



**FCC 47 CFR PART 15 SUBPART C
INDUSTRY CANADA RSS-210 ISSUE 8
CLASS II PERMISSIVE CHANGE
CERTIFICATION TEST REPORT**

FOR

TABLET DEVICE

MODEL NUMBER: A1622, A1623

**FCC ID: BCGA1489
IC: 579C-A1489**

REPORT NUMBER: 14U18979-E1, VERSION C

ISSUE DATE: FEBRUARY 10, 2015

Prepared for
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	01/26/15	Initial Issue	M. Mekuria
B	02/05/15	Revised report per TCB's questions	C. Pang
C	02/10/15	Revised Section 5.6 to address TCB's question	T. Chu

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: APPLE
1 INFINITE LOOP
CUPERTINO, CA 95014, U.S.A.

EUT DESCRIPTION: TABLET DEVICE

MODEL: A1622, A1623

SERIAL NUMBER: F4KNN01FGDKQ (MODEL: A1622) &
F4KNN00LGDKQ (MODEL: A1623)

DATE TESTED: NOVEMBER 13, 2014 TO JANUARY 24, 2015

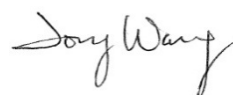
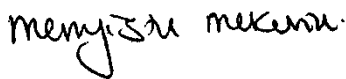
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-210 Issue 8 Annex 8	Pass
INDUSTRY CANADA RSS-GEN Issue 4	Pass

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.

Approved & Released For
UL Verification Services Inc. By:

Tested By:



MENGISTU MEKURIA
SENIOR ENGINEER
UL VERIFICATION SERVICES INC.

TONY WANG
EMC ENGINEER
UL VERIFICATION SERVICES INC.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, KDB558074 and ANSI C63.4-2009, RSS-GEN Issue 4, and RSS-210 Issue 8.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
☐ Chamber A	☐ Chamber D
☐ Chamber B	☒ Chamber E
☐ Chamber C	☒ Chamber F
	☒ Chamber G
	☒ Chamber H

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://ts.nist.gov/standards/scopes/2000650.htm>.

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
Conducted Disturbance, 0.15 to 30 MHz	±3.52 dB
Radiated Disturbance, 30 to 1000 MHz	±4.94 dB

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

5. EQUIPMENT UNDER TEST

5.1.DESCRPTION OF EUT

Models A1622 and A1623 are tablet display accessories with IEEE 802.11a/b/g/n (SISO 1x1) and Bluetooth radios.

5.2.DESCRPTION OF MODELS DIFFERENCES

EUT MODEL	Description
A1622	This is a portable device. It has additional internal battery packs and has a steel/rubber back cover.
A1623	This is a Non-portable device that does not have additional battery packs and has adhesives on bottom side of unit to adhere to a table surface.

5.3.DESCRPTION OF CLASS II PERMISSIVE CHANGE

To add Models A1622 and A1623 to original Model A1489 grant (FCC ID: BCGA1489, IC: 579C-A1489).

5.4.DESCRPTION OF AVAILABLE ANTENNAS

The radio utilizes an IFA antenna, with a maximum gain as below table:

Frequency (MHz)	Antenna Peak Gain
2400 – 2480	0.812
5725 – 5850	3.756

5.5.SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was 6.25.105

The test utility software used during testing was wl 6.25 RC87.120

5.6.WORST-CASE CONFIGURATION AND MODE

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

The watch is only used in the AC power line and receiver tests, not in the WLAN/BT transmitter testing.

The fundamental of the EUT was investigated in three orthogonal orientations X (Flatbed), Y (Landscape), Z (Portrait), it was determined that Z (Portrait) was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Z (Portrait) orientation.

Worst-case data rates as provided by the client were:

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

Radiated emissions for EUT with antenna was performed and passed; therefore, antenna port spurious was not performed.

5.7.DESCRPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Dell	Lattitude 3640	D49G802	DoC
Laptop Adapter	Dell	HA65NM130	CN-06TFFF-75661-426-03PG-A00	DoC
AC Adapter	Apple	MD836LL/A	N/A	N/A
AC Adapter	Apple	MD506LL/A	N/A	N/A
AC Adapter	Apple	MD592LL/A	N/A	N/A
Watch	Apple	A1638	FGNJ02AFY2F	BCG-E2871

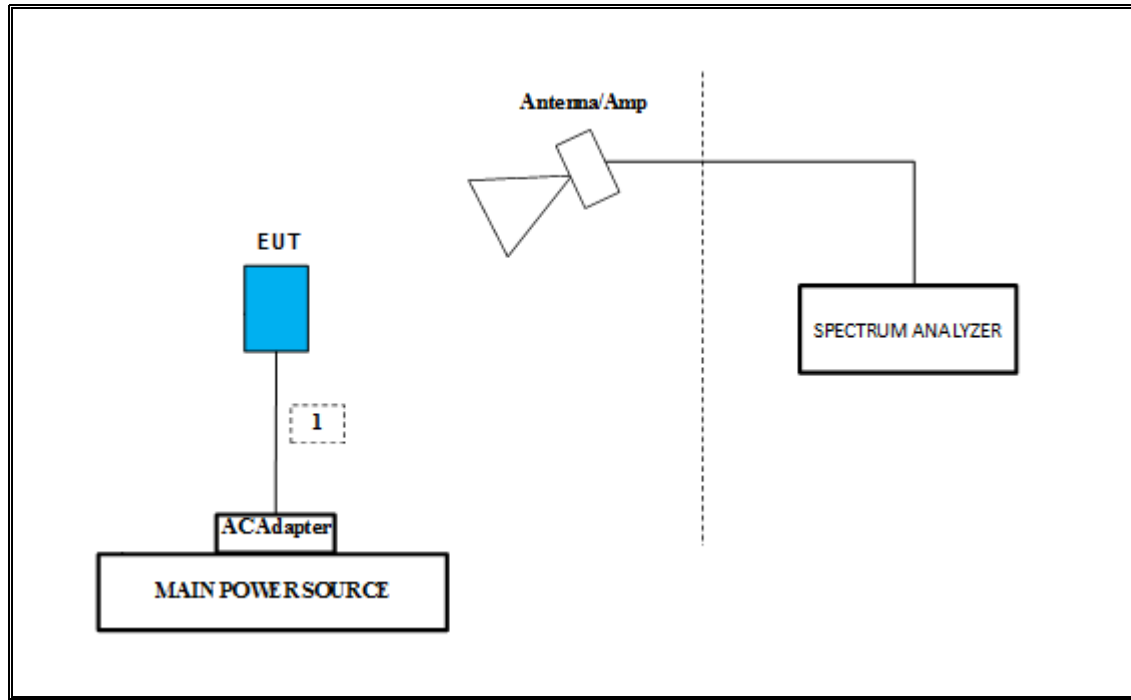
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	DC	1	DC	Un-shielded	2.0m	N/A
2	AC	1	AC	Un-shielded	2.0m	N/A
3	DC	1	DC	Un-shielded	1.0m	Custom Lightning Cable # LA0645649-1H

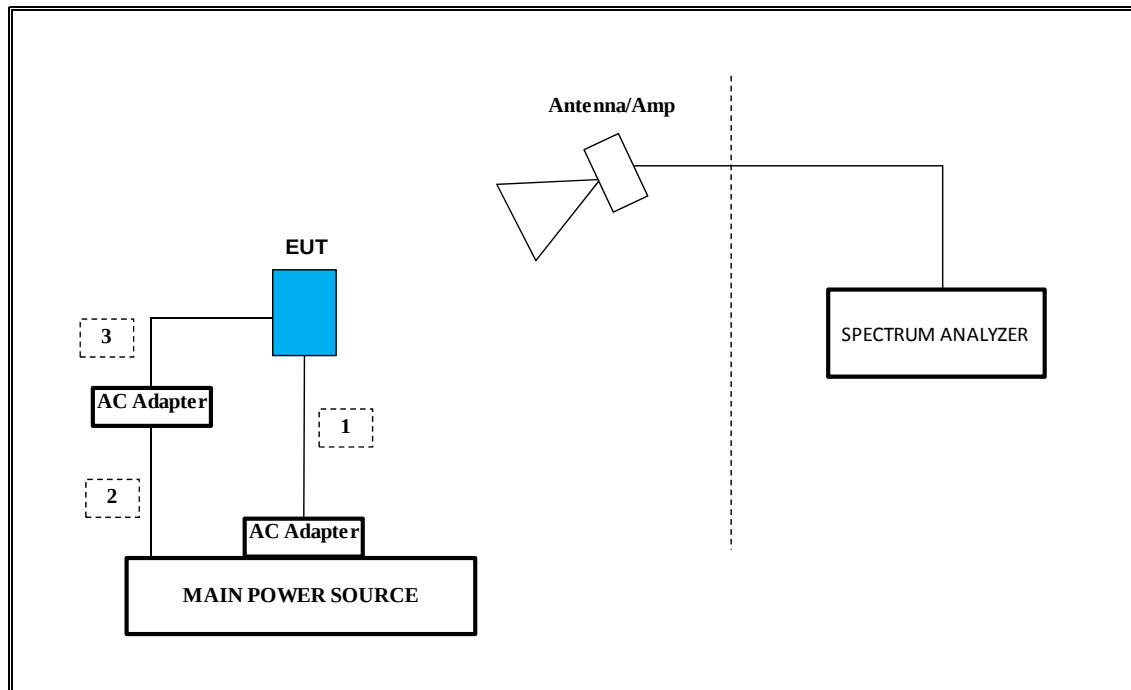
SETUP DIAGRAM – BELOW 1G RADIATED

The EUT is powered by AC/DC adapter. It is only connected to the support laptop computer to make any parameter change.

MODEL: A1622

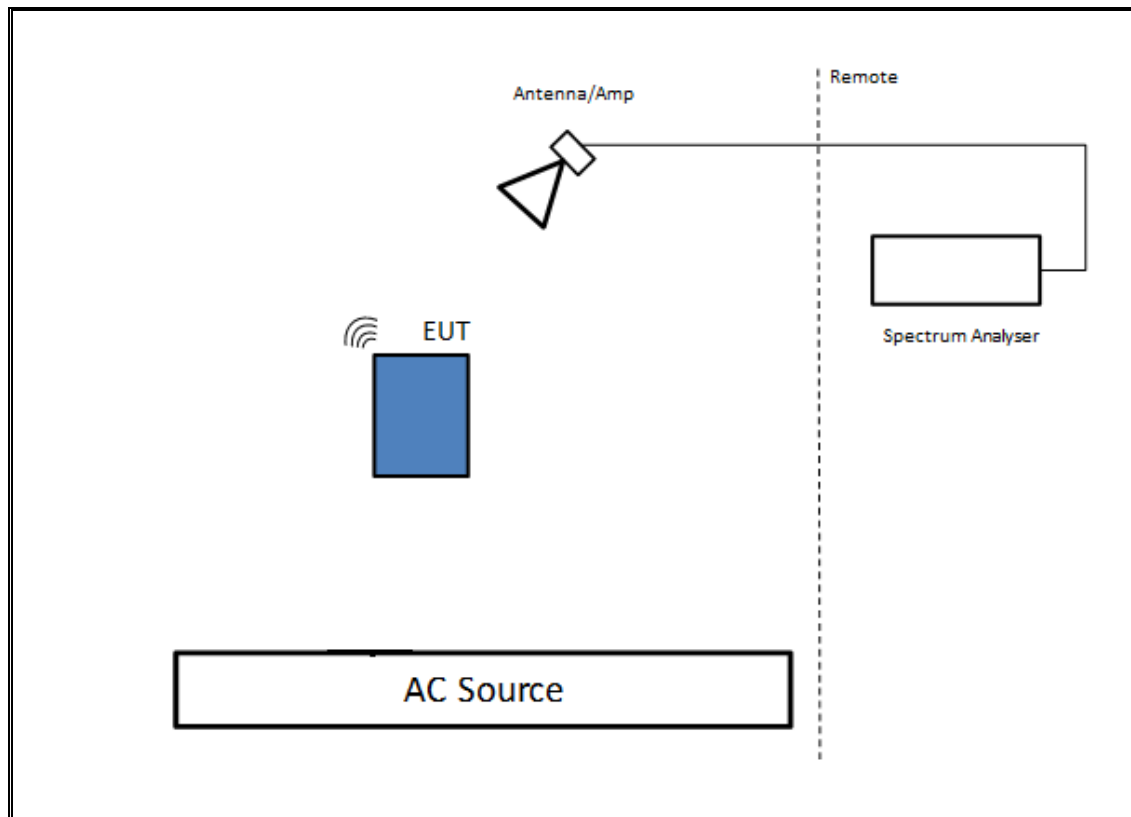


MODEL: A1623



SETUP DIAGRAM – ABOVE 1G RADIATED TEST

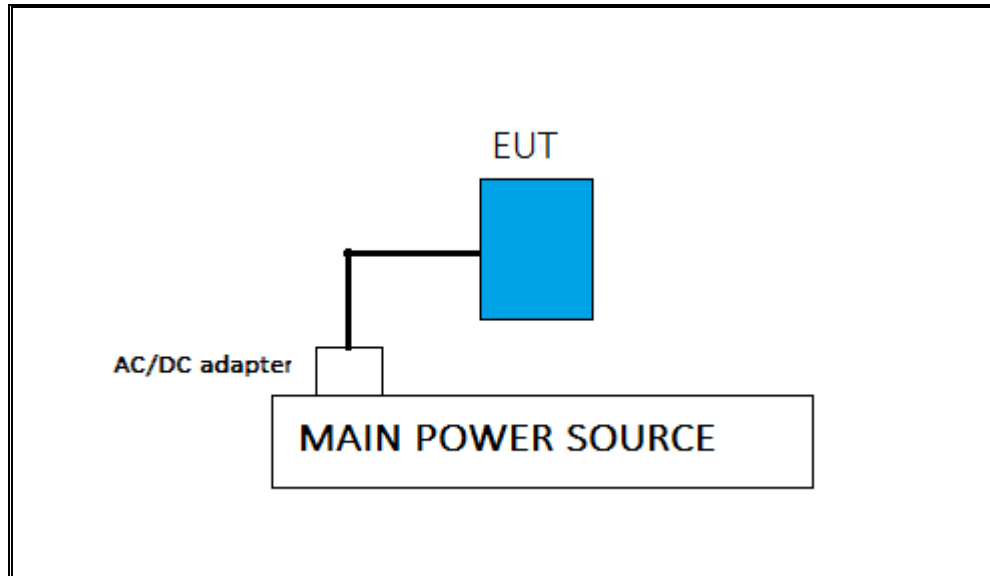
The EUT is a stand-alone unit. It is only connected to the support laptop computer to make any parameter change.



SETUP DIAGRAM – AC LINE EMISSION TESTS

The EUT is powered by AC/DC adapter. It is only connected to the support laptop computer to make any parameter change.

AC/DC ADAPTER MODEL NUMBER: MD506LL/A, MD836LL/A OR MD592LL/A



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	Manufacturer	Model	Serial Number	Cal Due
Antenna, Horn 1-18GHz	ETS Lindgren	3117	00143449	2/25/2015
Amplifier, 1 - 18GHz	Miteq	AFS42-00101800-25-S-42	No Serial Number	2/7/2015
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	US51350187	5/2/2015
Antenna, Horn 1-18GHz	ETS Lindgren	3117	29310	3/20/2015
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB1	A121003	1/28/2015
Amplifier, 1 - 18GHz	Miteq	AFS42-00101800-25-S-42	N/A	1/20/2015
Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	185623	6/7/2015
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	MY51380911	2/12/2015
Antenna, Horn 1-18GHz	ETS Lindgren	3117	165318	4/14/2015
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	A051314-2	4/27/2015
Amplifier, 1 - 18GHz	Miteq	AFS42-00101800-25-S-42	1818464	6/5/2015
Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	325118	6/5/2015
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	MY53311010	5/17/2015
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	MY53310972	5/8/2015
Amplifier, 1 to 26.5GHz, 23.5dB Gain minimum	Agilent	8449B	3008A04710	3/25/2015
Antenna, Horn 18 to 26.5GHz	ARA	SWH-28	1007	5/9/2015
Spectrum Analyzer, 40 GHz	Agilent	8564E	3943A01643	8/6/2015

7. MEASUREMENT METHODS

Out-of-band emissions in non-restricted bands: KDB 558074 D01 v03r02, Section 11.0.

Out-of-band emissions in restricted bands: KDB 558074 D01 v03r02, Section 12.0

Band-edge: KDB 558074 D01 v03r02, Section 13.3.1.

8. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

PROCEDURE

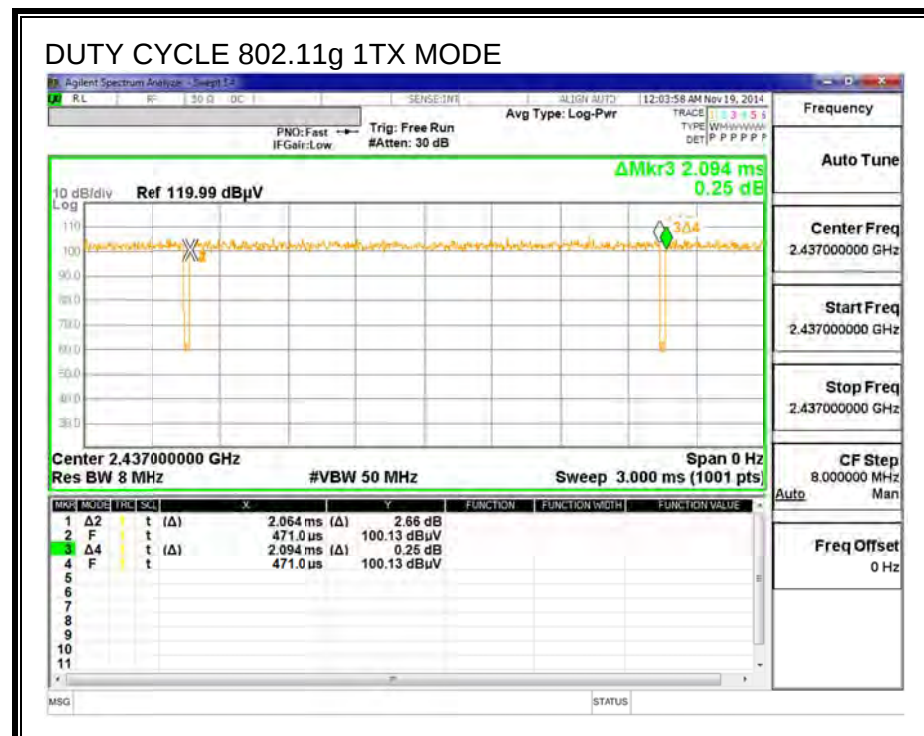
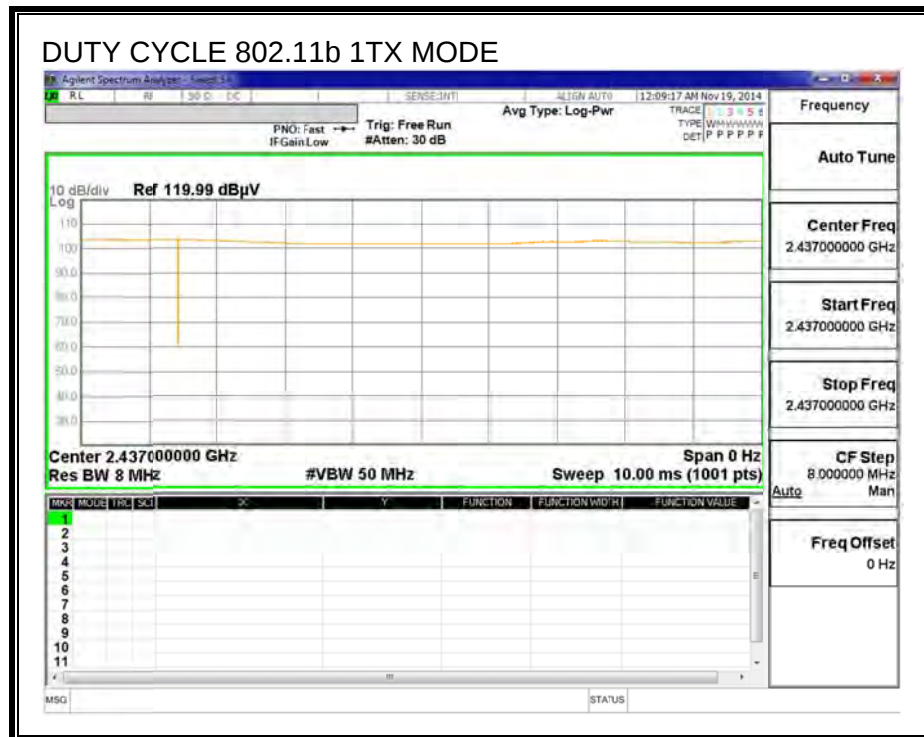
KDB 558074 Zero-Span Spectrum Analyzer Method.

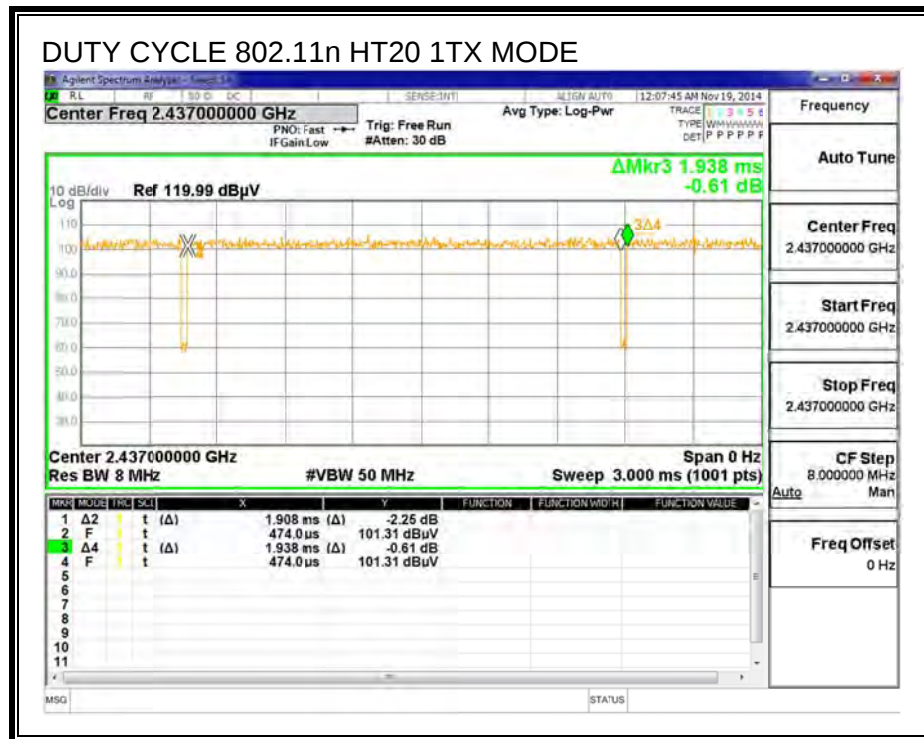
8.1.ON TIME AND DUTY CYCLE RESULTS

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 1TX	1.000	1.000	1.000	100.00%	0.000	0.010
802.11g 1TX	2.064	2.094	0.986	98.57%	0.000	0.010
802.11n HT20 1TX	1.908	1.938	0.985	98.45%	0.000	0.010
5GHz Band						
802.11a 1TX	2.064	2.094	0.986	98.57%	0.000	0.010
802.11n HT20 1TX	1.908	1.935	0.986	98.60%	0.000	0.010
802.11n HT40 1TX	0.930	0.958	0.971	97.08%	0.129	1.075

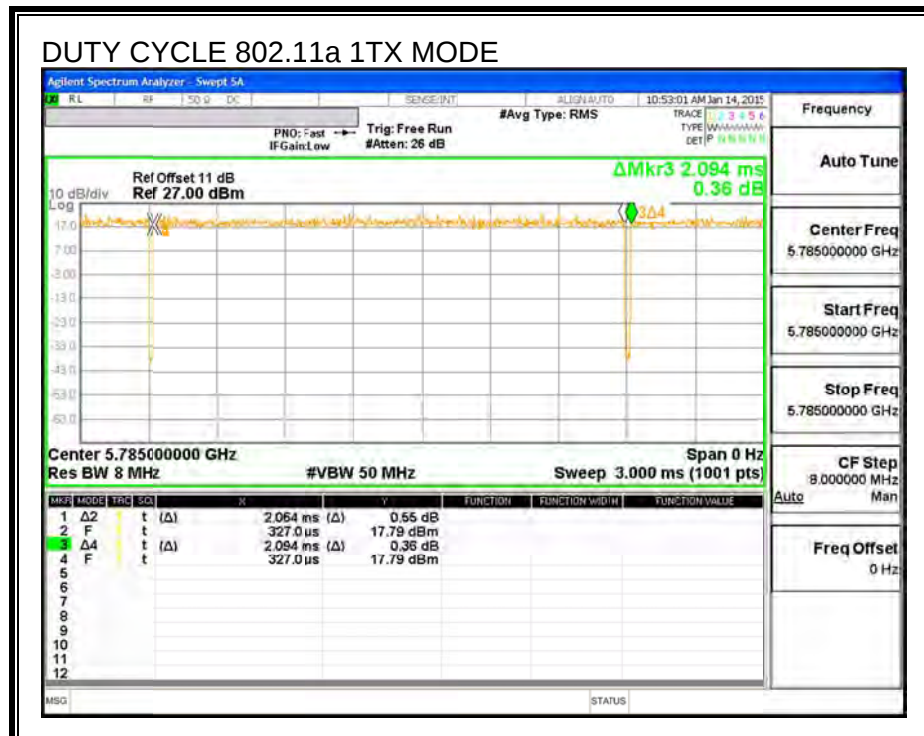
8.2.DUTY CYCLE PLOTS

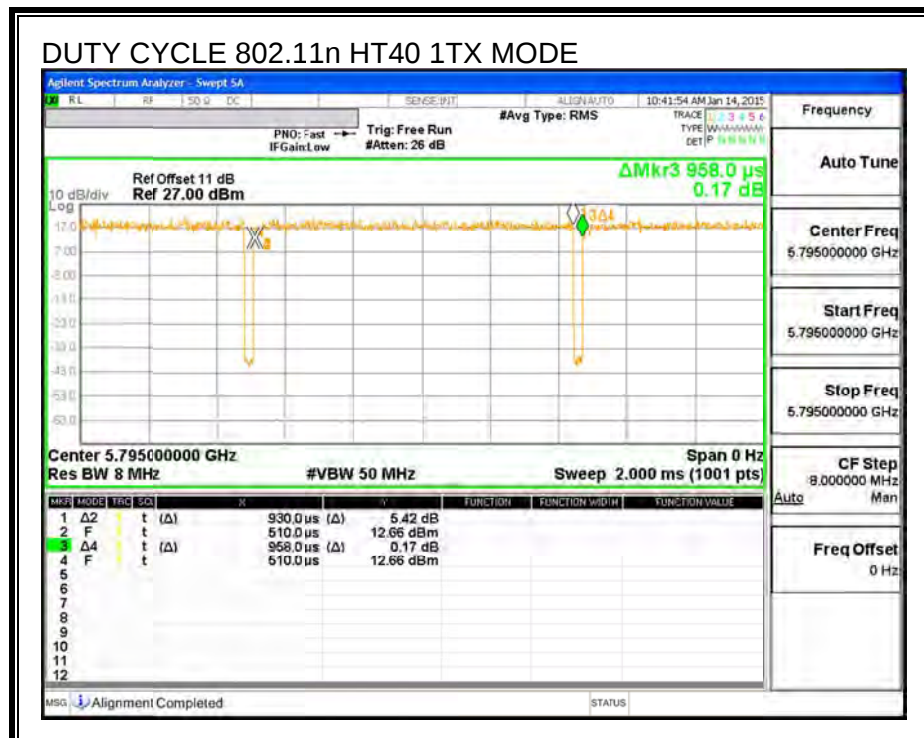
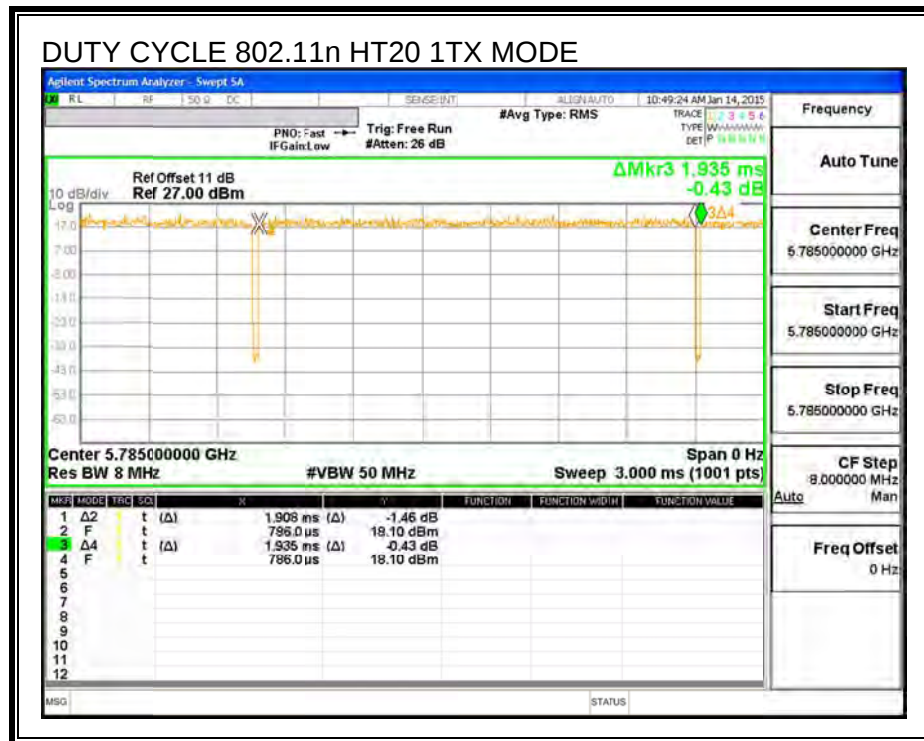
2.4 GHz BAND





5 GHz BANDS





9. ANTENNA PORT TEST RESULTS

For all antenna port results, refer the WLAN test report that has done by UL Verification Services INC. The report is 13U15668-1, FCC ID: BCGA1489, IC: 579C-A1489.

10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-210 Clause 2.5 (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. 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 as applicable for average measurements.

The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

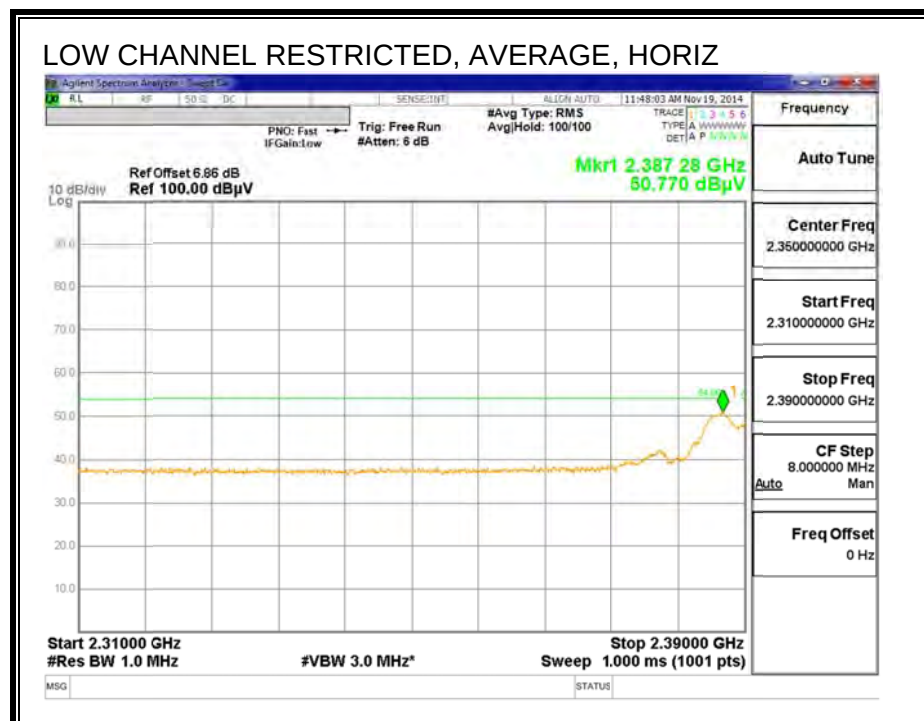
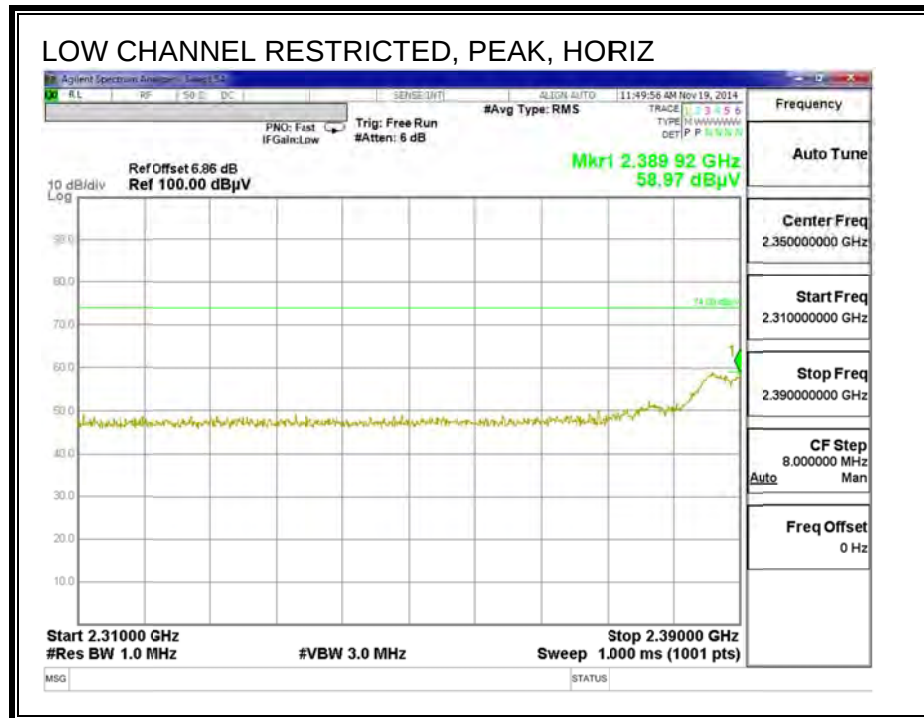
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

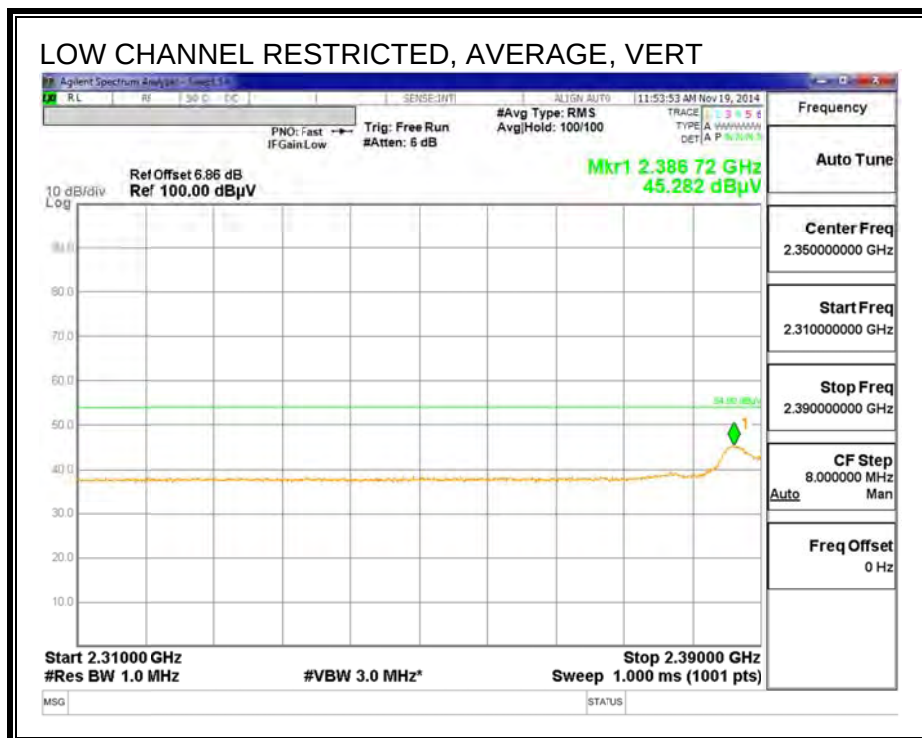
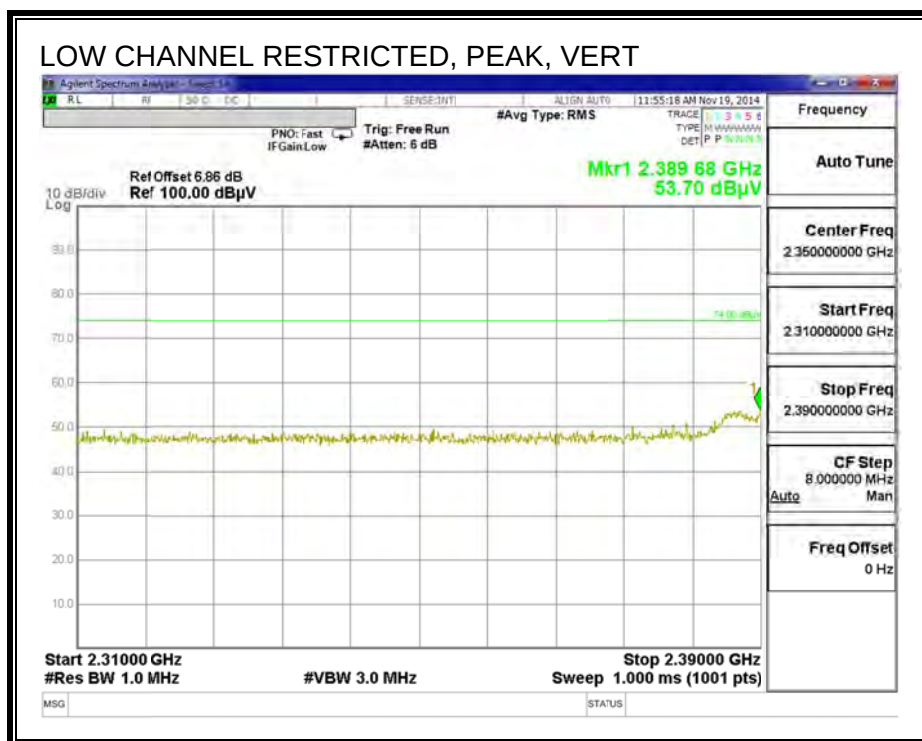
1TX mode indicates that only one antenna is transmitting.

10.2. MODEL: A1622

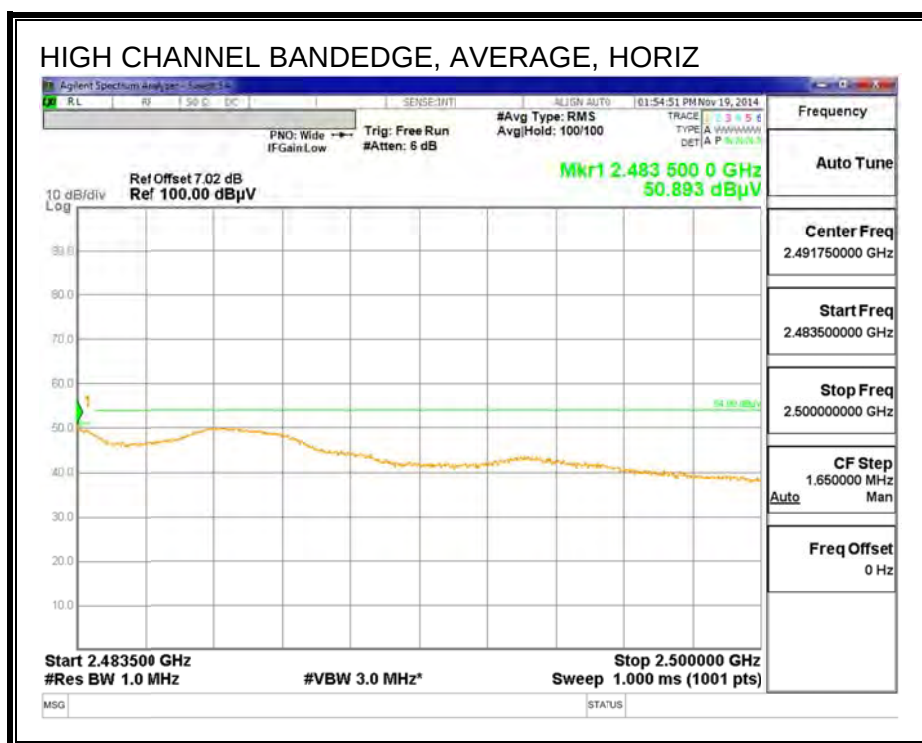
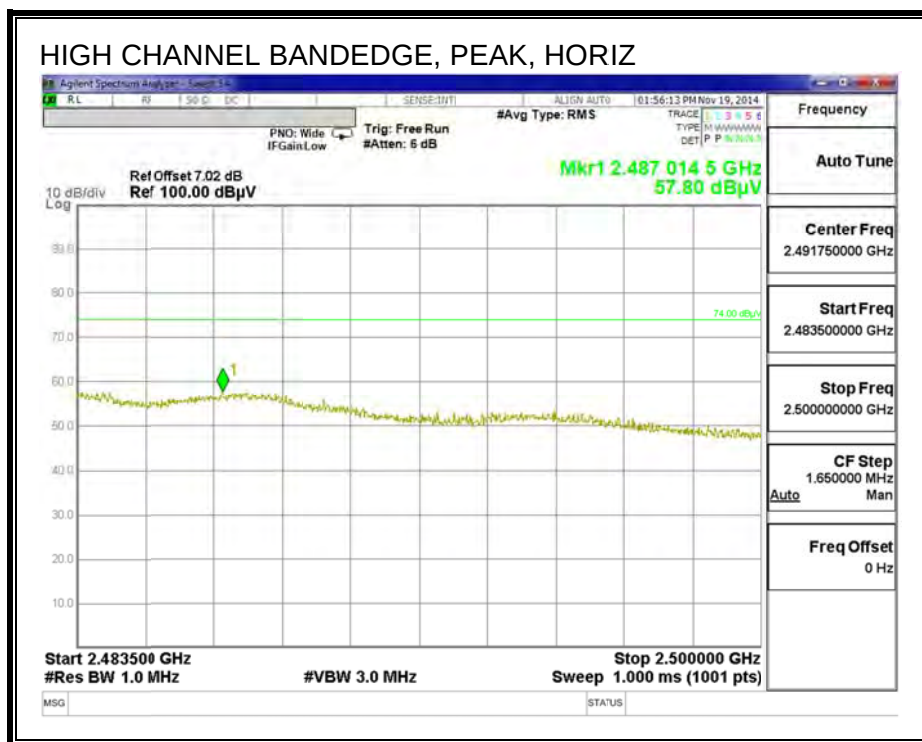
10.2.1. 802.11b 1Tx MODE IN THE 2.4 GHz BAND

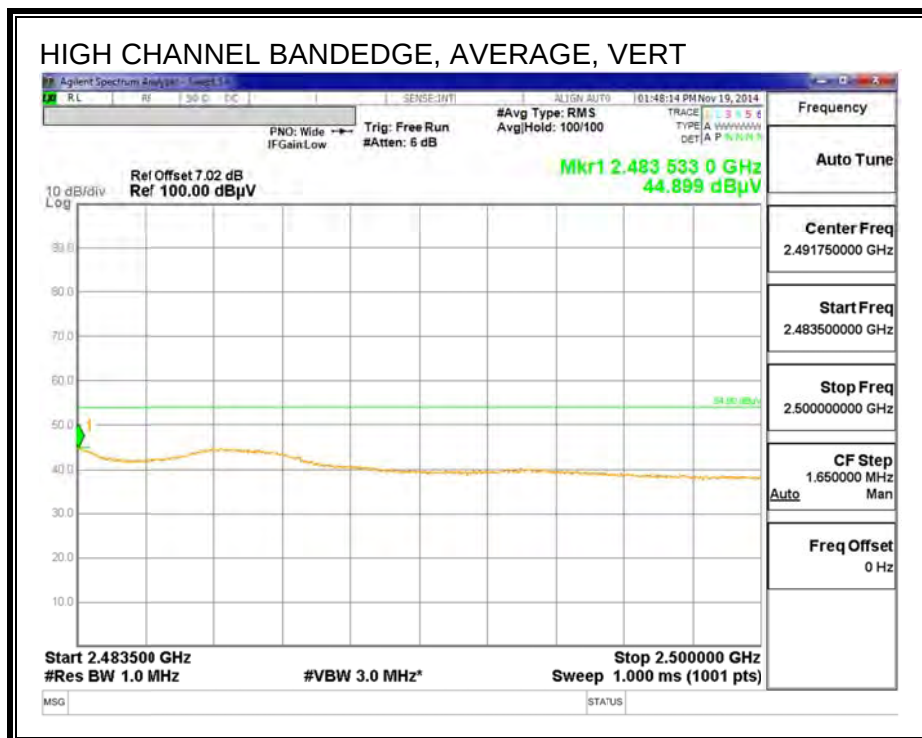
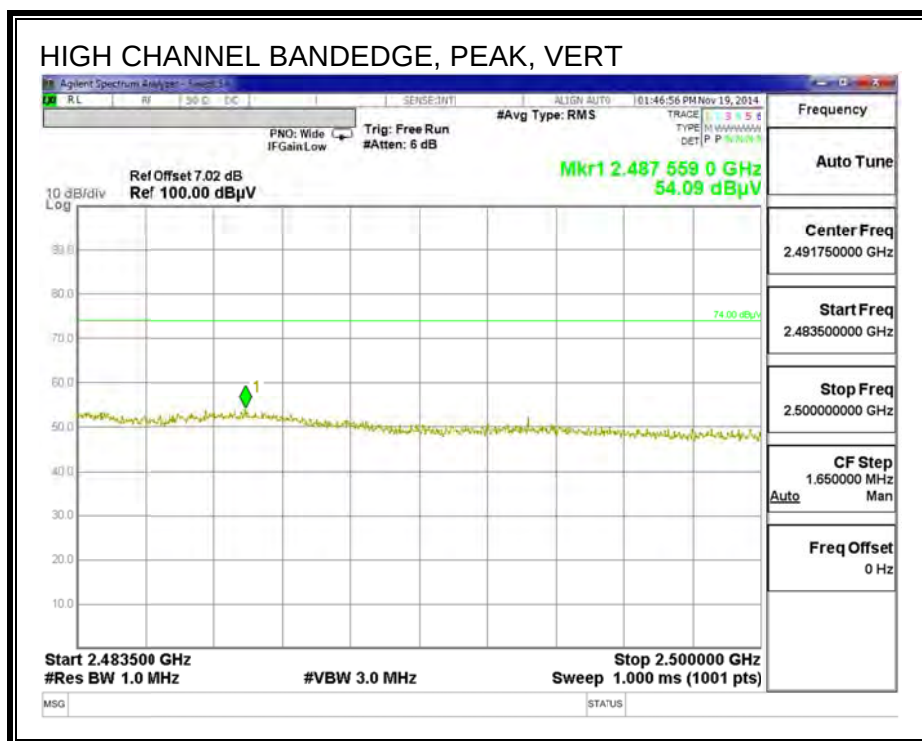
RESTRICTED BANDEDGE (LOW CHANNEL, CHANNEL 1)



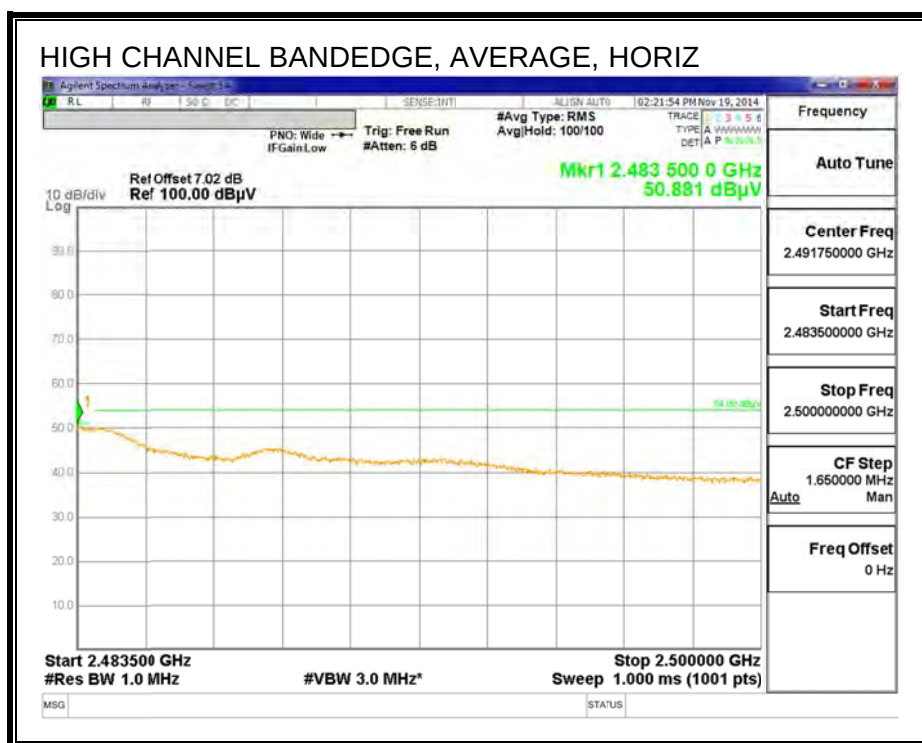
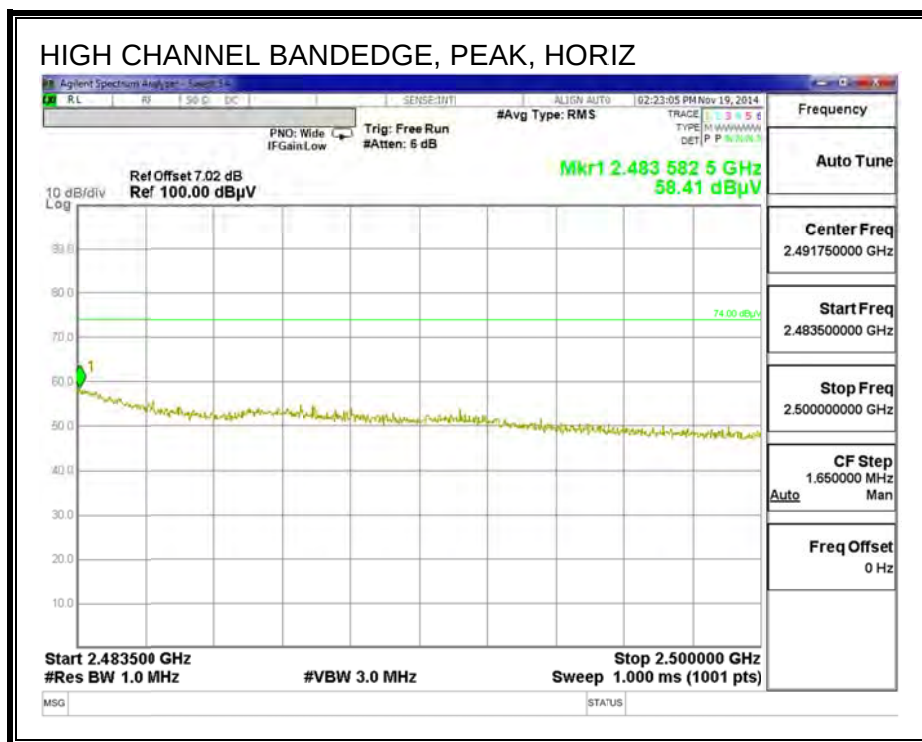


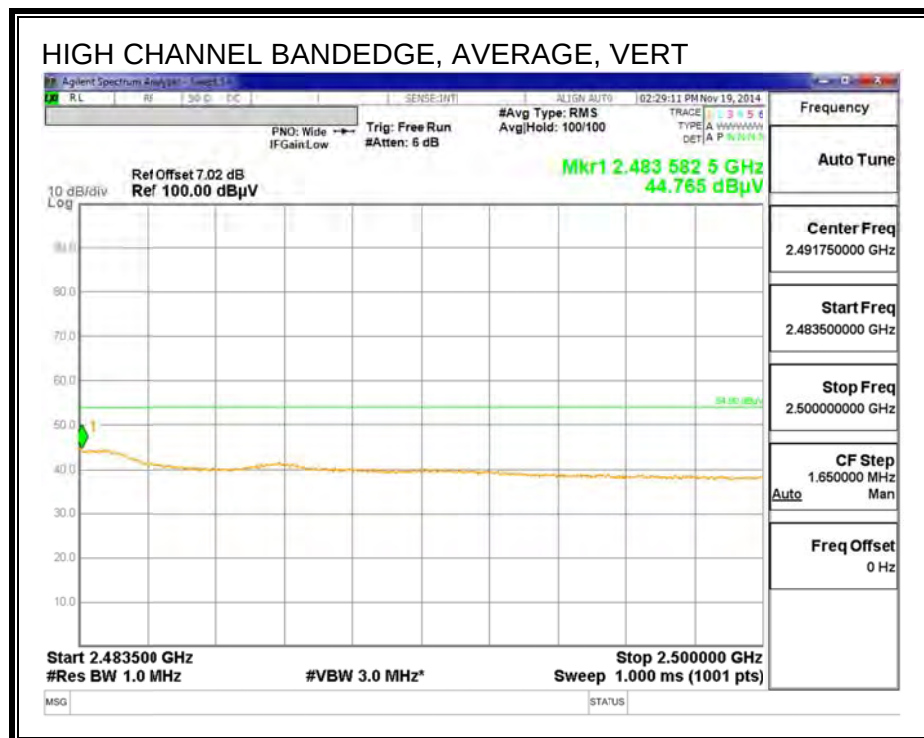
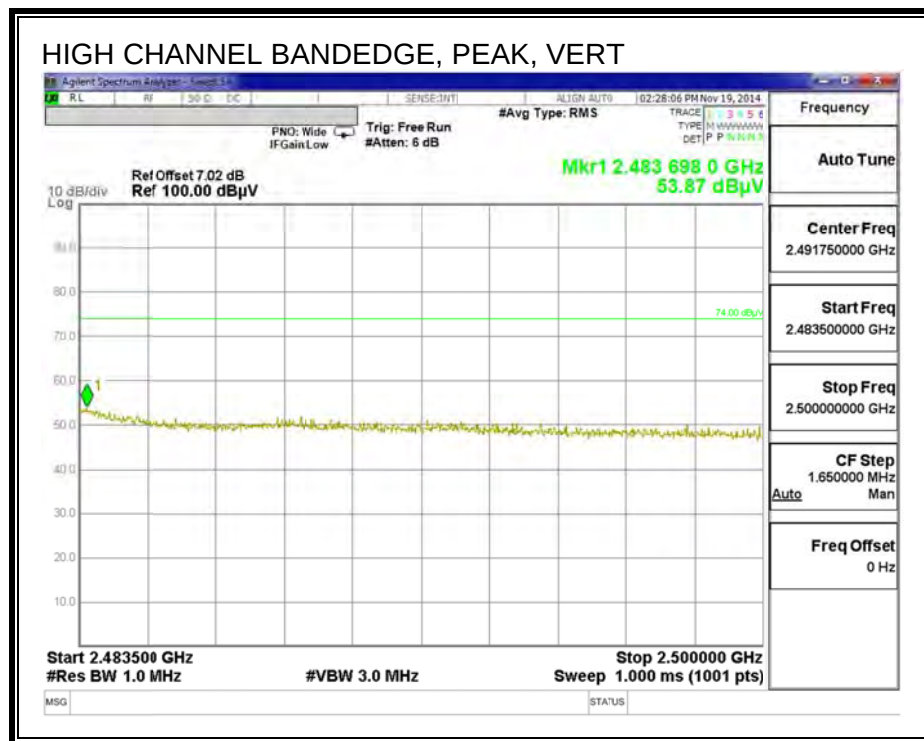
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 11)



