

Report No.: FR132651AA





RADIO TEST REPORT

FCC ID

: XHG-RG1100

Equipment

: Mobile Hotspot

Model Name

: RG1100

Applicant

: Franklin Technology Inc.

906 JEI Platz, 186, Gasan digital 1-ro,

Gumcheon-Gu, Seoul, South Korea, 08502

Manufacturer

: Franklin Technology Inc.

906 JEI Platz, 186, Gasan digital 1-ro,

Gumcheon-Gu, Seoul, South Korea, 08502

Standard

: 47 CFR FCC Part 15.247

The product was received on May 07, 2021, and testing was started from May 27, 2021 and completed on Jul. 19, 2021. We, Sporton International Inc. Hsinchu 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. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)

TEL: 886-3-656-9065 FAX: 886-3-656-9085

Report Template No.: CB-A10_10 Ver1.3

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Issued Date

: Aug. 12, 2021

Report Version : 01

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Photographs of EUT v01

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History of this test report

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Report No.	Version	Description	Issued Date
FR132651AA	01	Initial issue of report	Aug. 12, 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:

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: Sandy Chuang

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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), VHT20, ax (HEW20)	2412-2462	1-11 [11]

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Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	2TX
2.4-2.4835GHz	802.11g	20	2TX
2.4-2.4835GHz	802.11n HT20	20	2TX
2.4-2.4835GHz	VHT20	20	2TX
2.4-2.4835GHz	802.11ax HEW20	20	2TX

Note:

- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation. HEW20 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM 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	Hutec	HIA-ASM0053B-IR	PIFA Antenna	Murata	Note 1
2	2	Hutec	HIA-ASM0053B-IR	PIFA Antenna	Murata	Note i

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Note 1

		Ante	nna Gain	(dBi)	Cab	ole Loss (dB)		True Gain (dBi)		
Ant.	Port	2.4GHz	5GHz	5GHz	2.4GHz	5GHz	5GHz	2.4GHz	5GHz	5GHz
		2.40112	Band 1	Band 4	2.40112	Band 1	Band 4	2.40112	Band 1	Band 4
1	1	4.131	3.275	3.275	-1.18	-3.54	-3.98	2.951	-0.265	-0.705
2	2	-1.44	4.136	4.136	-1.18	-3.54	-3.98	-2.620	0.596	0.156

Note 2: The above information was declared by manufacturer.

For 2.4GHz function:

For IEEE 802.11b/g/n/VHT/ax (2TX/2RX):

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

Port 1 and Port 2 could transmit/receive simultaneously.

For 5GHz function:

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

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

Port 1 and Port 2 could transmit/receive simultaneously.

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1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.979	0.09	689u	3k
802.11g	0.99	0.04	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ax HEW20	0.997	0.01	n/a (DC>=0.98)	n/a (DC>=0.98)

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

1.1.4 EUT Operational Condition

EUT Power Type	From power adapter / Host system / Li-ion Battery					
Beamforming Function	☐ With beamforming ☐ Without beamforming					
Function	\boxtimes	Point-to-multipoint		Point-to-point		
Test Software Version	QR	QRCT (Version 4.0.00189.0)				

Note: The above information was declared by manufacturer.

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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 15.247
- 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 662911 D01 v02r01
- FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

Testing Location Information

Test Lab.: Sporton International Inc. Hsinchu Laboratory

Hsinchu ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)

(TAF: 3787) TEL: 886-3-656-9065 FAX: 886-3-656-9085

Test site Designation No. TW3787 with FCC.

Conformity Assessment Body Identifier (CABID) TW3787 with ISED.

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH02-CB	Paul Chen	24-25.6 / 64-69	Jun. 07, 2021~ Jun. 08, 2021
Radiated <above 1ghz=""></above>	03CH01-CB	Ken Yeh	24-24.8 / 63-67	May 27, 2021~ Jul. 17, 2021
Radiated <below 1ghz=""></below>	03CH05-CB	Ken Yeh	24.5-24.7 / 65-68	May 27, 2021~ Jul. 17, 2021
Radiated <co-location></co-location>	03CH05-CB	Ken Yeh	24.2-25 °C / 62-65%	May 27, 2021~ Jul. 17, 2021
AC Conduction	CO02-CB	Ryo Fan	23~24 / 61~62	Jul. 19, 2021

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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)

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Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.0 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.5 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.2 dB	Confidence levels of 95%
Conducted Emission	2.5 dB	Confidence levels of 95%
Output Power Measurement	1.3 dB	Confidence levels of 95%
Power Density Measurement	2.5 dB	Confidence levels of 95%
Bandwidth Measurement	0.9%	Confidence levels of 95%

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2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting	
802.11b_Nss1,(1Mbps)_2TX	-	
2412MHz	15.5	
2417MHz	15.5	
2437MHz	14	
2457MHz	16	
2462MHz	16	
802.11g_Nss1,(6Mbps)_2TX	-	
2412MHz	13.5	
2417MHz	14	
2437MHz	12.5	
2457MHz	14	
2462MHz	14	
802.11ax HEW20_Nss1,(MCS0)_2TX	-	
2412MHz	10.5	
2417MHz	10.5	
2437MHz	9	
2457MHz	10.5	
2462MHz	10.5	

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Note:

• Evaluated HEW20 mode only, due to similar modulation. The power setting of HT20/VHT20 mode are the same or lower than HEW20.

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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	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz			
Operating Mode CTX				
1	EUT: WiFi 2.4GHz – Powered from adapter			
2	EUT: WiFi 2.4GHz – Powered from host system			
Mode 1 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3 will follow this same test mode.				
3	EUT: WiFi 5GHz – Powered from adapter			
For operating mode	For operating mode 1 is the worst case and it was record in this test report.			

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	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		

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	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	стх		
2.4GHz: EUT X a	formed at X axis, Y axis and Z axis position. xis and 5GHz: EUT Y axis has been evaluated to be the worst case at Emissions in Restricted <above 1ghz="">; thus, the measurement will follow this same test configuration.</above>		
1	EUT in X axis: WiFi 2.4GHz – Powered from Li-ion Battery		
2	EUT in X axis: WiFi 2.4GHz – Powered from adapter		
3	EUT in X axis: WiFi 2.4GHz – Powered from host system		
Mode 3 has been same test mode.	evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4 will follow this		
4	EUT in Y axis: WiFi 5GHz – Powered from host system		
For operating mod	le 4 is the worst case and it was record in this test report.		
Operating Mode > 1GHz	стх		
	rformed at X axis, Y axis and Z axis position. The worst case was found at X axis, thus the follow this same test configuration.		

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	The Worst Case Mode for Following Conformance Tests	
Tests Item Simultaneous Transmission Analysis - Radiated Emission Co-location		
Test Condition Radiated measurement		
Operating Mode Normal Link		
The EUT was performed at X axis, Y axis and Z axis position. EUT X axis has been evaluated to be the worst case at Emissions in Radiated measurement <above 1ghz="">; thus, the measurement will follow this same test configuration.</above>		
1 EUT in X axis: WiFi 2.4GHz + WiFi 5GHz		
Refer to Appendix G for Ra	adiated Emission Co-location.	

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.

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2.4 Accessories

Accessories				
Equipment Name	Brand Name	Model Name	Rating	
Adapter	Franklin Wireless	APS-KP018W-G	INPUT: 100-240V~50/60Hz, 0.5A, Max. OUTPUT: 5V, 3.0A, 9V, 2.0A, 12V, 1.5A	
Li-ion Battery	Franklin Wireless	V105555P	3.8V, 4000mAh, 15.2Wh	
		Other		
Equipment Name	Brand Name	Model Name	Remark	
USB 3.0 Type-C cable	Franklin Wireless	1575-017	Shielded, 1.2m	

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2.5 Support Equipment

For AC Conduction: N/A

For Radiated<Below 1GHz>:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
Α	Notebook	DELL	E4300	N/A

For Radiated<Above 1GHz>:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
Α	Notebook	DELL	E4300	N/A
В	Notebook	DELL	E4300	N/A

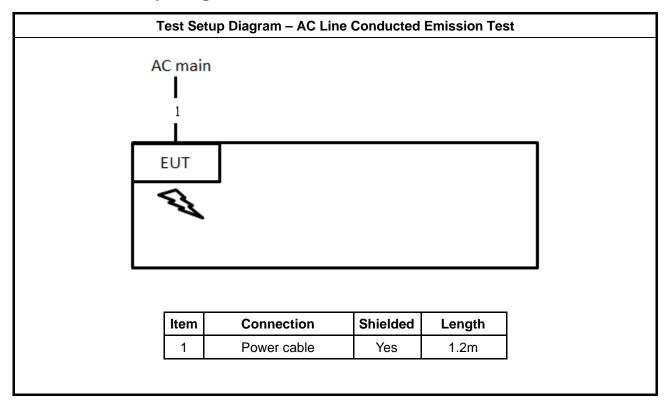
For RF Conducted:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
Α	Notebook	DELL	E4300	N/A

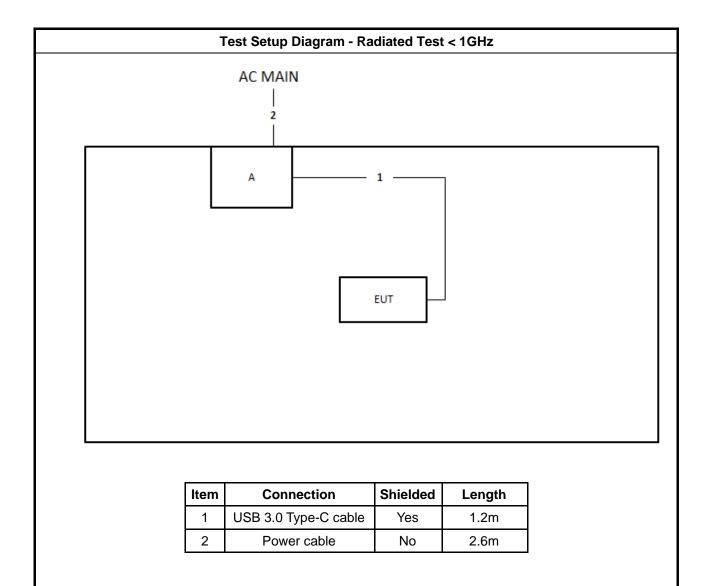
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2.6 Test Setup Diagram

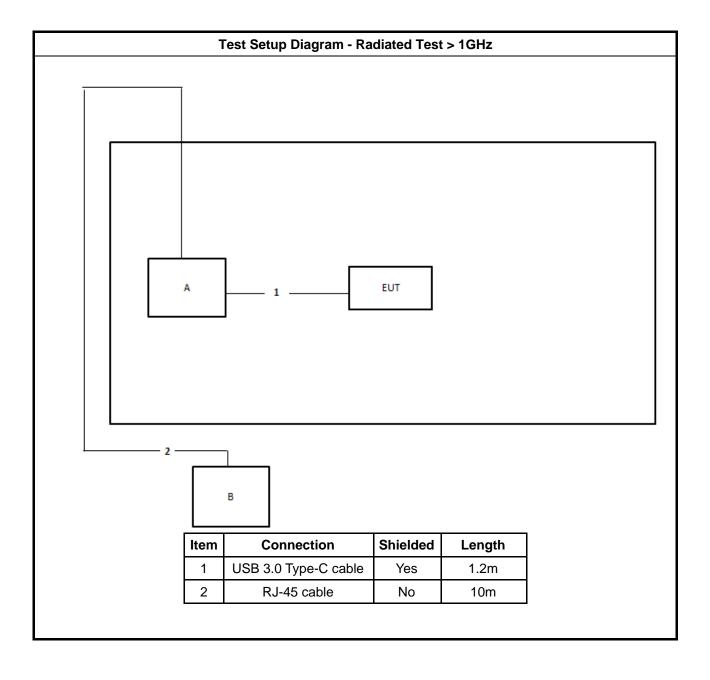


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3 Transmitter Test Result

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

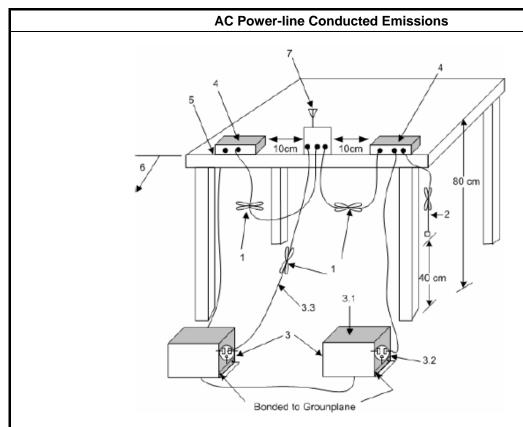
Refer a test equipment and calibration data table in this test report.

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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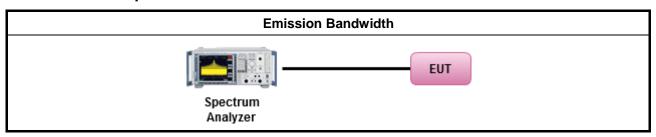
3.2.2 Measuring Instruments

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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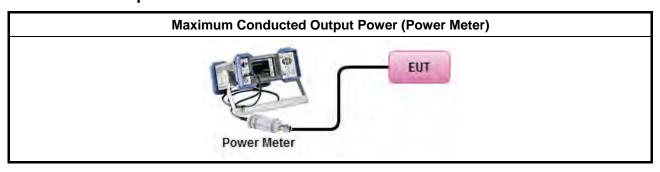
3.3.3 Test Procedures

		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: $P_{total} = P_1 + P_2 + + P_n$ (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

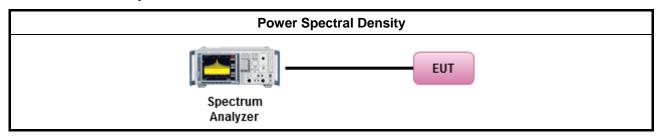
Refer a test equipment and calibration data table in this test report.

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).									
	\boxtimes	Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10 Method Max. PSD.								
•	For c	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.								

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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.

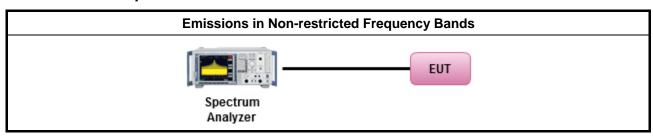
3.5.2 Measuring Instruments

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 ELIT
- 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

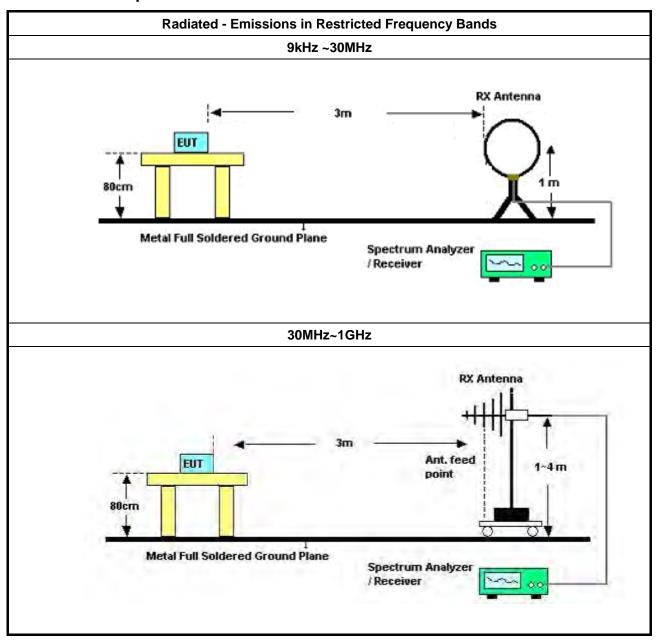
		Test Method								
•	The	average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].								
•	Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.									
•	For	or 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 duty 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										
		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	or 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 per average radiated measurements, emissions within 2 MHz of the authorized band edge managements are 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 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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4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark	
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Dec. 04, 2020	Dec. 03, 2021	Conduction (CO02-CB)	
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 20, 2020	Nov. 19, 2021	Conduction (CO02-CB)	
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	May 05, 2021	May 04, 2022	Conduction (CO02-CB)	
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Oct. 20, 2020	Oct. 19, 2021	Conduction (CO02-CB)	
Pulse Limiter	Schwarzbeck	VTSD 9561F-N	00378	9kHz ~ 30MHz	Mar. 18, 2021	Mar. 17, 2022	Conduction (CO02-CB)	
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO02-CB)	
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 10, 2020	Aug. 09, 2021	Radiation (03CH05-CB)	
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH05-CB	1GHz ~18GHz 3m	Nov. 08, 2020	Nov. 07, 2021	Radiation (03CH05-CB)	
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 26, 2021	Mar. 25, 2022	Radiation (03CH05-CB)	
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 14, 2021	Apr. 13, 2022	Radiation (03CH05-CB)	
Horn Antenna	SCHWARZBE CK	BBHA9120D	BBHA 9120 D-1291	1GHz~18GHz	Sep. 05, 2020	Sep. 04, 2021	Radiation (03CH05-CB)	
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 21, 2020	Jul. 20, 2021	Radiation (03CH05-CB)	
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 27, 2021	Apr. 26, 2022	Radiation (03CH05-CB)	
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz – 26.5GHz	Jul. 03, 2020	Jul. 02, 2021	Radiation (03CH05-CB)	
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz – 26.5GHz	Jul. 02, 2021	Jul. 01, 2022	Radiation (03CH05-CB)	
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 08, 2020	Jul. 07, 2021	Radiation (03CH05-CB)	
Amplifier	-	-	TF-130N-R1	18GHz ~ 40GHz	Jun.15, 2021	Jun. 14, 2022	Radiation (03CH05-CB)	
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Nov. 10, 2020	Nov. 09, 2021	Radiation (03CH05-CB)	
EMI Test Receiver	R&S	ESR7	102171	9kHz ~ 26GHz	Jul. 01, 2020	Jun. 30, 2021	Radiation (03CH05-CB)	
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 21, 2021	Jun. 20, 2022	Radiation (03CH05-CB)	
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH05-CB)	

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Calibration Calibration Model No. Serial No. Characteristics Remark Instrument **Brand Date Due Date** Radiation RG402 High Cable-28 1GHz~18GHz Oct. 05, 2020 Oct. 04, 2021 RF Cable-high Woken (03CH05-CB) High Radiation RF Cable-high Woken 1GHz~18GHz Oct. 05, 2020 Oct. 04, 2021 RG402 (03CH05-CB) Cable-04+28 High Radiation RF Cable-high Woken RG402 18GHz ~ 40 GHz Jul. 16, 2020 Jul. 15, 2021 Cable-40G#1 (03CH05-CB) High Radiation Jul. 14, 2022 RF Cable-high Jul. 15, 2021 Woken RG402 18GHz ~ 40 GHz Cable-40G#1 (03CH05-CB) High Radiation RF Cable-high Woken RG402 18GHz ~ 40 GHz Jul. 16, 2020 Jul. 15, 2021 Cable-40G#2 (03CH05-CB) Radiation High RF Cable-high Jul. 15, 2021 Jul. 14, 2022 Woken RG402 18GHz ~ 40 GHz Cable-40G#2 (03CH05-CB) Radiation **Test Software SPORTON SENSE** V5.10 N.C.R. N.C.R. (03CH05-CB) 3m Semi 1GHz ~18GHz Radiation Anechoic **TDK** SAC-3M 03CH01-CB May 07, 2021 May 06, 2022 (03CH01-CB) Chamber VSWR 3m **ETS-LINDGRE** Radiation Horn Antenna 00075790 750MHz ~ 18GHz Nov. 06, 2020 3115 Nov. 05, 2021 Ν (03CH01-CB) Radiation Horn Antenna **BBHA 9170** BBHA9170252 15GHz ~ 40GHz Jul. 21, 2020 Jul. 20, 2021 Schwarzbeck (03CH01-CB) Radiation Pre-Amplifier Agilent 8449B 3008A02121 1GHz ~ 26.5GHz May 20, 2021 May 19, 2022 (03CH01-CB) TTA1840-35-H Radiation 18GHz ~ 40GHz Pre-Amplifier MITEQ 1864479 Jul. 08, 2020 Jul. 07, 2021 (03CH01-CB) G Radiation 18GHz ~ 40GHz TF-130N-R1 Jun.15, 2021 Jun. 14, 2022 **Amplifier** (03CH01-CB) Spectrum Radiation R&S FSP40 100056 9kHz ~ 40GHz May 03, 2021 May 02, 2022 Analyzer (03CH01-CB) High Radiation RF Cable-high Woken RG402 1 GHz ~ 18 GHz Oct. 05, 2020 Oct. 04, 2021 (03CH01-CB) Cable-16+17 High Radiation RF Cable-high Woken RG402 18GHz ~ 40 GHz Jul. 16, 2020 Jul. 15, 2021 Cable-40G#1 (03CH01-CB) Radiation High RF Cable-high Woken RG402 18GHz ~ 40 GHz Jul. 15, 2021 Jul. 14, 2022 Cable-40G#1 (03CH01-CB) Radiation RF Cable-high Woken RG402 18GHz ~ 40 GHz Jul. 16, 2020 Jul. 15, 2021 Cable-40G#2 (03CH01-CB) Hiah Radiation RF Cable-high Woken RG402 18GHz ~ 40 GHz Jul. 15, 2021 Jul. 14, 2022 Cable-40G#2 (03CH01-CB) Radiation **SPORTON SENSE** V5.10 N.C.R. N.C.R. Test Software (03CH01-CB) Spectrum Conducted R&S FSV40 101027 9kHz~40GHz Jul. 27, 2020 Jul. 26, 2021 (TH02-CB) analvzer Conducted Power Sensor Anritsu MA2411B 1126203 300MHz~40GHz Sep. 17, 2020 Sep. 16, 2021 (TH02-CB) Conducted Power Meter Anritsu ML2495A 1210004 300MHz~40GHz Sep. 17, 2020 Sep. 16, 2021 (TH02-CB) Conducted RF Cable-high Woken RG402 High Cable-01 1 GHz - 18 GHz Oct. 05, 2020 Oct. 04, 2021

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(TH02-CB)

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Report Version : 01

Instrument	Brand	Model No.	Serial No.	Characteristics Calibration Date		Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-02	1 GHz – 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH02-CB)
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)

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

NCR means Non-Calibration required.

