

Report No.: FR780412AC

# FCC Test Report

**MEVO PLUS** Equipment

**Brand Name** LIVESTREAM

Model No. : A20201A

FCC ID 2AHGTA20201A

**Standard** 47 CFR FCC Part 15.247

**Operating Band** 2400 MHz - 2483.5 MHz

**Function** Point-to-multipoint; Point-to-point

**Applicant** : Livestream, Inc.

195 Morgan Ave. Brooklyn, NY 11237, USA

: Chicony Electronics (Dong Guan ) Co.,Ltd. Manufacturer

> San Zhong Guan Li Qu, Qingxi Town, **Dongguan City Guangdong 523651 China**

The product sample received on Aug. 08, 2017 and completely tested on Sep. 22, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

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## **Summary of Test Result**

	Conformance Test Specifications							
Report Clause	Ref. Std. Clause	Description	Limit	Result				
1.1.2	15.203	Antenna Requirement	FCC 15.203	Complied				
3.1	15.207	AC Power-line Conducted Emissions	FCC 15.207	Complied				
3.2	15.247(a)	DTS Bandwidth	≥500kHz	Complied				
3.3	15.247(b)	Maximum Conducted Output Power	Power [dBm]:30	Complied				
3.4	15.247(e)	Power Spectral Density	PSD [dBm/3kHz]:8	Complied				
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	Non-Restricted Bands: > 30 dBc	Complied				
3.6	15.247(d)	Emissions in Restricted Frequency Bands	Restricted Bands: FCC 15.209	Complied				

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## **Revision History**

Report No.	Version	Description	Issued Date
FR780412AC	Rev. 01	Initial issue of report	Sep. 20, 2017
FR780412AC	Rev. 02	1.Add Emissions in Restricted Frequency Bands(9kHz ~30MHz) test 2.Update Photographs of EUT 3.Update Appendix G test photos	Sep. 22, 2017

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## 1 General Description

#### 1.1 Information

#### 1.1.1 RF General Information

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

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

#### Note:

- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- BWch is the nominal channel bandwidth.

#### 1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	-	GY196HT337-012	PIFA Antenna	I-PEX	1.2
2	2	-	GY196HT337-011	PIFA Antenna	I-PEX	-0.86

Note: 1: 802.11b/g/n used two antennas are for signal transmitting and receiving.(2T2R Spatial Multiplexing MIMO configuration)

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#### 1.1.3 EUT Information

	Operational Condition							
EU	Γ Power T	уре	Fro	n AC Adapter				
Bea	ımforminç	g Function		With beamforming	ng [	$\boxtimes$	Without beamforming	
				7	Гуре of	EU	JT	
$\boxtimes$	Stand-alc	ne						
	Combine	d (EUT where	e the	radio part is fully	integra	atec	d within another device)	
	Combine	d Equipment	- Bra	and Name / Mode	el No.:			
	Plug-in radio (EUT intended for a variety of host systems)							
	Host System - Brand Name / Model No.:							
	Other:							

## 1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.991	0.039	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11g	0.927	0.329	1.429m	1k
802.11n HT20	0.931	0.311	1.338m	1k

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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 v04
- 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 No. TW1190 with FCC.						
$\boxtimes$	LIN KOU	ADD	:	No. 30-2, Dingfu Vil., L	inkou Dist., New Taipei City, Taiwan (R.O.C.)		
	TEL: 886-2-2601-1640 FAX: 886-2-2601-1695						
	Test site Designation No. TW1095 with FCC.						

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH07-HY	Ryan	24.2°C / 65%	24/Aug/2017
Radiated	03CH09-HY	Jerry	24.5°C / 63.8%	22/Sep/2017
AC Conduction	CO01-LK	Morrison	29°C / 51%	21/Aug/2017

## 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)	3.6 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	2.1 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	2.6 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	2.9 dB	Confidence levels of 95%
Conducted Emission	1.3 dB	Confidence levels of 95%

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2 Test Configuration of EUT

## 2.1 Test Condition

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

## 2.2 Test Channel Mode

Test Software	Putty
---------------	-------

Mode	Power Setting
802.11b_Nss1,(1Mbps)_2TX	-
2412MHz	88
2437MHz	88
2462MHz	88
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	78
2437MHz	88
2462MHz	88
802.11n HT20_Nss1,(MCS0)_2TX	-
2412MHz	71
2437MHz	88
2462MHz	88

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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	Normal Link	
1	REC, BT ON, WiFi 2.4GHz, adapter(USB charging)	

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 Fr	equency 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	CTX		
	X Plane	Y Plane	Z Plane
Orthogonal Planes of EUT			
Worst Planes of EUT		V	

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## 2.4 Accessories

Accessories				
AC Adoptor	Brand Name	I.T.E	Model Name	KSA29B0500200D5
AC Adapter   Power Rating   I/P: 100 - 240Vac, 0.5 A, O/P: 5.0 Vdc, 2.0 A				Vdc, 2.0 A
Data Calda	Brand Name	Mevo		
Data Cable	Data Cable Signal Line 3.04 meter, shielded cable, without ferrite core		errite core	
Liian Battami	Brand Name	FUJI	Model Name	901935
Li-ion Battery	Power Rating	3.7V/1200mAh 4.44Wh		

## 2.5 Support Equipment

	Support Equipment – RF Conducted				
No.	Equipment	Brand Name	Model Name	FCC ID	
1	Notebook	DELL	E5410	DoC	
2	Adapter for NB	DELL	HA65NM130	DoC	
3	AC Source	G.W	APS-9102	-	

	Support Equipment – AC Conduction				
No.	Equipment	Brand Name	Model Name	FCC ID	
Α	Micro SD Card	SanDisk	8GB	DoC	
Z	iPad mini (Remote Workstation)	APPLE	16GB	DoC	
Z	Notebook(BT) (Remote Workstation)	DELL	Latitude E5520	DoC	

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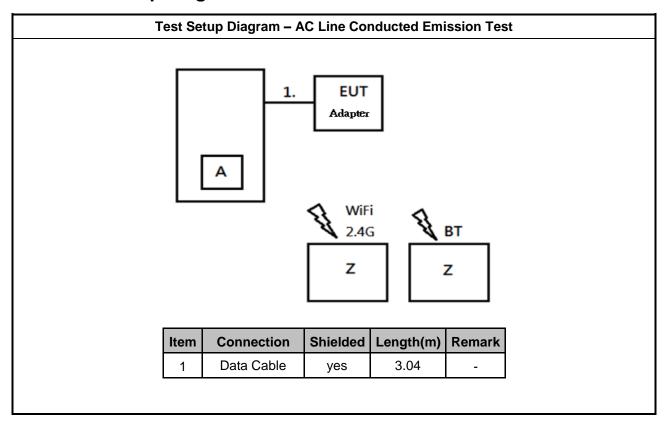
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#### 2.6 **Test Setup Diagram**



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**Test Setup Diagram - Radiated Test** AC Mains 1 **EUT** Adapter Power box Item Connection Shielded Length(m) Remark AC Power line 1 No 1.8 2 Data cable yes 3.04

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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 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

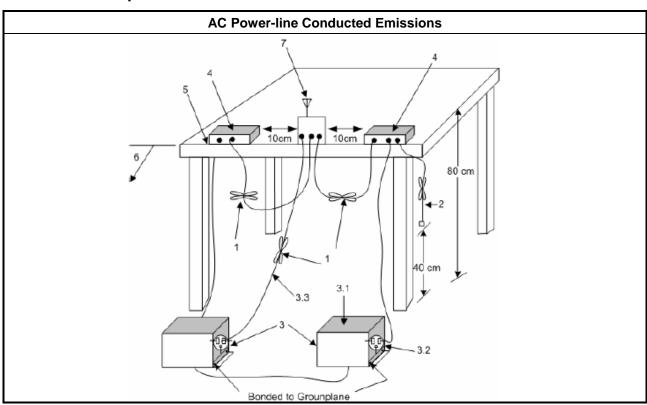
### 3.1.2 Measuring Instruments

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 cond	lucted 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 ≥ 5	600 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 8.1 Option 1 for 6 dB bandwidth measurement.
	Refer as KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement.
	Refer as RSS-Gen, clause 6.6 for for occupied bandwidth testing.
	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.

### 3.2.4 Test Setup

Emission Bandwidth					
Spectrum Analyzer					

#### 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

Max	imu	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. F	Power Limit:
•	240	00-2483.5 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 <sub>eirp</sub> ≤ MAX(36, P <sub>Out</sub> + G <sub>TX</sub> ) dBm
		- Overlap beam: P <sub>eirp</sub> ≤ MAX(36, P <sub>Out</sub> + G <sub>TX</sub> ) dBm
		- Aggregate power on all beams: P <sub>eirp</sub> ≤ MAX(36, [P <sub>Out</sub> + G <sub>TX</sub> + 8]) dBm
		naximum peak conducted output power or maximum conducted output power in dBm, e maximum transmitting antenna directional gain in dBi.

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#### 3.3.2 Measuring Instruments

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

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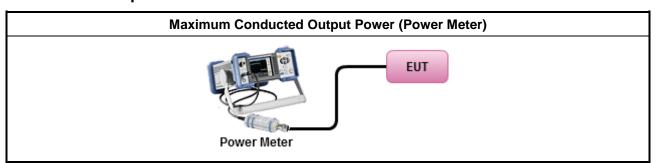
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#### 3.3.3 Test Procedures

	Test Method
•	Maximum Peak Conducted Output Power
	☐ Refer as KDB 558074, clause 9.1.1 Option 1 (RBW ≥ EBW method).
	Refer as KDB 558074, clause 9.1.2 Option 2 (integrated band power method)
	☐ Refer as KDB 558074, clause 9.1.3 Option 3 (peak power meter for VBW ≥ DTS BW)
•	Maximum Average Conducted Output Power
	Duty cycle ≥ 98%
	Refer as KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
	Duty cycle < 98%
	Refer as KDB 558074, clause 9.2.2.5 Method AVGSA-2 Alt. (slow sweep speed)
	RF power meter and average over on/off periods with duty factor or gated trigger
	Refer as KDB 558074, clause 9.2.3.1 Method AVGPM (using an RF average 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

### 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

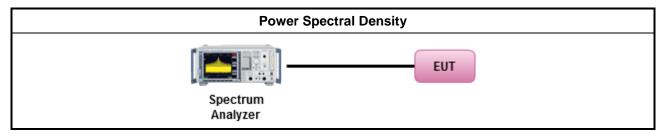
Refer a test equipment and calibration data table in this test report.

#### 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 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak).
- 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

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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.

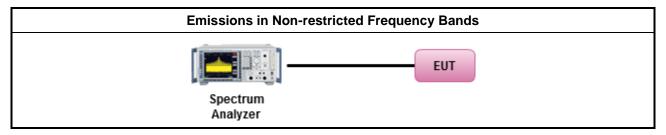
#### 3.5.2 Measuring Instruments

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

#### 3.5.3 Test Procedures

Test Method	
<ul> <li>Refer as KDB 558074, clause 11 for unwanted emissions into non-restricted bands.</li> </ul>	

#### 3.5.4 Test Setup



#### 3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

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### 3.6 Emissions in Restricted Frequency Bands

#### 3.6.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions Limit								
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)					
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300					
0.490~1.705	24000/F(kHz)	33.8 - 23	30					
1.705~30.0	30	29	30					
30~88	100	40	3					
88~216	150	43.5	3					
216~960	200	46	3					
Above 960	500	54	3					

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

#### 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 12 for unwanted emissions into restricted bands.
    - Refer as KDB 558074, clause 12.2.5.3 (ANSI C63.10, clause 4.1.4.2.3), Reduced VBW≥1/T.
    - Refer as KDB 558074, clause 12.2.4 measurement procedure peak limit.
- For the transmitter band-edge emissions shall be measured using following options below:
  - Refer as KDB 558074 clause 13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
  - Refer as KDB 558074, clause 13.2 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.
  - Refer as KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
- For conducted and cabinet radiation measurement, refer as KDB 558074, clause 12.2.2.
  - 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 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.

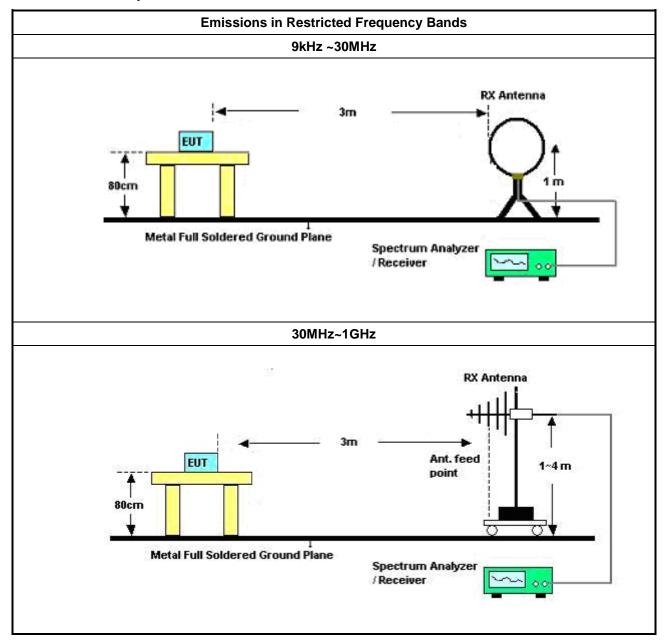
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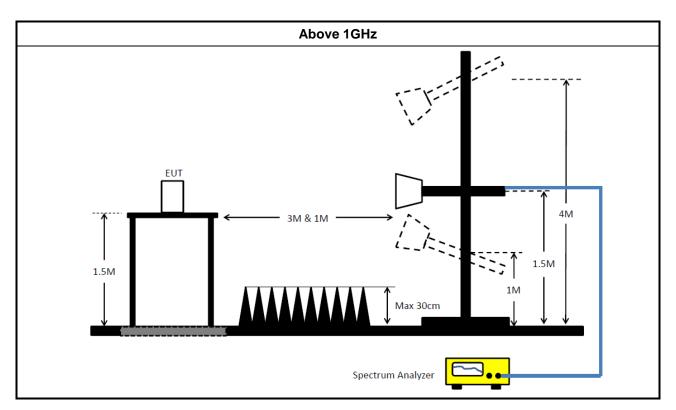
3.6.4 Test Setup



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#### 3.6.5 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. All amplitude of spurious emissions that are attenuated by more than 20 dB 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**

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Test Receiver	R&S	ESR3	102051	9 KHz ~ 3.6 GHz	29/Apr/2017	28/Apr/2018
Two-Line V-Network	R&S	ENV 216	100003	9 kHz ~ 30 MHz	30/Aug/2016	29/Aug/2017
RF Cable-CON	Weiyang	WY200	CB018	9 kHz ~ 30 MHz	07/Feb/2017	06/Feb/2018
Impulsbegrenzer Pulse Limiter	R&S	ESH3-Z2	100921	10 kHz ~ 30 MHz	20/Oct/2016	19/Oct/2017

#### **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	25/Apr/2017	24/Apr/2018
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz ~ 18GHz	28/Jun/2017	27/Jun/2018
Amplifier	Agilent	8449B	3008A02096	1GHz ~ 26.5GHz	25/Apr/2017	24/Apr/2018
Amplifier	EMC	EMC9135	980232	9KHz~1GHz	25/Apr/2017	24/Apr/2018
Spectrum Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz ~ 44GHz	20/Jul/2017	19/Jul/2018
Bilog Antenna	TESEQ	CBL 6111D	35418	30MHz~1GHz	01/Oct/2016	30/Sep/2017
Horn Antenna	SCHWARZBECK	BBHA 9120D	BBHA9120D 1534	1GHz~18GHz	28/Apr/2017	27/Apr/2018
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170614	18GHz ~ 40GHz	06/Feb/2017	05/Feb/2018
Loop Antenna	R&S	HFH2-Z2	100330	9 kHz~30 MHz	10/Nov/2016	09/Nov/2017
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz ~ 1GHz	02/Feb/2017	01/Feb/2018
RF Cable-high	Jye Bao	RG142	03CH09-HY	1GHz ~ 40GHz	02/Feb/2017	01/Feb/2018
Receiver	R&S	ESU-26	100422/026	20Hz ~ 26.5GHz	21/Sep/2017	20/Sep/2018

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## FCC Test Report

**Instrument for Conducted Test** 

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum R&S F		FSV 40	101500	9kHz~40GHz	28/Jun/2017	27Jun/2018
Power Sensor	Anritsu	MA2411B	1027452	300MHz ~ 40GHz	27/Oct/2016	26/Oct/2017
Power Meter	Anritsu	ML2495A	1124009	300MHz ~ 40GHz	27/Oct/2016	26/Oct/2017
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	27/Jul/2017	26/Jul/2018
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY10709/4	30MHz ~ 26.5GHz	02/Oct/2016	01/Oct/2017
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY10710/4	30MHz ~ 26.5GHz	02/Oct/2016	01/Oct/2017
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY10713/4	30MHz ~ 26.5GHz	02/Oct/2016	01/Oct/2017

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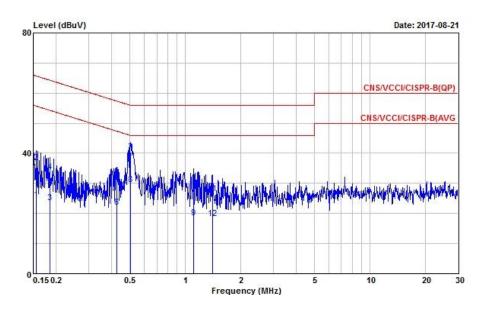
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AC Power-line Conducted Emissions Result							
Operating Mode	Operating Mode 1 Power Phase Neutral						
Operating Function REC , BT ON , WiFi 2.4GHz , adapter(usb charging)							



	Freq	Level	Over Limit	Limit Line	Read Level	LISN	Cable	Remark
-	MHz	dBuV	——dB	dBuV	dBuV	dB	dB	-
1	0.156	24.60	-31.07	55.67	14.90	9.67	0.03	Average
2	0.156	36.77	-28.90	65.67	27.07	9.67	0.03	QP
3	0.184	23.58	-30.72	54.30	13.90	9.65	0.03	Average
4	0.184	33.79	-30.51	64.30	24.11	9.65	0.03	QP
5	0.424	32.28	-25.09	57.37	22.51	9.73	0.04	QP
6	0.424	22.13	-25.24	47.37	12.36	9.73	0.04	Average
7	0.505	40.27	-15.73	56.00	30.51	9.72	0.04	QP
8	0.505	29.69	-16.31	46.00	19.93	9.72	0.04	Average
9	1.110	18.63	-27.37	46.00	8.85	9.69	0.09	Average
10	1.110	28.38	-27.62	56.00	18.60	9.69	0.09	QP
11	1.410	26.54	-29.46	56.00	16.76	9.68	0.10	QP
12	1.410	18.36	-27.64	46.00	8.58	9.68	0.10	Average

