



FCC RADIO TEST REPORT

FCC ID : RI7WE310F5

Equipment: 802.11 b/g/n WiFi Module+BT combo module

Brand Name : Telit

Model Name : WE310F5-I; WE310F5-P

Applicant: TELIT COMMUNICATIONS S.P.A.

VIA STAZIONE DI PROSECCO 5B - SGONICO

-TRIESTE - ITALY

Manufacturer: TELIT COMMUNICATIONS S.P.A.

VIA STAZIONE DI PROSECCO 5B - SGONICO

-TRIESTE - ITALY

Standard: 47 CFR FCC Part 15.247

The product was received on Nov. 12, 2020, and testing was started from Nov. 26, 2020 and completed on Dec. 14, 2020. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Approved by: Sam Chen

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

TEL: 886-3-656-9065

FAX: 886-3-656-9085

Report Template No.: CB-A10_10 Ver1.2

Page Number : 1

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Issued Date

: Jan. 18, 2021

Report Version : 01

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Report No.: FR0N1118AA

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History of this test report

Report No.: FR0N1118AA

Report No.	Version	Description	Issued Date
FR0N1118AA	01	Initial issue of report	Jan. 18, 2021

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Summary of Test Result

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Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	DTS Bandwidth	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(e)	Power Spectral Density	PASS	-
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.6	15.247(d)	Emissions in Restricted Frequency Bands	PASS	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

- 1. The test configuration, test mode and test software were written in this test report are declared by the manufacturer.
- 2. The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen Report Producer: Viola Huang

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1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
2400-2483.5	b, g, n (HT20)	2412-2462	1-11 [11]
2400-2483.5	n (HT40)	2422-2452	3-9 [7]

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Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	1
2.4-2.4835GHz	802.11g	20	1
2.4-2.4835GHz	802.11n HT20	20	1
2.4-2.4835GHz	802.11n HT40	40	1

Note:

- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.

BWch is the nominal channel bandwidth.

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1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	AMO	ALA321C3	Chip	N/A	2.3
2	1	TAOGLAS	GW.11.A113	Dipole	N/A	2.3

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Note: The above information was declared by manufacturer.

<For 2.4GHz Band>

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

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

<For Bluetooth>

For bluetooth (1TX/1RX):

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

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.992	0.03	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11g	0.936	0.29	2.065m	1k
802.11n HT20	0.94	0.27	1.921m	1k
802.11n HT40	0.871	0.6	946.25u	3k

NI	ntα	٠

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

1.1.4 EUT Operational Condition

EUT Power Type	Fro	From host system			
Beamforming Function	☐ With beamforming ☐ Without beamforming				
Function	☑ Point-to-multipoint ☐ Point-to-point				
Test Software Version	PuTTY_0.62 \ UI_mptool_2V2				

Note: The above information was declared by manufacturer.

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1.1.5 Table for Multiple Listing

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

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EUT No.	Model Name	Description	Remark
1	WE310F5-I	Interated antenna variant (SMD)	Equip with ant.1
2	WE310F5-P	Without antenna-Expose RF pad (Dipole antenna)	Equip with ant.2

Note 1: The above information was declared by manufacturer.

Note 2: The EUT 2 was performed testing for all items.

The EUT 1 was performed testing for AC Power-line Conducted Emissions and Emissions in Restricted Frequency Bands measurement.

1.1.6 EUT Support Function

The EUT supports AP/client functions, only the client function was tested by manufacturer request.

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1.2 Applicable Standards

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

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- 47 CFR FCC Part 15
- ANSI C63.10-2013

The following reference test guidance is not within the scope of accreditation of TAF.

- FCC KDB 558074 D01 v05r02
- FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

Testing Location								
	HWA YA ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)							
		TEL	:	886-3-327-3456 FAX : 886-3-327-0973				
\boxtimes	☐ JHUBEI ADD : No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302, Taiwan (R.O.C.)							
		TEL	:	386-3-656-9065 FAX : 886-3-656-9085				

Test Condition Test Site No.		Test Engineer	Test Environment	Test Date
RF Conducted	TH02-CB	Caster Chang	22.2~23.1°C / 56~57%	Nov. 30, 2020~Dec. 14, 2020
Radiated below 1GHz	03CH04-CB	Kevin Huang	24.4~25.2°C / 56~58%	Dec. 15, 2020~Dec. 16, 2020
Radiated above 1GHz	03CH01-CB	KJ Chang	24.4~25.2°C / 56~58%	Nov. 26, 2020~Nov. 30, 2020
Radiated above 10112	03CH06-CB	KJ Chang	23.9~24.8°C / 57~59%	Nov. 26, 2020~Nov. 30, 2020
AC Conduction	CO01-CB	Peter Wu	22~23°C / 60~61%	Dec. 09, 2020

Test site Designation No. TW0006 with FCC.

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.0 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.8 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	5.0 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.9 dB	Confidence levels of 95%
Conducted Emission	2.8 dB	Confidence levels of 95%
Output Power Measurement	1.4 dB	Confidence levels of 95%
Power Density Measurement	2.8 dB	Confidence levels of 95%
Bandwidth Measurement	0.4%	Confidence levels of 95%

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Test site registered number IC 4086D with Industry Canada.

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	Default
2437MHz	Default
2462MHz	Default
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	Default
2417MHz	Default
2437MHz	Default
2457MHz	Default
2462MHz	Default
802.11n HT20_Nss1,(MCS0)_1TX	-
2412MHz	Default
2417MHz	Default
2437MHz	Default
2457MHz	Default
2462MHz	Default
802.11n HT40_Nss1,(MCS0)_1TX	-
2422MHz	Default
2427MHz	Default
2437MHz	Default
2452MHz	Default

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2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests		
Tests Item	AC power-line conducted emissions	
Condition	Condition AC power-line conducted measurement for line and neutral	
Operating Mode Normal Link		
1	Normal Link - EUT 1 in Z axis_Bluetooth	
2	Normal Link - EUT 1 in Z axis_WLAN 2.4GHz	
3	Normal Link - EUT 2 in Z axis_Bluetooth	
4	Normal Link - EUT 2 in Z axis_WLAN 2.4GHz	
For operating mode 2 is the worst case and it was record in this test report.		

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Th	The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands	
Test Condition	Conducted measurement at transmit chains	
1	EUT 2_WLAN 2.4GHz	

Th	The Worst Case Mode for Following Conformance Tests		
Tests Item	Emissions in Restricted Frequency Bands		
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 1 in Z axis_Bluetooth		
2	Normal Link - EUT 1 in Z axis_WLAN 2.4GHz		
3	Normal Link - EUT 2 in Z axis_Bluetooth		
4	Normal Link - EUT 2 in Z axis_WLAN 2.4GHz		
For operating mode 2 is th	e worst case and it was record in this test report.		

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	CTX
Operating Mode > 1GHz	The EUT 1~EUT 2 were performed at X axis, Y axis and Z axis position for Radiated emission above 1GHz test, the EUT 1 worst case was found at Z axis and EUT 2 was case found at X axis. So the measurement will follow this same test configuration.
1	EUT 1 in Z axis_WLAN 2.4GHz
2	EUT 2 in X axis_WLAN 2.4GHz

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

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2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
Α	Fixture	Telit	CS2106B	N/A
В	NB	DELL	E6430	N/A
С	Earphone	e-Power	S90W	N/A
D	Mouse	HP	FM100	N/A
Е	AP Router	ASUS	RP-N53	MSQ-RPN53
F	AP NB	DELL	E6430	N/A

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For Radiated (below 1GHz):

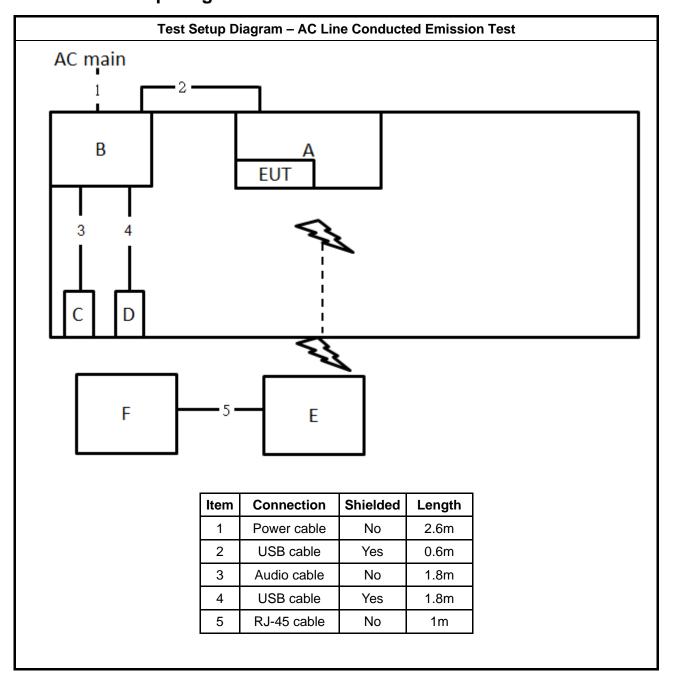
	Support Equipment				
No. Equipment Brand Name Model Name FCC ID				FCC ID	
Α	NB	DELL	E4300	N/A	
В	WLAN AP	D-LINK	DIR860L	KA2IR860LA1	
С	NB	DELL	E4300	N/A	
D	Earphone	e-Power	S90W	N/A	
Е	Mouse	Logitech	M-U0026	N/A	
F	Fixture	Telit	CS2106B	N/A	

For Radiated (above 1GHz) and RF Conducted:

	Support Equipment			
No.	Equipment	Brand Name	Model Name	FCC ID
Α	NB	DELL	E4300	N/A
В	Fixture	Telit	CS2106B	N/A

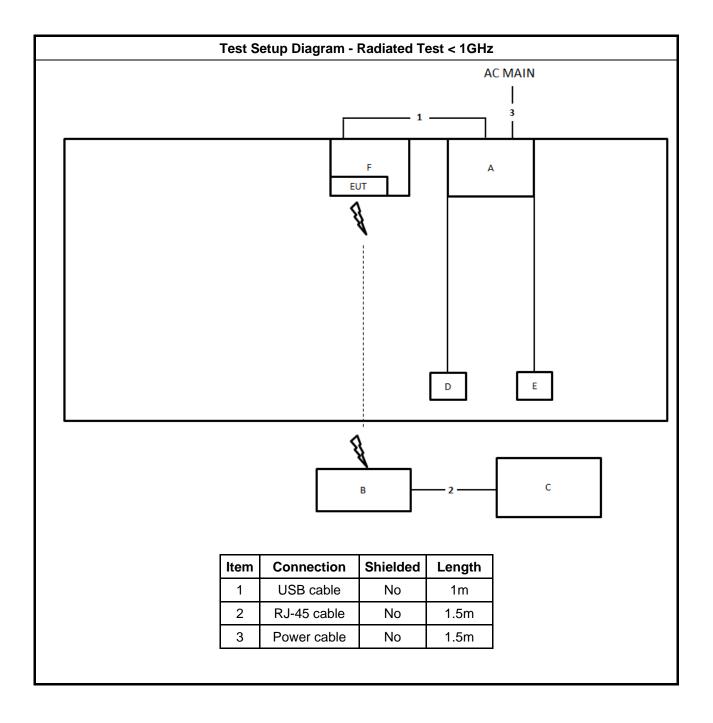
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2.6 Test Setup Diagram

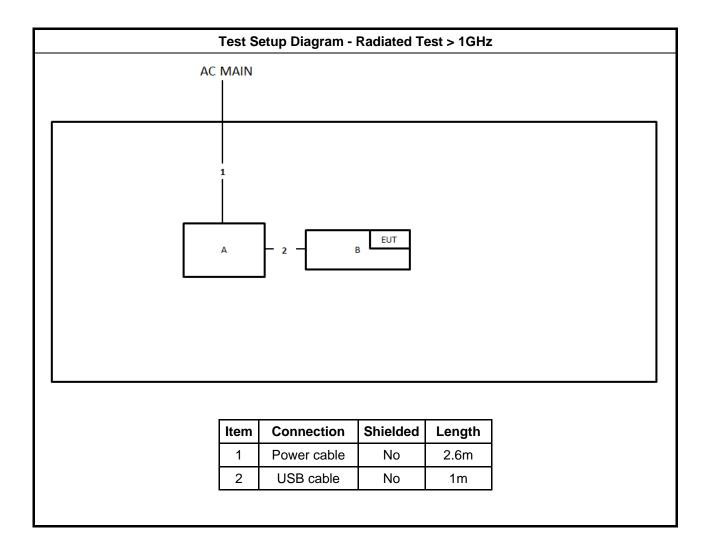


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3 Transmitter Test Result

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	of the frequency.	

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3.1.2 Measuring Instruments

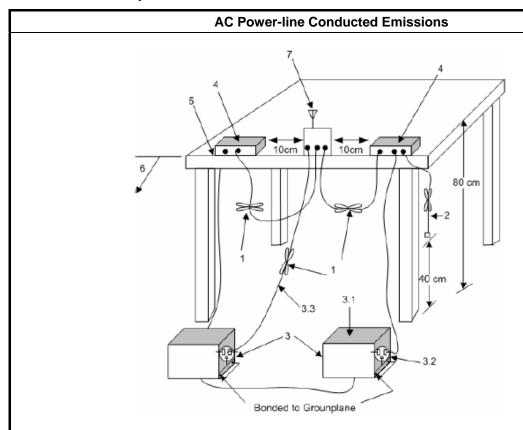
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

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

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3.1.4 Test Setup



1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.

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

3.1.5 Measurement Results Calculation

The measured Level is calculated using:

- a. Corrected Reading: LISN Factor (LISN) + Attenuator (AT/AUX) + Cable Loss (CL) + Read Level (Raw) = Level
- b. Margin = -Limit + Level

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

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3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
■ 6 dB bandwidth ≥ 500 kHz.

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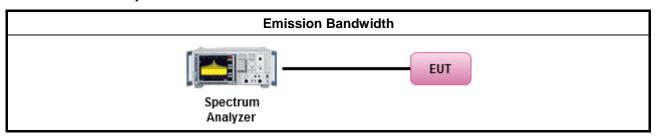
3.2.2 Measuring Instruments

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:								
	\boxtimes	Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.1 Option 1 for 6 dB bandwidth measurement.							
		Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.2 Option 2 for 6 dB bandwidth measurement.							
		Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.							

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

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3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit

- If G_{TX} ≤ 6 dBi, then P_{Out} ≤ 30 dBm (1 W)
- Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 (G_{TX} 6)$ dBm
- Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 (G_{TX} 6)/3$ dBm
- Smart antenna system (SAS):
 - Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 (G_{TX} 6)/3$ dBm
 - Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 (G_{TX} 6)/3$ dBm
 - Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 (G_{TX} 6)/3 + 8$ dB dBm

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 \mathbf{P}_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, \mathbf{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.

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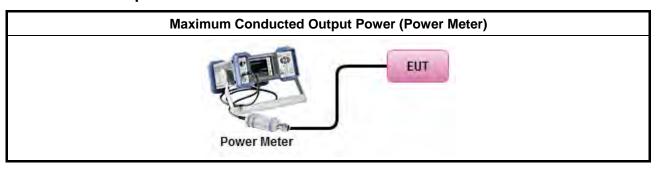
3.3.3 Test Procedures

		Test Method
•	Max	imum Peak Conducted Output Power
		Refer as FCC KDB 558074, clause 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW ≥ EBW method).
		Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter).
•	Max	imum Conducted Output Power
	[duty	/ cycle ≥ 98% or external video / power trigger]
		Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.2 Method AVGSA-1.
		Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.3 Method AVGSA-1A. (alternative)
	duty	cycle < 98% and average over on/off periods with duty factor
		Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2.
		Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative)
		Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3
		Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.7 Method AVGSA-3A (alternative)
	Mea	surement using a power meter (PM)
		Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.1 Method AVGPM (using an RF average power meter).
	\boxtimes	Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.2 Method AVGPM-G (using an gate 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: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

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3.3.4 Test Setup



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3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

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3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit ■ Power Spectral Density (PSD) ≤ 8 dBm/3kHz

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3.4.2 Measuring Instruments

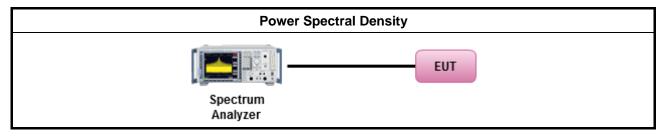
Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

		Test Method							
•	Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).								
	⊠ R	efer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10 Method Max. PSD.							
•	For cor	nducted 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.							

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3.4.4 Test Setup



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3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

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3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit					
RF output power procedure	Limit (dBc)				
Peak output power procedure	20				
Average output power procedure	30				

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- Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.
- Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.

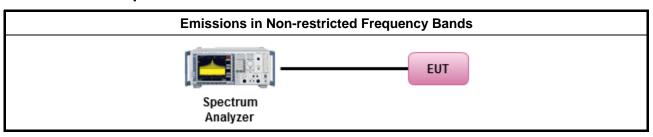
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method	
Refer as FCC KDB 558074, clause 8.5 for unwanted emissions into non-restricted bands.	

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

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3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions 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					

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- Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).
- Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.
- Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

3.6.2 Measuring Instruments

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

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3.6.3 Test Procedures

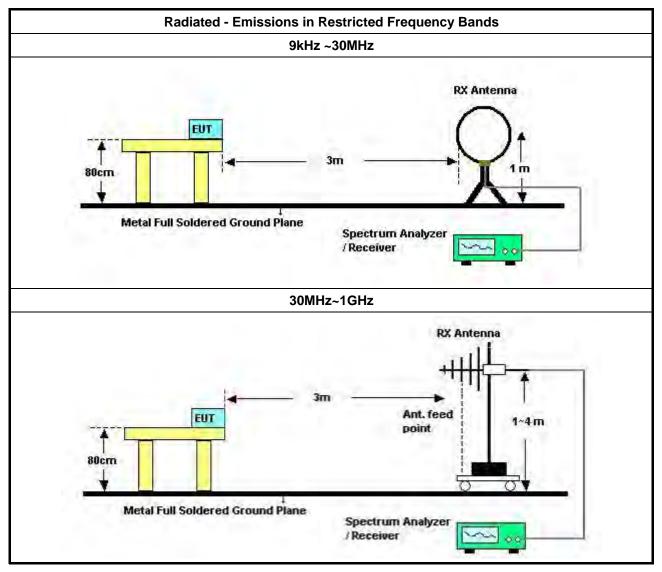
		Test Method								
•	The	average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].								
•	Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.									
•	For	the transmitter unwanted emissions shall be measured using following options below:								
	 Refer as FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands. 									
	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for cycle ≥98%).									
		Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).								
		☐ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW≥1/T).								
Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 1/T, where T is pul										
		Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.								
		Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit.								
•	For	the transmitter band-edge emissions shall be measured using following options below:								
	•	Refer as FCC KDB 558074 clause 8.7 & C63.10 clause 11.13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.								
	•	Refer as FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.								
	•	Refer as FCC KDB 558074, clause 8.7 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).								
	•	For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB								
	•	For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.								

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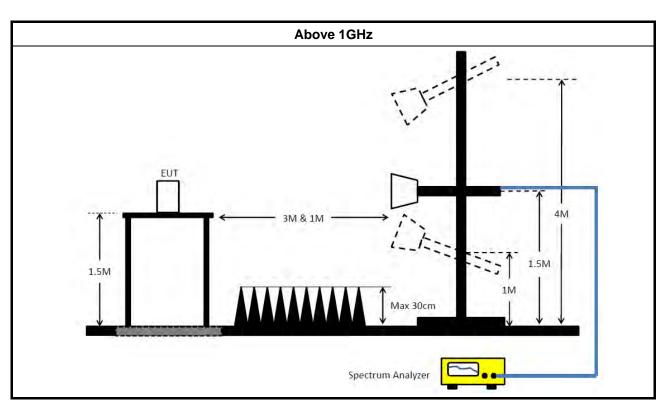


3.6.4 Test Setup



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3.6.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA) (if applicable) = Level.

3.6.6 Emissions in Restricted Frequency Bands (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.

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

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

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

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Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Feb. 26, 2020	Feb. 25, 2021	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-5 0-16-2	04083	150kHz ~ 100MHz	Dec. 25, 2019	Dec. 24, 2020	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Feb. 25, 2020	Feb. 24, 2021	Conduction (CO01-CB)
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Jan. 31, 2020	Jan. 30, 2021	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 20, 2020	May 19, 2021	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 13, 2020	Apr. 12, 2021	Radiation (03CH04-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH04-CB	30 MHz ~ 1 GHz	Aug. 08, 2020	Aug. 07, 2021	Radiation (03CH04-CB)
BILOG ANTENNA with 6 dB attenuator	Schaffner & EMCI	CBL6112B & N-6-06	22021&AT-N06 07	30MHz ~ 1GHz	Oct. 11, 2020	Oct. 10, 2021	Radiation (03CH04-CB)
Pre-Amplifier	EMCI	EMC330N	980391	20MHz ~ 3GHz	May 21, 2020	May 20, 2021	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Dec. 18, 2019	Dec. 17, 2020	Radiation (03CH04-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 13, 2020	May 12, 2021	Radiation (03CH04-CB)
RF Cable-low	Woken	RG402	Low Cable-03+67	30MHz – 1GHz	Nov. 05, 2020	Nov. 04, 2021	Radiation (03CH04-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH04-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 29, 2020	May 28, 2021	Radiation (03CH01-CB)
Horn Antenna	ETS-LINDGREN	3115	00075790	750MHz ~ 18GHz	Nov. 06, 2020	Nov. 05, 2021	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 21, 2020	Jul. 20, 2021	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 08, 2020	Jan. 07, 2021	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35- HG	1864479	18GHz ~ 40GHz	Jul. 08, 2020	Jul. 07, 2021	Radiation (03CH01-CB)

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Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Apr. 16, 2020	Apr. 15, 2021	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH01-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH06-CB	1GHz ~18GHz 3m	Oct. 02, 2020	Oct. 01, 2021	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1292	1GHz~18GHz	Jul. 22, 2020	Jul. 21, 2021	Radiation (03CH06-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 21, 2020	Jul. 20, 2021	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	83017A	MY53270064	0.5GHz ~ 26.5GHz	May 07, 2020	May 06, 2021	Radiation (03CH06-CB)
Pre-Amplifier	MITEQ	TTA1840-35- HG	1864479	18GHz ~ 40GHz	Jul. 08, 2020	Jul. 07, 2021	Radiation (03CH06-CB)
Signal Analyzer	R&S	FSV40	101904	9kHz ~ 40GHz	May 12, 2020	May 11, 2021	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-05	1GHz~18GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-05+24	1GHz~18GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH06-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSV40	101027	9kHz~40GHz	Jul. 27, 2020	Jul. 26, 2021	Conducted (TH02-CB)
Power Sensor	Anritsu	MA2411B	1126203	300MHz~40GHz	Sep. 17, 2020	Sep. 16, 2021	Conducted (TH02-CB)
Power Meter	Anritsu	ML2495A	1210004	300MHz~40GHz	Sep. 17, 2020	Sep. 16, 2021	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-01	1 GHz – 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-02	1 GHz – 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH02-CB)

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Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-03	1 GHz – 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-04	1 GHz – 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-05	1 GHz – 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH02-CB)

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

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

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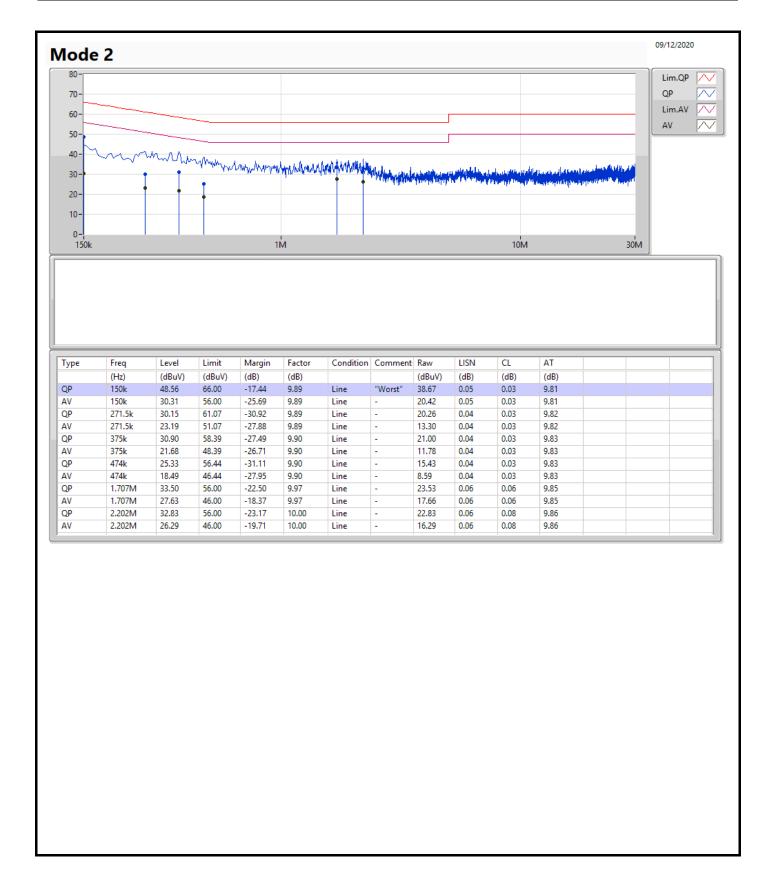
Conducted Emissions at Powerline

Appendix A

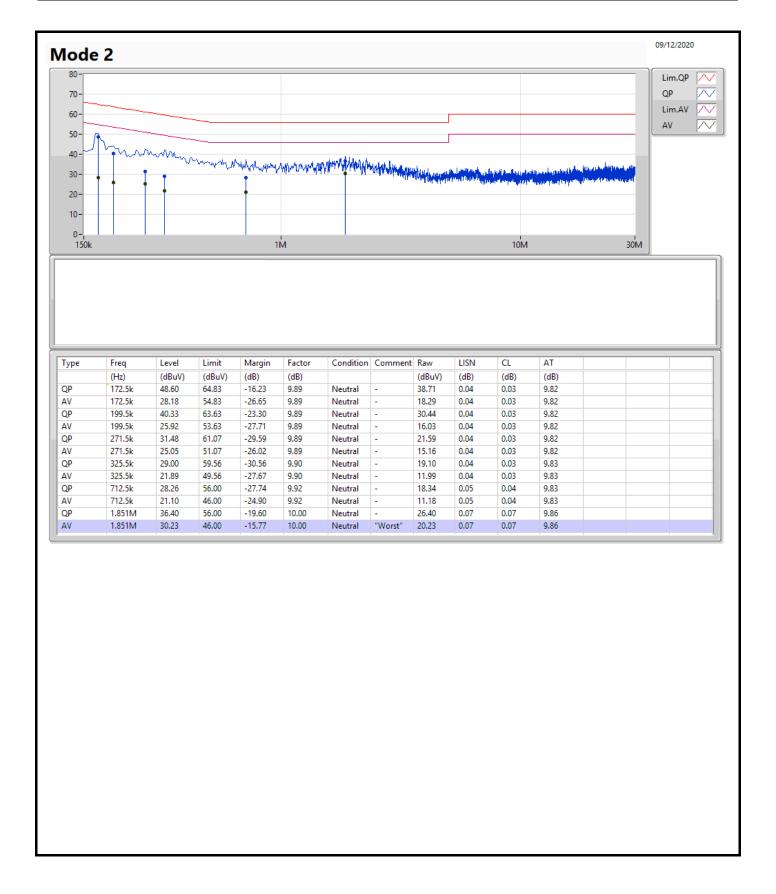
Summary

Mode	Result	Туре	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 2	Pass	AV	1.851M	30.23	46.00	-15.77	Neutral











EBW Appendix B

Summary

Mode	Max-N dB	Max-OBW	ITU-Code	Min-N dB	Min-OBW
	(Hz)	(Hz)		(Hz)	(Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	10.025M	14.743M	14M7G1D	9.05M	14.718M
802.11g_Nss1,(6Mbps)_1TX	16.325M	16.692M	16M7D1D	16.275M	16.592M
802.11n HT20_Nss1,(MCS0)_1TX	17.25M	17.816M	17M8D1D	17.075M	17.716M
802.11n HT40_Nss1,(MCS0)_1TX	35.5M	35.832M	35M8D1D	35.05M	35.782M

Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth; Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth;

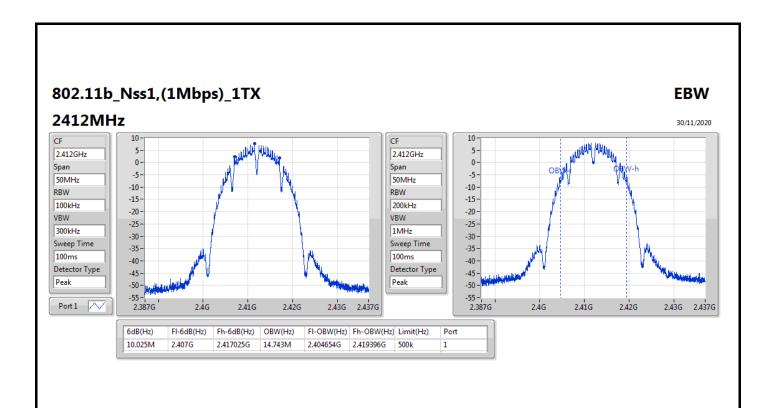


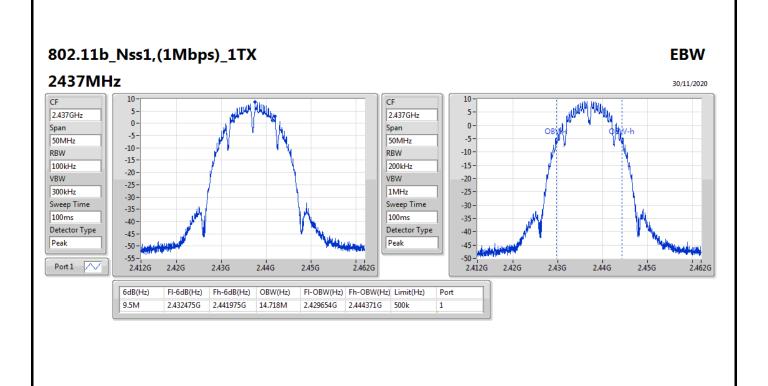
EBW Appendix B

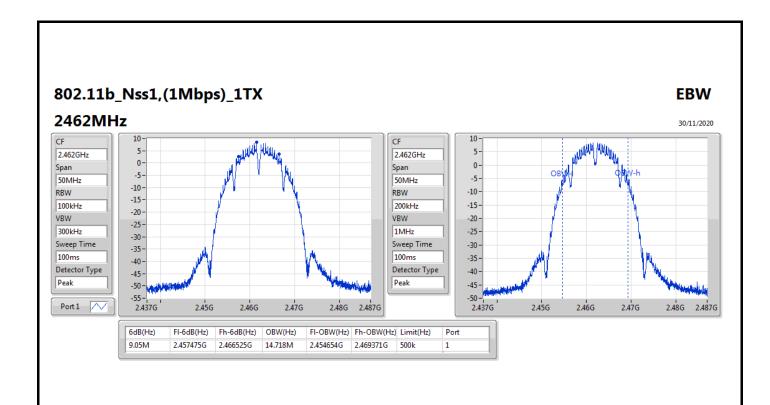
Result

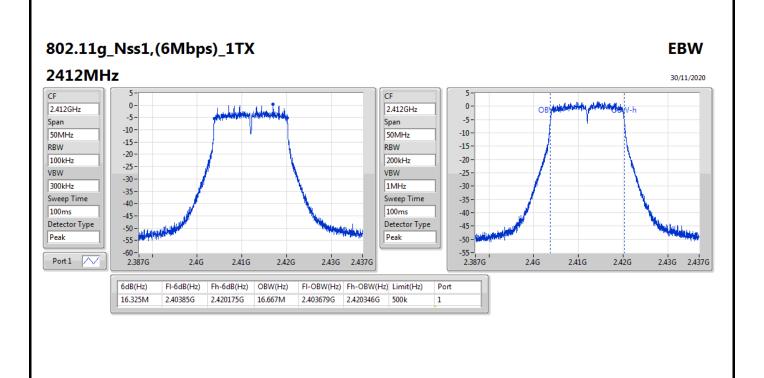
Mode	Result	Limit	Port 1-N dB	Port 1-OBW
		(Hz)	(Hz)	(Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	10.025M	14.743M
2437MHz	Pass	500k	9.5M	14.718M
2462MHz	Pass	500k	9.05M	14.718M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	16.325M	16.667M
2437MHz	Pass	500k	16.325M	16.692M
2462MHz	Pass	500k	16.275M	16.592M
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	17.25M	17.716M
2437MHz	Pass	500k	17.075M	17.766M
2462MHz	Pass	500k	17.25M	17.816M
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-
2422MHz	Pass	500k	35.05M	35.782M
2437MHz	Pass	500k	35.5M	35.782M
2452MHz	Pass	500k	35.25M	35.832M