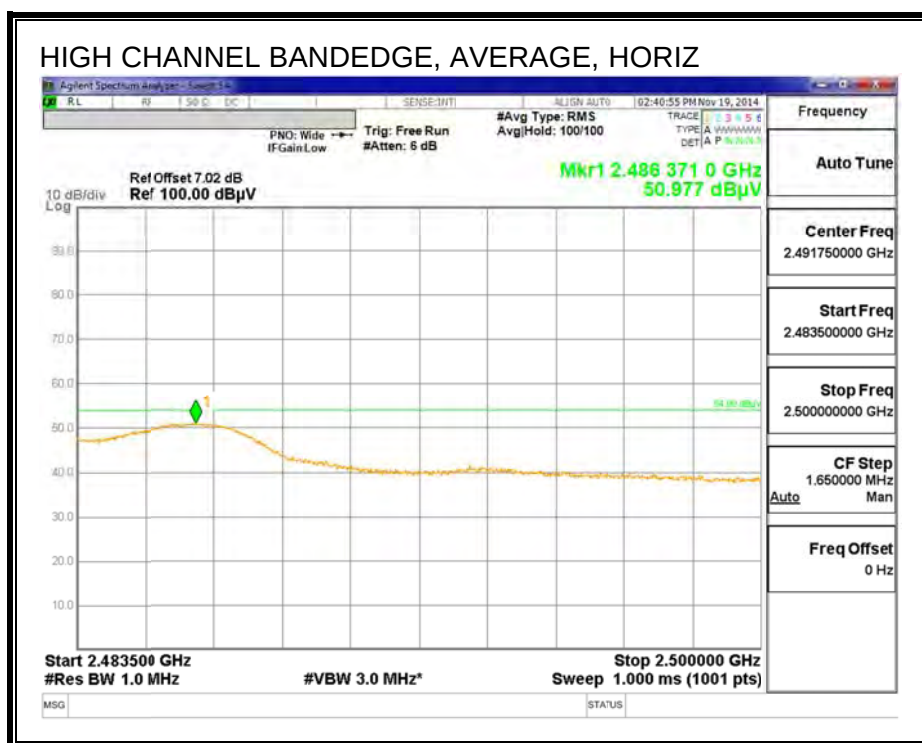
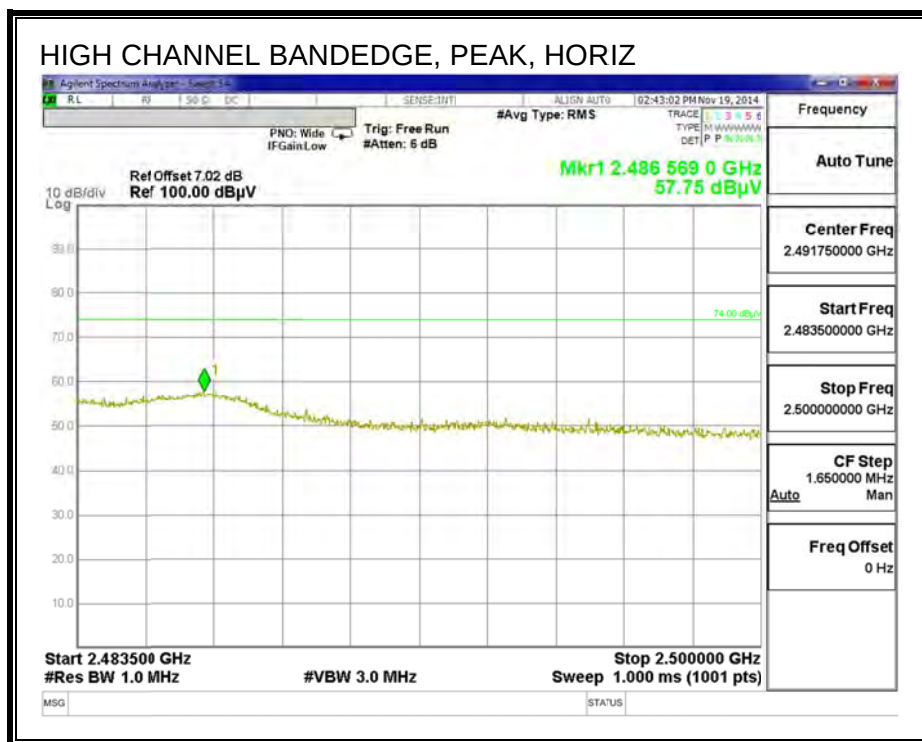


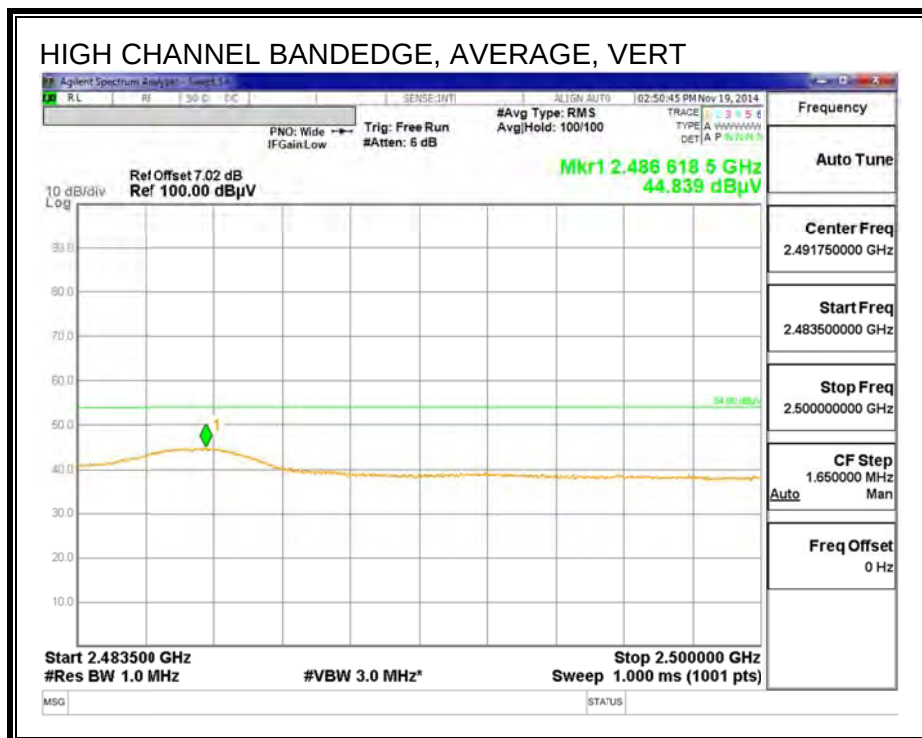
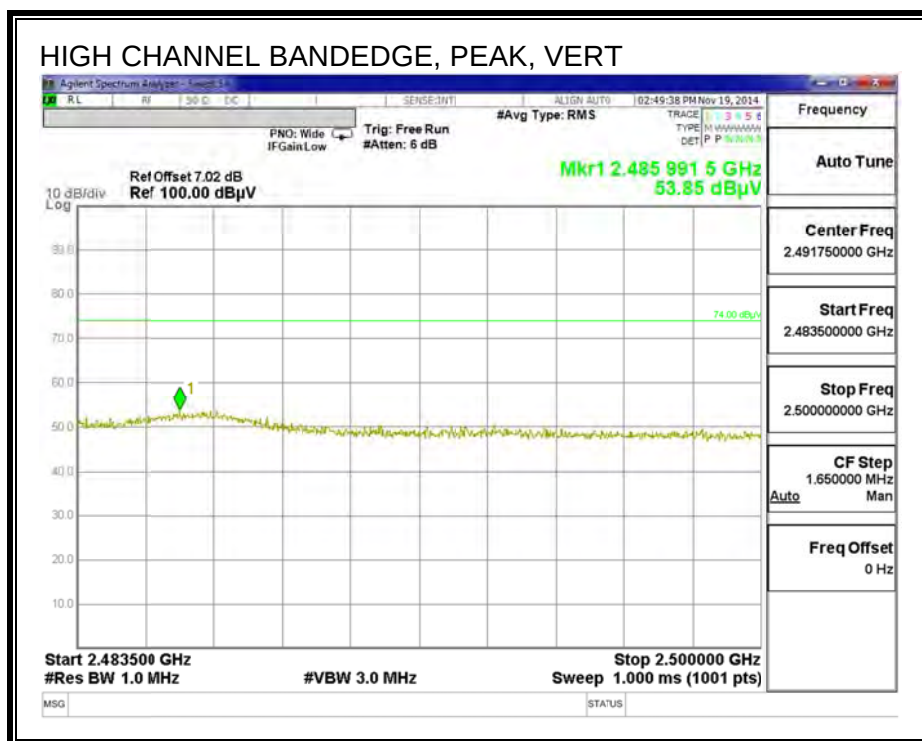
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 12)





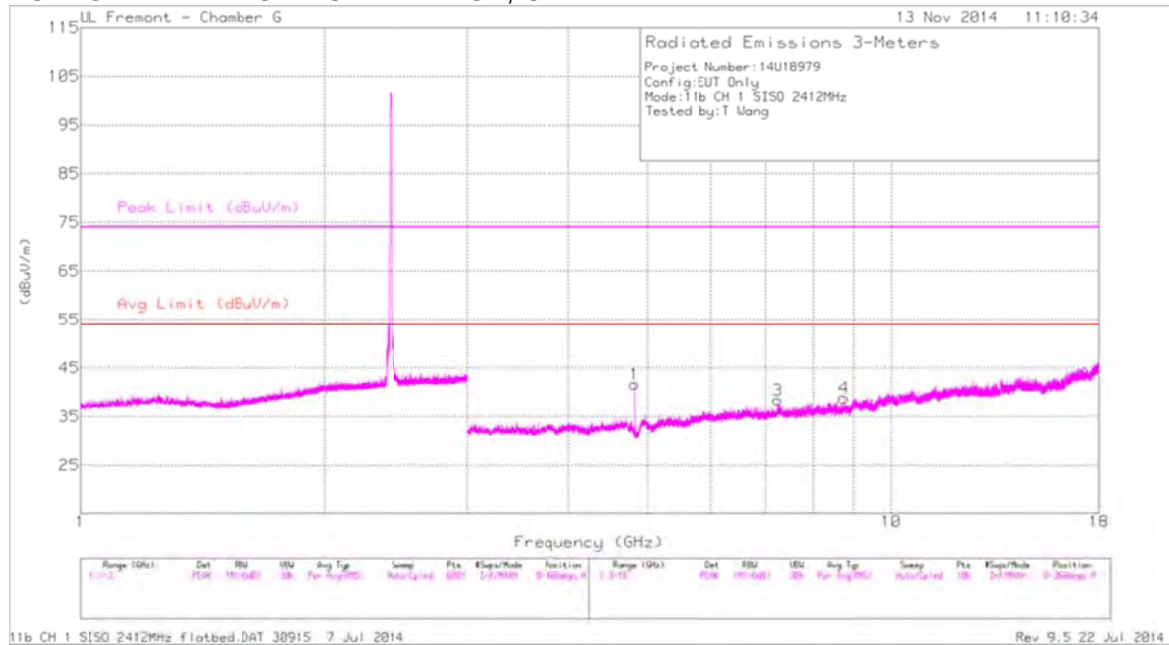
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 13)



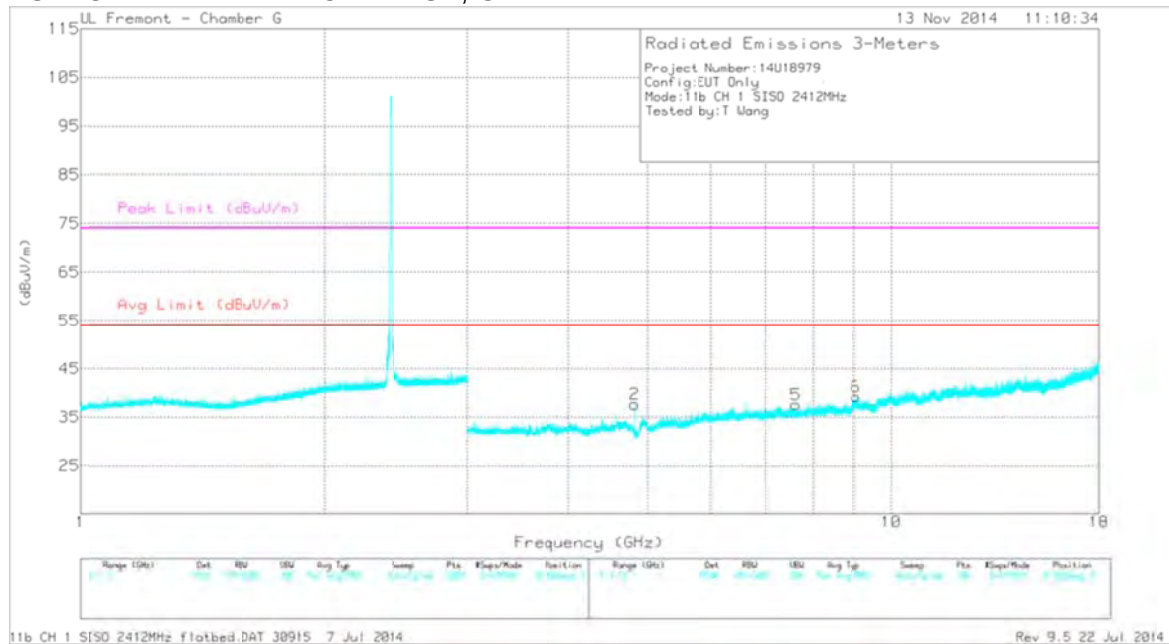


HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT, CH 1



LOW CHANNEL VERTICAL PLOT, CH 1



DATA

Radiated Emissions

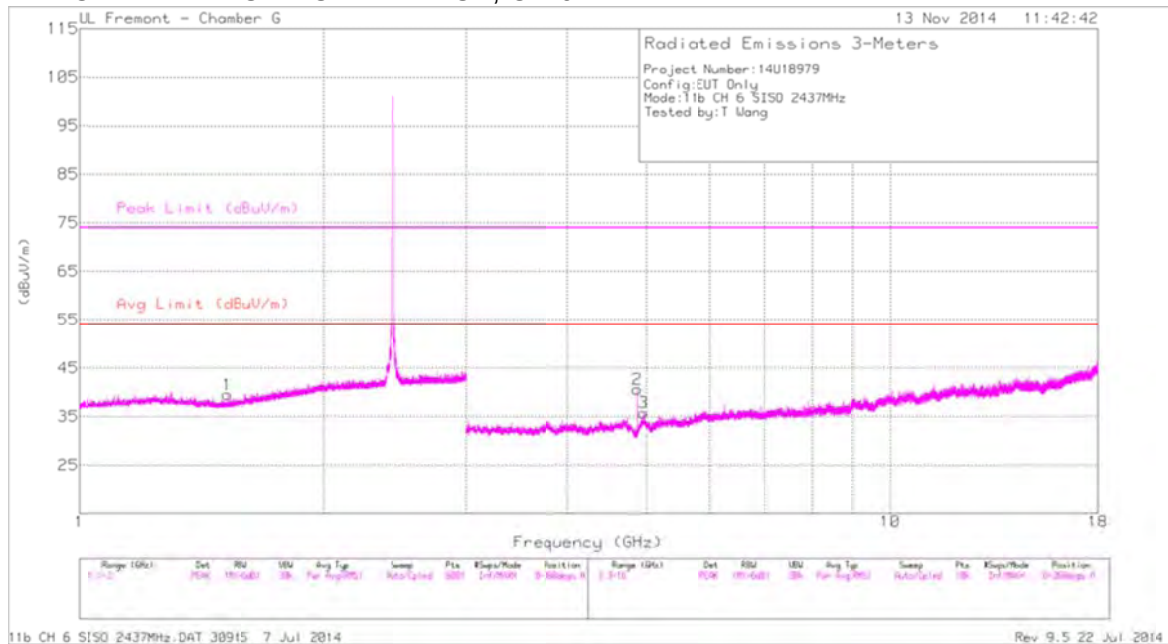
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.826	39.88	PK2	34.1	-33.0	40.98	-	-	74	-33.02	176	121	H
1	* 4.826	28.60	MAv1	34.1	-33.0	29.70	54	-24.30	-	-	176	121	H
2	* 4.824	39.65	PK2	34.1	-33.0	40.75	-	-	74	-33.25	216	102	V
2	* 4.826	28.42	MAv1	34.1	-33.0	29.52	54	-24.48	-	-	216	102	V
3	7.239	33.80	PK2	35.6	-31.0	38.40	-	-	-	-	216	102	H
4	8.713	32.26	PK2	36.0	-29.4	38.86	-	-	-	-	216	102	H
5	* 7.619	39.46	PK2	35.6	-30.8	44.26	-	-	74	-29.74	216	102	V
5	* 7.620	28.34	MAv1	35.6	-30.9	33.04	54	-20.96	-	-	216	102	V
6	* 9.036	37.75	PK2	36.4	-28.2	45.95	-	-	74	-28.05	216	102	V
6	* 9.037	27.20	MAv1	36.4	-28.2	35.40	54	-18.60	-	-	216	102	V

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

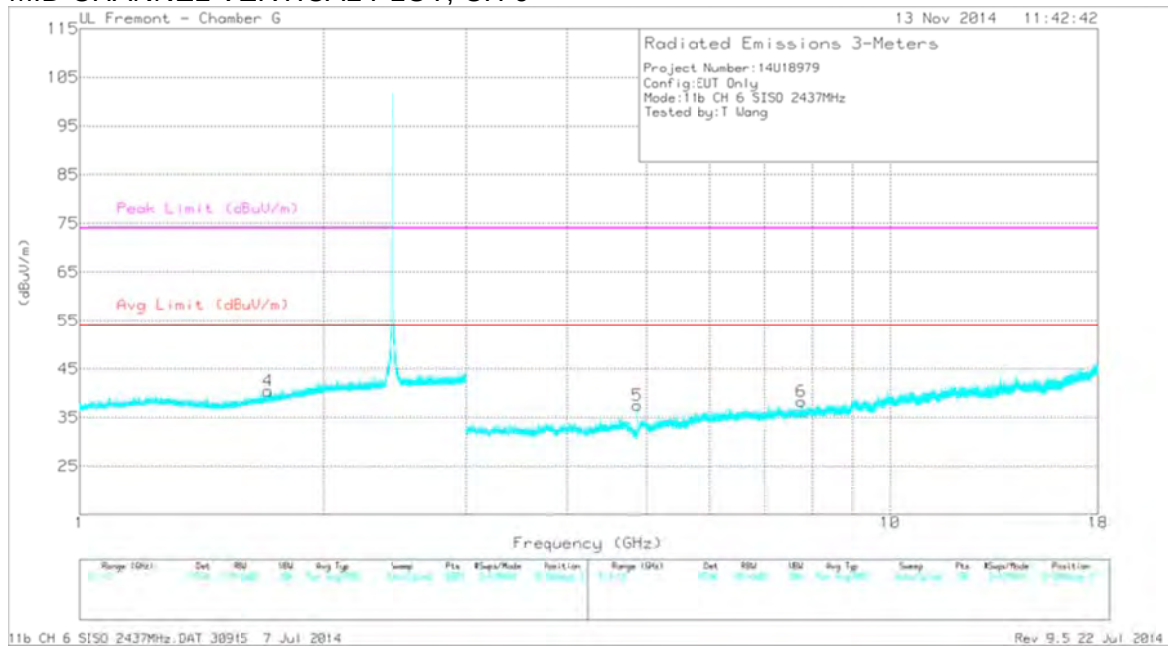
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL PLOT, CH 6



MID CHANNEL VERTICAL PLOT, CH 6



DATA

Radiated Emissions

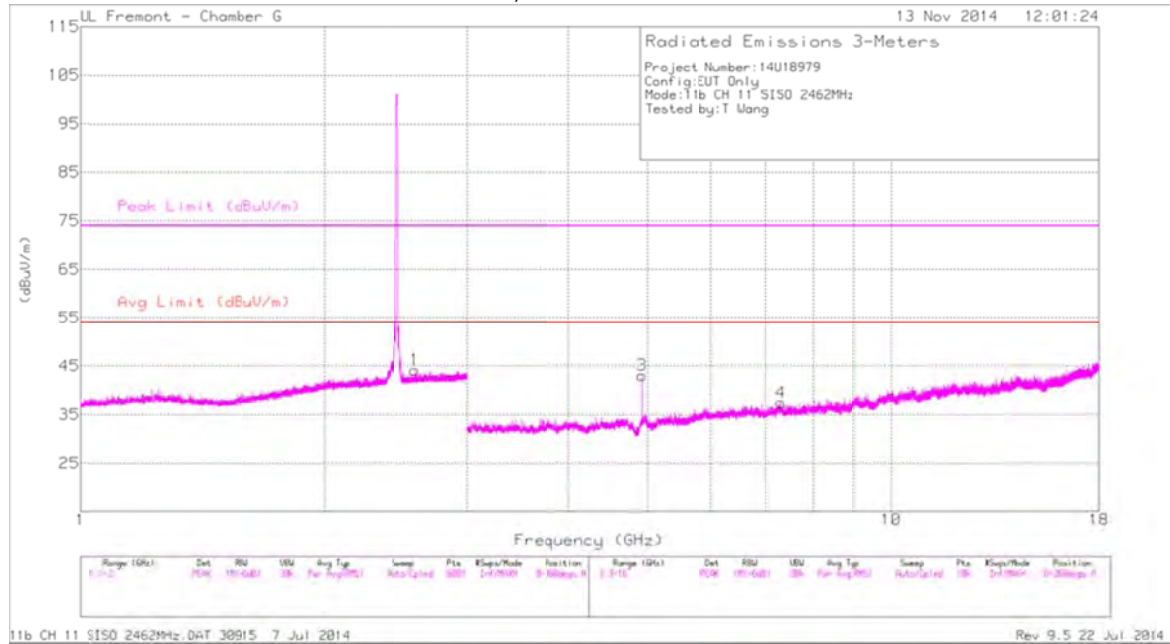
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.521	43.84	PK2	28.0	-25.6	46.24	-	-	74	-27.76	92	315	H
1	* 1.519	31.80	MAv1	28.0	-25.6	34.20	54	-19.80	-	-	92	315	H
2	* 4.874	40.95	PK2	34.1	-33.1	41.95	-	-	74	-32.05	92	261	H
2	* 4.874	31.92	MAv1	34.1	-33.1	32.92	54	-21.08	-	-	92	261	H
3	* 4.956	40.91	PK2	34.1	-32.9	42.11	-	-	74	-31.89	92	261	H
3	* 4.955	30.22	MAv1	34.1	-32.9	31.42	54	-22.58	-	-	92	261	H
4	1.710	36.58	PK2	29.3	-25.4	40.48	-	-	-	-	213	110	V
5	* 4.874	42.40	PK2	34.1	-33.1	43.40	-	-	74	-30.60	213	110	V
5	* 4.874	35.11	MAv1	34.1	-33.1	36.11	54	-17.89	-	-	213	110	V
6	7.752	33.34	PK2	35.7	-30.7	38.34	-	-	-	-	213	110	V

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

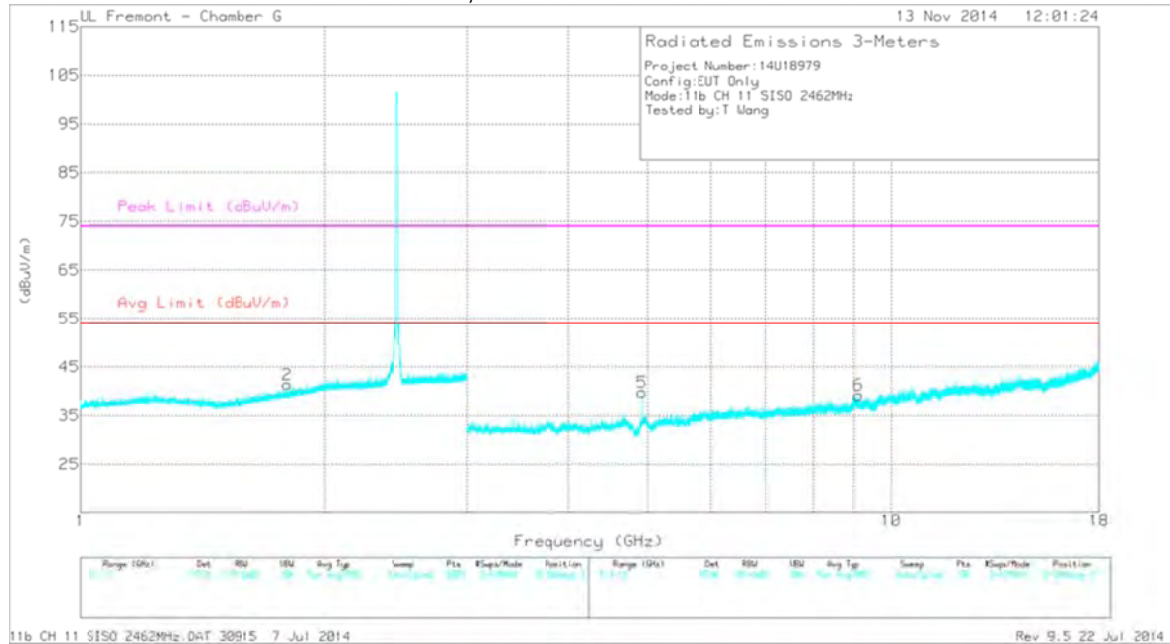
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL PLOT, CH 11



HIGH CHANNEL VERTICAL PLOT, CH 11



DATA

Radiated Emissions

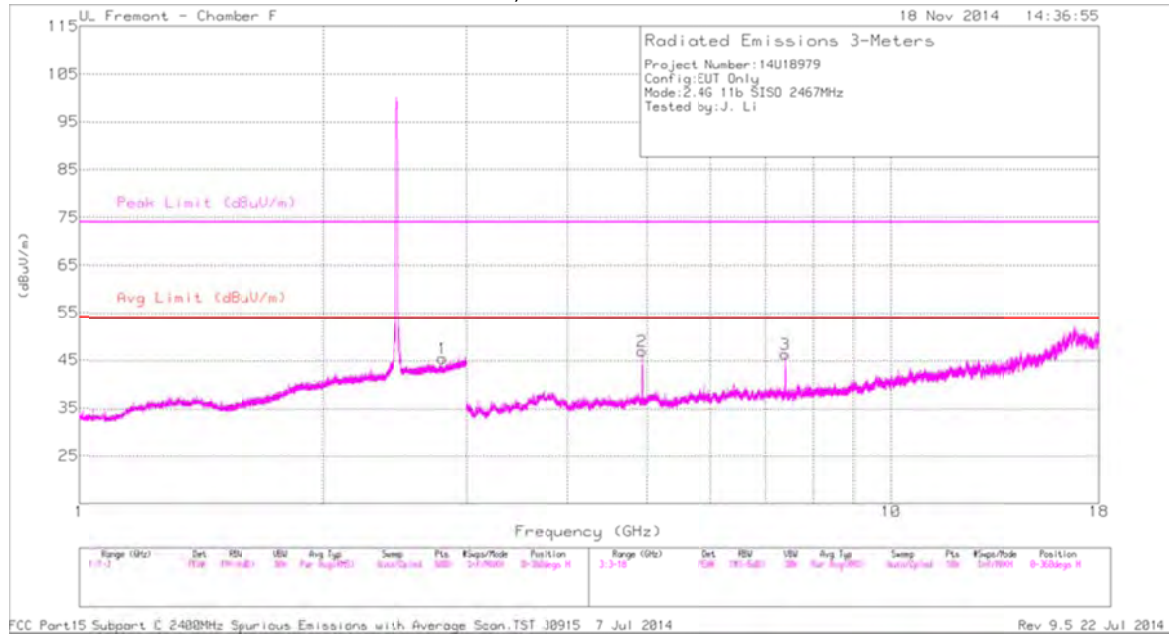
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.591	37.00	PK2	32.1	-24.9	44.2	-	-	-	-	198	174	H
2	1.801	36.89	PK2	29.9	-25.4	41.39	-	-	-	-	148	236	V
3	* 4.924	46.98	PK2	34.1	-33.1	47.98	-	-	74	-26.02	218	111	H
3	* 4.924	42.79	MAv1	34.1	-33.1	43.79	54	-10.21	-	-	218	111	H
4	* 7.303	39.66	PK2	35.6	-30.8	44.46	-	-	74	-29.54	218	111	H
4	* 7.303	28.87	MAv1	35.6	-30.8	33.67	54	-20.33	-	-	218	111	H
5	* 4.924	44.91	PK2	34.1	-33.1	45.91	-	-	74	-28.09	110	118	V
5	* 4.924	37.31	MAv1	34.1	-33.1	38.31	54	-15.69	-	-	110	118	V
6	* 9.116	37.89	PK2	36.4	-28.9	45.39	-	-	74	-28.61	110	118	V
6	* 9.116	27.38	MAv1	36.4	-28.9	34.88	54	-19.12	-	-	110	118	V

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

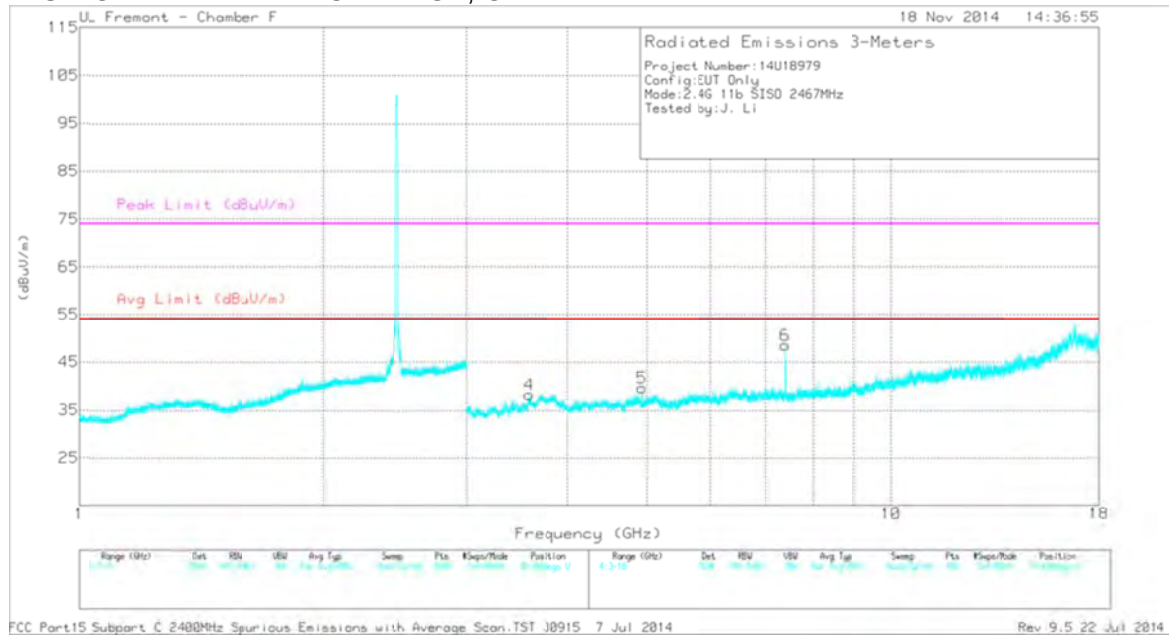
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL PLOT, CH 12



HIGH CHANNEL VERTICAL PLOT, CH 12



DATA

Radiated Emissions

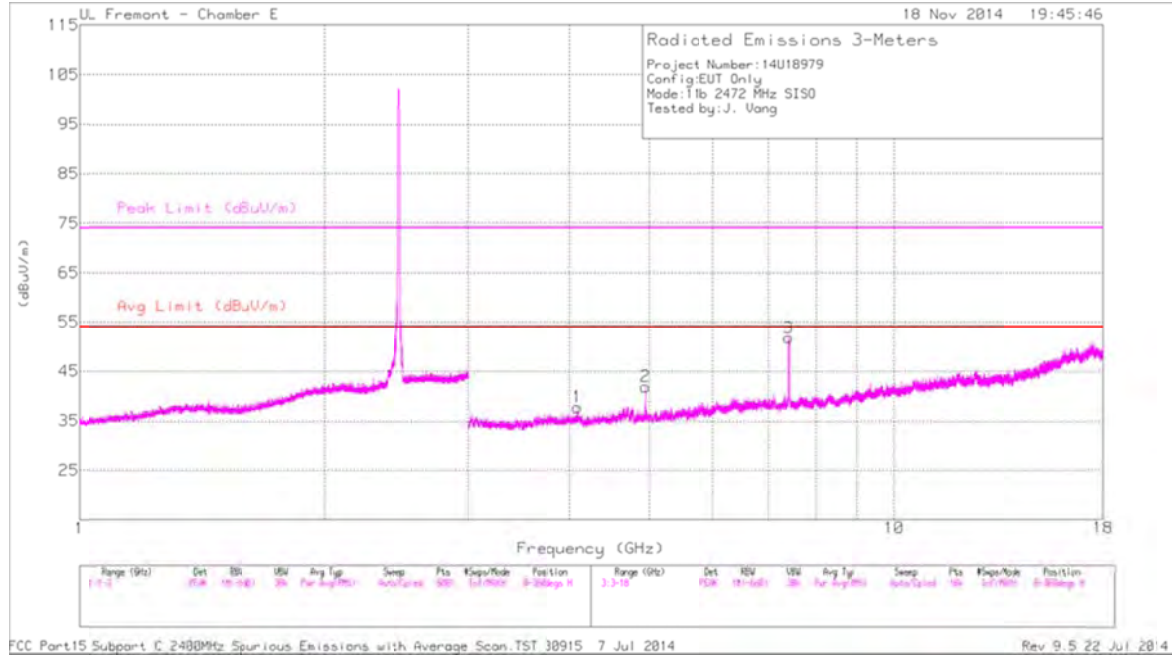
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/ Filt/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.805	41.59	PK2	32.9	-22.8	51.69	-	-	74	-22.31	360	101	H
1	* 2.803	30.12	MAv1	32.9	-22.9	40.12	54	-13.88	-	-	360	101	H
2	* 4.934	42.90	PK2	34.2	-29.1	48.00	-	-	74	-26.00	43	182	H
2	* 4.934	36.86	MAv1	34.2	-29.1	41.96	54	-12.04	-	-	43	182	H
3	* 7.400	38.11	PK2	35.6	-25.7	48.01	-	-	74	-25.99	1	339	H
3	* 7.400	28.84	MAv1	35.6	-25.7	38.74	54	-15.26	-	-	1	339	H
4	* 3.574	38.85	PK2	34.8	-28.5	45.15	-	-	74	-28.85	1	339	V
4	* 3.578	28.10	MAv1	34.8	-28.6	34.30	54	-19.70	-	-	1	339	V
5	* 4.934	41.84	PK2	34.2	-29.1	46.94	-	-	74	-27.06	276	219	V
5	* 4.934	33.75	MAv1	34.2	-29.1	38.85	54	-15.15	-	-	276	219	V
6	* 7.400	38.00	PK2	35.6	-25.7	47.90	-	-	74	-26.10	348	146	V
6	* 7.400	28.59	MAv1	35.6	-25.7	38.49	54	-15.51	-	-	348	146	V

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

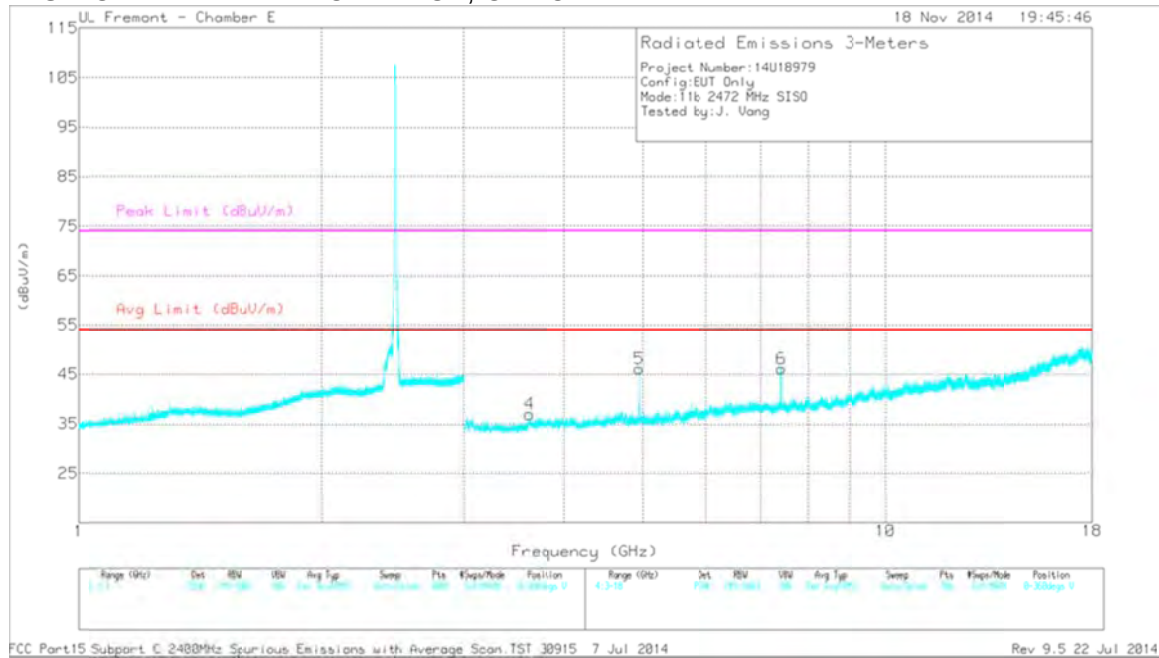
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 13



HIGH CHANNEL VERTICAL PLOT, CH 13



DATA

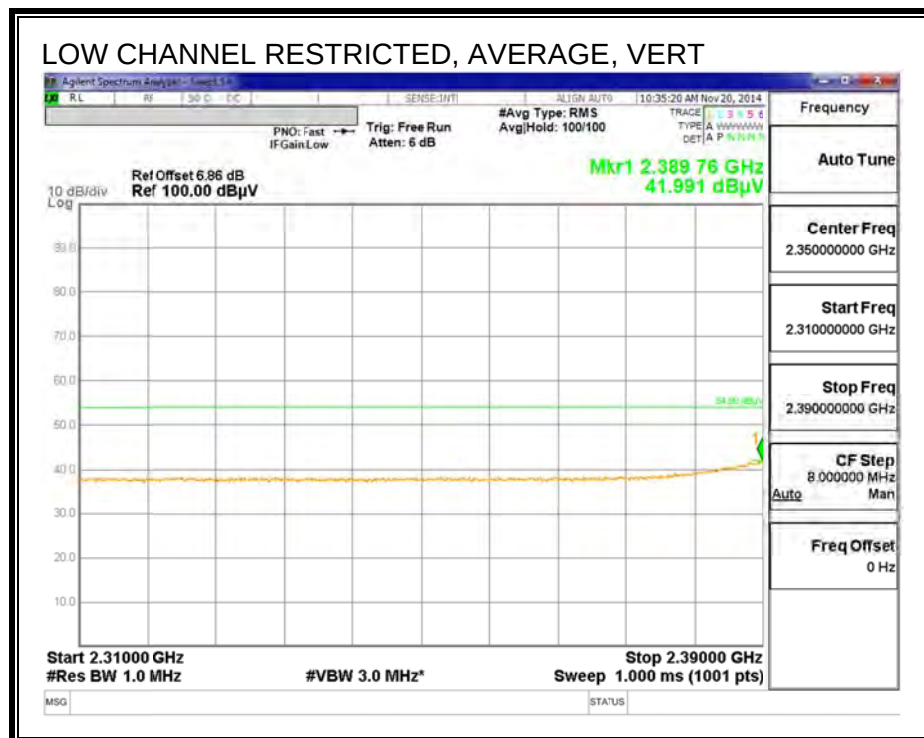
Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.090	40.98	PK2	33.5	-30.6	43.88	-	-	74	-30.12	216	363	H
1	* 4.091	29.76	MAv1	33.5	-30.6	32.66	54	-21.34	-	-	216	363	H
2	* 4.944	41.61	PK2	34.1	-30.2	45.51	-	-	74	-28.49	211	336	H
2	* 4.944	30.44	MAv1	34.1	-30.2	34.34	54	-19.66	-	-	211	336	H
3	* 7.416	44.26	PK2	35.7	-27.6	52.36	-	-	74	-21.64	32	213	H
3	* 7.417	37.46	MAv1	35.7	-27.6	45.56	54	-8.44	-	-	32	213	H
4	* 3.611	42.39	PK2	33.1	-31.7	43.79	-	-	74	-30.21	107	105	V
4	* 3.614	30.60	MAv1	33.1	-31.7	32.00	54	-22	-	-	107	105	V
5	* 4.944	40.61	PK2	34.1	-30.2	44.51	-	-	74	-29.49	125	187	V
5	* 4.944	29.81	MAv1	34.1	-30.2	33.71	54	-20.29	-	-	125	187	V
6	* 7.416	43.97	PK2	35.7	-27.6	52.07	-	-	74	-21.93	337	239	V
6	* 7.417	36.62	MAv1	35.7	-27.6	44.72	54	-9.28	-	-	337	239	V

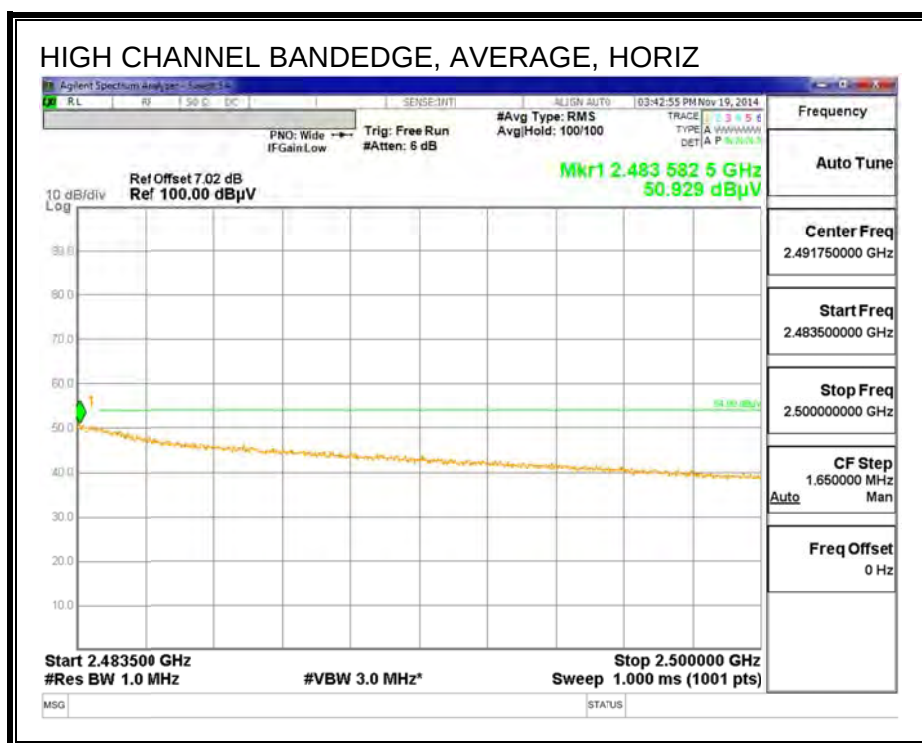
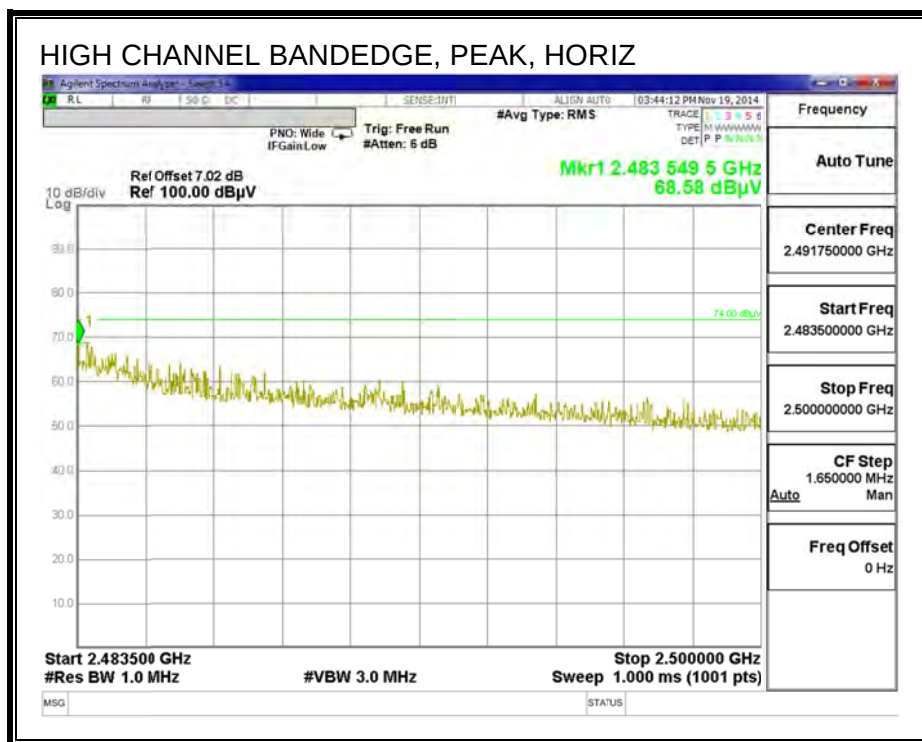
* - indicates frequency in CFR15.205/IC8.10 Restricted Band

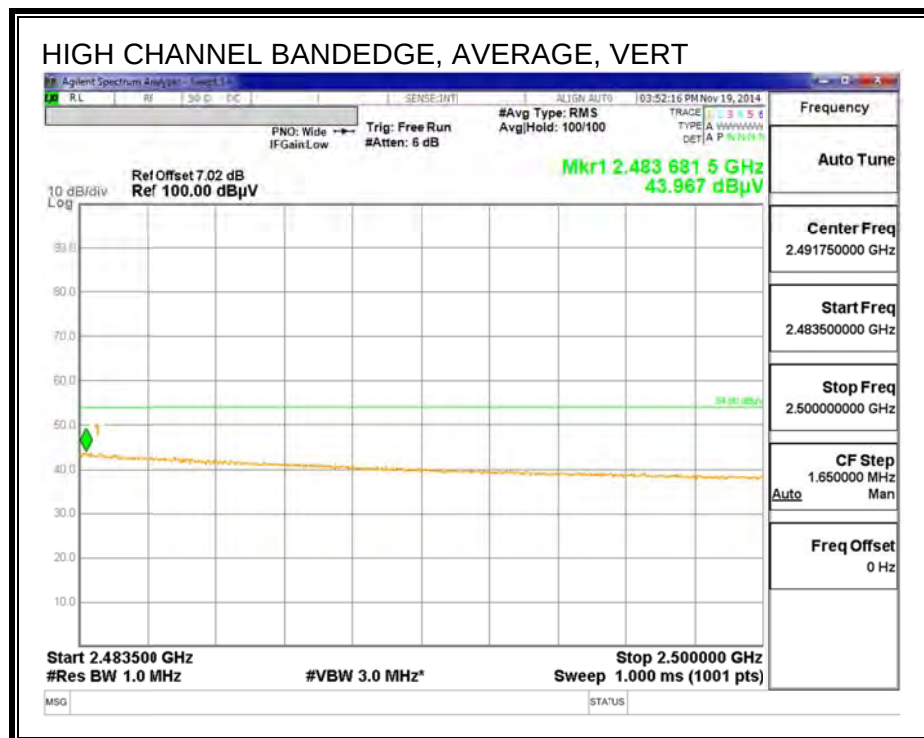
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

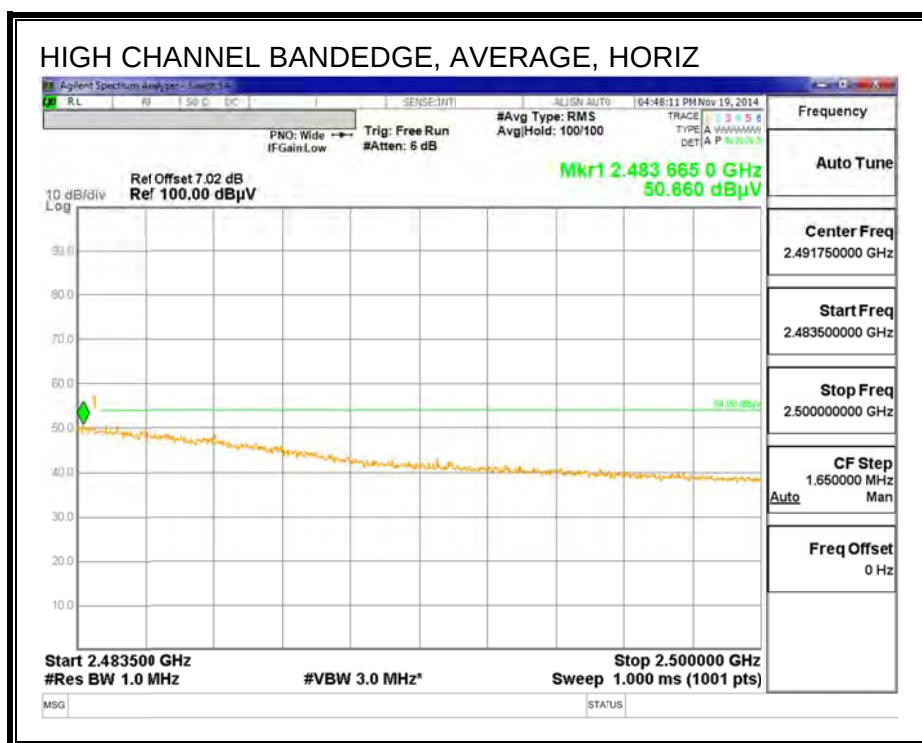
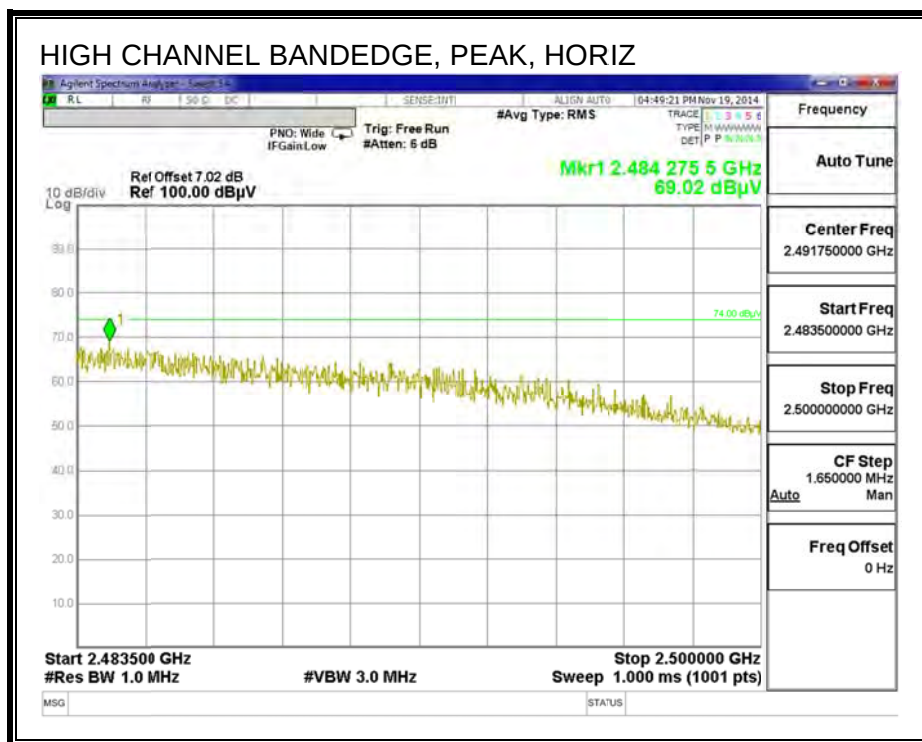


