FCC CFR47 PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac & NFC

FCC ID: PY7-PM0944

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V1	4/25/2016	Initial Issue	C. OOI
V1	4/25/2016	Updated Section 6	C. OOI

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TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS 5

2. TEST METHODOLOGY 6

3. FACILITIES AND ACCREDITATION 6

4. CALIBRATION AND UNCERTAINTY 6

4.1. MEASURING INSTRUMENT CALIBRATION 6

4.2. SAMPLE CALCULATION 6

4.3. MEASUREMENT UNCERTAINTY 7

5. EQUIPMENT UNDER TEST 7

5.1. DESCRIPTION OF EUT 7

5.2. MAXIMUM OUTPUT POWER 7

5.3. DESCRIPTION OF AVAILABLE ANTENNAS 7

5.4. SOFTWARE AND FIRMWARE 8

5.5. LIST OF TEST REDUCTION AND MODES 8

5.6. WORST-CASE CONFIGURATION AND MODE 8

5.7. DESCRIPTION OF TEST SETUP 9

6. TEST AND MEASUREMENT EQUIPMENT 11

7. MEASUREMENT METHODS 13

8. SUMMARY TABLE 14

9. ANTENNA PORT TEST RESULTS 15

9.1. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS 15

9.1.1. ON TIME AND DUTY CYCLE RESULTS 15

9.1.2. DUTY CYCLE PLOTS 16

9.2. 6 dB BANDWIDTH 18

9.2.1. 802.11b MODE IN THE 2.4 GHz BAND 19

9.2.2. 802.11g MODE IN THE 2.4 GHz BAND 19

9.2.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND 19

9.2.4. 6 dB BANDWIDTH MID CH PLOTS 20

9.3. 99% BANDWIDTH 21

9.3.1. 802.11b MODE IN THE 2.4 GHz BAND 21

9.3.2. 802.11g MODE IN THE 2.4 GHz BAND 21

9.3.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND 21

9.3.4. 99% BANDWIDTH MID CH PLOTS 22

9.4. OUTPUT POWER 23

9.4.1. 802.11b MODE IN THE 2.4 GHz BAND 24

9.4.2. 802.11g MODE IN THE 2.4 GHz BAND 26

9.4.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND 27

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9.5. PSD 28
9.5.1. 802.11b MODE IN THE 2.4 GHz BAND 28
9.5.2. 802.11g MODE IN THE 2.4 GHz BAND 29
9.5.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND 29
9.5.4. PSD MID CH PLOTS 30

9.6. OUT-OF-BAND EMISSIONS 31
9.6.1. 802.11b MODE IN THE 2.4 GHz BAND 32
9.6.2. 802.11g MODE IN THE 2.4 GHz BAND 35
9.6.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND 38

10. RADIATED TEST RESULTS 41

10.1. LIMITS AND PROCEDURE 41

10.2. TRANSMITTER ABOVE 1 GHz 42
10.2.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND 42
10.2.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND 54
10.2.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND 68

10.3. WORST-CASE BELOW 1 GHz 82

11. AC POWER LINE CONDUCTED EMISSIONS 83

12. SETUP PHOTOS 85

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SONY MOBILE COMMUNICATIONS, INC.

EUT DESCRIPTION: GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac & NFC

SERIAL NUMBER: Z0ZW, CB5129YMBE

DATE TESTED: March 25 – April 13, 2016

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	Pass

UL Verification Services Inc. 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 Verification Services Inc. 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 Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. 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, any agency of the Federal Government, or any agency of any government.

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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, RSS-GEN Issue 4, and RSS-247 Issue 1.

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 Suite B, Perimeter Park Drive, Morrisville, NC 27560.

12 Laboratory Dr., RTP, NC 27709
☐ Chamber A
☐ Chamber C

2800 Suite B Perimeter Park Dr., Morrisville, NC 27560
☐ Chamber NORTH
☒ Chamber SOUTH

The onsite chambers are covered under Industry Canada company address code 2180C with site numbers 2180C -1 through 2180C-4, respectively.

UL LLC (RTP) is accredited by NVLAP, Laboratory Code 200246-0. The full scope of accreditation can be viewed at http://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:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

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4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER		UNCERTAINTY
Total RF power, conducted	+/-	0.45
RF power density, conducted	+/-	1.50
Spurious emissions, conducted	+/-	2.94
All emissions, radiated up to 26 GHz	+/-	5.36
Temperature	+/-	0.07
Humidity	+/-	2.26
DC and low frequency voltages	+/-	1.27
Conducted Disturbance, 0.15 to 30 MHz	+/-	2.37

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

This EUT is a GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac & NFC.

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 - 2472	802.11b	12.50	17.78
2412 - 2472	802.11g	14.04	25.35
2412 - 2472	802.11n HT20	14.00	25.12

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes integrated antenna, with a maximum as below:

Frequency (MHz)	Antenna Gain (dBi)	
	Core0(Main)	Core1 (Sub)
2.402	-7.0	-3.7
2.441	-6.2	-4.4
2.480	-6.9	-4.9

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5.4. SOFTWARE AND FIRMWARE

The firmware/SW installed in the EUT during testing was SONY, s_atp_xxxx_1_600_7_9

The hardware version was A

The test utility software used during testing was Tera Term, rev 4.8.9(SVN#6182)

5.5. LIST OF TEST REDUCTION AND MODES

2400 - 2483.5 MHz Authorized Frequency Band (Antenna Port & Radiated Testing)		
Frequency Range (MHz)	**Mode**	**Covered by**
2412 - 2472	802.11g Legacy 1TX	802.11g CDD 2TX
2412 - 2472	802.11n 1TX	802.11n HT20 CDD 2TX
2412 - 2472	802.11n STBC 2TX	802.11n HT20 CDD 2TX

5.6. WORST-CASE CONFIGURATION AND MODE

Radiated emission below 1GHz and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X, Y, Z to determine the worst-case orientation; therefore, all final radiated testing was performed with the EUT in worst-case orientation.

802.11g/n SISO mode share same power per chain as 802.11g/n MIMO mode; therefore only MIMO mode was tested.

802.11b only support SISO mode.

Based on the baseline scan, the worst-case data rates were:

802.11b mode: 1 Mbps
802.11g MIMO mode: 6 Mbps
802.11n HT20 MIMO mode: MCS8

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5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	SONY	UCH 20 1295-70821	N/A	N/A
Earphone	SONY	MH410C	N/A	N/A
Laptop	Lenovo	T450	PC-0A2UQU	N/A
Laptop AC Adapter	Lenovo	ADLX65NLC2A	11S45N0263Z1ZS995256HR	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 Power	1	Mini-USB	Shielded	1m	N/A
2	Audio	1	Mini-Jack	Unshielded	1.5m	N/A

TEST SETUP

The EUT is a stand-alone unit during the tests. Test software exercised the radio card.

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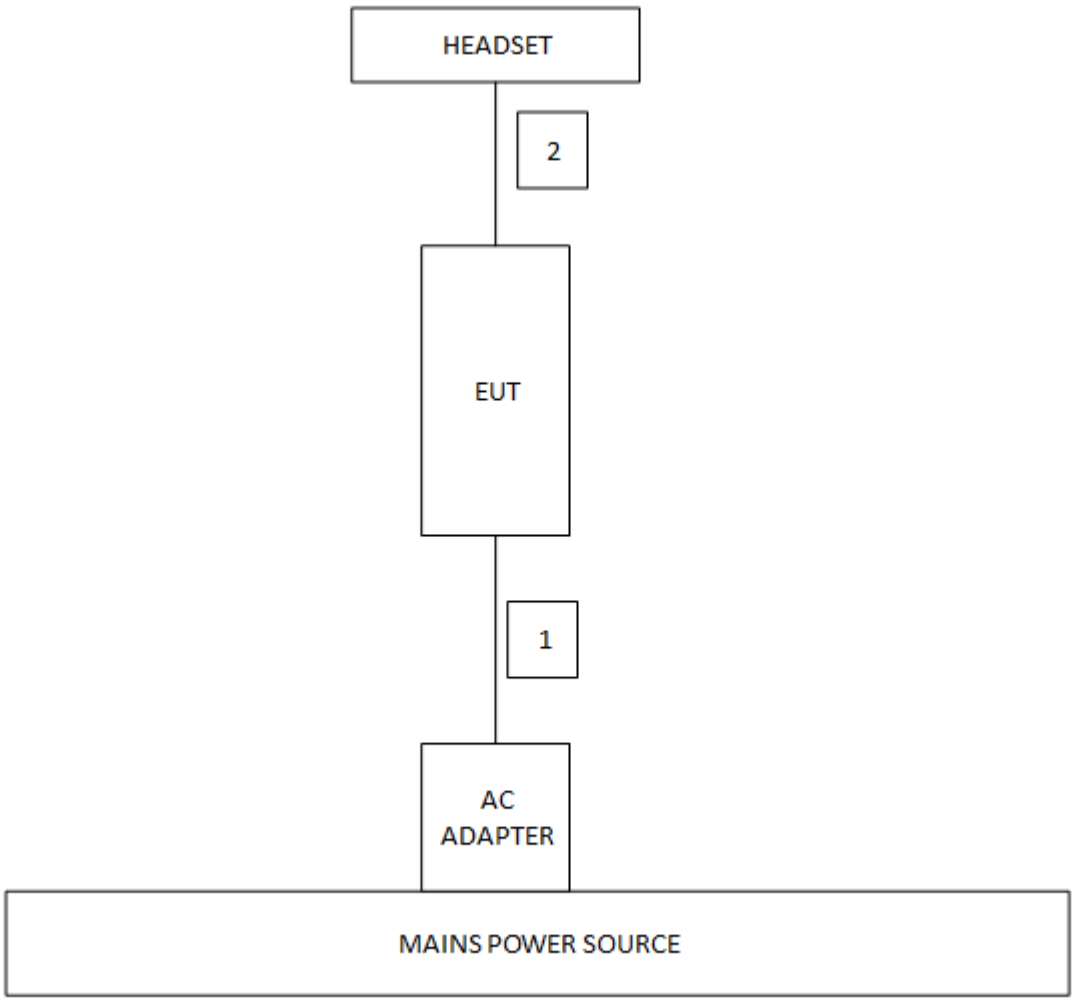
SETUP DIAGRAM FOR TESTS



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6. TEST AND MEASUREMENT EQUIPMENT

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

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	0.009-30MHz	**(Loop Ant.)**			
AT0079	Active Loop Antenna	ETS-Lindgren	6502	2015-12-08	2016-12-31
	30-1000 MHz				
AT0074	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2015-06-10	2016-06-30
	1-18 GHz				
AT0067 (02/28-03/17/2016)	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2015-03-12	2016-03-31
AT0069 (As of 03/18/2016)	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2016-03-07	2017-03-31
	18-40 GHz				
AT0076	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2015-08-27	2016-08-31
AT0077	Horn Antenna, 26-40GHz	ARA	MWH-2640/B	2015-08-27	2016-08-31
	Tuned Dipole Set				
AT0013-AT0016	Four Dipole Antenna Set, 30 to 1000 MHz	EMCO	3121C-DB-1, -2, -3, -4	2015-05-06	2016-05-31
	Gain-Loss Chains				
S-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2015-10-07	2016-10-31
S-SAC02	Gain-loss string: 30-1000MHz	Various	Various	2015-06-09	2016-06-30
S-SAC03	Gain-loss string: 1-18GHz	Various	Various	2015-08-22	2016-08-31
S-SAC04	Gain-loss string: 18-40GHz	Various	Various	2016-02-29	2017-02-28
	Receiver & Software				
SA0025	Spectrum Analyzer	Agilent	N9030A	2016-03-17	2017-03-31
SA0026 (18-40GHz RSE)	Spectrum Analyzer	Agilent	N9030A	2016-02-24	2017-02-28
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Additional Equipment used				
HI0050	Temp/Humid/Pressure Meter	Cole-Parmer	99760-00	2015-07-01	2016-07-31

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Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	Conducted Room 1				
SA0019	Spectrum Analyzer	Agilent Technologies	E4446A	2015-09-02	2016-09-30
PWM004	RF Power Meter	Keysight Technologies	N1911A	2015-06-08	2016-06-08
PWS004	Peak and Avg Power Sensor, 50MHz to 6GHz	Keysight Technologies	E9323A	2015-06-05	2016-06-05
HI0079	Temp/Humid/Pressure Meter	Springfield	PreciseTemp	2015-07-1	2016-07-31
MM0167	True RMS Multimeter	Agilent	U1232A	2015-08-17	2016-08-31
76022	DC Regulated Power Supply	CircuitSpecialists.Com	CSI3005X5	NA	NA
T1023	EMPower USB RF Power Sensor, 10MHz to 6GHz	ETS Lindgren	7002-006	2015-10-01	2016-10-01

Test Software List			
Description	**Manufacturer**	**Model**	**Version**
Radiated Software	UL	UL EMC	Ver 9.5, Aug 20, 2015
Conducted Software	UL	UL EMC	Ver 9.5, Aug 20, 2015
Antenna Port Software	UL	UL RF	Ver 4.3, Mar 16, 2016

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7. MEASUREMENT METHODS

KDB 558074 D01 DTS Meas Guidance v03r05: Measurement Procedure AVGPM-G is used for power and AVGPSD-3 is used for power spectral density.

Unwanted emissions within Restricted Bands are measured using traditional radiated procedures.

Band edge emissions within Restricted Bands are measured using RMS with duty cycle factor offset method.

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8. SUMMARY TABLE

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result
15.247 (a)(2)	RSS-247 5.2.1	Occupied Band width (6dB)	>500KHz	Conducted	Pass
2.1051, 15.247 (d)	RSS-247 5.5	Band Edge / Conducted Spurious Emission	-30dBc		Pass
15.247	RSS-247 5.4.4	TX conducted output power	<30dBm		Pass
15.247	RSS-247 5.2.2	PSD	<8dBm		Pass
15.207 (a)	RSS-GEN 8.8	AC Power Line conducted emissions	Section 10	Radiated	Pass
15.205, 15.209, 15.247(d)	RSS-GEN 8.9/7	Radiated Spurious Emission	< 54dBuV/m		Pass

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9. ANTENNA PORT TEST RESULTS

9.1. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 58074 D01 v03r05 Section 6 (b)

9.1.1. ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
2.4GHz Band						
802.11b CDD	4.416	4.464	0.989	98.92%	0.00	0.010
802.11g CDD	3.095	3.142	0.985	98.50%	0.00	0.010
802.11n HT20 CDD	1.469	1.492	0.985	98.46%	0.00	0.010

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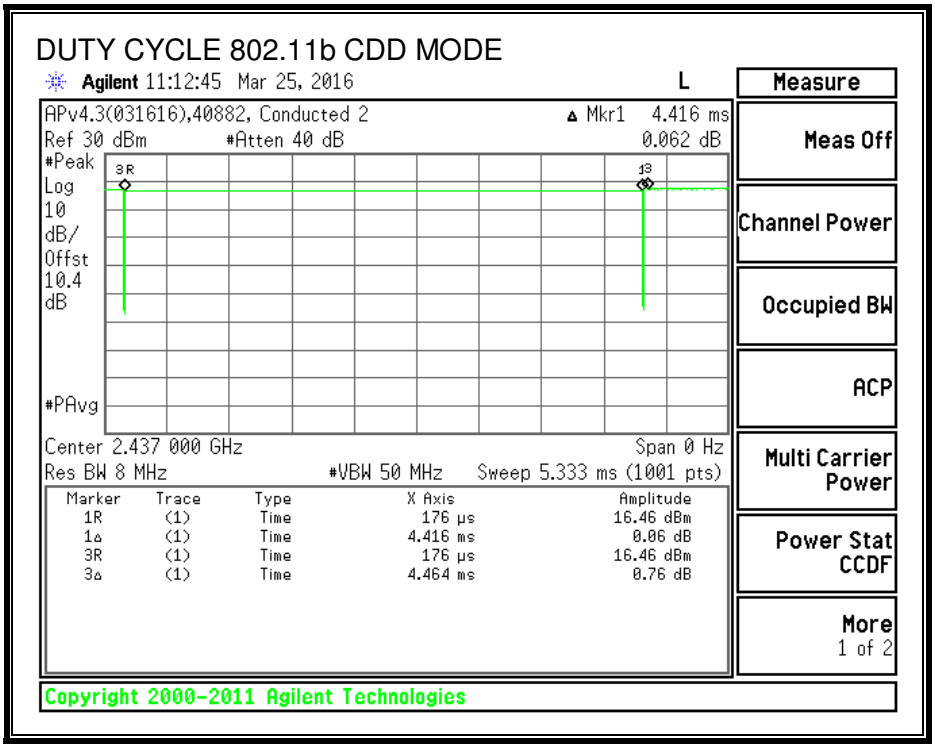
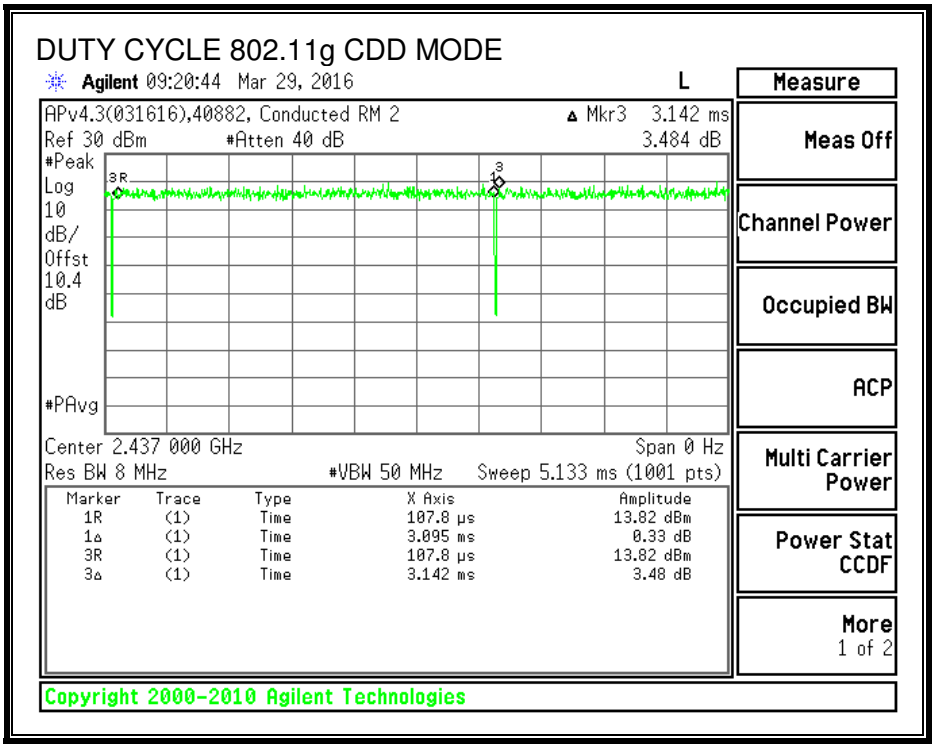
9.1.2. DUTY CYCLE PLOTS

2.4 GHz BAND





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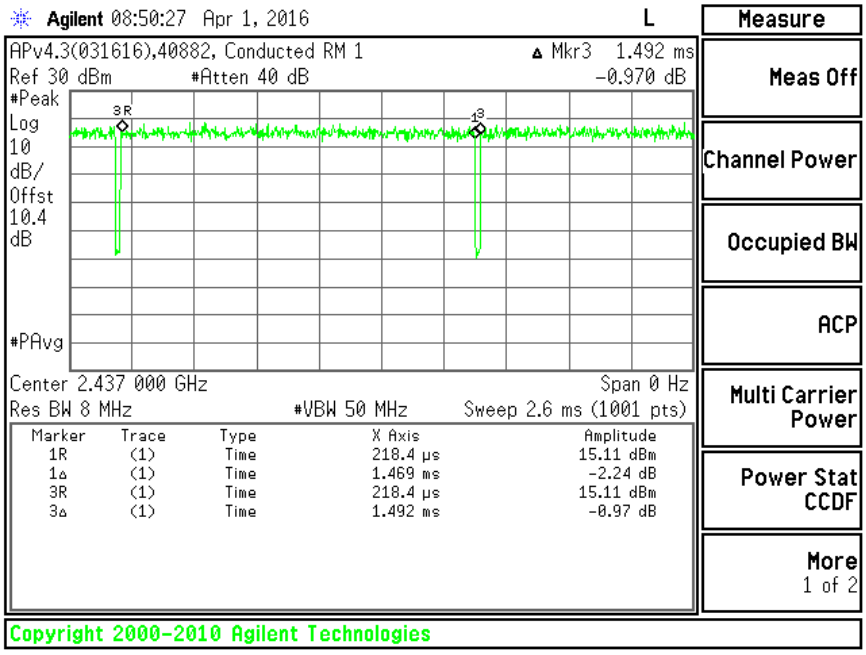
DUTY CYCLE 802.11n HT20 MODE



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9.2. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-247 5.2.1

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

TEST PROCEDURE

KDB 58074 D01 v03r05 Section 8.1

RESULTS

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9.2.1. 802.11b MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth CHAIN 0(MHz)	6 dB Bandwidth CHAIN 1(MHz)	Minimum Limit (MHz)
Low	2412	7.572	7.073	0.5
Mid	2437	7.073	7.051	0.5
High	2472	7.560	6.550	0.5

9.2.2. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth CHAIN 0(MHz)	6 dB Bandwidth CHAIN 1(MHz)	Minimum Limit (MHz)
Low	2412	16.400	16.400	0.5
Mid	2437	16.425	16.400	0.5
High	2472	15.768	16.450	0.5

9.2.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth CHAIN 0(MHz)	6 dB Bandwidth CHAIN 1(MHz)	Minimum Limit (MHz)
Low	2412	17.658	17.631	0.5
Mid	2437	17.631	17.631	0.5
High	2472	16.375	17.300	0.5

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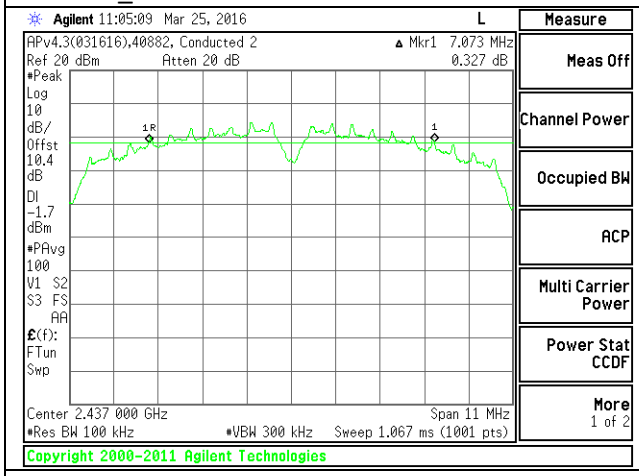
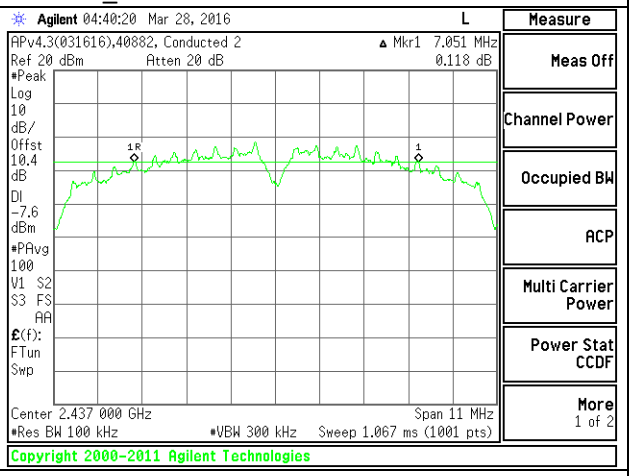
9.2.4. 6 dB BANDWIDTH MID CH PLOTS

