



Report No.: FR941813AC



# **FCC Test Report**

FCC ID : VW3FAST3890V3

Equipment : Docsis 3.1 Voice Gateway

Brand Name : Samgemcom
Model Name : F@ST3890 V3

Multiple Listing : F@ST3890 V3XXXXXXXXXXXXX

(X=0-9,A-Z or blank for marketing purpose)

Applicant : Sagemcom Broadband SAS

250, route de l'Empereur 92848 Rueil-Malmaison cedex – France

Manufacturer : Sagemcom Broadband SAS

250, route de l'Empereur 92848 Rueil-Malmaison cedex – France

Standard : 47 CFR FCC Part 15.247

The product was received on Apr. 18, 2019, and testing was started from Apr. 18, 2019 and completed on May 06, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

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

Approved by: Allen Lin

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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

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# FCC Test Report

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# History of this test report

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Report No.	Version	Description	Issued Date
FR941813AC	01	Initial issue of report	Jul. 02, 2019

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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	FCC 15.203
3.1	15.207	AC Power-line Conducted Emissions	PASS	FCC 15.207
3.2	15.247(a)	DTS Bandwidth	PASS	≥500kHz
3.3	15.247(b)	Maximum Conducted Output Power	PASS	Power [dBm]: 30
3.4	15.247(e)	Power Spectral Density	PASS	PSD [dBm/3kHz]: 8
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	Non-Restricted Bands: > 30 dBc
3.6	15.247(d)	Emissions in Restricted Frequency Bands	PASS	Restricted Bands: FCC 15.209

## **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:

None

Reviewed by: Jackson Tsai

Report Producer: Ann Hou

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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), ac (VHT20)	2412-2462	1-11 [11]
2400-2483.5	n (HT40), ac (VHT40)	2422-2452	3-9 [7]

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Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	4TX
2.4-2.4835GHz	802.11g	20	4TX
2.4-2.4835GHz	VHT20	20	4TX
2.4-2.4835GHz	VHT40	40	4TX

#### 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.
- VHT20, VHT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- BWch is the nominal channel bandwidth.

#### 1.1.2 Antenna Information

Ant	Port			Gain (dE	Bi)		Antenna Connecto	Connector Brand		Model Name
Ant.	Port	2.4G	U-NII-1	U-NII-2A	U-NII-2C	U-NII-3	Type	Connector	brand	woder Name
1	1	3.04	4.12	3.59	3	3.93	PCB	I-PEX	PEGATRON	FAST3890v3
2	2	3	3.55	4.22	4.39	4.11	PCB	I-PEX	PEGATRON	FAST3890v3
3	3	3.81	3.91	5.03	5.12	4.95	PCB	I-PEX	PEGATRON	FAST3890v3
4	4	3.18	3.44	3.25	3.25	4.1	PCB	I-PEX	PEGATRON	FAST3890v3
	elated ain	7.59	7.38	6.99	7.46	7.8	-	-	-	-

Note 1: The EUT has four antennas.

#### For 2.4GHz function:

For IEEE 802.11 b/g mode (4TX/4RX)

Ant. 1 (port 1), Ant. 2 (port 2), Ant. 3 (port 3) and Ant. 4 (port 4) could transmit/receive simultaneously.

#### For 5GHz function:

For IEEE 802.11 n mode (4TX/4RX)

Ant. 1 (port 1), Ant. 2 (port 2), Ant. 3 (port 3) and Ant. 4 (port 4) could transmit/receive simultaneously.

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## 1.1.3 EUT Information

	Operational Condition						
EU	Γ Power T	уре	Fro	m AC Adapter			
EU	Γ Function	า	$\boxtimes$	Point-to-multipoi	nt [		Point-to-point
Bea	ımforminç	g Function		With beamforming	ng [	$\boxtimes$	Without beamforming
				Т	ype of	f EU	т
$\boxtimes$	Stand-alo	ne					
	Combine	d (EUT where	e the	radio part is fully	integra	atec	within another device)
	Combine	d Equipment	- Bra	and Name / Mode	l No.:		
	Plug-in radio (EUT intended for a variety of host systems)						
	Host System - Brand Name / Model No.:						
	Other:						

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# 1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.949	0.23	12.42m	100
802.11g	0.952	0.21	2.067m	1k
VHT20	0.986	0.06	n/a (DC>=0.98)	n/a (DC>=0.98)
VHT40	0.972	0.12	954.688u	3k

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

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# 1.2 Testing Applied 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
- KDB 558074 D01 v05r02
- KDB 662911 D01 v02r01

# 1.3 Testing Location Information

	Testing Location						
$\boxtimes$	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					
				Test site Designation	on No. TW1190 with FCC.		
	JHUBEI	ADD	:	No.8, Ln. 724, Bo'ai St.	, Zhubei City, Hsinchu County, Taiwan (R.O.C.)		
	TEL: 886-3-656-9065 FAX: 886-3-656-9085						
	Test site Designation No. TW0006 with FCC.						

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO01-HY	Jeff	23.2~23.8°C / 55.2~57.1%	30/Apr/2019
RF Conducted	TH01-HY	Andy	23.7~25.2°C / 59.6~61.3%	26/Apr/2019~ 06/May/2019
Radiated	03CH09-HY	Lego	22.3~24.2°C / 65.1~68.2%	18/Apr/2019~ 06/May/2019

# 1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.54 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	1.6 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.9 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.3 dB	Confidence levels of 95%
Temperature	0.7 °C	Confidence levels of 95%
Humidity	4 %	Confidence levels of 95%

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2 Test Configuration of EUT

# 2.1 Test Condition

RF Conducted	Abbreviation	Remark
TnomVnom	Tnom	20°C
-	Vnom	120V

# 2.2 Test Channel Mode

<b>Test Software Version</b>	accessMTool 3.0.0.2
------------------------------	---------------------

Mode	Power Setting
802.11b_Nss1,(1Mbps)_4TX	-
2412MHz	86
2437MHz	82
2457MHz	82
2462MHz	79
802.11g_Nss1,(6Mbps)_4TX	-
2412MHz	71
2417MHz	79
2437MHz	90
2457MHz	83
2462MHz	68
VHT20_Nss1,(MCS0)_4TX	-
2412MHz	72
2417MHz	75
2437MHz	95
2457MHz	79
2462MHz	66
VHT40_Nss1,(MCS0)_4TX	-
2422MHz	57
2427MHz	57
2437MHz	65
2447MHz	60
2452MHz	52

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# 2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests			
Tests Item AC power-line conducted emissions			
Condition AC power-line conducted measurement for line and neutral			
Operating Mode CTX			
1 Adapter mode			

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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			

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			
1	Adapter mode			
Operating Mode > 1GHz	СТХ			
	Y Plane			
Orthogonal Planes of EUT				
Worst Planes of EUT	V			

The Worst Case Mode for Following Conformance Tests			
Tests Item Simultaneous Transmission Analysis			
Test Condition Radiated measurement			
Operating Mode Normal Link			
1	WLAN 2.4GHz +WLAN 5GHz		

Refer to Sporton Test Report No.: FA941813 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.

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# 2.4 Accessories and Support Equipment

Accessories					
	Brand Name	Sagemcom	Model Name	MSA-Z3800IC12.0-48W-P	
AC Adapter	Manufacturer	MOSO	P/N	191377516	
AC Adapter	Power Rating	I/P: 200-240Vac; 1.2A	I/P: 200-240Vac; 1.2A; O/P: 10Vdc, 3.8A		
	Power Cord	1.5 meter, non-shielded cable, w/o ferrite core			
	Brand Name	Sagemcom	Model Name	MSA-Z3800IC12.0-48W-P	
Power Cable	Manufacturer	MOSO	P/N	191377516	
	Signal Line	0.9 meter, non-shielde	ed cable, w/o ferri	te core	
RJ11 Cable	Brand Name	N/A	Model Name	N/A	
Power Cord 1.45 meter, non-shielded cable					
RJ45 Cable	Brand Name	N/A	Model Name	N/A	
NJ45 Cable	Power Cord	1.45 meter, non-shielded cable			

Reminder: Regarding to more detail and other information, please refer to user manual.

	Support Equipment – AC Conduction				
No. Equipment Brand Name Model Name FCC ID				FCC ID	
1	Notebook	Dell	PP13S	DoC	
2	Client	N/A	N/A	N/A	

Note: Support equipment No.2 was provided by customer.

	Support Equipment - RF Conducted				
No. Equipment Brand Name Model Name FCC ID				FCC ID	
1	Notebook	DELL	E5410	DoC	
2	Adapter for Notebook	DELL	HA65NM130	DoC	
3	AC Power Source	GW	APS-9102	N/A	

	Support Equipment – Radiated Emission				
No.	No. Equipment Brand Name Model Name FCC ID				
1	Notebook	Dell	PP13S	DoC	
2	Client	N/A	N/A	N/A	

Note: Support equipment No.2 was provided by customer.

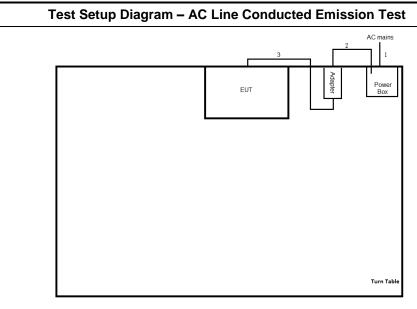
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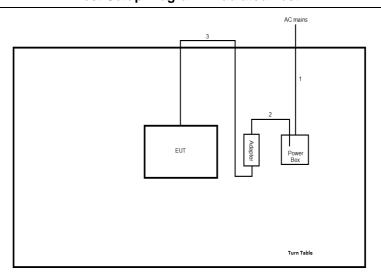
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#### 2.5 **Test Setup Diagram**



Item	Connection	Shielded	Length
1	AC Power line	No	1.5 m
2	AC Power line	No	1.5 m
3	DC Power line	No	0.9 m

## **Test Setup Diagram - Radiated Test**



Item	Connection	Shielded	Length
1	AC Power line	No	1.5 m
2	AC Power line	No	1.5 m
3	DC Power line	No	0.9 m

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**Transmitter Test Result** 3

#### 3.1 **AC Power-line Conducted Emissions**

#### 3.1.1 **AC Power-line Conducted Emissions Limit**

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

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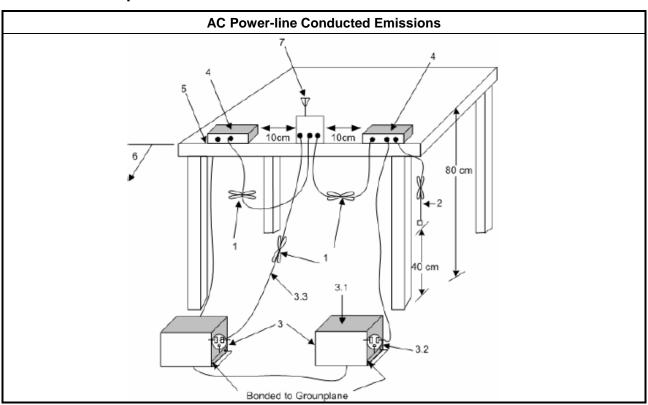
## 3.1.2 Measuring Instruments

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.	

## 3.1.4 Test Setup



#### 3.1.5 **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.			

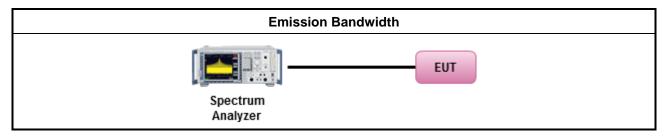
# 3.2.2 Measuring Instruments

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

#### 3.2.3 Test Procedures

	Test Method					
•	For the emission bandwidth shall be measured using one of the options below:					
	Refer as KDB 558074. clause 8.2 (11.8 of ANSI C63.10) DTS bandwidth measurement.					
	Refer as RSS-Gen, clause 6.7 for for occupied bandwidth testing.					
	Refer as ANSI C63.10, clause 6.9.3 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

Maxi	imuı	m Conducted Output Power Limit						
	•	If $G_{TX} \le 6$ dBi, then $P_{Out} \le 30$ 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						
e.i.r.	p. P	ower Limit:						
•	2400	0-2483.5 MHz Band						
	•	Point-to-multipoint systems (P2M): P <sub>eirp</sub> ≤ 36 dBm (4 W)						
	•	Point-to-point systems (P2P): $P_{eirp} \le MAX(36, [P_{Out} + G_{TX}]) dBm$						
	•	Smart antenna system (SAS)						
		- Single beam: $P_{eirp} \le MAX(36, P_{Out} + G_{TX}) dBm$						
		- Overlap beam: $P_{eirp} \le MAX(36, P_{Out} + G_{TX}) dBm$						
		- Aggregate power on all beams: $P_{eirp} \le MAX(36, [P_{Out} + G_{TX} + 8]) dBm$						
		aximum peak conducted output power or maximum conducted output power in dBm, maximum transmitting antenna directional gain in dBi.						

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# 3.3.2 Measuring Instruments

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

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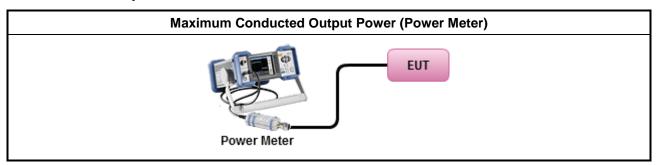
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## 3.3.3 Test Procedures

	Test Method
•	Maximum Peak Conducted Output Power
	☐ Refer as KDB 558074, clause 8.3.1.1 (11.9.1.1 of ANSI C63.10) RBW ≥ EBW method.
	Refer as KDB 558074, clause 8.3.1.2 (11.9.1.2 of ANSI C63.10) integrated band power method.
	Refer as KDB 558074, clause 8.3.1.3 (11.9.1.3 of ANSI C63.10) peak power meter.
•	Maximum Average Conducted Output Power
	Refer as KDB 558074, clause 8.3.2.2 (11.9.2.2 of ANSI C63.10) using a spectrum analyzer.
	Refer as KDB 558074, clause 8.3.2.3 (11.9.2.3 of ANSI C63.10) using a power meter.
•	For conducted measurement.
	If the EUT supports multiple transmit chains using options given below: Refer as 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 <sub>total</sub> = P <sub>1</sub> + P <sub>2</sub> + + P <sub>n</sub> (calculated in linear unit [mW] and transfer to log unit [dBm])  EIRP <sub>total</sub> = P <sub>total</sub> + DG

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# 3.3.4 Test Setup



# 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**

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

#### 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).
  - Refer as KDB 558074, clause 8.4 (11.10 of ANSI C63.10) Method PKPSD.
- For conducted measurement.
  - If The EUT supports multiple transmit chains using options given below:
    - Measure and sum the spectra across the outputs. Refer as 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.

#### 3.4.4 Test Setup



#### 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 (dB)			
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.

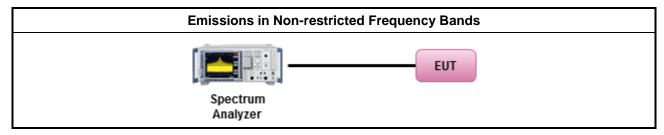
## 3.5.2 Measuring Instruments

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

#### 3.5.3 Test Procedures

	Test Method
•	Refer as KDB 558074, clause 8.5 (11.11 of ANSI C63.10) for non-restricted frequency 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 Distan							
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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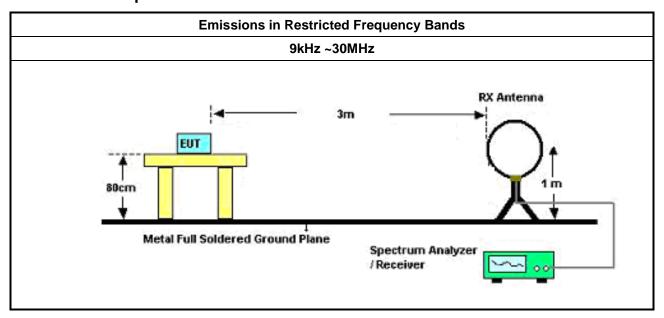
#### 3.6.3 Test Procedures

#### **Test Method**

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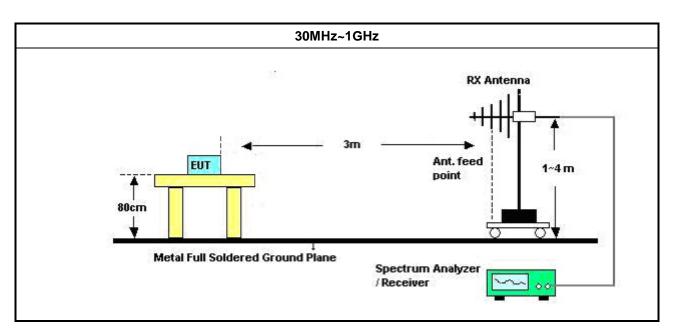
- The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
- Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
- For the transmitter unwanted emissions shall be measured using following options below:
  - Refer as KDB 558074, clause 8.6 (11.12 of ANSI C63.10) for restricted frequency bands.
- For the transmitter band-edge emissions shall be measured using following options below:
  - Refer as KDB 558074 clause 8.7.1, 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 KDB 558074, clause 8.7.2 (6.10.6 of ANSI C63.10) for marker-delta method for band-edge measurements.
  - Refer as KDB 558074, clause 8.7.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
- Use the following spectrum analyzer settings:
  - Set RBW=100 kHz for f < 1 GHz; VBW=3 \* RBW; Sweep = auto; Detector function = peak; Trace = max hold.
  - Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement. For average measurement, refer as 1.1.4.

#### 3.6.4 Test Setup

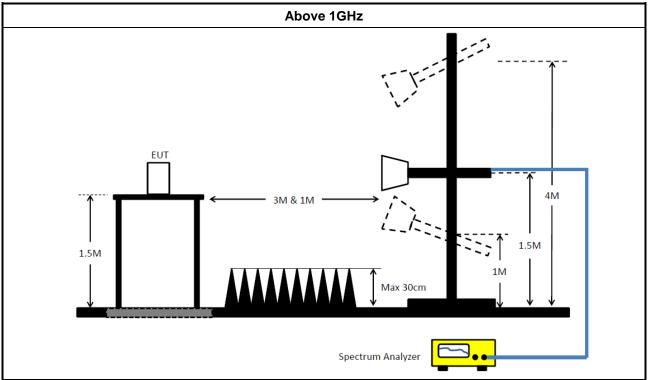


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## 3.6.5 Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

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

## 3.6.6 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

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4 Test Equipment and Calibration Data

#### **Instrument for AC Conduction**

11011 411101111 101 710 1						
Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMC Receiver	R&S	ESR3	102052	9kHz ~ 3.6GHz	09/Apr/2019	08/Apr/2020
LISN	R&S	ENV 216	101274	9kHz ~ 30MHz	12/Jun/2018	11/Jun/2019
RF Cable-CON	MTJ	RG142	CB001-CO	9kHz ~ 30MHz	17/Sep/2018	16/Sep/2019
AC POWER	APC	AFC-11003G	F308010045	47Hz~63Hz 5~300V	NCR	NCR
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561F	9495	9kHz ~ 30MHz	11/Oct/2018	10/Oct/2019

NCR : Non-Calibration Require

#### **Instrument for Radiated Test**

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30MHz ~ 1GHz	23/Apr/2018	22/Apr/2019
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz ~ 18GHz	14/Jun/2018	13/Jun/2019
Microwave Preamplifier	Agilent	8449B	3008A02096	1GHz ~ 26.5GHz	10/May/2018	09/May/2019
Amplifier	EMC	EMC9135	980232	9KHz~1GHz	27/Apr/2018	26/Apr/2019
EMI Test Receiver	R&S	ESR3	102052	9kHz ~ 3.6GHz	10/Apr/2018	09/Apr/2019
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz ~ 44GHz	31/Jul/2018	30/Jul/2019
Bilog Antenna & 5dB Attenuator	TESEQ & MTJ	CBL6111D & MTJ6102-05	35418 / 3	30MHz~1GHz	02/Oct/2018	03/Oct/2019
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA9120 D 1534	1GHz~18GHz	30/Apr/2018	29/Apr/2019
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170339	15GHz ~ 40GHz	11/Apr/2018	10/Apr/2019
Preamplifier	MITEQ	TTA1840-35-H G	1864481	18GHz ~ 40GHz	24/Aug/2018	23/Aug/2019
Loop Antenna	TESEQ	HLA 6120	31244	9k-30MHz	29/Mar/2018	28/Mar/2019
LF-CABLE-20190218	Jye Bao	RG142	CB028	9kHz ~ 1GHz	18/Feb/2019	17/Feb/2020
RF Cable-high	HUBER+SUHNER	SUCOFLEX104	SN 556626/4 + 556627	1GHz ~ 40GHz	14/Mar/2019	13/Mar/2020

### **Instrument for Conducted Test**

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date	
Spectrum Analyzer	R&S	FSV 40	101500	10Hz~40GHz	18/Jul/2018	17/Jul/2019	
Power Sensor	Anritsu	MA2411B	1339407	300MHz ~ 40GHz	17/Nov/2018	16/Nov/2019	
Power Meter	Anritsu	ML2495A	1517010	300MHz ~ 40GHz	17/Nov/2018	16/Nov/2019	
Cable 0.2m	HUBER	MY10710/4	RF Cable - 01	30MHz ~18G	10/Jan/2019	09/Jan/2020	
Cable 0.2m	HUBER	MY10711/4	RF Cable - 02	30MHz ~18G	10/Jan/2019	09/Jan/2020	
Cable 0.5m	HUBER	MY39470/4	RF Cable - 29	30MHz ~18G	10/Jan/2019	09/Jan/2020	
SMB100A Signal Generator	R&S	SMB100A03	181147	100kHz~40GHz	12/Nov/2018	10/Nov/2020	

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FCC ID: VW3FAST3890V3

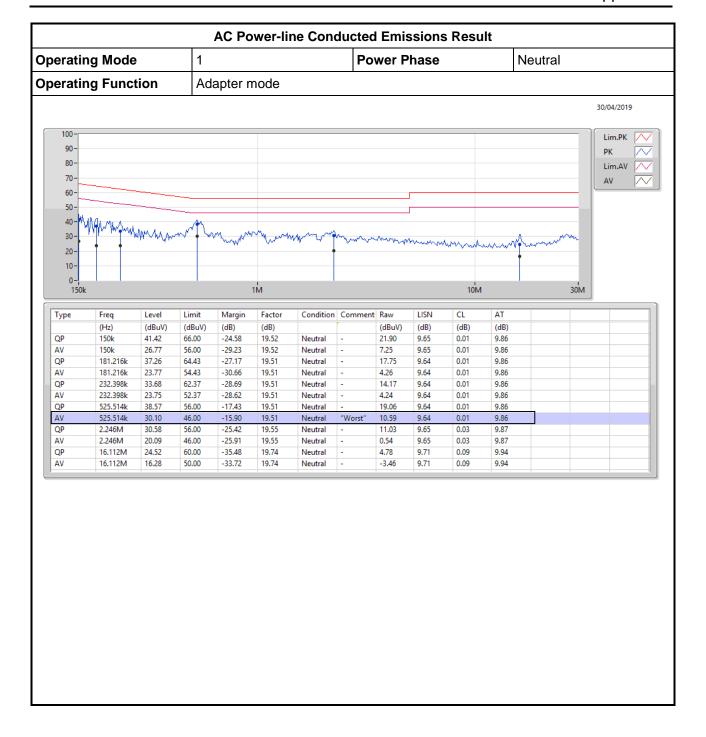
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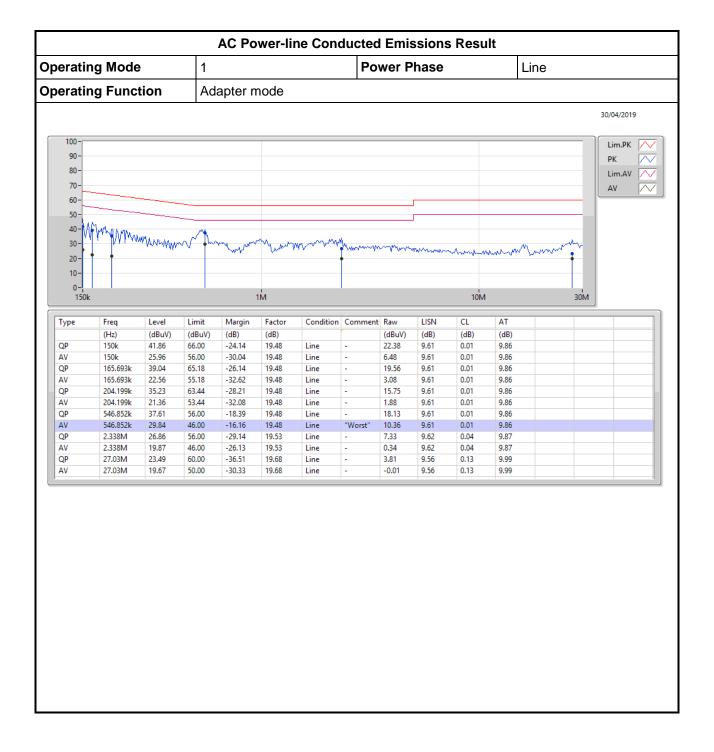
Report Version : 01



#### AC Power-line Conducted Emissions









**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)_4TX	8.075M	11.969M	12M0G1D	7.5M	10.37M	
802.11g_Nss1,(6Mbps)_4TX	15.1M	19.49M	19M5D1D	14.375M	16.342M	
VHT20_Nss1,(MCS0)_4TX	15.95M	26.362M	26M4D1D	14.95M	17.491M	
VHT40_Nss1,(MCS0)_4TX	36.35M	36.332M	36M3D1D	36.1M	36.232M	

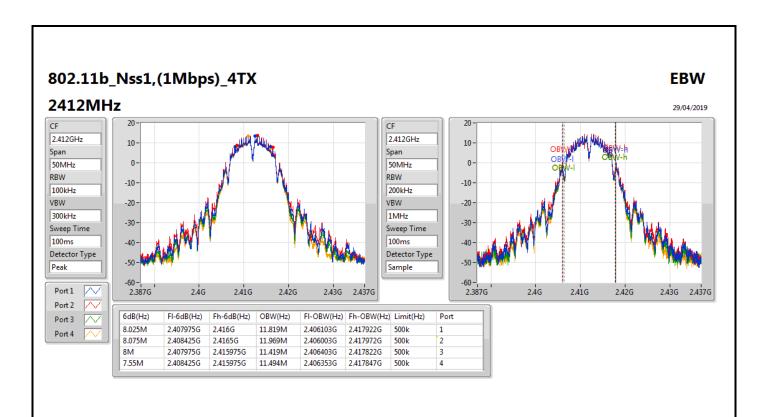
Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth; Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth;