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Conducted Emissions at Powerline

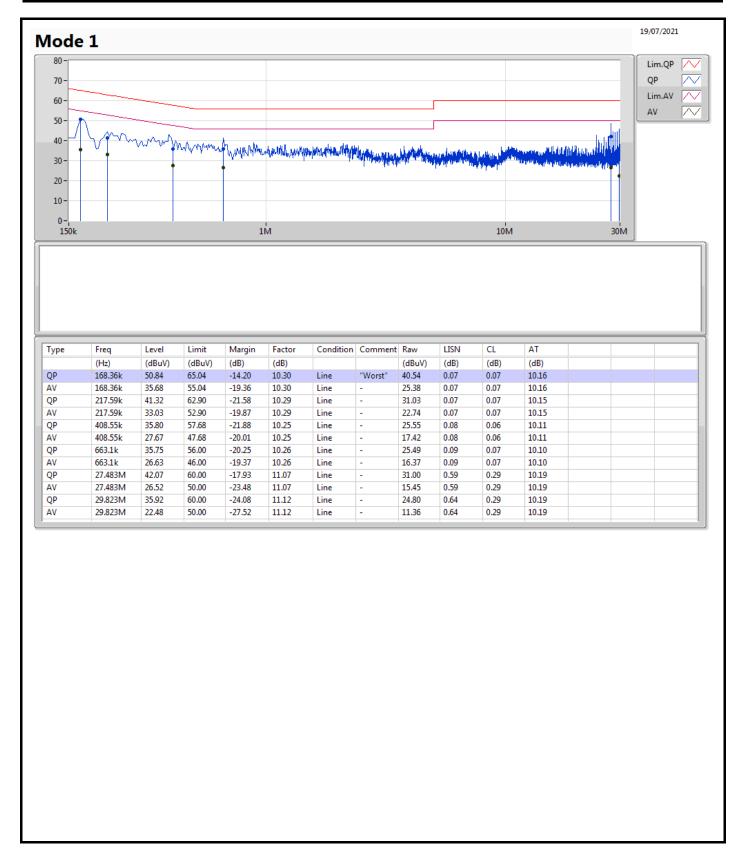
Appendix A

Summary

Mode	Result	Туре	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	168.36k	50.84	65.04	-14.20	Line

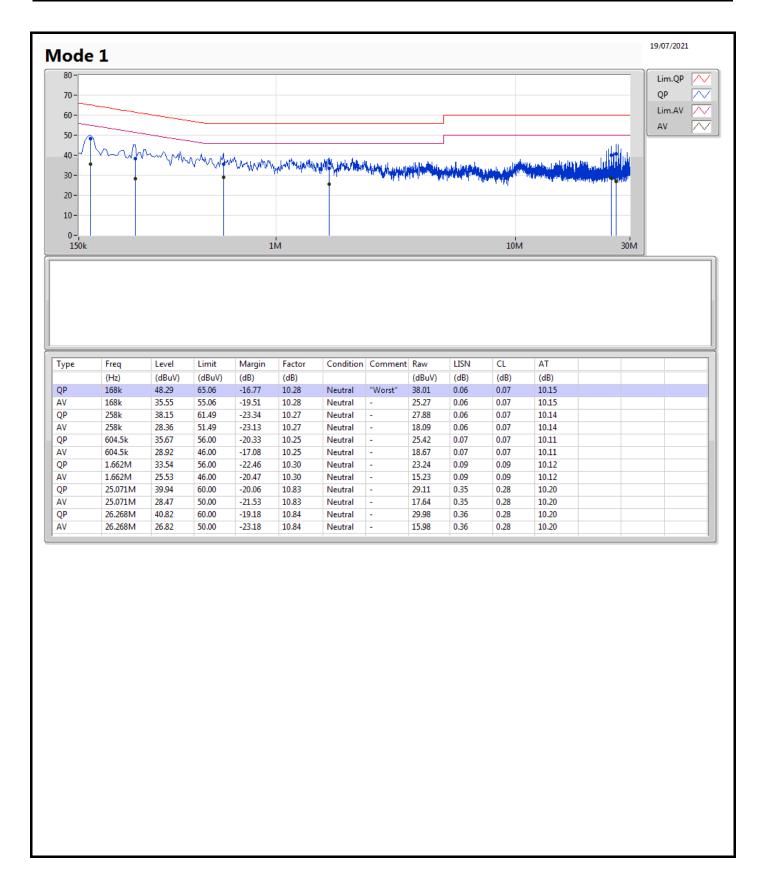
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EBW Appendix B

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)_2TX	8.1M	13.068M	13M1G1D	8.025M	12.819M
802.11g_Nss1,(6Mbps)_2TX	16.3M	16.342M	16M3D1D	15.425M	16.292M
802.11ax HEW20_Nss1,(MCS0)_2TX	18.775M	18.866M	18M9D1D	18.05M	18.841M

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;

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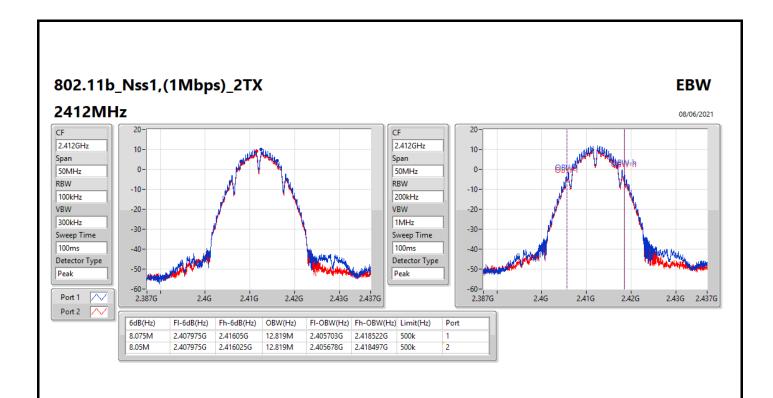
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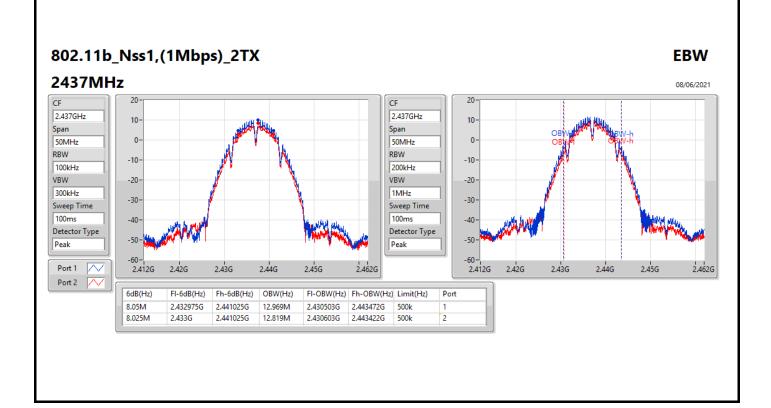
Mode	Result	Limit	Port 1-N dB	Port 1-OBW	Port 2-N dB	Port 2-OBW
		(Hz)	(Hz)	(Hz)	(Hz)	(Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	8.075M	12.819M	8.05M	12.819M
2437MHz	Pass	500k	8.05M	12.969M	8.025M	12.819M
2462MHz	Pass	500k	8.1M	13.068M	8.075M	12.894M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	15.9M	16.342M	15.675M	16.292M
2437MHz	Pass	500k	16.025M	16.317M	15.9M	16.317M
2462MHz	Pass	500k	15.425M	16.342M	16.3M	16.317M
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	=
2412MHz	Pass	500k	18.725M	18.866M	18.2M	18.841M
2437MHz	Pass	500k	18.775M	18.841M	18.65M	18.841M
2462MHz	Pass	500k	18.4M	18.841M	18.05M	18.841M

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

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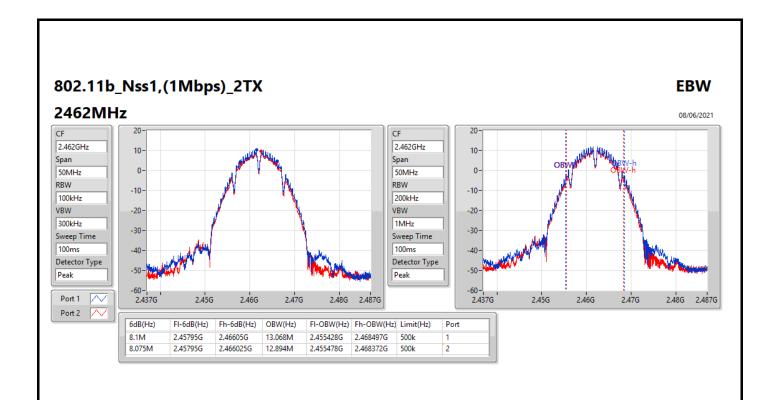
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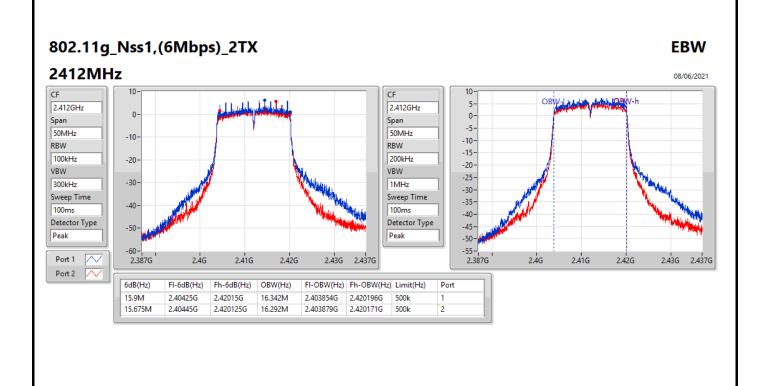




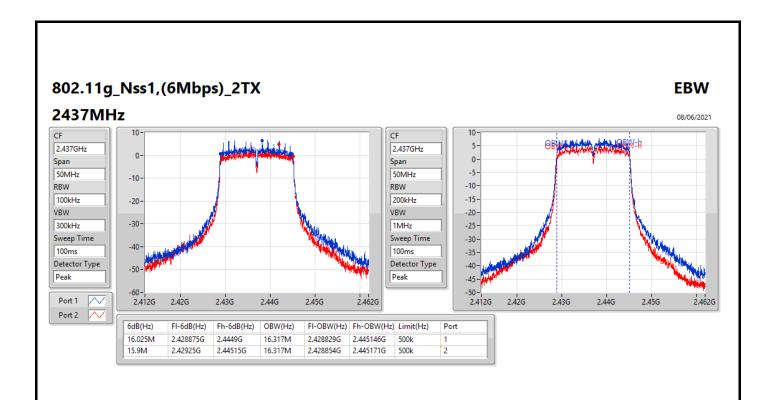
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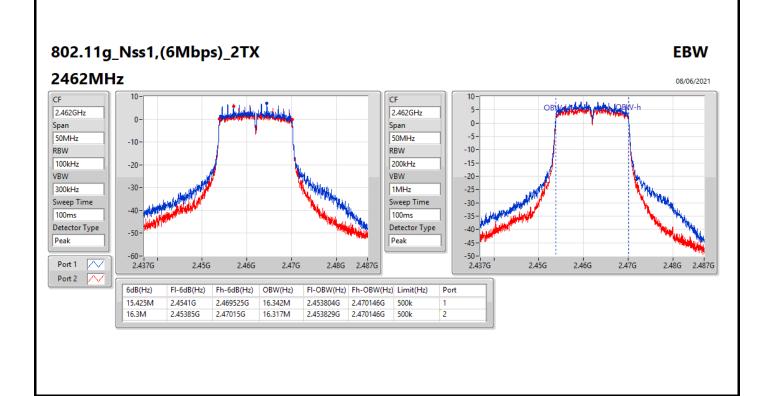
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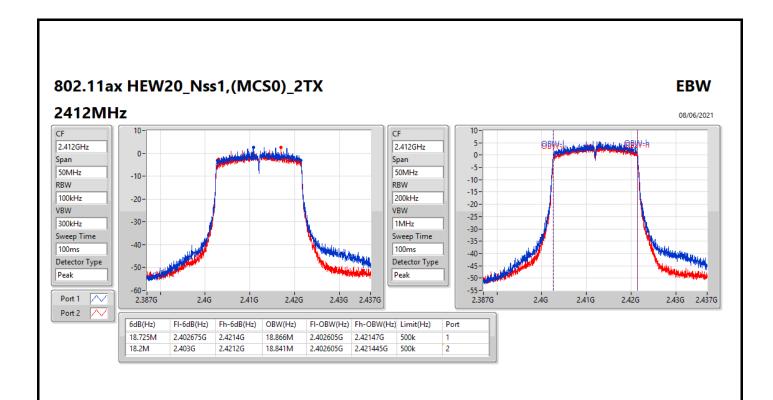
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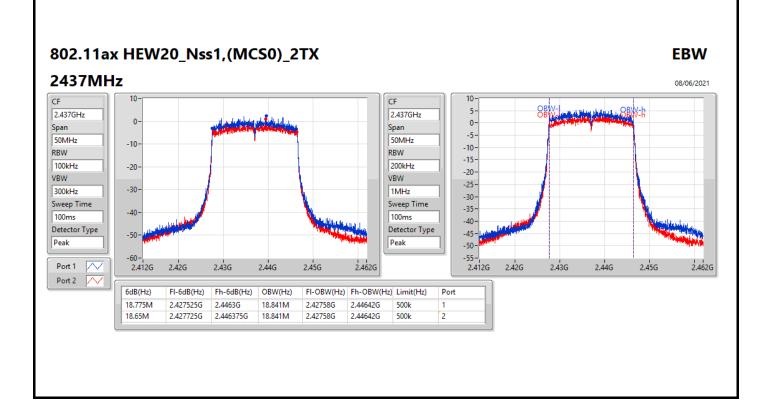




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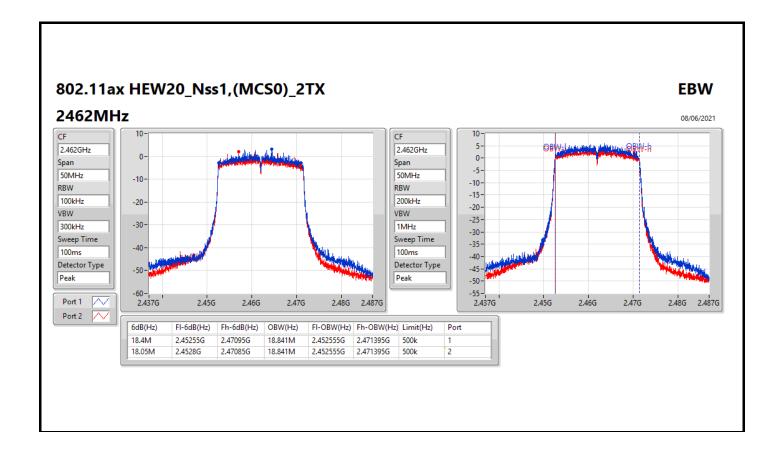
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Appendix C Average Power

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	21.47	0.14028
802.11g_Nss1,(6Mbps)_2TX	19.46	0.08831
802.11ax HEW20_Nss1,(MCS0)_2TX	16.36	0.04325

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Average Power Appendix C

Result

Mode	Result	DG	Port 1	Port 2	Total Power	Power Limit
		(dBi)	(dBm)	(dBm)	(dBm)	(dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.951	18.76	17.89	21.36	30.00
2417MHz	Pass	2.951	18.53	17.22	20.93	30.00
2437MHz	Pass	2.951	18.83	17.03	21.03	30.00
2457MHz	Pass	2.951	18.84	17.70	21.32	30.00
2462MHz	Pass	2.951	18.91	17.95	21.47	30.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.951	16.55	15.64	19.13	30.00
2417MHz	Pass	2.951	16.92	15.93	19.46	30.00
2437MHz	Pass	2.951	16.95	15.02	19.10	30.00
2457MHz	Pass	2.951	16.74	15.63	19.23	30.00
2462MHz	Pass	2.951	16.87	15.84	19.40	30.00
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.951	13.80	12.85	16.36	30.00
2417MHz	Pass	2.951	13.58	12.57	16.11	30.00
2437MHz	Pass	2.951	13.59	12.03	15.89	30.00
2457MHz	Pass	2.951	13.59	12.44	16.06	30.00
2462MHz	Pass	2.951	13.73	12.53	16.18	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)_2TX	-2.97
802.11g_Nss1,(6Mbps)_2TX	-7.56
802.11ax HEW20_Nss1,(MCS0)_2TX	-10.65

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

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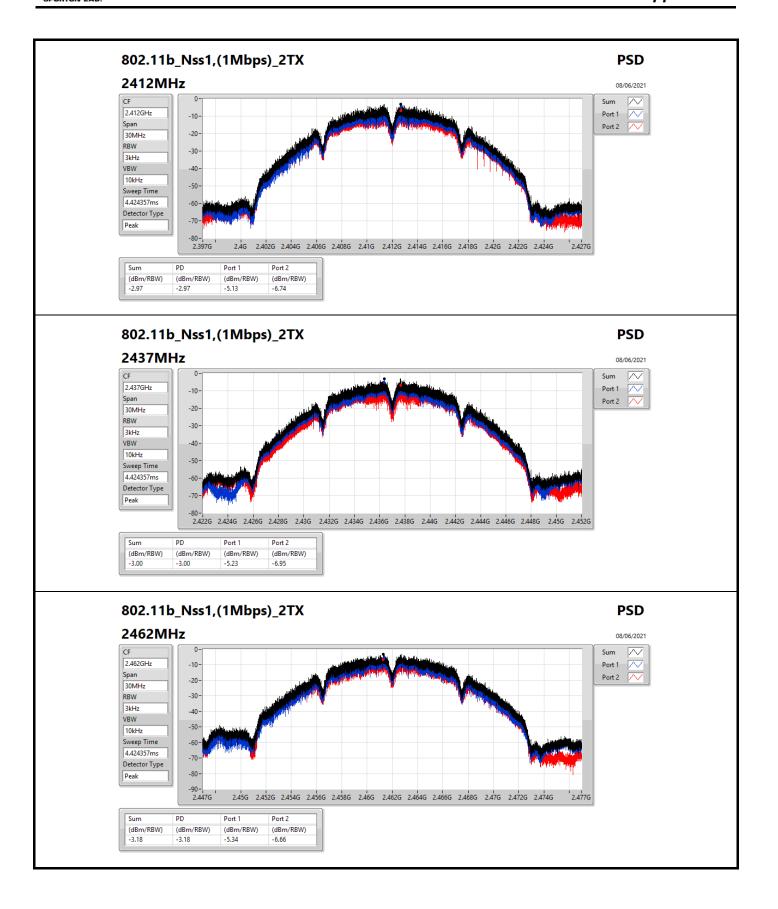
Appendix D **PSD**