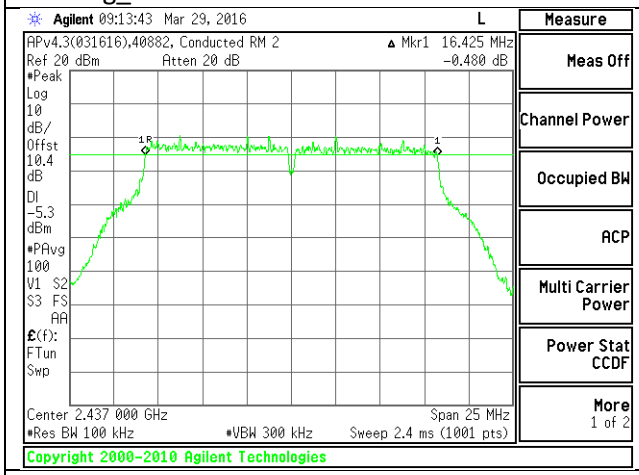
6dB 11b_2.4 Chain 0 Mid Ch



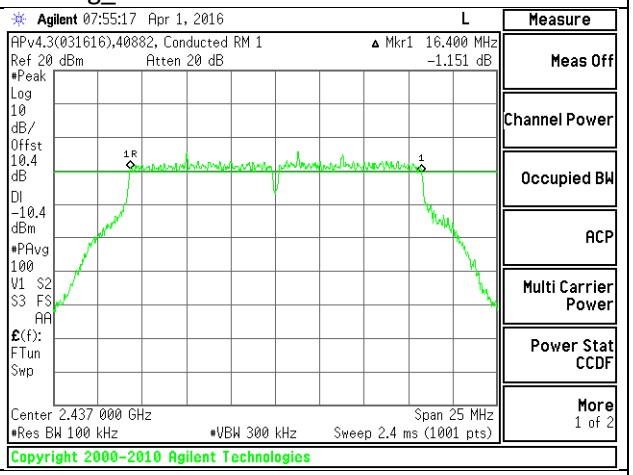
6dB 11b_2.4 Chain 1 Mid Ch



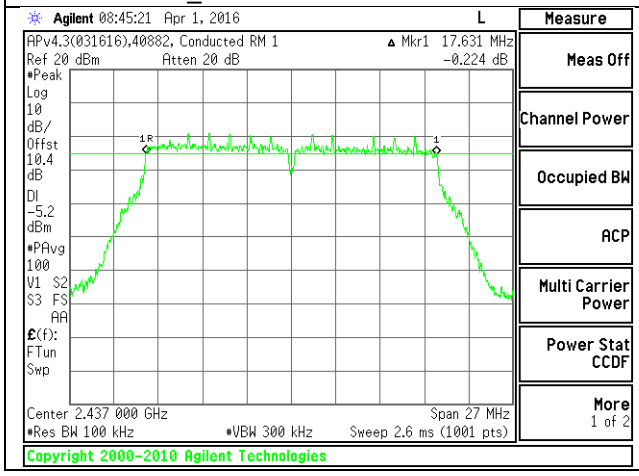
6dB 11g_2.4 Chain 0 Mid Ch



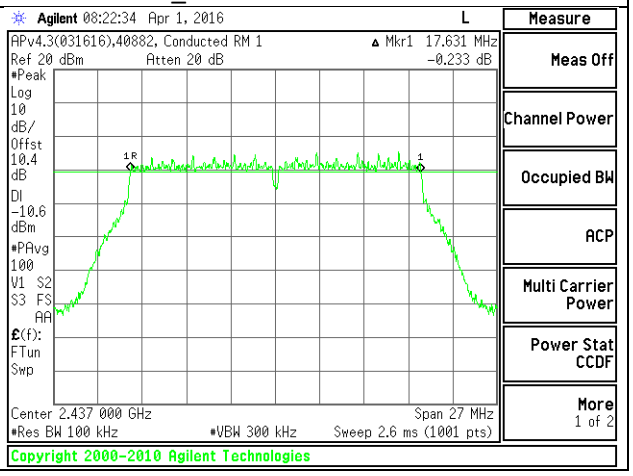
6dB 11g_2.4 Chain 1 Mid Ch



6dB 11n HT20_2.4 Chain 0 Mid Ch



6dB 11n HT20_2.4 Chain 1 Mid Ch



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9.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

ANSI C63.10: 2013 Section 6.9.3

RESULTS

9.3.1. 802.11b MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth CHAIN 0(MHz)	99% Bandwidth CHAIN 1(MHz)
Low	2412	10.4712	10.2539
Mid	2437	10.3875	10.3908
High	2472	10.4529	10.2940

9.3.2. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth CHAIN 0(MHz)	99% Bandwidth CHAIN 1(MHz)
Low	2412	16.5772	16.5326
Mid	2437	16.5738	16.5673
High	2472	16.5537	16.5162

9.3.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth CHAIN 0(MHz)	99% Bandwidth CHAIN 1(MHz)
Low	2412	17.7715	17.7062
Mid	2437	17.7731	17.7508
High	2472	17.7077	17.7115

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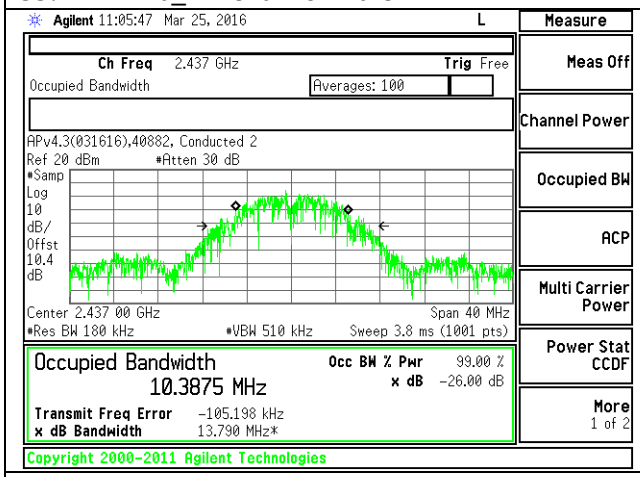
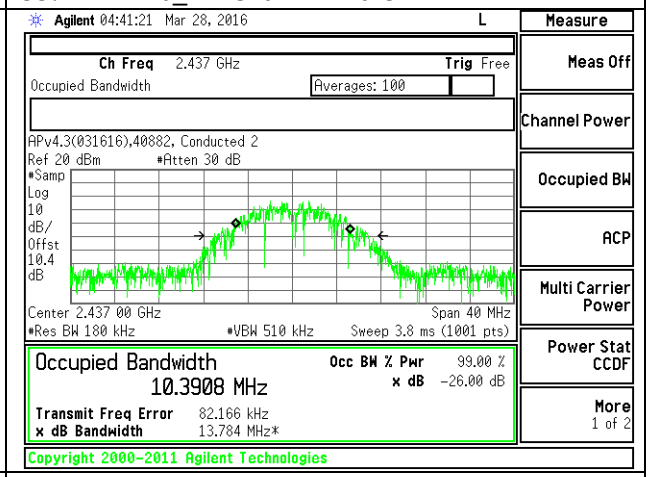
9.3.4. 99% BANDWIDTH MID CH PLOTS

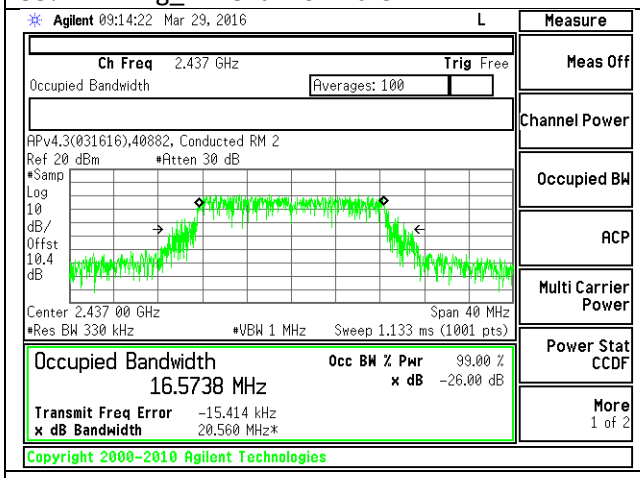
99% BW 11b_2.4 Chain 0 Mid Ch



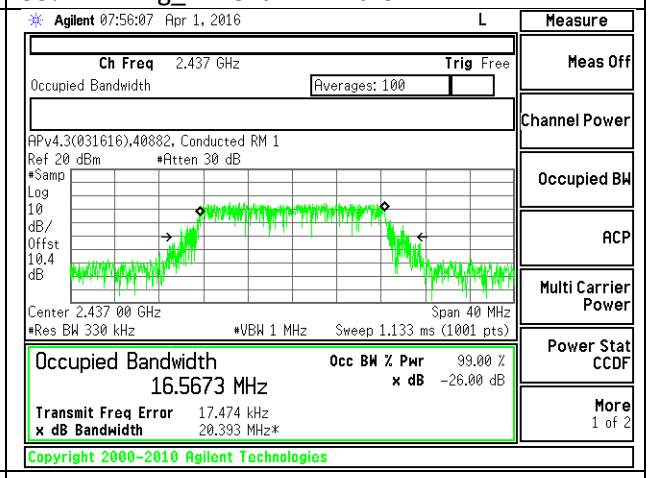
99% BW 11b_2.4 Chain 1 Mid Ch



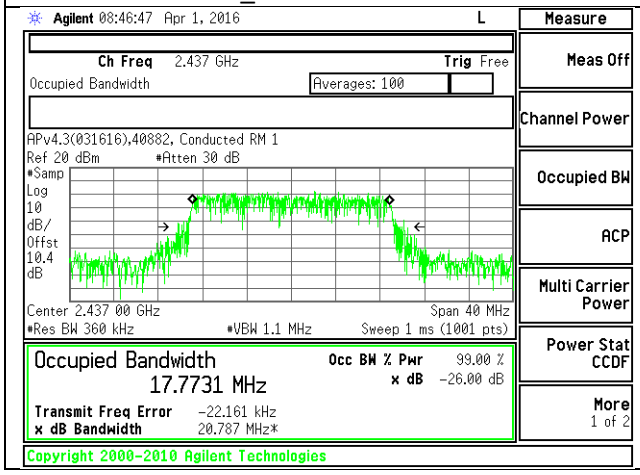
99% BW 11g_2.4 Chain 0 Mid Ch



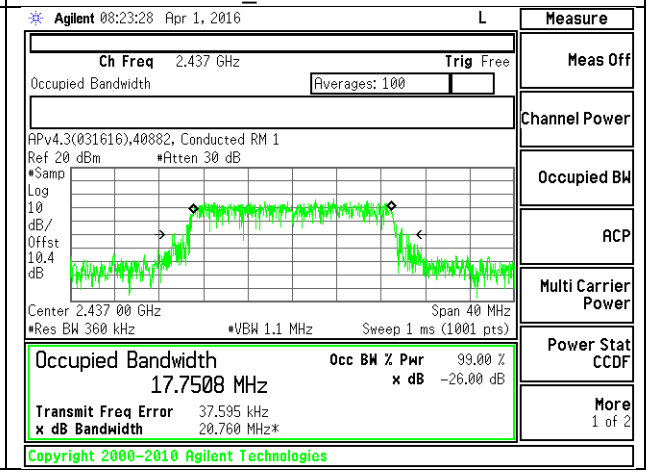
99% BW 11g_2.4 Chain 1 Mid Ch



99% BW 11n HT20_2.4 Chain 0 Mid Ch



99% BW 11n HT20_2.4 Chain 1 Mid Ch



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9.4. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-247 5.4.4

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

The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
-6.20	-3.70	-4.77

The TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
-6.20	-3.70	-1.85

TEST PROCEDURE

KDB 58074 D01 v03r05 Section 9.2.3.2

RESULTS

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9.4.1. 802.11b MODE IN THE 2.4 GHz BAND

Chain 0

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	-6.20	30.00	30	36	30.00
Mid	2437	-6.20	30.00	30	36	30.00
11	2462	-6.20	30.00	30	36	30.00
12	2467	-6.20	30.00	30	36	30.00
High	2472	-6.20	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	12.50	12.50	30.00	-17.50
Mid	2437	12.00	12.00	30.00	-18.00
11	2462	12.30	12.30	30.00	-17.70
12	2467	12.40	12.40	30.00	-17.60
High	2472	11.50	11.50	30.00	-18.50

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

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Chain 1

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	-3.70	30.00	30	36	30.00
Mid	2437	-3.70	30.00	30	36	30.00
11	2462	-3.70	30.00	30	36	30.00
12	2467	-3.70	30.00	30	36	30.00
High	2472	-3.70	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power

Results

Channel	Frequency (MHz)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	6.40	6.40	30.00	-23.60
Mid	2437	6.40	6.40	30.00	-23.60
11	2462	6.70	6.70	30.00	-23.30
12	2467	6.50	6.50	30.00	-23.50
High	2472	6.70	6.70	30.00	-23.30

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

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9.4.2. 802.11g MODE IN THE 2.4 GHz BAND

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	-4.77	30.00	30	36	30.00
Mid	2437	-4.77	30.00	30	36	30.00
11	2462	-4.77	30.00	30	36	30.00
12	2467	-4.77	30.00	30	36	30.00
High	2472	-4.77	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	12.90	7.10	13.91	30.00	-16.09
Mid	2437	12.50	7.20	13.62	30.00	-16.38
11	2462	13.00	7.30	14.04	30.00	-15.96
12	2467	9.00	5.20	10.51	30.00	-19.49
High	2472	2.90	-1.30	4.30	30.00	-25.70

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

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9.4.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	-4.77	30.00	30	36	30.00
Mid	2437	-4.77	30.00	30	36	30.00
11	2462	-4.77	30.00	30	36	30.00
12	2467	-4.77	30.00	30	36	30.00
High	2472	-4.77	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	12.90	7.50	14.00	30.00	-16.00
Mid	2437	12.60	7.50	13.77	30.00	-16.23
11	2462	12.90	7.40	13.98	30.00	-16.02
12	2467	7.40	3.50	8.88	30.00	-21.12
High	2472	2.10	-2.10	3.50	30.00	-26.50

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

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9.5. PSD

LIMITS

FCC §15.247

IC RSS-247 5.2.2

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

TEST PROCEDURE

KDB 58074 D01 v03r05 Section 10.5 (Option: Method AVGPSD-2)

RESULTS

9.5.1. 802.11b MODE IN THE 2.4 GHz BAND

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-9.358	-9.36	8.0	-17.4
Mid	2437	-10.701	-10.70	8.0	-18.7
High	2472	-10.082	-10.08	8.0	-18.1

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

Channel	Frequency (MHz)	Chain 1 Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-14.259	-14.26	8.0	-22.3
Mid	2437	-16.497	-16.50	8.0	-24.5
High	2472	-14.586	-14.59	8.0	-22.6

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9.5.2. 802.11g MODE IN THE 2.4 GHz BAND

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Chain 1 Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-14.021	-18.941	-12.81	8.0	-20.8
Mid	2437	-13.163	-19.170	-12.19	8.0	-20.2
High	2472	-23.368	-25.464	-21.28	8.0	-29.3

9.5.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Chain 1 Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-13.385	-20.023	-12.53	8.0	-20.5
Mid	2437	-13.187	-19.042	-12.18	8.0	-20.2
High	2472	-22.930	-27.498	-21.63	8.0	-29.6

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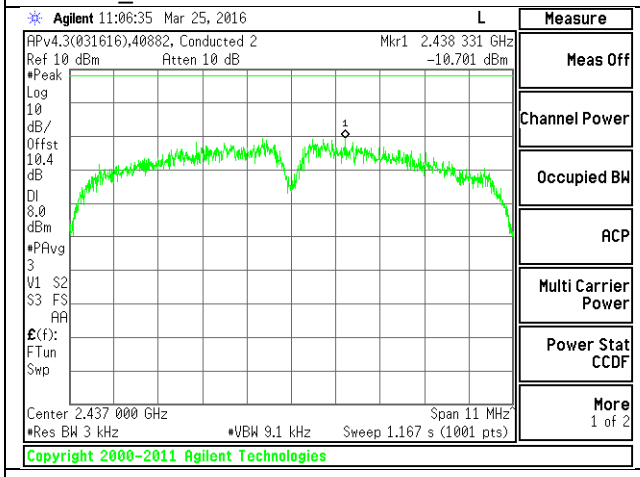
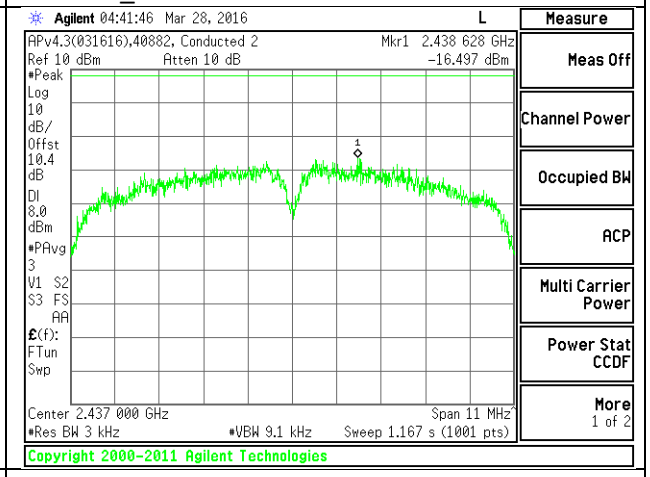
9.5.4. PSD MID CH PLOTS

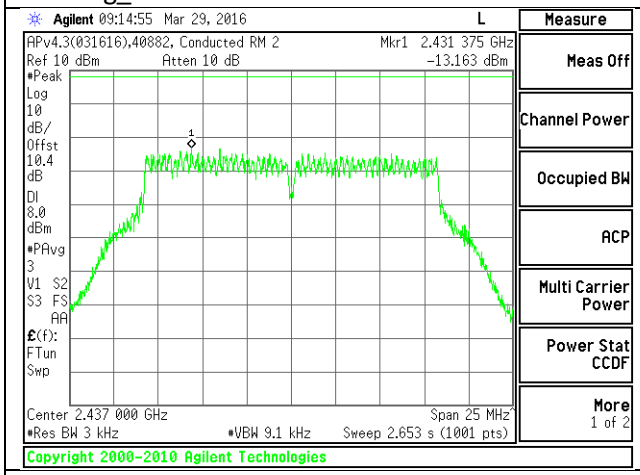
PSD 11b_2.4 Chain 0 Mid Ch



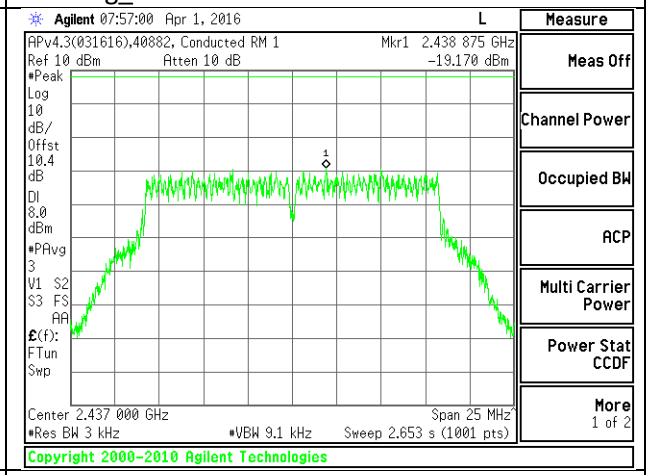
PSD 11b_2.4 Chain 1 Mid Ch



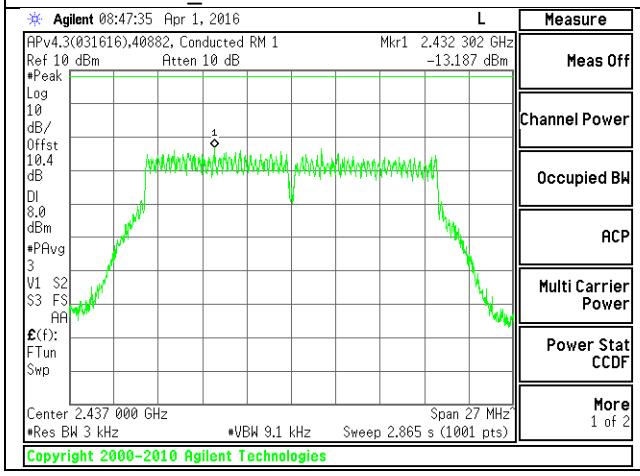
PSD 11g_2.4 Chain 0 Mid Ch



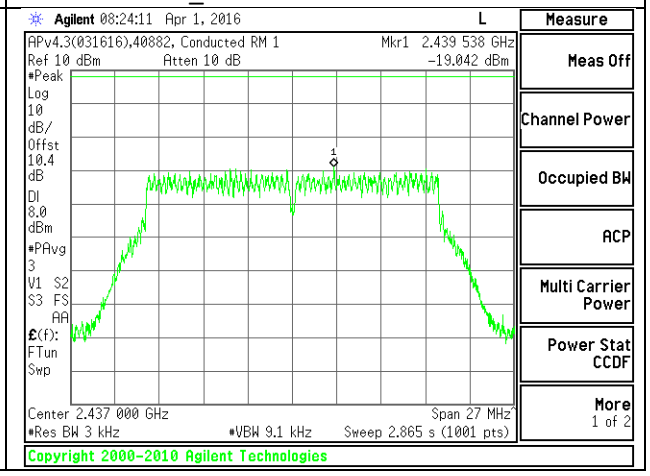
PSD 11g_2.4 Chain 1 Mid Ch



PSD 11n HT20_2.4 Chain 0 Mid Ch



PSD 11n HT20_2.4 Chain 1 Mid Ch



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9.6. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-247 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 PROCEDURE

KDB 58074 D01 v03r05 Section 11

RESULTS

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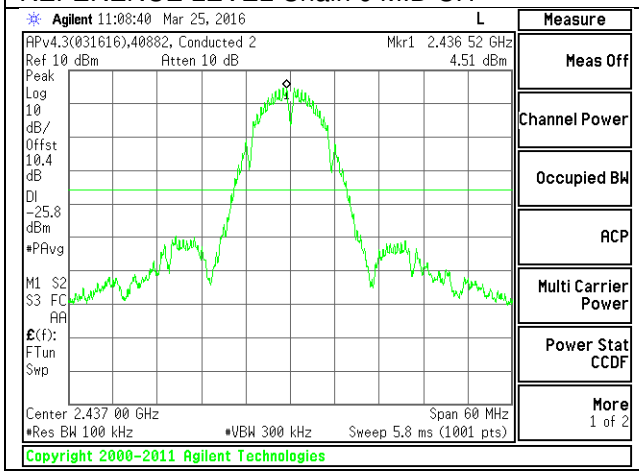
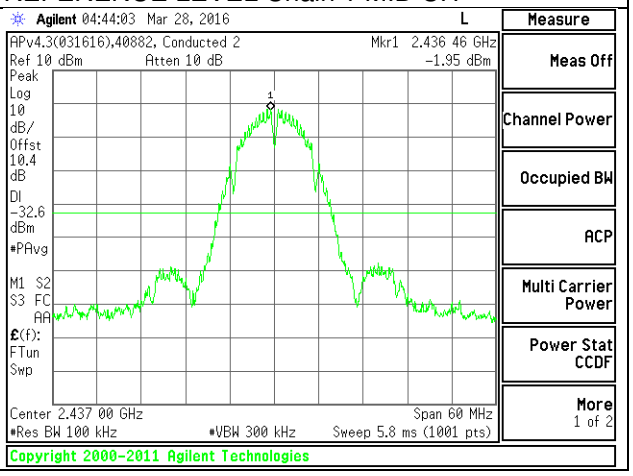
9.6.1. 802.11b MODE IN THE 2.4 GHz BAND

