



CERTIFICATION TEST REPORT

Report Number. : 16U23813-E1V2

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

Model : A1822

FCC ID : BCGA1822

IC : 579C-A1822

EUT Description : TABLET DEVICE

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C
INDUSTRY CANADA RSS - 247 ISSUE 1

Date Of Issue:
February 10, 2017

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	01/24/17	Initial Issue	Mengistu Mekuria
V2	02/10/2017	Address TCB's Question	Chin Pang

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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: A1822

SERIAL NUMBER: CONDUCTED (F9FSQ02CHQNX), RADIATED (F9FSJ00HHN9P)

DATE TESTED: NOVEMBER 15, 2016 – JANUARY 18, 2017

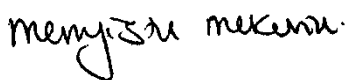
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-247 Issue 1	Pass
INDUSTRY CANADA RSS-GEN Issue 4	Pass

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:

Prepared By:



MENGISTU MEKURIA
SENIOR ENGINEER
UL VERIFICATION SERVICES INC.

HUNG THAI
LAB 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, KDB 558074 D01 v03r05, ANSI C63.10-2013, RSS-GEN Issue 4, and RSS-247 Issue 1.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 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 (IC:2324B-1)	☐ Chamber D (IC:2324B-4)
☐ Chamber B (IC:2324B-2)	☒ Chamber E (IC:2324B-5)
☐ Chamber C (IC:2324B-3)	☒ Chamber F (IC:2324B-6)
	☒ Chamber G (IC:2324B-7)
	☐ Chamber H (IC:2324B-8)

The above test sites and facilities are covered under FCC Test Firm Registration # 208313.

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:

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

4.3. MEASUREMENT UNCERTAINTY

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

Parameter	Uncertainty
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.84 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.65 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	3.15 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	5.36 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.32 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.45 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.24 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a tablet with multimedia functions (music, application support, and video), IEEE 802.11a/b/g/n/ac radio, and Bluetooth radio. The rechargeable battery is not user accessible.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2402 - 2480	BLE	17.233	52.88

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

Frequency Band (GHz)	Antenna Gain (dBi)
2.4	1.91

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was 14E232.

5.5. WORST-CASE CONFIGURATION AND MODE

For below 1G, 18-26GHz radiated emission, and power line conducted emissions were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X/Y/Z, it was determined that Y- landscape orientation was worst-case orientation. Therefore, all final radiated testing was performed with the EUT in Y- landscape orientation.

Worst-case data rates as provided by the client were:
Based on the baseline scan, the worst-case data rates were:

BLE: 1 Mbps.

There are two vendors of the WiFi/Bluetooth radio modules: variant 1 and variant 2. The Wi-Fi/Bluetooth radio modules have the same mechanical outline (e.g., the same package dimension and pin-out layout), use the same on-board antenna matching circuit, have an identical antenna structure, and are built and tested to conform to the same specifications and to operate within the same tolerances.

Baseline testing was performed on the two variants to determine the worst case on all conducted power and radiated emissions.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Apple	A1286	7313700NAGW	N/A
Laptop AC/DC adapter	Apple	A1343	C062172045DDJ94A6	N/A
Earphone	Apple	NA	NA	N/A
EUT AC/DC adapter	Apple	A1357	W010A051	N/A

I/O CABLES (CONDUCTED TEST)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Antenna	1	SMA	Un-Shielded	0.2	To spectrum Analyzer
2	USB	1	USB	Shielded	1	N/A
3	AC	1	AC	Un-shielded	2	N/A

I/O CABLES (RADIATED ABOVE 1 GHZ)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
None Used						

I/O CABLES (RADIATED BELOW 1 GHZ AND AC LINE CONDUCTED: AC/DC ADAPTER CONFIGURATION)

I/O Cable List						
Cable No	Port	# of identical	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Earphone Jack	1	3.5mm Audio	Shielded	0.9	N/A
2	USB	1	USB	shielded	1	N/A

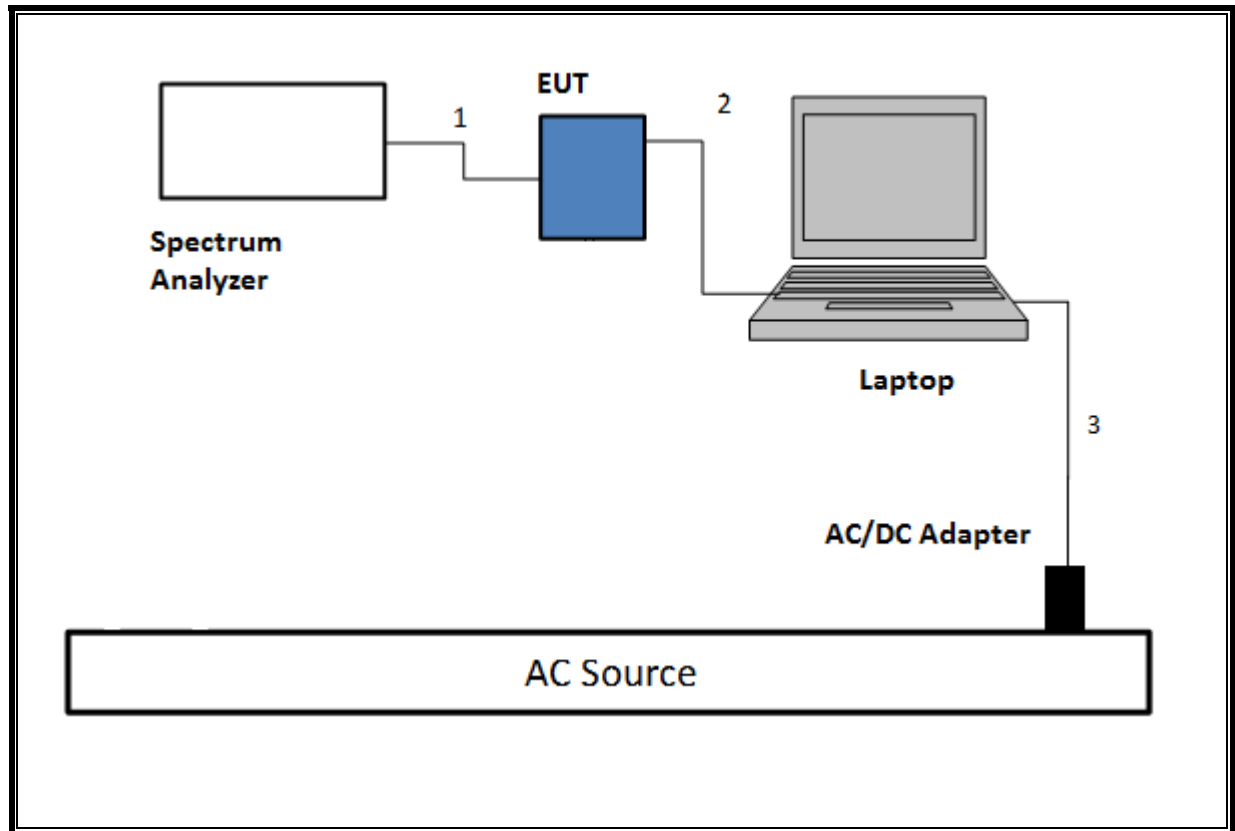
I/O CABLES (AC LINE CONDUCTED: LAPTOP CONFIGUARTION)

I/O Cable List						
Cable No	Port	# of identical	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Earphone Jack	1	3.5mm Audio	Shielded	0.9	N/A
2	USB	1	USB	Shielded	1	N/A
3	AC	1	AC	Un-shielded	2	N/A

TEST SETUP - CONDUCTED TESTS

The EUT was connected to a host Laptop via USB cable adapter and spectrum analyzer to antenna port. Test software exercised the EUT.

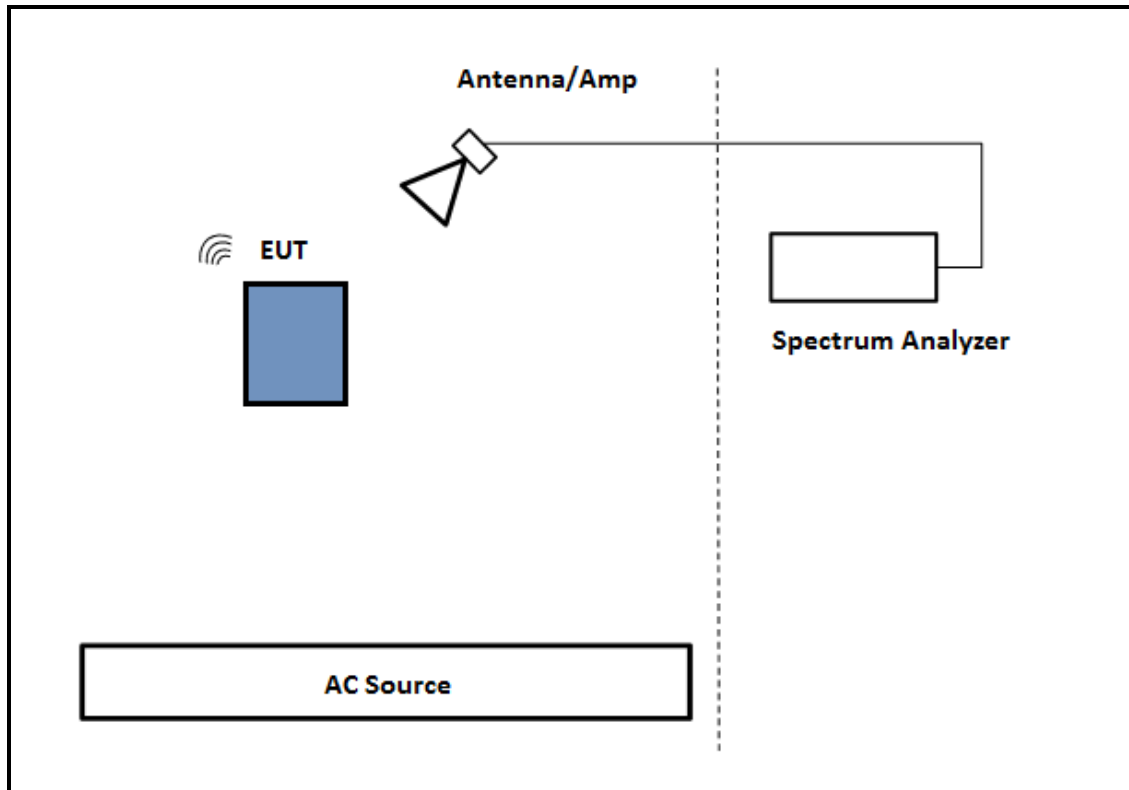
SETUP DIAGRAM



TEST SETUP- RADIATED-ABOVE 1 GHZ

The EUT was powered by battery. Test software exercised the EUT.

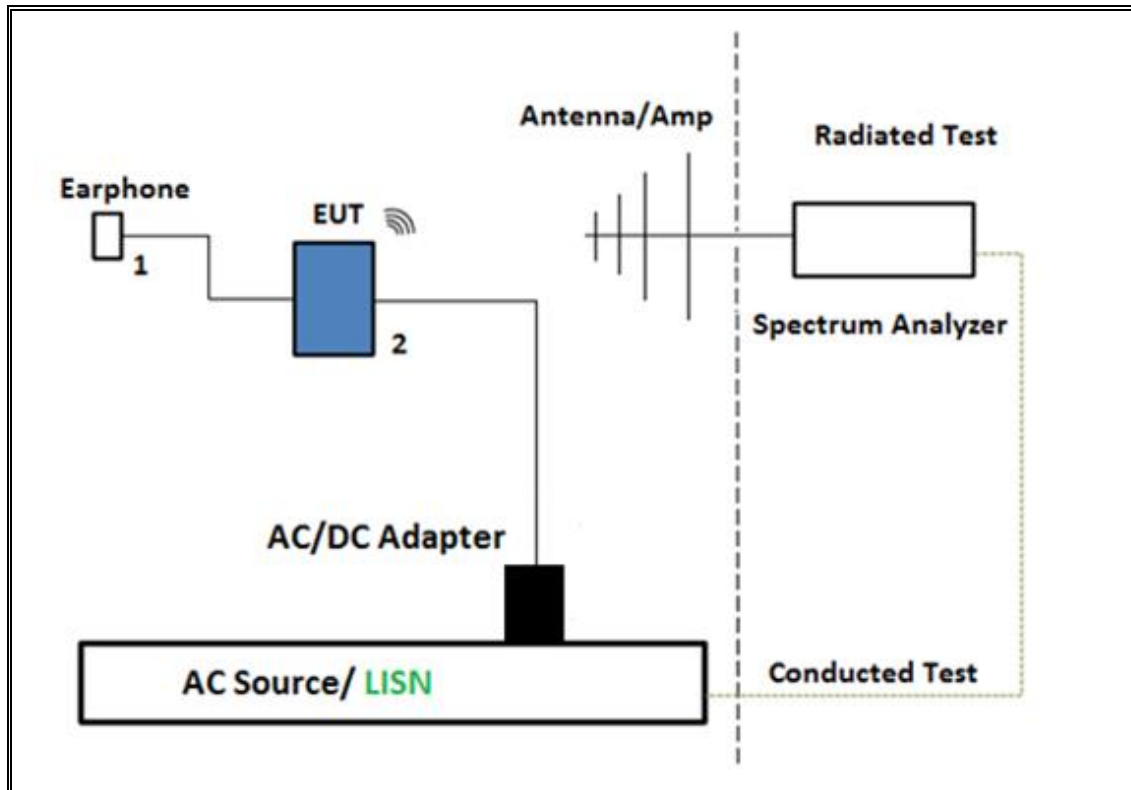
SETUP DIAGRAM



TEST SETUP- BELOW 1GHz

The EUT was powered by AC/DC adapter and connected with earphone. Test software exercised the EUT.

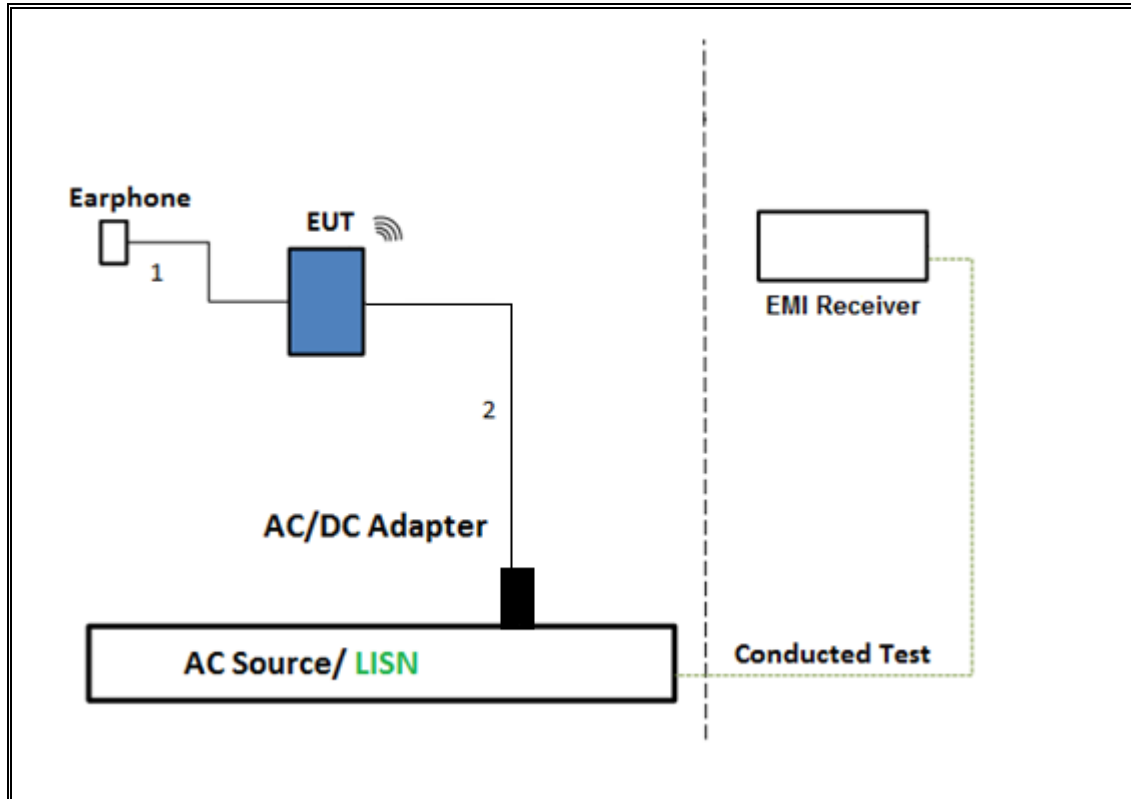
SETUP DIAGRAM



TEST SETUP- AC LINE CONDUCTED: AC/DC ADAPTER CONFIGURATION

The EUT was tested with earphone connected and powered by AC/DC adapter via USB cable. Test software exercised the EUT.

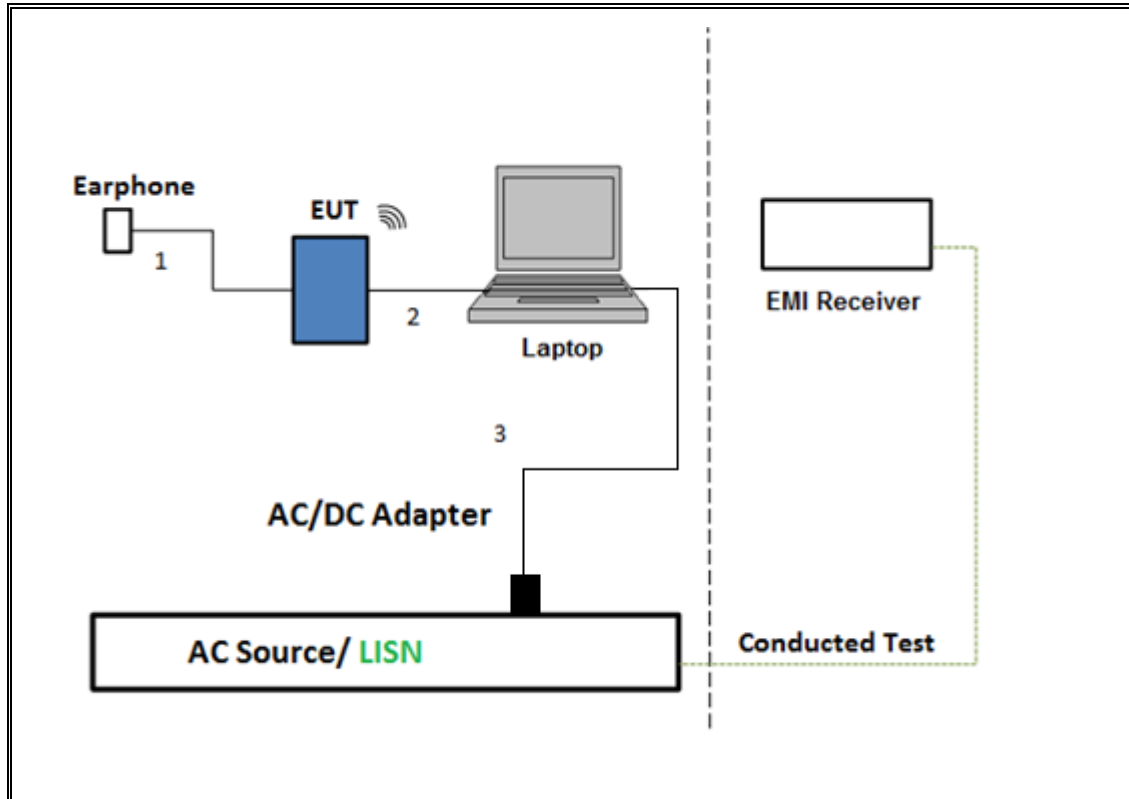
SETUP DIAGRAM



TEST SETUP- AC LINE CONDUCTED: LAPTOP CONFIGURATION

The EUT was tested with earphone connected and powered by host PC via USB cable. Test software exercised the EUT.

SETUP DIAGRAM



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
Antenna, Horn 1-18GHz	ETS Lindgren	3117	T300	11/10/2017
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	T426	09/23/2017
Amplifier, 1 to 18GHz	Miteq	AFS42-00101800-25-S-42	T243	10/11/2017
Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	T285	06/20/2017
Spectrum Analyzer, PXA 3Hz to 44GHz	Keysight	N9030A	T1613	09/23/2017
Antenna, Horn 1-18GHz	ETS Lindgren	3117	T120	04/5/2017
Amplifier, 1 to 18GHz	Miteq	AFS42-00101800-25-S-42	T742	11/29/2017
Spectrum Analyzer, PXA 3Hz to 44GHz	Keysight	N9030A	T341	10/25/2017
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	T899	05/26/2017
Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	T834	06/17/2017
Spectrum Analyzer, PXA 3Hz to 44GHz	Keysight	N9030A-544	T1210	06/30/2017
Power Meter, P-series single channel	Keysight	N1912A	T1244	05/03/2017
Power Sensor	ETS LINDGREN	7002-006	T1126	02/10/2017
Power Sensor, Peak and average, 50 MHz to 18 GHz, 5 MHz BW	HEWLET PACKARD	8481A	T246	06/24/2017
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight	N9030A	T339	09/22/2017
Spectrum Analyzer	Keysight	8564E	T106	09/07/2017
Antenna, Horn 18 to 26.5GHz	ARA	MWH-1826/B	T447	06/16/2017
Amplifier, 1 to 26.5GHz, 23.5dB Gain minimum	Keysight	8449B	T402	07/5/2017
AC Line Conducted				
*EMI Test Receiver 9KHz-7GHz	Rohde & Schwarz	ESCI7	T1436	12/19/2016
LISN for Conducted Emissions CISPR-16	Fischer	50/250-25-2-01	T1310	06/08/2017
Power Cable, Line Conducted Emissions	UL	PG1	T861	9/1/2017
UL AUTOMATION SOFTWARE				
Radiated Software	UL	UL EMC	Ver 9.5, April 26, 2016	
Conducted Software	UL	UL EMC	Ver 5.4, October 13, 2016	
AC Line Conducted Software	UL	UL EMC	Ver 9.5, May 26, 2015	

NOTE: *testing is completed before equipment calibration expiration date.

7. ANTENNA PORT TEST RESULTS

7.1. MEASUREMENT METHODS

6 dB BW: KDB 558074 D01 v03r05, Section 8.1.

Output Power: KDB 558074 D01 v03r05, Section 9.1.2.

Power Spectral Density: KDB 558074 D01 v03r05, Section 10.2.

Out-of-band emissions in non-restricted bands: KDB 558074 D01 v03r05, Section 11.0.

Out-of-band emissions in restricted bands: KDB 558074 D01 v03r05, Section 12.1.

Band-edge: KDB 558074 D01 v03r05, Section 12.1.

7.2. ON TIME, DUTY CYCLE

LIMITS

None; for reporting purposes only.

