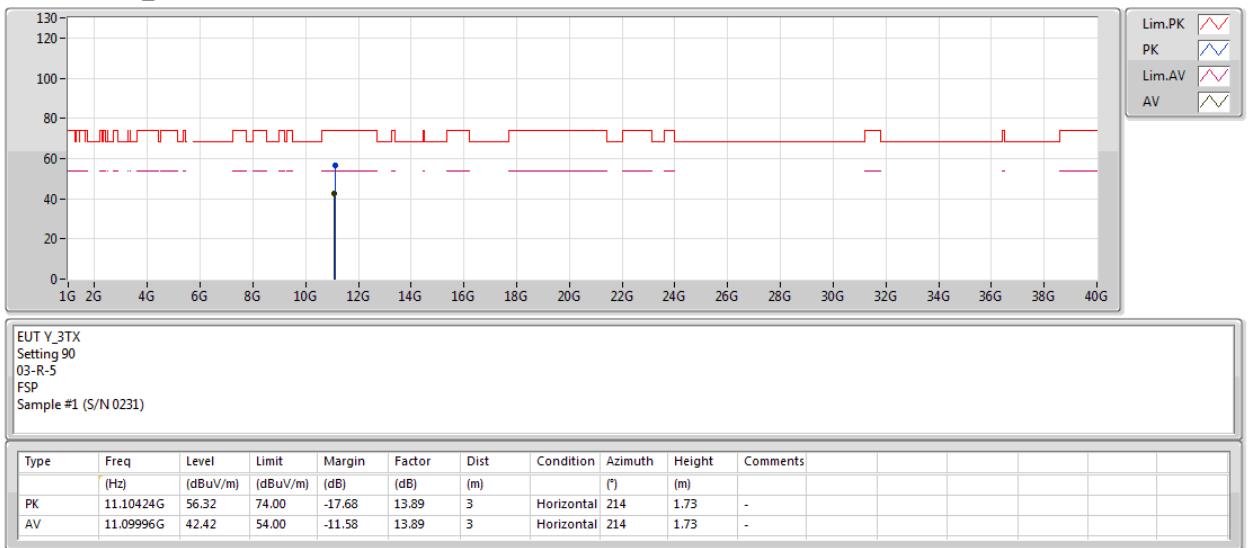
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5550MHz_TX





RSE TX above 1GHz Result

Appendix E.2





RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5670MHz_TX





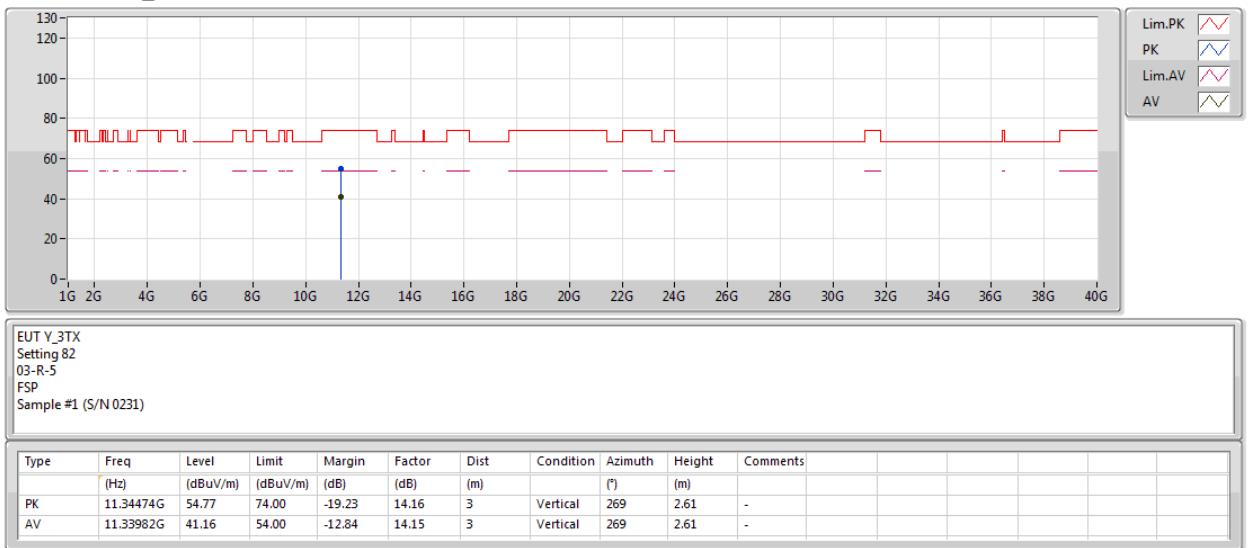
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5670MHz_TX





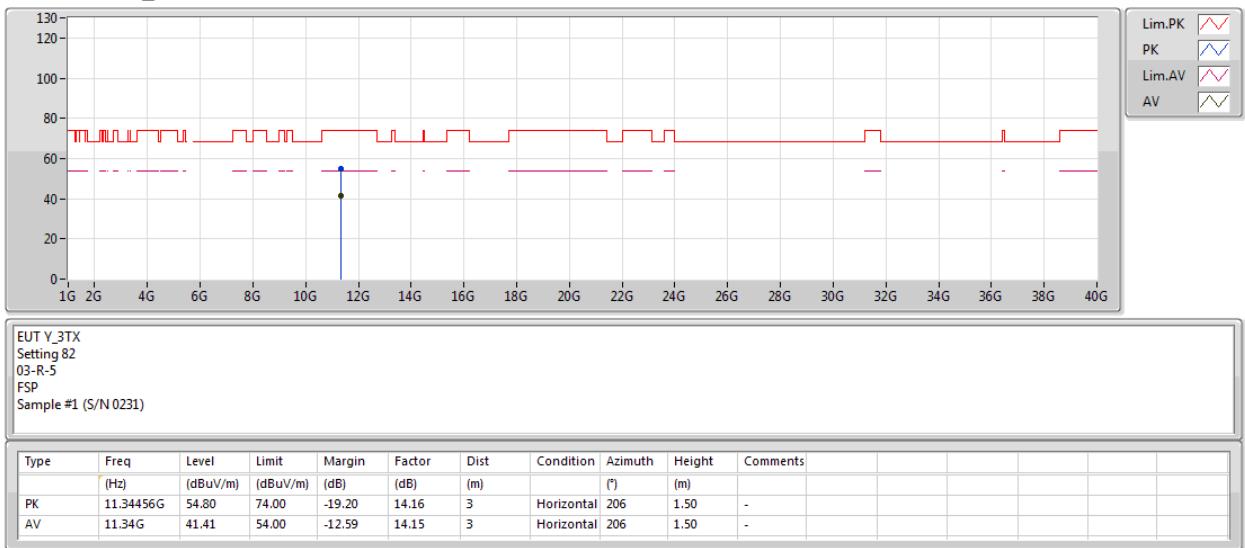
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5670MHz_TX





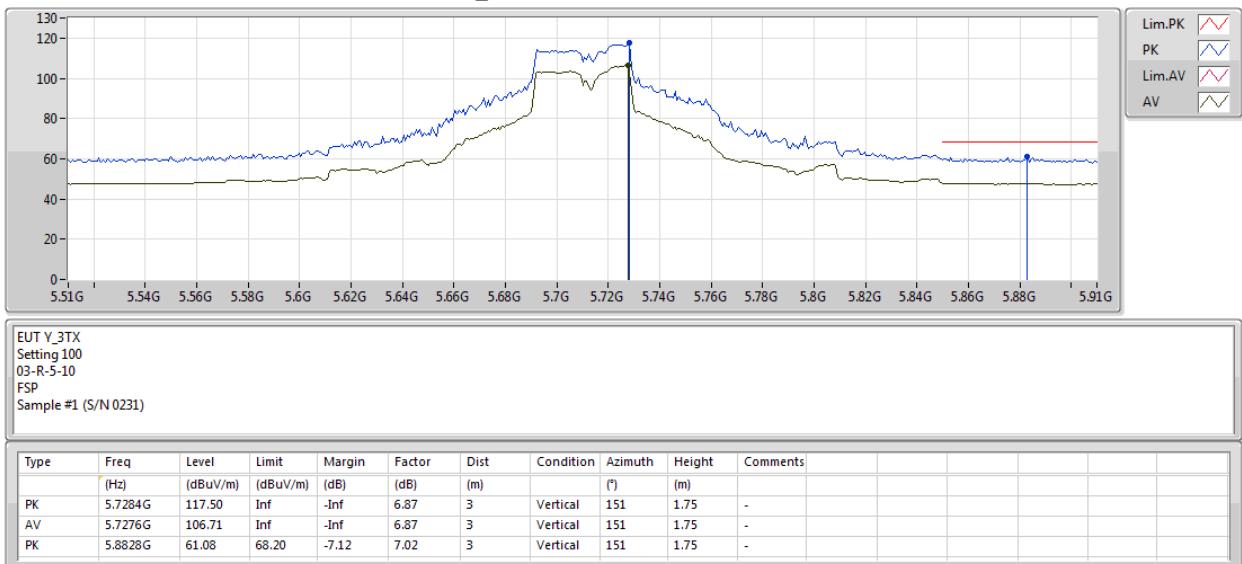
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5710MHz Straddle 5.47-5.725GHz_TX