IN-BAND REFERENCE LEVEL

REFERENCE LEVEL Chain 0 MID CH

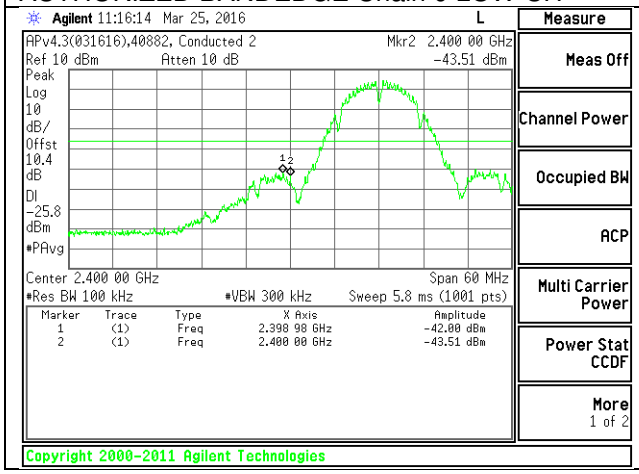


REFERENCE LEVEL Chain 1 MID CH

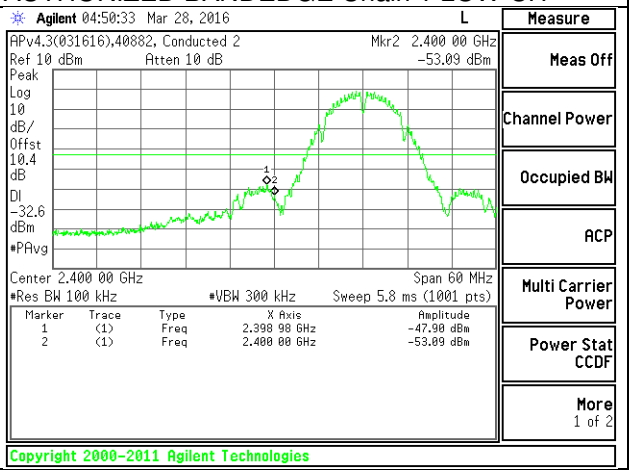


LOW CHANNEL BAND EDGE

AUTHORIZED BANDEDGE Chain 0 LOW CH



AUTHORIZED BANDEDGE Chain 1 LOW CH



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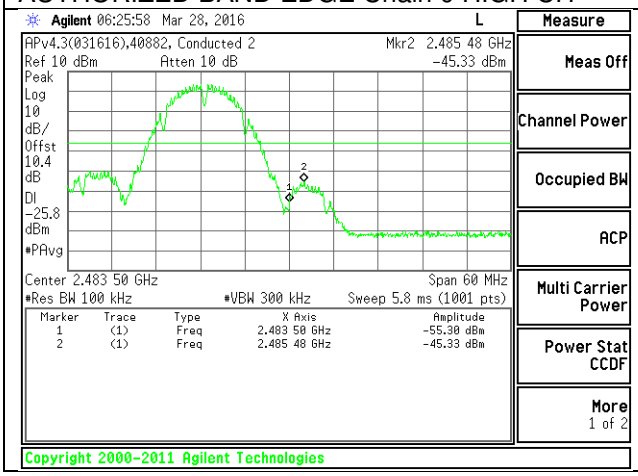
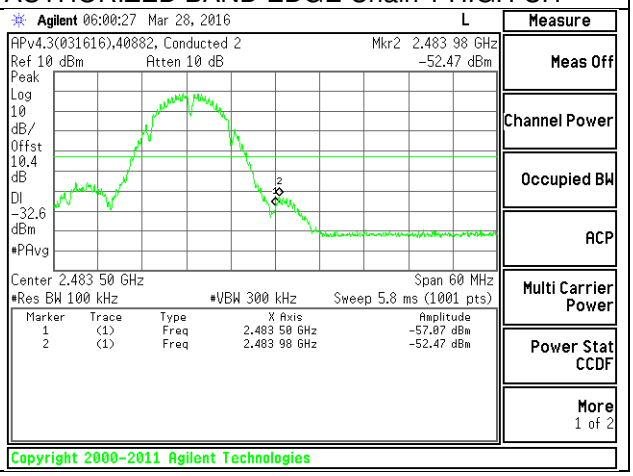
HIGH CHANNEL BAND EDGE

AUTHORIZED BAND EDGE Chain 0 HIGH CH

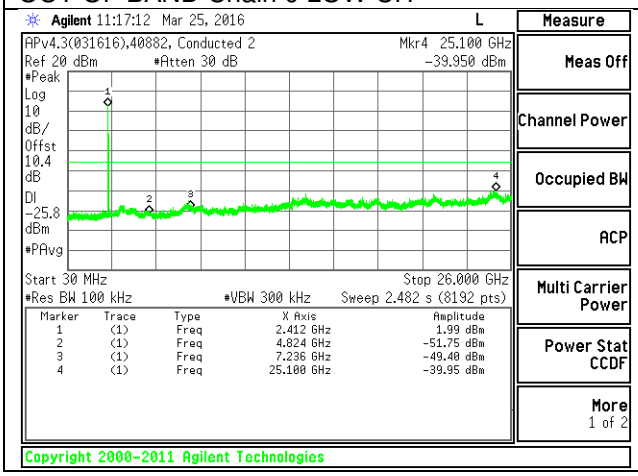


AUTHORIZED BAND EDGE Chain 1 HIGH CH

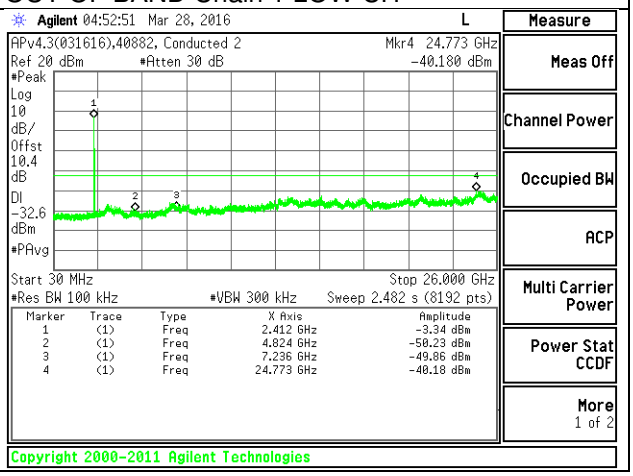


OUT-OF-BAND EMISSIONS

OUT OF BAND Chain 0 LOW CH



OUT OF BAND Chain 1 LOW CH



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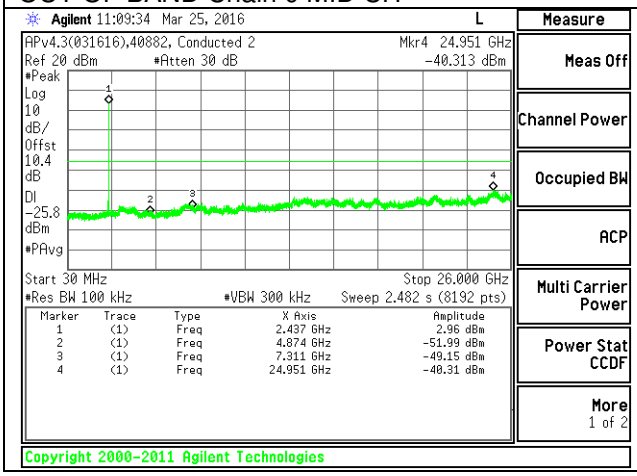
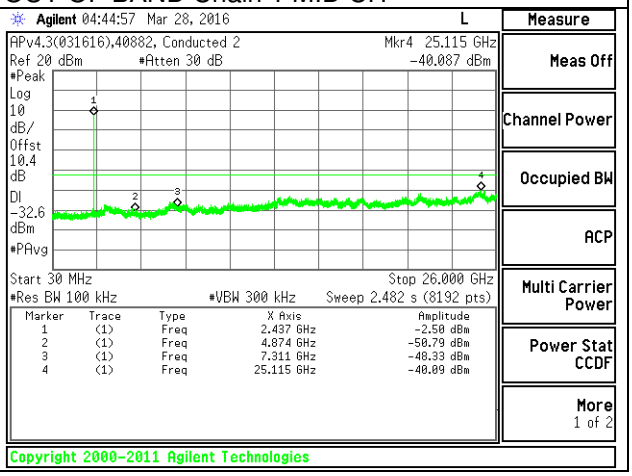
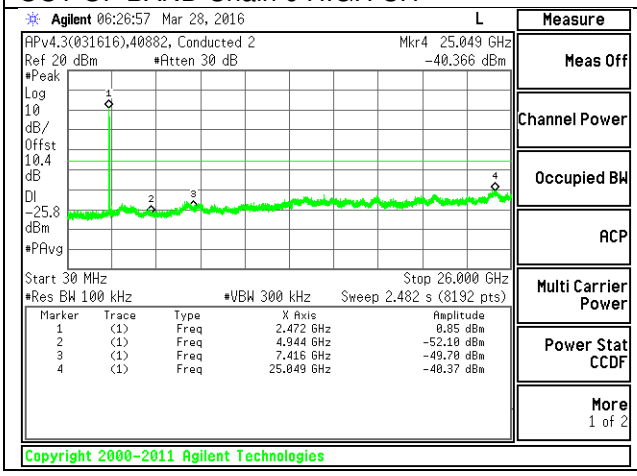
OUT OF BAND Chain 0 MID CH



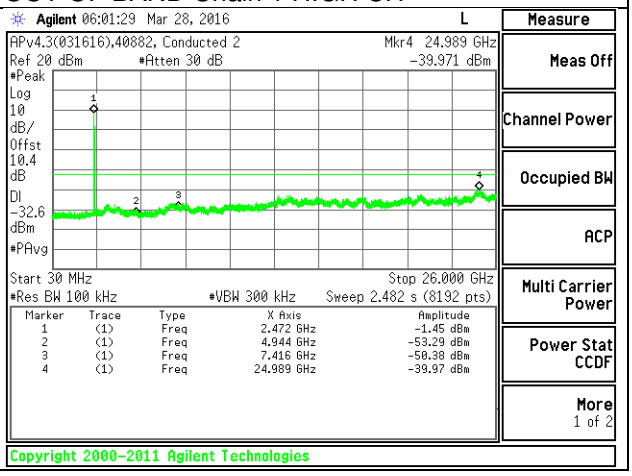
OUT OF BAND Chain 1 MID CH



OUT OF BAND Chain 0 HIGH CH



OUT OF BAND Chain 1 HIGH CH



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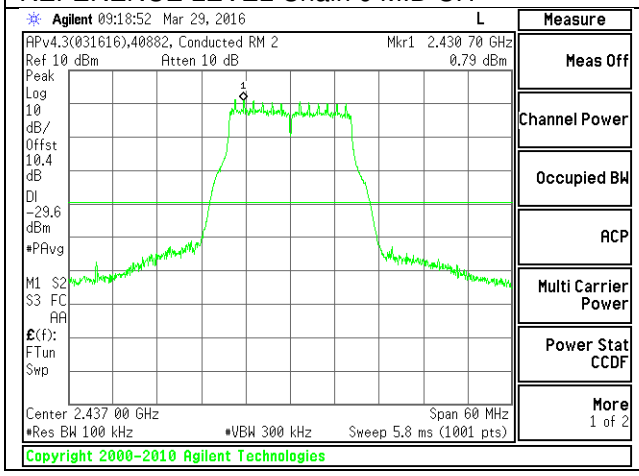
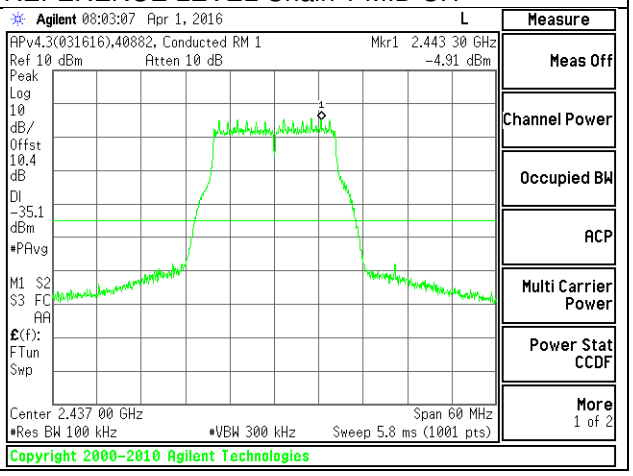
9.6.2. 802.11g MODE IN THE 2.4 GHz BAND

IN-BAND REFERENCE LEVEL

REFERENCE LEVEL Chain 0 MID CH

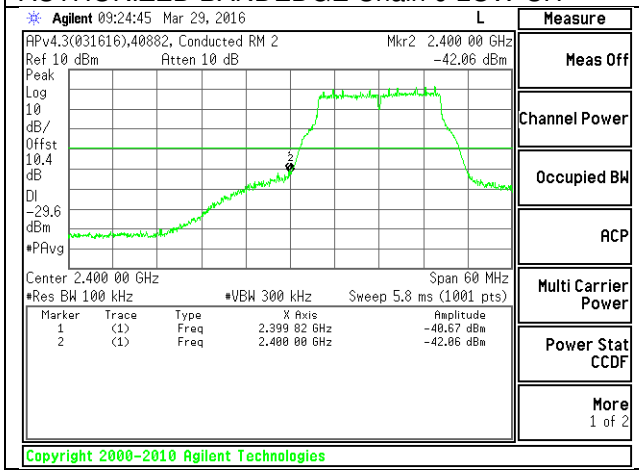


REFERENCE LEVEL Chain 1 MID CH

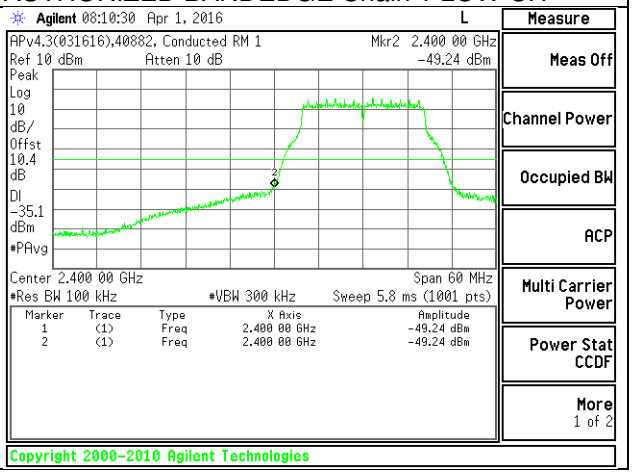


LOW CHANNEL BAND EDGE

AUTHORIZED BANDEDGE Chain 0 LOW CH



AUTHORIZED BANDEDGE Chain 1 LOW CH



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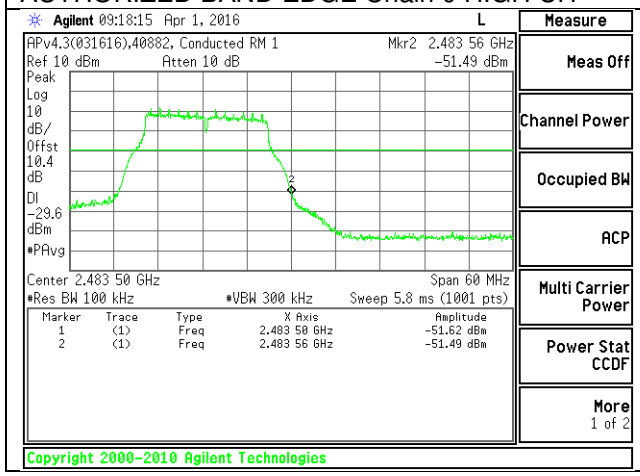
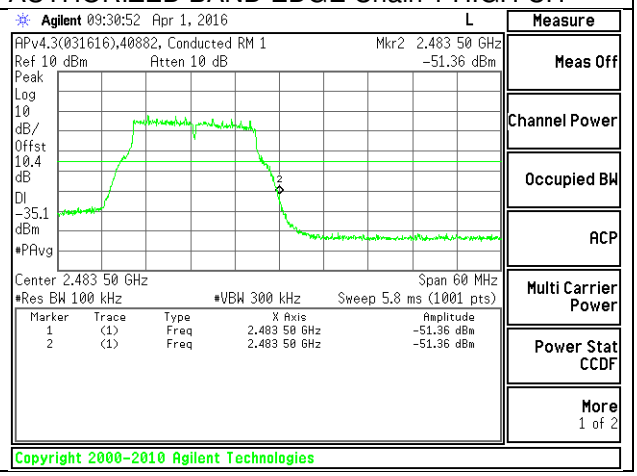
HIGH CHANNEL BAND EDGE

AUTHORIZED BAND EDGE Chain 0 HIGH CH

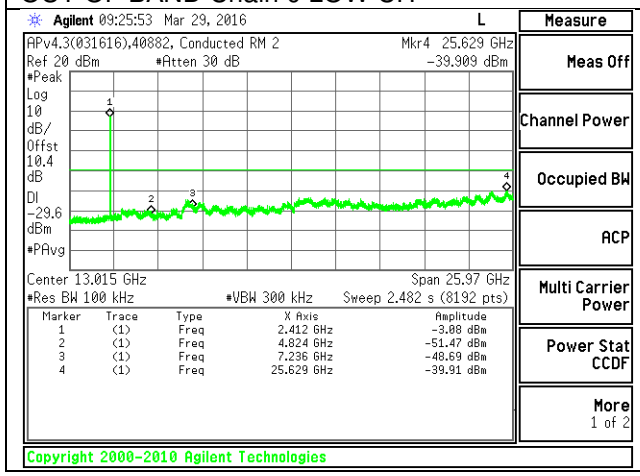


AUTHORIZED BAND EDGE Chain 1 HIGH CH

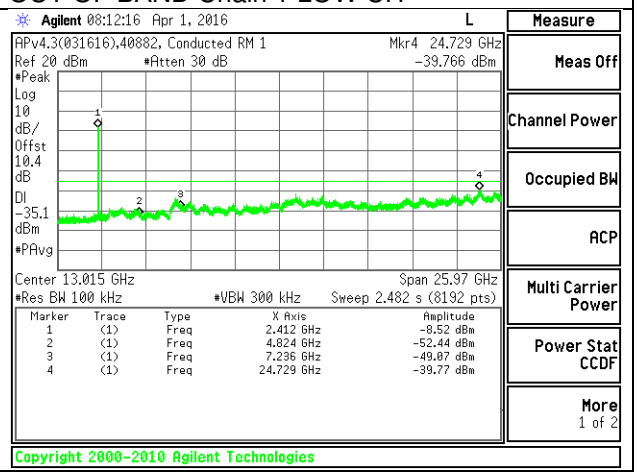


OUT-OF-BAND EMISSIONS

OUT OF BAND Chain 0 LOW CH



OUT OF BAND Chain 1 LOW CH



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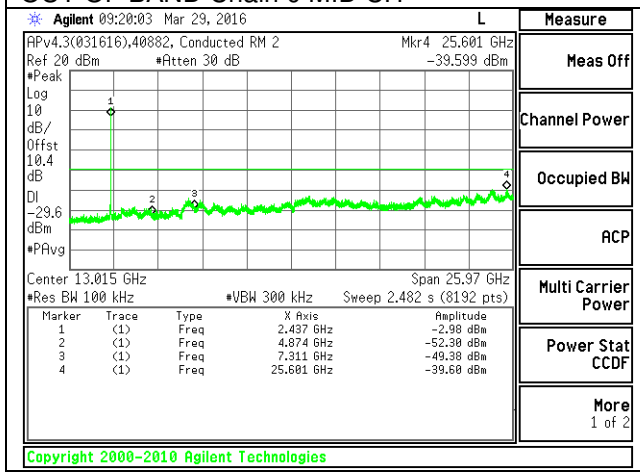
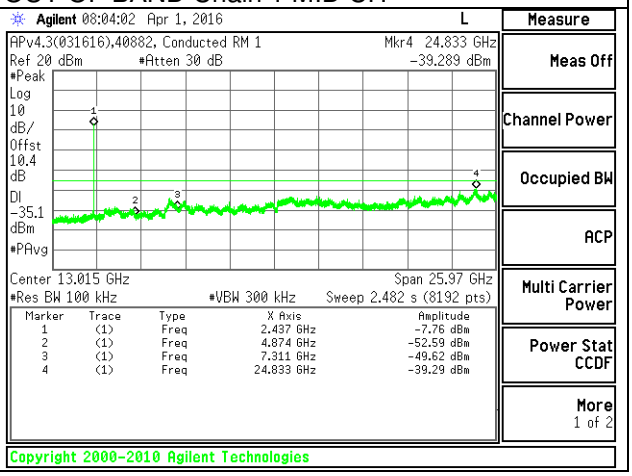
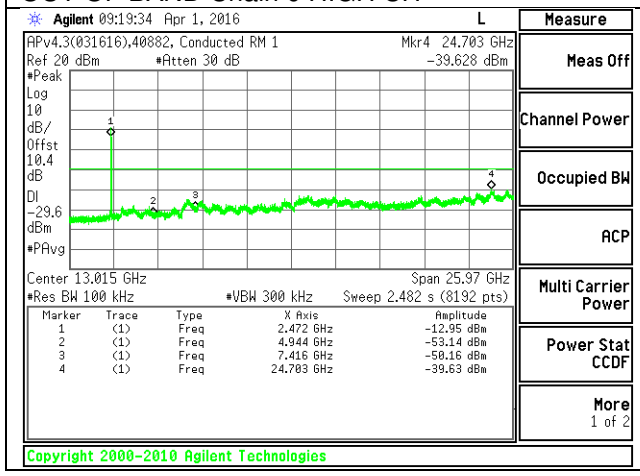
OUT OF BAND Chain 0 MID CH



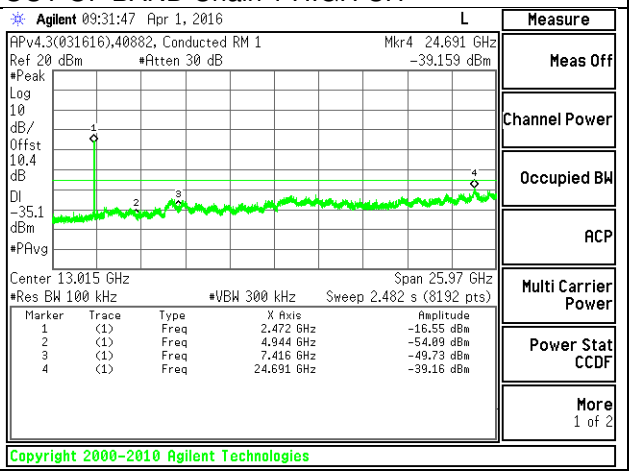
OUT OF BAND Chain 1 MID CH



OUT OF BAND Chain 0 HIGH CH



OUT OF BAND Chain 1 HIGH CH



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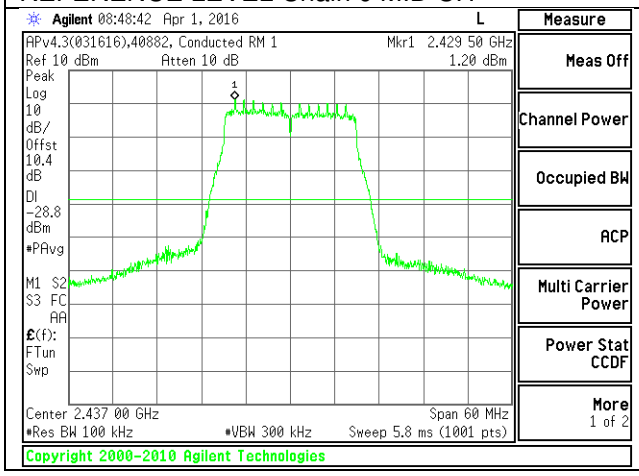
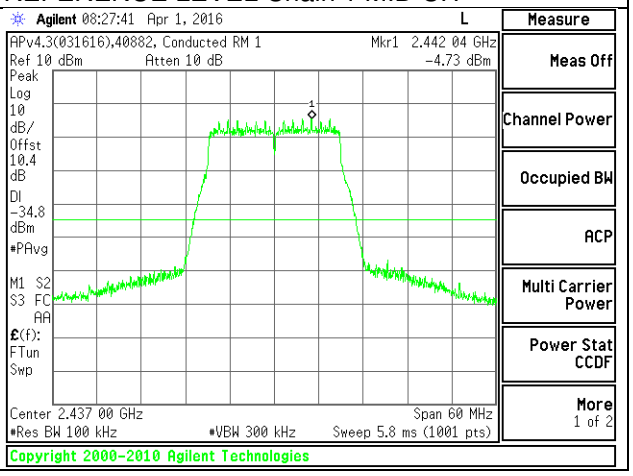
9.6.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