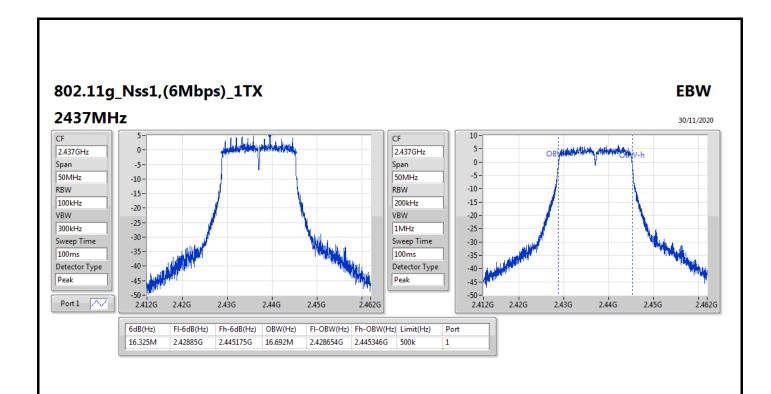
Port X-N dB = Port X 6dB down bandwidth; Port X-OBW = Port X 99% occupied bandwidth;

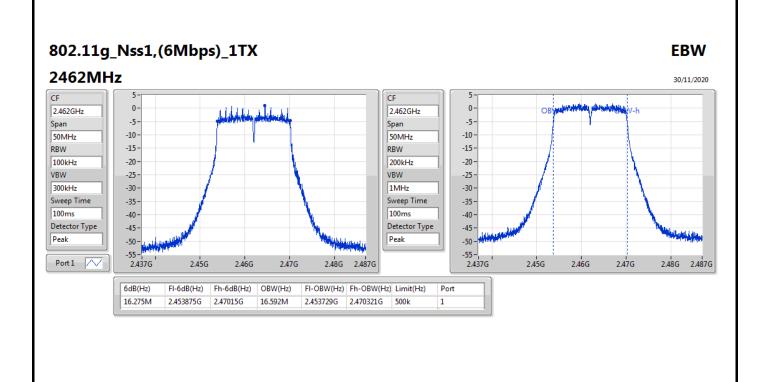


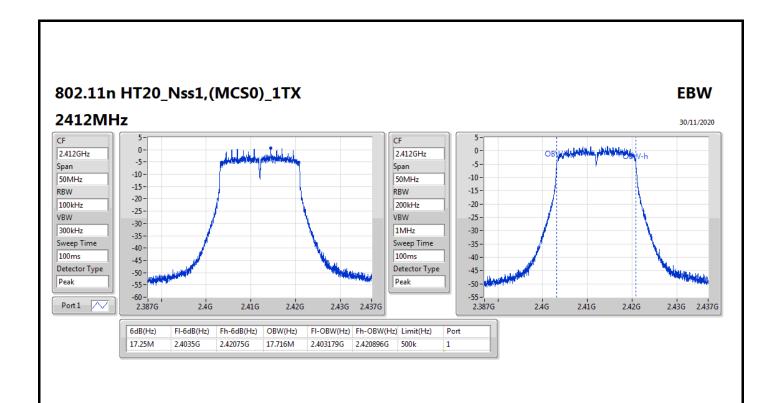


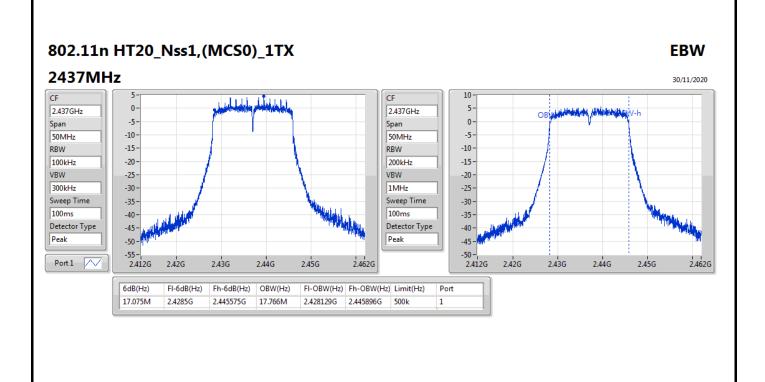


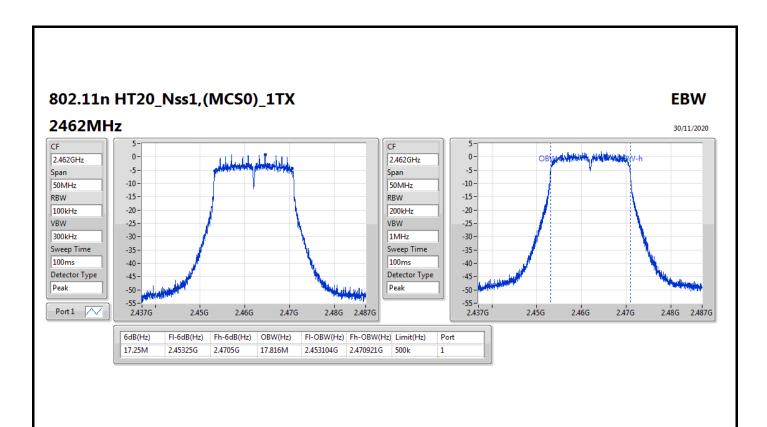


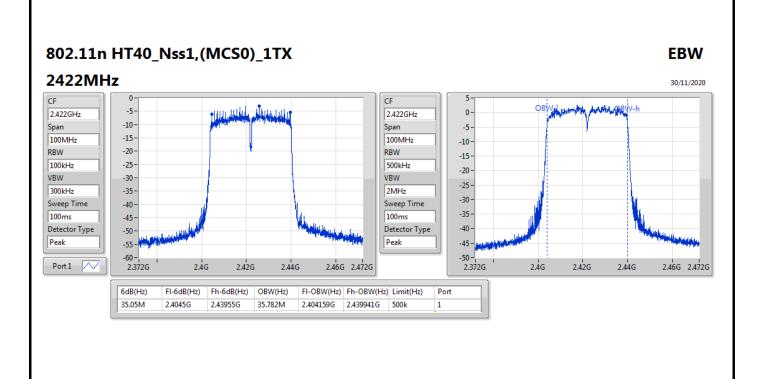


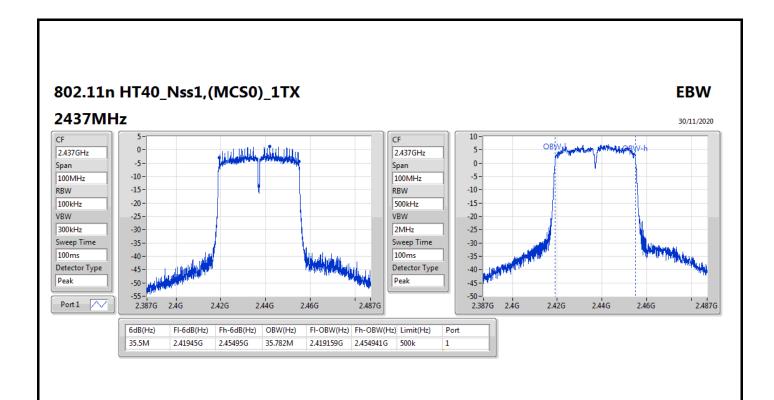


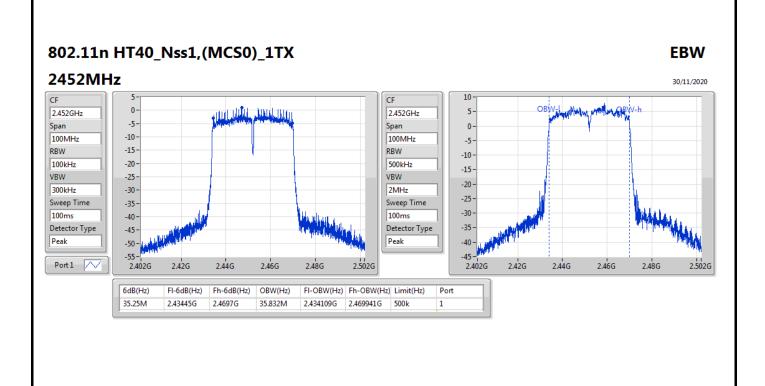














Average Power Appendix C

Mode	Total Power	Total Power
	(dBm)	(W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	17.34	0.05420
802.11g_Nss1,(6Mbps)_1TX	16.24	0.04207
802.11n HT20_Nss1,(MCS0)_1TX	15.75	0.03758
802.11n HT40_Nss1,(MCS0)_1TX	15.27	0.03365



Average Power Appendix C

Result

Mode	Result	DG	Port 1	Total Power	Power Limit
		(dBi)	(dBm)	(dBm)	(dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.30	16.54	16.54	30.00
2437MHz	Pass	2.30	17.34	17.34	30.00
2462MHz	Pass	2.30	16.86	16.86	30.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.30	11.90	11.90	30.00
2417MHz	Pass	2.30	13.91	13.91	30.00
2437MHz	Pass	2.30	16.24	16.24	30.00
2457MHz	Pass	2.30	13.87	13.87	30.00
2462MHz	Pass	2.30	12.16	12.16	30.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	2.30	11.91	11.91	30.00
2417MHz	Pass	2.30	13.84	13.84	30.00
2437MHz	Pass	2.30	15.75	15.75	30.00
2457MHz	Pass	2.30	13.71	13.71	30.00
2462MHz	Pass	2.30	12.05	12.05	30.00
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-
2422MHz	Pass	2.30	10.90	10.90	30.00
2427MHz	Pass	2.30	11.84	11.84	30.00
2437MHz	Pass	2.30	15.27	15.27	30.00
2452MHz	Pass	2.30	15.03	15.03	30.00

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



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Summary

Mode	PD
	(dBm/RBW)
2.4-2.4835GHz	·
802.11b_Nss1,(1Mbps)_1TX	-5.45
802.11g_Nss1,(6Mbps)_1TX	-9.09
802.11n HT20_Nss1,(MCS0)_1TX	-9.24
802.11n HT40_Nss1,(MCS0)_1TX	-13.30

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



Appendix D **PSD**

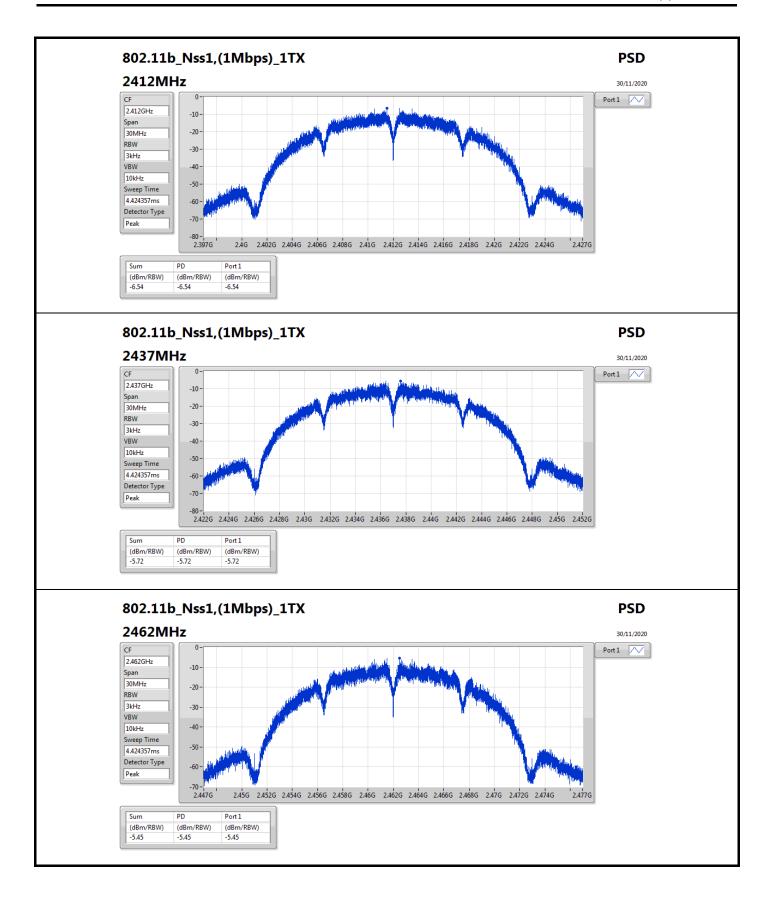
Page No.

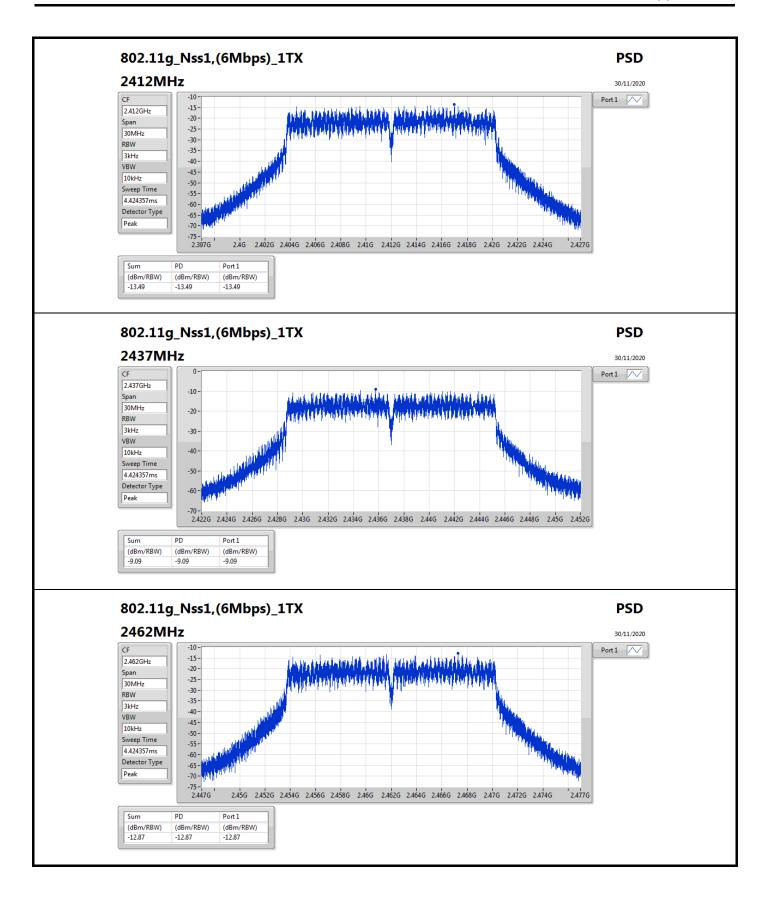
: 2 of 6

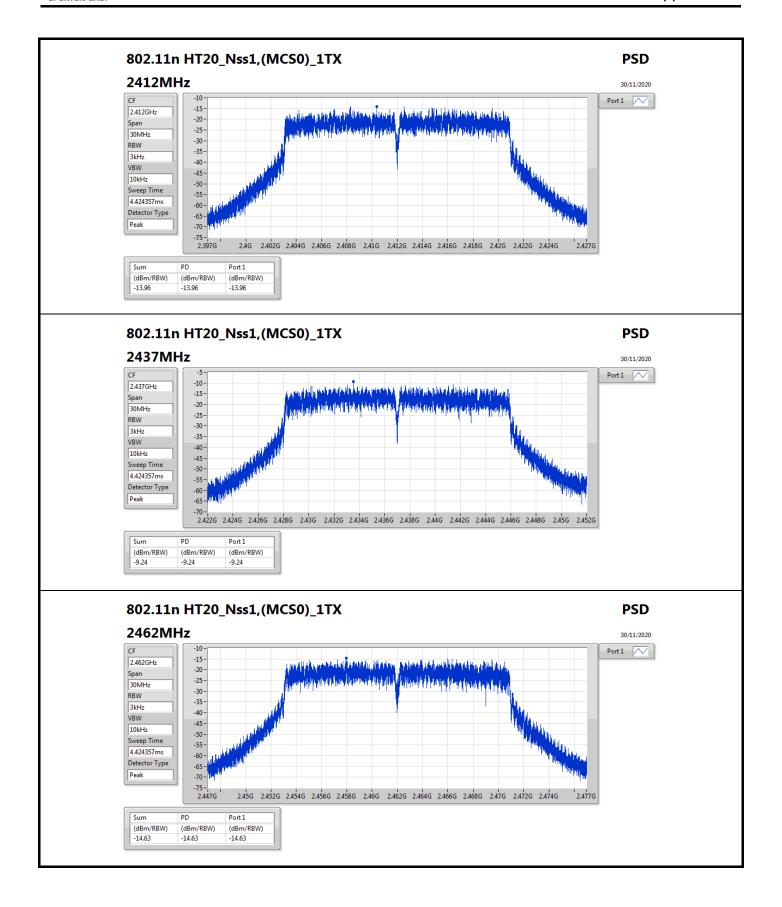
Result

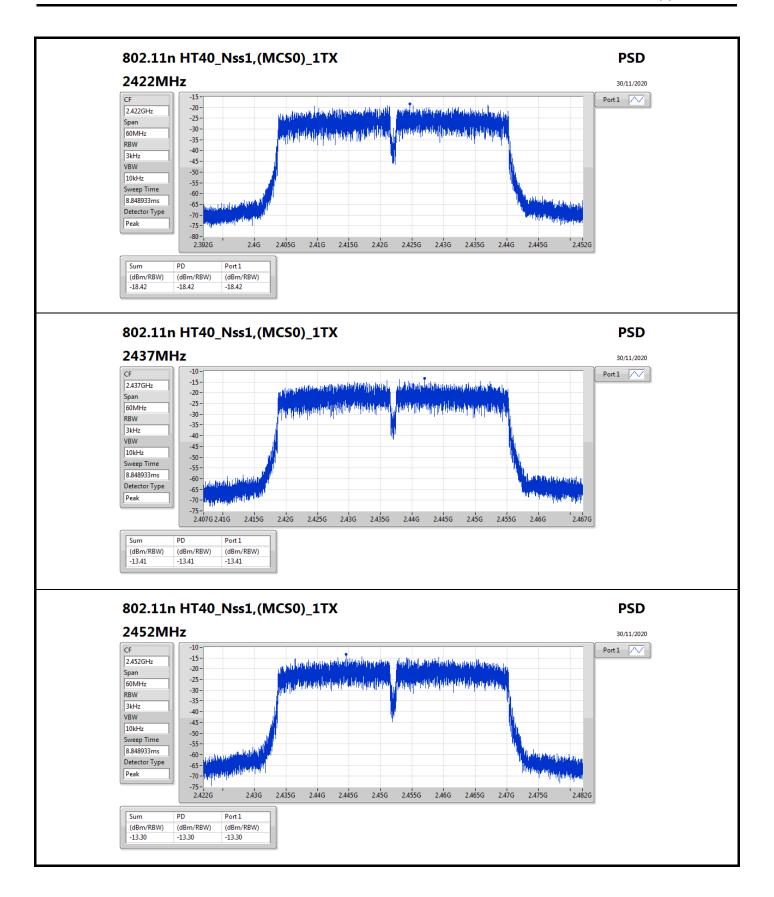
Mode	Result	DG	Port 1	PD	PD Limit
		(dBi)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.30	-6.54	-6.54	8.00
2437MHz	Pass	2.30	-5.72	-5.72	8.00
2462MHz	Pass	2.30	-5.45	-5.45	8.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.30	-13.49	-13.49	8.00
2437MHz	Pass	2.30	-9.09	-9.09	8.00
2462MHz	Pass	2.30	-12.87	-12.87	8.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	2.30	-13.96	-13.96	8.00
2437MHz	Pass	2.30	-9.24	-9.24	8.00
2462MHz	Pass	2.30	-14.63	-14.63	8.00
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-
2422MHz	Pass	2.30	-18.42	-18.42	8.00
2437MHz	Pass	2.30	-13.41	-13.41	8.00
2452MHz	Pass	2.30	-13.30	-13.30	8.00

DG = Directional Gain; RBW = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X power density;











CSE(Non-restricted Band)

Appendix E

Mode	Resu	ult Ref	Ref	Limit	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Port
		(Hz)	(dBm)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-		-	-	-	-	-
802.11b_Nss1,(1Mbps)_1	TX Pas	s 2.43799G	8.43	-21.57	159.9M	-52.45	2.39954G	-35.59	2.4G	-35.95	2.49378G	-47.36	24.02508G	-42.46	1
802.11g_Nss1,(6Mbps)_1	TX Pas	s 2.442G	4.78	-25.22	2.12321G	-53.22	2.39994G	-36.48	2.4G	-37.11	2.49258G	-49.78	17.68109G	-43.41	1
802.11n HT20_Nss1,(MCS0)_1TX Pas	s 2.4395G	5.02	-24.98	159.9M	-51.20	2.4G	-36.19	2.4G	-35.43	2.48854G	-49.05	24.5589G	-43.00	1
802.11n HT40_Nss1,(MCS0)_1TX Pas	s 2.44075G	1.48	-28.52	2.30111G	-52.47	2.39228G	-50.70	2.4835G	-43.00	2.48474G	-41.86	24.89623G	-43.16	1



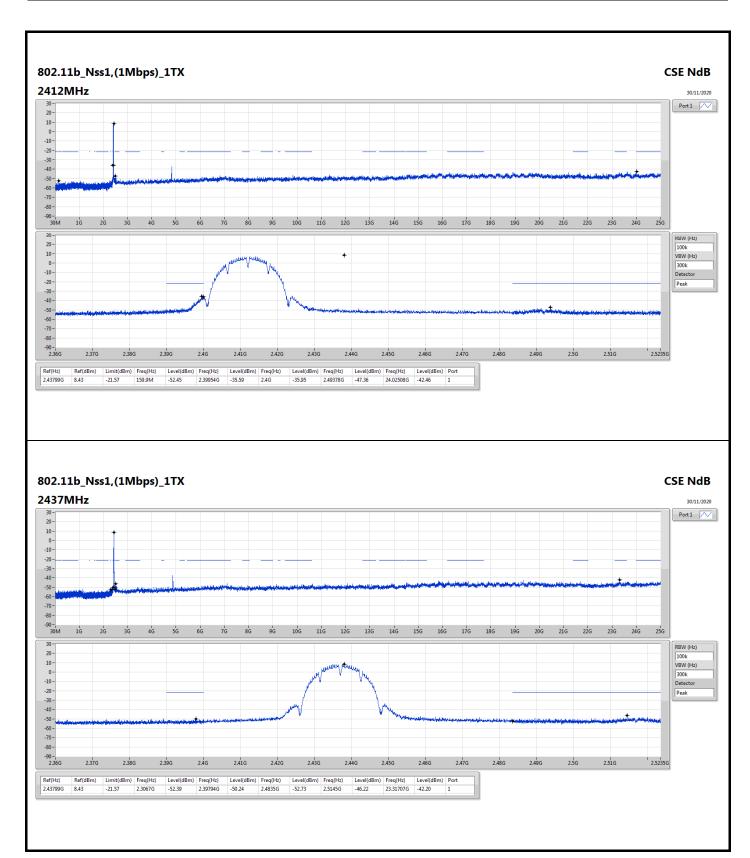
CSE(Non-restricted Band)

Appendix E

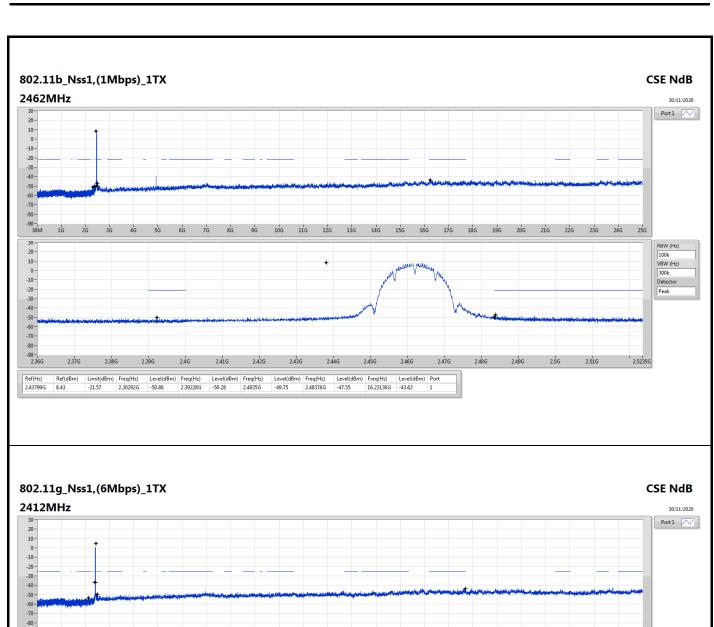
Result

Mode	Result	Ref	Ref	Limit	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Port
		(Hz)	(dBm)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43799G	8.43	-21.57	159.9M	-52.45	2.39954G	-35.59	2.4G	-35.95	2.49378G	-47.36	24.02508G	-42.46	1
2437MHz	Pass	2.43799G	8.43	-21.57	2.3067G	-52.39	2.39794G	-50.24	2.4835G	-52.73	2.5145G	-46.22	23.31707G	-42.20	1
2462MHz	Pass	2.43799G	8.43	-21.57	2.30292G	-50.86	2.39228G	-50.28	2.4835G	-49.75	2.48378G	-47.55	16.23136G	-43.62	1
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.442G	4.78	-25.22	2.12321G	-53.22	2.39994G	-36.48	2.4G	-37.11	2.49258G	-49.78	17.68109G	-43.41	1
2437MHz	Pass	2.442G	4.78	-25.22	857.73M	-53.14	2.39382G	-51.18	2.4835G	-51.94	2.4895G	-49.14	24.93819G	-42.63	1
2462MHz	Pass	2.442G	4.78	-25.22	2.09904G	-52.31	2.3906G	-51.21	2.4835G	-51.46	2.49946G	-49.98	17.68109G	-43.82	1
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.4395G	5.02	-24.98	159.9M	-51.20	2.4G	-36.19	2.4G	-35.43	2.48854G	-49.05	24.5589G	-43.00	1
2437MHz	Pass	2.4395G	5.02	-24.98	159.9M	-50.80	2.39784G	-50.55	2.4835G	-52.44	2.51672G	-48.38	23.36764G	-43.25	1
2462MHz	Pass	2.4395G	5.02	-24.98	159.9M	-52.04	2.39322G	-50.79	2.4835G	-51.82	2.48674G	-49.51	16.22012G	-43.78	1
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-			-		-	-	-
2422MHz	Pass	2.44075G	1.48	-28.52	738.18M	-53.01	2.39956G	-44.92	2.4G	-46.33	2.51802G	-50.78	24.60175G	-43.20	1
2437MHz	Pass	2.44075G	1.48	-28.52	710.13M	-53.26	2.3952G	-46.47	2.4G	-47.86	2.48482G	-44.64	15.19525G	-42.95	1
2452MHz	Pass	2.44075G	1.48	-28.52	2.30111G	-52.47	2.39228G	-50.70	2.4835G	-43.00	2.48474G	-41.86	24.89623G	-43.16	1

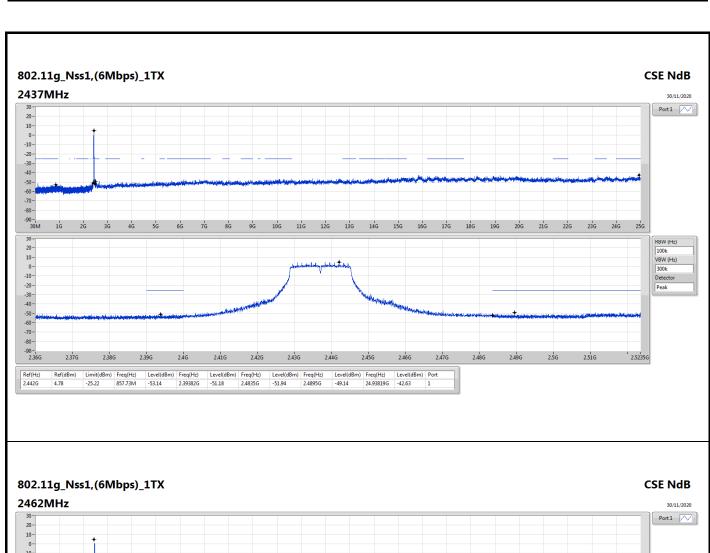


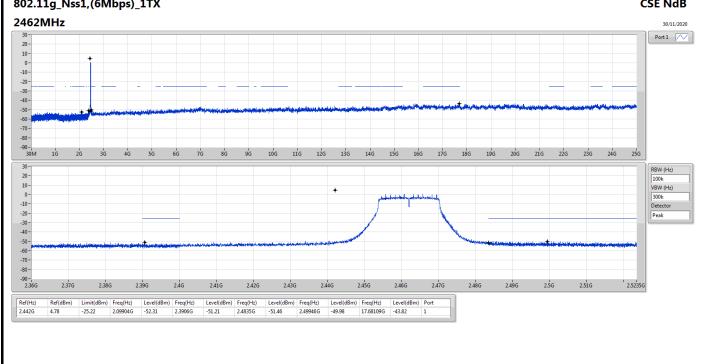




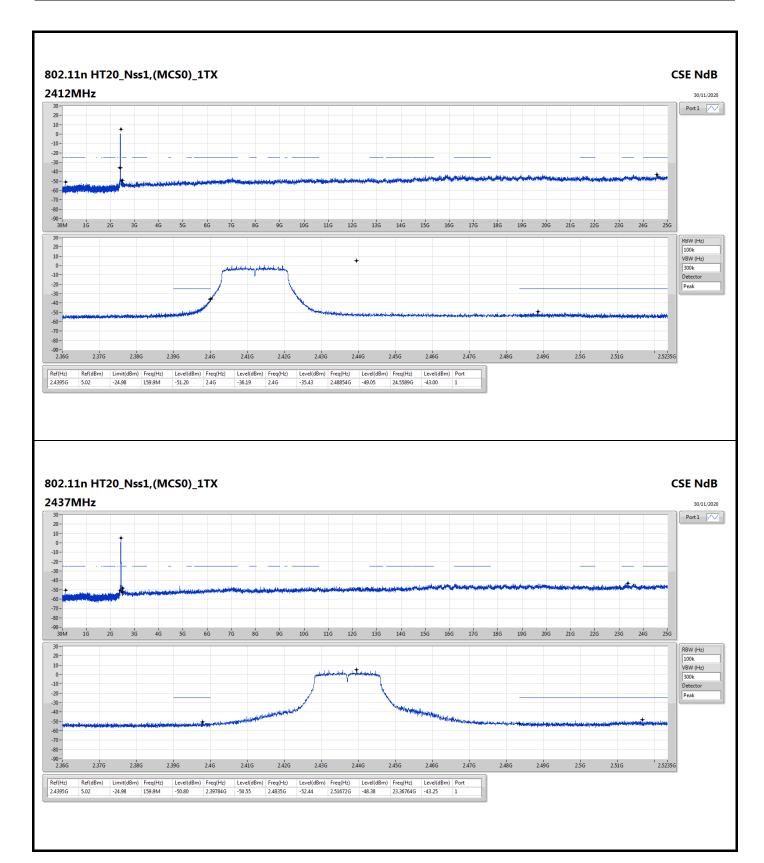






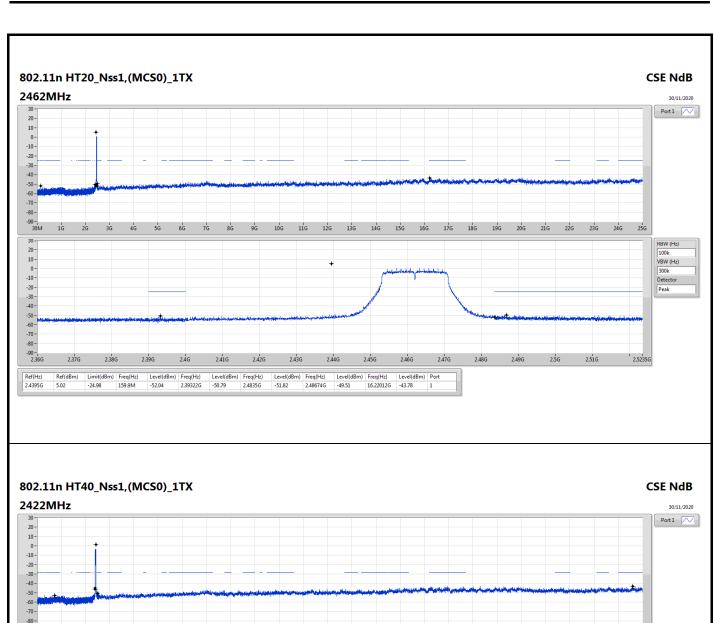








10 -0 --10 -



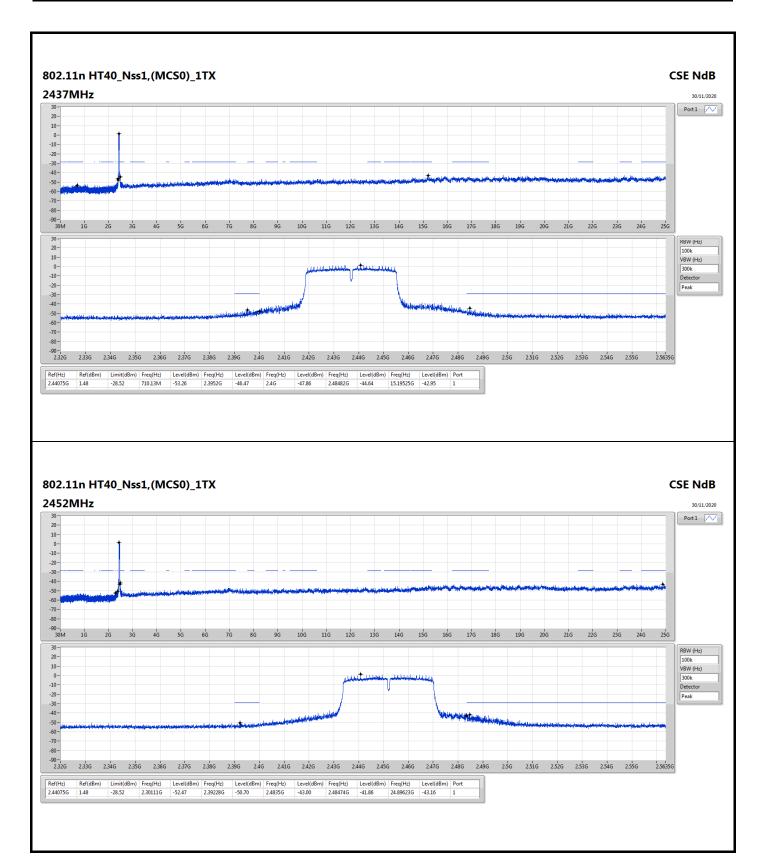
2336 2346 2356 2356 236 2376 2386 2396 246 2416 2426 2436 2436 2456 2456 2456 2456 2456 2496 256 2516 2526 2536 2546 2556