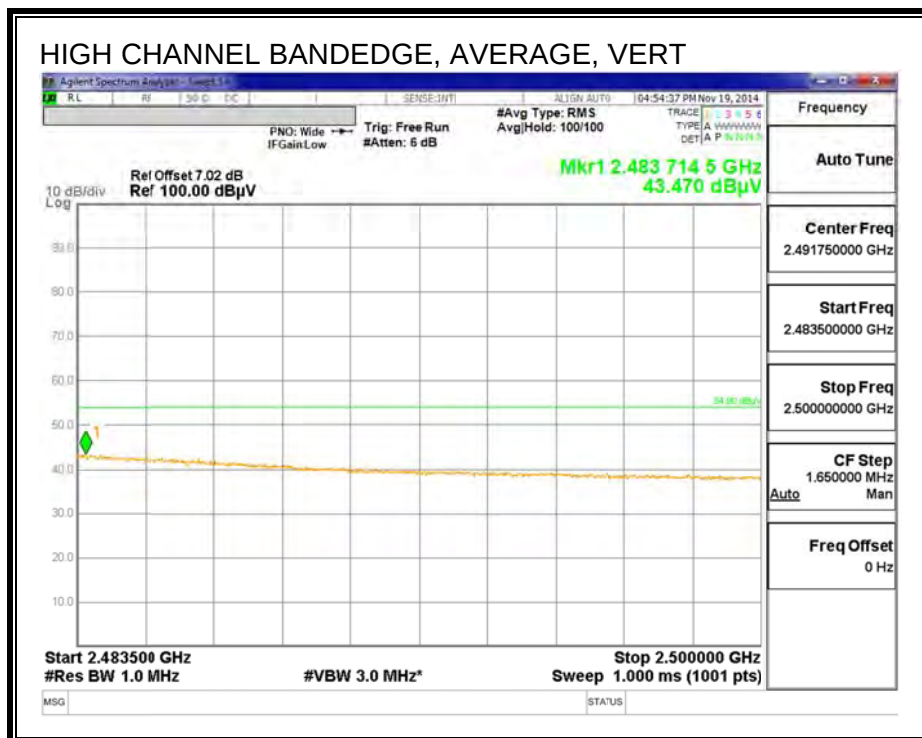
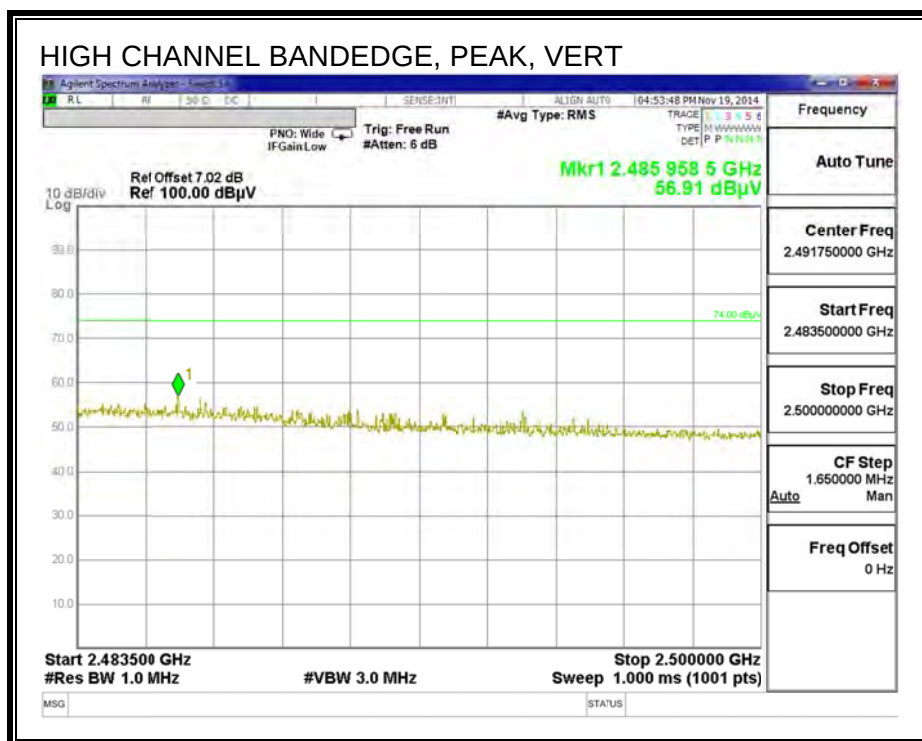
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 11)



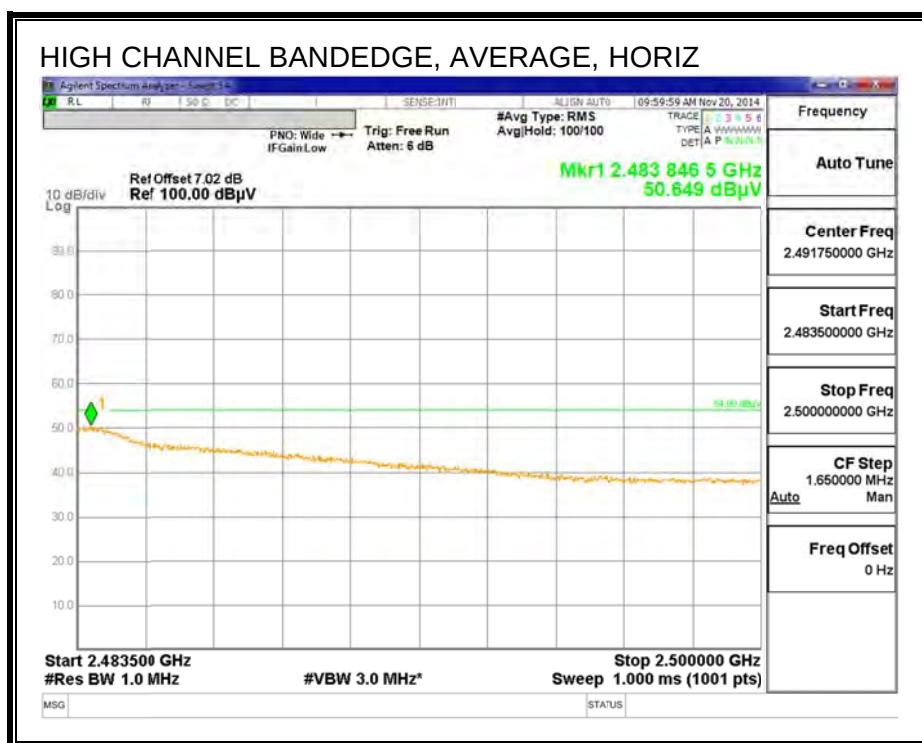
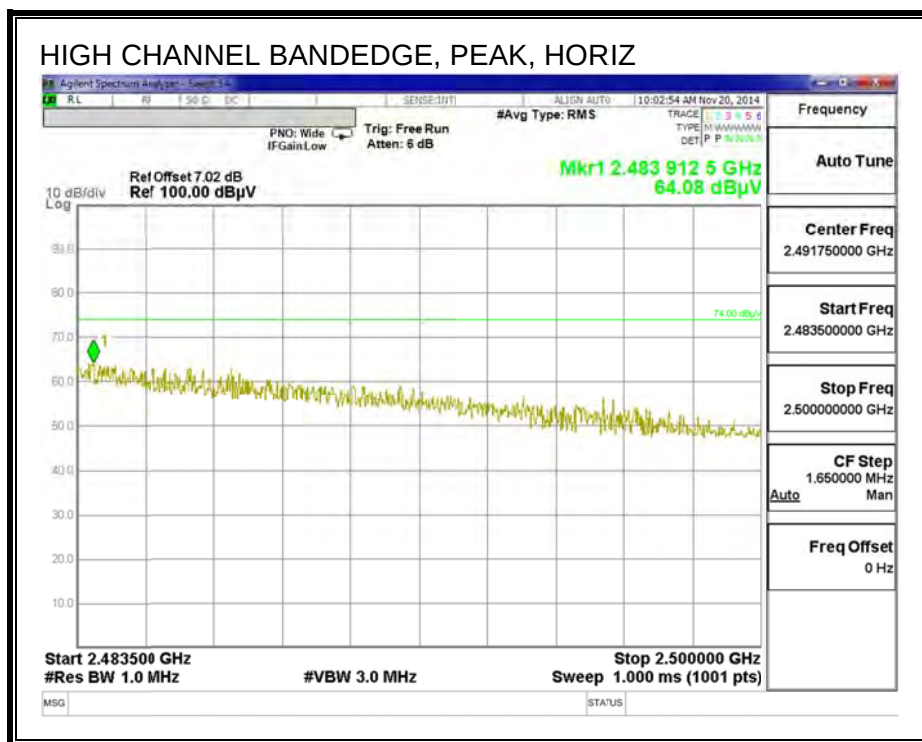


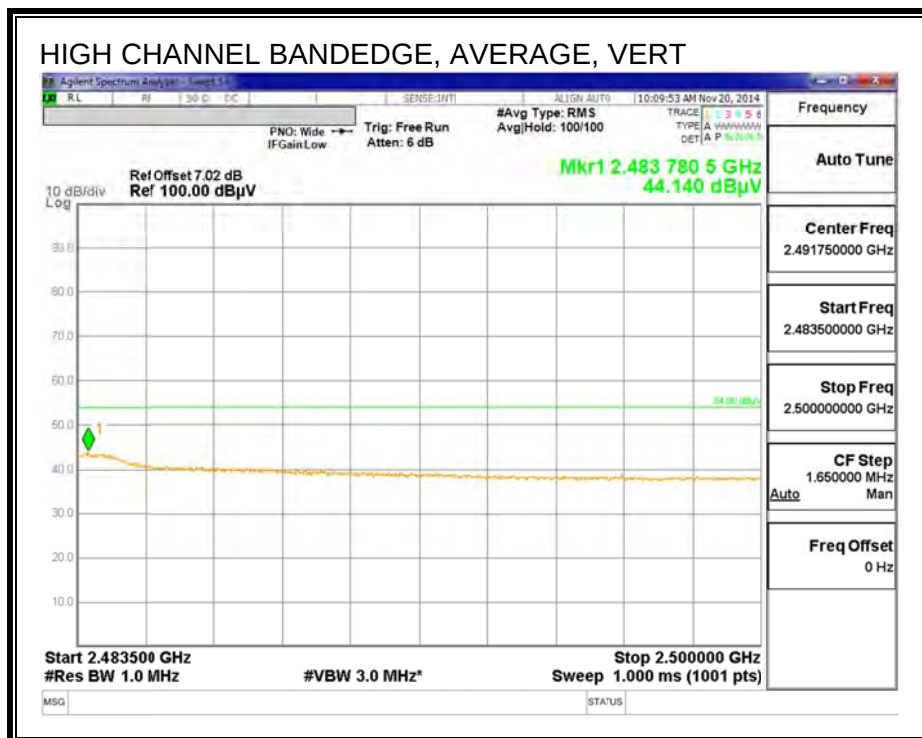
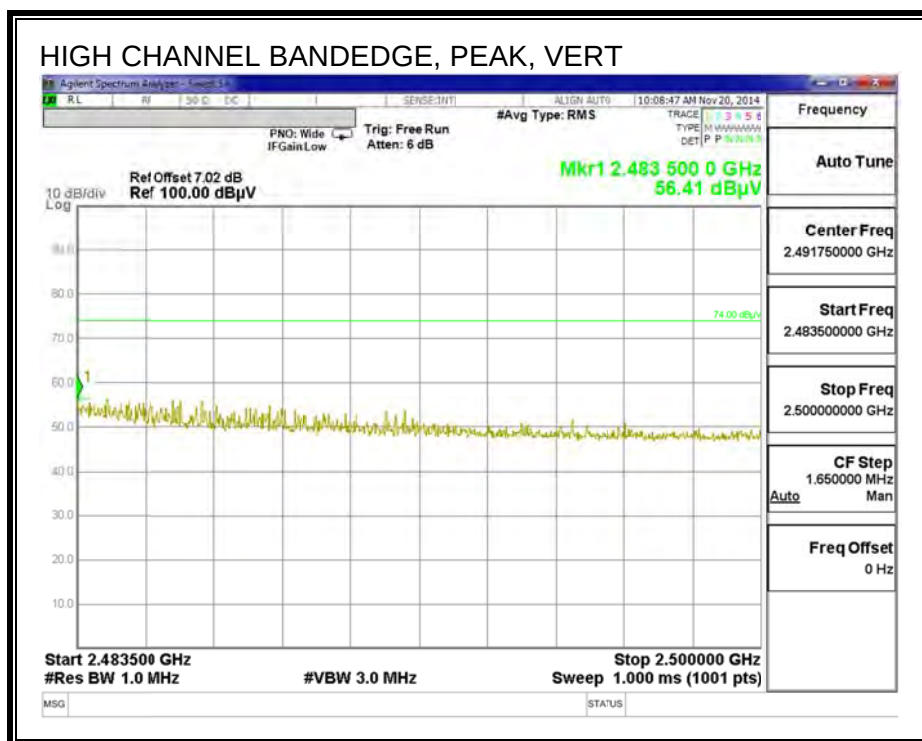
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 12)





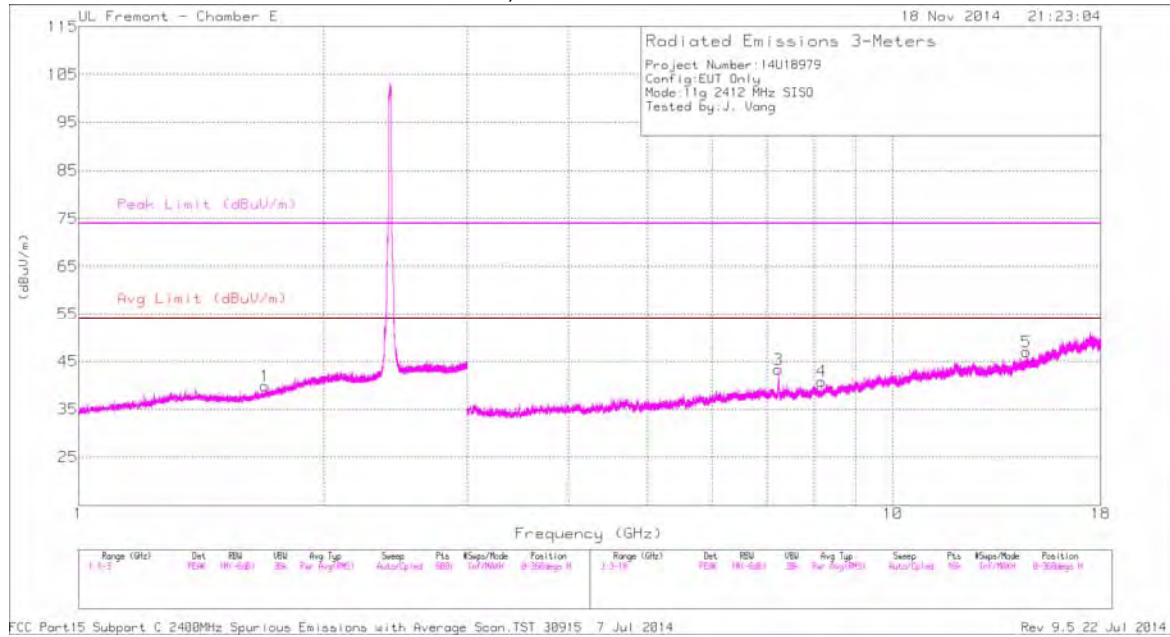
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 13)



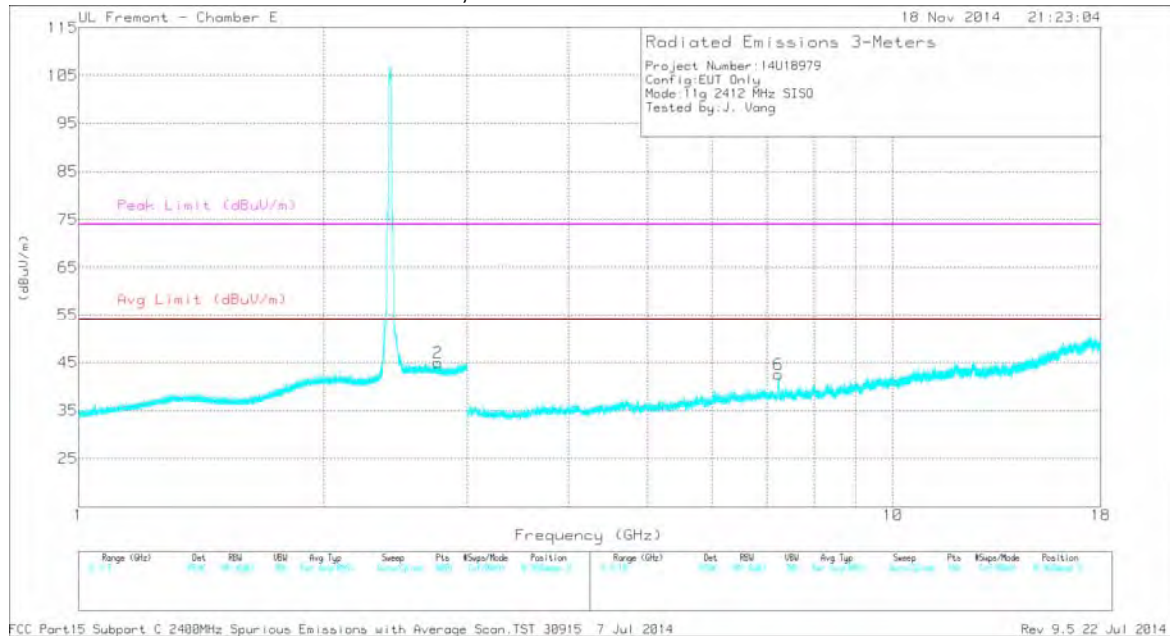


HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT, CH 1



LOW CHANNEL VERTICAL PLOT, CH 1



DATA

Radiated Emissions

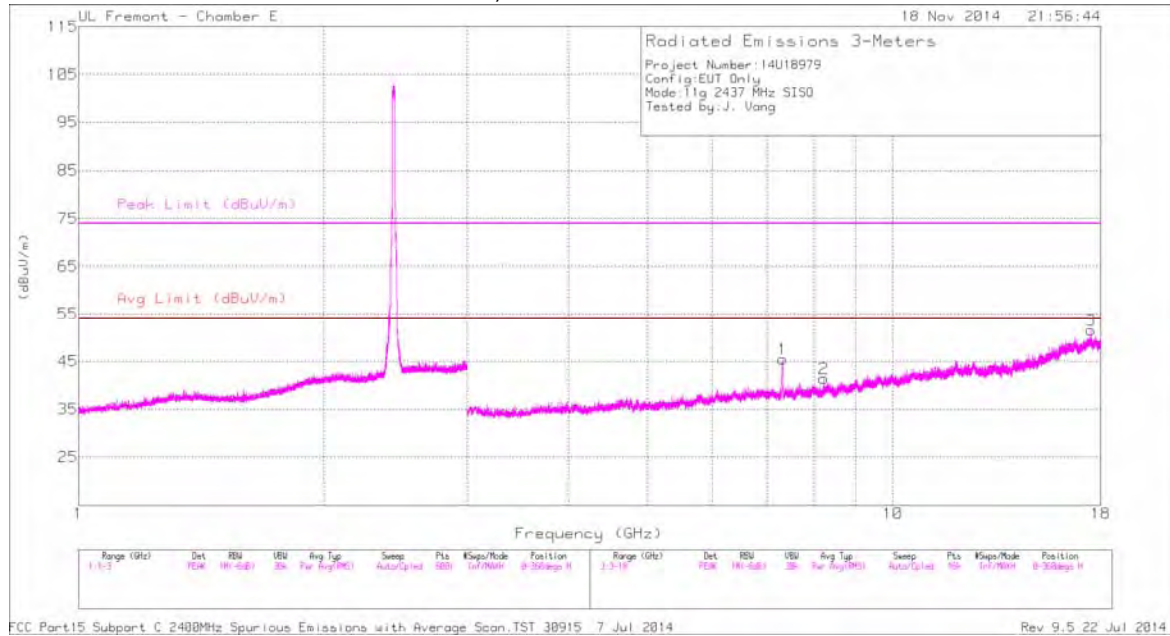
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.696	43.90	PK2	29.1	-26.3	46.70	-	-	74	-27.30	86	253	H
1	* 1.697	32.08	MAv1	29.1	-26.3	34.88	54	-19.12	-	-	86	253	H
2	* 2.765	42.97	PK2	32.4	-24.0	51.37	-	-	74	-22.63	92	133	V
2	* 2.764	31.33	MAv1	32.4	-24.0	39.73	54	-14.27	-	-	92	133	V
3	7.238	38.53	PK2	35.7	-28.4	45.83	-	-	-	-	117	204	H
4	* 8.174	38.74	PK2	35.9	-28.0	46.64	-	-	74	-27.36	98	214	H
4	* 8.174	27.65	MAv1	35.9	-28.0	35.55	54	-18.45	-	-	98	214	H
5	14.594	38.99	PK2	39.4	-24.8	53.59	-	-	-	-	177	293	H
6	7.236	36.06	PK2	35.7	-28.5	42.54	-	-	-	-	186	256	V

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

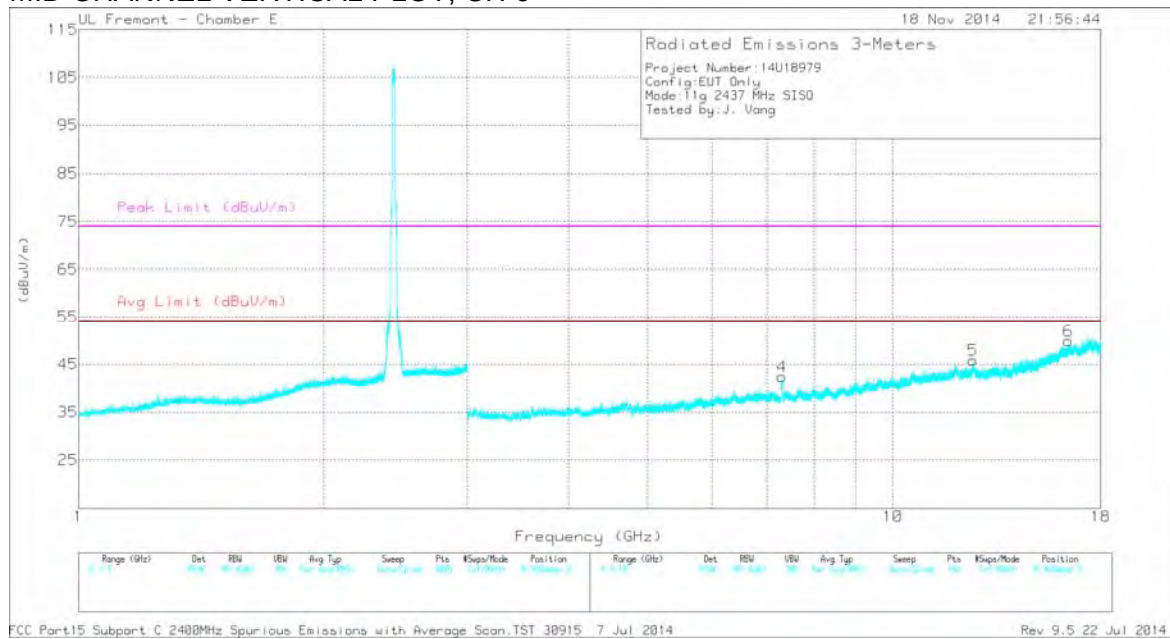
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL HORIZONTAL PLOT, CH 6



MID CHANNEL VERTICAL PLOT, CH 6



DATA

Radiated Emissions

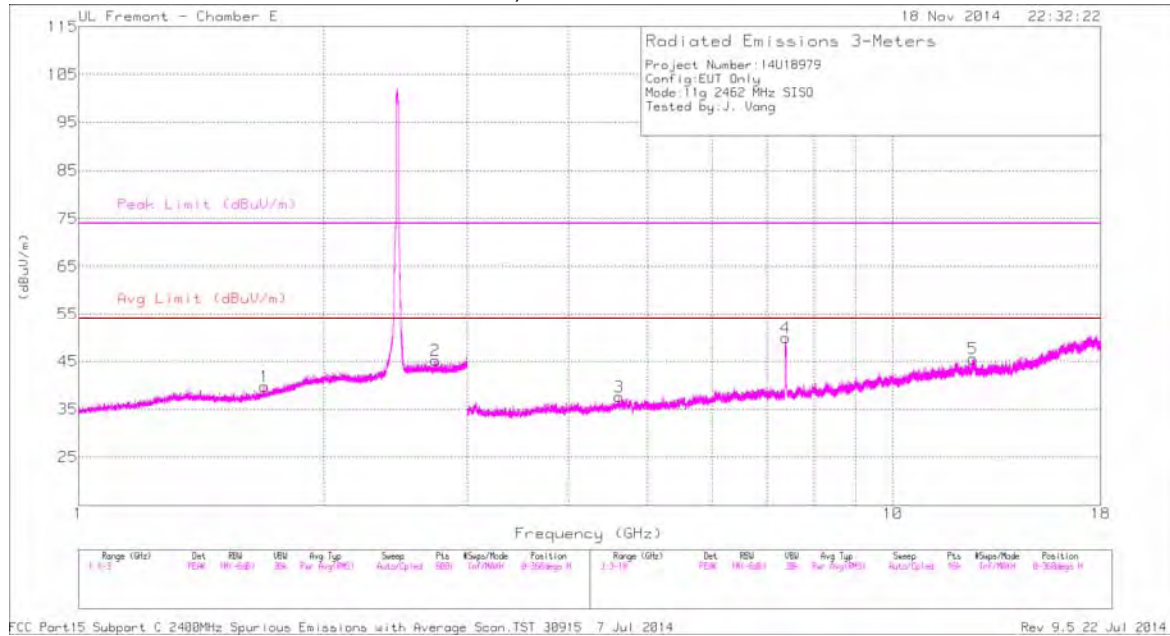
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 7.320	45.55	PK2	35.7	-27.7	53.55	-	-	74	-20.45	46	223	H
1	* 7.319	31.58	MAv1	35.7	-27.7	39.58	54	-14.42	-	-	46	223	H
2	* 8.223	38.41	PK2	35.9	-27.2	47.11	-	-	74	-26.89	174	203	H
2	* 8.221	27.08	MAv1	35.9	-27.2	35.78	54	-18.22	-	-	174	203	H
3	17.504	35.24	PK2	41.1	-18.4	57.94	-	-	-	-	89	248	H
4	* 7.314	42.83	PK2	35.7	-27.8	50.73	-	-	74	-23.27	47	200	V
4	* 7.311	30.54	MAv1	35.7	-27.9	38.34	54	-15.66	-	-	47	200	V
5	* 12.545	36.93	PK2	39.0	-23.1	52.83	-	-	74	-21.17	11	341	V
5	* 12.543	25.33	MAv1	39.0	-23.1	41.23	54	-12.77	-	-	11	341	V
6	16.434	36.23	PK2	41.0	-20.8	56.43	-	-	-	-	201	312	V

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

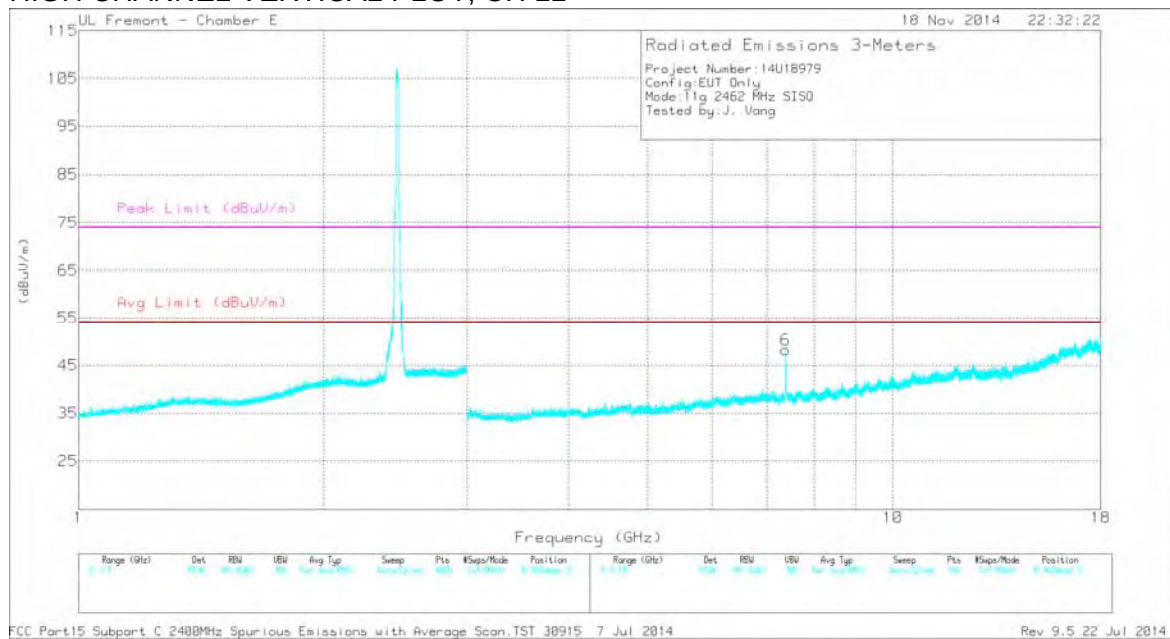
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 11



HIGH CHANNEL VERTICAL PLOT, CH 11



DATA

Radiated Emissions

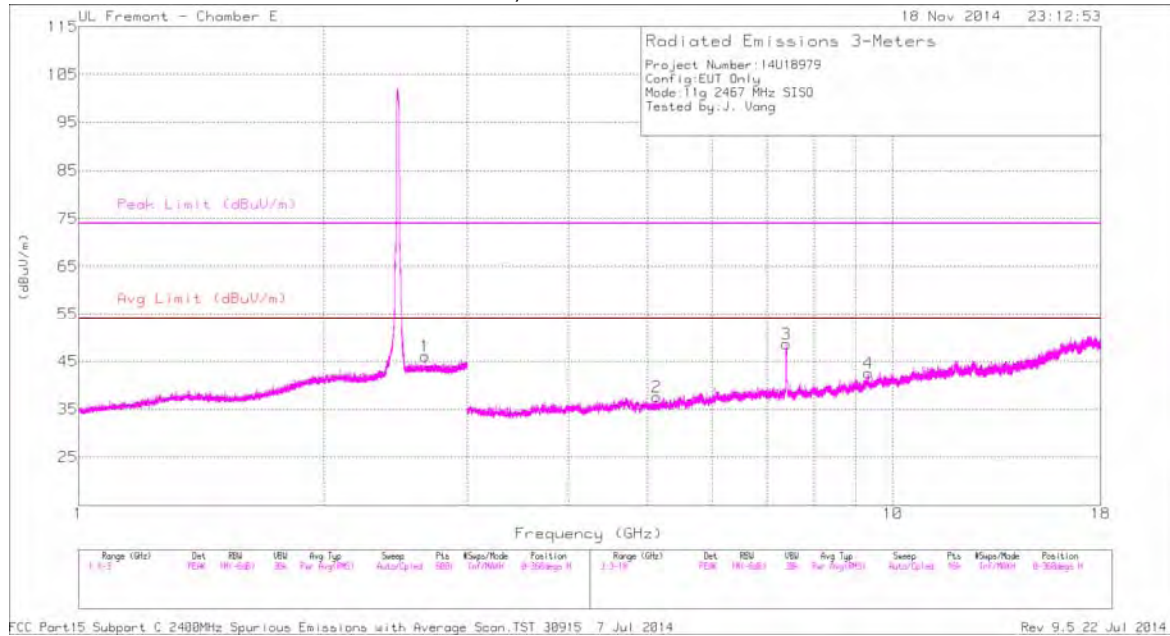
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.694	43.43	PK2	29.1	-26.3	46.23	-	-	74	-27.77	270	316	H
1	* 1.694	32.13	MAv1	29.1	-26.2	35.03	54	-18.97	-	-	270	316	H
2	* 2.745	43.43	PK2	32.4	-23.8	52.03	-	-	74	-21.97	106	181	H
2	* 2.744	31.69	MAv1	32.4	-23.8	40.29	54	-13.71	-	-	106	181	H
3	* 4.612	39.70	PK2	34.1	-30.2	43.60	-	-	74	-30.40	192	219	H
3	* 4.614	28.76	MAv1	34.1	-30.2	32.66	54	-21.34	-	-	192	219	H
4	* 7.385	53.07	PK2	35.7	-26.9	61.87	-	-	74	-12.13	16	216	H
4	* 7.386	39.43	MAv1	35.7	-26.9	48.23	54	-5.77	-	-	16	216	H
5	* 12.540	37.58	PK2	39.0	-23.2	53.38	-	-	74	-20.62	82	293	H
5	* 12.541	25.30	MAv1	39.0	-23.2	41.10	54	-12.90	-	-	82	293	H
6	* 7.388	51.99	PK2	35.7	-26.9	60.79	-	-	74	-13.21	103	218	V
6	* 7.387	38.37	MAv1	35.7	-26.9	47.17	54	-6.83	-	-	103	218	V

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

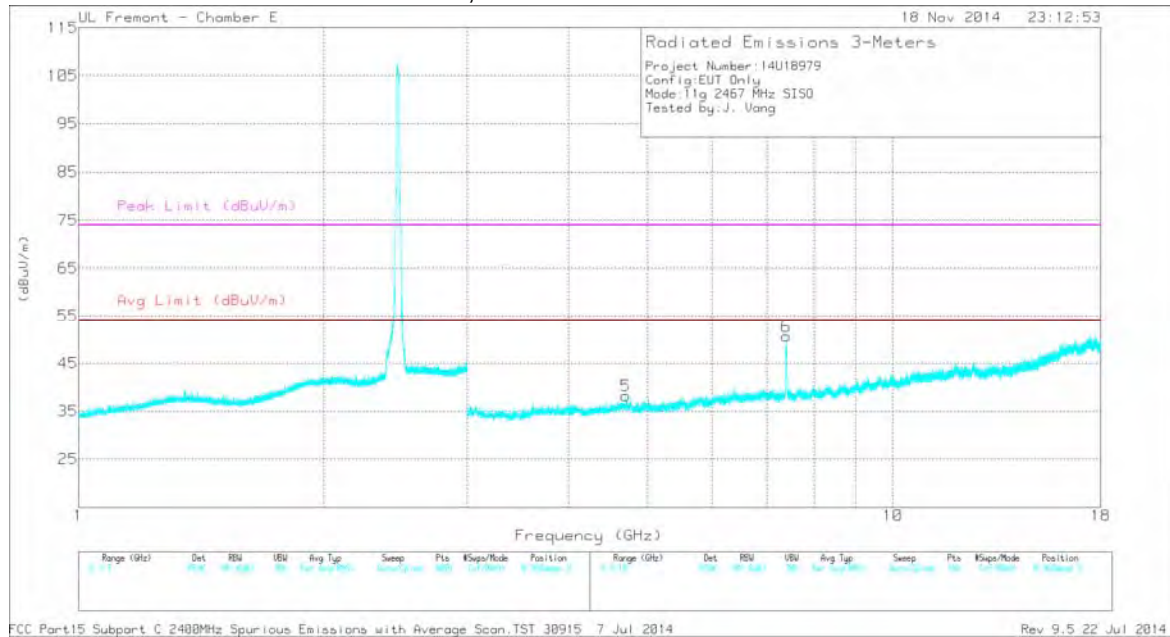
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 12



HIGH CHANNEL VERTICAL PLOT, CH 12



DATA

Radiated Emissions

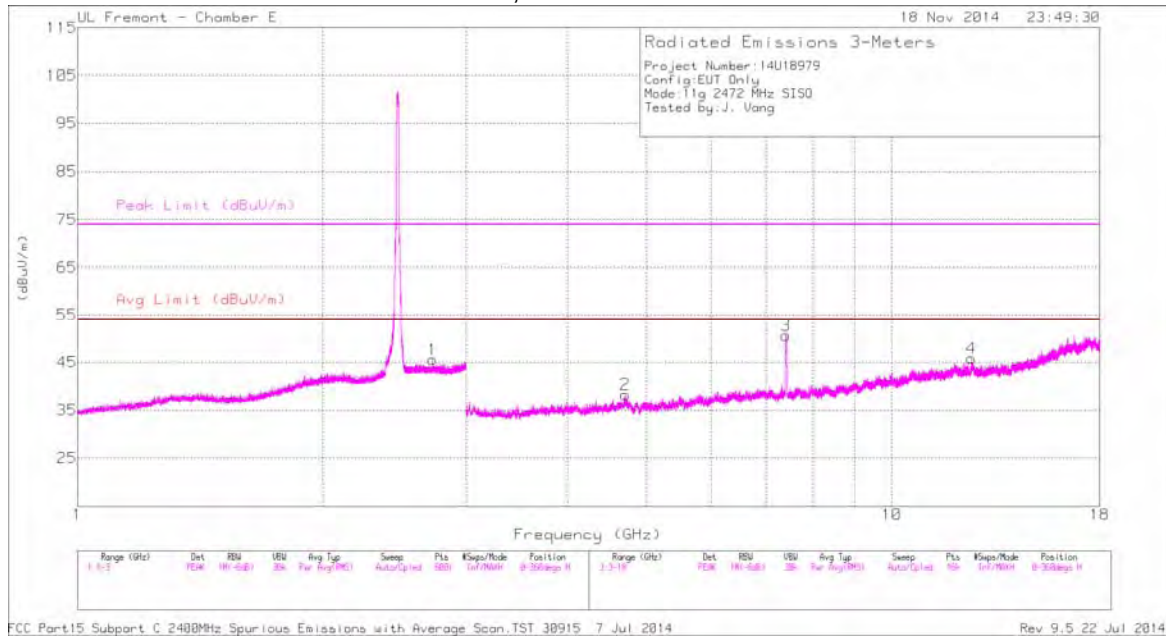
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.663	43.93	PK2	32.5	-23.9	52.53	-	-	74	-21.47	15	231	H
1	* 2.665	31.63	MAv1	32.5	-23.9	40.23	54	-13.77	-	-	15	231	H
2	* 5.126	42.31	PK2	34.2	-30.8	45.71	-	-	74	-28.29	52	235	H
2	* 5.126	29.40	MAv1	34.2	-30.8	32.80	54	-21.20	-	-	52	235	H
3	* 7.401	54.35	PK2	35.7	-27.2	62.85	-	-	74	-11.15	13	131	H
3	* 7.401	40.38	MAv1	35.7	-27.2	48.88	54	-5.12	-	-	13	131	H
4	* 9.330	36.52	PK2	36.7	-24.7	48.52	-	-	74	-25.48	227	391	H
4	* 9.328	25.44	MAv1	36.7	-24.7	37.44	54	-16.56	-	-	227	391	H
5	* 4.700	41.61	PK2	34.2	-30.3	45.51	-	-	74	-28.49	335	232	V
5	* 4.701	30.09	MAv1	34.2	-30.3	33.99	54	-20.01	-	-	335	232	V
6	* 7.403	53.81	PK2	35.7	-27.3	62.21	-	-	74	-11.79	107	215	V
6	* 7.401	40.55	MAv1	35.7	-27.2	49.05	54	-4.95	-	-	107	215	V

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

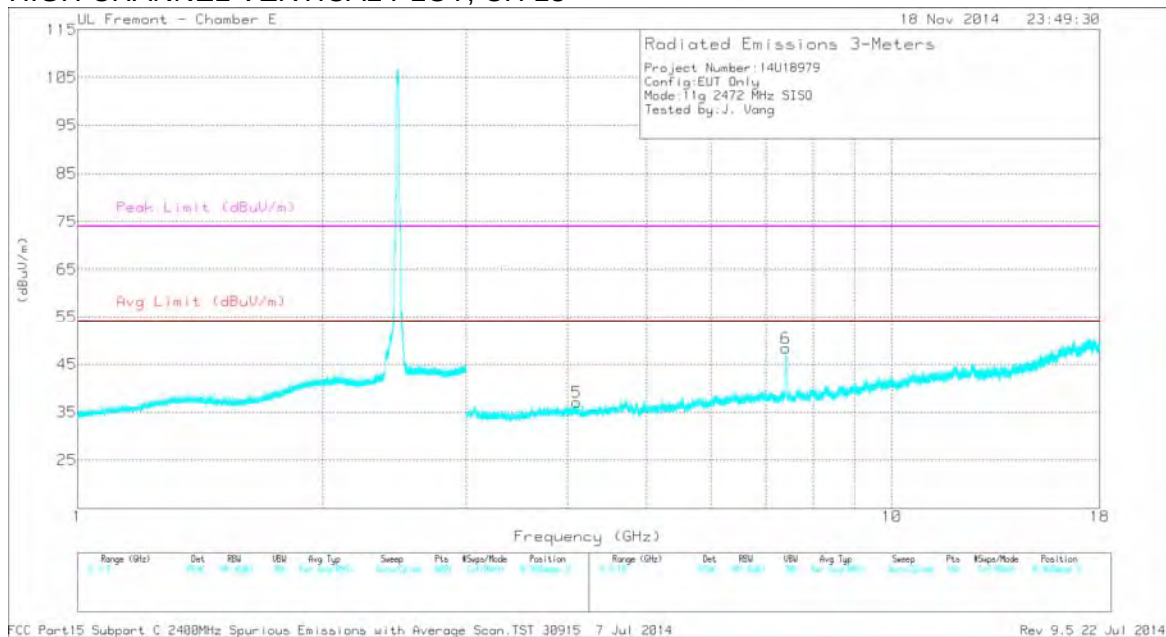
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 13



HIGH CHANNEL VERTICAL PLOT, CH 13



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.728	43.91	PK2	32.5	-24.0	52.41	-	-	74	-21.59	76	378	H
1	* 2.732	31.68	MAv1	32.5	-24.0	40.18	54	-13.82	-	-	76	378	H
2	* 4.706	42.37	PK2	34.2	-30.5	46.07	-	-	74	-27.93	351	237	H
2	* 4.707	30.46	MAv1	34.2	-30.5	34.16	54	-19.84	-	-	351	237	H
3	* 7.411	54.68	PK2	35.7	-27.5	62.88	-	-	74	-11.12	14	173	H
3	* 7.415	41.69	MAv1	35.7	-27.6	49.79	54	-4.21	-	-	14	173	H
4	* 12.525	36.66	PK2	39.0	-23.2	52.46	-	-	74	-21.54	323	164	H
4	* 12.525	25.31	MAv1	39.0	-23.3	41.01	54	-12.99	-	-	323	164	H
5	* 4.100	40.95	PK2	33.5	-30.4	44.05	-	-	74	-29.95	211	185	V
5	* 4.099	29.41	MAv1	33.5	-30.4	32.51	54	-21.49	-	-	211	185	V
6	* 7.421	52.32	PK2	35.7	-27.8	60.22	-	-	74	-13.78	105	371	V
6	* 7.415	39.36	MAv1	35.7	-27.6	47.46	54	-6.54	-	-	105	371	V

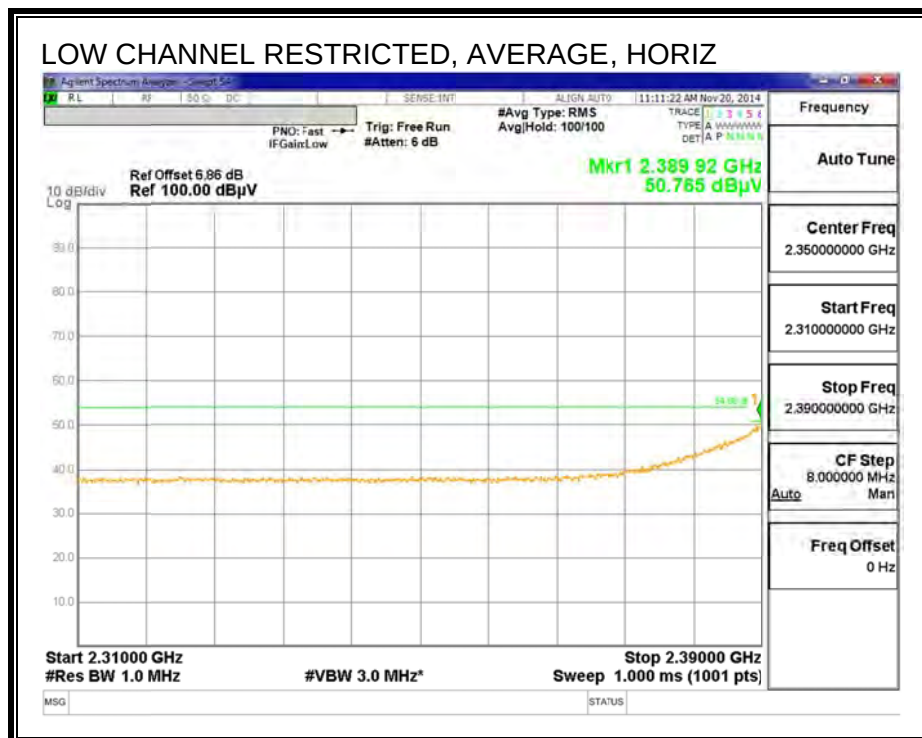
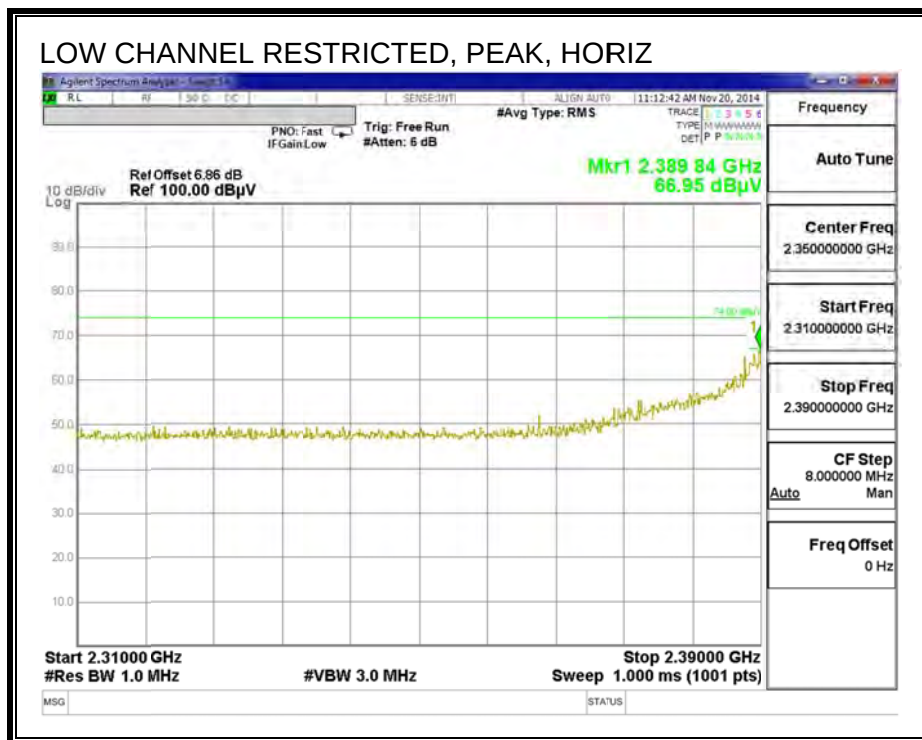
* - indicates frequency in CFR15.205/IC8.10 Restricted Band

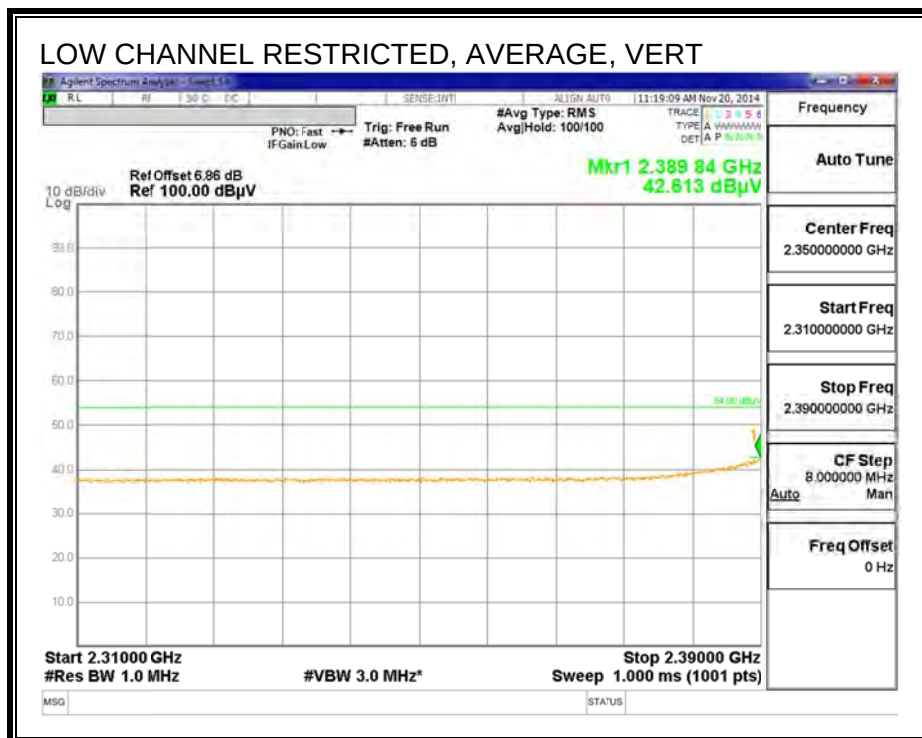
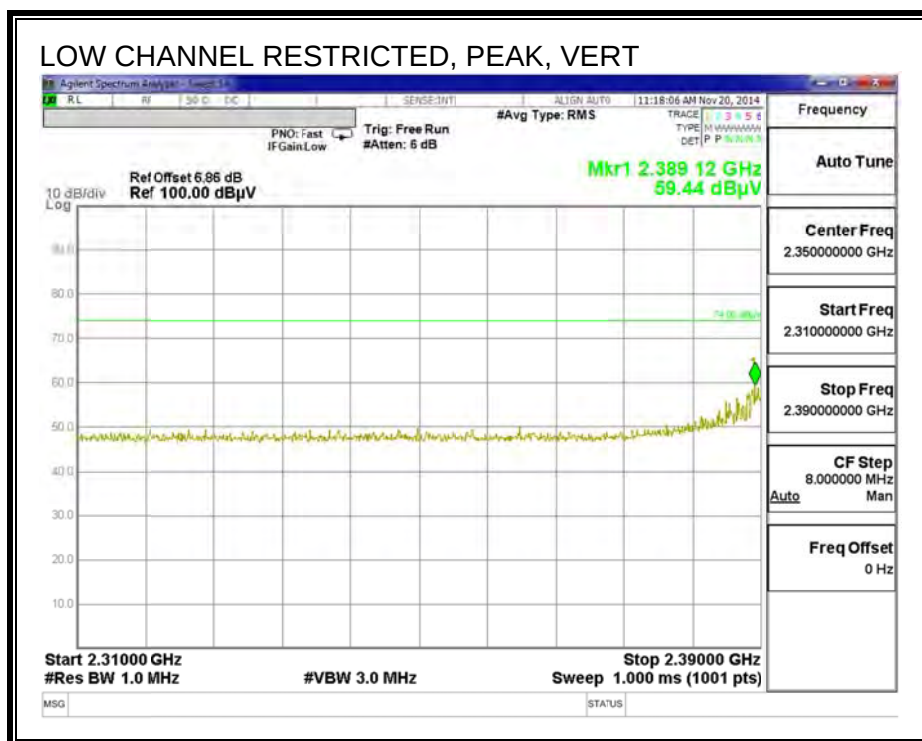
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

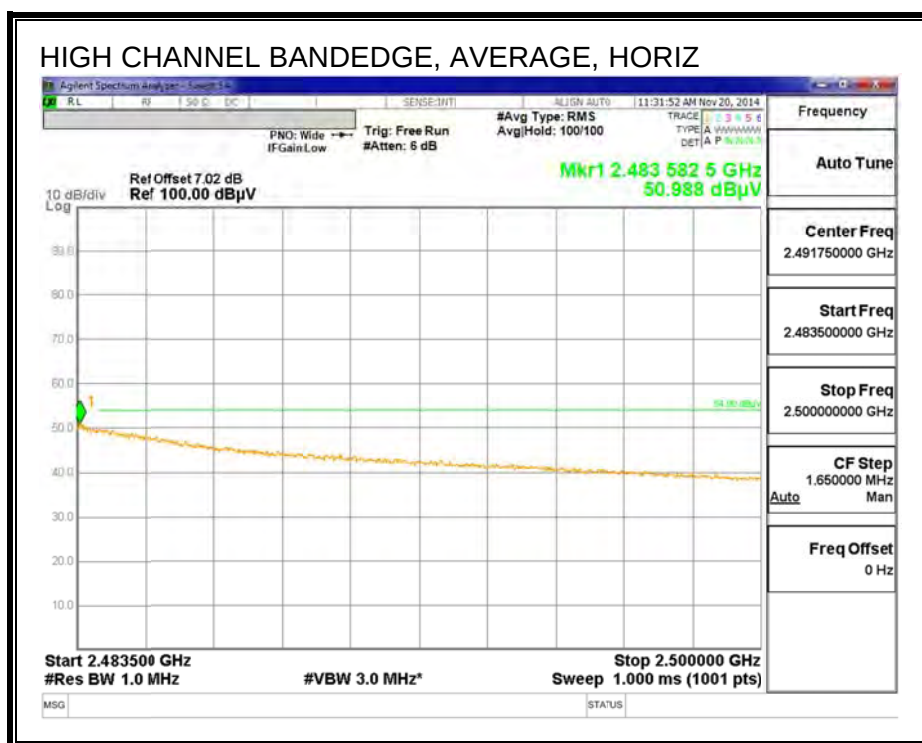
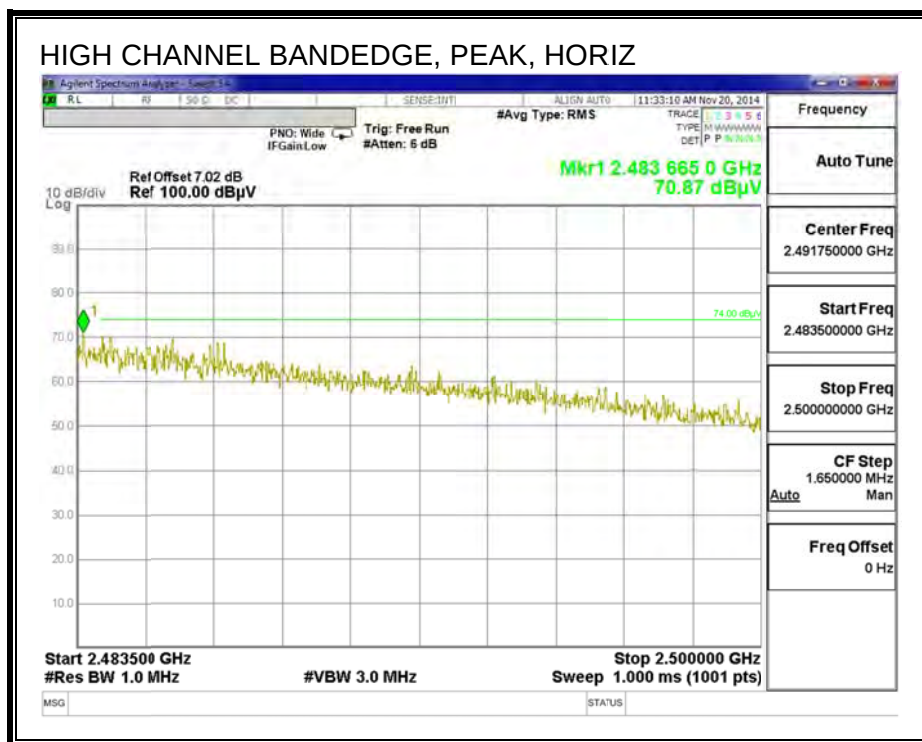
10.2.3. 802.11n HT20 1Tx MODE IN THE 2.4 GHz BAND