IN-BAND REFERENCE LEVEL

REFERENCE LEVEL Chain 0 MID CH

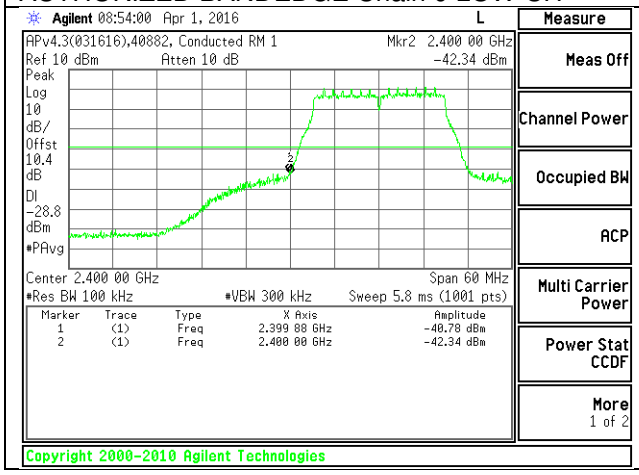


REFERENCE LEVEL Chain 1 MID CH

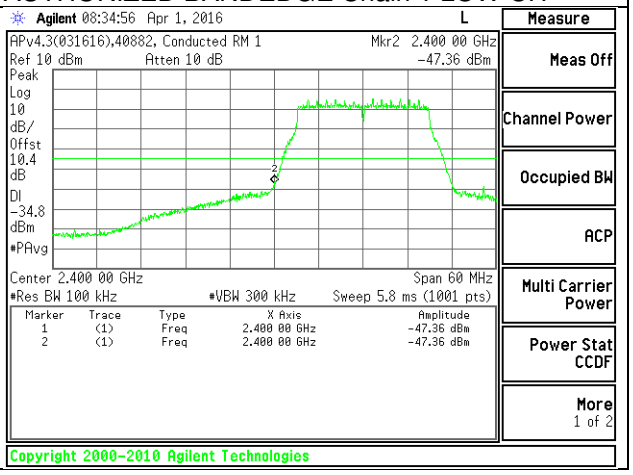


LOW CHANNEL BAND EDGE

AUTHORIZED BANDEDGE Chain 0 LOW CH



AUTHORIZED BANDEDGE Chain 1 LOW CH



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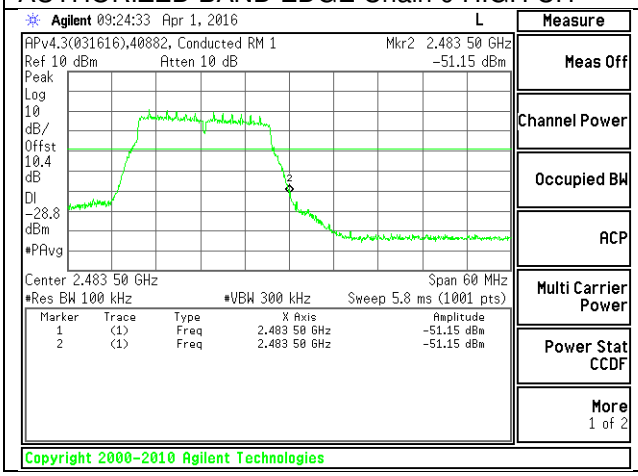
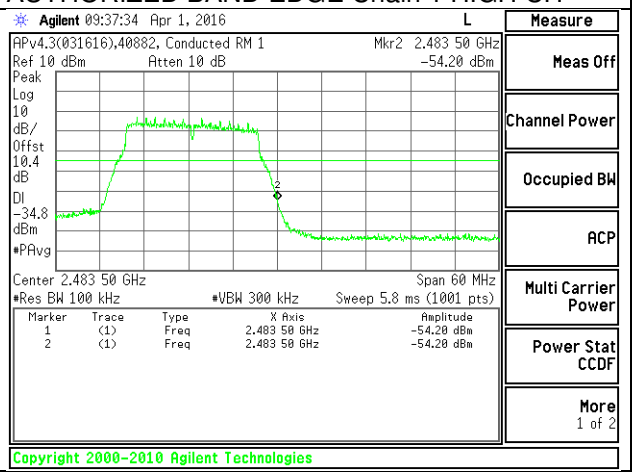
HIGH CHANNEL BAND EDGE

AUTHORIZED BAND EDGE Chain 0 HIGH CH

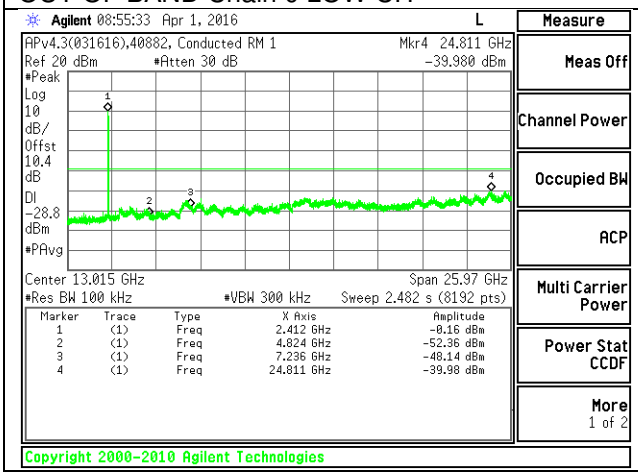


AUTHORIZED BAND EDGE Chain 1 HIGH CH

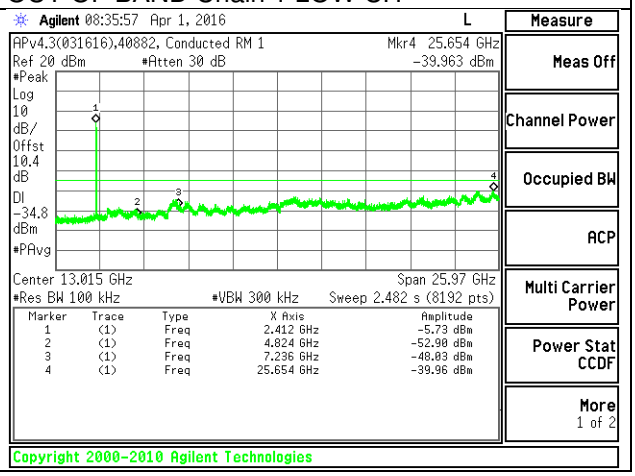


OUT-OF-BAND EMISSIONS

OUT OF BAND Chain 0 LOW CH



OUT OF BAND Chain 1 LOW CH



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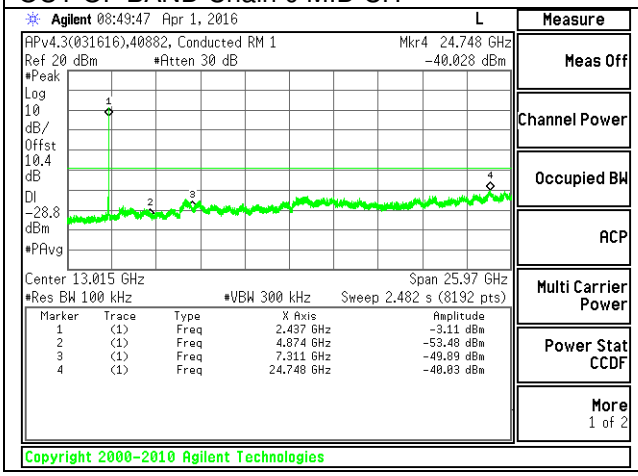
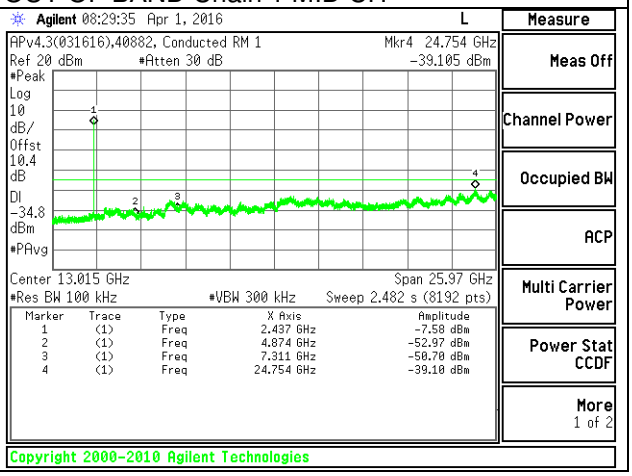
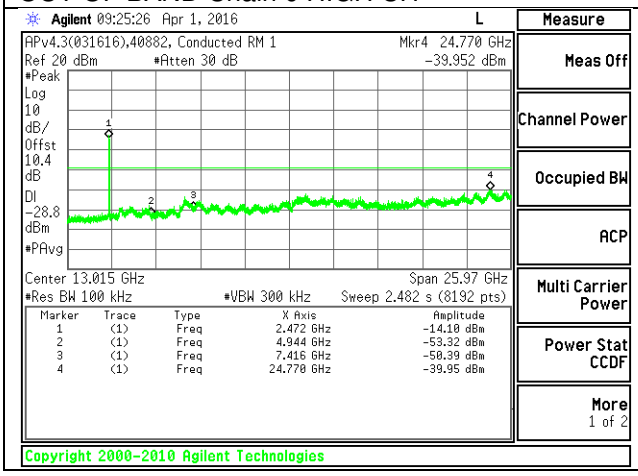
OUT OF BAND Chain 0 MID CH



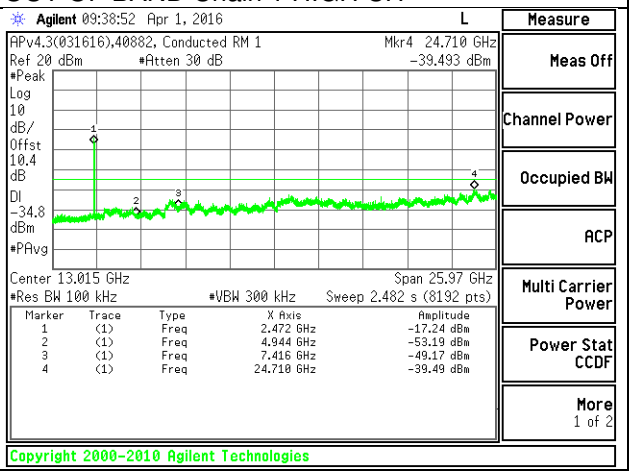
OUT OF BAND Chain 1 MID CH



OUT OF BAND Chain 0 HIGH CH



OUT OF BAND Chain 1 HIGH CH



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10. RADIATED TEST RESULTS

10.1. 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
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 and 150 cm for above 1GHz. The antenna to EUT distance is 3 meters.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor for average measurements. Please refer to test report section 9.1.1 for duty cycle factor information.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

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.

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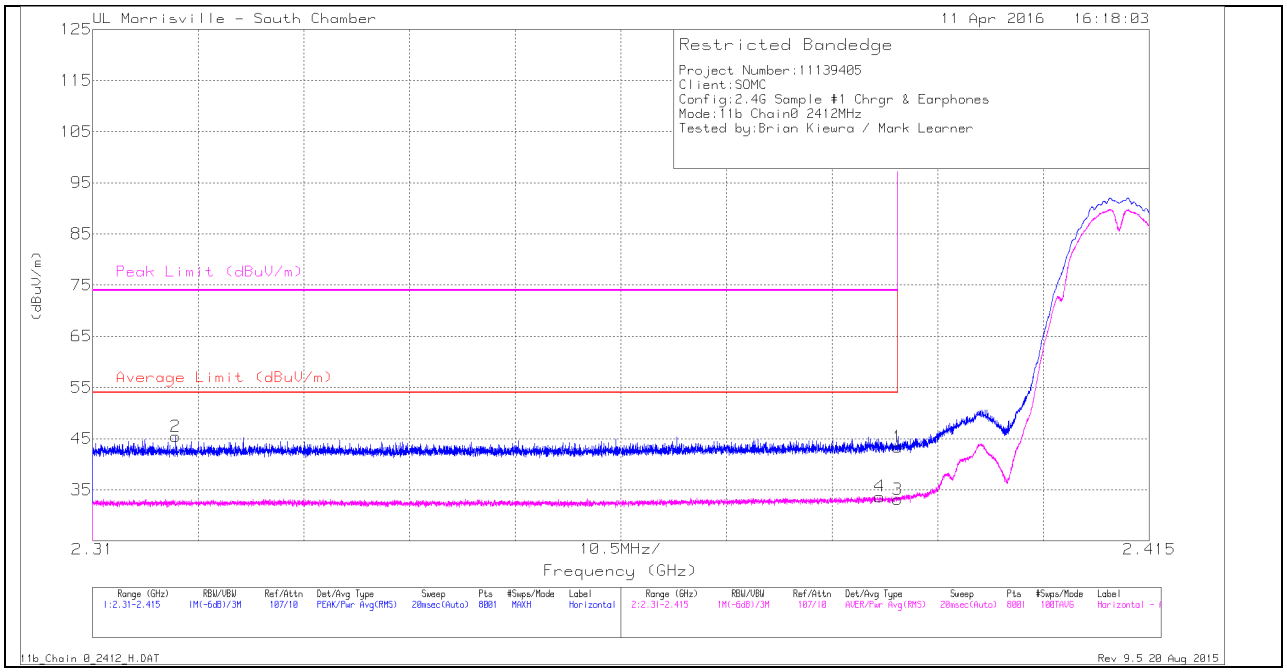
10.2. TRANSMITTER ABOVE 1 GHz

10.2.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	35.37	Pk	32.2	-24.2	0	43.37	-	-	74	-30.63	334	128	H
2	* 2.318	37.61	Pk	31.7	-23.9	0	45.41	-	-	74	-28.59	334	128	H
3	* 2.39	25.13	RMS	32.2	-24.2	0	33.13	54	-20.87	-	-	334	128	H
4	* 2.388	25.59	RMS	32.2	-24.1	0	33.69	54	-20.31	-	-	334	128	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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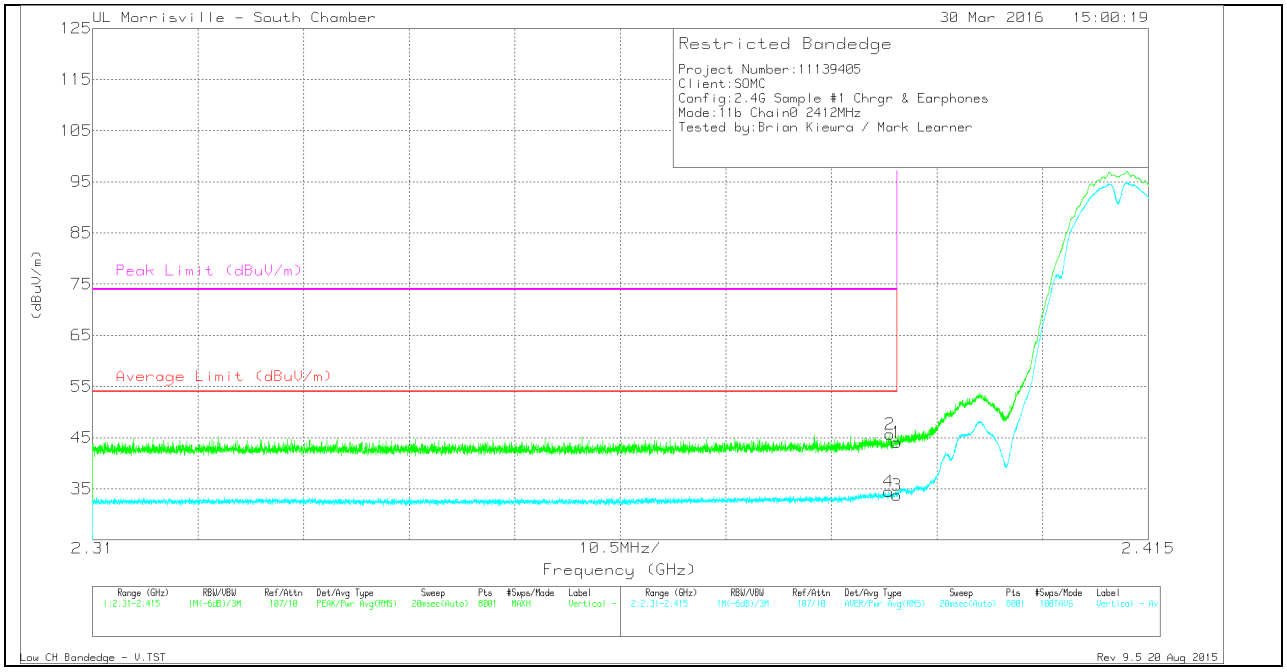
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	36.09	Pk	32.2	-24.2	0	44.09	-	-	74	-29.91	100	133	V
2	* 2.389	37.56	Pk	32.2	-24.1	0	45.66	-	-	74	-28.34	100	133	V
3	* 2.39	25.74	RMS	32.2	-24.2	0	33.74	54	-20.26	-	-	100	133	V
4	* 2.389	26.37	RMS	32.2	-24.1	0	34.47	54	-19.53	-	-	100	133	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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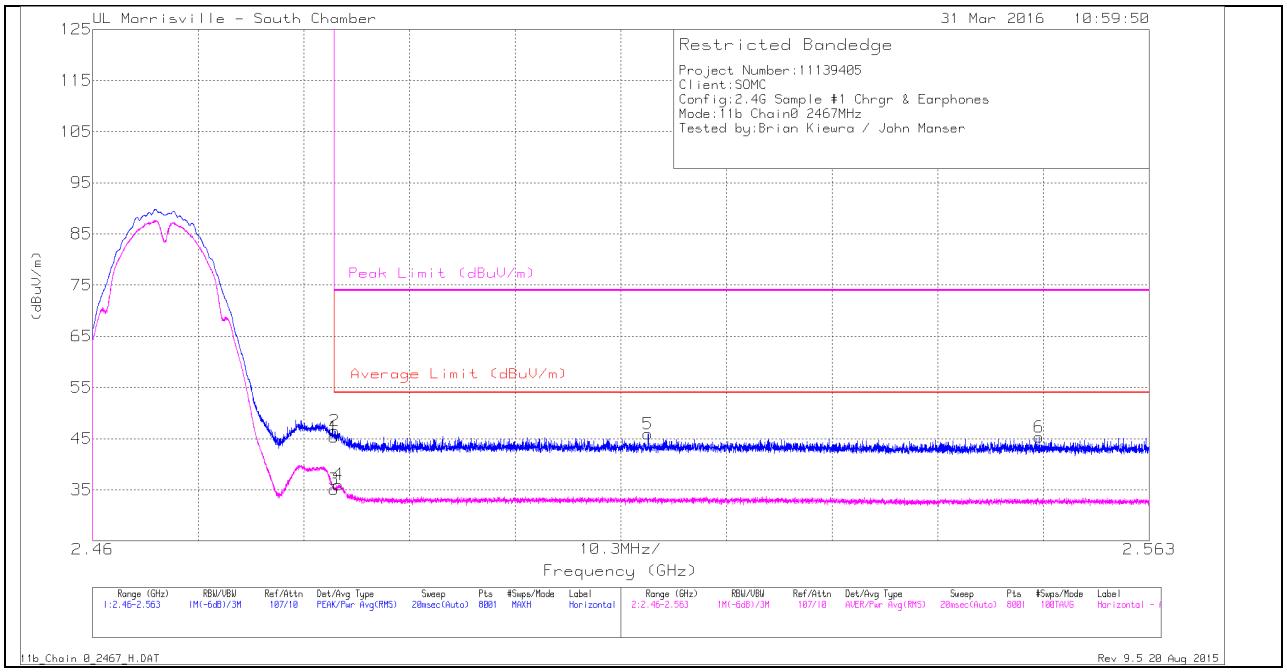
AUTHORIZED BANDEDGE (CHANNEL 12)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	37.57	Pk	32.4	-24.7	0	45.27	-	-	74	-28.73	47	111	H
2	* 2.484	38.83	Pk	32.4	-24.7	0	46.53	-	-	74	-27.47	47	111	H
3	* 2.484	27.41	RMS	32.4	-24.7	0	35.11	54	-18.89	-	-	47	111	H
4	* 2.484	28.32	RMS	32.4	-24.7	0	36.02	54	-17.98	-	-	47	111	H
5	2.514	38.31	Pk	32.5	-24.9	0	45.91	-	-	74	-28.09	47	111	H
6	2.552	38	Pk	32.4	-25.1	0	45.3	-	-	74	-28.7	47	111	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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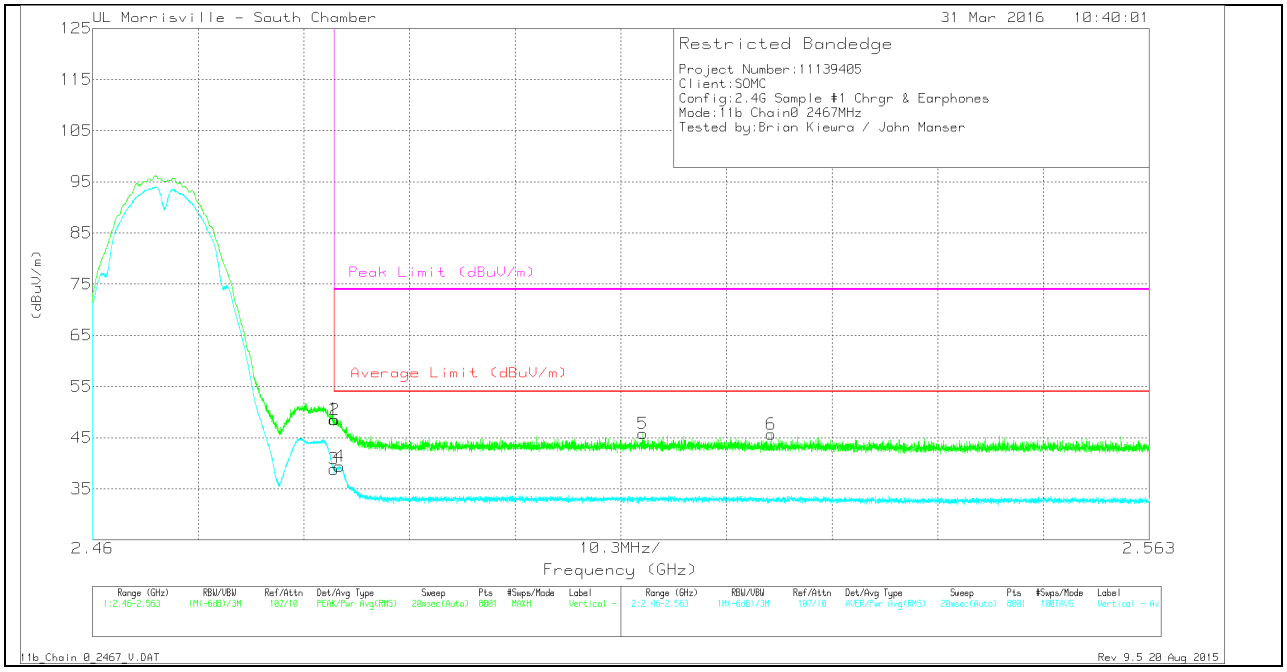
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	40.84	Pk	32.4	-24.7	0	48.54	-	-	74	-25.46	94	109	V
2	* 2.484	40.8	Pk	32.4	-24.7	0	48.5	-	-	74	-25.5	94	109	V
3	* 2.484	31.16	RMS	32.4	-24.7	0	38.86	54	-15.14	-	-	94	109	V
4	* 2.484	31.72	RMS	32.4	-24.7	0	39.42	54	-14.58	-	-	94	109	V
5	2.514	38.22	Pk	32.5	-24.9	0	45.82	-	-	74	-28.18	94	109	V
6	2.526	38.05	Pk	32.5	-24.9	0	45.65	-	-	74	-28.35	94	109	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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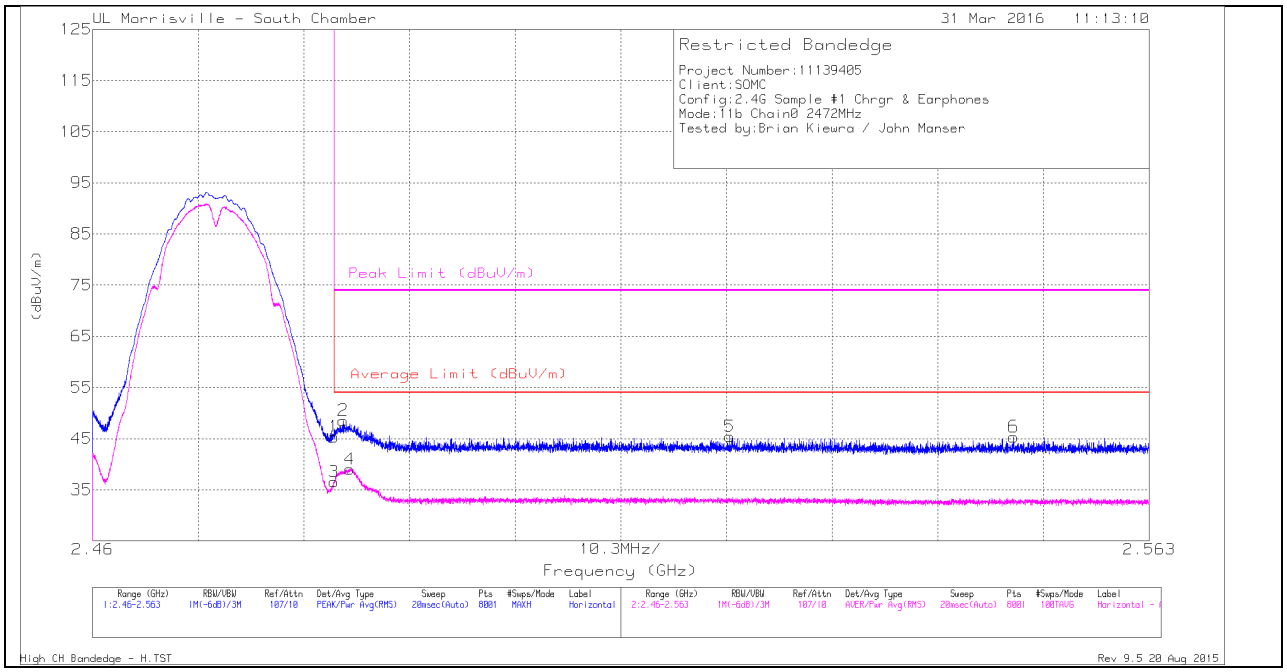
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	37.68	Pk	32.4	-24.7	0	45.38	-	-	74	-28.62	335	303	H
2	* 2.484	40.84	Pk	32.4	-24.7	0	48.54	-	-	74	-25.46	335	303	H
3	* 2.484	28.84	RMS	32.4	-24.7	0	36.54	54	-17.46	-	-	335	303	H
4	* 2.485	31.36	RMS	32.4	-24.7	0	39.06	54	-14.94	-	-	335	303	H
5	2.522	37.82	Pk	32.5	-24.9	0	45.42	-	-	74	-28.58	335	303	H
6	2.55	38.05	Pk	32.4	-25.1	0	45.35	-	-	74	-28.65	335	303	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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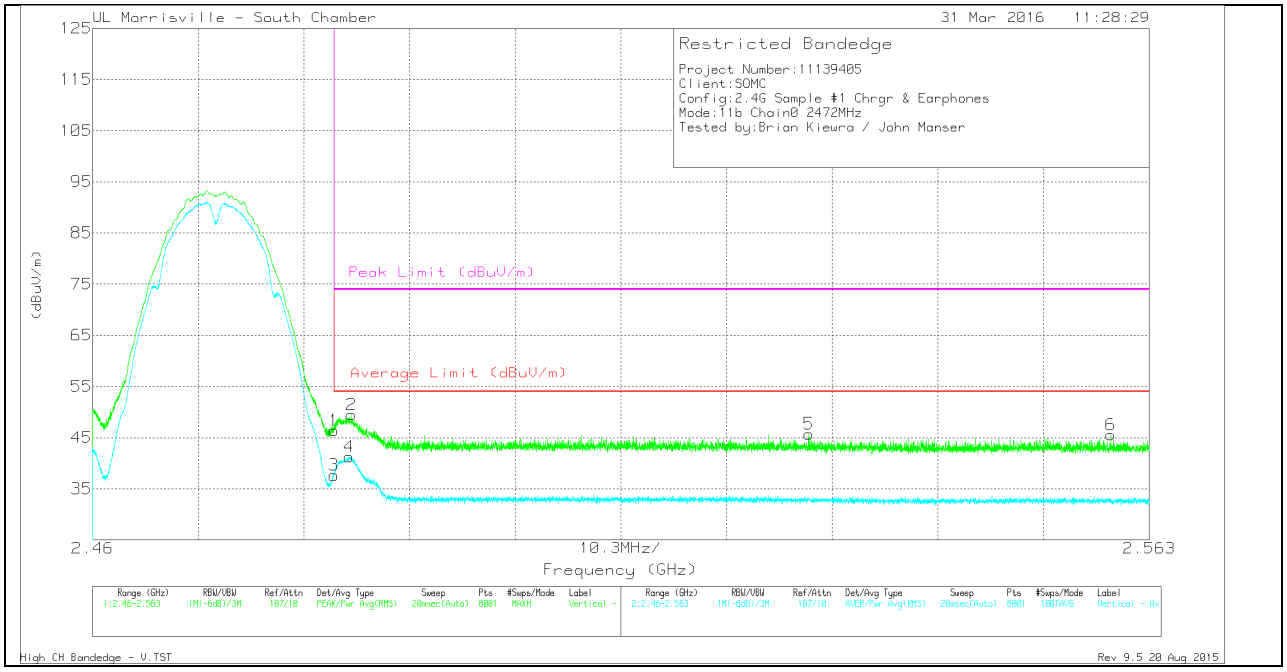
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	38.7	Pk	32.4	-24.7	0	46.4	-	-	74	-27.6	341	250	V
2	* 2.485	41.81	Pk	32.4	-24.7	0	49.51	-	-	74	-24.49	341	250	V
3	* 2.484	29.93	RMS	32.4	-24.7	0	37.63	54	-16.37	-	-	341	250	V
4	* 2.485	33.55	RMS	32.4	-24.7	0	41.25	54	-12.75	-	-	341	250	V
5	2.53	38.11	Pk	32.5	-24.9	0	45.71	-	-	74	-28.29	341	250	V
6	2.559	38.37	Pk	32.4	-25.2	0	45.57	-	-	74	-28.43	341	250	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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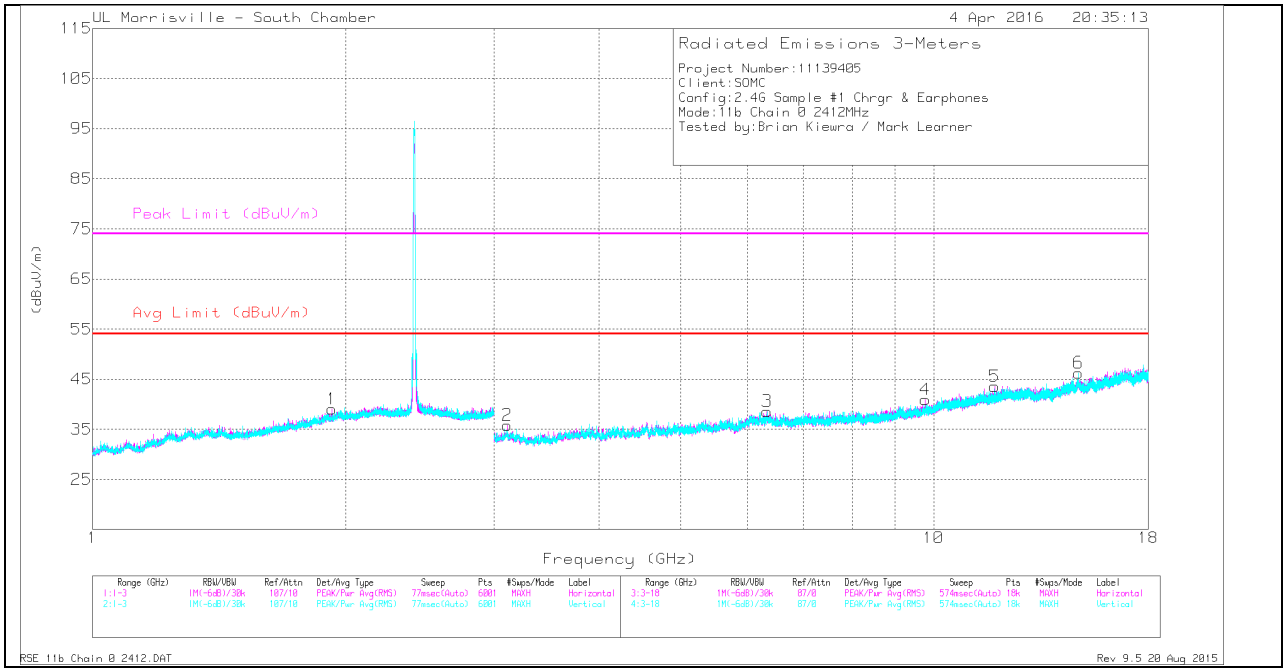
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL/ VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/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
5	* 11.819	34.97	PK2	38.7	-25.1	0	48.57	-	-	74	-25.43	357	264	H
	* 11.815	23.12	MAv1	38.7	-25.1	0	36.72	54	-17.28	-	-	357	264	H
1	1.926	30.65	Pk	31	-22.6	0	39.05	-	-	-	-	0-360	102	H
2	3.112	35.32	Pk	33.9	-33.4	0	35.82	-	-	-	-	0-360	199	H
3	6.339	31.7	Pk	35.5	-28.6	0	38.6	-	-	-	-	0-360	102	V
4	9.778	30.55	Pk	36.8	-26.4	0	40.95	-	-	-	-	0-360	199	H
6	14.874	30.06	Pk	39.9	-23.7	0	46.26	-	-	-	-	0-360	199	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

