



FCC Test Report

Equipment : 802.11n Dual Band Wireless Lan Module
Brand Name : LITE-ON
Model No. : WN3501M
FCC ID : PPQ-WN3501M
Standard : 47 CFR FCC Part 15.407
Operating Band : 5150 MHz – 5250 MHz
5250 MHz – 5350 MHz
5470 MHz – 5725 MHz
5725 MHz – 5850 MHz
Applicant : Lite-On Technology Corp.
Bldg. C, 90, Chien 1 Road, Chung Ho, New Taipei City
23585, Taiwan, R.O.C
Manufacturer : LITE-ON TECHNOLOGY (Changzhou) CO., LTD
A9 Building, No.88 Yanghu Road, Wujin Hi-Tech
Industrial Development Zone, Changzhou City, Jiangsu
Province 213100 China
Function : ☐ Outdoor; ☐ Indoor; ☐ Fixed P2P
☒ Client
TPC Function : TPC

The product sample received on Nov. 07, 2016 and completely tested on Dec. 05, 2016. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

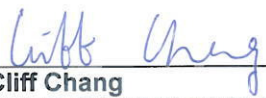

Cliff Chang
SPORTON INTERNATIONAL INC.



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Summary of Test Result

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

Revision History

[illegible]

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)	5180-5240	36-48 [4]
5250-5350		5260-5320	52-64 [4]
5470-5725		5500-5700	100-140 [11]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40)	5190-5230	38-46 [2]
5250-5350		5270-5310	54-62 [2]
5470-5725		5510-5670	102-134 [5]
5725-5850		5755-5795	151-159 [2]

Band	Mode	BWch (MHz)	Nant
5.2G	11a	20	1
5.2G	HT20	20	1
5.2G	HT40	40	1
5.3G	11a	20	1
5.3G	HT20	20	1
5.3G	HT40	40	1
5.6G	11a	20	1
5.6G	HT20	20	1
5.6G	HT40	40	1
5.8G	11a	20	1
5.8G	HT20	20	1
5.8G	HT40	40	1

Note:

- ♦ 5.2G/5.2G-I(IC) is the 5.2GHz Band (5.15-5.25GHz).
- ♦ 5.3G/5.3G-I(IC) is the 5.3GHz Band (5.25-5.35GHz).
- ♦ 5.6G is the 5.6GHz Band (5.47-5.725GHz) or w/o TDWR (5.47-5.6GHz and 5.65-5.725GHz).
- ♦ 5.6G-I(IC) is the 5.6GHz IC Band w/o TDWR (5.47-5.6GHz and 5.65-5.725GHz).
- ♦ 5.8G/5.8G-I(IC) is the 5.8GHz Band (5.725-5.850GHz).
- ♦ 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation
- ♦ BWch is the nominal channel bandwidth.
- ♦ Nss-Min is the minimum number of spatial streams.
- ♦ Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	
					2.4GHz	5GHz
1	LITE-ON	WN3501M	Printed Antenna	N/A	0.95	3.22
2	LITE-ON	WN3501M	Printed Antenna	N/A	0.60	3.10

Note: The EUT has two antennas. (1TX/1RX)

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

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

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

1.1.3 Mode Test Duty Cycle

Mode	DC	T(s)	VBW(Hz) $\geq 1/T$
11a	1	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
HT20	1	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
HT40	1	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)

1.1.4 EUT Operational Condition

EUT Power Type	From host system			
Beamforming Function	☐	With beamforming	☒	Without beamforming
Weather Band	☒	With 5600~5650MHz	☐	Without 5600~5650MHz

1.2 Testing Applied Standards

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

- ◆ 47 CFR FCC Part 15
- ◆ ANSI C63.10-2013
- ◆ FCC KDB 789033 D02 v01r03
- ◆ FCC KDB 662911 D01 v02r01

1.3 Testing Location Information

Testing Location				
☐	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.		
		TEL : 886-3-327-3456	FAX : 886-3-318-0055	
☒	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.		
		TEL : 886-3-656-9065	FAX : 886-3-656-9085	

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Serway Li	26°C / 53%	Nov. 17, 2016~Nov. 18, 2016
Radiated	03CH01-CB	Jay Luo	26°C / 53%	Nov. 13, 2016~Dec. 02, 2016
AC Conduction	CO02-CB	Da Deng	24°C / 55%	Dec. 05, 2016

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086D with Industry Canada.

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Band	Mode	BWch (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Power Setting
5.2G	11a	20	1	1	5180	L	20
5.2G	11a	20	1	1	5200	M	20
5.2G	11a	20	1	1	5240	H	20
5.2G	HT20	20	1,(M0)	1	5180	L	20
5.2G	HT20	20	1,(M0)	1	5200	M	20
5.2G	HT20	20	1,(M0)	1	5240	H	20
5.2G	HT40	40	1,(M0)	1	5190	L	20
5.2G	HT40	40	1,(M0)	1	5230	H	20
5.3G	11a	20	1	1	5260	L	20
5.3G	11a	20	1	1	5300	M	20
5.3G	11a	20	1	1	5320	H	20
5.3G	HT20	20	1,(M0)	1	5260	L	20
5.3G	HT20	20	1,(M0)	1	5300	M	20
5.3G	HT20	20	1,(M0)	1	5320	H	20
5.3G	HT40	40	1,(M0)	1	5270	L	20
5.3G	HT40	40	1,(M0)	1	5310	H	15
5.6G	11a	20	1	1	5500	L	20
5.6G	11a	20	1	1	5580	M	20
5.6G	11a	20	1	1	5700	H	20
5.6G	HT20	20	1,(M0)	1	5500	L	15
5.6G	HT20	20	1,(M0)	1	5580	M	20
5.6G	HT20	20	1,(M0)	1	5700	H	15
5.6G	HT40	40	1,(M0)	1	5510	L	13
5.6G	HT40	40	1,(M0)	1	5550	M	15
5.6G	HT40	40	1,(M0)	1	5670	H	20
5.8G	11a	20	1	1	5745	L	20
5.8G	11a	20	1	1	5785	M	20
5.8G	11a	20	1	1	5825	H	20
5.8G	HT20	20	1,(M0)	1	5745	L	20
5.8G	HT20	20	1,(M0)	1	5785	M	20
5.8G	HT20	20	1,(M0)	1	5825	H	20
5.8G	HT40	40	1,(M0)	1	5755	L	20
5.8G	HT40	40	1,(M0)	1	5795	H	20

Note:

- ♦ Test range channel consist of L (Low Ch.), M (Middle Ch.), H (High Ch.), S (Single Ch.) and C (Straddle Band Ch.).

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	Normal Link-2.4GHz WLAN function
2	Normal Link-5GHz WLAN function
For operating mode 1 is the worst case and it was record in this test report.	

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

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



2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

N/A

2.5 Support Equipment

For Test Site No: CO02-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	AP Router	Planex	GW-AP54SGX	KA220030603014-1
2	NB	HP	EliteBook 2570P	DoC
3	Mouse	Logitech	WN3501M_EVB	DoC
4	Earphone	SHYARO CHI	MIC-04	N/A
5	Test fixture	LITE-ON	WN3501M_EVB	N/A

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

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC
2	Mouse	Logitech	M-U0026	DoC
3	Earphone	SHYARO CHI	MIC-04	N/A
4	Test fixture	LITE-ON	WN3501M_EVB	N/A

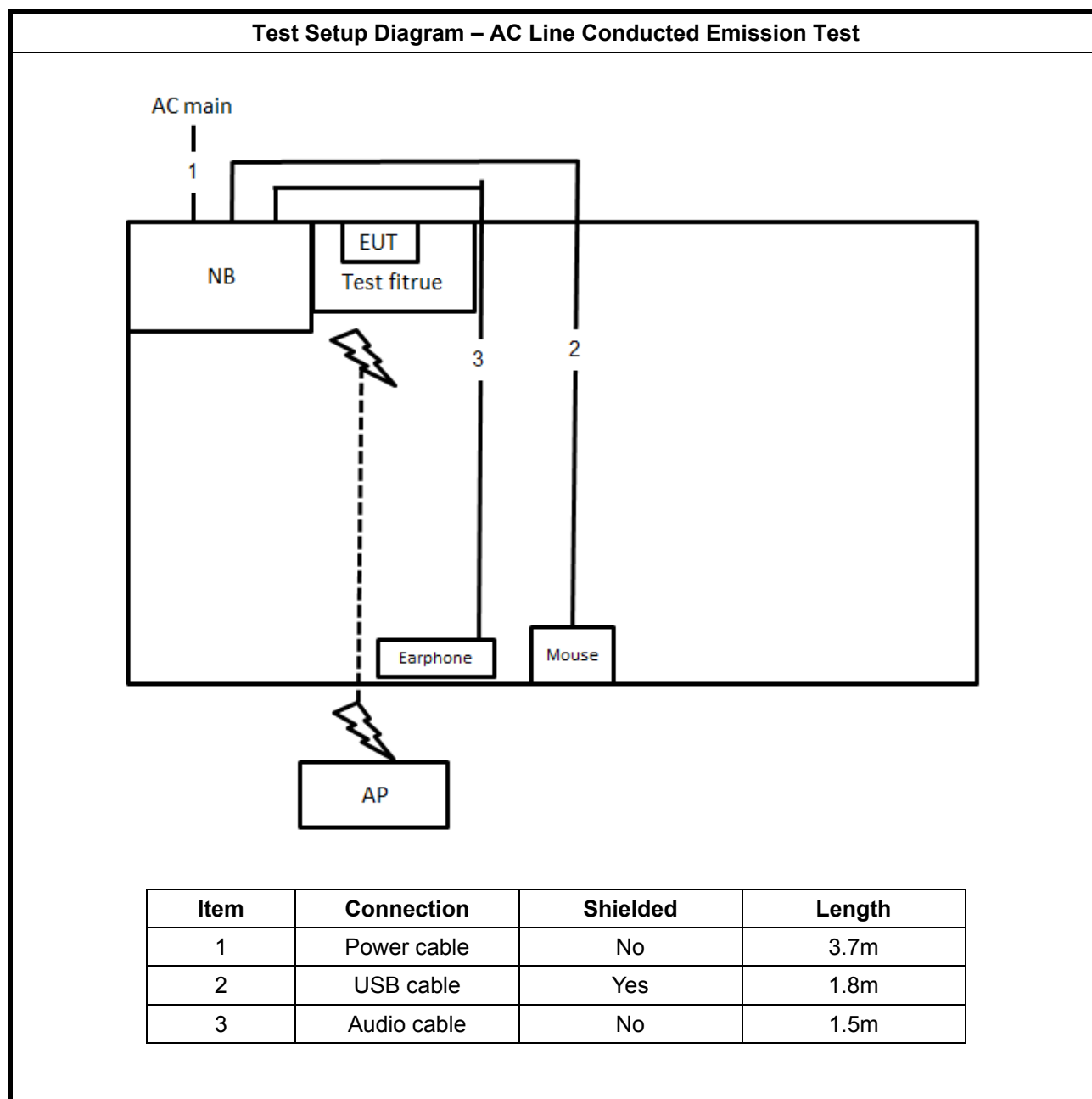
For Test Site No: 03CH01-CB (above 1GHz)

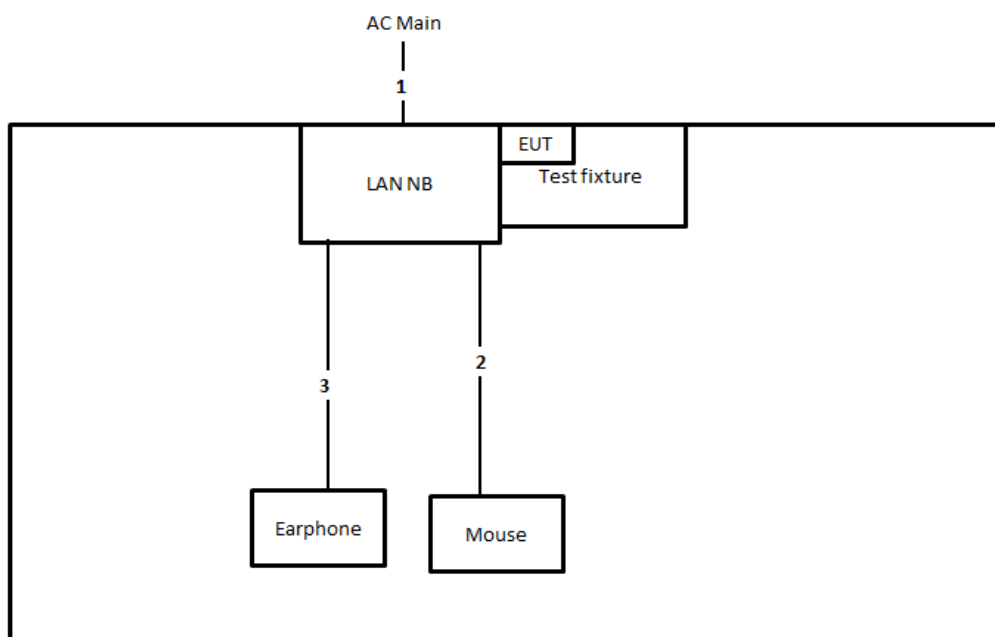
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC
2	Test fixture	LITE-ON	WN3501M_EVB	N/A

For Test Site No: TH01-CB

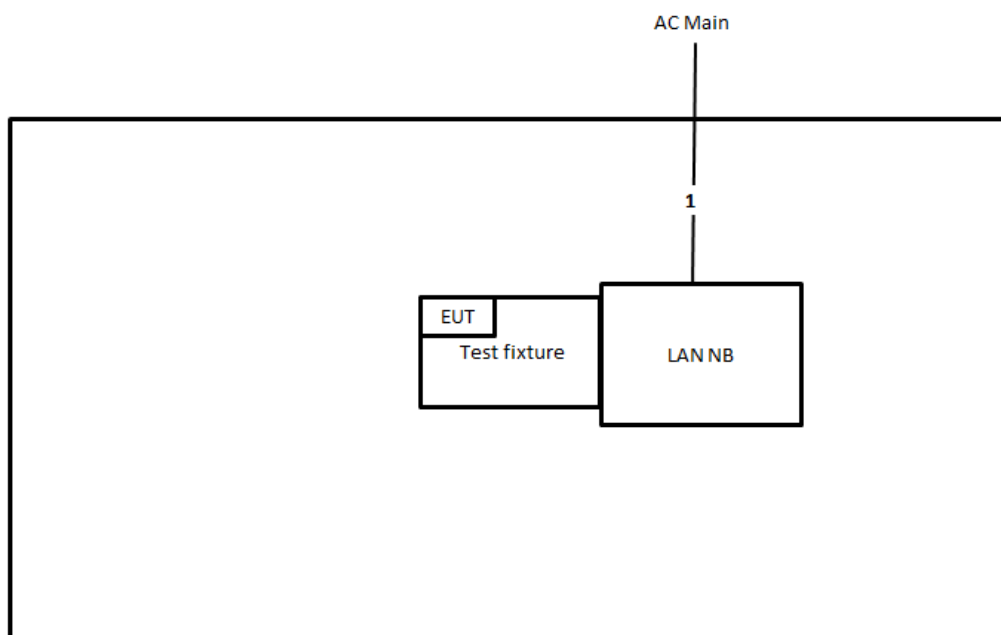
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC
2	Test fixture	Liteo	WN3501M_EVB	N/A

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz


Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	USB cable	Yes	1.8m
3	Audio cable	No	1.5m

Test Setup Diagram - Radiated Test > 1GHz


Item	Connection	Shielded	Length
1	Power cable	No	2.6m

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

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

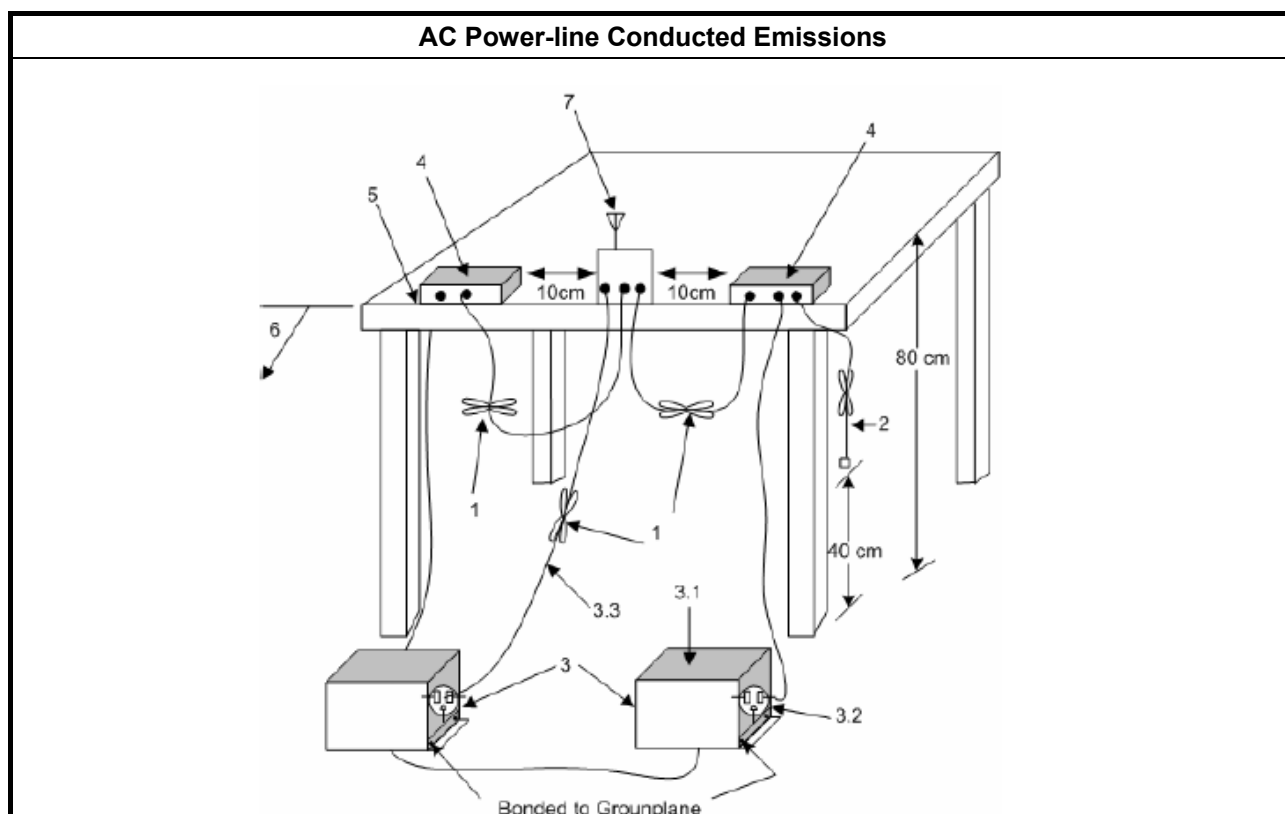
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup





3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

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

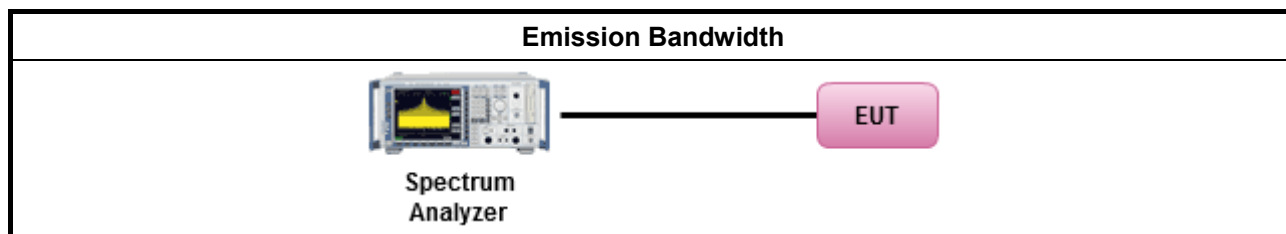
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

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

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

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

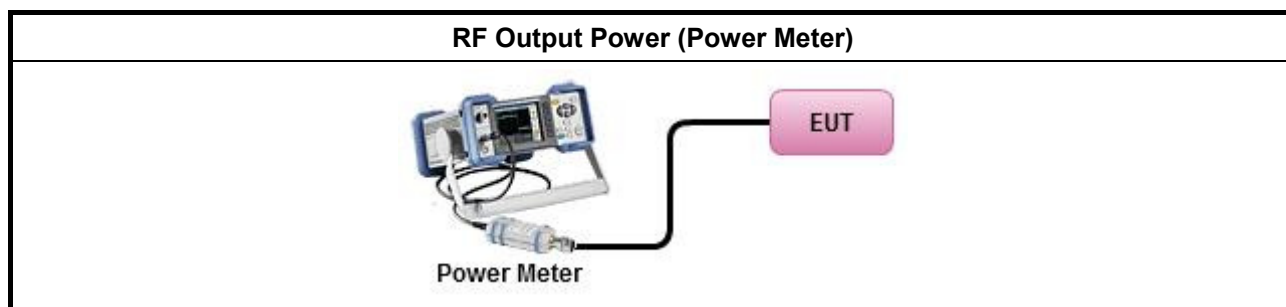
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
Maximum Conducted Output Power	
	[duty cycle $\geq$ 98% or external video / power trigger]
☐	Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).
☐	Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)
	duty cycle < 98% and average over on/off periods with duty factor
☐	Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
☐	Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods with duty factor
☒	Refer as FCC KDB 789033, clause E Method PM-G (using an RF average power meter).
For conducted measurement.	
	If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Peak Power Spectral Density

3.4.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
UNII Devices	
☒ For the 5.15-5.25 GHz band:	
	- Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. - Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. - Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$. - Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.
☒ For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
☒ For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
☒ For the 5.725-5.85 GHz band:	
	- Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
LE-LAN Devices	
☐ For the 5.15-5.25 GHz band, the peak power spectral density (PPSD) ≤ 4 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.	
☐ For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.	
	e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for $0^\circ \leq \theta < 8^\circ$; $-13 - 0.716 (\theta - 8)$ dBW/MHz for $8^\circ \leq \theta < 40^\circ$; $-35.9 - 1.22 (\theta - 40)$ dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$
☐ For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.	
☐ For the 5.725-5.85 GHz band:	
	- Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz G_{TX} = the maximum transmitting antenna directional gain in dBi.	

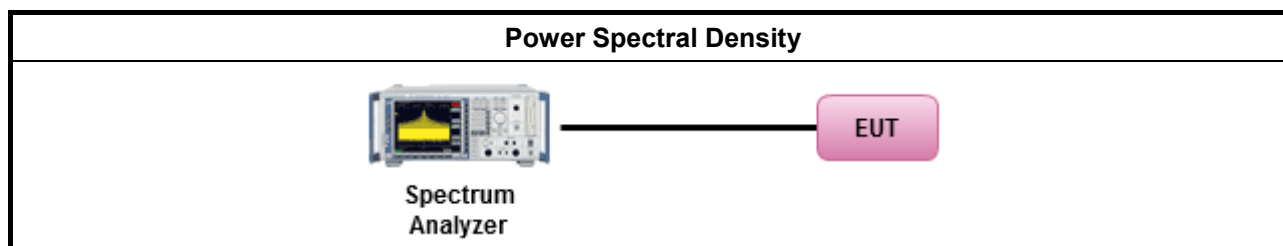
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options:	
☐ Refer as FCC KDB 789033, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth	
[duty cycle ≥ 98% or external video / power trigger]	
☒ Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).	
☐ Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)	
duty cycle < 98% and average over on/off periods with duty factor	
☒ Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).	
☐ Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)	
For conducted measurement.	
If the EUT supports multiple transmit chains using options given below:	
☒ Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.	
☐ Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,	
☐ Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.	
If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$	

3.4.4 Test Setup





3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix D

3.5 Unwanted Emissions

3.5.1 Transmitter Radiated Unwanted Emissions Limit

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

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

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

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

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

3.5.2 Measuring Instruments

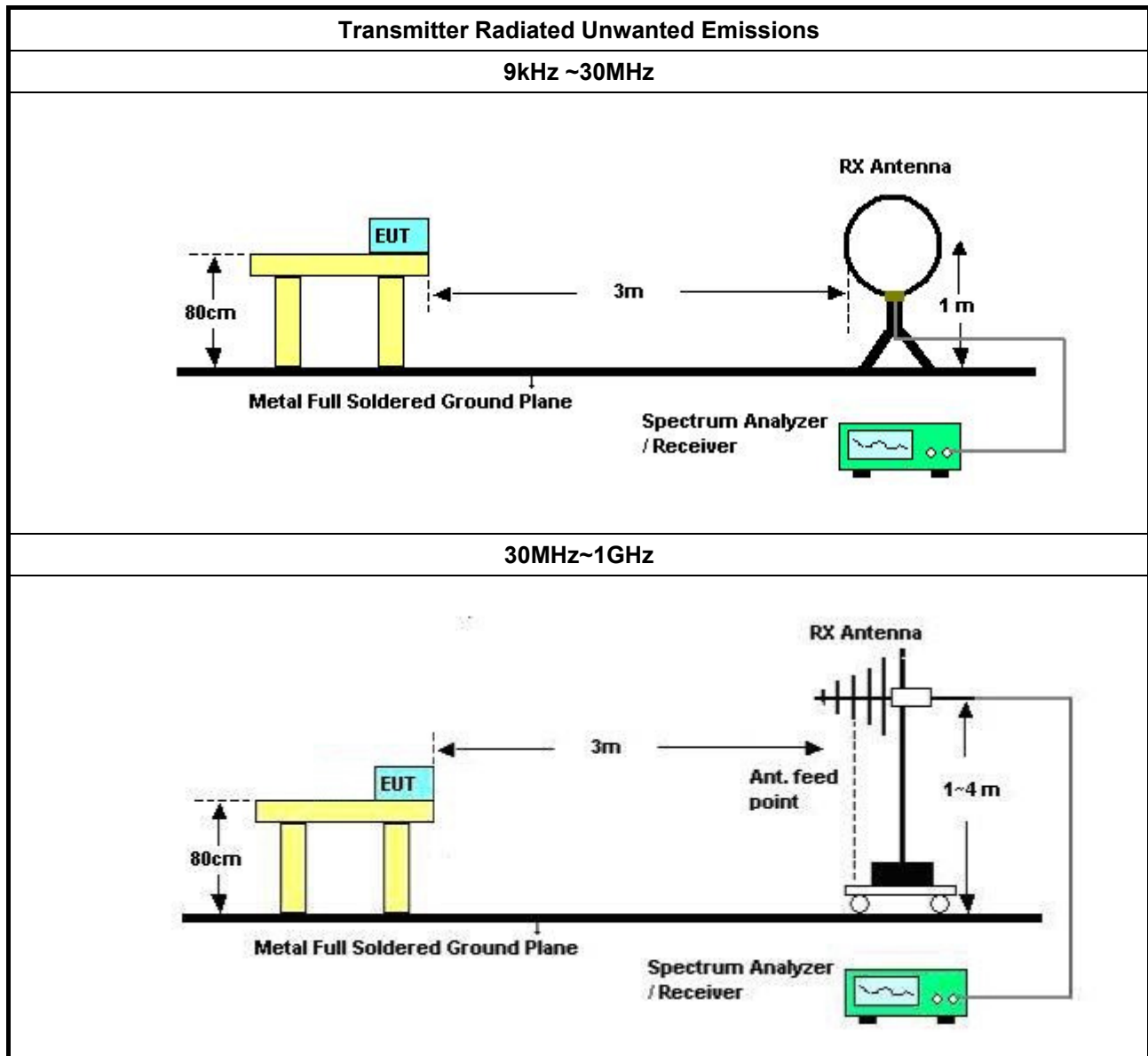


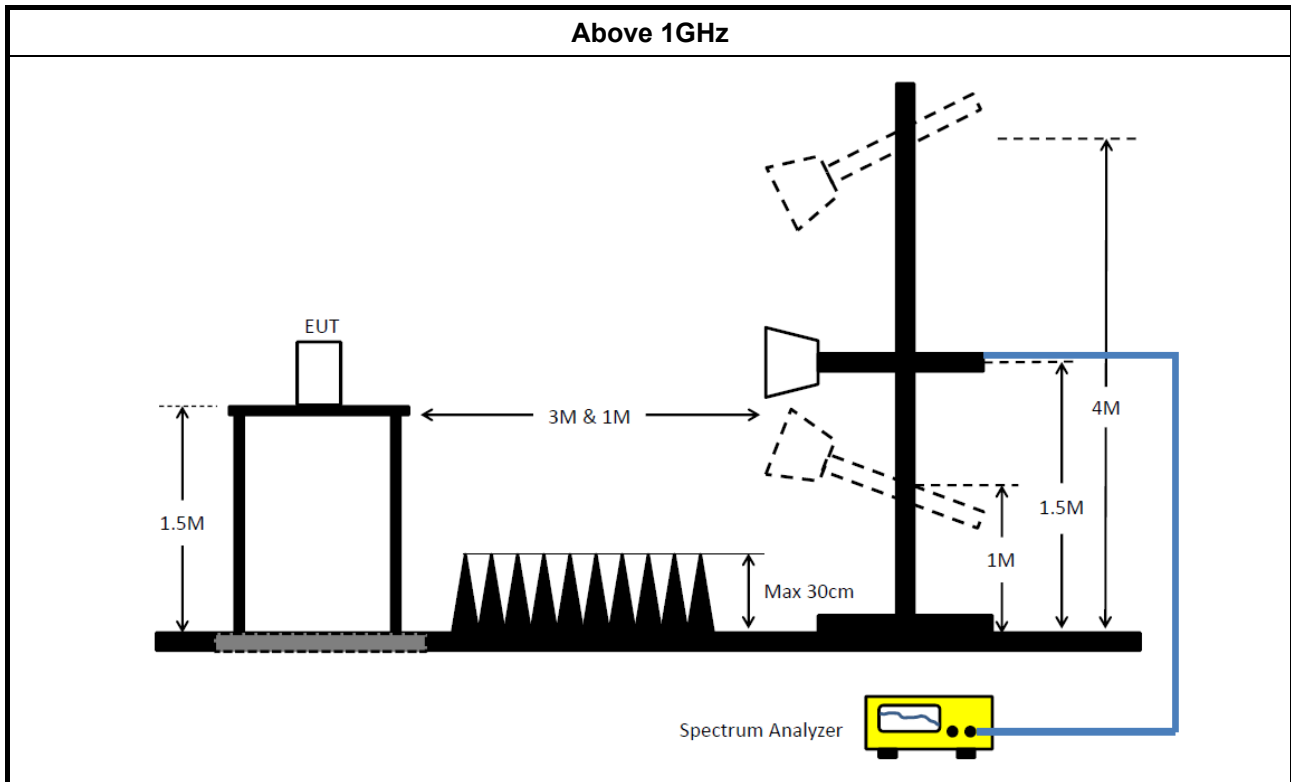
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method	
Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as FCC KDB 789033, clause H)2) for unwanted emissions into non-restricted bands.
	Refer as Clause 11.11 of ANSI C63.10-2013 and/or in Section 11.0 of KDB Publication 558074 for unwanted emissions into non-restricted bands.
	Refer as FCC KDB 789033, clause H)1) for unwanted emissions into restricted bands.
	☐ Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging).
	☒ Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW).
	☐ Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW $\geq$ 1/T, where T is pulse time.
	☐ Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
	☒ Refer as FCC KDB 789033, clause H)5) measurement procedure peak limit.
	☐ Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.
For radiated measurement.	
	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
The any unwanted emissions level shall not exceed the fundamental emission level.	
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.	

3.5.4 Test Setup





3.5.5 Transmitter Unwanted Emissions (Below 30MHz)

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

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E

3.6 Frequency Stability

3.6.1 Frequency Stability Limit

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

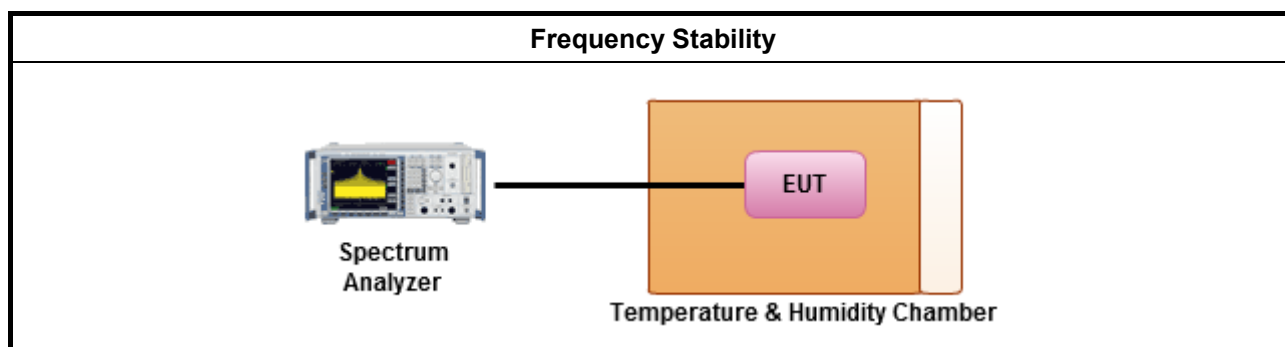
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

Test Method
Refer as ANSI C63.10, clause 6.8 for frequency stability tests
- Frequency stability with respect to ambient temperature - Frequency stability when varying supply voltage - Extreme temperature is 0°C~70°C.

3.6.4 Test Setup



3.6.5 Test Result of Frequency Stability

Refer as Appendix F



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Nov. 23, 2016	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 15, 2016	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	Jan. 18, 2016	Conduction (CO02-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 24, 2016	Conduction (CO02-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	Conduction (CO02-CB)
Pulse Limiter	Schwarzbeck	VTSD 9561F	9561-F073	9kHz ~ 30MHz	Sep. 29, 2016	Conduction (CO02-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2016	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 25, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Mar. 15, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 18, 2016	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jun. 28, 2016	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Oct. 27, 2015	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 21, 2016	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 16, 2016	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-1	N/A	30 MHz ~ 1 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-17	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-1	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-I0-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 09, 2015	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 03, 2016	Conducted (TH01-CB)



FCC Test Report

Report No. : FR6N0506AB

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz – 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz – 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz – 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY54320014	50MHz~18GHz	Apr. 20, 2016	Conducted (TH01-CB)

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

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

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

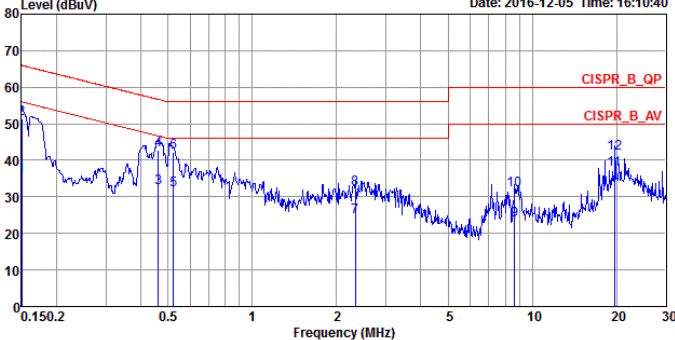


AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Neutral
Operating Function	Normal Link		

Level (dBuV)

Date: 2016-12-05 Time: 16:10:40



Frequency (MHz)

	Freq	Level	Over	Limit	LISN	Cable	Remark	Pol/Phase
	MHz	dBuV	Limit	Line	Factor	Loss		
			dB	dBuV	dB	dB		
1	0.1500	35.71	-20.29	56.00	9.96	0.16	Average	NEUTRAL
2	0.1500	51.43	-14.57	66.00	9.96	0.16	QP	NEUTRAL
3	0.4612	32.50	-14.17	46.67	9.97	0.20	Average	NEUTRAL
4	0.4612	42.89	-13.78	56.67	9.97	0.20	QP	NEUTRAL
5	0.5235	31.83	-14.17	46.00	9.97	0.20	Average	NEUTRAL
6	0.5235	42.09	-13.91	56.00	9.97	0.20	QP	NEUTRAL
7	2.3336	24.55	-21.45	46.00	10.00	0.27	Average	NEUTRAL
8	2.3336	32.26	-23.74	56.00	10.00	0.27	QP	NEUTRAL
9	8.6373	23.59	-26.41	50.00	10.13	0.37	Average	NEUTRAL
10	8.6373	31.77	-28.23	60.00	10.13	0.37	QP	NEUTRAL
11	19.6599	37.60	-12.40	50.00	10.28	0.48	Average	NEUTRAL
12	19.6599	41.79	-18.21	60.00	10.28	0.48	QP	NEUTRAL

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

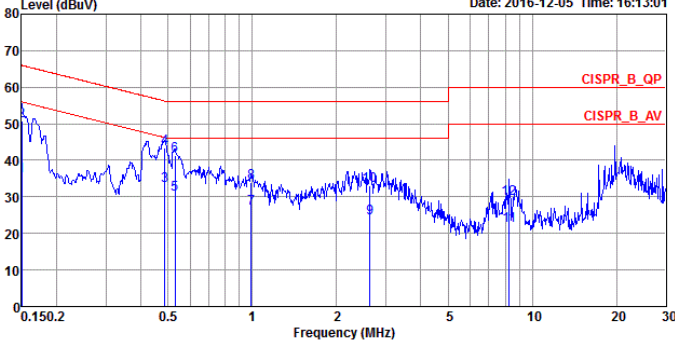
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Line
Operating Function	Normal Link		

Level (dBuV)

Date: 2016-12-05 Time: 16:13:01



Frequency (MHz)

	Freq	Level	Over	Limit	LISN	Cable	Remark	Pol/Phase
	MHz	dBuV	Limit	Line	Factor	Loss		
			dB	dBuV	dB	dB		
1	0.1500	35.69	-20.31	56.00	9.96	0.16	Average	LINE
2	0.1500	50.81	-15.19	66.00	9.96	0.16	QP	LINE
3	0.4863	33.02	-13.21	46.23	10.02	0.20	Average	LINE
4	0.4863	43.35	-12.88	56.23	10.02	0.20	QP	LINE
5	0.5293	30.82	-15.18	46.00	10.02	0.20	Average	LINE
6	0.5293	41.19	-14.81	56.00	10.02	0.20	QP	LINE
7	0.9891	26.76	-19.24	46.00	10.05	0.19	Average	LINE
8	0.9891	33.99	-22.01	56.00	10.05	0.19	QP	LINE
9	2.6360	24.21	-21.79	46.00	10.09	0.28	Average	LINE
10	2.6360	32.95	-23.05	56.00	10.09	0.28	QP	LINE
11	8.2789	22.28	-27.72	50.00	10.14	0.37	Average	LINE
12	8.2789	29.52	-30.48	60.00	10.14	0.37	QP	LINE

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

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



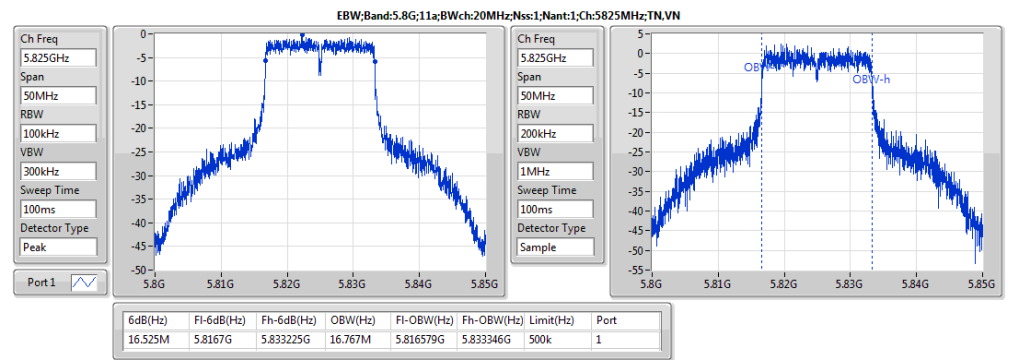
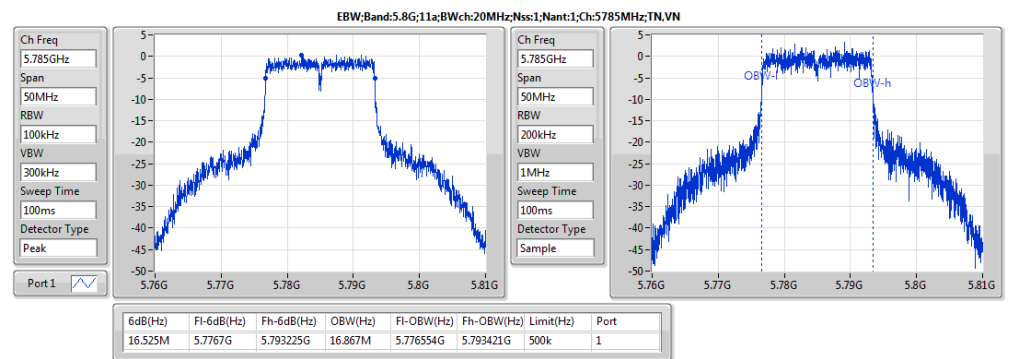
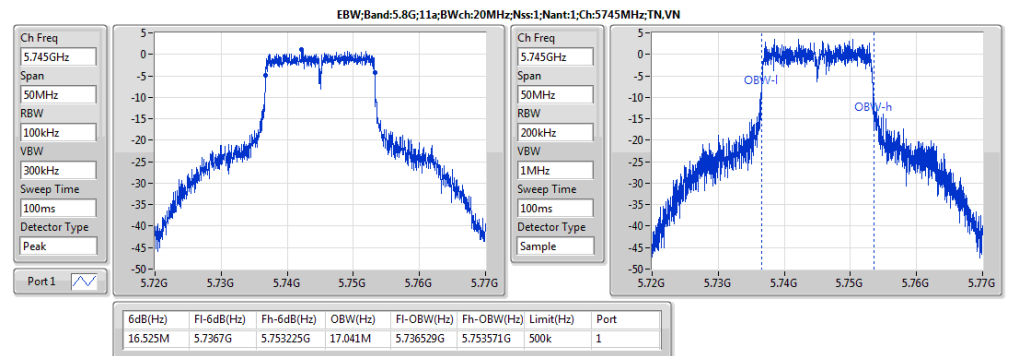
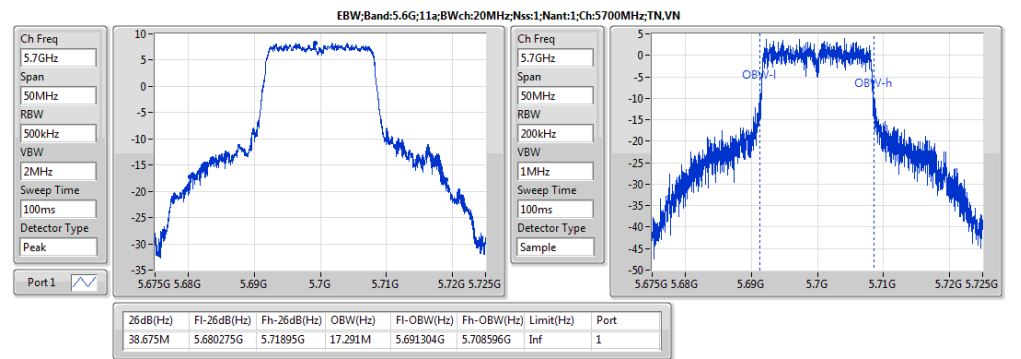
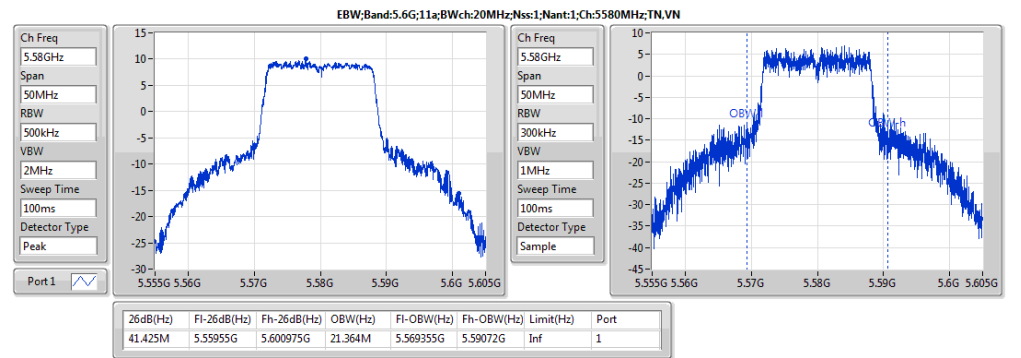
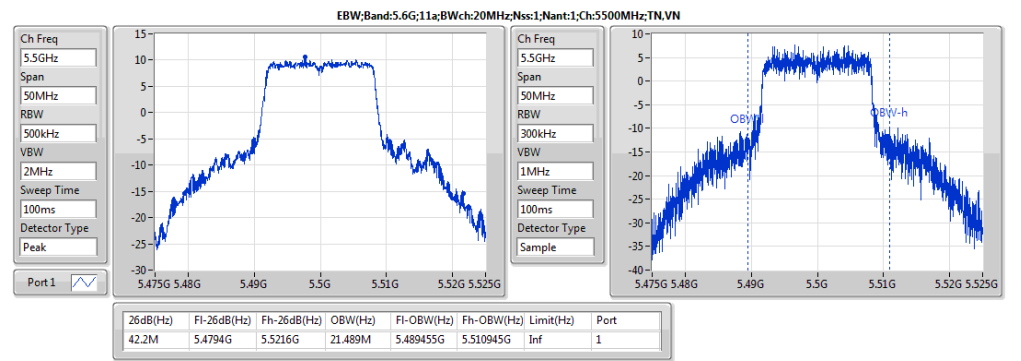
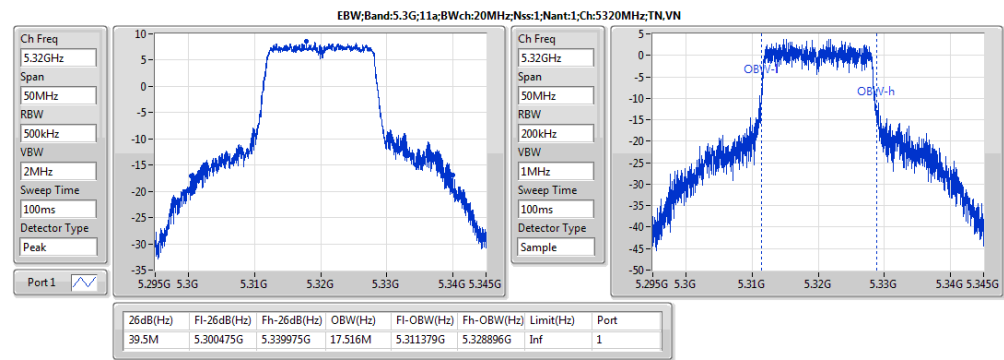
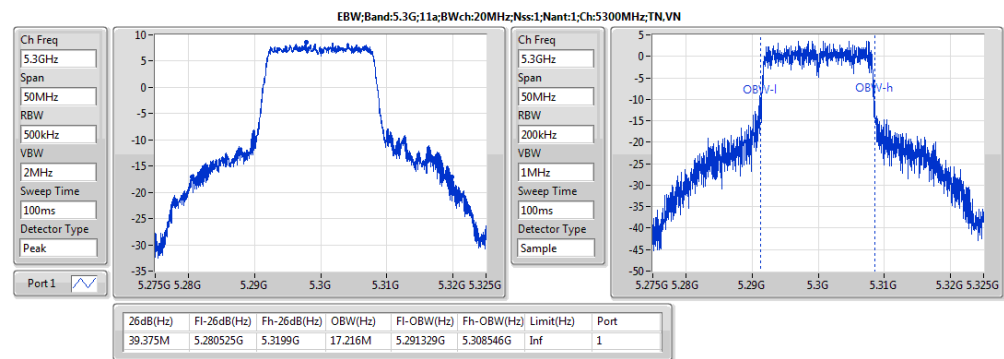
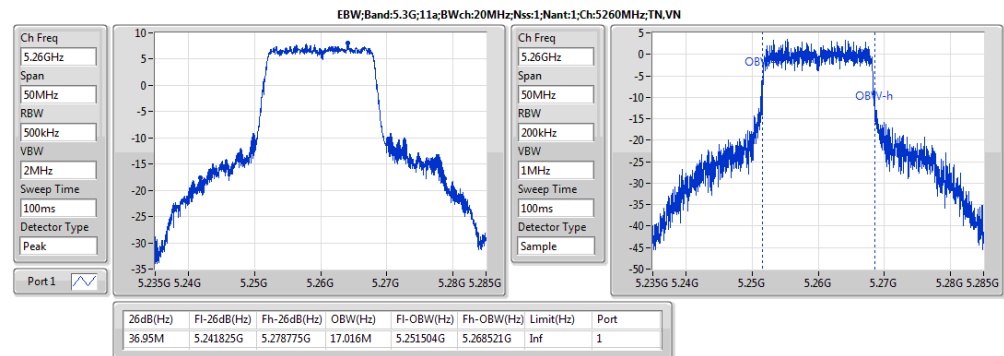
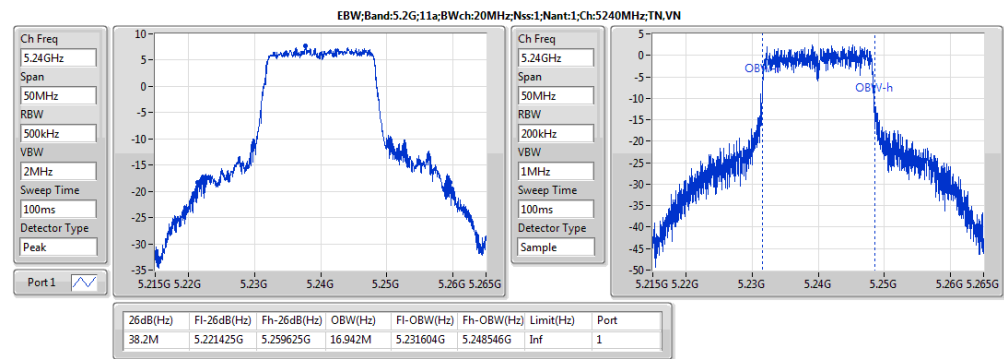
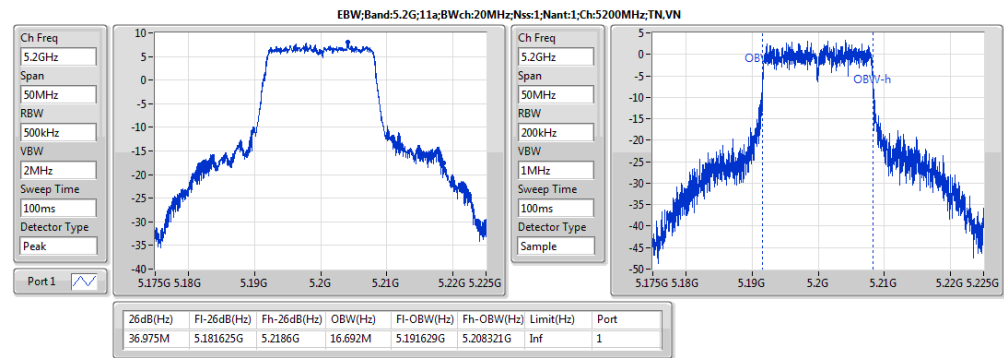
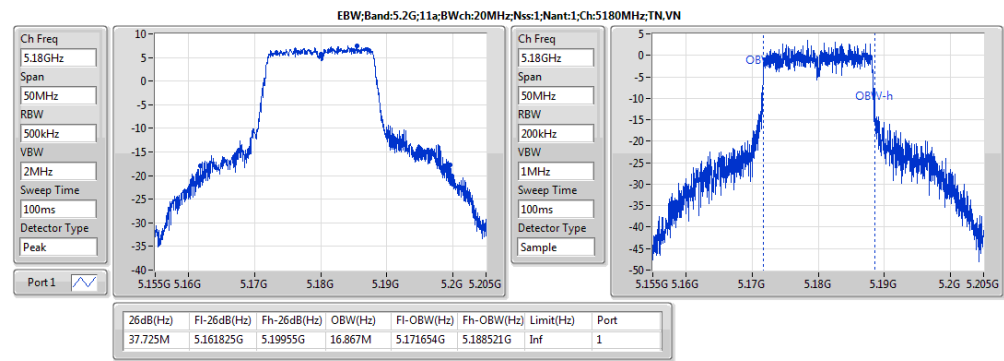
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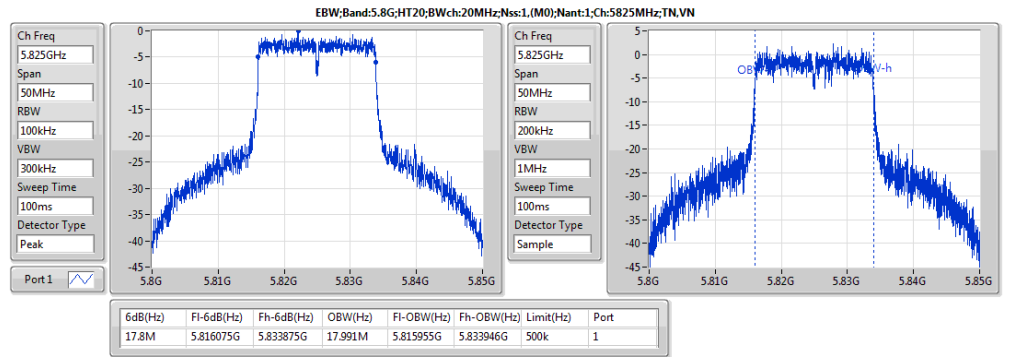
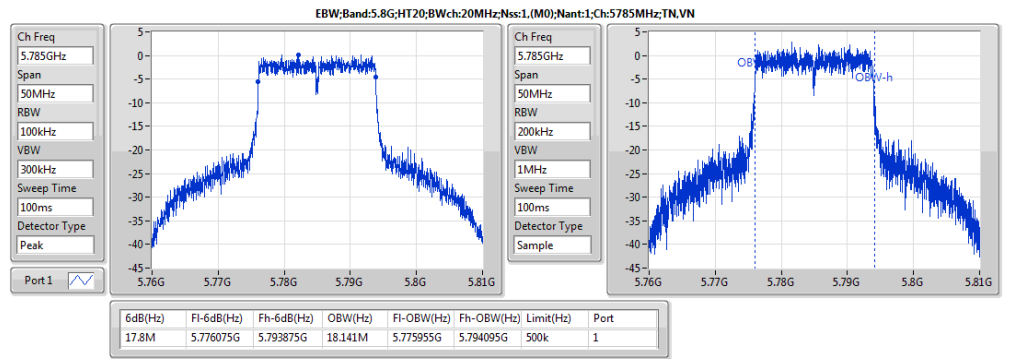
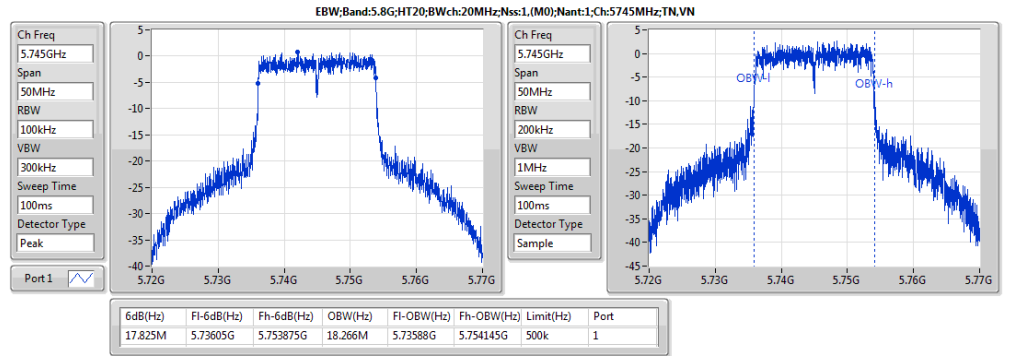
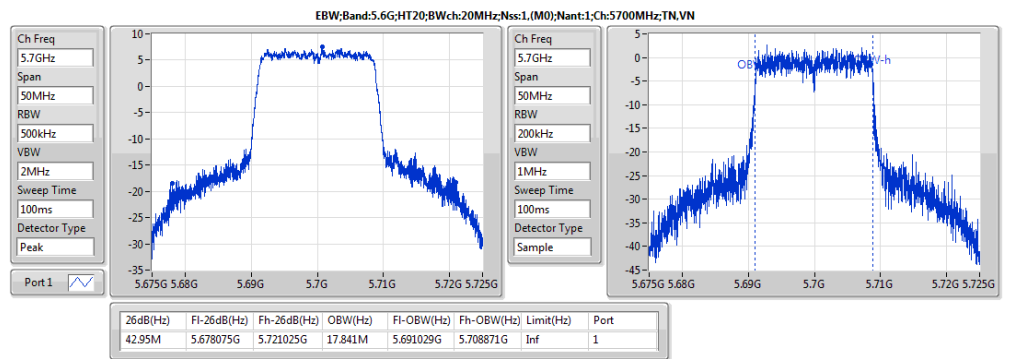
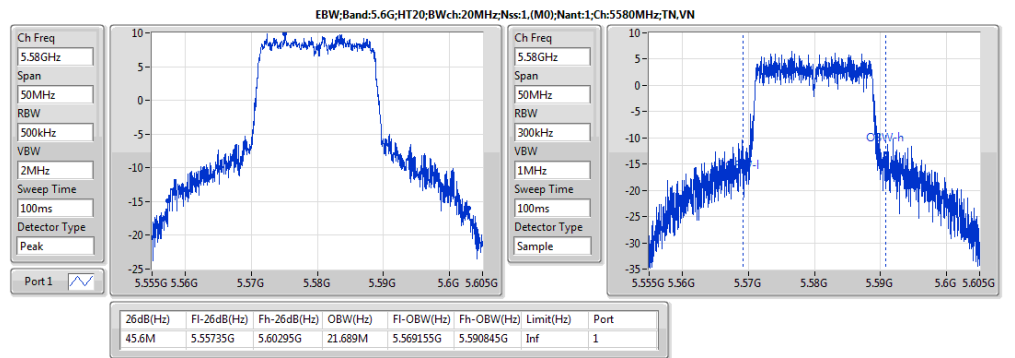
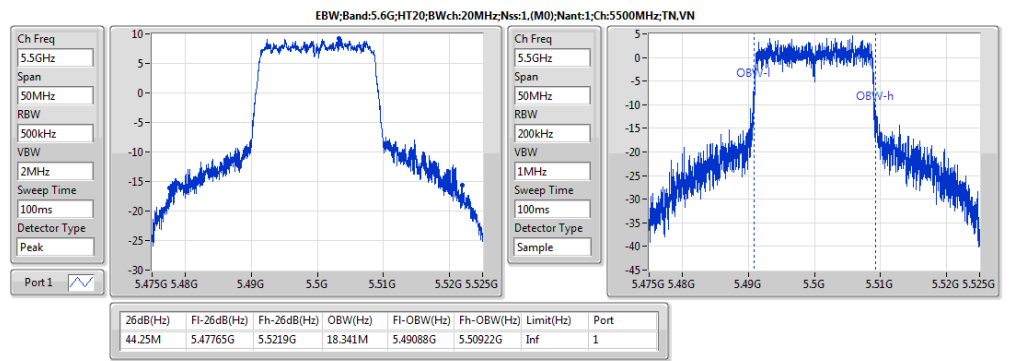
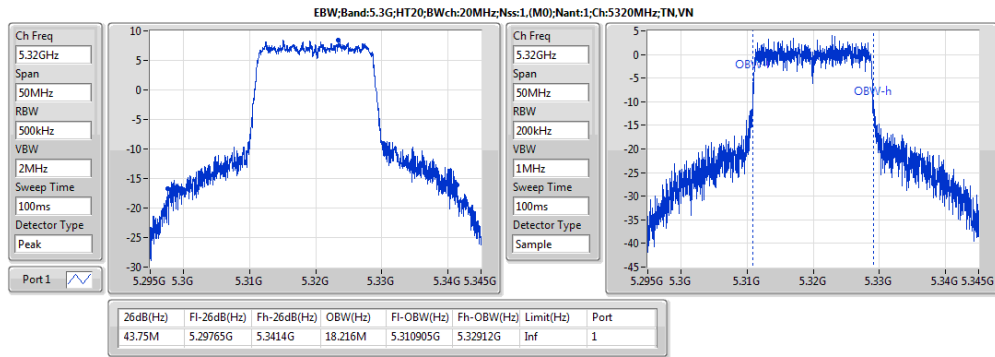
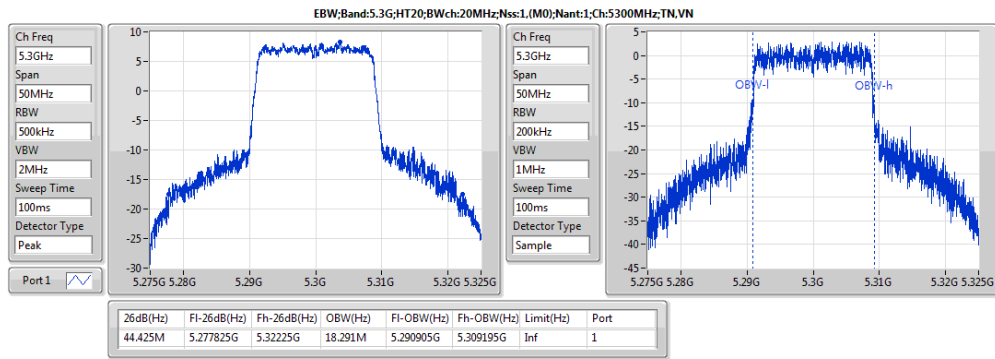
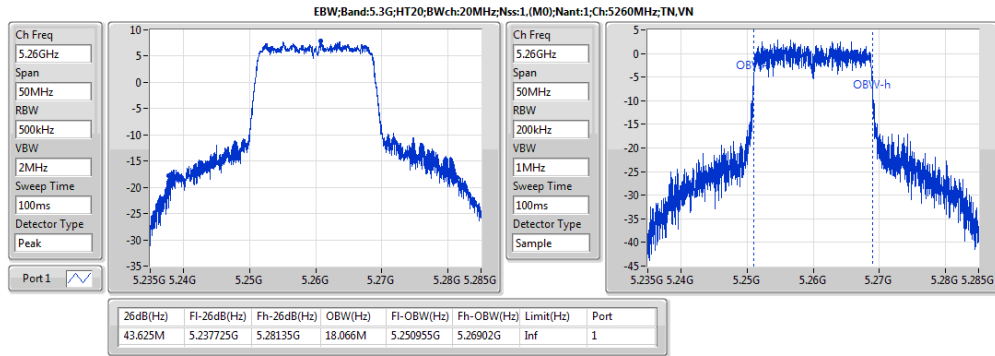
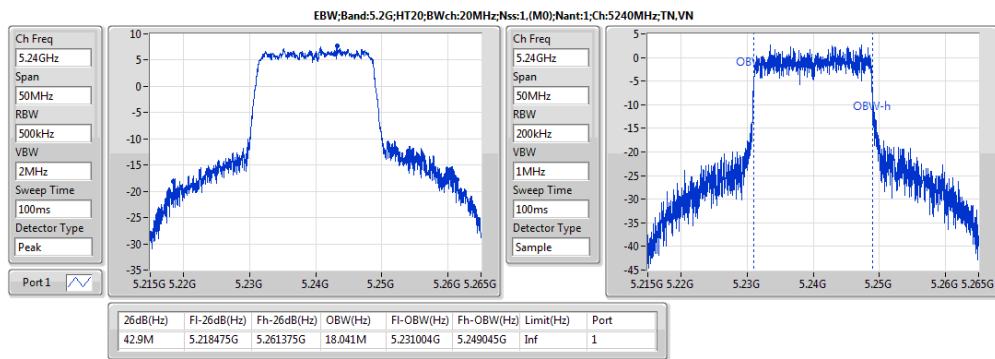
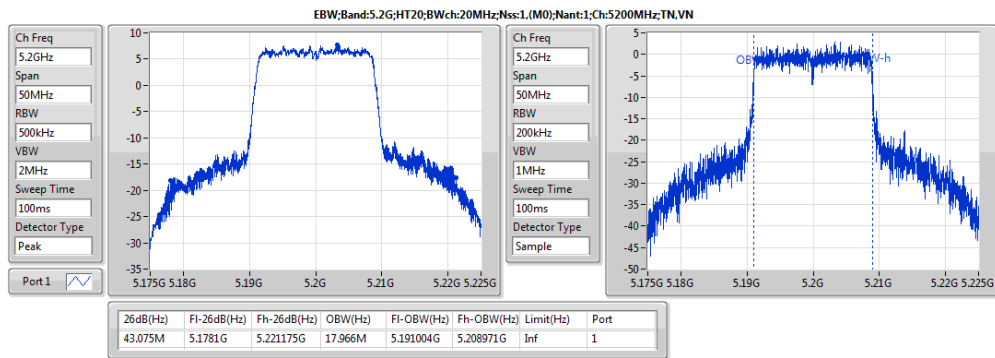
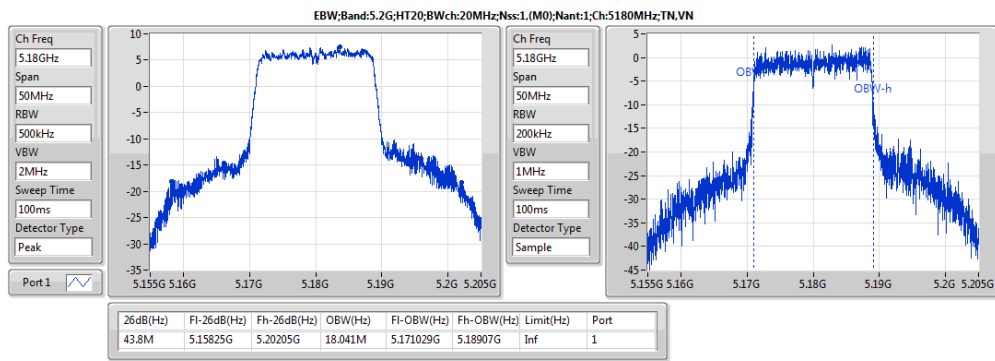
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.2G;11a;Nss1;Ntx1	38.2M	16.942M	16M9D1D	36.975M	16.692M
5.3G;11a;Nss1;Ntx1	39.5M	17.516M	17M5D1D	36.95M	17.016M
5.6G;11a;Nss1;Ntx1	42.2M	21.489M	21M5D1D	38.675M	17.291M
5.8G;11a;Nss1;Ntx1	16.525M	17.041M	17M0D1D	16.525M	16.767M
5.2G;HT20;Nss1,(M0);Ntx1	43.8M	18.041M	18M0D1D	42.9M	17.966M
5.3G;HT20;Nss1,(M0);Ntx1	44.425M	18.291M	18M3D1D	43.625M	18.066M
5.6G;HT20;Nss1,(M0);Ntx1	45.6M	21.689M	21M7D1D	42.95M	17.841M
5.8G;HT20;Nss1,(M0);Ntx1	17.825M	18.266M	18M3D1D	17.8M	17.991M
5.2G;HT40;Nss1,(M0);Ntx1	80.85M	36.782M	36M8D1D	80.7M	36.482M
5.3G;HT40;Nss1,(M0);Ntx1	82.15M	36.932M	36M9D1D	80.5M	36.782M
5.6G;HT40;Nss1,(M0);Ntx1	94.5M	38.081M	38M1D1D	72.35M	36.532M
5.8G;HT40;Nss1,(M0);Ntx1	36.5M	36.832M	36M8D1D	36.5M	36.832M