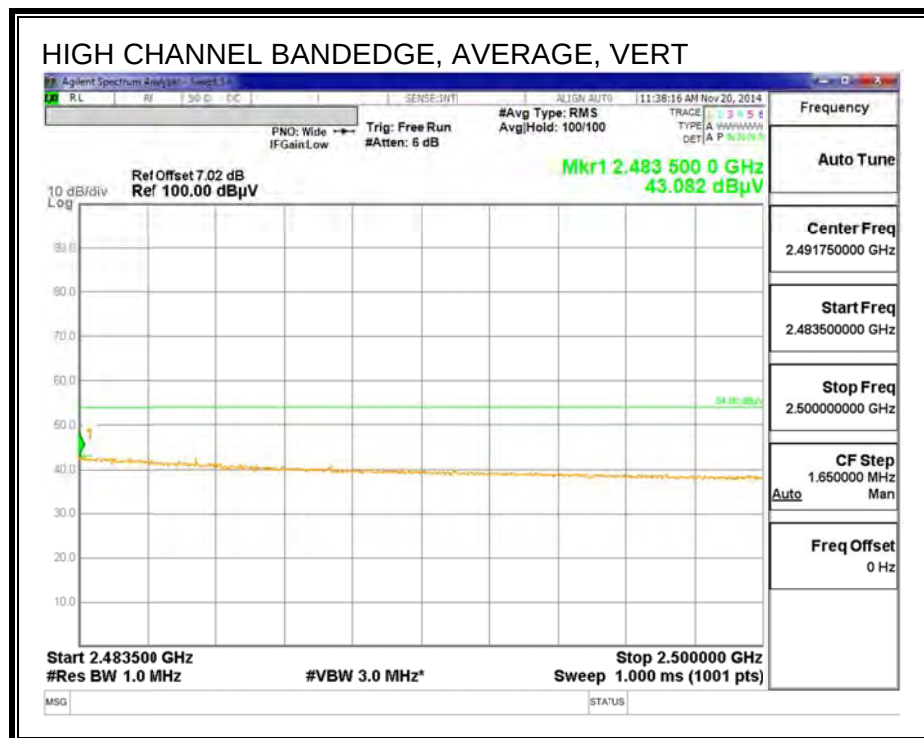
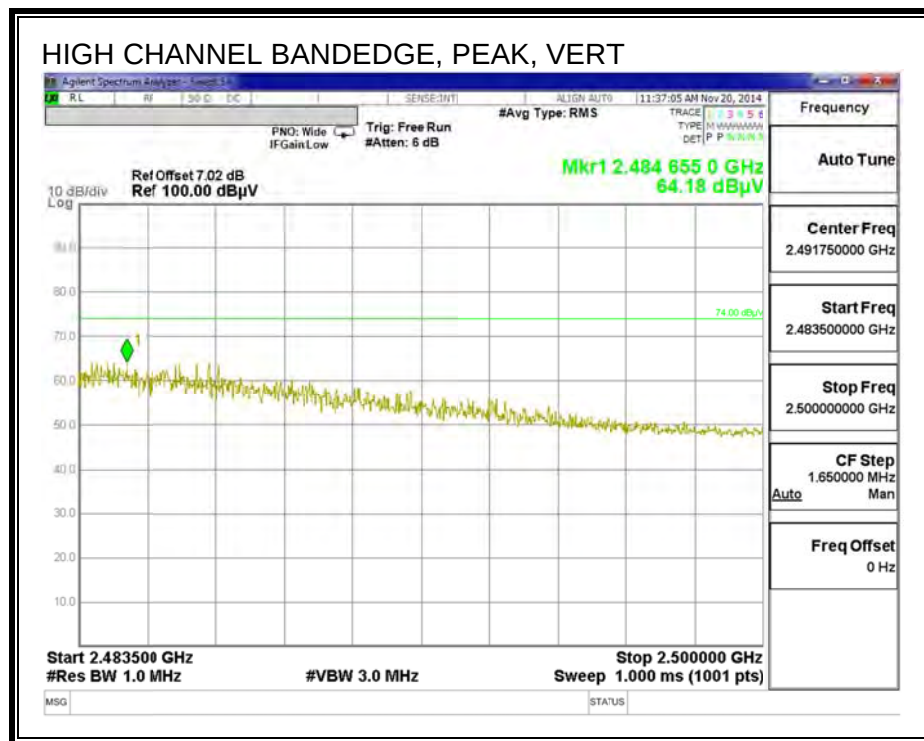
RESTRICTED BANDEDGE (LOW CHANNEL, CHANNEL 1)



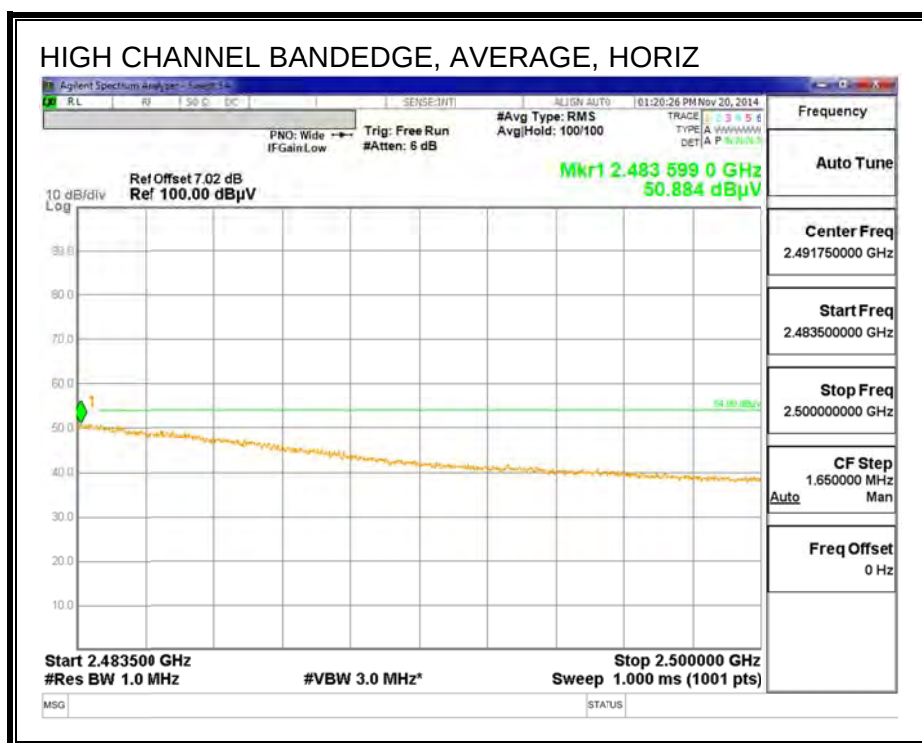
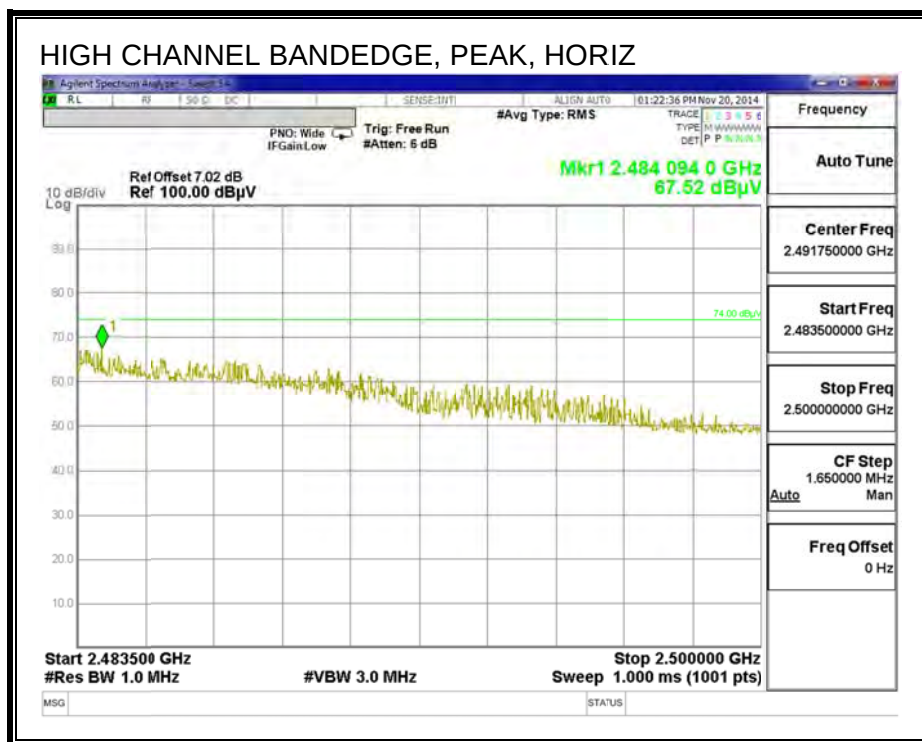


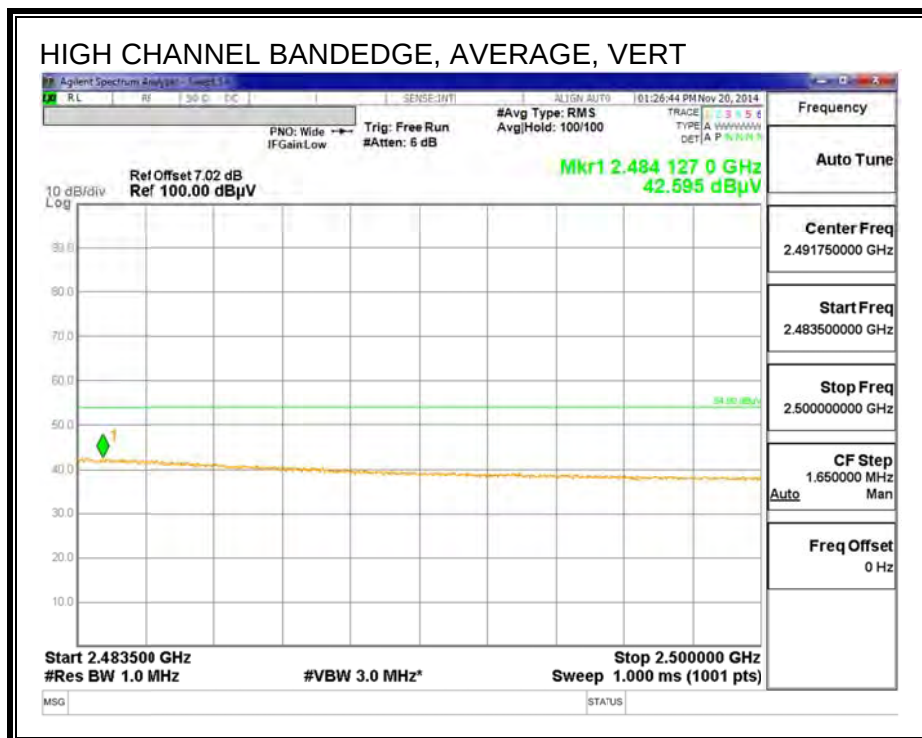
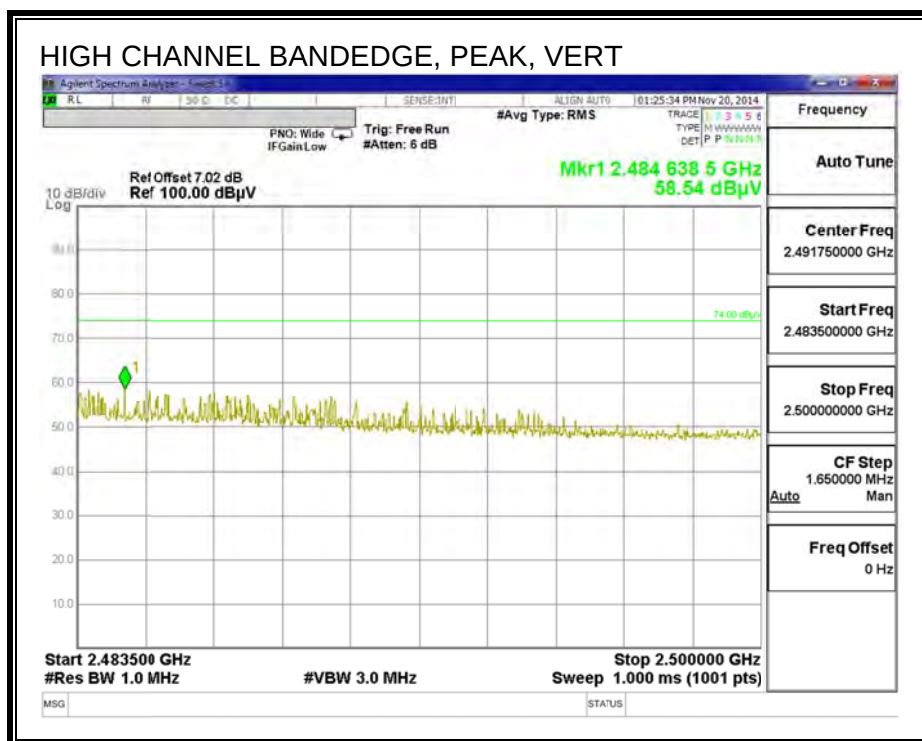
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 11)



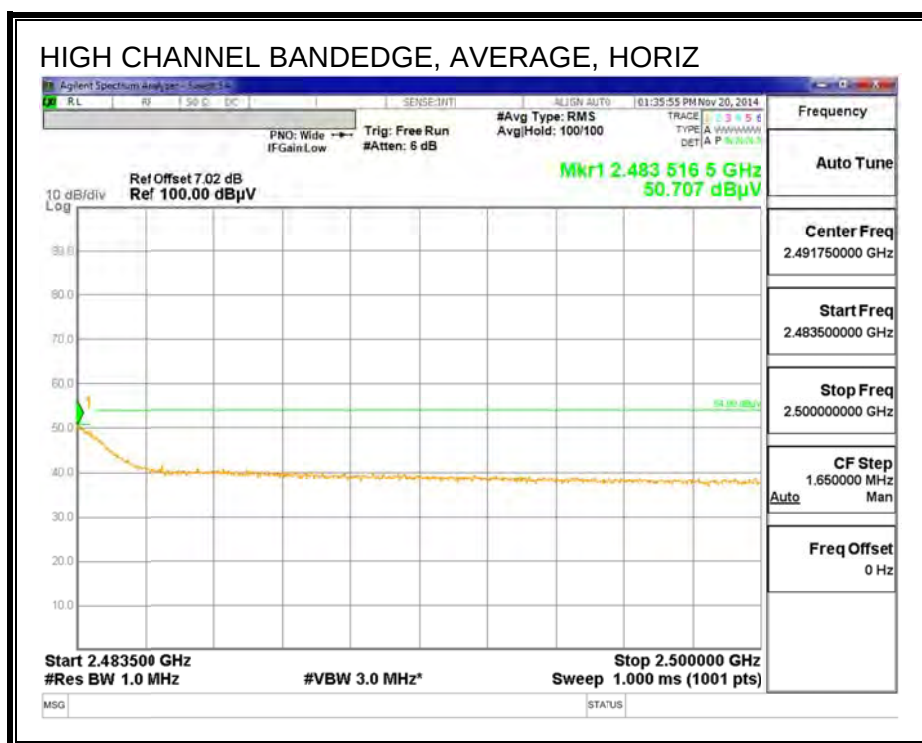
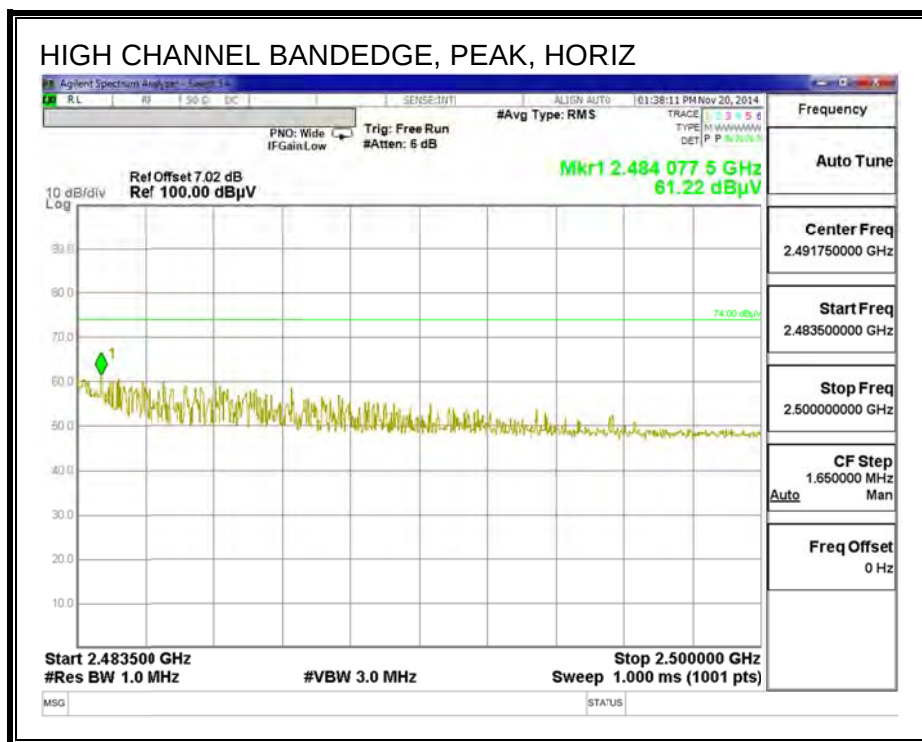


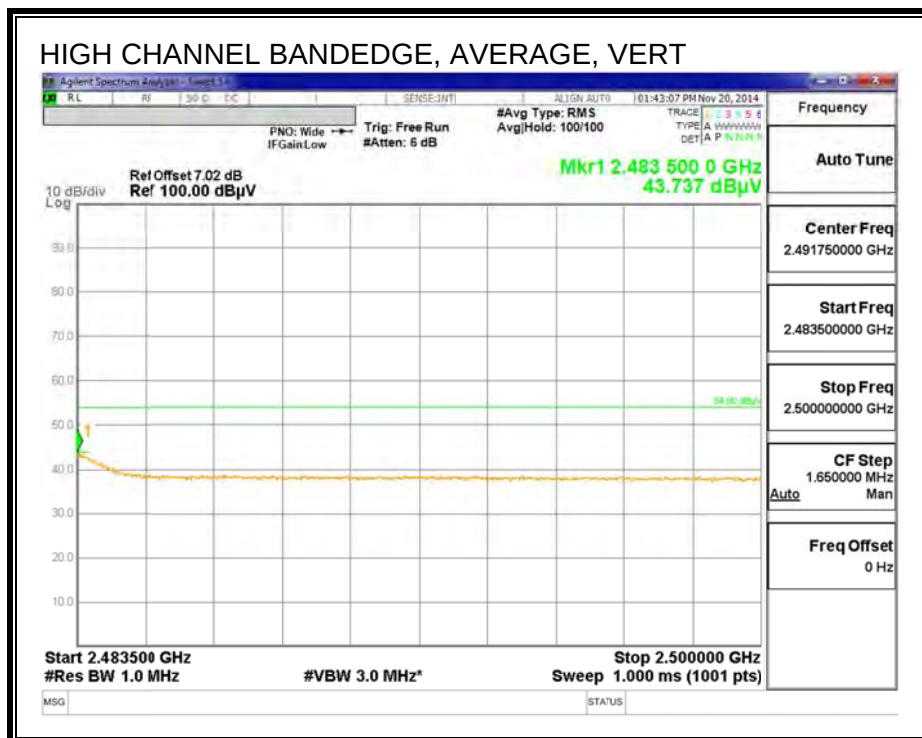
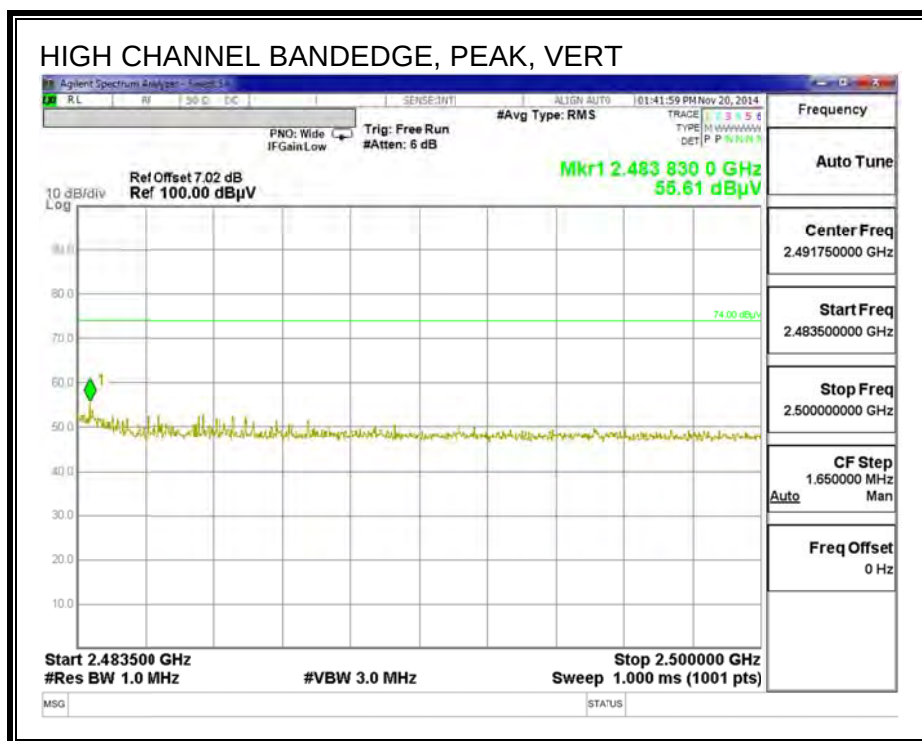
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 12)





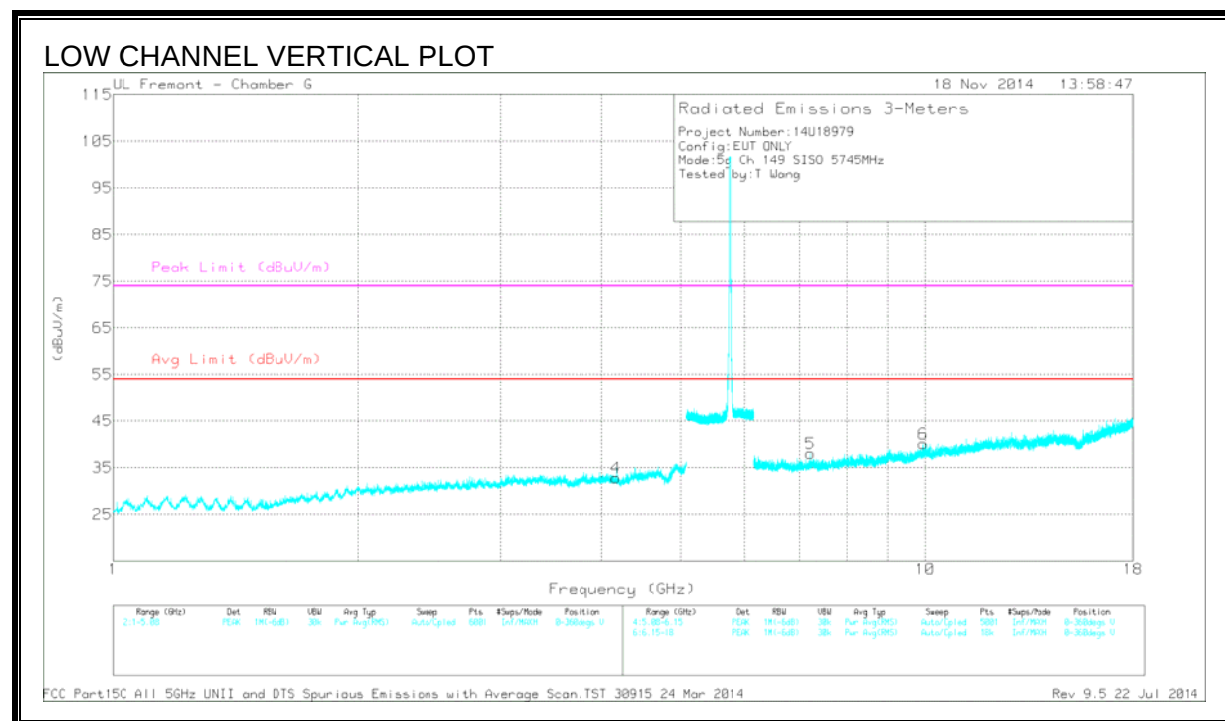
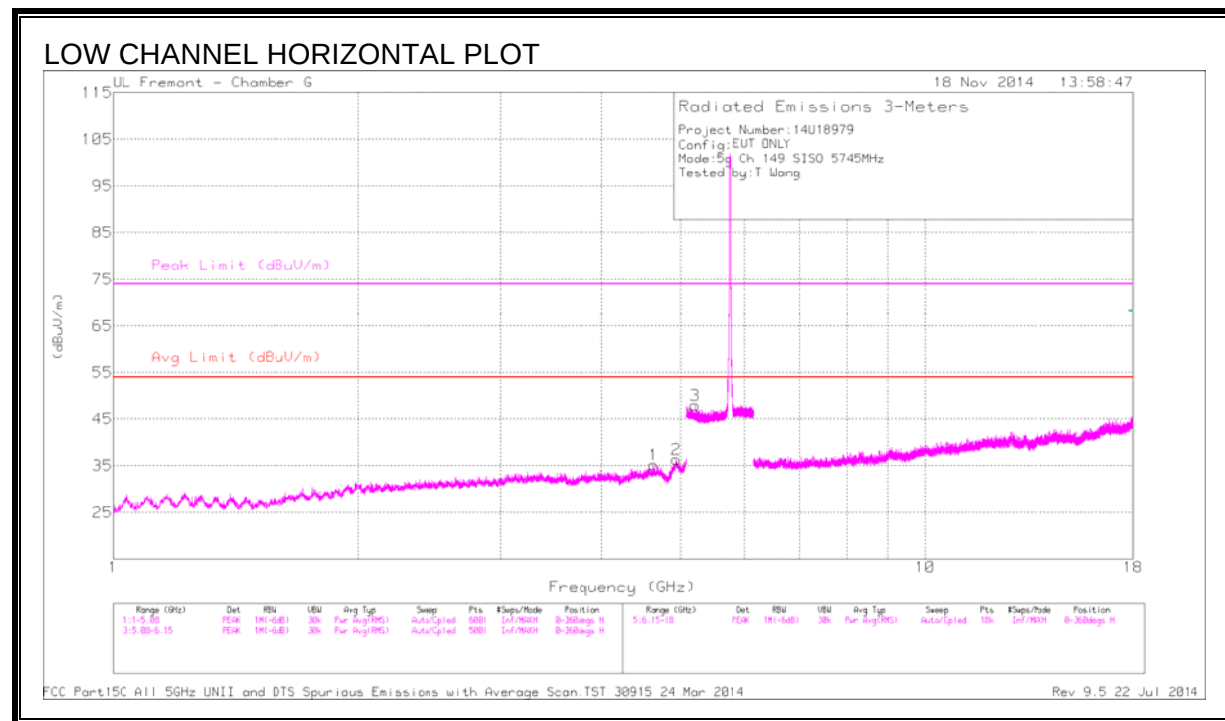
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 13)





10.2.4. TX ABOVE 1 GHz 802.11a 1Tx MODE IN THE 5.8 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS



DATA

Radiated Emissions

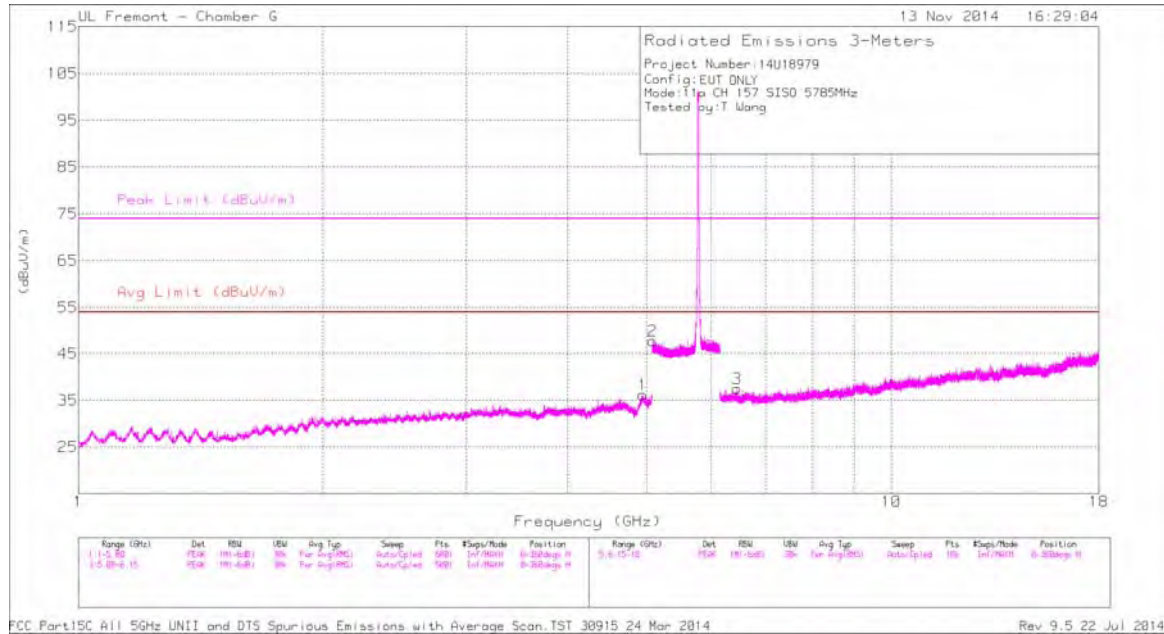
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Polarity
1	* 4.630	40.98	PK1	33.9	-32.8	42.08	-	-	74	-31.92	H
1	* 4.629	29.82	AD1	33.9	-32.8	30.92	54	-23.08	-	-	H
2	* 4.943	41.15	PK1	34.1	-31.7	43.55	-	-	74	-30.45	H
2	* 4.940	30.26	AD1	34.1	-31.7	32.66	54	-21.34	-	-	H
3	5.206	43.18	PK1	34.4	-23.7	53.88	-	-	-	-	H
4	* 4.163	41.13	PK1	33.4	-33.1	41.43	-	-	74	-32.57	V
4	* 4.164	29.24	AD1	33.4	-33.1	29.54	54	-24.46	-	-	V
5	7.223	39.52	PK1	35.6	-31.0	44.12	-	-	-	-	V
6	9.947	38.36	PK1	37.3	-28.6	47.06	-	-	-	-	V

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

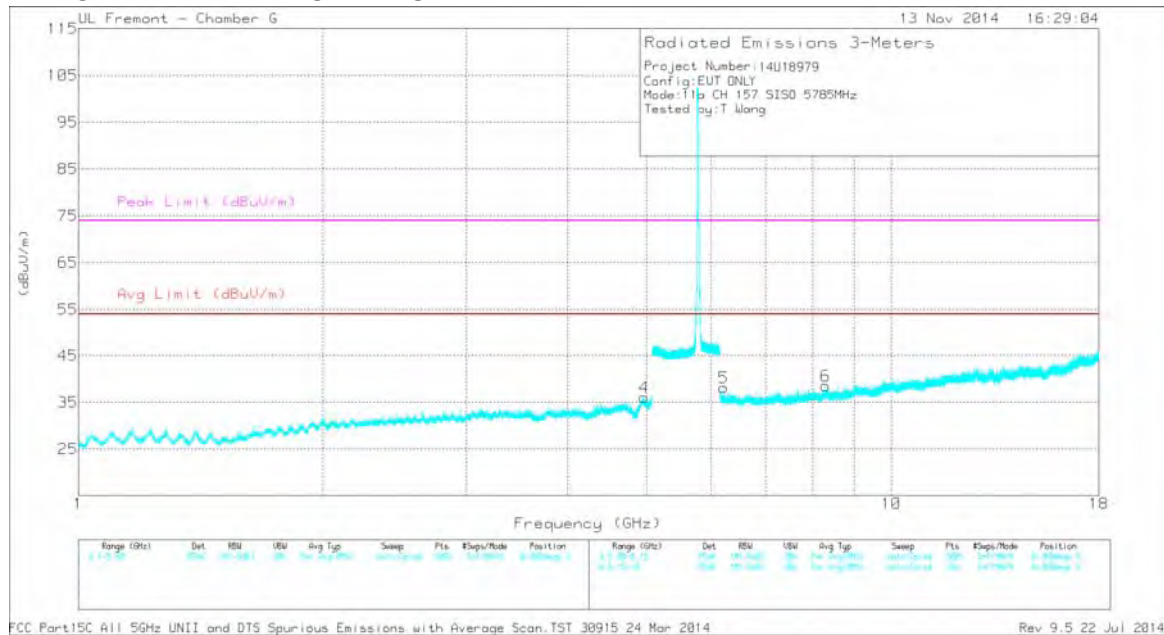
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

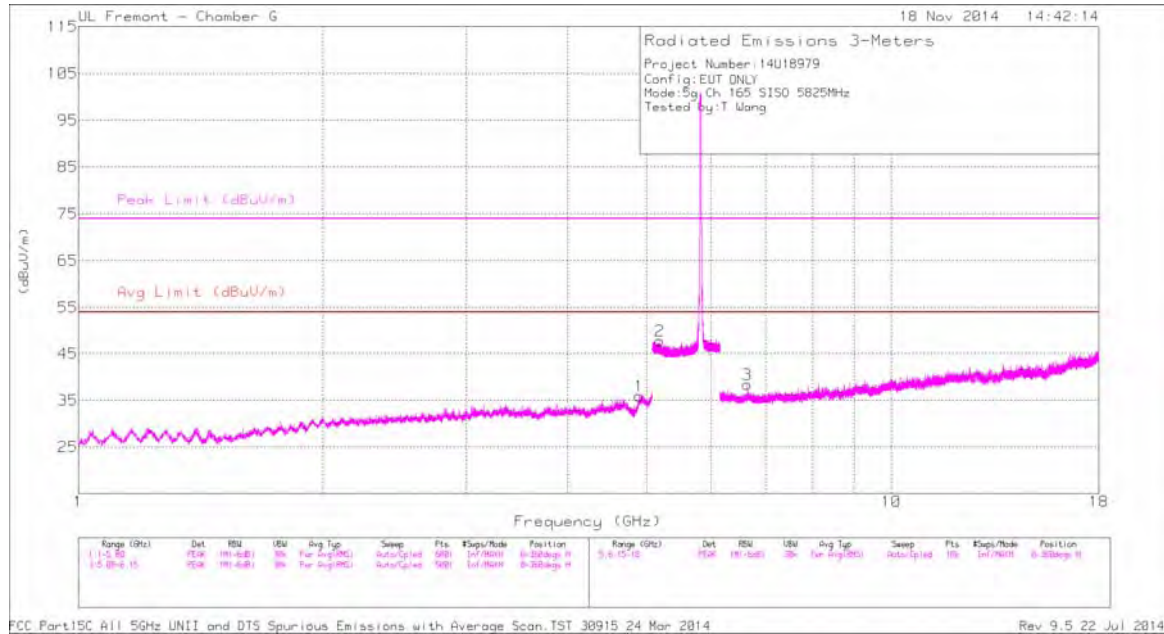
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Polarity
1	* 4.950	41.13	PK1	34.1	-31.8	43.43	-	-	74	-30.57	H
1	* 4.949	29.76	AD1	34.1	-31.8	32.06	54	-21.94	-	-	H
2	* 5.086	43.89	PK1	34.2	-23.7	54.39	-	-	74	-19.61	H
2	* 5.084	32.59	AD1	34.2	-23.7	43.09	54	-10.91	-	-	H
3	6.453	40.87	PK1	35.6	-32.0	44.47	-	-	-	-	H
4	* 4.967	40.62	PK1	34.1	-31.8	42.92	-	-	74	-31.08	V
4	* 4.964	29.59	AD1	34.1	-31.8	31.89	54	-22.11	-	-	V
5	6.213	40.19	PK1	35.6	-32.3	43.49	-	-	-	-	V
6	* 8.303	39.00	PK1	35.8	-29.2	45.60	-	-	74	-28.40	V
6	* 8.303	28.00	AD1	35.8	-29.2	34.60	54	-19.40	-	-	V

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

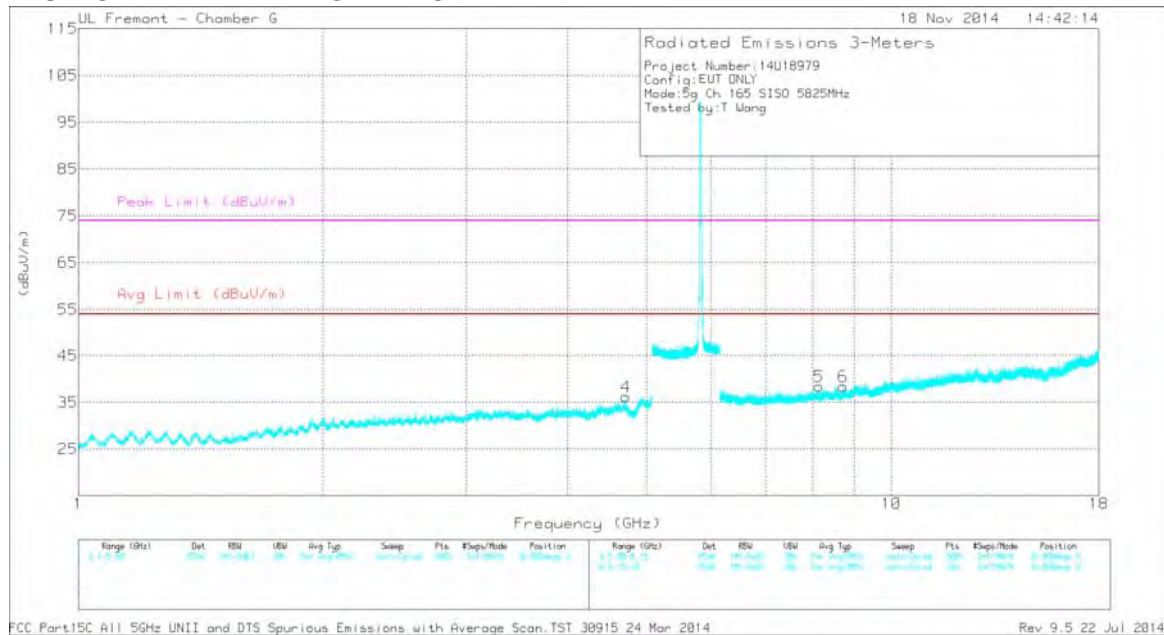
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Filt/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Polarity
1	* 4.900	40.83	PK1	34.1	-32.2	42.73	-	-	74	-31.27	H
1	* 4.897	29.33	AD1	34.1	-32.2	31.23	54	-22.77	-	-	H
2	5.194	43.35	PK1	34.4	-23.6	54.15	-	-	-	-	H
3	6.652	40.40	PK1	35.6	-31.5	44.50	-	-	-	-	H
4	* 4.717	40.96	PK1	34.0	-32.6	42.36	-	-	74	-31.64	V
4	* 4.719	29.41	AD1	34.0	-32.6	30.81	54	-23.19	-	-	V
5	* 8.148	38.98	PK1	35.8	-30.3	44.48	-	-	74	-29.52	V
5	* 8.147	27.54	AD1	35.8	-30.2	33.14	54	-20.86	-	-	V
6	8.727	38.48	PK1	36.0	-30.0	44.48	-	-	-	-	V

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

PK1 - KDB789033 Method: Peak

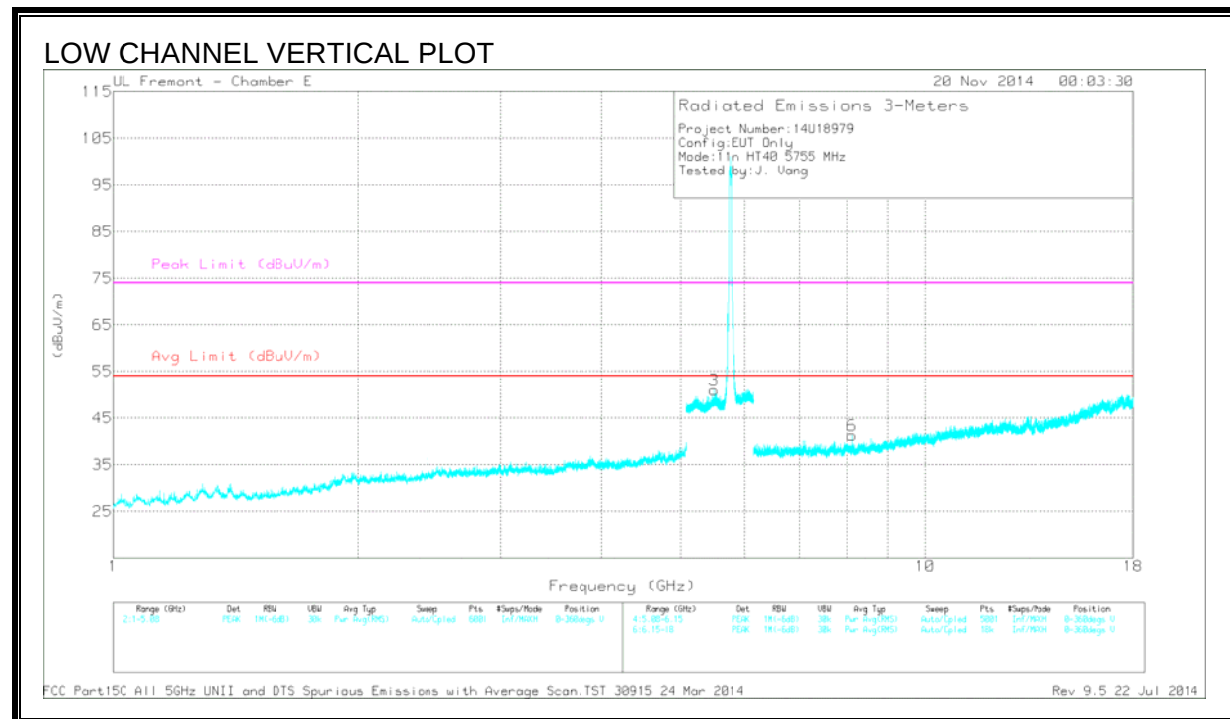
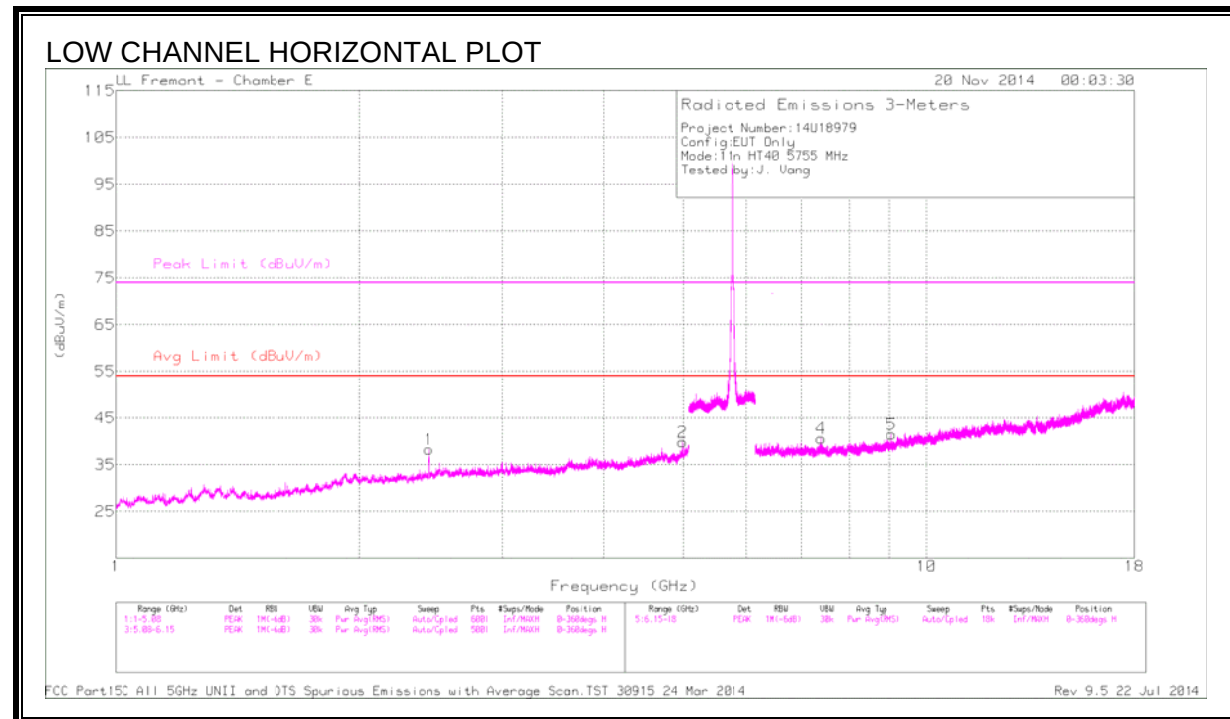
AD1 - KDB789033 Method: AD Primary Power Average

10.2.5. TX ABOVE 1 GHz 802.11n HT20 1Tx MODE IN THE 5.8 GHz BAND

Note: this test is covered on by testing to 11a 1Tx Mode.

10.2.6. TX ABOVE 1 GHz 802.11n HT40 1Tx MODE IN THE 5.8 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS



DATA

Radiated Emissions

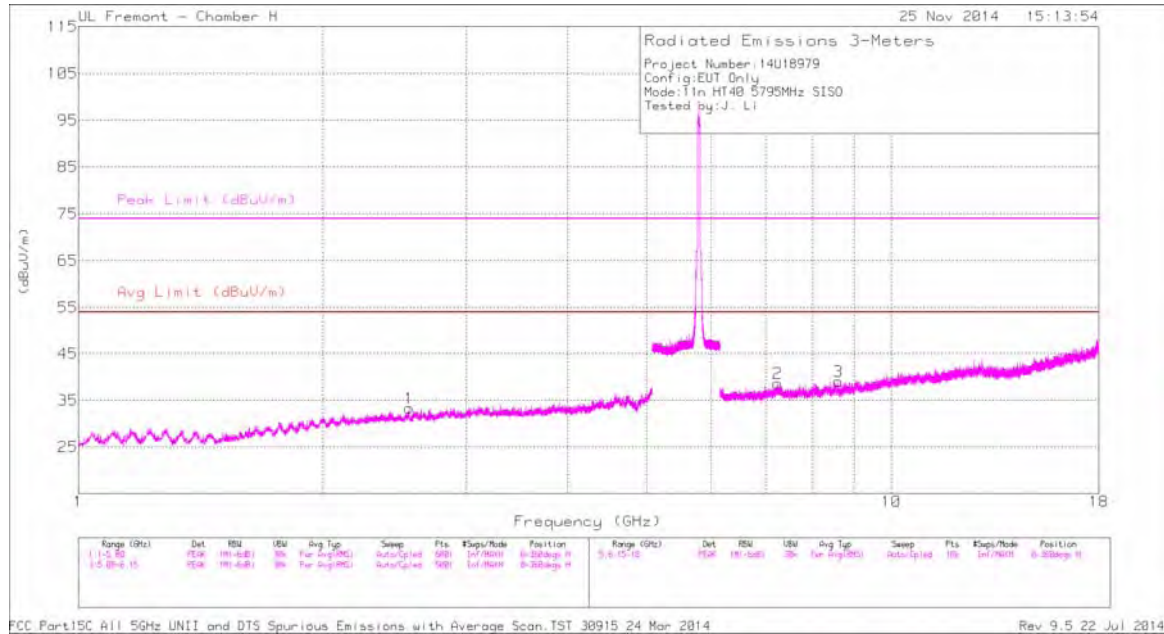
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Polarity
1	2.435	46.65	PK1	32.1	-33.1	0	45.65	-	-	-	-	H
2	* 4.988	43.14	PK1	34.1	-29.2	0	48.04	-	-	74	-25.96	H
2	* 4.988	33.84	AD1	34.1	-29.2	.13	38.87	54	-15.13	-	-	H
3	5.491	44.14	PK1	34.6	-20.7	0	58.04	-	-	-	-	V
4	* 7.405	38.11	PK1	35.7	-27.6	0	46.21	-	-	74	-27.79	H
4	* 7.404	27.11	AD1	35.7	-27.6	.13	35.34	54	-18.66	-	-	H
5	* 9.053	37.59	PK1	36.4	-26.1	0	47.89	-	-	74	-26.11	H
5	* 9.053	26.11	AD1	36.4	-26.1	.13	36.54	54	-17.46	-	-	H
6	* 8.124	38.36	PK1	35.8	-27.5	0	46.66	-	-	74	-27.34	V
6	* 8.122	26.87	AD1	35.8	-27.5	.13	35.30	54	-18.70	-	-	V

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

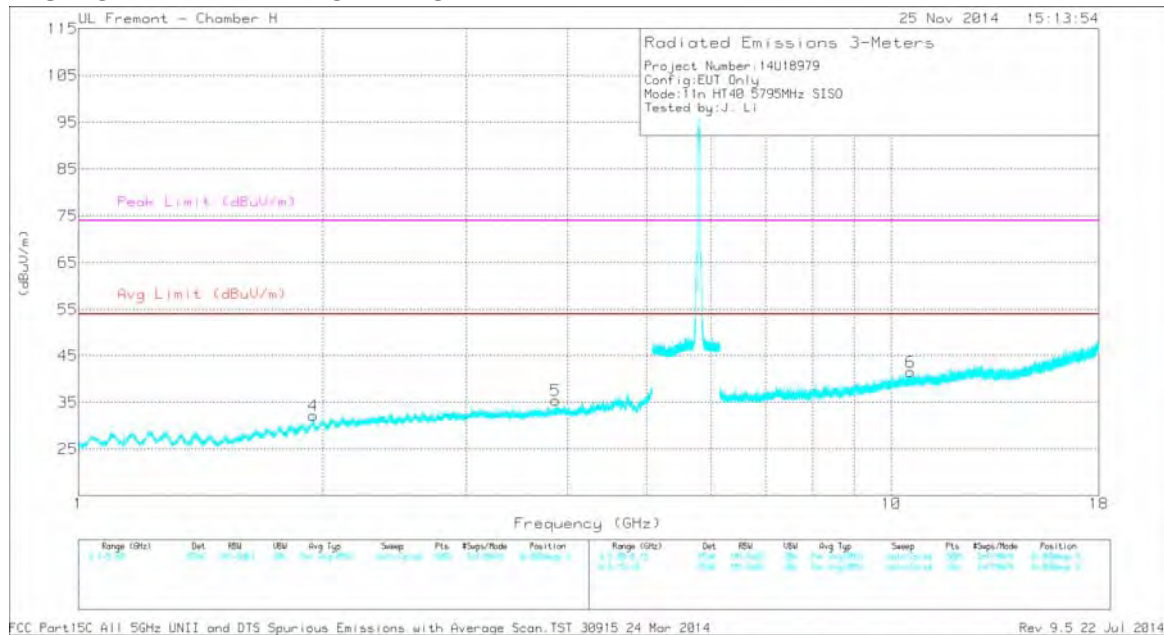
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT863 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Polarity
1	2.549	42.47	PK1	32.2	-33.7	0	40.97	-	-	-	-	H
2	* 7.255	38.17	PK1	36.2	-29.1	0	45.27	-	-	74	-28.73	H
2	* 7.253	27.33	AD1	36.2	-29.1	.13	34.56	54	-19.44	-	-	H
3	8.603	37.22	PK1	36.1	-27.6	0	45.72	-	-	-	-	H
4	1.946	42.44	PK1	31.0	-34.5	0	38.94	-	-	-	-	V
5	* 3.862	41.40	PK1	33.3	-32.8	0	41.90	-	-	74	-32.10	V
5	* 3.863	30.93	AD1	33.3	-32.8	.13	31.56	54	-22.44	-	-	V
6	10.57	36.56	PK1	37.6	-25.0	0	49.16	-	-	-	-	V

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

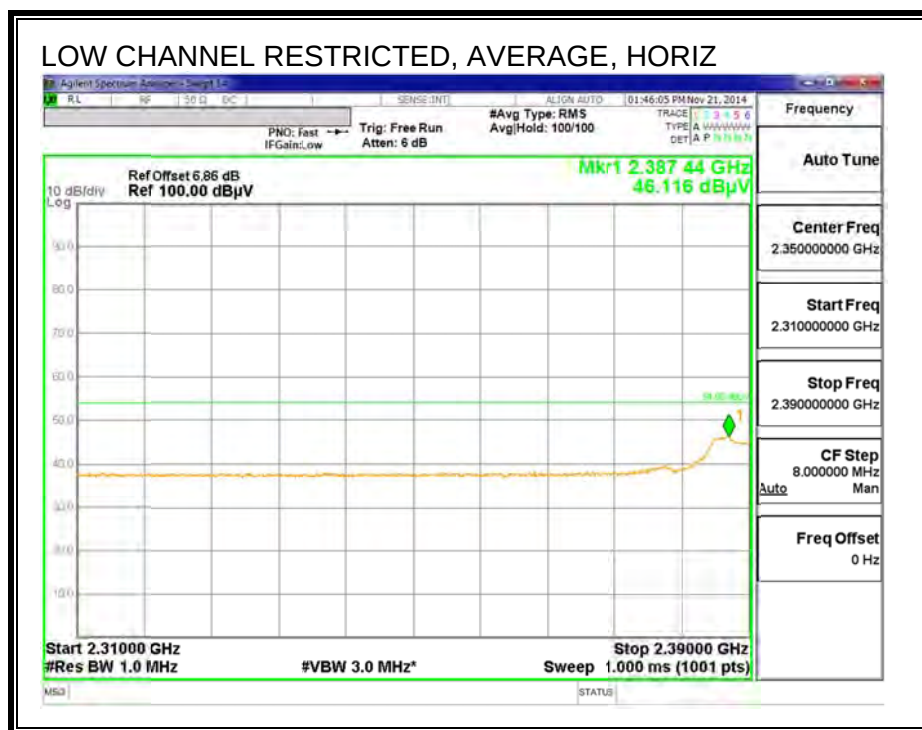
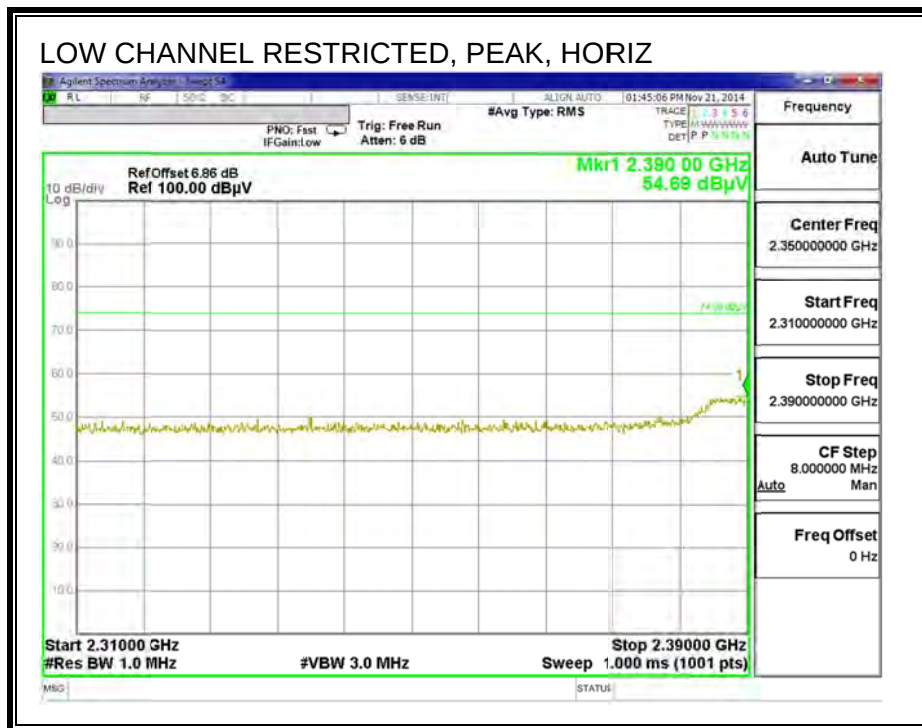
PK1 - KDB789033 Method: Peak