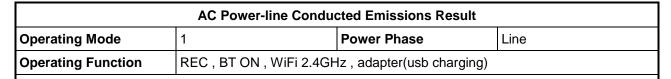
Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

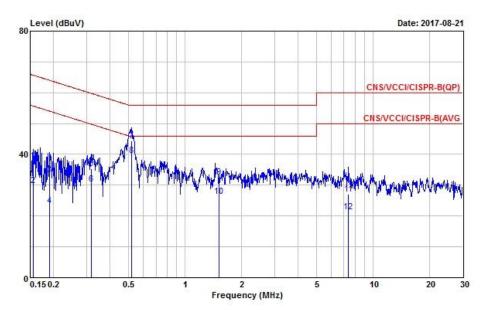
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

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	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
-	MHz	dBuV	dB	dBuV	dBuV	dB	dB	·
1	0.156	38.13	-27.56	65.69	28.40	9.70	0.03	QP
2	0.156	29.89	-25.80	55.69	20.16	9.70	0.03	Average
3	0.190	33.25	-30.79	64.04	23.53	9.69	0.03	QP
4	0.190	23.20	-30.84	54.04	13.48	9.69	0.03	Average
5	0.317	35.28	-24.51	59.79	25.53	9.72	0.03	QP
6	0.317	30.47	-19.32	49.79	20.72	9.72	0.03	Average
7	0.521	44.44	-11.56	56.00	34.67	9.73	0.04	QP
8 @	0.521	39.72	-6.28	46.00	29.95	9.73	0.04	Average
9	1.513	32.66	-23.34	56.00	22.90	9.65	0.11	QP
10	1.513	26.29	-19.71	46.00	16.53	9.65	0.11	Average
11	7.410	27.07	-32.93	60.00	16.97	9.83	0.27	QP
12	7.410	21.35	-28.65	50.00	11.25	9.83	0.27	Average

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

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

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Summary

Mode	Max-N dB	Max-OBW	ITU-Code	Min-N dB	Min-OBW
	(Hz)	(Hz)		(Hz)	(Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-
2.4-2.4835GHz	9.05M	11.869M	11M9G1D	8.05M	11.444M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-
2.4-2.4835GHz	16.35M	16.867M	16M9D1D	16.075M	16.617M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-
2.4-2.4835GHz	17.6M	17.891M	17M9D1D	17.525M	17.766M

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;

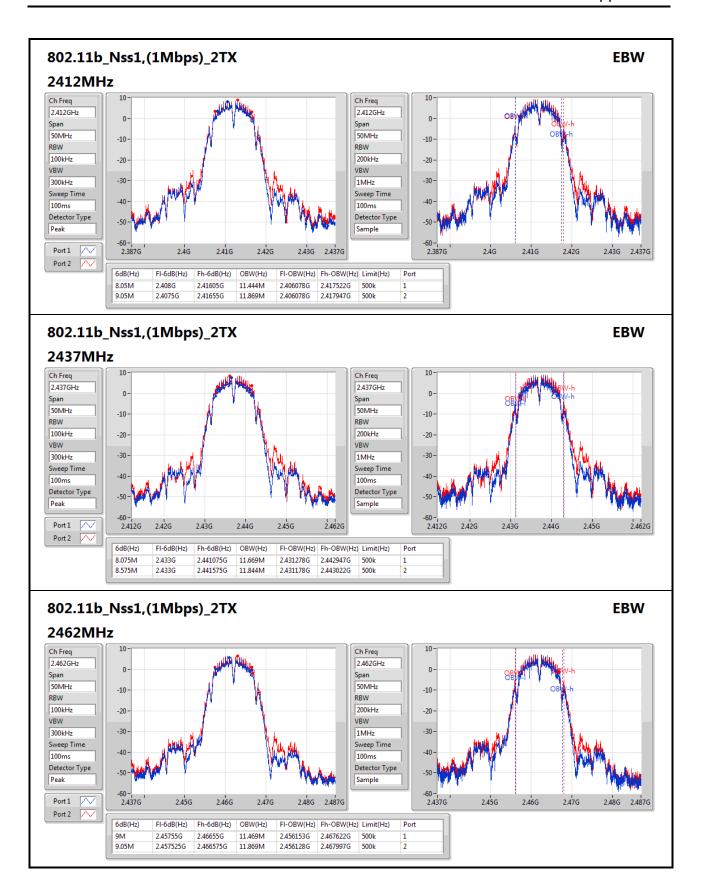
#### Result

Mode	Result	Limit	Port 1-N dB	Port 1-OBW	Port 2-N dB	Port 2-OBW
		(Hz)	(Hz)	(Hz)	(Hz)	(Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	500k	8.05M	11.444M	9.05M	11.869M
2437MHz_TnomVnom	Pass	500k	8.075M	11.669M	8.575M	11.844M
2462MHz_TnomVnom	Pass	500k	9M	11.469M	9.05M	11.869M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	500k	16.075M	16.767M	16.325M	16.717M
2437MHz_TnomVnom	Pass	500k	16.35M	16.617M	16.325M	16.692M
2462MHz_TnomVnom	Pass	500k	16.325M	16.867M	16.3M	16.692M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	500k	17.525M	17.841M	17.6M	17.866M
2437MHz_TnomVnom	Pass	500k	17.55M	17.816M	17.525M	17.766M
2462MHz_TnomVnom	Pass	500k	17.575M	17.891M	17.575M	17.841M

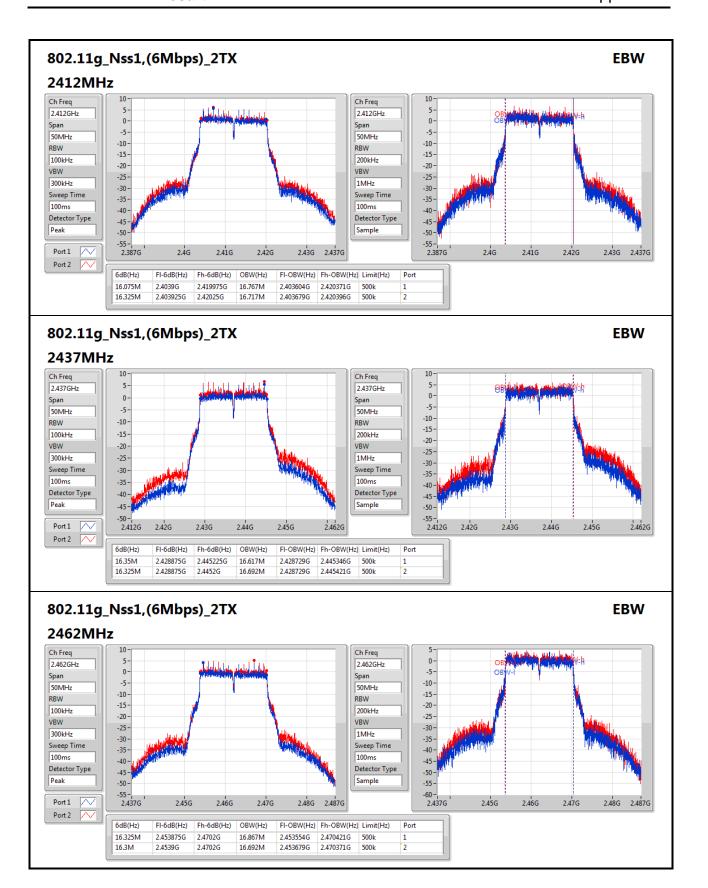
Port X-N dB = Port X 6dB down bandwidth; Port X-OBW = Port X 99% occupied bandwidth;

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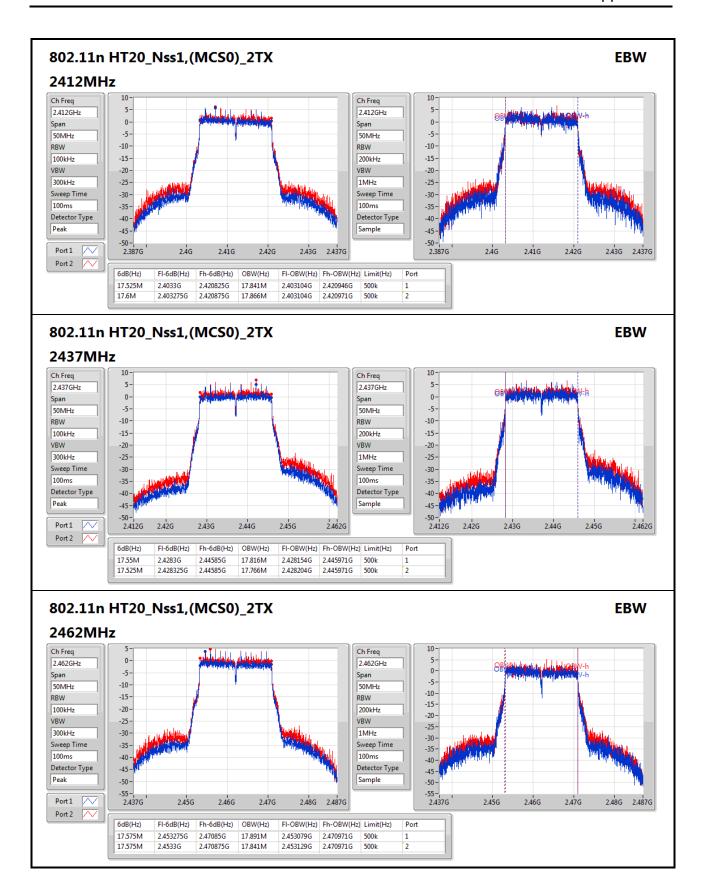
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AV Power Result Appendix C

Summary

Mode	Total Power	Total Power
	(dBm)	(W)
802.11b_Nss1,(1Mbps)_2TX	-	-
2.4-2.4835GHz	22.33	0.17100
802.11g_Nss1,(6Mbps)_2TX	-	-
2.4-2.4835GHz	21.08	0.12823
802.11n HT20_Nss1,(MCS0)_2TX	-	-
2.4-2.4835GHz	20.68	0.11695

#### Result

Mode	Result	DG	Port 1	Port 2	Total Power	Power Limit
		(dBi)	(dBm)	(dBm)	(dBm)	(dBm)
802.11b_Nss1,(1Mbps)_2TX	-	=	=	-	=	-
2412MHz_TnomVnom	Pass	1.20	17.43	18.20	20.84	30.00
2437MHz_TnomVnom	Pass	1.20	16.76	18.03	20.45	30.00
2462MHz_TnomVnom	Pass	1.20	18.64	19.92	22.33	30.00
802.11g_Nss1,(6Mbps)_2TX	-	=	=	-	=	-
2412MHz_TnomVnom	Pass	1.20	16.92	17.47	20.21	30.00
2437MHz_TnomVnom	Pass	1.20	17.14	18.26	20.75	30.00
2462MHz_TnomVnom	Pass	1.20	17.61	18.49	21.08	30.00
802.11n HT20_Nss1,(MCS0)_2TX	-	=	=	-	=	-
2412MHz_TnomVnom	Pass	1.20	17.07	17.69	20.40	30.00
2437MHz_TnomVnom	Pass	1.20	16.63	17.78	20.25	30.00
2462MHz_TnomVnom	Pass	1.20	17.13	18.14	20.68	30.00

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

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**Summary** 

Mode	PD
	(dBm/RBW)
802.11b_Nss1,(1Mbps)_2TX	-
2.4-2.4835GHz	-2.86
802.11g_Nss1,(6Mbps)_2TX	-
2.4-2.4835GHz	-5.48
802.11n HT20_Nss1,(MCS0)_2TX	-
2.4-2.4835GHz	-7.31

RBW=3kHz.

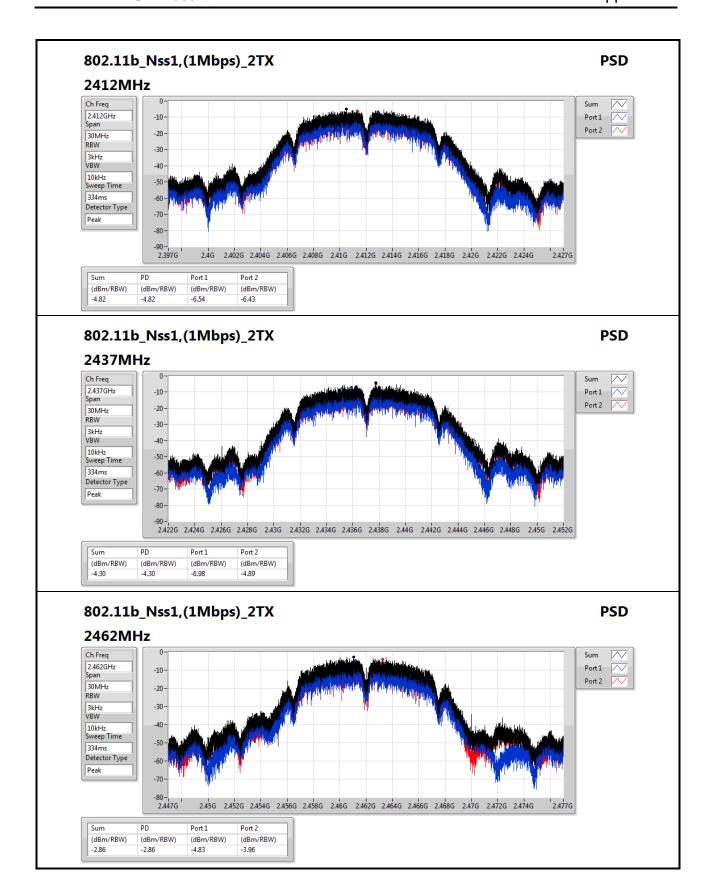
#### Result

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_TnomVnom	Pass	3.24	-6.54	-6.43	-4.82	8.00
2437MHz_TnomVnom	Pass	3.24	-6.98	-4.89	-4.30	8.00
2462MHz_TnomVnom	Pass	3.24	-4.83	-3.96	-2.86	8.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	3.24	-8.98	-8.95	-6.35	8.00
2437MHz_TnomVnom	Pass	3.24	-9.11	-7.59	-5.78	8.00
2462MHz_TnomVnom	Pass	3.24	-8.31	-7.47	-5.48	8.00
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	3.24	-9.10	-9.05	-7.31	8.00
2437MHz_TnomVnom	Pass	3.24	-10.13	-9.11	-8.53	8.00
2462MHz_TnomVnom	Pass	3.24	-8.98	-8.13	-7.48	8.00

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

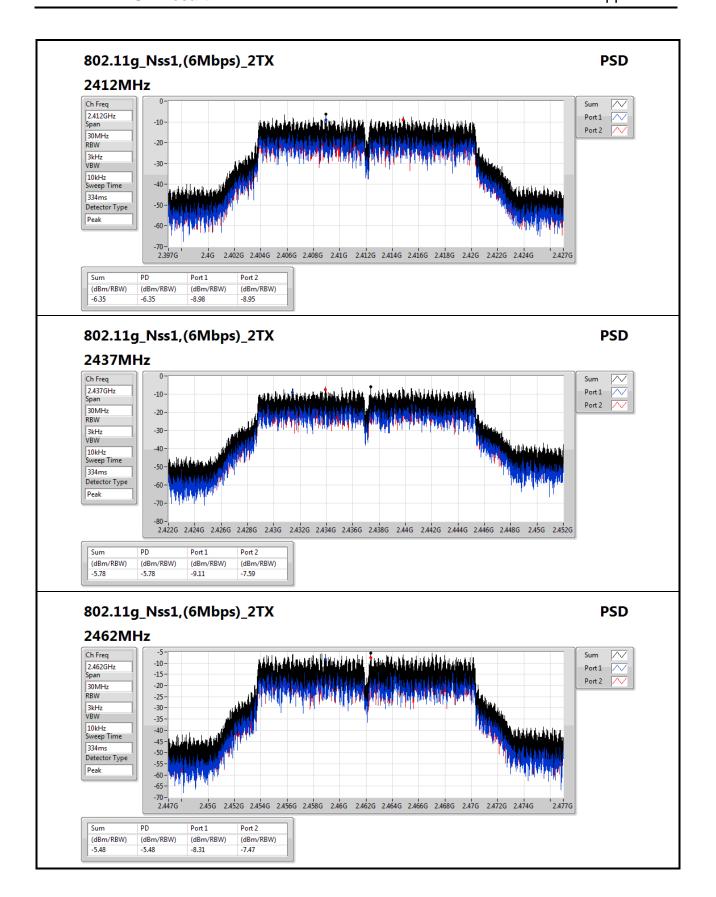
**PD** = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

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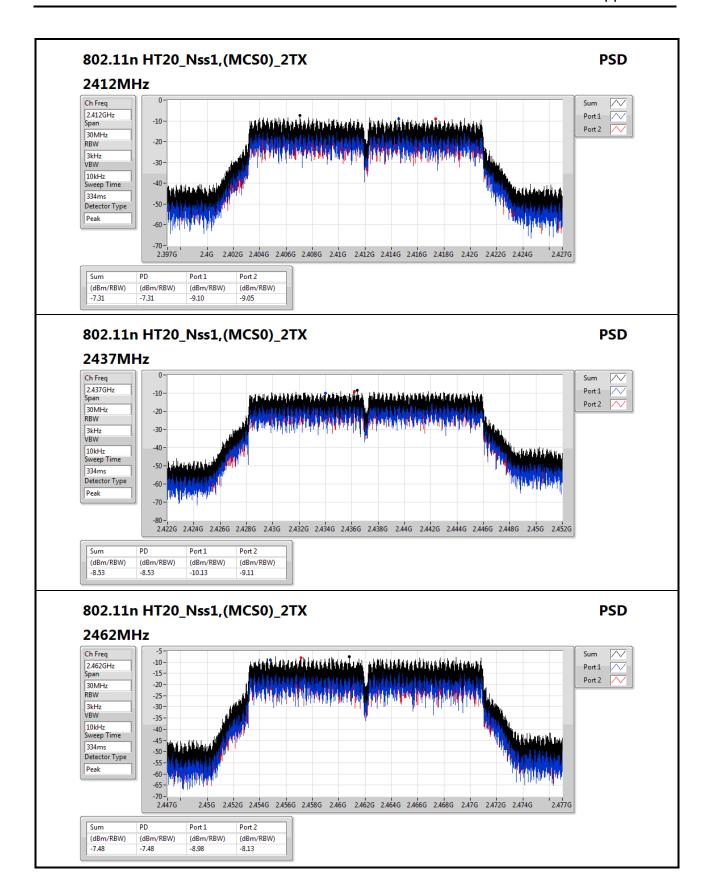
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## **CSE Non-restricted Band Result**