Result

Mode	Result	Limit (Hz)	P1-N dB (Hz)	P1-OBW (Hz)
5.2G;11a;Nss1;Ntx1;5180	Pass	Inf	37.725M	16.867M
5.2G;11a;Nss1;Ntx1;5200	Pass	Inf	36.975M	16.692M
5.2G;11a;Nss1;Ntx1;5240	Pass	Inf	38.2M	16.942M
5.3G;11a;Nss1;Ntx1;5260	Pass	Inf	36.95M	17.016M
5.3G;11a;Nss1;Ntx1;5300	Pass	Inf	39.375M	17.216M
5.3G;11a;Nss1;Ntx1;5320	Pass	Inf	39.5M	17.516M
5.6G;11a;Nss1;Ntx1;5500	Pass	Inf	42.2M	21.489M
5.6G;11a;Nss1;Ntx1;5580	Pass	Inf	41.425M	21.364M
5.6G;11a;Nss1;Ntx1;5700	Pass	Inf	38.675M	17.291M
5.8G;11a;Nss1;Ntx1;5745	Pass	500k	16.525M	17.041M
5.8G;11a;Nss1;Ntx1;5785	Pass	500k	16.525M	16.867M
5.8G;11a;Nss1;Ntx1;5825	Pass	500k	16.525M	16.767M
5.2G;HT20;Nss1,(M0);Ntx1;5180	Pass	Inf	43.8M	18.041M
5.2G;HT20;Nss1,(M0);Ntx1;5200	Pass	Inf	43.075M	17.966M
5.2G;HT20;Nss1,(M0);Ntx1;5240	Pass	Inf	42.9M	18.041M
5.3G;HT20;Nss1,(M0);Ntx1;5260	Pass	Inf	43.625M	18.066M
5.3G;HT20;Nss1,(M0);Ntx1;5300	Pass	Inf	44.425M	18.291M
5.3G;HT20;Nss1,(M0);Ntx1;5320	Pass	Inf	43.75M	18.216M
5.6G;HT20;Nss1,(M0);Ntx1;5500	Pass	Inf	44.25M	18.341M
5.6G;HT20;Nss1,(M0);Ntx1;5580	Pass	Inf	45.6M	21.689M
5.6G;HT20;Nss1,(M0);Ntx1;5700	Pass	Inf	42.95M	17.841M
5.8G;HT20;Nss1,(M0);Ntx1;5745	Pass	500k	17.825M	18.266M
5.8G;HT20;Nss1,(M0);Ntx1;5785	Pass	500k	17.8M	18.141M
5.8G;HT20;Nss1,(M0);Ntx1;5825	Pass	500k	17.8M	17.991M
5.2G;HT40;Nss1,(M0);Ntx1;5190	Pass	Inf	80.7M	36.482M
5.2G;HT40;Nss1,(M0);Ntx1;5230	Pass	Inf	80.85M	36.782M
5.3G;HT40;Nss1,(M0);Ntx1;5270	Pass	Inf	82.15M	36.782M
5.3G;HT40;Nss1,(M0);Ntx1;5310	Pass	Inf	80.5M	36.932M
5.6G;HT40;Nss1,(M0);Ntx1;5510	Pass	Inf	72.35M	36.532M
5.6G;HT40;Nss1,(M0);Ntx1;5550	Pass	Inf	89.5M	37.331M
5.6G;HT40;Nss1,(M0);Ntx1;5670	Pass	Inf	94.5M	38.081M
5.8G;HT40;Nss1,(M0);Ntx1;5755	Pass	500k	36.5M	36.832M
5.8G;HT40;Nss1,(M0);Ntx1;5795	Pass	500k	36.5M	36.832M

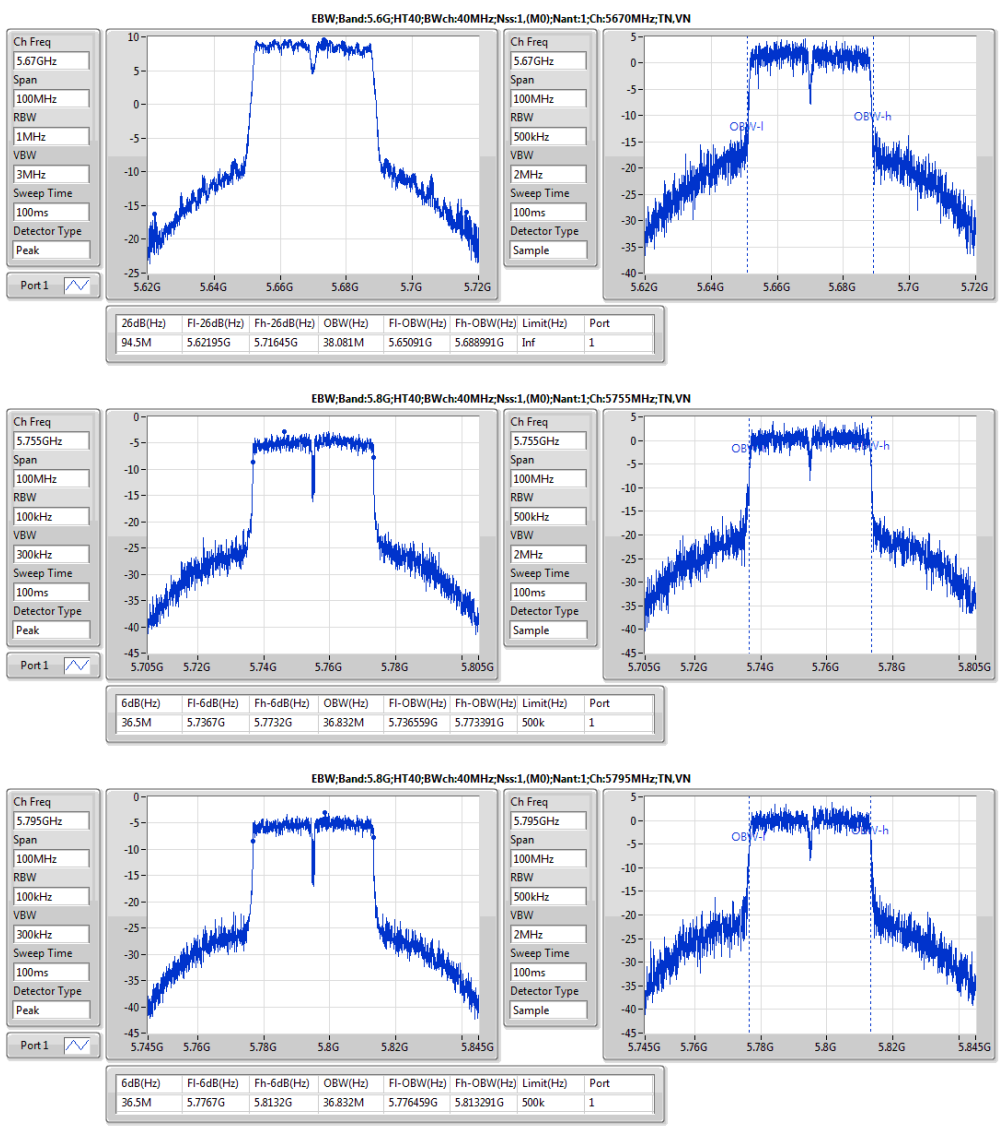
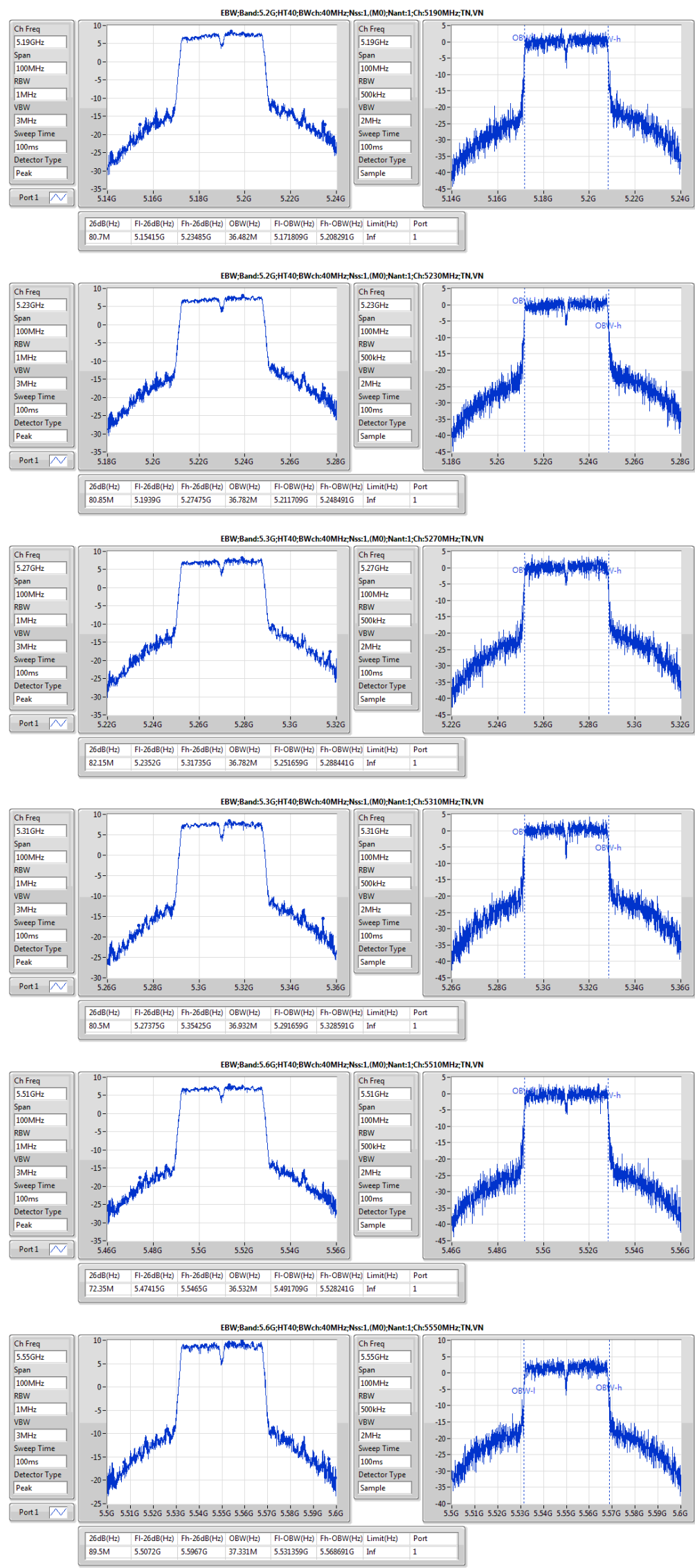






EBW Result

Appendix B





Summary

Mode	Sum (dBm)	Sum (W)	EIRP (dBm)	EIRP (W)
5.2G;11a;Nss1;Ntx1	15.14	0.03266	18.36	0.06855
5.3G;11a;Nss1;Ntx1	15.92	0.03908	19.14	0.08204
5.6G;11a;Nss1;Ntx1	17.36	0.05445	20.58	0.11429
5.8G;11a;Nss1;Ntx1	16.52	0.04487	19.74	0.09419
5.2G;HT20;Nss1,(M0);Ntx1	15.46	0.03516	18.68	0.07379
5.3G;HT20;Nss1,(M0);Ntx1	16.50	0.04467	19.72	0.09376
5.6G;HT20;Nss1,(M0);Ntx1	17.92	0.06194	21.14	0.13002
5.8G;HT20;Nss1,(M0);Ntx1	16.59	0.0456	19.81	0.09572
5.2G;HT40;Nss1,(M0);Ntx1	15.39	0.03459	18.61	0.07261
5.3G;HT40;Nss1,(M0);Ntx1	15.61	0.03639	18.83	0.07638
5.6G;HT40;Nss1,(M0);Ntx1	17.11	0.0514	20.33	0.10789
5.8G;HT40;Nss1,(M0);Ntx1	16.39	0.04355	19.61	0.09141



Result

Mode	Result	DG (dBi)	Sum (dBm)	Sum Lim. (dBm)	EIRP (dBm)	EIRP Lim. (dBm)	P1 (dBm)
5.2G;11a;Nss1;Ntx1;5180	Pass	3.22	15.14	23.98	18.36	30.00	15.14
5.2G;11a;Nss1;Ntx1;5200	Pass	3.22	14.97	23.98	18.19	30.00	14.97
5.2G;11a;Nss1;Ntx1;5240	Pass	3.22	14.75	23.98	17.97	30.00	14.75
5.3G;11a;Nss1;Ntx1;5260	Pass	3.22	15.36	23.98	18.58	30.00	15.36
5.3G;11a;Nss1;Ntx1;5300	Pass	3.22	15.66	23.98	18.88	30.00	15.66
5.3G;11a;Nss1;Ntx1;5320	Pass	3.22	15.92	23.98	19.14	30.00	15.92
5.6G;11a;Nss1;Ntx1;5500	Pass	3.22	17.36	23.98	20.58	30.00	17.36
5.6G;11a;Nss1;Ntx1;5580	Pass	3.22	17.25	23.98	20.47	30.00	17.25
5.6G;11a;Nss1;Ntx1;5700	Pass	3.22	15.85	23.98	19.07	30.00	15.85
5.8G;11a;Nss1;Ntx1;5745	Pass	3.22	16.52	30.00	19.74	36.00	16.52
5.8G;11a;Nss1;Ntx1;5785	Pass	3.22	16.04	30.00	19.26	36.00	16.04
5.8G;11a;Nss1;Ntx1;5825	Pass	3.22	15.56	30.00	18.78	36.00	15.56
5.2G;HT20;Nss1,(M0);Ntx1;5180	Pass	3.22	15.46	23.98	18.68	30.00	15.46
5.2G;HT20;Nss1,(M0);Ntx1;5200	Pass	3.22	15.42	23.98	18.64	30.00	15.42
5.2G;HT20;Nss1,(M0);Ntx1;5240	Pass	3.22	15.35	23.98	18.57	30.00	15.35
5.3G;HT20;Nss1,(M0);Ntx1;5260	Pass	3.22	15.75	23.98	18.97	30.00	15.75
5.3G;HT20;Nss1,(M0);Ntx1;5300	Pass	3.22	16.24	23.98	19.46	30.00	16.24
5.3G;HT20;Nss1,(M0);Ntx1;5320	Pass	3.22	16.50	23.98	19.72	30.00	16.5
5.6G;HT20;Nss1,(M0);Ntx1;5500	Pass	3.22	17.22	23.98	20.44	30.00	17.22
5.6G;HT20;Nss1,(M0);Ntx1;5580	Pass	3.22	17.92	23.98	21.14	30.00	17.92
5.6G;HT20;Nss1,(M0);Ntx1;5700	Pass	3.22	14.12	23.98	17.34	30.00	14.12
5.8G;HT20;Nss1,(M0);Ntx1;5745	Pass	3.22	16.59	30.00	19.81	36.00	16.59
5.8G;HT20;Nss1,(M0);Ntx1;5785	Pass	3.22	16.13	30.00	19.35	36.00	16.13
5.8G;HT20;Nss1,(M0);Ntx1;5825	Pass	3.22	15.72	30.00	18.94	36.00	15.72
5.2G;HT40;Nss1,(M0);Ntx1;5190	Pass	3.22	15.39	23.98	18.61	30.00	15.39
5.2G;HT40;Nss1,(M0);Ntx1;5230	Pass	3.22	15.37	23.98	18.59	30.00	15.37
5.3G;HT40;Nss1,(M0);Ntx1;5270	Pass	3.22	15.61	23.98	18.83	30.00	15.61
5.3G;HT40;Nss1,(M0);Ntx1;5310	Pass	3.22	13.68	23.98	16.90	30.00	13.68
5.6G;HT40;Nss1,(M0);Ntx1;5510	Pass	3.22	13.42	23.98	16.64	30.00	13.42
5.6G;HT40;Nss1,(M0);Ntx1;5550	Pass	3.22	17.11	23.98	20.33	30.00	17.11
5.6G;HT40;Nss1,(M0);Ntx1;5670	Pass	3.22	17.04	23.98	20.26	30.00	17.04
5.8G;HT40;Nss1,(M0);Ntx1;5755	Pass	3.22	16.39	30.00	19.61	36.00	16.39
5.8G;HT40;Nss1,(M0);Ntx1;5795	Pass	3.22	15.92	30.00	19.14	36.00	15.92



Summary

Mode	PD (dBm/RBW)	EIRP.PD (dBm/RBW)
5.2G;11a;Nss1;Ntx1	1.96	5.18
5.3G;11a;Nss1;Ntx1	2.51	5.73
5.6G;11a;Nss1;Ntx1	4.24	7.46
5.8G;11a;Nss1;Ntx1	0.52	3.74
5.2G;HT20;Nss1,(M0);Ntx1	1.61	4.83
5.3G;HT20;Nss1,(M0);Ntx1	2.18	5.40
5.6G;HT20;Nss1,(M0);Ntx1	3.40	6.62
5.8G;HT20;Nss1,(M0);Ntx1	0.39	3.61
5.2G;HT40;Nss1,(M0);Ntx1	-1.46	1.76
5.3G;HT40;Nss1,(M0);Ntx1	-1.61	1.61
5.6G;HT40;Nss1,(M0);Ntx1	-0.40	2.82
5.8G;HT40;Nss1,(M0);Ntx1	-2.64	0.58



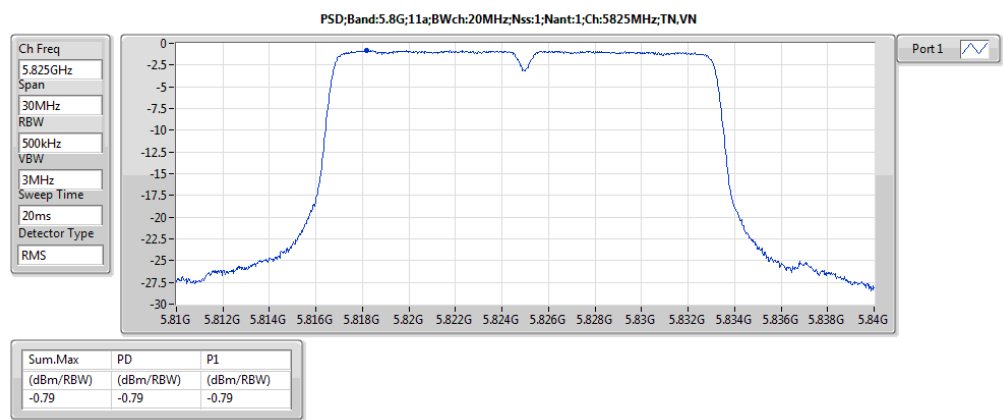
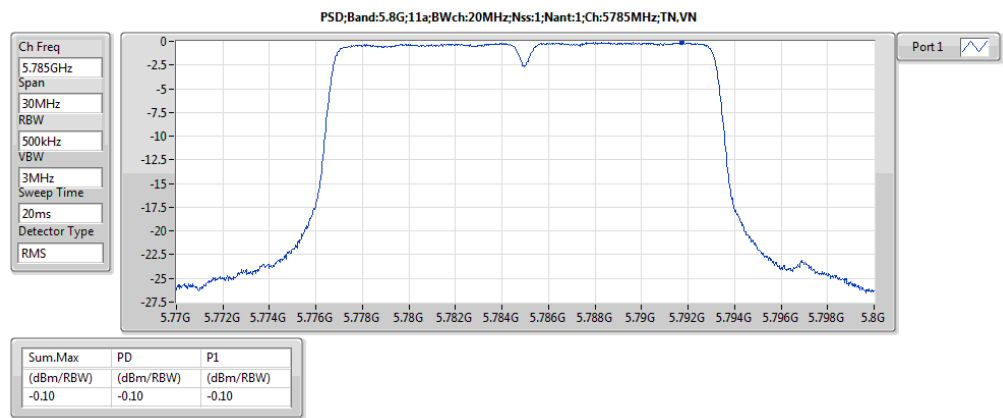
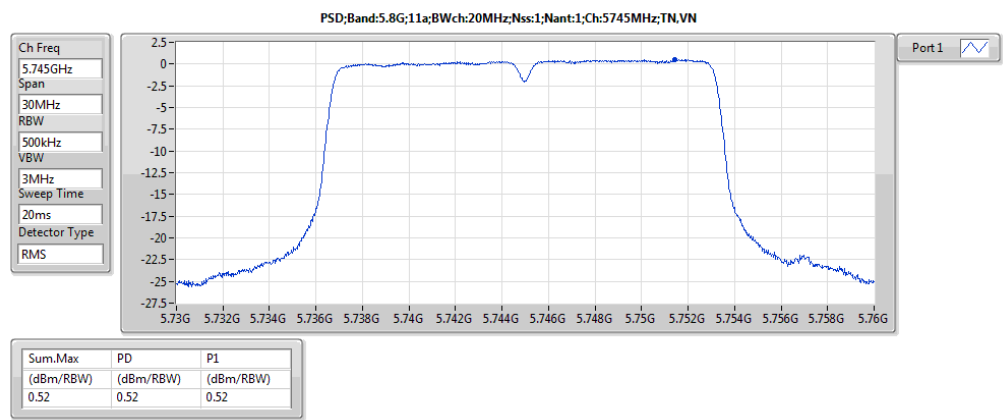
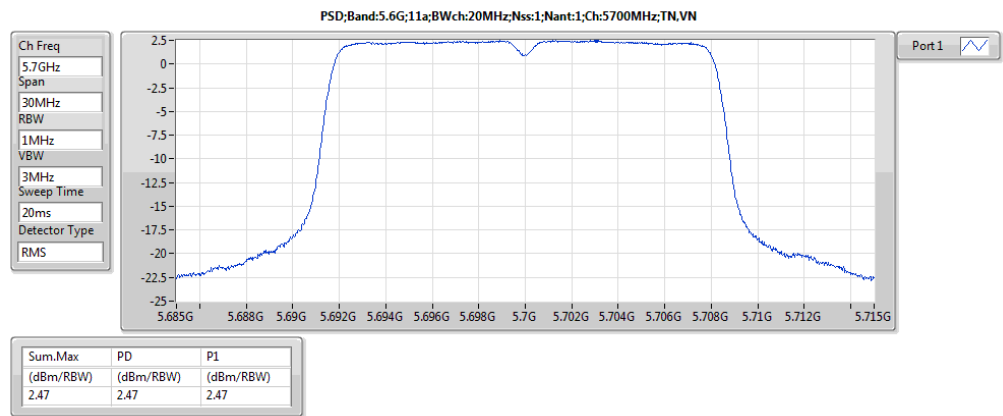
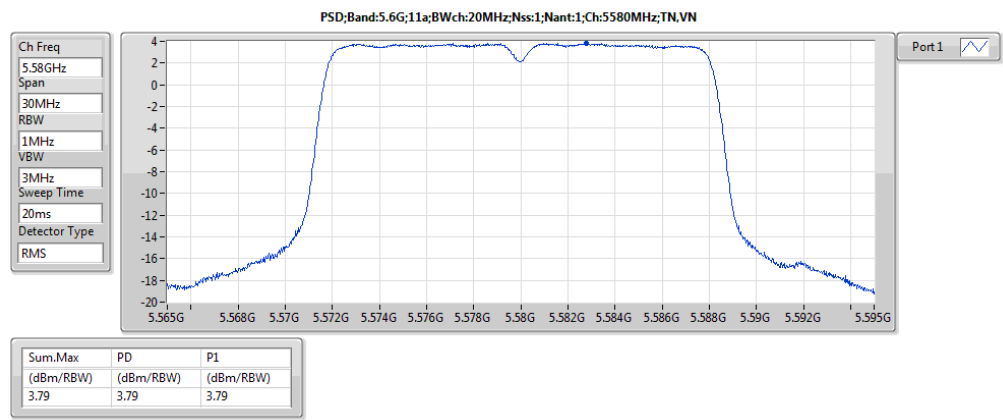
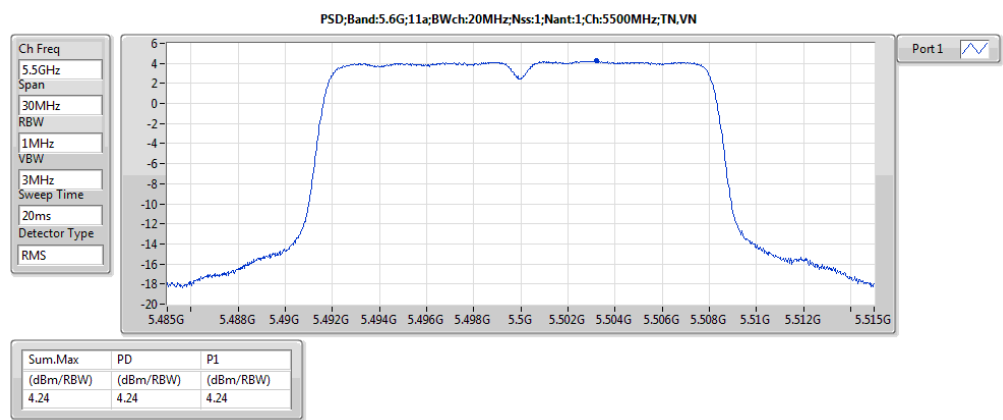
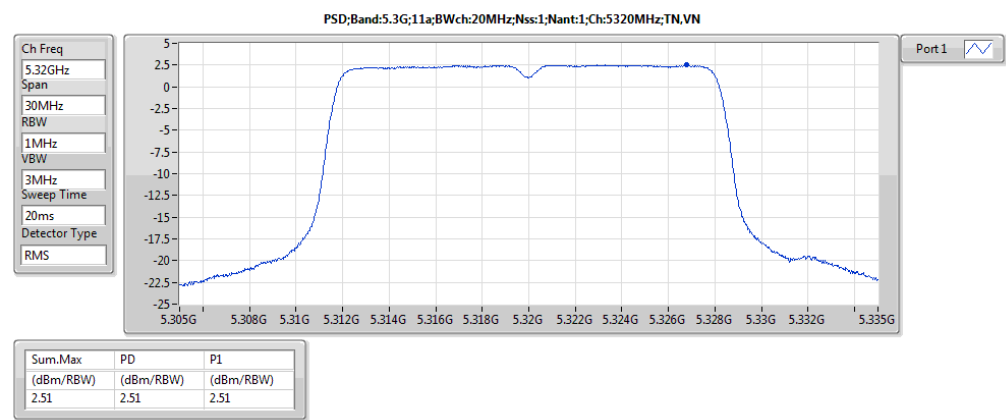
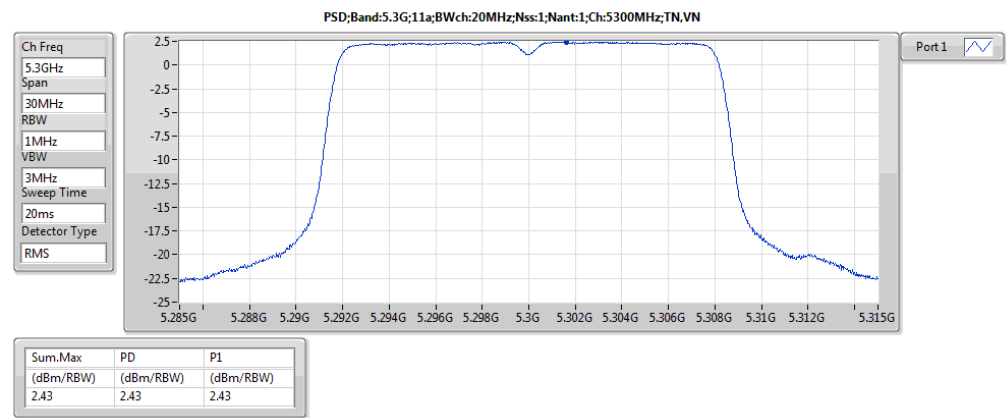
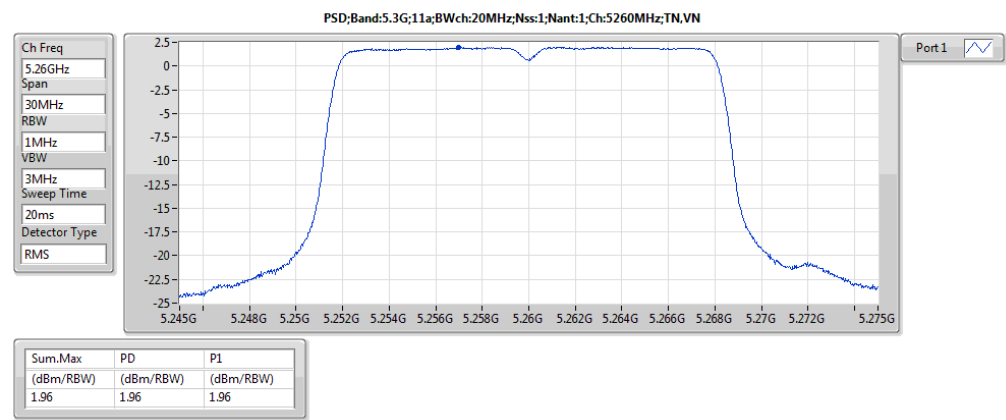
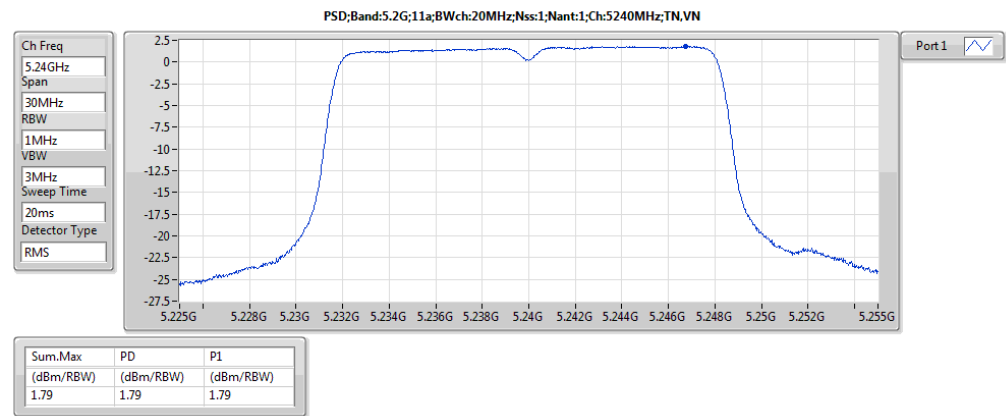
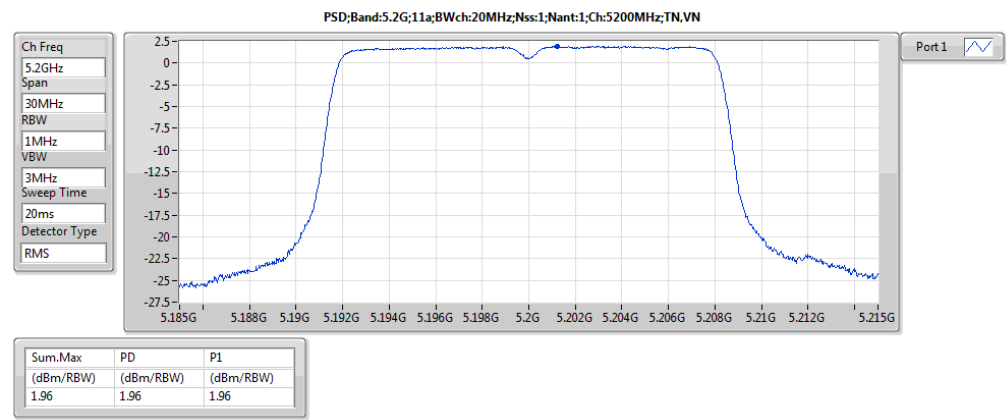
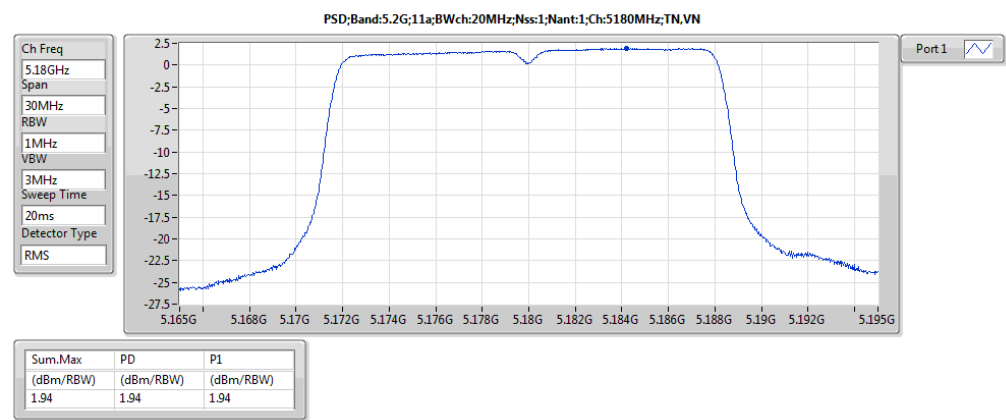
Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD.Limit (dBm/RBW)	EIRP.PD (dBm/RBW)	P1 (dBm/RBW)
5.2G;11a;Nss1;Ntx1;5180	Pass	3.22	1.94	11.00	5.16	1.94
5.2G;11a;Nss1;Ntx1;5200	Pass	3.22	1.96	11.00	5.18	1.96
5.2G;11a;Nss1;Ntx1;5240	Pass	3.22	1.79	11.00	5.01	1.79
5.3G;11a;Nss1;Ntx1;5260	Pass	3.22	1.96	11.00	5.18	1.96
5.3G;11a;Nss1;Ntx1;5300	Pass	3.22	2.43	11.00	5.65	2.43
5.3G;11a;Nss1;Ntx1;5320	Pass	3.22	2.51	11.00	5.73	2.51
5.6G;11a;Nss1;Ntx1;5500	Pass	3.22	4.24	11.00	7.46	4.24
5.6G;11a;Nss1;Ntx1;5580	Pass	3.22	3.79	11.00	7.01	3.79
5.6G;11a;Nss1;Ntx1;5700	Pass	3.22	2.47	11.00	5.69	2.47
5.8G;11a;Nss1;Ntx1;5745	Pass	3.22	0.52	30.00	3.74	0.52
5.8G;11a;Nss1;Ntx1;5785	Pass	3.22	-0.10	30.00	3.12	-0.10
5.8G;11a;Nss1;Ntx1;5825	Pass	3.22	-0.79	30.00	2.43	-0.79
5.2G;HT20;Nss1,(M0);Ntx1;5180	Pass	3.22	1.61	11.00	4.83	1.61
5.2G;HT20;Nss1,(M0);Ntx1;5200	Pass	3.22	1.60	11.00	4.82	1.60
5.2G;HT20;Nss1,(M0);Ntx1;5240	Pass	3.22	1.48	11.00	4.70	1.48
5.3G;HT20;Nss1,(M0);Ntx1;5260	Pass	3.22	1.67	11.00	4.89	1.67
5.3G;HT20;Nss1,(M0);Ntx1;5300	Pass	3.22	2.08	11.00	5.30	2.08
5.3G;HT20;Nss1,(M0);Ntx1;5320	Pass	3.22	2.18	11.00	5.40	2.18
5.6G;HT20;Nss1,(M0);Ntx1;5500	Pass	3.22	3.08	11.00	6.30	3.08
5.6G;HT20;Nss1,(M0);Ntx1;5580	Pass	3.22	3.40	11.00	6.62	3.40
5.6G;HT20;Nss1,(M0);Ntx1;5700	Pass	3.22	1.27	11.00	4.49	1.27
5.8G;HT20;Nss1,(M0);Ntx1;5745	Pass	3.22	0.39	30.00	3.61	0.39
5.8G;HT20;Nss1,(M0);Ntx1;5785	Pass	3.22	-0.29	30.00	2.93	-0.29
5.8G;HT20;Nss1,(M0);Ntx1;5825	Pass	3.22	-1.04	30.00	2.18	-1.04
5.2G;HT40;Nss1,(M0);Ntx1;5190	Pass	3.22	-1.46	11.00	1.76	-1.46
5.2G;HT40;Nss1,(M0);Ntx1;5230	Pass	3.22	-1.79	11.00	1.43	-1.79
5.3G;HT40;Nss1,(M0);Ntx1;5270	Pass	3.22	-1.66	11.00	1.56	-1.66
5.3G;HT40;Nss1,(M0);Ntx1;5310	Pass	3.22	-1.61	11.00	1.61	-1.61
5.6G;HT40;Nss1,(M0);Ntx1;5510	Pass	3.22	-2.23	11.00	0.99	-2.23
5.6G;HT40;Nss1,(M0);Ntx1;5550	Pass	3.22	-0.40	11.00	2.82	-0.40
5.6G;HT40;Nss1,(M0);Ntx1;5670	Pass	3.22	-0.48	11.00	2.74	-0.48
5.8G;HT40;Nss1,(M0);Ntx1;5755	Pass	3.22	-2.64	30.00	0.58	-2.64
5.8G;HT40;Nss1,(M0);Ntx1;5795	Pass	3.22	-3.40	30.00	-0.18	-3.40



PSD Result

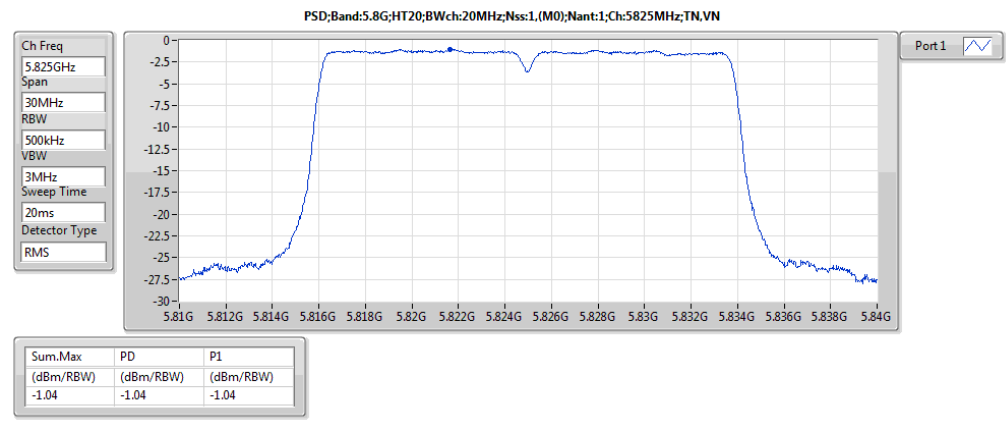
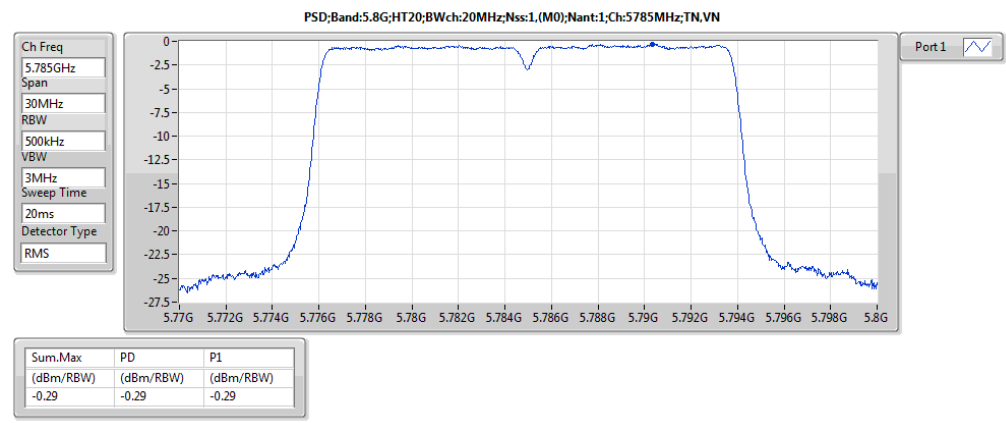
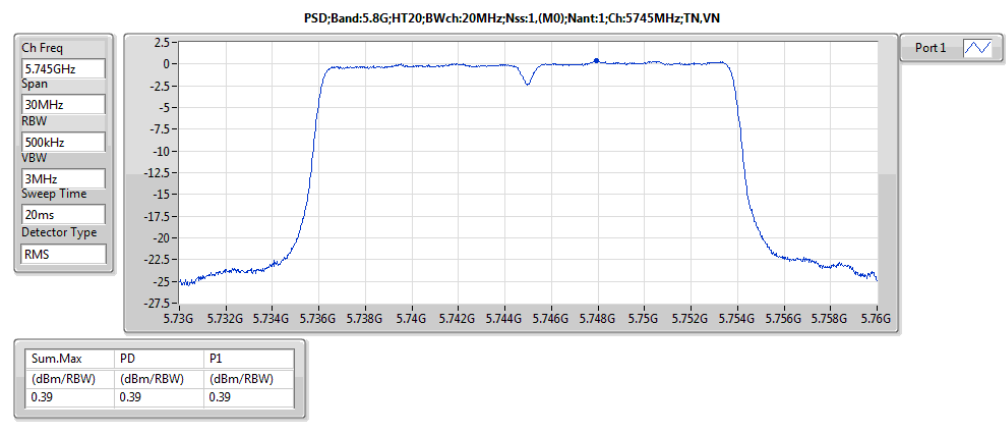
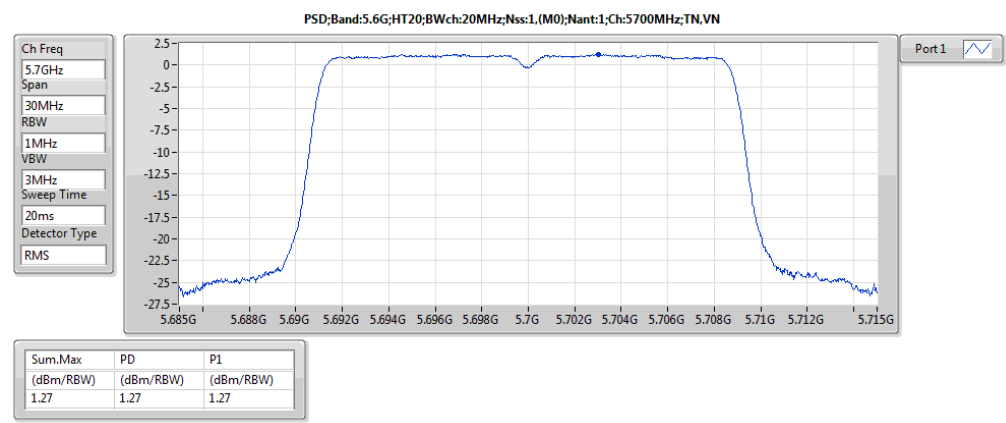
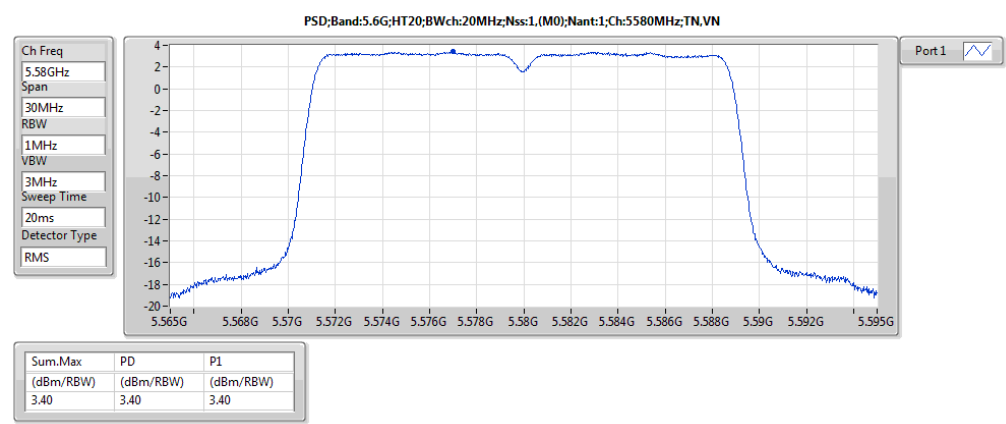
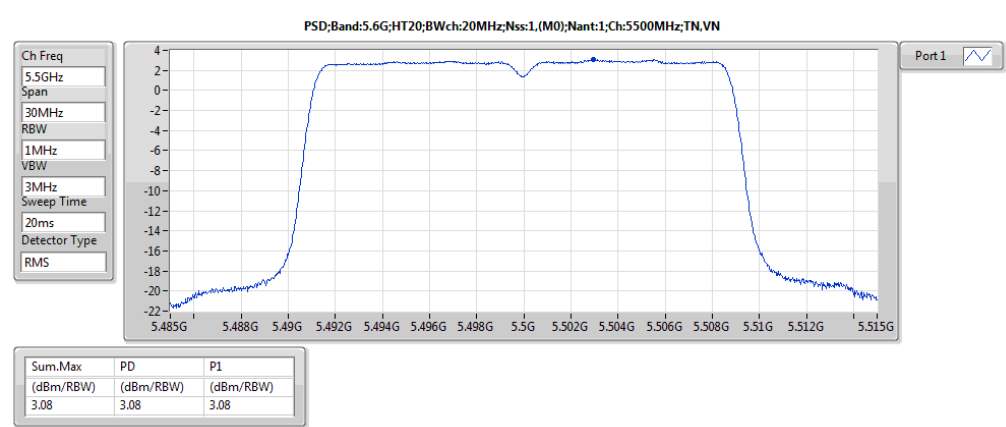
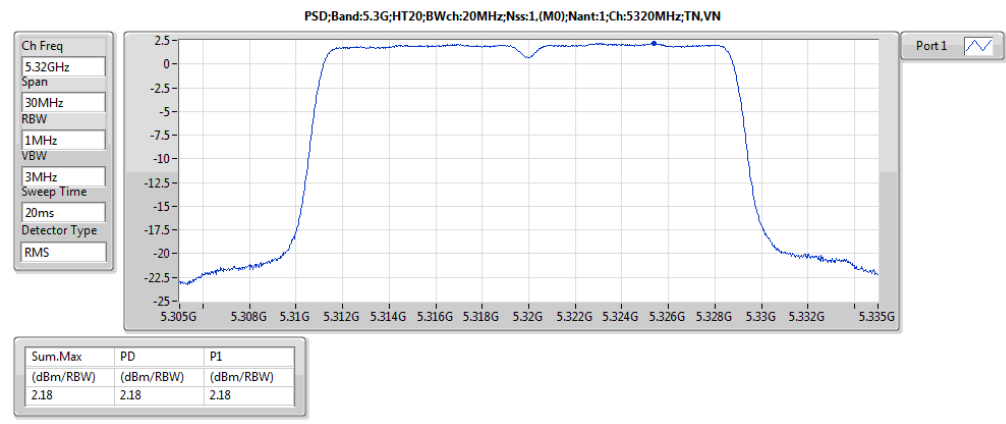
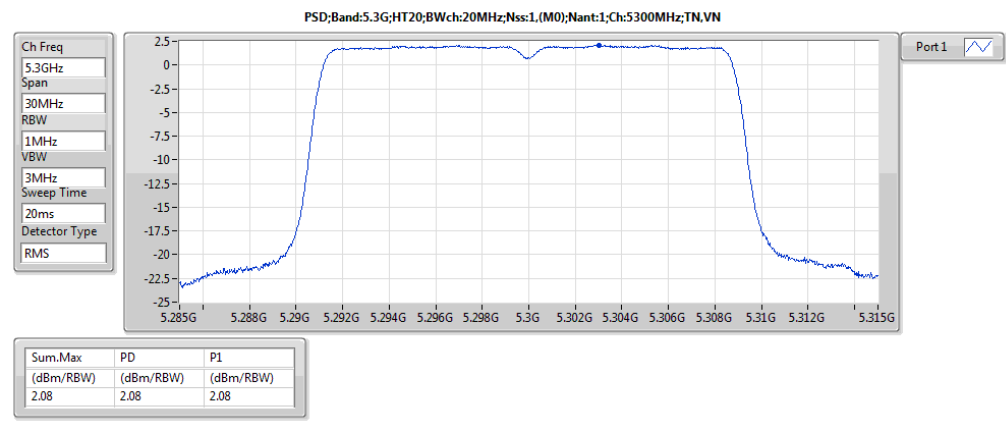
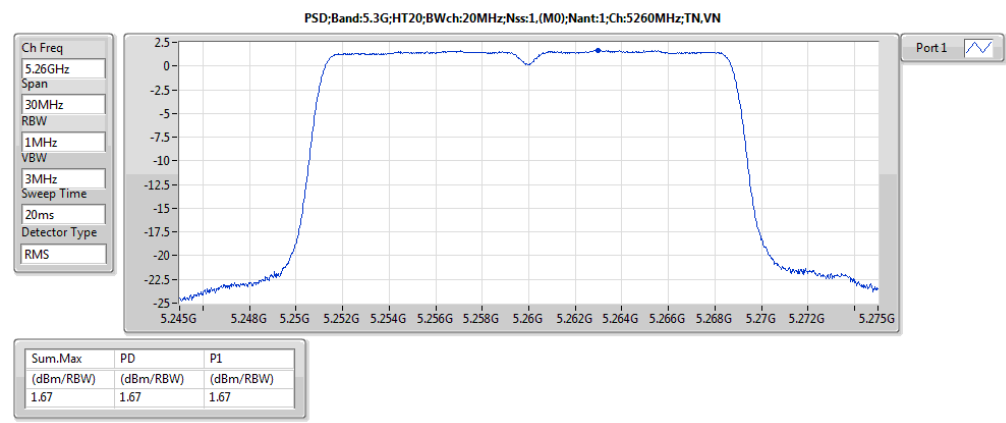
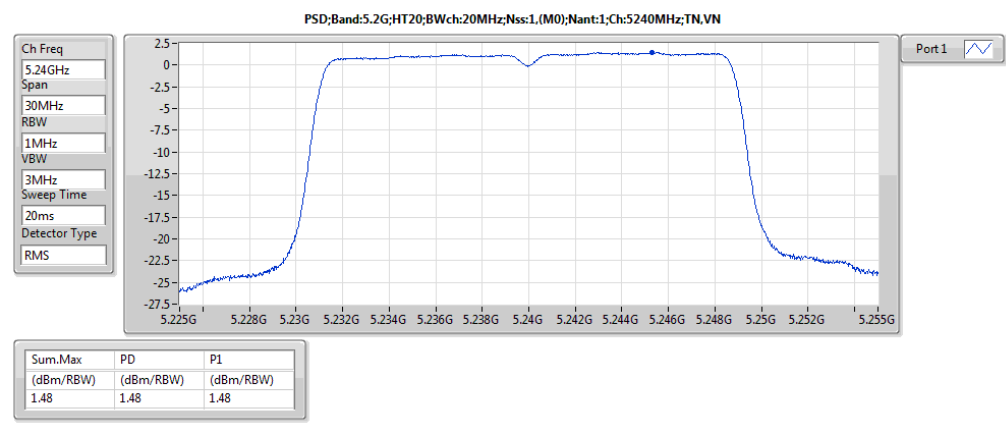
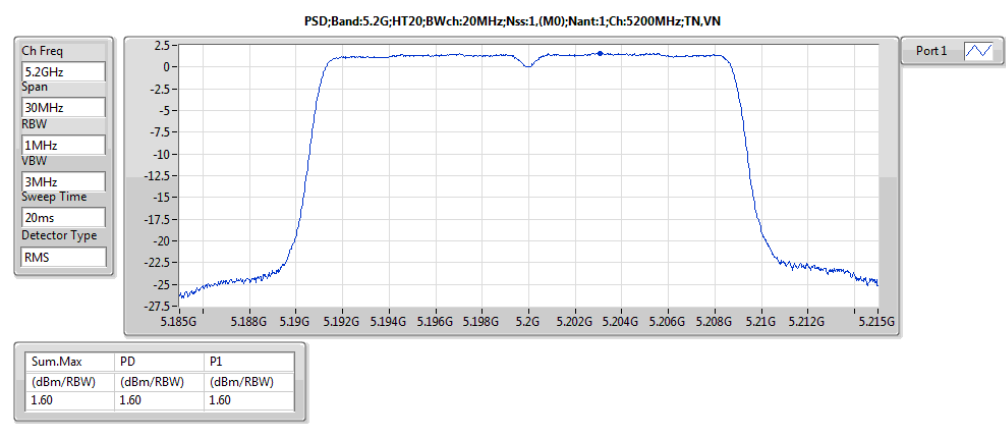
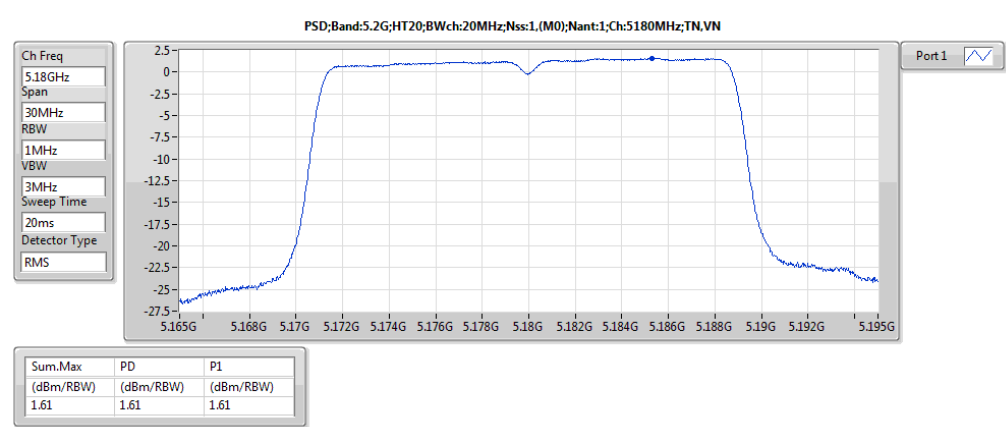
Appendix D





PSD Result

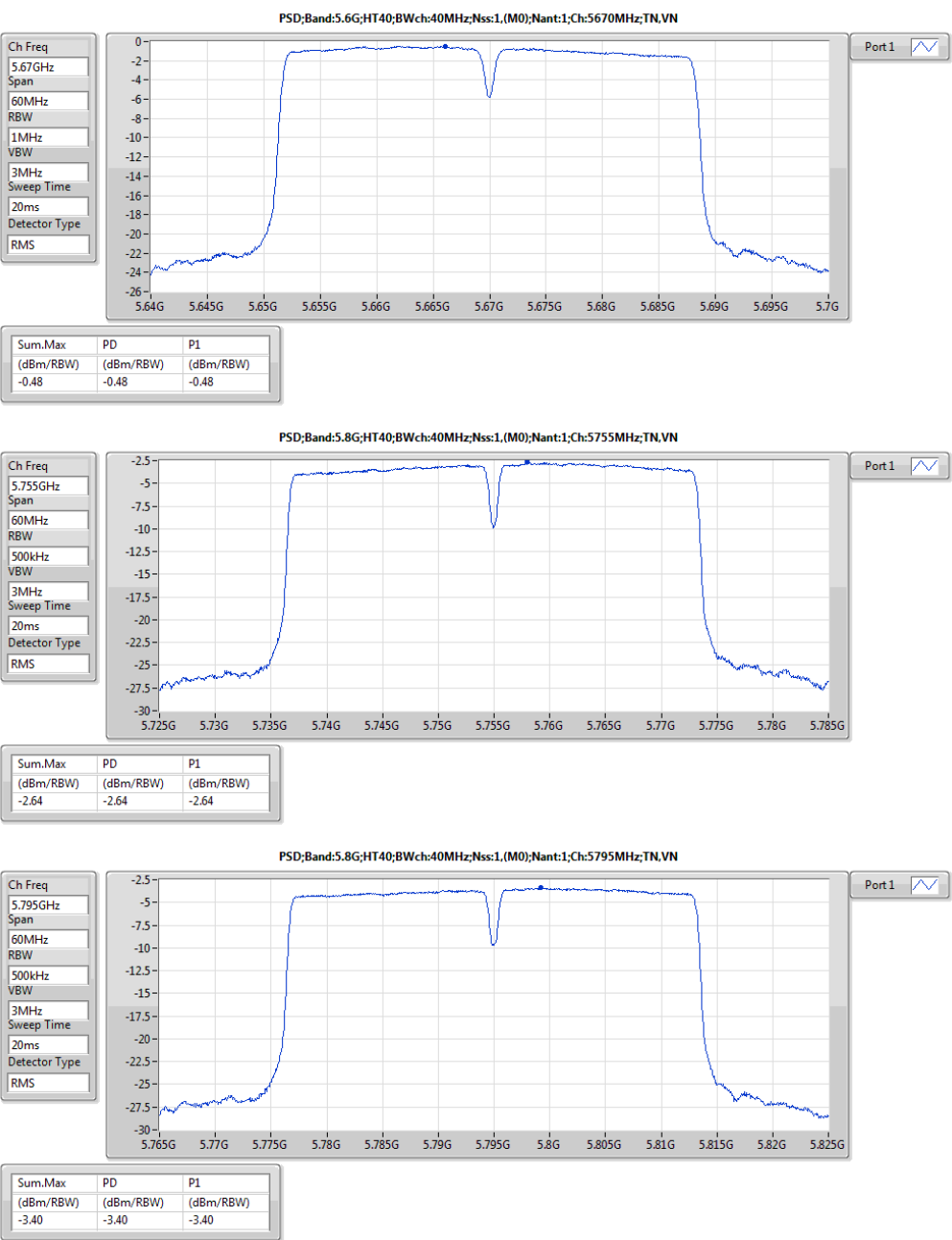
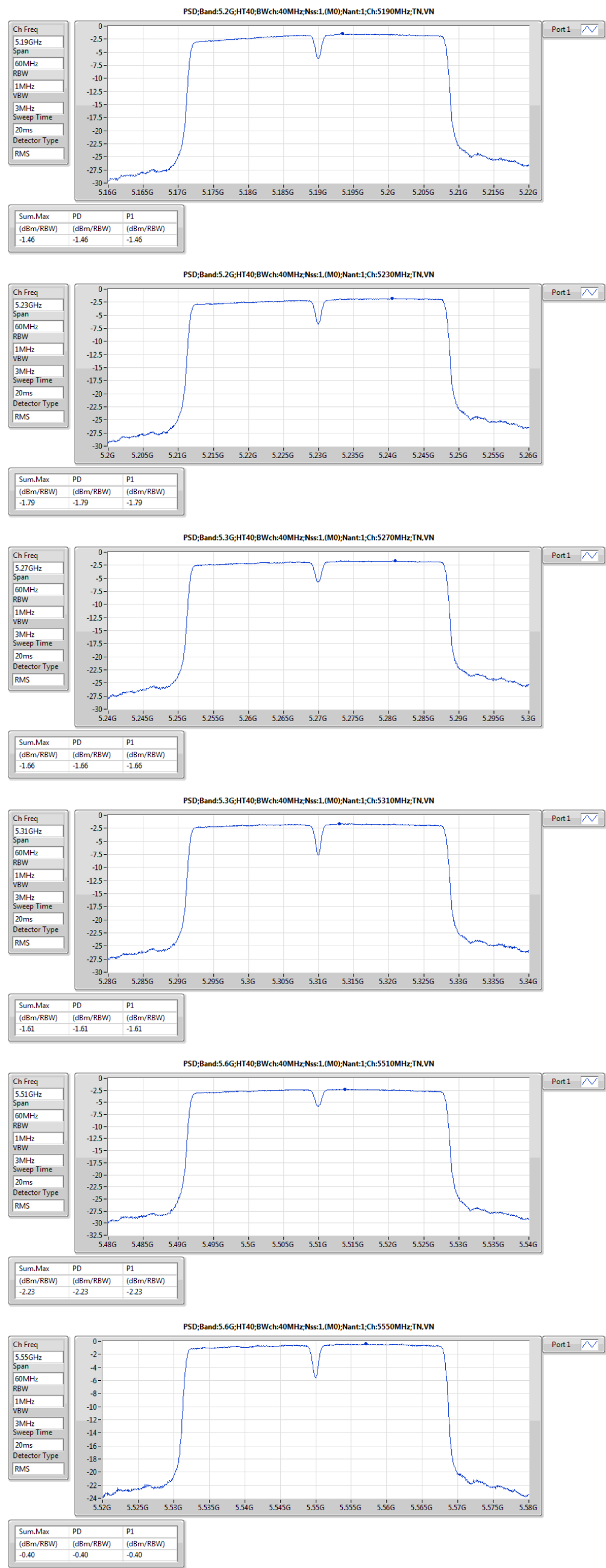
Appendix D





