

Japan Test Report

Equipment : 802.11 b/g/n with antenna diversity module
Model No. : DNUK-FN88
Brand Name : FUNAI
Applicant : FUNAI ELECTRIC CO.,LTD.
Address : 7-7-1,Nakagaito,Daito,Osaka 574-0013,Japan
Standard : Article 2 Paragraph 1 Item 19
Received Date : Apr. 24, 2018
Tested Date : May 07 ~ May 10, 2018

Measurement was conducted by the following test method:
the test method of Ordinance Concerning Technical Regulations Conformity Certification
etc. of Specified Radio Equipment in Annex 1, the Ministry of Internal Affairs and
Communication notification in Annex "43" of Article 88, Paragraph 1 and ARIB STD-T66.

We, International Certification Corp., would like to declare that the tested sample has been
evaluated and in compliance with the requirement of the above standards. The test results
contained in this report refer exclusively to the product. It may be duplicated completely for
legal use with the approval of the applicant. It shall not be reproduced except in full without
the written approval of our laboratory.

Reviewed by:


James Fan / Assistant Manager

Approved by:


Gary Chang / Manager



Table of Contents

1	GENERAL DESCRIPTION	5
1.1	Information.....	5
1.2	Test Equipment and Calibration Data	8
1.3	Testing Applied Standards	8
1.4	Measurement Uncertainty	8
2	TEST CONFIGURATION	9
2.1	Testing Location and Conditions	9
2.2	The Worst Test Modes and Channel Details	9
3	TRANSMITTER TEST RESULTS	10
3.1	Antenna Power	10
3.2	Frequency Tolerance	12
3.3	Occupied Bandwidth	13
3.4	Spreading Bandwidth and Factor	14
3.5	Transmitter Spurious Emissions.....	15
3.6	Carrier Sense Measurement	16
3.7	Interference prevention function.....	17
4	RECEIVER TEST RESULTS	18
4.1	Receiver Spurious Emissions.....	18
5	PHOTOGRAPHS OF THE TEST CONFIGURATION	19
6	TEST LABORATORY INFORMATION.....	20
APPENDIX A.1 TEST RESULTS FOR ANTENNA POWER		
APPENDIX A.2 TEST RESULTS FOR ANTENNA POWER		
APPENDIX B. TEST RESULTS FOR FREQUENCY TOLERANCE		
APPENDIX C. TEST RESULTS FOR OCCUPIED BANDWIDTH		
APPENDIX D. TEST RESULTS FOR SPREADING BANDWIDTH AND FACTOR		
APPENDIX E. TEST RESULTS FOR TRANSMITTER SPURIOUS EMISSIONS		
APPENDIX F. TEST RESULTS FOR CARRIER SENSE MEASUREMENT		
APPENDIX G. TEST RESULTS FOR INTERFERENCE PREVENTION FUNCTION		
APPENDIX H. TEST RESULTS FOR RECEIVER SPURIOUS EMISSIONS		
APPENDIX I. ANTENNA INFORMATION		

Release Record

Report No.	Version	Description	Issued Date
JR631401-02	Rev. 01	Initial issue	May 25, 2018

Summary of Test Results

Ref. Std. Clause	Description	Result
3.2(2)(3)	Antenna Power	Pass
3.2(4)	Frequency Tolerance	Pass
3.2(6)	Transmitter Spurious Emission	Pass
3.2(7)	Occupied Bandwidth	Pass
3.2(8)	Spreading Bandwidth	Pass
3.2(9)	Spreading Factor	Pass
3.3(1)	Receiver Emission	Pass
3.4.1	Interference prevention function	Pass
3.4.1(3)	Carrier Sense	Pass

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

Power Type	DC 3.3V from host
Type(s) of Modulation / Technology	DBPSK, DQPSK, CCK / DSSS 64QAM, 16QAM, QPSK, BPSK / OFDM
Frequency Range (MHz)	2412 ~ 2472 MHz
Total Channel Number	13
Operating Mode: IEEE Std. 802.11 / Data rate (Mbps)	802.11b: Up to 11 Mbps 802.11g: Up to 54 Mbps 802.11n HT 20 (MCS 0~7) 802.11n HT 40 (MCS 0~7)
HW Version	1.0
SW Version	1.0

1.1.2 Antenna Details

Ant. No.	Model	Type	Connector	Gain (dBi)
1	Printed ANT	PIFA	No	2.57

Note: Please refer to Appendix I for more details about antenna pattern and other information.

1.1.3 Antenna Power

Operating Mode	Rated Power (mW/MHz)	Measured Conducted Power (mW/MHz)	Radiated Power (mW/MHz)
11b	9.00	9.03649	16.33052
11g	3.00	2.76058	4.98884
11n HT20	3.00	2.53513	4.58142
11n HT40	2.00	1.57761	2.85102

1.1.4 Channel List

Frequency band (MHz)		2400~2483.5	
802.11b / g / n HT 20		802.11n HT 40	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
1	2412	3	2422
2	2417	4	2427
3	2422	5	2432
4	2427	6	2437
5	2432	7	2442
6	2437	8	2447
7	2442	9	2452
8	2447	10	2457
9	2452	11	2462
10	2457	-	-
11	2462	-	-
12	2467	-	-
13	2472	-	-

1.1.5 Test Tool and Power Setting

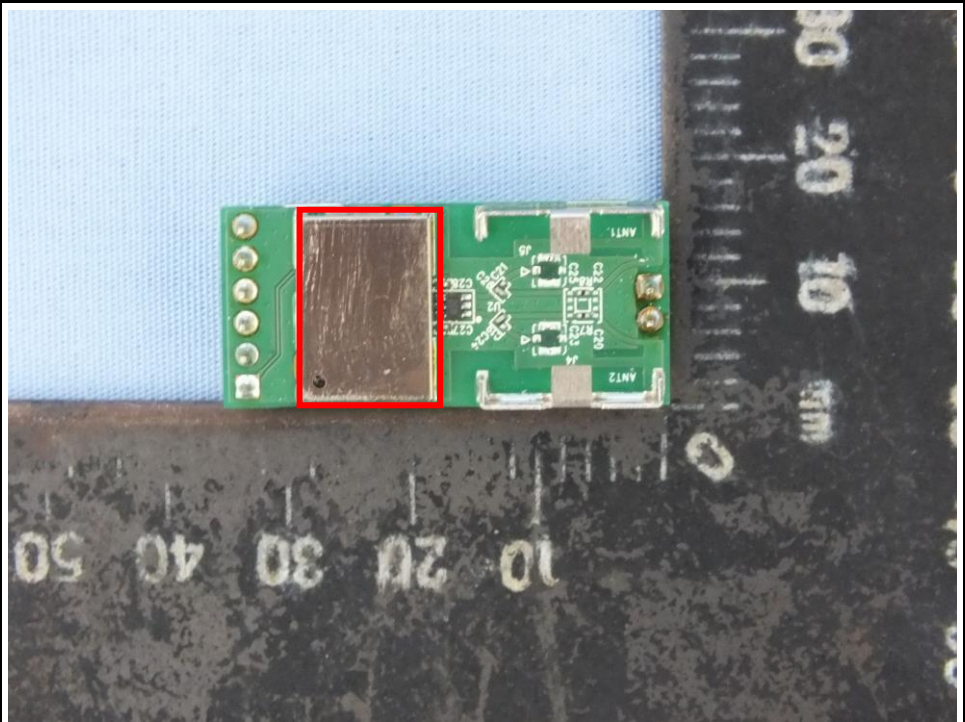
Test Tool
Realtek 11n 8188F USB WLAN MP Version 1.08.20160111

Power Setting							
Channel	Frequency (MHz)	802.11b	802.11g	802.11n HT20	Channel	Frequency (MHz)	802.11n HT40
1	2412	55	63	63	3	2422	63
7	2442	55	63	63	7	2442	63
13	2472	60	63	63	11	2462	63

1.1.6 Protection Method for High Frequency and Modulation Section

Protected Method	Description
Shielded case	RF and Modulation components are covered with shielding case and this shielding case is soldered

Photo



1.2 Test Equipment and Calibration Data

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101486	Nov. 21, 2017	Nov. 20, 2018
Power Meter	Anritsu	ML2495A	1241002	Oct. 16, 2017	Oct. 15, 2018
Power Sensor	Anritsu	MA2411B	1207366	Oct. 16, 2017	Oct. 15, 2018
Signal Generator	R&S	SMB100A	175727	Oct. 26, 2017	Oct. 25, 2018
DC POWER SOURCE	GW INSTEK	GPC-6030D	EM892433	Oct. 26, 2017	Oct. 25, 2018
Measurement Software	Sporton	Sporton_1	1.3.30	NA	NA
Note 1: Calibration Interval of instruments listed above is one year.					
Note 2: Above instruments are calibrated by Electronics Testing Center					

1.3 Testing Applied Standards

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

Article 2 Paragraph 1 Item 19

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))

Measurement Uncertainty	
Parameters	Uncertainty
Frequency error	±33.988 Hz
Bandwidth	±33.988 Hz
Conducted power	±0.537 dB
TX Conducted emission	±2.308 dB
RX Conducted emission	±2.525 dB

2 Test Configuration

2.1 Testing Location and Conditions

Test Site	Site Category	Ambient Condition	Tested By
TH01-WS	OVEN Room	25°C / 65%	Ryan Lee

2.2 The Worst Test Modes and Channel Details

Test item	Mode	Test channel
Antenna Power Frequency Tolerance Transmitter Spurious Emission Occupied Bandwidth Spreading Bandwidth Collateral Emission of Receiver Interference prevention function	11b, 11g, 11n HT20	1 / 7 / 13
	11n HT40	3 / 7 / 11
Spreading Factor	11b	1 / 7 / 13
Carrier Sense Capability	11n HT40	3 / 7 / 11

3 Transmitter Test Results

3.1 Antenna Power

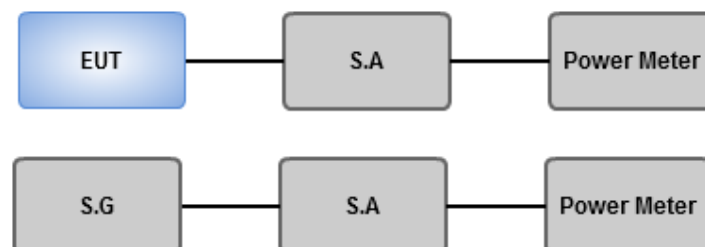
3.1.1 Limit of Antenna Power

Mode	Limit	Tolerance
1) FH, FH+DS, FH+OFDM	3 mW / MHz	+20 % , -80 %
2) OFDM(Narrow- bandwidht), DS	10 mW / MHz	
3) Other than 1) & 2)	10mW	
4) OFDM (Wide-band)	5 mW / MHz	

3.1.2 Test Procedures

1. A power meter is connected on the IF output port of the spectrum analyzer. Adjust the spectrum analyzer to have the center frequency the same with the measured carrier. RBW=VBW=1MHz, detector mode is positive peak. Turn off the averaging function and use zero span.
2. The calibrating signal power shall be reduced to 0 dBm and it shall be verified that the power meter reading also reduces by 10 dB. Connect the equipment to be measured. Using the following settings of the spectrum analyzer in combination with "max hold" function, find the frequency of highest power output in the power envelope: center frequency equal to operating frequency; RBW & VBW: 1 MHz; detector mode: positive peak; averaging: off; span: 3 times the spectrum width; amplitude: adjust for middle of the instrument's range. The frequency found shall be recorded.
3. Set the center frequency of the spectrum analyzer to the found frequency and switch to zero span. The power meter indicates the measured power density "E". Remove the EUT and put the replacing standard signal generator (SSG). Set the standard signal generator (SSG) at same frequency and transmit on, then set SSG output power at Pt to give the equivalent output level of "E".
4. Calculate antenna power density by the formula below $PD = Pt + 10 \cdot \log(1/x)$.
x: The duty cycle of the EUT in continuously transmitting mode.
Pt: Output power of the SSG.
5. Antenna Power Error is definition that actual measure antenna power tolerance between + 20% to - 80% power range that base on manufacturer declare the conducted power density.

3.1.3 Test Setup



3.1.4 Test Result of Maximum Transmit Power

Reference Documents	Test Mode
Appendix A1, A2	11b (20MHz)
Appendix A1, A2	11g (20MHz)
Appendix A1, A2	11n (20MHz)
Appendix A1, A2	11n (40MHz)

3.2 Frequency Tolerance

3.2.1 Limit of Frequency Tolerance

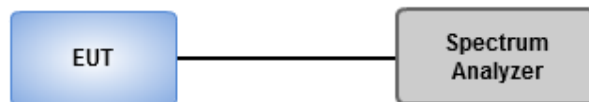
Frequency tolerance shall be +/- 50ppm.

3.2.2 Test Procedures

1. Set Span = 150kHz, RBW = 1kHz, VBW = 30kHz, Sweep time = Auto, detector = Peak.
2. Use Peak search function to find the max peak value and record this value (RF).
3. Calculate frequency tolerance by below formula
$$FT(ppm) = \{ (RF) - (MF) / (MF) \} \times 1000000$$

(FT: Frequency Tolerance, RF: Reading Frequency, MF: Measurement Frequency.)

3.2.3 Test Setup



3.2.4 Test Result of Frequency Tolerance

Reference Documents	Test Mode
Appendix B	11b (20MHz)
Appendix B	11g (20MHz)
Appendix B	11n (20MHz)
Appendix B	11n (40MHz)

3.3 Occupied Bandwidth

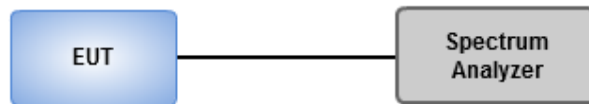
3.3.1 Limit of Occupied Bandwidth

Mode	Limit (MHz)
FH	83.5
FH+DS	83.5
FH+OFDM	83.5
OFDM(Narrow- bandwidth), DS	26
Others	26
OFDM (Wide-band)	38

3.3.2 Test Procedures

1. Set Span = 40MHz, RBW = VBW = 300kHz, detector = Peak, Sweep time = Auto.
2. Enable OBW function of spectrum analyzer to measure OBW and capture test plot.

3.3.3 Test Setup



3.3.4 Test Result of Occupied Bandwidth

Reference Documents	Test Mode
Appendix C	11b (20MHz)
Appendix C	11g (20MHz)
Appendix C	11n (20MHz)
Appendix C	11n (40MHz)

3.4 Spreading Bandwidth and Factor

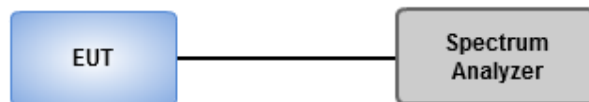
3.4.1 Limit of Spreading Bandwidth and Factor

Item	Limit
Spreading bandwidth	$\geq 500\text{kHz}$
Spreading factor for DSSS (operates at 2400~2483.5 MHz)	≥ 5
Spreading factor for DSSS (operates at 2471~2497 MHz)	≥ 10

3.4.2 Test Procedures

1. Set Span = 20MHz, RBW = VBW = 300kHz, detector = Peak, Sweep time = Auto.
2. Enable OBW (90%) function of spectrum analyzer to measure OBW (90%) and capture test plot.

3.4.3 Test Setup



3.4.4 Test Result of Spreading Bandwidth and Factor

Reference Documents	Test Mode
Appendix D	11b (20MHz)

3.5 Transmitter Spurious Emissions

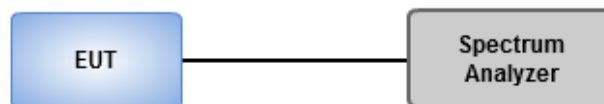
3.5.1 Limit of Transmitter Spurious Emissions

Item	Limits
Tx Spurious Emission	$\leq 2.5 \mu\text{W}$ ($2387\text{MHz} > f$; $2496.5\text{MHz} < f$).
	$\leq 25 \mu\text{W}$. ($2387\text{MHz} \leq f < 2400\text{MHz}$) and ($2483.5\text{MHz} < f \leq 2496.5\text{MHz}$).

3.5.2 Test Procedures

1. Set EUT to transmit at rated power and channel to perform test.
2. Set RBW = VBW = 1MHz, Detector type = Peak, Sweep time = Auto.
3. Following above setting of spectrum analyzer to measure spurious emission of 30~12500 MHz.

3.5.3 Test Setup



3.5.4 Test Result of Transmitter Spurious Emissions

Reference Documents	Test Mode
Appendix E	11b (20MHz)
Appendix E	11g (20MHz)
Appendix E	11n (20MHz)
Appendix E	11n (40MHz)

3.6 Carrier Sense Measurement

3.6.1 Limit of Carrier Sense Measurement

Limits
EUT shall not transmit any waves when carrier wave inject into EUT

3.6.2 Test Procedures

1. Set RBW = VBW = 1MHz, Detector type = Peak, Sweep time = Auto, Span = 50 MHz.
2. Set EUT to normal operating mode and link up with companion equipment
3. Turn off the EUT transmission
4. Turn on the Signal Generator output to send carrier wave to EUT then turn on the EUT transmission

Power level of carrier wave at EUT is as below

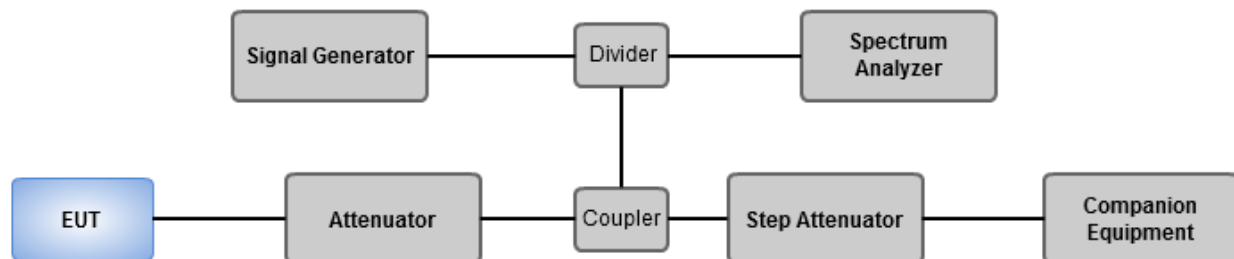
$$Pcs \text{ (dBm)} = 22.79 + Gr - 20\log(F)$$

Gr: Antenna gain (dBi)

F : Transmission Frequency (MHz)

5. Check the EUT does not transmit any waves

3.6.3 Test Setup



3.6.4 Test Result of Carrier Sense

Reference Documents	Test Mode
Appendix F	11n (40MHz)

3.7 Interference prevention function

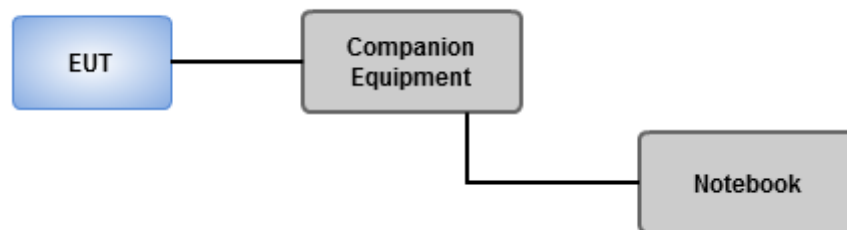
3.7.1 Limit of Interference Prevention Function

Limits
The identification code shall be 48 bits long

3.7.2 Test Procedures

1. Set EUT under operating mode and link up with companion equipment
2. Check communication status between EUT and companion equipment is normal
3. Confirm the MAC address of EUT

3.7.3 Test Setup



3.7.4 Test Result of Interference Prevention Function

Reference Documents	Test Mode
Appendix G	11b (20MHz)
Appendix G	11g (20MHz)
Appendix G	11n (20MHz)
Appendix G	11n (40MHz)

4 Receiver Test Results

4.1 Receiver Spurious Emissions

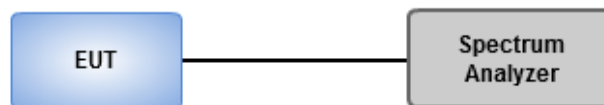
4.1.1 Limit of Receiver Spurious Emissions

Item	Limits
Rx Spurious Emission	$\leq 4\text{nW}$ ($f < 1\text{GHz}$).
	$\leq 20\text{nW}$ ($1\text{GHz} \leq f$).

4.1.2 Test Procedures

1. Set EUT under receiving condition to perform test
2. Set RBW = VBW = 100kHz, detector = Peak, Sweep time = Auto for emission measurement below 1GHz.
3. Set RBW = VBW=1MHz, detector = Peak, Sweep time = Auto for emission measurement above 1GHz.

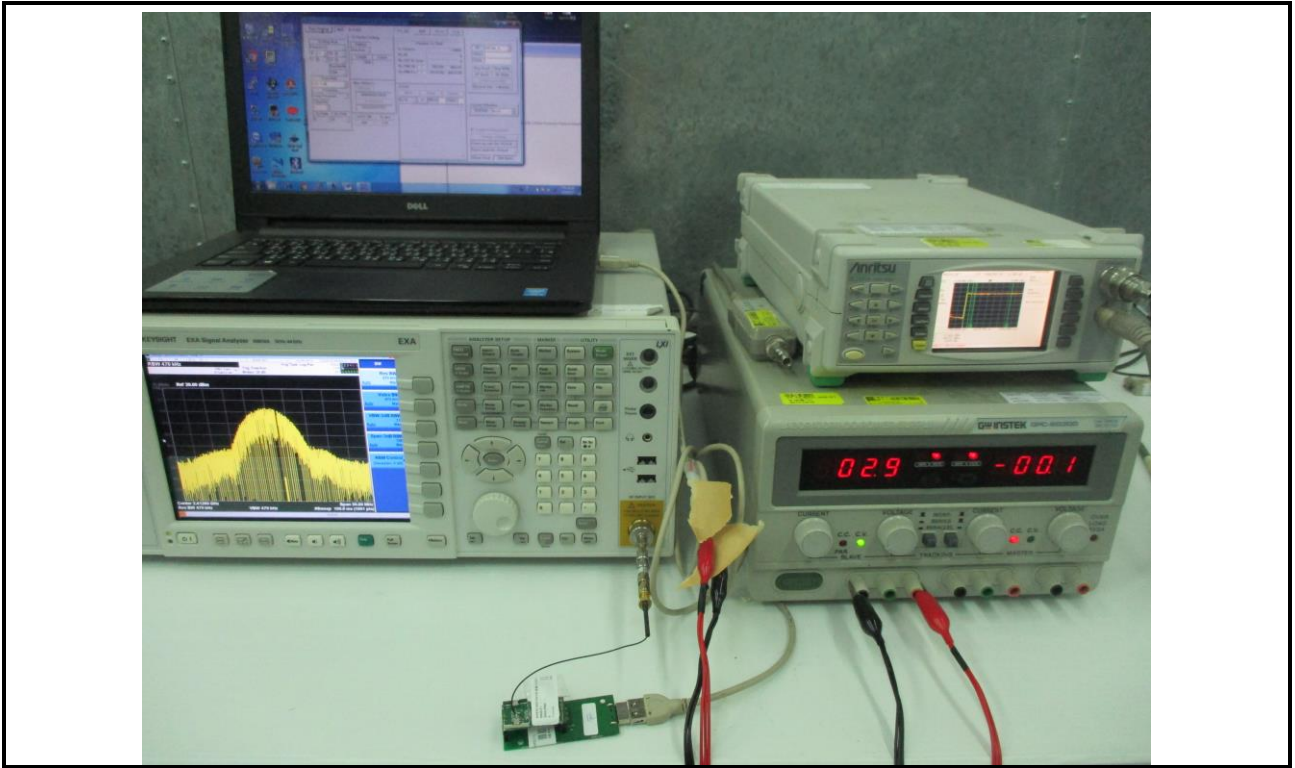
4.1.3 Test Setup



4.1.4 Test Result of Receiver Spurious Emissions

Reference Documents	Test Mode
Appendix H	11b (20MHz)
Appendix H	11g (20MHz)
Appendix H	11n (20MHz)
Appendix H	11n (40MHz)

5 Photographs of the Test Configuration



6 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

Linkou

Tel: 886-2-2601-1640

No. 30-2, Ding Fwu Tsuen, Lin Kou
District, New Taipei City, Taiwan,
R.O.C.

Kwei Shan

Tel: 886-3-271-8666

No. 3-1, Lane 6, Wen San 3rd
St., Kwei Shan District, Tao Yuan
City 333, Taiwan, R.O.C.

Kwei Shan Site II

Tel: 886-3-271-8640

No. 14-1, Lane 19, Wen San 3rd
St., Kwei Shan District, Tao Yuan
City 333, Taiwan, R.O.C.

If you have any suggestion, please feel free to contact us as below information

Tel: 886-3-271-8666

Fax: 886-3-318-0155

Email: ICC_Service@icertifi.com.tw

==END==

**Summary**

Mode	Result	Power (dBm/MHz)	Power (mW/MHz)	Declare (mW/MHz)	Tolerance (%)	Limit+ (%)	Limit- (%)
2.4-2.4835GHz	-	-	-	-	-	-	-
802.11b_Nss1_1TX	Pass	9.56	9.03649	9.00	0.41	20	-80
802.11g_Nss1_1TX	Pass	4.41	2.76058	3.00	-7.98	20	-80
802.11n HT20_Nss1,(MCS0)_1TX	Pass	4.04	2.53513	3.00	-15.50	20	-80
802.11n HT40_Nss1,(MCS0)_1TX	Pass	1.98	1.57761	2.00	-21.12	20	-80

Result

Mode	Result	Power (dBm/MHz)	Power (mW/MHz)	Declare (mW/MHz)	Tolerance (%)	Limit+ (%)	Limit- (%)
802.11b_Nss1_1TX	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	9.35	8.60994	9.00	-4.33	20	-80
2412MHz_TnomVmin	Pass	9.49	8.89201	9.00	-1.20	20	-80
2412MHz_TnomVmax	Pass	9.55	9.01571	9.00	0.17	20	-80
2442MHz_TnomVnom	Pass	9.53	8.97429	9.00	-0.29	20	-80
2442MHz_TnomVmin	Pass	9.51	8.93305	9.00	-0.74	20	-80
2442MHz_TnomVmax	Pass	9.54	8.99498	9.00	-0.06	20	-80
2472MHz_TnomVnom	Pass	9.54	8.99498	9.00	-0.06	20	-80
2472MHz_TnomVmin	Pass	9.51	8.93305	9.00	-0.74	20	-80
2472MHz_TnomVmax	Pass	9.56	9.03649	9.00	0.41	20	-80
802.11g_Nss1_1TX	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	4.29	2.68534	3.00	-10.49	20	-80
2412MHz_TnomVmin	Pass	4.20	2.63027	3.00	-12.32	20	-80
2412MHz_TnomVmax	Pass	4.41	2.76058	3.00	-7.98	20	-80
2442MHz_TnomVnom	Pass	4.22	2.64241	3.00	-11.92	20	-80
2442MHz_TnomVmin	Pass	4.14	2.59418	3.00	-13.53	20	-80
2442MHz_TnomVmax	Pass	4.25	2.66073	3.00	-11.31	20	-80
2472MHz_TnomVnom	Pass	2.72	1.87068	3.00	-37.64	20	-80
2472MHz_TnomVmin	Pass	2.46	1.76198	3.00	-41.27	20	-80
2472MHz_TnomVmax	Pass	2.98	1.98609	3.00	-33.80	20	-80
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	4.04	2.53513	3.00	-15.50	20	-80
2412MHz_TnomVmin	Pass	3.73	2.36048	3.00	-21.32	20	-80
2412MHz_TnomVmax	Pass	4.02	2.52348	3.00	-15.88	20	-80
2442MHz_TnomVnom	Pass	3.70	2.34423	3.00	-21.86	20	-80
2442MHz_TnomVmin	Pass	3.59	2.28560	3.00	-23.81	20	-80
2442MHz_TnomVmax	Pass	3.78	2.38781	3.00	-20.41	20	-80
2472MHz_TnomVnom	Pass	2.86	1.93197	3.00	-35.60	20	-80
2472MHz_TnomVmin	Pass	2.80	1.90546	3.00	-36.48	20	-80
2472MHz_TnomVmax	Pass	2.90	1.94984	3.00	-35.01	20	-80
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-



Power Tolerance Result

Appendix A.1

Mode	Result	Power (dBm/MHz)	Power (mW/MHz)	Declare (mW/MHz)	Tolerance (%)	Limit+ (%)	Limit- (%)
2422MHz_TnomVnom	Pass	1.44	1.39316	2.00	-30.34	20	-80
2422MHz_TnomVmin	Pass	1.18	1.31220	2.00	-34.39	20	-80
2422MHz_TnomVmax	Pass	1.67	1.46893	2.00	-26.55	20	-80
2442MHz_TnomVnom	Pass	1.62	1.45211	2.00	-27.39	20	-80
2442MHz_TnomVmin	Pass	1.59	1.44212	2.00	-27.89	20	-80
2442MHz_TnomVmax	Pass	1.98	1.57761	2.00	-21.12	20	-80
2462MHz_TnomVnom	Pass	1.33	1.35831	2.00	-32.08	20	-80
2462MHz_TnomVmin	Pass	1.30	1.34896	2.00	-32.55	20	-80
2462MHz_TnomVmax	Pass	1.46	1.39959	2.00	-30.02	20	-80



Summary

Mode	Power (dBm/MHz)	Power (mW/MHz)	EIRP (dBm/MHz)	EIRP (mW/MHz)
2.4-2.4835GHz	-	-	-	-
802.11b_Nss1_1TX	9.56	9.03649	12.13	16.33052
802.11g_Nss1_1TX	4.41	2.76058	6.98	4.98884
802.11n HT20_Nss1,(MCS0)_1TX	4.04	2.53513	6.61	4.58142
802.11n HT40_Nss1,(MCS0)_1TX	1.98	1.57761	4.55	2.85102

PD = Antenna Power (Power Density)sum by P1;

P1 = Port 1 PD;; ENBF = Equivalent Noise Bandwidth Factor;

Result

Mode	Result	Gain (dBi)	ENBF (dB)	P1 (dBm/MHz)	Power (dBm/MHz)	Power (mW/MHz)	Power Lim. (mW/MHz)	EIRP (dBm/MHz)	EIRP (mW/MHz)	EIRP Lim. (mW/MHz)
802.11b_Nss1_1TX	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.57	0.49	9.35	9.35	8.60994	10	11.92	15.55966	16.368
2412MHz_TnomVmin	Pass	2.57	0.49	9.49	9.49	8.89201	10	12.06	16.06941	16.368
2412MHz_TnomVmax	Pass	2.57	0.49	9.55	9.55	9.01571	10	12.12	16.29296	16.368
2442MHz_TnomVnom	Pass	2.57	0.49	9.53	9.53	8.97429	10	12.10	16.21810	16.368
2442MHz_TnomVmin	Pass	2.57	0.49	9.51	9.51	8.93305	10	12.08	16.14359	16.368
2442MHz_TnomVmax	Pass	2.57	0.49	9.54	9.54	8.99498	10	12.11	16.25549	16.368
2472MHz_TnomVnom	Pass	2.57	0.49	9.54	9.54	8.99498	10	12.11	16.25549	16.368
2472MHz_TnomVmin	Pass	2.57	0.49	9.51	9.51	8.93305	10	12.08	16.14359	16.368
2472MHz_TnomVmax	Pass	2.57	0.49	9.56	9.56	9.03649	10	12.13	16.33052	16.368
802.11g_Nss1_1TX	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.57	0.49	4.29	4.29	2.68534	10	6.86	4.85289	16.368
2412MHz_TnomVmin	Pass	2.57	0.49	4.20	4.20	2.63027	10	6.77	4.75335	16.368
2412MHz_TnomVmax	Pass	2.57	0.49	4.41	4.41	2.76058	10	6.98	4.98884	16.368
2442MHz_TnomVnom	Pass	2.57	0.49	4.22	4.22	2.64241	10	6.79	4.77529	16.368
2442MHz_TnomVmin	Pass	2.57	0.49	4.14	4.14	2.59418	10	6.71	4.68813	16.368
2442MHz_TnomVmax	Pass	2.57	0.49	4.25	4.25	2.66073	10	6.82	4.80839	16.368
2472MHz_TnomVnom	Pass	2.57	0.49	2.72	2.72	1.87068	10	5.29	3.38065	16.368
2472MHz_TnomVmin	Pass	2.57	0.49	2.46	2.46	1.76198	10	5.03	3.18420	16.368
2472MHz_TnomVmax	Pass	2.57	0.49	2.98	2.98	1.98609	10	5.55	3.58922	16.368
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.57	0.49	4.04	4.04	2.53513	10	6.61	4.58142	16.368
2412MHz_TnomVmin	Pass	2.57	0.49	3.73	3.73	2.36048	10	6.30	4.26580	16.368
2412MHz_TnomVmax	Pass	2.57	0.49	4.02	4.02	2.52348	10	6.59	4.56037	16.368
2442MHz_TnomVnom	Pass	2.57	0.49	3.70	3.70	2.34423	10	6.27	4.23643	16.368
2442MHz_TnomVmin	Pass	2.57	0.49	3.59	3.59	2.28560	10	6.16	4.13048	16.368
2442MHz_TnomVmax	Pass	2.57	0.49	3.78	3.78	2.38781	10	6.35	4.31519	16.368
2472MHz_TnomVnom	Pass	2.57	0.49	2.86	2.86	1.93197	10	5.43	3.49140	16.368
2472MHz_TnomVmin	Pass	2.57	0.49	2.80	2.80	1.90546	10	5.37	3.44350	16.368
2472MHz_TnomVmax	Pass	2.57	0.49	2.90	2.90	1.94984	10	5.47	3.52371	16.368
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-
2422MHz_TnomVnom	Pass	2.57	0.49	1.44	1.44	1.39316	5	4.01	2.51768	8.184
2422MHz_TnomVmin	Pass	2.57	0.49	1.18	1.18	1.31220	5	3.75	2.37137	8.184
2422MHz_TnomVmax	Pass	2.57	0.49	1.67	1.67	1.46893	5	4.24	2.65461	8.184
2442MHz_TnomVnom	Pass	2.57	0.49	1.62	1.62	1.45211	5	4.19	2.62422	8.184
2442MHz_TnomVmin	Pass	2.57	0.49	1.59	1.59	1.44212	5	4.16	2.60615	8.184
2442MHz_TnomVmax	Pass	2.57	0.49	1.98	1.98	1.57761	5	4.55	2.85102	8.184
2462MHz_TnomVnom	Pass	2.57	0.49	1.33	1.33	1.35831	5	3.90	2.45471	8.184



Power Result

Appendix A.2

Mode	Result	Gain (dBi)	ENBF (dB)	P1 (dBm/MHz)	Power (dBm/MHz)	Power (mW/MHz)	Power Lim. (mW/MHz)	EIRP (dBm/MHz)	EIRP (mW/MHz)	EIRP Lim. (mW/MHz)
2462MHz_TnomVmin	Pass	2.57	0.49	1.3	1.30	1.34896	5	3.87	2.43781	8.184
2462MHz_TnomVmax	Pass	2.57	0.49	1.46	1.46	1.39959	5	4.03	2.52930	8.184

PD = Antenna Power (Power Density)sum by **P1**;

P1 = Port 1 PD;; **ENBF** = Equivalent Noise Bandwidth Factor;



Frequency Tolerance Result

Appendix B

Summary

Mode	Result	Ch (Hz)	Center (Hz)	ppm	Limit (ppm)	Port	Remark
2.4-2.4835GHz	-	-	-	-	-	-	-
802.11b_Nss1_1TX	Pass	2.412G	2.41202749G	11.396	±50	1	-
802.11g_Nss1_1TX	Pass	2.412G	2.41202766G	11.466	±50	1	-
802.11n HT20_Nss1,(MCS0)_1TX	Pass	2.412G	2.41202734G	11.337	±50	1	-
802.11n HT40_Nss1,(MCS0)_1TX	Pass	2.422G	2.4220275G	11.353	±50	1	-



Frequency Tolerance Result

Appendix B

Result

Mode	Result	Ch (Hz)	Center (Hz)	ppm	Limit (ppm)	Port	Remark
802.11b_Nss1_1TX	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.412G	2.41202749G	11.396	±50	1	-
2412MHz_TnomVmin	Pass	2.412G	2.41202739G	11.358	±50	1	-
2412MHz_TnomVmax	Pass	2.412G	2.41202737G	11.346	±50	1	-
2442MHz_TnomVnom	Pass	2.442G	2.44202573G	10.538	±50	1	-
2442MHz_TnomVmin	Pass	2.442G	2.4420256G	10.485	±50	1	-
2442MHz_TnomVmax	Pass	2.442G	2.44202611G	10.692	±50	1	-
2472MHz_TnomVnom	Pass	2.472G	2.47202154G	8.715	±50	1	-
2472MHz_TnomVmin	Pass	2.472G	2.47202105G	8.514	±50	1	-
2472MHz_TnomVmax	Pass	2.472G	2.47202129G	8.614	±50	1	-
802.11g_Nss1_1TX	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.412G	2.41202766G	11.466	±50	1	-
2412MHz_TnomVmin	Pass	2.412G	2.41202741G	11.366	±50	1	-
2412MHz_TnomVmax	Pass	2.412G	2.41202745G	11.382	±50	1	-
2442MHz_TnomVnom	Pass	2.442G	2.4420266G	10.892	±50	1	-
2442MHz_TnomVmin	Pass	2.442G	2.44202681G	10.979	±50	1	-
2442MHz_TnomVmax	Pass	2.442G	2.44202684G	10.989	±50	1	-
2472MHz_TnomVnom	Pass	2.472G	2.47202148G	8.688	±50	1	-
2472MHz_TnomVmin	Pass	2.472G	2.47202181G	8.824	±50	1	-
2472MHz_TnomVmax	Pass	2.472G	2.47202188G	8.85	±50	1	-
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.412G	2.41202734G	11.337	±50	1	-
2412MHz_TnomVmin	Pass	2.412G	2.41202733G	11.329	±50	1	-
2412MHz_TnomVmax	Pass	2.412G	2.41202726G	11.303	±50	1	-
2442MHz_TnomVnom	Pass	2.442G	2.44202677G	10.964	±50	1	-
2442MHz_TnomVmin	Pass	2.442G	2.44202671G	10.937	±50	1	-
2442MHz_TnomVmax	Pass	2.442G	2.44202603G	10.658	±50	1	-
2472MHz_TnomVnom	Pass	2.472G	2.47202221G	8.984	±50	1	-
2472MHz_TnomVmin	Pass	2.472G	2.47202244G	9.078	±50	1	-
2472MHz_TnomVmax	Pass	2.472G	2.47202231G	9.025	±50	1	-
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
2422MHz_TnomVnom	Pass	2.422G	2.4220275G	11.353	±50	1	-
2422MHz_TnomVmin	Pass	2.422G	2.4220268G	11.066	±50	1	-
2422MHz_TnomVmax	Pass	2.422G	2.42202649G	10.936	±50	1	-
2442MHz_TnomVnom	Pass	2.442G	2.44202593G	10.618	±50	1	-
2442MHz_TnomVmin	Pass	2.442G	2.44202594G	10.624	±50	1	-
2442MHz_TnomVmax	Pass	2.442G	2.44202546G	10.426	±50	1	-
2462MHz_TnomVnom	Pass	2.462G	2.46202469G	10.027	±50	1	-
2462MHz_TnomVmin	Pass	2.462G	2.46202494G	10.128	±50	1	-
2462MHz_TnomVmax	Pass	2.462G	2.462025G	10.154	±50	1	-