10G 11G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G 22G 23G 24G 25G

RBW (Hz) 100k VBW (Hz)

300k Detec





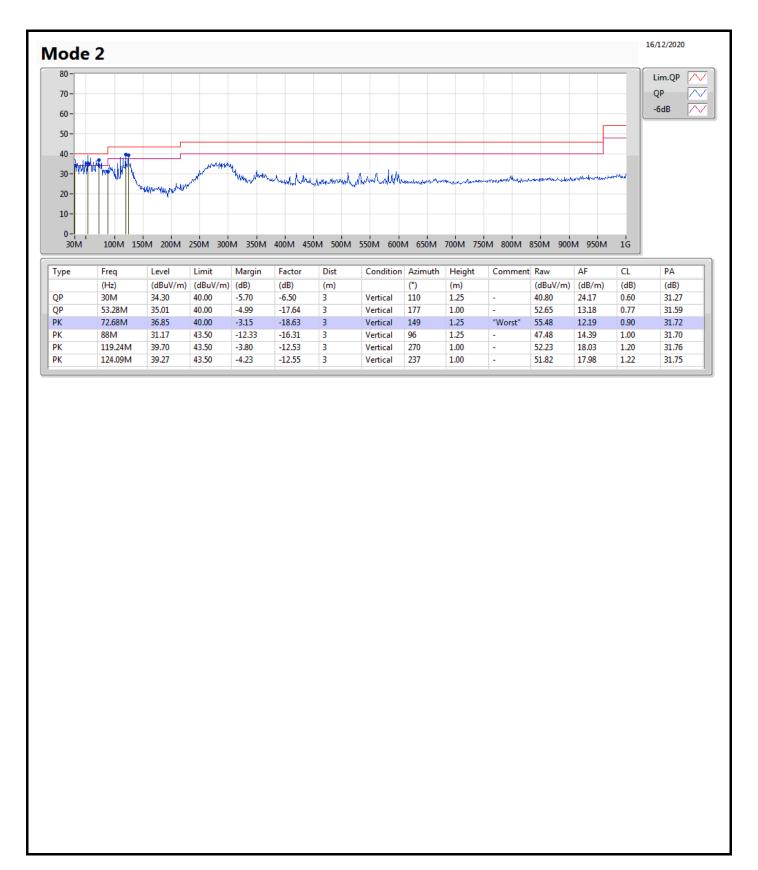


Radiated Emissions below 1GHz

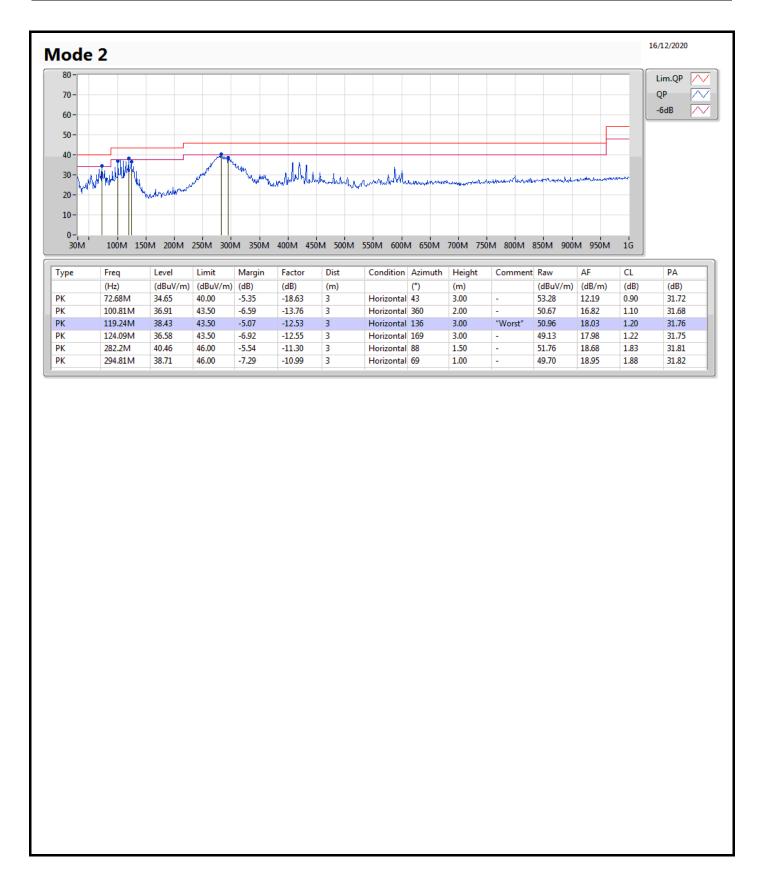
Appendix F.1

Mode	Result	Туре	Freq	Level	Limit	Margin	Condition
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	
Mode 2	Pass	PK	72.68M	36.85	40.00	-3.15	Vertical











RSE TX above 1GHz

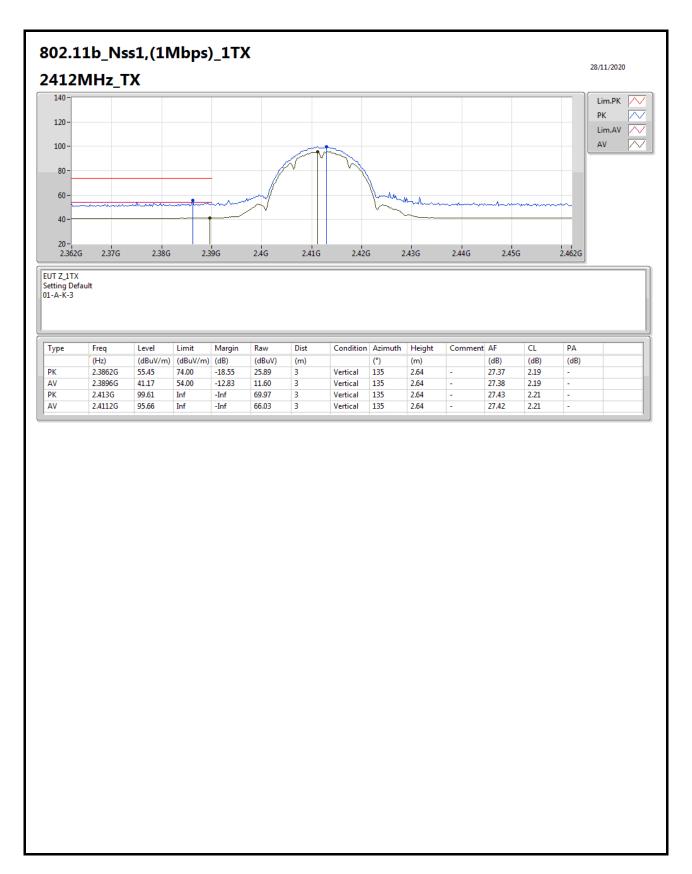
Appendix F.2

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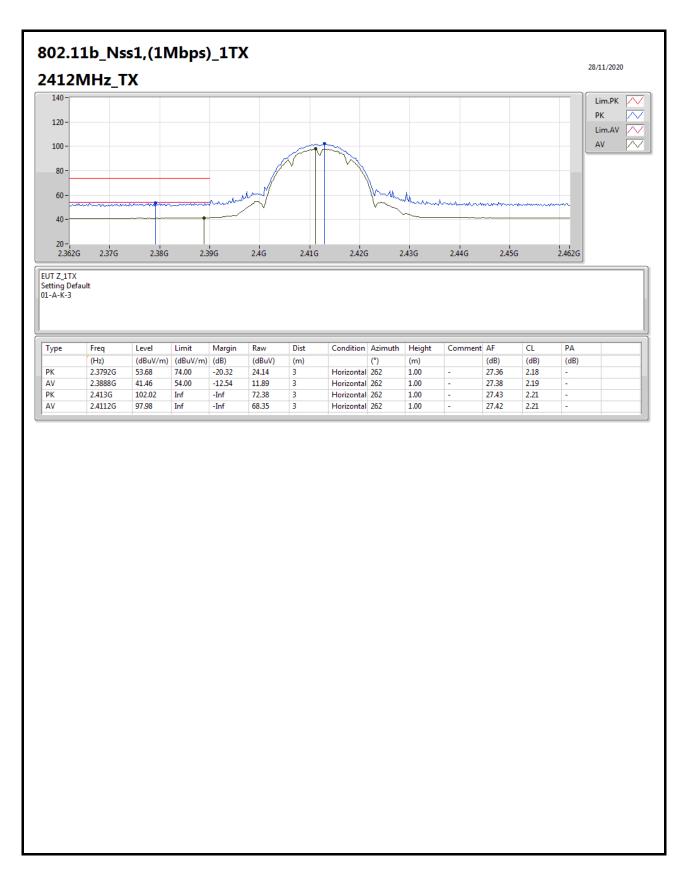
Test Mode: Mode 1

Mode	Result	Туре	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)	
2.4-2.4835GHz	-	-		-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	AV	4.87397G	51.64	54.00	-2.36	3	Horizontal	226	1.01	-

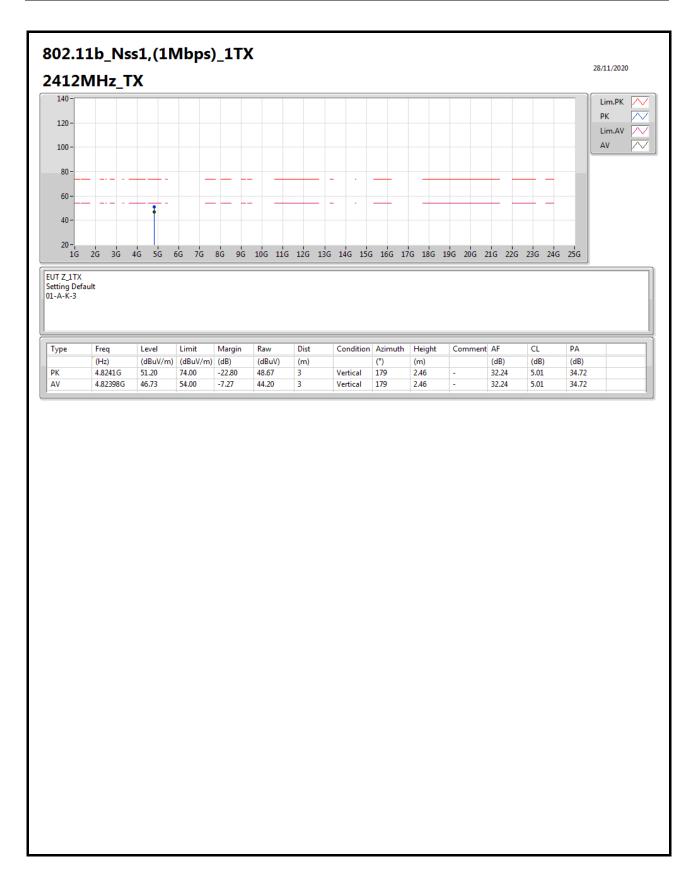




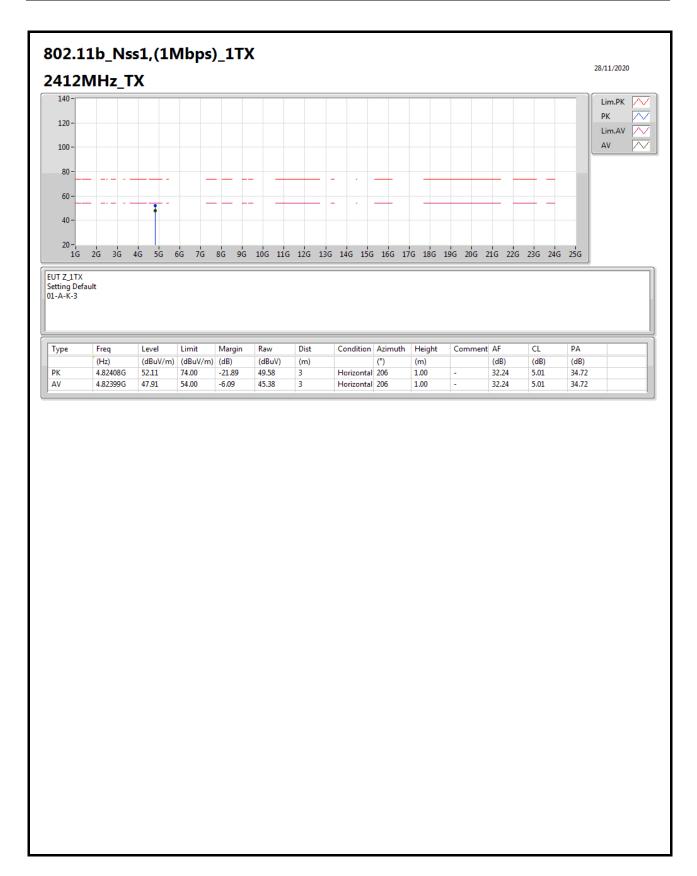




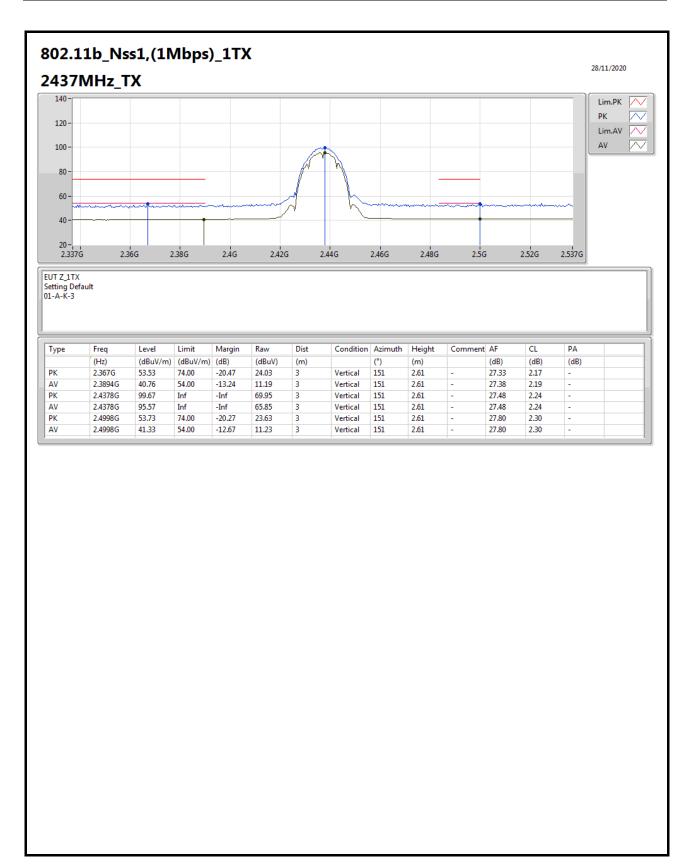




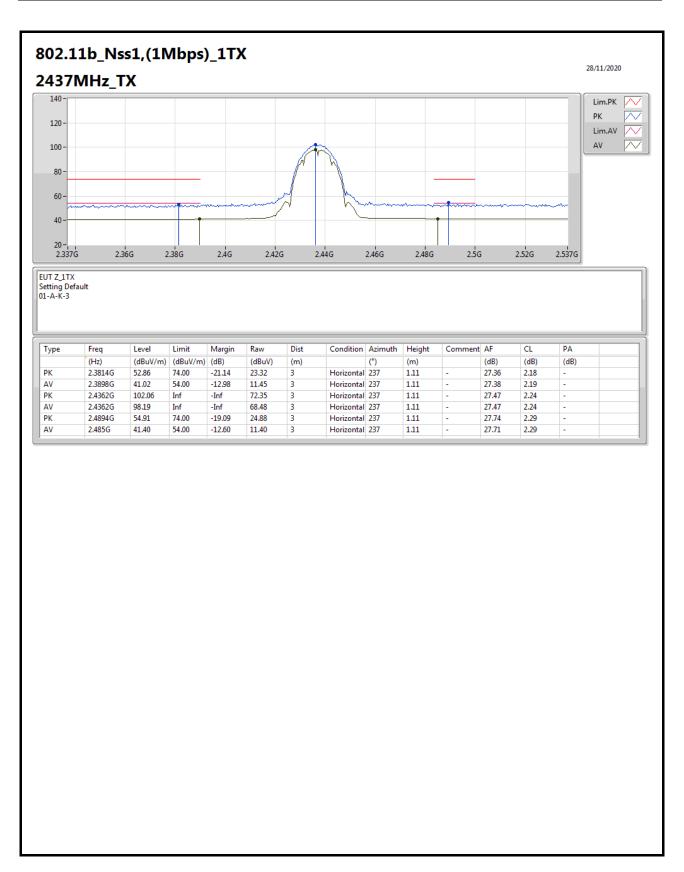




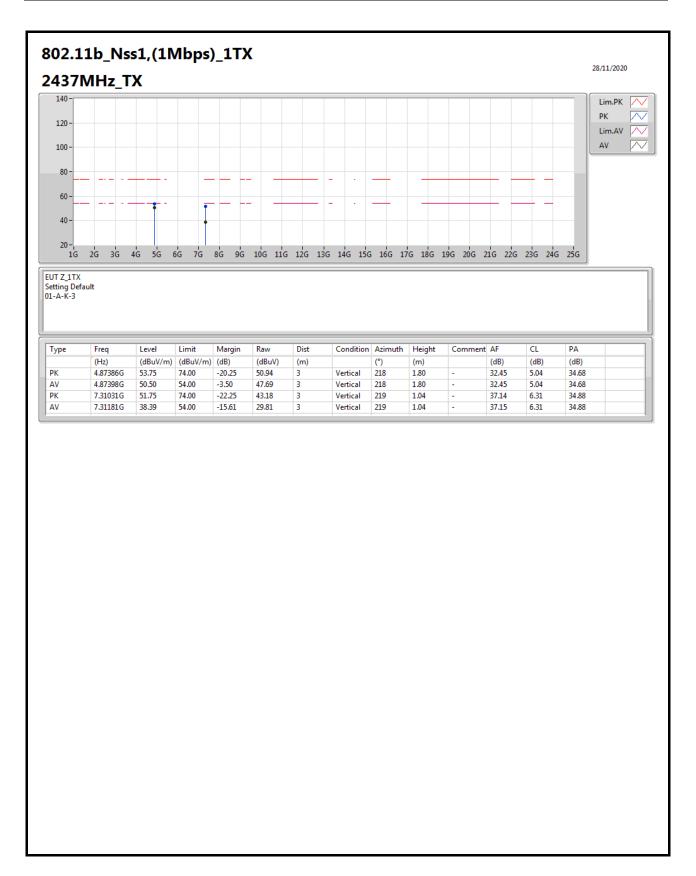




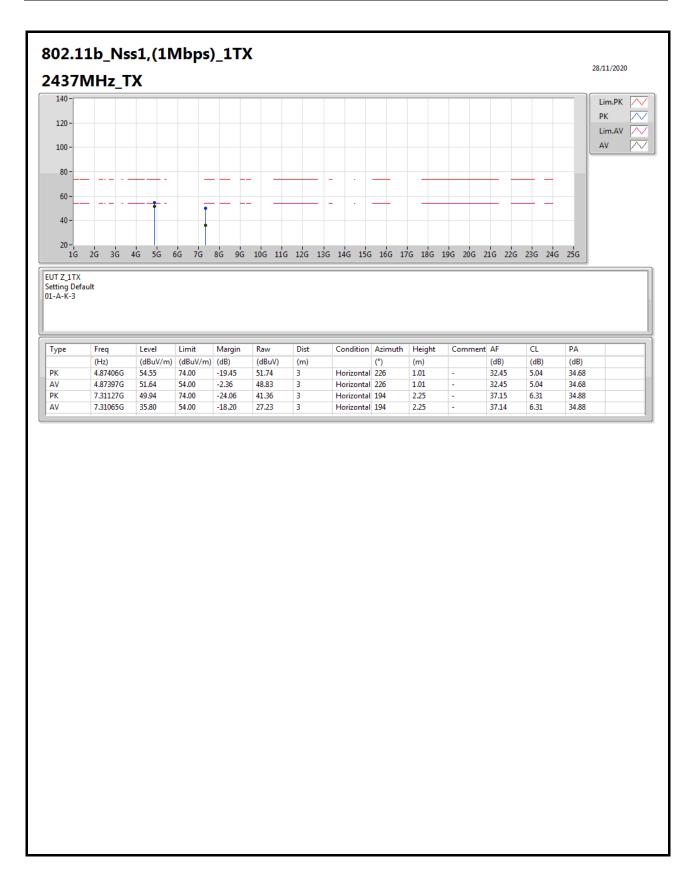




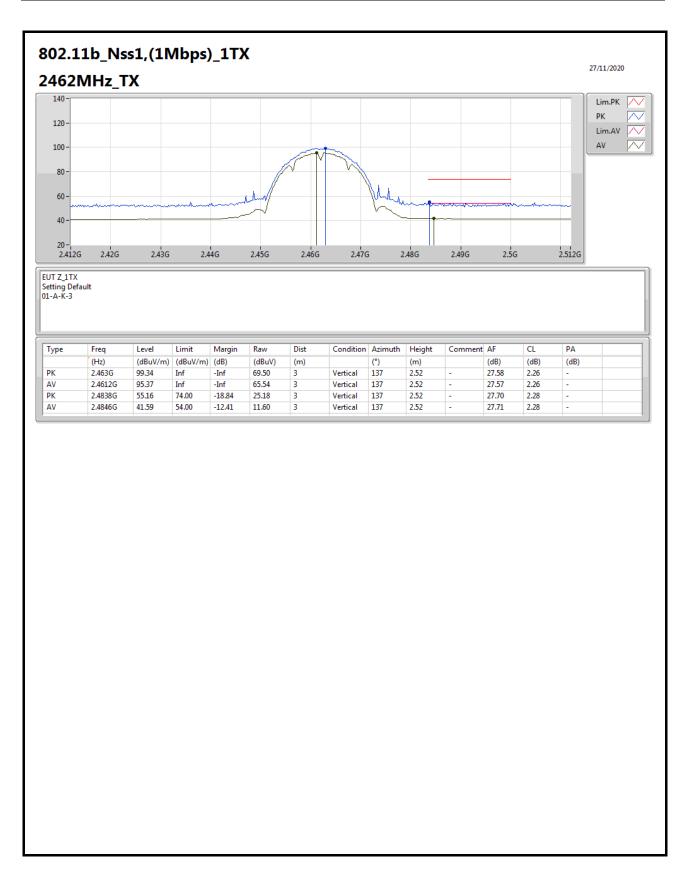




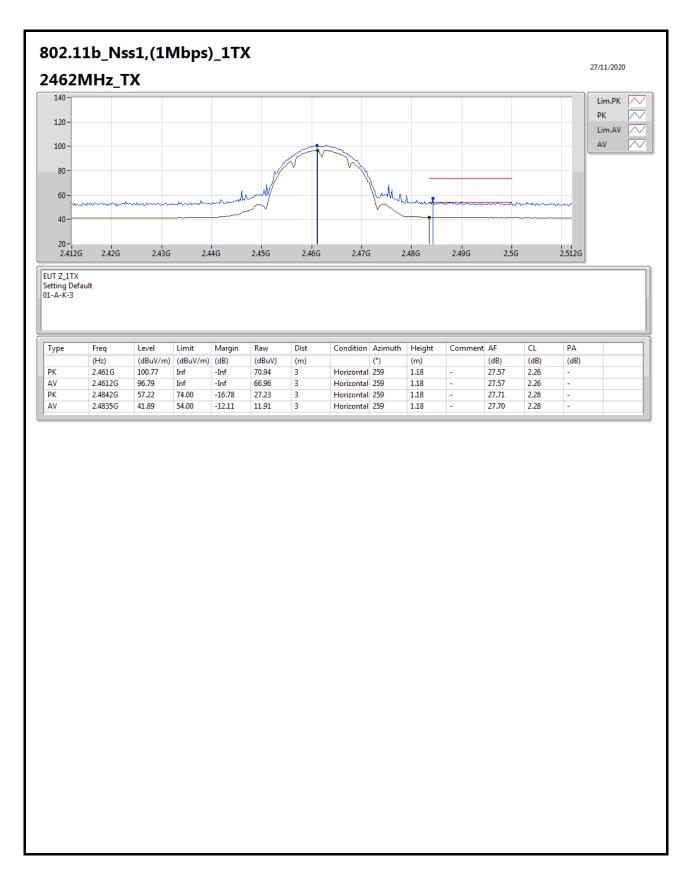






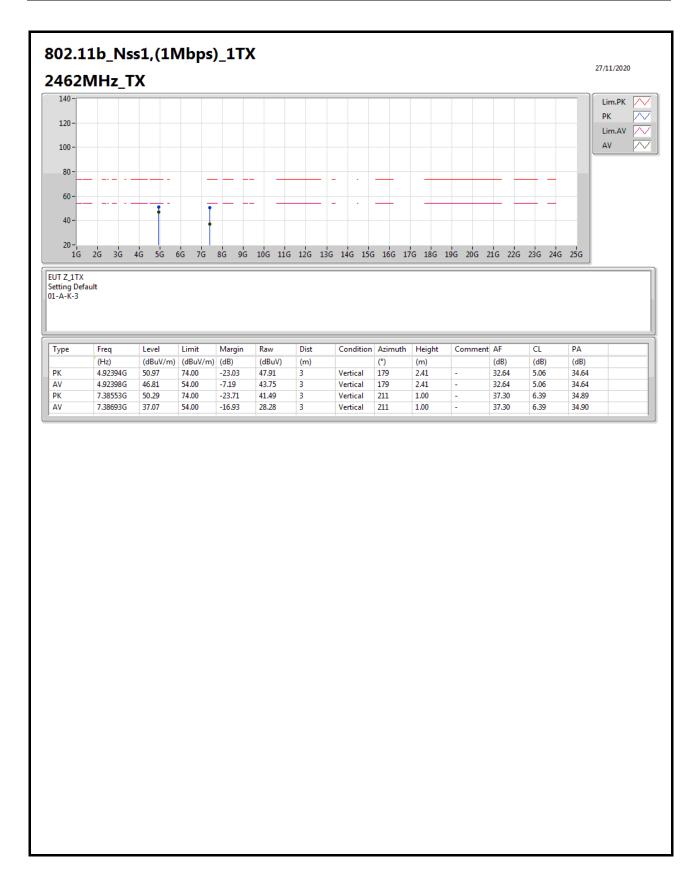






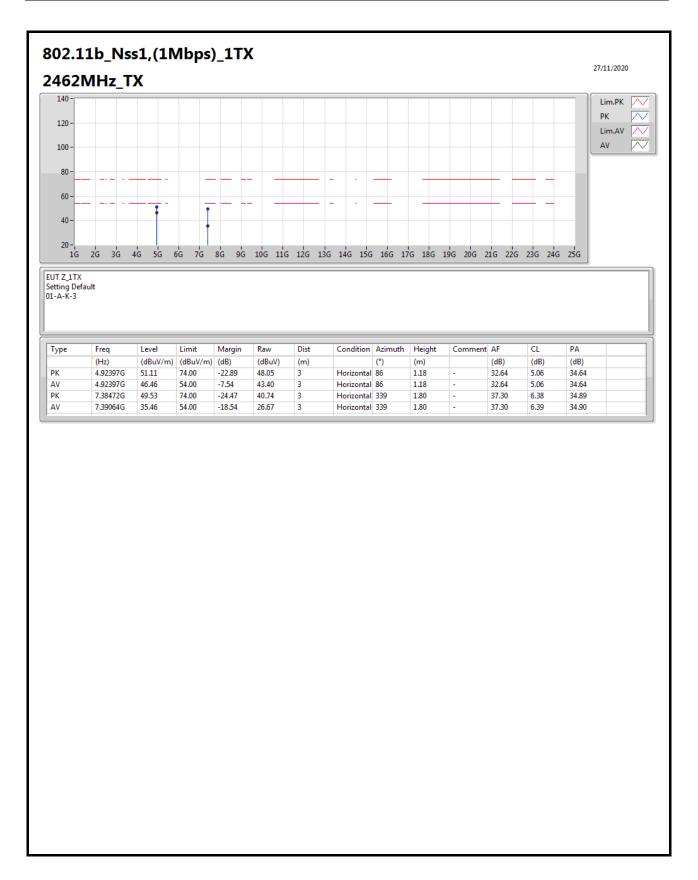
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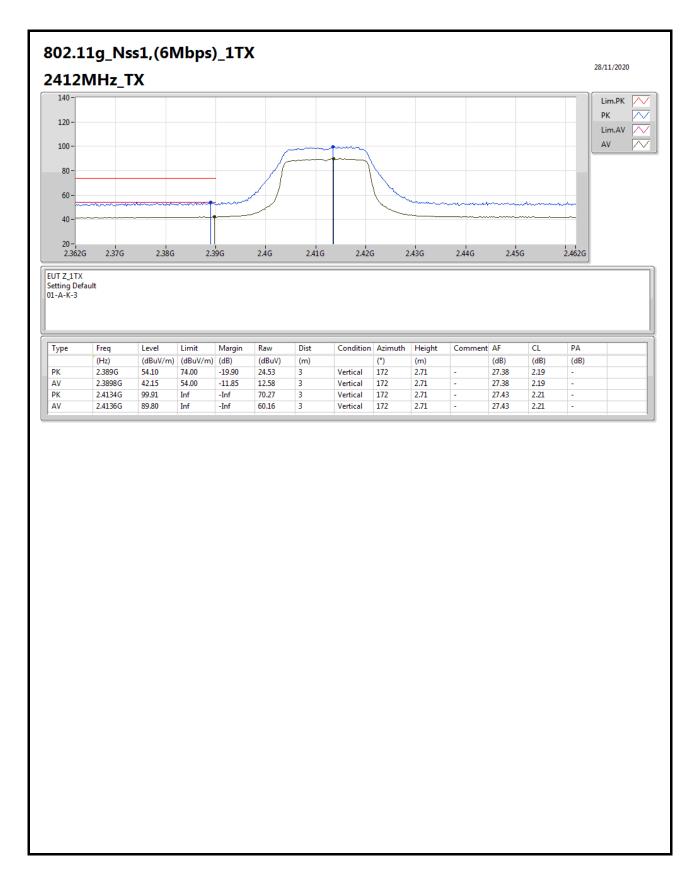


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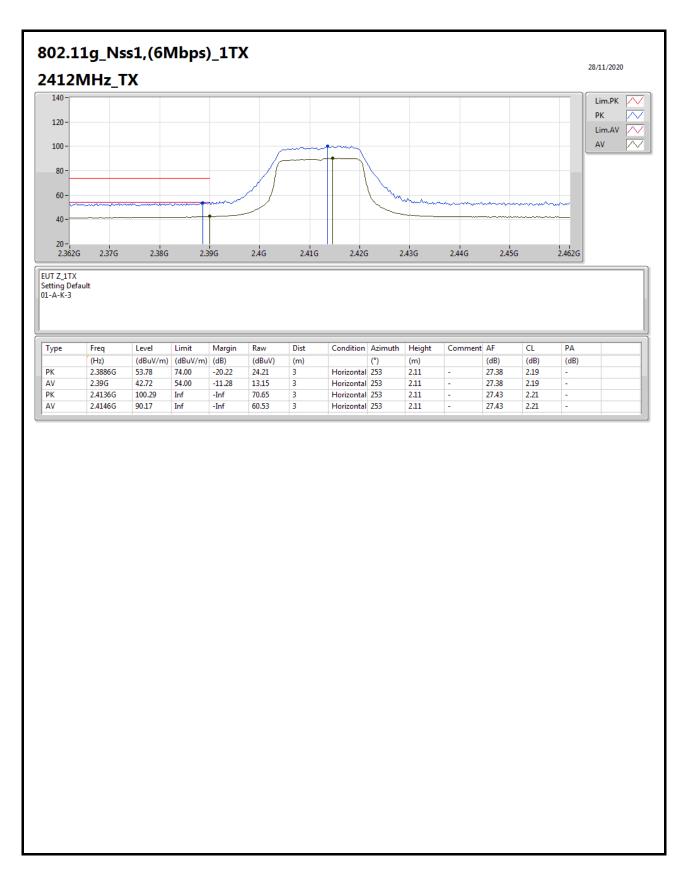