Appendix E

**Summary** 

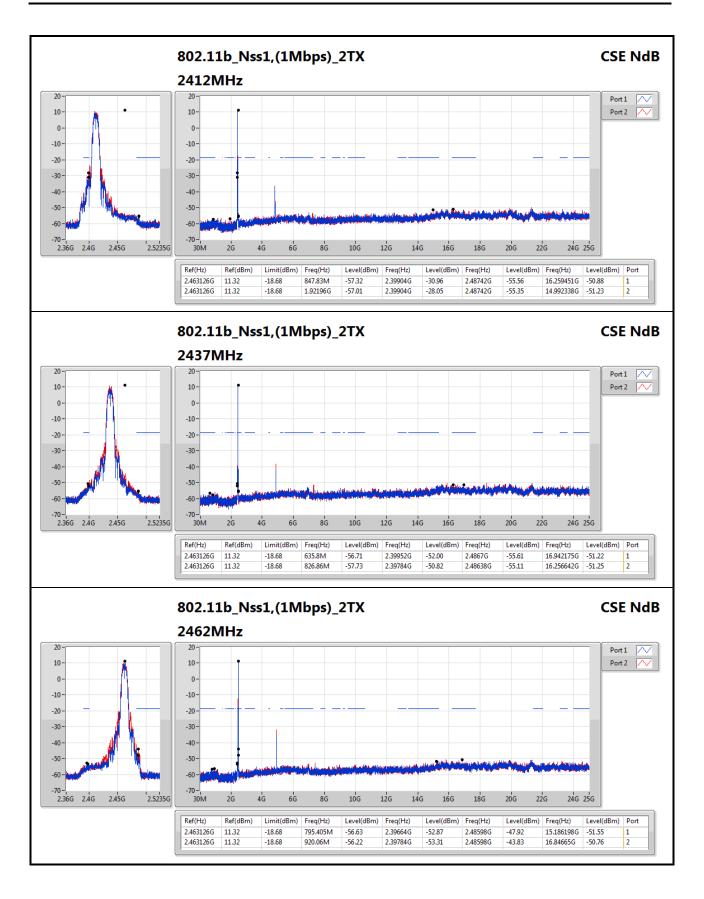
Mode	Resul t	Ref	Ref	Limit	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Port
		(Hz)	(dBm)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-		-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.455778G	6.18	-23.82	1.771675G	-57.07	2.39752G	-25.11	2.48494G	-55.49	16.984318G	-51.41	2

#### Result

Mode	Resul t	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)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.463126G	11.32	-18.68	847.83M	-57.32	2.39904G	-30.96	2.48742G	-55.56	16.259451G	-50.88	1
2412MHz_TnomVnom	Pass	2.463126G	11.32	-18.68	1.92196G	-57.01	2.39904G	-28.05	2.48742G	-55.35	14.992338G	-51.23	2
2437MHz_TnomVnom	Pass	2.463126G	11.32	-18.68	635.8M	-56.71	2.39952G	-52.00	2.4867G	-55.61	16.942175G	-51.22	1
2437MHz_TnomVnom	Pass	2.463126G	11.32	-18.68	826.86M	-57.73	2.39784G	-50.82	2.48638G	-55.11	16.256642G	-51.25	2
2462MHz_TnomVnom	Pass	2.463126G	11.32	-18.68	795.405M	-56.63	2.39664G	-52.87	2.48598G	-47.92	15.186198G	-51.55	1
2462MHz_TnomVnom	Pass	2.463126G	11.32	-18.68	920.06M	-56.22	2.39784G	-53.31	2.48598G	-43.83	16.84665G	-50.76	2
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.460788G	6.95	-23.05	512.31M	-57.56	2.39744G	-26.71	2.48358G	-55.61	17.647375G	-50.77	1
2412MHz_TnomVnom	Pass	2.460788G	6.95	-23.05	875.79M	-57.44	2.39744G	-24.68	2.48662G	-54.27	16.413977G	-51.48	2
2437MHz_TnomVnom	Pass	2.460788G	6.95	-23.05	915.4M	-57.67	2.3996G	-42.87	2.48438G	-53.04	15.180579G	-51.74	1
2437MHz_TnomVnom	Pass	2.460788G	6.95	-23.05	582.21M	-57.66	2.39808G	-42.64	2.48398G	-52.31	16.593789G	-51.45	2
2462MHz_TnomVnom	Pass	2.460788G	6.95	-23.05	853.655M	-57.00	2.39928G	-52.40	2.4839G	-38.80	15.211484G	-51.56	1
2462MHz_TnomVnom	Pass	2.460788G	6.95	-23.05	931.71M	-56.78	2.39976G	-50.47	2.48358G	-37.19	24.005415G	-51.07	2
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.455778G	6.18	-23.82	943.36M	-56.88	2.398G	-27.75	2.48414G	-56.24	16.225736G	-50.69	1
2412MHz_TnomVnom	Pass	2.455778G	6.18	-23.82	1.771675G	-57.07	2.39752G	-25.11	2.48494G	-55.49	16.984318G	-51.41	2
2437MHz_TnomVnom	Pass	2.455778G	6.18	-23.82	908.41M	-55.39	2.39712G	-44.52	2.4851G	-52.53	16.290356G	-52.10	1
2437MHz_TnomVnom	Pass	2.455778G	6.18	-23.82	953.845M	-57.73	2.39896G	-44.11	2.48454G	-52.79	21.40657G	-51.59	2
2462MHz_TnomVnom	Pass	2.455778G	6.18	-23.82	788.415M	-56.84	2.39976G	-52.16	2.48358G	-37.97	17.655804G	-50.87	1
2462MHz_TnomVnom	Pass	2.455778G	6.18	-23.82	657.935M	-57.61	2.39968G	-51.99	2.48518G	-35.38	17.085462G	-50.63	2

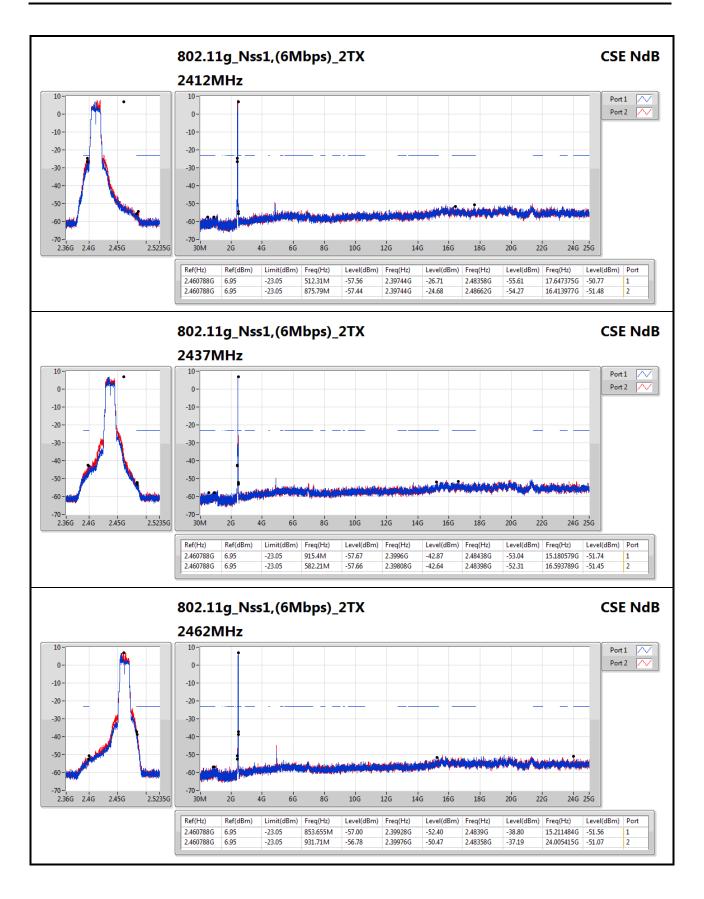
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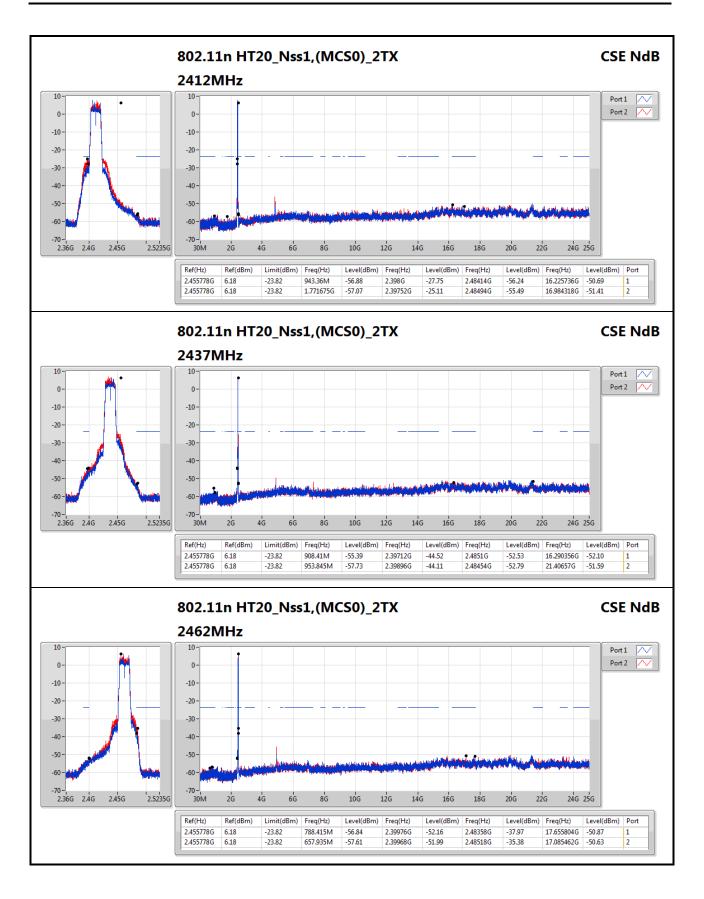
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# RSE TX below 1GHz Result (9kHz~30MHz)

Appendix F.1

780412

**Summary** 

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	PK	1.1649M	47.96	67.80	-19.84	20.78	3	Horizontal	360	1.00	-

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# RSE TX below 1GHz Result (9kHz~30MHz)

Appendix F.1

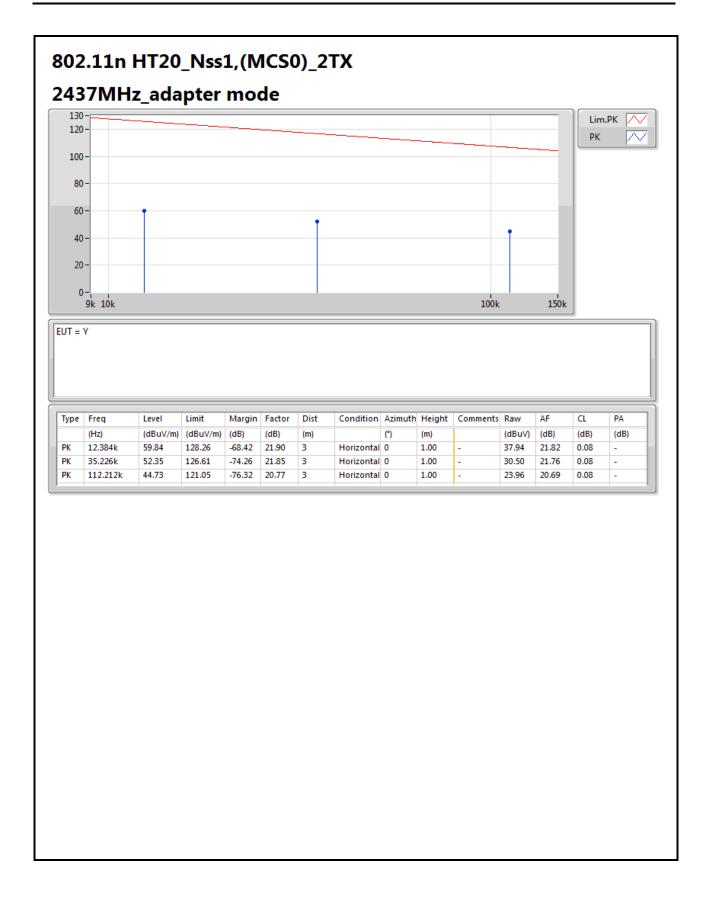
### Result

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
2437MHz	Pass	PK	12.384k	59.84	128.26	-68.42	21.90	3	Horizontal	0	1.00	-
2437MHz	Pass	PK	35.226k	52.35	126.61	-74.26	21.85	3	Horizontal	0	1.00	-
2437MHz	Pass	PK	112.212k	44.73	121.05	-76.32	20.77	3	Horizontal	0	1.00	-
2437MHz	Pass	PK	1.1649M	47.96	67.80	-19.84	20.78	3	Horizontal	360	1.00	-
2437MHz	Pass	PK	2.4186M	46.66	69.50	-22.84	20.61	3	Horizontal	360	1.00	-
2437MHz	Pass	PK	22.1793M	33.68	69.50	-35.82	22.99	3	Horizontal	360	1.00	-

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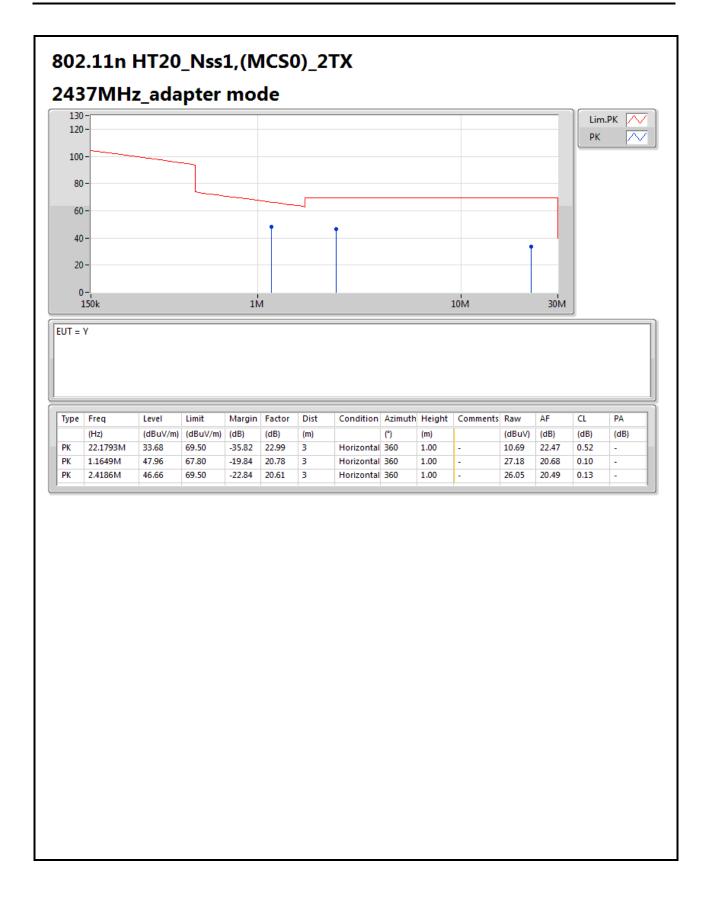
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# RSE TX below 1GHz Result (30MHz~1GHz)

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)	
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	QP	336.52M	42.81	46.00	-3.19	-14.54	3	Horizontal	0	1.00	-

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# RSE TX below 1GHz Result (30MHz~1GHz)

Appendix F.2

780412

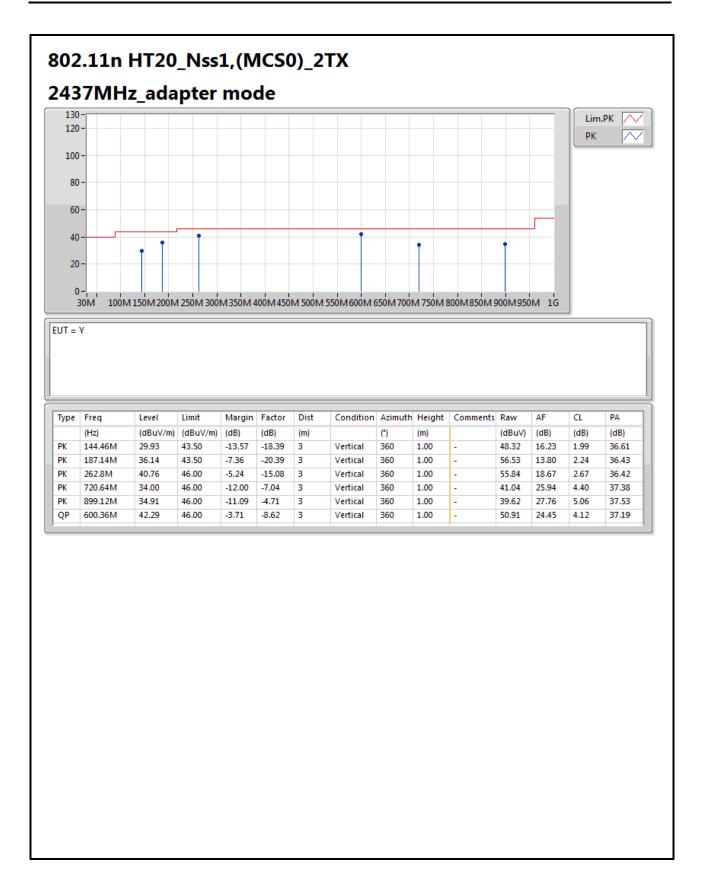
### Result

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
2437MHz	Pass	PK	144.46M	31.34	43.50	-12.16	-18.39	3	Horizontal	0	1.00	-
2437MHz	Pass	PK	239.52M	42.28	46.00	-3.72	-17.83	3	Horizontal	0	1.00	-
2437MHz	Pass	PK	307.42M	42.59	46.00	-3.41	-15.23	3	Horizontal	0	1.00	-
2437MHz	Pass	PK	600.36M	29.46	46.00	-16.54	-8.62	3	Horizontal	0	1.00	-
2437MHz	Pass	PK	899.12M	37.58	46.00	-8.42	-4.71	3	Horizontal	0	1.00	-
2437MHz	Pass	QP	336.52M	42.81	46.00	-3.19	-14.54	3	Horizontal	0	1.00	-
2437MHz	Pass	PK	144.46M	29.93	43.50	-13.57	-18.39	3	Vertical	360	1.00	-
2437MHz	Pass	PK	187.14M	36.14	43.50	-7.36	-20.39	3	Vertical	360	1.00	-
2437MHz	Pass	PK	262.8M	40.76	46.00	-5.24	-15.08	3	Vertical	360	1.00	-
2437MHz	Pass	PK	720.64M	34.00	46.00	-12.00	-7.04	3	Vertical	360	1.00	-
2437MHz	Pass	PK	899.12M	34.91	46.00	-11.09	-4.71	3	Vertical	360	1.00	-
2437MHz	Pass	QP	600.36M	42.29	46.00	-3.71	-8.62	3	Vertical	360	1.00	-

