



**FCC 47 CFR PART 15 SUBPART C
ISED CANADA RSS-247 ISSUE 2
ISED CANADA RSS-GEN ISSUE 4**

CERTIFICATION TEST REPORT

FOR

WIRELESS MODULE

MODEL NUMBER: 424821

FCC ID: A94424821

IC: 3232A-424821

REPORT NUMBER: R12053557-E10

ISSUE DATE: 2018-06-06

**Prepared for
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100 THE MOUNTAIN ROAD
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Revision History

<u>Ver.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
1	2018-04-25	Initial Issue	Brian T. Kiewra
2	2018-05-08	Added channel 2 power for 802.11g in Section 8.3.4	Brian T. Kiewra
3	2018-05-23	Added KDB662911 D01 v02r01 reference to Section 2 Added 'ac' to Section 5.1. Added reference to monitor and headphones in Section 5.5. Added calibration note to Section 6.	Brian T. Kiewra
4	2018-05-25	Added MIMO/CDD statements in Section 5.5.	Brian T. Kiewra
5	2018-05-31	Simultaneous Transmission statement added to Section 5.5.	Brian T. Kiewra
6	2018-06-06	Revised MIMO statement in Section 5.5 to include why MIMO covers SISO. Revised antenna description in Section 5.3.	Brian T. Kiewra

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	5
2. TEST METHODOLOGY	6
3. FACILITIES AND ACCREDITATION	6
4. CALIBRATION AND UNCERTAINTY	7
4.1. <i>MEASURING INSTRUMENT CALIBRATION</i>	<i>7</i>
4.2. <i>SAMPLE CALCULATION</i>	<i>7</i>
4.3. <i>MEASUREMENT UNCERTAINTY</i>	<i>7</i>
5. EQUIPMENT UNDER TEST	8
5.1. <i>DESCRIPTION OF EUT</i>	<i>8</i>
5.2. <i>MAXIMUM OUTPUT POWER.....</i>	<i>8</i>
5.3. <i>DESCRIPTION OF AVAILABLE ANTENNAS</i>	<i>8</i>
5.4. <i>SOFTWARE AND FIRMWARE.....</i>	<i>8</i>
5.5. <i>WORST-CASE CONFIGURATION AND MODE.....</i>	<i>9</i>
5.6. <i>CHANNEL POWER STEPPING INFORMATION.....</i>	<i>10</i>
5.7. <i>DESCRIPTION OF TEST SETUP.....</i>	<i>11</i>
6. TEST AND MEASUREMENT EQUIPMENT	13
7. MEASUREMENT METHODS	15
8. ANTENNA PORT TEST RESULTS	16
8.1. <i>ON TIME AND DUTY CYCLE.....</i>	<i>16</i>
8.2. <i>802.11b MODE IN THE 2.4 GHz BAND.....</i>	<i>19</i>
8.2.1. <i>6 dB BANDWIDTH.....</i>	<i>19</i>
8.2.1. <i>99% BANDWIDTH.....</i>	<i>23</i>
8.2.2. <i>OUTPUT POWER – EXTERNAL ANTENNA</i>	<i>27</i>
8.2.3. <i>OUTPUT POWER – ETCHED PCB ANTENNA</i>	<i>29</i>
8.2.4. <i>POWER SPECTRAL DENSITY</i>	<i>31</i>
8.2.5. <i>OUT-OF-BAND EMISSIONS</i>	<i>35</i>
8.3. <i>802.11g MODE IN THE 2.4 GHz BAND.....</i>	<i>43</i>
8.3.1. <i>6 dB BANDWIDTH.....</i>	<i>43</i>
8.3.2. <i>99% BANDWIDTH.....</i>	<i>47</i>
8.3.3. <i>OUTPUT POWER – EXTERNAL ANTENNA</i>	<i>51</i>
8.3.4. <i>OUTPUT POWER – ETCHED PCB ANTENNA</i>	<i>54</i>

8.3.5.	POWER SPECTRAL DENSITY	57
8.3.6.	OUT-OF-BAND EMISSIONS	61
8.4.	<i>802.11n HT20 MODE IN THE 2.4 GHz BAND</i>	68
8.4.1.	6 dB BANDWIDTH.....	68
8.4.1.	99% BANDWIDTH.....	72
8.4.2.	OUTPUT POWER – EXTERNAL ANTENNA	76
8.4.3.	OUTPUT POWER – ETCHED PCB ANTENNA	79
8.4.4.	POWER SPECTRAL DENSITY	82
8.4.5.	OUT-OF-BAND EMISSIONS	86
8.5.	<i>802.11n HT40 MODE IN THE 2.4 GHz BAND</i>	93
8.5.1.	6 dB BANDWIDTH.....	93
8.5.1.	99% BANDWIDTH.....	97
8.5.2.	OUTPUT POWER – EXTERNAL ANTENNA	101
8.5.3.	OUTPUT POWER – ETCHED PCB ANTENNA	104
8.5.4.	POWER SPECTRAL DENSITY	107
8.5.5.	OUT-OF-BAND EMISSIONS	111
9.	RADIATED TEST RESULTS.....	118
9.1.	<i>LIMITS AND PROCEDURE</i>	118
9.2.	<i>TRANSMITTER ABOVE 1 GHz</i>	119
9.2.1.	TX ABOVE 1 GHz - 802.11b MODE, EXT ANTENNA.....	119
9.2.2.	TX ABOVE 1 GHz - 802.11b MODE, PCB ANT	130
9.2.3.	TX ABOVE 1 GHz - 802.11g MODE, EXT ANTENNA.....	141
9.2.4.	TX ABOVE 1 GHz - 802.11g MODE, PCB ANTENNA	162
9.2.5.	TX ABOVE 1 GHz - 802.11n HT20 MODE, EXT ANTENNA	187
9.2.6.	TX ABOVE 1 GHz - 802.11n HT20 MODE, PCB ANTENNA.....	208
9.2.7.	TX ABOVE 1 GHz - 802.11n HT40 MODE, EXT ANTENNA	233
9.2.8.	TX ABOVE 1 GHz - 802.11n HT40 MODE, PCB ANTENNA.....	258
9.3.	<i>WORST-CASE RADIATED</i>	285
10.	AC POWER LINE CONDUCTED EMISSIONS	291
11.	SETUP PHOTOS	296
	END OF REPORT	305

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Bose Corporation
100 The Mountain
Framingham, MA 01701, USA

EUT DESCRIPTION: Wireless Module

MODEL: 424821

SERIAL NUMBER: Radiated: 0122, 0180; Conducted: 0199

DATE TESTED: 2018-02-22 to 2018-04-06

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Compliant
ISED CANADA RSS-247 Issue 2	Compliant
ISED CANADA RSS-GEN Issue 4	Compliant

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL LLC based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

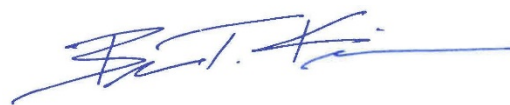
Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

Approved & Released
For UL LLC By:



Jeffrey Moser
Operations Leader
UL – Consumer Technology Division

Prepared By:



Brian T. Kiewra
Project Engineer
UL – Consumer Technology Division

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2013, KDB558074 D01 v04, KDB662911D01 v02r01, RSS-GEN Issue 4, RSS-247 Issue 2.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 12 Laboratory Dr., Research Triangle Park, NC 27709, USA and 2800 Perimeter Park Drive, Suite B, Morrisville, NC 27560.

12 Laboratory Dr., RTP, NC 27709
<input type="checkbox"/> Chamber A
<input type="checkbox"/> Chamber C

2800 Perimeter Park Dr., Suite B, Morrisville, NC 27560
<input checked="" type="checkbox"/> Chamber NORTH
<input type="checkbox"/> Chamber SOUTH

The onsite chambers (A, C, North and South) are covered under Industry Canada company address code 2180C with site numbers 2180C -1 through 2180C-4, respectively.

UL LLC is accredited by NVLAP, Laboratory Code 200246-0. The full scope of accreditation can be viewed at <https://www.nist.gov/nvlap>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY	REQUIRED BY STANDARD
Occupied Channel Bandwidth	2.00%	±5 %
RF output power, conducted	1.3 dB	±1,5 dB
Power Spectral Density, conducted	2.47 dB	±3 dB
Unwanted Emissions, conducted	2.94 dB	±3 dB
All emissions, radiated	5.36 dB	±6 dB
Temperature	2.26 °C	±3 °C
Supply voltages	2.40%	±3 %
Time	3.39%	±5 %

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a wireless module with 802.11a/b/g/n/ac, BT, and BLE capabilities.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2462	802.11b	22.50	177.83
2412 - 2462	802.11g	20.21	104.95
2412 - 2462	802.11n HT20	20.77	119.40
2422 - 2452	802.11n HT40	17.70	58.88

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The module was tested with two different types external antennas; flexible and PCB trace antennas.

Etched PCB Antennas		
Frequency (MHz)	Antenna Gain Antenna 1 (dBi)	Antenna Gain Antenna 2 (dBi)
2.4GHz	3.34	1.61
5GHz	1.52	2.28

External Antennas			
Frequency (MHz)	Antenna Gain (dBi)	Cable Loss (dB)	Net gain (dBi)
2.4GHz	2.403	1.06	1.343
5GHz	3.994	1.83	2.164

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was PCS2.
 The EUT driver software installed during testing was 2.1.2.9.
 The test utility software used during testing was QRCT3 V6.1.29QPST.

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emissions in range of 1-18GHz, EUT was set to transmit at low, a middle, and high channels. Radiated emissions <1GHz, >18GHz and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power and PSD as worst-case scenario.

EUT was populated with headphones and monitor to maximize emissions.

MIMO and SISO power the same; therefore, MIMO testing covers SISO. Likewise, EUT was tested in CDD mode to cover SDM.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y, and Z using both external and etched PCB antenna configurations. It was determined that X orientation was worst-case orientation for PCB antenna configuration and Y orientation was worst-case orientation for external antenna configuration. Therefore, all final radiated testing was performed with the EUT in X orientation for PCB antennas and Y orientation for external antennas.

Bandedge testing was done at both highest and lowest data rate per mode:

802.11b mode: 1Mbps and 11Mbps
802.11g mode: 6Mbps and 54Mbps
802.11nHT20: MCS0 and MCS7
802.11nHT40: MCS0 and MCS7

All other testing done, based on the baseline scan, at worst-case data rates of:

802.11b mode: 1 Mbps
802.11g mode: 6 Mbps
802.11n HT20mode: MCS0
802.11n HT40mode: MCS0

Simultaneous transmission of BT/2.4GHz and BT/5GHz was investigated. Device was found to still be compliant.

5.6. CHANNEL POWER STEPPING INFORMATION

Model 424821 was set for different power setting configurations, depending on modulation, data rate and antenna configuration. Please refer to the below table for more information:

Mode	Antenna	Data Rate	Channel Stepping
802.11b	External and PCB Etch	All	All
802.11g	External	6 Mbps	1-10
			11
		54Mbps	1
			2
			3-9
			10
	PCB Etched	6 Mbps	11
			1
		54 Mbps	2-10
			11
			1
			2
			3-8
			9
10			
11			
802.11n HT20	External	MCS0	1
			2-10
			11
		MCS7	1
			2-9
			10
	PCB Etched	MCS0	11
			1
			2
			3-9
		MCS7	10
			11
			1
			2
802.11n HT40	External	MCS0	3
			4
			5
			6-9
		MCS7	3
			4
			5
			6-7
	PCB Etched	MCS0	8-9
			3-4
			5
		MCS7	6-8
			9
			3
			4-7
			8-9

5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Lenovo	T440	PC041B0G	NA
Monitor	ViewSonic	VS15562	TVT171081663	N/A
AC/DC Adaptor	Bose	S024RU1700100	344666-0020	N/A

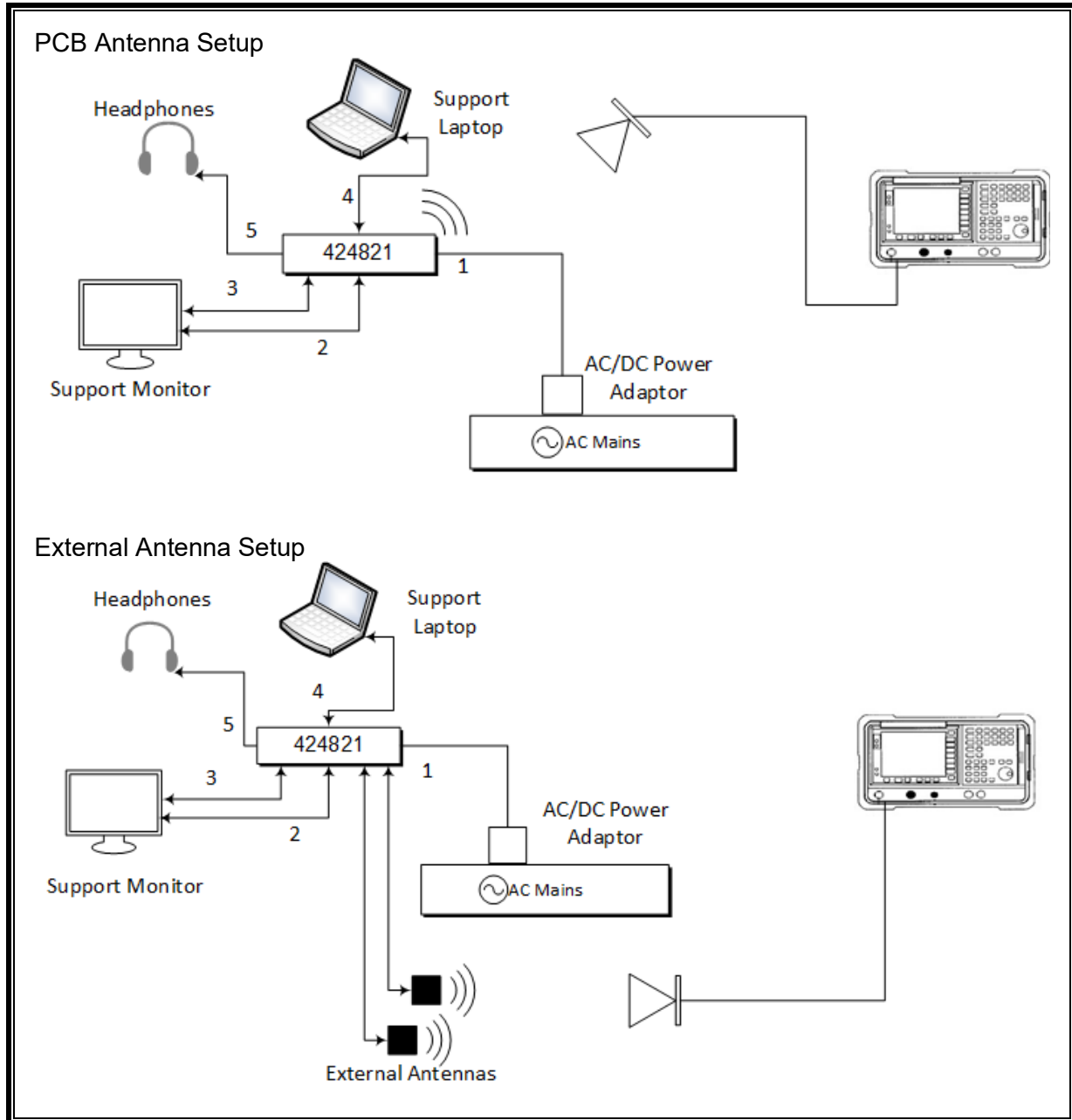
I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC	1	AC/ DC Adaptor	DC Mains	<3m	None
2	HDMI	1	HDMI	HDMI	<3m	Connects to monitor
3	Audio	2	3.5mm plug	Audio	<3m	Connects to monitor
4	USB	1	USB	USB	<3m	Connects to Laptop
5	Audio	2	3.5mm plug	Audio	<3m	Connects to headphones

TEST SETUP

EUT installed as a standalone device.

SETUP DIAGRAM FOR TESTS



Note: Conducted setups were the same, with the exception of the spectrum analyzer being connected directly to the antenna port.

6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Note: All test performed within equipment calibration intervals. Unless test date occurred between calibration intervals, in which case both calibrations intervals were included.

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville - North Chamber)

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
0.009-30MHz (Loop Ant.)					
AT0059	Active Loop Antenna	ETS-Lindgren	6502	2017-06-05	2018-06-05
30-1000 MHz					
AT0073	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2017-07-18	2018-07-31
1-18 GHz					
AT0072	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2017-04-05	2018-04-05
AT0067	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2018-03-26	2019-03-26
18-40 GHz					
AT0076	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2017-10-10	2018-10-10
AT0077	Horn Antenna, 26-40GHz	ARA	MWH-2640/B	2017-10-10	2018-10-10
Gain-Loss Chains					
N-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2017-09-15	2018-09-15
N-SAC02	Gain-loss string: 30-1000MHz	Various	Various	2017-06-11	2018-06-11
N-SAC03	Gain-loss string: 1-18GHz	Various	Various	2017-08-18	2018-08-18
N-SAC04	Gain-loss string: 18-40GHz	Various	Various	2017-03-03	2018-03-03
N-SAC04	Gain-loss string: 18-40GHz	Various	Various	2018-04-03	2019-04-03
Receiver & Software					
SA0027	Spectrum Analyzer	Agilent	N9030A	2017-03-16	2018-03-16
SA0027	Spectrum Analyzer	Agilent	N9030A	2018-04-04	2019-04-04
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
Additional Equipment used					
s/n 161024690	Environmental Meter	Fisher Scientific	15-077-963	2016-12-21	2018-12-21

Test Equipment Used - Wireless Conducted Measurement Equipment

Note: All conducted testing completed between 2018-02-22 and 2018-03-19.

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
Conducted Room 2					
T177	Spectrum Analyzer	Agilent Technologies	E4446A	2017-03-30	2018-03-30
SA0020	Spectrum Analyzer	Agilent Technologies	E4446A	2017-04-25	2018-04-25
PWM001	RF Power Meter	Keysight Technologies	N1911A	2017-05-23	2018-05-23
PWS006	Peak and Avg Power Sensor, 50MHz to 6GHz	Keysight Technologies	E9323A	2017-07-18	2018-07-18
PWS001	Peak and Avg Power Sensor, 50MHz to 18GHz	Keysight Technologies	N1921A	2017-12-18	2018-12-18
PWM004	RF Power Meter	Keysight Technologies	N1911A	2017-07-17	2018-07-17
PWS004	Peak and Avg Power Sensor, 50MHz to 6GHz	Keysight Technologies	E9323A	2017-07-17	2018-07-17
76023 (EC0225)	Temp/Humid Chamber	Cincinnati Sub-Zero	ZPH-8-3.5-SCT/AC	2017-06-06	2018-06-06
SN 161016511	Environmental Meter	Fisher Scientific	15-077-963	2016-12-21	2018-12-21

Test Equipment Used - Line-Conducted Emissions – Voltage (Morrisville – Conducted 1)

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
CBL076	Coax cable, RG223, N-male to BNC-male, 20-ft.	Pasternack	PE3476-240	2017-06-12	2018-06-12
s/n 160938893	Environmental Meter	Fisher Scientific	14-650-118	2016-11-02	2018-11-02
LISN003	LISN, 50-ohm/50-uH, 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50-25-2-01-550V	2017-08-22	2018-08-22
PRE0101521 (75141)	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2017-08-23	2018-08-23
TL001	Transient Limiter, 0.009-30MHz	Com-Power	LIT-930A	2017-06-12	2018-06-12
PS215	AC Power Source	Elgar	CW2501M (s/n 1523A02397)	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
Miscellaneous (if needed)					
MM0168	Multi-meter	Agilent	U1232A	2017-09-25	2018-09-30
CDECABLE001	ANSI C63.4 1m extension cable.	UL	Per Annex B of ANSI C63.4	2017-07-03	2018-07-03
LISN008	LISN, 50-ohm/50-uH, 2-conductor, 25A (For support gear only.)	Solar Electronics	8012-50-R-24-BNC	2017-08-22	2018-08-22

7. MEASUREMENT METHODS

On Time and Duty Cycle: KDB 558074 D01 v04, Section 6.0

6 dB BW: KDB 558074 D01 v04 Section 8.5

99% Occupied Bandwidth: ANSI C63.10-2013, Section 6.9.3

Output Power: KDB 558074 D01 v04, Section 9.2.3.2.

Power Spectral Density: KDB 558074 D01 v04, Section 10.2.

Out-of-band emissions in non-restricted bands: KDB 558074 D01 v04, Section 11.0.

Out-of-band emissions in restricted bands: KDB 558074 D01 v04, Section 12.1.

General Radiated Emissions: ANSI C63.10:2013 Sections 6.3 – 6.6

AC Mains Line Conducted Emissions: ANSI C63.10:2013 Sections 6.2

8. ANTENNA PORT TEST RESULTS

8.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
2.4GHz Band					
802.11b	2.032	2.179	0.933	93.25%	0.30
802.11g	0.131	0.257	0.512	51.21%	2.91
802.11n HT20	0.140	0.310	0.451	45.12%	3.46
802.11n HT40	0.124	0.230	0.538	53.78%	2.69

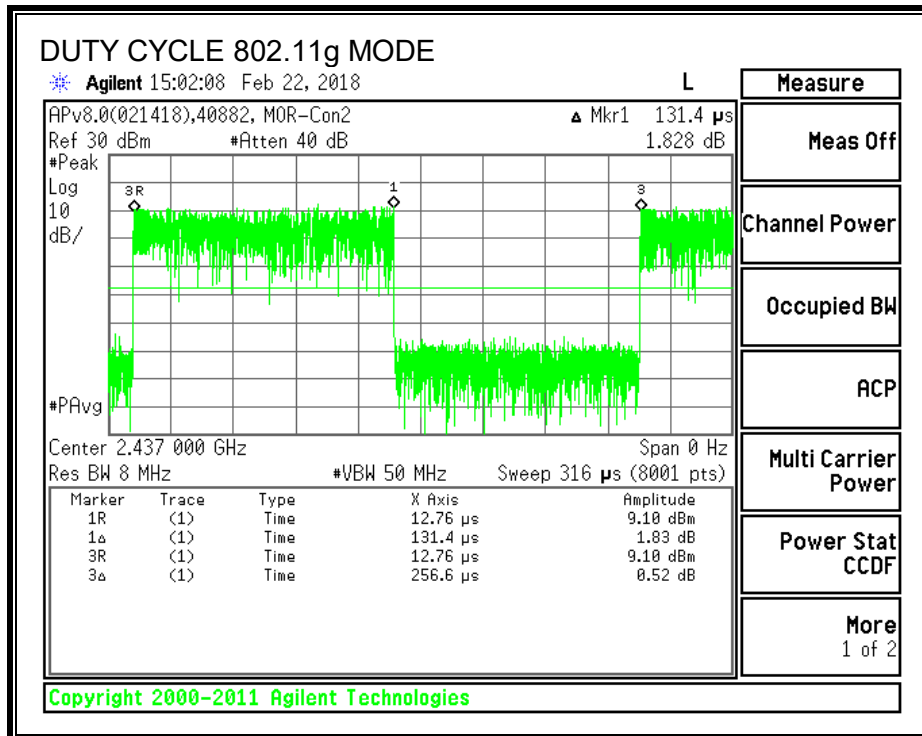
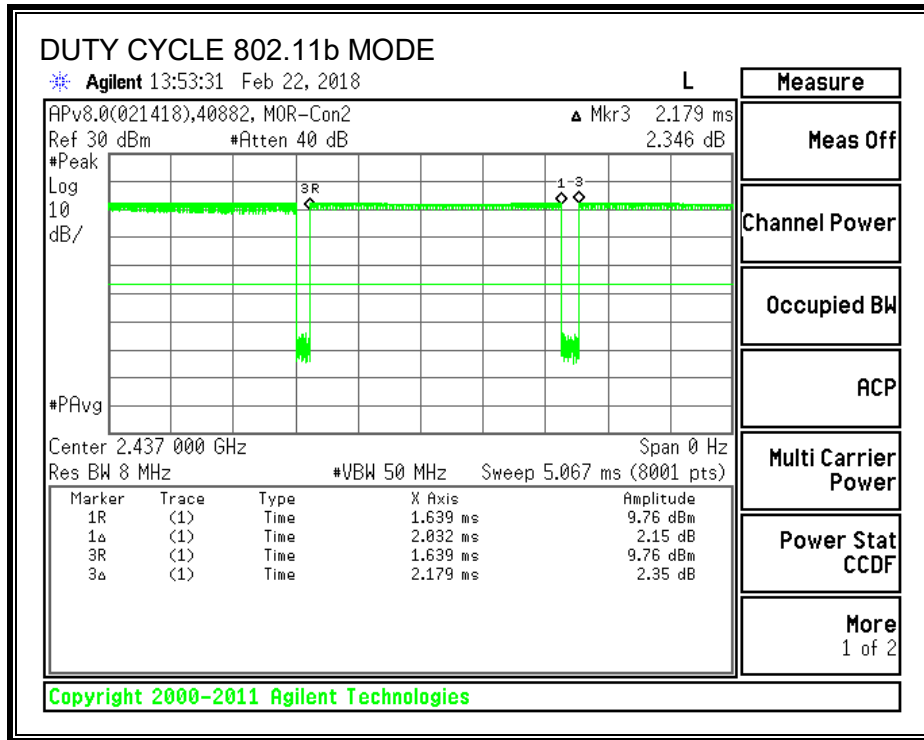
TEST INFORMATION

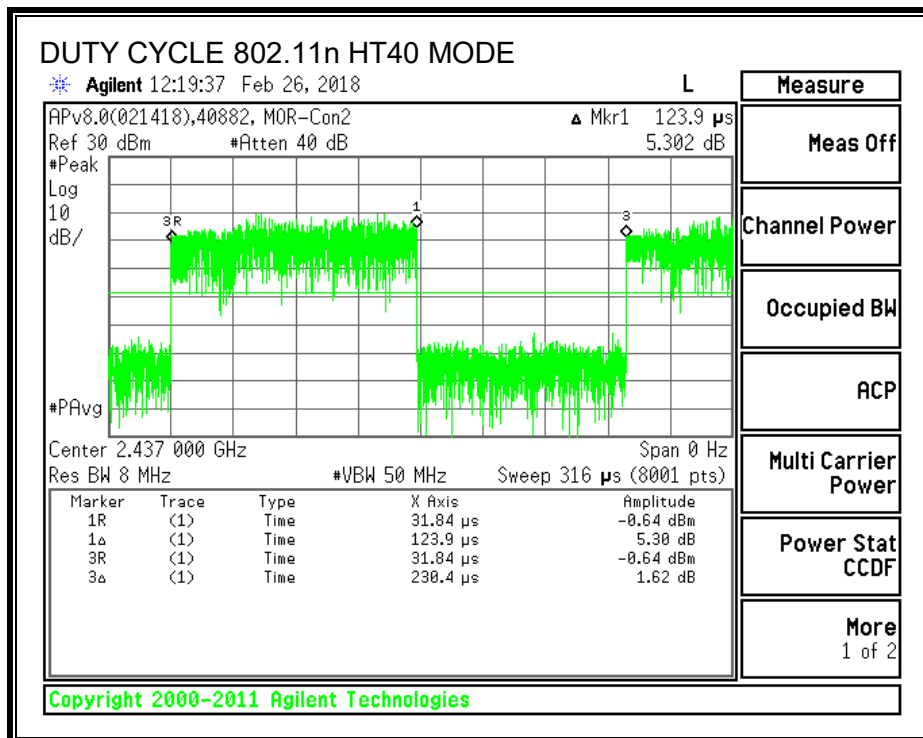
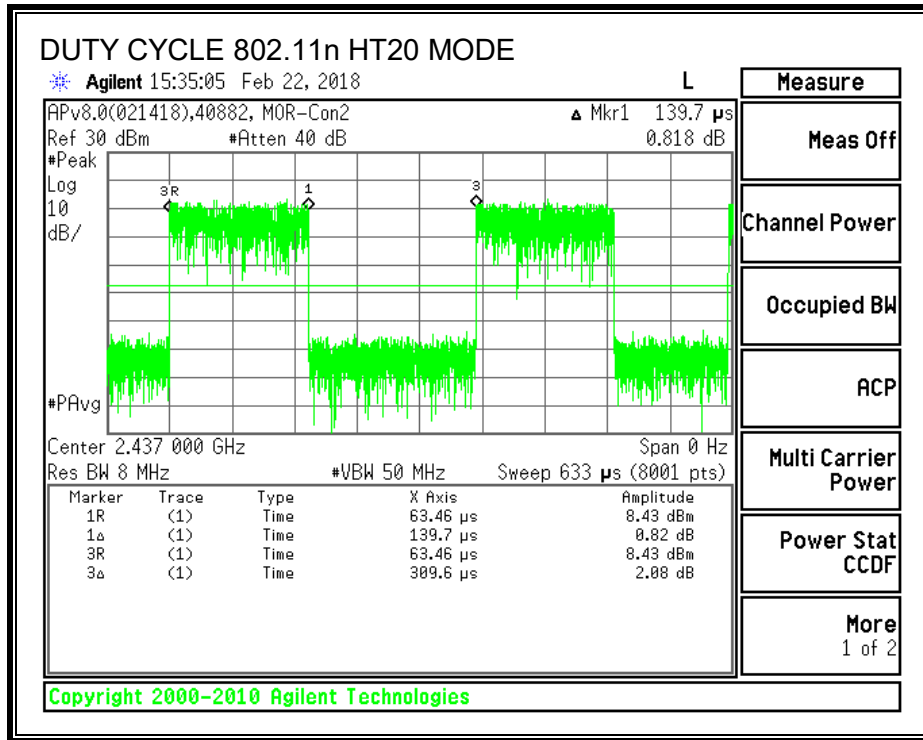
Test Date: 2018-02-22 and 2018-02-26

Project: 12053557

Tested By: Jeffrey Cabrera

DUTY CYCLE PLOTS





8.2. 802.11b MODE IN THE 2.4 GHz BAND

8.2.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

ISED RSS-247 5.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low	2412	7.560	8.080	0.5
Mid	2437	7.600	8.040	0.5
High	2462	8.080	8.040	0.5

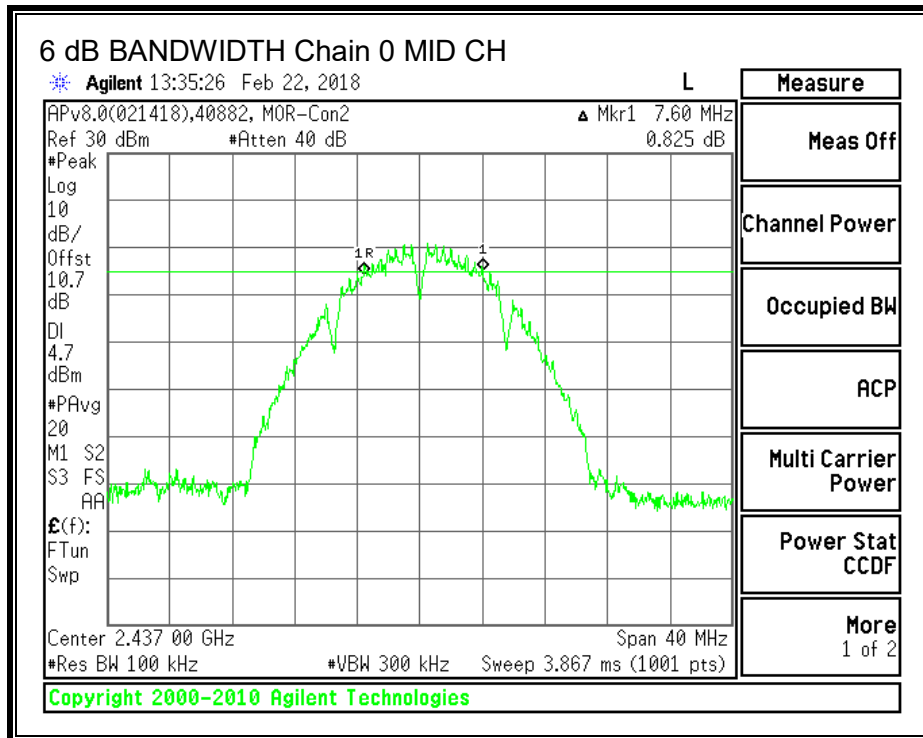
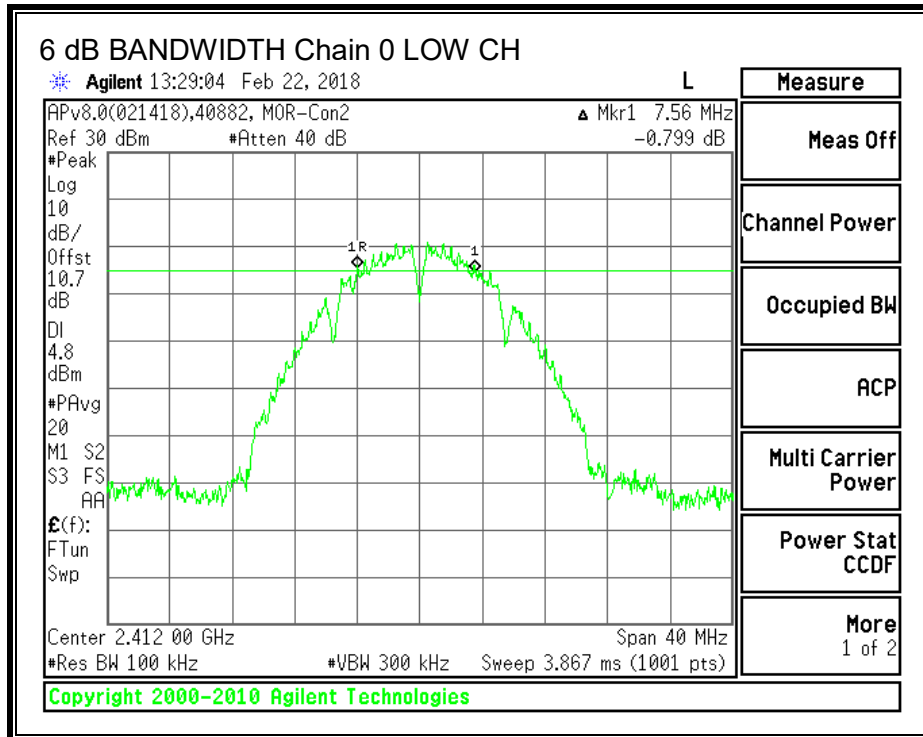
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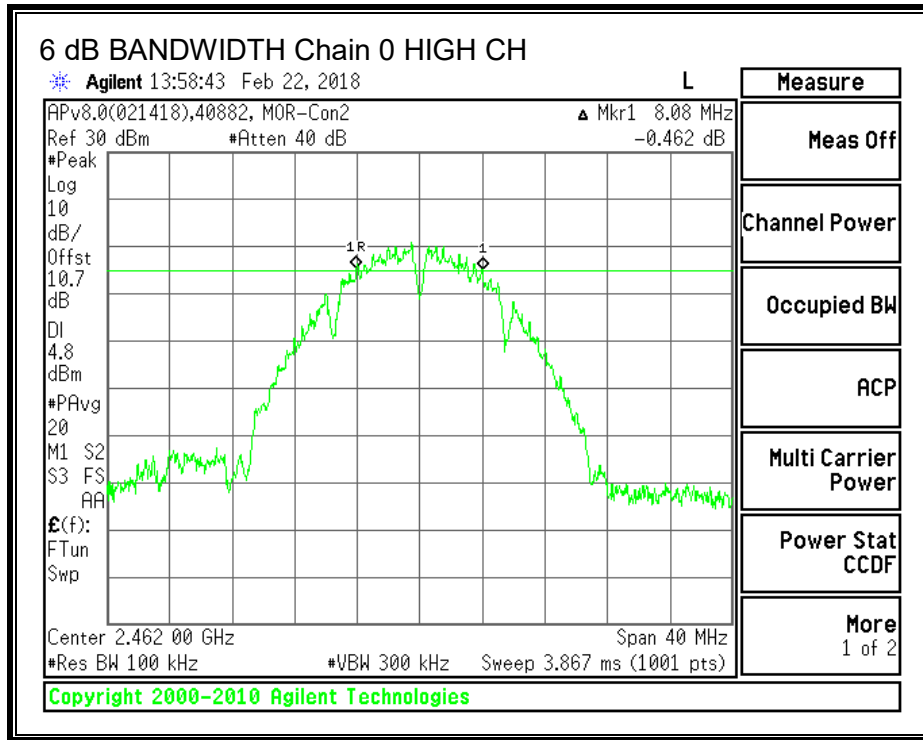
Test Date: 2018-02-22

Project: 12053557

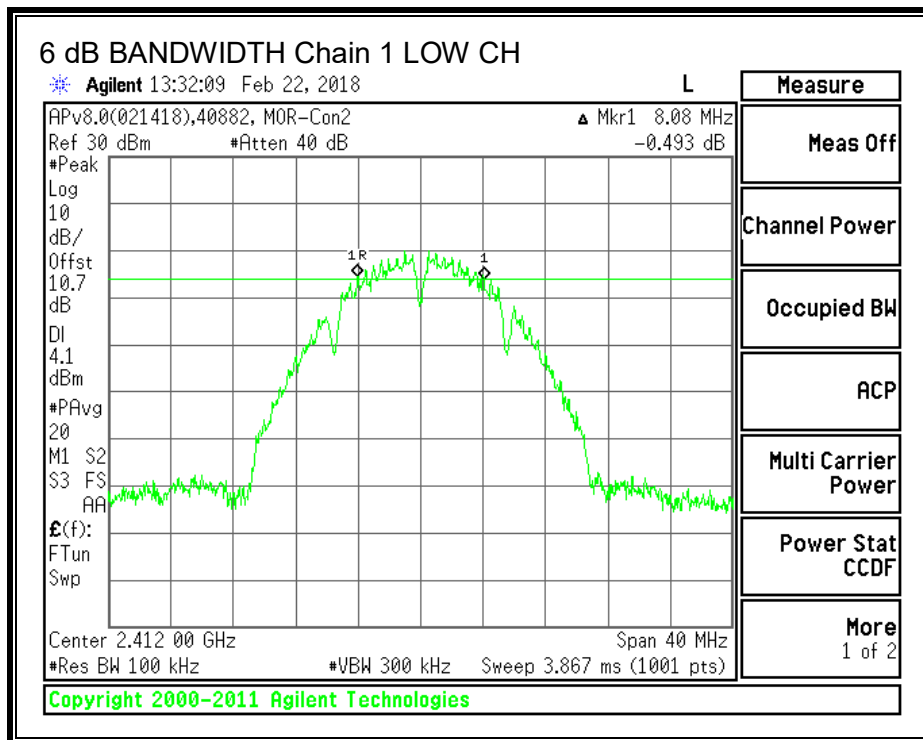
Tested By: Jeffrey Cabrera

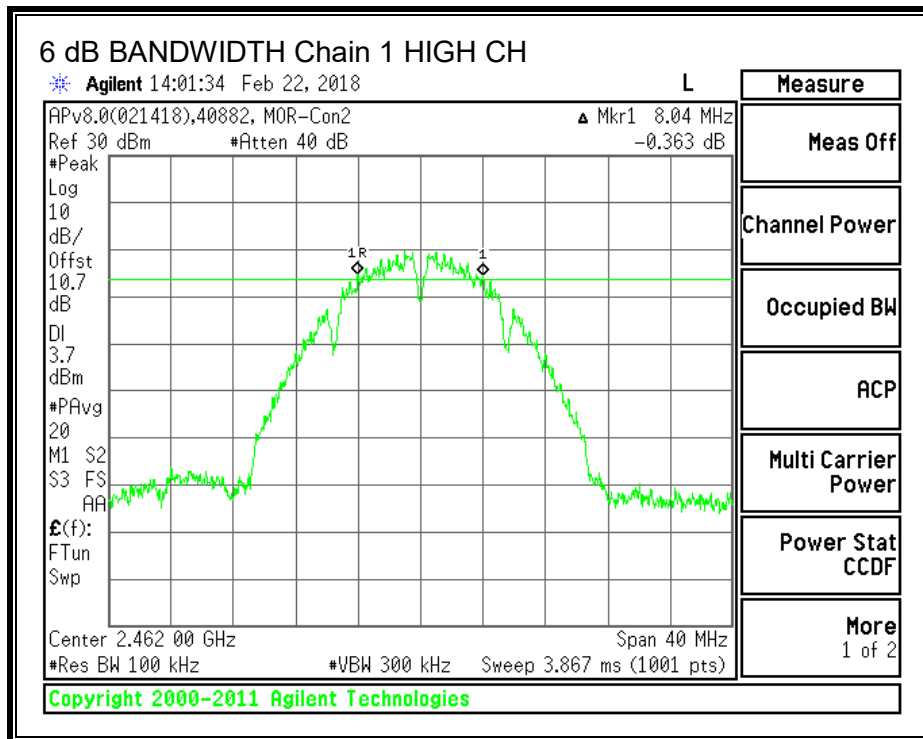
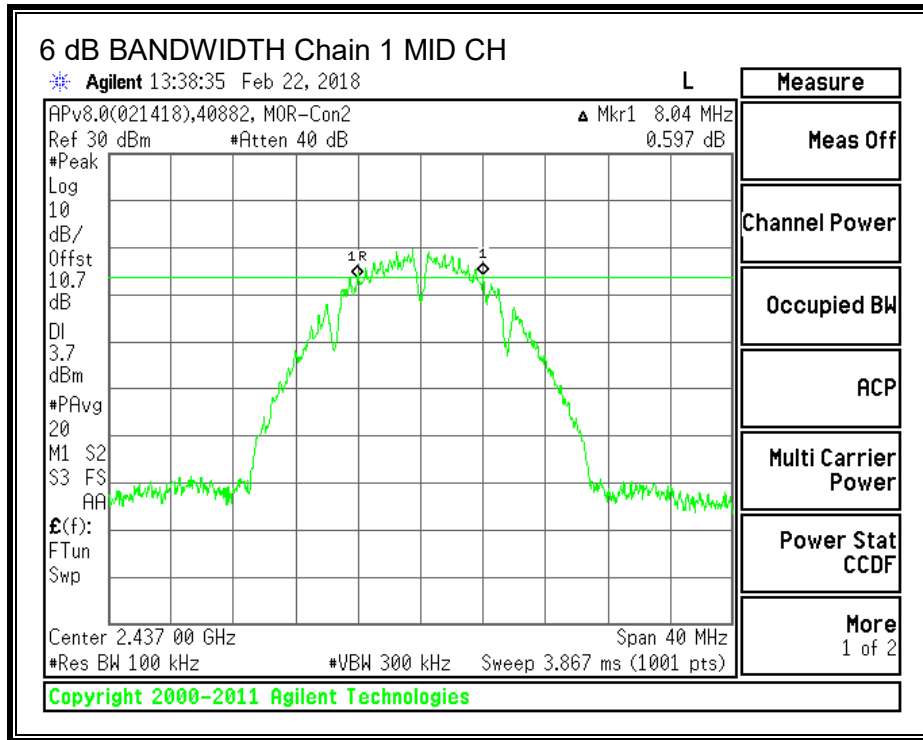
6 dB BANDWIDTH, Chain 0





6 dB BANDWIDTH, Chain 1





8.2.1. 99% BANDWIDTH LIMITS

None; for reporting purposes only.

TEST PROCEDURE

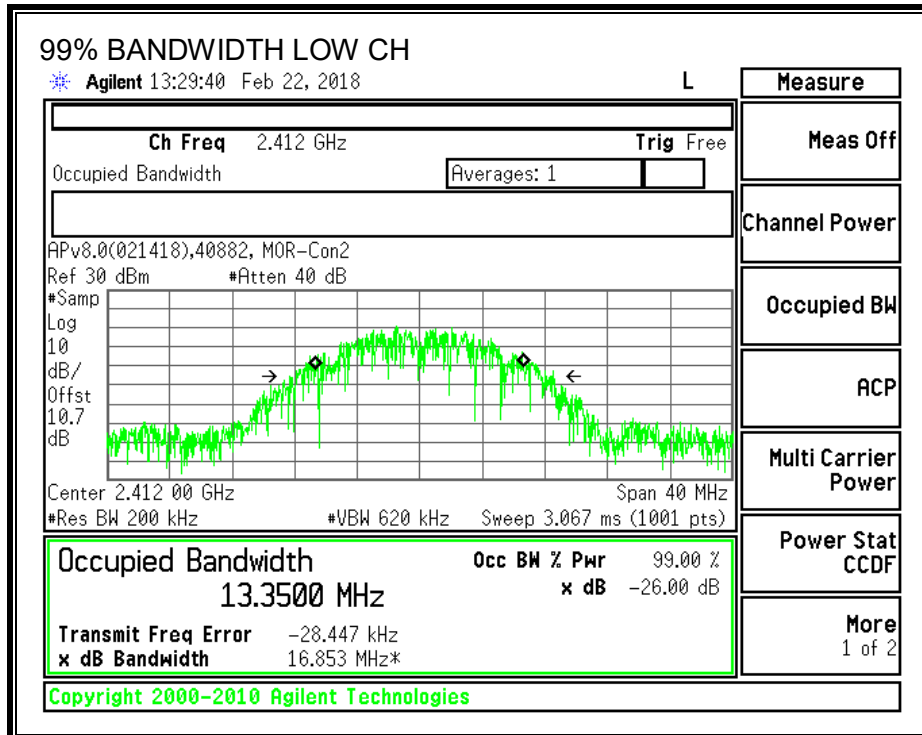
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 5% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

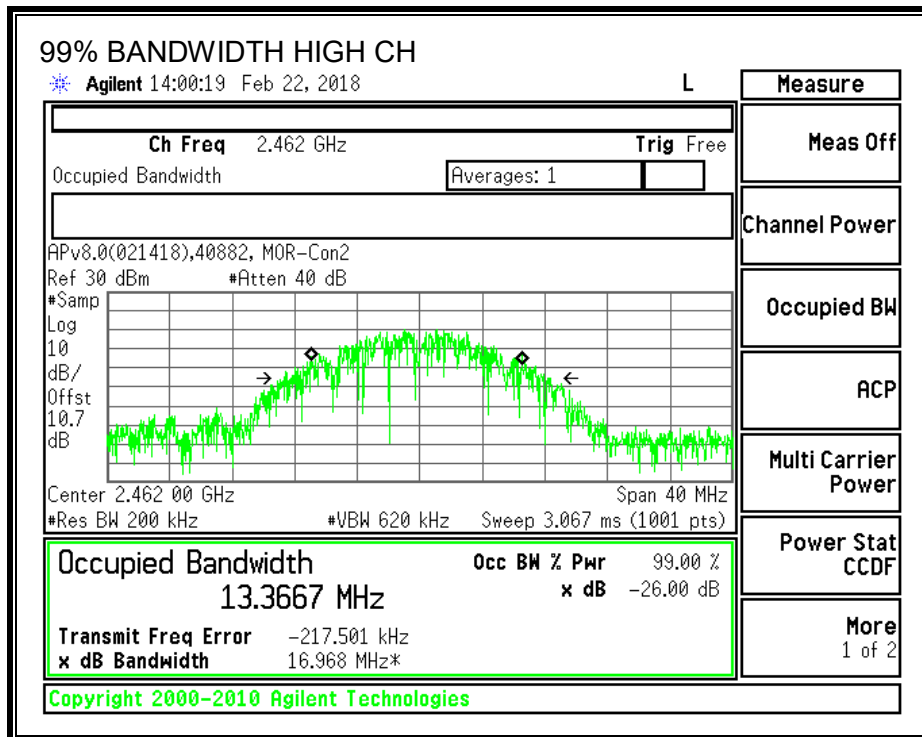
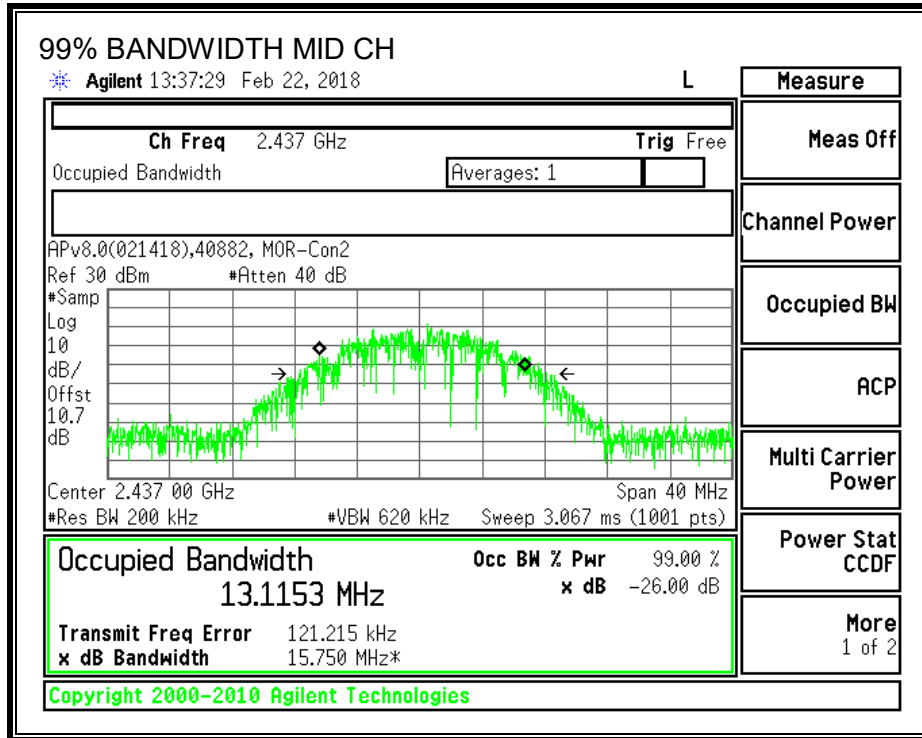
Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Low	2412	13.350	13.121
Middle	2437	13.115	13.067
High	2462	13.367	13.084

TEST INFORMATION

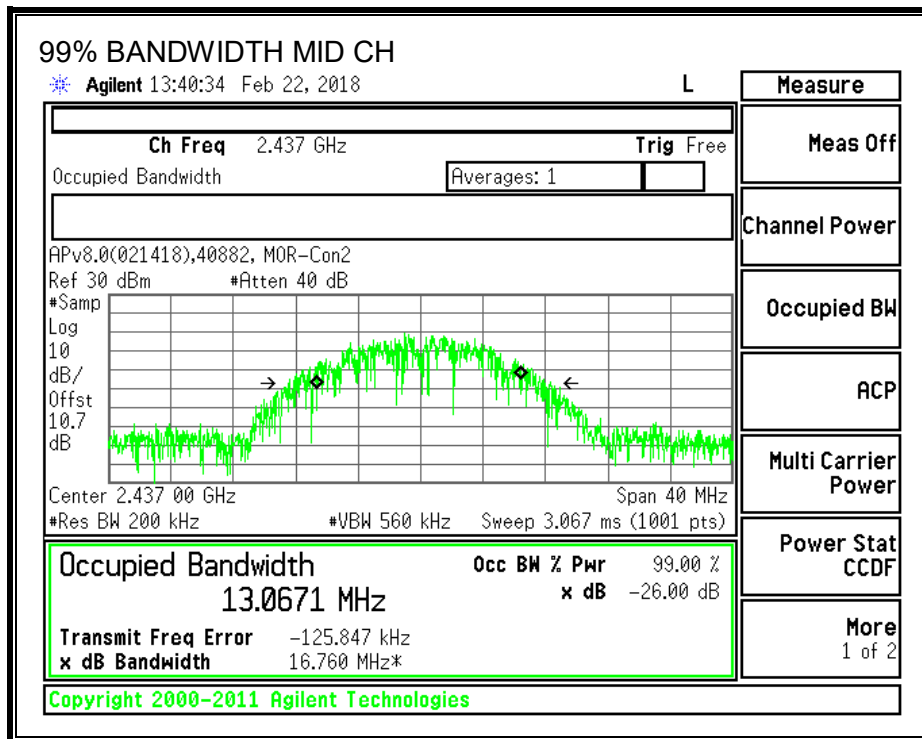
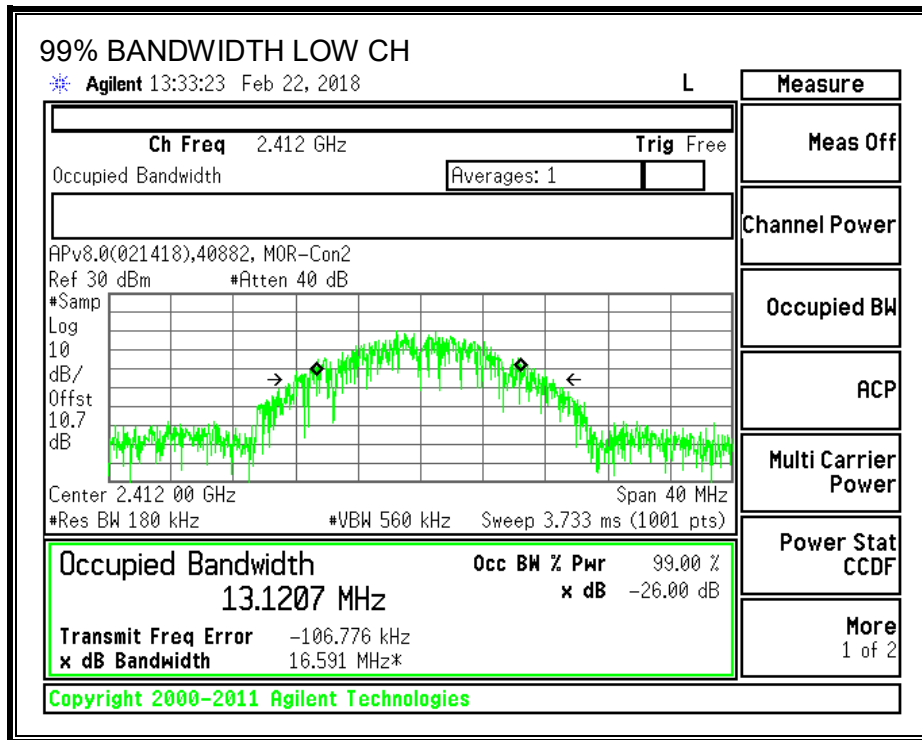
Test Date: 2018-02-22
 Project: 12053557
 Tested By: Jeffrey Cabrera

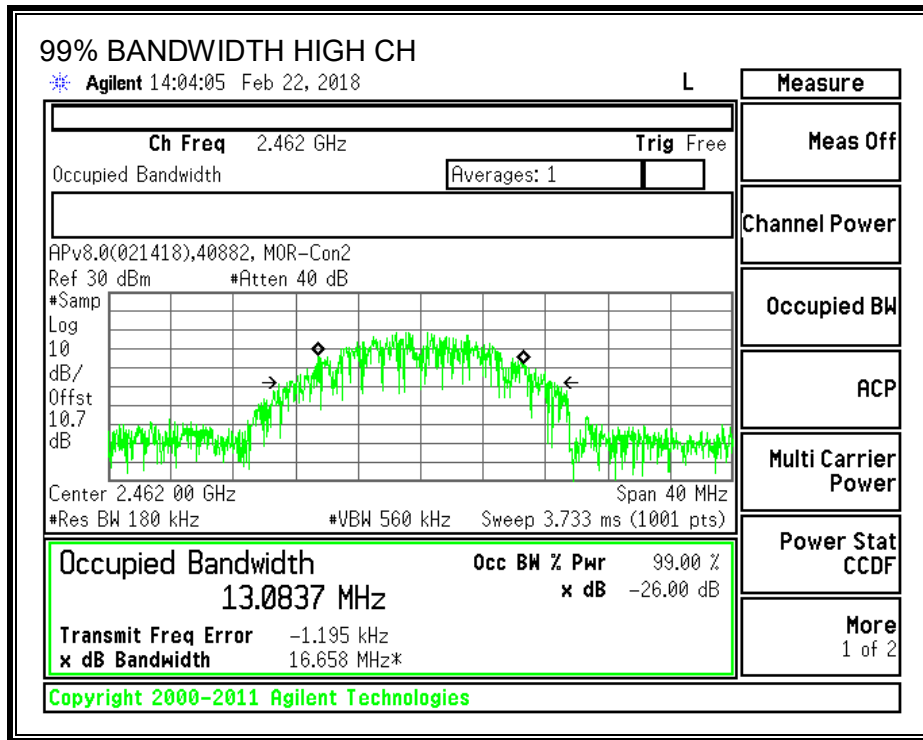
99% BANDWIDTH – Chain 0





99% BANDWIDTH – Chain 1





8.2.2. OUTPUT POWER – EXTERNAL ANTENNA

LIMITS

FCC §15.247 (b)(3)

ISED RSS-247 Clauses 5.4 (d)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Directional Gain (dBi)
1.34	1.34	1.34

TEST INFORMATION

Test Date: 2018-02-22 and 2018-03-19

Project: 12053557

Tested By: Eric McCalister

RESULTS 1 Mbps

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	1.34	30.00	30	36	30.00
Mid	2437	1.34	30.00	30	36	30.00
High	2462	1.34	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	19.08	19.86	22.50	30.00	-7.50
Mid	2437	18.76	19.69	22.26	30.00	-7.74
High	2462	18.88	19.71	22.33	30.00	-7.67

Note: Measurements are gated AVG.

RESULTS 11 Mbps

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	1.34	30.00	30	36	30.00
Mid	2437	1.34	30.00	30	36	30.00
High	2462	1.34	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
Low	2412	18.70	17.99	21.37	30.00	-8.63
Mid	2437	18.23	17.76	21.01	30.00	-8.99
High	2462	18.48	17.97	21.24	30.00	-8.76

Note: Measurements are gated AVG.

8.2.3. OUTPUT POWER – ETCHED PCB ANTENNA

LIMITS

FCC §15.247 (b)(3)

ISED RSS-247 Clauses 5.4 (d)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Directional Gain (dBi)
3.34	1.61	2.56

TEST INFORMATION

Test Date: 2018-02-22 and 2018-03-19

Project: 12053557

Tested By: Eric McCalister

RESULTS 1 Mbps

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	2.56	30.00	30	36	30.00
Mid	2437	2.56	30.00	30	36	30.00
High	2462	2.56	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
Low	2412	19.08	19.86	22.50	30.00	-7.50
Mid	2437	18.76	19.69	22.26	30.00	-7.74
High	2462	18.88	19.71	22.33	30.00	-7.67

Note: Measurements are gated AVG.

RESULTS 11 Mbps

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	2.56	30.00	30	36	30.00
Mid	2437	2.56	30.00	30	36	30.00
High	2462	2.56	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
Low	2412	18.70	17.99	21.37	30.00	-8.63
Mid	2437	18.23	17.76	21.01	30.00	-8.99
High	2462	18.48	17.97	21.24	30.00	-8.76

Note: Measurements are gated AVG.

8.2.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

ISED RSS-247 5.2 (b)

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

RESULTS

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Chain 1 Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-2.82	-4.84	-0.70	8.0	-8.7
Mid	2437	-3.51	-4.64	-1.03	8.0	-9.0
High	2462	-3.44	-4.75	-1.03	8.0	-9.0

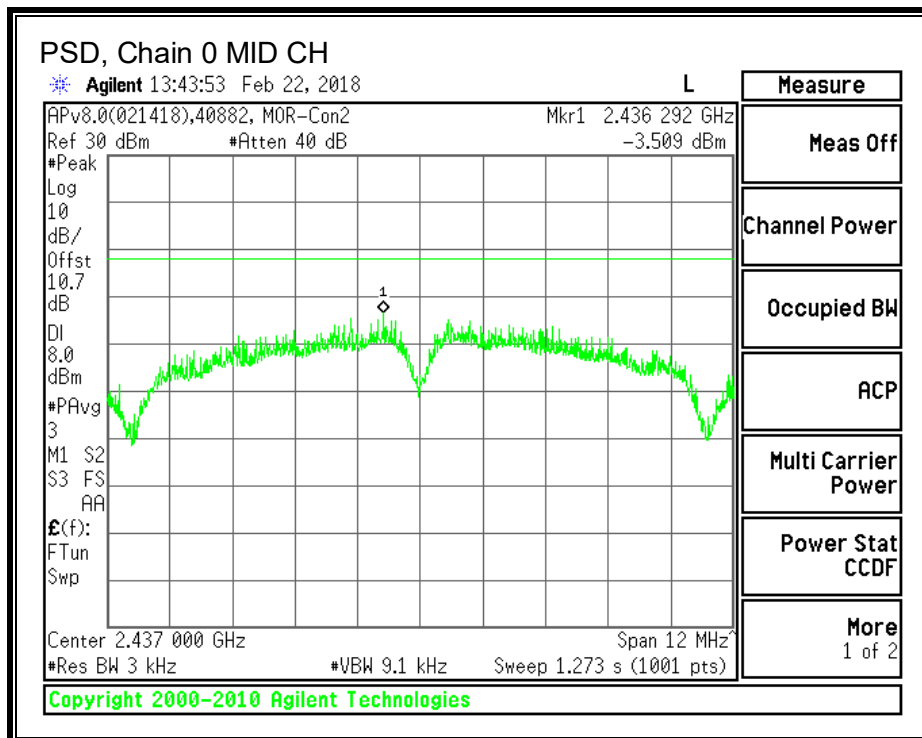
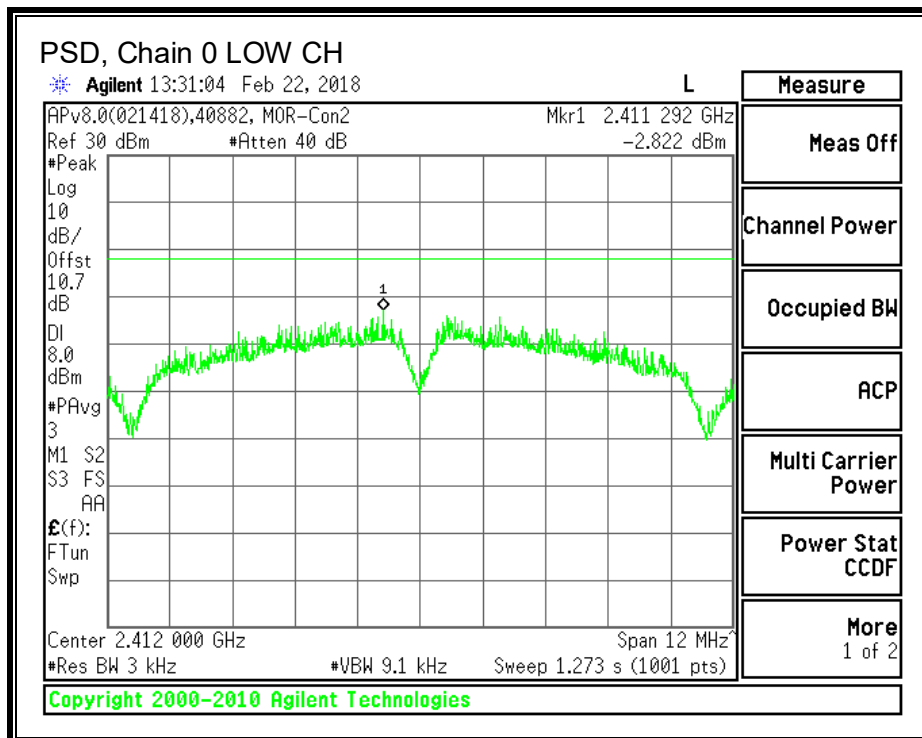
TEST INFORMATION

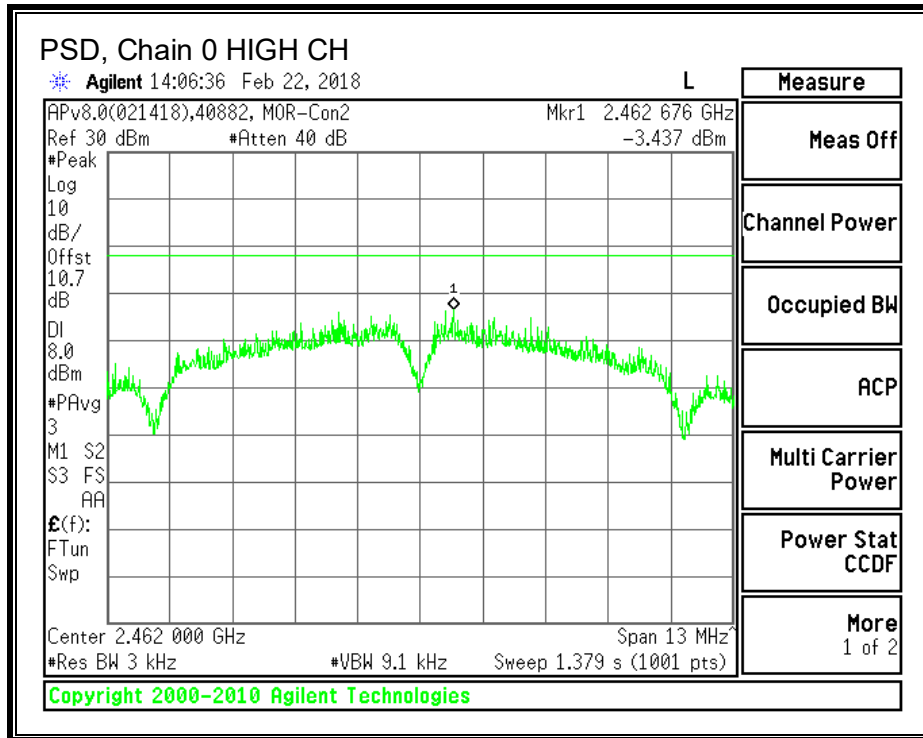
Test Date: 2018-02-22

Project: 12053557

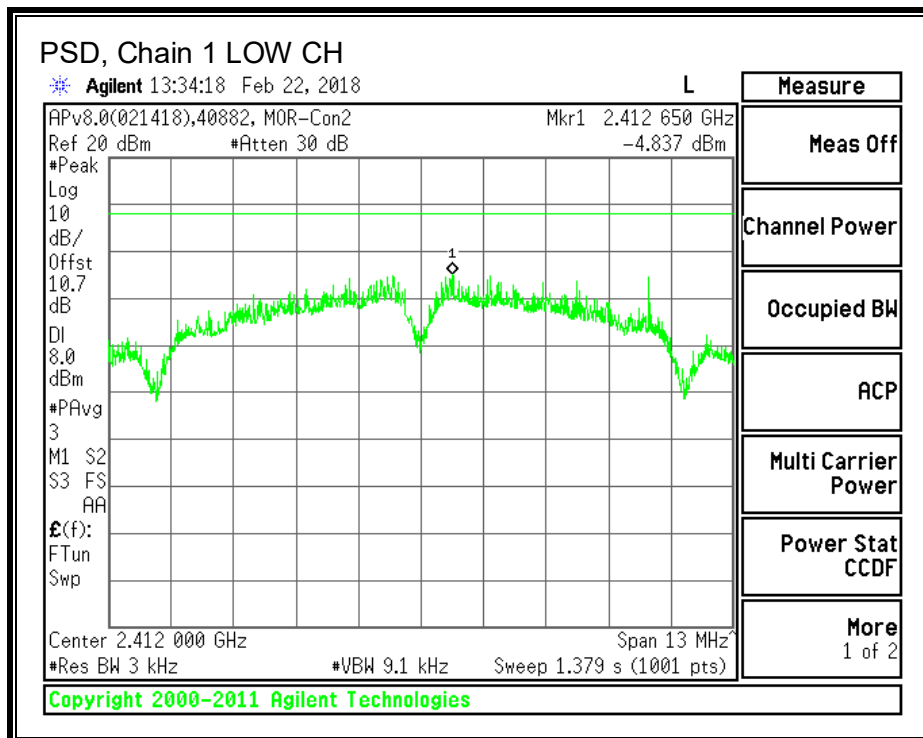
Tested By: Jeffrey Cabrera

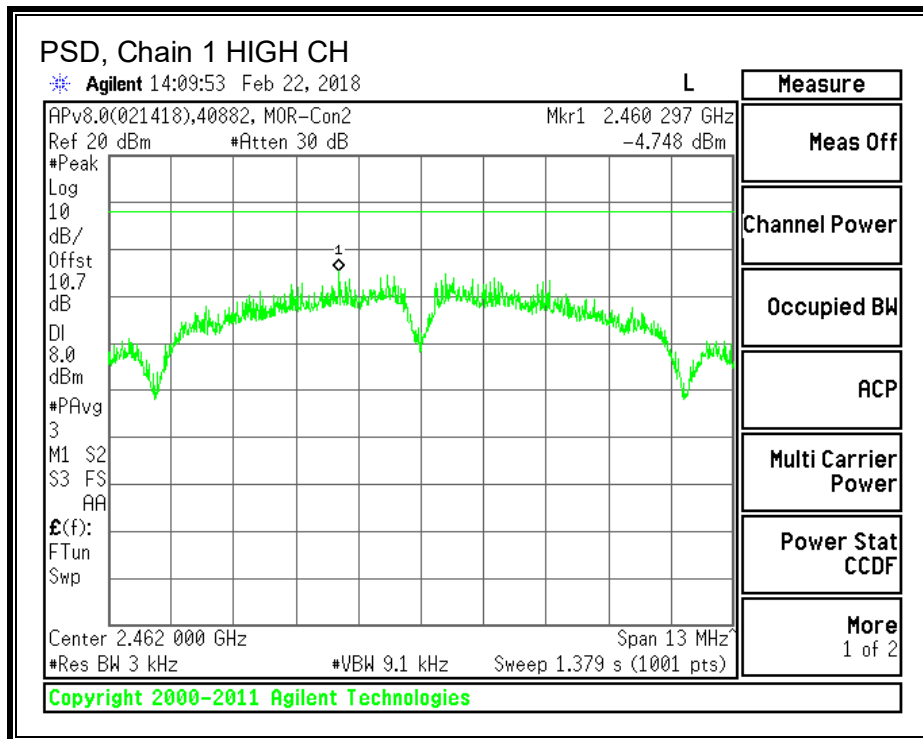
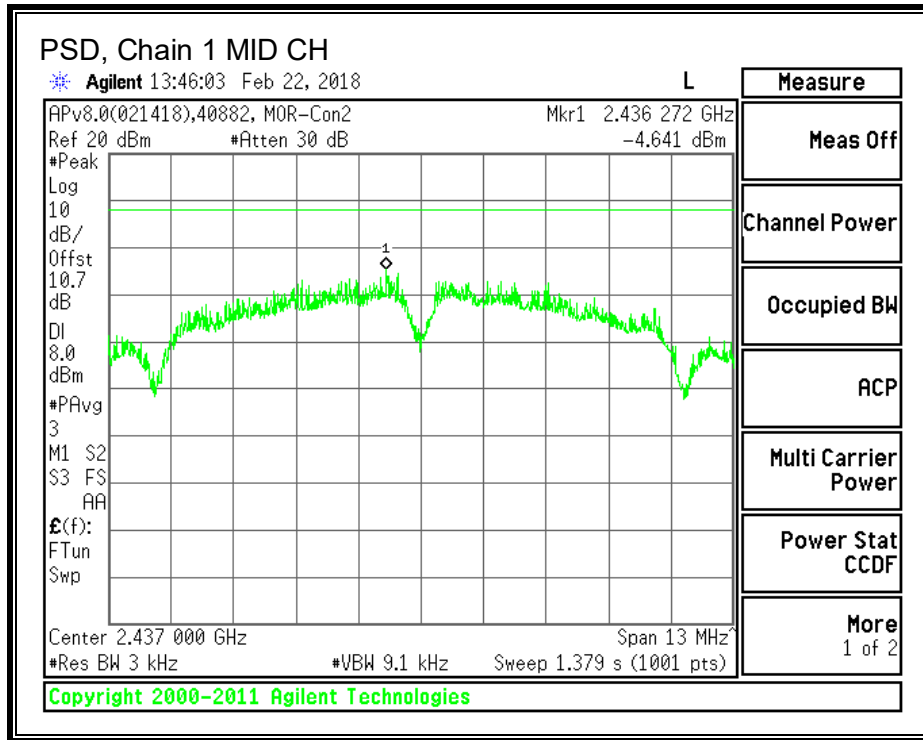
PSD, Chain 0