PSD Result

Appendix D





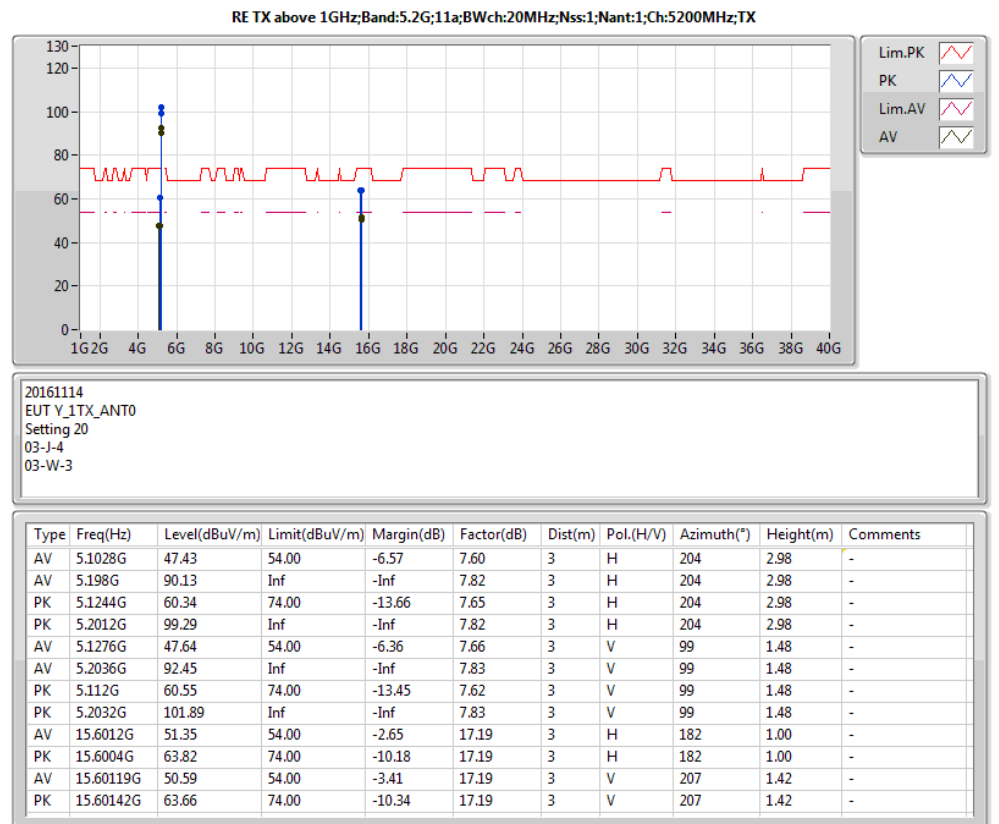
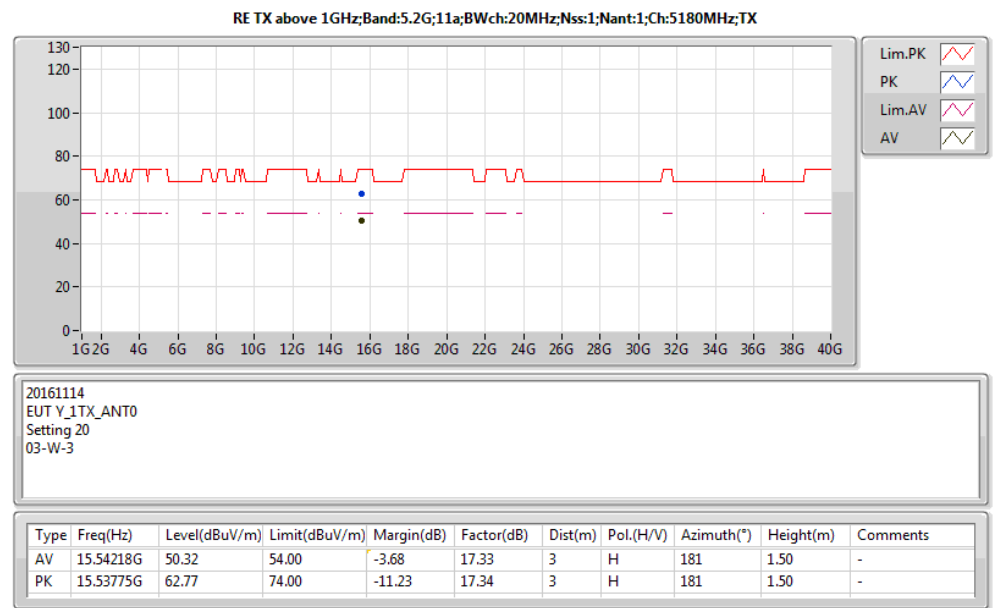
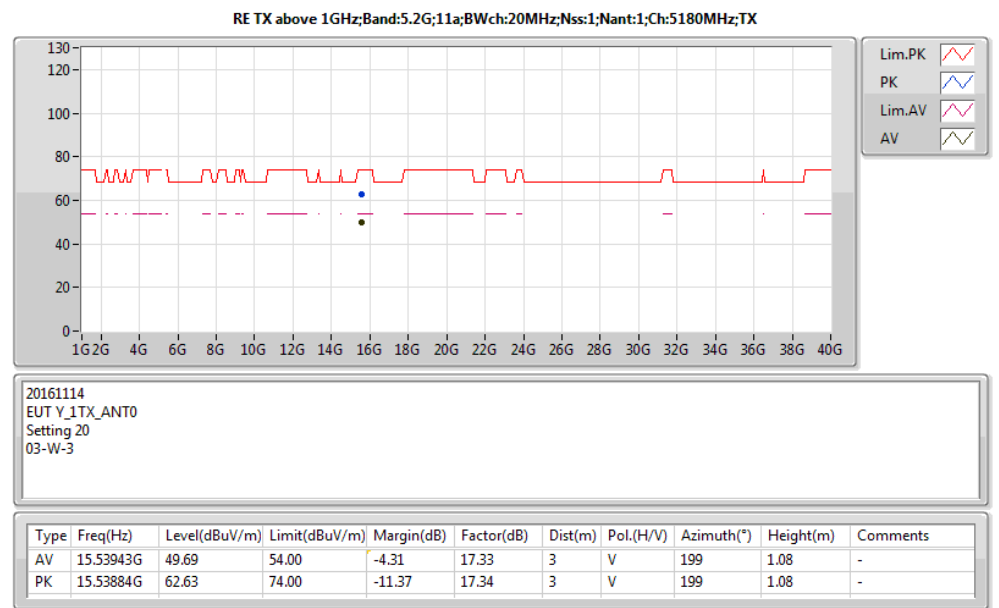
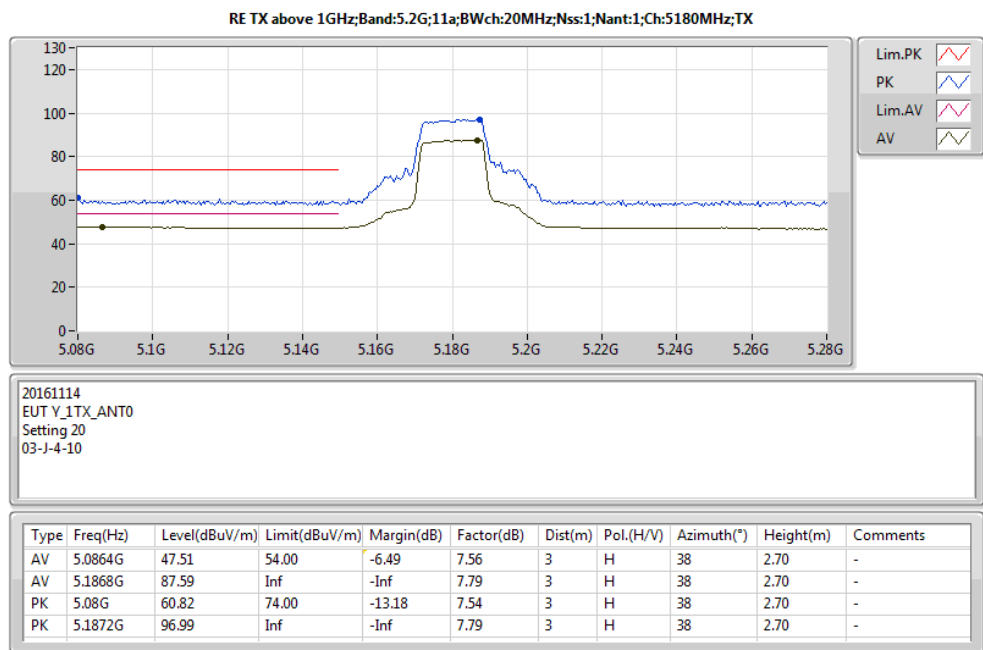
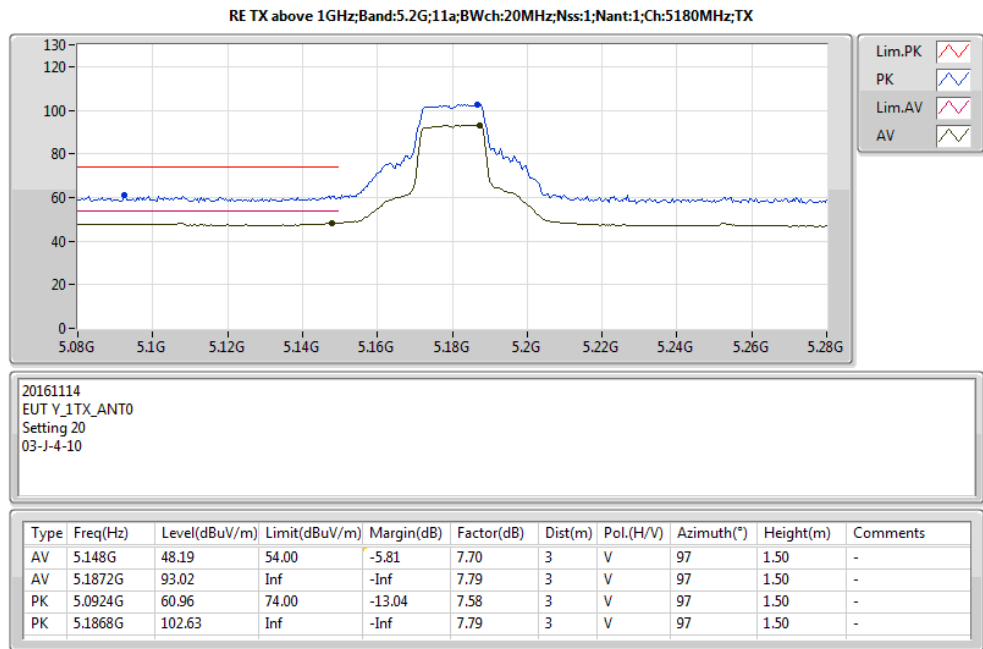
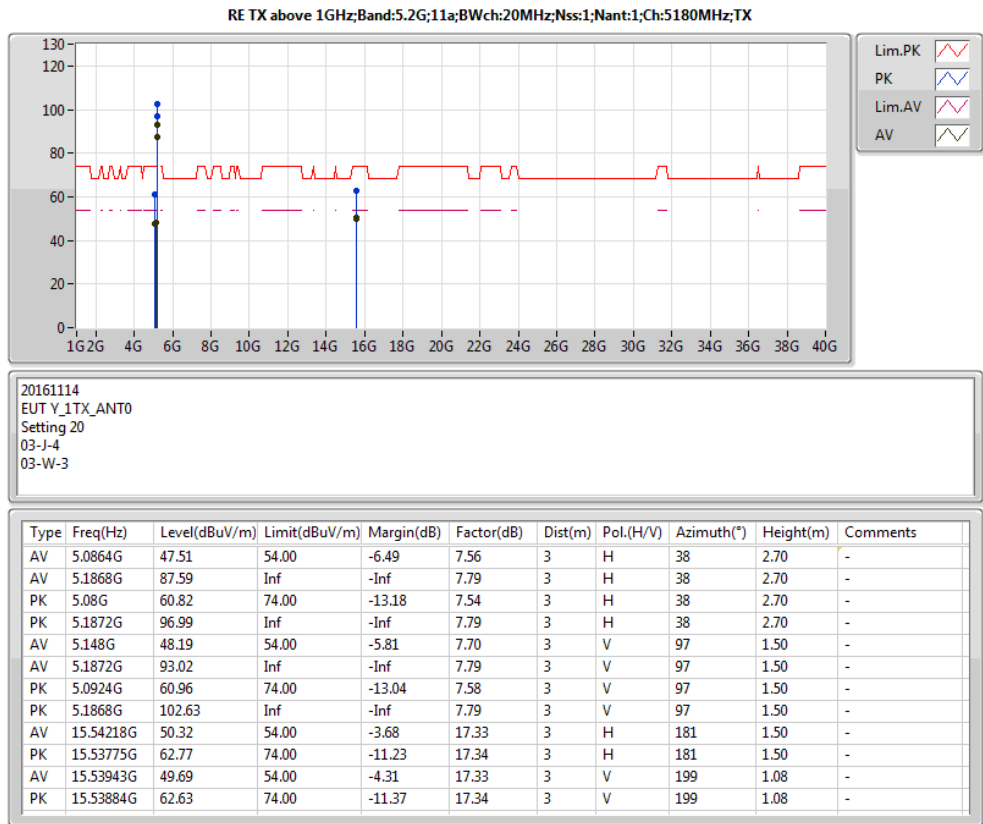
RSE below 1GHz Result																																																																																																												
Operating Mode	2					Polarization			Horizontal																																																																																																			
Operating Function	Normal Link																																																																																																											
Level (dBuV/m) Date: 2016-12-02 Time: 20:59:44 Frequency (MHz) <table><tr><th></th><th>Freq</th><th>Level</th><th>Limit</th><th>Over</th><th>Read</th><th>CableAntenna</th><th>Preamp</th><th>A/Pos</th><th>T/Pos</th><th>Remark</th><th>Pol/Phase</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dBuV/m</th><th>dB</th><th>dBuV</th><th>dB</th><th>dB/m</th><th>dB</th><th>cm</th><th>deg</th><th></th></tr><tr><td>1</td><td>30.97</td><td>32.96</td><td>40.00</td><td>-7.04</td><td>38.94</td><td>0.53</td><td>24.99</td><td>31.50</td><td>150</td><td>183 Peak</td><td>HORIZONTAL</td></tr><tr><td>2</td><td>250.19</td><td>37.34</td><td>46.00</td><td>-8.66</td><td>49.36</td><td>1.25</td><td>18.70</td><td>31.97</td><td>100</td><td>155 Peak</td><td>HORIZONTAL</td></tr><tr><td>3</td><td>437.40</td><td>39.36</td><td>46.00</td><td>-6.64</td><td>47.20</td><td>1.62</td><td>22.75</td><td>32.21</td><td>100</td><td>182 Peak</td><td>HORIZONTAL</td></tr><tr><td>4</td><td>522.76</td><td>38.98</td><td>46.00</td><td>-7.02</td><td>45.46</td><td>1.80</td><td>24.07</td><td>32.35</td><td>100</td><td>198 Peak</td><td>HORIZONTAL</td></tr><tr><td>5</td><td>699.30</td><td>38.53</td><td>46.00</td><td>-7.47</td><td>43.44</td><td>2.09</td><td>25.50</td><td>32.50</td><td>100</td><td>203 Peak</td><td>HORIZONTAL</td></tr><tr><td>6</td><td>850.62</td><td>38.60</td><td>46.00</td><td>-7.40</td><td>41.77</td><td>2.35</td><td>27.00</td><td>32.52</td><td>100</td><td>198 Peak</td><td>HORIZONTAL</td></tr></table>														Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		1	30.97	32.96	40.00	-7.04	38.94	0.53	24.99	31.50	150	183 Peak	HORIZONTAL	2	250.19	37.34	46.00	-8.66	49.36	1.25	18.70	31.97	100	155 Peak	HORIZONTAL	3	437.40	39.36	46.00	-6.64	47.20	1.62	22.75	32.21	100	182 Peak	HORIZONTAL	4	522.76	38.98	46.00	-7.02	45.46	1.80	24.07	32.35	100	198 Peak	HORIZONTAL	5	699.30	38.53	46.00	-7.47	43.44	2.09	25.50	32.50	100	203 Peak	HORIZONTAL	6	850.62	38.60	46.00	-7.40	41.77	2.35	27.00	32.52	100	198 Peak	HORIZONTAL
	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase																																																																																																	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg																																																																																																		
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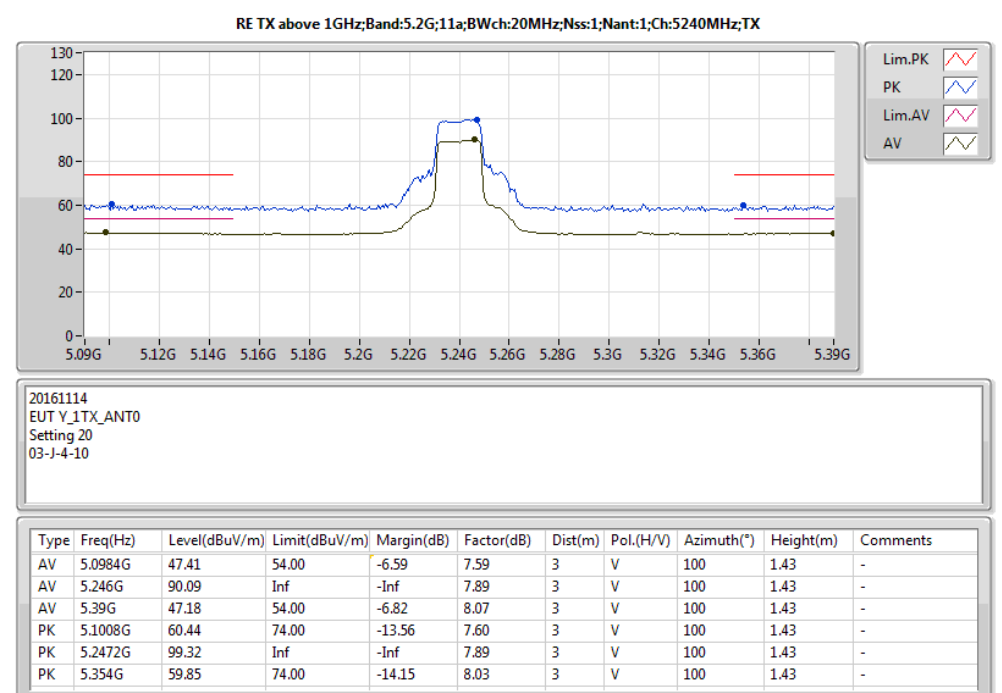
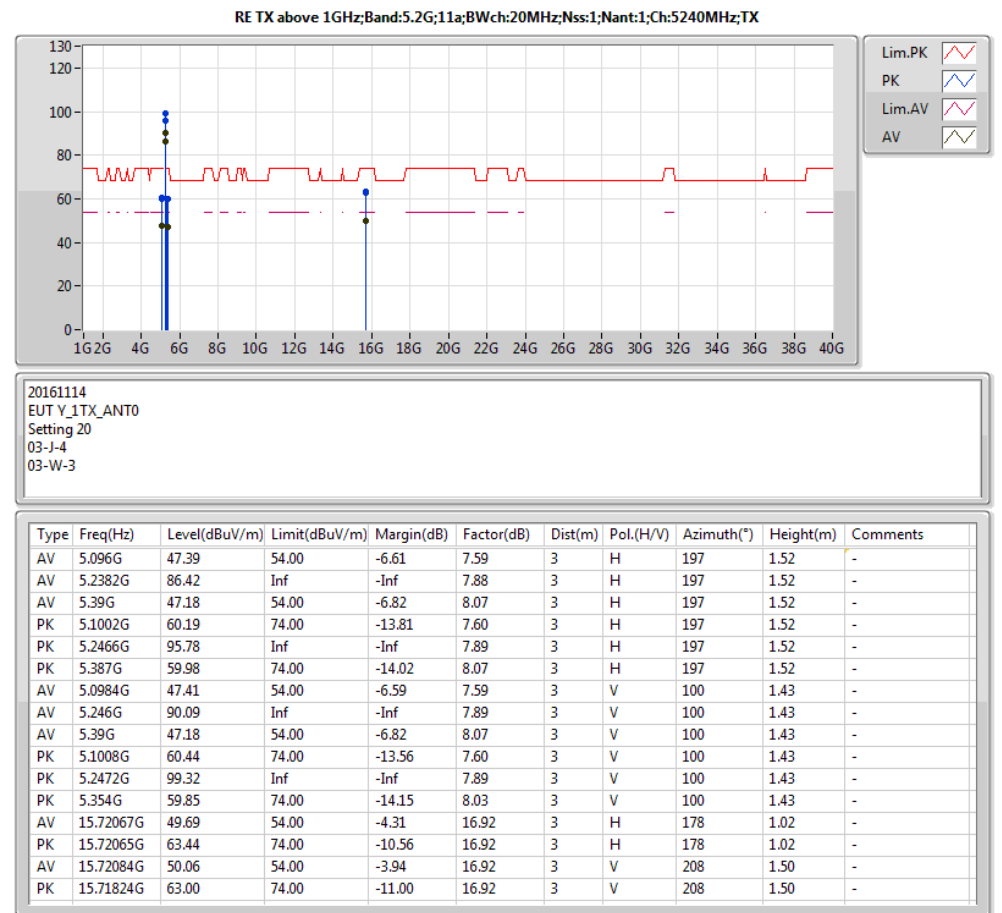
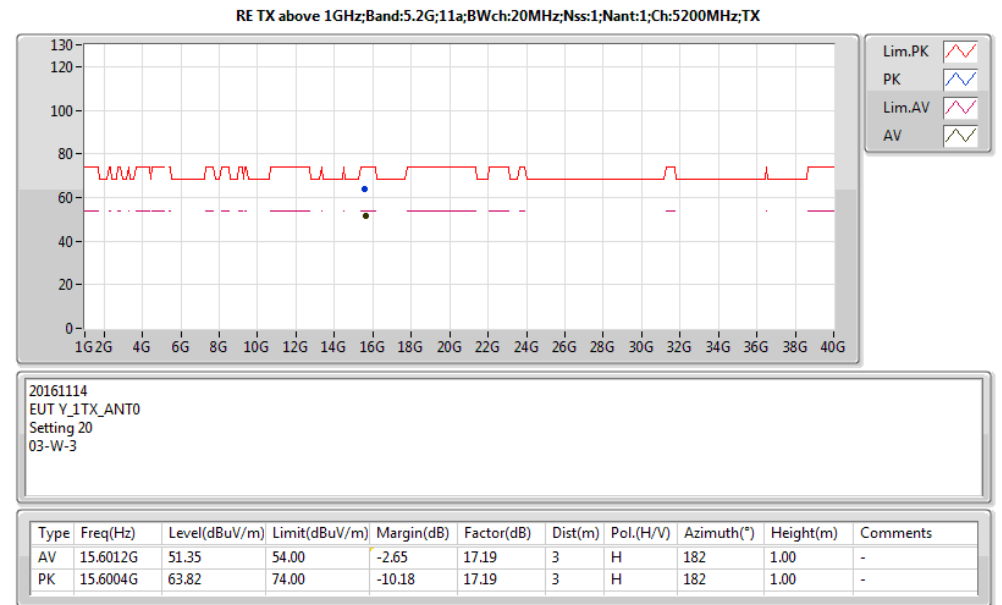
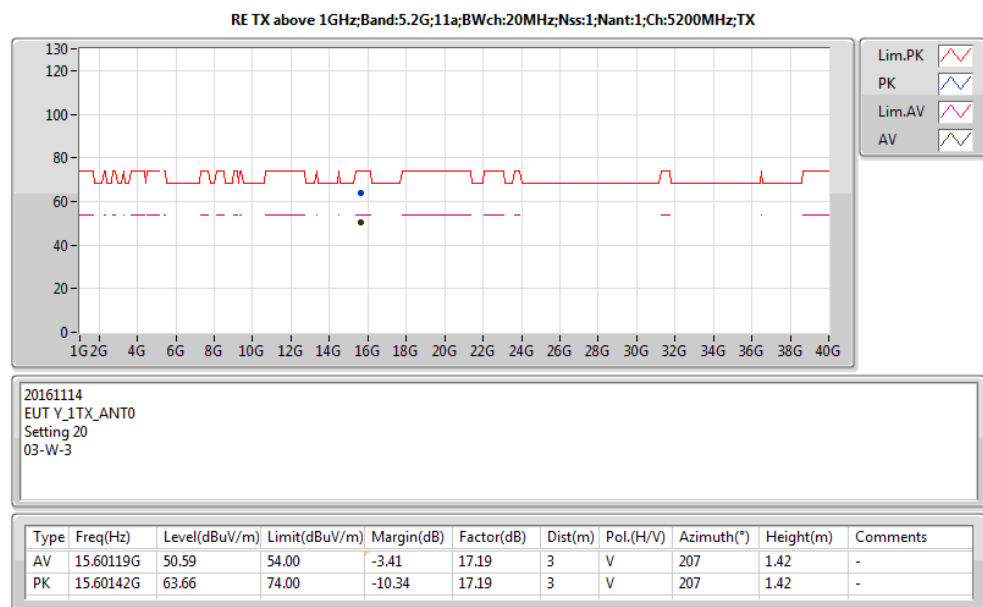
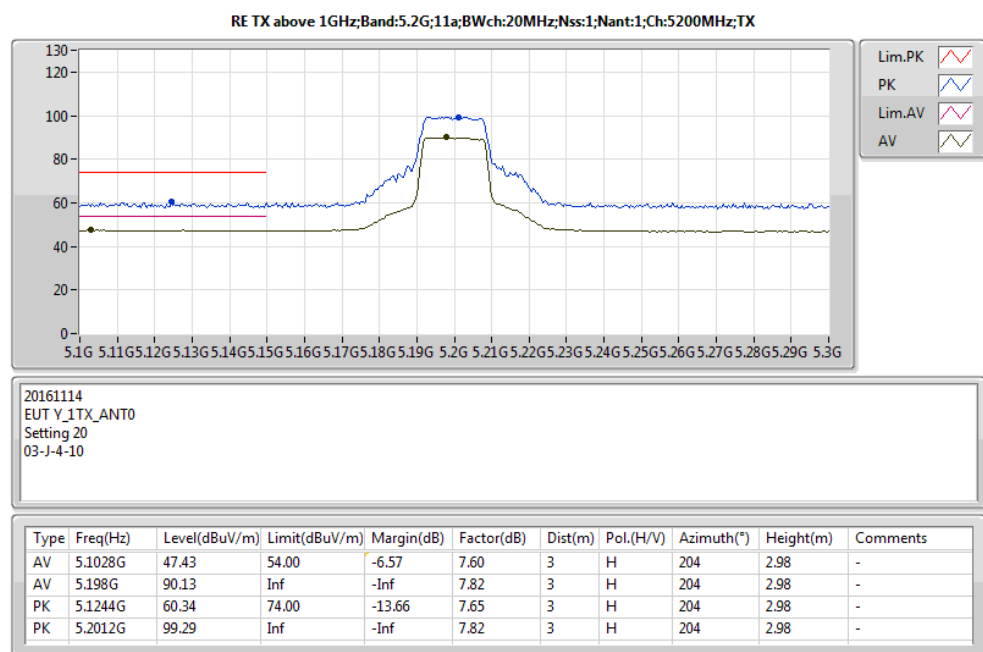
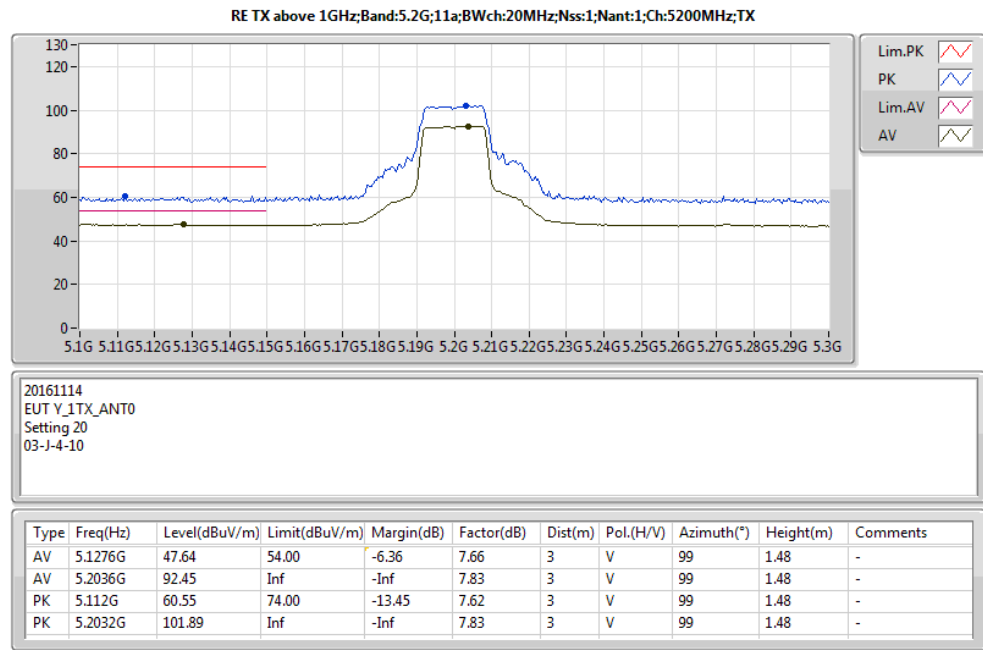
RSE below 1GHz Result																																																																																																												
Operating Mode	2					Power Phase			Vertical																																																																																																			
Operating Function	Normal Link																																																																																																											
Level (dBuV/m) Date: 2016-12-02 Time: 21:02:00 Frequency (MHz)																																																																																																												
<table><tr><th></th><th>Freq</th><th>Level</th><th>Limit</th><th>Over</th><th>Read</th><th>CableAntenna</th><th>Preamp</th><th>A/Pos</th><th>T/Pos</th><th>Remark</th><th>Pol/Phase</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dBuV/m</th><th>dB</th><th>dBuV</th><th>dB</th><th>dB/m</th><th>dB</th><th>cm</th><th>deg</th><th></th></tr><tr><td>1</td><td>49.40</td><td>32.67</td><td>40.00</td><td>-7.33</td><td>48.73</td><td>0.61</td><td>15.08</td><td>31.75</td><td>100</td><td>163 Peak</td><td>VERTICAL</td></tr><tr><td>2</td><td>424.79</td><td>40.01</td><td>46.00</td><td>-5.99</td><td>48.00</td><td>1.60</td><td>22.61</td><td>32.20</td><td>100</td><td>226 Peak</td><td>VERTICAL</td></tr><tr><td>3</td><td>512.09</td><td>39.40</td><td>46.00</td><td>-6.60</td><td>46.05</td><td>1.78</td><td>23.90</td><td>32.33</td><td>200</td><td>288 Peak</td><td>VERTICAL</td></tr><tr><td>4</td><td>524.70</td><td>38.23</td><td>46.00</td><td>-7.77</td><td>44.67</td><td>1.81</td><td>24.10</td><td>32.35</td><td>100</td><td>249 Peak</td><td>VERTICAL</td></tr><tr><td>5</td><td>849.65</td><td>37.88</td><td>46.00</td><td>-8.12</td><td>41.05</td><td>2.35</td><td>27.00</td><td>32.52</td><td>100</td><td>208 Peak</td><td>VERTICAL</td></tr><tr><td>6</td><td>950.53</td><td>39.32</td><td>46.00</td><td>-6.68</td><td>41.69</td><td>2.43</td><td>27.67</td><td>32.47</td><td>100</td><td>213 Peak</td><td>VERTICAL</td></tr></table>														Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		1	49.40	32.67	40.00	-7.33	48.73	0.61	15.08	31.75	100	163 Peak	VERTICAL	2	424.79	40.01	46.00	-5.99	48.00	1.60	22.61	32.20	100	226 Peak	VERTICAL	3	512.09	39.40	46.00	-6.60	46.05	1.78	23.90	32.33	200	288 Peak	VERTICAL	4	524.70	38.23	46.00	-7.77	44.67	1.81	24.10	32.35	100	249 Peak	VERTICAL	5	849.65	37.88	46.00	-8.12	41.05	2.35	27.00	32.52	100	208 Peak	VERTICAL	6	950.53	39.32	46.00	-6.68	41.69	2.43	27.67	32.47	100	213 Peak	VERTICAL
	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase																																																																																																	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg																																																																																																		
1	49.40	32.67	40.00	-7.33	48.73	0.61	15.08	31.75	100	163 Peak	VERTICAL																																																																																																	
2	424.79	40.01	46.00	-5.99	48.00	1.60	22.61	32.20	100	226 Peak	VERTICAL																																																																																																	
3	512.09	39.40	46.00	-6.60	46.05	1.78	23.90	32.33	200	288 Peak	VERTICAL																																																																																																	
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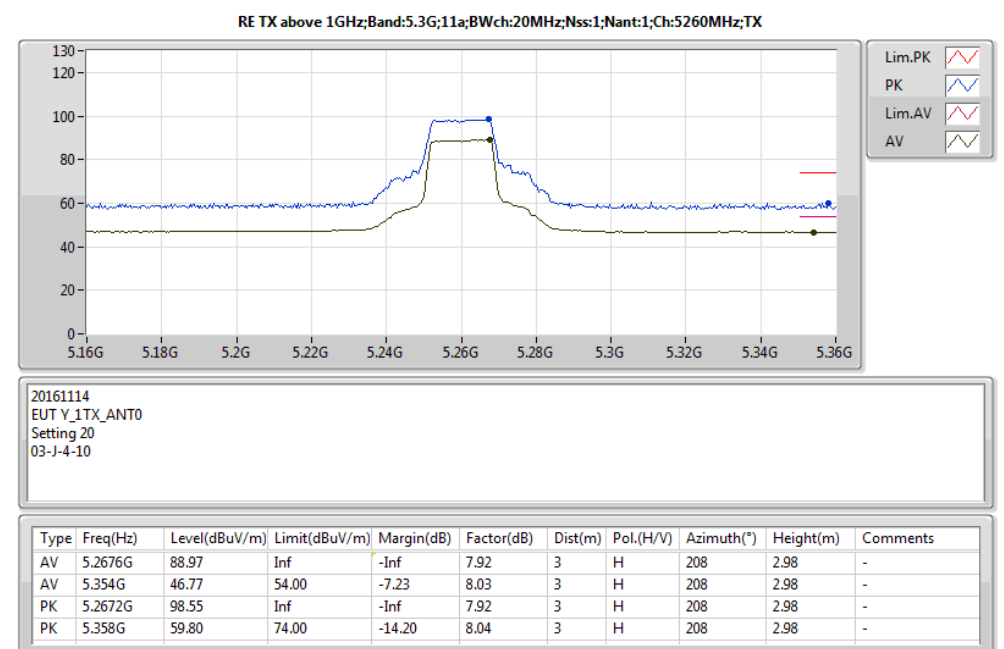
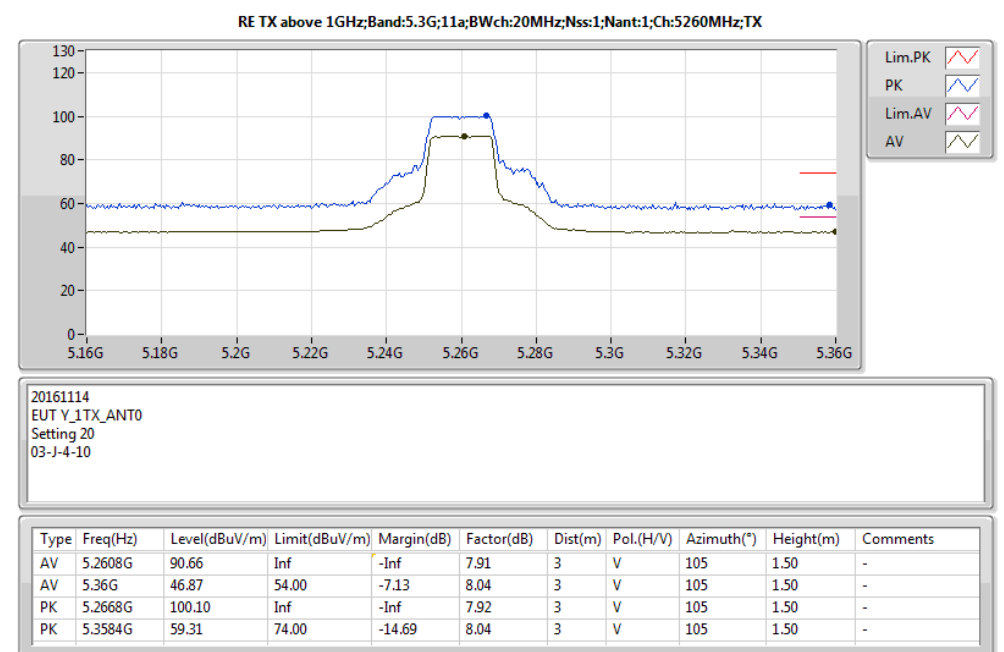
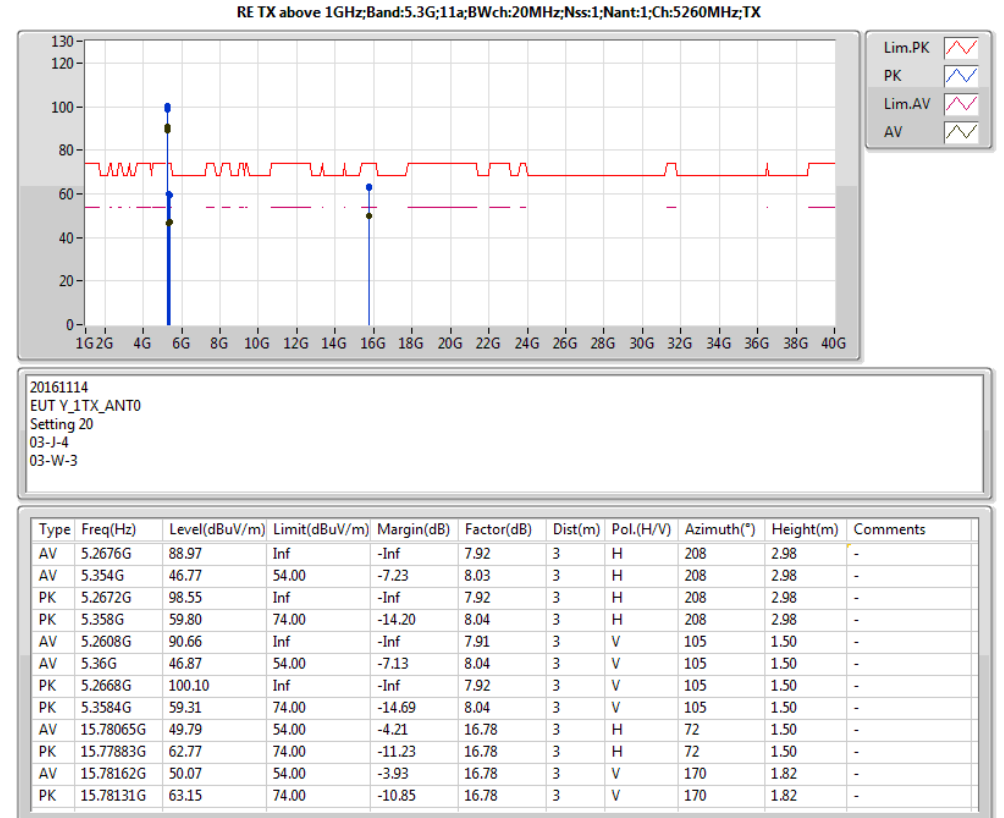
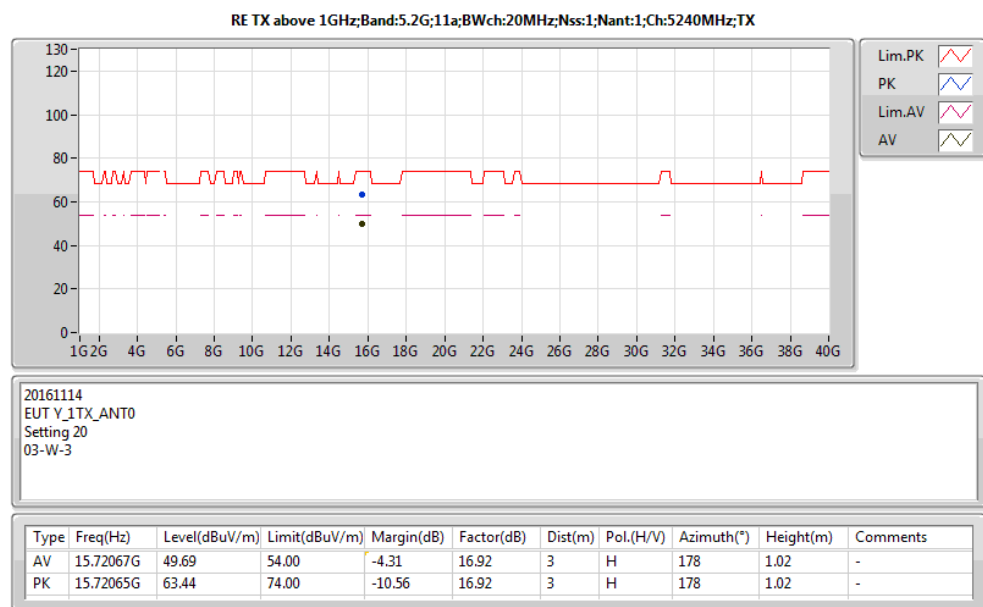
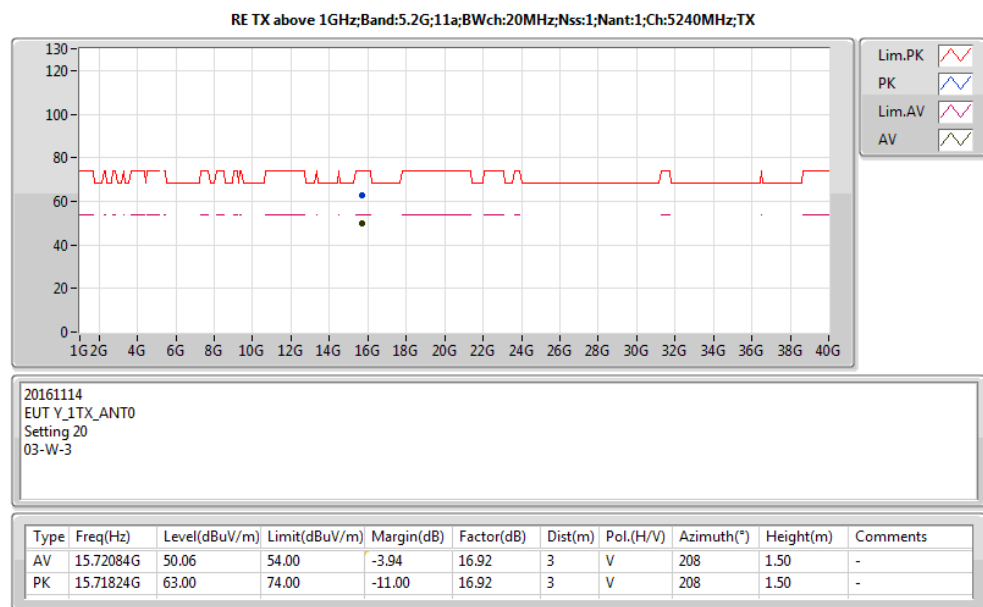
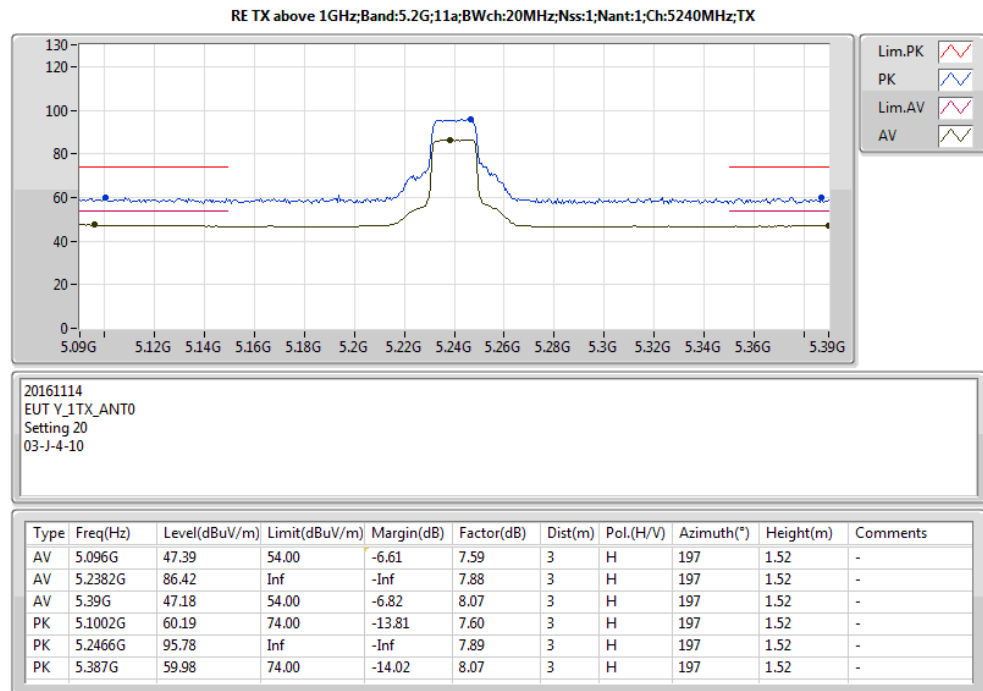


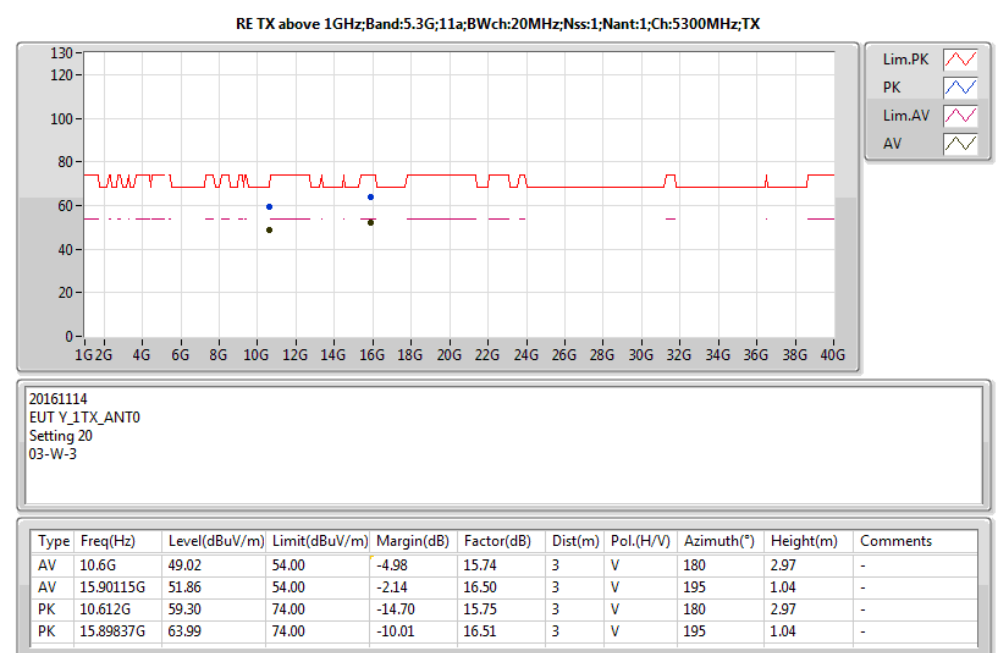
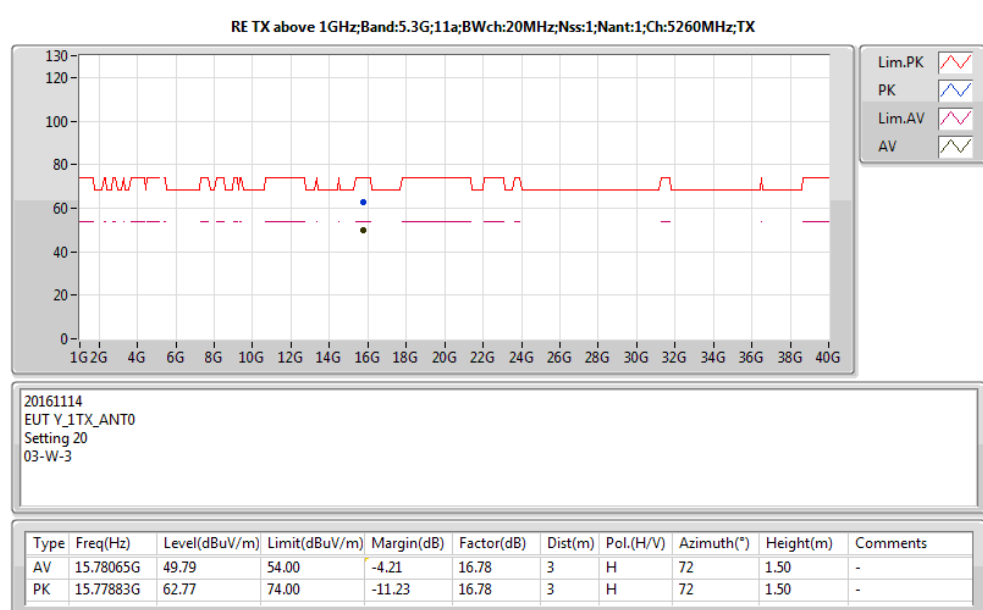
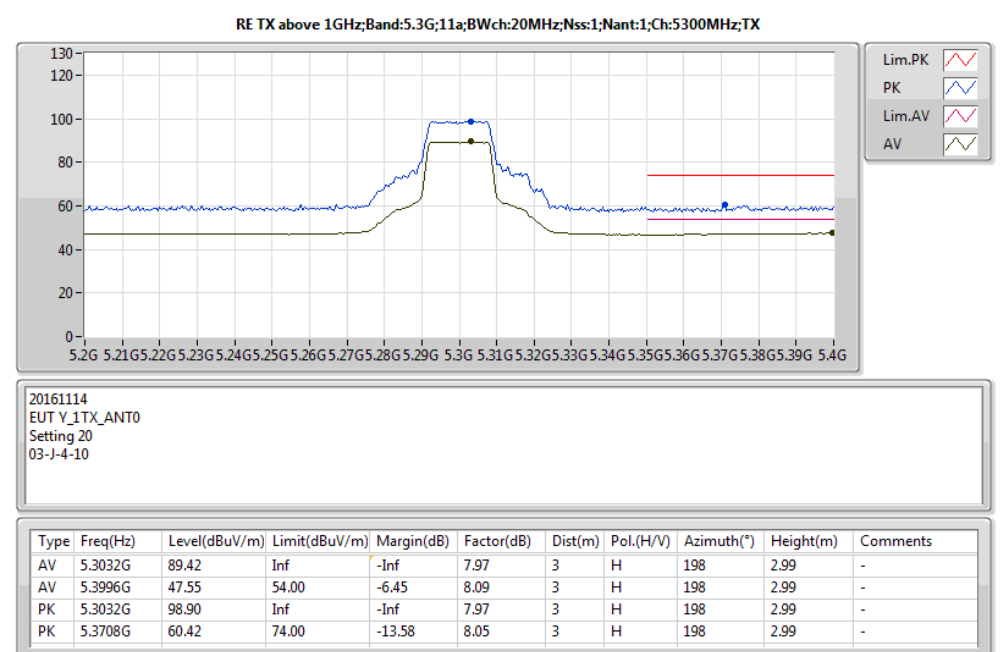
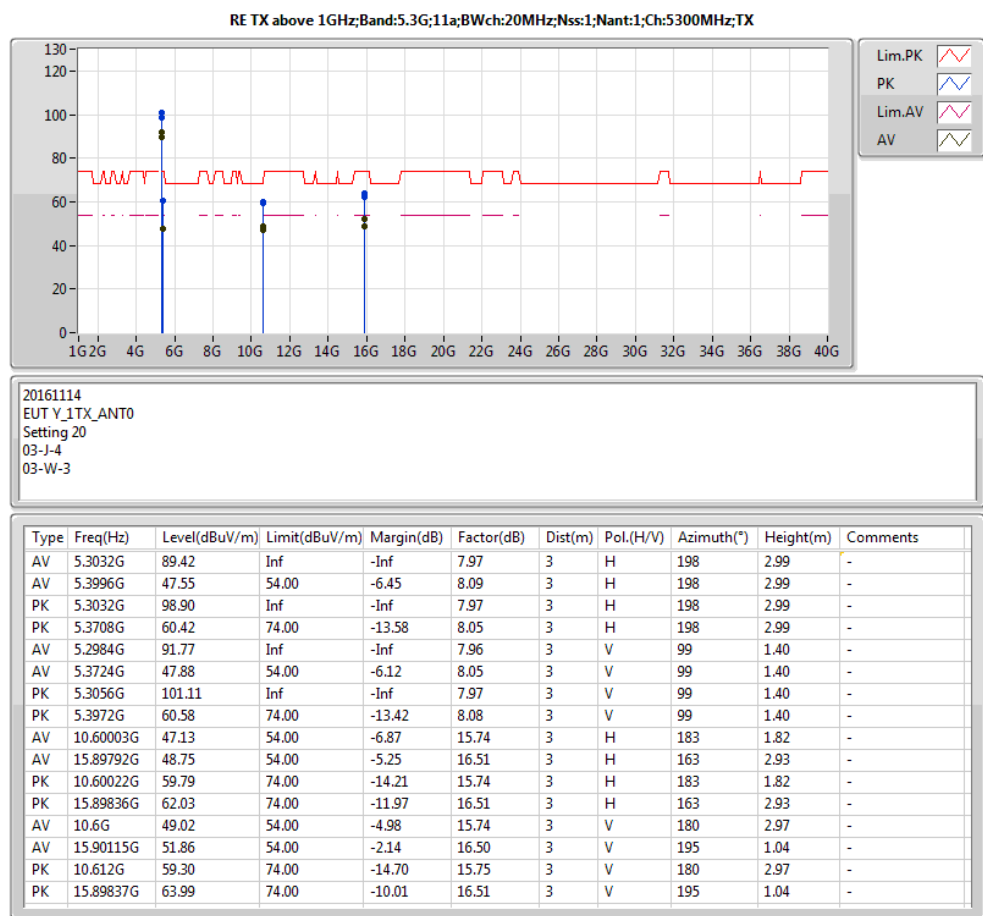
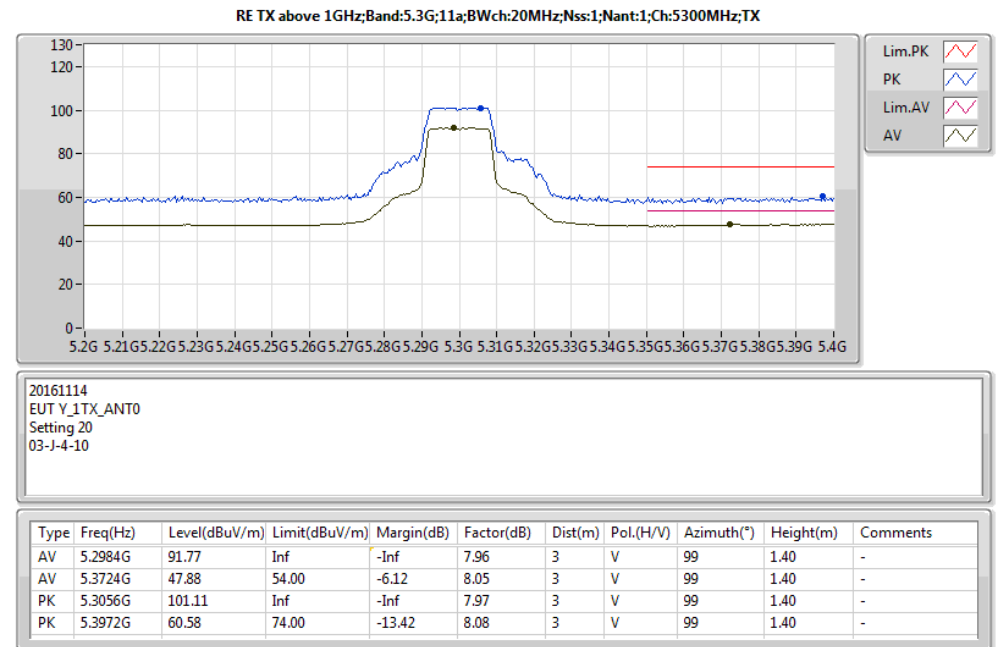
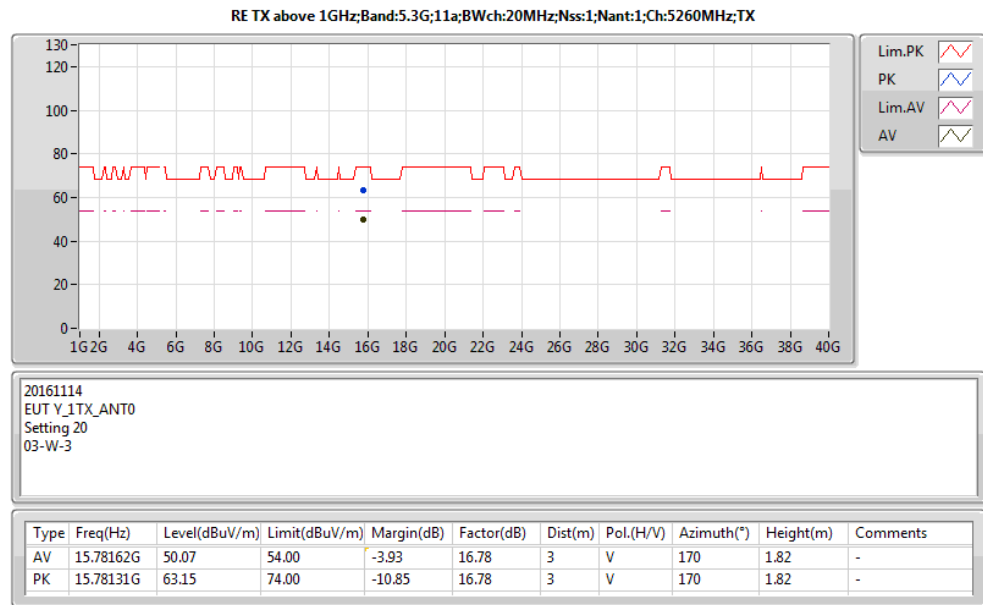
Summary