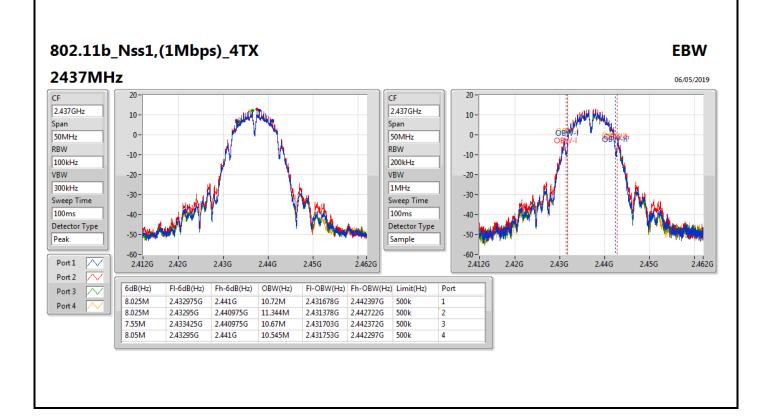


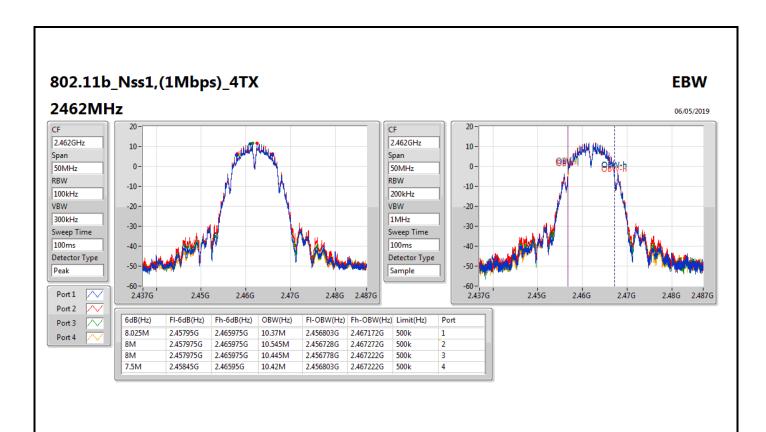
#### Result

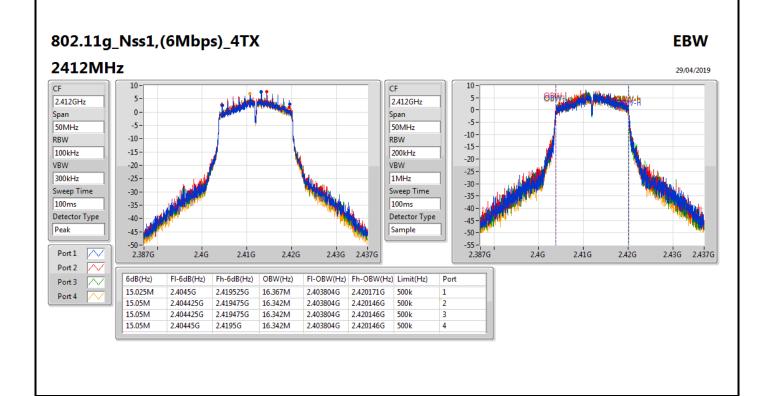
Mode	Result	Limit	Port 1-N dB	Port 1-OBW	Port 2-N dB	Port 2-OBW	Port 3-N dB	Port 3-OBW	Port 4-N dB	Port 4-OBW
		(Hz)	(Hz)	(Hz)	(Hz)	(Hz)	(Hz)	(Hz)	(Hz)	(Hz)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	500k	8.025M	11.819M	8.075M	11.969M	8M	11.419M	7.55M	11.494M
2437MHz_TnomVnom	Pass	500k	8.025M	10.72M	8.025M	11.344M	7.55M	10.67M	8.05M	10.545M
2462MHz_TnomVnom	Pass	500k	8.025M	10.37M	8M	10.545M	8M	10.445M	7.5M	10.42M
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	500k	15.025M	16.367M	15.05M	16.342M	15.05M	16.342M	15.05M	16.342M
2437MHz_TnomVnom	Pass	500k	15.075M	19.09M	15.075M	19.49M	15.025M	18.041M	15.1M	18.091M
2462MHz_TnomVnom	Pass	500k	14.975M	16.367M	15.05M	16.367M	15.025M	16.342M	14.375M	16.342M
VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	500k	15.05M	17.591M	15M	17.566M	14.975M	17.566M	15.1M	17.566M
2437MHz_TnomVnom	Pass	500k	15.6M	24.913M	15.85M	26.362M	15.075M	24.213M	15.95M	24.313M
2462MHz_TnomVnom	Pass	500k	15.025M	17.516M	15.05M	17.566M	14.95M	17.491M	15.05M	17.541M
VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz_TnomVnom	Pass	500k	36.35M	36.232M	36.35M	36.282M	36.35M	36.232M	36.35M	36.282M
2437MHz_TnomVnom	Pass	500k	36.3M	36.332M	36.3M	36.332M	36.1M	36.232M	36.3M	36.232M
2452MHz_TnomVnom	Pass	500k	36.3M	36.232M	36.3M	36.332M	36.35M	36.232M	36.35M	36.232M

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



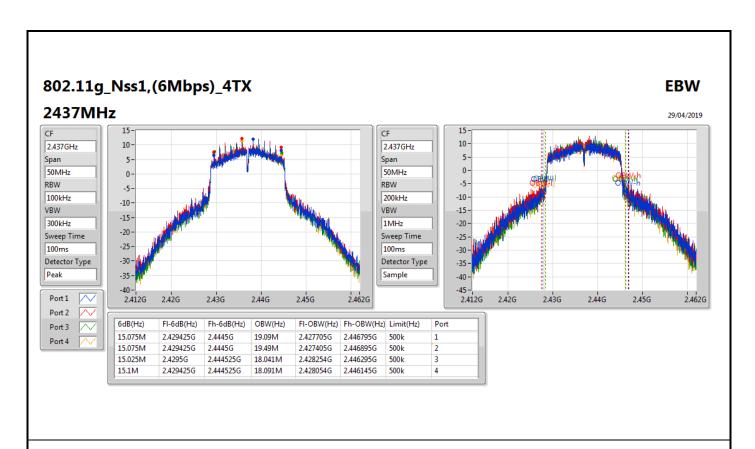


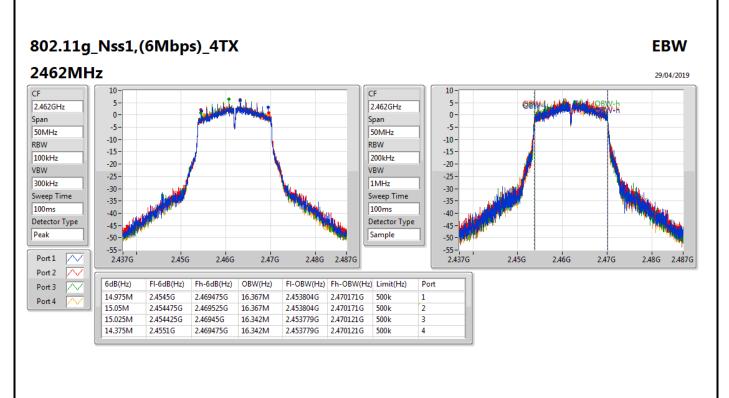




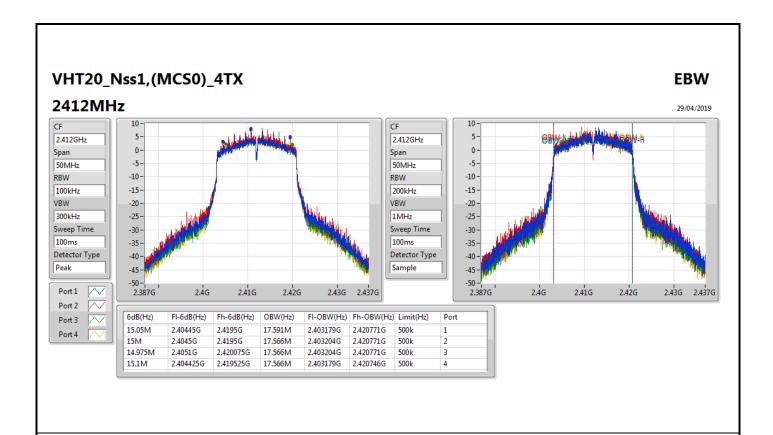
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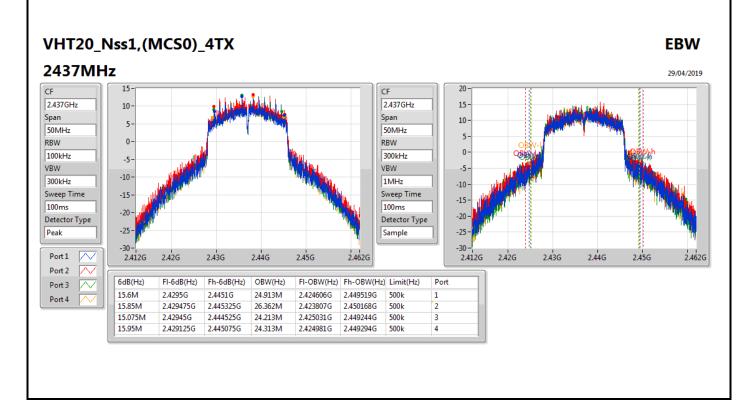
Appendix B

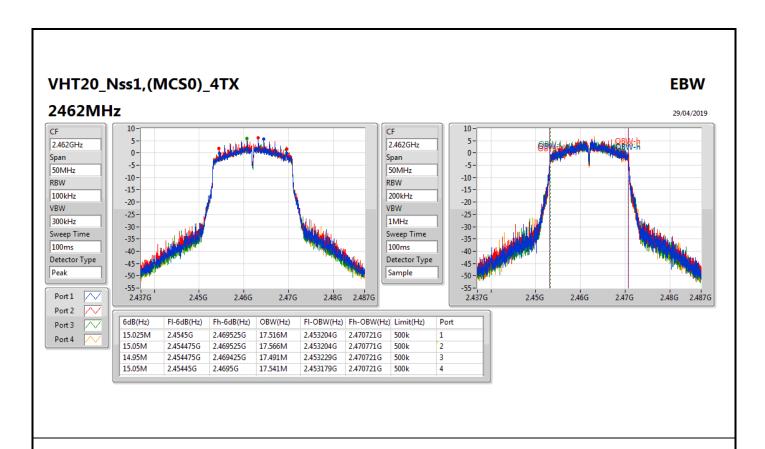


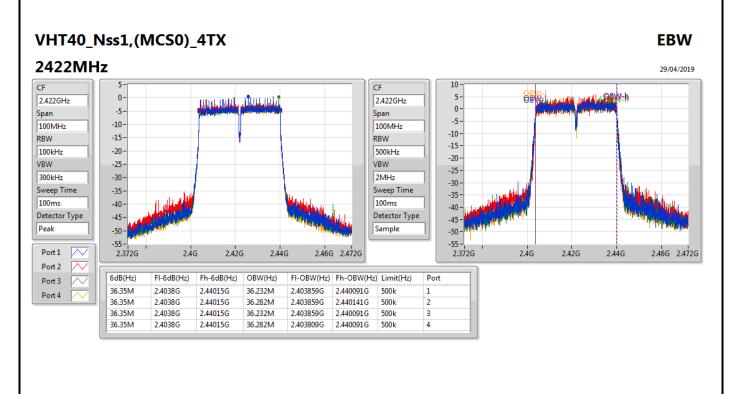


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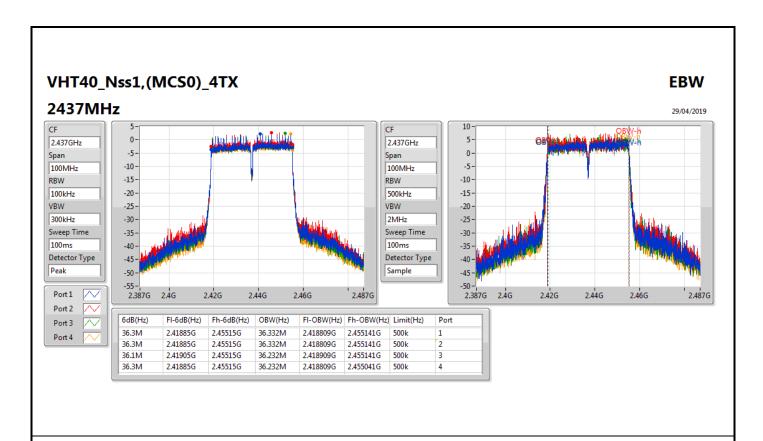


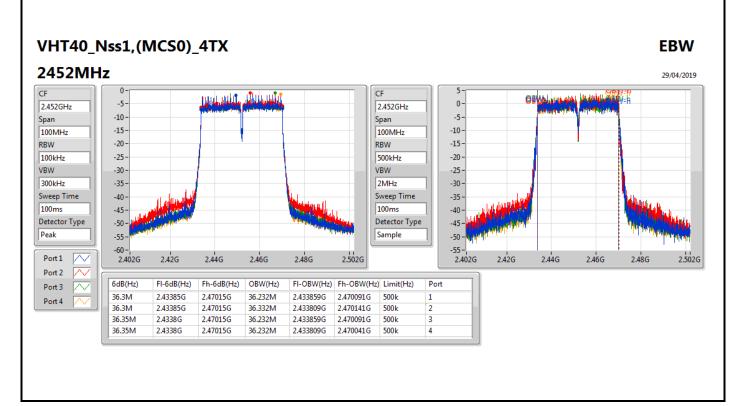






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Average Power Appendix C

#### **Summary**

Mode	Total Power	Total Power		
	(dBm)	(W)		
2.4-2.4835GHz	-	-		
802.11b_Nss1,(1Mbps)_4TX	27.76	0.59704		
802.11g_Nss1,(6Mbps)_4TX	28.24	0.66681		
VHT20_Nss1,(MCS0)_4TX	29.37	0.86497		
VHT40_Nss1,(MCS0)_4TX	22.28	0.16904		



Average Power Appendix C

#### Result

Mode	Result	DG	Port 1	Port 2	Port 3	Port 4	Total Power	Power Limit
		(dBi)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	3.81	21.36	22.18	21.80	21.58	27.76	30.00
2437MHz_TnomVnom	Pass	3.81	20.50	21.18	20.63	20.61	26.76	30.00
2457MHz_TnomVnom	Pass	3.81	20.45	21.03	20.53	20.58	26.67	30.00
2462MHz_TnomVnom	Pass	3.81	19.41	19.89	19.81	19.64	25.71	30.00
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	3.81	17.67	18.21	18.21	17.70	23.98	30.00
2417MHz_TnomVnom	Pass	3.81	19.55	20.08	19.93	19.64	25.83	30.00
2437MHz_TnomVnom	Pass	3.81	21.92	22.43	22.32	22.18	28.24	30.00
2457MHz_TnomVnom	Pass	3.81	20.07	20.76	20.53	20.46	26.48	30.00
2462MHz_TnomVnom	Pass	3.81	16.36	16.92	17.11	16.87	22.84	30.00
VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	3.81	17.84	18.28	17.96	17.93	24.03	30.00
2417MHz_TnomVnom	Pass	3.81	18.47	19.05	18.77	18.58	24.74	30.00
2437MHz_TnomVnom	Pass	3.81	22.95	23.68	23.42	23.33	29.37	30.00
2457MHz_TnomVnom	Pass	3.81	19.07	19.52	19.67	19.21	25.39	30.00
2462MHz_TnomVnom	Pass	3.81	15.91	16.24	16.15	16.18	22.14	30.00
VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2422MHz_TnomVnom	Pass	3.81	14.33	14.61	14.51	14.32	20.46	30.00
2427MHz_TnomVnom	Pass	3.81	14.30	14.67	14.51	14.24	20.45	30.00
2437MHz_TnomVnom	Pass	3.81	16.02	16.68	16.34	15.94	22.28	30.00
2447MHz_TnomVnom	Pass	3.81	14.80	15.07	15.00	14.87	20.96	30.00
2452MHz_TnomVnom	Pass	3.81	12.75	13.19	12.94	12.70	18.92	30.00

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



**PSD** Appendix D

**Summary** 

Mode	PD
	(dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_4TX	2.21
802.11g_Nss1,(6Mbps)_4TX	1.19
VHT20_Nss1,(MCS0)_4TX	1.25
VHT40_Nss1,(MCS0)_4TX	-8.16

RBW=3 kHz.



**PSD** Appendix D

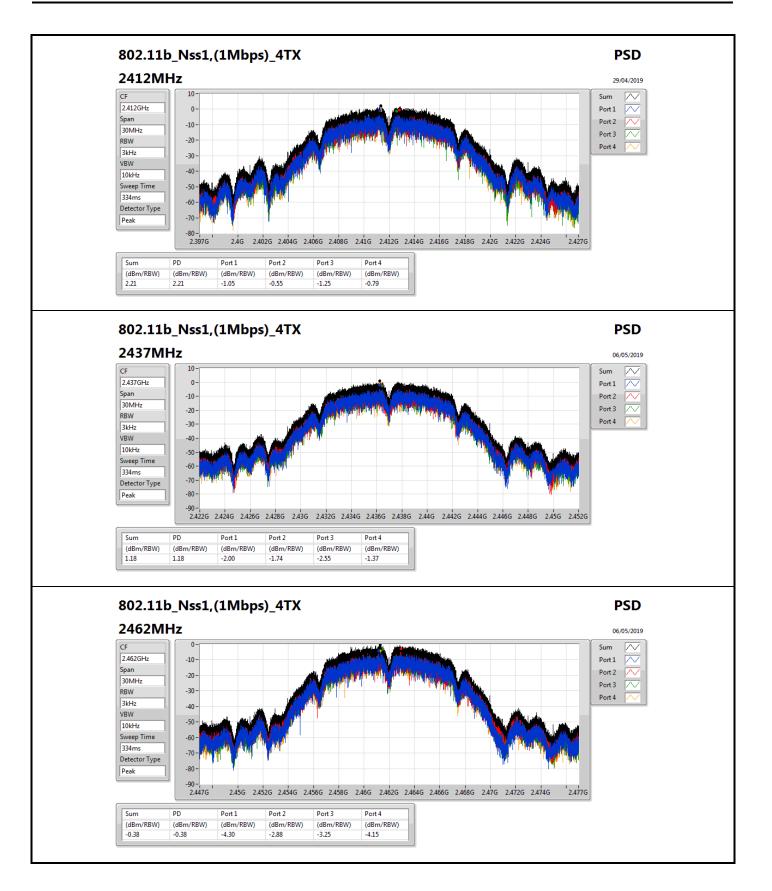
#### Result

Mode	Result	DG	Port 1	Port 2	Port 3	Port 4	PD	PD Limit
		(dBi)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	7.59	-1.05	-0.55	-1.25	-0.79	2.21	6.41
2437MHz_TnomVnom	Pass	7.59	-2.00	-1.74	-2.55	-1.37	1.18	6.41
2462MHz_TnomVnom	Pass	7.59	-4.30	-2.88	-3.25	-4.15	-0.38	6.41
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	7.59	-7.73	-8.43	-7.65	-7.39	-2.76	6.41
2437MHz_TnomVnom	Pass	7.59	-3.47	-2.91	-3.29	-3.16	1.19	6.41
2462MHz_TnomVnom	Pass	7.59	-8.51	-8.41	-7.33	-7.92	-3.37	6.41
VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	7.59	-6.43	-6.33	-7.69	-6.04	-3.20	6.41
2437MHz_TnomVnom	Pass	7.59	-2.75	-1.85	-2.42	-2.37	1.25	6.41
2462MHz_TnomVnom	Pass	7.59	-9.29	-9.03	-9.13	-8.39	-5.99	6.41
VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2422MHz_TnomVnom	Pass	7.59	-13.91	-14.08	-13.60	-13.91	-10.77	6.41
2437MHz_TnomVnom	Pass	7.59	-12.83	-11.77	-11.94	-11.29	-8.16	6.41
2452MHz_TnomVnom	Pass	7.59	-16.01	-15.26	-15.37	-15.96	-12.11	6.41

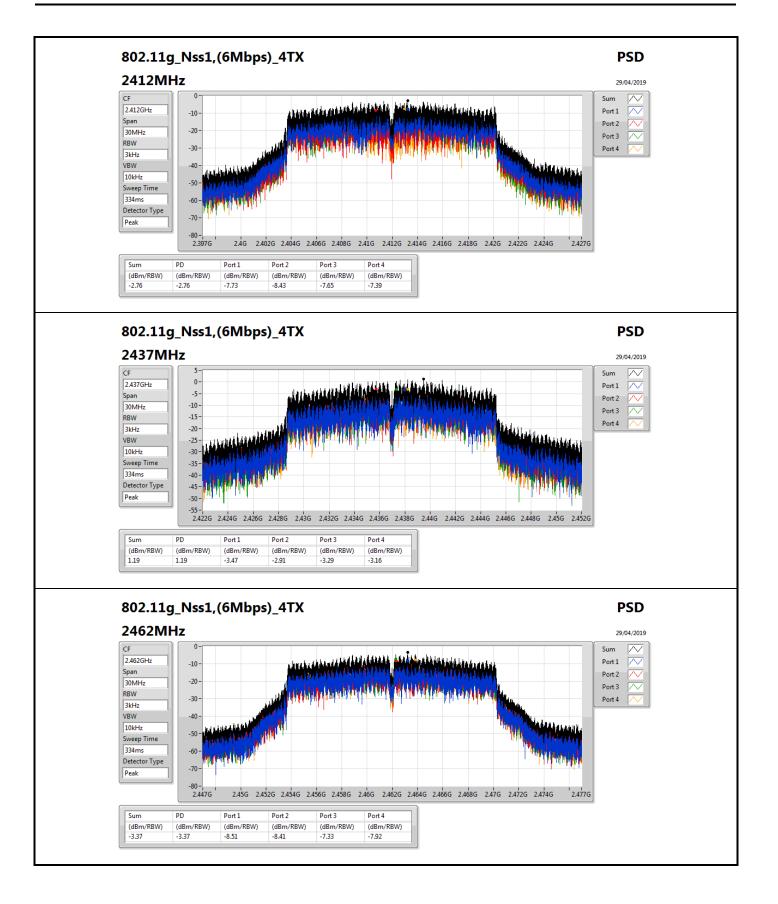
**DG** = Directional Gain; RBW=3 kHz;

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

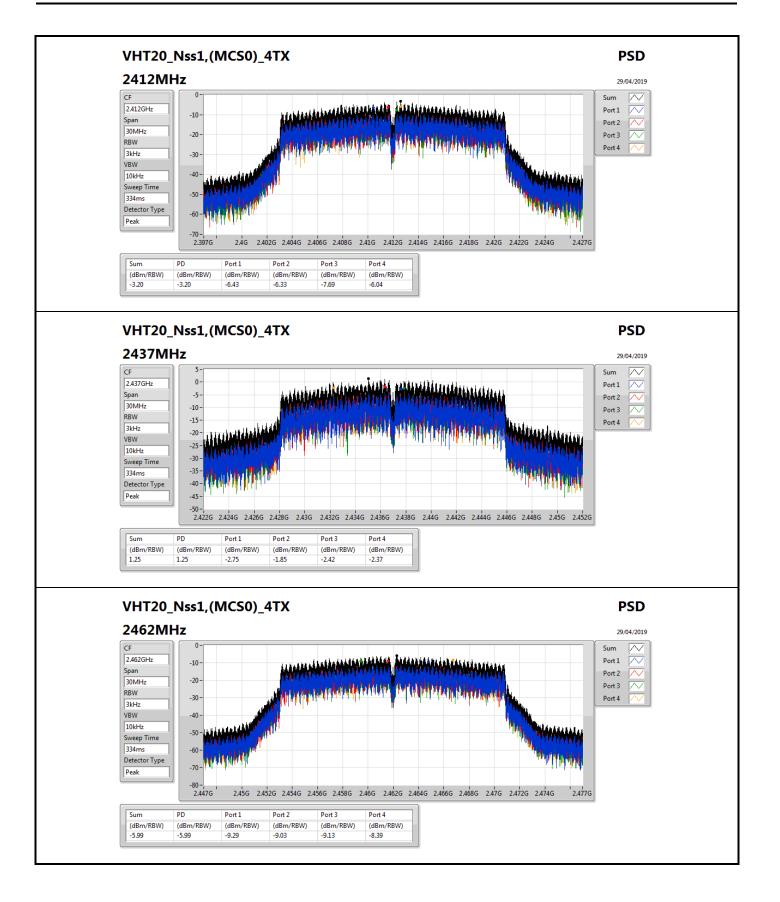
**PSD** Appendix D



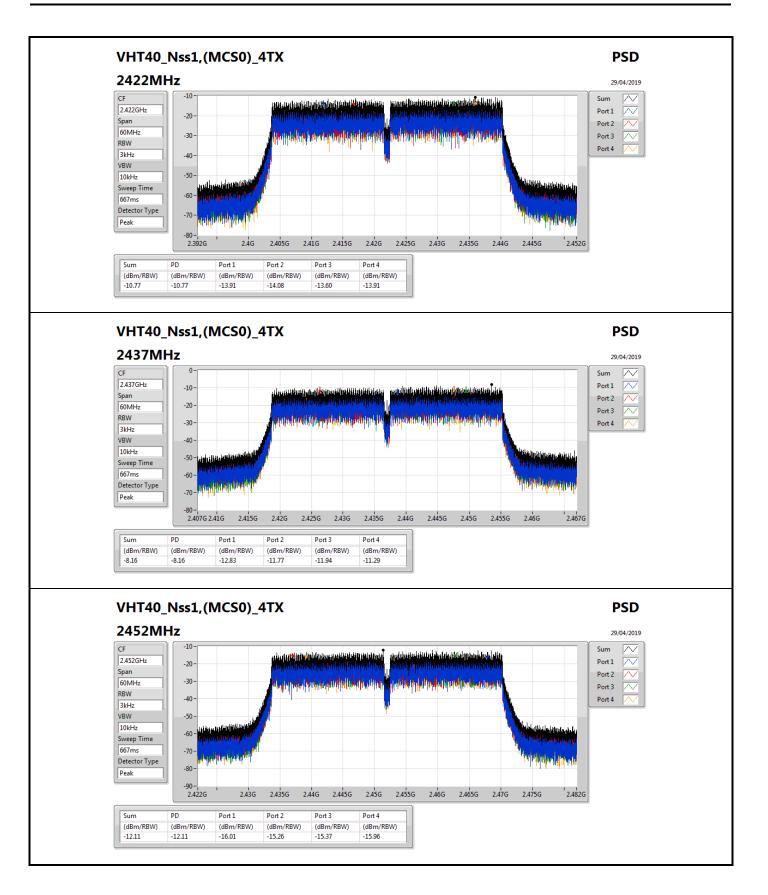
**PSD** Appendix D



ABD Appendix D



**PSD** Appendix D





# CSE(Non-restricted Band)

Appendix E

Summary

Mode	Result	Ref	Ref	Limit	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Port
		(Hz)	(dBm)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	
2.4-2.4835GHz	-	-	-	-		-	-	-		-	-	-	-
802.11b_Nss1,(1Mbps)_4TX	Pass	2.41248G	13.34	-16.66	1.94351G	-53.82	2.39898G	-26.46	2.48732G	-44.63	24.34818G	-41.18	2
802.11g_Nss1,(6Mbps)_4TX	Pass	2.4357G	12.12	-17.88	2.3067G	-54.53	2.39972G	-26.42	2.48734G	-46.15	24.50552G	-40.14	2
VHT20_Nss1,(MCS0)_4TX	Pass	2.43824G	13.25	-16.75	2.30204G	-53.82	2.3998G	-23.64	2.48734G	-43.00	24.39313G	-39.25	1
VHT40_Nss1,(MCS0)_4TX	Pass	2.44071G	3.10	-26.90	2.15684G	-54.49	2.3994G	-33.91	2.4845G	-42.01	24.40263G	-39.93	2