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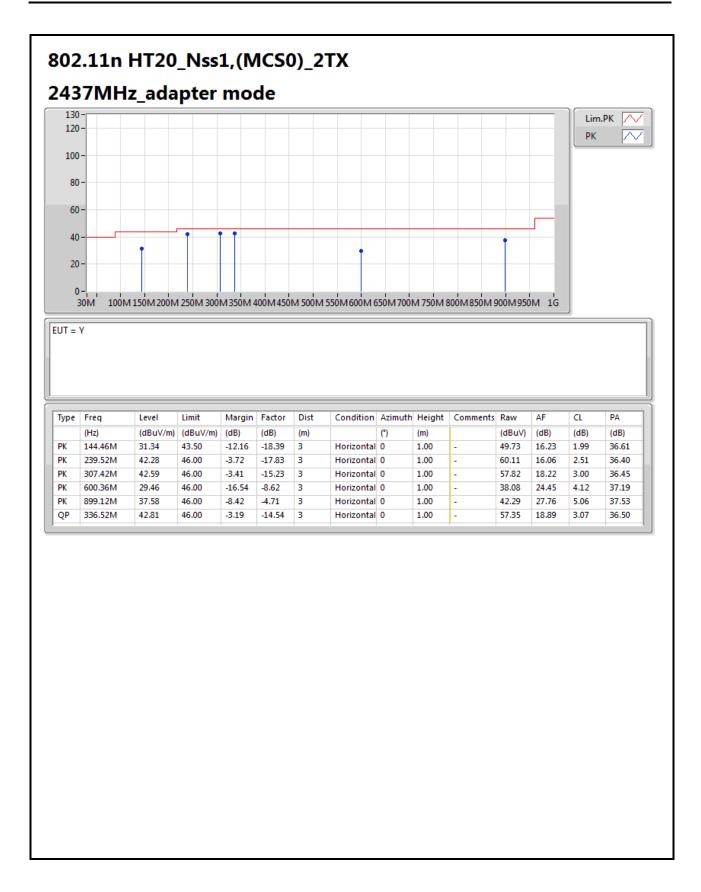
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Appendix F.3

**Summary** 

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
802.11g_(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	AV	2.39G	53.65	54.00	-0.35	31.17	3	Horizontal	3	1.04	-

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Appendix F.3

### 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_(1Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.3874G	47.91	54.00	-6.09	30.93	3	Horizontal	342	1.16	-
2412MHz	Pass	AV	2.4138G	97.69	Inf	-Inf	31.02	3	Horizontal	342	1.16	-
2412MHz	Pass	PK	2.3874G	57.00	74.00	-17.00	30.93	3	Horizontal	342	1.16	-
2412MHz	Pass	PK	2.413G	101.58	Inf	-Inf	31.02	3	Horizontal	342	1.16	-
2412MHz	Pass	AV	2.3872G	44.85	54.00	-9.15	30.93	3	Vertical	322	1.43	-
2412MHz	Pass	AV	2.4104G	91.29	Inf	-Inf	31.01	3	Vertical	322	1.43	-
2412MHz	Pass	PK	2.3874G	55.33	74.00	-18.67	30.93	3	Vertical	322	1.43	-
2412MHz	Pass	PK	2.4112G	94.87	Inf	-Inf	31.01	3	Vertical	322	1.43	-
2412MHz	Pass	AV	4.824G	49.48	54.00	-4.52	2.48	3	Horizontal	330	2.16	-
2412MHz	Pass	PK	4.824G	52.03	74.00	-21.97	2.48	3	Horizontal	330	2.16	-
2412MHz	Pass	AV	4.824G	50.98	54.00	-3.02	2.48	3	Vertical	319	2.72	-
2412MHz	Pass	PK	4.824G	52.70	74.00	-21.30	2.48	3	Vertical	319	2.72	-
2437MHz	Pass	AV	2.365G	43.94	54.00	-10.06	31.07	3	Horizontal	40	1.12	-
2437MHz	Pass	AV	2.4358G	88.85	Inf	-Inf	31.35	3	Horizontal	40	1.12	-
2437MHz	Pass	AV	2.4978G	44.74	54.00	-9.26	31.58	3	Horizontal	40	1.12	-
2437MHz	Pass	PK	2.3814G	57.08	74.00	-16.92	31.14	3	Horizontal	40	1.12	-
2437MHz	Pass	PK	2.4362G	92.00	Inf	-Inf	31.35	3	Horizontal	40	1.12	-
2437MHz	Pass	PK	2.4966G	58.08	74.00	-15.92	31.58	3	Horizontal	40	1.12	-
2437MHz	Pass	AV	2.3794G	43.88	54.00	-10.12	31.13	3	Vertical	255	3.35	-
2437MHz	Pass	AV	2.4358G	88.33	Inf	-Inf	31.35	3	Vertical	255	3.35	-
2437MHz	Pass	AV	2.4846G	44.75	54.00	-9.25	31.53	3	Vertical	255	3.35	-
2437MHz	Pass	PK	2.3862G	57.52	74.00	-16.48	31.16	3	Vertical	255	3.35	-
2437MHz	Pass	PK	2.437G	91.55	Inf	-Inf	31.35	3	Vertical	255	3.35	-
2437MHz	Pass	PK	2.4978G	57.27	74.00	-16.73	31.58	3	Vertical	255	3.35	-
2437MHz	Pass	AV	4.874G	45.19	54.00	-8.81	2.55	3	Horizontal	324	1.04	-
2437MHz	Pass	AV	7.311G	36.28	54.00	-17.72	8.42	3	Horizontal	0	1.50	-
2437MHz	Pass	PK	4.874G	49.81	74.00	-24.19	2.55	3	Horizontal	324	1.04	-
2437MHz	Pass	PK	7.311G	51.15	74.00	-22.85	8.42	3	Horizontal	0	1.50	-
2437MHz	Pass	AV	4.874G	46.19	54.00	-7.81	2.32	3	Vertical	15	2.41	-
2437MHz	Pass	AV	7.311G	36.13	54.00	-17.87	7.60	3	Vertical	268	1.50	-
2437MHz	Pass	PK	4.874G	50.63	74.00	-23.37	2.32	3	Vertical	15	2.41	-
2437MHz	Pass	PK	7.311G	49.79	74.00	-24.21	7.60	3	Vertical	268	1.50	-
2462MHz	Pass	AV	2.4608G	95.52	Inf	-Inf	31.44	3	Horizontal	301	1.01	-
2462MHz	Pass	AV	2.5G	44.59	54.00	-9.41	31.59	3	Horizontal	301	1.01	-
2462MHz	Pass	PK	2.4606G	98.51	Inf	-Inf	31.44	3	Horizontal	301	1.01	-
2462MHz	Pass	PK	2.5G	57.67	74.00	-16.33	31.59	3	Horizontal	301	1.01	-
2462MHz	Pass	AV	2.461G	93.53	Inf	-Inf	31.44	3	Vertical	57	3.69	-
2462MHz	Pass	AV	2.5G	44.59	54.00	-9.41	31.59	3	Vertical	57	3.69	-
2462MHz	Pass	PK	2.4606G	96.82	Inf	-Inf	31.44	3	Vertical	57	3.69	-
2462MHz	Pass	PK	2.5G	56.06	74.00	-17.94	31.59	3	Vertical	57	3.69	-
2462MHz	Pass	AV	4.924G	51.13	54.00	-2.87	2.63	3	Horizontal	66	2.47	-
2462MHz	Pass	AV	7.386G	42.51	54.00	-11.49	8.51	3	Horizontal	84	1.38	-
2462MHz	Pass	PK	4.924G	54.13	74.00	-19.87	2.63	3	Horizontal	66	2.47	-
2462MHz	Pass	PK	7.386G	52.31	74.00	-21.69	8.51	3	Horizontal	84	1.38	-
2462MHz	Pass	AV	4.924G	53.26	54.00	-0.74	2.63	3	Vertical	10	2.34	-
2462MHz	Pass	AV	7.386G	45.51	54.00	-8.49	8.51	3	Vertical	15	1.50	-
2462MHz	Pass	PK	4.924G	55.63	74.00	-18.37	2.63	3	Vertical	10	2.34	-

SPORTON INTERNATIONAL INC.

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Appendix F.3

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
mode	Result	Type	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	Condition	(°)	(m)	Comments
2462MHz	Pass	PK	7.386G	52.71	74.00	-21.29	8.51	3	Vertical	15	1.50	
802.11g_(6Mbps)_2TX	-	-	-	-	-	-21.23	-	-	-	-	-	_
2412MHz	Pass	AV	2.39G	53.65	54.00	-0.35	31.17	3	Horizontal	3	1.04	_
2412MHz	Pass	AV	2.416G	97.29	Inf	-0.55 -Inf	31.17	3	Horizontal	3	1.04	
2412MHz	Pass	PK	2.3898G	66.05	74.00	-7.95	31.17	3	Horizontal	3	1.04	-
	Pass	PK	2.4158G			-7.95 -Inf		3		3		-
2412MHz		AV		104.55	Inf		31.27	3	Horizontal		1.04	
2412MHz	Pass		2.3898G	51.72	54.00	-2.28	31.17		Vertical	304	3.69	-
2412MHz	Pass	AV	2.4146G	94.42	Inf	-Inf	31.27	3	Vertical	304	3.69	-
2412MHz	Pass	PK	2.3882G	63.32	74.00	-10.68	31.16	3	Vertical	304	3.69	-
2412MHz	Pass	PK	2.4144G	102.34	Inf	-Inf	31.26	3	Vertical	304	3.69	-
2412MHz	Pass	AV	4.824G	39.20	54.00	-14.80	2.16	3	Horizontal	57	1.01	-
2412MHz	Pass	PK	4.824G	50.32	74.00	-23.68	2.16	3	Horizontal	57	1.01	-
2412MHz	Pass	AV	4.824G	37.25	54.00	-16.75	2.48	3	Vertical	320	1.02	-
2412MHz	Pass	PK	4.824G	45.66	74.00	-28.34	2.48	3	Vertical	320	1.02	-
2437MHz	Pass	AV	2.3894G	46.62	54.00	-7.38	31.17	3	Horizontal	69	1.00	-
2437MHz	Pass	AV	2.4298G	93.88	Inf	-Inf	31.32	3	Horizontal	69	1.00	-
2437MHz	Pass	AV	2.4842G	47.27	54.00	-6.73	31.53	3	Horizontal	69	1.00	-
2437MHz	Pass	PK	2.367G	57.50	74.00	-16.50	31.08	3	Horizontal	69	1.00	-
2437MHz	Pass	PK	2.4302G	100.98	Inf	-Inf	31.32	3	Horizontal	69	1.00	-
2437MHz	Pass	PK	2.4862G	58.03	74.00	-15.97	31.54	3	Horizontal	69	1.00	-
2437MHz	Pass	AV	2.3646G	46.40	54.00	-7.60	31.07	3	Vertical	301	3.60	-
2437MHz	Pass	AV	2.4294G	91.17	Inf	-Inf	31.32	3	Vertical	301	3.60	-
2437MHz	Pass	AV	2.4946G	47.29	54.00	-6.71	31.57	3	Vertical	301	3.60	-
2437MHz	Pass	PK	2.3566G	57.49	74.00	-16.51	31.04	3	Vertical	301	3.60	-
2437MHz	Pass	PK	2.433G	98.99	Inf	-Inf	31.34	3	Vertical	301	3.60	-
2437MHz	Pass	PK	2.4838G	58.12	74.00	-15.88	31.53	3	Vertical	301	3.60	-
2437MHz	Pass	AV	4.874G	35.54	54.00	-18.46	2.55	3	Horizontal	320	1.14	-
2437MHz	Pass	AV	7.311G	38.99	54.00	-15.01	8.42	3	Horizontal	20	1.50	-
2437MHz	Pass	PK	4.874G	46.94	74.00	-27.06	2.55	3	Horizontal	320	1.14	-
2437MHz	Pass	PK	7.311G	50.67	74.00	-23.33	8.42	3	Horizontal	20	1.50	-
2437MHz	Pass	AV	4.874G	37.01	54.00	-16.99	2.55	3	Vertical	17	1.14	-
2437MHz	Pass	AV	7.311G	38.94	54.00	-15.06	8.42	3	Vertical	317	1.50	-
2437MHz	Pass	PK	4.874G	48.85	74.00	-25.15	2.55	3	Vertical	17	1.14	-
2437MHz	Pass	PK	7.311G	50.98	74.00	-23.02	8.42	3	Vertical	317	1.50	-
2462MHz	Pass	AV	2.46G	96.35	Inf	-Inf	31.44	3	Horizontal	61	1.01	-
2462MHz	Pass	AV	2.483502G	50.55	54.00	-3.45	31.53	3	Horizontal	61	1.01	-
2462MHz	Pass	PK	2.46G	102.96	Inf	-Inf	31.44	3	Horizontal	61	1.01	-
2462MHz	Pass	PK	2.483502G	61.12	74.00	-12.88	31.53	3	Horizontal	61	1.01	-
2462MHz	Pass	AV	2.4548G	93.78	Inf	-Inf	31.42	3	Vertical	301	3.57	-
2462MHz	Pass	AV	2.483502G	48.80	54.00	-5.20	31.53	3	Vertical	301	3.57	-
2462MHz	Pass	PK	2.4594G	100.89	Inf	-Inf	31.44	3	Vertical	301	3.57	-
2462MHz	Pass	PK	2.4966G	59.64	74.00	-14.36	31.58	3	Vertical	301	3.57	-
2462MHz	Pass	AV	4.924G	40.29	54.00	-13.71	2.63	3	Horizontal	53	1.04	-
2462MHz	Pass	AV	7.386G	41.10	54.00	-12.90	8.51	3	Horizontal	253	1.50	-
2462MHz	Pass	PK	4.924G	51.85	74.00	-22.15	2.63	3	Horizontal	53	1.04	-
2462MHz	Pass	PK	7.386G	50.75	74.00	-23.25	8.51	3	Horizontal	253	1.50	-
2462MHz	Pass	AV	4.924G	40.49	54.00	-13.51	2.63	3	Vertical	9	3.51	-
2462MHz	Pass	AV	7.386G	39.22	54.00	-14.78	8.51	3	Vertical	219	1.50	-
2462MHz	Pass	PK	4.924G	51.86	74.00	-22.14	2.63	3	Vertical	9	3.51	-
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SPORTON INTERNATIONAL INC.