PK - Peak detector

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

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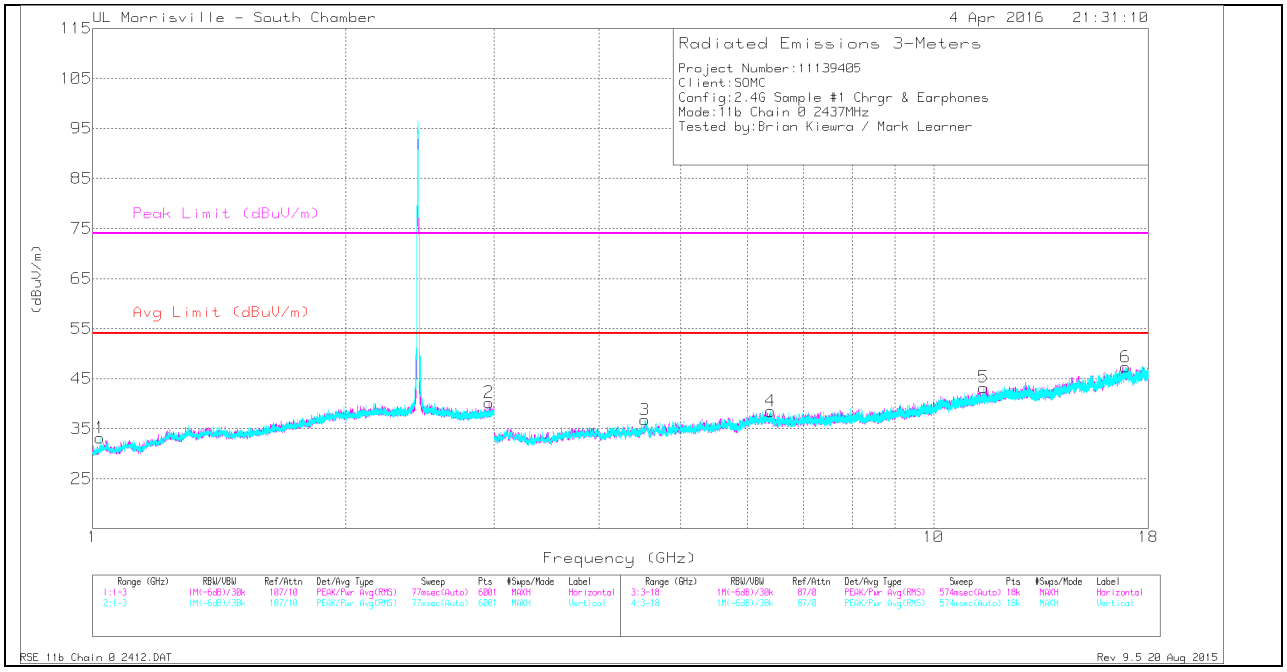
MID CHANNEL HORIZONTAL/ VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

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MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/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	* 1.019	36.1	PK2	27.4	-25	0	38.5	-	-	74	-35.5	317	167	V
	* 1.022	23.76	MAv1	27.4	-24.9	0	26.26	54	-27.74	-	-	317	167	V
3	* 4.541	40.47	PK2	33.9	-32	0	42.37	-	-	74	-31.63	38	250	V
	* 4.54	28.32	MAv1	33.9	-32	0	30.22	54	-23.78	-	-	38	250	V
5	* 11.459	34.98	PK2	38.3	-25	0	48.28	-	-	74	-25.72	146	271	V
	* 11.46	23.31	MAv1	38.3	-25	0	36.61	54	-17.39	-	-	146	271	V
2	2.962	33.73	Pk	32.7	-26.2	0	40.23	-	-	-	-	0-360	102	H
4	6.398	32.4	Pk	35.4	-29.3	0	38.5	-	-	-	-	0-360	101	V
6	16.908	29.74	Pk	41.6	-24	0	47.34	-	-	-	-	0-360	199	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

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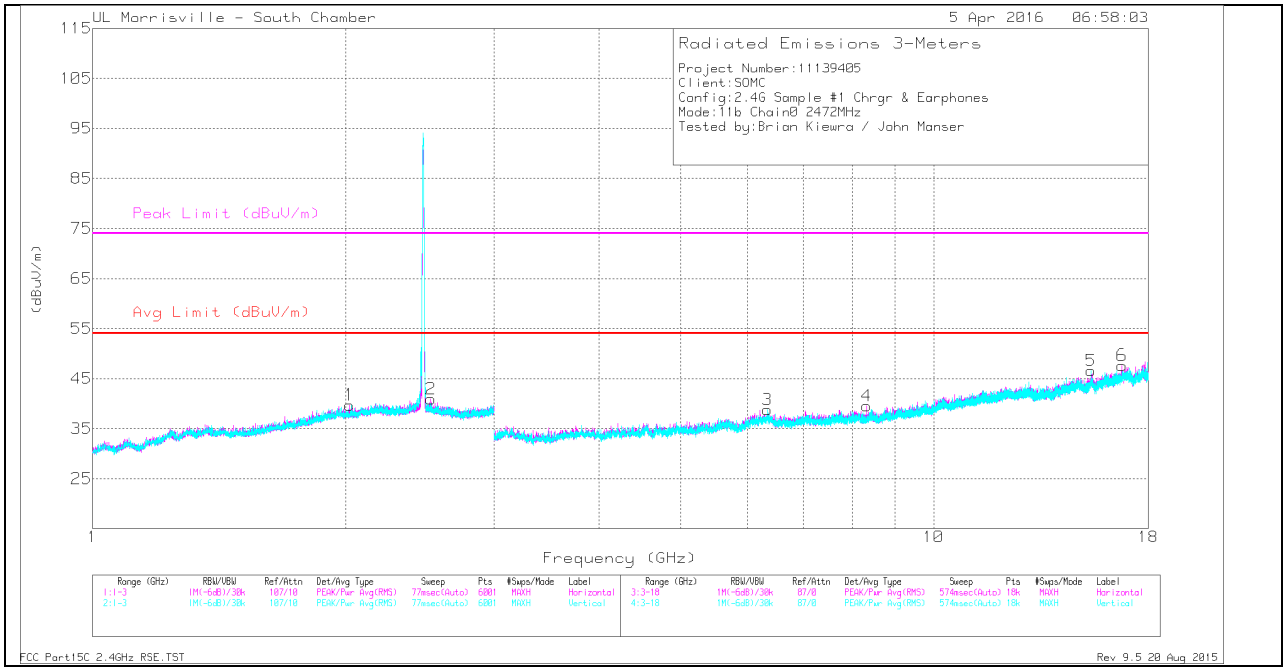
HIGH CHANNEL HORIZONTAL/ VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

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HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/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
4	* 8.33	36.26	PK2	35.7	-28.1	0	43.86	-	-	74	-30.14	64	325	H
	* 8.331	24.96	MAv1	35.7	-28	0	32.66	54	-21.34	-	-	64	325	H
5	* 15.384	34.48	PK2	40	-23.2	0	51.28	-	-	74	-22.72	10	315	V
	* 15.384	23.11	MAv1	40	-23.2	0	39.91	54	-14.09	-	-	10	315	V
1	2.02	31.52	Pk	31.2	-23	0	39.72	-	-	-	-	0-360	200	H
2	2.525	33.36	Pk	32.5	-24.9	0	40.96	-	-	-	-	0-360	200	H
3	6.341	31.83	Pk	35.5	-28.5	0	38.83	-	-	-	-	0-360	199	V
6	16.754	31.03	Pk	41.6	-25	0	47.63	-	-	-	-	0-360	102	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