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#### Result

Mode	Result	Ref	Ref	Limit	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Port
		(Hz)	(dBm)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.41248G	13.34	-16.66	2.14477G	-53.51	2.39998G	-29.61	2.48736G	-43.54	24.93257G	-39.78	1
2412MHz_TnomVnom	Pass	2.41248G	13.34	-16.66	1.94351G	-53.82	2.39898G	-26.46	2.48732G	-44.63	24.34818G	-41.18	2
2412MHz_TnomVnom	Pass	2.41248G	13.34	-16.66	1.95982G	-54.27	2.39998G	-29.19	2.48734G	-44.78	23.3845G	-40.11	3
2412MHz_TnomVnom	Pass	2.41248G	13.34	-16.66	2.12118G	-54.58	2.39896G	-30.80	2.48732G	-42.68	24.29761G	-40.57	4
2437MHz_TnomVnom	Pass	2.41248G	13.34	-16.66	880.16M	-54.53	2.39998G	-48.59	2.51312G	-43.36	17.54904G	-40.51	1
2437MHz_TnomVnom	Pass	2.41248G	13.34	-16.66	2.15816G	-54.14	2.3995G	-51.17	2.51312G	-41.98	24.01384G	-40.77	2
2437MHz_TnomVnom	Pass	2.41248G	13.34	-16.66	2.18787G	-54.64	2.3939G	-51.97	2.51312G	-44.89	23.56431G	-40.96	3
2437MHz_TnomVnom	Pass	2.41248G	13.34	-16.66	2.30758G	-53.47	2.39726G	-51.88	2.51314G	-47.34	24.96629G	-40.77	4
2462MHz_TnomVnom	Pass	2.41248G	13.34	-16.66	1.99943G	-54.42	2.39998G	-50.68	2.51998G	-44.76	24.24704G	-40.66	1
2462MHz_TnomVnom	Pass	2.41248G	13.34	-16.66	2.00235G	-53.89	2.39888G	-53.77	2.48594G	-46.60	24.01946G	-40.45	2
2462MHz_TnomVnom	Pass	2.41248G	13.34	-16.66	761.62M	-53.84	2.3981G	-53.54	2.48356G	-45.61	24.9129G	-40.06	3
2462MHz_TnomVnom	Pass	2.41248G	13.34	-16.66	2.07749G	-53.38	2.39942G	-53.40	2.48572G	-46.87	24.88762G	-40.21	4
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.4357G	12.12	-17.88	2.14389G	-53.59	2.3998G	-27.18	2.48734G	-44.33	24.03913G	-39.41	1
2412MHz_TnomVnom	Pass	2.4357G	12.12	-17.88	2.3067G	-54.53	2.39972G	-26.42	2.48734G	-46.15	24.50552G	-40.14	2
2412MHz_TnomVnom	Pass	2.4357G	12.12	-17.88	2.17972G	-54.30	2.3982G	-26.62	2.48732G	-42.65	24.5589G	-39.15	3
2412MHz_TnomVnom	Pass	2.4357G	12.12	-17.88	364.06M	-47.06	2.39822G	-28.89	2.48732G	-39.89	24.1487G	-39.70	4
2437MHz_TnomVnom	Pass	2.4357G	12.12	-17.88	2.13108G	-53.66	2.39756G	-42.50	2.51312G	-43.79	23.19907G	-39.17	1
2437MHz_TnomVnom	Pass	2.4357G	12.12	-17.88	2.17389G	-54.04	2.39822G	-41.26	2.51312G	-42.20	24.51114G	-39.84	2
2437MHz_TnomVnom	Pass	2.4357G	12.12	-17.88	2.30991G	-54.54	2.39784G	-42.99	2.51312G	-42.01	24.45494G	-39.10	3
2437MHz_TnomVnom	Pass	2.4357G	12.12	-17.88	293.58M	-43.25	2.39946G	-43.69	2.51314G	-41.51	24.05037G	-40.14	4
2462MHz_TnomVnom	Pass	2.4357G	12.12	-17.88	2.30728G	-52.78	2.39998G	-50.07	2.48354G	-42.55	23.40136G	-39.59	1
2462MHz_TnomVnom	Pass	2.4357G	12.12	-17.88	2.30816G	-52.69	2.39048G	-52.98	2.48354G	-40.45	24.31447G	-38.76	2
2462MHz_TnomVnom	Pass	2.4357G	12.12	-17.88	2.03322G	-54.32	2.39708G	-53.06	2.48384G	-42.64	24.45494G	-39.57	3
2462MHz_TnomVnom	Pass	2.4357G	12.12	-17.88	2.30816G	-52.85	2.39072G	-52.86	2.4837G	-45.06	24.05599G	-39.26	4
VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.43824G	13.25	-16.75	2.30204G	-53.82	2.3998G	-23.64	2.48734G	-43.00	24.39313G	-39.25	1
2412MHz_TnomVnom	Pass	2.43824G	13.25	-16.75	1.89371G	-54.10	2.39694G	-23.85	2.48734G	-43.20	23.43788G	-39.49	2
2412MHz_TnomVnom	Pass	2.43824G	13.25	-16.75	2.30961G	-55.16	2.3982G	-26.07	2.48734G	-44.00	24.51956G	-39.31	3
2412MHz_TnomVnom	Pass	2.43824G	13.25	-16.75	335.52M	-53.88	2.39882G	-24.35	2.48734G	-42.22	24.0588G	-39.74	4
2437MHz_TnomVnom	Pass	2.43824G	13.25	-16.75	2.0737G	-53.08	2.39982G	-36.30	2.48382G	-42.43	24.42966G	-39.82	1
2437MHz_TnomVnom	Pass	2.43824G	13.25	-16.75	2.19603G	-54.56	2.39946G	-34.42	2.48822G	-40.25	24.18242G	-39.60	2
2437MHz_TnomVnom	Pass	2.43824G	13.25	-16.75	2.14768G	-53.90	2.39854G	-34.93	2.48824G	-40.97	24.05037G	-39.43	3
2437MHz_TnomVnom	Pass	2.43824G	13.25	-16.75	310.77M	-39.85	2.3998G	-36.96	2.48602G	-41.54	24.44652G	-39.19	4
2462MHz_TnomVnom	Pass	2.43824G	13.25	-16.75	2.12758G	-53.62	2.39996G	-51.47	2.48448G	-43.24	24.42404G	-39.77	1
2462MHz_TnomVnom	Pass	2.43824G	13.25	-16.75	2.1538G	-54.26	2.39052G	-52.88	2.48386G	-41.70	17.54623G	-39.57	2
2462MHz_TnomVnom	Pass	2.43824G	13.25	-16.75	2.07749G	-54.00	2.39674G	-53.03	2.48382G	-43.44	24.06161G	-39.72	3
2462MHz_TnomVnom	Pass	2.43824G	13.25	-16.75	2.30816G	-53.41	2.39286G	-53.65	2.48394G	-43.98	24.53923G	-39.39	4
VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz_TnomVnom	Pass	2.44071G	3.10	-26.90	2.10617G	-54.78	2.3998G	-38.60	2.51998G	-41.51	24.49237G	-39.58	1
2422MHz_TnomVnom	Pass	2.44071G	3.10	-26.90	2.13938G	-54.42	2.397G	-35.50	2.48366G	-48.17	23.22752G	-39.38	2
2422MHz_TnomVnom	Pass	2.44071G	3.10	-26.90	2.30254G	-52.91	2.39956G	-40.50	2.4839G	-48.83	24.39141G	-38.78	3
2422MHz_TnomVnom	Pass	2.44071G	3.10	-26.90	335.43M	-51.65	2.3982G	-40.26	2.48622G	-48.65	24.00718G	-39.58	4
2437MHz_TnomVnom	Pass	2.44071G	3.10	-26.90	2.15999G	-53.68	2.39948G	-37.53	2.51998G	-39.54	24.05767G	-39.80	1
2437MHz_TnomVnom	Pass	2.44071G	3.10	-26.90	2.15684G	-54.49	2.3994G	-33.91	2.4845G	-42.01	24.40263G	-39.93	2
2437MHz_TnomVnom	Pass	2.44071G	3.10	-26.90	2.16228G	-54.81	2.39948G	-37.70	2.48454G	-43.35	24.49798G	-38.92	3
2437MHz_TnomVnom	Pass	2.44071G	3.10	-26.90	285.62M	-50.63	2.39952G	-39.39	2.48602G	-43.61	24.38861G	-39.68	4



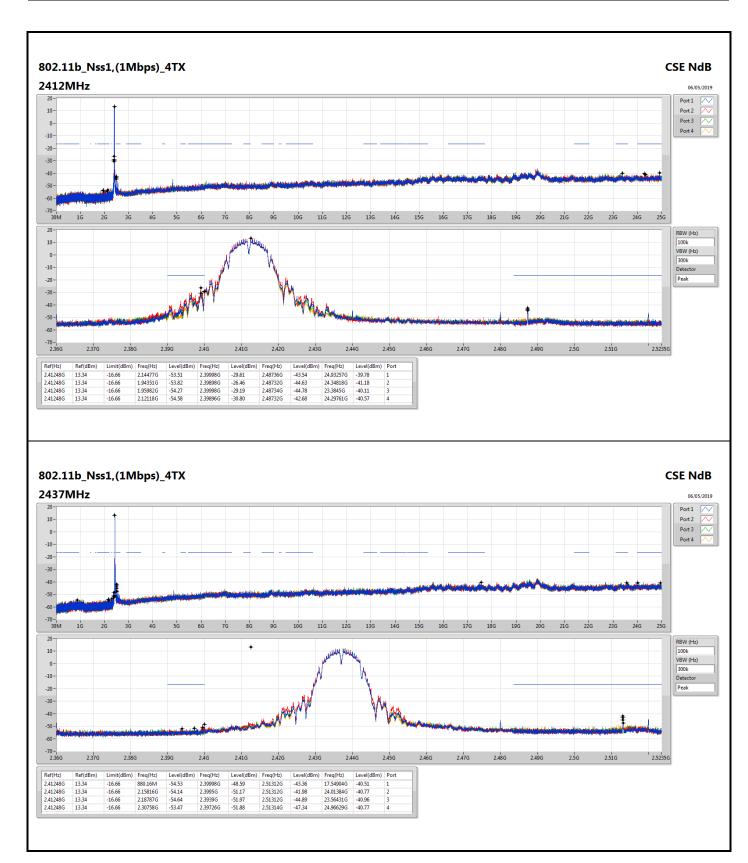
# CSE(Non-restricted Band)

Appendix E

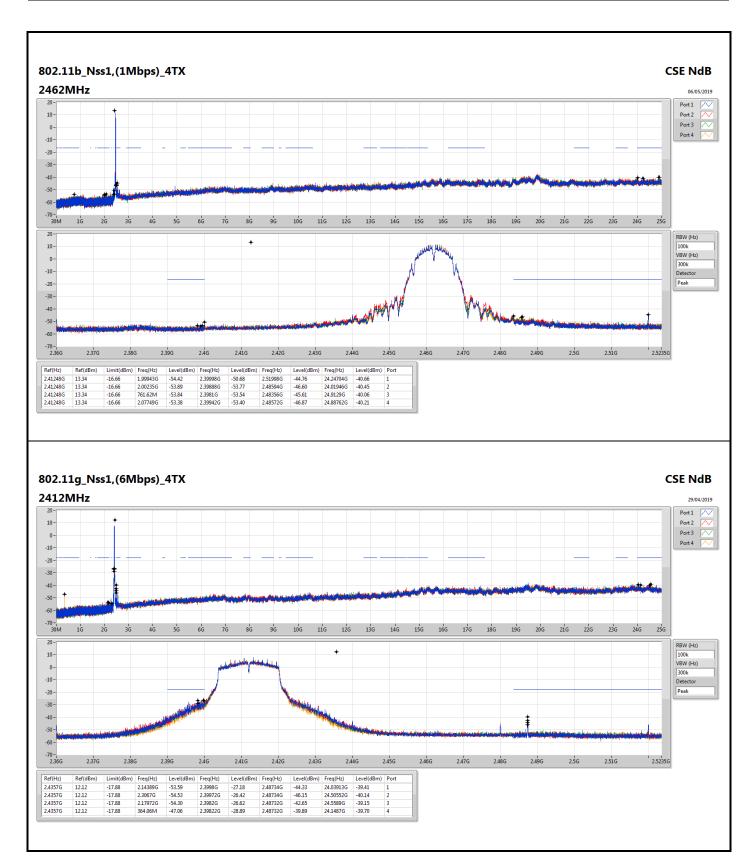
Mode	Result	Ref	Ref	Limit	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Port
		(Hz)	(dBm)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	
2452MHz_TnomVnom	Pass	2.44071G	3.10	-26.90	2.1846G	-55.01	2.39904G	-49.50	2.51998G	-42.54	24.45872G	-39.38	1
2452MHz_TnomVnom	Pass	2.44071G	3.10	-26.90	2.08842G	-54.51	2.39024G	-50.55	2.48506G	-40.96	24.0801G	-39.56	2
2452MHz_TnomVnom	Pass	2.44071G	3.10	-26.90	2.17659G	-55.02	2.39992G	-50.17	2.48946G	-44.62	23.45749G	-39.41	3
2452MHz_TnomVnom	Pass	2.44071G	3.10	-26.90	2.30626G	-54.23	2.39152G	-51.75	2.48358G	-47.32	24.09693G	-39.55	4

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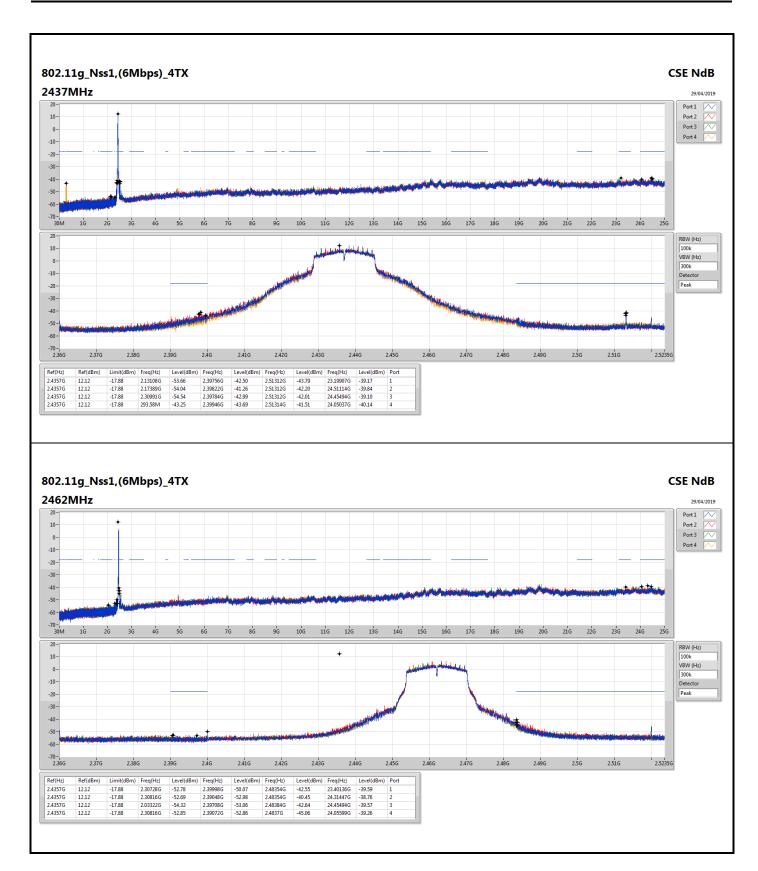




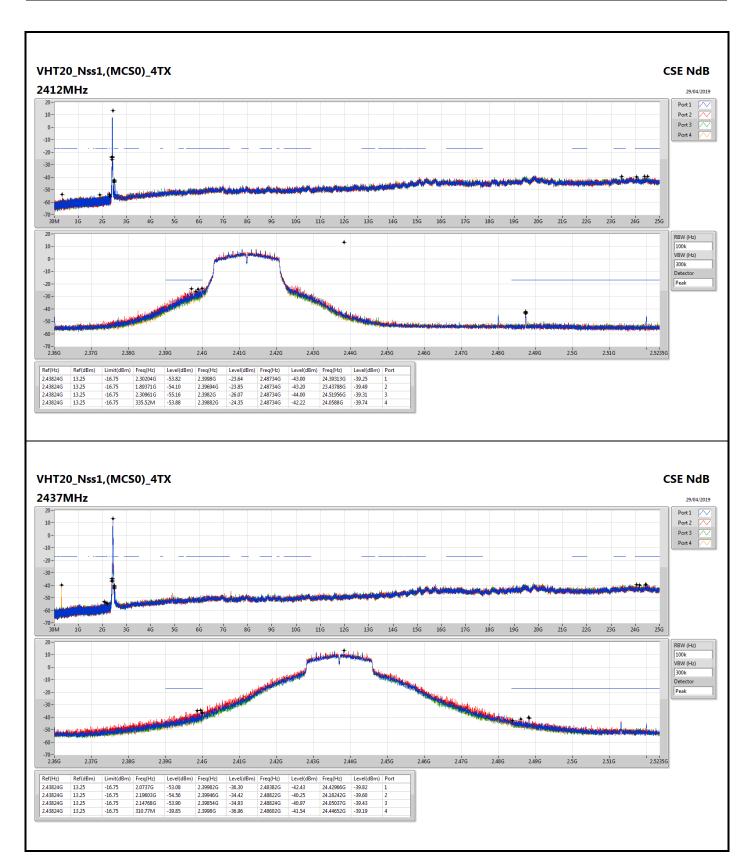




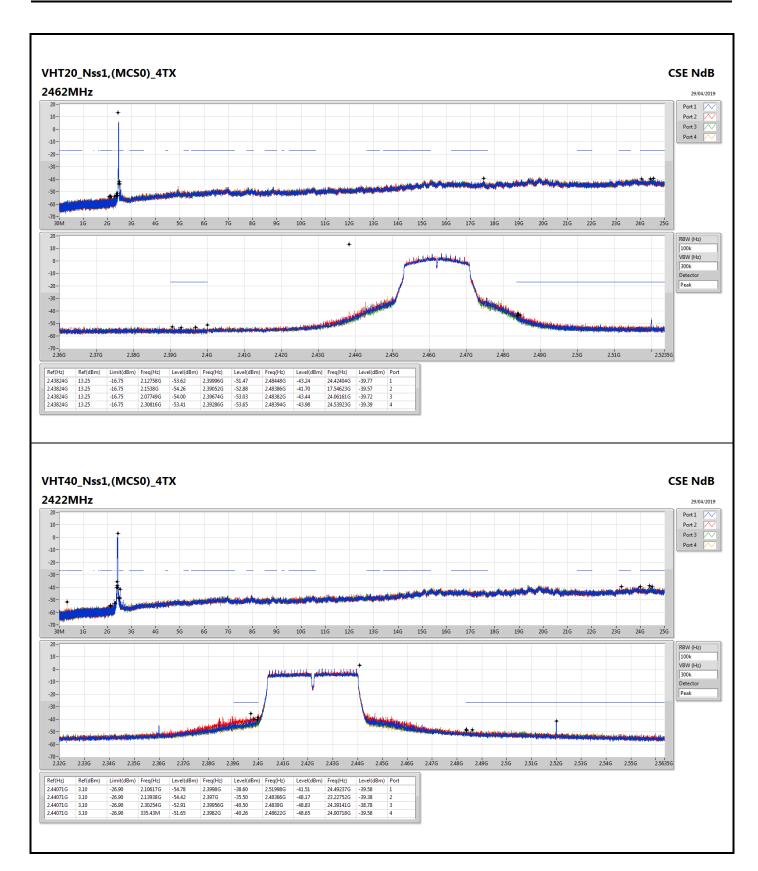




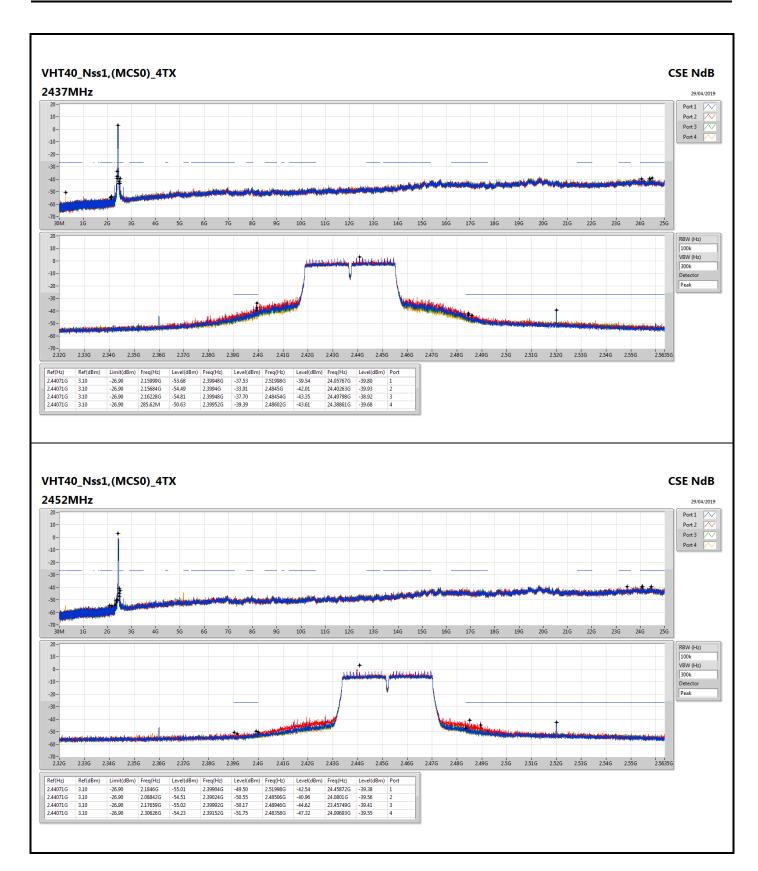














RSE TX below 1GHz Appendix F.1

**Summary** 

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
VHT40_Nss1,(MCS0)_4TX	Pass	PK	61.04M	34.76	40.00	-5.24	-25.47	3	Horizontal	360	1.00	-

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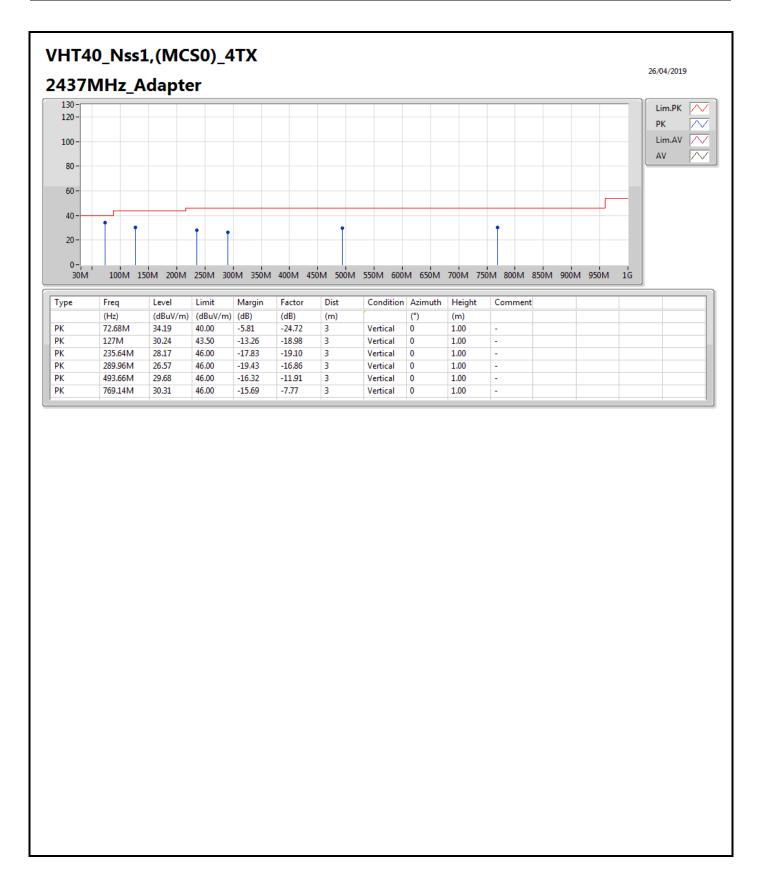


RSE TX below 1GHz Appendix F.1

#### Result

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	ļ
VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-
2437MHz	Pass	PK	72.68M	34.19	40.00	-5.81	-24.72	3	Vertical	0	1.00	-
2437MHz	Pass	PK	127M	30.24	43.50	-13.26	-18.98	3	Vertical	0	1.00	-
2437MHz	Pass	PK	235.64M	28.17	46.00	-17.83	-19.10	3	Vertical	0	1.00	-
2437MHz	Pass	PK	289.96M	26.57	46.00	-19.43	-16.86	3	Vertical	0	1.00	-
2437MHz	Pass	PK	493.66M	29.68	46.00	-16.32	-11.91	3	Vertical	0	1.00	-
2437MHz	Pass	PK	769.14M	30.31	46.00	-15.69	-7.77	3	Vertical	0	1.00	-
2437MHz	Pass	PK	61.04M	34.76	40.00	-5.24	-25.47	3	Horizontal	360	1.00	-
2437MHz	Pass	PK	117.3M	31.34	43.50	-12.16	-19.26	3	Horizontal	360	1.00	-
2437MHz	Pass	PK	167.74M	28.76	43.50	-14.74	-20.43	3	Horizontal	360	1.00	-
2437MHz	Pass	PK	301.6M	37.37	46.00	-8.63	-16.64	3	Horizontal	360	1.00	-
2437MHz	Pass	PK	633.34M	27.19	46.00	-18.81	-9.56	3	Horizontal	360	1.00	-
2437MHz	Pass	PK	771.08M	29.22	46.00	-16.78	-7.75	3	Horizontal	360	1.00	-











### RSE TX above 1GHz

Appendix F.2

**Summary** 

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_4TX	Pass	AV	2.39G	53.84	54.00	-0.16	31.11	3	Horizontal	111	1.92	-
802.11g_Nss1,(6Mbps)_4TX	Pass	AV	2.39G	53.80	54.00	-0.20	31.11	3	Vertical	75	2.29	-
VHT20_Nss1,(MCS0)_4TX	Pass	AV	2.3876G	53.91	54.00	-0.09	31.11	3	Horizontal	329	1.45	-
VHT40_Nss1,(MCS0)_4TX	Pass	AV	2.3892G	53.96	54.00	-0.04	31.11	3	Horizontal	99	2.12	-