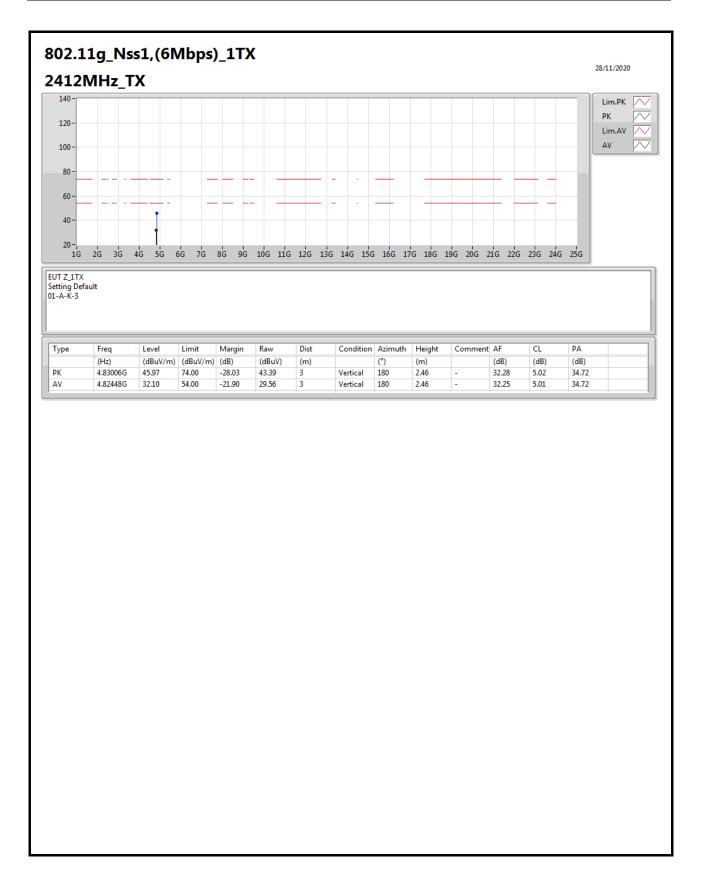






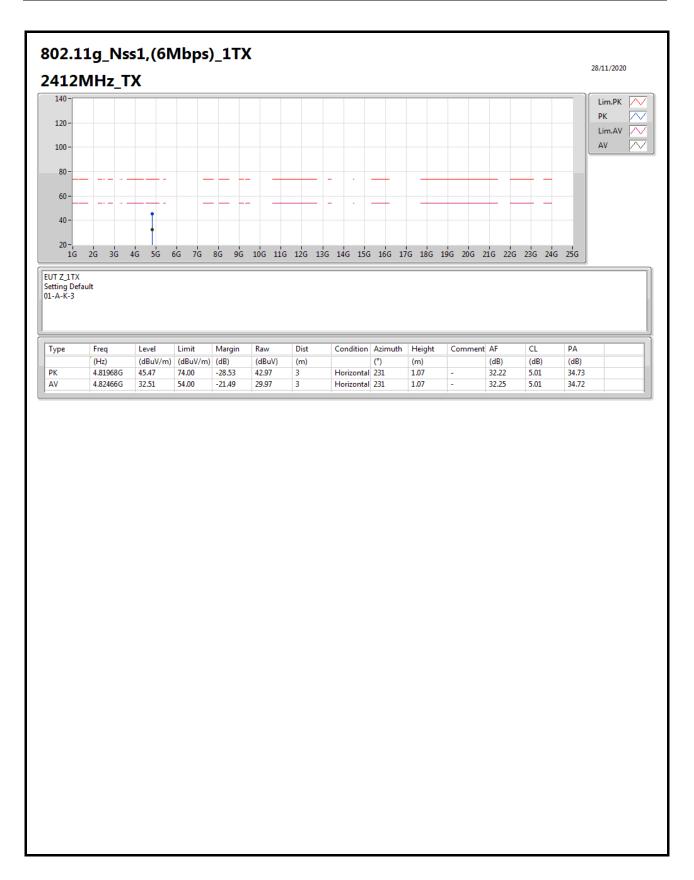
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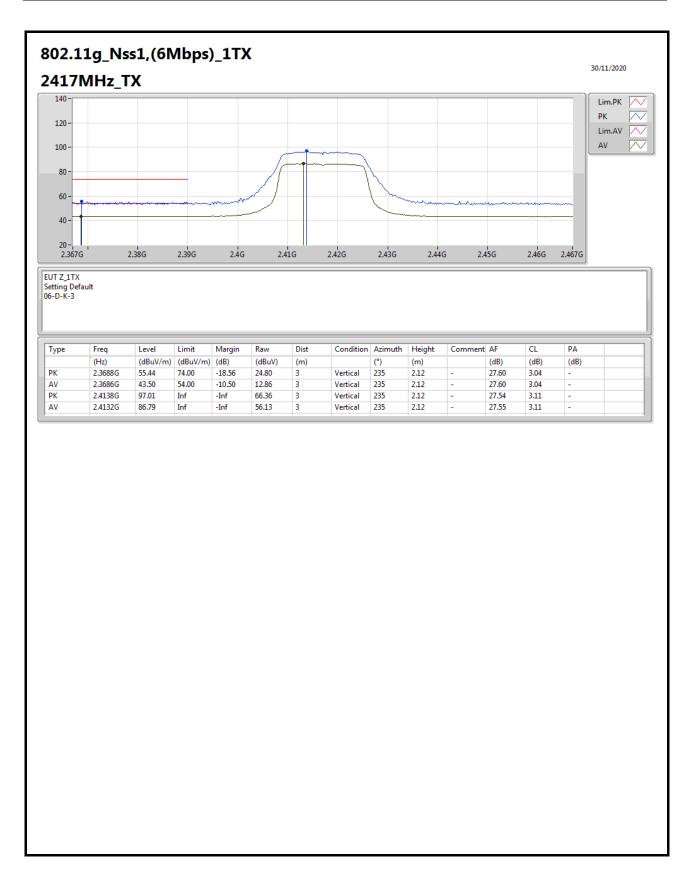


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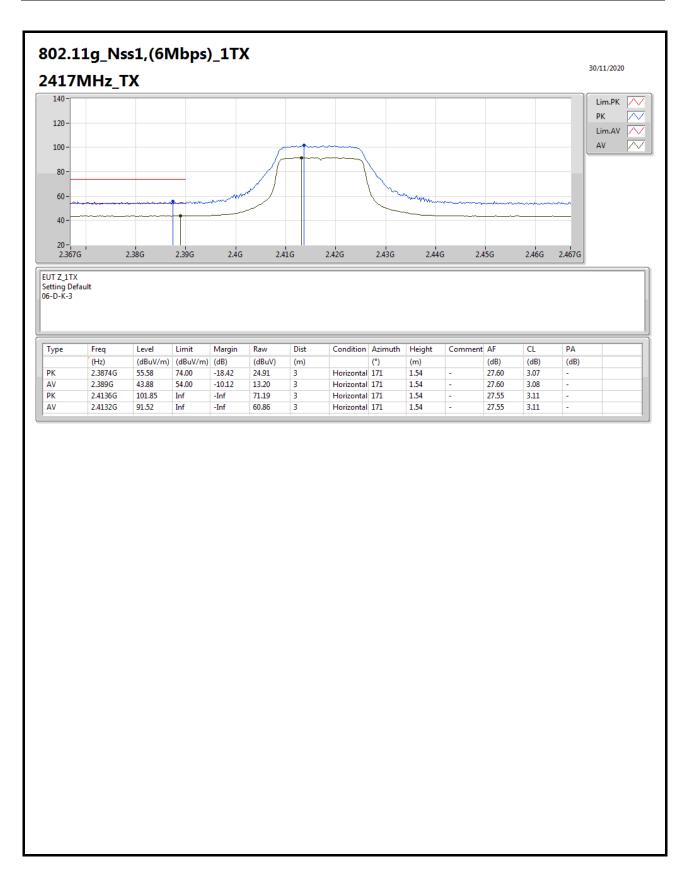