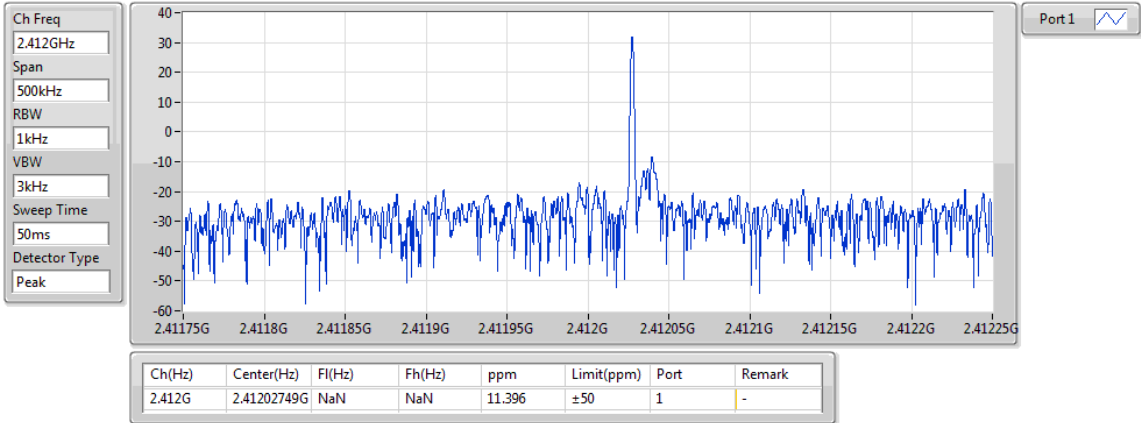
Frequency Tolerance Result

Appendix B

802.11b_Nss1_1TX

Freq. Stability

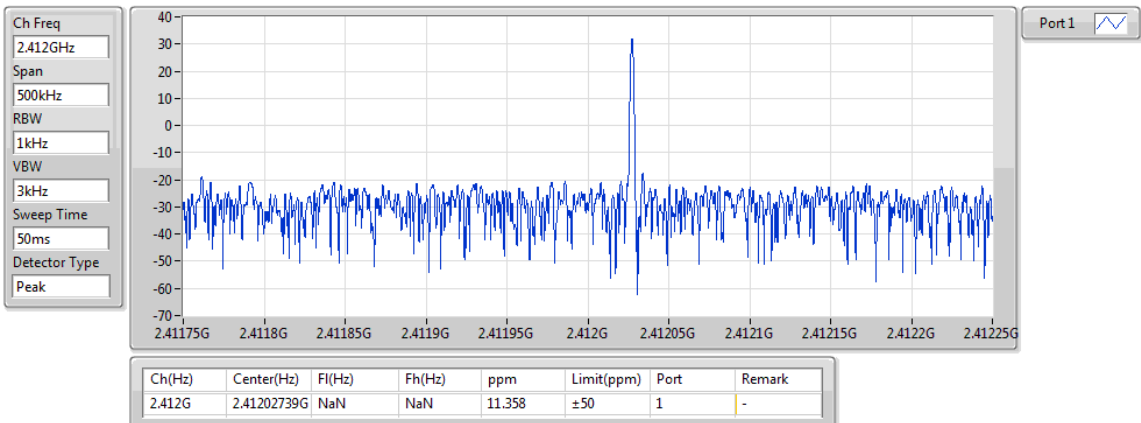
2412MHz_



802.11b_Nss1_1TX

Freq. Stability

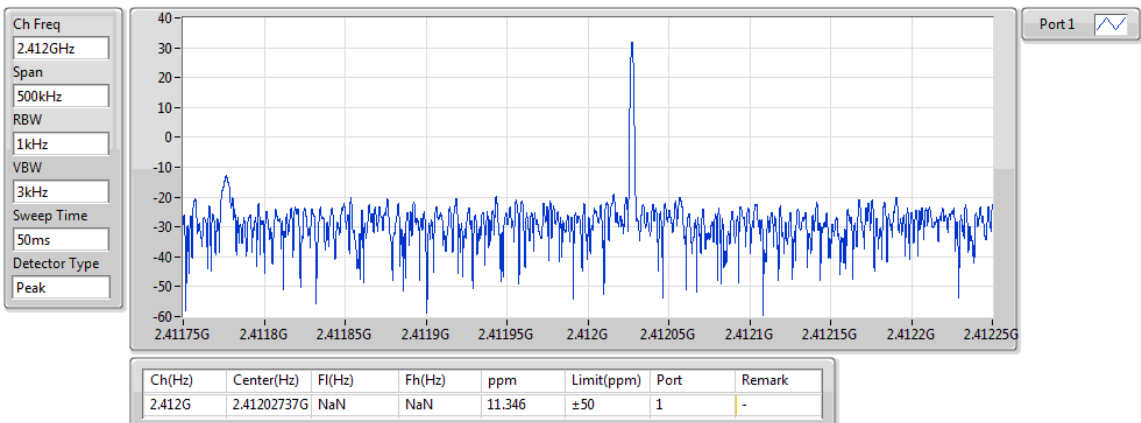
2412MHz_



802.11b_Nss1_1TX

Freq. Stability

2412MHz_





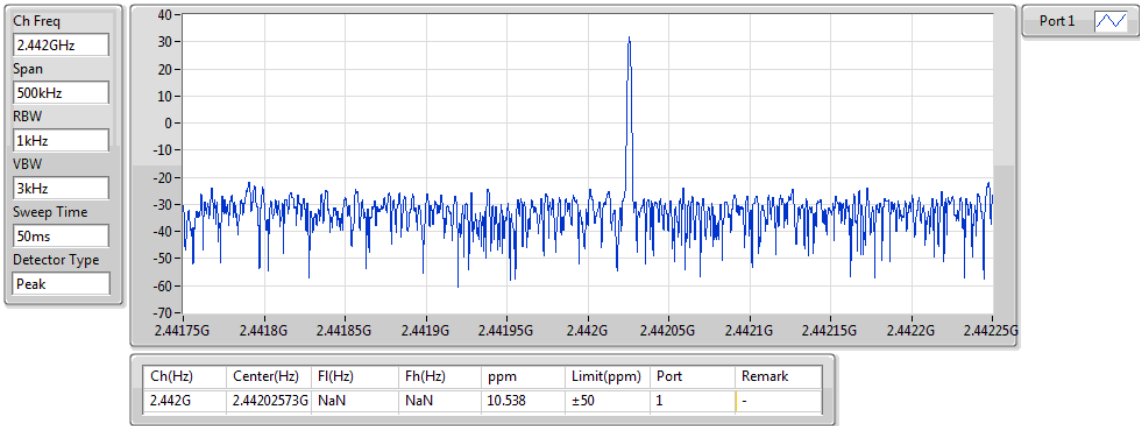
Frequency Tolerance Result

Appendix B

802.11b_Nss1_1TX

Freq. Stability

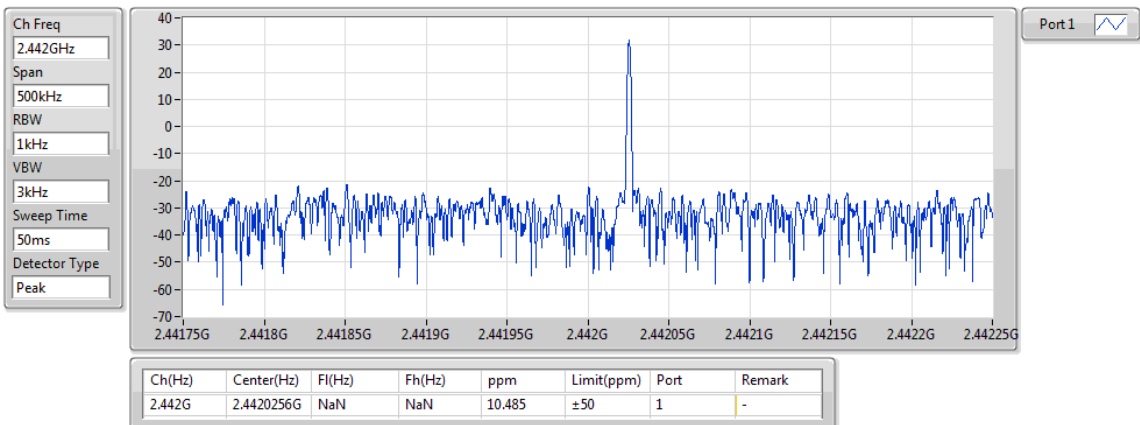
2442MHz_



802.11b_Nss1_1TX

Freq. Stability

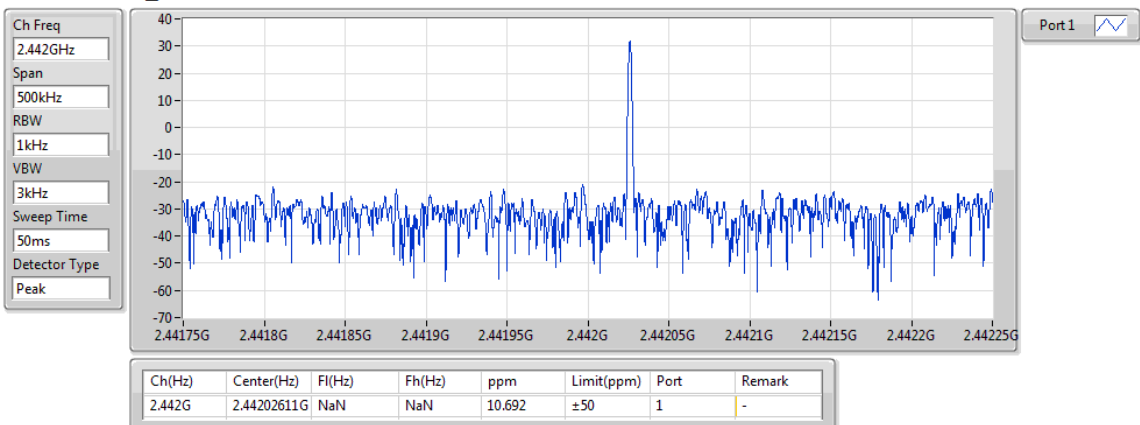
2442MHz_



802.11b_Nss1_1TX

Freq. Stability

2442MHz_





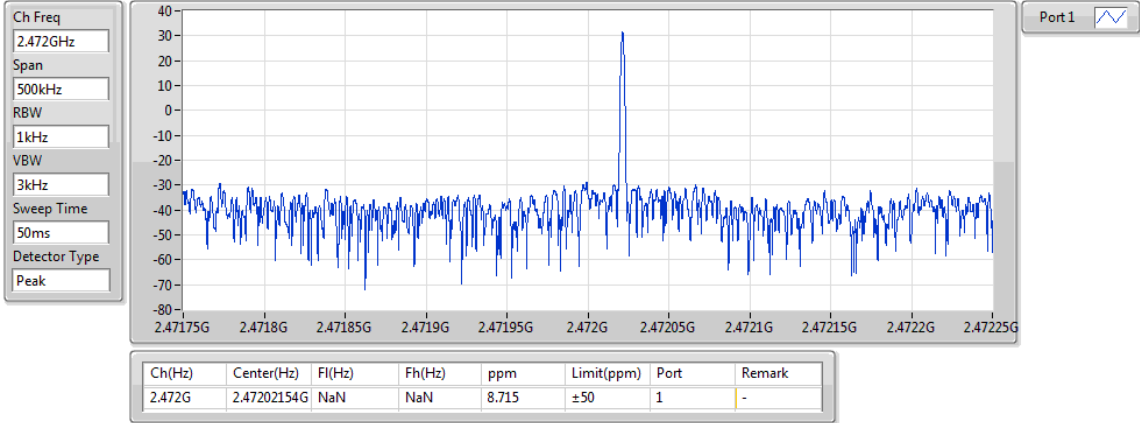
Frequency Tolerance Result

Appendix B

802.11b_Nss1_1TX

Freq. Stability

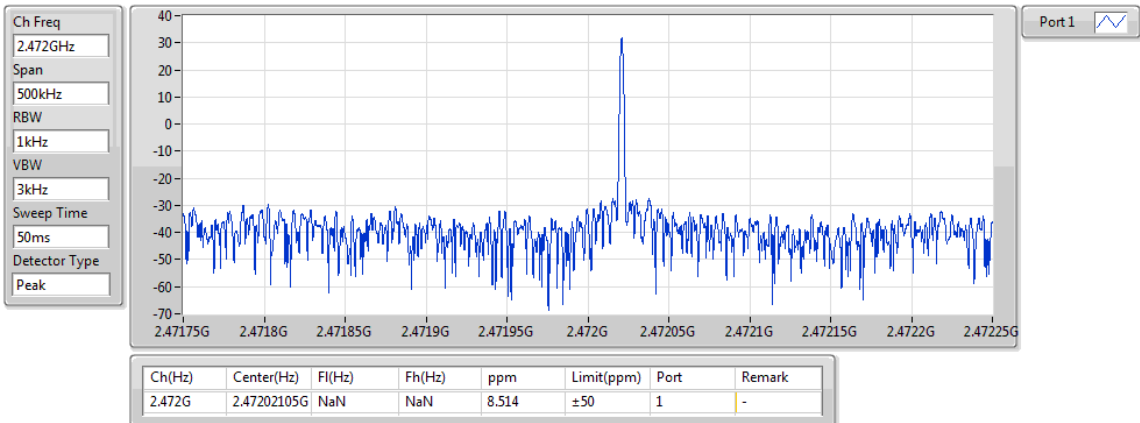
2472MHz_



802.11b_Nss1_1TX

Freq. Stability

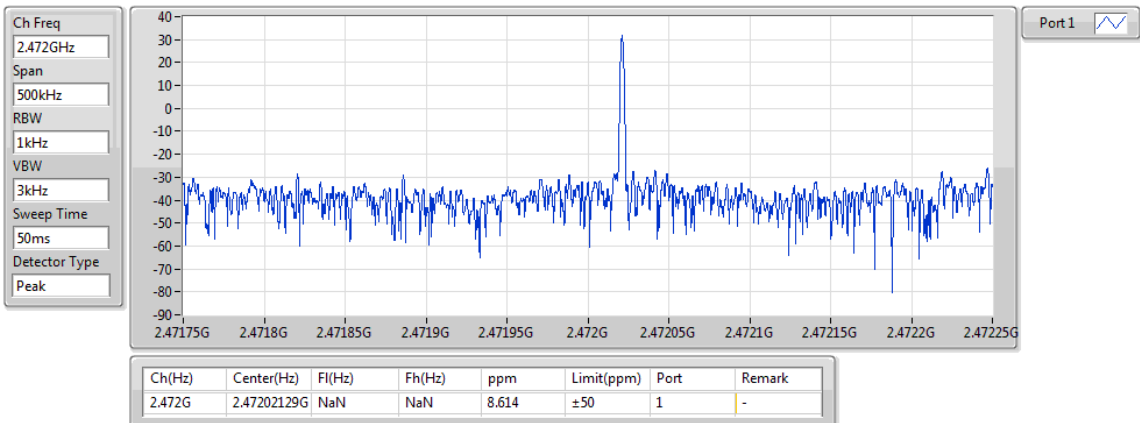
2472MHz_



802.11b_Nss1_1TX

Freq. Stability

2472MHz_





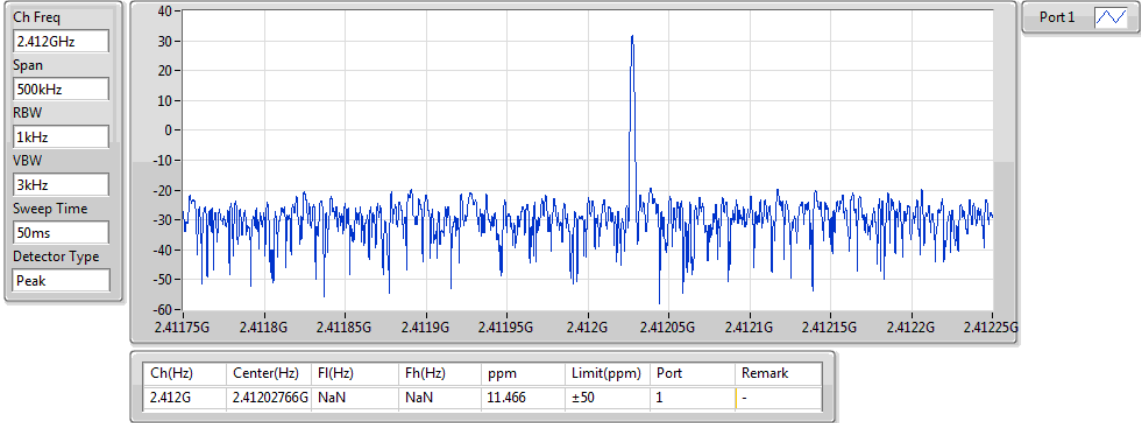
Frequency Tolerance Result

Appendix B

802.11g_Nss1_1TX

Freq. Stability

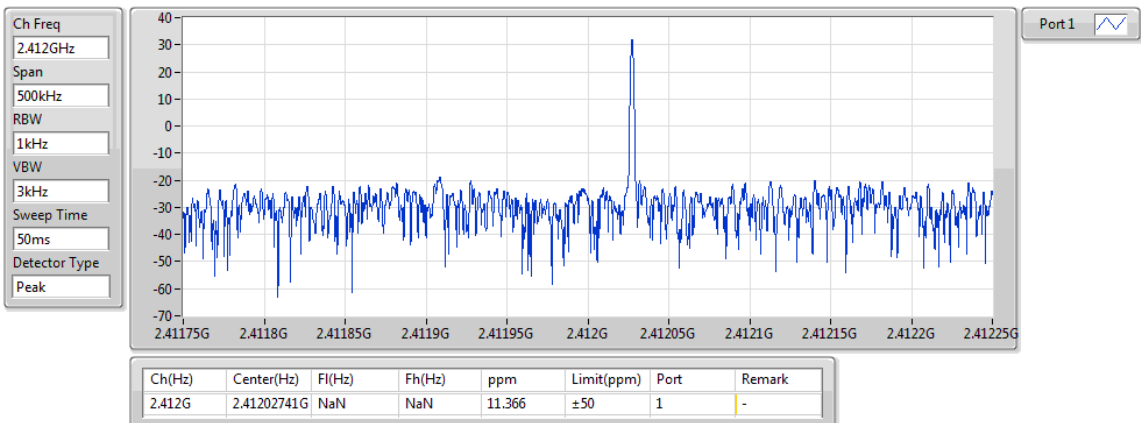
2412MHz_



802.11g_Nss1_1TX

Freq. Stability

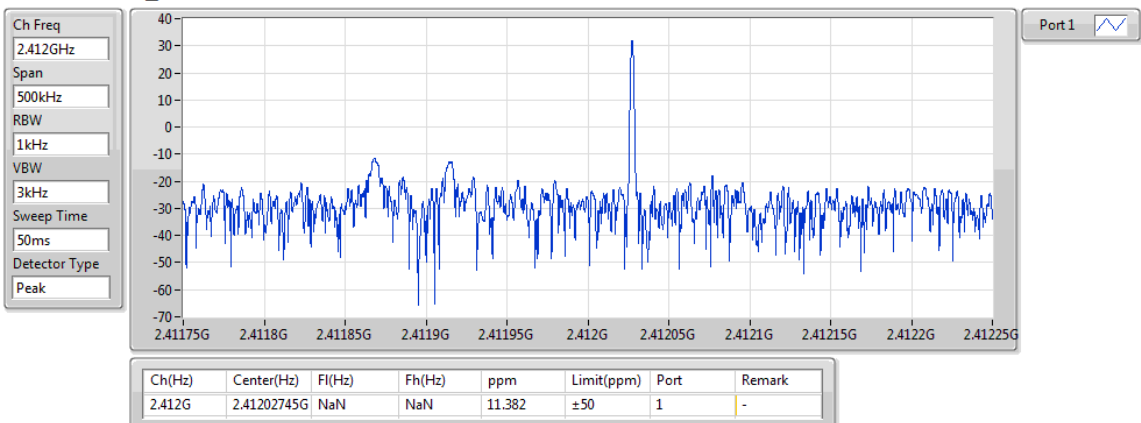
2412MHz_



802.11g_Nss1_1TX

Freq. Stability

2412MHz_





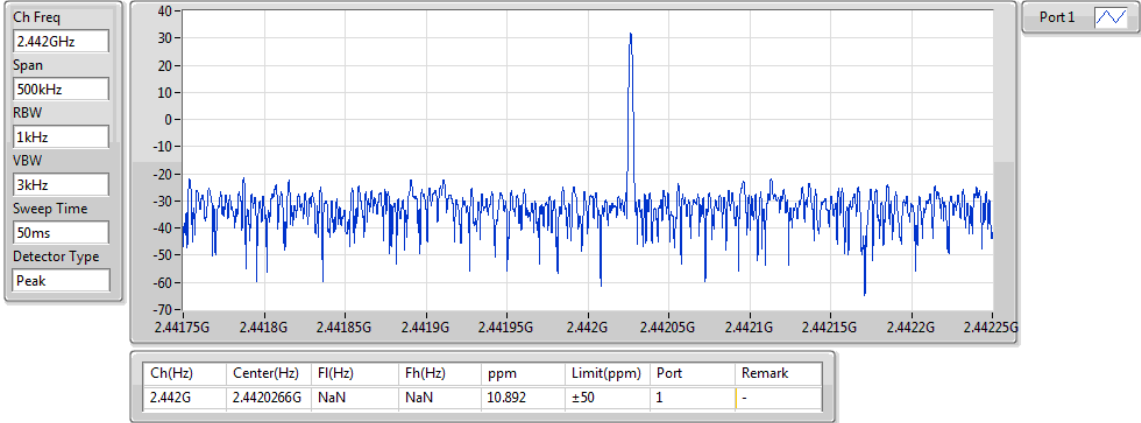
Frequency Tolerance Result

Appendix B

802.11g_Nss1_1TX

Freq. Stability

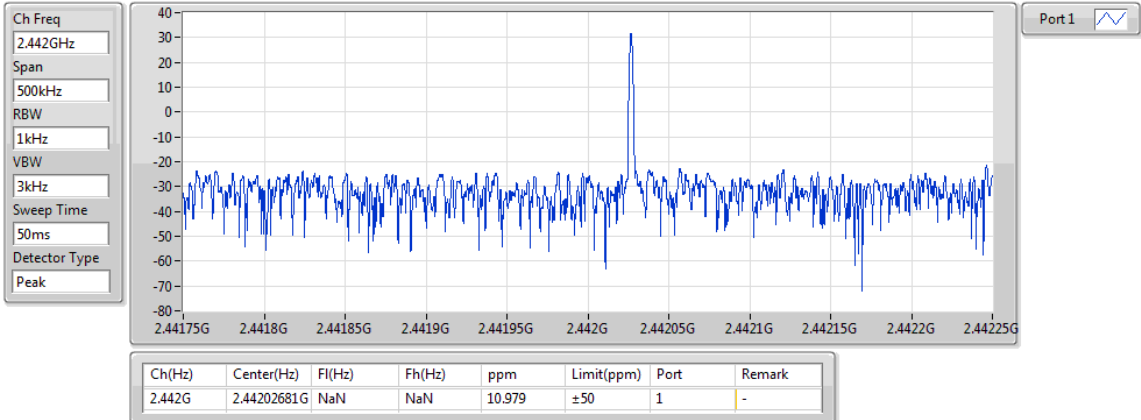
2442MHz_



802.11g_Nss1_1TX

Freq. Stability

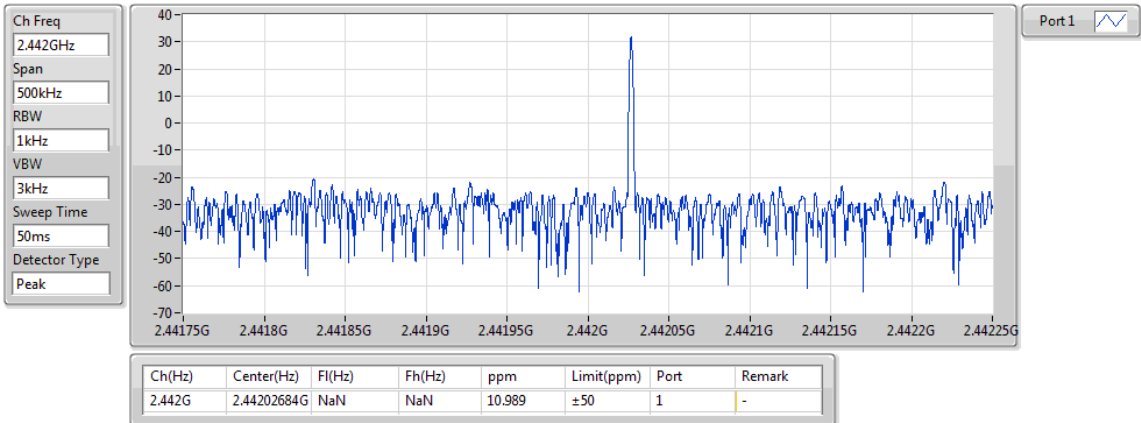
2442MHz_



802.11g_Nss1_1TX

Freq. Stability

2442MHz_





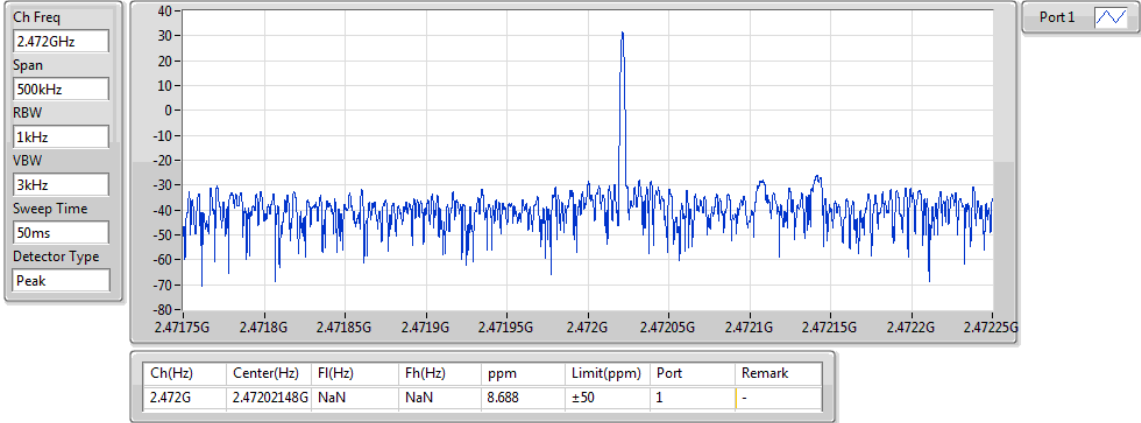
Frequency Tolerance Result

Appendix B

802.11g_Nss1_1TX

Freq. Stability

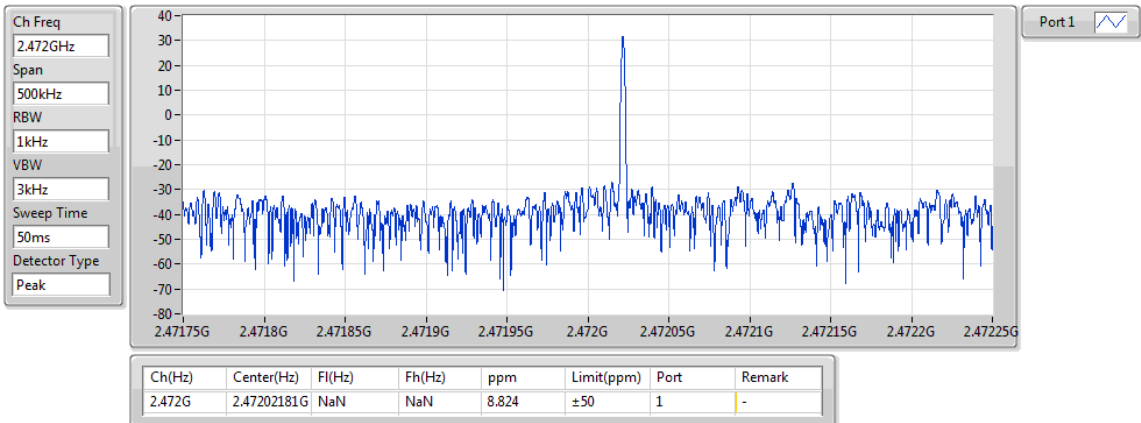
2472MHz_



802.11g_Nss1_1TX

Freq. Stability

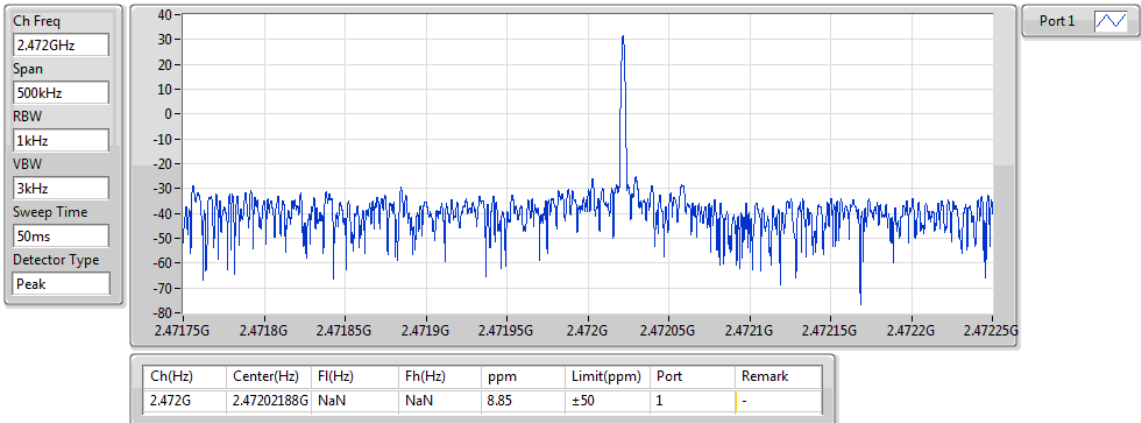
2472MHz_



802.11g_Nss1_1TX

Freq. Stability

2472MHz_





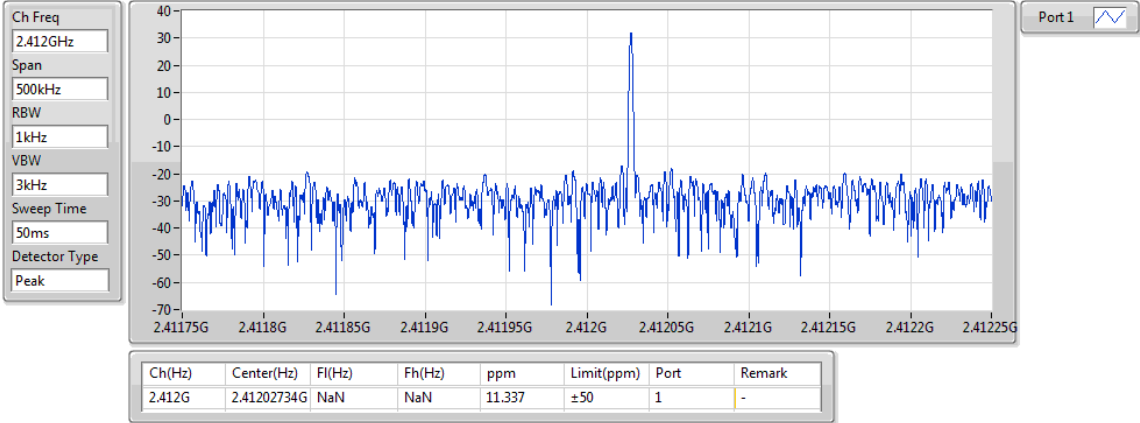
Frequency Tolerance Result

Appendix B

802.11n HT20_Nss1,(MCS0)_1TX

Freq. Stability

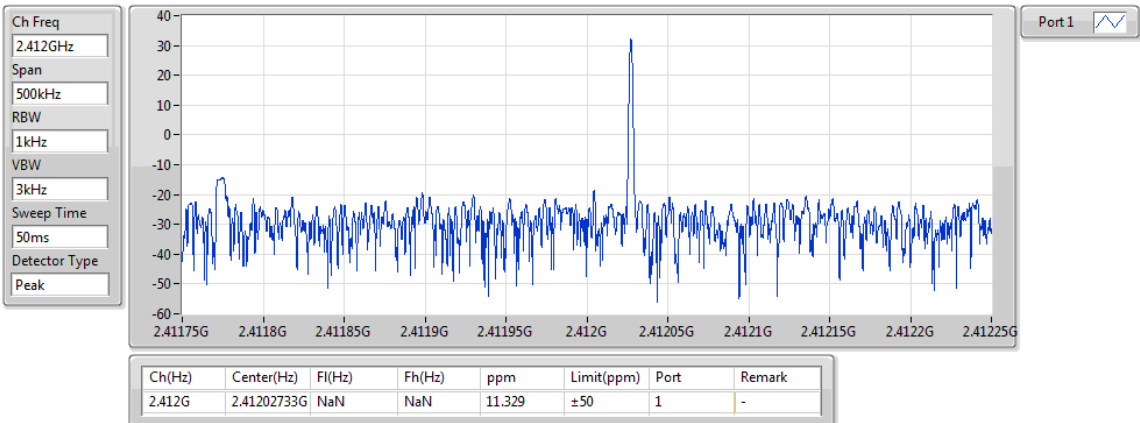
2412MHz_



802.11n HT20_Nss1,(MCS0)_1TX

Freq. Stability

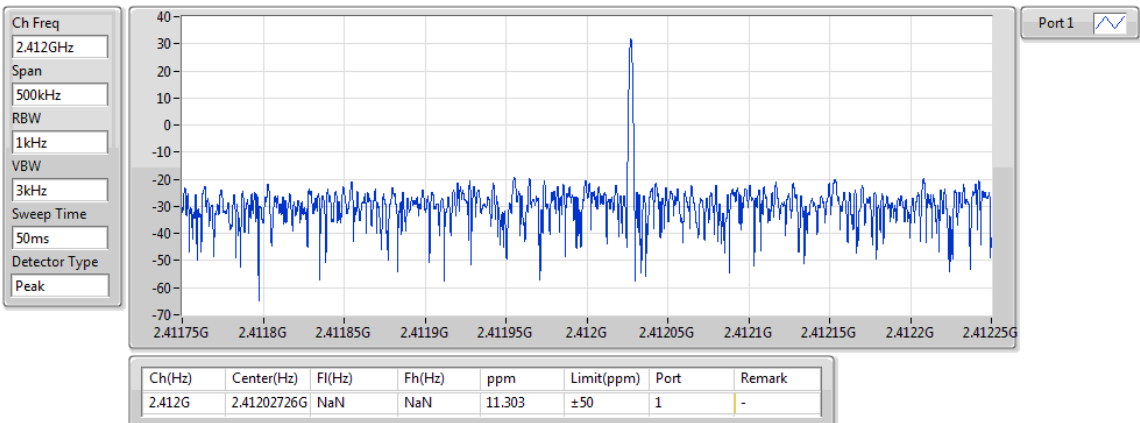
2412MHz_



802.11n HT20_Nss1,(MCS0)_1TX

Freq. Stability

2412MHz_





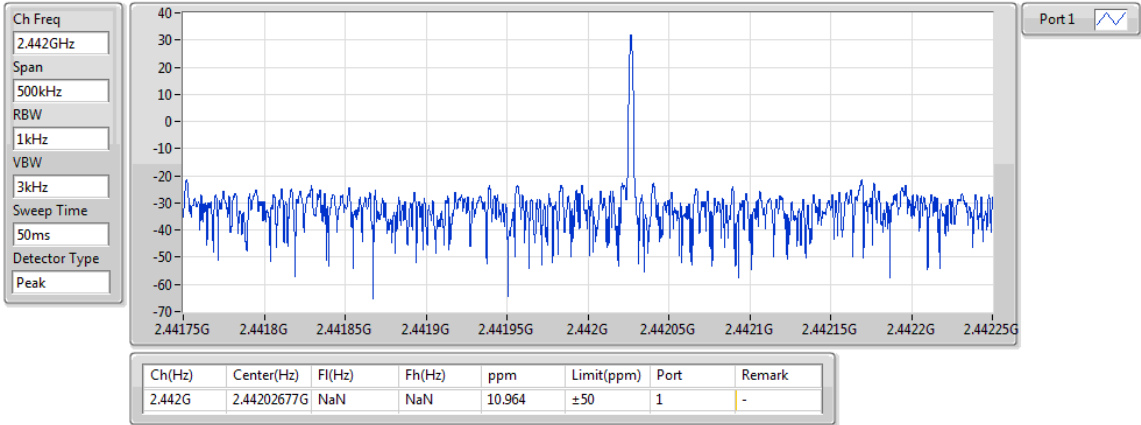
Frequency Tolerance Result

Appendix B

802.11n HT20_Nss1,(MCS0)_1TX

Freq. Stability

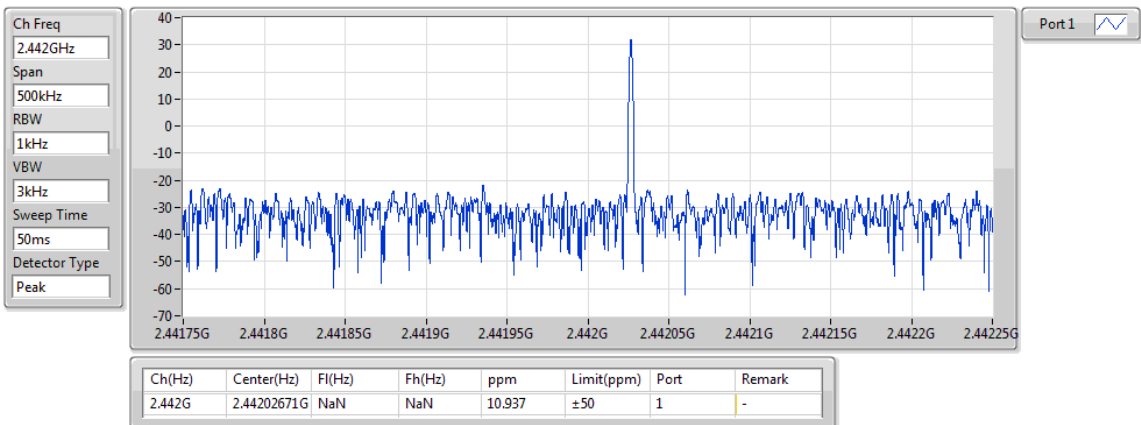
2442MHz_



802.11n HT20_Nss1,(MCS0)_1TX

Freq. Stability

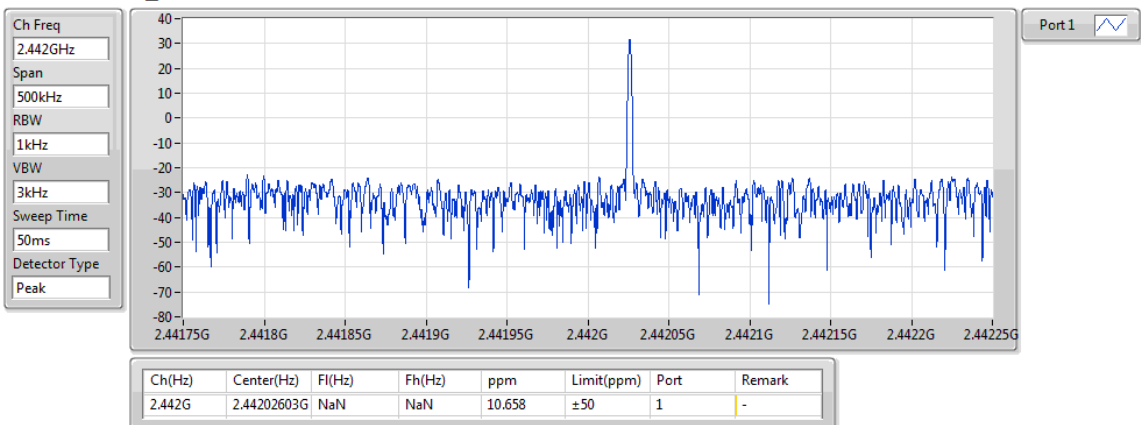
2442MHz_



802.11n HT20_Nss1,(MCS0)_1TX

Freq. Stability

2442MHz_





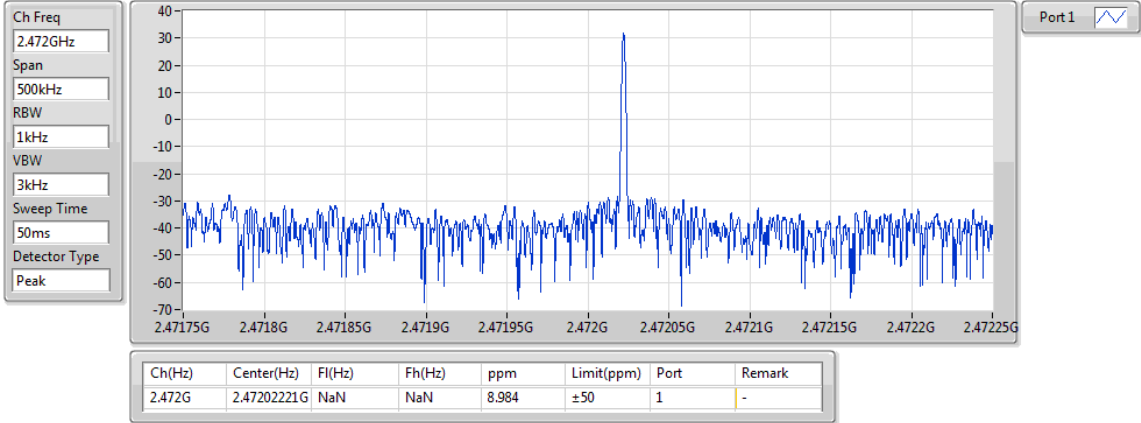
Frequency Tolerance Result

Appendix B

802.11n HT20_Nss1,(MCS0)_1TX

Freq. Stability

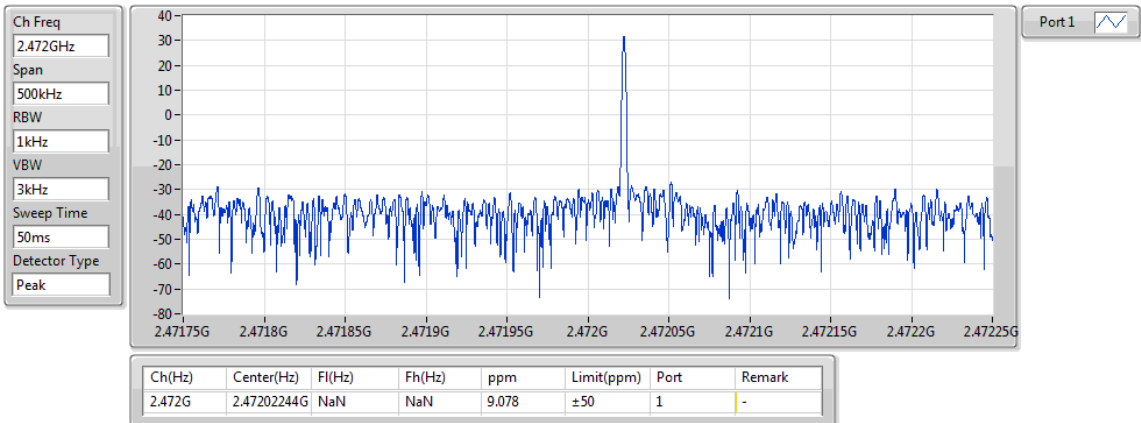
2472MHz_



802.11n HT20_Nss1,(MCS0)_1TX

Freq. Stability

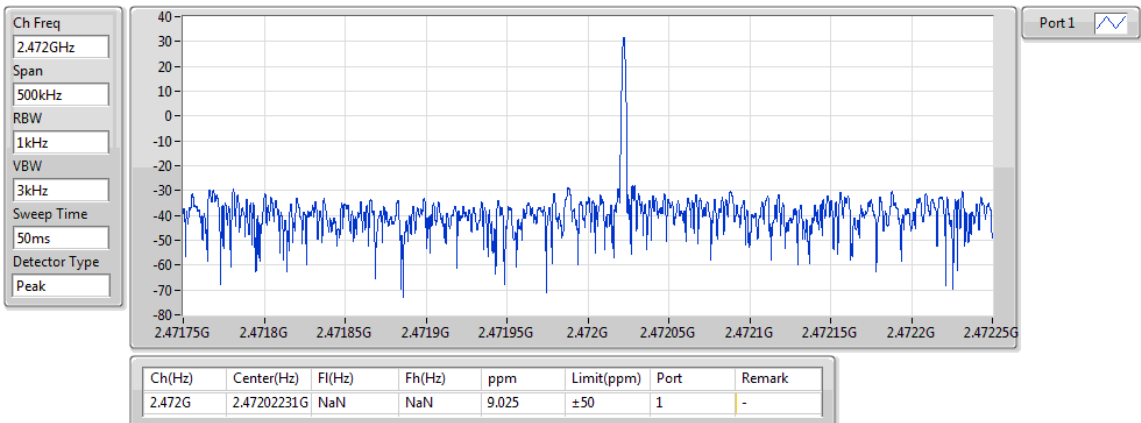
2472MHz_



802.11n HT20_Nss1,(MCS0)_1TX

Freq. Stability

2472MHz_





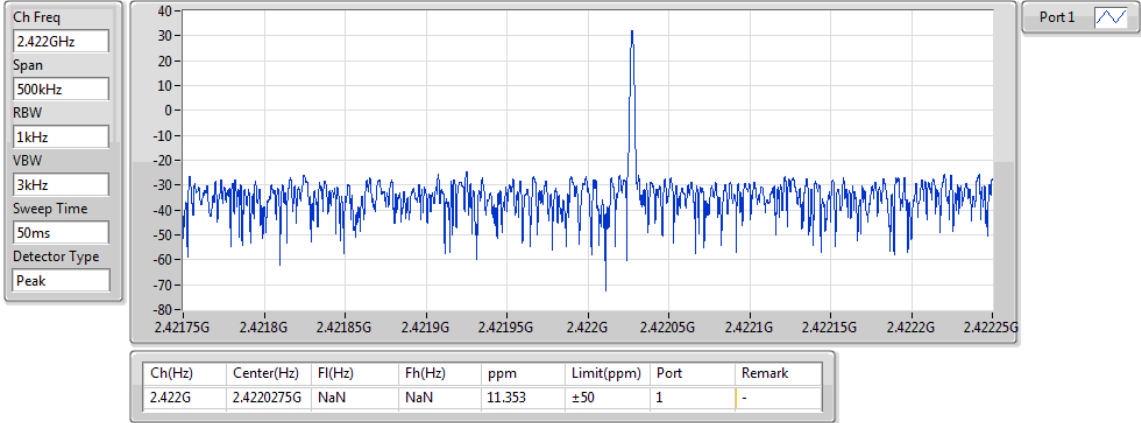