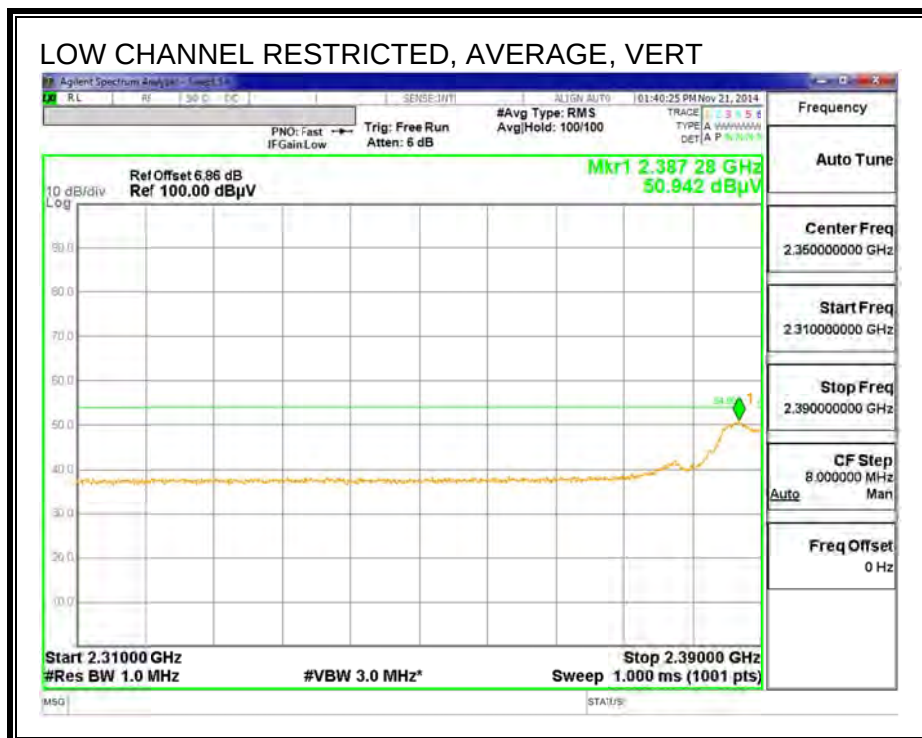
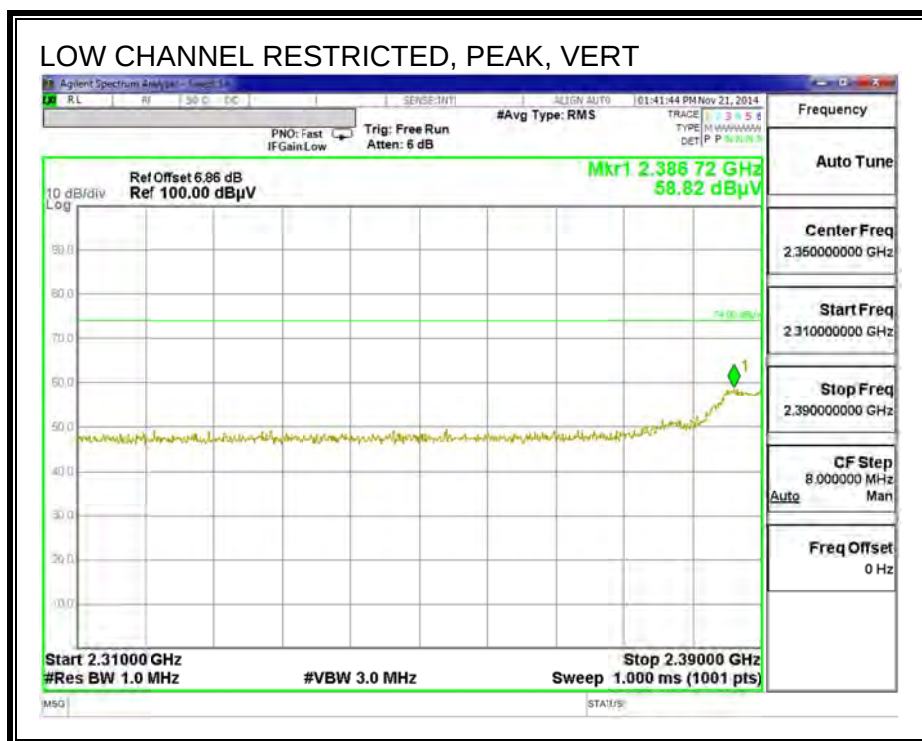
AD1 - KDB789033 Method: AD Primary Power Average

10.3. MODEL: A1623

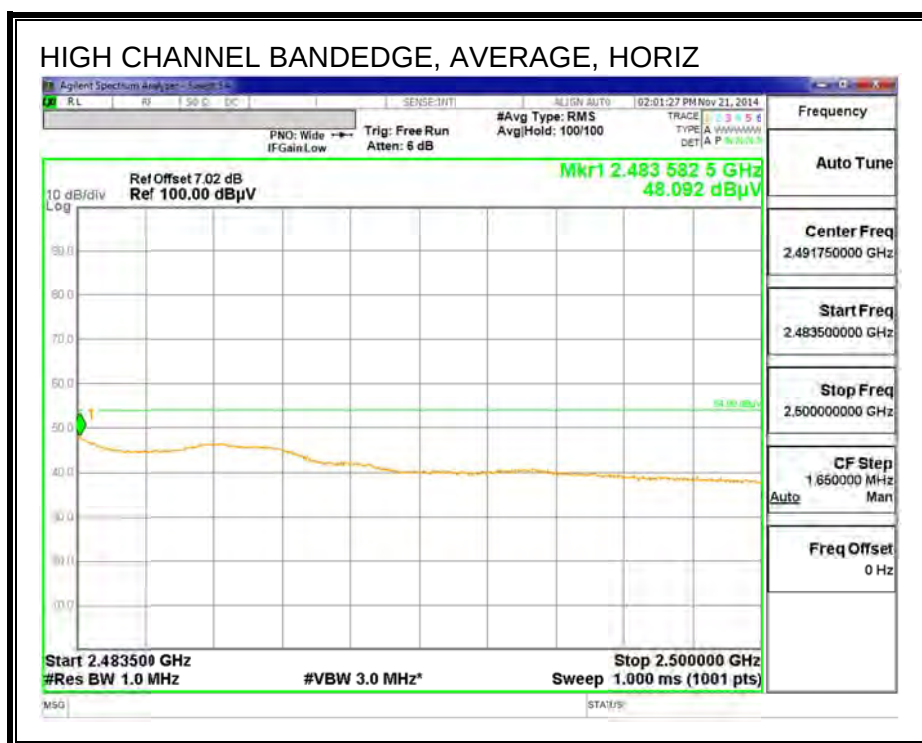
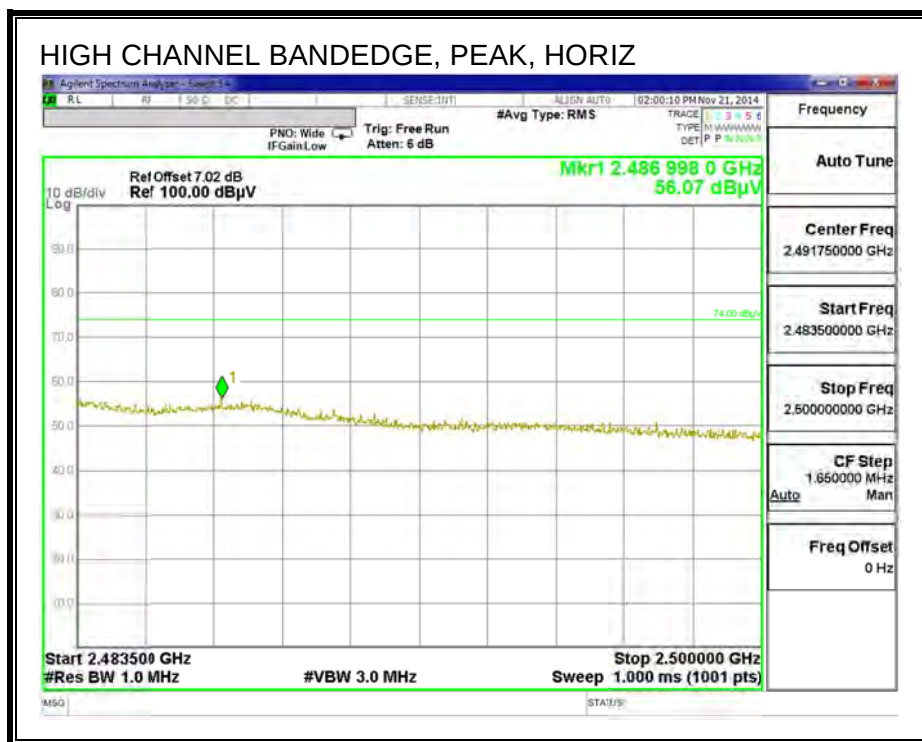
10.3.1. 802.11b 1Tx MODE IN THE 2.4 GHz BAND

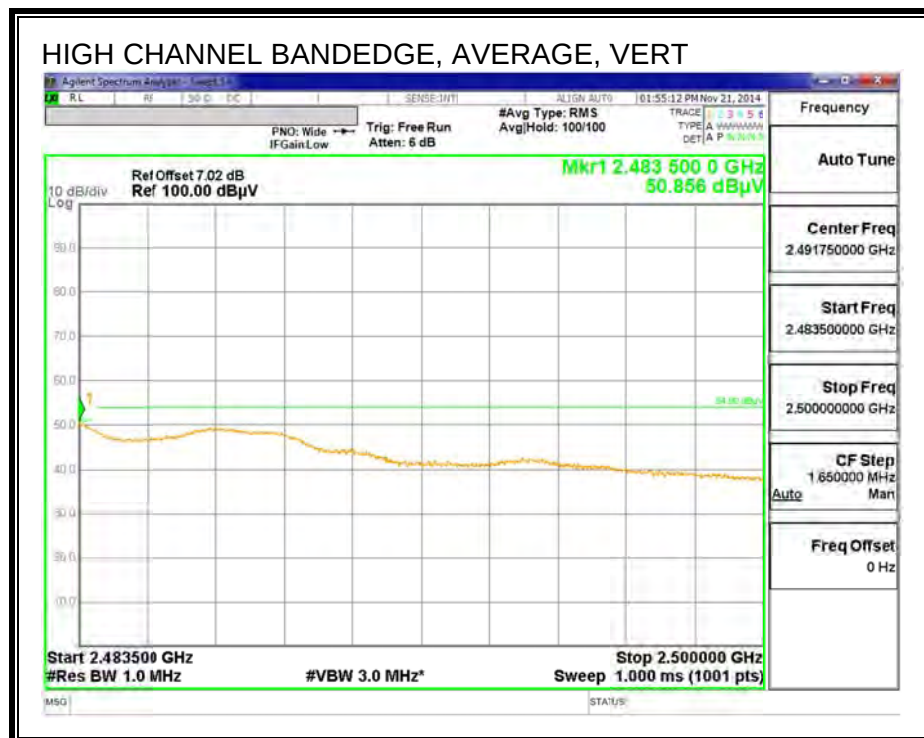
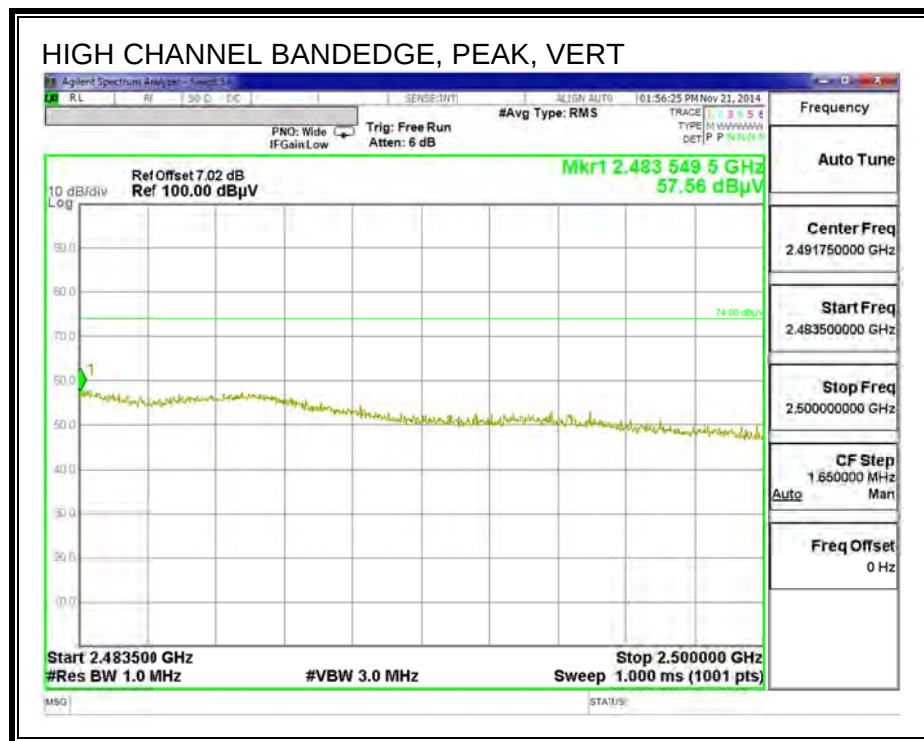
RESTRICTED BANDEDGE (LOW CHANNEL, CHANNEL 1)



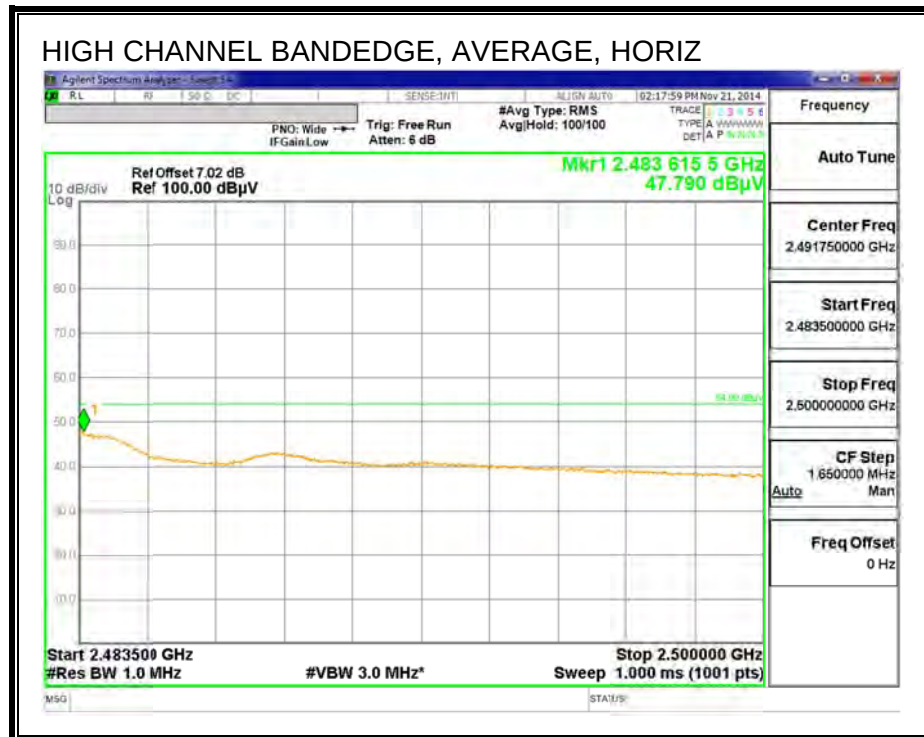
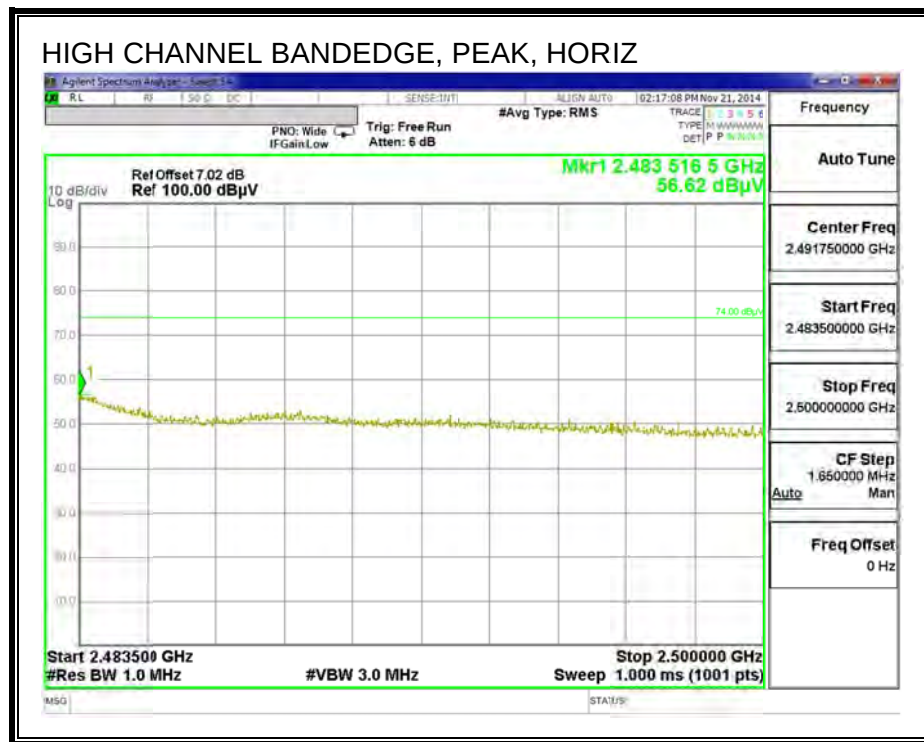


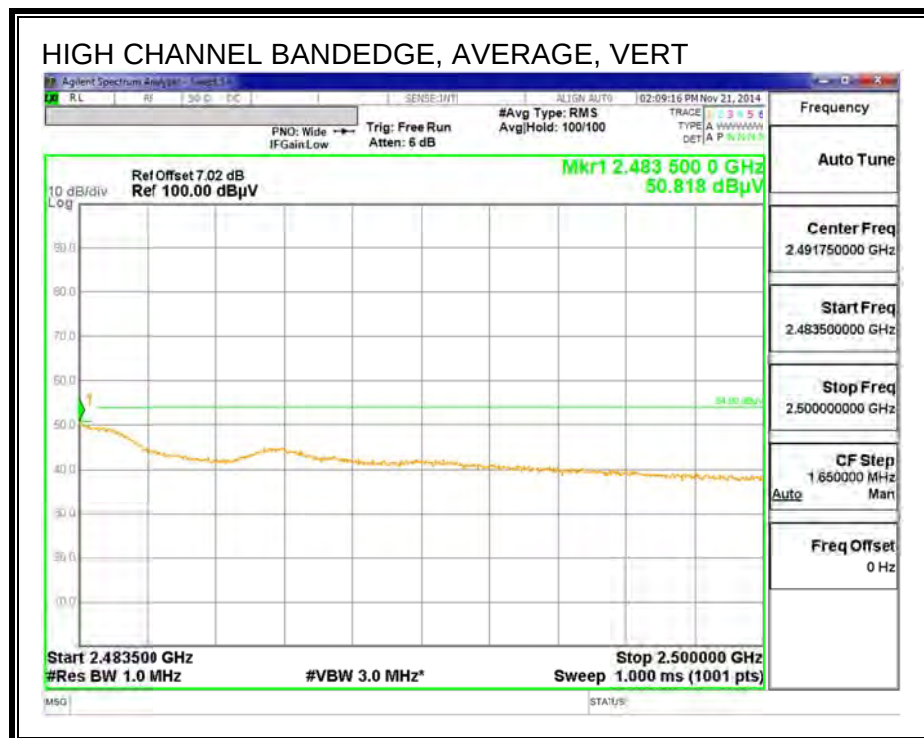
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 11)



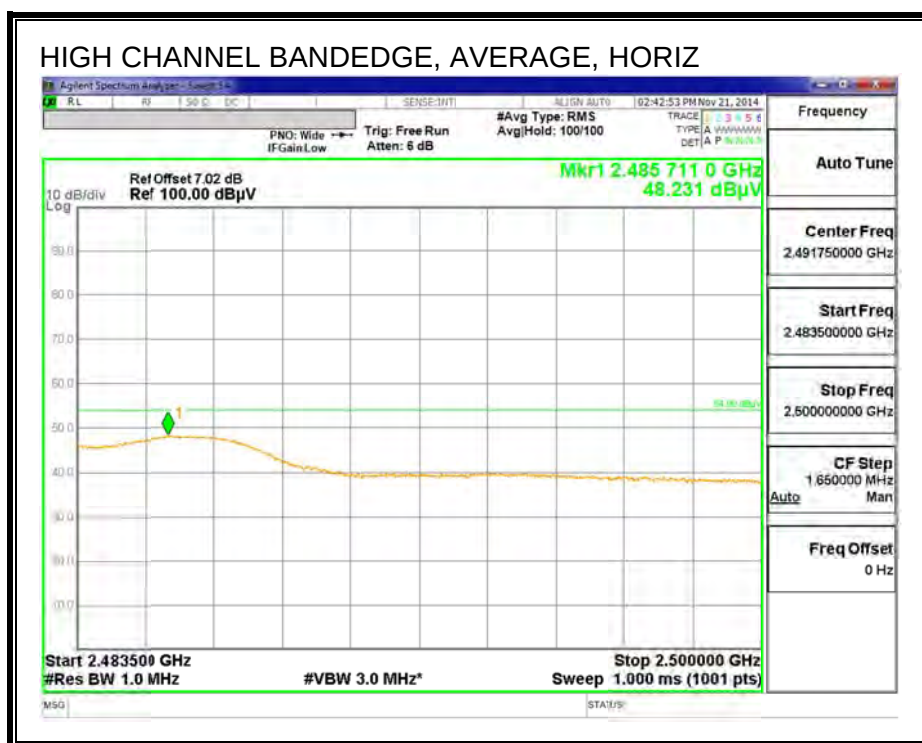
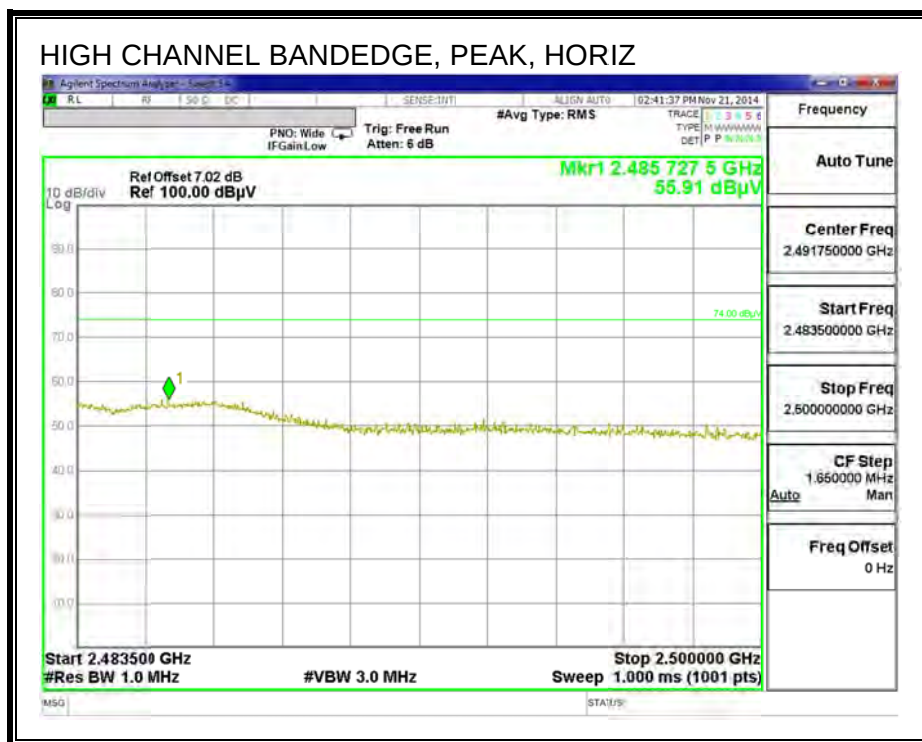


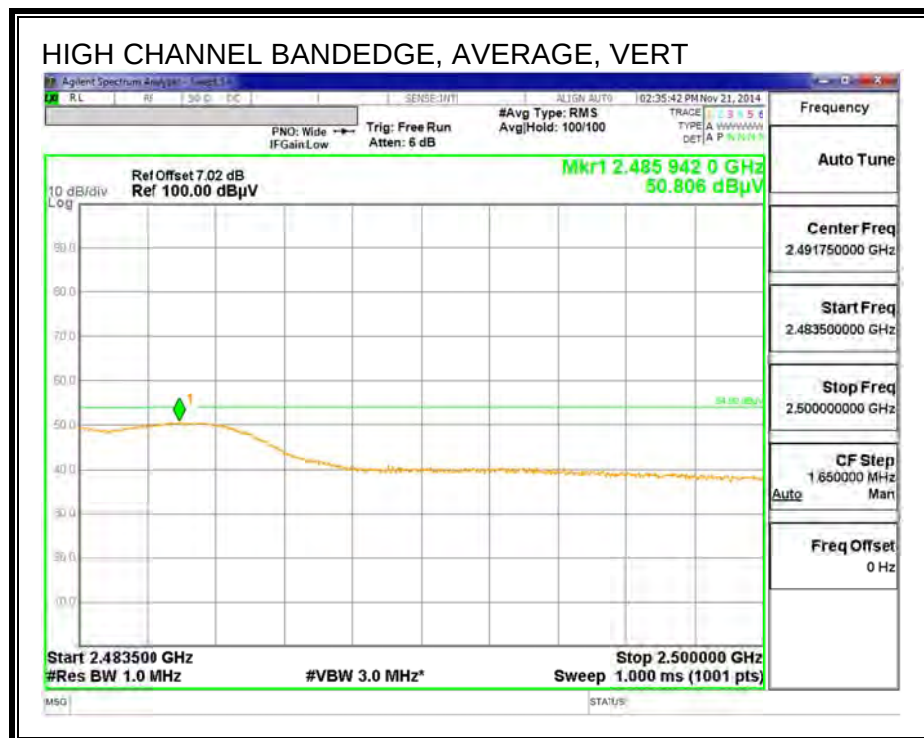
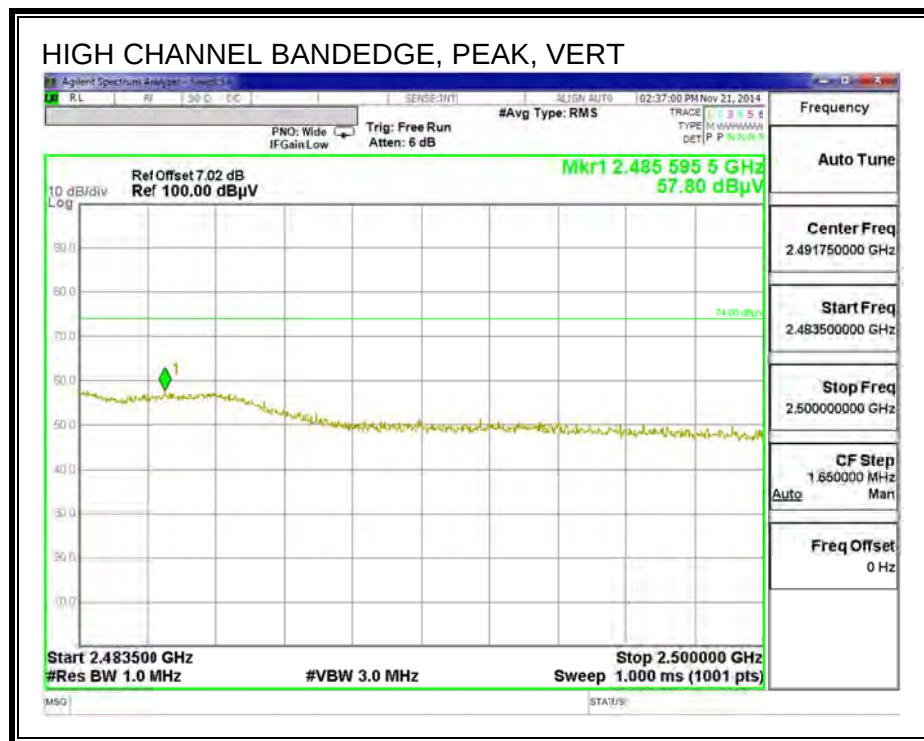
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 12)





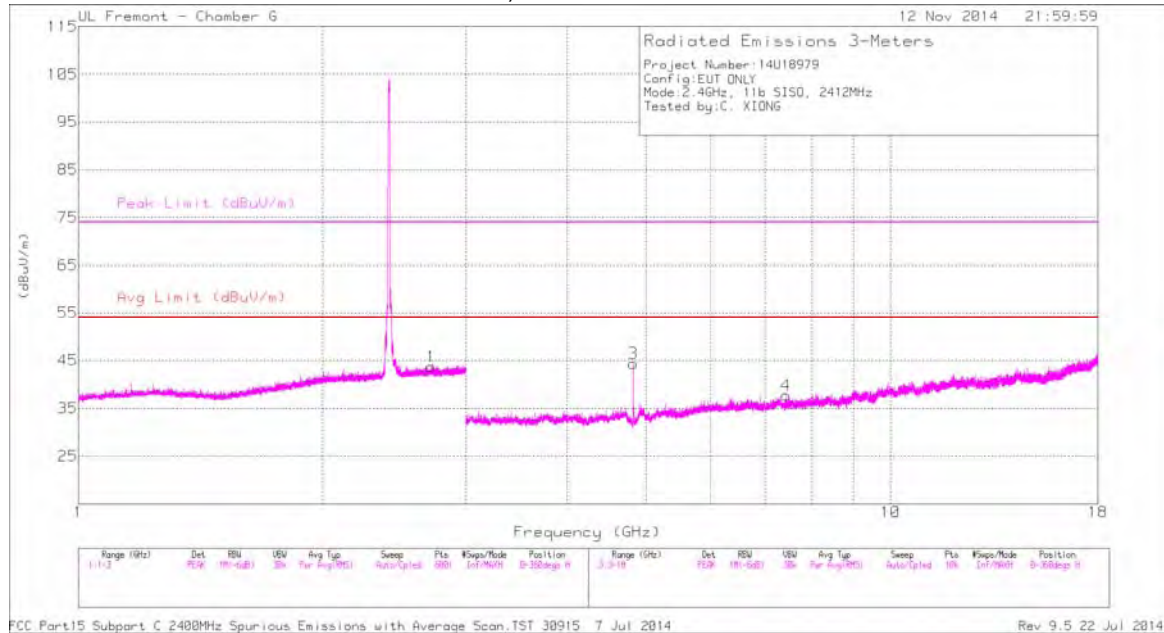
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 13)



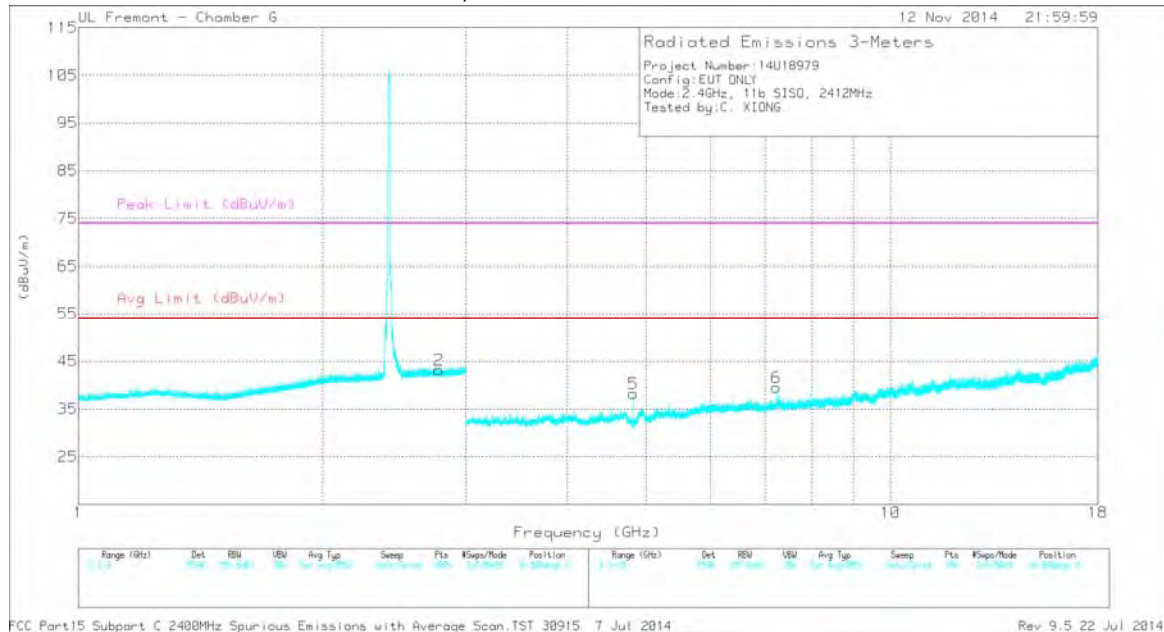


HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT, CH 1



LOW CHANNEL VERTICAL PLOT, CH 1



DATA

Radiated Emissions

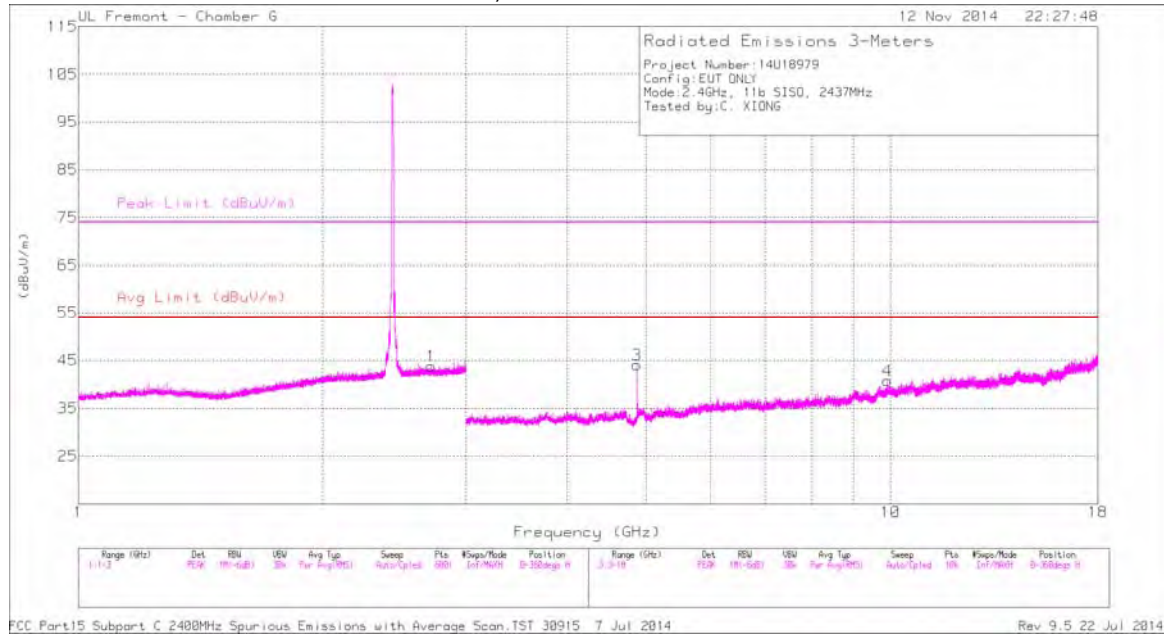
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.720	43.63	PK2	32.2	-24.8	51.03	-	-	74	-22.97	71	106	H
1	* 2.723	32.24	MAv1	32.2	-24.8	39.64	54	-14.36	-	-	71	106	H
2	* 2.78	43.62	PK2	32.2	-24.9	50.92	-	-	74	-23.08	101	118	V
2	* 2.778	32.20	MAv1	32.2	-24.9	39.50	54	-14.50	-	-	101	118	V
3	* 4.824	47.58	PK2	34.1	-33.0	48.68	-	-	74	-25.32	30	223	H
3	* 4.824	43.40	MAv1	34.1	-33.0	44.50	54	-9.50	-	-	30	223	H
4	* 7.432	40.18	PK2	35.6	-31.4	44.38	-	-	74	-29.62	173	391	H
4	* 7.429	28.72	MAv1	35.6	-31.4	32.92	54	-21.08	-	-	173	391	H
5	* 4.824	43.13	PK2	34.1	-33.0	44.23	-	-	74	-29.77	37	103	V
5	* 4.824	36.29	MAv1	34.1	-33.0	37.39	54	-16.61	-	-	37	103	V
6	7.235	34.76	PK2	35.6	-30.9	39.46	-	-	-	-	58	194	V

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

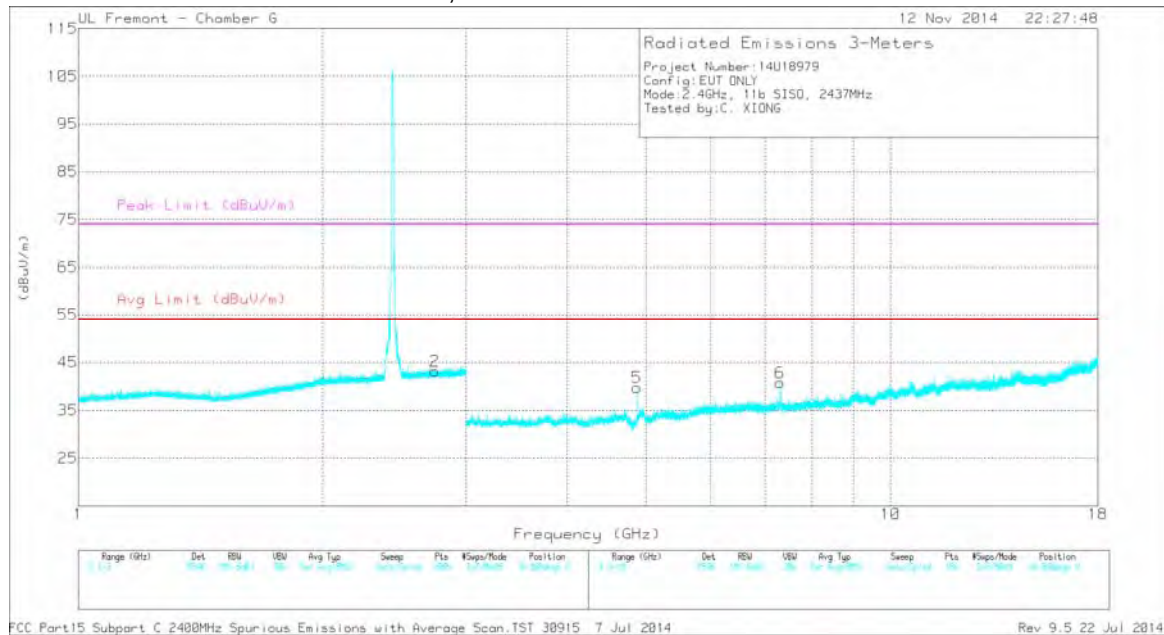
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL HORIZONTAL PLOT, CH 6



MID CHANNEL VERTICAL PLOT, CH 6



DATA

Radiated Emissions

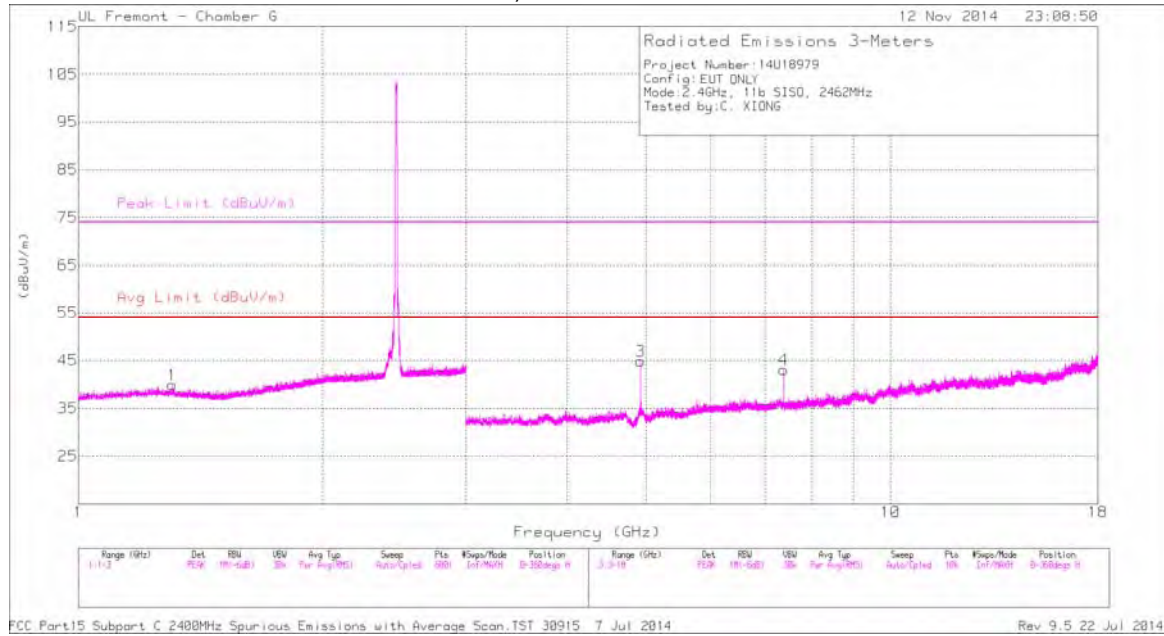
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.720	43.46	PK2	32.2	-24.8	50.86	-	-	74	-23.14	62	115	H
1	* 2.721	32.23	MAv1	32.2	-24.8	39.63	54	-14.37	-	-	62	115	H
2	* 2.745	44.35	PK2	32.2	-24.8	51.75	-	-	74	-22.25	120	121	V
2	* 2.744	32.21	MAv1	32.2	-24.8	39.61	54	-14.39	-	-	120	121	V
3	* 4.874	47.01	PK2	34.1	-33.1	48.01	-	-	74	-25.99	30	200	H
3	* 4.874	43.00	MAv1	34.1	-33.1	44.00	54	-10.00	-	-	30	200	H
4	9.916	31.27	PK2	37.3	-27.8	40.77	-	-	-	-	149	180	H
5	* 4.874	43.02	PK2	34.1	-33.1	44.02	-	-	74	-29.98	60	110	V
5	* 4.874	36.47	MAv1	34.1	-33.1	37.47	54	-16.53	-	-	60	110	V
6	* 7.313	40.74	PK2	35.6	-31.1	45.24	-	-	74	-28.76	54	192	V
6	* 7.313	29.05	MAv1	35.6	-31.1	33.55	54	-20.45	-	-	54	192	V

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

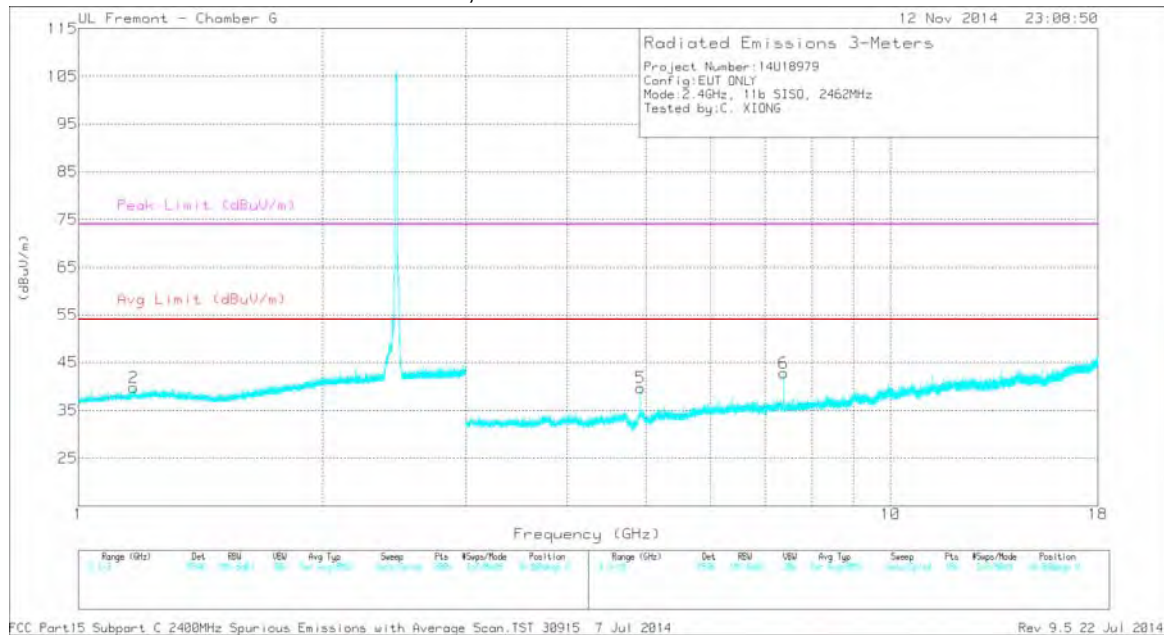
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 11



HIGH CHANNEL VERTICAL PLOT, CH 11



DATA

Radiated Emissions

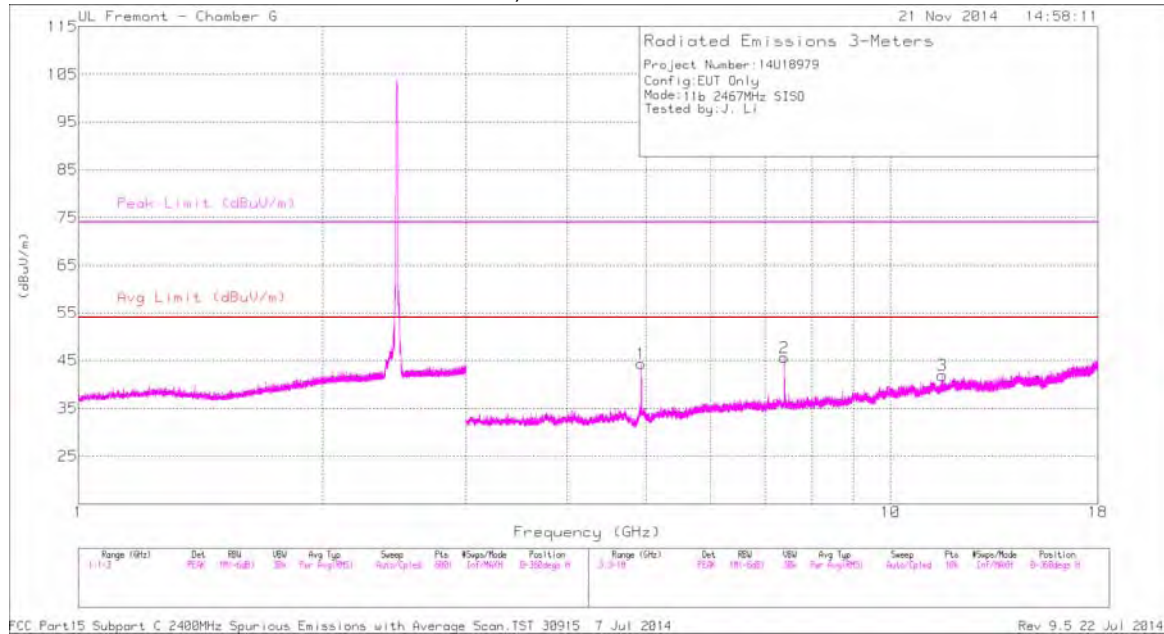
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Filt/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.304	44.06	PK2	28.9	-26.0	46.96	-	-	74	-27.04	174	143	H
1	* 1.306	32.51	MAv1	28.9	-26.0	35.41	54	-18.59	-	-	174	143	H
2	* 1.167	43.93	PK2	28.8	-26.0	46.73	-	-	74	-27.27	103	143	V
2	* 1.169	32.65	MAv1	28.8	-26.0	35.45	54	-18.55	-	-	103	143	V
3	* 4.924	48.38	PK2	34.1	-33.1	49.38	-	-	74	-24.62	8	240	H
3	* 4.924	43.93	MAv1	34.1	-33.1	44.93	54	-9.07	-	-	8	240	H
4	* 7.388	42.37	PK2	35.6	-31.7	46.27	-	-	74	-27.73	42	176	H
4	* 7.385	33.21	MAv1	35.6	-31.7	37.11	54	-16.89	-	-	42	176	H
5	* 4.924	45.86	PK2	34.1	-33.1	46.86	-	-	74	-27.14	47	315	V
5	* 4.924	38.54	MAv1	34.1	-33.1	39.54	54	-14.46	-	-	47	315	V
6	* 7.386	48.79	PK2	35.6	-31.7	52.69	-	-	74	-21.31	8	179	V
6	* 7.385	43.30	MAv1	35.6	-31.7	47.20	54	-6.80	-	-	8	179	V

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

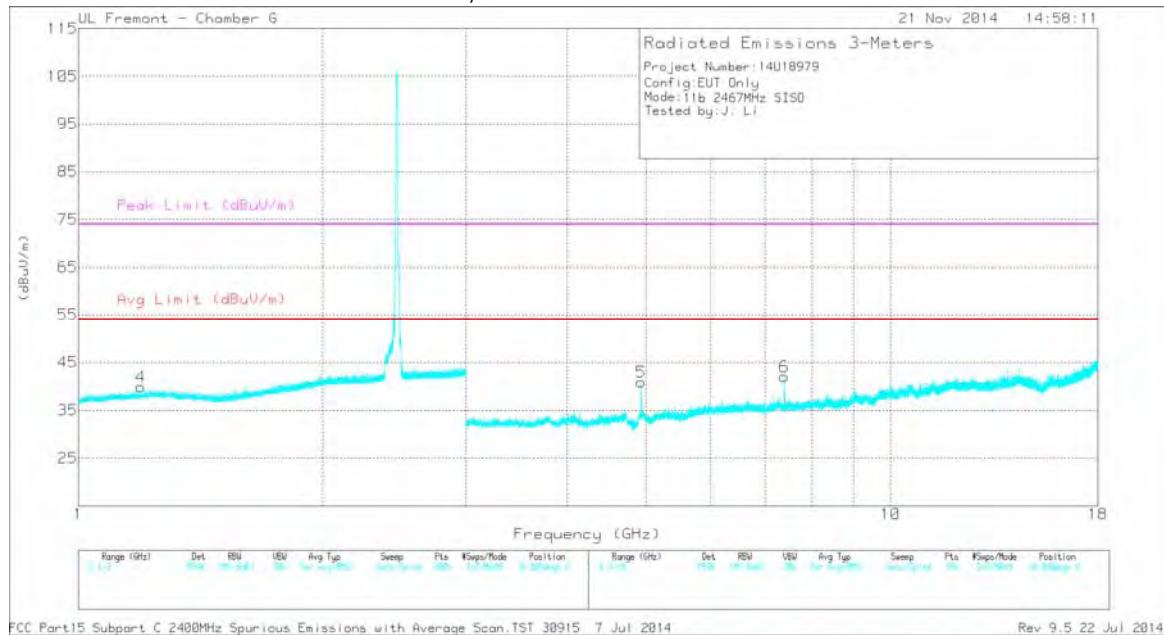
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 12



HIGH CHANNEL VERTICAL PLOT, CH 12



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.934	47.6	PK2	34.1	-33.1	48.6	-	-	74	-25.4	31	108	H
1	* 4.934	42.72	MAv1	34.1	-33.1	43.72	54	-10.28	-	-	31	108	H
2	* 7.402	48.57	PK2	35.6	-31.6	52.57	-	-	74	-21.43	358	288	H
2	* 7.400	43.27	MAv1	35.6	-31.6	47.27	54	-6.73	-	-	358	288	H
3	* 11.576	36.16	PK2	38.4	-26.3	48.26	-	-	74	-25.74	358	288	H
3	* 11.573	24.53	MAv1	38.4	-26.4	36.53	54	-17.47	-	-	358	288	H
4	1.997	31.74	MAv1	31.3	-25.3	37.74	-	-	-	-	358	288	V
4	1.998	42.68	PK2	31.3	-25.3	48.68	-	-	-	-	358	288	V
5	* 4.934	45.65	PK2	34.1	-33.1	46.65	-	-	74	-27.35	360	107	V
5	* 4.934	39.95	MAv1	34.1	-33.1	40.95	54	-13.05	-	-	360	107	V
6	* 7.401	45.84	PK2	35.6	-31.6	49.84	-	-	74	-24.16	360	362	V
6	* 7.400	39.37	MAv1	35.6	-31.6	43.37	54	-10.63	-	-	360	362	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

UL Fremont - Chamber G

21 Nov 2014 16:07:22

Radiated Emissions 3-Meters

Project Number: 14U18979
 Config: EUT Only
 Mode: 11b 2472MHz SISO
 Tested by: J. Li

Peak Limit (dBuV/m)

Avg Limit (dBuV/m)

Frequency (GHz)

Range (Hz) 1.1-1.1 Det P13P Res 100-500 dBW 10- Pur Avg (dB) Sweep Auto/Timed 10s Pts 1000000 Range/Mode 10-100 Range R Position 0-360deg R

Range (Hz) 1.1-1.1 Det P13P Res 100-500 dBW 10- Pur Avg (dB) Sweep Auto/Timed 10s Pts 1000000 Range/Mode 10-100 Range R Position 0-360deg R

FCC Part15 Subpart C 2400MHz Spurious Emissions with Average Scan.TST 30915 7 Jul 2014

Rev 9.5 22 Jul 2014

Radiated Emissions 3-Meters

Project Number: 14U18979
 Config: EUT Only
 Mode: 11b 2472MHz SISO
 Tested by: J. Li

Range (GHz)	Det	RBW	VBW	Avg Type	Sweep	Pts	#Sps/Mode	Position
1 - 18	Peak	300 kHz	300 kHz	Max Hold	Linear	1000	1	Page 1

FCC Part 15 Subpart C 2400MHz Spurious Emissions with Average Scan.TST 30915 7 Jul 2014 Rev 9.5 22 Jul 2014

