



**FCC 47 CFR PART 15 SUBPART C
CERTIFICATION TEST REPORT**

FOR

**TABLET WITH CELLULAR GSM/GPRS/EGPRS/WCDMA/HSPA+/DC- HSDPA/LTE
IEEE 802.11A/B/G/N (MIMO 2X2) AND BLUETOOTH RADIO**

Model: A1491

FCC ID: BCGA1491

REPORT NUMBER: 13U16583-3, REVISION A

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Prepared for

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Prepared by

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Revision History

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1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: Tablet with cellular GSM/GPRS/EGPRS/WCDMA/HSPA+/DC-HSDPA/LTE/IEEE 802.11a/b/g/n (MIMO 2x2) and Bluetooth Radio

MODEL: A1491

SERIAL NUMBER: 11510

DATE TESTED: NOVEMBER 11 – DECEMBER 17, 2013 and FEBRUARY 14, 2014

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

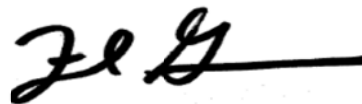
UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services based on interpretations and/or observations of test results. Measurement Uncertainties 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 and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services 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:



Thu Chan
WISE OPERATIONS MANAGER
UL VERIFICATION SERVICES INC.

Francisco Guarnero
WiSE Lab Technician
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, ANSI C63.10-2009.

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
<input type="checkbox"/> Chamber A	<input checked="" type="checkbox"/> Chamber D
<input type="checkbox"/> Chamber B	<input checked="" type="checkbox"/> Chamber E
<input type="checkbox"/> Chamber C	<input checked="" type="checkbox"/> Chamber F

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ul.com>.

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. DESCRIPTION OF EUT

The device is a Tablet with cellular GSM/GPRS/EGPRS/WCDMA/HSPA+/DC-HSDPA/LTE/IEEE 802.11a/b/g/n (MIMO 2x2) and Bluetooth Radio

5.2. DESCRIPTION OF AVAILABLE ANTENNAS

Frequency Band (GHz)	Antenna Gain		Uncorrelated Gain	Correlated Gain
	Tx1	Tx2		
2.4	0.81	-1.86	-0.32	2.59
5.8	2.68	3.76	3.25	6.25

5.3. SOFTWARE AND FIRMWARE

The test utility software used during testing was Broadcom WL Tool Version 6.25.86.

5.4. MAXIMUM OUTPUT POWER

Please refer to project number 13U15668-5, Section 5.2

5.5. WORST-CASE CONFIGURATION AND MODE

There are two vendors of the WiFi/Bluetooth radio modules: BOM #1, vender1 and BOM #2, vender 2, and they have the same mechanical outline, same on board antenna, matching circuit, antenna structure and same specification and baseline was performed on both vendors to determine the worst case on conducted power and radiated emissions.

For the RF conducted test: Refer to FCC DTS report with the FCC ID BCGA1490 and project number 13U15668-5.

For the RF radiated test: The fundamental of the EUT was investigated in three orthogonal orientations X, Y, Z, with AC Adapter and Headset, it was determined that X orientation without AC Adapter and Headset was the worst-case orientation for 2.4GHz band, and Z orientation was the worst-case orientation for 5.8 GHz band; therefore, all final radiated testing was performed with the EUT in X orientation for 2.4GHz band, and Z orientation for 5.8 GHz band.

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

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

For below 1GHz test, the EUT that is connected to the headset and AC charger is activated on the worst-case mode and channel with the highest output power.

For all modes with single chain, the radiated emissions test was based on the port with the higher antenna gain.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC/DC Adapter	Apple	A1357	A/12981EA	DoC
Earphone	Apple	NA	NA	NA

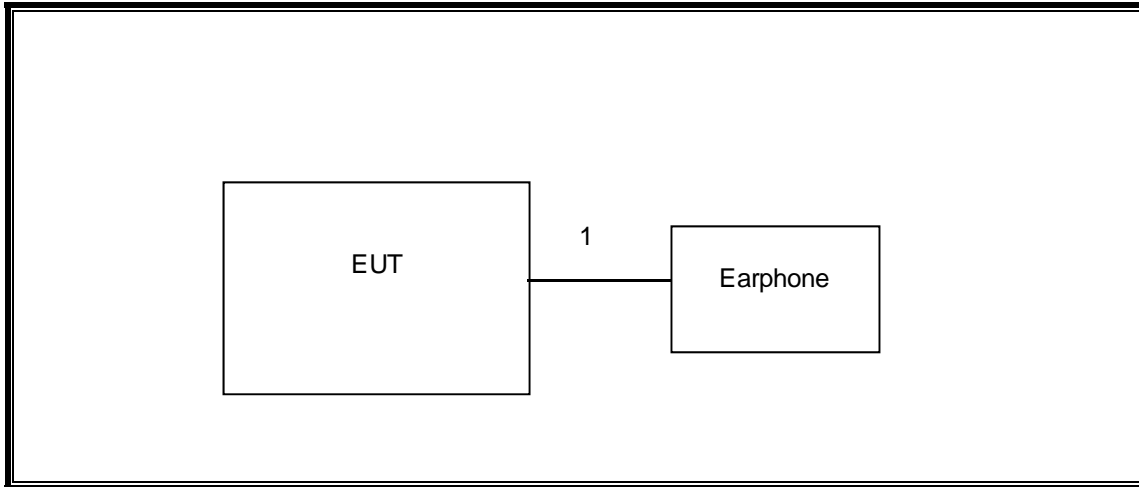
I/O CABLES (RADIATED TEST)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Audio	1	Jack	Un-Shielded	0.5m	NA

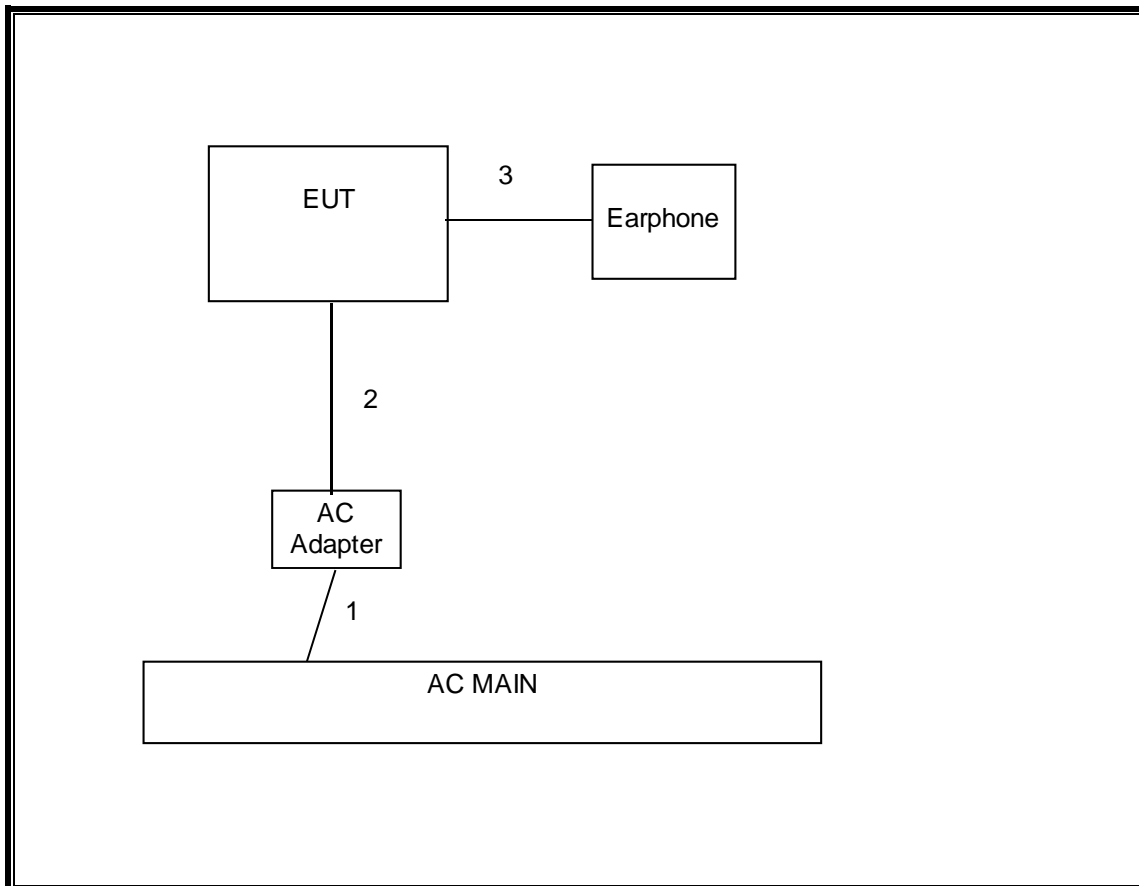
I/O CABLES BELOW 1GHZ TEST

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	1	US115	Un-Shielded	2m	NA
2	DC	1	USB	Un-Shielded	2m	NA
3	Audio	1	Jack	Un-Shielded	0.5m	NA

SETUP DIAGRAM FOR RADIATED TESTS



SETUP DIAGRAM FOR BELOW 1GHZ & AC POWER CONDUCTED TESTS



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	Asset	Cal Due
Horn Antenna 1-18GHz	ETS Lindgren	3117	F00131	02/18/15
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00580	01/28/14
Antenna, Horn, 26.5 GHz	ARA	SWH-28	C01015	05/06/14
Antenna, Biconolog, 30MHz-1 GHz	Sunol Sciences	JB3	F00027	03/07/14
Peak / Average Power Sensor	Agilent / HP	E9323A	F00163	04/03/14
P-Series single channel Power Meter	Agilent / HP	N1911A	F00164	04/03/14
Spectrum Analyzer, 3Hz-44GHz	Agilent	N9030A	F00127	02/22/14
PreApmplifier, 1-26.5GHz	Agilent	8449B	C01052	10/22/14
Antenna, Horn, 40 GHz	ARA	MWH-2640/B	F00194	05/14/14
Preamplifier, 40 GHz	Miteq	NSP4000-SP2	C00990	08/20/14

7. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

7.1. ON TIME AND DUTY CYCLE RESULTS

Refer the on time and duty cycle data in FCC DTS report with the FCC ID BCGA1490 and project number 13U15668-5 at Section 7.1.

7.2. MEASUREMENT METHODS

6 dB BW: KDB 558074 D01.

Output Power: KDB 558074 D01.

Power Spectral Density: KDB 558074 D01.

Out-of-band emissions in non-restricted bands: KDB 558074 D01.

Out-of-band emissions in restricted bands: KDB 558074 D01.

8. ANTENNA PORT TEST RESULTS

Note that for all antenna port data refer to the FCC DTS report with the FCC ID BCGA1490 and project number 13U15668-5 from Section 8.1. to 8.7.

9. RADIATED TEST RESULTS

9.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

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 1 MHz for peak measurements and as applicable for average measurements.

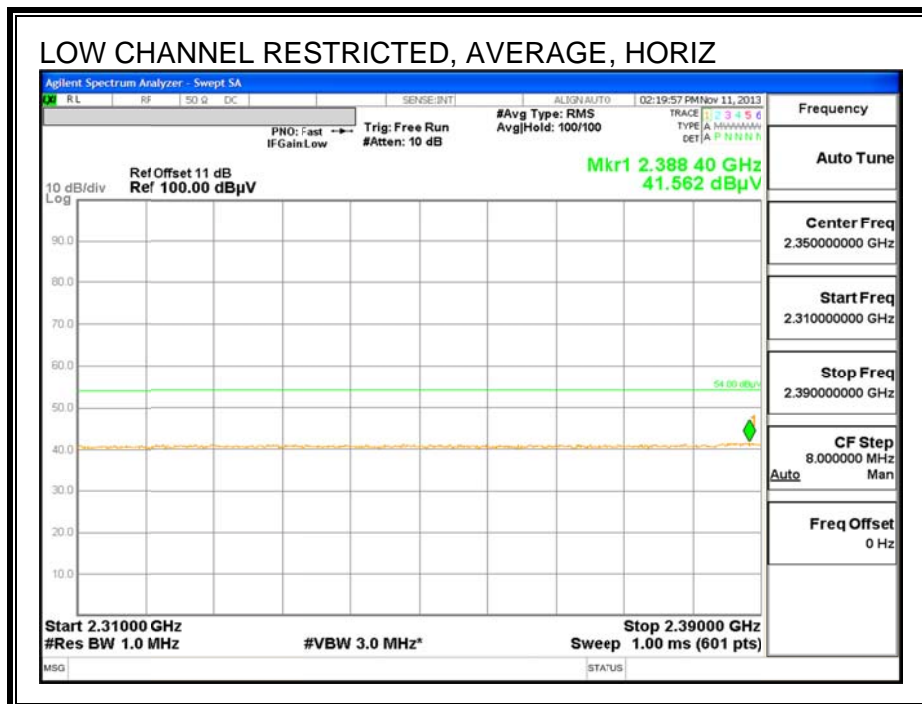
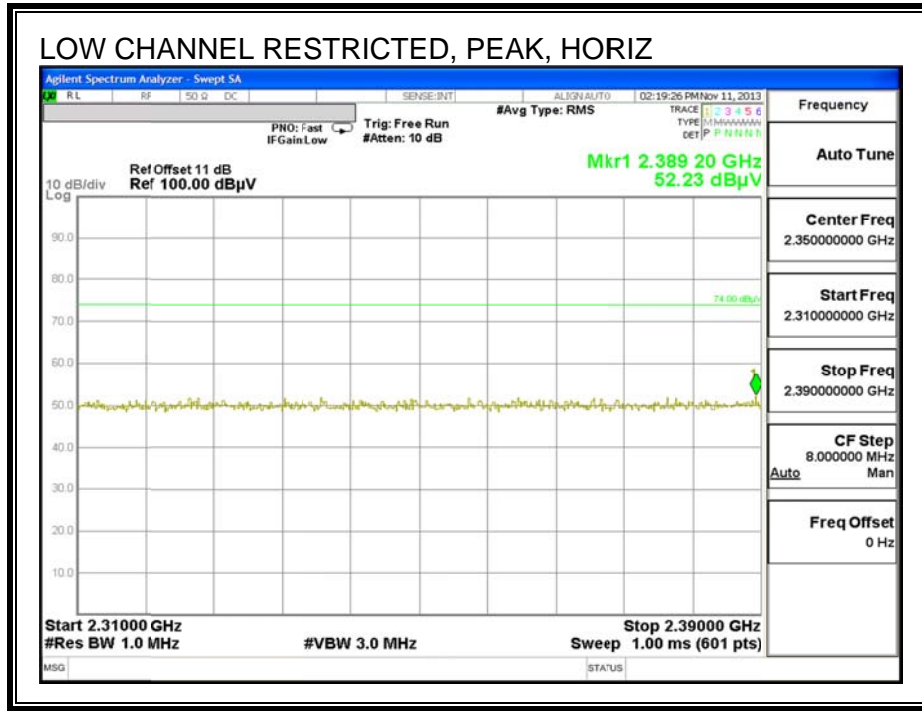
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

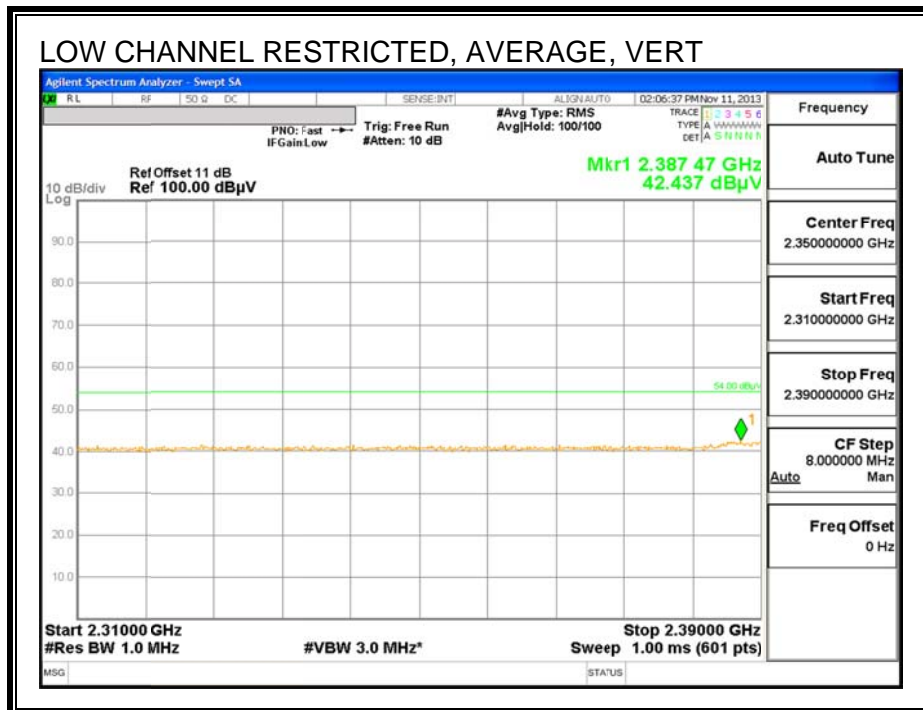
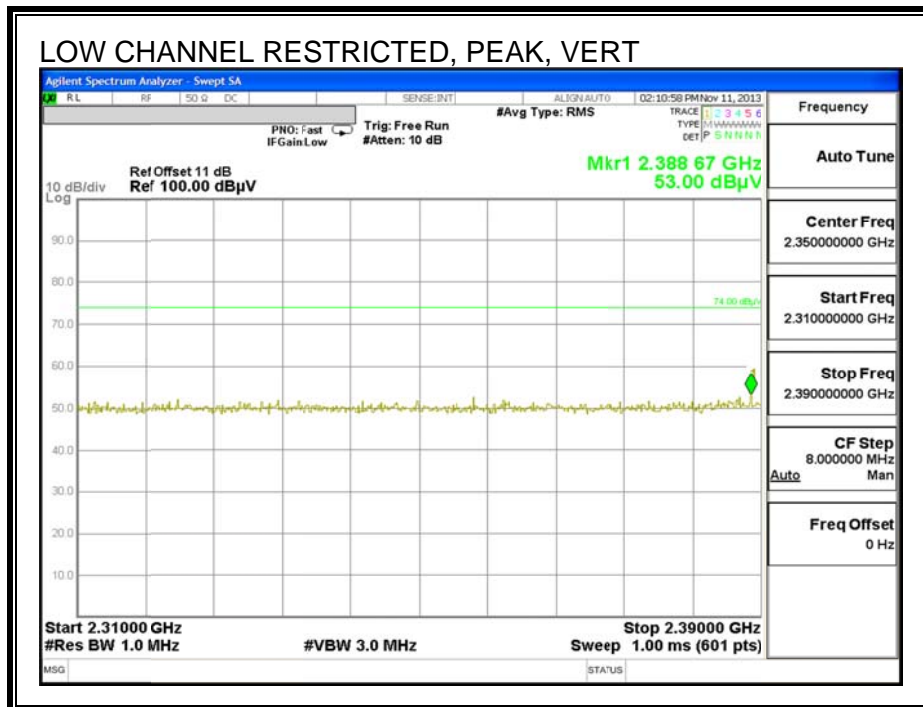
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

9.2. TRANSMITTER ABOVE 1 GHz

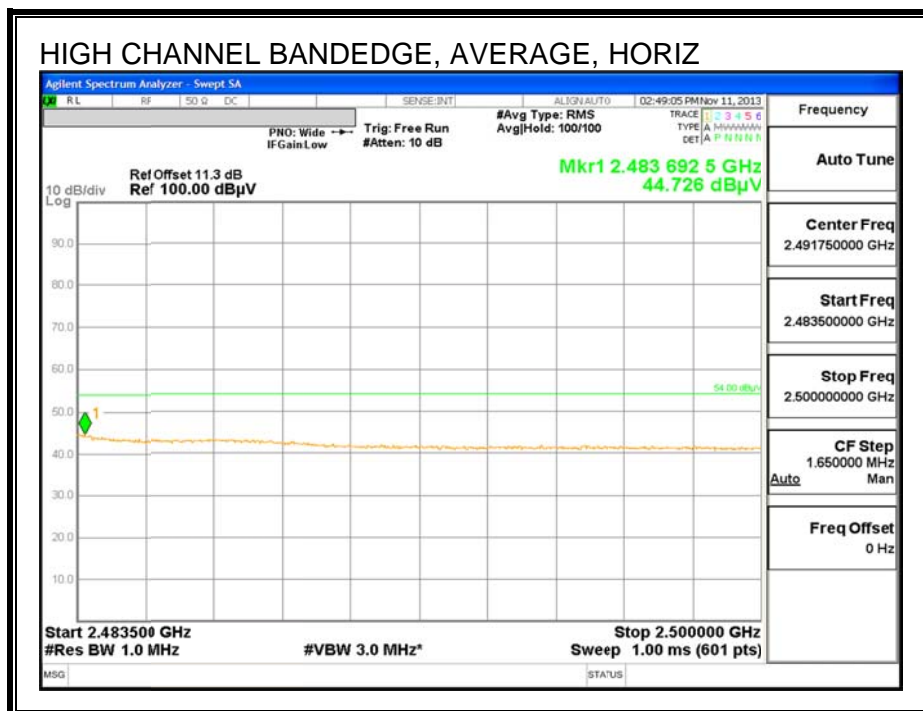
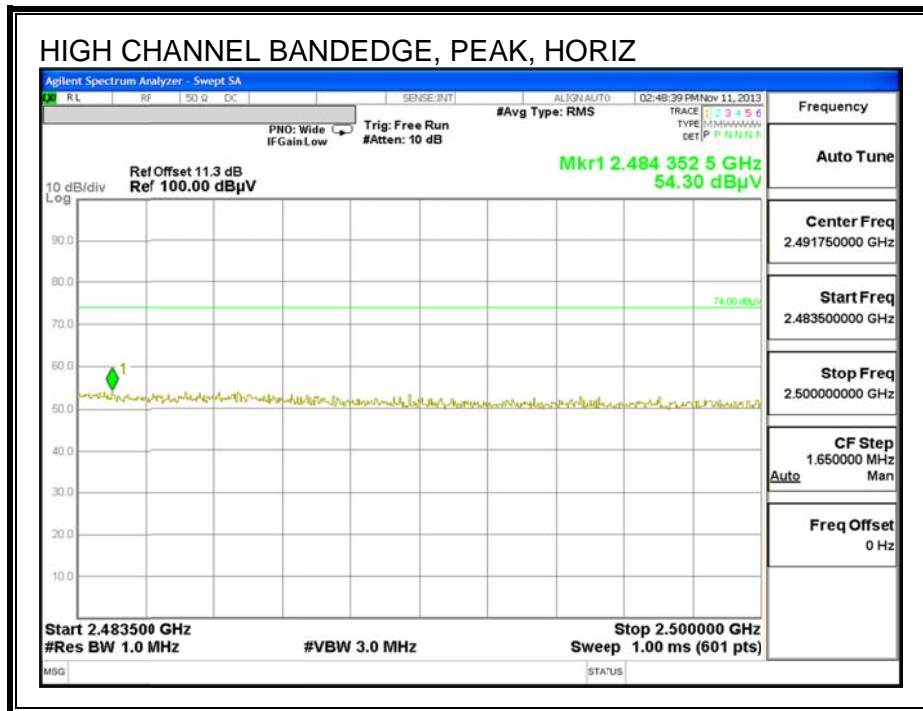
9.2.1. 802.11b MODE IN THE 2.4 GHz BAND

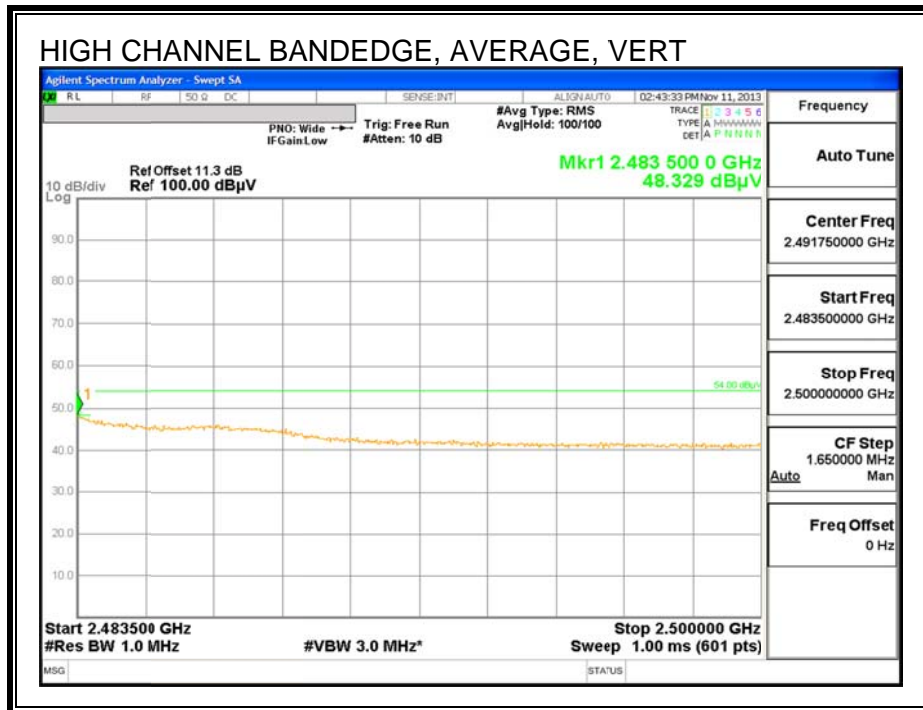
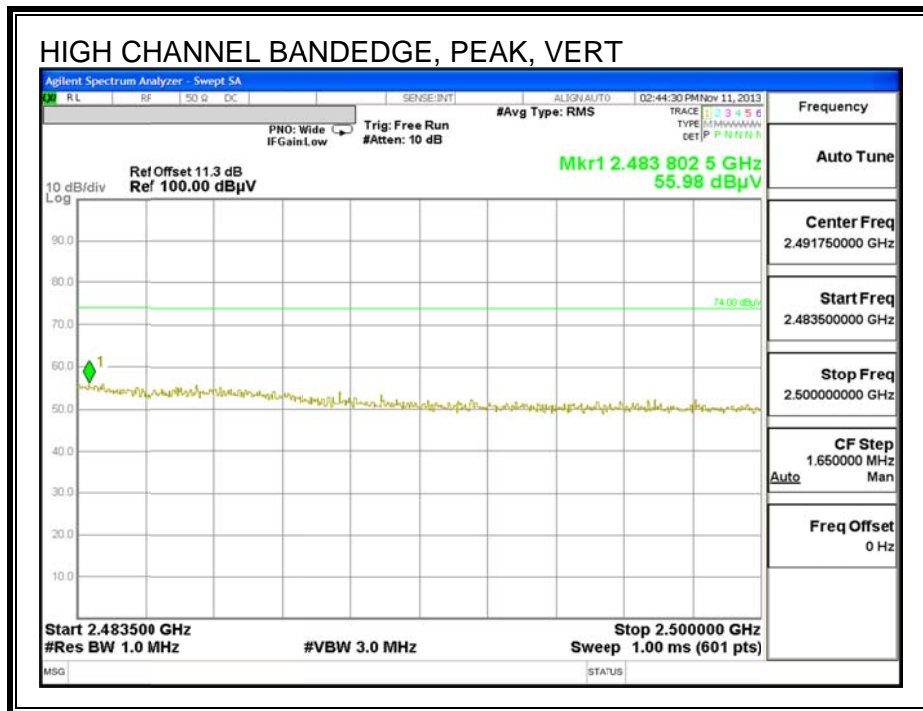
RESTRICTED BANDEDGE (LOW CHANNEL) CH1



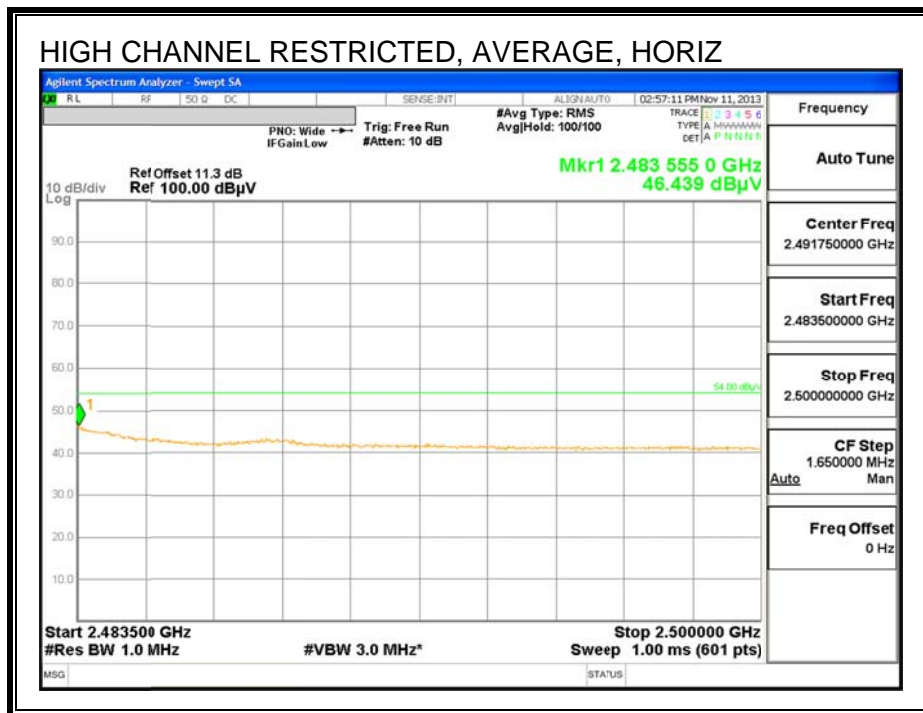
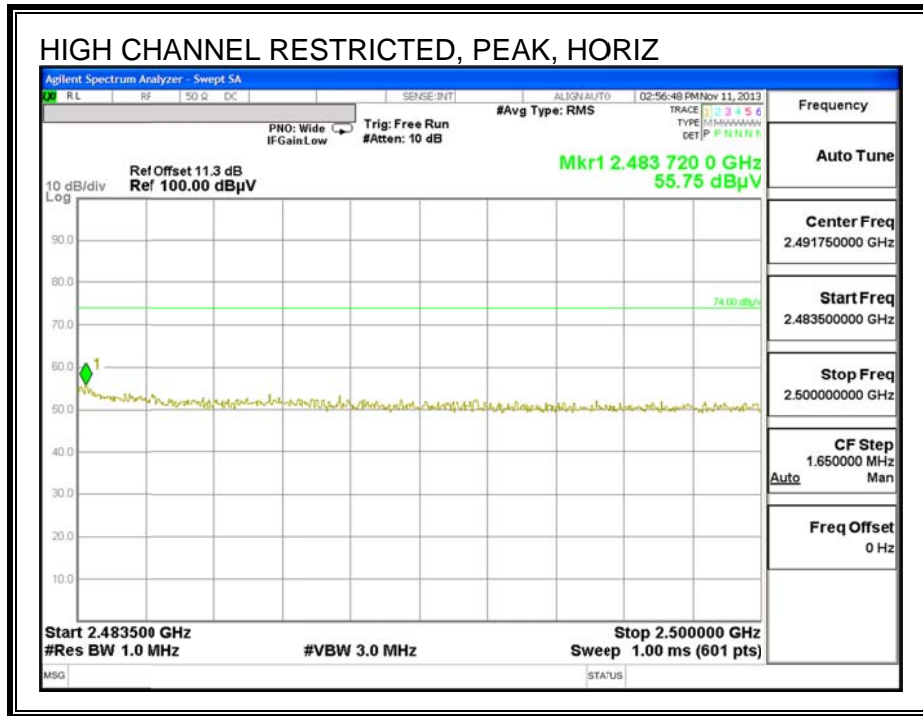


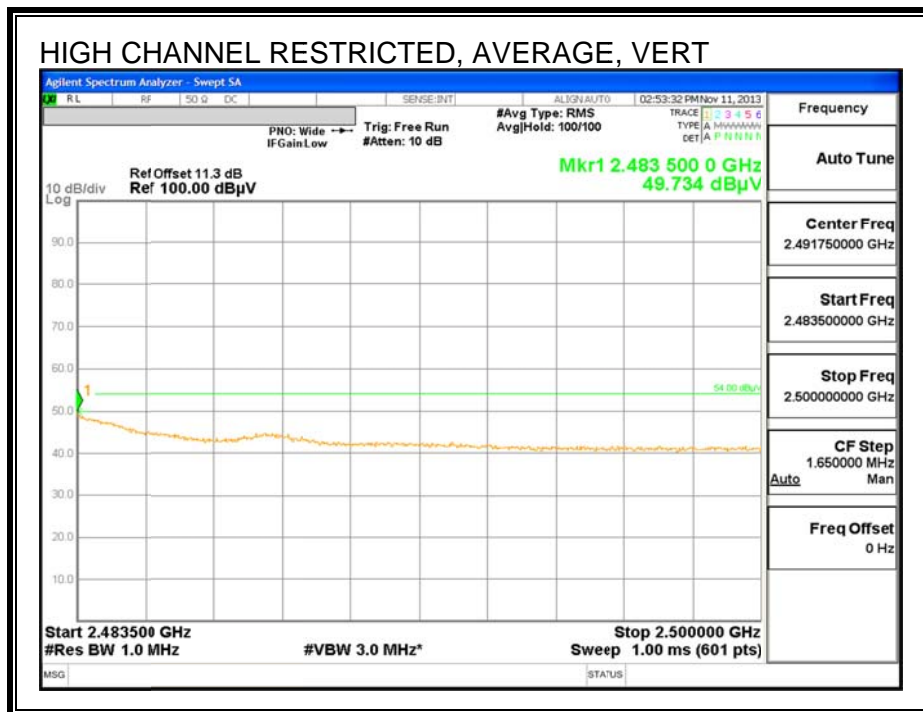
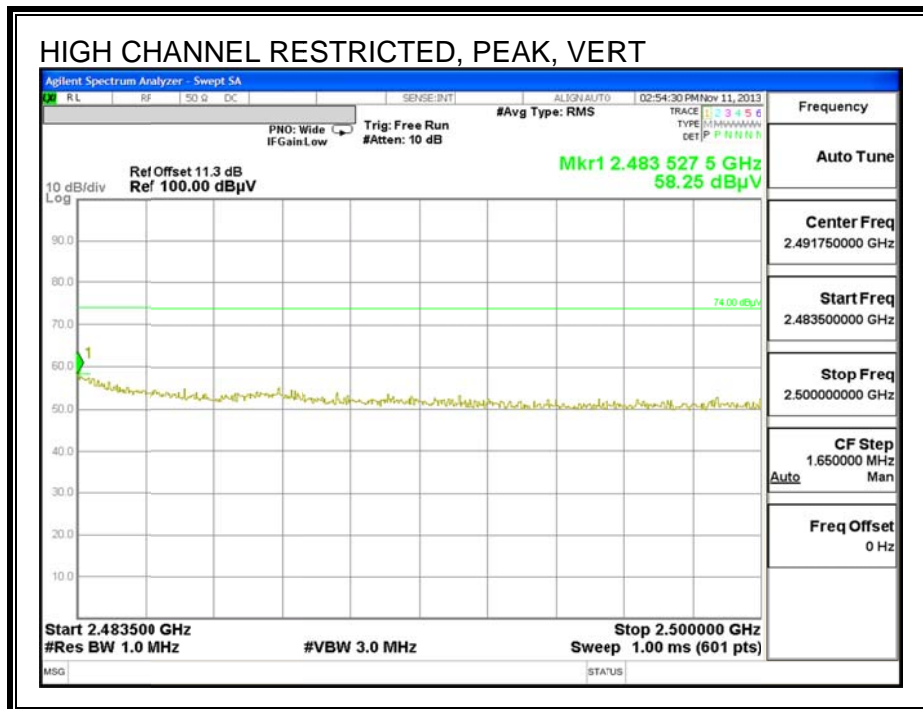
RESTRICTED BANDEDGE (HIGH CHANNEL) CH11