Frequency Tolerance Result

Appendix B

802.11n HT40_Nss1,(MCS0)_1TX

Freq. Stability

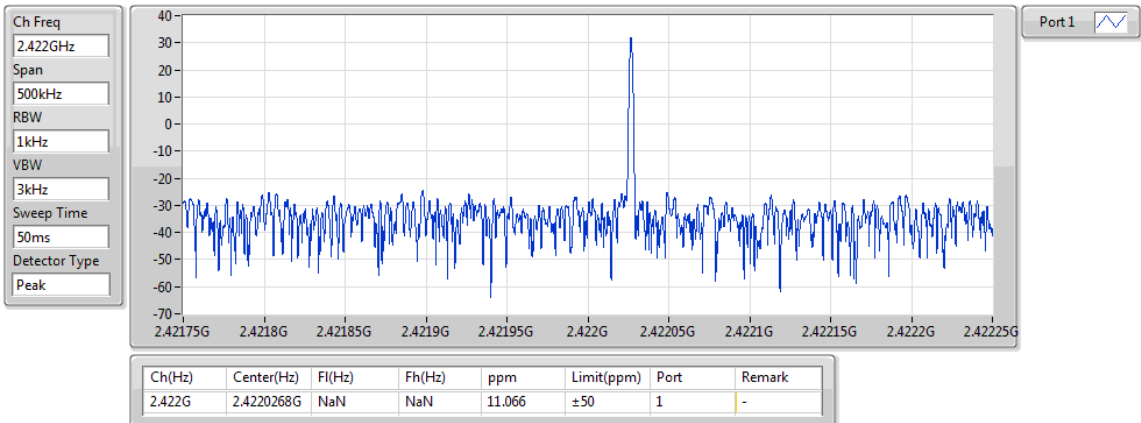
2422MHz_



802.11n HT40_Nss1,(MCS0)_1TX

Freq. Stability

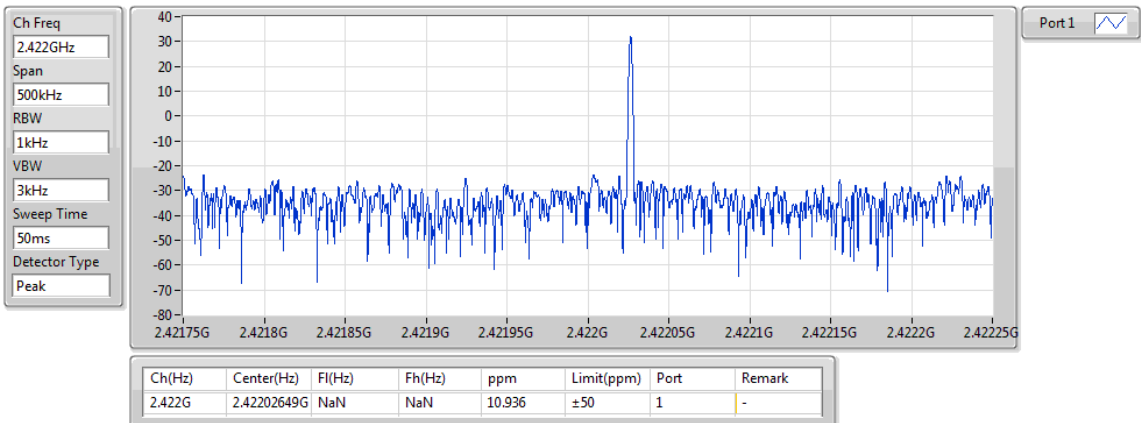
2422MHz_



802.11n HT40_Nss1,(MCS0)_1TX

Freq. Stability

2422MHz_





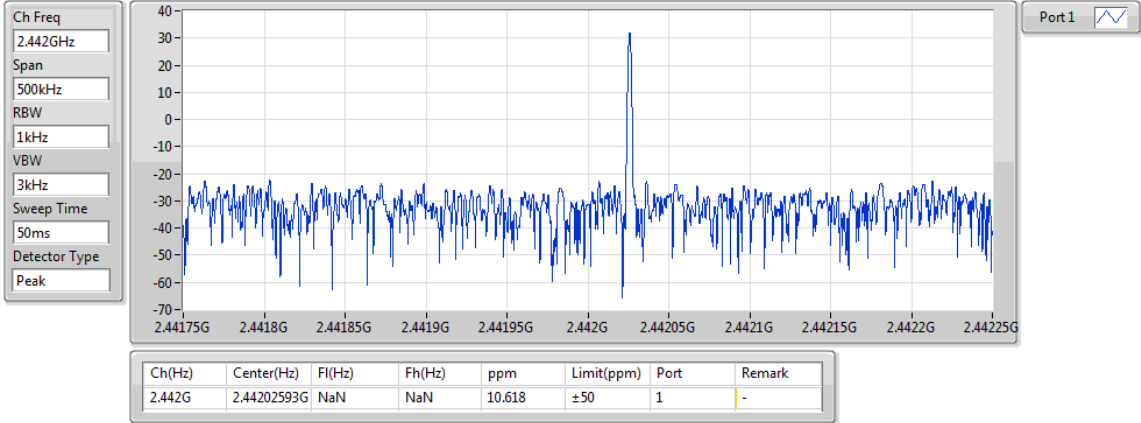
Frequency Tolerance Result

Appendix B

802.11n HT40_Nss1,(MCS0)_1TX

Freq. Stability

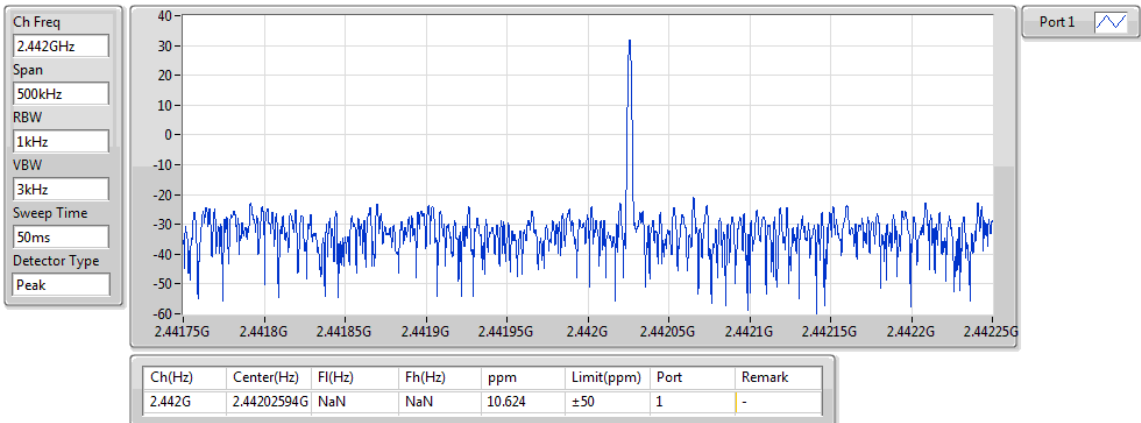
2442MHz_



802.11n HT40_Nss1,(MCS0)_1TX

Freq. Stability

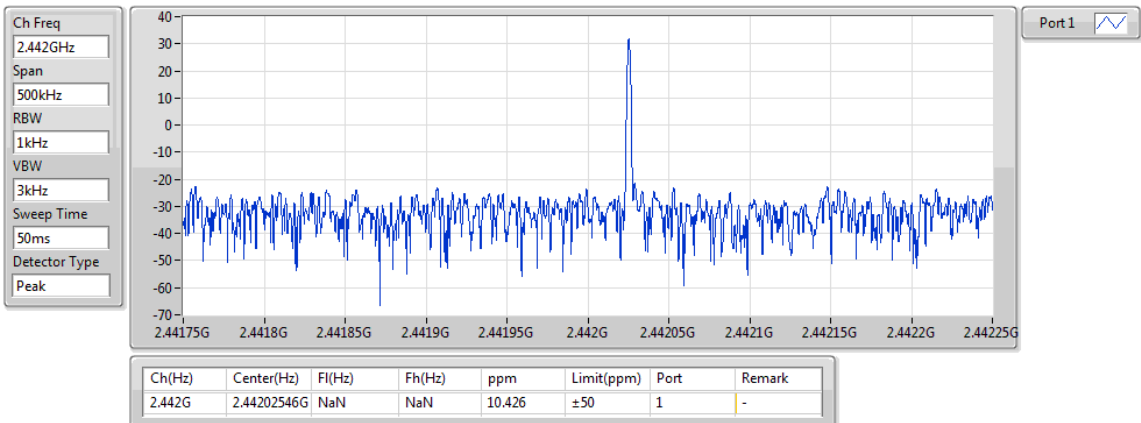
2442MHz_



802.11n HT40_Nss1,(MCS0)_1TX

Freq. Stability

2442MHz_





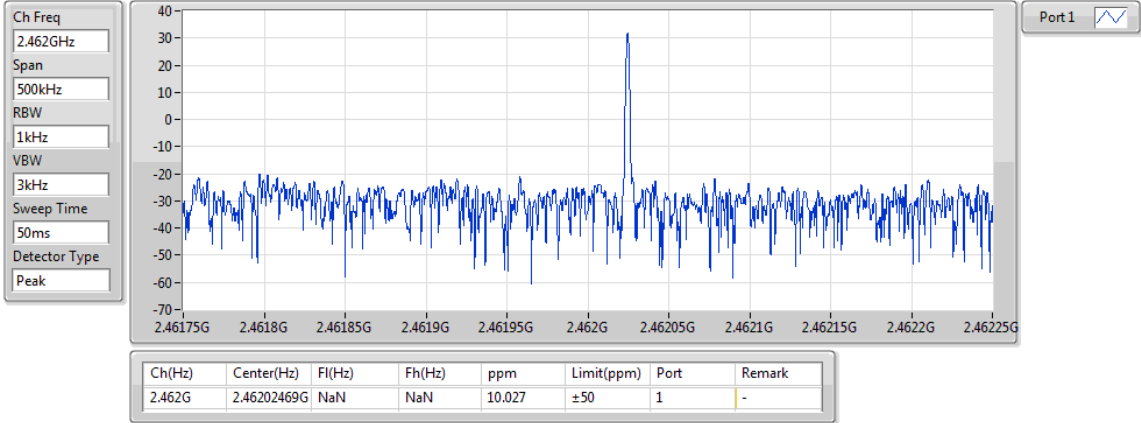
Frequency Tolerance Result

Appendix B

802.11n HT40_Nss1,(MCS0)_1TX

Freq. Stability

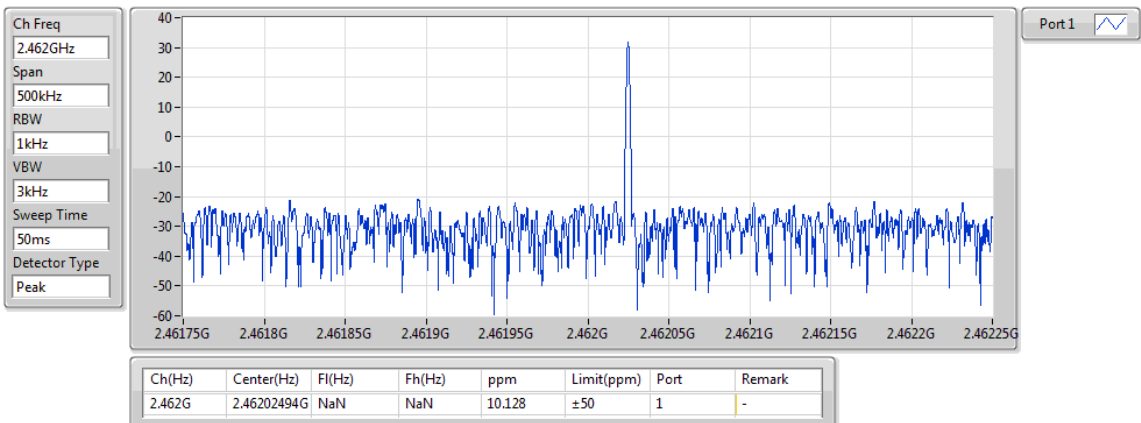
2462MHz_



802.11n HT40_Nss1,(MCS0)_1TX

Freq. Stability

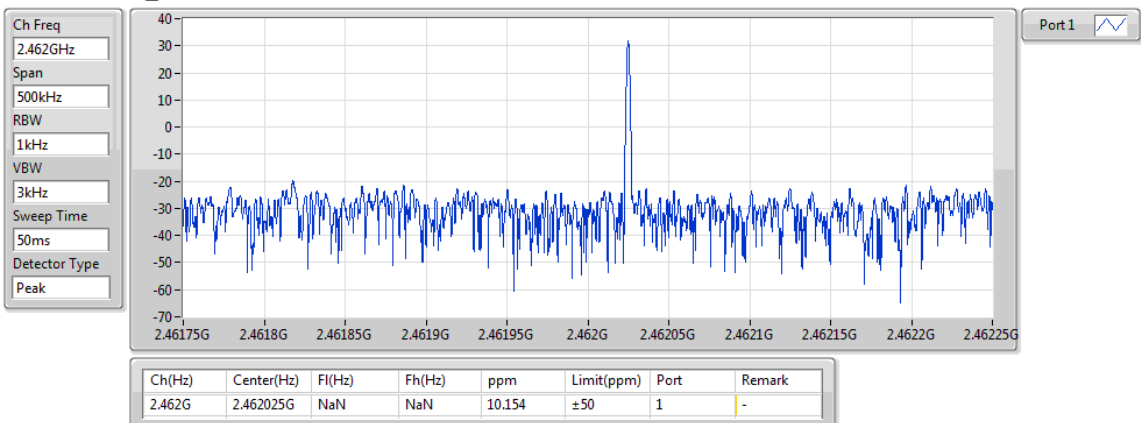
2462MHz_



802.11n HT40_Nss1,(MCS0)_1TX

Freq. Stability

2462MHz_





Occupied Bandwidth Result

Appendix C

Summary

Mode	Max-OBW (MHz)	ITU-Code	Min-OBW (MHz)
2.4-2.4835GHz	-	-	-
802.11b_Nss1_1TX	13.228	13M2G1D	13.187
802.11g_Nss1_1TX	17.934	17M9D1D	16.802
802.11n HT20_Nss1,(MCS0)_1TX	17.929	17M9D1D	17.836
802.11n HT40_Nss1,(MCS0)_1TX	37.039	37M0D1D	36.924

Max-OBW = Maximum99% occupied bandwidth; **Min-OBW** = Minimum99% occupied bandwidth;

Result

Mode	Result	Limit (MHz)	P1-OBW (MHz)
802.11b_Nss1_1TX	-	-	-
2412MHz_TnomVnom	Pass	26	13.187
2412MHz_TnomVmin	Pass	26	13.197
2412MHz_TnomVmax	Pass	26	13.207
2442MHz_TnomVnom	Pass	26	13.228
2442MHz_TnomVmin	Pass	26	13.224
2442MHz_TnomVmax	Pass	26	13.21
2472MHz_TnomVnom	Pass	26	13.209
2472MHz_TnomVmin	Pass	26	13.204
2472MHz_TnomVmax	Pass	26	13.199
802.11g_Nss1_1TX	-	-	-
2412MHz_TnomVnom	Pass	26	17.934
2412MHz_TnomVmin	Pass	26	17.933
2412MHz_TnomVmax	Pass	26	17.926
2442MHz_TnomVnom	Pass	26	16.857
2442MHz_TnomVmin	Pass	26	16.851
2442MHz_TnomVmax	Pass	26	16.847
2472MHz_TnomVnom	Pass	26	16.802
2472MHz_TnomVmin	Pass	26	16.814
2472MHz_TnomVmax	Pass	26	16.814
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-
2412MHz_TnomVnom	Pass	26	17.92
2412MHz_TnomVmin	Pass	26	17.929
2412MHz_TnomVmax	Pass	26	17.915
2442MHz_TnomVnom	Pass	26	17.886
2442MHz_TnomVmin	Pass	26	17.893
2442MHz_TnomVmax	Pass	26	17.883
2472MHz_TnomVnom	Pass	26	17.836
2472MHz_TnomVmin	Pass	26	17.843
2472MHz_TnomVmax	Pass	26	17.85
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-



Occupied Bandwidth Result

Appendix C

Mode	Result	Limit (MHz)	P1-OBW (MHz)
2422MHz_TnomVnom	Pass	38	37.007
2422MHz_TnomVmin	Pass	38	36.966
2422MHz_TnomVmax	Pass	38	37.039
2442MHz_TnomVnom	Pass	38	37.031
2442MHz_TnomVmin	Pass	38	37.015
2442MHz_TnomVmax	Pass	38	37.026
2462MHz_TnomVnom	Pass	38	36.924
2462MHz_TnomVmin	Pass	38	37.001
2462MHz_TnomVmax	Pass	38	36.956

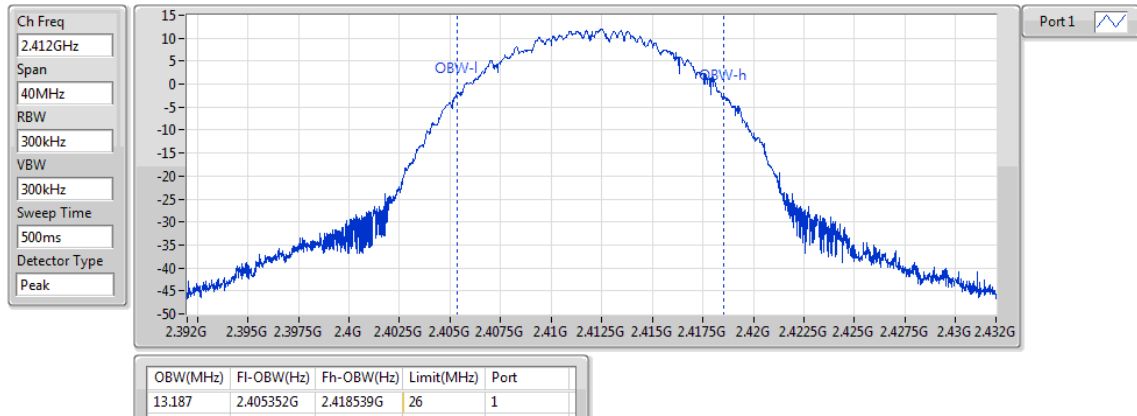
P1-OBW = Port 1 99% occupied bandwidth; d