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Appendix F.3

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
Mode	Result	Type	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	Condition	(°)	(m)	Comments
2462MHz	Pass	PK	7.386G	50.55	74.00	-23.45	8.51	3	Vertical	219	1.50	
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-20.40	-	-	-	-	-	_
2412MHz	Pass	AV	2.39G	52.61	54.00	-1.39	31.17	3	Horizontal	60	1.01	_
2412MHz	Pass	AV	2.416G	95.40	Inf	-1.55 -Inf	31.17	3	Horizontal	60	1.01	
2412MHz	Pass	PK	2.3896G	65.79	74.00	-8.21	31.17	3	Horizontal	60	1.01	-
2412MHz	Pass	PK	2.4158G	103.12	Inf	-0.21	31.17	3	Horizontal	60	1.01	-
2412MHz	Pass	AV	2.4130G 2.39G	50.82	54.00	-3.18	31.17	3	Vertical	316	3.69	-
2412MHz		AV	2.416G	91.83	Inf		31.17	3		316	3.69	-
2412MHz	Pass					-Inf		3	Vertical			-
2412MHz	Pass	PK PK	2.3894G	62.64 99.49	74.00 Inf	-11.36	31.17	3	Vertical Vertical	316	3.69	-
	Pass		2.4146G			-Inf	31.27					-
2412MHz	Pass	AV	4.824G	37.66	54.00	-16.34	2.48	3	Horizontal	40	1.01	-
2412MHz	Pass	PK	4.824G	48.41	74.00	-25.59	2.48	3	Horizontal	40	1.01	-
2412MHz	Pass	AV	4.824G	37.20	54.00	-16.80	2.48	3	Vertical	355	3.67	-
2412MHz	Pass	PK	4.824G	47.94	74.00	-26.06	2.48	3	Vertical	355	3.67	-
2437MHz	Pass	AV	2.3878G	46.49	54.00	-7.51	31.16	3	Horizontal	55	1.08	-
2437MHz	Pass	AV	2.4306G	92.42	Inf	-Inf	31.33	3	Horizontal	55	1.08	-
2437MHz	Pass	AV	2.491G	47.05	54.00	-6.95	31.56	3	Horizontal	55	1.08	-
2437MHz	Pass	PK	2.3818G	57.98	74.00	-16.02	31.14	3	Horizontal	55	1.08	-
2437MHz	Pass	PK	2.431G	99.77	Inf	-Inf	31.33	3	Horizontal	55	1.08	-
2437MHz	Pass	PK	2.4866G	58.11	74.00	-15.89	31.54	3	Horizontal	55	1.08	-
2437MHz	Pass	AV	2.389G	46.45	54.00	-7.55	31.17	3	Vertical	317	3.69	-
2437MHz	Pass	AV	2.4306G	88.58	Inf	-Inf	31.33	3	Vertical	317	3.69	-
2437MHz	Pass	AV	2.4966G	47.12	54.00	-6.88	31.58	3	Vertical	317	3.69	-
2437MHz	Pass	PK	2.3622G	57.50	74.00	-16.50	31.06	3	Vertical	317	3.69	-
2437MHz	Pass	PK	2.4306G	96.65	Inf	-Inf	31.33	3	Vertical	317	3.69	-
2437MHz	Pass	PK	2.4922G	57.70	74.00	-16.30	31.56	3	Vertical	317	3.69	-
2437MHz	Pass	AV	4.874G	34.35	54.00	-19.65	2.55	3	Horizontal	323	1.06	-
2437MHz	Pass	AV	7.311G	39.12	54.00	-14.88	8.42	3	Horizontal	23	1.50	-
2437MHz	Pass	PK	4.874G	46.12	74.00	-27.88	2.55	3	Horizontal	323	1.06	-
2437MHz	Pass	PK	7.311G	50.52	74.00	-23.48	8.42	3	Horizontal	23	1.50	-
2437MHz	Pass	AV	4.874G	35.56	54.00	-18.44	2.55	3	Vertical	10	1.33	-
2437MHz	Pass	AV	7.311G	39.09	54.00	-14.91	8.42	3	Vertical	310	1.50	-
2437MHz	Pass	PK	4.874G	46.63	74.00	-27.37	2.55	3	Vertical	10	1.33	-
2437MHz	Pass	PK	7.311G	51.32	74.00	-22.68	8.42	3	Vertical	310	1.50	-
2462MHz	Pass	AV	2.4562G	95.14	Inf	-Inf	31.42	3	Horizontal	57	1.01	-
2462MHz	Pass	AV	2.483502G	51.97	54.00	-2.03	31.53	3	Horizontal	57	1.01	-
2462MHz	Pass	PK	2.4586G	102.85	Inf	-Inf	31.43	3	Horizontal	57	1.01	-
2462MHz	Pass	PK	2.483502G	62.46	74.00	-11.54	31.53	3	Horizontal	57	1.01	-
2462MHz	Pass	AV	2.4562G	90.32	Inf	-Inf	31.42	3	Vertical	316	3.56	-
2462MHz	Pass	AV	2.483502G	49.68	54.00	-4.32	31.53	3	Vertical	316	3.56	-
2462MHz	Pass	PK	2.4562G	98.29	Inf	-Inf	31.42	3	Vertical	316	3.56	-
2462MHz	Pass	PK	2.485G	60.31	74.00	-13.69	31.53	3	Vertical	316	3.56	-
2462MHz	Pass	AV	4.924G	39.98	54.00	-14.02	2.63	3	Horizontal	54	1.00	-
2462MHz	Pass	AV	7.386G	39.10	54.00	-14.90	8.51	3	Horizontal	254	1.50	-
2462MHz	Pass	PK	4.924G	51.62	74.00	-22.38	2.63	3	Horizontal	54	1.00	-
2462MHz	Pass	PK	7.386G	50.87	74.00	-23.13	8.51	3	Horizontal	254	1.50	-
2462MHz	Pass	AV	4.924G	39.52	54.00	-14.48	2.63	3	Vertical	359	2.50	-
2462MHz	Pass	AV	7.386G	39.24	54.00	-14.76	8.51	3	Vertical	59	1.50	-
2462MHz	Pass	PK	4.924G	51.22	74.00	-22.78	2.63	3	Vertical	359	2.50	-

SPORTON INTERNATIONAL INC.

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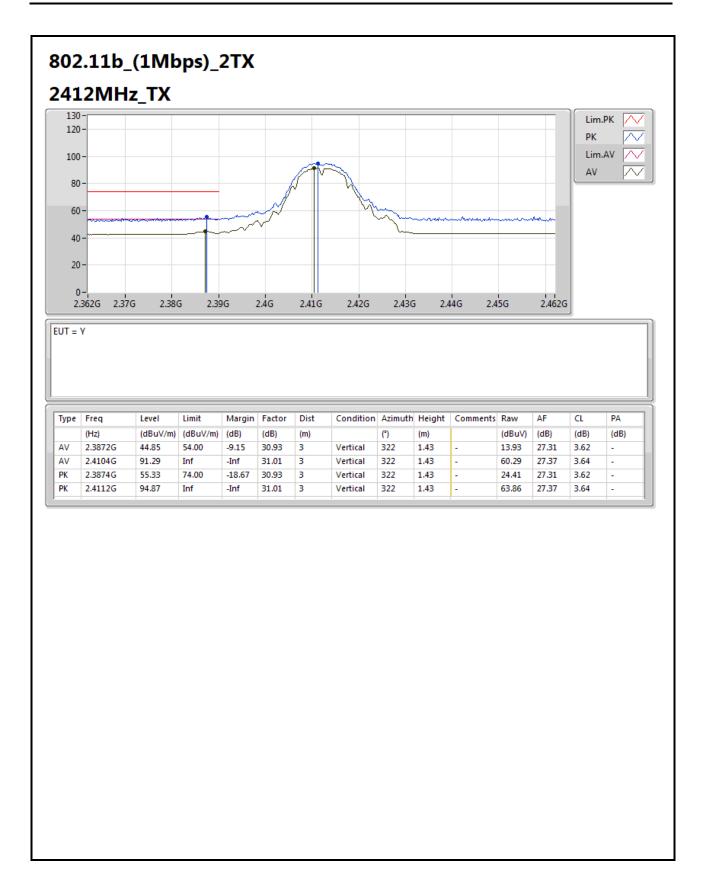
Appendix F.3

Mode	Result	Туре	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
2462MHz	Pass	PK	7.386G	51.04	74.00	-22.96	8.51	3	Vertical	59	1.50	-