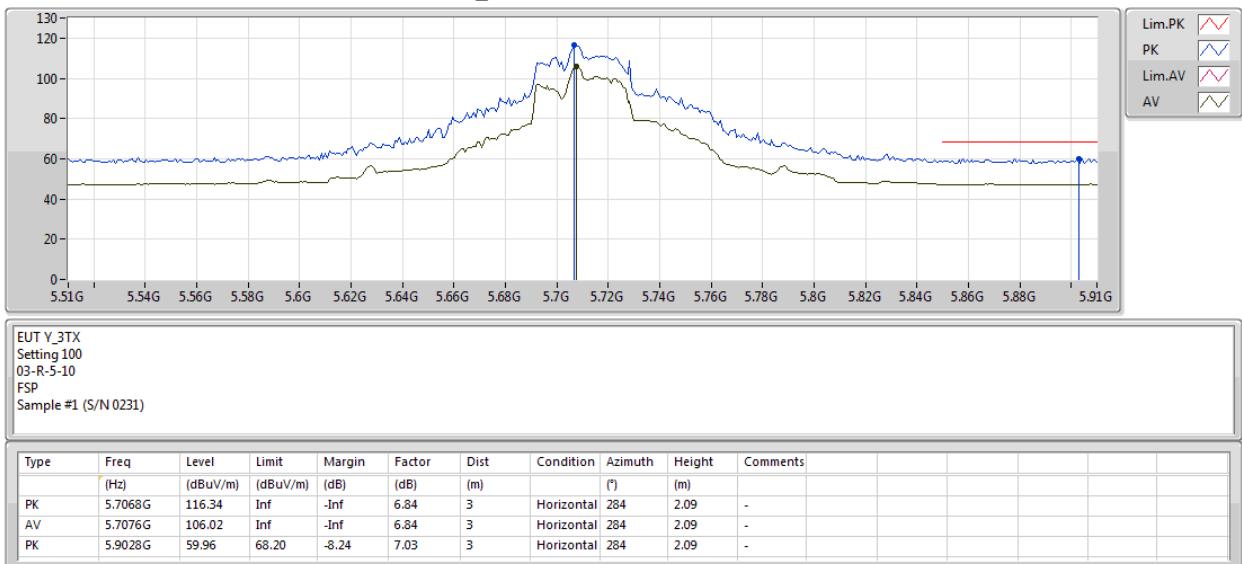
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5710MHz Straddle 5.47-5.725GHz_TX





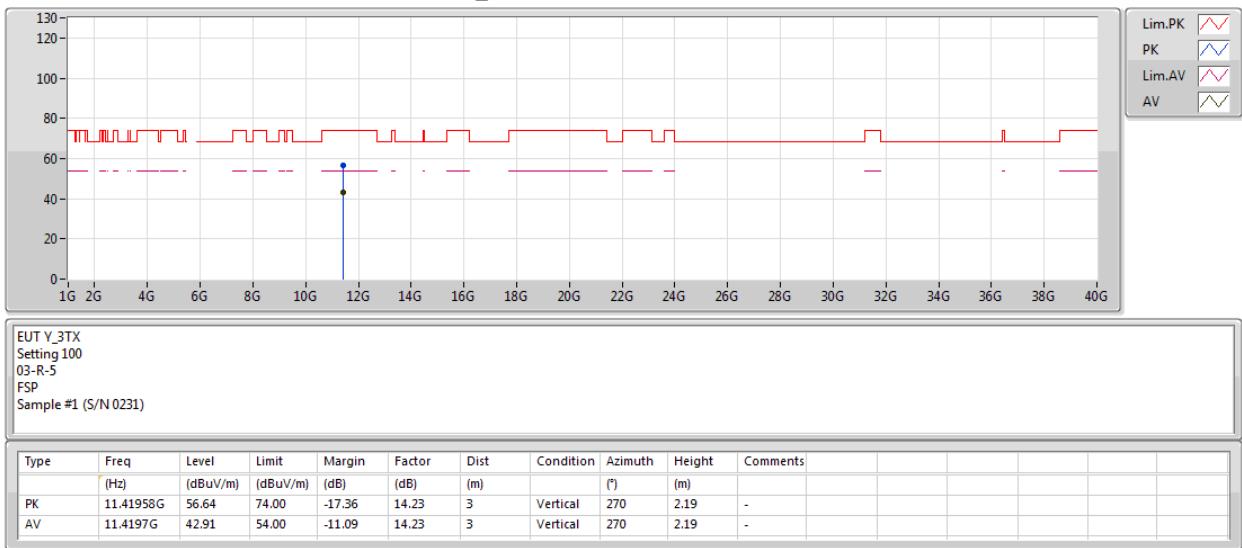
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5710MHz Straddle 5.47-5.725GHz_TX





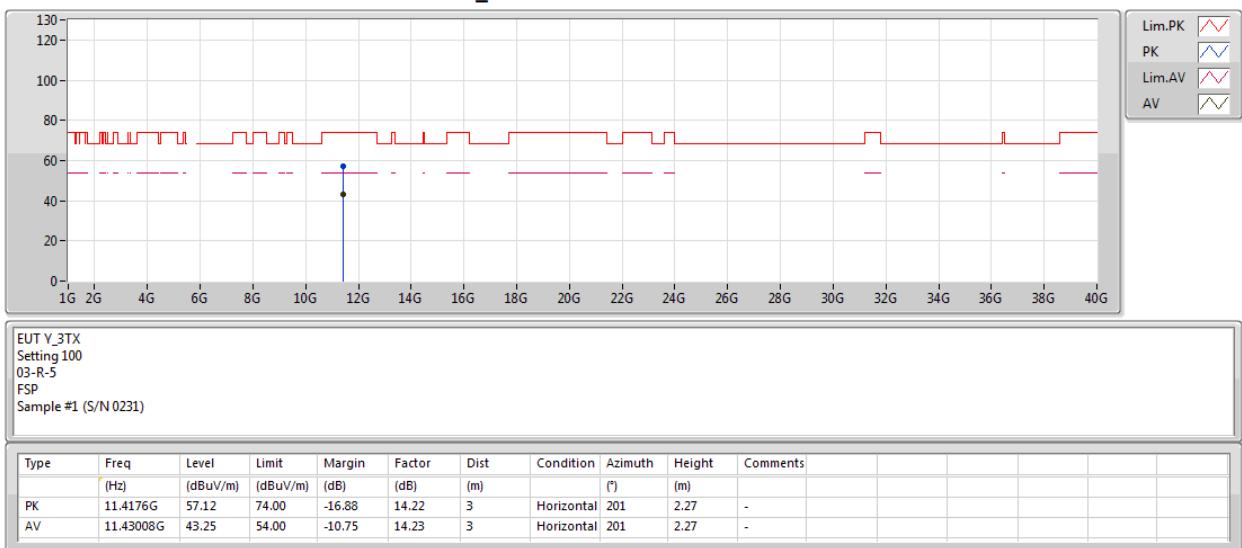
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5710MHz Straddle 5.47-5.725GHz_TX





RSE TX above 1GHz Result

Appendix E.2





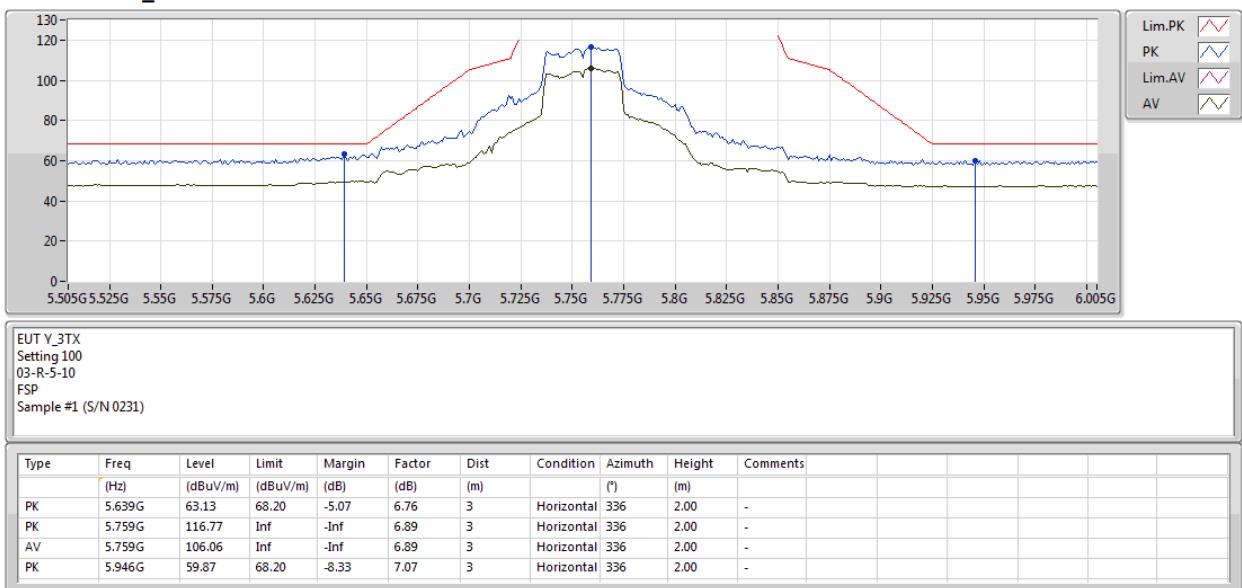
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5755MHz_TX