802.11b_Nss1_1TX

OBW

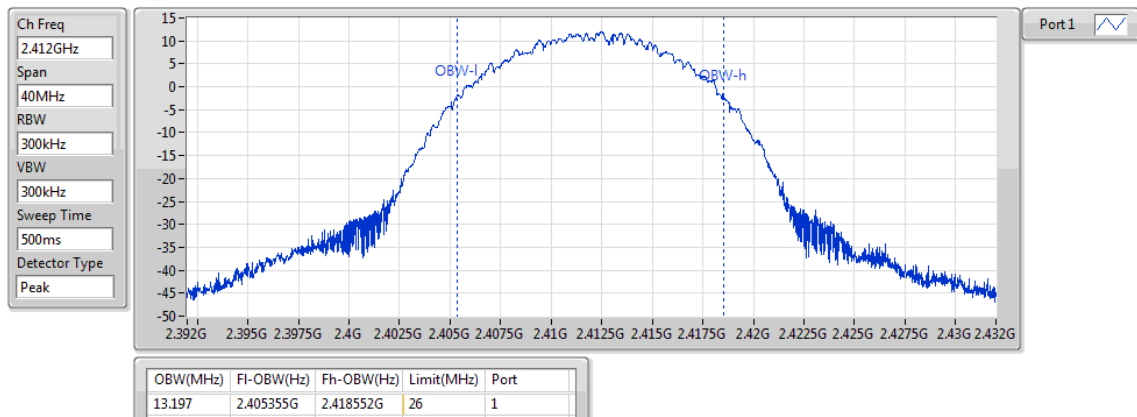
2412MHz_TnomVnom



802.11b_Nss1_1TX

OBW

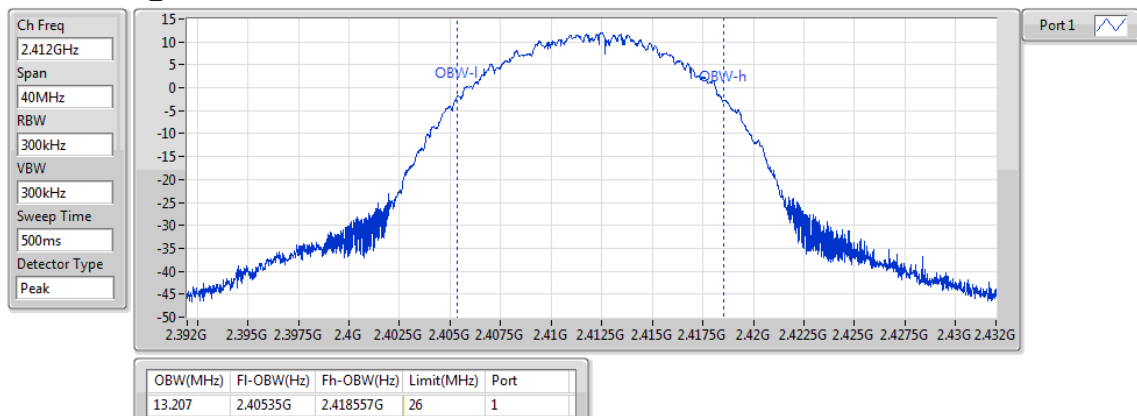
2412MHz_TnomVmin



802.11b_Nss1_1TX

OBW

2412MHz_TnomVmax

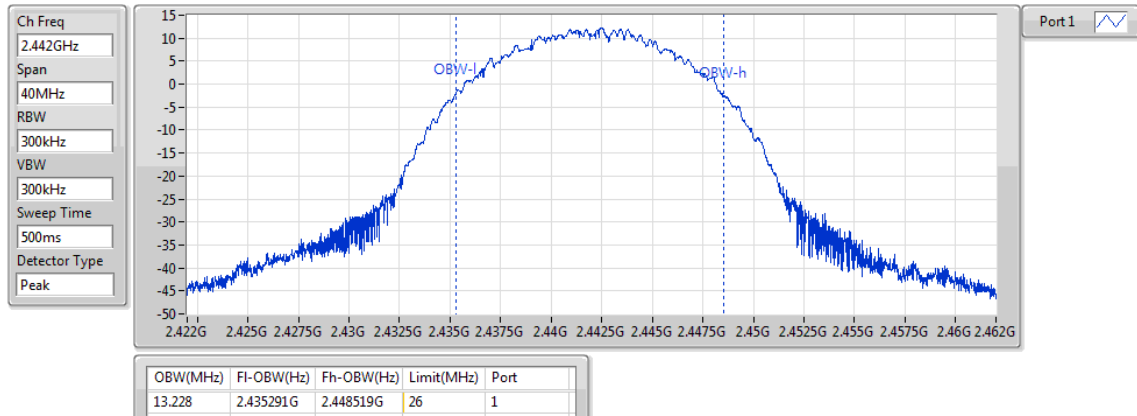




802.11b_Nss1_1TX

OBW

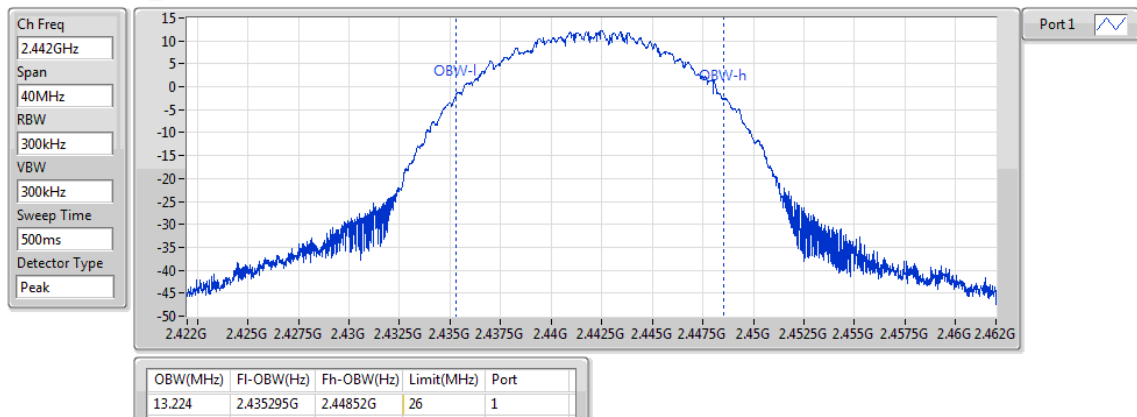
2442MHz_TnomVnom



802.11b_Nss1_1TX

OBW

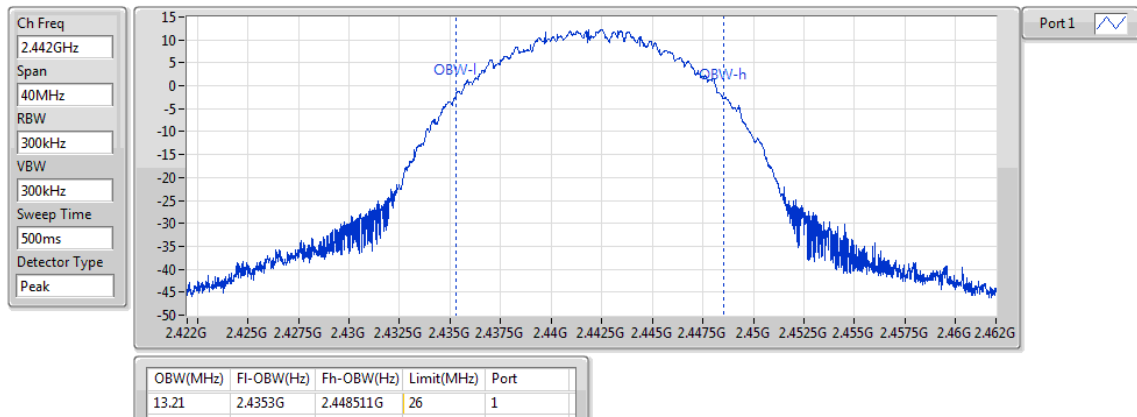
2442MHz_TnomVmin



802.11b_Nss1_1TX

OBW

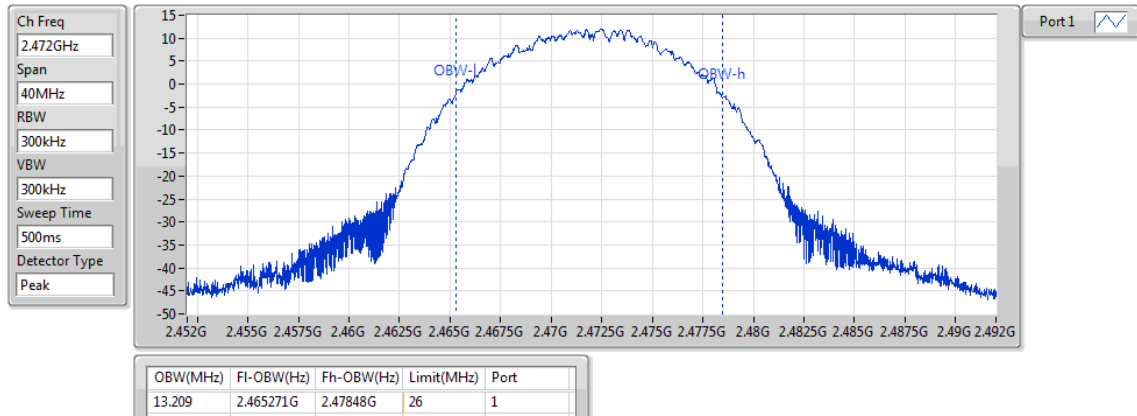
2442MHz_TnomVmax



802.11b_Nss1_1TX

OBW

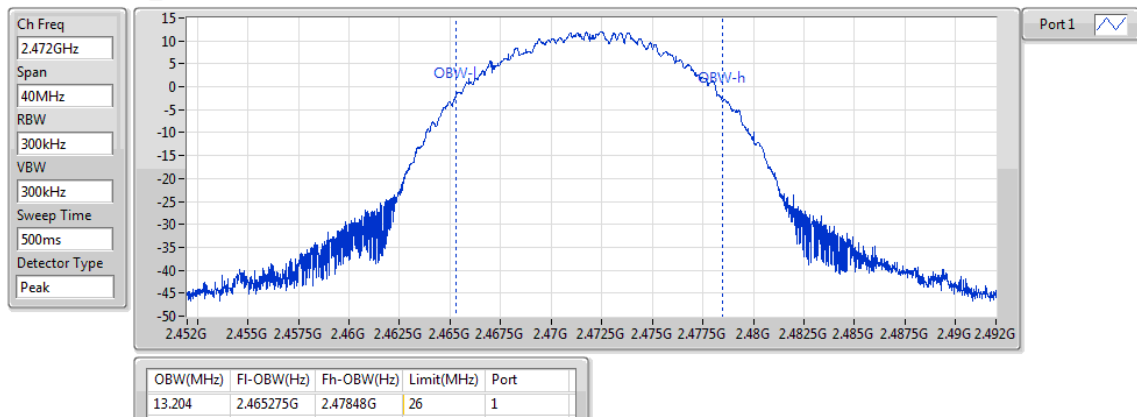
2472MHz_TnomVnom



802.11b_Nss1_1TX

OBW

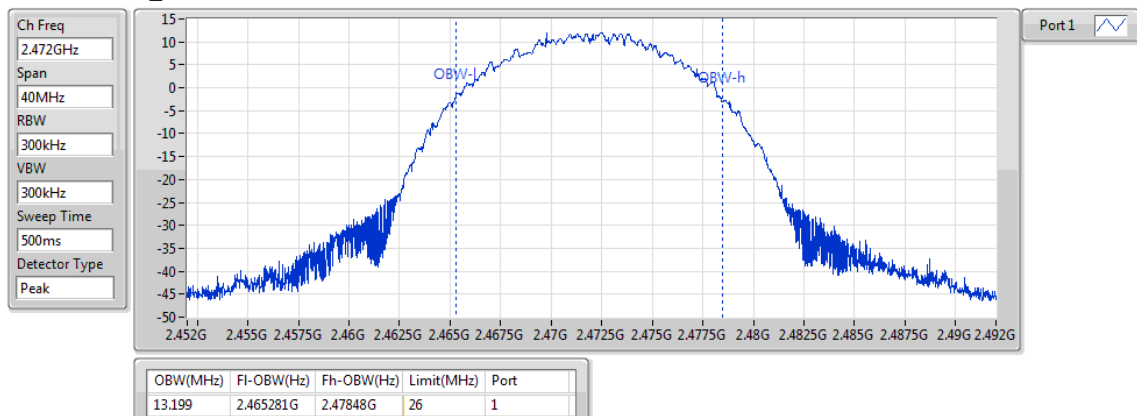
2472MHz_TnomVmin



802.11b_Nss1_1TX

OBW

2472MHz_TnomVmax

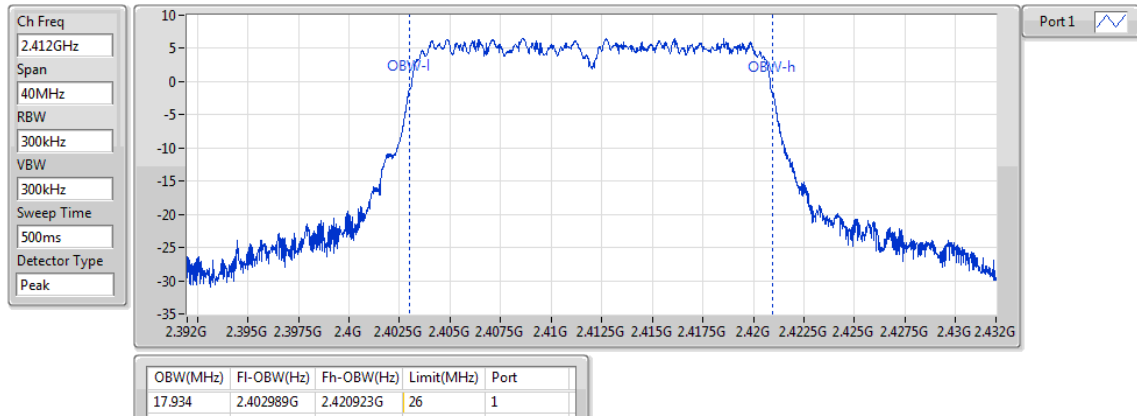




802.11g_Nss1_1TX

OBW

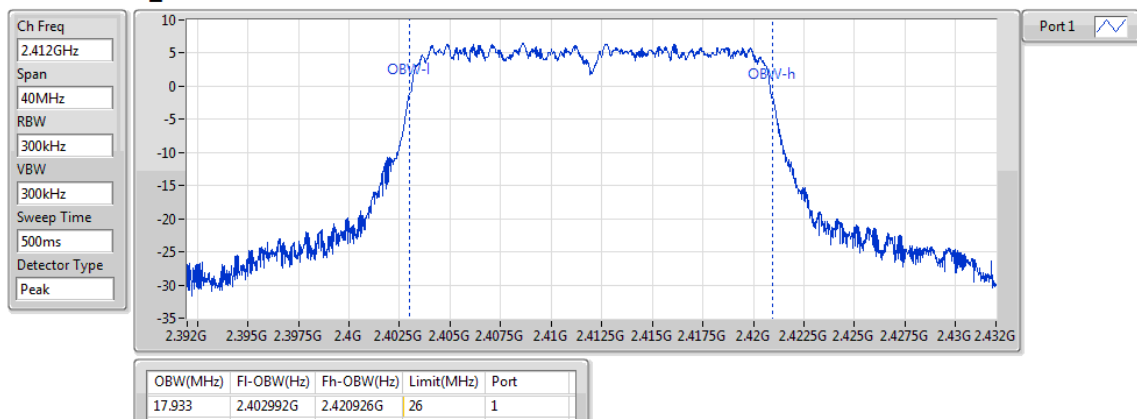
2412MHz_TnomVnom



802.11g_Nss1_1TX

OBW

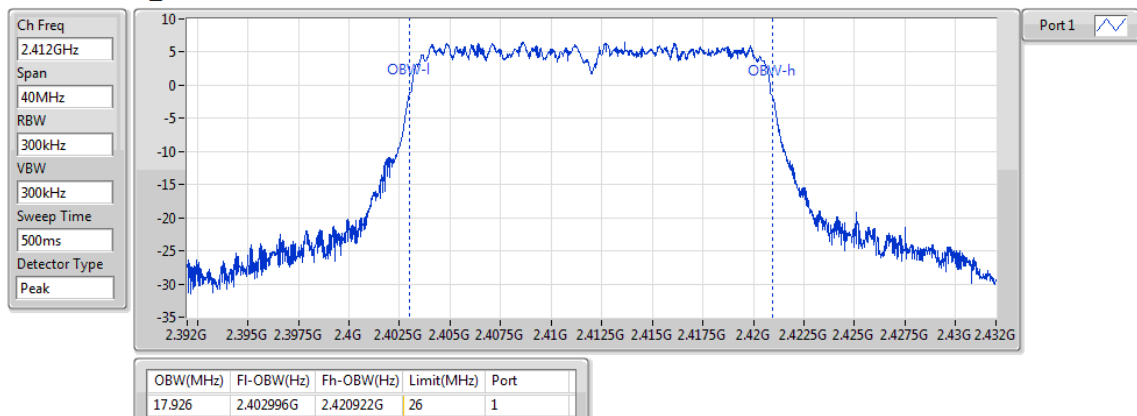
2412MHz_TnomVmin



802.11g_Nss1_1TX

OBW

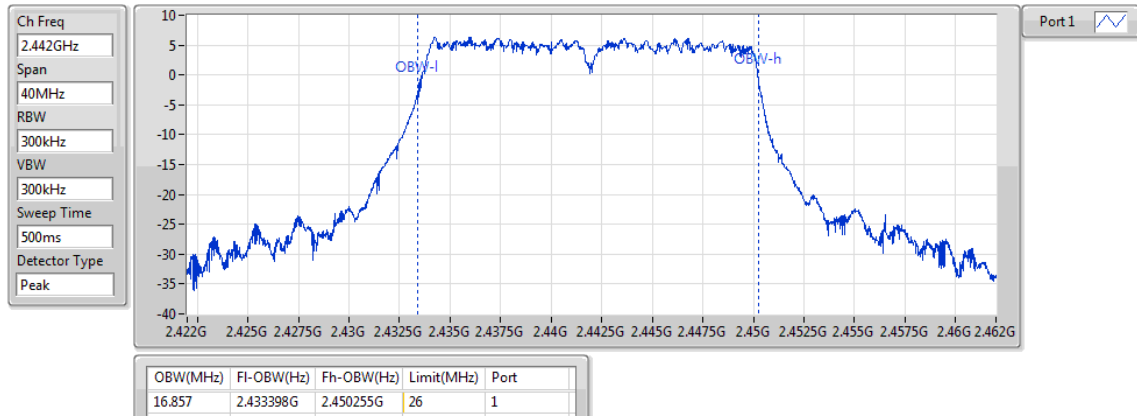
2412MHz_TnomVmax



802.11g_Nss1_1TX

OBW

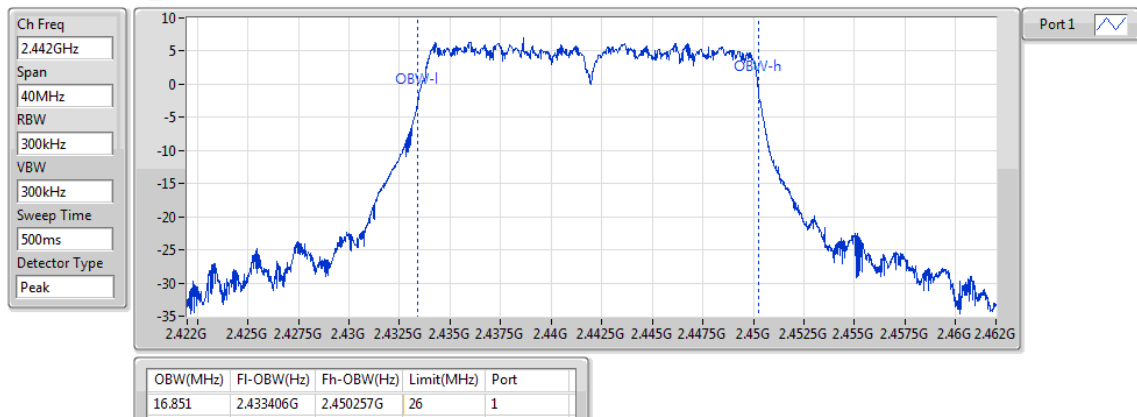
2442MHz_TnomVnom



802.11g_Nss1_1TX

OBW

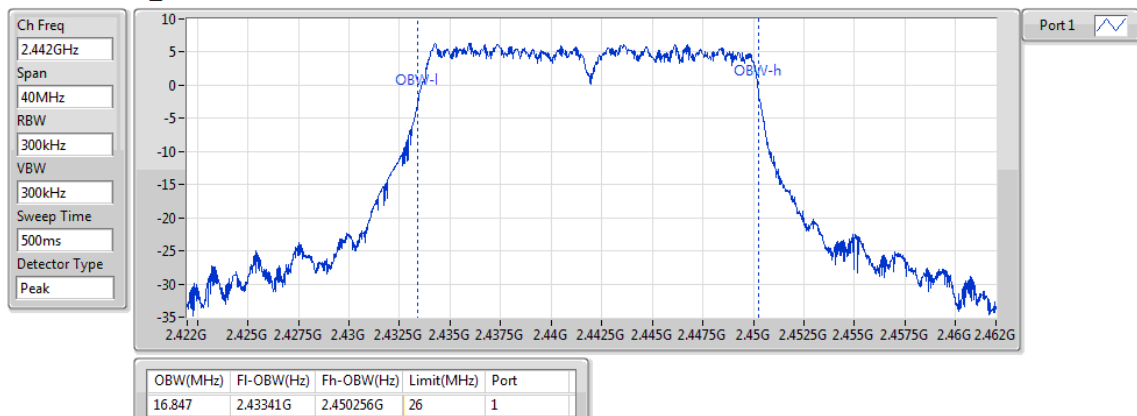
2442MHz_TnomVmin



802.11g_Nss1_1TX

OBW

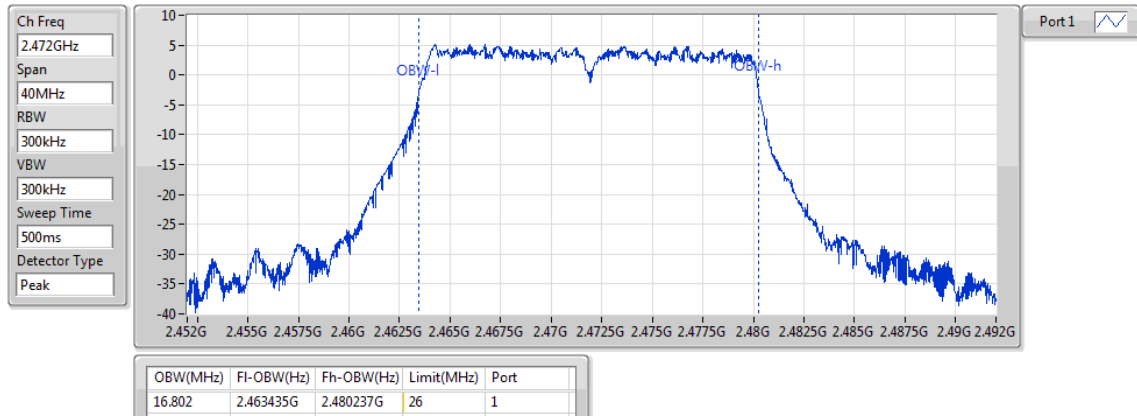
2442MHz_TnomVmax



802.11g_Nss1_1TX

OBW

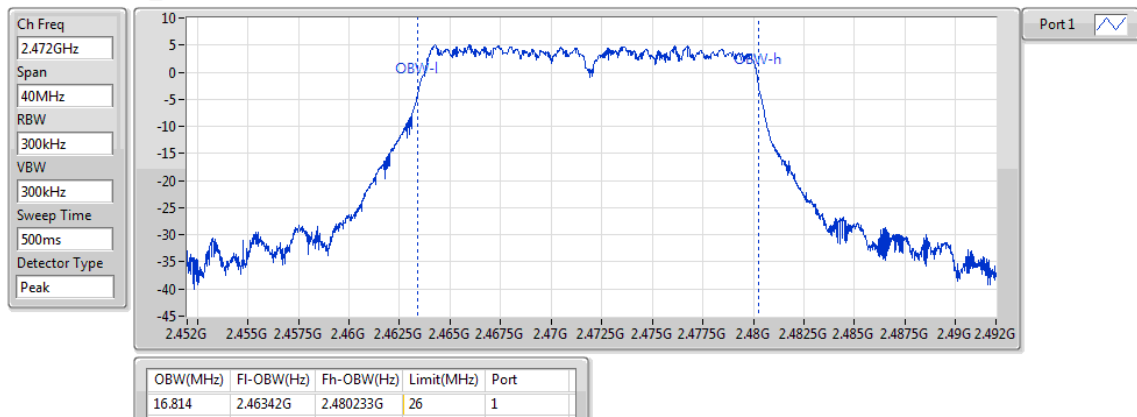
2472MHz_TnomVnom



802.11g_Nss1_1TX

OBW

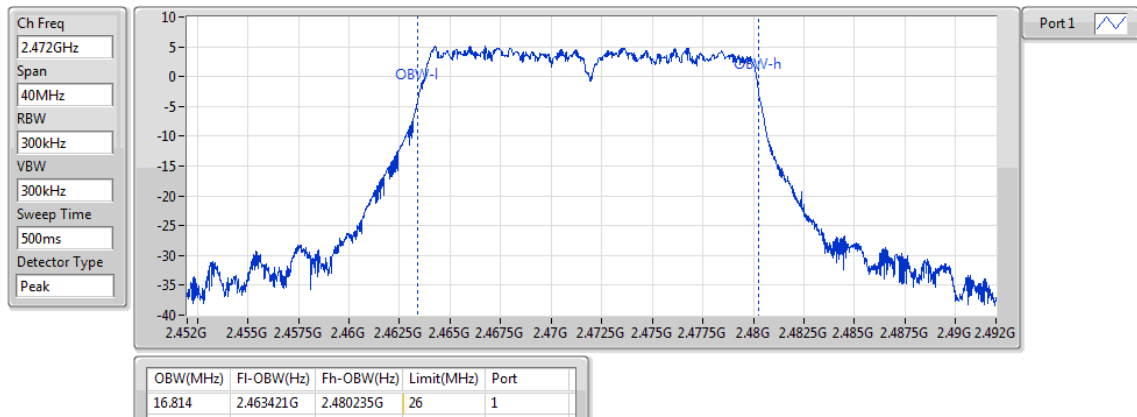
2472MHz_TnomVmin



802.11g_Nss1_1TX

OBW

2472MHz_TnomVmax

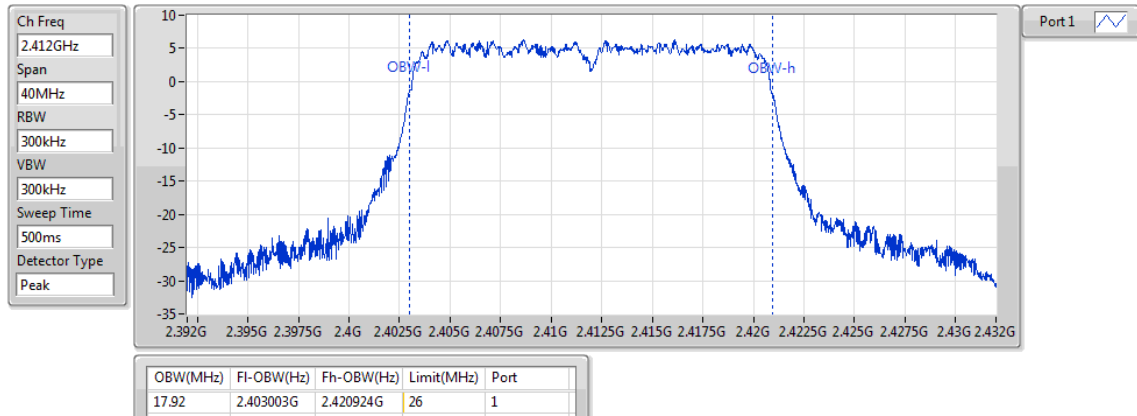




802.11n HT20_Nss1,(MCS0)_1TX

OBW

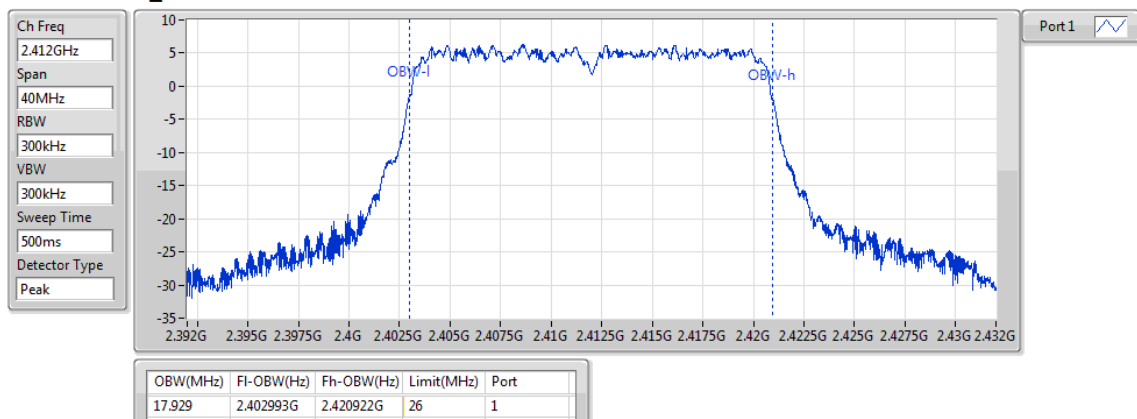
2412MHz_TnomVnom



802.11n HT20_Nss1,(MCS0)_1TX

OBW

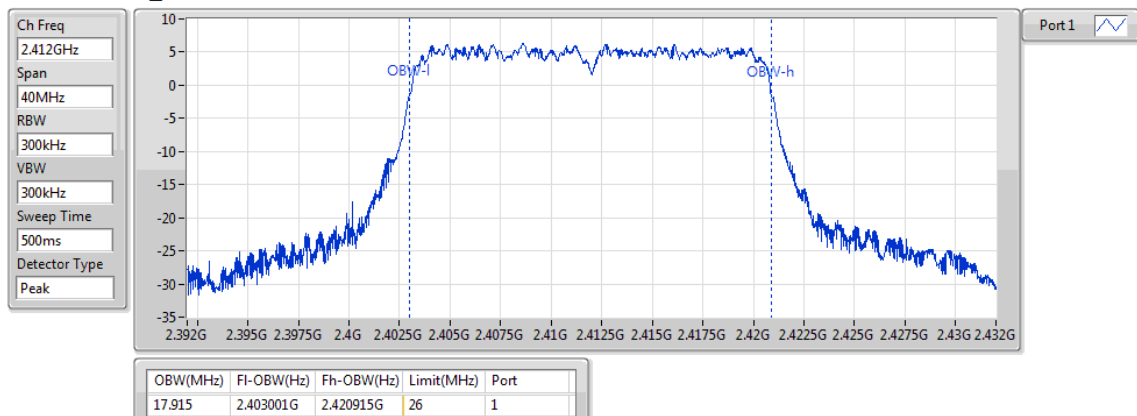
2412MHz_TnomVmin



802.11n HT20_Nss1,(MCS0)_1TX

OBW

2412MHz_TnomVmax

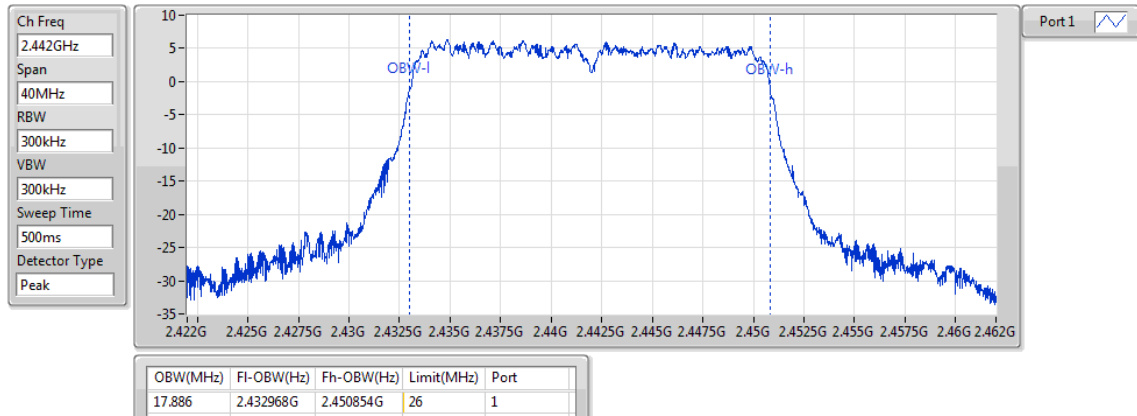




802.11n HT20_Nss1,(MCS0)_1TX

OBW

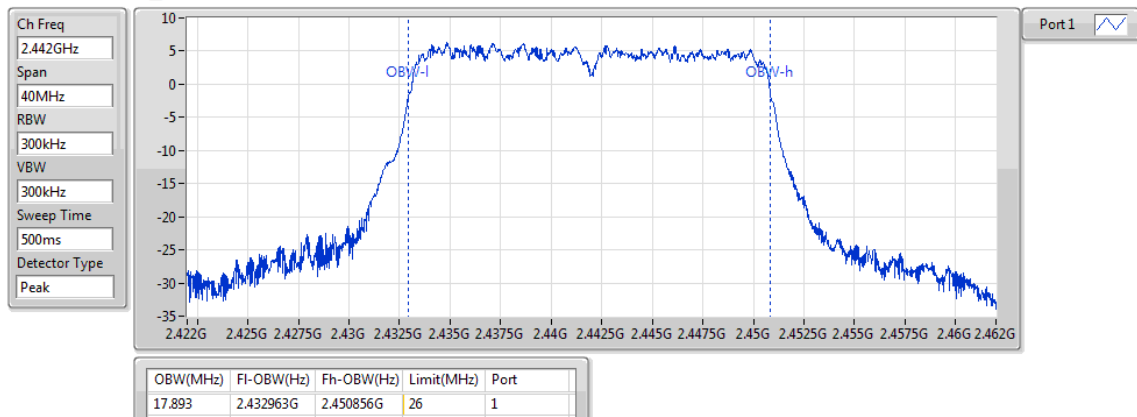
2442MHz_TnomVnom



802.11n HT20_Nss1,(MCS0)_1TX

OBW

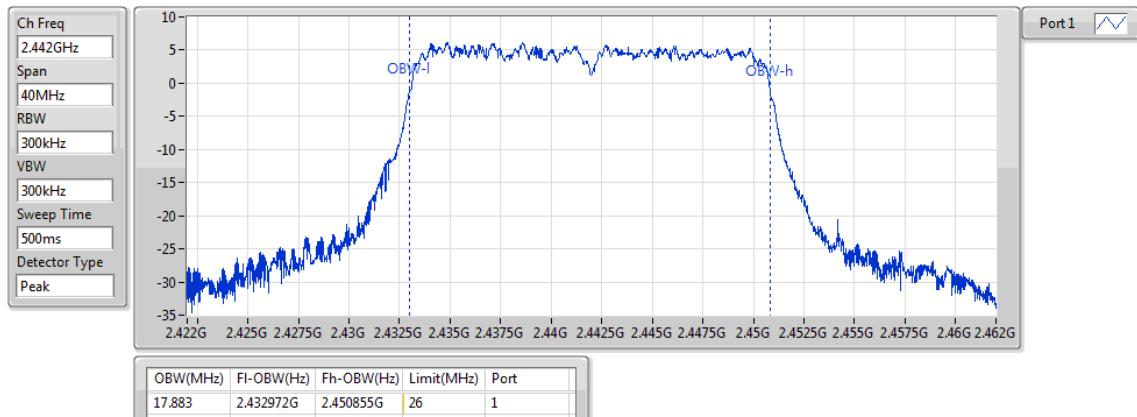
2442MHz_TnomVmin



802.11n HT20_Nss1,(MCS0)_1TX

OBW

2442MHz_TnomVmax

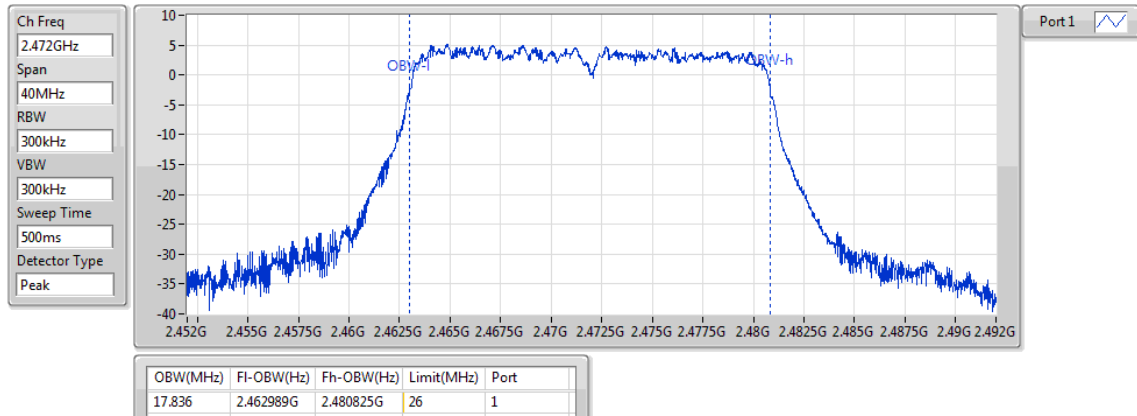




802.11n HT20_Nss1,(MCS0)_1TX

OBW

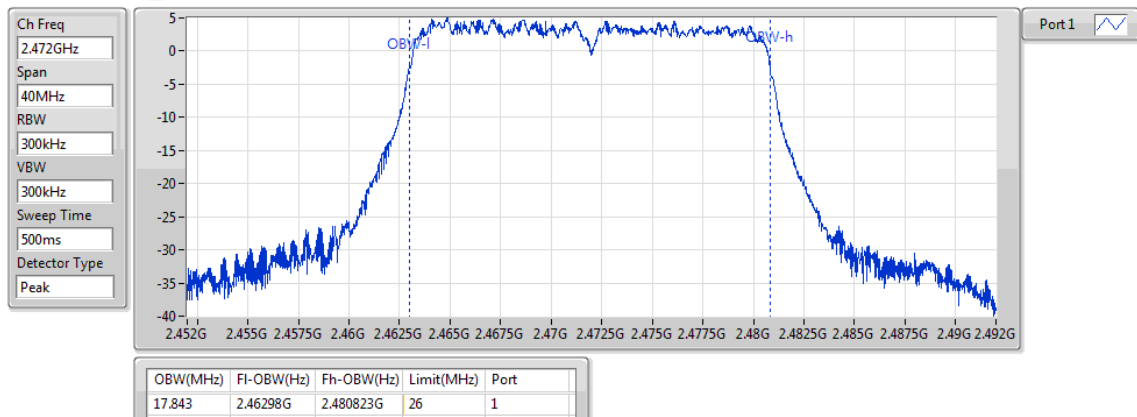
2472MHz_TnomVnom



802.11n HT20_Nss1,(MCS0)_1TX

OBW

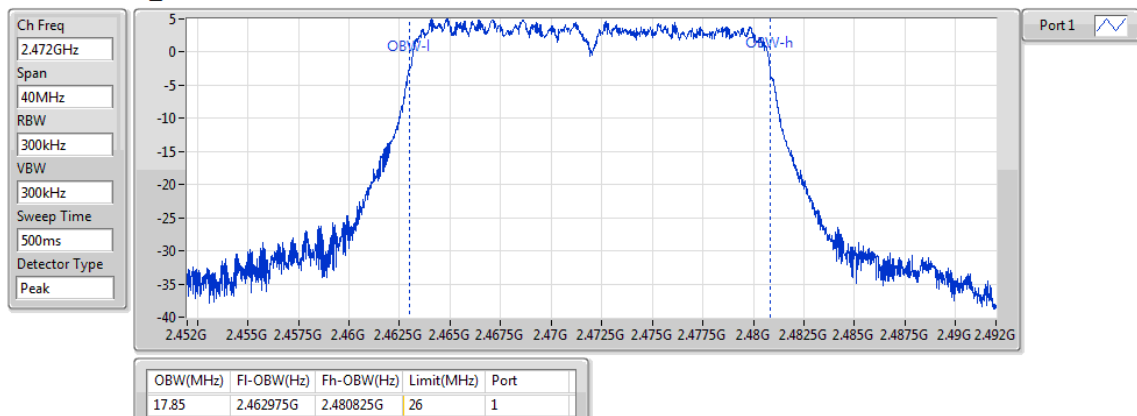
2472MHz_TnomVmin



802.11n HT20_Nss1,(MCS0)_1TX

OBW

2472MHz_TnomVmax

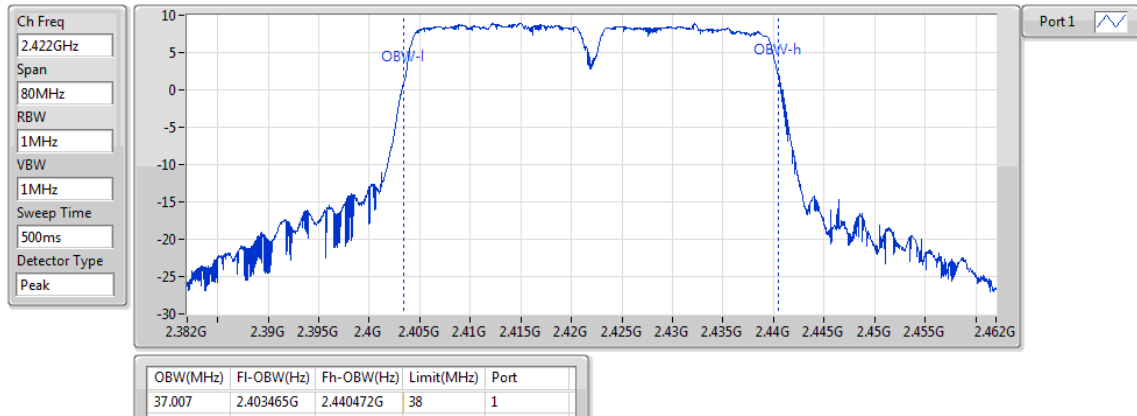




802.11n HT40_Nss1,(MCS0)_1TX

OBW

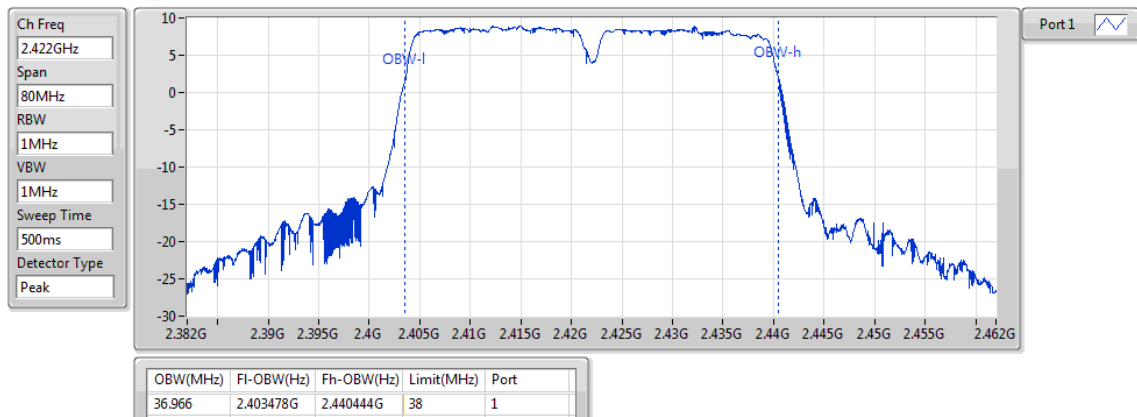
2422MHz_TnomVnom



802.11n HT40_Nss1,(MCS0)_1TX

OBW

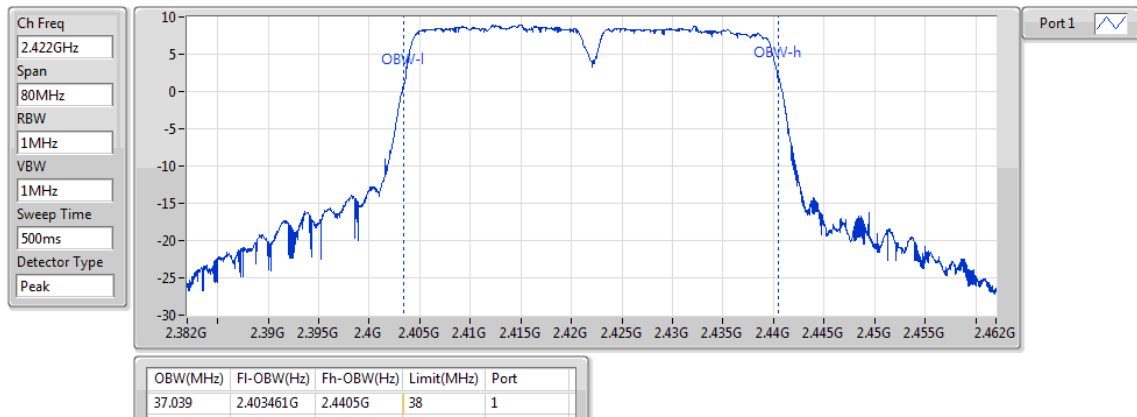
2422MHz_TnomVmin



802.11n HT40_Nss1,(MCS0)_1TX

OBW

2422MHz_TnomVmax

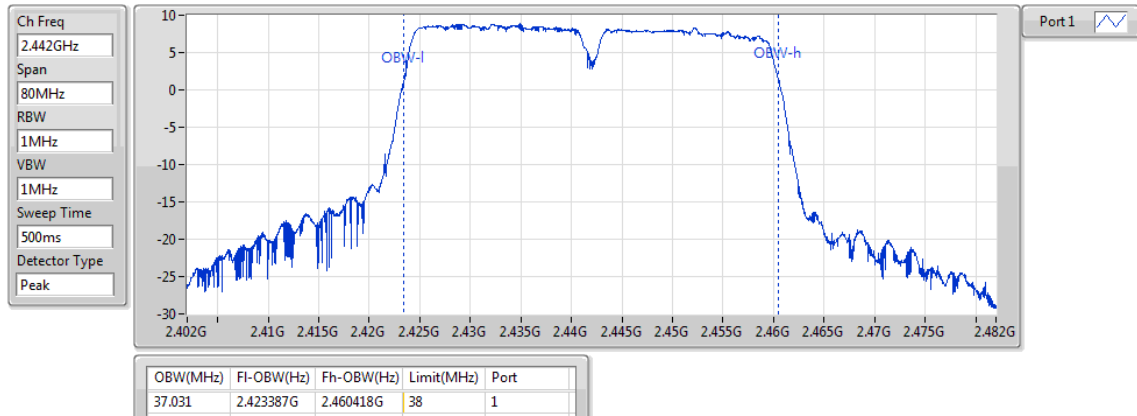




802.11n HT40_Nss1,(MCS0)_1TX

OBW

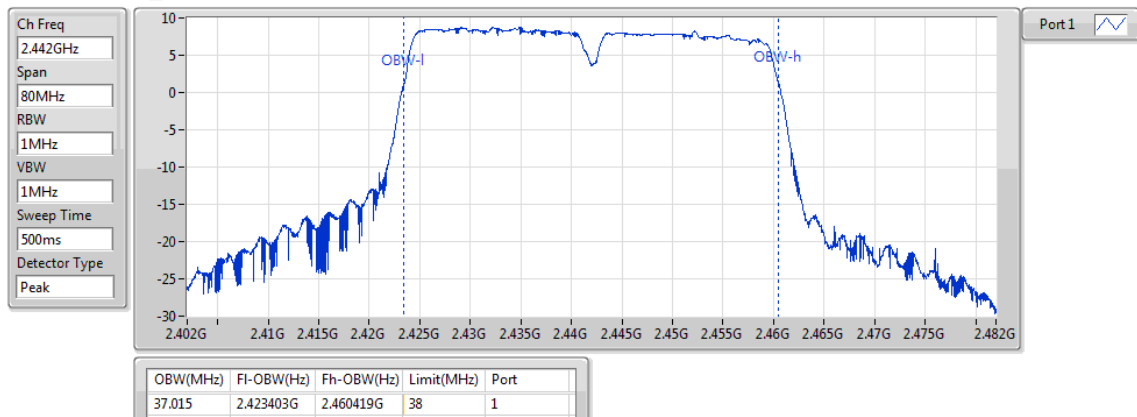
2442MHz_TnomVnom



802.11n HT40_Nss1,(MCS0)_1TX

OBW

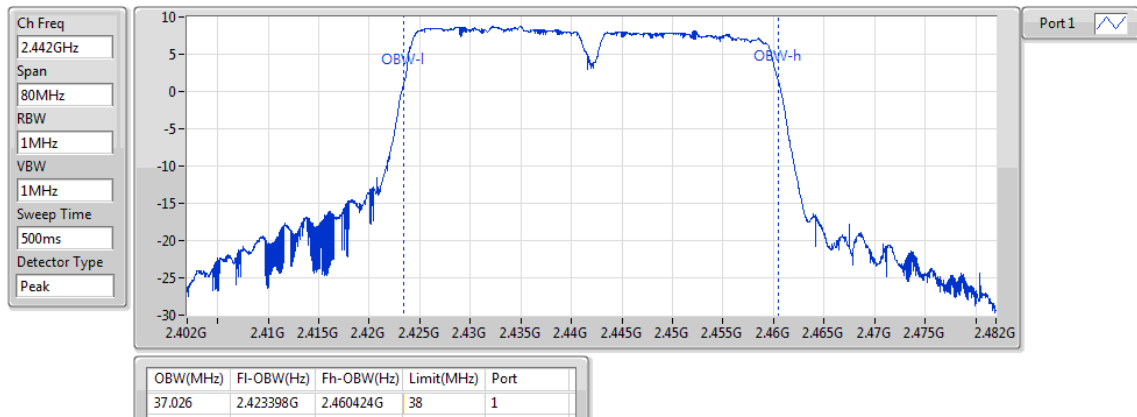
2442MHz_TnomVmin



802.11n HT40_Nss1,(MCS0)_1TX

OBW

2442MHz_TnomVmax

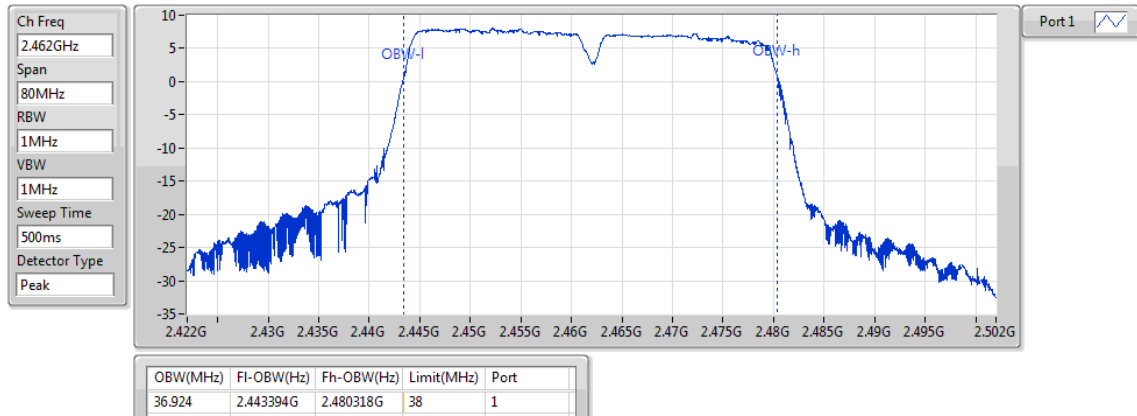




802.11n HT40_Nss1,(MCS0)_1TX

OBW

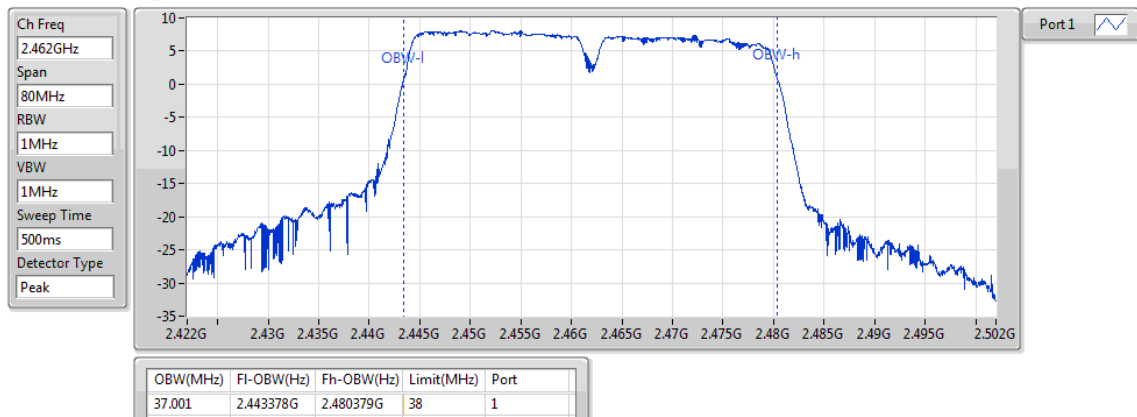
2462MHz_TnomVnom



802.11n HT40_Nss1,(MCS0)_1TX

OBW

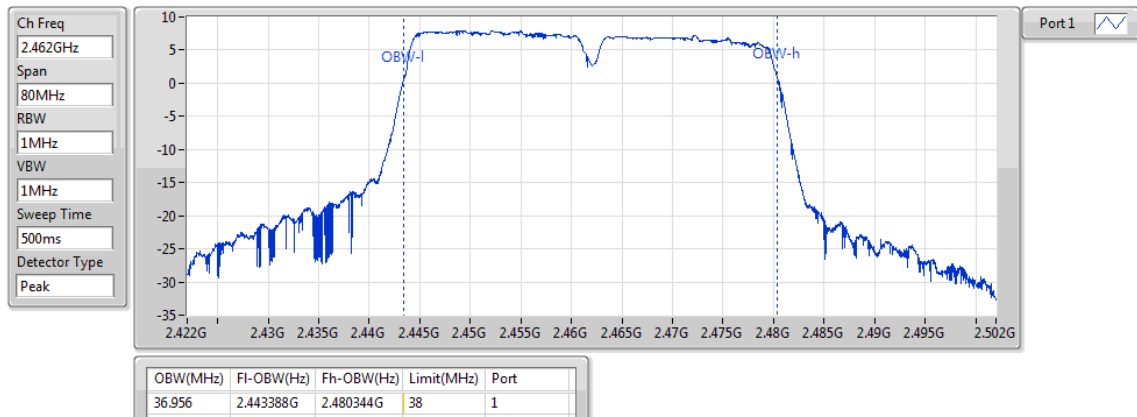
2462MHz_TnomVmin



802.11n HT40_Nss1,(MCS0)_1TX

OBW

2462MHz_TnomVmax





Summary

Mode	Max-SBW (MHz)	Min-SBW (MHz)	Max-SF	Min-SF
2.4-2.4835GHz	-	-	-	-
802.11b_Nss1_1TX	8.873	8.77	6.453	6.378

Max-SBW = Maximum spreading bandwidth; **Min-SBW** = Minimum spreading bandwidth;

Max-SF = Maximum spreading factor; **Min-SF** = Minimum spreading factor;

**Result**

Mode	Result	SBW Limit (MHz)	Symbol Rate (Msps)	SF Limit	P1-SBW (MHz)	P1-SF
802.11b_Nss1_1TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	0.5	1.375	5	8.778	6.384
2412MHz_TnomVmin	Pass	0.5	1.375	5	8.78	6.386
2412MHz_TnomVmax	Pass	0.5	1.375	5	8.77	6.378
2442MHz_TnomVnom	Pass	0.5	1.375	5	8.873	6.453
2442MHz_TnomVmin	Pass	0.5	1.375	5	8.867	6.449
2442MHz_TnomVmax	Pass	0.5	1.375	5	8.859	6.443
2472MHz_TnomVnom	Pass	0.5	1.375	5	8.803	6.402
2472MHz_TnomVmin	Pass	0.5	1.375	5	8.787	6.39
2472MHz_TnomVmax	Pass	0.5	1.375	5	8.794	6.396

P1-SBW = Port 1 spreading bandwidth;

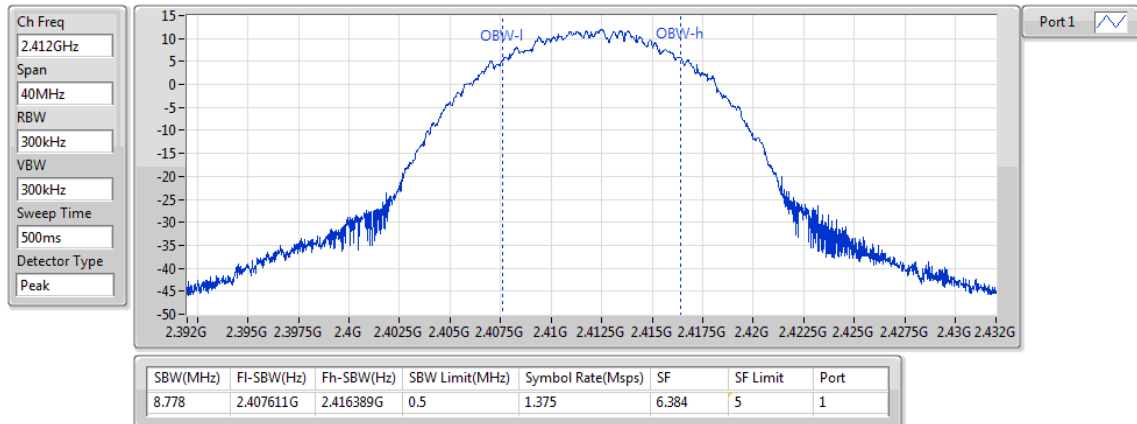
P1-SF = Port 1 spreading factor;