Result

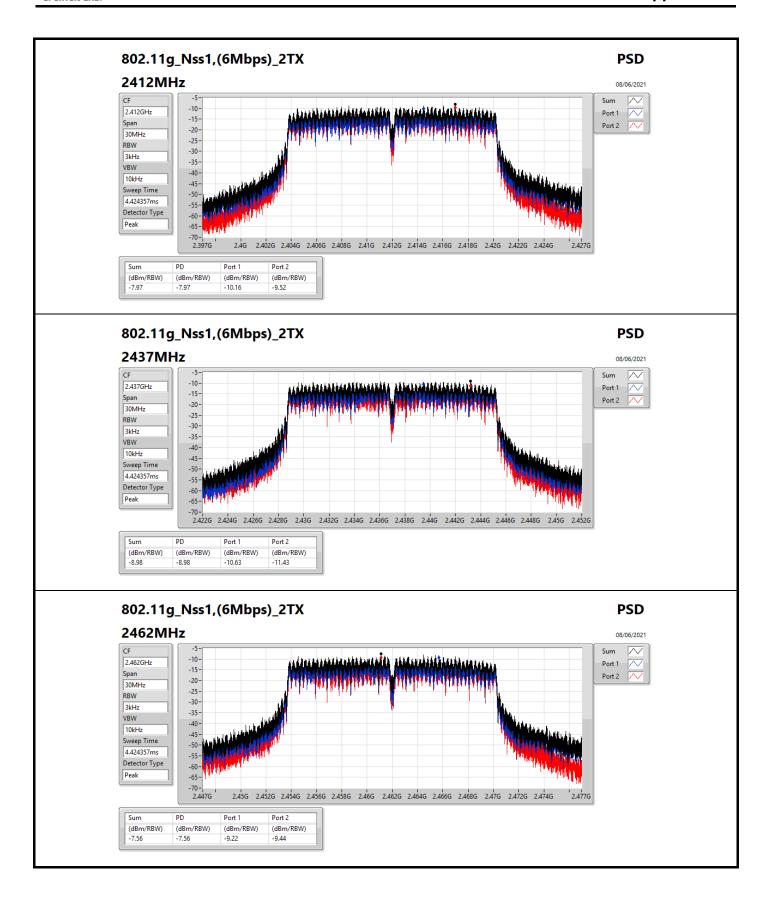
Mode	Result	DG	Port 1	Port 2	PD	PD Limit
		(dBi)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.615	-5.13	-6.74	-2.97	8.00
2437MHz	Pass	3.615	-5.23	-6.95	-3.00	8.00
2462MHz	Pass	3.615	-5.34	-6.66	-3.18	8.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.615	-10.16	-9.52	-7.97	8.00
2437MHz	Pass	3.615	-10.63	-11.43	-8.98	8.00
2462MHz	Pass	3.615	-9.22	-9.44	-7.56	8.00
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.615	-12.09	-13.96	-11.35	8.00
2437MHz	Pass	3.615	-12.37	-14.08	-10.72	8.00
2462MHz	Pass	3.615	-11.35	-13.27	-10.65	8.00

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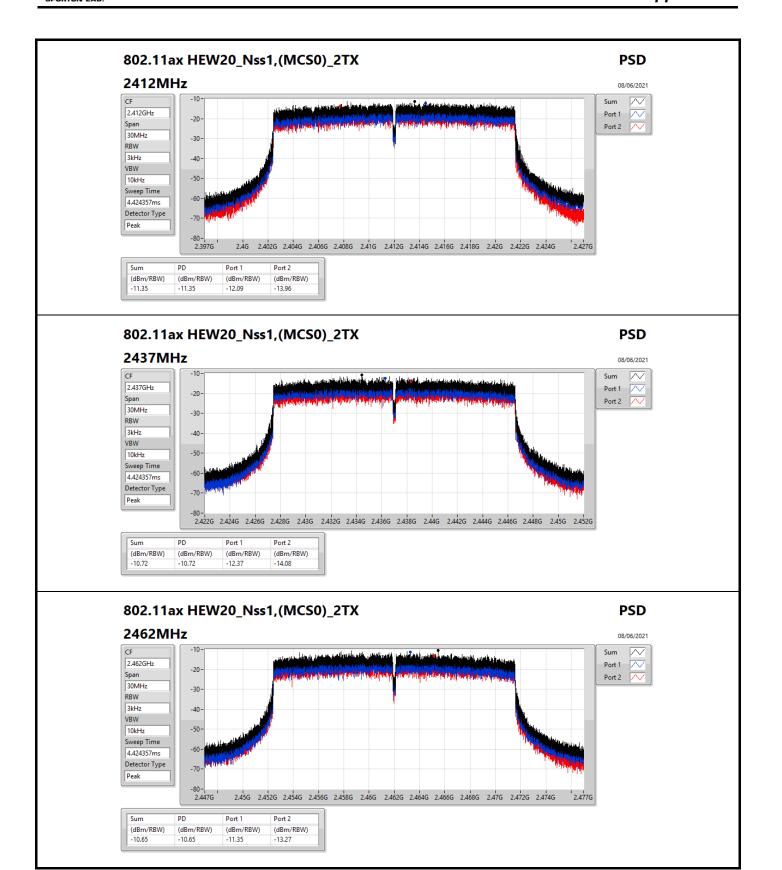
DG = Directional Gain; RBW = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X power density;



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CSE(Non-restricted Band)

Appendix E

Summary

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)	
2.4-2.4835GHz	-	-		-	-	-	-	-	-	-	-		-		-
802.11b_Nss1,(1Mbps)_2TX	Pass	2.41248G	10.64	-19.36	878.7M	-51.45	2.39962G	-41.82	2.4G	-43.49	2.52144G	-50.10	15.20025G	-43.40	1
802.11g_Nss1,(6Mbps)_2TX	Pass	2.45703G	7.16	-22.84	795.7M	-50.86	2.39988G	-29.88	2.4G	-32.42	2.509G	-50.06	24.17399G	-44.60	1
802.11ax HEW20_Nss1,(MCS0)_2TX	Pass	2.41328G	3.65	-26.35	857.44M	-51.47	2.39998G	-37.30	2.4G	-39.98	2.51696G	-50.26	23.48003G	-44.06	1

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CSE(Non-restricted Band)

Appendix E

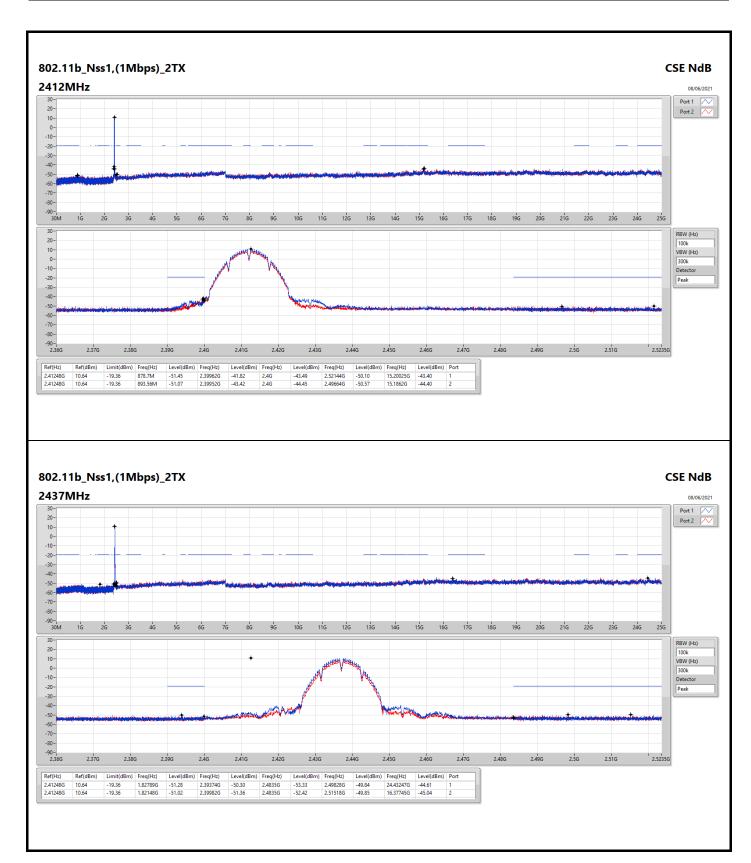
Result

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)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.41248G	10.64	-19.36	878.7M	-51.45	2.39962G	-41.82	2.4G	-43.49	2.52144G	-50.10	15.20025G	-43.40	1
2412MHz	Pass	2.41248G	10.64	-19.36	893.56M	-51.07	2.39952G	-43.42	2.4G	-44.45	2.49664G	-50.57	15.1862G	-44.40	2
2437MHz	Pass	2.41248G	10.64	-19.36	1.82789G	-51.28	2.39374G	-50.30	2.4835G	-53.33	2.49828G	-49.84	24.43247G	-44.61	1
2437MHz	Pass	2.41248G	10.64	-19.36	1.82148G	-51.02	2.39982G	-51.36	2.4835G	-52.42	2.51518G	-49.85	16.37745G	-45.04	2
2462MHz	Pass	2.41248G	10.64	-19.36	681.82M	-51.47	2.39934G	-50.70	2.4835G	-53.02	2.50898G	-50.23	24.1768G	-44.55	1
2462MHz	Pass	2.41248G	10.64	-19.36	950.35M	-52.16	2.39314G	-51.14	2.4G	-53.44	2.48762G	-50.10	15.19463G	-44.90	2
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-		-	-	-	-	-	
2412MHz	Pass	2.45703G	7.16	-22.84	795.7M	-50.86	2.39988G	-29.88	2.4G	-32.42	2.509G	-50.06	24.17399G	-44.60	1
2412MHz	Pass	2.45703G	7.16	-22.84	907.25M	-51.99	2.39994G	-36.01	2.4G	-38.32	2.50456G	-50.56	21.83924G	-44.63	2
2437MHz	Pass	2.45703G	7.16	-22.84	508.52M	-51.56	2.3967G	-49.20	2.4G	-52.43	2.51554G	-50.28	15.19463G	-44.10	1
2437MHz	Pass	2.45703G	7.16	-22.84	731.91M	-50.88	2.397G	-51.40	2.4G	-52.14	2.48658G	-49.18	24.54766G	-44.92	2
2462MHz	Pass	2.45703G	7.16	-22.84	2.07807G	-51.02	2.39378G	-51.19	2.4835G	-39.60	2.48374G	-39.82	21.78024G	-45.04	1
2462MHz	Pass	2.45703G	7.16	-22.84	701.04M	-51.77	2.39918G	-51.49	2.4835G	-48.93	2.4839G	-46.72	24.10656G	-44.93	2
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.41328G	3.65	-26.35	857.44M	-51.47	2.39998G	-37.30	2.4G	-39.98	2.51696G	-50.26	23.48003G	-44.06	1
2412MHz	Pass	2.41328G	3.65	-26.35	2.17564G	-51.15	2.39982G	-40.41	2.4G	-41.90	2.4848G	-50.01	15.19744G	-43.93	2
2437MHz	Pass	2.41328G	3.65	-26.35	906.08M	-51.42	2.3919G	-51.61	2.4G	-52.32	2.48414G	-49.65	24.45775G	-45.05	1
2437MHz	Pass	2.41328G	3.65	-26.35	346.01M	-50.98	2.39116G	-50.97	2.4G	-54.12	2.50156G	-49.77	21.8561G	-44.26	2
2462MHz	Pass	2.41328G	3.65	-26.35	1.82556G	-51.99	2.39178G	-49.82	2.4835G	-48.66	2.48422G	-46.46	16.57131G	-44.56	1
2462MHz	Pass	2.41328G	3.65	-26.35	888.02M	-51.06	2.39274G	-51.11	2.4835G	-52.51	2.50518G	-48.15	24.89324G	-44.84	2

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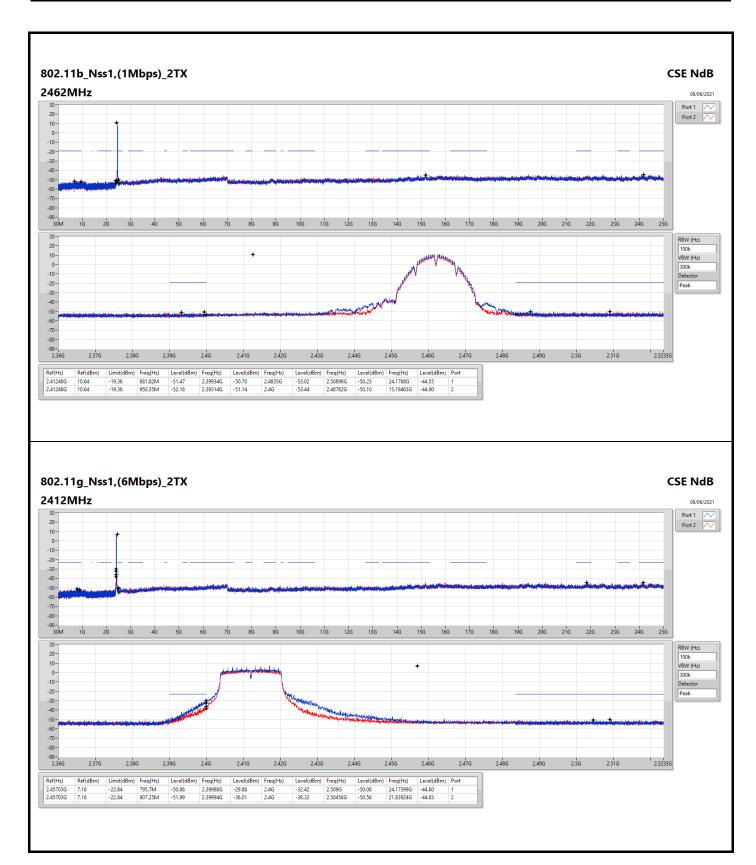
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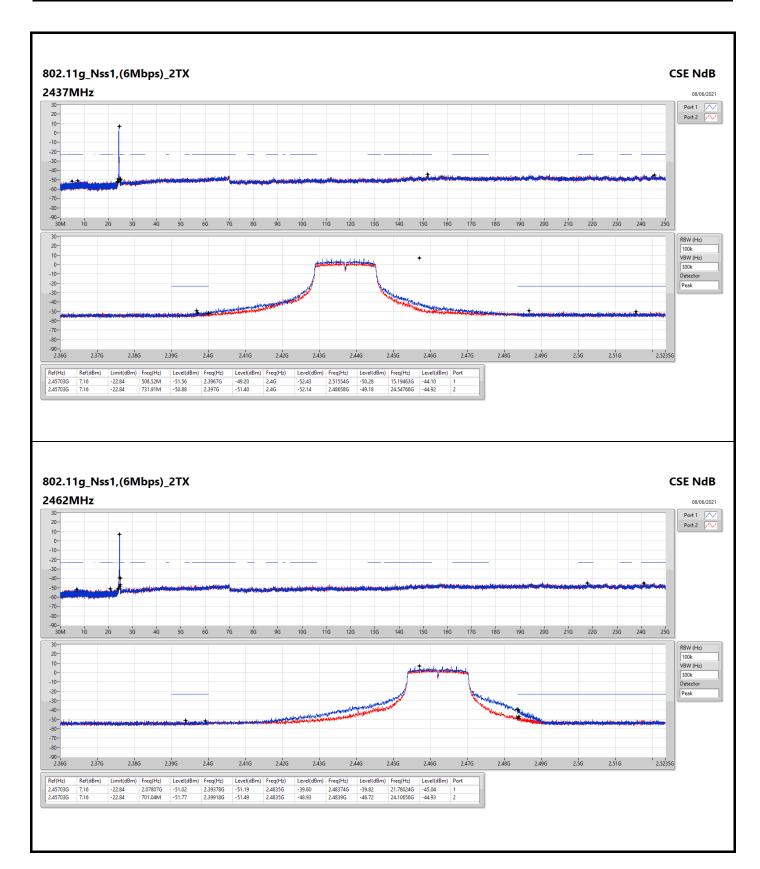
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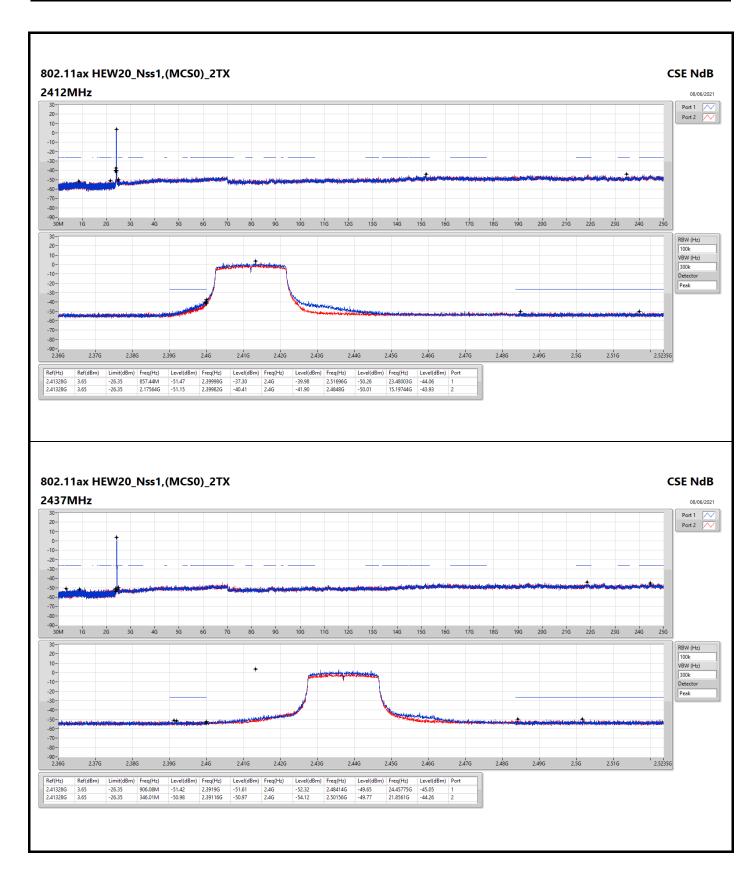
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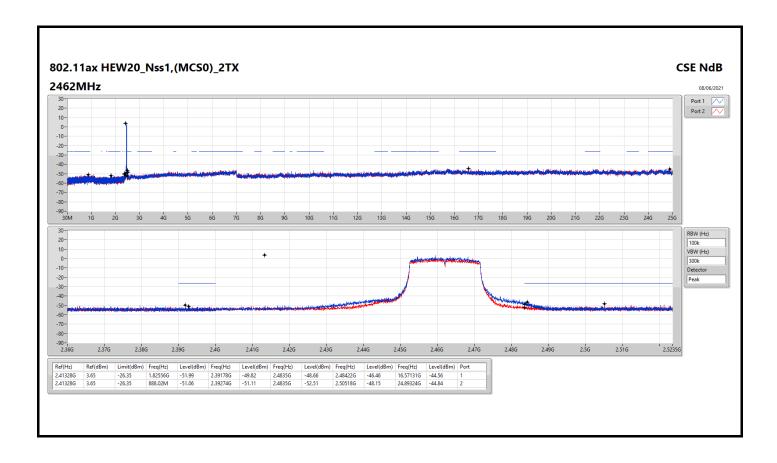
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Radiated Emissions below 1GHz