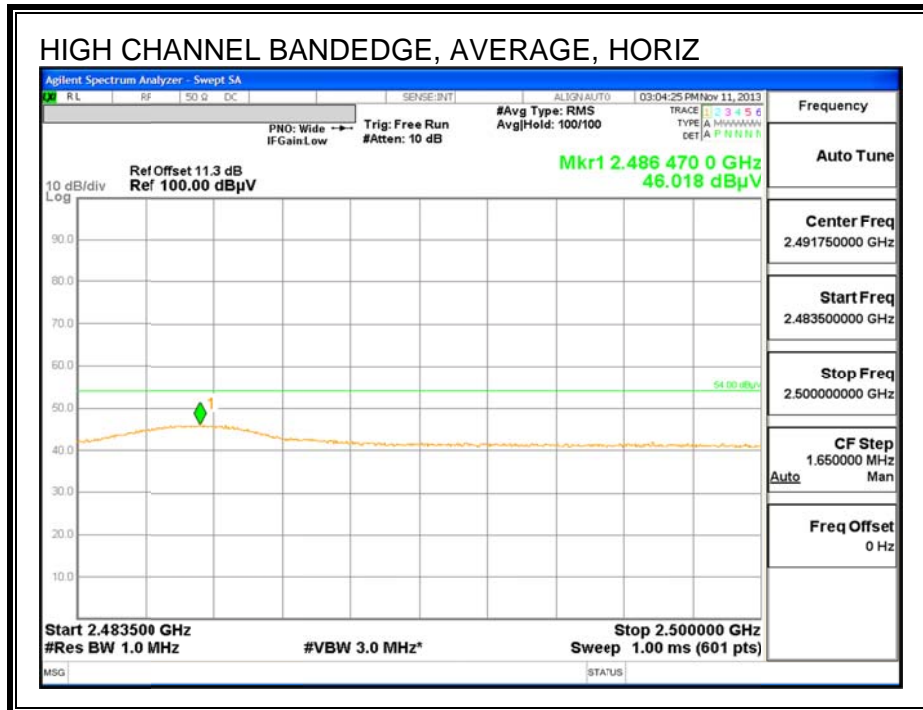
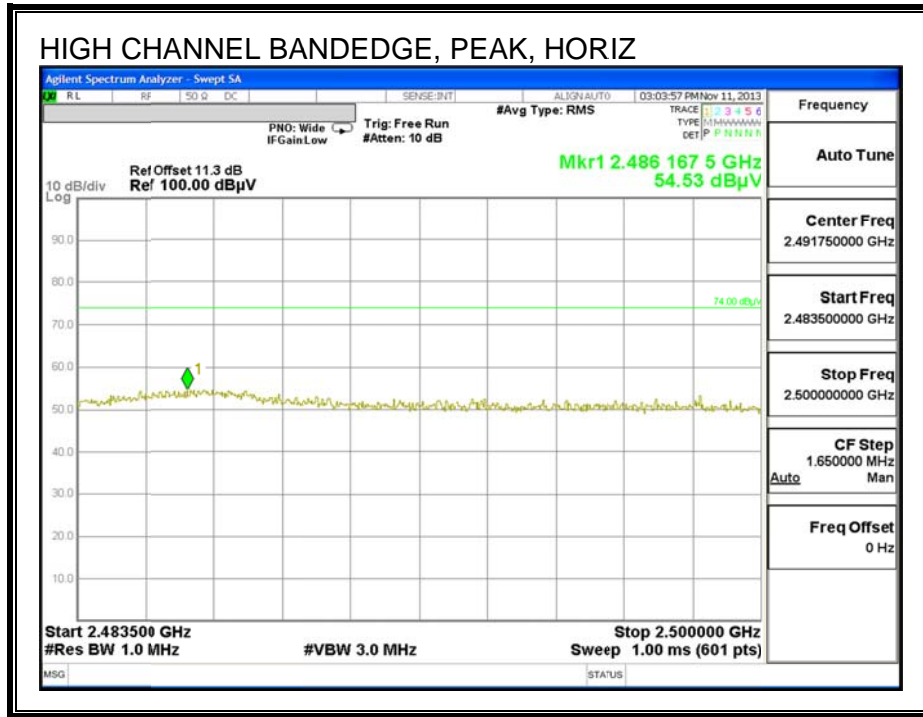


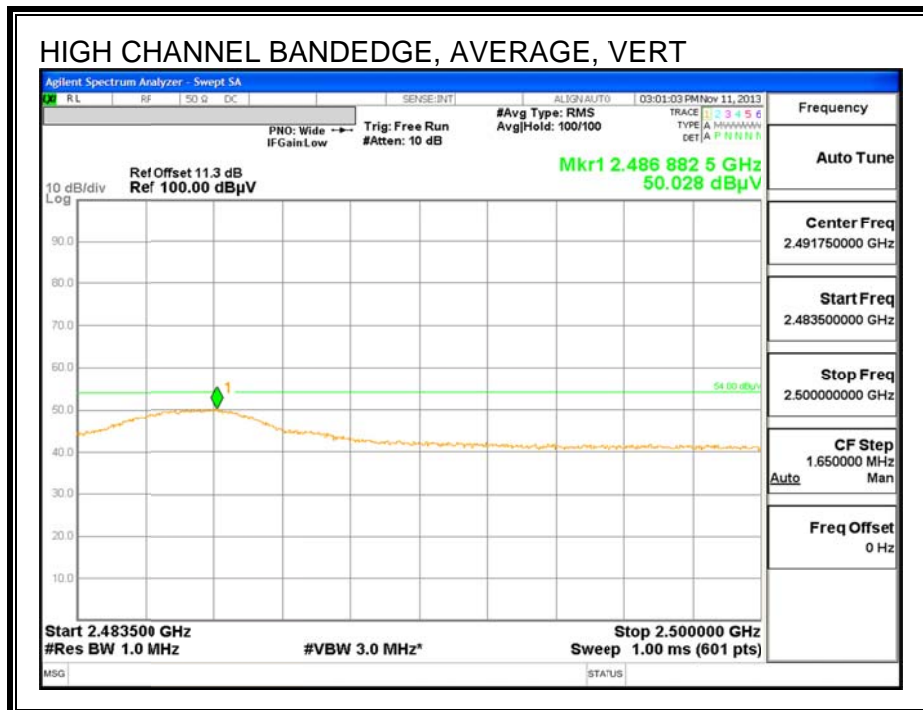
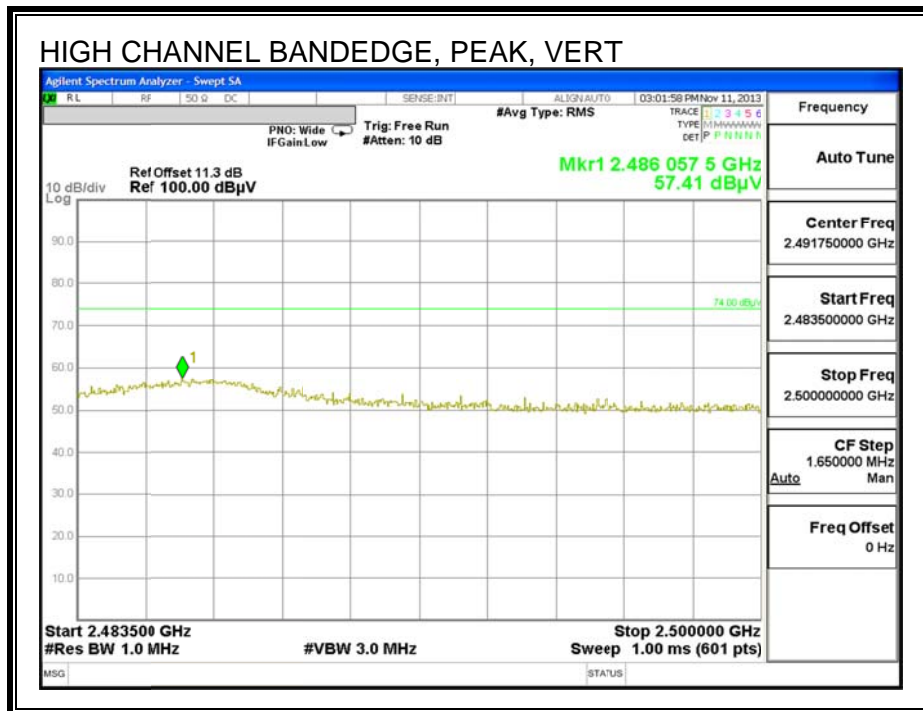
RESTRICTED BANDEDGE CH12



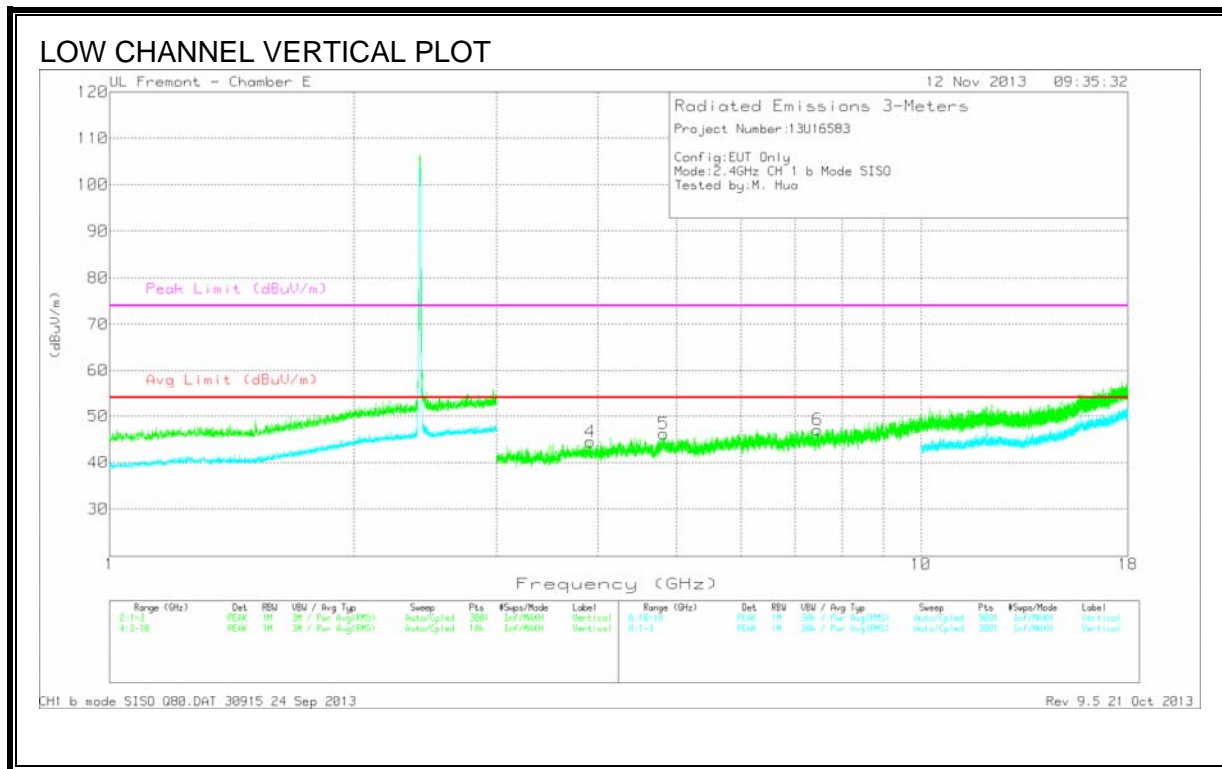
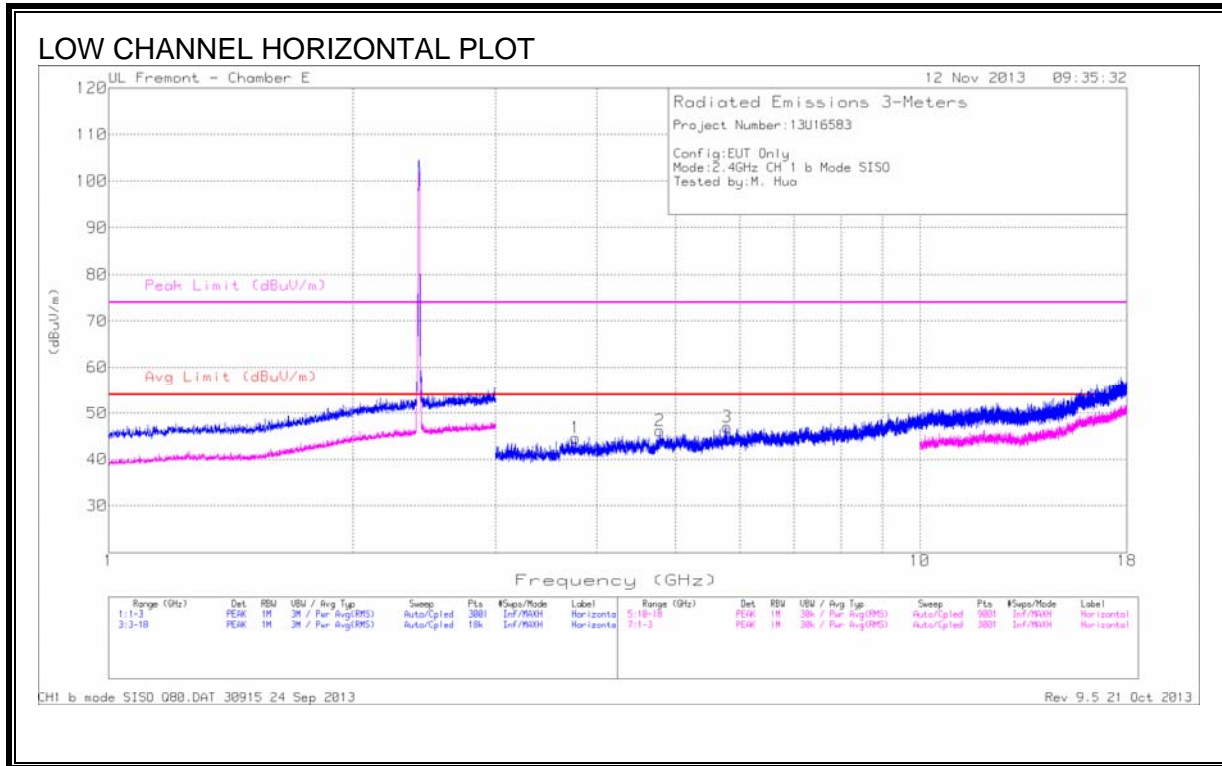


RESTRICTED BANDEDGE CH13





HARMONICS AND SPURIOUS EMISSIONS CH1



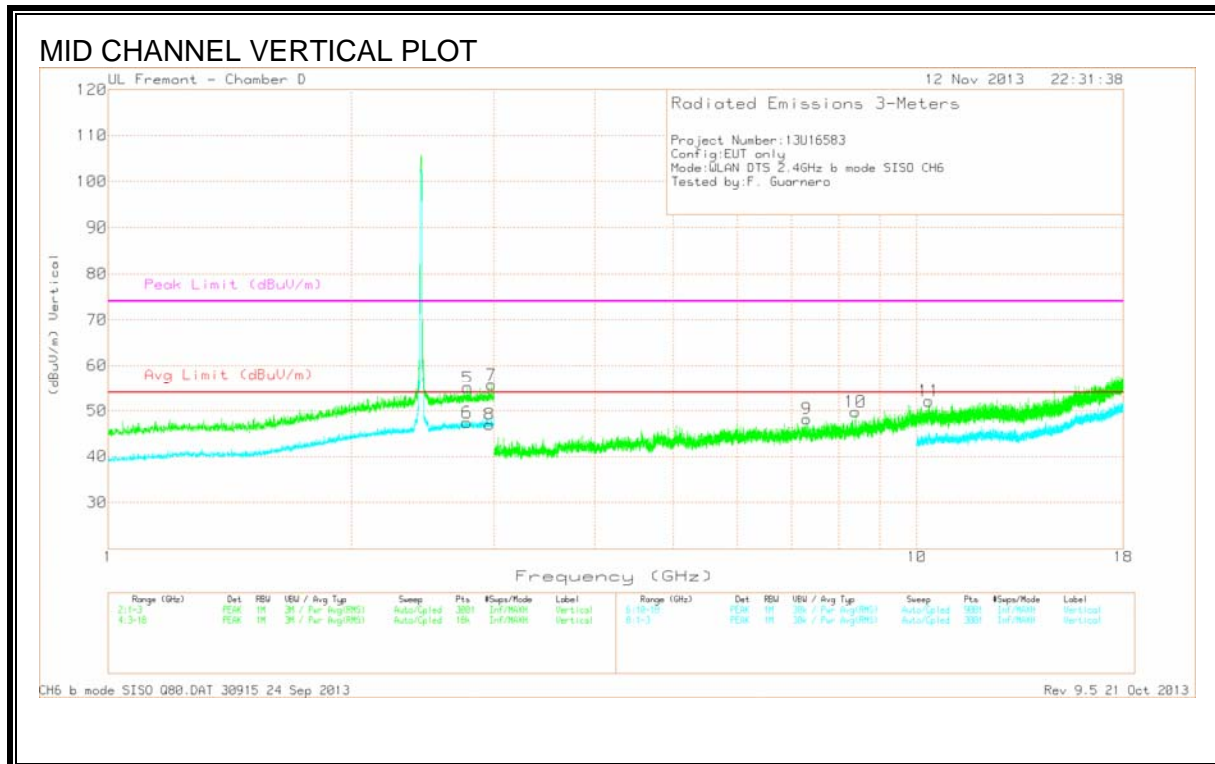
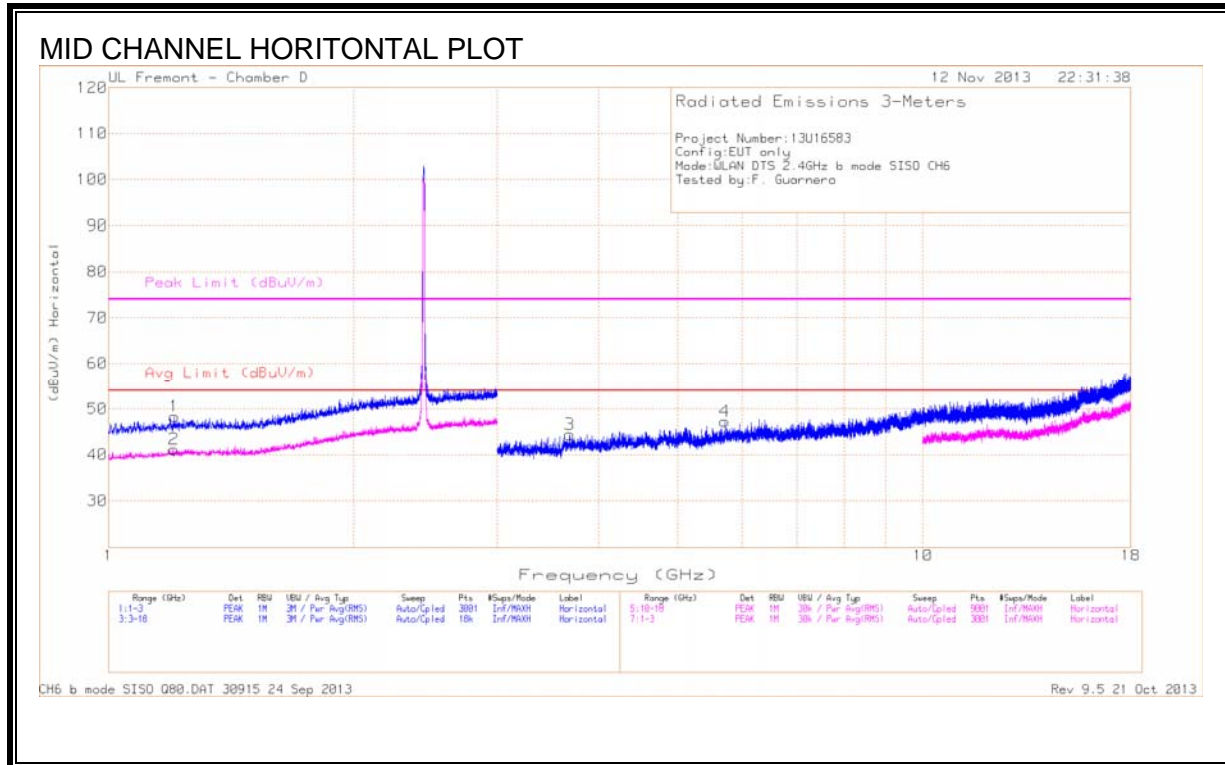
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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (db/m)	Amp/Cbl/ Fitr/Pad	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.764	39.85	PK	33.8	-29.0	44.65	53.97	-9.32	74	-29.35	0-360	201	H
2	* 4.782	39.77	PK	34.4	-28.0	46.17	53.97	-7.8	74	-27.83	0-360	100	H
3	5.788	38.55	PK	35.4	-27.0	46.95	-	-	-	-	0-360	201	H
4	* 3.913	39.36	PK	33.8	-28.7	44.46	53.97	-9.51	74	-29.54	0-360	100	V
5	* 4.822	38.92	PK	34.4	-27.1	46.22	53.97	-7.75	74	-27.78	0-360	100	V
6	* 7.463	36.47	PK	35.9	-25.3	47.07	53.97	-6.9	74	-26.93	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

HARMONICS AND SPURIOUS EMISSIONS CH6



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (db/m)	Amp/Cbl/ Pad	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.205	42.54	PK	28.4	-22.6	48.34	-	-	74	-25.66	0-360	100	H
2	* 1.205	35.39	Avg	28.4	-22.6	41.19	53.97	-12.78	-	-	0-360	100	H
3	* 3.683	39.11	PK	33.7	-28.4	44.41	53.97	-9.86	74	-29.59	0-360	201	H
4	5.713	39.46	PK	35.2	-27.4	47.26	-	-	-	-	0-360	100	H
5	* 2.783	42.82	PK	32.9	-20.6	55.12	-	-	74	-18.88	0-360	201	V
6	* 2.783	35.18	Avg	32.9	-20.7	47.38	53.97	-6.59	-	-	0-360	100	V
7	2.980	42.89	PK	33.1	-20.3	55.69	-	-	-	-	0-360	201	V
9	* 7.310	37.71	PK	35.9	-25.4	48.21	-	-	74	-25.79	0-360	201	V
	* 7.310	26.92	MAv1	35.9	-25.4	37.42	53.97	-16.55	-	-	0-360	392	V
10	* 8.398	37.78	PK	36.1	-24.1	49.78	-	-	74	-24.22	0-360	201	V
	* 8.398	25.85	MAv1	36.1	-24.2	37.75	53.97	-16.22	-	-	0-360	145	V
11	10.350	35.31	PK	38.2	-21.4	52.11	-	-	-	-	0-360	201	V

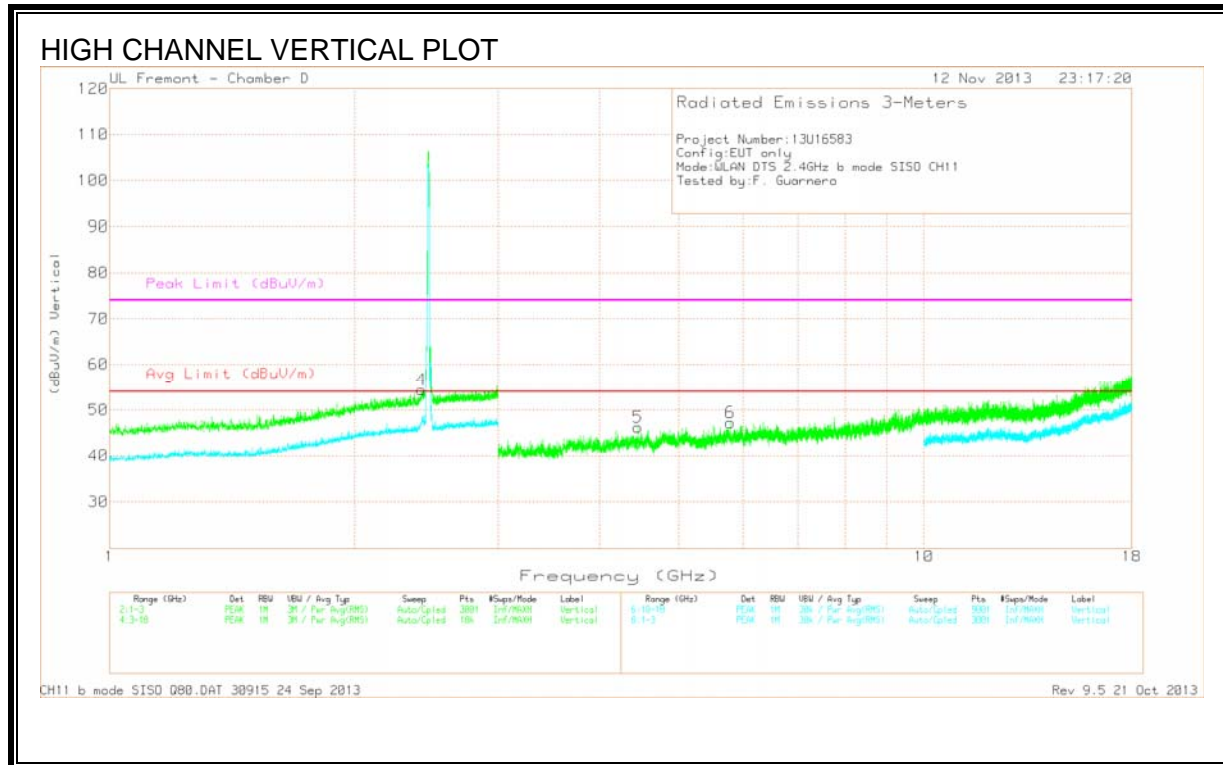
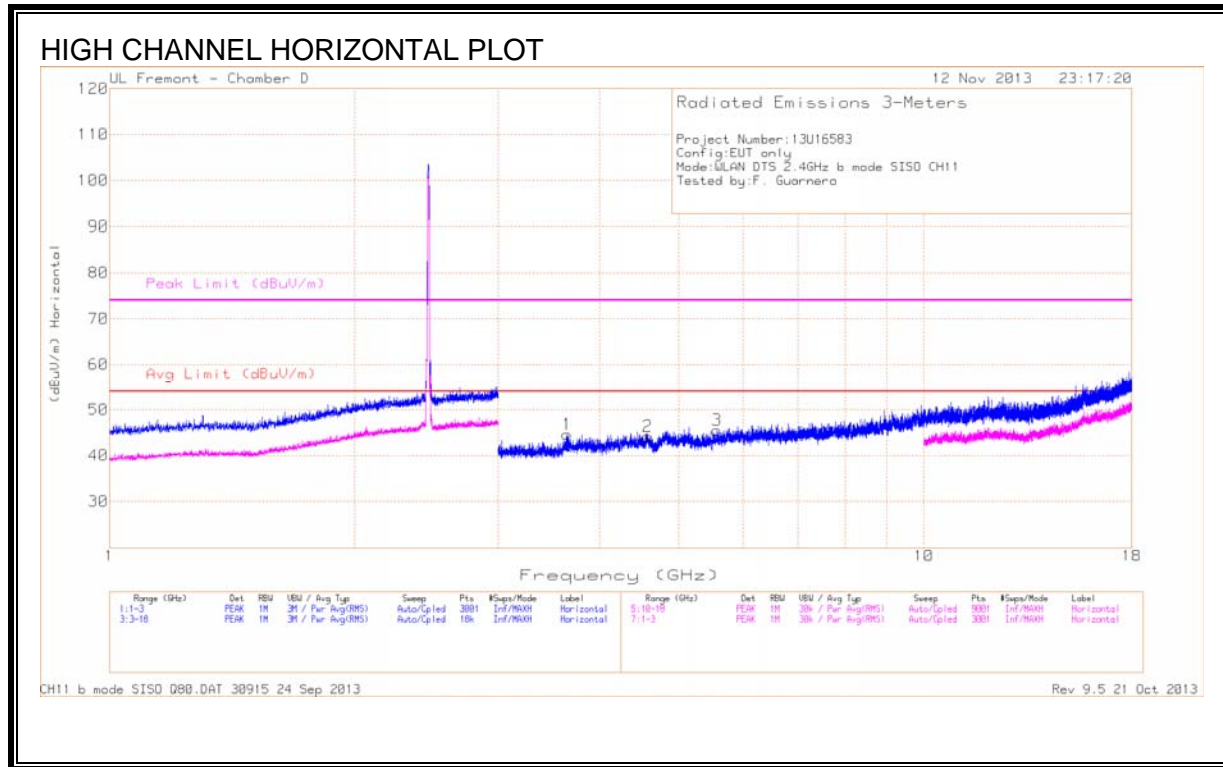
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS CH11



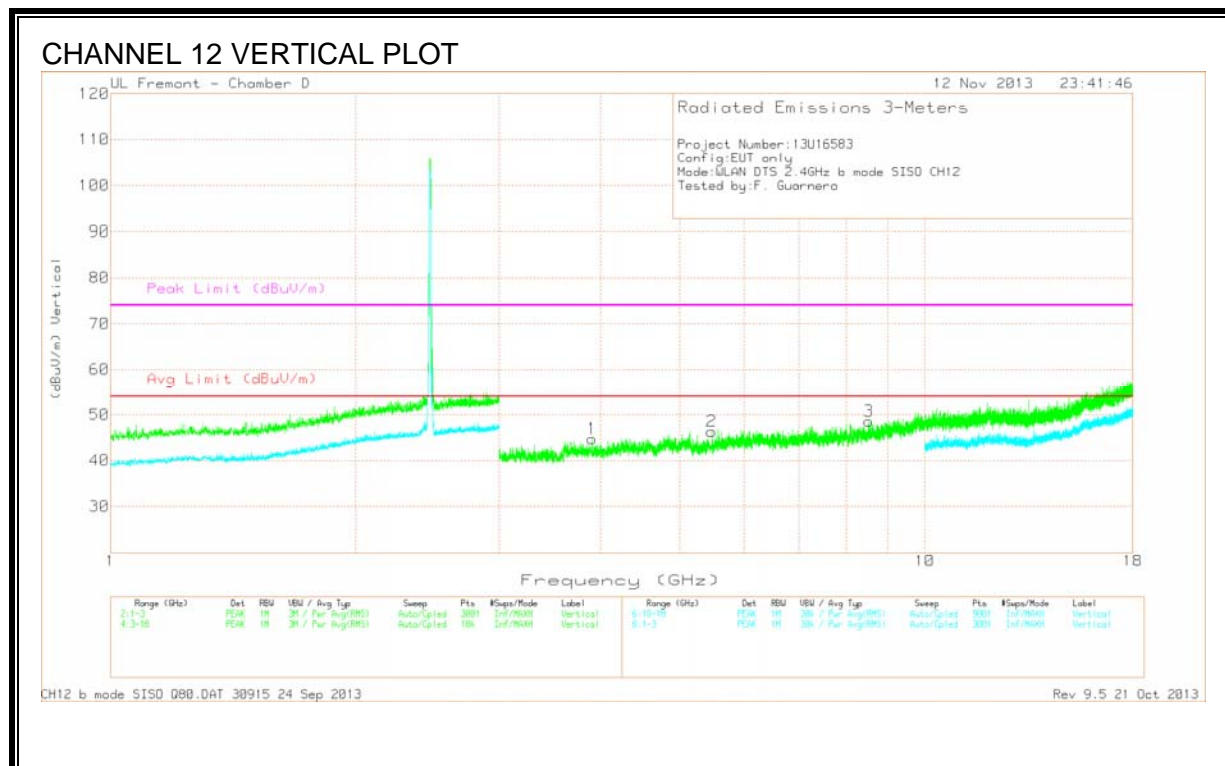
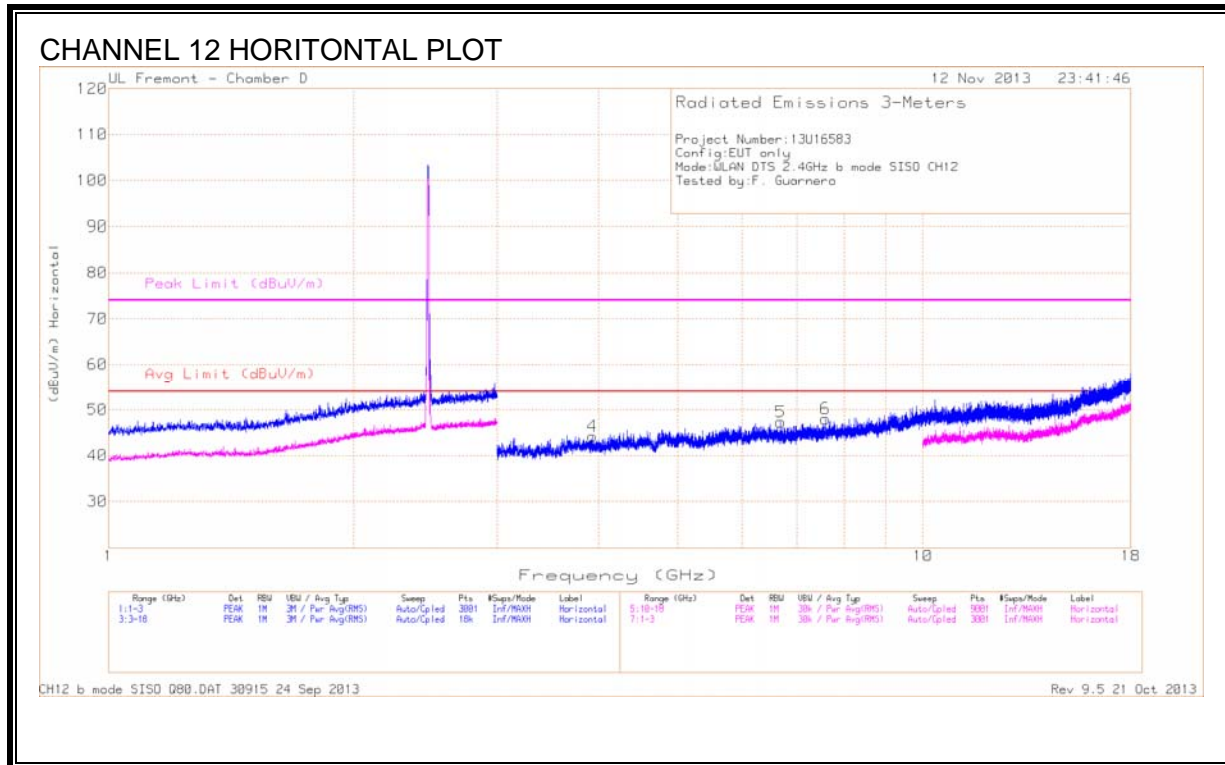
DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (db/m)	Amp/Cbl/ Pad	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.647	39.52	PK	33.6	-28.5	44.62	53.97	-9.35	74	-29.38	0-360	200	H
2	* 4.581	36.65	PK	34.3	-26.8	44.15	53.97	-9.82	74	-29.85	0-360	200	H
3	5.569	37.93	PK	34.9	-27.3	45.53	-	-	-	-	0-360	100	H
4	2.415	43.17	PK	32.4	-21.2	54.37	-	-	-	-	0-360	201	V
5	4.455	40.80	PK	34.1	-28.7	46.20	-	-	-	-	0-360	100	V
6	5.785	38.90	PK	35.4	-27.1	47.20	-	-	-	-	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

HARMONICS AND SPURIOUS EMISSIONS CH12



DATA

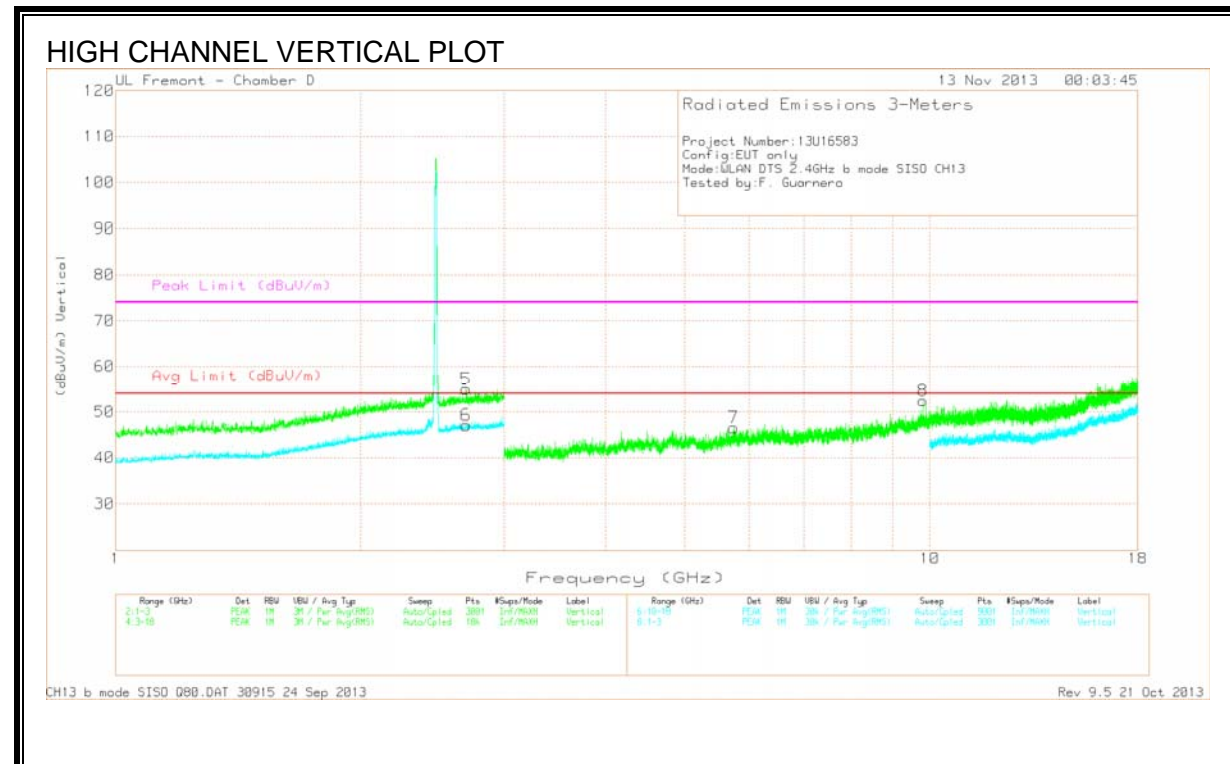
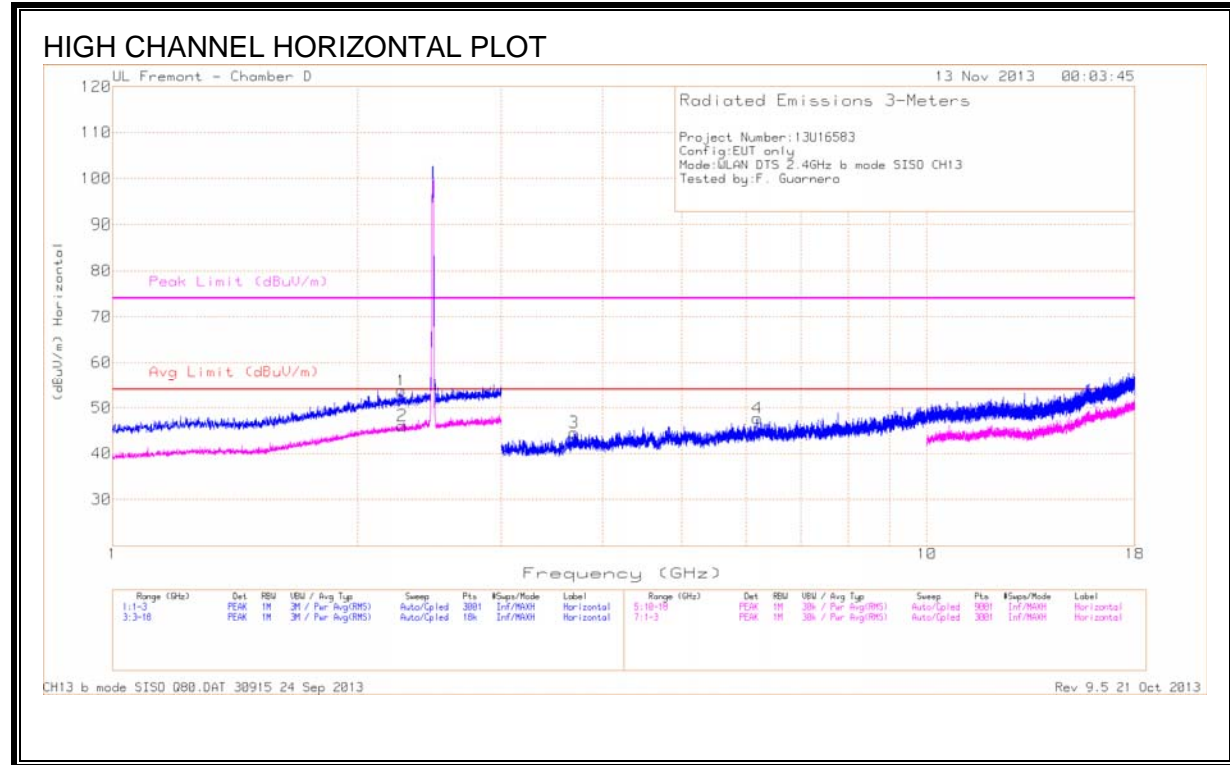
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (db/m)	Amp/Cbl /Pad	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.987	41.53	PK	33.1	-20.3	54.33	-	-	-	-	0-360	200	H
2	* 4.334	39.59	PK	34.0	-28.0	45.59	53.97	-8.38	74	-28.41	0-360	100	H
3	2.420	42.95	PK	32.4	-21.1	54.25	-	-	-	-	0-360	200	V
4	* 2.899	42.30	PK	33.0	-20.5	54.80	-	-	74	-19.20	0-360	200	V
5	* 2.899	34.96	Avg	33.0	-20.6	47.36	53.97	-6.61	-	-	0-360	100	V
6	13.411	37.36	PK	39.1	-23.2	53.26	-	-	-	-	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