PSD, Chain 1





8.2.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

ISED RSS-247 Clause 5.5

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

TEST INFORMATION

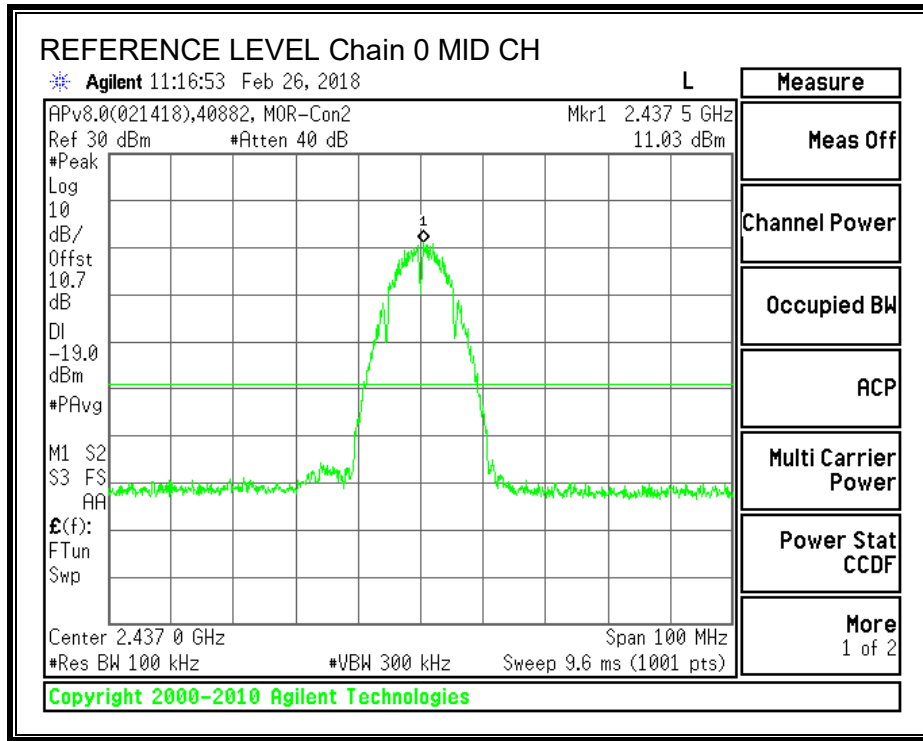
Test Date: 2018-02-26

Project: 12053557

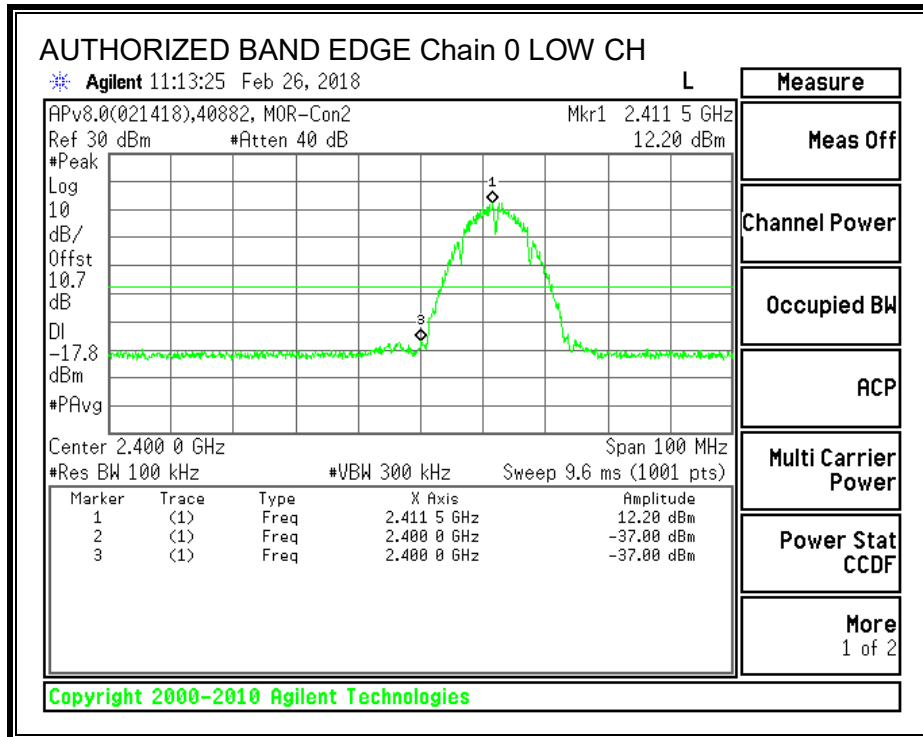
Tested By: Jeffrey Cabrera

RESULTS

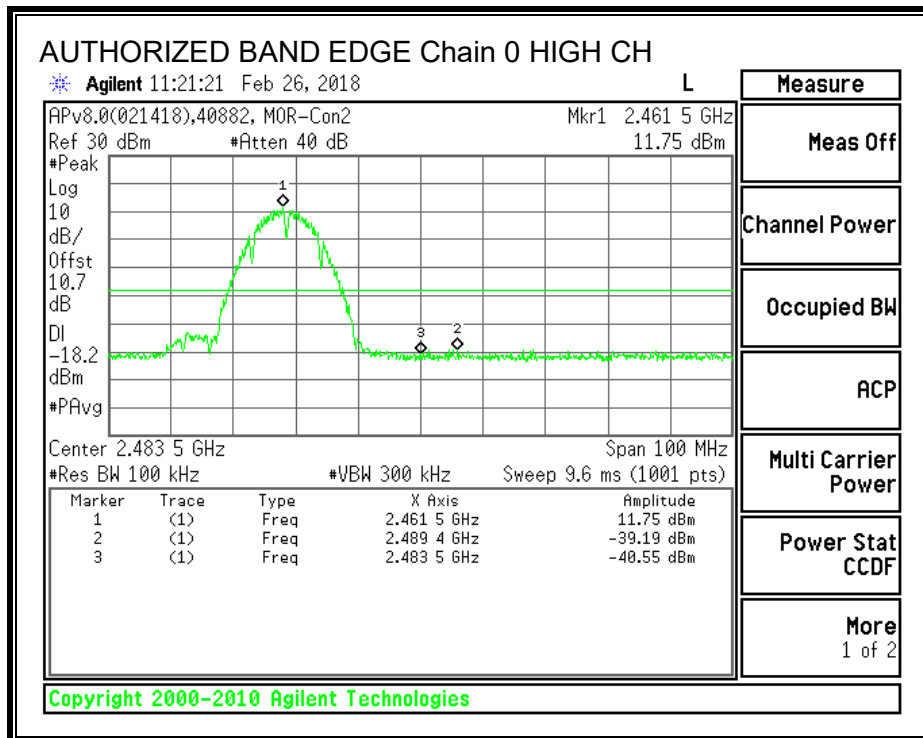
IN-BAND REFERENCE LEVEL, Chain 0



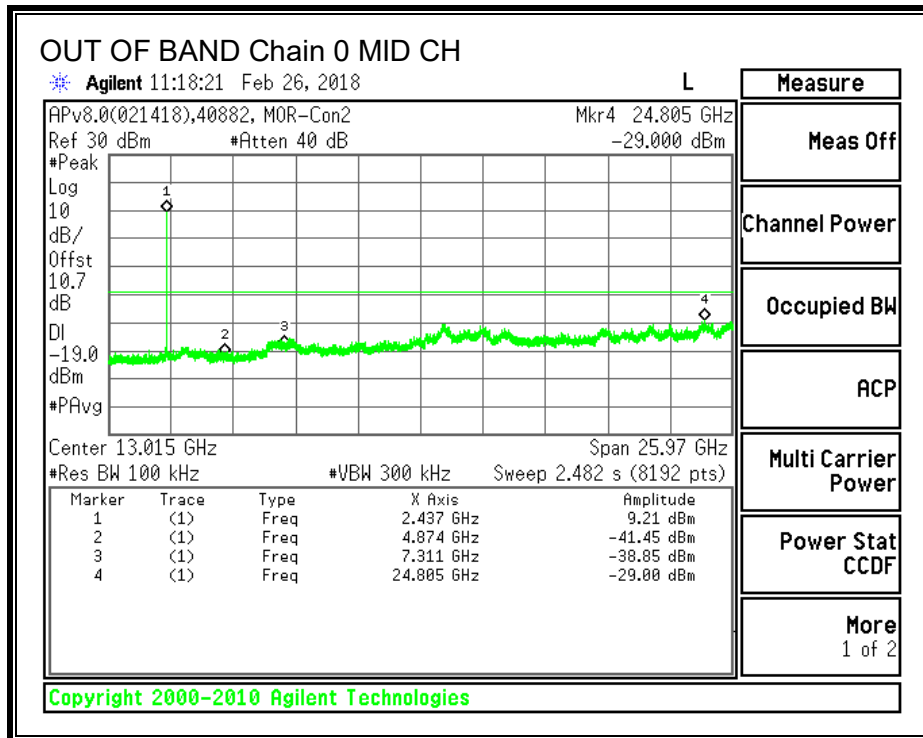
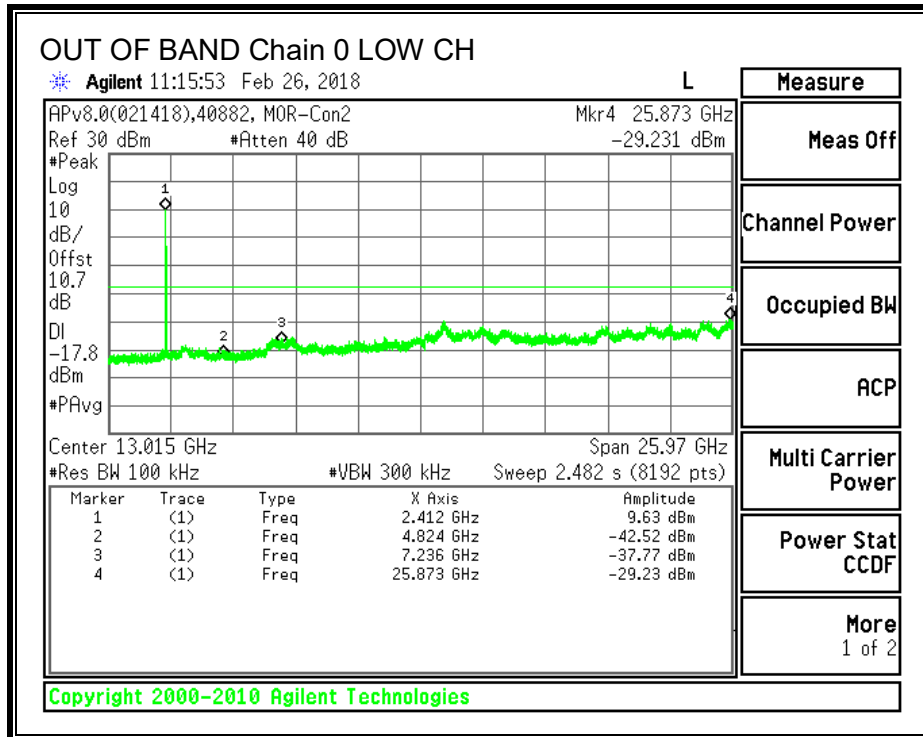
LOW CHANNEL BANDEDGE, Chain 0

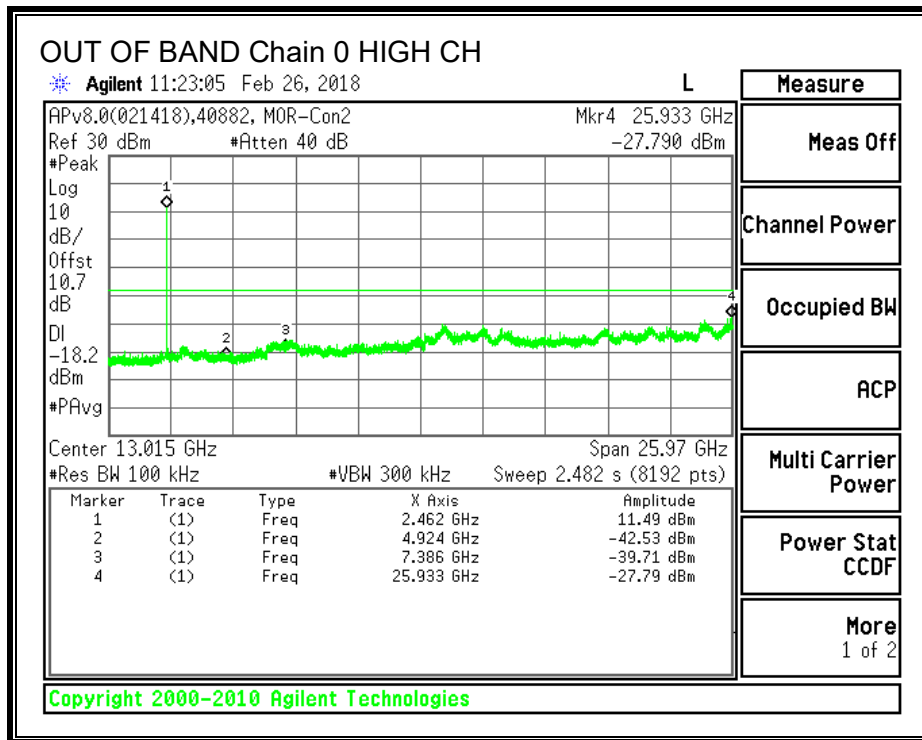


HIGH CHANNEL BANDEDGE, Chain 0

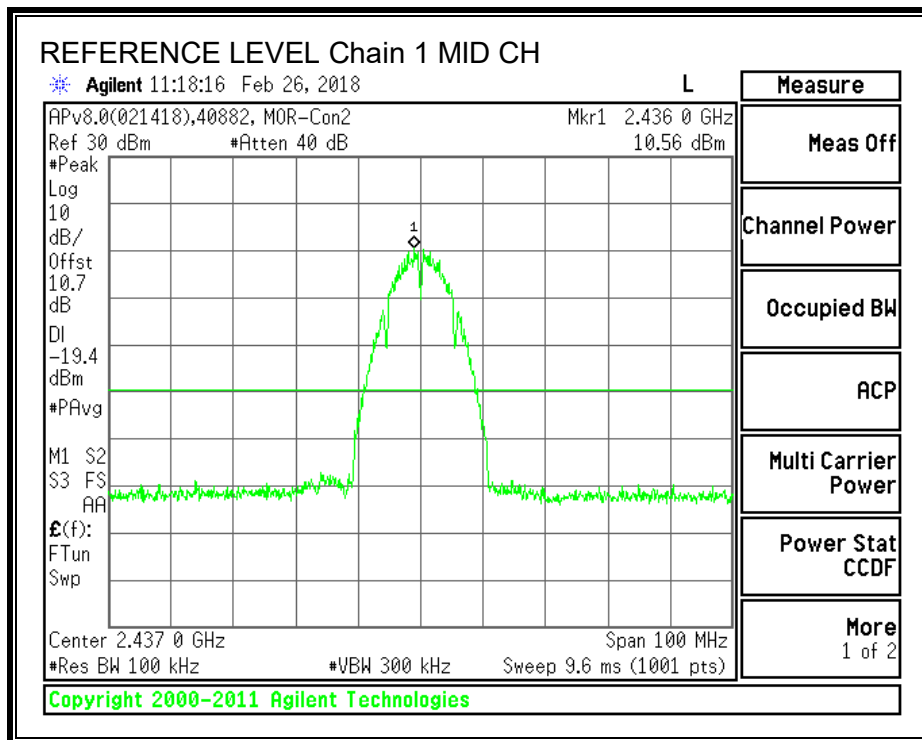


OUT-OF-BAND EMISSIONS, Chain 0

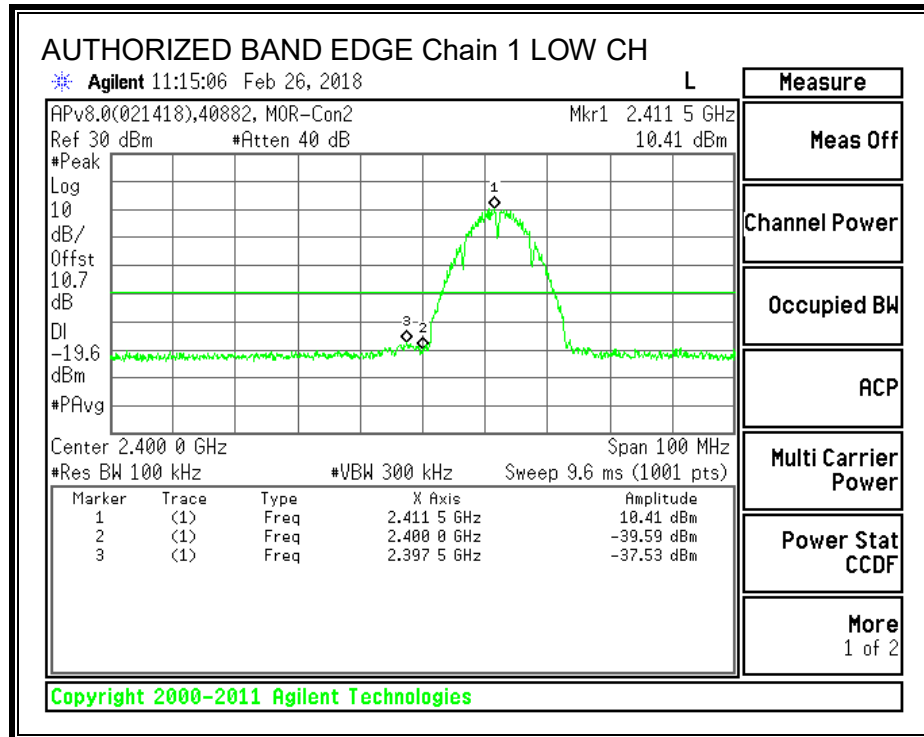




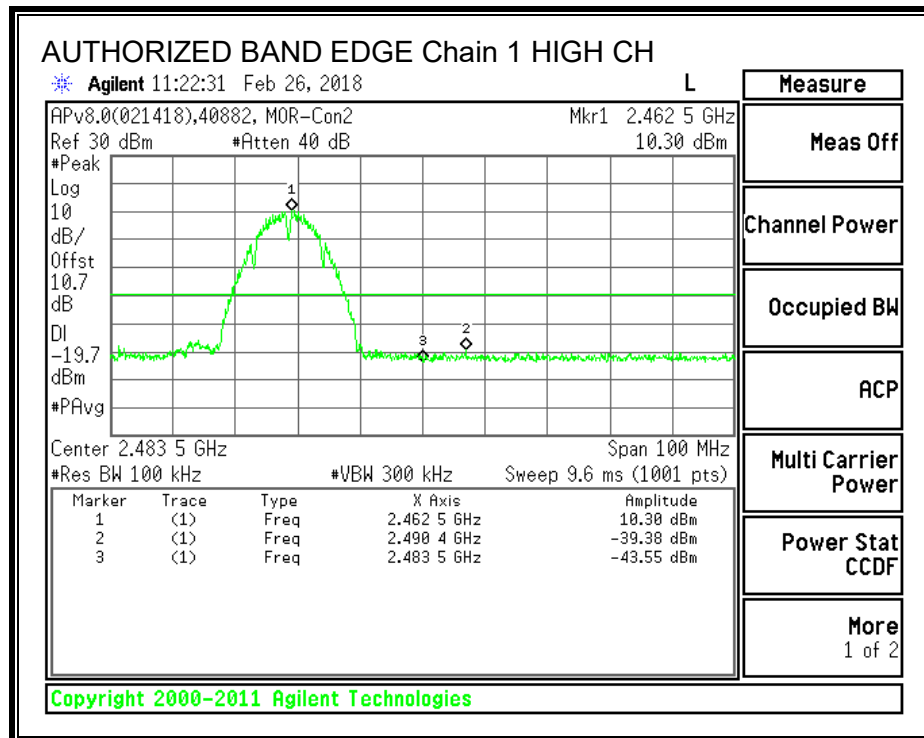
IN-BAND REFERENCE LEVEL, Chain 1

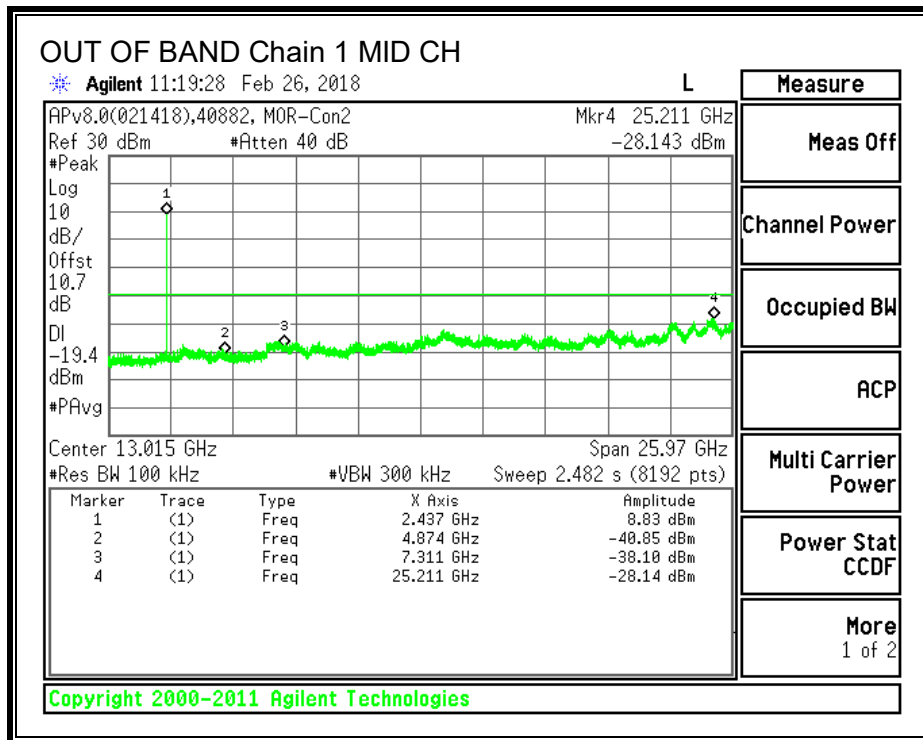
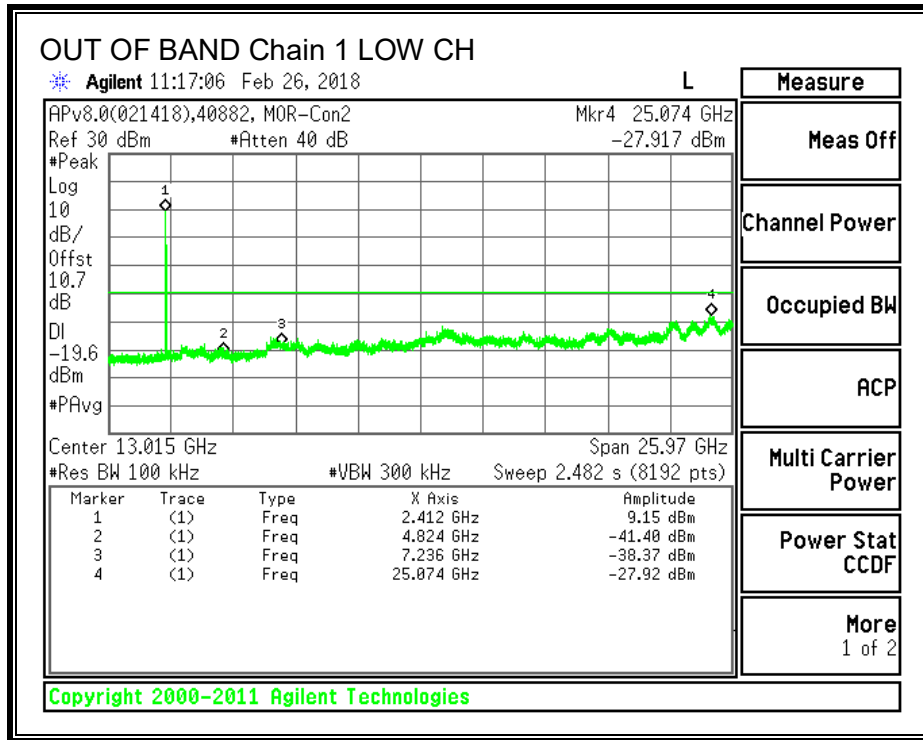


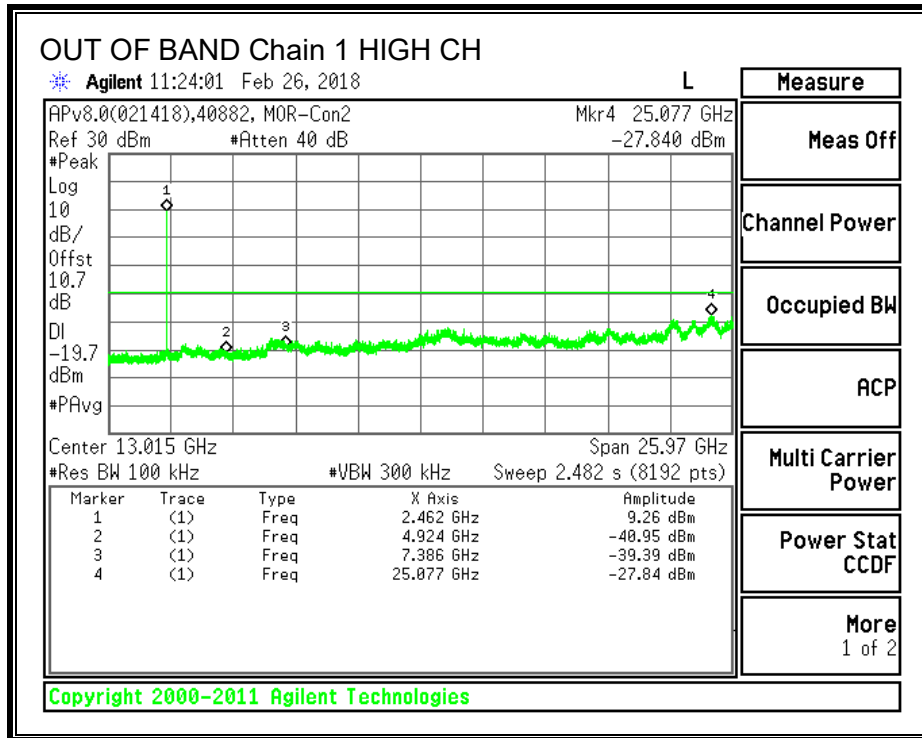
LOW CHANNEL BANDEDGE, Chain 1



HIGH CHANNEL BANDEDGE, Chain 1







8.3.802.11g MODE IN THE 2.4 GHz BAND

8.3.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

ISED RSS-247 5.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low	2412	15.240	15.360	0.5
Mid	2437	15.200	16.040	0.5
High	2462	15.760	15.360	0.5

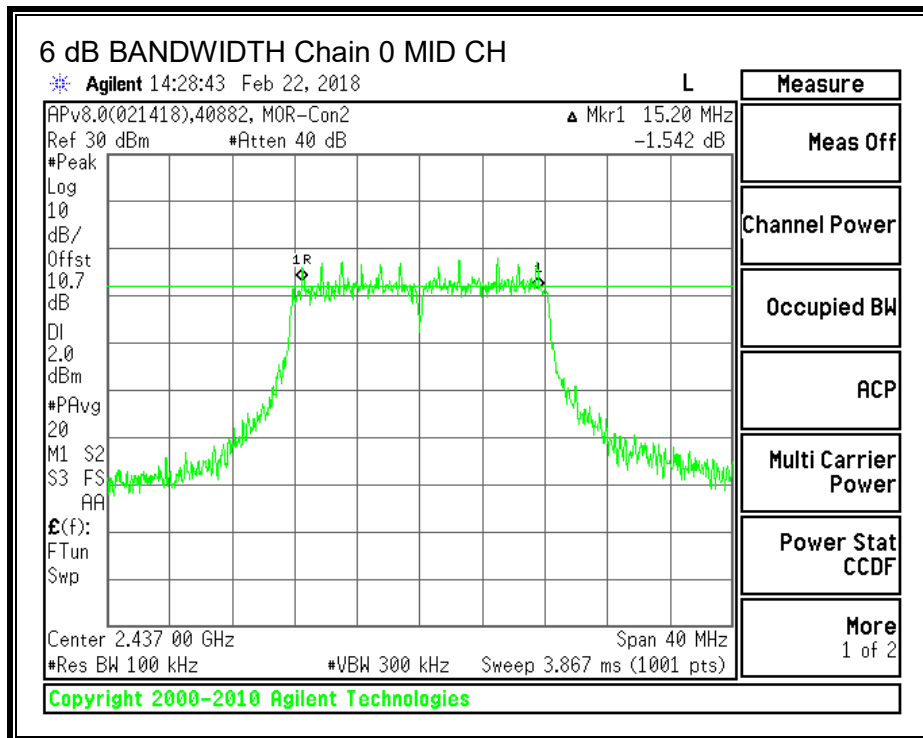
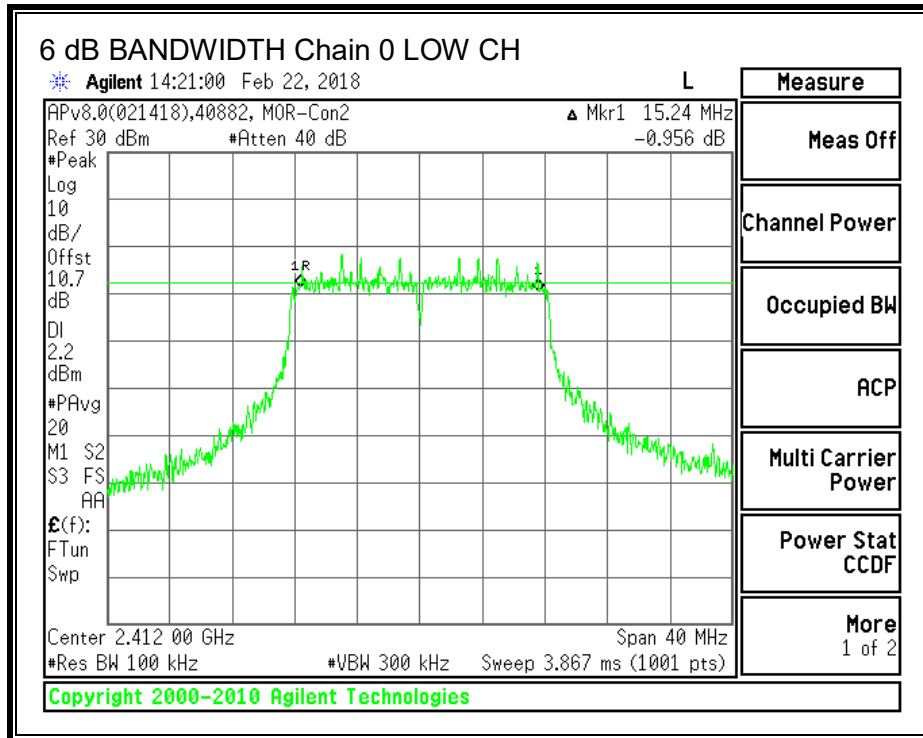
TEST INFORMATION

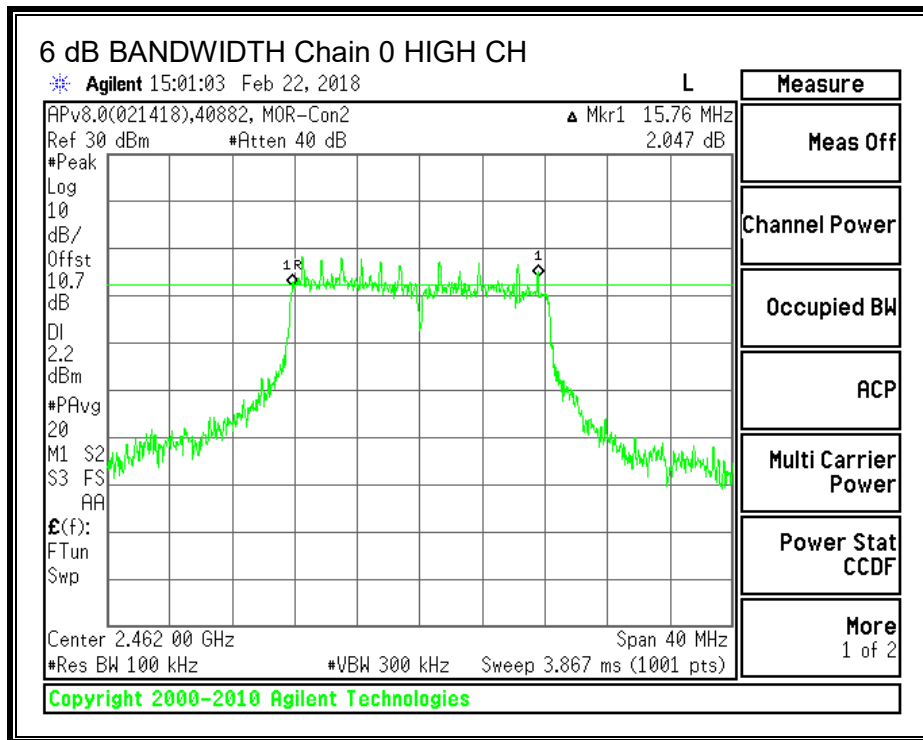
Test Date: 2018-02-22

Project: 12053557

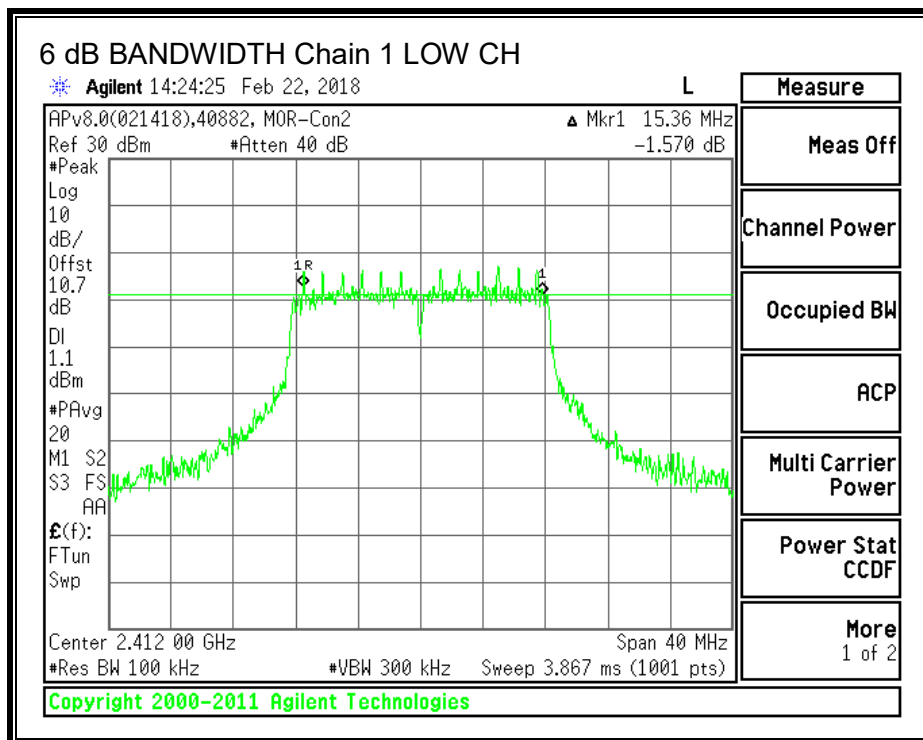
Tested By: Jeffrey Cabrera

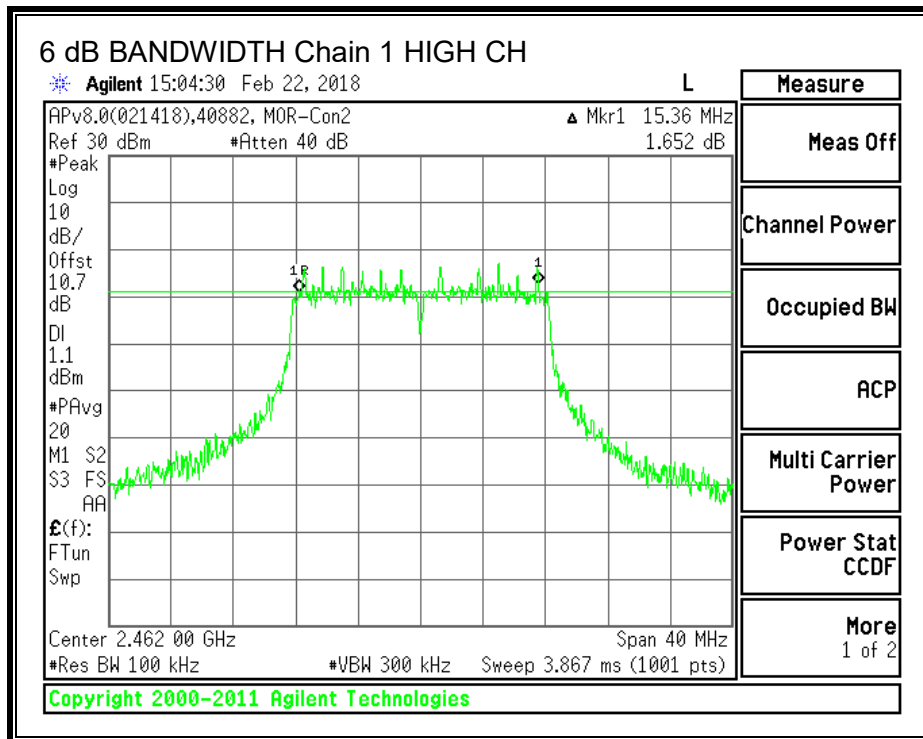
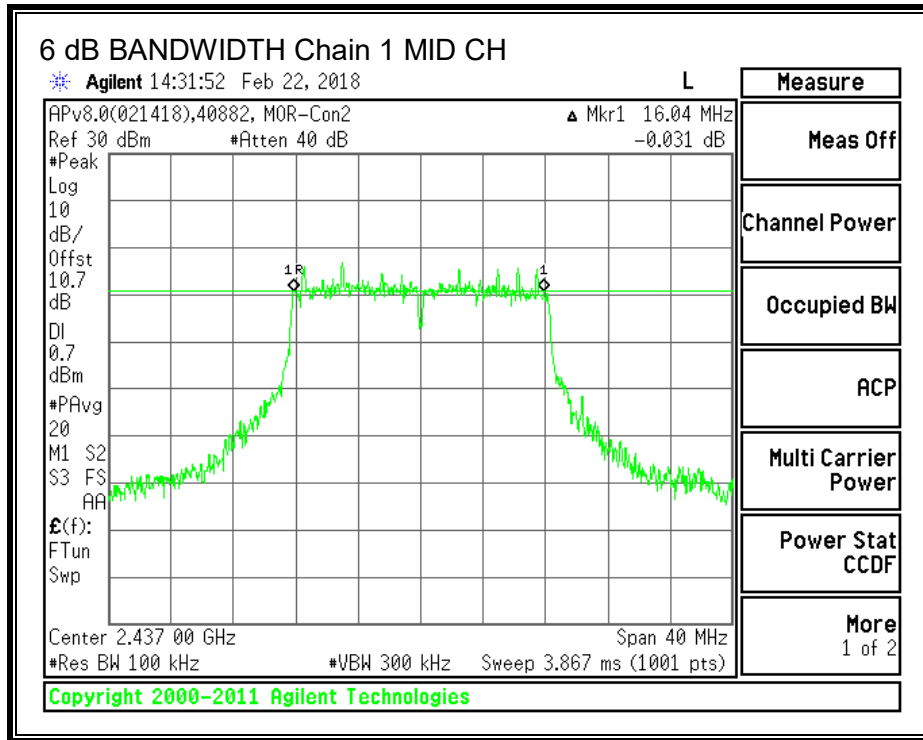
6 dB BANDWIDTH, Chain 0





6 dB BANDWIDTH, Chain 1





8.3.2. 99% BANDWIDTH LIMITS

None; for reporting purposes only.

TEST PROCEDURE

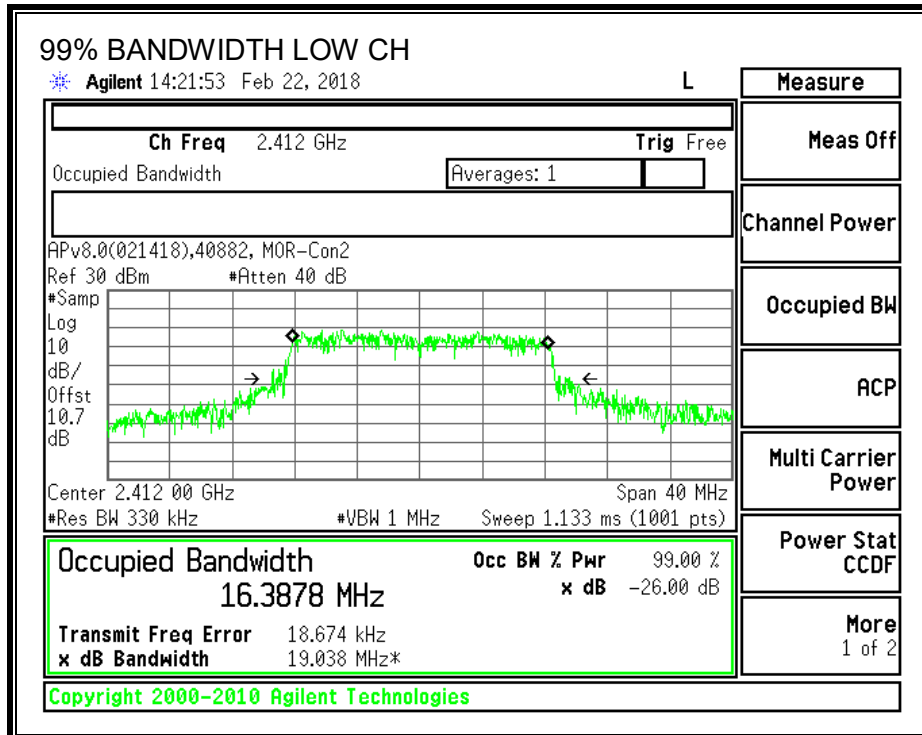
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 5% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

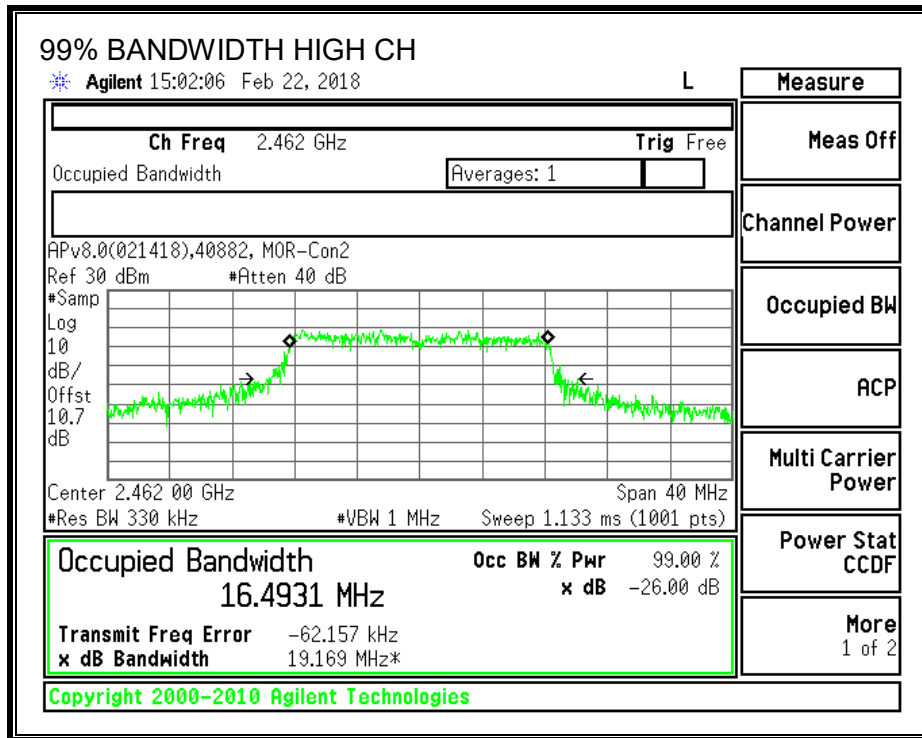
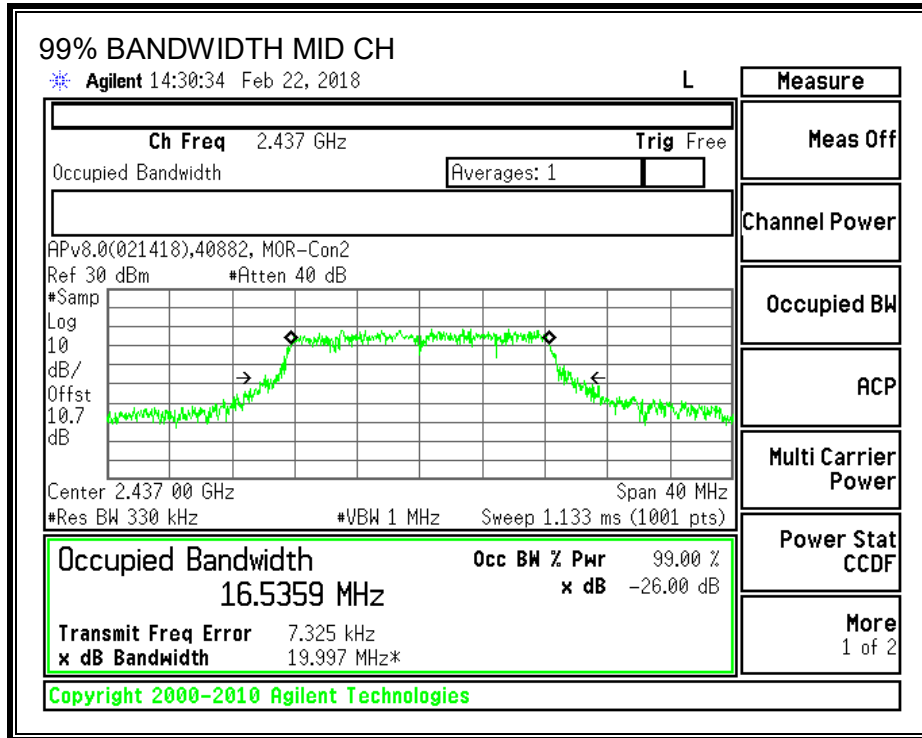
Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Low	2412	16.388	16.508
Middle	2437	16.536	16.478
High	2462	16.493	16.470

TEST INFORMATION

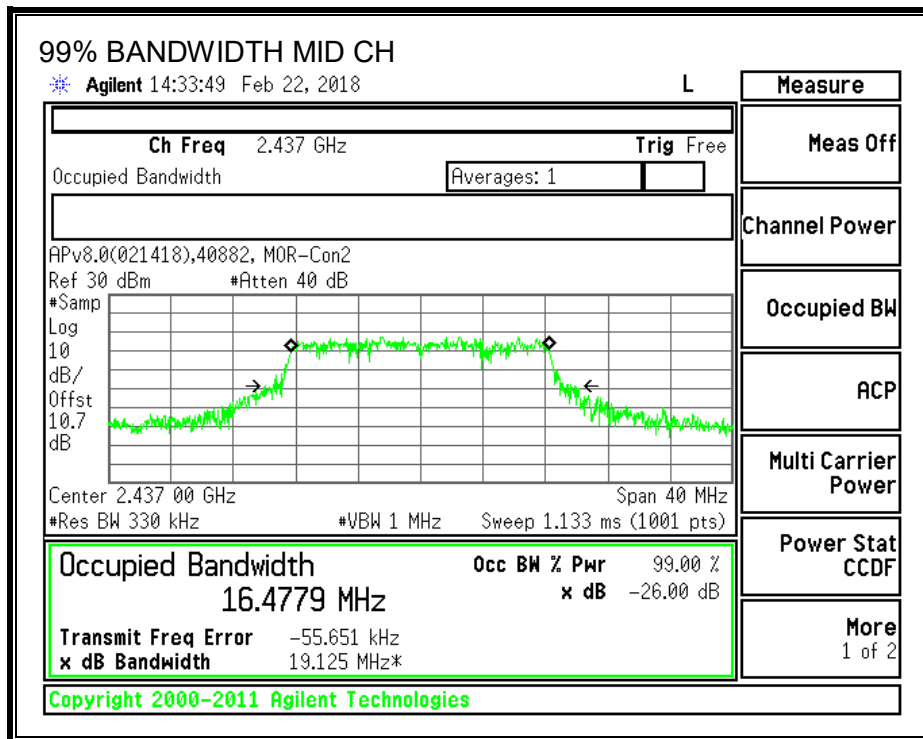
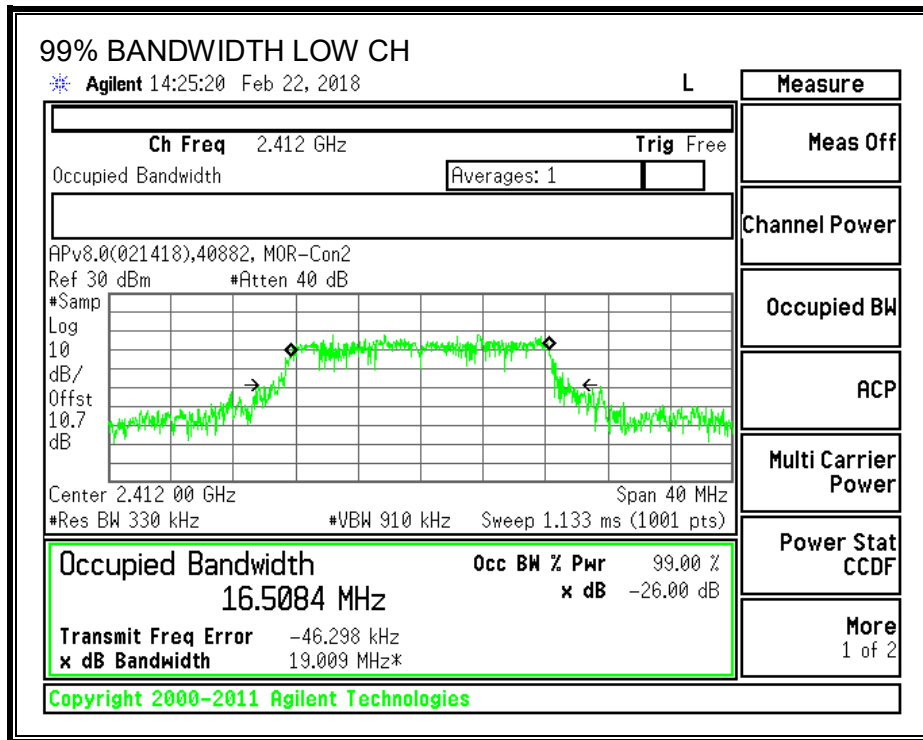
Test Date: 2018-02-22
 Project: 12053557
 Tested By: Jeffrey Cabrera

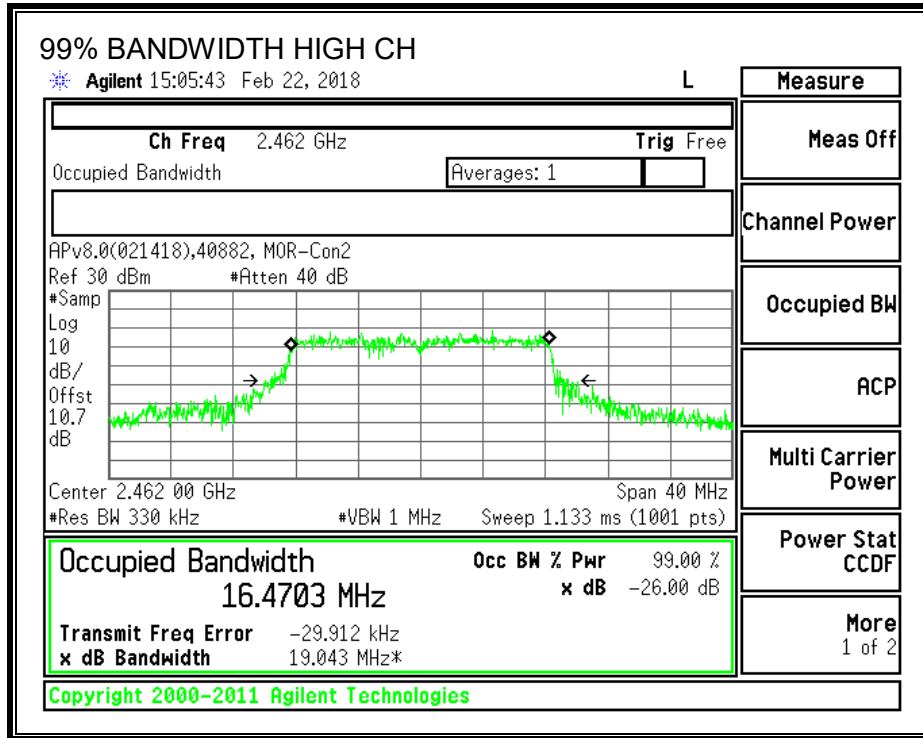
99% BANDWIDTH – Chain 0





99% BANDWIDTH – Chain 1





8.3.3. OUTPUT POWER – EXTERNAL ANTENNA

LIMITS

FCC §15.247 (b)(3)
ISED RSS-247 Clauses 5.4 (d)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Directional Gain (dBi)
1.34	1.34	1.34

TEST INFORMATION

Test Date: 2018-02-22 and 2018-03-19
Project: 12053557
Tested By: Eric McCalister \ Niklas Haydon

RESULTS 6 Mbps

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
1	2412	1.34	30.00	30	36	30.00
6	2437	1.34	30.00	30	36	30.00
10	2457	1.34	30.00	30	36	30.00
11	2462	1.34	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
1	2412	17.33	16.79	20.08	30.00	-9.92
6	2437	17.11	16.64	19.89	30.00	-10.11
10	2457	15.81	16.48	19.17	30.00	-10.83
11	2462	14.25	13.58	16.94	30.00	-13.06

Note: Measurements are gated AVG.

RESULTS 54 Mbps

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
1	2412	1.34	30.00	30	36	30.00
2	2417	1.34	30.00	30	36	30.00
3	2422	1.34	30.00	30	36	30.00
6	2437	1.34	30.00	30	36	30.00
9	2452	1.34	30.00	30	36	30.00
10	2457	1.34	30.00	30	36	30.00
11	2462	1.34	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
1	2412	13.50	13.14	16.33	30.00	-13.67
2	2417	16.68	15.88	19.31	30.00	-10.69
3	2422	17.51	16.71	20.14	30.00	-9.86
6	2437	17.58	16.79	20.21	30.00	-9.79
9	2452	17.07	17.09	20.09	30.00	-9.91
10	2457	16.48	15.99	19.25	30.00	-10.75
11	2462	13.58	12.99	16.31	30.00	-13.69

Note: Measurements are gated AVG.

8.3.4. OUTPUT POWER – ETCHED PCB ANTENNA

LIMITS

FCC §15.247 (b)(3)

ISED RSS-247 Clauses 5.4 (d)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Directional Gain (dBi)
3.34	1.61	2.56

TEST INFORMATION

Test Date: 2018-02-22 and 2018-03-19

Project: 12053557

Tested By: Eric MacCalister \ Niklas Haydon

RESULTS 6 Mbps

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
1	2412	2.56	30.00	30	36	30.00
2	2417	2.56	30.00	30	36	30.00
6	2437	2.56	30.00	30	36	30.00
10	2457	2.56	30.00	30	36	30.00
11	2462	2.56	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
1	2412	16.29	15.67	19.00	30.00	-11.00
2	2417	18.57	14.92	20.13	30.00	-9.87
6	2437	17.11	16.64	19.89	30.00	-10.11
10	2457	15.81	16.48	19.17	30.00	-10.83
11	2462	14.25	13.58	16.94	30.00	-13.06

Note: Measurements are gated AVG.

RESULTS 54 Mbps

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
1	2412	2.56	30.00	30	36	30.00
2	2417	2.56	30.00	30	36	30.00
3	2422	2.56	30.00	30	36	30.00
6	2437	2.56	30.00	30	36	30.00
8	2447	2.56	30.00	30	36	30.00
9	2452	2.56	30.00	30	36	30.00
10	2457	2.56	30.00	30	36	30.00
11	2462	2.56	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
1	2412	14.81	14.31	17.58	30.00	-12.42
2	2417	16.68	15.88	19.31	30.00	-10.69
3	2422	17.51	16.71	20.14	30.00	-9.86
6	2437	17.58	16.79	20.21	30.00	-9.79
8	2447	17.21	17.18	20.21	30.00	-9.79
9	2452	15.77	16.34	19.07	30.00	-10.93
10	2457	14.53	14.14	17.35	30.00	-12.65
11	2462	13.52	13.07	16.31	30.00	-13.69

Note: Measurements are gated AVG.

8.3.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

ISED RSS-247 5.2 (b)

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

RESULTS

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Chain 1 Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-8.13	-9.21	-5.63	8.0	-13.6
Mid	2437	-9.00	-9.27	-6.12	8.0	-14.1
High	2462	-7.21	-10.58	-5.57	8.0	-13.6

Note – Low and High channels were tested at mid channel power settings for worst-case results. The Mid channel power setting is same for all 802.11g antenna configs and data rates.

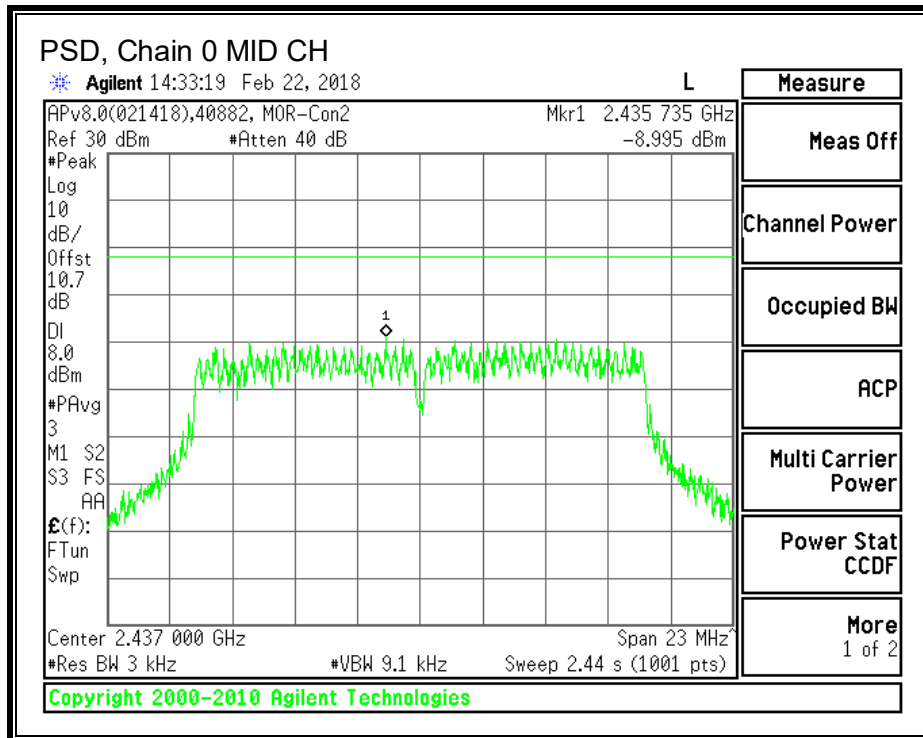
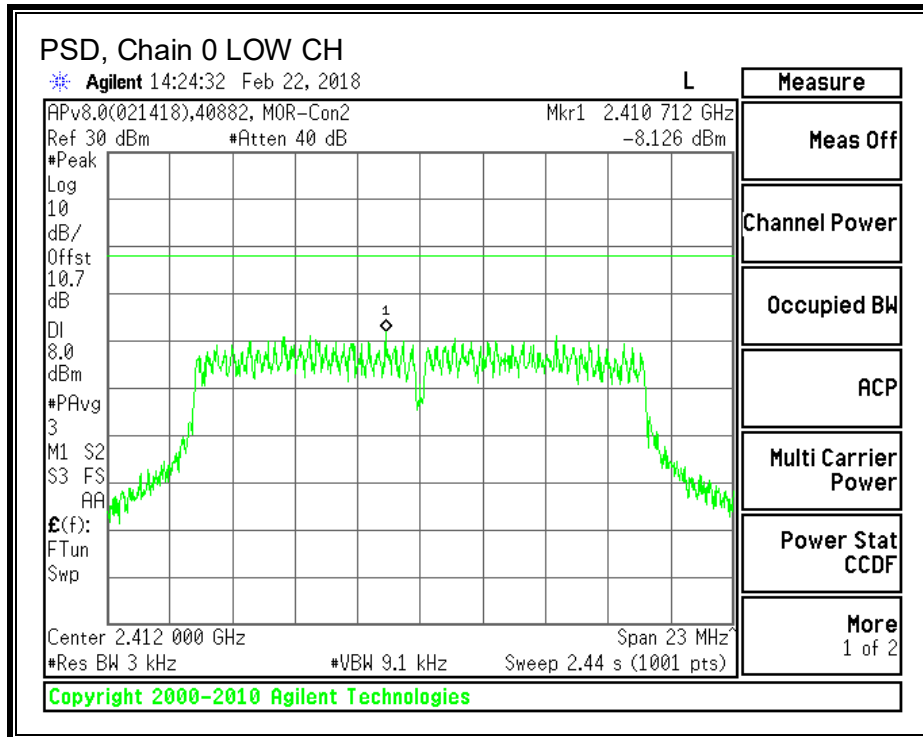
TEST INFORMATION

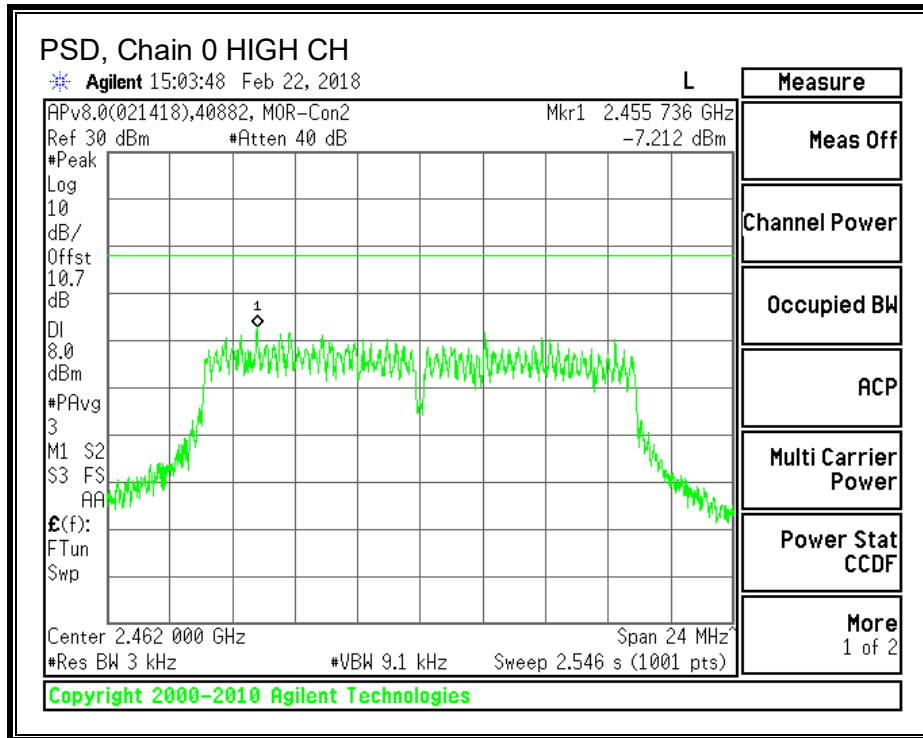
Test Date: 2018-02-22

Project: 12053557

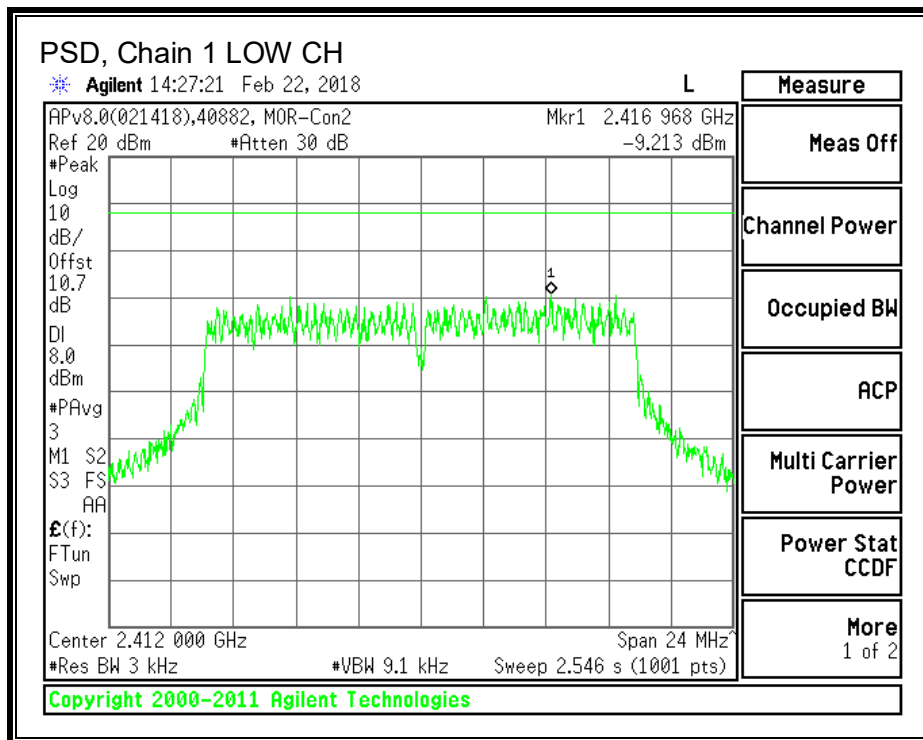
Tested By: Jeffrey Cabrera

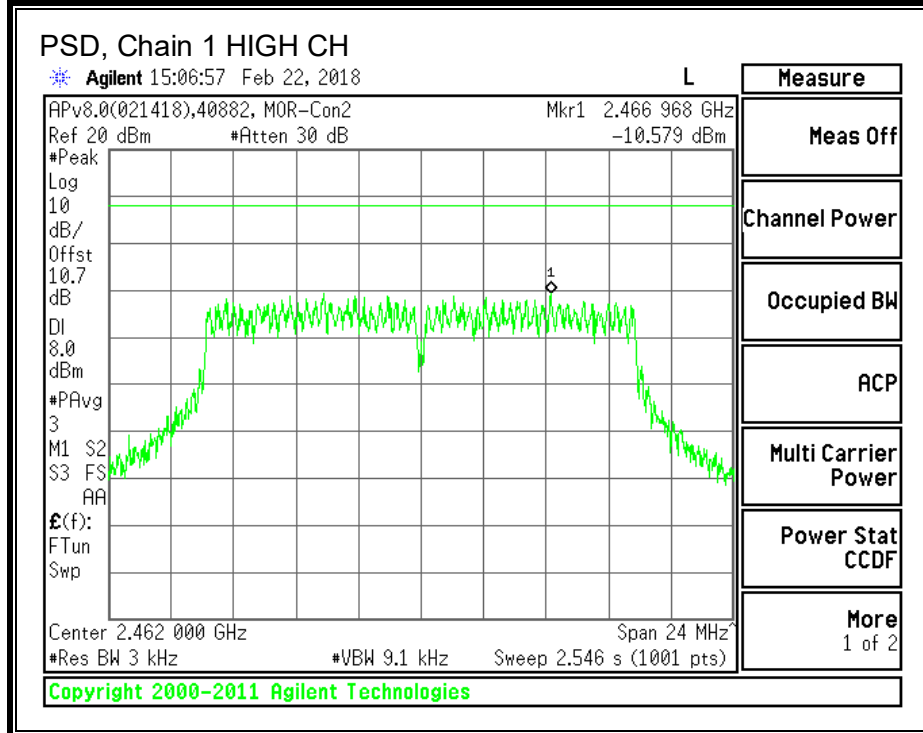
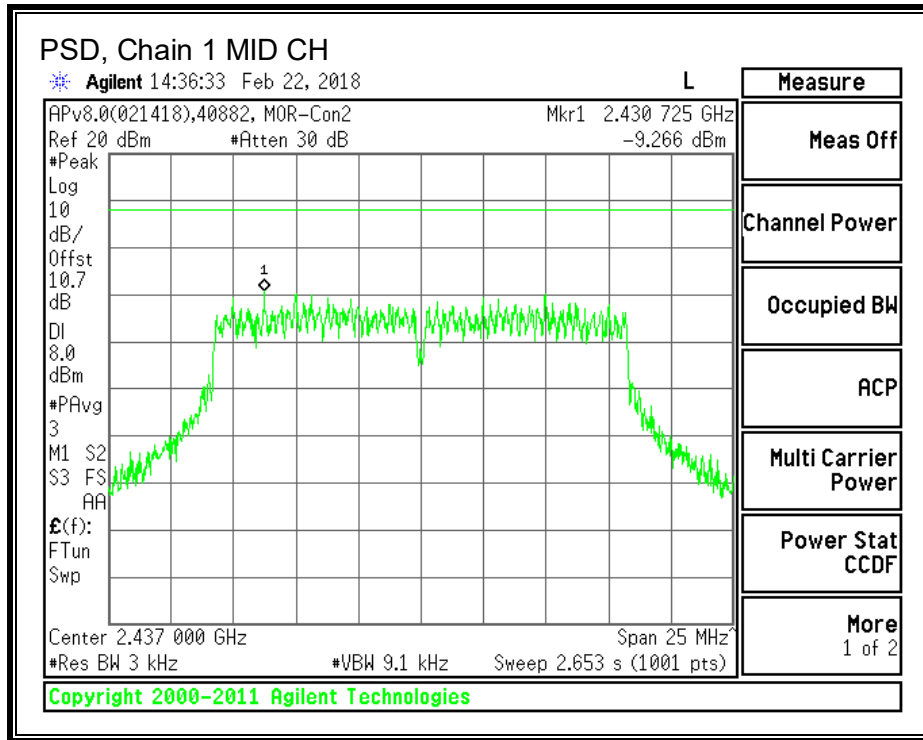
PSD, Chain 0





PSD, Chain 1





8.3.6. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

ISED RSS-247 Clause 5.5

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

TEST INFORMATION

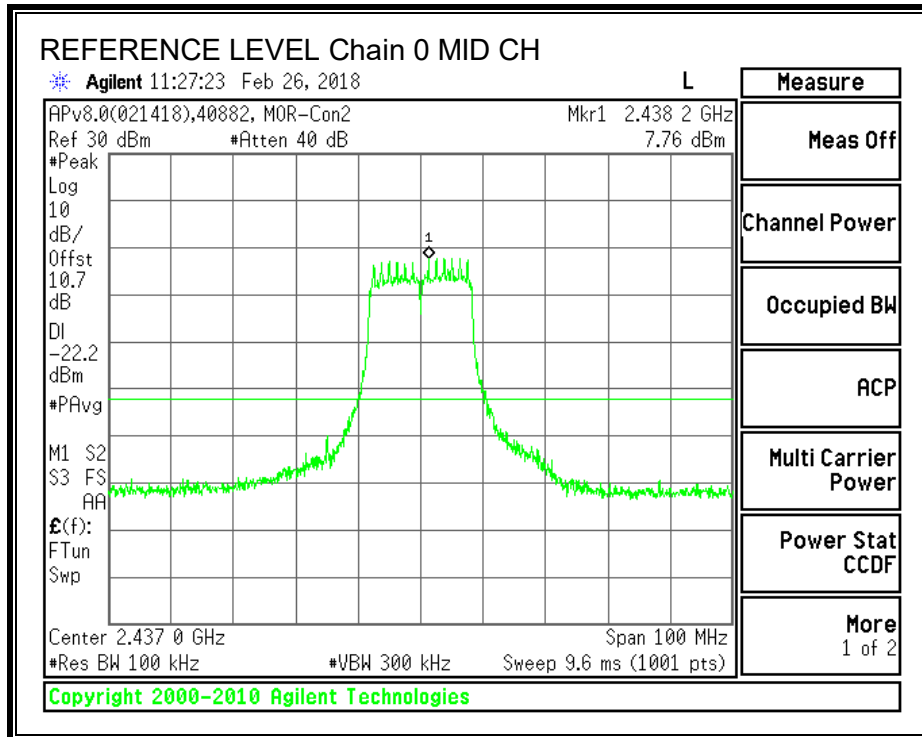
Test Date: 2018-02-26

Project: 12053557

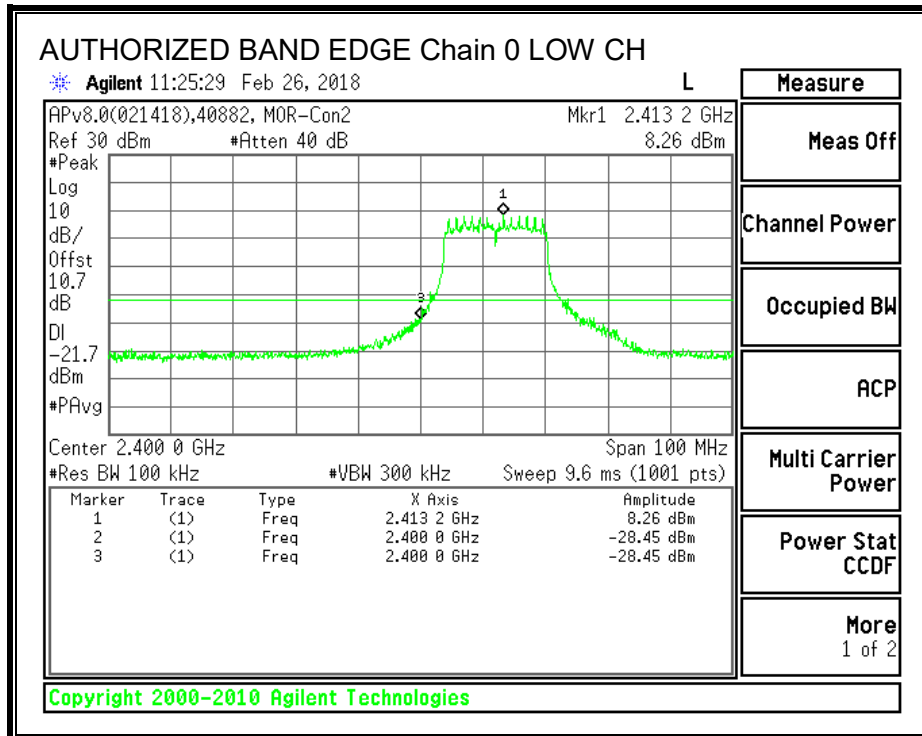
Tested By: Jeffrey Cabrera

Note – Low and High channels were tested at mid channel power settings for worst-case results. The Mid channel power setting is same for all 802.11g antenna configs and data rates.