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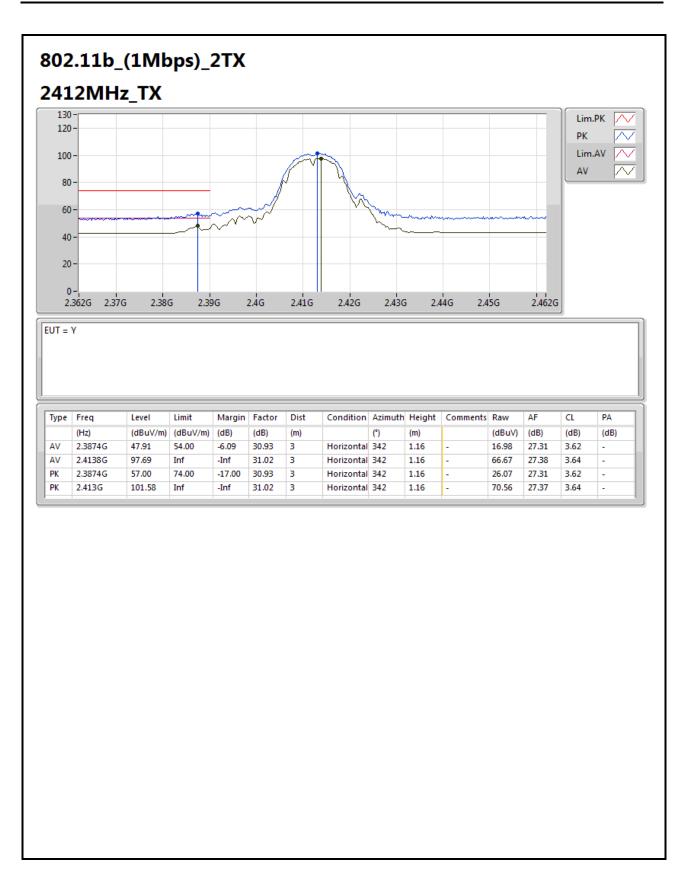
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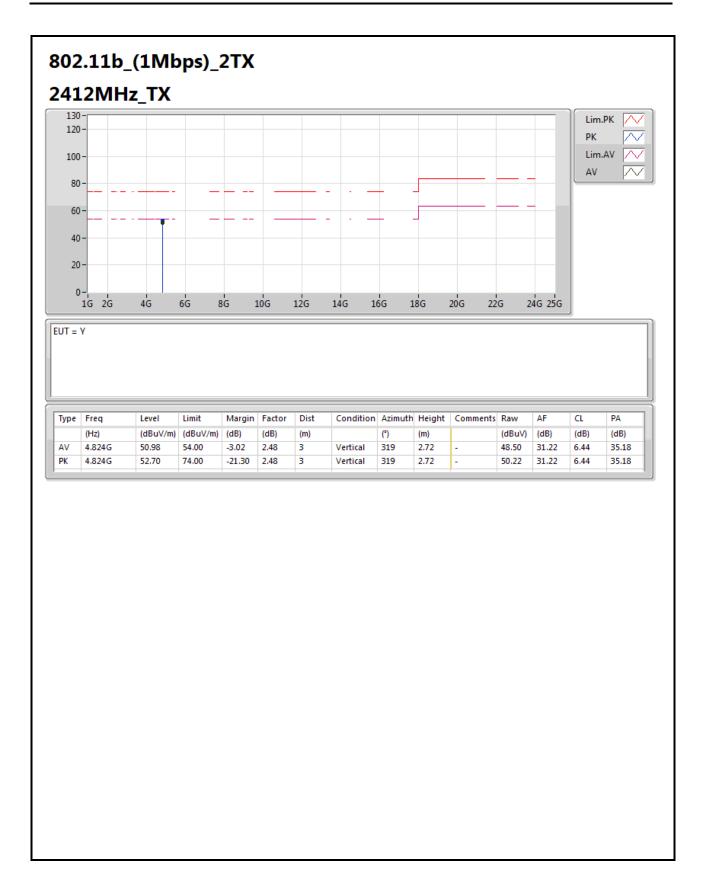
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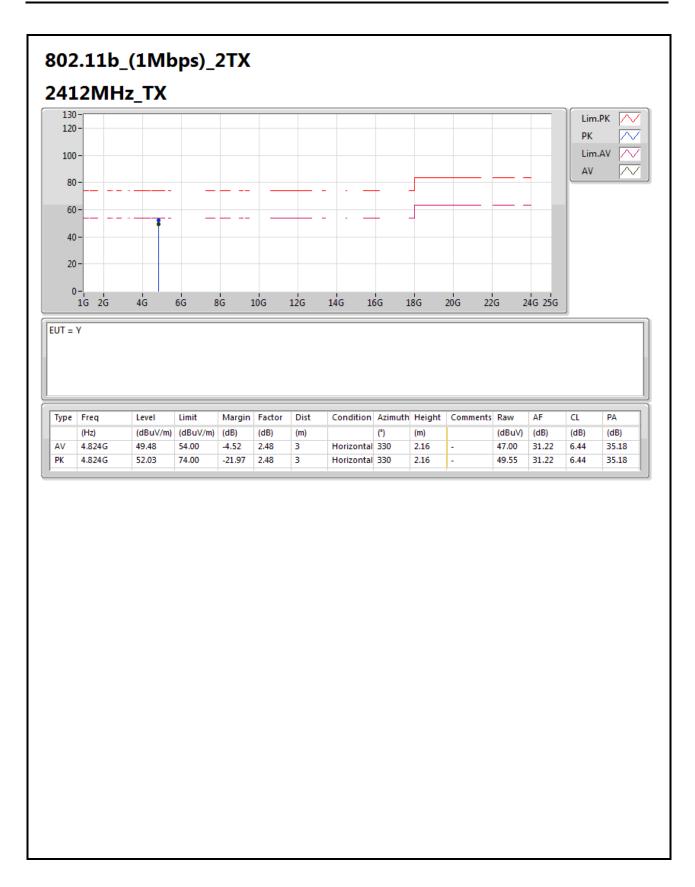
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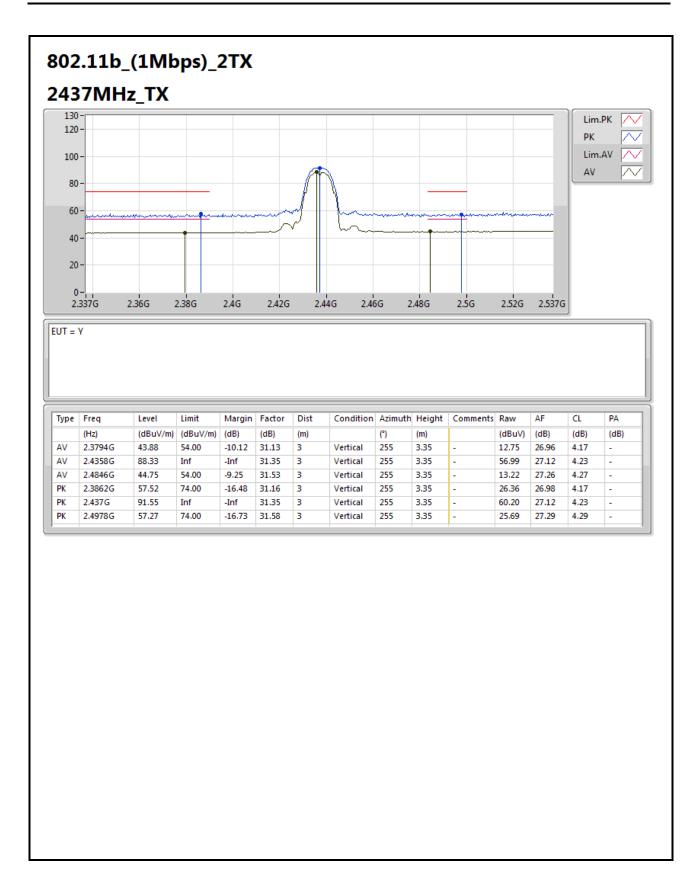
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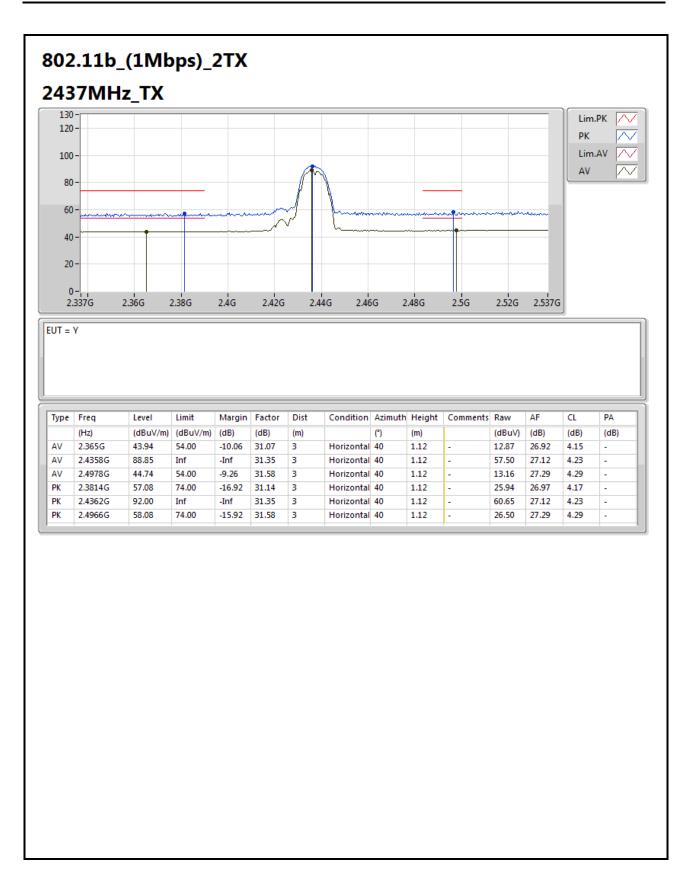
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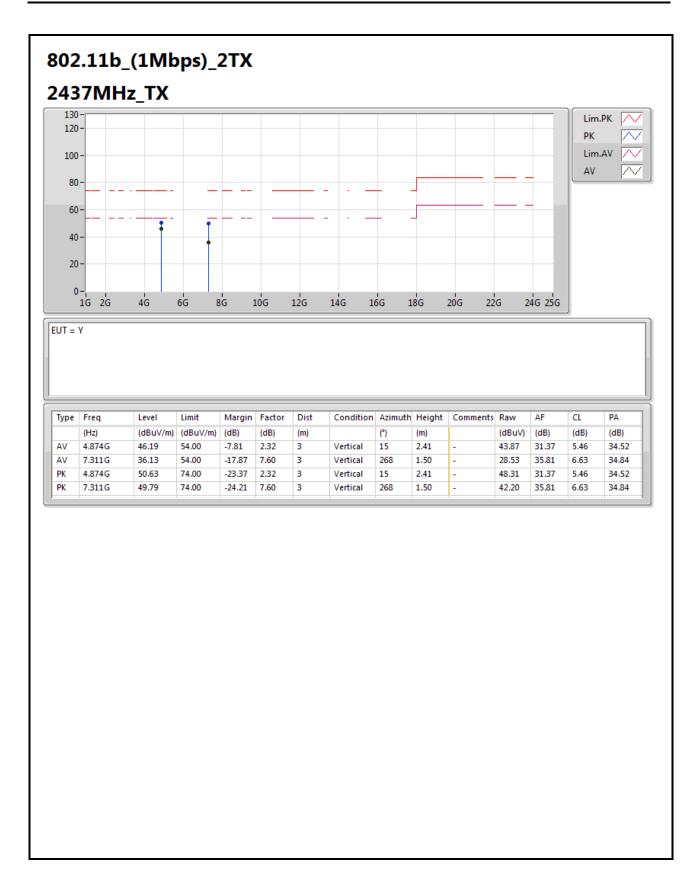
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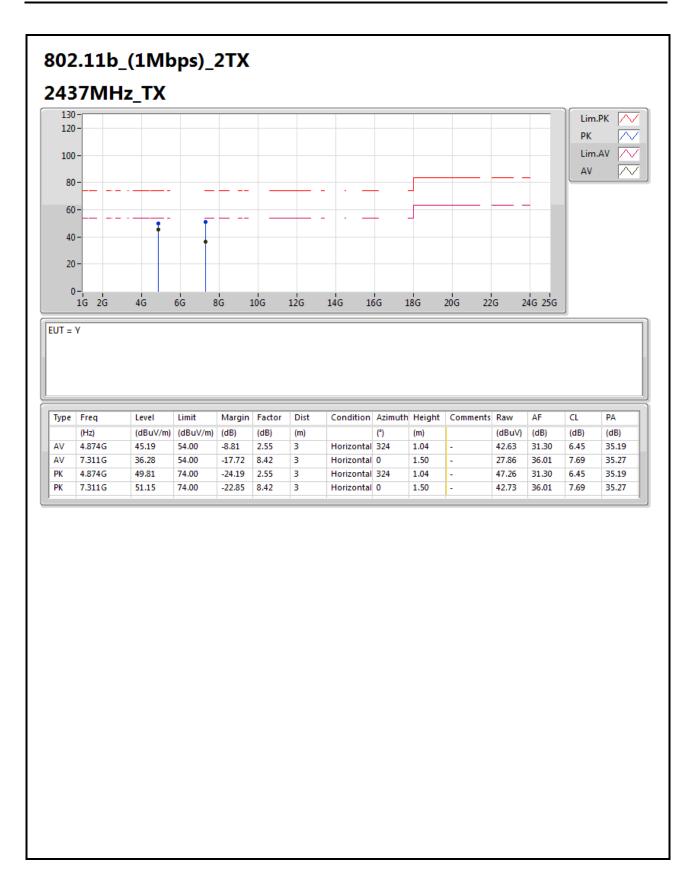
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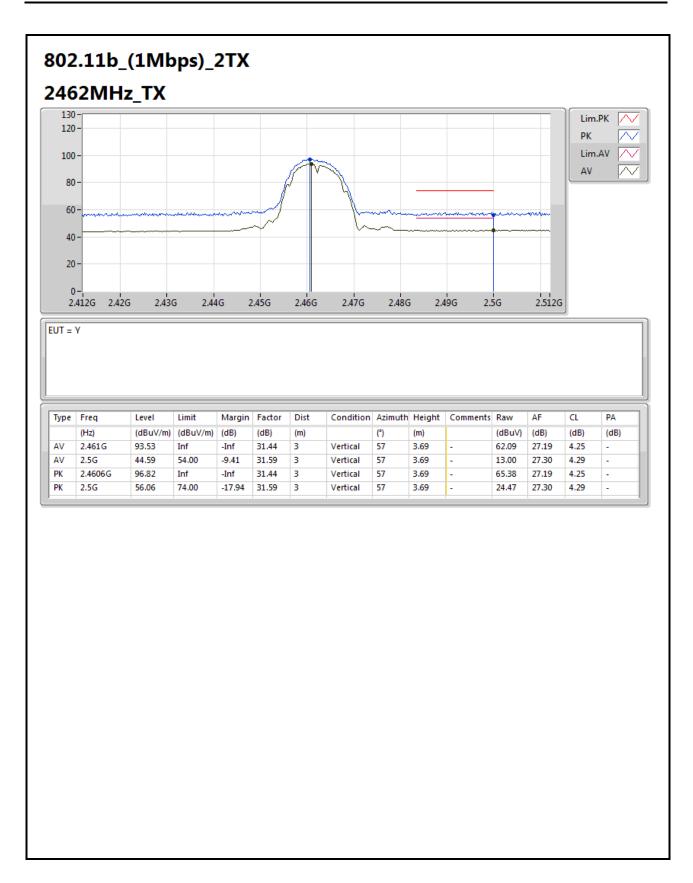
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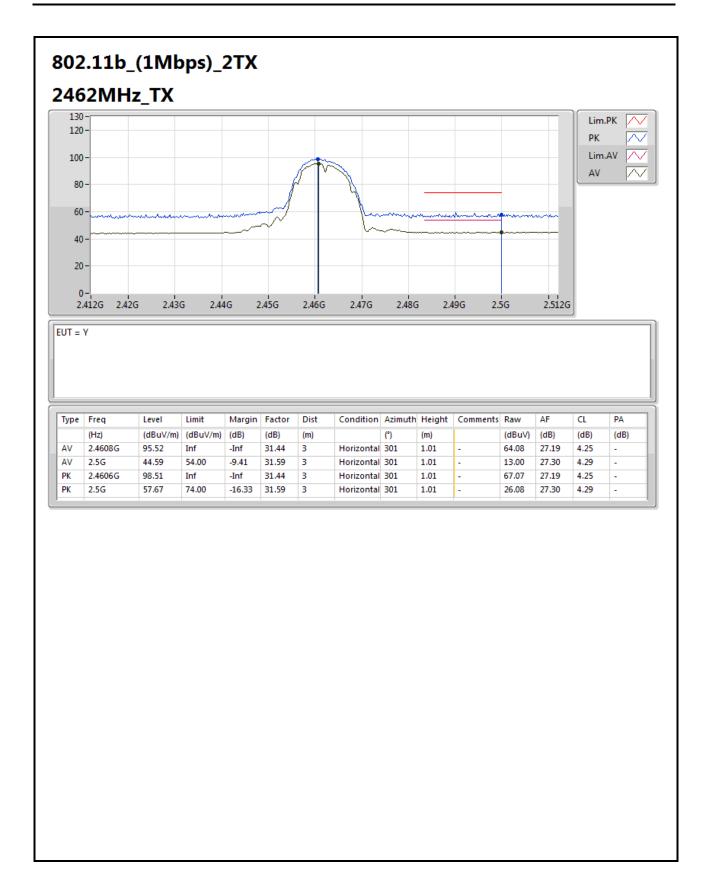
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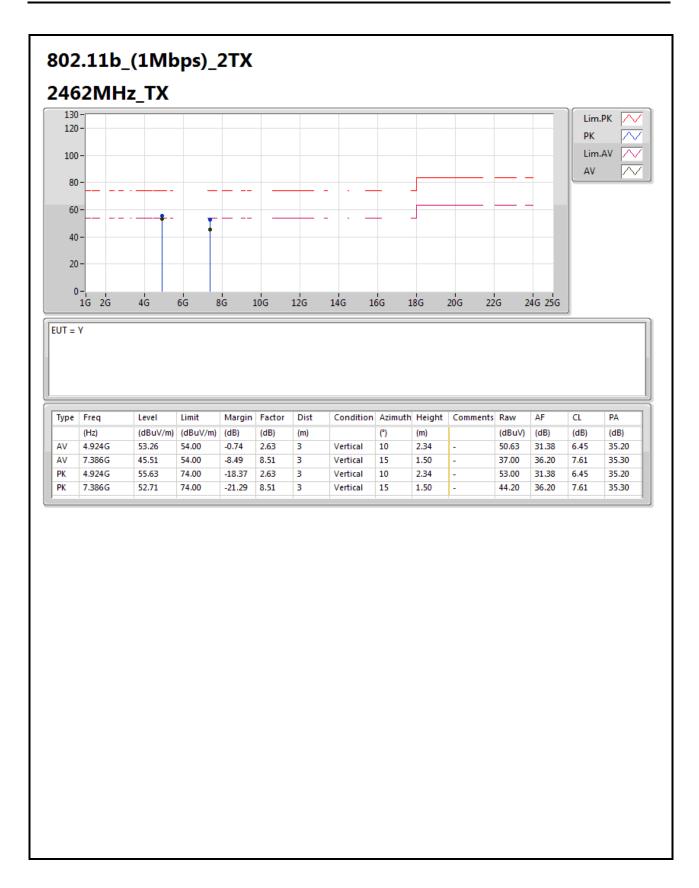
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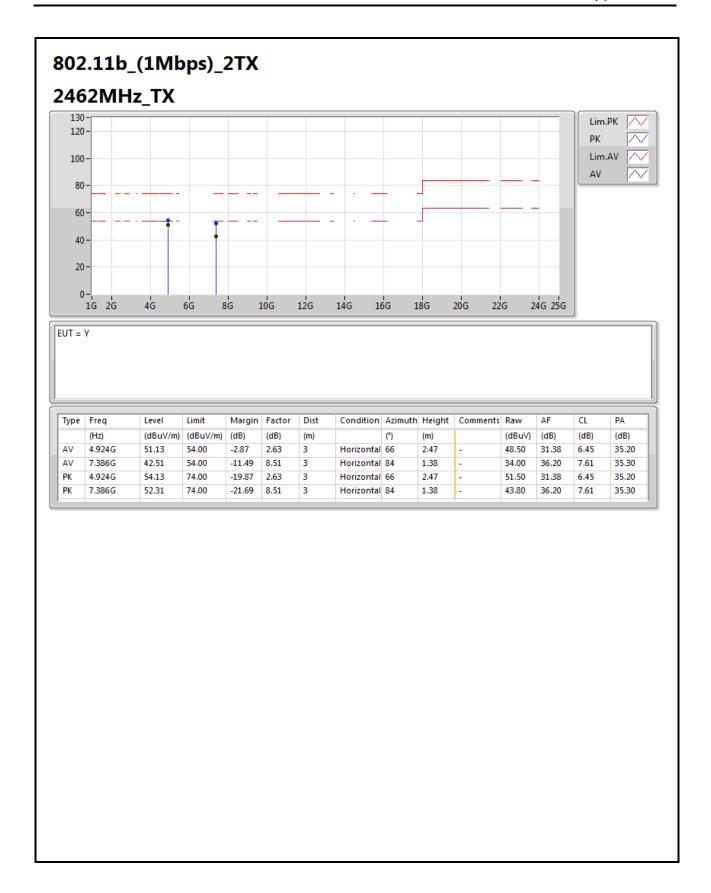
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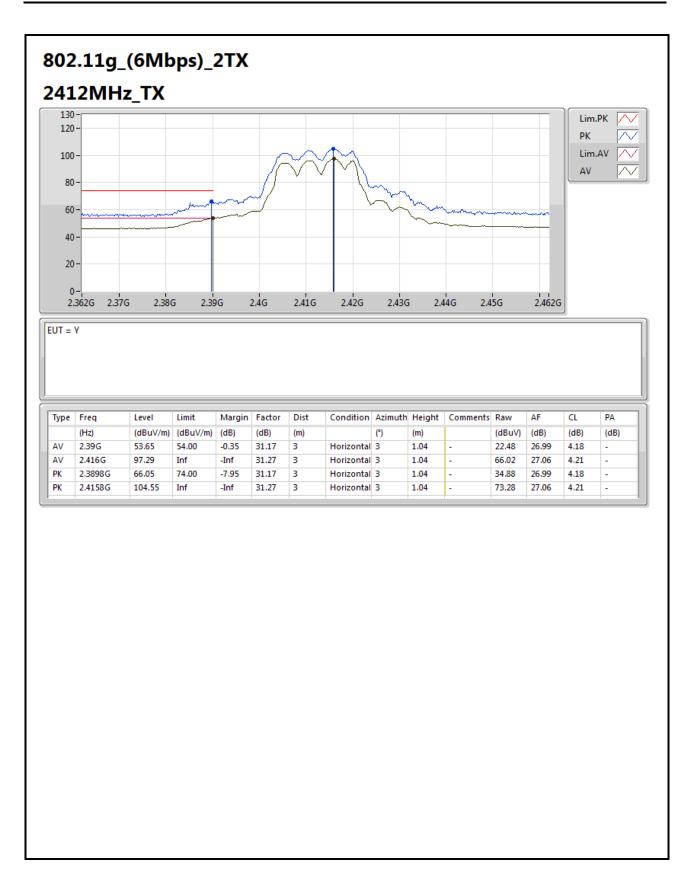