DATA

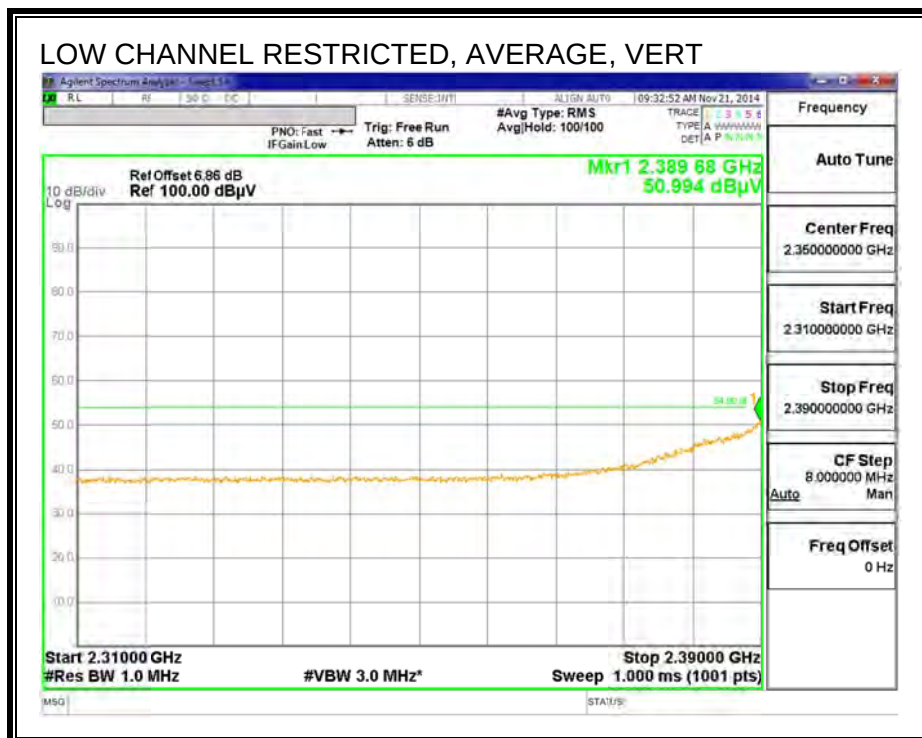
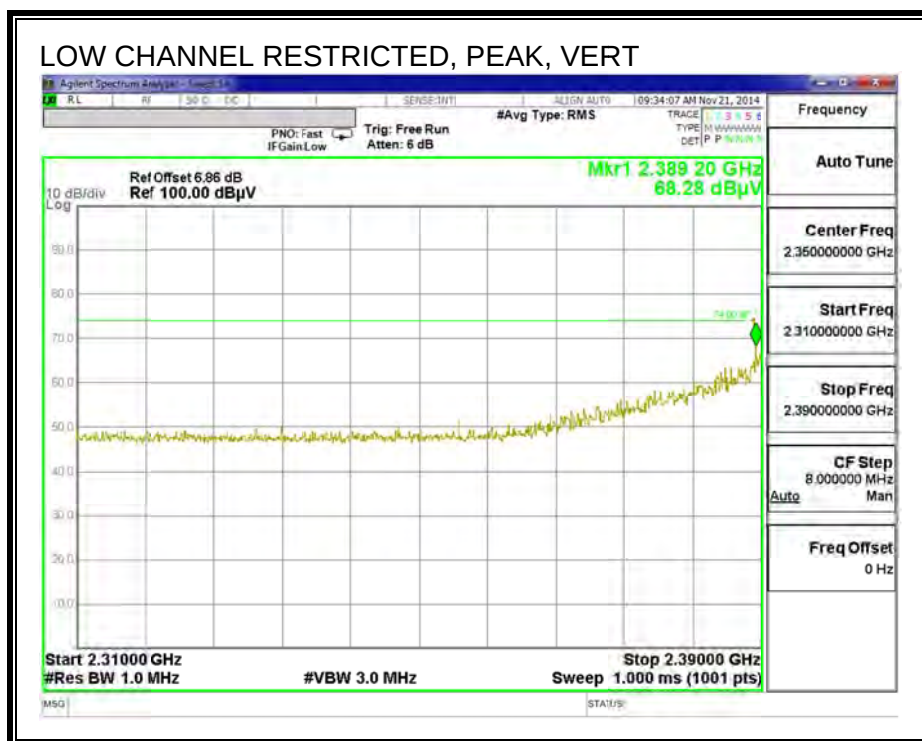
Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Filt/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.327	43.65	PK2	28.8	-26.0	46.45	-	-	74	-27.55	360	101	H
1	* 1.320	32.36	MAv1	28.8	-26.0	35.16	54	-18.84	-	-	360	101	H
2	* 4.944	46.60	PK2	34.1	-33.0	47.70	-	-	74	-26.30	34	107	H
2	* 4.944	41.36	MAv1	34.1	-33.0	42.46	54	-11.54	-	-	34	107	H
3	* 7.416	40.99	PK2	35.6	-31.7	44.89	-	-	74	-29.11	353	215	H
3	* 7.417	30.89	MAv1	35.6	-31.7	34.79	54	-19.21	-	-	353	215	H
4	* 1.152	43.81	PK2	28.7	-26.0	46.51	-	-	74	-27.49	353	215	V
4	* 1.156	32.42	MAv1	28.7	-26.0	35.12	54	-18.88	-	-	353	215	V
5	* 4.944	43.93	PK2	34.1	-33.0	45.03	-	-	74	-28.97	260	290	V
5	* 4.944	37.28	MAv1	34.1	-33.0	38.38	54	-15.62	-	-	260	290	V
6	* 7.418	43.07	PK2	35.6	-31.7	46.97	-	-	74	-27.03	246	156	V
6	* 7.415	34.95	MAv1	35.6	-31.7	38.85	54	-15.15	-	-	246	156	V

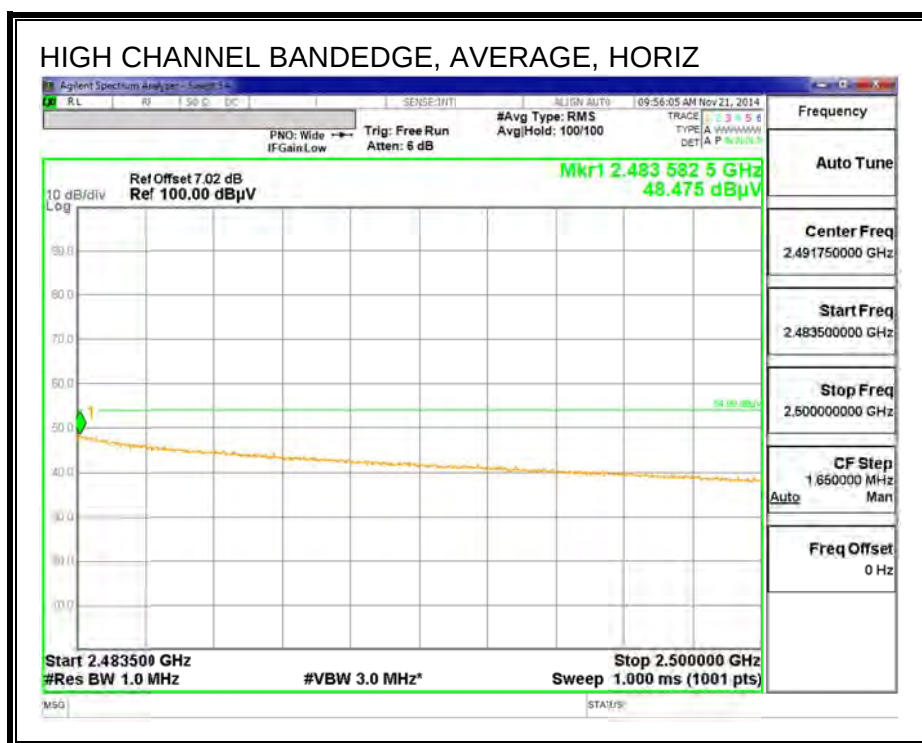
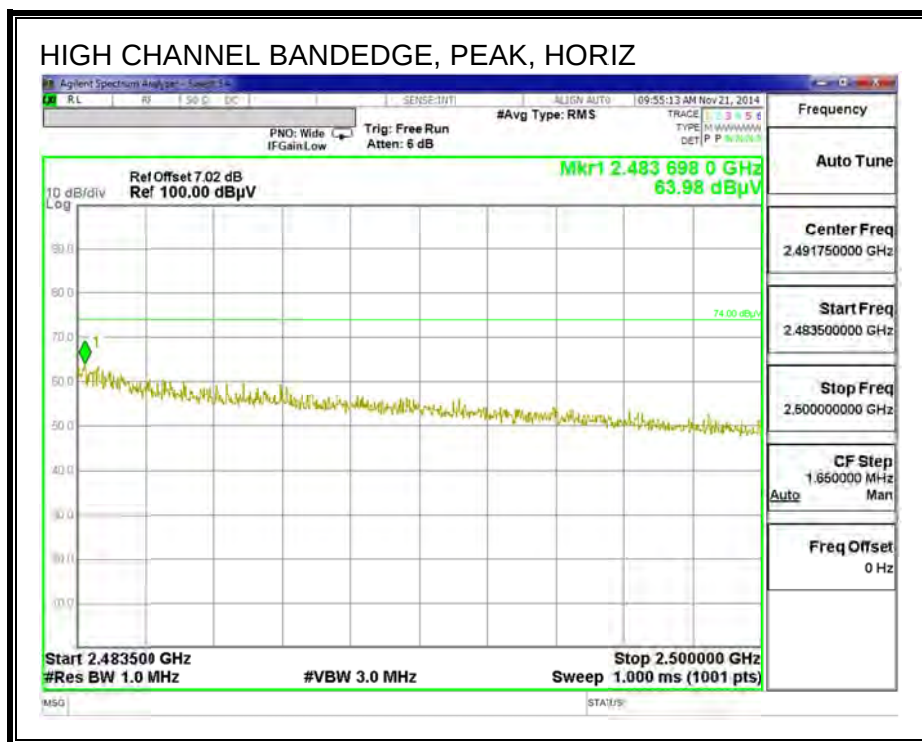
* - indicates frequency in CFR15.205/IC8.10 Restricted Band

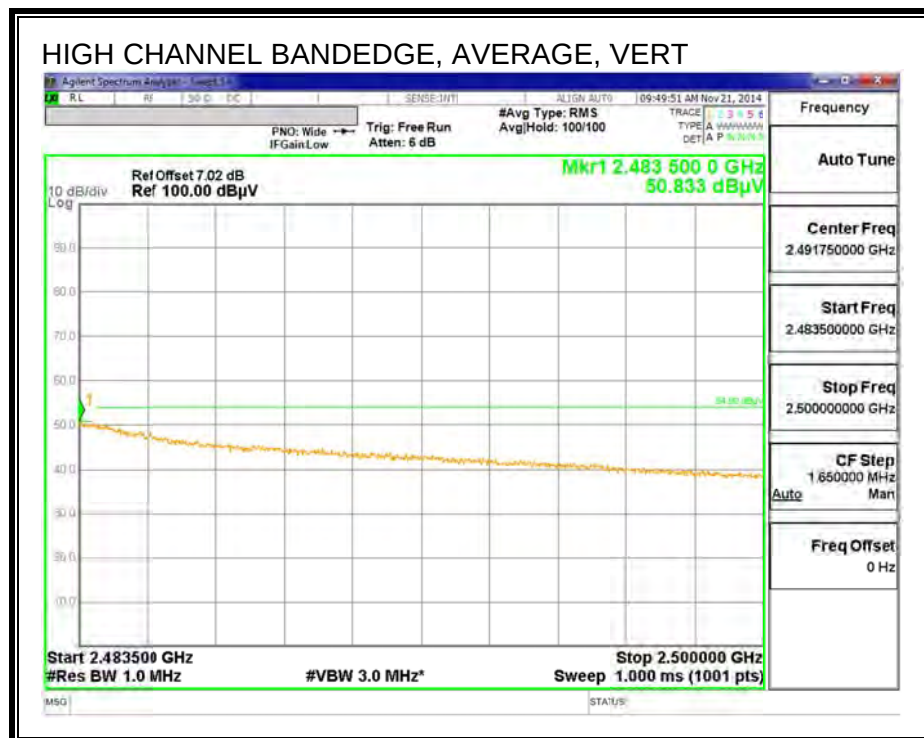
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

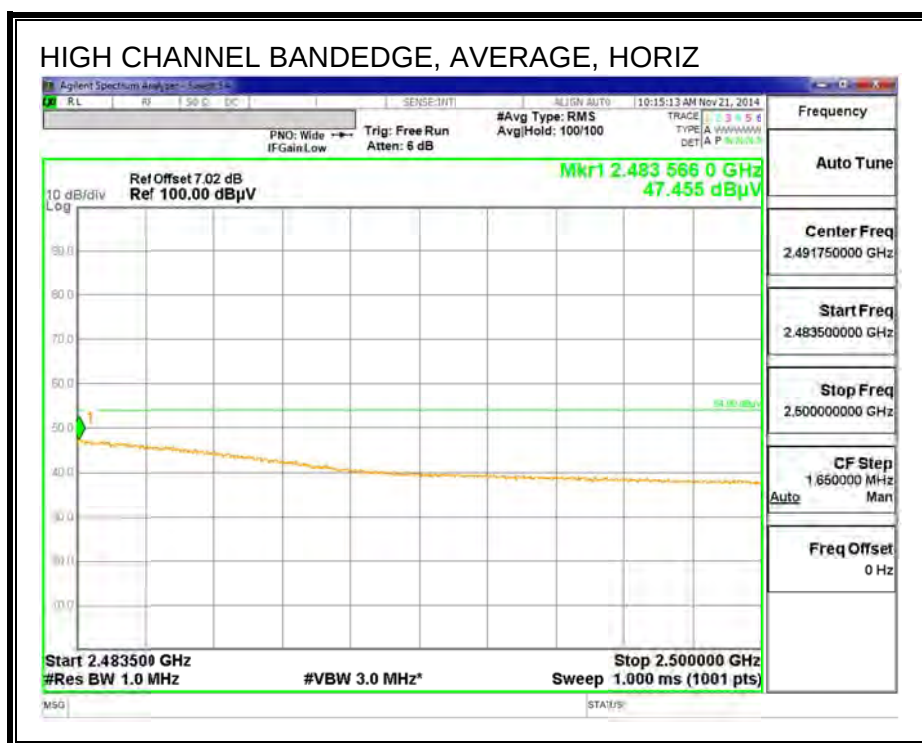
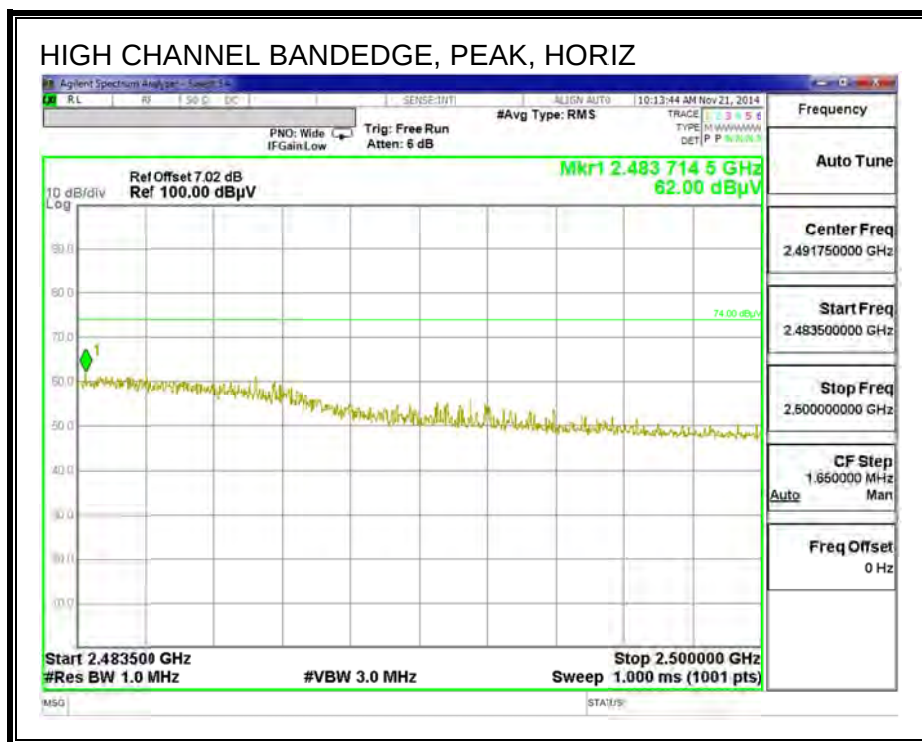


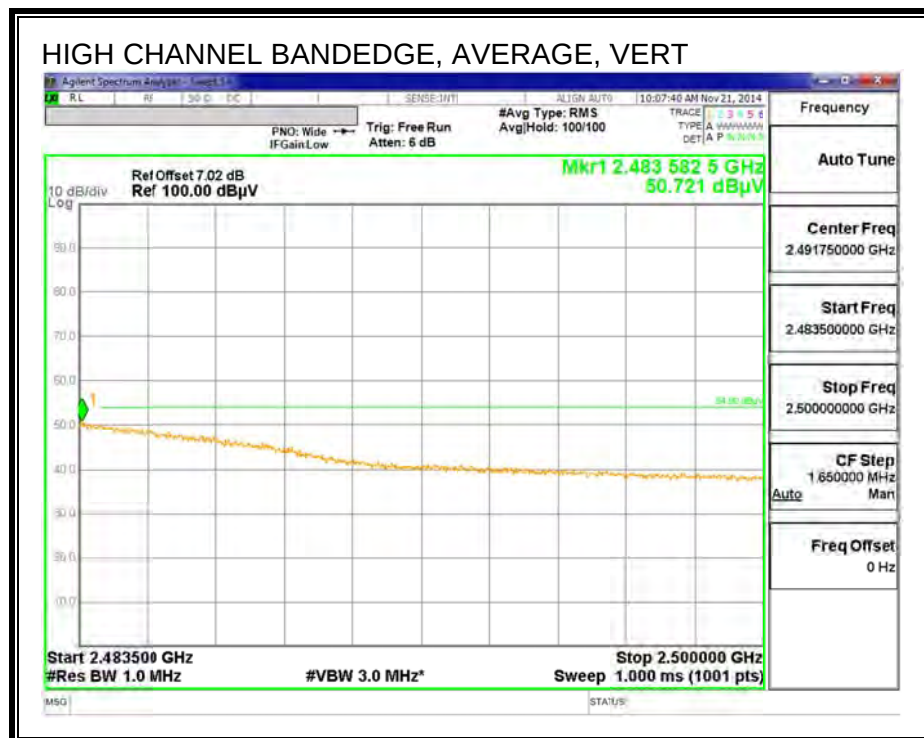
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 11)



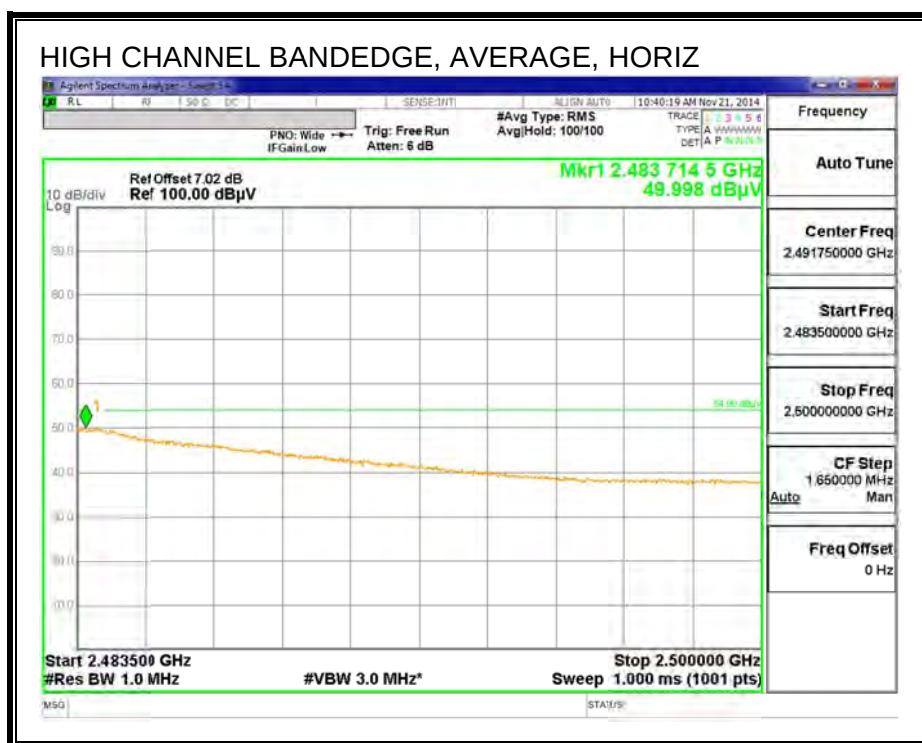
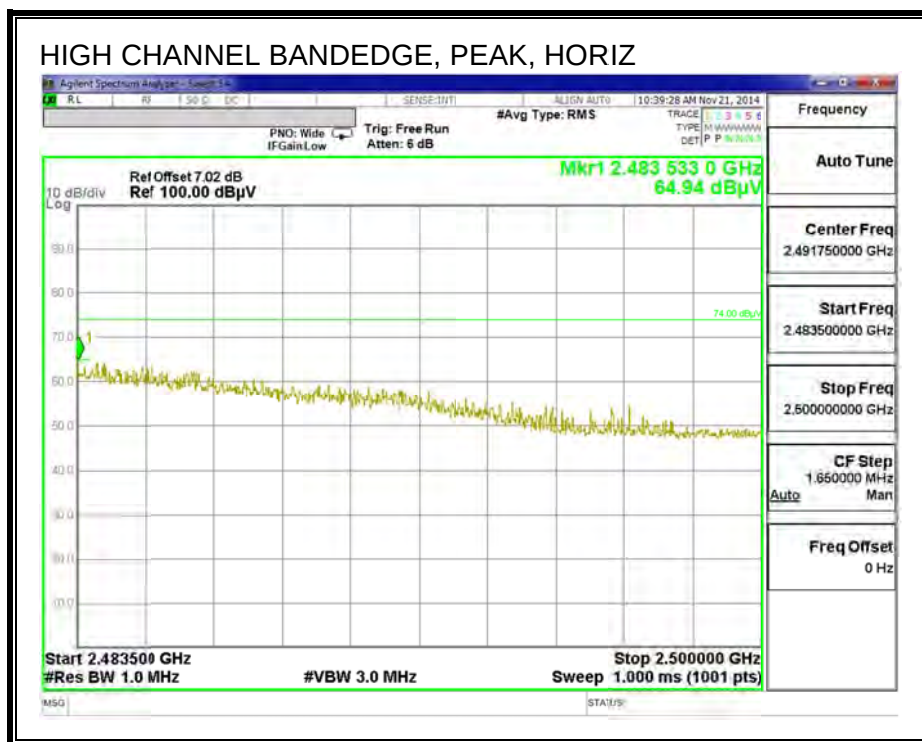


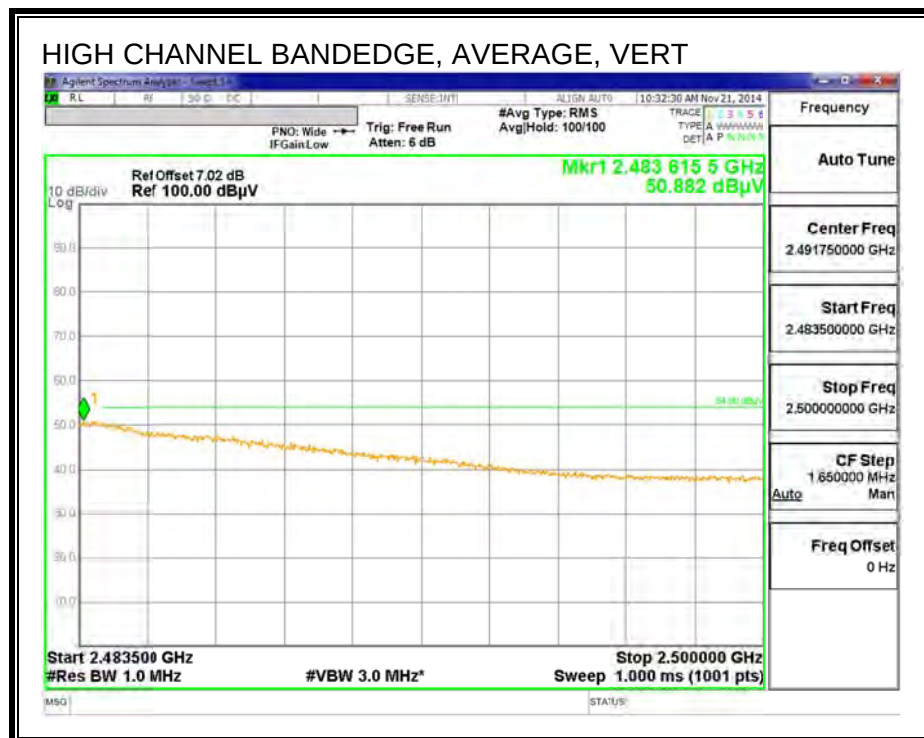
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 12)





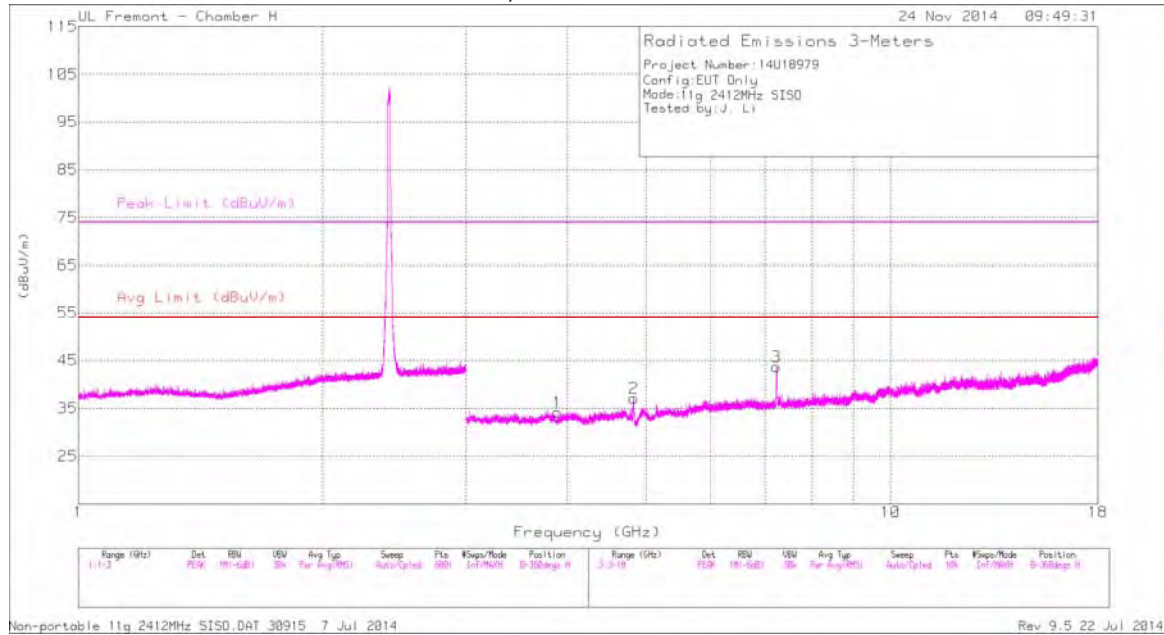
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 13)



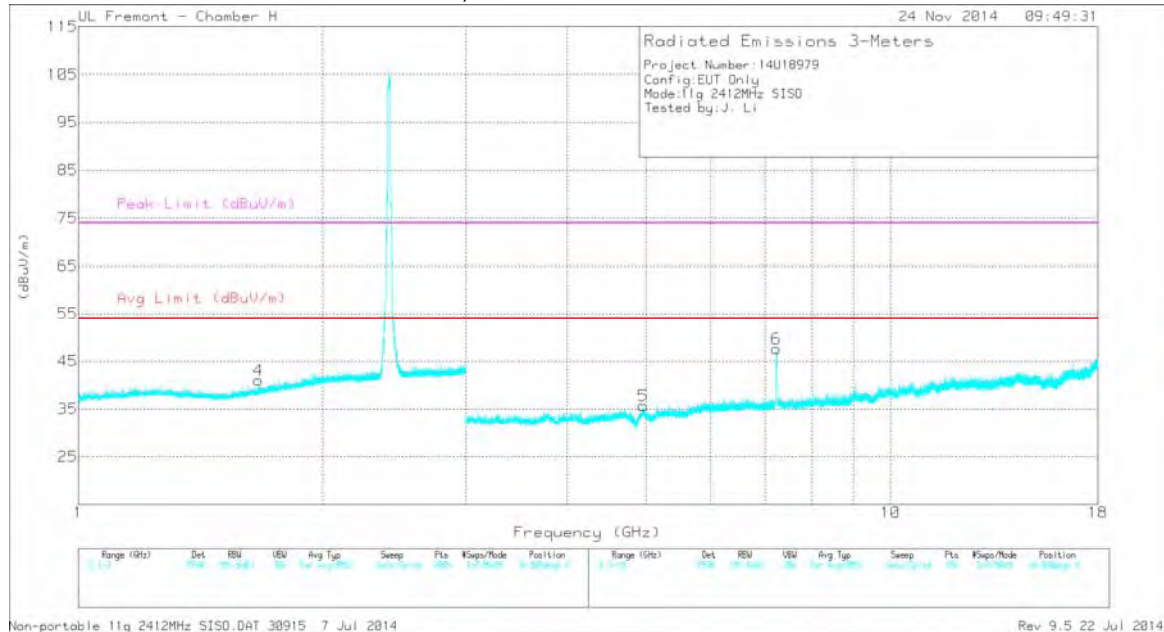


HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT, CH 1



LOW CHANNEL VERTICAL PLOT, CH 1



DATA

Radiated Emissions

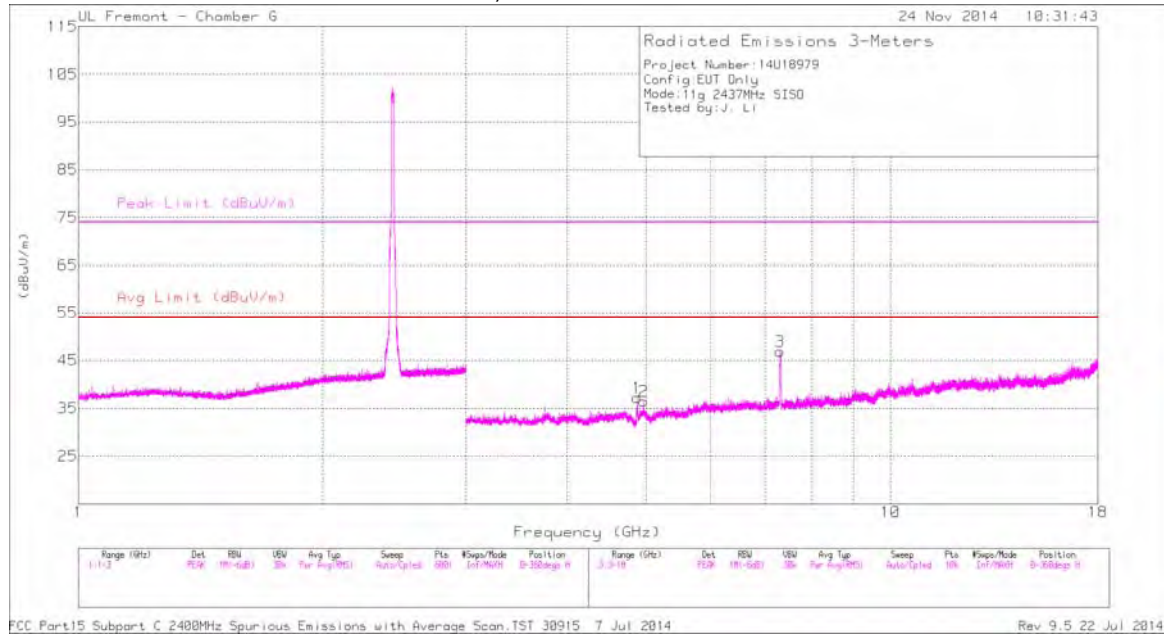
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.887	41.59	PK2	33.2	-33.9	40.89	-	-	74	-33.11	360	101	H
1	* 3.891	31.00	MAv1	33.2	-33.9	30.30	54	-23.70	-	-	360	101	H
2	* 4.826	45.09	PK2	34.1	-33.1	46.09	-	-	74	-27.91	215	162	H
2	* 4.824	32.91	MAv1	34.1	-33.0	34.01	54	-19.99	-	-	215	162	H
3	7.232	42.92	PK2	35.6	-30.9	43.69	-	-	-	-	215	162	H
4	* 1.667	43.08	PK2	29.0	-25.4	46.68	-	-	74	-27.32	215	162	V
4	* 1.668	32.05	MAv1	29.0	-25.4	35.65	54	-18.35	-	-	215	162	V
5	* 4.958	41.21	PK2	34.1	-32.9	42.41	-	-	74	-31.59	215	162	V
5	* 4.962	30.75	MAv1	34.1	-32.9	31.95	54	-22.05	-	-	215	162	V
6	7.234	42.92	PK2	35.6	-30.9	47.62	-	-	-	-	215	162	V

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

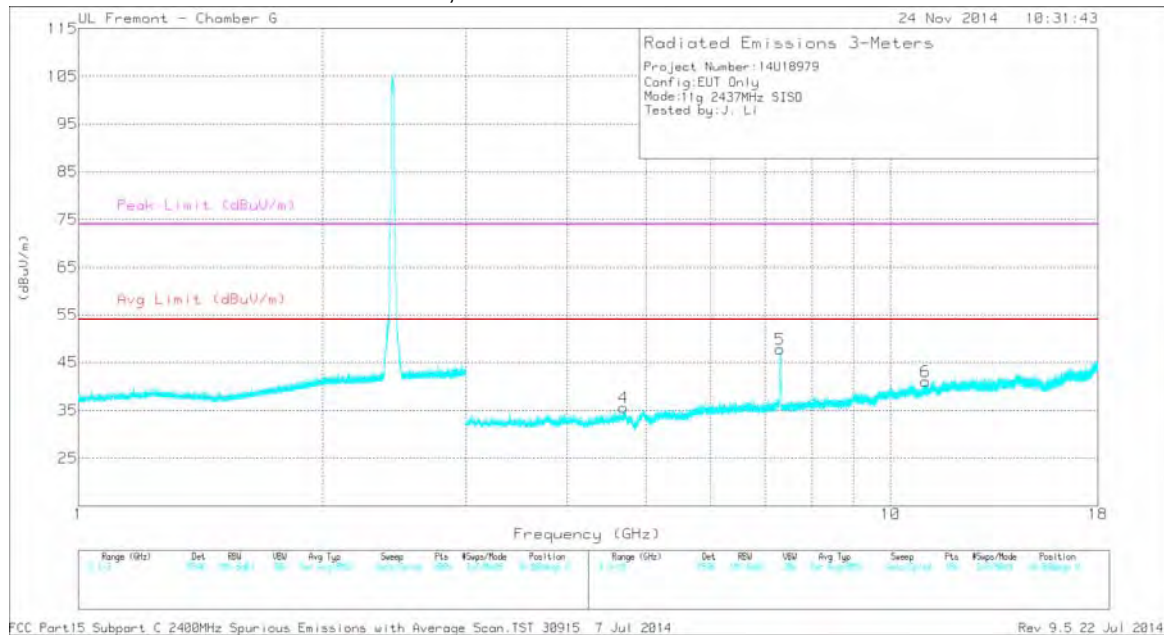
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL HORIZONTAL PLOT, CH 6



MID CHANNEL VERTICAL PLOT, CH 6



DATA

Radiated Emissions

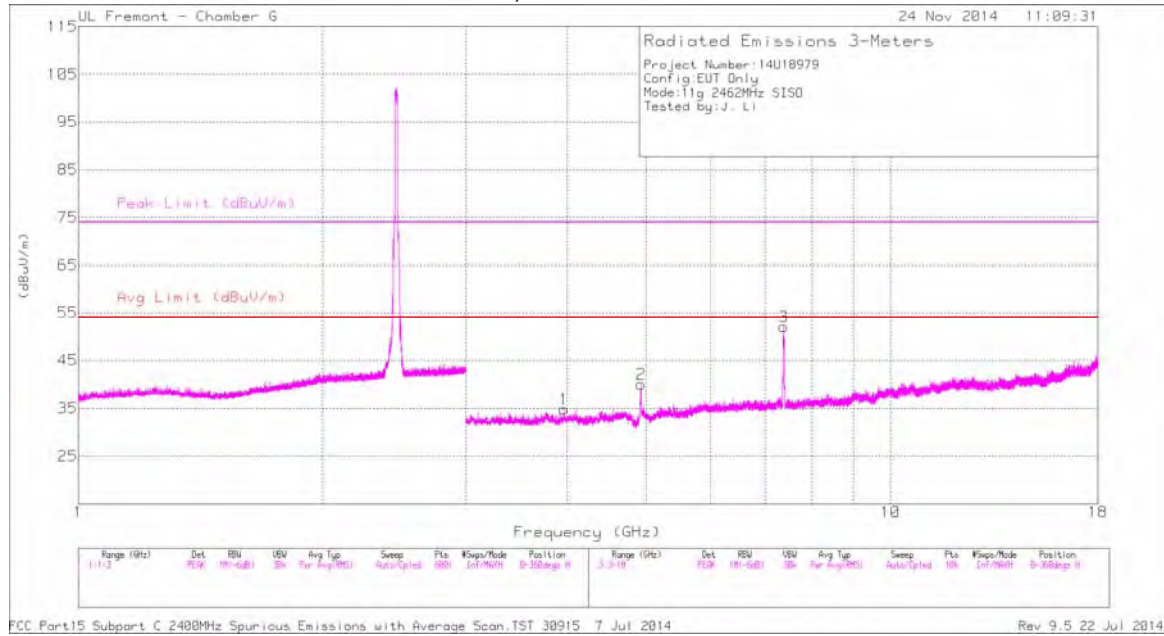
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.875	42.85	PK2	34.1	-33.1	43.85	-	-	74	-30.15	46	107	H
1	* 4.874	32.13	MAv1	34.1	-33.1	33.13	54	-20.87	-	-	46	107	H
2	* 4.962	41.36	PK2	34.1	-32.9	42.56	-	-	74	-31.44	314	294	H
2	* 4.963	29.79	MAv1	34.1	-32.9	30.99	54	-23.01	-	-	314	294	H
3	* 7.316	51.99	PK2	35.6	-31.1	56.49	-	-	74	-17.51	93	268	H
3	* 7.311	38.62	MAv1	35.6	-31.1	43.12	54	-10.88	-	-	93	268	H
4	* 4.698	40.63	PK2	34.0	-33.0	41.63	-	-	74	-32.37	93	268	V
4	* 4.697	30.16	MAv1	34.0	-33.0	31.16	54	-22.84	-	-	93	268	V
5	* 7.312	55.22	PK2	35.6	-31.1	59.72	-	-	74	-14.28	8	142	V
5	* 7.311	42.19	MAv1	35.6	-31.1	46.69	54	-7.31	-	-	8	142	V
6	* 11.045	35.99	PK2	37.8	-27.1	46.69	-	-	74	-27.31	8	142	V
6	* 11.044	25.09	MAv1	37.8	-27.0	35.89	54	-18.11	-	-	8	142	V

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

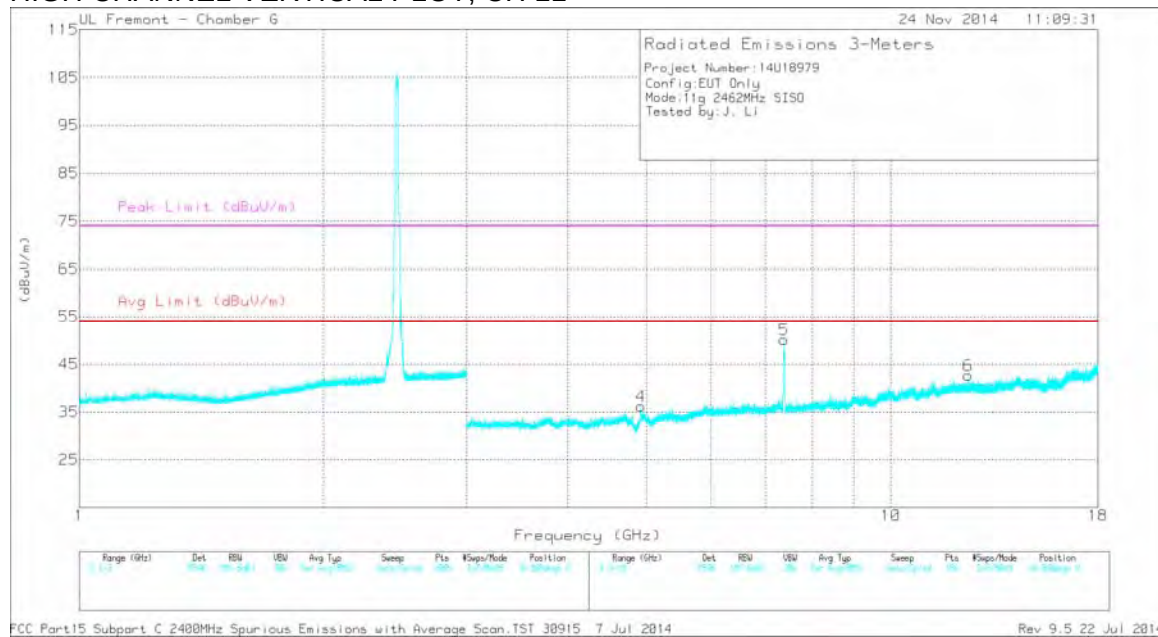
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 11



HIGH CHANNEL VERTICAL PLOT, CH 11



DATA

Radiated Emissions

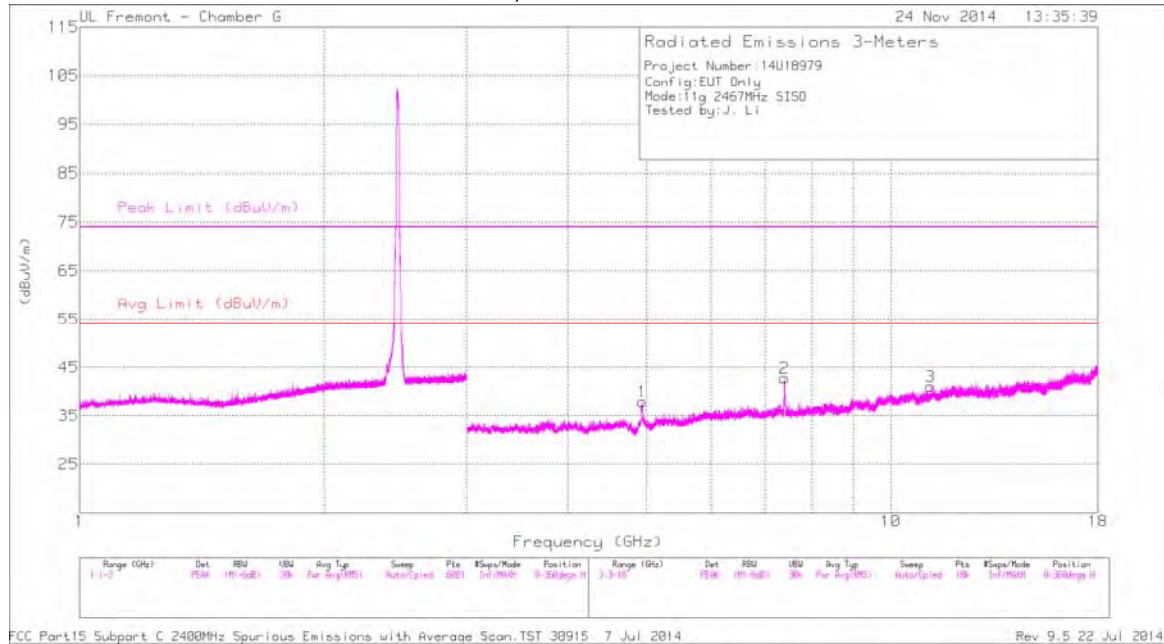
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.960	41.43	PK2	33.3	-33.1	41.63	-	-	74	-32.37	0	101	H
1	* 3.966	30.62	MAv1	33.3	-33.2	30.72	54	-23.28	-	-	0	101	H
2	* 4.927	45.37	PK2	34.1	-33.1	46.37	-	-	74	-27.63	209	101	H
2	* 4.923	33.87	MAv1	34.1	-33.1	34.87	54	-19.13	-	-	209	101	H
3	* 7.377	56.42	PK2	35.6	-31.7	60.32	-	-	74	-13.68	287	365	H
3	* 7.384	43.55	MAv1	35.6	-31.7	47.45	54	-6.55	-	-	287	365	H
4	* 4.925	44.44	PK2	34.1	-33.1	45.44	-	-	74	-28.56	127	286	V
4	* 4.924	33.11	MAv1	34.1	-33.1	34.11	54	-19.89	-	-	127	286	V
5	* 7.381	53.30	PK2	35.6	-31.7	57.20	-	-	74	-16.80	185	166	V
5	* 7.382	39.78	MAv1	35.6	-31.7	43.68	54	-10.32	-	-	185	166	V
6	* 12.464	36.82	PK2	39.0	-26.8	49.02	-	-	74	-24.98	185	166	V
6	* 12.464	25.05	MAv1	39.0	-26.8	37.25	54	-16.75	-	-	185	166	V

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

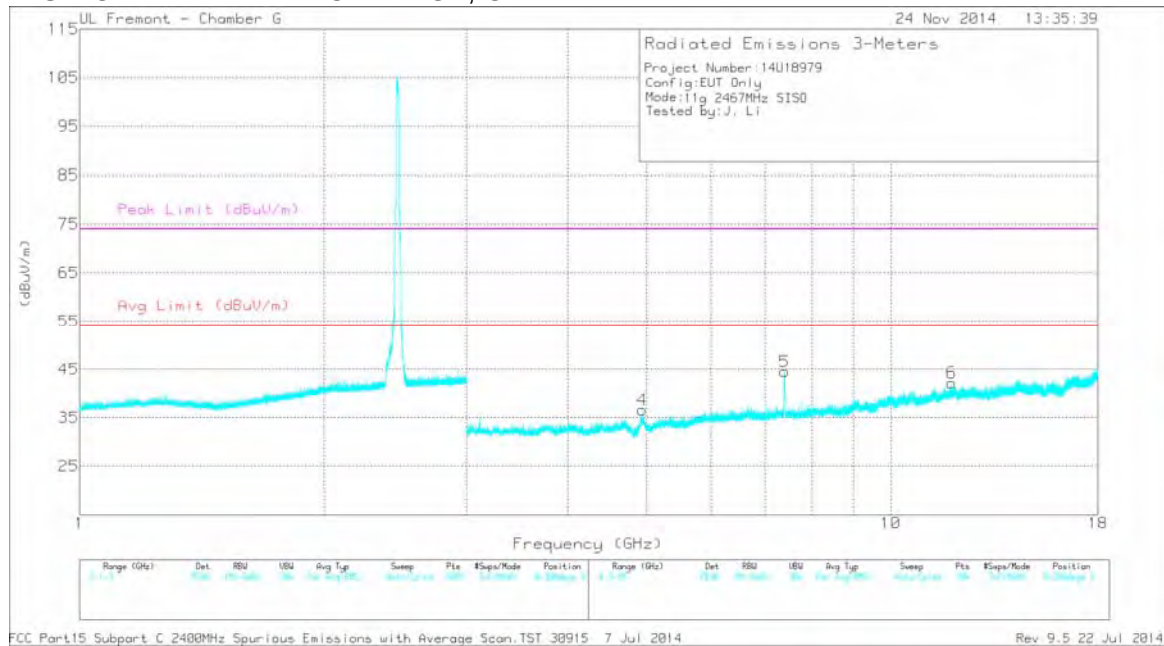
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 12



HIGH CHANNEL VERTICAL PLOT, CH 12



DATA

Radiated Emissions

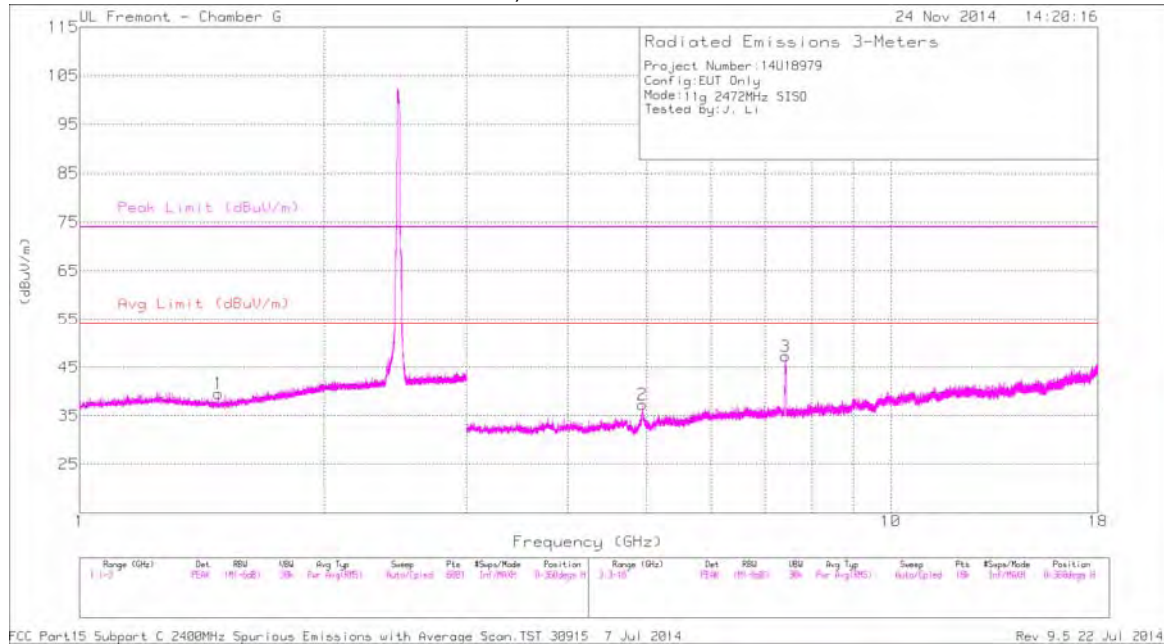
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.940	44.28	PK2	34.1	-33.1	45.28	-	-	74	-28.72	31	163	H
1	* 4.937	33.06	MAv1	34.1	-33.1	34.06	54	-19.94	-	-	31	163	H
2	* 7.394	52.30	PK2	35.6	-31.7	56.2	-	-	74	-17.8	350	250	H
2	* 7.398	39.13	MAv1	35.6	-31.7	43.03	54	-10.97	-	-	350	250	H
3	* 11.198	36.16	PK2	38.0	-26.6	47.56	-	-	74	-26.44	350	250	H
3	* 11.196	24.95	MAv1	380	-26.6	36.35	54	-17.65	-	-	350	250	H
4	* 4.933	42.36	PK2	34.1	-33.1	43.36	-	-	74	-30.64	248	124	V
4	* 4.934	31.18	MAv1	34.1	-33.1	32.18	54	-21.82	-	-	248	124	V
5	* 7.406	40.64	PK2	35.6	-31.6	44.64	-	-	74	-29.36	321	202	V
5	* 7.388	29.27	MAv1	35.6	-31.7	33.17	54	-20.83	-	-	321	202	V
6	* 11.876	36.36	PK2	38.8	-26.7	48.46	-	-	74	-25.54	321	202	V
6	* 11.877	25.14	MAv1	38.8	-26.7	37.24	54	-16.76	-	-	321	202	V

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

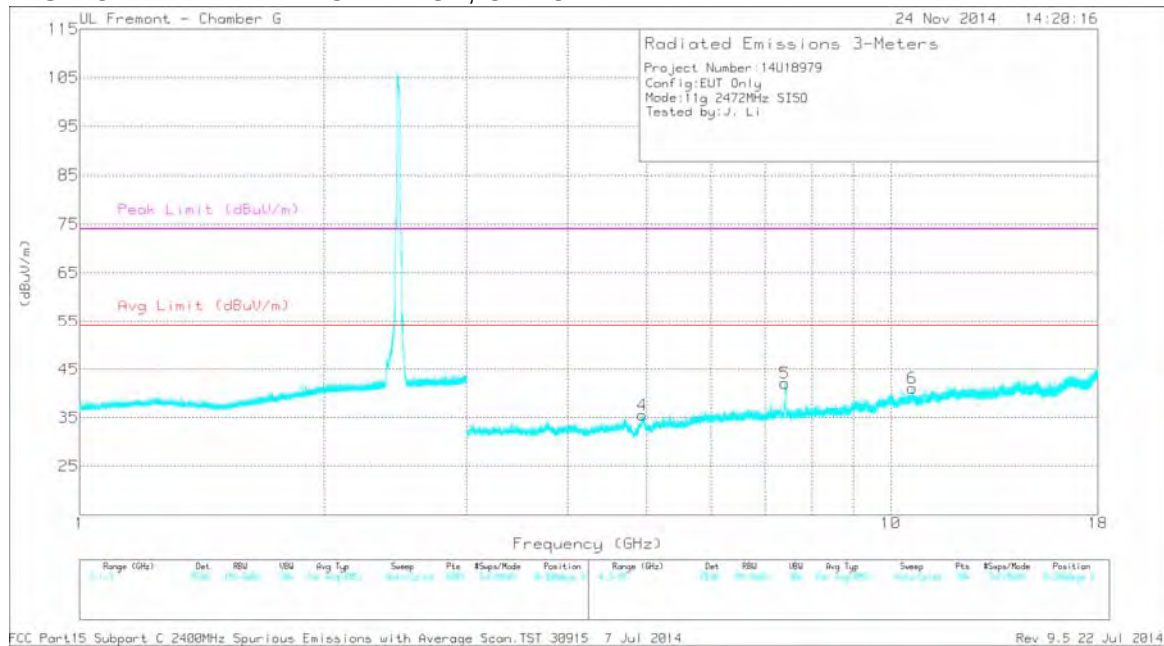
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL PLOT, CH 13