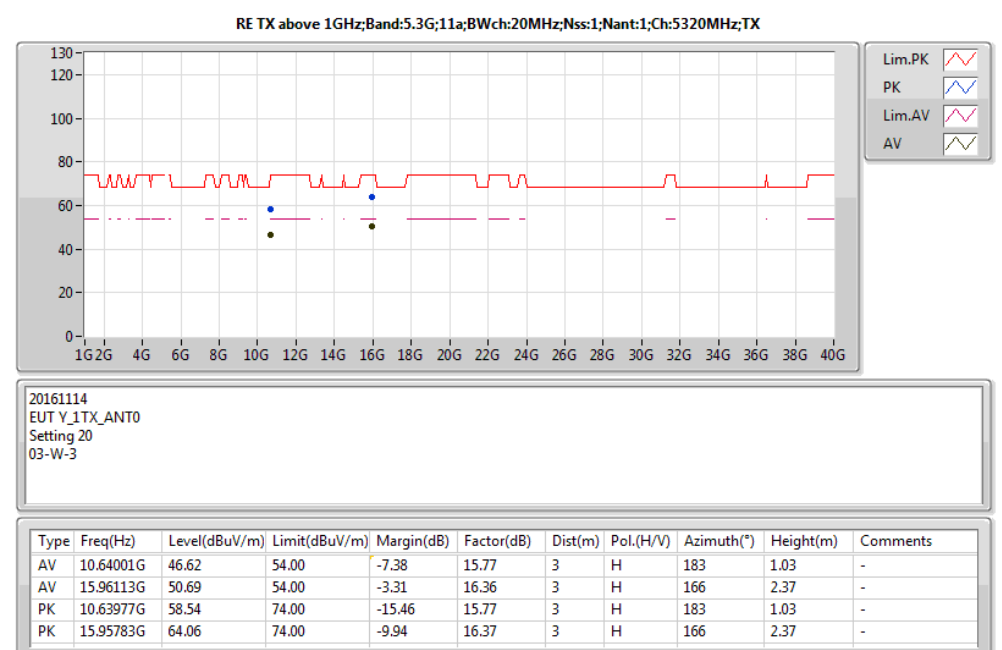
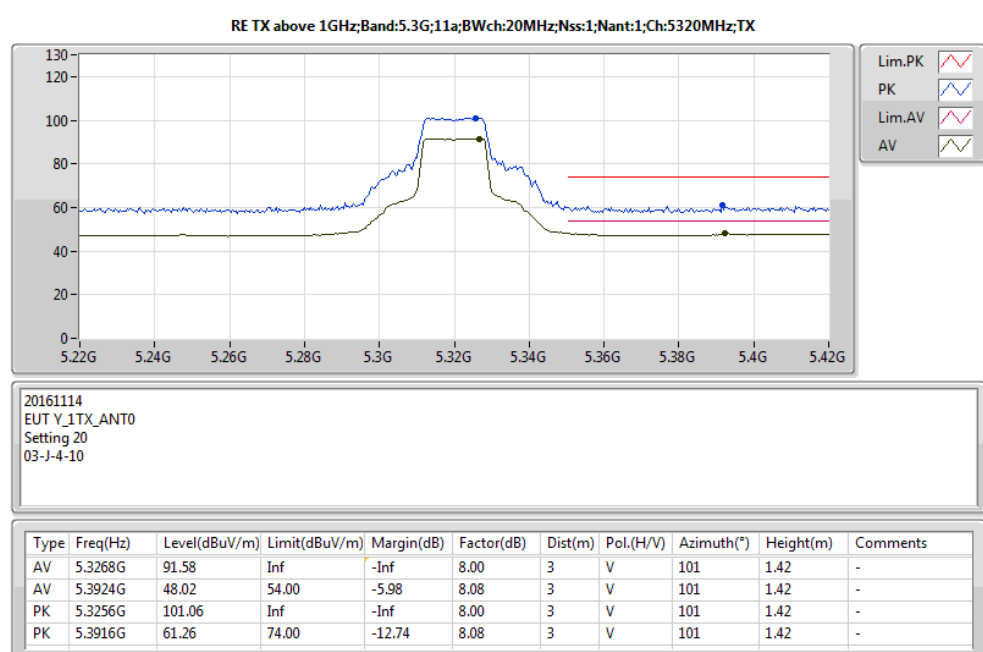
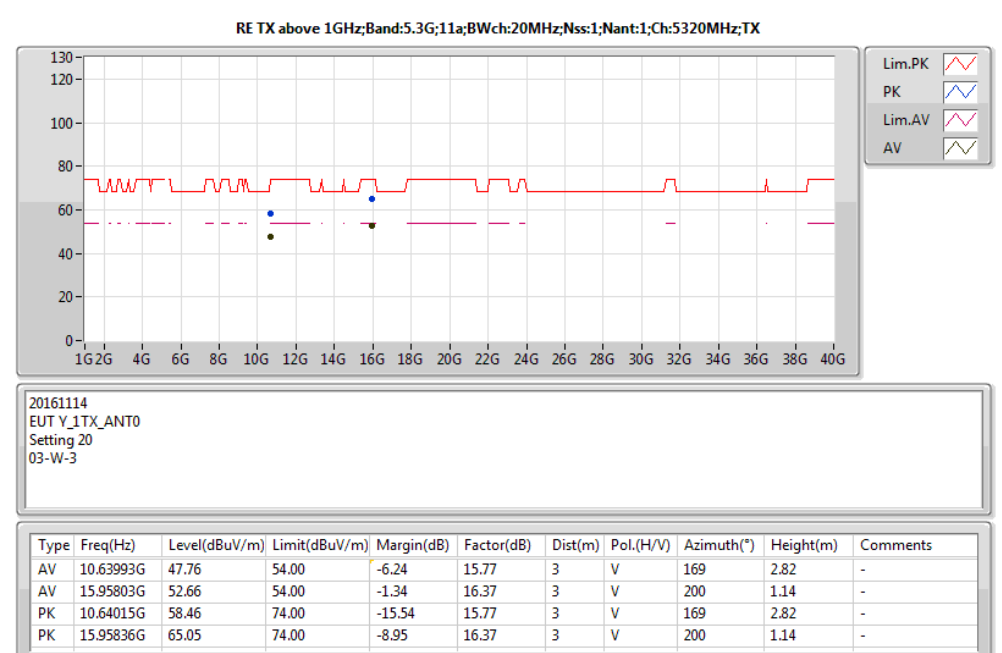
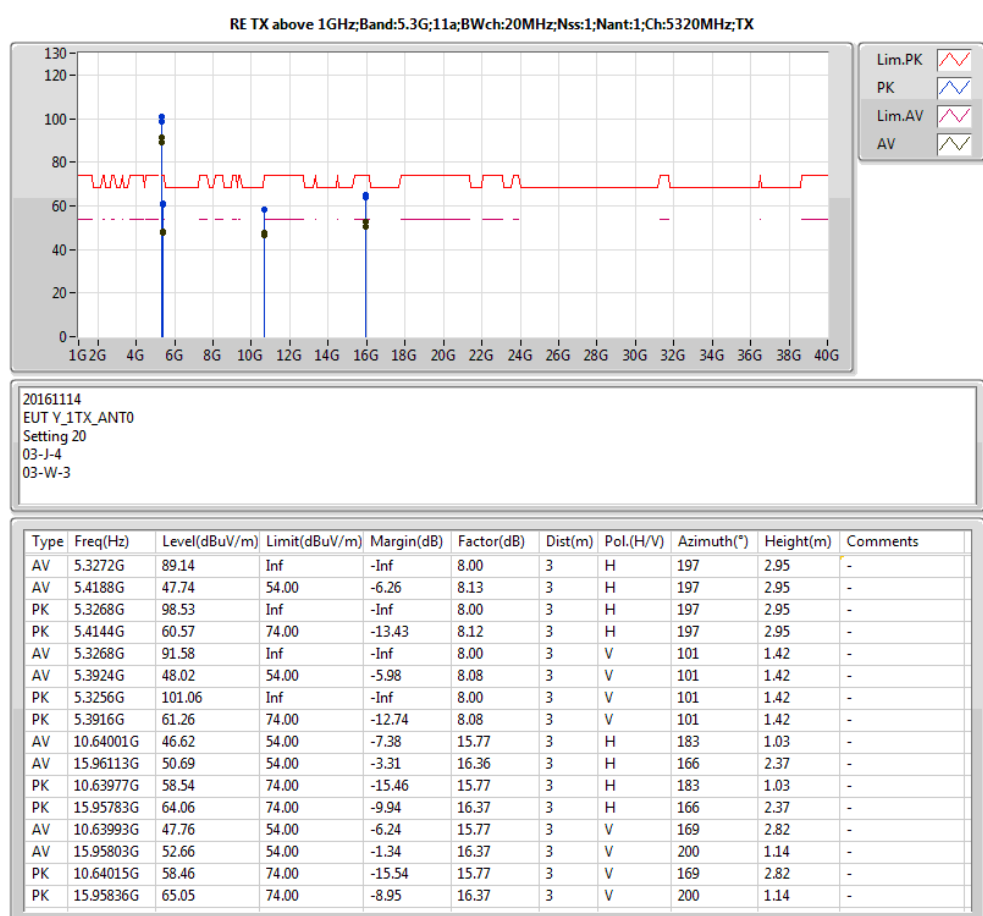
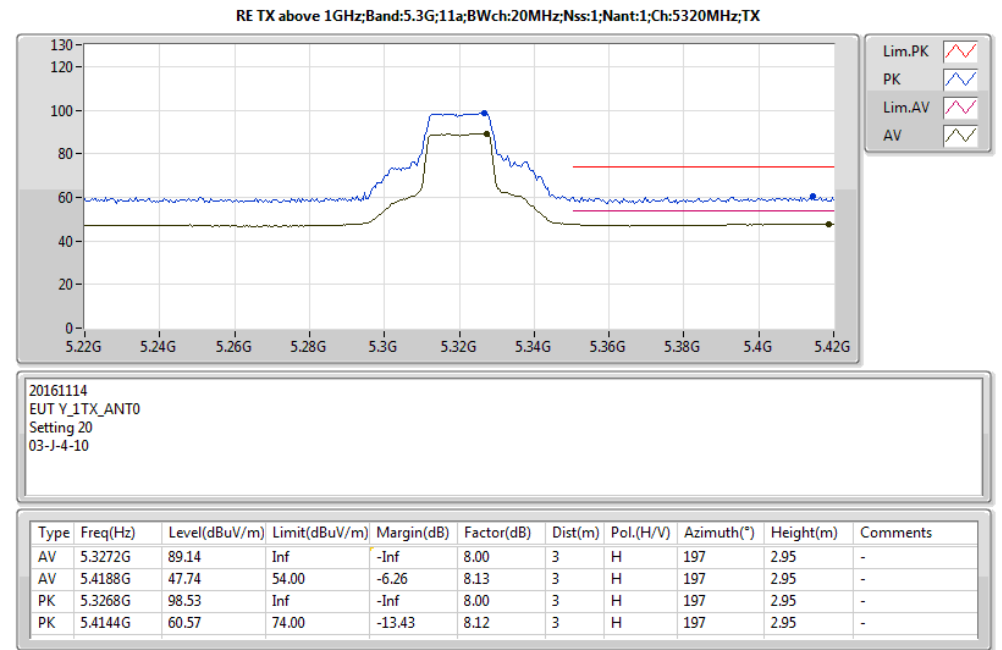
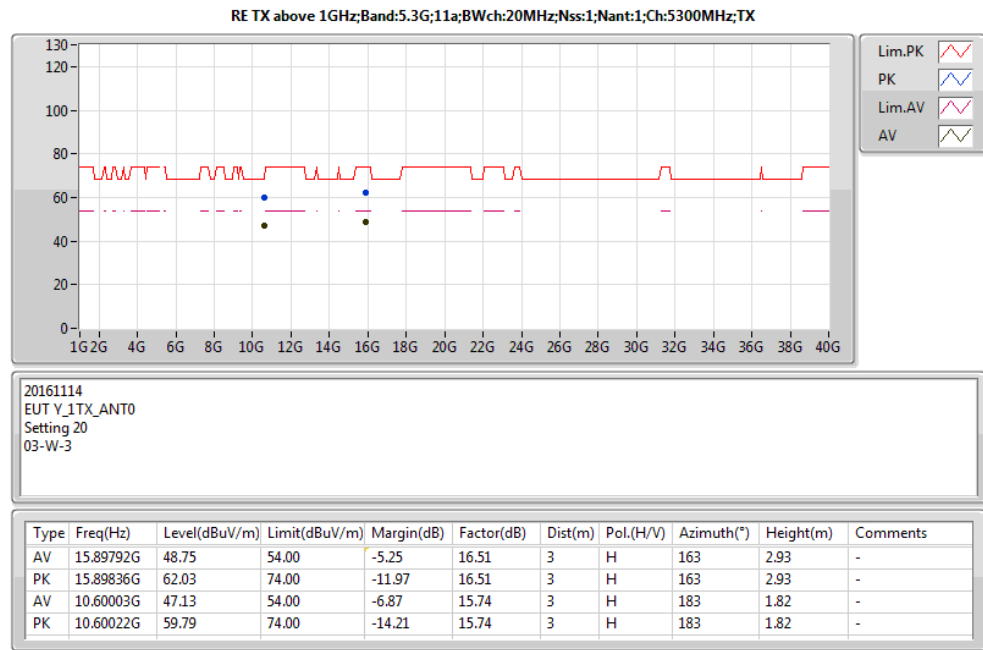
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5.6G;HT40;Nss1,(M0);Ntx1;5510;TX	Pass	PK	5.4696G	68.05	68.20	-0.15	8.25	3	V	68	1.50	-

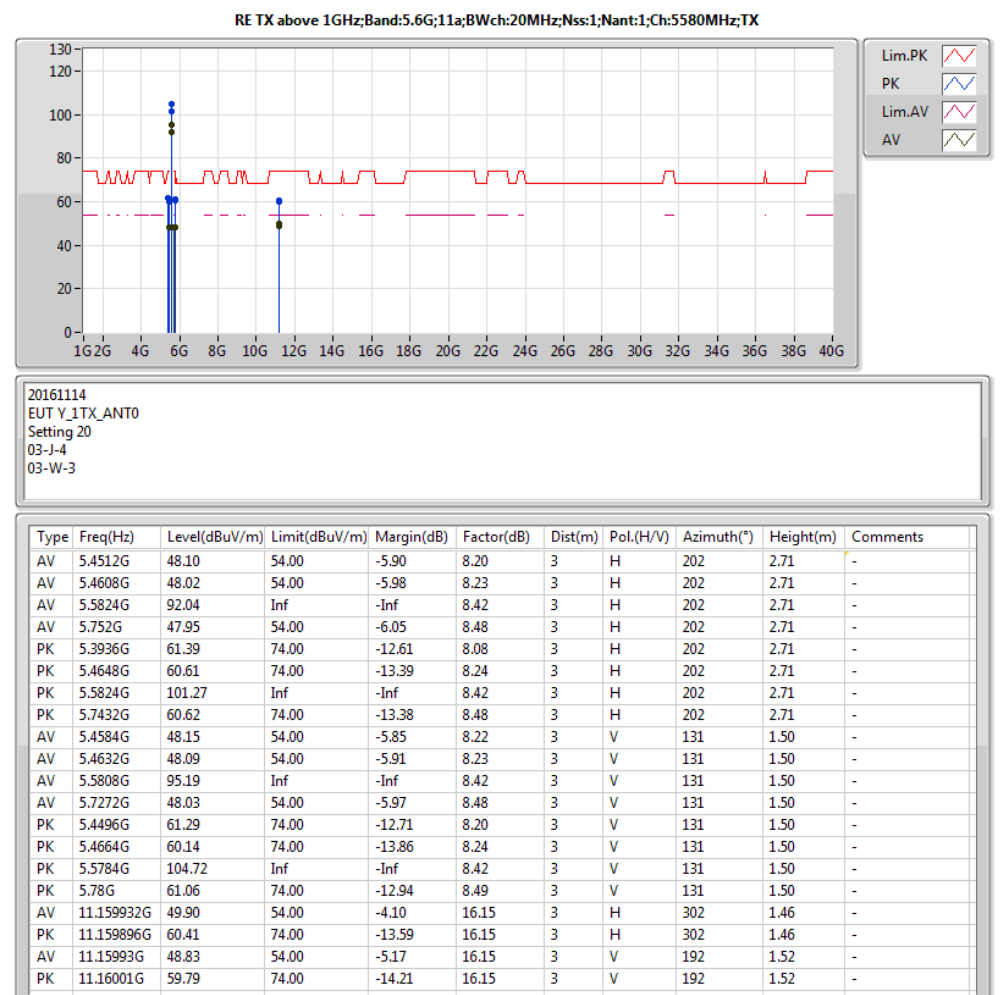
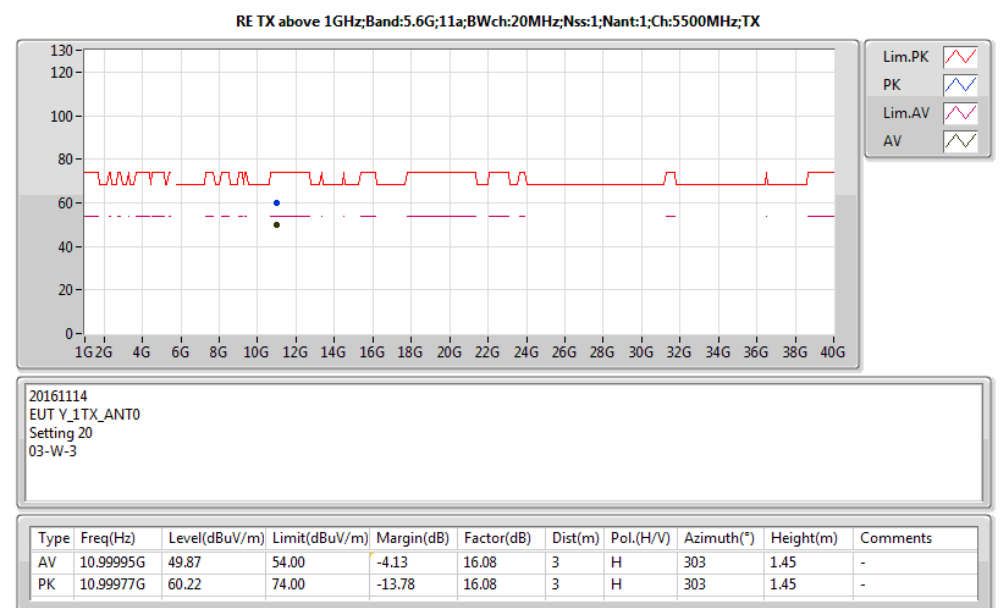
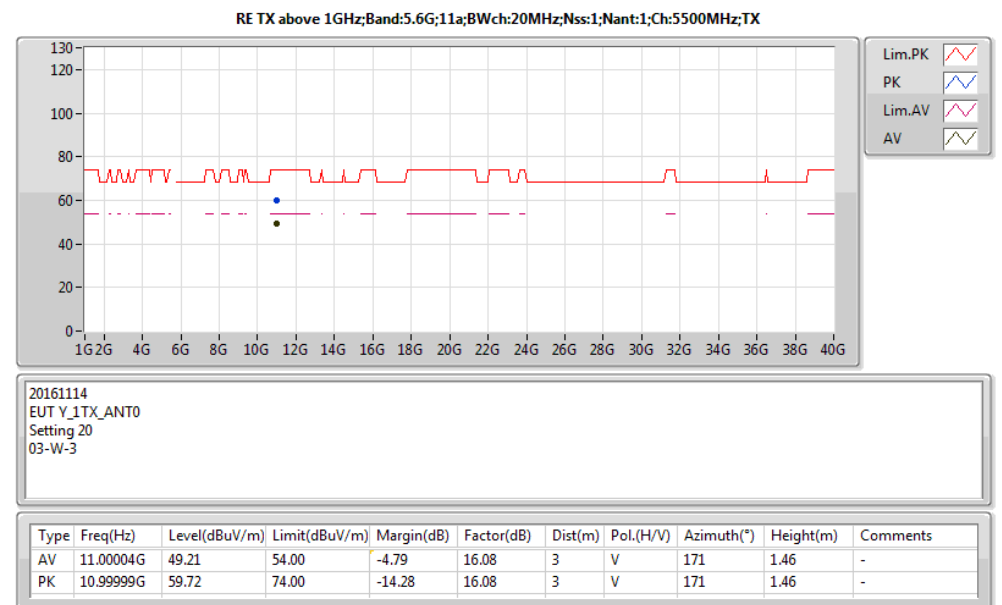
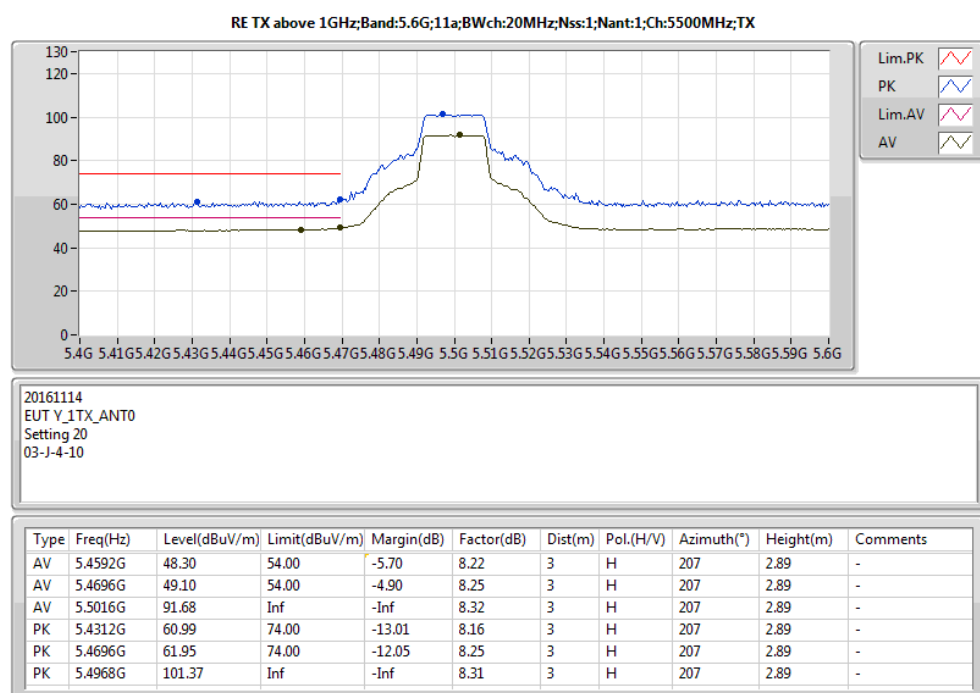
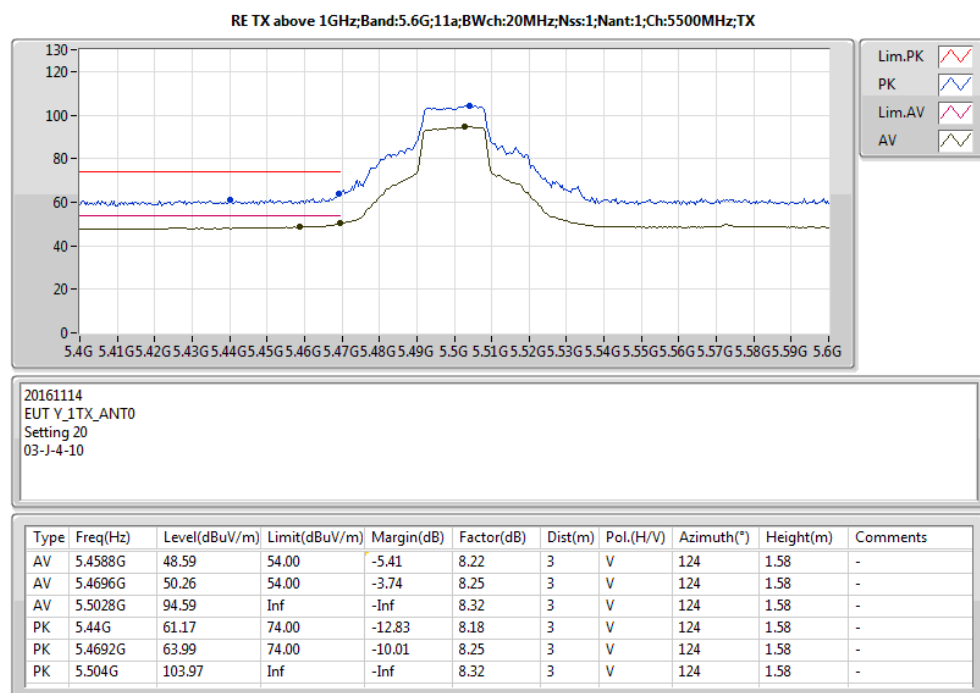
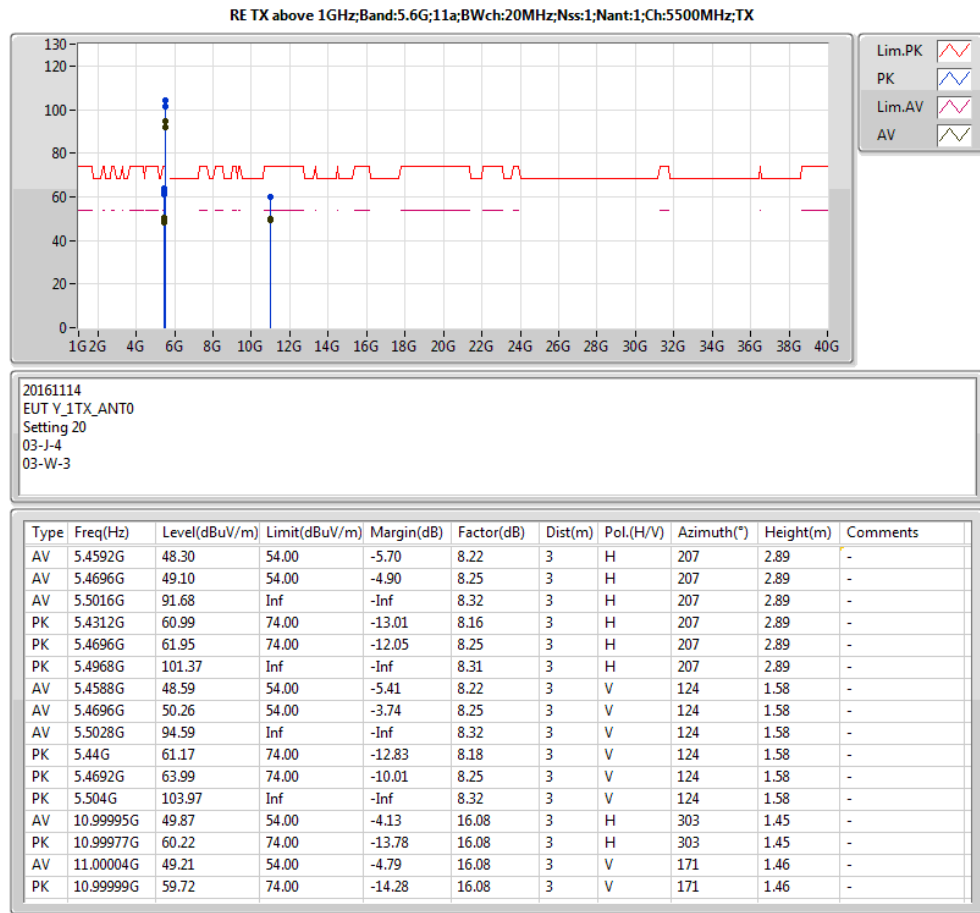


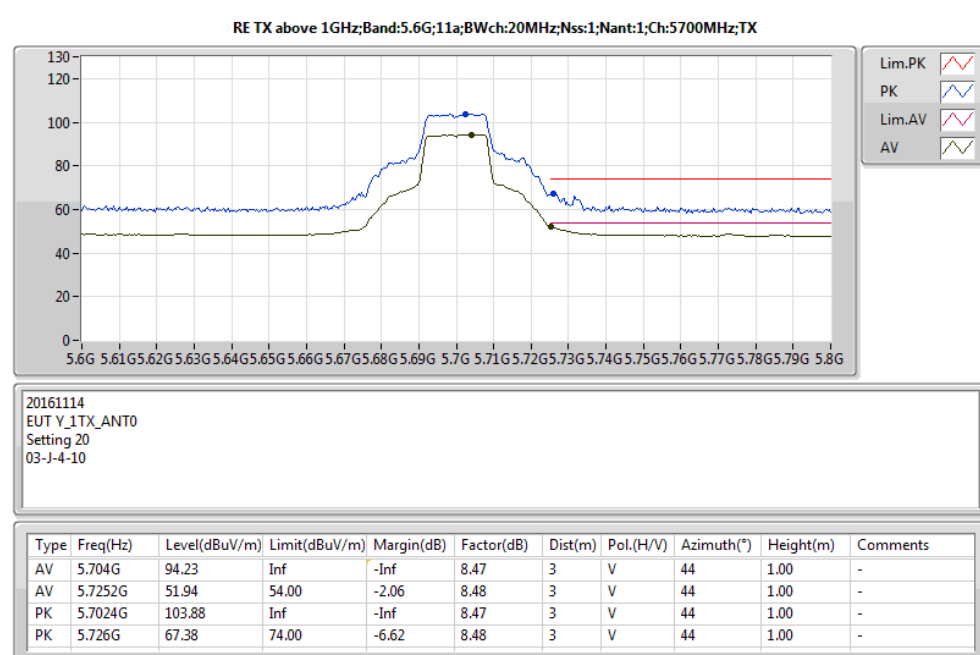
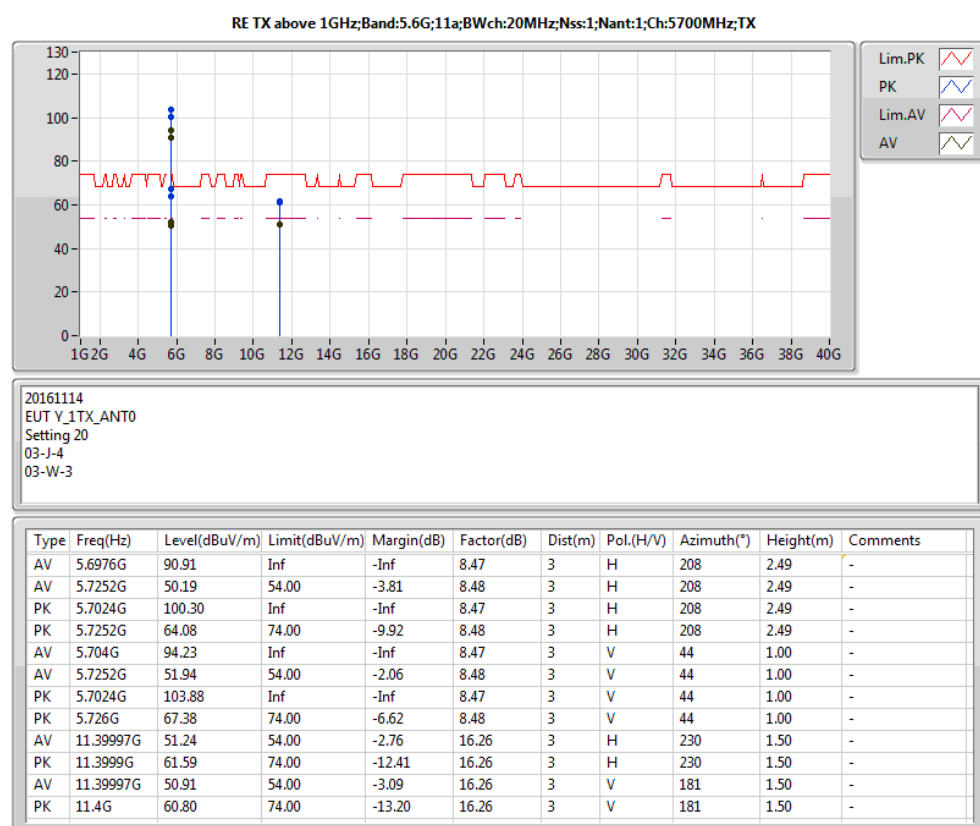
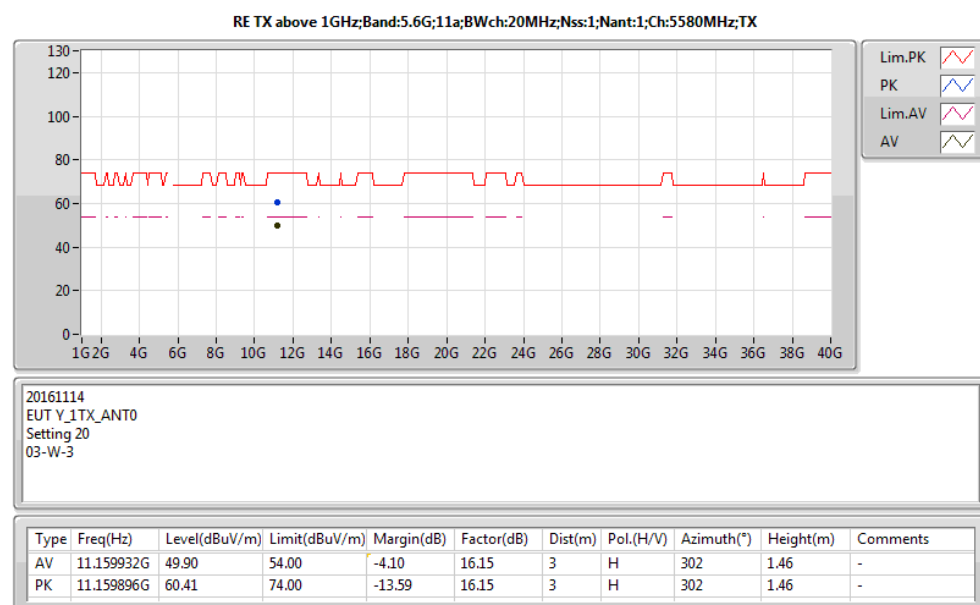
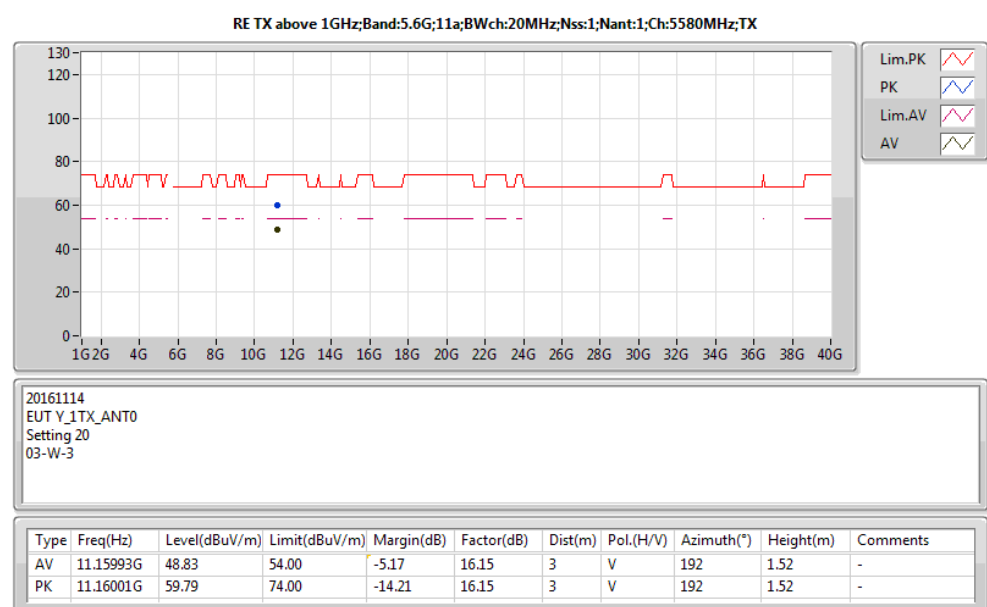
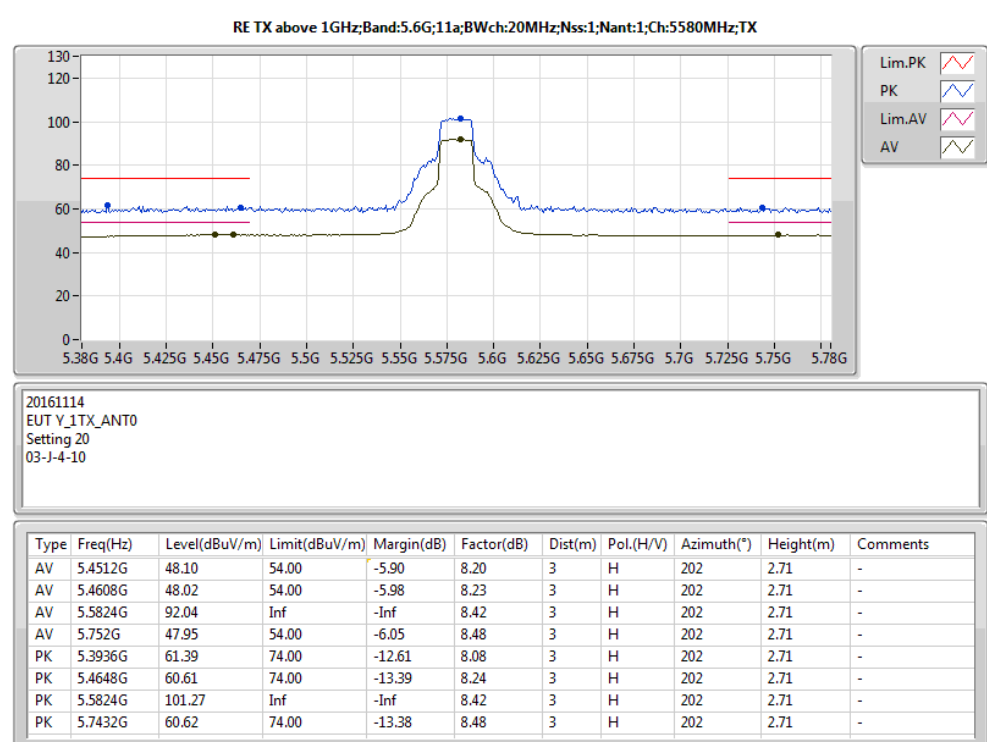
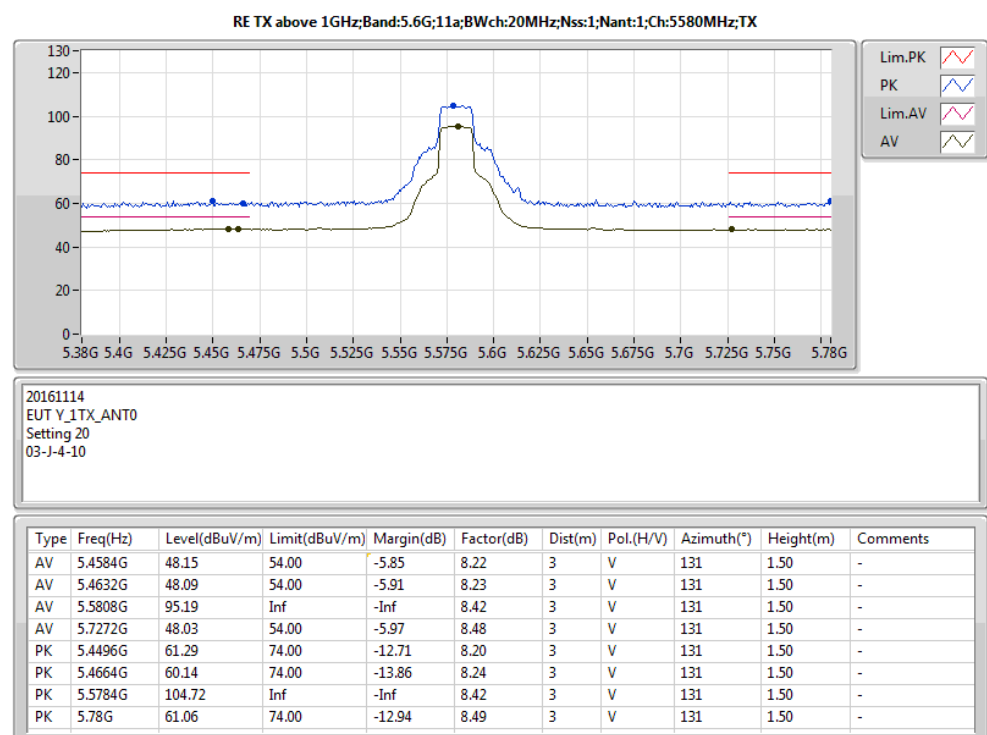


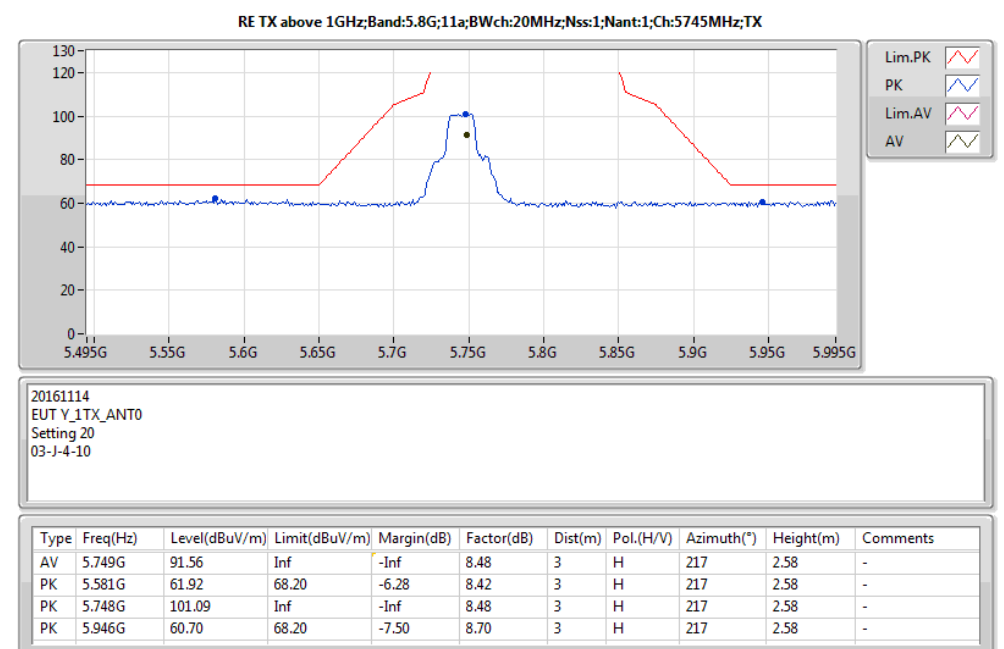
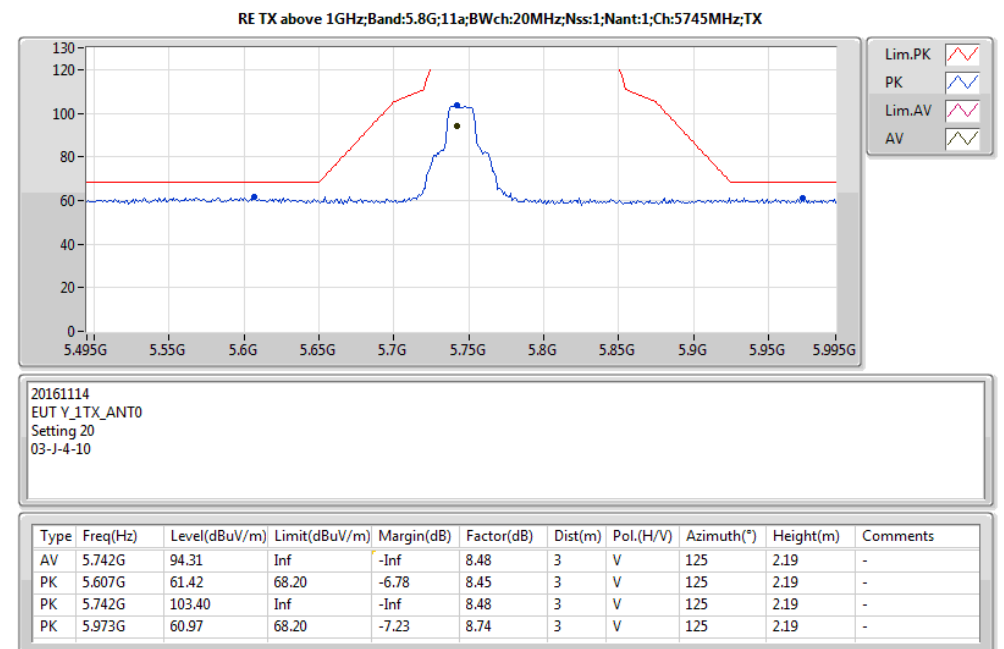
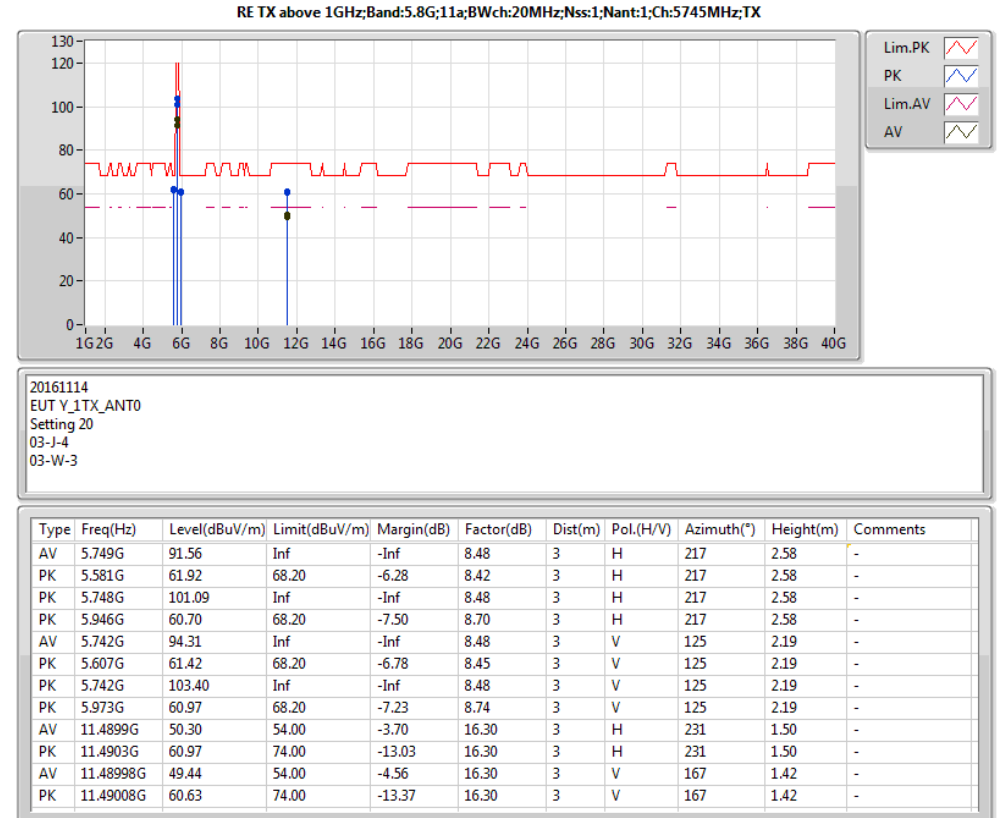
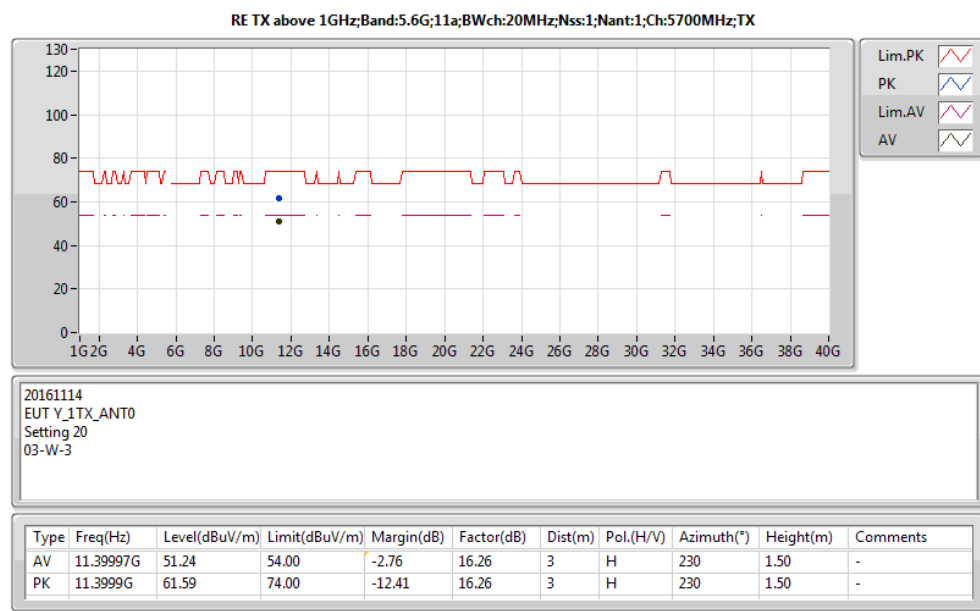
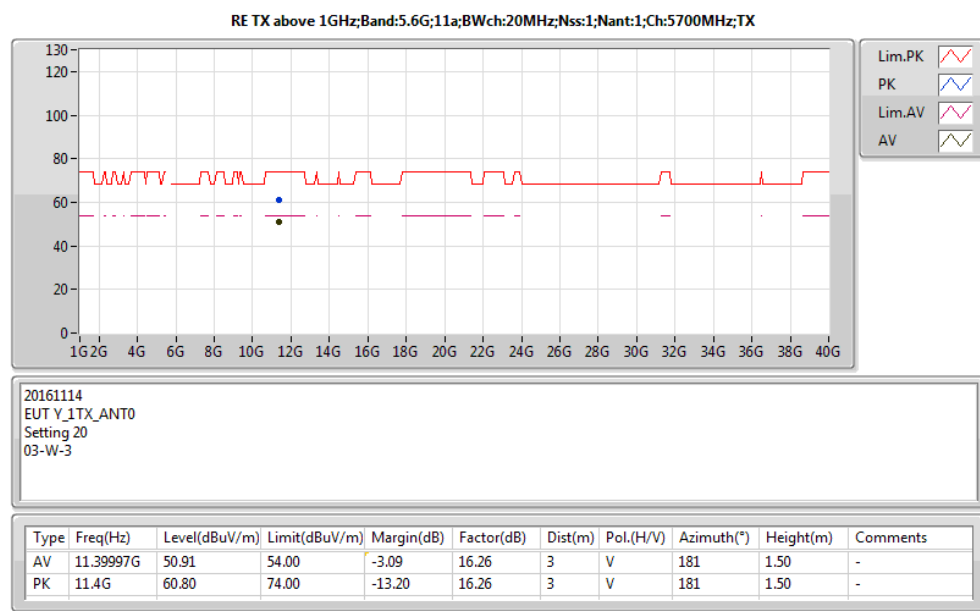
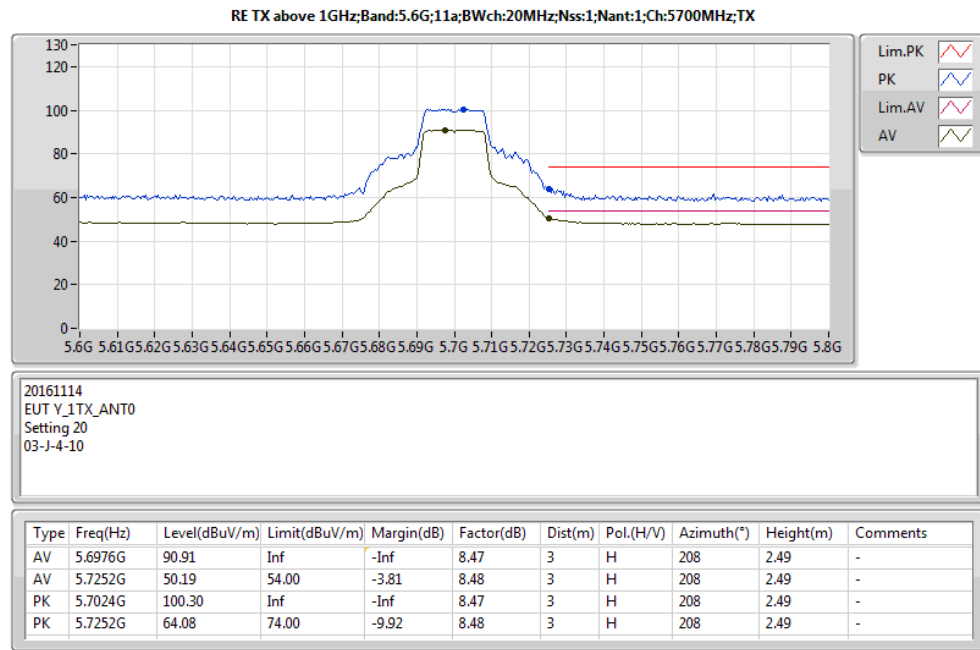


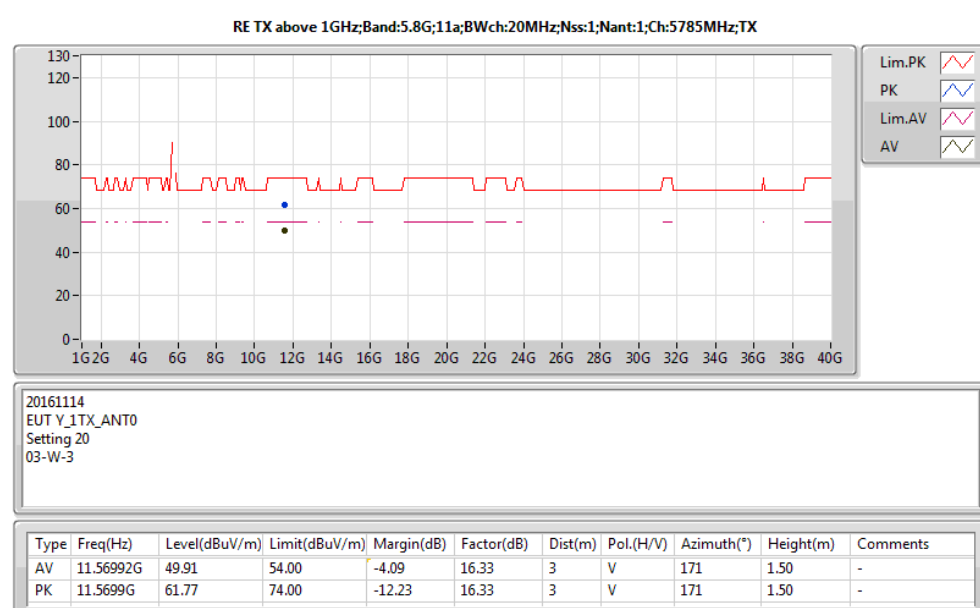
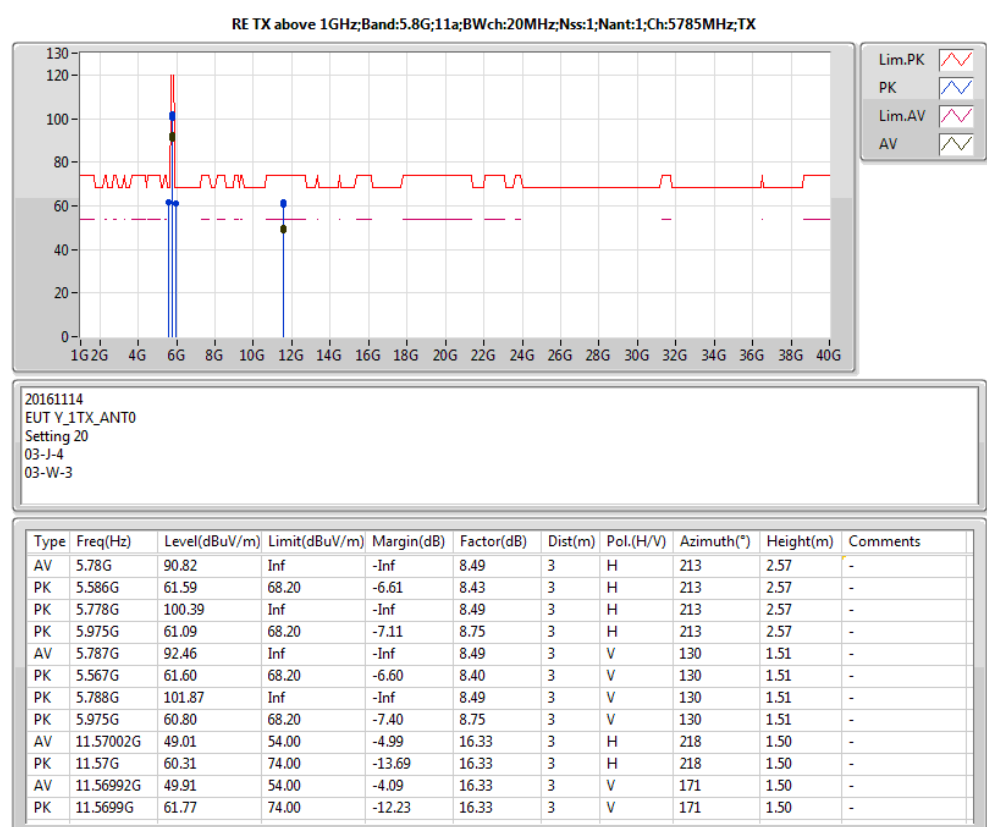
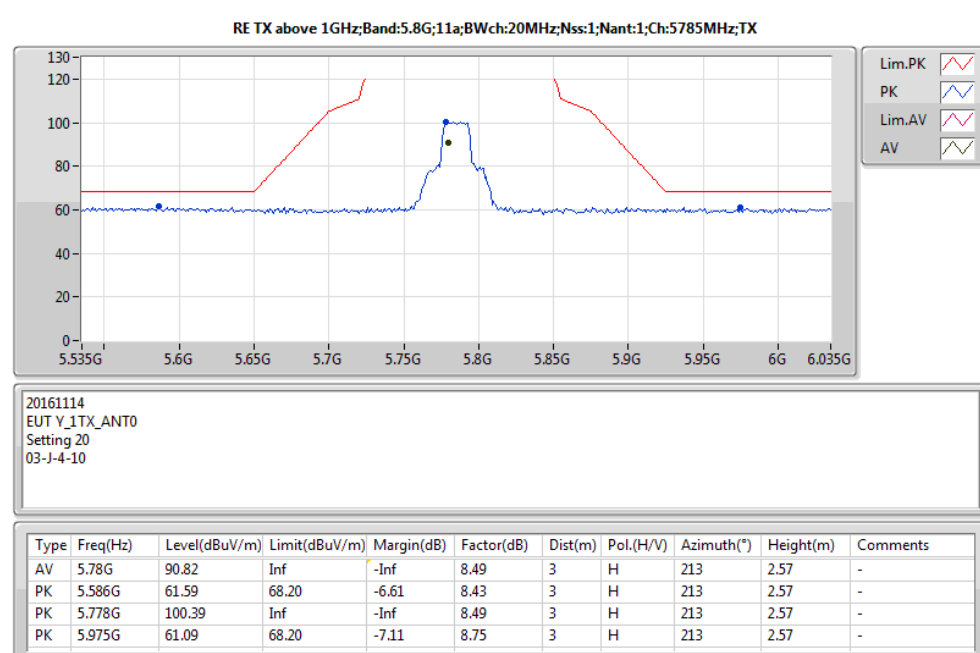
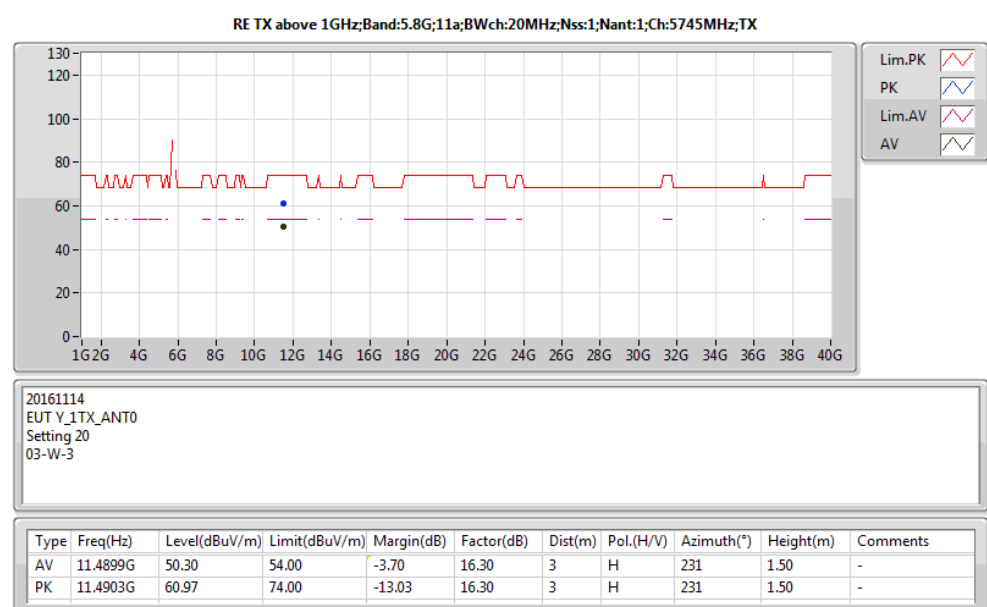
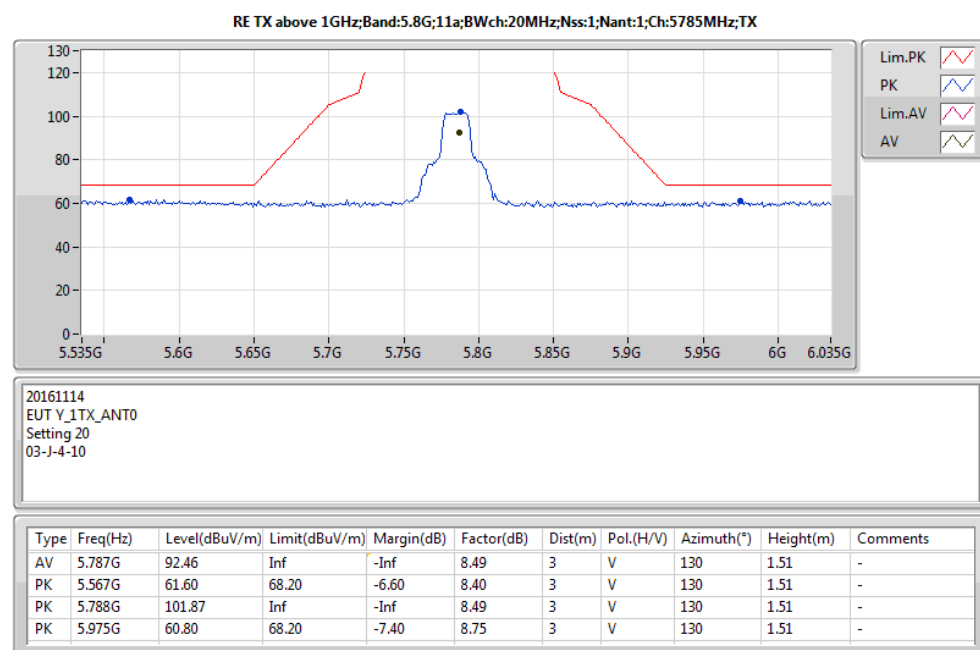
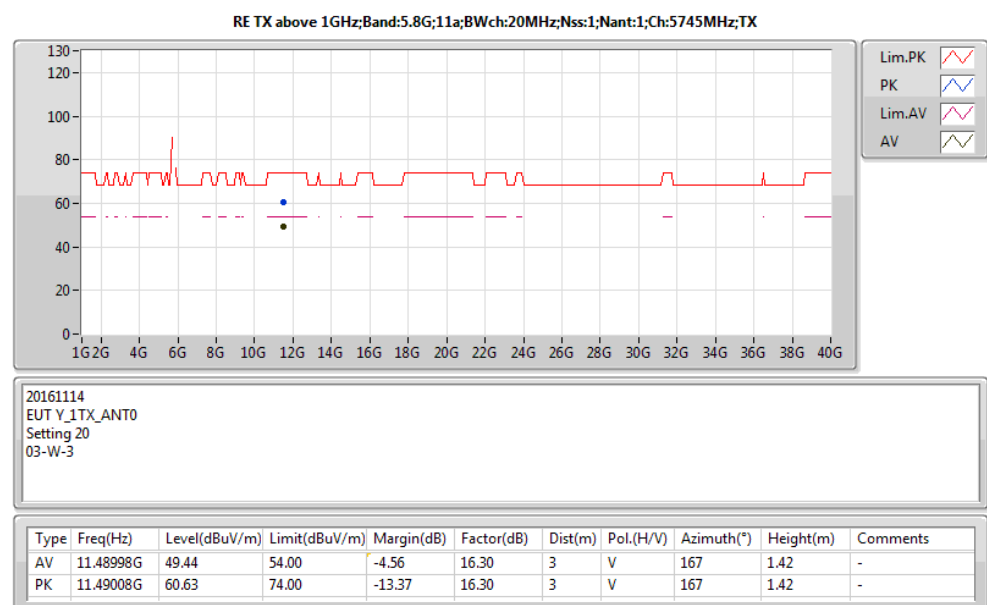