### RSE TX above 1GHz

Appendix F.2

#### Result

Result												
Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.3882G	49.45	54.00	-4.55	31.11	3	Vertical	266	1.15	-
2412MHz	Pass	AV	2.4112G	110.66	Inf	-Inf	31.20	3	Vertical	266	1.15	-
2412MHz	Pass	PK	2.3886G	59.51	74.00	-14.49	31.11	3	Vertical	266	1.15	-
2412MHz	Pass	PK	2.4112G	113.10	Inf	-Inf	31.20	3	Vertical	266	1.15	-
2412MHz	Pass	AV	2.39G	53.84	54.00	-0.16	31.11	3	Horizontal	111	1.92	-
2412MHz	Pass	AV	2.4112G	111.38	Inf	-Inf	31.20	3	Horizontal	111	1.92	-
2412MHz	Pass	PK	2.39G	61.75	74.00	-12.25	31.11	3	Horizontal	111	1.92	-
2412MHz	Pass	PK	2.4128G	114.34	Inf	-Inf	31.21	3	Horizontal	111	1.92	-
2412MHz	Pass	AV	4.82396G	51.48	54.00	-2.52	3.46	3	Vertical	278	1.49	-
2412MHz	Pass	PK	4.82394G	54.28	74.00	-19.72	3.46	3	Vertical	278	1.49	-
2412MHz	Pass	AV	4.82396G	47.24	54.00	-6.76	3.46	3	Horizontal	227	1.50	-
2412MHz	Pass	PK	4.824G	50.92	74.00	-23.08	3.46	3	Horizontal	227	1.50	-
2437MHz	Pass	AV	2.3598G	44.81	54.00	-9.19	30.99	3	Vertical	268	1.28	-
2437MHz	Pass	AV	2.4362G	110.90	Inf	-Inf	31.31	3	Vertical	268	1.28	-
2437MHz	Pass	AV	2.491G	44.91	54.00	-9.09	31.54	3	Vertical	268	1.28	-
2437MHz	Pass	PK	2.3562G	56.75	74.00	-17.25	30.97	3	Vertical	268	1.28	-
2437MHz	Pass	PK	2.4378G	113.55	Inf	-Inf	31.32	3	Vertical	268	1.28	-
2437MHz	Pass	PK	2.4982G	58.11	74.00	-15.89	31.57	3	Vertical	268	1.28	-
2437MHz	Pass	AV	2.3582G	43.82	54.00	-10.18	30.97	3	Horizontal	111	1.45	-
2437MHz	Pass	AV	2.4378G	110.93	Inf	-Inf	31.32	3	Horizontal	111	1.45	-
2437MHz	Pass	AV	2.4846G	44.39	54.00	-9.61	31.52	3	Horizontal	111	1.45	-
2437MHz	Pass	PK	2.3498G	56.51	74.00	-17.49	30.94	3	Horizontal	111	1.45	-
2437MHz	Pass	PK	2.4378G	113.77	Inf	-Inf	31.32	3	Horizontal	111	1.45	_
2437MHz	Pass	PK	2.4946G	57.29	74.00	-16.71	31.55	3	Horizontal	111	1.45	_
2437MHz	Pass	AV	4.87394G	49.09	54.00	-4.91	3.58	3	Vertical	273	1.63	_
2437MHz	Pass	AV	7.31168G	53.59	54.00	-0.41	9.50	3	Vertical	77	1.50	_
2437MHz	Pass	PK	4.87396G	52.79	74.00	-21.21	3.58	3	Vertical	273	1.63	_
2437MHz	Pass	PK	7.31132G	58.54	74.00	-15.46	9.50	3	Vertical	77	1.50	-
2437MHz	Pass	AV	4.87394G	42.30	54.00	-11.70	3.58	3	Horizontal	323	1.59	
2437MHz	Pass	AV	7.31012G	51.19	54.00	-2.81	9.50	3	Horizontal	316	1.43	
2437MHz	Pass	PK	4.87406G	47.85	74.00	-26.15	3.58	3	Horizontal	323	1.43	-
								3				-
2437MHz	Pass	PK	7.31138G	57.00	74.00	-17.00	9.50		Horizontal	316	1.43	-
2457MHz	Pass	AV	2.4562G	110.99	Inf	-Inf	31.40	3	Vertical	268	1.16	-
2457MHz	Pass	AV	2.4862G	48.31	54.00	-5.69	31.52	3	Vertical	268	1.16	-
2457MHz	Pass	PK	2.4578G	113.73	Inf	-Inf	31.40	3	Vertical	268	1.16	-
2457MHz	Pass	PK	2.4856G	59.95	74.00	-14.05	31.52	3	Vertical	268	1.16	-
2457MHz	Pass	AV	2.4562G	111.37	Inf	-Inf	31.40	3	Horizontal	110	1.89	-
2457MHz	Pass	AV	2.4835G	47.75	54.00	-6.25	31.51	3	Horizontal	110	1.89	-
2457MHz	Pass	PK	2.4562G	113.94	Inf	-Inf	31.40	3	Horizontal	110	1.89	-
2457MHz	Pass	PK	2.4844G	59.76	74.00	-14.24	31.52	3	Horizontal	110	1.89	-
2462MHz	Pass	AV	2.4612G	110.32	Inf	-Inf	31.41	3	Vertical	269	1.18	-
2462MHz	Pass	AV	2.4835G	50.02	54.00	-3.98	31.51	3	Vertical	269	1.18	-
2462MHz	Pass	PK	2.4628G	112.76	Inf	-Inf	31.43	3	Vertical	269	1.18	-
2462MHz	Pass	PK	2.4836G	60.51	74.00	-13.49	31.51	3	Vertical	269	1.18	-
2462MHz	Pass	AV	2.4612G	109.35	Inf	-Inf	31.41	3	Horizontal	36	1.19	-
2462MHz	Pass	AV	2.4835G	49.34	54.00	-4.66	31.51	3	Horizontal	36	1.19	-
2462MHz	Pass	PK	2.4628G	111.69	Inf	-Inf	31.43	3	Horizontal	36	1.19	-



### RSE TX above 1GHz

Appendix F.2

Mada	Danult	Time	F===	Lavel	Limit	Mannin	Fastar	Diet	Candition	A = i = · · · · · · · · · · · · ·	Haimhá	Commonto
Mode	Result	Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	_		(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
2462MHz	Pass	PK	2.4858G	60.00	74.00	-14.00	31.52	3	Horizontal	36	1.19	-
2462MHz	Pass	AV	4.92394G	48.36	54.00	-5.64	3.71	3	Vertical	270	1.60	-
2462MHz	Pass	AV	7.38512G	53.84	54.00	-0.16	9.73	3	Vertical	64	1.65	-
2462MHz	Pass	PK	4.92392G	52.18	74.00	-21.82	3.71	3	Vertical	270	1.60	-
2462MHz	Pass	PK	7.3868G	59.13	74.00	-14.87	9.74	3	Vertical	64	1.65	-
2462MHz	Pass	AV	4.92395G	45.24	54.00	-8.76	3.68	3	Horizontal	205	1.69	-
2462MHz	Pass	AV	7.38512G	49.90	54.00	-4.10	9.73	3	Horizontal	317	1.50	-
2462MHz	Pass	PK	4.92397G	49.89	74.00	-24.11	3.68	3	Horizontal	205	1.69	-
2462MHz	Pass	PK	7.3863G	56.38	74.00	-17.62	9.73	3	Horizontal	317	1.50	-
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.39G	53.80	54.00	-0.20	31.11	3	Vertical	75	2.29	-
2412MHz	Pass	AV	2.4102G	106.17	Inf	-Inf	31.20	3	Vertical	75	2.29	-
2412MHz	Pass	PK	2.39G	73.32	74.00	-0.68	31.11	3	Vertical	75	2.29	-
2412MHz	Pass	PK	2.4106G	115.40	Inf	-Inf	31.20	3	Vertical	75	2.29	-
2412MHz	Pass	AV	2.39G	51.79	54.00	-2.21	31.11	3	Horizontal	101	1.91	-
2412MHz	Pass	AV	2.413G	106.49	Inf	-Inf	31.21	3	Horizontal	101	1.91	-
2412MHz	Pass	PK	2.39G	68.56	74.00	-5.44	31.11	3	Horizontal	101	1.91	-
2412MHz	Pass	PK	2.4126G	115.31	Inf	-Inf	31.21	3	Horizontal	101	1.91	-
2412MHz	Pass	AV	4.82118G	33.99	54.00	-20.01	3.44	3	Vertical	75	2.24	-
2412MHz	Pass	PK	4.82034G	46.36	74.00	-27.64	3.44	3	Vertical	75	2.24	-
2412MHz	Pass	AV	4.8276G	36.60	54.00	-17.40	3.46	3	Horizontal	161	1.88	-
2412MHz	Pass	PK	4.82742G	49.22	74.00	-24.78	3.46	3	Horizontal	161	1.88	-
2417MHz	Pass	AV	2.39G	48.75	54.00	-5.25	31.11	3	Vertical	305	1.97	-
2417MHz	Pass	AV	2.4134G	106.36	Inf	-Inf	31.21	3	Vertical	305	1.97	-
2417MHz	Pass	PK	2.3856G	64.52	74.00	-9.48	31.09	3	Vertical	305	1.97	-
2417MHz	Pass	PK	2.4128G	116.26	Inf	-Inf	31.21	3	Vertical	305	1.97	-
2417MHz	Pass	AV	2.39G	53.44	54.00	-0.56	31.11	3	Horizontal	92	1.90	-
2417MHz	Pass	AV	2.4152G	109.20	Inf	-Inf	31.22	3	Horizontal	92	1.90	-
2417MHz	Pass	PK	2.3898G	69.41	74.00	-4.59	31.11	3	Horizontal	92	1.90	-
2417MHz	Pass	PK	2.4152G	118.16	Inf	-Inf	31.22	3	Horizontal	92	1.90	-
2437MHz	Pass	AV	2.3822G	44.53	54.00	-9.47	31.08	3	Vertical	271	1.49	-
2437MHz	Pass	AV	2.4382G	105.95	Inf	-Inf	31.32	3	Vertical	271	1.49	-
2437MHz	Pass	AV	2.4838G	46.78	54.00	-7.22	31.51	3	Vertical	271	1.49	-
2437MHz	Pass	PK	2.389G	57.94	74.00	-16.06	31.11	3	Vertical	271	1.49	-
2437MHz	Pass	PK	2.4386G	114.75	Inf	-Inf	31.32	3	Vertical	271	1.49	-
2437MHz	Pass	PK	2.4835G	65.99	74.00	-8.01	31.51	3	Vertical	271	1.49	-
2437MHz	Pass	AV	2.3834G	45.17	54.00	-8.83	31.08	3	Horizontal	101	2.09	-
2437MHz	Pass	AV	2.439G	110.11	Inf	-Inf	31.32	3	Horizontal	101	2.09	-
2437MHz	Pass	AV	2.4835G	47.10	54.00	-6.90	31.51	3	Horizontal	101	2.09	-
2437MHz	Pass	PK	2.3822G	60.94	74.00	-13.06	31.08	3	Horizontal	101	2.09	-
2437MHz	Pass	PK	2.4394G	119.20	Inf	-10.00 -Inf	31.32	3	Horizontal	101	2.09	-
2437MHz	Pass	PK	2.4838G	65.25	74.00	-8.75	31.52	3	Horizontal	101	2.09	-
2437MHz	Pass	AV	4.87424G	48.81	54.00	-5.19	3.58	3	Vertical	230	1.64	<del>                                     </del>
2437MHz 2437MHz			7.31442G	53.19	54.00	-0.81	9.51	3	Vertical		1.58	<del>                                     </del>
	Pass	AV					-			57		-
2437MHz	Pass	PK	4.87454G	61.93	74.00	-12.07	3.58	3	Vertical	230	1.64	-
2437MHz	Pass	PK	7.31424G	67.01	74.00	-6.99	9.51	3	Vertical	57	1.58	-
2437MHz	Pass	AV	4.87616G	49.32	54.00	-4.68	3.59	3	Horizontal	224	2.71	-
2437MHz	Pass	AV	7.31256G	49.02	54.00	-4.98	9.50	3	Horizontal	304	2.72	-
2437MHz	Pass	PK	4.87448G	61.42	74.00	-12.58	3.58	3	Horizontal	224	2.71	-



Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
2437MHz	Pass	PK	7.31244G	62.33	74.00	-11.67	9.50	3	Horizontal	304	2.72	-
2457MHz	Pass	AV	2.4562G	108.50	Inf	-Inf	31.40	3	Vertical	275	1.01	-
2457MHz	Pass	AV	2.4835G	52.22	54.00	-1.78	31.51	3	Vertical	275	1.01	-
2457MHz	Pass	PK	2.4556G	117.15	Inf	-Inf	31.40	3	Vertical	275	1.01	-
2457MHz	Pass	PK	2.4836G	67.43	74.00	-6.57	31.51	3	Vertical	275	1.01	-
2457MHz	Pass	AV	2.4562G	106.76	Inf	-Inf	31.40	3	Horizontal	89	2.75	-
2457MHz	Pass	AV	2.4835G	53.74	54.00	-0.26	31.51	3	Horizontal	89	2.75	-
2457MHz	Pass	PK	2.4554G	115.98	Inf	-Inf	31.39	3	Horizontal	89	2.75	-
2457MHz	Pass	PK	2.4852G	69.51	74.00	-4.49	31.52	3	Horizontal	89	2.75	-
2462MHz	Pass	AV	2.4612G	104.72	Inf	-Inf	31.41	3	Vertical	258	1.85	-
2462MHz	Pass	AV	2.4835G	51.52	54.00	-2.48	31.51	3	Vertical	258	1.85	-
2462MHz	Pass	PK	2.4606G	113.65	Inf	-Inf	31.41	3	Vertical	258	1.85	-
2462MHz	Pass	PK	2.4835G	67.09	74.00	-6.91	31.51	3	Vertical	258	1.85	-
2462MHz	Pass	AV	2.4644G	104.10	Inf	-Inf	31.43	3	Horizontal	320	1.00	-
2462MHz	Pass	AV	2.4836G	52.94	54.00	-1.06	31.51	3	Horizontal	320	1.00	-
2462MHz	Pass	PK	2.465G	113.09	Inf	-Inf	31.43	3	Horizontal	320	1.00	_
2462MHz	Pass	PK	2.4836G	69.36	74.00	-4.64	31.51	3	Horizontal	320	1.00	_
2462MHz	Pass	AV	4.92658G	49.54	54.00	-4.46	3.72	3	Vertical	299	1.46	-
2462MHz	Pass	AV	7.38588G	46.07	54.00	-7.93	9.73	3	Vertical	61	1.67	
2462MHz	Pass	PK	4.92652G	62.81	74.00	-11.19	3.72	3	Vertical	299	1.46	<del>-</del>
2462MHz	Pass	PK	7.38912G	57.75	74.00	-16.25	9.74	3	Vertical	61	1.40	-
2462MHz			4.924G		54.00	-3.63		3		12	1.50	-
	Pass	AV		50.37			3.71	3	Horizontal			-
2462MHz	Pass	AV	7.38606G	42.80	54.00	-11.20	9.73		Horizontal	299	1.50	-
2462MHz	Pass	PK	4.92286G	64.08	74.00	-9.92	3.71	3	Horizontal	12	1.50	-
2462MHz	Pass	PK	7.38648G	55.70	74.00	-18.30	9.73	3	Horizontal	299	1.50	-
VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.39G	52.85	54.00	-1.15	31.11	3	Vertical	283	1.45	-
2412MHz	Pass	AV	2.4108G	103.85	Inf	-Inf	31.20	3	Vertical	283	1.45	-
2412MHz	Pass	PK	2.3888G	72.16	74.00	-1.84	31.11	3	Vertical	283	1.45	-
2412MHz	Pass	PK	2.4108G	114.07	Inf	-Inf	31.20	3	Vertical	283	1.45	-
2412MHz	Pass	AV	2.3876G	53.91	54.00	-0.09	31.11	3	Horizontal	329	1.45	-
2412MHz	Pass	AV	2.4126G	105.28	Inf	-Inf	31.21	3	Horizontal	329	1.45	-
2412MHz	Pass	PK	2.3876G	70.91	74.00	-3.09	31.11	3	Horizontal	329	1.45	-
2412MHz	Pass	PK	2.4126G	114.84	Inf	-Inf	31.21	3	Horizontal	329	1.45	-
2412MHz	Pass	AV	4.82664G	44.01	54.00	-9.99	3.46	3	Vertical	68	2.02	-
2412MHz	Pass	PK	4.82628G	56.58	74.00	-17.42	3.46	3	Vertical	68	2.02	-
2412MHz	Pass	AV	4.82676G	36.84	54.00	-17.16	3.46	3	Horizontal	143	1.84	-
2412MHz	Pass	PK	4.8267G	48.79	74.00	-25.21	3.46	3	Horizontal	143	1.84	-
2417MHz	Pass	AV	2.3896G	51.45	54.00	-2.55	31.11	3	Vertical	86	1.81	-
2417MHz	Pass	AV	2.4148G	104.95	Inf	-Inf	31.22	3	Vertical	86	1.81	-
2417MHz	Pass	PK	2.3892G	65.60	74.00	-8.40	31.11	3	Vertical	86	1.81	-
2417MHz	Pass	PK	2.4196G	114.34	Inf	-Inf	31.23	3	Vertical	86	1.81	-
2417MHz	Pass	AV	2.3898G	53.80	54.00	-0.20	31.11	3	Horizontal	82	1.23	-
2417MHz	Pass	AV	2.4146G	106.00	Inf	-Inf	31.22	3	Horizontal	82	1.23	-
2417MHz	Pass	PK	2.3892G	70.42	74.00	-3.58	31.11	3	Horizontal	82	1.23	-
2417MHz	Pass	PK	2.4194G	116.71	Inf	-Inf	31.23	3	Horizontal	82	1.23	-
2437MHz	Pass	AV	2.3886G	49.98	54.00	-4.02	31.11	3	Vertical	280	1.36	-
2437MHz	Pass	AV	2.4358G	109.53	Inf	-Inf	31.31	3	Vertical	280	1.36	-
2437MHz	Pass	AV	2.4858G	52.45	54.00	-1.55	31.52	3	Vertical	280	1.36	-



Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
2437MHz	Pass	PK	2.389G	64.37	74.00	-9.63	31.11	3	Vertical	280	1.36	-
2437MHz	Pass	PK	2.4358G	119.01	Inf	-Inf	31.31	3	Vertical	280	1.36	-
2437MHz	Pass	PK	2.4862G	70.13	74.00	-3.87	31.52	3	Vertical	280	1.36	-
2437MHz	Pass	AV	2.3874G	49.68	54.00	-4.32	31.10	3	Horizontal	324	1.61	-
2437MHz	Pass	AV	2.4378G	110.62	Inf	-Inf	31.32	3	Horizontal	324	1.61	-
2437MHz	Pass	AV	2.4835G	52.22	54.00	-1.78	31.51	3	Horizontal	324	1.61	-
2437MHz	Pass	PK	2.3882G	65.70	74.00	-8.30	31.11	3	Horizontal	324	1.61	-
2437MHz	Pass	PK	2.4378G	120.03	Inf	-Inf	31.32	3	Horizontal	324	1.61	-
2437MHz	Pass	PK	2.4835G	67.05	74.00	-6.95	31.51	3	Horizontal	324	1.61	-
2437MHz	Pass	AV	4.87904G	48.58	54.00	-5.42	3.60	3	Vertical	213	1.55	-
2437MHz	Pass	AV	7.31376G	52.85	54.00	-1.15	9.51	3	Vertical	44	1.55	-
2437MHz	Pass	PK	4.87394G	62.19	74.00	-11.81	3.58	3	Vertical	213	1.55	-
2437MHz	Pass	PK	7.30902G	66.22	74.00	-7.78	9.49	3	Vertical	44	1.55	-
2437MHz	Pass	AV	4.8782G	48.98	54.00	-5.02	3.60	3	Horizontal	211	1.48	-
2437MHz	Pass	AV	7.31124G	49.02	54.00	-4.98	9.50	3	Horizontal	287	1.58	-
2437MHz	Pass	PK	4.87862G	61.21	74.00	-12.79	3.60	3	Horizontal	211	1.48	_
2437MHz	Pass	PK	7.31136G	64.22	74.00	-9.78	9.50	3	Horizontal	287	1.58	_
2457MHz	Pass	AV	2.4562G	105.77	Inf	-3.76 -Inf	31.40	3	Vertical	294	1.50	_
2457MHz	Pass	AV	2.486G	51.09	54.00	-2.91	31.52	3	Vertical	294	1.50	
2457MHz	Pass	PK	2.4562G	115.52	Inf	-2.51 -Inf	31.40	3	Vertical	294	1.50	-
2457MHz	Pass	PK	2.4846G	68.27	74.00	-5.73	31.52	3	Vertical	294	1.50	
2457MHz	Pass	AV	2.4578G	106.63	Inf	-5.75 -Inf	31.40	3	Horizontal	348	1.17	-
		AV	2.4835G			-0.49		3				-
2457MHz	Pass			53.51	54.00		31.51		Horizontal	348	1.17	-
2457MHz	Pass	PK	2.4578G 2.4835G	115.66 69.07	Inf	-Inf	31.40	3	Horizontal	348	1.17	-
2457MHz	Pass	PK			74.00	-4.93	31.51	3	Horizontal	348	1.17	-
2462MHz	Pass	AV	2.461G	102.82	Inf	-Inf	31.41		Vertical	275	1.29	-
2462MHz	Pass	AV	2.4856G	51.39	54.00	-2.61	31.52	3	Vertical	275	1.29	-
2462MHz	Pass	PK	2.4608G	112.37	Inf	-Inf	31.41	3	Vertical	275	1.29	-
2462MHz	Pass	PK	2.485G	67.75	74.00	-6.25	31.52	3	Vertical	275	1.29	-
2462MHz	Pass	AV	2.4628G	103.52	Inf	-Inf	31.43	3	Horizontal	318	1.19	-
2462MHz	Pass	AV	2.4835G	52.85	54.00	-1.15	31.51	3	Horizontal	318	1.19	-
2462MHz	Pass	PK	2.4628G	112.57	Inf	-Inf	31.43	3	Horizontal	318	1.19	-
2462MHz	Pass	PK	2.4835G	70.65	74.00	-3.35	31.51	3	Horizontal	318	1.19	-
2462MHz	Pass	AV	4.92592G	46.45	54.00	-7.55	3.72	3	Vertical	234	1.50	-
2462MHz	Pass	AV	7.38588G	45.90	54.00	-8.10	9.73	3	Vertical	57	1.71	-
2462MHz	Pass	PK	4.92574G	59.61	74.00	-14.39	3.72	3	Vertical	234	1.50	-
2462MHz	Pass	PK	7.38594G	57.73	74.00	-16.27	9.73	3	Vertical	57	1.71	-
2462MHz	Pass	AV	4.92874G	48.34	54.00	-5.66	3.74	3	Horizontal	7	1.30	-
2462MHz	Pass	AV	7.38624G	41.69	54.00	-12.31	9.73	3	Horizontal	292	1.34	-
2462MHz	Pass	PK	4.92916G	63.29	74.00	-10.71	3.74	3	Horizontal	7	1.30	-
2462MHz	Pass	PK	7.3815G	54.02	74.00	-19.98	9.72	3	Horizontal	292	1.34	-
VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	AV	2.39G	53.88	54.00	-0.12	31.11	3	Vertical	94	1.78	-
2422MHz	Pass	AV	2.4352G	98.44	Inf	-Inf	31.31	3	Vertical	94	1.78	-
2422MHz	Pass	AV	2.4848G	47.90	54.00	-6.10	31.52	3	Vertical	94	1.78	-
2422MHz	Pass	PK	2.3896G	66.07	74.00	-7.93	31.11	3	Vertical	94	1.78	-
2422MHz	Pass	PK	2.4352G	107.07	Inf	-Inf	31.31	3	Vertical	94	1.78	-
2422MHz	Pass	PK	2.4996G	59.12	74.00	-14.88	31.58	3	Vertical	94	1.78	-
2422MHz	Pass	AV	2.3892G	53.96	54.00	-0.04	31.11	3	Horizontal	99	2.12	-



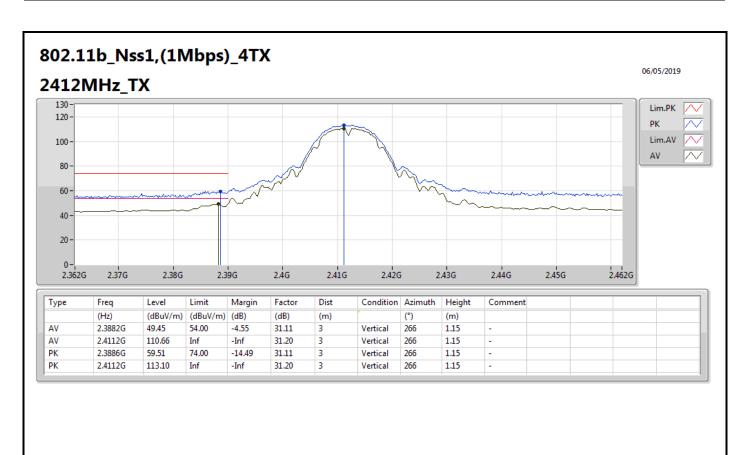
Made	Danult	Toma	F===	Lavel	Limit	Maurin	Fastan	Diet	Candition	A=i4b	Haimhá	C
Mode	Result	Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	_		(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
2422MHz	Pass	AV	2.4316G	98.01	Inf	-Inf	31.29	3	Horizontal	99	2.12	-
2422MHz	Pass	AV	2.484G	46.61	54.00	-7.39	31.52	3	Horizontal	99	2.12	-
2422MHz	Pass	PK	2.3892G	66.95	74.00	-7.05	31.11	3	Horizontal	99	2.12	-
2422MHz	Pass	PK	2.4316G	106.92	Inf	-Inf	31.29	3	Horizontal	99	2.12	-
2422MHz	Pass	PK	2.4936G	58.10	74.00	-15.90	31.55	3	Horizontal	99	2.12	-
2422MHz	Pass	AV	4.84808G	34.83	54.00	-19.17	3.51	3	Vertical	210	1.50	-
2422MHz	Pass	AV	7.266G	44.74	54.00	-9.26	9.36	3	Vertical	195	1.52	-
2422MHz	Pass	PK	4.85304G	48.22	74.00	-25.78	3.53	3	Vertical	210	1.50	-
2422MHz	Pass	PK	7.2658G	52.53	74.00	-21.47	9.36	3	Vertical	195	1.52	-
2422MHz	Pass	AV	4.84633G	35.24	54.00	-18.76	3.50	3	Horizontal	291	2.88	-
2422MHz	Pass	AV	7.26604G	41.02	54.00	-12.98	9.36	3	Horizontal	221	1.50	-
2422MHz	Pass	PK	4.84138G	47.39	74.00	-26.61	3.50	3	Horizontal	291	2.88	-
2422MHz	Pass	PK	7.266G	50.79	74.00	-23.21	9.36	3	Horizontal	221	1.50	-
2427MHz	Pass	AV	2.3898G	50.44	54.00	-3.56	31.11	3	Vertical	92	1.74	-
2427MHz	Pass	AV	2.435G	97.08	Inf	-Inf	31.31	3	Vertical	92	1.74	-
2427MHz	Pass	AV	2.4918G	47.49	54.00	-6.51	31.55	3	Vertical	92	1.74	-
2427MHz	Pass	PK	2.3898G	63.30	74.00	-10.70	31.11	3	Vertical	92	1.74	-
2427MHz	Pass	PK	2.435G	105.98	Inf	-Inf	31.31	3	Vertical	92	1.74	-
2427MHz	Pass	PK	2.4835G	59.00	74.00	-15.00	31.51	3	Vertical	92	1.74	-
2427MHz	Pass	AV	2.3894G	53.61	54.00	-0.39	31.11	3	Horizontal	78	1.56	-
2427MHz	Pass	AV	2.4442G	96.37	Inf	-Inf	31.34	3	Horizontal	78	1.56	-
2427MHz	Pass	AV	2.4878G	47.80	54.00	-6.20	31.53	3	Horizontal	78	1.56	-
2427MHz	Pass	PK	2.389G	65.71	74.00	-8.29	31.11	3	Horizontal	78	1.56	-
2427MHz	Pass	PK	2.4442G	106.12	Inf	-Inf	31.34	3	Horizontal	78	1.56	-
2427MHz	Pass	PK	2.487G	59.38	74.00	-14.62	31.52	3	Horizontal	78	1.56	-
2437MHz	Pass	AV	2.389G	48.32	54.00	-5.68	31.11	3	Vertical	271	1.22	-
2437MHz	Pass	AV	2.4506G	99.31	Inf	-Inf	31.37	3	Vertical	271	1.22	-
2437MHz	Pass	AV	2.4858G	52.06	54.00	-1.94	31.52	3	Vertical	271	1.22	-
2437MHz	Pass	PK	2.3894G	63.30	74.00	-10.70	31.11	3	Vertical	271	1.22	-
2437MHz	Pass	PK	2.4458G	108.24	Inf	-Inf	31.35	3	Vertical	271	1.22	-
2437MHz	Pass	PK	2.4838G	68.79	74.00	-5.21	31.51	3	Vertical	271	1.22	-
2437MHz	Pass	AV	2.3878G	51.66	54.00	-2.34	31.11	3	Horizontal	318	1.59	-
2437MHz	Pass	AV	2.4426G	100.84	Inf	-Inf	31.34	3	Horizontal	318	1.59	-
2437MHz	Pass	AV	2.4835G	53.59	54.00	-0.41	31.51	3	Horizontal	318	1.59	-
2437MHz	Pass	PK	2.3878G	68.00	74.00	-6.00	31.11	3	Horizontal	318	1.59	-
2437MHz	Pass	PK	2.4326G	109.60	Inf	-Inf	31.29	3	Horizontal	318	1.59	-
2437MHz	Pass	PK	2.4838G	68.81	74.00	-5.19	31.51	3	Horizontal	318	1.59	-
2437MHz	Pass	AV	4.87652G	37.45	54.00	-16.55	3.59	3	Vertical	244	1.50	-
2437MHz	Pass	AV	7.31092G	44.74	54.00	-9.26	9.50	3	Vertical	198	1.49	-
2437MHz	Pass	PK	4.8766G	49.33	74.00	-24.67	3.59	3	Vertical	244	1.50	-
2437MHz	Pass	PK	7.3111G	52.53	74.00	-21.47	9.50	3	Vertical	198	1.49	-
2437MHz	Pass	AV	4.88312G	37.33	54.00	-16.67	3.60	3	Horizontal	197	1.50	-
2437MHz	Pass	AV	7.311G	41.19	54.00	-12.81	9.50	3	Horizontal	281	1.50	-
2437MHz	Pass	PK	4.88328G	49.25	74.00	-24.75	3.60	3	Horizontal	197	1.50	-
2437MHz	Pass	PK	7.31312G	52.99	74.00	-21.01	9.50	3	Horizontal	281	1.50	-
2447MHz	Pass	AV	2.3602G	45.69	54.00	-8.31	30.99	3	Vertical	292	1.47	-
2447MHz	Pass	AV	2.4562G	97.92	Inf	-Inf	31.40	3	Vertical	292	1.47	-
2447MHz	Pass	AV	2.4858G	53.51	54.00	-0.49	31.52	3	Vertical	292	1.47	-
2447MHz	Pass	PK	2.3858G	57.43	74.00	-16.57	31.09	3	Vertical	292	1.47	-
2771 WII IZ	1 400	111	2.00000	07.10	1 7.00	10.01	01.00		TOTALOGI	272	1.71	