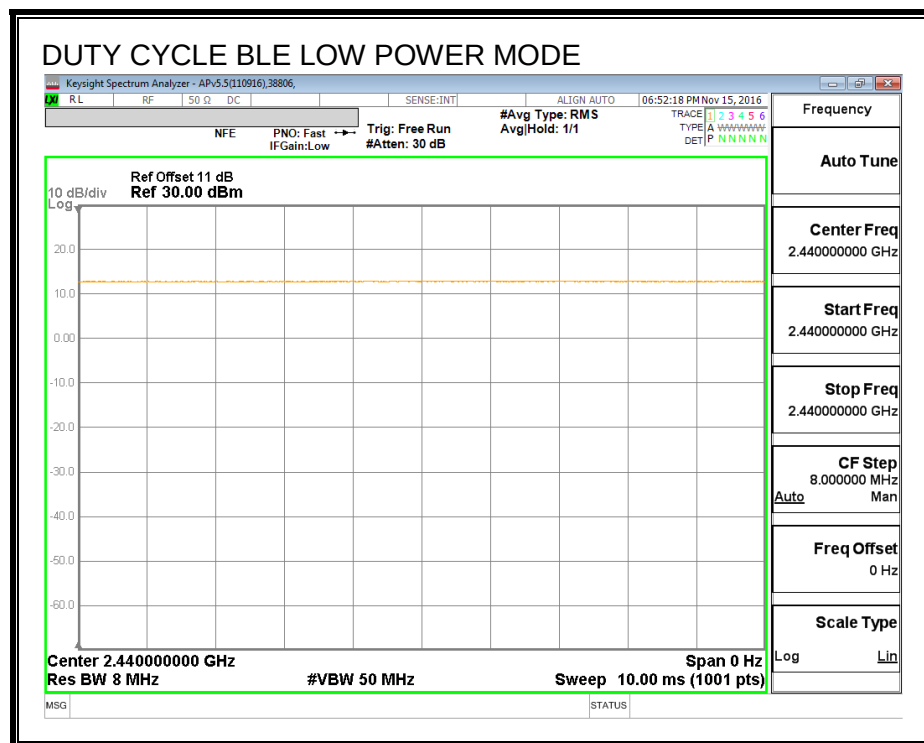
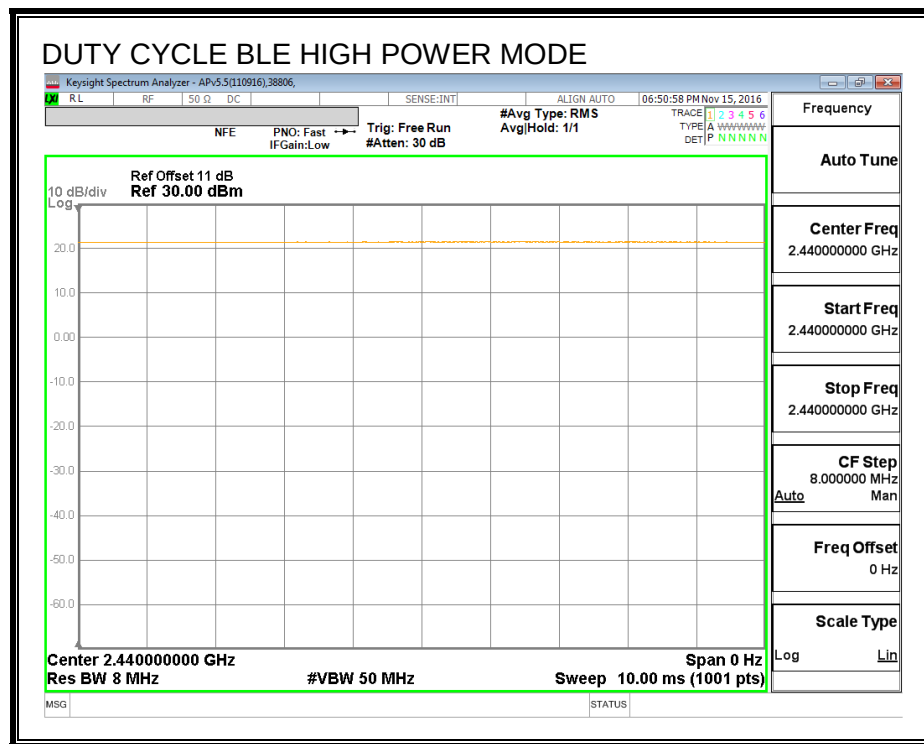
PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
BLE HIGH POWER	1.000	1.000	1.000	100.00%	0.00	0.010
BLE LOW POWER	1.000	1.000	1.000	100.00%	0.00	0.010

DUTY CYCLE PLOTS



7.3. HIGH POWER MODE

7.3.1. 6 dB BANDWIDTH

LIMITS

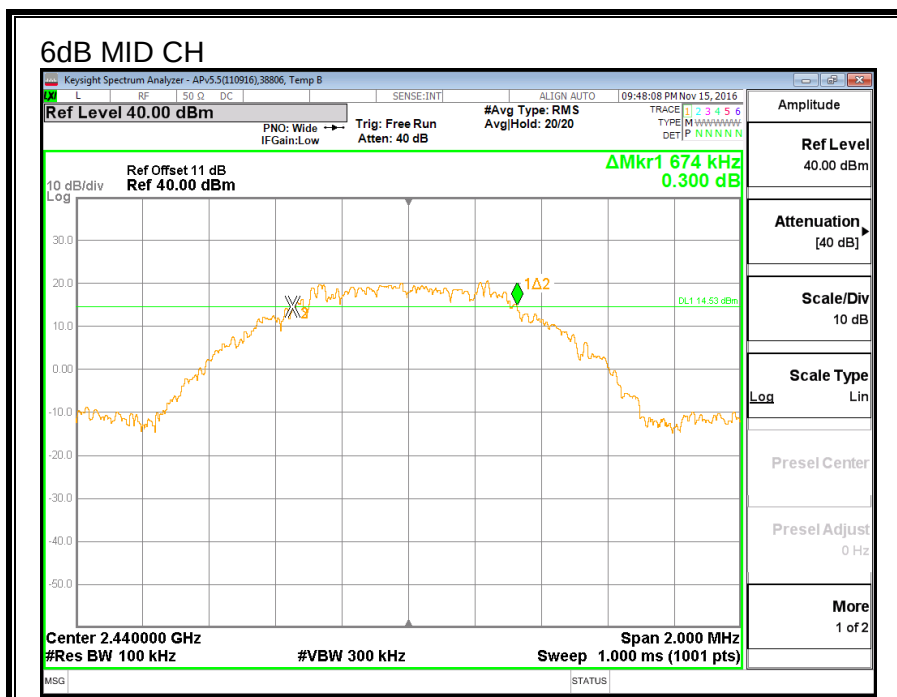
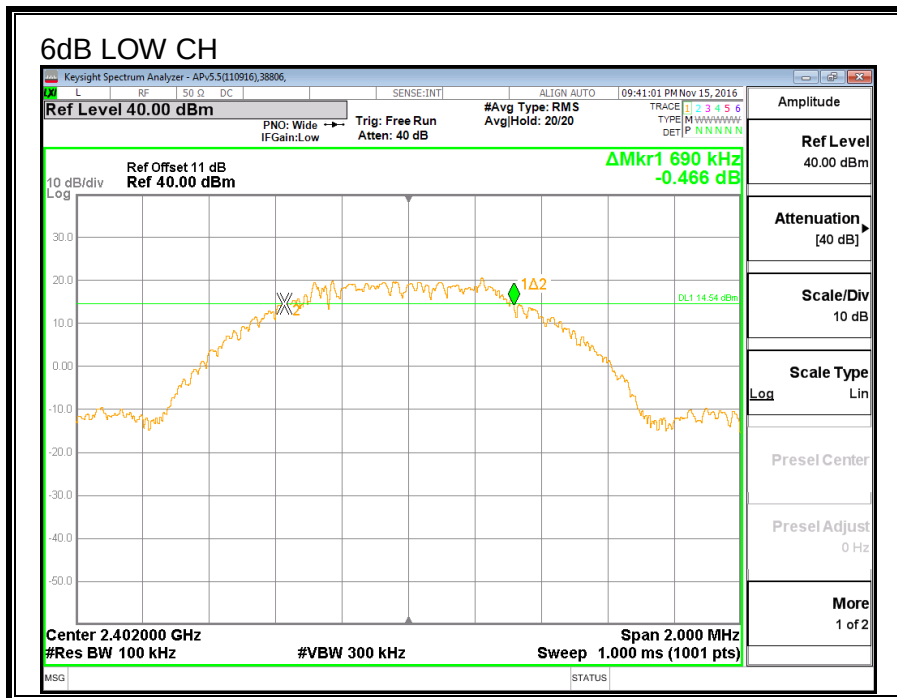
FCC §15.247 (a) (2)

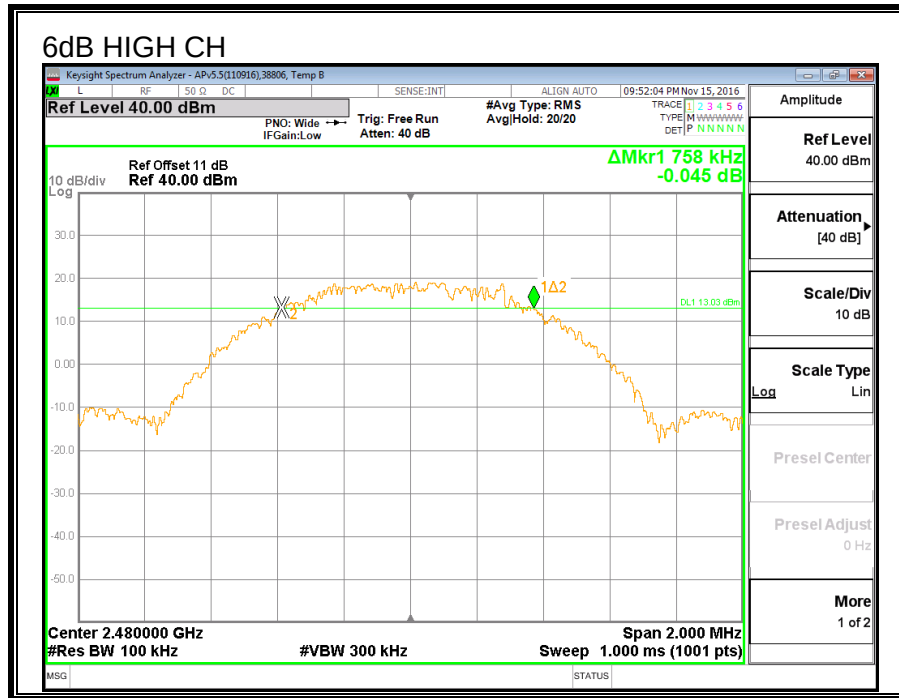
IC RSS-247 (5.2) (1)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2402	0.690	0.5
Middle	2440	0.674	0.5
High	2480	0.758	0.5





7.3.2. 99% BANDWIDTH

LIMITS

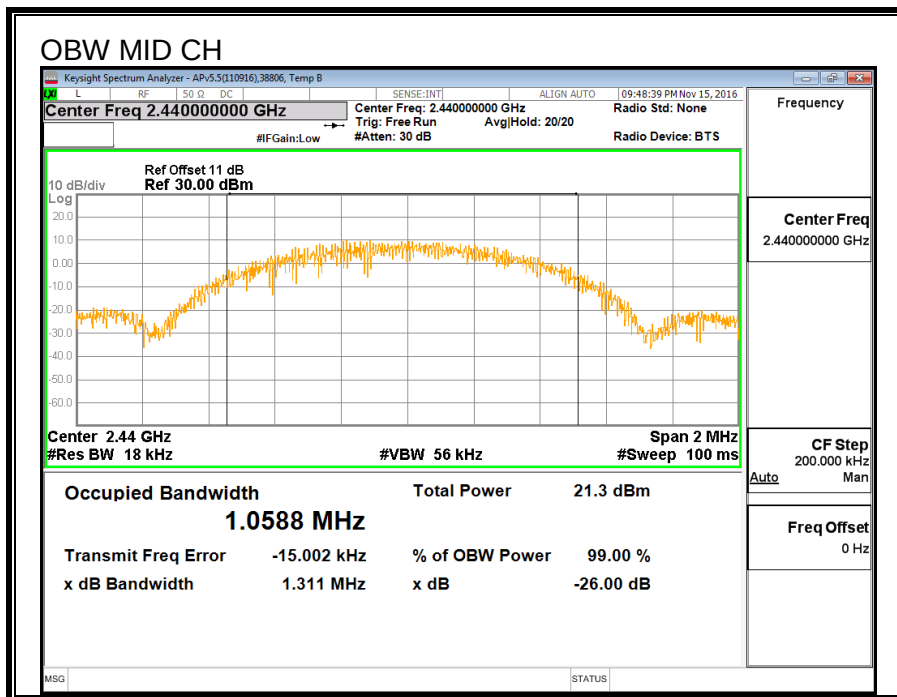
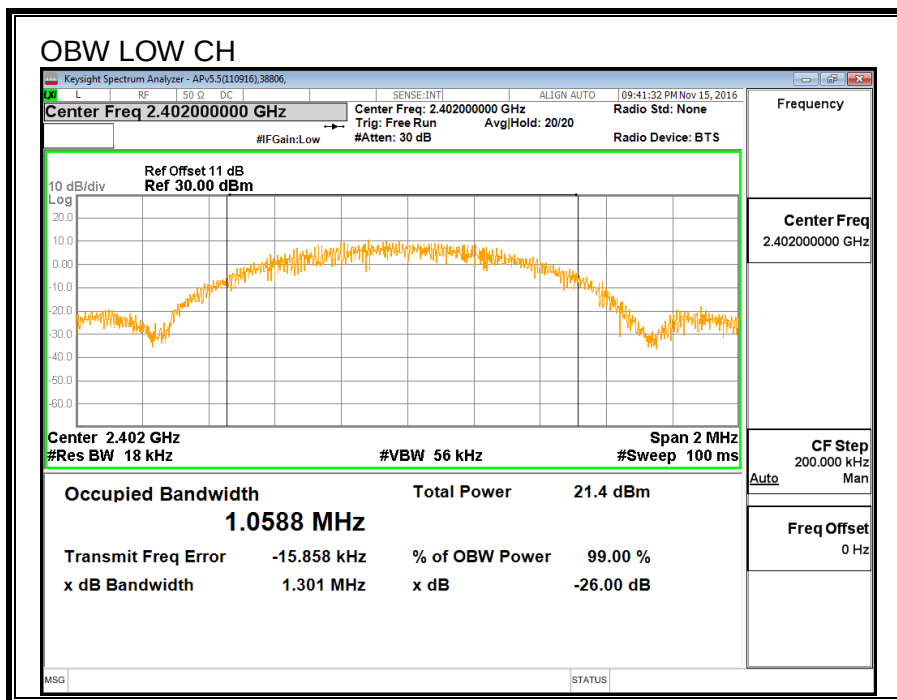
None; for reporting purposes only.

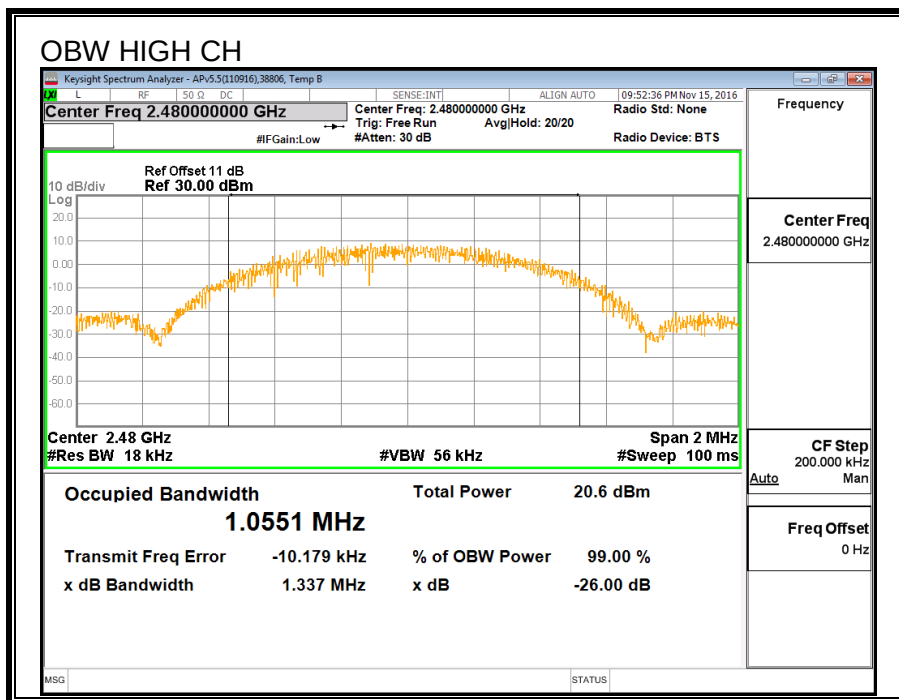
Test Procedure

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

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.0588
Middle	2440	1.0588
High	2480	1.0551





7.3.3. AVERAGE POWER

ID:	30606	Date:	12/28/2016
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LIMITS

None; for reporting purposes only.

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	AV Power (MHz)
Low	2402	16.69
Middle	2440	16.95
High	2480	16.65

7.3.4. OUTPUT POWER

ID:	30606	Date:	12/28/2016
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LIMITS

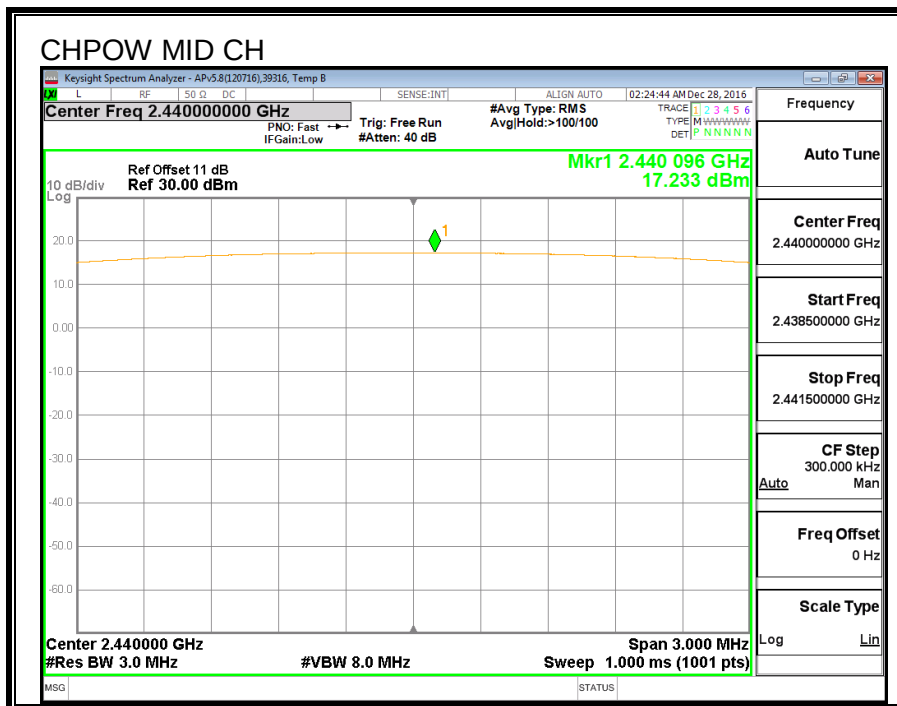
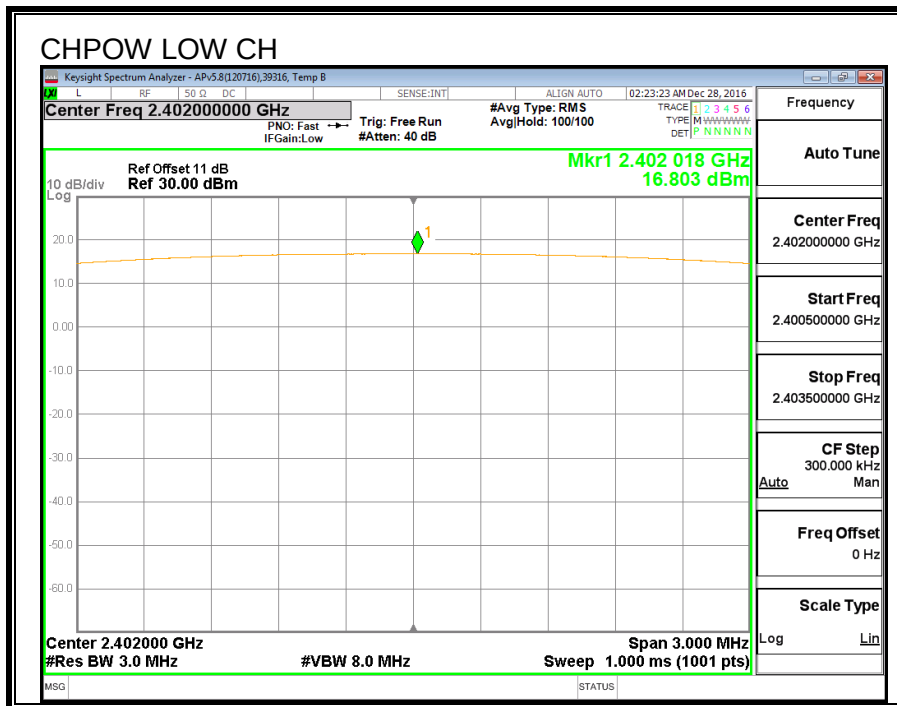
FCC §15.247 (b)

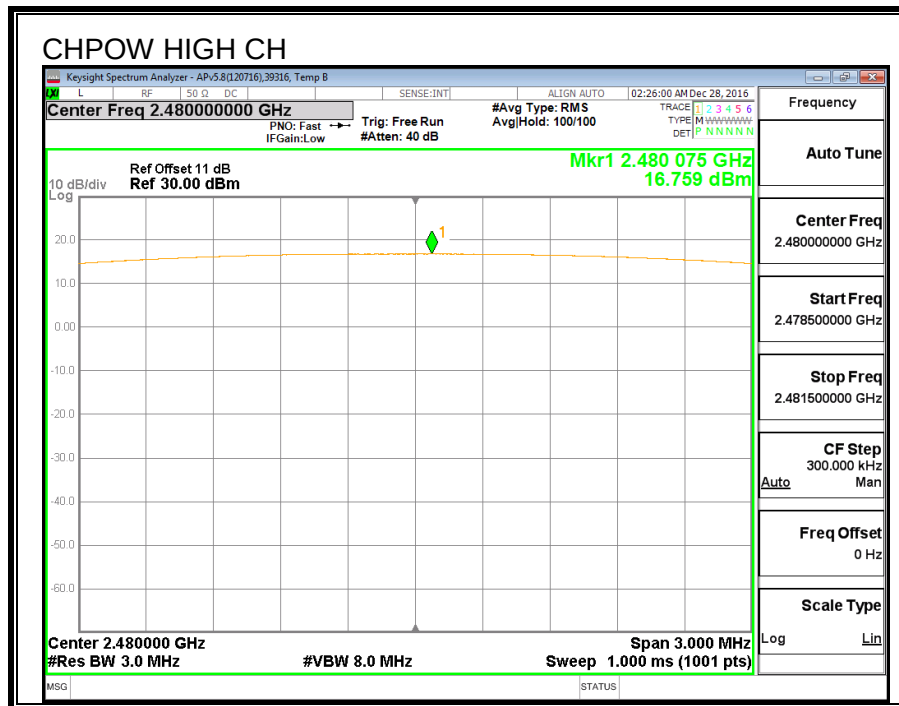
IC RSS-247 (5.4) (4)

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

RESULTS

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	16.803	30	-13.197
Middle	2440	17.233	30	-12.767
High	2480	16.759	30	-13.241