HARMONICS AND SPURIOUS EMISSIONS CH13



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (db/m)	Amp/Cbl /Pad	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.262	42.60	PK	32.4	-21.2	53.80	-	-	-	-	0-360	100	H
2	* 2.262	34.84	Avg	32.4	-21.2	46.04	53.97	-7.93	-	-	0-360	100	H
3	* 3.686	39.26	PK	33.7	-28.4	44.56	53.97	-9.44	74	-29.44	0-360	201	H
4	6.194	38.81	PK	35.9	-27.0	47.71	-	-	-	-	0-360	100	H
5	* 2.693	42.92	PK	32.8	-20.7	55.02	-	-	74	-18.98	0-360	201	V
6	* 2.693	34.99	Avg	32.8	-20.7	47.09	53.97	-6.88	-	-	0-360	201	V
7	5.742	38.43	PK	35.3	-27.2	46.53	-	-	-	-	0-360	201	V
8	9.807	36.23	PK	37.5	-21.3	52.43	-	-	-	-	0-360	201	V

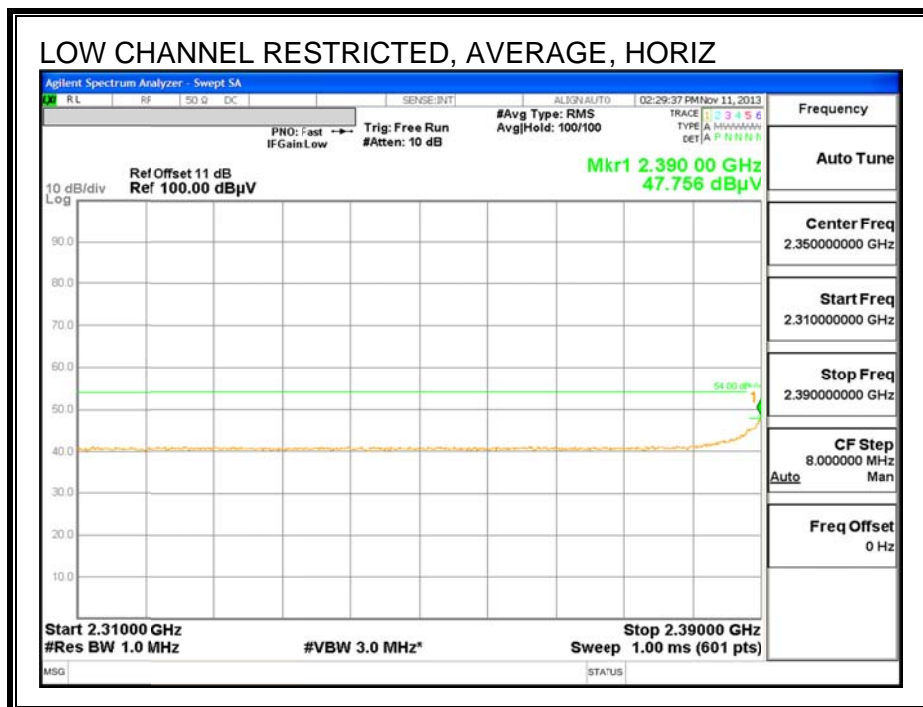
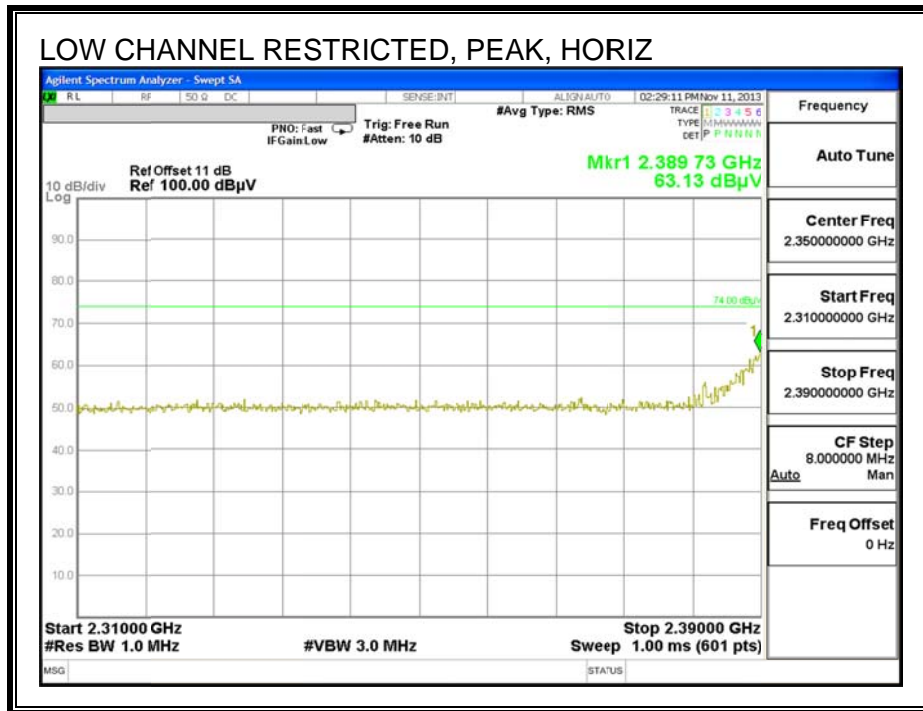
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

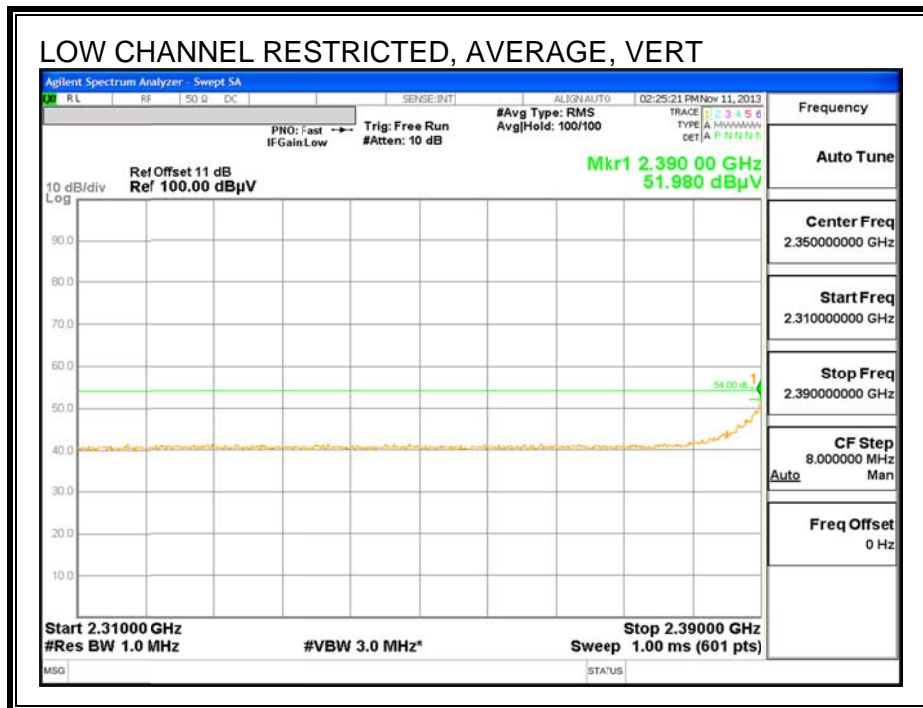
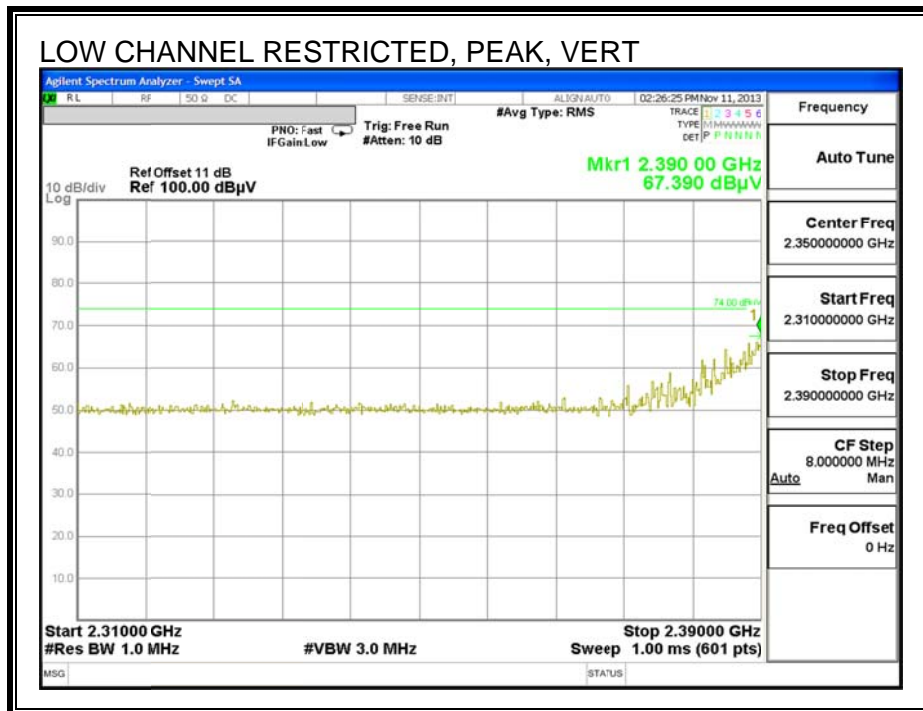
PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

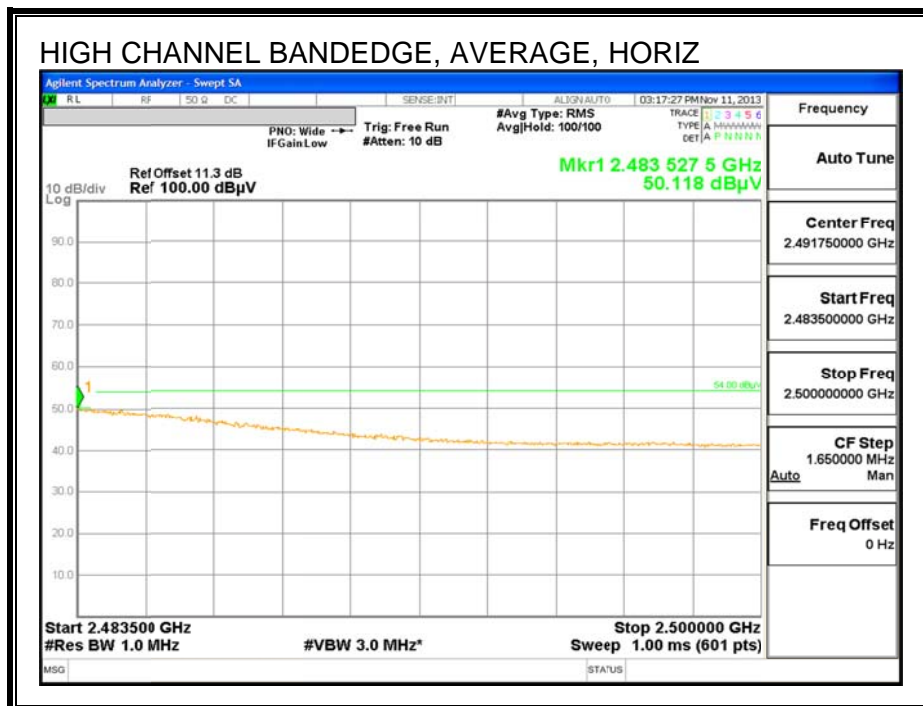
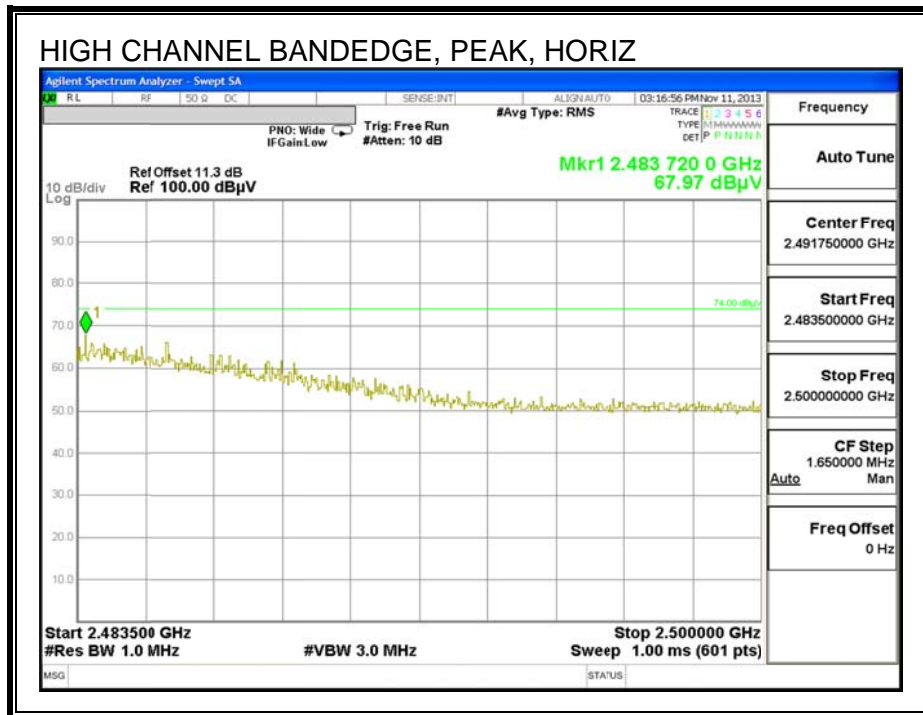
9.2.2. 802.11g MODE IN THE 2.4 GHz BAND

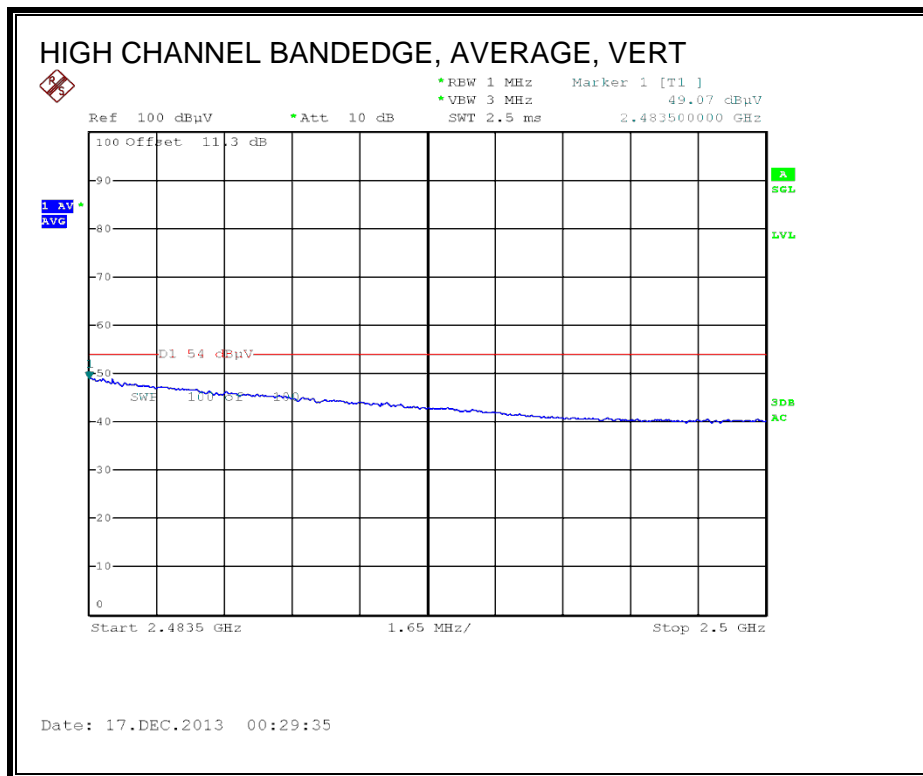
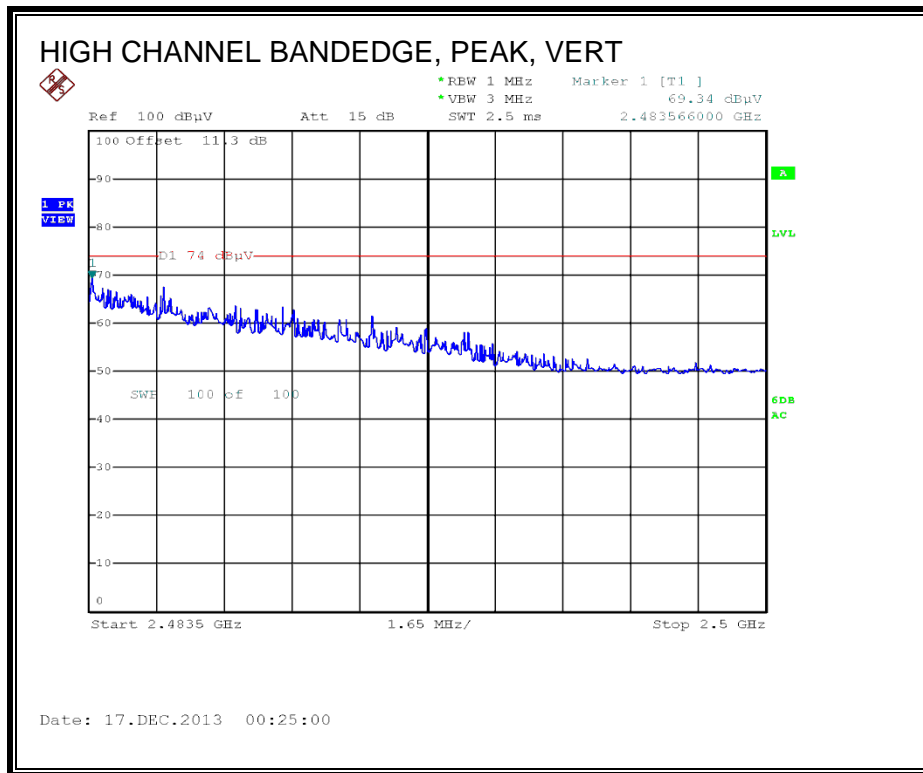
RESTRICTED BANDEDGE (LOW CHANNEL) CH1



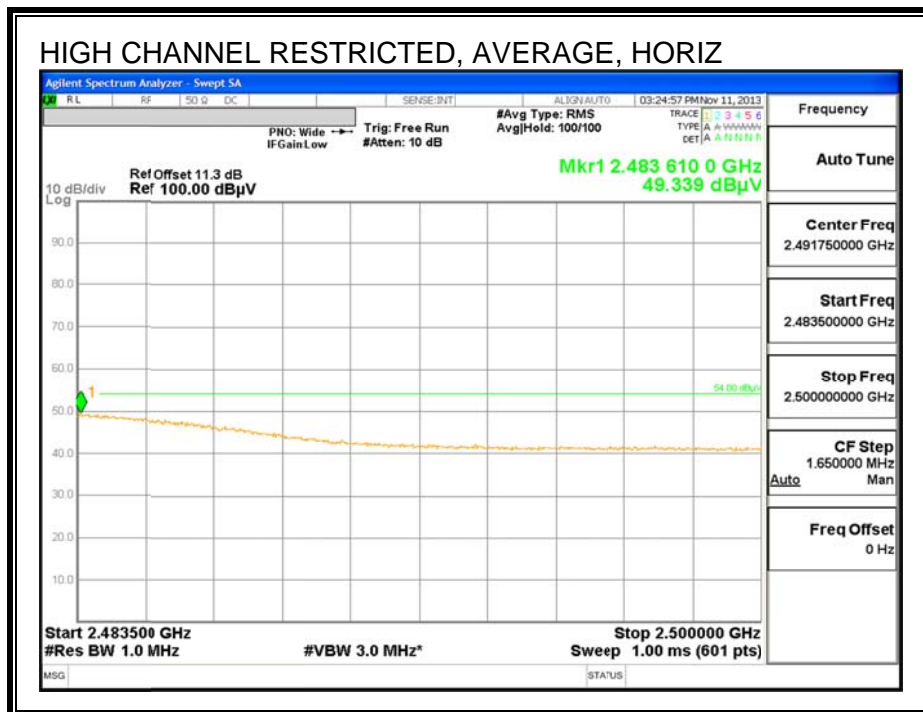
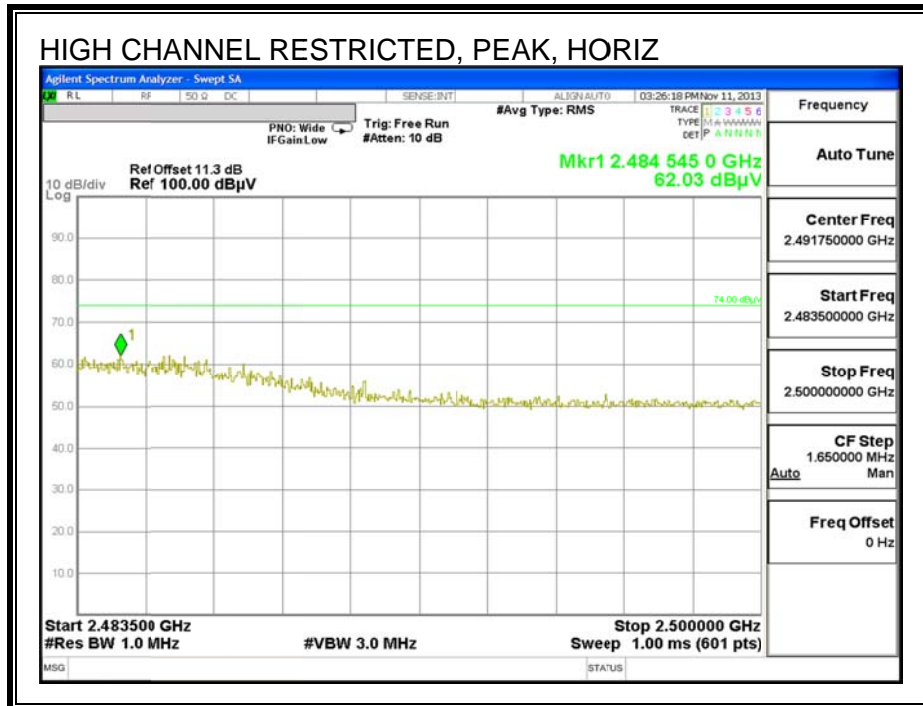


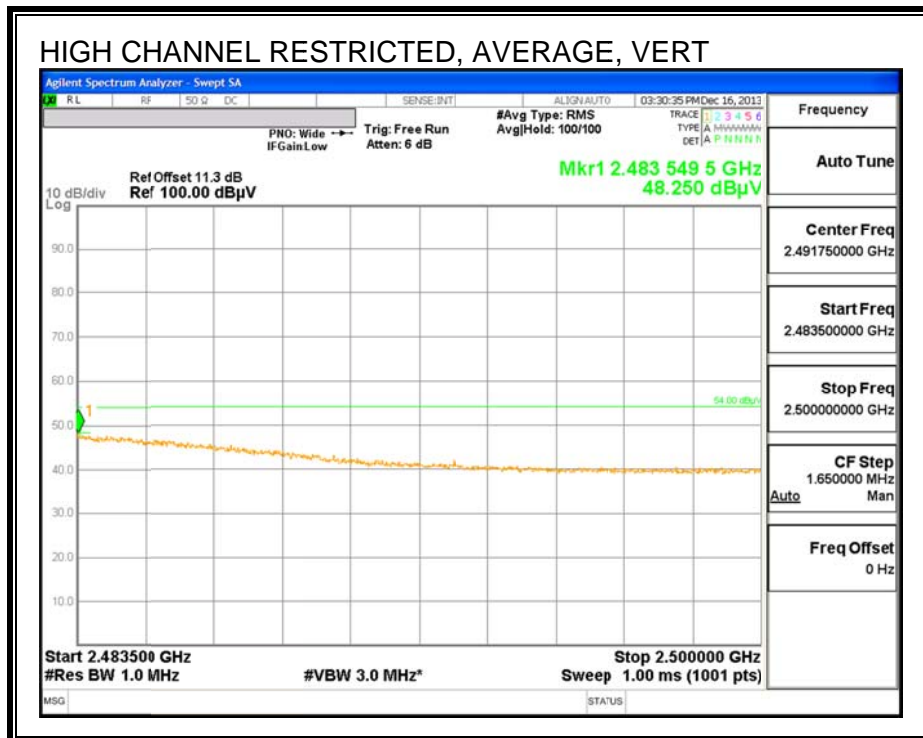
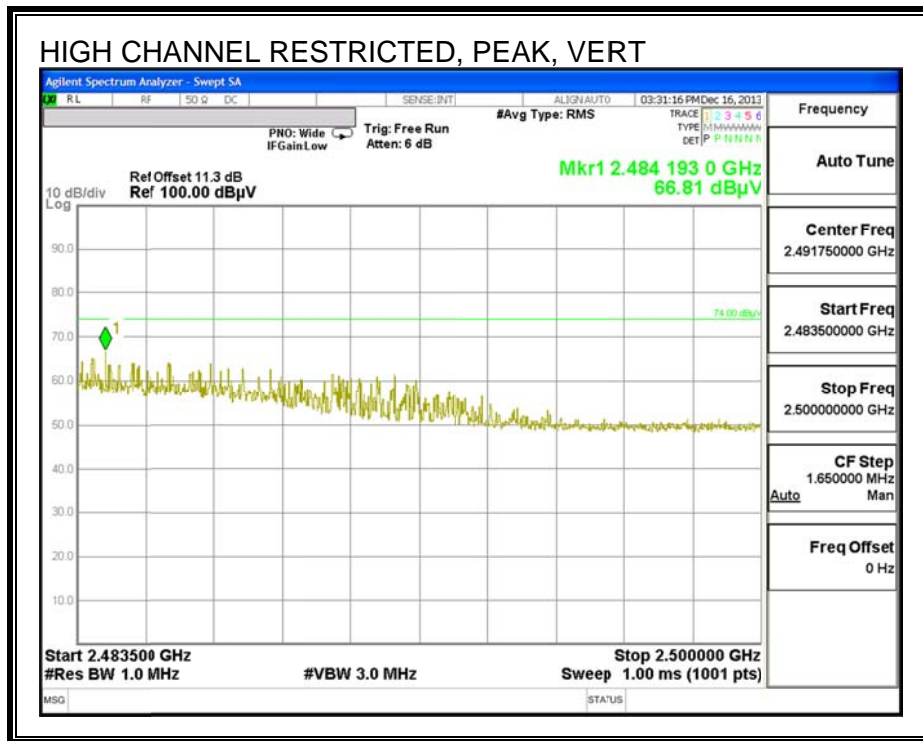
RESTRICTED BANDEDGE (HIGH CHANNEL) CH11



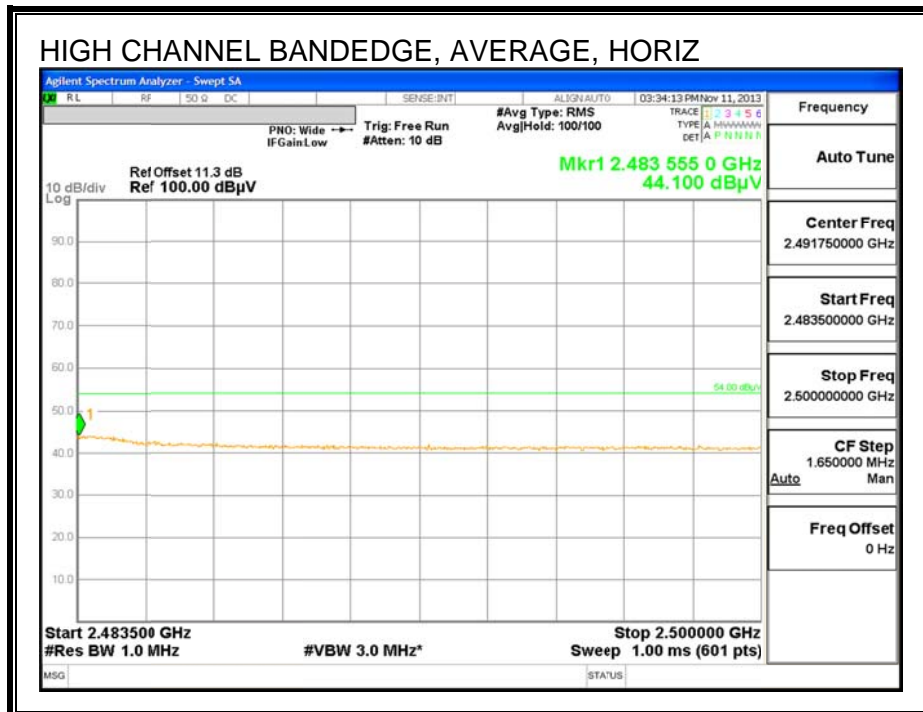
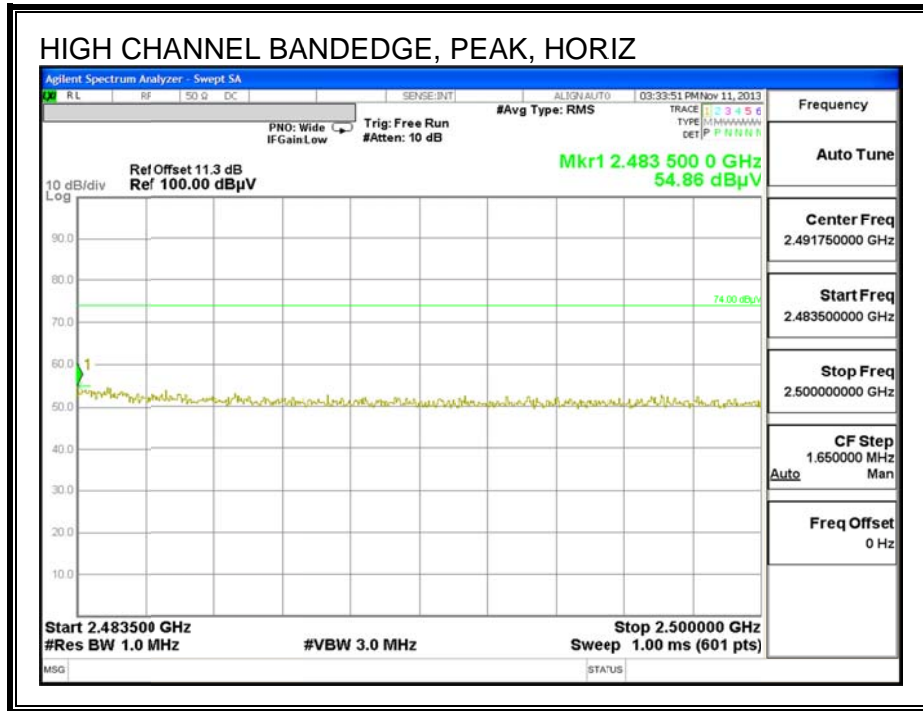


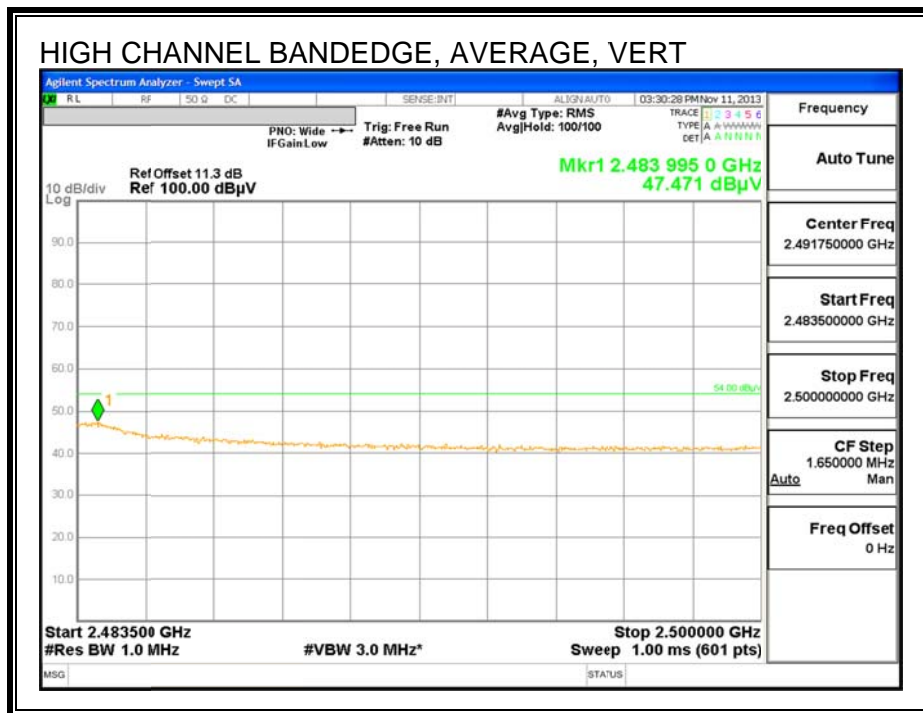
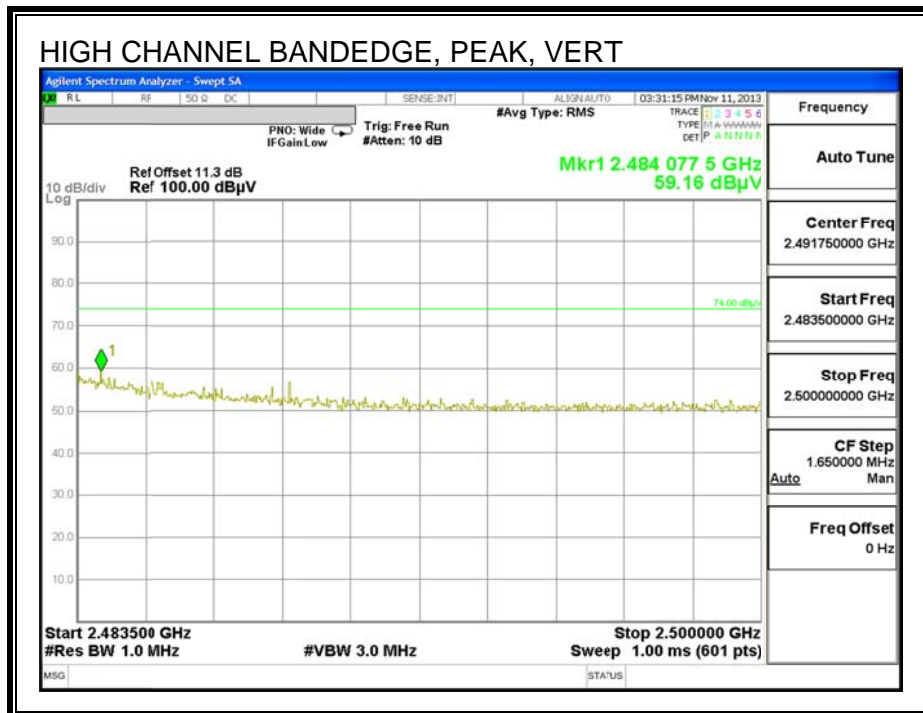
RESTRICTED BANDEDGE CH12