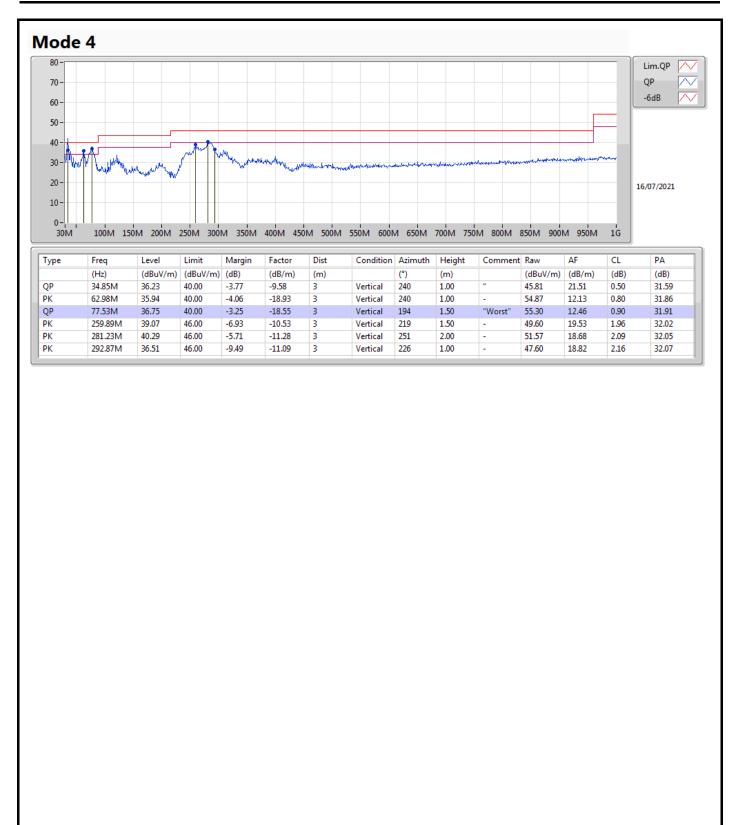
Appendix F.1

Summary

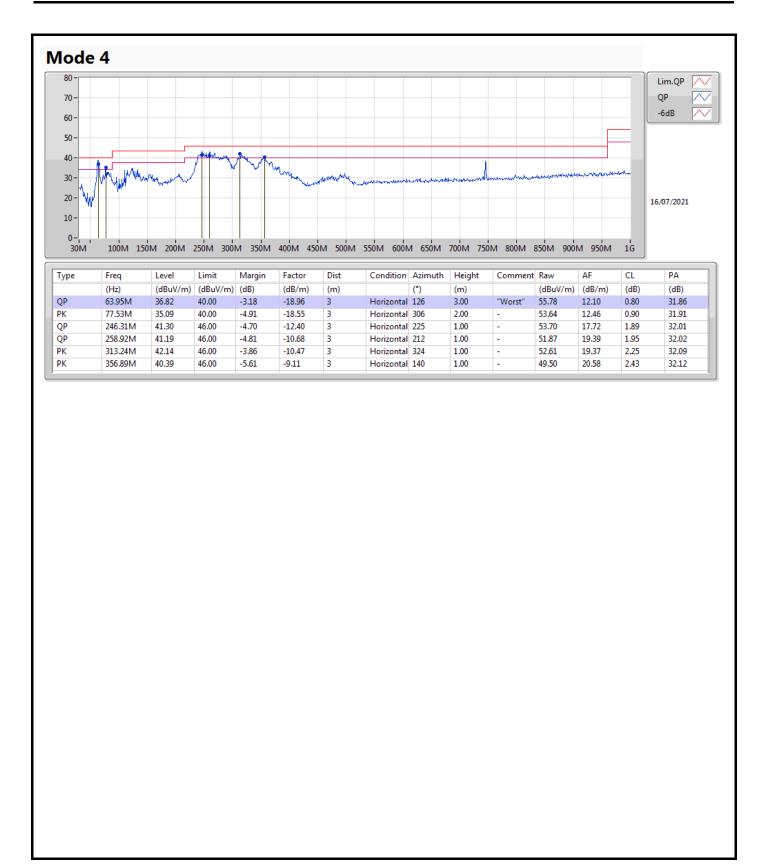
Mode	Result	Туре	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 4	Pass	QP	63.95M	36.82	40.00	-3.18	Horizontal

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RSE TX above 1GHz

Appendix F.2

Summary

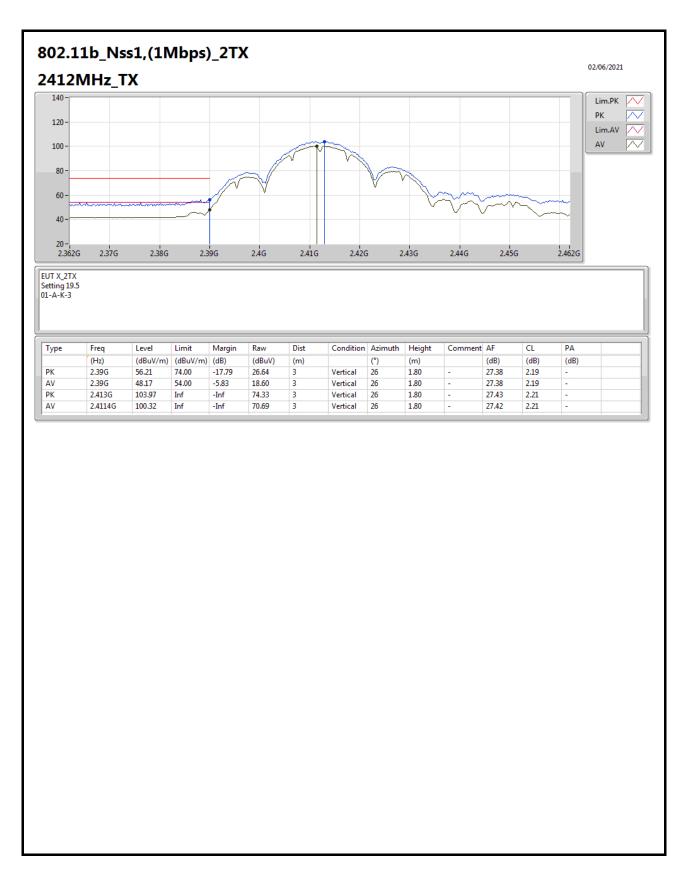
Mode	Result	Туре	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)	
2.4-2.4835GHz	-	-	=	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	Pass	AV	4.82402G	53.98	54.00	-0.02	3	Horizontal	207	1.00	-

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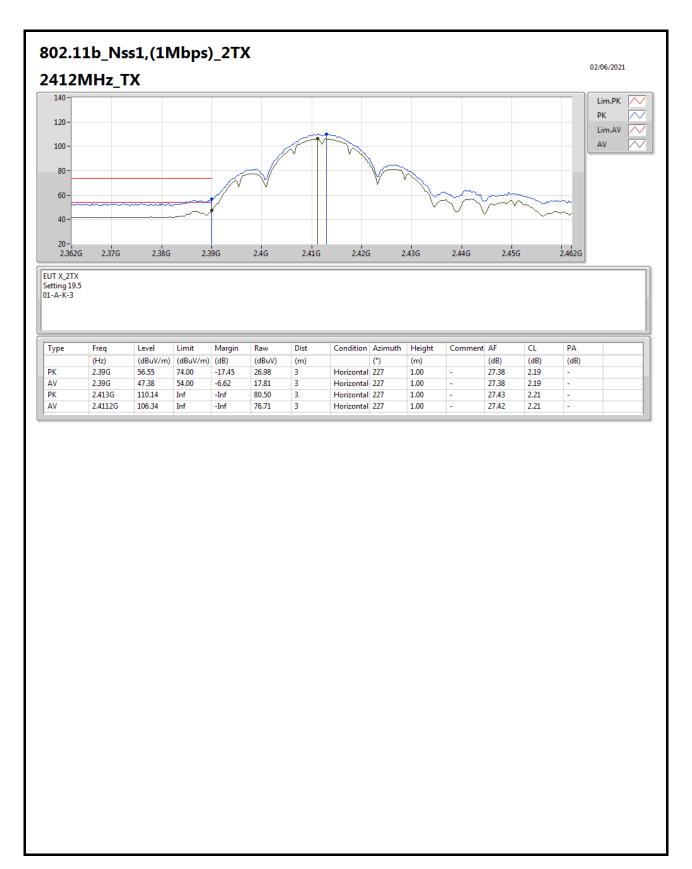
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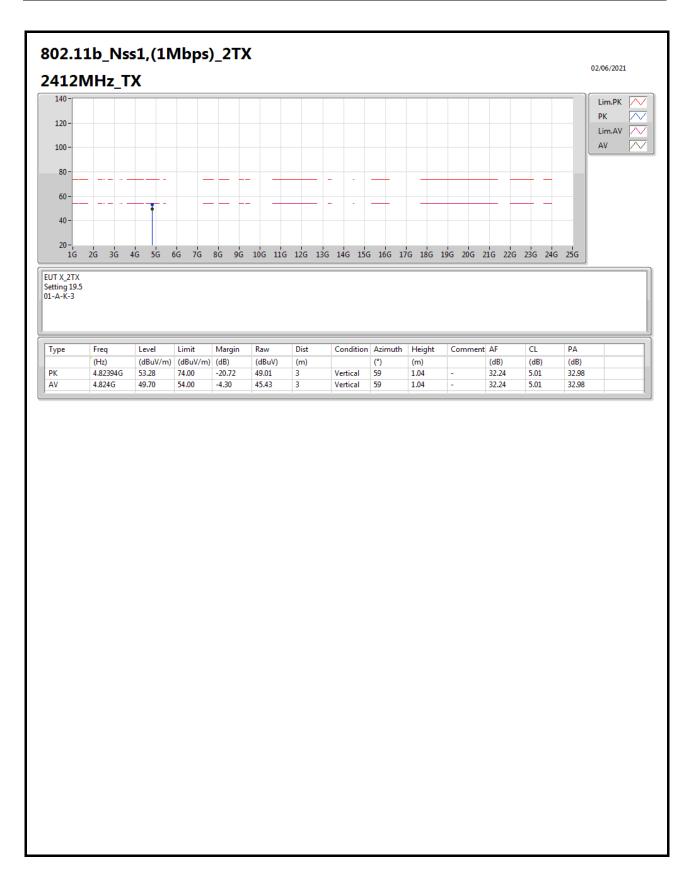




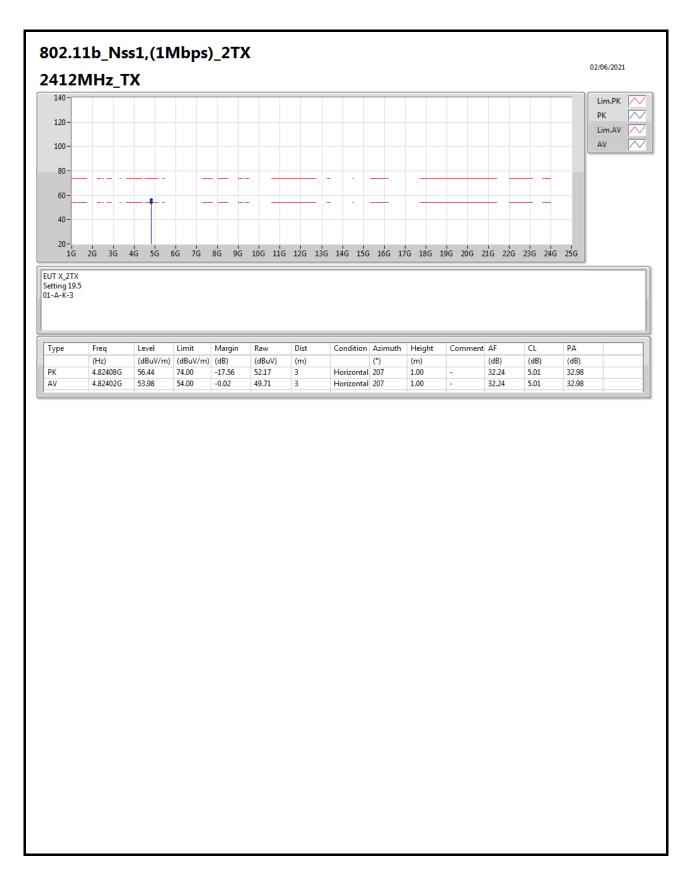




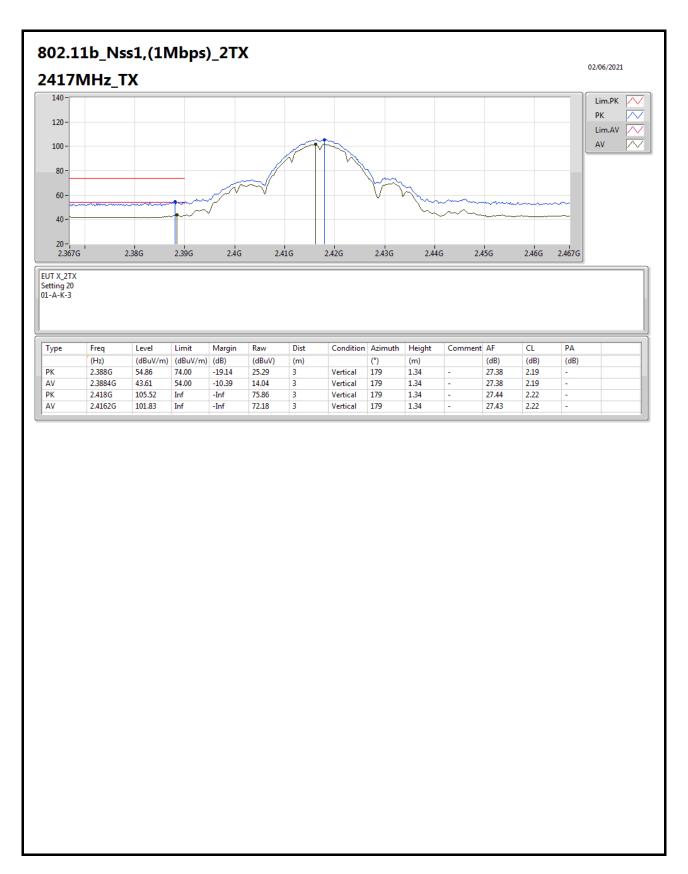




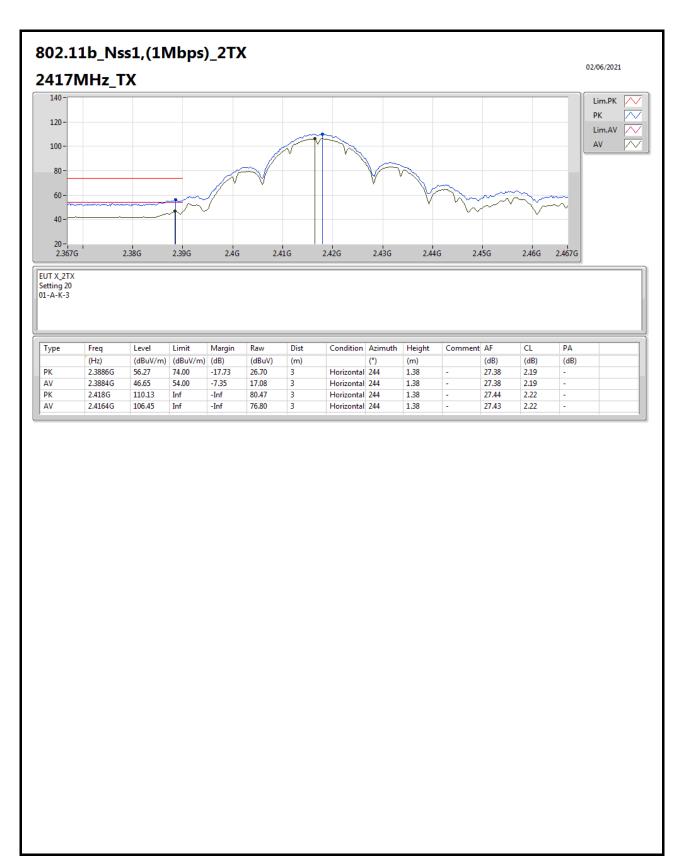




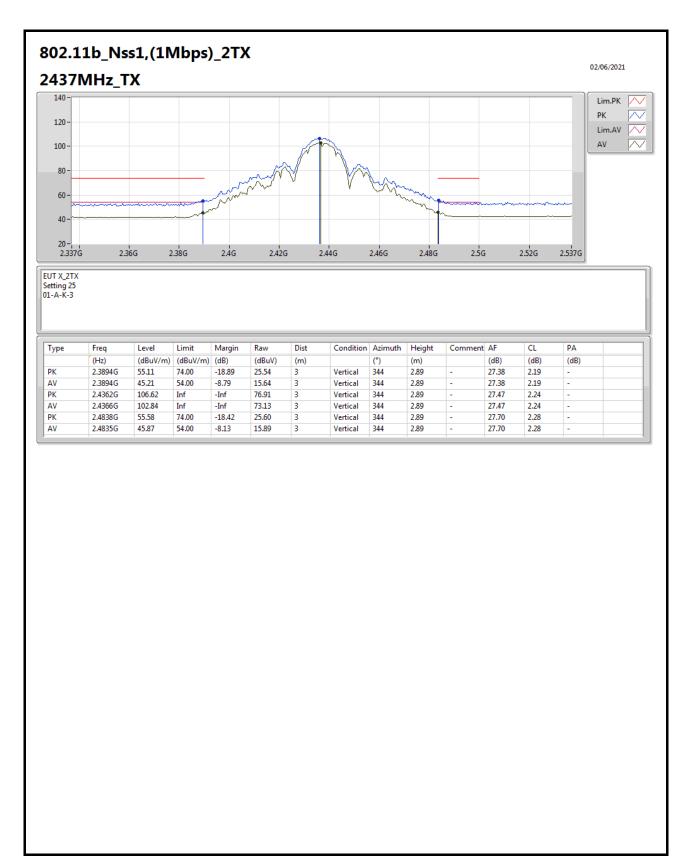






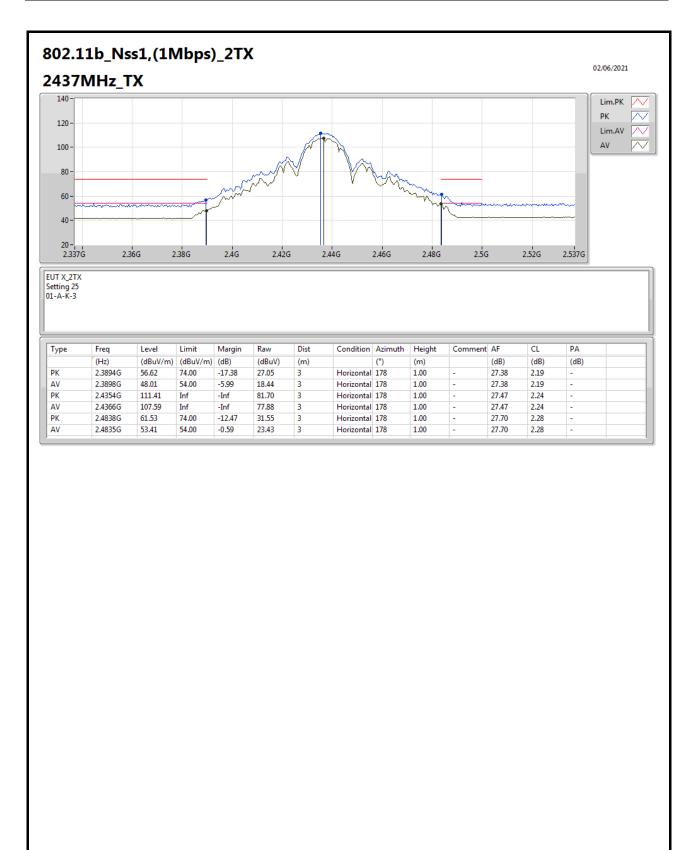






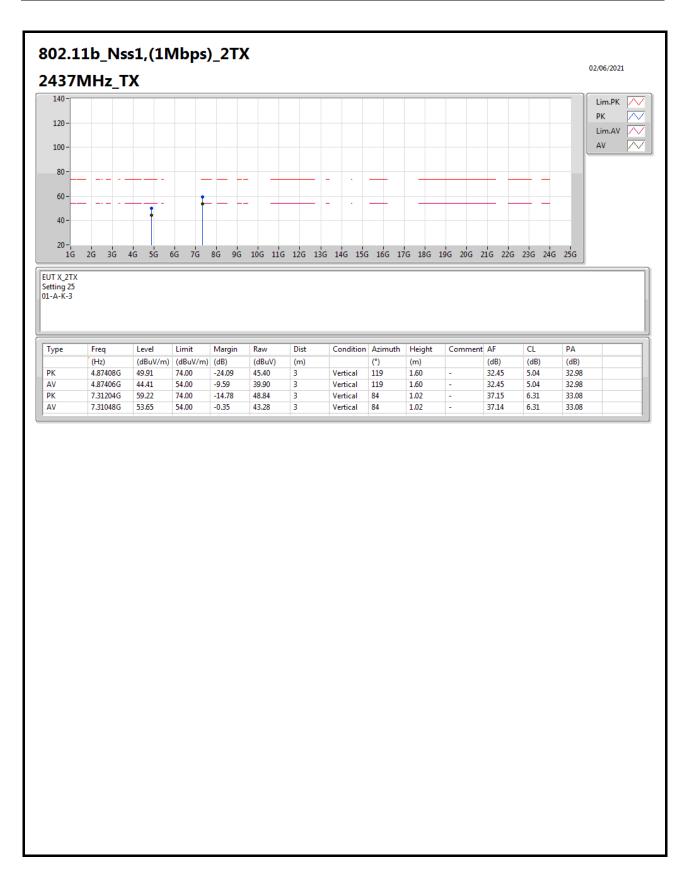
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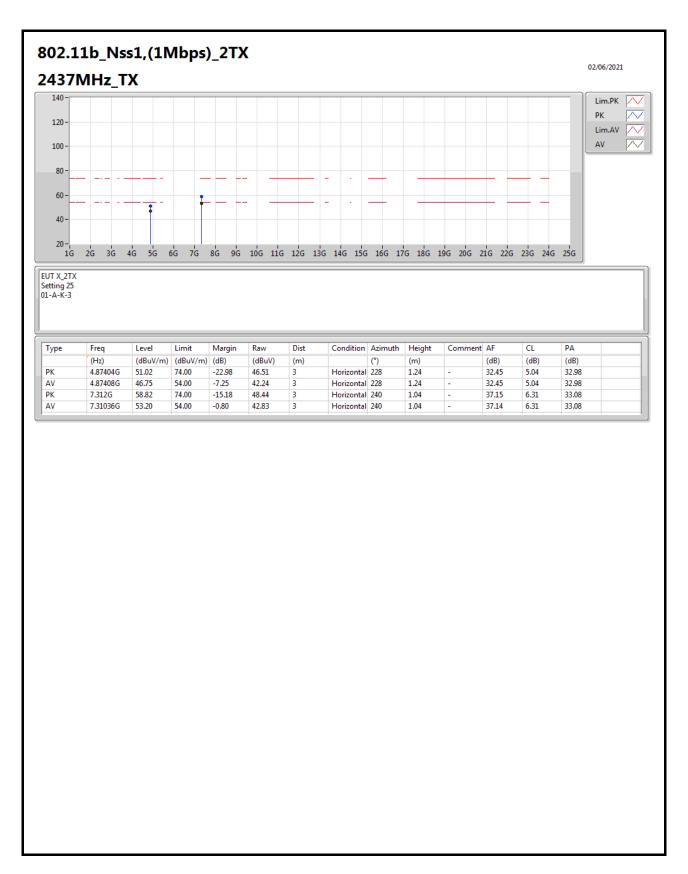