802.11b_Nss1_1TX

SBW

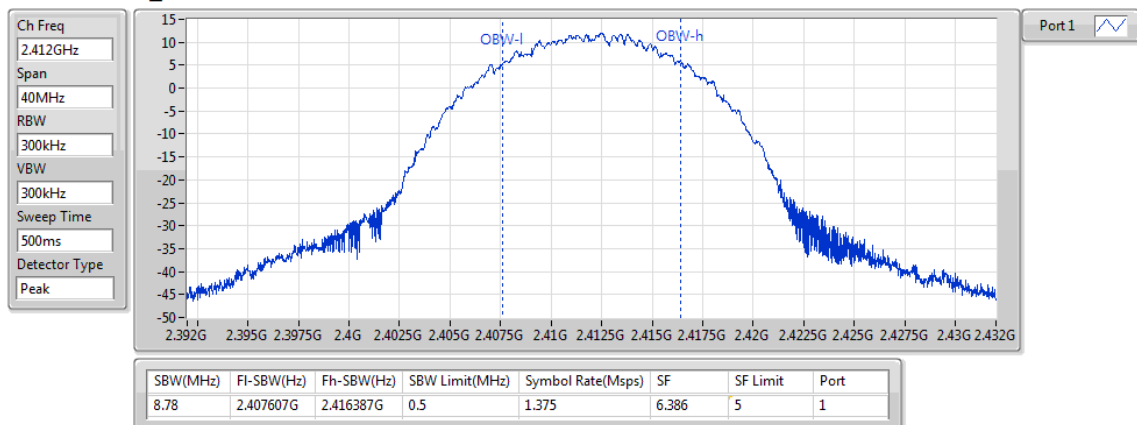
2412MHz_TnomVnom



802.11b_Nss1_1TX

SBW

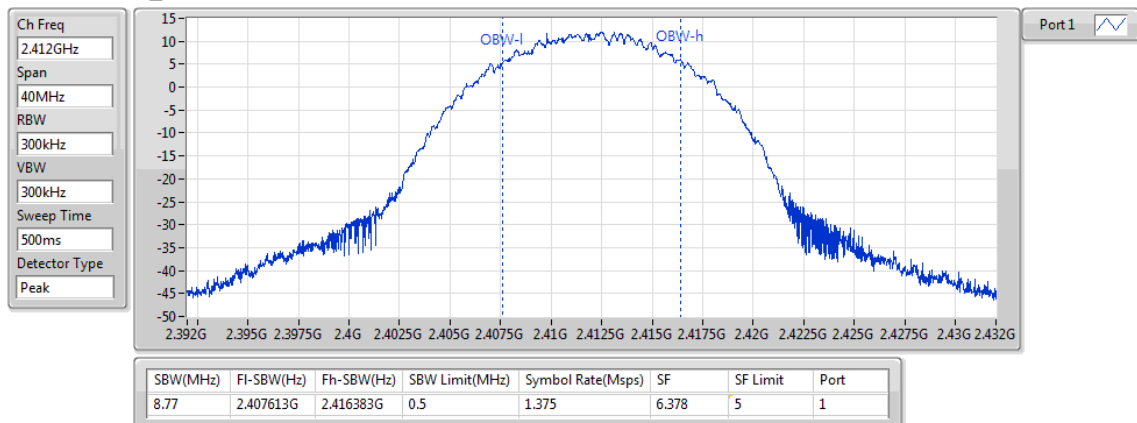
2412MHz_TnomVmin



802.11b_Nss1_1TX

SBW

2412MHz_TnomVmax

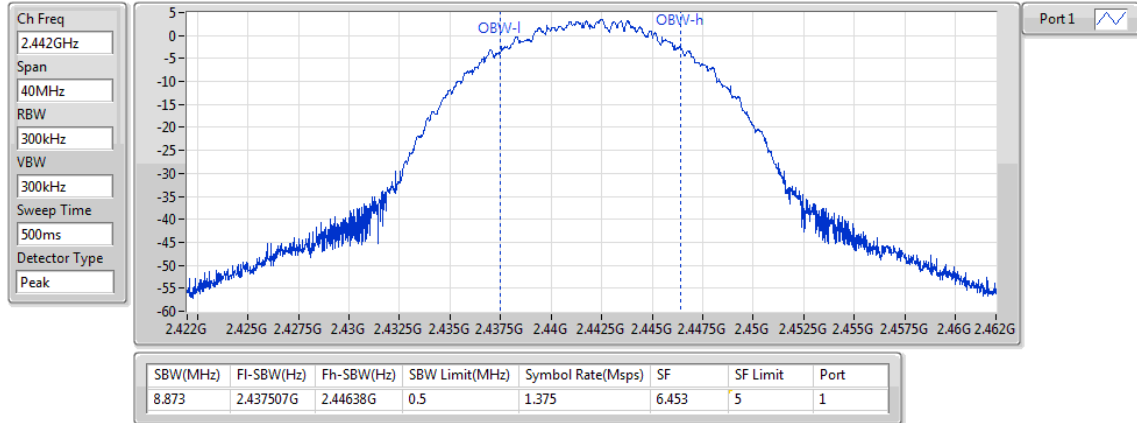




802.11b_Nss1_1TX

SBW

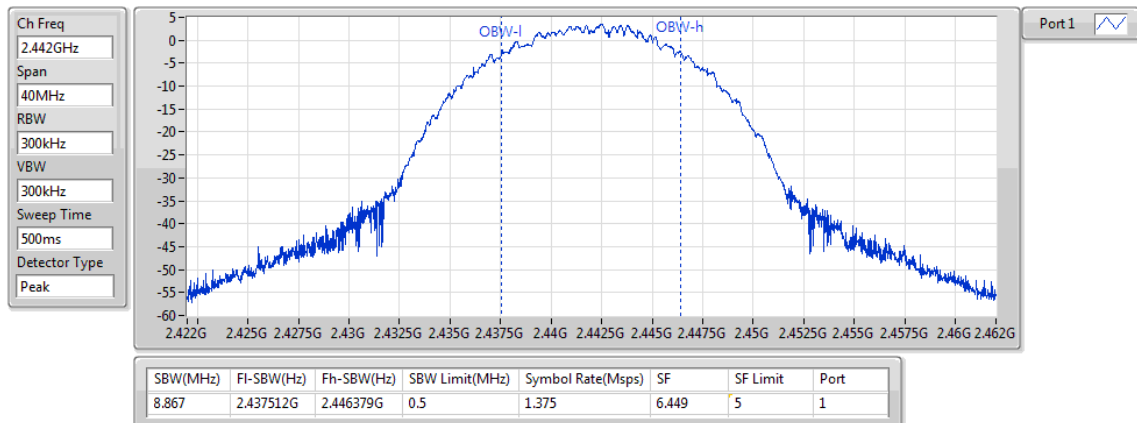
2442MHz_TnomVnom



802.11b_Nss1_1TX

SBW

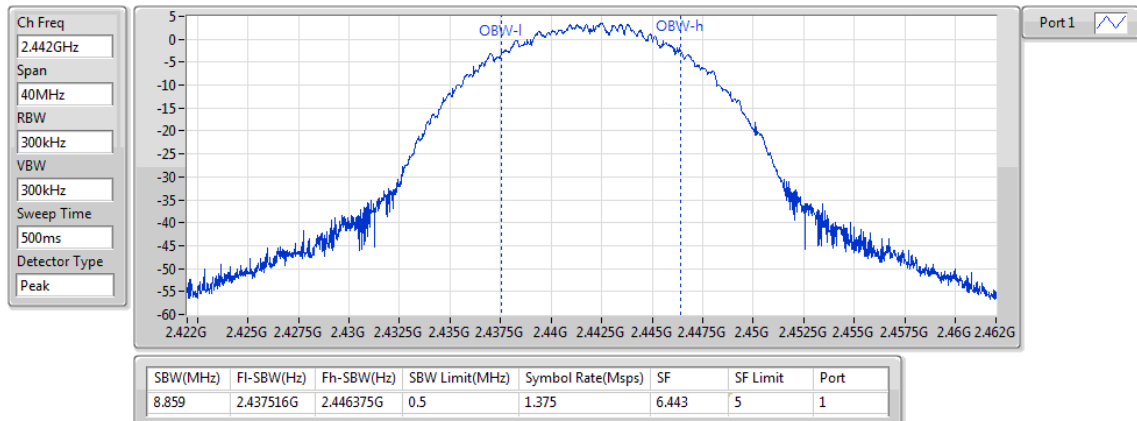
2442MHz_TnomVmin



802.11b_Nss1_1TX

SBW

2442MHz_TnomVmax

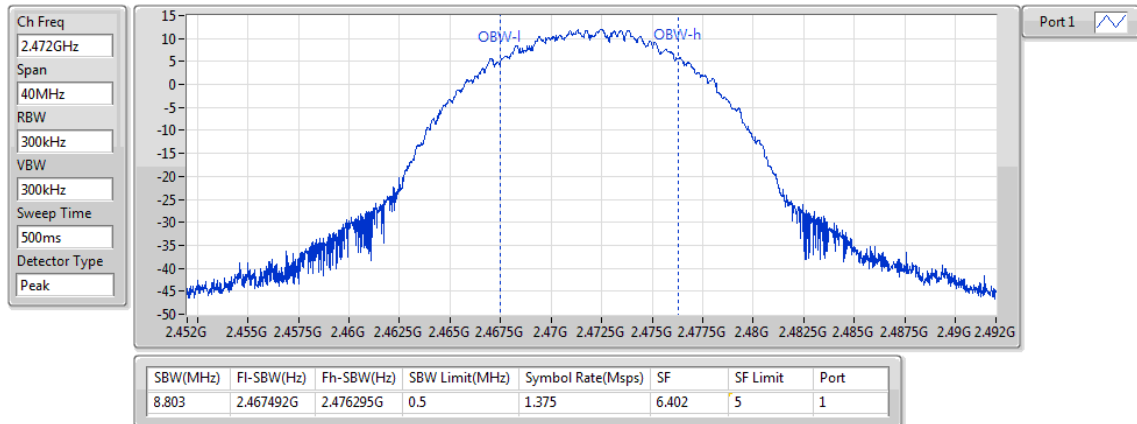




802.11b_Nss1_1TX

SBW

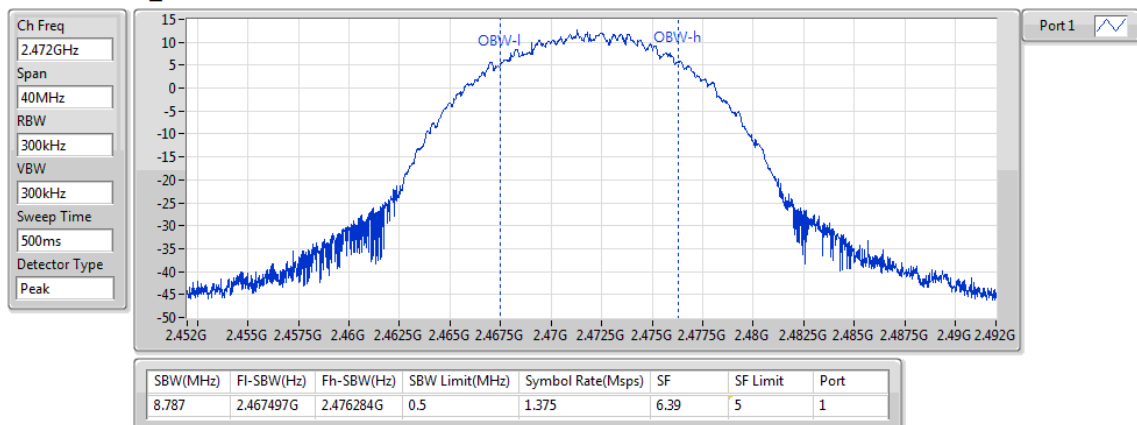
2472MHz_TnomVnom



802.11b_Nss1_1TX

SBW

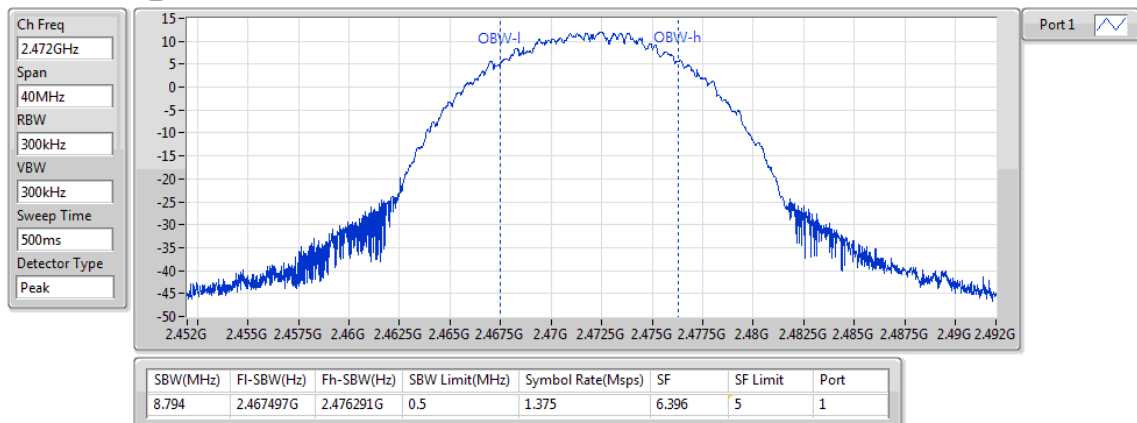
2472MHz_TnomVmin



802.11b_Nss1_1TX

SBW

2472MHz_TnomVmax





CSE-TX Unwanted Emission Strength Result

Appendix E

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Freq (MHz)	Psum (dBm)	Psum (uW/MHz)	Limit (dBm)	Limit (uW/MHz)	Margin (dB)	P1 (dBm)	P1 (uW/MHz)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1_1TX	Pass	2.4965G	12.5G	1M	4823.564	-39.48	0.11272	-26.02	2.5	-13.46	-39.48	0.11272
802.11g_Nss1_1TX	Pass	2.387G	2.4G	1M	2399.831	-26.21	2.39332	-16.02	25	-10.19	-26.21	2.39332
802.11n HT20_Nss1(MCS0)_1TX	Pass	2.387G	2.4G	1M	2399.974	-26.35	2.31739	-16.02	25	-10.33	-26.35	2.31739
802.11n HT40_Nss1(MCS0)_1TX	Pass	30M	2.387G	1M	2387	-32.44	0.57016	-26.02	2.5	-6.42	-32.44	0.57016



CSE-TX Unwanted Emission Strength Result

Appendix E

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Freq (MHz)	Psum (dBm)	Psum (uW/MHz)	Limit (dBm)	Limit (uW/MHz)	Margin (dB)	P1 (dBm)	P1 (uW/MHz)
802.11b_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	30M	2.387G	1M	2387	-51.35	0.00733	-26.02	2.5	-25.33	-51.35	0.00733
2412MHz_TnomVnom	Pass	2.387G	2.4G	1M	2397.036	-34.43	0.36058	-16.02	25	-18.41	-34.43	0.36058
2412MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2492.21	-53.60	0.00437	-16.02	25	-37.58	-53.60	0.00437
2412MHz_TnomVnom	Pass	2.4965G	12.5G	1M	4823.564	-39.57	0.11041	-26.02	2.5	-13.55	-39.57	0.11041
2412MHz_TnomVmin	Pass	30M	2.387G	1M	2387	-51.95	0.00638	-26.02	2.5	-25.93	-51.95	0.00638
2412MHz_TnomVmin	Pass	2.387G	2.4G	1M	2396.425	-34.35	0.36728	-16.02	25	-18.33	-34.35	0.36728
2412MHz_TnomVmin	Pass	2.4835G	2.4965G	1M	2491.625	-53.65	0.00432	-16.02	25	-37.63	-53.65	0.00432
2412MHz_TnomVmin	Pass	2.4965G	12.5G	1M	4823.564	-39.48	0.11272	-26.02	2.5	-13.46	-39.48	0.11272
2412MHz_TnomVmax	Pass	30M	2.387G	1M	2387	-51.94	0.0064	-26.02	2.5	-25.92	-51.94	0.0064
2412MHz_TnomVmax	Pass	2.387G	2.4G	1M	2397.855	-34.55	0.35075	-16.02	25	-18.53	-34.55	0.35075
2412MHz_TnomVmax	Pass	2.4835G	2.4965G	1M	2491.885	-53.37	0.0046	-16.02	25	-37.35	-53.37	0.0046
2412MHz_TnomVmax	Pass	2.4965G	12.5G	1M	4823.564	-45.09	0.03097	-26.02	2.5	-19.07	-45.09	0.03097
2442MHz_TnomVnom	Pass	30M	2.387G	1M	2359.894	-51.86	0.00652	-26.02	2.5	-25.84	-51.86	0.00652
2442MHz_TnomVnom	Pass	2.387G	2.4G	1M	2399.948	-53.02	0.00499	-16.02	25	-37.00	-53.02	0.00499
2442MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2483.591	-54.19	0.00381	-16.02	25	-38.17	-54.19	0.00381
2442MHz_TnomVnom	Pass	2.4965G	12.5G	1M	4883.585	-42.69	0.05383	-26.02	2.5	-16.67	-42.69	0.05383
2442MHz_TnomVmin	Pass	30M	2.387G	1M	2362.251	-52.32	0.00586	-26.02	2.5	-26.30	-52.32	0.00586
2442MHz_TnomVmin	Pass	2.387G	2.4G	1M	2399.714	-53.08	0.00492	-16.02	25	-37.06	-53.08	0.00492
2442MHz_TnomVmin	Pass	2.4835G	2.4965G	1M	2483.747	-54.13	0.00386	-16.02	25	-38.11	-54.13	0.00386
2442MHz_TnomVmin	Pass	2.4965G	12.5G	1M	4883.585	-40.55	0.0881	-26.02	2.5	-14.53	-40.55	0.0881
2442MHz_TnomVmax	Pass	30M	2.387G	1M	2363.43	-52.03	0.00627	-26.02	2.5	-26.01	-52.03	0.00627
2442MHz_TnomVmax	Pass	2.387G	2.4G	1M	2399.896	-53.07	0.00493	-16.02	25	-37.05	-53.07	0.00493
2442MHz_TnomVmax	Pass	2.4835G	2.4965G	1M	2483.786	-54.06	0.00393	-16.02	25	-38.04	-54.06	0.00393
2442MHz_TnomVmax	Pass	2.4965G	12.5G	1M	7324.439	-45.71	0.02685	-26.02	2.5	-19.69	-45.71	0.02685
2472MHz_TnomVnom	Pass	30M	2.387G	1M	2387	-53.18	0.00481	-26.02	2.5	-27.16	-53.18	0.00481
2472MHz_TnomVnom	Pass	2.387G	2.4G	1M	2391.94	-51.31	0.0074	-16.02	25	-35.29	-51.31	0.0074
2472MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2483.539	-38.92	0.12823	-16.02	25	-22.90	-38.92	0.12823
2472MHz_TnomVnom	Pass	2.4965G	12.5G	1M	4943.606	-39.68	0.10765	-26.02	2.5	-13.66	-39.68	0.10765
2472MHz_TnomVmin	Pass	30M	2.387G	1M	2387	-53.07	0.00493	-26.02	2.5	-27.05	-53.07	0.00493
2472MHz_TnomVmin	Pass	2.387G	2.4G	1M	2392.213	-51.15	0.00767	-16.02	25	-35.13	-51.15	0.00767
2472MHz_TnomVmin	Pass	2.4835G	2.4965G	1M	2486.971	-38.59	0.13836	-16.02	25	-22.57	-38.59	0.13836
2472MHz_TnomVmin	Pass	2.4965G	12.5G	1M	4943.606	-44.61	0.03459	-26.02	2.5	-18.59	-44.61	0.03459
2472MHz_TnomVmax	Pass	30M	2.387G	1M	2387	-53.24	0.00474	-26.02	2.5	-27.22	-53.24	0.00474
2472MHz_TnomVmax	Pass	2.387G	2.4G	1M	2391.966	-51.60	0.00692	-16.02	25	-35.58	-51.60	0.00692
2472MHz_TnomVmax	Pass	2.4835G	2.4965G	1M	2483.708	-37.66	0.1714	-16.02	25	-21.64	-37.66	0.1714
2472MHz_TnomVmax	Pass	2.4965G	12.5G	1M	7416.972	-45.27	0.02972	-26.02	2.5	-19.25	-45.27	0.02972
802.11g_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	30M	2.387G	1M	2387	-39.45	0.1135	-26.02	2.5	-13.43	-39.45	0.1135
2412MHz_TnomVnom	Pass	2.387G	2.4G	1M	2399.987	-26.28	2.35505	-16.02	25	-10.26	-26.28	2.35505
2412MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2484.696	-52.82	0.00522	-16.02	25	-36.80	-52.82	0.00522
2412MHz_TnomVnom	Pass	2.4965G	12.5G	1M	4824.815	-47.54	0.01762	-26.02	2.5	-21.52	-47.54	0.01762
2412MHz_TnomVmin	Pass	30M	2.387G	1M	2387	-39.76	0.10568	-26.02	2.5	-13.74	-39.76	0.10568
2412MHz_TnomVmin	Pass	2.387G	2.4G	1M	2399.831	-26.21	2.39332	-16.02	25	-10.19	-26.21	2.39332
2412MHz_TnomVmin	Pass	2.4835G	2.4965G	1M	2485.216	-52.85	0.00519	-16.02	25	-36.83	-52.85	0.00519
2412MHz_TnomVmin	Pass	2.4965G	12.5G	1M	4829.816	-47.85	0.01641	-26.02	2.5	-21.83	-47.85	0.01641
2412MHz_TnomVmax	Pass	30M	2.387G	1M	2387	-39.59	0.1099	-26.02	2.5	-13.57	-39.59	0.1099
2412MHz_TnomVmax	Pass	2.387G	2.4G	1M	2399.961	-26.53	2.22331	-16.02	25	-10.51	-26.53	2.22331
2412MHz_TnomVmax	Pass	2.4835G	2.4965G	1M	2484.787	-52.85	0.00519	-16.02	25	-36.83	-52.85	0.00519
2412MHz_TnomVmax	Pass	2.4965G	12.5G	1M	4822.314	-47.82	0.01652	-26.02	2.5	-21.80	-47.82	0.01652
2442MHz_TnomVnom	Pass	30M	2.387G	1M	2368.144	-51.68	0.00679	-26.02	2.5	-25.66	-51.68	0.00679
2442MHz_TnomVnom	Pass	2.387G	2.4G	1M	2399.766	-51.03	0.00789	-16.02	25	-35.01	-51.03	0.00789
2442MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2483.552	-51.95	0.00638	-16.02	25	-35.93	-51.95	0.00638



CSE-TX Unwanted Emission Strength Result

Appendix E

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Freq (MHz)	Psum (dBm)	Psum (uW/MHz)	Limit (dBm)	Limit (uW/MHz)	Margin (dB)	P1 (dBm)	P1 (uW/MHz)
2442MHz_TnomVnom	Pass	2.4965G	12.5G	1M	4886.086	-50.05	0.00989	-26.02	2.5	-24.03	-50.05	0.00989
2442MHz_TnomVmin	Pass	30M	2.387G	1M	2363.43	-51.71	0.00675	-26.02	2.5	-25.69	-51.71	0.00675
2442MHz_TnomVmin	Pass	2.387G	2.4G	1M	2399.87	-51.03	0.00789	-16.02	25	-35.01	-51.03	0.00789
2442MHz_TnomVmin	Pass	2.4835G	2.4965G	1M	2483.565	-51.92	0.00643	-16.02	25	-35.90	-51.92	0.00643
2442MHz_TnomVmin	Pass	2.4965G	12.5G	1M	4883.585	-49.75	0.01059	-26.02	2.5	-23.73	-49.75	0.01059
2442MHz_TnomVmax	Pass	30M	2.387G	1M	2369.323	-51.80	0.00661	-26.02	2.5	-25.78	-51.80	0.00661
2442MHz_TnomVmax	Pass	2.387G	2.4G	1M	2399.974	-51.11	0.00774	-16.02	25	-35.09	-51.11	0.00774
2442MHz_TnomVmax	Pass	2.4835G	2.4965G	1M	2483.76	-51.95	0.00638	-16.02	25	-35.93	-51.95	0.00638
2442MHz_TnomVmax	Pass	2.4965G	12.5G	1M	4886.086	-49.40	0.01148	-26.02	2.5	-23.38	-49.40	0.01148
2472MHz_TnomVnom	Pass	30M	2.387G	1M	2384.643	-51.44	0.00718	-26.02	2.5	-25.42	-51.44	0.00718
2472MHz_TnomVnom	Pass	2.387G	2.4G	1M	2399.662	-51.72	0.00673	-16.02	25	-35.70	-51.72	0.00673
2472MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2483.513	-29.74	1.0617	-16.02	25	-13.72	-29.74	1.0617
2472MHz_TnomVnom	Pass	2.4965G	12.5G	1M	2496.5	-43.77	0.04198	-26.02	2.5	-17.75	-43.77	0.04198
2472MHz_TnomVmin	Pass	30M	2.387G	1M	2385.822	-51.34	0.00735	-26.02	2.5	-25.32	-51.34	0.00735
2472MHz_TnomVmin	Pass	2.387G	2.4G	1M	2394.592	-51.75	0.00668	-16.02	25	-35.73	-51.75	0.00668
2472MHz_TnomVmin	Pass	2.4835G	2.4965G	1M	2483.513	-29.68	1.07647	-16.02	25	-13.66	-29.68	1.07647
2472MHz_TnomVmin	Pass	2.4965G	12.5G	1M	2496.5	-43.96	0.04018	-26.02	2.5	-17.94	-43.96	0.04018
2472MHz_TnomVmax	Pass	30M	2.387G	1M	2385.822	-51.19	0.0076	-26.02	2.5	-25.17	-51.19	0.0076
2472MHz_TnomVmax	Pass	2.387G	2.4G	1M	2399.519	-51.75	0.00668	-16.02	25	-35.73	-51.75	0.00668
2472MHz_TnomVmax	Pass	2.4835G	2.4965G	1M	2483.513	-29.67	1.07895	-16.02	25	-13.65	-29.67	1.07895
2472MHz_TnomVmax	Pass	2.4965G	12.5G	1M	2496.5	-43.22	0.04764	-26.02	2.5	-17.20	-43.22	0.04764
802.11n HT20_Nss1(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	30M	2.387G	1M	2387	-39.21	0.11995	-26.02	2.5	-13.19	-39.21	0.11995
2412MHz_TnomVnom	Pass	2.387G	2.4G	1M	2399.974	-26.35	2.31739	-16.02	25	-10.33	-26.35	2.31739
2412MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2484.579	-52.74	0.00532	-16.02	25	-36.72	-52.74	0.00532
2412MHz_TnomVnom	Pass	2.4965G	12.5G	1M	4823.564	-47.62	0.0173	-26.02	2.5	-21.60	-47.62	0.0173
2412MHz_TnomVmin	Pass	30M	2.387G	1M	2387	-39.53	0.11143	-26.02	2.5	-13.51	-39.53	0.11143
2412MHz_TnomVmin	Pass	2.387G	2.4G	1M	2399.922	-26.58	2.19786	-16.02	25	-10.56	-26.58	2.19786
2412MHz_TnomVmin	Pass	2.4835G	2.4965G	1M	2485.905	-52.92	0.00511	-16.02	25	-36.90	-52.92	0.00511
2412MHz_TnomVmin	Pass	2.4965G	12.5G	1M	4823.564	-48.00	0.01585	-26.02	2.5	-21.98	-48.00	0.01585
2412MHz_TnomVmax	Pass	30M	2.387G	1M	2387	-39.14	0.1219	-26.02	2.5	-13.12	-39.14	0.1219
2412MHz_TnomVmax	Pass	2.387G	2.4G	1M	2399.948	-26.62	2.17771	-16.02	25	-10.60	-26.62	2.17771
2412MHz_TnomVmax	Pass	2.4835G	2.4965G	1M	2486.373	-52.91	0.00512	-16.02	25	-36.89	-52.91	0.00512
2412MHz_TnomVmax	Pass	2.4965G	12.5G	1M	4824.815	-47.20	0.01905	-26.02	2.5	-21.18	-47.20	0.01905
2442MHz_TnomVnom	Pass	30M	2.387G	1M	2368.144	-51.82	0.00658	-26.02	2.5	-25.80	-51.82	0.00658
2442MHz_TnomVnom	Pass	2.387G	2.4G	1M	2399.805	-51.07	0.00782	-16.02	25	-35.05	-51.07	0.00782
2442MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2483.578	-51.32	0.00738	-16.02	25	-35.30	-51.32	0.00738
2442MHz_TnomVnom	Pass	2.4965G	12.5G	1M	4882.335	-49.12	0.01225	-26.02	2.5	-23.10	-49.12	0.01225
2442MHz_TnomVmin	Pass	30M	2.387G	1M	2368.144	-51.69	0.00678	-26.02	2.5	-25.67	-51.69	0.00678
2442MHz_TnomVmin	Pass	2.387G	2.4G	1M	2399.818	-51.01	0.00793	-16.02	25	-34.99	-51.01	0.00793
2442MHz_TnomVmin	Pass	2.4835G	2.4965G	1M	2483.565	-51.28	0.00745	-16.02	25	-35.26	-51.28	0.00745
2442MHz_TnomVmin	Pass	2.4965G	12.5G	1M	4884.836	-48.29	0.01483	-26.02	2.5	-22.27	-48.29	0.01483
2442MHz_TnomVmax	Pass	30M	2.387G	1M	2364.608	-51.69	0.00678	-26.02	2.5	-25.67	-51.69	0.00678
2442MHz_TnomVmax	Pass	2.387G	2.4G	1M	2399.909	-50.96	0.00802	-16.02	25	-34.94	-50.96	0.00802
2442MHz_TnomVmax	Pass	2.4835G	2.4965G	1M	2483.682	-51.29	0.00743	-16.02	25	-35.27	-51.29	0.00743
2442MHz_TnomVmax	Pass	2.4965G	12.5G	1M	4884.836	-48.82	0.01312	-26.02	2.5	-22.80	-48.82	0.01312
2472MHz_TnomVnom	Pass	30M	2.387G	1M	2387	-51.50	0.00708	-26.02	2.5	-25.48	-51.50	0.00708
2472MHz_TnomVnom	Pass	2.387G	2.4G	1M	2399.753	-51.62	0.00689	-16.02	25	-35.60	-51.62	0.00689
2472MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2483.513	-29.00	1.25893	-16.02	25	-12.98	-29.00	1.25893
2472MHz_TnomVnom	Pass	2.4965G	12.5G	1M	2496.5	-42.41	0.05741	-26.02	2.5	-16.39	-42.41	0.05741
2472MHz_TnomVmin	Pass	30M	2.387G	1M	2387	-51.39	0.00726	-26.02	2.5	-25.37	-51.39	0.00726
2472MHz_TnomVmin	Pass	2.387G	2.4G	1M	2399.961	-51.53	0.00703	-16.02	25	-35.51	-51.53	0.00703
2472MHz_TnomVmin	Pass	2.4835G	2.4965G	1M	2483.513	-29.07	1.2388	-16.02	25	-13.05	-29.07	1.2388
2472MHz_TnomVmin	Pass	2.4965G	12.5G	1M	2496.5	-43.50	0.04467	-26.02	2.5	-17.48	-43.50	0.04467



CSE-TX Unwanted Emission Strength Result

Appendix E

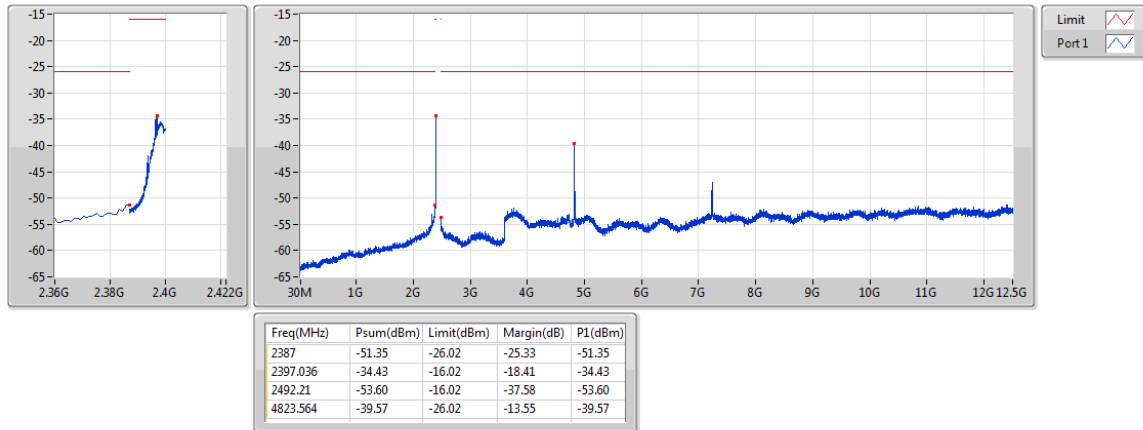
Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Freq (MHz)	Psum (dBm)	Psum (uW/MHz)	Limit (dBm)	Limit (uW/MHz)	Margin (dB)	P1 (dBm)	P1 (uW/MHz)
2472MHz_TnomVmax	Pass	30M	2.387G	1M	2387	-51.39	0.00726	-26.02	2.5	-25.37	-51.39	0.00726
2472MHz_TnomVmax	Pass	2.387G	2.4G	1M	2399.87	-51.65	0.00684	-16.02	25	-35.63	-51.65	0.00684
2472MHz_TnomVmax	Pass	2.4835G	2.4965G	1M	2483.513	-28.93	1.27938	-16.02	25	-12.91	-28.93	1.27938
2472MHz_TnomVmax	Pass	2.4965G	12.5G	1M	2496.5	-42.92	0.05105	-26.02	2.5	-16.90	-42.92	0.05105
802.11n HT40_Nss1(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz_TnomVnom	Pass	30M	2.387G	1M	2387	-32.44	0.57016	-26.02	2.5	-6.42	-32.44	0.57016
2422MHz_TnomVnom	Pass	2.387G	2.4G	1M	2399.987	-26.64	2.1677	-16.02	25	-10.62	-26.64	2.1677
2422MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2484.007	-43.89	0.04083	-16.02	25	-27.87	-43.89	0.04083
2422MHz_TnomVnom	Pass	2.4965G	12.5G	1M	2500.251	-49.46	0.01132	-26.02	2.5	-23.44	-49.46	0.01132
2422MHz_TnomVmin	Pass	30M	2.387G	1M	2384.643	-34.50	0.35481	-26.02	2.5	-8.48	-34.50	0.35481
2422MHz_TnomVmin	Pass	2.387G	2.4G	1M	2399.974	-26.47	2.25424	-16.02	25	-10.45	-26.47	2.25424
2422MHz_TnomVmin	Pass	2.4835G	2.4965G	1M	2483.916	-44.72	0.03373	-16.02	25	-28.70	-44.72	0.03373
2422MHz_TnomVmin	Pass	2.4965G	12.5G	1M	2496.5	-49.46	0.01132	-26.02	2.5	-23.44	-49.46	0.01132
2422MHz_TnomVmax	Pass	30M	2.387G	1M	2385.822	-33.34	0.46345	-26.02	2.5	-7.32	-33.34	0.46345
2422MHz_TnomVmax	Pass	2.387G	2.4G	1M	2399.948	-26.35	2.31739	-16.02	25	-10.33	-26.35	2.31739
2422MHz_TnomVmax	Pass	2.4835G	2.4965G	1M	2484.462	-44.75	0.0335	-16.02	25	-28.73	-44.75	0.0335
2422MHz_TnomVmax	Pass	2.4965G	12.5G	1M	2496.5	-49.23	0.01194	-26.02	2.5	-23.21	-49.23	0.01194
2442MHz_TnomVnom	Pass	30M	2.387G	1M	2387	-43.35	0.04624	-26.02	2.5	-17.33	-43.35	0.04624
2442MHz_TnomVnom	Pass	2.387G	2.4G	1M	2399.948	-38.69	0.13521	-16.02	25	-22.67	-38.69	0.13521
2442MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2483.539	-39.43	0.11402	-16.02	25	-23.41	-39.43	0.11402
2442MHz_TnomVnom	Pass	2.4965G	12.5G	1M	2499.001	-43.56	0.04406	-26.02	2.5	-17.54	-43.56	0.04406
2442MHz_TnomVmin	Pass	30M	2.387G	1M	2387	-43.60	0.04365	-26.02	2.5	-17.58	-43.60	0.04365
2442MHz_TnomVmin	Pass	2.387G	2.4G	1M	2399.649	-38.87	0.12972	-16.02	25	-22.85	-38.87	0.12972
2442MHz_TnomVmin	Pass	2.4835G	2.4965G	1M	2483.513	-39.46	0.11324	-16.02	25	-23.44	-39.46	0.11324
2442MHz_TnomVmin	Pass	2.4965G	12.5G	1M	2496.5	-43.79	0.04178	-26.02	2.5	-17.77	-43.79	0.04178
2442MHz_TnomVmax	Pass	30M	2.387G	1M	2387	-43.84	0.0413	-26.02	2.5	-17.82	-43.84	0.0413
2442MHz_TnomVmax	Pass	2.387G	2.4G	1M	2399.909	-38.66	0.13614	-16.02	25	-22.64	-38.66	0.13614
2442MHz_TnomVmax	Pass	2.4835G	2.4965G	1M	2484.046	-39.39	0.11508	-16.02	25	-23.37	-39.39	0.11508
2442MHz_TnomVmax	Pass	2.4965G	12.5G	1M	2496.5	-43.72	0.04246	-26.02	2.5	-17.70	-43.72	0.04246
2462MHz_TnomVnom	Pass	30M	2.387G	1M	2387	-49.23	0.01194	-26.02	2.5	-23.21	-49.23	0.01194
2462MHz_TnomVnom	Pass	2.387G	2.4G	1M	2399.779	-46.67	0.02153	-16.02	25	-30.65	-46.67	0.02153
2462MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2483.799	-29.28	1.18032	-16.02	25	-13.26	-29.28	1.18032
2462MHz_TnomVnom	Pass	2.4965G	12.5G	1M	2499.001	-37.41	0.18155	-26.02	2.5	-11.39	-37.41	0.18155
2462MHz_TnomVmin	Pass	30M	2.387G	1M	2387	-49.73	0.01064	-26.02	2.5	-23.71	-49.73	0.01064
2462MHz_TnomVmin	Pass	2.387G	2.4G	1M	2399.987	-46.65	0.02163	-16.02	25	-30.63	-46.65	0.02163
2462MHz_TnomVmin	Pass	2.4835G	2.4965G	1M	2483.812	-29.20	1.20226	-16.02	25	-13.18	-29.20	1.20226
2462MHz_TnomVmin	Pass	2.4965G	12.5G	1M	2496.5	-37.26	0.18793	-26.02	2.5	-11.24	-37.26	0.18793
2462MHz_TnomVmax	Pass	30M	2.387G	1M	2385.822	-49.35	0.01161	-26.02	2.5	-23.33	-49.35	0.01161
2462MHz_TnomVmax	Pass	2.387G	2.4G	1M	2399.701	-46.58	0.02198	-16.02	25	-30.56	-46.58	0.02198
2462MHz_TnomVmax	Pass	2.4835G	2.4965G	1M	2483.721	-29.24	1.19124	-16.02	25	-13.22	-29.24	1.19124
2462MHz_TnomVmax	Pass	2.4965G	12.5G	1M	2497.75	-38.32	0.14723	-26.02	2.5	-12.30	-38.32	0.14723



802.11b_Nss1_1TX

CSE-TX

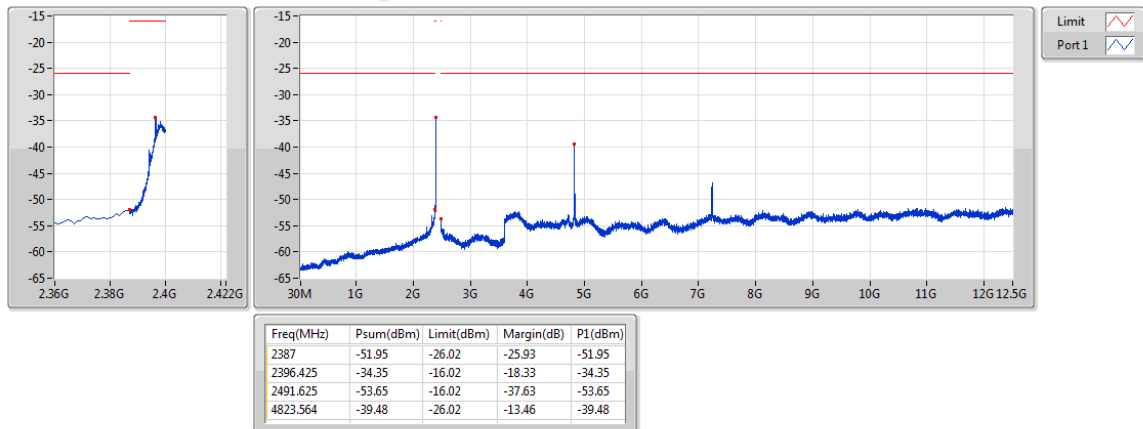
2412MHz_TnomVnom



802.11b_Nss1_1TX

CSE-TX

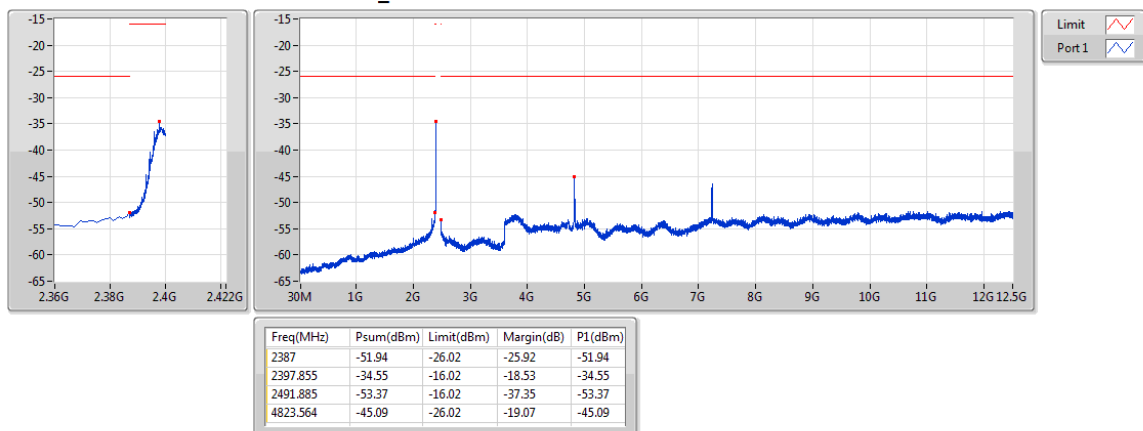
2412MHz_TnomVmin



802.11b_Nss1_1TX

CSE-TX

2412MHz_TnomVmax

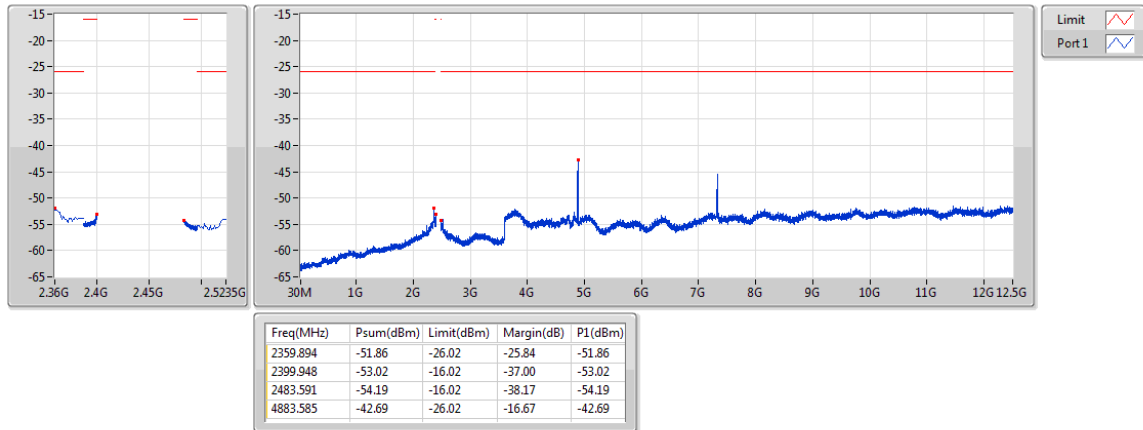




802.11b_Nss1_1TX

CSE-TX

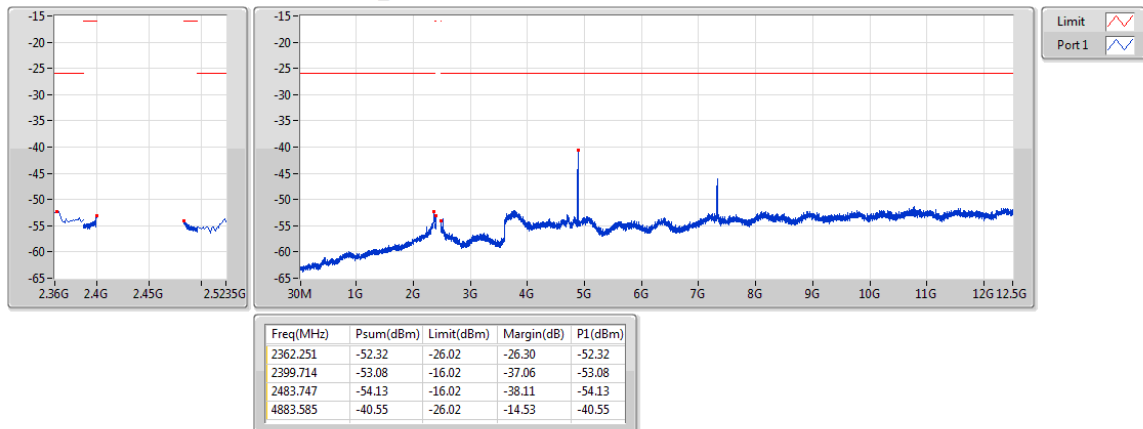
2442MHz_TnomVnom



802.11b_Nss1_1TX

CSE-TX

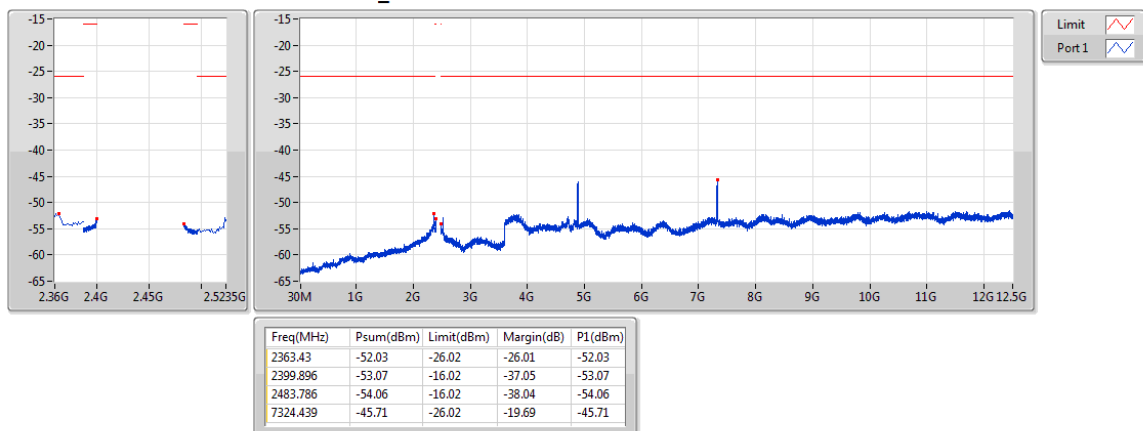
2442MHz_TnomVmin



802.11b_Nss1_1TX

CSE-TX

2442MHz_TnomVmax





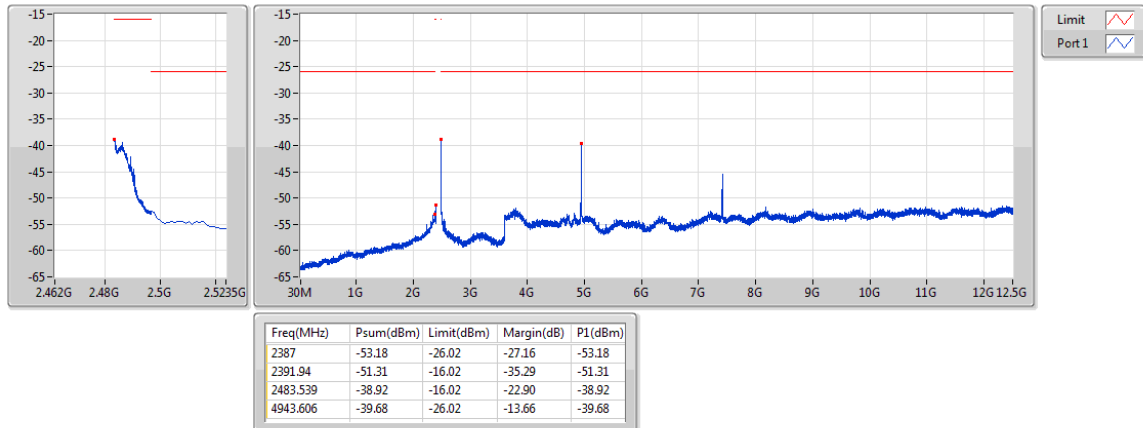
CSE-TX Unwanted Emission Strength Result