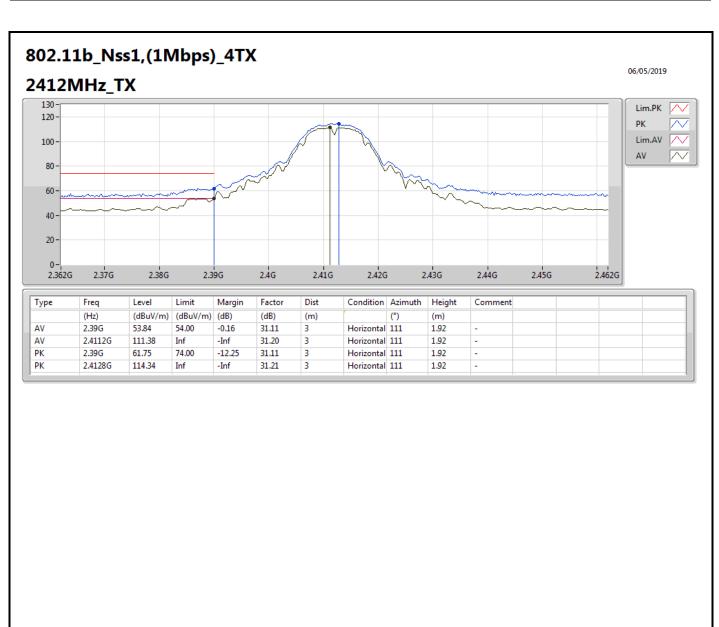
Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
2447MHz	Pass	PK	2.451G	106.75	Inf	-Inf	31.37	3	Vertical	292	1.47	-
2447MHz	Pass	PK	2.4835G	69.56	74.00	-4.44	31.51	3	Vertical	292	1.47	-
2447MHz	Pass	AV	2.3878G	47.13	54.00	-6.87	31.11	3	Horizontal	3	1.83	-
2447MHz	Pass	AV	2.4526G	98.61	Inf	-Inf	31.38	3	Horizontal	3	1.83	-
2447MHz	Pass	AV	2.4835G	53.76	54.00	-0.24	31.51	3	Horizontal	3	1.83	-
2447MHz	Pass	PK	2.387G	60.12	74.00	-13.88	31.10	3	Horizontal	3	1.83	-
2447MHz	Pass	PK	2.4526G	108.21	Inf	-Inf	31.38	3	Horizontal	3	1.83	-
2447MHz	Pass	PK	2.4874G	69.11	74.00	-4.89	31.52	3	Horizontal	3	1.83	-
2452MHz	Pass	AV	2.36G	45.17	54.00	-8.83	30.99	3	Vertical	299	1.07	-
2452MHz	Pass	AV	2.466G	96.52	Inf	-Inf	31.43	3	Vertical	299	1.07	-
2452MHz	Pass	AV	2.486G	49.75	54.00	-4.25	31.52	3	Vertical	299	1.07	-
2452MHz	Pass	PK	2.3896G	56.09	74.00	-17.91	31.11	3	Vertical	299	1.07	-
2452MHz	Pass	PK	2.466G	105.14	Inf	-Inf	31.43	3	Vertical	299	1.07	-
2452MHz	Pass	PK	2.488G	63.32	74.00	-10.68	31.53	3	Vertical	299	1.07	-
2452MHz	Pass	AV	2.3896G	45.71	54.00	-8.29	31.11	3	Horizontal	101	1.50	-
2452MHz	Pass	AV	2.4464G	96.84	Inf	-Inf	31.35	3	Horizontal	101	1.50	-
2452MHz	Pass	AV	2.484G	53.57	54.00	-0.43	31.52	3	Horizontal	101	1.50	-
2452MHz	Pass	PK	2.378G	57.42	74.00	-16.58	31.06	3	Horizontal	101	1.50	-
2452MHz	Pass	PK	2.4468G	106.01	Inf	-Inf	31.35	3	Horizontal	101	1.50	-
2452MHz	Pass	PK	2.4896G	67.37	74.00	-6.63	31.53	3	Horizontal	101	1.50	-
2452MHz	Pass	AV	4.9058G	38.92	54.00	-15.08	3.67	3	Vertical	228	1.50	-
2452MHz	Pass	AV	7.35596G	44.67	54.00	-9.33	9.65	3	Vertical	200	1.57	-
2452MHz	Pass	PK	4.90616G	50.93	74.00	-23.07	3.67	3	Vertical	228	1.50	-
2452MHz	Pass	PK	7.35592G	52.49	74.00	-21.51	9.65	3	Vertical	200	1.57	-
2452MHz	Pass	AV	4.9248G	40.15	54.00	-13.85	3.71	3	Horizontal	203	1.50	-
2452MHz	Pass	AV	7.35584G	42.25	54.00	-11.75	9.65	3	Horizontal	301	1.93	-
2452MHz	Pass	PK	4.9245G	52.77	74.00	-21.23	3.71	3	Horizontal	203	1.50	-
2452MHz	Pass	PK	7.35578G	51.65	74.00	-22.35	9.65	3	Horizontal	301	1.93	-

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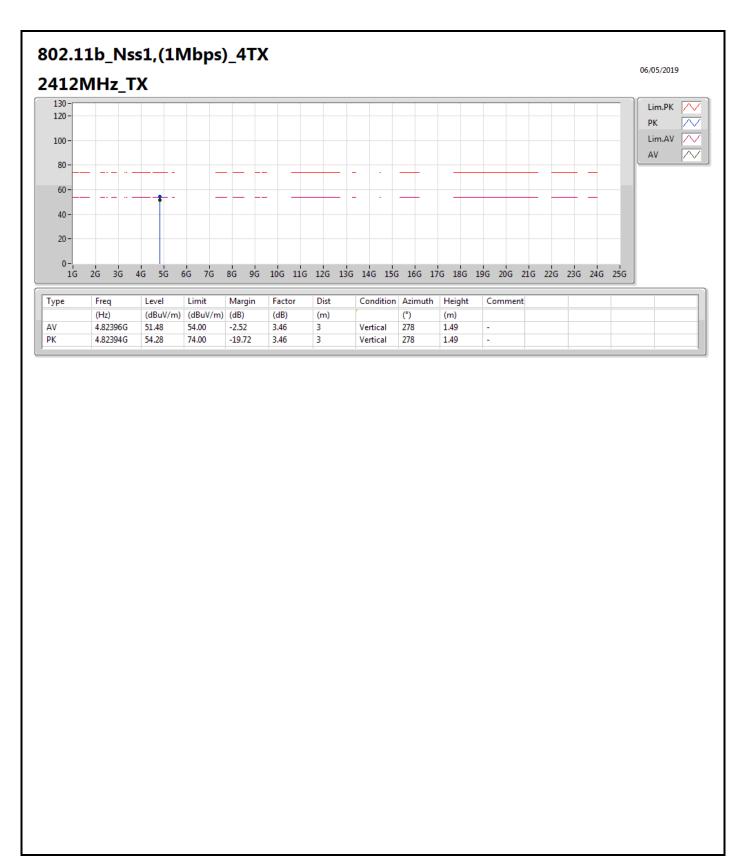






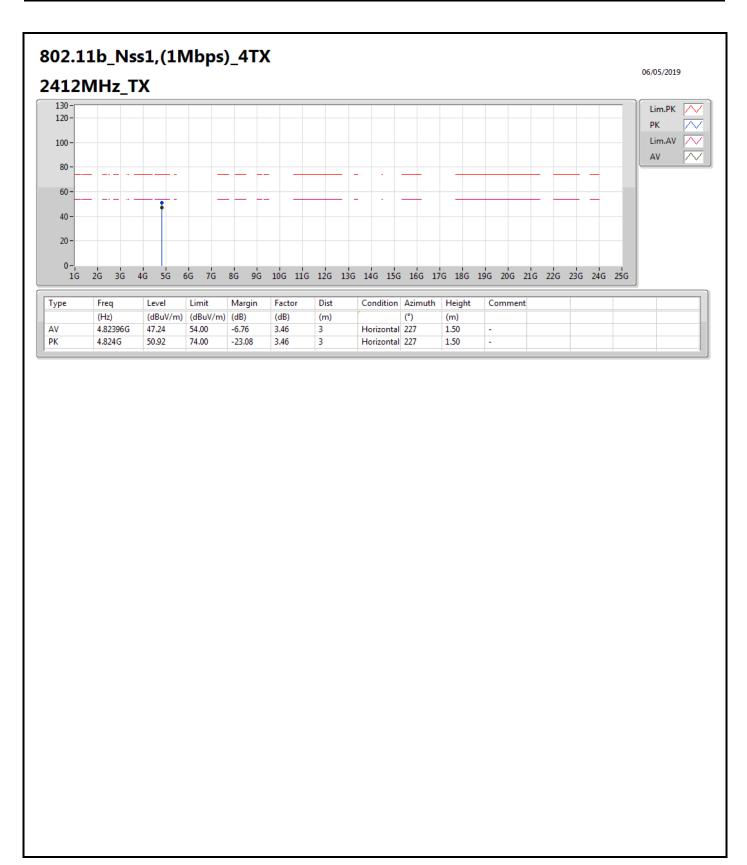






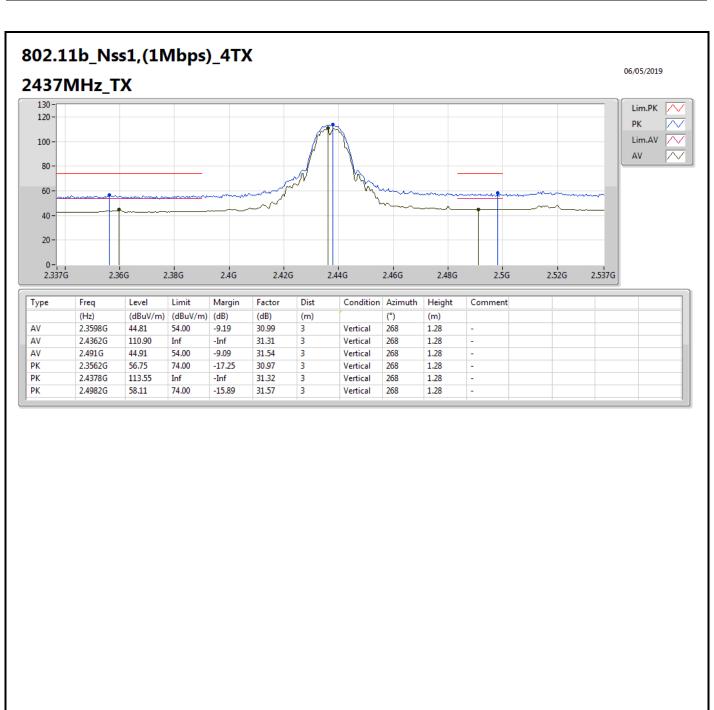
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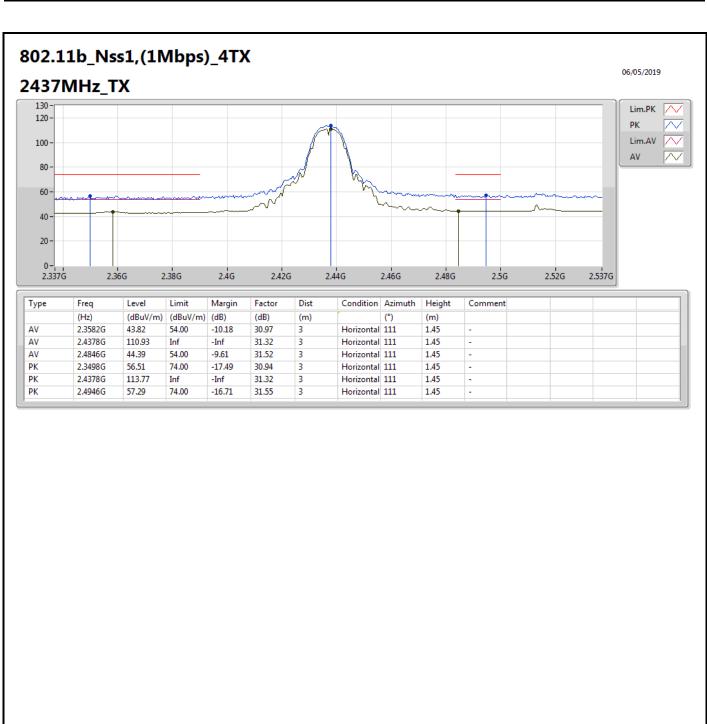


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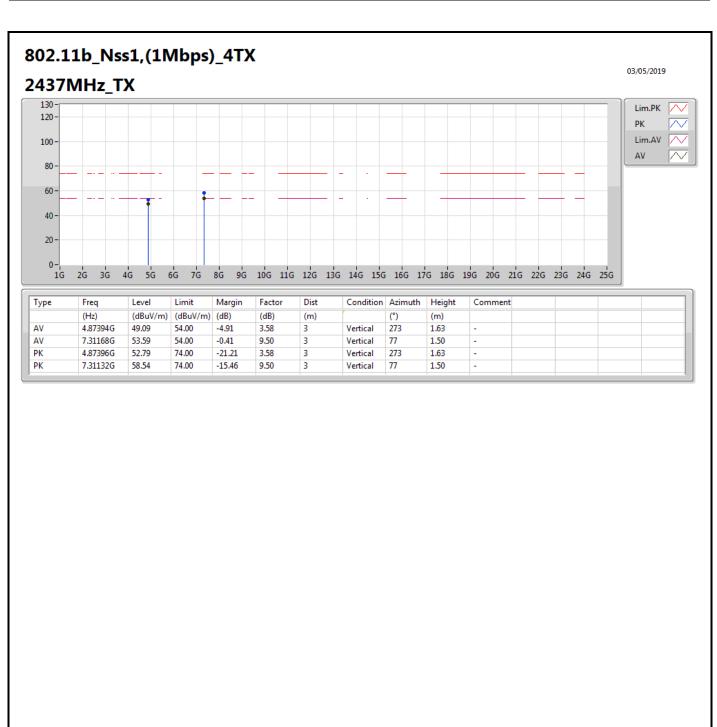




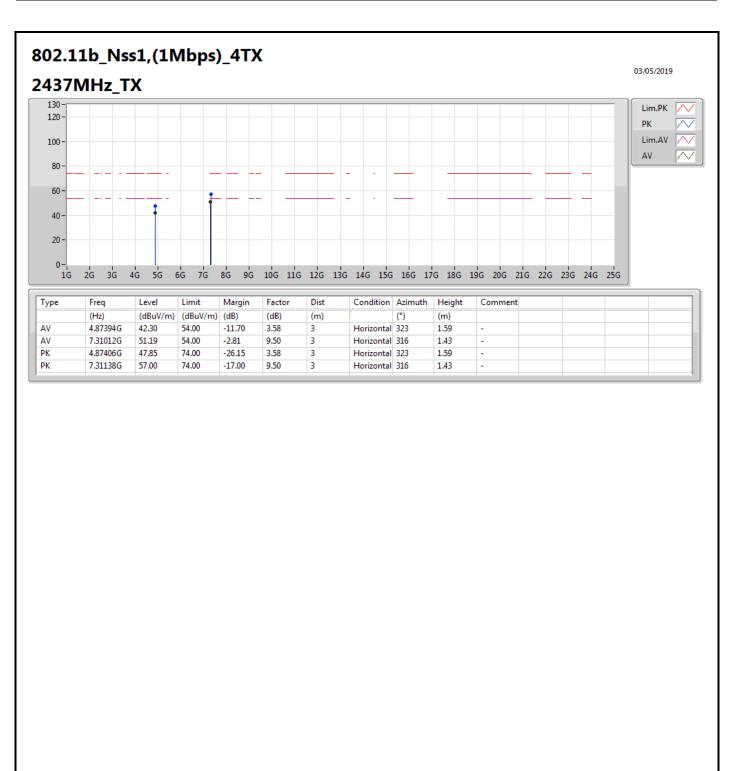






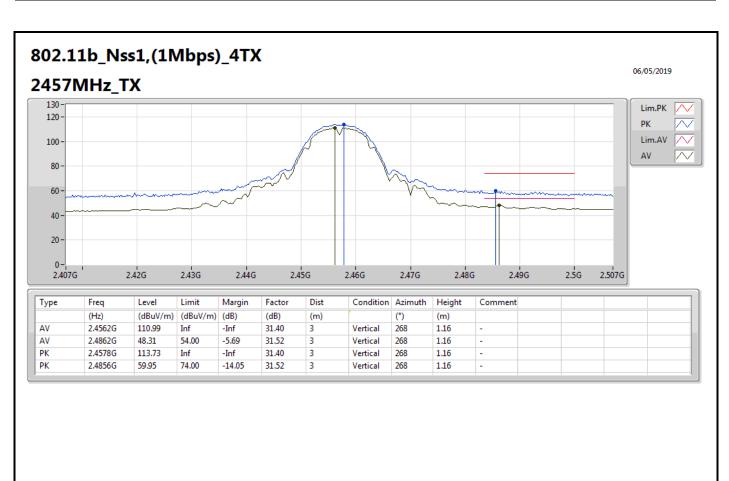




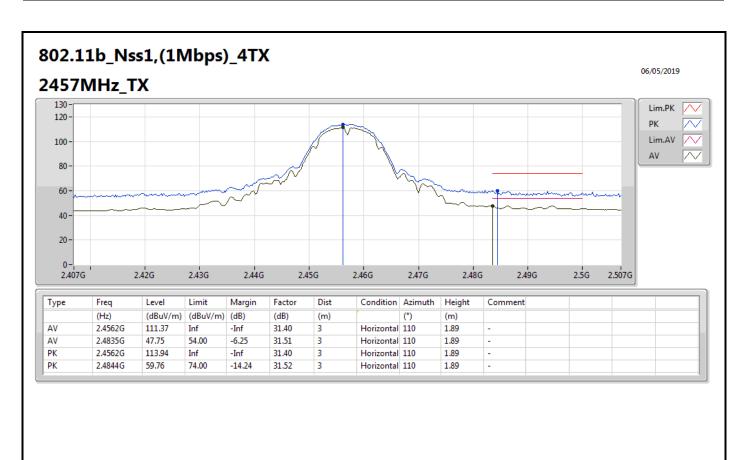


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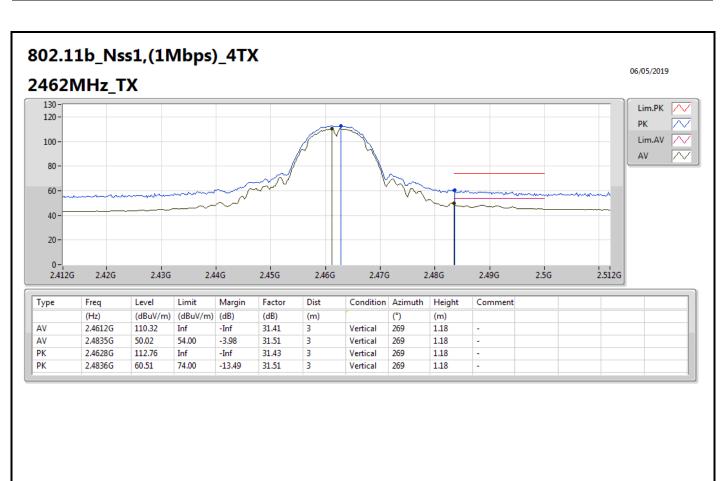