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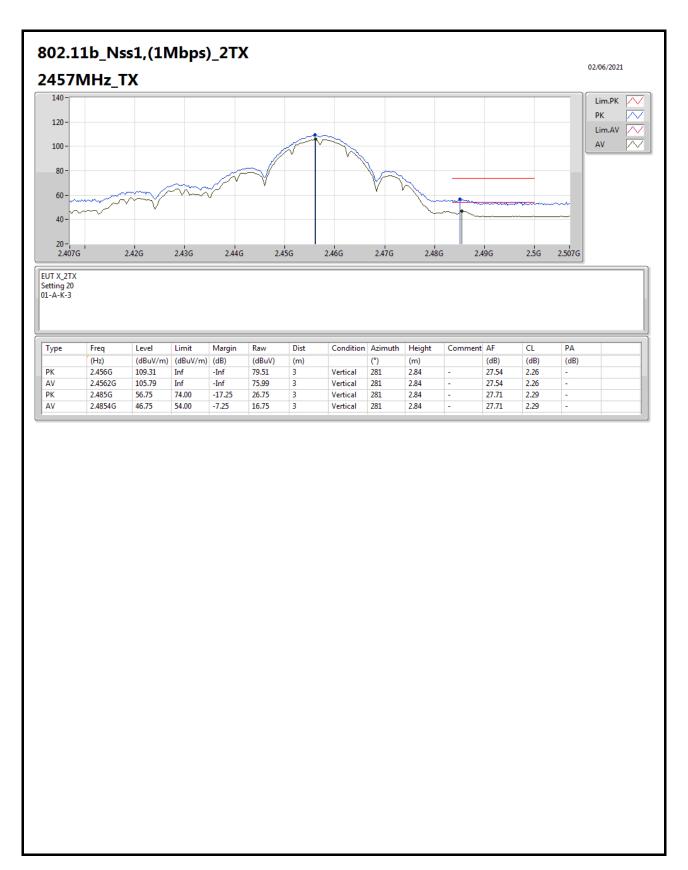