HIGH CHANNEL VERTICAL PLOT, CH 13



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.485	43.86	PK2	28.0	-25.6	46.26	-	-	74	-27.74	360	101	H
1	* 1.483	32.38	MAv1	28.0	-25.6	34.78	54	-19.22	-	-	360	101	H
2	* 4.936	44.33	PK2	34.1	-33.1	45.33	-	-	74	-28.67	225	105	H
2	* 4.943	32.78	MAv1	34.1	-33.0	33.88	54	-20.12	-	-	225	105	H
3	* 7.414	51.24	PK2	35.6	-31.7	55.14	-	-	74	-18.86	174	263	H
3	* 7.415	38.46	MAv1	35.6	-31.7	42.36	54	-11.64	-	-	174	263	H
4	* 4.938	41.85	PK2	34.1	-33.1	42.85	-	-	74	-31.15	3	190	V
4	* 4.936	30.05	MAv1	34.1	-33.1	31.05	54	-22.95	-	-	3	190	V
5	* 7.405	40.45	PK2	35.6	-31.6	44.45	-	-	74	-29.55	121	329	V
5	* 7.389	28.63	MAv1	35.6	-31.7	32.53	54	-21.47	-	-	121	329	V
6	* 10.626	36.33	PK2	37.7	-26.3	47.73	-	-	74	-26.27	121	329	V
6	* 10.625	25.02	MAv1	37.7	-26.3	36.42	54	-17.58	-	-	121	329	V

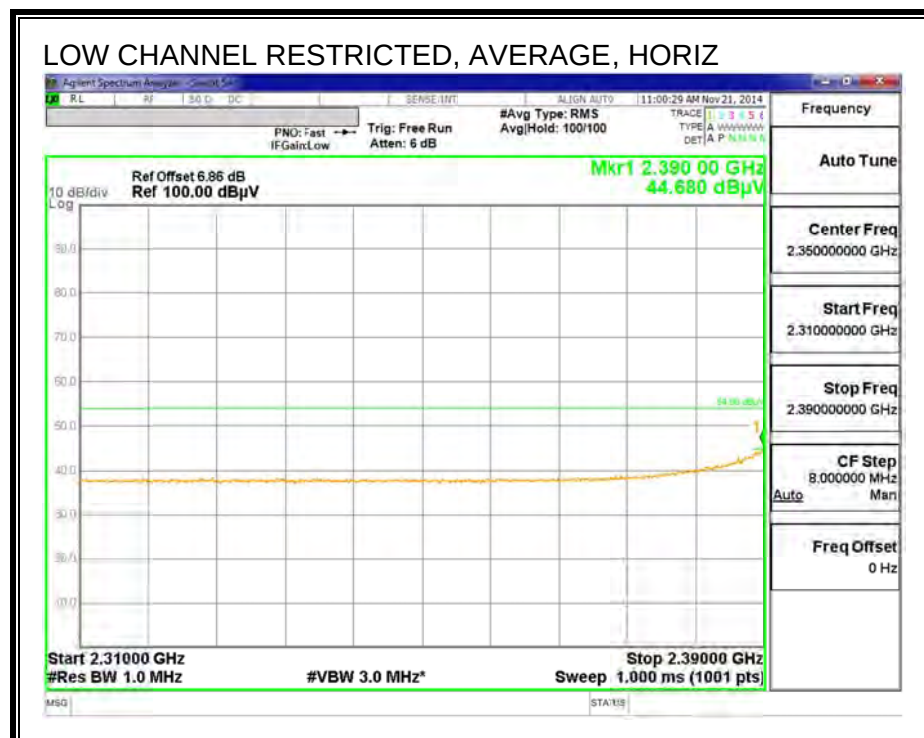
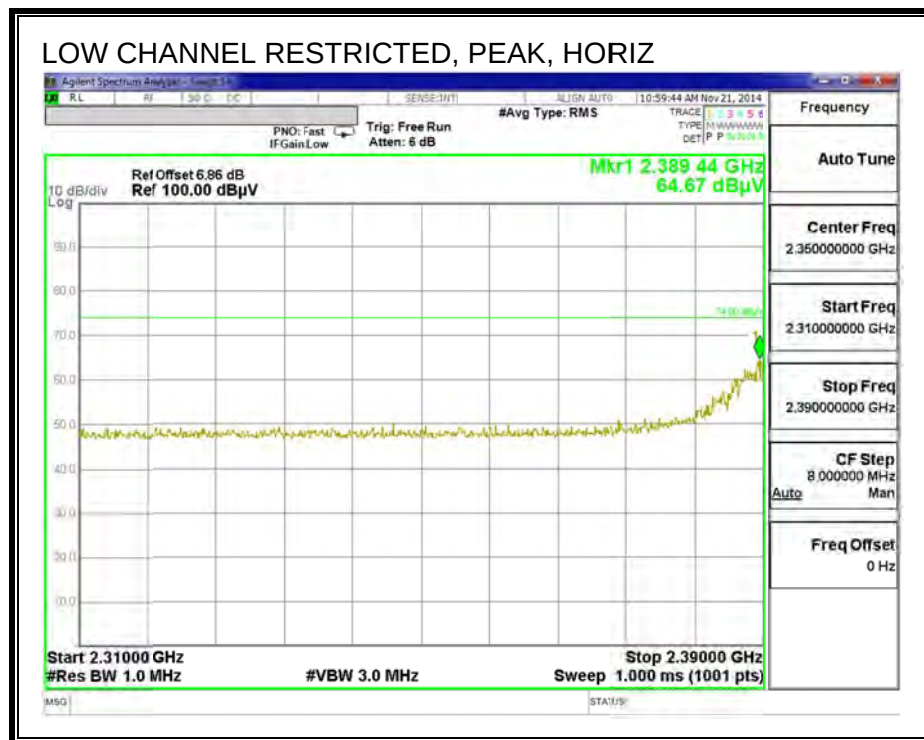
* - indicates frequency in CFR15.205/IC8.10 Restricted Band

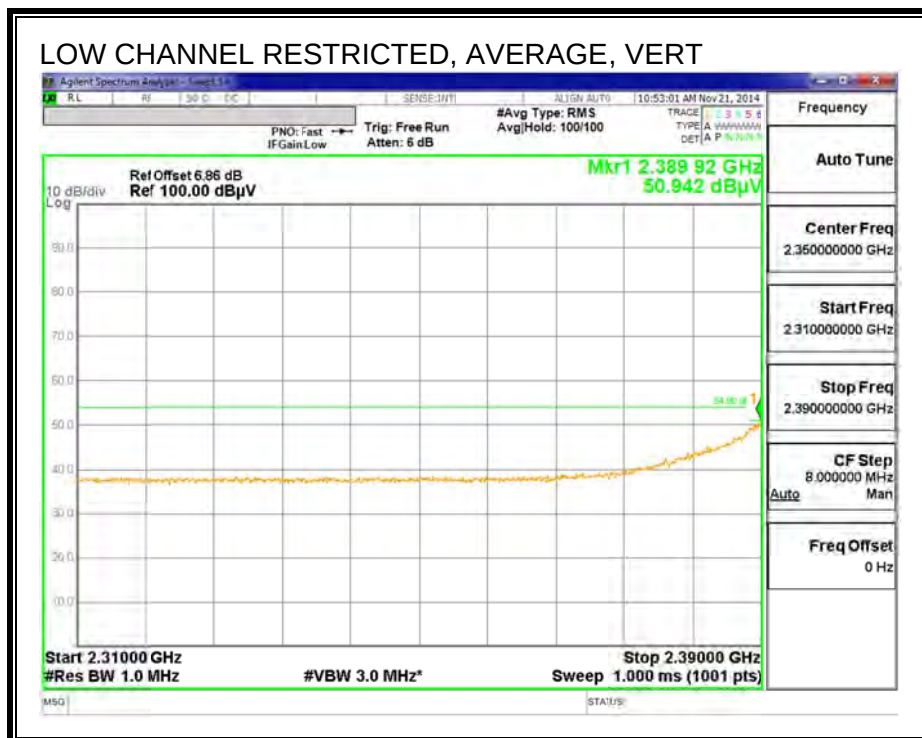
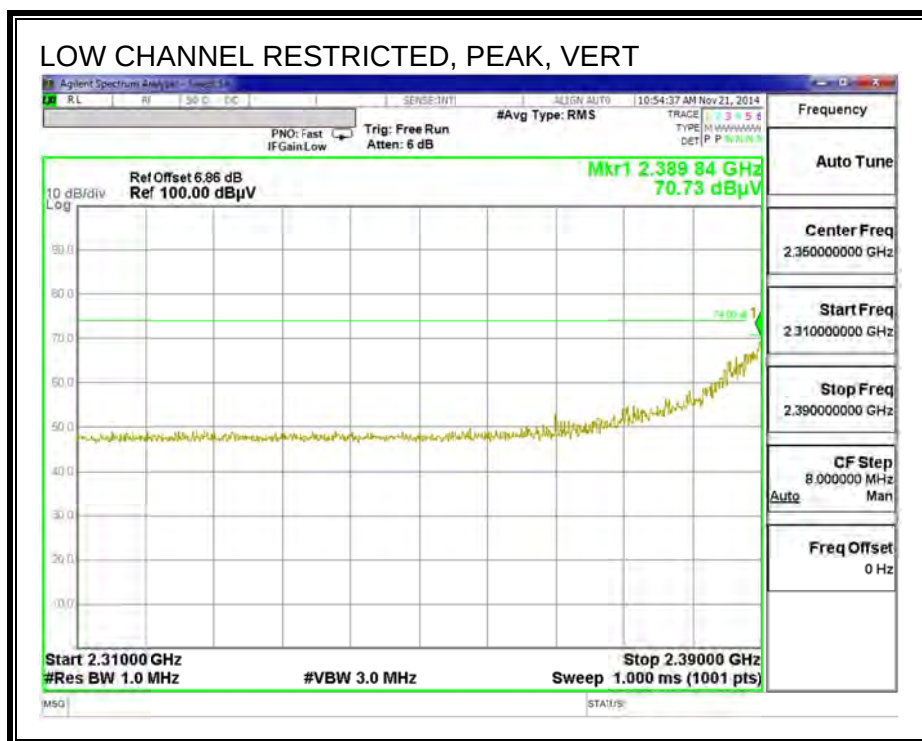
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

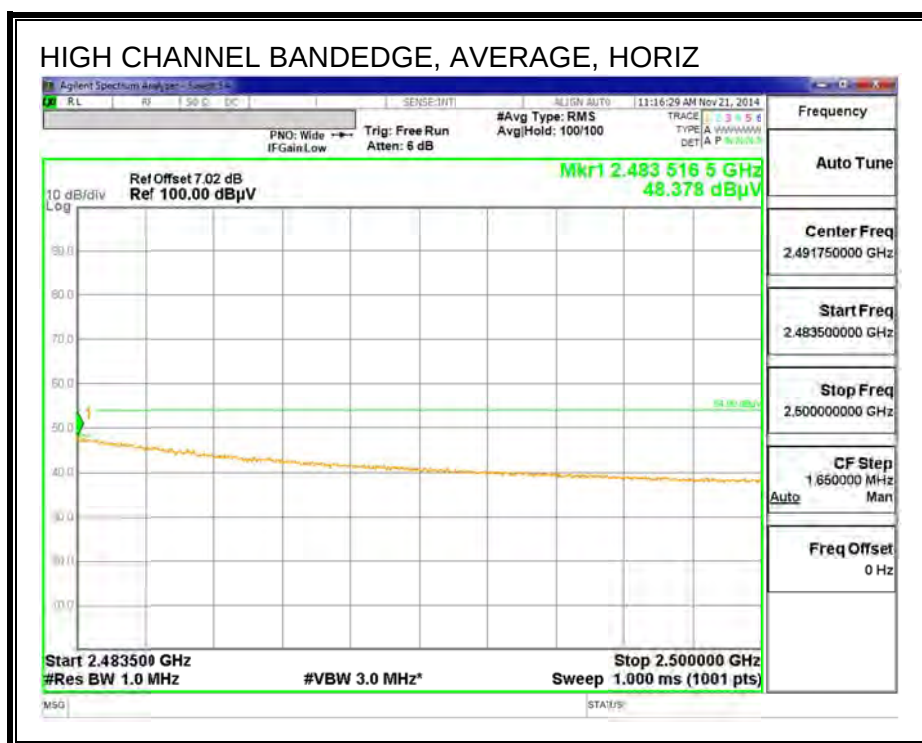
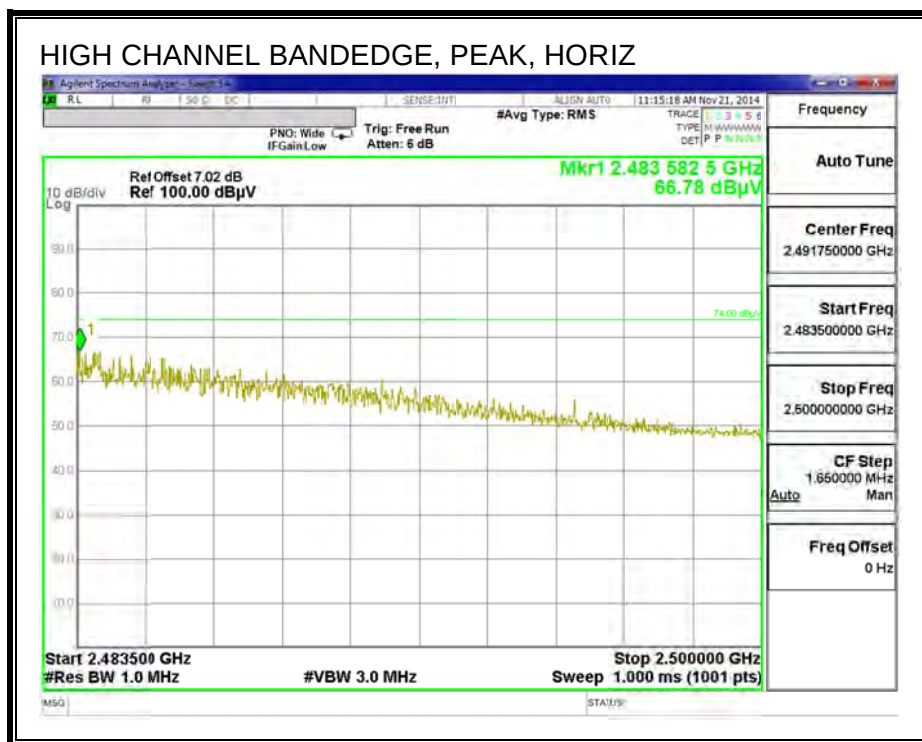
10.3.3. 802.11n HT20 1Tx MODE IN THE 2.4 GHz BAND

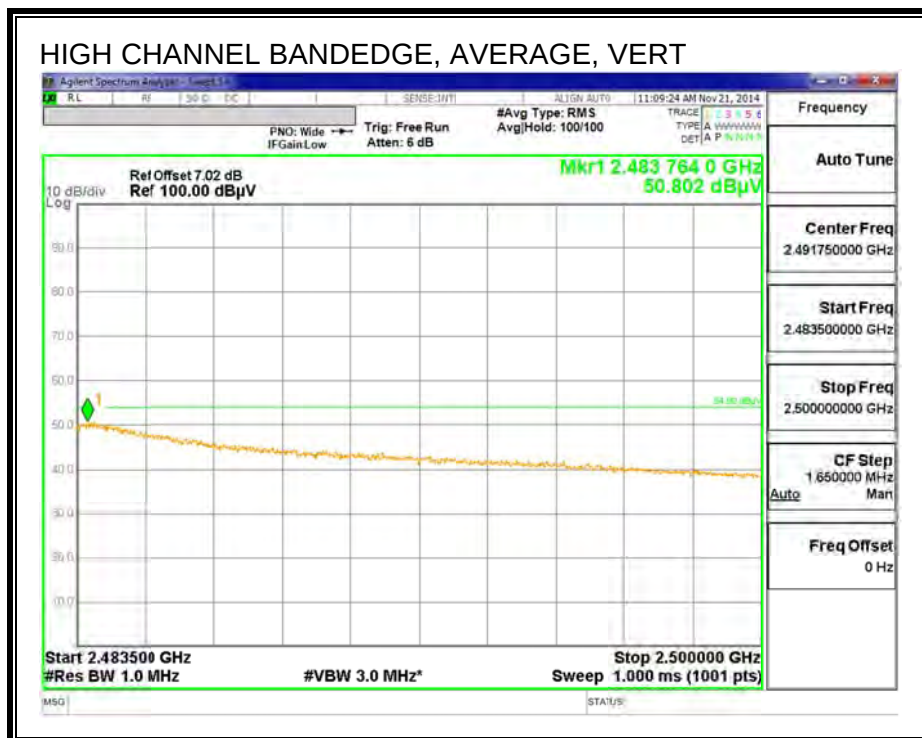
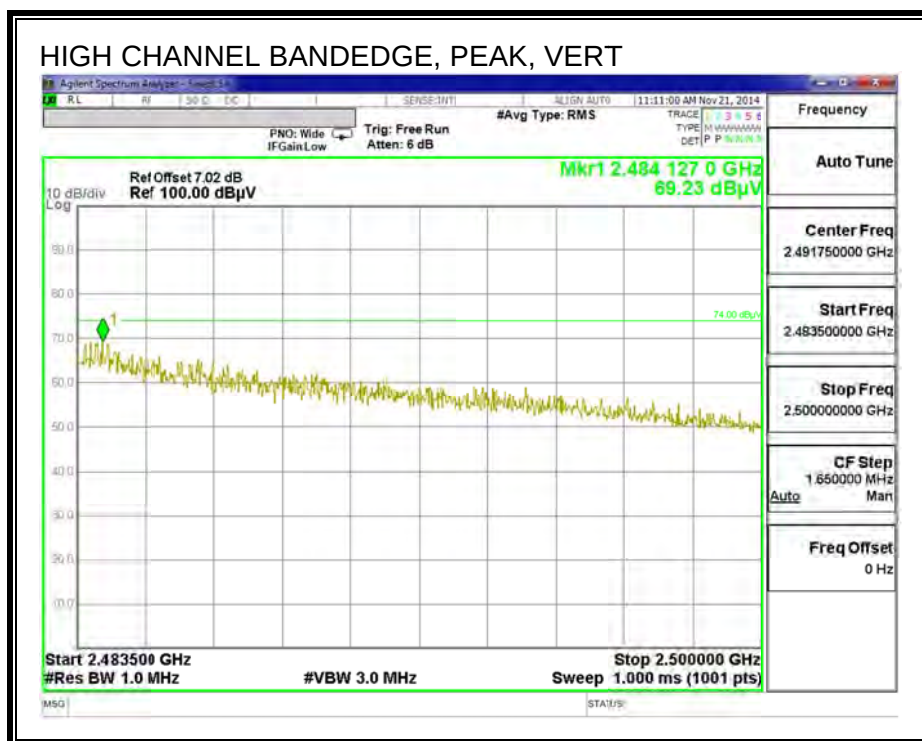
RESTRICTED BANDEDGE (LOW CHANNEL, CHANNEL 1)



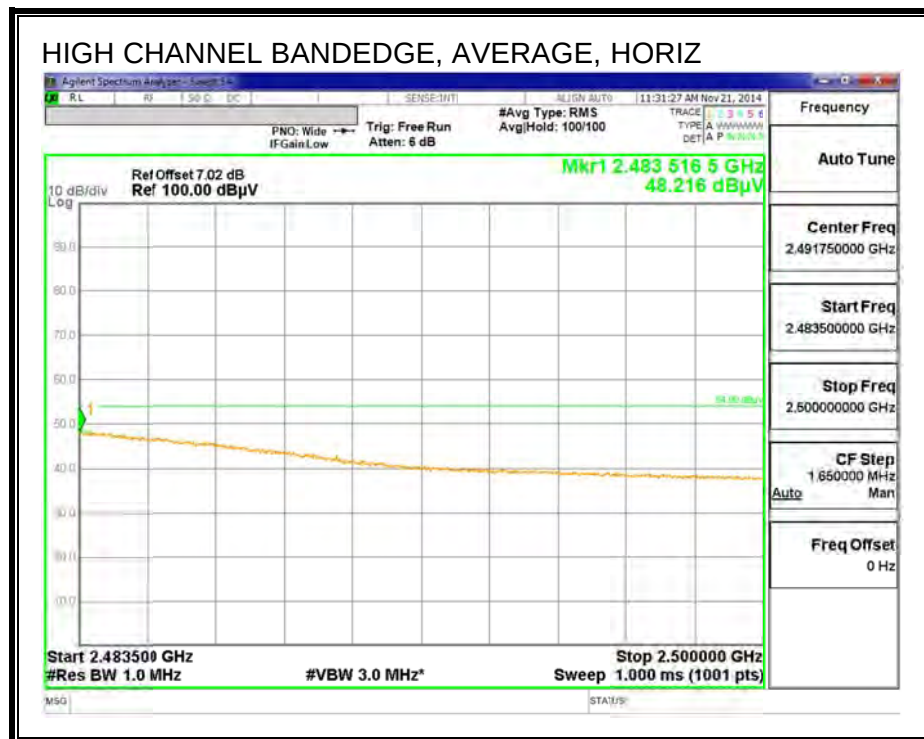
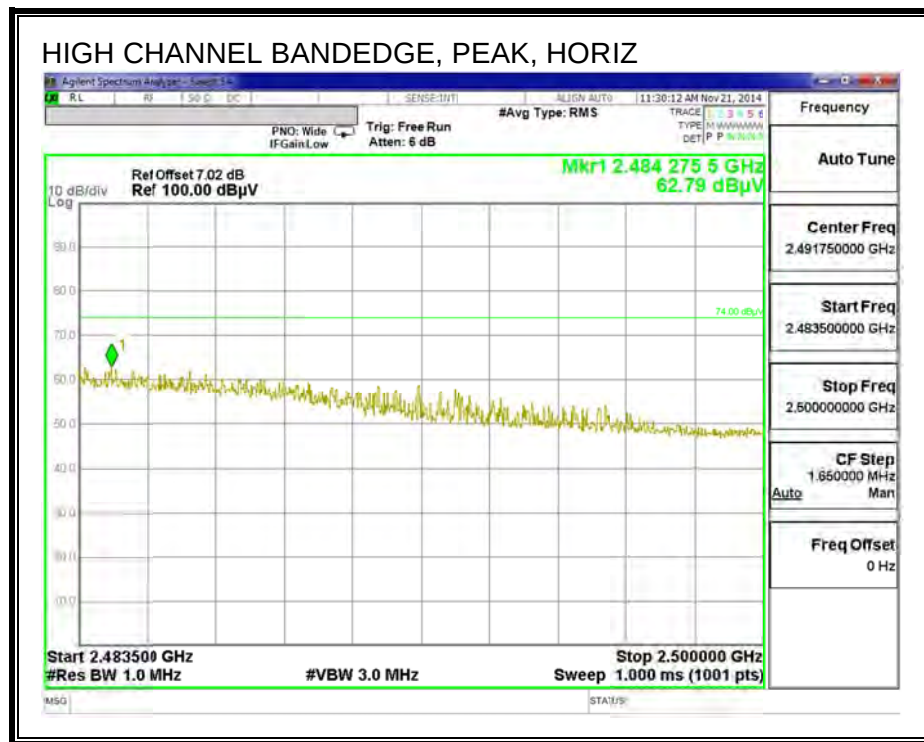


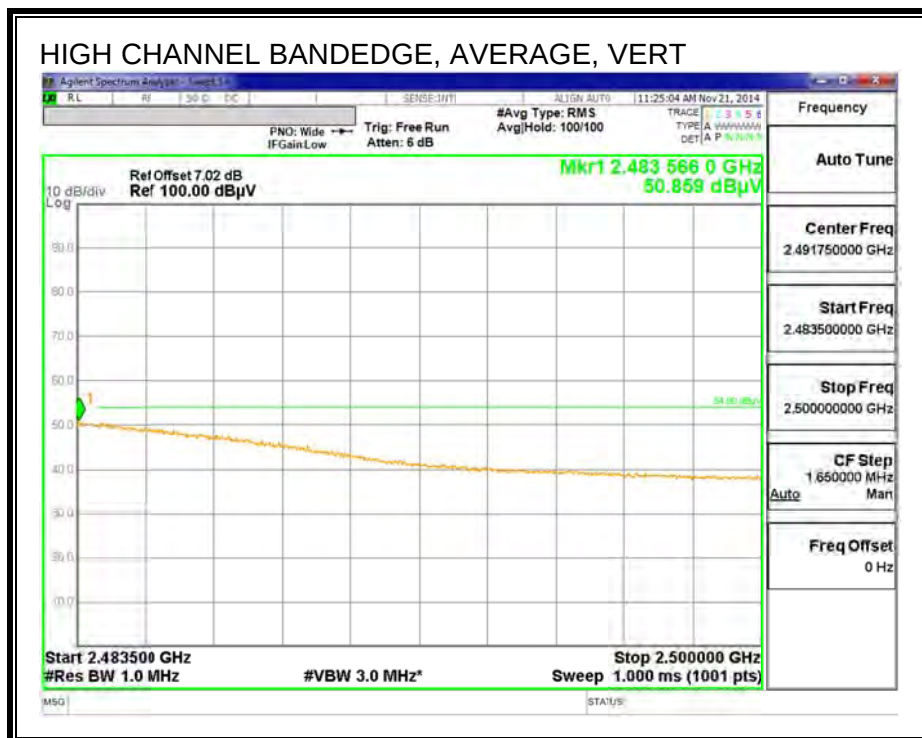
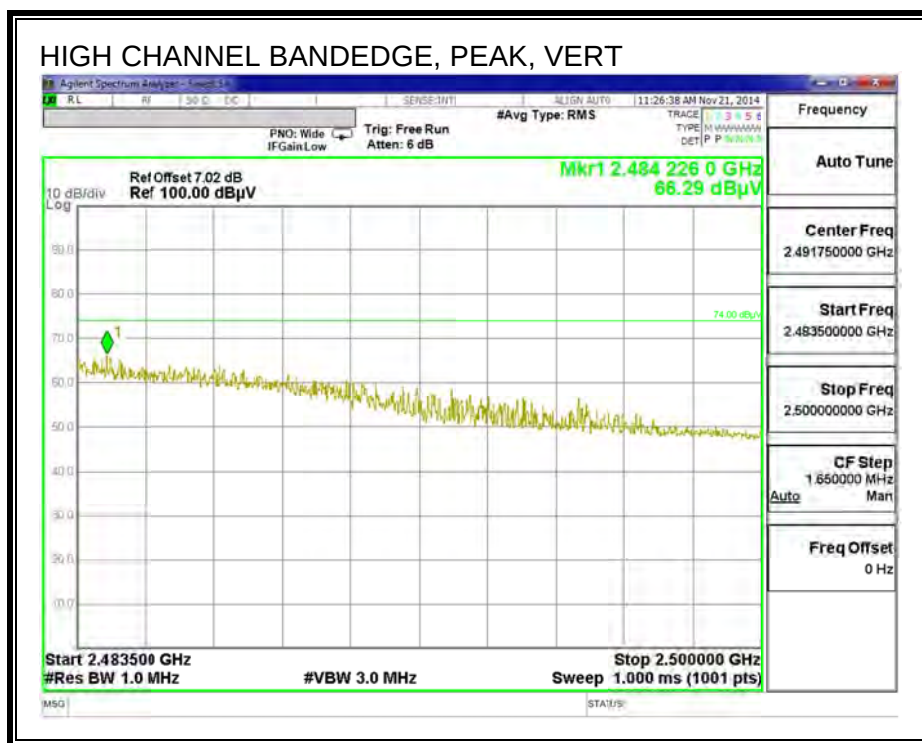
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 11)



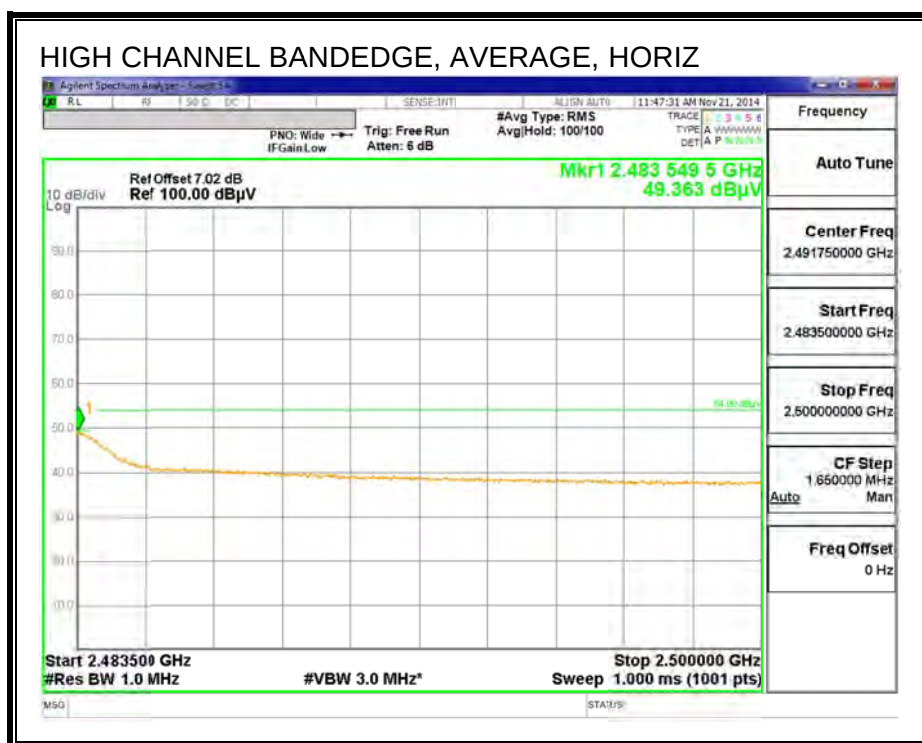
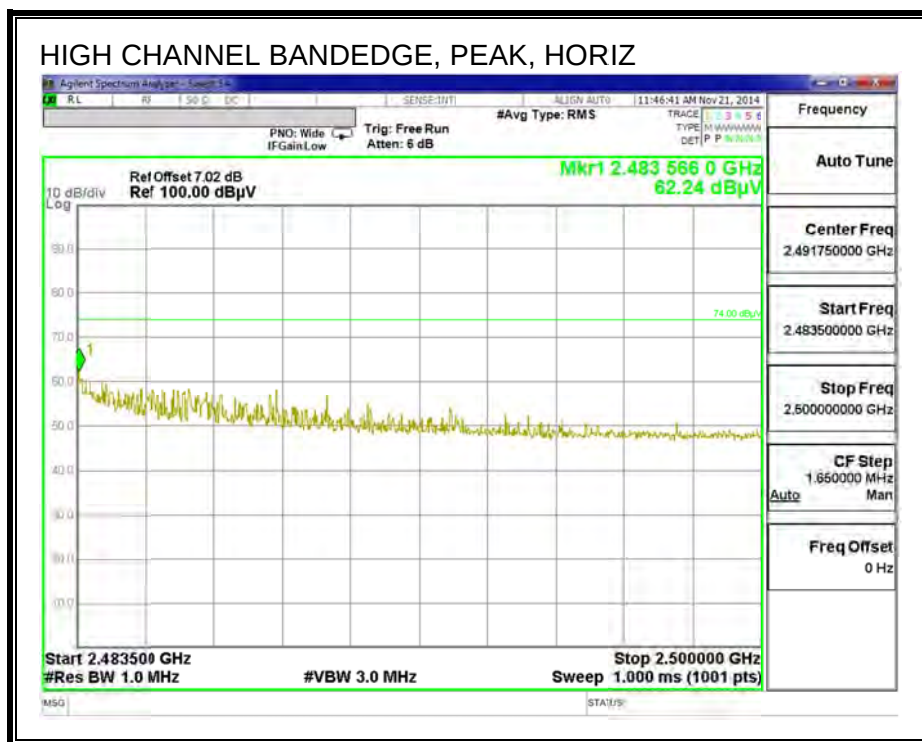


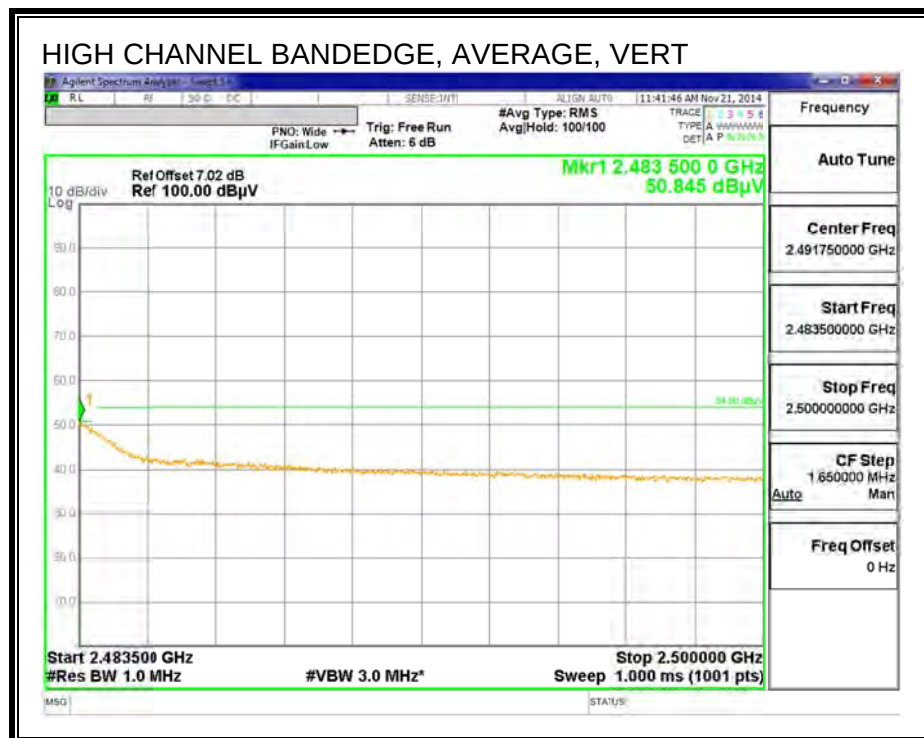
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 12)





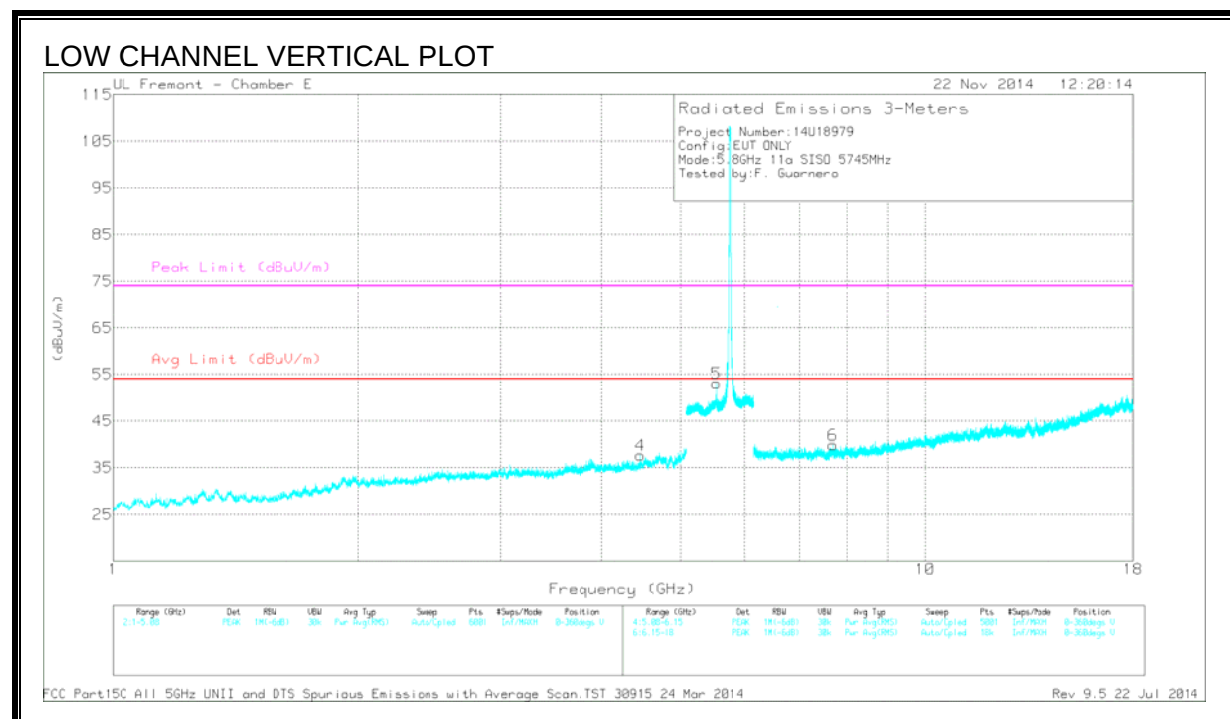
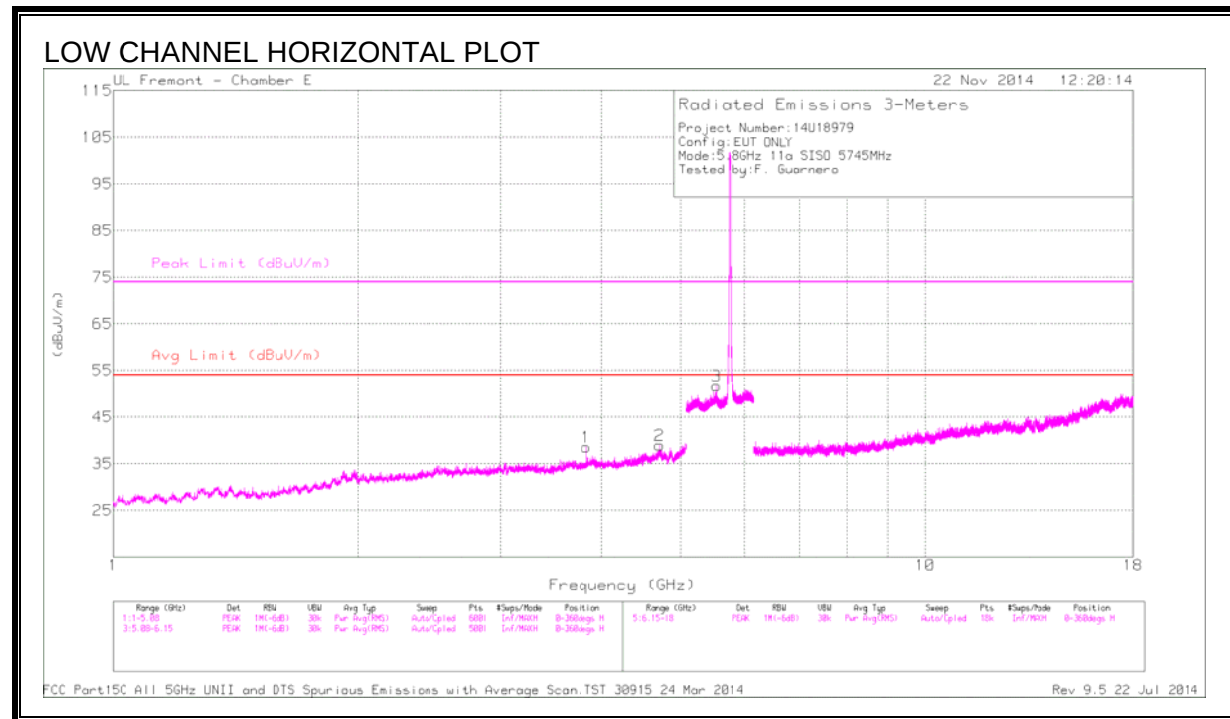
RESTRICTED BANDEDGE (HIGH CHANNEL, CHANNEL 13)





10.3.4. TX ABOVE 1 GHz 802.11a 1Tx MODE IN THE 5.8 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS



DATA

Radiated Emissions

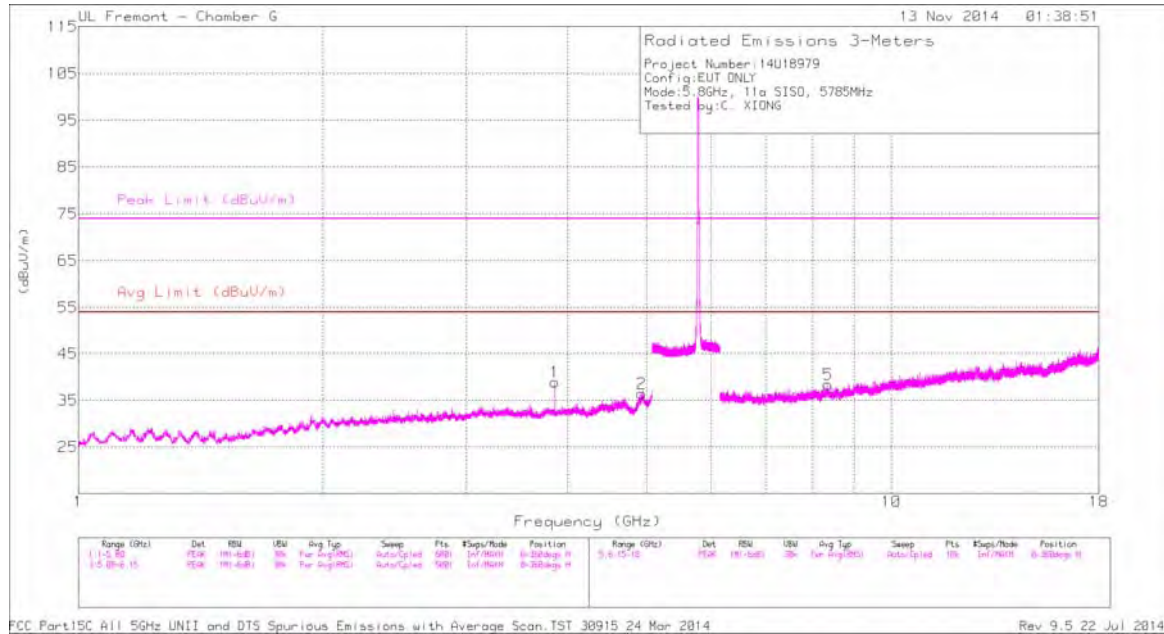
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Polarity
1	* 3.830	43.62	PK1	33.4	-31.6	45.42	-	-	74	-28.58	H
1	* 3.830	35.87	AD1	33.4	-31.6	37.67	54	-16.33	-	-	H
2	* 4.712	42.42	PK1	34.2	-30.3	46.32	-	-	74	-27.68	H
2	* 4.712	31.18	AD1	34.2	-30.3	35.08	54	-18.92	-	-	H
3	5.532	46.20	PK1	34.6	-20.5	60.30	-	-	-	-	H
4	4.466	40.95	PK1	33.9	-30.3	44.55	-	-	-	-	V
5	5.532	46.92	PK1	34.6	-20.5	61.02	-	-	-	-	V
6	* 7.694	38.37	PK1	35.9	-27.2	47.07	-	-	74	-26.93	V
6	* 7.695	27.09	AD1	35.9	-27.3	35.69	54	-18.31	-	-	V

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

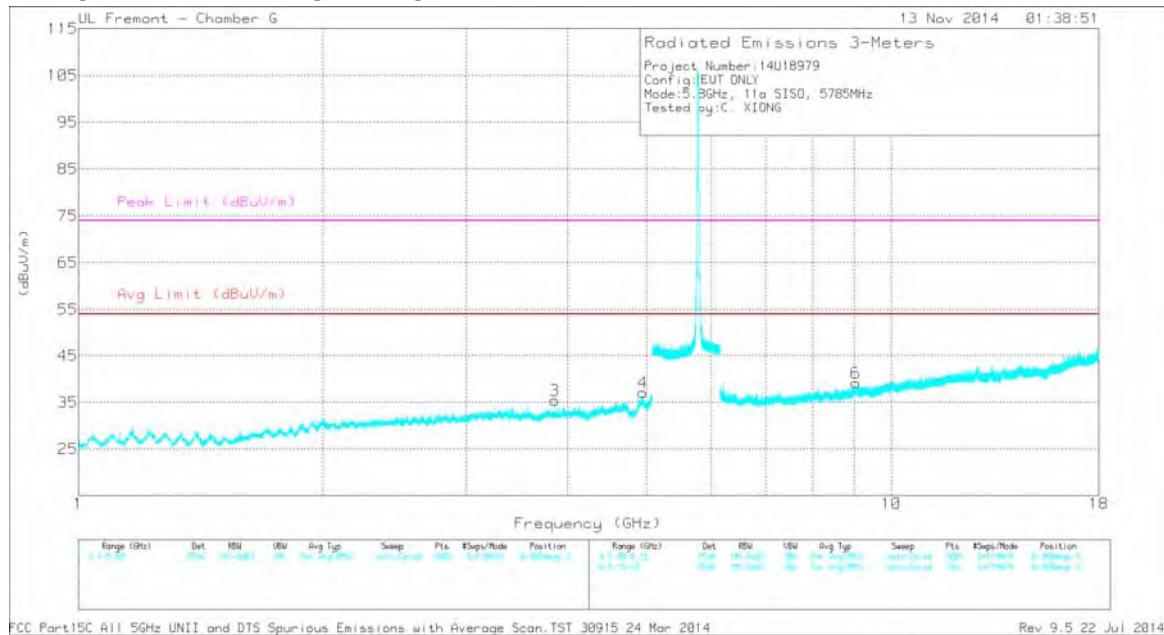
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

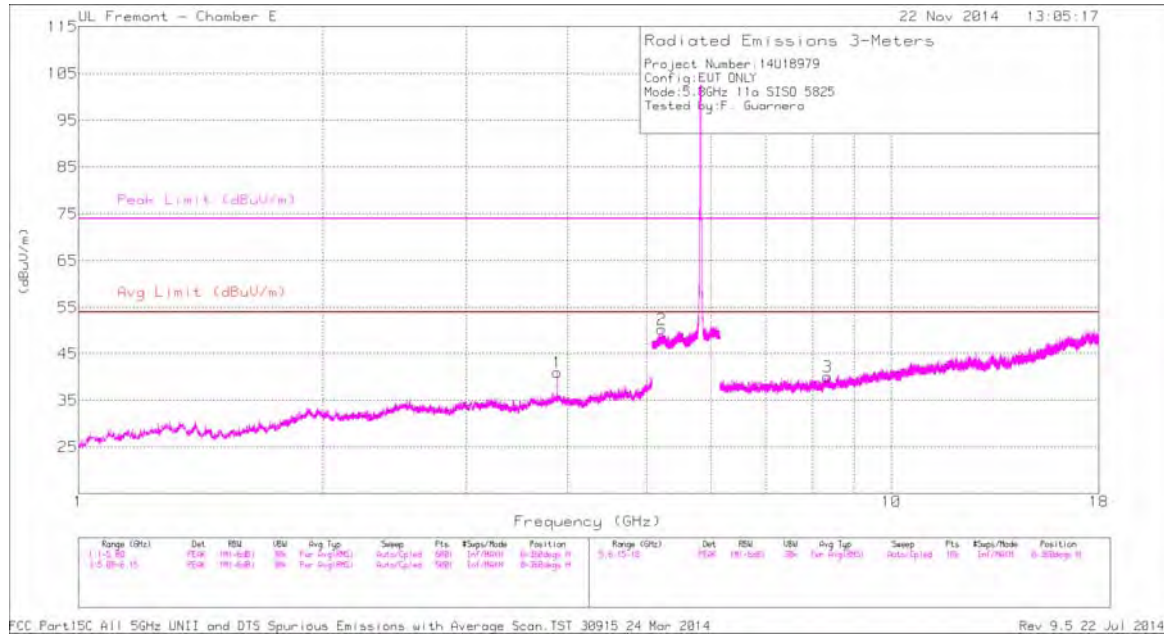
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Polarity
1	* 3.857	44.72	PK1	33.1	-33.5	44.32	-	-	74	-29.68	H
1	* 3.857	38.43	AD1	33.1	-33.5	38.03	54	-15.97	-	-	H
2	* 4.928	41.78	PK1	34.1	-31.7	44.18	-	-	74	-29.82	H
2	* 4.928	31.23	AD1	34.1	-31.7	33.63	54	-20.37	-	-	H
3	* 3.857	42.99	PK1	33.1	-33.5	42.59	-	-	74	-31.41	V
3	* 3.857	34.99	AD1	33.1	-33.5	34.59	54	-19.41	-	-	V
4	* 4.943	41.41	PK1	34.1	-31.7	43.81	-	-	74	-30.19	V
4	* 4.943	30.47	AD1	34.1	-31.7	32.87	54	-21.13	-	-	V
5	* 8.356	38.82	PK1	35.8	-29.4	45.22	-	-	74	-28.78	H
5	* 8.355	28.17	AD1	35.8	-29.4	34.57	54	-19.43	-	-	H
6	* 9.052	38.06	PK1	36.4	-28.3	46.16	-	-	74	-27.84	V
6	* 9.050	27.51	AD1	36.4	-28.4	35.51	54	-18.49	-	-	V

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

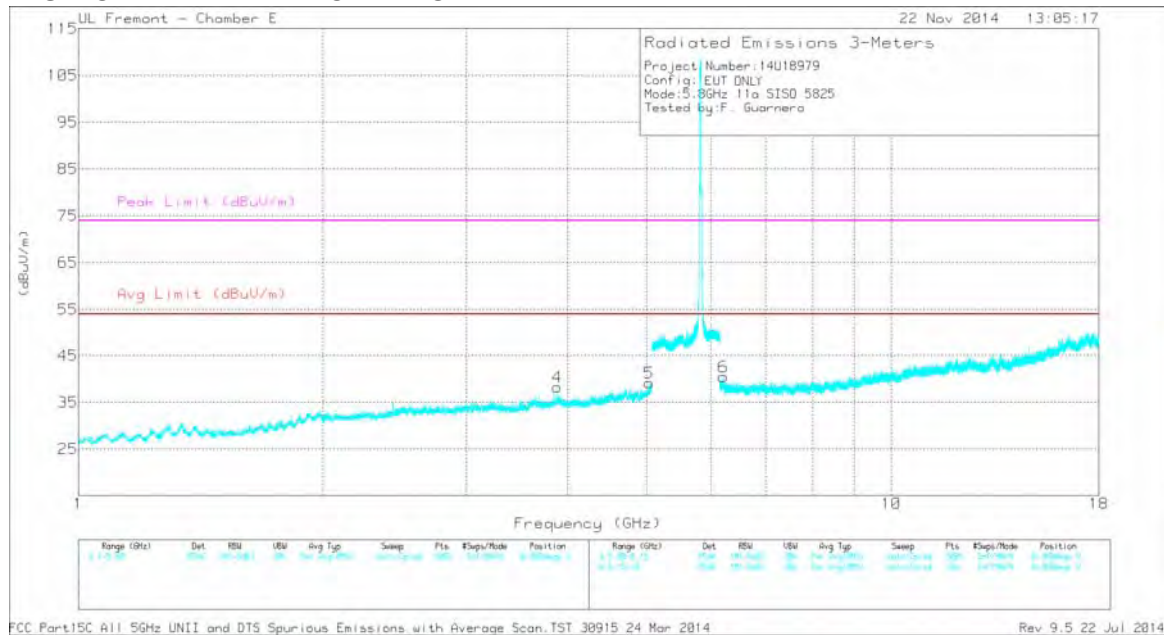
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Polarity
1	* 3.883	44.36	PK1	33.5	-30.5	47.36	-	-	74	-26.64	H
1	* 3.883	37.99	AD1	33.5	-30.5	40.99	54	-13.01	-	-	H
2	5.221	43.68	PK1	34.3	-21.3	56.68	-	-	-	-	H
3	* 8.349	38.65	PK1	35.9	-27.3	47.25	-	-	74	-26.75	H
3	* 8.347	27.26	AD1	35.9	-27.3	35.86	54	-18.14	-	-	H
4	* 3.883	42.52	PK1	33.5	-30.5	45.52	-	-	74	-28.48	V
4	* 3.883	34.34	AD1	33.5	-30.5	37.34	54	-16.66	-	-	V
5	* 5.030	41.23	PK1	34.1	-28.9	46.43	-	-	74	-27.57	V
5	* 5.032	29.38	AD1	34.1	-28.9	34.58	54	-19.42	-	-	V
6	6.213	44.42	PK1	35.4	-29.5	50.32	-	-	-	-	V

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

PK1 - KDB789033 Method: Peak

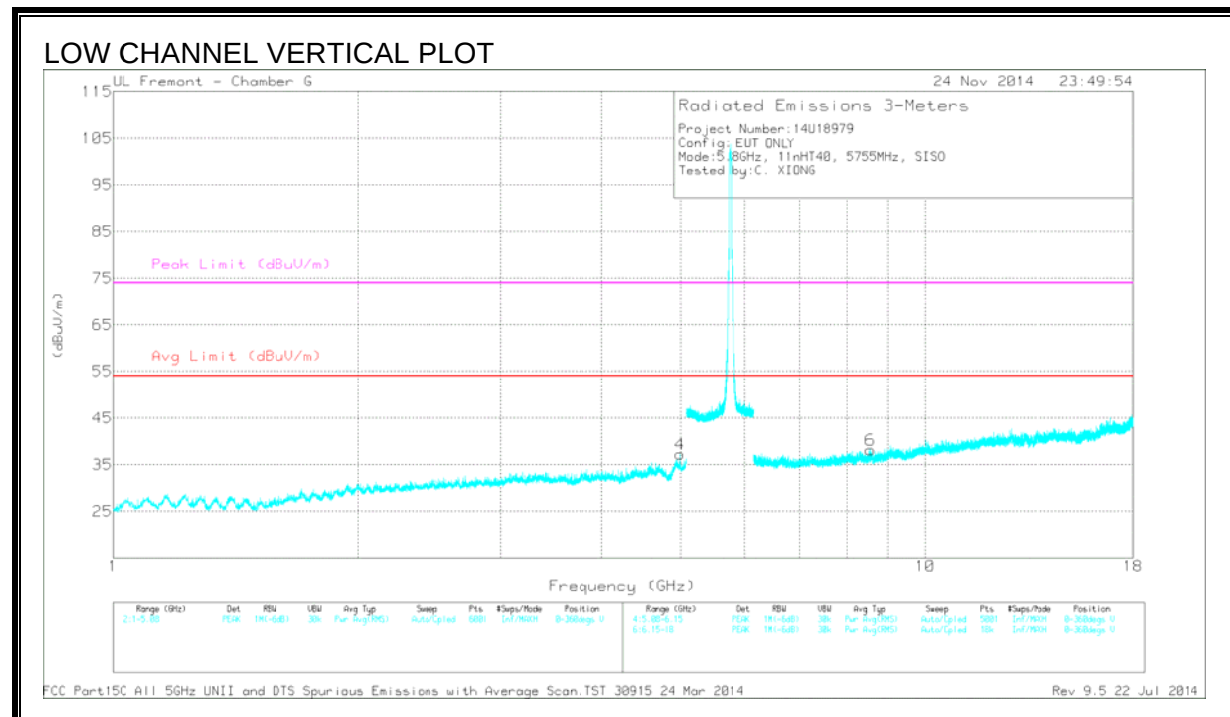
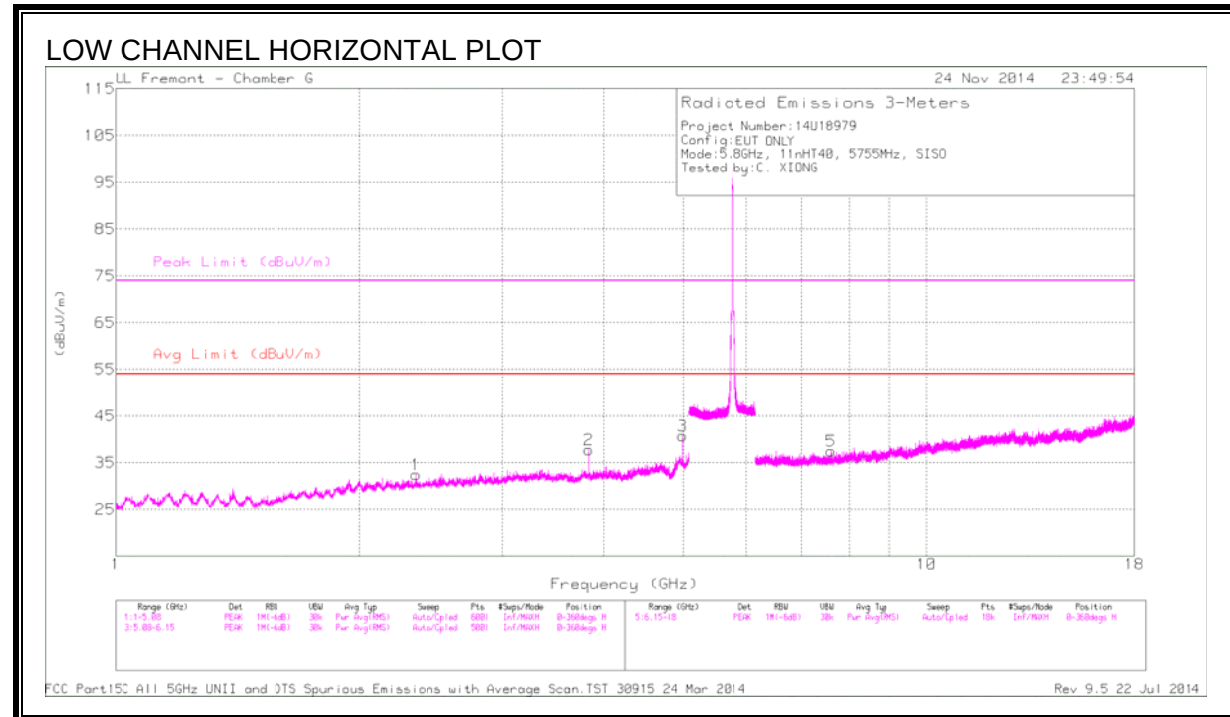
AD1 - KDB789033 Method: AD Primary Power Average

10.3.5. TX ABOVE 1 GHz 802.11n HT20 1Tx MODE IN THE 5.8 GHz BAND

Note: this test is covered on by testing to 11a 1Tx Mode.