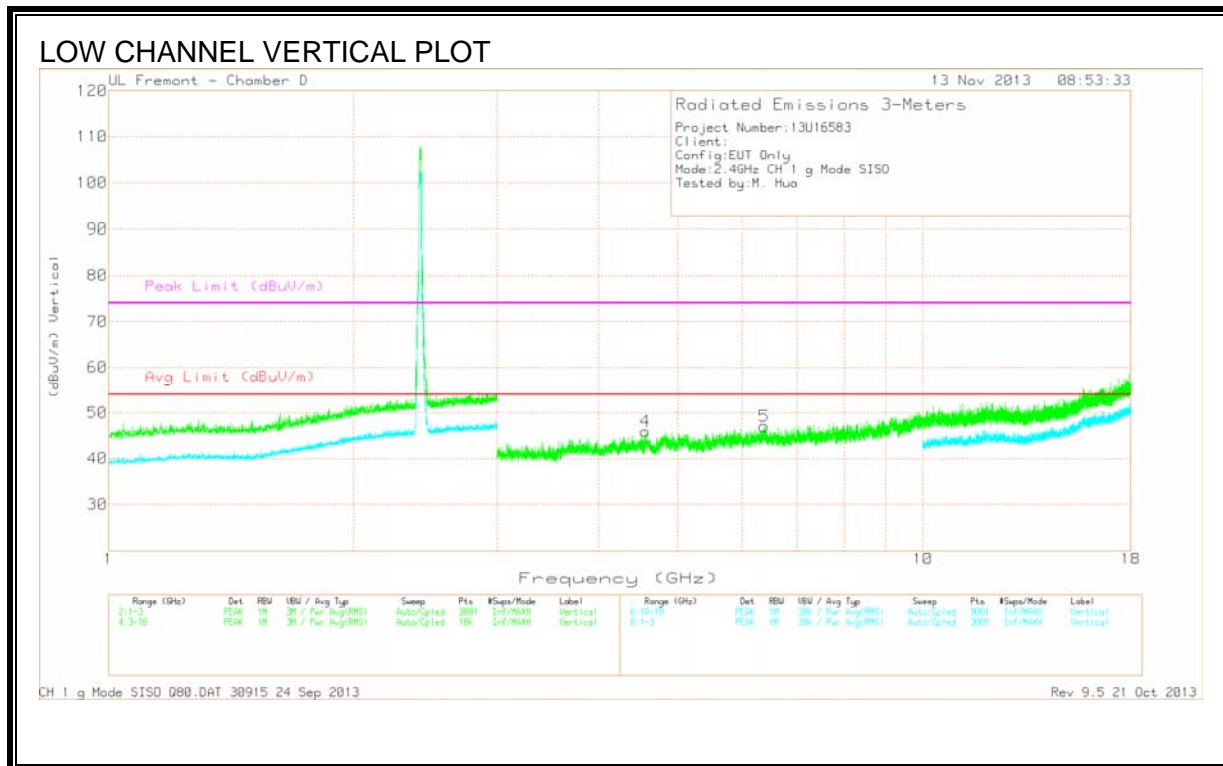
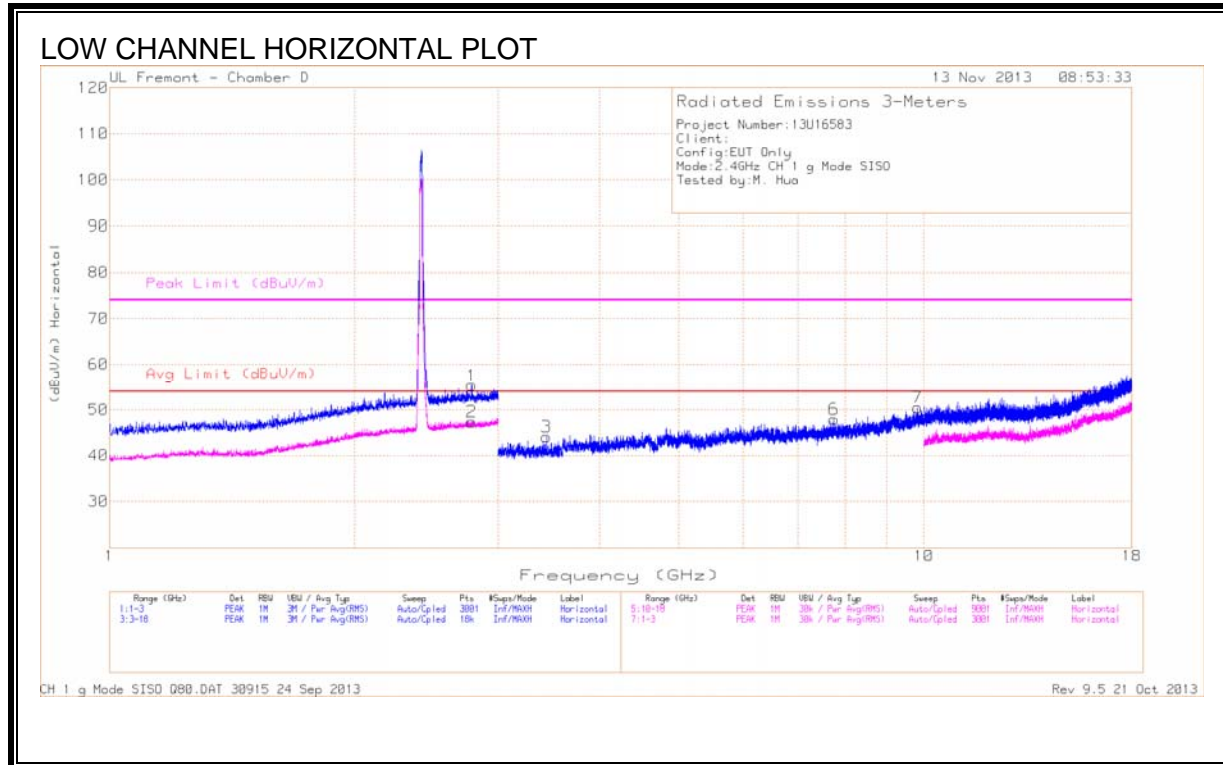


RESTRICTED BANDEDGE CH13





HARMONICS AND SPURIOUS EMISSIONS CH1



DATA

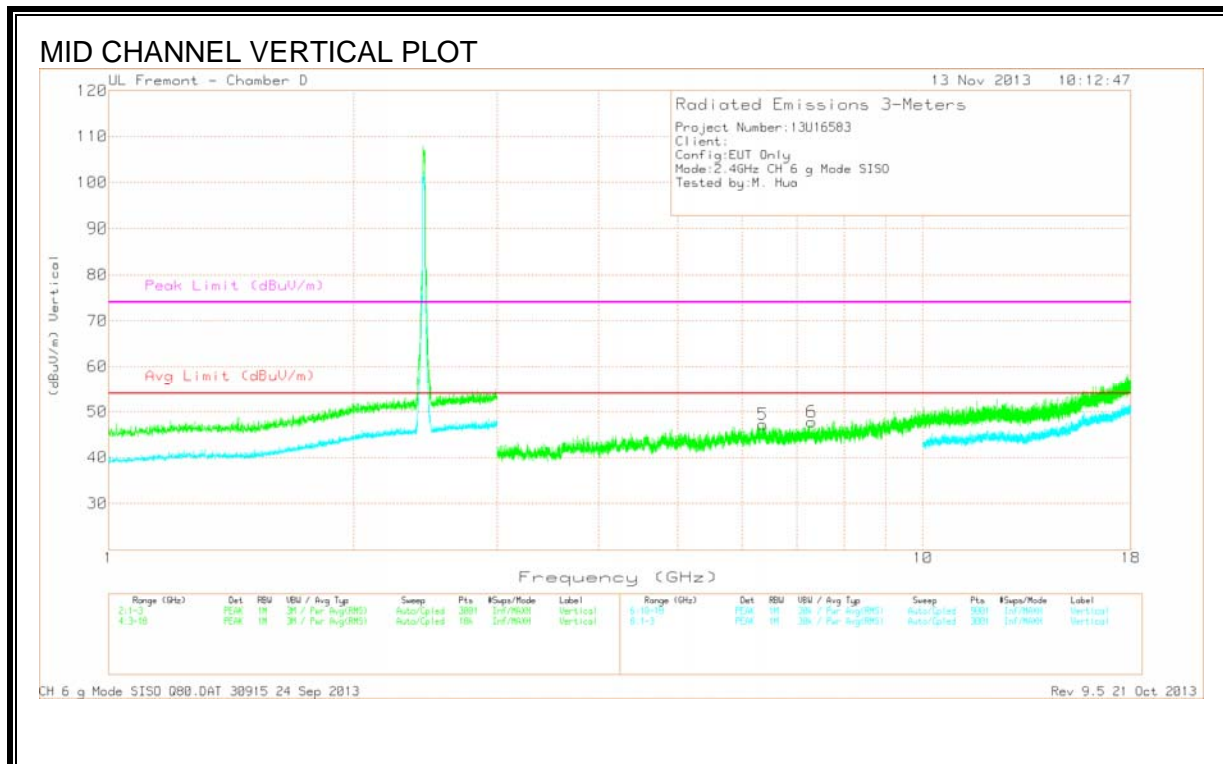
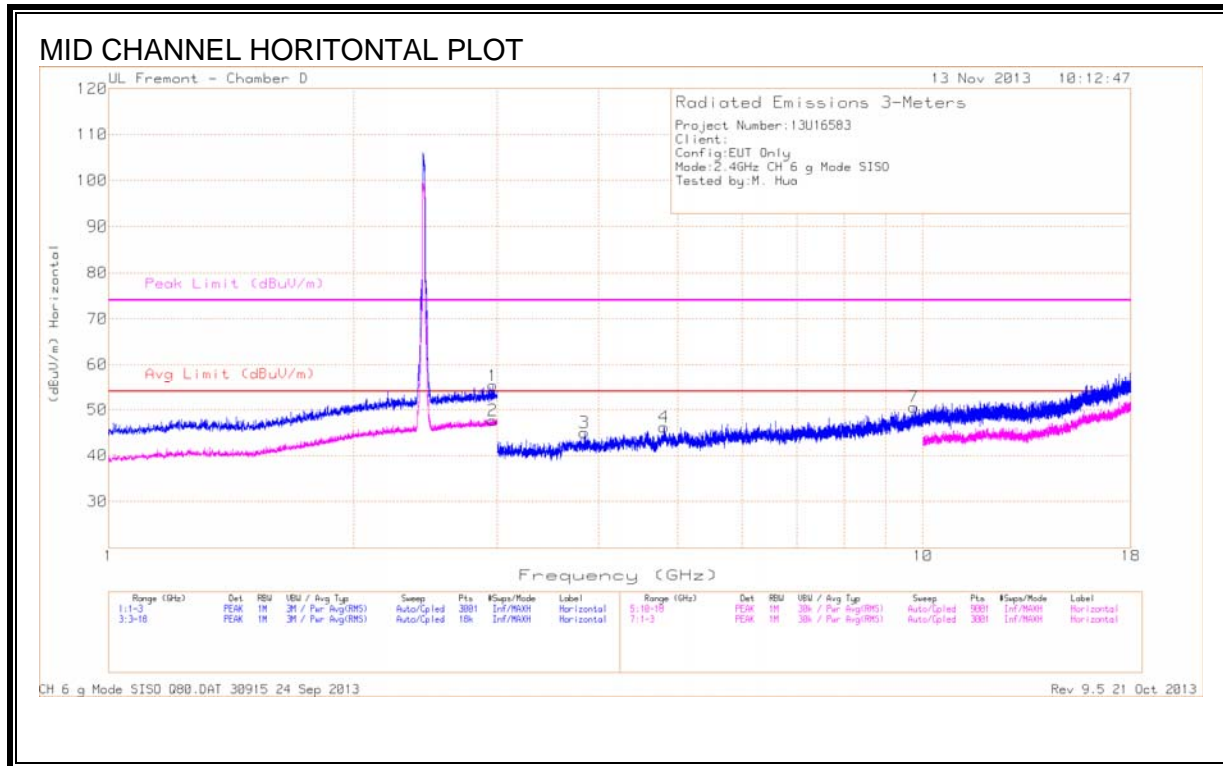
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (db/m)	Amp/Cbl /Pad	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.784	43.09	PK	32.9	-20.6	55.39	-	-	74	-18.61	0-360	201	H
2	* 2.784	35.05	Avg	32.9	-20.6	47.35	53.97	-6.62	-	-	0-360	200	H
3	3.440	39.36	PK	33.3	-28.6	44.06	-	-	-	-	0-360	201	H
4	* 4.565	38.33	PK	34.3	-26.7	45.93	53.97	-8.04	74	-28.07	0-360	201	V
5	6.387	37.85	PK	35.9	-26.7	47.05	-	-	-	-	0-360	201	V
6	7.754	36.7	PK	36.1	-24.9	47.9	-	-	-	-	0-360	201	H
7	9.824	34.59	PK	37.5	-21.6	50.49	-	-	-	-	0-360	201	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

HARMONICS AND SPURIOUS EMISSIONS CH6



DATA

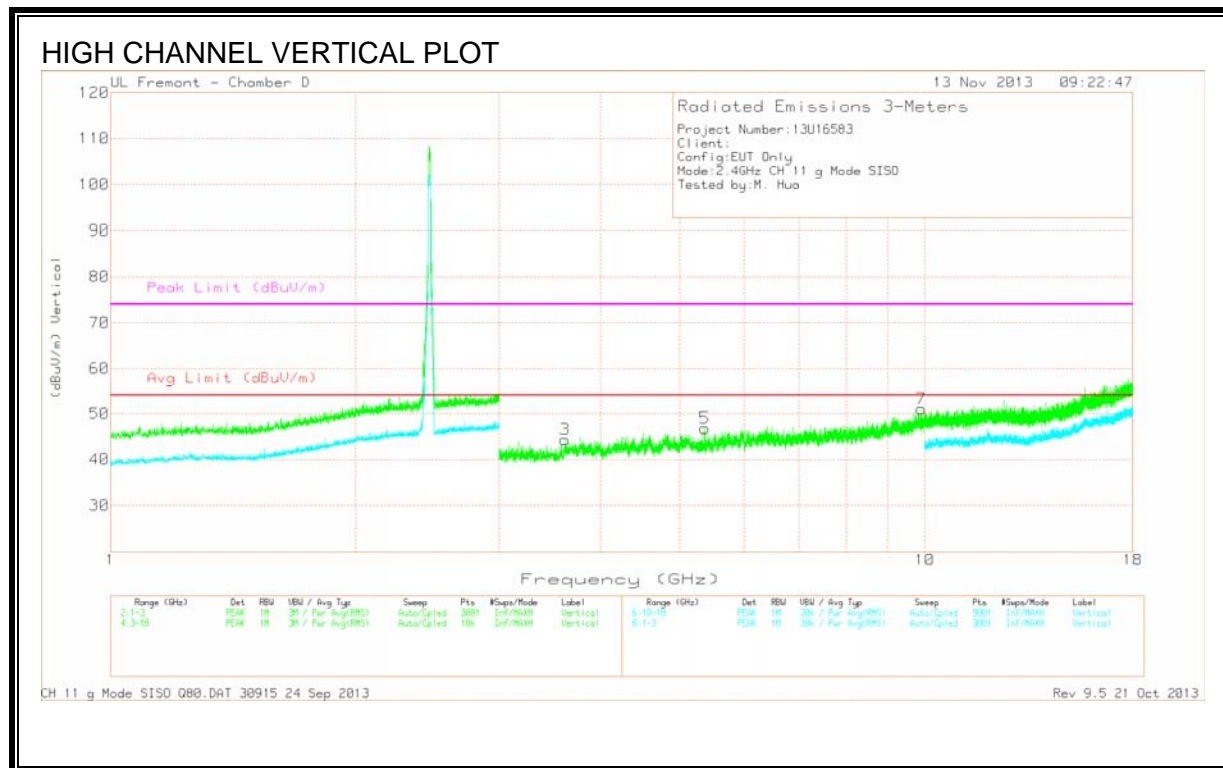
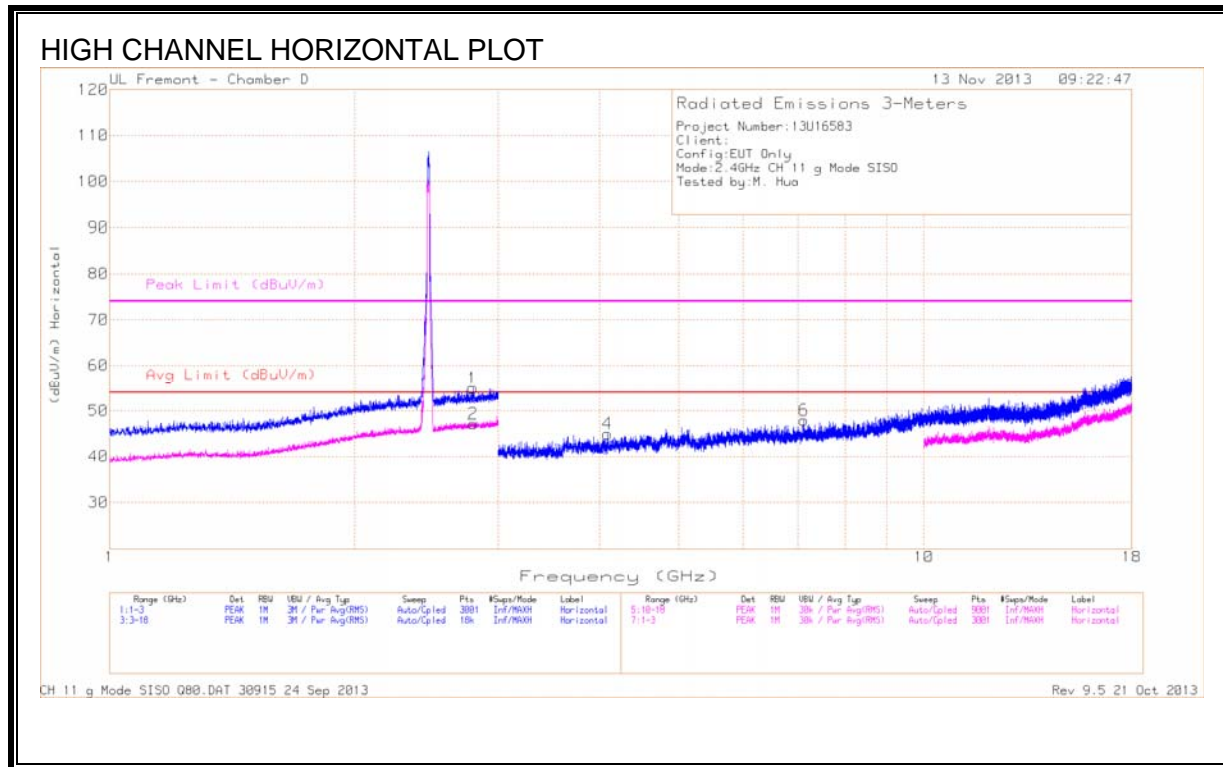
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (db/m)	Amp/Cbl/ Pad	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.964	42.62	PK	33.1	-20.4	55.32	-	-	-	-	0-360	100	H
3	* 3.839	40.19	PK	33.8	-29.0	44.99	53.97	-9.01	74	-29.01	0-360	201	H
4	* 4.809	39.30	PK	34.4	-27.5	46.20	53.97	-7.80	74	-27.80	0-360	201	H
5	6.360	38.23	PK	35.9	-26.9	47.23	-	-	-	-	0-360	100	V
6	* 7.304	37.18	PK	35.9	-25.3	47.78	53.97	-6.22	74	-26.22	0-360	100	V
7	9.746	34.99	PK	37.4	-21.8	50.59	-	-	-	-	0-360	201	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

HARMONICS AND SPURIOUS EMISSIONS CH11



DATA

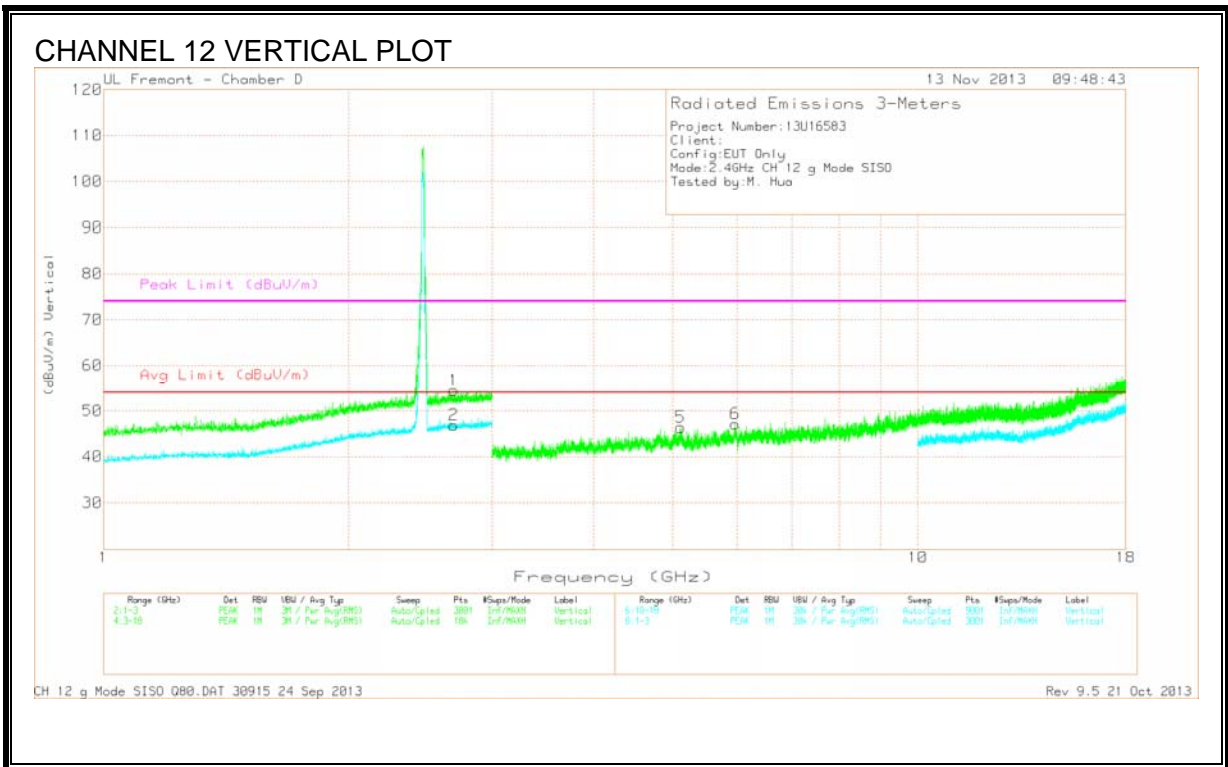
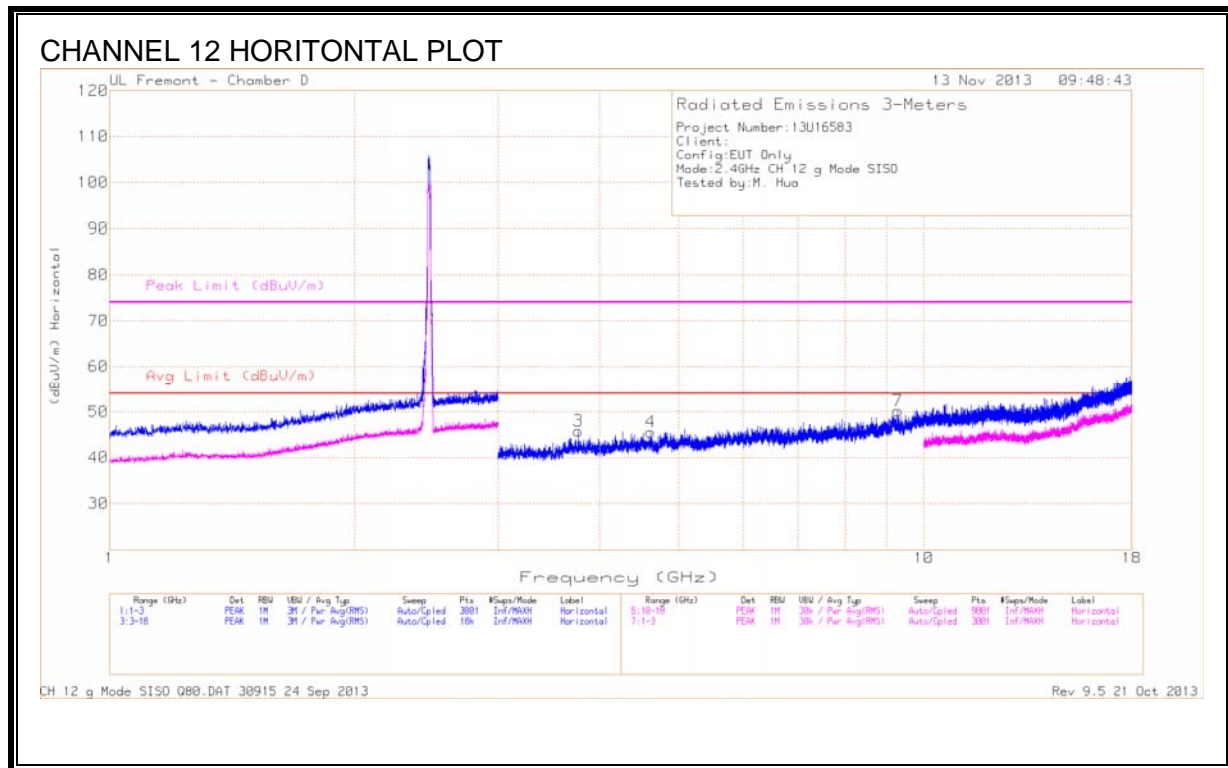
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (db/m)	Amp/Cbl /Pad	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.793	42.71	PK	32.9	-20.6	55.01	-	-	-	-	0-360	201	H
2	* 2.793	34.81	Avg	32.9	-20.6	47.11	53.97	-6.86	-	-	0-360	201	H
3	* 3.615	39.48	PK	33.5	-28.6	44.38	53.97	-9.62	74	-29.62	0-360	100	V
4	* 4.089	40.04	PK	33.8	-28.9	44.94	53.97	-9.06	74	-29.06	0-360	100	H
5	* 5.368	39.42	PK	34.7	-27.3	46.82	53.97	-7.18	74	-27.18	0-360	100	V
6	7.127	37.41	PK	35.9	-25.4	47.91	-	-	-	-	0-360	100	H
7	9.901	35.42	PK	37.7	-22.1	51.02	-	-	-	-	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

HARMONICS AND SPURIOUS EMISSIONS CH12



DATA

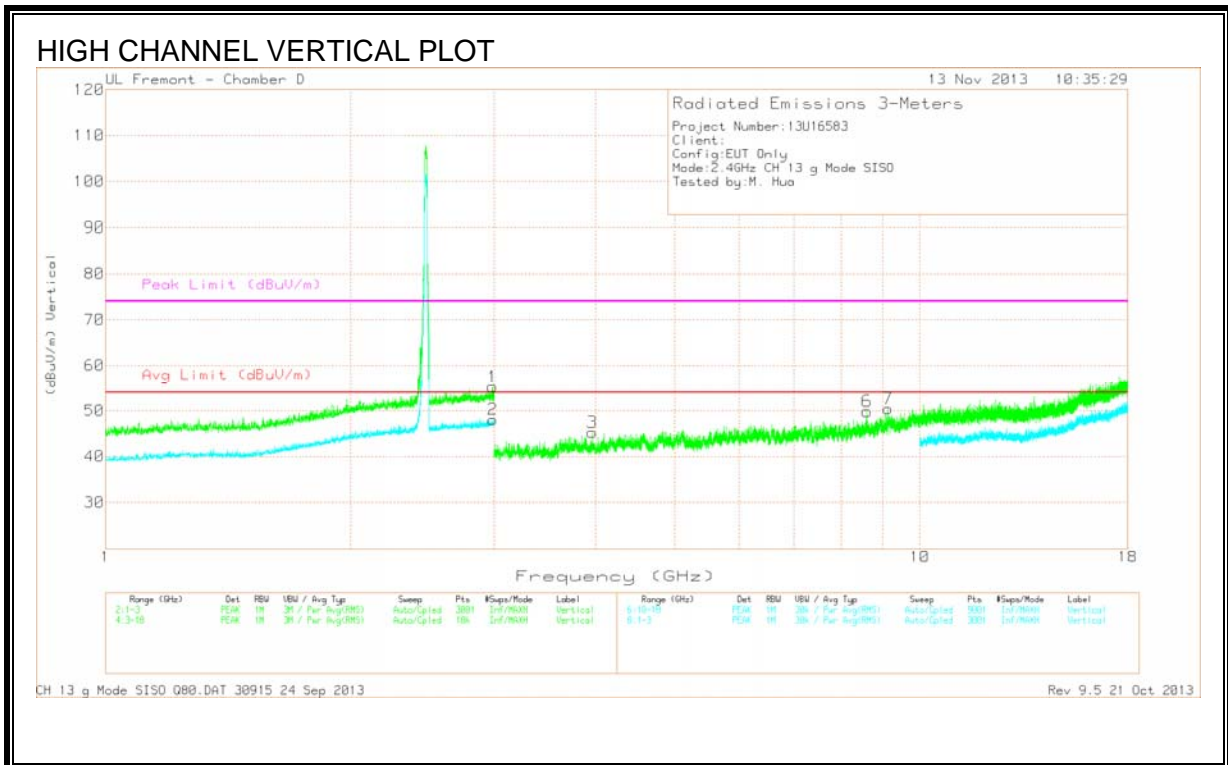
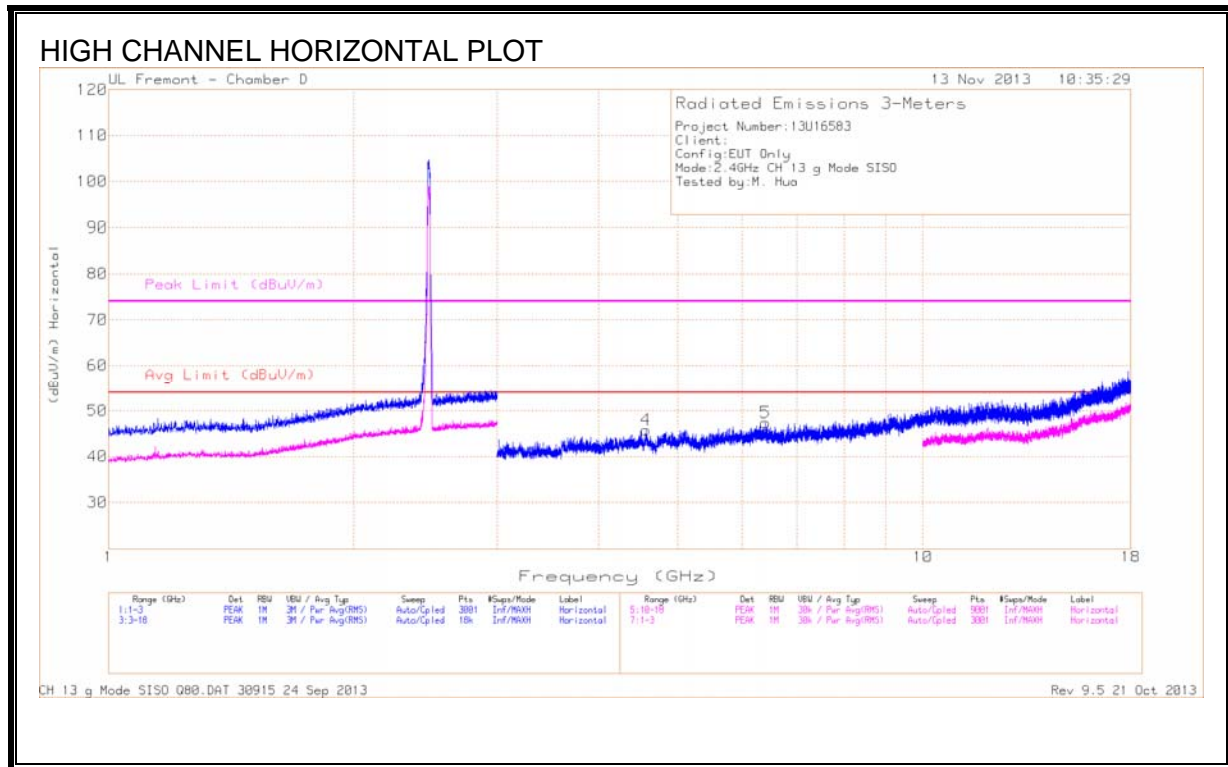
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (db/m)	Amp/Cbl /Pad	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.693	42.39	PK	32.8	-20.7	54.49	-	-	74	-19.51	0-360	201	V
2	* 2.693	34.79	Avg	32.8	-20.7	46.89	53.97	-7.08	-	-	0-360	201	V
3	* 3.766	41.02	PK	33.8	-29.0	45.82	53.97	-8.18	74	-28.18	0-360	201	H
4	* 4.619	38.97	PK	34.3	-27.7	45.57	53.97	-8.43	74	-28.43	0-360	201	H
5	* 5.113	38.50	PK	34.5	-26.6	46.40	53.97	-7.60	74	-27.60	0-360	201	V
6	5.969	38.45	PK	35.7	-27	47.15	-	-	-	-	0-360	100	V
7	9.290	36.07	PK	36.9	-22.8	50.17	-	-	-	-	0-360	201	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

HARMONICS AND SPURIOUS EMISSIONS CH13



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (db/m)	Amp/Cbl /Pad	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.987	42.48	PK	33.1	-20.3	55.28	-	-	-	-	0-360	100	V
3	* 3.961	40.27	PK	33.8	-28.8	45.27	53.97	-8.73	74	-28.73	0-360	100	V
4	* 4.572	38.20	PK	34.3	-26.7	45.80	53.97	-8.20	74	-28.20	0-360	201	H
5	6.407	38.30	PK	35.9	-26.8	47.40		-	-	-	0-360	201	H
6	8.613	36.46	PK	36.3	-22.9	49.86		-	-	-	0-360	100	V
7	* 9.143	35.61	PK	36.8	-22.0	50.41	53.97	-3.59	74	-23.59	0-360	100	V

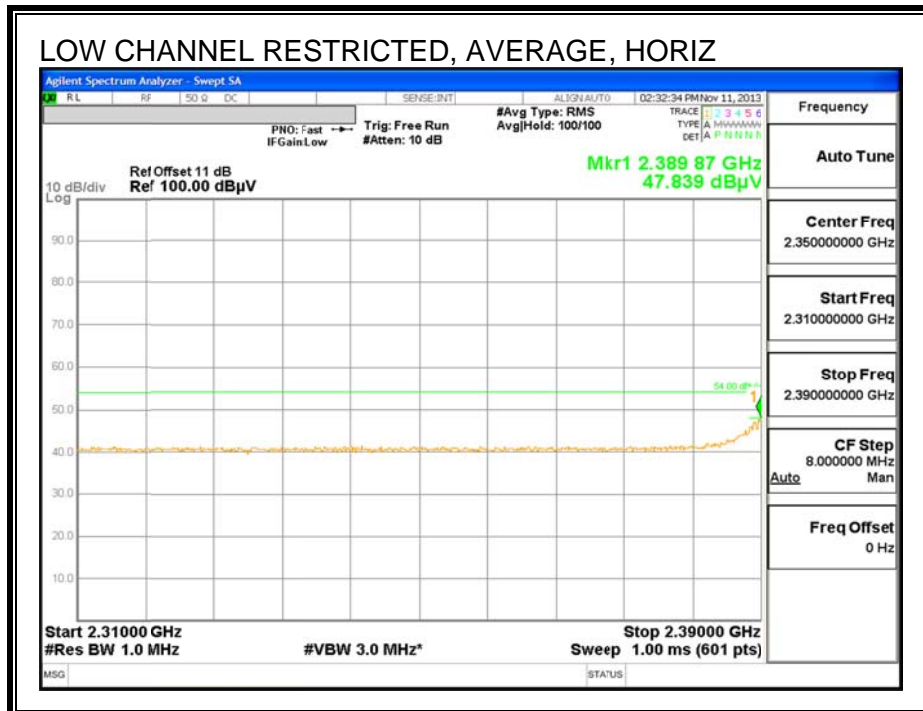
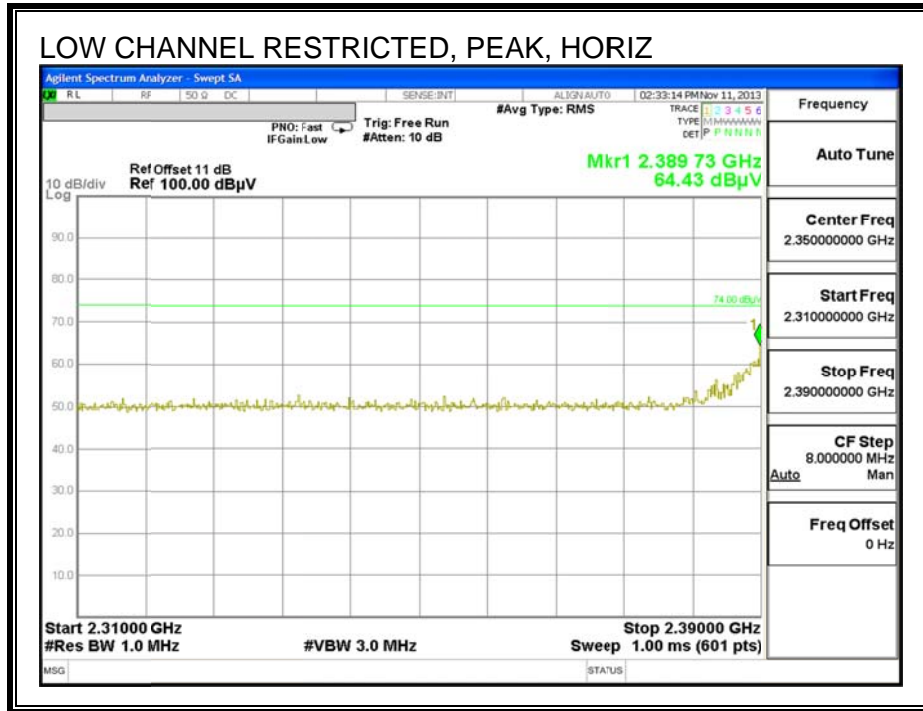
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