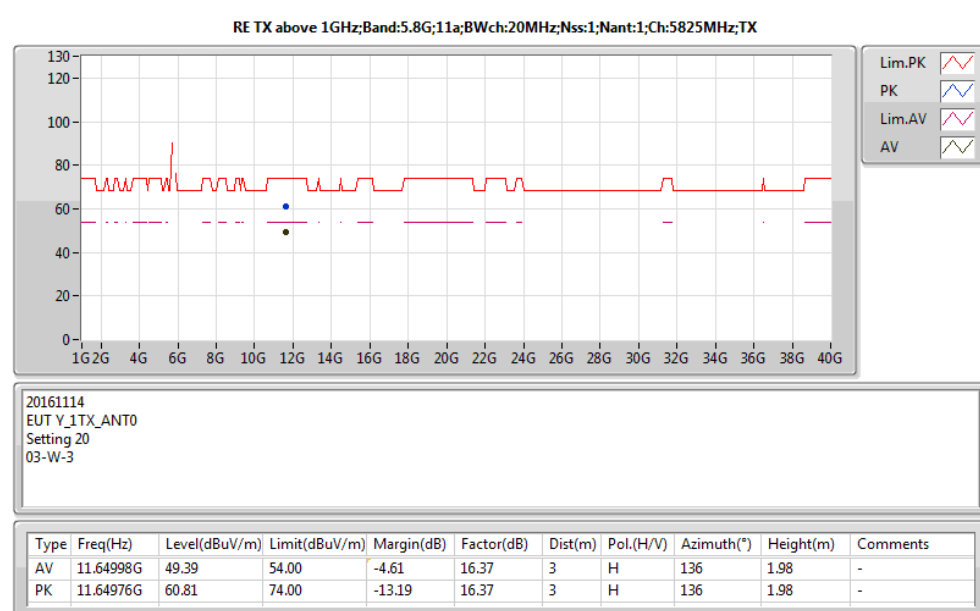
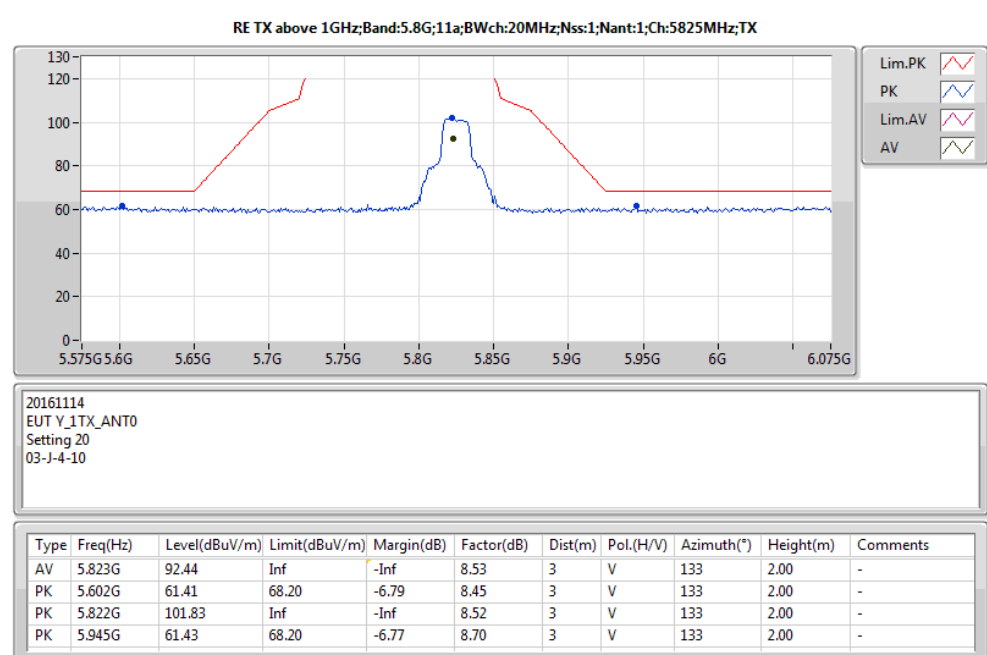
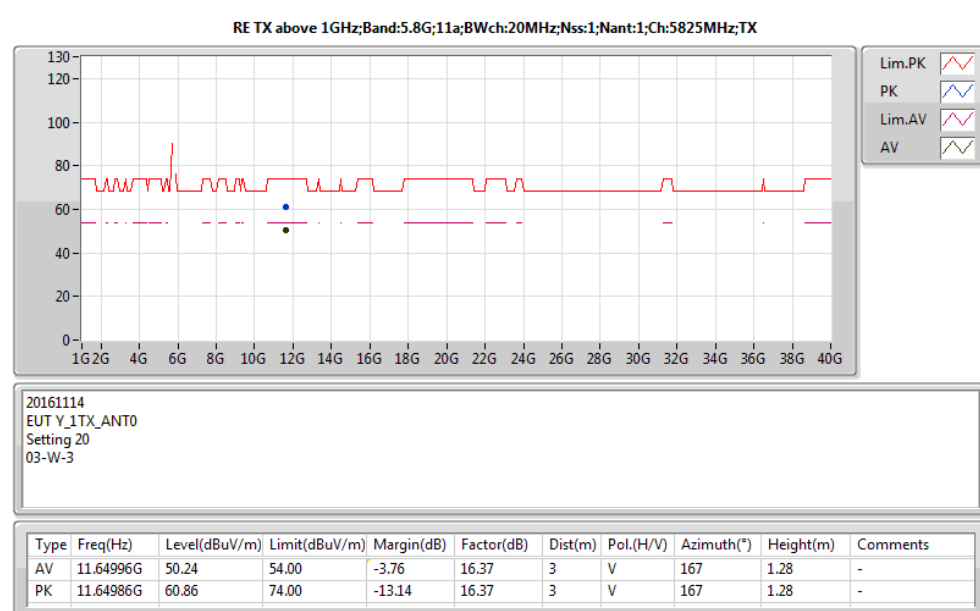
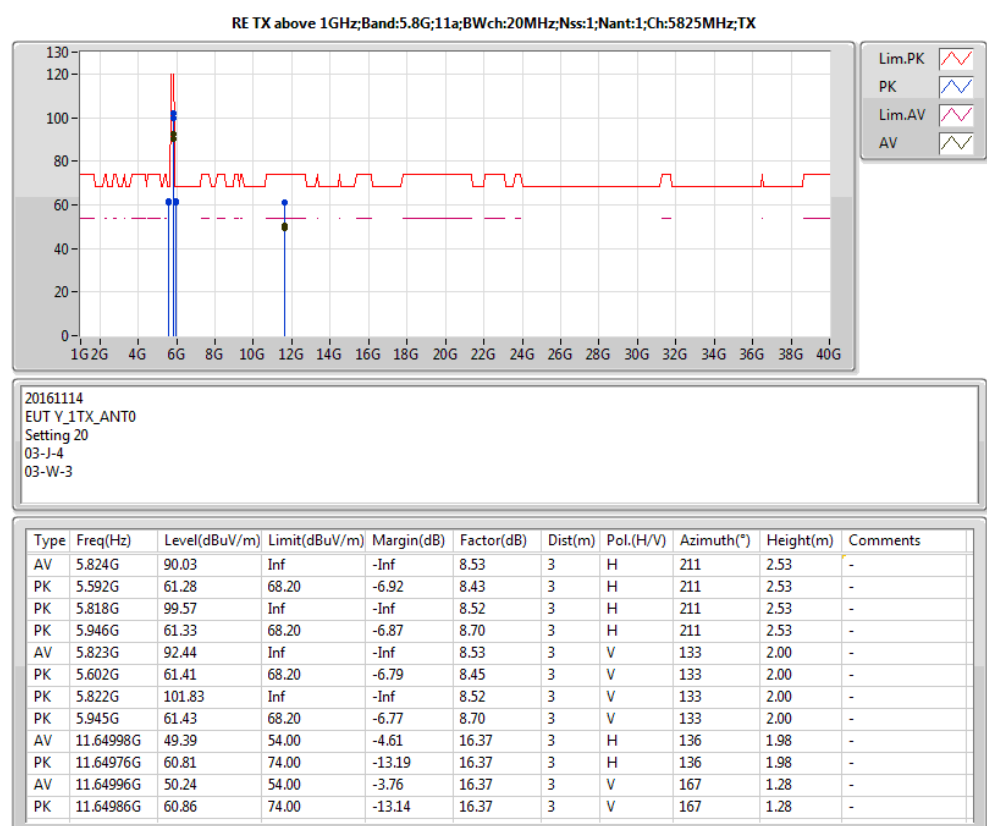
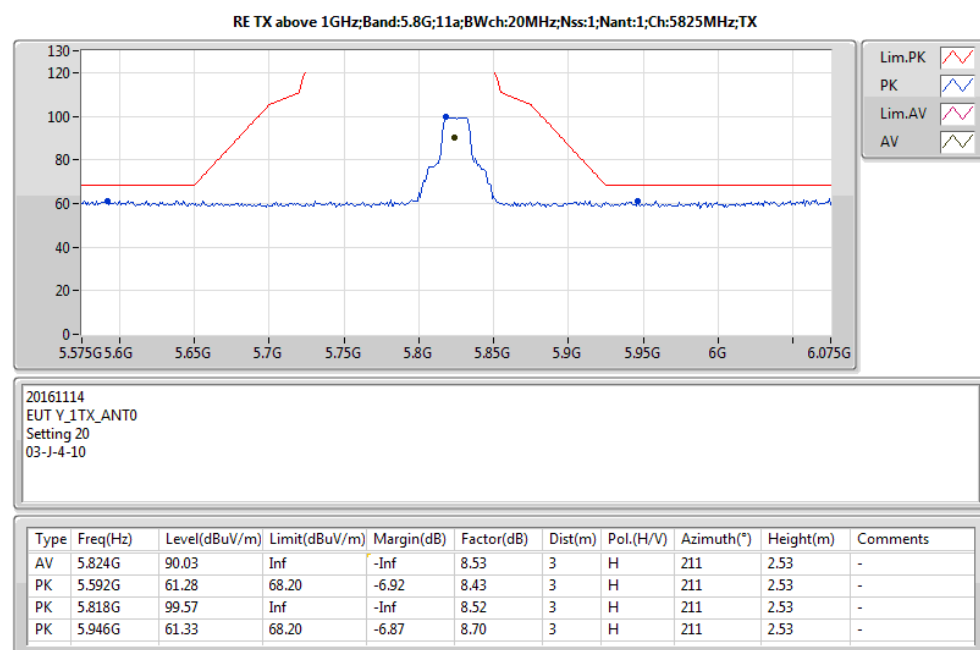
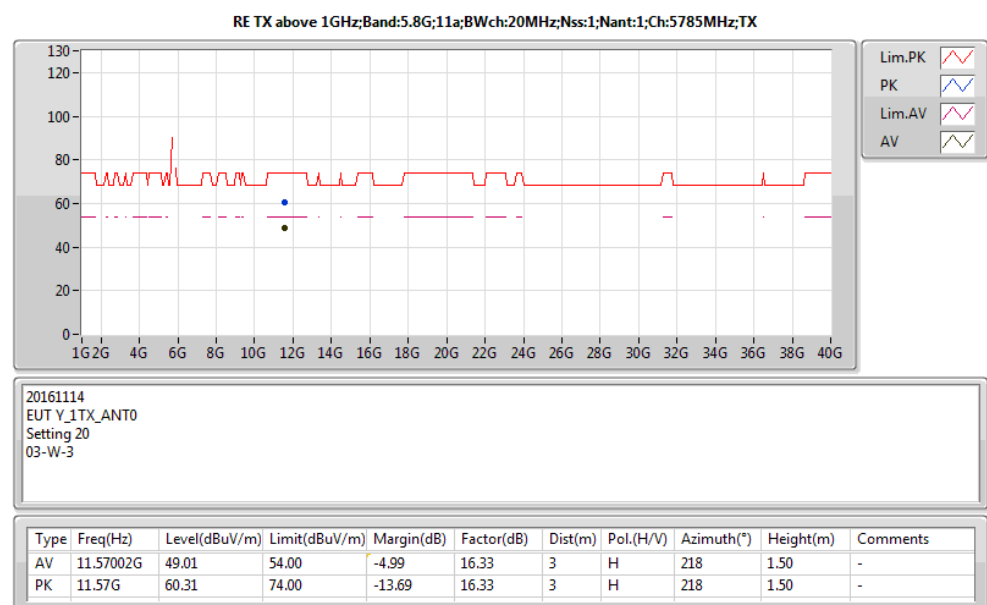


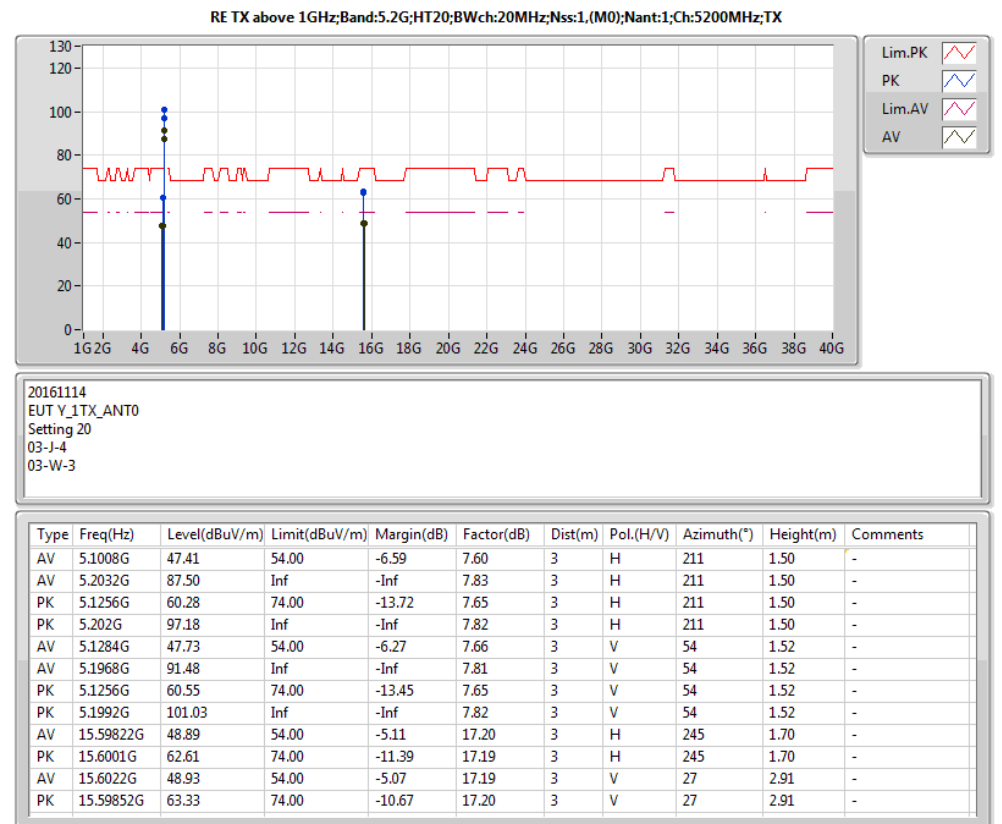
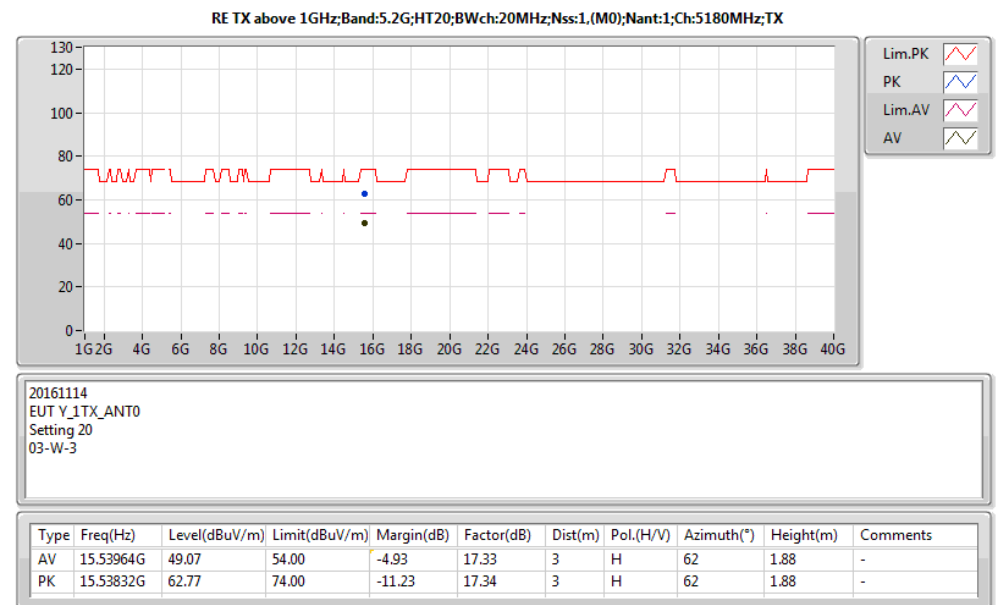
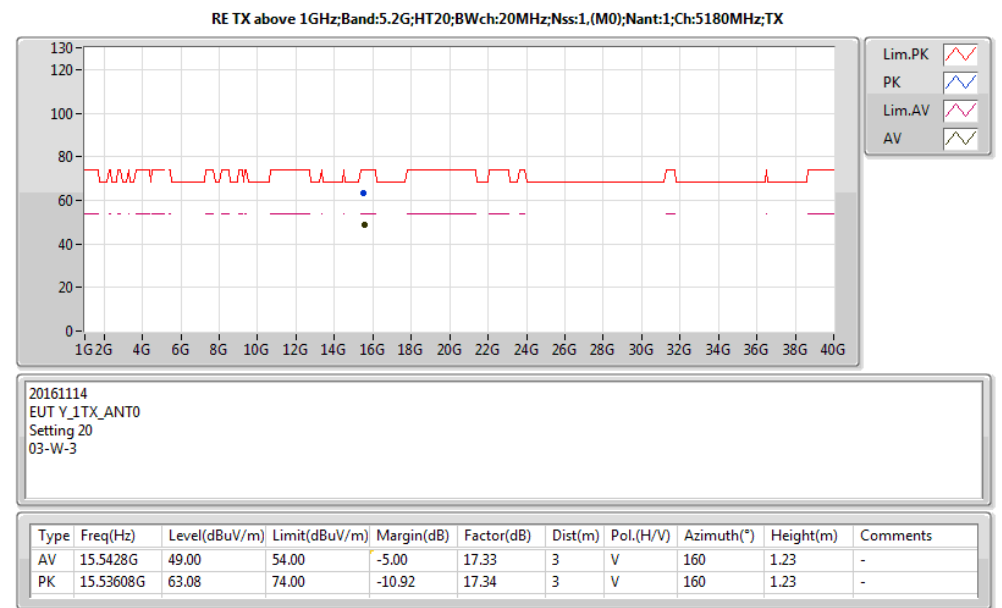
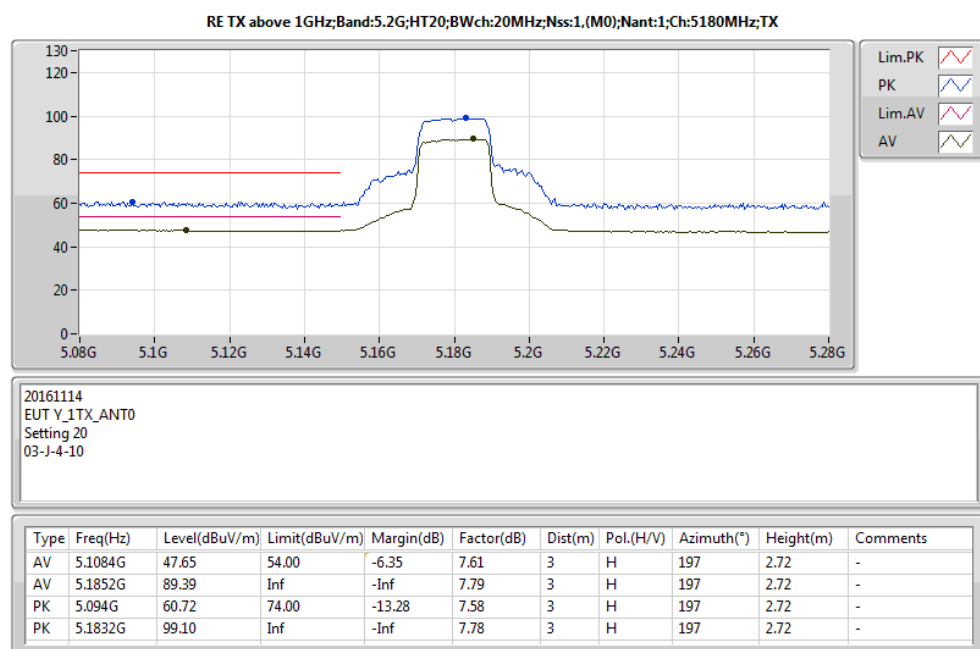
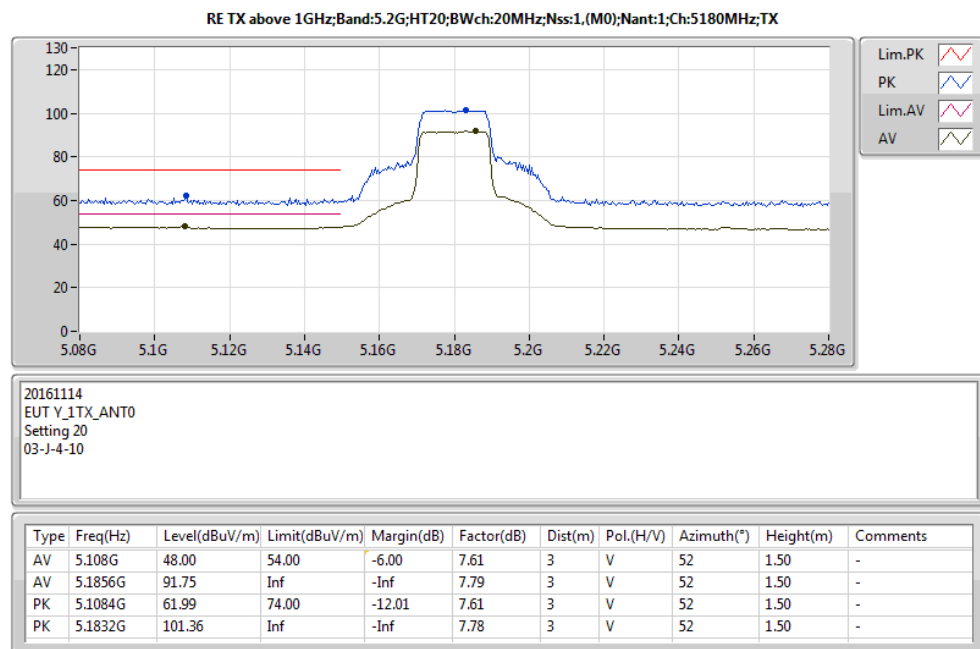
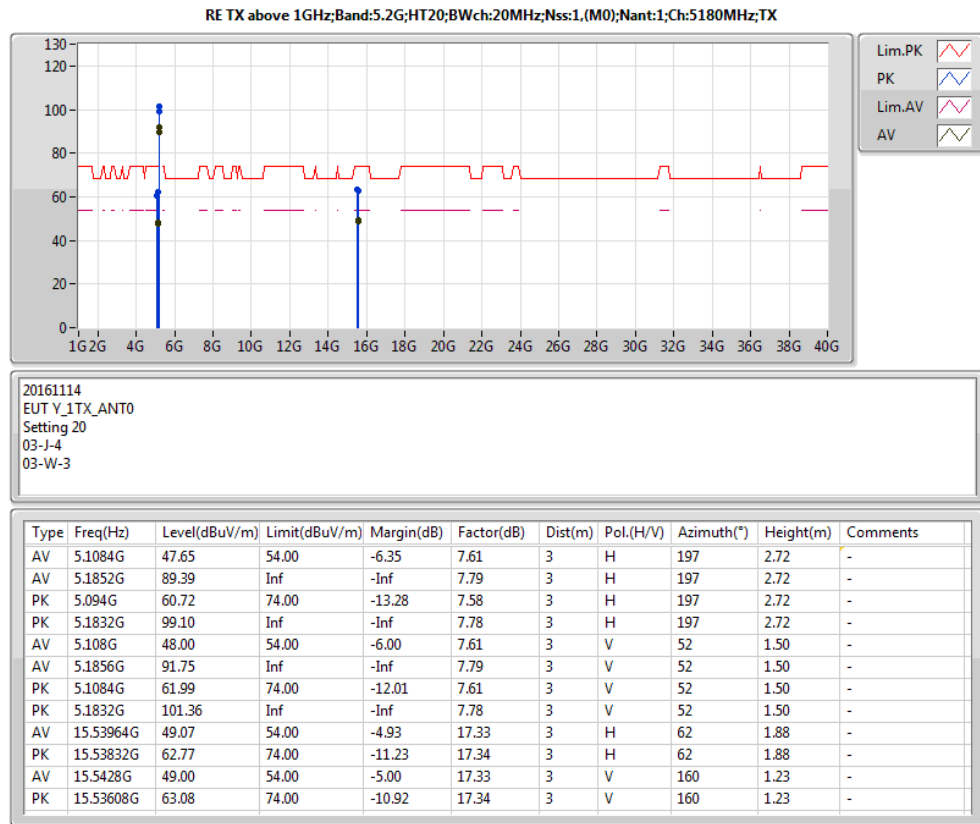


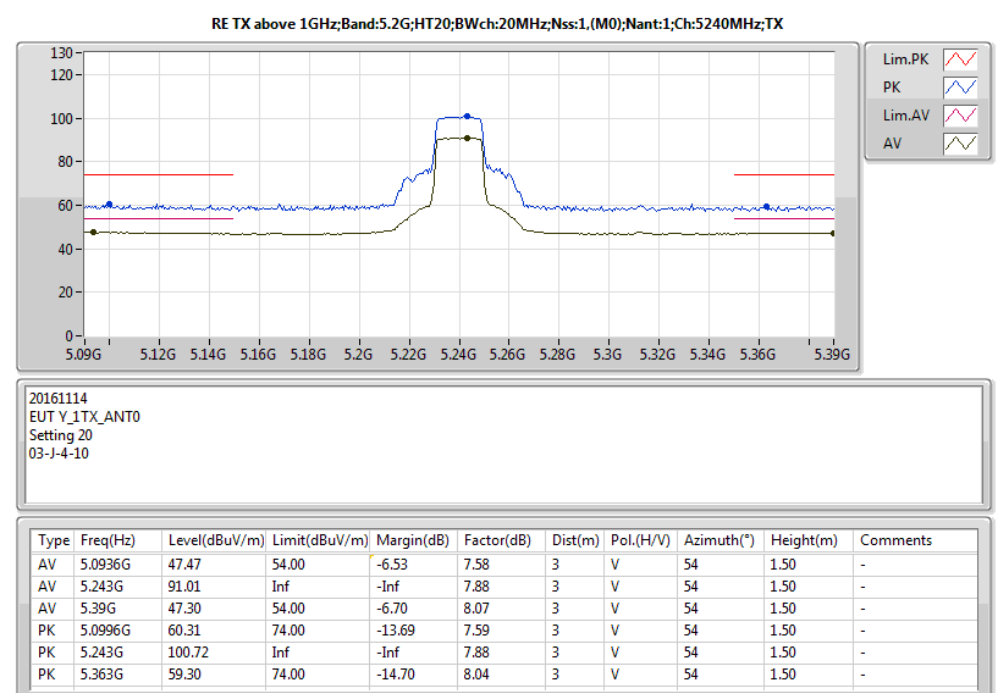
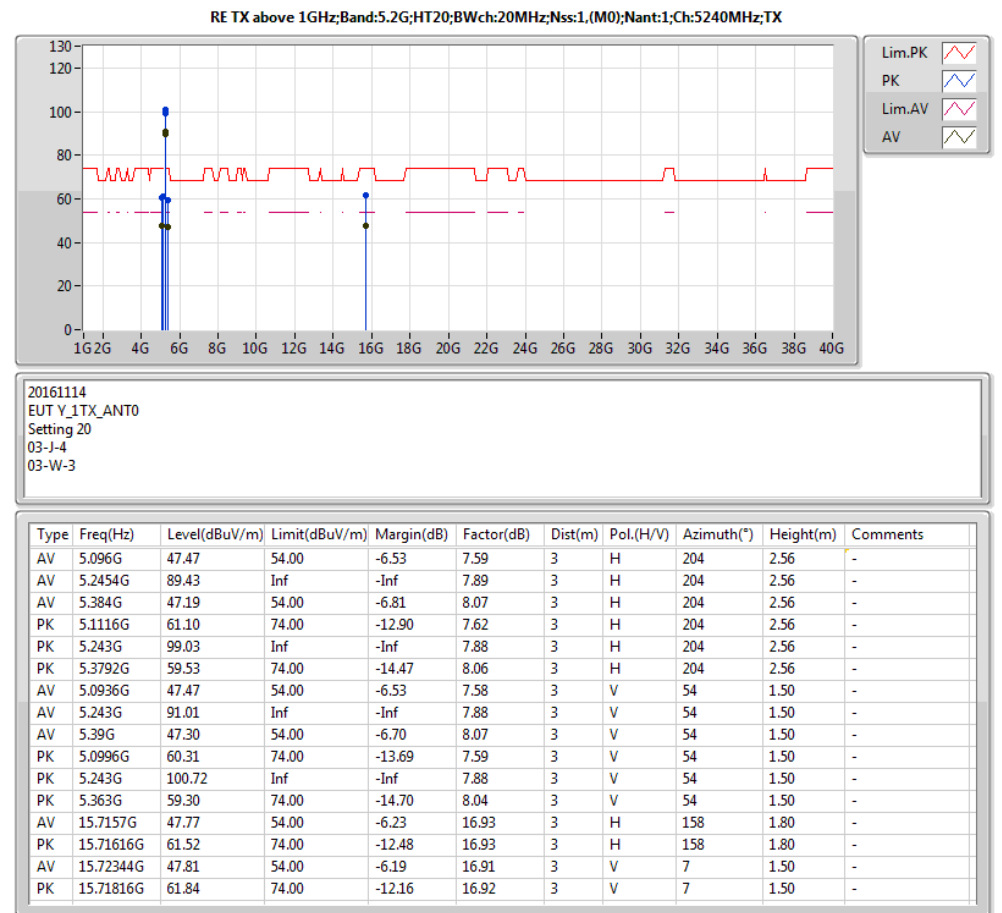
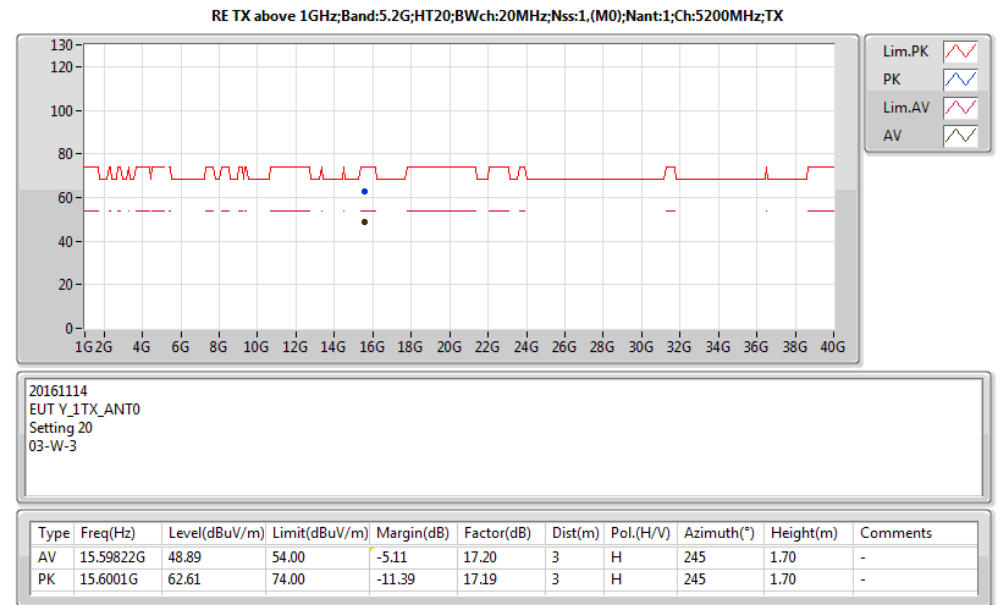
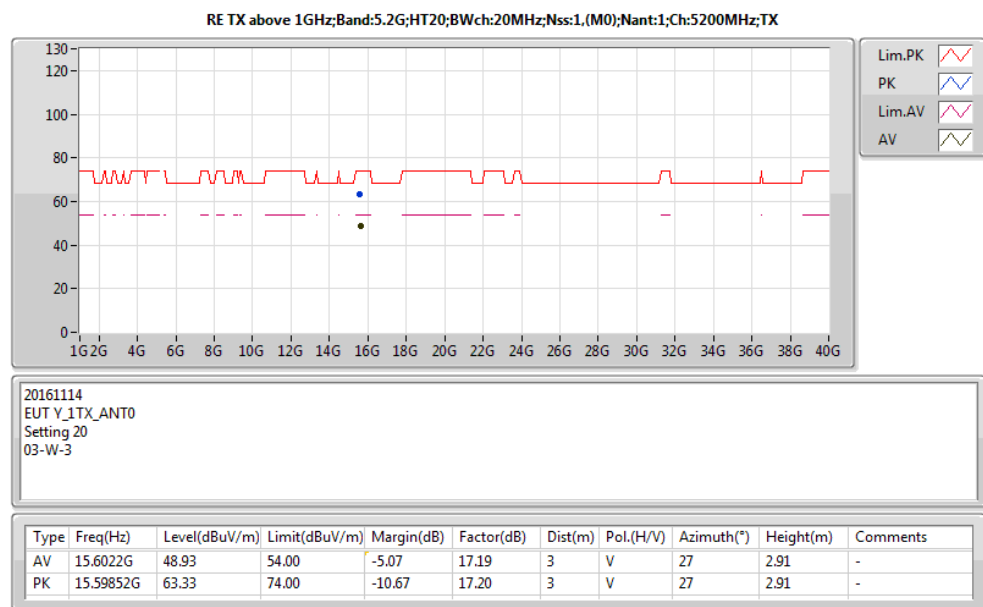
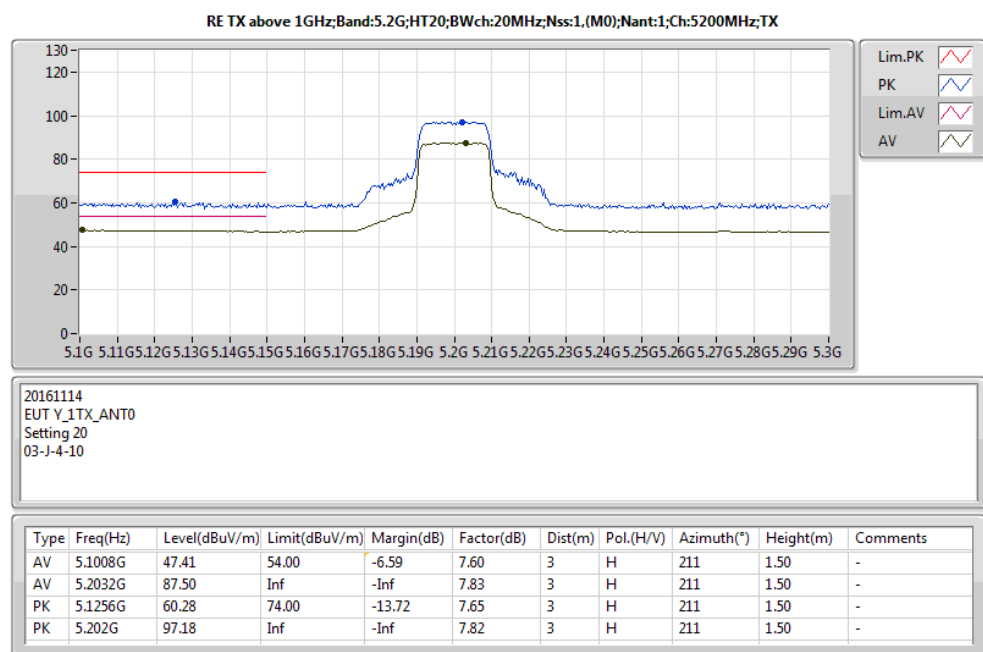
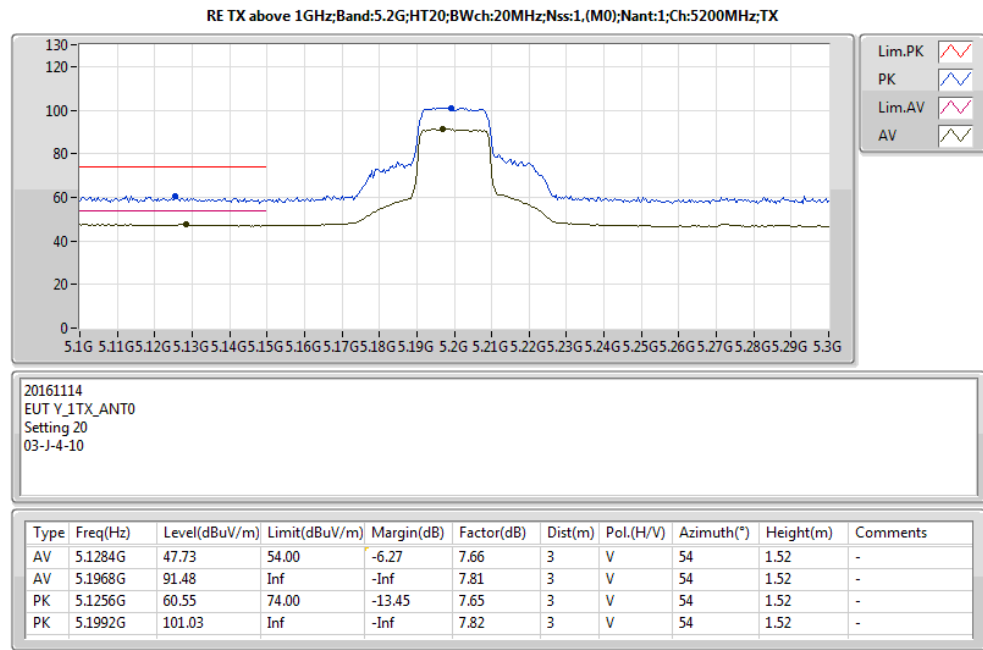


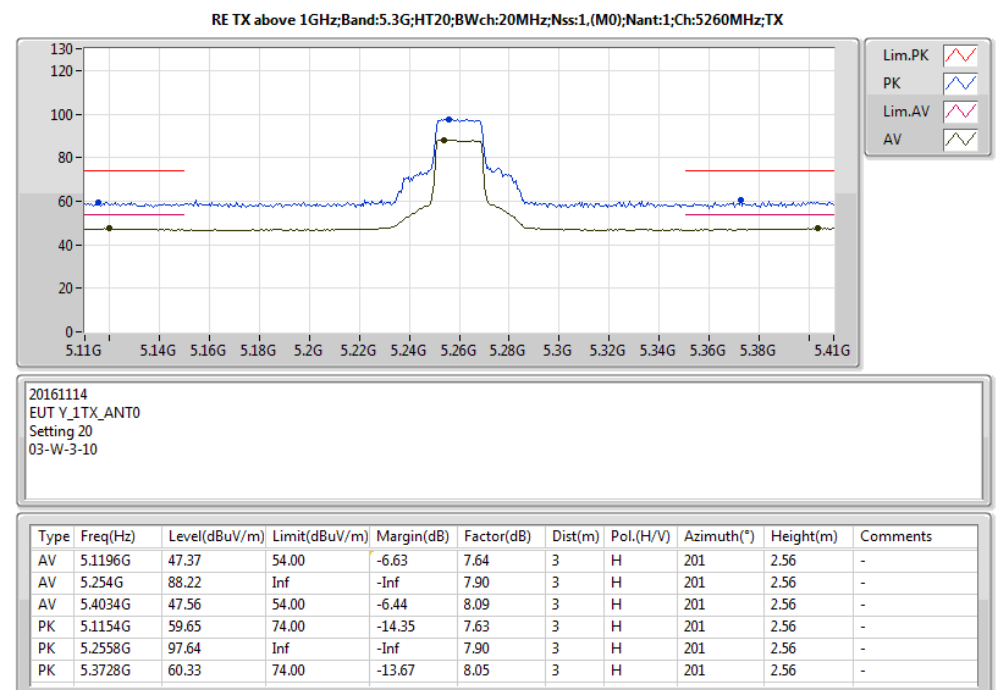
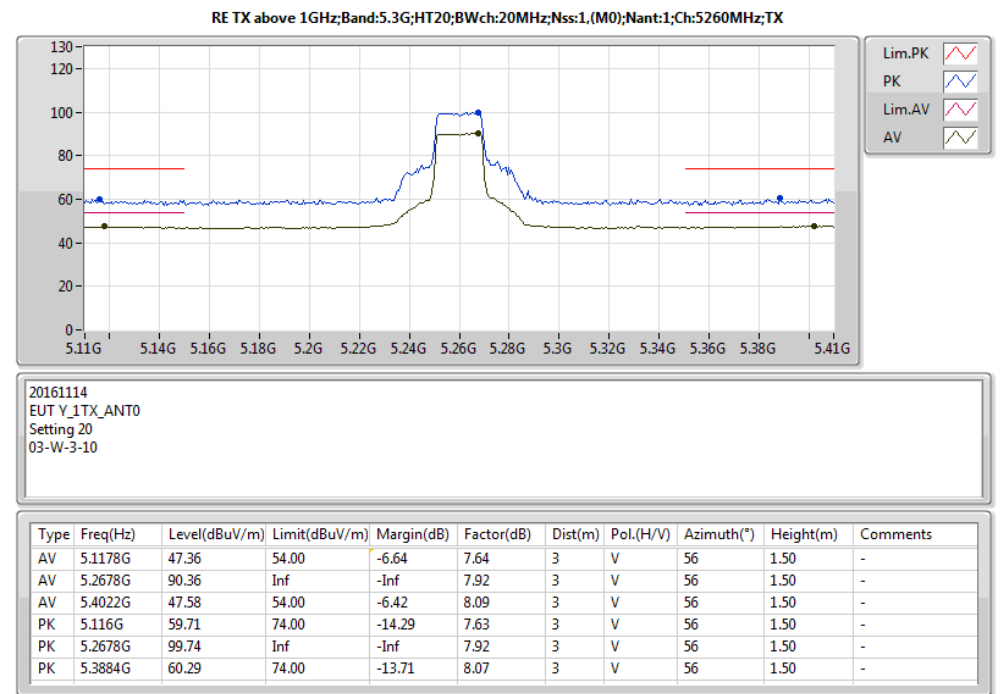
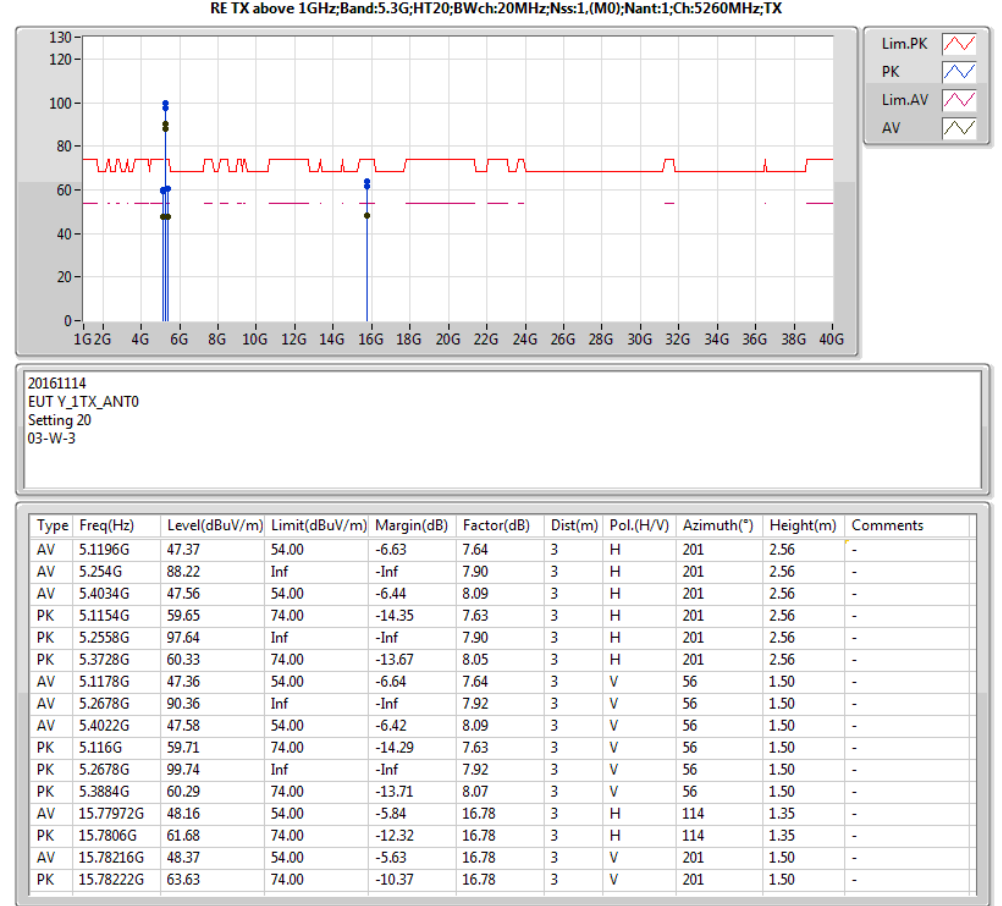
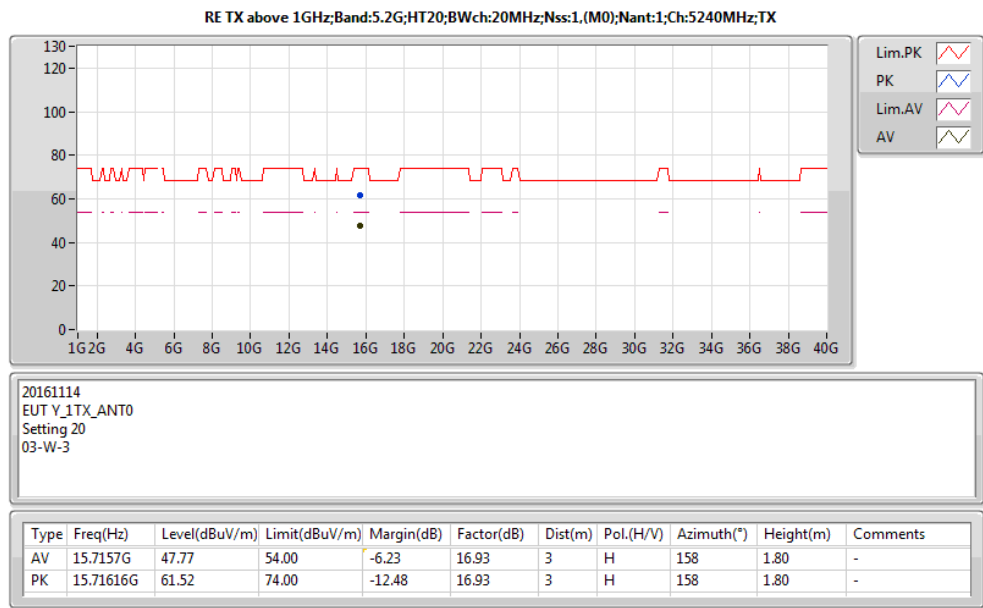
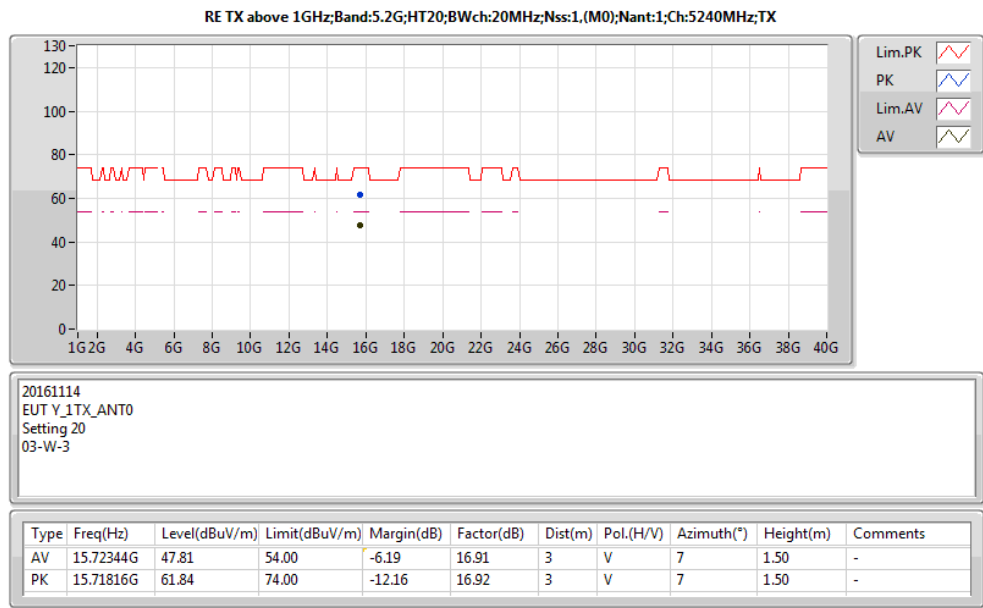
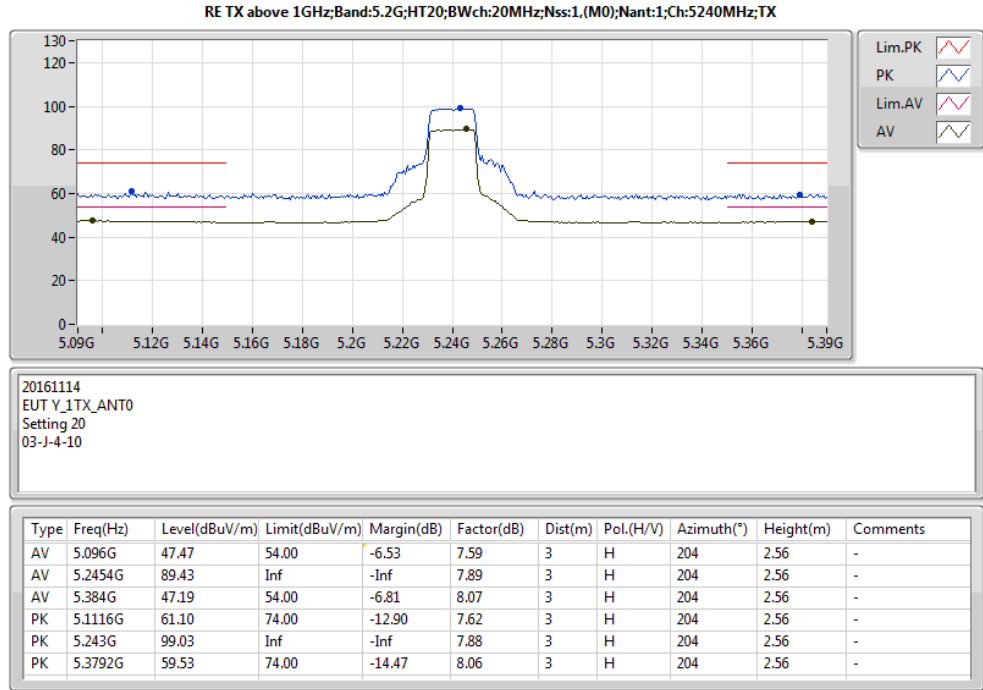


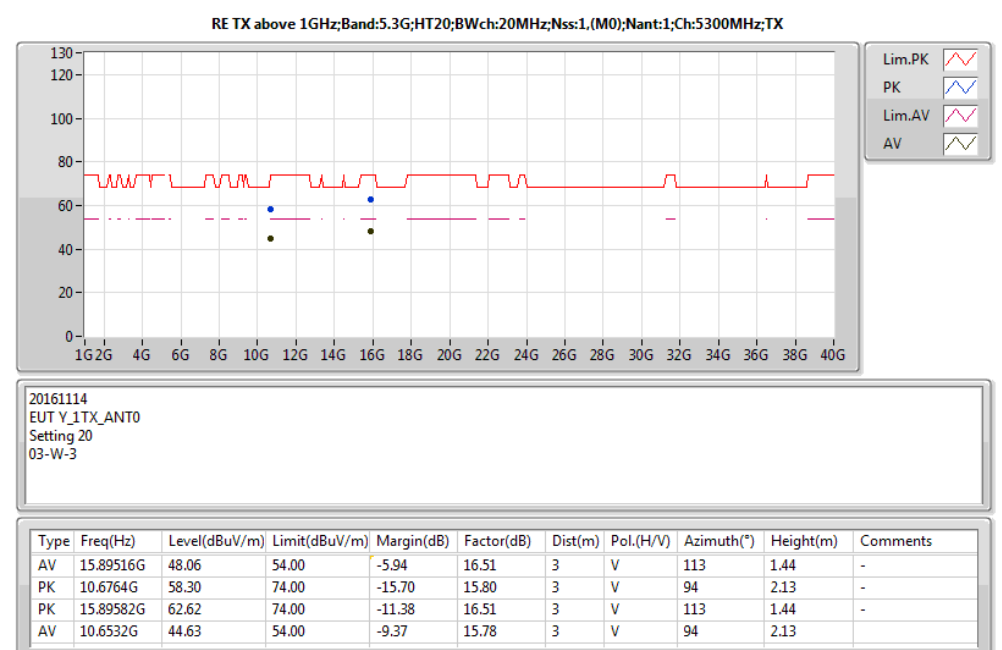
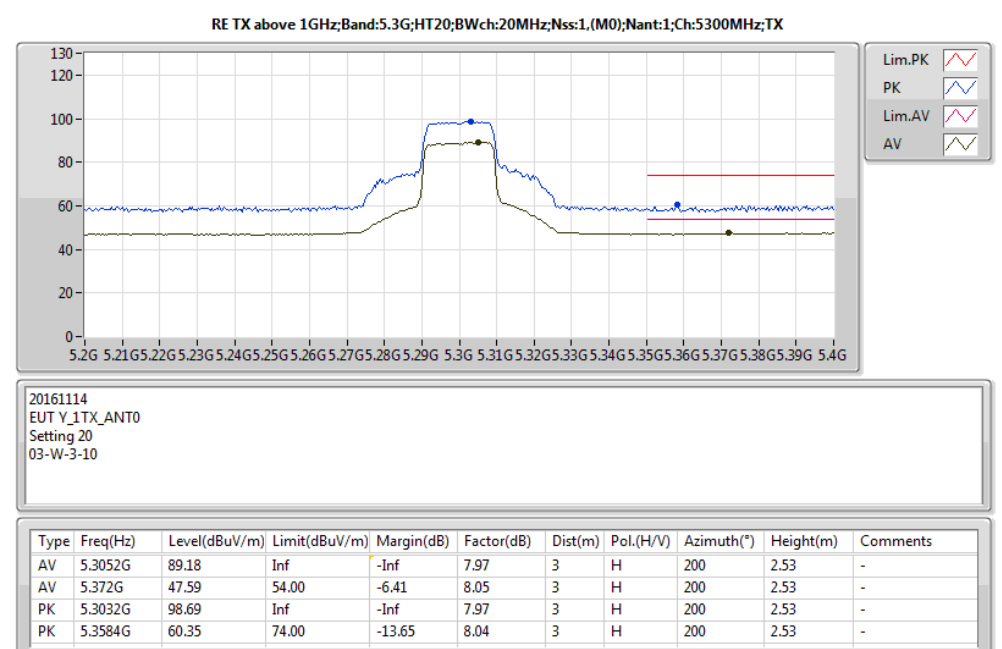
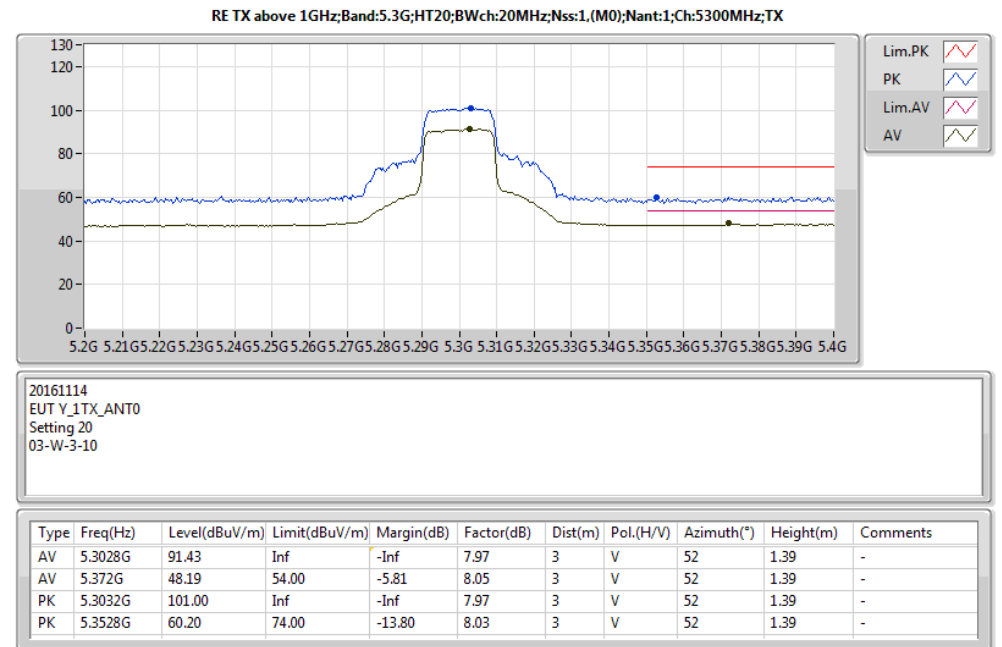
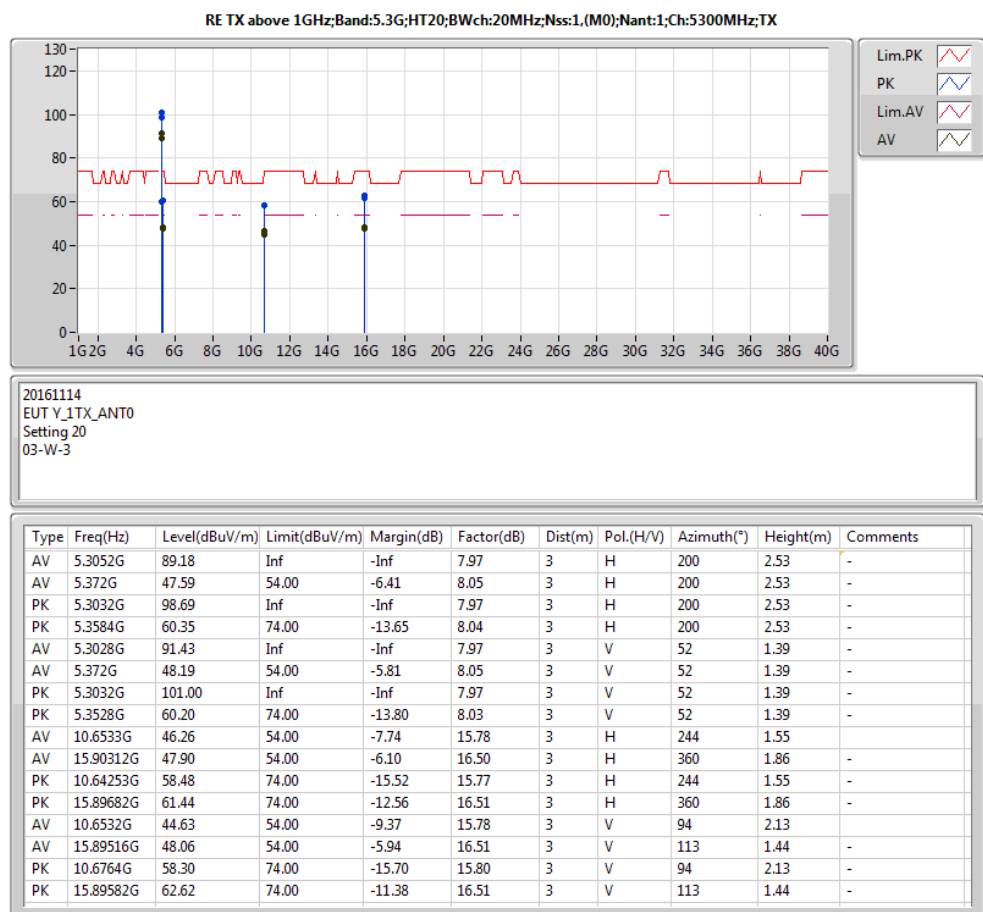
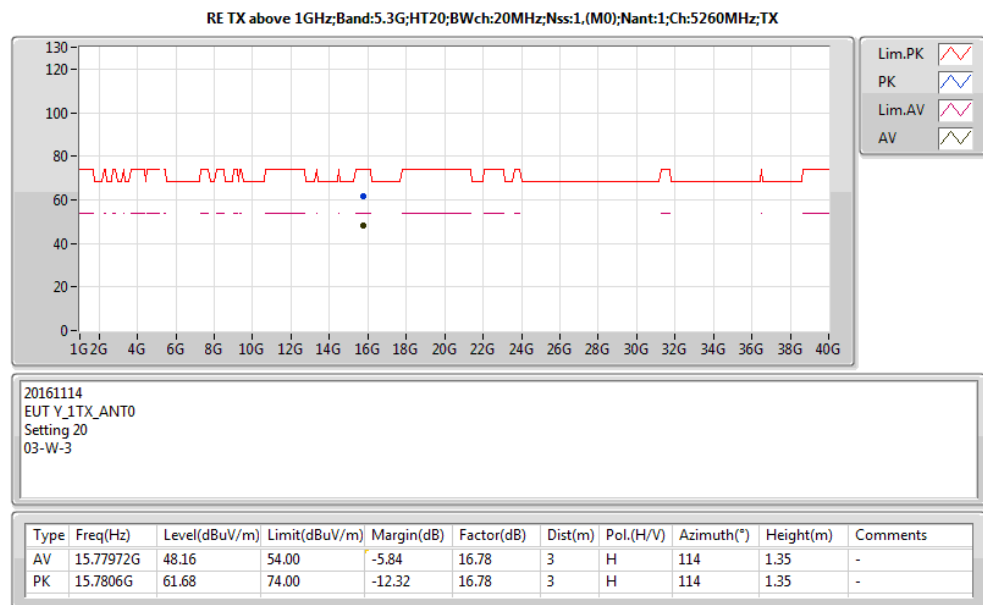
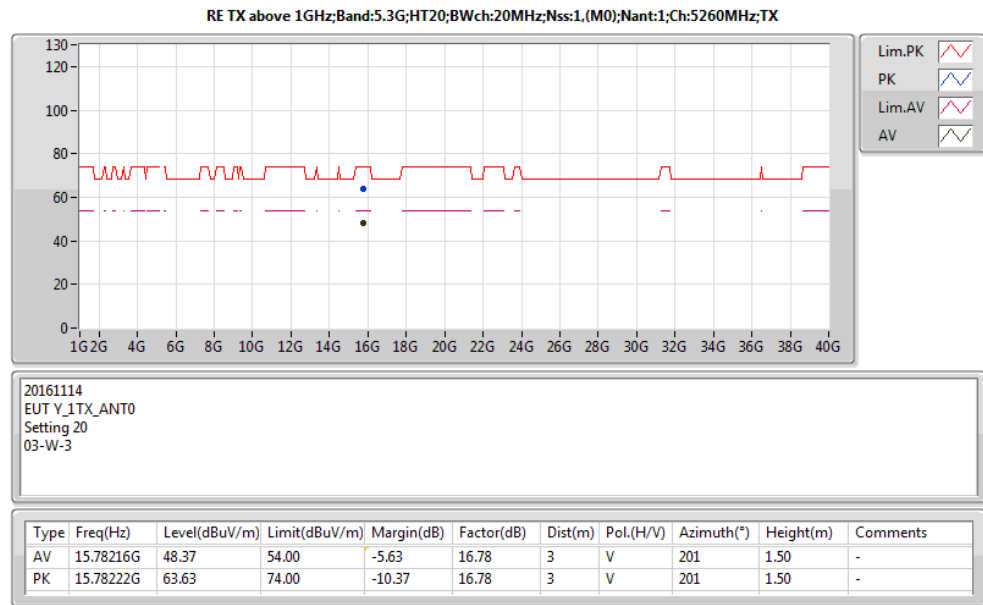