7.3.5. POWER SPECTRAL DENSITY

LIMITS

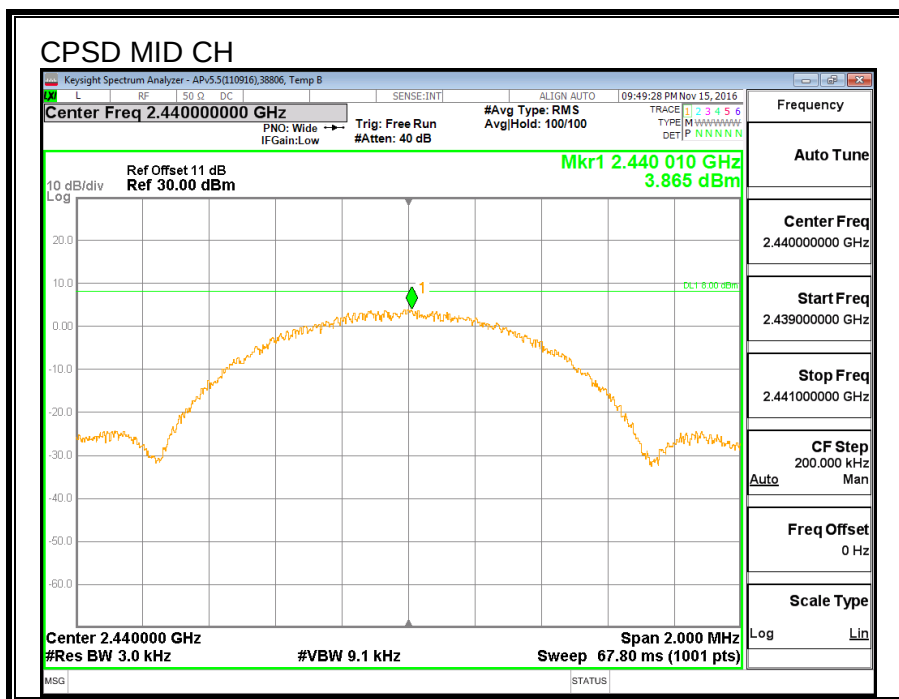
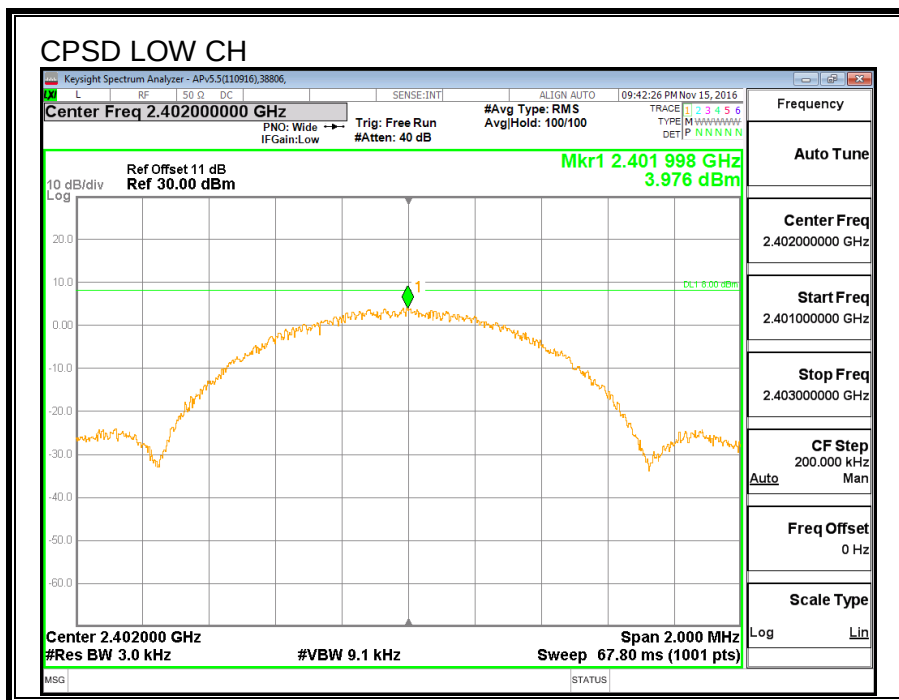
FCC §15.247 (e)

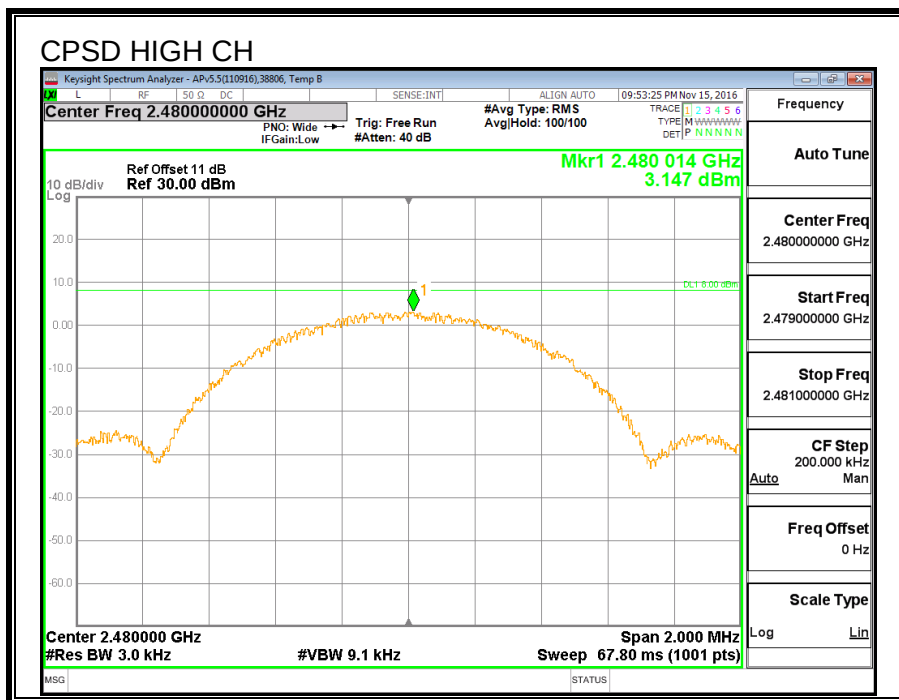
IC RSS-247 (5.2) (2)

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

RESULTS

Channel	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2402	3.976	8	-4.02
Middle	2440	3.865	8	-4.14
High	2480	3.147	8	-4.85





7.3.6. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

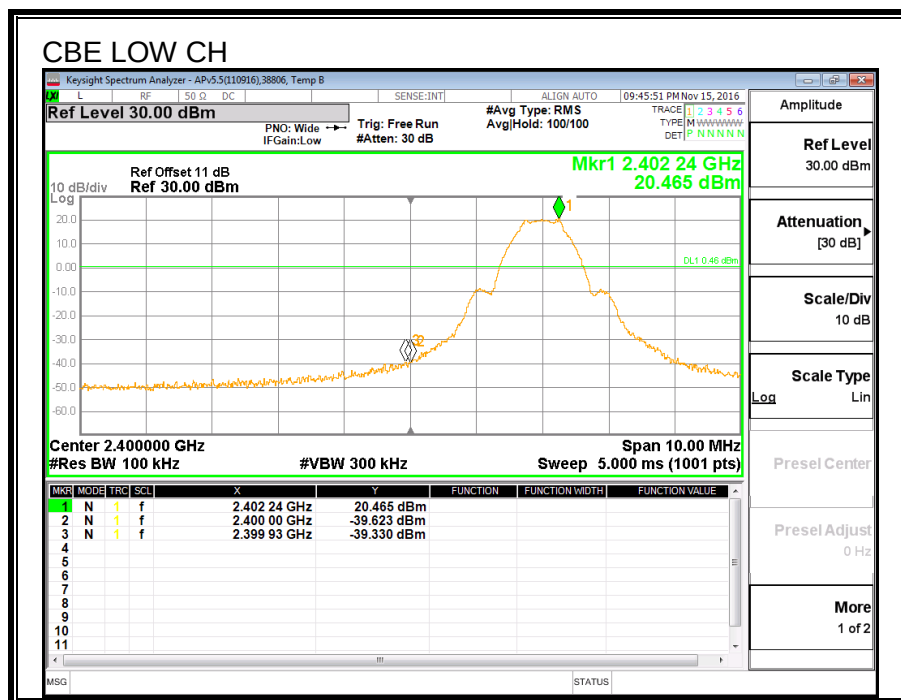
LIMITS

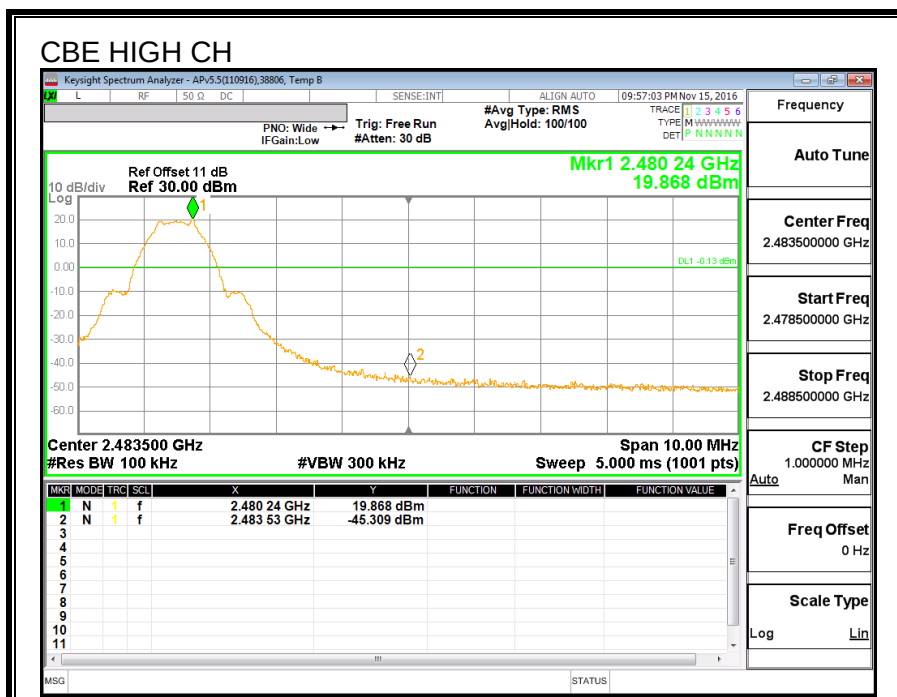
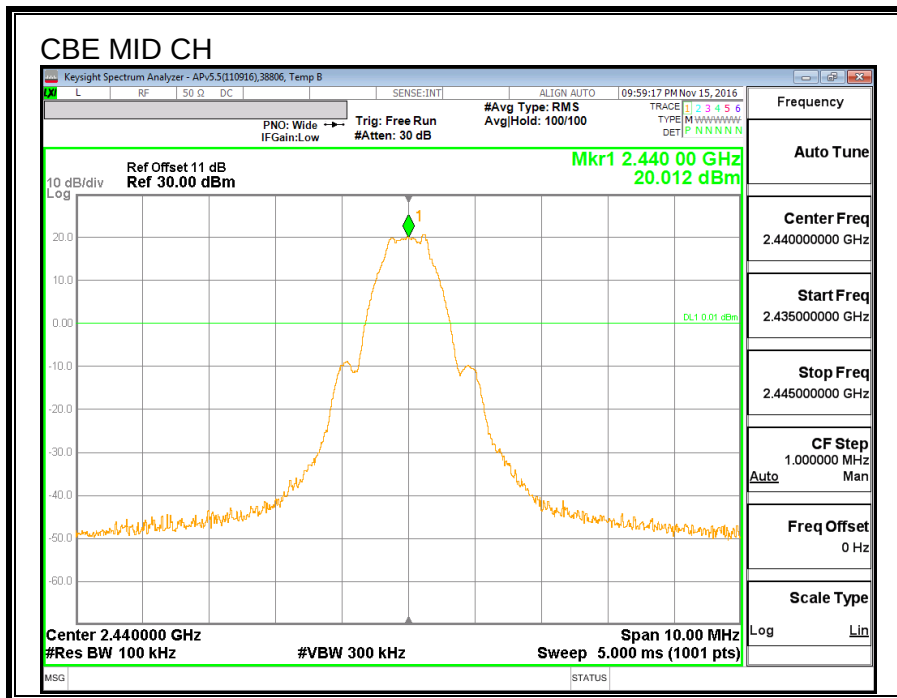
FCC §15.247 (d)

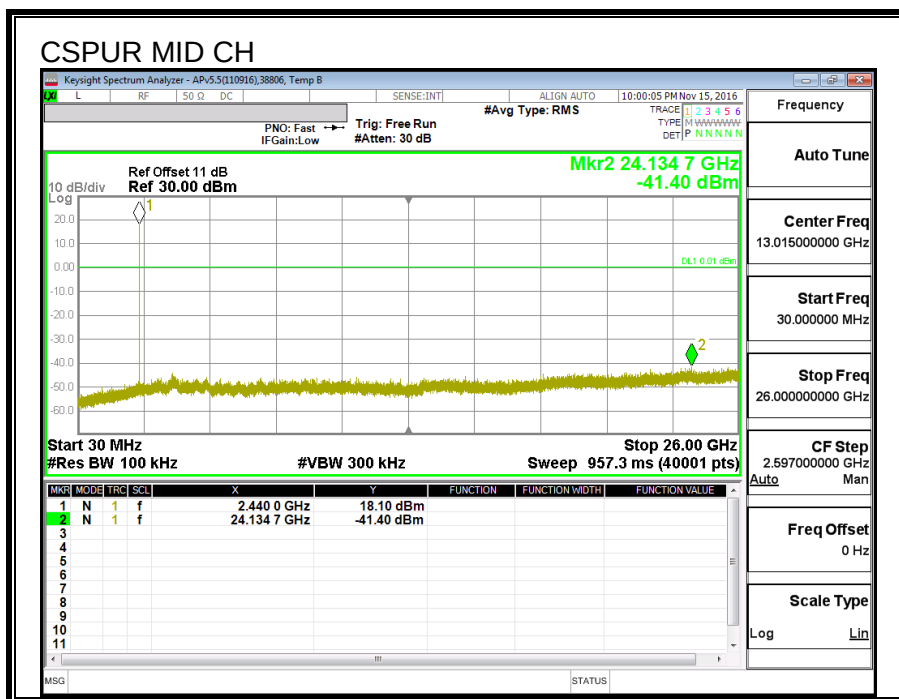
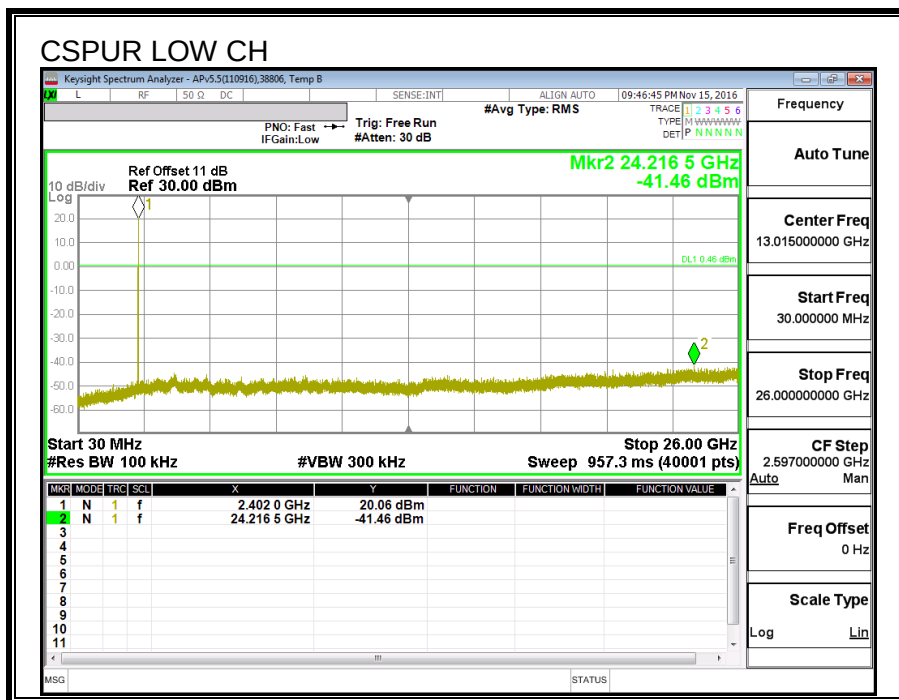
IC RSS-247 (5.5)

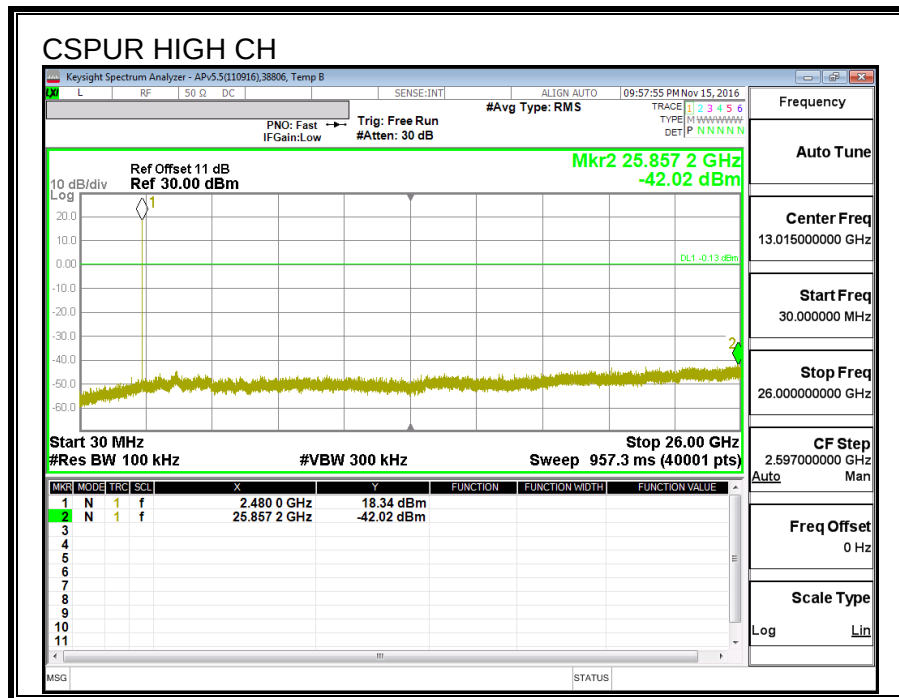
Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

RESULTS









7.4. LOW POWER MODE

7.4.1. 6 dB BANDWIDTH

LIMITS

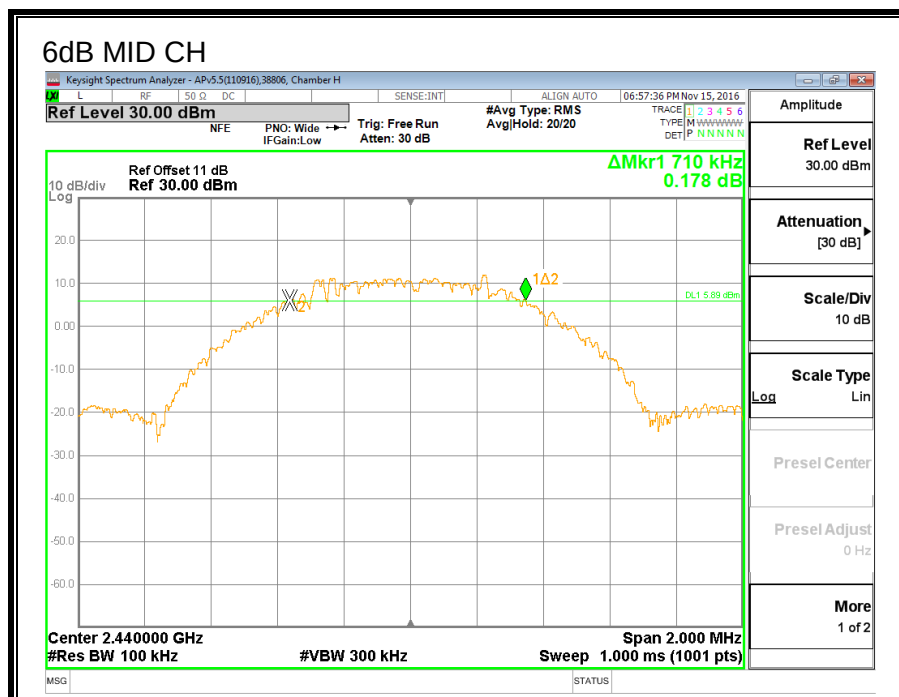
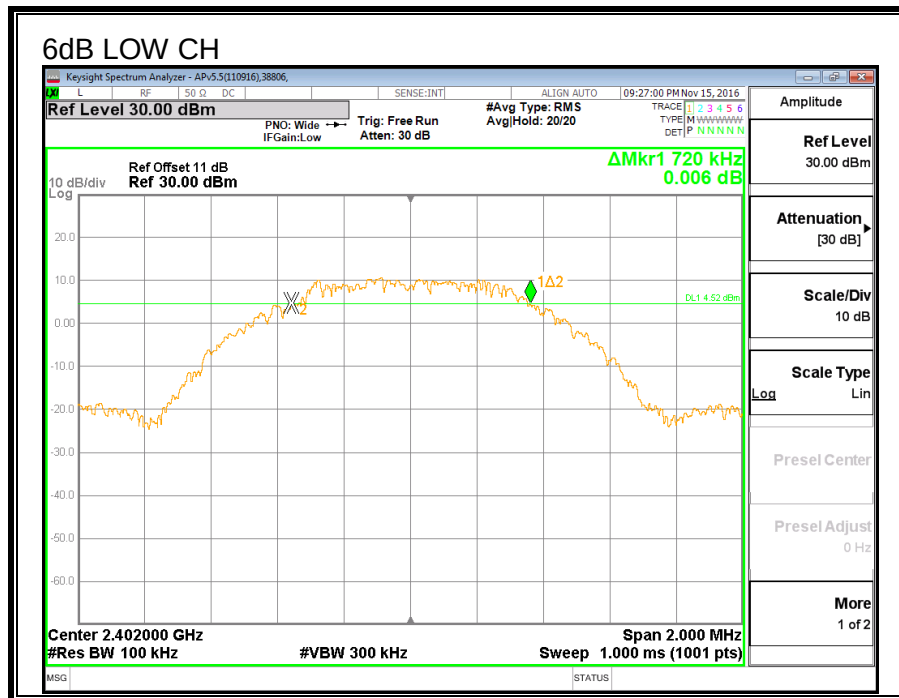
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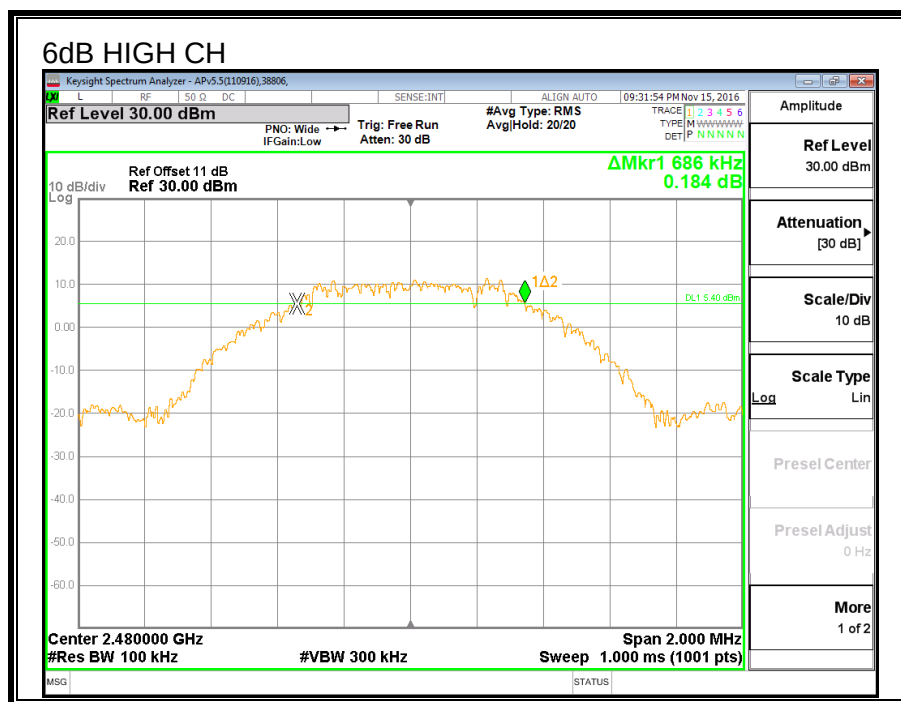
IC RSS-247 (5.2) (1)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2402	0.720	0.5
Middle	2440	0.710	0.5
High	2480	0.686	0.5