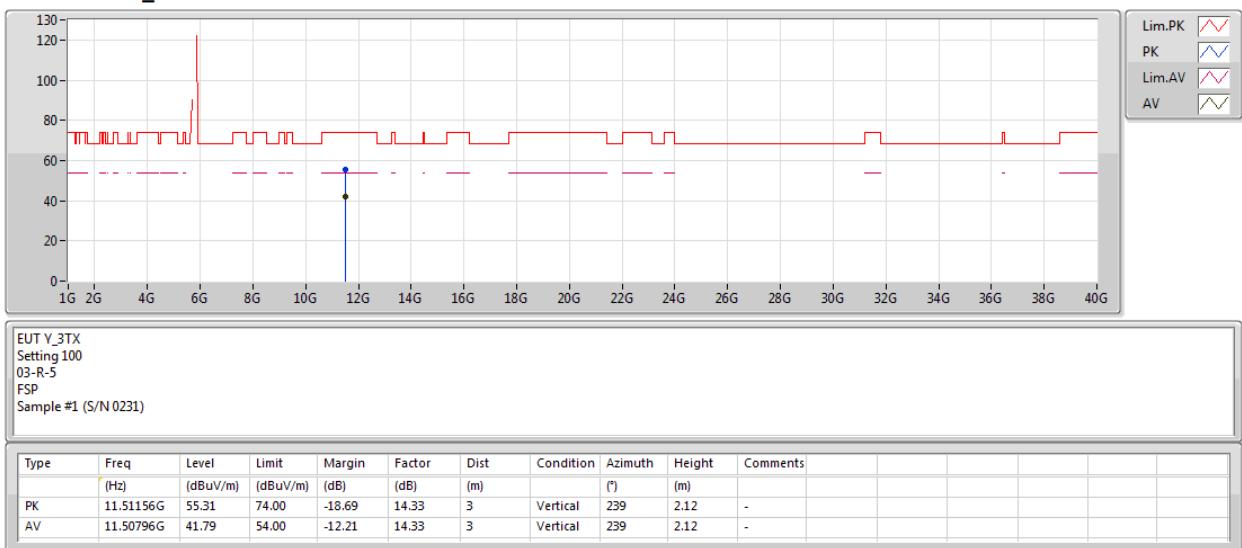
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5755MHz_TX





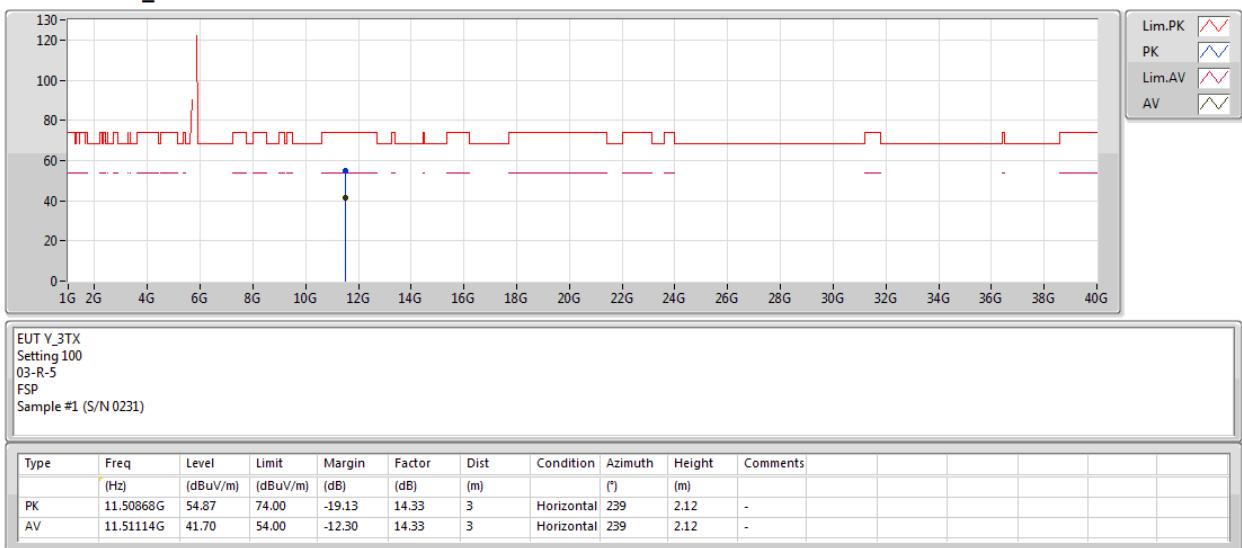
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5755MHz_TX





RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5795MHz_TX





RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5795MHz_TX





RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5795MHz_TX





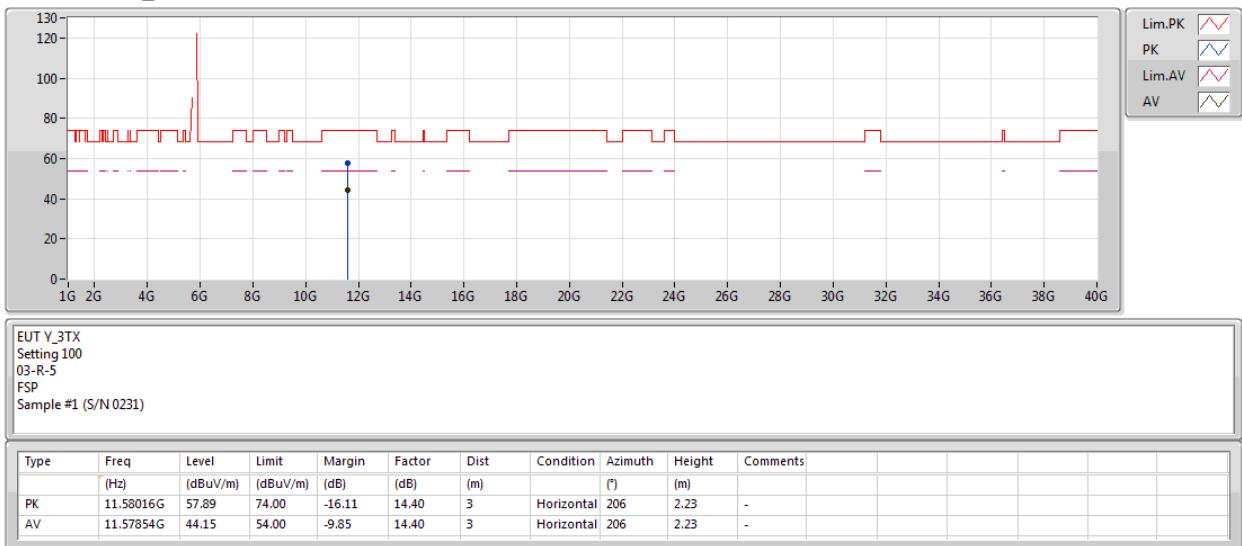
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

22/11/2018

5795MHz_TX





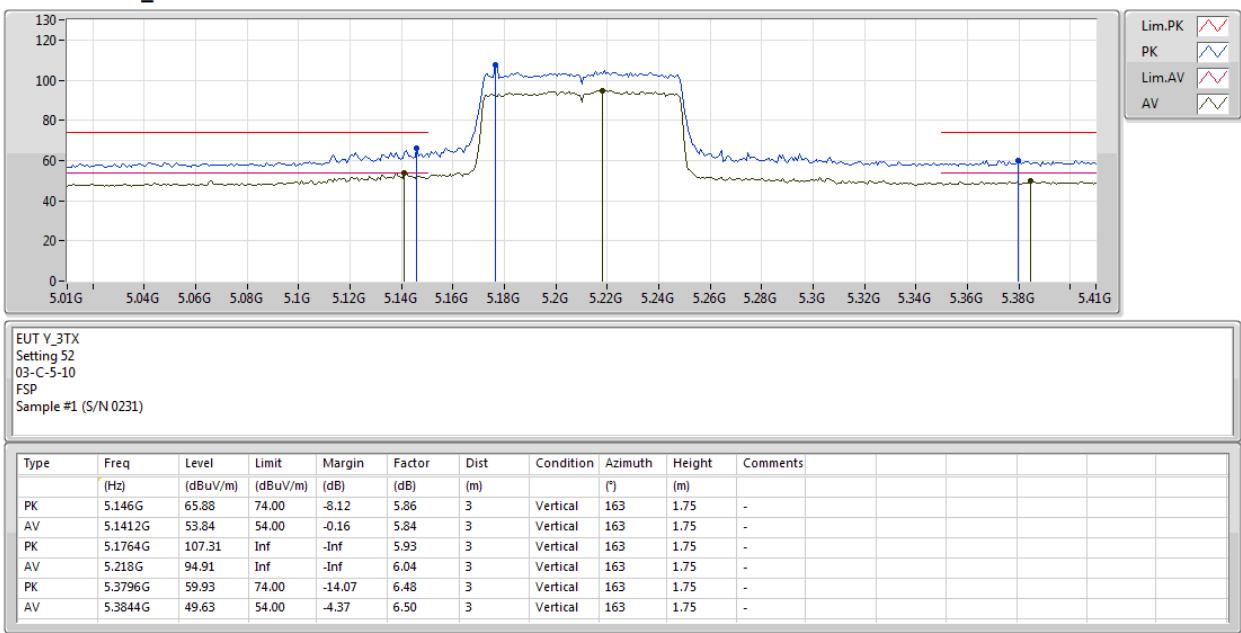
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

22/11/2018

5210MHz_TX





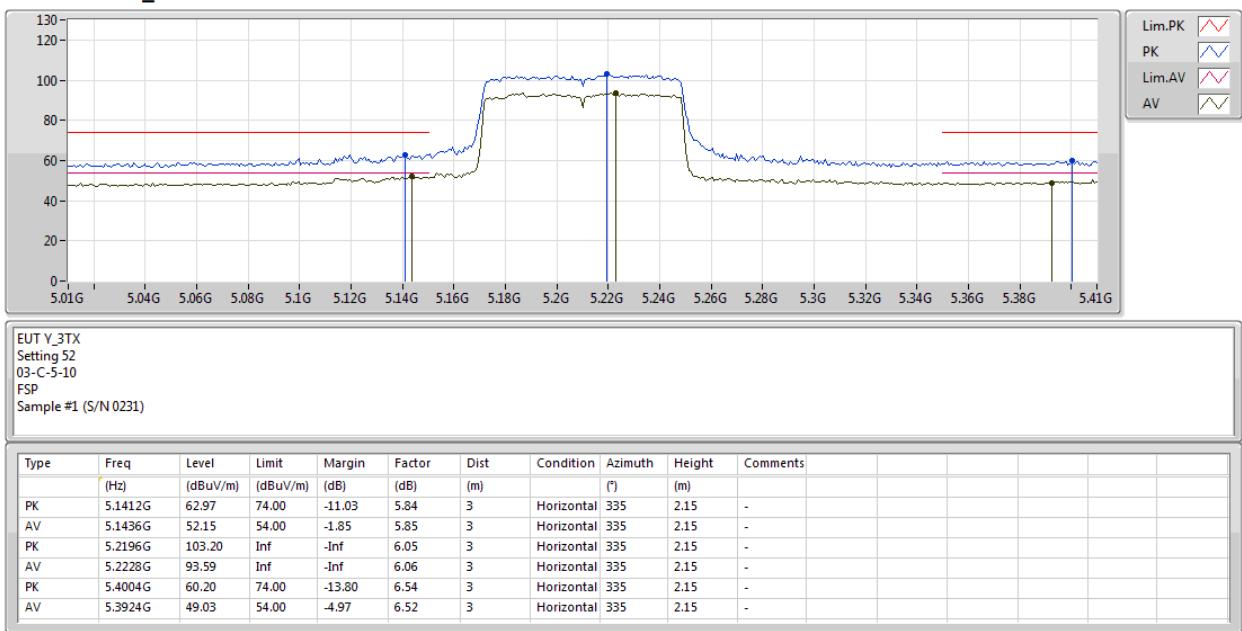
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