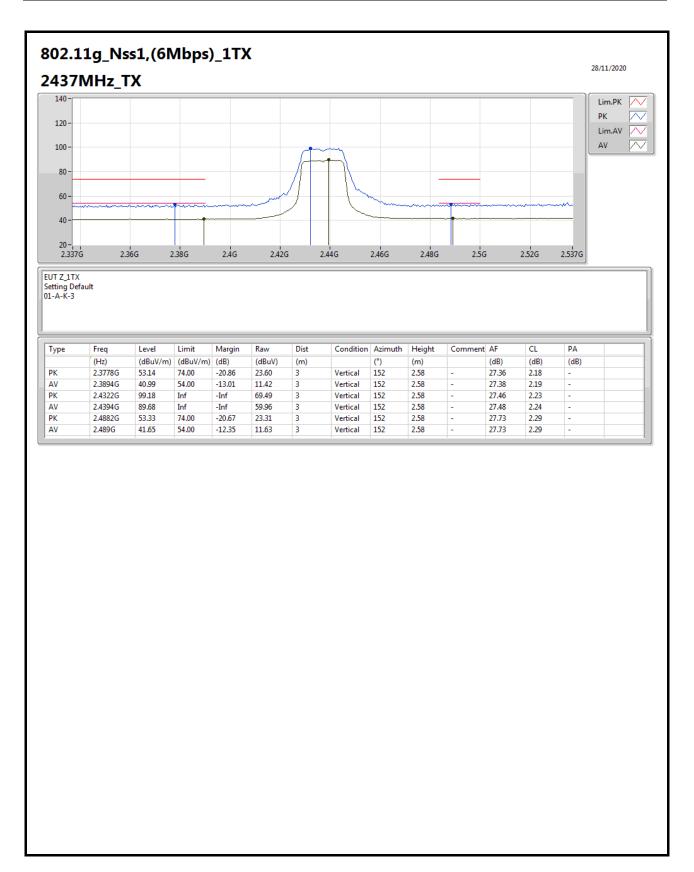




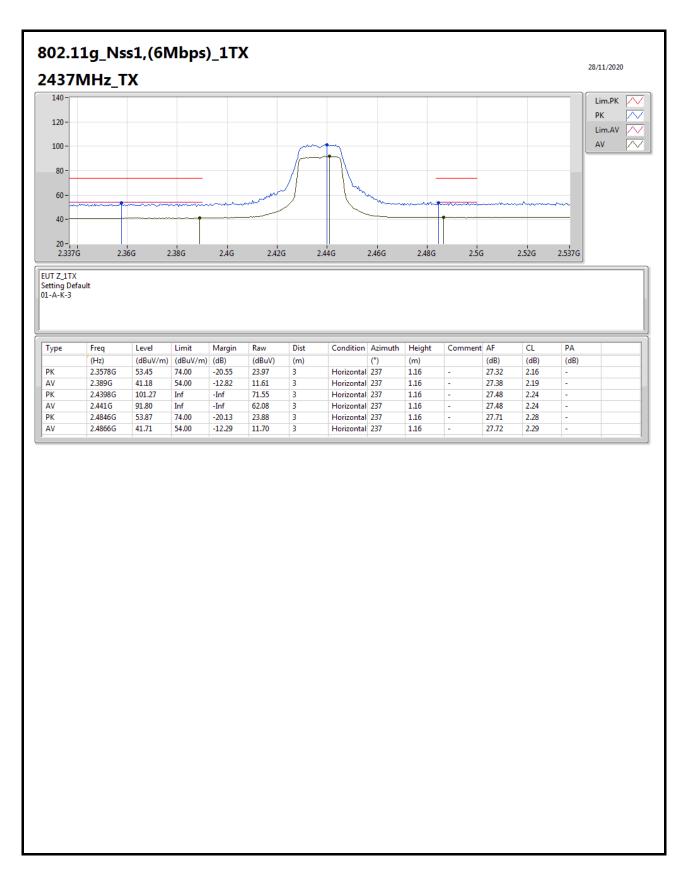




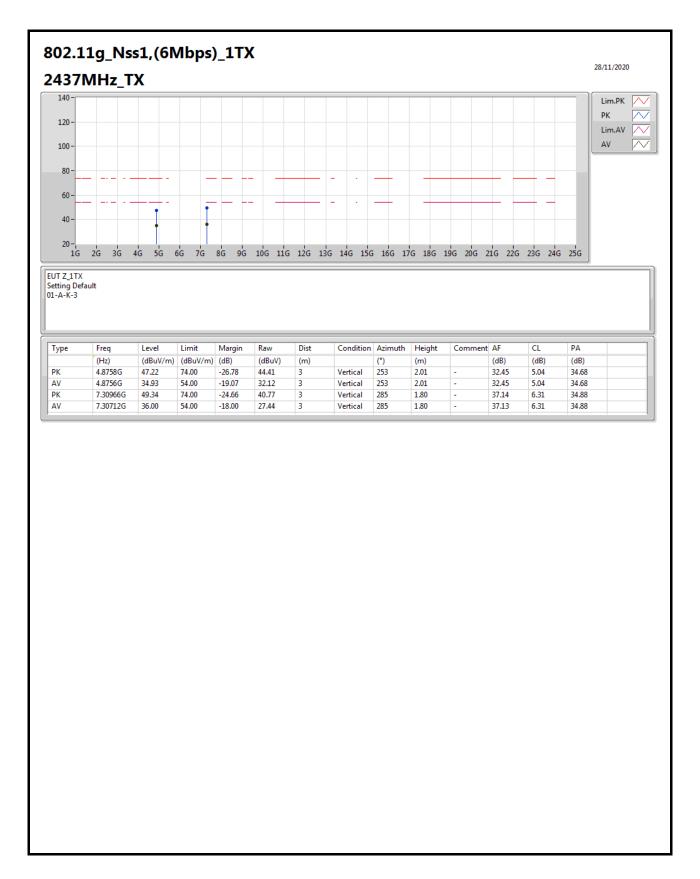




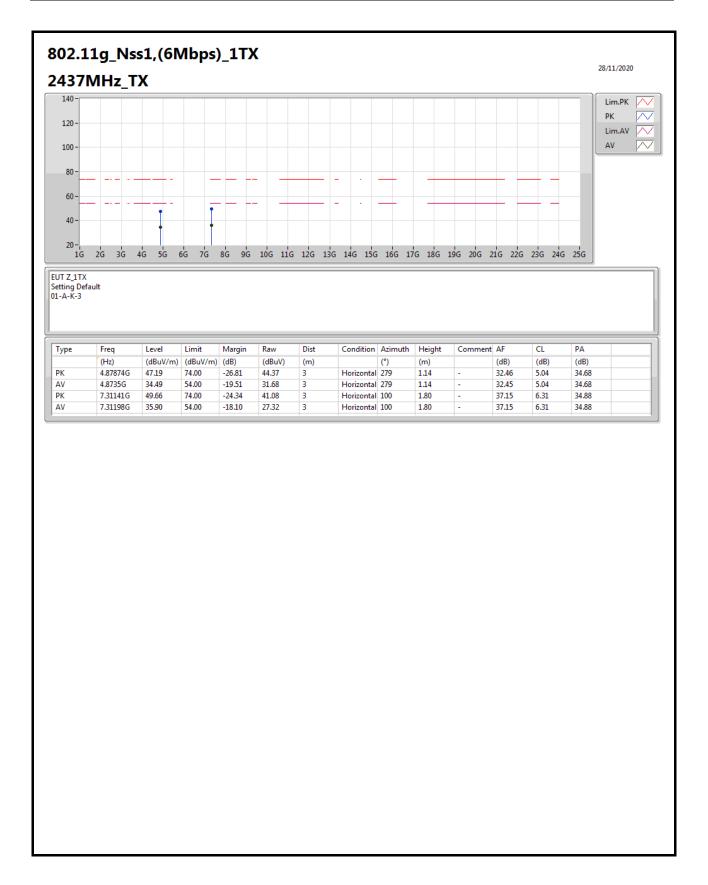




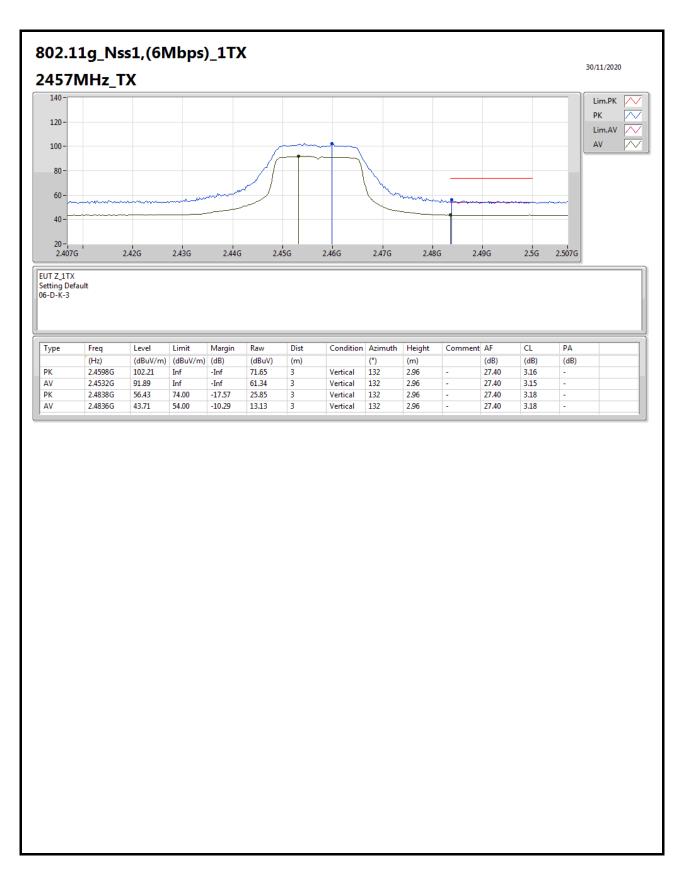




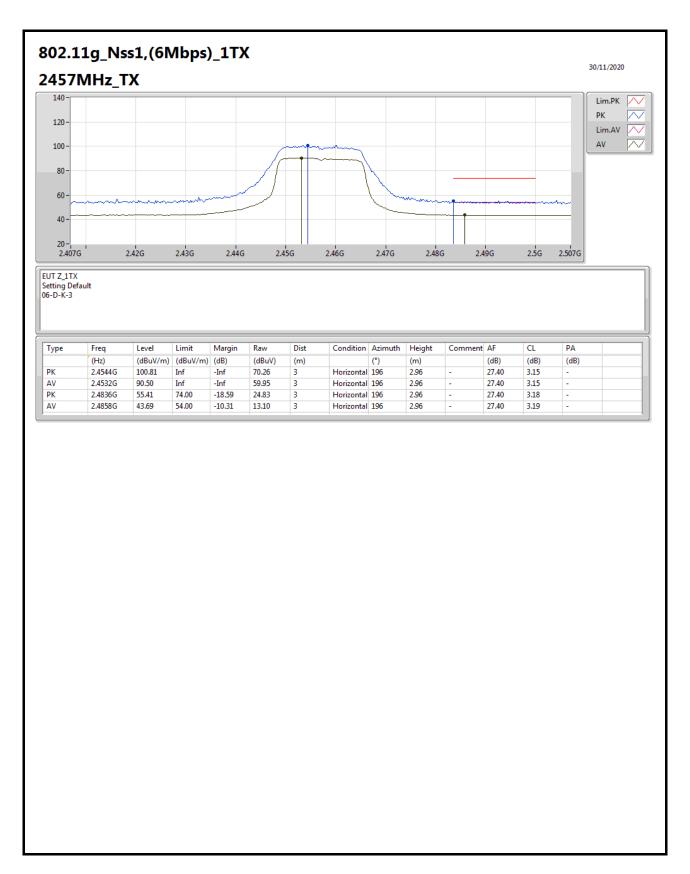




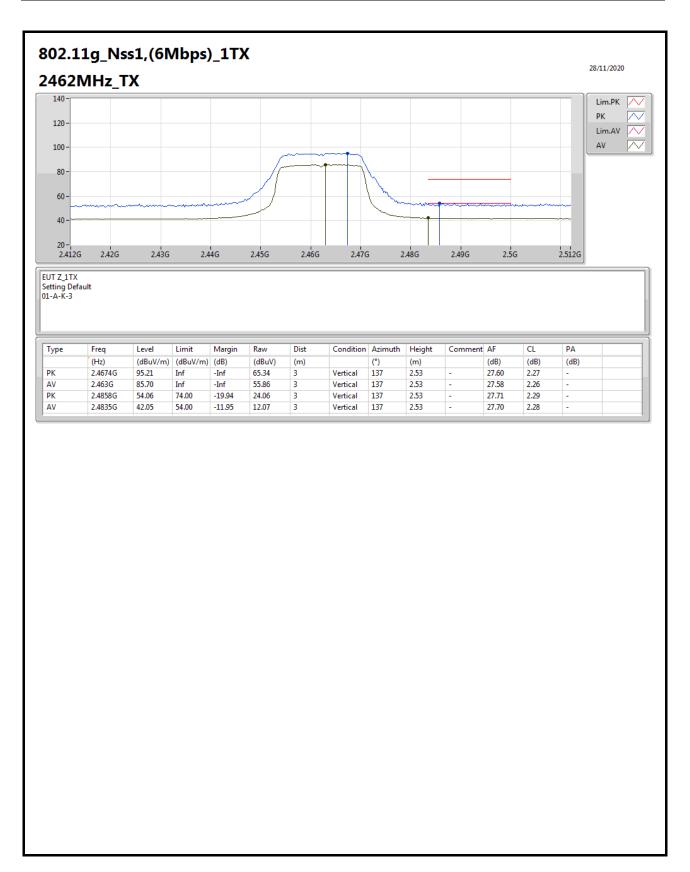




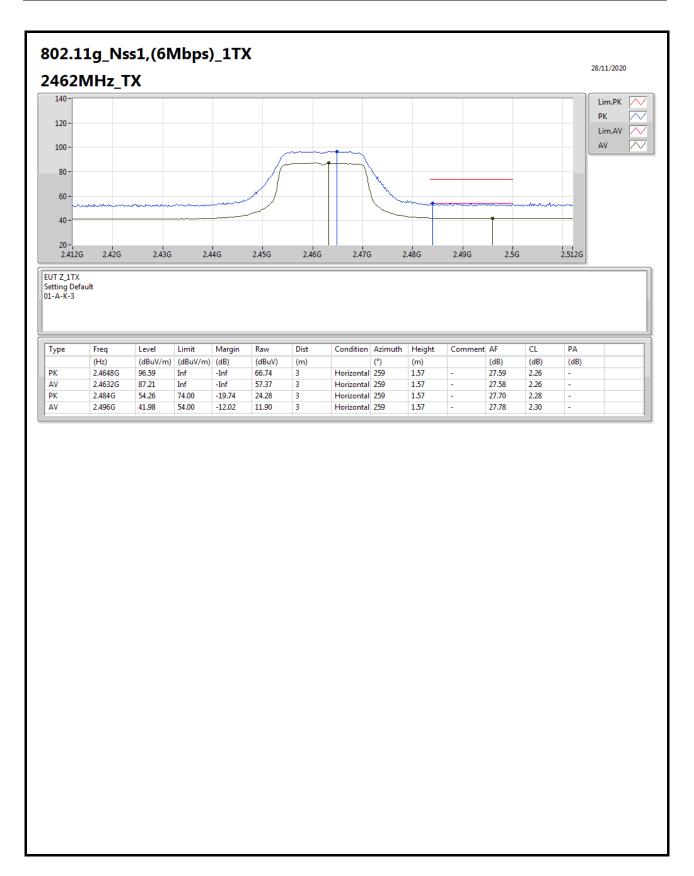




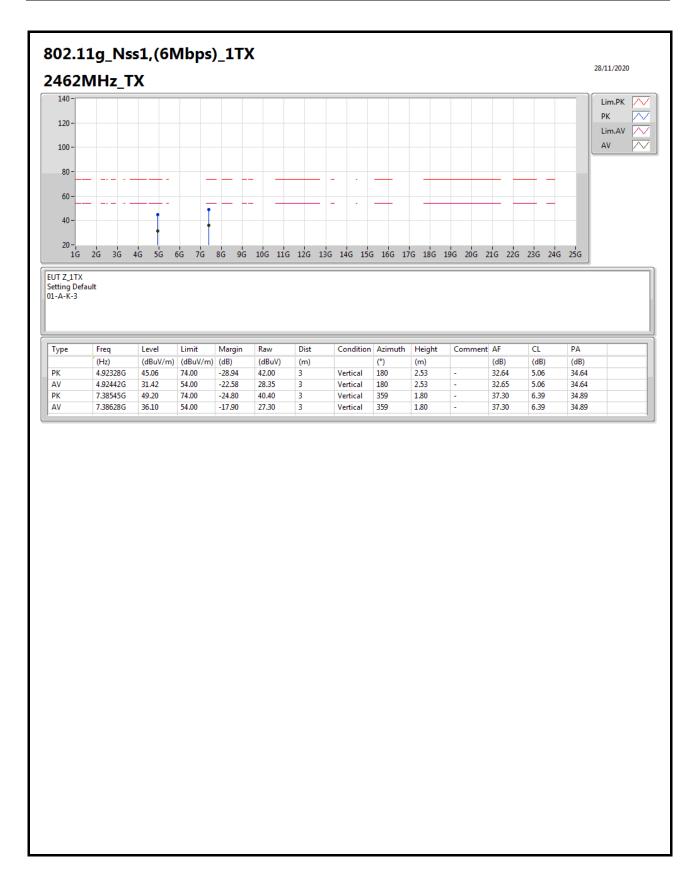




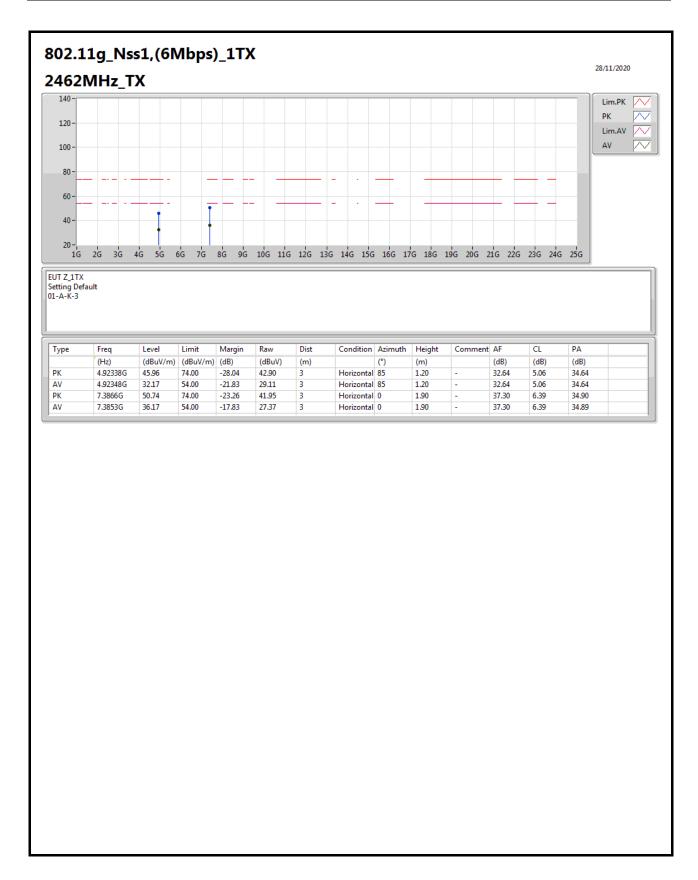




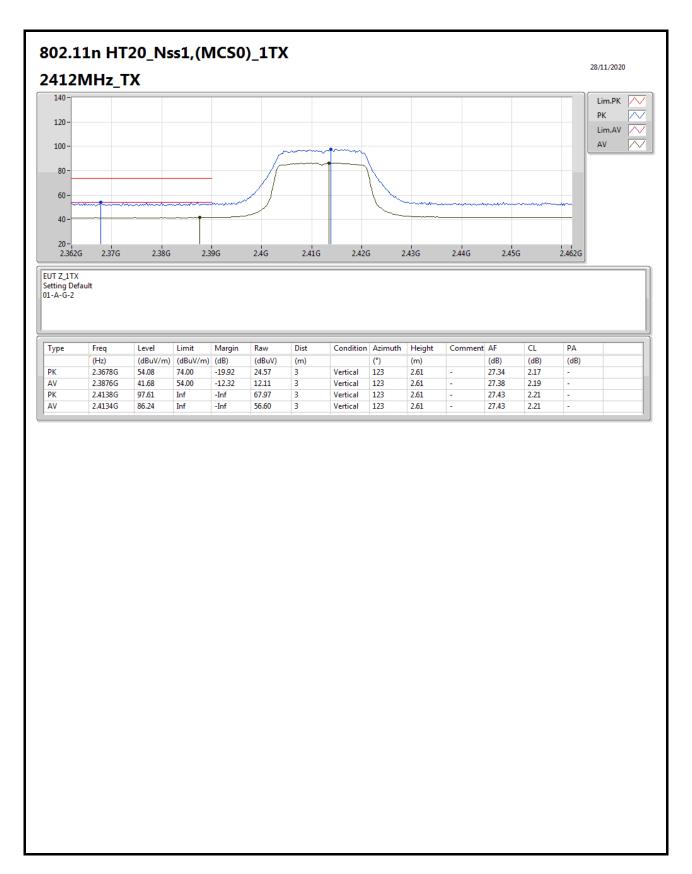




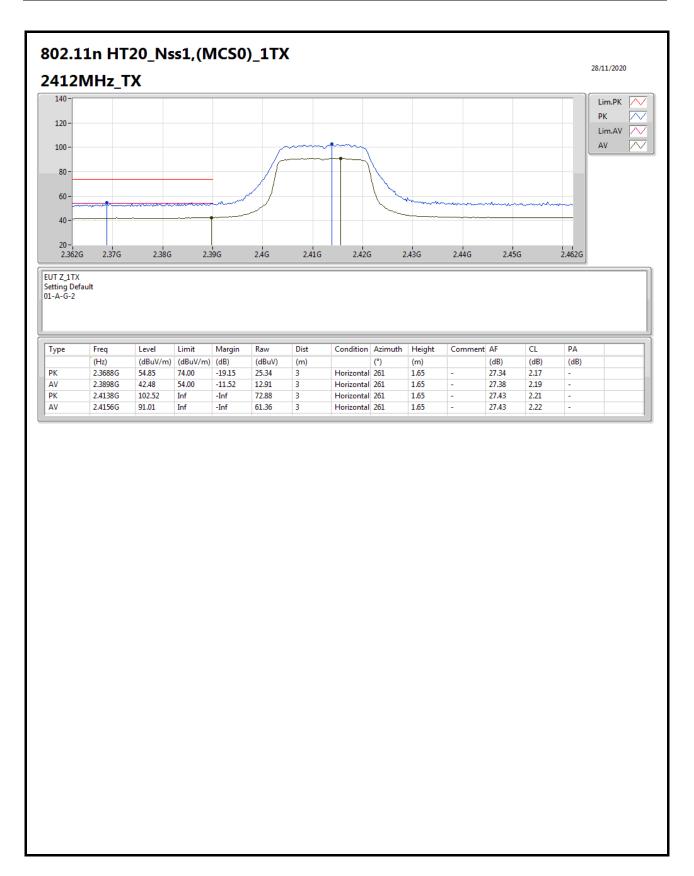




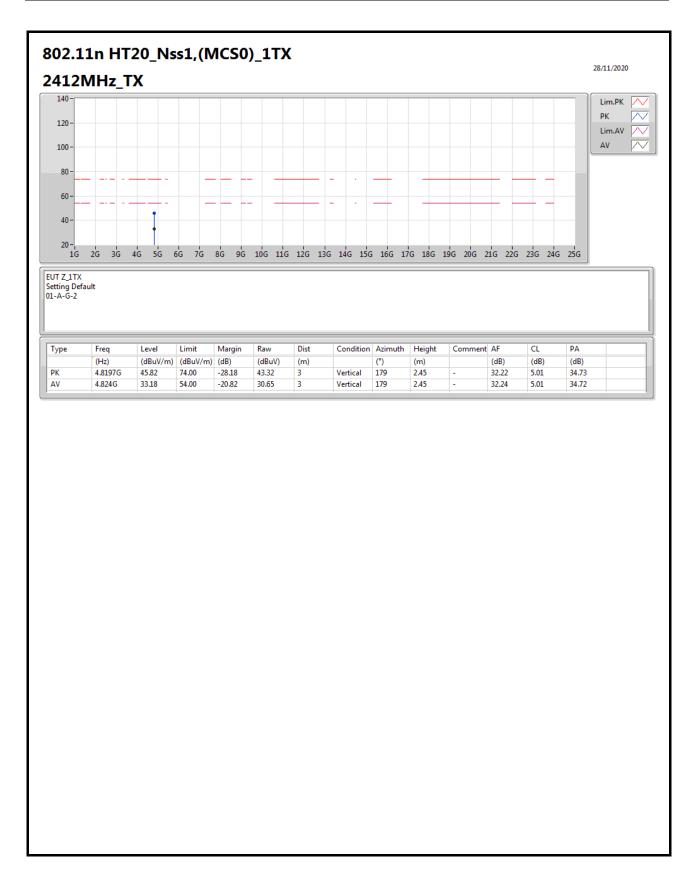




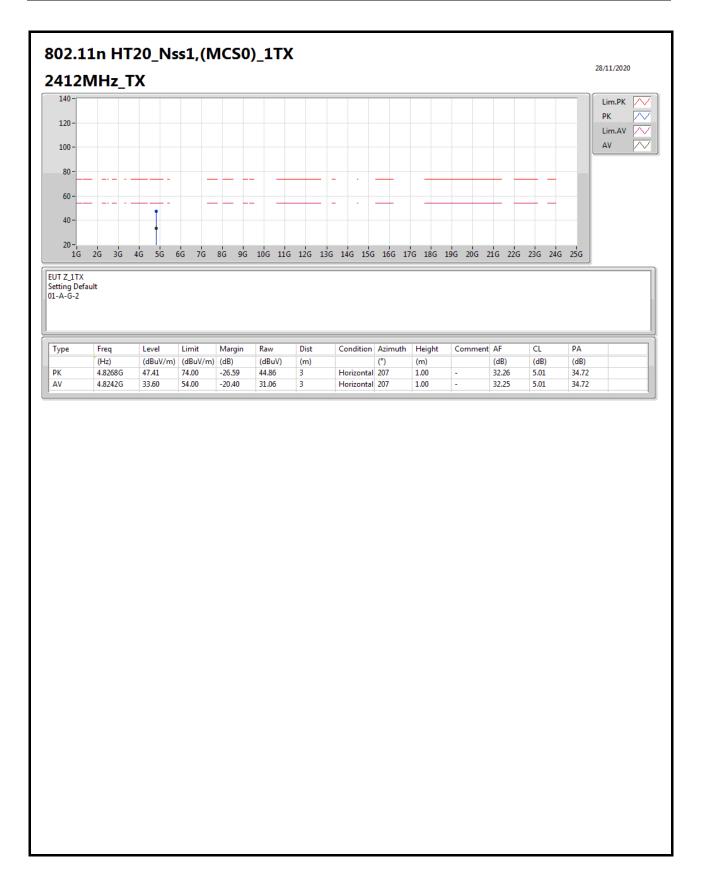




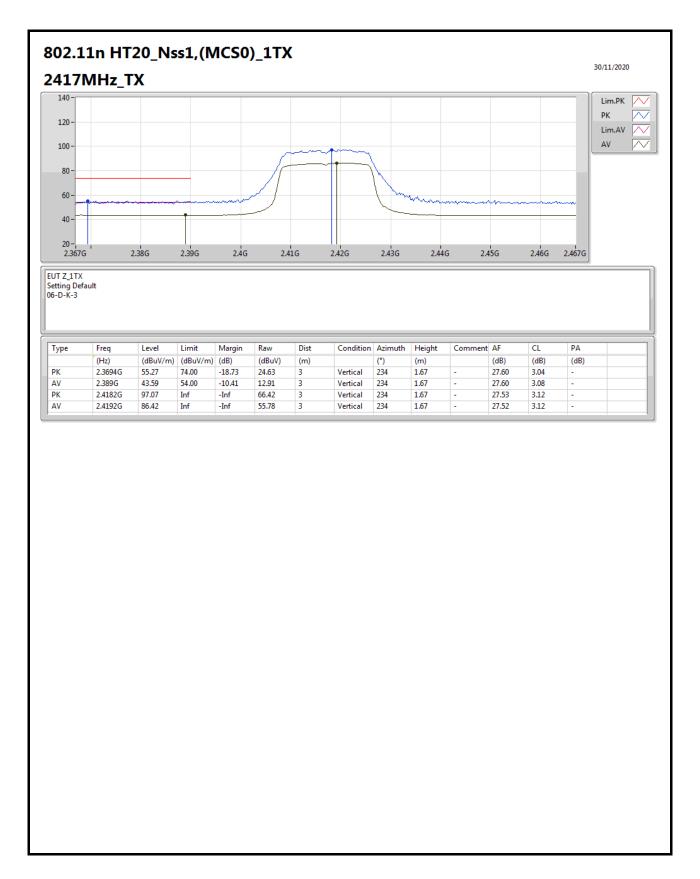




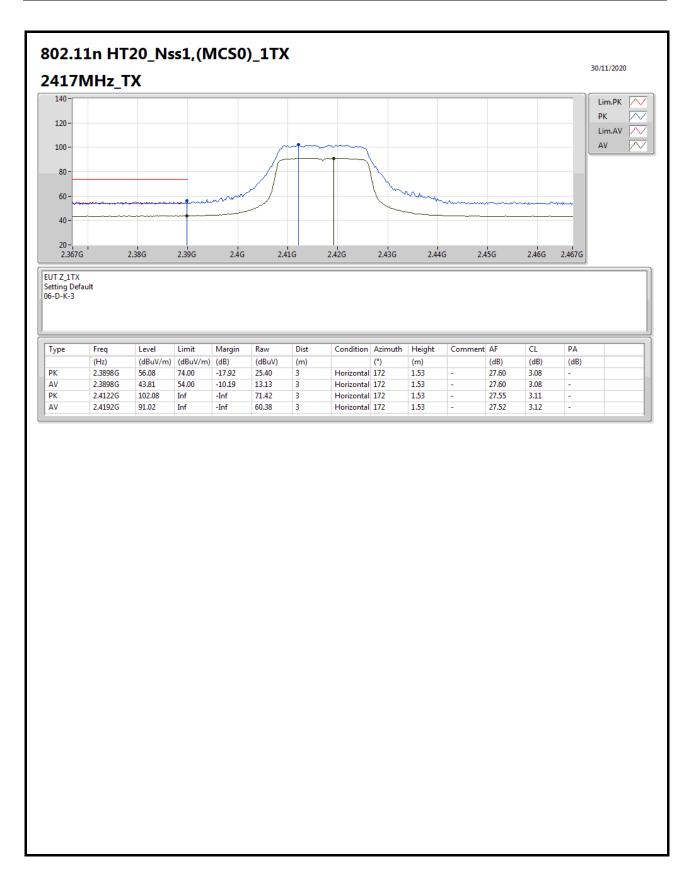




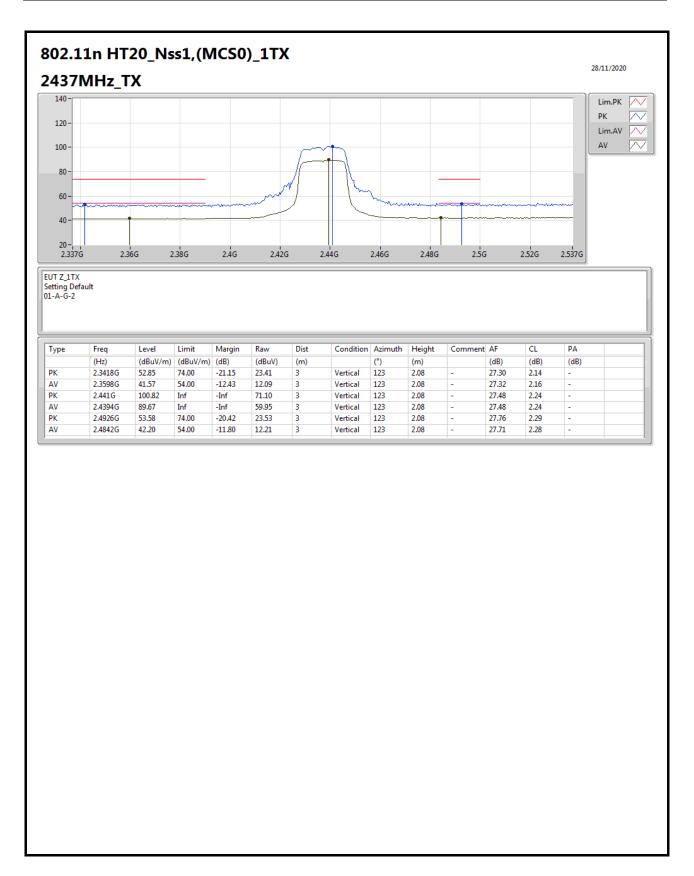




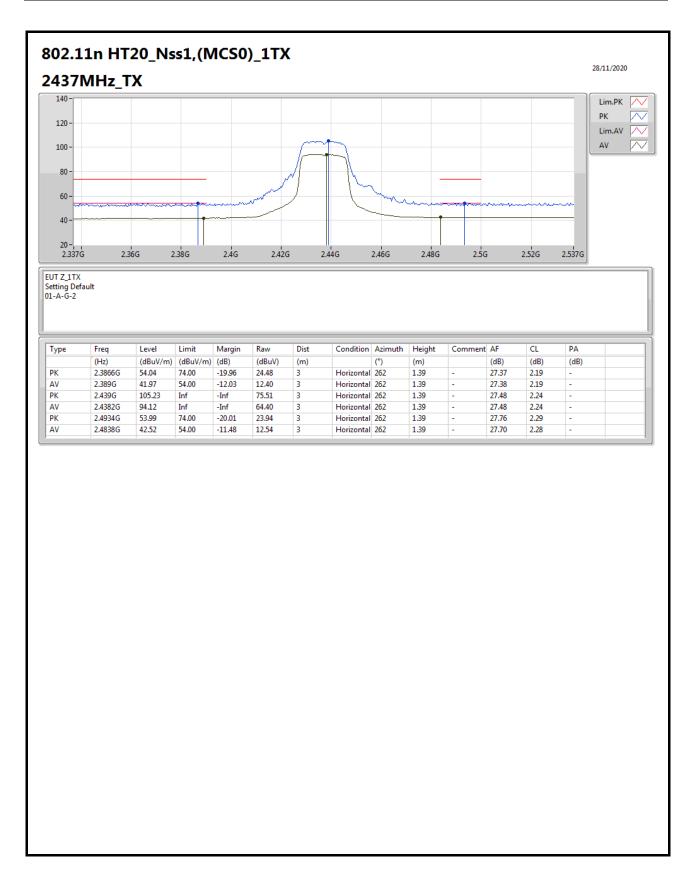




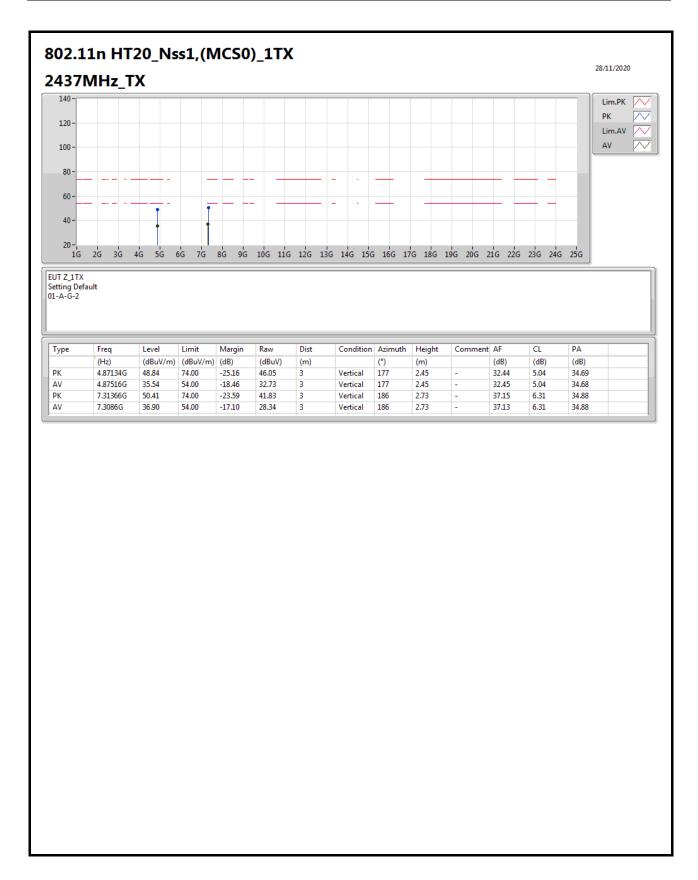




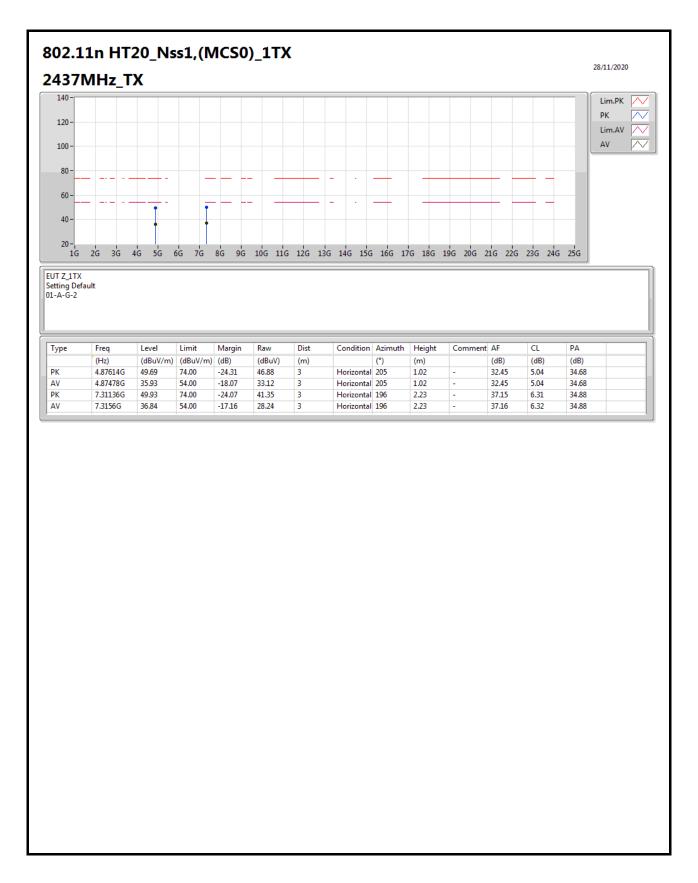




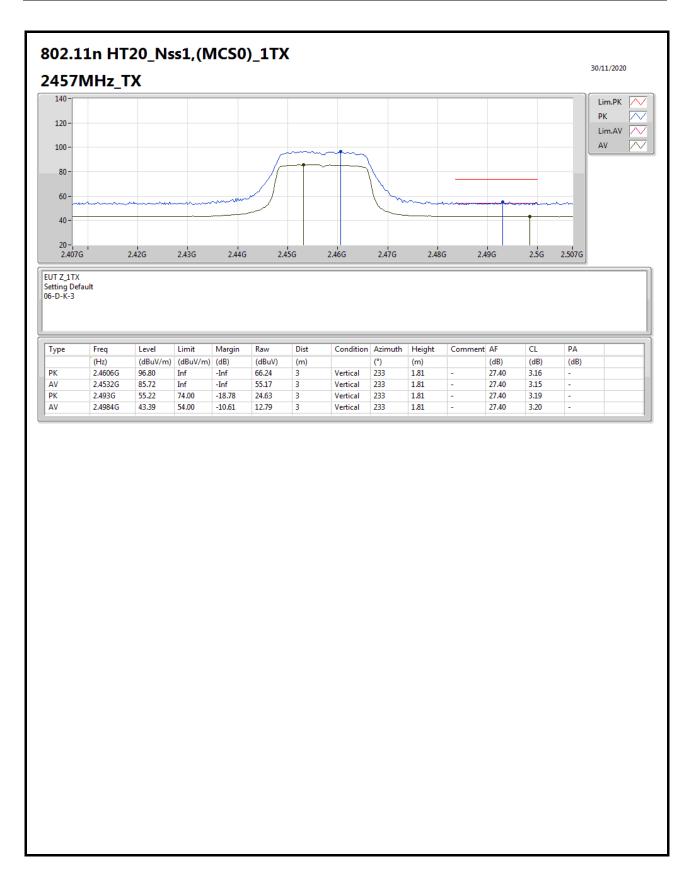




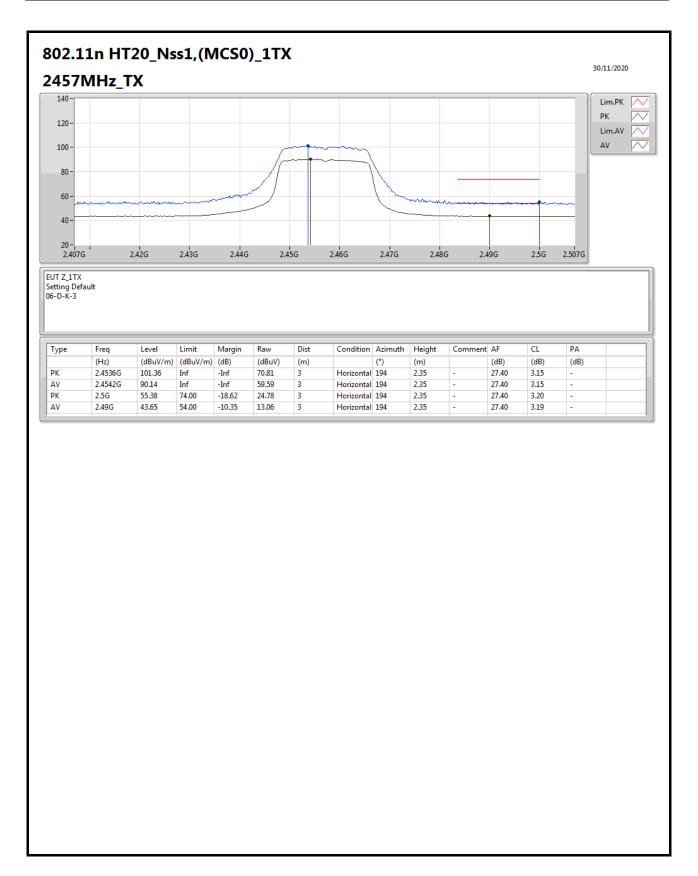




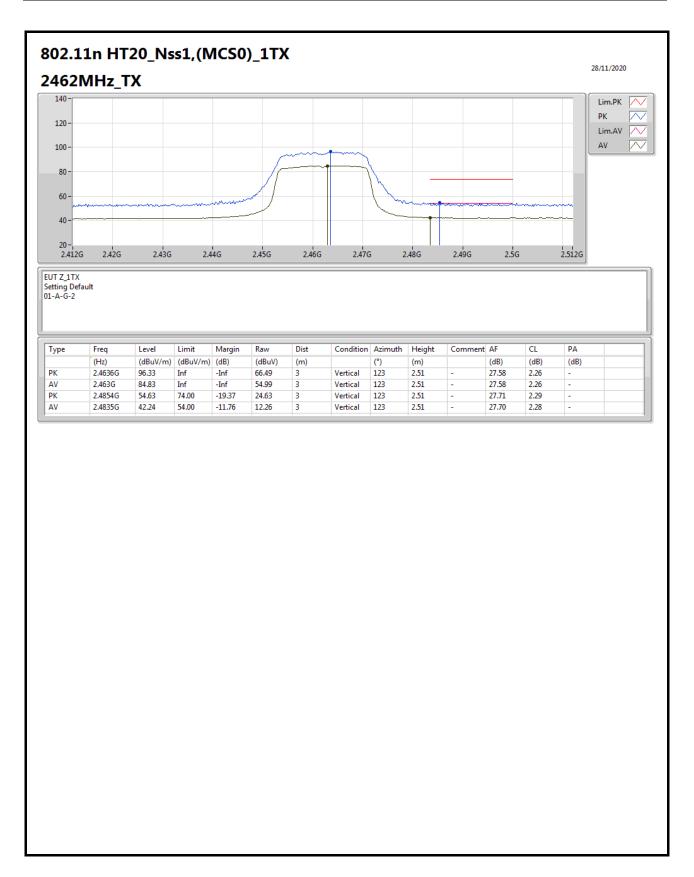




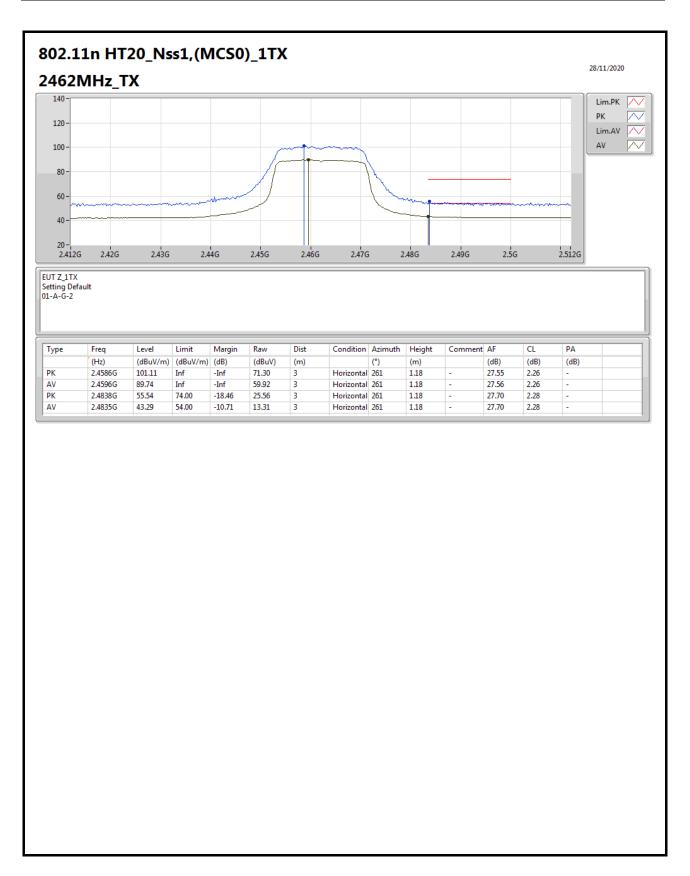




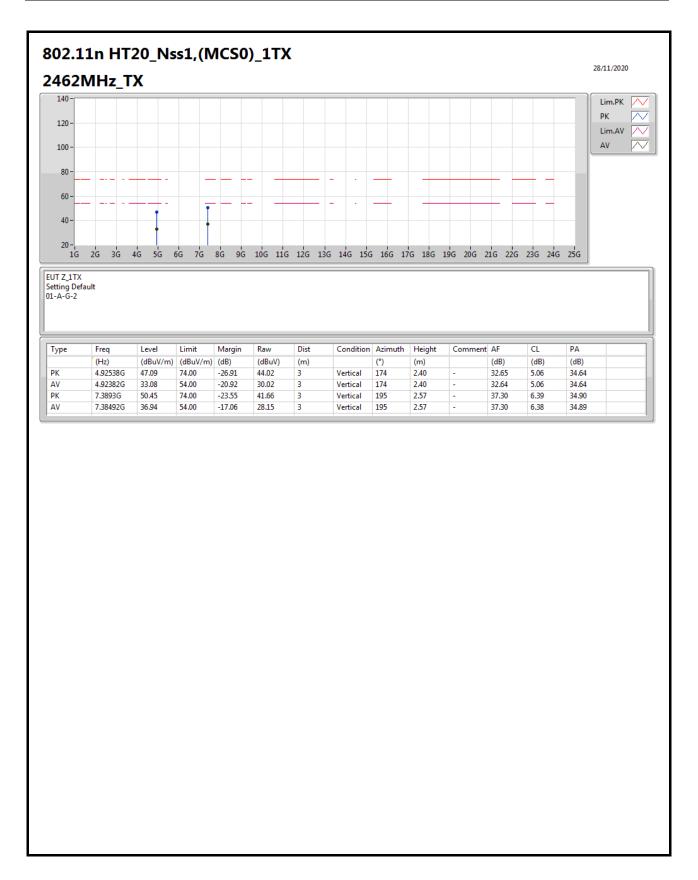




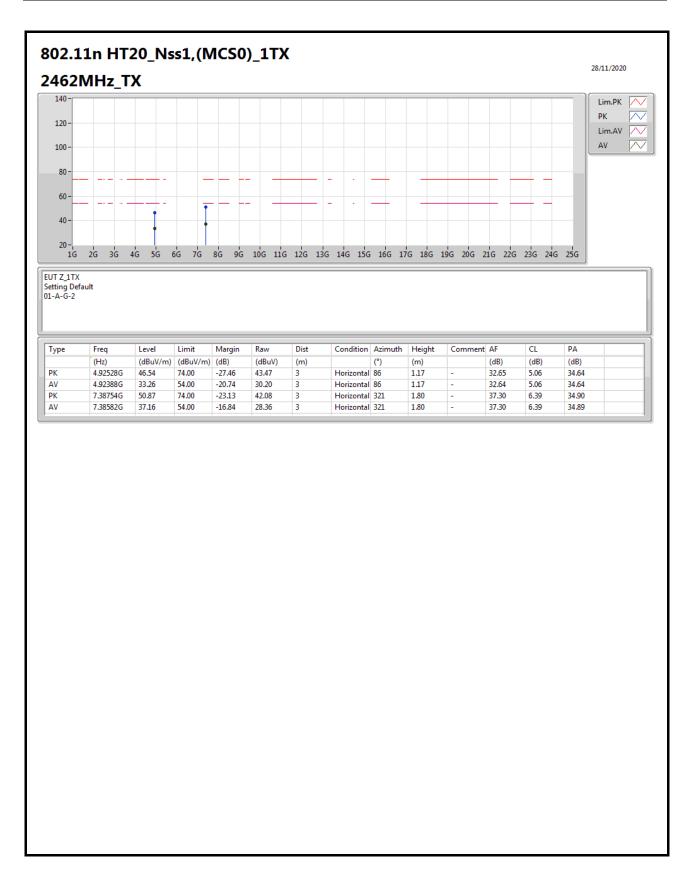




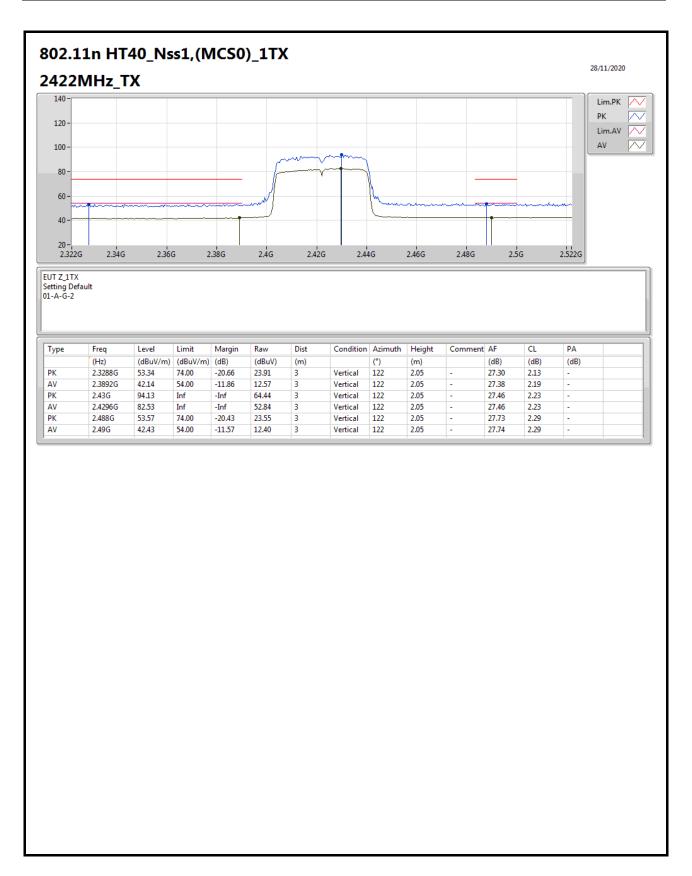




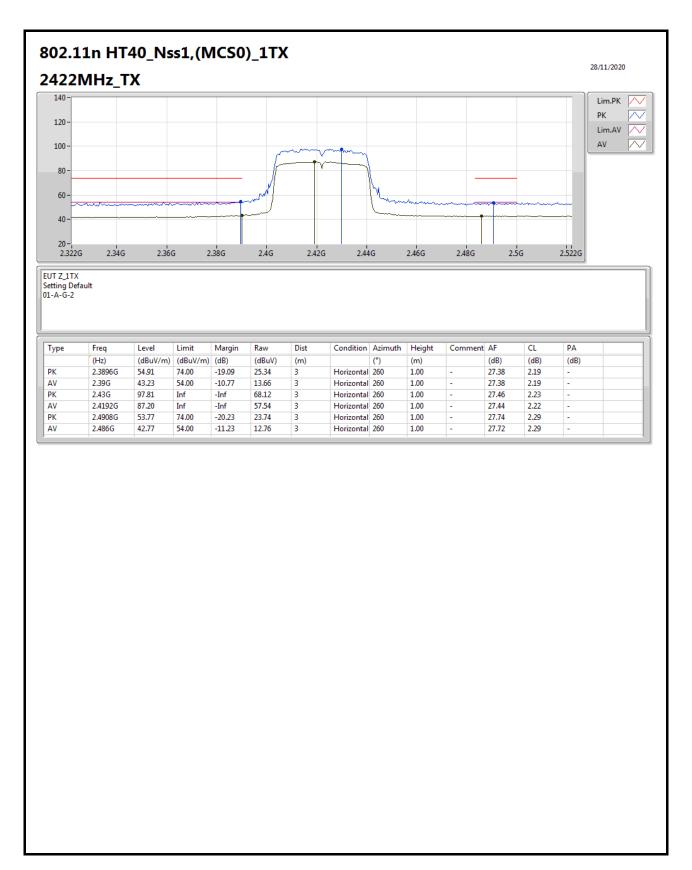




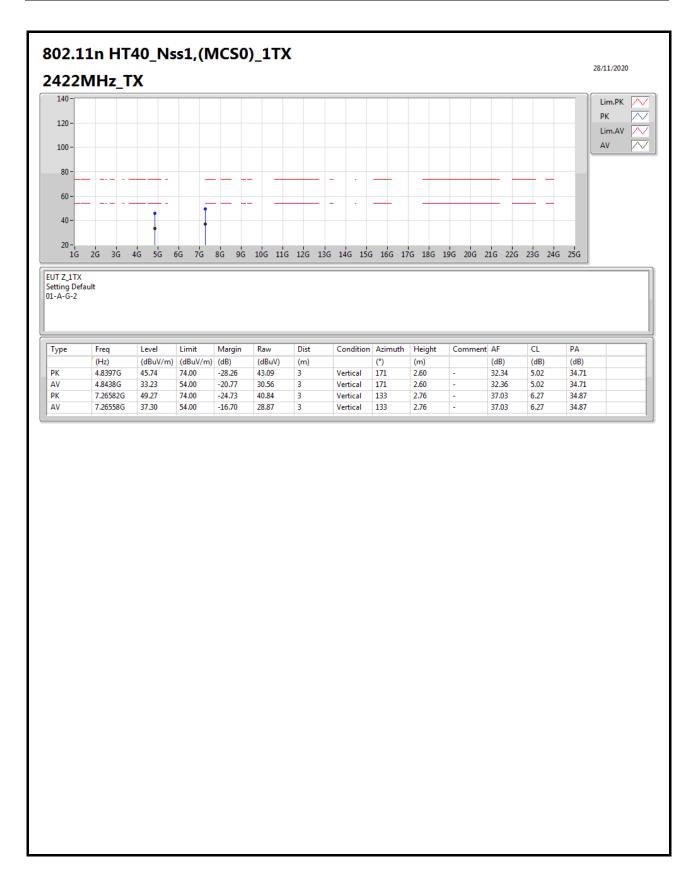






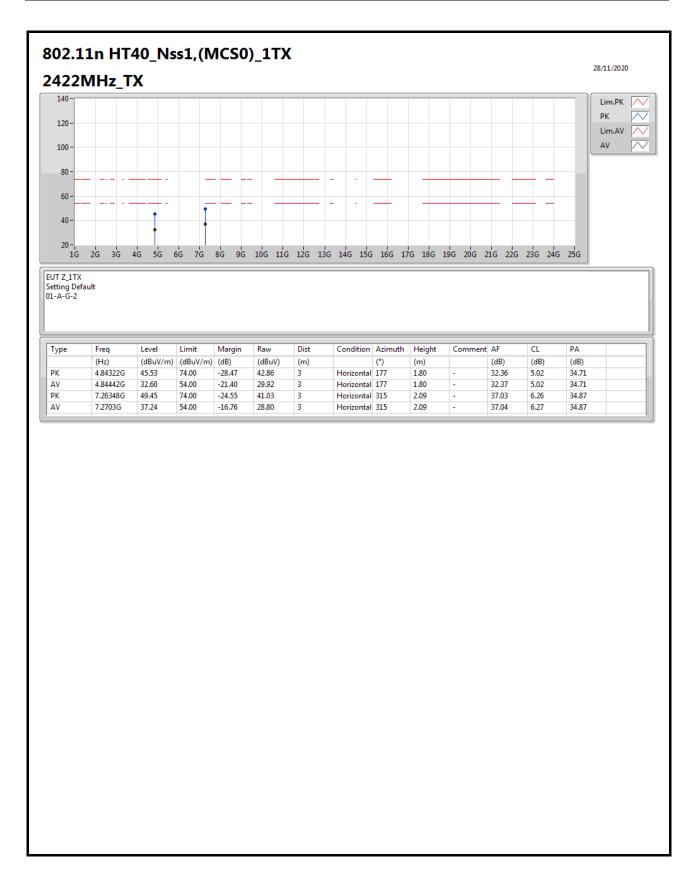




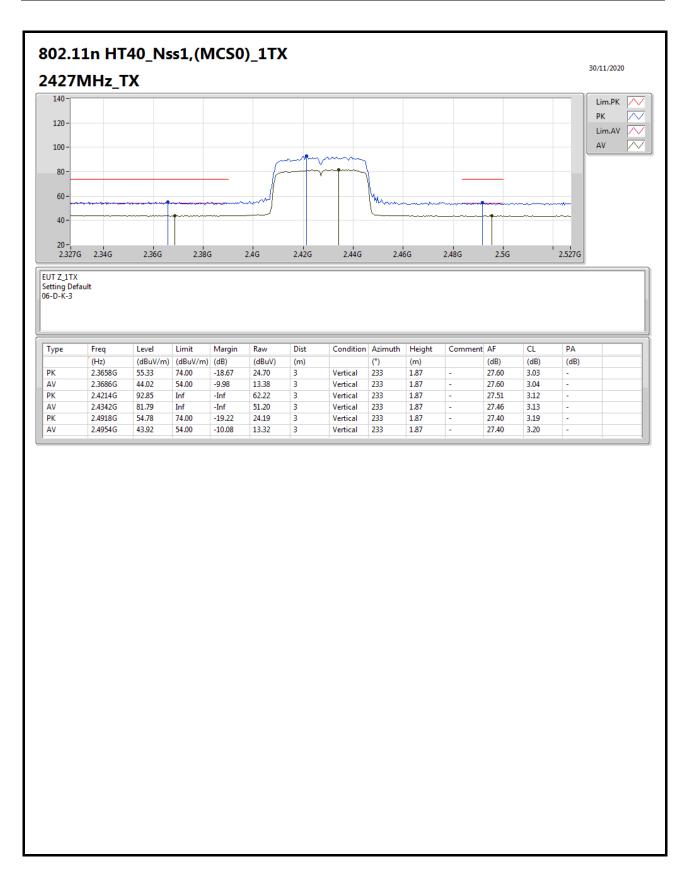


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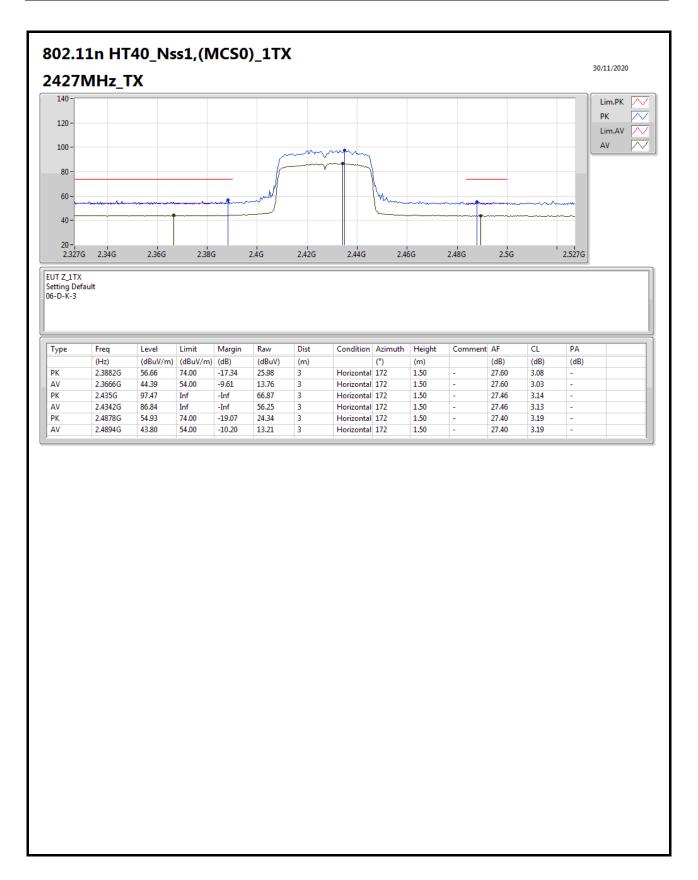