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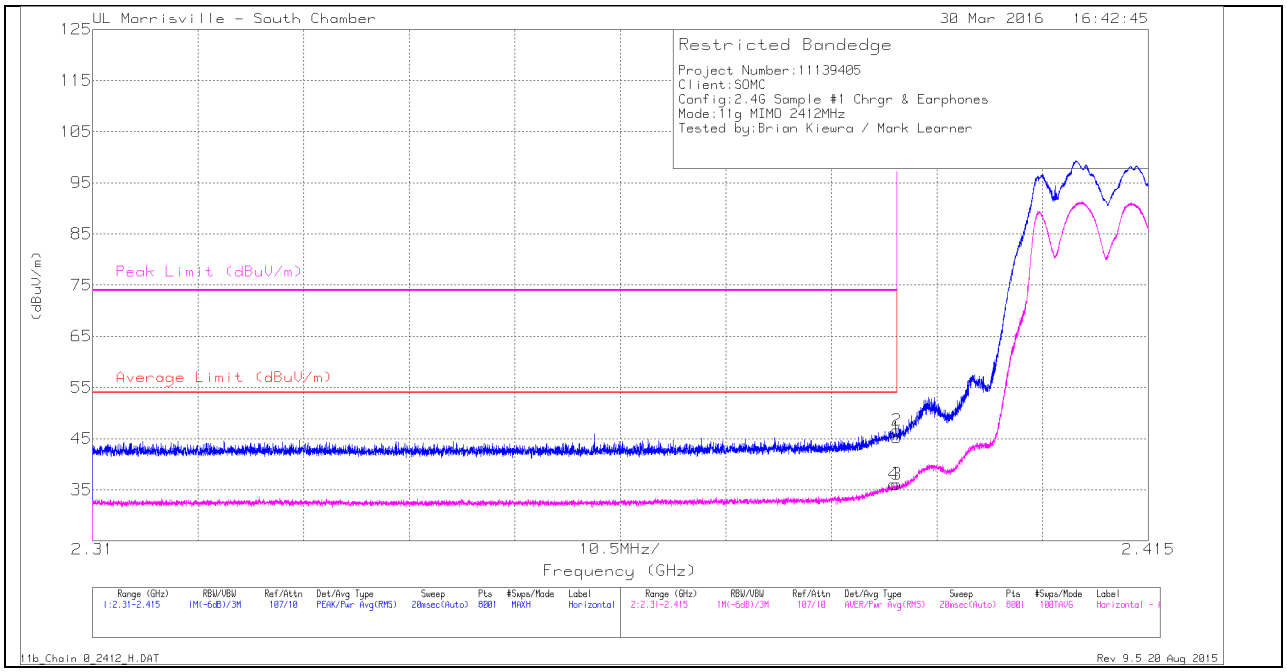
10.2.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	37.21	Pk	32.2	-24.2	0	45.21	-	-	74	-28.79	29	256	H
2	* 2.39	38.66	Pk	32.2	-24.2	0	46.66	-	-	74	-27.34	29	256	H
3	* 2.39	28.12	RMS	32.2	-24.2	0	36.12	54	-17.88	-	-	29	256	H
4	* 2.39	28.02	RMS	32.2	-24.1	0	36.12	54	-17.88	-	-	29	256	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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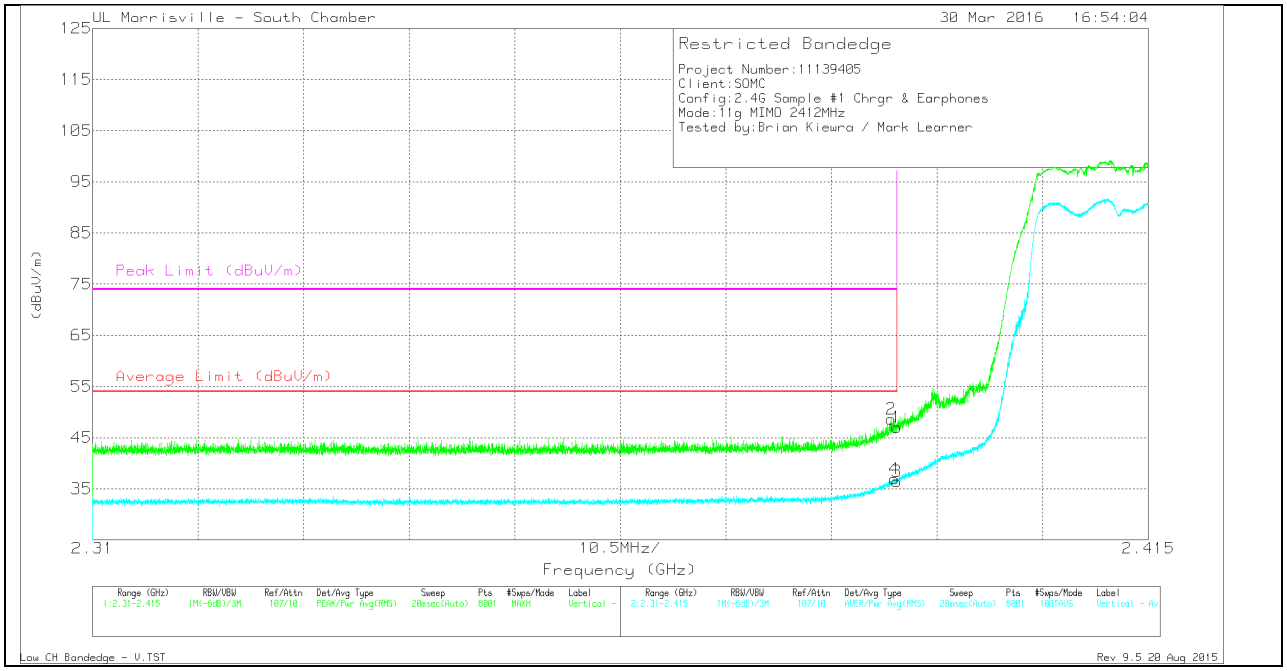
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	39.02	Pk	32.2	-24.2	0	47.02	-	-	74	-26.98	105	237	V
2	* 2.389	40.52	Pk	32.2	-24.1	0	48.62	-	-	74	-25.38	105	237	V
3	* 2.39	28.46	RMS	32.2	-24.2	0	36.46	54	-17.54	-	-	105	237	V
4	* 2.39	28.95	RMS	32.2	-24.2	0	36.95	54	-17.05	-	-	105	237	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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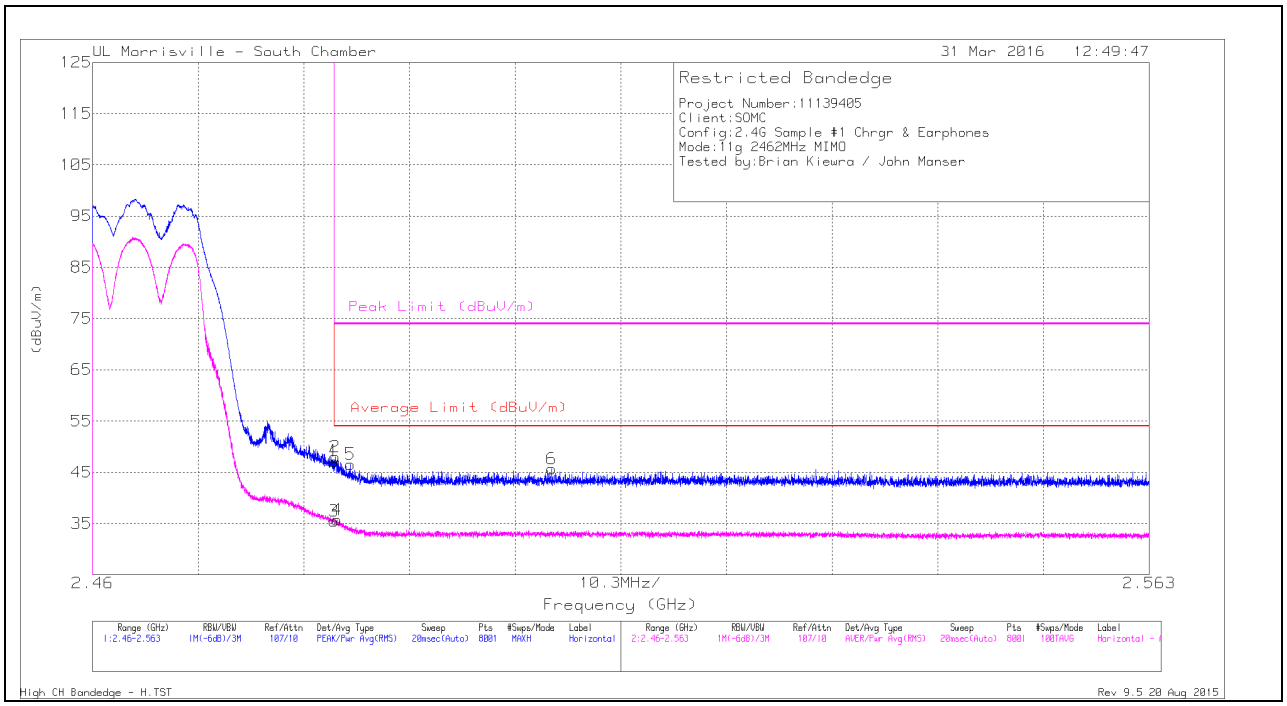
AUTHORIZED BANDEDGE (CHANNEL 11)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	39.49	Pk	32.4	-24.7	0	47.19	-	-	74	-26.81	234	177	H
2	* 2.484	40.26	Pk	32.4	-24.7	0	47.96	-	-	74	-26.04	234	177	H
5	* 2.485	38.87	Pk	32.4	-24.7	0	46.57	-	-	74	-27.43	234	177	H
3	* 2.484	27.75	RMS	32.4	-24.7	0	35.45	54	-18.55	-	-	234	177	H
4	* 2.484	28	RMS	32.4	-24.7	0	35.7	54	-18.3	-	-	234	177	H
6	2.505	37.99	Pk	32.5	-24.8	0	45.69	-	-	74	-28.31	234	177	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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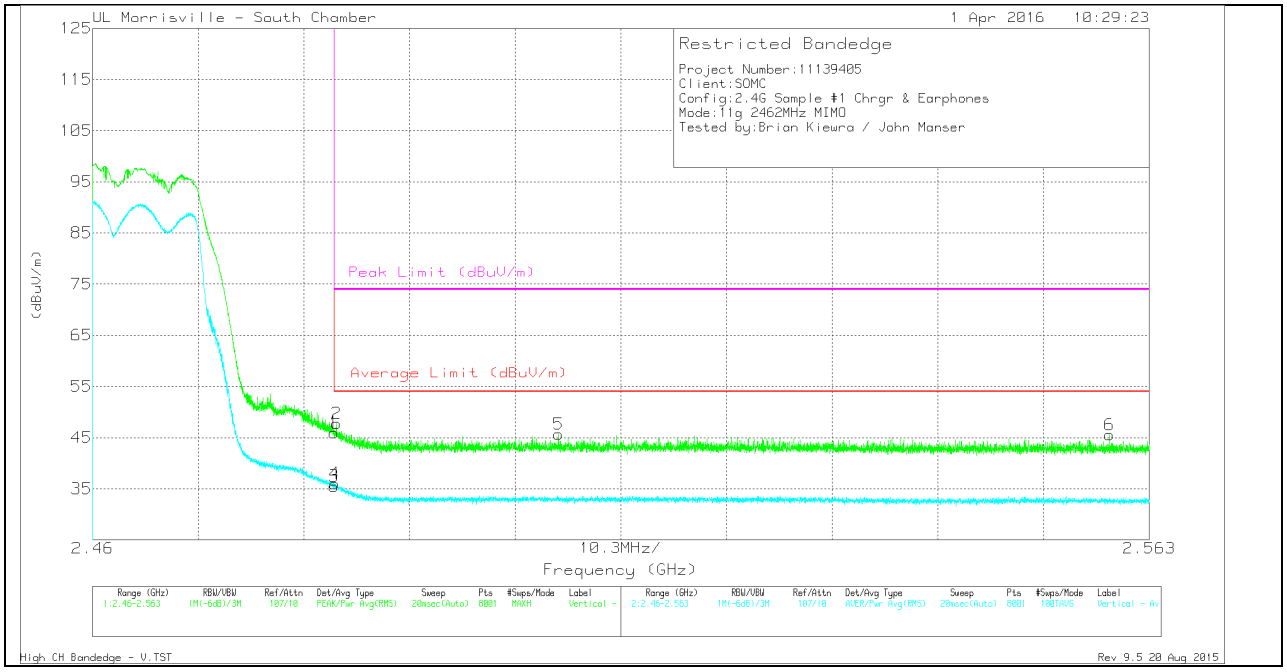
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	38.25	Pk	32.4	-24.7	0	45.95	-	-	74	-28.05	179	166	V
2	* 2.484	40.05	Pk	32.4	-24.7	0	47.75	-	-	74	-26.25	179	166	V
3	* 2.484	27.82	RMS	32.4	-24.7	0	35.52	54	-18.48	-	-	179	166	V
4	* 2.484	28.3	RMS	32.4	-24.7	0	36	54	-18	-	-	179	166	V
5	2.505	37.99	Pk	32.5	-24.8	0	45.69	-	-	74	-28.31	179	166	V
6	2.559	38.25	Pk	32.4	-25.1	0	45.55	-	-	74	-28.45	179	166	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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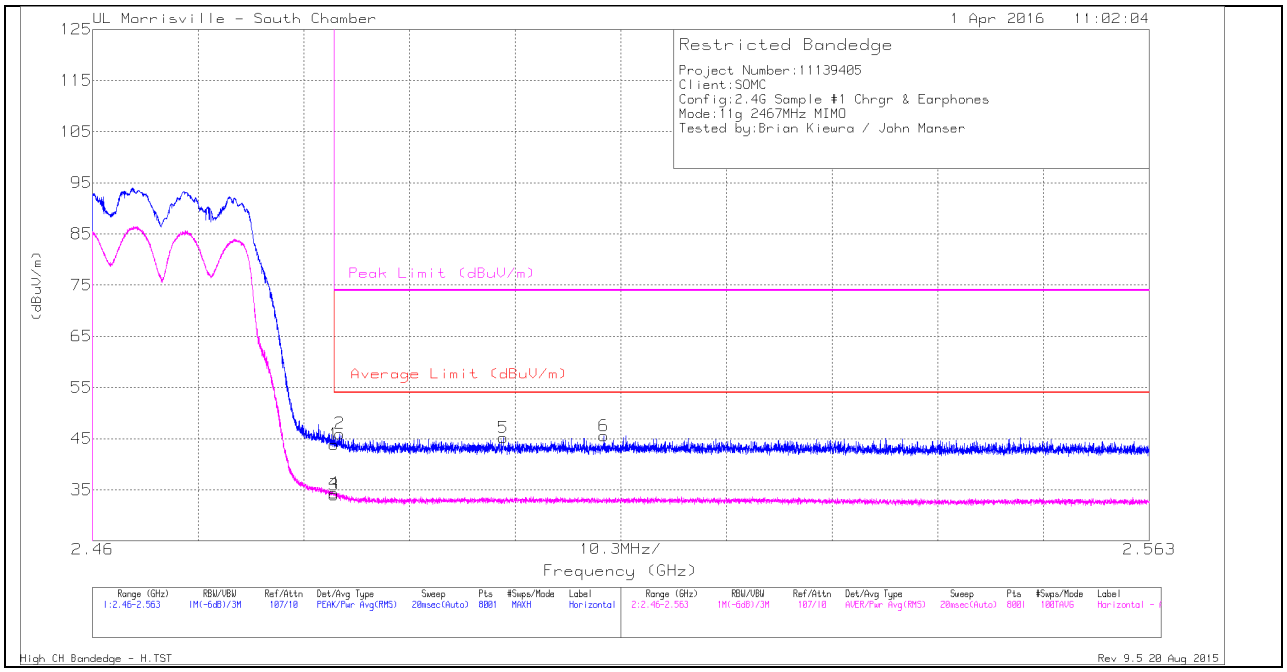
AUTHORIZED BANDEDGE (CHANNEL 12)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	36.18	Pk	32.4	-24.7	0	43.88	-	-	74	-30.12	50	194	H
2	* 2.484	38.28	Pk	32.4	-24.7	0	45.98	-	-	74	-28.02	50	194	H
3	* 2.484	26.3	RMS	32.4	-24.7	0	34	54	-20	-	-	50	194	H
4	* 2.484	26.66	RMS	32.4	-24.7	0	34.36	54	-19.64	-	-	50	194	H
5	2.5	37.5	Pk	32.5	-24.8	0	45.2	-	-	74	-28.8	50	194	H
6	2.51	37.94	Pk	32.5	-24.9	0	45.54	-	-	74	-28.46	50	194	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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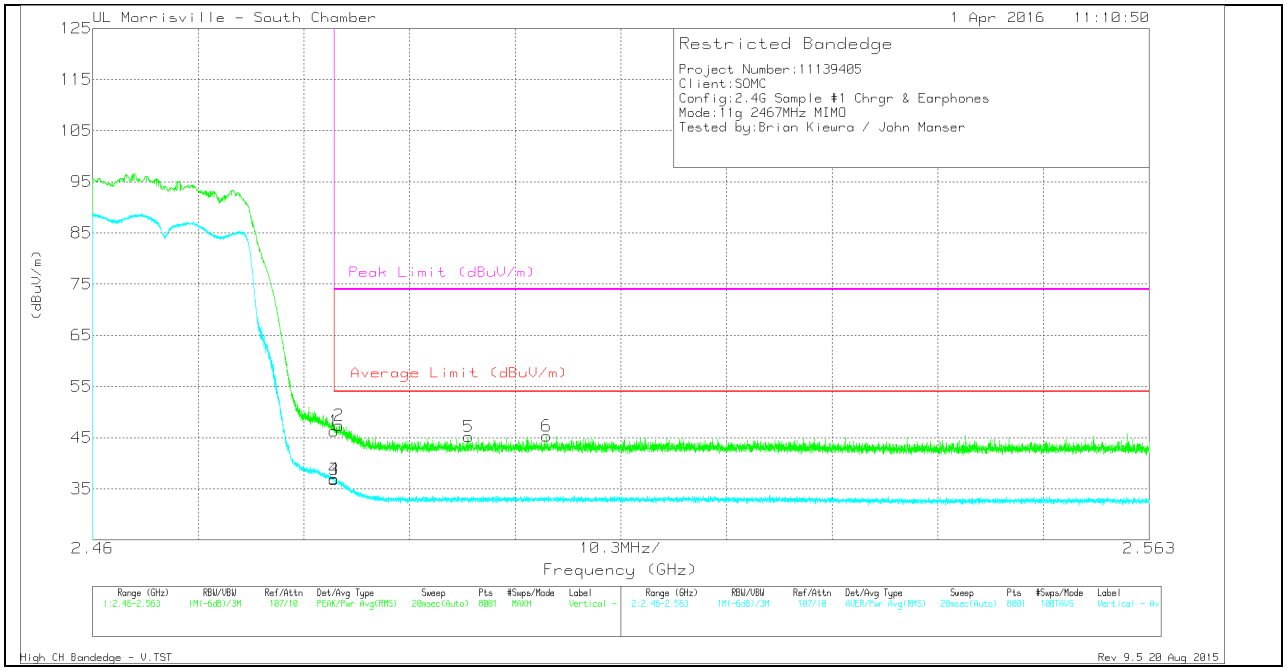
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	38.55	Pk	32.4	-24.7	0	46.25	-	-	74	-27.75	81	190	V
2	* 2.484	39.7	Pk	32.4	-24.7	0	47.4	-	-	74	-26.6	81	190	V
5	* 2.497	37.48	Pk	32.5	-24.8	0	45.18	-	-	74	-28.82	81	190	V
3	* 2.484	29.11	RMS	32.4	-24.7	0	36.81	54	-17.19	-	-	81	190	V
4	* 2.484	29.24	RMS	32.4	-24.7	0	36.94	54	-17.06	-	-	81	190	V
6	2.504	37.63	Pk	32.5	-24.8	0	45.33	-	-	74	-28.67	81	190	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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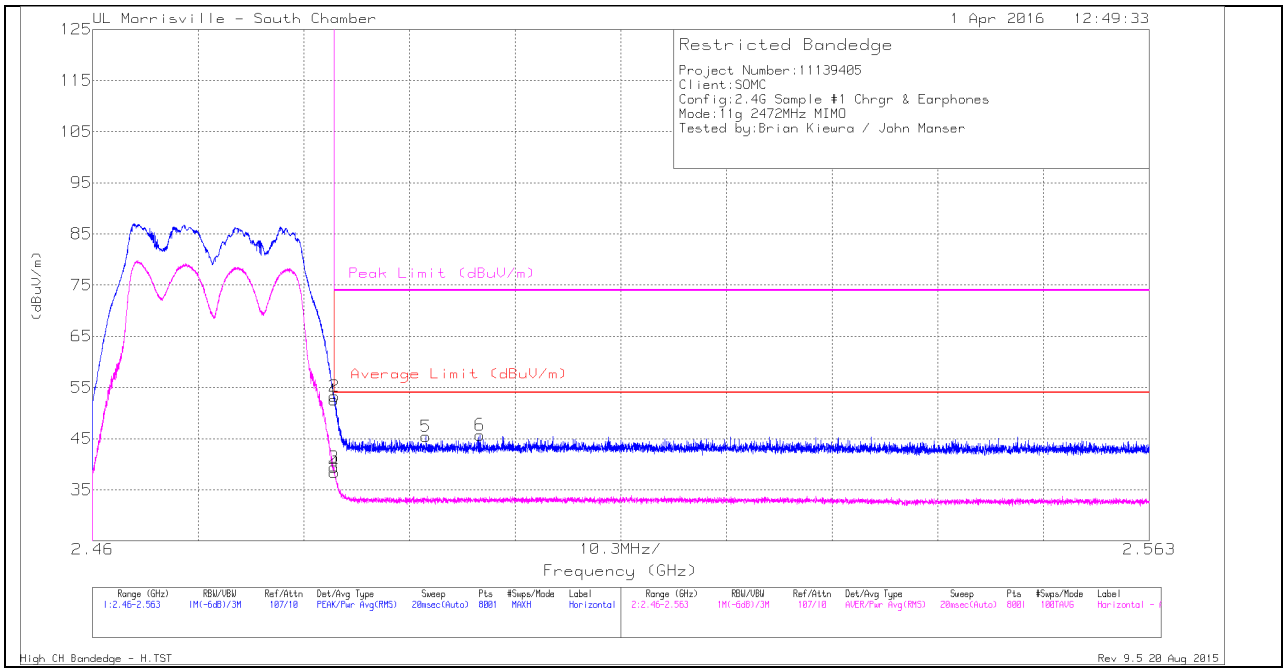
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	44.84	Pk	32.4	-24.7	0	52.54	-	-	74	-21.46	55	143	H
2	* 2.484	45.58	Pk	32.4	-24.7	0	53.28	-	-	74	-20.72	55	143	H
5	* 2.492	37.81	Pk	32.4	-24.8	0	45.41	-	-	74	-28.59	55	143	H
6	* 2.498	38.01	Pk	32.5	-24.8	0	45.71	-	-	74	-28.29	55	143	H
3	* 2.484	31.71	RMS	32.4	-24.7	0	39.41	54	-14.59	-	-	55	143	H
4	* 2.484	30.72	RMS	32.4	-24.7	0	38.42	54	-15.58	-	-	55	143	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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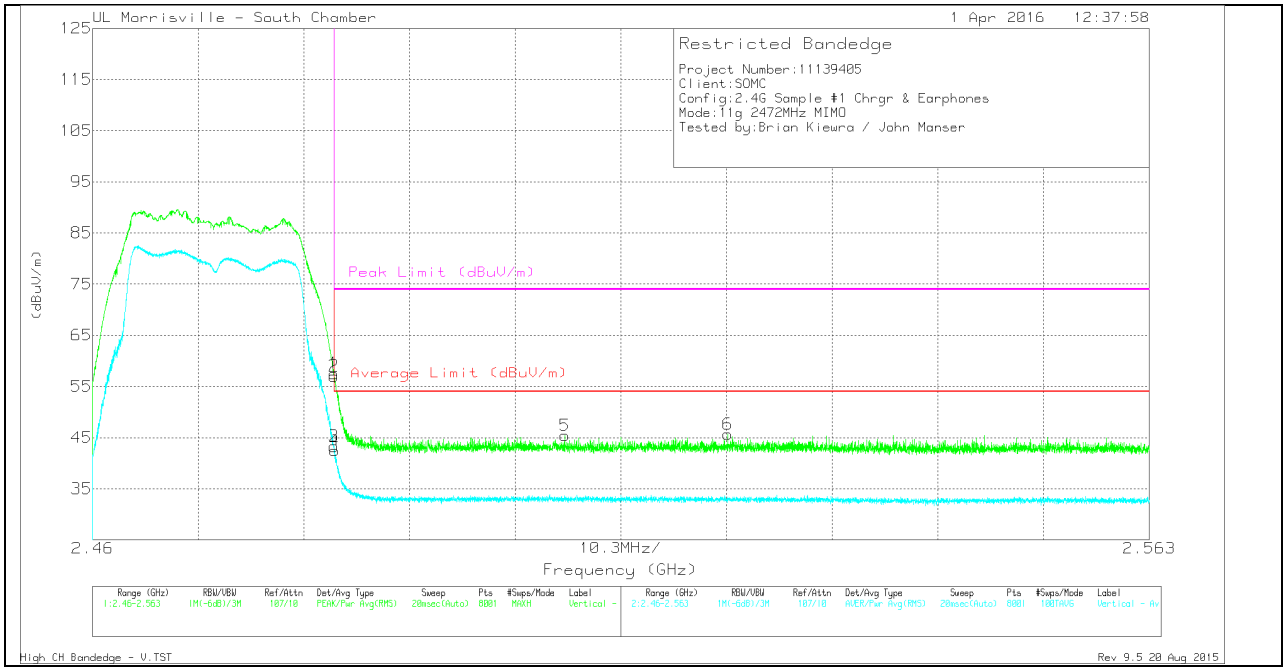
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	49.83	Pk	32.4	-24.7	0	57.53	-	-	74	-16.47	74	102	V
2	* 2.484	49.32	Pk	32.4	-24.7	0	57.02	-	-	74	-16.98	74	102	V
3	* 2.484	35.59	RMS	32.4	-24.7	0	43.29	54	-10.71	-	-	74	102	V
4	* 2.484	34.75	RMS	32.4	-24.7	0	42.45	54	-11.55	-	-	74	102	V
5	2.506	37.72	Pk	32.5	-24.8	0	45.42	-	-	74	-28.58	74	102	V
6	2.522	38.1	Pk	32.5	-24.9	0	45.7	-	-	74	-28.3	74	102	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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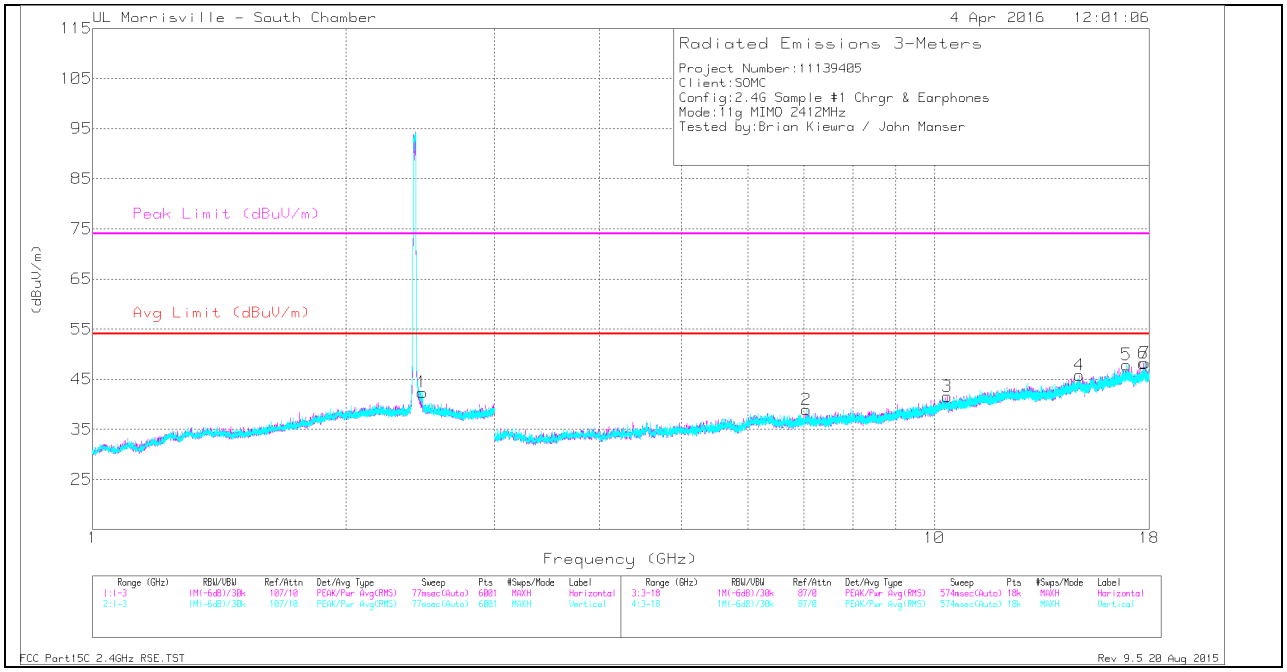
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL/ VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/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
6	* 17.731	34.81	PK2	41.2	-22.6	0	53.41	-	-	74	-20.59	213	329	H
	* 17.734	23.79	MAv1	41.2	-22.5	0	42.49	54	-11.51	-	-	213	329	H
7	* 17.793	34.9	PK2	41.2	-22.7	0	53.4	-	-	74	-20.6	179	363	V
	* 17.794	23.32	MAv1	41.2	-22.7	0	41.82	54	-12.18	-	-	179	363	V
1	2.465	34.58	Pk	32.4	-24.6	0	42.38	-	-	-	-	0-360	102	V
2	7.042	31.9	Pk	35.6	-28.6	0	38.9	-	-	-	-	0-360	199	V
3	10.362	29.26	Pk	37.5	-25.2	0	41.56	-	-	-	-	0-360	199	H
4	14.861	29.88	Pk	39.8	-23.9	0	45.78	-	-	-	-	0-360	102	H
5	16.909	30.29	Pk	41.6	-24	0	47.89	-	-	-	-	0-360	199	V

PK - Peak detector

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

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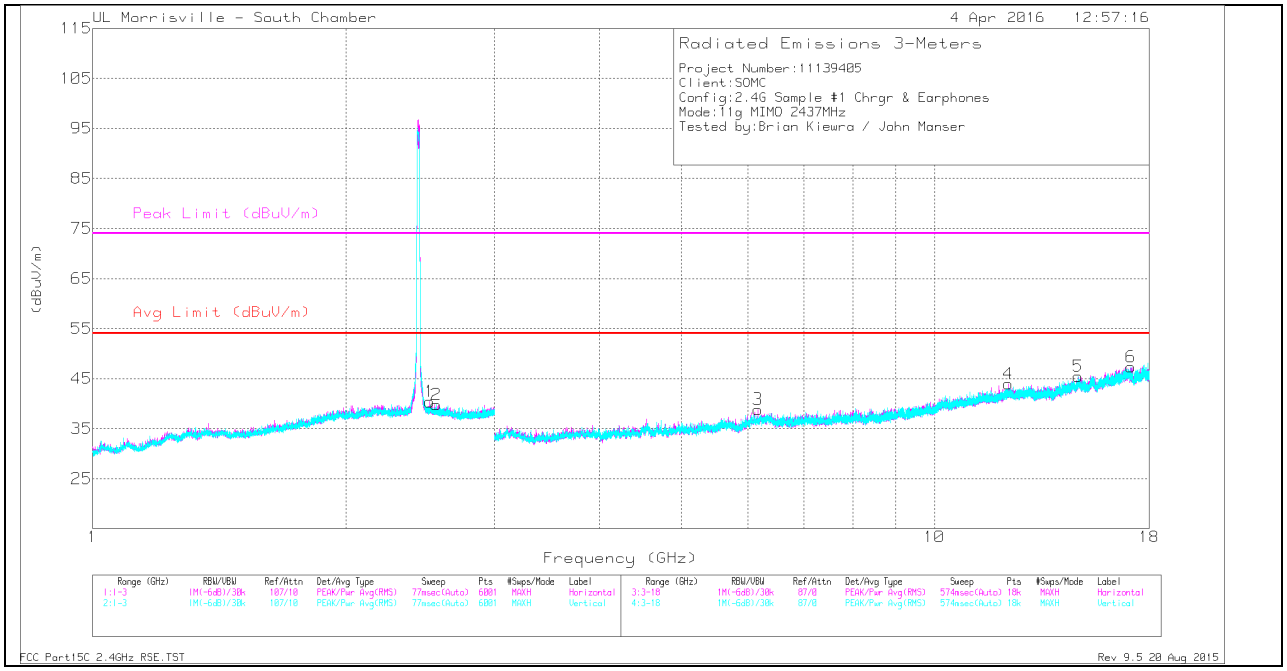
MID CHANNEL HORIZONTAL/ VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

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MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/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
4	* 12.237	34.83	PK2	39	-24.9	0	48.93	-	-	74	-25.07	49	205	H
	* 12.238	23.59	MAv1	39	-24.9	0	37.69	54	-16.31	-	-	49	205	H
1	2.516	32.78	Pk	32.5	-24.9	0	40.38	-	-	-	-	0-360	199	H
2	2.56	32.62	Pk	32.4	-25.2	0	39.82	-	-	-	-	0-360	102	V
3	6.172	33.74	Pk	35.4	-30.3	0	38.84	-	-	-	-	0-360	199	H
5	14.81	30.22	Pk	39.9	-24.7	0	45.42	-	-	-	-	0-360	101	V
6	17.116	29.75	Pk	41.3	-23.7	0	47.35	-	-	-	-	0-360	199	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK - Peak detector