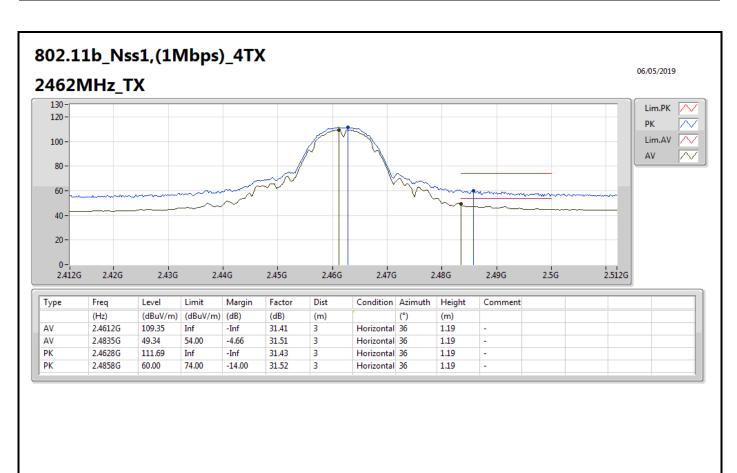




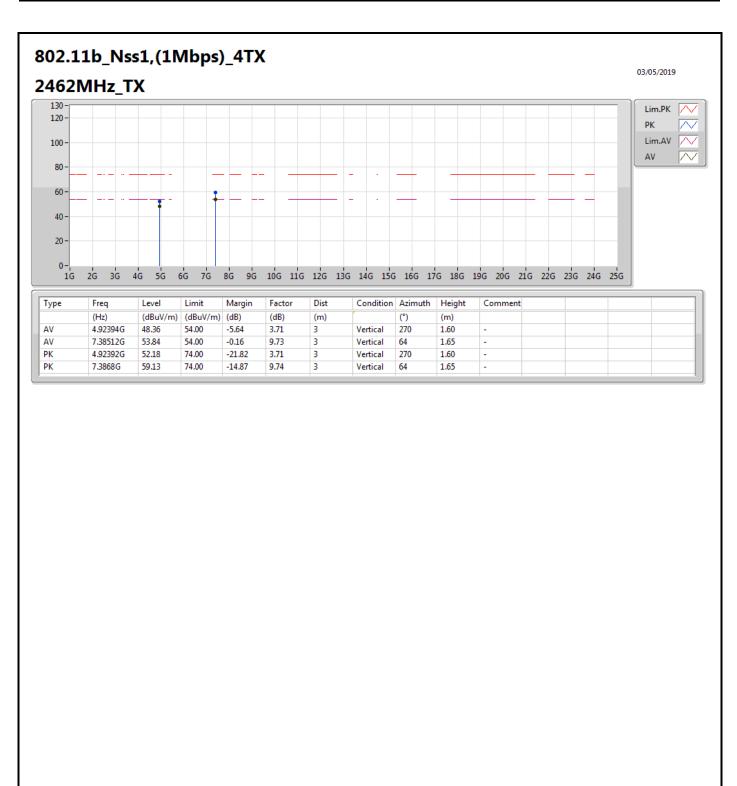




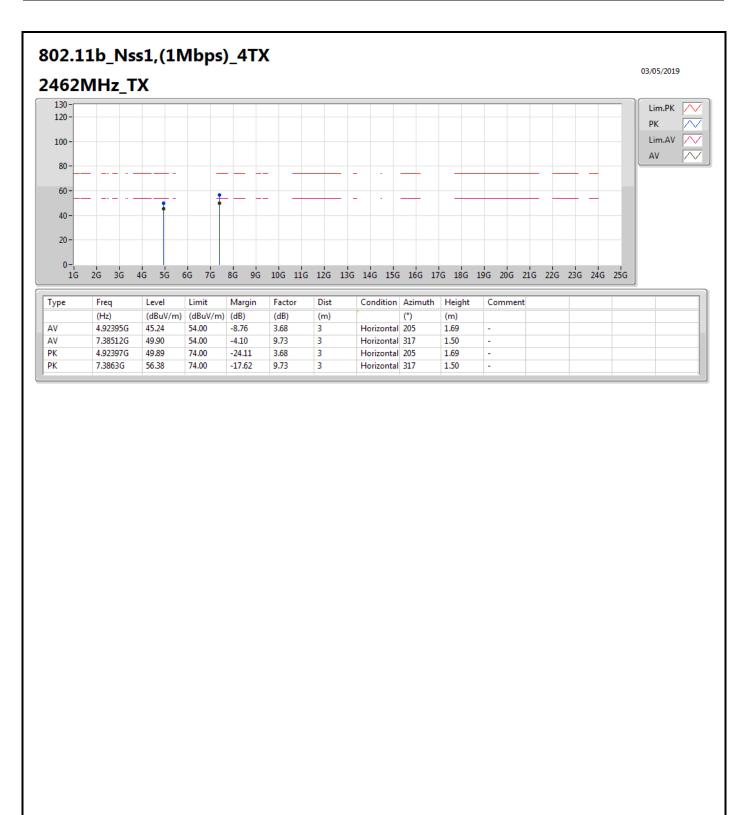








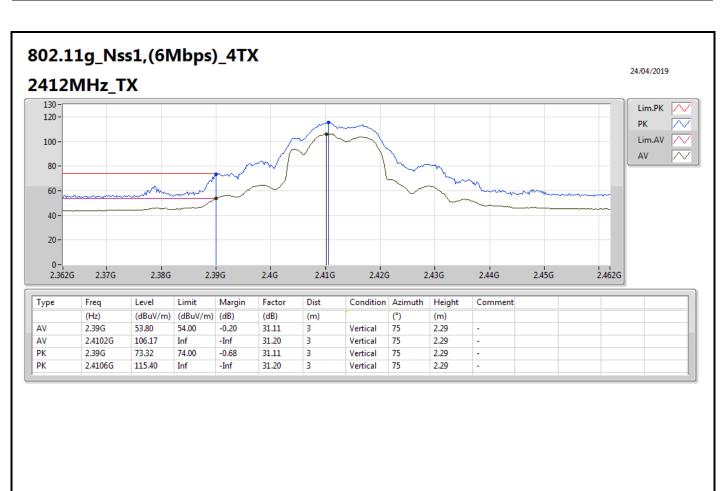




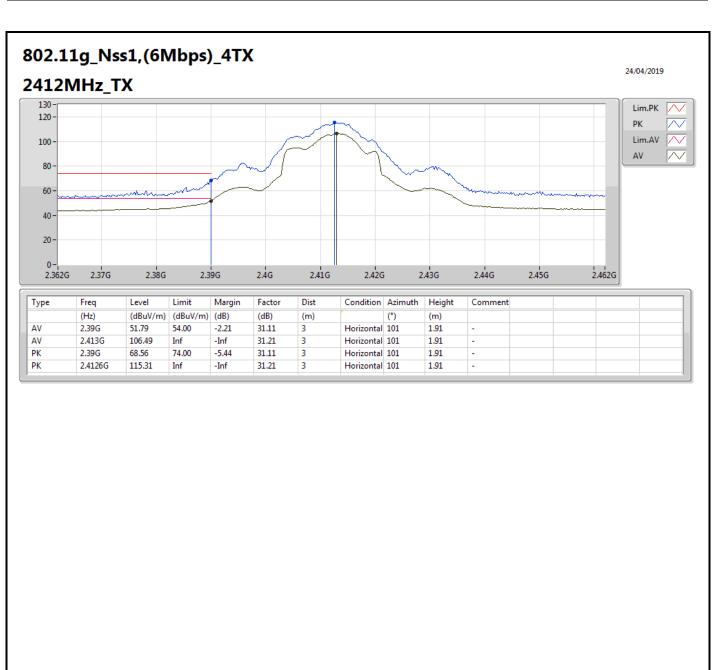
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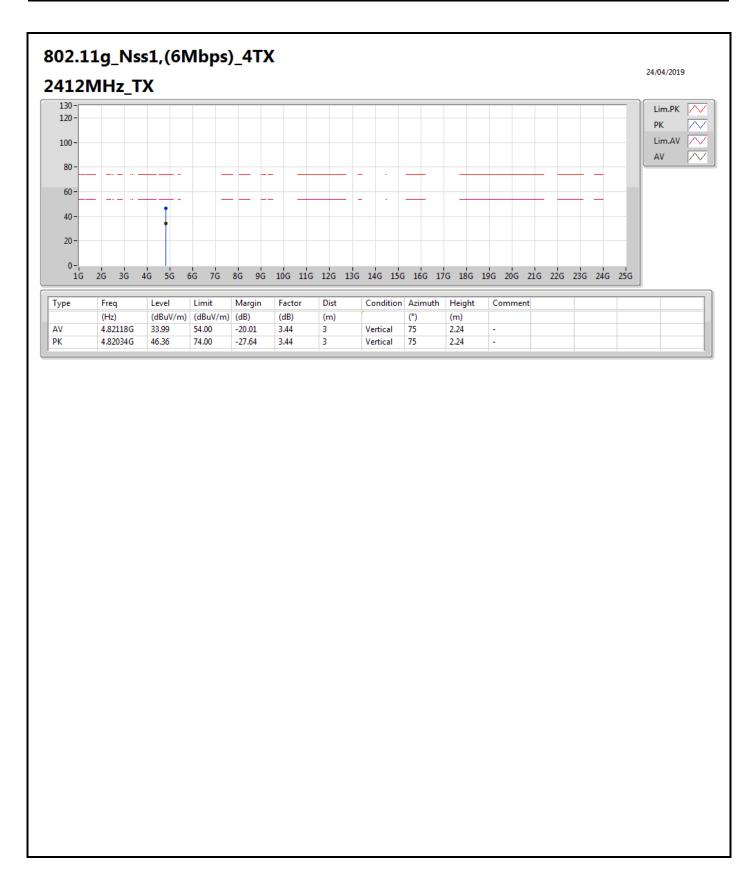




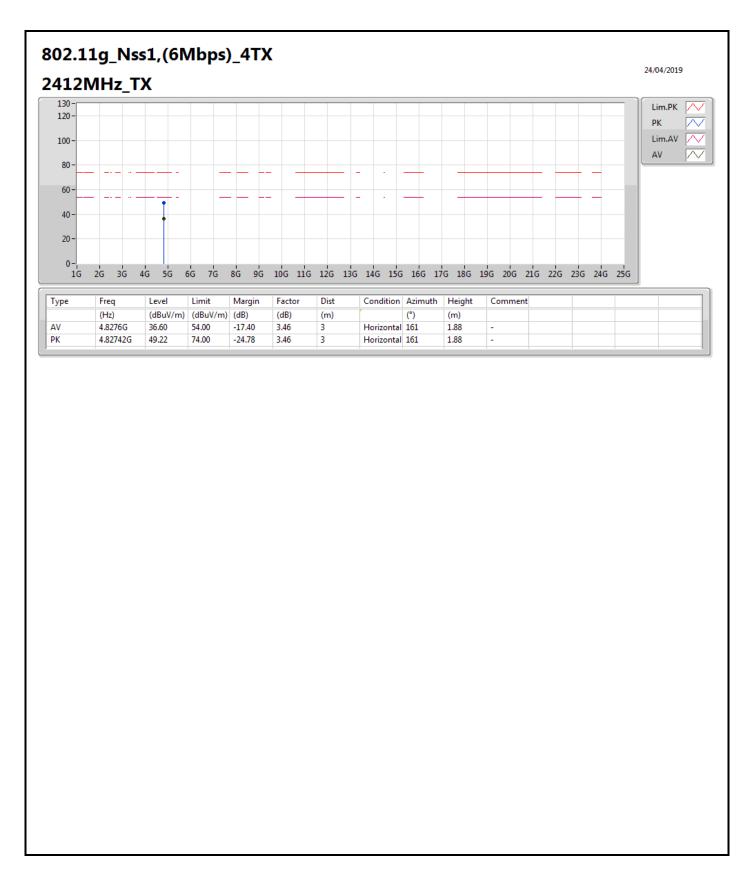


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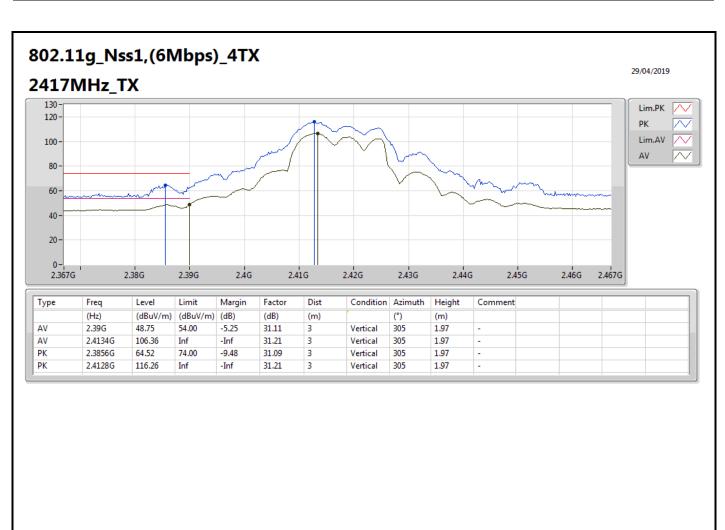