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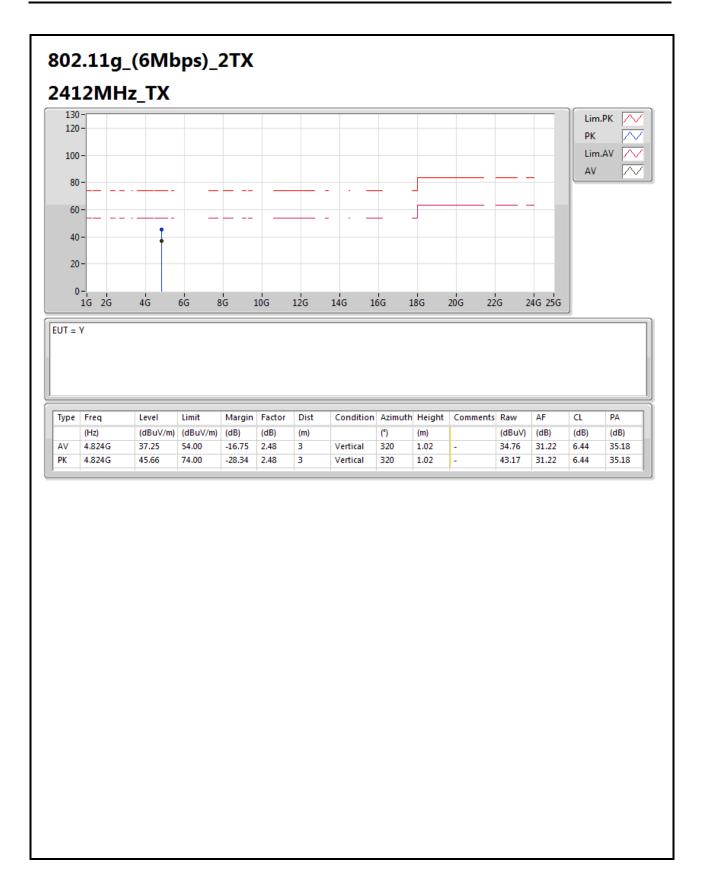
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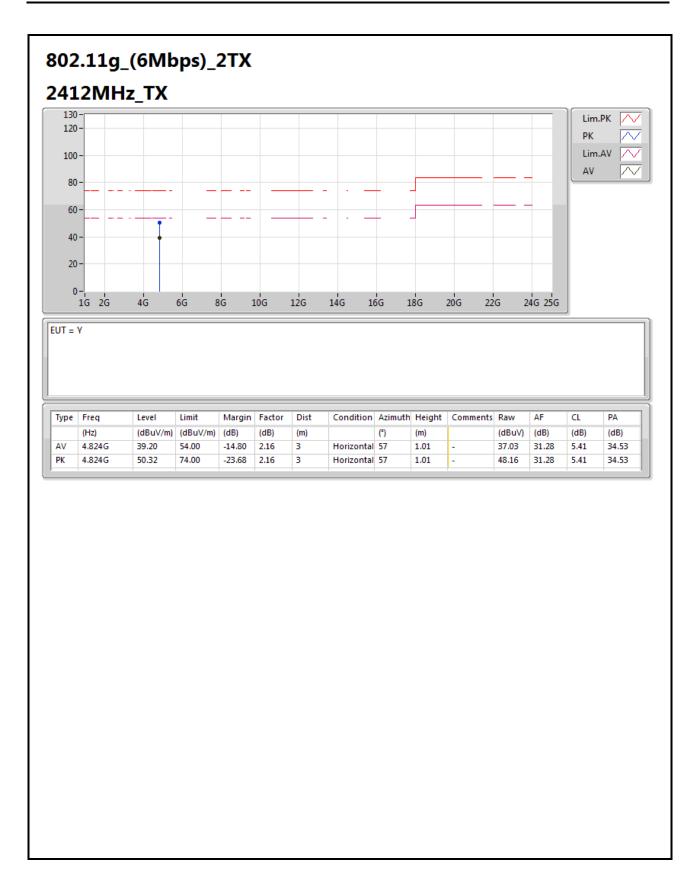
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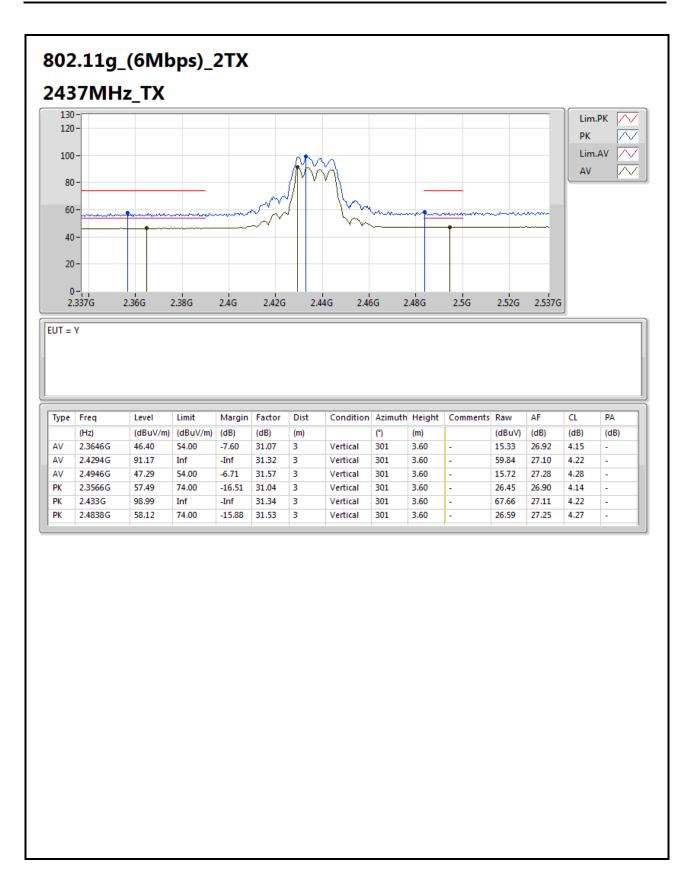
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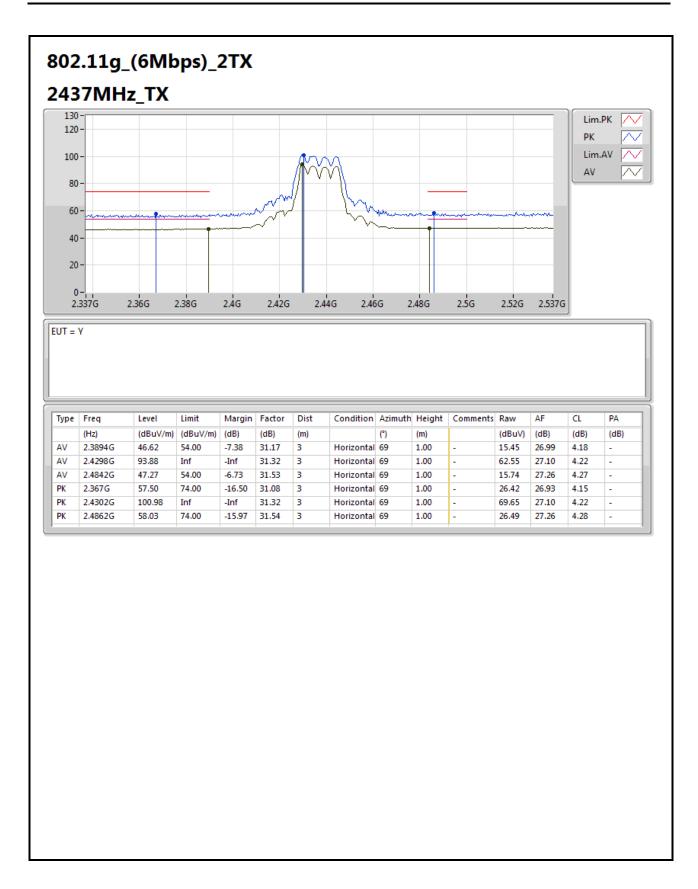
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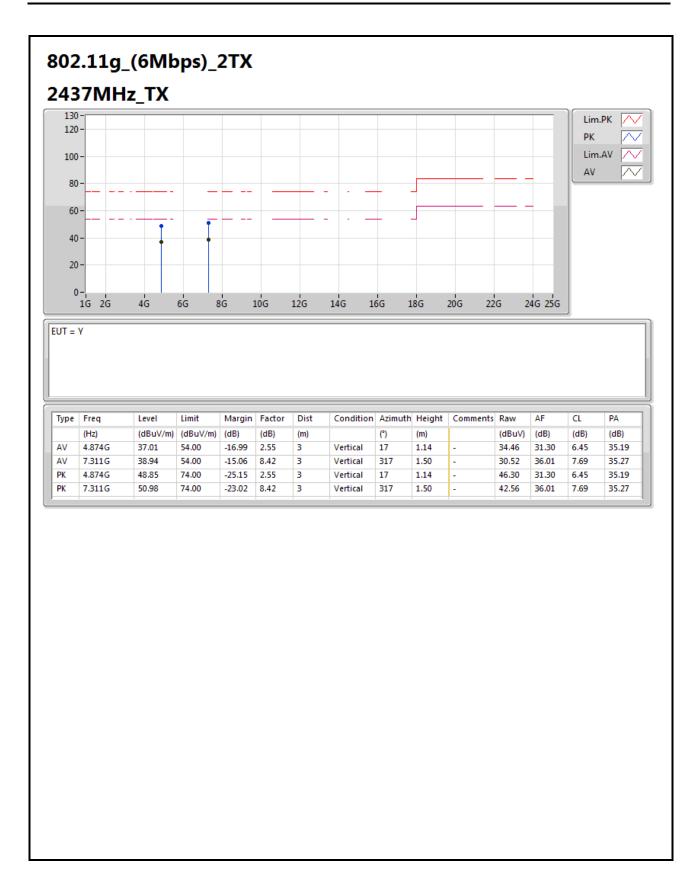
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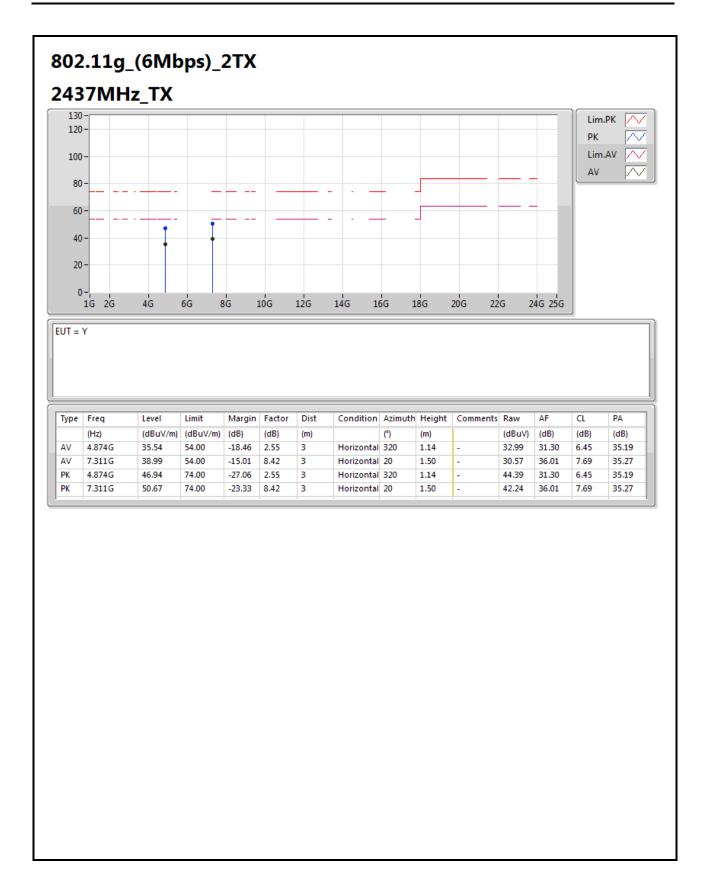
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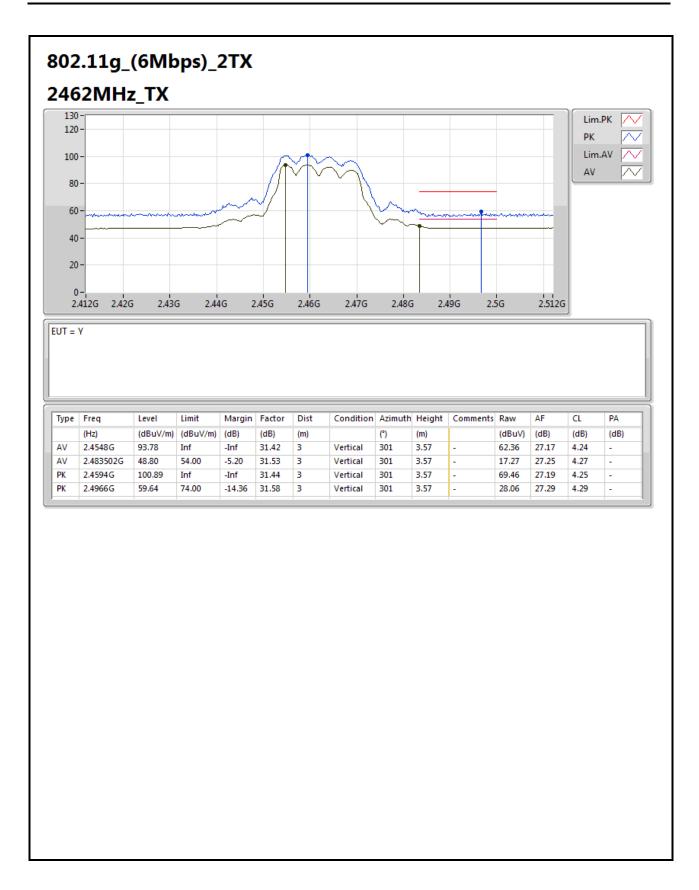
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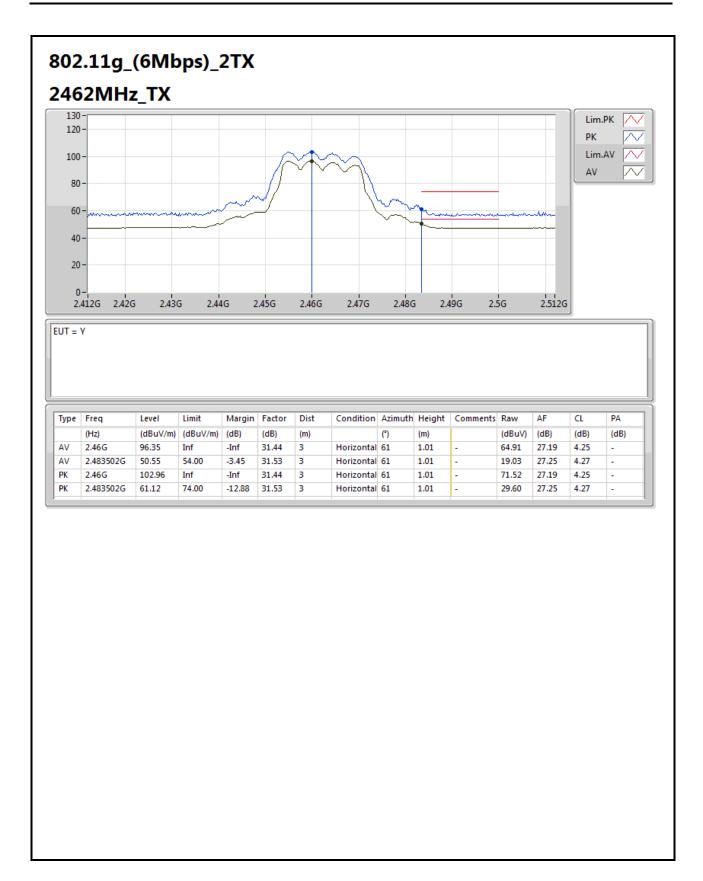
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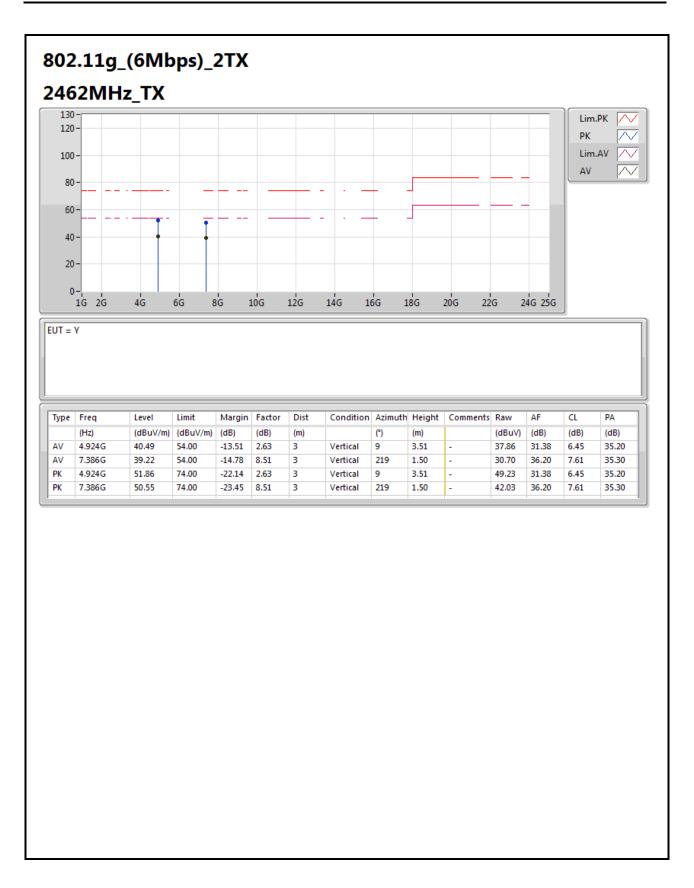
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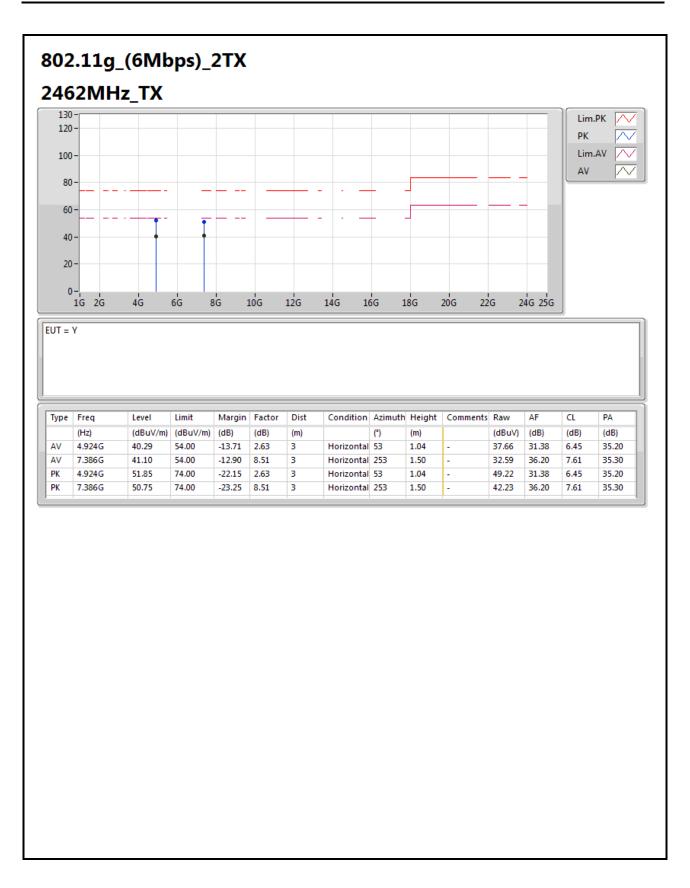
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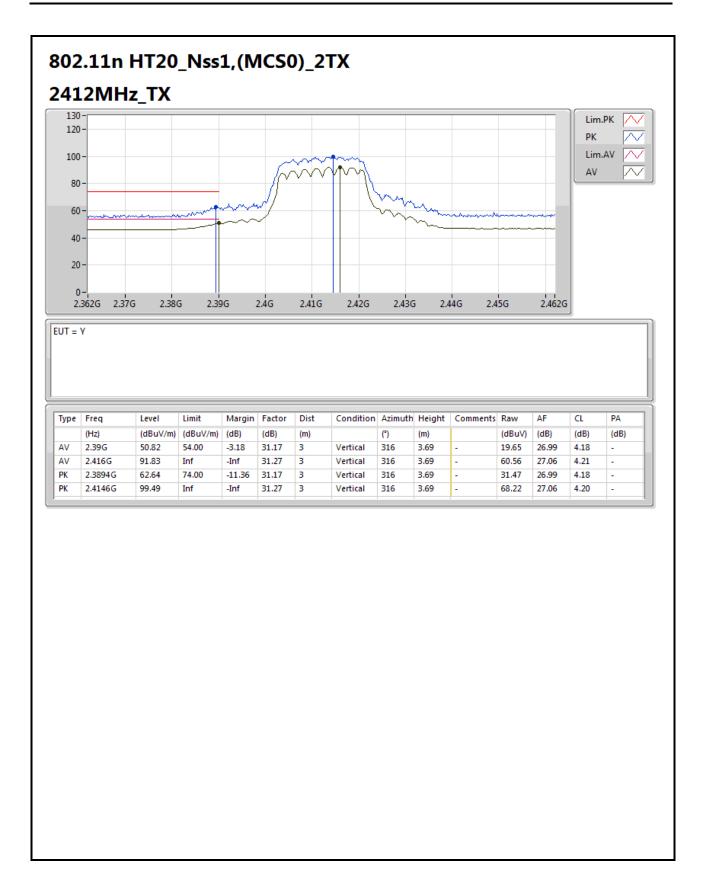