Appendix E

802.11b_Nss1_1TX

CSE-TX

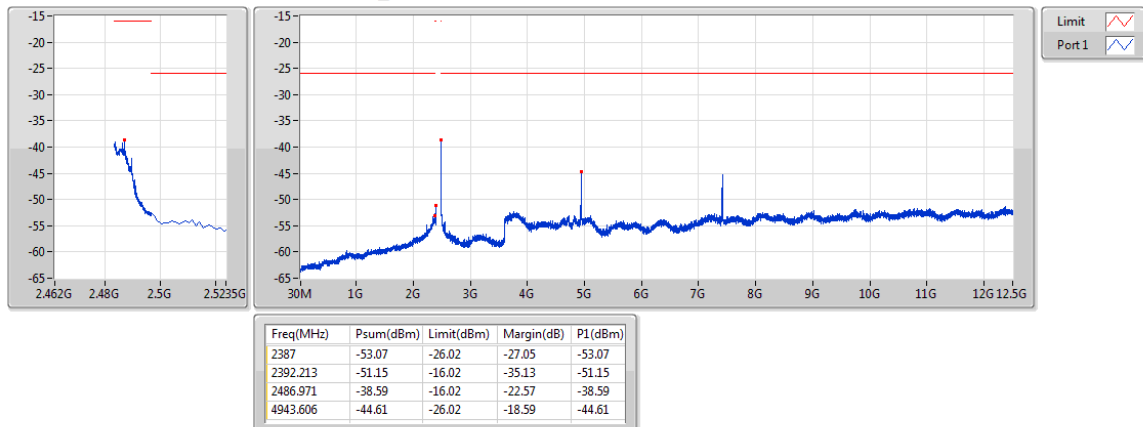
2472MHz_TnomVnom



802.11b_Nss1_1TX

CSE-TX

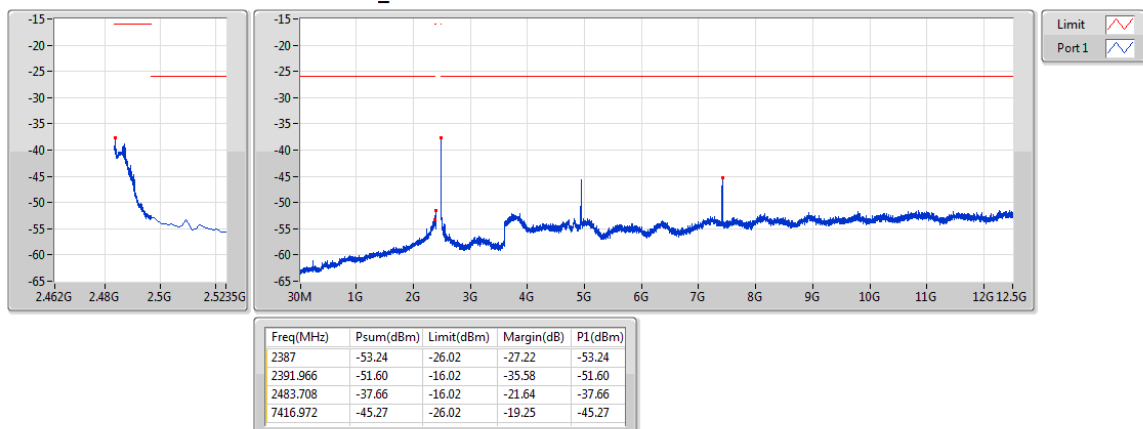
2472MHz_TnomVmin



802.11b_Nss1_1TX

CSE-TX

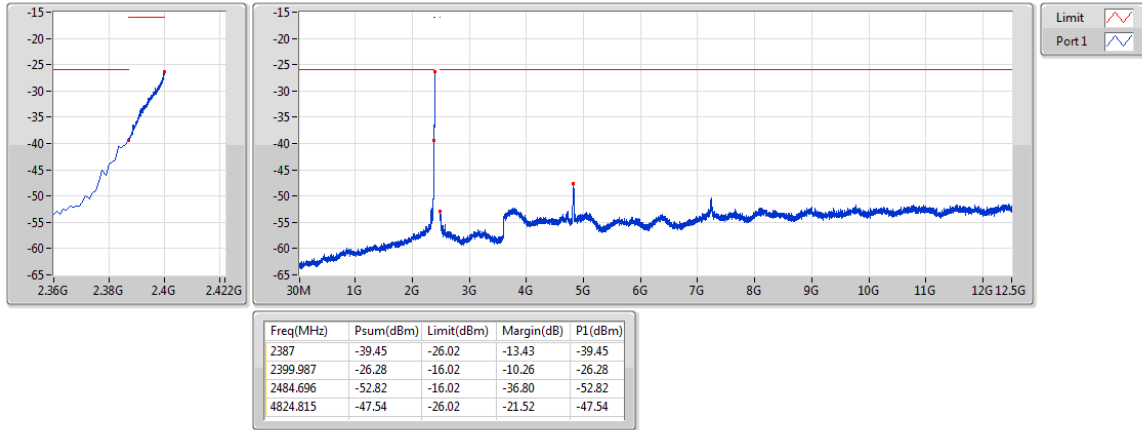
2472MHz_TnomVmax



802.11g_Nss1_1TX

CSE-TX

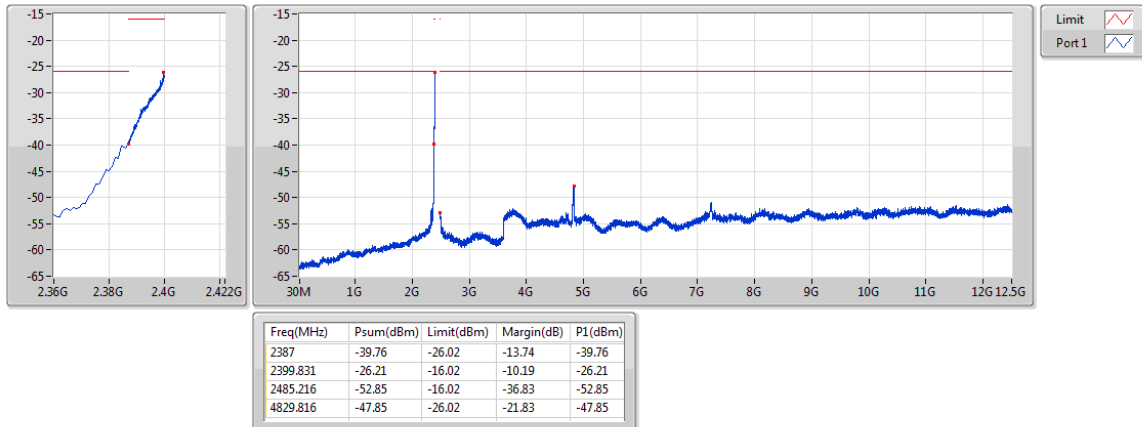
2412MHz_TnomVnom



802.11g_Nss1_1TX

CSE-TX

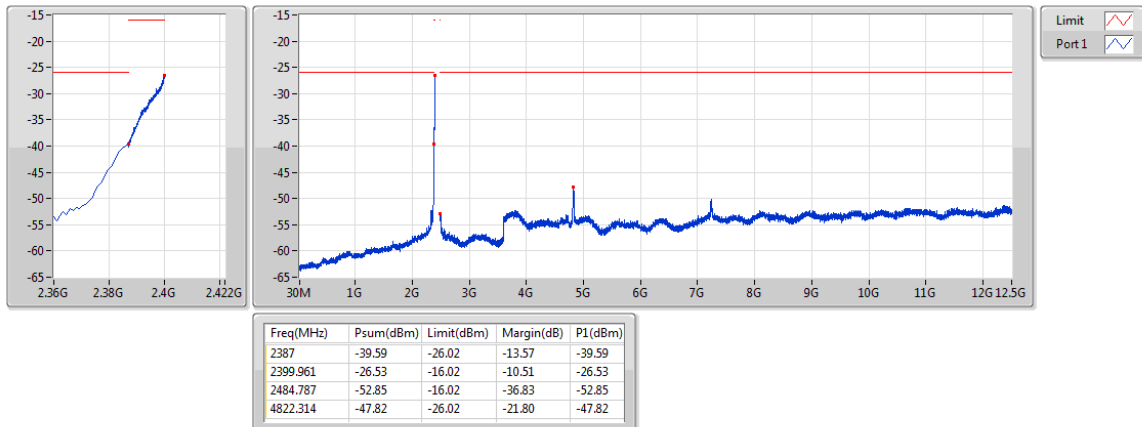
2412MHz_TnomVmin



802.11g_Nss1_1TX

CSE-TX

2412MHz_TnomVmax

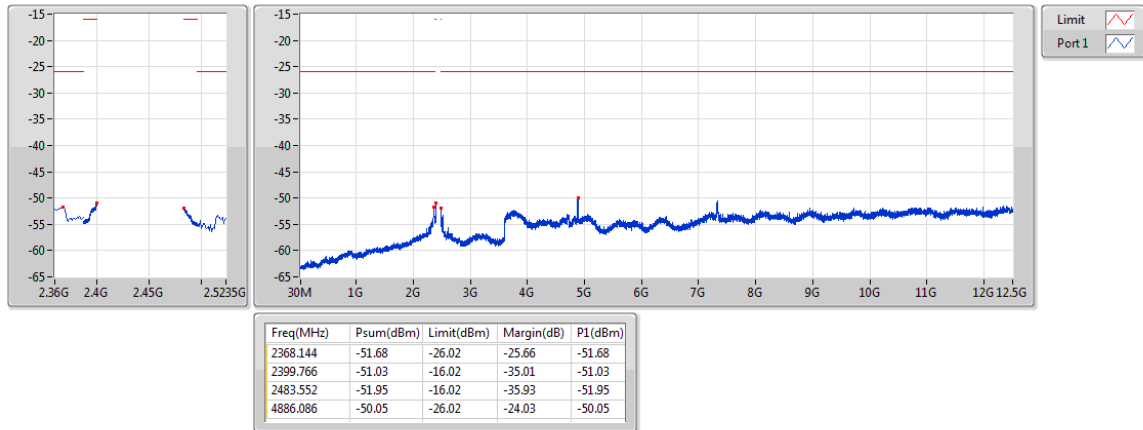




802.11g_Nss1_1TX

CSE-TX

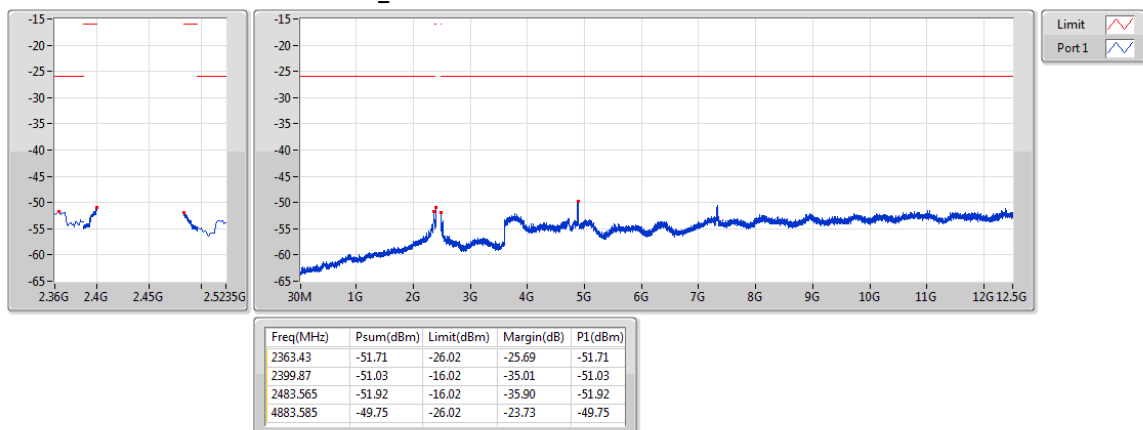
2442MHz_TnomVnom



802.11g_Nss1_1TX

CSE-TX

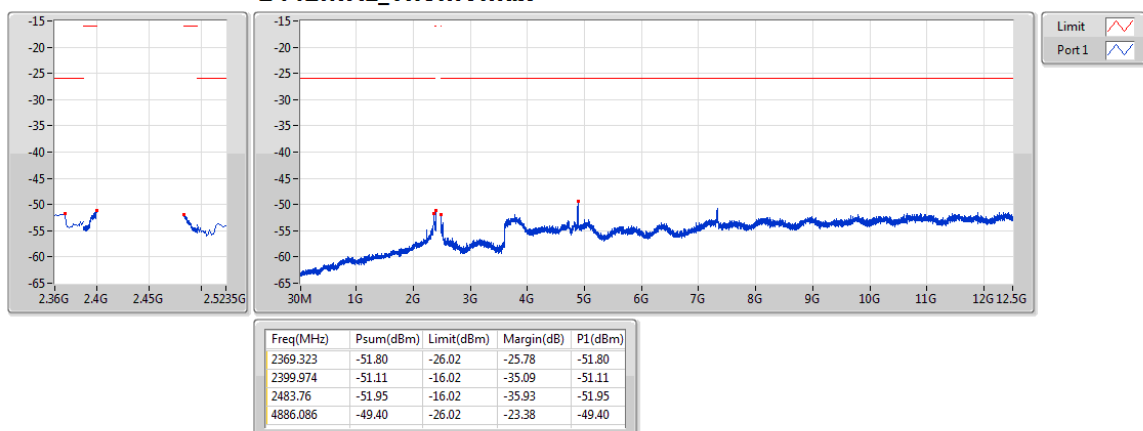
2442MHz_TnomVmin



802.11g_Nss1_1TX

CSE-TX

2442MHz_TnomVmax

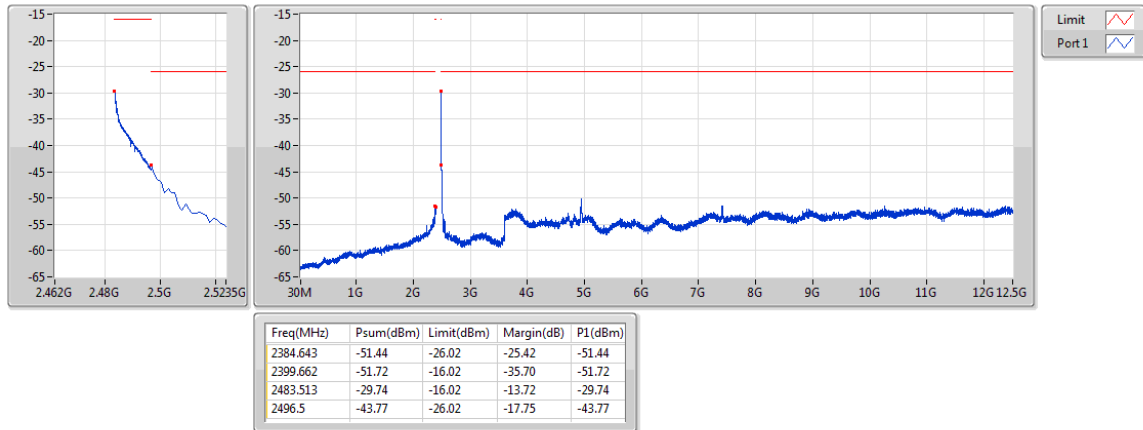




802.11g_Nss1_1TX

CSE-TX

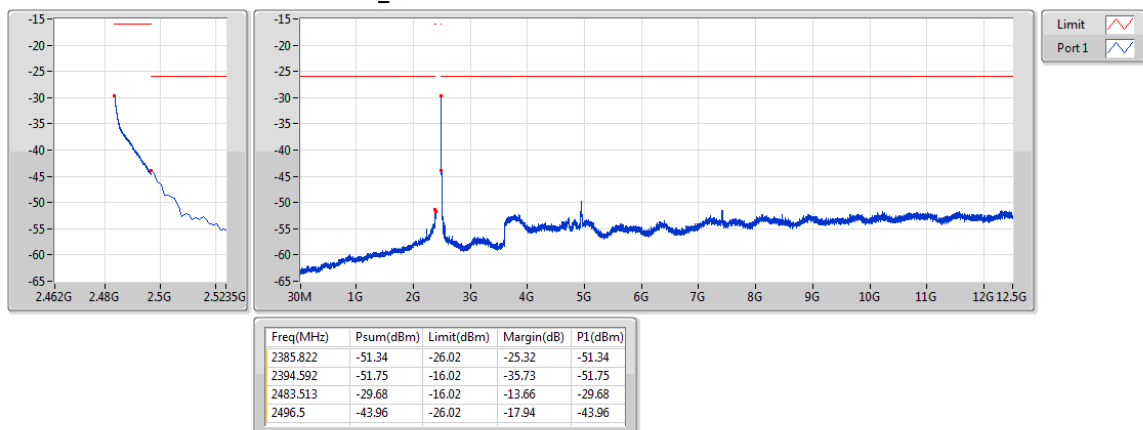
2472MHz_TnomVnom



802.11g_Nss1_1TX

CSE-TX

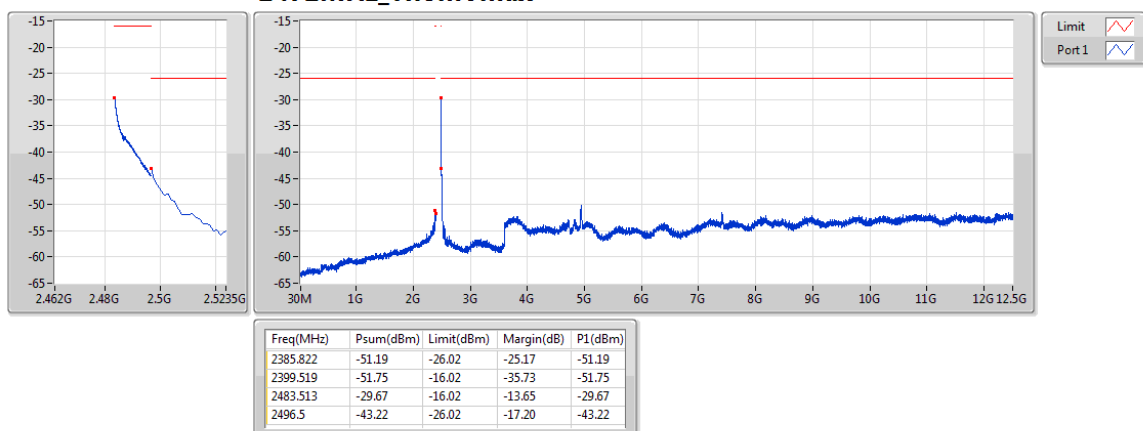
2472MHz_TnomVmin



802.11g_Nss1_1TX

CSE-TX

2472MHz_TnomVmax

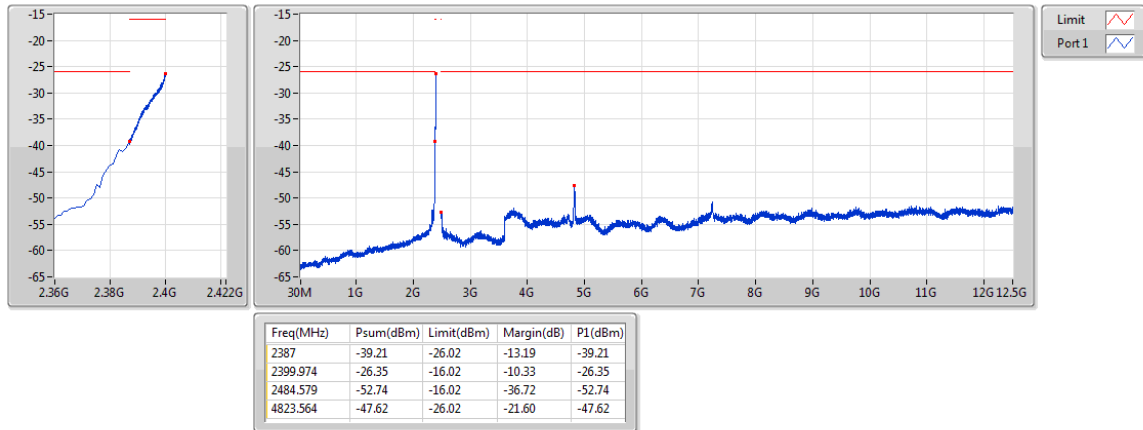




802.11n HT20_Nss1,(MCS0)_1TX

CSE-TX

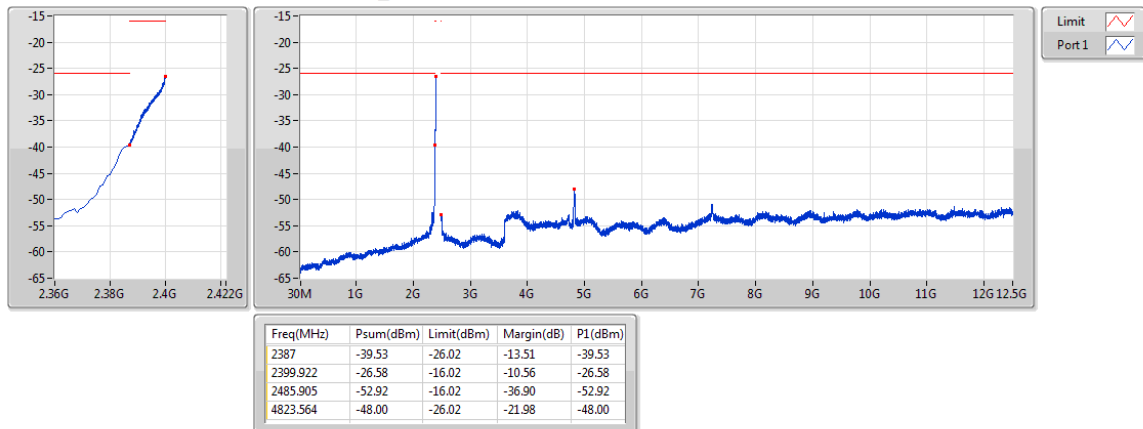
2412MHz_TnomVnom



802.11n HT20_Nss1,(MCS0)_1TX

CSE-TX

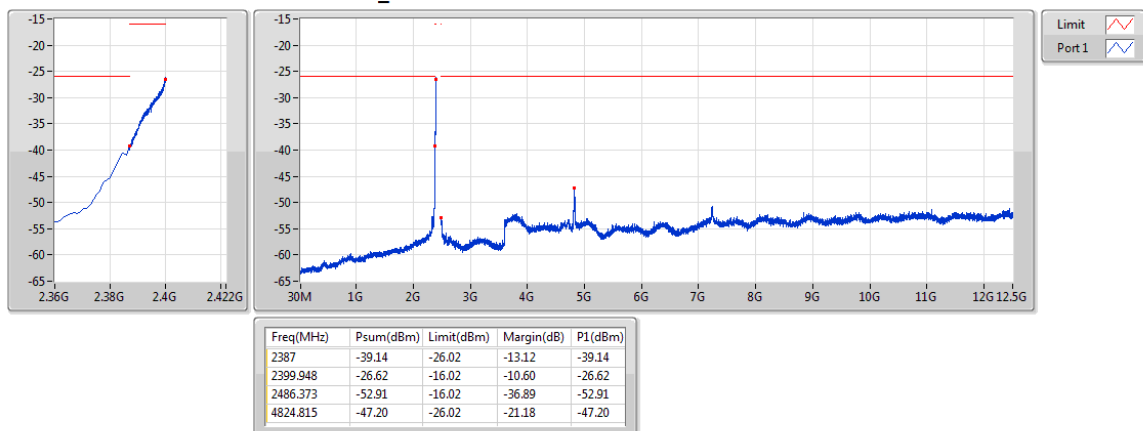
2412MHz_TnomVmin



802.11n HT20_Nss1,(MCS0)_1TX

CSE-TX

2412MHz_TnomVmax

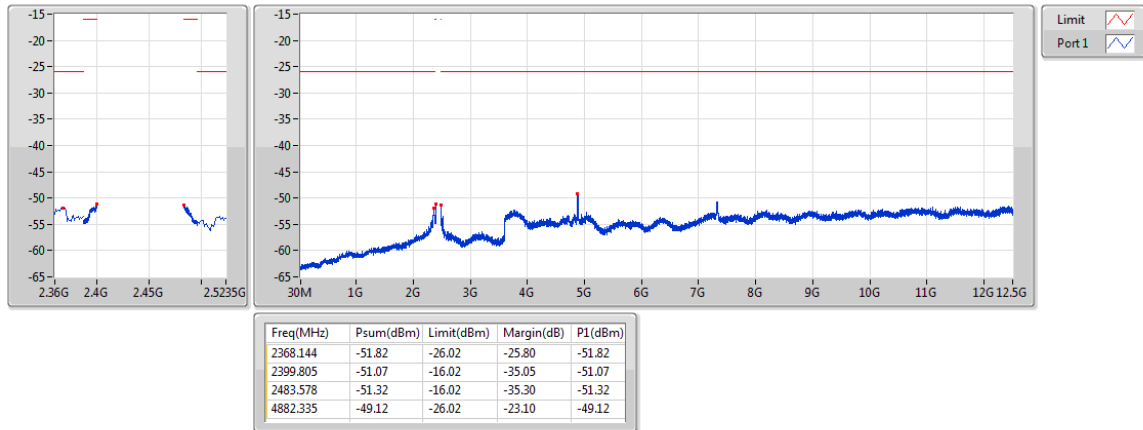




802.11n HT20_Nss1,(MCS0)_1TX

CSE-TX

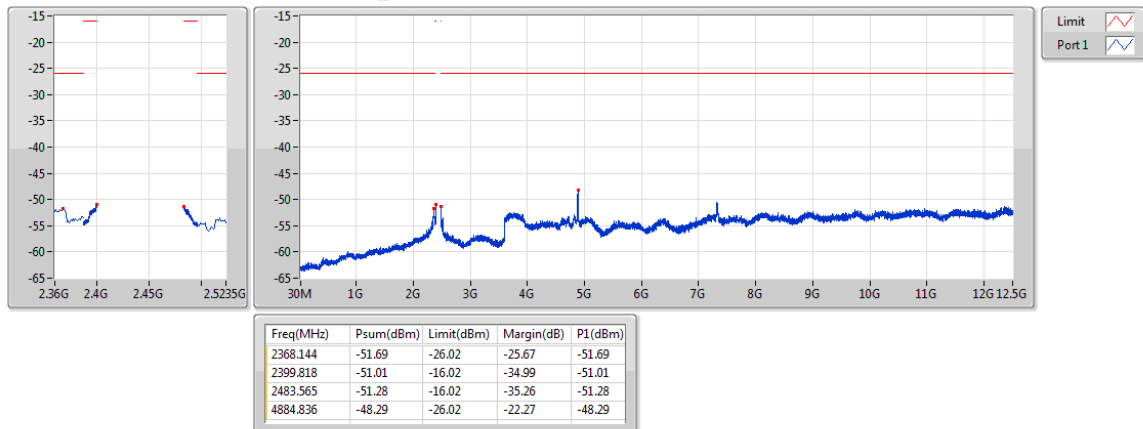
2442MHz_TnomVnom



802.11n HT20_Nss1,(MCS0)_1TX

CSE-TX

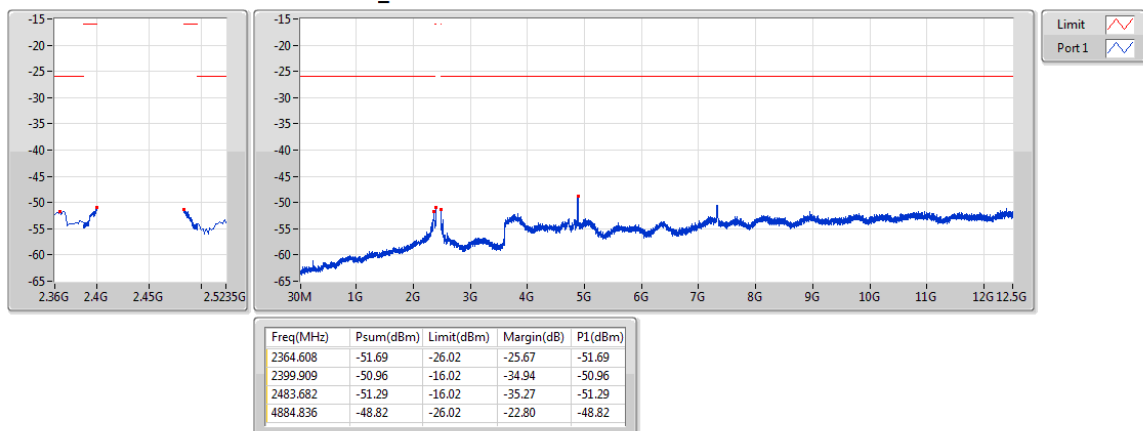
2442MHz_TnomVmin



802.11n HT20_Nss1,(MCS0)_1TX

CSE-TX

2442MHz_TnomVmax





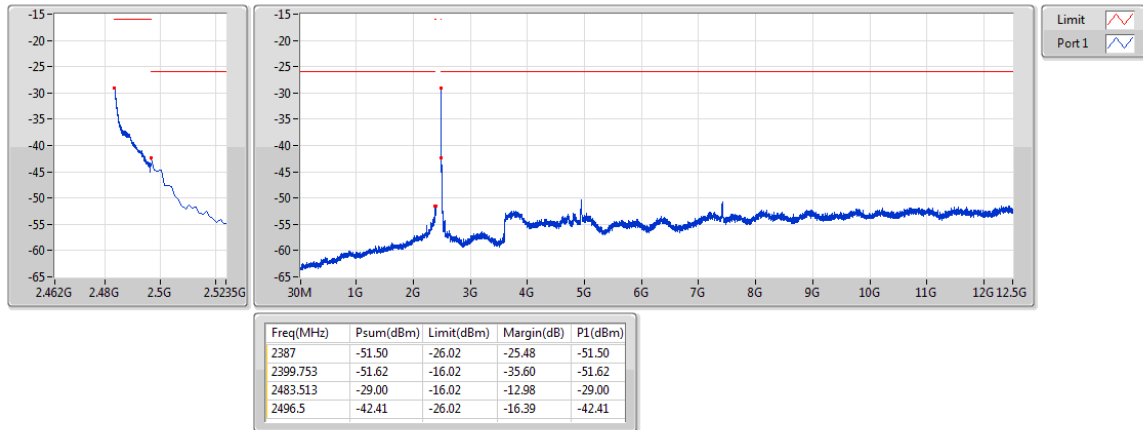
CSE-TX Unwanted Emission Strength Result