22/11/2018

5210MHz_TX





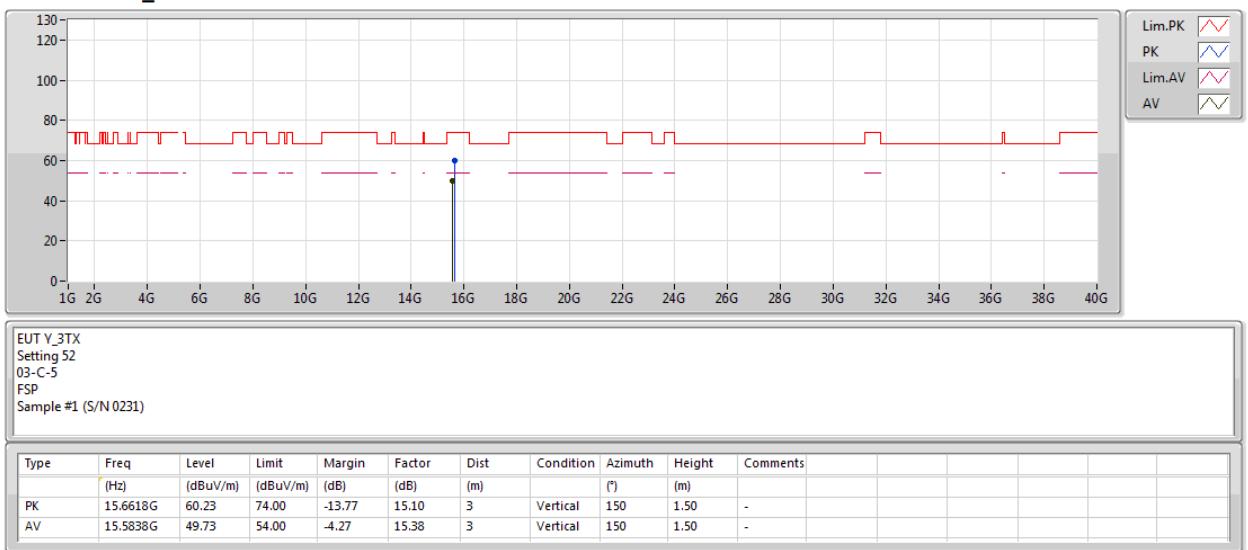
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

22/11/2018

5210MHz_TX





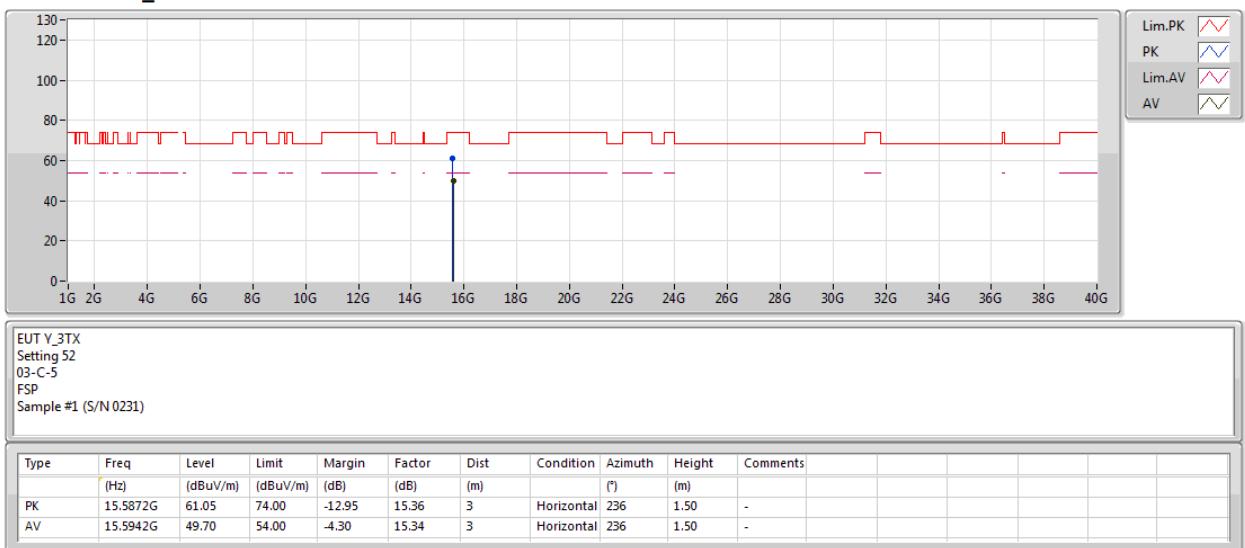
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

22/11/2018

5210MHz_TX





RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

22/11/2018

5290MHz_TX





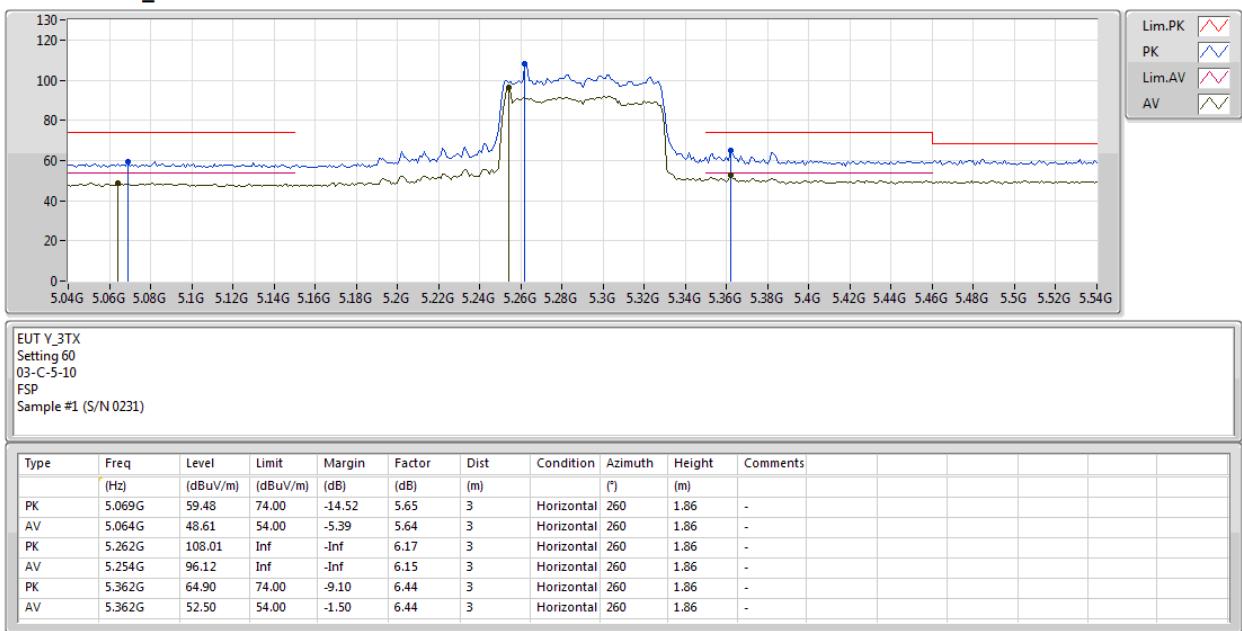
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

22/11/2018

5290MHz_TX





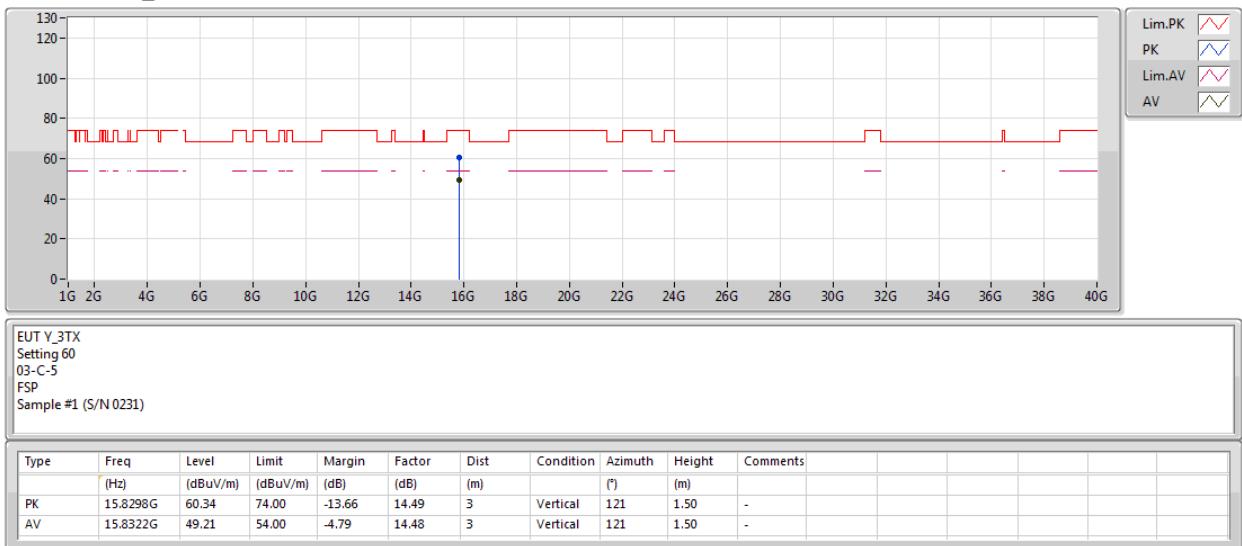
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