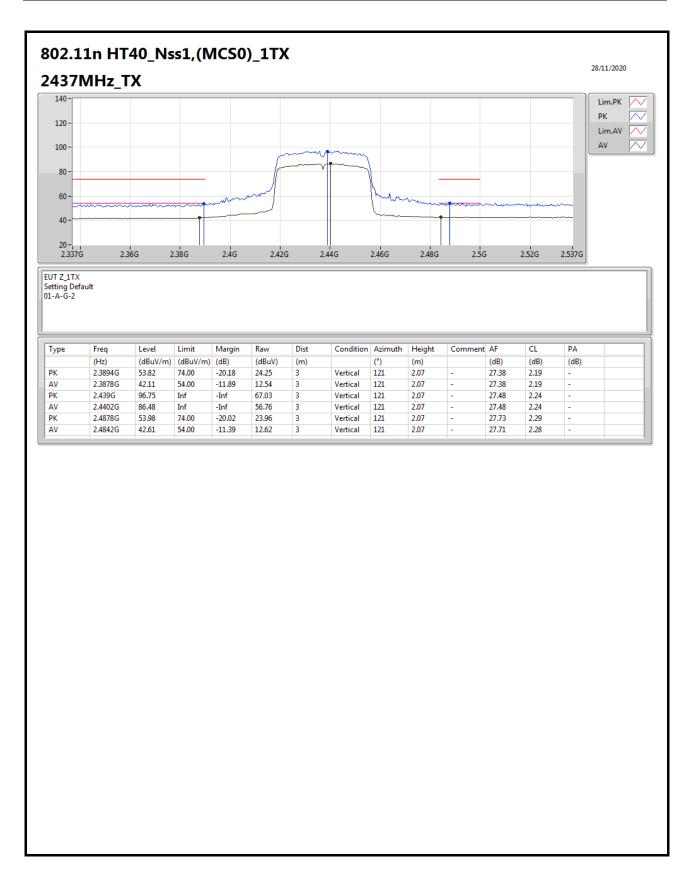






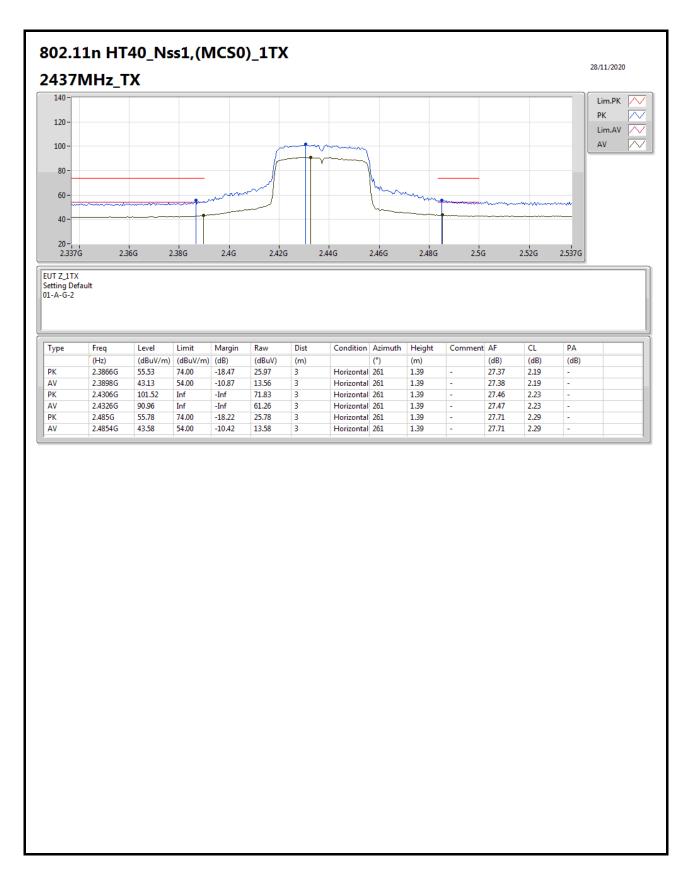






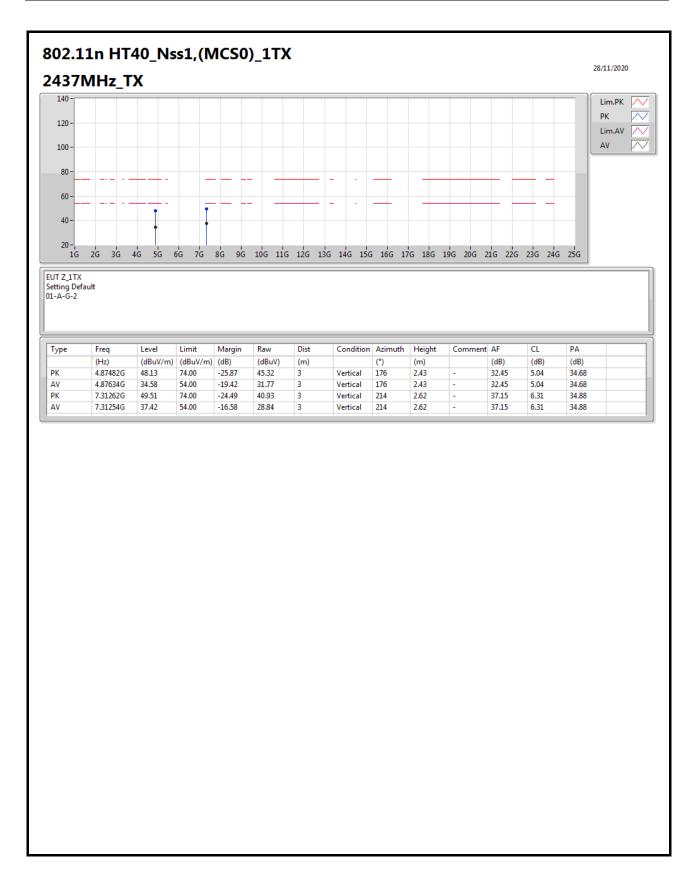
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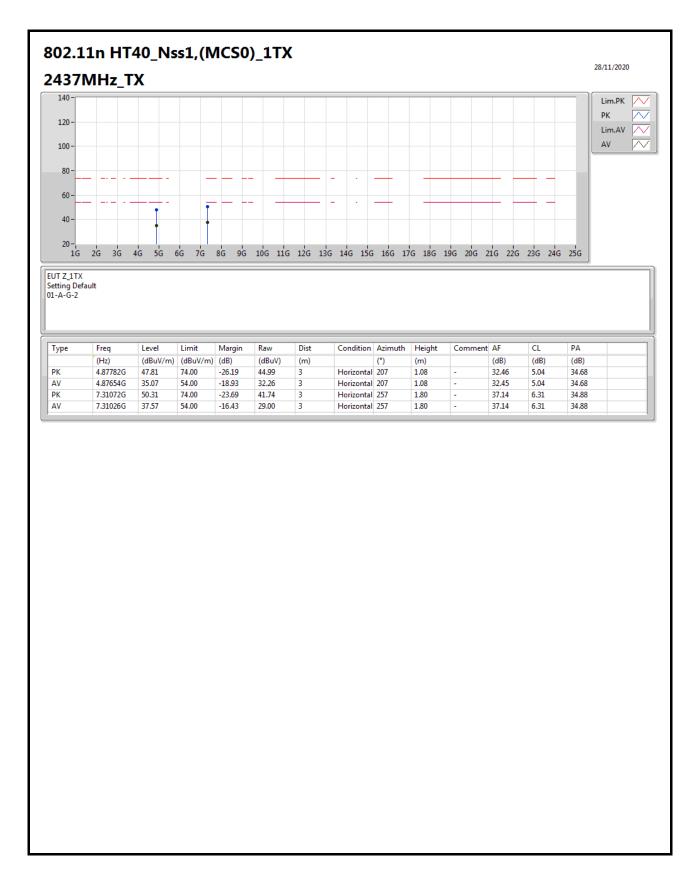
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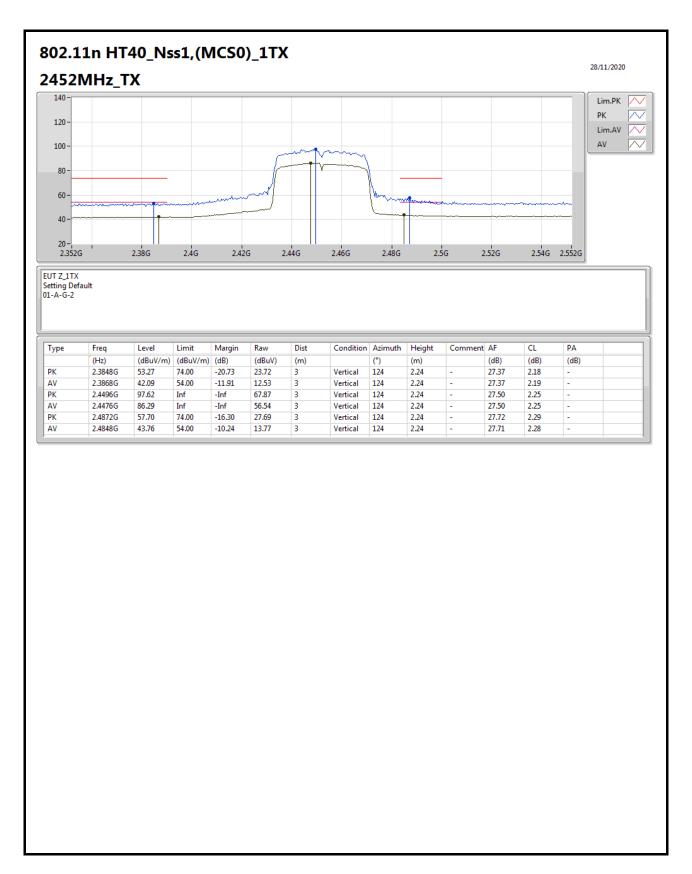
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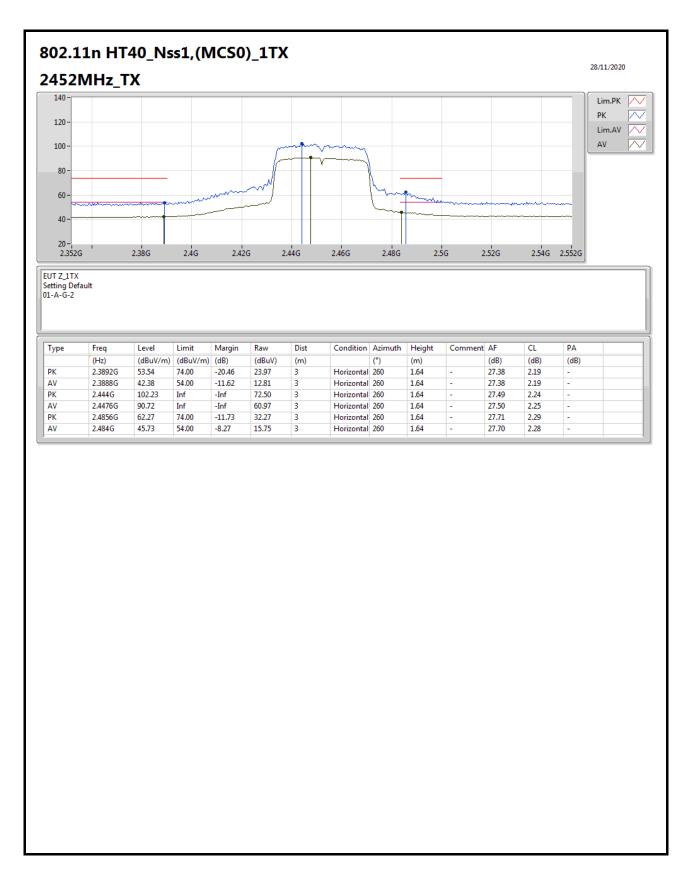


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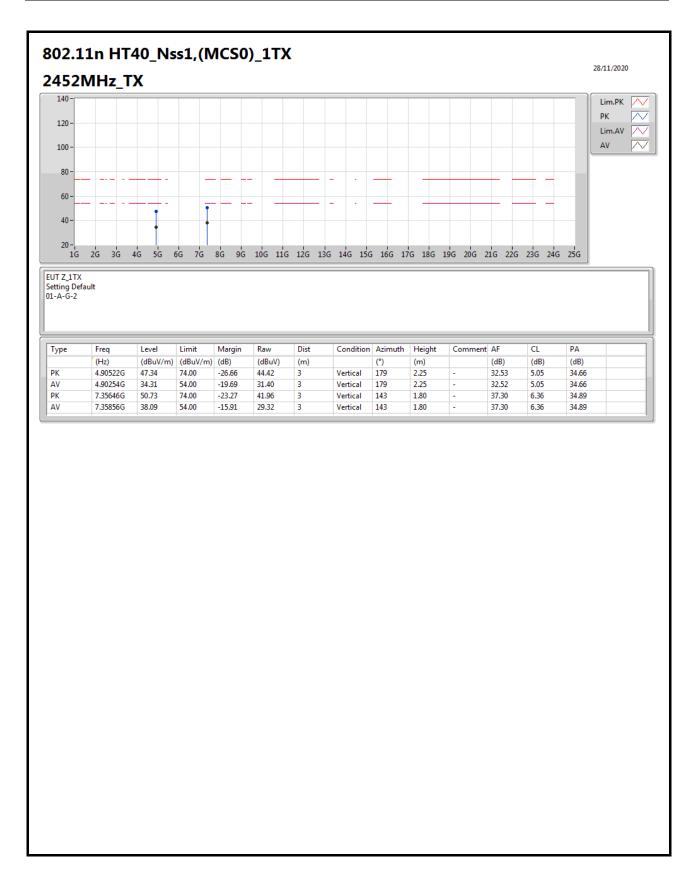






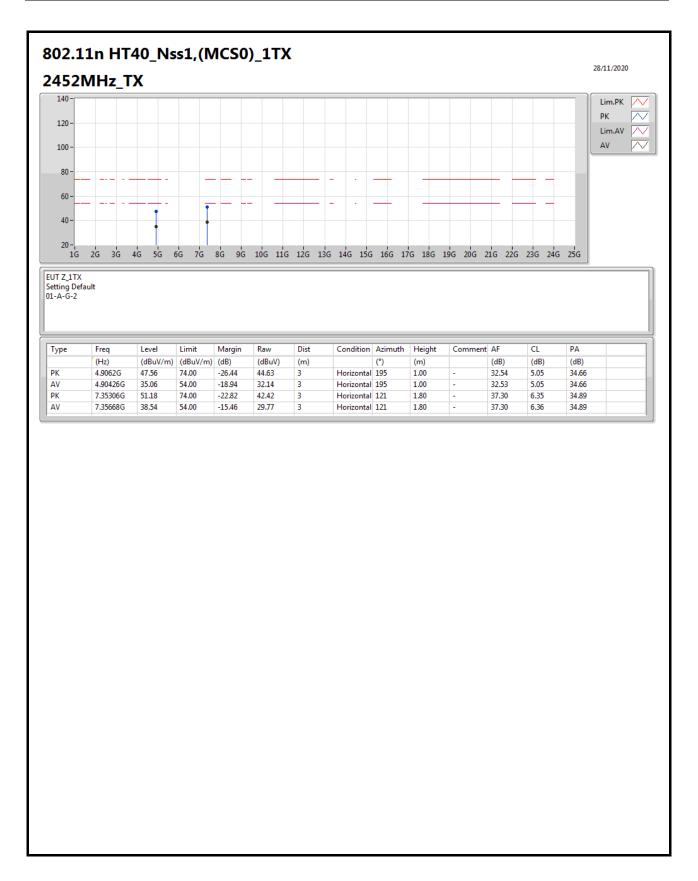
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RSE TX above 1GHz

Appendix F.3

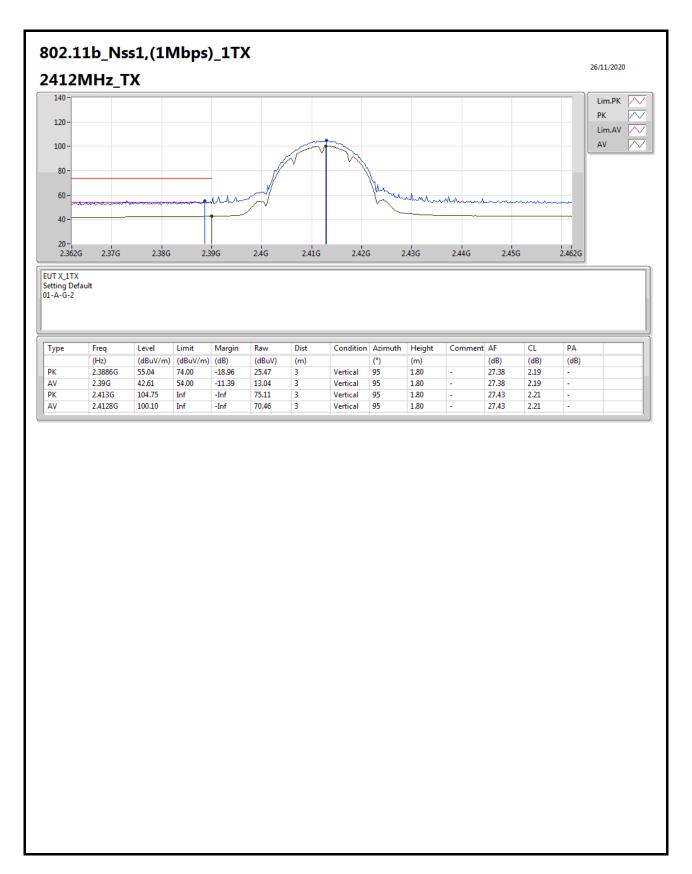
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Test Mode: Mode 2

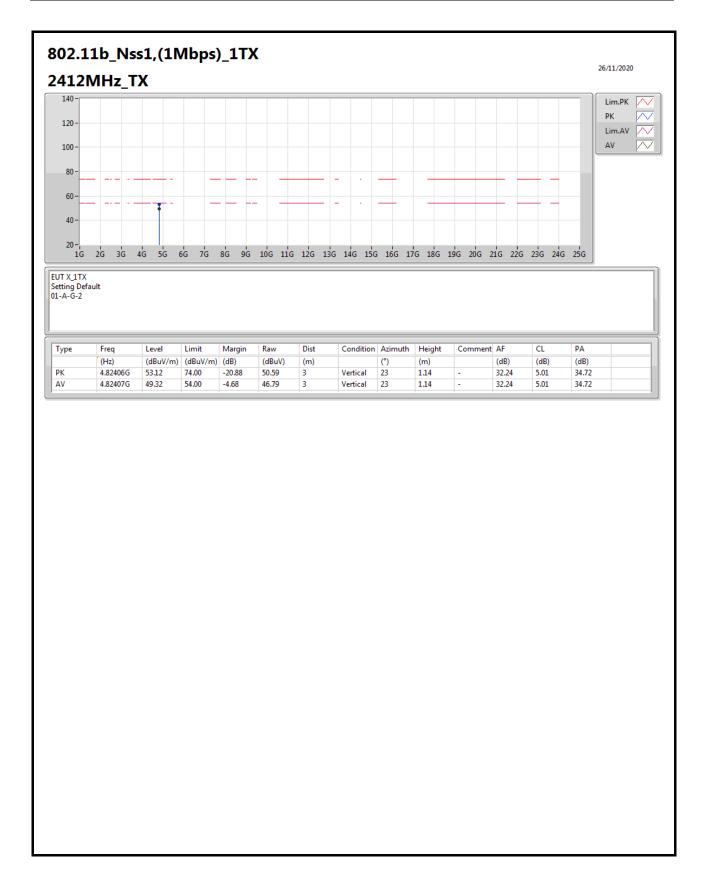
Summary

Mode	Result	Туре	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)	
2.4-2.4835GHz											
802.11b_Nss1,(1Mbps)_1TX	Pass	AV	4.92401G	52.37	54.00	-1.63	3	Vertical	128	2.42	