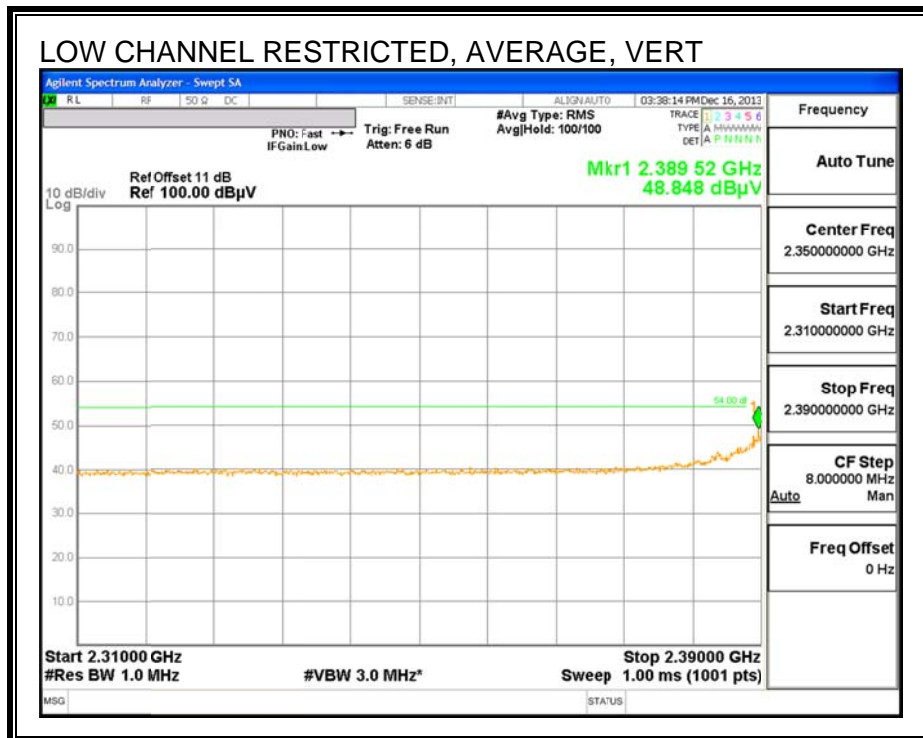
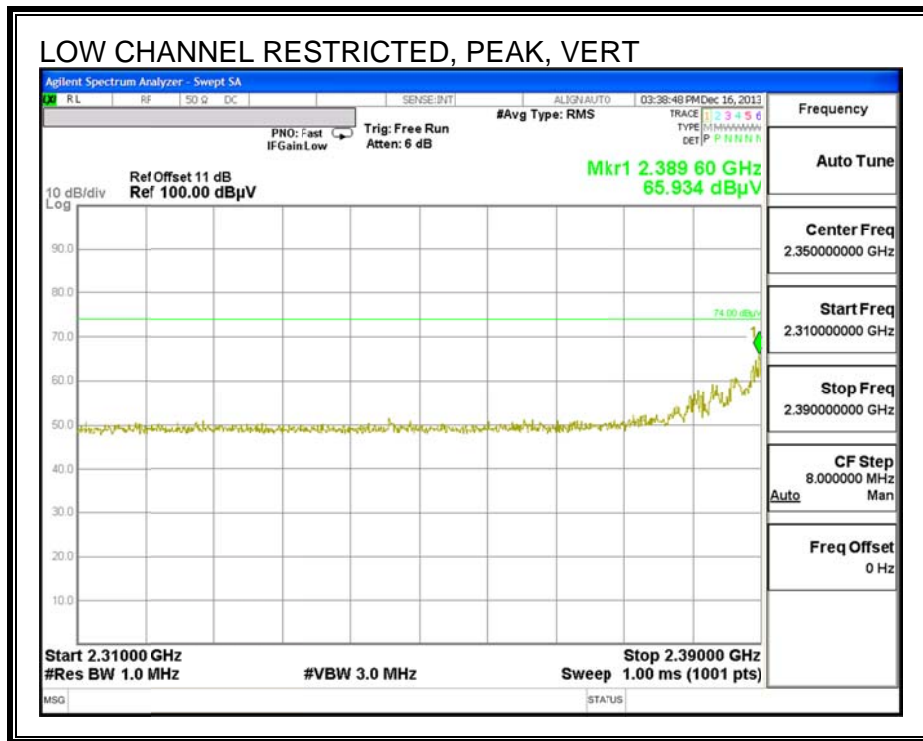
PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

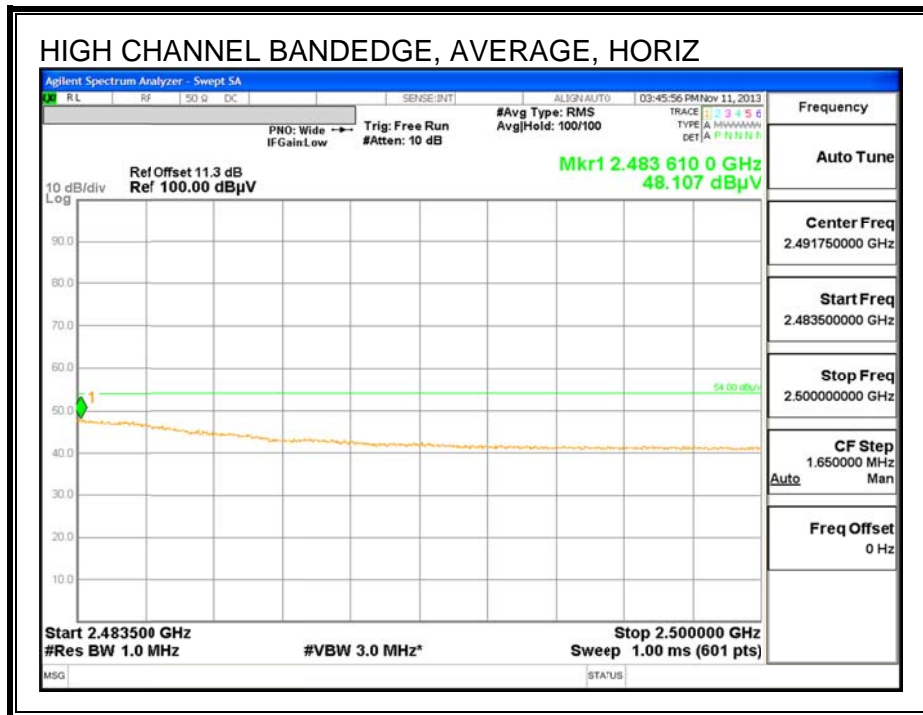
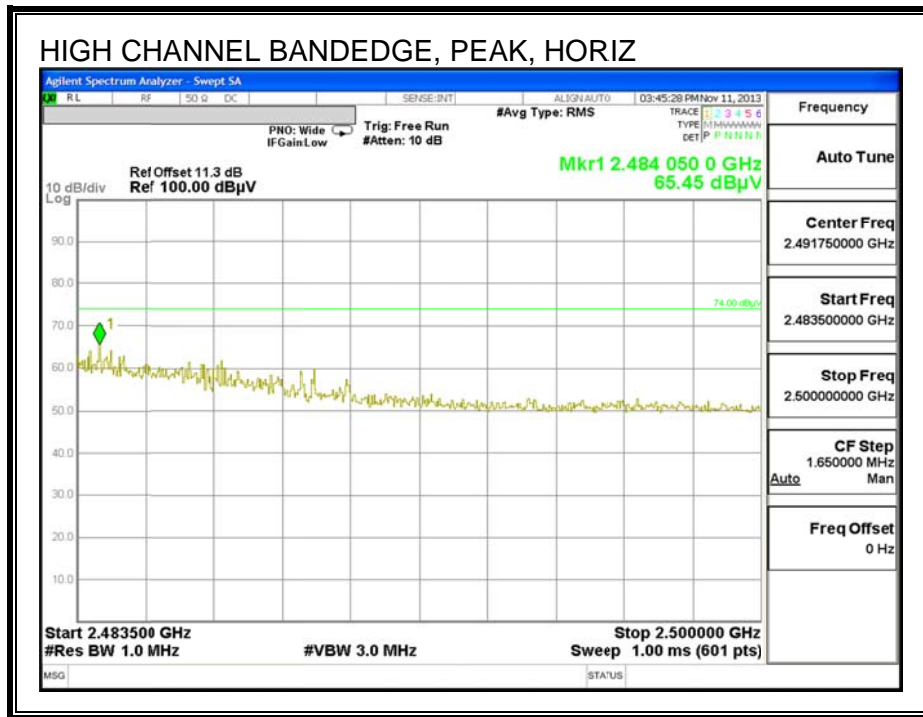
9.2.3. 802.11n HT20 MIMO 2TX CDD IN 2.4 GHz BAND

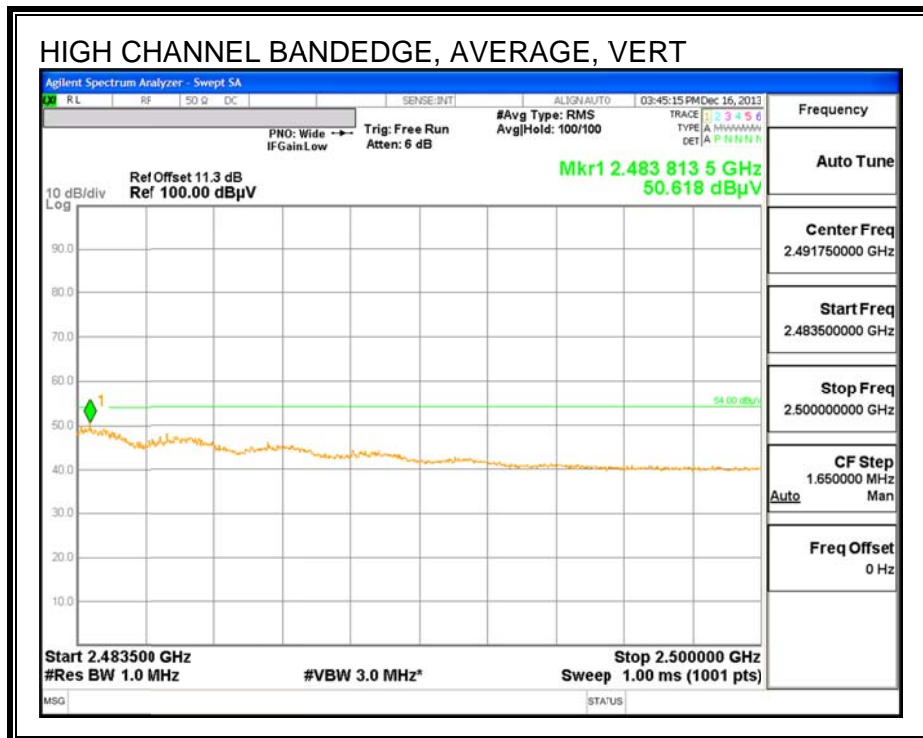
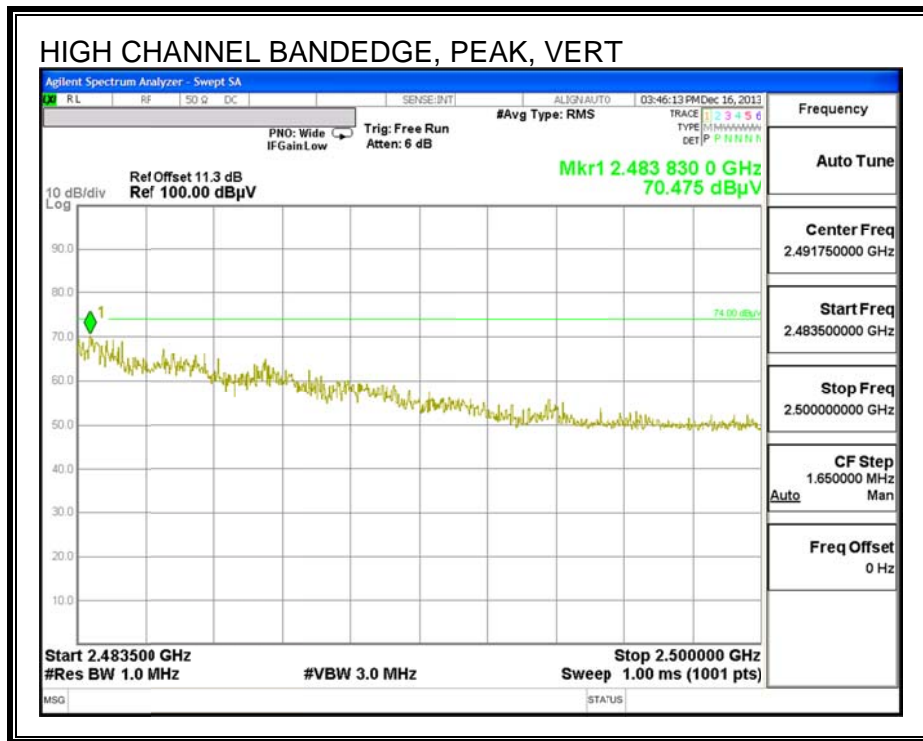
RESTRICTED BANDEDGE (LOW CHANNEL) CH1



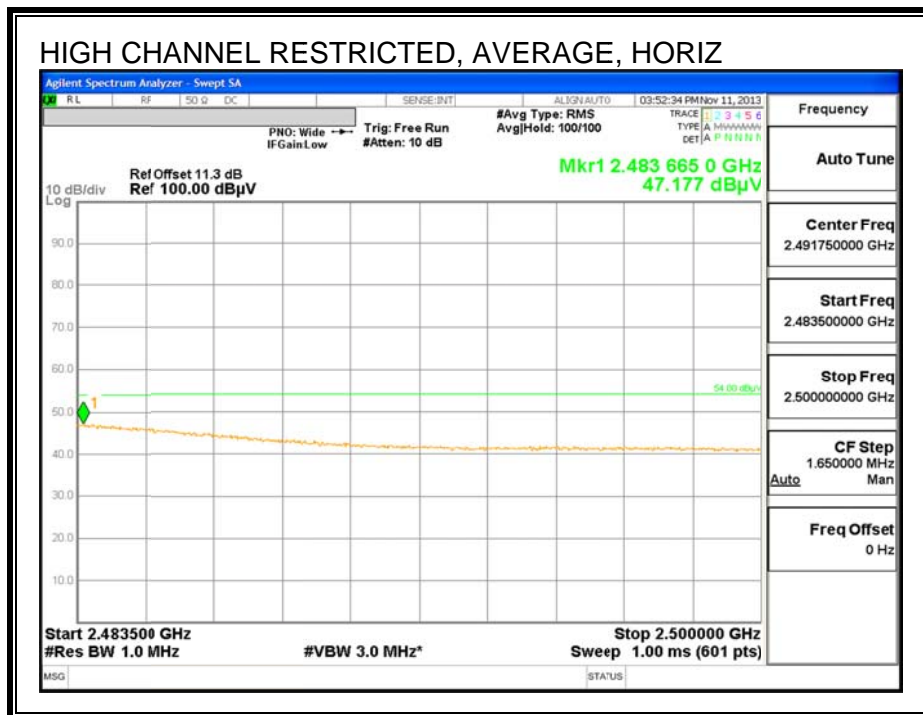
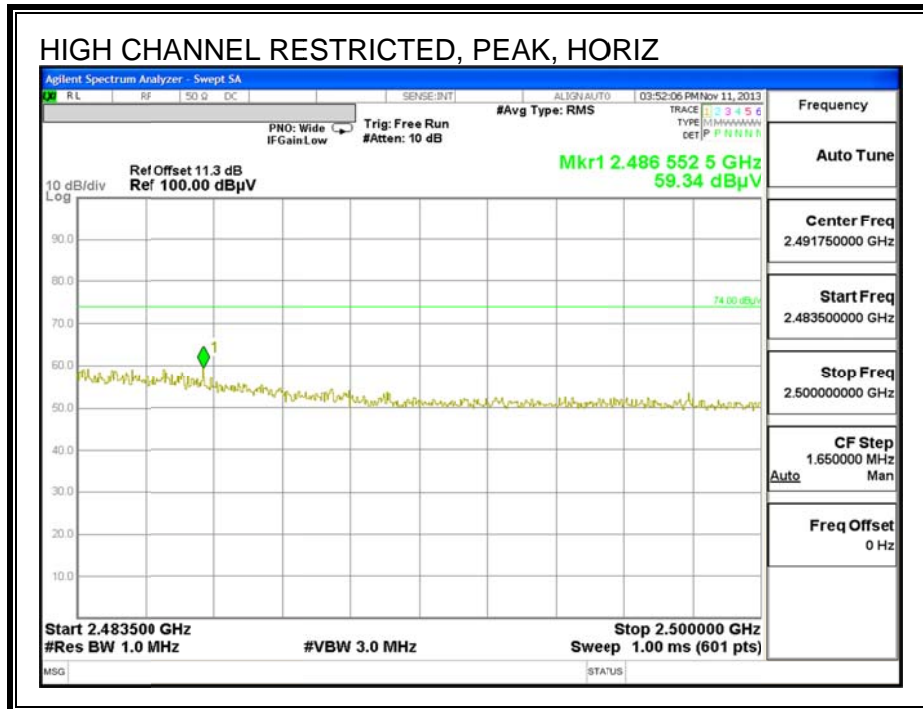


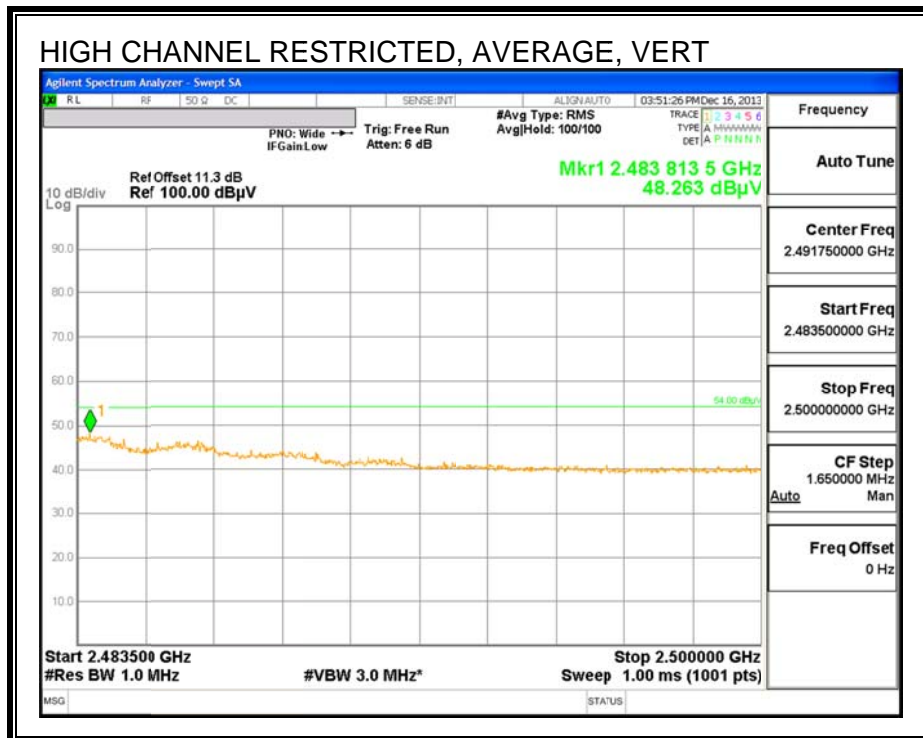
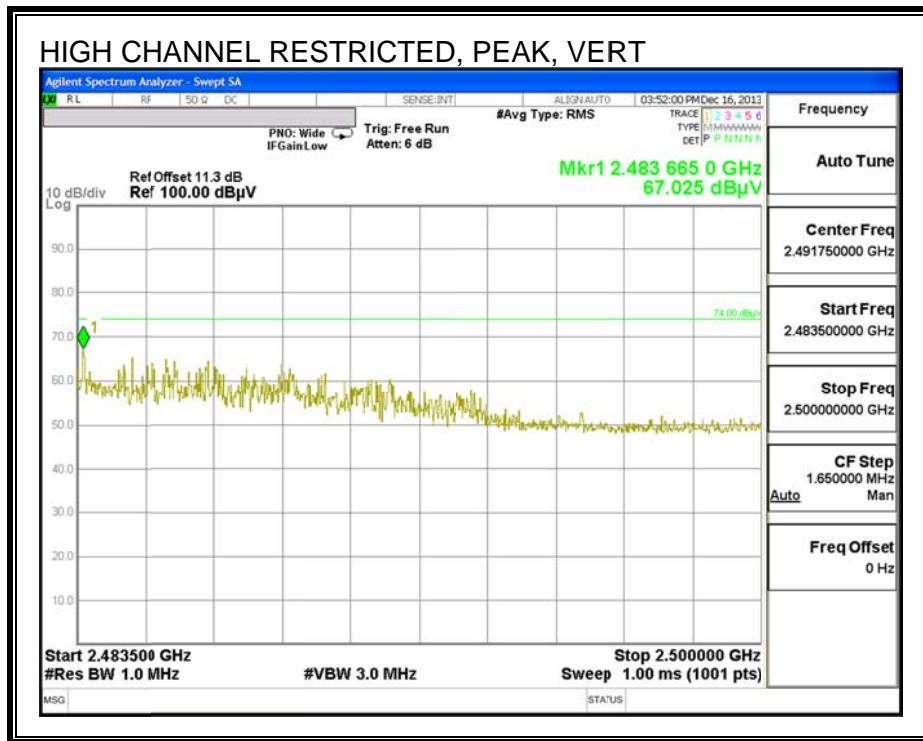
RESTRICTED BANDEDGE (HIGH CHANNEL) CH11



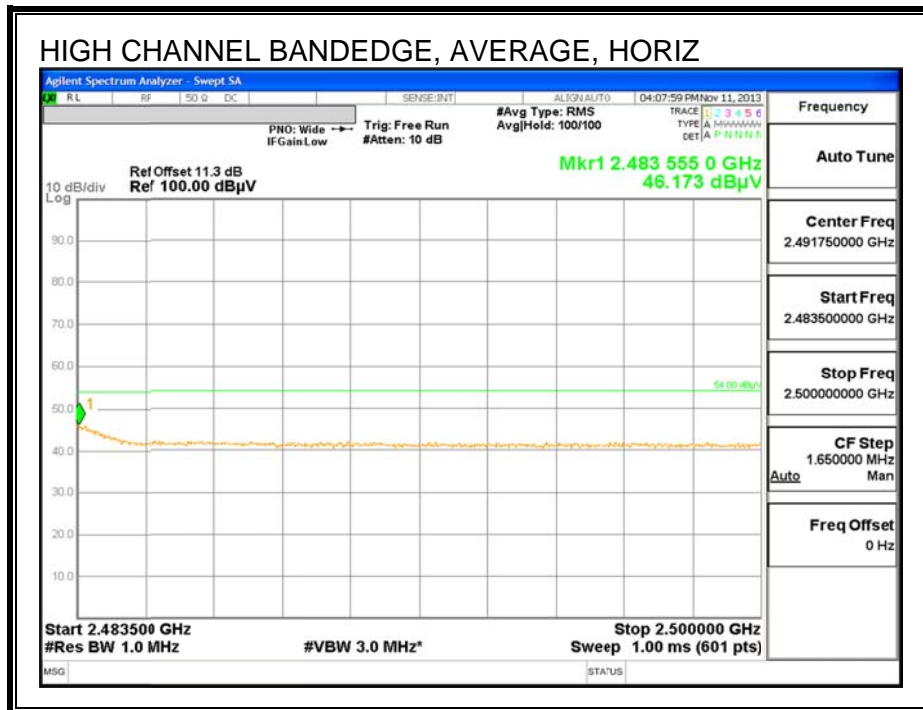
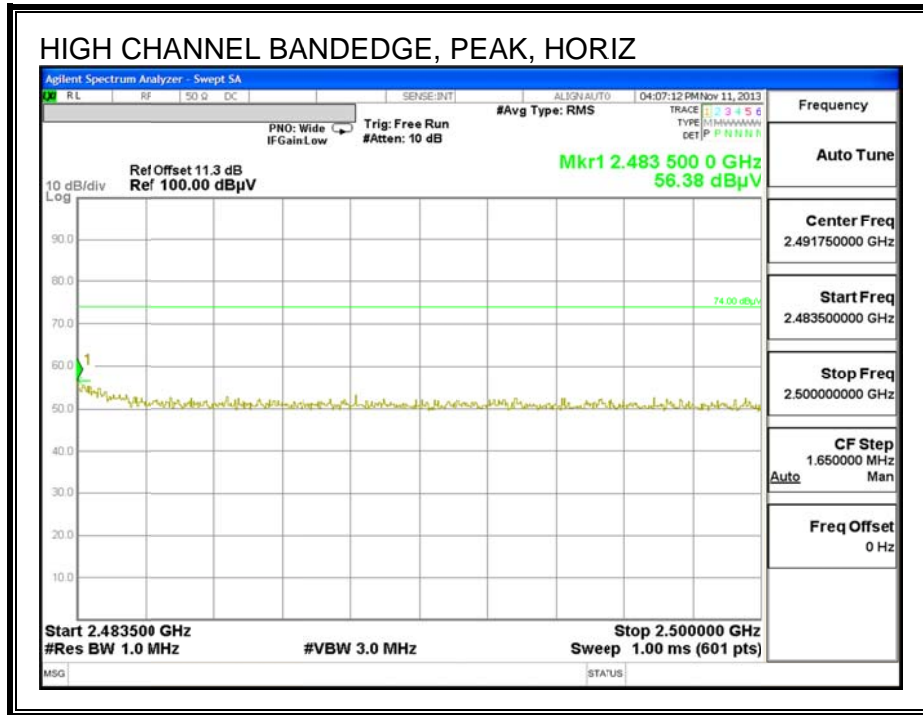


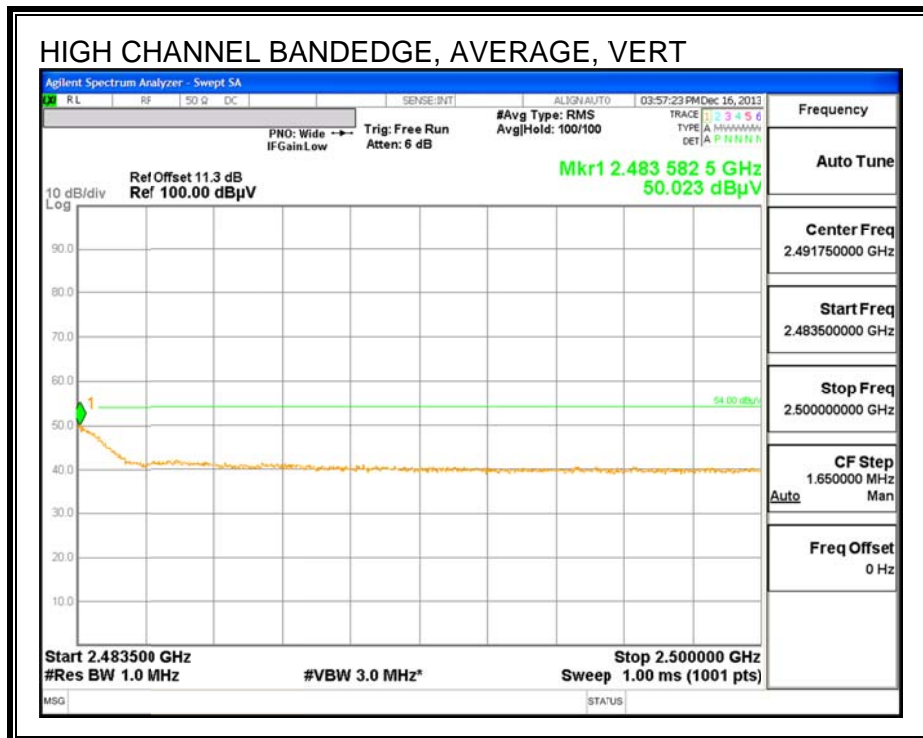
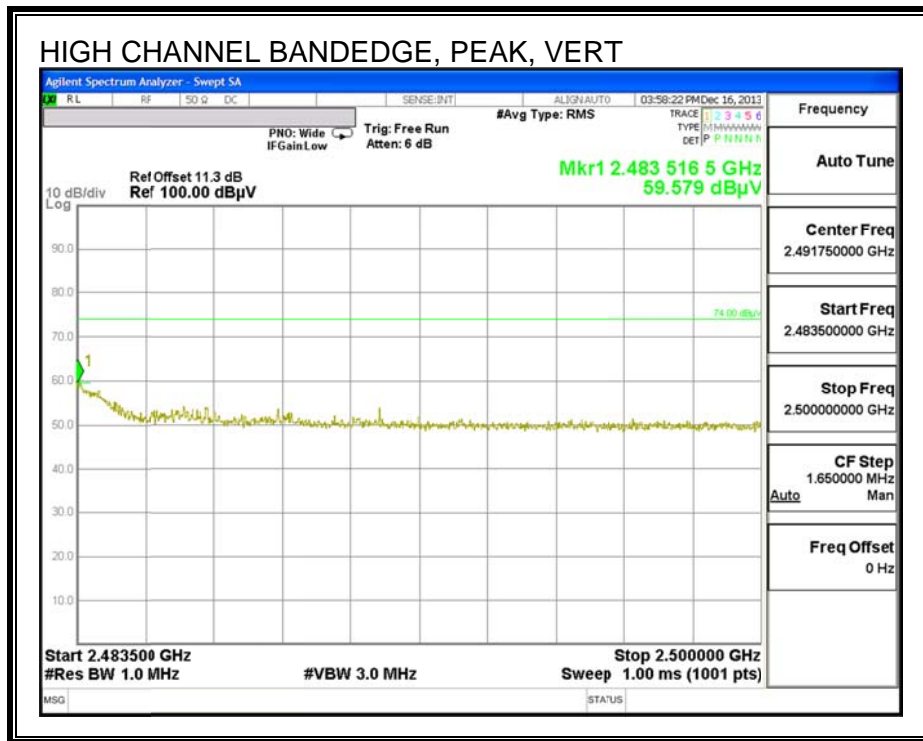
RESTRICTED BANDEDGE CH12



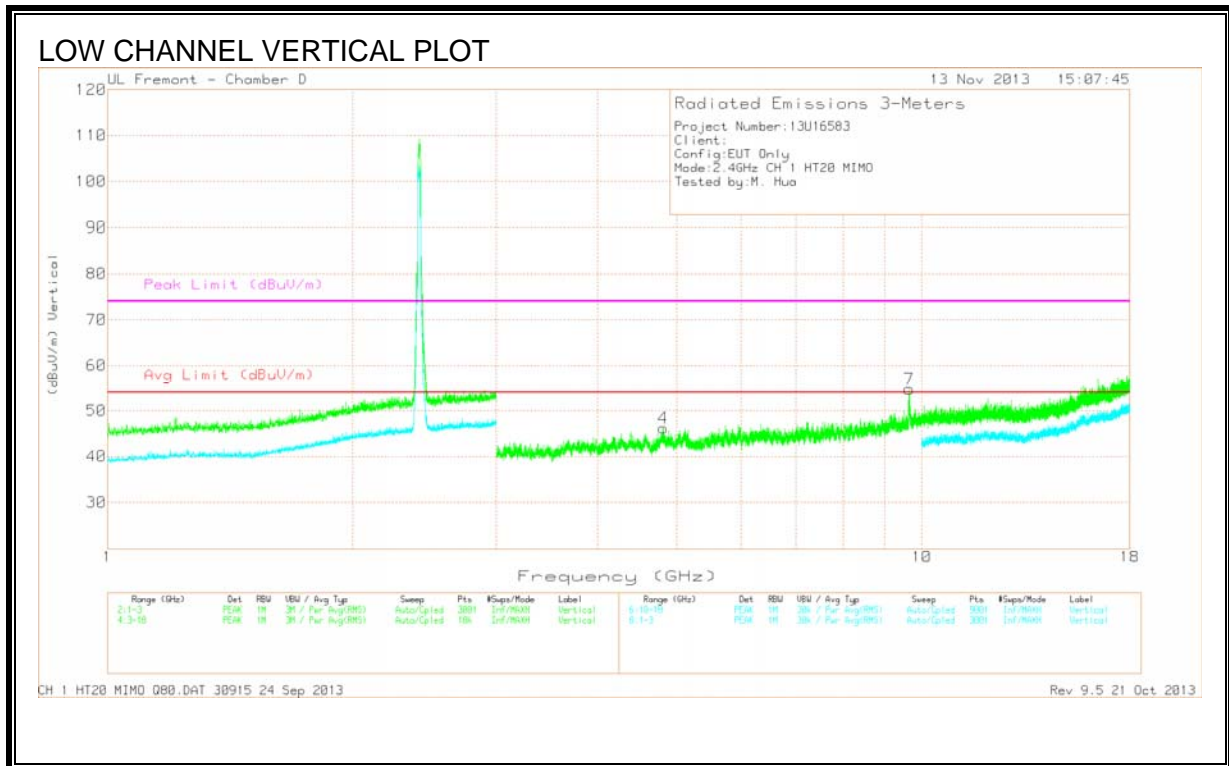
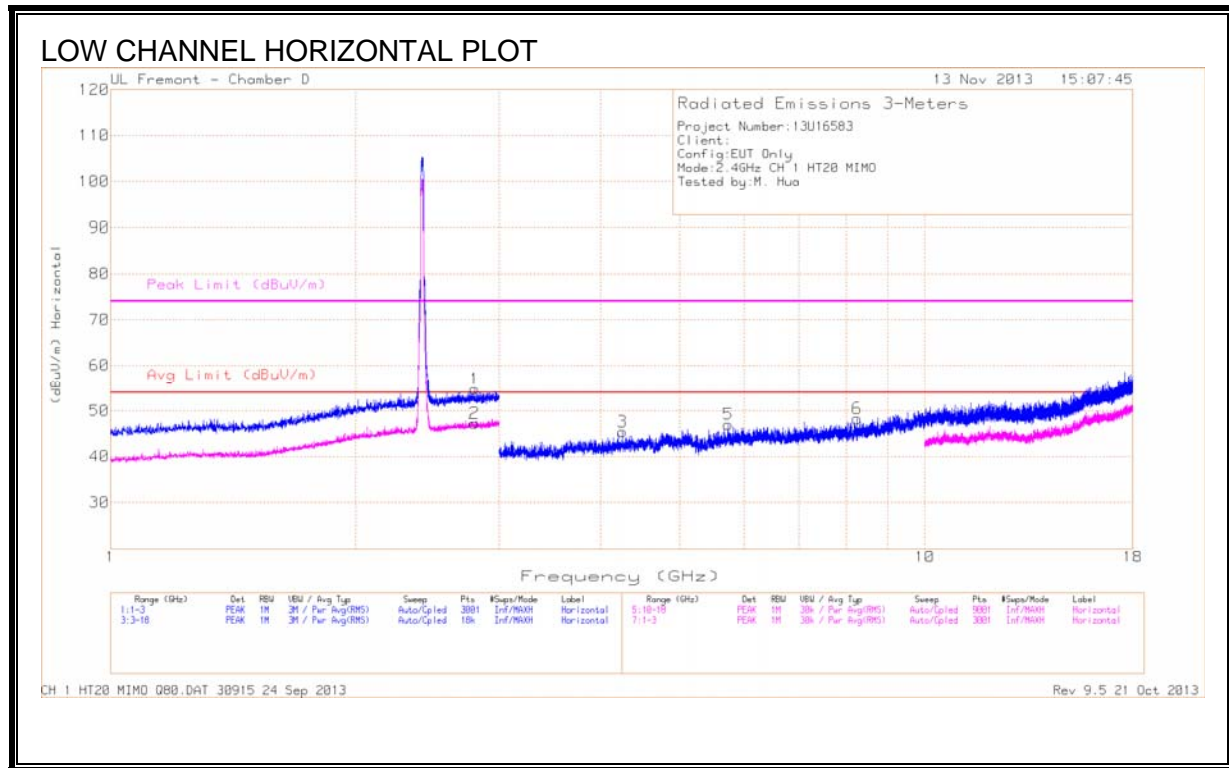


RESTRICTED BANDEDGE CH13





HARMONICS AND SPURIOUS EMISSIONS CH1



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (db/m)	Amp/Cbl /Pad	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.801	42.53	PK	32.9	-20.6	54.83	-	-	74	-19.17	0-360	100	H
2	* 2.801	34.95	Avg	32.9	-20.6	47.25	53.97	-6.72	-	-	0-360	100	H
3	* 4.252	39.50	PK	33.9	-28.0	45.40	53.97	-8.60	74	-28.60	0-360	201	H
4	* 4.813	39.17	PK	34.4	-27.4	46.17	53.97	-7.83	74	-27.83	0-360	100	V
5	5.735	39.12	PK	35.3	-27.4	47.02	-	-	-	-	0-360	100	H
6	* 8.257	36.47	PK	36.0	-24.2	48.27	-	-	74	-25.73	0-360	201	H
	* 8.257	25.50	MAv1	36.0	-24.3	37.20	53.97	-16.77	74	-	0-360	181	H
7	9.651	40.25	PK	37.3	-22.8	54.75	-	-	-	-	0-360	201	V