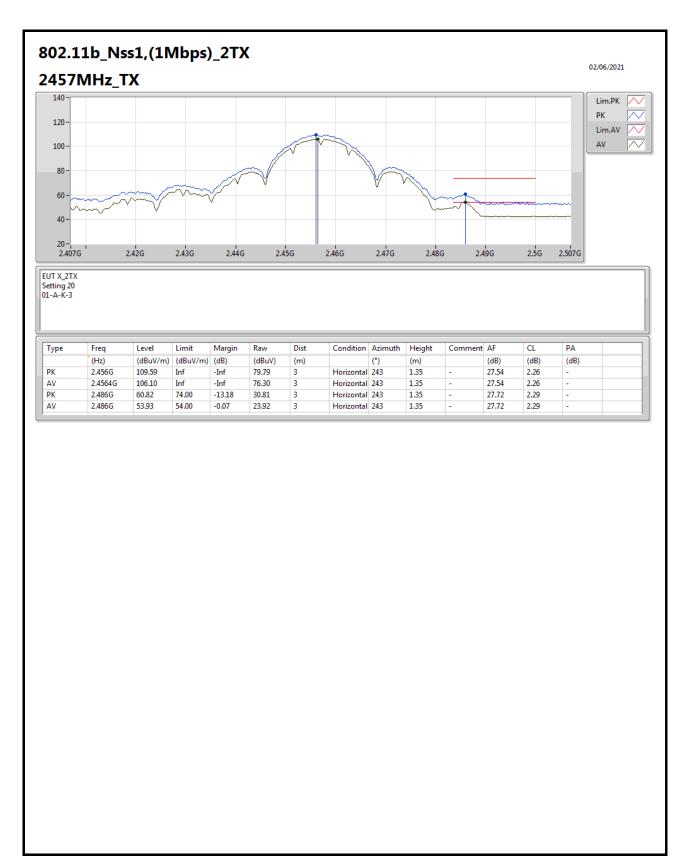




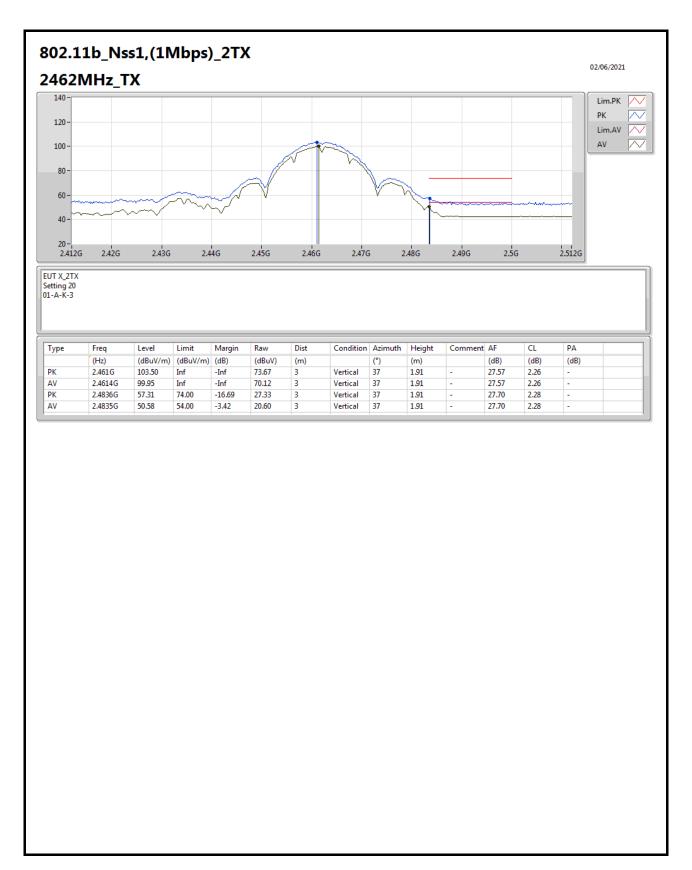




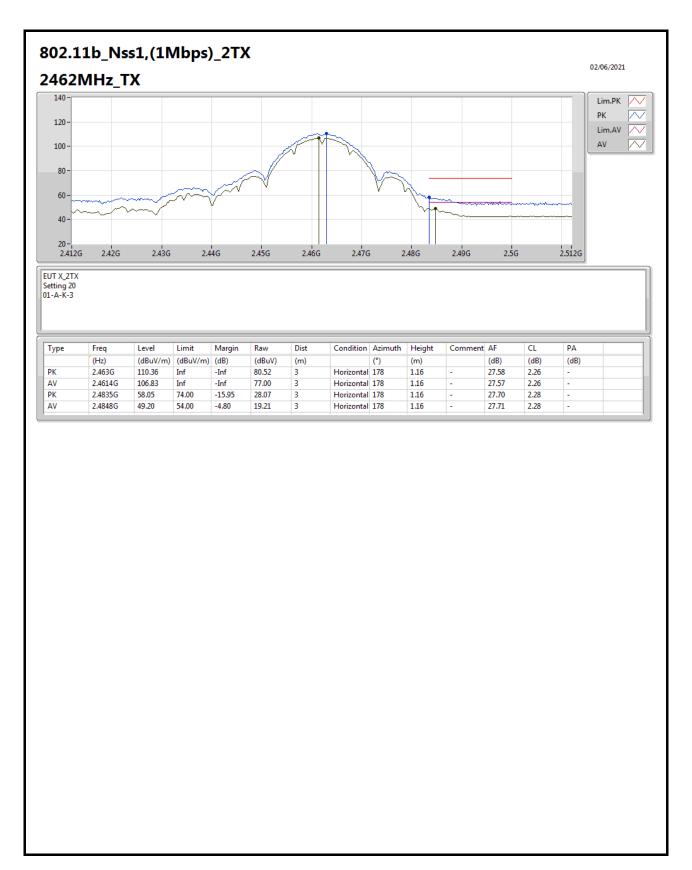




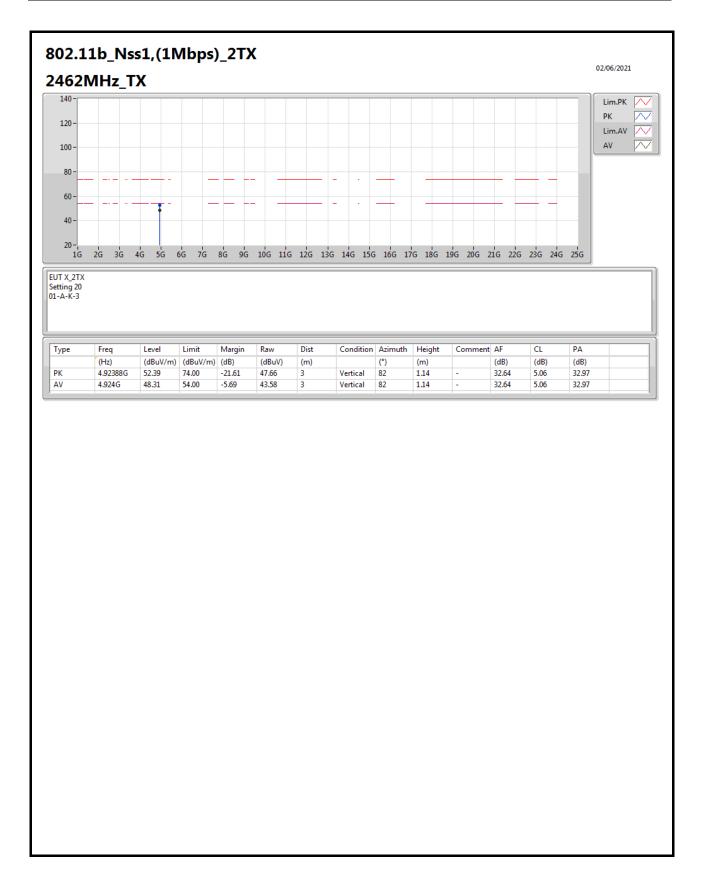




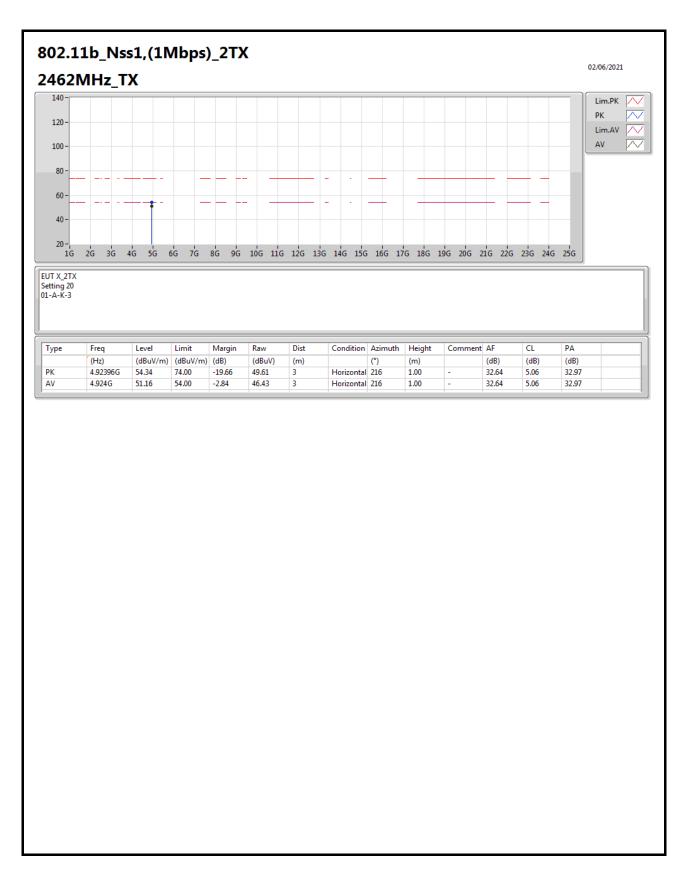




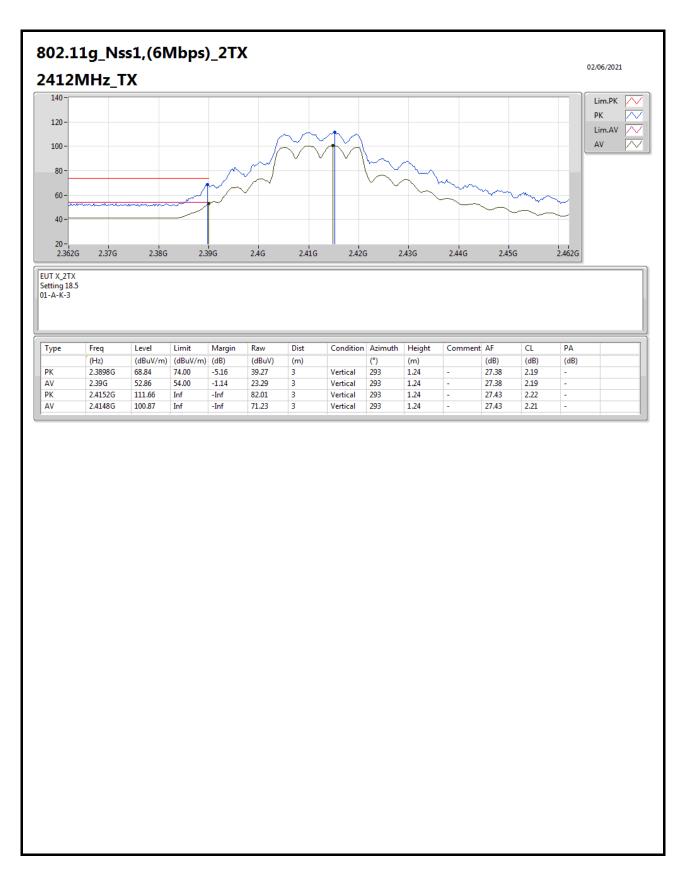




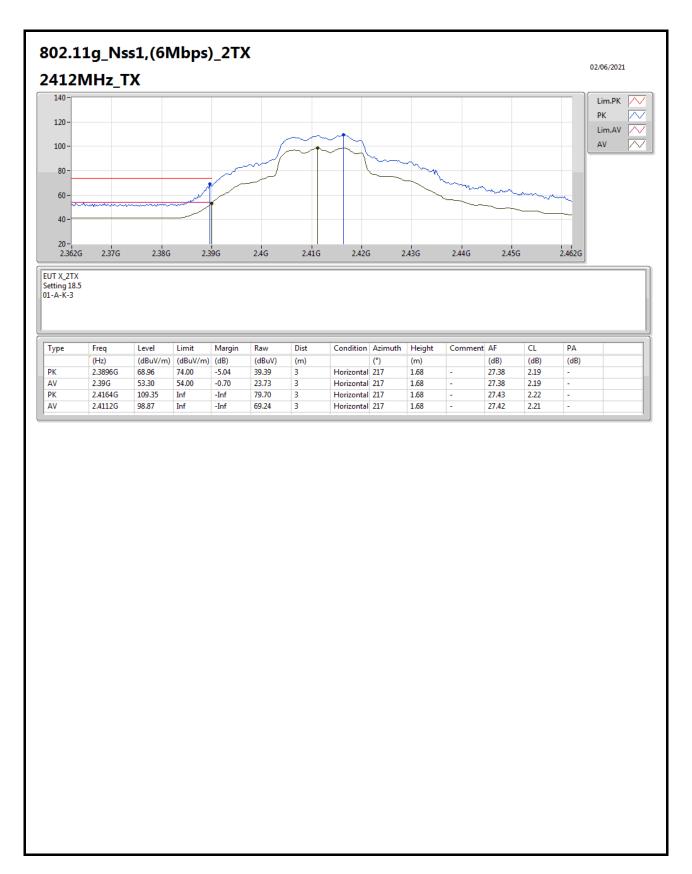




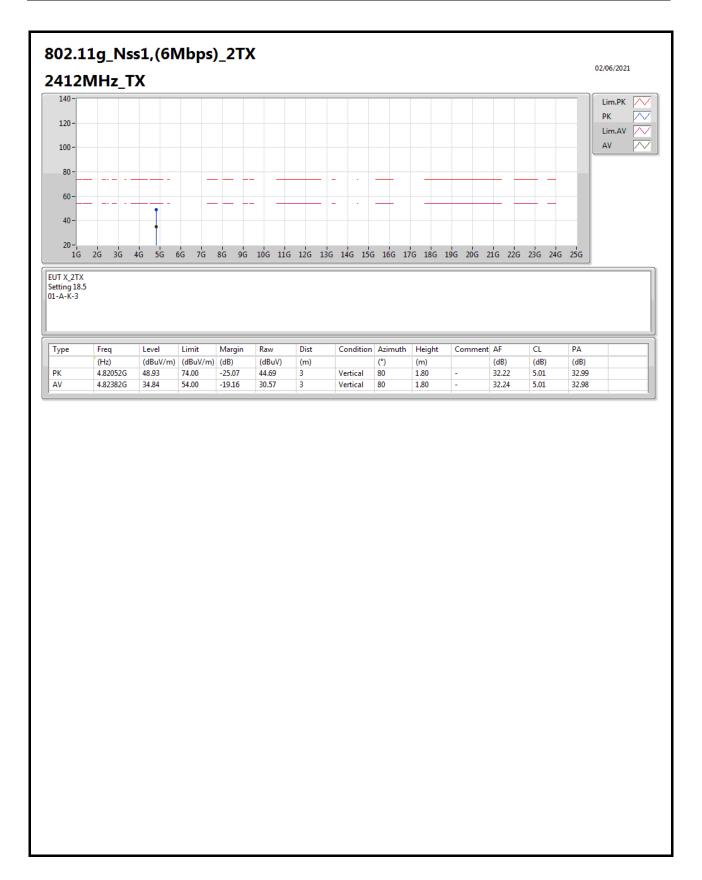




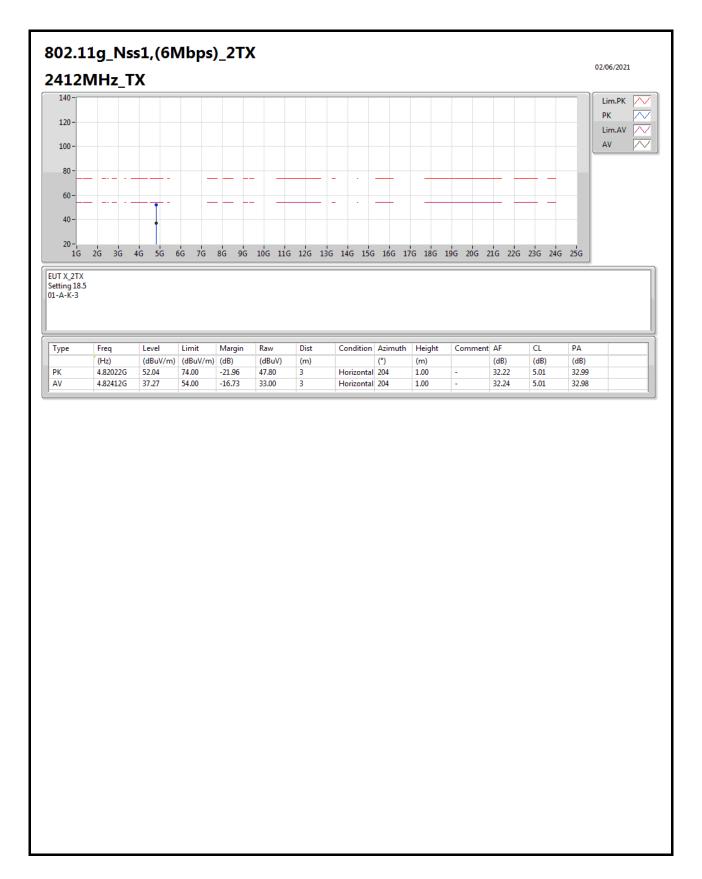




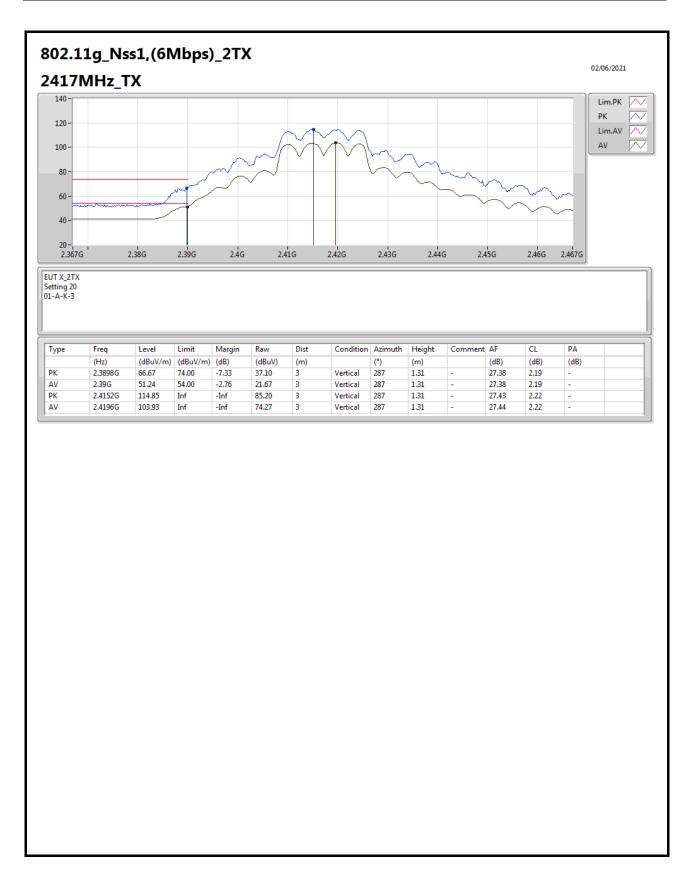




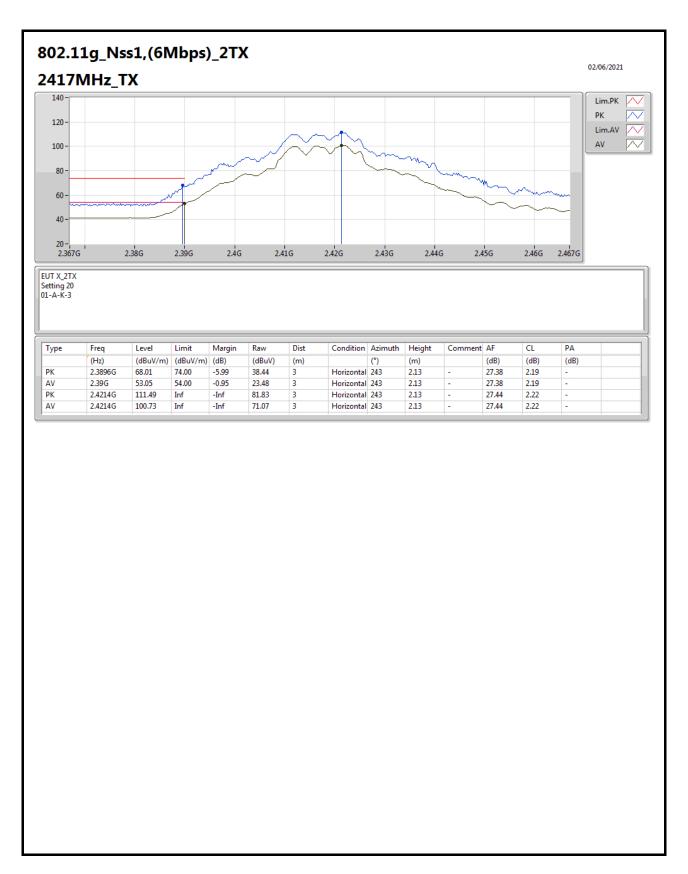




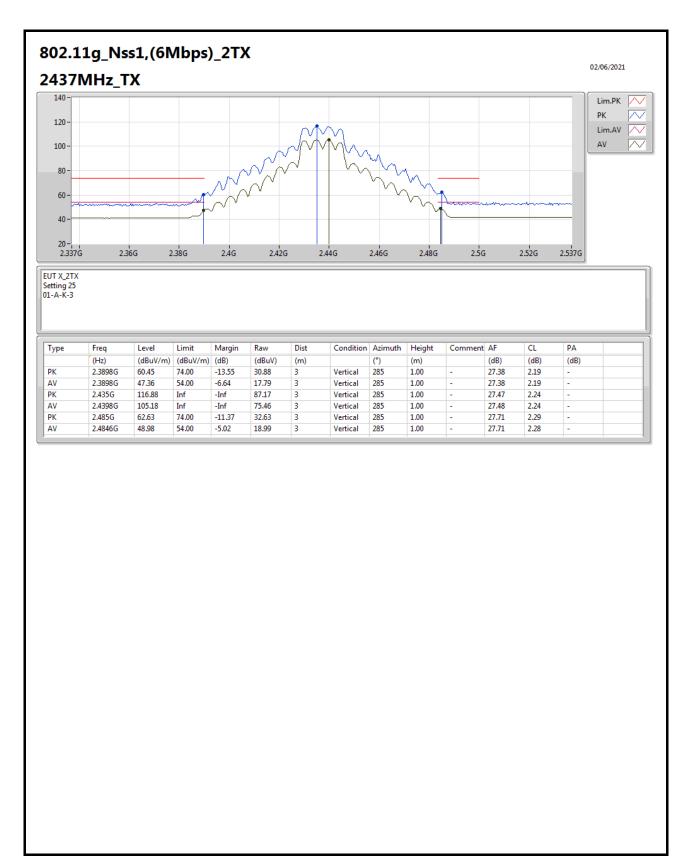








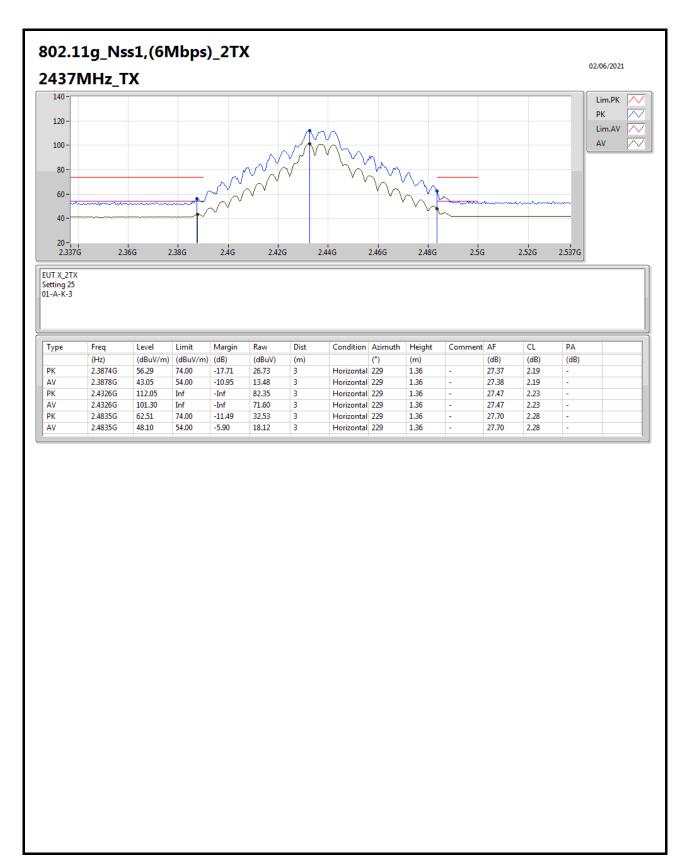




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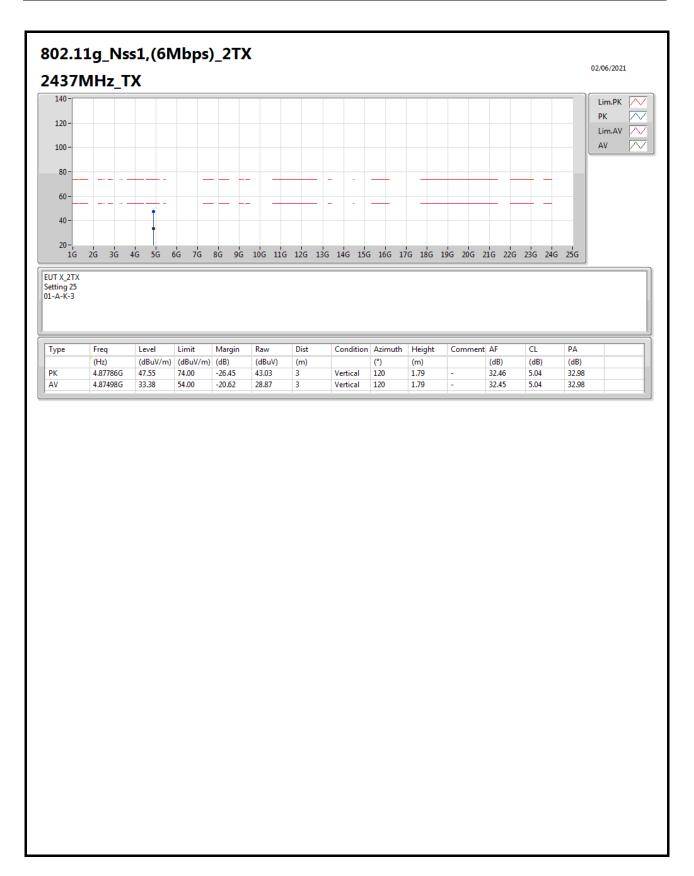
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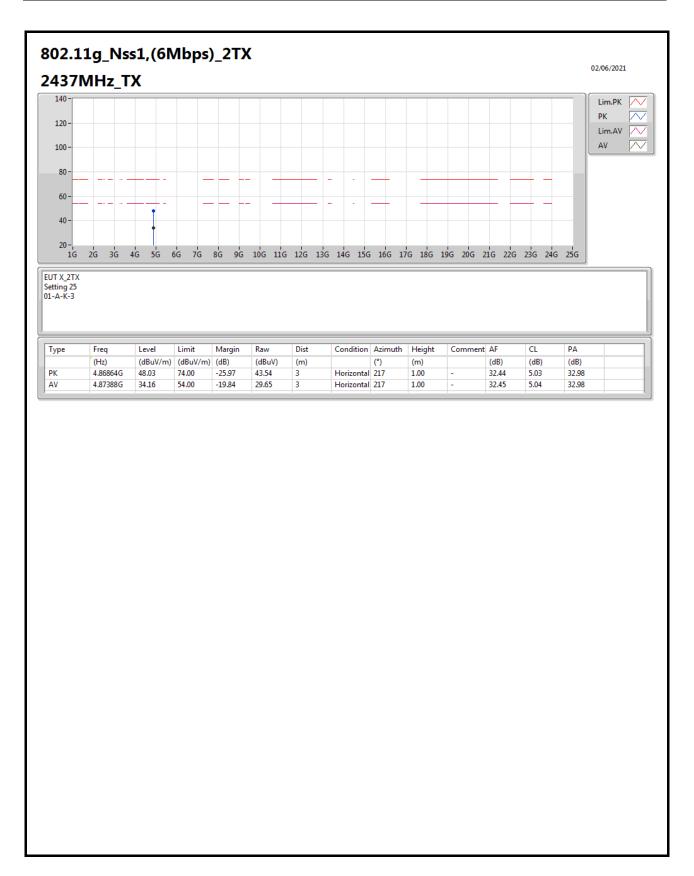


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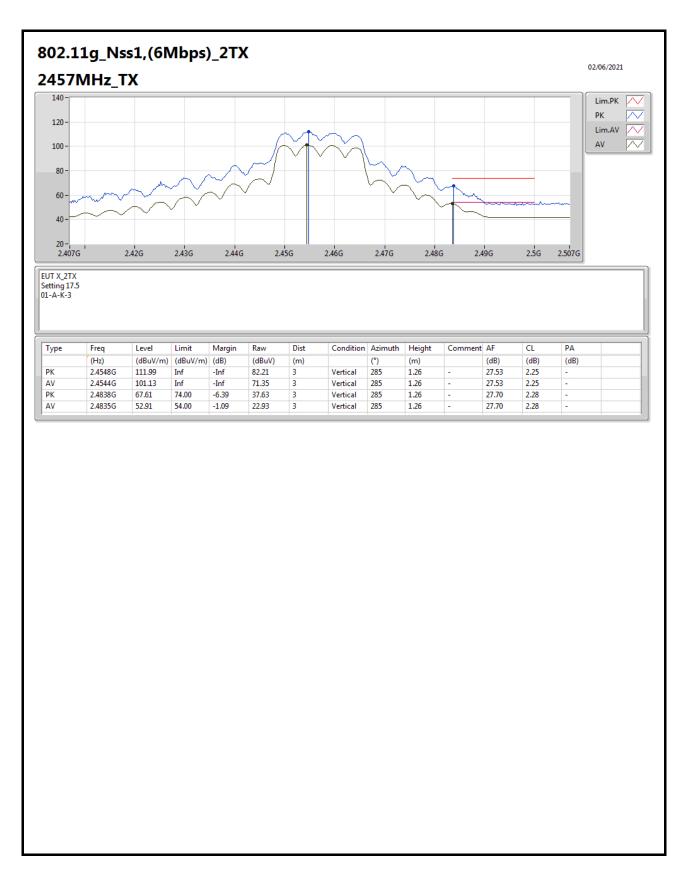




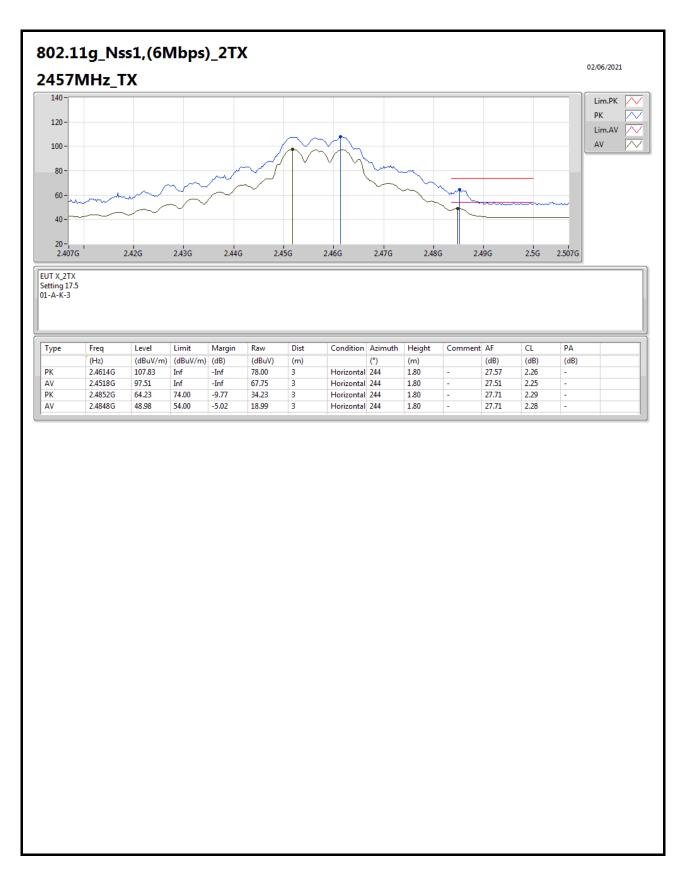
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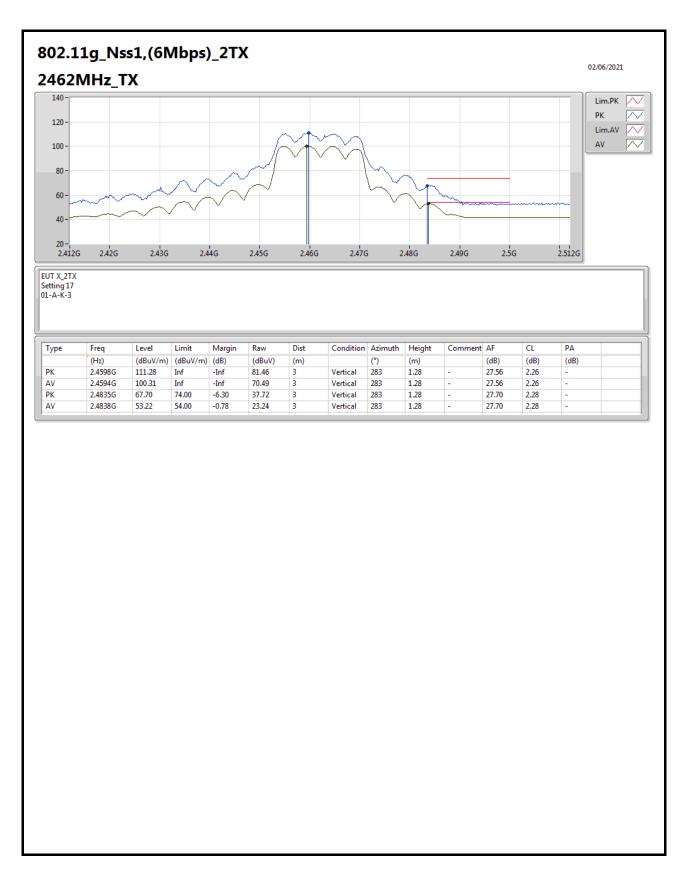