7.4.2. 99% BANDWIDTH

LIMITS

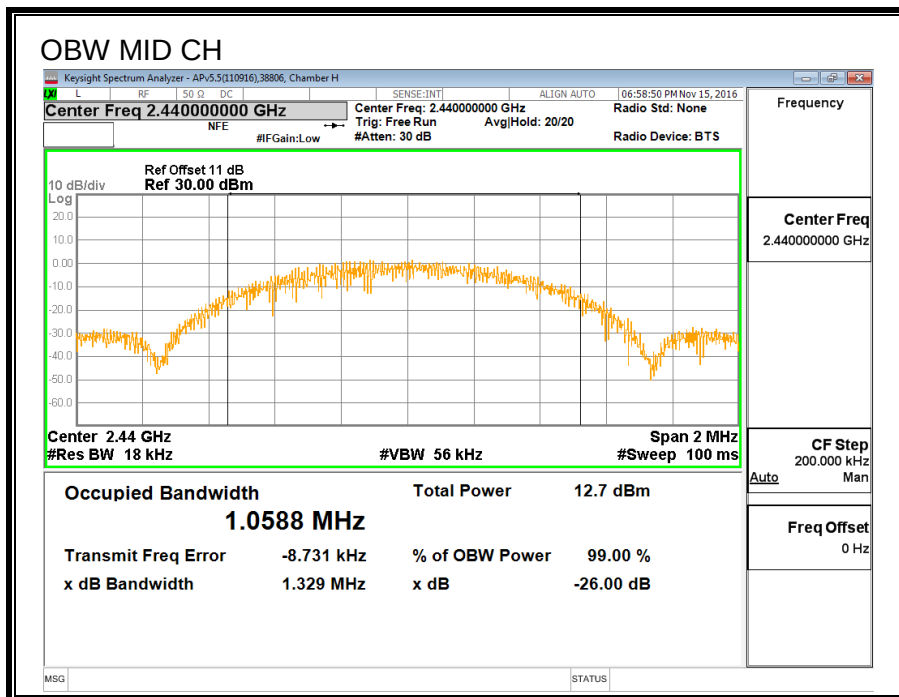
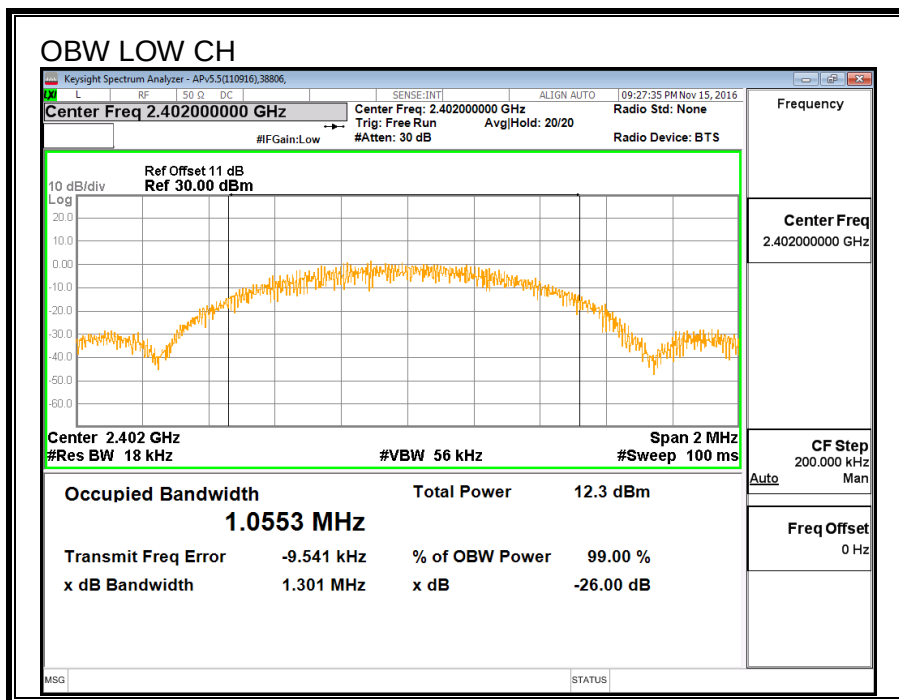
None; for reporting purposes only.

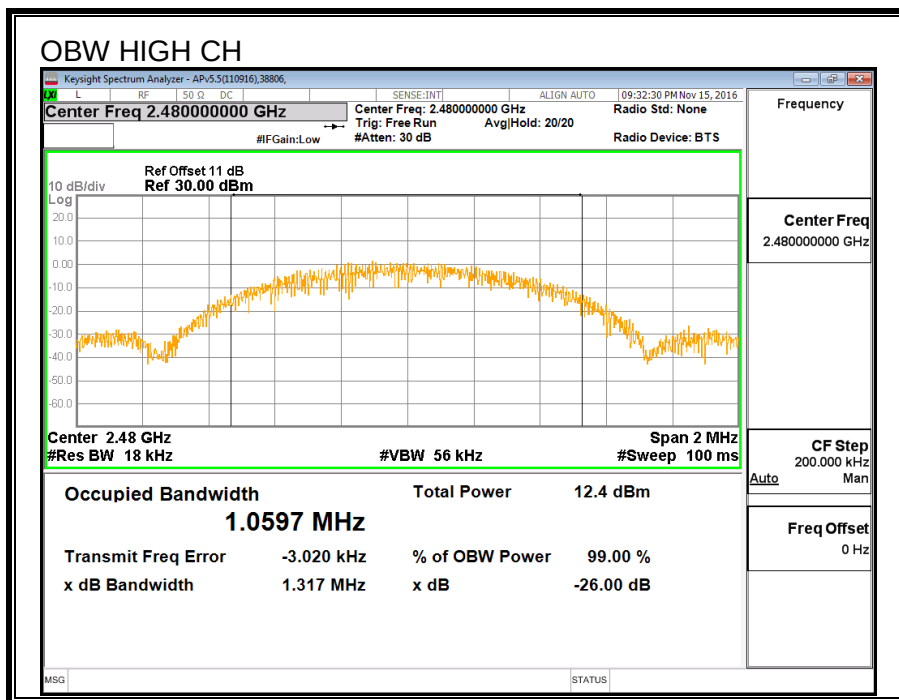
Test Procedure

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

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.0553
Middle	2440	1.0588
High	2480	1.0597





7.4.3. AVERAGE POWER

ID:	30606	Date:	12/28/2016
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LIMITS

None; for reporting purposes only.

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	AV Power (MHz)
Low	2402	6.95
Middle	2440	6.92
High	2480	6.71

7.4.4. OUTPUT POWER

ID:	30606	Date:	12/28/2016
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LIMITS

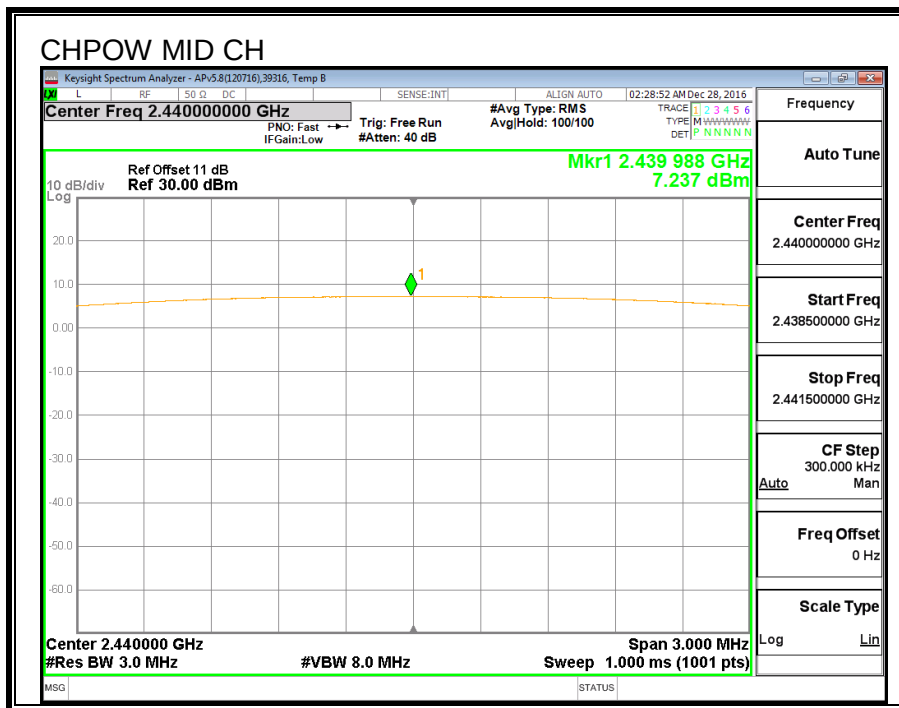
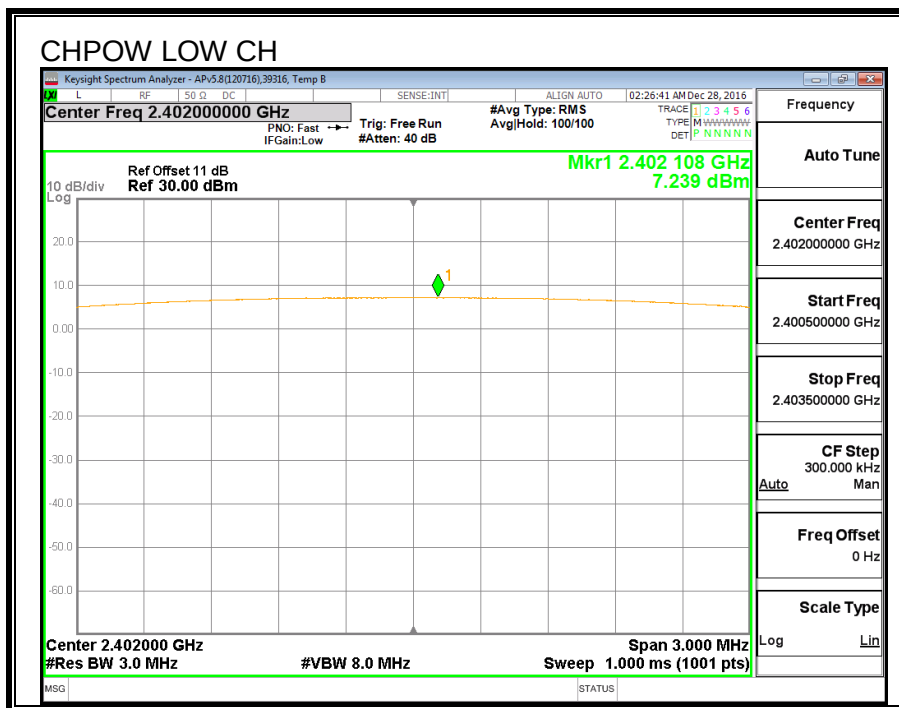
FCC §15.247 (b)

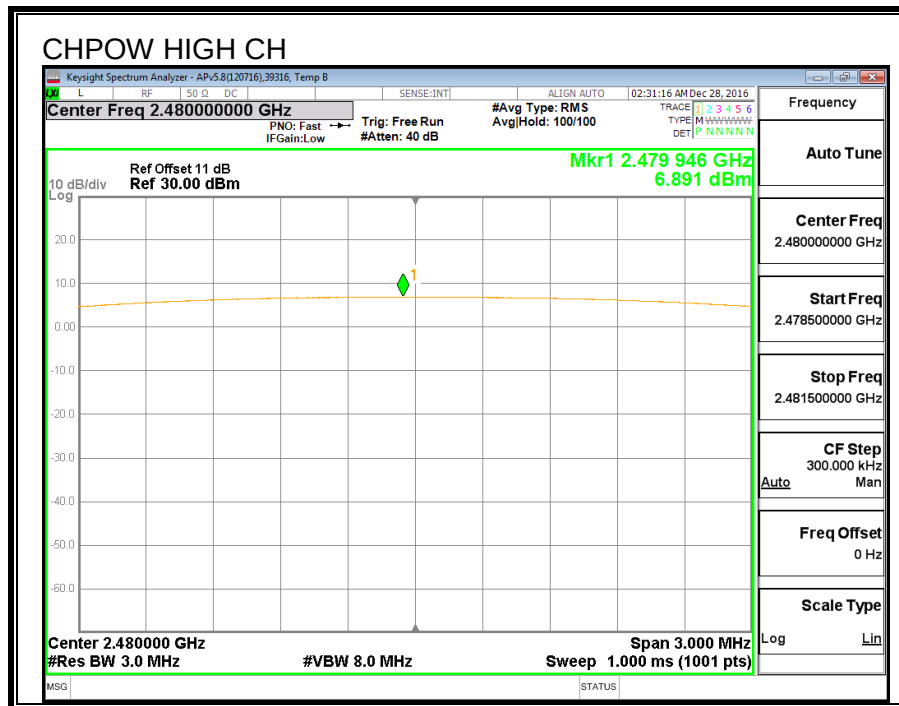
IC RSS-247 (5.4) (4)

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

RESULTS

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	7.239	30	-22.761
Middle	2440	7.237	30	-22.763
High	2480	6.891	30	-23.109





7.4.5. POWER SPECTRAL DENSITY

LIMITS

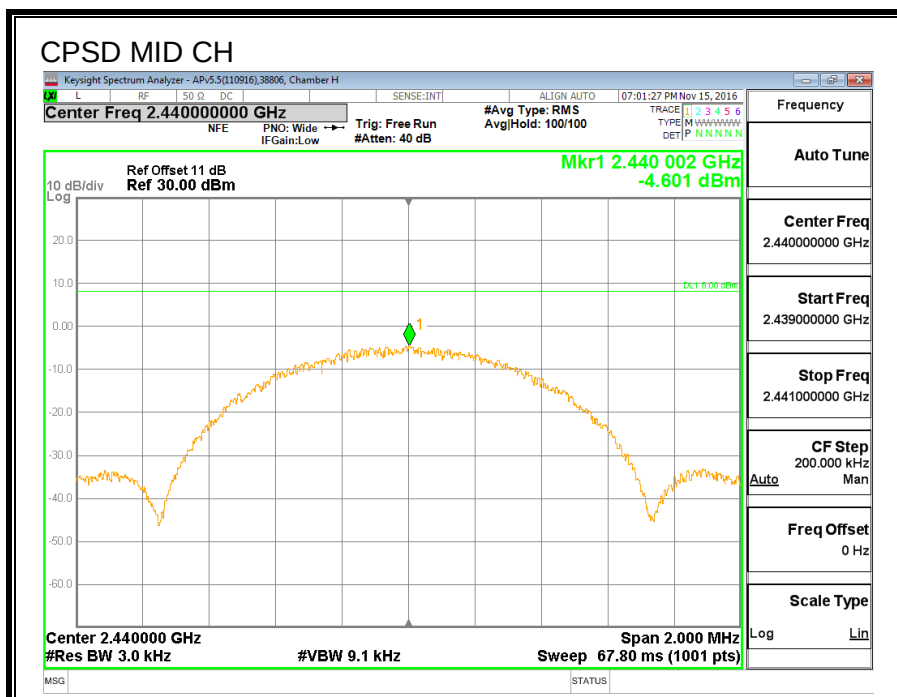
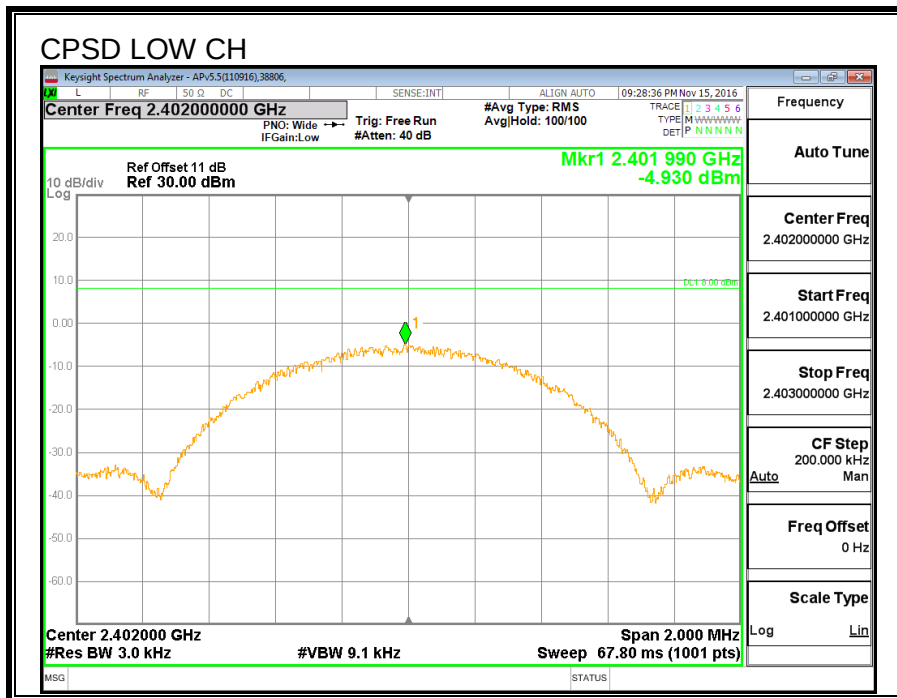
FCC §15.247 (e)

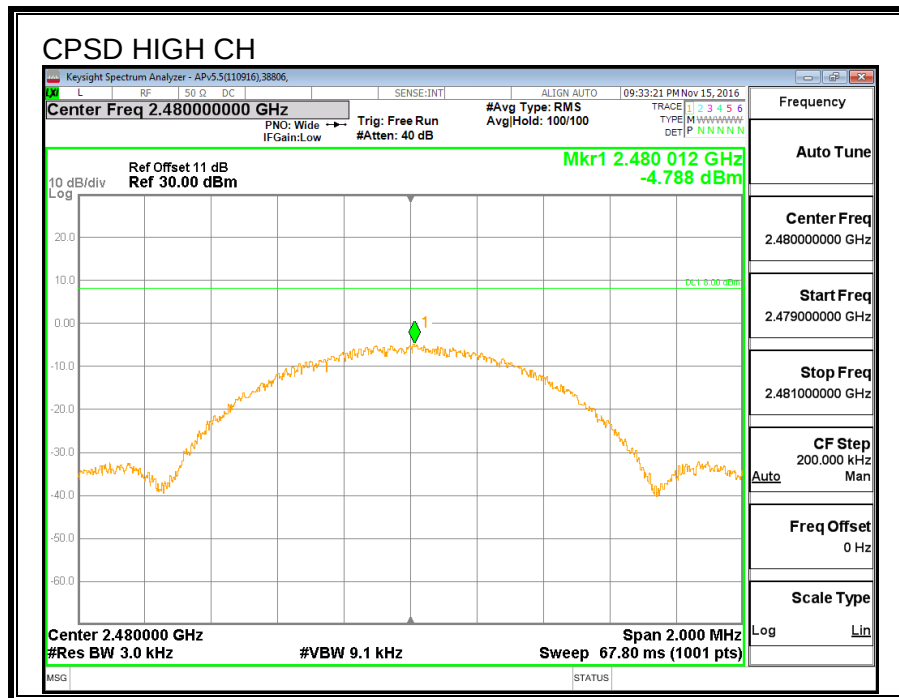
IC RSS-247 (5.2) (2)

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

RESULTS

Channel	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2402	-4.930	8	-12.93
Middle	2440	-4.601	8	-12.60
High	2480	-4.788	8	-12.79





7.4.6. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

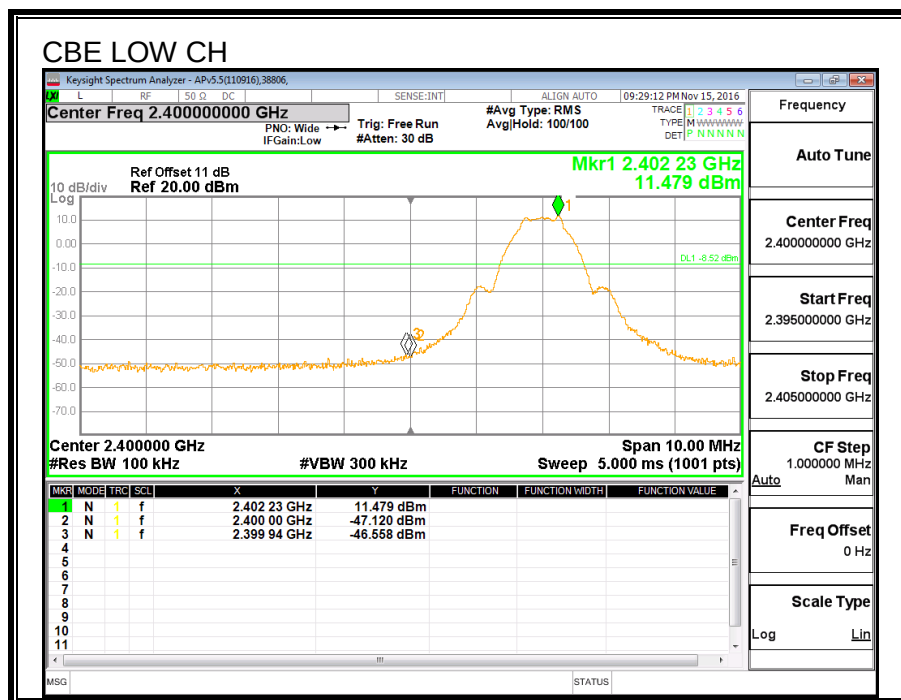
LIMITS

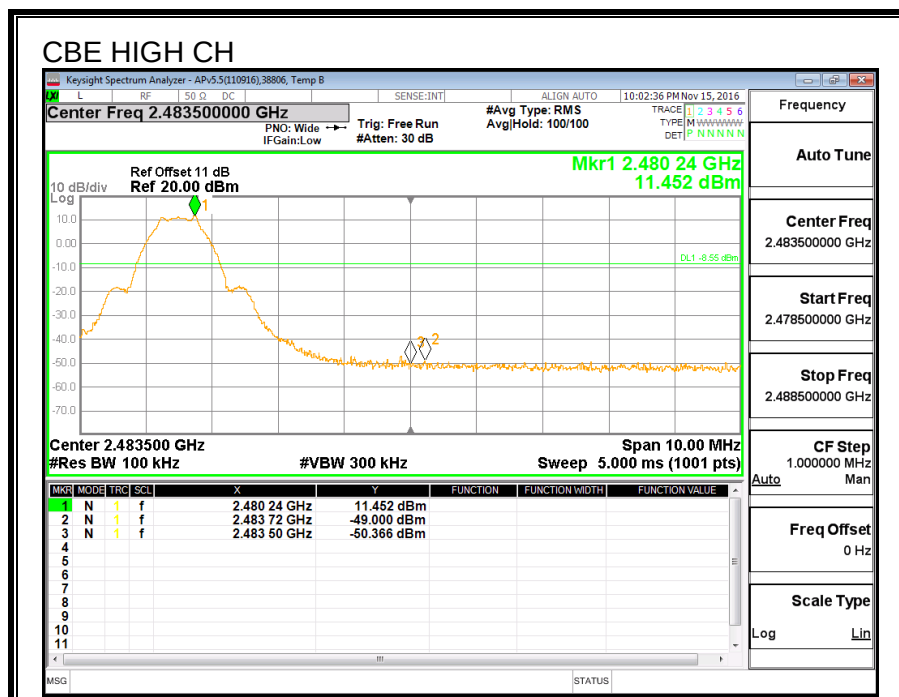
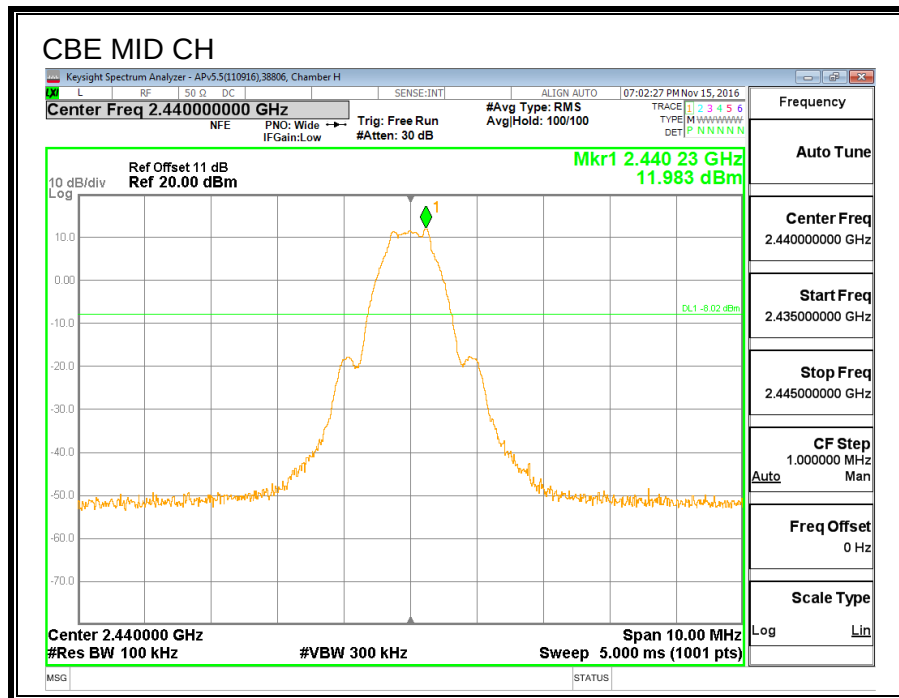
FCC §15.247 (d)