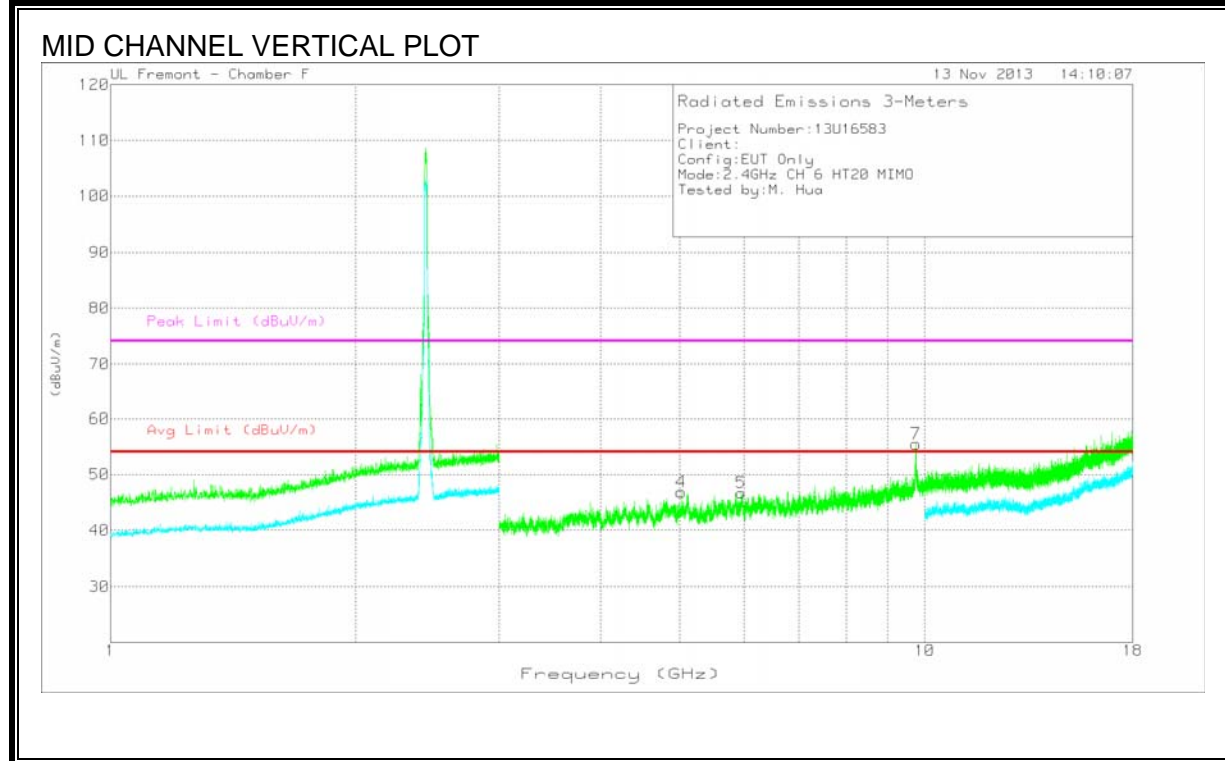
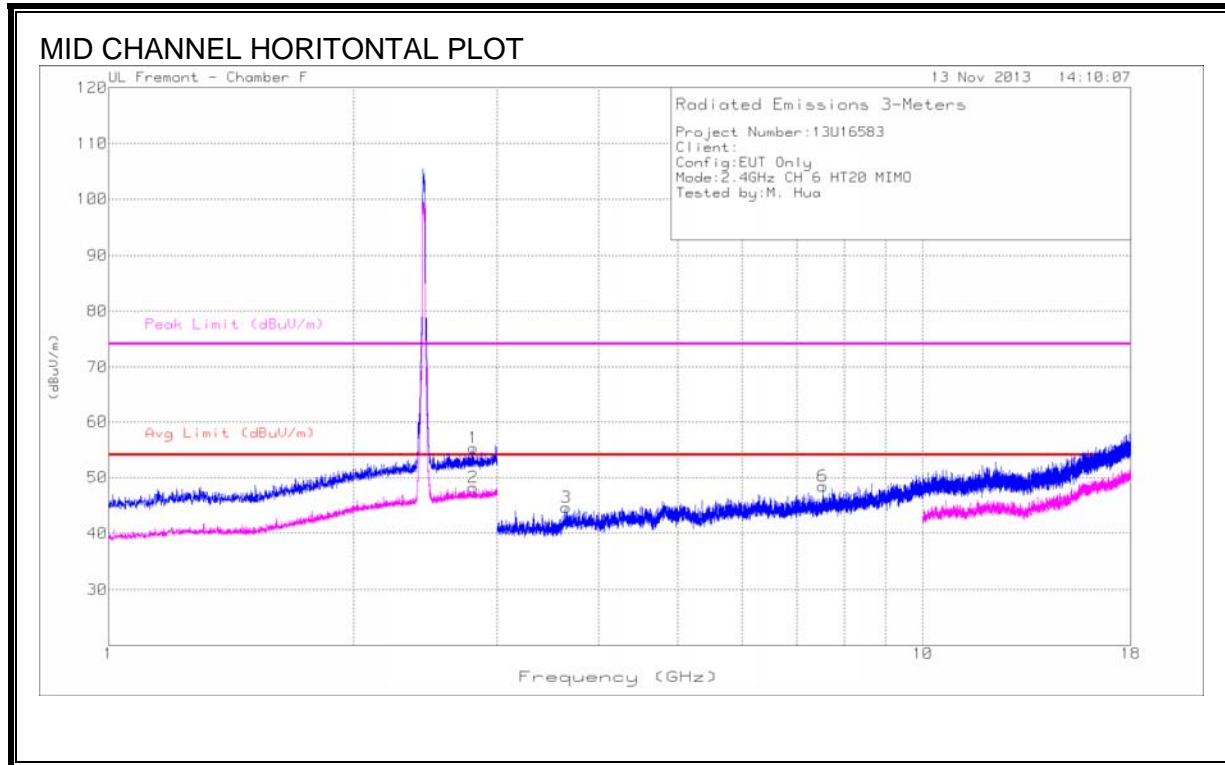
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS CH6



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (db/m)	Amp/Cbl /Pad	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.806	43.15	PK	32.9	-20.7	55.35	-	-	74	-18.65	0-360	100	H
2	* 2.806	30.52	MAv1	32.9	-20.7	42.72	53.97	-11.25	-	-	0-360	348	H
3	* 3.647	39.56	PK	33.6	-28.5	44.66	53.97	-9.34	74	-29.34	0-360	201	H
4	* 5.022	40.67	PK	34.3	-28.1	46.87	53.97	-7.13	74	-27.13	0-360	100	V
5	5.950	37.83	PK	35.6	-26.7	46.73	-	-	-	-	0-360	201	V
6	* 7.535	38.07	PK	35.9	-25.5	48.47	-	-	74	-25.53	0-360	100	H
	* 7.535	26.65	MAv1	35.9	-25.5	37.05	53.97	-16.92	74	-	0-360	341	H
7	9.750	39.98	PK	37.4	-21.9	55.48	-	-	-	-	0-360	201	V

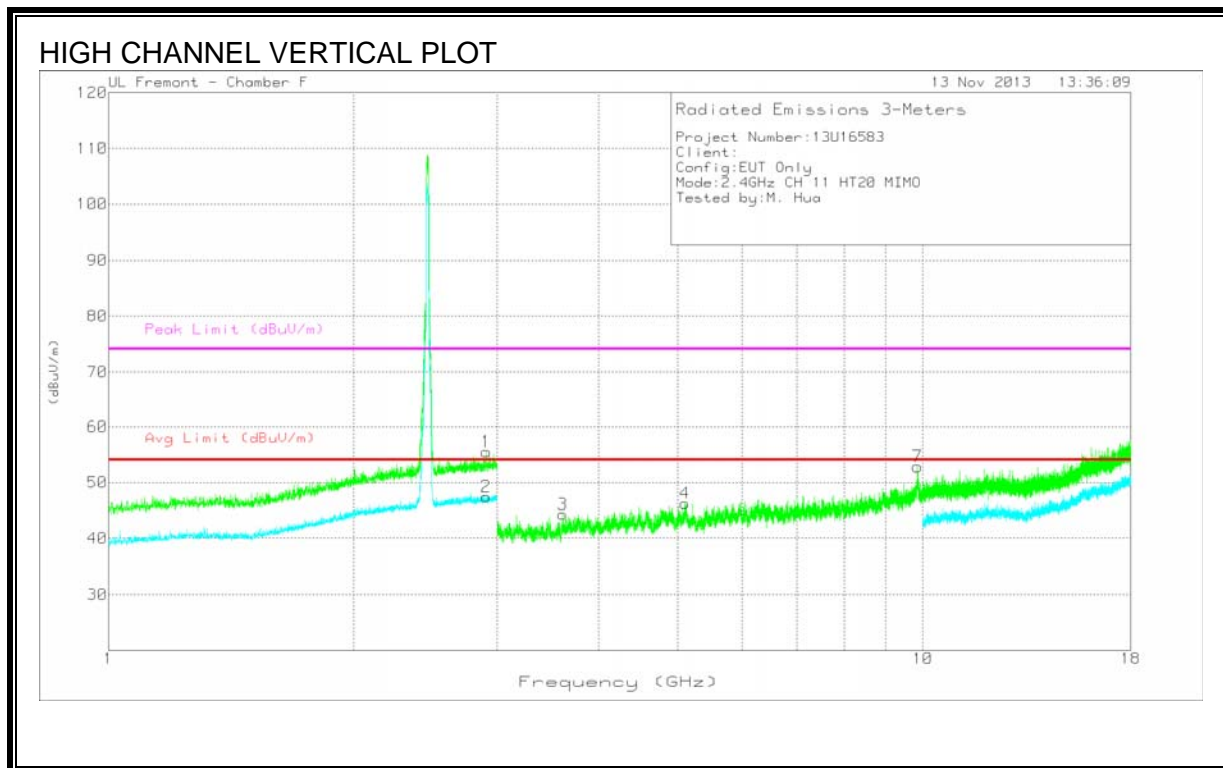
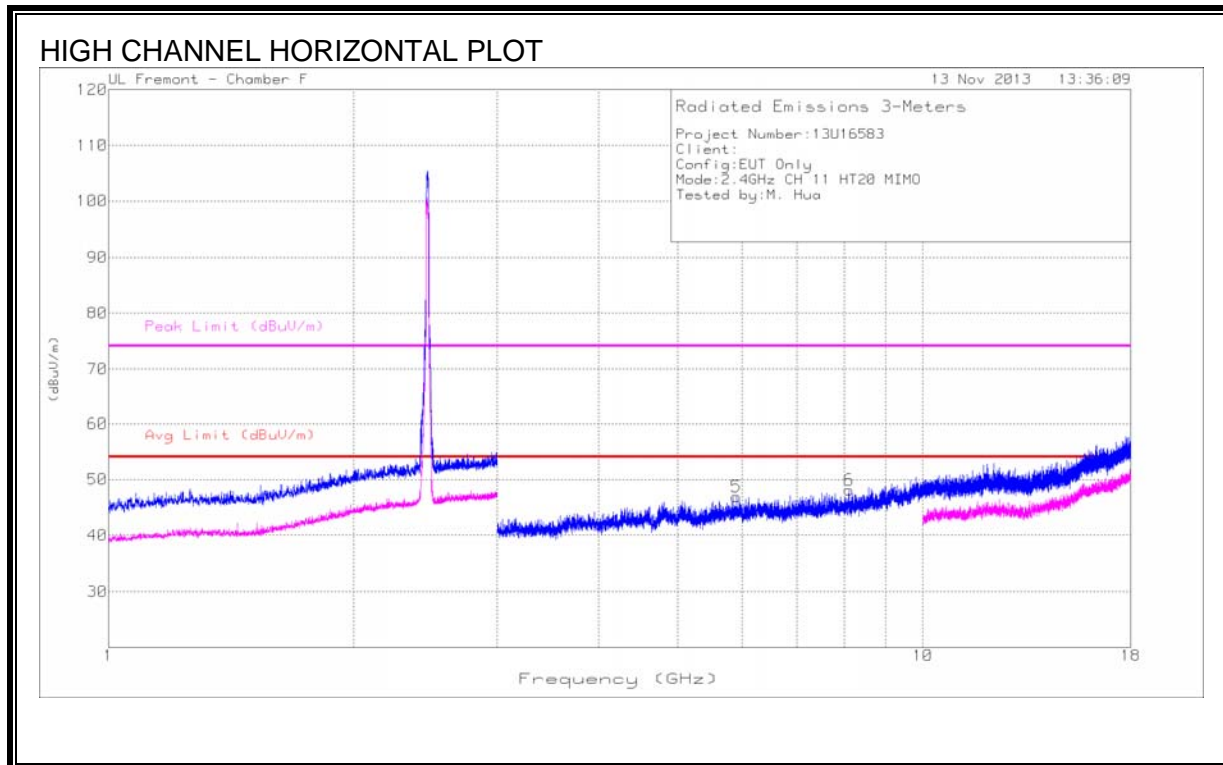
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS CH11



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (db/m)	Amp/Cbl /Pad	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.910	43.02	PK	33.0	-20.5	55.52	-	-	-	-	0-360	201	V
2	2.909	34.96	Avg	33.0	-20.5	47.46	-	-	-	-	0-360	100	V
3	* 3.612	39.52	PK	33.5	-28.7	44.32	53.97	-9.68	74	-29.68	0-360	201	V
4	* 5.105	38.39	PK	34.5	-26.6	46.29	53.97	-7.71	74	-27.71	0-360	100	V
5	5.902	37.94	PK	35.5	-26.5	46.94	-	-	-	-	0-360	100	H
6	* 8.116	36.53	PK	36.0	-24.4	48.13	-	-	74	-25.87	0-360	201	H
	* 8.116	26.31	MAv1	36.0	-24.5	37.81	53.97	-16.16			0-360	266	H
7	9.848	37.28	PK	37.6	-22.0	52.88	-	-	-	-	0-360	201	V

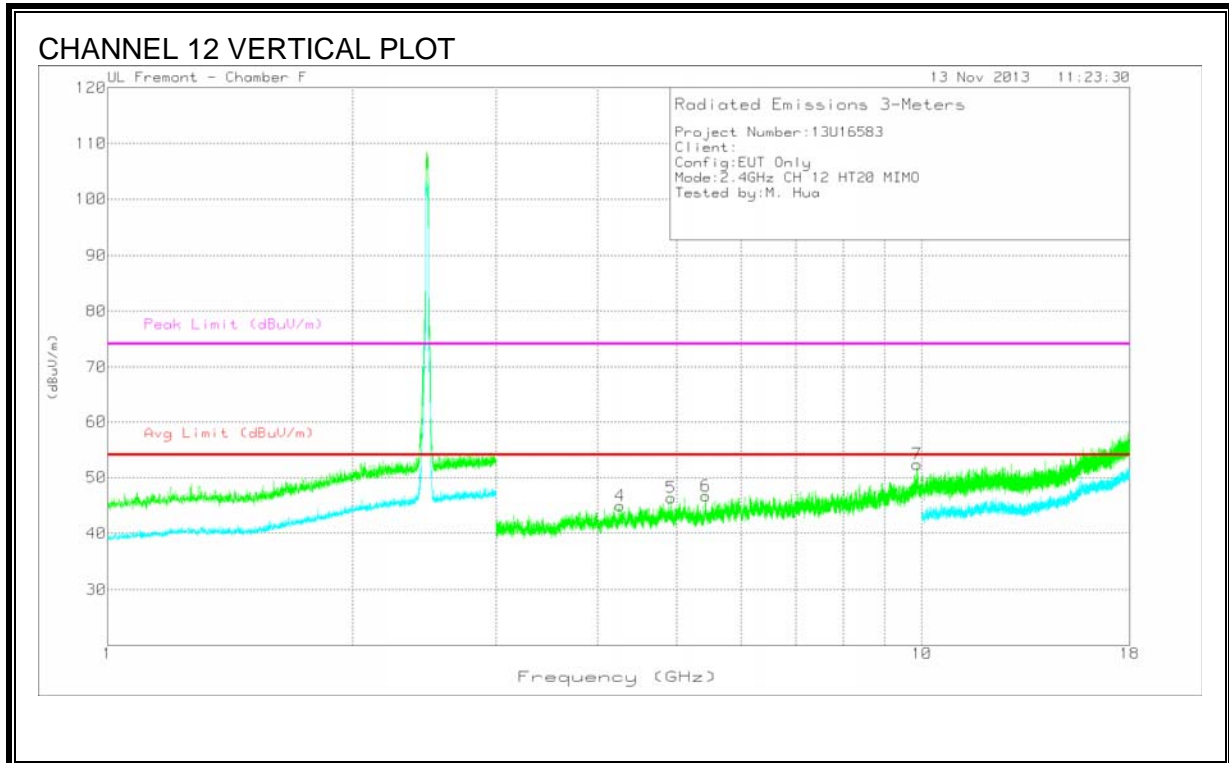
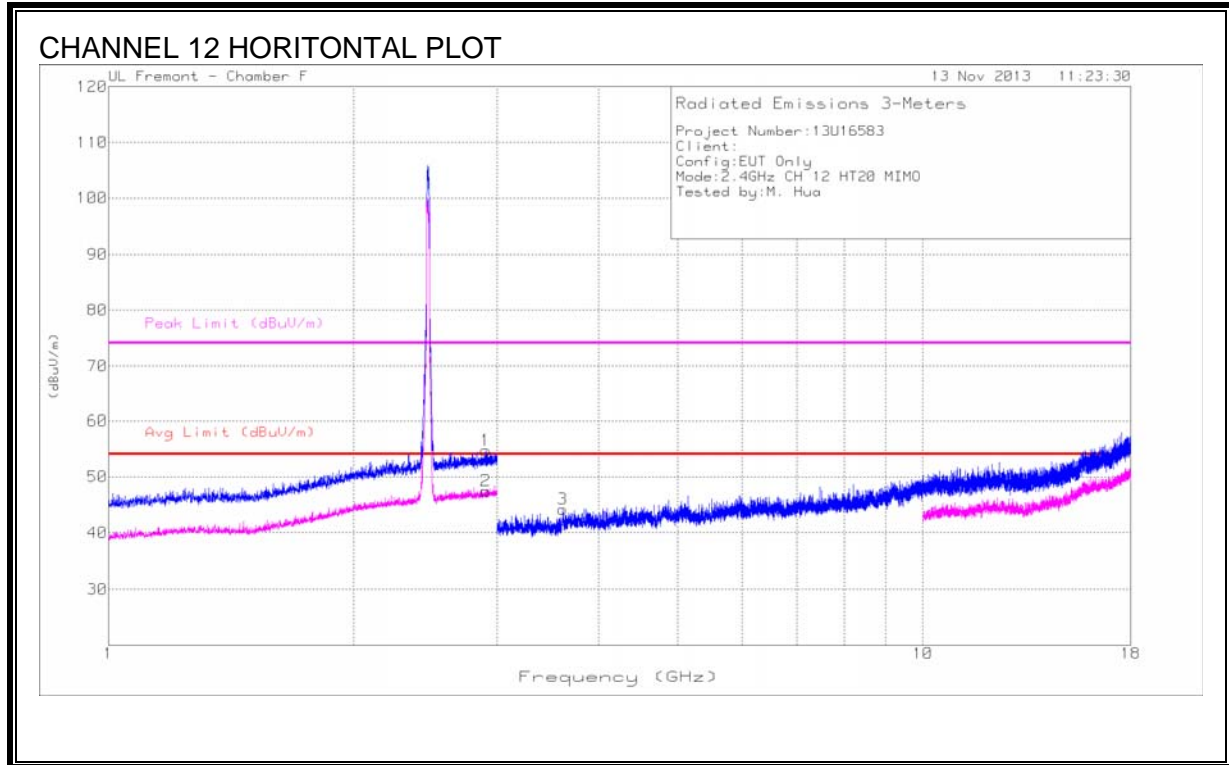
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

MAv1 - KDB558074 Option 1 Maximum RMS Average

HARMONICS AND SPURIOUS EMISSIONS CH12



DATA

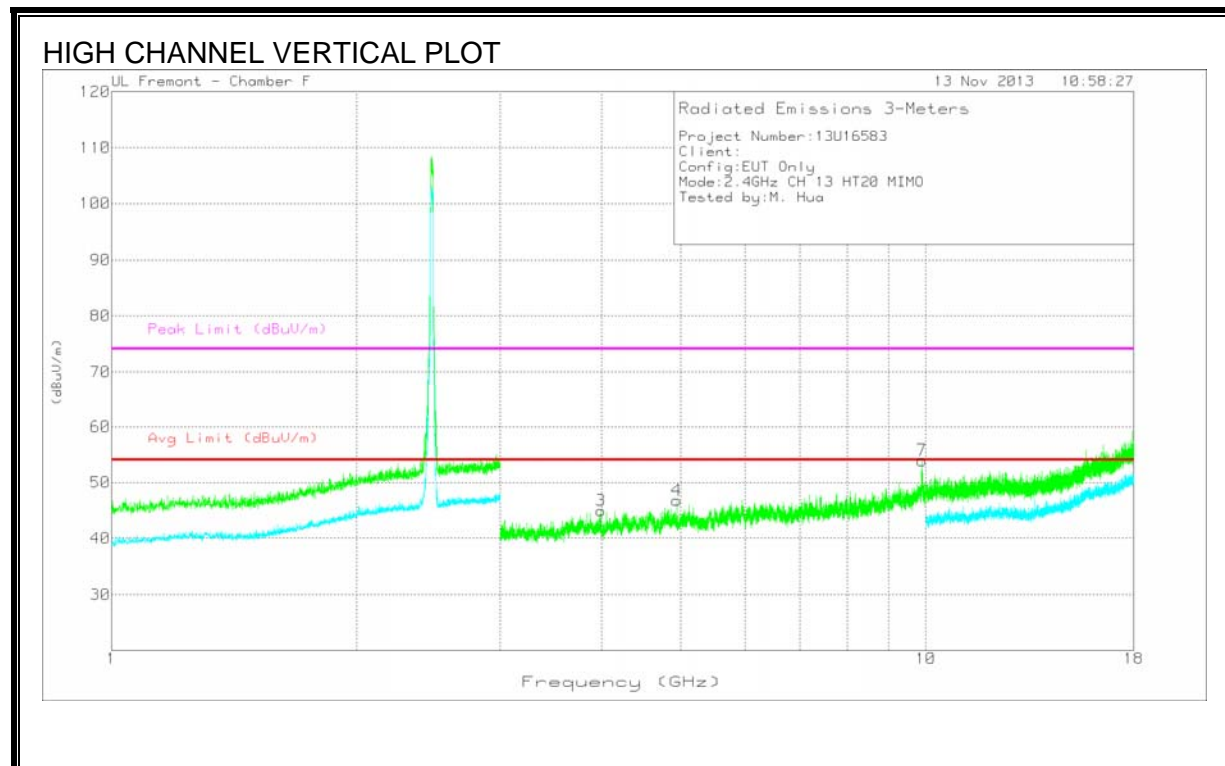
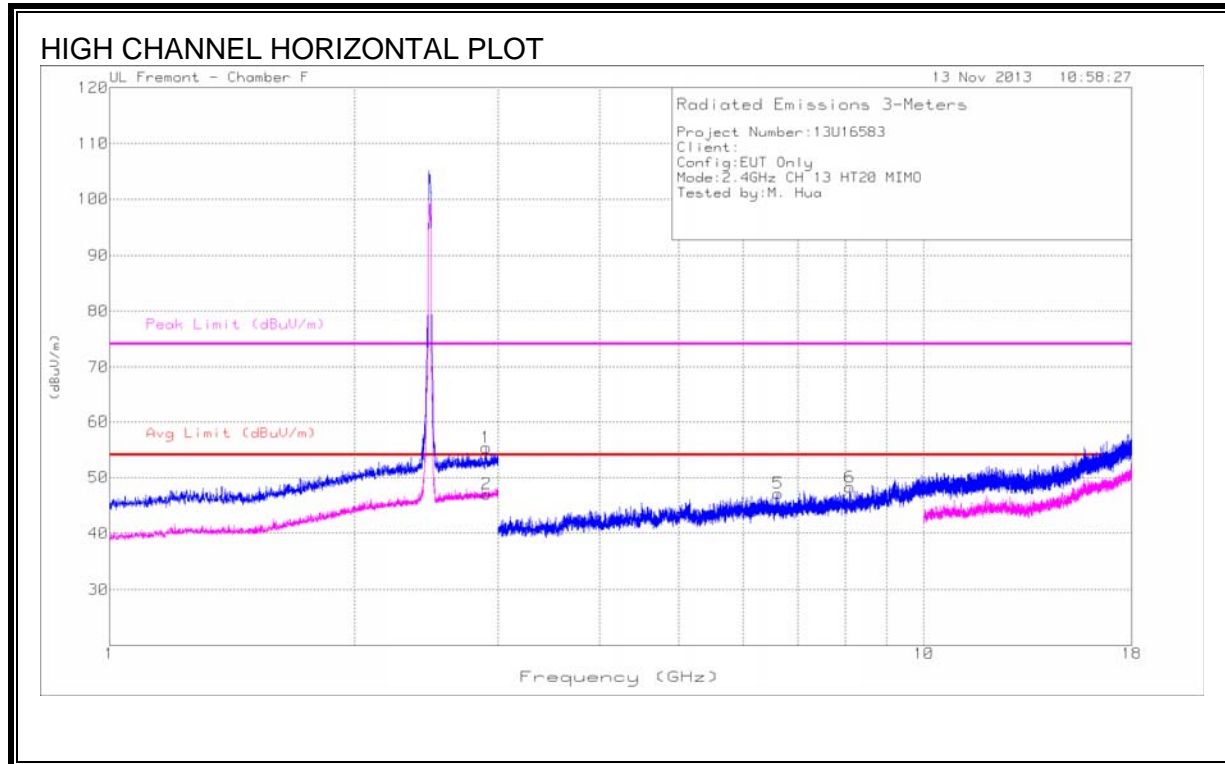
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (db/m)	Amp/Cbl /Pad	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.906	42.22	PK	33	-20.5	54.72	-	-	-	-	0-360	100	H
3	* 3.612	39.42	PK	33.5	-28.7	44.22	-53.97	-9.78	74	-29.78	0-360	100	H
4	* 4.261	39.04	PK	33.9	-28.0	44.94	-53.97	-9.06	74	-29.06	0-360	100	V
5	* 4.922	40.31	PK	34.3	-28.2	46.41	-53.97	-7.59	74	-27.59	0-360	200	V
6	* 5.431	39.21	PK	34.8	-27.3	46.71	-53.97	-7.29	74	-27.29	0-360	100	V
7	9.868	36.41	PK	37.6	-21.6	52.41	-	-	-	-	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

HARMONICS AND SPURIOUS EMISSIONS CH13



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (db/m)	Amp/Cbl /Pad	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.901	42.88	PK	33.0	-20.5	55.38	-	-	-	-	0-360	100	H
3	* 3.990	39.99	PK	33.8	-28.8	44.99	53.97	-9.01	74	-29.01	0-360	100	V
4	* 4.944	40.81	PK	34.3	-28.3	46.81	53.97	-7.19	74	-27.19	0-360	100	V
5	6.622	37.37	PK	35.8	-26.0	47.17	-	-	-	-	0-360	201	H
6	* 8.110	36.78	PK	36.0	-24.5	48.28	53.97	-5.72	74	-25.72	0-360	100	H
7	9.894	38.47	PK	37.7	-22.2	53.97	-	-	-	-	0-360	201	V

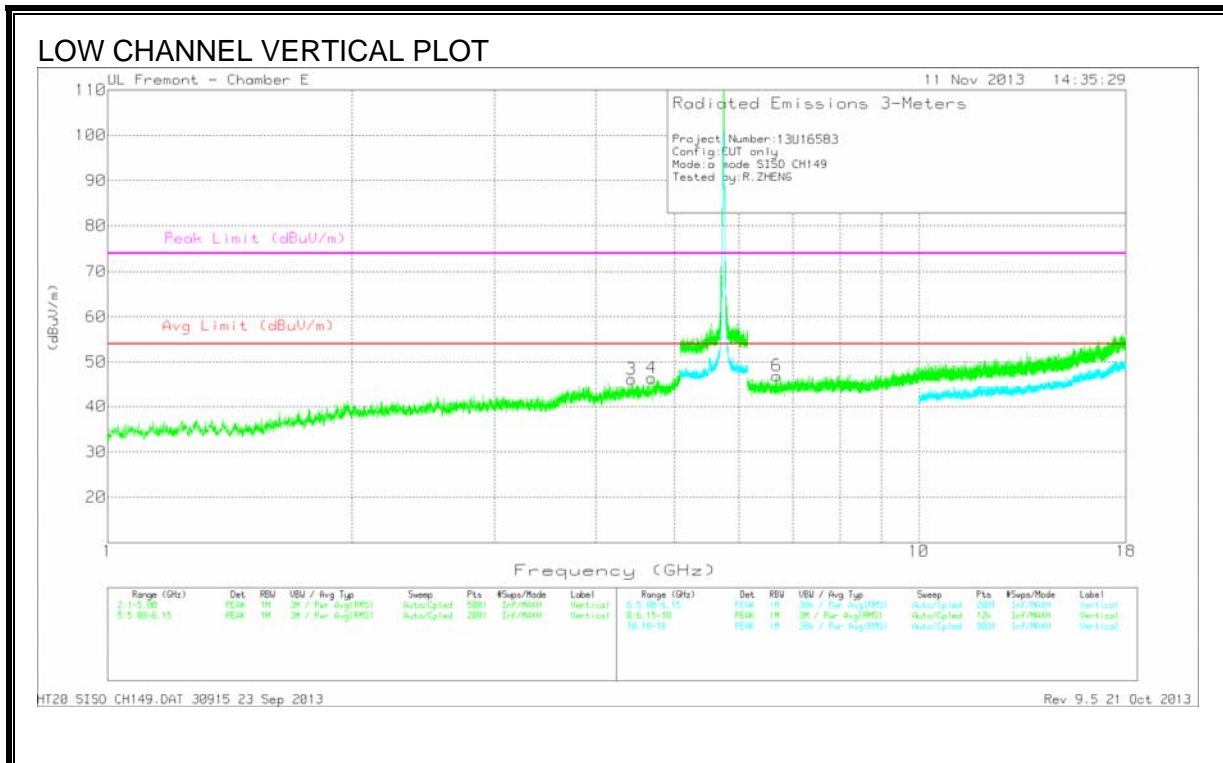
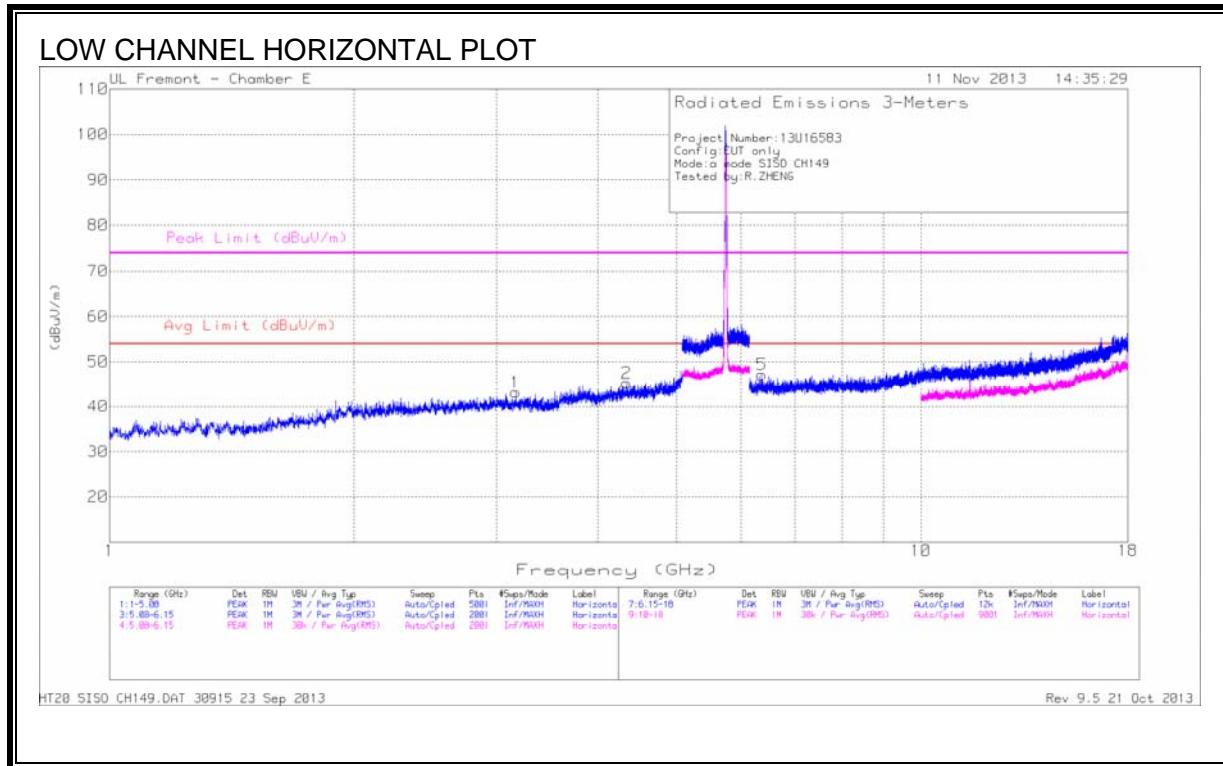
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

9.2.4. 802.11a MODE IN THE 5.8 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS CH149



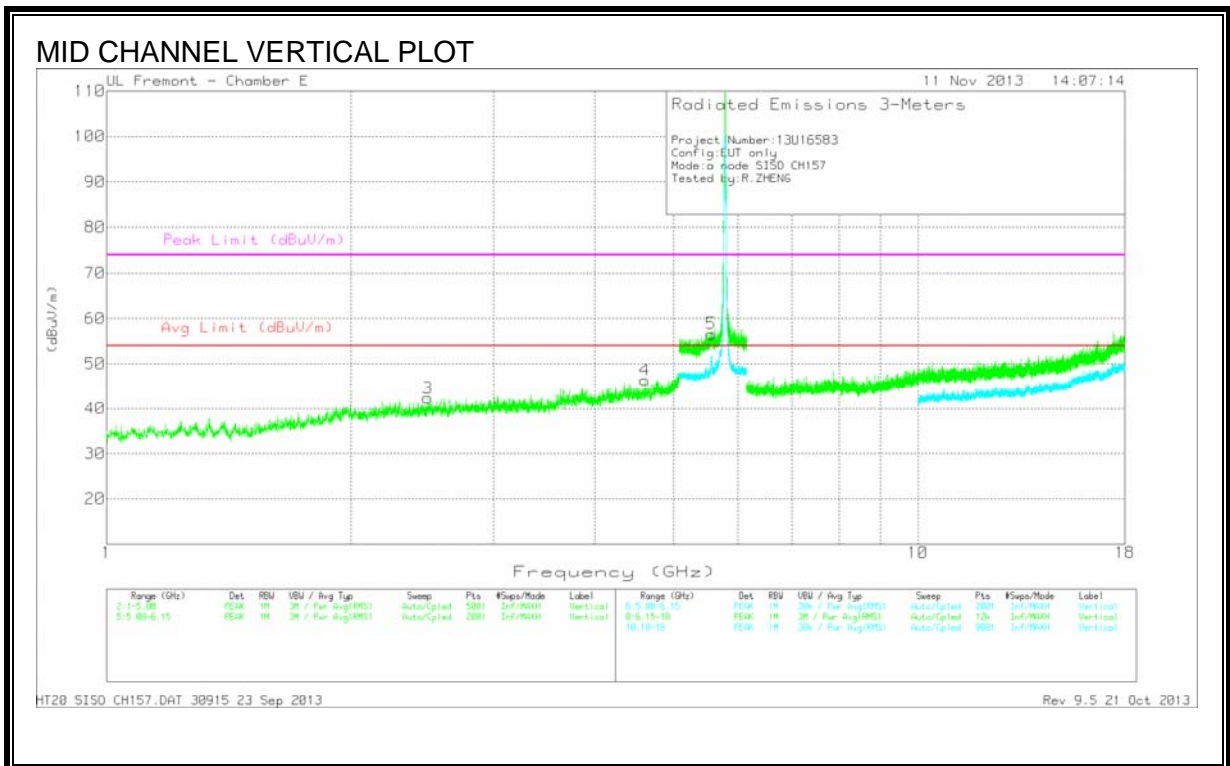
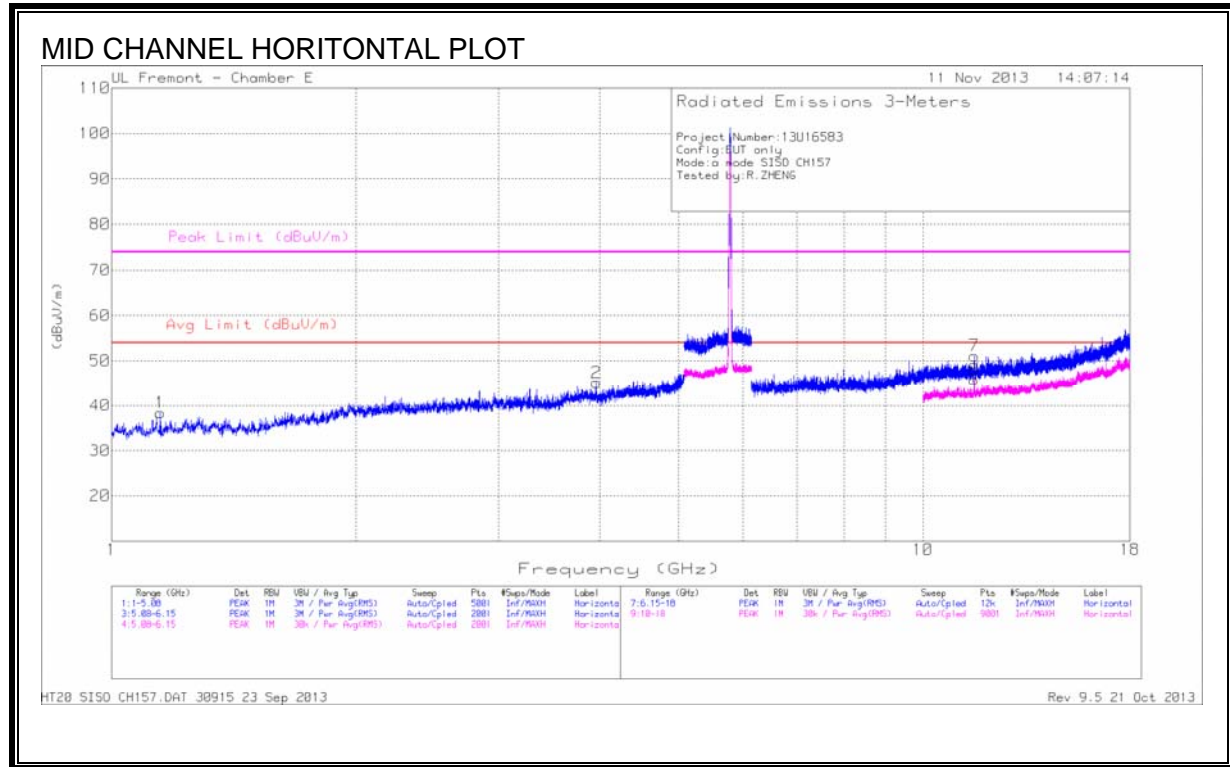
DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl /5GHz LPF	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	3.166	42.67	PK	33.3	-32.8	43.17	-	-	74	-30.83	0-360	100	H
2	* 4.340	42.07	PK	34.1	-30.9	45.27	-53.97	-8.73	74	-28.73	0-360	100	H
3	4.426	42.82	PK	34.2	-30.8	46.22	-	-	-	-	0-360	200	V
4	* 4.686	42.20	PK	34.4	-30.1	46.50	-53.97	-7.50	74	-27.50	0-360	200	V
5	6.367	40.27	PK	35.9	-29.0	47.17	-	-	-	-	0-360	100	H
6	6.684	40.36	PK	35.8	-29.2	46.96	-	-	-	-	0-360	199	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