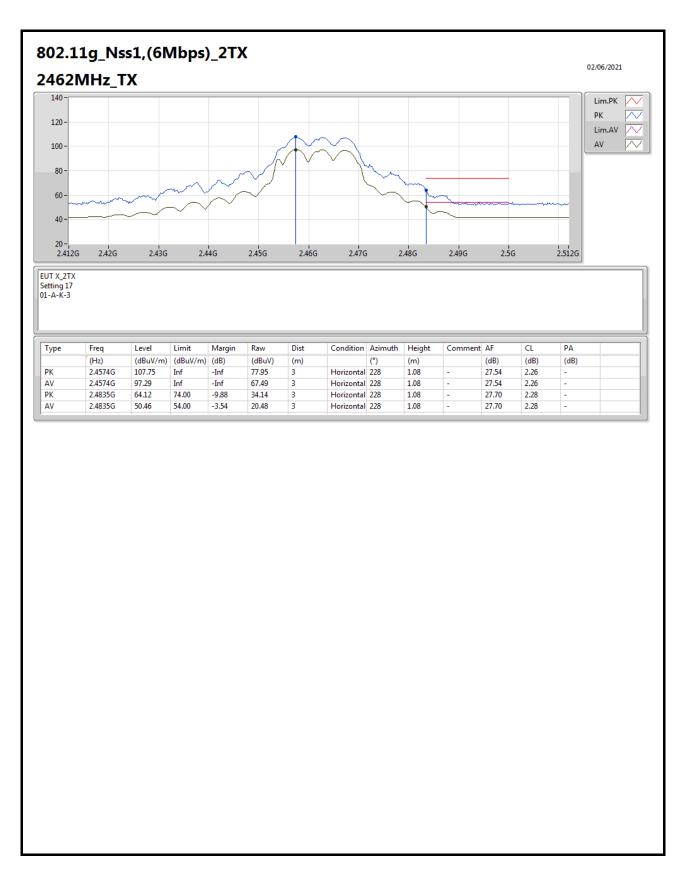
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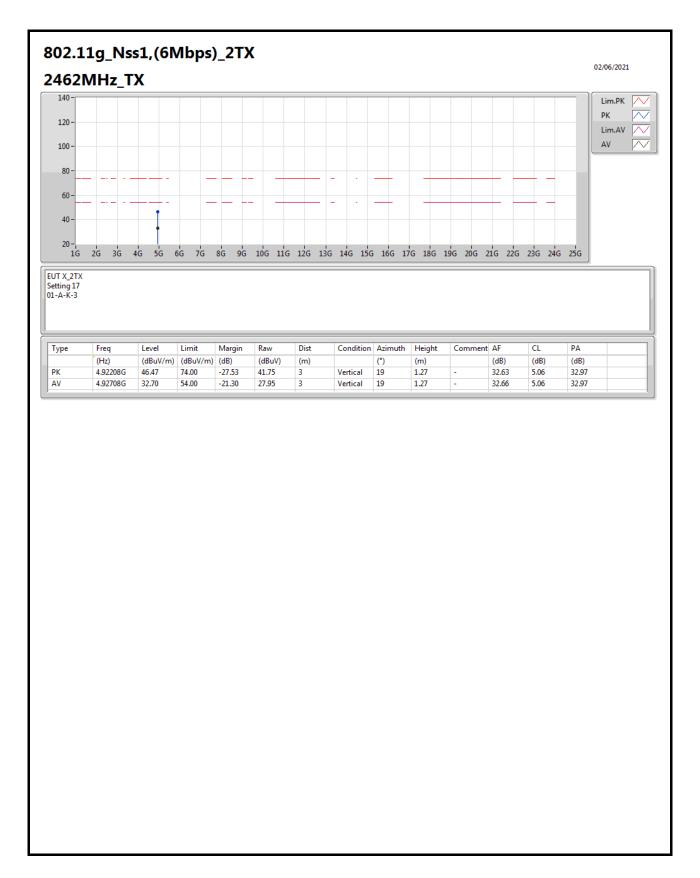




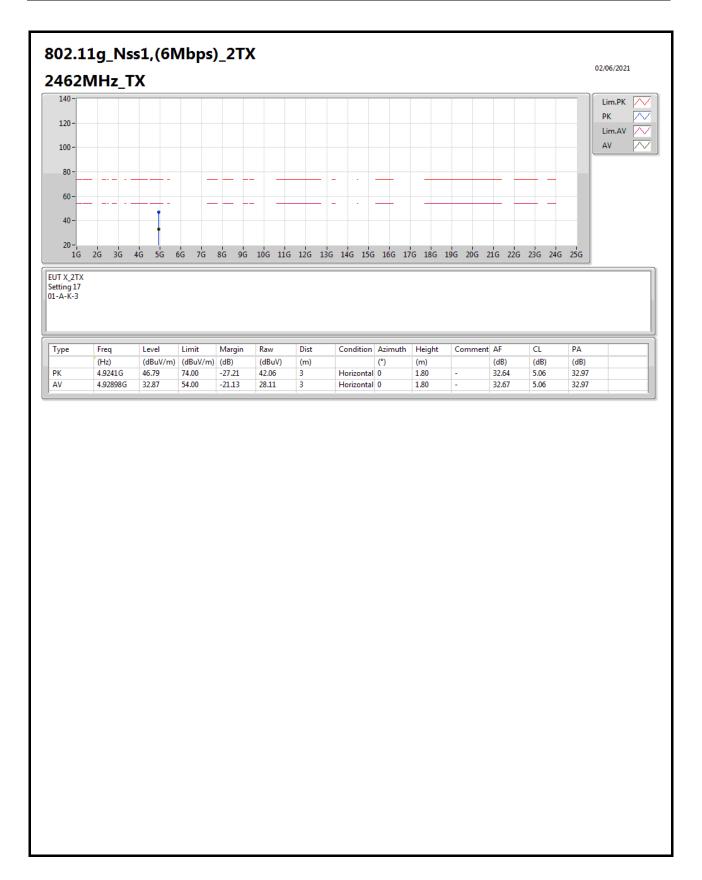




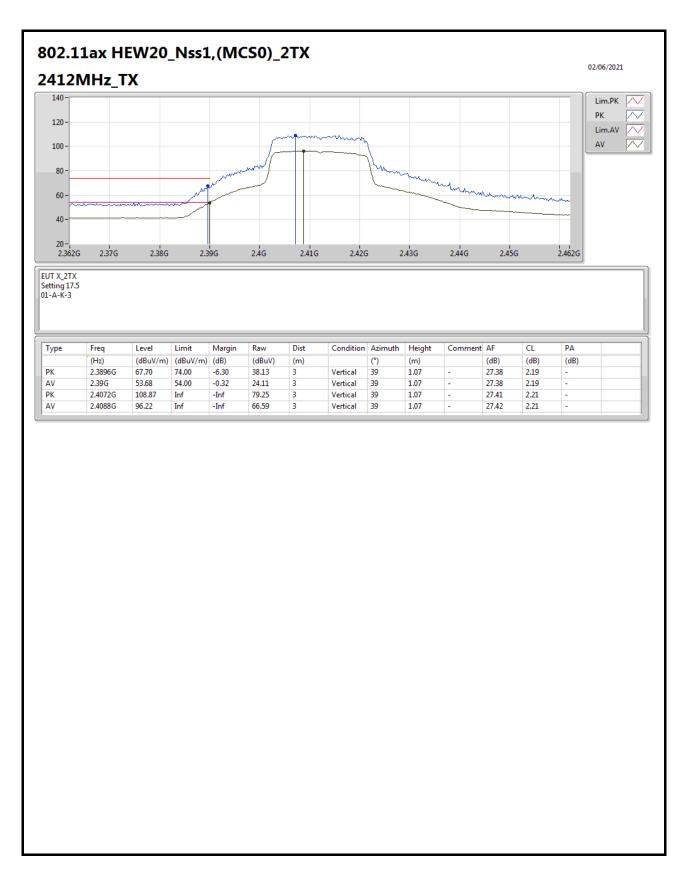




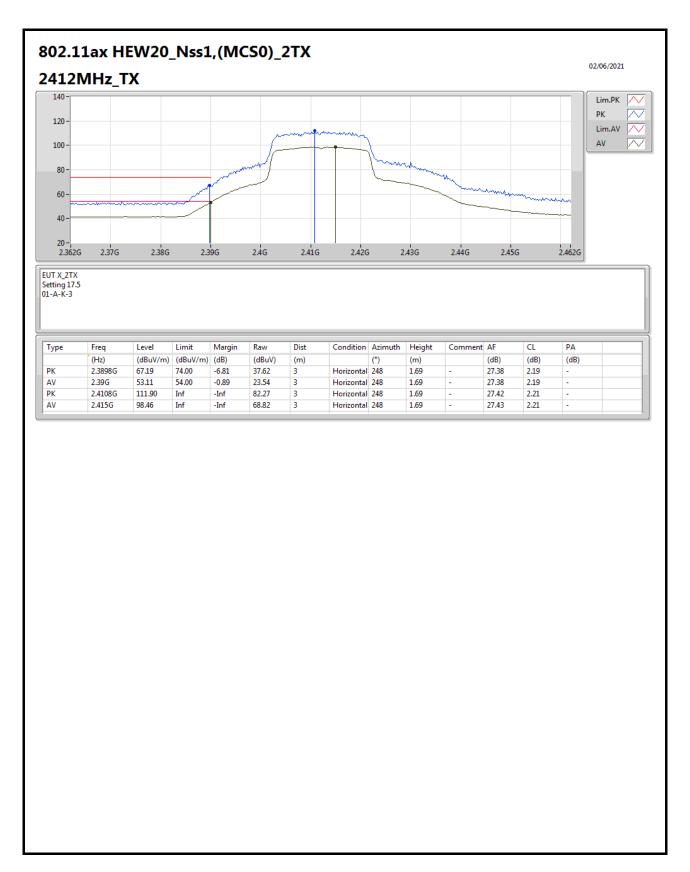




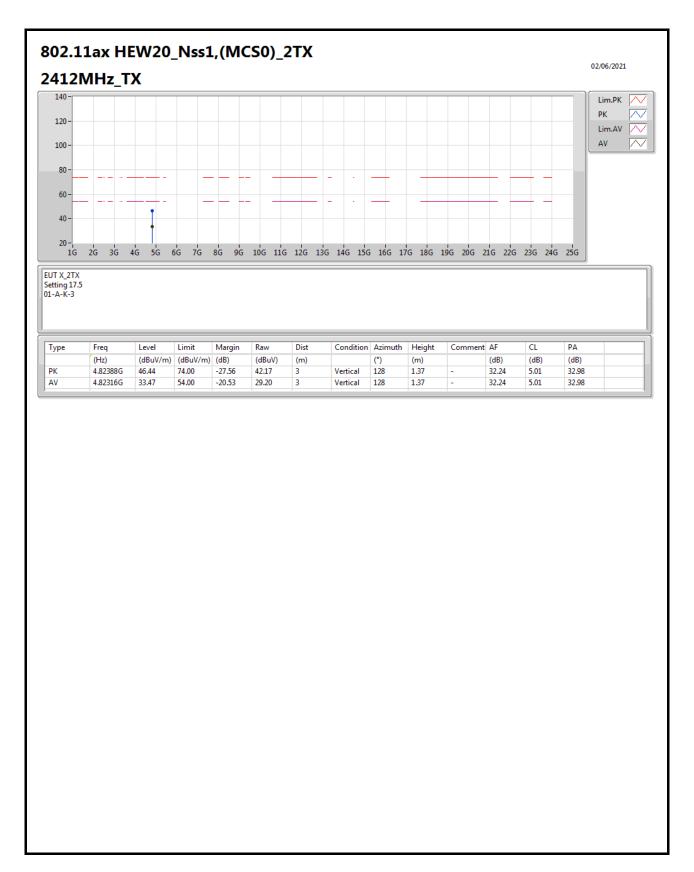








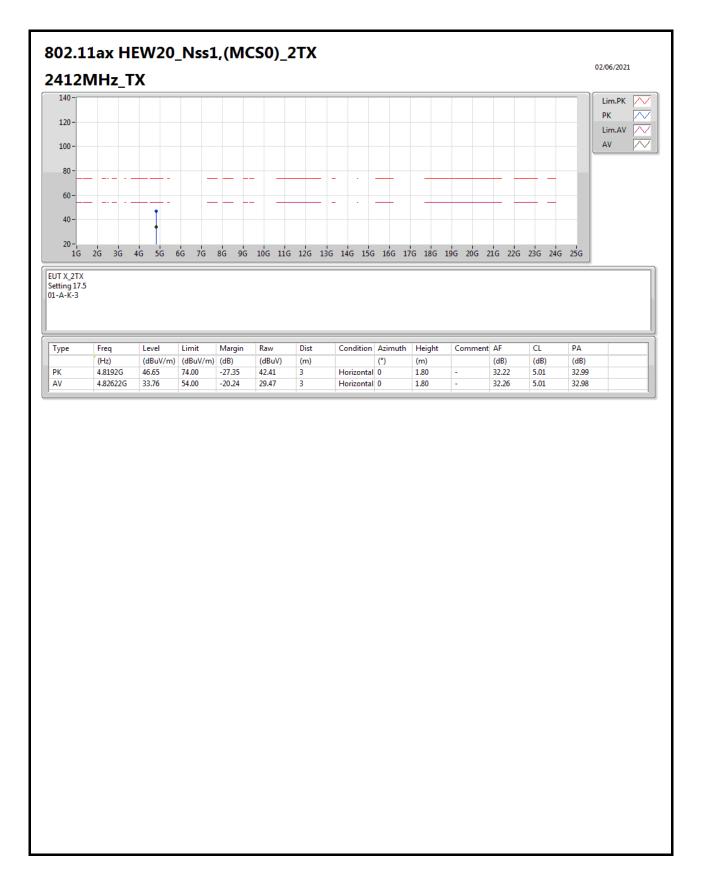




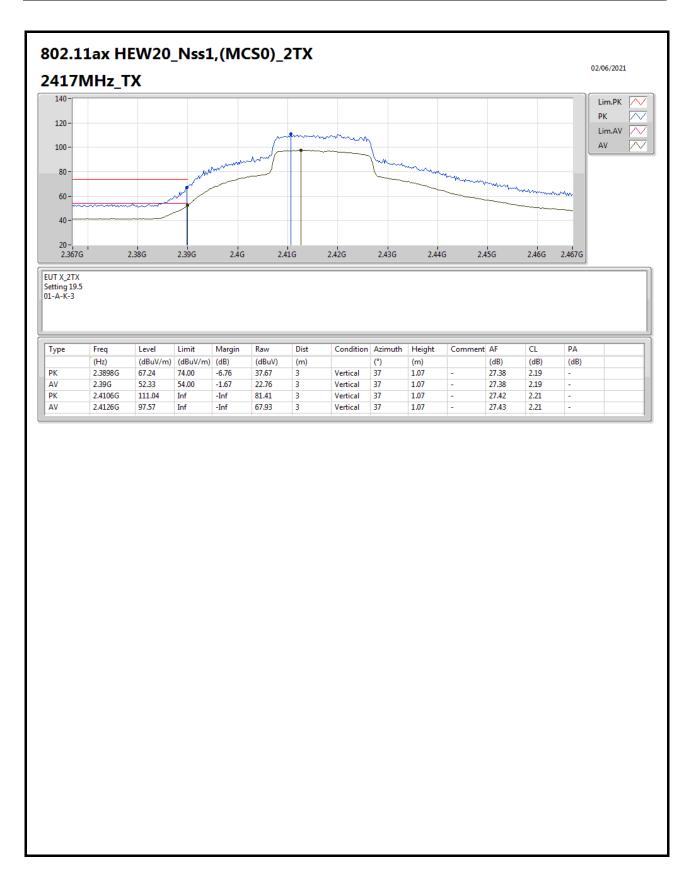
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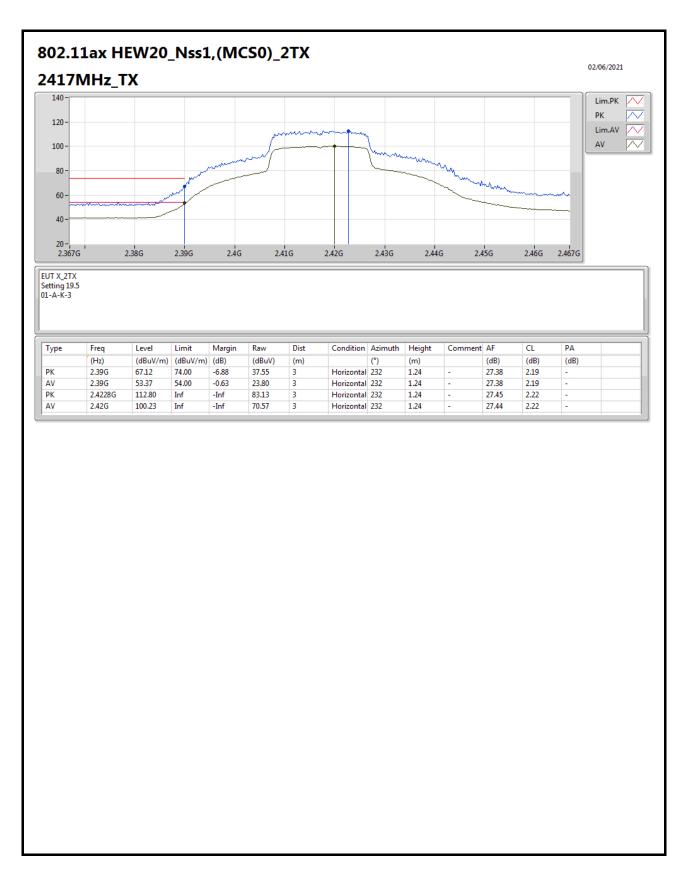