10.3.6. TX ABOVE 1 GHz 802.11n HT40 1Tx MODE IN THE 5.8 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS



DATA

Radiated Emissions

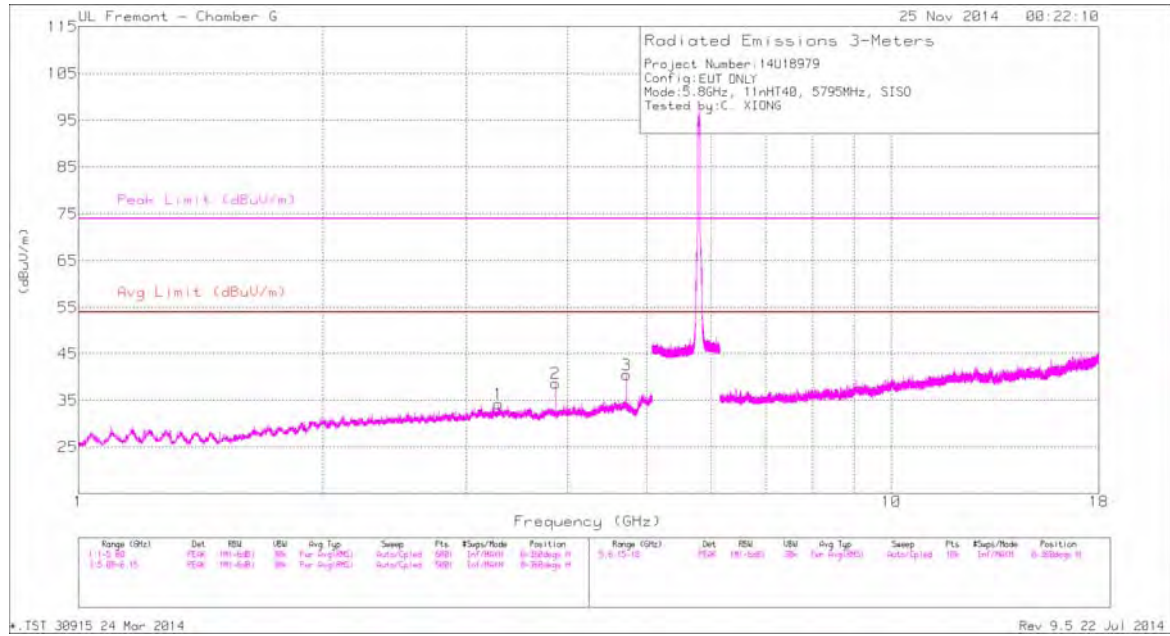
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Polarity
1	* 2.347	42.30	PK1	31.7	-34.5	0	39.50	-	-	74	-34.50	H
1	* 2.349	30.67	AD1	31.7	-34.4	.13	28.10	54	-25.90	-	-	H
2	* 3.837	41.30	PK1	33.1	-33.4	0	41.00	-	-	74	-33.00	H
2	* 3.837	33.20	AD1	33.1	-33.4	.13	33.03	54	-20.97	-	-	H
3	* 4.988	44.78	PK1	34.1	-31.9	0	46.98	-	-	74	-27.02	H
3	* 4.988	37.46	AD1	34.1	-31.9	.13	39.79	54	-14.21	-	-	H
4	* 4.987	42.60	PK1	34.1	-31.9	0	44.80	-	-	74	-29.20	V
4	* 4.988	33.22	AD1	34.1	-31.9	.13	35.55	54	-18.45	-	-	V
5	* 7.600	38.97	PK1	35.6	-31.0	0	43.57	-	-	74	-30.43	H
5	* 7.600	28.48	AD1	35.6	-31.0	.13	33.21	54	-20.79	-	-	H
6	8.556	38.47	PK1	35.8	-29.5	0	44.77	-	-	-	-	V

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

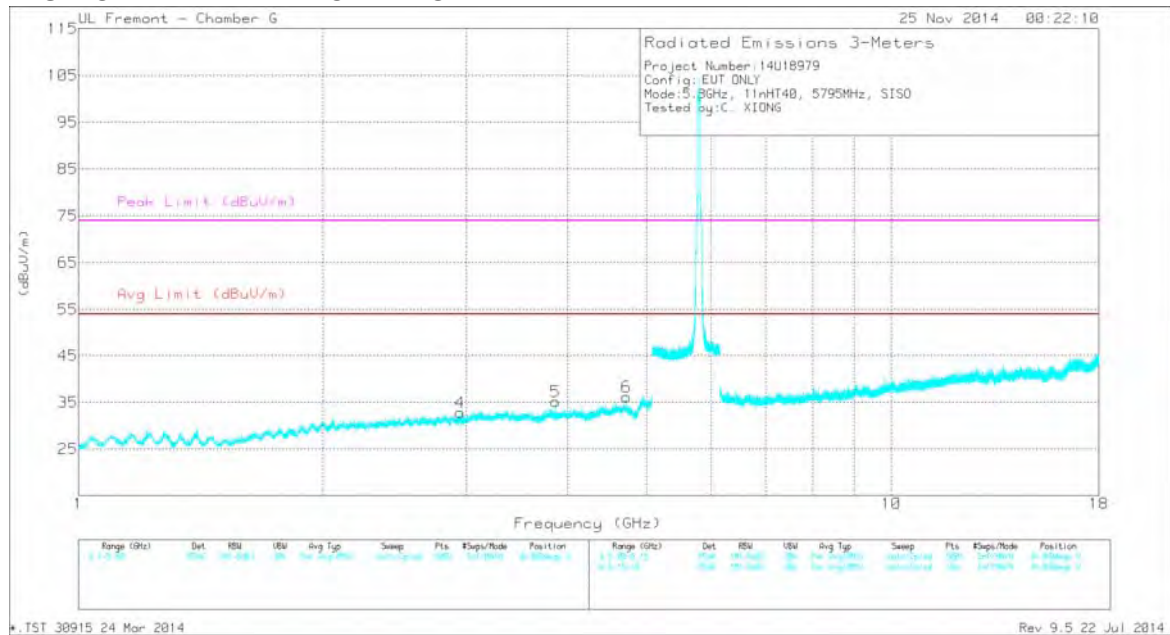
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Filt/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Polarity
1	3.290	41.67	PK1	33.0	-33.4	0	41.27	-	-	-	-	H
2	* 3.863	45.26	PK1	33.1	-33.5	0	44.86	-	-	74	-29.14	H
2	* 3.863	38.35	AD1	33.1	-33.5	.13	38.08	54	-15.92	-	-	H
3	* 4.722	44.52	PK1	34.1	-32.6	0	46.02	-	-	74	-27.98	H
3	* 4.722	37.90	AD1	34.1	-32.6	.13	39.53	54	-14.47	-	-	H
4	2.952	42.34	PK1	32.4	-34.5	0	40.24	-	-	-	-	V
5	* 3.864	43.31	PK1	33.1	-33.5	0	42.91	-	-	74	-31.09	V
5	* 3.863	35.22	AD1	33.1	-33.5	.13	34.95	54	-19.05	-	-	V
6	* 4.722	42.31	PK1	34.1	-32.6	0	43.81	-	-	74	-30.19	V
6	* 4.722	32.48	AD1	34.1	-32.6	.13	34.11	54	-19.89	-	-	V

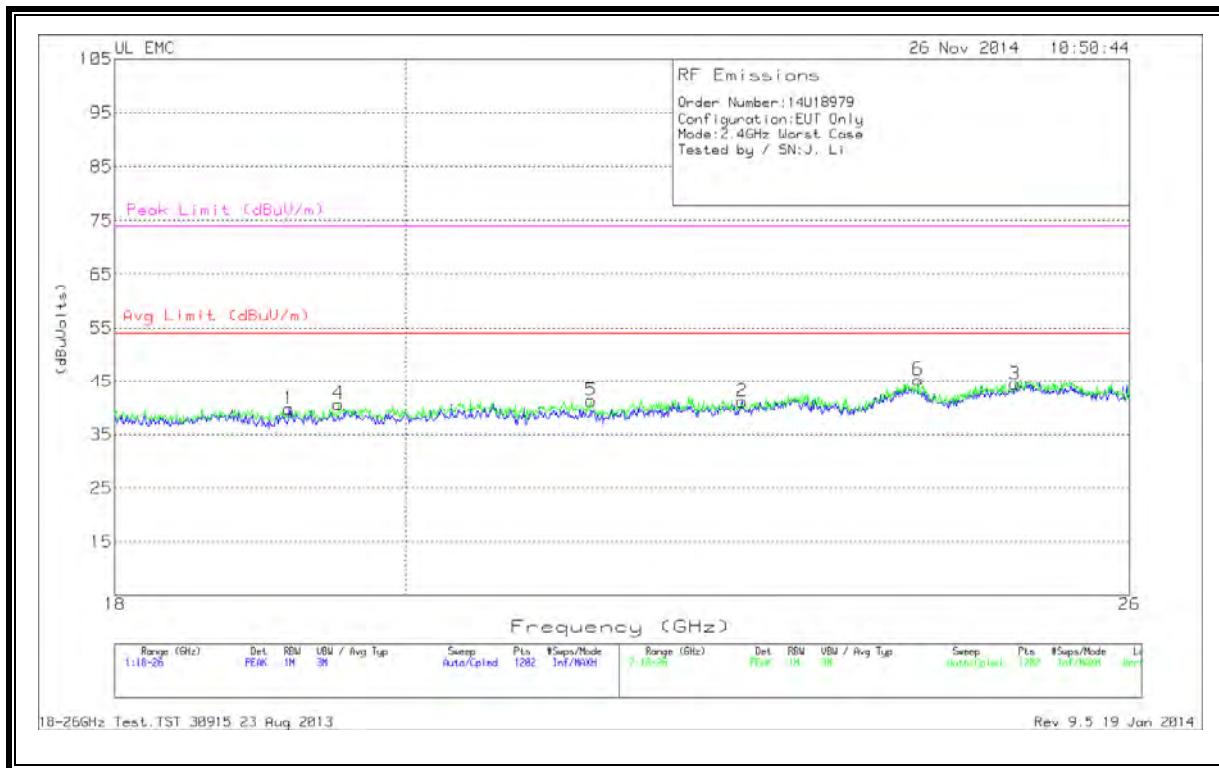
* - indicates frequency in CFR15.205/IC8.10 Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

10.4. WORST-CASE ABOVE 18 to 26GHz

SPURIOUS EMISSIONS 18 TO 26 GHz (WORST-CASE CONFIGURATION, HORIZONTAL & VERTICAL)



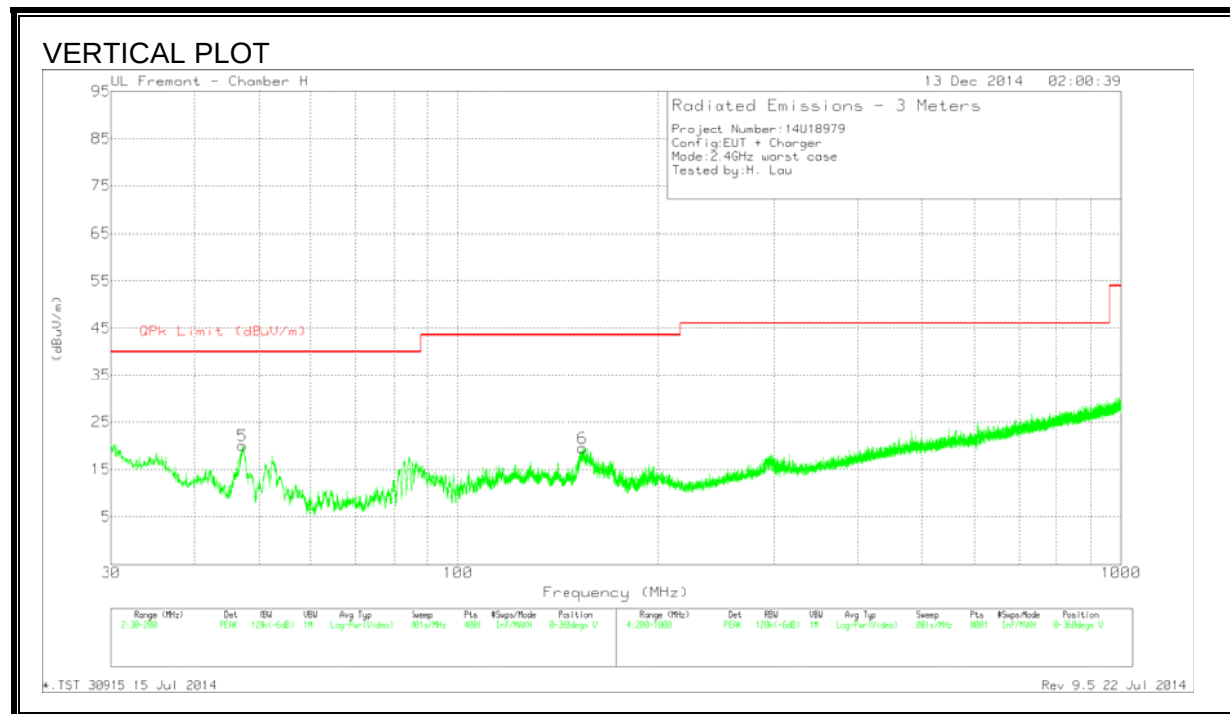
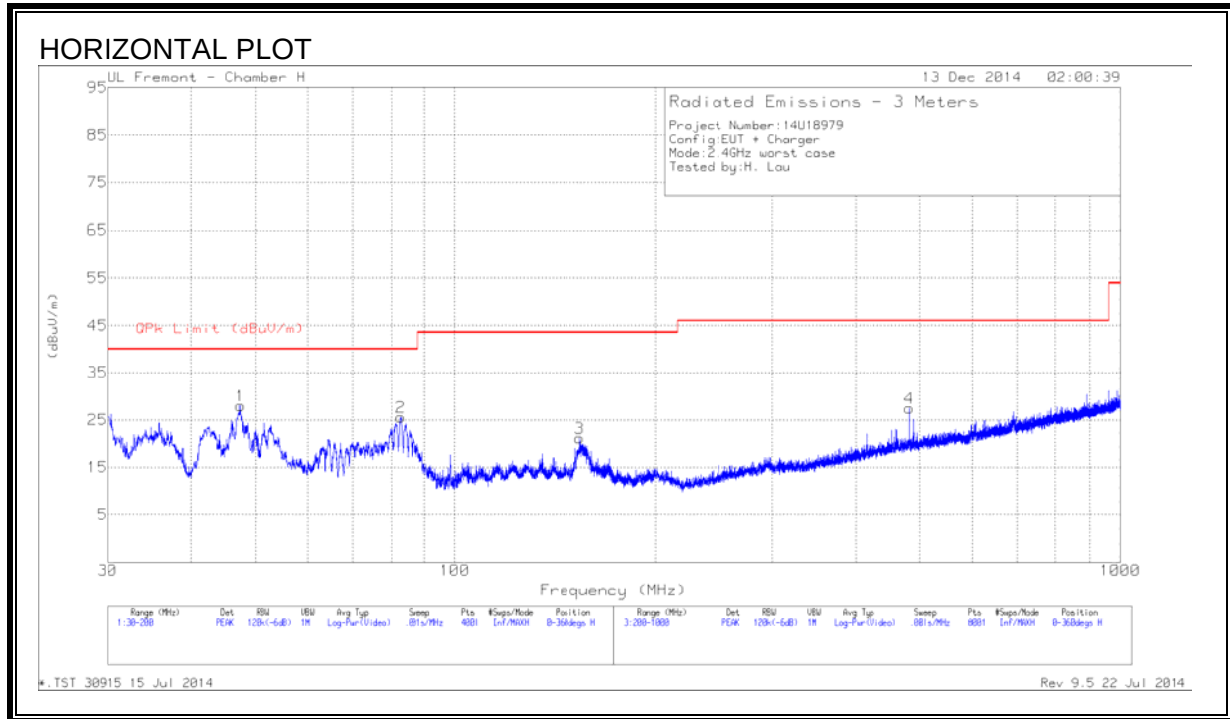
HORIZONTAL AND VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T89 (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	19.172	40.53	PK	32.5	-23.7	-9.5	39.833	54	-14.16	74	-34.166
2	22.593	40.47	PK	33.4	-23.2	-9.5	41.166	54	-12.83	74	-32.833
3	24.941	42.60	PK	34.0	-22.6	-9.5	44.500	54	-9.50	74	-29.500
4	19.519	41.97	PK	32.5	-24.3	-9.5	40.666	54	-13.33	74	-33.333
5	21.391	41.63	PK	32.9	-23.7	-9.5	41.333	54	-12.66	74	-32.666
6	24.082	44.13	PK	33.6	-22.9	-9.5	45.333	54	-8.666	74	-28.666

10.5. WORST-CASE BELOW 1 GHz

10.5.1. MODEL: A1622

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



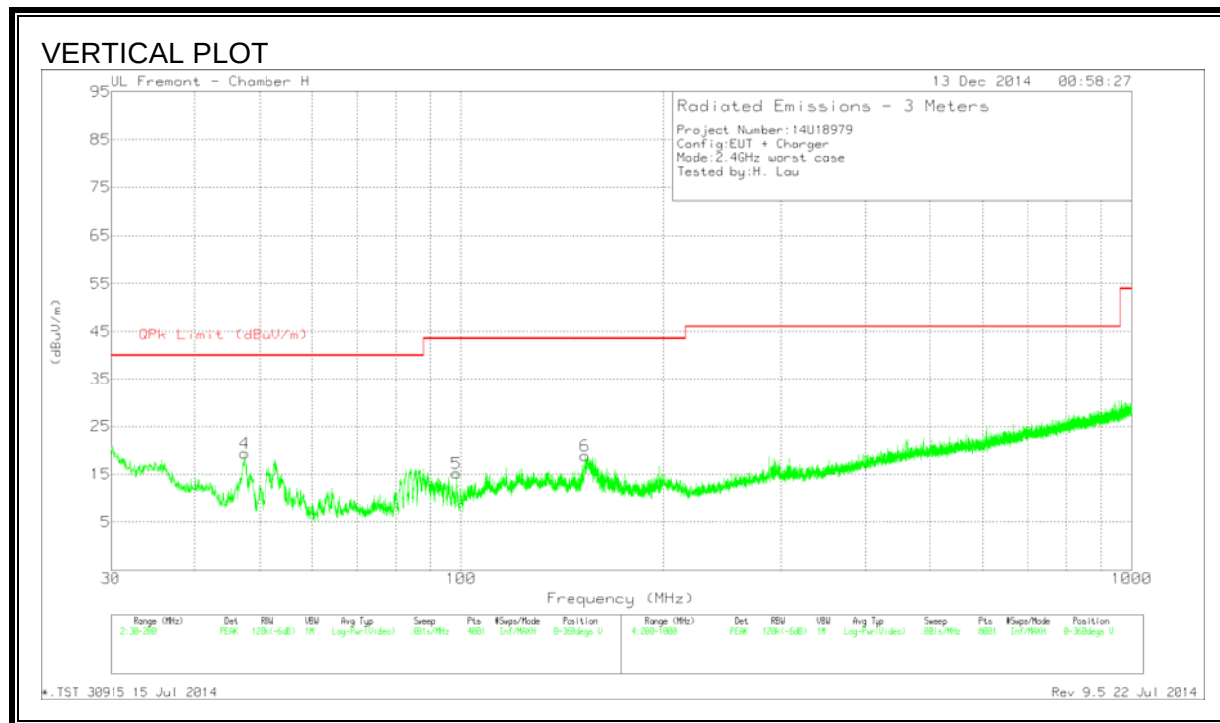
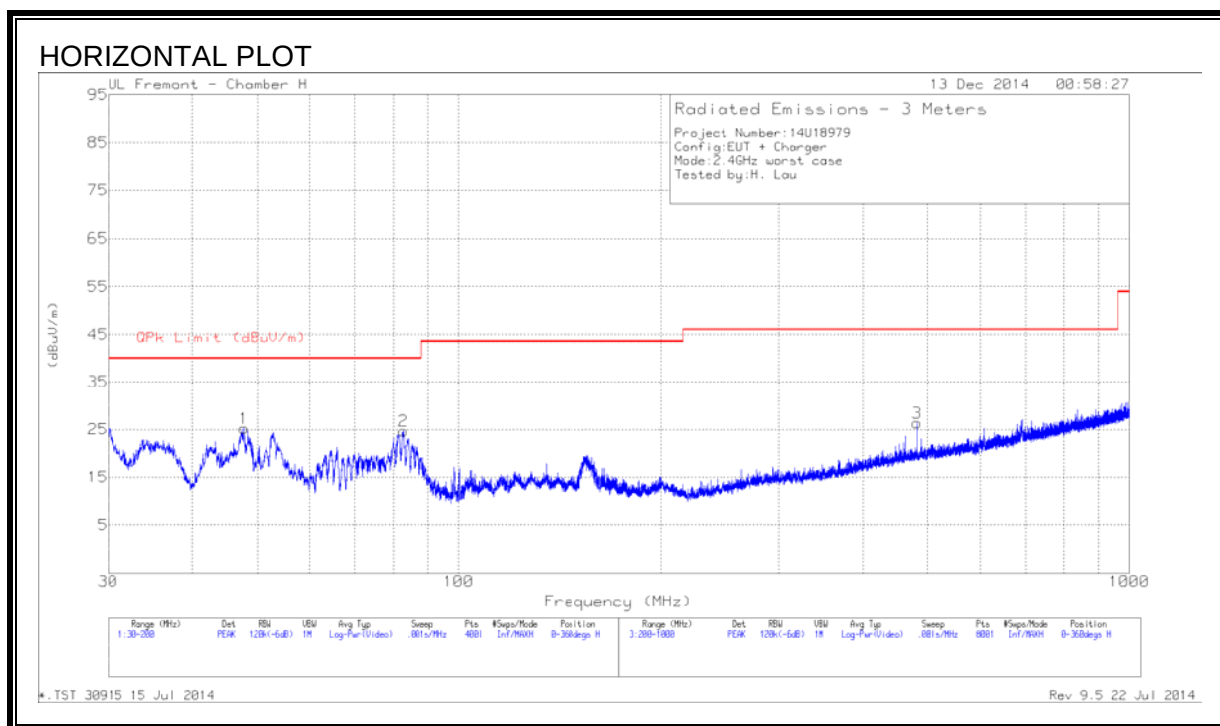
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	SS JB3 SN A051314-1	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	47.3360	41.01	QP	12.1	-30.7	22.41	40.00	-17.59	148	128	H
2	82.2695	41.80	QP	10.3	-30.3	21.80	40.00	-18.20	199	106	H
3	154.3485	30.97	QP	15.5	-29.6	16.87	43.52	-26.65	170	176	H
4	482.7291	22.66	QP	20.5	-27.6	15.56	46.02	-30.46	197	229	H
5	47.2620	38.93	QP	12.1	-30.7	20.33	40.00	-19.67	231	382	V
6	154.4808	28.98	QP	15.5	-29.6	14.88	43.52	-28.64	115	100	V

PK - Peak detector

10.5.2. MODEL: A1623

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



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	SS JB3 SN A051314-1	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	47.7225	44.06	PK	11.9	-30.7	25.26	40.00	-14.74	0-360	98	H
2	82.6150	44.66	PK	10.3	-30.3	24.66	40.00	-15.34	0-360	98	H
3	482.900	33.45	PK	20.5	-27.6	26.35	46.02	-19.67	0-360	401	H
4	47.4675	38.05	PK	12.0	-30.7	19.35	40.00	-20.65	0-360	100	V
5	98.4675	33.06	PK	12.2	-30.1	15.16	43.52	-28.36	0-360	100	V
6	153.1650	33.00	PK	15.5	-29.6	18.90	43.52	-24.62	0-360	100	V

PK - Peak detector

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 C63.4.

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

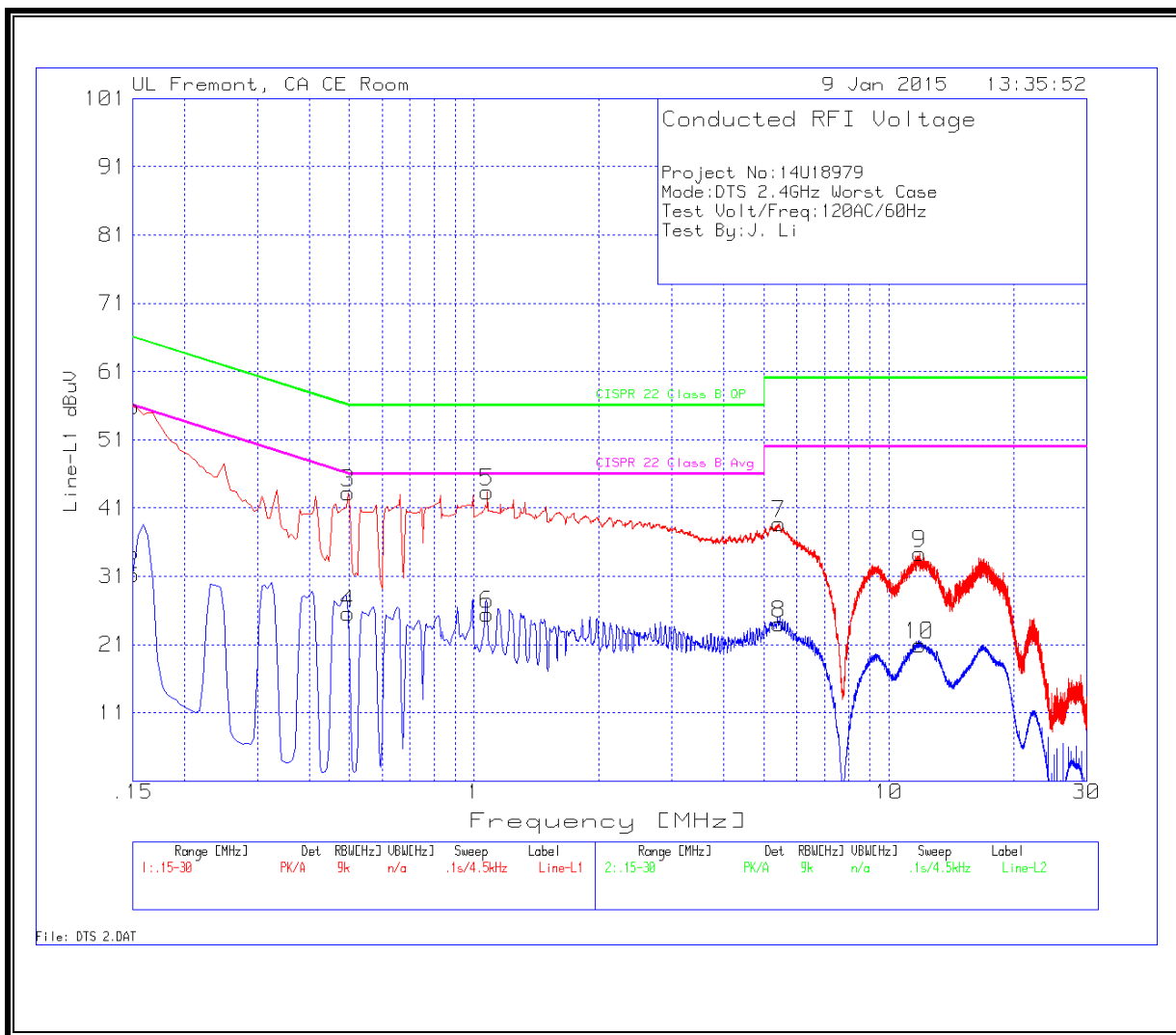
Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

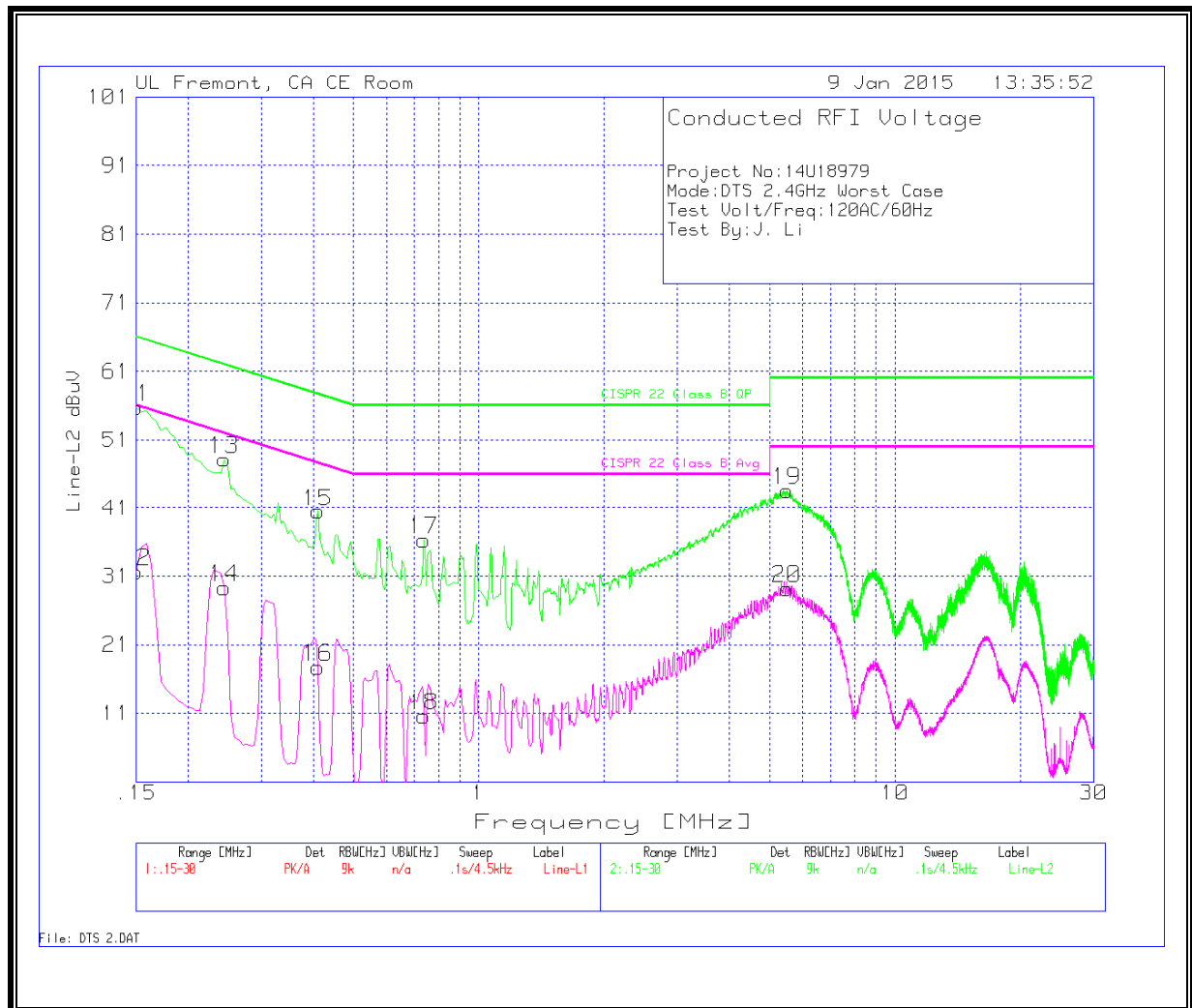
11.1. MODEL: A1622

AC/DC ADAPTER MODEL NUMBER: MD506LL/A

LINE 1 RESULT



LINE 2 RESULT



WORST EMISSIONS DATA

Line-L1 .15 - 30MHz

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1 (dB)	LC Cables 1&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
1	.15	54.47	PK	1.4	0	55.87	66	-10.13	-	-
2	.15	29.81	Av	1.4	0	31.21	-	-	56	-24.79
3	.4965	42.87	PK	.4	0	43.27	56.1	-12.83	-	-
4	.4965	25.18	Av	.4	0	25.58	-	-	46.1	-20.52
5	1.077	43.15	PK	.2	0	43.35	56	-12.65	-	-
6	1.077	25.3	Av	.2	0	25.5	-	-	46	-20.5
7	5.4285	38.39	PK	.2	.1	38.69	60	-21.31	-	-
8	5.4285	23.69	Av	.2	.1	23.99	-	-	50	-26.01
9	11.841	33.94	PK	.2	.2	34.34	60	-25.66	-	-
10	11.841	20.54	Av	.2	.2	20.94	-	-	50	-29.06

Line-L2 .15 - 30MHz

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2 (dB)	LC Cables 2&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
11	.15	54.21	PK	1.5	0	55.71	66	-10.29	-	-
12	.15	30.18	Av	1.5	0	31.68	-	-	56	-24.32
13	.2445	47.4	PK	.8	0	48.2	61.9	-13.7	-	-
14	.2445	28.49	Av	.8	0	29.29	-	-	51.9	-22.61
15	.411	40.07	PK	.4	0	40.47	57.6	-17.13	-	-
16	.411	17.37	Av	.4	0	17.77	-	-	47.6	-29.83
17	.7395	36	PK	.3	0	36.3	56	-19.7	-	-
18	.7395	10.27	Av	.3	0	10.57	-	-	46	-35.43
19	5.5005	43.3	PK	.2	.1	43.6	60	-16.4	-	-
20	5.5005	28.92	Av	.2	.1	29.22	-	-	50	-20.78

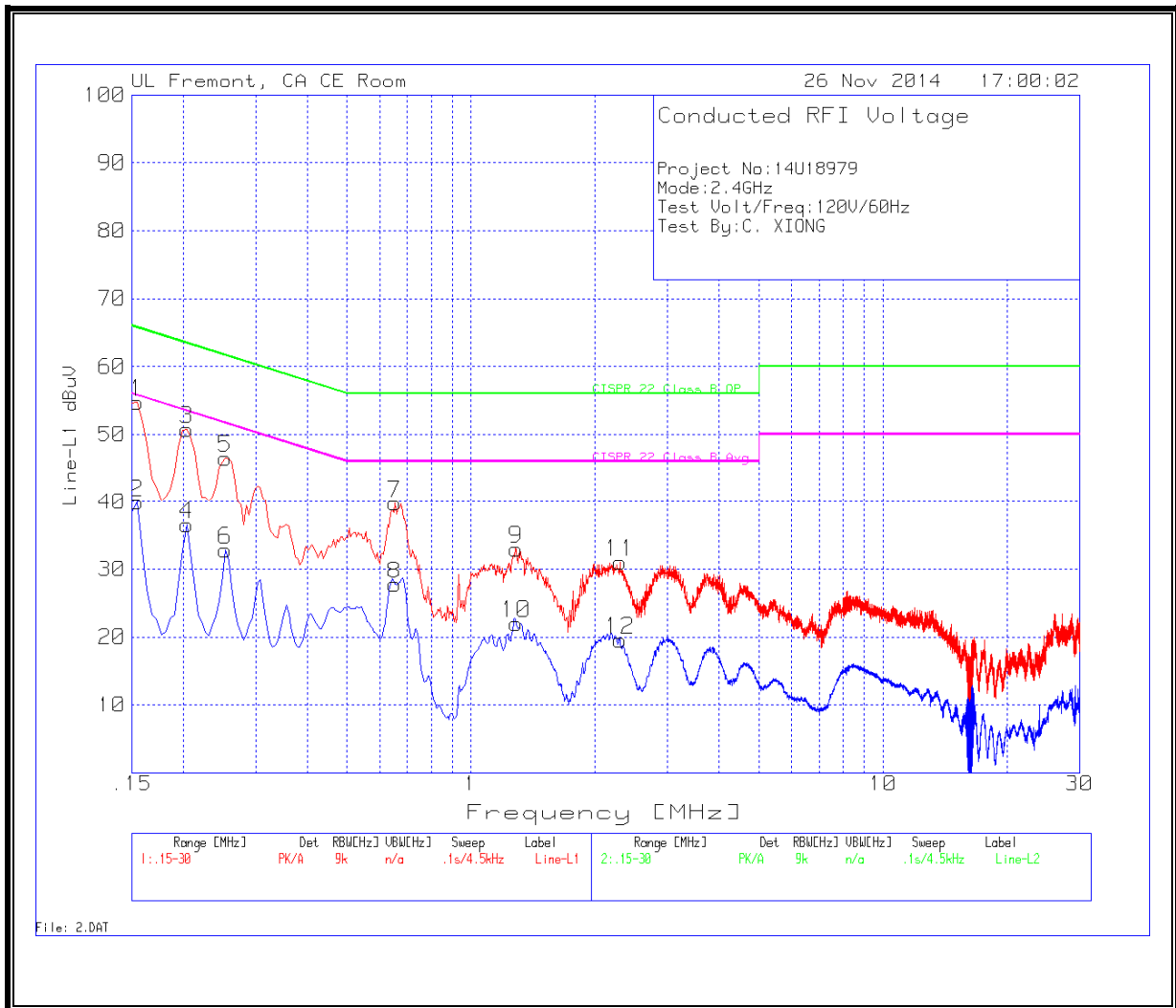
PK - Peak detector

Av - average detection

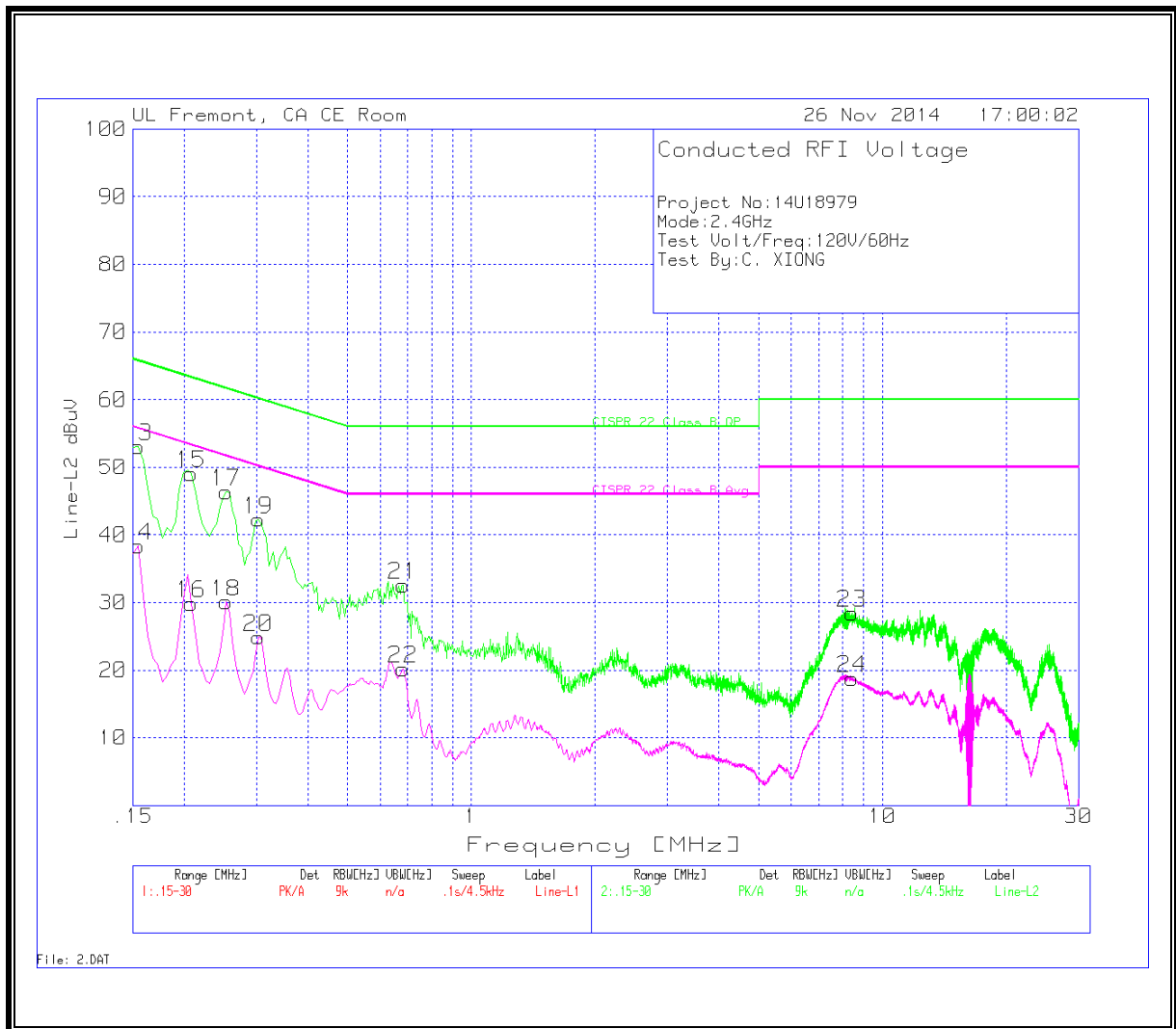
11.2. MODEL: A1623

AC/DC ADAPTER MODEL NUMBER: MD836LL/A

LINE 1 RESULT



LINE 2 RESULT



WORST EMISSIONS DATA

Line-L1 .15 - 30MHz

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1 (dB)	LC Cables 1&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
1	.1545	53.49	PK	1.3	0	54.79	65.8	-11.01	-	-
2	.1545	38.65	Av	1.3	0	39.95	-	-	55.8	-15.85
3	.204	49.9	PK	.9	0	50.8	63.4	-12.6	-	-
4	.204	35.65	Av	.9	0	36.55	-	-	53.4	-16.85
5	.2535	45.79	PK	.7	0	46.49	61.6	-15.11	-	-
6	.2535	32.12	Av	.7	0	32.82	-	-	51.6	-18.78
7	.654	39.54	PK	.3	0	39.84	56	-16.16	-	-
8	.654	27.44	Av	.3	0	27.74	-	-	46	-18.26
9	1.2885	32.66	PK	.2	.1	32.96	56	-23.04	-	-
10	1.2885	21.68	Av	.2	.1	21.98	-	-	46	-24.02
11	2.2965	30.77	PK	.2	.1	31.07	56	-24.93	-	-
12	2.2965	19.22	Av	.2	.1	19.52	-	-	46	-26.48

Line-L2 .15 - 30MHz

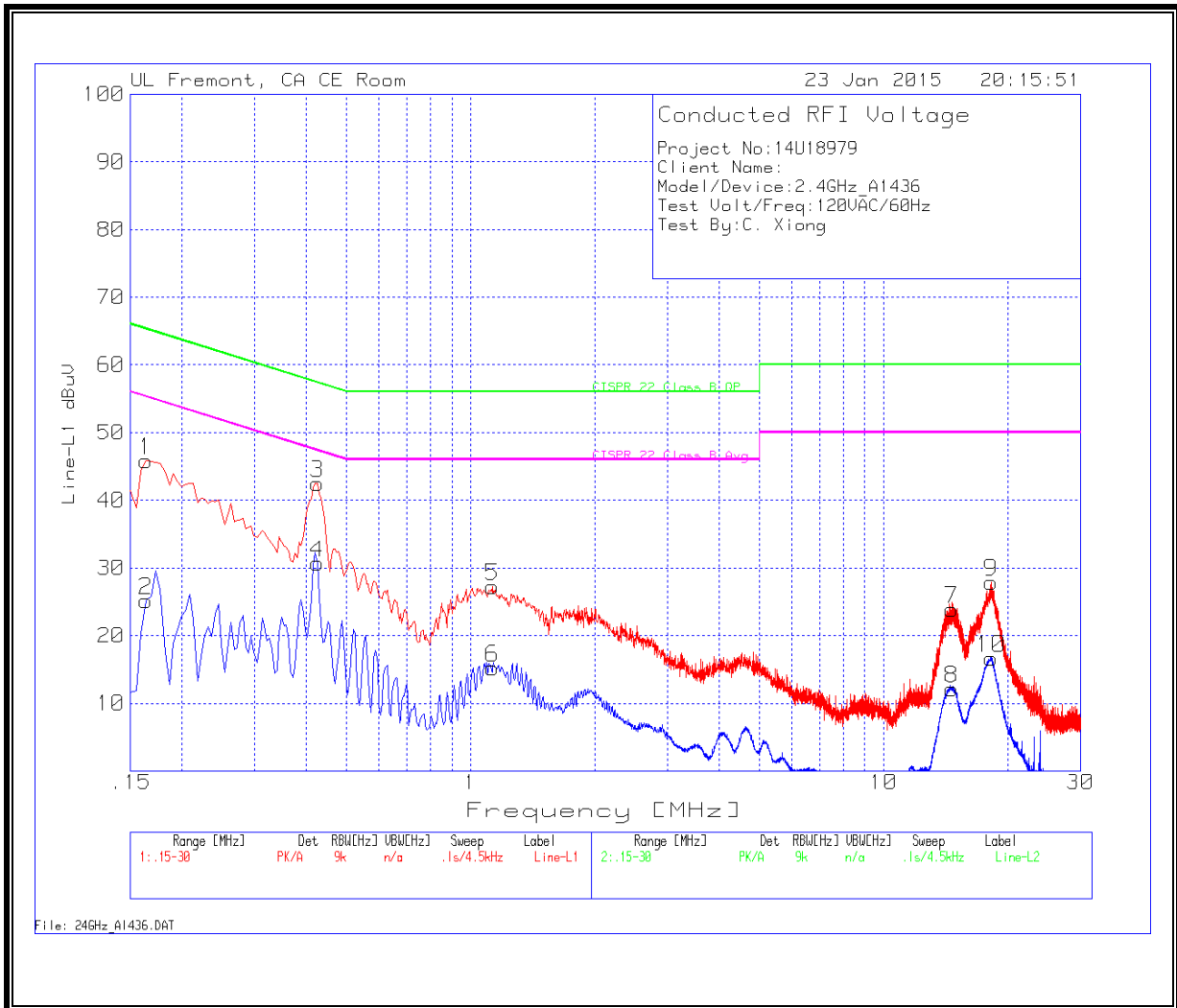
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2 (dB)	LC Cables 2&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
13	.1545	51.69	PK	1.4	0	53.09	65.8	-12.71	-	-
14	.1545	36.93	Av	1.4	0	38.33	-	-	55.8	-17.47
15	.2085	48.02	PK	1	0	49.02	63.3	-14.28	-	-
16	.2085	28.91	Av	1	0	29.91	-	-	53.3	-23.39
17	.2535	45.68	PK	.7	0	46.38	61.6	-15.22	-	-
18	.2535	29.36	Av	.7	0	30.06	-	-	51.6	-21.54
19	.303	41.7	PK	.6	0	42.3	60.2	-17.9	-	-
20	.303	24.3	Av	.6	0	24.9	-	-	50.2	-25.3
21	.681	32.31	PK	.3	0	32.61	56	-23.39	-	-
22	.681	19.95	Av	.3	0	20.25	-	-	46	-25.75
23	8.43	28.14	PK	.2	.1	28.44	60	-31.56	-	-
24	8.43	18.51	Av	.2	.1	18.81	-	-	50	-31.19

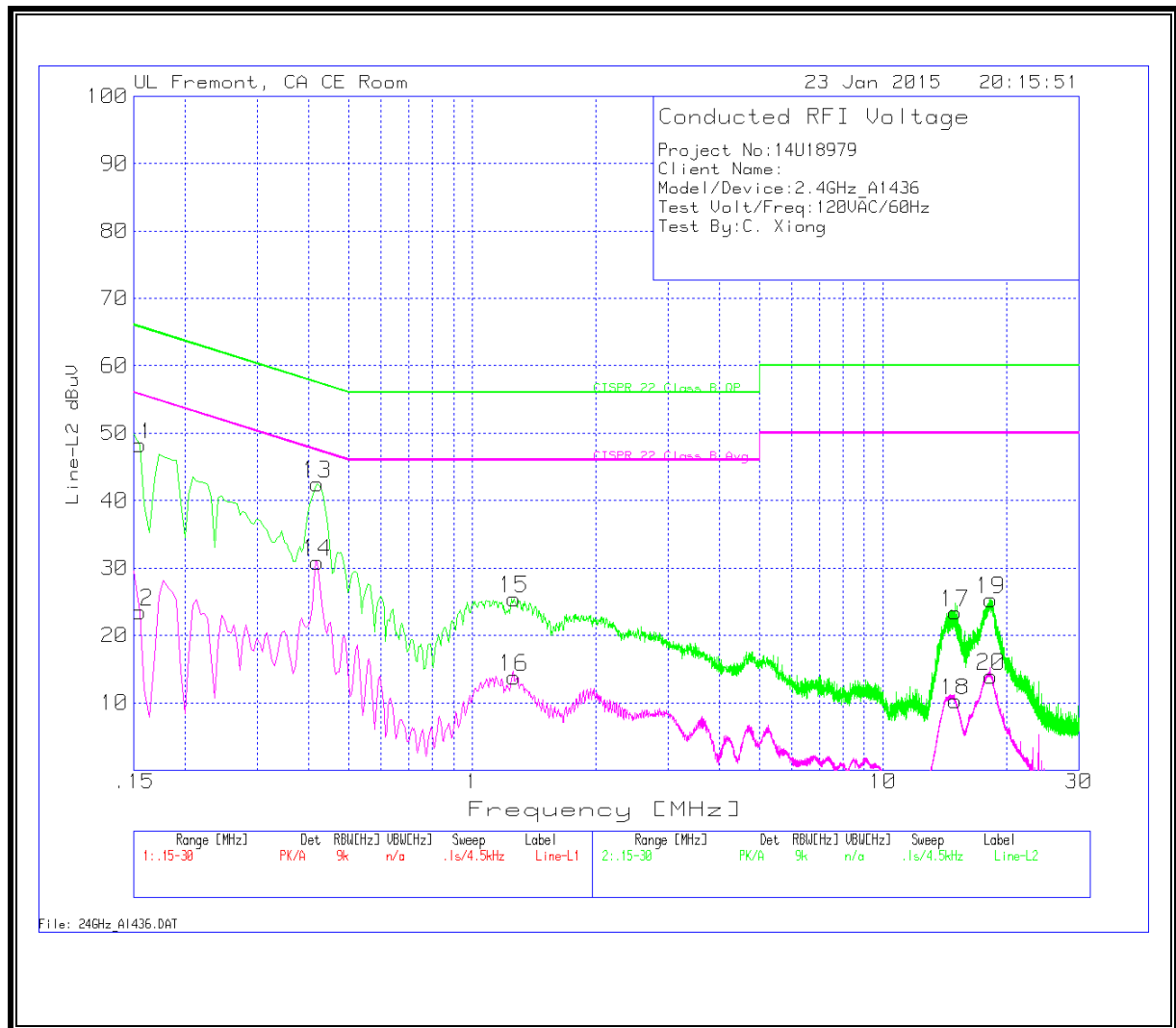
PK - Peak detector
Av - average detection

AC/DC ADAPTER MODEL NUMBER: MD592LL/A

LINE 1 RESULT



LINE 2 RESULT



WORST EMISSIONS DATA

Line-L1 .15 - 30MHz

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1 (dB)	LC Cables 1&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
1	.1635	44.68	PK	1.2	0	45.88	65.3	-19.42	-	-
2	.1635	23.94	Av	1.2	0	25.14	-	-	55.3	-30.16
3	.4245	42.15	PK	.4	0	42.55	57.4	-14.85	-	-
4	.4245	30.29	Av	.4	0	30.69	-	-	47.4	-16.71
5	1.131	27.05	PK	.2	0	27.25	56	-28.75	-	-
6	1.131	15.07	Av	.2	0	15.27	-	-	46	-30.73
7	14.6085	23.47	PK	.2	.2	23.87	60	-36.13	-	-
8	14.6085	11.76	Av	.2	.2	12.16	-	-	50	-37.84
9	18.24	27.38	PK	.3	.2	27.88	60	-32.12	-	-
10	18.24	16.12	Av	.3	.2	16.62	-	-	50	-33.38

Line-L2 .15 - 30MHz

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2 (dB)	LC Cables 2&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
11	.1545	46.85	PK	1.4	0	48.25	65.8	-17.55	-	-
12	.1545	22.1	Av	1.4	0	23.5	-	-	55.8	-32.3
13	.42	42.07	PK	.4	0	42.47	57.4	-14.93	-	-
14	.42	30.47	Av	.4	0	30.87	-	-	47.4	-16.53
15	1.2615	25.14	PK	.2	.1	25.44	56	-30.56	-	-
16	1.2615	13.55	Av	.2	.1	13.85	-	-	46	-32.15
17	15.0225	22.94	PK	.3	.2	23.44	60	-36.56	-	-
18	15.0225	9.78	Av	.3	.2	10.28	-	-	50	-39.72
19	18.366	24.8	PK	.3	.2	25.3	60	-34.7	-	-
20	18.366	13.43	Av	.3	.2	13.93	-	-	50	-36.07

PK - Peak detector
Av - average detection