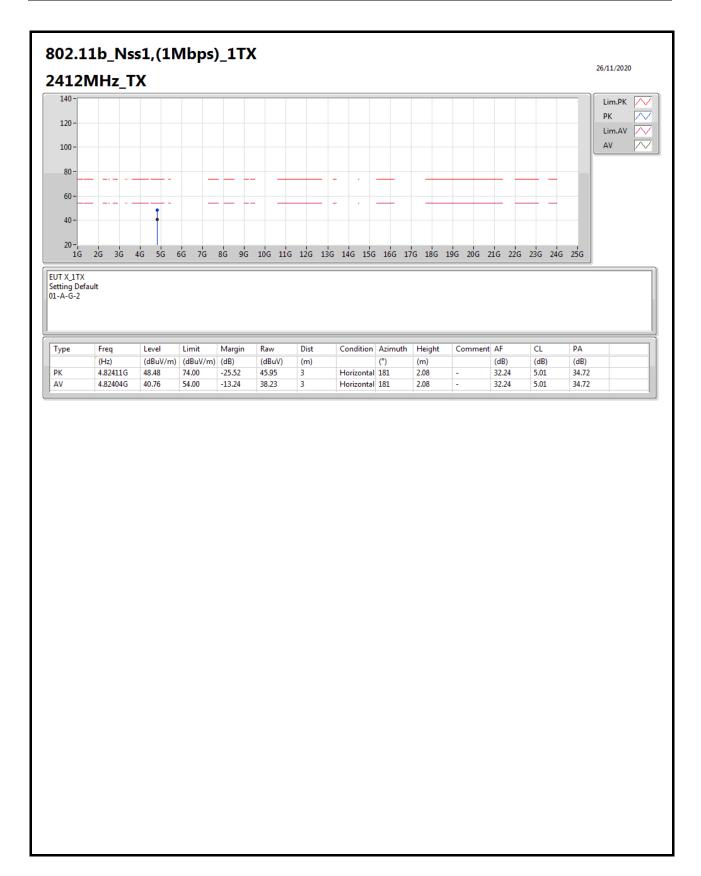




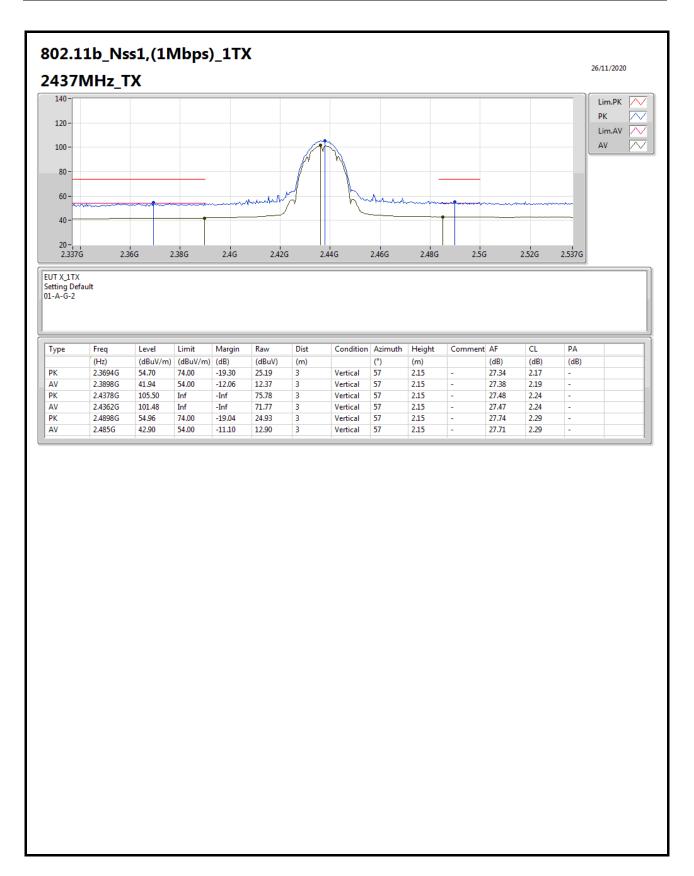




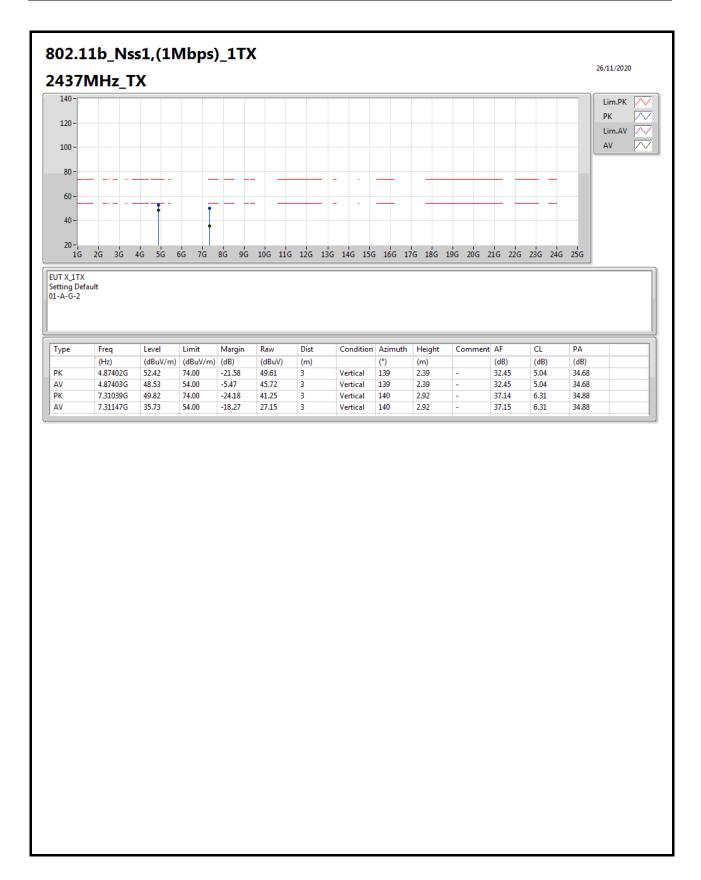




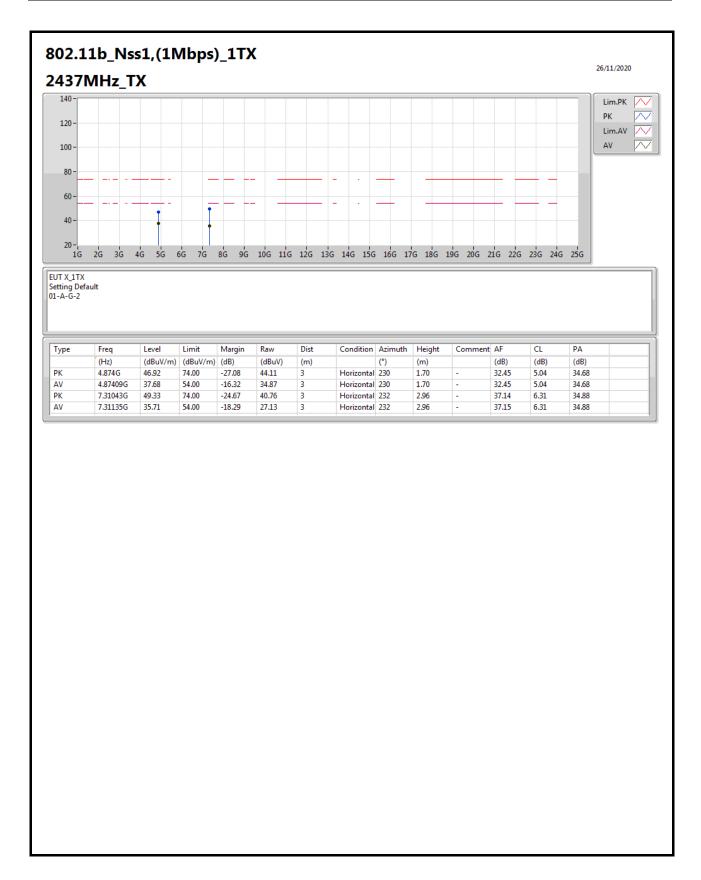




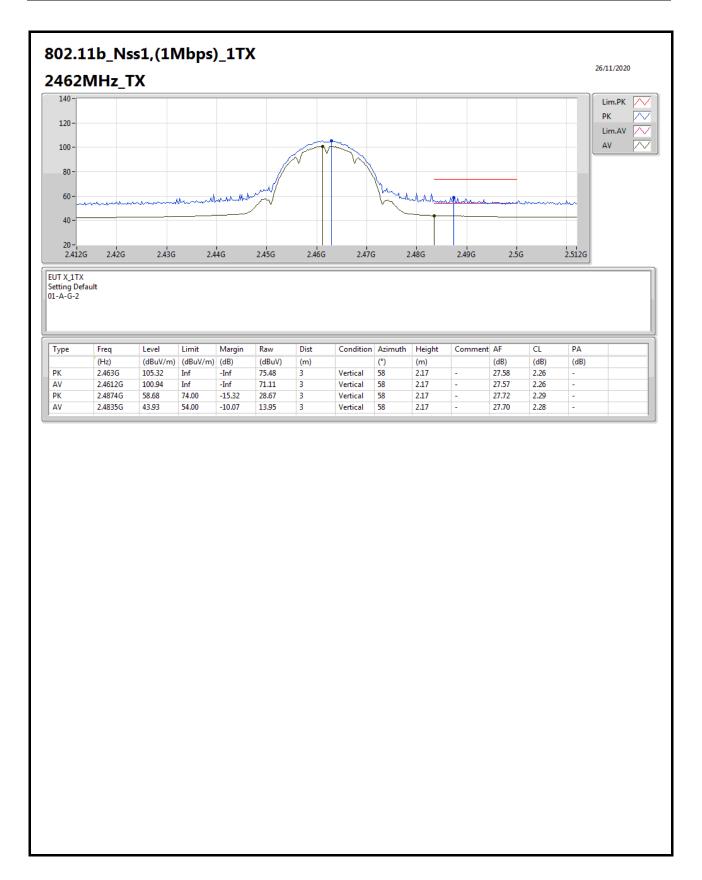




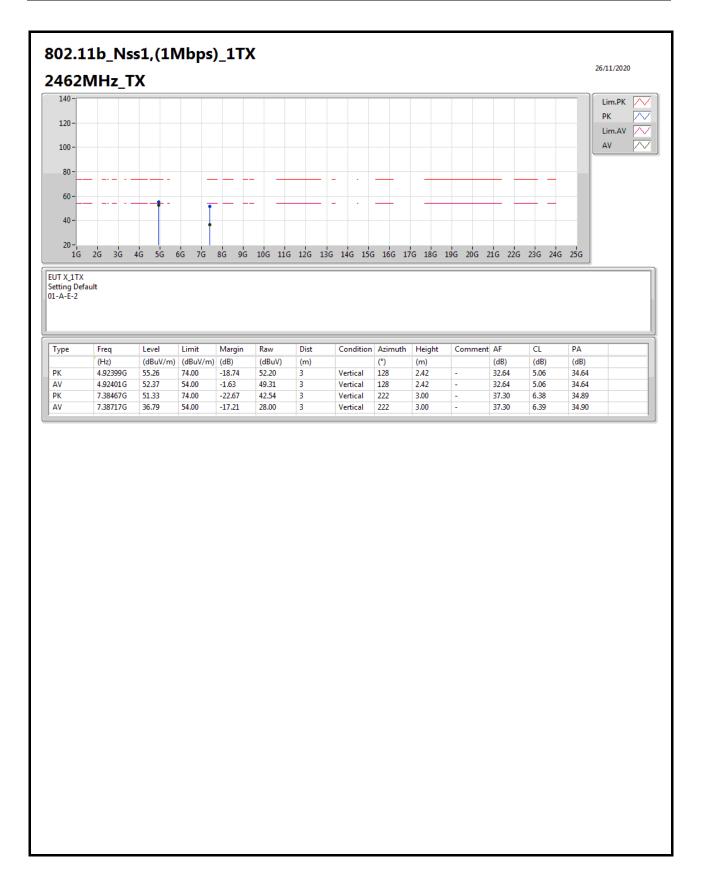






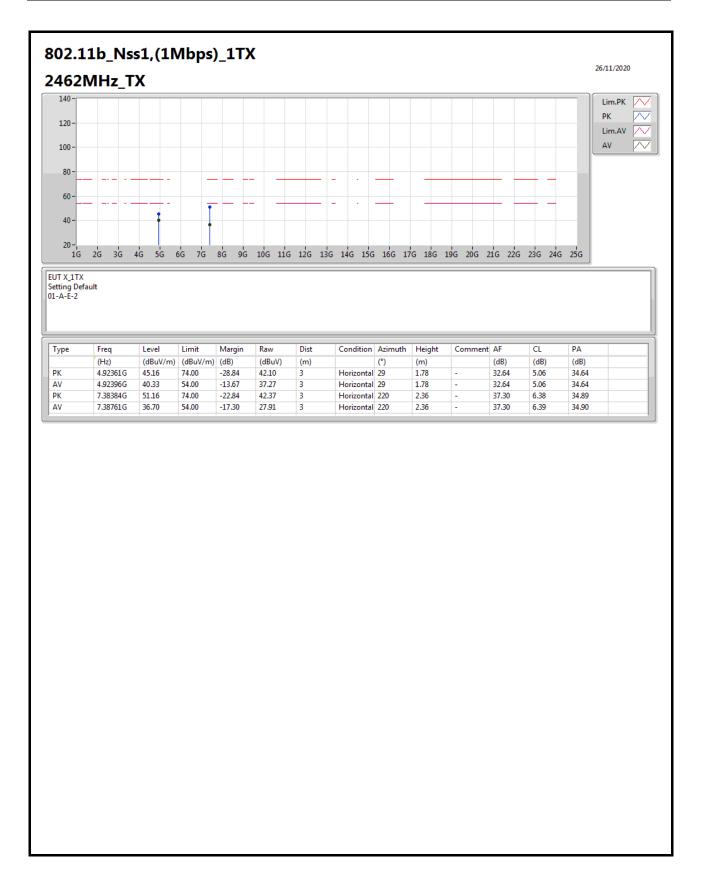




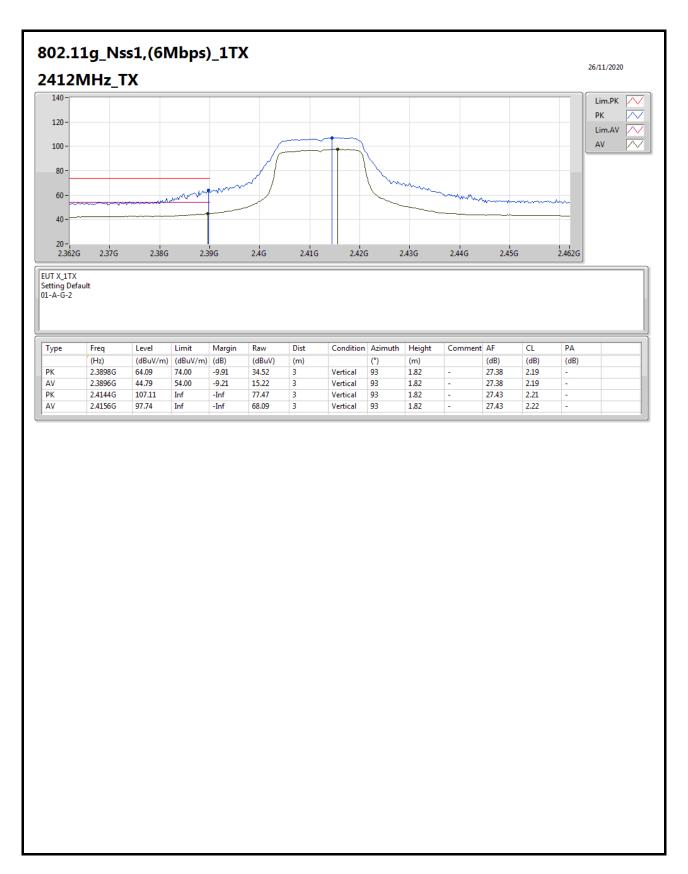


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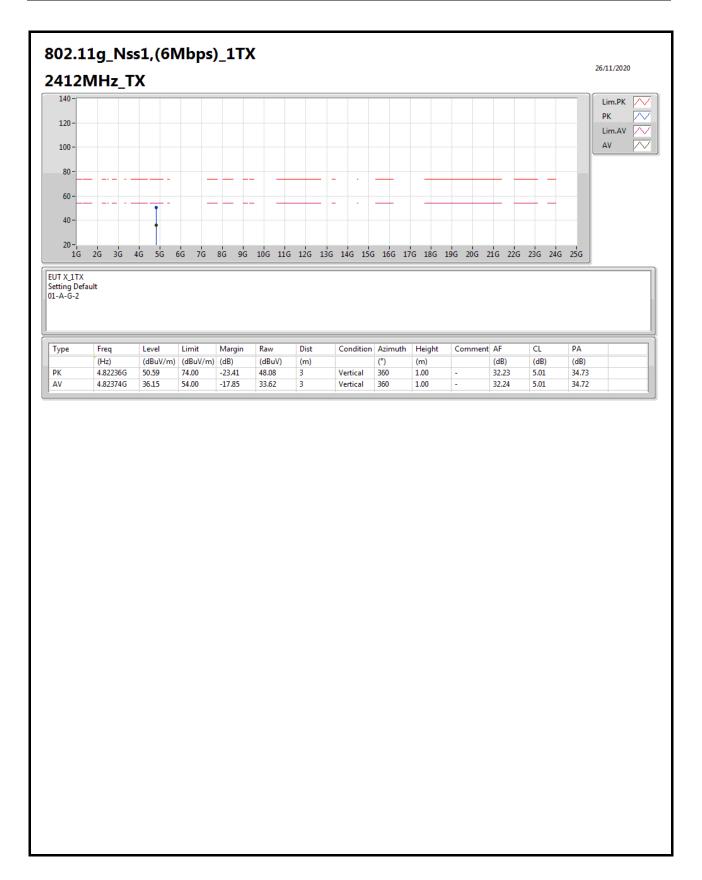






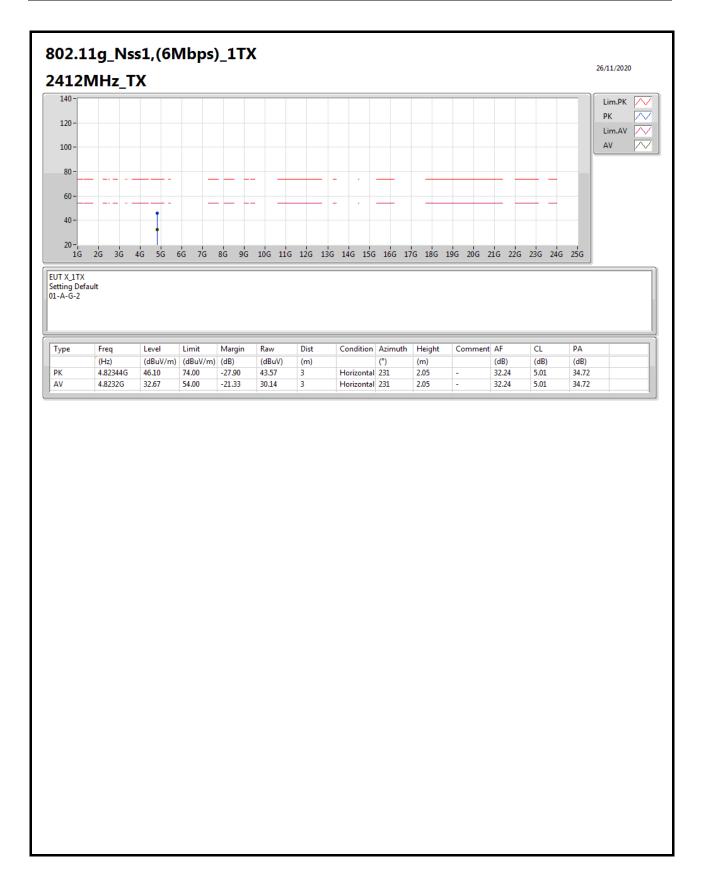
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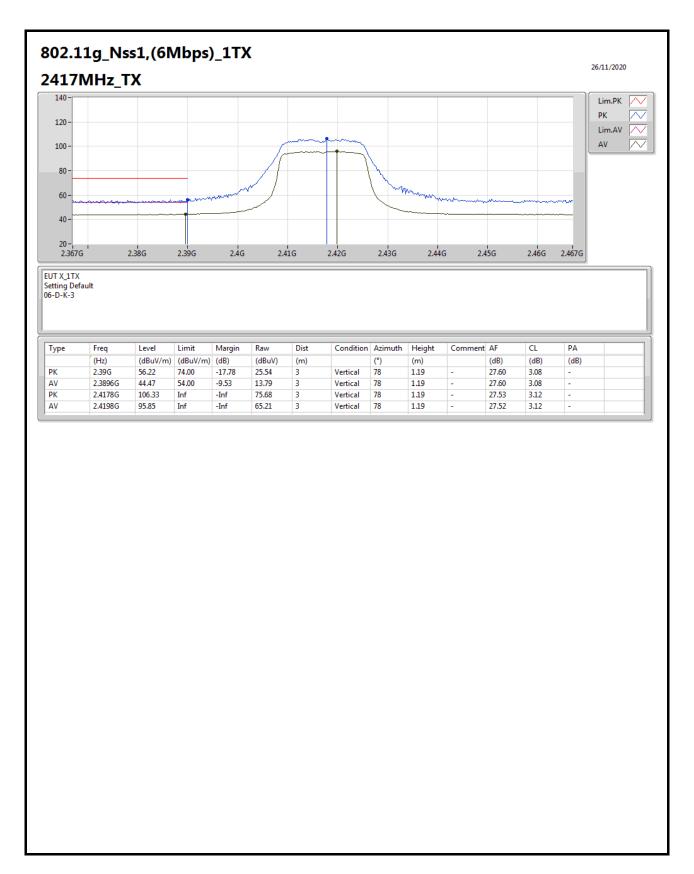


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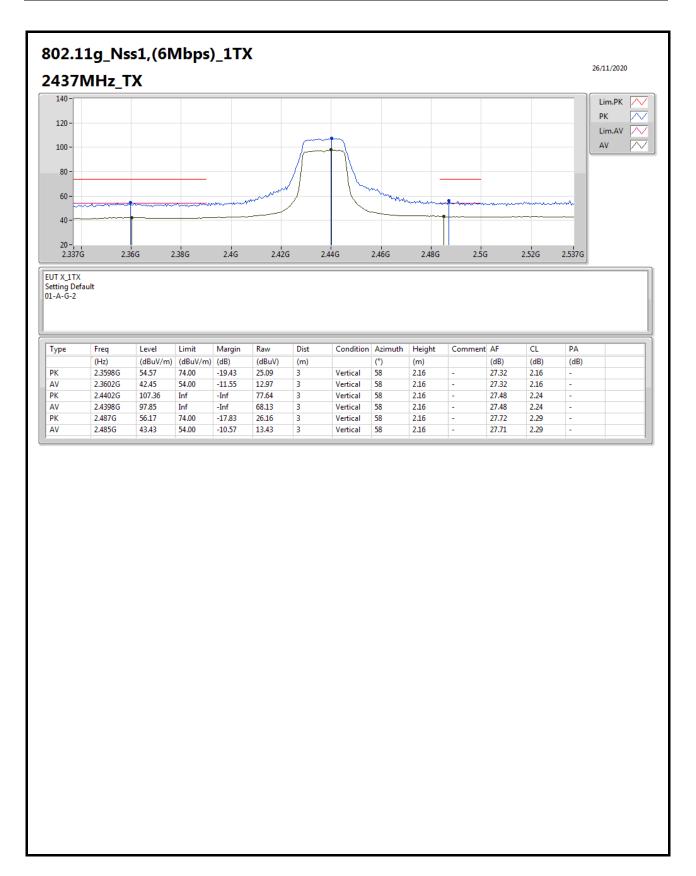






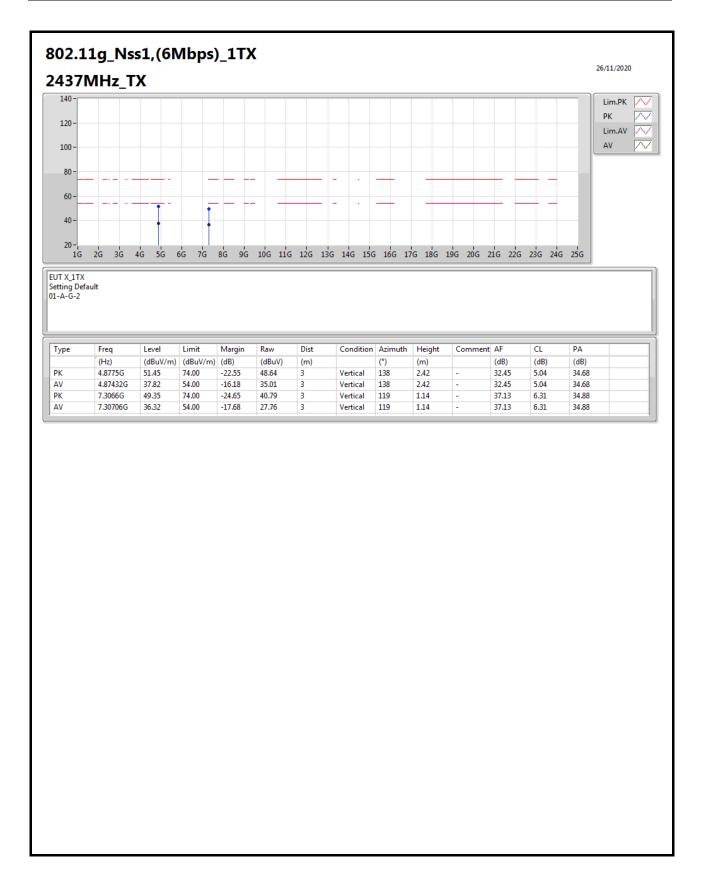






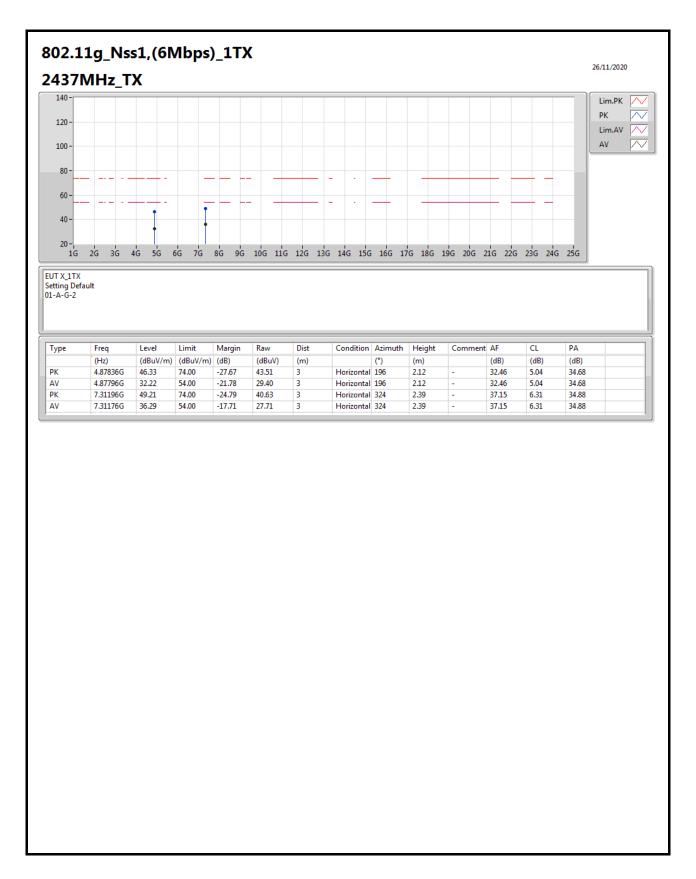
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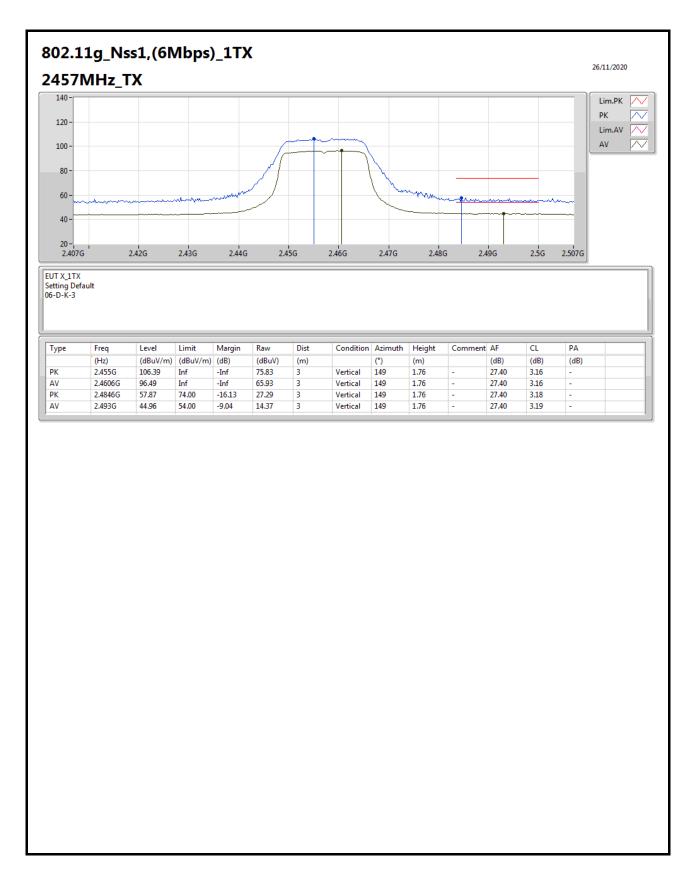


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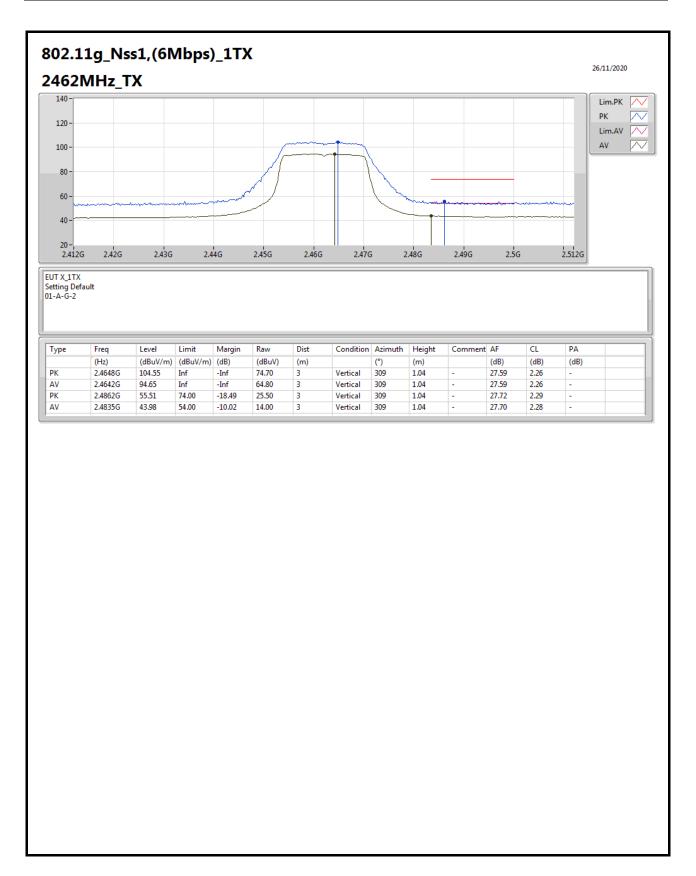






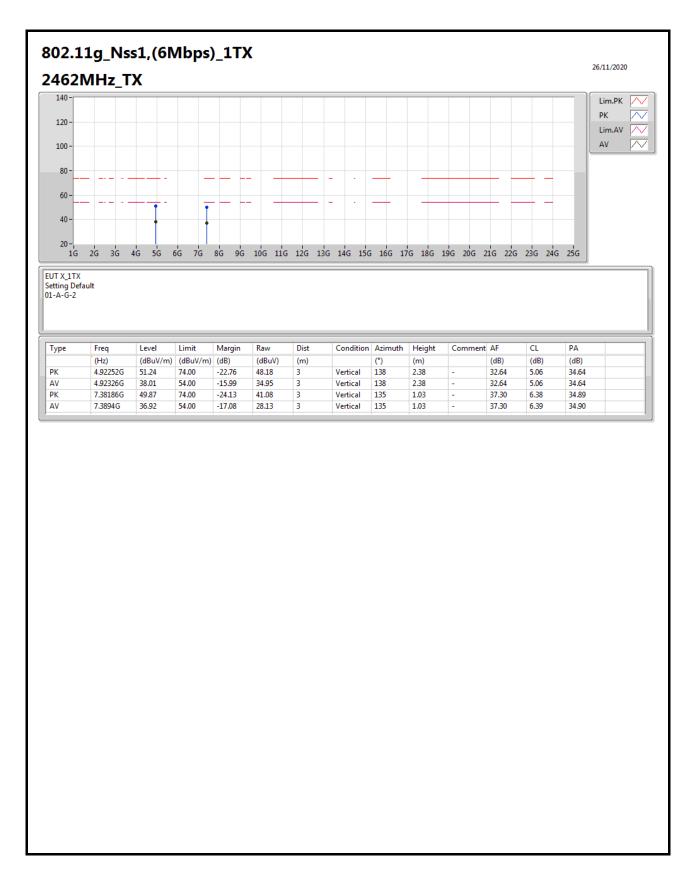




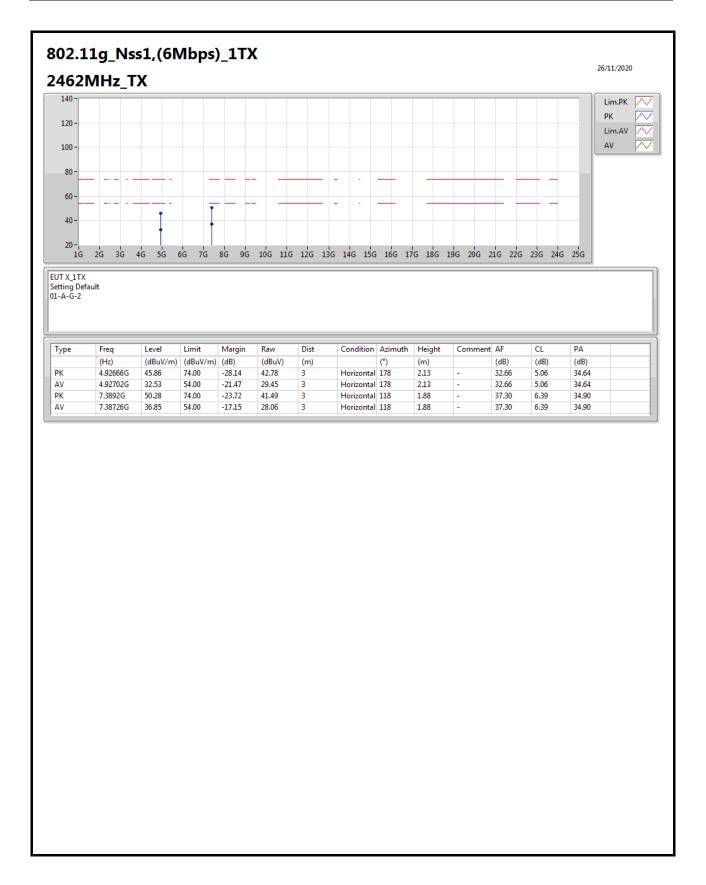


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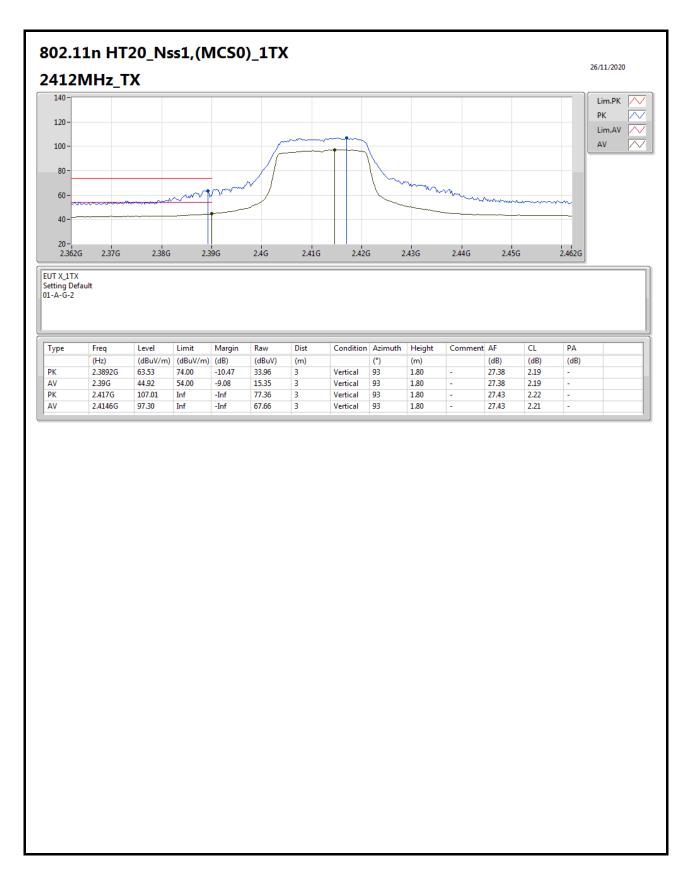