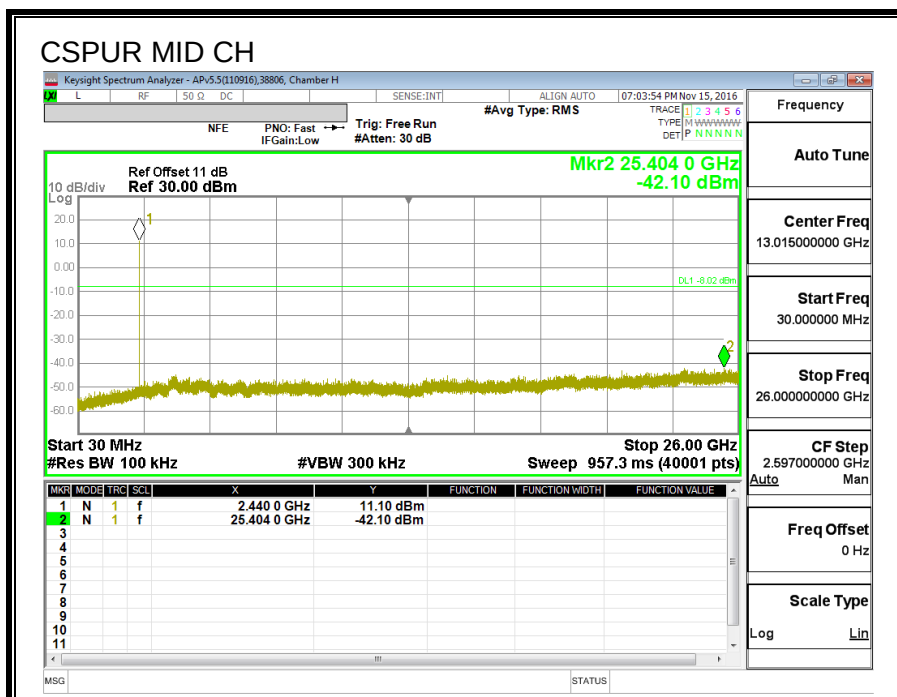
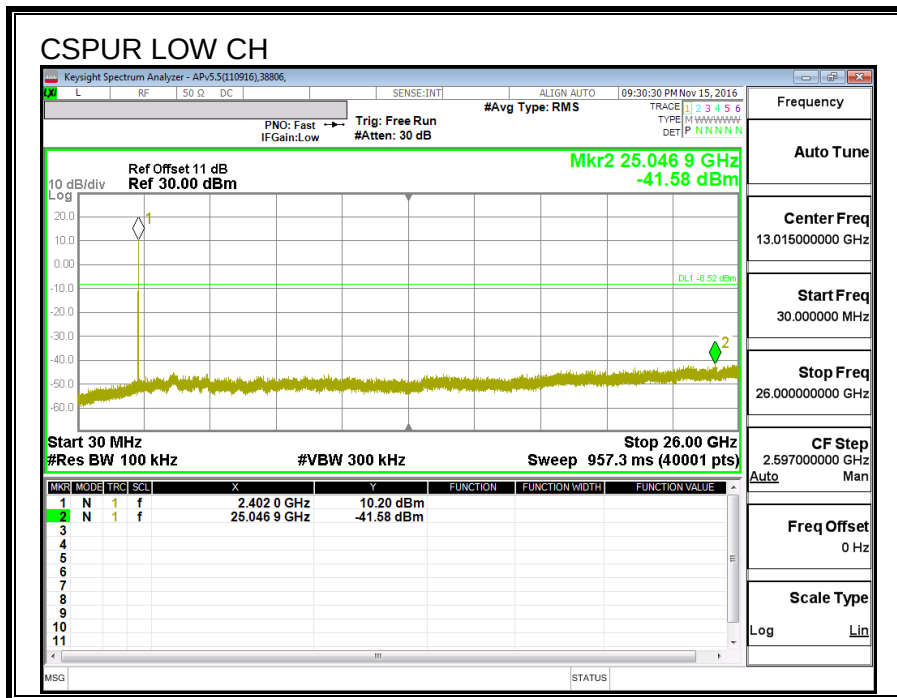
IC RSS-247 (5.5)

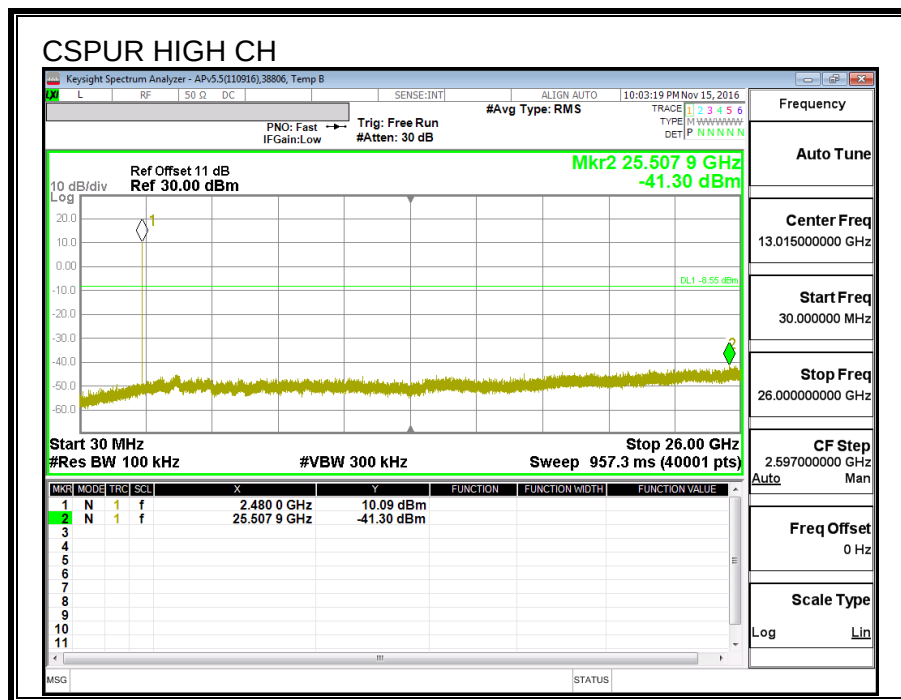
Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

RESULTS









8. RADIATED TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-GEN, Section 8.9 and 8.10.

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

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.

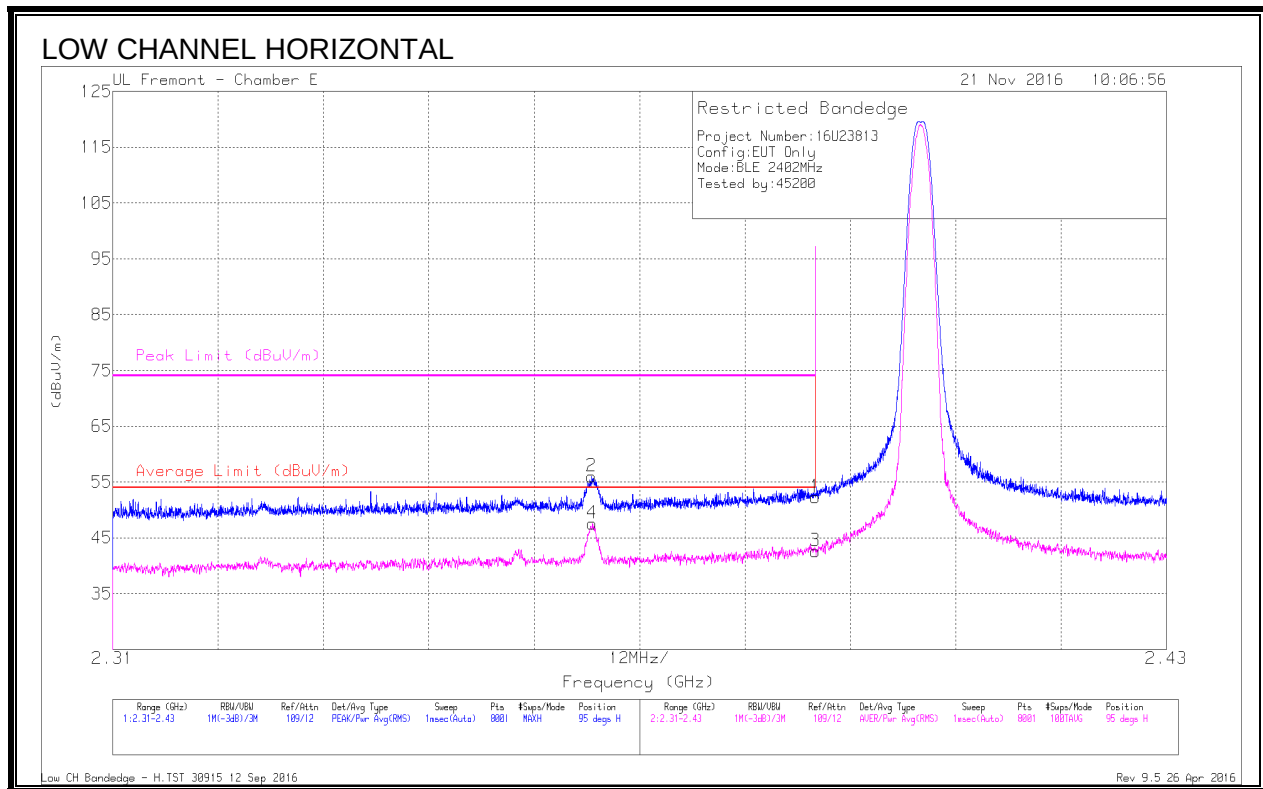
For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

For final 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 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.

8.2. HIGH POWER MODE

8.2.1. RESTRICTED BANDEDGE (LOW CHANNEL)

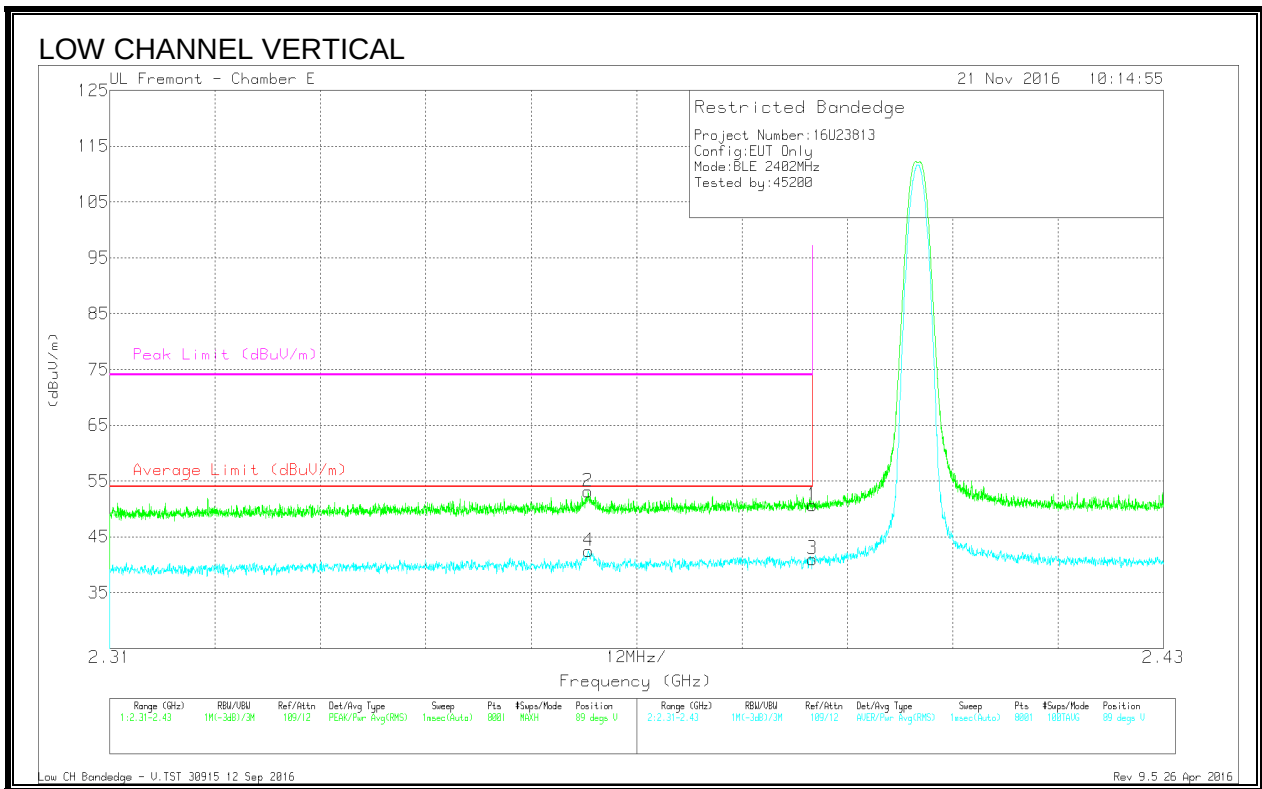


Marker	Frequ ncy (GHz)	Meter Readin g (dBuV)	Det	AF T711 (dB/m)	Amp/C b//Fitr/ Pad (dB)	Correc ted Readin g (dBuV/ m)	Averag e Limit (dBuV/ m)	Margin (dB)	Peak Limit (dBuV/ m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarit y
2	* 2.365	43.76	Pk	31.9	-19.7	55.96	-	-	74	-18.04	95	182	H
4	* 2.365	35.32	RMS	31.9	-19.7	47.52	54	-6.48	-	-	95	182	H
1	* 2.39	39.88	Pk	32.1	-19.7	52.28	-	-	74	-21.72	95	182	H
3	* 2.39	30.23	RMS	32.1	-19.7	42.63	54	-11.37	-	-	95	182	H

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

Pk - Peak detector

RMS - RMS detection



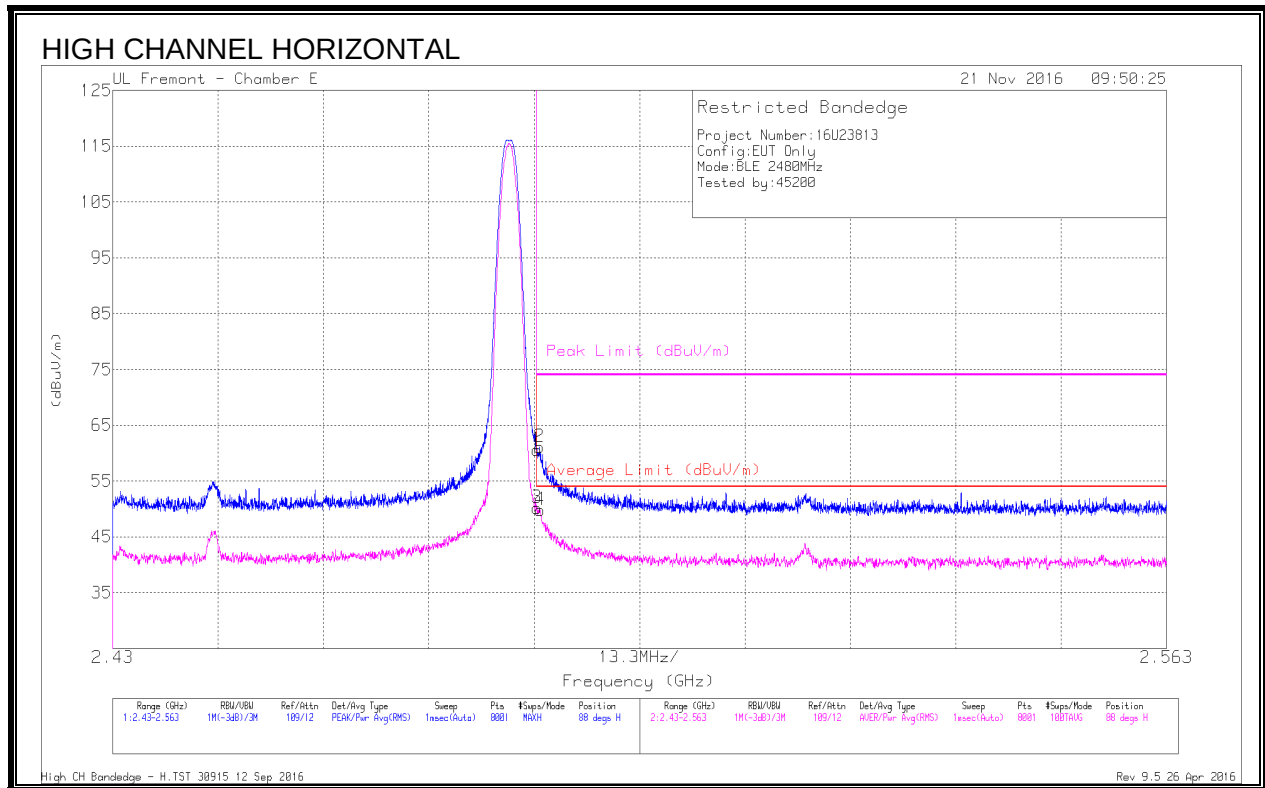
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/C bl/Filtr/ Pad (dB)	Correct ed Reading (dBuV/ m)	Average Limit (dBuV/ m)	Margin (dB)	Peak Limit (dBuV/ m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.364	40.9	Pk	31.9	-19.7	53.1	-	-	74	-20.9	89	139	V
4	* 2.364	30.28	RMS	31.9	-19.7	42.48	54	-11.52	-	-	89	139	V
1	* 2.39	38.29	Pk	32.1	-19.7	50.69	-	-	74	-23.31	89	139	V
3	* 2.39	28.64	RMS	32.1	-19.7	41.04	54	-12.96	-	-	89	139	V

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

Pk - Peak detector

RMS - RMS detection

8.2.2. AUTHORIZED BANDEDGE (HIGH CHANNEL)

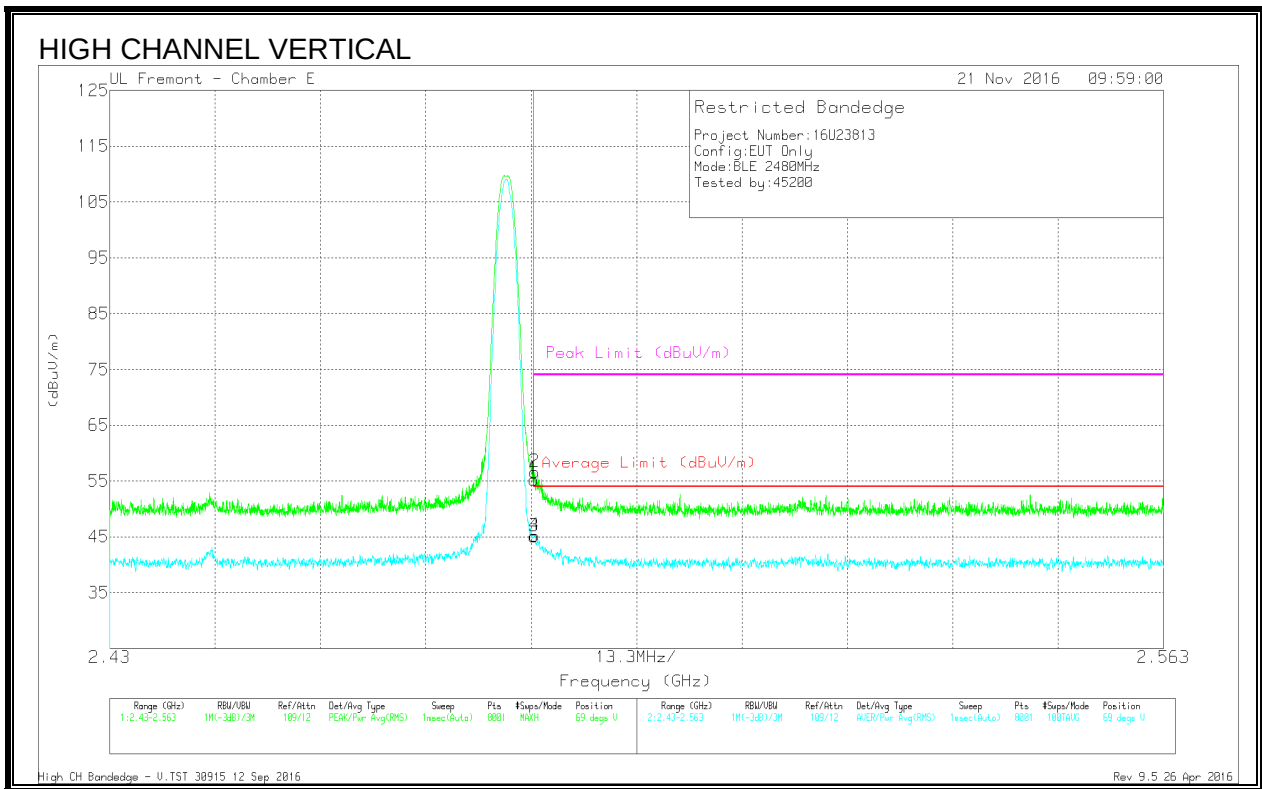


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cb/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	47.96	Pk	32.3	-19.7	60.56	-	-	74	-13.44	88	198	H
2	* 2.484	48.46	Pk	32.3	-19.7	61.06	-	-	74	-12.94	88	198	H
3	* 2.484	37.56	RMS	32.3	-19.7	50.16	54	-3.84	-	-	88	198	H
4	* 2.484	37.24	RMS	32.3	-19.7	49.84	54	-4.16	-	-	88	198	H