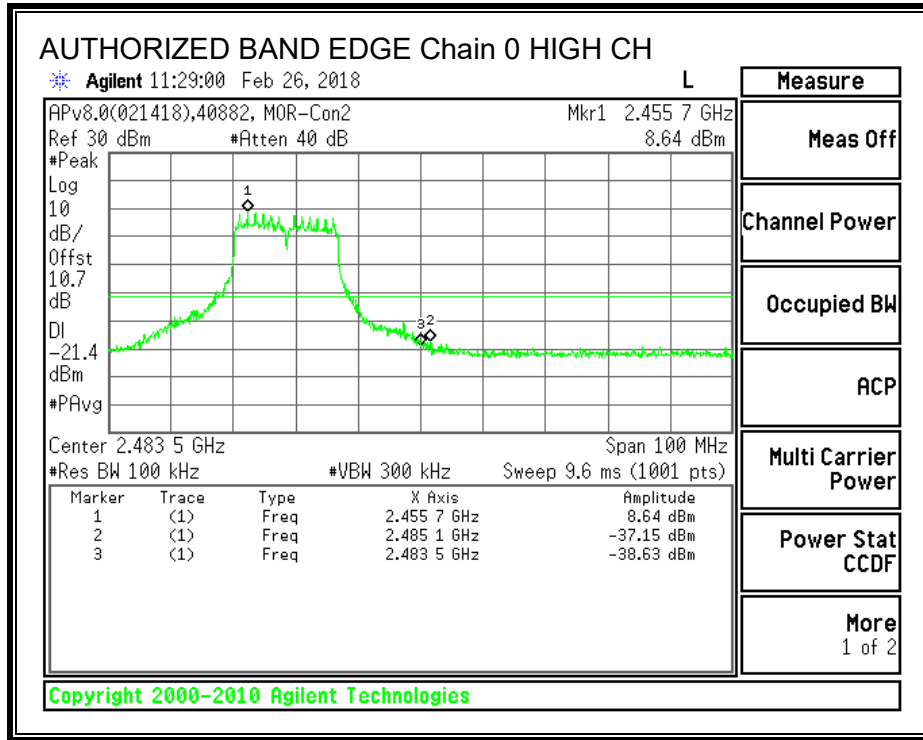
IN-BAND REFERENCE LEVEL, Chain 0



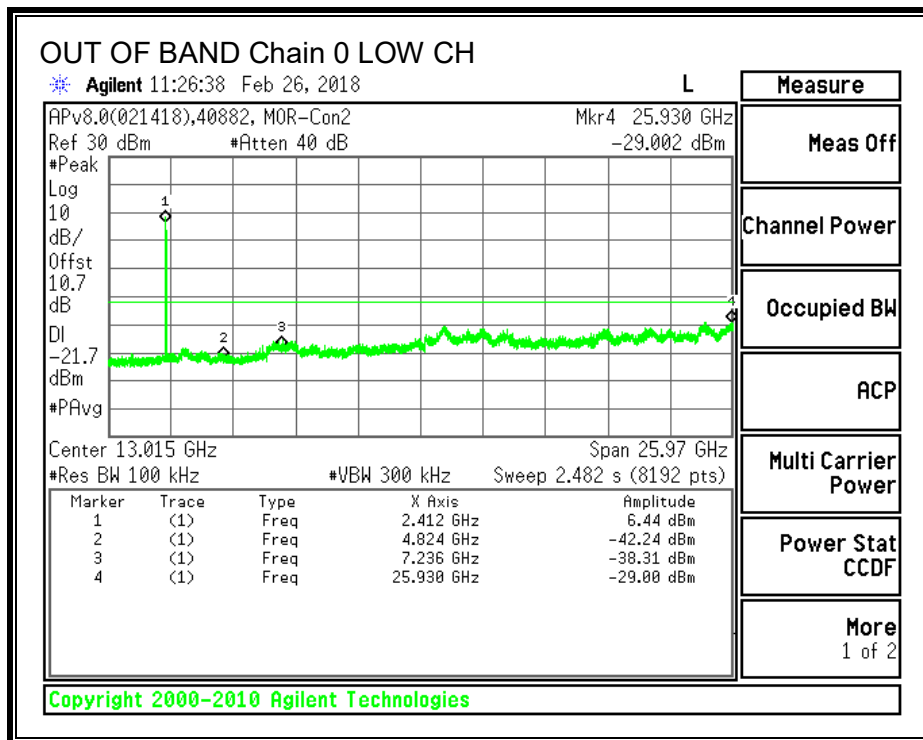
LOW CHANNEL BANDEDGE, Chain 0

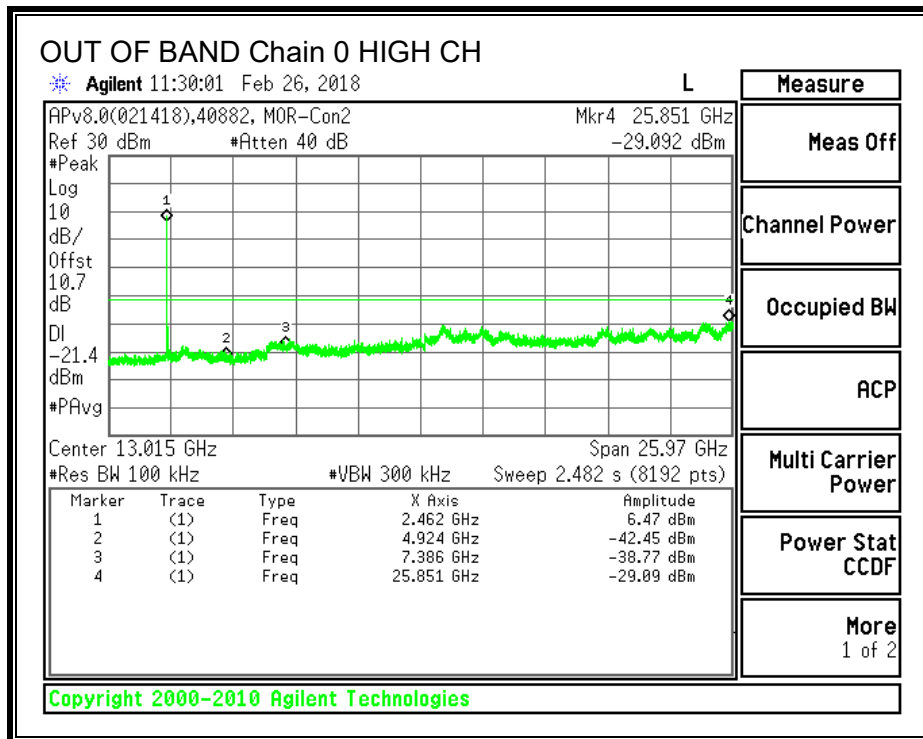
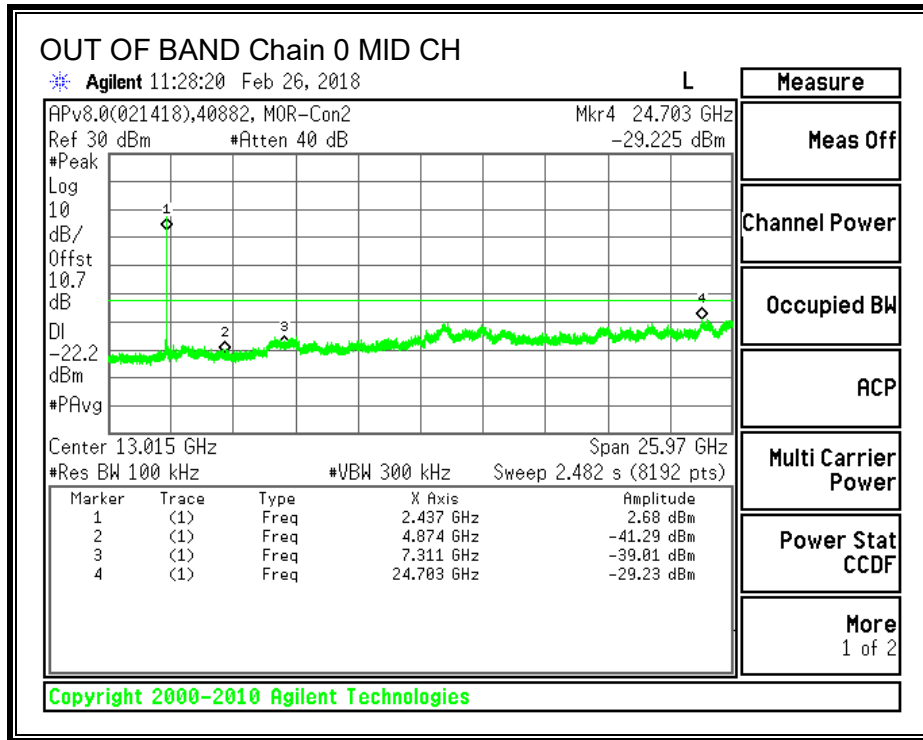


HIGH CHANNEL BANDEDGE, Chain 0

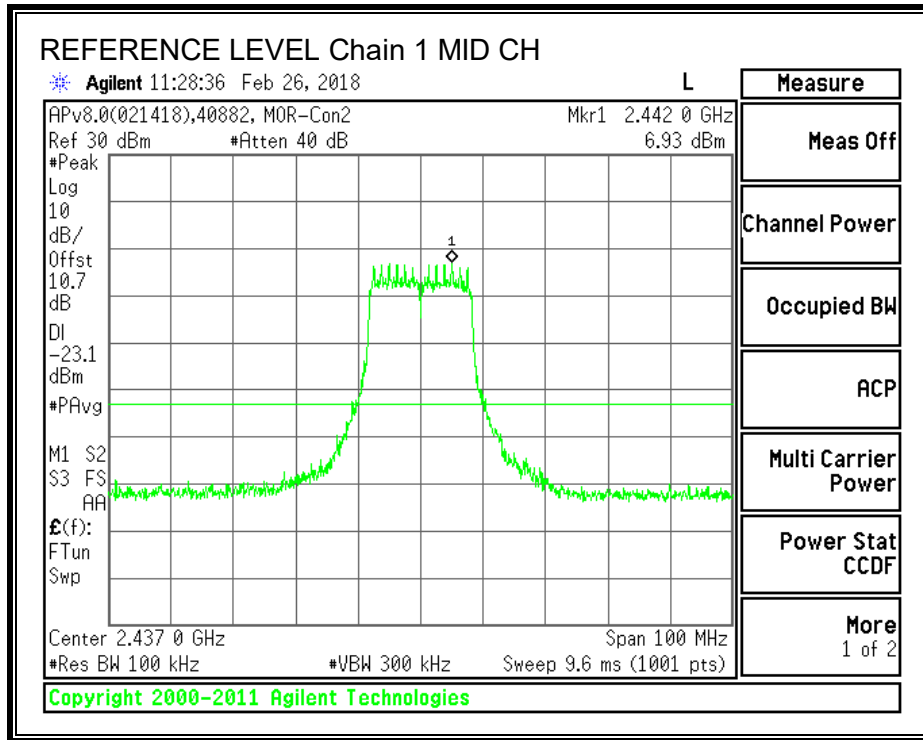


OUT-OF-BAND EMISSIONS, Chain 0

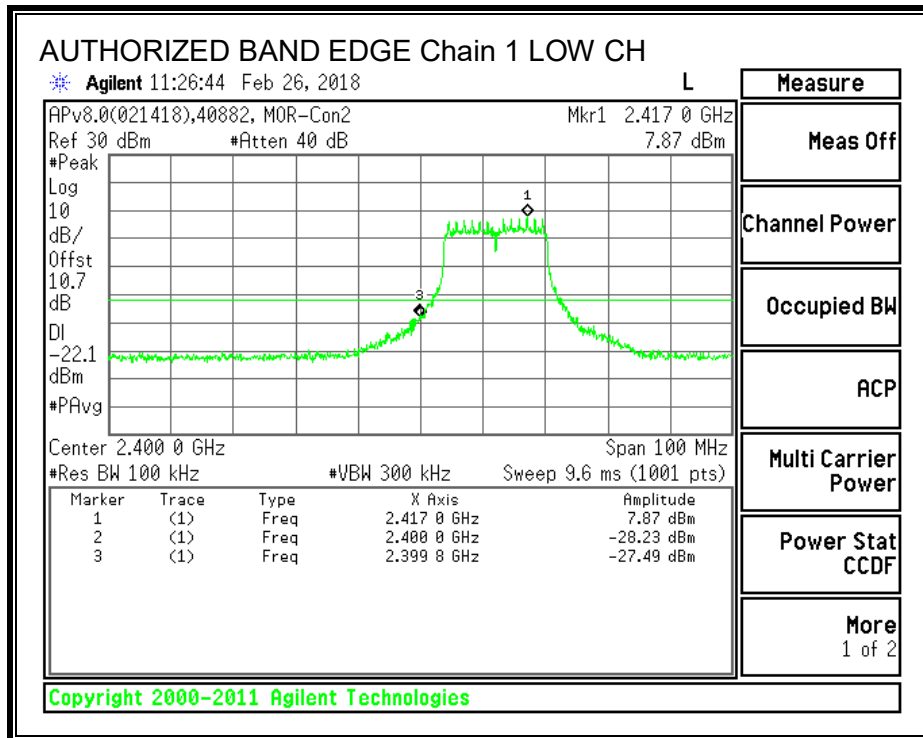




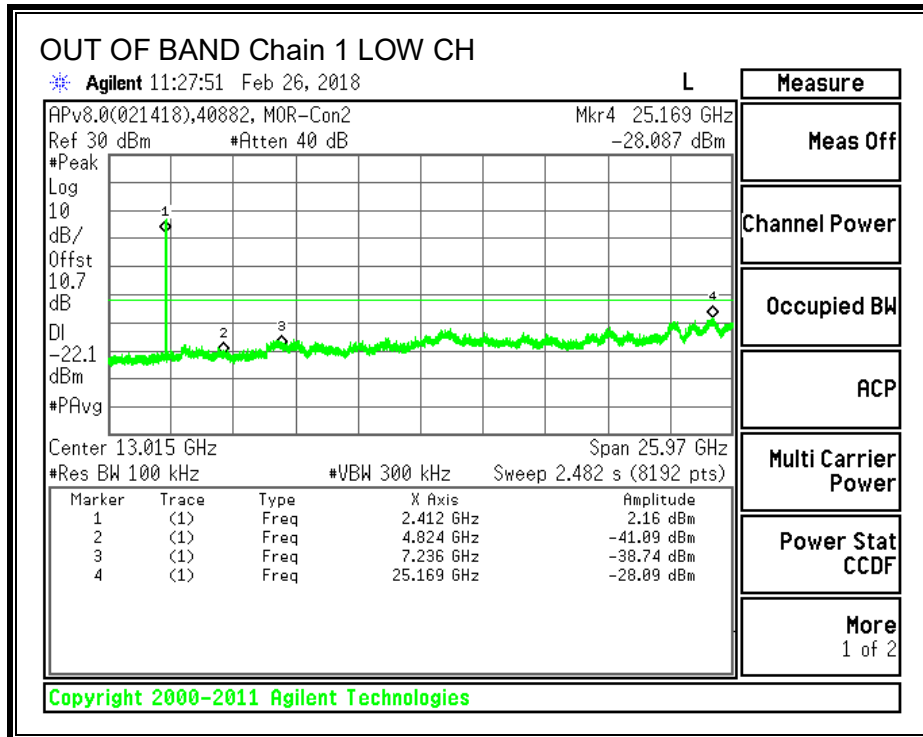
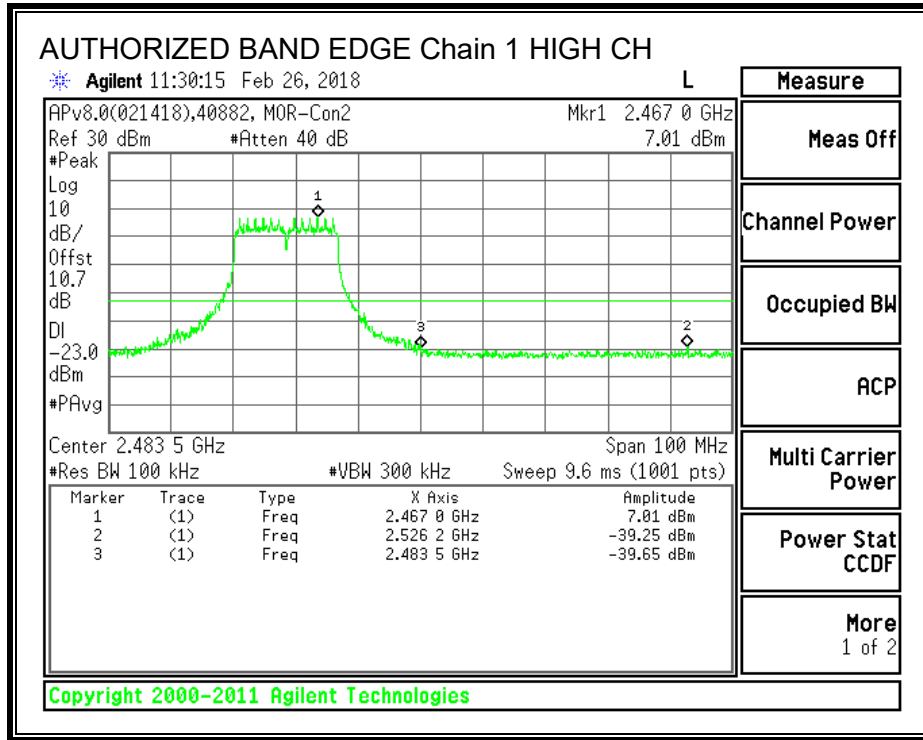
IN-BAND REFERENCE LEVEL, Chain 1

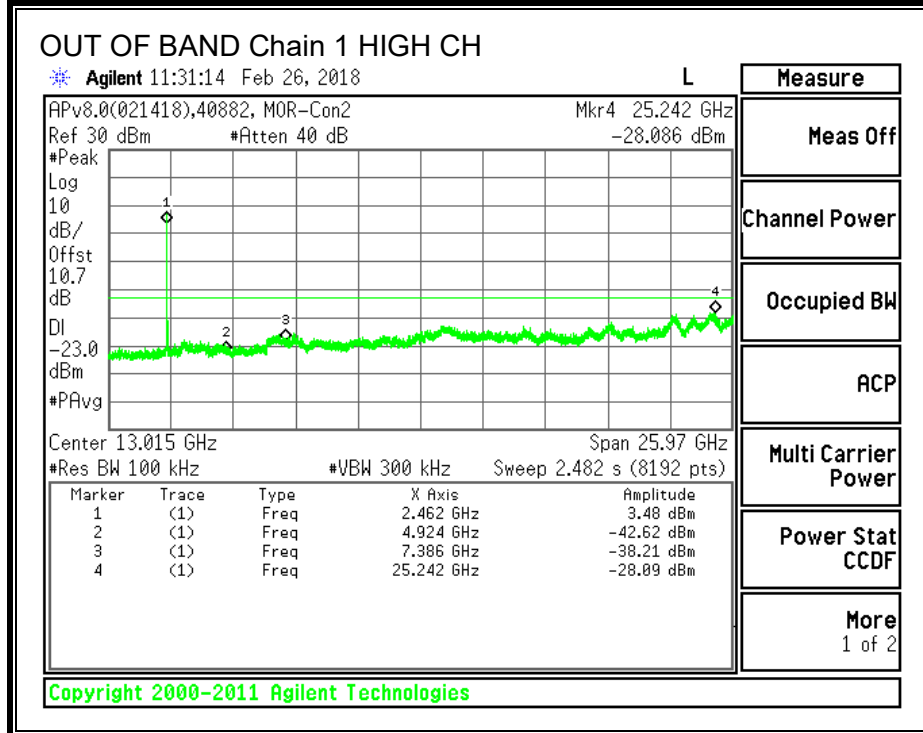
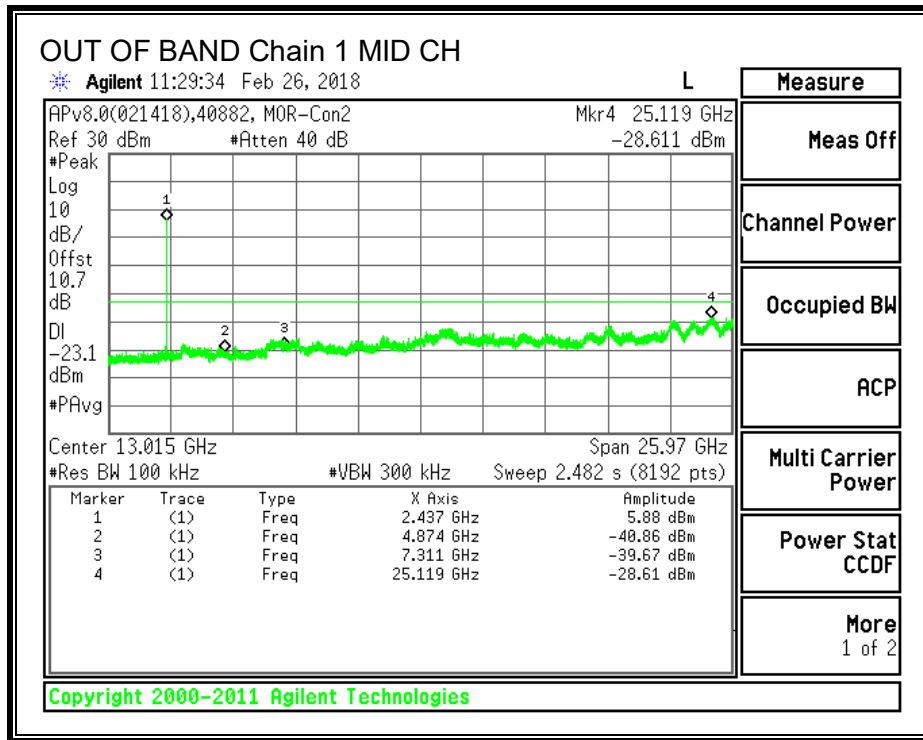


LOW CHANNEL BANDEDGE, Chain 1



HIGH CHANNEL BANDEDGE, Chain 1





8.4. 802.11n HT20 MODE IN THE 2.4 GHz BAND

8.4.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

ISED RSS-247 Clause 5.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low	2412	15.520	15.520	0.5
Mid	2437	15.520	16.080	0.5
High	2462	15.720	15.680	0.5

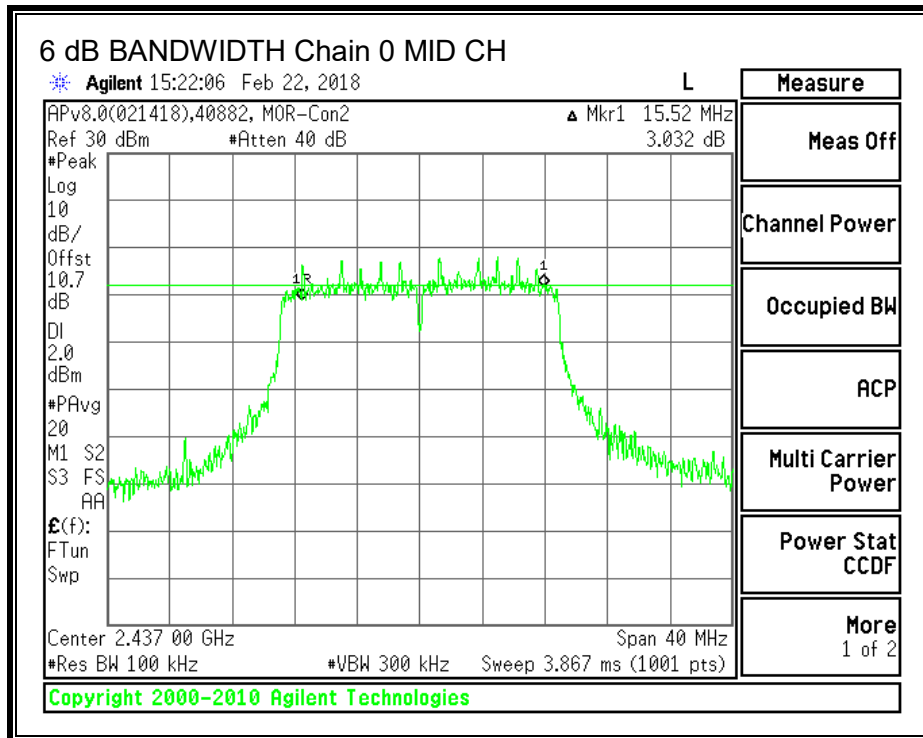
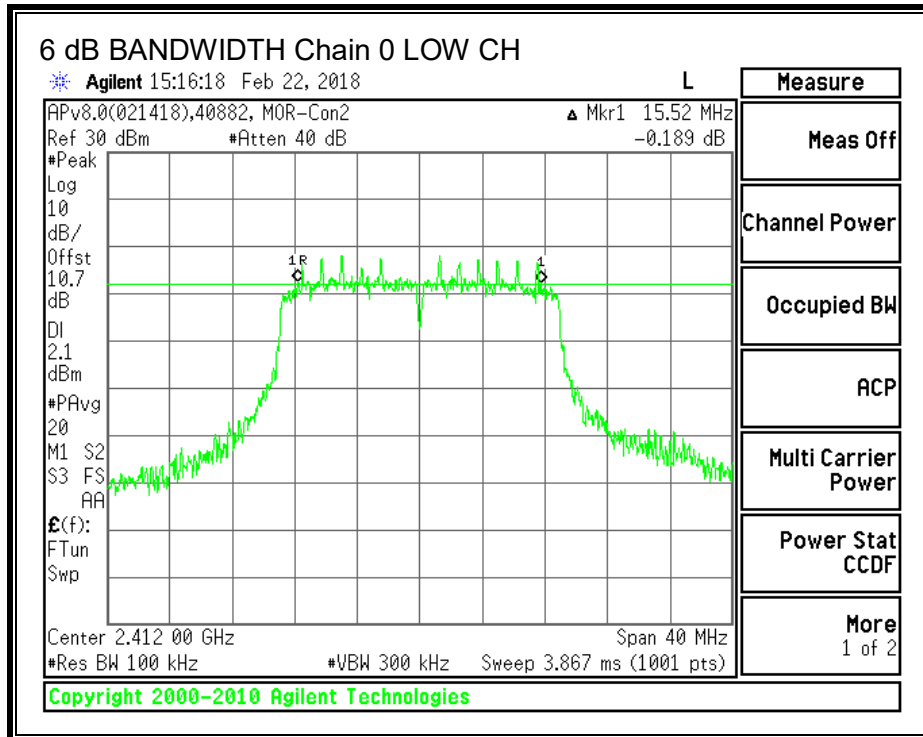
TEST INFORMATION

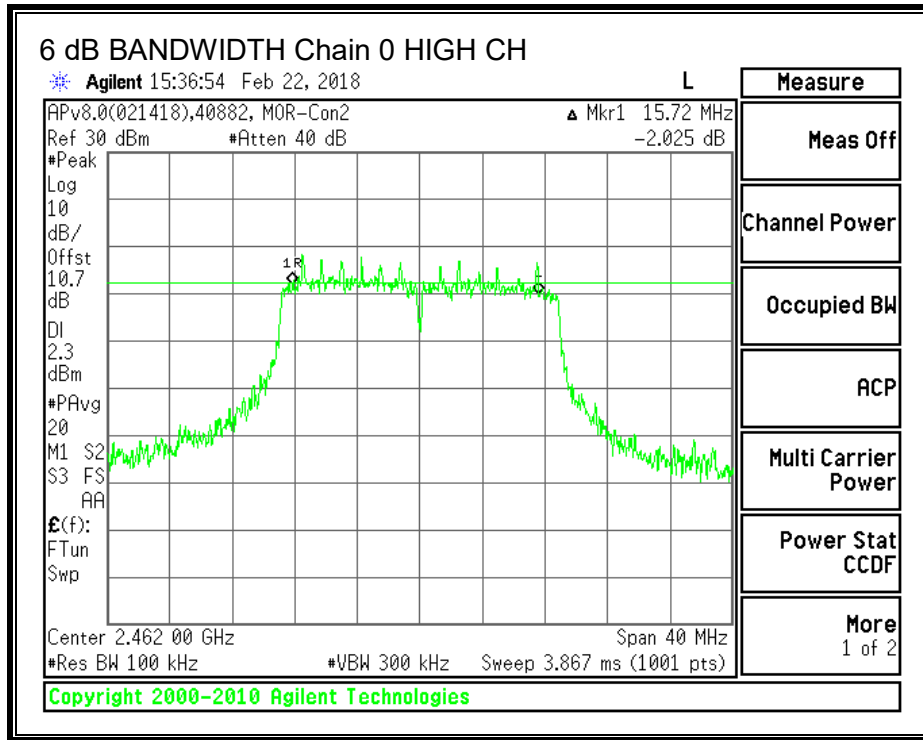
Test Date: 2018-02-22

Project: 12053557

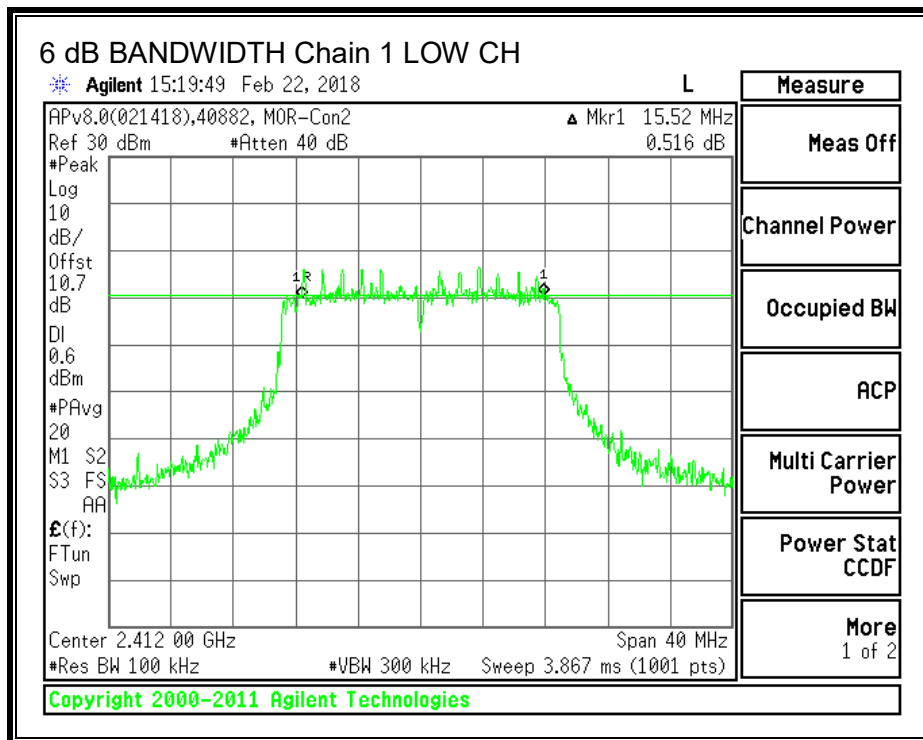
Tested By: Jeffrey Cabrera

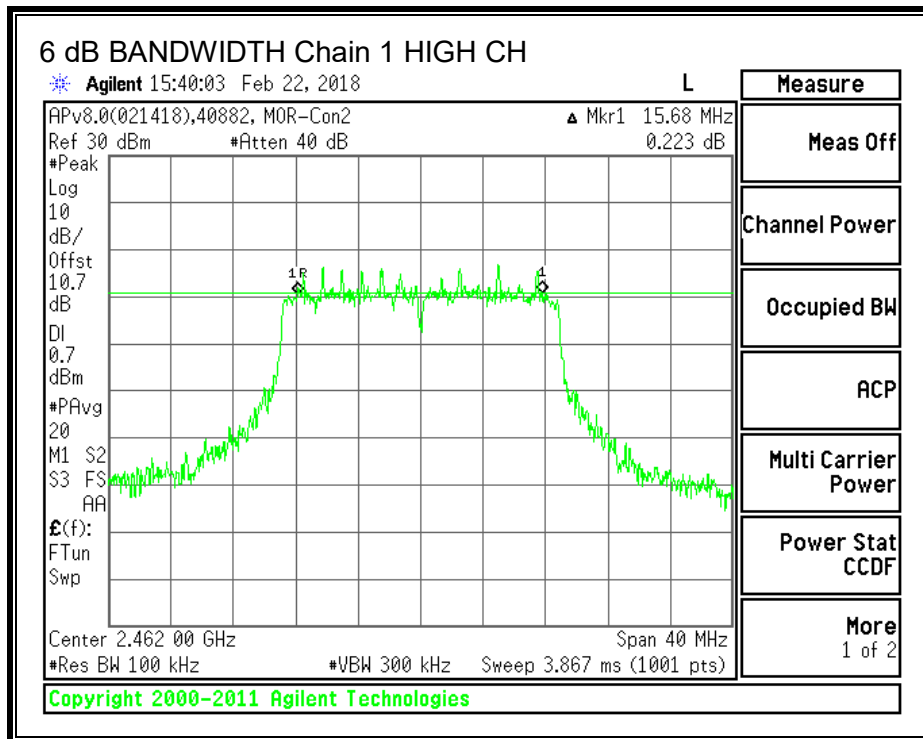
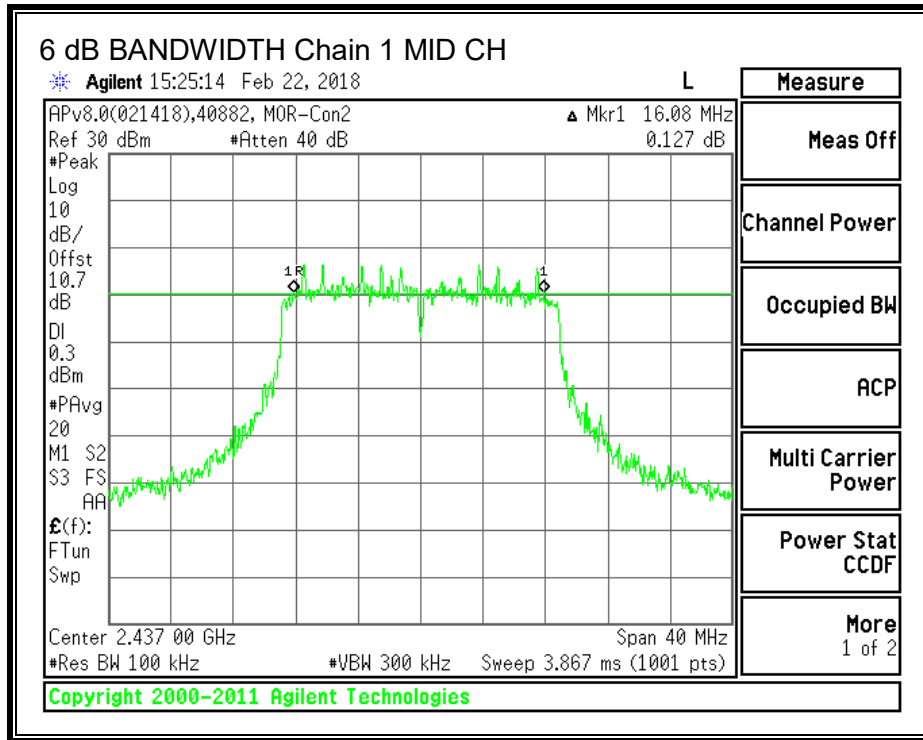
6 dB BANDWIDTH, Chain 0





6 dB BANDWIDTH, Chain 1





8.4.1. 99% BANDWIDTH LIMITS

None; for reporting purposes only.

TEST PROCEDURE

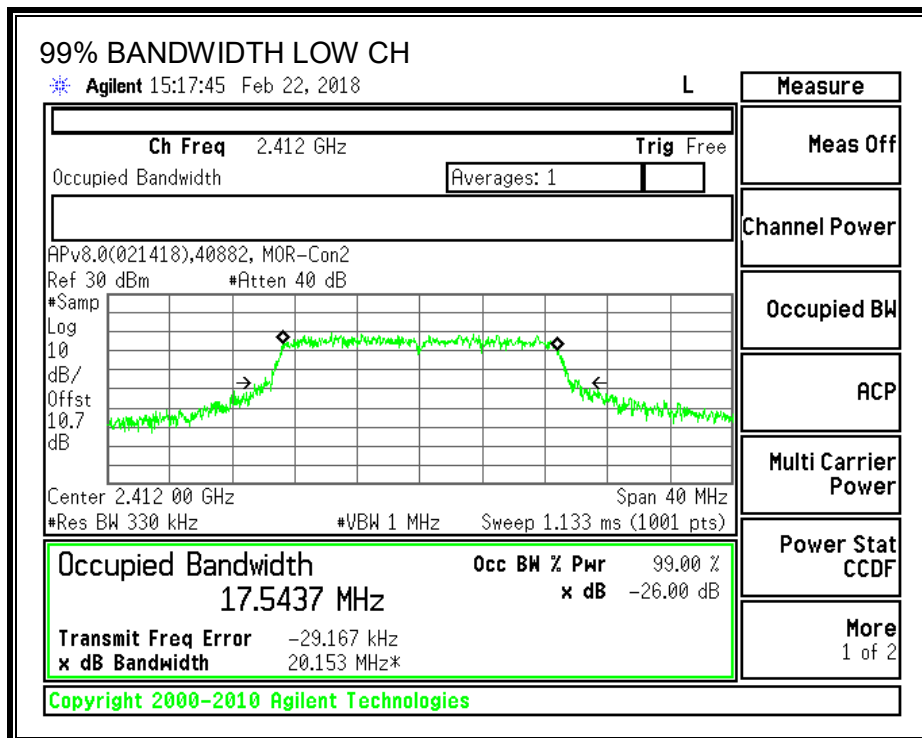
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 5% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

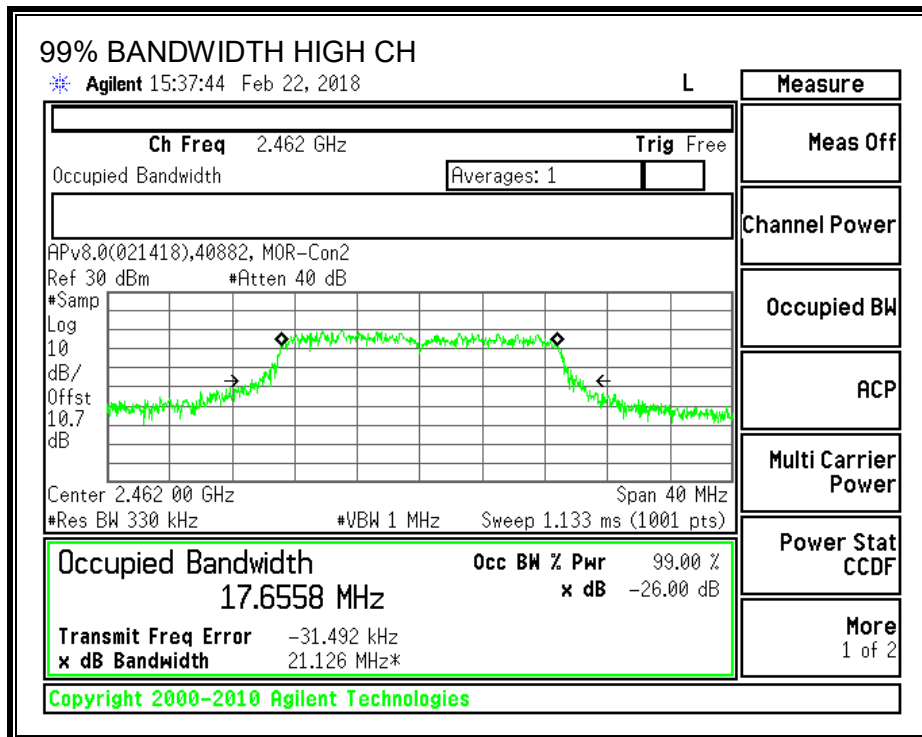
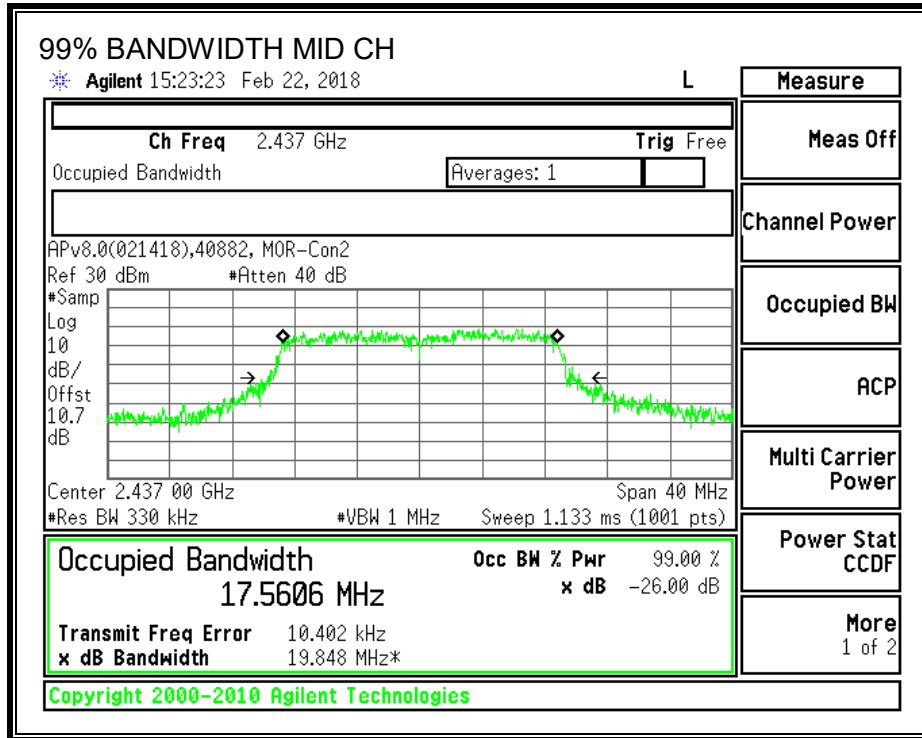
Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Low	2412	17.544	17.592
Middle	2437	17.561	17.583
High	2462	17.656	17.619

TEST INFORMATION

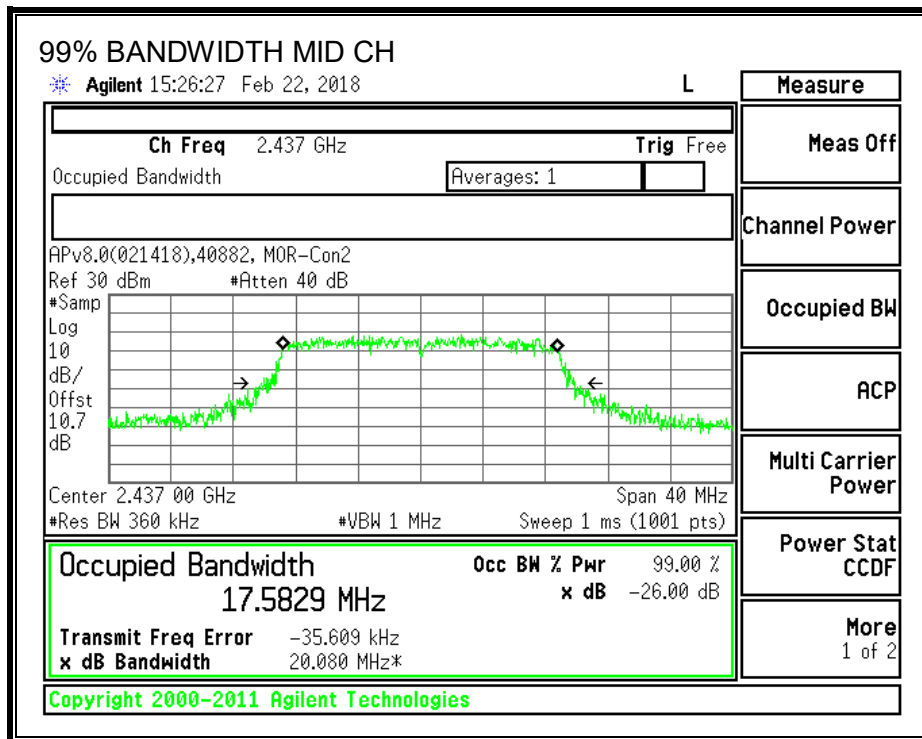
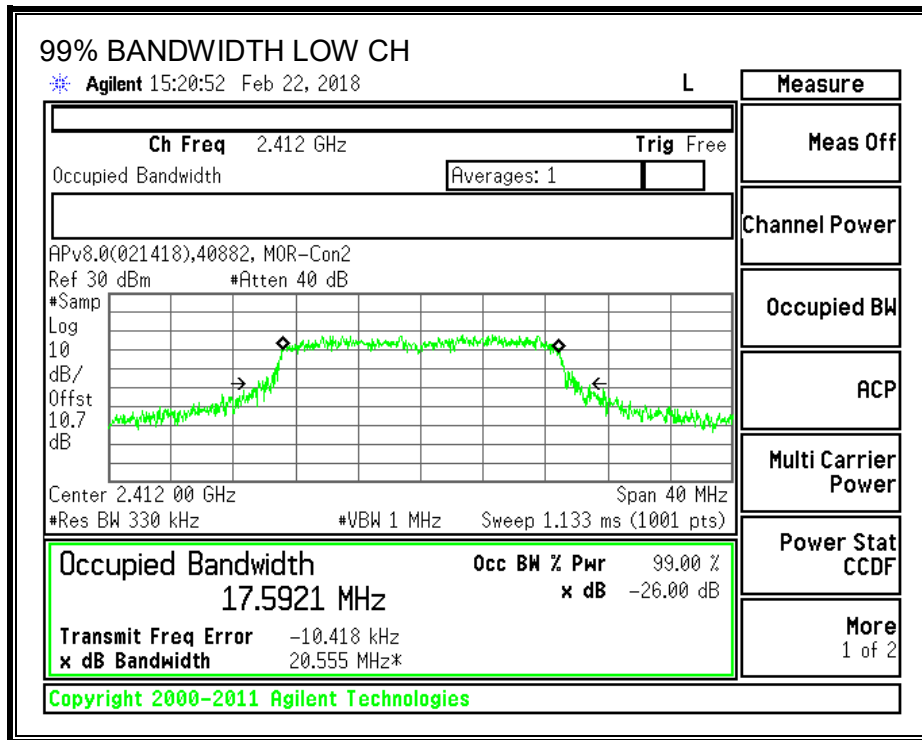
Test Date: 2018-02-22
 Project: 12053557
 Tested By: Jeffrey Cabrera

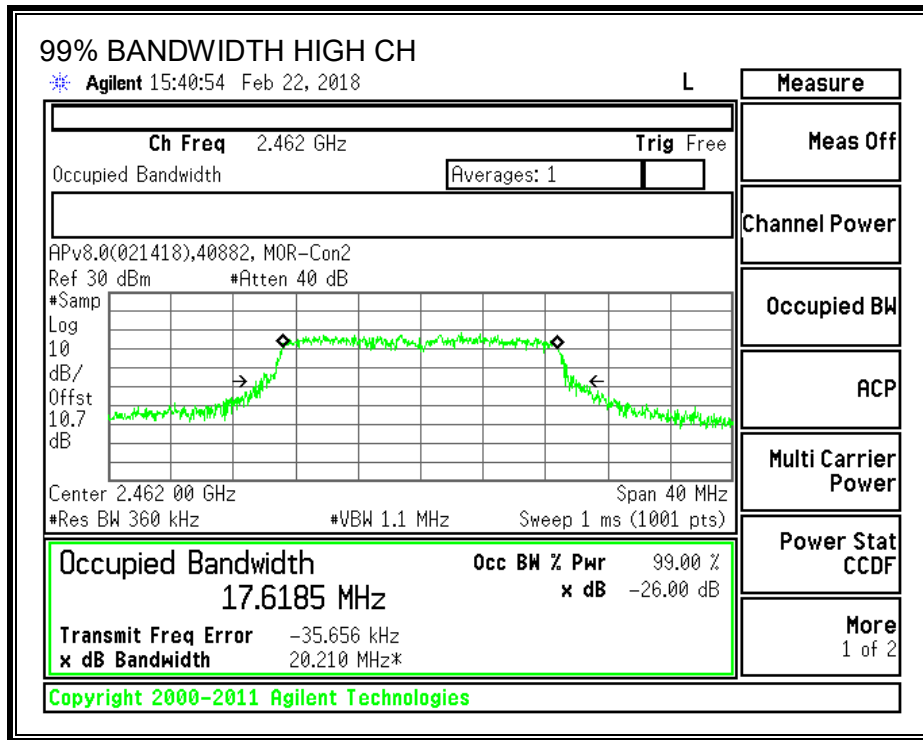
99% BANDWIDTH – Chain 0





99% BANDWIDTH – Chain 1





8.4.2. OUTPUT POWER – EXTERNAL ANTENNA

LIMITS

FCC §15.247 (b)(3)

ISED RSS-247 Clauses 5.4 (d)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Directional Gain (dBi)
1.34	1.34	1.34

TEST INFORMATION

Test Date: 2018-02-22 and 2018-03-19

Project: 12053557

Tested By: Eric McCalister / Niklas Haydon

RESULTS MCS0

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
1	2412	1.34	30.00	30	36	30.00
2	2417	1.34	30.00	30	36	30.00
6	2437	1.34	30.00	30	36	30.00
10	2457	1.34	30.00	30	36	30.00
11	2462	1.34	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
1	2412	14.15	13.60	16.89	30.00	-13.11
2	2417	18.19	17.28	20.77	30.00	-9.23
6	2437	17.20	17.41	20.32	30.00	-9.68
10	2457	17.04	16.36	19.72	30.00	-10.28
11	2462	12.96	12.18	15.60	30.00	-14.40

Note: Measurements are gated AVG.

RESULTS MCS7

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
1	2412	1.34	30.00	30	36	30.00
2	2417	1.34	30.00	30	36	30.00
3	2422	1.34	30.00	30	36	30.00
6	2437	1.34	30.00	30	36	30.00
9	2452	1.34	30.00	30	36	30.00
10	2457	1.34	30.00	30	36	30.00
11	2462	1.34	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
1	2412	12.84	13.09	15.98	30.00	-14.02
2	2417	16.66	15.42	19.09	30.00	-10.91
3	2422	16.66	15.84	19.28	30.00	-10.72
6	2437	16.67	16.01	19.36	30.00	-10.64
9	2452	16.01	16.29	19.16	30.00	-10.84
10	2457	15.61	14.24	17.99	30.00	-12.01
11	2462	13.65	12.25	16.02	30.00	-13.98

Note: Measurements are gated AVG.

8.4.3. OUTPUT POWER – ETCHED PCB ANTENNA

LIMITS

FCC §15.247 (b)(3)

ISED RSS-247 Clauses 5.4 (d)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Directional Gain (dBi)
3.34	1.61	2.56

TEST INFORMATION

Test Date: 2018-02-22 and 2018-03-19

Project: 12053557

Tested By: Eric McCalister \ Niklas Haydon

RESULTS MCS0

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
1	2412	2.56	30.00	30	36	30.00
2	2417	2.56	30.00	30	36	30.00
3	2422	2.56	30.00	30	36	30.00
6	2437	2.56	30.00	30	36	30.00
9	2452	2.56	30.00	30	36	30.00
10	2457	2.56	30.00	30	36	30.00
11	2462	2.56	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
1	2412	14.07	13.61	16.86	30.00	-13.14
2	2417	16.17	15.02	18.64	30.00	-11.36
3	2422	17.00	16.19	19.62	30.00	-10.38
6	2437	17.20	17.41	20.32	30.00	-9.68
9	2452	16.28	16.74	19.53	30.00	-10.47
10	2457	15.74	15.40	18.58	30.00	-11.42
11	2462	10.06	11.38	13.78	30.00	-16.22

Note: Measurements are gated AVG

RESULTS MCS7

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
1	2412	2.56	30.00	30	36	30.00
2	2417	2.56	30.00	30	36	30.00
3	2422	2.56	30.00	30	36	30.00
6	2437	2.56	30.00	30	36	30.00
9	2452	2.56	30.00	30	36	30.00
10	2457	2.56	30.00	30	36	30.00
11	2462	2.56	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
1	2412	12.66	12.09	15.39	30.00	-14.61
2	2417	15.66	13.66	17.78	30.00	-12.22
3	2422	16.66	15.84	19.28	30.00	-10.72
6	2437	16.67	16.01	19.36	30.00	-10.64
9	2452	16.01	16.29	19.16	30.00	-10.84
10	2457	16.57	16.01	19.31	30.00	-10.69
11	2462	12.42	12.03	15.24	30.00	-14.76

Note: Measurements are gated AVG

8.4.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

ISED RSS-247 5.2 (b)

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

RESULTS

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Chain 1 Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-8.00	-9.36	-5.62	8.0	-13.6
Mid	2437	-9.49	-9.75	-6.61	8.0	-14.6
High	2462	-6.41	-9.73	-4.75	8.0	-12.7

TEST INFORMATION

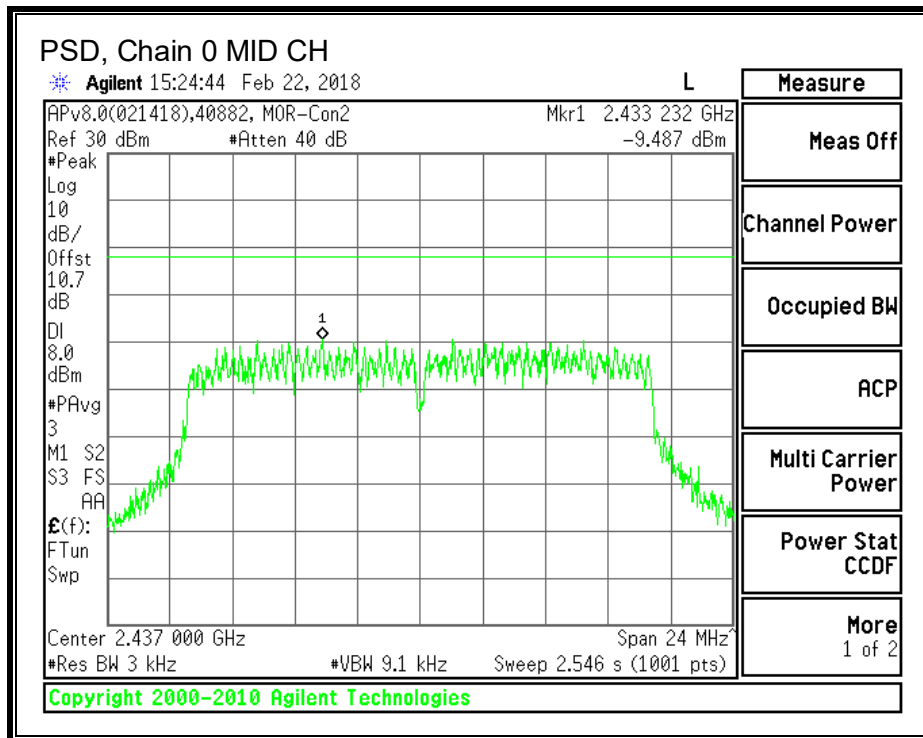
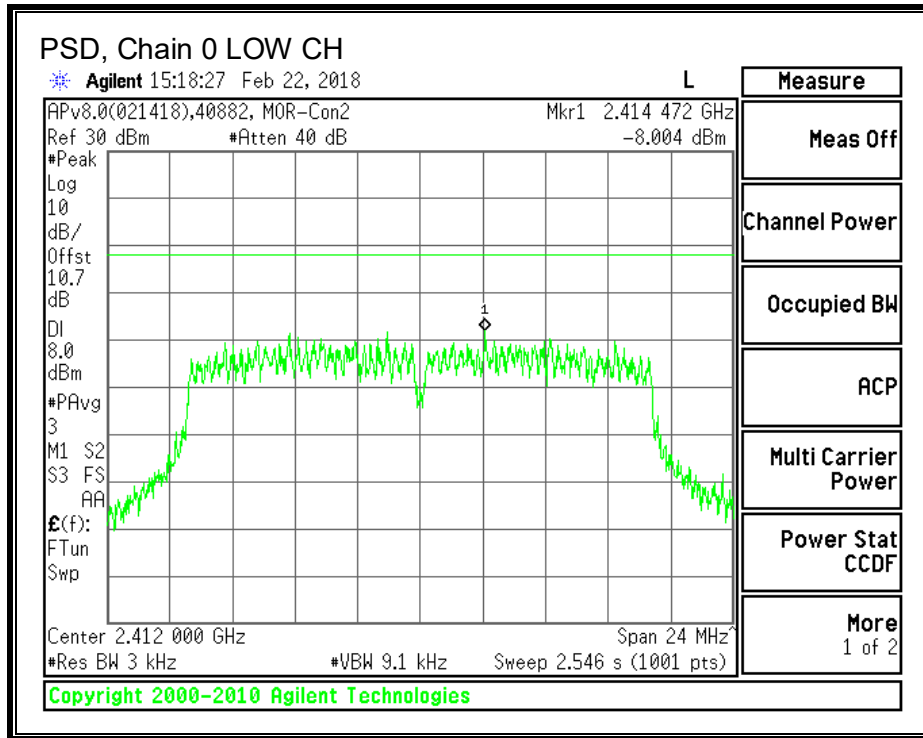
Test Date: 2018-02-22

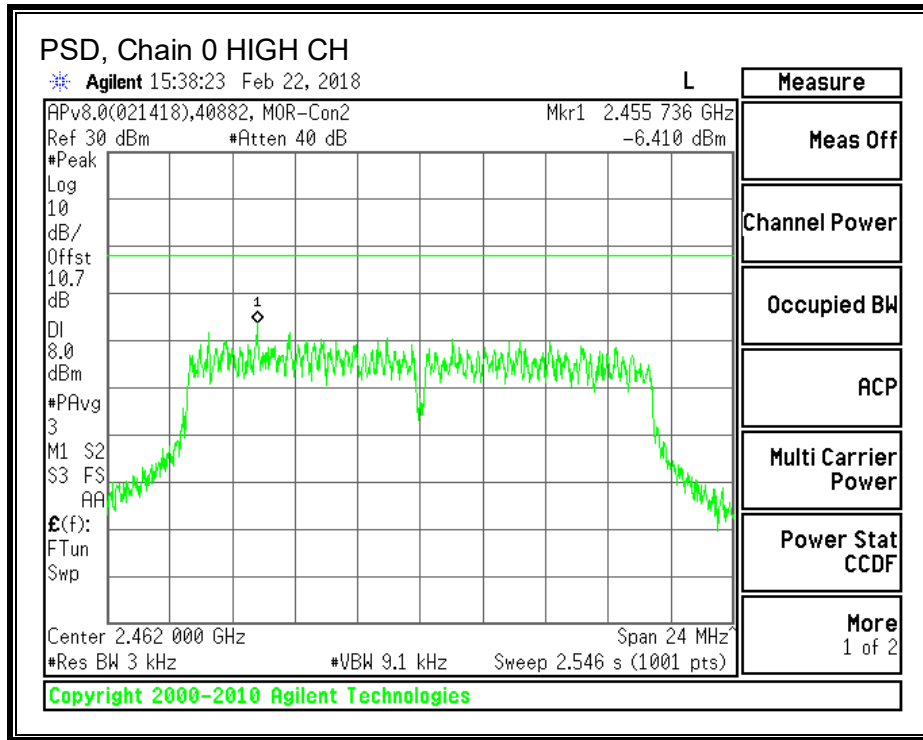
Project: 12053557

Tested By: Jeffrey Cabrera

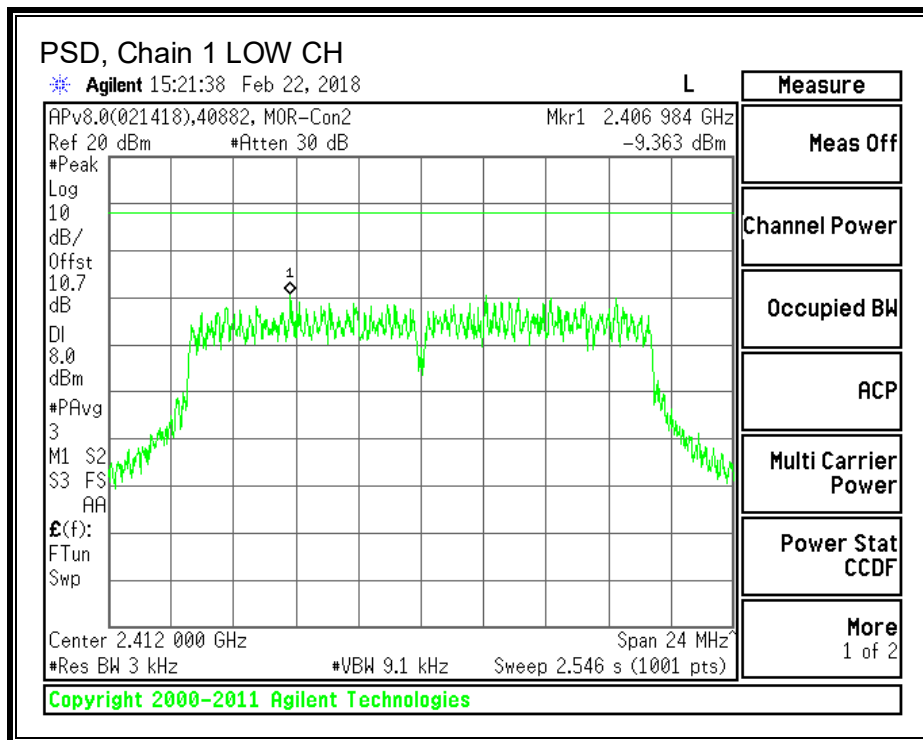
Note – Low and High channels were tested at mid channel power settings for worst-case results. The Mid channel power setting is same for all 802.11n HT20 antenna configs and data rates.

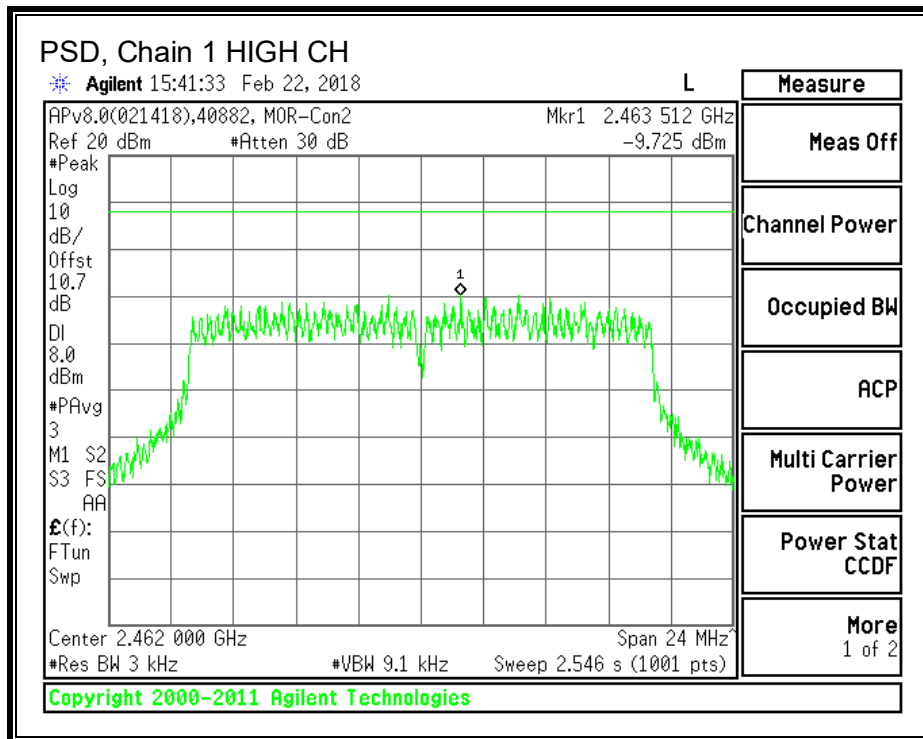
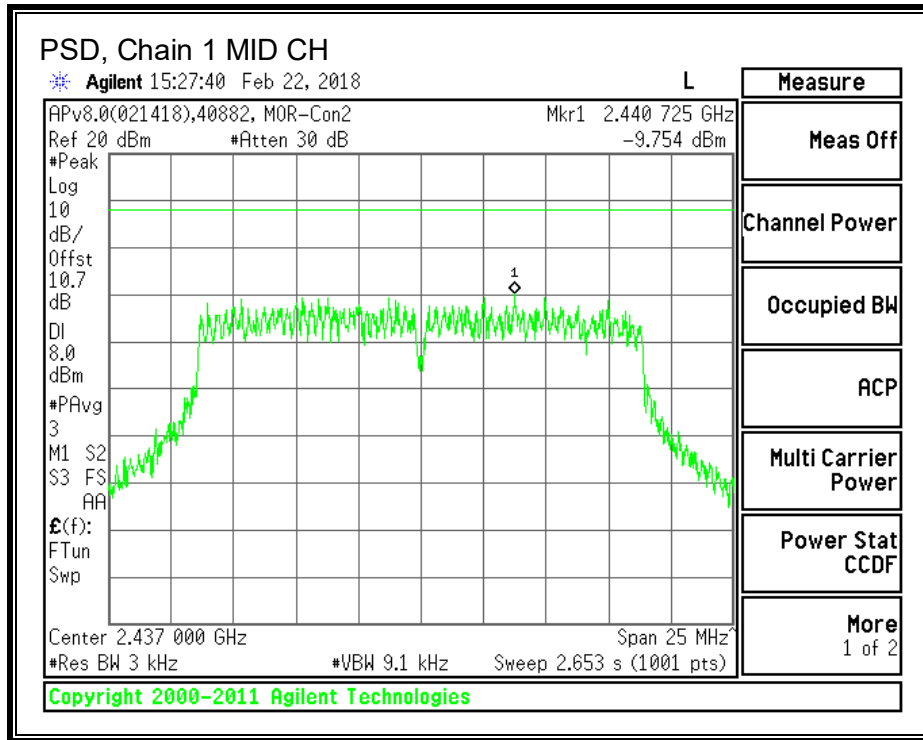
PSD, Chain 0





PSD, Chain 1





8.4.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

ISED RSS-247 Clause 5.5

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

TEST INFORMATION

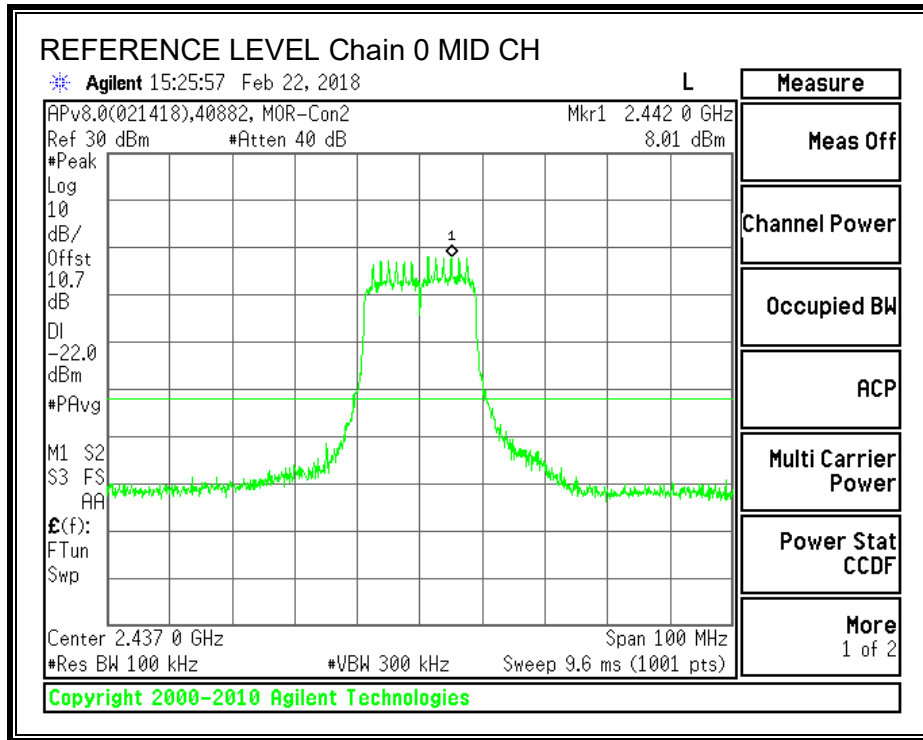
Test Date: 2018-02-22

Project: 12053557

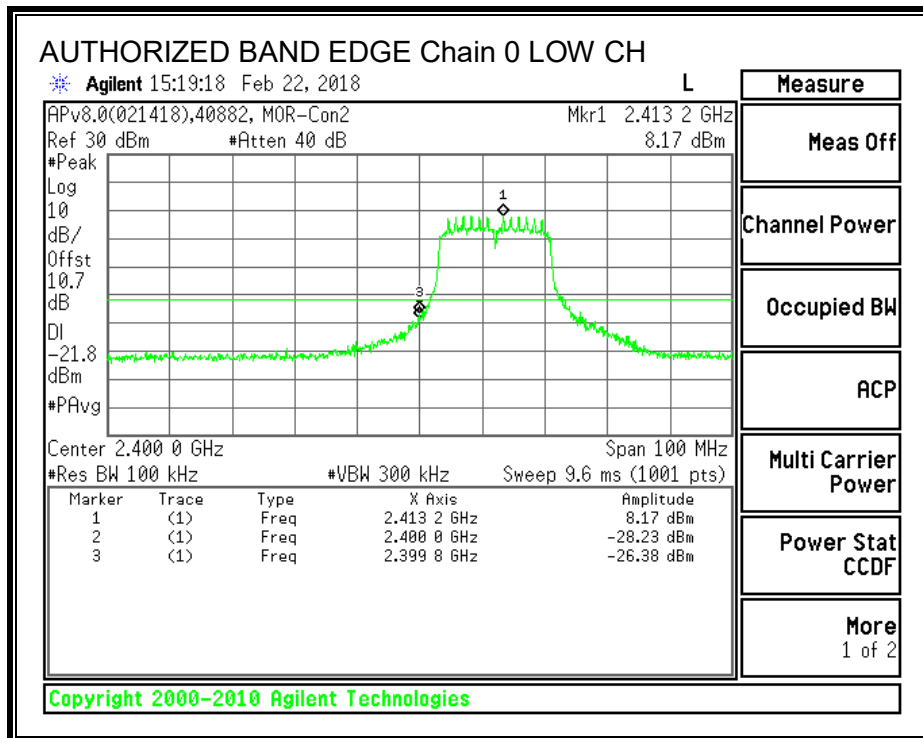
Tested By: Jeffrey Cabrera

Note – Low and High channels were tested at mid channel power settings for worst-case results. The Mid channel power setting is same for all 802.11n HT20 antenna configs and data rates.