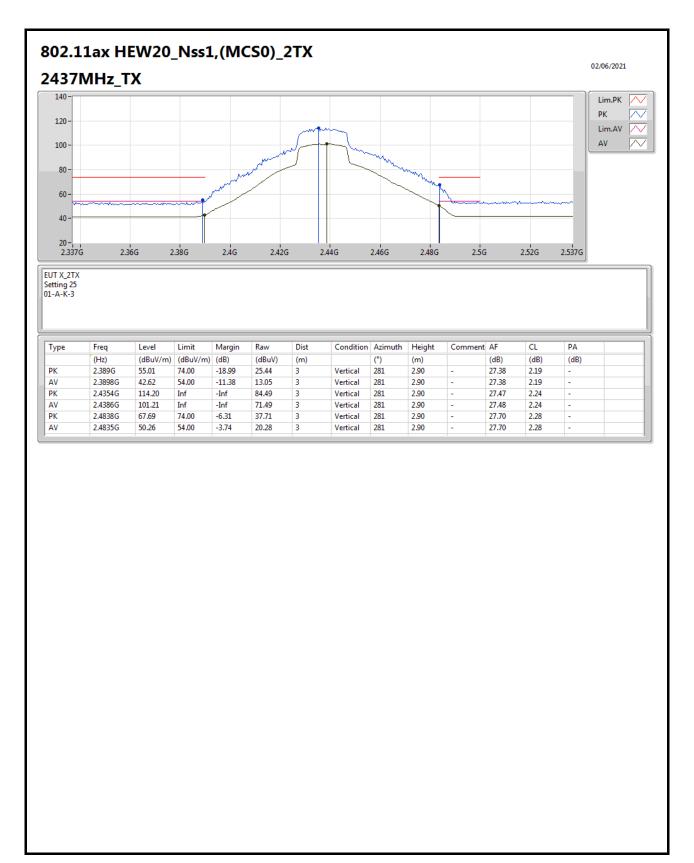








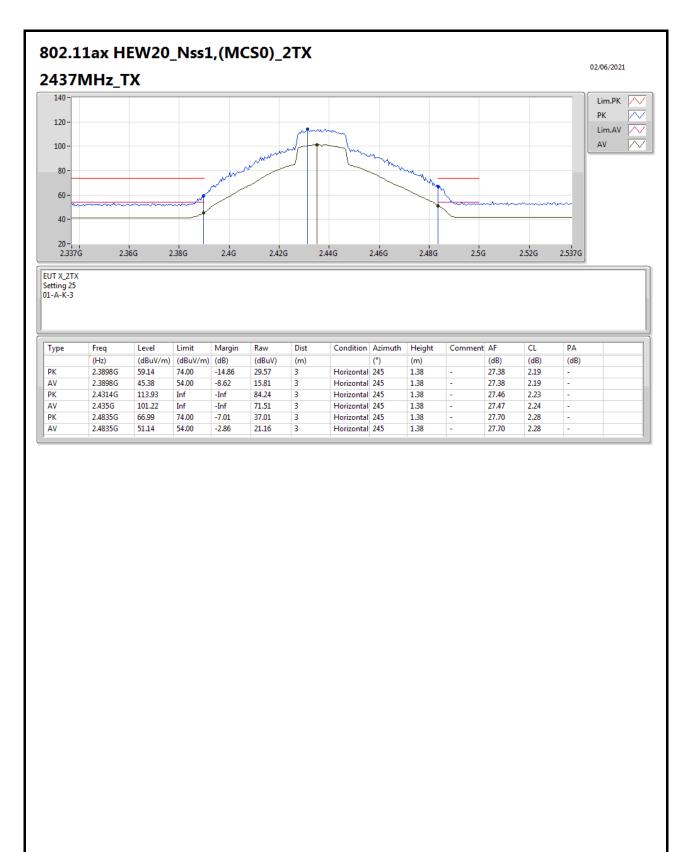




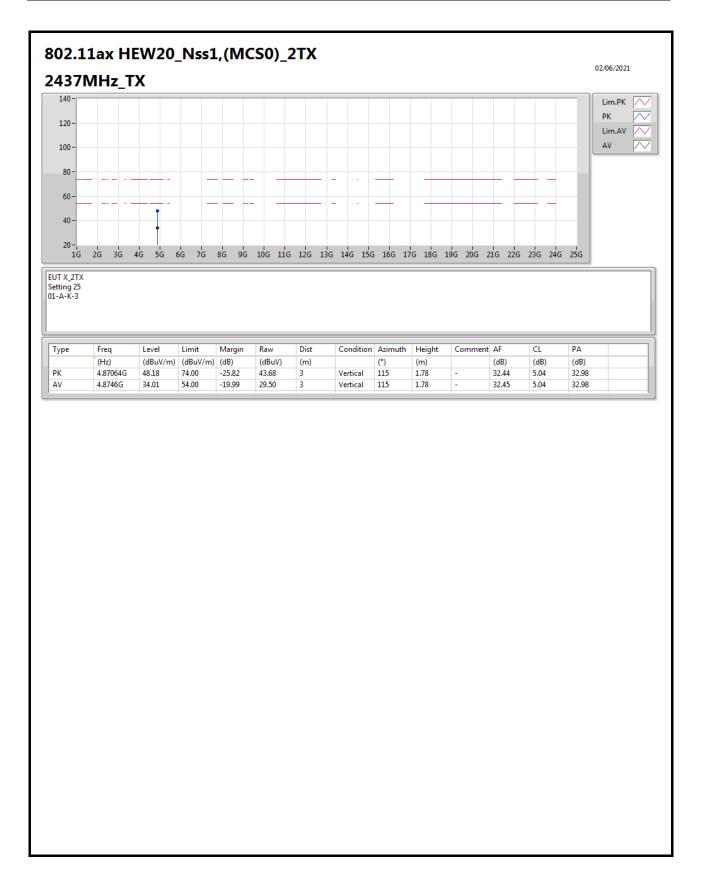
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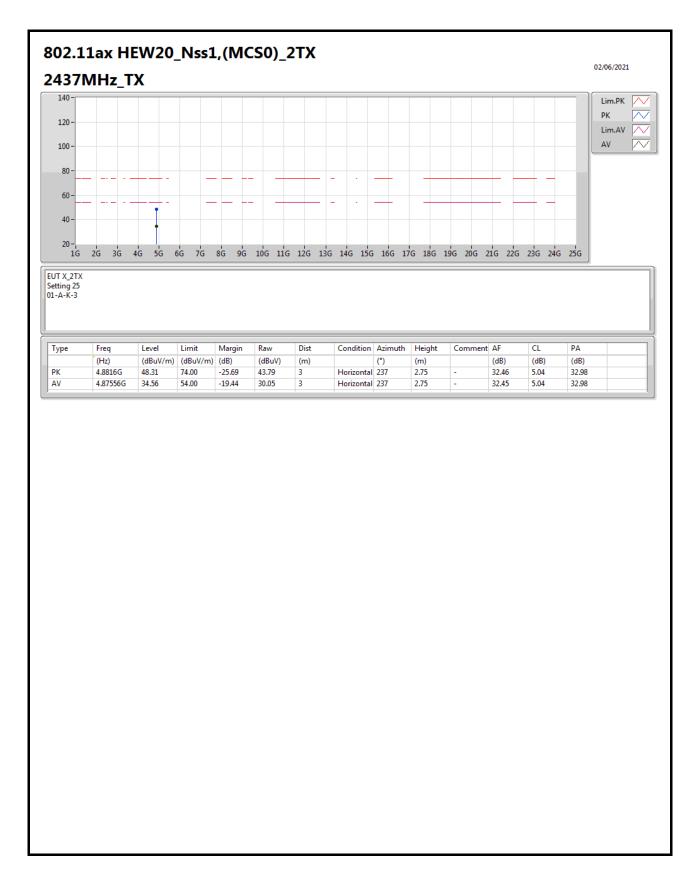








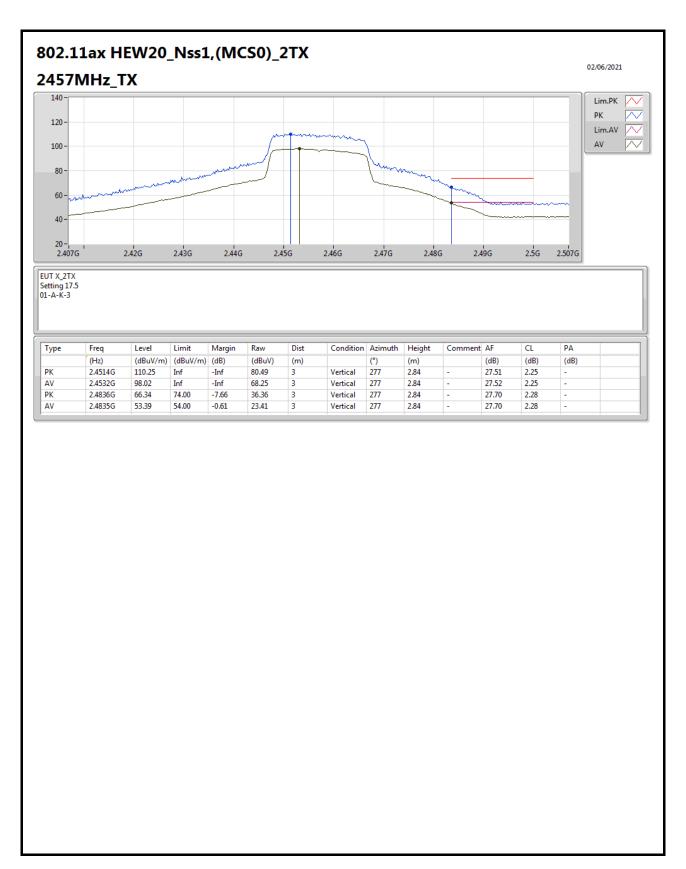




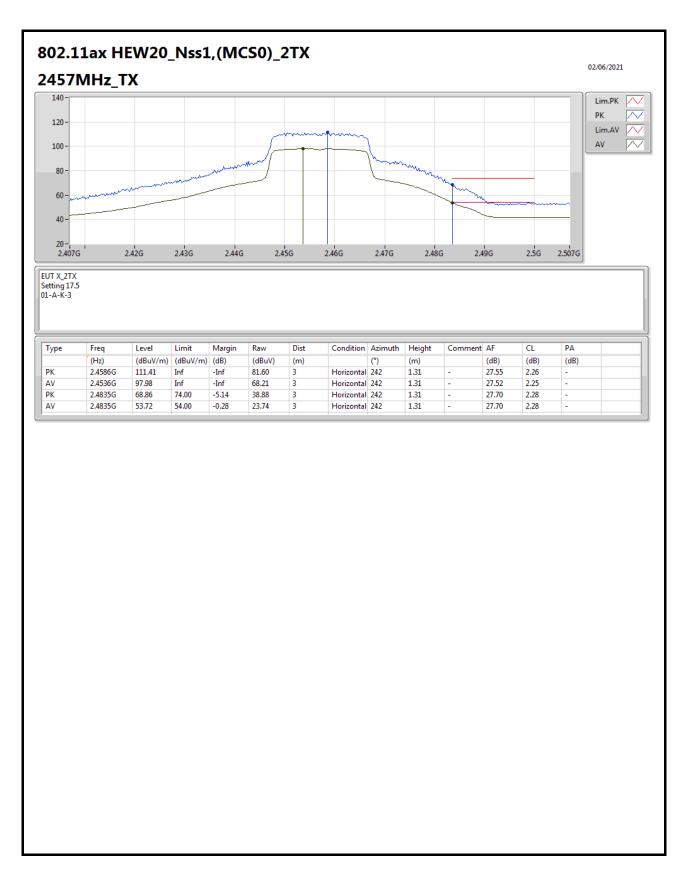
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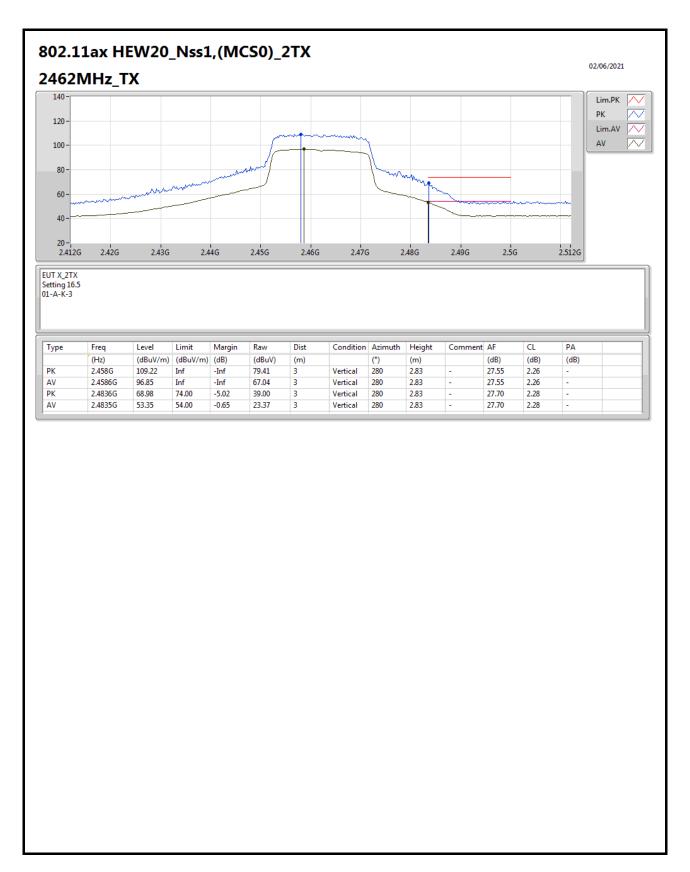




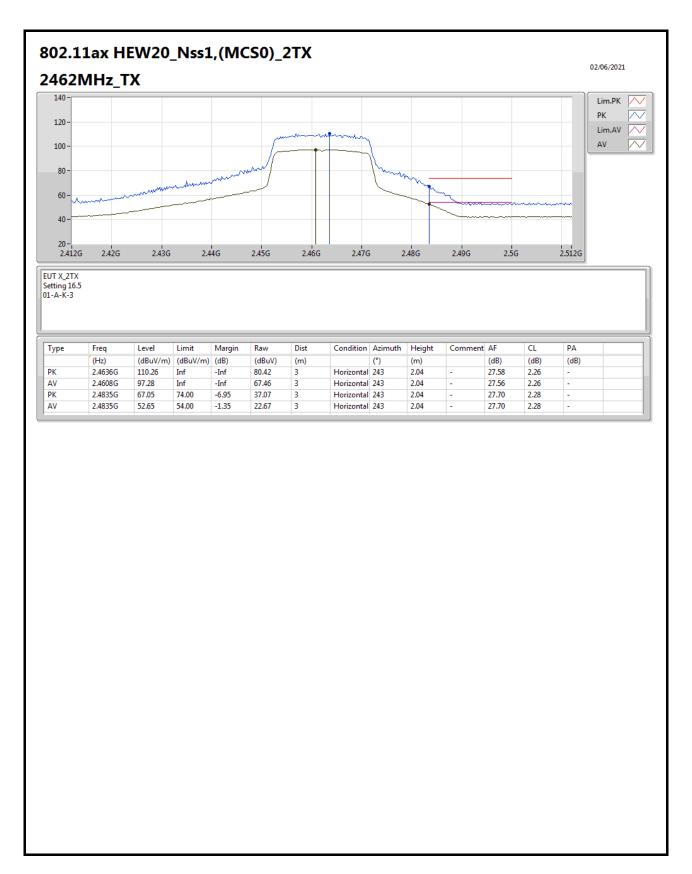
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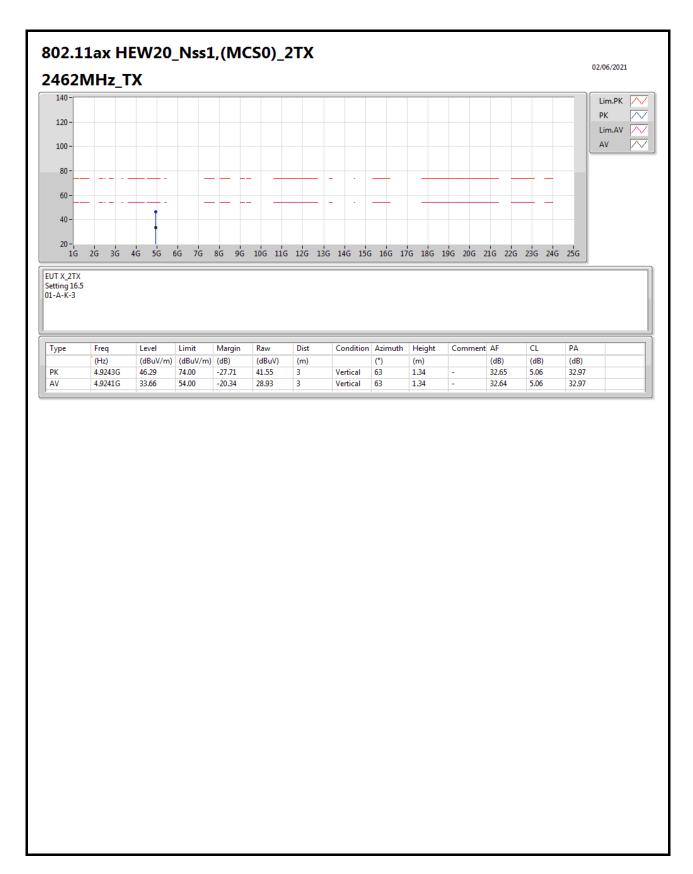








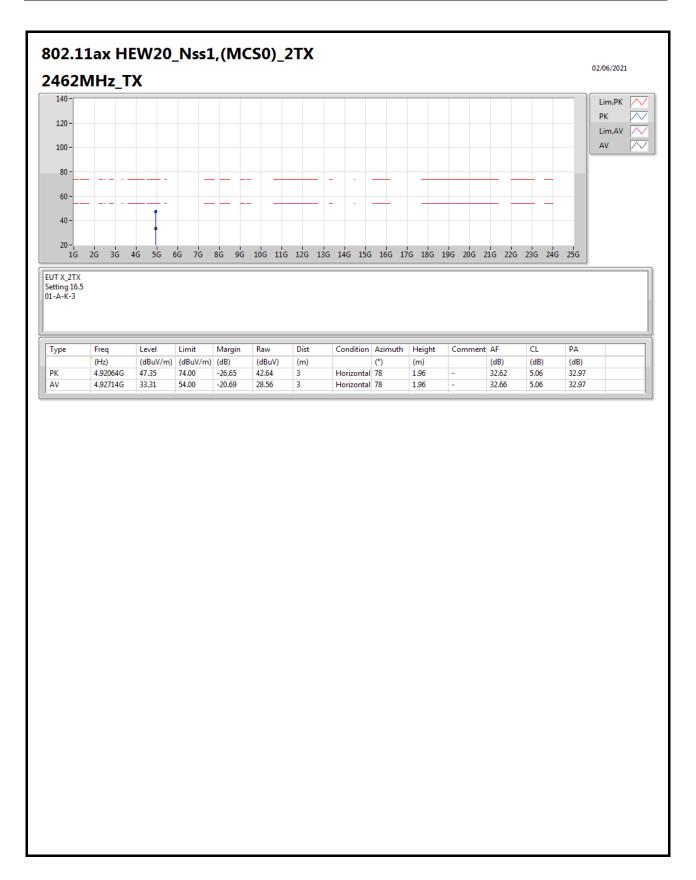




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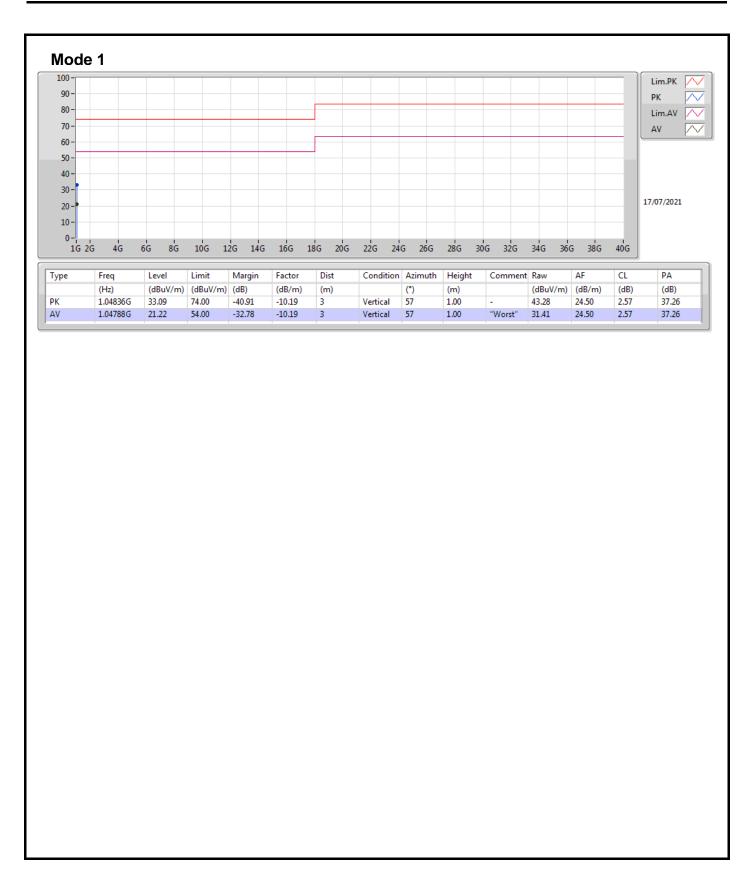
Radiated Emissions above 1GHz

Appendix G

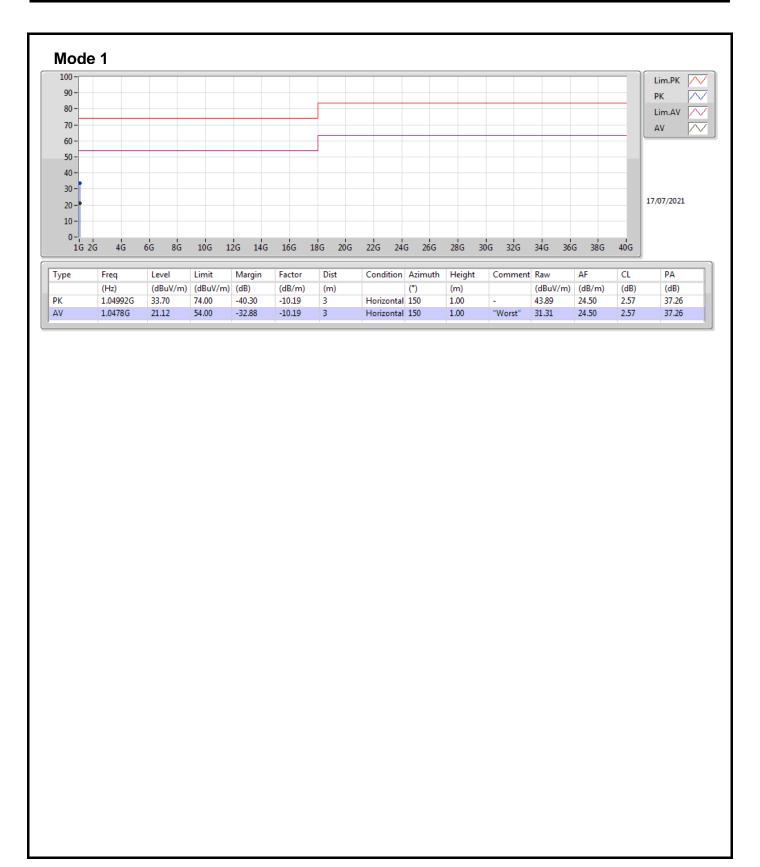
Summary

Mode	Result	Туре	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	1.04788G	21.22	54.00	-32.78	Vertical

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