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

Pk - Peak detector

RMS - RMS detection



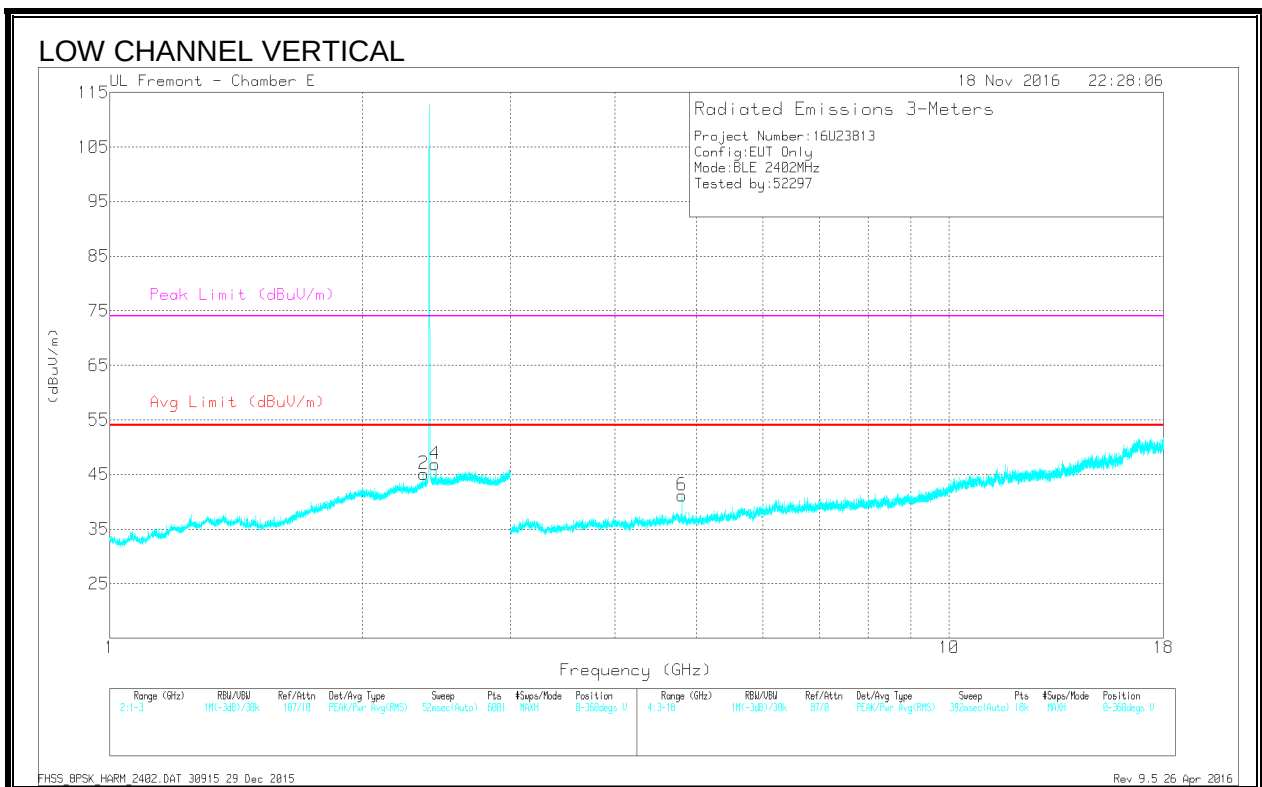
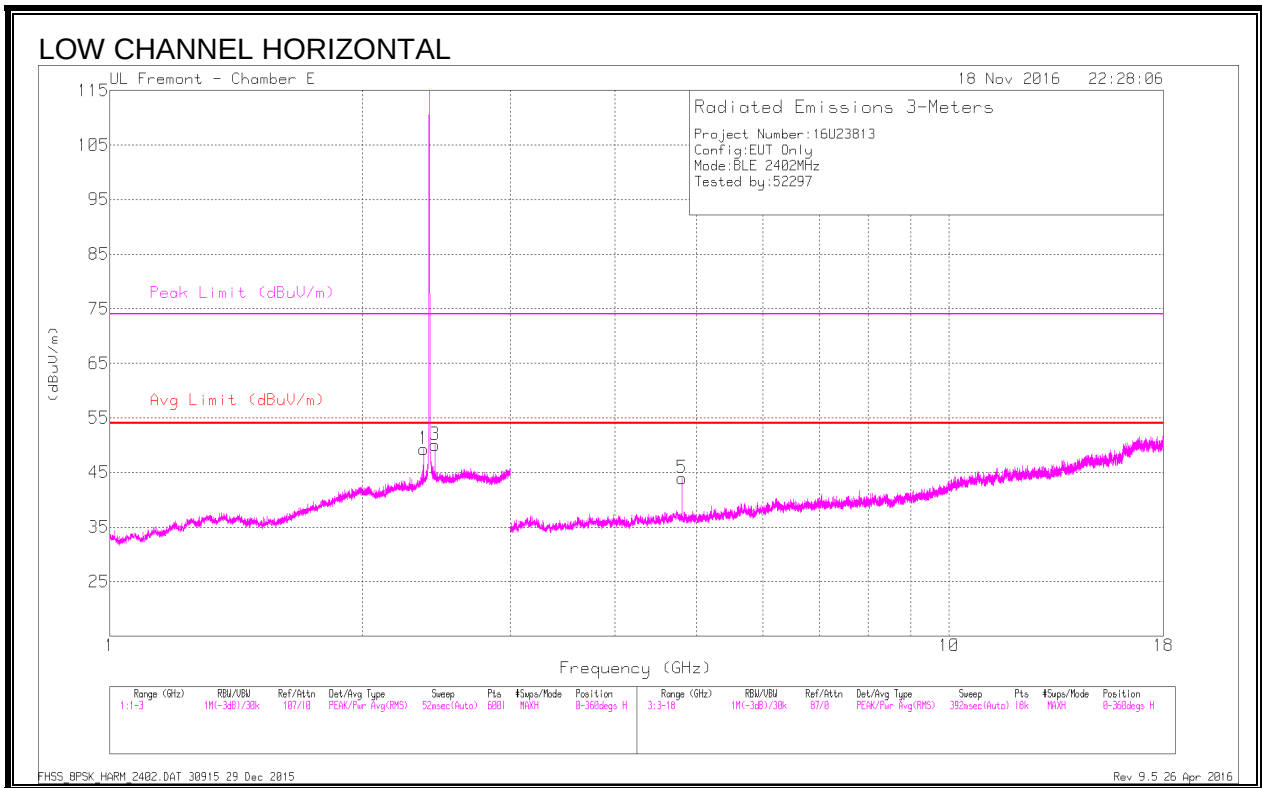
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	42.61	Pk	32.3	-19.7	55.21	-	-	74	-18.79	69	110	V
2	* 2.484	44.01	Pk	32.3	-19.7	56.61	-	-	74	-17.39	69	110	V
3	* 2.484	32.43	RMS	32.3	-19.7	45.03	54	-8.97	-	-	69	110	V
4	* 2.484	32.62	RMS	32.3	-19.7	45.22	54	-8.78	-	-	69	110	V

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

Pk - Peak detector

RMS - RMS detection

8.2.3. HARMONICS AND SPURIOUS EMISSIONS

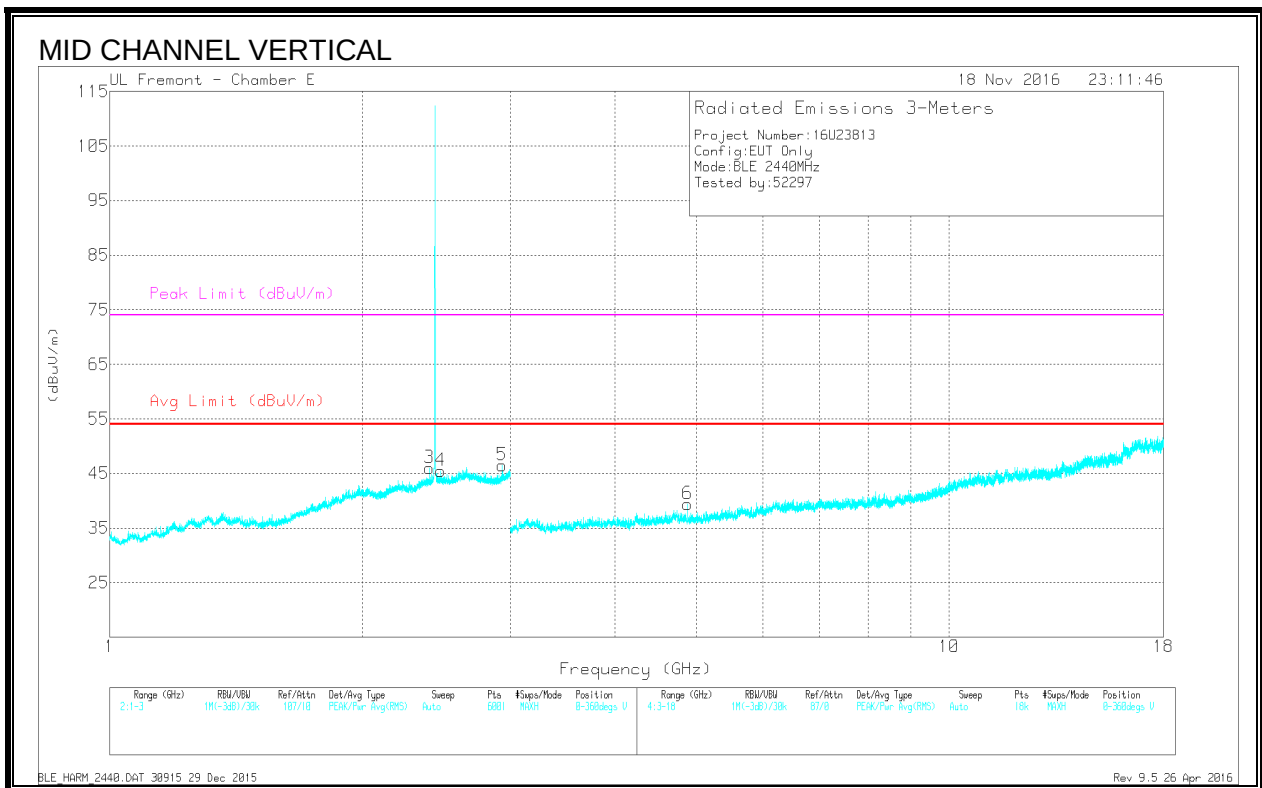
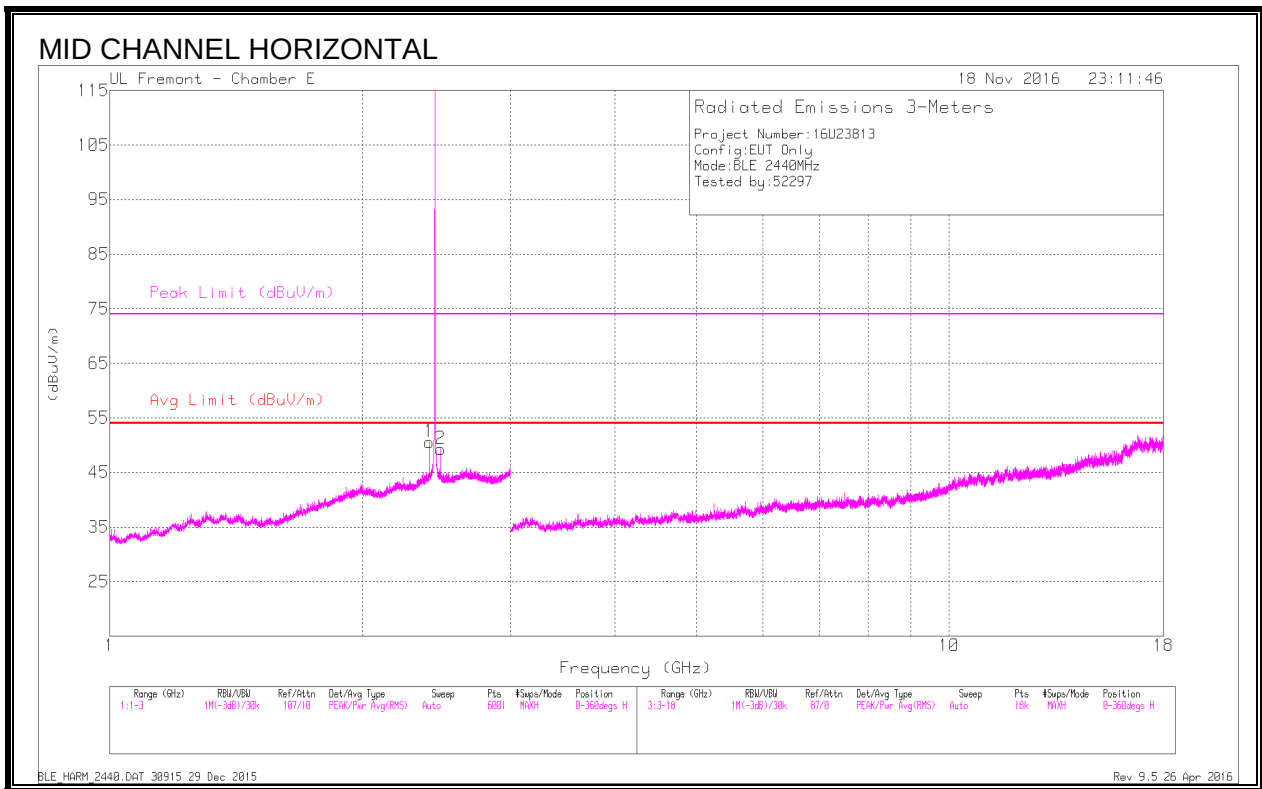


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.365	42.82	PK2	31.9	-19.7	55.02	-	-	74	-18.98	270	180	H
	* 2.365	34.87	MAv1	31.9	-19.7	47.07	54	-6.93	-	-	270	180	H
2	* 2.365	39.21	PK2	31.9	-19.7	51.41	-	-	74	-22.59	255	124	V
	* 2.365	28.93	MAv1	31.9	-19.7	41.13	54	-12.87	-	-	255	124	V
5	* 4.804	43.78	PK2	34	-29.6	48.18	-	-	74	-25.82	262	108	H
	* 4.804	36.69	MAv1	34	-29.6	41.09	54	-12.91	-	-	261	108	H
6	* 4.804	43.08	PK2	34	-29.6	47.48	-	-	74	-26.52	329	241	V
	* 4.804	34.57	MAv1	34	-29.6	38.97	54	-15.03	-	-	329	241	V
3	2.439	43	PK2	32.2	-19.8	55.4	-	-	-	-	275	189	H
4	2.44	40.33	PK2	32.2	-19.8	52.73	-	-	-	-	254	136	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

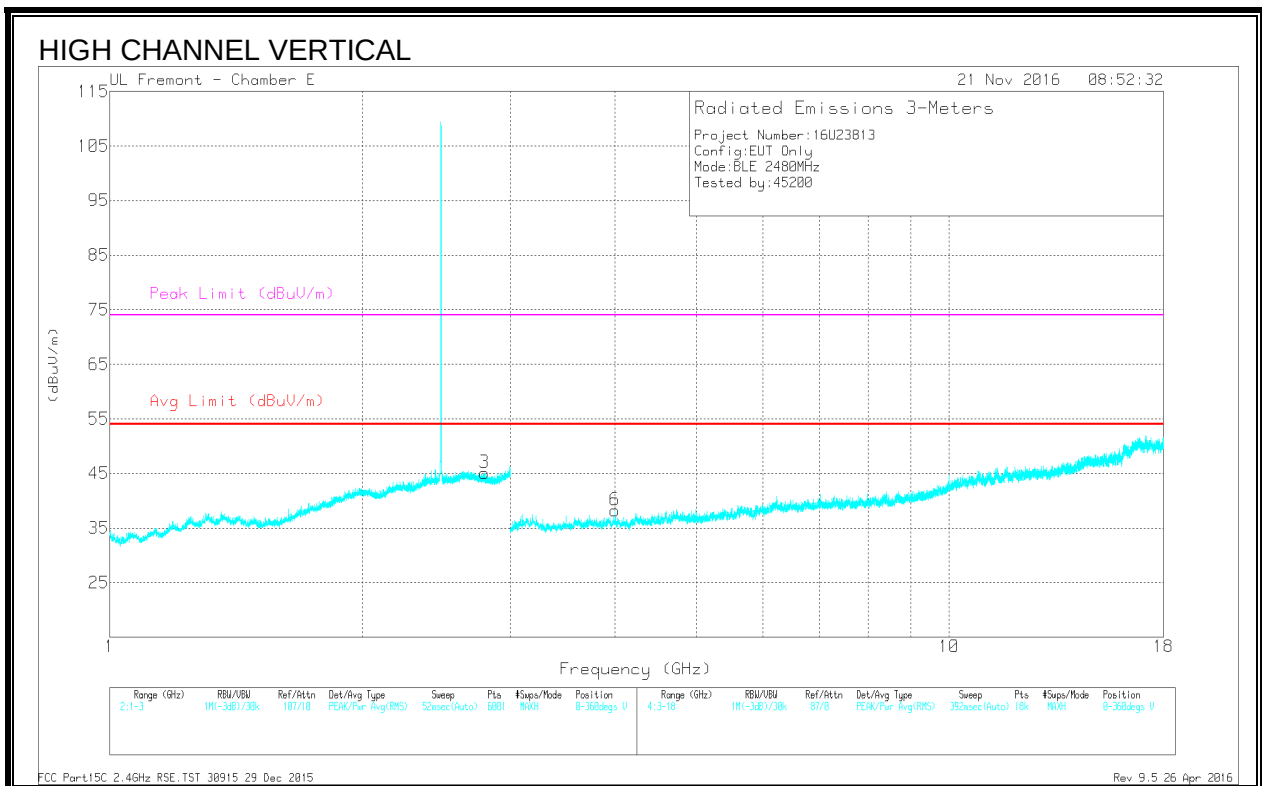
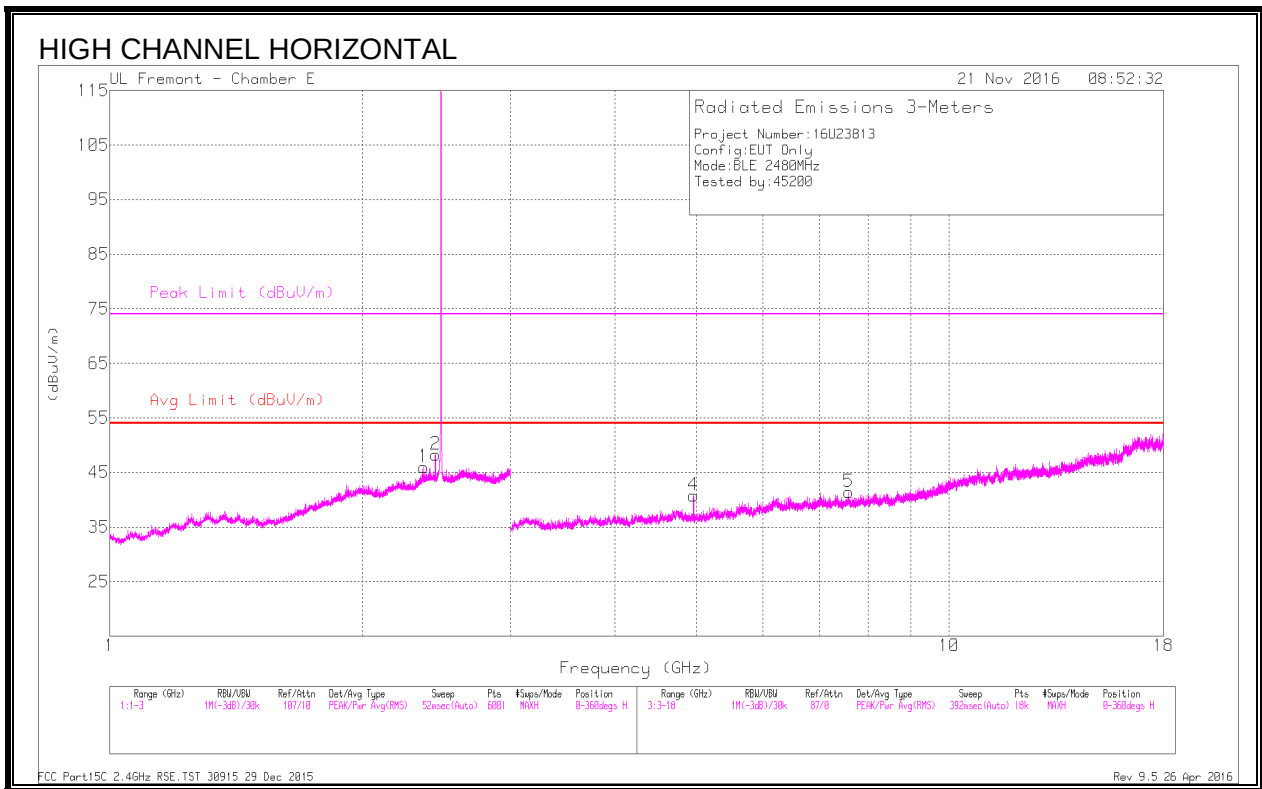


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 4.88	41.42	PK2	34	-30.4	45.02	-	-	74	-28.98	348	100	V
	* 4.88	31.92	MAv1	34	-30.4	35.52	54	-18.48	-	-	348	100	V
1	2.402	40.24	PK2	32.2	-19.7	52.74	-	-	-	-	233	100	V
3	2.403	43.49	PK2	32.2	-19.7	55.99	-	-	-	-	278	204	H
2	2.477	42.48	PK2	32.3	-19.7	55.08	-	-	-	-	265	189	H
4	2.477	40.37	PK2	32.3	-19.7	52.97	-	-	-	-	240	109	V
5	2.933	37.82	PK2	32.1	-18.9	51.02	-	-	-	-	355	210	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (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	* 2.367	40.38	PK2	31.9	-19.8	52.48	-	-	74	-21.52	86	244	H
	* 2.368	29.74	MAv1	31.9	-19.8	41.84	54	-12.16	-	-	86	244	H
3	* 2.796	38.23	PK2	32.4	-19.7	50.93	-	-	74	-23.07	294	123	V
	* 2.796	26.58	MAv1	32.4	-19.7	39.28	54	-14.72	-	-	294	123	V
4	* 4.961	42.35	PK2	34	-30.3	46.05	-	-	74	-27.95	74	116	H
	* 4.96	33.05	MAv1	34	-30.3	36.75	54	-17.25	-	-	74	116	H
5	* 7.59	36.67	PK2	35.7	-25.7	46.67	-	-	74	-27.33	172	226	H
	* 7.593	26.24	MAv1	35.7	-25.6	36.34	54	-17.66	-	-	172	226	H
6	* 3.997	40.28	PK2	33.1	-29.4	43.98	-	-	74	-30.02	28	222	V
	* 3.998	28.86	MAv1	33.1	-29.5	32.46	54	-21.54	-	-	28	222	V
2	2.442	41.43	PK2	32.2	-19.6	54.03	-	-	-	-	87	126	H

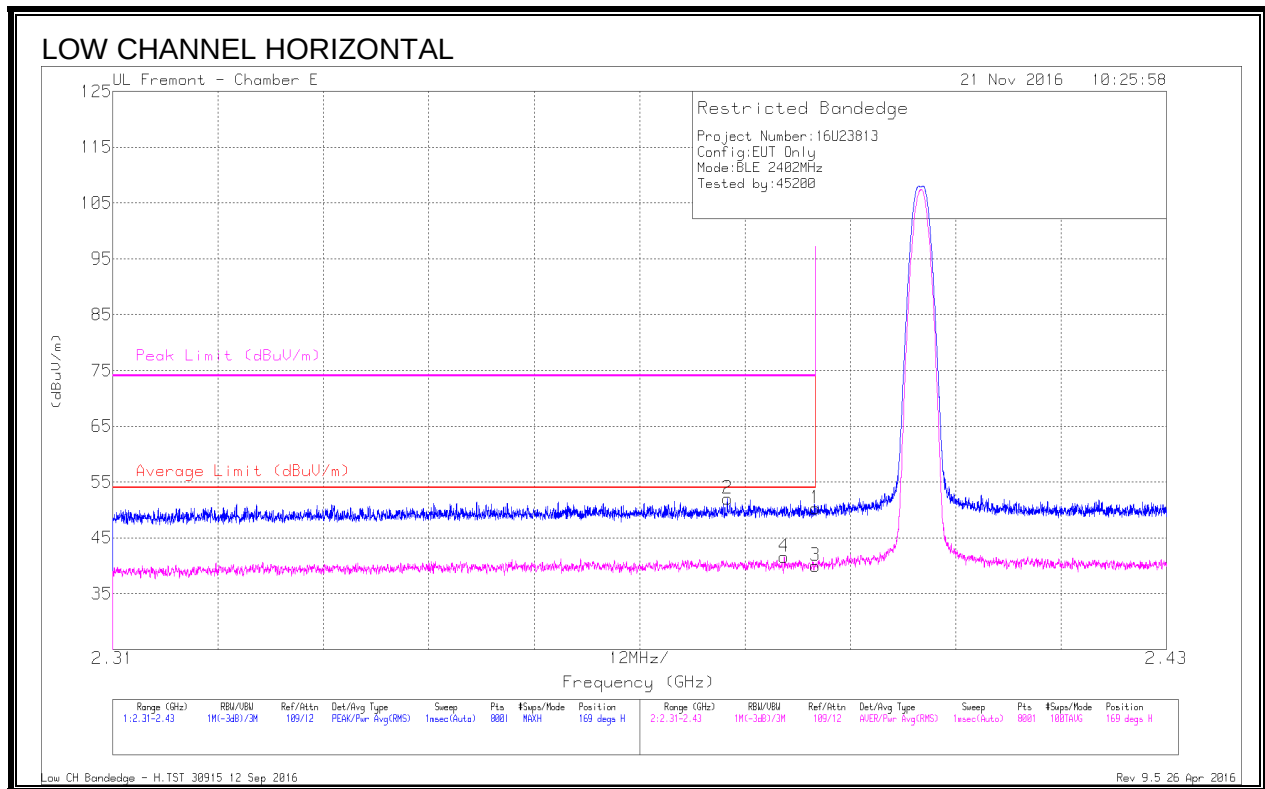
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