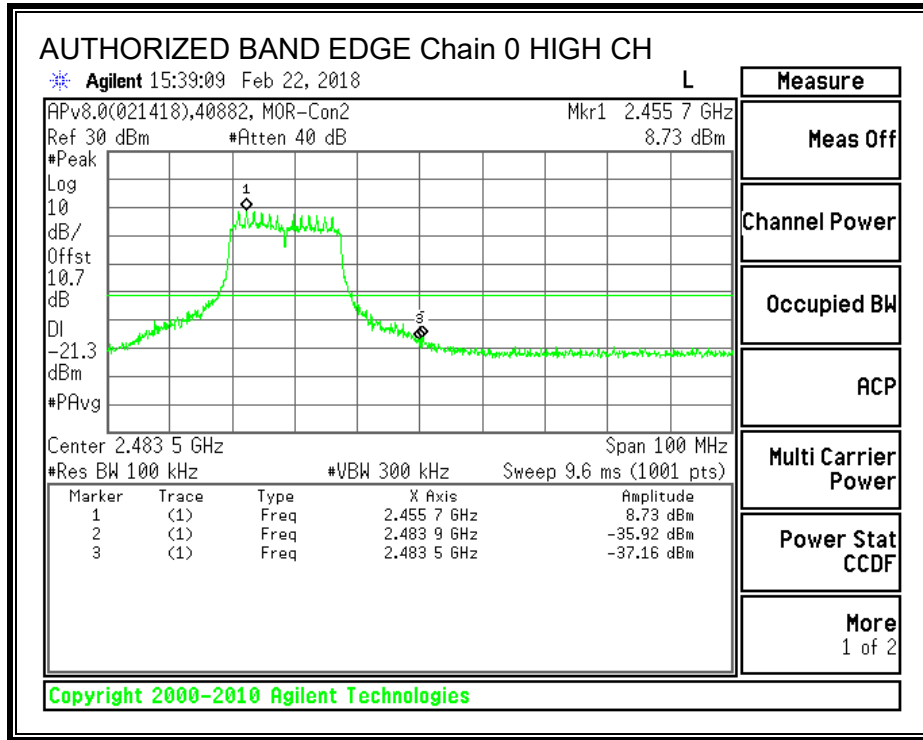
IN-BAND REFERENCE LEVEL, Chain 0



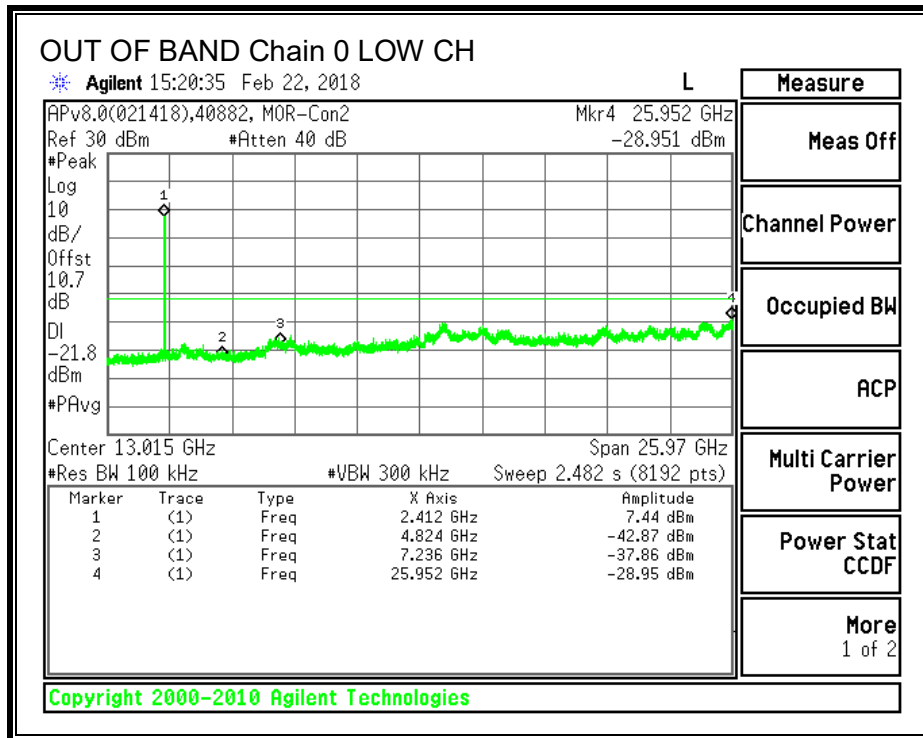
LOW CHANNEL BANDEDGE, Chain 0

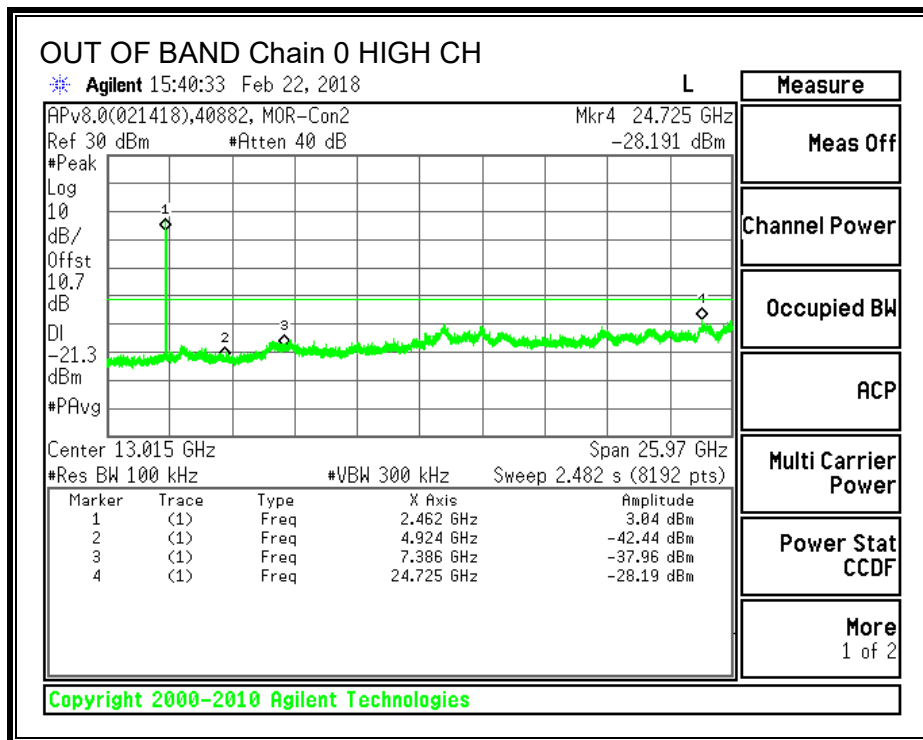
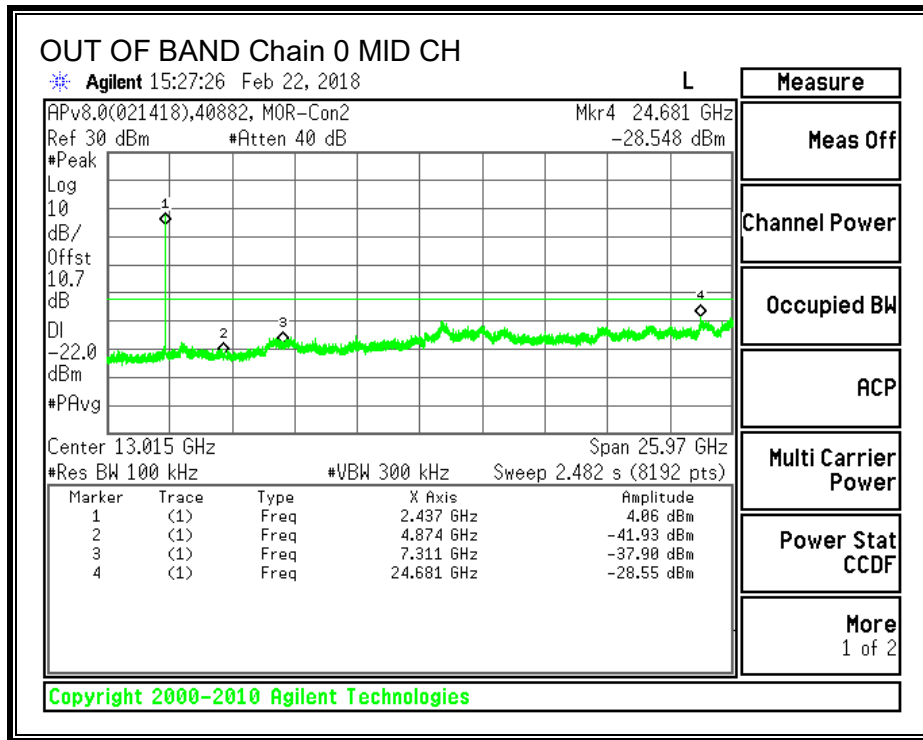


HIGH CHANNEL BANDEDGE, Chain 0

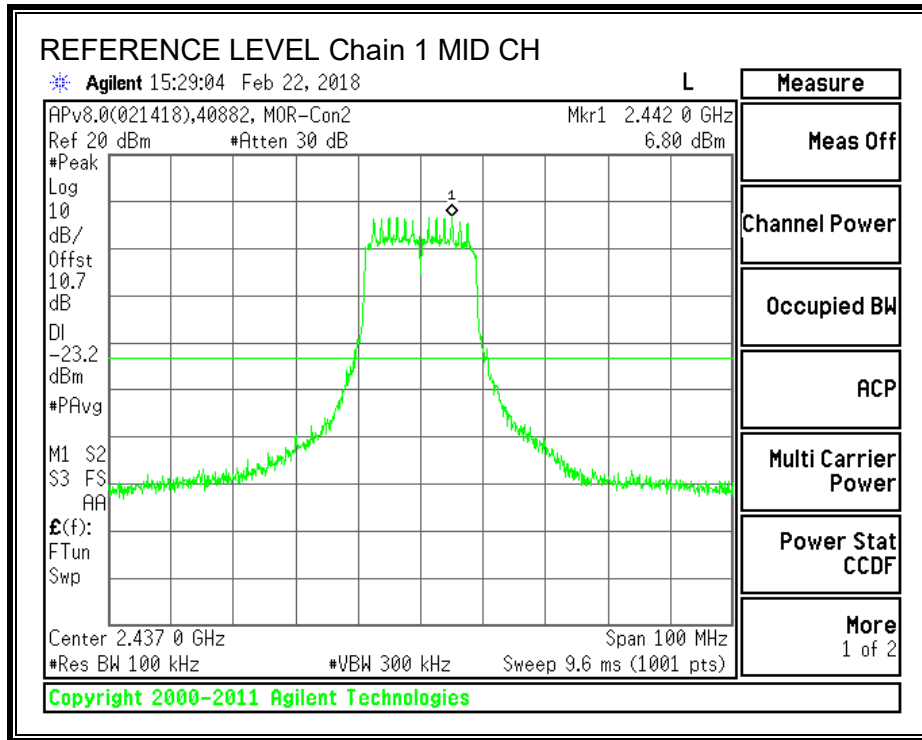


OUT-OF-BAND EMISSIONS, Chain 0

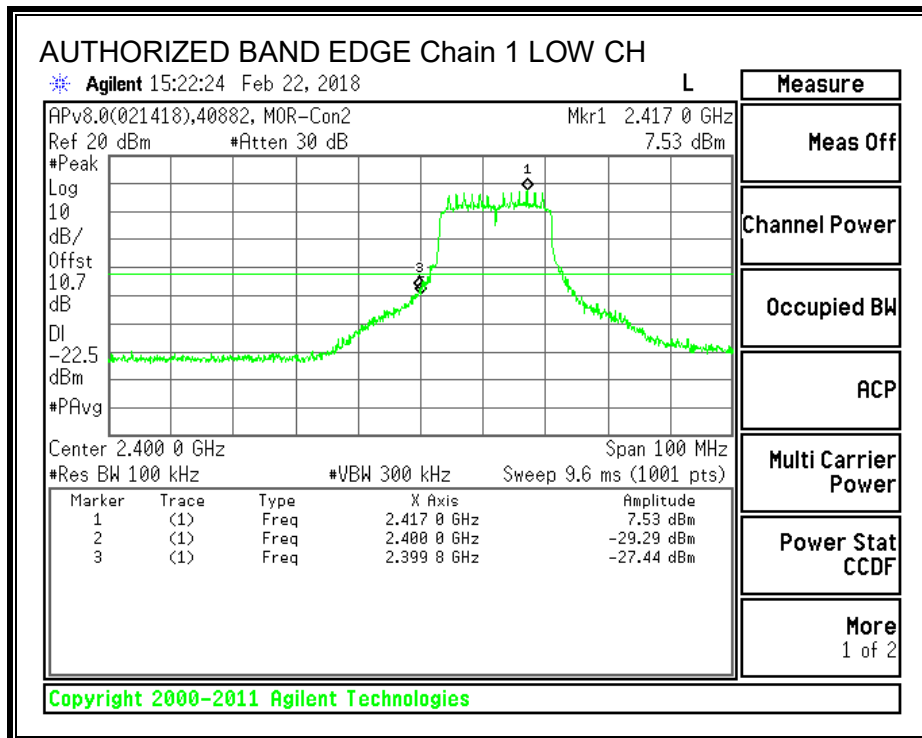




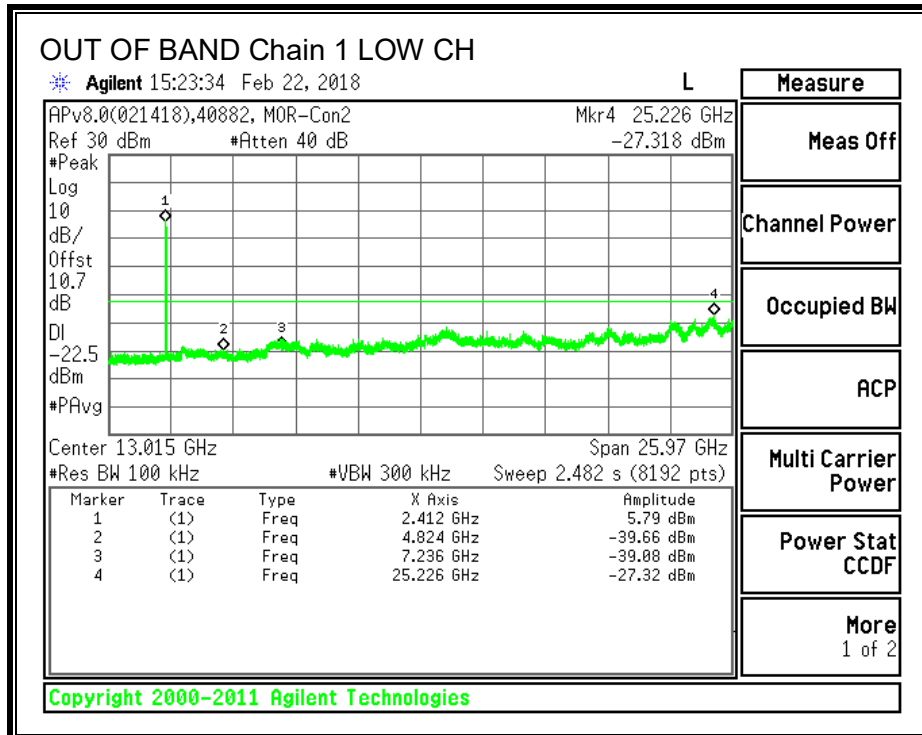
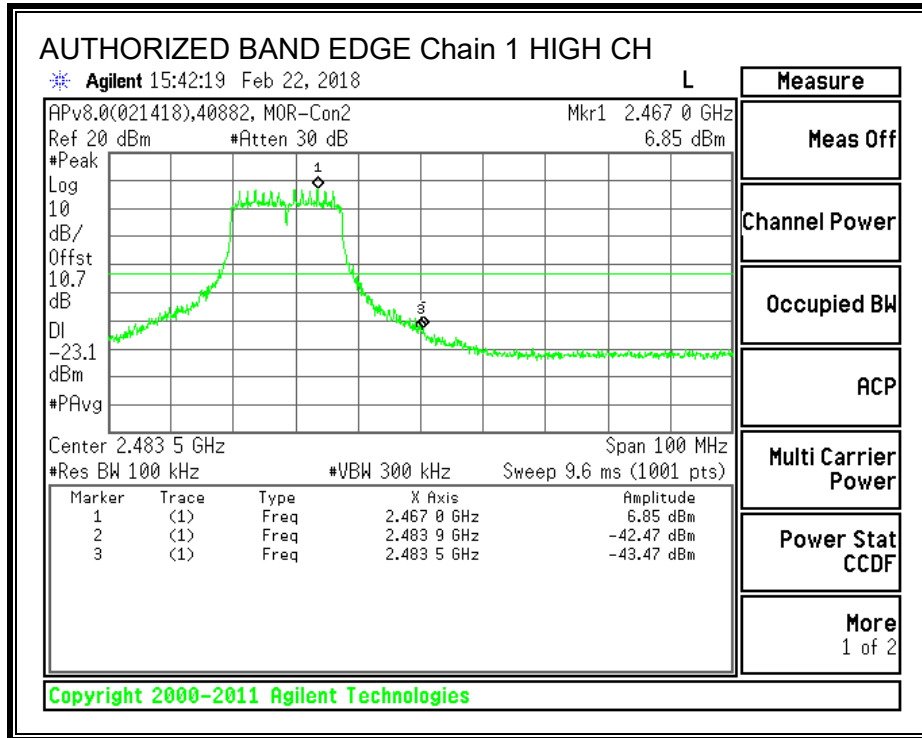
IN-BAND REFERENCE LEVEL, Chain 1

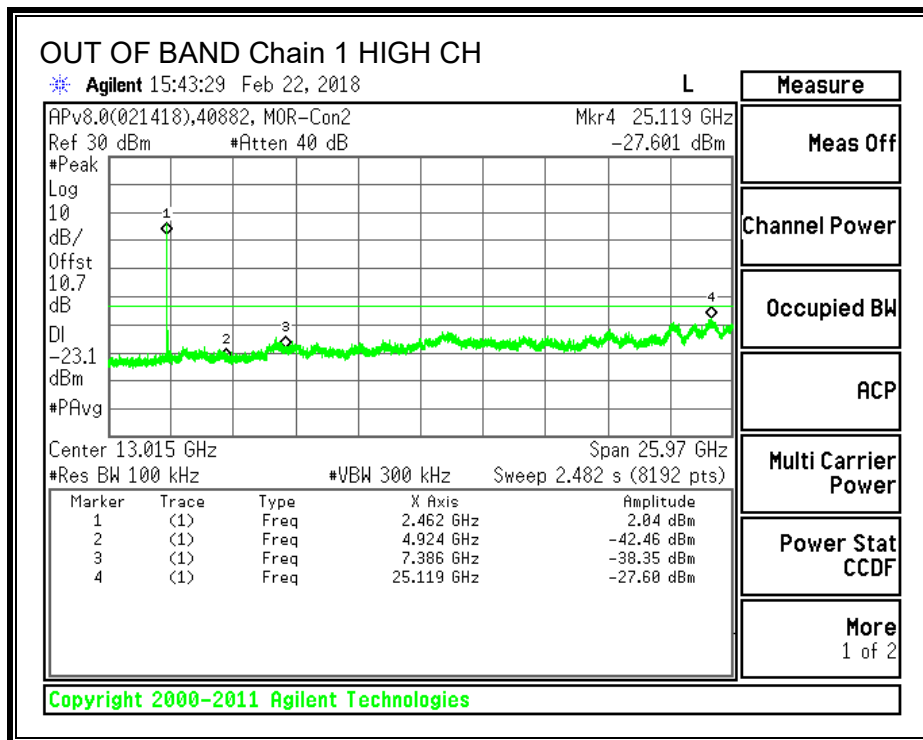
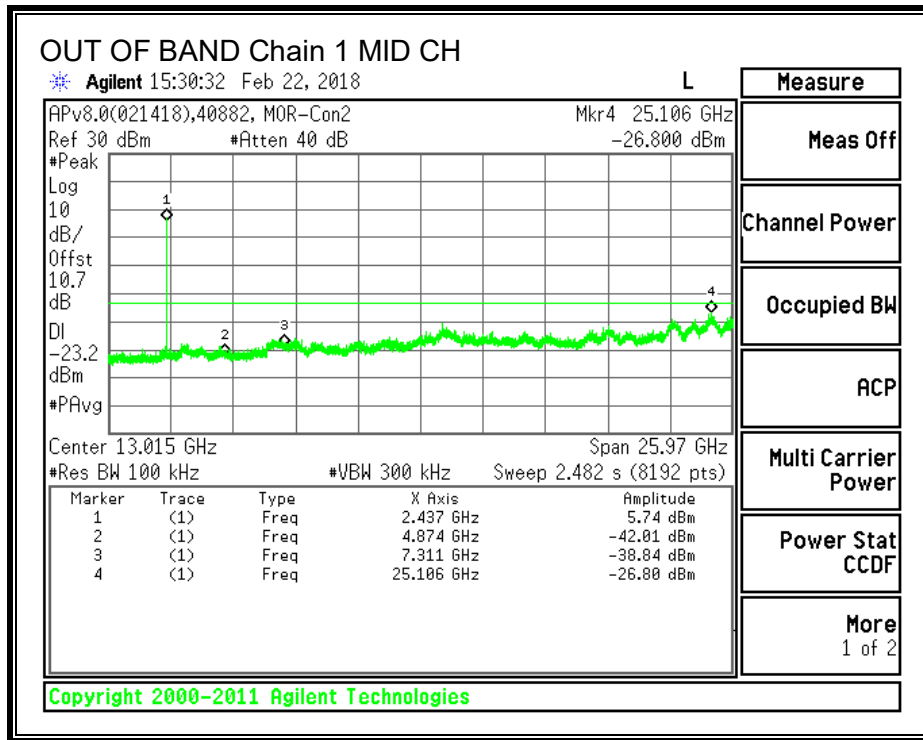


LOW CHANNEL BANDEDGE, Chain 1



HIGH CHANNEL BANDEDGE, Chain 1





8.5.802.11n HT40 MODE IN THE 2.4 GHz BAND

8.5.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

ISED RSS-247 Clause 5.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low	2422	35.120	35.200	0.5
Mid	2437	35.120	35.440	0.5
High	2452	35.120	35.440	0.5

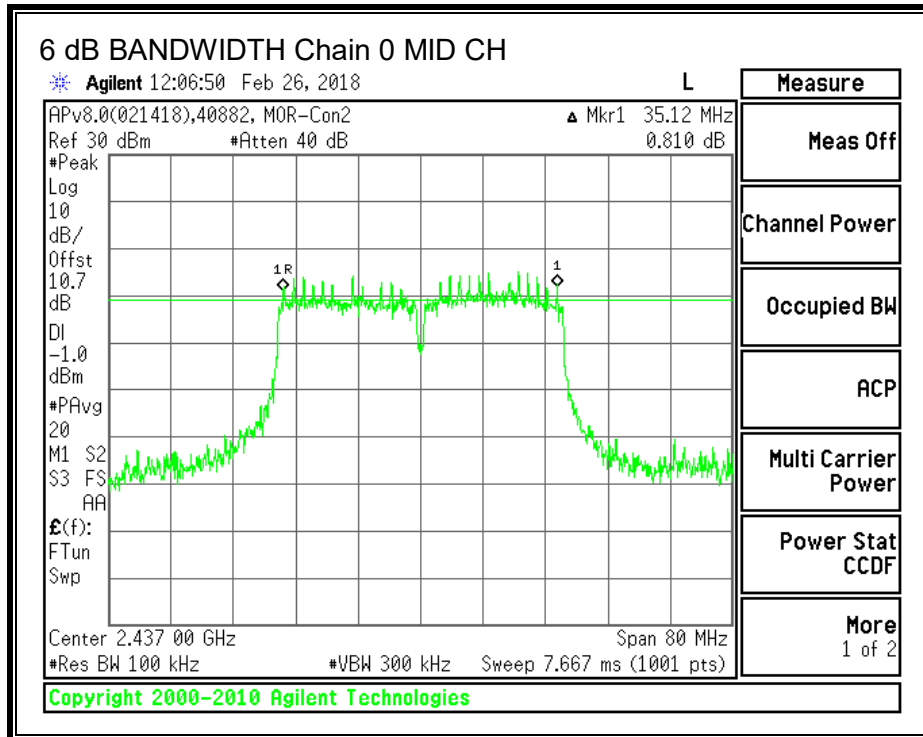
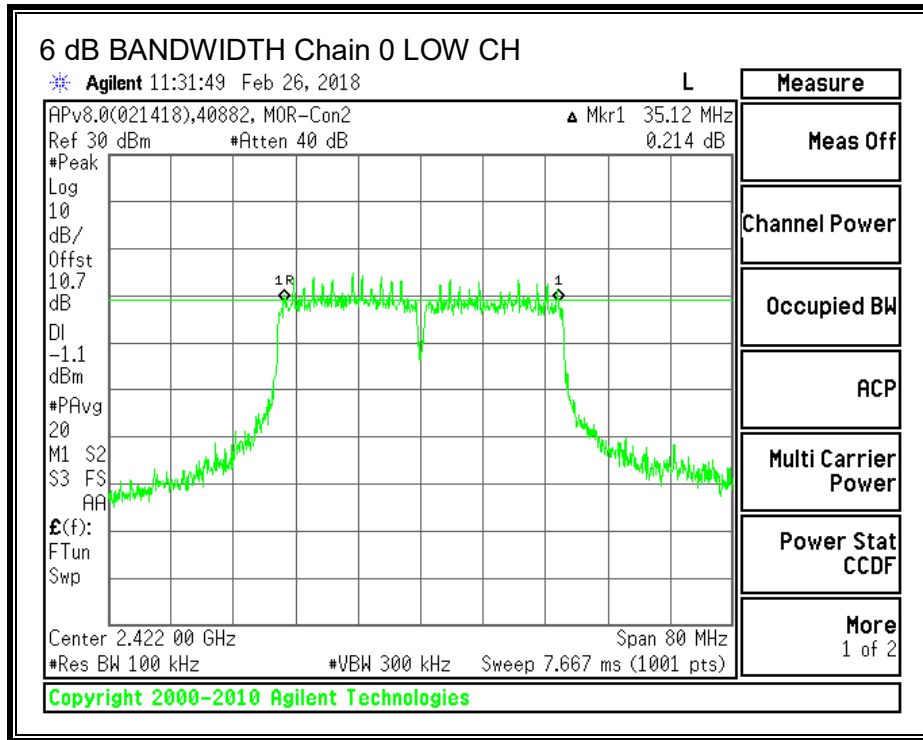
TEST INFORMATION

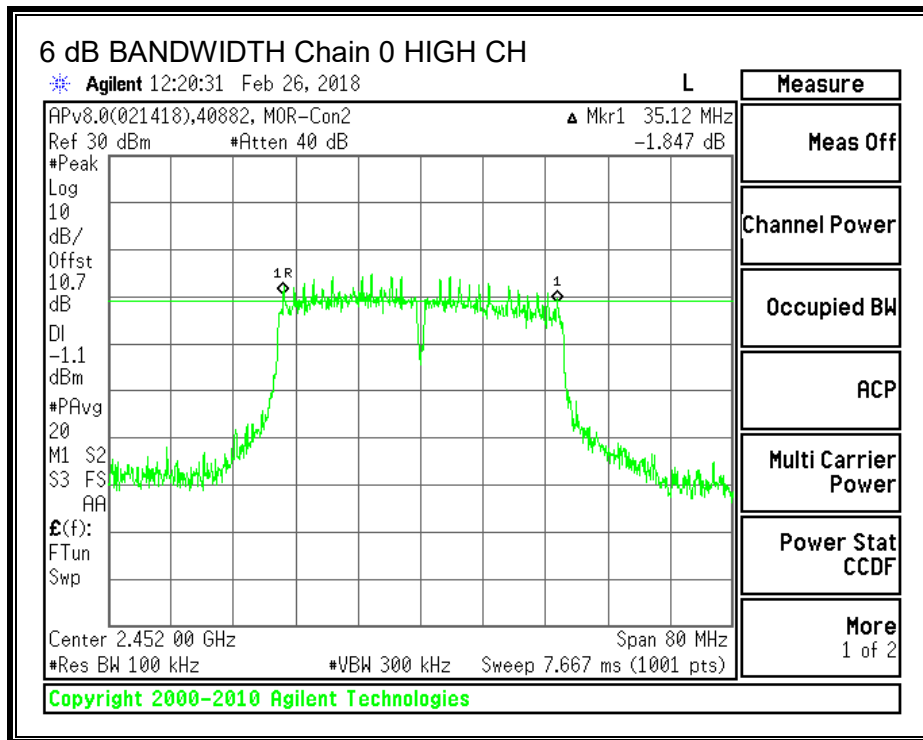
Test Date: 2018-02-26

Project: 12053557

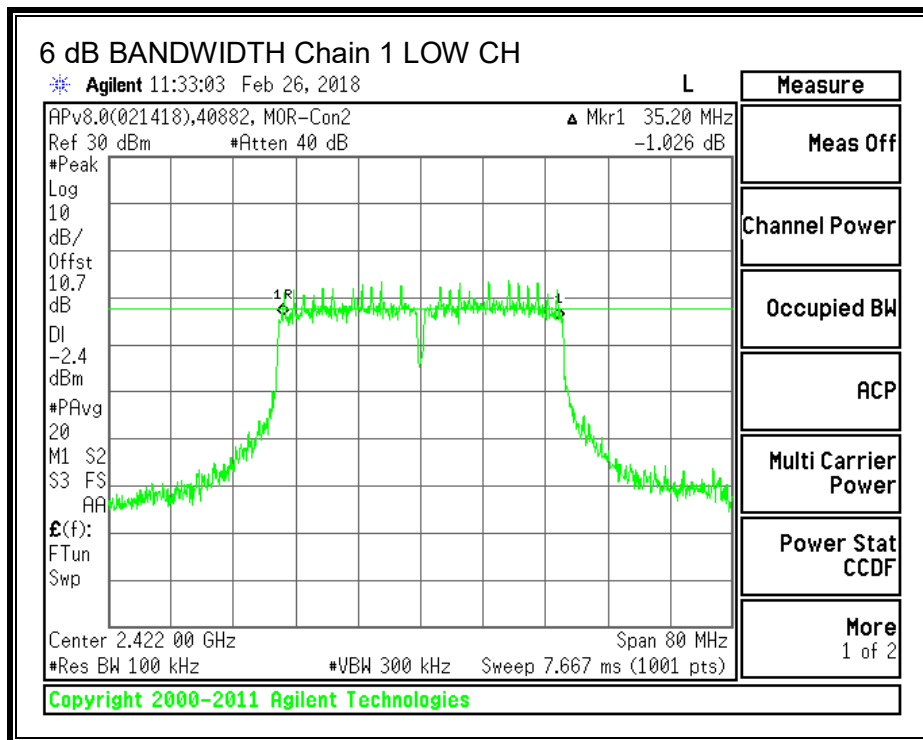
Tested By: Jeffrey Cabrera

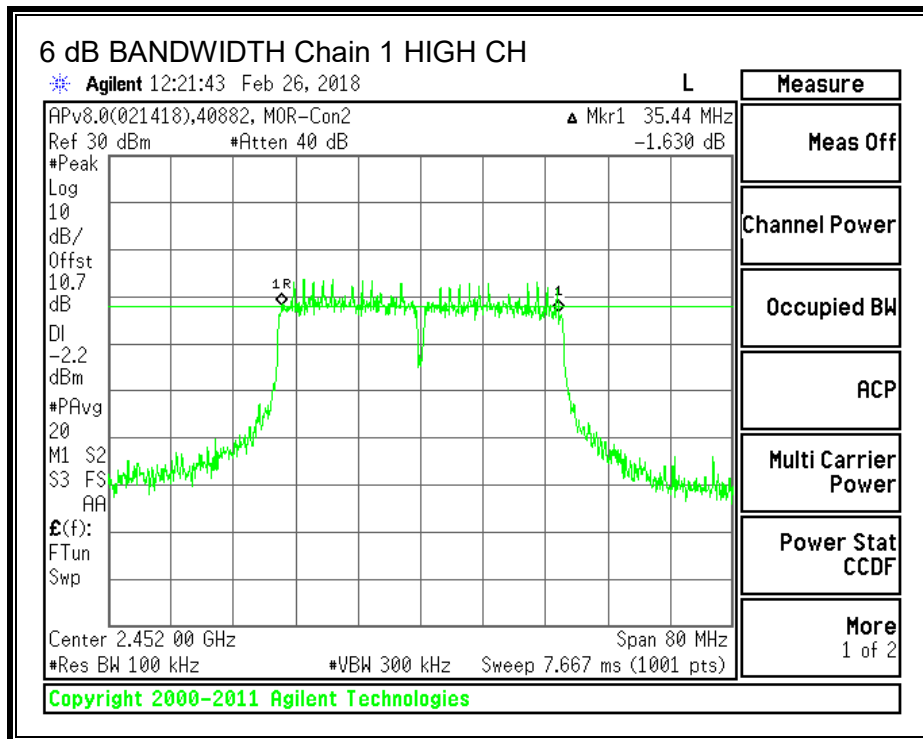
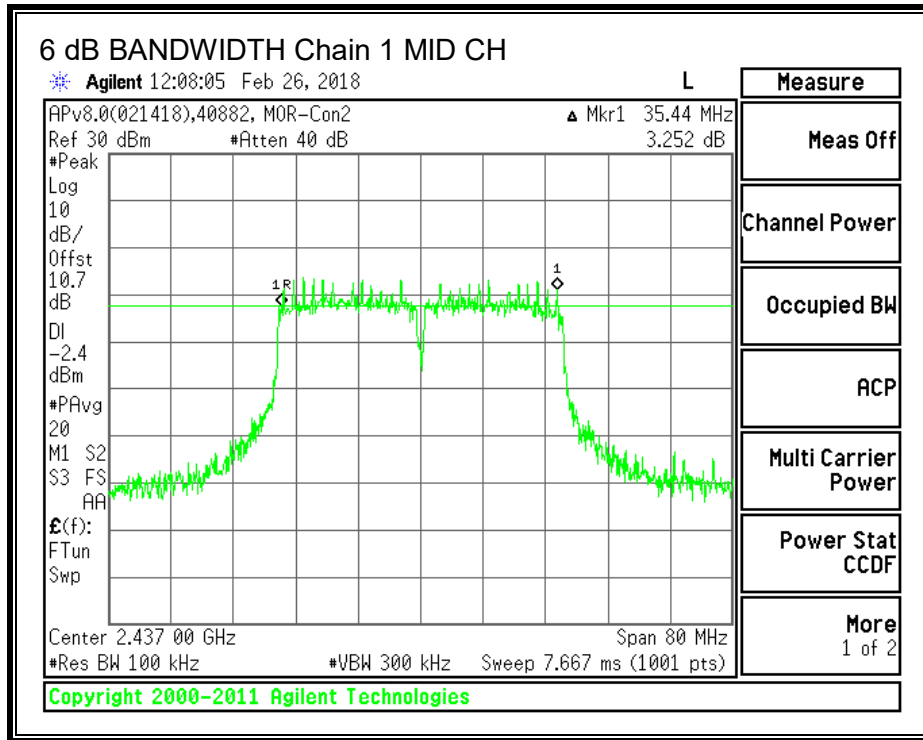
6 dB BANDWIDTH, Chain 0





6 dB BANDWIDTH, Chain 1





8.5.1. 99% BANDWIDTH LIMITS

None; for reporting purposes only.

TEST PROCEDURE

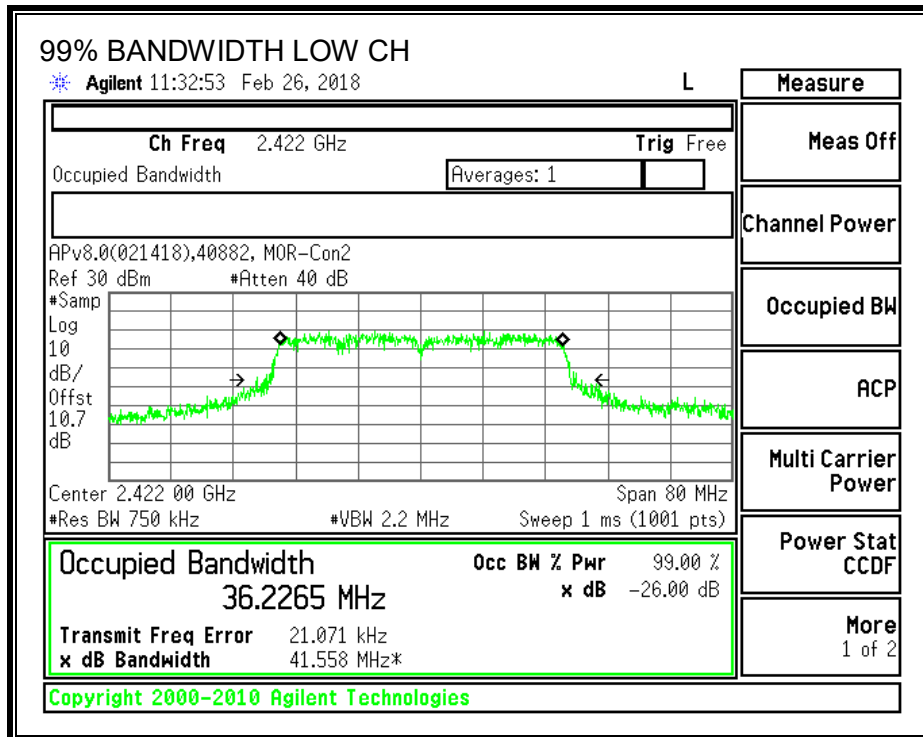
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 5% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

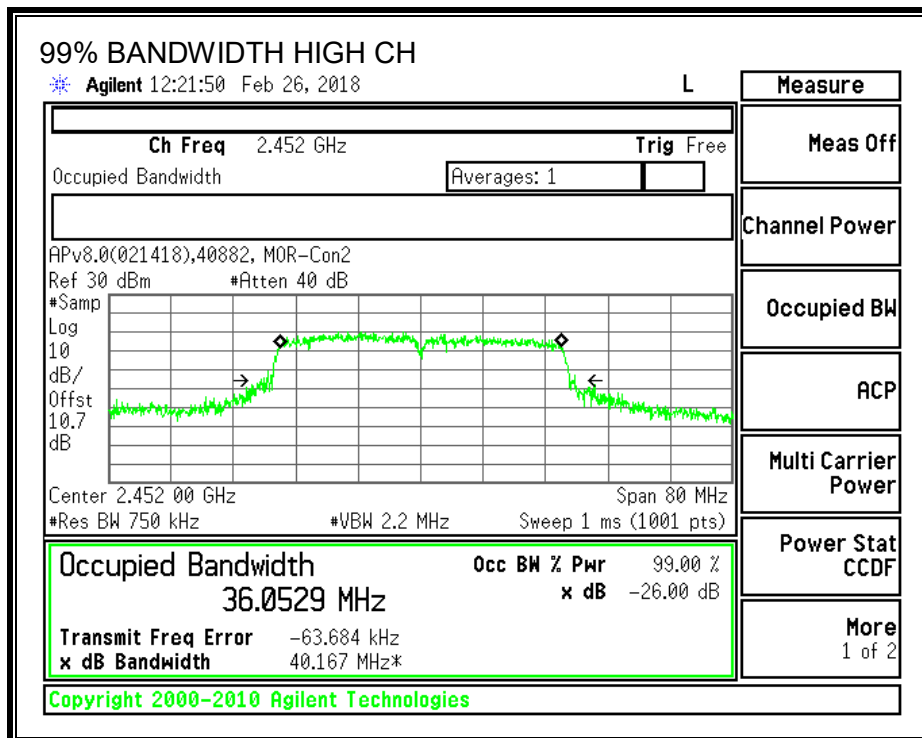
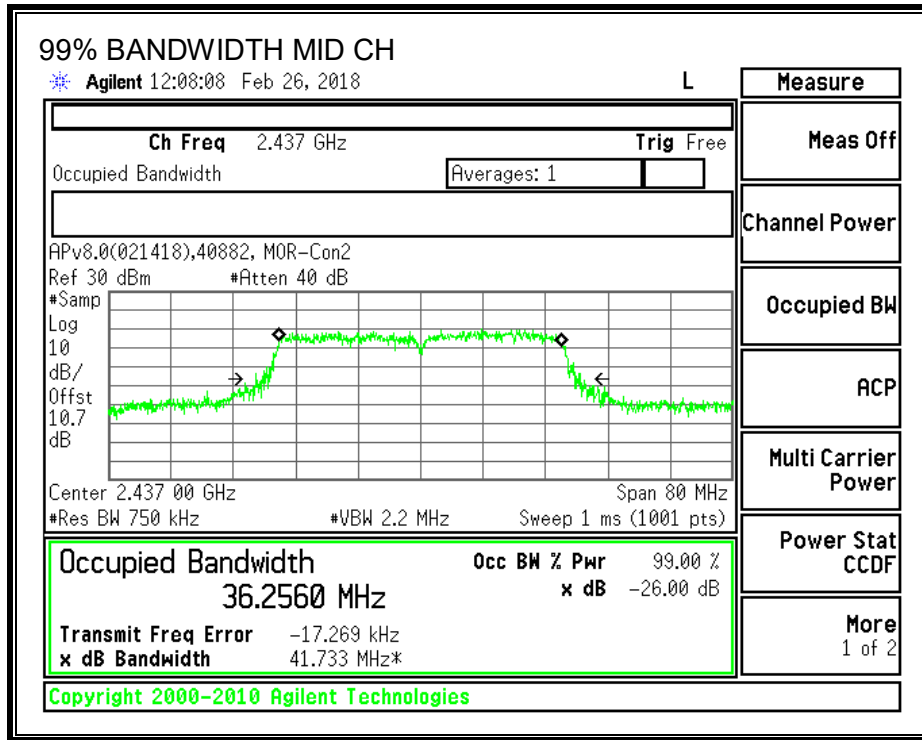
Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Low	2422	36.227	36.192
Middle	2437	36.256	36.071
High	2452	36.053	36.316

TEST INFORMATION

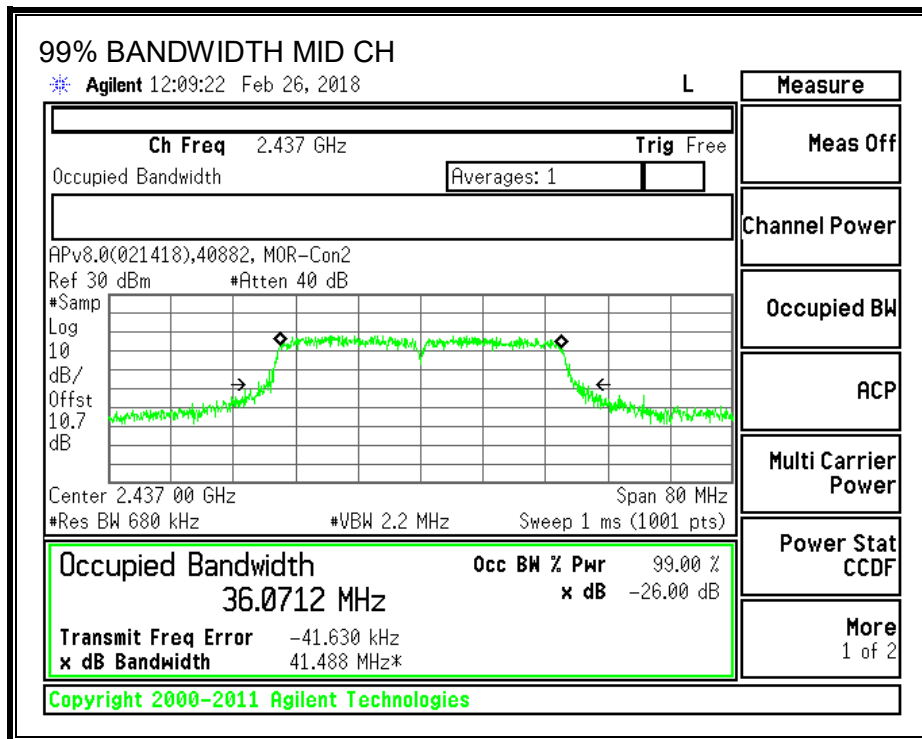
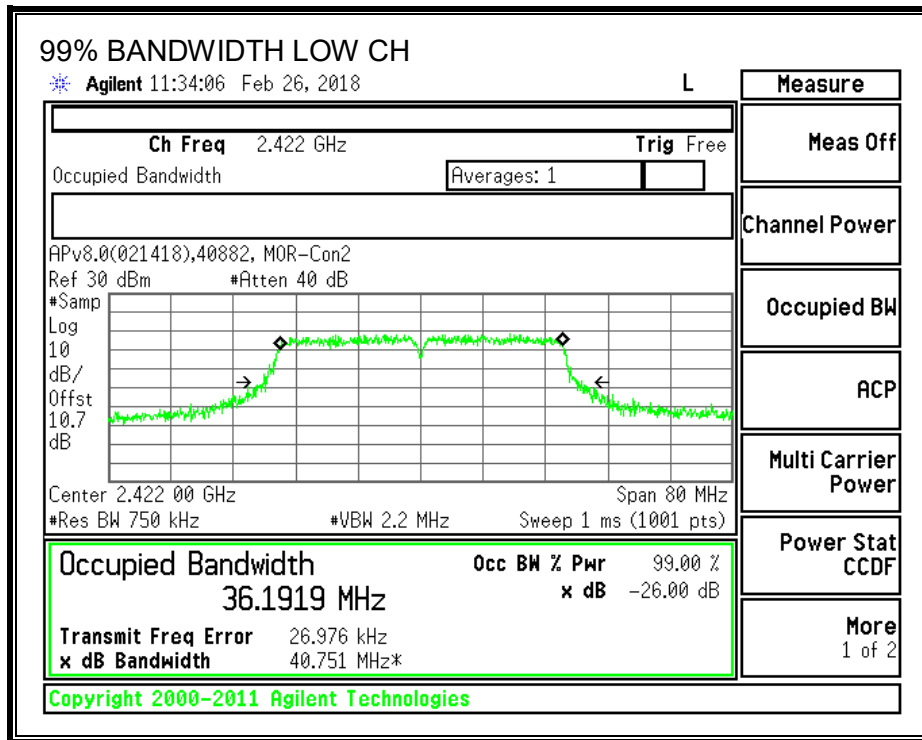
Test Date: 2018-02-26
 Project: 12053557
 Tested By: Jeffrey Cabrera

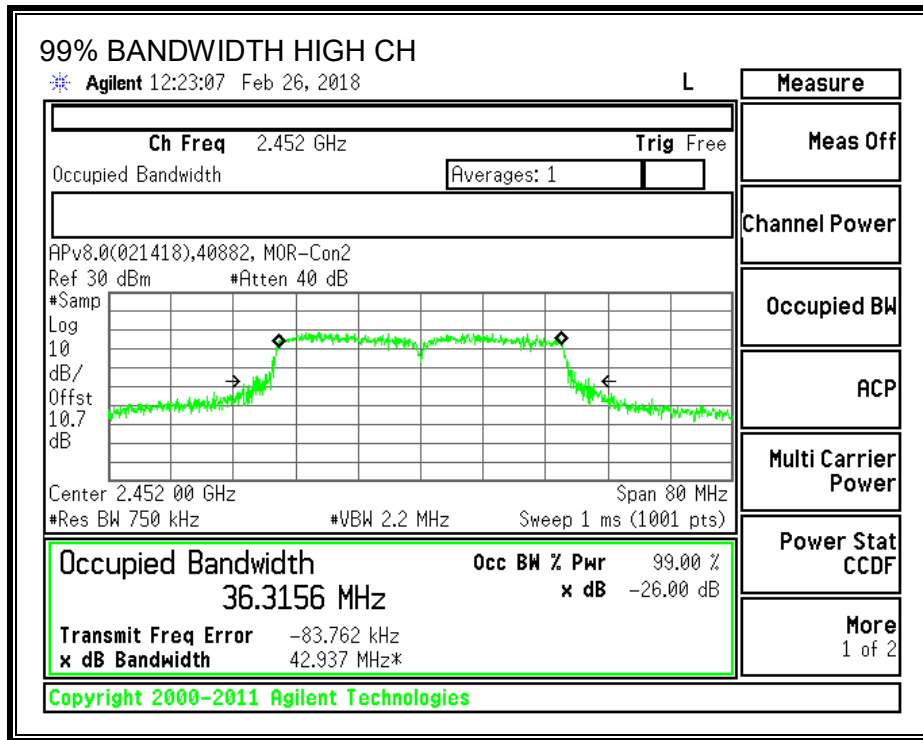
99% BANDWIDTH – Chain 0





99% BANDWIDTH – Chain 1





8.5.2. OUTPUT POWER – EXTERNAL ANTENNA

LIMITS

FCC §15.247 (b)(3)

ISED RSS-247 Clauses 5.4 (d)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Directional Gain (dBi)
1.34	1.34	1.34

TEST INFORMATION

Test Date: 2018-02-22 and 2018-03-19

Project: 12053557

Tested By: Eric McCalister / Niklas Haydon

RESULTS MCS0

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
3	2422	1.34	30.00	30	36	30.00
4	2427	1.34	30.00	30	36	30.00
5	2432	1.34	30.00	30	36	30.00
6	2437	1.34	30.00	30	36	30.00
9	2452	1.34	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
3	2422	9.50	9.41	12.47	30.00	-17.53
4	2427	11.39	11.19	14.30	30.00	-15.70
5	2432	14.29	13.27	16.82	30.00	-13.18
6	2437	14.89	14.47	17.70	30.00	-12.30
9	2452	14.48	14.05	17.28	30.00	-12.72

Note: Measurements are gated AVG

RESULTS MCS7

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
3	2422	1.34	30.00	30	36	30.00
4	2427	1.34	30.00	30	36	30.00
5	2432	1.34	30.00	30	36	30.00
6	2437	1.34	30.00	30	36	30.00
7	2442	1.34	30.00	30	36	30.00
8	2447	1.34	30.00	30	36	30.00
9	2452	1.34	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
3	2422	9.30	9.58	12.45	30.00	-17.55
4	2427	10.29	10.41	13.36	30.00	-16.64
5	2432	14.47	13.78	17.15	30.00	-12.85
6	2437	13.34	12.69	16.04	30.00	-13.96
7	2442	13.09	12.83	15.97	30.00	-14.03
8	2447	11.82	11.75	14.80	30.00	-15.20
9	2452	11.68	11.99	14.85	30.00	-15.15

Note: Measurements are gated AVG

8.5.3. OUTPUT POWER – ETCHED PCB ANTENNA

LIMITS

FCC §15.247 (b)(3)

ISED RSS-247 Clauses 5.4 (d)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Directional Gain (dBi)
3.34	1.61	2.56

TEST INFORMATION

Test Date: 2018-02-22 and 2018-03-19

Project: 12053557

Tested By: Eric McCalister / Niklas Haydon

RESULTS MCS0

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
3	2422	2.56	30.00	30	36	30.00
4	2427	2.56	30.00	30	36	30.00
5	2432	2.56	30.00	30	36	30.00
6	2437	2.56	30.00	30	36	30.00
7	2442	2.56	30.00	30	36	30.00
8	2447	2.56	30.00	30	36	30.00
9	2452	2.56	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
3	2422	11.58	10.37	14.03	30.00	-15.97
4	2427	11.39	11.19	14.30	30.00	-15.70
5	2432	13.49	13.65	16.58	30.00	-13.42
6	2437	13.00	12.59	15.81	30.00	-14.19
7	2442	12.83	12.39	15.63	30.00	-14.37
8	2447	12.74	12.63	15.70	30.00	-14.30
9	2452	11.47	11.46	14.48	30.00	-15.52

Note: Measurement is gated AVG

RESULTS MCS7

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
3	2422	2.56	30.00	30	36	30.00
4	2427	2.56	30.00	30	36	30.00
5	2432	2.56	30.00	30	36	30.00
6	2437	2.56	30.00	30	36	30.00
7	2442	2.56	30.00	30	36	30.00
8	2447	2.56	30.00	30	36	30.00
9	2452	2.56	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
3	2422	10.95	10.40	13.69	30.00	-16.31
4	2427	12.77	11.53	15.20	30.00	-14.80
5	2432	14.47	13.78	17.15	30.00	-12.85
6	2437	13.34	12.69	16.04	30.00	-13.96
7	2442	13.09	12.83	15.97	30.00	-14.03
8	2447	11.82	11.75	14.80	30.00	-15.20
9	2452	11.68	11.99	14.85	30.00	-15.15

Note: Measurement is gated AVG

8.5.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

ISED RSS-247 5.2 (b)

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

RESULTS

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Chain 1 Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2422	-11.64	-13.40	-9.42	8.0	-17.4
Mid	2437	-11.28	-11.79	-8.52	8.0	-16.5
High	2452	-11.27	-12.89	-8.99	8.0	-17.0

Note – Low and High channels were tested at mid channel power settings for worst-case results. The Mid channel power setting is same for all 802.11n HT40 antenna configs and data rates.

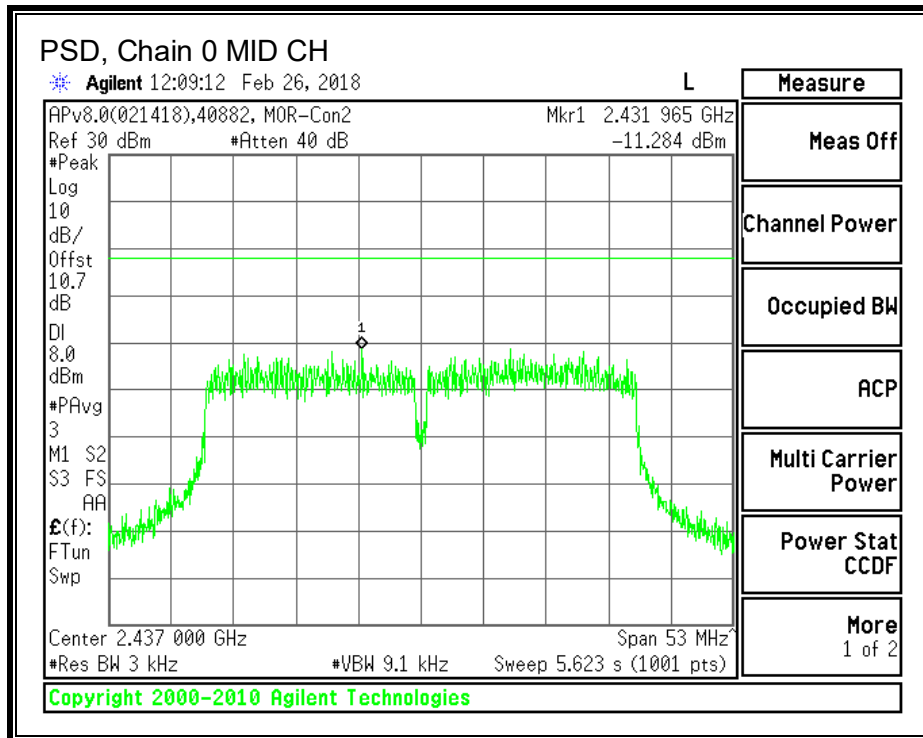
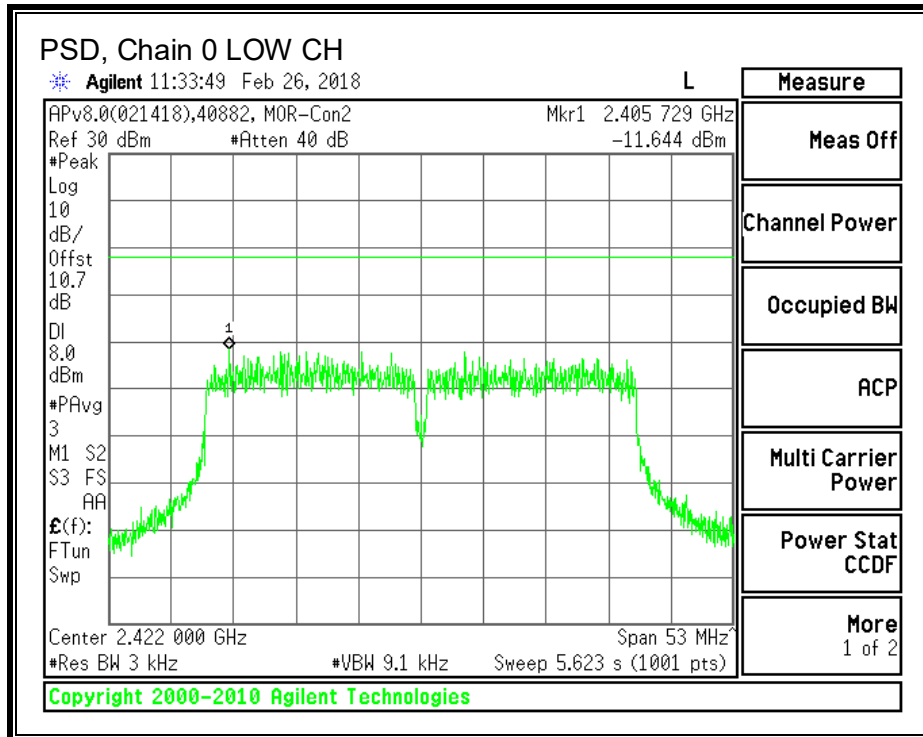
TEST INFORMATION

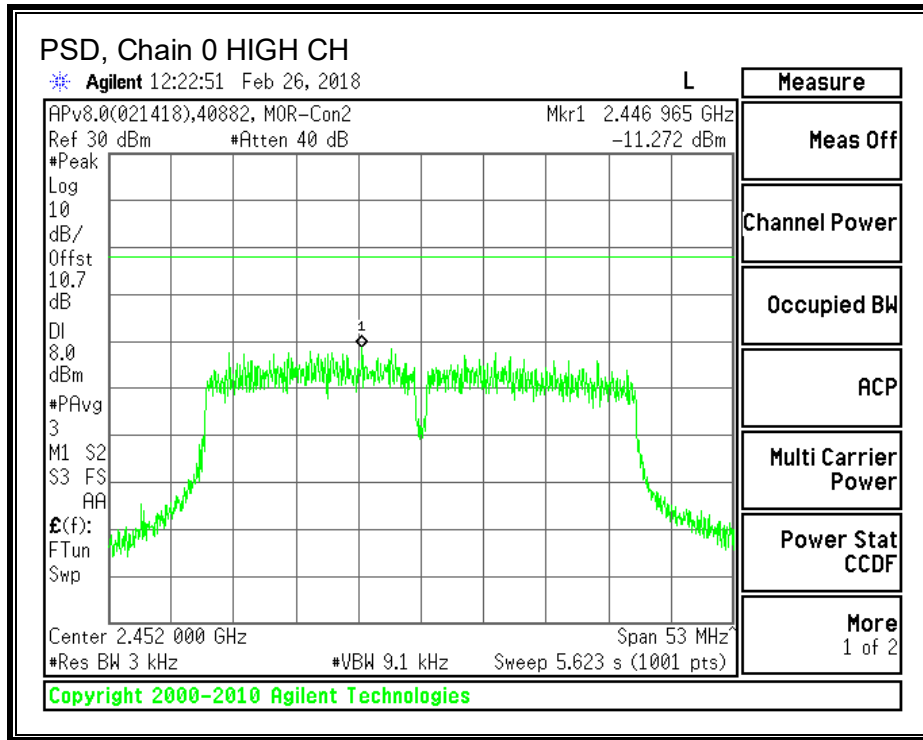
Test Date: 2018-02-26

Project: 12053557

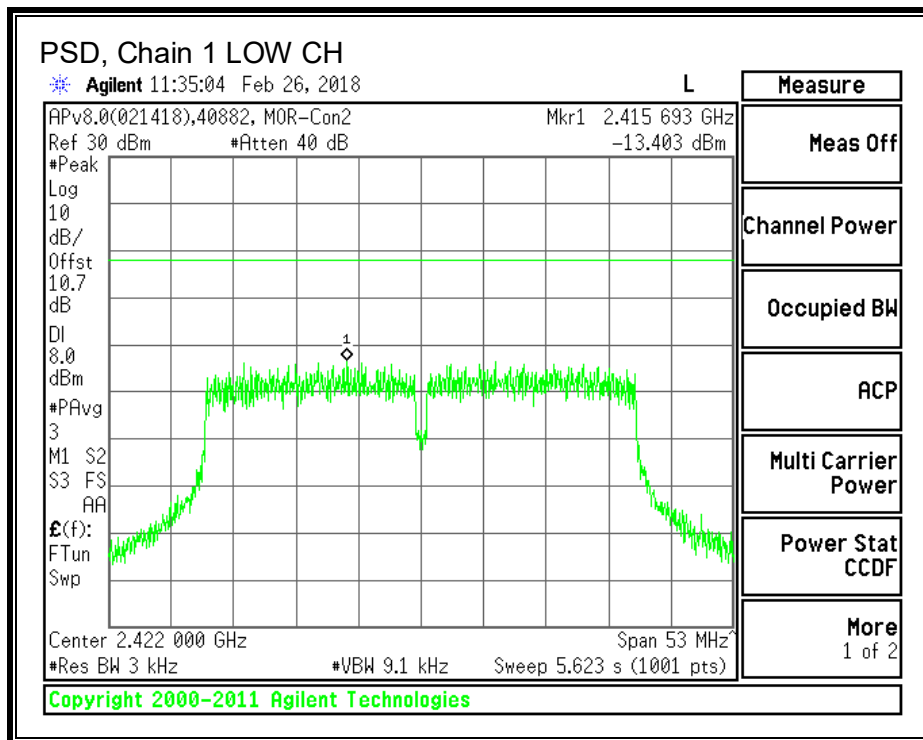
Tested By: Jeffrey Cabrera

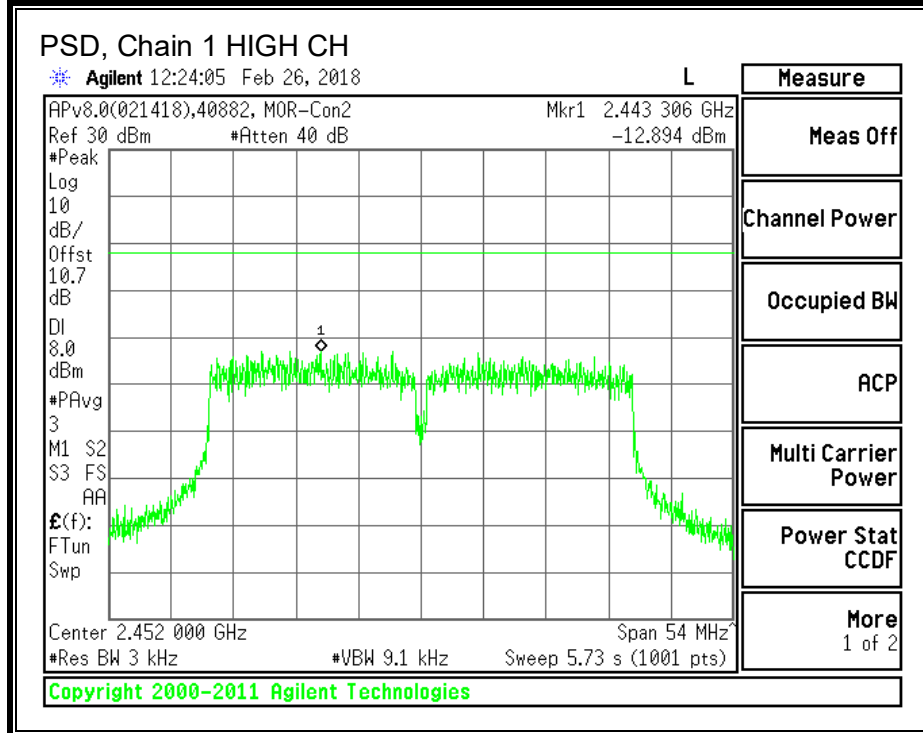
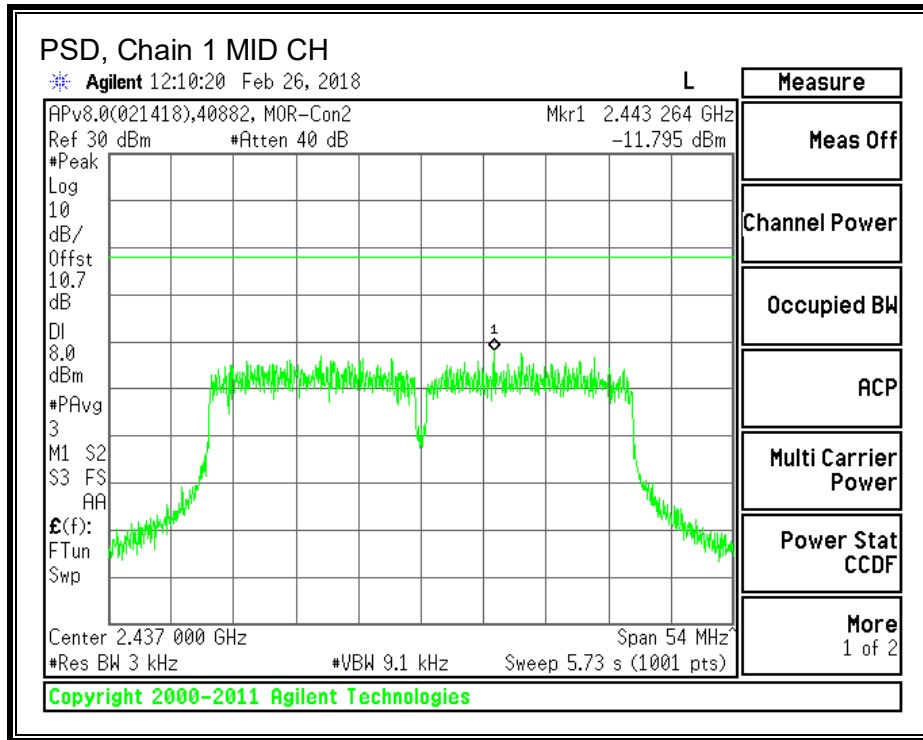
PSD, Chain 0





PSD, Chain 1





8.5.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

ISED RSS-247 Clause 5.5

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

TEST INFORMATION

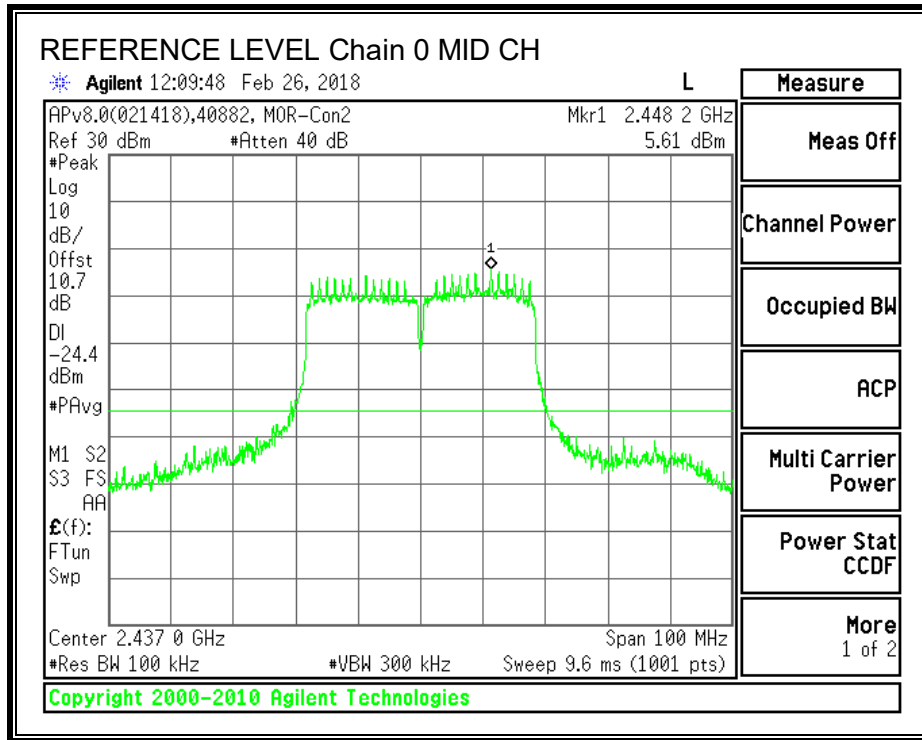
Test Date: 2018-02-26

Project: 12053557

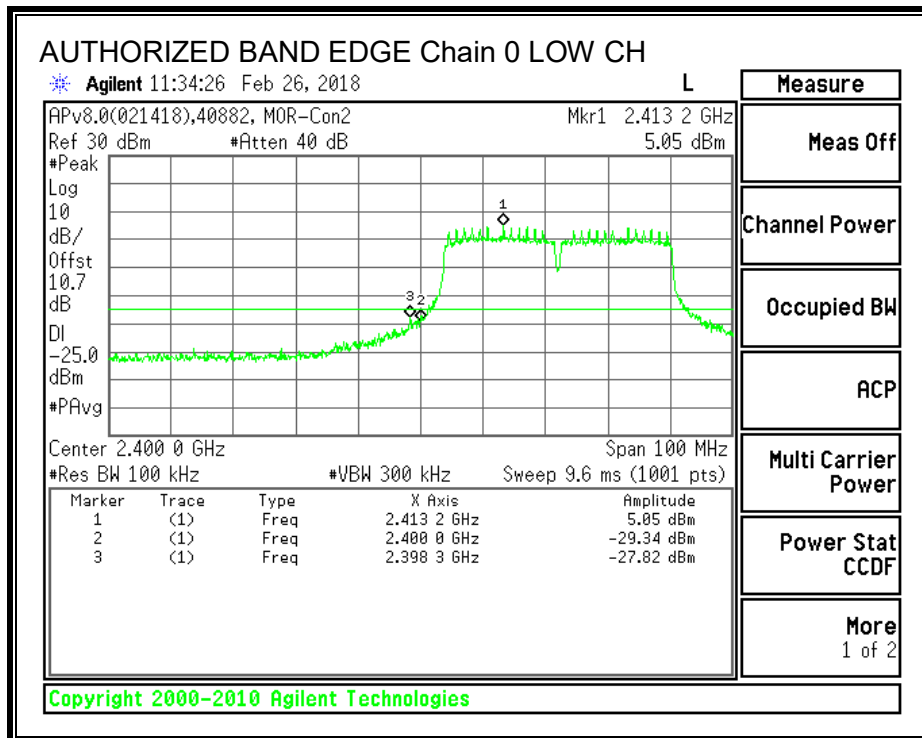
Tested By: Jeffrey Cabrera

Note – Low and High channels were tested at mid channel power settings for worst-case results. The Mid channel power setting is same for all 802.11n HT40 antenna configs and data rates.

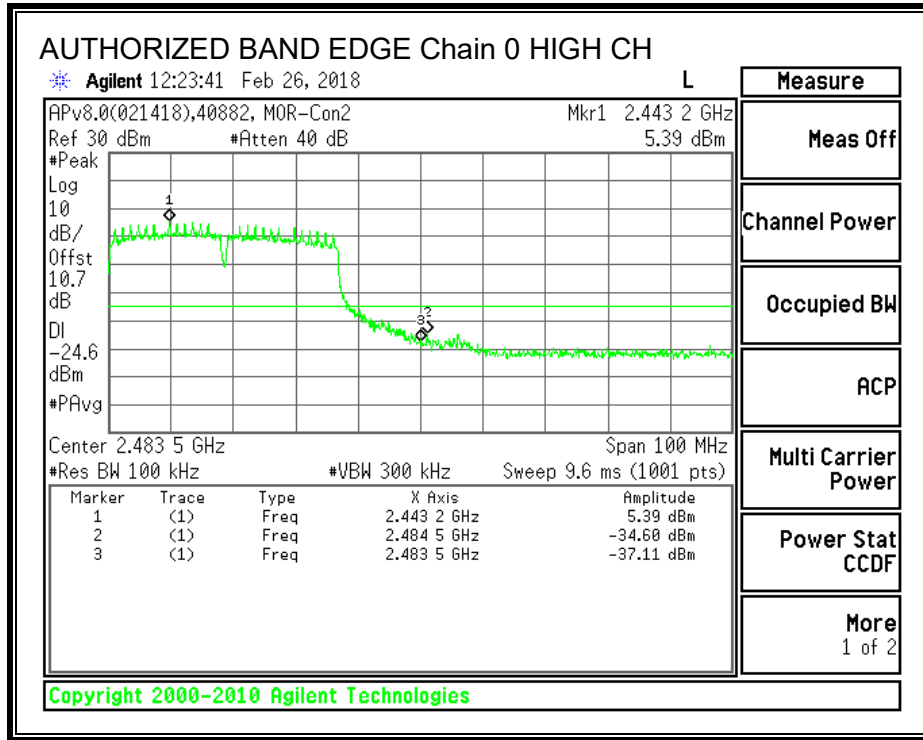
IN-BAND REFERENCE LEVEL, Chain 0



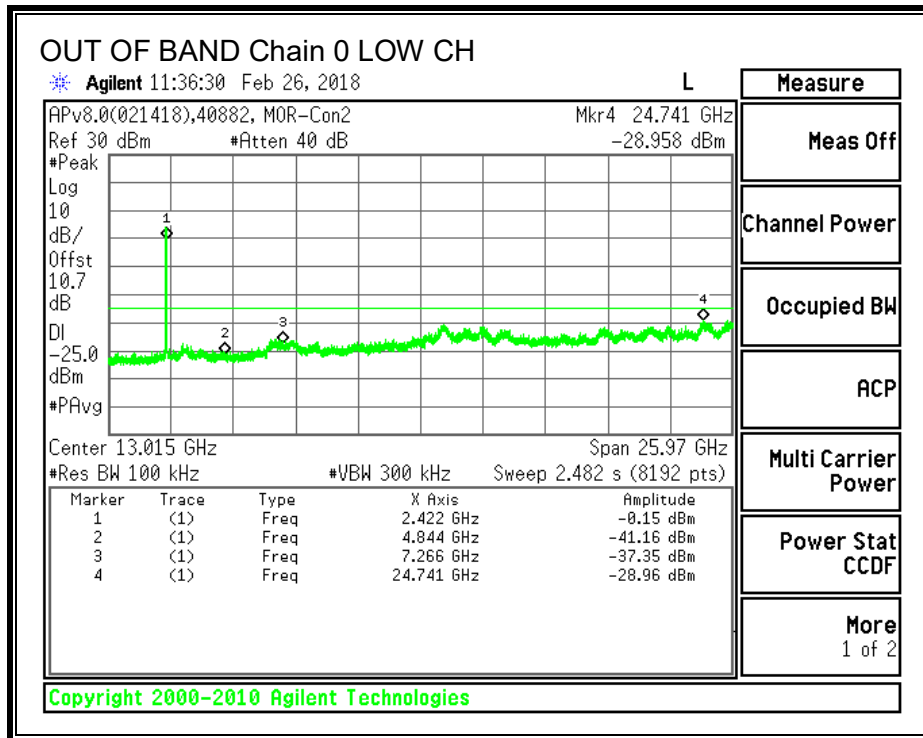
LOW CHANNEL BANDEDGE, Chain 0

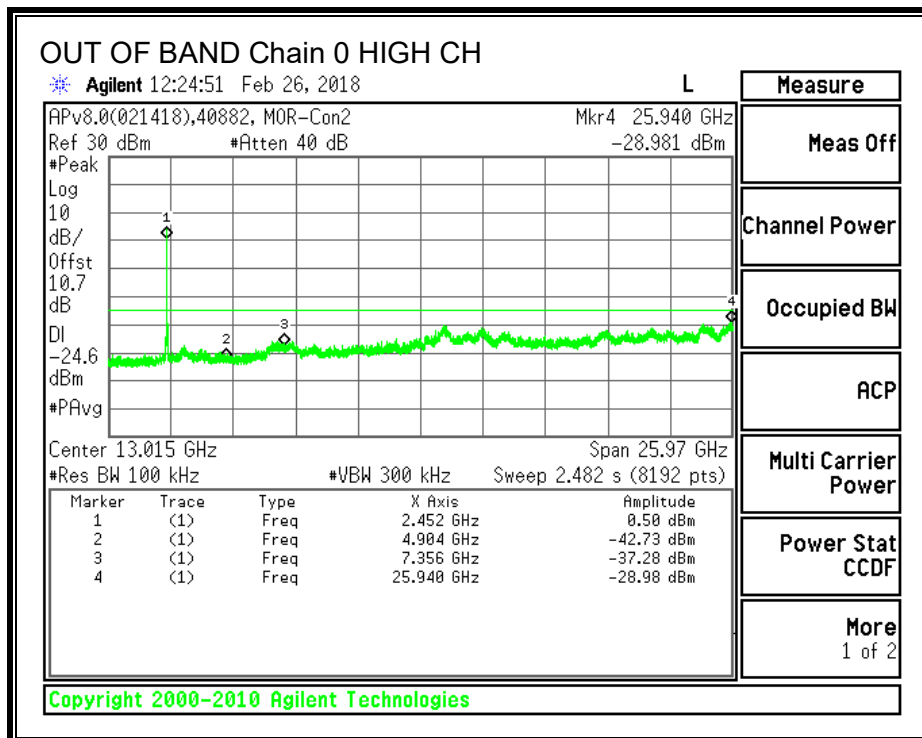
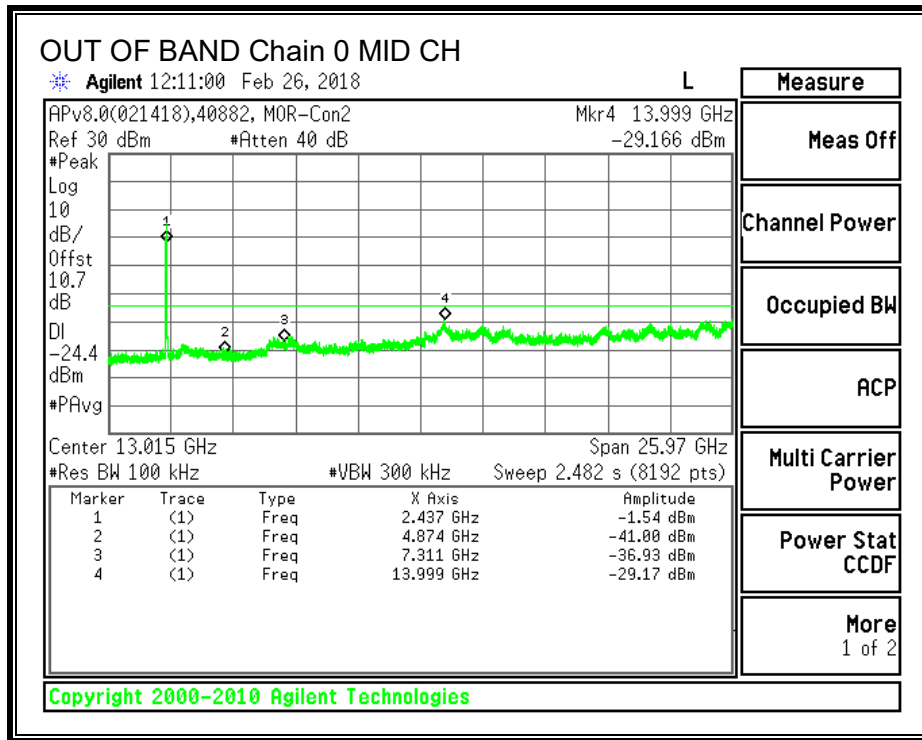


HIGH CHANNEL BANDEDGE, Chain 0

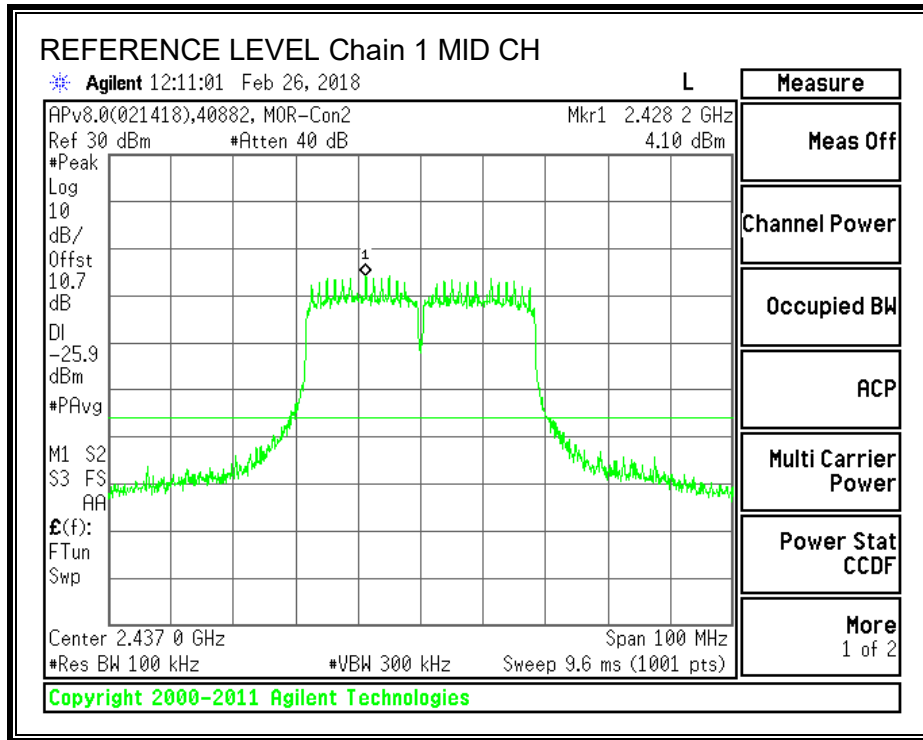


OUT-OF-BAND EMISSIONS, Chain 0

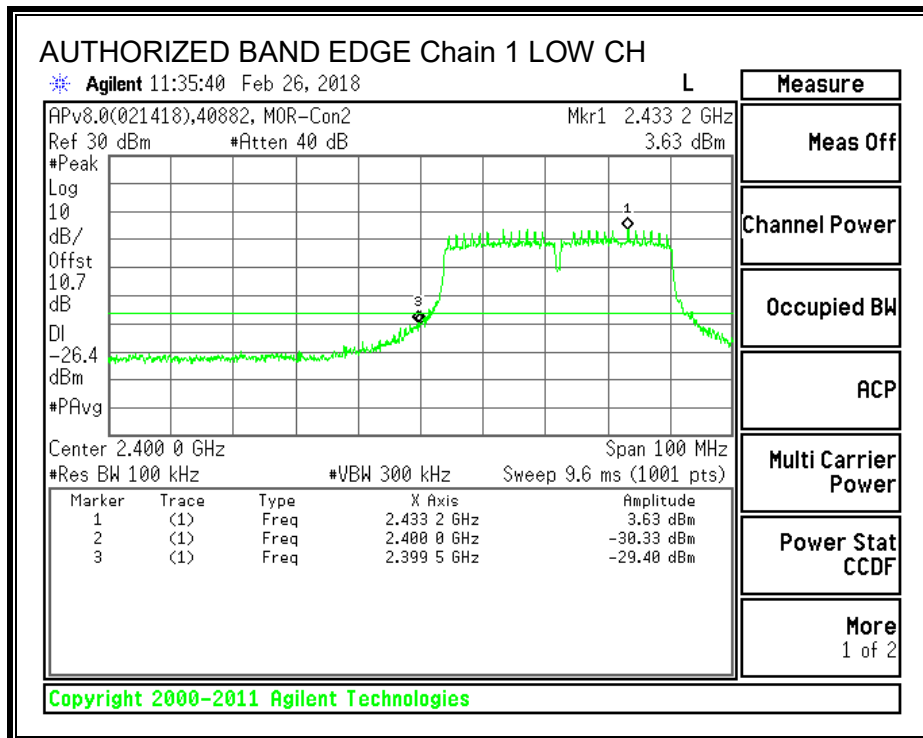




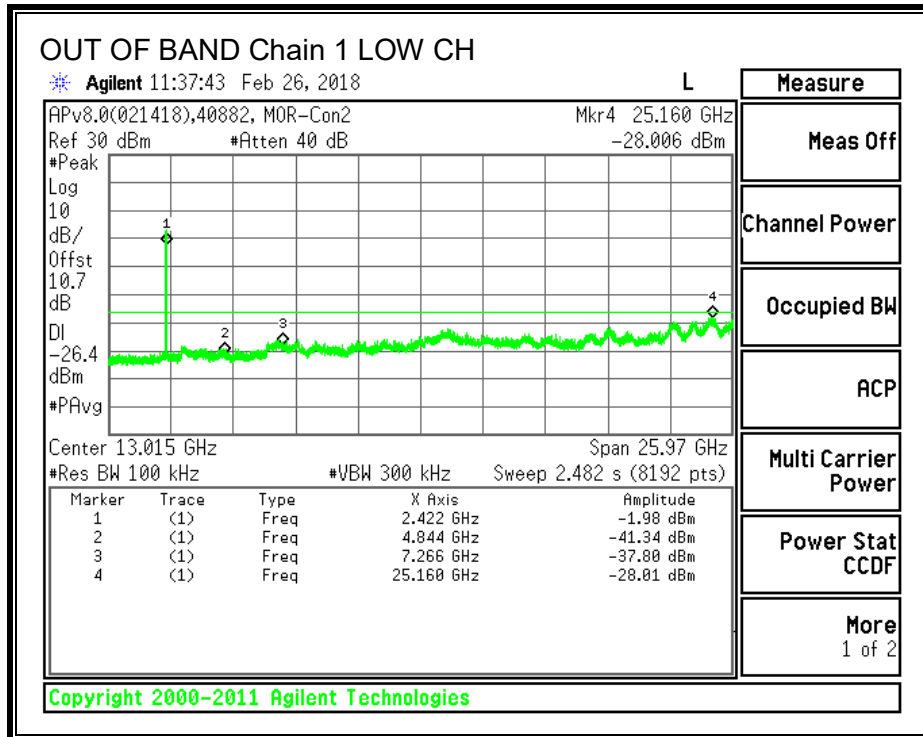
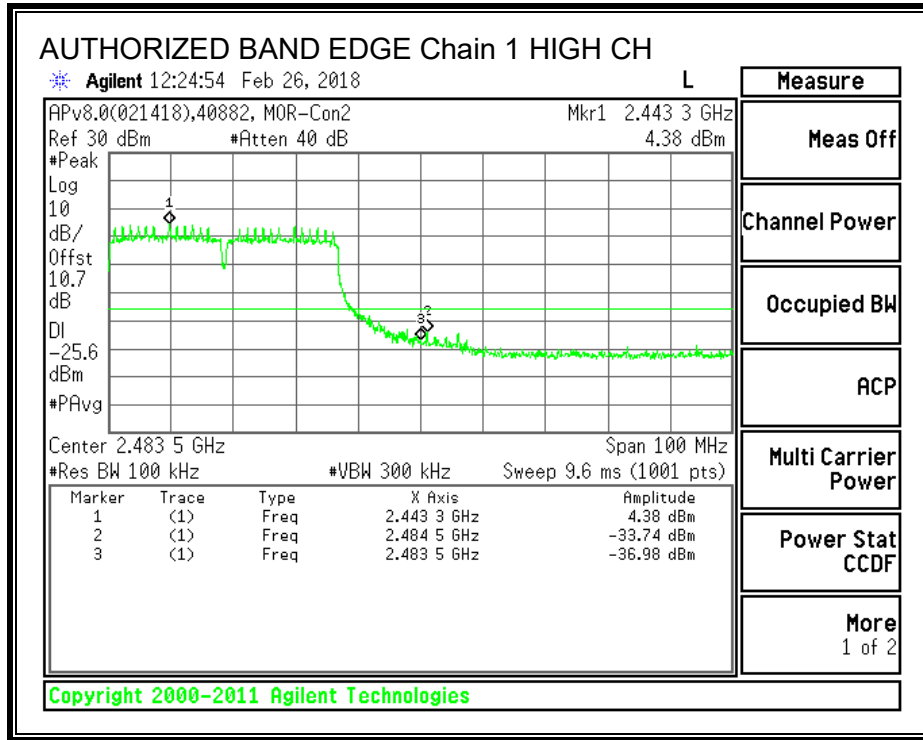
IN-BAND REFERENCE LEVEL, Chain 1

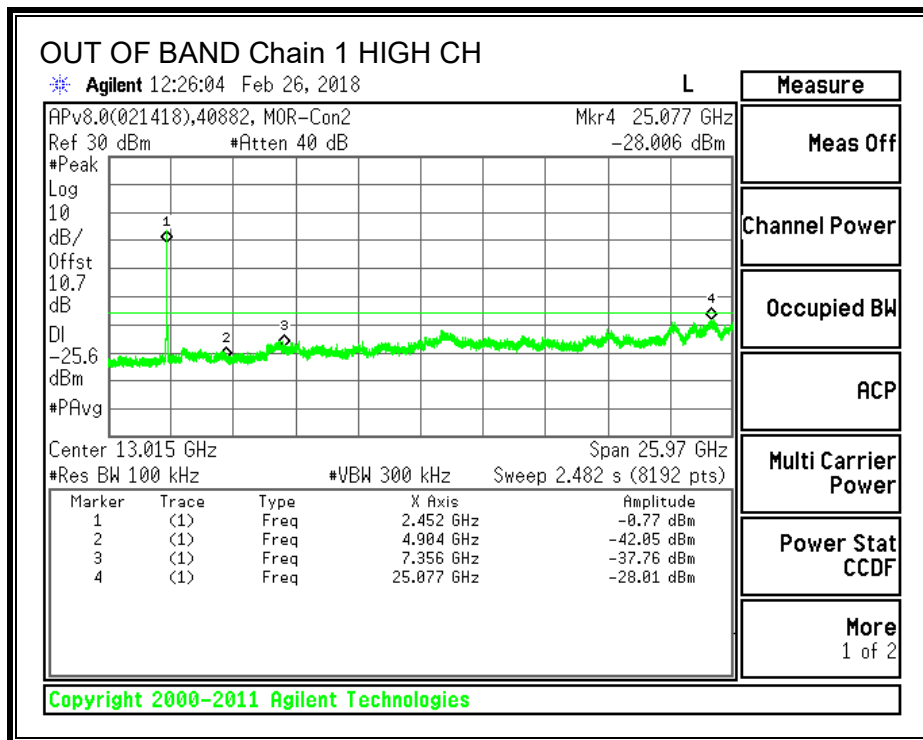
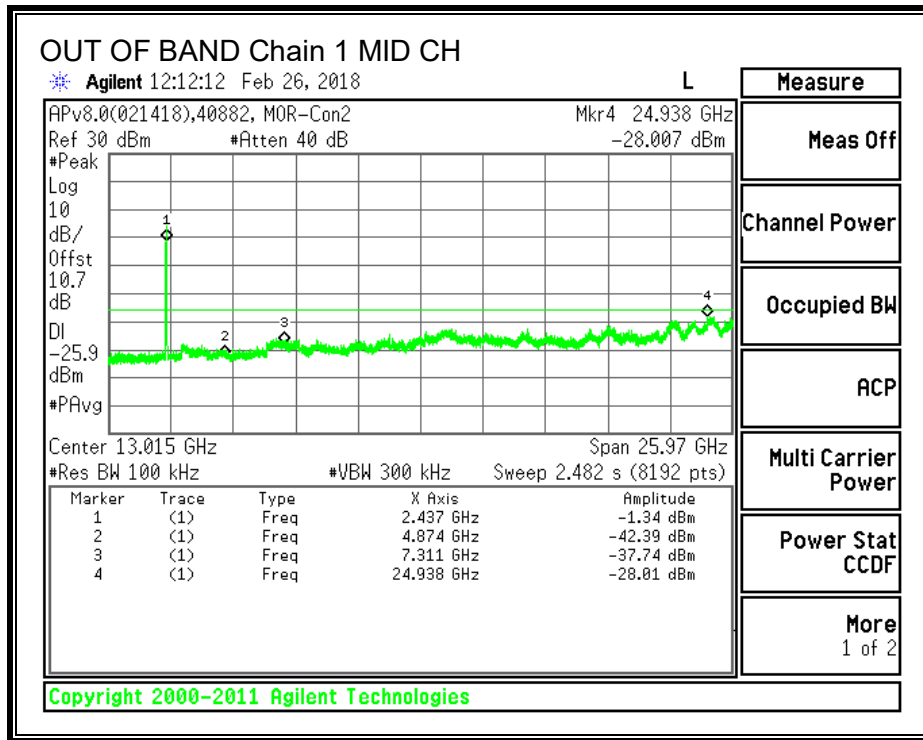


LOW CHANNEL BANDEDGE, Chain 1



HIGH CHANNEL BANDEDGE, Chain 1





9. RADIATED TEST RESULTS

9.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-GEN Clause 8.9 (Transmitter)

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	2400/F(kHz) @ 300 m	-
0.490-1.705	24000/F(kHz) @ 30 m	-
1.705 - 30	30 @ 30m	-
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz measurements and 1.5 m above the ground plane for above 1GHz measurements. The antenna to EUT distance is 3 meters.