22/11/2018

5290MHz_TX





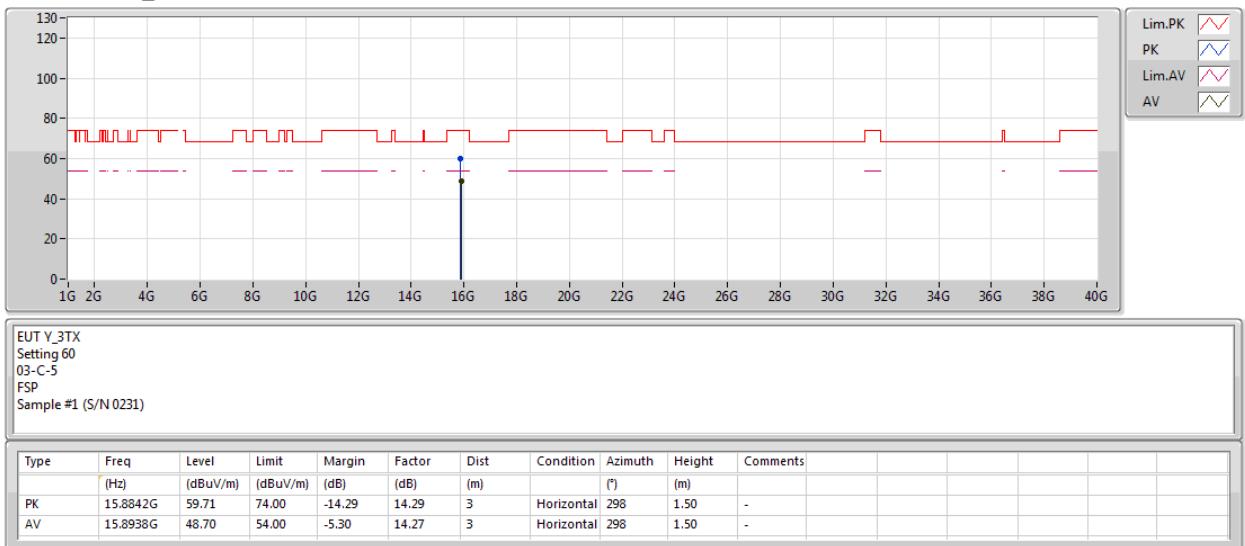
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

22/11/2018

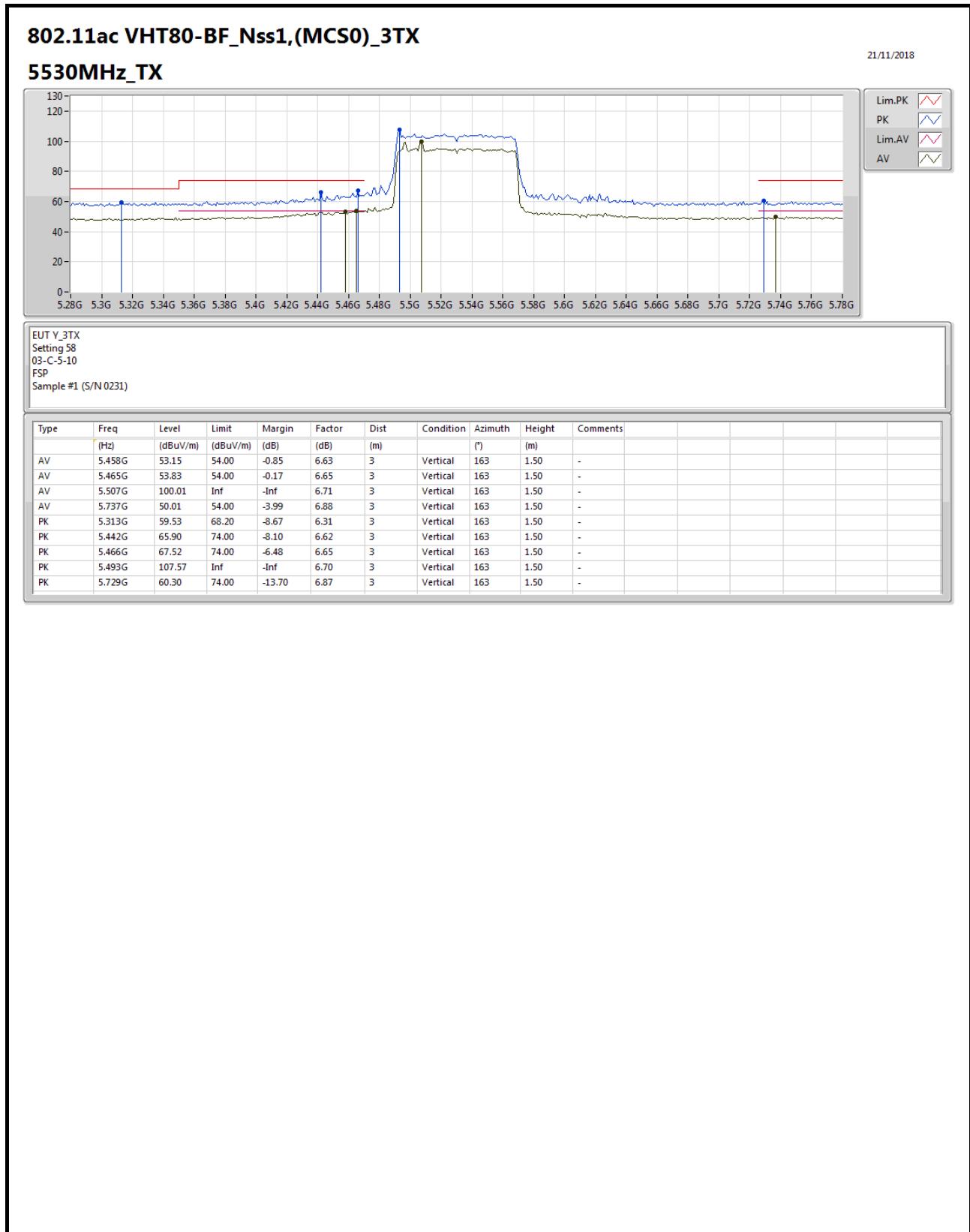
5290MHz_TX





RSE TX above 1GHz Result

Appendix E.2





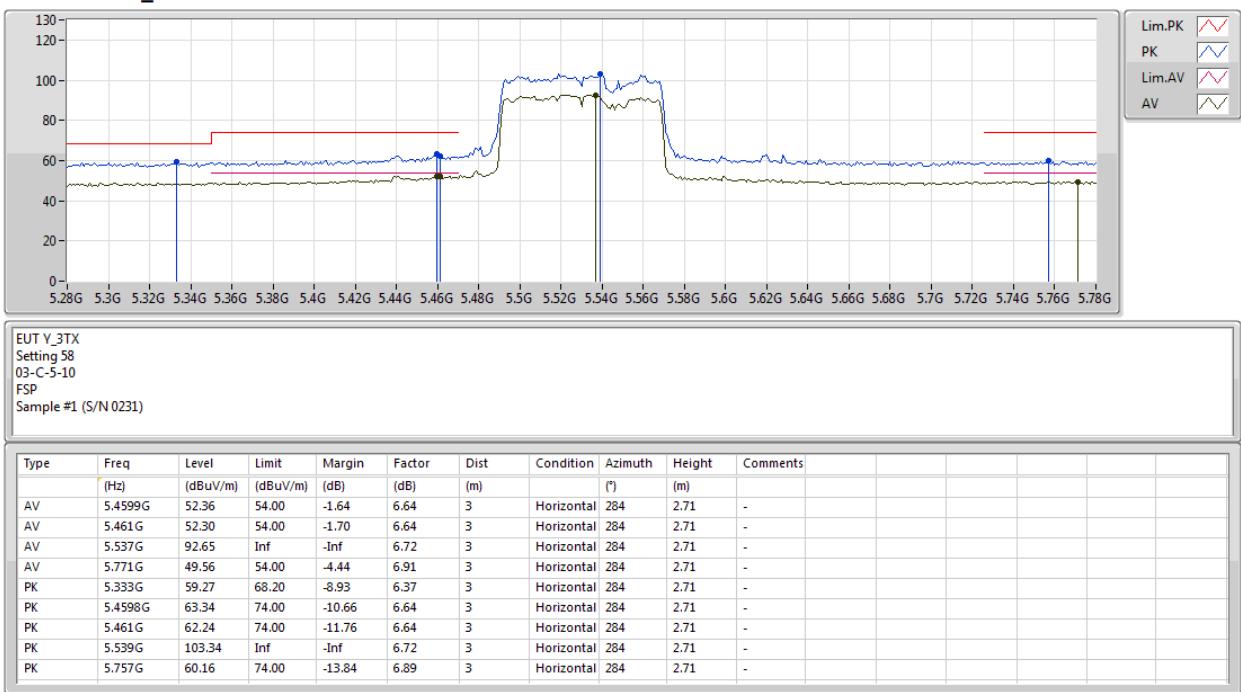
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