8.3. LOW POWER MODE

8.3.1. RESTRICTED BANDEDGE (LOW CHANNEL)

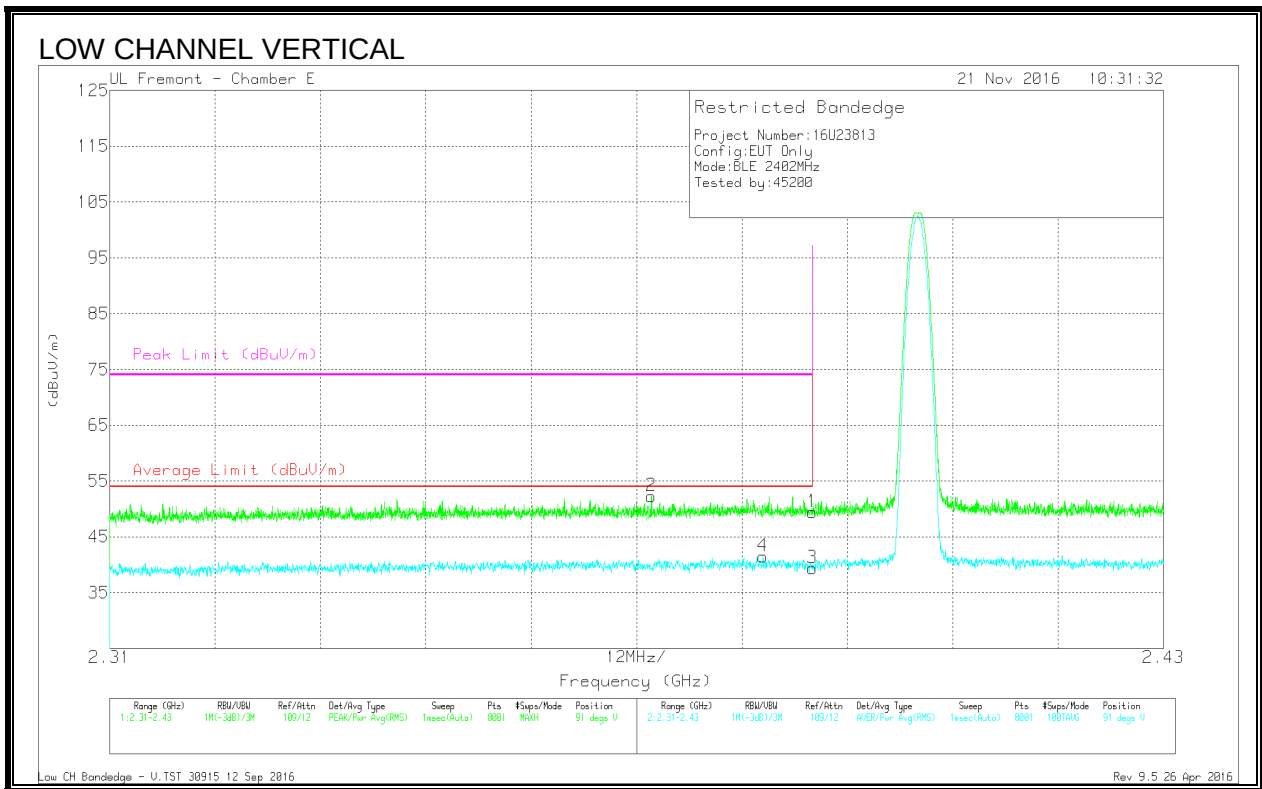


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.38	39.66	Pk	32	-19.6	52.06	-	-	74	-21.94	169	166	H
4	* 2.386	29.16	RMS	32.1	-19.7	41.56	54	-12.44	-	-	169	166	H
1	* 2.39	37.86	Pk	32.1	-19.7	50.26	-	-	74	-23.74	169	166	H
3	* 2.39	27.59	RMS	32.1	-19.7	39.99	54	-14.01	-	-	169	166	H

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

Pk - Peak detector

RMS - RMS detection



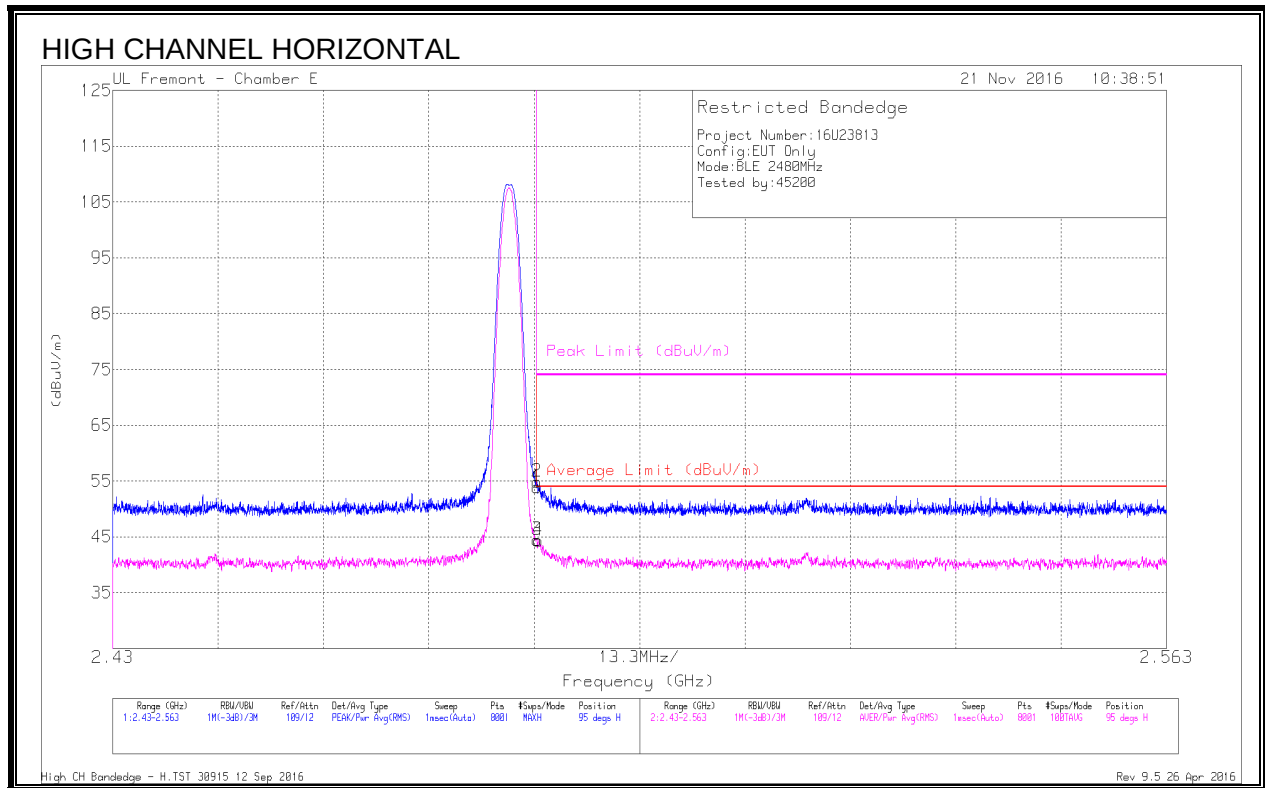
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/C bl/Filtr/ Pad (dB)	Correct ed Reading (dBuV/ m)	Average Limit (dBuV/ m)	Margin (dB)	Peak Limit (dBuV/ m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.372	40.12	Pk	32	-19.8	52.32	-	-	74	-21.68	91	113	V
4	* 2.384	28.9	RMS	32.1	-19.5	41.5	54	-12.5	-	-	91	113	V
1	* 2.39	36.99	Pk	32.1	-19.7	49.39	-	-	74	-24.61	91	113	V
3	* 2.39	27.01	RMS	32.1	-19.7	39.41	54	-14.59	-	-	91	113	V

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

Pk - Peak detector

RMS - RMS detection

8.3.2. AUTHORIZED BANDEDGE (HIGH CHANNEL)

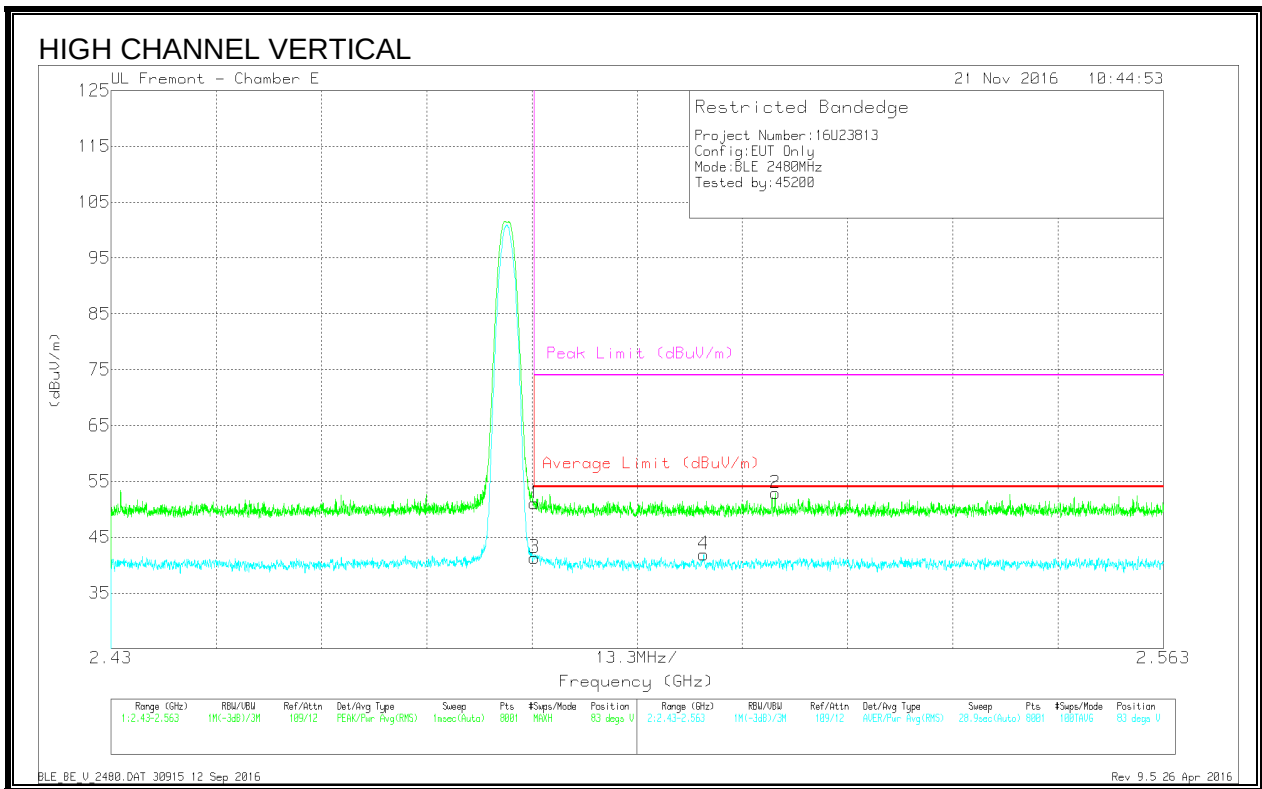


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cb/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	41.29	Pk	32.3	-19.7	53.89	-	-	74	-20.11	95	147	H
2	* 2.484	42.23	Pk	32.3	-19.7	54.83	-	-	74	-19.17	95	147	H
3	* 2.484	31.84	RMS	32.3	-19.7	44.44	54	-9.56	-	-	95	147	H
4	* 2.484	31.72	RMS	32.3	-19.7	44.32	54	-9.68	-	-	95	147	H

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

Pk - Peak detector

RMS - RMS detection



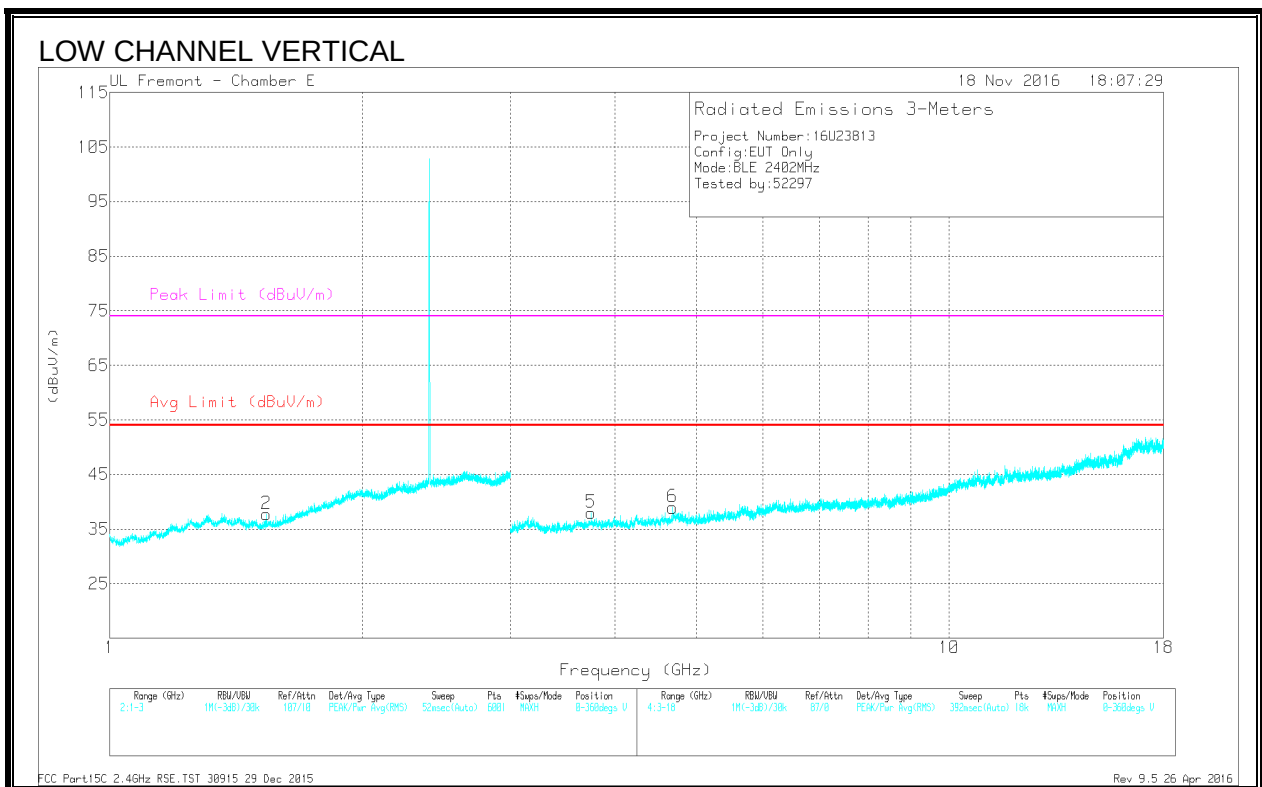
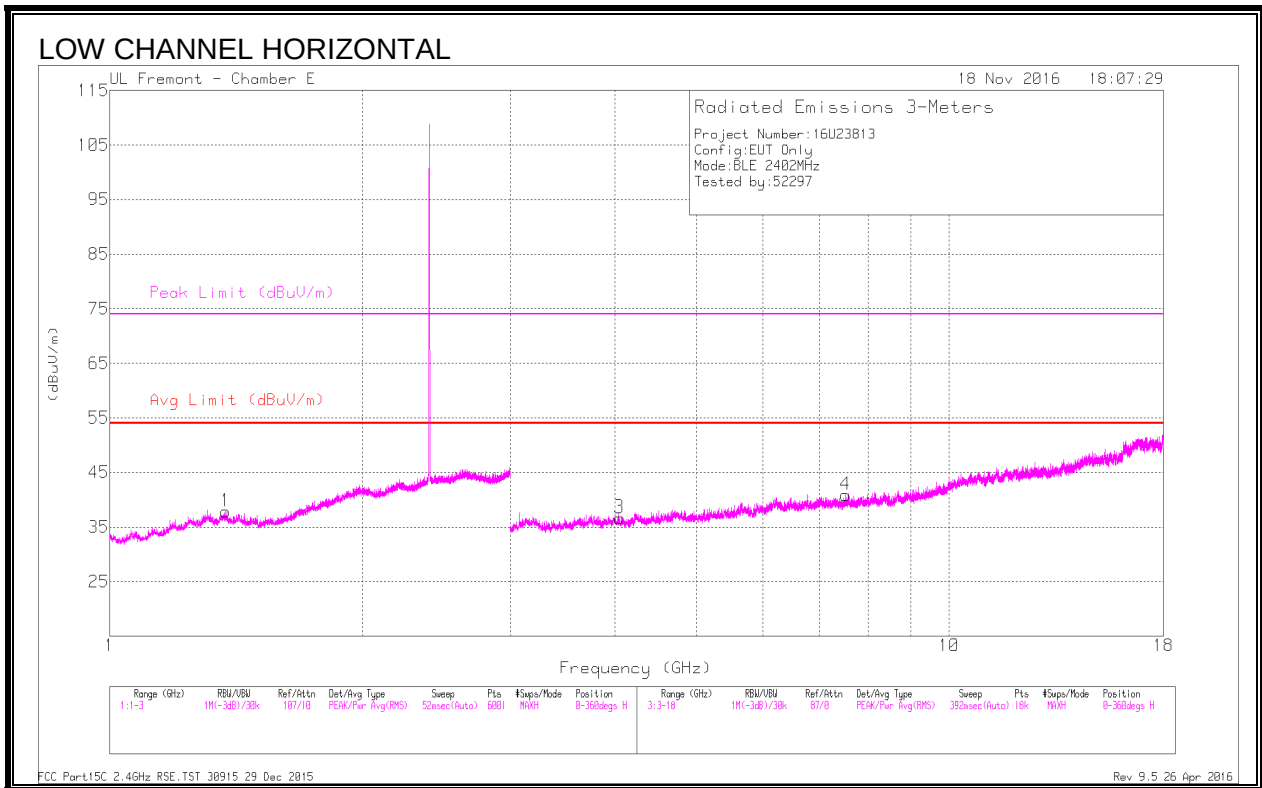
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/C bl/Filtr/ Pad (dB)	Correct ed Reading (dBuV/ m)	Average Limit (dBuV/ m)	Margin (dB)	Peak Limit (dBuV/ m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	38.44	Pk	32.3	-19.7	51.04	-	-	74	-22.96	83	108	V
3	* 2.484	28.72	RMS	32.3	-19.7	41.32	54	-12.68	-	-	83	108	V
4	2.505	29.43	RMS	32.3	-19.8	41.93	54	-12.07	-	-	83	108	V
2	2.514	40.37	Pk	32.3	-19.8	52.87	-	-	74	-21.13	83	108	V

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

Pk - Peak detector

RMS - RMS detection

8.3.3. HARMONICS AND SPURIOUS EMISSIONS

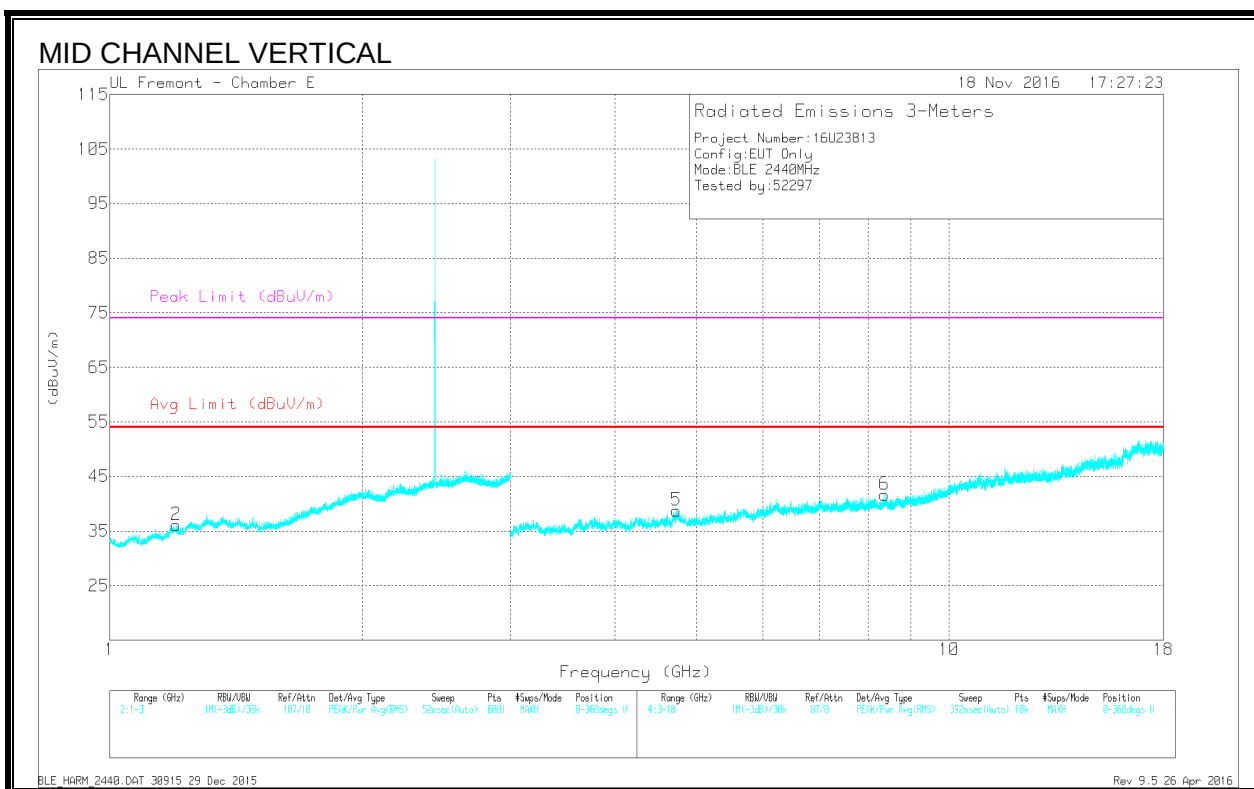
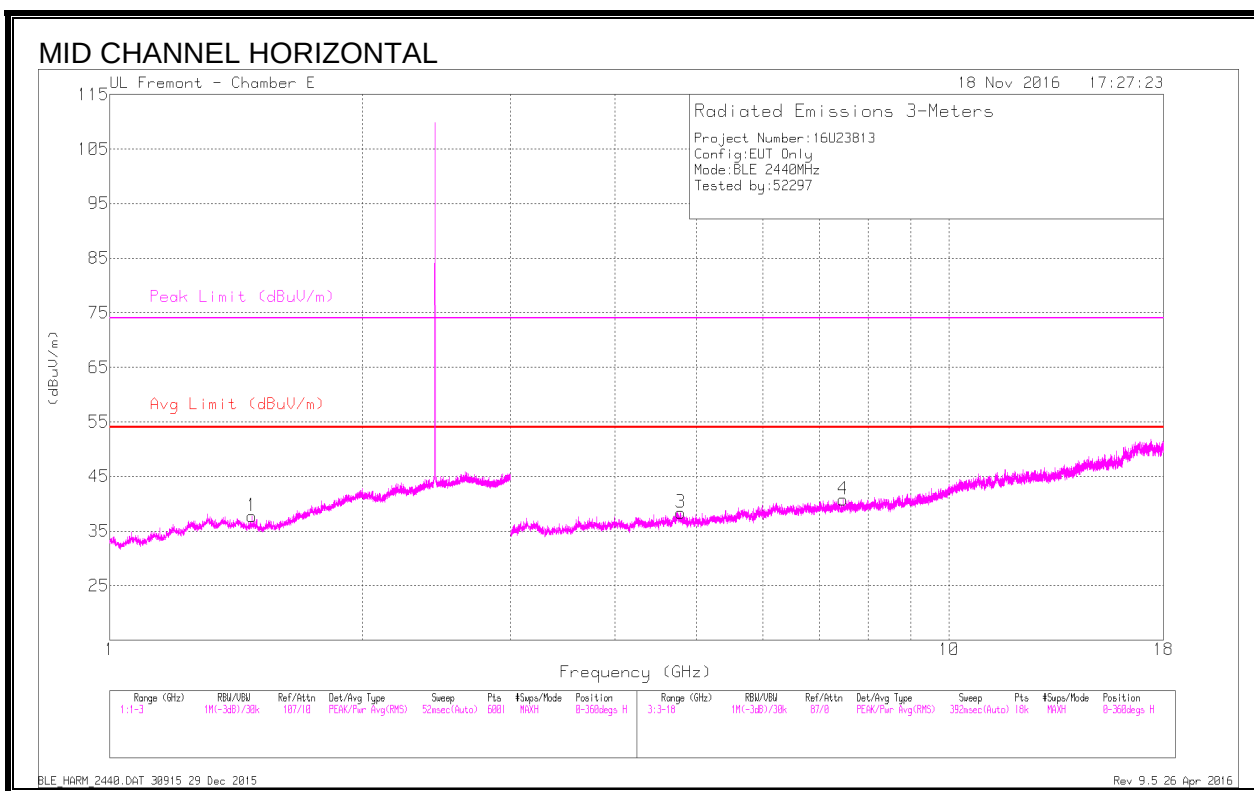