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

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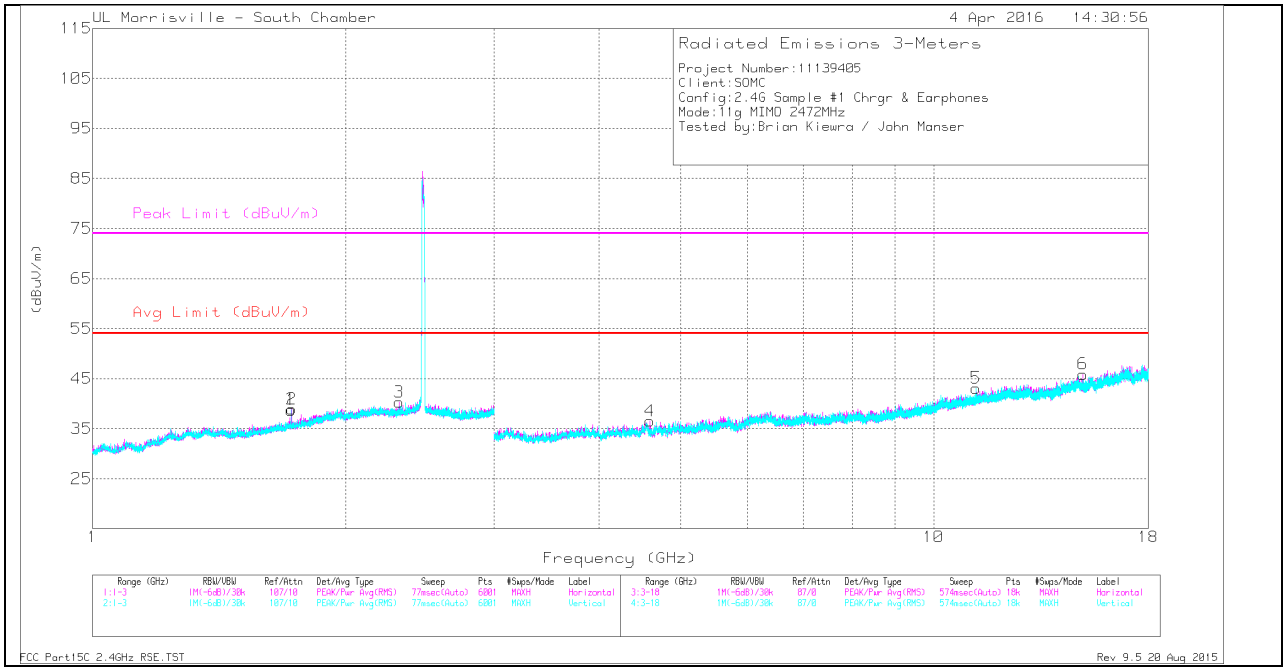
HIGH CHANNEL HORIZONTAL/ VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

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HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/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	* 1.72	36.7	PK2	29.2	-22.4	0	43.5	-	-	74	-30.5	13	154	V
	* 1.719	23.71	MAv1	29.2	-22.4	0	30.51	54	-23.49	-	-	13	154	V
3	* 2.312	37.14	PK2	31.7	-23.8	0	45.04	-	-	74	-28.96	352	304	H
	* 2.315	24.76	MAv1	31.7	-23.9	0	32.56	54	-21.44	-	-	352	304	H
4	* 4.597	39.92	PK2	34.1	-32.4	0	41.62	-	-	74	-32.38	331	254	H
	* 4.594	28.21	MAv1	34.1	-32.4	0	29.91	54	-24.09	-	-	331	254	H
5	* 11.232	34.13	PK2	38.1	-24.7	0	47.53	-	-	74	-26.47	290	103	V
	* 11.234	22.77	MAv1	38.1	-24.7	0	36.17	54	-17.83	-	-	290	103	V
2	1.726	32.02	Pk	29.3	-22.4	0	38.92	-	-	-	-	0-360	102	H
6	15.037	30.9	Pk	39.9	-24.9	0	45.9	-	-	-	-	0-360	102	H

;

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK - Peak detector

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

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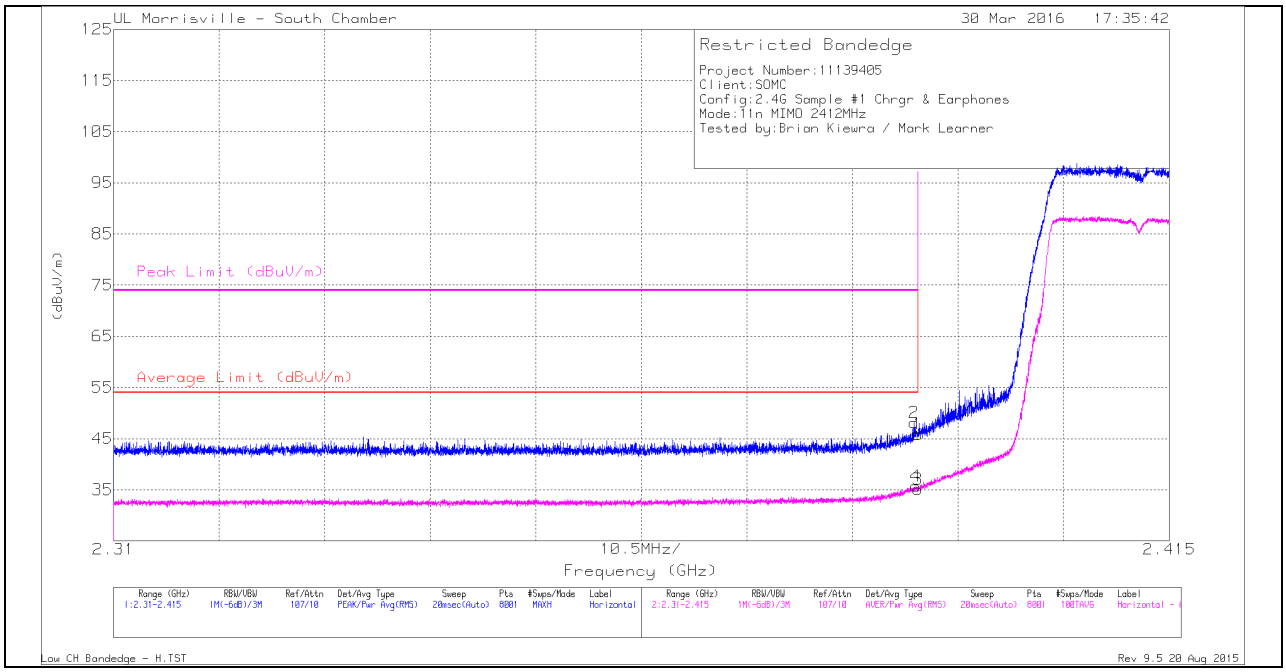
10.2.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	37.87	Pk	32.2	-24.2	0	45.87	-	-	74	-28.13	16	259	H
2	* 2.39	39.99	Pk	32.2	-24.1	0	48.09	-	-	74	-25.91	16	259	H
3	* 2.39	27.1	RMS	32.2	-24.2	0	35.1	54	-18.9	-	-	16	259	H
4	* 2.39	27.7	RMS	32.2	-24.2	0	35.7	54	-18.3	-	-	16	259	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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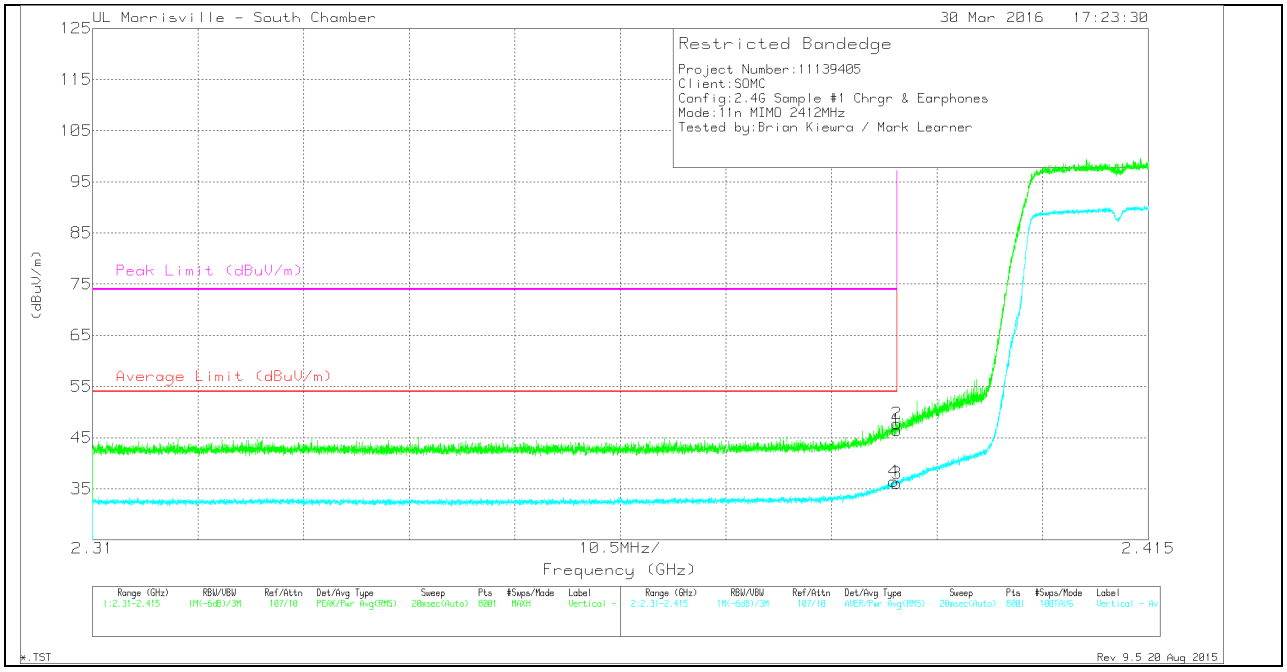
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	38.43	Pk	32.2	-24.2	0	46.43	-	-	74	-27.57	162	196	V
2	* 2.39	39.74	Pk	32.2	-24.2	0	47.74	-	-	74	-26.26	162	196	V
3	* 2.39	28.05	RMS	32.2	-24.2	0	36.05	54	-17.95	-	-	162	196	V
4	* 2.39	28.34	RMS	32.2	-24.1	0	36.44	54	-17.56	-	-	162	196	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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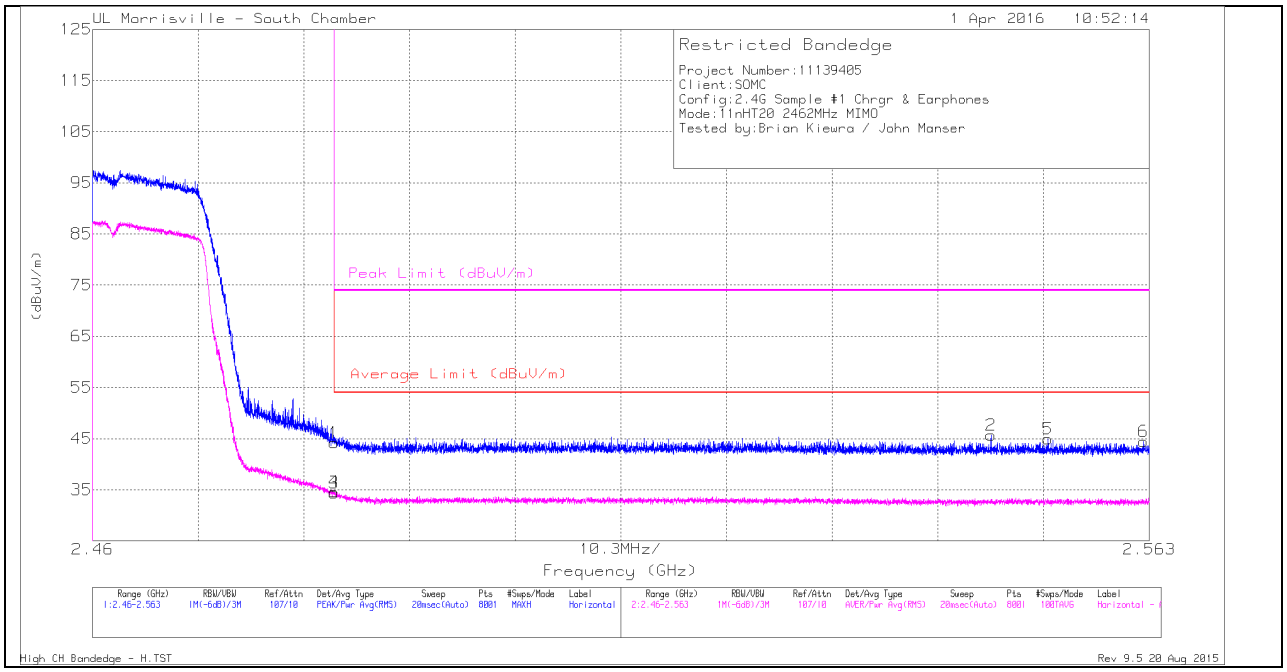
AUTHORIZED BANDEDGE (CHANNEL 11)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	36.48	Pk	32.4	-24.7	0	44.18	-	-	74	-29.82	34	135	H
3	* 2.484	26.7	RMS	32.4	-24.7	0	34.4	54	-19.6	-	-	34	135	H
4	* 2.484	26.88	RMS	32.4	-24.7	0	34.58	54	-19.42	-	-	34	135	H
2	2.548	38.38	Pk	32.4	-25.1	0	45.68	-	-	74	-28.32	34	135	H
5	2.553	37.61	Pk	32.4	-25.1	0	44.91	-	-	74	-29.09	34	135	H
6	2.562	37.26	Pk	32.4	-25.2	0	44.46	-	-	74	-29.54	34	135	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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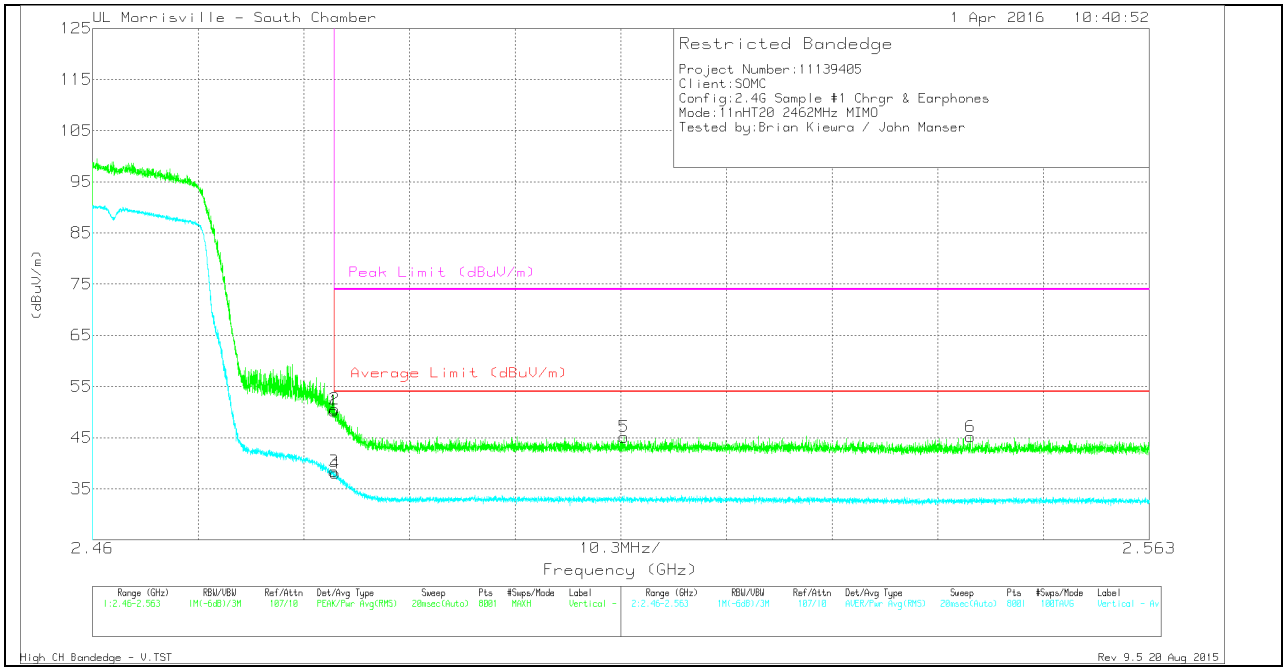
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	42.49	Pk	32.4	-24.7	0	50.19	-	-	74	-23.81	77	113	V
2	* 2.484	42.9	Pk	32.4	-24.7	0	50.6	-	-	74	-23.4	77	113	V
3	* 2.484	30.69	RMS	32.4	-24.7	0	38.39	54	-15.61	-	-	77	113	V
4	* 2.484	30.37	RMS	32.4	-24.7	0	38.07	54	-15.93	-	-	77	113	V
5	2.512	37.53	Pk	32.5	-24.9	0	45.13	-	-	74	-28.87	77	113	V
6	2.546	37.84	Pk	32.4	-25.1	0	45.14	-	-	74	-28.86	77	113	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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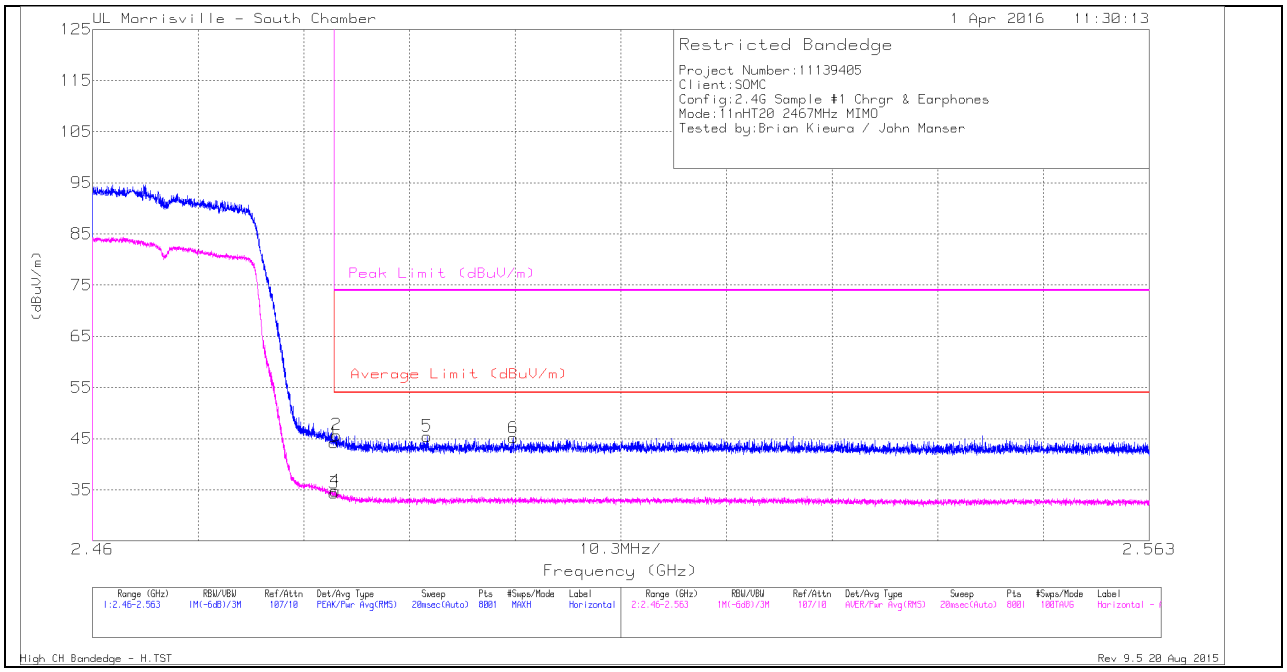
AUTHORIZED BANDEDGE (CHANNEL 12)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	36.51	Pk	32.4	-24.7	0	44.21	-	-	74	-29.79	53	269	H
2	* 2.484	38.03	Pk	32.4	-24.7	0	45.73	-	-	74	-28.27	53	269	H
5	* 2.493	37.88	Pk	32.4	-24.8	0	45.48	-	-	74	-28.52	53	269	H
3	* 2.484	26.63	RMS	32.4	-24.7	0	34.33	54	-19.67	-	-	53	269	H
4	* 2.484	27.11	RMS	32.4	-24.7	0	34.81	54	-19.19	-	-	53	269	H
6	2.501	37.47	Pk	32.5	-24.8	0	45.17	-	-	74	-28.83	53	269	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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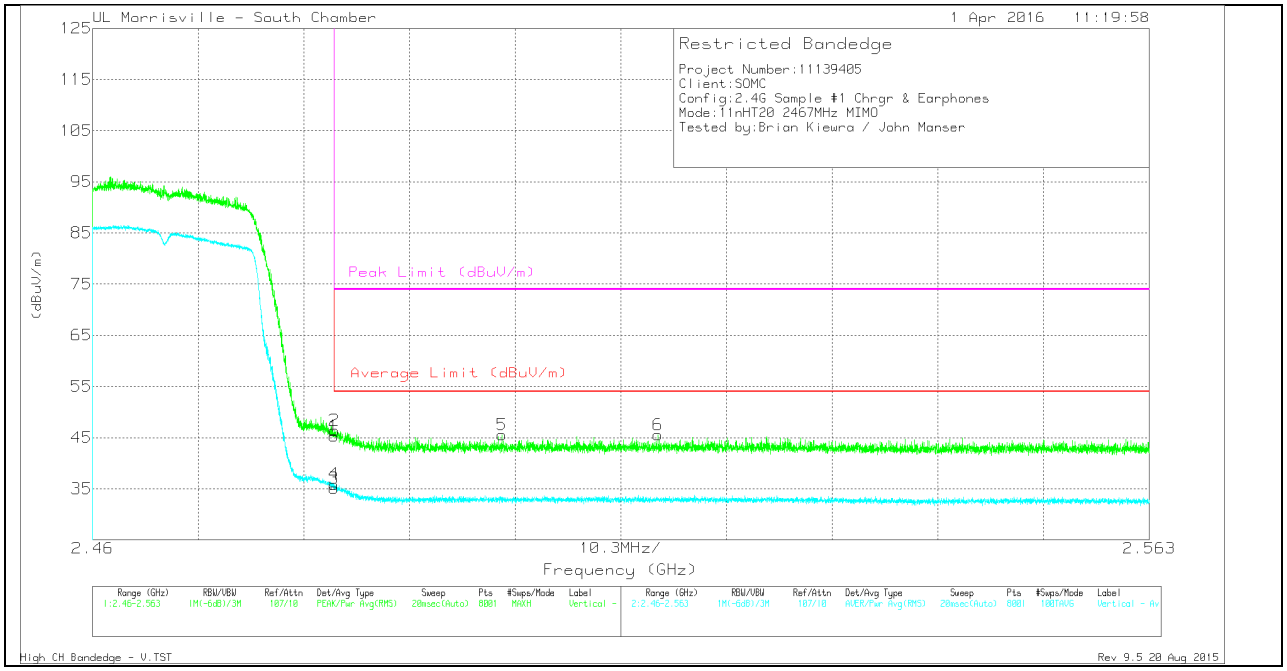
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	37.59	Pk	32.4	-24.7	0	45.29	-	-	74	-28.71	74	107	V
2	* 2.484	38.73	Pk	32.4	-24.7	0	46.43	-	-	74	-27.57	74	107	V
5	* 2.5	37.83	Pk	32.5	-24.8	0	45.53	-	-	74	-28.47	74	107	V
3	* 2.484	27.42	RMS	32.4	-24.7	0	35.12	54	-18.88	-	-	74	107	V
4	* 2.484	28.19	RMS	32.4	-24.7	0	35.89	54	-18.11	-	-	74	107	V
6	2.515	37.94	Pk	32.5	-24.9	0	45.54	-	-	74	-28.46	74	107	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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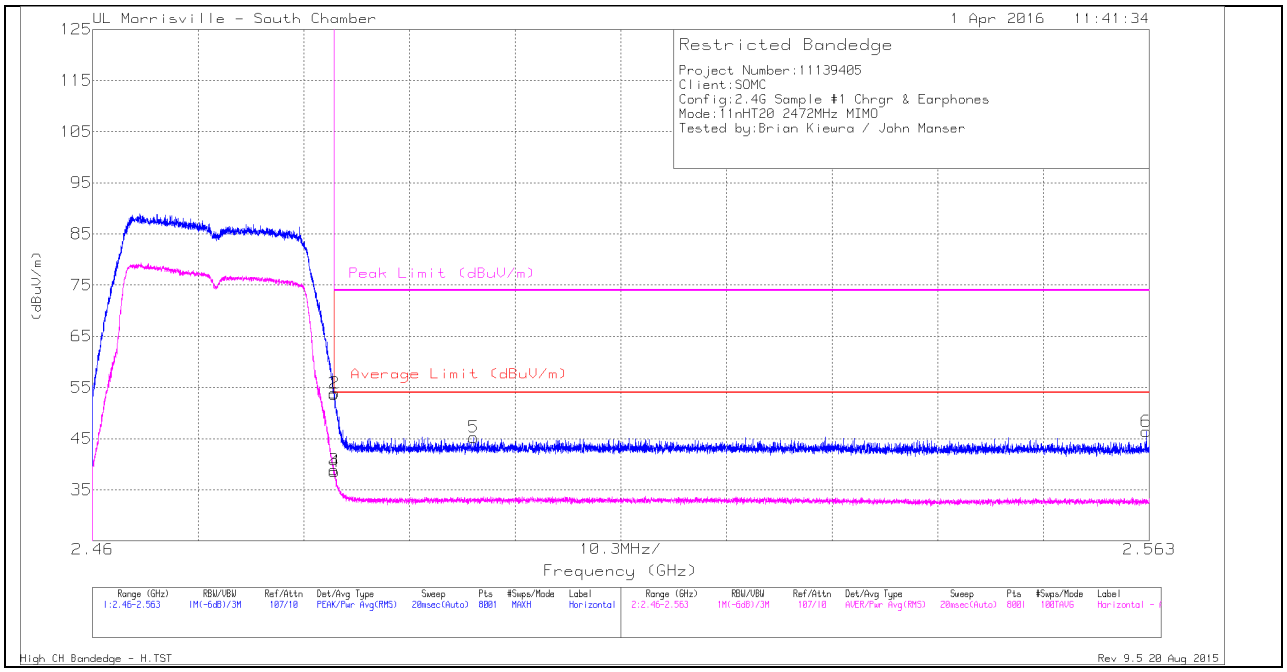
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	46.02	Pk	32.4	-24.7	0	53.72	-	-	74	-20.28	53	272	H
2	* 2.484	46.23	Pk	32.4	-24.7	0	53.93	-	-	74	-20.07	53	272	H
5	* 2.497	37.55	Pk	32.5	-24.8	0	45.25	-	-	74	-28.75	53	272	H
3	* 2.484	31.22	RMS	32.4	-24.7	0	38.92	54	-15.08	-	-	53	272	H
4	* 2.484	30.85	RMS	32.4	-24.7	0	38.55	54	-15.45	-	-	53	272	H
6	2.563	39.17	Pk	32.4	-25.2	0	46.37	-	-	74	-27.63	53	272	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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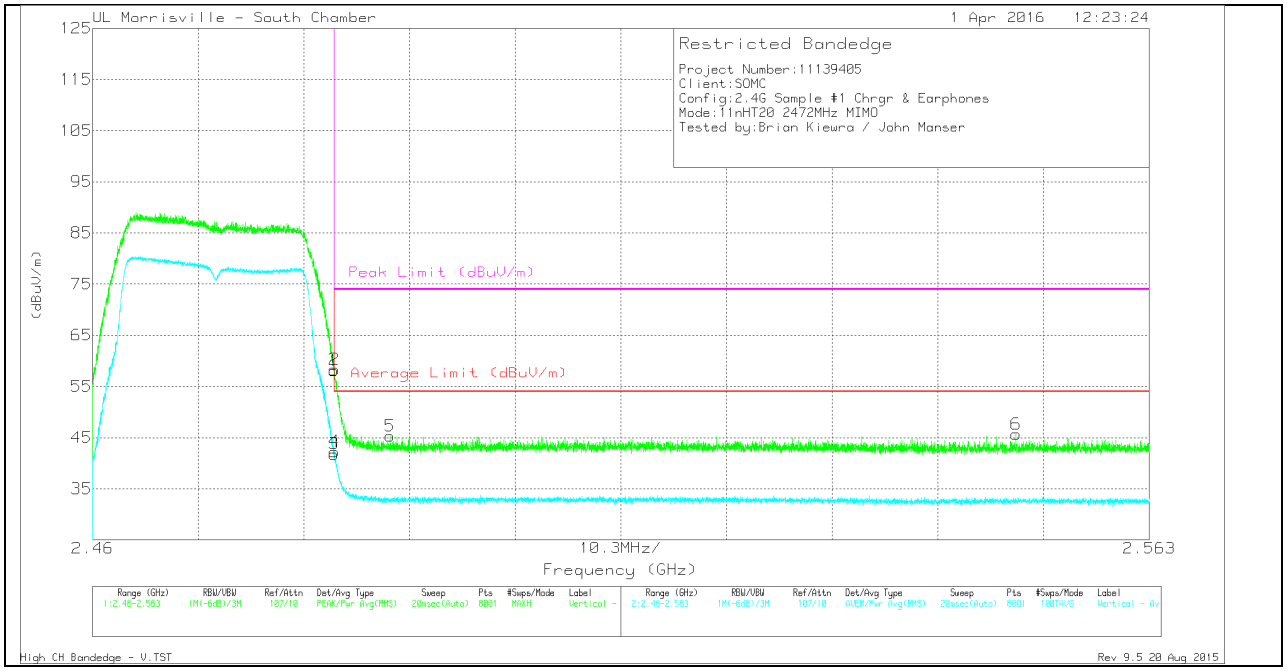
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	50.39	Pk	32.4	-24.7	0	58.09	-	-	74	-15.91	73	112	V
2	* 2.484	50.58	Pk	32.4	-24.7	0	58.28	-	-	74	-15.72	73	112	V
5	* 2.489	37.69	Pk	32.4	-24.8	0	45.29	-	-	74	-28.71	73	112	V
3	* 2.484	34.1	RMS	32.4	-24.7	0	41.8	54	-12.2	-	-	73	112	V
4	* 2.484	34.58	RMS	32.4	-24.7	0	42.28	54	-11.72	-	-	73	112	V
6	2.55	38.4	Pk	32.4	-25.1	0	45.7	-	-	74	-28.3	73	112	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