Appendix E

802.11n HT20_Nss1,(MCS0)_1TX

CSE-TX

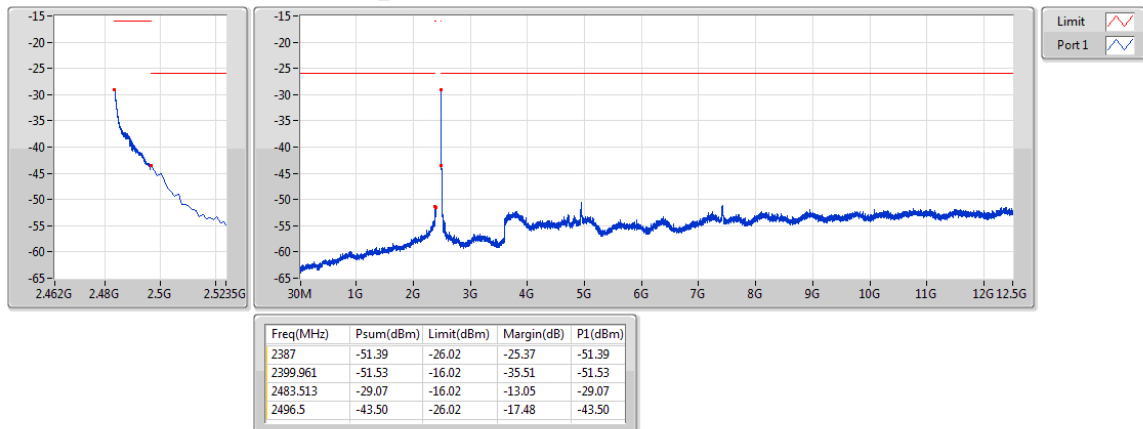
2472MHz_TnomVnom



802.11n HT20_Nss1,(MCS0)_1TX

CSE-TX

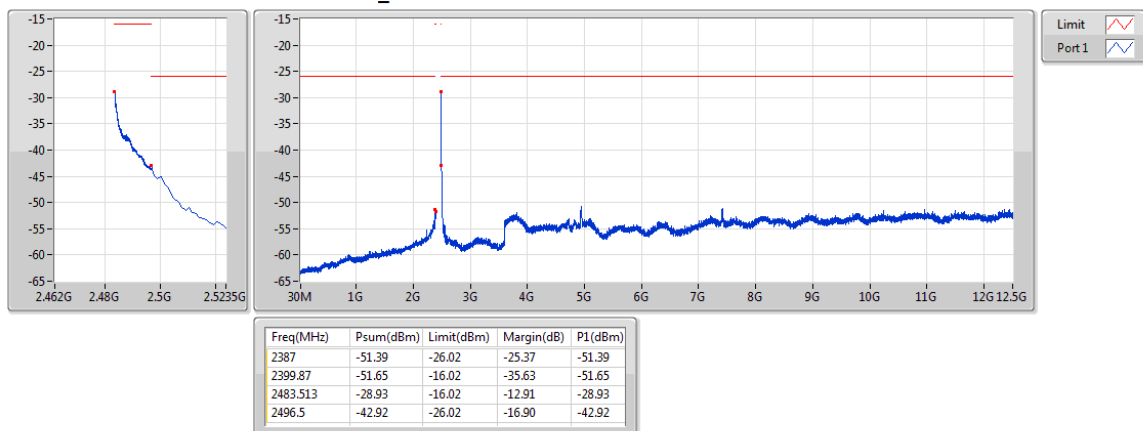
2472MHz_TnomVmin



802.11n HT20_Nss1,(MCS0)_1TX

CSE-TX

2472MHz_TnomVmax

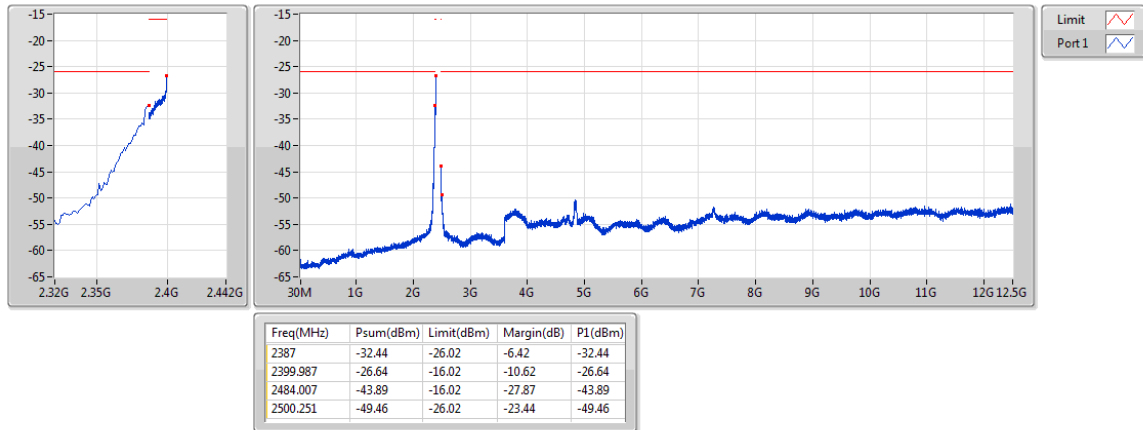




802.11n HT40_Nss1,(MCS0)_1TX

CSE-TX

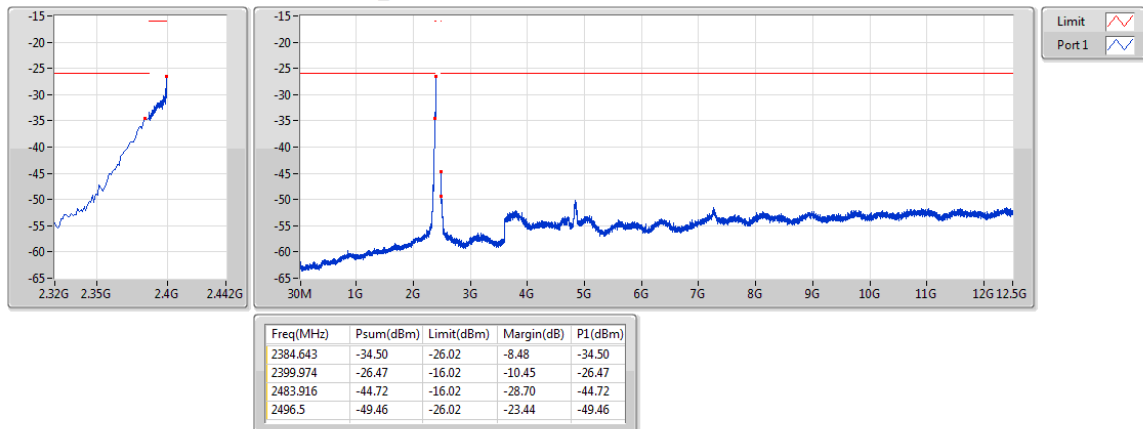
2422MHz_TnomVnom



802.11n HT40_Nss1,(MCS0)_1TX

CSE-TX

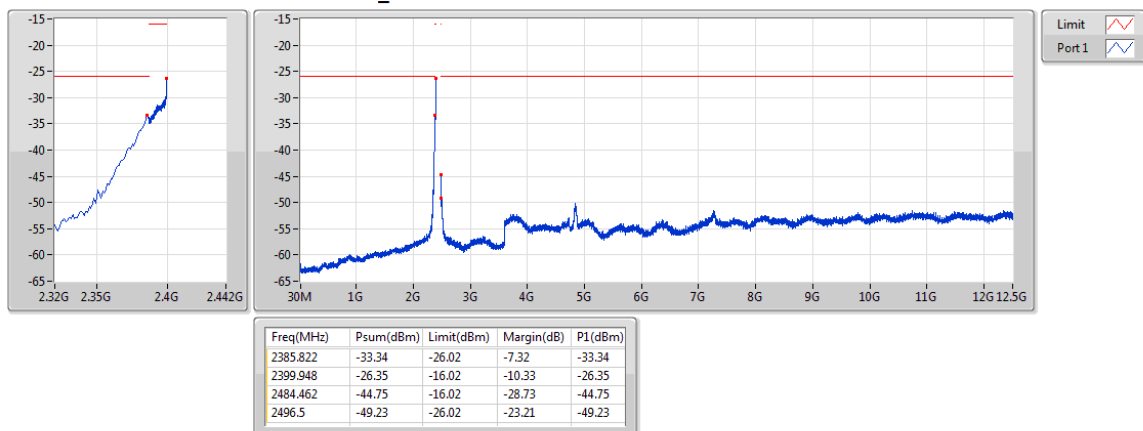
2422MHz_TnomVmin



802.11n HT40_Nss1,(MCS0)_1TX

CSE-TX

2422MHz_TnomVmax

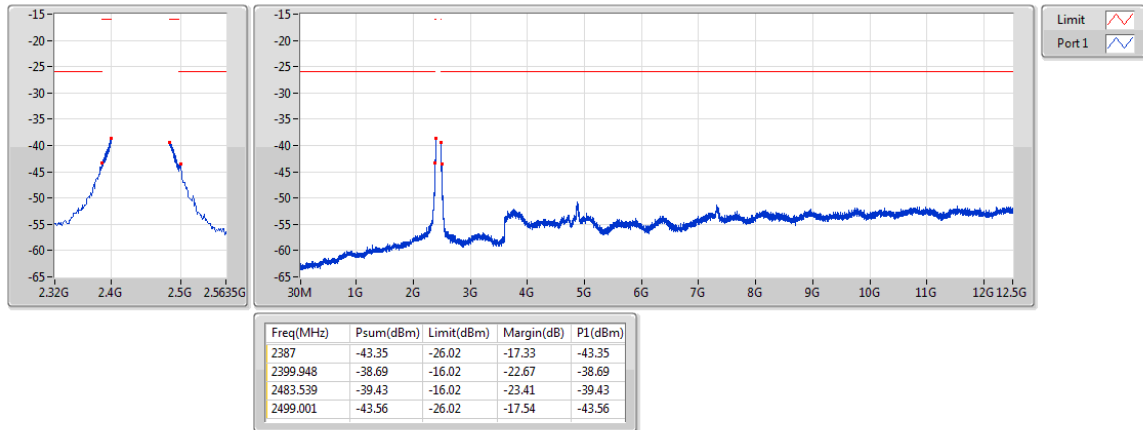




802.11n HT40_Nss1,(MCS0)_1TX

CSE-TX

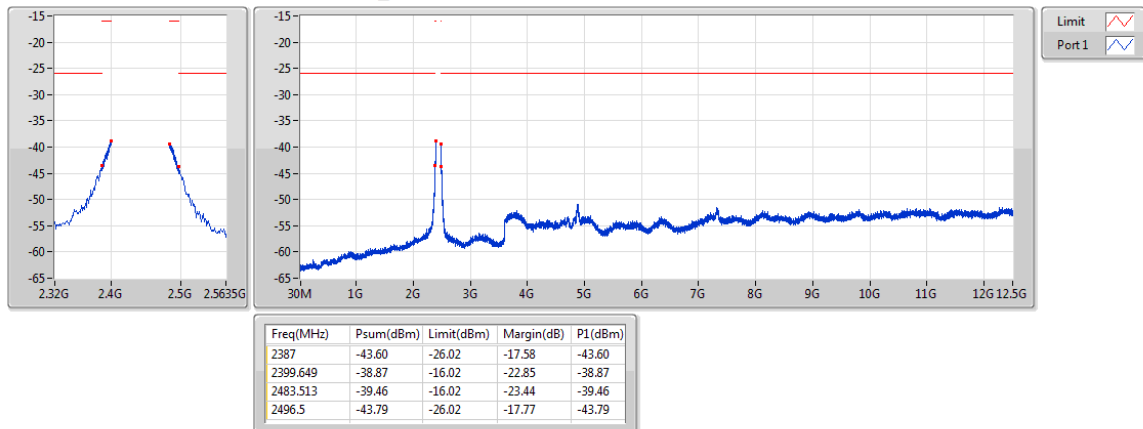
2442MHz_TnomVnom



802.11n HT40_Nss1,(MCS0)_1TX

CSE-TX

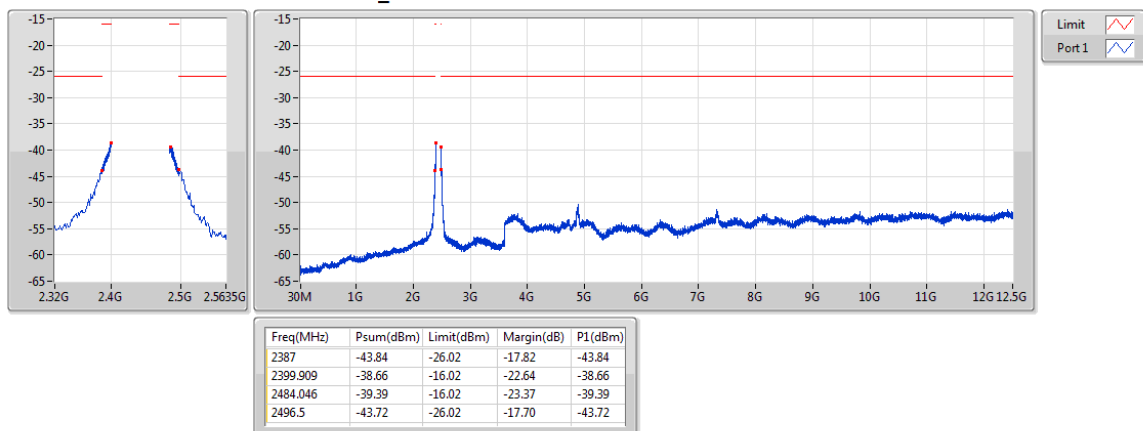
2442MHz_TnomVmin



802.11n HT40_Nss1,(MCS0)_1TX

CSE-TX

2442MHz_TnomVmax

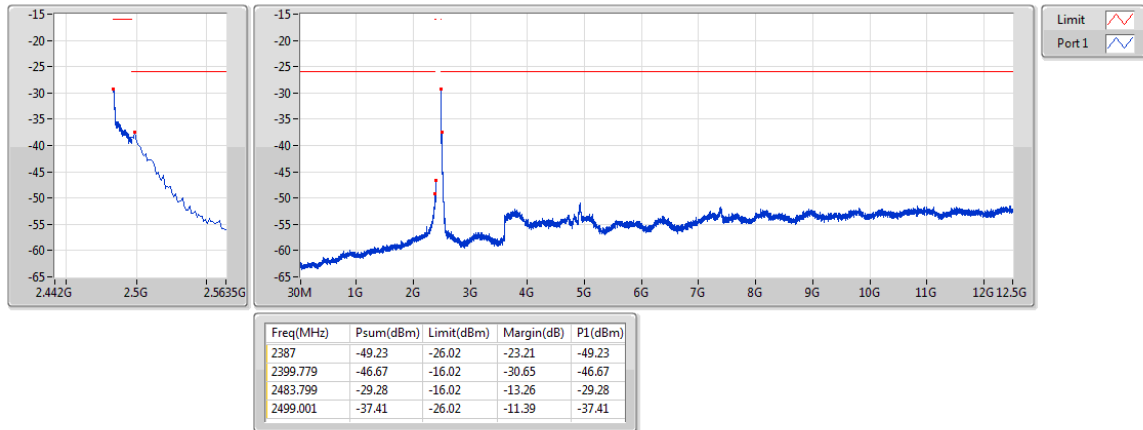




802.11n HT40_Nss1,(MCS0)_1TX

CSE-TX

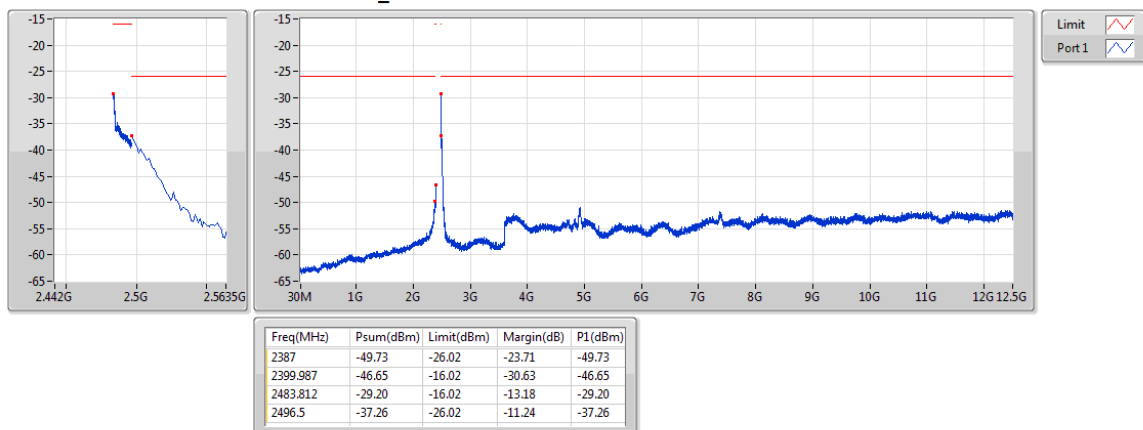
2462MHz_TnomVnom



802.11n HT40_Nss1,(MCS0)_1TX

CSE-TX

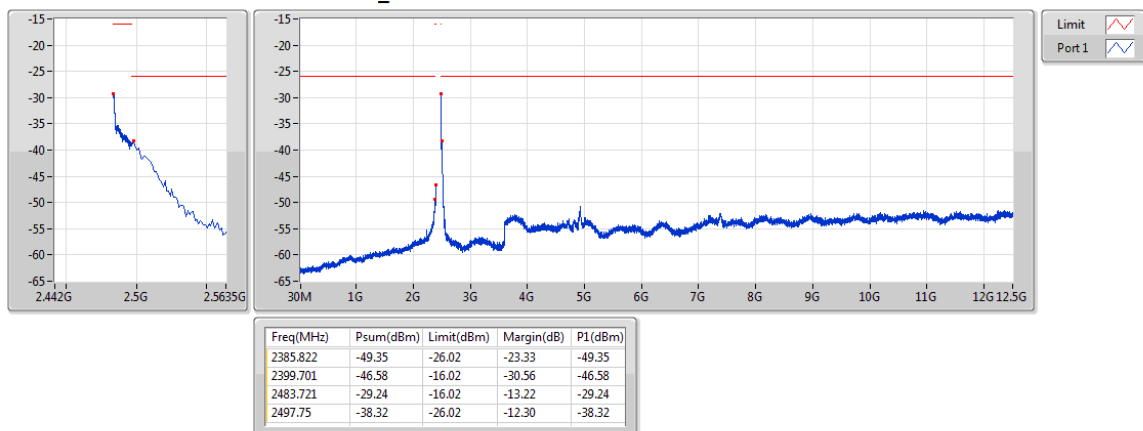
2462MHz_TnomVmin



802.11n HT40_Nss1,(MCS0)_1TX

CSE-TX

2462MHz_TnomVmax



**Summary**

Mode	Result	Interference Pin (dBm)	Function
2.4-2.4835GHz	-	-	-
802.11b_Nss1_1TX	Pass	OBW<26MHz	w/o test
802.11g_Nss1_1TX	Pass	OBW<26MHz	w/o test
802.11n HT20_Nss1,(MCS0)_1TX	Pass	OBW<26MHz	w/o test
802.11n HT40_Nss1,(MCS0)_1TX	Pass	-42.47	Good

**Result**

Mode	Result	Interference Pin (dBm)	Function
802.11b_Nss1_1TX	-	-	-
2412MHz_TnomVnom	Pass	OBW<26MHz	w/o test
2412MHz_TnomVmin	Pass	OBW<26MHz	w/o test
2412MHz_TnomVmax	Pass	OBW<26MHz	w/o test
2442MHz_TnomVnom	Pass	OBW<26MHz	w/o test
2442MHz_TnomVmin	Pass	OBW<26MHz	w/o test
2442MHz_TnomVmax	Pass	OBW<26MHz	w/o test
2472MHz_TnomVnom	Pass	OBW<26MHz	w/o test
2472MHz_TnomVmin	Pass	OBW<26MHz	w/o test
2472MHz_TnomVmax	Pass	OBW<26MHz	w/o test
802.11g_Nss1_1TX	-	-	-
2412MHz_TnomVnom	Pass	OBW<26MHz	w/o test
2412MHz_TnomVmin	Pass	OBW<26MHz	w/o test
2412MHz_TnomVmax	Pass	OBW<26MHz	w/o test
2442MHz_TnomVnom	Pass	OBW<26MHz	w/o test
2442MHz_TnomVmin	Pass	OBW<26MHz	w/o test
2442MHz_TnomVmax	Pass	OBW<26MHz	w/o test
2472MHz_TnomVnom	Pass	OBW<26MHz	w/o test
2472MHz_TnomVmin	Pass	OBW<26MHz	w/o test
2472MHz_TnomVmax	Pass	OBW<26MHz	w/o test
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-
2412MHz_TnomVnom	Pass	OBW<26MHz	w/o test
2412MHz_TnomVmin	Pass	OBW<26MHz	w/o test
2412MHz_TnomVmax	Pass	OBW<26MHz	w/o test
2442MHz_TnomVnom	Pass	OBW<26MHz	w/o test
2442MHz_TnomVmin	Pass	OBW<26MHz	w/o test
2442MHz_TnomVmax	Pass	OBW<26MHz	w/o test
2472MHz_TnomVnom	Pass	OBW<26MHz	w/o test
2472MHz_TnomVmin	Pass	OBW<26MHz	w/o test
2472MHz_TnomVmax	Pass	OBW<26MHz	w/o test
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-
2422MHz_TnomVnom	Pass	-42.32	Good
2422MHz_TnomVmin	Pass	-42.32	Good
2422MHz_TnomVmax	Pass	-42.32	Good
2442MHz_TnomVnom	Pass	-42.39	Good
2442MHz_TnomVmin	Pass	-42.39	Good
2442MHz_TnomVmax	Pass	-42.39	Good
2462MHz_TnomVnom	Pass	-42.47	Good
2462MHz_TnomVmin	Pass	-42.47	Good
2462MHz_TnomVmax	Pass	-42.47	Good

**Summary**

Mode	Result	ID Length	ID Limit	Function
2.4-2.4835GHz	-	-	-	-
802.11b_Nss1_1TX	Pass	00:0B:6B:EE:56:45	48 bits	Good
802.11g_Nss1_1TX	Pass	00:0B:6B:EE:56:45	48 bits	Good
802.11n HT20_Nss1,(MCS0)_1TX	Pass	00:0B:6B:EE:56:45	48 bits	Good
802.11n HT40_Nss1,(MCS0)_1TX	Pass	00:0B:6B:EE:56:45	48 bits	Good

**Result**

Mode	Result	ID Length	ID Limit	Function
802.11b_Nss1_1TX	-	-	-	-
2412MHz_TnomVnom	Pass	00:0B:6B:EE:56:45	48 bits	Good
2412MHz_TnomVmin	Pass	00:0B:6B:EE:56:45	48 bits	Good
2412MHz_TnomVmax	Pass	00:0B:6B:EE:56:45	48 bits	Good
2442MHz_TnomVnom	Pass	00:0B:6B:EE:56:45	48 bits	Good
2442MHz_TnomVmin	Pass	00:0B:6B:EE:56:45	48 bits	Good
2442MHz_TnomVmax	Pass	00:0B:6B:EE:56:45	48 bits	Good
2472MHz_TnomVnom	Pass	00:0B:6B:EE:56:45	48 bits	Good
2472MHz_TnomVmin	Pass	00:0B:6B:EE:56:45	48 bits	Good
2472MHz_TnomVmax	Pass	00:0B:6B:EE:56:45	48 bits	Good
802.11g_Nss1_1TX	-	-	-	-
2412MHz_TnomVnom	Pass	00:0B:6B:EE:56:45	48 bits	Good
2412MHz_TnomVmin	Pass	00:0B:6B:EE:56:45	48 bits	Good
2412MHz_TnomVmax	Pass	00:0B:6B:EE:56:45	48 bits	Good
2442MHz_TnomVnom	Pass	00:0B:6B:EE:56:45	48 bits	Good
2442MHz_TnomVmin	Pass	00:0B:6B:EE:56:45	48 bits	Good
2442MHz_TnomVmax	Pass	00:0B:6B:EE:56:45	48 bits	Good
2472MHz_TnomVnom	Pass	00:0B:6B:EE:56:45	48 bits	Good
2472MHz_TnomVmin	Pass	00:0B:6B:EE:56:45	48 bits	Good
2472MHz_TnomVmax	Pass	00:0B:6B:EE:56:45	48 bits	Good
802.11n_HT20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz_TnomVnom	Pass	00:0B:6B:EE:56:45	48 bits	Good
2412MHz_TnomVmin	Pass	00:0B:6B:EE:56:45	48 bits	Good
2412MHz_TnomVmax	Pass	00:0B:6B:EE:56:45	48 bits	Good
2442MHz_TnomVnom	Pass	00:0B:6B:EE:56:45	48 bits	Good
2442MHz_TnomVmin	Pass	00:0B:6B:EE:56:45	48 bits	Good
2442MHz_TnomVmax	Pass	00:0B:6B:EE:56:45	48 bits	Good
2472MHz_TnomVnom	Pass	00:0B:6B:EE:56:45	48 bits	Good
2472MHz_TnomVmin	Pass	00:0B:6B:EE:56:45	48 bits	Good
2472MHz_TnomVmax	Pass	00:0B:6B:EE:56:45	48 bits	Good
802.11n_HT40_Nss1,(MCS0)_1TX	-	-	-	-
2422MHz_TnomVnom	Pass	00:0B:6B:EE:56:45	48 bits	Good
2422MHz_TnomVmin	Pass	00:0B:6B:EE:56:45	48 bits	Good
2422MHz_TnomVmax	Pass	00:0B:6B:EE:56:45	48 bits	Good
2442MHz_TnomVnom	Pass	00:0B:6B:EE:56:45	48 bits	Good
2442MHz_TnomVmin	Pass	00:0B:6B:EE:56:45	48 bits	Good
2442MHz_TnomVmax	Pass	00:0B:6B:EE:56:45	48 bits	Good
2462MHz_TnomVnom	Pass	00:0B:6B:EE:56:45	48 bits	Good
2462MHz_TnomVmin	Pass	00:0B:6B:EE:56:45	48 bits	Good
2462MHz_TnomVmax	Pass	00:0B:6B:EE:56:45	48 bits	Good

**Summary**

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Freq (MHz)	Psum (dBm)	Psum (nW/MHz)	Limit (dBm)	Limit (nW/MHz)	Margin (dB)	P1 (dBm)	P1 (nW/MHz)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1_1TX	Pass	1G	12.5G	1M	9888.062	-63.63	0.43351	-46.99	20	-16.64	-63.63	0.43351
802.11g_Nss1_1TX	Pass	1G	12.5G	1M	9888.062	-63.59	0.43752	-46.99	20	-16.60	-63.59	0.43752
802.11n HT20_Nss1(MCS0)_1TX	Pass	1G	12.5G	1M	9888.062	-63.64	0.43251	-46.99	20	-16.65	-63.64	0.43251
802.11n HT40_Nss1(MCS0)_1TX	Pass	30M	1G	100k	240.005	-70.92	0.08091	-53.98	4	-16.94	-70.92	0.08091



CSE-RX Secondary Radiated EmissionsResult

Appendix H

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Freq (MHz)	Psum (dBm)	Psum (nW/MHz)	Limit (dBm)	Limit (nW/MHz)	Margin (dB)	P1 (dBm)	P1 (nW/MHz)
802.11b_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	30M	1G	100k	240.005	-71.82	0.06577	-53.98	4	-17.84	-71.82	0.06577
2412MHz_TnomVnom	Pass	1G	12.5G	1M	9648	-66.12	0.24434	-46.99	20	-19.13	-66.12	0.24434
2412MHz_TnomVmin	Pass	30M	1G	100k	240.005	-71.60	0.06918	-53.98	4	-17.62	-71.60	0.06918
2412MHz_TnomVmin	Pass	1G	12.5G	1M	9648	-66.13	0.24378	-46.99	20	-19.14	-66.13	0.24378
2412MHz_TnomVmax	Pass	30M	1G	100k	240.005	-71.83	0.06561	-53.98	4	-17.85	-71.83	0.06561
2412MHz_TnomVmax	Pass	1G	12.5G	1M	9648	-66.18	0.24099	-46.99	20	-19.19	-66.18	0.24099
2442MHz_TnomVnom	Pass	30M	1G	100k	159.98	-72.24	0.0597	-53.98	4	-18.26	-72.24	0.0597
2442MHz_TnomVnom	Pass	1G	12.5G	1M	9767.312	-68.73	0.13397	-46.99	20	-21.74	-68.73	0.13397
2442MHz_TnomVmin	Pass	30M	1G	100k	159.98	-72.24	0.0597	-53.98	4	-18.26	-72.24	0.0597
2442MHz_TnomVmin	Pass	1G	12.5G	1M	9767.312	-68.56	0.13932	-46.99	20	-21.57	-68.56	0.13932
2442MHz_TnomVmax	Pass	30M	1G	100k	159.98	-72.38	0.05781	-53.98	4	-18.40	-72.38	0.05781
2442MHz_TnomVmax	Pass	1G	12.5G	1M	9767.312	-68.57	0.139	-46.99	20	-21.58	-68.57	0.139
2472MHz_TnomVnom	Pass	30M	1G	100k	240.005	-71.14	0.07691	-53.98	4	-17.16	-71.14	0.07691
2472MHz_TnomVnom	Pass	1G	12.5G	1M	9888.062	-63.63	0.43351	-46.99	20	-16.64	-63.63	0.43351
2472MHz_TnomVmin	Pass	30M	1G	100k	240.005	-71.14	0.07691	-53.98	4	-17.16	-71.14	0.07691
2472MHz_TnomVmin	Pass	1G	12.5G	1M	9888.062	-63.63	0.43351	-46.99	20	-16.64	-63.63	0.43351
2472MHz_TnomVmax	Pass	30M	1G	100k	240.005	-71.12	0.07727	-53.98	4	-17.14	-71.12	0.07727
2472MHz_TnomVmax	Pass	1G	12.5G	1M	9888.062	-63.64	0.43251	-46.99	20	-16.65	-63.64	0.43251
802.11g_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	30M	1G	100k	240.005	-71.81	0.06592	-53.98	4	-17.83	-71.81	0.06592
2412MHz_TnomVnom	Pass	1G	12.5G	1M	9648	-66.03	0.24946	-46.99	20	-19.04	-66.03	0.24946
2412MHz_TnomVmin	Pass	30M	1G	100k	240.005	-71.83	0.06561	-53.98	4	-17.85	-71.83	0.06561
2412MHz_TnomVmin	Pass	1G	12.5G	1M	9648	-66.10	0.24547	-46.99	20	-19.11	-66.10	0.24547
2412MHz_TnomVmax	Pass	30M	1G	100k	240.005	-71.86	0.06516	-53.98	4	-17.88	-71.86	0.06516
2412MHz_TnomVmax	Pass	1G	12.5G	1M	9648	-66.08	0.2466	-46.99	20	-19.09	-66.08	0.2466
2442MHz_TnomVnom	Pass	30M	1G	100k	159.98	-72.34	0.05834	-53.98	4	-18.36	-72.34	0.05834
2442MHz_TnomVnom	Pass	1G	12.5G	1M	9767.312	-68.58	0.13868	-46.99	20	-21.59	-68.58	0.13868
2442MHz_TnomVmin	Pass	30M	1G	100k	159.98	-72.36	0.05808	-53.98	4	-18.38	-72.36	0.05808
2442MHz_TnomVmin	Pass	1G	12.5G	1M	9767.312	-68.61	0.13772	-46.99	20	-21.62	-68.61	0.13772
2442MHz_TnomVmax	Pass	30M	1G	100k	159.98	-72.32	0.05861	-53.98	4	-18.34	-72.32	0.05861
2442MHz_TnomVmax	Pass	1G	12.5G	1M	9767.312	-68.66	0.13614	-46.99	20	-21.67	-68.66	0.13614
2472MHz_TnomVnom	Pass	30M	1G	100k	240.005	-71.15	0.07674	-53.98	4	-17.17	-71.15	0.07674
2472MHz_TnomVnom	Pass	1G	12.5G	1M	9888.062	-63.62	0.43451	-46.99	20	-16.63	-63.62	0.43451
2472MHz_TnomVmin	Pass	30M	1G	100k	240.005	-71.14	0.07691	-53.98	4	-17.16	-71.14	0.07691
2472MHz_TnomVmin	Pass	1G	12.5G	1M	9888.062	-63.59	0.43752	-46.99	20	-16.60	-63.59	0.43752
2472MHz_TnomVmax	Pass	30M	1G	100k	240.005	-71.16	0.07656	-53.98	4	-17.18	-71.16	0.07656
2472MHz_TnomVmax	Pass	1G	12.5G	1M	9888.062	-63.72	0.42462	-46.99	20	-16.73	-63.72	0.42462
802.11n_HT20_Nss1(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	30M	1G	100k	240.005	-71.84	0.06546	-53.98	4	-17.86	-71.84	0.06546
2412MHz_TnomVnom	Pass	1G	12.5G	1M	9648	-66.10	0.24547	-46.99	20	-19.11	-66.10	0.24547
2412MHz_TnomVmin	Pass	30M	1G	100k	240.005	-71.83	0.06561	-53.98	4	-17.85	-71.83	0.06561
2412MHz_TnomVmin	Pass	1G	12.5G	1M	9648	-66.23	0.23823	-46.99	20	-19.24	-66.23	0.23823
2412MHz_TnomVmax	Pass	30M	1G	100k	240.005	-71.85	0.06531	-53.98	4	-17.87	-71.85	0.06531
2412MHz_TnomVmax	Pass	1G	12.5G	1M	9648	-66.14	0.24322	-46.99	20	-19.15	-66.14	0.24322
2442MHz_TnomVnom	Pass	30M	1G	100k	159.98	-72.31	0.05875	-53.98	4	-18.33	-72.31	0.05875
2442MHz_TnomVnom	Pass	1G	12.5G	1M	9767.312	-68.84	0.13062	-46.99	20	-21.85	-68.84	0.13062
2442MHz_TnomVmin	Pass	30M	1G	100k	159.98	-72.30	0.05888	-53.98	4	-18.32	-72.30	0.05888
2442MHz_TnomVmin	Pass	1G	12.5G	1M	9767.312	-68.69	0.13521	-46.99	20	-21.70	-68.69	0.13521
2442MHz_TnomVmax	Pass	30M	1G	100k	159.98	-72.34	0.05834	-53.98	4	-18.36	-72.34	0.05834
2442MHz_TnomVmax	Pass	1G	12.5G	1M	9767.312	-68.76	0.13305	-46.99	20	-21.77	-68.76	0.13305
2472MHz_TnomVnom	Pass	30M	1G	100k	240.005	-71.13	0.07709	-53.98	4	-17.15	-71.13	0.07709
2472MHz_TnomVnom	Pass	1G	12.5G	1M	9888.062	-63.75	0.4217	-46.99	20	-16.76	-63.75	0.4217



CSE-RX Secondary Radiated Emissions Result

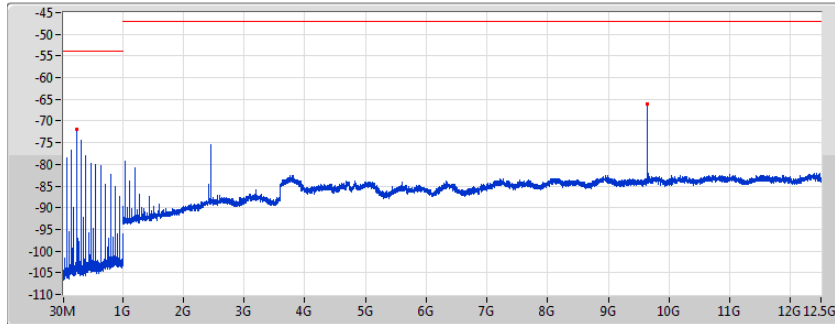
Appendix H

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Freq (MHz)	Psum (dBm)	Psum (nW/MHz)	Limit (dBm)	Limit (nW/MHz)	Margin (dB)	P1 (dBm)	P1 (nW/MHz)
2472MHz_TnomVmin	Pass	30M	1G	100k	240.005	-71.13	0.07709	-53.98	4	-17.15	-71.13	0.07709
2472MHz_TnomVmin	Pass	1G	12.5G	1M	9888.062	-63.69	0.42756	-46.99	20	-16.70	-63.69	0.42756
2472MHz_TnomVmax	Pass	30M	1G	100k	240.005	-71.10	0.07762	-53.98	4	-17.12	-71.10	0.07762
2472MHz_TnomVmax	Pass	1G	12.5G	1M	9888.062	-63.64	0.43251	-46.99	20	-16.65	-63.64	0.43251
802.11n HT40_Nss1(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz_TnomVnom	Pass	30M	1G	100k	240.005	-70.95	0.08035	-53.98	4	-16.97	-70.95	0.08035
2422MHz_TnomVnom	Pass	1G	12.5G	1M	9688.25	-69.12	0.12246	-46.99	20	-22.13	-69.12	0.12246
2422MHz_TnomVmin	Pass	30M	1G	100k	240.005	-70.92	0.08091	-53.98	4	-16.94	-70.92	0.08091
2422MHz_TnomVmin	Pass	1G	12.5G	1M	9688.25	-69.18	0.12078	-46.99	20	-22.19	-69.18	0.12078
2422MHz_TnomVmax	Pass	30M	1G	100k	240.005	-70.96	0.08017	-53.98	4	-16.98	-70.96	0.08017
2422MHz_TnomVmax	Pass	1G	12.5G	1M	9688.25	-68.94	0.12764	-46.99	20	-21.95	-68.94	0.12764
2442MHz_TnomVnom	Pass	30M	1G	100k	159.98	-72.35	0.05821	-53.98	4	-18.37	-72.35	0.05821
2442MHz_TnomVnom	Pass	1G	12.5G	1M	9767.312	-68.56	0.13932	-46.99	20	-21.57	-68.56	0.13932
2442MHz_TnomVmin	Pass	30M	1G	100k	159.98	-72.31	0.05875	-53.98	4	-18.33	-72.31	0.05875
2442MHz_TnomVmin	Pass	1G	12.5G	1M	9767.312	-68.57	0.139	-46.99	20	-21.58	-68.57	0.139
2442MHz_TnomVmax	Pass	30M	1G	100k	159.98	-72.35	0.05821	-53.98	4	-18.37	-72.35	0.05821
2442MHz_TnomVmax	Pass	1G	12.5G	1M	9767.312	-68.65	0.13646	-46.99	20	-21.66	-68.65	0.13646
2462MHz_TnomVnom	Pass	30M	1G	100k	240.005	-70.94	0.08054	-53.98	4	-16.96	-70.94	0.08054
2462MHz_TnomVnom	Pass	1G	12.5G	1M	9847.812	-64.79	0.33189	-46.99	20	-17.80	-64.79	0.33189
2462MHz_TnomVmin	Pass	30M	1G	100k	240.005	-70.99	0.07962	-53.98	4	-17.01	-70.99	0.07962
2462MHz_TnomVmin	Pass	1G	12.5G	1M	9847.812	-64.60	0.34674	-46.99	20	-17.61	-64.60	0.34674
2462MHz_TnomVmax	Pass	30M	1G	100k	240.005	-70.97	0.07998	-53.98	4	-16.99	-70.97	0.07998
2462MHz_TnomVmax	Pass	1G	12.5G	1M	9847.812	-64.61	0.34594	-46.99	20	-17.62	-64.61	0.34594

802.11b_Nss1_1TX

CSE-RX

2412MHz_TnomVnom



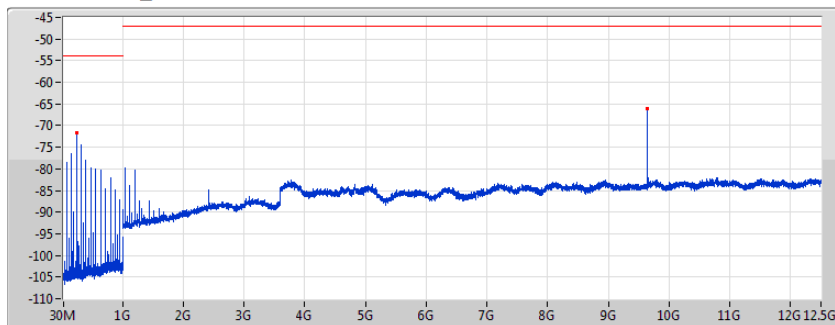
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.82	-53.98	-17.84	-71.82
9648	-66.12	-46.99	-19.13	-66.12

802.11b_Nss1_1TX

CSE-RX

2412MHz_TnomVmin



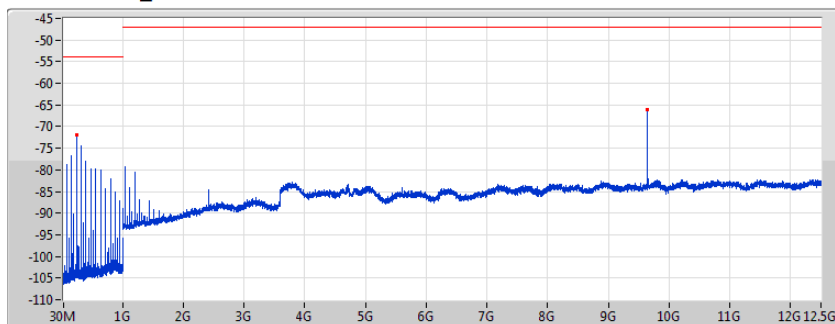
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.60	-53.98	-17.62	-71.60
9648	-66.13	-46.99	-19.14	-66.13

802.11b_Nss1_1TX

CSE-RX

2412MHz_TnomVmax



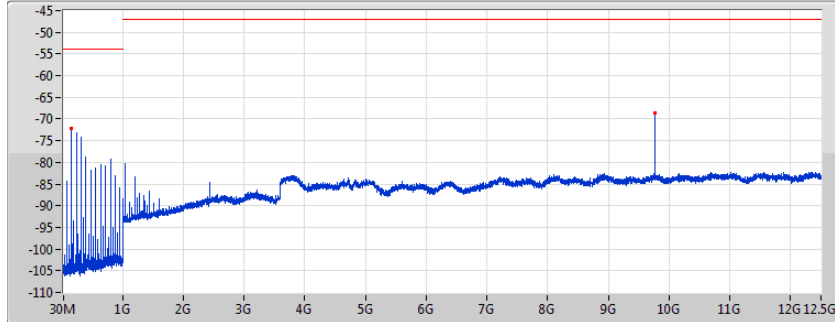
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.83	-53.98	-17.85	-71.83
9648	-66.18	-46.99	-19.19	-66.18

802.11b_Nss1_1TX

CSE-RX

2442MHz_TnomVnom



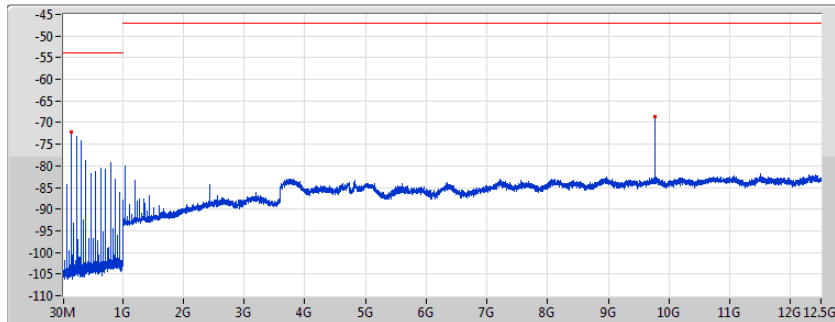
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
159.98	-72.24	-53.98	-18.26	-72.24
9767.312	-68.73	-46.99	-21.74	-68.73

802.11b_Nss1_1TX

CSE-RX

2442MHz_TnomVmin



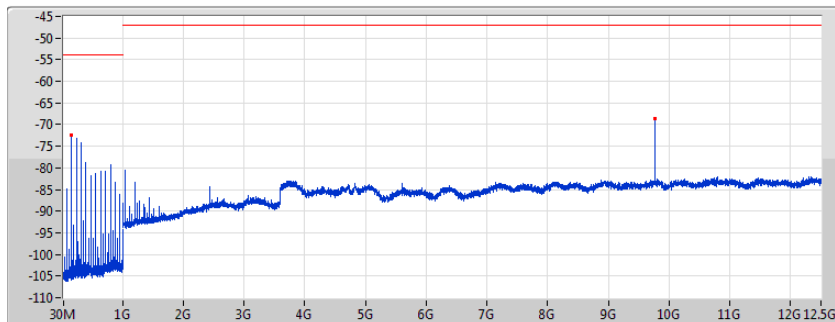
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
159.98	-72.24	-53.98	-18.26	-72.24
9767.312	-68.56	-46.99	-21.57	-68.56

802.11b_Nss1_1TX

CSE-RX

2442MHz_TnomVmax



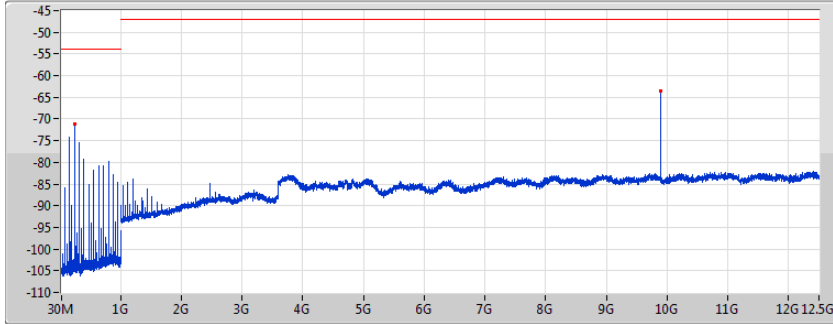
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
159.98	-72.38	-53.98	-18.40	-72.38
9767.312	-68.57	-46.99	-21.58	-68.57

802.11b_Nss1_1TX

CSE-RX

2472MHz_TnomVnom



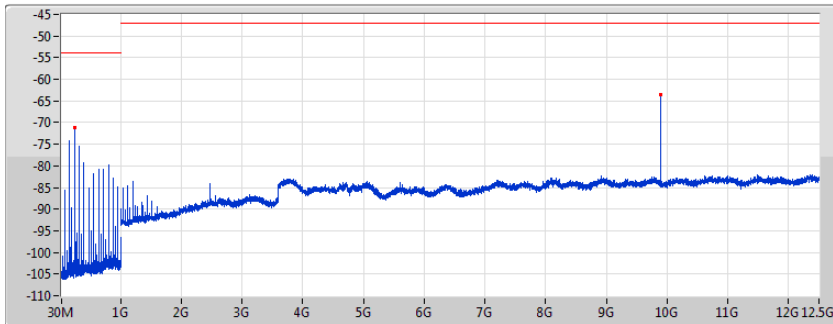
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.14	-53.98	-17.16	-71.14
9888.062	-63.63	-46.99	-16.64	-63.63

802.11b_Nss1_1TX

CSE-RX

2472MHz_TnomVmin



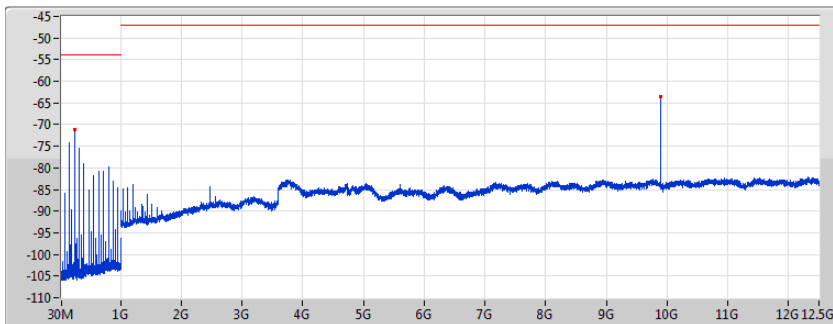
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.14	-53.98	-17.16	-71.14
9888.062	-63.63	-46.99	-16.64	-63.63

802.11b_Nss1_1TX

CSE-RX

2472MHz_TnomVmax



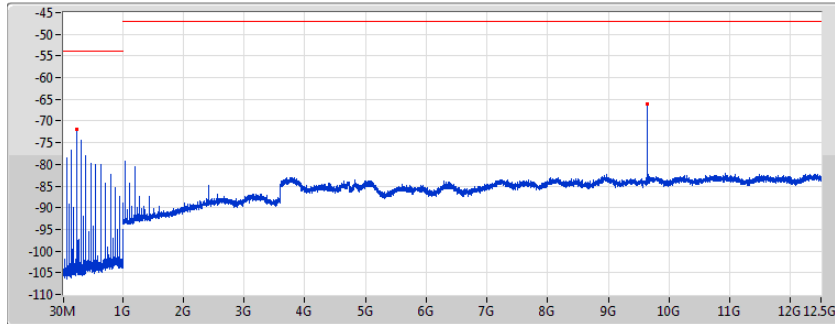
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.12	-53.98	-17.14	-71.12
9888.062	-63.64	-46.99	-16.65	-63.64

802.11g_Nss1_1TX

CSE-RX

2412MHz_TnomVnom



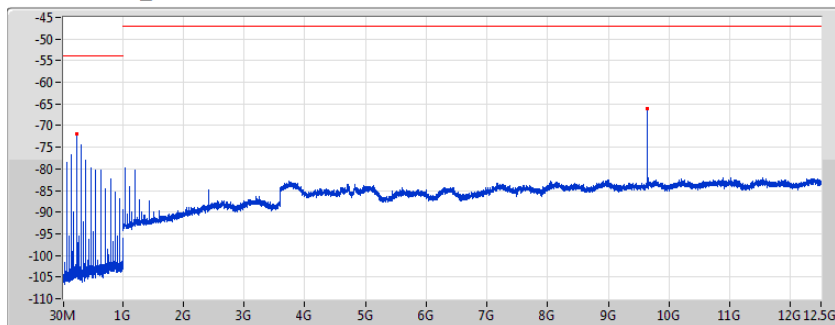
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.81	-53.98	-17.83	-71.81
9648	-66.03	-46.99	-19.04	-66.03

802.11g_Nss1_1TX

CSE-RX

2412MHz_TnomVmin



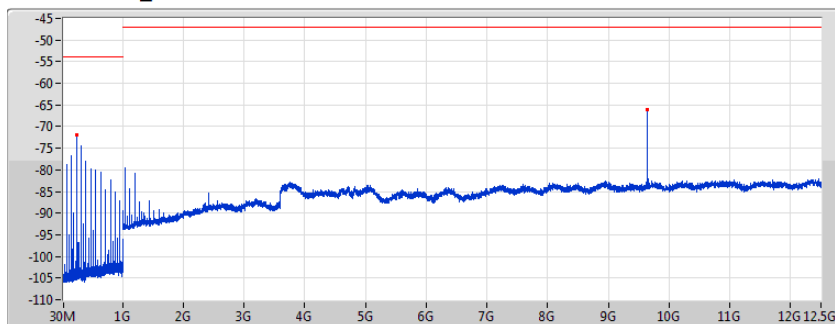
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.83	-53.98	-17.85	-71.83
9648	-66.10	-46.99	-19.11	-66.10

802.11g_Nss1_1TX

CSE-RX

2412MHz_TnomVmax



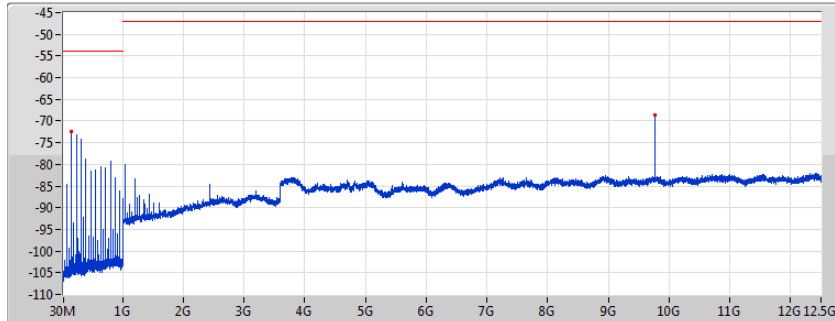
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.86	-53.98	-17.88	-71.86
9648	-66.08	-46.99	-19.09	-66.08

802.11g_Nss1_1TX

CSE-RX

2442MHz_TnomVnom



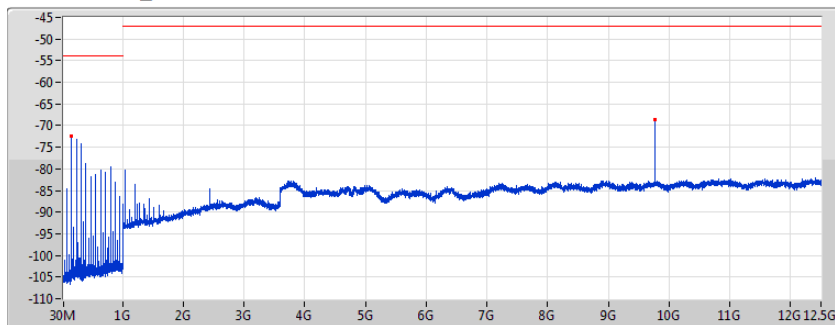
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
159.98	-72.34	-53.98	-18.36	-72.34
9767.312	-68.58	-46.99	-21.59	-68.58