21/11/2018

5530MHz_TX





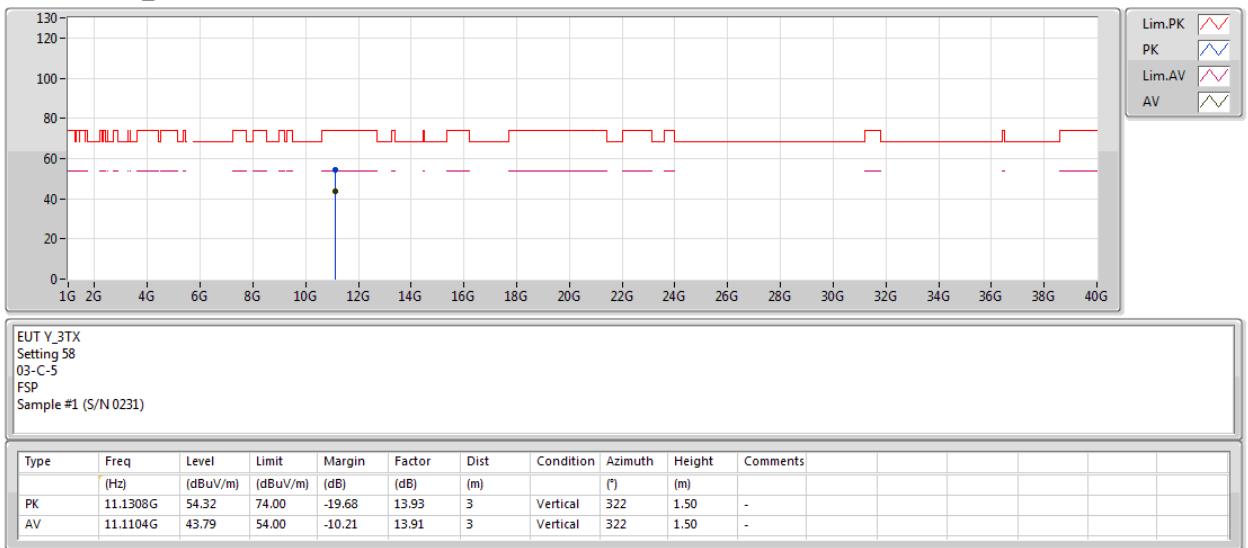
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

21/11/2018

5530MHz_TX





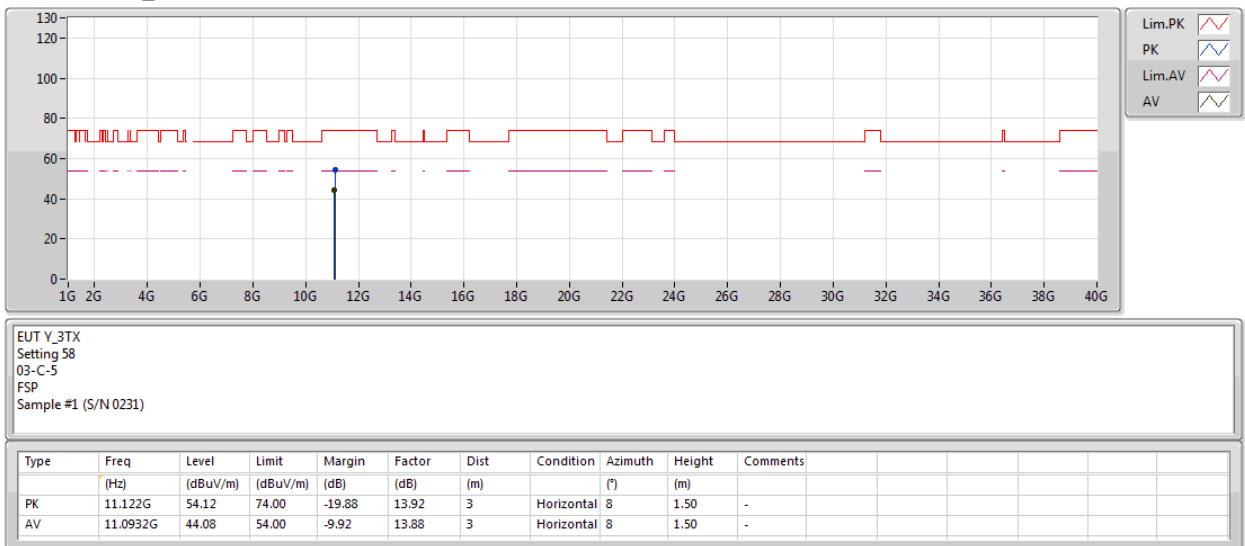
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

21/11/2018

5530MHz_TX





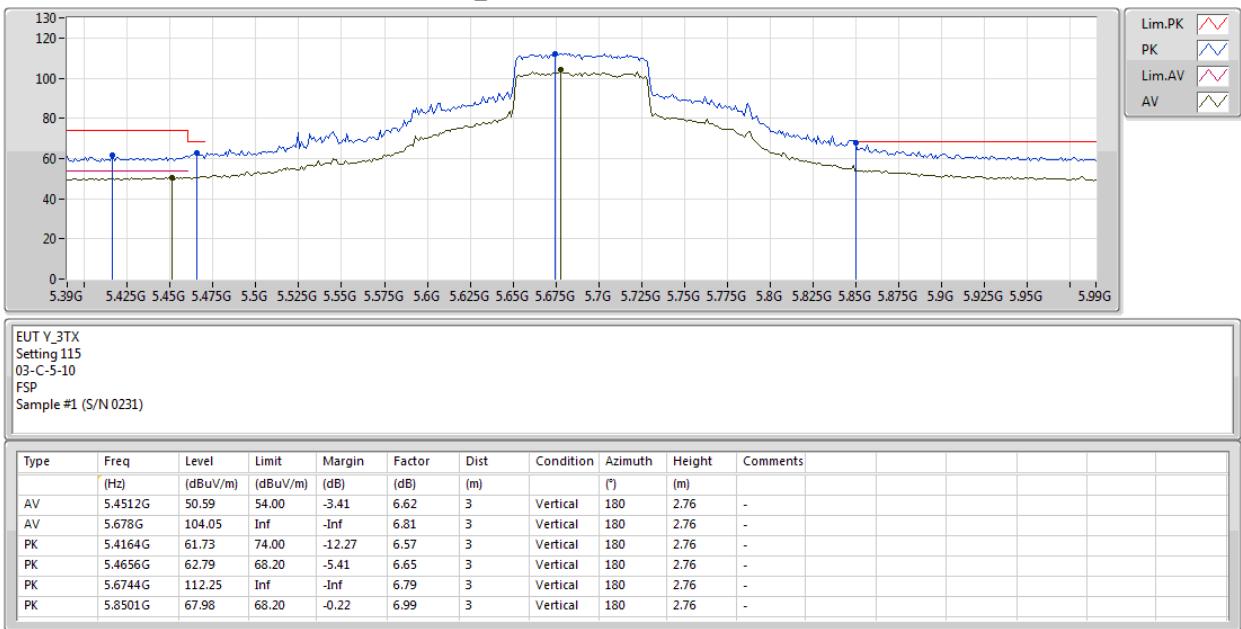
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

21/11/2018

5690MHz Straddle 5.47-5.725GHz_TX





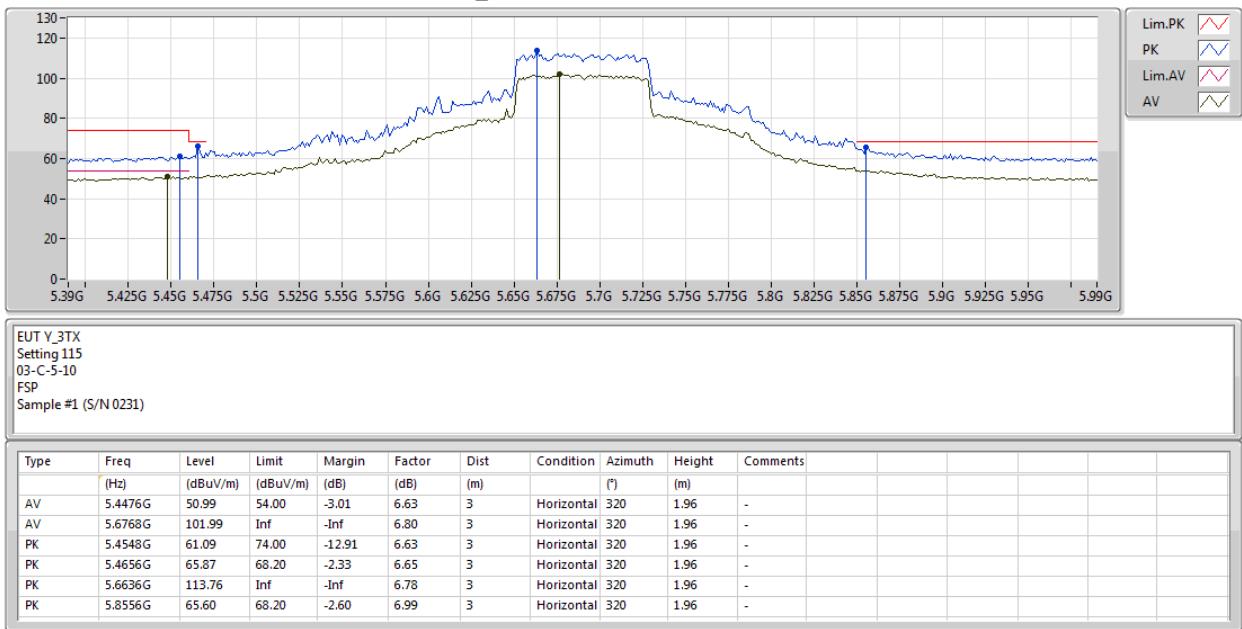
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