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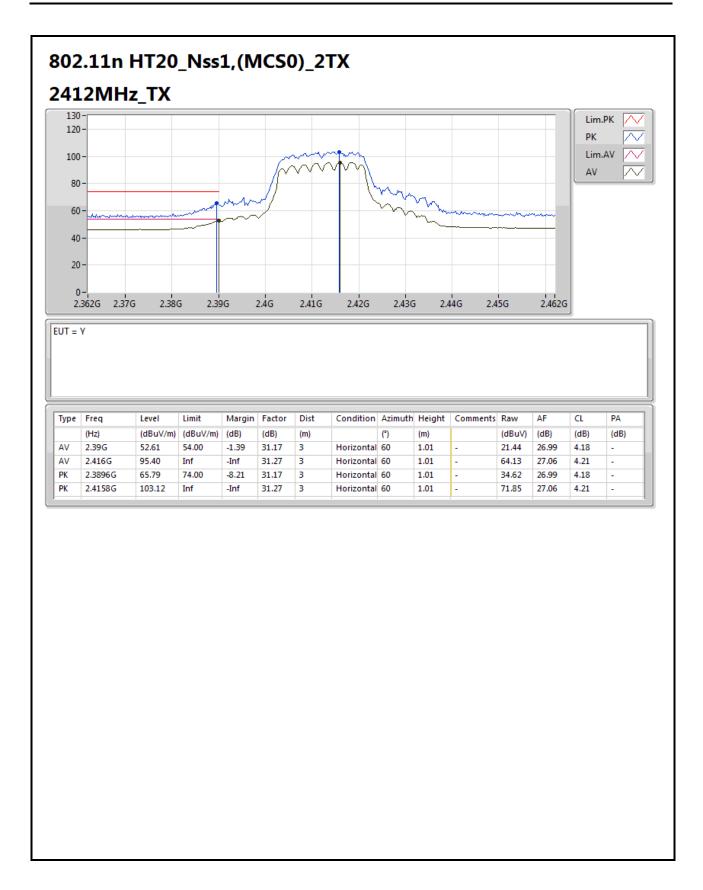
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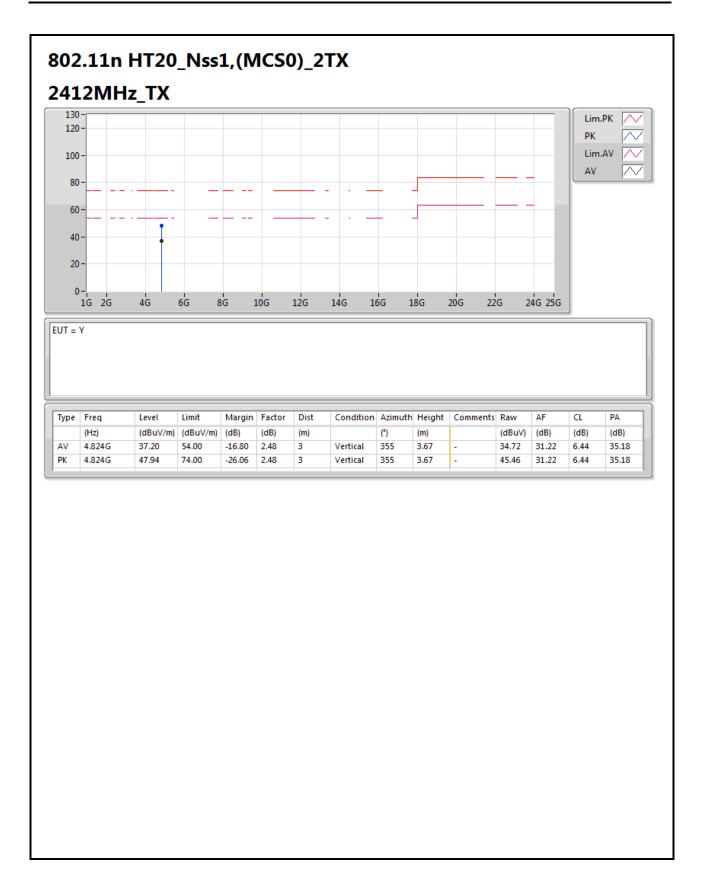
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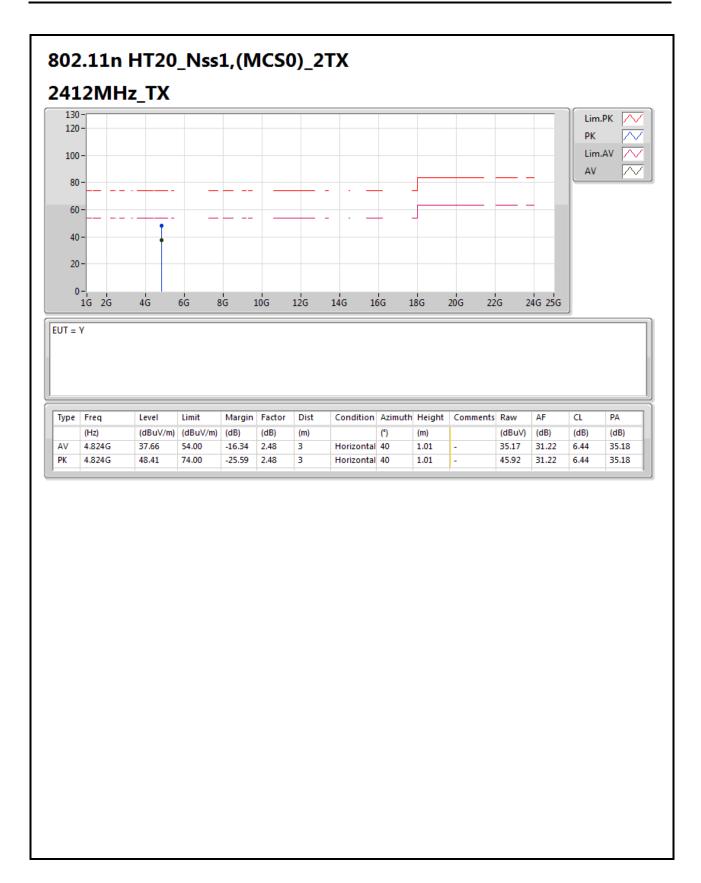
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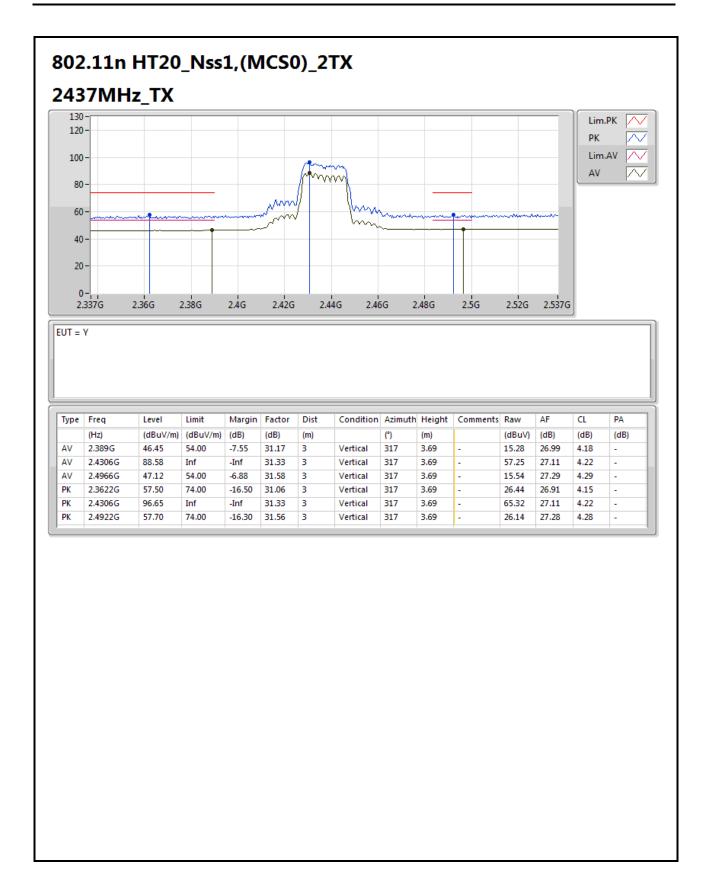
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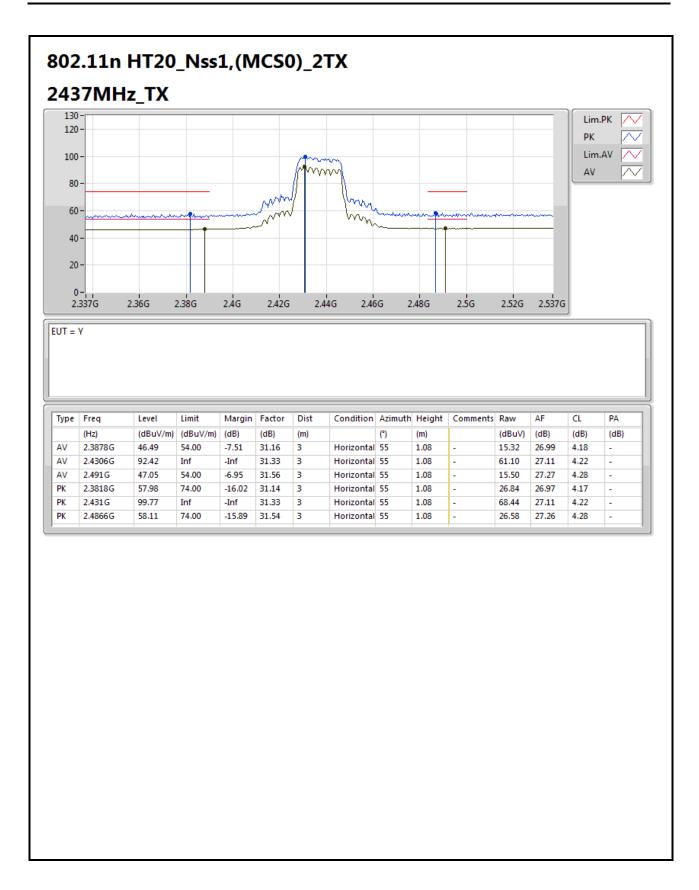
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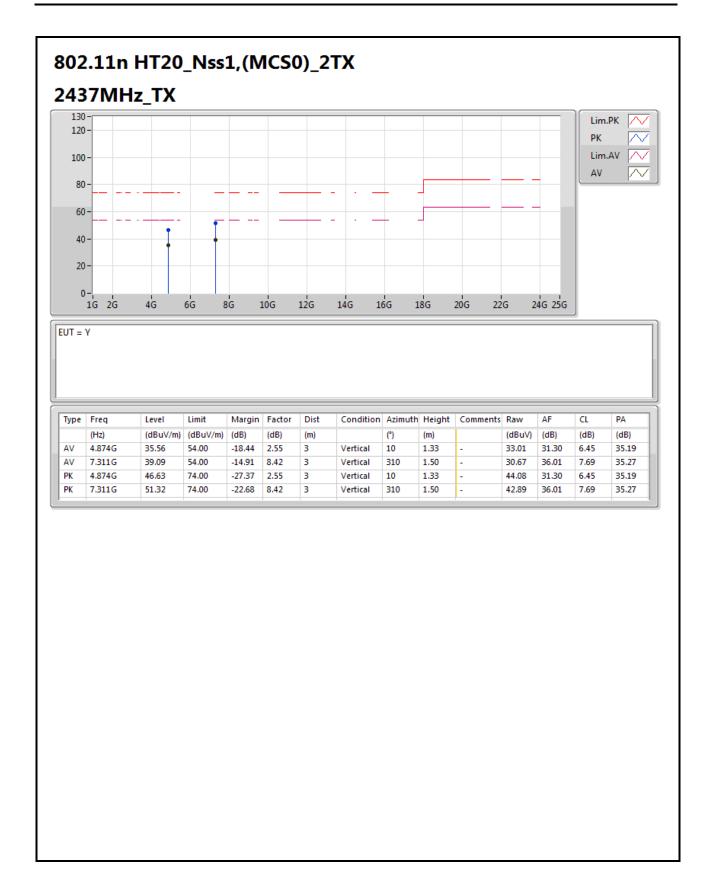
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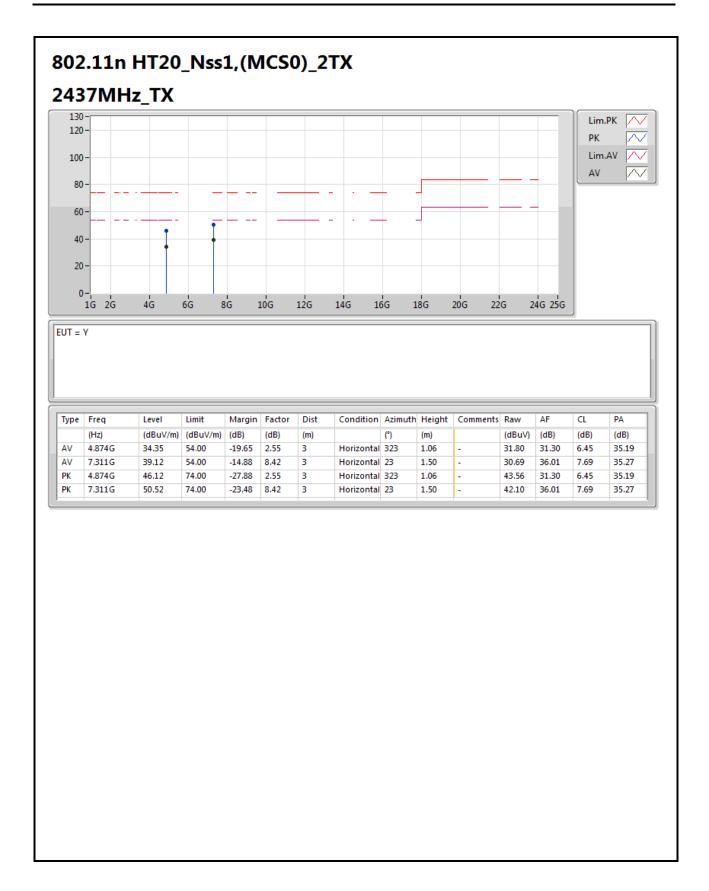
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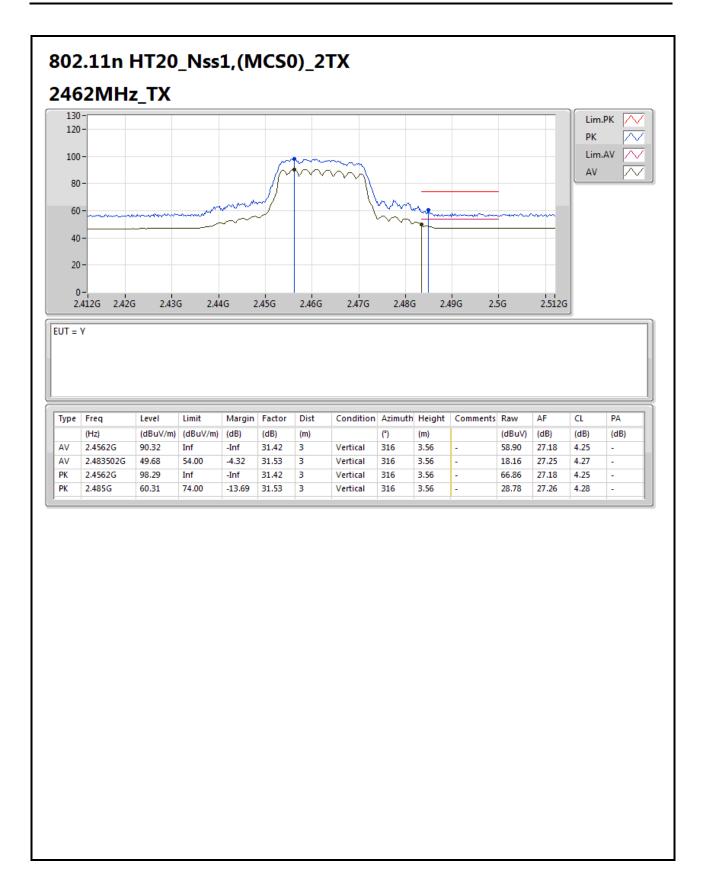
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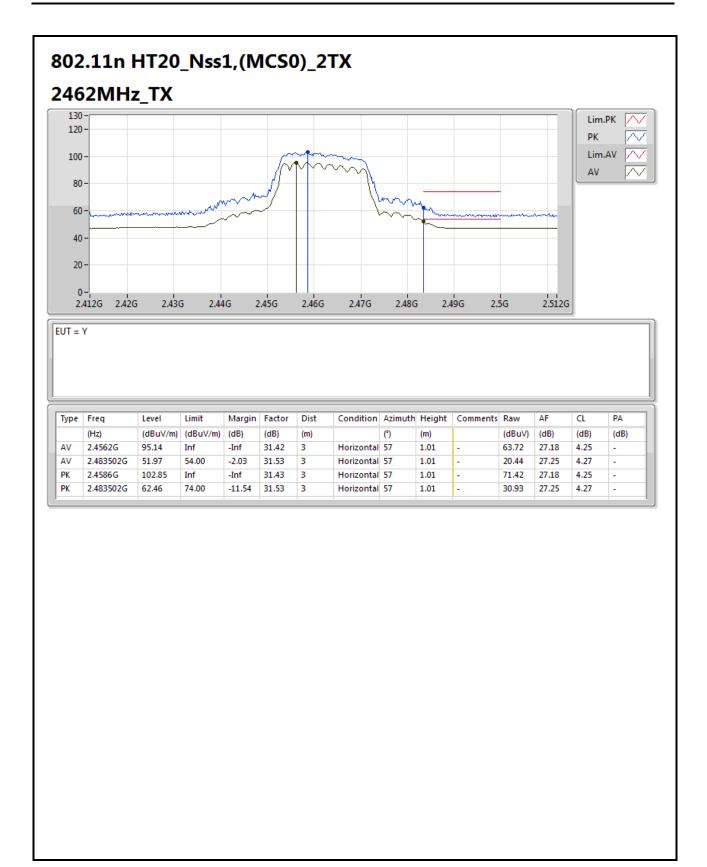
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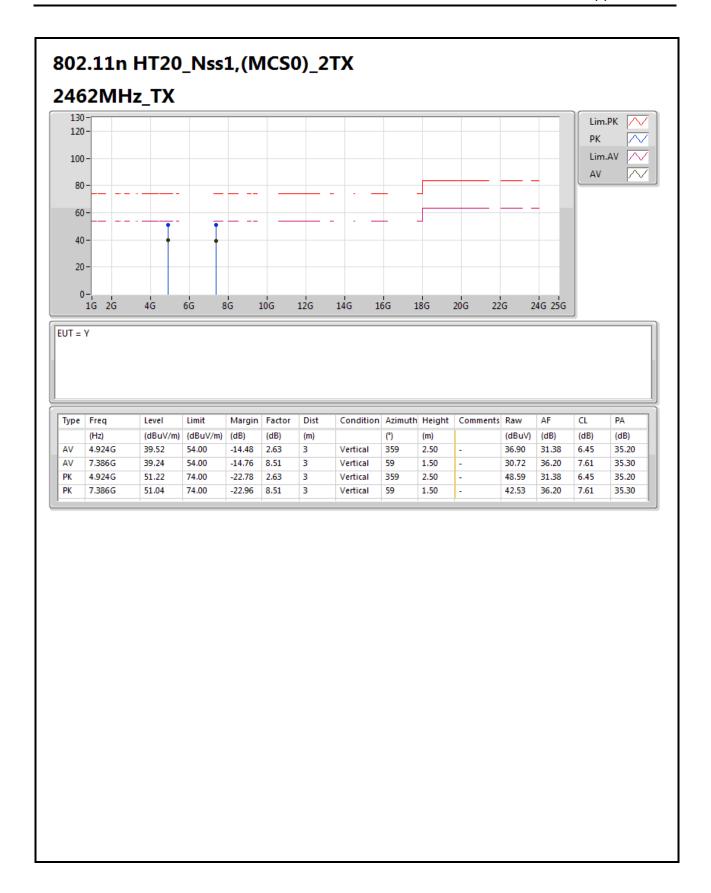
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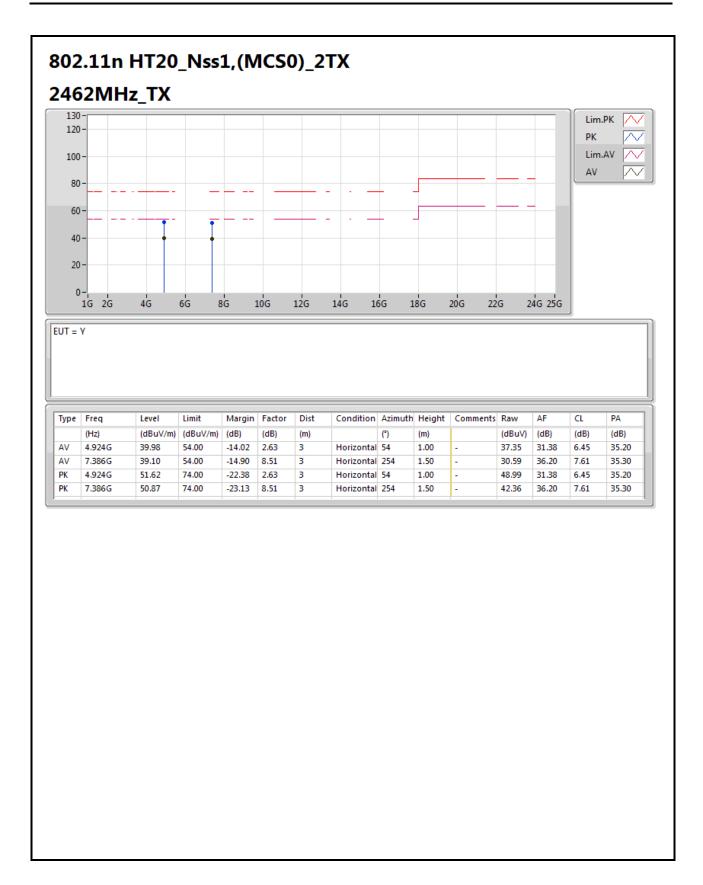
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