802.11g_Nss1_1TX

CSE-RX

2442MHz_TnomVmin



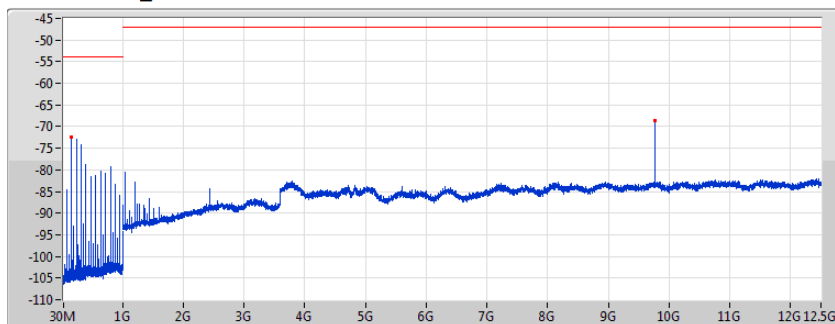
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
159.98	-72.36	-53.98	-18.38	-72.36
9767.312	-68.61	-46.99	-21.62	-68.61

802.11g_Nss1_1TX

CSE-RX

2442MHz_TnomVmax



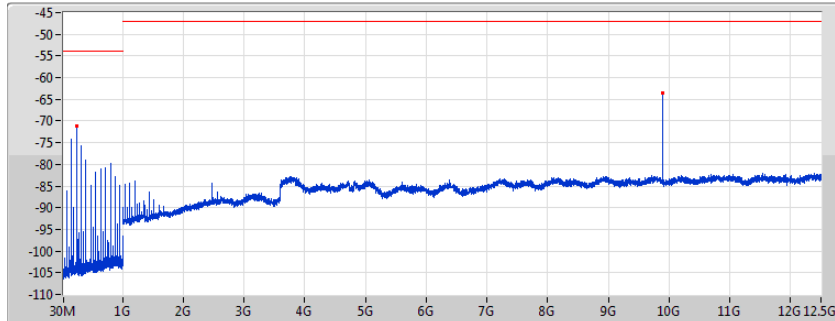
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
159.98	-72.32	-53.98	-18.34	-72.32
9767.312	-68.66	-46.99	-21.67	-68.66

802.11g_Nss1_1TX

CSE-RX

2472MHz_TnomVnom



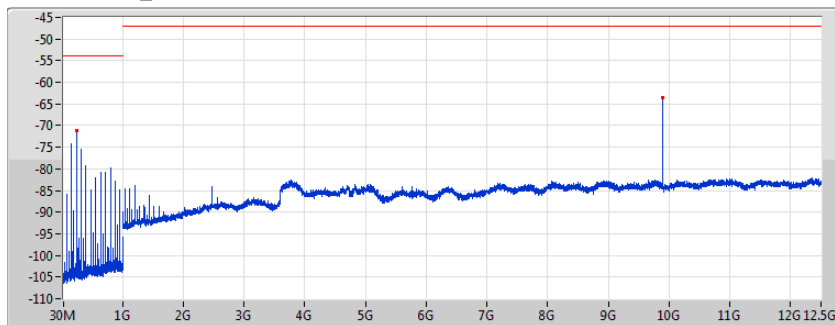
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.15	-53.98	-17.17	-71.15
9888.062	-63.62	-46.99	-16.63	-63.62

802.11g_Nss1_1TX

CSE-RX

2472MHz_TnomVmin



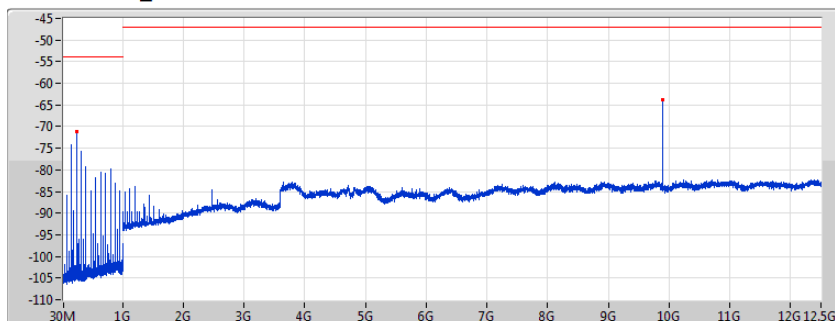
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.14	-53.98	-17.16	-71.14
9888.062	-63.59	-46.99	-16.60	-63.59

802.11g_Nss1_1TX

CSE-RX

2472MHz_TnomVmax



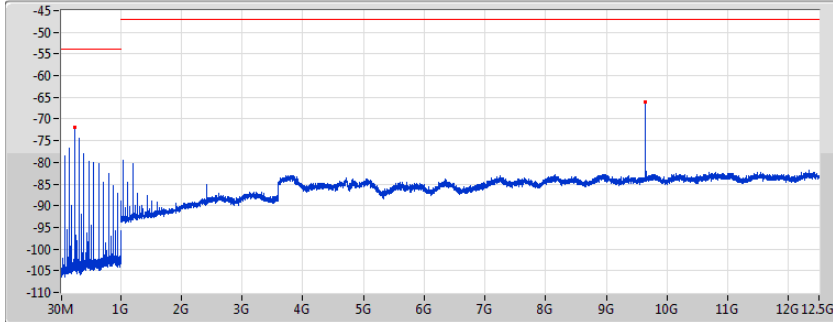
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.16	-53.98	-17.18	-71.16
9888.062	-63.72	-46.99	-16.73	-63.72

802.11n HT20_Nss1,(MCS0)_1TX

CSE-RX

2412MHz_TnomVnom



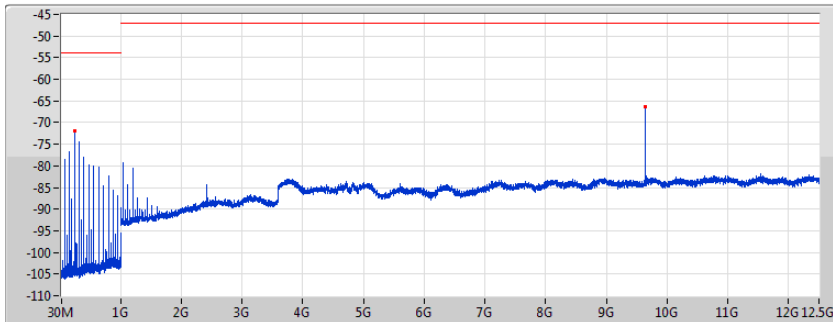
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.84	-53.98	-17.86	-71.84
9648	-66.10	-46.99	-19.11	-66.10

802.11n HT20_Nss1,(MCS0)_1TX

CSE-RX

2412MHz_TnomVmin



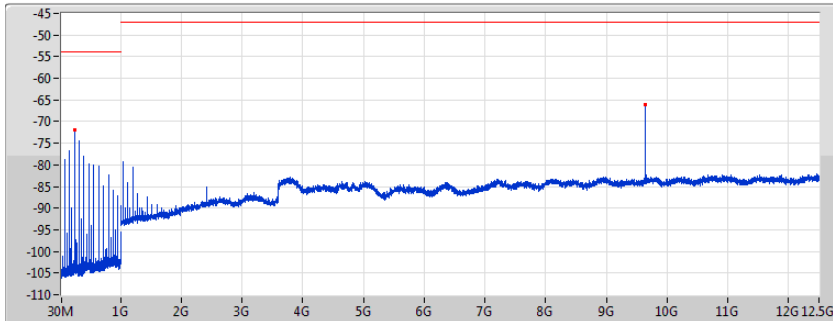
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.83	-53.98	-17.85	-71.83
9648	-66.23	-46.99	-19.24	-66.23

802.11n HT20_Nss1,(MCS0)_1TX

CSE-RX

2412MHz_TnomVmax



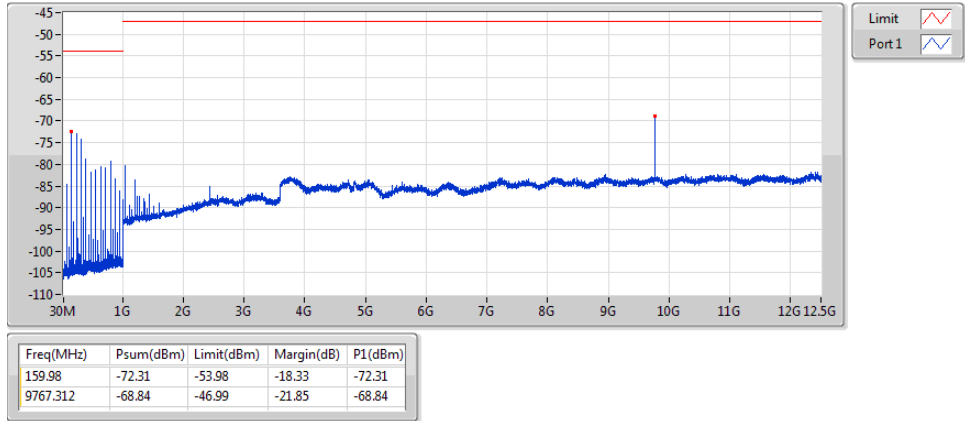
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.85	-53.98	-17.87	-71.85
9648	-66.14	-46.99	-19.15	-66.14

802.11n HT20_Nss1,(MCS0)_1TX

CSE-RX

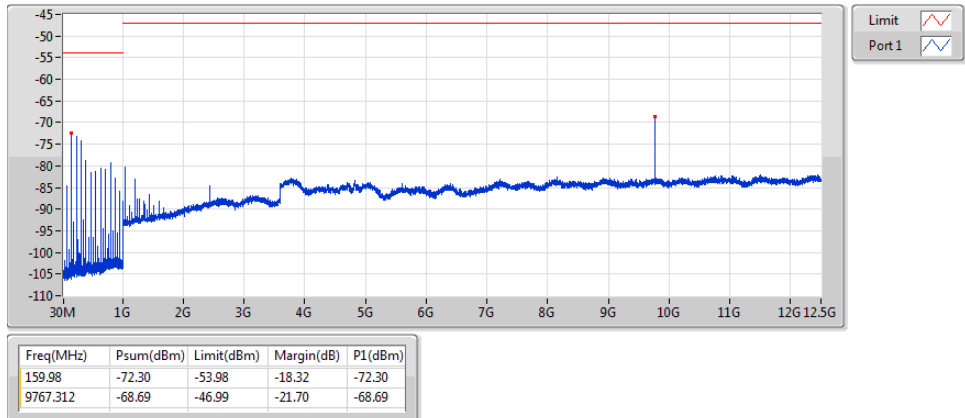
2442MHz_TnomVnom



802.11n HT20_Nss1,(MCS0)_1TX

CSE-RX

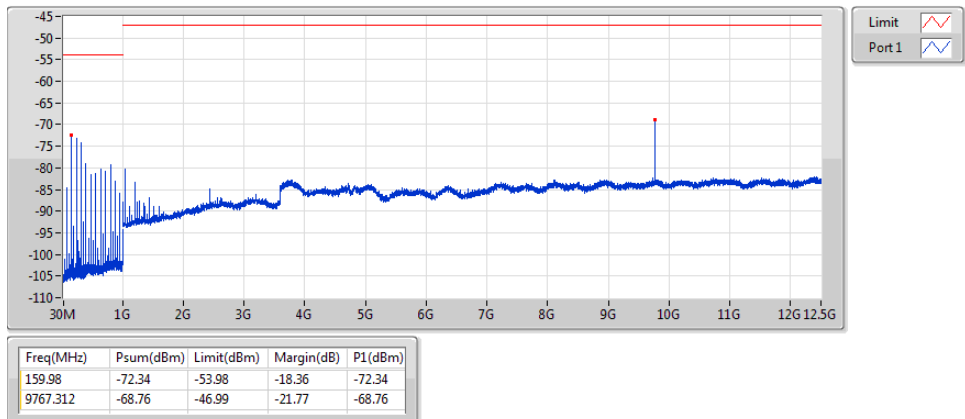
2442MHz_TnomVmin



802.11n HT20_Nss1,(MCS0)_1TX

CSE-RX

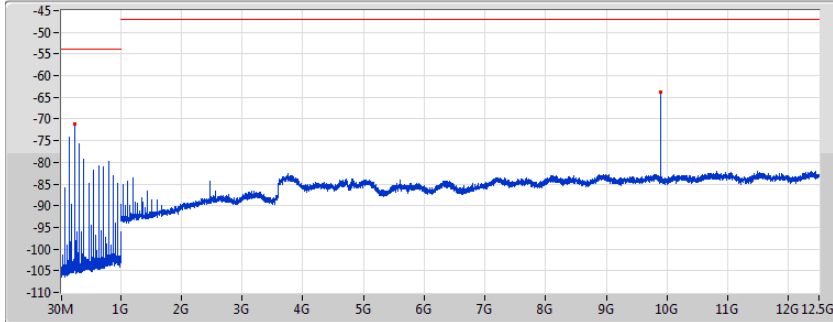
2442MHz_TnomVmax



802.11n HT20_Nss1,(MCS0)_1TX

CSE-RX

2472MHz_TnomVnom



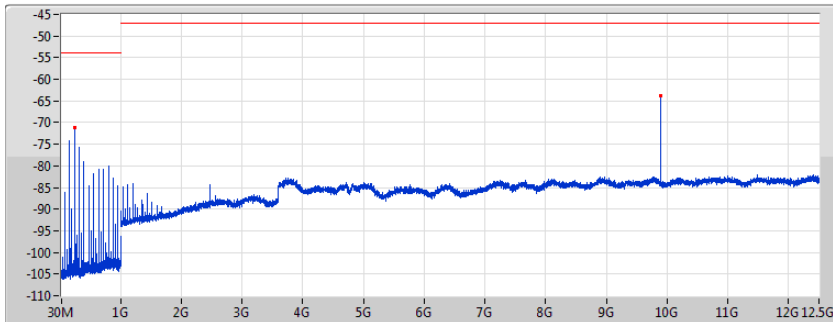
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.13	-53.98	-17.15	-71.13
9888.062	-63.75	-46.99	-16.76	-63.75

802.11n HT20_Nss1,(MCS0)_1TX

CSE-RX

2472MHz_TnomVmin



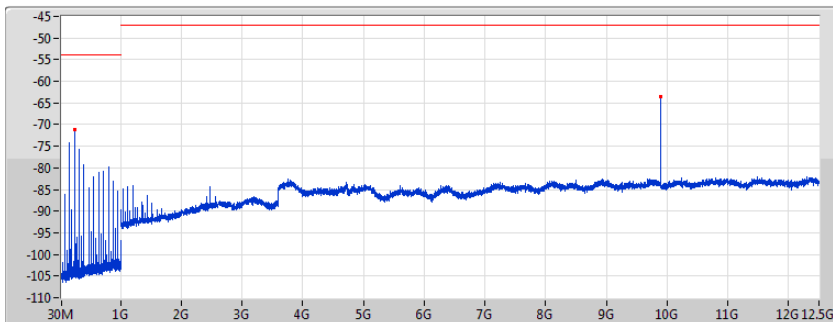
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.13	-53.98	-17.15	-71.13
9888.062	-63.69	-46.99	-16.70	-63.69

802.11n HT20_Nss1,(MCS0)_1TX

CSE-RX

2472MHz_TnomVmax



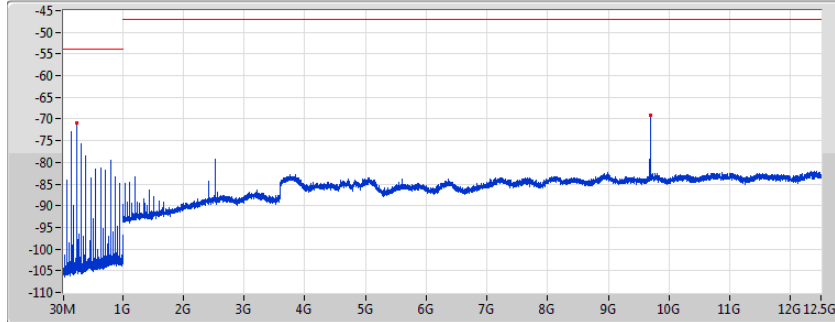
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-71.10	-53.98	-17.12	-71.10
9888.062	-63.64	-46.99	-16.65	-63.64

802.11n HT40_Nss1,(MCS0)_1TX

CSE-RX

2422MHz_TnomVnom



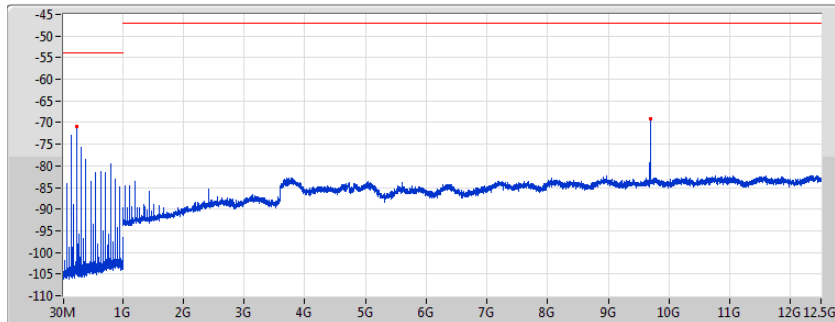
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-70.95	-53.98	-16.97	-70.95
9688.25	-69.12	-46.99	-22.13	-69.12

802.11n HT40_Nss1,(MCS0)_1TX

CSE-RX

2422MHz_TnomVmin



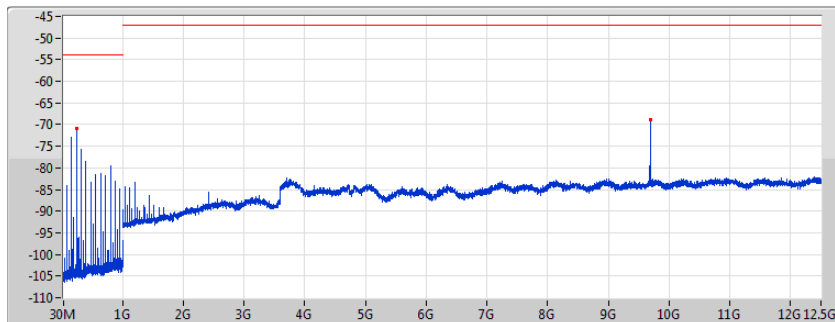
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-70.92	-53.98	-16.94	-70.92
9688.25	-69.18	-46.99	-22.19	-69.18

802.11n HT40_Nss1,(MCS0)_1TX

CSE-RX

2422MHz_TnomVmax



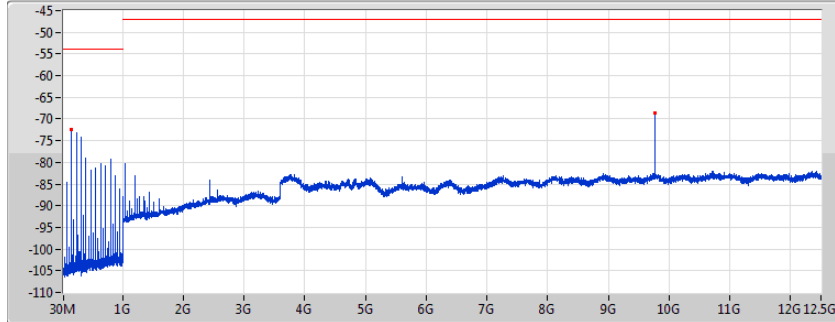
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-70.96	-53.98	-16.98	-70.96
9688.25	-68.94	-46.99	-21.95	-68.94

802.11n HT40_Nss1,(MCS0)_1TX

CSE-RX

2442MHz_TnomVnom



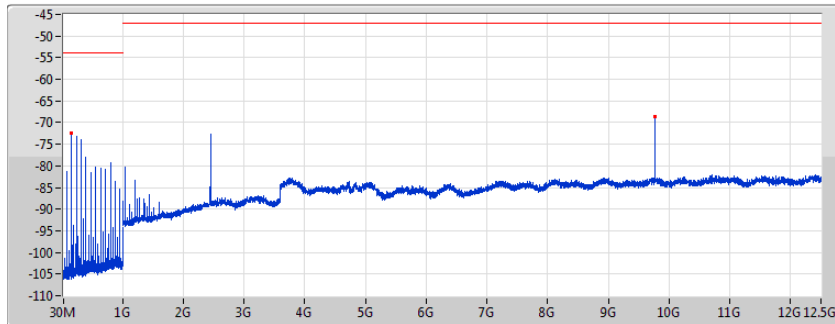
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
159.98	-72.35	-53.98	-18.37	-72.35
9767.312	-68.56	-46.99	-21.57	-68.56

802.11n HT40_Nss1,(MCS0)_1TX

CSE-RX

2442MHz_TnomVmin



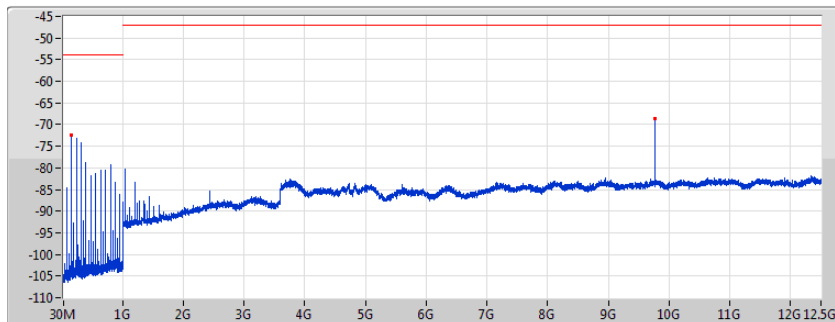
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
159.98	-72.31	-53.98	-18.33	-72.31
9767.312	-68.57	-46.99	-21.58	-68.57

802.11n HT40_Nss1,(MCS0)_1TX

CSE-RX

2442MHz_TnomVmax



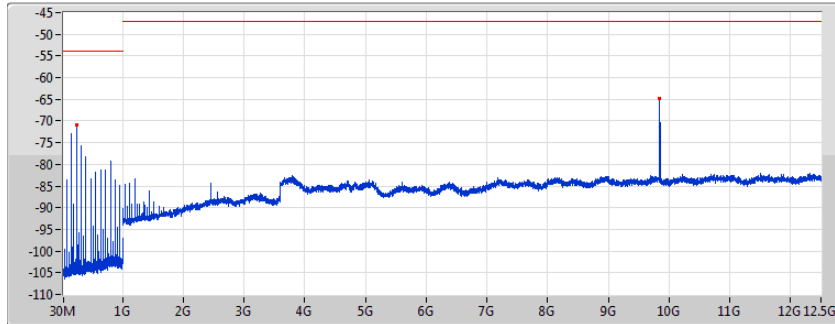
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
159.98	-72.35	-53.98	-18.37	-72.35
9767.312	-68.65	-46.99	-21.66	-68.65

802.11n HT40_Nss1,(MCS0)_1TX

CSE-RX

2462MHz_TnomVnom



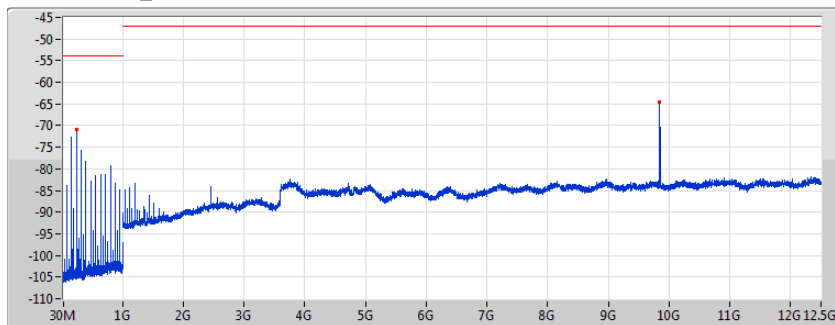
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-70.94	-53.98	-16.96	-70.94
9847.812	-64.79	-46.99	-17.80	-64.79

802.11n HT40_Nss1,(MCS0)_1TX

CSE-RX

2462MHz_TnomVmin



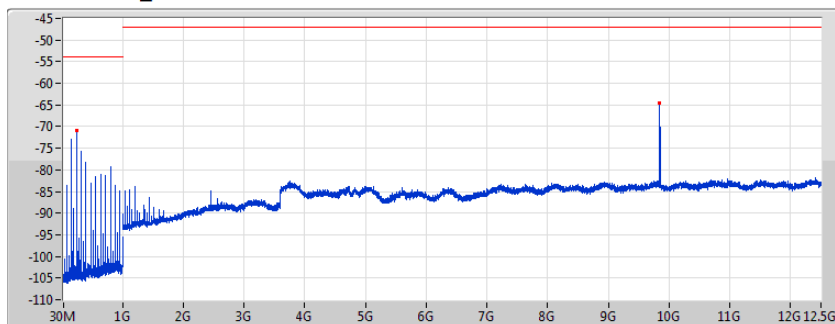
Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-70.99	-53.98	-17.01	-70.99
9847.812	-64.60	-46.99	-17.61	-64.60

802.11n HT40_Nss1,(MCS0)_1TX

CSE-RX

2462MHz_TnomVmax



Limit
Port 1

Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
240.005	-70.97	-53.98	-16.99	-70.97
9847.812	-64.61	-46.99	-17.62	-64.61

Appendix I. Antenna Information

DNUK-FN88 antenna test report (Free Space)

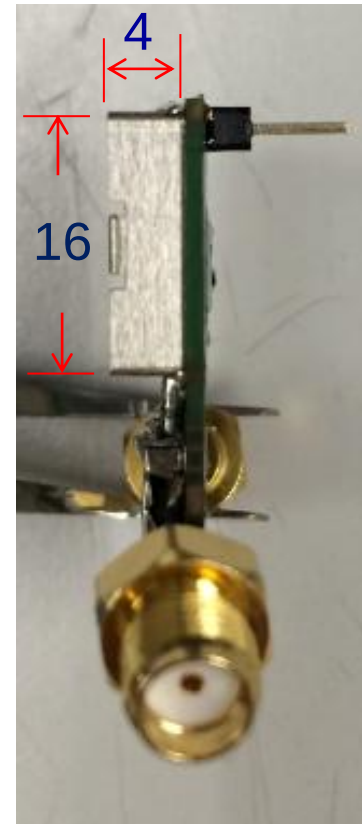
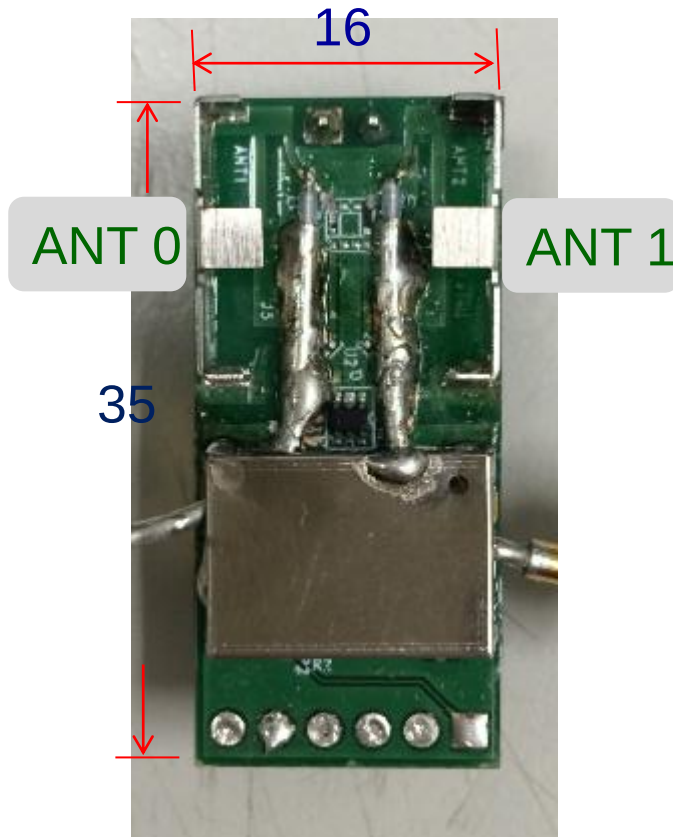
Provided by: Nathan Chang

Date:2015-12-29

Rev.02



Testing condition

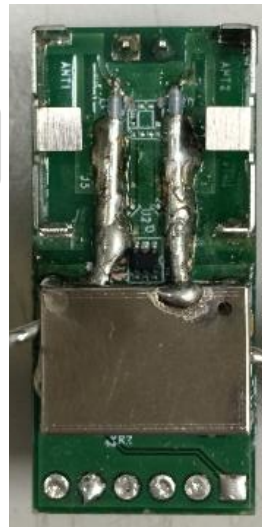


Unit : mm



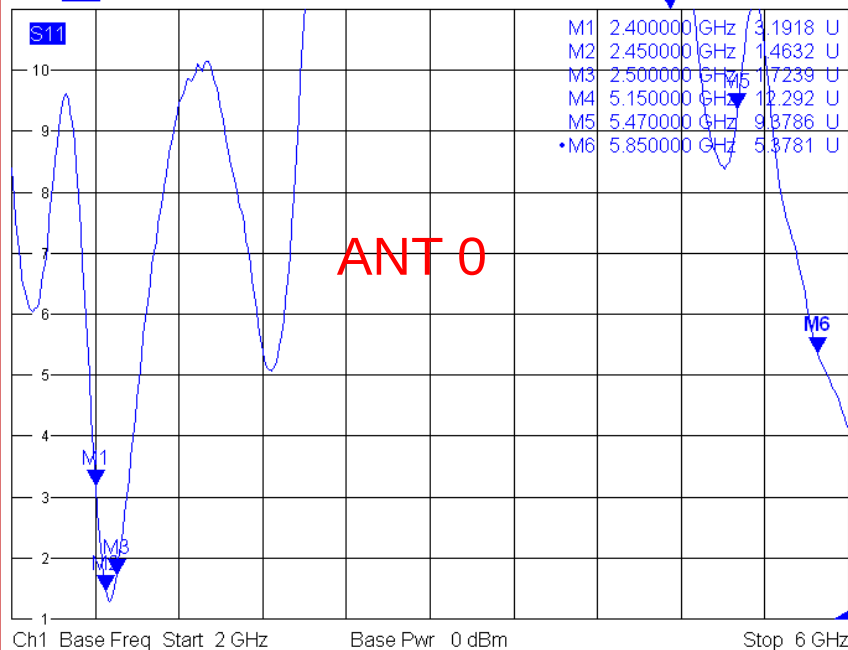
VSWR for WIFI

ANT 0



ANT 1

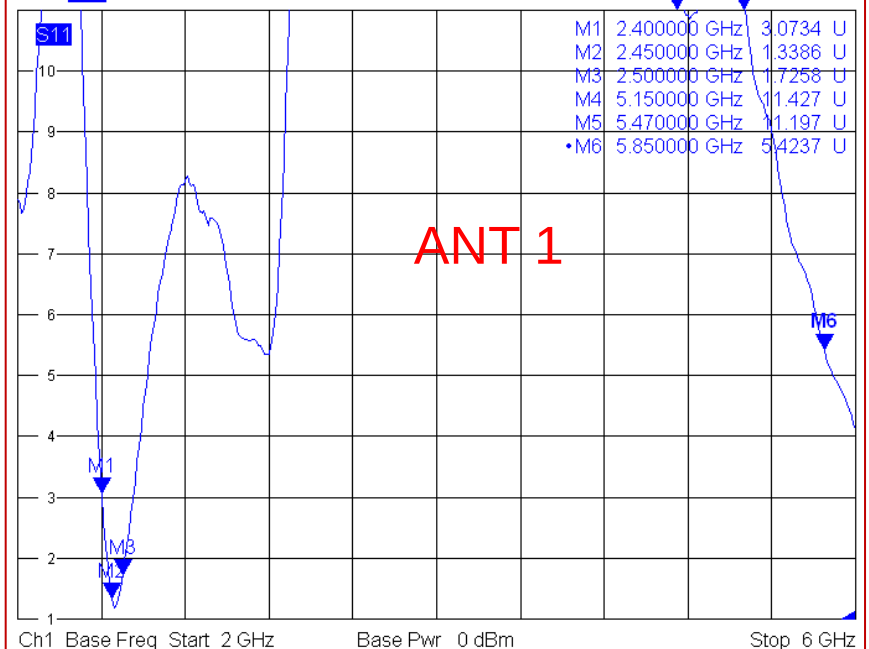
Trc1 S11 SWR 1 U/ Ref 1 U Cal Offs



ANT 0

12/30/2015, 8:10 AM

Trc1 S11 SWR 1 U/ Ref 1 U Cal Offs



ANT 1

12/30/2015, 8:11 AM

Peak Gain and Efficiency

ANT 0



ANT 1

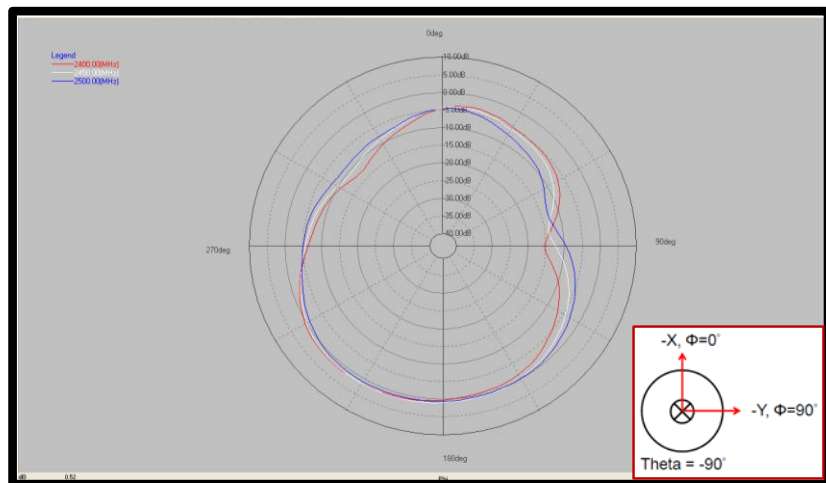
		2400	2450	2500	Avg.
2G ANT 0	Eff.	56%	62%	60%	59%
	Avg. Gain	-2.53	-2.10	-2.22	
	Peak Gain	2.16	2.57	2.29	
2G ANT 1	Eff.	56%	63%	63%	61%
	Avg. Gain	-2.54	-1.98	-2.00	
	Peak Gain	1.99	2.06	2.30	

Unit : Avg. Gain(dBi), Peak Gain(dBi)

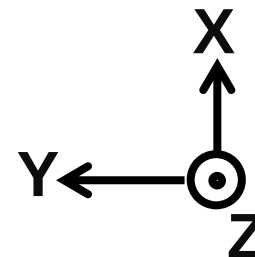
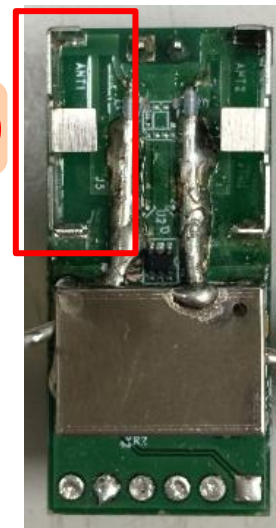


Radiation Pattern for 2GHz ANT 0

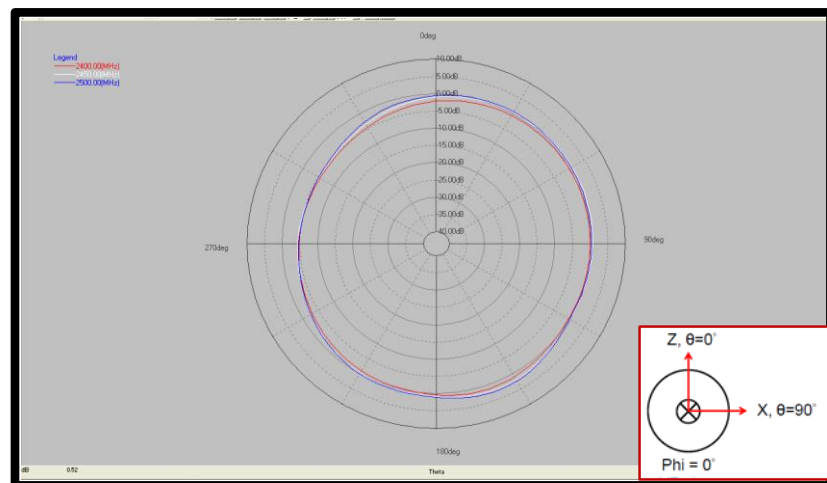
XY-Plane



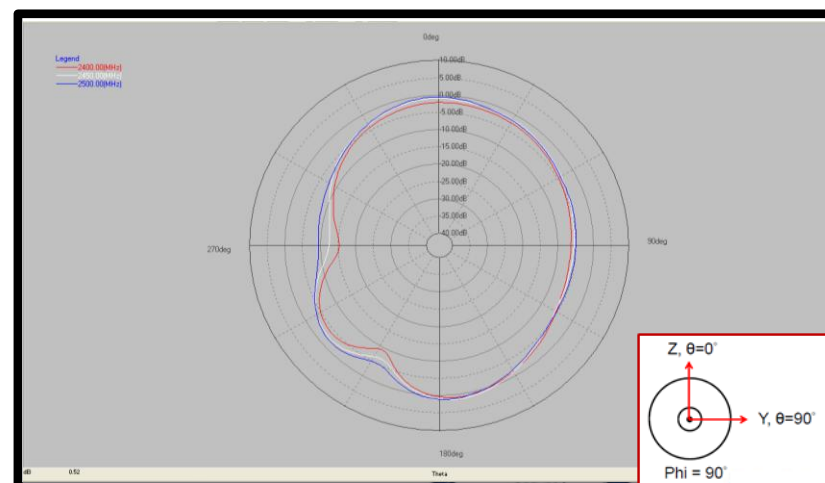
ANT 0



XZ-Plane

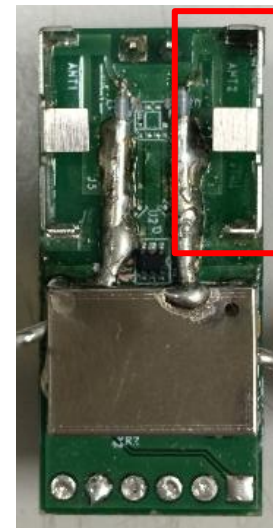
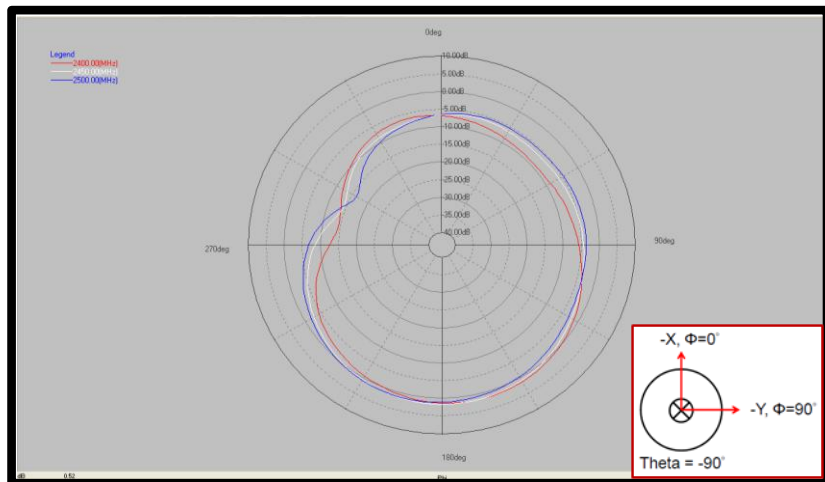


YZ-Plane

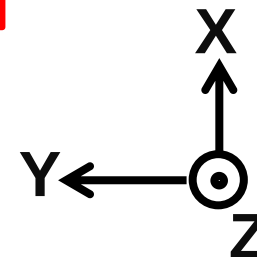


Radiation Pattern for 2GHz ANT 0

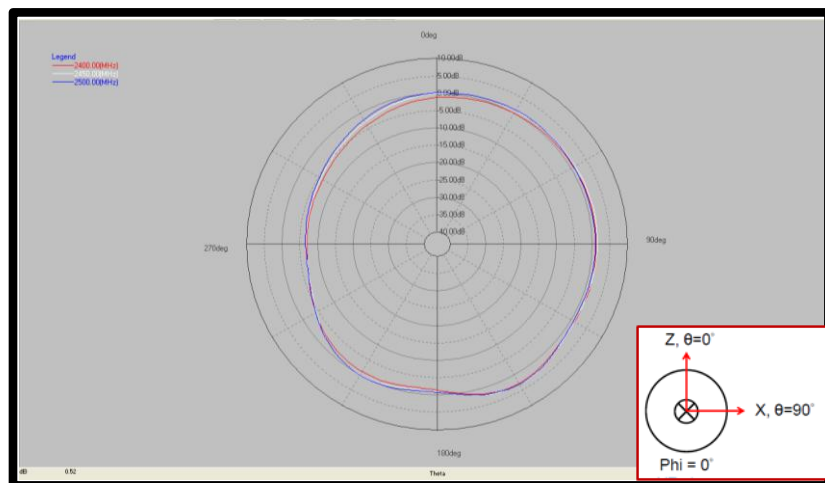
XY-Plane



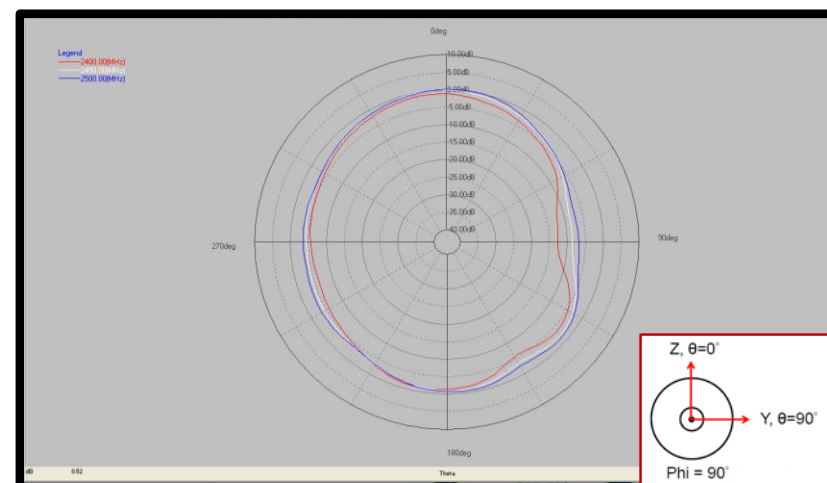
ANT 1



XZ-Plane



YZ-Plane



WNC[®]

Smarter Solutions for a Smarter Future