21/11/2018

5690MHz Straddle 5.47-5.725GHz_TX





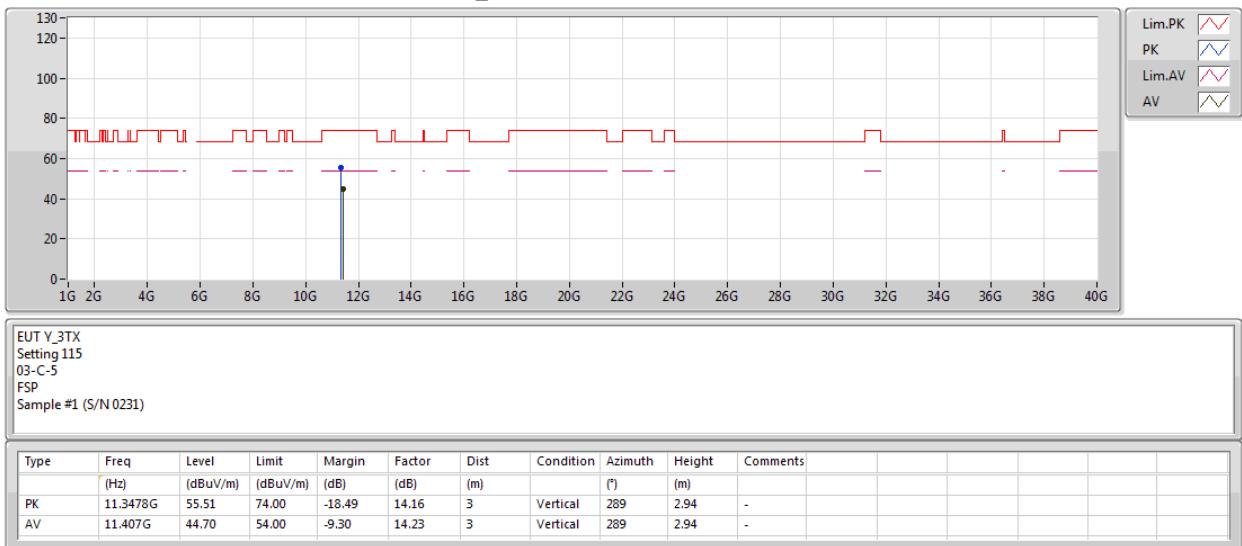
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

21/11/2018

5690MHz Straddle 5.47-5.725GHz_TX





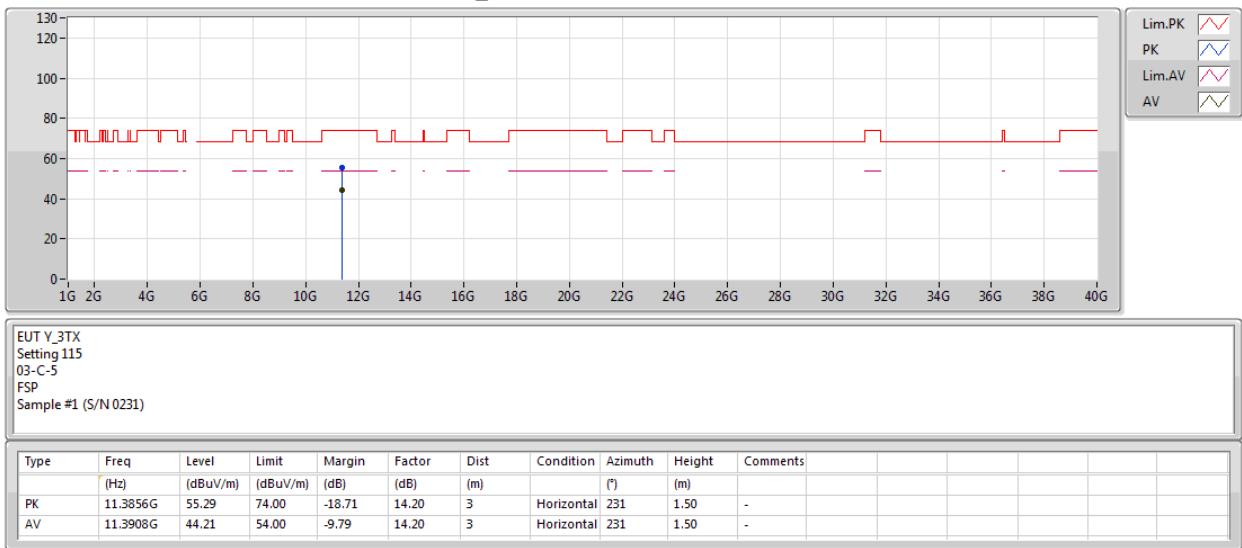
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

21/11/2018

5690MHz Straddle 5.47-5.725GHz_TX





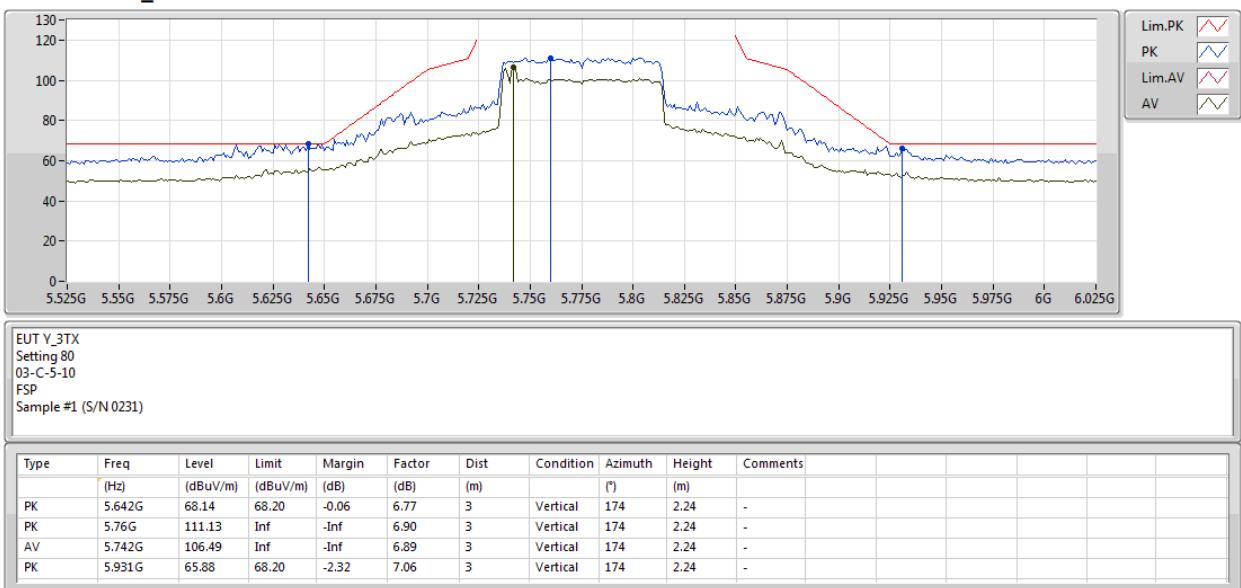
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