For measurements below 1 GHz the resolution bandwidth is set to 120 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements for the 30-1000 MHz range, 9 kHz for peak detection measurements or 9 kHz for quasi-peak detection measurements for the 0.15-30 MHz range and 200 Hz for peak detection measurements or 200 Hz for quasi-peak detection measurements for the 9 to 150 kHz range. Peak detection is used unless otherwise noted as quasi-peak.

For peak measurements above 1 GHz, the resolution bandwidth is set to 1 MHz and the video bandwidth is set to 3 MHz. For average measurements above 1GHz, the resolution bandwidth and video bandwidth are set as described in ANSI C63.10:2013 for the applicable measurement. The particular averaging method used for this test program was RMS averaging.

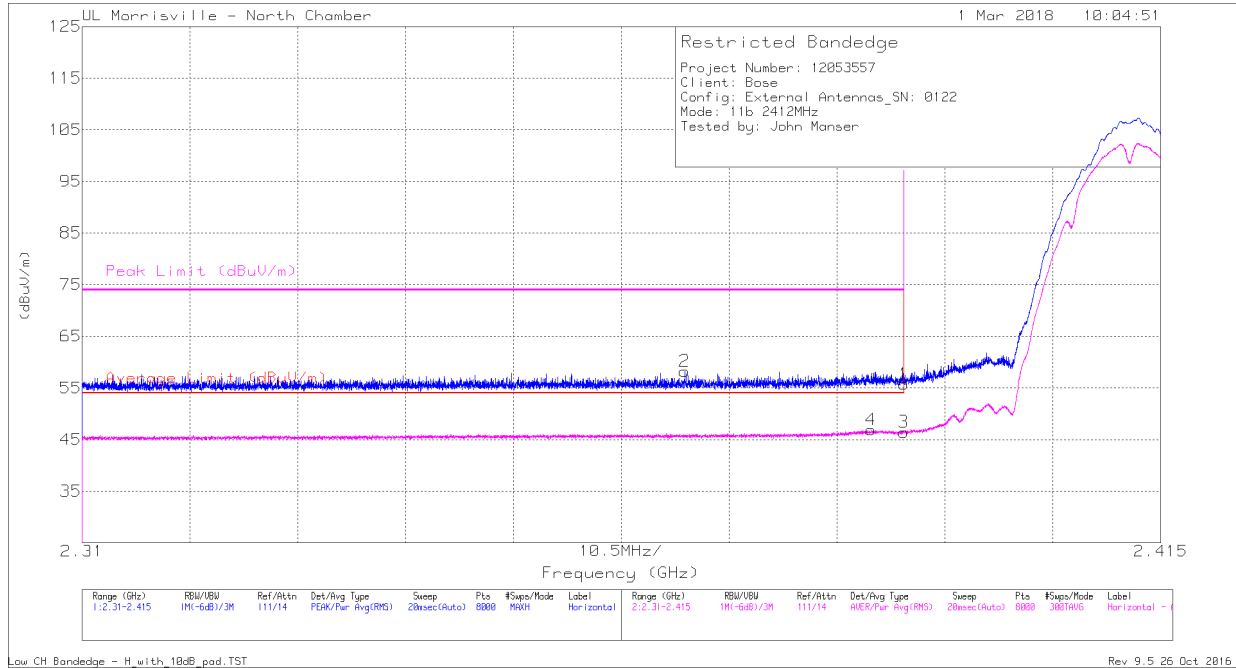
The spectrum from 1 to 18 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. For 9kHz to 1000 MHz and 18 to 26 GHz investigation, the worst-case channel was selected.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

9.2. TRANSMITTER ABOVE 1 GHz

9.2.1. TX ABOVE 1 GHz - 802.11b MODE, EXT ANTENNA

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL) 1Mbps



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	37.83	PK	31.8	-23.9	10	0	55.73	-	-	74	-18.27	118	139	H
2	* ** 2.369	40.44	PK	31.7	-23.9	10	0	58.24	-	-	74	-15.76	118	139	H
3	* ** 2.39	28.25	RMS	31.8	-23.9	10	.3	46.45	54	-7.55	-	-	118	139	H
4	* ** 2.387	28.68	RMS	31.8	-23.9	10	.3	46.88	54	-7.12	-	-	118	139	H

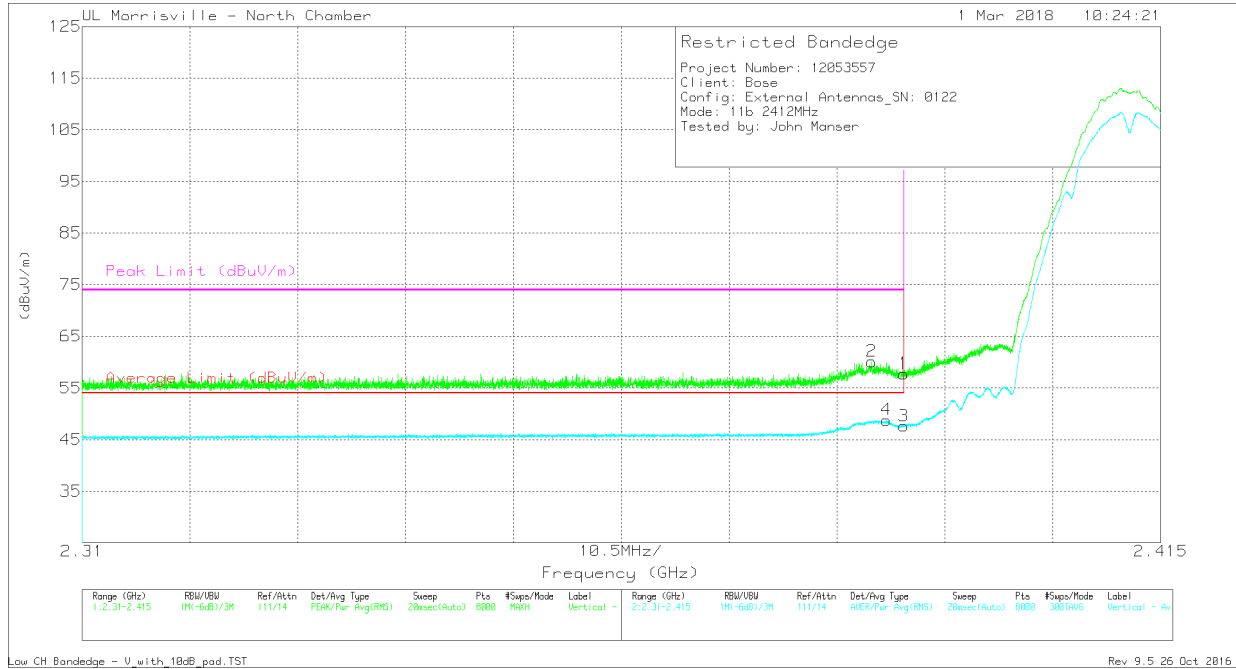
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS

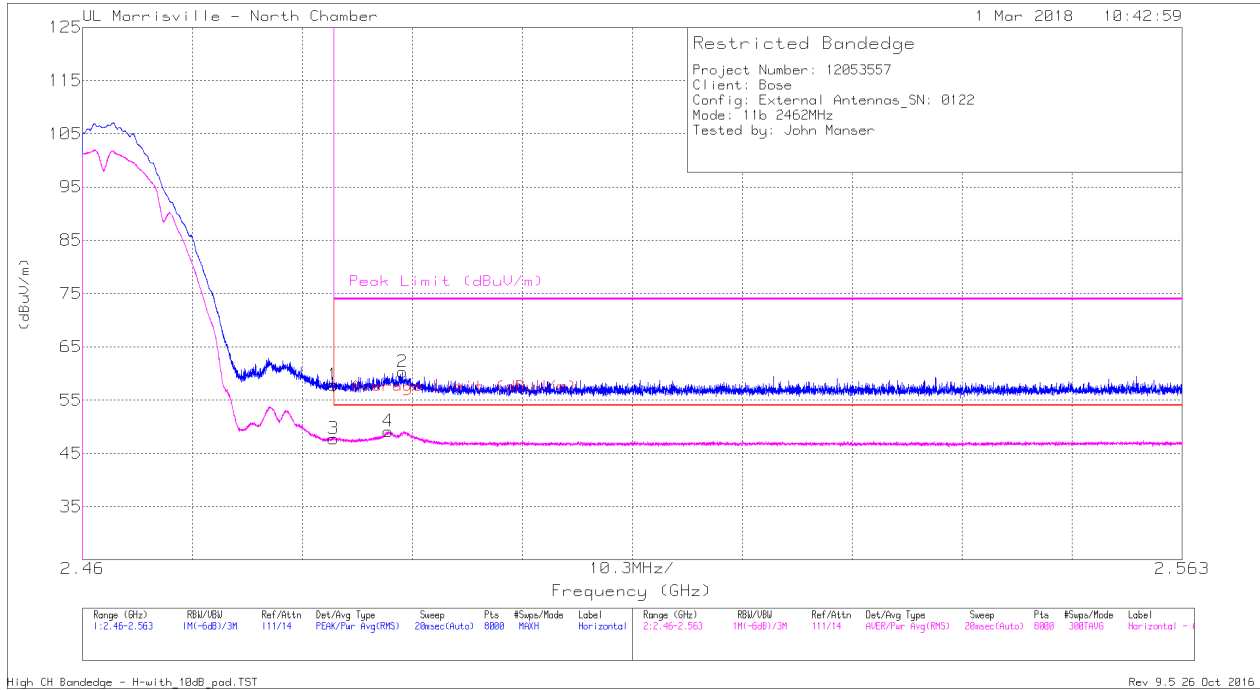
RESTRICTED BANDEGE (LOW CHANNEL, VERTICAL) 1Mbps



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	39.87	PK	31.8	-23.9	10	0	57.77	-	-	74	-16.23	145	269	V
2	*** 2.387	42.22	PK	31.8	-23.9	10	0	60.12	-	-	74	-13.88	145	269	V
3	*** 2.39	29.46	RMS	31.8	-23.9	10	.3	47.66	54	-6.34	-	-	145	269	V
4	*** 2.388	30.61	RMS	31.8	-23.9	10	.3	48.81	54	-5.19	-	-	145	269	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 Pk - Peak detector
 RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, HORIZONTAL) 1Mbps



Marker	Freq. (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Pol.
1	*** 2.484	39.36	Pk	32.3	-23.8	10	0	57.86	-	-	74	-16.14	44	361	H
2	*** 2.49	41.76	Pk	32.3	-23.8	10	0	60.26	-	-	74	-13.74	44	361	H
3	*** 2.484	28.97	RMS	32.3	-23.8	10	.3	47.77	54	-6.23	-	-	44	361	H
4	*** 2.489	30.35	RMS	32.3	-23.8	10	.3	49.15	54	-4.85	-	-	44	361	H

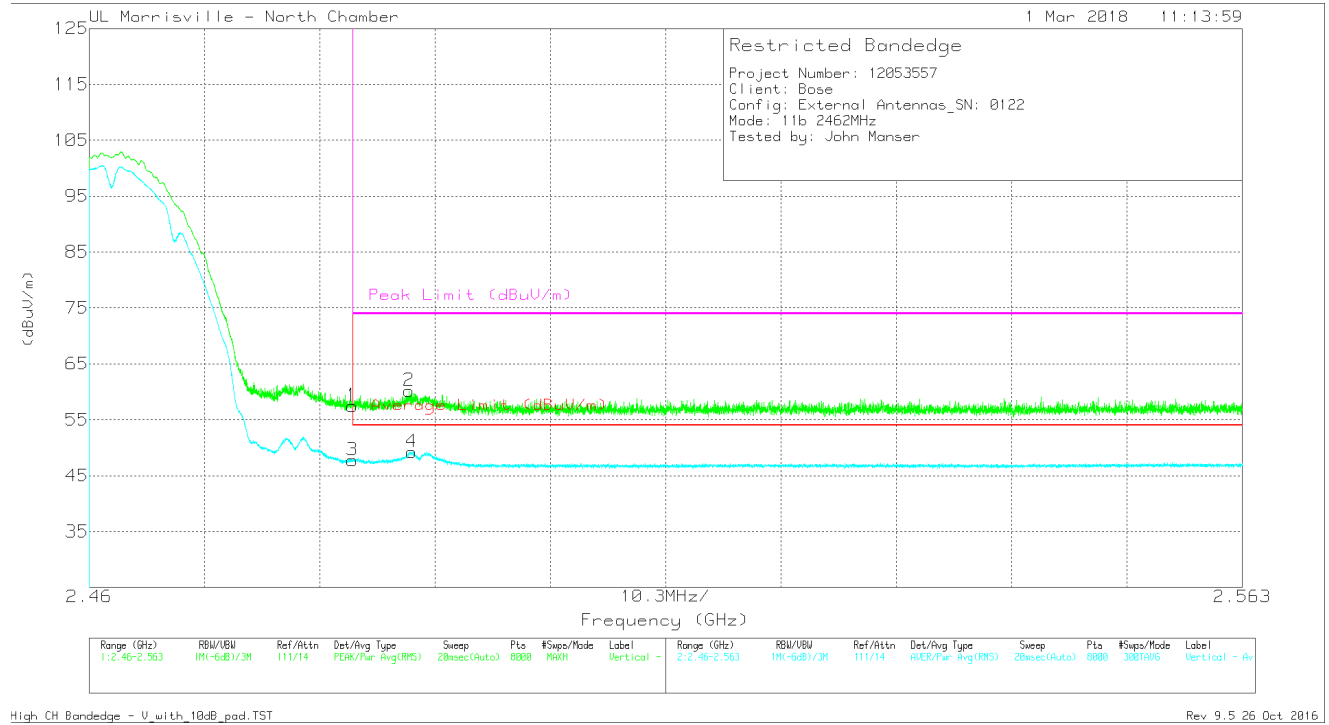
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

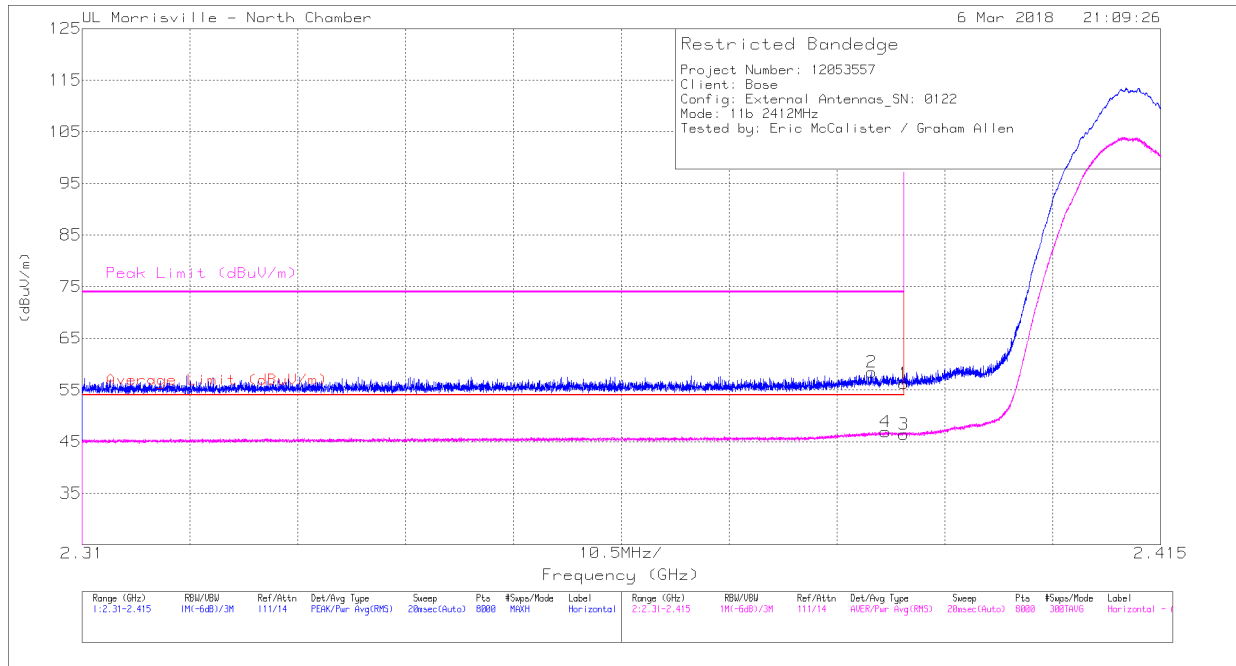
AUTHORIZED BANDEDGE (HIGH CHANNEL, VERTICAL) 1Mbps



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Pol.
1	*** 2.484	39	Pk	32.3	-23.8	10	0	57.5	-	-	74	-16.5	84	399	V
2	*** 2.489	41.66	Pk	32.3	-23.8	10	0	60.16	-	-	74	-13.84	84	399	V
3	*** 2.484	28.96	RMS	32.3	-23.8	10	.3	47.76	54	-6.24	-	-	84	399	V
4	*** 2.489	30.46	RMS	32.3	-23.8	10	.3	49.26	54	-4.74	-	-	84	399	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 Pk - Peak detector
 RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL) 11Mbps



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	38.37	PK	31.8	-23.9	10	0	56.27	-	-	74	-17.73	294	136	H
2	*** 2.387	40.52	PK	31.8	-23.9	10	0	58.42	-	-	74	-15.58	294	136	H
3	*** 2.39	28.2	RMS	31.8	-23.9	10	.3	46.4	54	-7.6	-	-	294	136	H
4	*** 2.388	28.67	RMS	31.8	-23.9	10	.3	46.87	54	-7.13	-	-	294	136	H

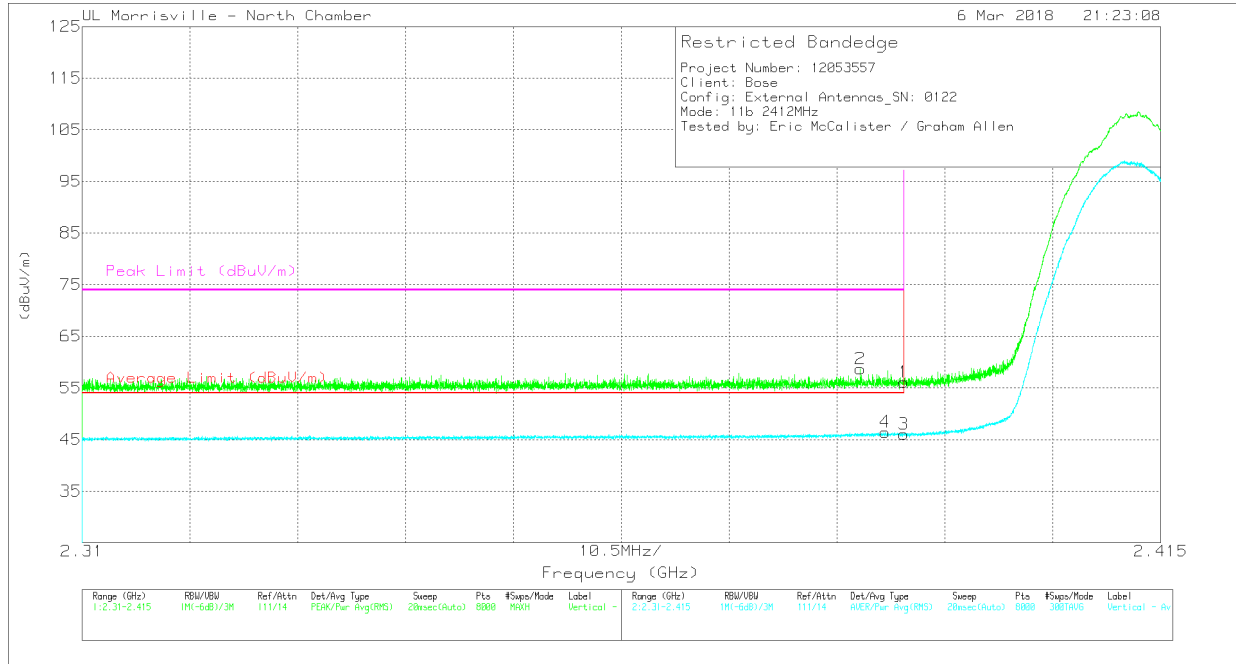
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL) 11Mbps



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	38.19	PK	31.8	-23.9	10	0	56.09	-	-	74	-17.91	97	402	V
2	* ** 2.386	40.76	PK	31.8	-23.9	10	0	58.66	-	-	74	-15.34	97	402	V
3	* ** 2.39	27.84	RMS	31.8	-23.9	10	.3	46.04	54	-7.96	-	-	97	402	V
4	* ** 2.388	28.25	RMS	31.8	-23.9	10	.3	46.45	54	-7.55	-	-	97	402	V

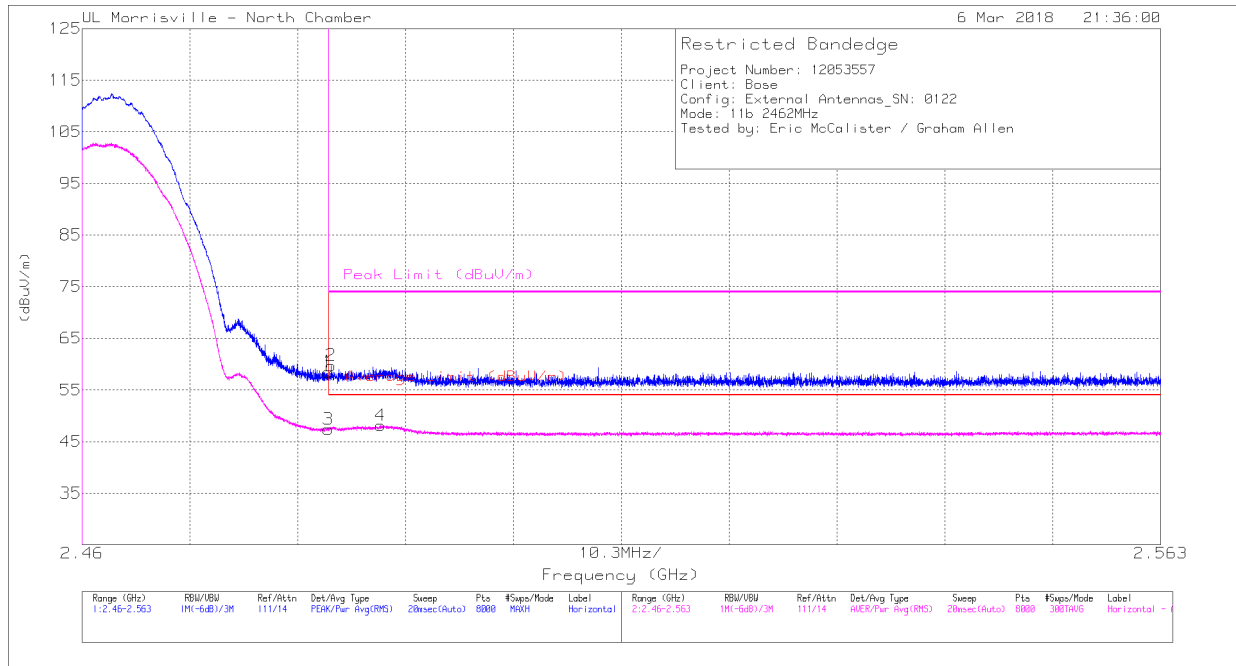
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, HORIZONTAL) 11Mbps



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	40	PK	32.3	-23.8	10	0	58.5	-	-	74	-15.5	266	380	H
2	*** 2.484	41.23	PK	32.3	-23.8	10	0	59.73	-	-	74	-14.27	266	380	H
3	*** 2.484	28.58	RMS	32.3	-23.8	10	.3	47.38	54	-6.62	-	-	266	380	H
4	*** 2.489	29.29	RMS	32.3	-23.8	10	.3	48.09	54	-5.91	-	-	266	380	H

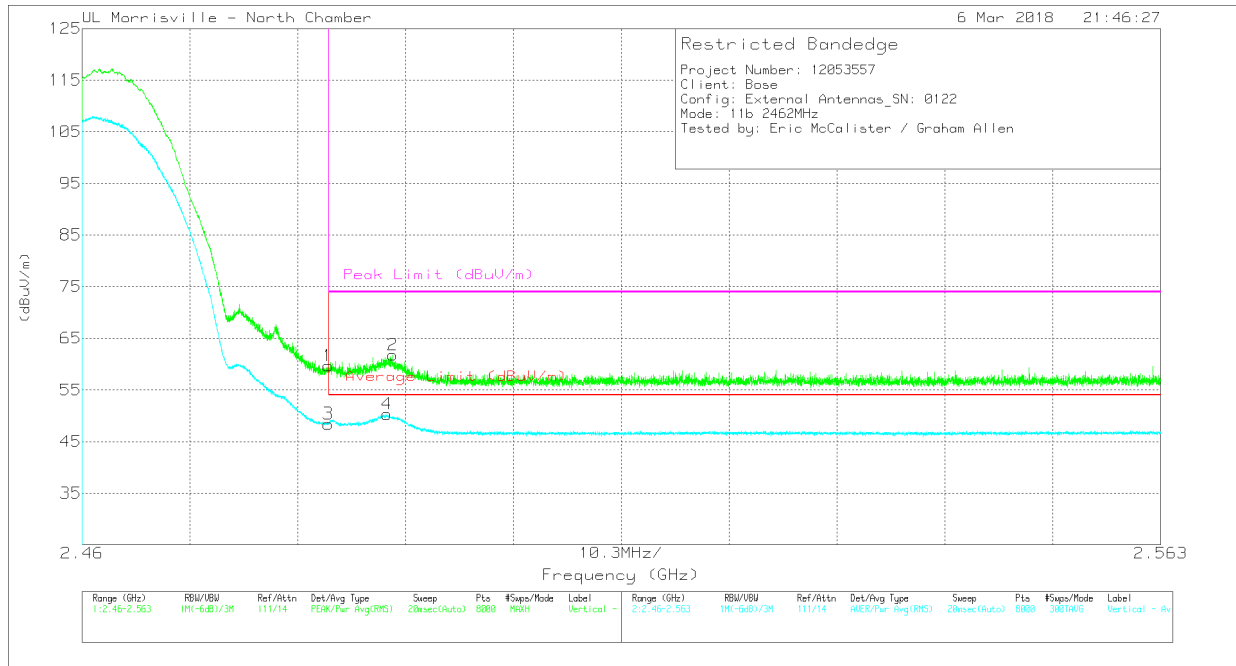
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, VERTICAL) 11Mbps



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	41.19	PK	32.3	-23.8	10	0	59.69	-	-	74	-14.31	134	257	V
2	* ** 2.49	43.24	PK	32.3	-23.8	10	0	61.74	-	-	74	-12.26	134	257	V
3	* ** 2.484	29.62	RMS	32.3	-23.8	10	.3	48.42	54	-5.58	-	-	134	257	V
4	* ** 2.489	31.5	RMS	32.3	-23.8	10	.3	50.3	54	-3.7	-	-	134	257	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

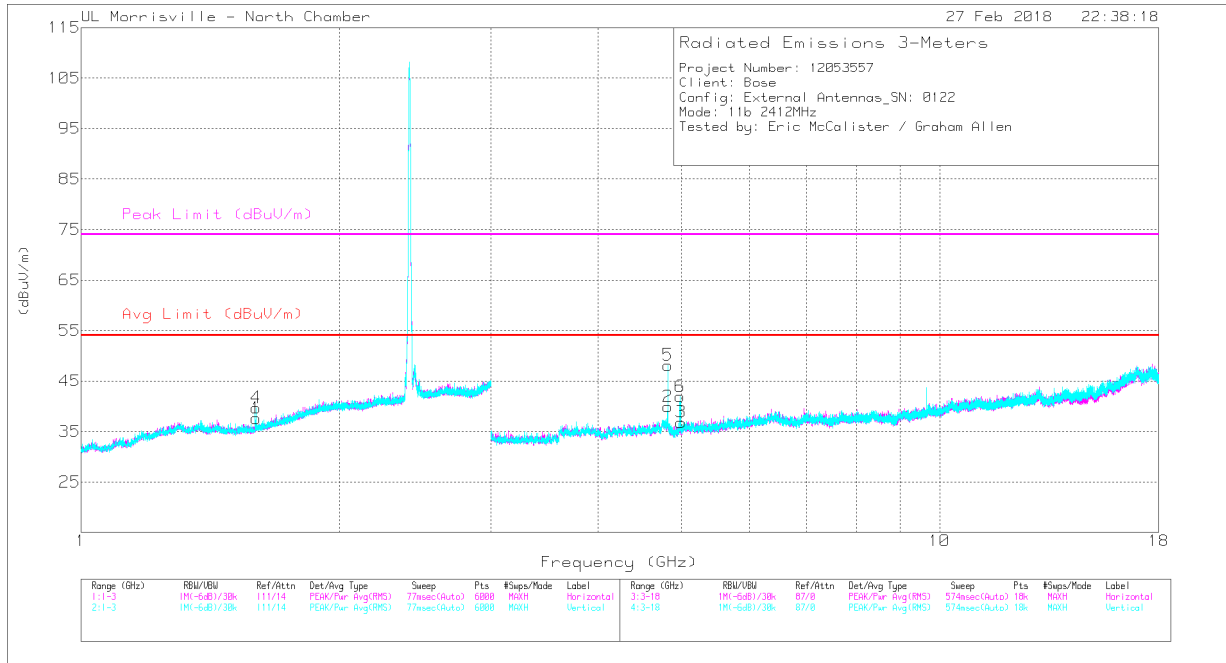
PK - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

Note: Radiated Spurious emissions from 1-18 GHz was run at the lowest data rate since this was found to be the highest Power and PSD. It was also run with Low and High channels set to mid channel power settings for worst-case results.

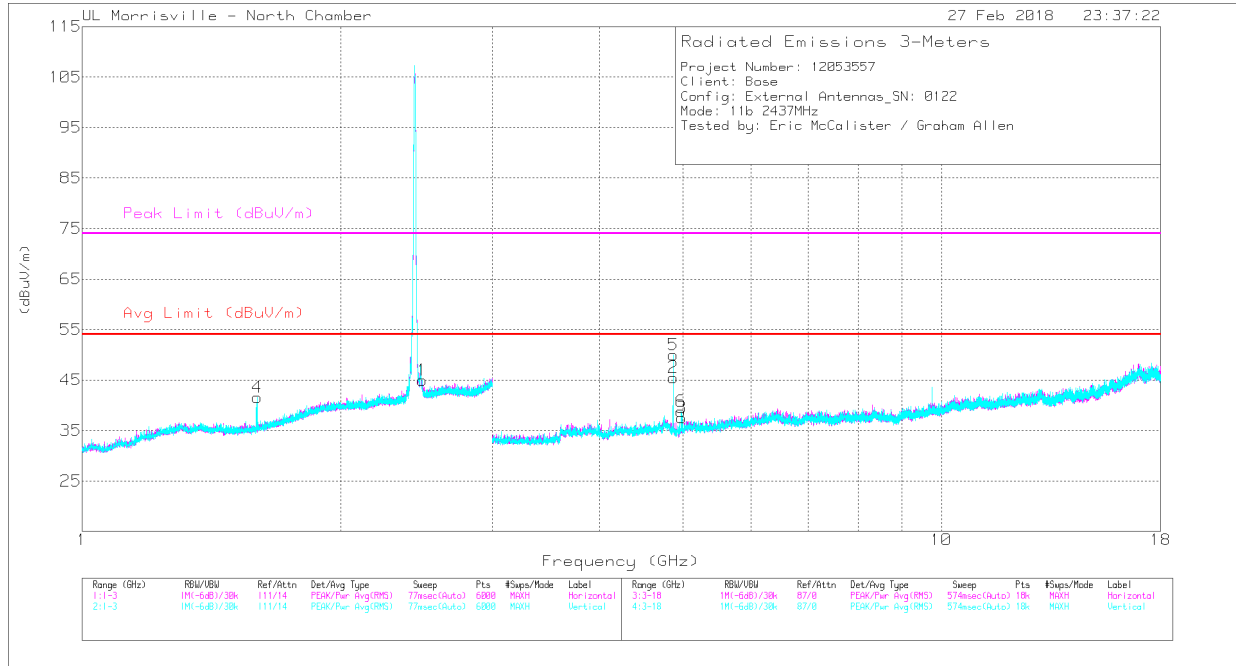
Low Channel



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	** * 1.599	42.46	PK2	28	-24.1	0	46.36	-	-	74	-27.64	166	188	H
	** * 1.598	26.84	MAV1	28	-24.1	.3	31.04	54	-22.96	-	-	166	188	H
2	** * 4.824	42.27	PK2	34.1	-31	0	45.37	-	-	74	-28.63	243	131	H
	** * 4.824	32.94	MAV1	34.1	-31	.3	36.34	54	-17.66	-	-	243	131	H
3	** * 4.999	41.82	PK2	34.1	-32.2	0	43.72	-	-	74	-30.28	253	359	H
	** * 4.996	28.53	MAV1	34.1	-32.2	.3	30.73	54	-23.27	-	-	253	359	H
4	** * 1.598	41.97	PK2	28	-24.1	0	45.87	-	-	74	-28.13	311	131	V
	** * 1.595	26.73	MAV1	27.9	-24.1	.3	30.83	54	-23.17	-	-	311	131	V
5	** * 4.824	48.91	PK2	34.1	-31	0	52.01	-	-	74	-21.99	138	243	V
	** * 4.824	45.13	MAV1	34.1	-31	.3	48.53	54	-5.47	-	-	138	243	V
6	** * 4.984	49.62	PK2	34.1	-32.2	0	51.52	-	-	74	-22.48	195	104	V
	** * 4.982	28.54	MAV1	34.1	-32.1	.3	30.84	54	-23.16	-	-	195	104	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 PK2 - Maximum Peak
 MAV1 - Maximum RMS Average

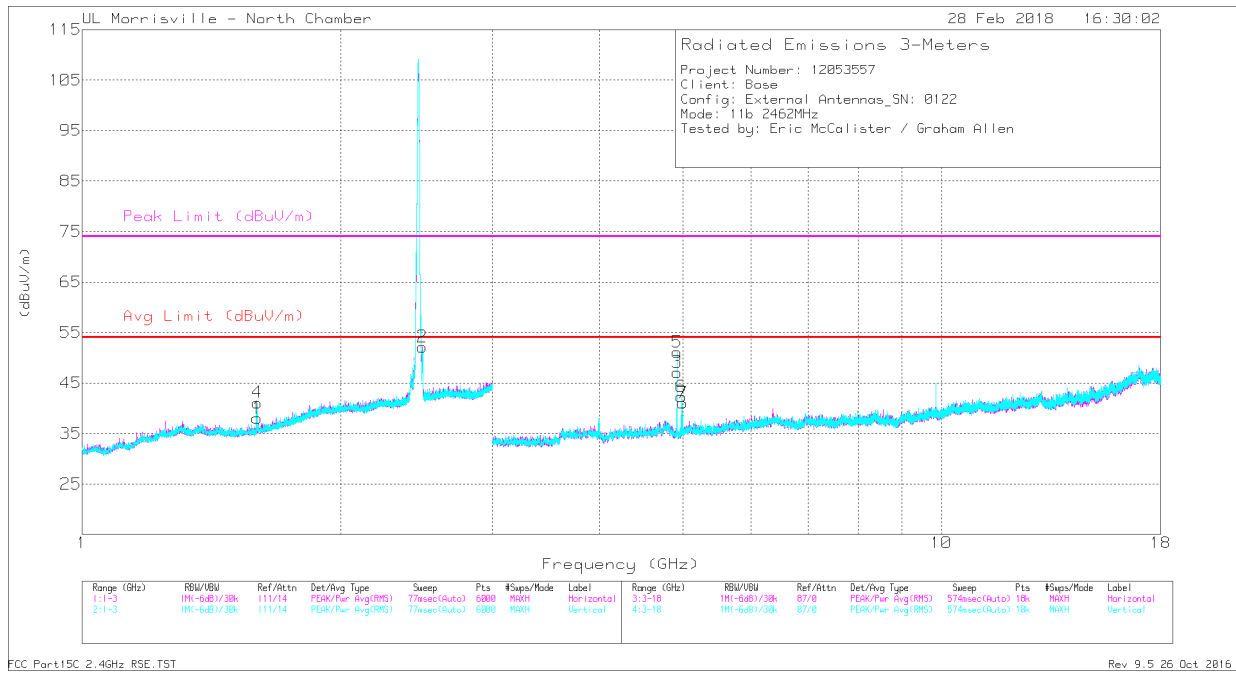
Mid Channel



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	** * 2.485	43.97	PK2	32.3	-23.8	0	52.47	-	-	74	-21.53	3	123	H
	** * 2.485	31.87	MAV1	32.3	-23.8	.3	40.67	54	-13.33	-	-	3	123	H
2	** * 4.874	43.77	PK2	34	-31	0	46.77	-	-	74	-27.23	242	159	H
	** * 4.874	37.47	MAV1	34	-31	.3	40.77	54	-13.23	-	-	242	159	H
3	** * 4.991	40.07	PK2	34.1	-32.2	0	41.97	-	-	74	-32.03	6	131	H
	** * 4.99	28.66	MAV1	34.1	-32.2	.3	30.86	54	-23.14	-	-	6	131	H
4	** * 1.598	41.9	PK2	28	-24.1	0	45.8	-	-	74	-28.2	180	239	V
	** * 1.599	26.6	MAV1	28	-24.1	.3	30.8	54	-23.2	-	-	180	239	V
5	** * 4.874	50.59	PK2	34	-31	0	53.59	-	-	74	-20.41	132	203	V
	** * 4.874	47.22	MAV1	34	-31	.3	50.52	54	-3.48	-	-	132	203	V
6	** * 4.978	53.8	PK2	34.1	-32.1	0	55.8	-	-	74	-18.2	254	102	V
	** * 4.978	29.07	MAV1	34.1	-32.1	.3	31.37	54	-22.63	-	-	254	102	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 PK2 - Maximum Peak
 MAV1 - Maximum RMS Average

High Channel

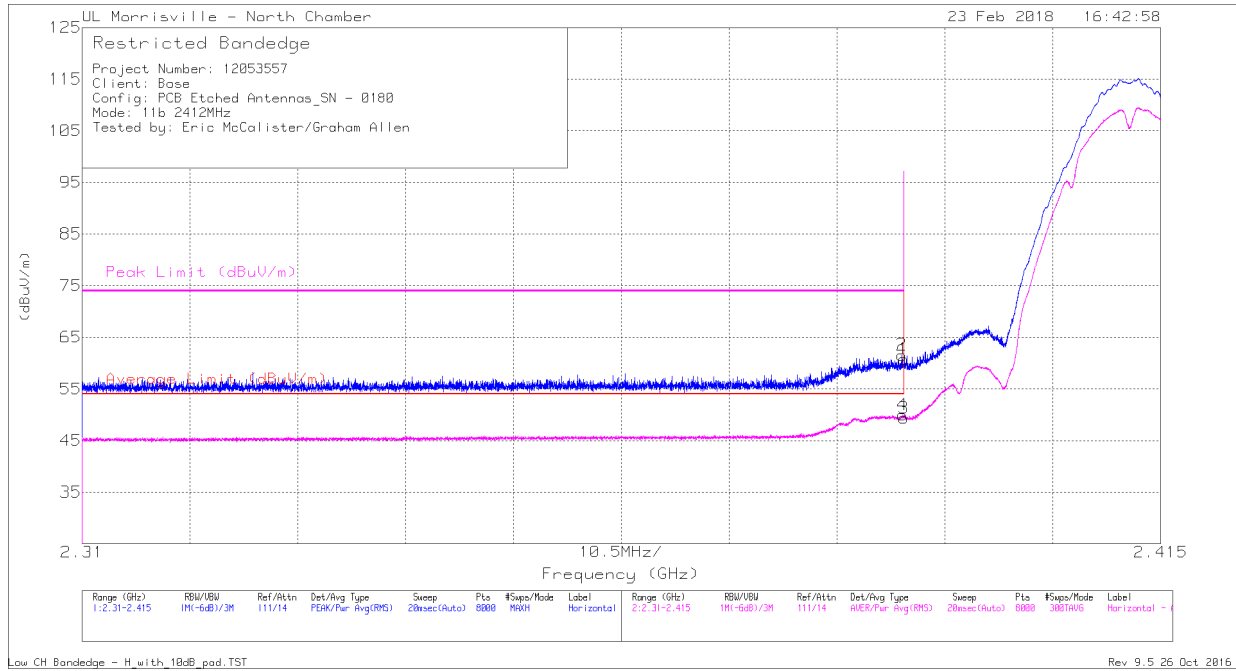


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.598	44.34	PK2	28	-24.1	0	48.24	-	-	74	-25.76	53	282	H
	* ** 1.596	26.84	MAv1	28	-24.1	.3	31.04	54	-22.96	-	-	53	282	H
2	* ** 2.489	46.43	PK2	32.3	-23.8	0	54.93	-	-	74	-19.07	10	103	H
	* ** 2.49	37.23	MAv1	32.3	-23.8	.3	46.03	54	-7.97	-	-	10	103	H
3	* ** 4.924	48.36	PK2	34.1	-31.2	0	51.26	-	-	74	-22.74	251	127	H
	* ** 4.924	44.98	MAv1	34.1	-31.2	.3	48.18	54	-5.82	-	-	251	127	H
4	* ** 1.599	41.26	PK2	28	-24.1	0	45.16	-	-	74	-28.84	321	113	V
	* ** 1.598	26.65	MAv1	28	-24.1	.3	30.85	54	-23.15	-	-	321	113	V
5	* ** 4.924	51.49	PK2	34.1	-31.2	0	54.39	-	-	74	-19.61	131	185	V
	* ** 4.924	49.21	MAv1	34.1	-31.2	.3	52.41	54	-1.59	-	-	131	185	V
6	* ** 4.984	45.7	PK2	34.1	-32.2	0	47.6	-	-	74	-26.4	2	187	V
	* ** 4.981	28.8	MAv1	34.1	-32.1	.3	31.1	54	-22.9	-	-	2	187	V
7	* ** 4.998	47.98	PK2	34.1	-32.2	0	49.88	-	-	74	-24.12	249	138	V
	* ** 4.999	28.92	MAv1	34.1	-32.2	.3	31.12	54	-22.88	-	-	249	138	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 PK2 - Maximum Peak
 MAv1 - Maximum RMS Average

9.2.2. TX ABOVE 1 GHz - 802.11b MODE, PCB ANT

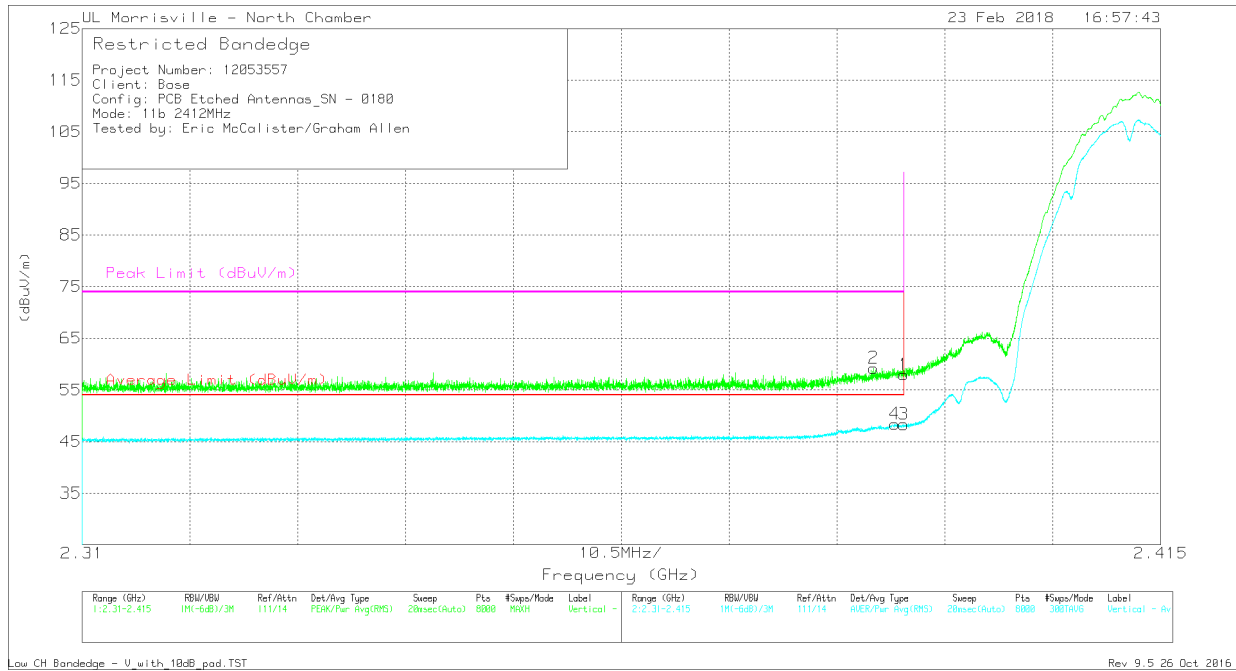
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL) 1Mbps



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	42.84	Pk	31.8	-23.9	10	0	60.74	-	-	74	-13.26	279	108	H
2	*** 2.39	43.68	Pk	31.8	-23.9	10	0	61.58	-	-	74	-12.42	279	108	H
3	*** 2.39	31.17	RMS	31.8	-23.9	10	.3	49.37	54	-4.63	-	-	279	108	H
4	*** 2.39	31.76	RMS	31.8	-23.9	10	.3	49.96	54	-4.04	-	-	279	108	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 Pk - Peak detector
 RMS - RMS detection

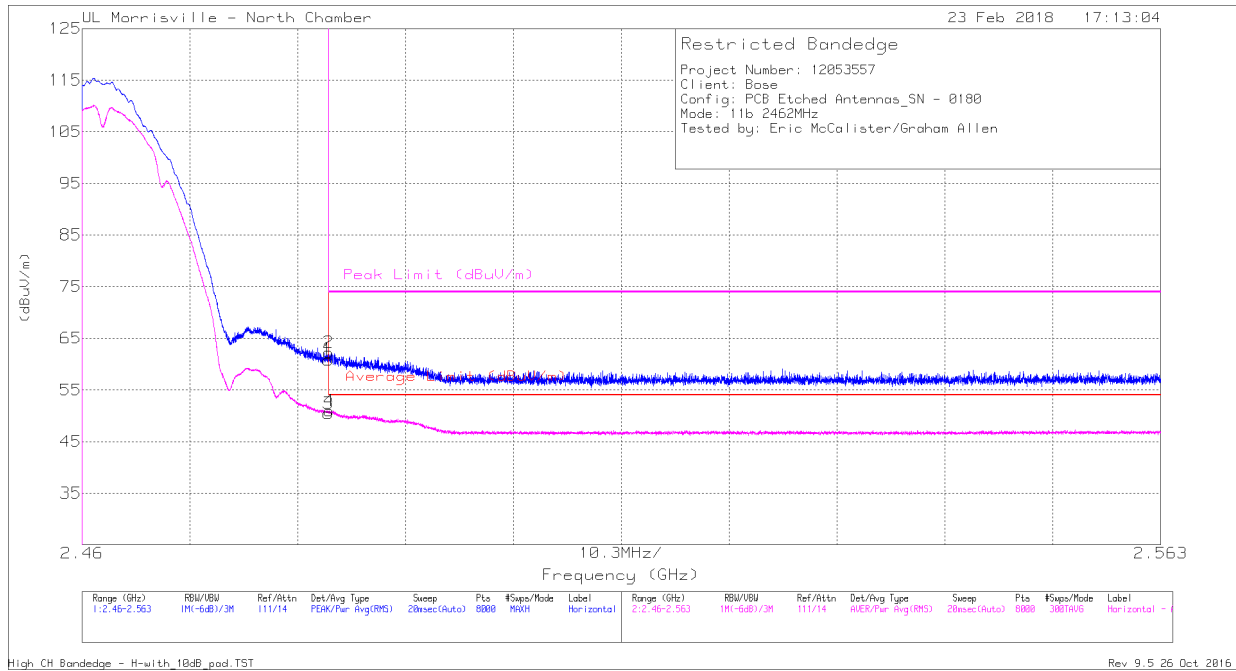
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL) 1Mbps



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	40.09	Pk	31.8	-23.9	10	0	57.99	-	-	74	-16.01	211	359	V
2	* ** 2.387	41.34	Pk	31.8	-23.9	10	0	59.24	-	-	74	-14.76	211	359	V
3	* ** 2.39	30.13	RMS	31.8	-23.9	10	.3	48.33	54	-5.67	-	-	211	359	V
4	* ** 2.389	30.22	RMS	31.8	-23.9	10	.3	48.42	54	-5.58	-	-	211	359	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 Pk - Peak detector
 RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, HORIZONTAL) 1Mbps



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	42.33	Pk	32.3	-23.8	10	0	60.83	-	-	74	-13.17	262	326	H
2	* ** 2.484	43.77	Pk	32.3	-23.8	10	0	62.27	-	-	74	-11.73	262	326	H
3	* ** 2.484	31.66	RMS	32.3	-23.8	10	.3	50.46	54	-3.54	-	-	262	326	H
4	* ** 2.484	32.15	RMS	32.3	-23.8	10	.3	50.95	54	-3.05	-	-	262	326	H

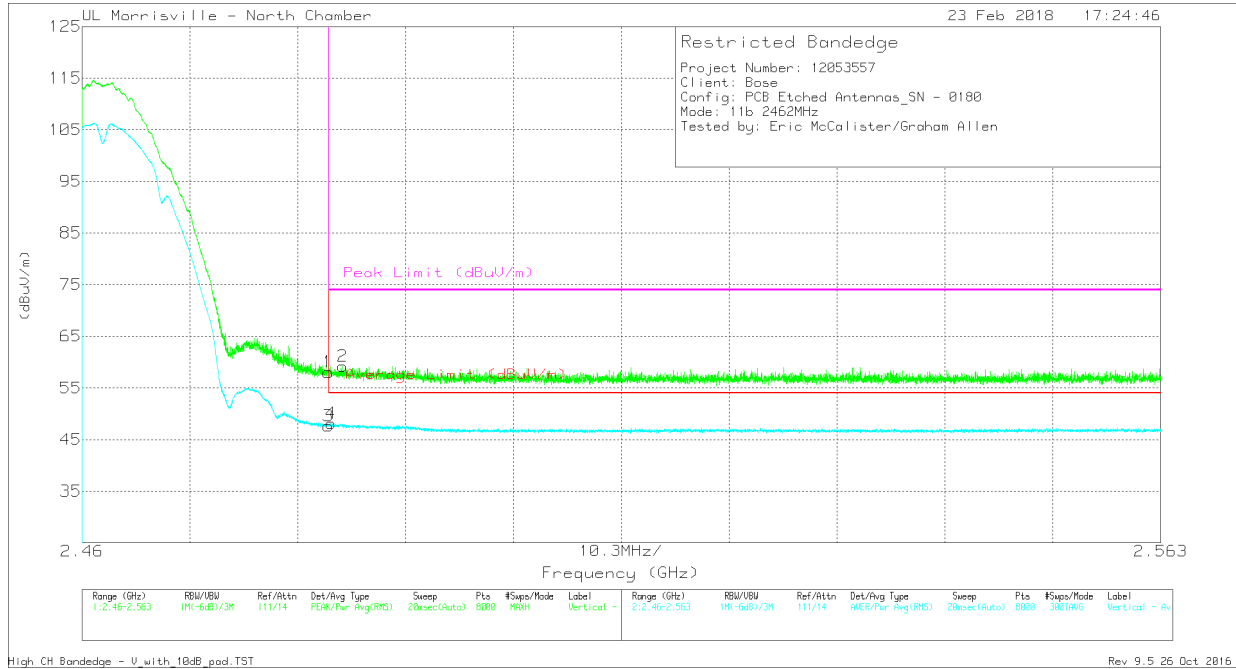
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, VERTICAL) 1Mbps



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	39.54	Pk	32.3	-23.8	10	0	58.04	-	-	74	-15.96	261	331	V
2	* ** 2.485	40.71	Pk	32.3	-23.8	10	0	59.21	-	-	74	-14.79	261	331	V
3	* ** 2.484	28.84	RMS	32.3	-23.8	10	.3	47.64	54	-6.36	-	-	261	331	V
4	* ** 2.484	29.34	RMS	32.3	-23.8	10	.3	48.14	54	-5.86	-	-	261	331	V

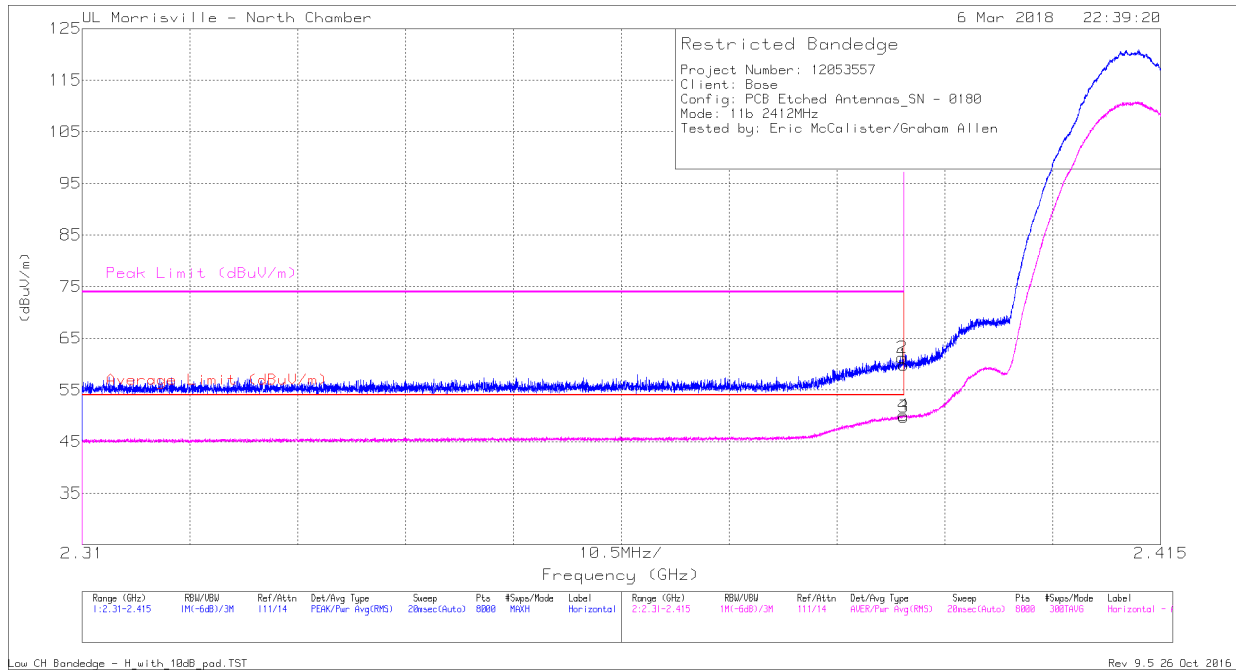
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL) 11Mbps



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	41.97	PK	31.8	-23.9	10	0	59.87	-	-	74	-14.13	276	332	H
2	*** 2.39	43.39	PK	31.8	-23.9	10	0	61.29	-	-	74	-12.71	276	332	H
3	*** 2.39	31.56	RMS	31.8	-23.9	10	.3	49.76	54	-4.24	-	-	276	332	H
4	*** 2.39	31.88	RMS	31.8	-23.9	10	.3	50.08	54	-3.92	-	-	276	332	H

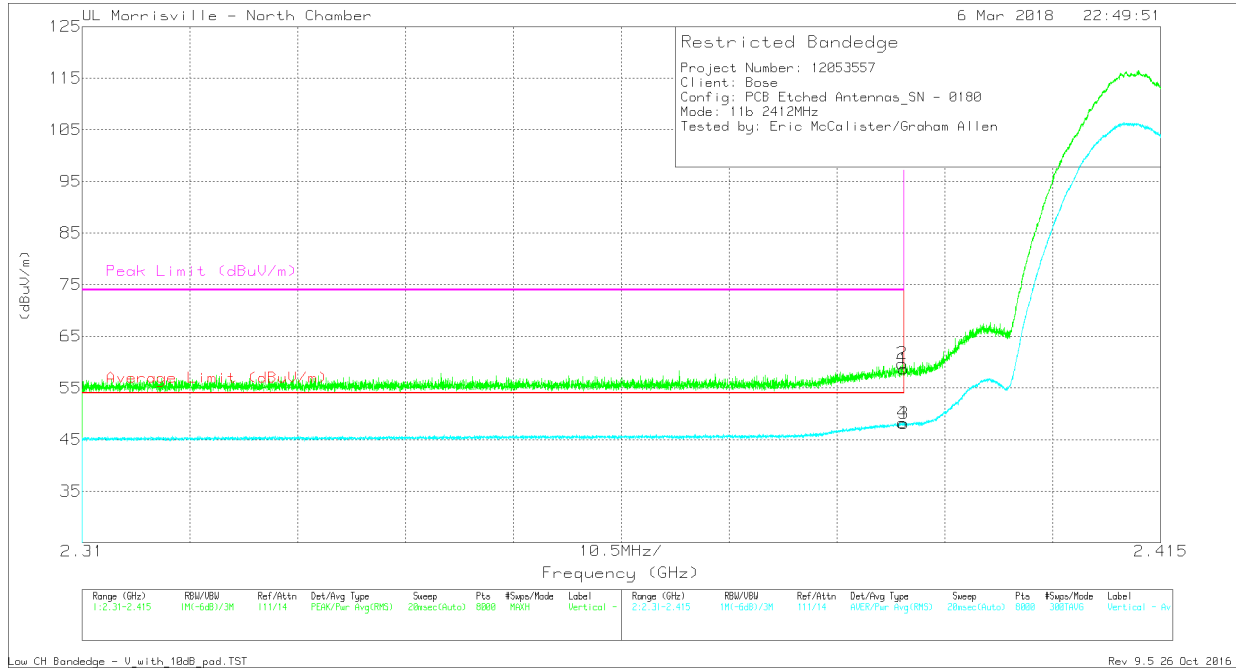
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

RESTRICTED BANDEGE (LOW CHANNEL, VERTICAL) 11Mbps



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	40.77	PK	31.8	-23.9	10	0	58.67	-	-	74	-15.33	259	384	V
2	* ** 2.39	41.84	PK	31.8	-23.9	10	0	59.74	-	-	74	-14.26	259	384	V
3	* ** 2.39	29.93	RMS	31.8	-23.9	10	.3	48.13	54	-5.87	-	-	259	384	V
4	* ** 2.39	30.07	RMS	31.8	-23.9	10	.3	48.27	54	-5.73	-	-	259	384	V

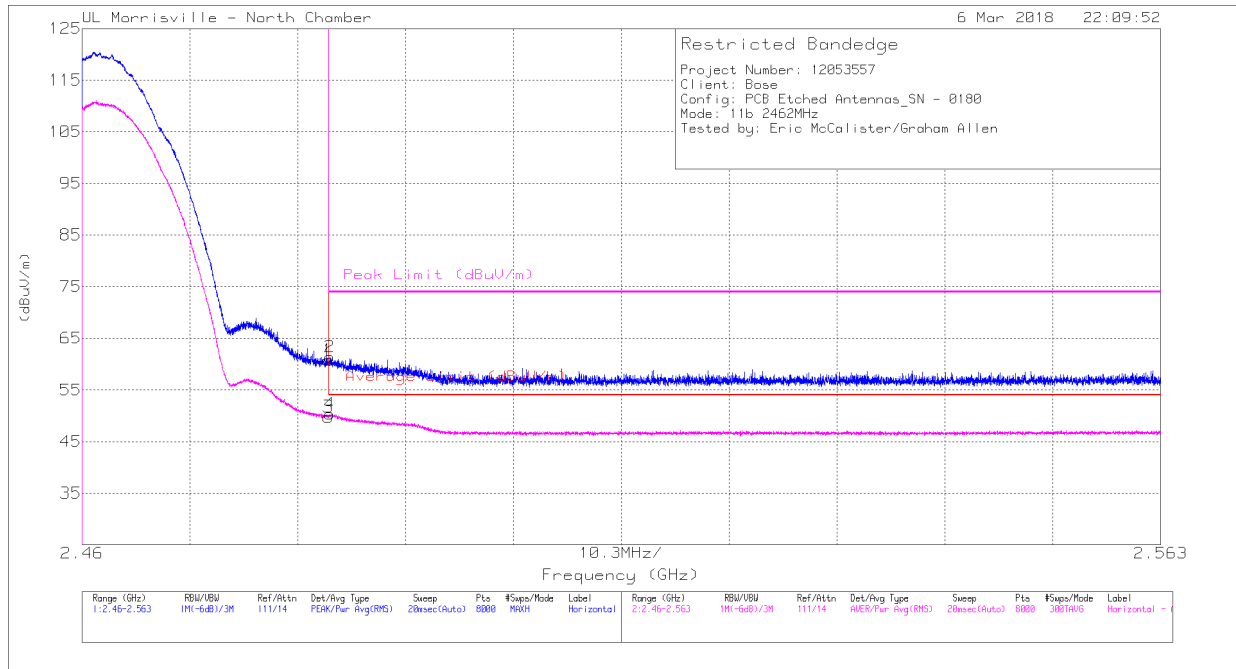
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEGE (HIGH CHANNEL, HORIZONTAL) 11Mbps



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	42.3	Pk	32.3	-23.8	10	0	60.8	-	-	74	-13.2	252	328	H
2	*** 2.484	42.89	Pk	32.3	-23.8	10	0	61.39	-	-	74	-12.61	252	328	H
3	*** 2.484	30.97	RMS	32.3	-23.8	10	.3	49.77	54	-4.23	-	-	252	328	H
4	*** 2.484	31.54	RMS	32.3	-23.8	10	.3	50.34	54	-3.66	-	-	252	328	H

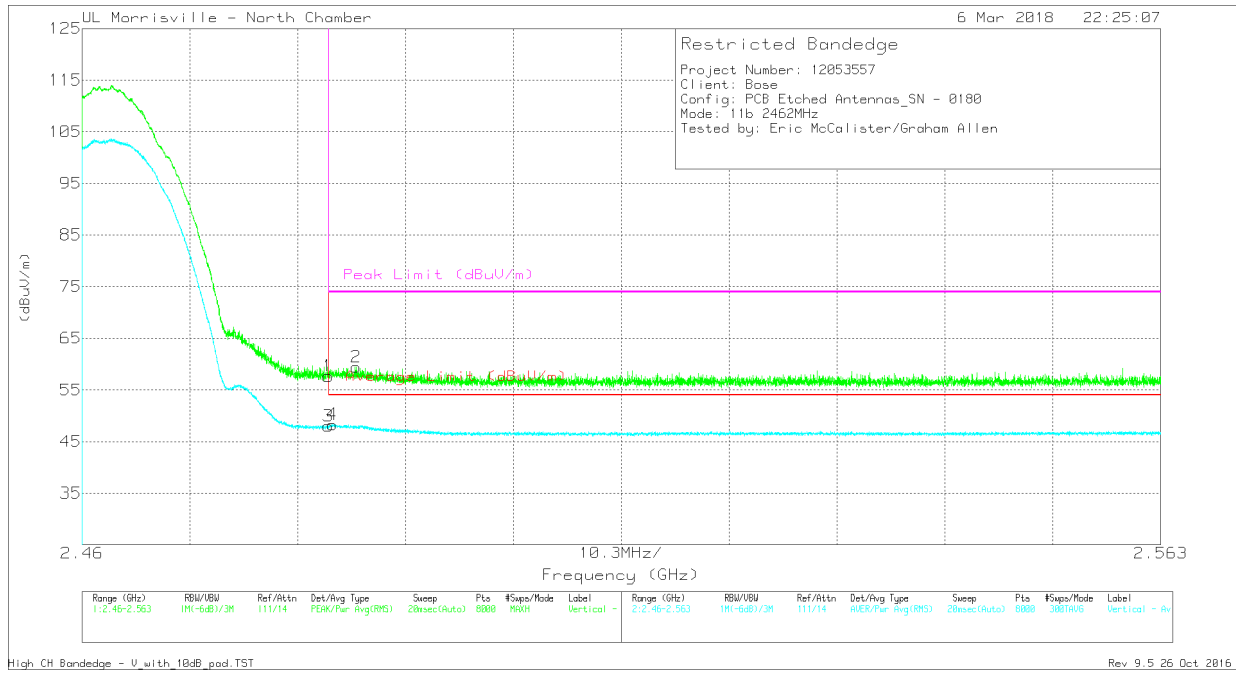
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEGE (HIGH CHANNEL, VERTICAL) 11Mbps



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	39.17	Pk	32.3	-23.8	10	0	57.67	-	-	74	-16.33	163	385	V
3	*** 2.484	29.18	RMS	32.3	-23.8	10	.3	47.98	54	-6.02	-	-	163	385	V
4	*** 2.484	29.5	RMS	32.3	-23.8	10	.3	48.3	54	-5.7	-	-	163	385	V
2	*** 2.486	40.96	Pk	32.3	-23.8	10	0	59.46	-	-	74	-14.54	163	385	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

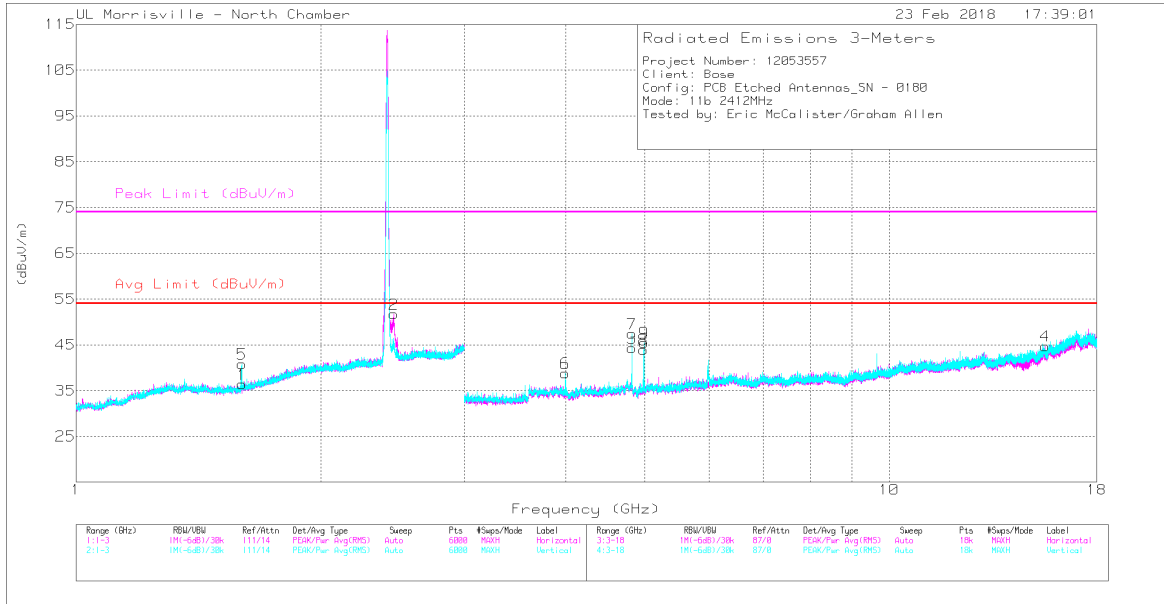
Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

Note: Radiated Spurious emissions from 1-18 GHz was run at the lowest data rate since this was found to be the highest Power and PSD. It was also run with Low and High channels set to mid channel power settings for worst-case results.