HARMONICS AND SPURIOUS EMISSIONS CH157



DATA

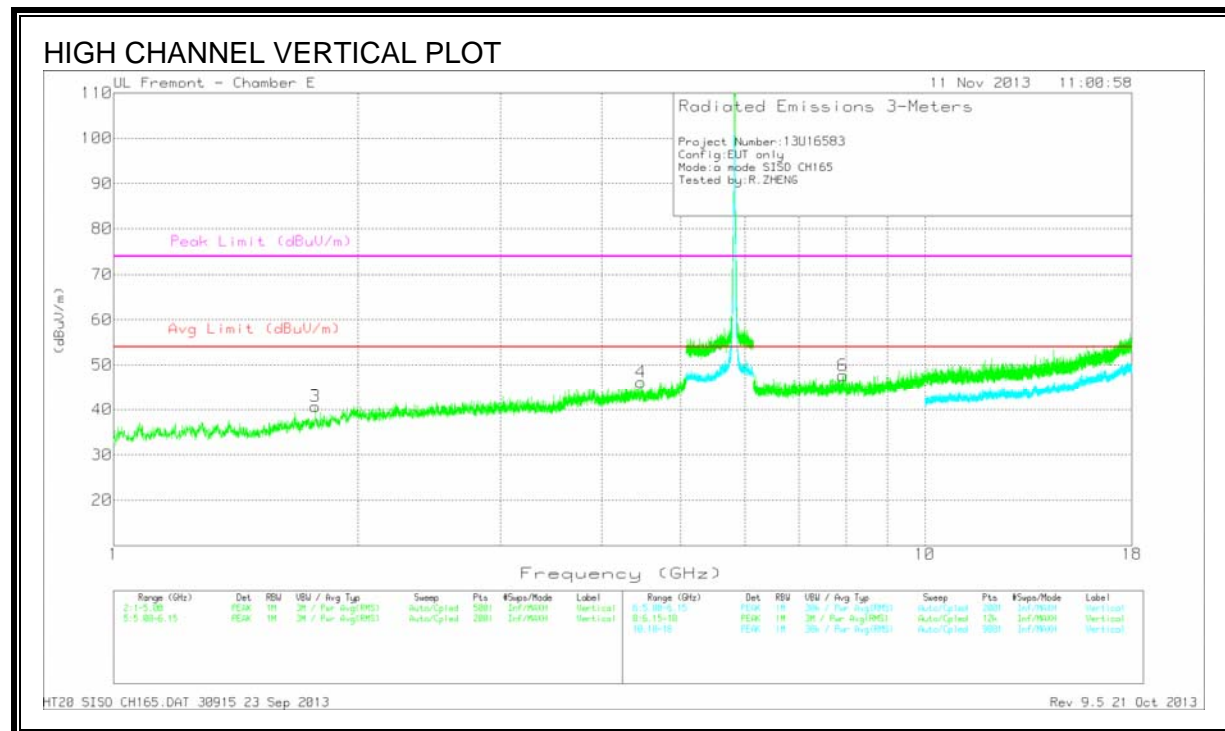
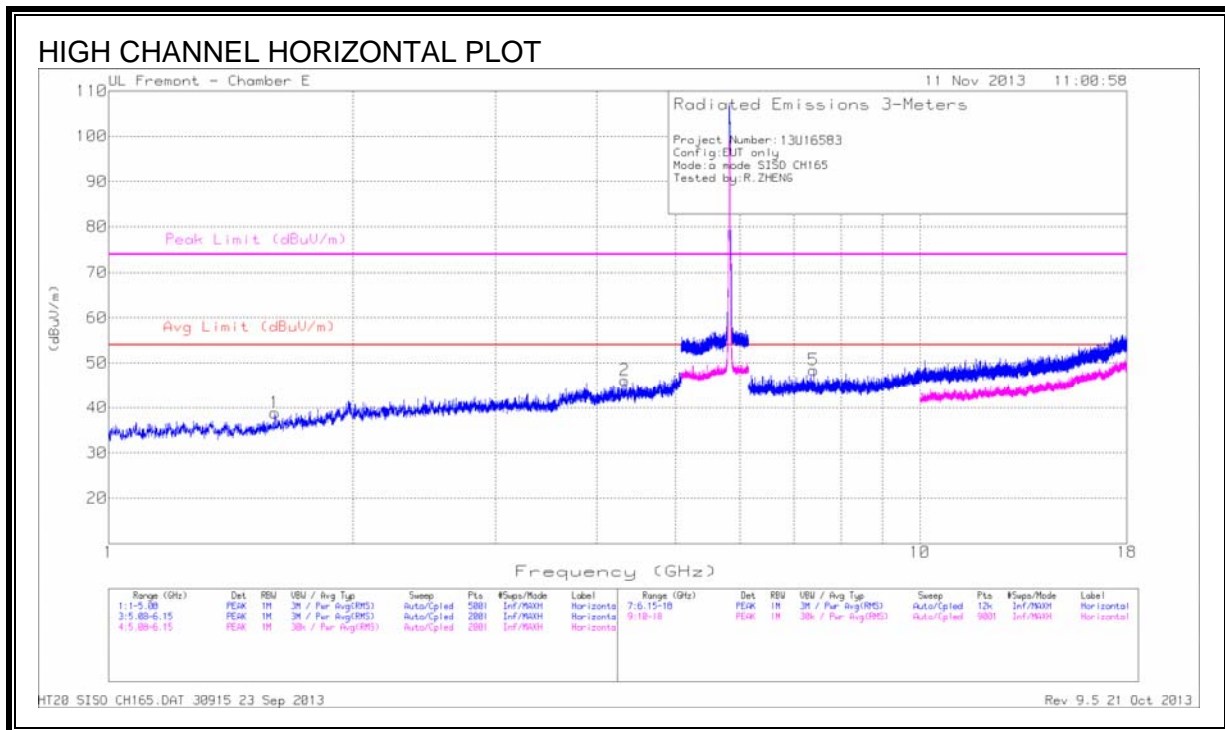
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl /LPF	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.149	44.77	PK	28.8	-35.2	38.37	53.97	-15.63	74	-35.63	0-360	199	H
2	* 3.960	43.16	PK	33.8	-31.8	45.16	53.97	-8.84	74	-28.84	0-360	101	H
3	* 2.490	42.03	PK	32.7	-32.4	42.33	53.97	-11.67	74	-31.67	0-360	100	V
4	* 4.611	43.30	PK	34.3	-31.2	46.40	53.97	-7.6	74	-27.6	0-360	199	V
5	5.564	42.51	PK	35.0	-20.9	56.61	-	-	-	-	0-360	100	V
7	* 11.576	37.82	PK	38.7	-25.4	51.12	-	-	74	-22.88	0-360	199	H
8	* 11.576	32.36	Avg	38.7	-25.2	45.86	53.97	-8.11	-	-	0-360	199	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

HARMONICS AND SPURIOUS EMISSIONS CH165



DATA

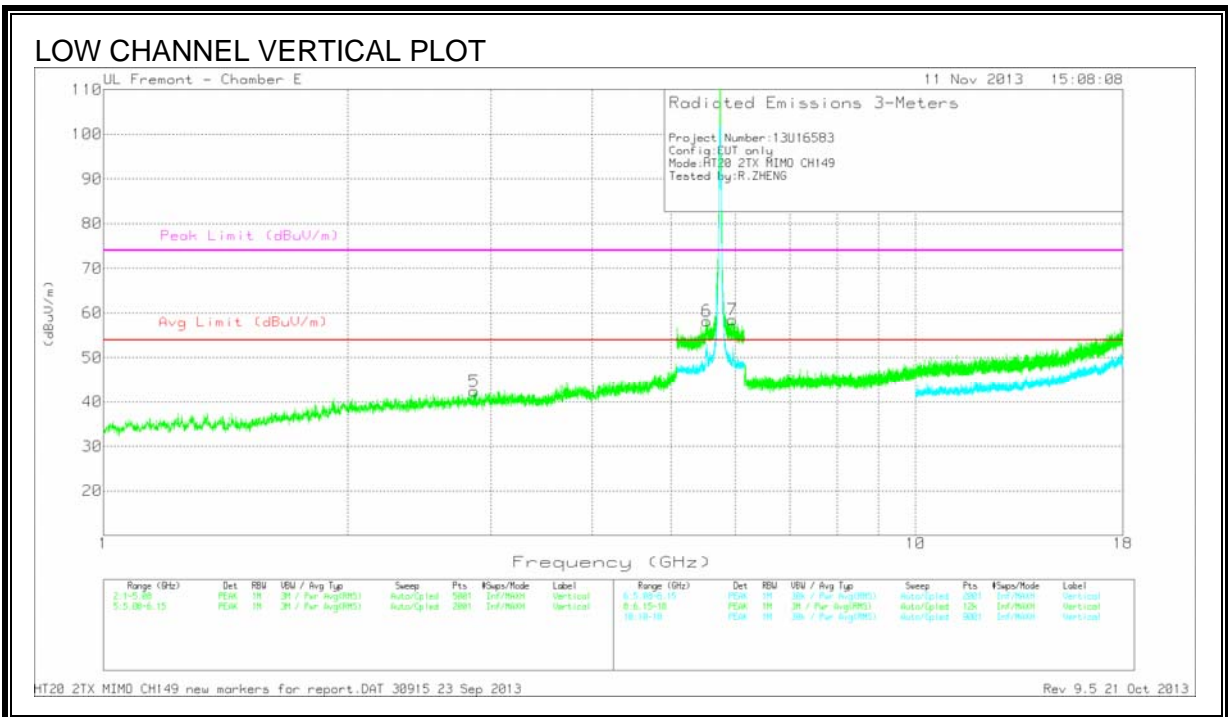
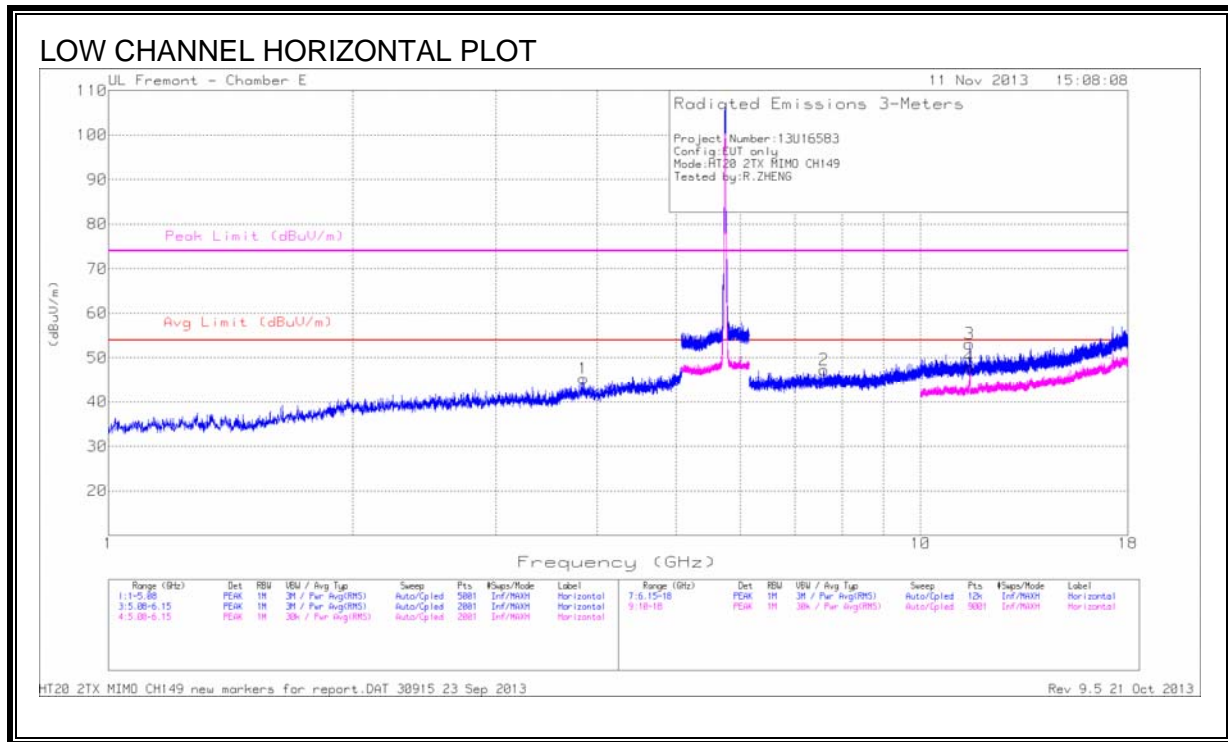
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl /LPF	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.604	43.22	PK	29.5	-33.9	38.82	53.97	-15.18	74	-35.18	0-360	199	H
2	* 4.328	43.07	PK	34.1	-31.0	46.17	-53.97	-7.83	74	-27.83	0-360	199	H
3	1.774	44.28	PK	30.7	-34.3	40.68	-	-	-	-	0-360	199	V
4	4.470	42.18	PK	34.3	-30.3	46.18	-	-	-	-	0-360	100	V
5	* 7.399	40.24	PK	36.1	-27.9	48.44	53.97	--5.56	74	-25.56	0-360	199	H
6	7.925	38.56	PK	36.2	-27.1	47.66	-	-	-	-	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

9.2.5. 802.11n HT20 MIMO 2TX CDD IN 5.8 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS CH149



DATA

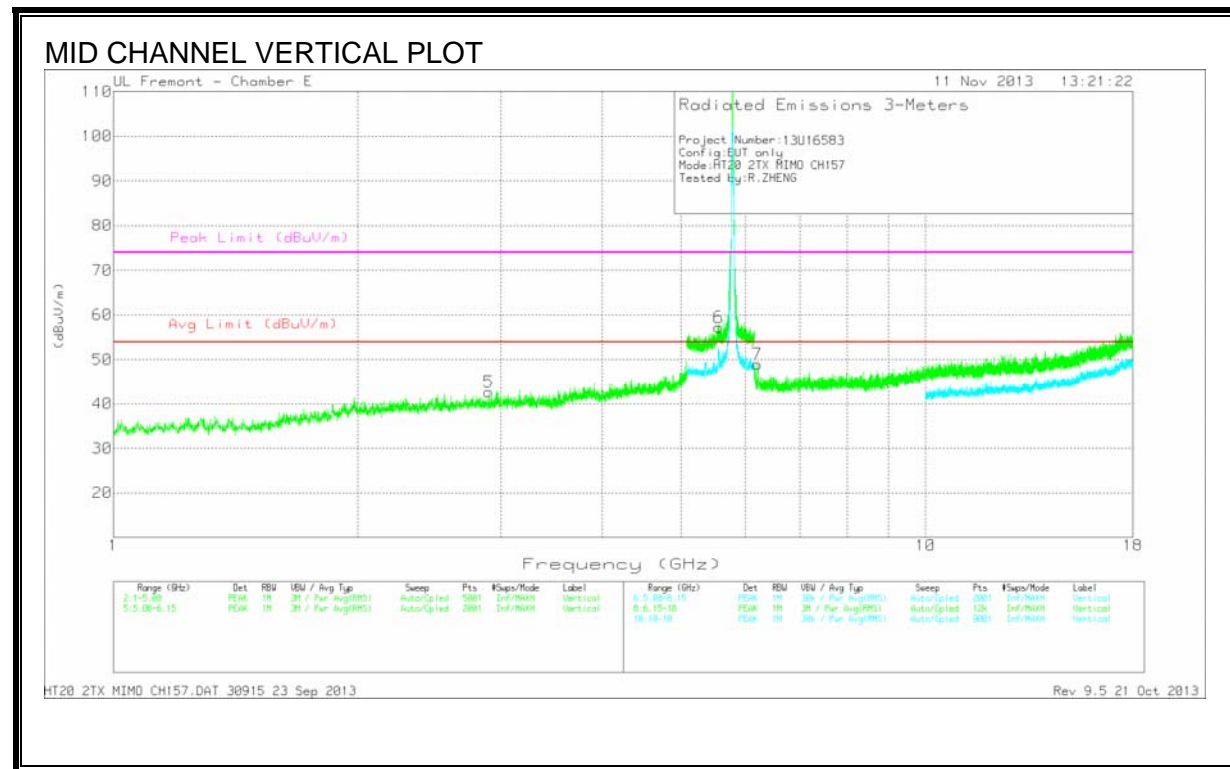
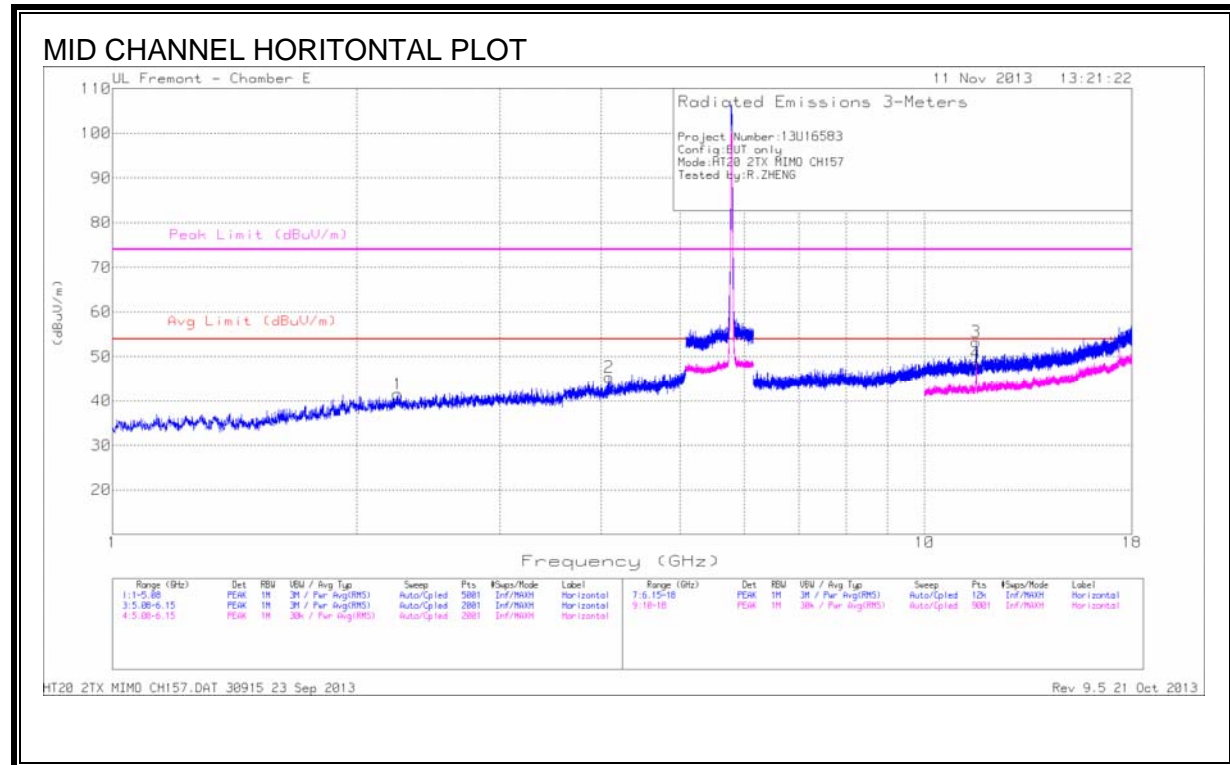
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/6GHz HPF	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.845	42.5	PK	33.7	-30.9	45.3	53.97	-8.7	74	-28.7	0-360	100	H
2	* 7.608	39.28	PK	36.1	-28.1	47.28	53.97	-6.72	74	-26.72	0-360	101	H
3	* 11.483	39.51	PK	38.7	-25.1	53.11	-	-	74	-20.89	0-360	199	H
4	* 11.488	34.37	Avg	38.7	-25.1	47.97	53.97	-6.00	-	-	0-360	199	H
5	* 2.862	42.22	PK	33.2	-33.0	42.42	53.97	-	74	-31.58	0-360	199	V
6	5.532	44.29	PK	34.9	-21.0	58.19	-	-	-	-	0-360	101	V
7	5.953	43.16	PK	35.7	-20.4	58.46	-	-	-	-	0-360	199	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

HARMONICS AND SPURIOUS EMISSIONS CH157



DATA

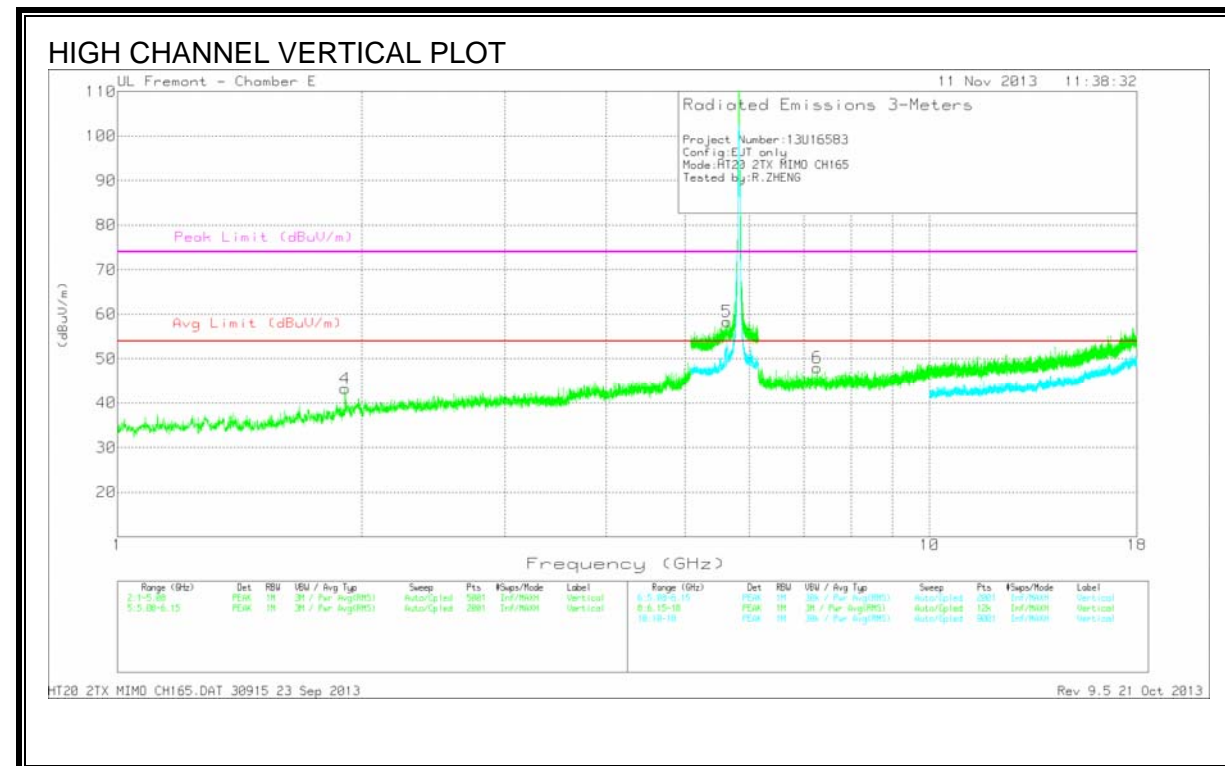
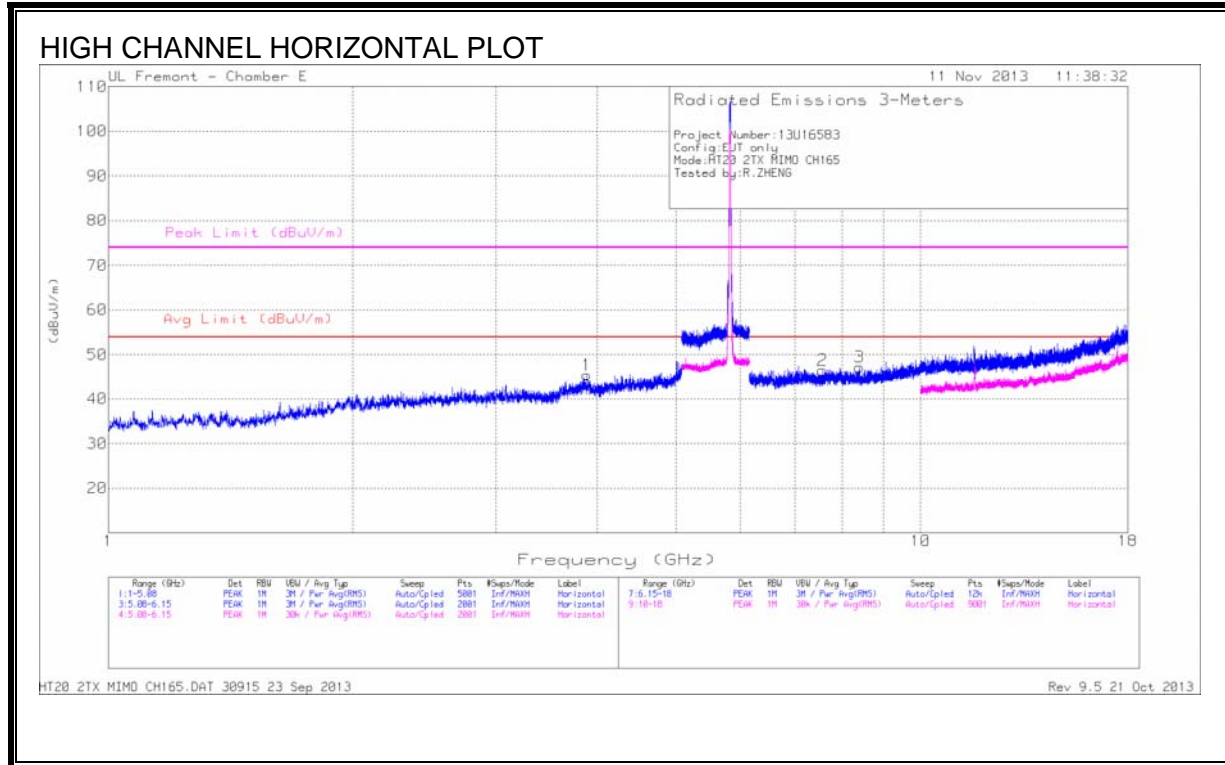
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/5GHz LPF	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.246	41.64	PK	32.4	-32.5	41.54	53.97	-12.46	74	-32.46	0-360	199	H
2	* 4.088	42.47	PK	33.9	-31	45.37	53.97	-8.63	74	-28.63	0-360	199	H
3	* 11.571	39.88	PK	38.7	-25.3	53.28	-	-	74	-20.72	0-360	199	H
4	* 11.570	35.08	Avg	38.7	-25.3	48.48	53.97	-5.49	-	-	0-360	199	H
5	* 2.900	42.51	PK	33.2	-33	42.71	53.97	-11.29	74	-31.29	0-360	100	V
6	5.564	43.16	PK	35	-20.9	57.26	-	-	-	-	0-360	101	V
7	6.207	42.68	PK	35.9	-29.6	48.98	-	-	-	-	0-360	199	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

HARMONICS AND SPURIOUS EMISSIONS CH165



DATA

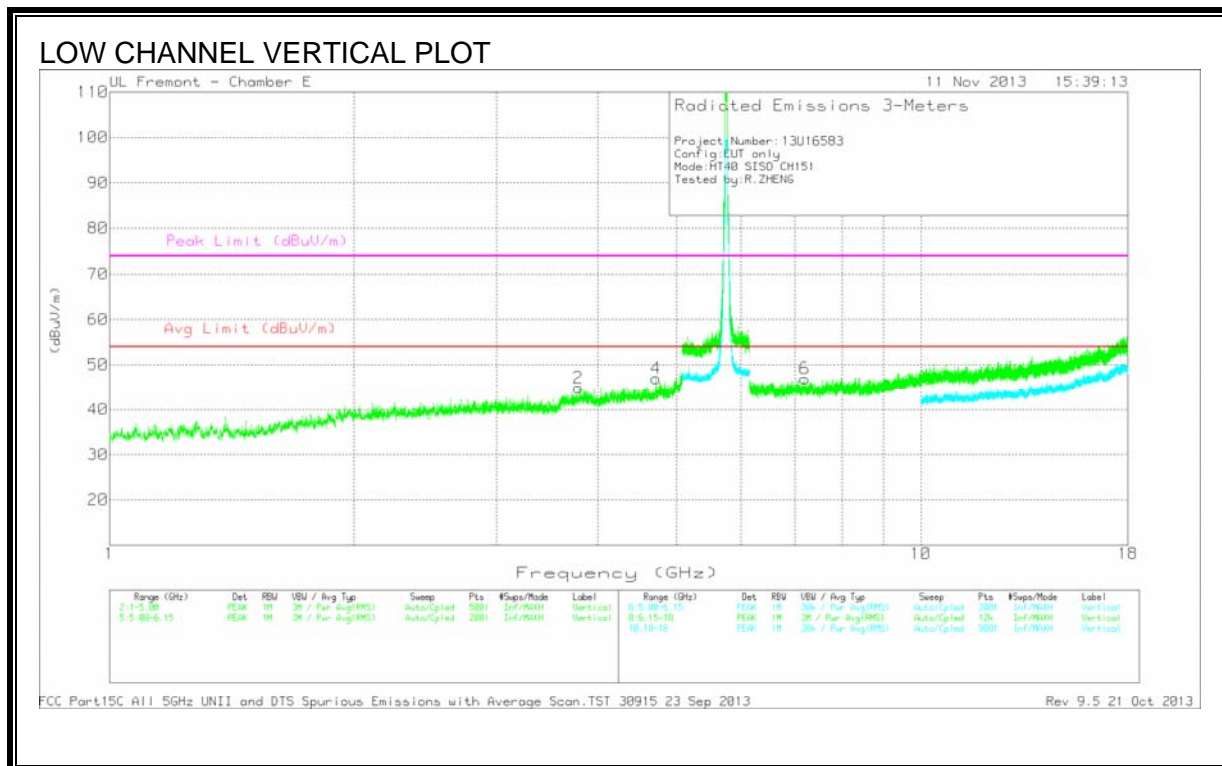
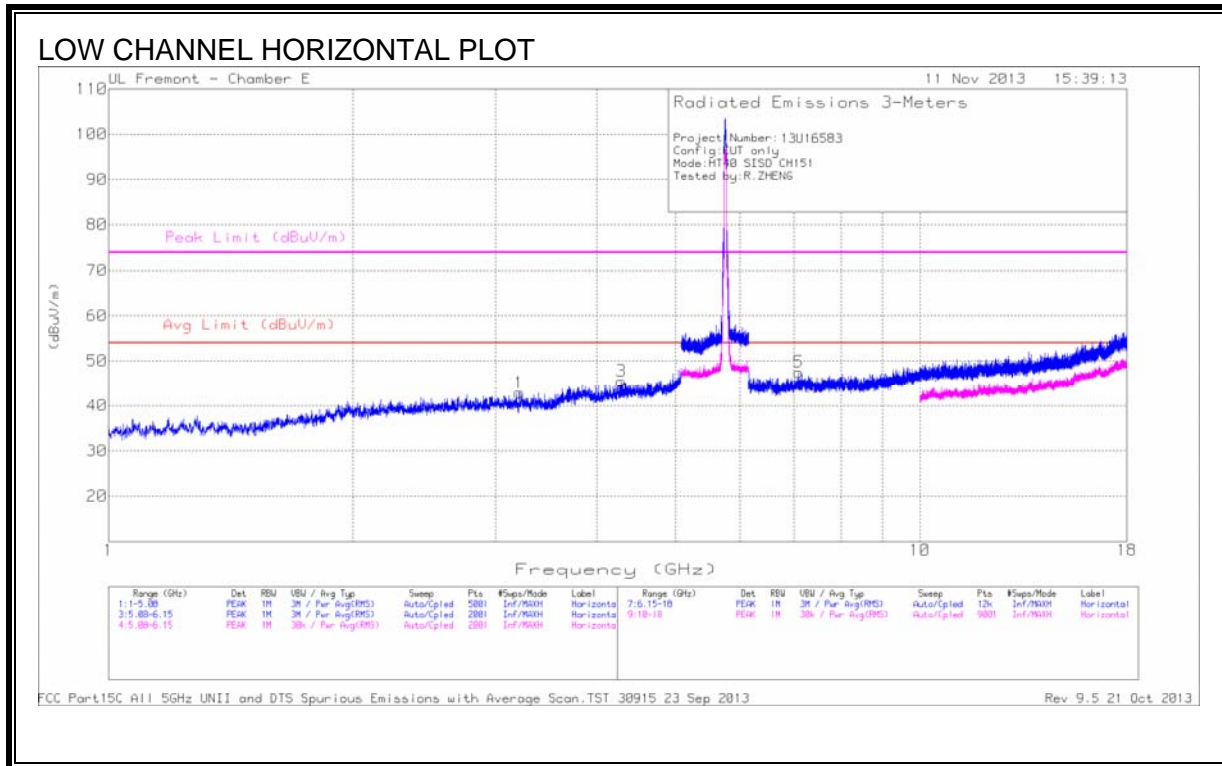
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl /5GHz LPF	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.884	42.61	PK	33.8	-31.0	45.41	53.97	-8.59	74	-28.59	0-360	199	H
2	* 7.572	38.94	PK	36.1	-28.6	46.44	53.97	-7.56	74	-27.56	0-360	199	H
3	* 8.409	38.53	PK	36.2	-27.5	47.23	53.97	-6.77	74	-26.77	0-360	101	H
4	1.907	44.93	PK	31.5	-33.2	43.23	-	-	-	-	0-360	199	V
5	5.627	44.25	PK	35.1	-21.0	58.35	-	-	-	-	0-360	101	V
6	* 7.27	40.90	PK	36.0	-28.9	48.00	53.97	-6.00	74	-26.00	0-360	199	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

9.2.6. 802.11n HT40 SISO MODE IN 5.8 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS CH151



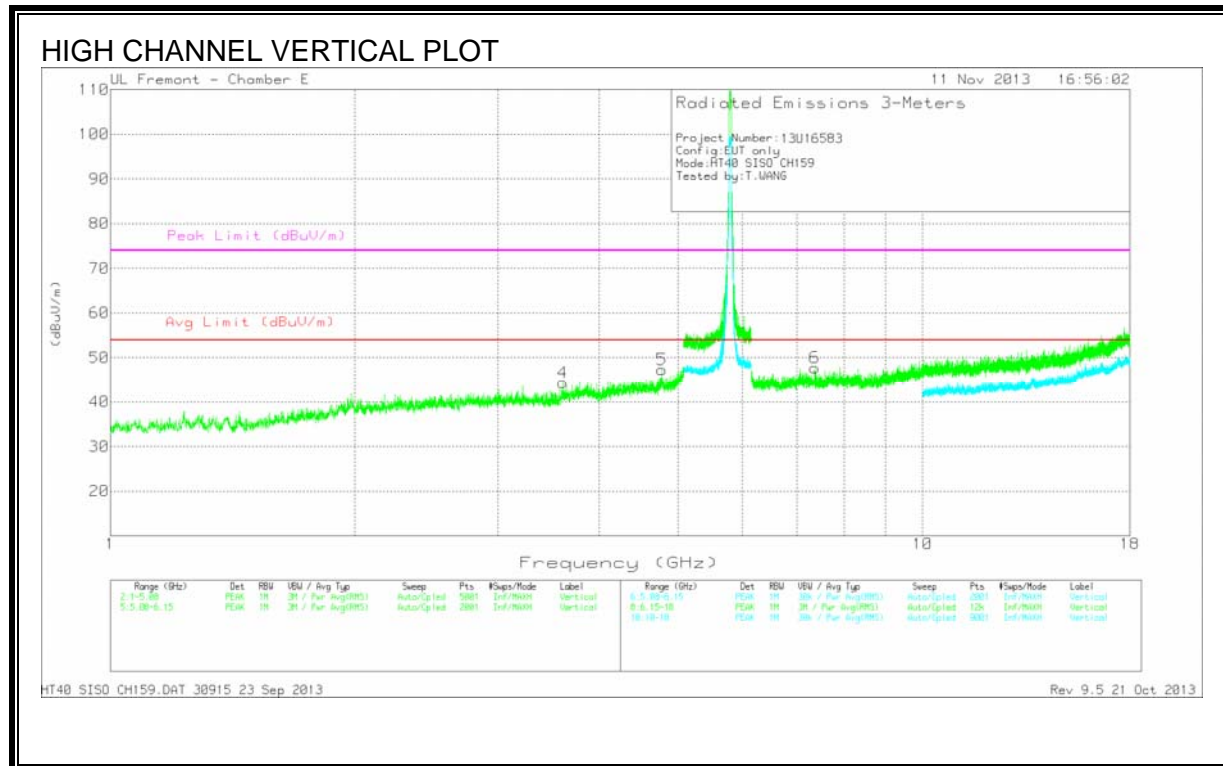
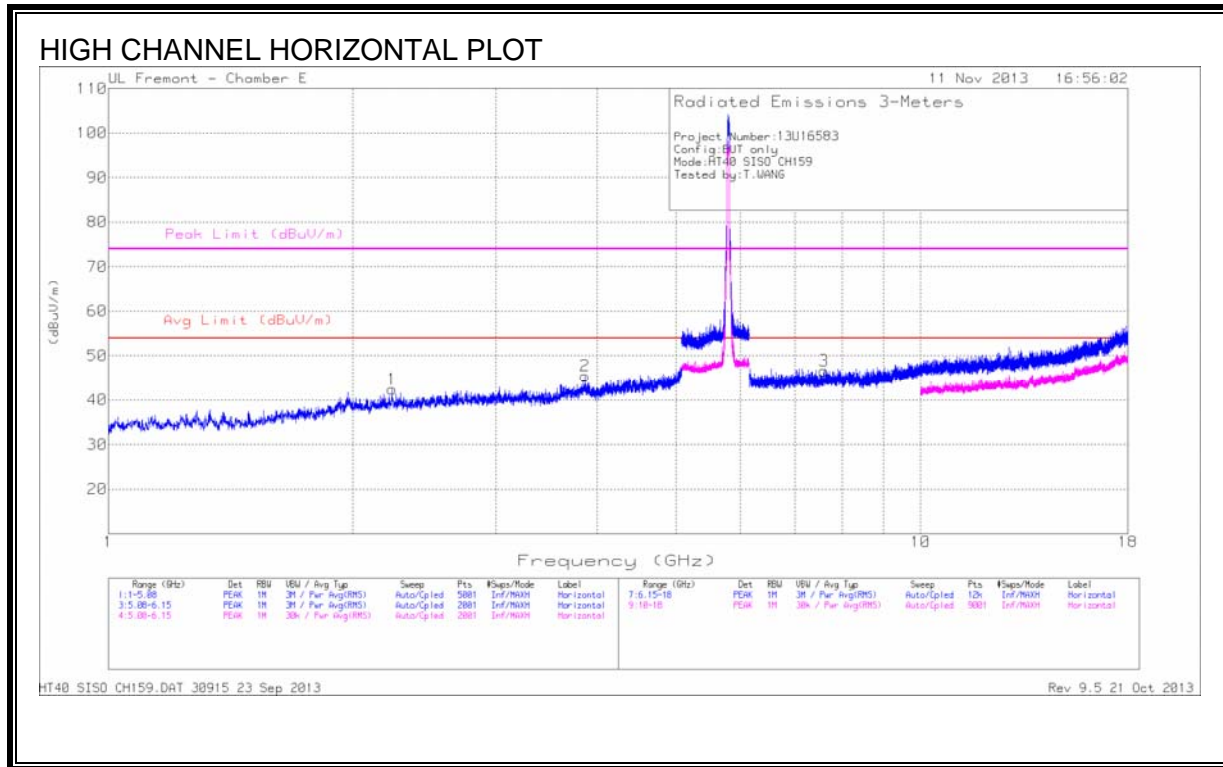
DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl /5GHz LPF	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	3.210	41.88	PK	33.4	-32.4	42.88	-	-	-	-	0-360	199	H
2	* 3.785	43.36	PK	33.7	-32.2	44.86	53.97	-9.14	74	-29.14	0-360	100	V
3	* 4.286	42.67	PK	34.0	-31.2	45.47	53.97	-8.53	74	-28.53	0-360	199	H
4	* 4.719	43.39	PK	34.4	-30.8	46.99	53.97	-7.01	74	-27.01	0-360	100	V
5	7.095	39.99	PK	36.0	-28.5	47.49	-	-	-	-	0-360	101	H
6	7.195	39.45	PK	36.0	-28.5	46.95	-	-	-	-	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