21/11/2018

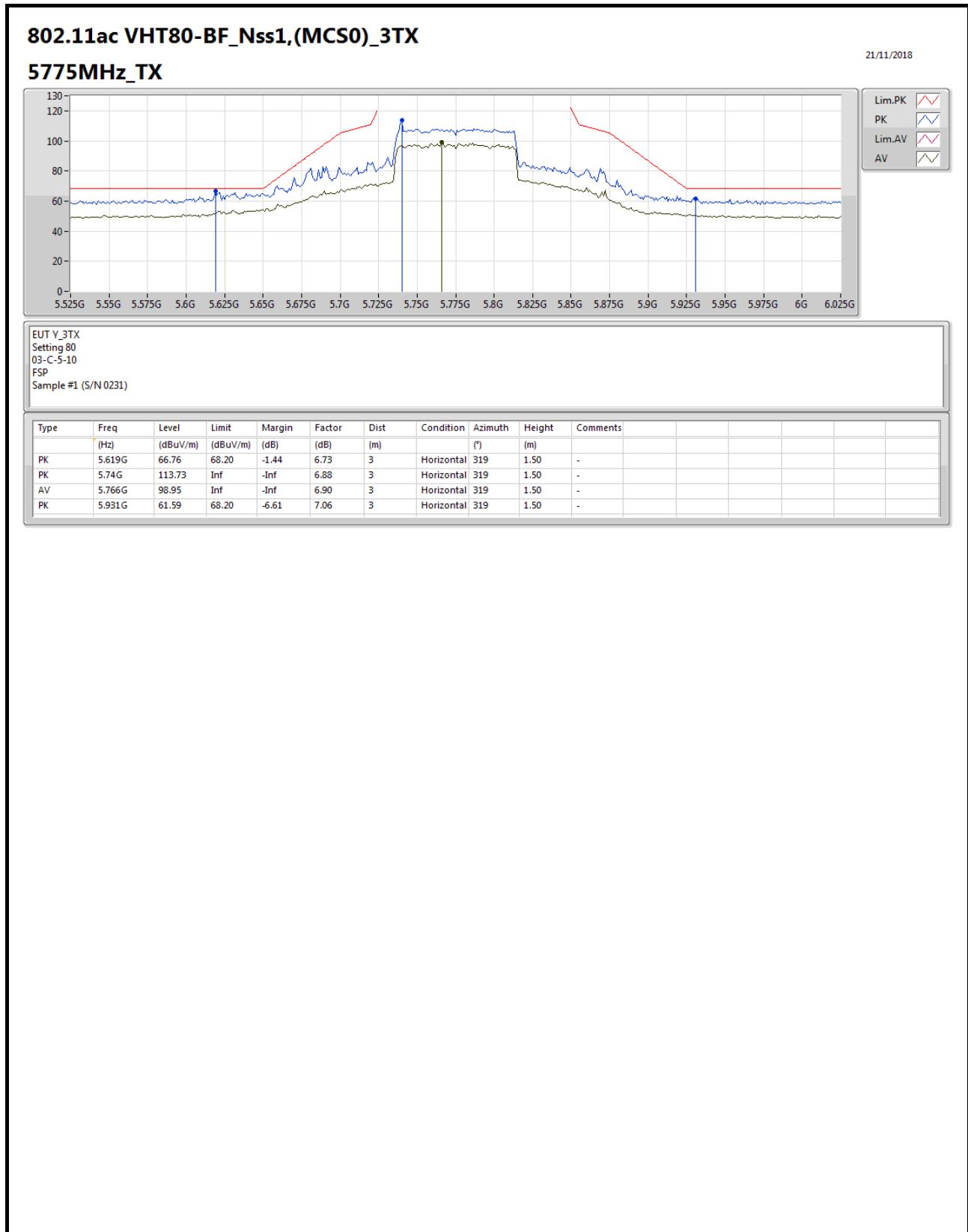
5775MHz_TX





RSE TX above 1GHz Result

Appendix E.2





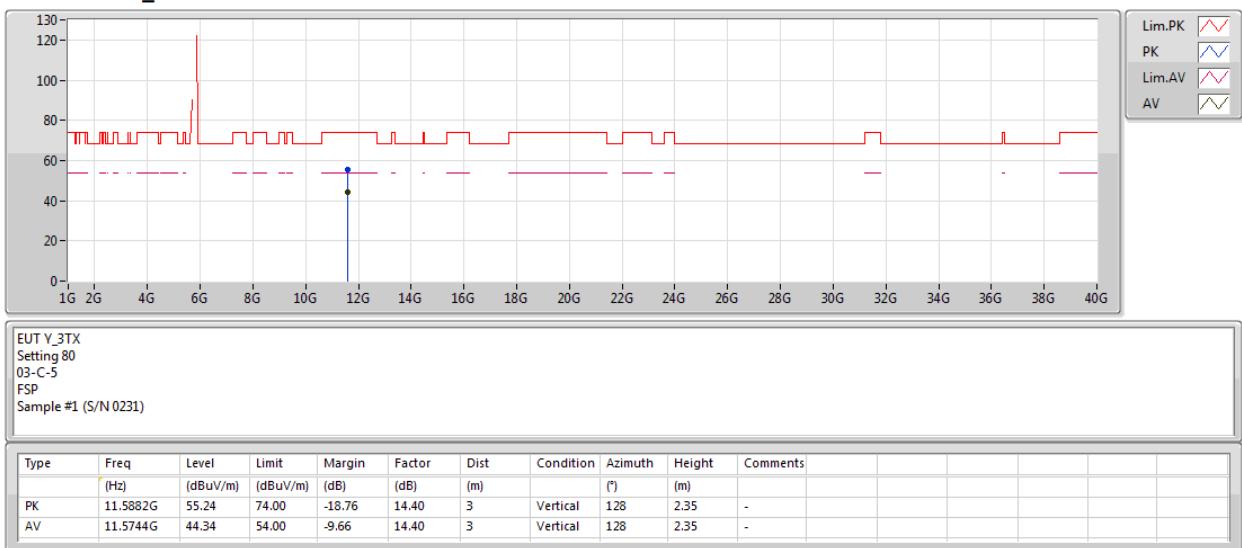
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

21/11/2018

5775MHz_TX





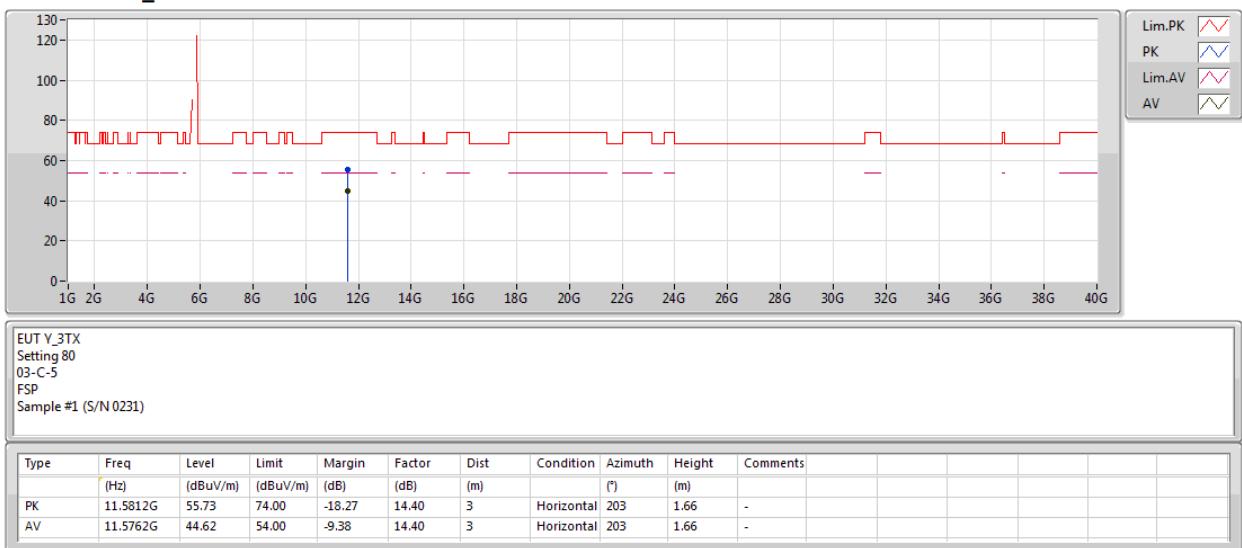
RSE TX above 1GHz Result

Appendix E.2

802.11ac VHT80-BF_Nss1,(MCS0)_3TX

21/11/2018

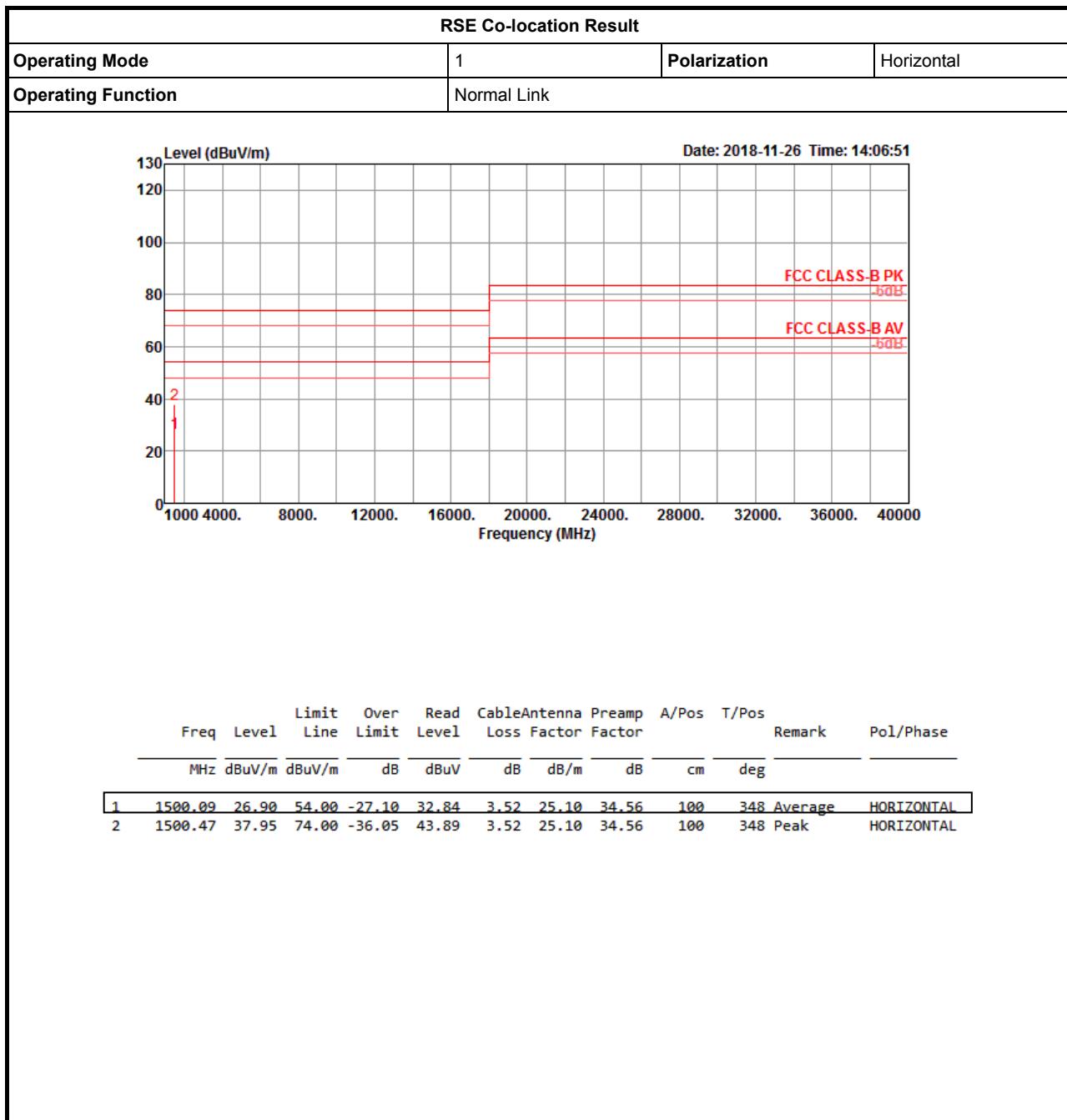
5775MHz_TX





RSE Co-location Result

Appendix F





RSE Co-location Result

Appendix F