Low Channel



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 1.6	42	PK2	28	-24.1	0	45.9	-	-	74	-28.1	221	155	H
	*** 1.6	26.6	MAv1	28	-24.1	.3	30.8	54	-23.2	-	-	221	155	H
3	*** 4.824	44.87	PK2	34.1	-31	0	47.97	-	-	74	-26.03	281	112	H
	*** 4.824	38.14	MAv1	34.1	-31	.3	41.54	54	-12.46	-	-	281	112	H
4	*** 15.557	34.97	PK2	40.1	-25.5	0	49.57	-	-	74	-24.43	259	379	H
	*** 15.557	23.5	MAv1	40.1	-25.5	.3	38.4	54	-15.6	-	-	259	379	H
2	2.46	46.93	Pk	32.3	-23.9	0	55.33	-	-	-	-	278	135	H
5	*** 1.597	42.74	PK2	28	-24.1	0	46.64	-	-	74	-27.36	319	108	V
	*** 1.6	26.63	MAv1	28	-24.1	.3	30.83	54	-23.17	-	-	319	108	V
6	*** 3.994	44.21	PK2	33.4	-31.5	0	46.11	-	-	74	-27.89	249	102	V
	*** 3.996	28.24	MAv1	33.4	-31.6	.3	30.34	54	-23.66	-	-	249	102	V
7	*** 4.824	49.35	PK2	34.1	-31	0	52.45	-	-	74	-21.55	146	358	V
	*** 4.824	45.49	MAv1	34.1	-31	.3	48.89	54	-5.11	-	-	146	358	V
8	*** 4.985	49.96	PK2	34.1	-32.2	0	51.86	-	-	74	-22.14	352	106	V
	*** 4.985	28.66	MAv1	34.1	-32.2	.3	30.86	54	-23.14	-	-	352	106	V
9	*** 4.996	45.97	PK2	34.1	-32.2	0	47.87	-	-	74	-26.13	250	104	V
	*** 4.996	28.75	MAv1	34.1	-32.2	.3	30.95	54	-23.05	-	-	250	104	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

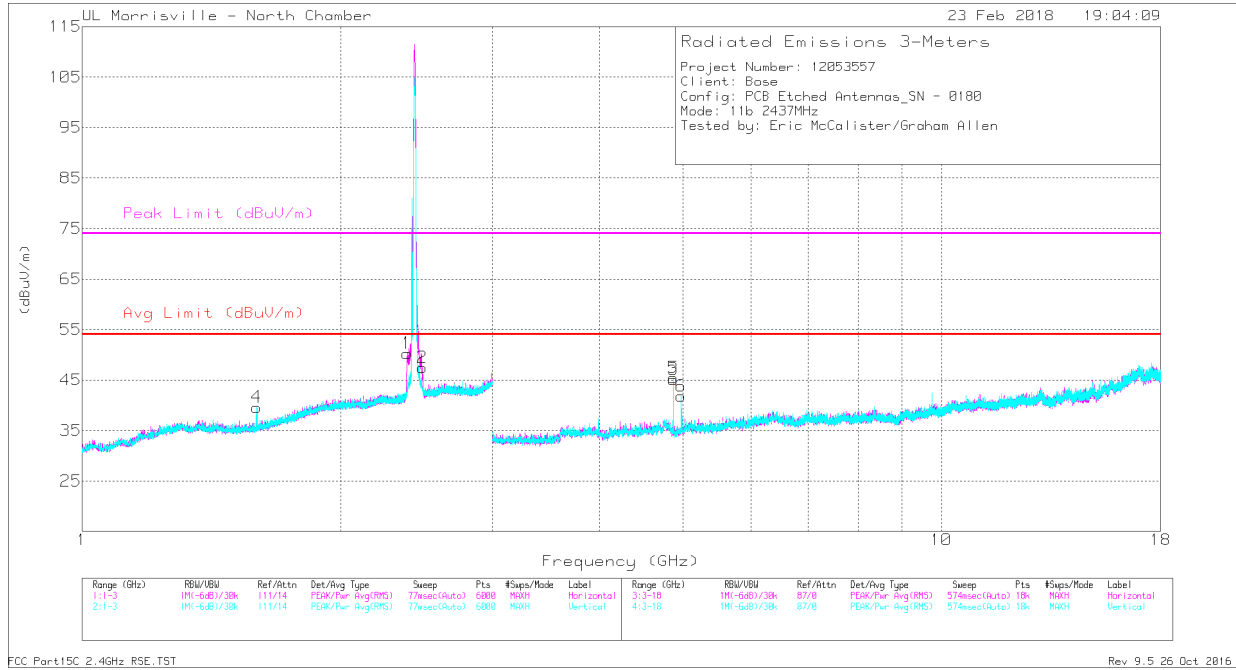
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

Mid Channel



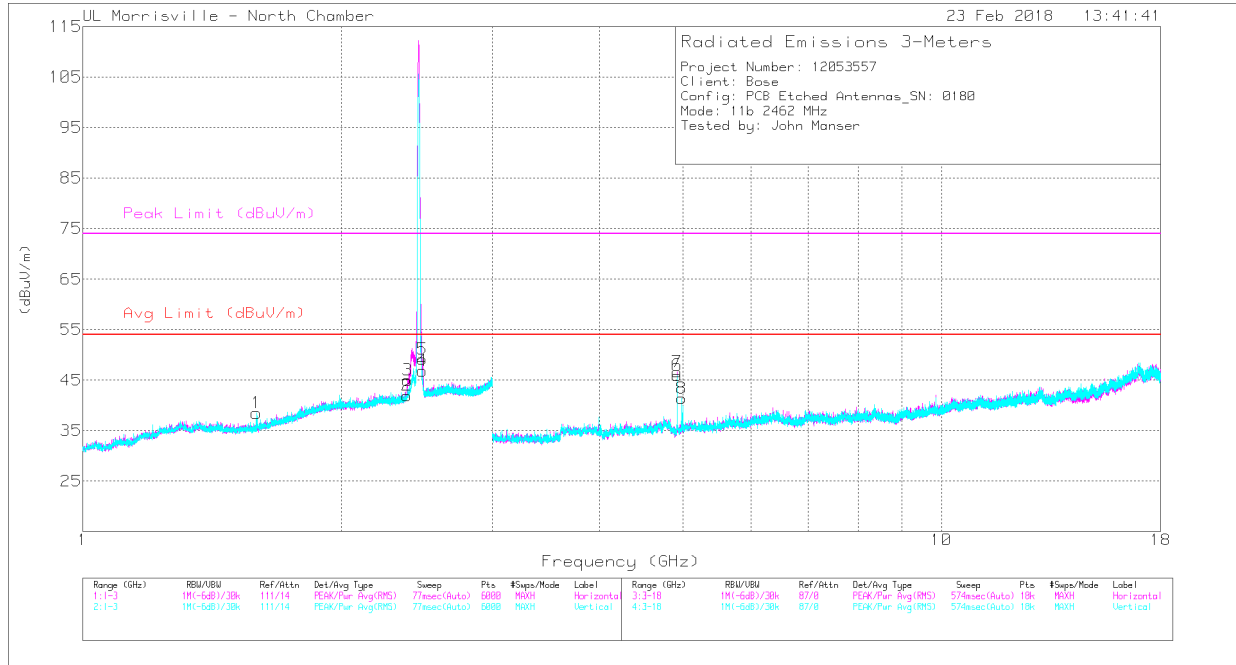
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.387	48.48	PK2	31.8	-23.9	0	56.38	-	-	74	-17.62	280	105	H
	* ** 2.39	37.49	MAv1	31.8	-23.9	.3	45.69	54	-8.31	-	-	280	105	H
2	* ** 2.485	48.53	PK2	32.3	-23.8	0	57.03	-	-	74	-16.97	282	180	H
	* ** 2.485	37.15	MAv1	32.3	-23.8	.3	45.95	54	-8.05	-	-	282	180	H
3	* ** 4.874	45.42	PK2	34	-31	0	48.42	-	-	74	-25.58	277	107	H
	* ** 4.874	39.03	MAv1	34	-31	.3	42.33	54	-11.67	-	-	277	107	H
4	* ** 1.593	43.44	PK2	27.9	-24.1	0	47.24	-	-	74	-26.76	291	241	V
	* ** 1.594	26.83	MAv1	27.9	-24.1	.3	30.93	54	-23.07	-	-	291	241	V
5	* ** 4.874	47.24	PK2	34	-31	0	50.24	-	-	74	-23.76	140	291	V
	* ** 4.874	42.98	MAv1	34	-31	.3	46.28	54	-7.72	-	-	140	291	V
6	* ** 4.981	52.51	PK2	34.1	-32.1	0	54.51	-	-	74	-19.49	254	111	V
	* ** 4.979	29.43	MAv1	34.1	-32.1	.3	31.73	54	-22.27	-	-	254	111	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

High Channel



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	*** 2.389	44.23	PK2	31.8	-23.9	0	52.13	-	-	74	-21.87	278	114	H
	*** 2.39	32.62	MAv1	31.8	-23.9	.3	40.82	54	-13.18	-	-	278	114	H
5	*** 2.487	53.05	PK2	32.3	-23.8	0	61.55	-	-	74	-12.45	283	282	H
	*** 2.484	39.69	MAv1	32.3	-23.8	.3	48.49	54	-5.51	-	-	283	282	H
1	*** 1.595	42.13	PK2	27.9	-24.1	0	45.93	-	-	74	-28.07	317	141	V
	*** 1.594	26.84	MAv1	27.9	-24.1	.3	30.94	54	-23.06	-	-	317	141	V
2	*** 2.387	41.92	PK2	31.8	-23.9	0	49.82	-	-	74	-24.18	260	370	V
	*** 2.39	30.35	MAv1	31.8	-23.9	.3	38.55	54	-15.45	-	-	260	370	V
4	*** 2.484	49.06	PK2	32.3	-23.8	0	57.56	-	-	74	-16.44	212	373	V
	*** 2.484	37.57	MAv1	32.3	-23.8	.3	46.37	54	-7.63	-	-	212	373	V
7	*** 4.924	46.48	PK2	34.1	-31.2	0	49.38	-	-	74	-24.62	287	107	H
	*** 4.924	41.02	MAv1	34.1	-31.2	.3	44.22	54	-9.78	-	-	287	107	H
6	*** 4.924	46.87	PK2	34.1	-31.2	0	49.77	-	-	74	-24.23	137	326	V
	*** 4.924	42.9	MAv1	34.1	-31.2	.3	46.1	54	-7.9	-	-	137	326	V
8	*** 4.983	53.25	PK2	34.1	-32.2	0	55.15	-	-	74	-18.85	267	111	V
	*** 4.993	29.64	MAv1	34.1	-32.2	.3	31.84	54	-22.16	-	-	267	111	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

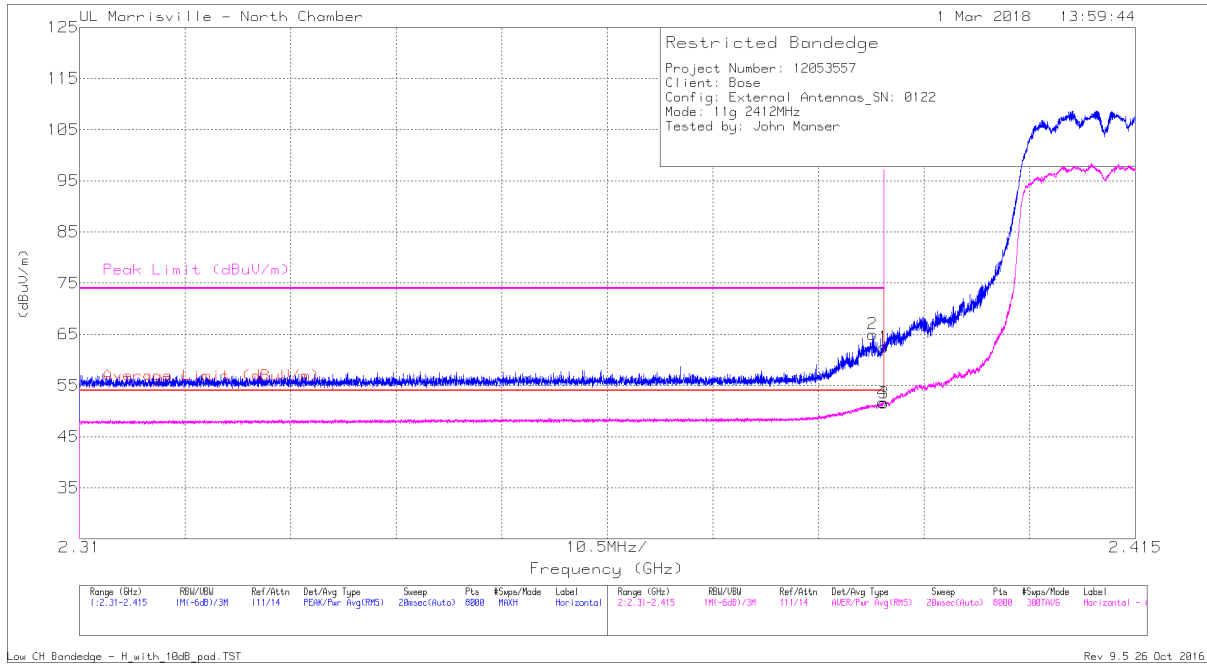
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

9.2.3. TX ABOVE 1 GHz - 802.11g MODE, EXT ANTENNA

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL) 6Mbps 2412MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	44.61	Pk	31.8	-23.9	10	0	62.51	-	-	74	-11.49	288	154	H
2	*** 2.389	47.13	Pk	31.8	-23.9	10	0	65.03	-	-	74	-8.97	288	154	H
3	*** 2.39	30.79	RMS	31.8	-23.9	10	2.91	51.6	54	-2.4	-	-	288	154	H
4	*** 2.39	30.89	RMS	31.8	-23.9	10	2.91	51.7	54	-2.3	-	-	288	154	H

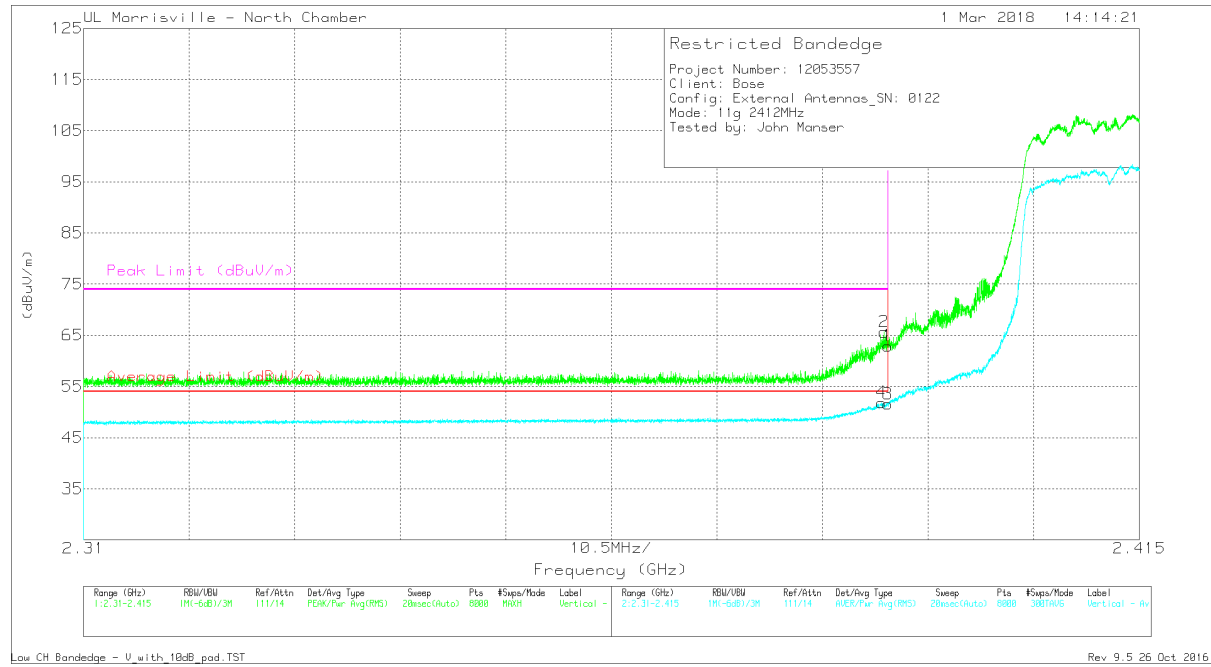
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL) 6Mbps 2412MHZ



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	45.04	Pk	31.8	-23.9	10	0	62.94	-	-	74	-11.06	118	278	V
2	* ** 2.39	47.76	Pk	31.8	-23.9	10	0	65.66	-	-	74	-8.34	118	278	V
3	* ** 2.39	30.74	RMS	31.8	-23.9	10	2.91	51.55	54	-2.45	-	-	118	278	V
4	* ** 2.389	31.06	RMS	31.8	-23.9	10	2.91	51.87	54	-2.13	-	-	118	278	V

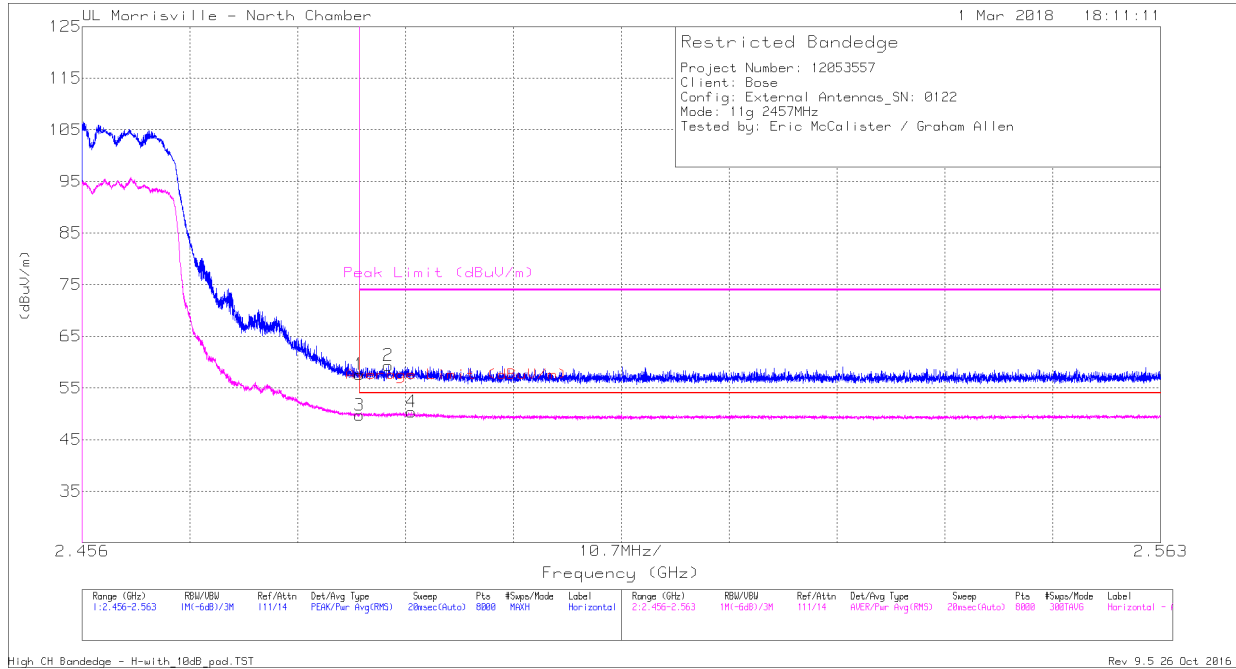
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, HORIZONTAL) 6Mbps 2457MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	39.13	Pk	32.3	-23.8	10	0	57.63	-	-	74	-16.37	178	257	H
2	*** 2.486	40.87	Pk	32.3	-23.8	10	0	59.37	-	-	74	-14.63	178	257	H
3	*** 2.484	28.3	RMS	32.3	-23.8	10	2.91	49.71	54	-4.29	-	-	178	257	H
4	*** 2.489	28.97	RMS	32.3	-23.8	10	2.91	50.38	54	-3.62	-	-	178	257	H

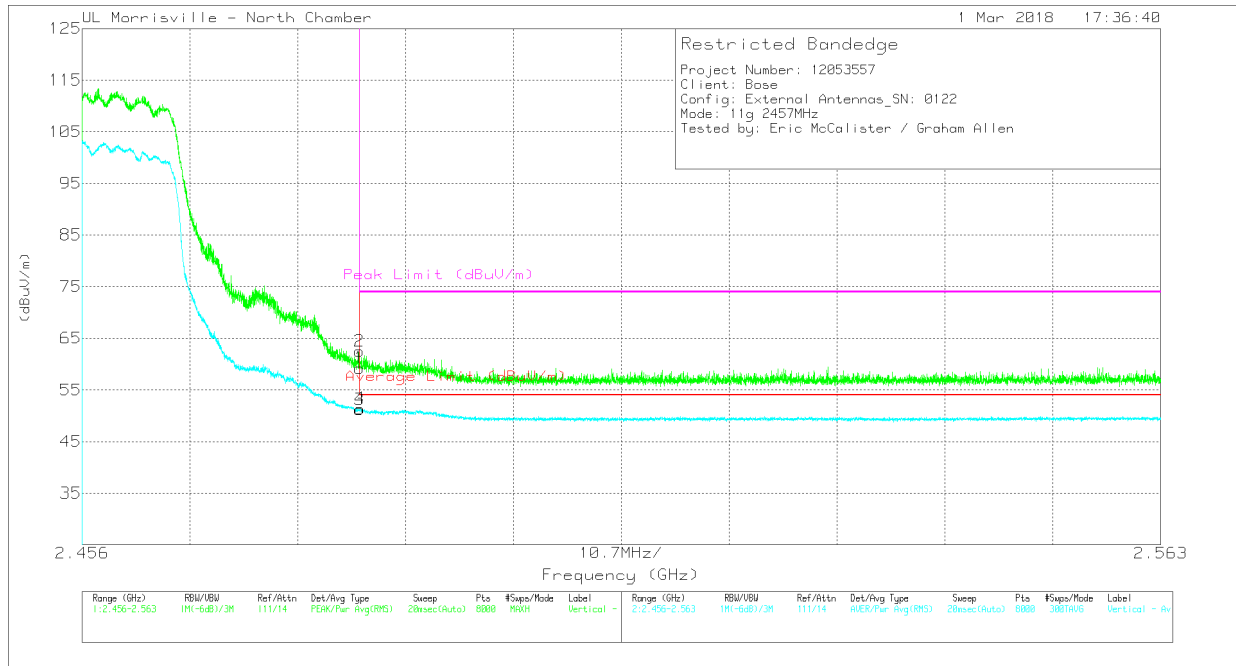
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, VERTICAL) 6Mbps 2457MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	40.75	PK	32.3	-23.8	10	0	59.25	-	-	74	-14.75	146	261	V
2	* ** 2.484	43.98	PK	32.3	-23.8	10	0	62.48	-	-	74	-11.52	146	261	V
3	* ** 2.484	29.78	RMS	32.3	-23.8	10	2.91	51.19	54	-2.81	-	-	146	261	V
4	* ** 2.484	29.96	RMS	32.3	-23.8	10	2.91	51.37	54	-2.63	-	-	146	261	V

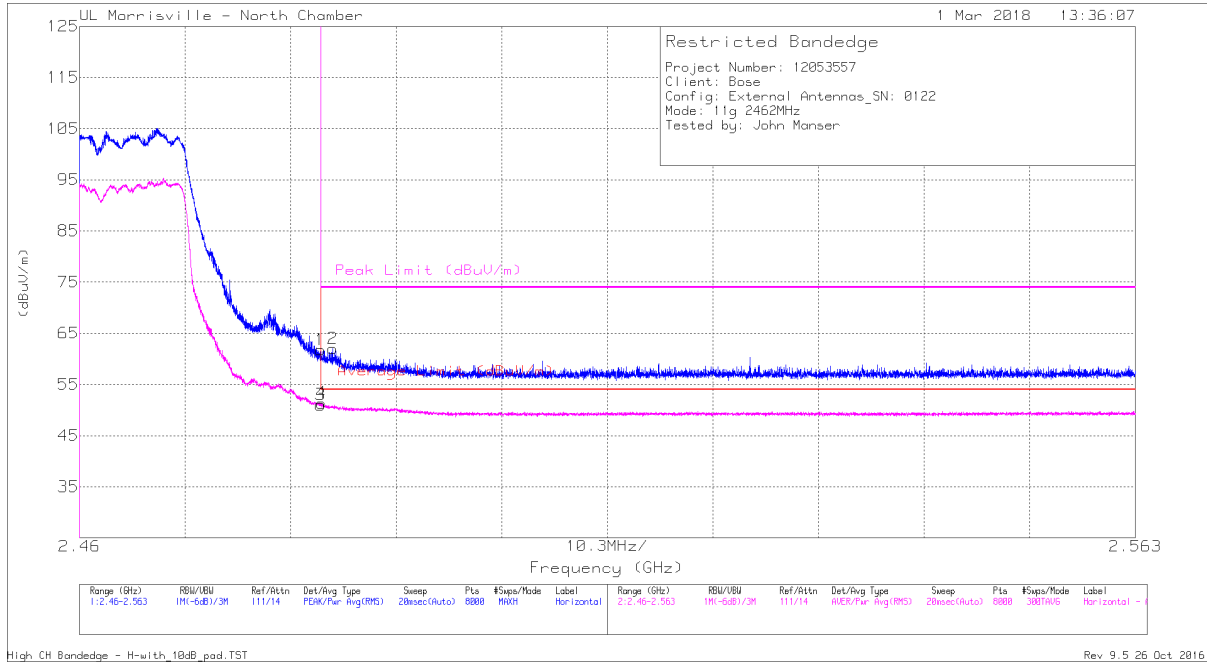
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, HORIZONTAL) 6Mbps 2462MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	43.24	Pk	32.3	-23.8	10	0	61.74	-	-	74	-12.26	9	199	H
2	*** 2.485	43.53	Pk	32.3	-23.8	10	0	62.03	-	-	74	-11.97	9	199	H
3	*** 2.484	29.62	RMS	32.3	-23.8	10	2.91	51.03	54	-2.97	-	-	9	199	H
4	*** 2.484	29.96	RMS	32.3	-23.8	10	2.91	51.37	54	-2.63	-	-	9	199	H

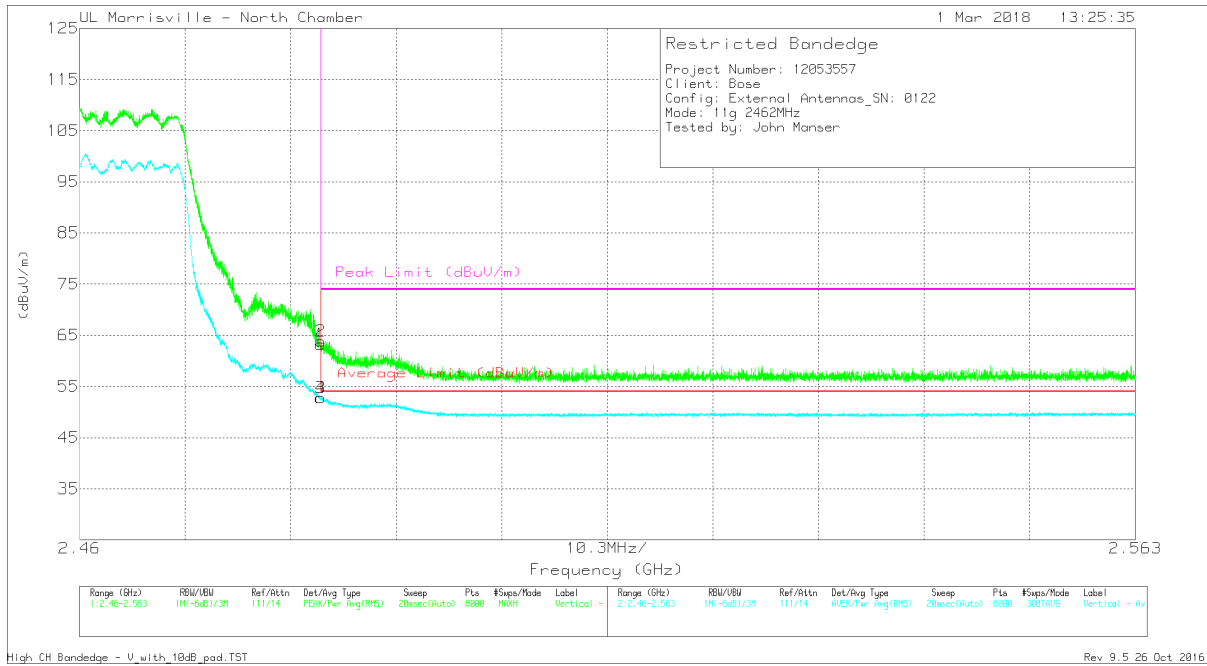
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, VERTICAL) 6Mbps 2462MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	44.73	Pk	32.3	-23.8	10	0	63.23	-	-	74	-10.77	138	245	V
2	*** 2.484	45.37	Pk	32.3	-23.8	10	0	63.87	-	-	74	-10.13	138	245	V
3	*** 2.484	31.41	RMS	32.3	-23.8	10	2.91	52.82	54	-1.18	-	-	138	245	V
4	*** 2.484	31.41	RMS	32.3	-23.8	10	2.91	52.82	54	-1.18	-	-	138	245	V

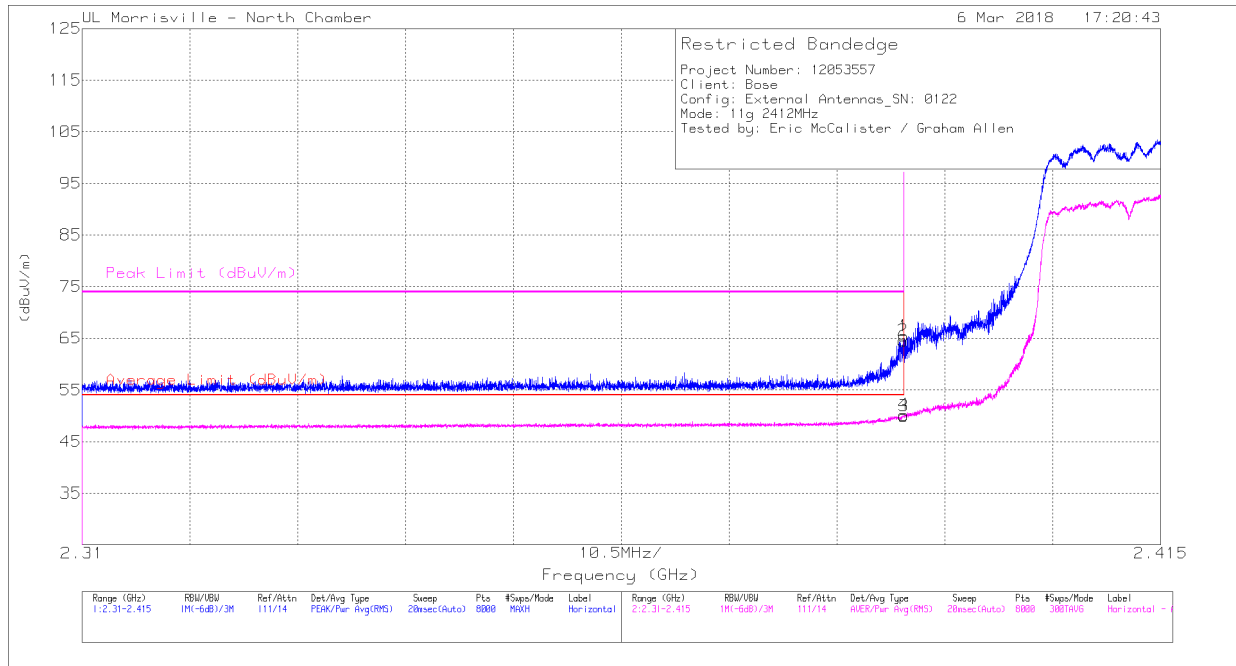
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL) 54Mbps 2412MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	47.53	PK	31.8	-23.9	10	0	65.43	-	-	74	-8.57	46	302	H
2	*** 2.39	46.65	PK	31.8	-23.9	10	0	64.55	-	-	74	-9.45	46	302	H
3	*** 2.39	29.12	RMS	31.8	-23.9	10	2.91	49.93	54	-4.07	-	-	46	302	H
4	*** 2.39	29.36	RMS	31.8	-23.9	10	2.91	50.17	54	-3.83	-	-	46	302	H

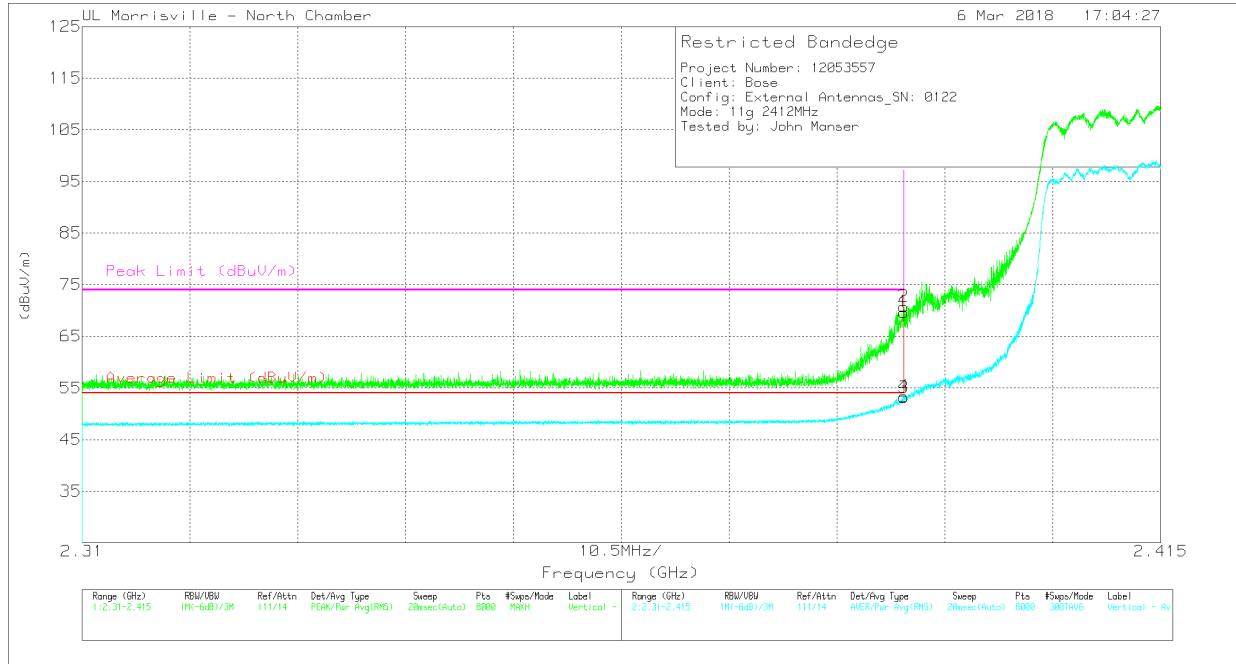
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

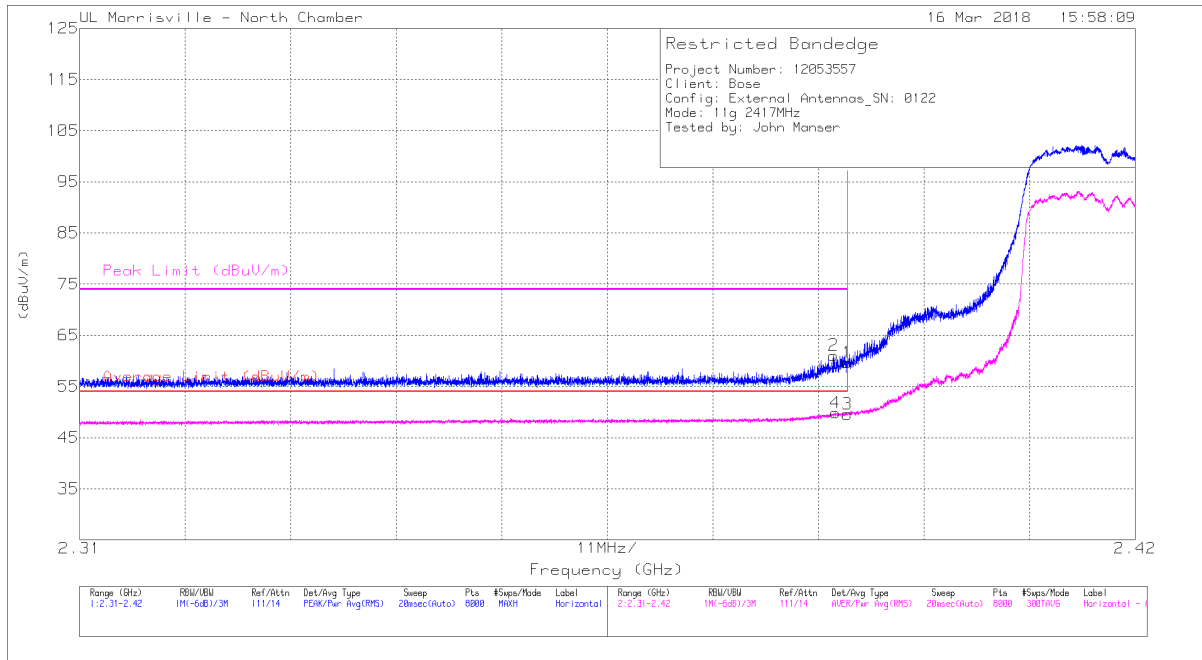
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL) 54Mbps 2412MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	51.8	Pk	31.8	-23.9	10	0	69.7	-	-	74	-4.3	144	267	V
2	* ** 2.39	52.88	Pk	31.8	-23.9	10	0	70.78	-	-	74	-3.22	144	267	V
3	* ** 2.39	32.33	RMS	31.8	-23.9	10	2.91	53.14	54	-0.86	-	-	144	267	V
4	* ** 2.39	32.55	RMS	31.8	-23.9	10	2.91	53.36	54	-0.64	-	-	144	267	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 Pk - Peak detector
 RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL) 54Mbps 2417MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	41.79	Pk	31.8	-23.9	10	0	59.69	-	-	74	-14.31	140	340	H
2	* ** 2.389	43.17	Pk	31.8	-23.9	10	0	61.07	-	-	74	-12.93	140	340	H
3	* ** 2.39	28.74	RMS	31.8	-23.9	10	2.91	49.55	54	-4.45	-	-	140	340	H
4	* ** 2.389	29.05	RMS	31.8	-23.9	10	2.91	49.86	54	-4.14	-	-	140	340	H

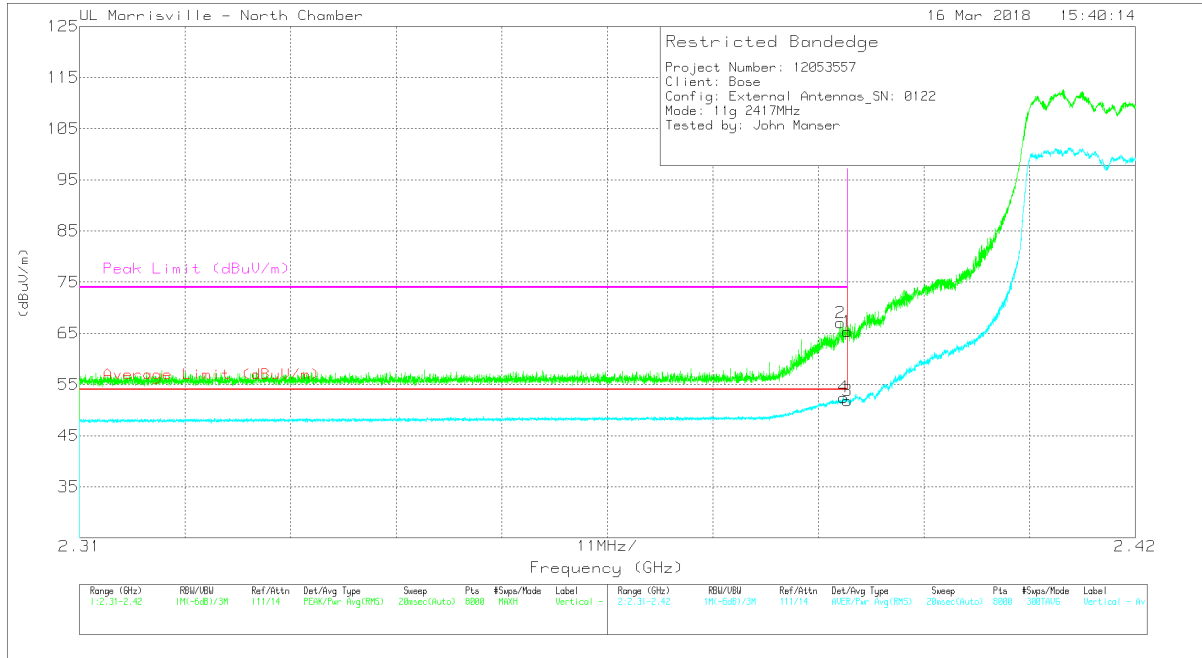
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL) 54Mbps 2417MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	47.46	Pk	31.8	-23.9	10	0	65.36	-	-	74	-8.64	140	259	V
2	* ** 2.389	49.17	Pk	31.8	-23.9	10	0	67.07	-	-	74	-6.93	140	259	V
3	* ** 2.39	31	RMS	31.8	-23.9	10	2.91	51.81	54	-2.19	-	-	140	259	V
4	* ** 2.39	31.68	RMS	31.8	-23.9	10	2.91	52.49	54	-1.51	-	-	140	259	V

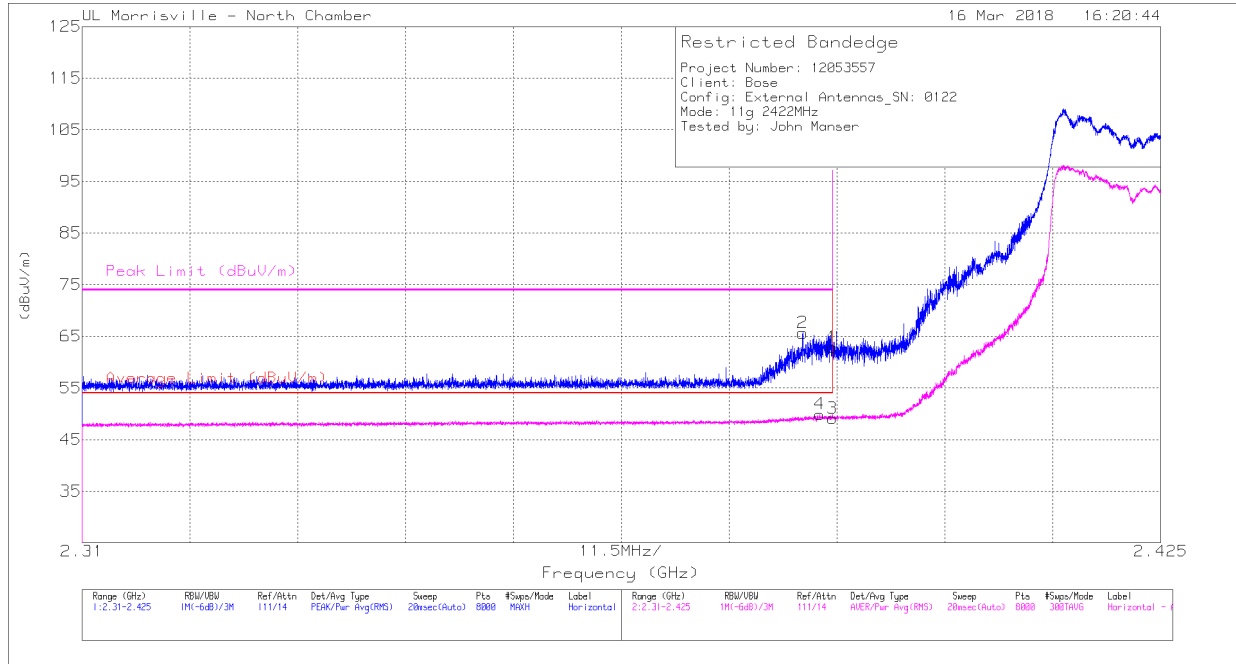
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

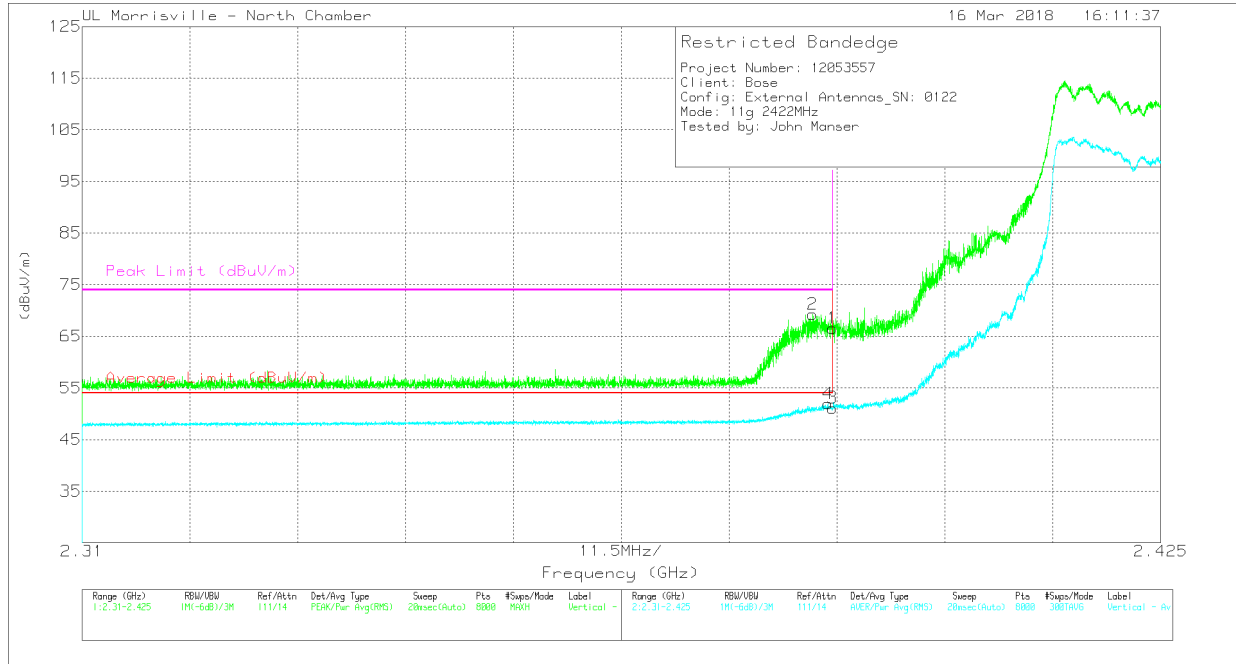
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL) 54Mbps 2422MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	44.96	Pk	31.8	-23.9	10	0	62.86	-	-	74	-11.14	238	349	H
2	* ** 2.387	47.76	Pk	31.8	-23.9	10	0	65.66	-	-	74	-8.34	238	349	H
3	* ** 2.39	28.29	RMS	31.8	-23.9	10	2.91	49.1	54	-4.9	-	-	238	349	H
4	* ** 2.389	29.1	RMS	31.8	-23.9	10	2.91	49.91	54	-4.09	-	-	238	349	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 Pk - Peak detector
 RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL) 54Mbps 2422MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	48.64	PK	31.8	-23.9	10	0	66.54	-	-	74	-7.46	140	270	V
2	* ** 2.388	51.4	PK	31.8	-23.9	10	0	69.3	-	-	74	-4.7	140	270	V
3	* ** 2.39	30.32	RMS	31.8	-23.9	10	2.91	51.13	54	-2.87	-	-	140	270	V
4	* ** 2.39	31.09	RMS	31.8	-23.9	10	2.91	51.9	54	-2.1	-	-	140	270	V

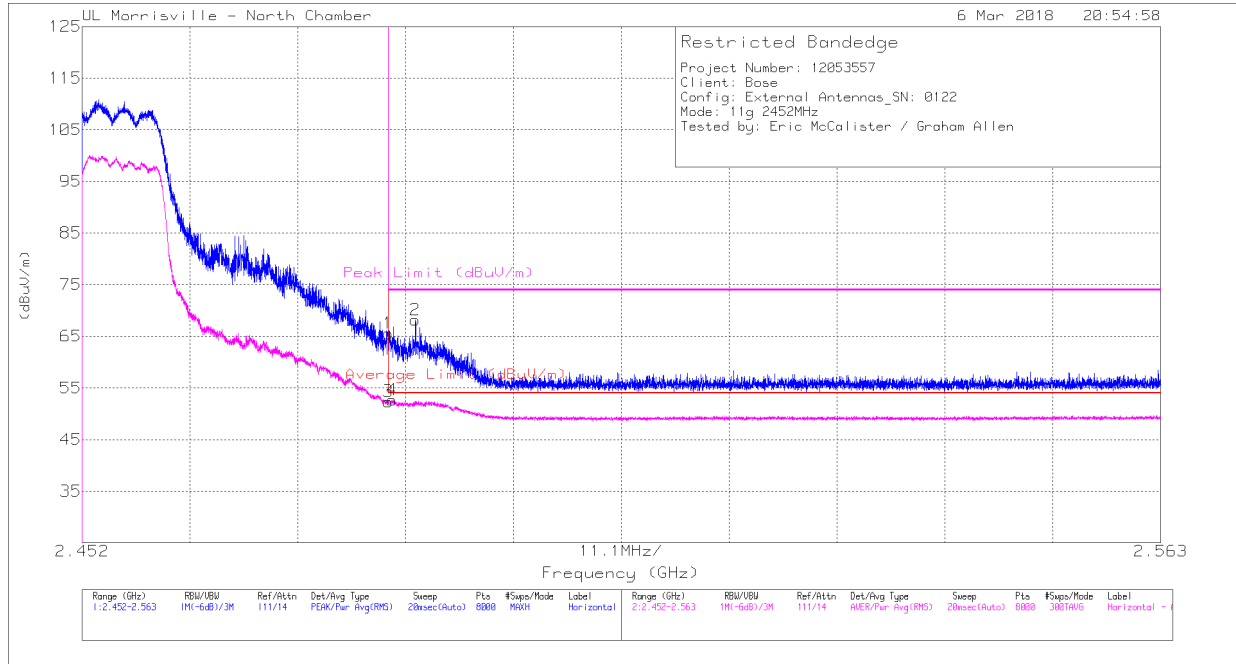
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, HORIZONTAL) 54Mbps 2452MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	47.03	PK	32.3	-23.8	10	0	65.53	-	-	74	-8.47	288	127	H
2	*** 2.486	49.68	PK	32.3	-23.8	10	0	68.18	-	-	74	-5.82	288	127	H
3	*** 2.484	30.95	RMS	32.3	-23.8	10	2.91	52.36	54	-1.64	-	-	288	127	H
4	*** 2.484	31.28	RMS	32.3	-23.8	10	2.91	52.69	54	-1.31	-	-	288	127	H

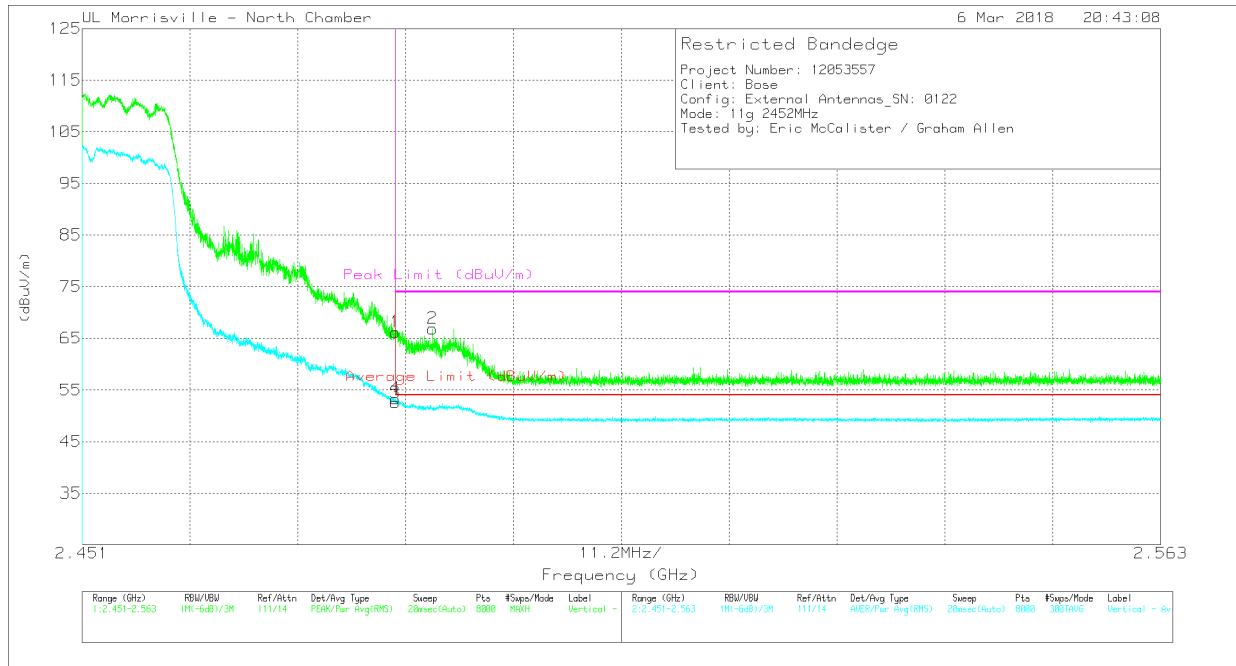
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, VERTICAL) 54Mbps 2452MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	** * 2.484	47.73	Pk	32.3	-23.8	10	0	66.23	-	-	74	-7.77	140	275	V
2	** * 2.487	48.38	Pk	32.3	-23.8	10	0	66.88	-	-	74	-7.12	140	275	V
3	** * 2.484	31.15	RMS	32.3	-23.8	10	2.91	52.56	54	-1.44	-	-	140	275	V
4	** * 2.484	31.94	RMS	32.3	-23.8	10	2.91	53.35	54	-.65	-	-	140	275	V

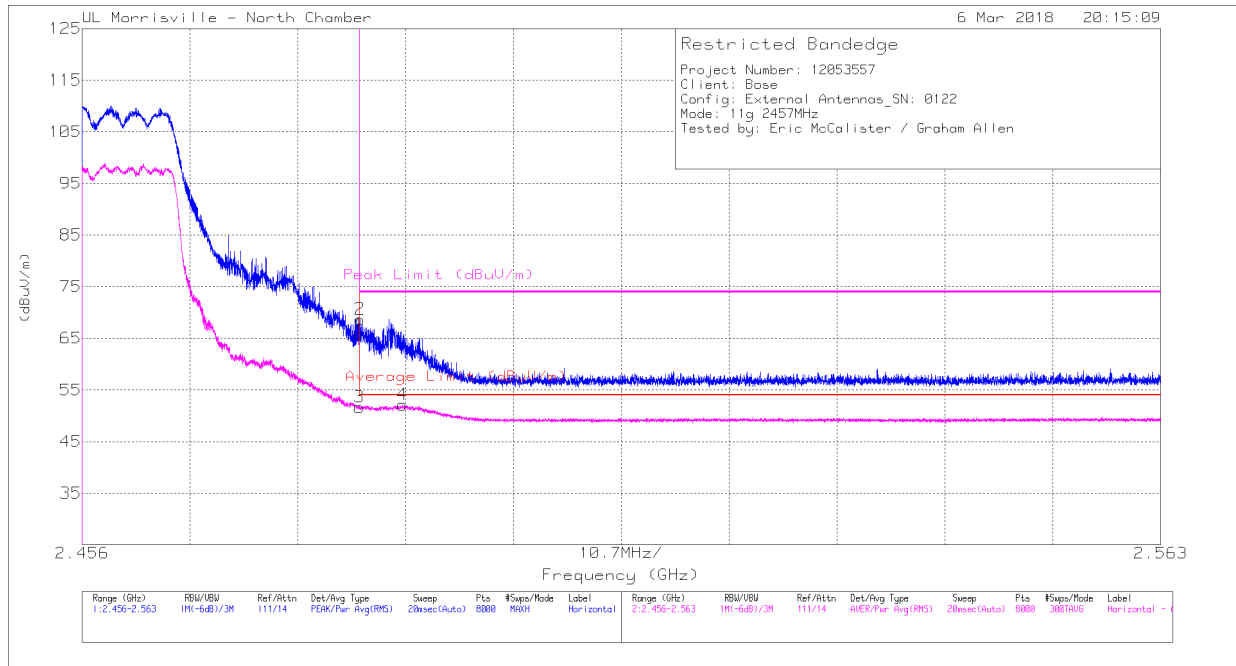
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, HORIZONTAL) 54Mbps 2457MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	47.35	Pk	32.3	-23.8	10	0	65.85	-	-	74	-8.15	286	129	H
2	*** 2.484	50.2	Pk	32.3	-23.8	10	0	68.7	-	-	74	-5.3	286	129	H
3	*** 2.484	30.24	RMS	32.3	-23.8	10	2.91	51.65	54	-2.35	-	-	286	129	H
4	** 2.488	30.72	RMS	32.3	-23.8	10	2.91	52.13	54	-1.87	-	-	286	129	H

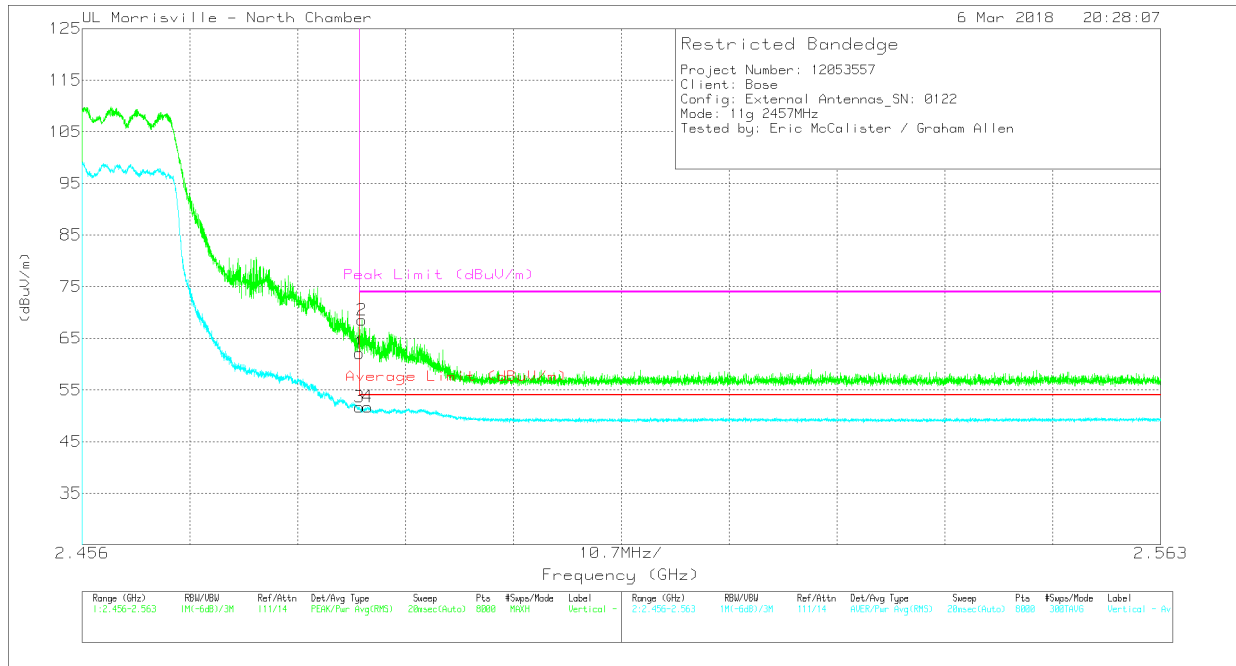
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, VERTICAL) 54Mbps 2457MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	** * 2.484	43.6	Pk	32.3	-23.8	10	0	62.1	-	-	74	-11.9	142	323	V
2	** * 2.484	50.06	Pk	32.3	-23.8	10	0	68.56	-	-	74	-5.44	142	323	V
3	** * 2.484	30.25	RMS	32.3	-23.8	10	2.91	51.66	54	-2.34	-	-	142	323	V
4	** * 2.484	30.33	RMS	32.3	-23.8	10	2.91	51.74	54	-2.26	-	-	142	323	V

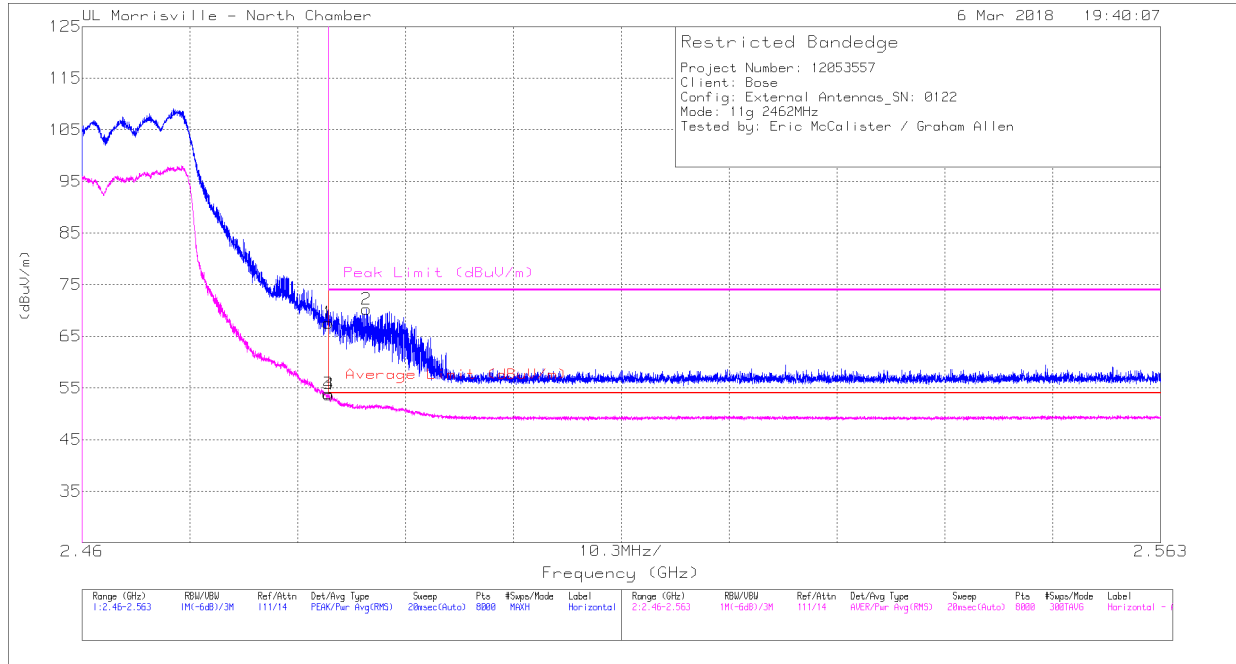
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, HORIZONTAL) 54Mbps 2462MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	49.09	Pk	32.3	-23.8	10	0	67.59	-	-	74	-6.41	286	121	H
2	*** 2.487	51.72	Pk	32.3	-23.8	10	0	70.22	-	-	74	-3.78	286	121	H
3	*** 2.484	32.51	RMS	32.3	-23.8	10	2.91	53.92	54	-0.08	-	-	286	121	H
4	*** 2.484	32.31	RMS	32.3	-23.8	10	2.91	53.72	54	-.28	-	-	286	121	H

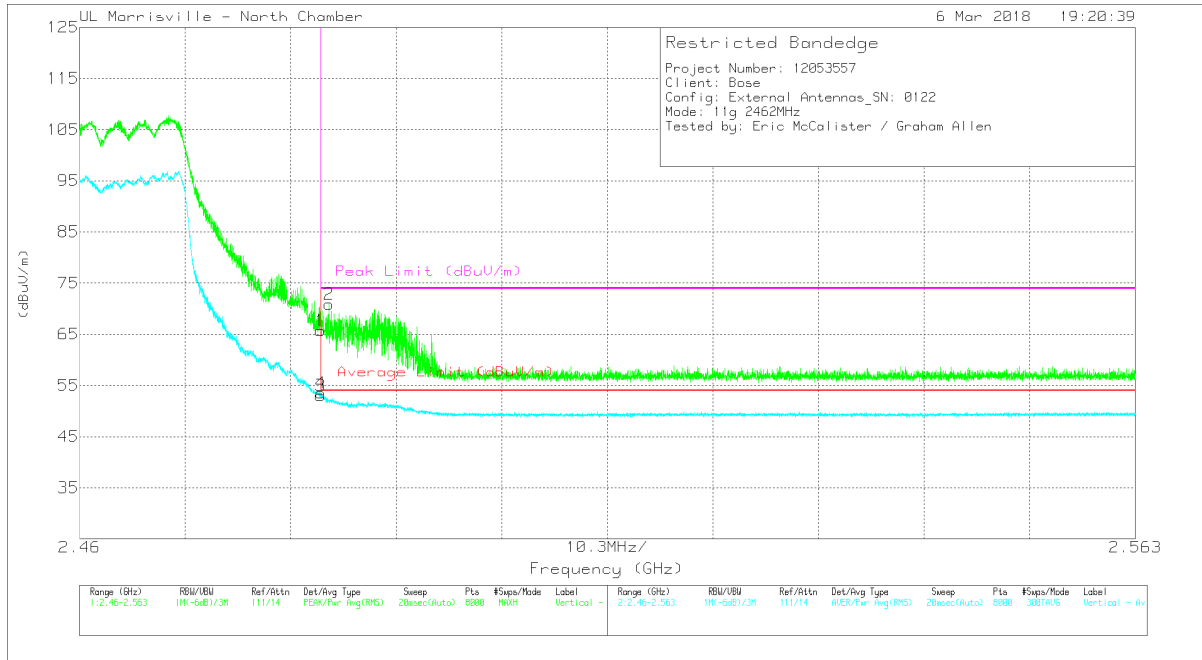
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, VERTICAL) 54Mbps 2462MHz



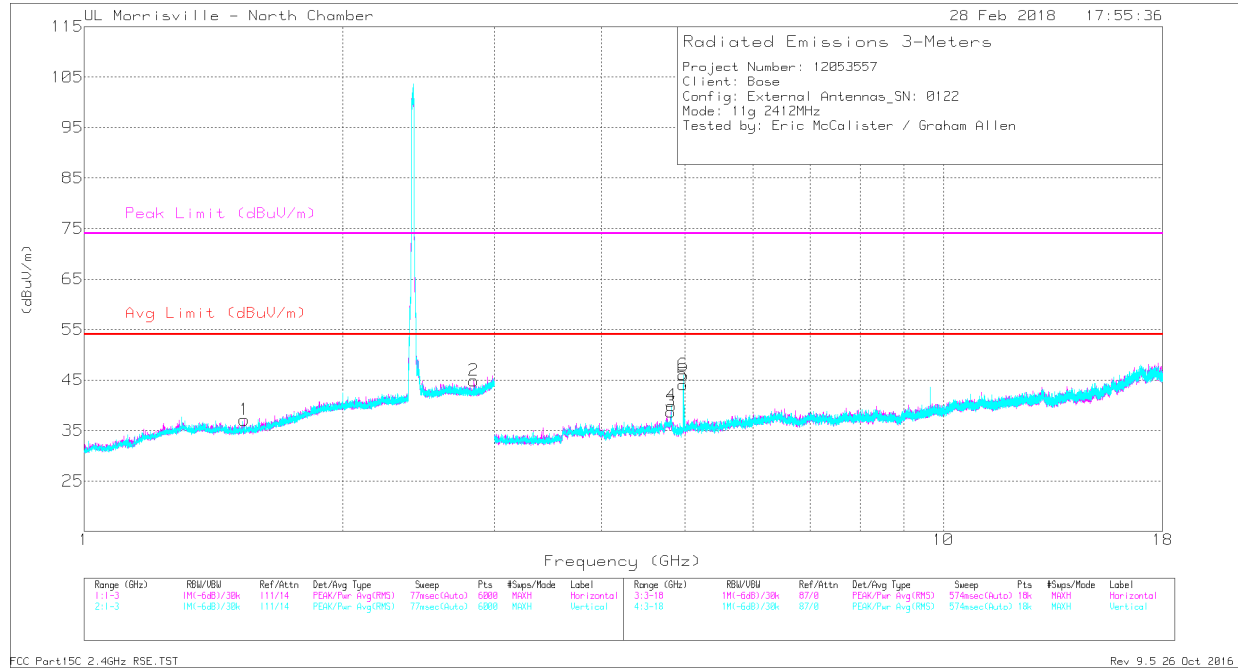
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	47.2	Pk	32.3	-23.8	10	0	65.7	-	-	74	-8.3	131	281	V
2	*** 2.484	52.39	Pk	32.3	-23.8	10	0	70.89	-	-	74	-3.11	131	281	V
3	*** 2.484	31.62	RMS	32.3	-23.8	10	2.91	53.03	54	-97	-	-	131	281	V
4	*** 2.484	32.12	RMS	32.3	-23.8	10	2.91	53.53	54	-47	-	-	131	281	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 Pk - Peak detector
 RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

Note: Radiated Spurious emissions from 1-18 GHz was run at the lowest data rate since this was found to be the highest Power and PSD. It was also run with Low and High channels set to mid channel power settings for worst-case results.