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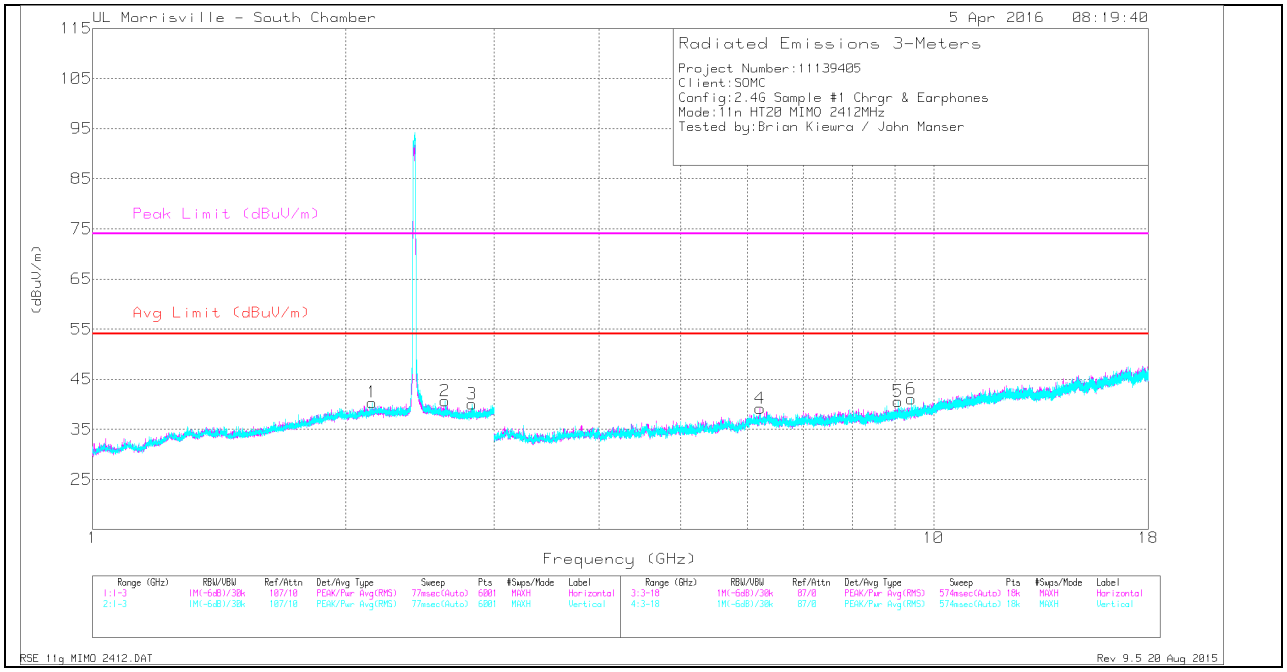
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL/ VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/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	* 2.825	37.3	PK2	32.7	-26.1	0	43.9	-	-	74	-30.1	96	210	V
	* 2.824	25.63	MAv1	32.7	-26.1	0	32.23	54	-21.77	-	-	96	210	V
5	* 9.074	35.8	PK2	36	-26.9	0	44.9	-	-	74	-29.1	201	102	V
	* 9.071	24.53	MAv1	36	-26.9	0	33.63	54	-20.37	-	-	201	102	V
6	* 9.403	36.16	PK2	36.4	-27.1	0	45.46	-	-	74	-28.54	19	389	V
	* 9.401	24.32	MAv1	36.4	-27.2	0	33.52	54	-20.48	-	-	19	389	V
1	2.15	31.97	Pk	31.7	-23.3	0	40.37	-	-	-	-	0-360	200	V
2	2.626	33.89	Pk	32.4	-25.6	0	40.69	-	-	-	-	0-360	102	V
4	6.219	33.26	Pk	35.4	-29.5	0	39.16	-	-	-	-	0-360	102	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK - Peak detector

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

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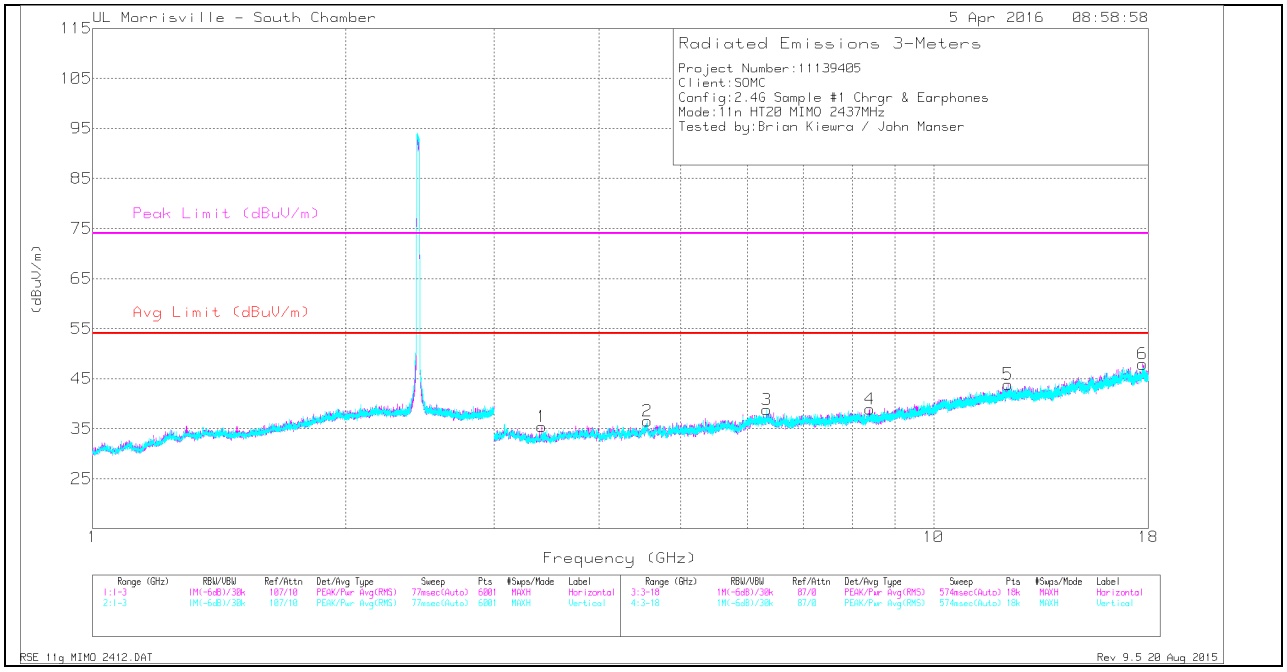
MID CHANNEL HORIZONTAL/ VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

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MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/fltr/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	* 4.567	40.03	PK2	34	-32.1	0	41.93	-	-	74	-32.07	4	344	V
	* 4.566	28.6	MAv1	34	-32.1	0	30.5	54	-23.5	-	-	4	344	V
4	* 8.4	36.53	PK2	35.7	-27.9	0	44.33	-	-	74	-29.67	282	323	H
	* 8.397	25.19	MAv1	35.7	-27.9	0	32.99	54	-21.01	-	-	282	323	H
5	* 12.266	35.68	PK2	39	-24.9	0	49.78	-	-	74	-24.22	211	259	H
	* 12.264	23.61	MAv1	39	-24.9	0	37.71	54	-16.29	-	-	211	259	H
6	* 17.734	35.36	PK2	41.2	-22.5	0	54.06	-	-	74	-19.94	327	269	H
	* 17.731	23.78	MAv1	41.2	-22.6	0	42.38	54	-11.62	-	-	327	269	H
1	3.421	35.81	Pk	32.9	-33.3	0	35.41	-	-	-	-	0-360	102	H
3	6.336	32.03	Pk	35.4	-28.6	0	38.83	-	-	-	-	0-360	102	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

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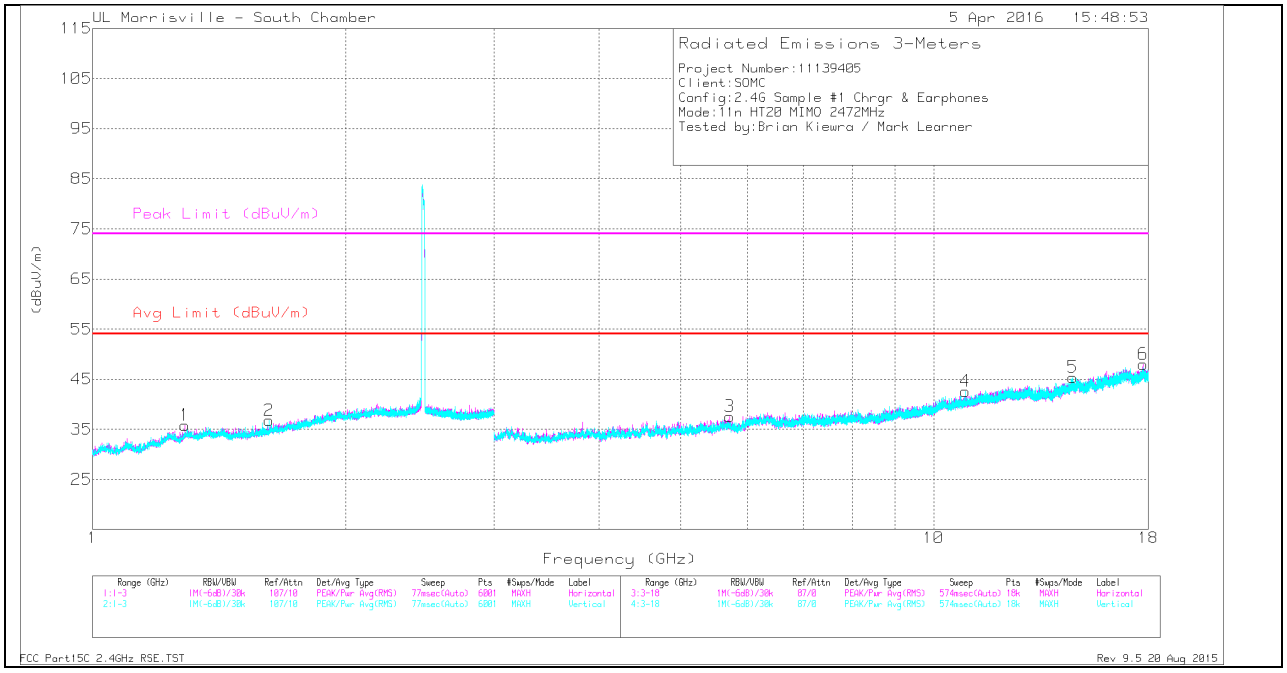
HIGH CHANNEL HORIZONTAL/ VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

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HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0069 (dB/m)	Amp/Cbl/Fltr/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	* 1.288	35.77	PK2	28.8	-23.4	0	41.17	-	-	74	-32.83	177	202	H
	* 1.289	23.76	MAv1	28.8	-23.4	0	29.16	54	-24.84	-	-	177	202	H
2	* 1.62	35.99	PK2	28.5	-22.5	0	41.99	-	-	74	-32.01	226	360	V
	* 1.622	23.72	MAv1	28.5	-22.4	0	29.82	54	-24.18	-	-	226	360	V
6	* 17.736	34.89	PK2	41.2	-22.5	0	53.59	-	-	74	-20.41	87	216	H
	* 17.737	23.75	MAv1	41.2	-22.5	0	42.45	54	-11.55	-	-	87	216	H
4	* 10.914	34.71	PK2	38	-25.4	0	47.31	-	-	74	-26.69	87	360	V
	* 10.915	23.26	MAv1	38	-25.4	0	35.86	54	-18.14	-	-	87	360	V
3	5.718	33.38	Pk	34.7	-30.5	0	37.58	-	-	-	-	0-360	199	H
5	14.634	29.38	Pk	39.8	-23.8	0	45.38	-	-	-	-	0-360	199	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

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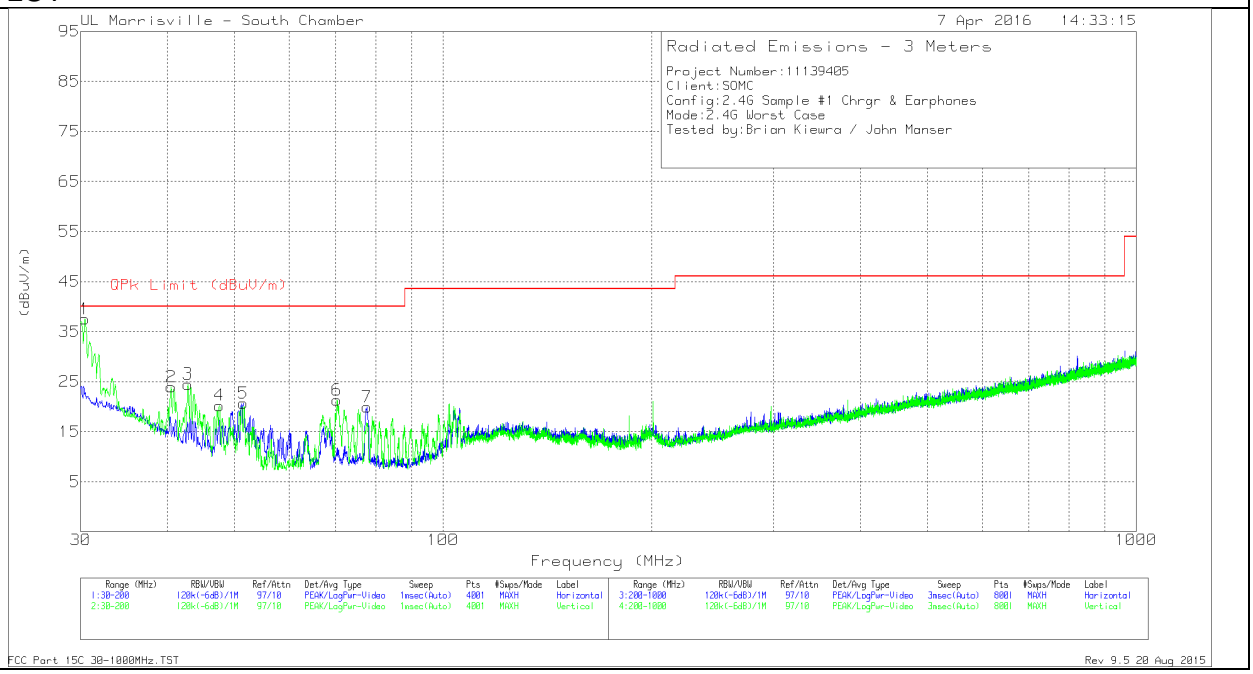
10.3. WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

PLOT



Below 1G Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF AT0074 (dB/m)	Port 0 Factors	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	30.425	43.44	Pk	25.9	-31.8	37.54	40	-2.46	0-360	102	V
	30.3208	34.53	Qp	25.9	-31.8	28.63	40	-11.37	271	110	V
2	40.54	37.51	Pk	18	-31.6	23.91	40	-16.09	0-360	102	V
3	42.835	39.81	Pk	16.3	-31.6	24.51	40	-15.49	0-360	102	V
4	47.5525	38.24	Pk	13.6	-31.6	20.24	40	-19.76	0-360	102	V
5	51.4625	40	Pk	12.3	-31.6	20.7	40	-19.3	0-360	399	H
6	70.3325	40.1	Pk	12.4	-31.2	21.3	40	-18.7	0-360	102	V
7	77.6425	38.92	Pk	12.2	-31.2	19.92	40	-20.08	0-360	199	H

Pk - Peak detector
Qp - Quasi-Peak detector

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11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

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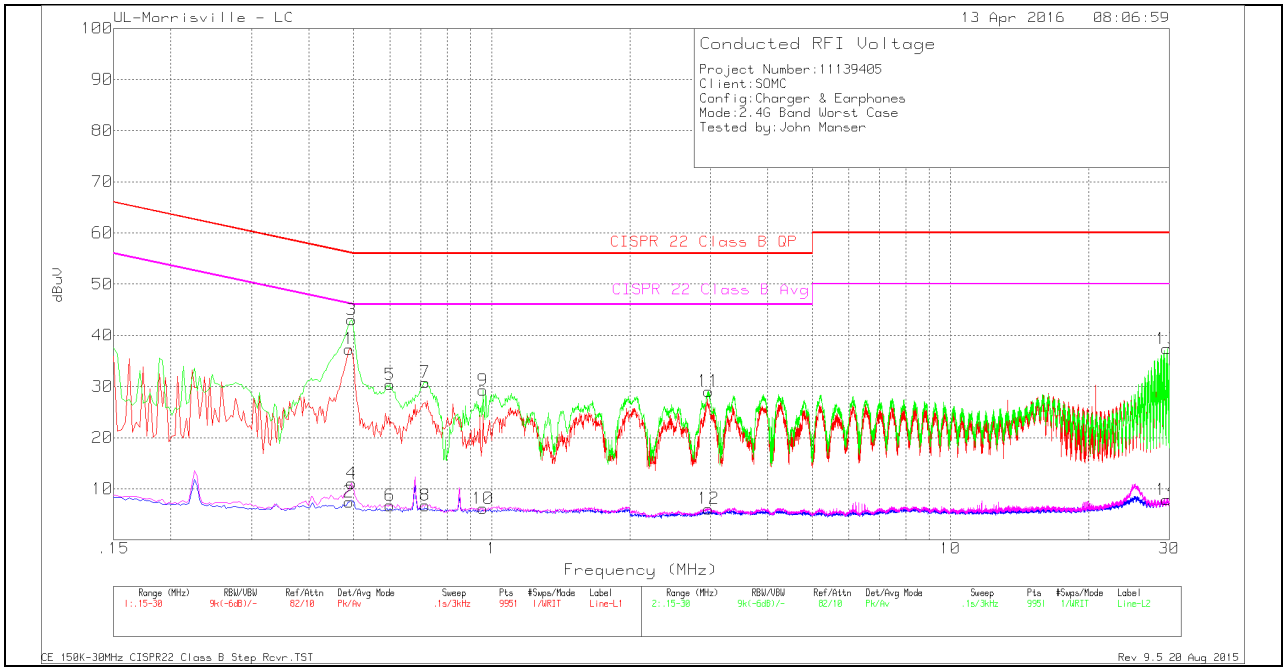
6 WORST EMISSIONS

PLOT



RESULTS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF [dB]	Cbl/Limiter (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
Range 1 (Line 1)										
1	.489	27.23	Pk	.1	10	37.33	56.18	-18.85	-	-
2	.489	-2.65	Av	.1	10	7.45	-	-	46.18	-38.73
Range 2 (Line 2)										
3	.495	32.92	Pk	.1	10	43.02	56.08	-13.06	-	-
4	.495	.99	Av	.1	10	11.09	-	-	46.08	-34.99
5	.6	20.41	Pk	0	10	30.41	56	-25.59	-	-
6	.6	-3.26	Av	0	10	6.74	-	-	46	-39.26
7	.717	20.8	Pk	0	10	30.8	56	-25.2	-	-
8	.717	-3.27	Av	0	10	6.73	-	-	46	-39.27
9	.957	19.27	Pk	0	10	29.27	56	-26.73	-	-
10	.957	-3.83	Av	0	10	6.17	-	-	46	-39.83
11	2.973	18.97	Pk	0	10.1	29.07	56	-26.93	-	-
12	2.973	-3.99	Av	0	10.1	6.11	-	-	46	-39.89
13	29.658	26.29	Pk	.4	10.7	37.39	60	-22.61	-	-
14	29.658	-3.18	Av	.4	10.7	7.92	-	-	50	-42.08

Pk - Peak detector

Av - Average detection

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