HARMONICS AND SPURIOUS EMISSIONS CH159



DATA

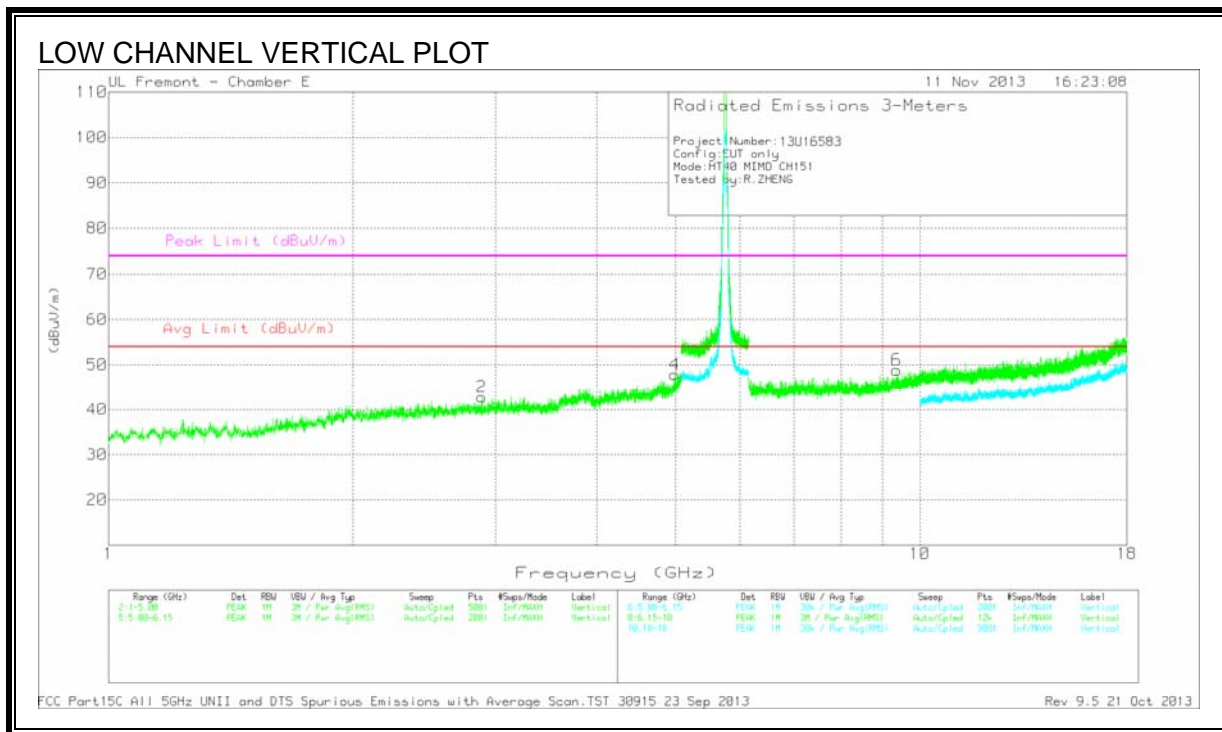
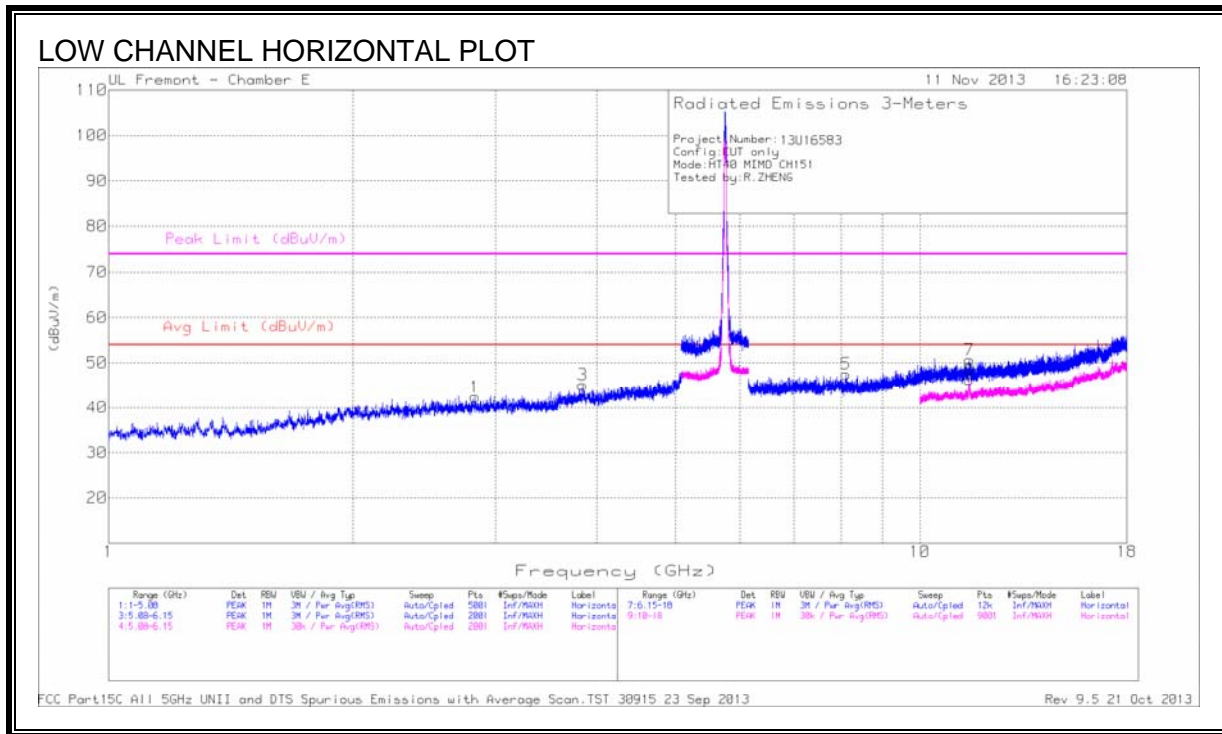
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl /5GHz LPF	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.236	42.61	PK	32.4	-32.6	42.41	53.97	-11.59	74	-31.59	0-360	199	H
2	* 3.864	42.75	PK	33.7	-31.0	45.45	53.97	-8.55	74	-28.55	0-360	199	H
3	* 7.602	38.67	PK	36.1	-28.2	46.57	53.97	-7.43	74	-27.43	0-360	100	H
4	* 3.605	42.28	PK	33.4	-31.3	44.38	53.97	-9.62	74	-29.62	0-360	199	V
5	* 4.775	43.02	PK	34.4	-30.1	47.32	53.97	-6.68	74	-26.68	0-360	199	V
6	* 7.366	39.57	PK	36.0	-27.8	47.77	53.97	-6.23	74	-26.23	0-360	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

9.2.7. 802.11n HT40 MIMO 2TX CDD IN 5.8 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS CH151



DATA

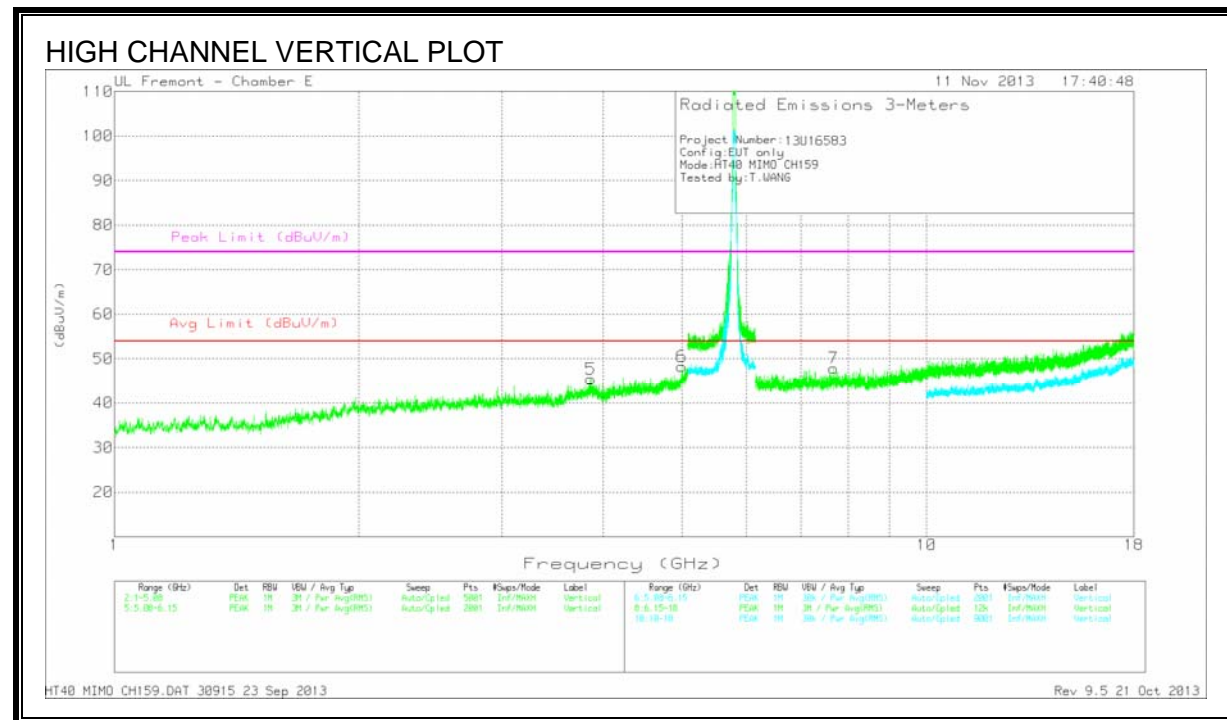
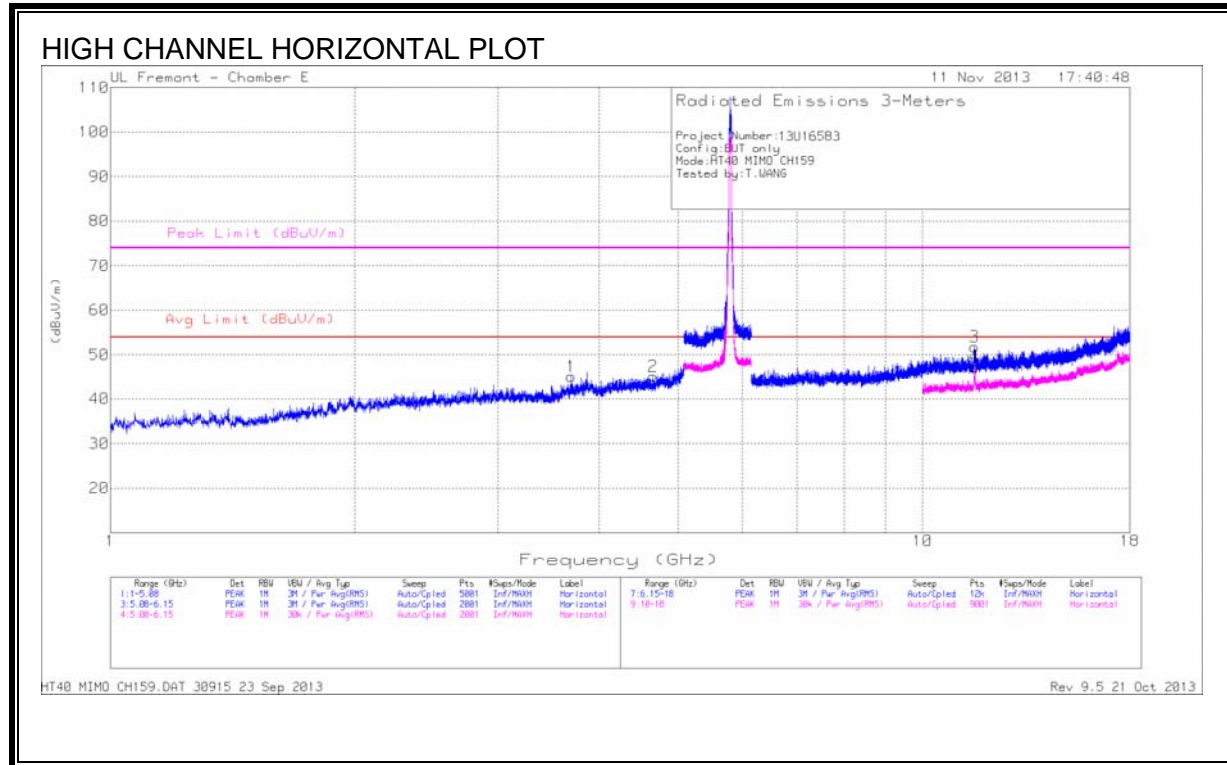
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl /LPF	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.831	41.76	PK	33.2	-32.6	42.36	53.97	-11.64	74	-31.64	0-360	199	H
2	* 2.883	42.81	PK	33.2	-33.2	42.81	53.97	-11.19	74	-31.19	0-360	100	V
3	* 3.842	42.47	PK	33.7	-31.1	45.07	53.97	-8.93	74	-28.93	0-360	199	H
4	* 4.989	42.86	PK	34.4	-29.4	47.86	53.97	-6.14	74	-26.14	0-360	100	V
5	* 8.114	39.18	PK	36.2	-27.9	47.48	53.97	-6.52	74	-26.52	0-360	100	H
6	* 9.364	37.05	PK	37.3	-25.5	48.85	53.97	-5.15	74	-25.15	0-360	100	V
7	* 11.511	37.17	PK	38.7	-25.2	50.67	-	-	74	-23.33	0-360	199	H
8	* 11.511	32.75	Avg	38.7	-25.2	46.25	53.97	-7.72	-	-	0-360	199	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

HARMONICS AND SPURIOUS EMISSIONS CH159



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ 5GHz LPF	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.695	43.18	PK	33.6	-31.7	45.08	53.97	-8.92	74	-28.92	0-360	100	H
2	* 4.657	40.73	PK	34.4	-30.0	45.13	53.97	-8.87	74	-28.87	0-360	199	H
3	* 11.594	38.40	PK	38.7	-25.3	51.80			74	-22.20	0-360	199	H
4	* 11.594	33.85	Avg	38.7	-25.3	47.25	53.97	-6.75	-	-	0-360	199	H
5	* 3.859	42.63	PK	33.7	-30.9	45.43	53.97	-8.57	74	-28.57	0-360	199	V
6	* 4.996	42.67	PK	34.4	-29.1	47.97	53.97	-6.03	74	-25.72	0-360	199	V
7	* 7.682	39.99	PK	36.2	-28.3	47.89	53.97	-6.11	74	-26.11	0-360	101	V

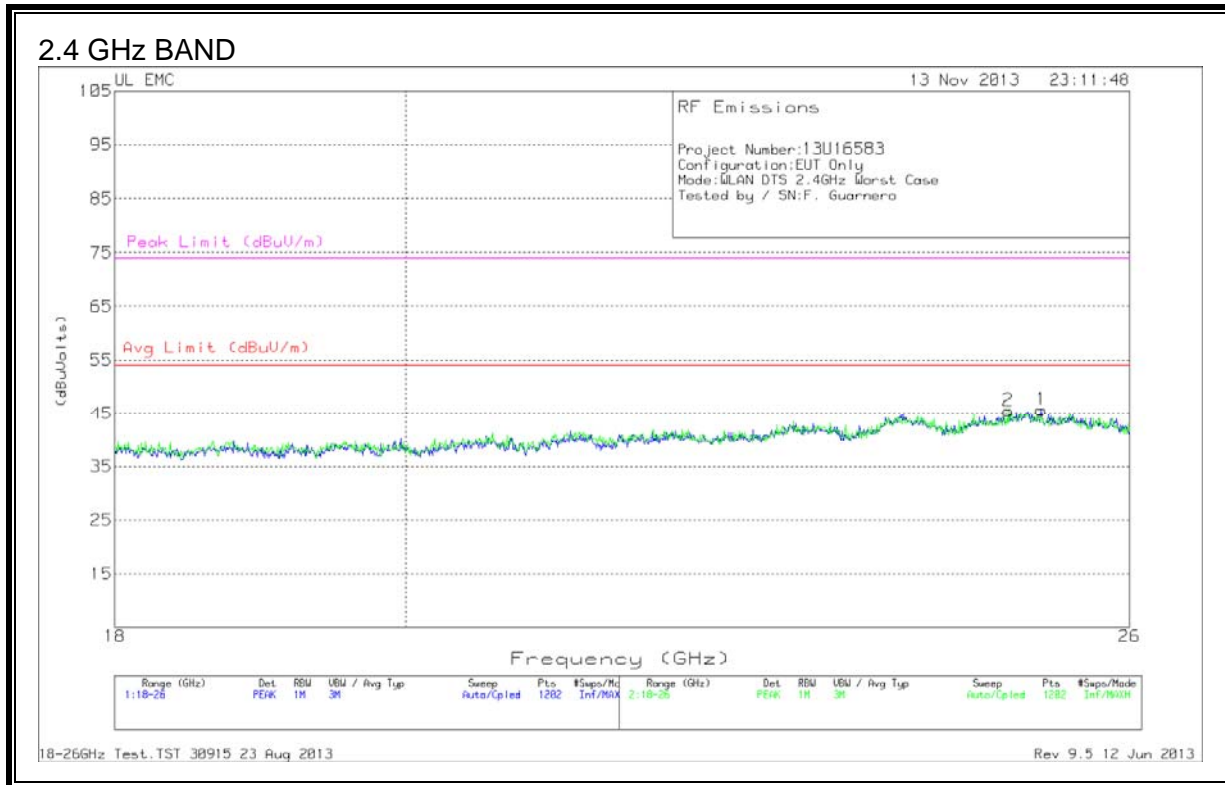
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Avg - Video bandwidth < Resolution bandwidth

9.3. WORST-CASE ABOVE 18 GHz

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



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T89 AF (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	25.181	44.37	PK	33.7	-22.9	-9.5	45.67	-	-	74	-28.33
2	24.881	43.70	PK	34.0	-22.7	-9.5	45.50	-	-	74	-28.50

PK - Peak detector

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

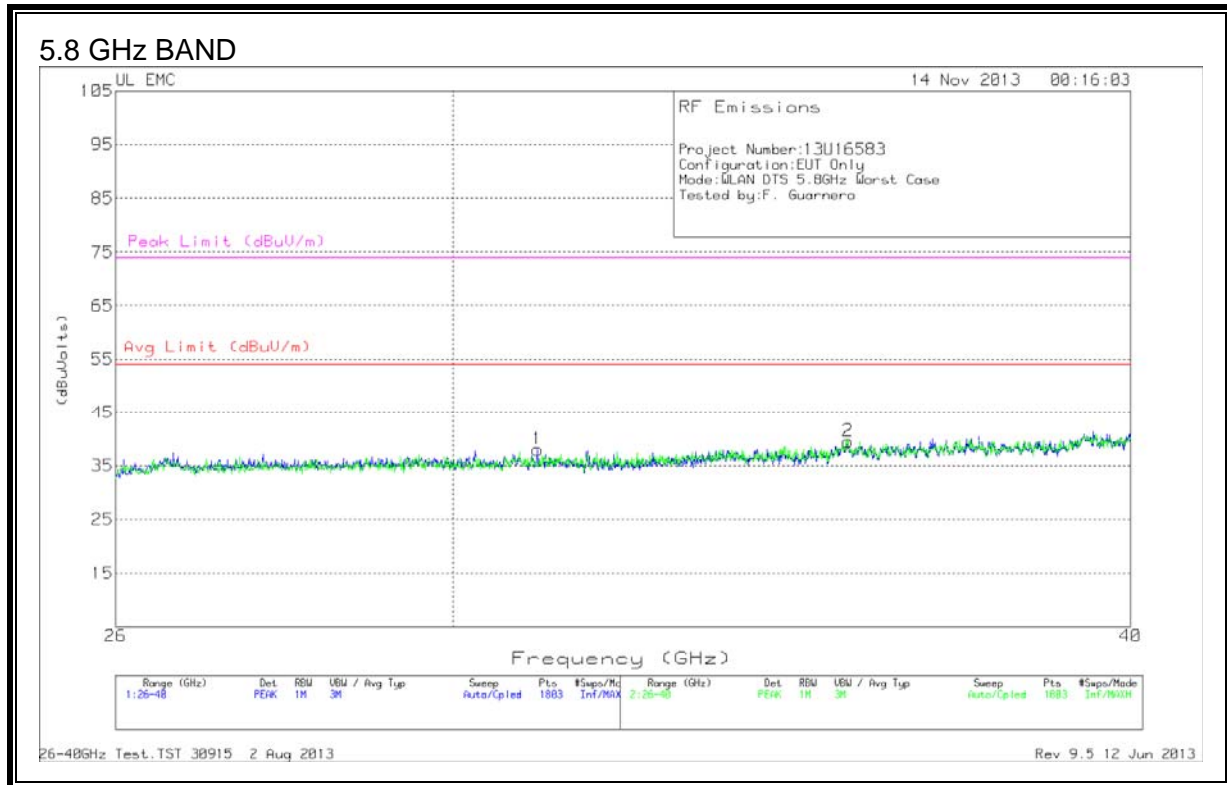


DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T89 AF (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	25.034	43.20	PK	34.1	-22.8	-9.5	45.00	-	-	74	-29.00
2	24.022	43.77	PK	33.3	-22.9	-9.5	44.67	-	-	74	-29.33

PK - Peak detector

SPURIOUS EMISSIONS 26 TO 40 GHz (WORST-CASE CONFIGURATION, HORIZONTAL & VERTICAL)



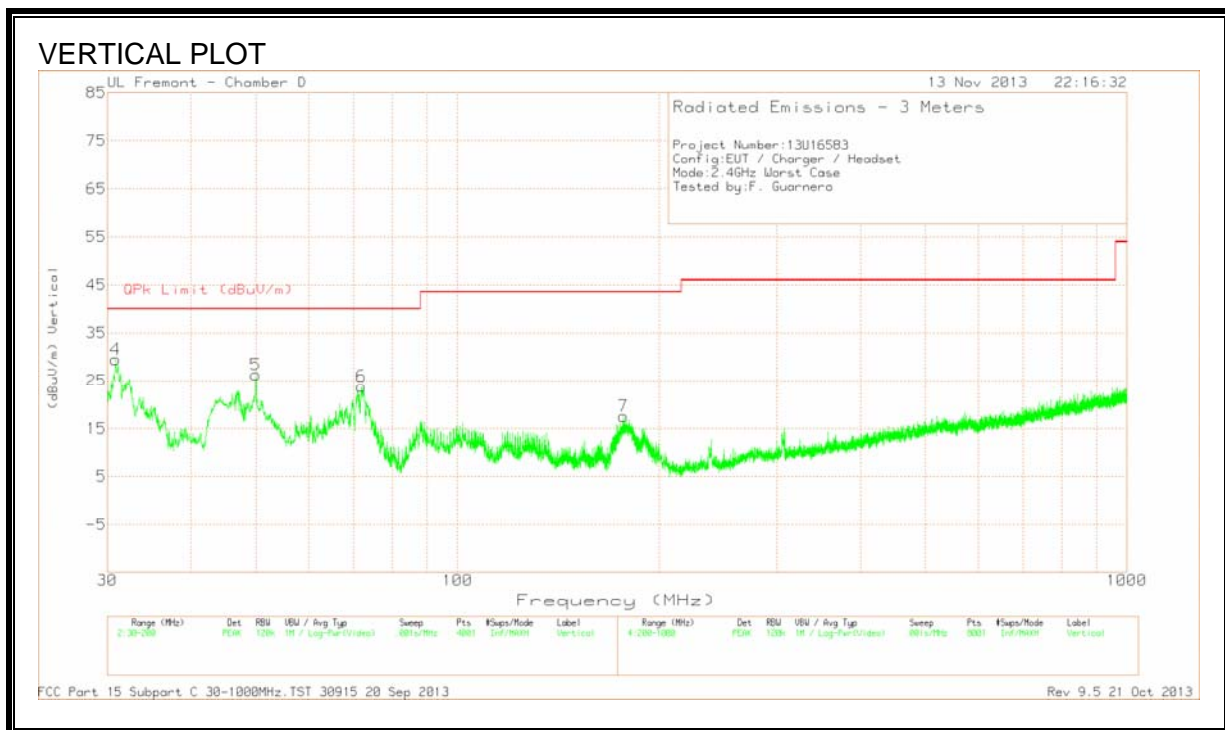
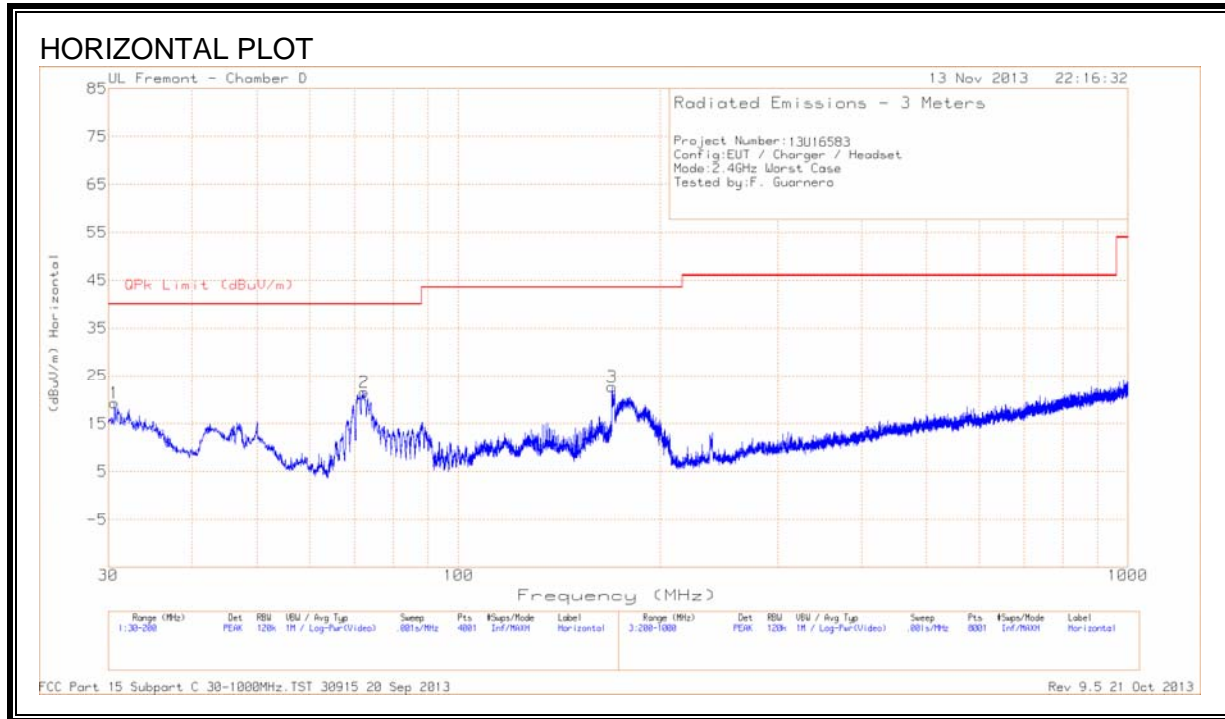
DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T90 AF (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	31.097	47.9	PK	35.9	-36.3	-9.5	38.0	-	-	74	-36.0
2	35.478	48.4	PK	37.9	-37.3	-9.5	39.5	-	-	74	-34.5

PK - Peak detector

9.4. WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION 2.4GHz BAND)

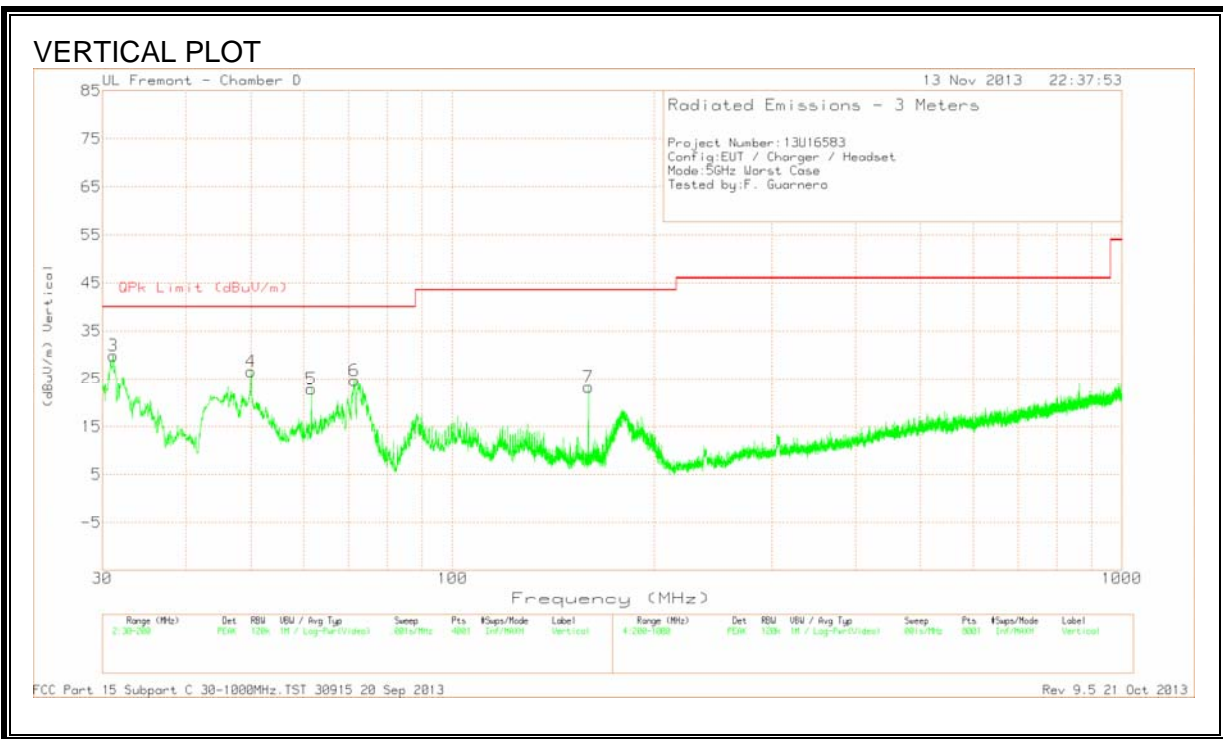
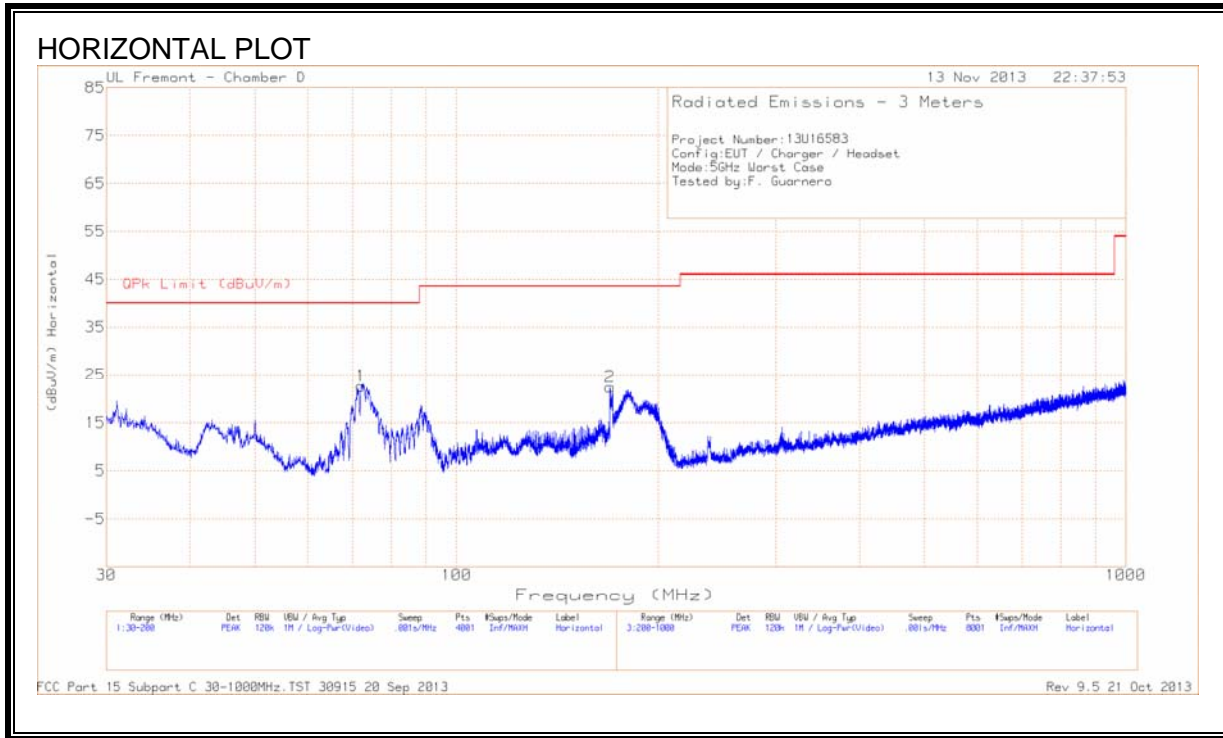


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T407 dB/m	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarity
1	30.6375	30.58	PK	20.8	-32.1	19.28	40.00	-20.72	300	H
2	72.3725	44.98	PK	8.4	-31.8	21.58	40.00	-18.42	400	H
3	169.6125	42.19	PK	11.8	-31.3	22.69	43.52	-20.83	98	H
4	30.8500	41.00	PK	20.6	-32.1	29.50	40.00	-10.50	100	V
5	49.9750	50.20	PK	8.0	-31.9	26.3	40.00	-13.70	100	V
6	71.9050	47.22	PK	8.4	-31.8	23.82	40.00	-16.18	100	V
7	177.0925	37.30	PK	11.5	-31.2	17.60	43.52	-25.92	100	V

PK - Peak detector

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION 5.8 GHz BAND)



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T407 dB/m	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Height (cm)	Polarity
1	72.075	46.07	PK	8.4	-31.8	22.67	40.00	-17.33	200	H
2	169.57	41.99	PK	11.8	-31.3	22.49	43.52	-21.03	98	H
3	31.1475	41.58	PK	20.4	-32.1	29.88	40.00	-10.12	100	V
4	50.0175	50.49	PK	8.0	-31.9	26.59	40.00	-13.41	100	V
5	61.535	47.10	PK	7.7	-31.9	22.90	40.00	-17.10	100	V
6	71.395	48.19	PK	8.3	-31.8	24.69	40.00	-15.31	100	V
7	159.625	42.40	PK	12.2	-31.3	23.3	43.52	-20.22	100	V

PK - Peak detector

10. AC POWER LINE CONDUCTED EMISSIONS

Refer to the FCC DTS report with the FCC ID BCGA1490 and project number 13U15668-5 at Section 10.