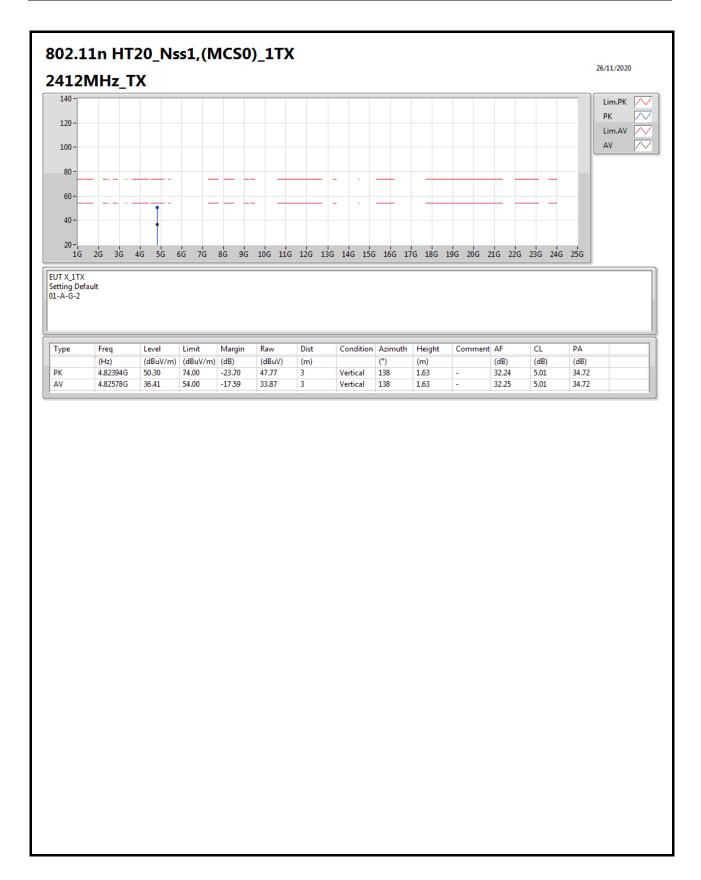




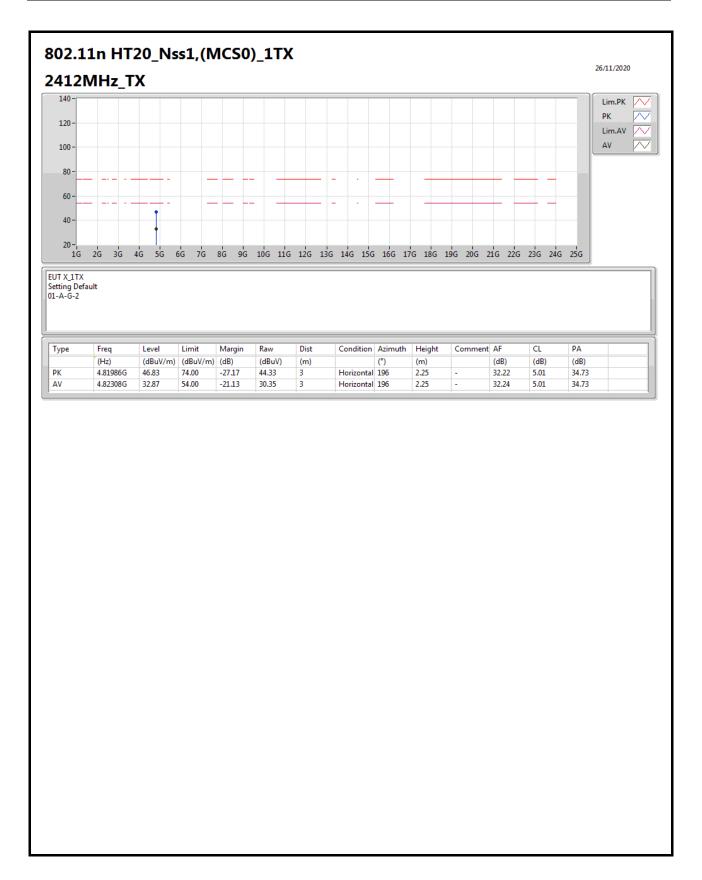






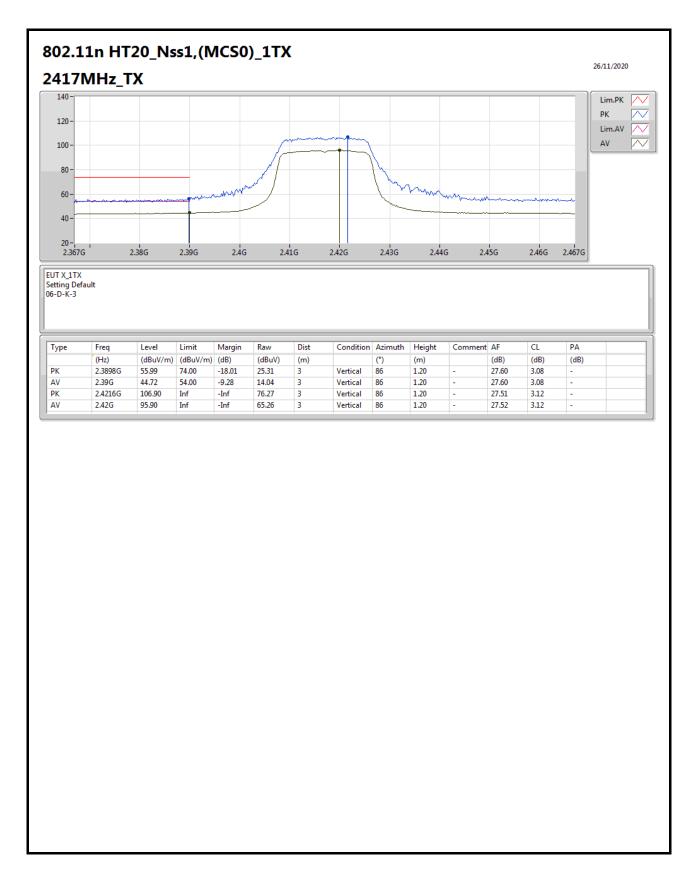




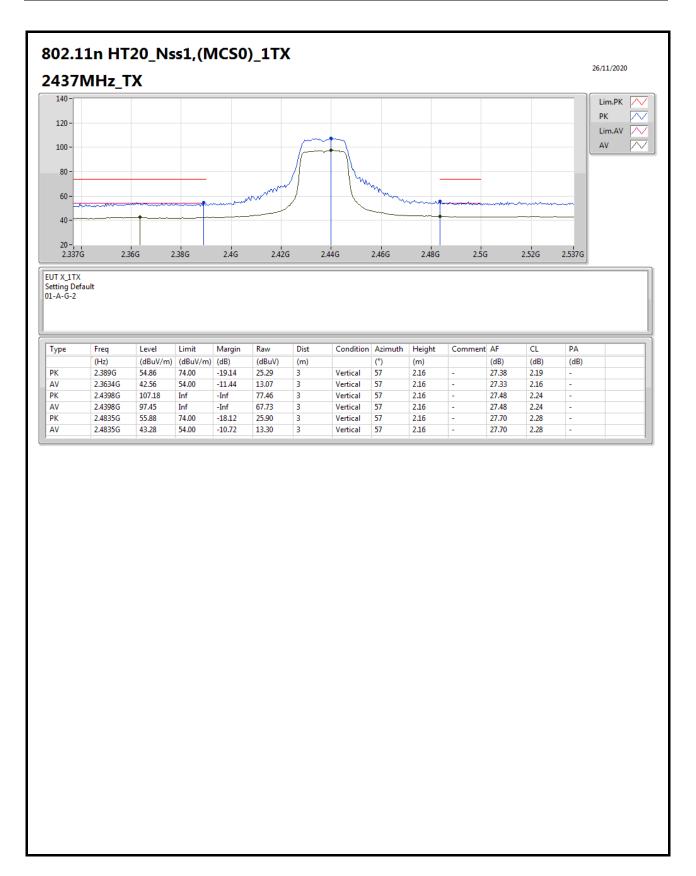


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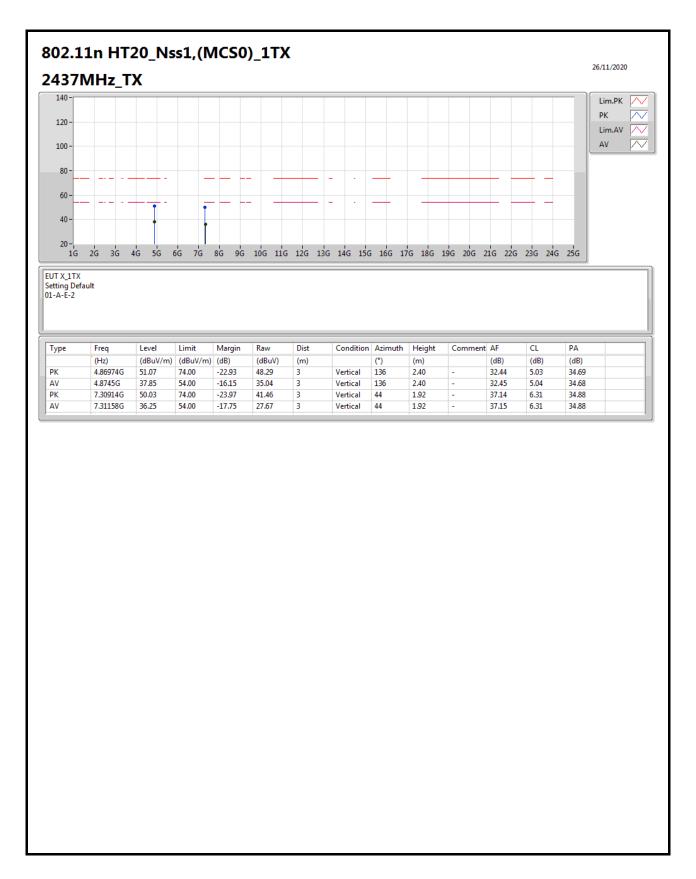




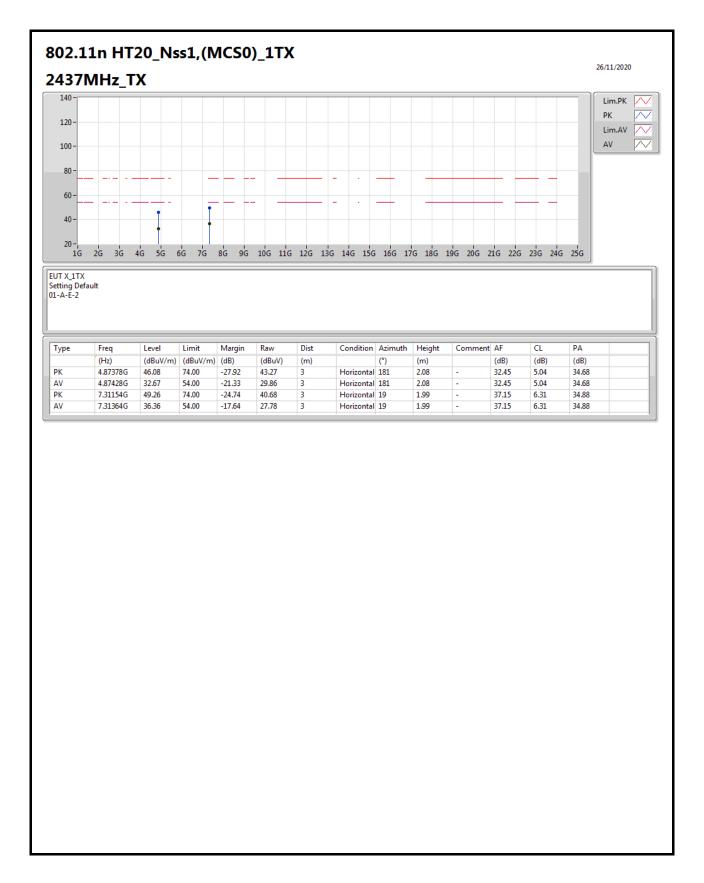


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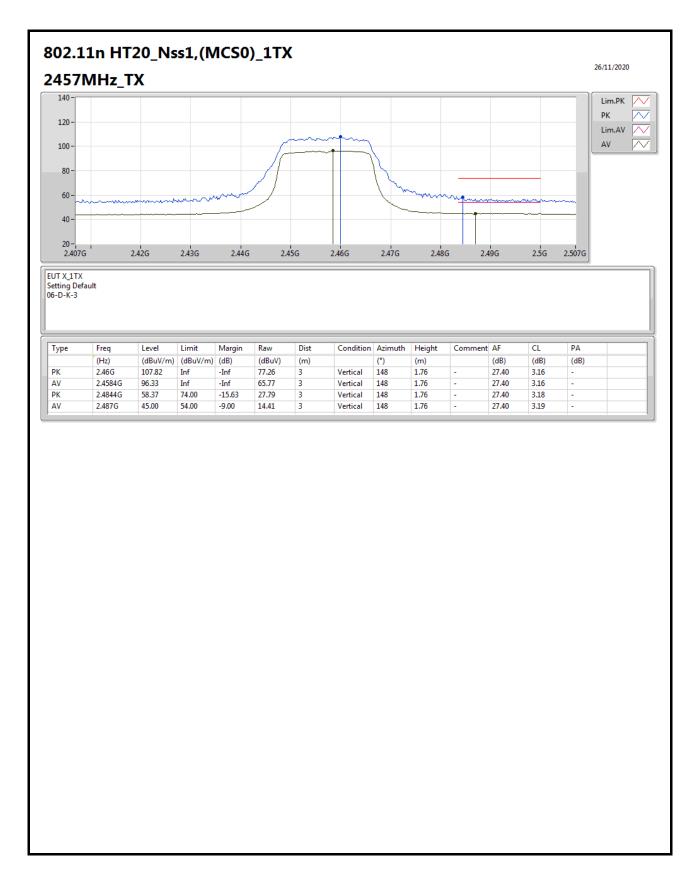




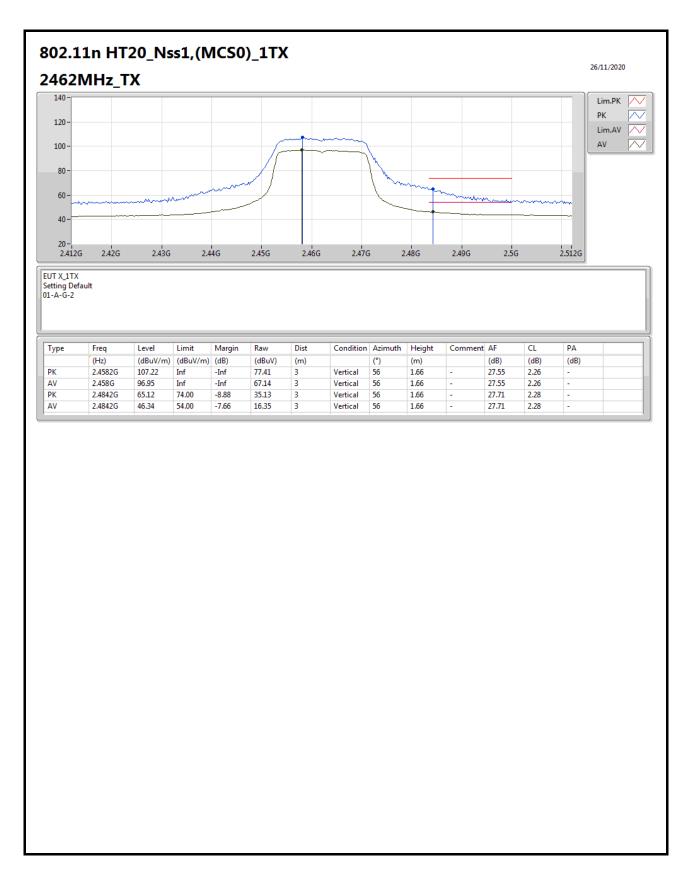




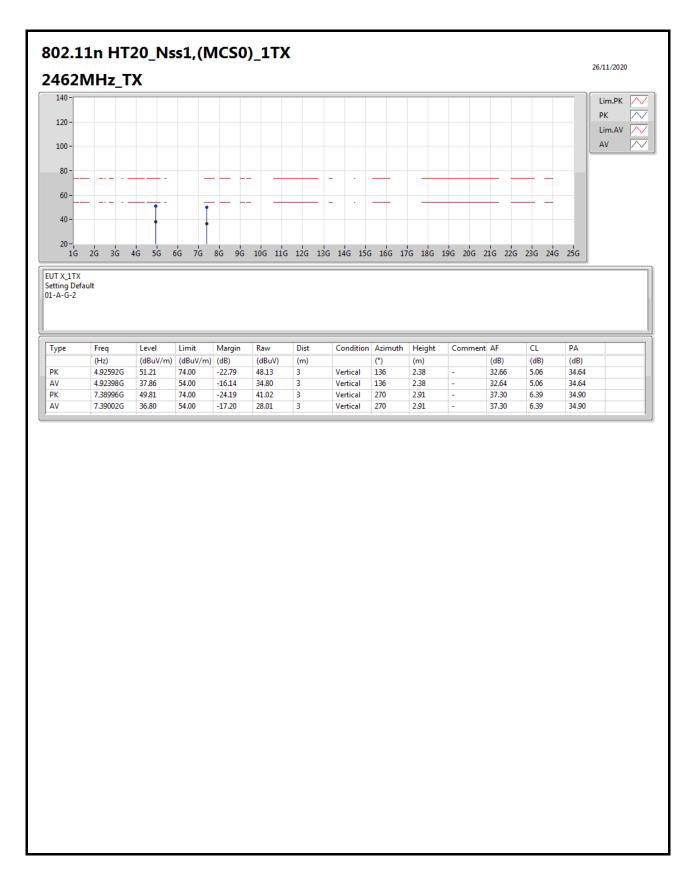




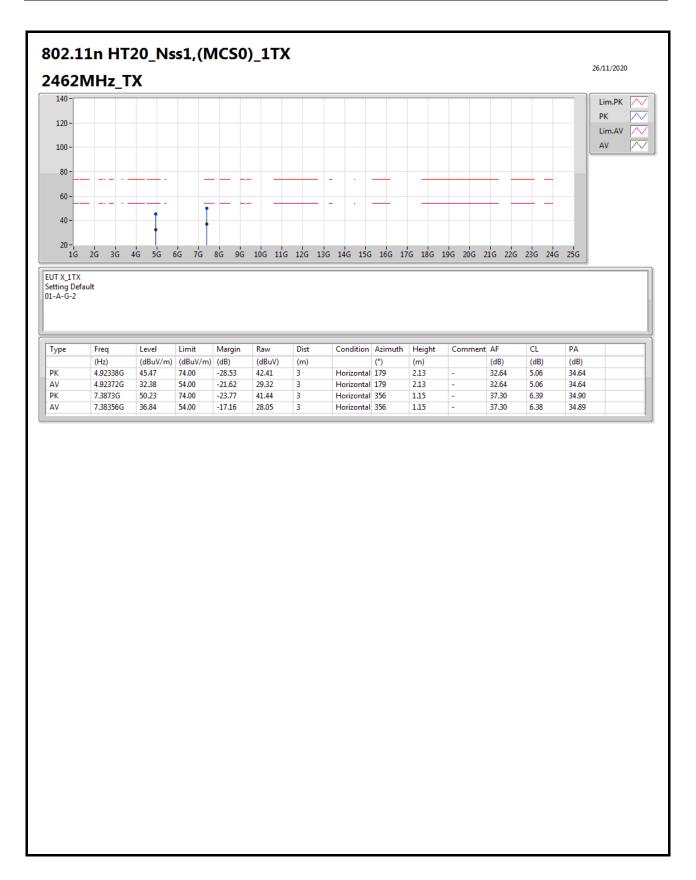




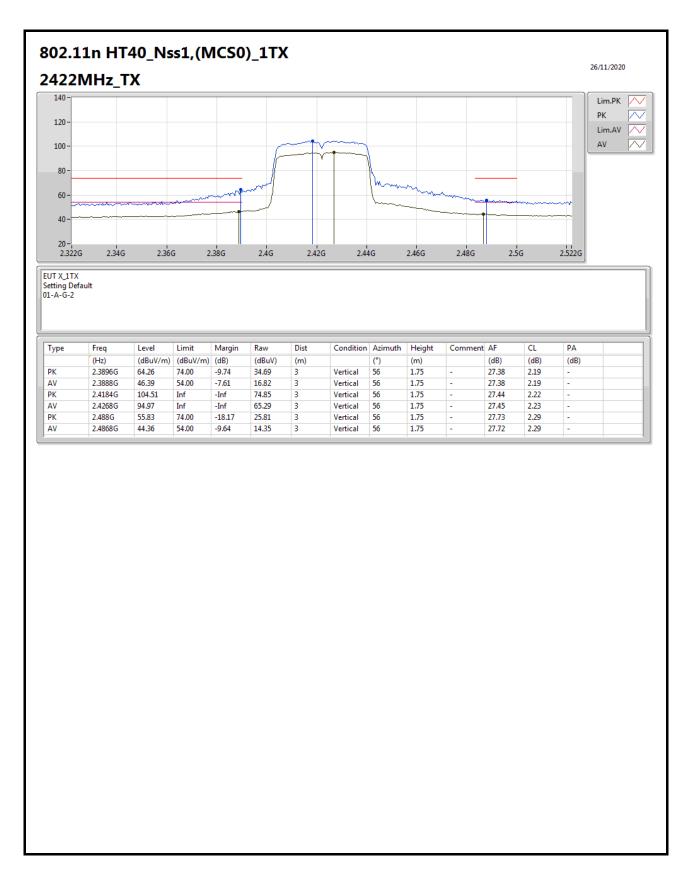




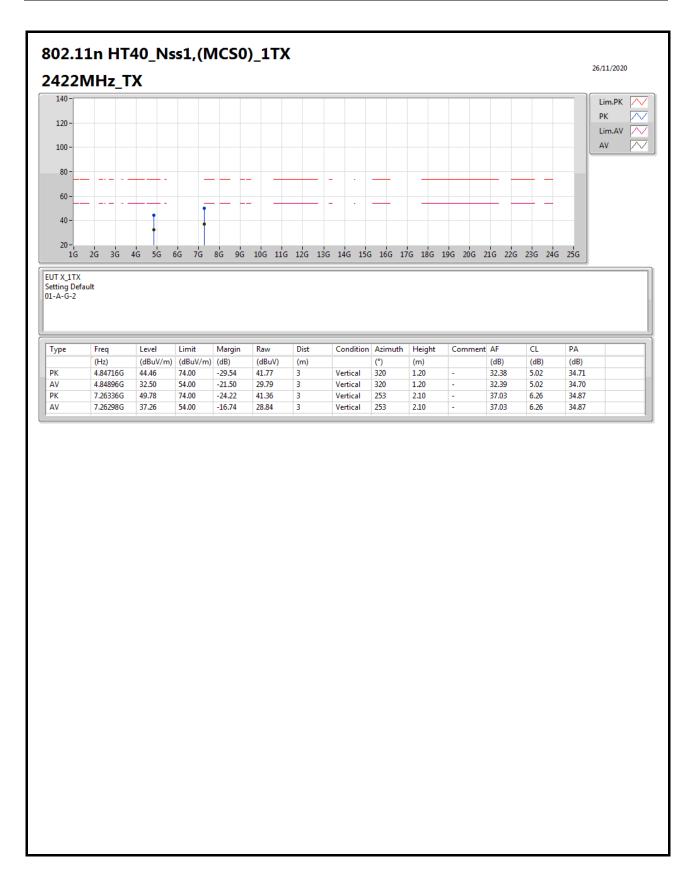






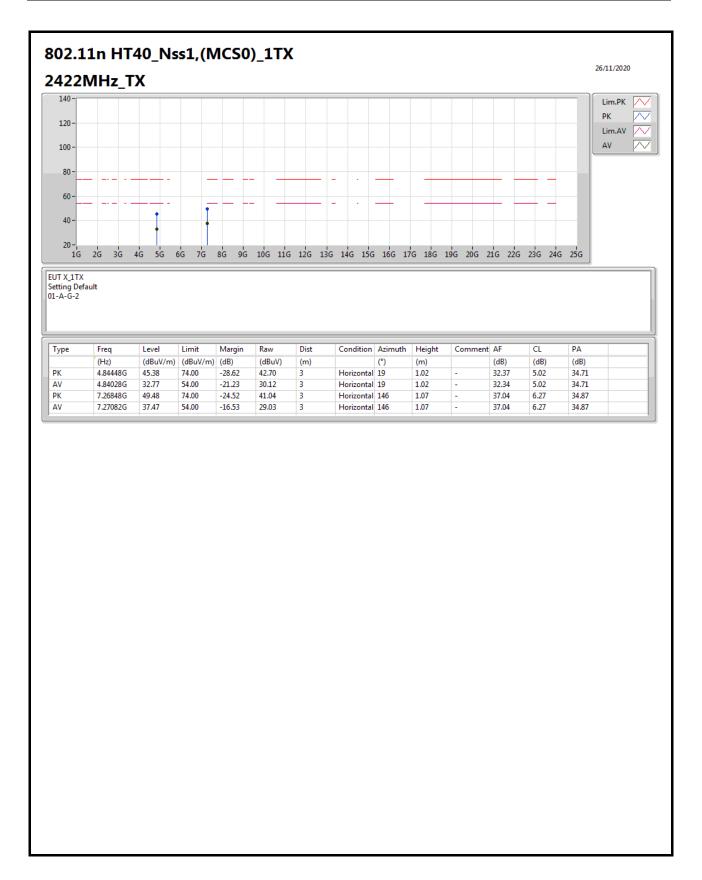




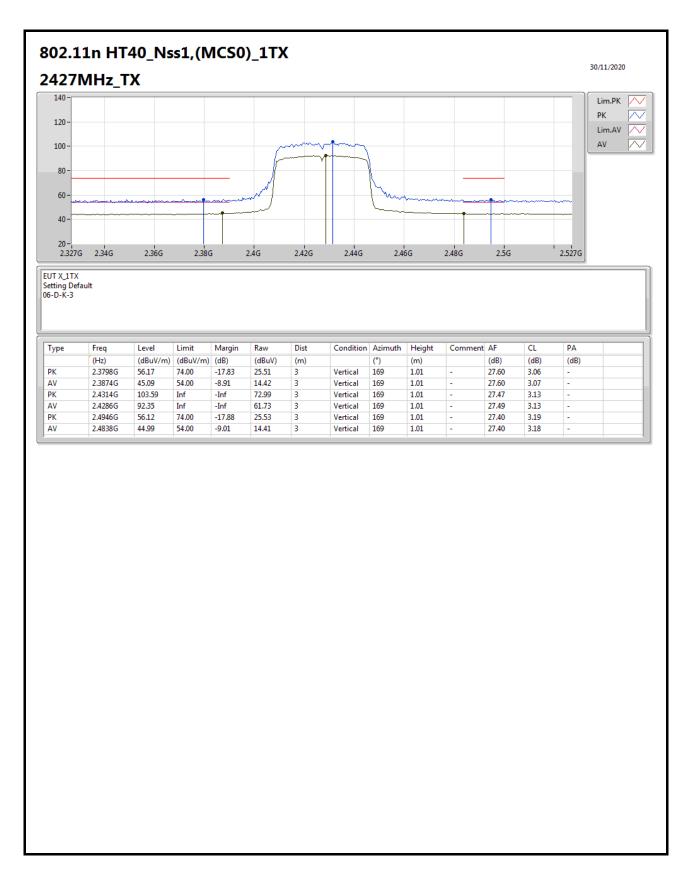


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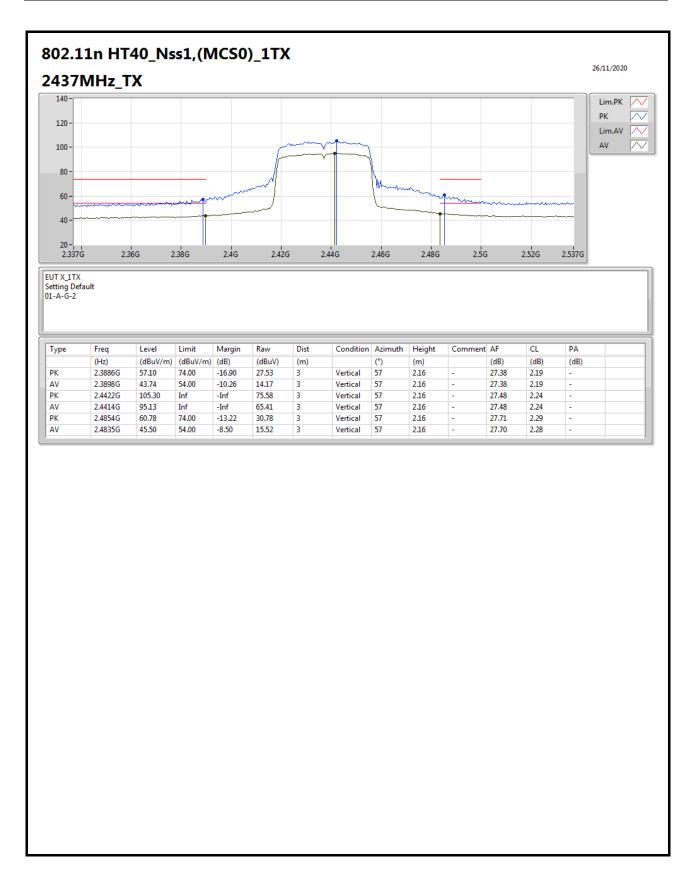




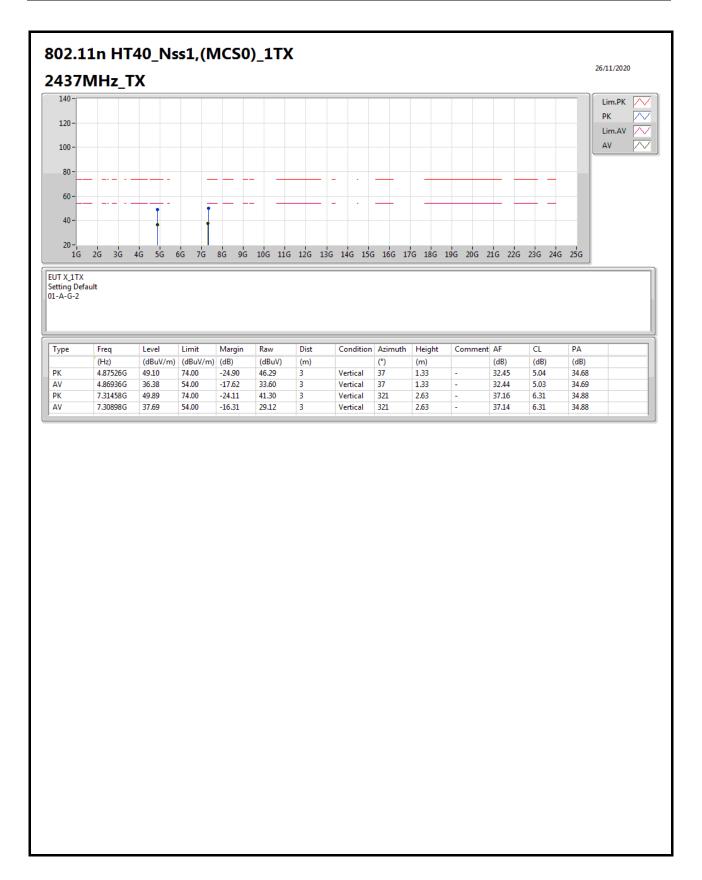




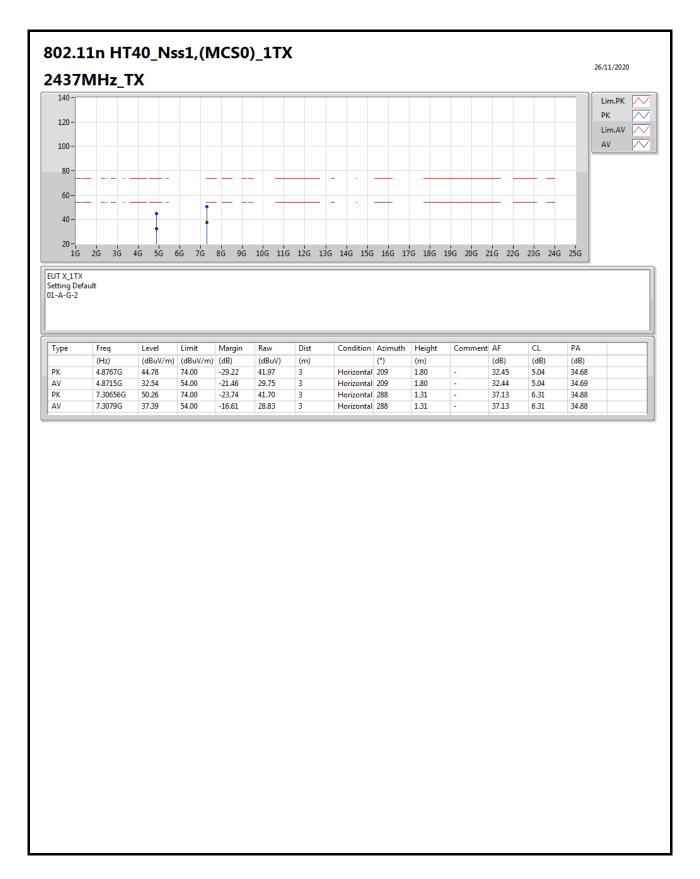




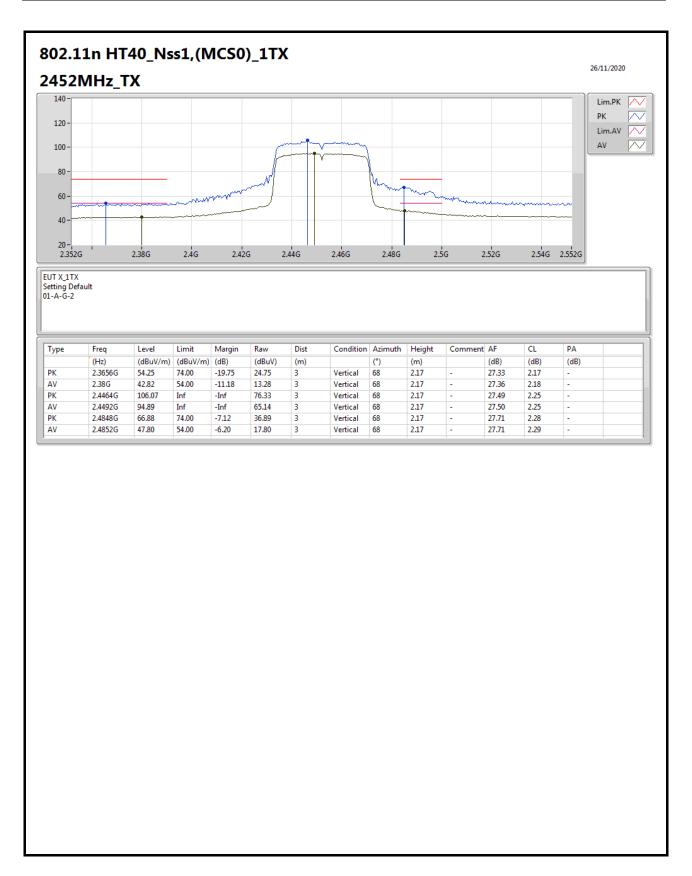






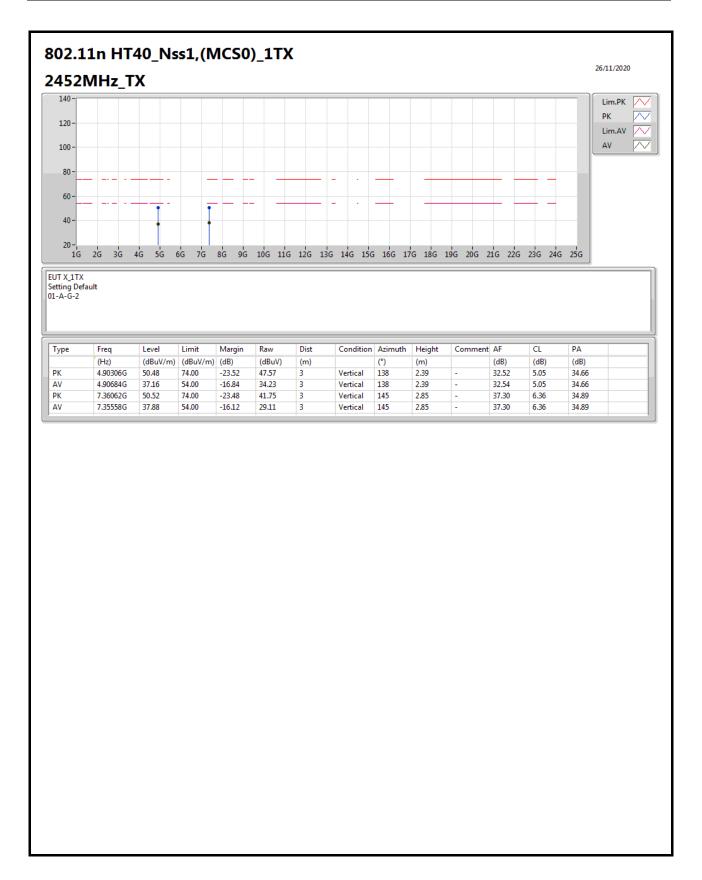






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