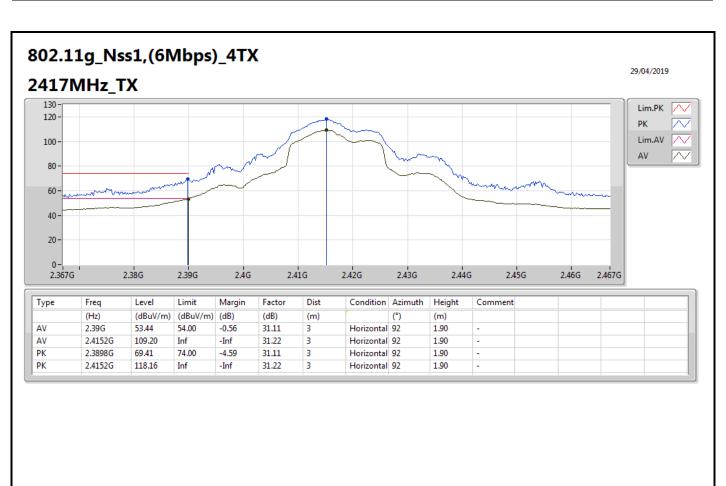




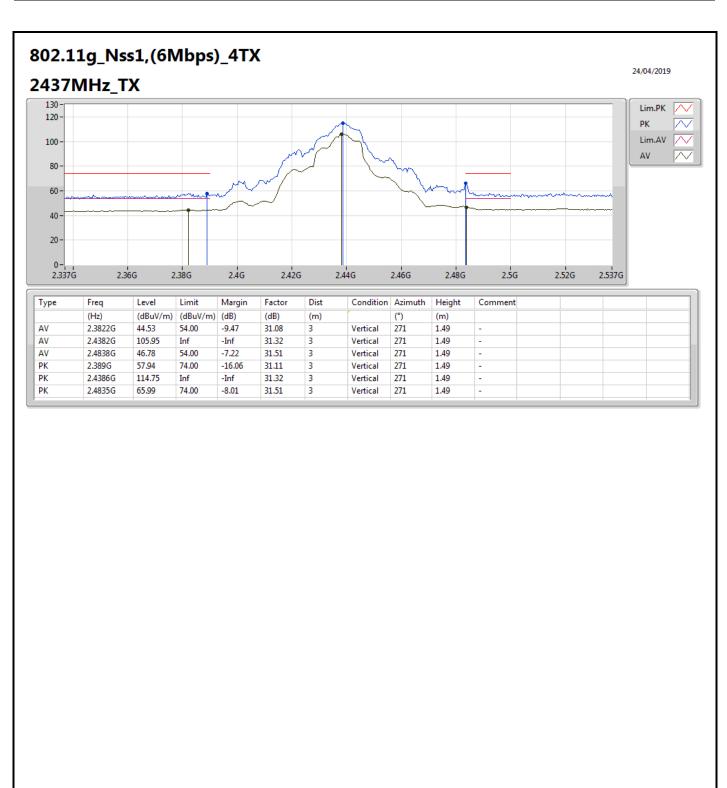




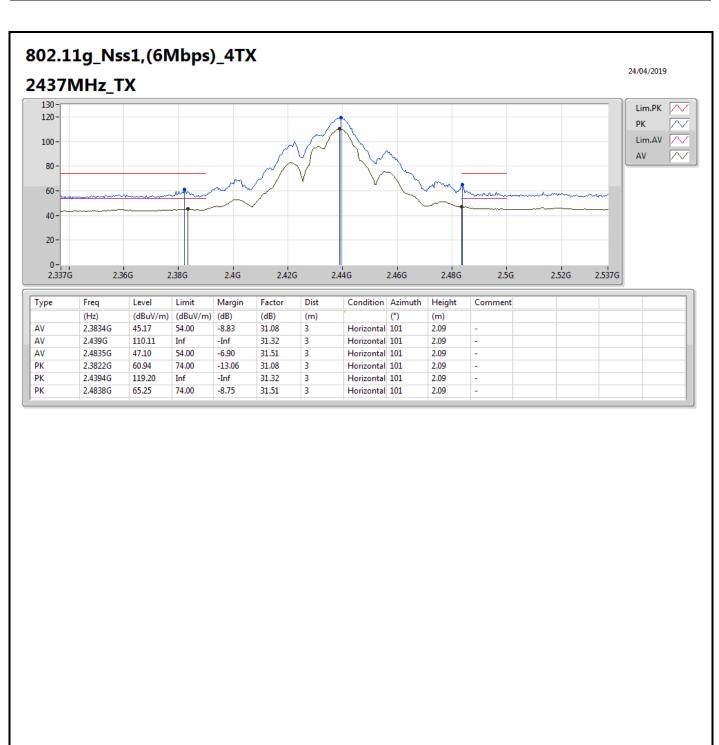




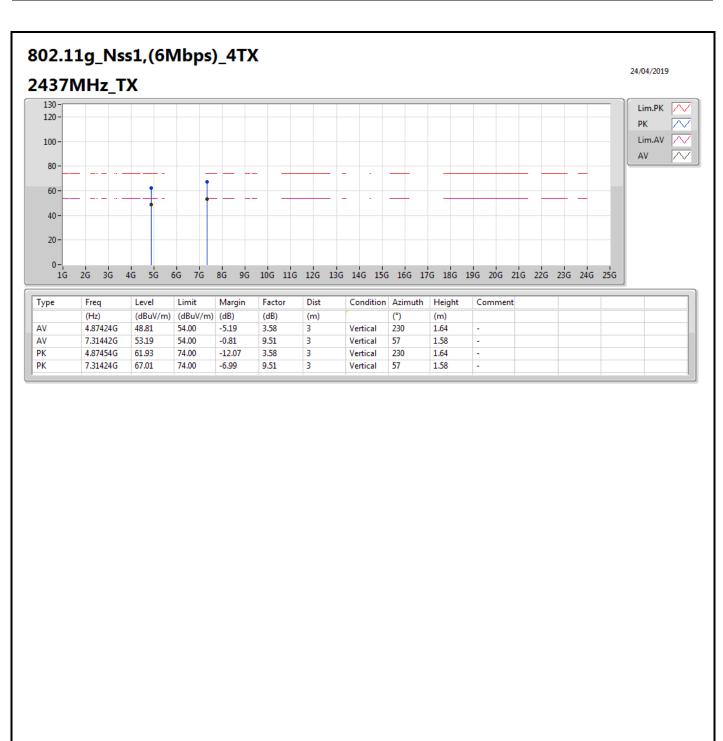




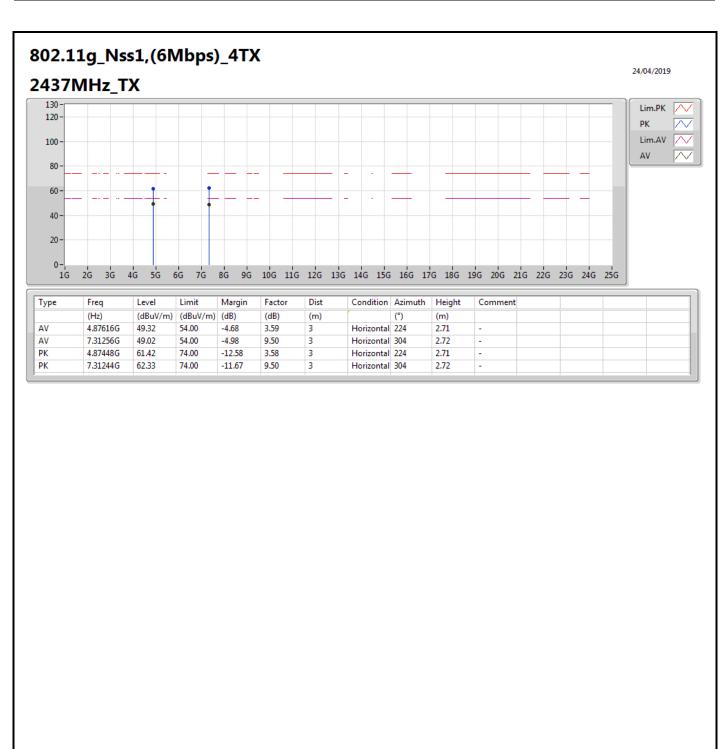




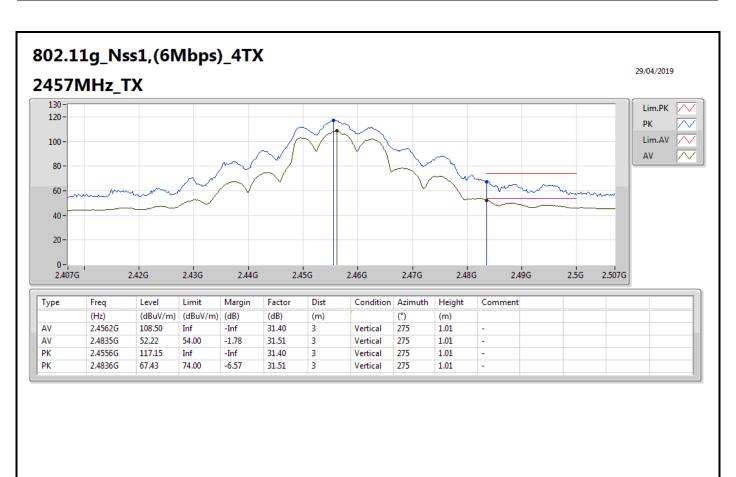




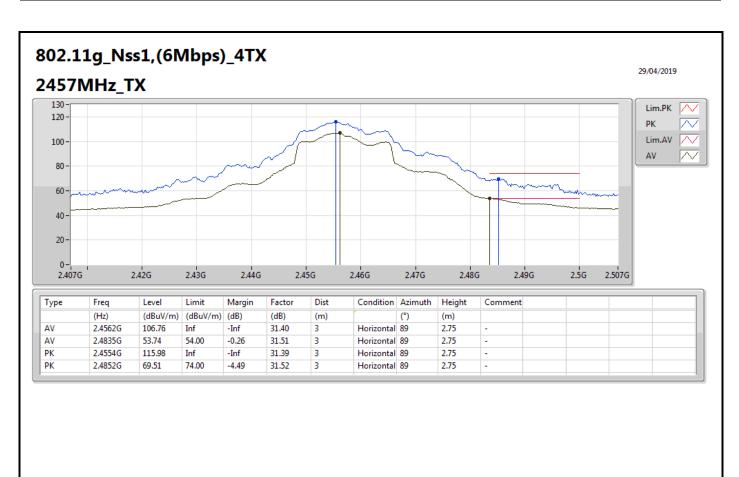




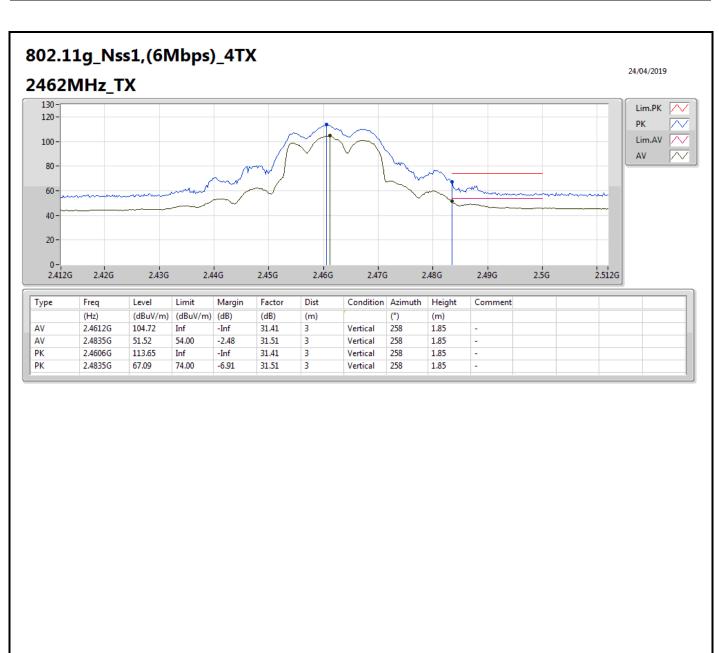




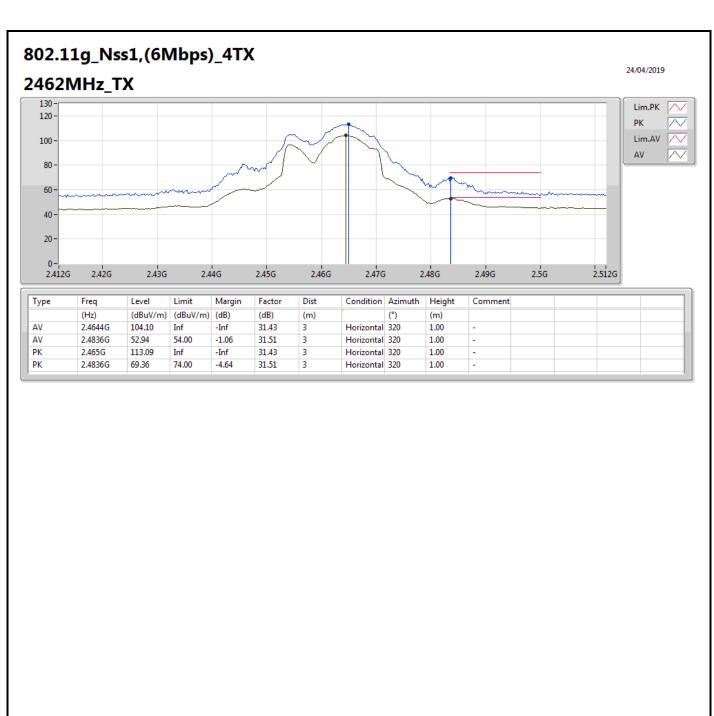




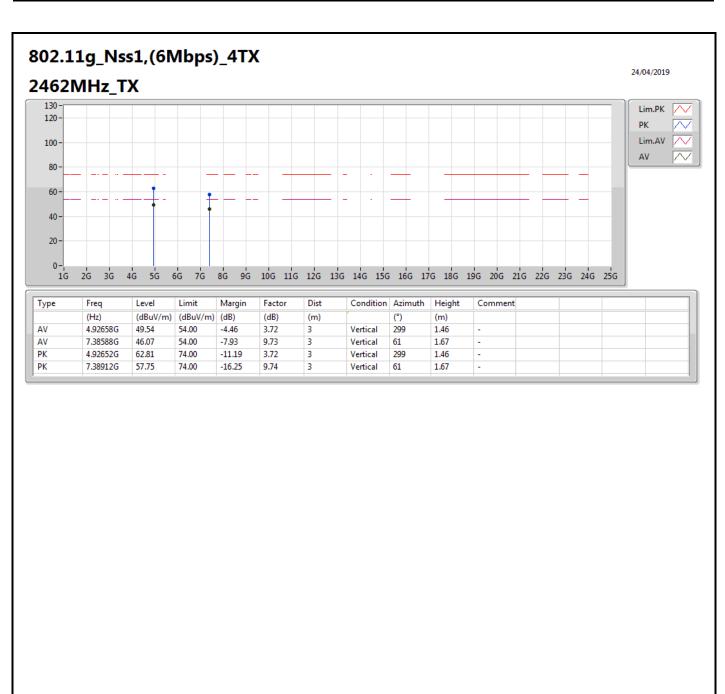




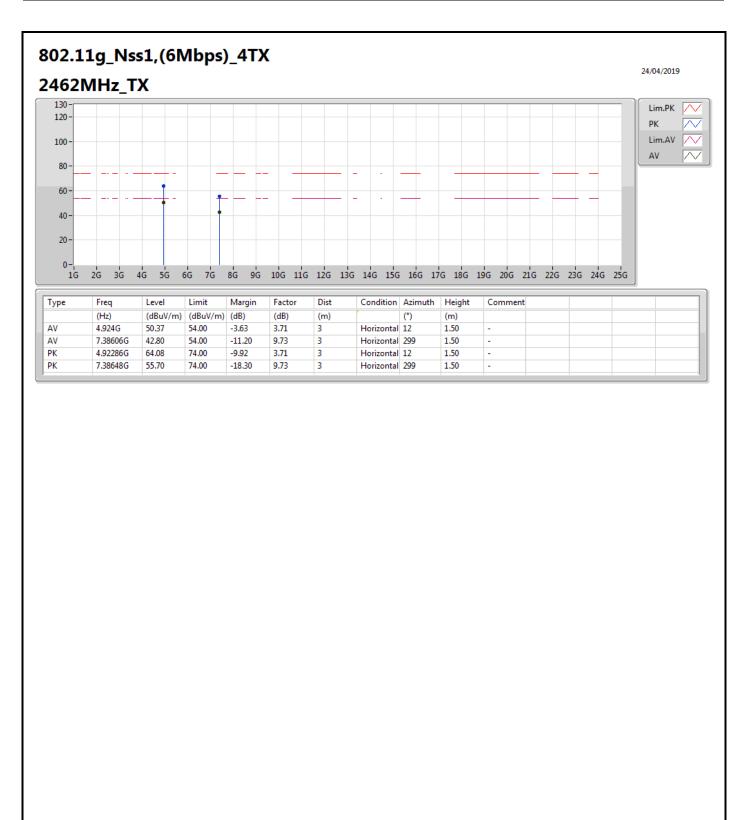




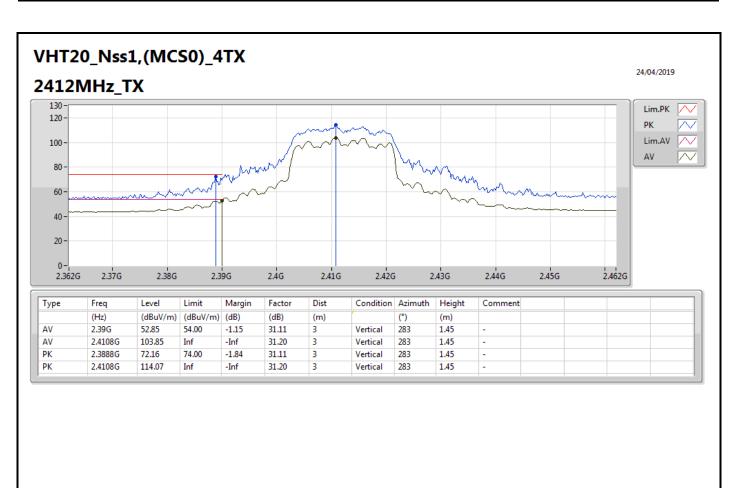




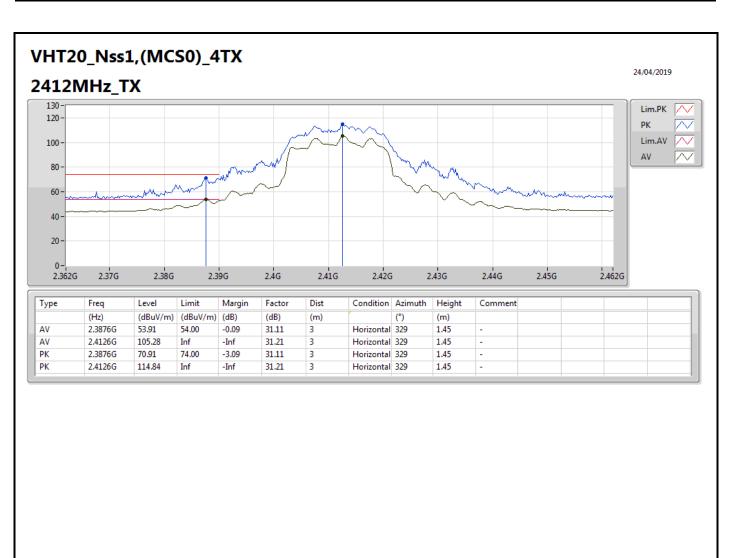




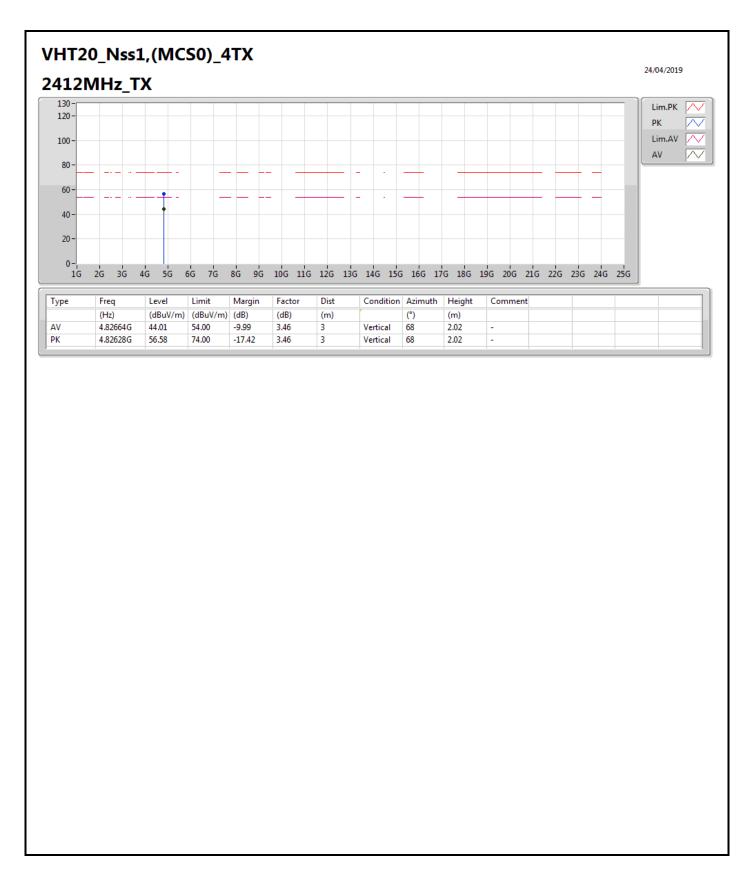




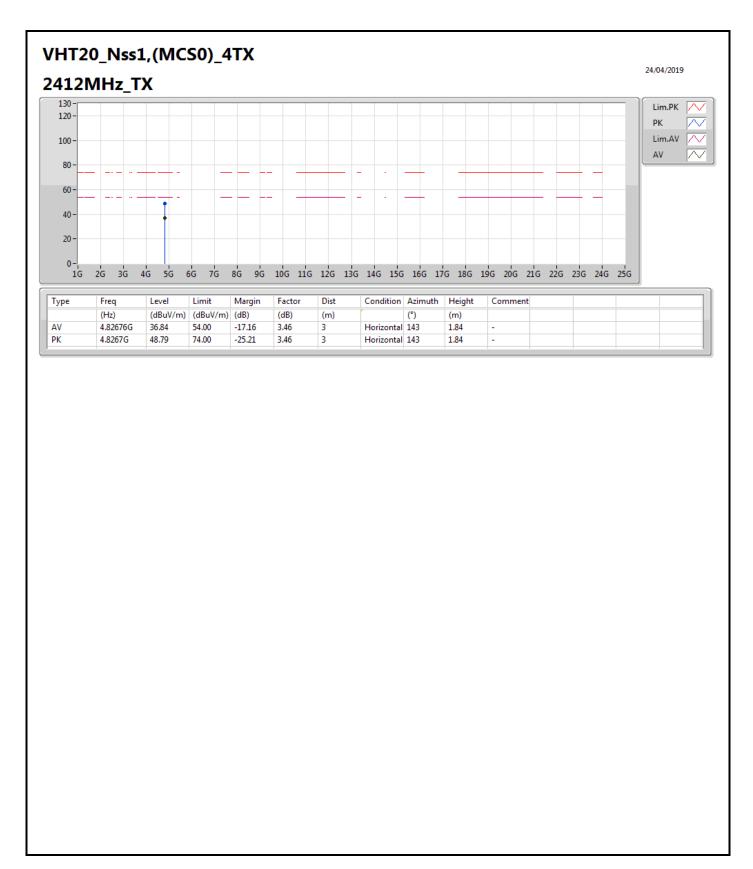




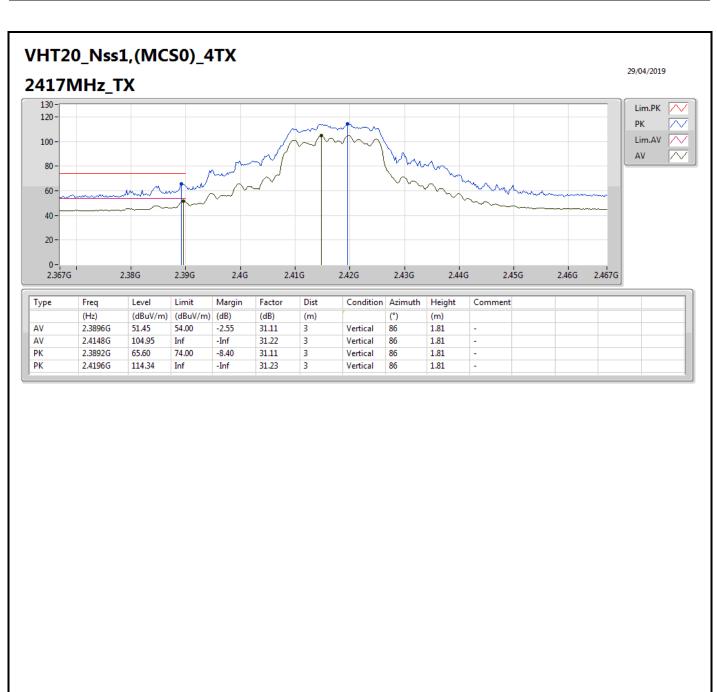




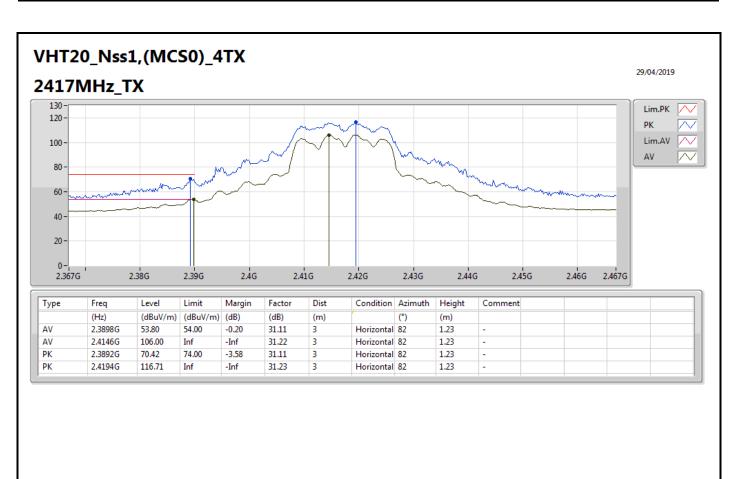




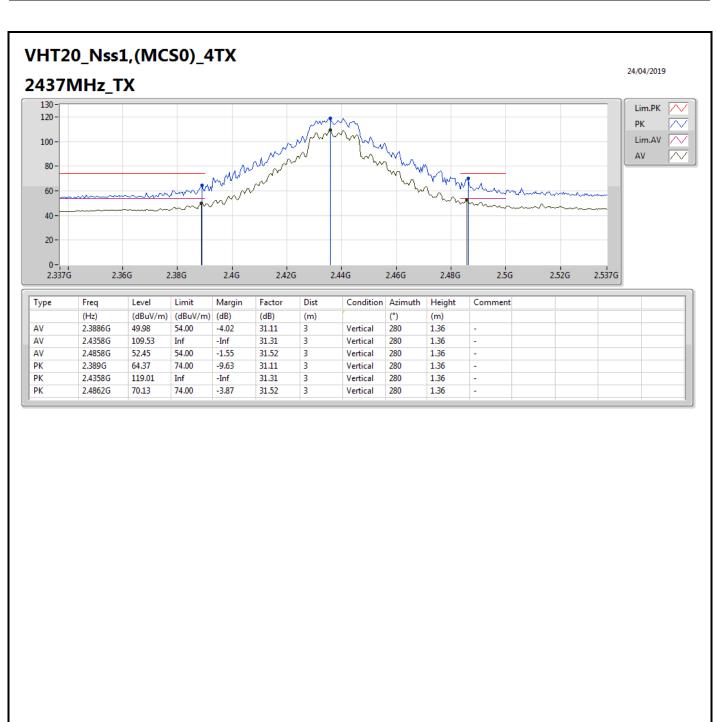




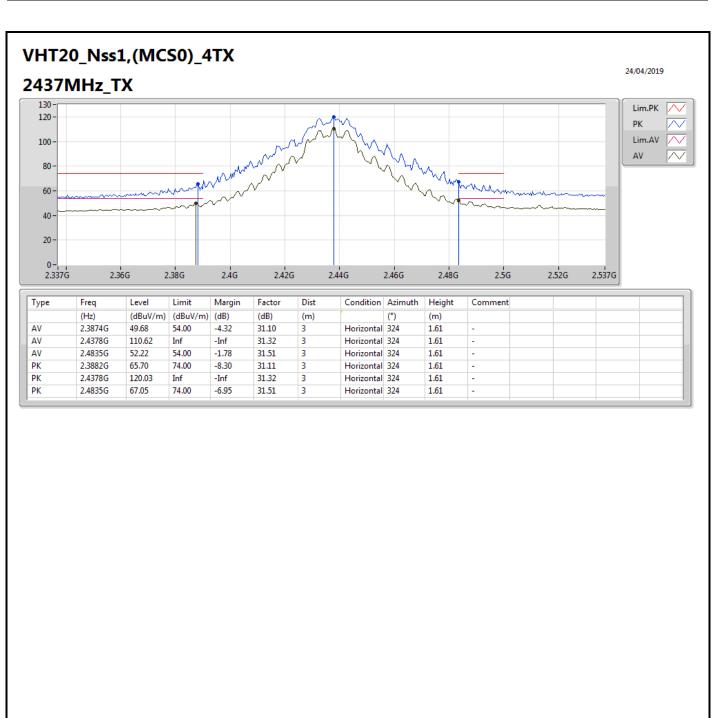




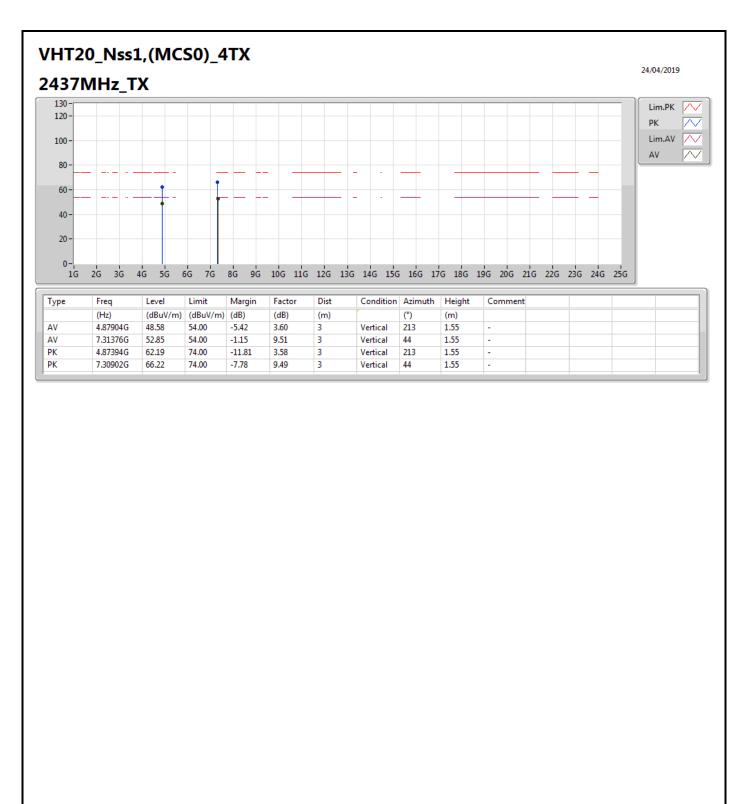




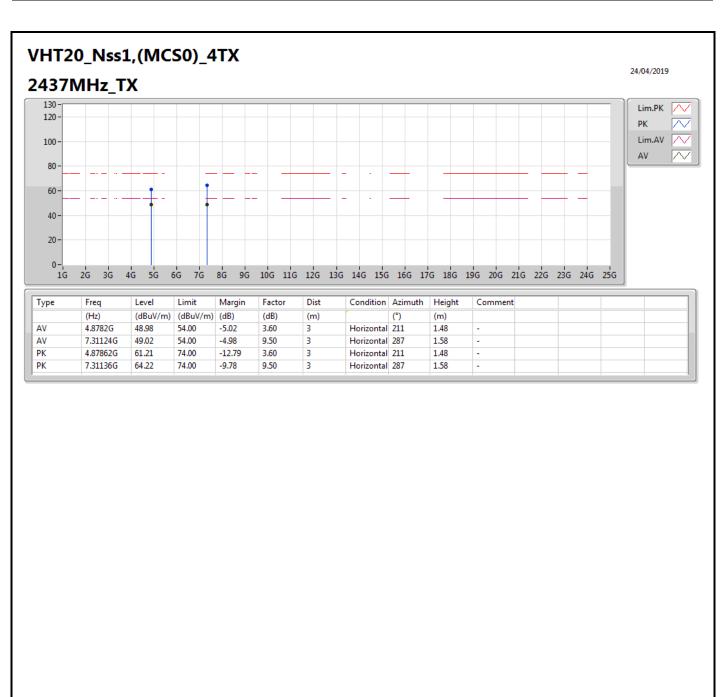




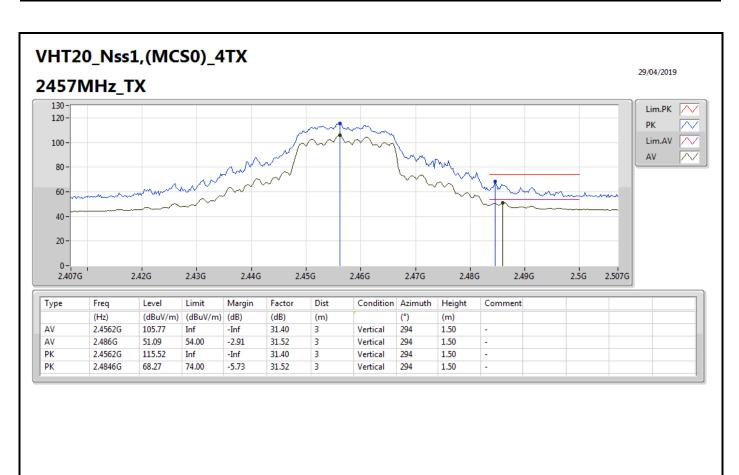




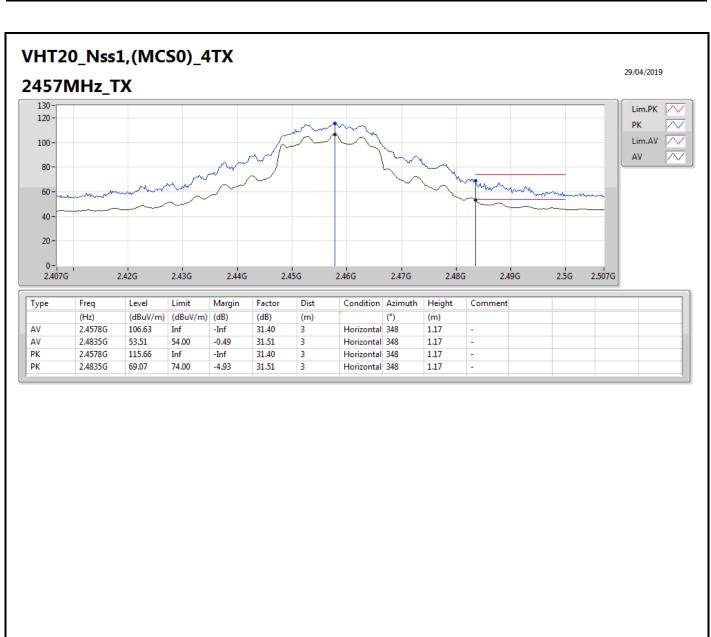




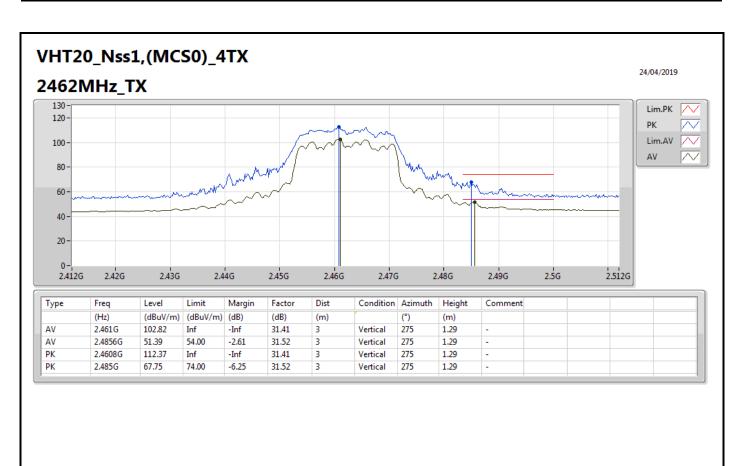




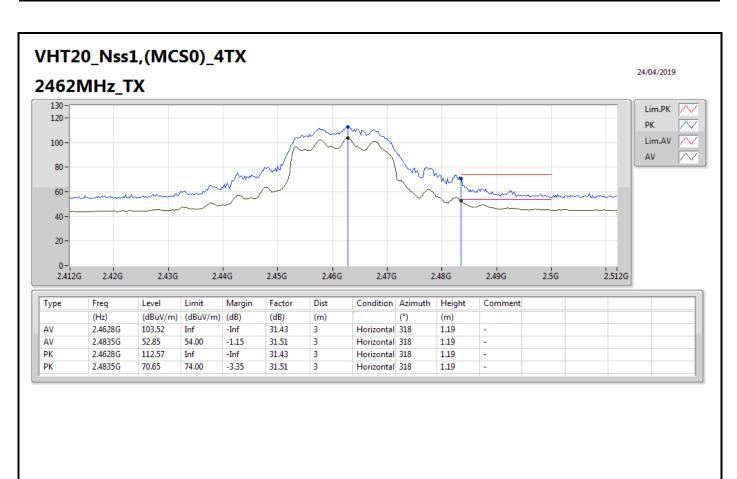






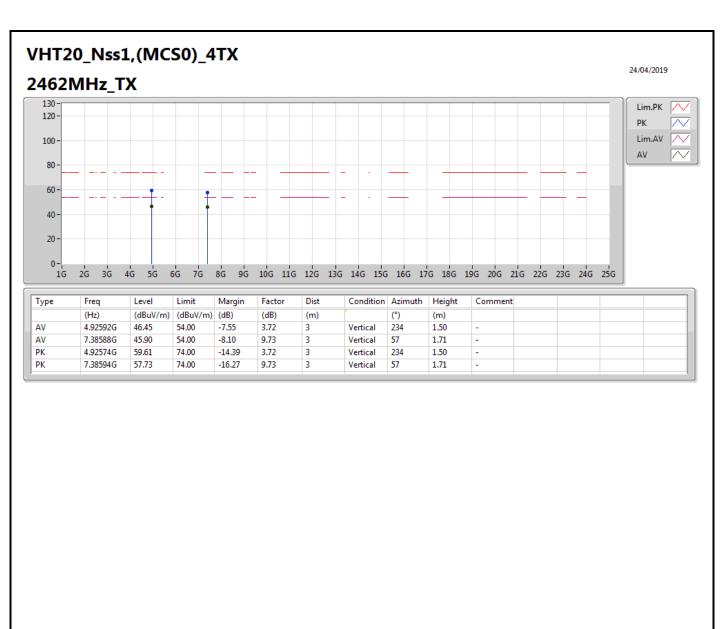




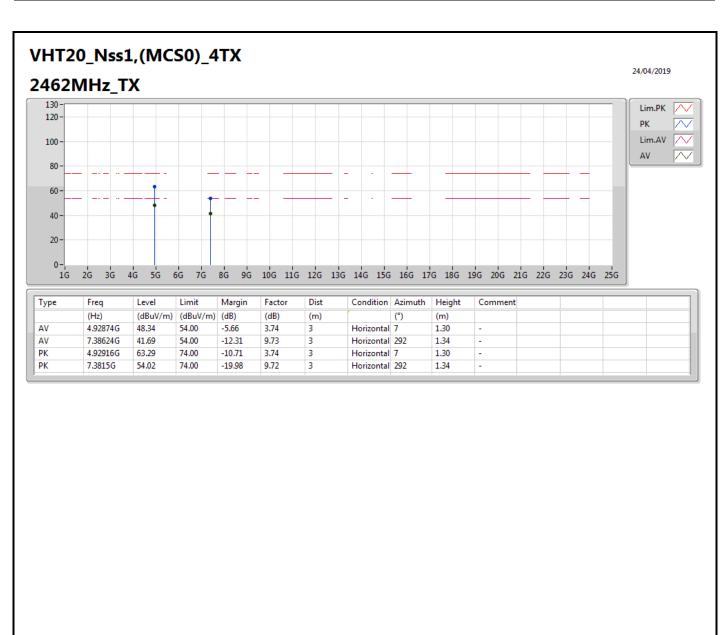


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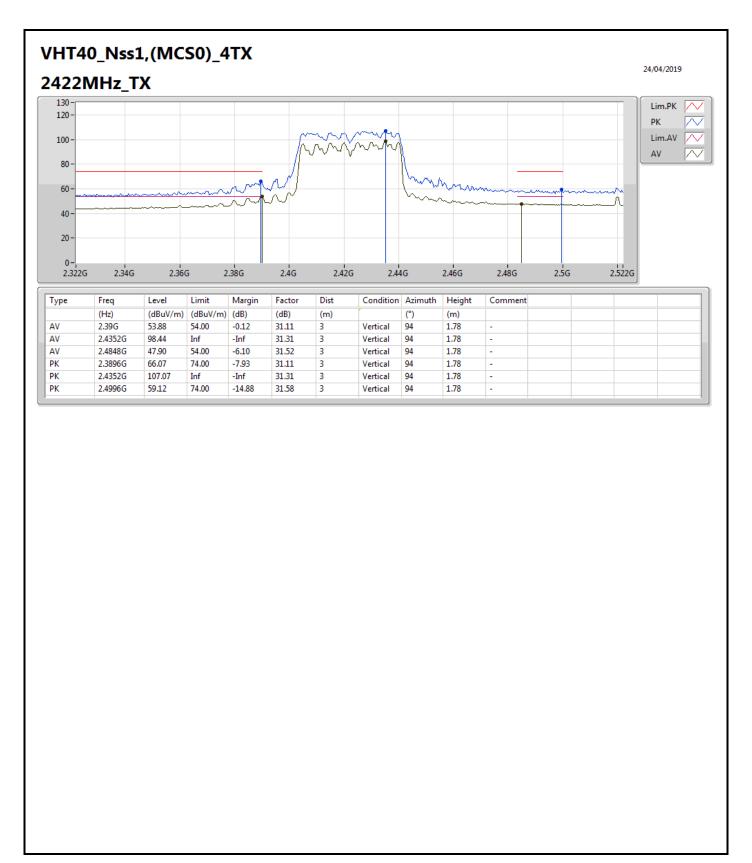