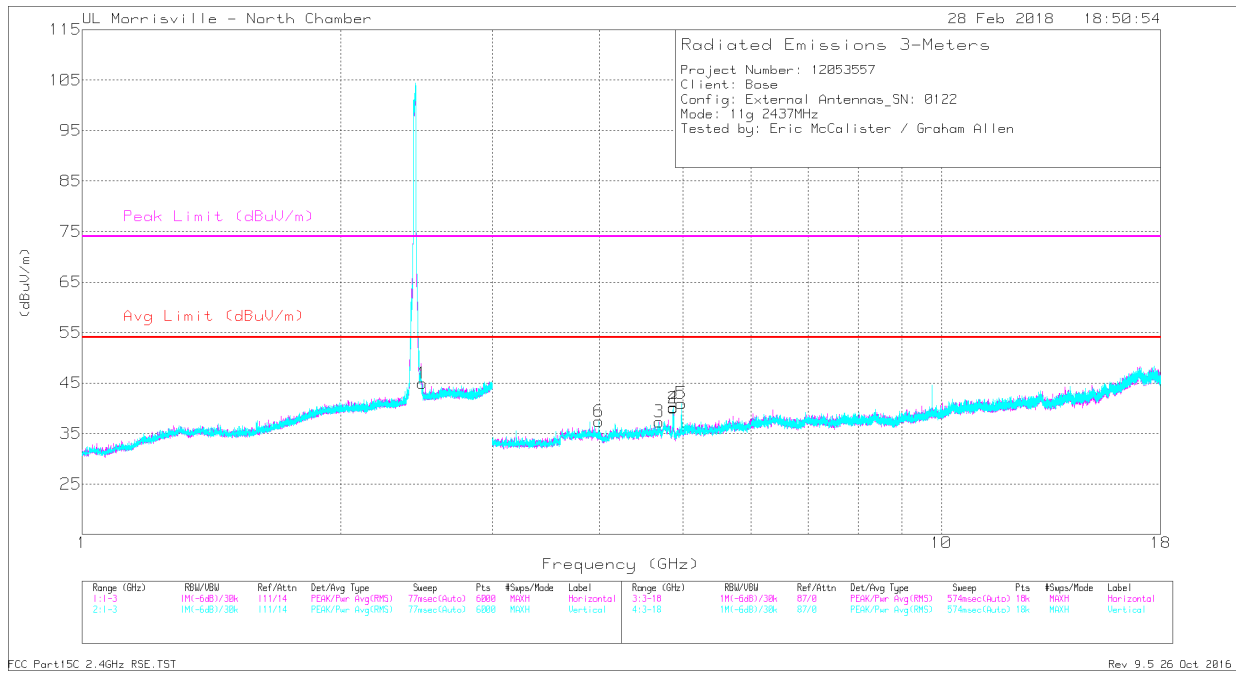
Low Channel



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 1.534	38.49	PK2	27.9	-24.2	0	42.19	-	-	74	-31.81	320	256	H
	*** 1.531	26.51	MAv1	27.9	-24.2	2.91	33.12	54	-20.88	-	-	320	256	H
2	*** 2.839	40.63	PK2	32	-23.1	0	49.53	-	-	74	-24.47	45	115	H
	*** 2.838	27.96	MAv1	32	-23.1	2.91	39.77	54	-14.23	-	-	45	115	H
3	*** 4.817	45.32	PK2	34.1	-31	0	48.42	-	-	74	-25.58	240	104	H
	*** 4.817	31.4	MAv1	34.1	-31	2.91	37.41	54	-16.59	-	-	240	104	H
4	*** 4.823	43.94	PK2	34.1	-31	0	47.04	-	-	74	-26.96	142	297	V
	*** 4.823	31.62	MAv1	34.1	-31	2.91	37.63	54	-16.37	-	-	142	297	V
5	*** 4.979	48.9	PK2	34.1	-32.1	0	50.9	-	-	74	-23.1	264	185	V
	*** 4.979	28.41	MAv1	34.1	-32.1	2.91	33.32	54	-20.68	-	-	264	185	V
6	*** 4.983	46.04	PK2	34.1	-32.2	0	47.94	-	-	74	-26.06	247	118	V
	*** 4.981	28.57	MAv1	34.1	-32.1	2.91	33.48	54	-20.52	-	-	247	118	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 PK2 - Maximum Peak
 MAv1 - Maximum RMS Average

Mid Channel



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.487	44.17	PK2	32.3	-23.8	0	52.67	-	-	74	-21.33	4	153	H
	*** 2.487	30.65	MAV1	32.3	-23.8	2.91	42.06	54	-11.94	-	-	4	153	H
2	*** 4.872	44.56	PK2	34	-31	0	47.56	-	-	74	-26.44	257	107	H
	*** 4.874	31.43	MAV1	34	-31	2.91	37.34	54	-16.66	-	-	257	107	H
3	*** 4.697	40.91	PK2	34.1	-32.1	0	42.91	-	-	74	-31.09	58	136	H
	*** 4.696	29.44	MAV1	34.1	-32.1	2.91	34.35	54	-19.65	-	-	58	136	H
4	*** 4.874	46.02	PK2	34	-31	0	49.02	-	-	74	-24.98	132	196	V
	*** 4.874	33.03	MAV1	34	-31	2.91	38.94	54	-15.06	-	-	132	196	V
5	*** 4.98	46.39	PK2	34.1	-32.1	0	48.39	-	-	74	-25.61	249	238	V
	*** 4.981	28.85	MAV1	34.1	-32.1	2.91	33.76	54	-20.24	-	-	249	238	V
6	*** 3.994	43.66	PK2	33.4	-31.5	0	45.56	-	-	74	-28.44	215	171	V
	*** 3.996	28.44	MAV1	33.4	-31.6	2.91	33.15	54	-20.85	-	-	215	171	V

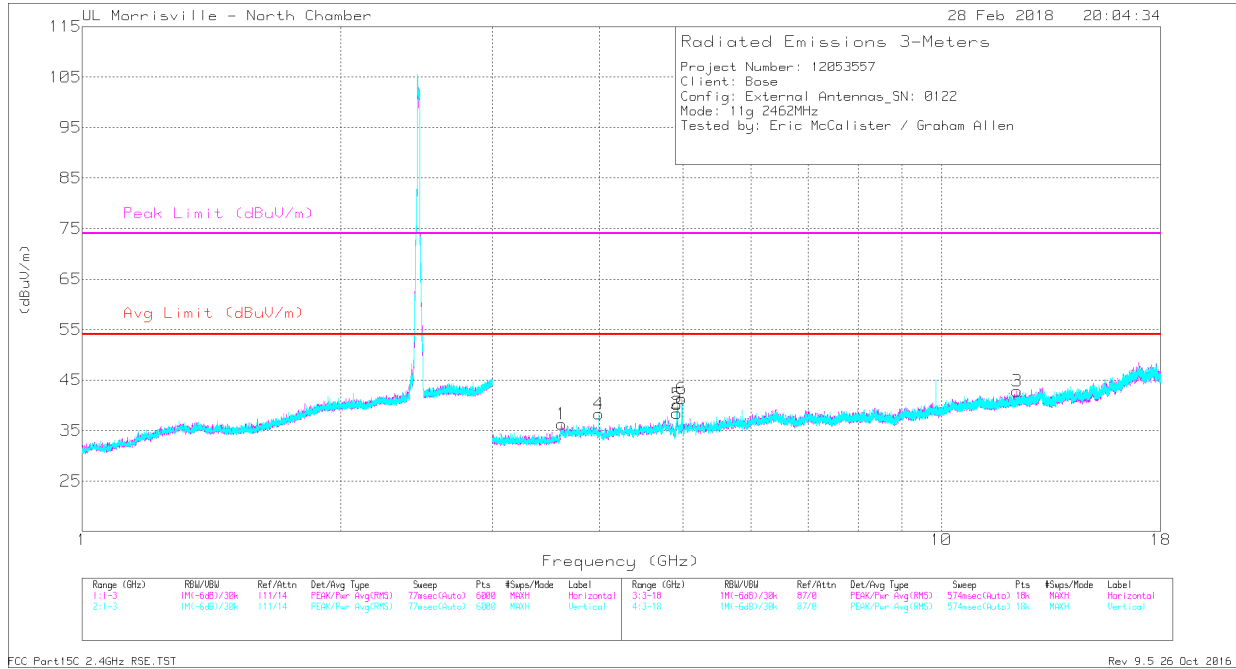
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

MAV1 - Maximum RMS Average

High Channel

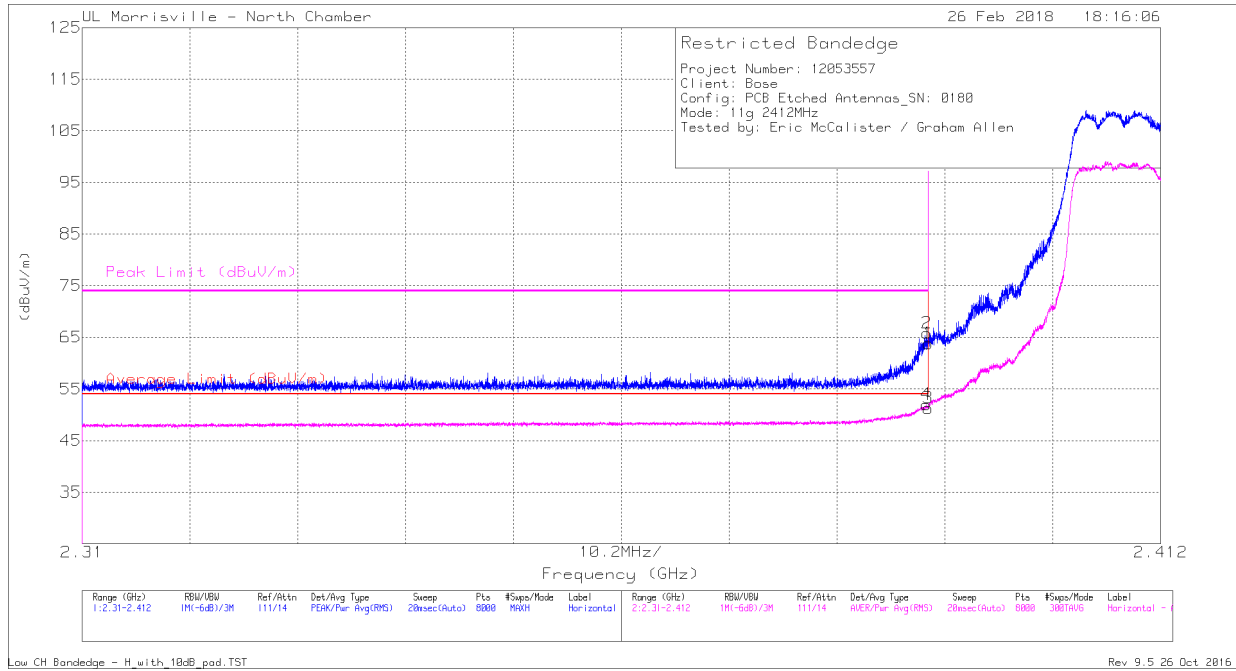


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 3.617	40.01	PK2	32.8	-30.9	0	41.91	-	-	74	-32.09	289	164	H
	*** 3.617	28.27	MAv1	32.9	-31	2.91	33.08	54	-20.92	-	-	289	164	H
2	*** 4.924	43.46	PK2	34.1	-31.2	0	46.36	-	-	74	-27.64	236	315	H
	*** 4.924	30.8	MAv1	34.1	-31.2	2.91	36.61	54	-17.39	-	-	236	315	H
3	*** 12.25	35.22	PK2	38.9	-25.8	0	48.32	-	-	74	-25.68	283	152	H
	** 12.248	23.62	MAv1	38.9	-25.9	2.91	39.53	54	-14.47	-	-	283	152	H
4	*** 3.991	40.08	PK2	33.4	-31.4	0	42.08	-	-	74	-31.92	60	105	V
	*** 3.992	28.66	MAv1	33.4	-31.4	2.91	33.57	54	-20.43	-	-	60	105	V
5	*** 4.929	44.71	PK2	34.1	-31.3	0	47.51	-	-	74	-26.49	101	196	V
	*** 4.928	31.44	MAv1	34.1	-31.3	2.91	37.15	54	-16.85	-	-	101	196	V
6	*** 4.989	48.06	PK2	34.1	-32.2	0	49.96	-	-	74	-24.04	3	104	V
	*** 4.989	28.89	MAv1	34.1	-32.2	2.91	33.7	54	-20.3	-	-	3	104	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 PK2 - Maximum Peak
 MAv1 - Maximum RMS Average

9.2.4. TX ABOVE 1 GHz - 802.11g MODE, PCB ANTENNA

RESTRICTED BANDEDGE (LOW CHANNEL) Horizontal 6Mbps 2412MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	45.92	Pk	31.8	-23.9	10	0	63.82	-	-	74	-10.18	25	377	H
2	* ** 2.39	47.89	Pk	31.8	-23.9	10	0	65.79	-	-	74	-8.21	25	377	H
3	* ** 2.39	30.46	RMS	31.8	-23.9	10	2.91	51.27	54	-2.73	-	-	25	377	H
4	* ** 2.39	31.18	RMS	31.8	-23.9	10	2.91	51.99	54	-2.01	-	-	25	377	H

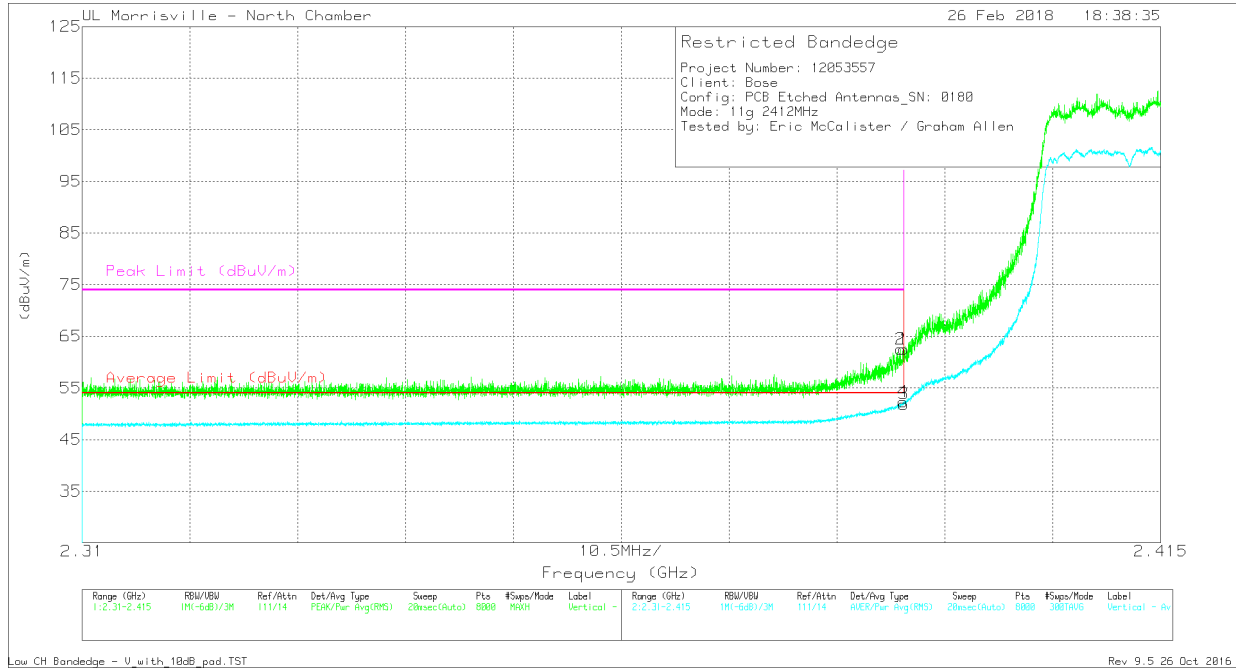
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL) Vertical 6Mbps 2412MHz



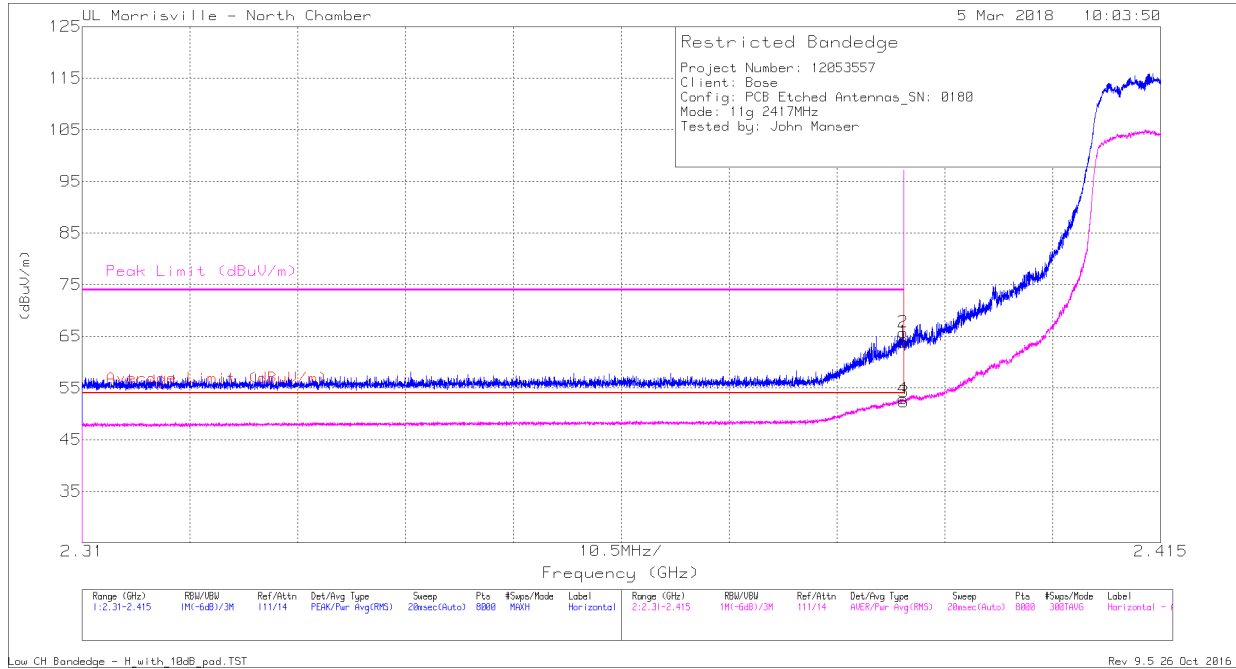
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	44.61	Pk	31.8	-23.9	10	0	62.51	-	-	74	-11.49	262	346	V
2	* ** 2.39	44.63	Pk	31.8	-23.9	10	0	62.53	-	-	74	-11.47	262	346	V
3	* ** 2.39	31.07	RMS	31.8	-23.9	10	2.91	51.88	54	-2.12	-	-	262	346	V
4	* ** 2.39	31.53	RMS	31.8	-23.9	10	2.91	52.34	54	-1.66	-	-	262	346	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RESTRICTED BANDEDGE (LOW CHANNEL) Horizontal 6Mbps 2417MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	46	PK	31.8	-23.9	10	0	63.9	-	-	74	-10.1	253	277	H
2	*** 2.39	47.87	PK	31.8	-23.9	10	0	65.77	-	-	74	-8.23	253	277	H
3	*** 2.39	31.52	RMS	31.8	-23.9	10	2.91	52.33	54	-1.67	-	-	253	277	H
4	*** 2.39	32.13	RMS	31.8	-23.9	10	2.91	52.94	54	-1.06	-	-	253	277	H

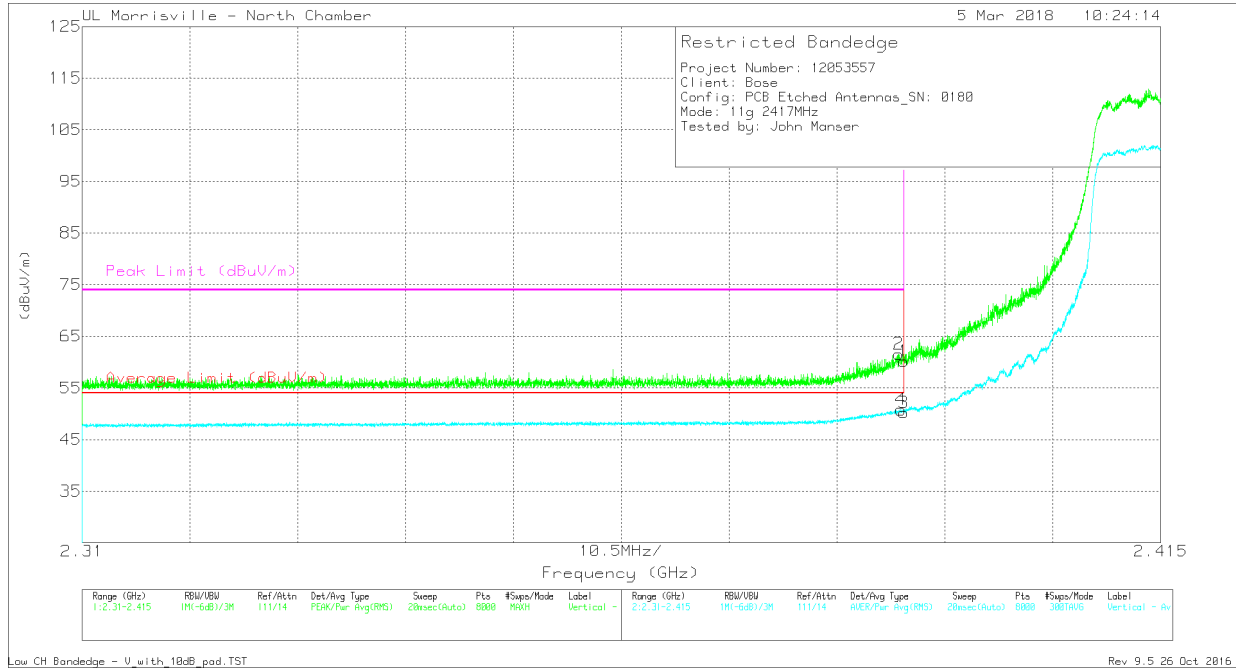
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL) Vertical 6Mbps 2417MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	42.29	PK	31.8	-23.9	10	0	60.19	-	-	74	-13.81	254	399	V
2	*** 2.389	43.68	PK	31.8	-23.9	10	0	61.58	-	-	74	-12.42	254	399	V
3	*** 2.39	29.4	RMS	31.8	-23.9	10	2.91	50.21	54	-3.79	-	-	254	399	V
4	*** 2.39	29.98	RMS	31.8	-23.9	10	2.91	50.79	54	-3.21	-	-	254	399	V

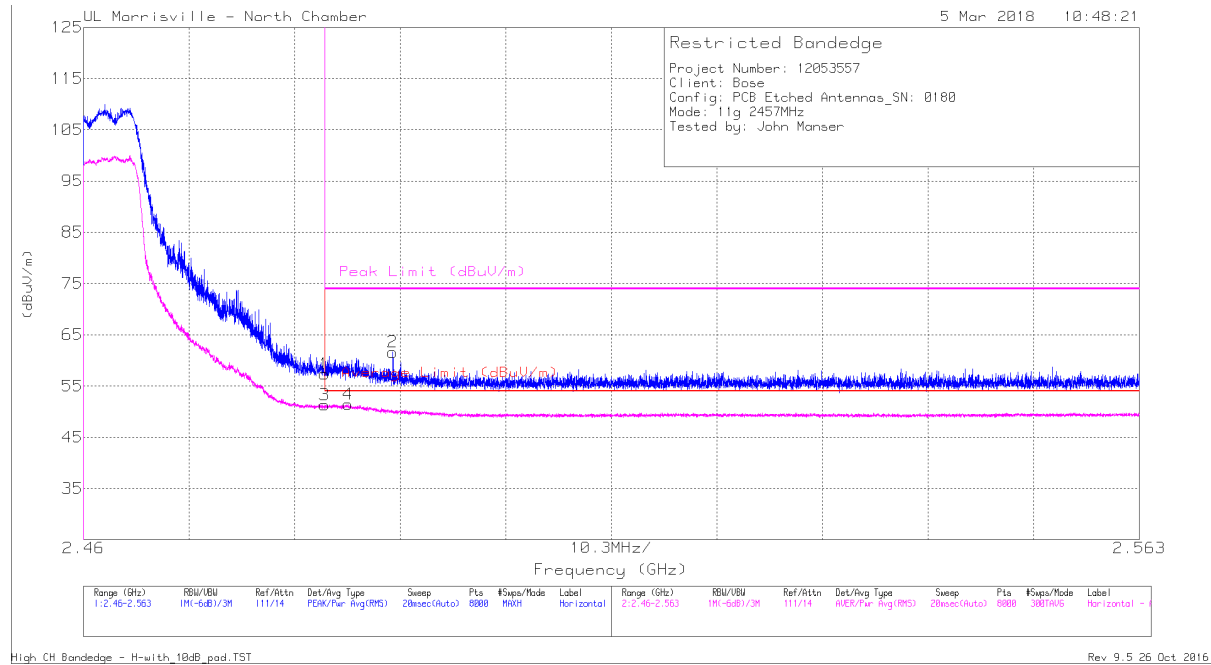
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL) Horizontal 6Mbps 2457MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	38.81	Pk	32.3	-23.8	10	0	57.31	-	-	74	-16.69	46	398	H
2	*** 2.49	43.1	Pk	32.3	-23.8	10	0	61.6	-	-	74	-12.4	46	398	H
3	*** 2.484	29.93	RMS	32.3	-23.8	10	2.91	51.34	54	-2.66	-	-	46	398	H
4	*** 2.486	30.06	RMS	32.3	-23.8	10	2.91	51.47	54	-2.53	-	-	46	398	H

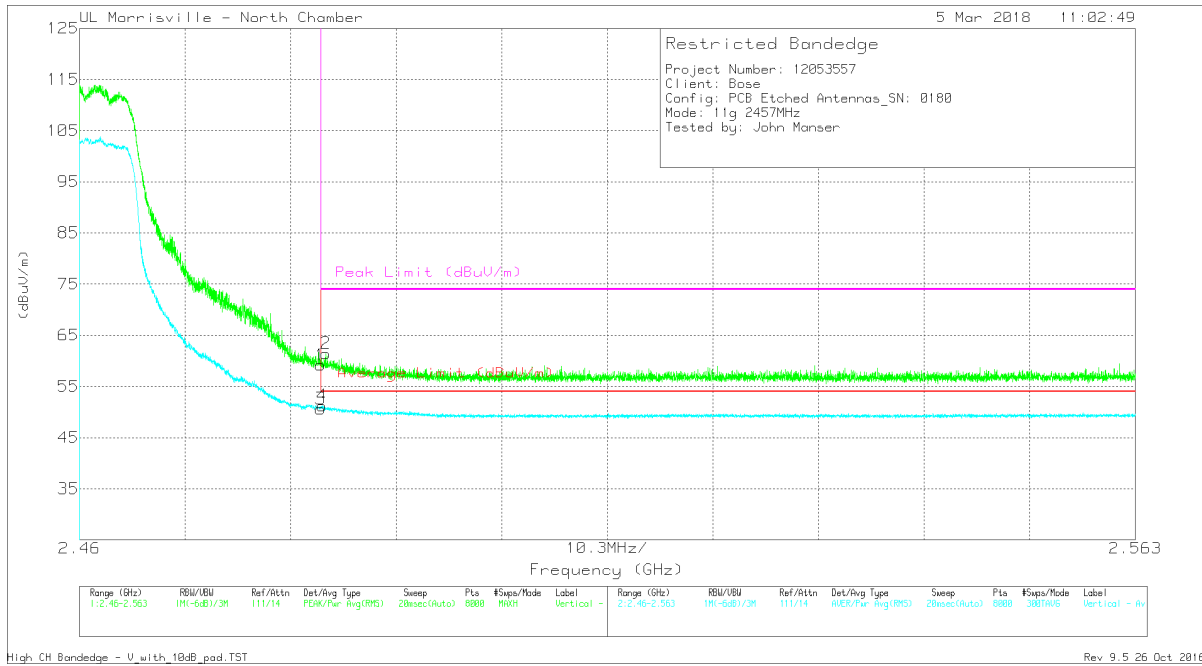
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL) Vertical 6Mbps 2457MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	40.7	Pk	32.3	-23.8	10	0	59.2	-	-	74	-14.8	259	371	V
2	*** 2.484	42.95	Pk	32.3	-23.8	10	0	61.45	-	-	74	-12.55	259	371	V
3	*** 2.484	29.23	RMS	32.3	-23.8	10	2.91	50.64	54	-3.36	-	-	259	371	V
4	*** 2.484	29.83	RMS	32.3	-23.8	10	2.91	51.24	54	-2.76	-	-	259	371	V

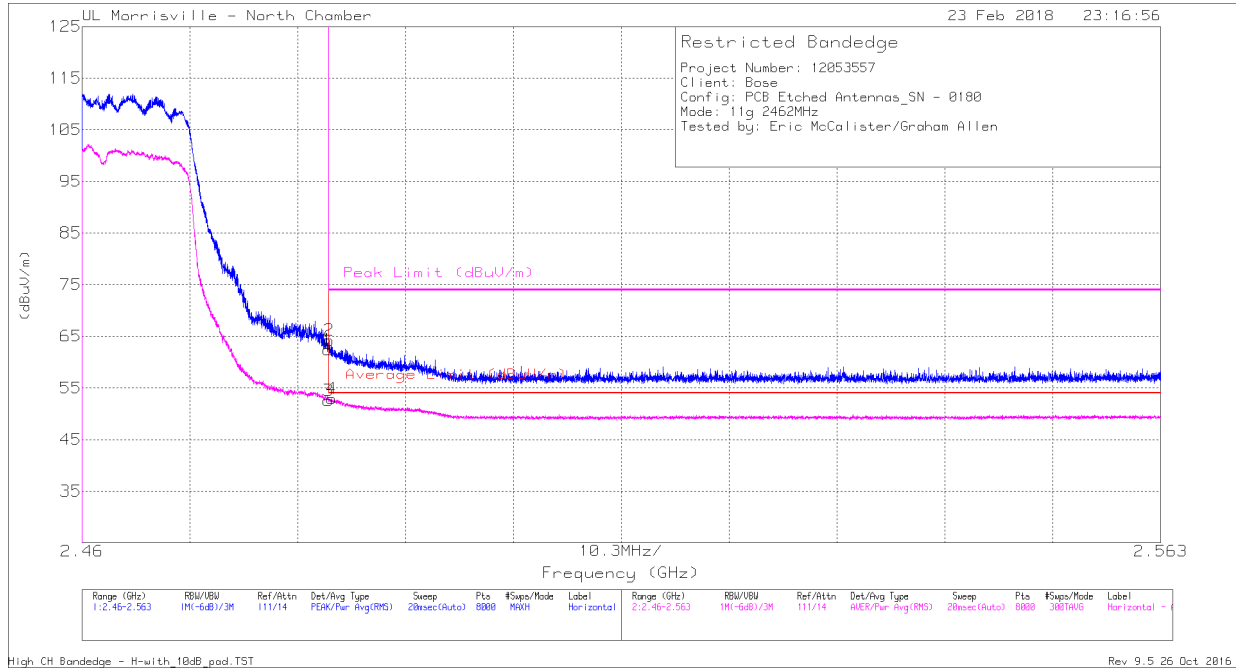
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL) Horizontal 6Mbps 2462MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	43.89	Pk	32.3	-23.8	10	0	62.39	-	-	74	-11.61	240	329	H
2	* ** 2.484	45.75	Pk	32.3	-23.8	10	0	64.25	-	-	74	-9.75	240	329	H
3	* ** 2.484	31.12	RMS	32.3	-23.8	10	2.91	52.53	54	-1.47	-	-	240	329	H
4	* ** 2.484	31.49	RMS	32.3	-23.8	10	2.91	52.9	54	-1.1	-	-	240	329	H

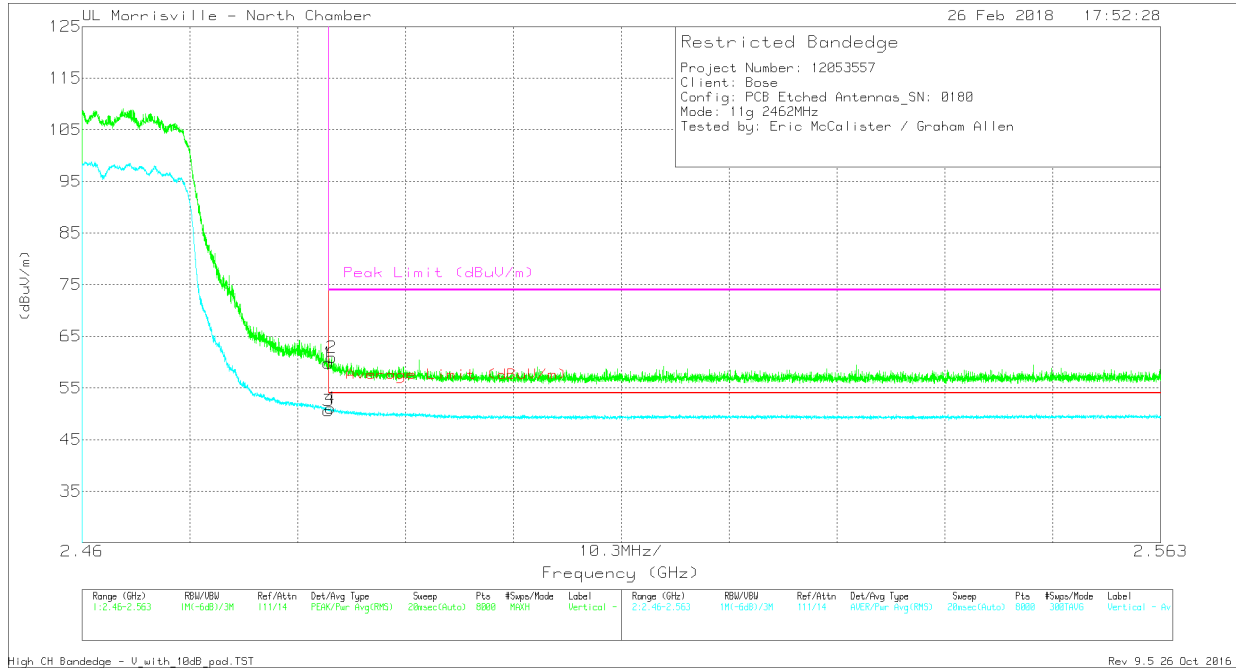
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL) Vertical 6Mbps 2462MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	41.29	PK	32.3	-23.8	10	0	59.79	-	-	74	-14.21	261	375	V
2	*** 2.484	42.41	PK	32.3	-23.8	10	0	60.91	-	-	74	-13.09	261	375	V
3	*** 2.484	29.19	RMS	32.3	-23.8	10	2.91	50.6	54	-3.4	-	-	261	375	V
4	*** 2.484	29.69	RMS	32.3	-23.8	10	2.91	51.1	54	-2.9	-	-	261	375	V

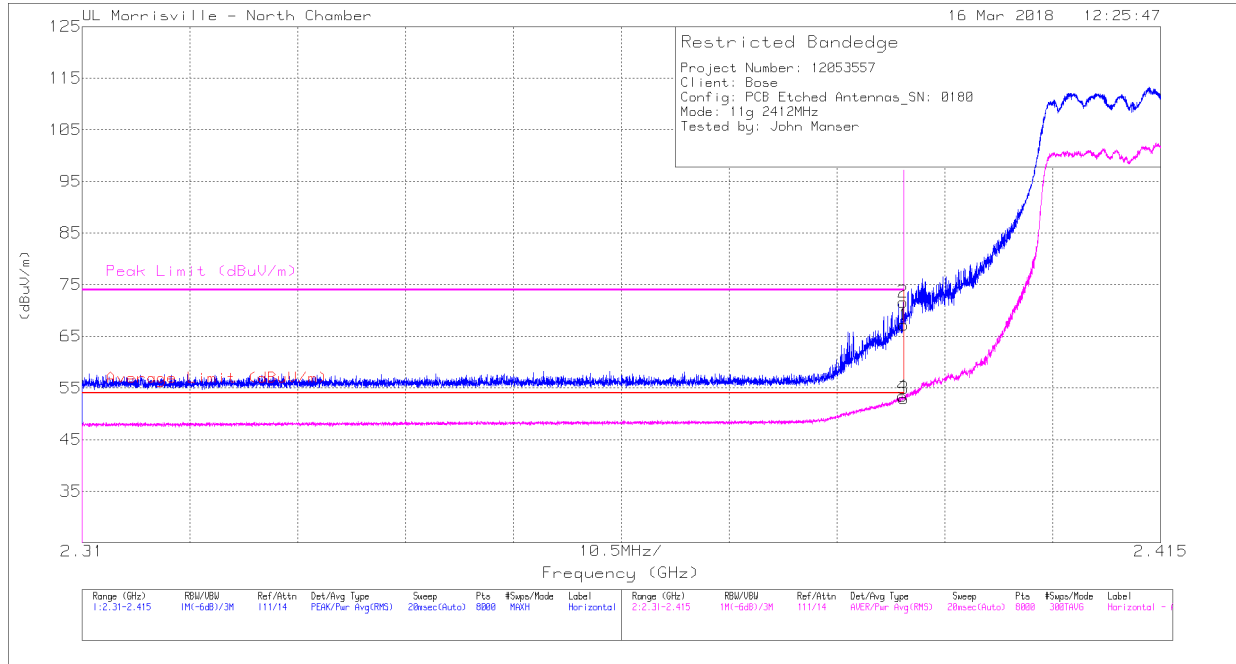
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL) Horizontal 54Mbps 2412MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	49.27	PK	31.8	-23.9	10	0	67.17	-	-	74	-6.83	288	275	H
2	*** 2.39	53.76	PK	31.8	-23.9	10	0	71.66	-	-	74	-2.34	288	275	H
3	*** 2.39	32.15	RMS	31.8	-23.9	10	2.91	52.96	54	-1.04	-	-	288	275	H
4	*** 2.39	32.63	RMS	31.8	-23.9	10	2.91	53.44	54	-0.56	-	-	288	275	H

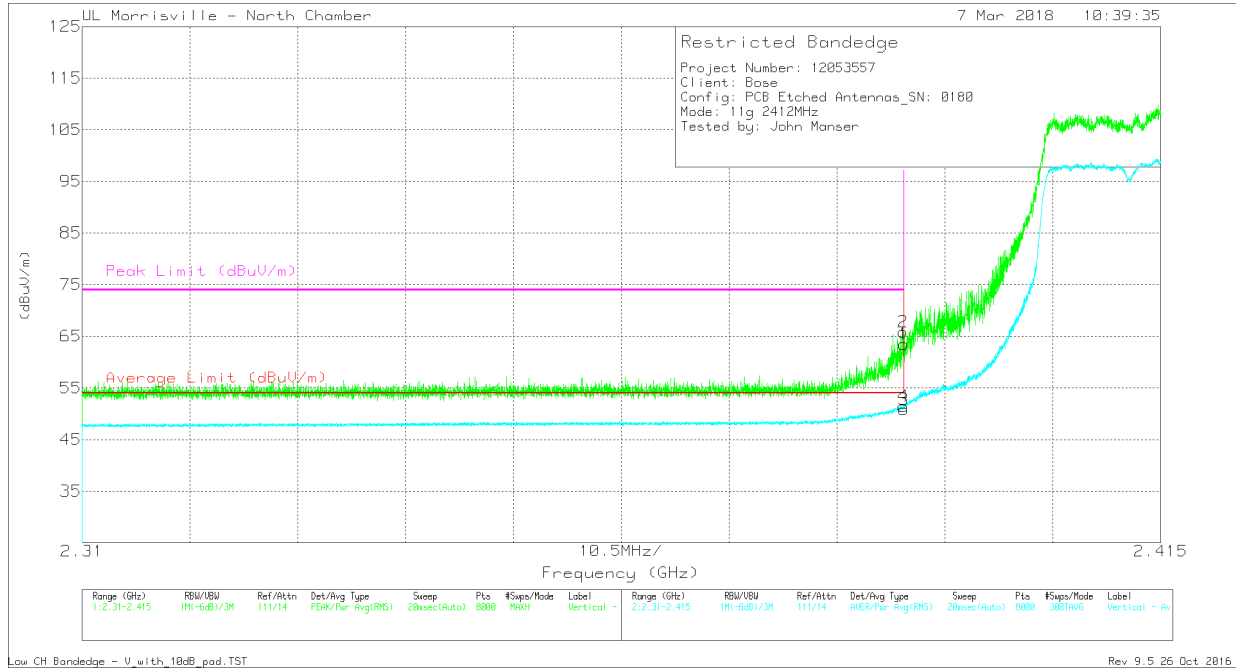
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL) Vertical 54Mbps 2412MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	45.55	PK	31.8	-23.9	10	0	63.45	-	-	74	-10.55	258	393	V
2	*** 2.39	47.94	PK	31.8	-23.9	10	0	65.84	-	-	74	-8.16	258	393	V
3	*** 2.39	29.99	RMS	31.8	-23.9	10	2.91	50.8	54	-3.2	-	-	258	393	V
4	*** 2.39	30.63	RMS	31.8	-23.9	10	2.91	51.44	54	-2.56	-	-	258	393	V

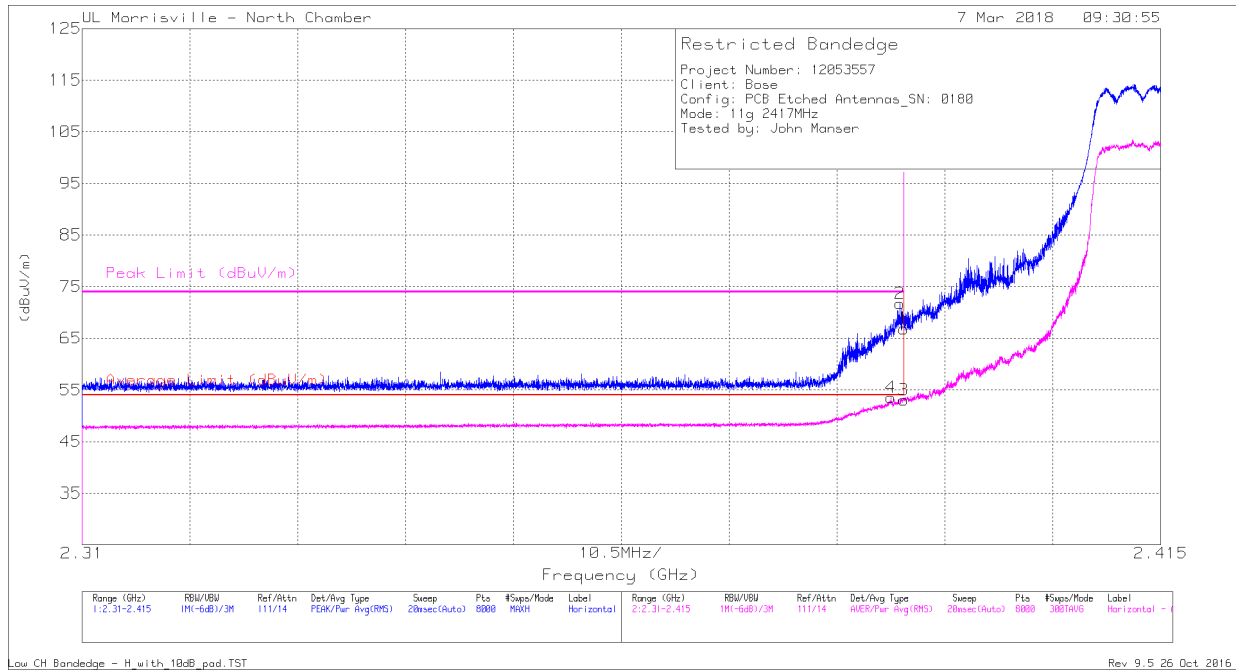
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL) Horizontal 54Mbps 2417MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	48.98	PK	31.8	-23.9	10	0	66.88	-	-	74	-7.12	278	341	H
2	*** 2.39	53.84	PK	31.8	-23.9	10	0	71.74	-	-	74	-2.26	278	341	H
3	*** 2.39	32.24	RMS	31.8	-23.9	10	2.91	53.05	54	-95	-	-	278	341	H
4	*** 2.389	32.75	RMS	31.8	-23.9	10	2.91	53.56	54	-44	-	-	278	341	H

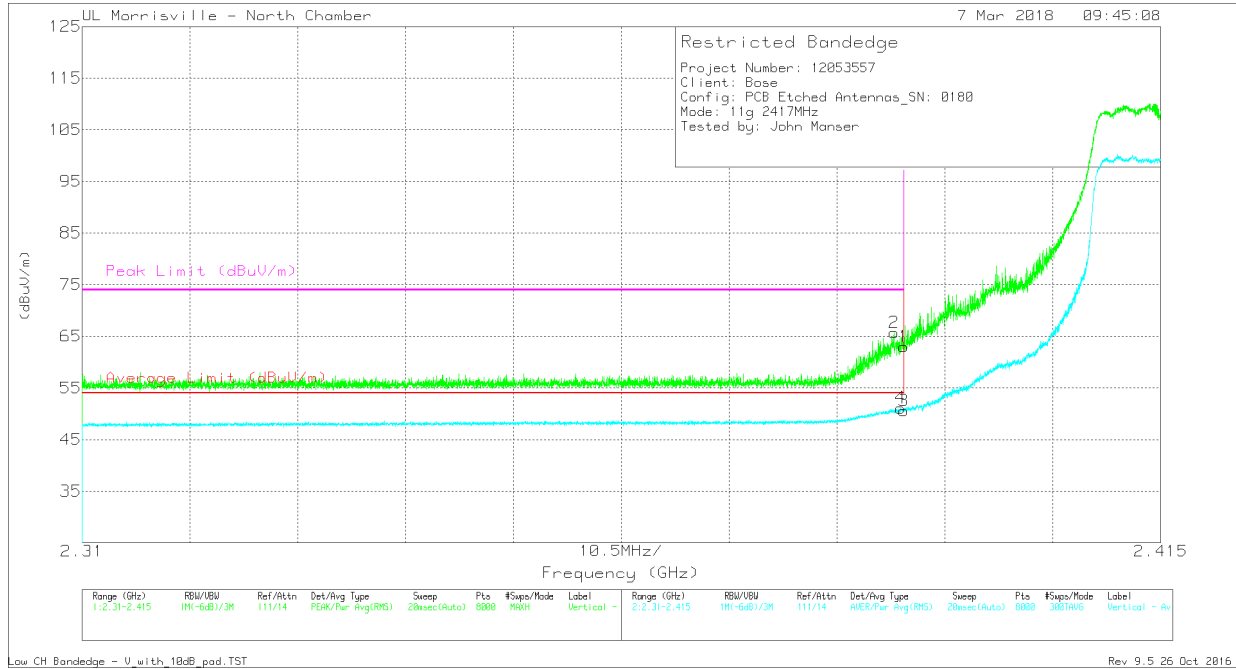
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL) Vertical 54Mbps 2417MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	45.1	PK	31.8	-23.9	10	0	63	-	-	74	-11	145	396	V
2	* ** 2.389	47.81	PK	31.8	-23.9	10	0	65.71	-	-	74	-8.29	145	396	V
3	* ** 2.39	29.75	RMS	31.8	-23.9	10	2.91	50.56	54	-3.44	-	-	145	396	V
4	* ** 2.39	30.32	RMS	31.8	-23.9	10	2.91	51.13	54	-2.87	-	-	145	396	V

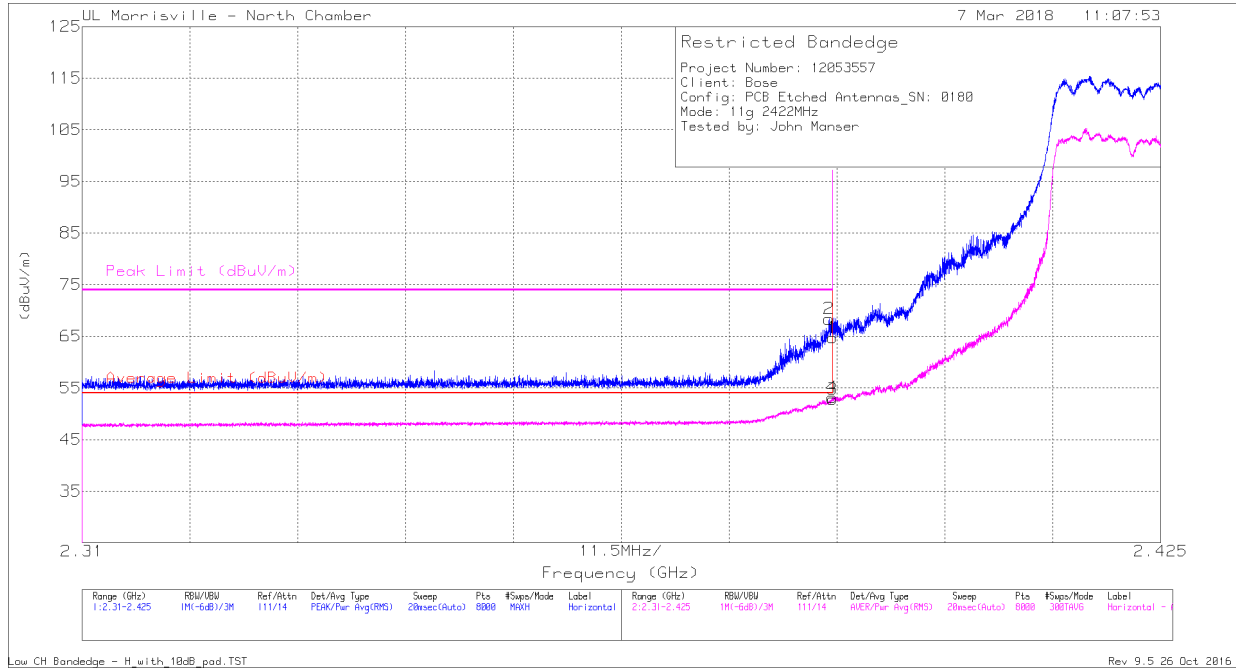
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL) Horizontal 54Mbps 2422MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	46.81	PK	31.8	-23.9	10	0	64.71	-	-	74	-9.29	271	348	H
2	*** 2.39	50.46	PK	31.8	-23.9	10	0	68.36	-	-	74	-5.64	271	348	H
3	*** 2.39	31.96	RMS	31.8	-23.9	10	2.91	52.77	54	-1.23	-	-	271	348	H
4	*** 2.39	32.36	RMS	31.8	-23.9	10	2.91	53.17	54	-0.83	-	-	271	348	H

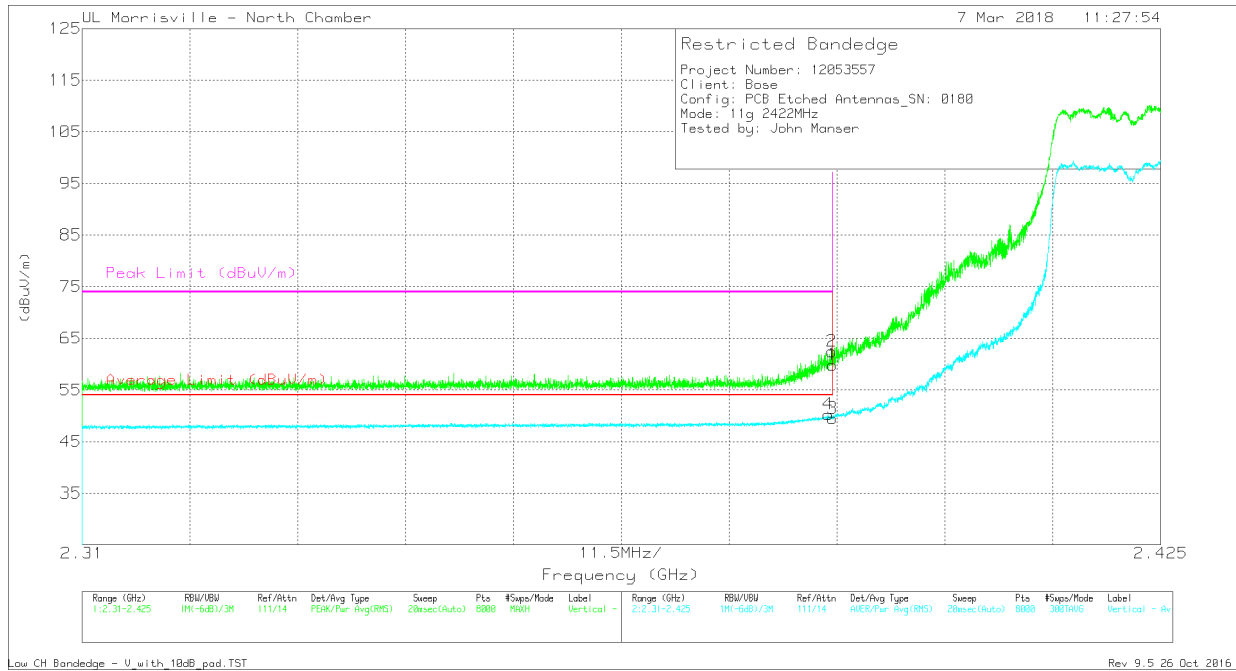
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL) Vertical 54Mbps 2422MHz



Low CH Bandedge - U_with_18dB_pad.TST

Rev. 9.5.26. Oct. 2016

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	41.97	PK	31.8	-23.9	10	0	59.87	-	-	74	-14.13	142	346	V
2	*** 2.39	44.56	PK	31.8	-23.9	10	0	62.46	-	-	74	-11.54	142	346	V
3	*** 2.39	28.71	RMS	31.8	-23.9	10	2.91	49.52	54	-4.48	-	-	142	346	V
4	*** 2.39	29.47	RMS	31.8	-23.9	10	2.91	50.28	54	-3.72	-	-	142	346	V

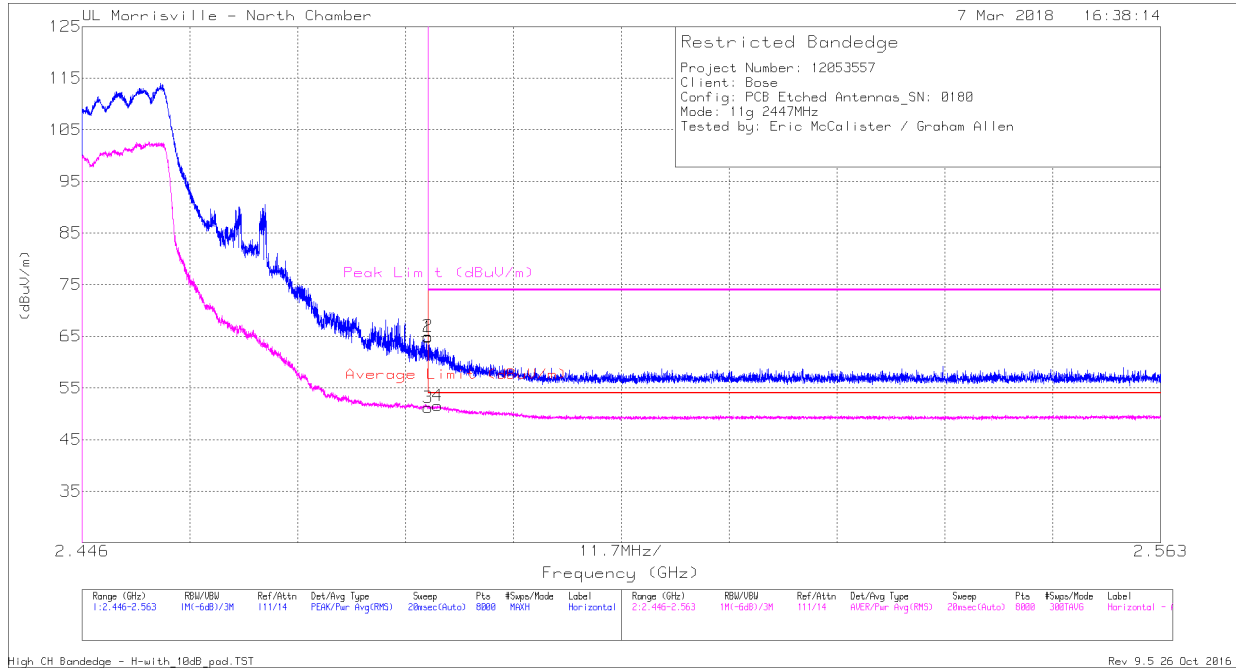
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL) Horizontal 54Mbps 2447MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	46.34	PK	32.3	-23.8	10	0	64.84	-	-	74	-9.16	284	102	H
2	*** 2.484	46.52	PK	32.3	-23.8	10	0	65.02	-	-	74	-8.98	284	102	H
3	*** 2.484	29.77	RMS	32.3	-23.8	10	2.91	51.18	54	-2.82	-	-	284	102	H
4	*** 2.485	30.17	RMS	32.3	-23.8	10	2.91	51.58	54	-2.42	-	-	284	102	H

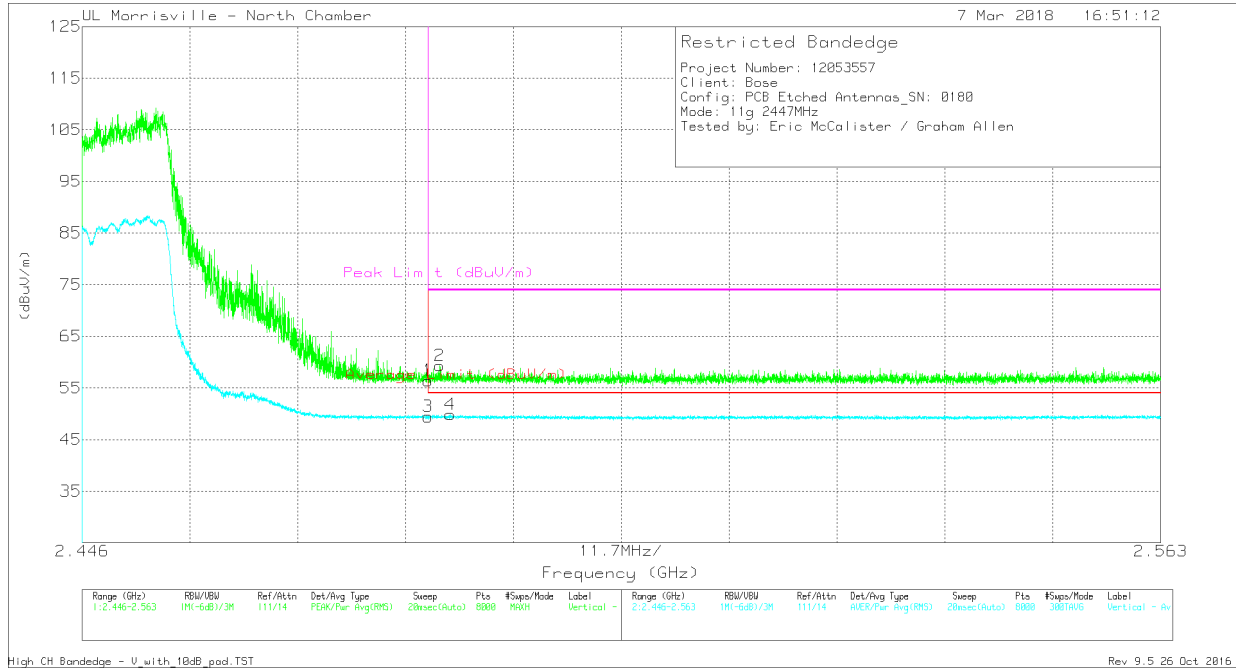
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL) Vertical 54Mbps 2447MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	37.92	PK	32.3	-23.8	10	0	56.42	-	-	74	-17.58	278	116	V
2	*** 2.485	40.78	PK	32.3	-23.8	10	0	59.28	-	-	74	-14.72	278	116	V
3	*** 2.484	28.03	RMS	32.3	-23.8	10	2.91	49.44	54	-4.56	-	-	278	116	V
4	*** 2.486	28.47	RMS	32.3	-23.8	10	2.91	49.88	54	-4.12	-	-	278	116	V

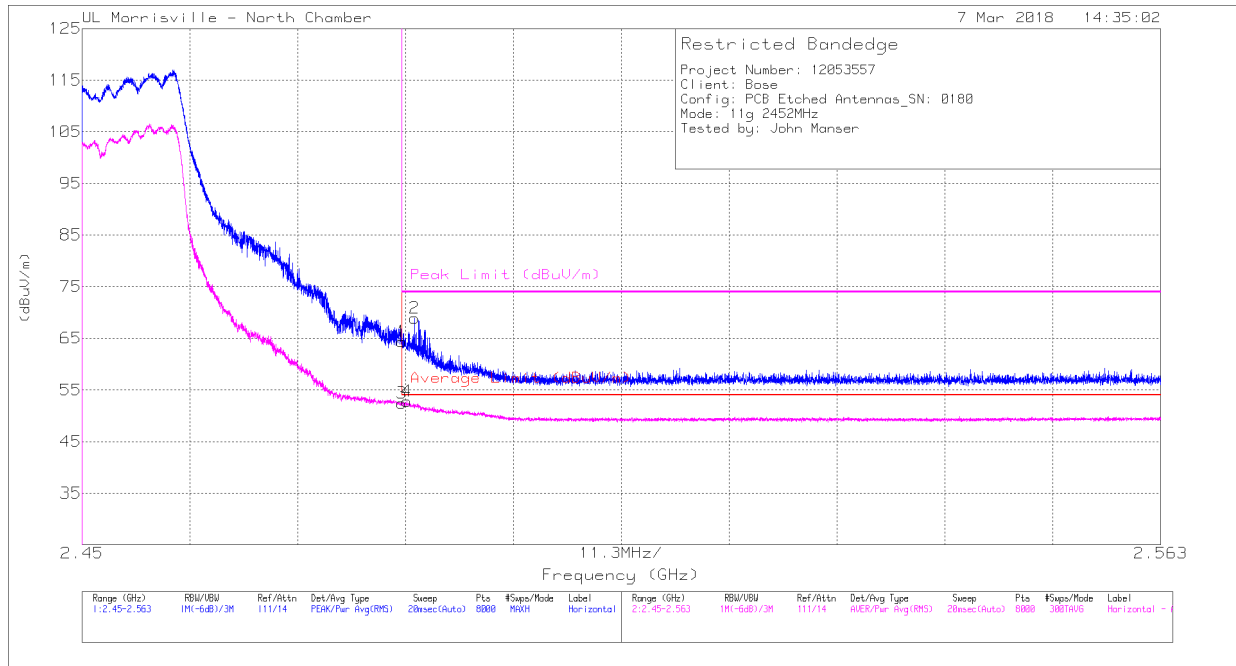
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL) Horizontal 54Mbps 2452MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	45.87	PK	32.3	-23.8	10	0	64.37	-	-	74	-9.63	269	332	H
2	*** 2.485	50.4	PK	32.3	-23.8	10	0	68.9	-	-	74	-5.1	269	332	H
3	*** 2.484	31.04	RMS	32.3	-23.8	10	2.91	52.45	54	-1.55	-	-	269	332	H
4	*** 2.484	31.35	RMS	32.3	-23.8	10	2.91	52.76	54	-1.24	-	-	269	332	H

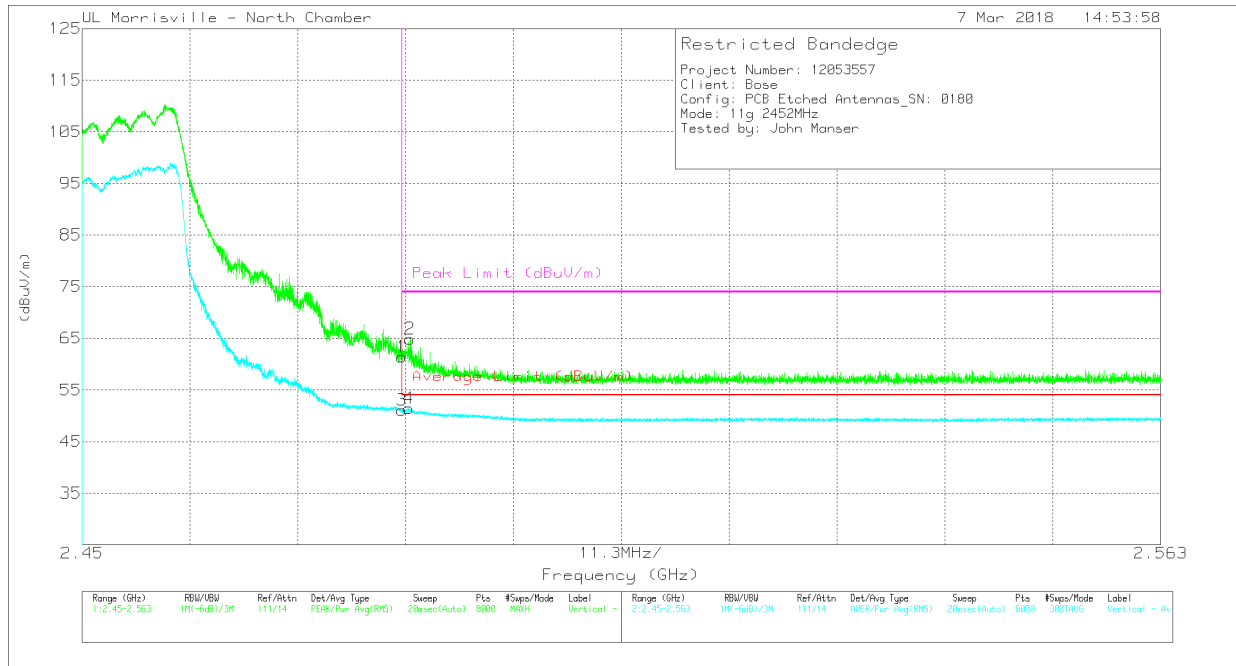
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL) Vertical 54Mbps 2452MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	42.87	PK	32.3	-23.8	10	0	61.37	-	-	74	-12.63	220	367	V
2	*** 2.484	46.38	PK	32.3	-23.8	10	0	64.88	-	-	74	-9.12	220	367	V
3	*** 2.484	29.64	RMS	32.3	-23.8	10	2.91	51.05	54	-2.95	-	-	220	367	V
4	*** 2.484	30	RMS	32.3	-23.8	10	2.91	51.41	54	-2.59	-	-	220	367	V

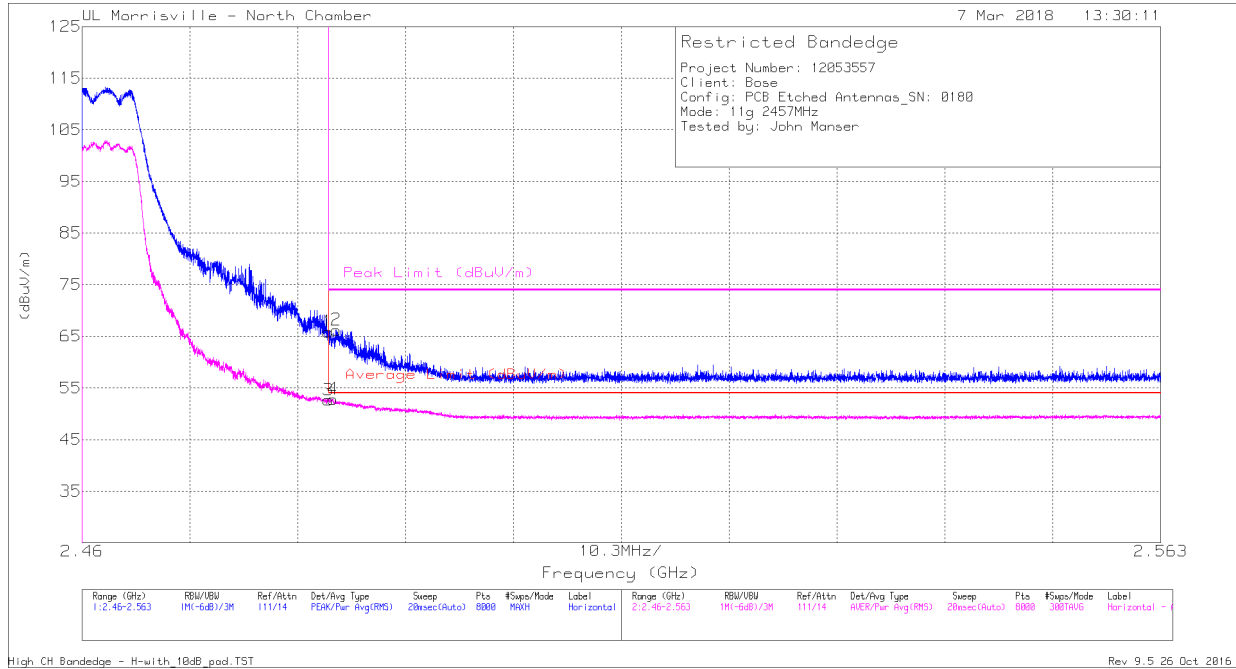
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL) Horizontal 54Mbps 2457MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	47.39	PK	32.3	-23.8	10	0	65.89	-	-	74	-8.11	274	269	H
2	*** 2.484	47.75	PK	32.3	-23.8	10	0	66.25	-	-	74	-7.75	274	269	H
3	*** 2.484	31.27	RMS	32.3	-23.8	10	2.91	52.68	54	-1.32	-	-	274	269	H
4	*** 2.484	31.43	RMS	32.3	-23.8	10	2.91	52.84	54	-1.16	-	-	274	269	H

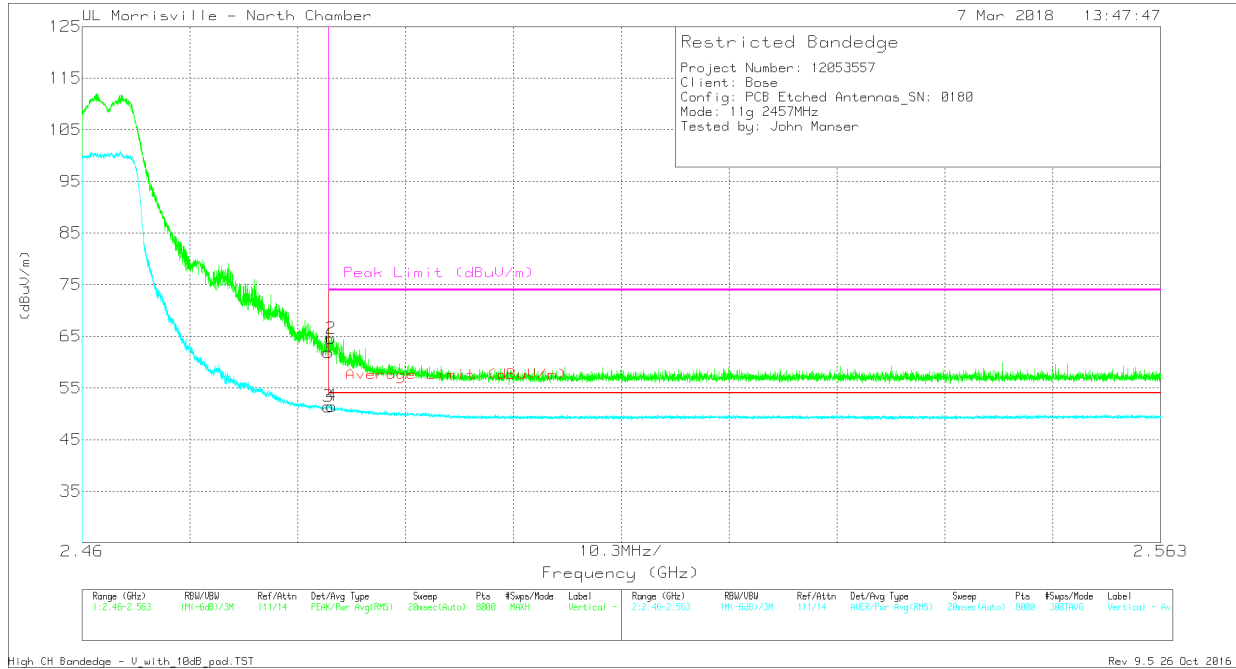
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL) Vertical 54Mbps 2457MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	43.41	PK	32.3	-23.8	10	0	61.91	-	-	74	-12.09	218	381	V
2	*** 2.484	46.12	PK	32.3	-23.8	10	0	64.62	-	-	74	-9.38	218	381	V
3	*** 2.484	29.99	RMS	32.3	-23.8	10	2.91	51.4	54	-2.6	-	-	218	381	V
4	*** 2.484	30.1	RMS	32.3	-23.8	10	2.91	51.51	54	-2.49	-	-	218	381	V

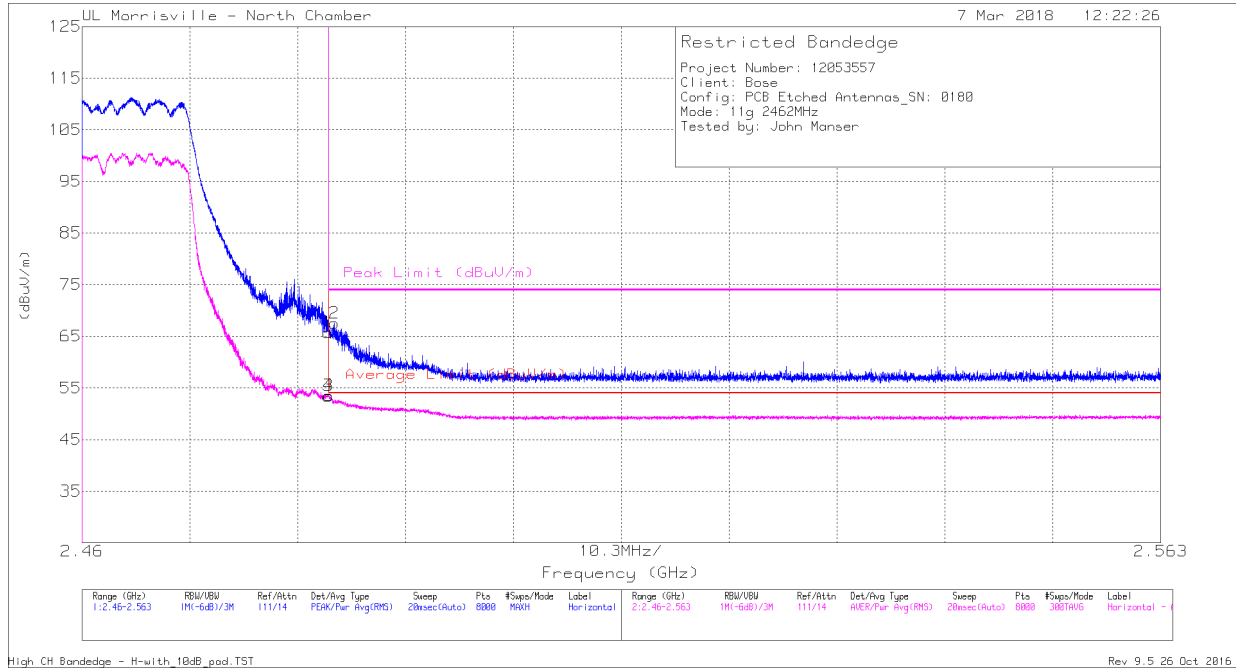
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL) Horizontal 54Mbps 2462MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	47.21	PK	32.3	-23.8	10	0	65.71	-	-	74	-8.29	268	357	H
2	*** 2.484	49.02	PK	32.3	-23.8	10	0	67.52	-	-	74	-6.48	268	357	H
3	*** 2.484	32.07	RMS	32.3	-23.8	10	2.91	53.48	54	-52	-	-	268	357	H
4	*** 2.484	32.17	RMS	32.3	-23.8	10	2.91	53.58	54	-42	-	-	268	357	H

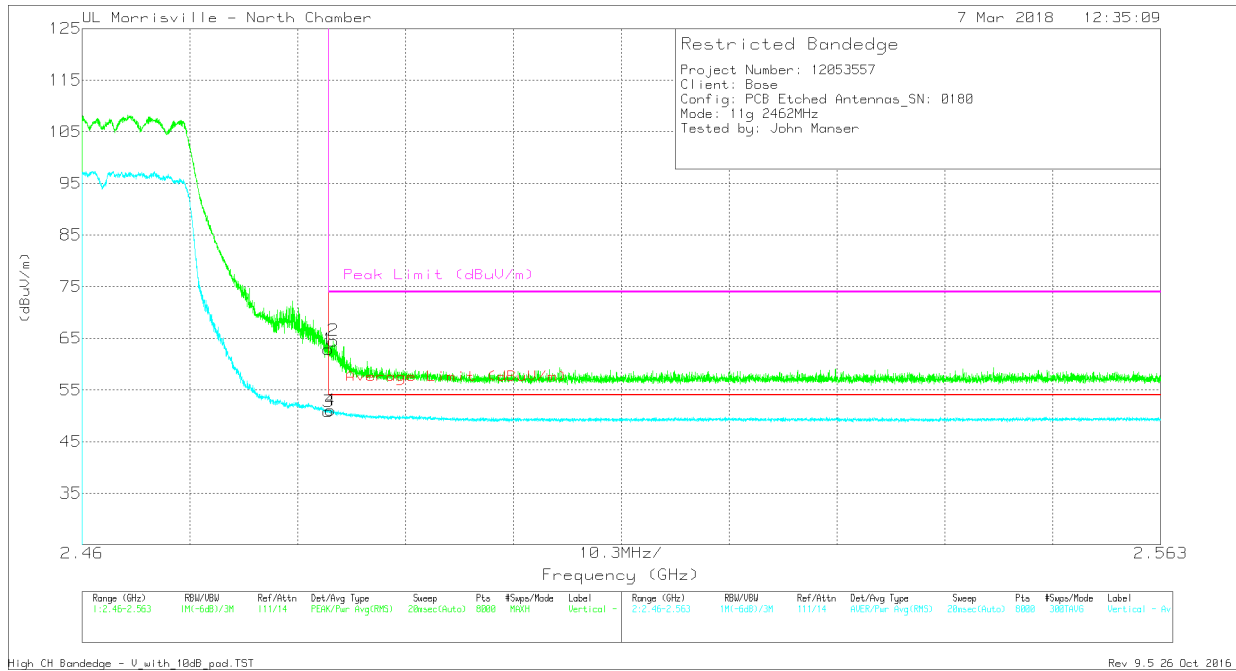
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL) Vertical 54Mbps 2462MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	44.35	PK	32.3	-23.8	10	0	62.85	-	-	74	-11.15	256	365	V
2	*** 2.484	46.04	PK	32.3	-23.8	10	0	64.54	-	-	74	-9.46	256	365	V
3	*** 2.484	29.42	RMS	32.3	-23.8	10	2.91	50.83	54	-3.17	-	-	256	365	V
4	*** 2.484	29.69	RMS	32.3	-23.8	10	2.91	51.1	54	-2.9	-	-	256	365	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

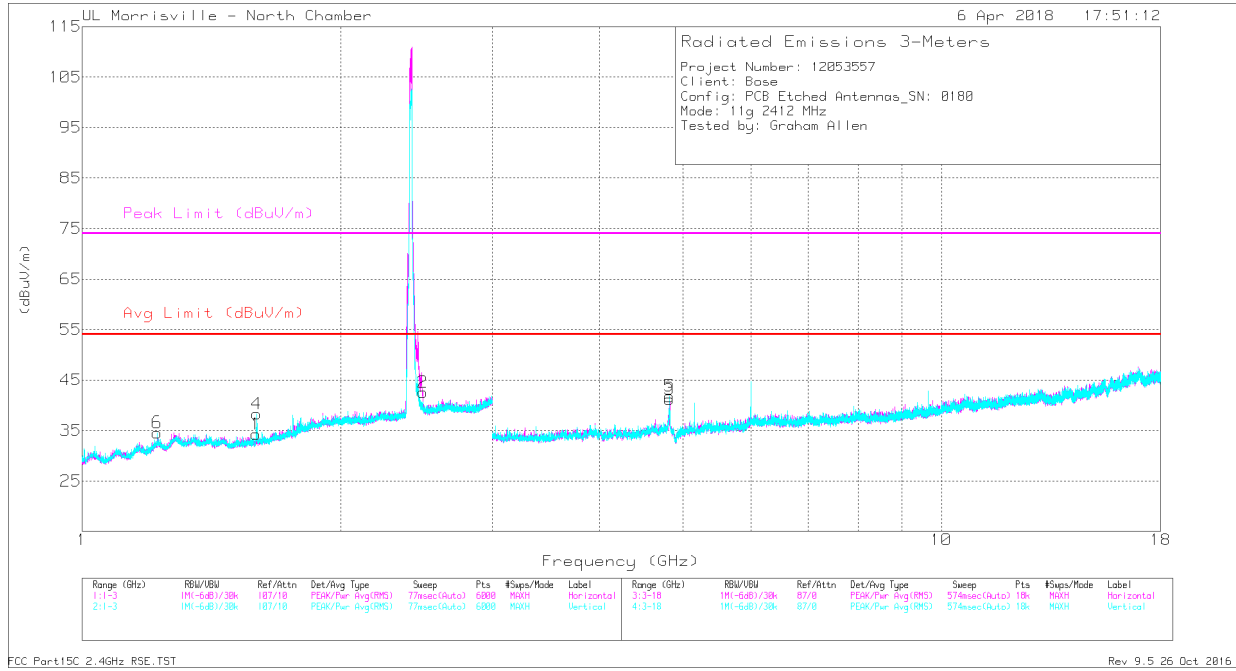
PK - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

Note: Radiated Spurious emissions from 1-18 GHz was run at the lowest data rate since this was found to be the highest Power and PSD. It was also run with Low and High channels set to mid channel power settings for worst-case results.