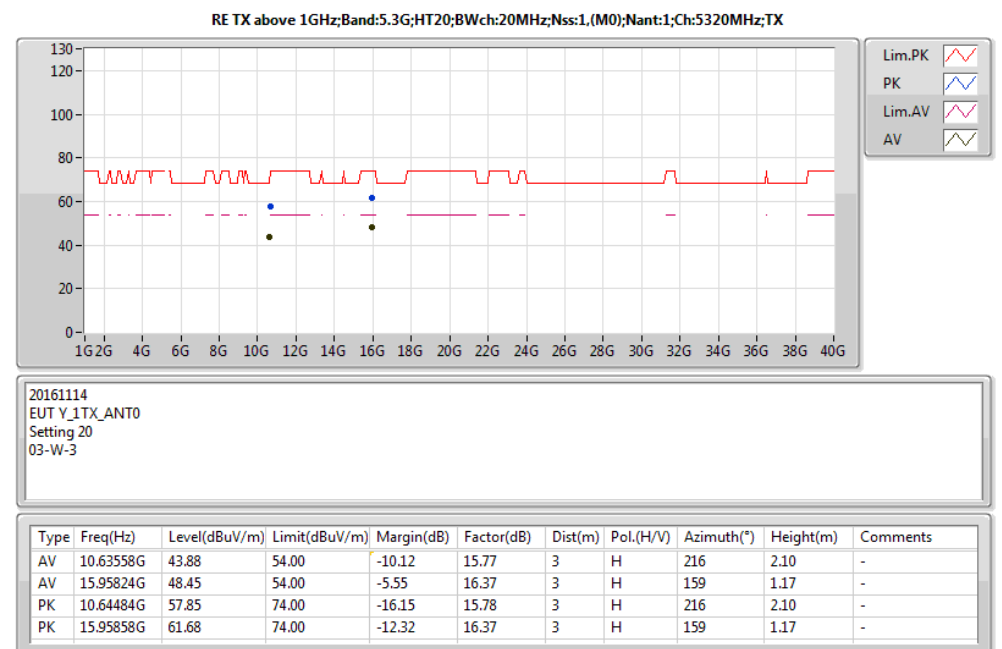
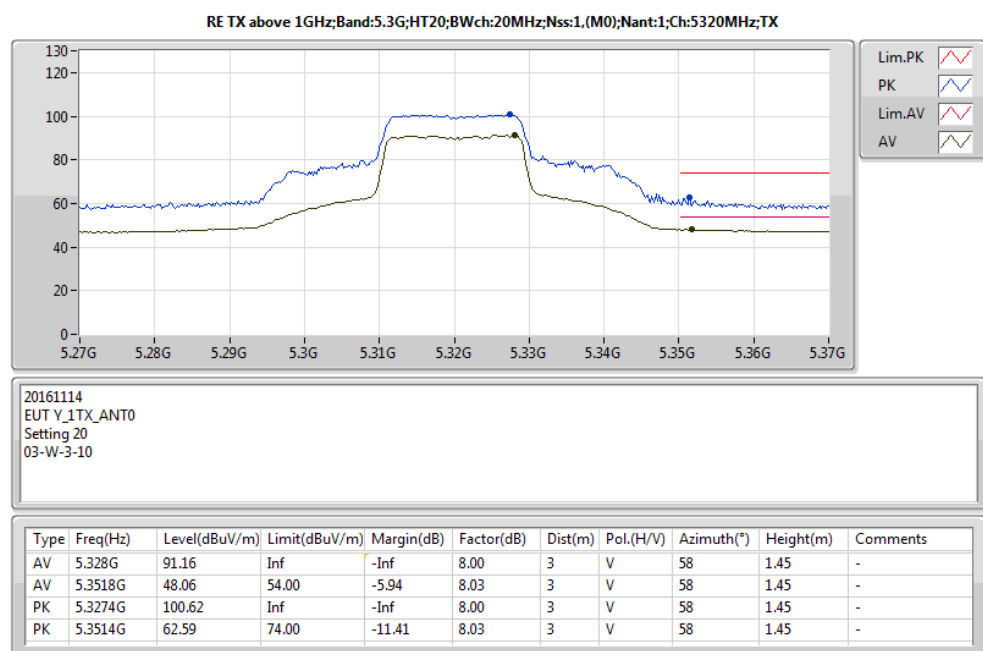
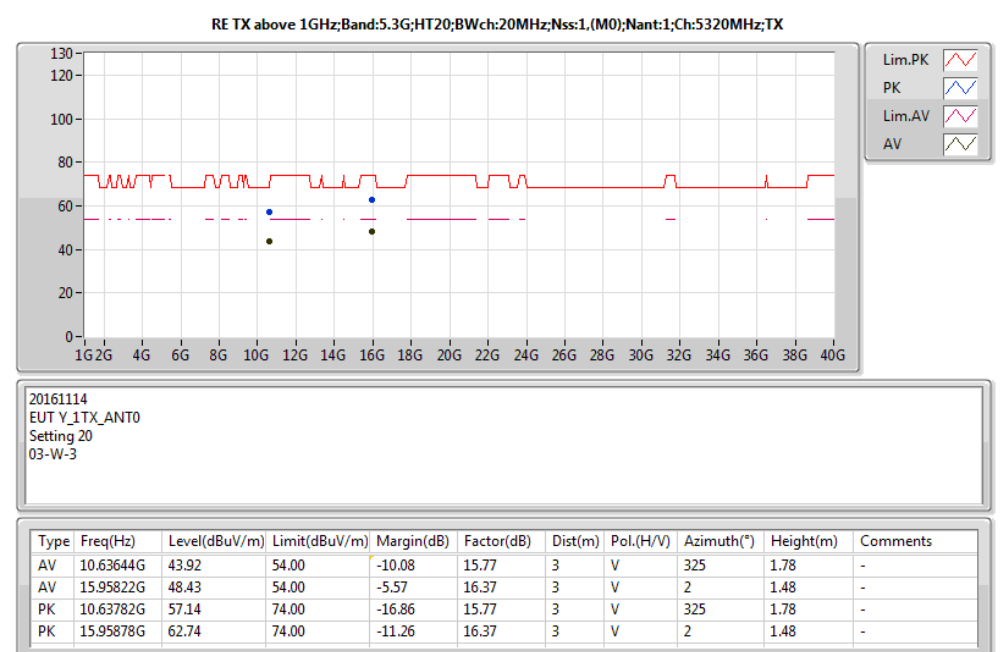
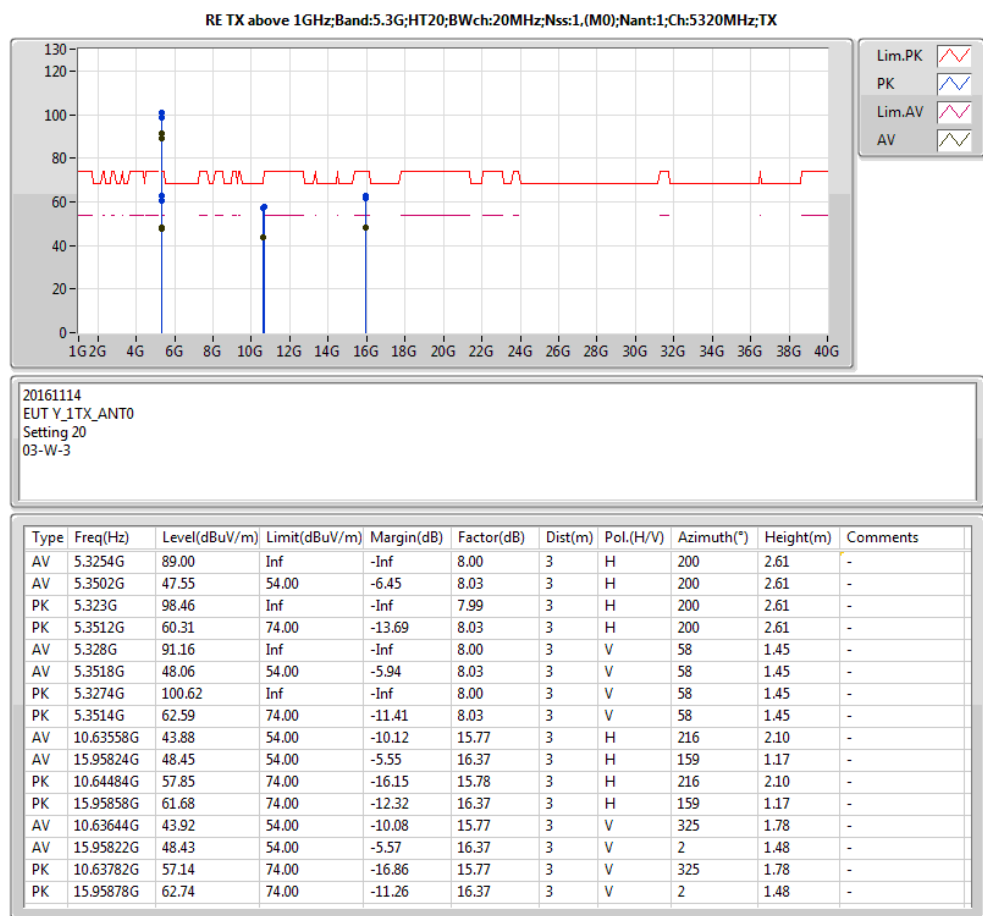
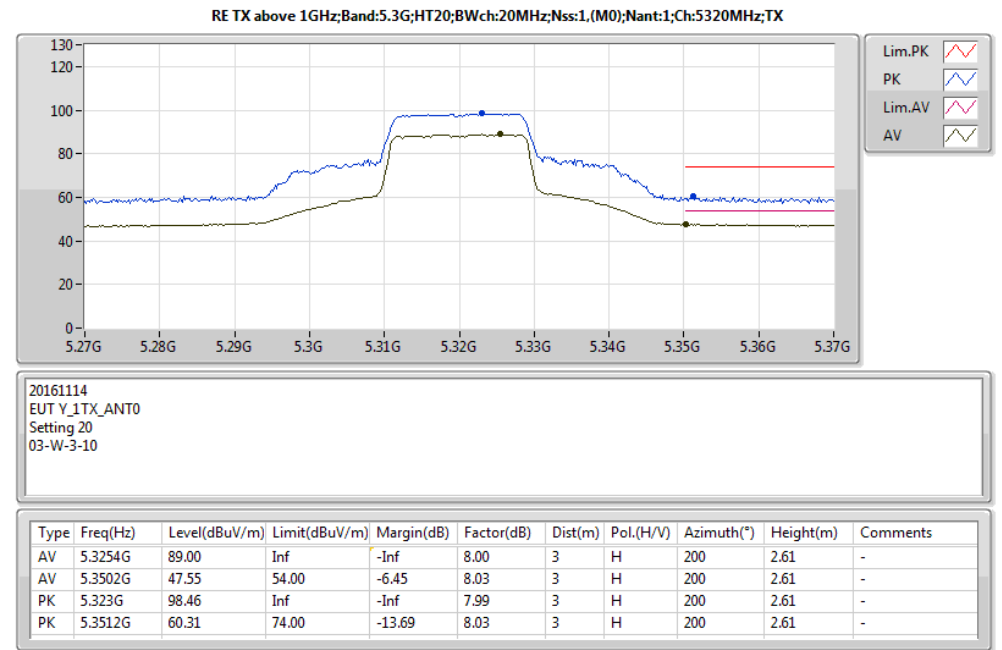
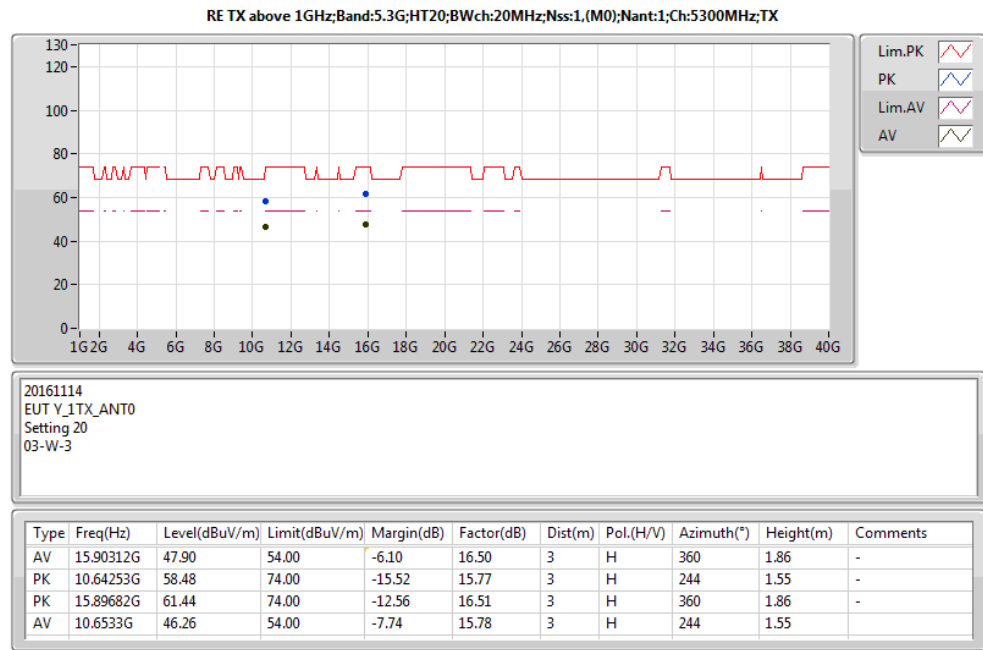


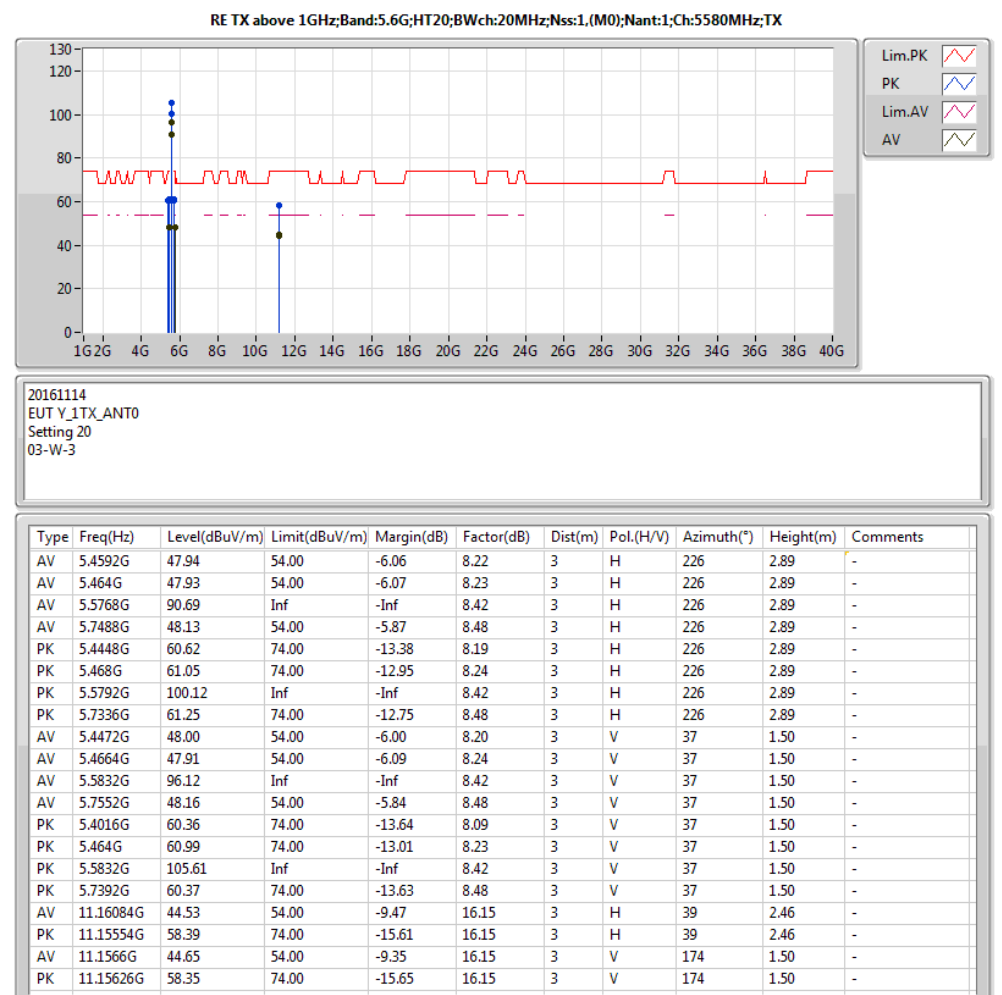
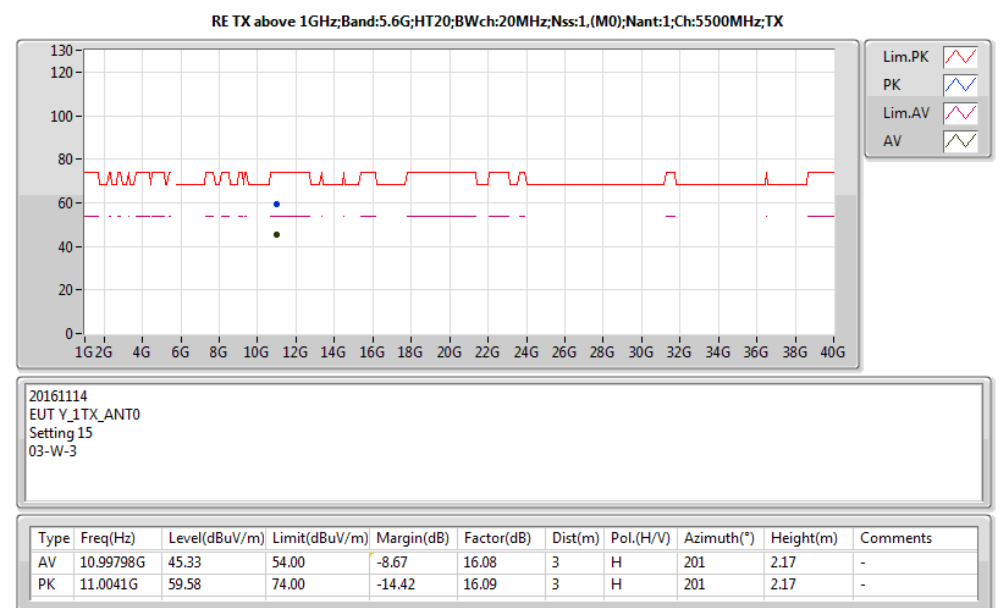
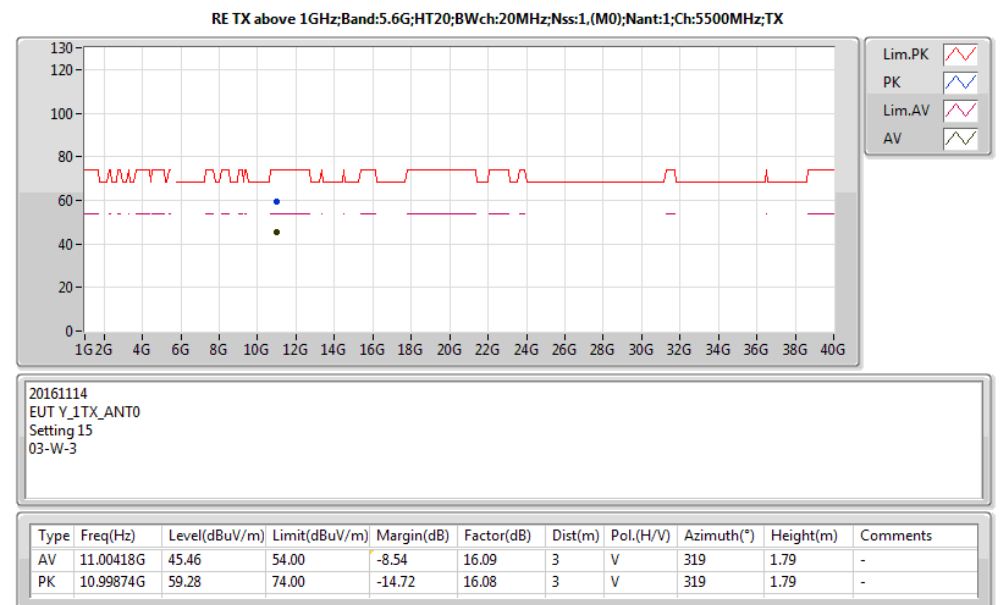
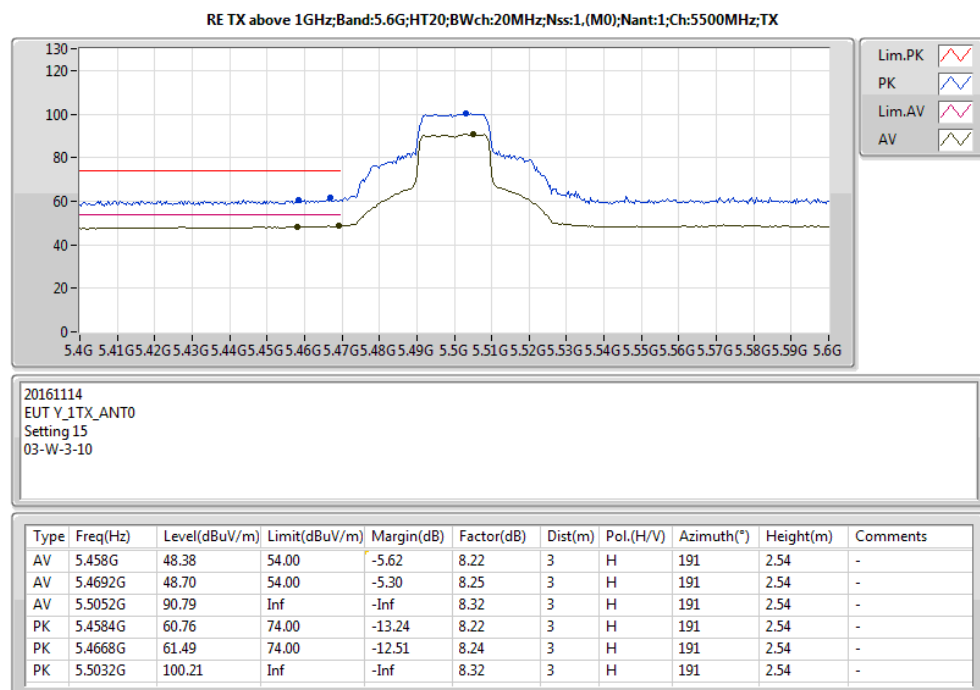
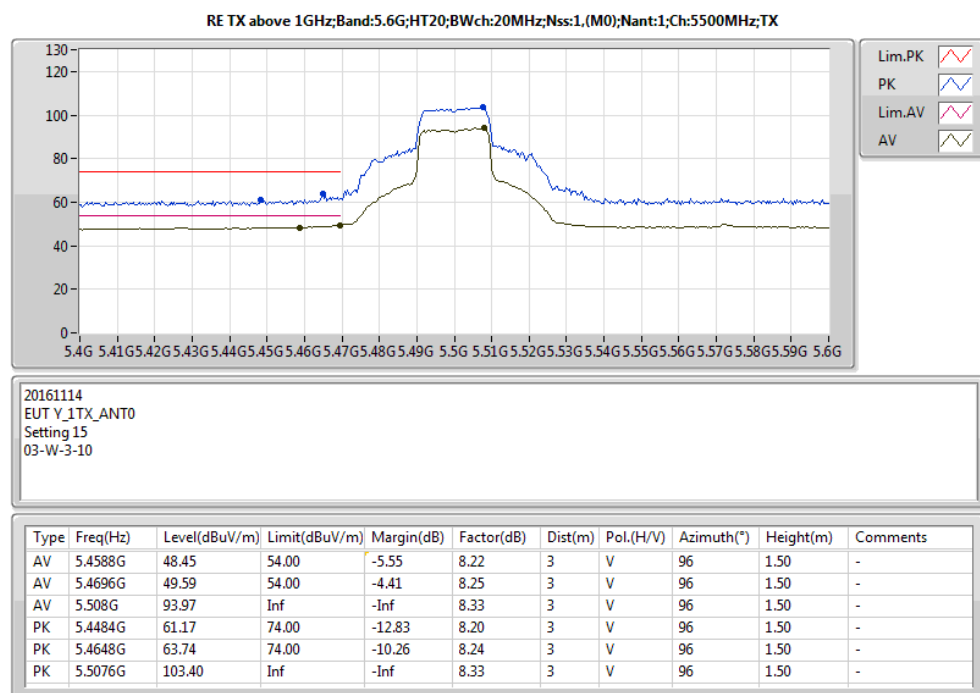
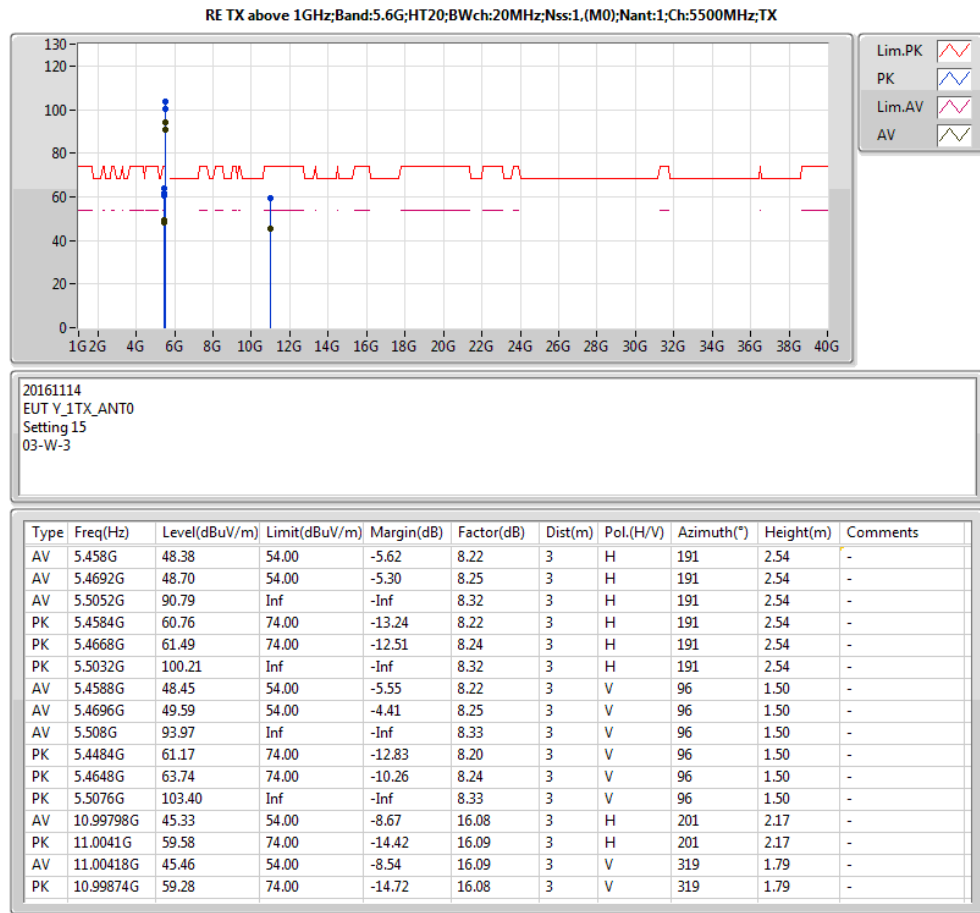


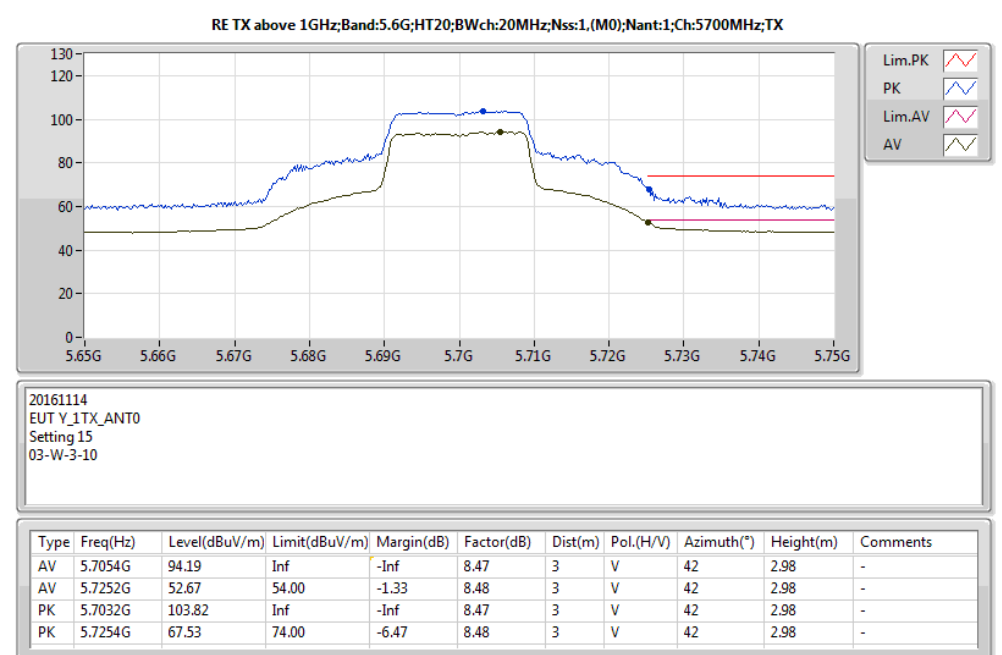
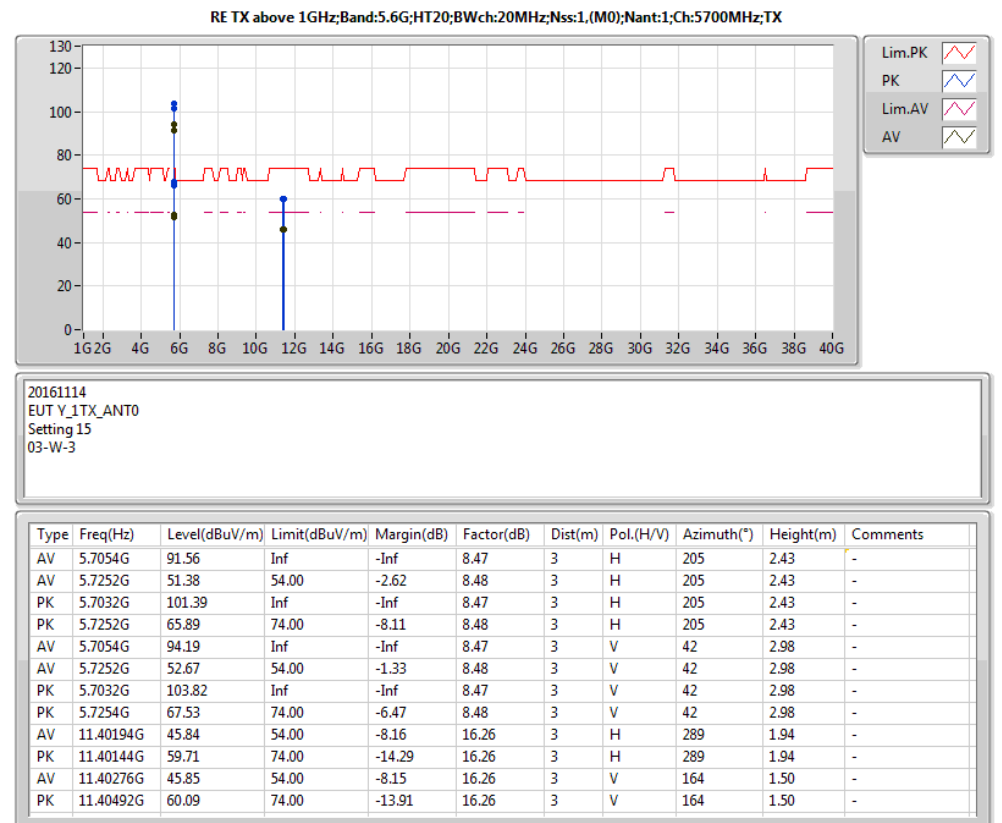
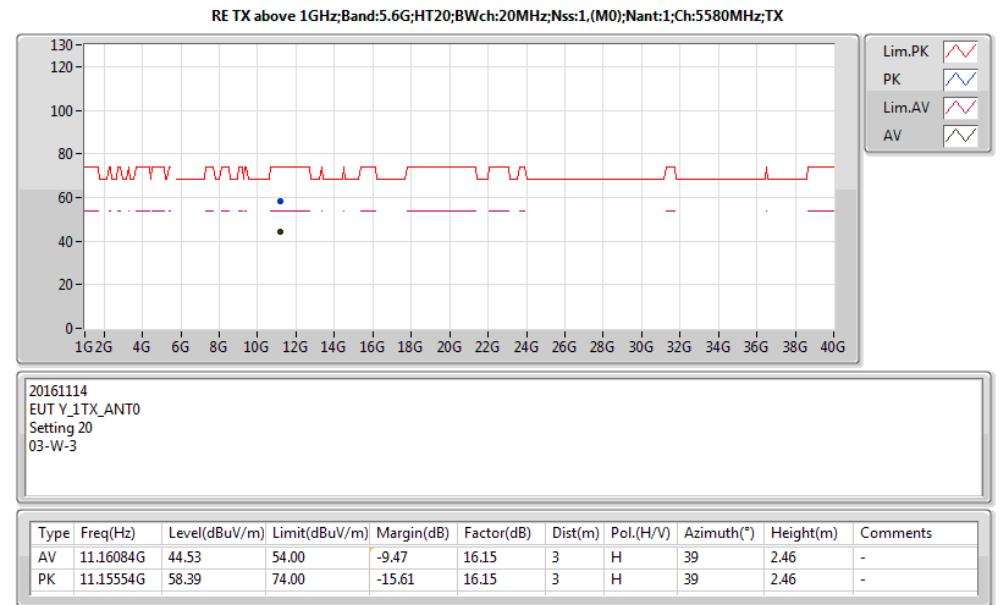
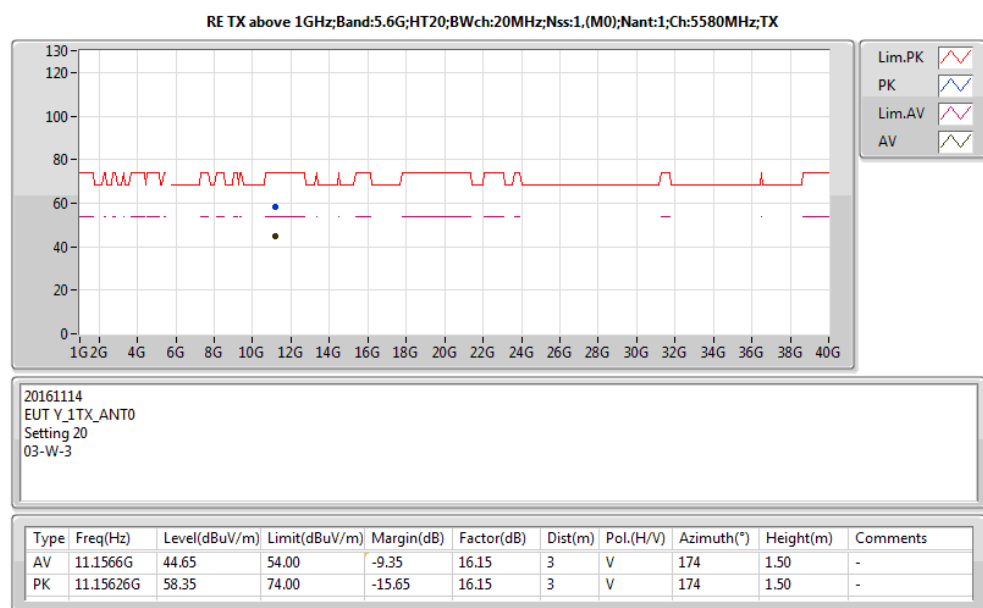
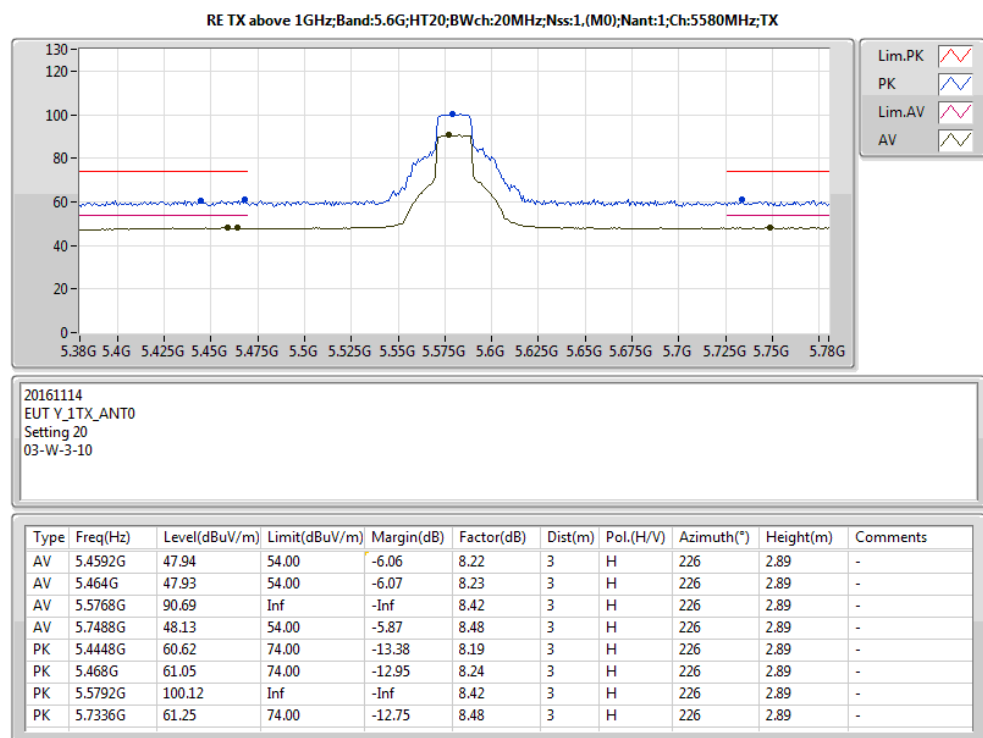
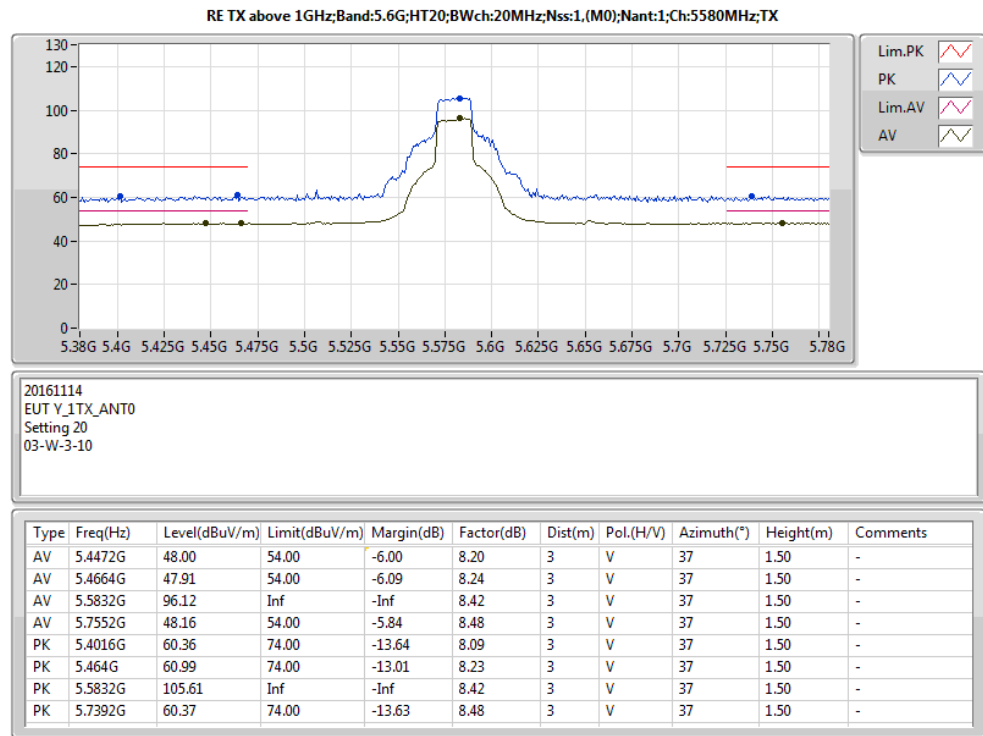




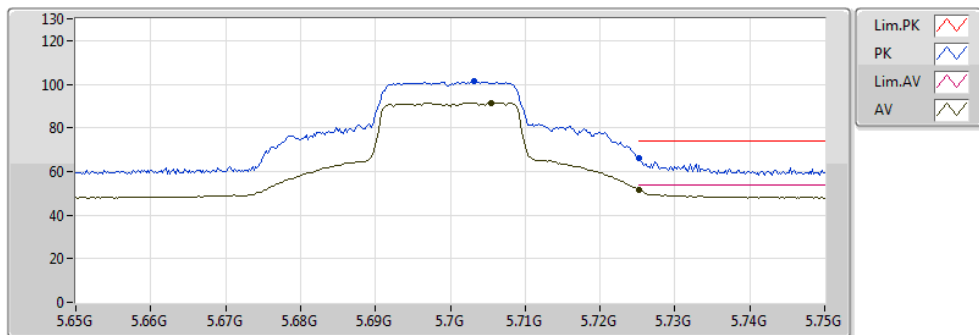








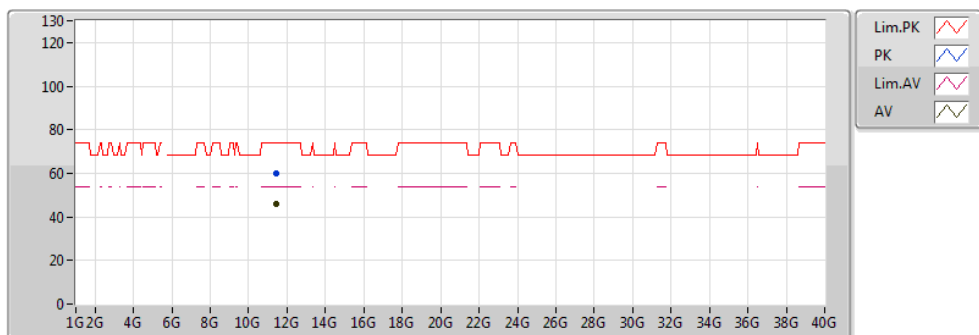
RE TX above 1GHz;Band:5.6G;HT20;BWch:20MHz;Nss:1;(M0);Nant:1;Ch:5700MHz;TX



20161114
EUT_Y_1TX_ANT0
Setting 15
03-W-3-10

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.7054G	91.56	Inf	-Inf	8.47	3	H	205	2.43	-
AV	5.7252G	51.38	54.00	-2.62	8.48	3	H	205	2.43	-
PK	5.7032G	101.39	Inf	-Inf	8.47	3	H	205	2.43	-
PK	5.7252G	65.89	74.00	-8.11	8.48	3	H	205	2.43	-

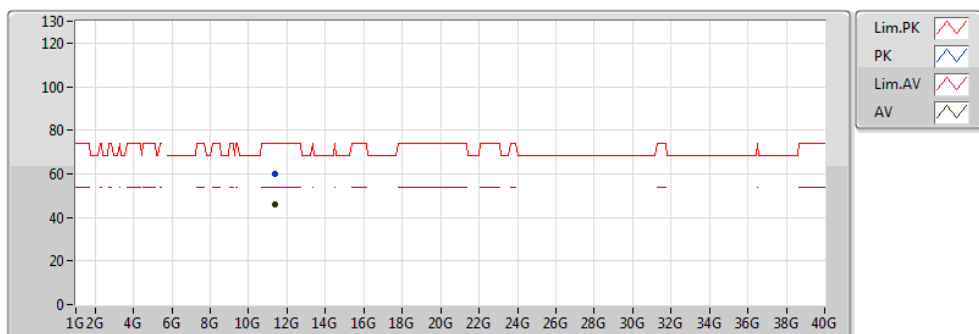
RE TX above 1GHz;Band:5.6G;HT20;BWch:20MHz;Nss:1;(M0);Nant:1;Ch:5700MHz;TX



20161114
EUT_Y_1TX_ANT0
Setting 15
03-W-3

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.40276G	45.85	54.00	-8.15	16.26	3	V	164	1.50	-
PK	11.40492G	60.09	74.00	-13.91	16.26	3	V	164	1.50	-

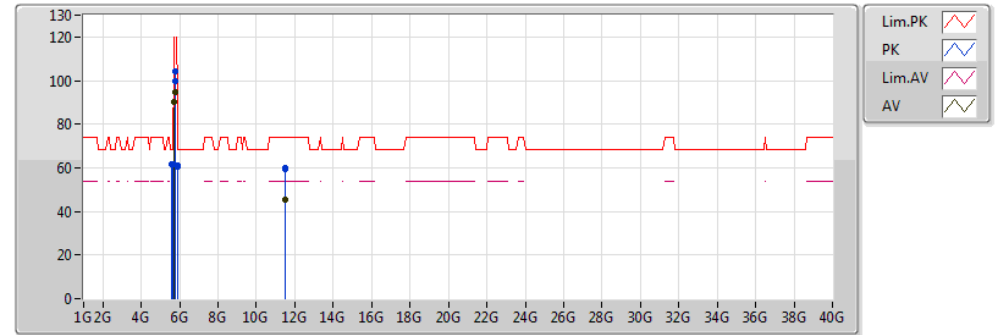
RE TX above 1GHz;Band:5.6G;HT20;BWch:20MHz;Nss:1;(M0);Nant:1;Ch:5700MHz;TX



20161114
EUT_Y_1TX_ANT0
Setting 15
03-W-3

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.40194G	45.84	54.00	-8.16	16.26	3	H	289	1.94	-
PK	11.40144G	59.71	74.00	-14.29	16.26	3	H	289	1.94	-

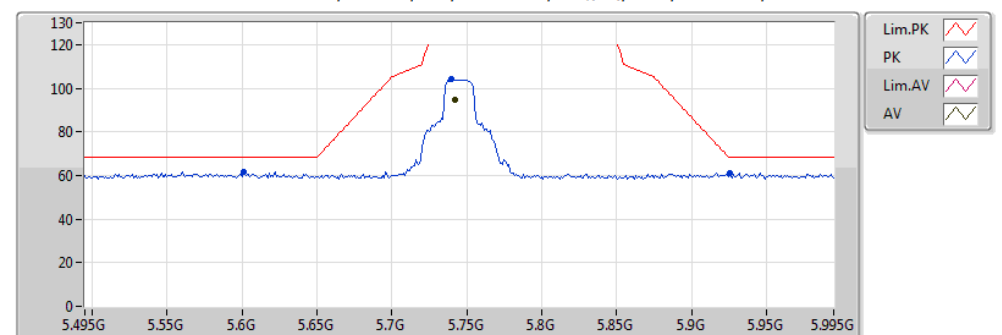
RE TX above 1GHz;Band:5.8G;HT20;BWch:20MHz;Nss:1;(M0);Nant:1;Ch:5745MHz;TX



20161114
EUT_Y_1TX_ANT0
Setting 20
03-W-3

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.739G	90.12	Inf	-Inf	8.48	3	H	216	2.79	-
PK	5.647G	61.68	68.20	-6.52	8.46	3	H	216	2.79	-
PK	5.74G	99.75	Inf	-Inf	8.48	3	H	216	2.79	-
PK	5.93G	60.70	68.20	-7.50	8.68	3	H	216	2.79	-
AV	5.742G	94.54	Inf	-Inf	8.48	3	V	43	2.97	-
PK	5.601G	61.70	68.20	-6.50	8.45	3	V	43	2.97	-
PK	5.74G	104.18	Inf	-Inf	8.48	3	V	43	2.97	-
PK	5.926G	61.11	68.20	-7.09	8.68	3	V	43	2.97	-
AV	11.48522G	45.60	54.00	-8.40	16.29	3	H	198	1.62	-
PK	11.49194G	59.51	74.00	-14.49	16.30	3	H	198	1.62	-
AV	11.48796G	45.56	54.00	-8.44	16.30	3	V	164	1.01	-
PK	11.48644G	59.73	74.00	-14.27	16.29	3	V	164	1.01	-

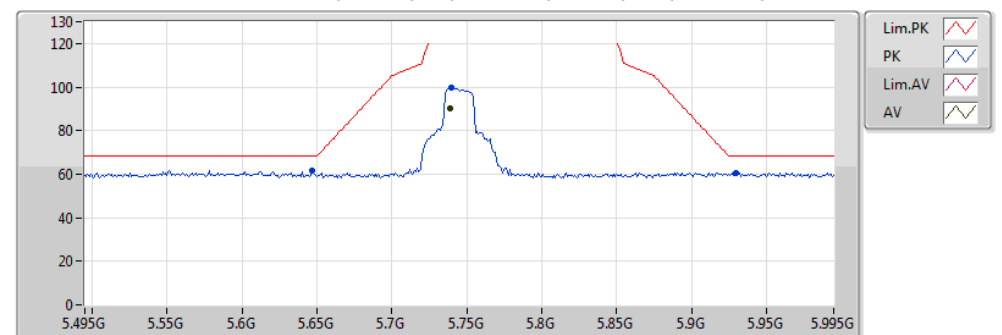
RE TX above 1GHz;Band:5.8G;HT20;BWch:20MHz;Nss:1;(M0);Nant:1;Ch:5745MHz;TX



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Setting 20
03-W-3-10

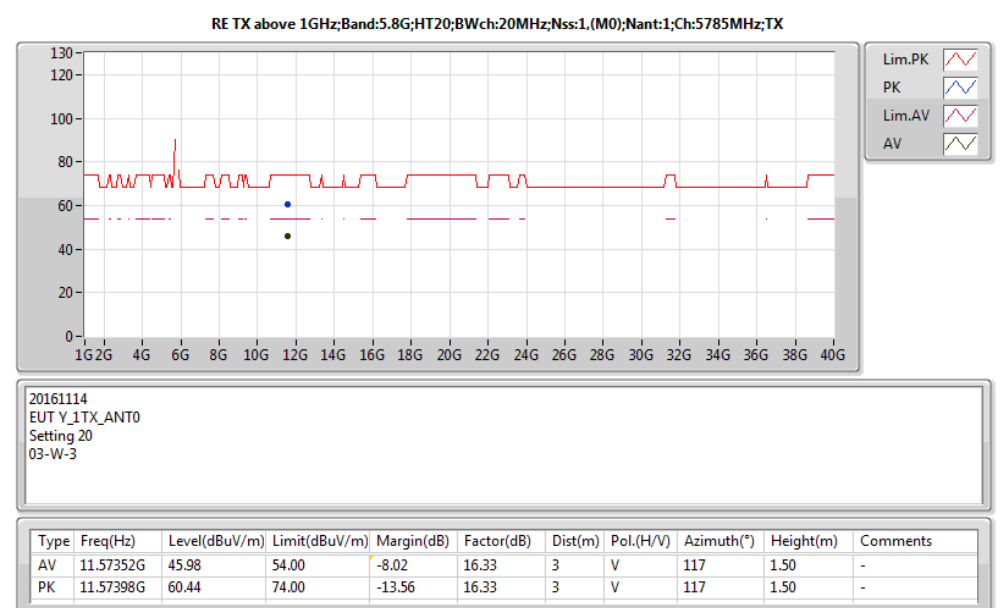
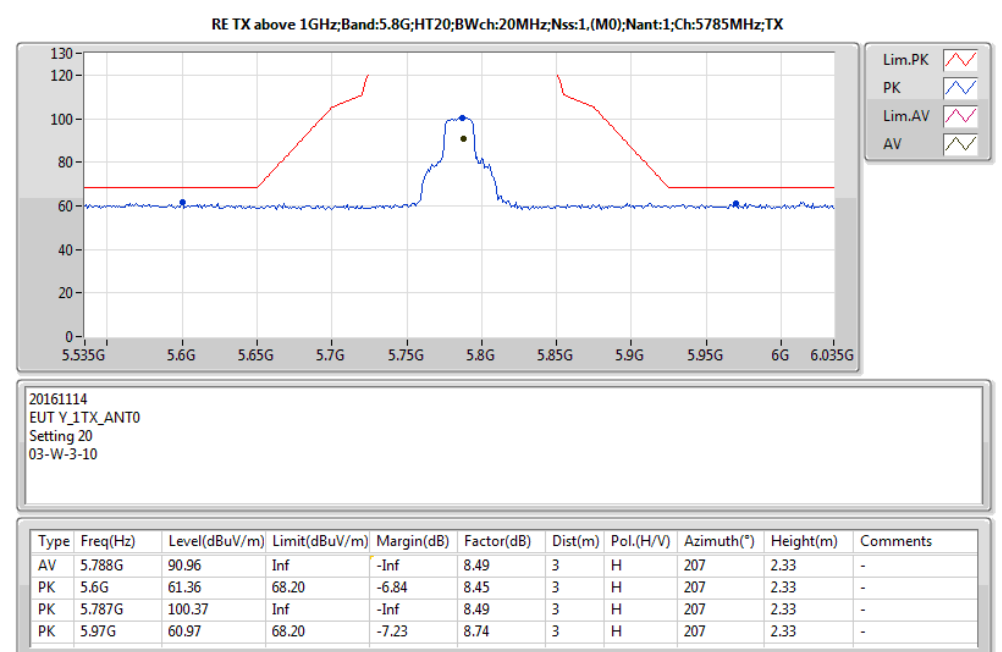
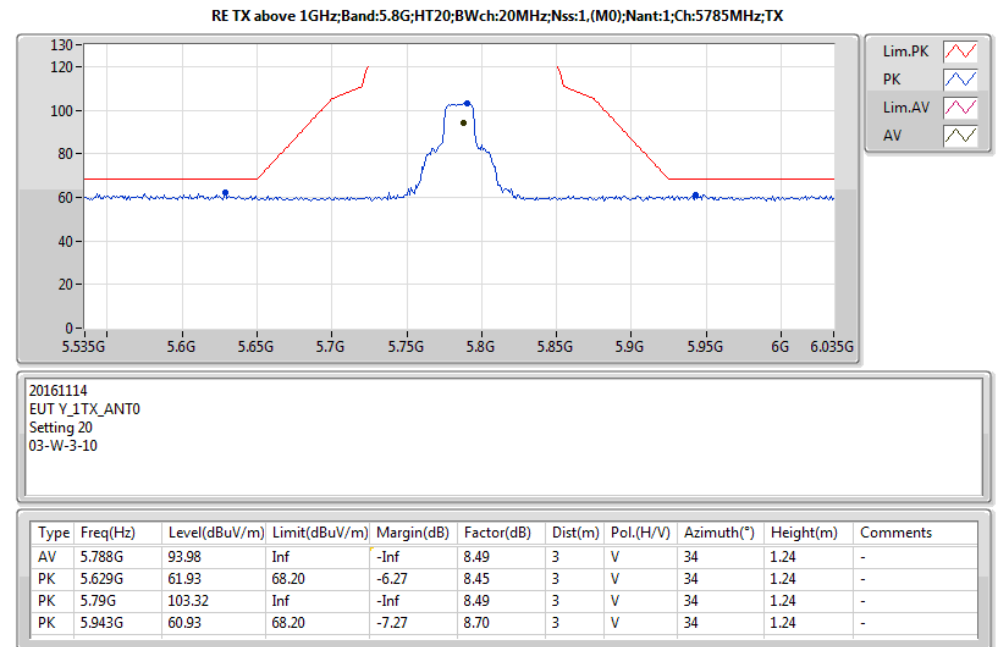
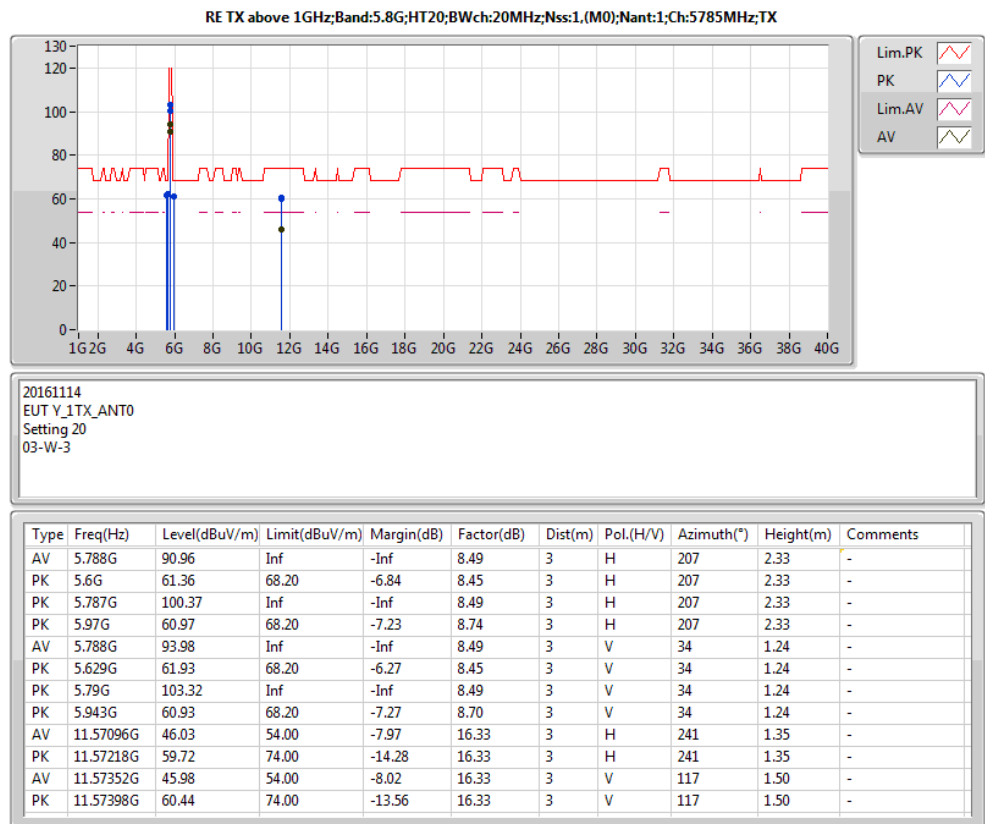
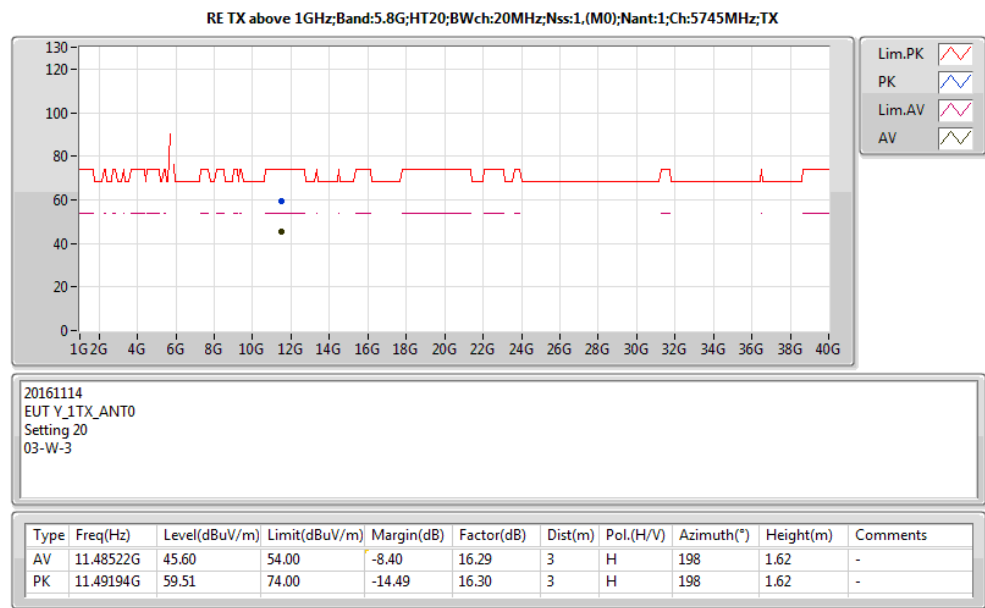
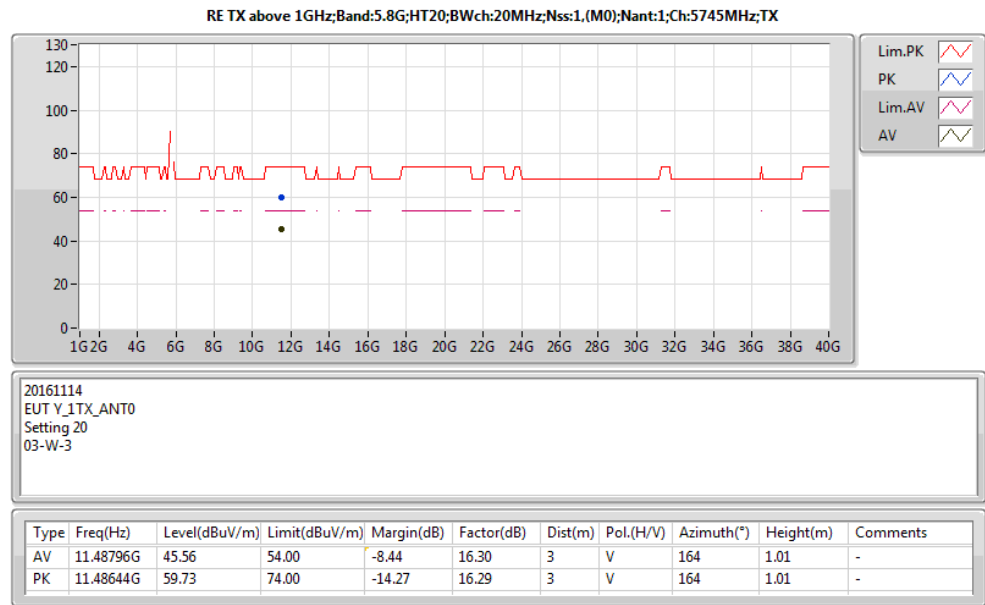
Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.742G	94.54	Inf	-Inf	8.48	3	V	43	2.97	-
PK	5.601G	61.70	68.20	-6.50	8.45	3	V	43	2.97	-
PK	5.74G	104.18	Inf	-Inf	8.48	3	V	43	2.97	-
PK	5.926G	61.11	68.20	-7.09	8.68	3	V	43	2.97	-