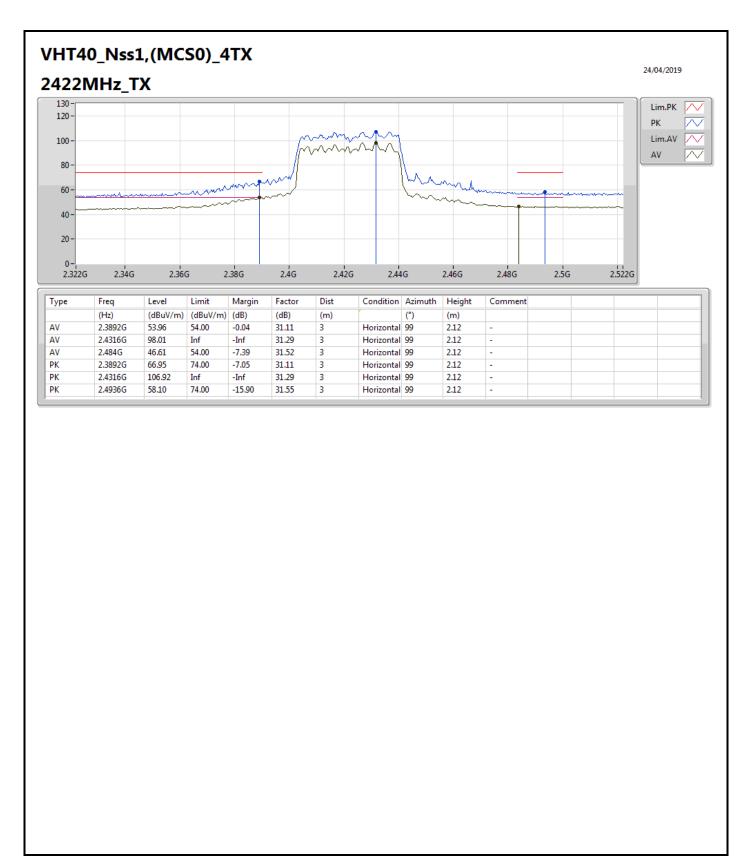




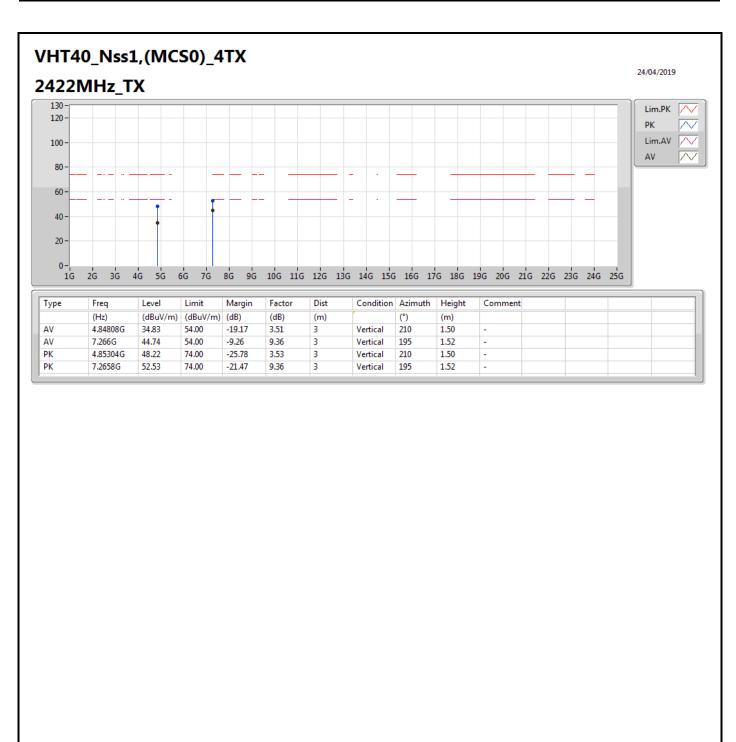




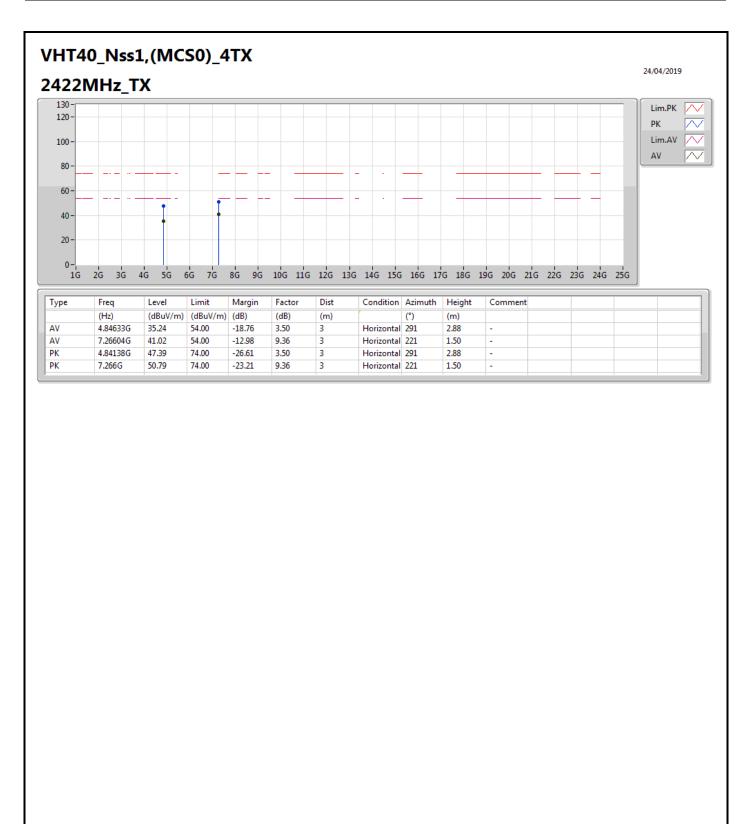




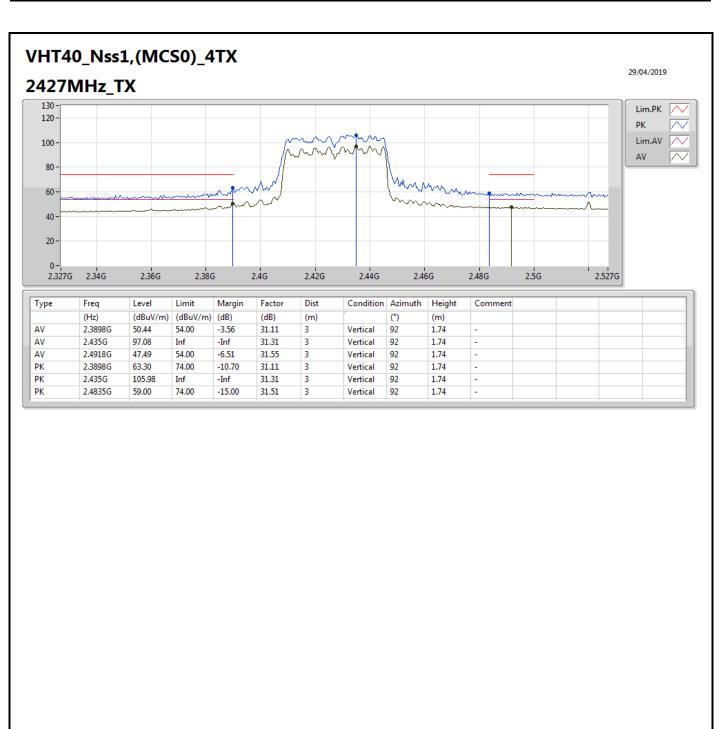




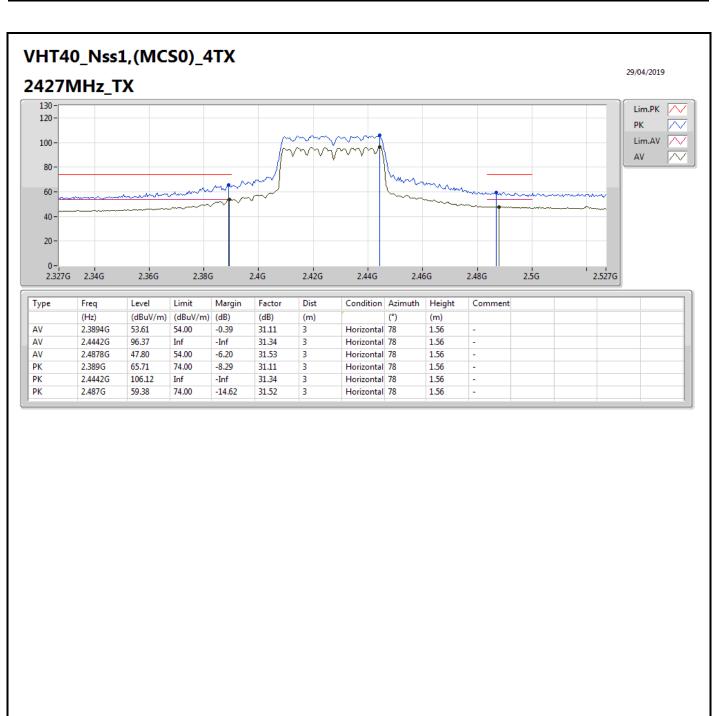




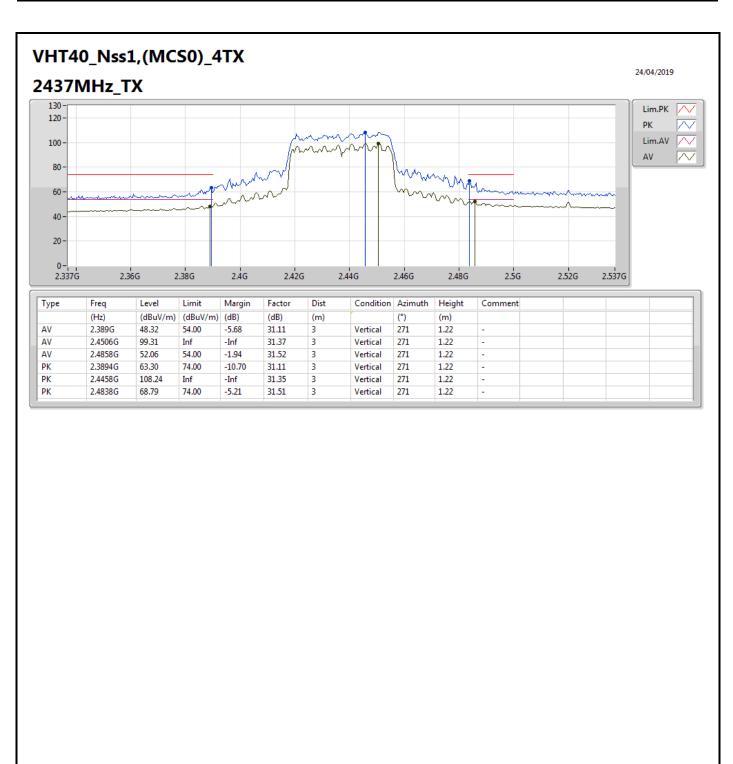




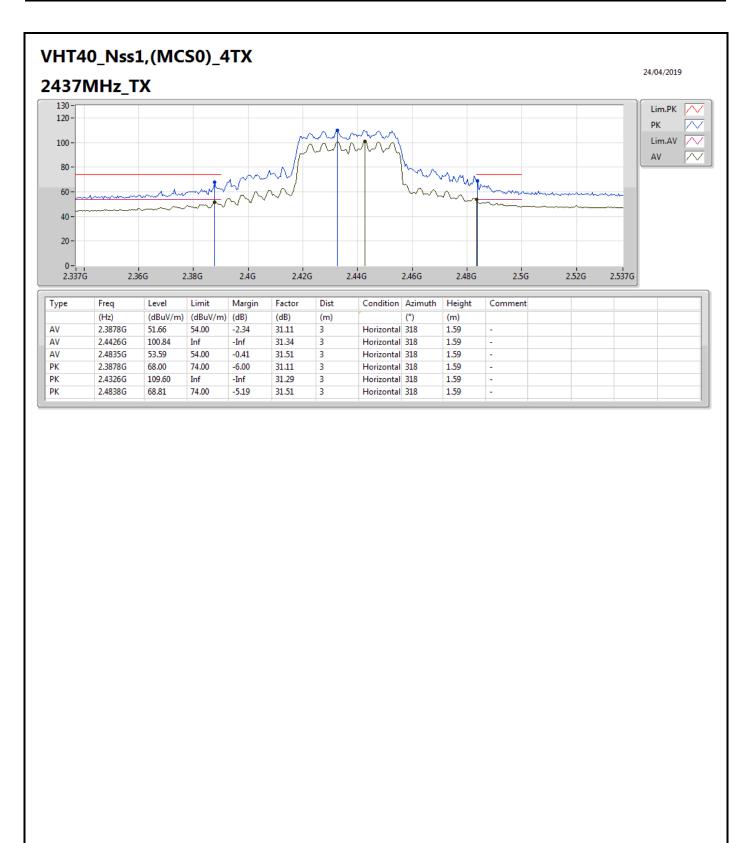




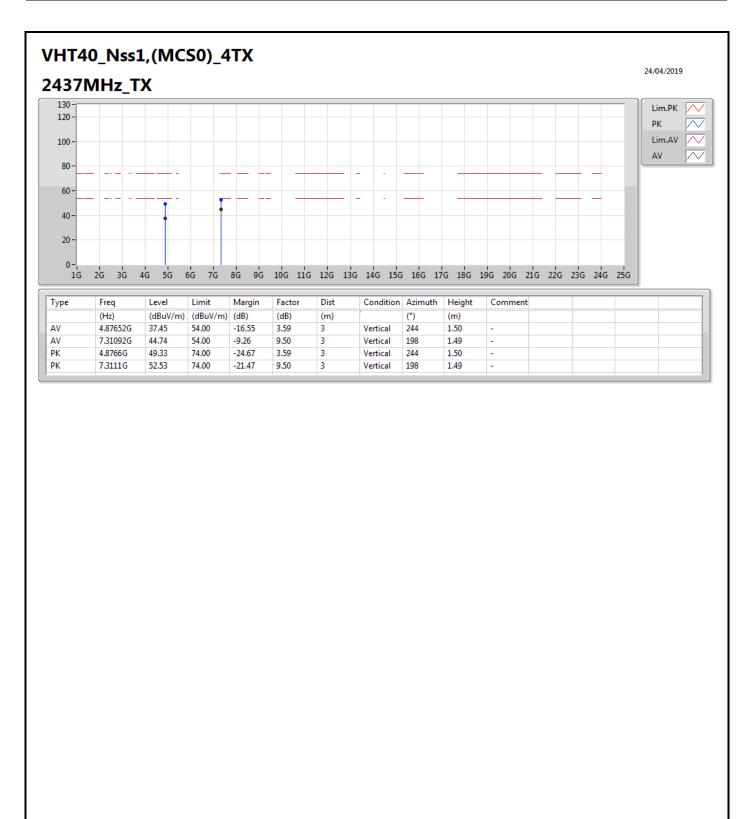




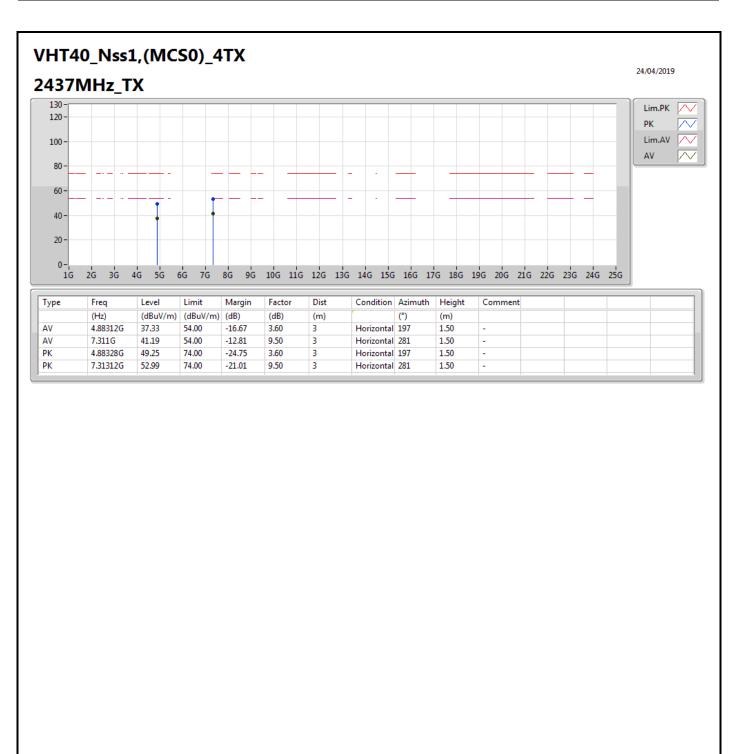




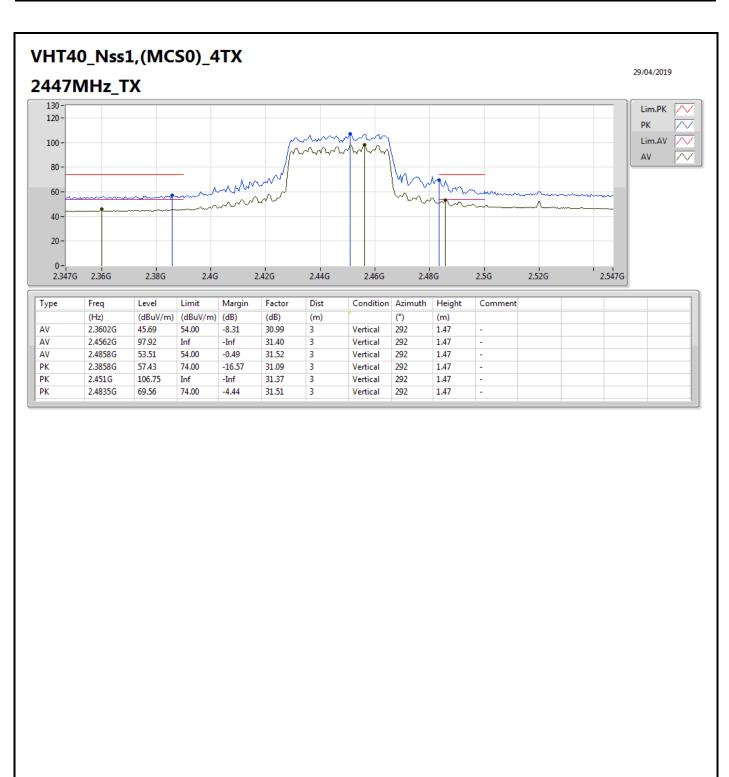




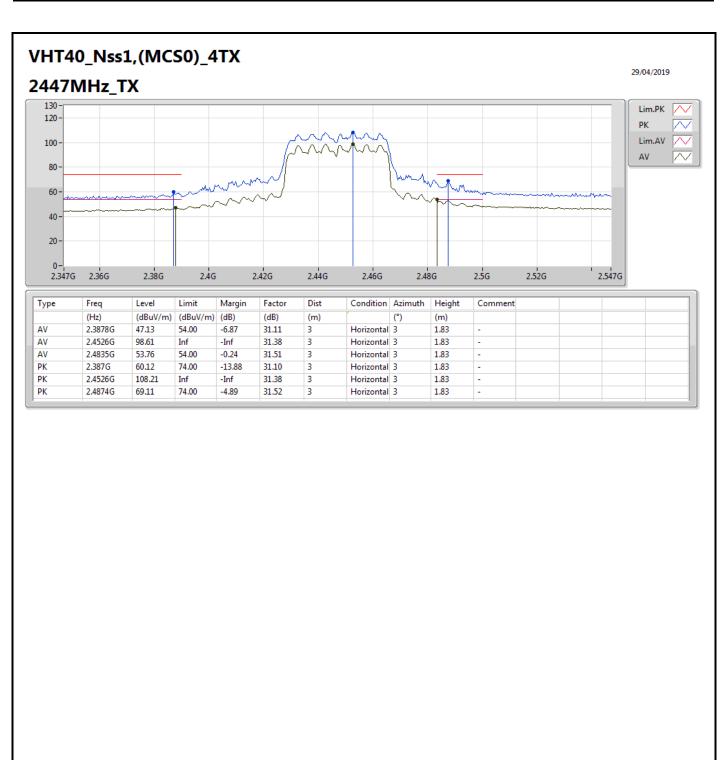




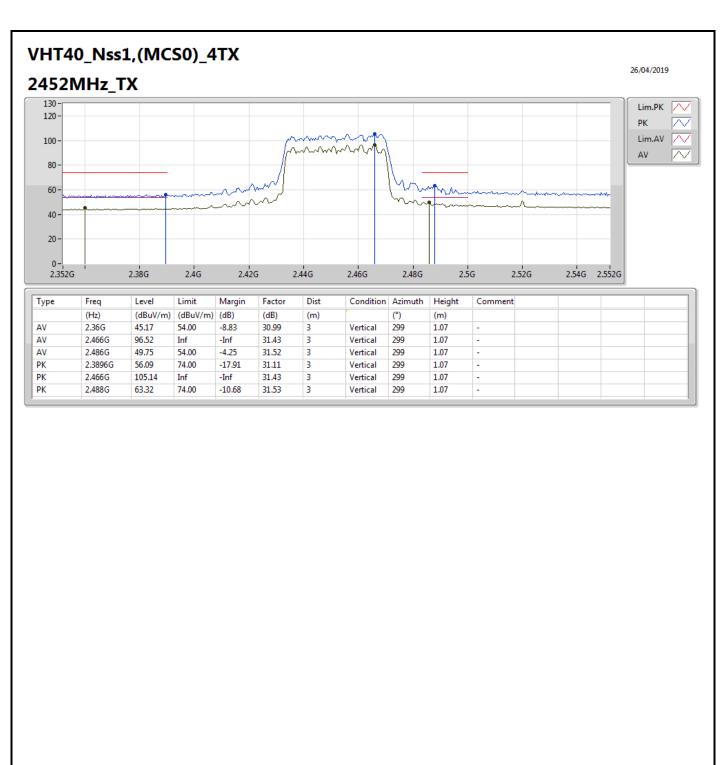




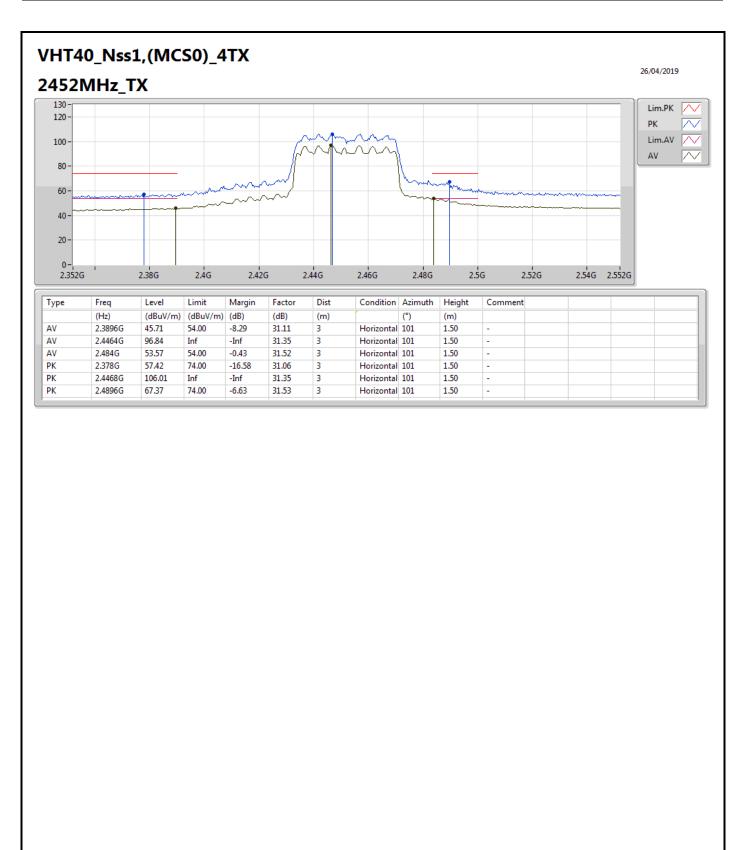




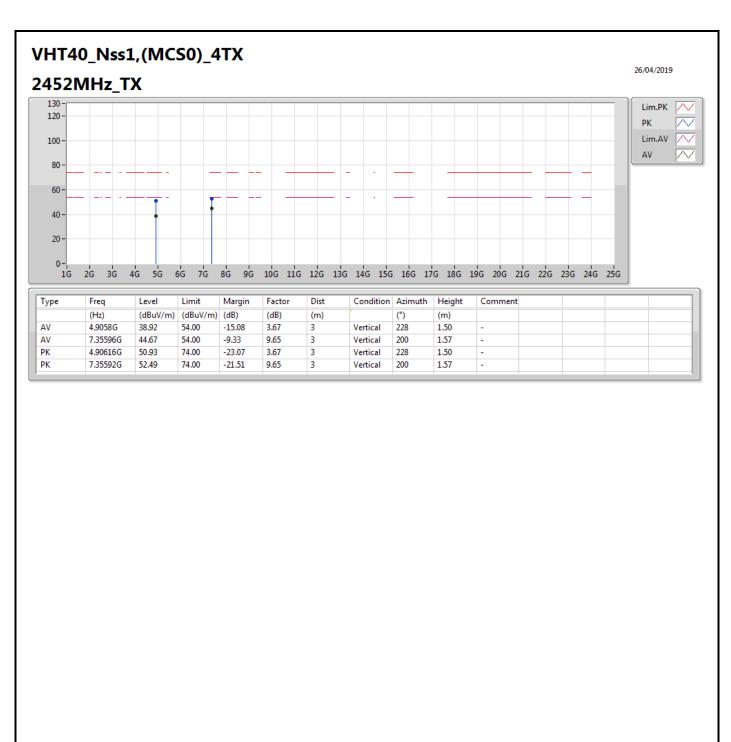




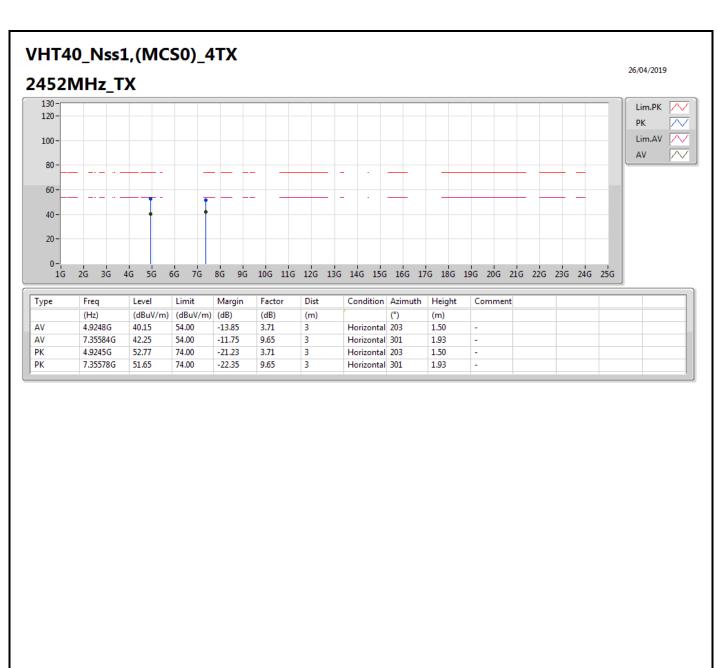














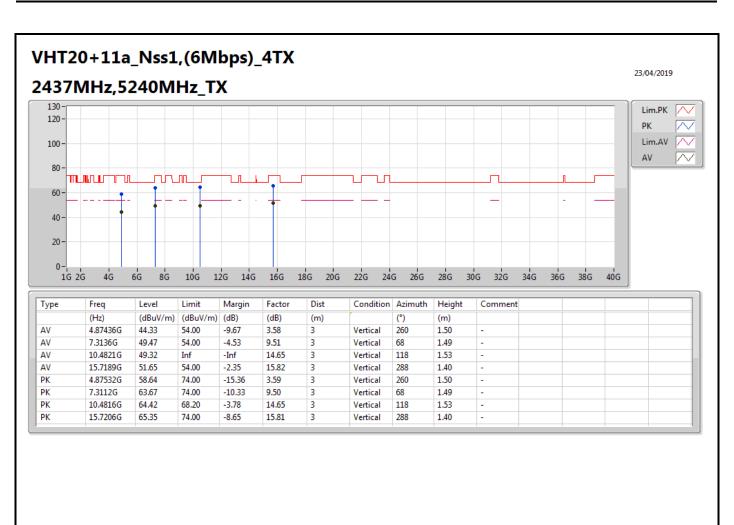
Summary

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
2.4G+5G	-	-	-	-	-	-	-	-	-	-	-	-
VHT20+11a_Nss1,(6Mbps)_4TX	Pass	AV	15.7189G	51.65	54.00	-2.35	15.82	3	Vertical	288	1.40	-



## Result

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
VHT20+11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-	-	-
2437MHz,5240MHz	Pass	AV	4.87436G	44.33	54.00	-9.67	3.58	3	Vertical	260	1.50	-
2437MHz,5240MHz	Pass	AV	7.3136G	49.47	54.00	-4.53	9.51	3	Vertical	68	1.49	-
2437MHz,5240MHz	Pass	AV	10.4821G	49.32	Inf	-Inf	14.65	3	Vertical	118	1.53	-
2437MHz,5240MHz	Pass	AV	15.7189G	51.65	54.00	-2.35	15.82	3	Vertical	288	1.40	-
2437MHz,5240MHz	Pass	PK	4.87532G	58.64	74.00	-15.36	3.59	3	Vertical	260	1.50	-
2437MHz,5240MHz	Pass	PK	7.3112G	63.67	74.00	-10.33	9.50	3	Vertical	68	1.49	-
2437MHz,5240MHz	Pass	PK	10.4816G	64.42	68.20	-3.78	14.65	3	Vertical	118	1.53	-
2437MHz,5240MHz	Pass	PK	15.7206G	65.35	74.00	-8.65	15.81	3	Vertical	288	1.40	-
2437MHz,5240MHz	Pass	AV	4.87424G	37.00	54.00	-17.00	3.58	3	Horizontal	224	2.11	-
2437MHz,5240MHz	Pass	AV	7.31142G	47.31	54.00	-6.69	9.50	3	Horizontal	299	1.50	-
2437MHz,5240MHz	Pass	AV	10.48192G	49.02	Inf	-Inf	14.65	3	Horizontal	120	1.50	-
2437MHz,5240MHz	Pass	AV	15.72504G	51.46	54.00	-2.54	15.80	3	Horizontal	230	1.32	-
2437MHz,5240MHz	Pass	PK	4.87376G	59.27	74.00	-14.73	3.58	3	Horizontal	224	2.11	-
2437MHz,5240MHz	Pass	PK	7.3113G	60.93	74.00	-13.07	9.50	3	Horizontal	299	1.50	-
2437MHz,5240MHz	Pass	PK	10.48126G	63.08	68.20	-5.12	14.65	3	Horizontal	120	1.50	-
2437MHz,5240MHz	Pass	PK	15.72324G	66.98	74.00	-7.02	15.80	3	Horizontal	230	1.32	-



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