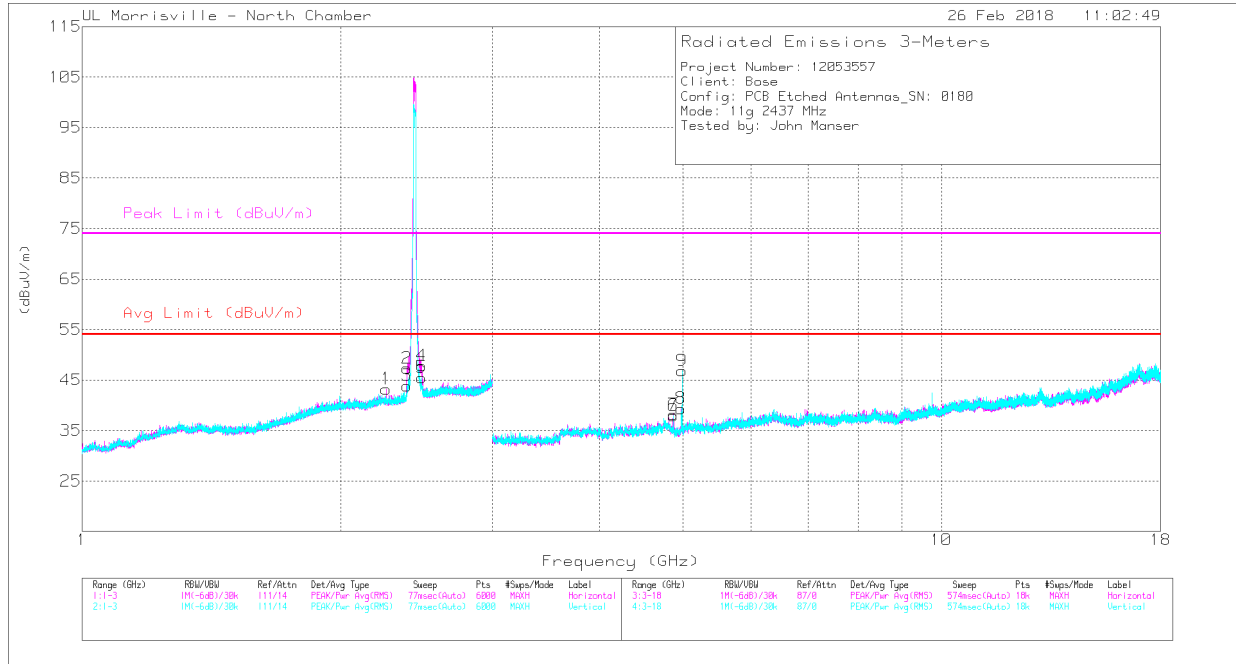
Low Channel



Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.594	36.88	PK2	27.9	-24.6	0	40.18	-	-	74	-33.82	359	275	H
	* ** 1.594	24.49	MAV1	27.9	-24.6	2.91	30.7	54	-23.3	-	-	359	275	H
2	* ** 2.492	43.43	PK2	32.3	-24.4	0	51.33	-	-	74	-22.67	286	129	H
	* ** 2.492	29.79	MAV1	32.3	-24.4	2.91	40.6	54	-13.4	-	-	286	129	H
4	* ** 1.597	44.06	PK2	28	-24.6	0	47.46	-	-	74	-26.54	306	116	V
	* ** 1.597	25.12	MAV1	28	-24.6	2.91	31.43	54	-22.57	-	-	306	116	V
6	* ** 1.223	36.81	PK2	28.6	-26.1	0	39.31	-	-	74	-34.69	272	258	V
	* ** 1.223	25.01	MAV1	28.6	-26.1	2.91	30.42	54	-23.58	-	-	272	258	V
3	* ** 4.824	46.07	PK2	34.1	-31.7	0	48.47	-	-	74	-25.53	298	126	H
	* ** 4.824	37.82	MAV1	34.1	-31.7	2.91	43.13	54	-10.87	-	-	298	126	H
5	* ** 4.823	47.44	PK2	34.1	-31.7	0	49.84	-	-	74	-24.16	136	352	V
	* ** 4.823	34.2	MAV1	34.1	-31.7	2.91	39.51	54	-14.49	-	-	136	352	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 PK2 - Maximum Peak
 MAV1 - Maximum RMS Average

Mid Channel



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.259	39.91	PK2	31.7	-23.8	0	47.81	-	-	74	-26.19	142	182	H
	* ** 2.257	27.44	MAV1	31.7	-23.8	2.91	38.25	54	-15.75	-	-	142	182	H
2	* ** 2.389	48.69	PK2	31.8	-23.9	0	56.59	-	-	74	-17.41	275	104	H
	* ** 2.389	34.85	MAV1	31.8	-23.9	2.91	45.66	54	-8.34	-	-	275	104	H
4	* ** 2.484	49.07	PK2	32.3	-23.8	0	57.57	-	-	74	-16.43	288	270	H
	* ** 2.485	36.39	MAV1	32.3	-23.8	2.91	47.8	54	-6.2	-	-	288	270	H
3	* ** 2.389	46.71	PK2	31.8	-23.9	0	54.61	-	-	74	-19.39	233	313	V
	* ** 2.389	33.38	MAV1	31.8	-23.9	2.91	44.19	54	-9.81	-	-	233	313	V
5	* ** 2.485	48.1	PK2	32.3	-23.8	0	56.6	-	-	74	-17.4	261	374	V
	* ** 2.485	34.63	MAV1	32.3	-23.8	2.91	46.04	54	-7.96	-	-	261	374	V
7	* ** 4.874	42.88	PK2	34	-31	0	45.88	-	-	74	-28.12	308	271	H
	* ** 4.874	34.79	MAV1	34	-31	2.91	40.7	54	-13.3	-	-	308	271	H
8	* ** 4.979	45.94	PK2	34.1	-32.1	0	47.94	-	-	74	-26.06	186	250	H
	* ** 4.989	29.27	MAV1	34.1	-32.2	2.91	34.08	54	-19.92	-	-	186	250	H
6	* ** 4.874	43.83	PK2	34	-31	0	46.83	-	-	74	-27.17	243	294	V
	* ** 4.874	33.69	MAV1	34	-31	2.91	39.6	54	-14.4	-	-	243	294	V
9	* ** 4.984	47.98	PK2	34.1	-32.2	0	49.88	-	-	74	-24.12	256	284	V
	* ** 4.986	28.89	MAV1	34.1	-32.2	2.91	33.7	54	-20.3	-	-	256	284	V

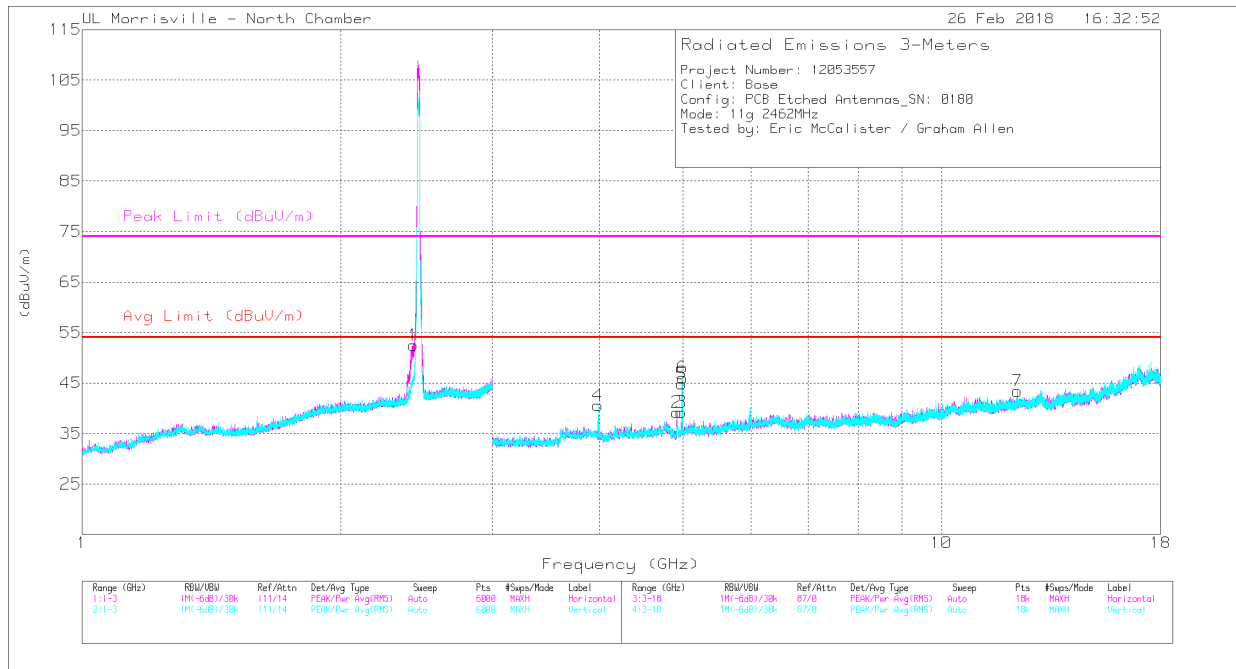
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

MAV1 - Maximum RMS Average

High Channel

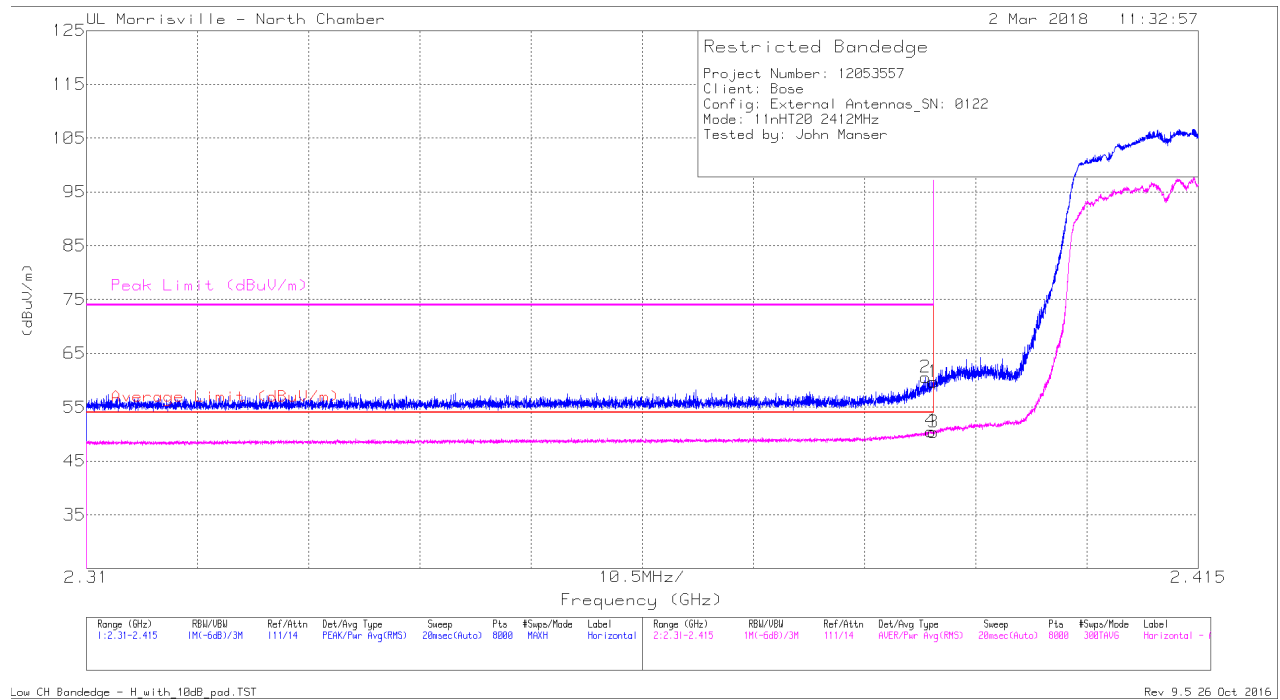


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	*** 4.924	42.43	PK2	34.1	-31.2	0	45.33	-	-	74	-28.67	301	121	H
	*** 4.924	34.34	MAv1	34.1	-31.2	2.91	40.15	54	-13.85	-	-	301	121	H
3	*** 4.981	40.09	PK2	34.1	-32.1	0	42.09	-	-	74	-31.91	167	154	H
	*** 4.981	28.4	MAv1	34.1	-32.1	2.91	33.31	54	-20.69	-	-	167	154	H
7	*** 12.264	34.93	PK2	38.9	-25.8	0	48.03	-	-	74	-25.97	183	182	H
	*** 12.262	23.5	MAv1	38.9	-25.8	2.91	39.51	54	-14.49	-	-	183	182	H
1	2.425	52.23	PK2	32	-23.9	0	60.33	-	-	-	-	279	105	H
	2.425	38.34	MAv1	32	-23.9	2.91	49.35	-	-	-	-	279	105	H
4	*** 3.983	40.01	PK2	33.4	-31.3	0	42.11	-	-	74	-31.89	342	141	V
	*** 3.98	28.11	MAv1	33.4	-31.2	2.91	33.22	54	-20.78	-	-	342	141	V
5	*** 4.986	53.94	PK2	34.1	-32.2	0	55.84	-	-	74	-18.16	255	131	V
	*** 4.987	29.36	MAv1	34.1	-32.2	2.91	34.17	54	-19.83	-	-	255	131	V
6	*** 4.999	54.4	PK2	34.1	-32.2	0	56.3	-	-	74	-17.7	259	120	V
	*** 4.999	29.56	MAv1	34.1	-32.2	2.91	34.37	54	-19.63	-	-	259	120	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 PK2 - Maximum Peak
 MAv1 - Maximum RMS Average

9.2.5. TX ABOVE 1 GHz - 802.11n HT20 MODE, EXT ANTENNA

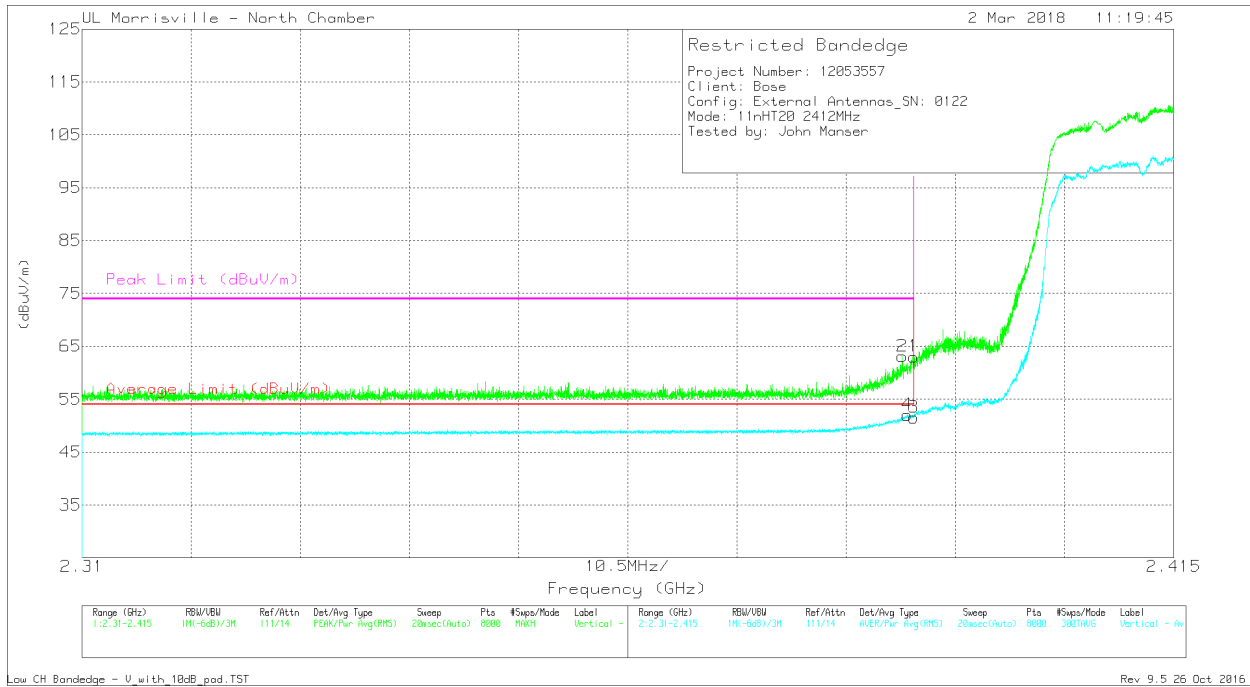
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL) MCS 0 2412MHZ



Marker	Freq. (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Pol.
1	*** 2.39	41.77	Pk	31.8	-23.9	10	0	59.67	-	-	74	-14.33	115	118	H
2	*** 2.389	42.62	Pk	31.8	-23.9	10	0	60.52	-	-	74	-13.48	115	118	H
3	*** 2.39	28.99	RMS	31.8	-23.9	10	3.46	50.35	54	-3.65	-	-	115	118	H
4	*** 2.39	29.17	RMS	31.8	-23.9	10	3.46	50.53	54	-3.47	-	-	115	118	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 Pk - Peak detector
 RMS - RMS detection

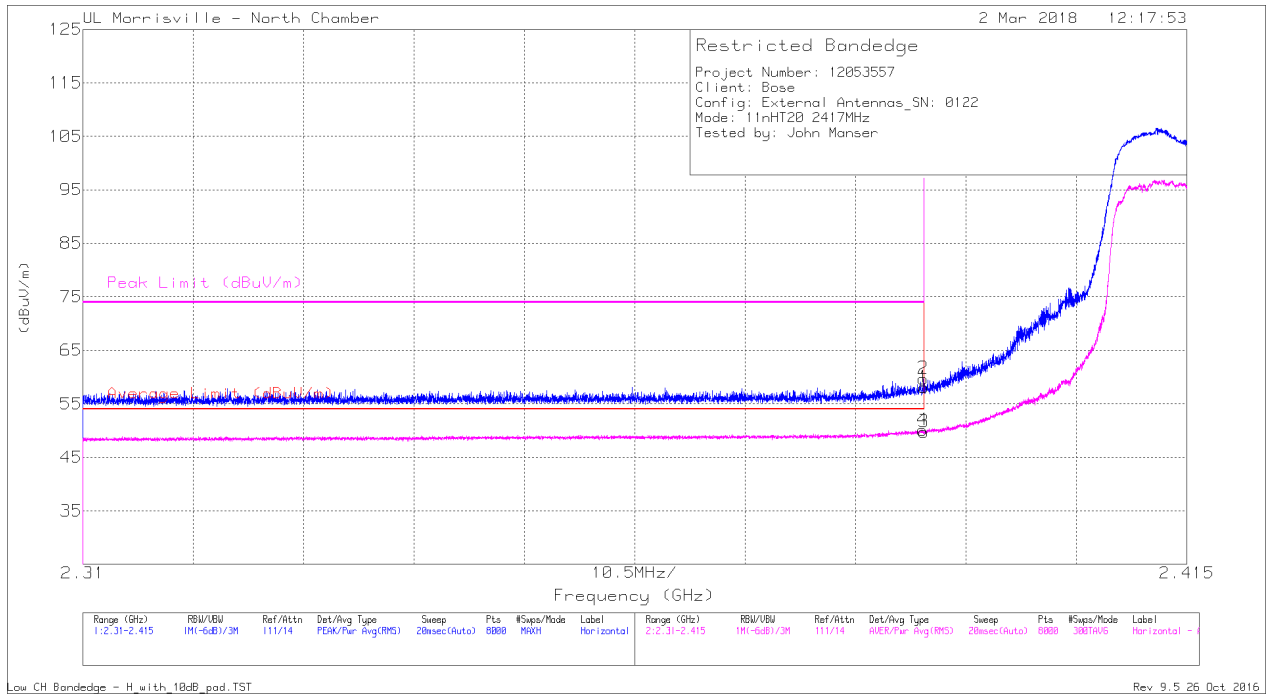
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL) MCS 0 2412MHZ



Marker	Freq. (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Pol.
1	* ** 2.39	45.16	PK	31.8	-23.9	10	0	63.06	-	-	74	-10.94	138	268	V
2	* ** 2.389	45.19	PK	31.8	-23.9	10	0	63.09	-	-	74	-10.91	138	268	V
3	* ** 2.39	30.17	RMS	31.8	-23.9	10	3.46	51.53	54	-2.47	-	-	138	268	V
4	* ** 2.389	30.66	RMS	31.8	-23.9	10	3.46	52.02	54	-1.98	-	-	138	268	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 Pk - Peak detector
 RMS - RMS detection

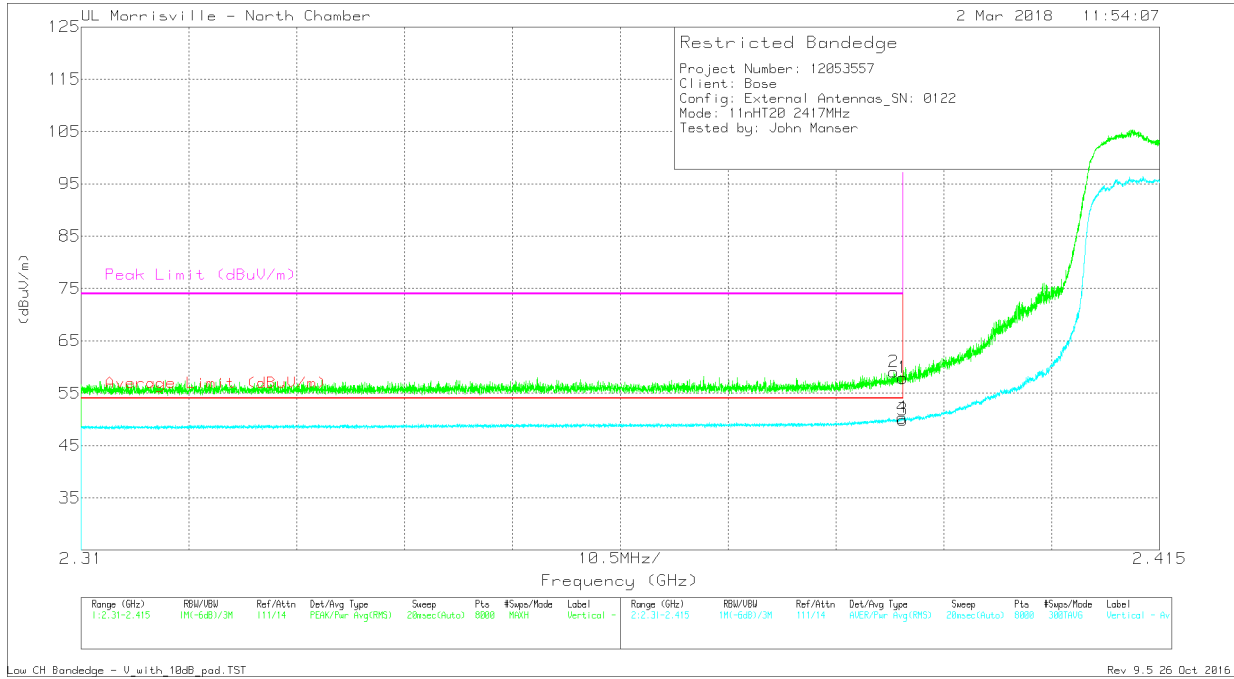
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL) MCS 0 2417MHz



Marker	Freq. (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Pol.
1	* ** 2.39	40.21	Pk	31.8	-23.9	10	0	58.11	-	-	74	-15.89	259	365	H
2	* ** 2.39	41.82	Pk	31.8	-23.9	10	0	59.72	-	-	74	-14.28	259	365	H
3	* ** 2.39	28.42	RMS	31.8	-23.9	10	3.46	49.78	54	-4.22	-	-	259	365	H
4	* ** 2.39	28.7	RMS	31.8	-23.9	10	3.46	50.06	54	-3.94	-	-	259	365	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 Pk - Peak detector
 RMS - RMS detection

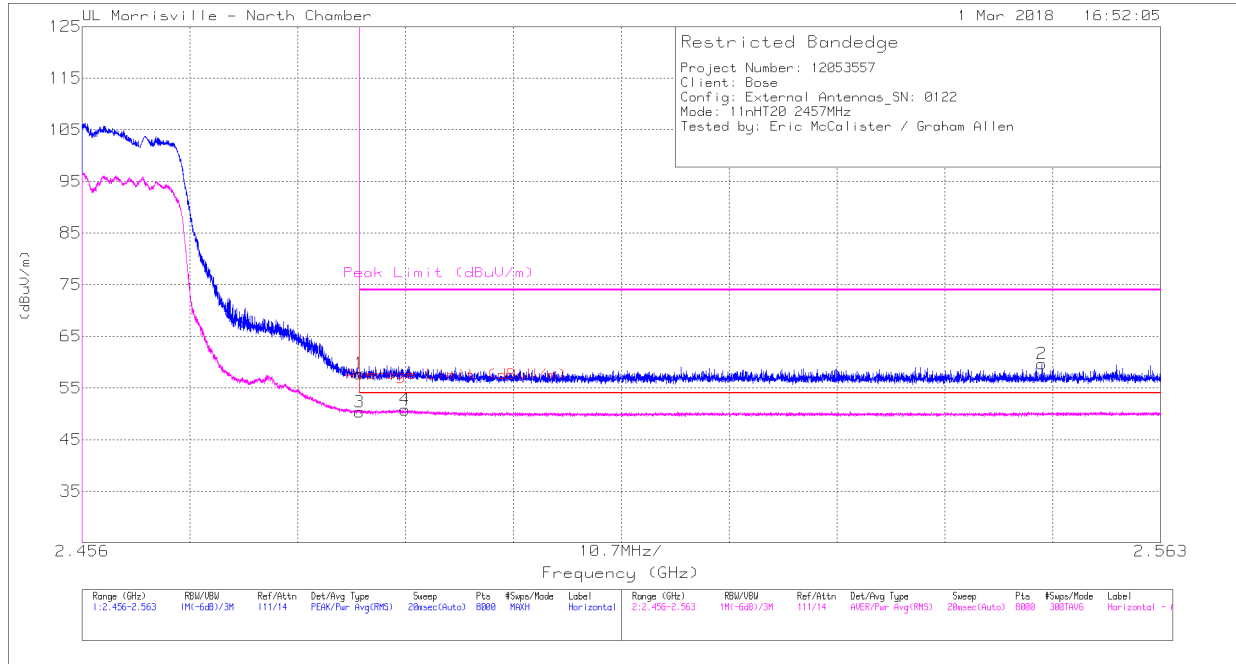
RESTRICTED BANDEGE (LOW CHANNEL, VERTICAL) MCS 0 2417MHZ



Marker	Freq. (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Pol.
1	* ** 2.39	40.01	Pk	31.8	-23.9	10	0	57.91	-	-	74	-16.09	197	358	V
2	* ** 2.389	41.15	Pk	31.8	-23.9	10	0	59.05	-	-	74	-14.95	197	358	V
3	* ** 2.39	28.54	RMS	31.8	-23.9	10	3.46	49.9	54	-4.1	-	-	197	358	V
4	* ** 2.39	28.93	RMS	31.8	-23.9	10	3.46	50.29	54	-3.71	-	-	197	358	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 Pk - Peak detector
 RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, HORIZONTAL) MCS 0 2457MHZ



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	39.27	PK	32.3	-23.8	10	0	57.77	-	-	74	-16.23	165	254	H
3	*** 2.484	28.39	RMS	32.3	-23.8	10	3.46	50.35	54	-3.65	-	-	165	254	H
4	*** 2.488	28.83	RMS	32.3	-23.8	10	3.46	50.79	54	-3.21	-	-	165	254	H
2	2.551	41.15	PK	32.3	-23.8	10	0	59.65	-	-	74	-14.35	165	254	H

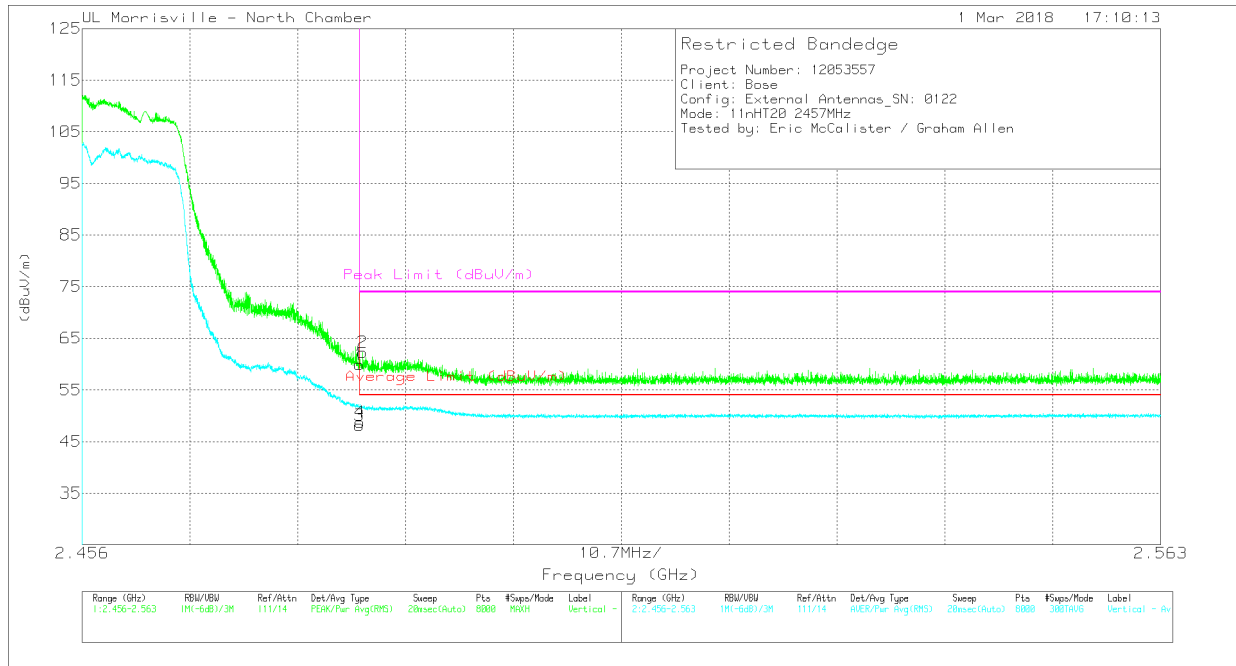
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, VERTICAL) MCS 0 2457MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	41.44	PK	32.3	-23.8	10	0	59.94	-	-	74	-14.06	146	274	V
2	*** 2.484	43.78	PK	32.3	-23.8	10	0	62.28	-	-	74	-11.72	146	274	V
3	*** 2.484	29.63	RMS	32.3	-23.8	10	3.46	51.59	54	-2.41	-	-	146	274	V
4	*** 2.484	30.22	RMS	32.3	-23.8	10	3.46	52.18	54	-1.82	-	-	146	274	V

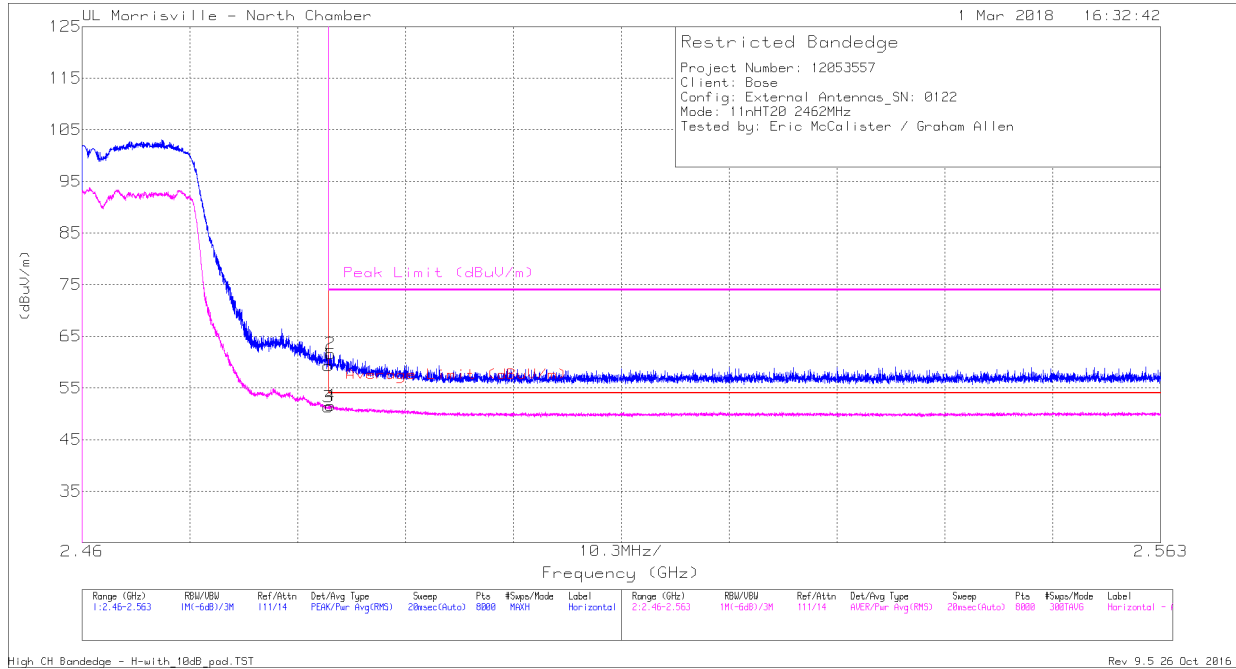
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, HORIZONTAL) MCS 0 2462MHZ



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	40.87	PK	32.3	-23.8	10	0	59.37	-	-	74	-14.63	184	285	H
2	* ** 2.484	43.15	PK	32.3	-23.8	10	0	61.65	-	-	74	-12.35	184	285	H
3	* ** 2.484	29.39	RMS	32.3	-23.8	10	3.46	51.35	54	-2.65	-	-	184	285	H
4	* ** 2.484	29.63	RMS	32.3	-23.8	10	3.46	51.59	54	-2.41	-	-	184	285	H

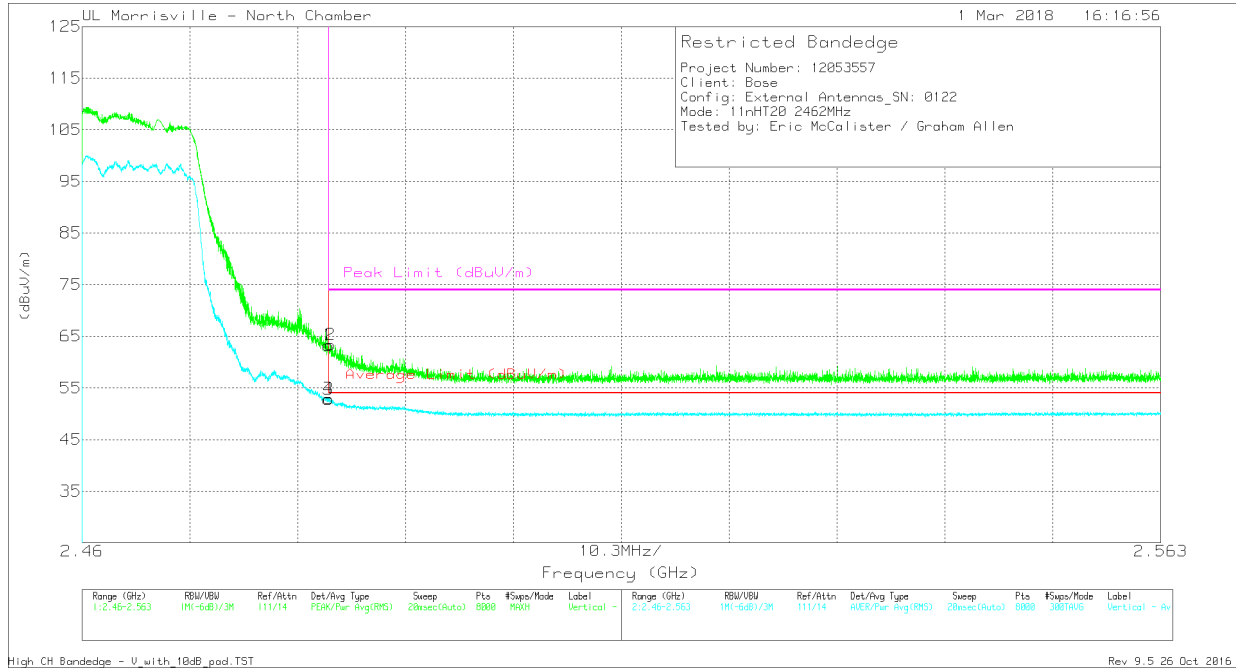
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, VERTICAL) MCS 0 2462MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	44.72	PK	32.3	-23.8	10	0	63.22	-	-	74	-10.78	152	259	V
2	* ** 2.484	44.88	PK	32.3	-23.8	10	0	63.38	-	-	74	-10.62	152	259	V
3	* ** 2.484	30.88	RMS	32.3	-23.8	10	3.46	52.84	54	-1.16	-	-	152	259	V
4	* ** 2.484	30.99	RMS	32.3	-23.8	10	3.46	52.95	54	-1.05	-	-	152	259	V

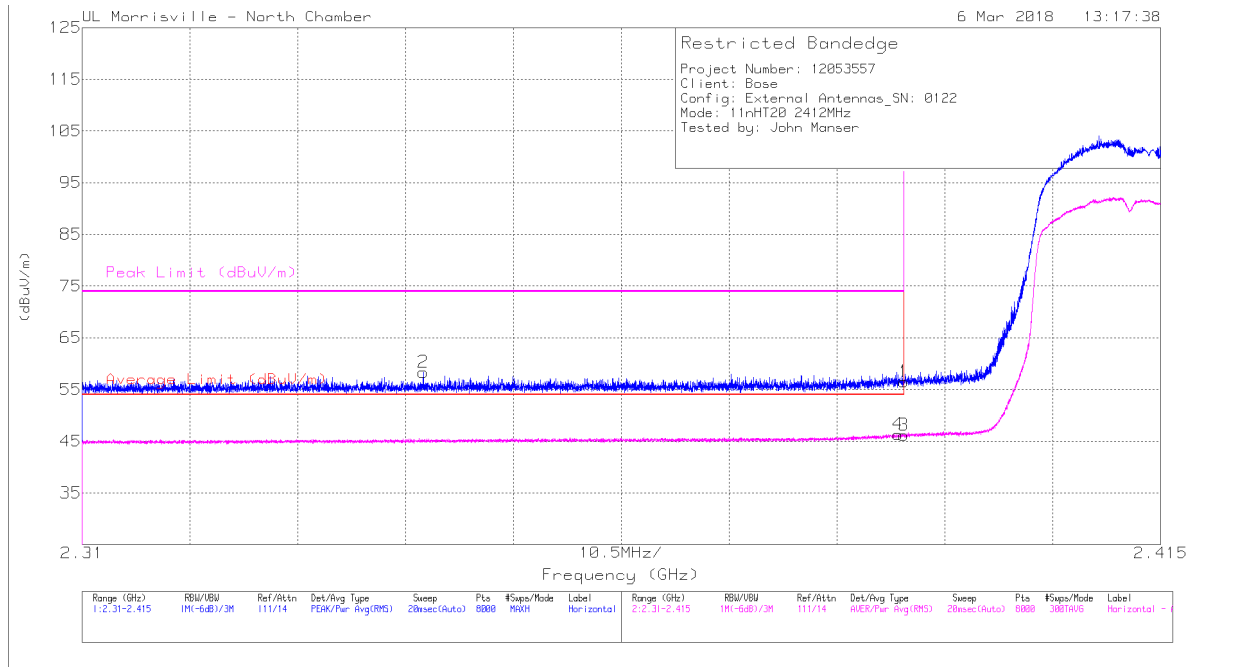
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL) MCS 7 2412MHZ



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	38.62	Pk	31.8	-23.9	10	0	56.52	-	-	74	-17.48	241	299	H
2	* ** 2.343	40.67	Pk	31.6	-23.9	10	0	58.37	-	-	74	-15.63	241	299	H
3	* ** 2.39	28.3	RMS	31.8	-23.9	10	3.46	49.66	54	-4.34	-	-	241	299	H
4	* ** 2.389	28.44	RMS	31.8	-23.9	10	3.46	49.88	54	-4.2	-	-	241	299	H

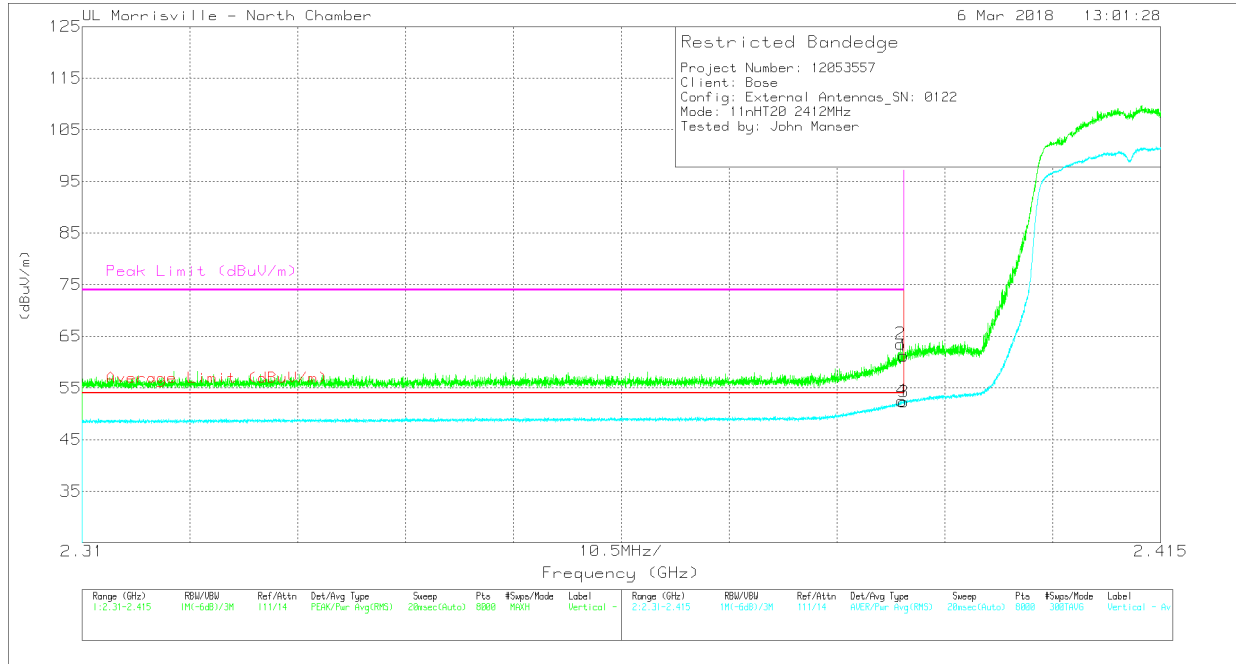
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

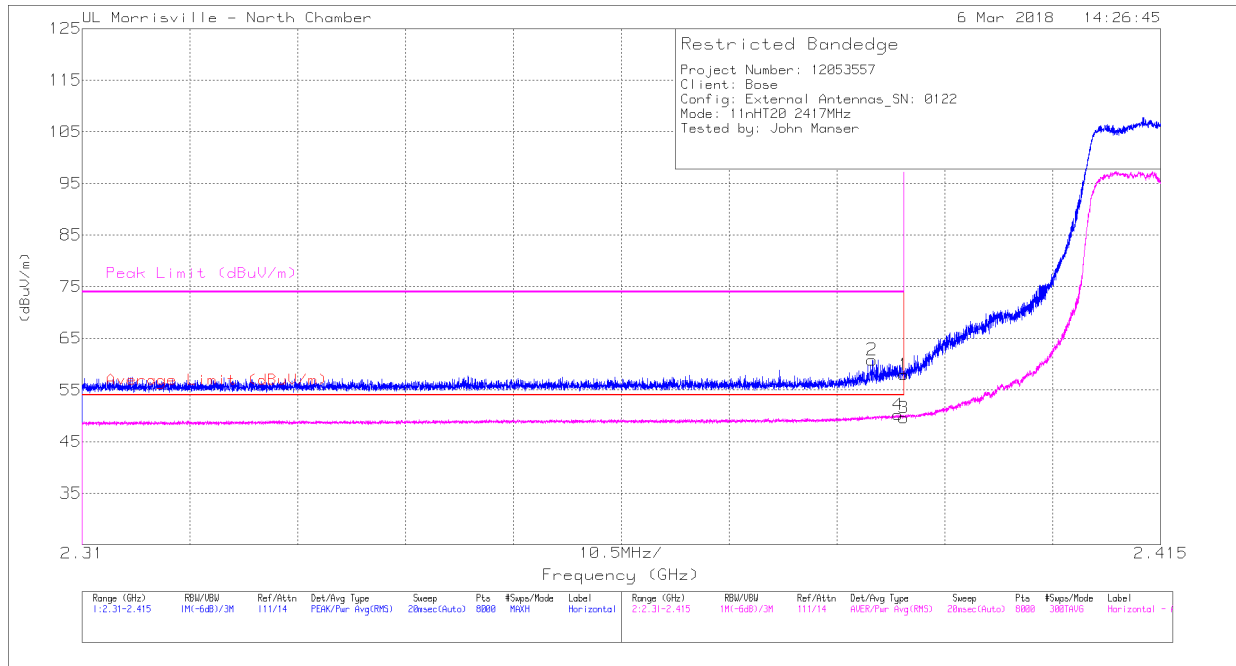
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL) MCS 7 2412MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	43.34	PK	31.8	-23.9	10	0	61.24	-	-	74	-12.76	135	268	V
2	*** 2.39	45.64	PK	31.8	-23.9	10	0	63.54	-	-	74	-10.46	135	268	V
3	*** 2.39	30.91	RMS	31.8	-23.9	10	3.46	52.27	54	-1.73	-	-	135	268	V
4	*** 2.39	31.15	RMS	31.8	-23.9	10	3.46	52.51	54	-1.49	-	-	135	268	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 Pk - Peak detector
 RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL) MCS 7 2417MHZ



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	40.08	Pk	31.8	-23.9	10	0	57.98	-	-	74	-16.02	268	309	H
2	*** 2.387	42.93	Pk	31.8	-23.9	10	0	60.83	-	-	74	-13.17	268	309	H
3	*** 2.39	28.27	RMS	31.8	-23.9	10	3.46	49.63	54	-4.37	-	-	268	309	H
4	*** 2.389	28.86	RMS	31.8	-23.9	10	3.46	50.22	54	-3.78	-	-	268	309	H

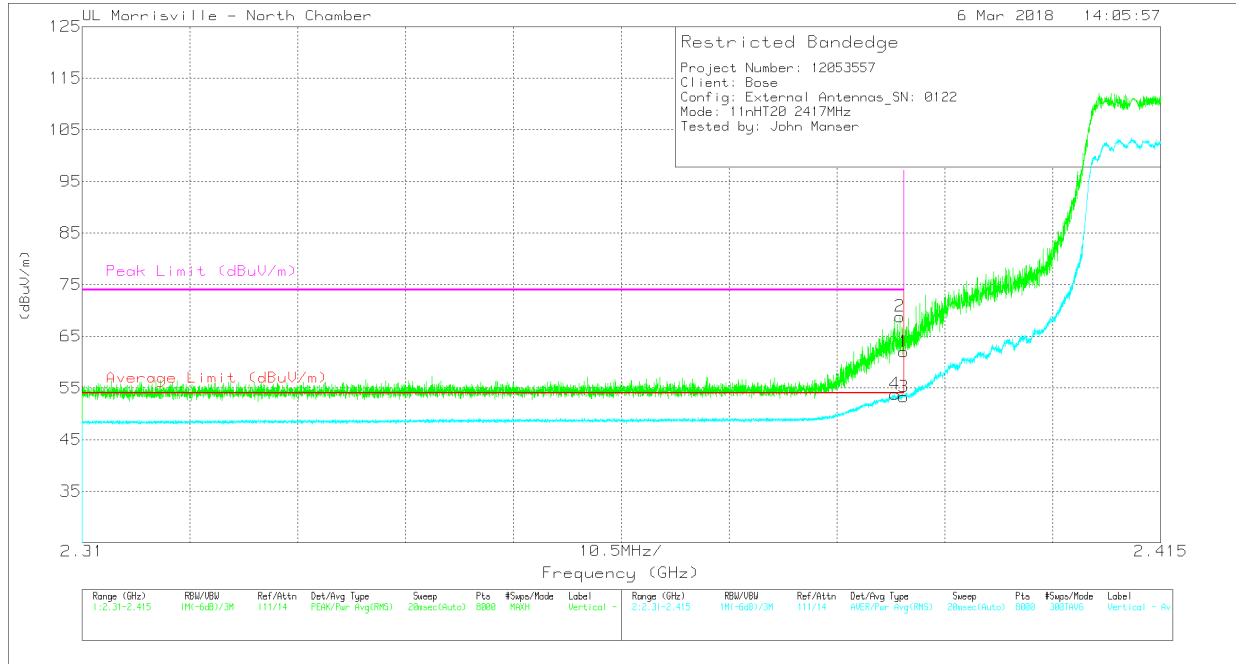
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL) MCS 7 2417MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	44.12	PK	31.8	-23.9	10	0	62.02	-	-	74	-11.98	138	274	V
2	*** 2.39	50.94	PK	31.8	-23.9	10	0	68.84	-	-	74	-5.16	138	274	V
3	*** 2.39	31.92	RMS	31.8	-23.9	10	3.46	53.28	54	-72	-	-	138	274	V
4	*** 2.389	32.46	RMS	31.8	-23.9	10	3.46	53.82	54	-18	-	-	138	274	V

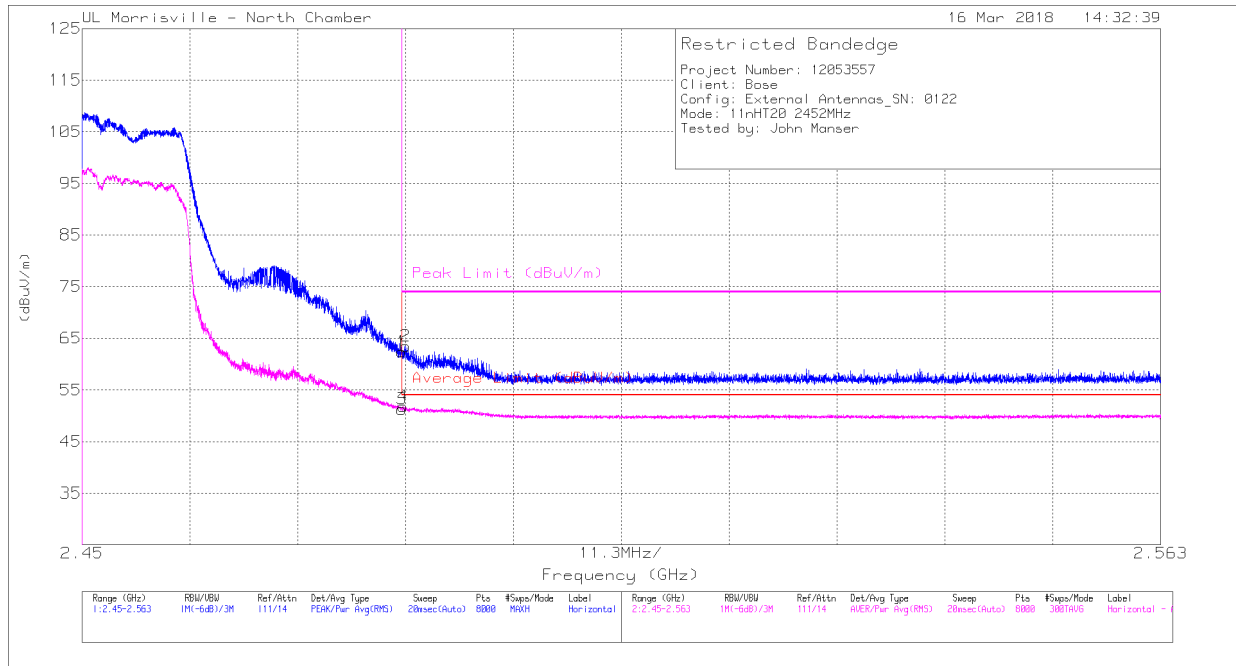
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, HORIZONTAL) MCS 7 2452MHZ



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	43.9	PK	32.3	-23.8	10	0	62.4	-	-	74	-11.6	264	114	H
2	* ** 2.484	44.95	PK	32.3	-23.8	10	0	63.45	-	-	74	-10.55	264	114	H
3	* ** 2.484	29.31	RMS	32.3	-23.8	10	3.46	51.27	54	-2.73	-	-	264	114	H
4	* ** 2.484	29.86	RMS	32.3	-23.8	10	3.46	51.82	54	-2.18	-	-	264	114	H

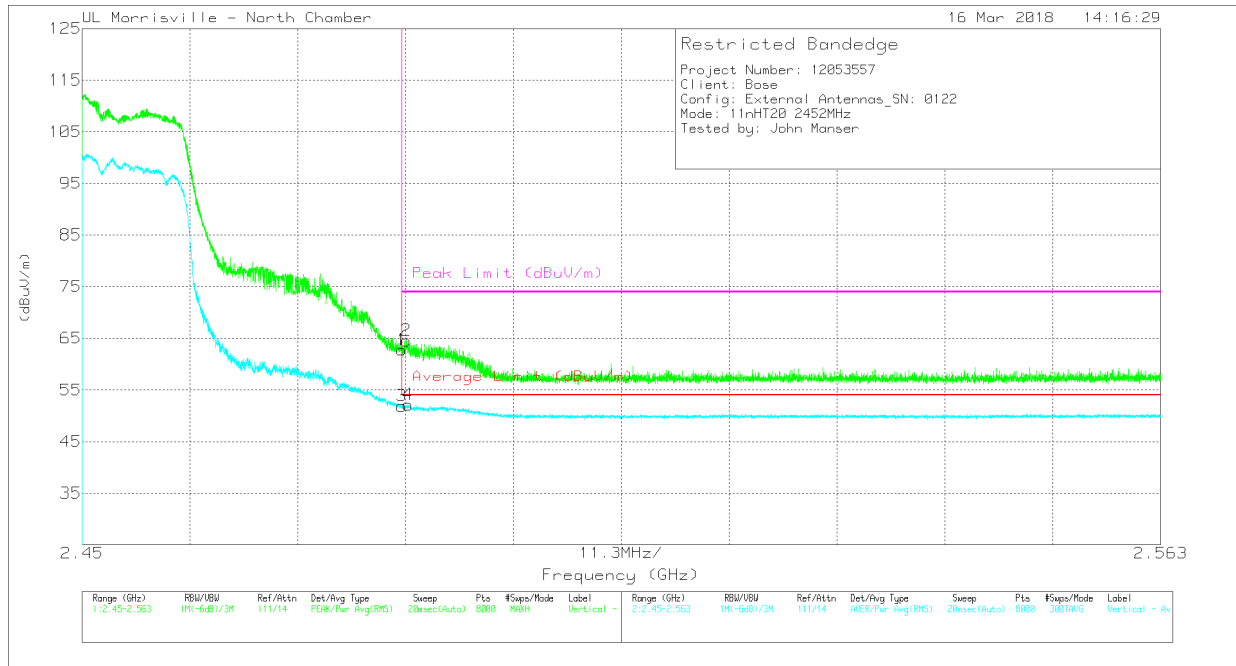
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

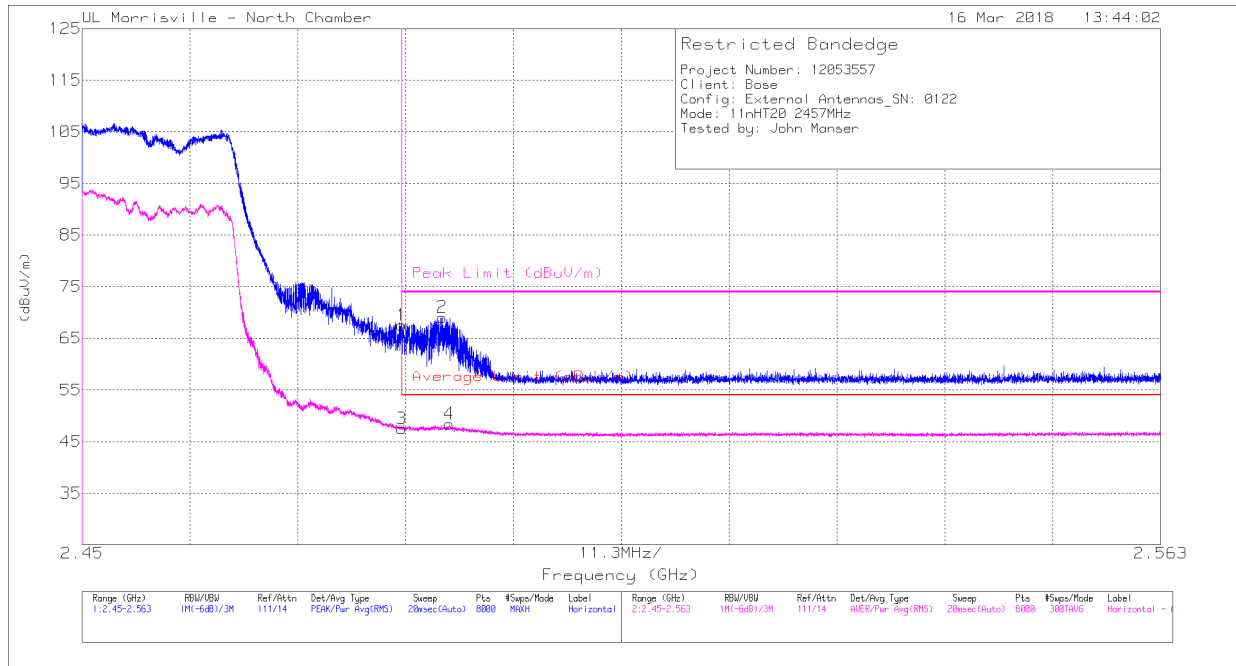
AUTHORIZED BANDEDGE (HIGH CHANNEL, VERTICAL) MCS 7 2452MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	44.26	PK	32.3	-23.8	10	0	62.76	-	-	74	-11.24	129	307	V
2	*** 2.484	46.05	PK	32.3	-23.8	10	0	64.55	-	-	74	-9.45	129	307	V
3	*** 2.484	29.93	RMS	32.3	-23.8	10	3.46	51.89	54	-2.11	-	-	129	307	V
4	*** 2.484	30.17	RMS	32.3	-23.8	10	3.46	52.13	54	-1.87	-	-	129	307	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 Pk - Peak detector
 RMS - RMS detection

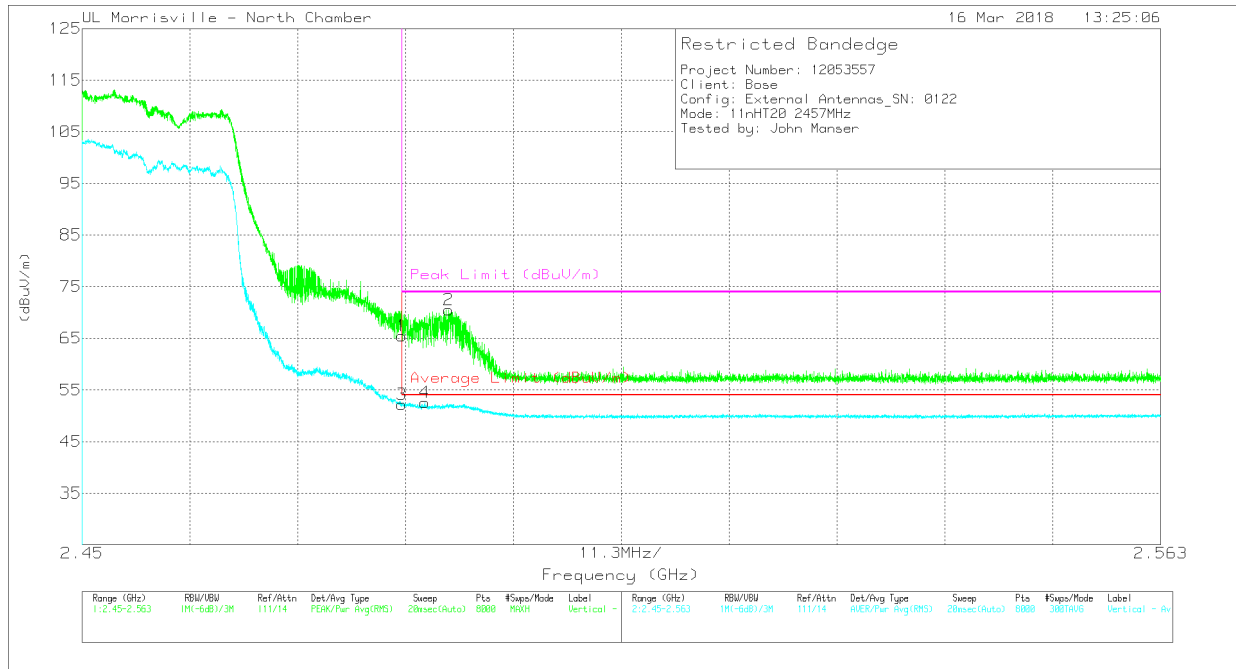
AUTHORIZED BANDEGE (HIGH CHANNEL, HORIZONTAL) MCS 7 2457MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	49.03	Pk	32.3	-23.8	10	0	67.53	-	-	74	-6.47	270	331	H
2	*** 2.488	50.58	Pk	32.3	-23.8	10	0	69.08	-	-	74	-4.92	270	331	H
3	*** 2.484	29.03	RMS	32.3	-23.8	10	3.46	50.99	54	-3.01	-	-	270	331	H
4	*** 2.488	29.92	RMS	32.3	-23.8	10	3.46	51.88	54	-2.12	-	-	270	331	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 Pk - Peak detector
 RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, VERTICAL) MCS 7 2457MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	46.99	Pk	32.3	-23.8	10	0	65.49	-	-	74	-8.51	137	263	V
2	* ** 2.488	52.02	Pk	32.3	-23.8	10	0	70.52	-	-	74	-3.48	137	263	V
3	* ** 2.484	30.25	RMS	32.3	-23.8	10	3.46	52.21	54	-1.79	-	-	137	263	V
4	* ** 2.486	30.62	RMS	32.3	-23.8	10	3.46	52.58	54	-1.42	-	-	137	263	V

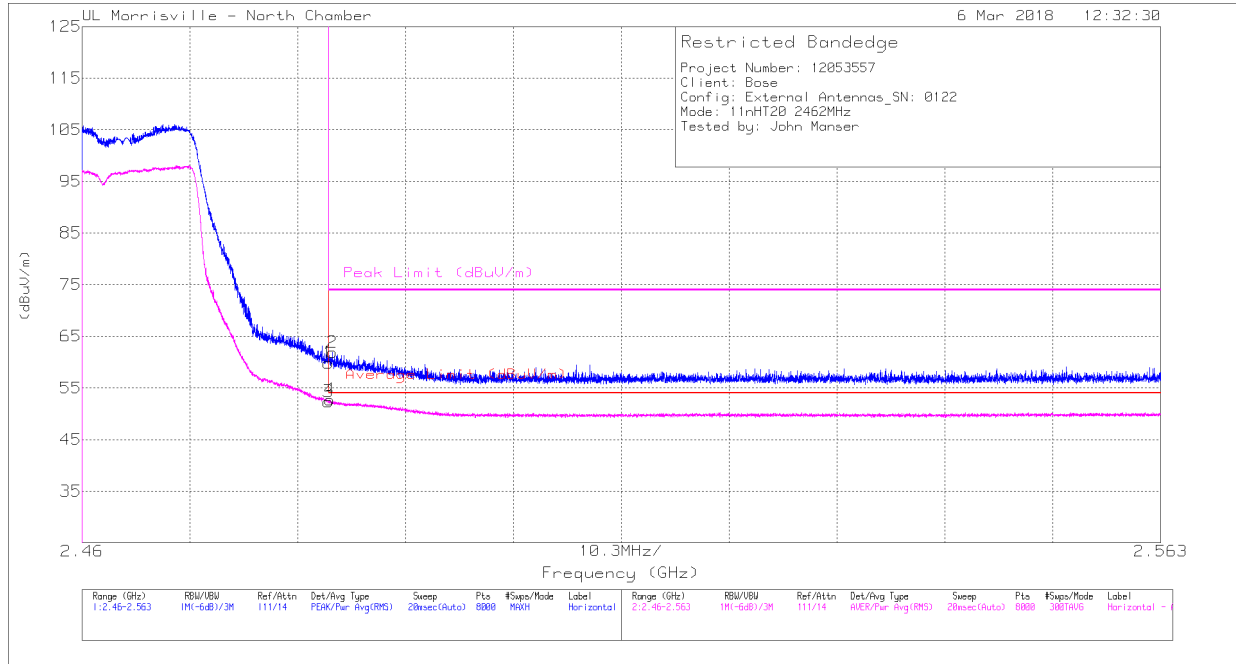
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, HORIZONTAL) MCS 7 2462MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	41.37	PK	32.3	-23.8	10	0	59.87	-	-	74	-14.13	301	149	H
2	* ** 2.484	43.36	PK	32.3	-23.8	10	0	61.86	-	-	74	-12.14	301	149	H
3	* ** 2.484	30.39	RMS	32.3	-23.8	10	3.46	52.35	54	-1.65	-	-	301	149	H
4	* ** 2.484	30.75	RMS	32.3	-23.8	10	3.46	52.71	54	-1.29	-	-	301	149	H

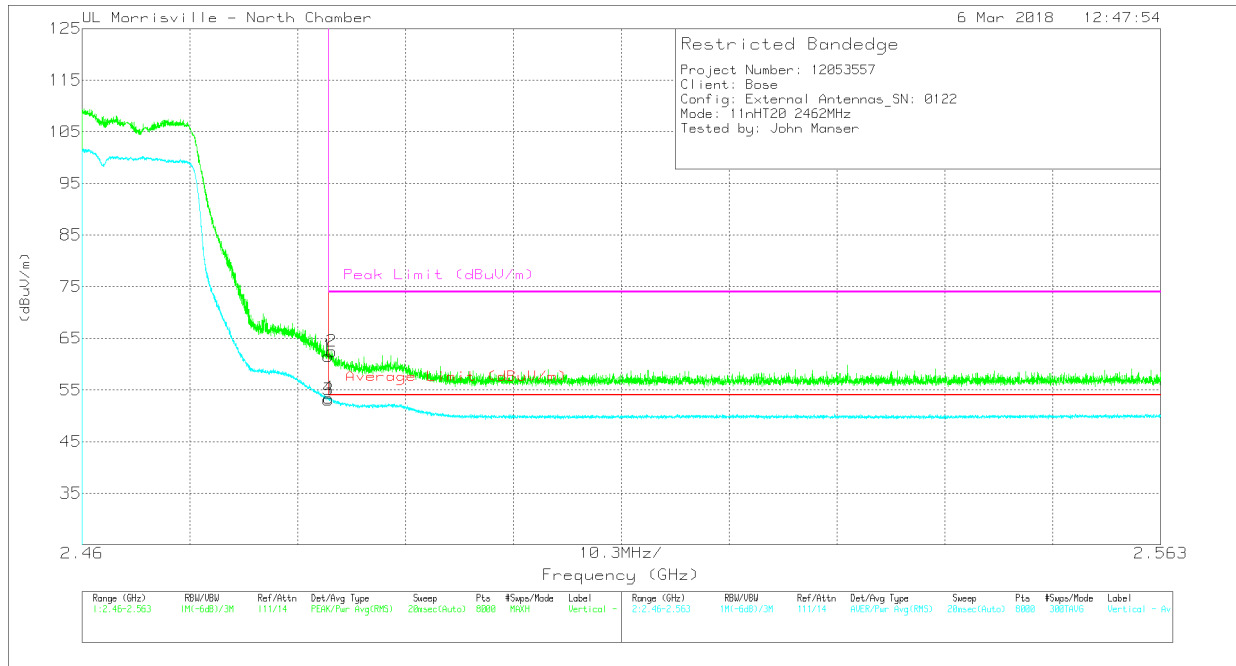
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL, VERTICAL) MCS 7 2462MHz



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Pad (10dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.484	43.08	PK	32.3	-23.8	10	0	61.58	-	-	74	-12.42	139	263	V
2	*** 2.484	43.96	PK	32.3	-23.8	10	0	62.46	-	-	74	-11.54	139	263	V
3	*** 2.484	31.16	RMS	32.3	-23.8	10	3.46	53.12	54	-88	-	-	139	263	V
4	*** 2.484	31.49	RMS	32.3	-23.8	10	3.46	53.45	54	-55	-	-	139	263	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

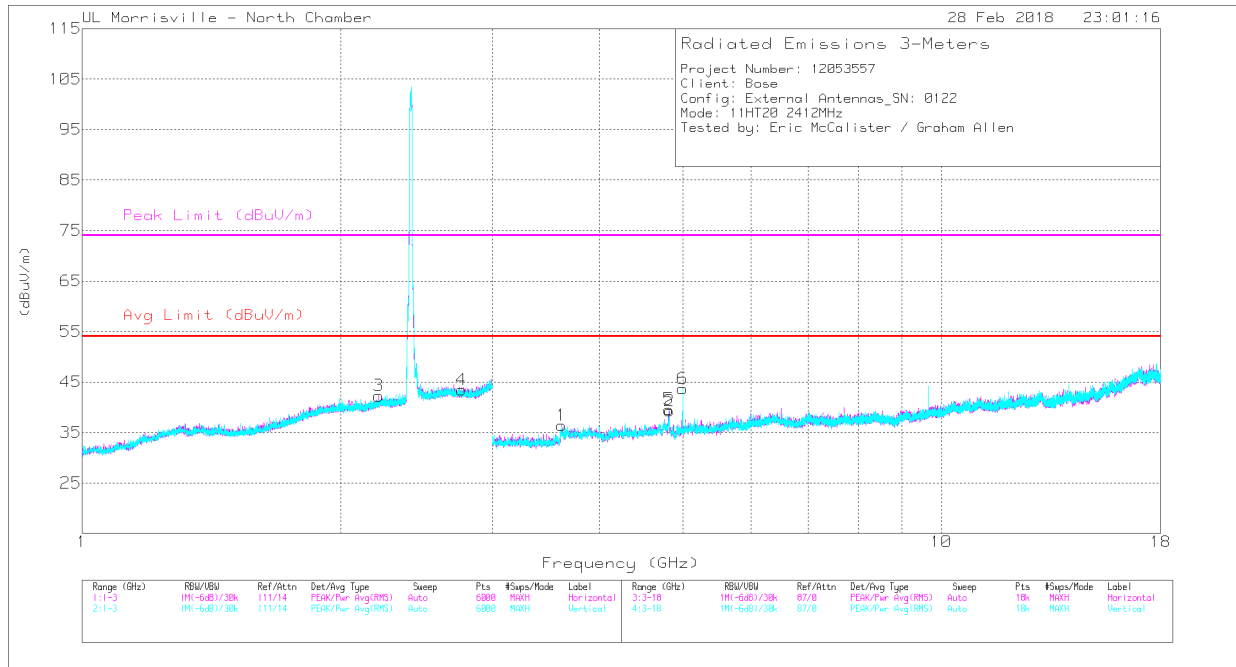
PK - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

Note: Radiated Spurious emissions from 1-18 GHz was run at the lowest data rate since this was found to be the highest Power and PSD. It was also run with Low and High channels set to mid channel power settings for worst-case results.

Low Channel



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	*** 2.214	41.38	PK2	31.7	-23.8	0	49.28	-	-	74	-24.72	232	222	H
	*** 2.218	27.62	MAV1	31.7	-23.8	3.46	38.98	54	-15.02	-	-	232	222	H
1	*** 3.617	39.4	PK2	32.9	-31	0	41.3	-	-	74	-32.7	330	196	H
	*** 3.616	27.99	MAV1	32.9	-31	3.46	33.35	54	-20.65	-	-	325	138	H
2	*** 4.821	41.66	PK2	34.1	-31	0	44.76	-	-	74	-29.24	240	373	H
	*** 4.824	30.77	MAV1	34.1	-31	3.46	37.33	54	-16.67	-	-	240	373	H
4	*** 2.762	40.24	PK2	32.2	-23.3	0	49.14	-	-	74	-24.86	285	299	V
	*** 2.759	28.21	MAV1	32.2	-23.3	3.46	40.57	54	-13.43	-	-	285	299	V
5	*** 4.82	43.88	PK2	34.1	-31	0	46.98	-	-	74	-27.02	139	195	V
	*** 4.818	30.4	MAV1	34.1	-31	3.46	36.96	54	-17.04	-	-	139	195	V
6	*** 4.999	46.17	PK2	34.1	-32.2	0	48.07	-	-	74	-25.93	246	258	V
	*** 4.998	28.72	MAV1	34.1	-32.2	3.46	34.08	54	-19.92	-	-	246	258	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

MAV1 -Maximum RMS Average