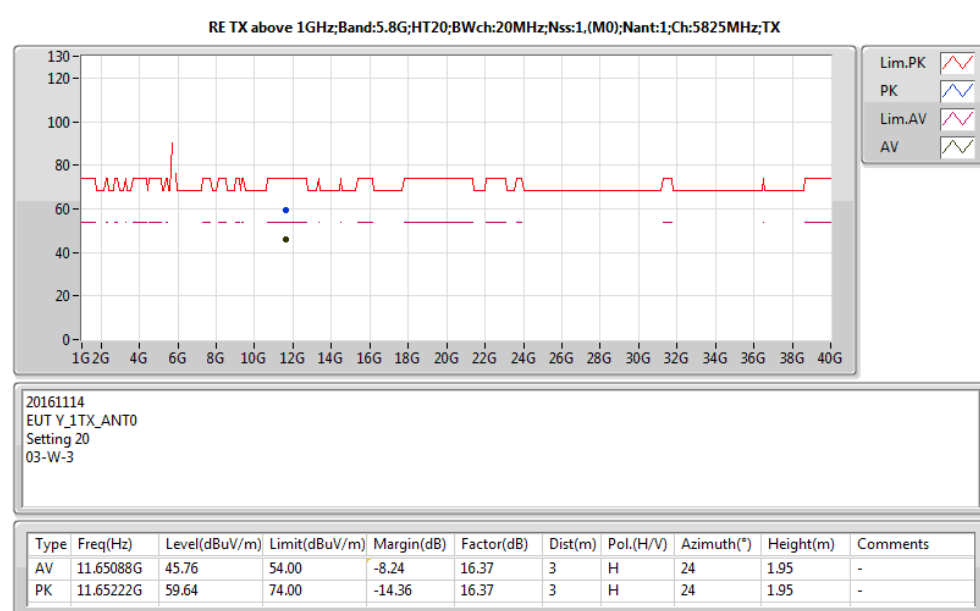
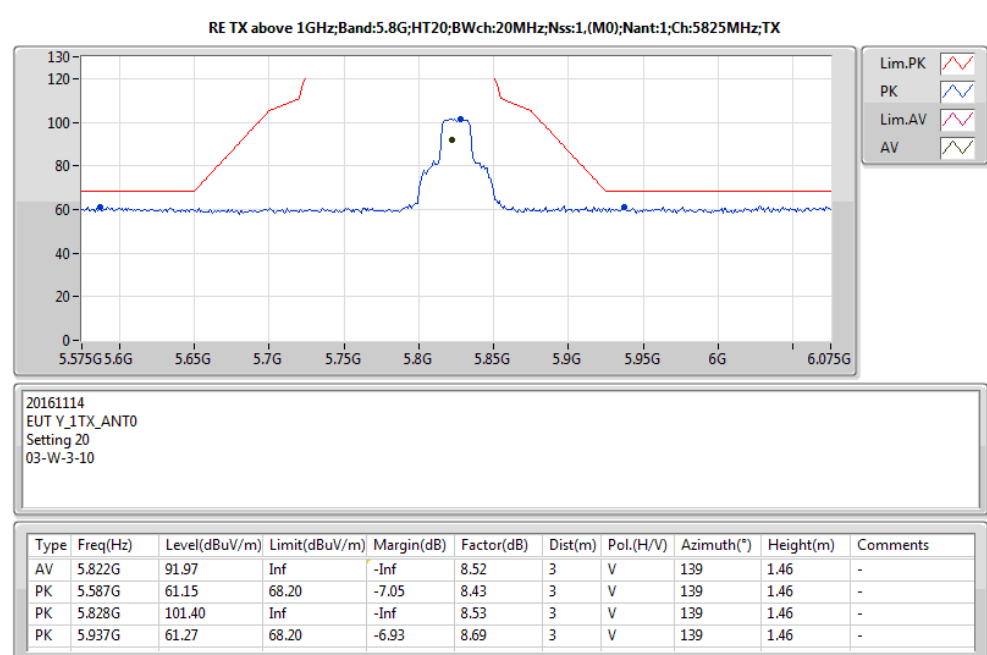
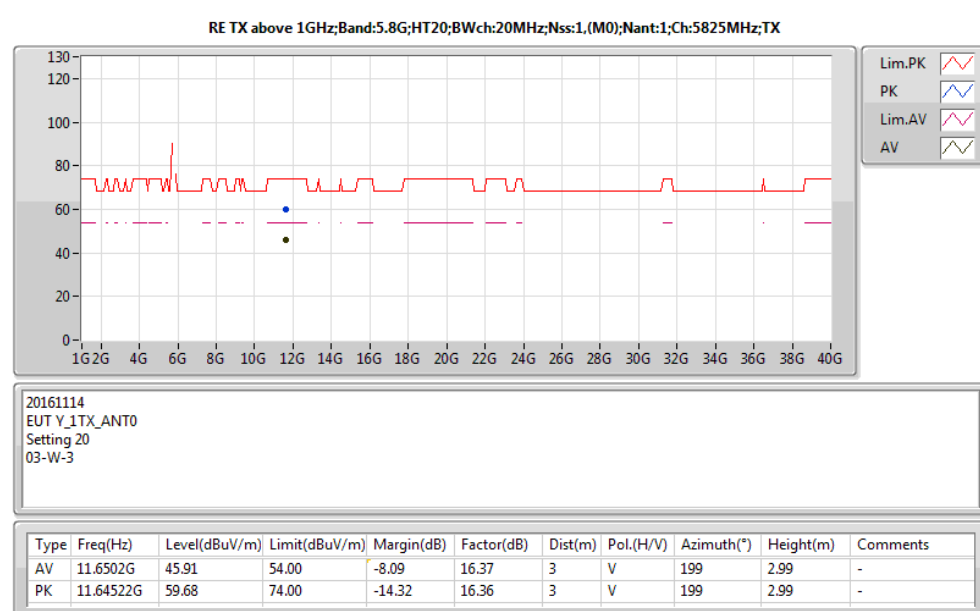
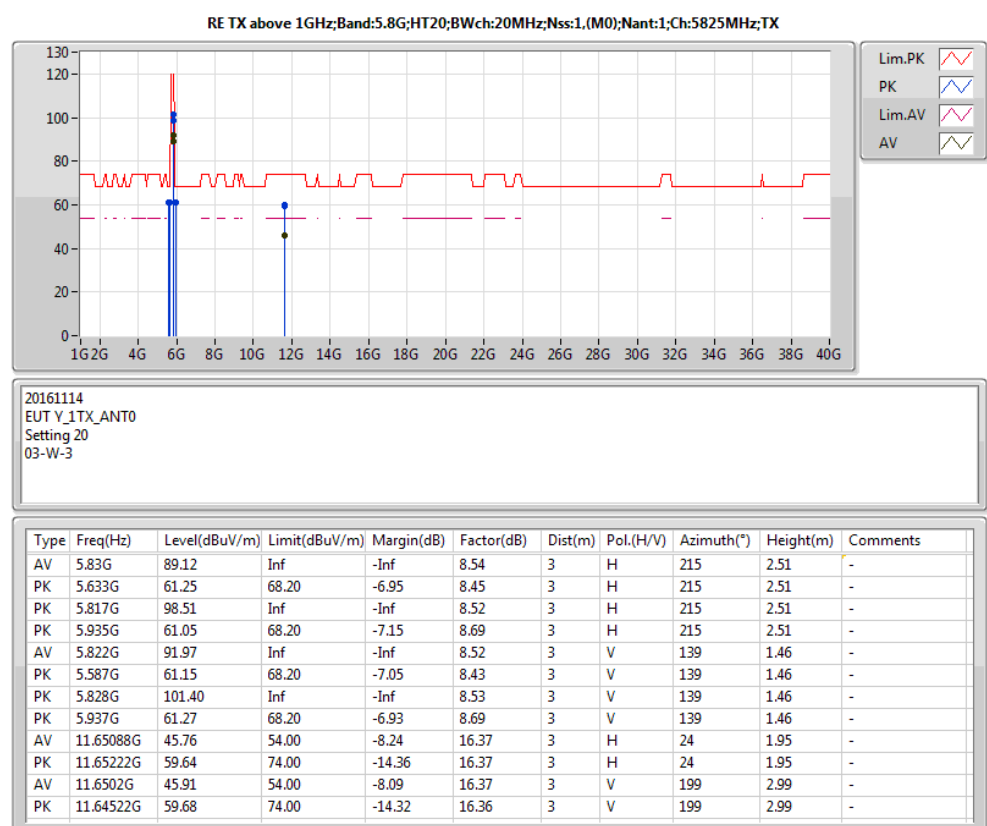
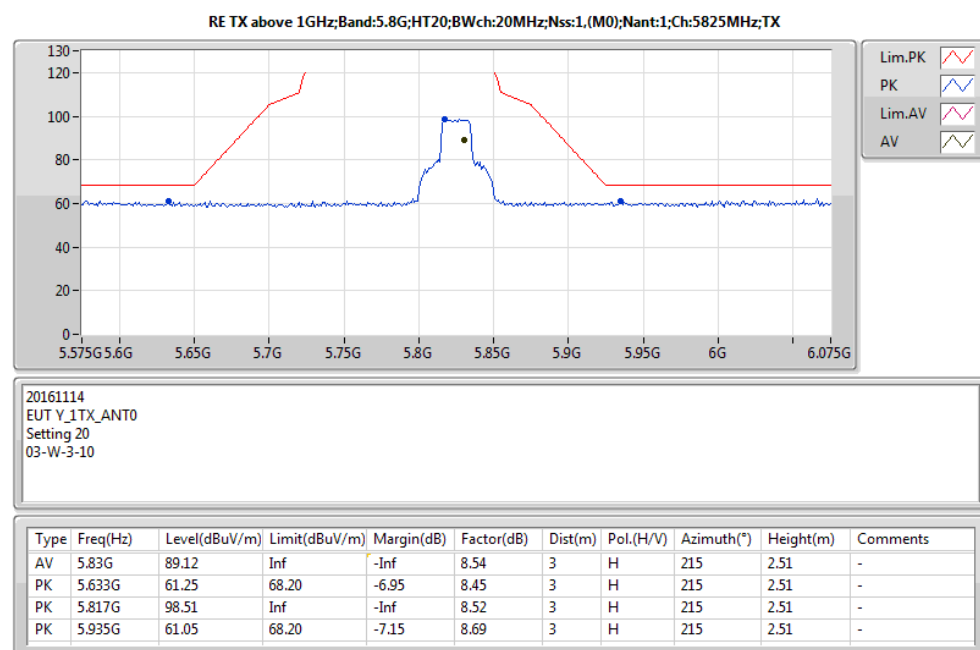
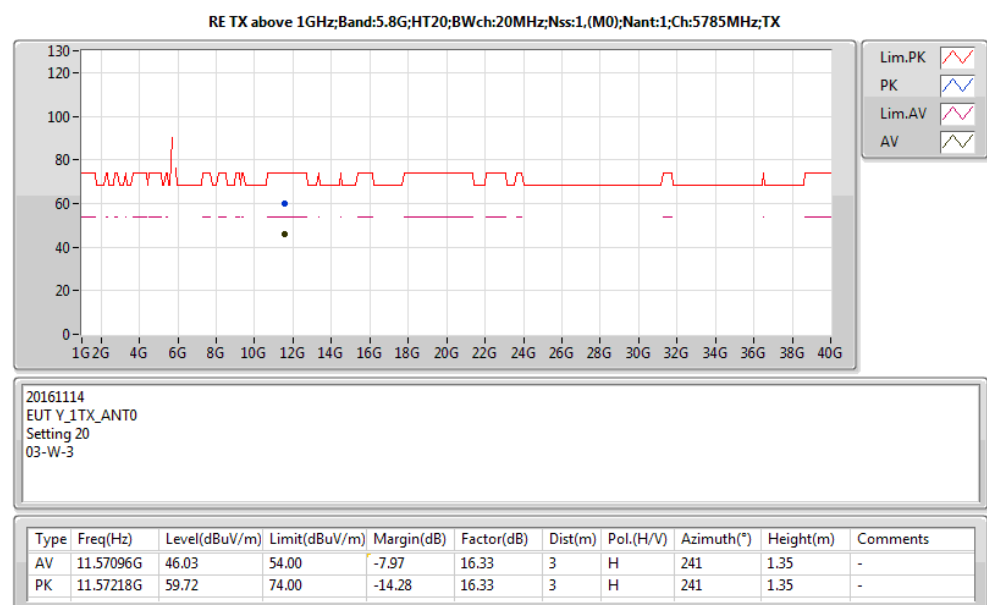
RE TX above 1GHz;Band:5.8G;HT20;BWch:20MHz;Nss:1;(M0);Nant:1;Ch:5745MHz;TX

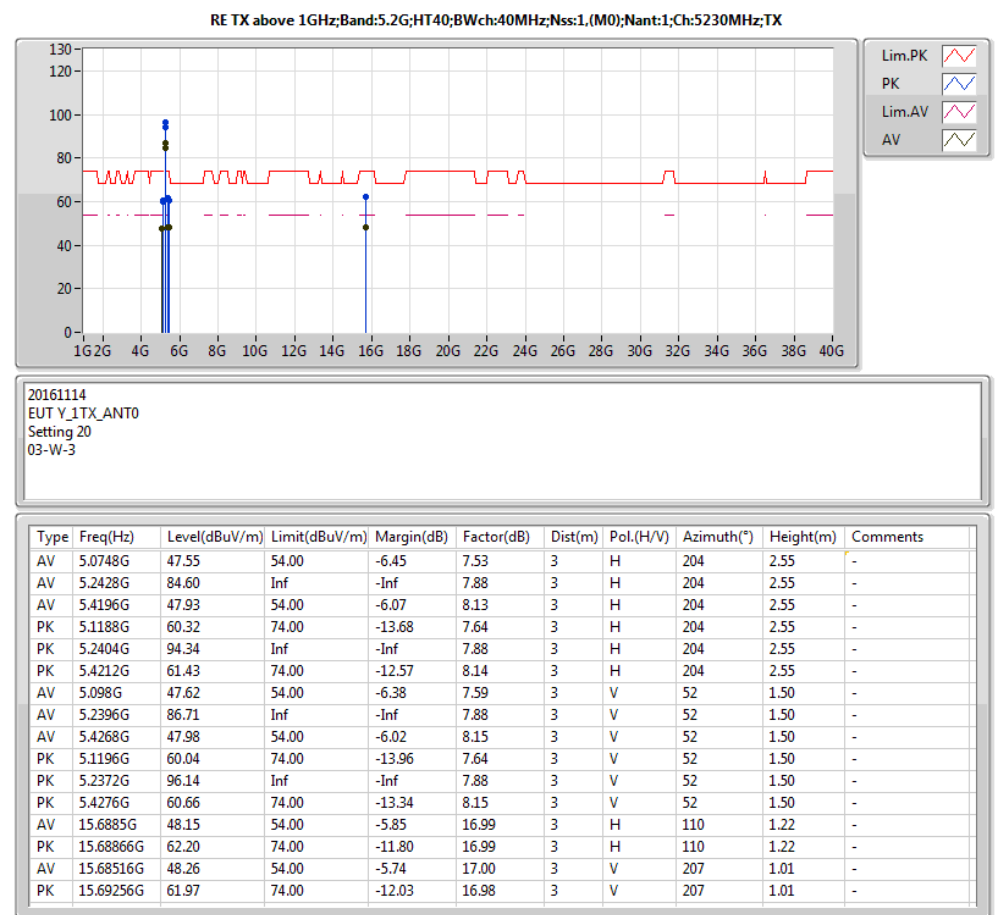
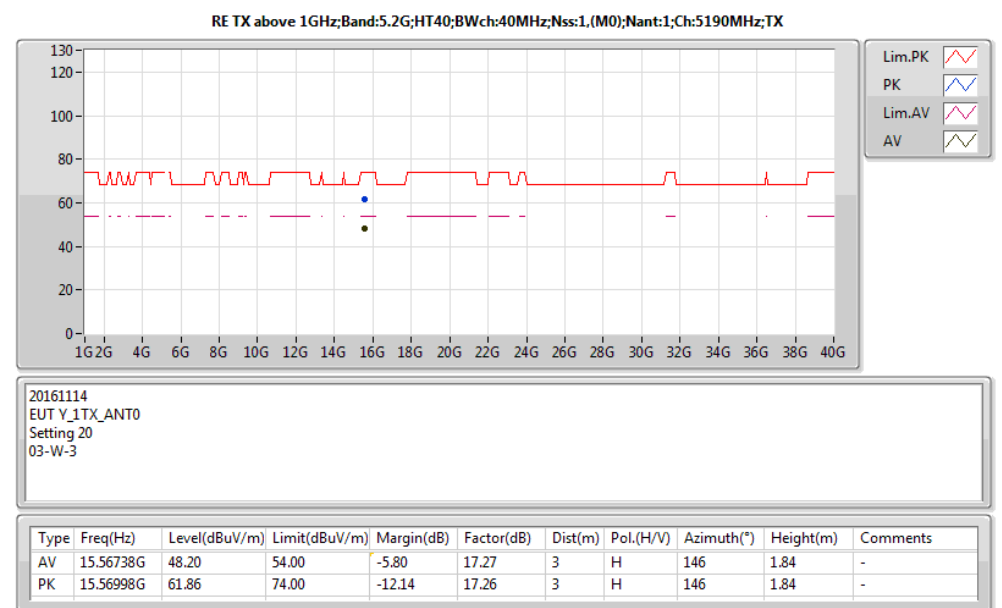
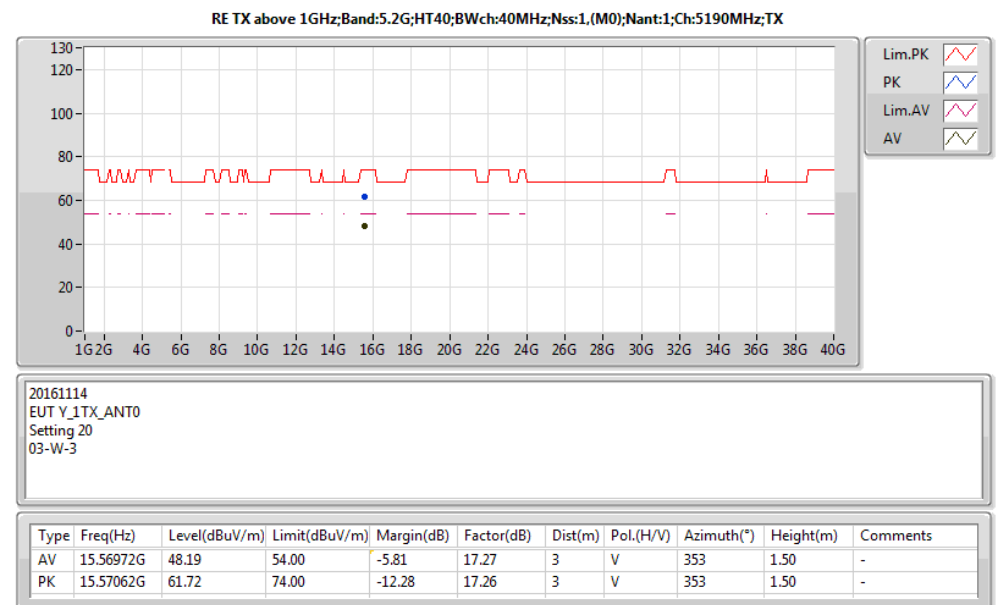
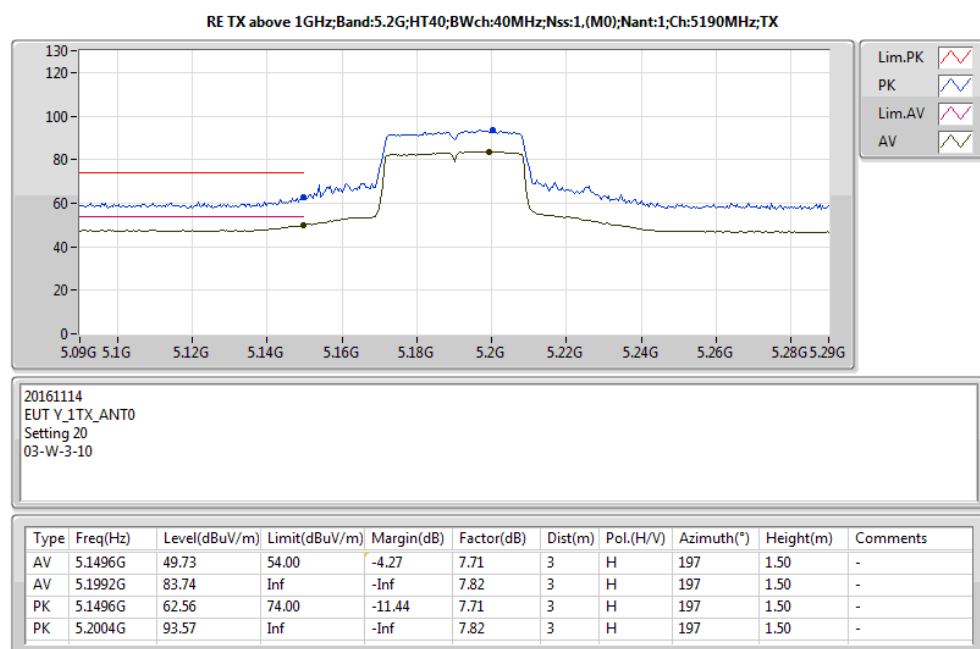
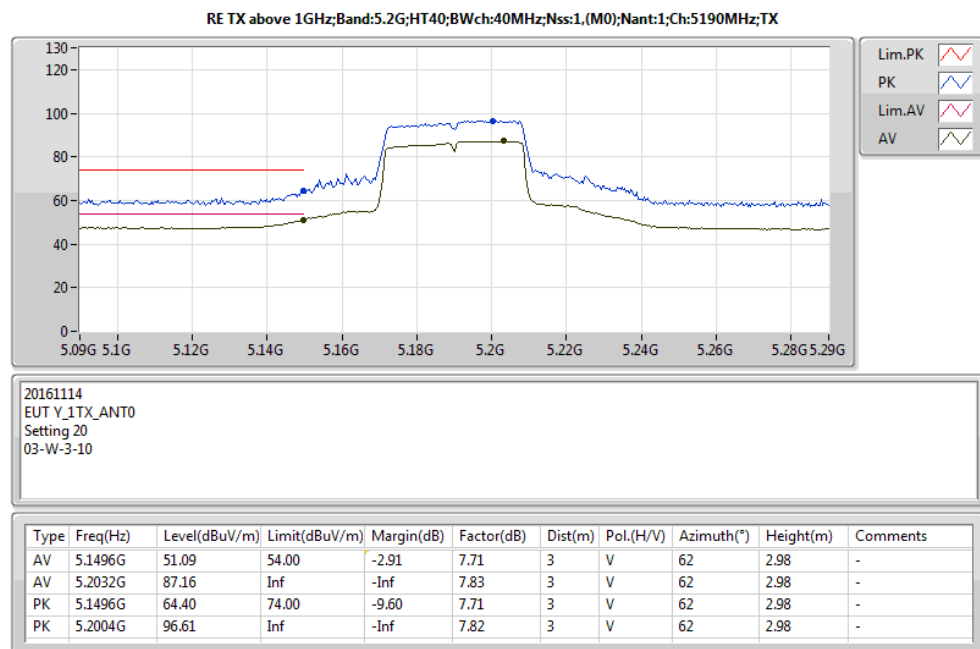
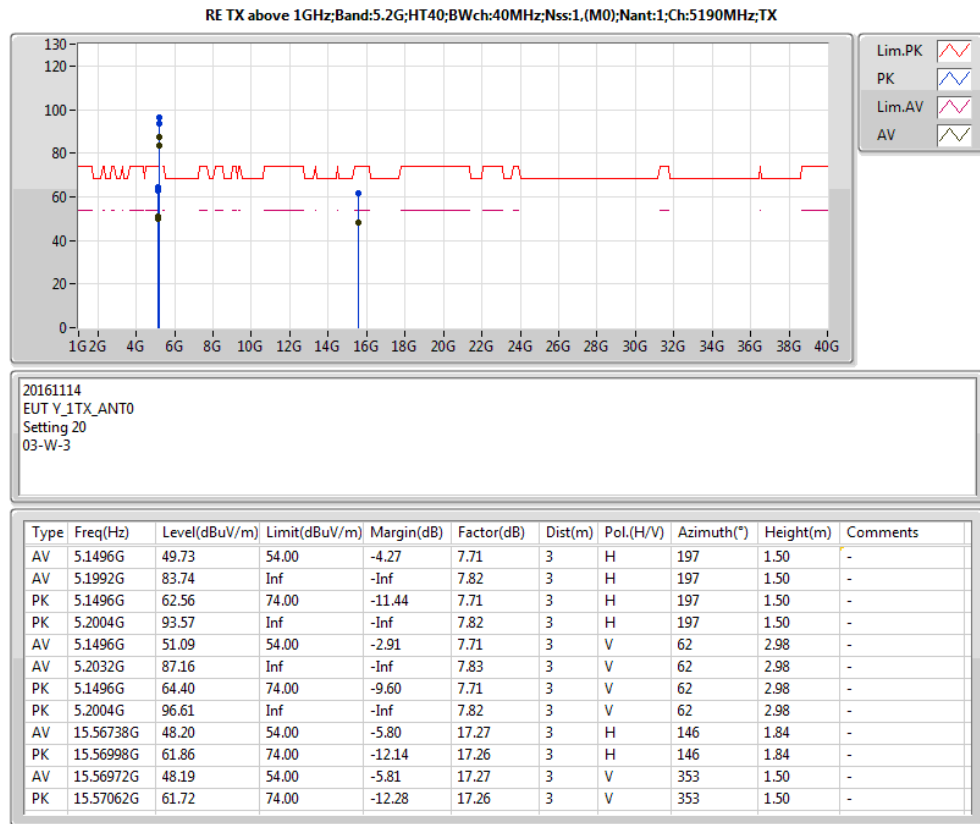


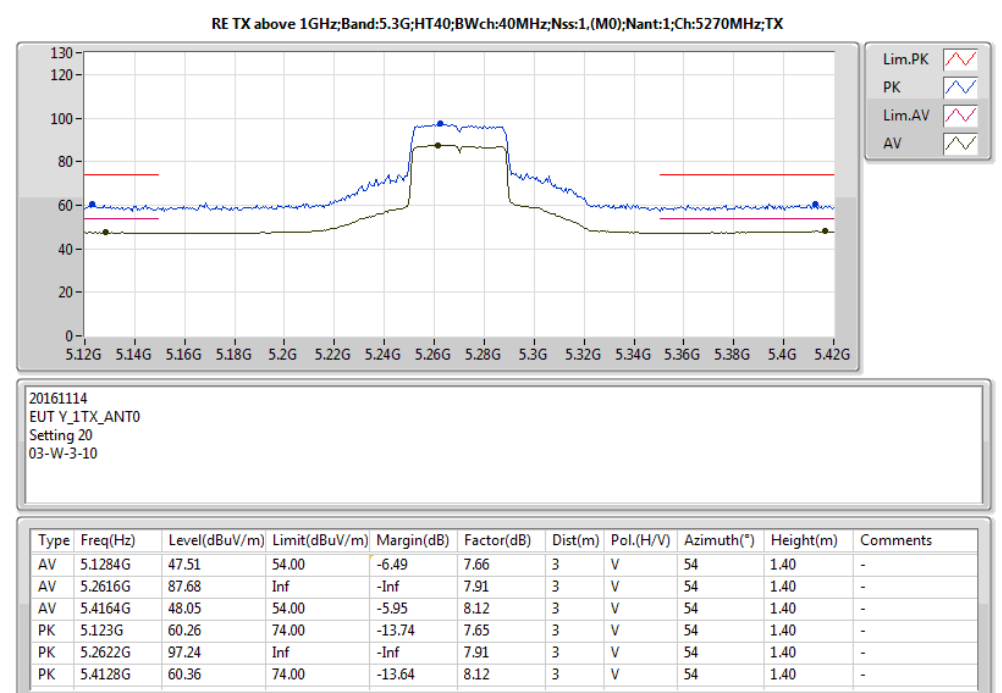
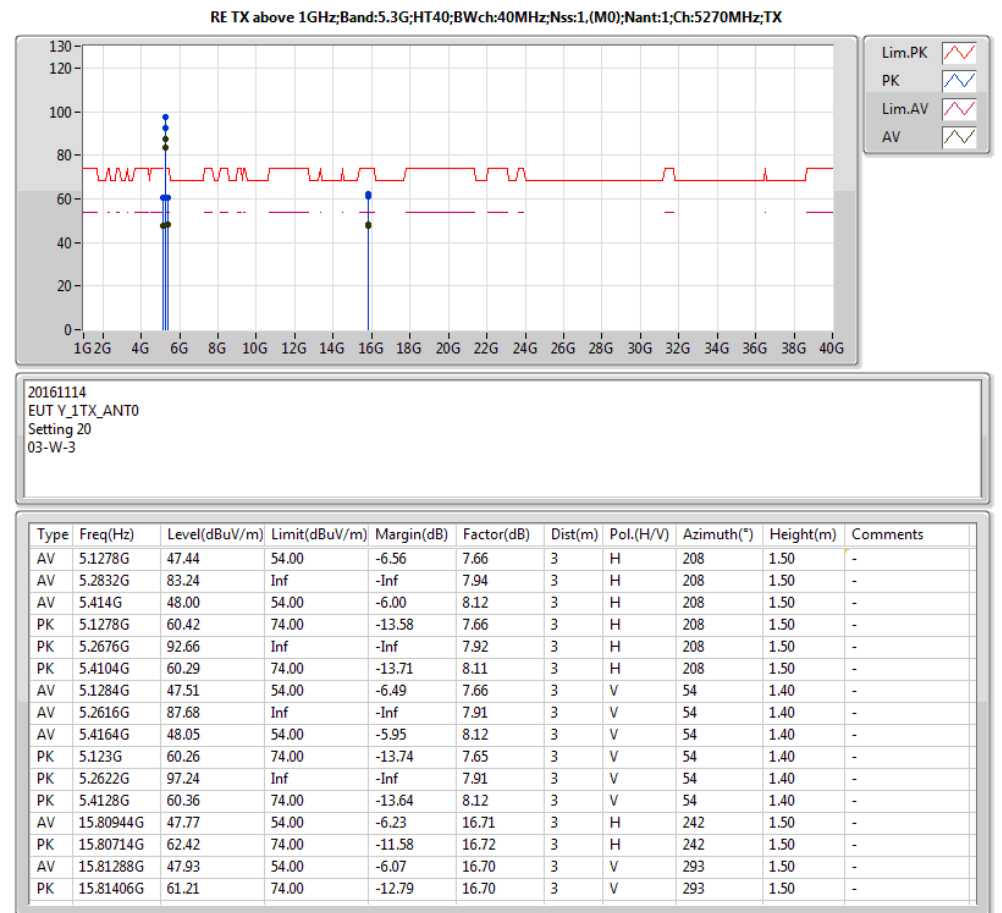
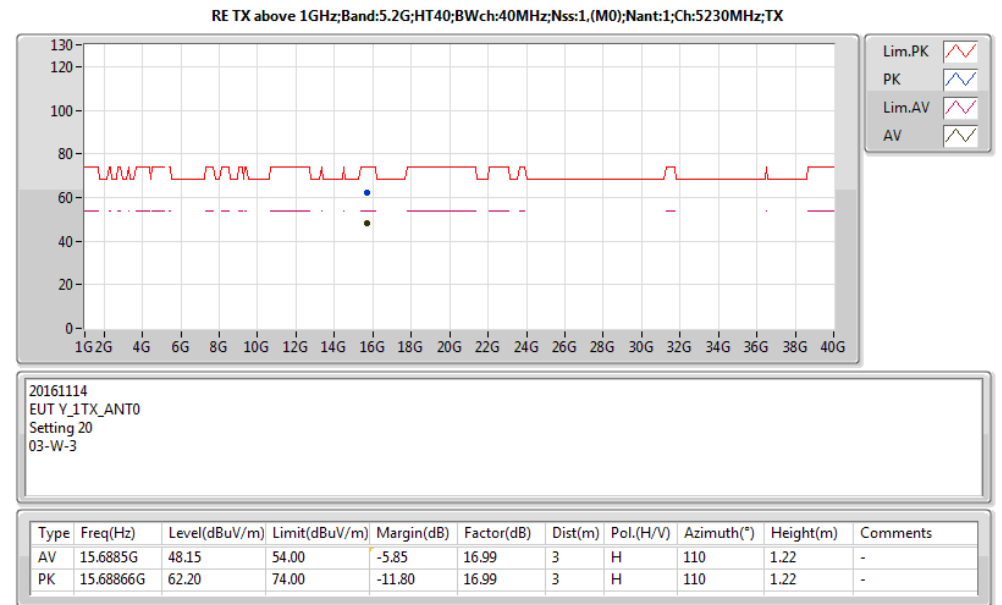
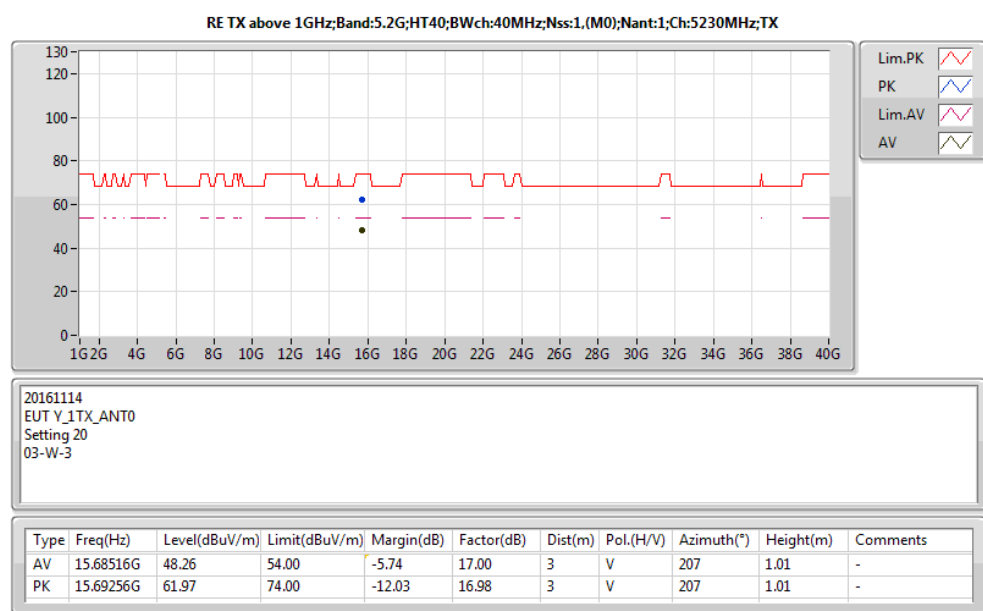
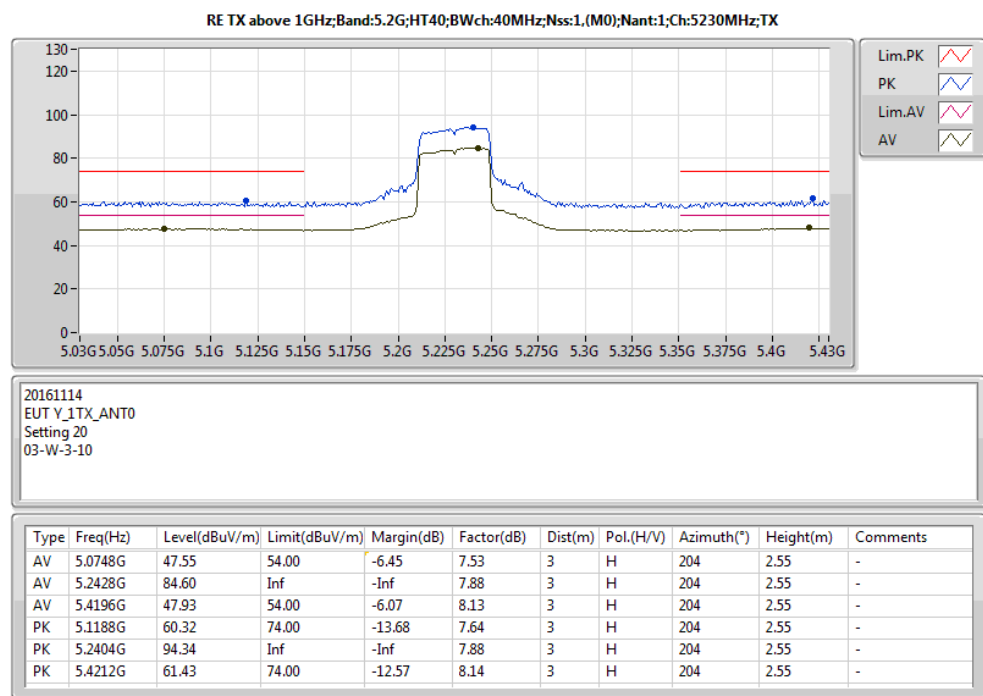
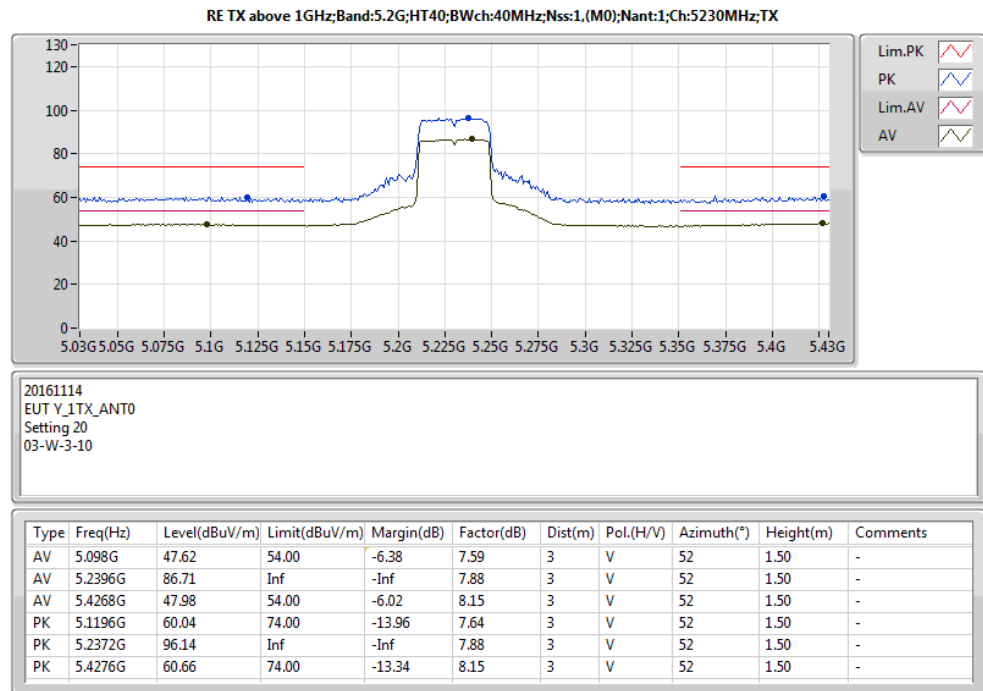
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Setting 20
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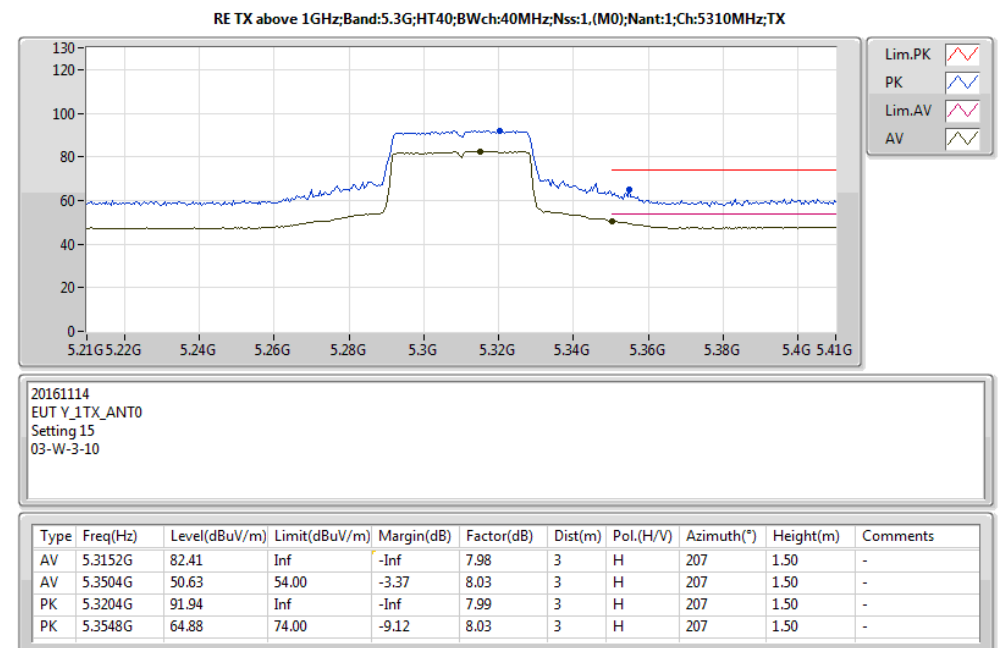
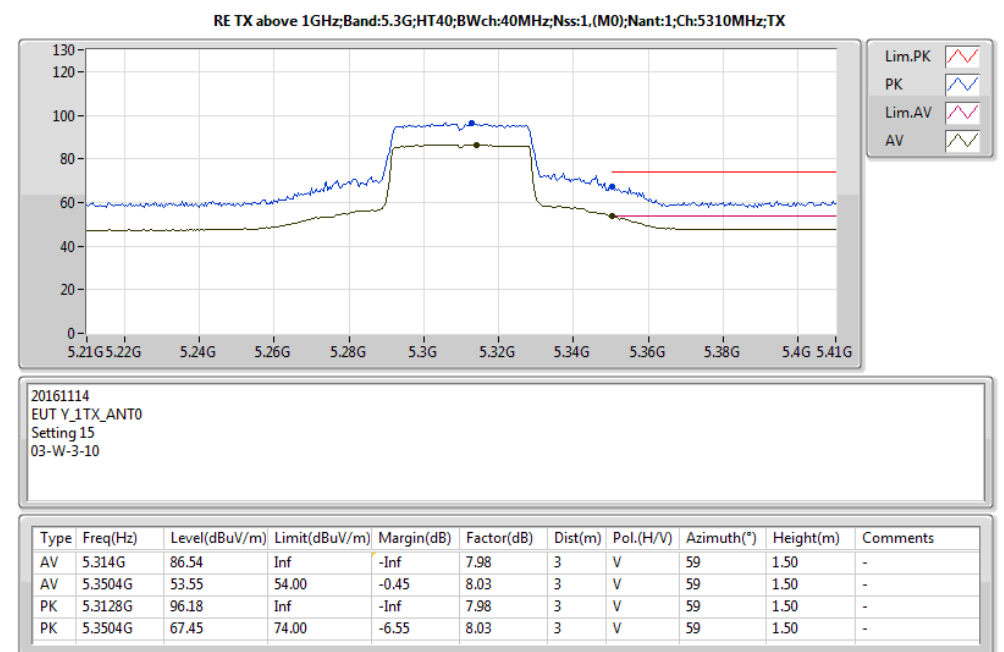
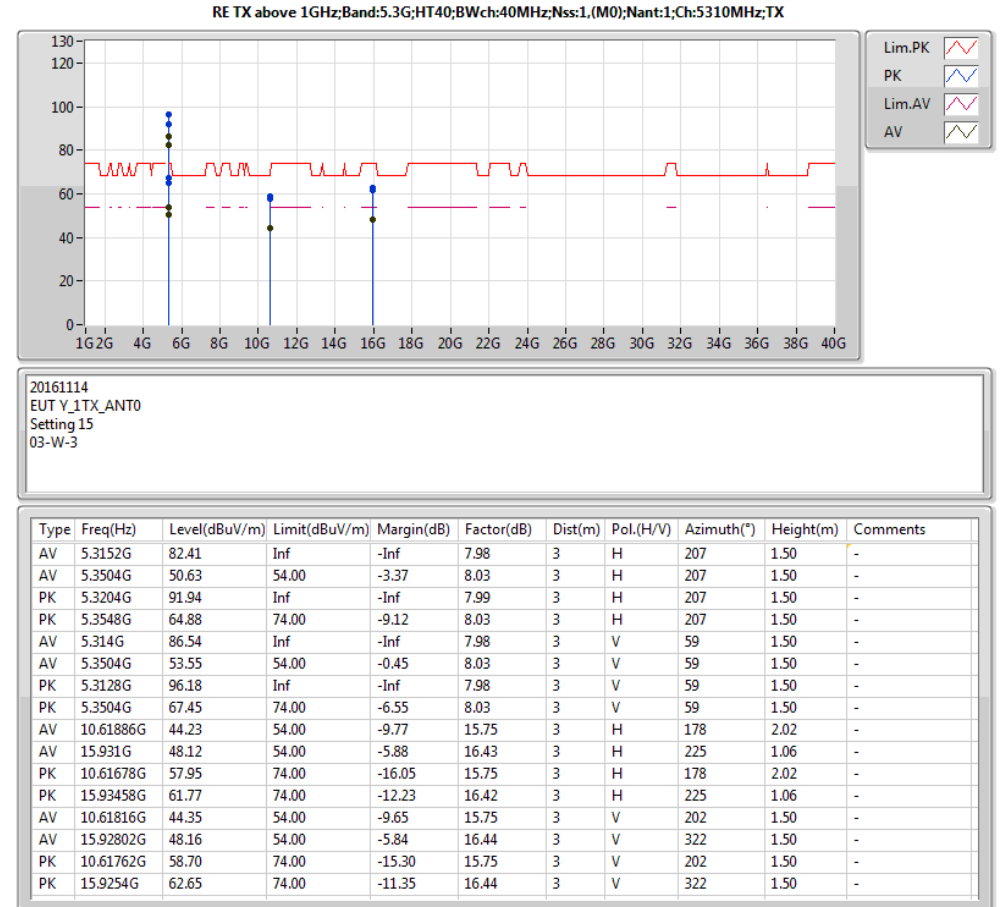
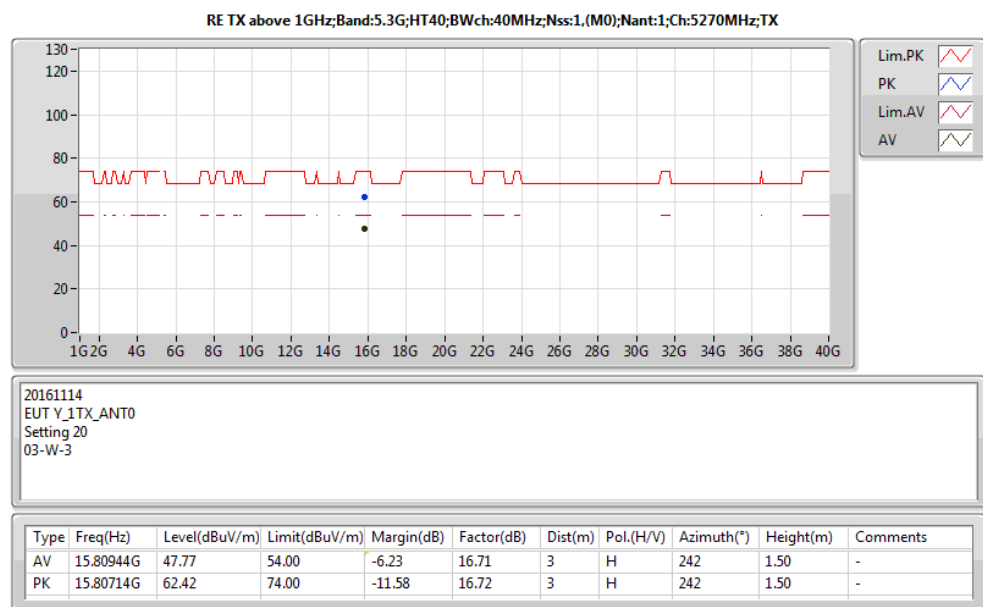
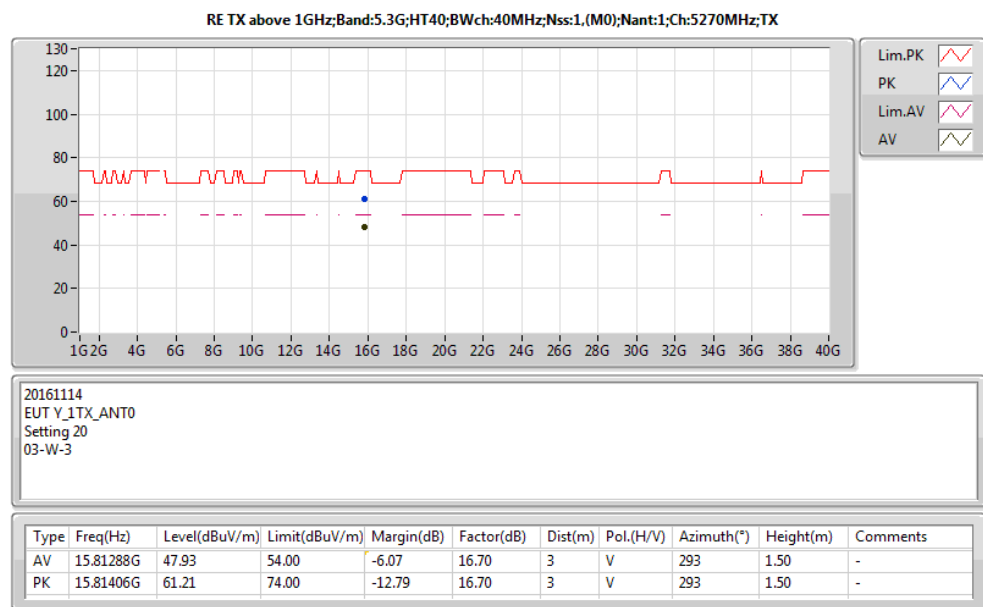
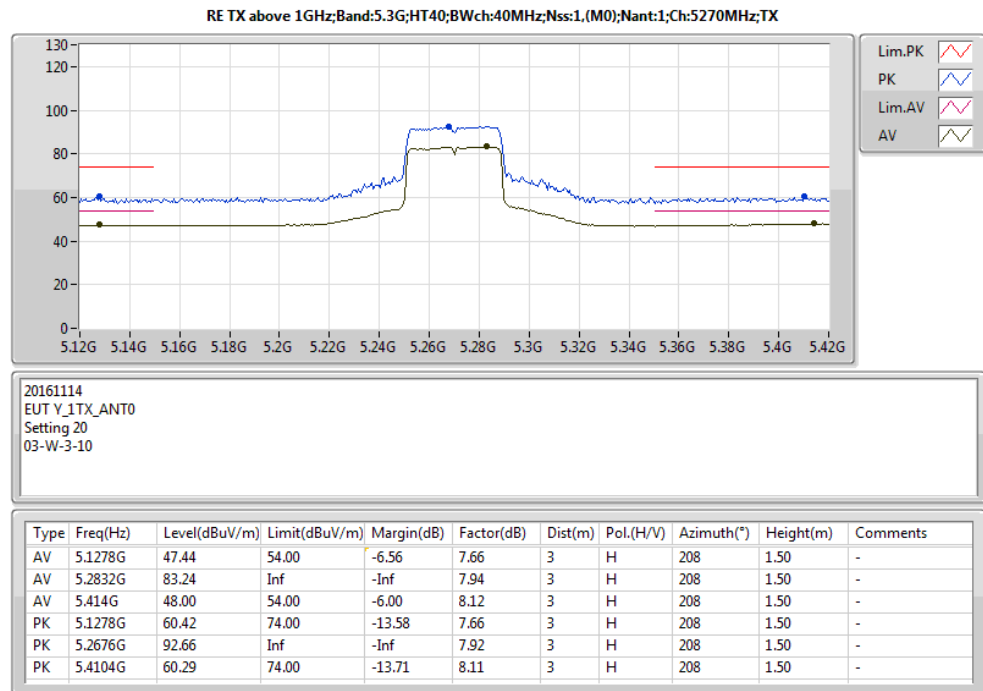
Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.739G	90.12	Inf	-Inf	8.48	3	H	216	2.79	-
PK	5.647G	61.68	68.20	-6.52	8.46	3	H	216	2.79	-
PK	5.74G	99.75	Inf	-Inf	8.48	3	H	216	2.79	-
PK	5.93G	60.70	68.20	-7.50	8.68	3	H	216	2.79	-

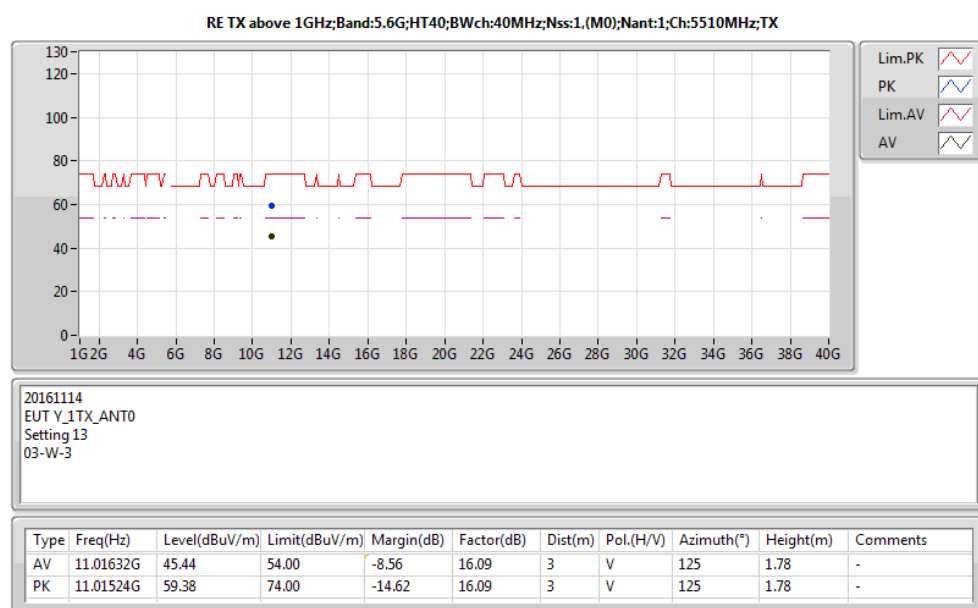
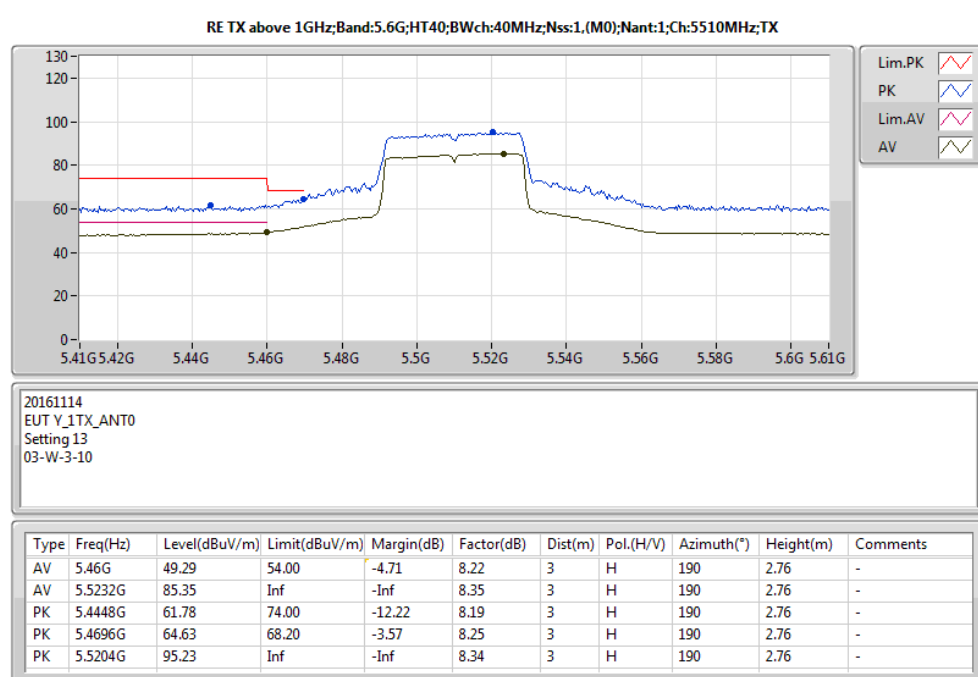
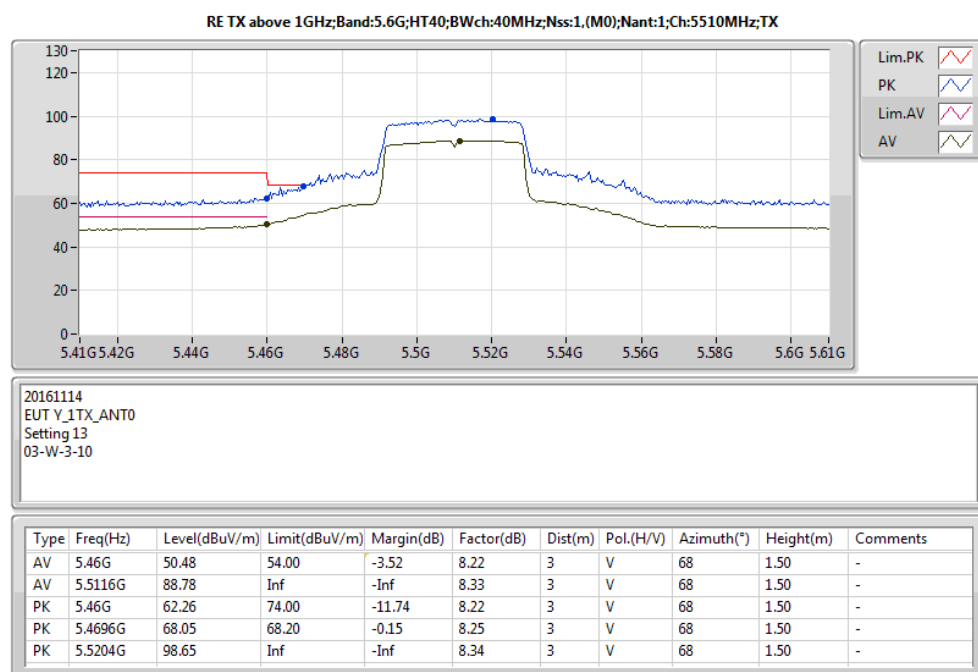
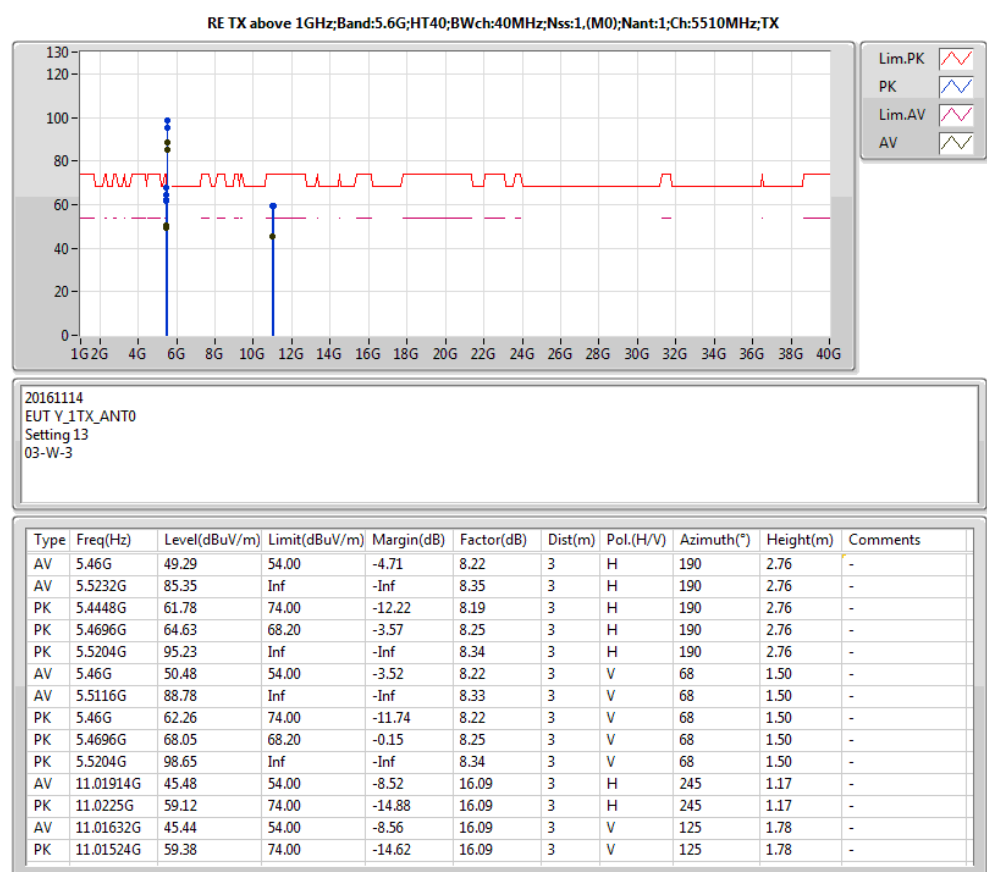
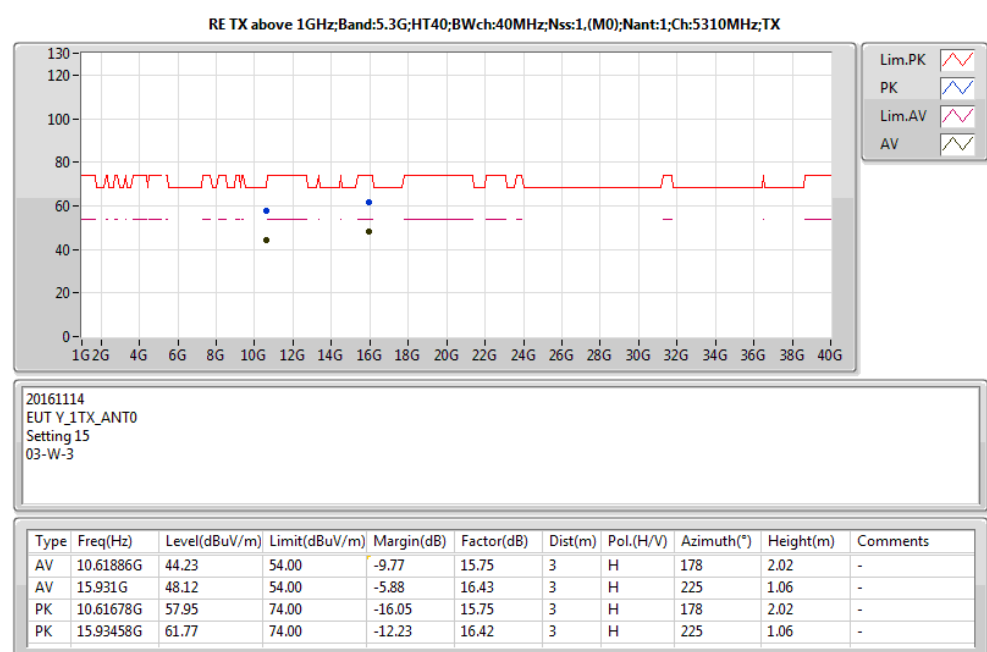
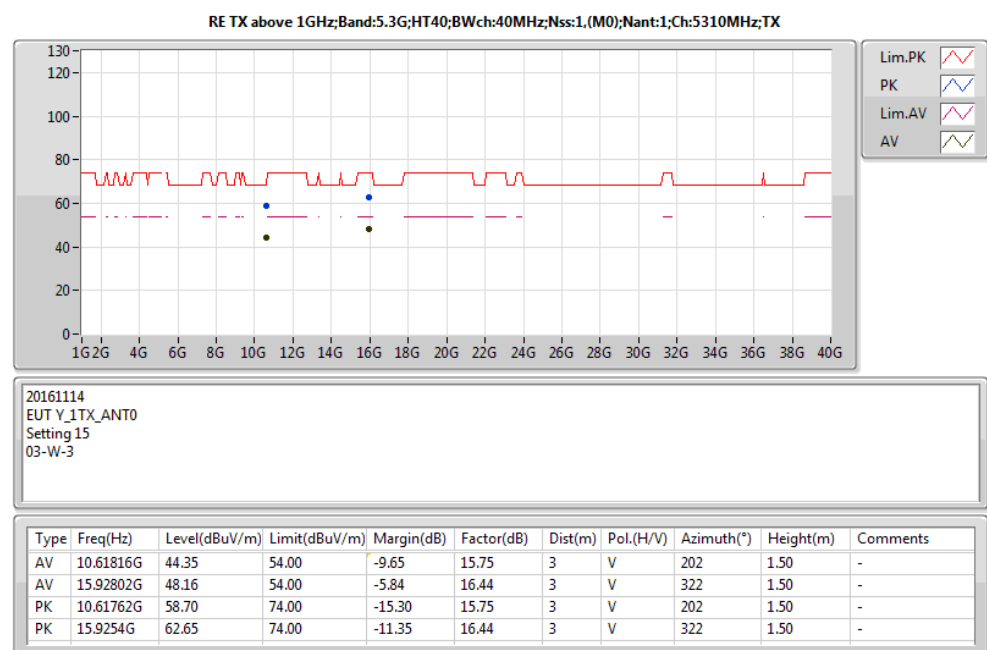


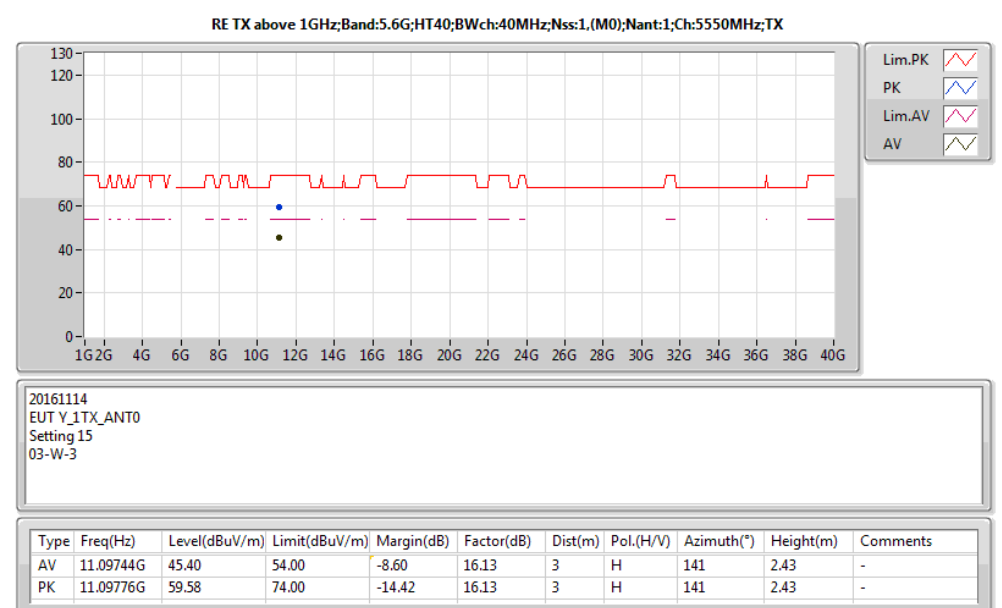
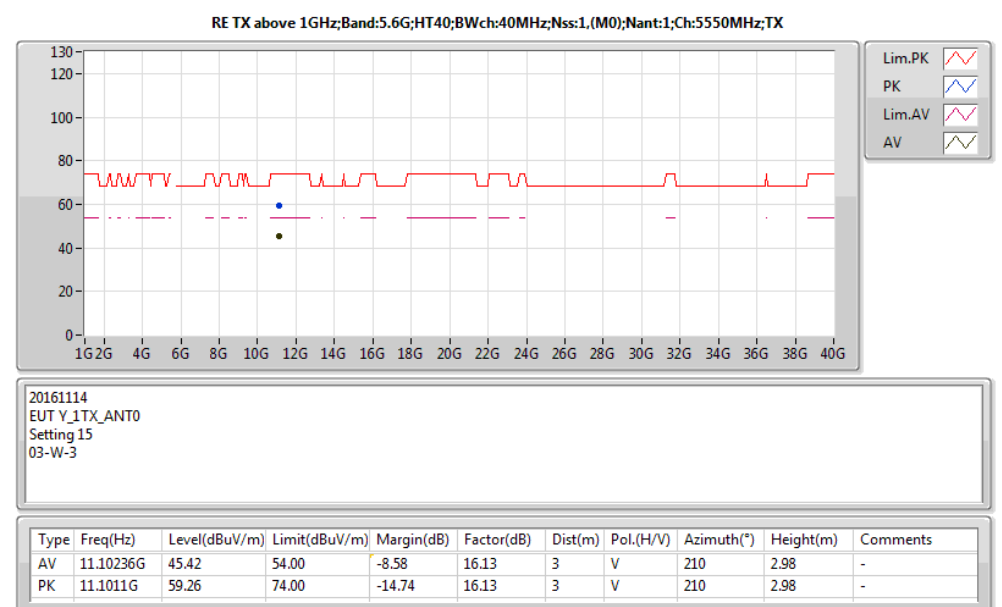
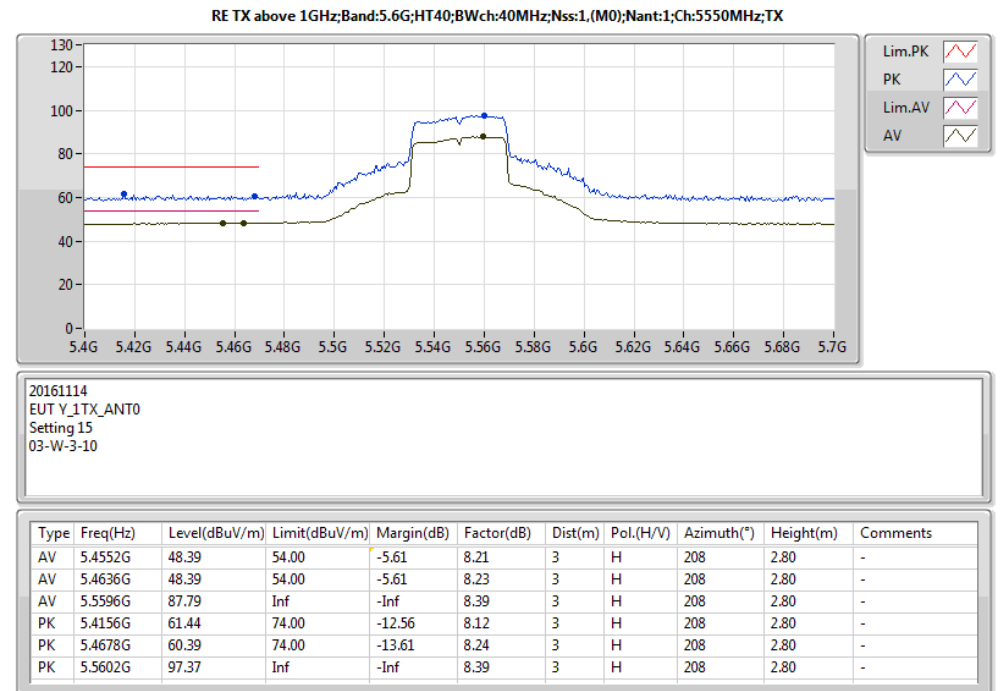
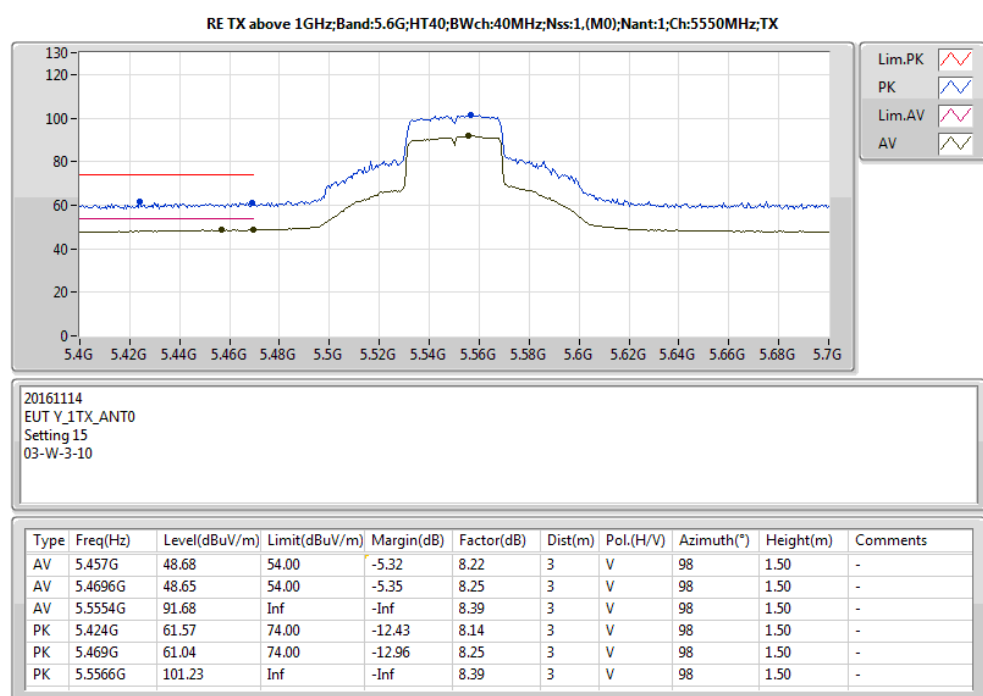
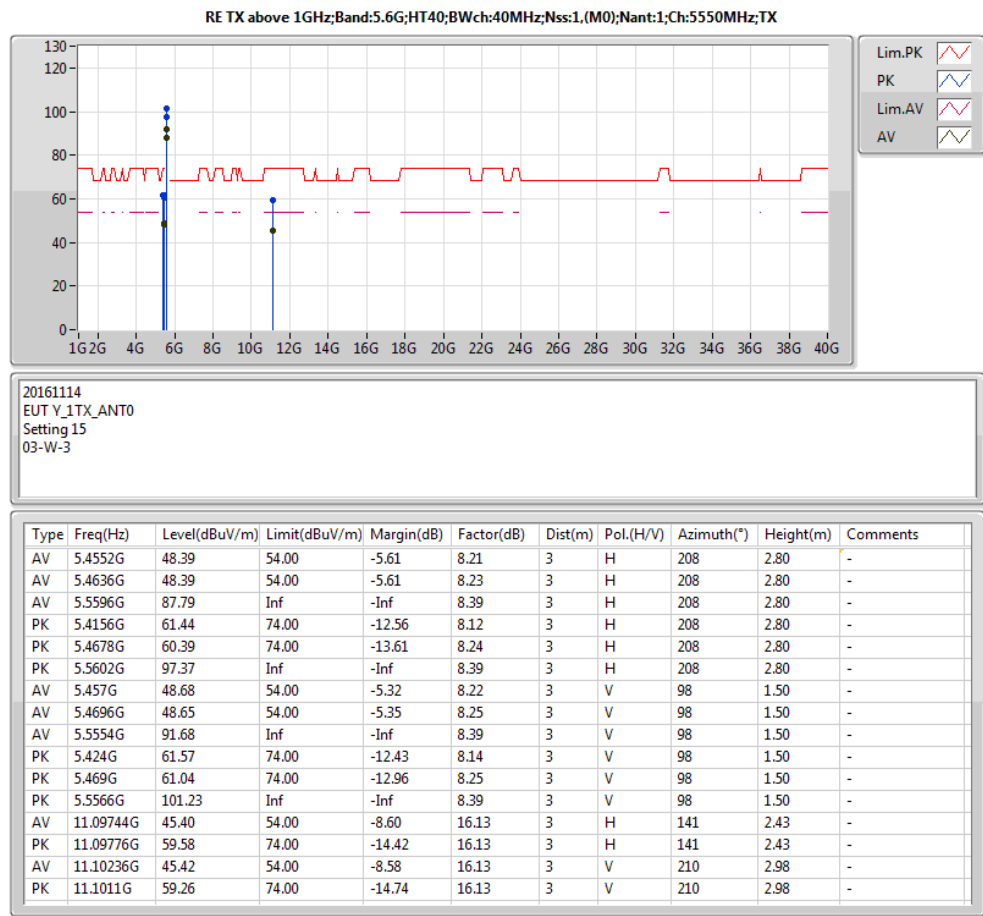
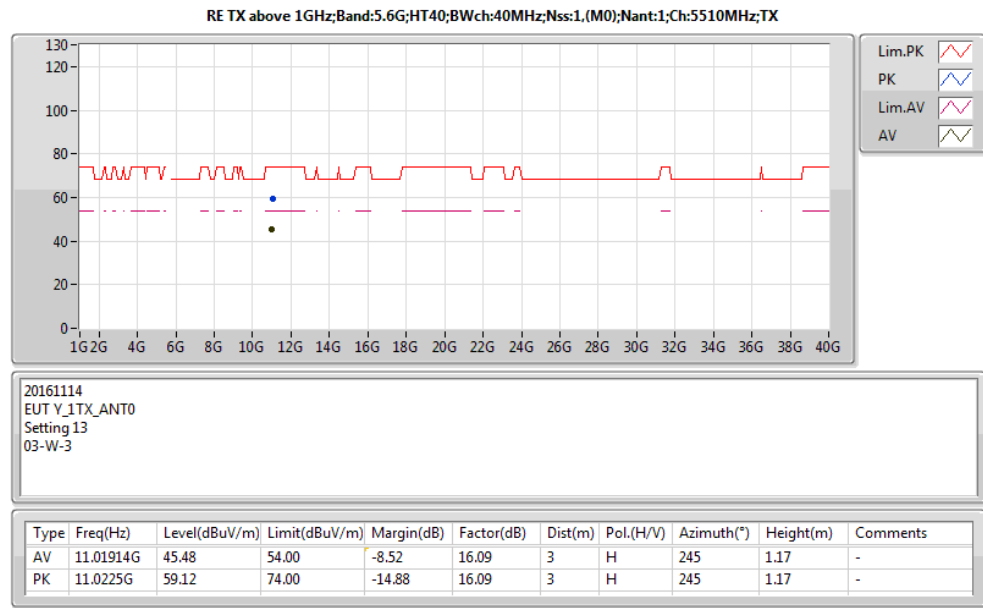


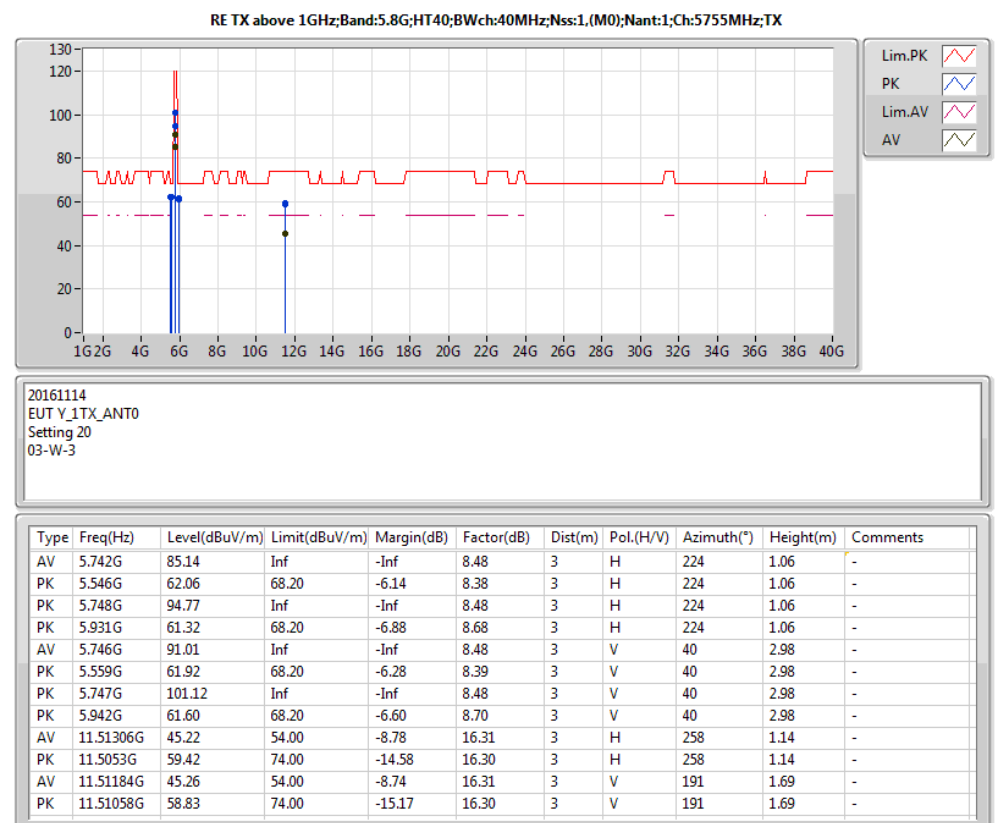
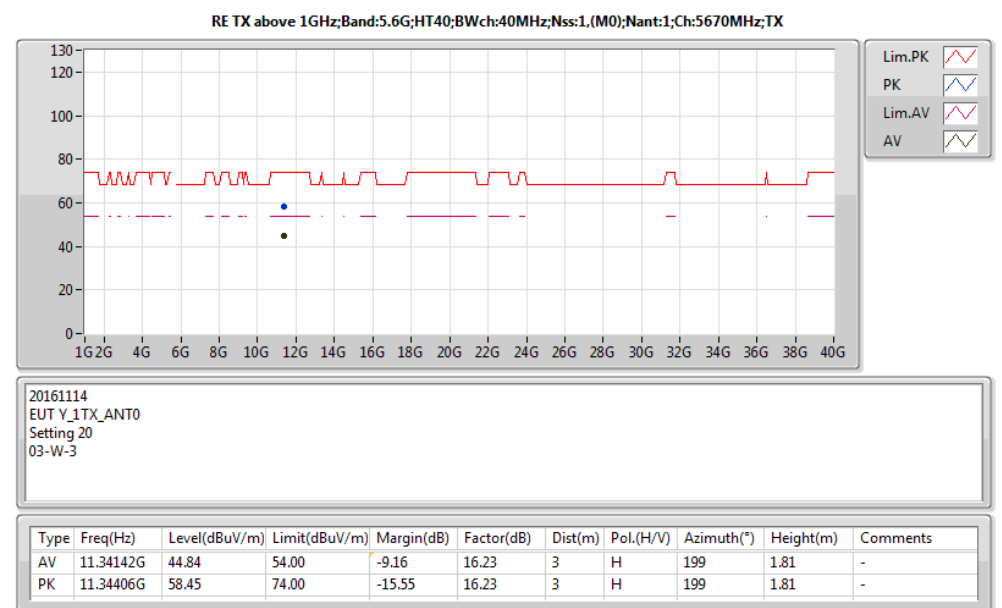
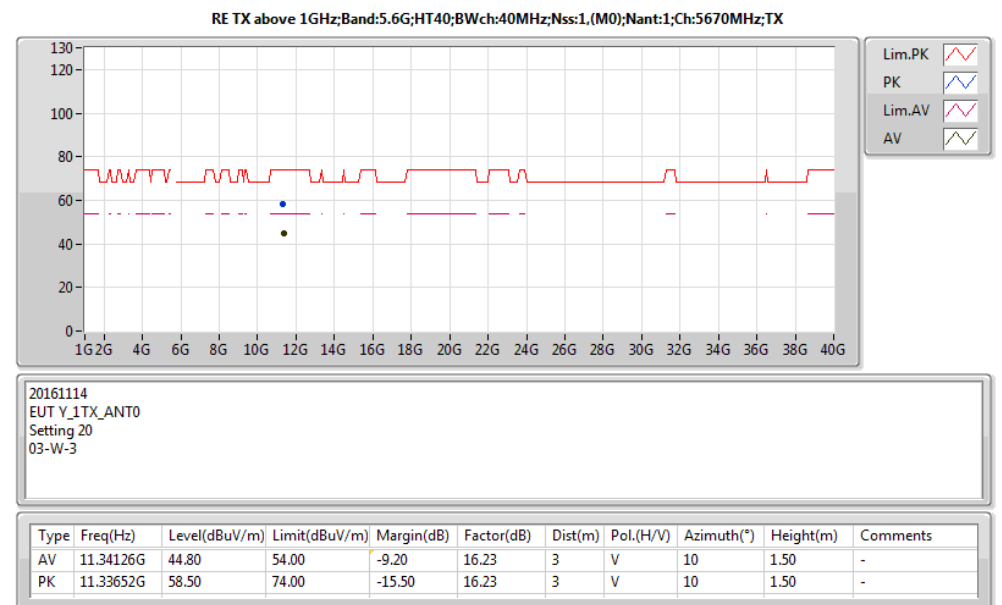
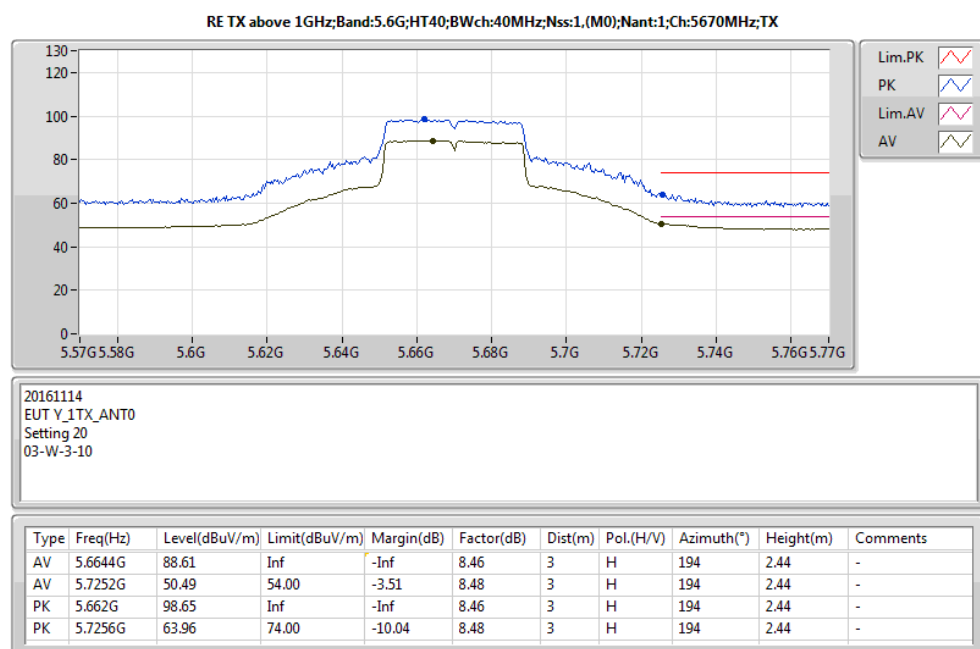
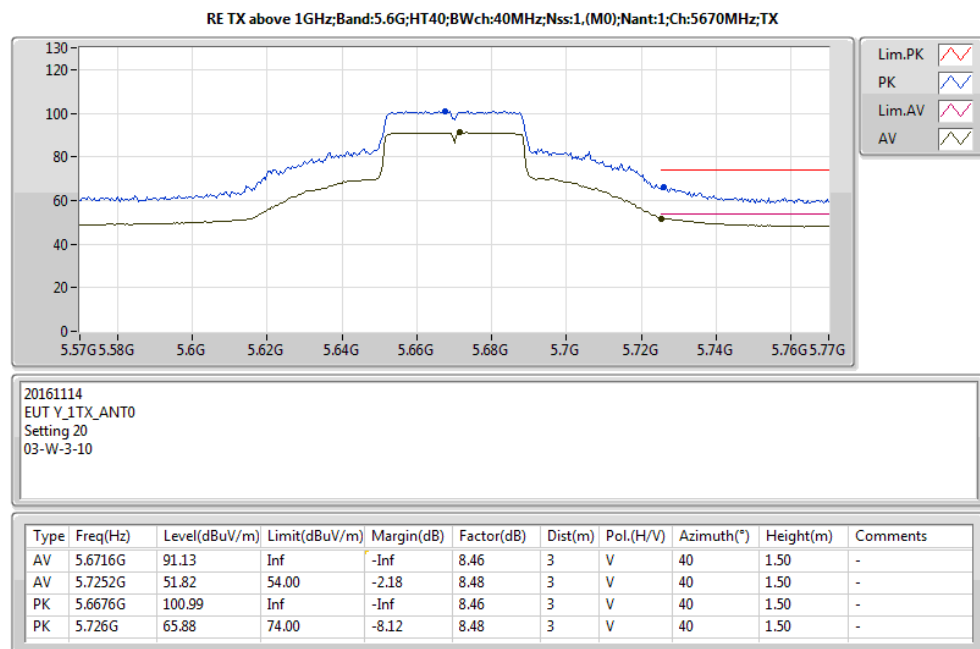
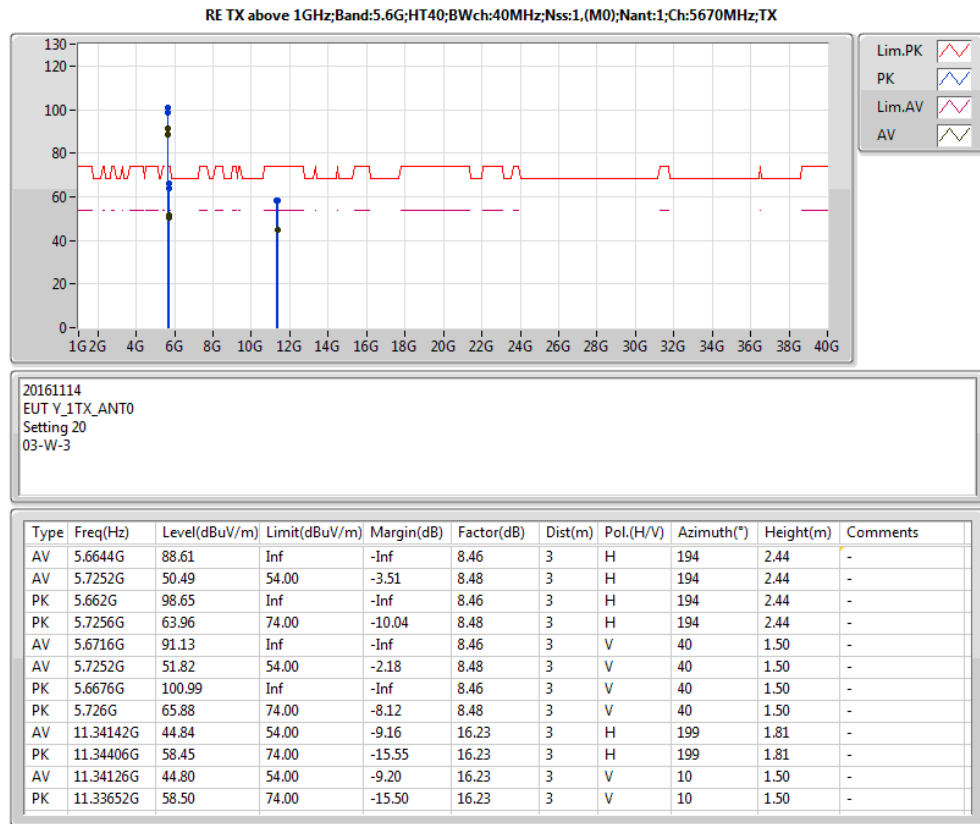


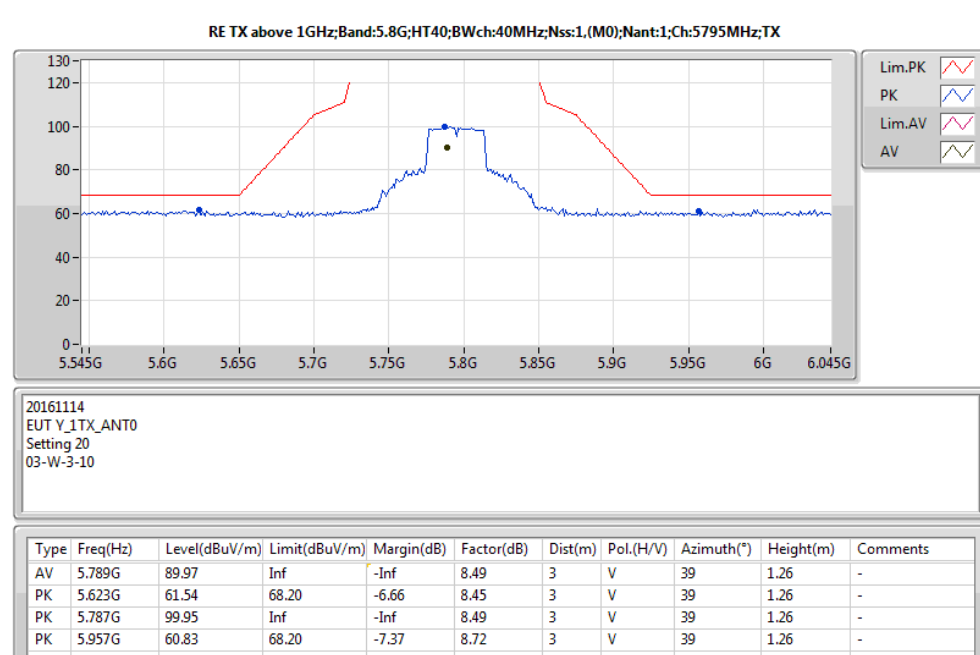
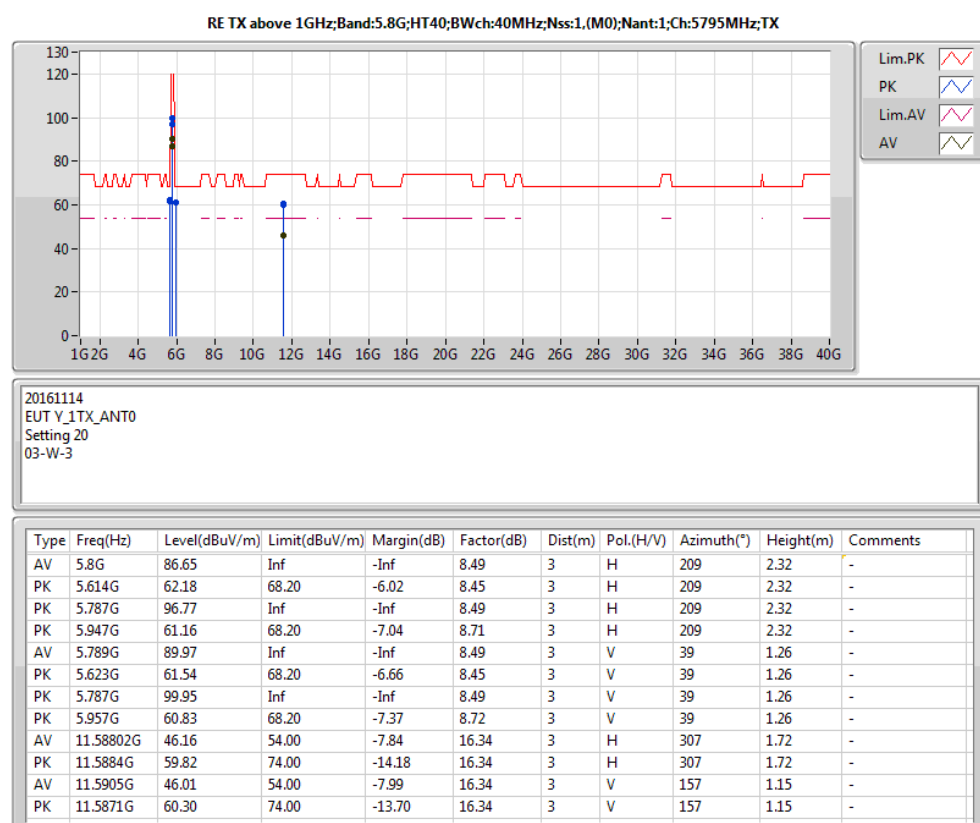
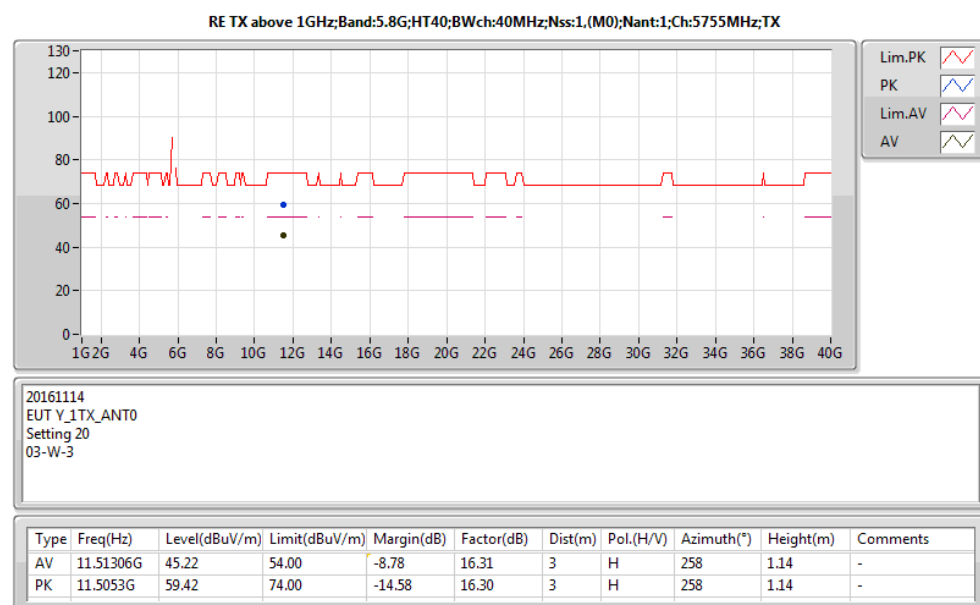
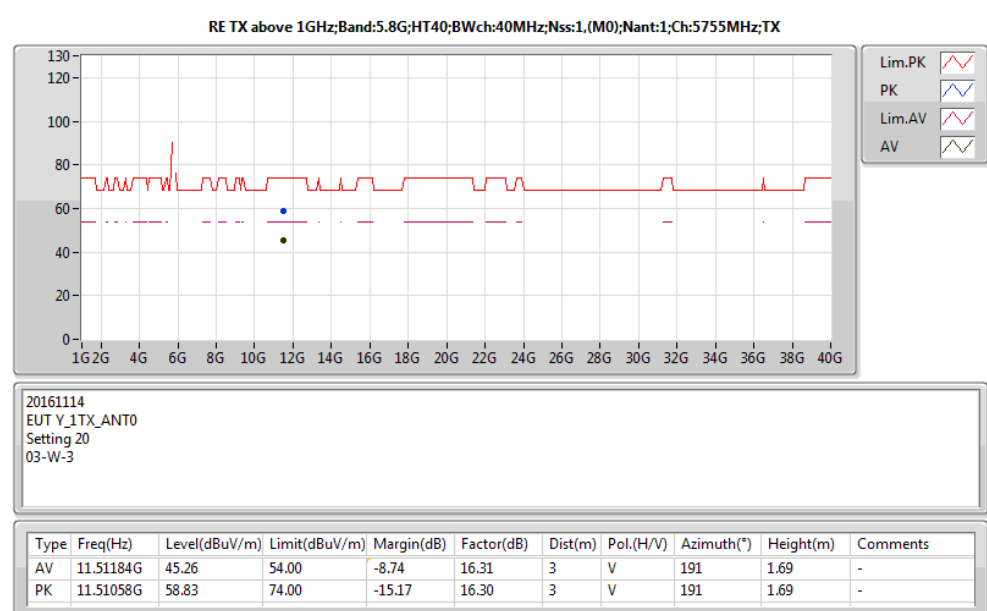
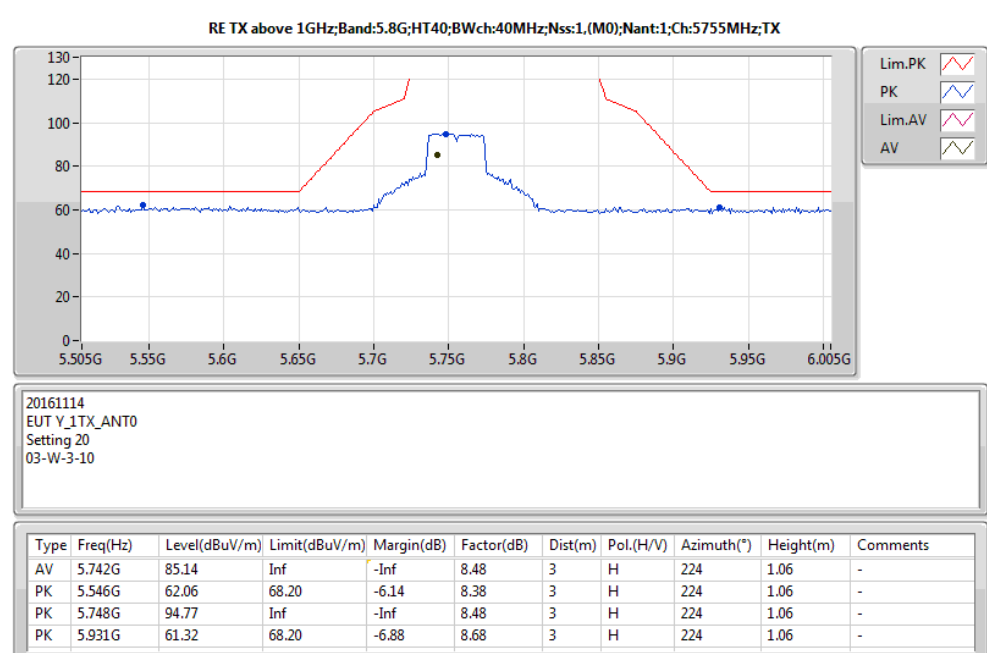
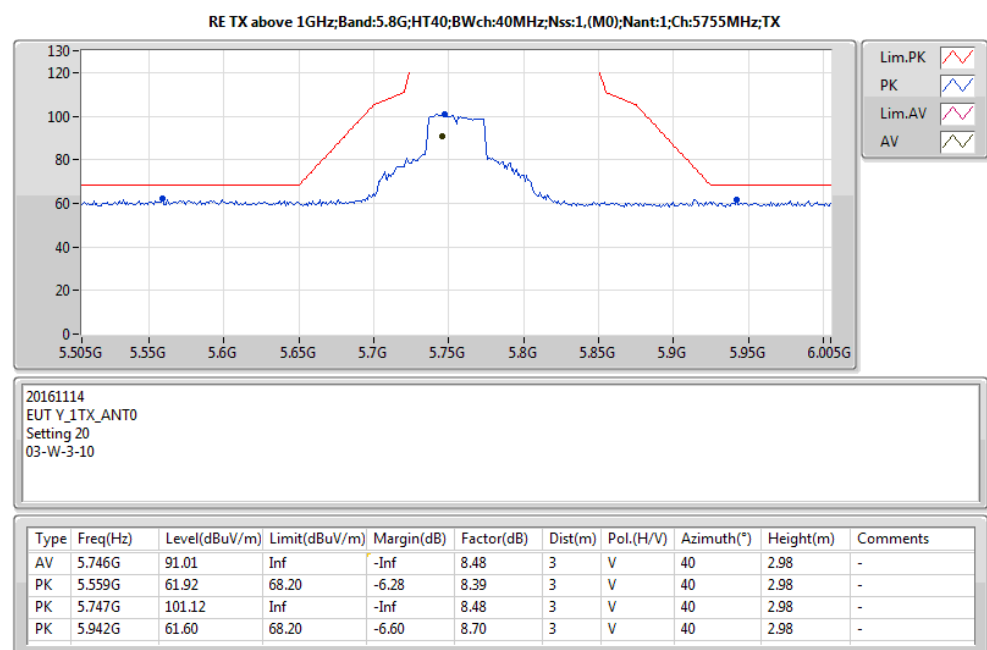


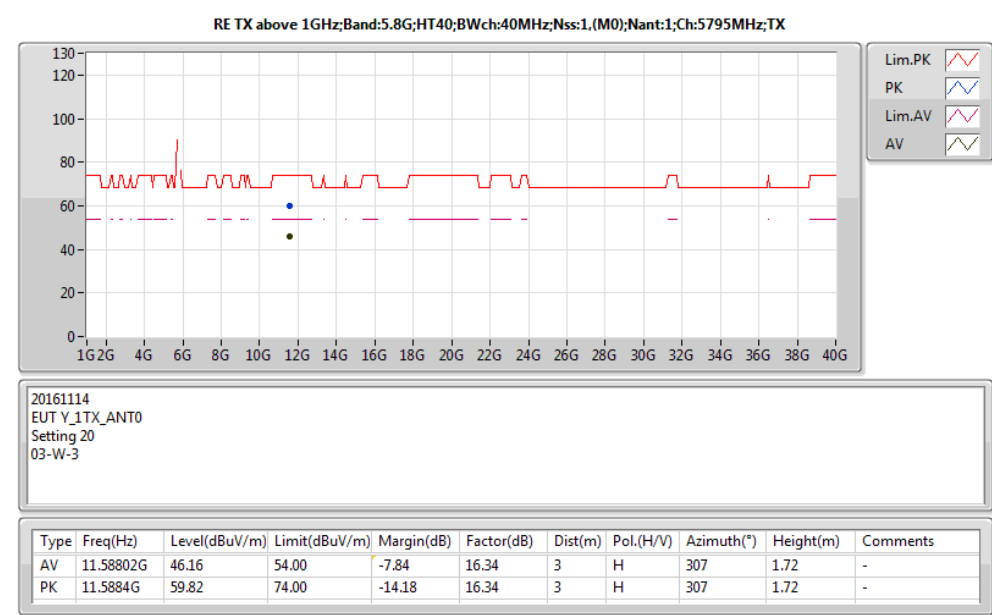
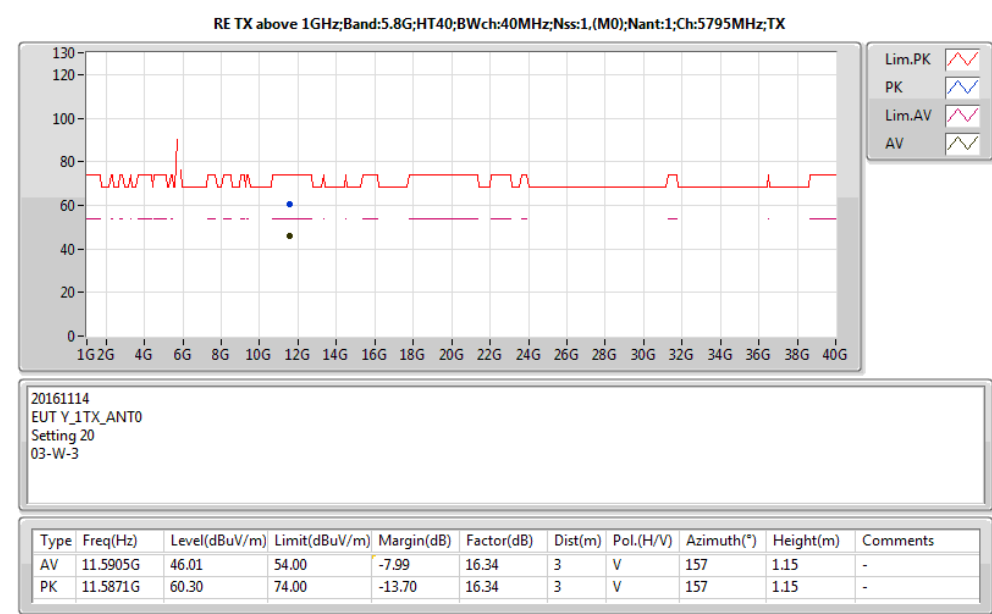
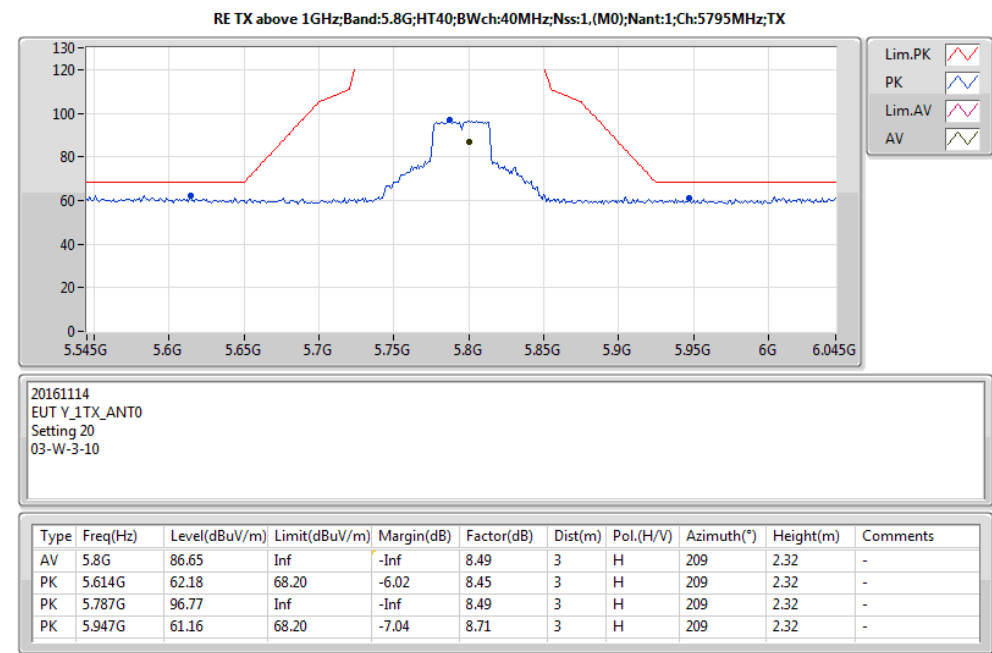














Mode: 20 MHz / Ant. 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5199.9650	5199.9643	5199.9635	5199.9634
110.00	5199.9645	5199.9640	5199.9636	5199.9634
93.50	5199.9642	5199.9638	5199.9631	5199.9629
Max. Deviation (MHz)	0.0358	0.0362	0.0369	0.0371
Max. Deviation (ppm)	6.88	6.96	7.10	7.13
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5199.9639	5199.9637	5199.9633	5199.9629
10	5199.9641	5199.9636	5199.9629	5199.9627
20	5199.9645	5199.9639	5199.9635	5199.9630
30	5199.9984	5199.9974	5199.9966	5199.9960
40	5199.9994	5199.9990	5199.9989	5199.9987
50	5199.9999	5199.9993	5199.9985	5199.9976
60	5200.0011	5200.0007	5200.0004	5199.9997
70	5200.0011	5200.0009	5200.0005	5200.0002
Max. Deviation (MHz)	0.0392	0.0402	0.0404	0.0406
Max. Deviation (ppm)	7.54	7.73	7.77	7.81
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5300 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5299.9652	5299.9650	5299.9647	5299.9640
110.00	5299.9645	5299.9639	5299.9637	5299.9628
93.50	5299.9638	5299.9634	5299.9628	5299.9622
Max. Deviation (MHz)	0.0362	0.0366	0.0372	0.0378
Max. Deviation (ppm)	6.83	6.91	7.02	7.13
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5300 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5299.9627	5299.9620	5299.9613	5299.9611
10	5299.9635	5299.9632	5299.9625	5299.9621
20	5299.9645	5299.9636	5299.9626	5299.9619
30	5299.9984	5299.9976	5299.9973	5299.9966
40	5299.9988	5299.9978	5299.9968	5299.9958
50	5299.9989	5299.9979	5299.9969	5299.9960
60	5299.9996	5299.9990	5299.9983	5299.9975
70	5299.9990	5299.9983	5299.9973	5299.9965
Max. Deviation (MHz)	0.0414	0.0424	0.0427	0.0429
Max. Deviation (ppm)	7.81	8.00	8.06	8.09
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5580 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5579.9653	5579.9645	5579.9641	5579.9638
110.00	5579.9645	5579.9636	5579.9626	5579.9621
93.50	5579.9644	5579.9634	5579.9624	5579.9615
Max. Deviation (MHz)	0.0356	0.0366	0.0376	0.0385
Max. Deviation (ppm)	6.38	6.56	6.74	6.90
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5580 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5579.9609	5579.9600	5579.9596	5579.9591
10	5579.9629	5579.9623	5579.9615	5579.9605
20	5579.9645	5579.9637	5579.9631	5579.9628
30	5579.9984	5579.9976	5579.9971	5579.9964
40	5579.9996	5579.9990	5579.9983	5579.9980
50	5579.9989	5579.9982	5579.9973	5579.9966
60	5579.9992	5579.9982	5579.9980	5579.9979
70	5579.9998	5579.9995	5579.9992	5579.9984
Max. Deviation (MHz)	0.0420	0.0427	0.0435	0.0444
Max. Deviation (ppm)	7.53	7.65	7.80	7.96
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5784.9649	5784.9648	5784.9639	5784.9629
110.00	5784.9645	5784.9642	5784.9638	5784.9636
93.50	5784.9636	5784.9635	5784.9626	5784.9620
Max. Deviation (MHz)	0.0364	0.0365	0.0374	0.0380
Max. Deviation (ppm)	6.29	6.31	6.46	6.57
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5784.9620	5784.9611	5784.9605	5784.9601
10	5784.9630	5784.9628	5784.9621	5784.9620
20	5784.9645	5784.9638	5784.9633	5784.9629
30	5784.9984	5784.9974	5784.9964	5784.9957
40	5784.9999	5784.9990	5784.9989	5784.9981
50	5785.0000	5784.9995	5784.9992	5784.9982
60	5785.0003	5784.9993	5784.9988	5784.9980
70	5785.0015	5785.0006	5785.0003	5785.0001
Max. Deviation (MHz)	0.0390	0.0395	0.0398	0.0406
Max. Deviation (ppm)	6.74	6.83	6.88	7.02
Result	Pass			

Mode: 40 MHz / Ant. 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5189.9647	5189.9645	5189.9640	5189.9636
110.00	5189.9645	5189.9642	5189.9641	5189.9635
93.50	5189.9638	5189.9637	5189.9633	5189.9627
Max. Deviation (MHz)	0.0362	0.0363	0.0367	0.0373
Max. Deviation (ppm)	6.97	6.99	7.07	7.19
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5189.9620	5189.9617	5189.9607	5189.9598
10	5189.9628	5189.9627	5189.9618	5189.9609
20	5189.9645	5189.9639	5189.9633	5189.9625
30	5189.9984	5189.9980	5189.9971	5189.9962
40	5189.9992	5189.9991	5189.9988	5189.9979
50	5189.9647	5189.9640	5189.9636	5189.9627
60	5189.9997	5189.9987	5189.9980	5189.9970
70	5190.0008	5190.0004	5190.0000	5189.9997
Max. Deviation (MHz)	0.0416	0.0422	0.0424	0.0432
Max. Deviation (ppm)	8.02	8.13	8.17	8.32
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5310 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5309.9646	5309.9636	5309.9627	5309.9625
110.00	5309.9645	5309.9643	5309.9639	5309.9629
93.50	5309.9635	5309.9630	5309.9623	5309.9620
Max. Deviation (MHz)	0.0365	0.0370	0.0377	0.0380
Max. Deviation (ppm)	6.87	6.97	7.10	7.16
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5310 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5309.9625	5309.9621	5309.9616	5309.9615
10	5309.9630	5309.9627	5309.9624	5309.9615
20	5309.9645	5309.9643	5309.9634	5309.9632
30	5309.9984	5309.9978	5309.9974	5309.9966
40	5309.9998	5309.9995	5309.9987	5309.9978
50	5309.9659	5309.9653	5309.9646	5309.9639
60	5309.9988	5309.9987	5309.9986	5309.9980
70	5310.0006	5310.0003	5309.9998	5309.9991
Max. Deviation (MHz)	0.0404	0.0411	0.0412	0.0416
Max. Deviation (ppm)	7.61	7.74	7.76	7.83
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5550 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5549.9653	5549.9649	5549.9641	5549.9640
110.00	5549.9645	5549.9643	5549.9635	5549.9631
93.50	5549.9642	5549.9634	5549.9632	5549.9630
Max. Deviation (MHz)	0.0358	0.0366	0.0368	0.0370
Max. Deviation (ppm)	6.45	6.59	6.63	6.67
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5550 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5549.9620	5549.9617	5549.9608	5549.9598
10	5549.9635	5549.9629	5549.9624	5549.9619
20	5549.9645	5549.9644	5549.9636	5549.9633
30	5549.9984	5549.9983	5549.9978	5549.9974
40	5549.9990	5549.9982	5549.9975	5549.9967
50	5549.9653	5549.9652	5549.9648	5549.9642
60	5550.0004	5550.0000	5549.9992	5549.9990
70	5549.9995	5549.9986	5549.9980	5549.9977
Max. Deviation (MHz)	0.0388	0.0397	0.0406	0.0416
Max. Deviation (ppm)	6.99	7.15	7.32	7.50
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5754.9649	5754.9640	5754.9635	5754.9631
110.00	5754.9645	5754.9642	5754.9632	5754.9631
93.50	5754.9637	5754.9627	5754.9626	5754.9618
Max. Deviation (MHz)	0.0363	0.0373	0.0374	0.0382
Max. Deviation (ppm)	6.31	6.48	6.50	6.64
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5754.9624	5754.9623	5754.9618	5754.9613
10	5754.9630	5754.9625	5754.9622	5754.9618
20	5754.9645	5754.9639	5754.9629	5754.9628
30	5754.9984	5754.9979	5754.9975	5754.9974
40	5754.9989	5754.9984	5754.9974	5754.9967
50	5754.9648	5754.9638	5754.9630	5754.9620
60	5754.9986	5754.9981	5754.9976	5754.9971
70	5755.0006	5755.0003	5754.9999	5754.9993
Max. Deviation (MHz)	0.0386	0.0388	0.0393	0.0401
Max. Deviation (ppm)	6.71	6.74	6.83	6.97
Result	Pass			

Mode: 80 MHz / Ant. 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5209.9648	5209.9647	5209.9645	5209.9637
110.00	5209.9645	5209.9643	5209.9641	5209.9638
93.50	5209.9637	5209.9635	5209.9627	5209.9626
Max. Deviation (MHz)	0.0363	0.0365	0.0373	0.0374
Max. Deviation (ppm)	6.97	7.01	7.16	7.18
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5209.9623	5209.9617	5209.9614	5209.9605
10	5209.9636	5209.9631	5209.9627	5209.9622
20	5209.9645	5209.9640	5209.9632	5209.9625
30	5209.9984	5209.9976	5209.9974	5209.9969
40	5210.0004	5210.0000	5209.9997	5209.9990
50	5209.9653	5209.9645	5209.9637	5209.9630
60	5209.9987	5209.9981	5209.9977	5209.9973
70	5210.0012	5210.0009	5210.0004	5209.9998
Max. Deviation (MHz)	0.0388	0.0392	0.0398	0.0403
Max. Deviation (ppm)	7.45	7.52	7.64	7.74
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5290 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5289.9649	5289.9641	5289.9637	5289.9632
110.00	5289.9645	5289.9638	5289.9637	5289.9631
93.50	5289.9640	5289.9635	5289.9632	5289.9622
Max. Deviation (MHz)	0.0360	0.0365	0.0368	0.0378
Max. Deviation (ppm)	6.81	6.90	6.96	7.15
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5290 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5289.9628	5289.9622	5289.9615	5289.9613
10	5289.9634	5289.9630	5289.9626	5289.9624
20	5289.9645	5289.9636	5289.9634	5289.9625
30	5289.9984	5289.9976	5289.9973	5289.9972
40	5290.0004	5289.9996	5289.9989	5289.9980
50	5289.9664	5289.9658	5289.9652	5289.9649
60	5289.9999	5289.9993	5289.9983	5289.9982
70	5290.0008	5290.0007	5290.0002	5289.9997
Max. Deviation (MHz)	0.0418	0.0425	0.0429	0.0430
Max. Deviation (ppm)	7.90	8.03	8.11	8.13
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5530 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5529.9650	5529.9645	5529.9644	5529.9638
110.00	5529.9645	5529.9643	5529.9642	5529.9635
93.50	5529.9643	5529.9634	5529.9633	5529.9624
Max. Deviation (MHz)	0.0357	0.0366	0.0367	0.0376
Max. Deviation (ppm)	6.46	6.62	6.64	6.80
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5530 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5529.9626	5529.9616	5529.9613	5529.9607
10	5529.9627	5529.9619	5529.9616	5529.9613
20	5529.9645	5529.9637	5529.9628	5529.9622
30	5529.9984	5529.9976	5529.9970	5529.9968
40	5529.9991	5529.9985	5529.9981	5529.9977
50	5529.9664	5529.9655	5529.9645	5529.9637
60	5529.9994	5529.9984	5529.9977	5529.9972
70	5529.9995	5529.9992	5529.9989	5529.9987
Max. Deviation (MHz)	0.0398	0.0407	0.0417	0.0423
Max. Deviation (ppm)	7.20	7.36	7.54	7.65
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5774.9652	5774.9649	5774.9648	5774.9646
110.00	5774.9645	5774.9641	5774.9637	5774.9632
93.50	5774.9644	5774.9634	5774.9627	5774.9625
Max. Deviation (MHz)	0.0356	0.0366	0.0373	0.0375
Max. Deviation (ppm)	6.16	6.34	6.46	6.49
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5774.9620	5774.9612	5774.9609	5774.9603
10	5774.9630	5774.9624	5774.9616	5774.9608
20	5774.9645	5774.9640	5774.9636	5774.9631
30	5774.9984	5774.9977	5774.9970	5774.9967
40	5775.0002	5774.9999	5774.9996	5774.9990
50	5774.9665	5774.9664	5774.9656	5774.9650
60	5774.9997	5774.9989	5774.9982	5774.9979
70	5775.0012	5775.0009	5775.0008	5775.0005
Max. Deviation (MHz)	0.0393	0.0399	0.0408	0.0416
Max. Deviation (ppm)	6.81	6.91	7.06	7.20
Result	Pass			