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.375	36.23	PK2	29.1	-21.5	43.83	-	-	74	-30.17	54	206	H
	* 1.375	25.67	MAv1	29.1	-21.5	33.27	54	-20.73	-	-	54	206	H
2	* 1.535	35.96	PK2	27.8	-20.9	42.86	-	-	74	-31.14	143	190	V
	* 1.536	25.68	MAv1	27.8	-20.9	32.58	54	-21.42	-	-	143	190	V
3	* 4.047	40.4	PK2	33.2	-30.3	43.3	-	-	74	-30.7	259	121	H
	* 4.047	30.37	MAv1	33.2	-30.4	33.17	54	-20.83	-	-	259	121	H
4	* 7.53	37.39	PK2	35.6	-26.3	46.69	-	-	74	-27.31	163	151	H
	* 7.53	27.26	MAv1	35.6	-26.3	36.56	54	-17.44	-	-	163	151	H
5	* 3.748	39.73	PK2	33.1	-29.8	43.03	-	-	74	-30.97	264	231	V
	* 3.748	29.76	MAv1	33.1	-29.8	33.06	54	-20.94	-	-	264	231	V
6	* 4.687	40.59	PK2	34	-29.4	45.19	-	-	74	-28.81	112	292	V
	* 4.687	30.03	MAv1	34	-29.4	34.63	54	-19.37	-	-	112	292	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

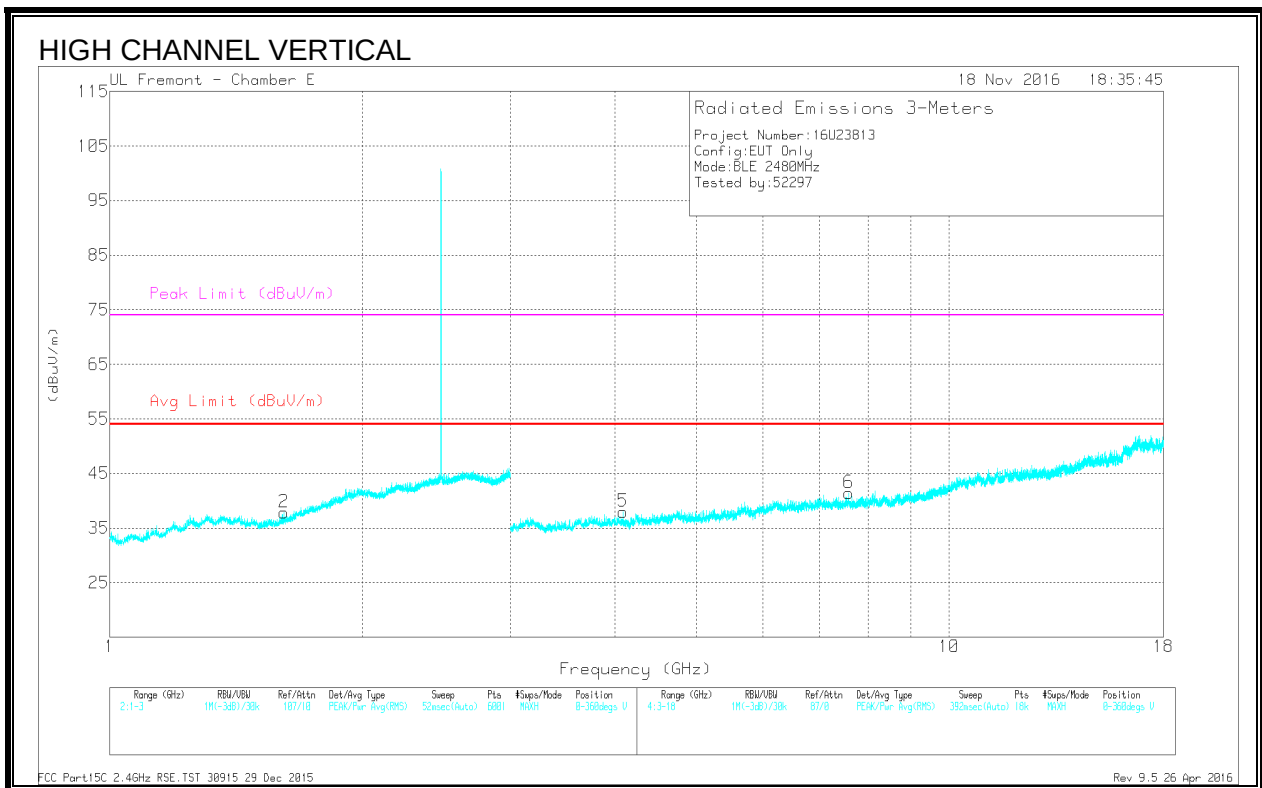
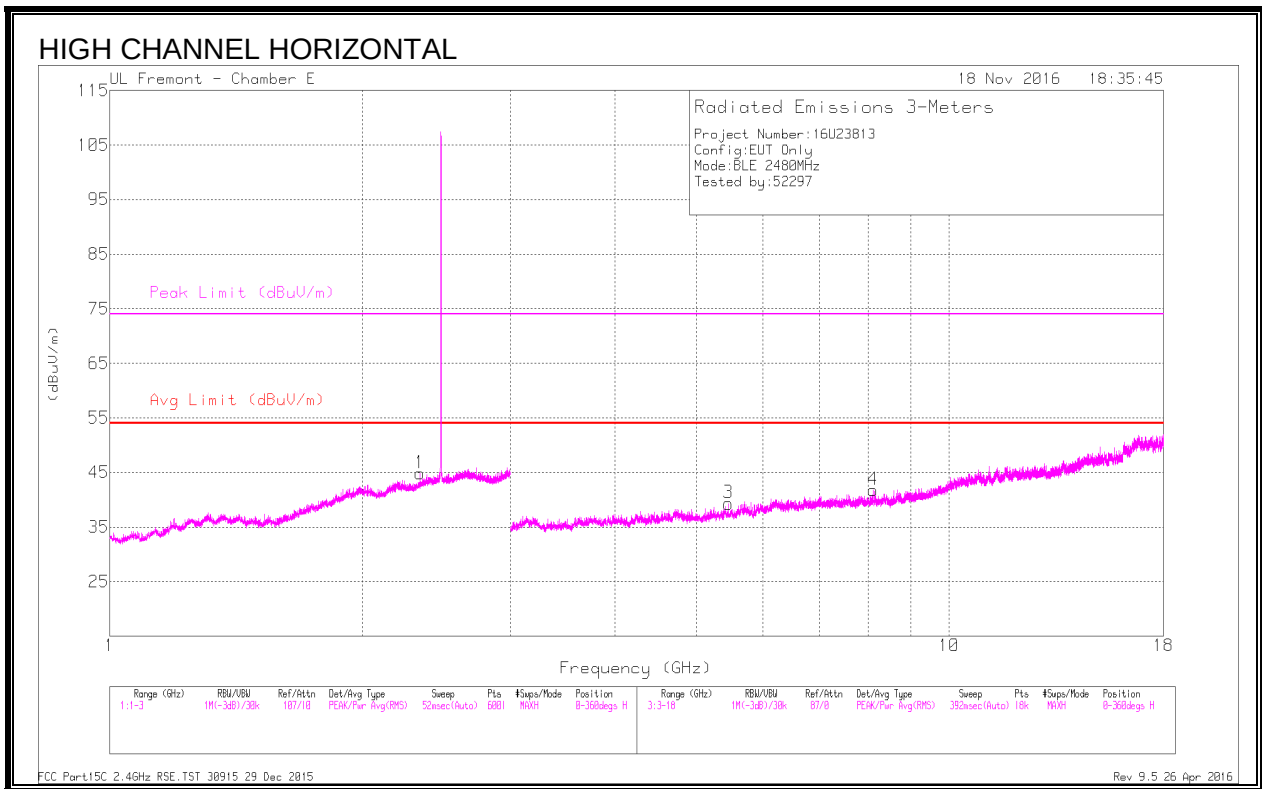


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.478	36.25	PK2	28	-20.9	43.35	-	-	74	-30.65	135	345	H
	* 1.476	25.15	MAv1	28	-20.9	32.25	54	-21.75	-	-	135	345	H
2	* 1.202	36.45	PK2	28.6	-22.4	42.65	-	-	74	-31.35	27	105	V
	* 1.201	24.85	MAv1	28.6	-22.4	31.05	54	-22.95	-	-	27	105	V
3	* 4.786	38.92	PK2	34	-29.5	43.42	-	-	74	-30.58	124	155	H
	* 4.788	28.82	MAv1	34	-29.5	33.32	54	-20.68	-	-	124	155	H
4	* 7.472	38.01	PK2	35.5	-27.2	46.31	-	-	74	-27.69	190	229	H
	* 7.473	27.84	MAv1	35.5	-27.1	36.24	54	-17.76	-	-	190	229	H
5	* 4.729	38.98	PK2	34	-29	43.98	-	-	74	-30.02	348	213	V
	* 4.73	28.91	MAv1	34	-29	33.91	54	-20.09	-	-	348	213	V
6	* 8.374	37.2	PK2	35.7	-25.6	47.3	-	-	74	-26.7	250	339	V
	* 8.374	26.75	MAv1	35.7	-25.6	36.85	54	-17.15	-	-	250	339	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (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	* 2.342	37.29	PK2	31.8	-19.8	49.29	-	-	74	-24.71	36	142	H
	* 2.343	26.83	MAv1	31.8	-19.7	38.93	54	-15.07	-	-	36	142	H
2	* 1.615	36.88	PK2	28	-20.8	44.08	-	-	74	-29.92	286	238	V
	* 1.613	25.8	MAv1	28	-20.9	32.9	54	-21.1	-	-	286	238	V
3	* 5.458	41.12	PK2	34.4	-30.2	45.32	-	-	74	-28.68	211	134	H
	* 5.457	30.23	MAv1	34.4	-30.1	34.53	54	-19.47	-	-	211	134	H
4	* 8.122	37.05	PK2	35.7	-25.7	47.05	-	-	74	-26.95	75	124	H
	* 8.12	27.07	MAv1	35.7	-25.6	37.17	54	-16.83	-	-	75	124	H
5	* 4.089	40.49	PK2	33.4	-30.7	43.19	-	-	74	-30.81	148	261	V
	* 4.09	30.58	MAv1	33.4	-30.7	33.28	54	-20.72	-	-	148	261	V
6	* 7.594	37.02	PK2	35.7	-25.7	47.02	-	-	74	-26.98	189	323	V
	* 7.595	27.09	MAv1	35.7	-25.7	37.09	54	-16.91	-	-	189	323	V

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

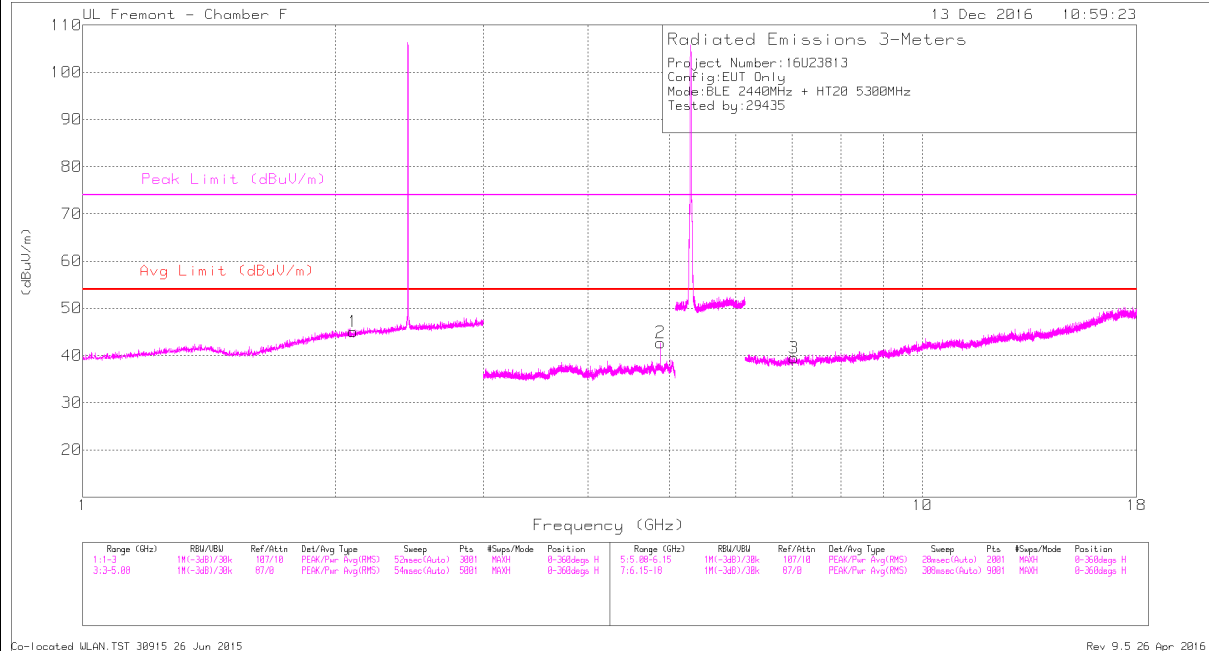
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

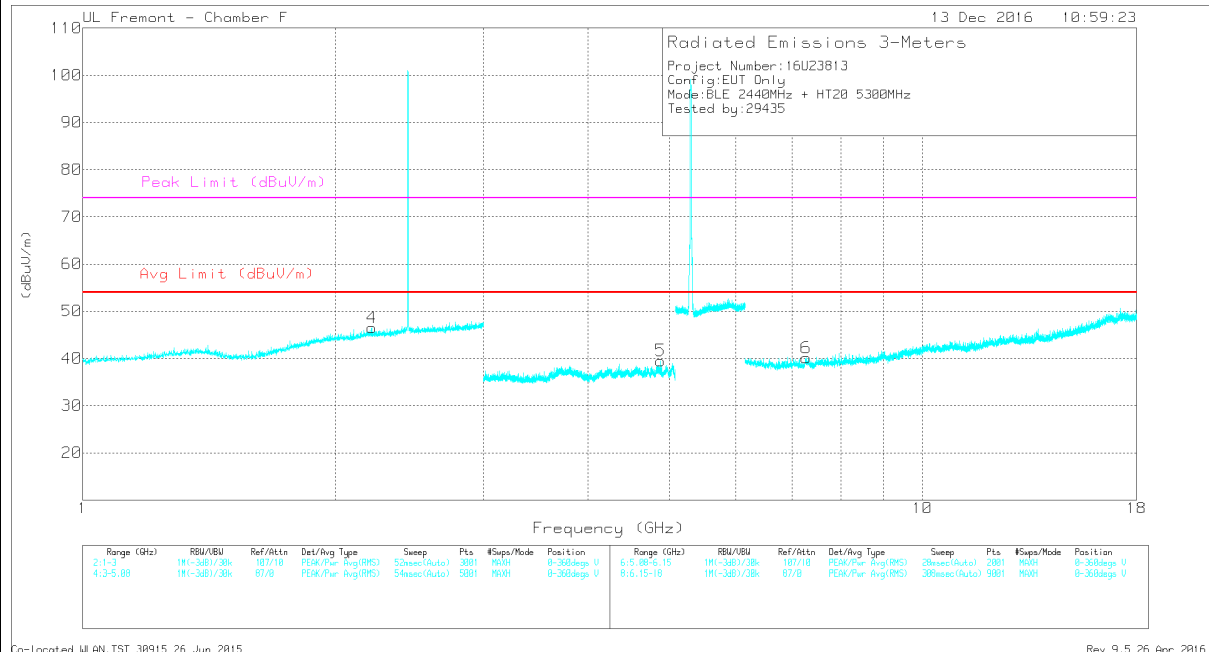
8.4. RADIATION CO-LOCATION

8.4.1. BLUETOOTH LOW ENERGY & 802.11 HT20 2Tx CDD MODE IN THE 5.3GHz BAND

HORIZONTAL PLOT



VERTICAL PLOT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.098	34.99	Pk	31.4	-21.3	45.09	-	-	74	-28.91	0-360	200	H
4	* 2.208	41.16	PK-U	31.9	-21	52.06	-	-	74	-21.94	307	371	V
	* 2.21	30.34	ADR	31.9	-21	41.24	53.97	-12.73	-	-	307	371	V
2	* 4.88	41.55	PK-U	34.1	-27.8	47.85	-	-	74	-26.15	76	121	H
	* 4.88	33.38	ADR	34.1	-27.8	39.68	53.97	-14.29	-	-	76	121	H
5	* 4.88	40.32	PK-U	34.1	-27.8	46.62	-	-	74	-27.38	27	194	V
	* 4.88	30.09	ADR	34.1	-27.8	36.39	53.97	-17.58	-	-	27	194	V
3	7.04	29.32	Pk	35.6	-25.5	39.42	-	-	74	-34.58	0-360	100	H
6	* 7.273	35.94	PK-U	35.5	-25.2	46.24	-	-	74	-27.76	144	230	V
	* 7.275	25.36	ADR	35.5	-25.2	35.66	53.97	-18.31	-	-	144	230	V

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

Pk - Peak detector

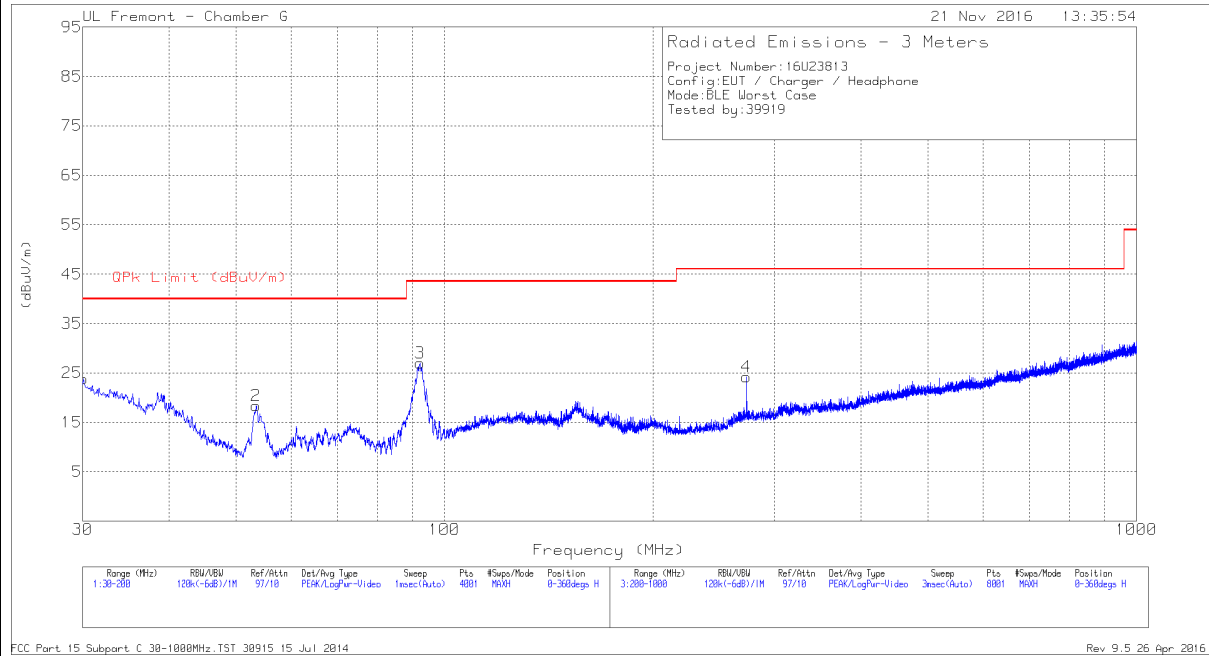
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

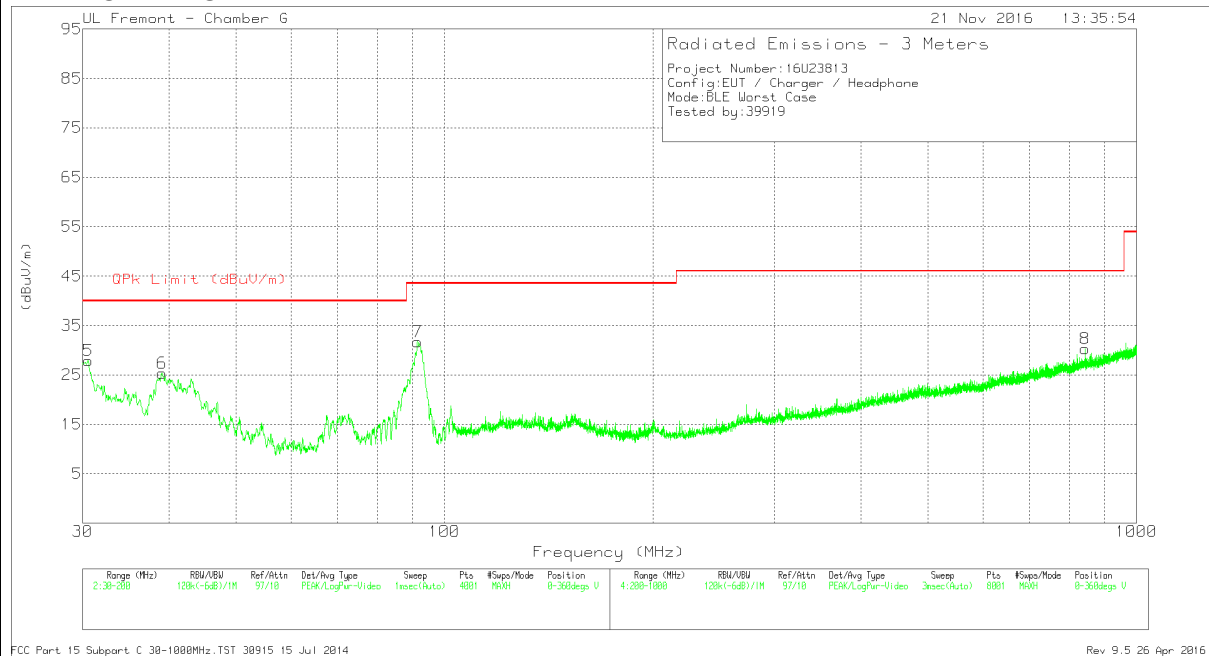
8.5. WORST-CASE BELOW 1 GHz

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

HORIZONTAL PLOT



VERTICAL PLOT



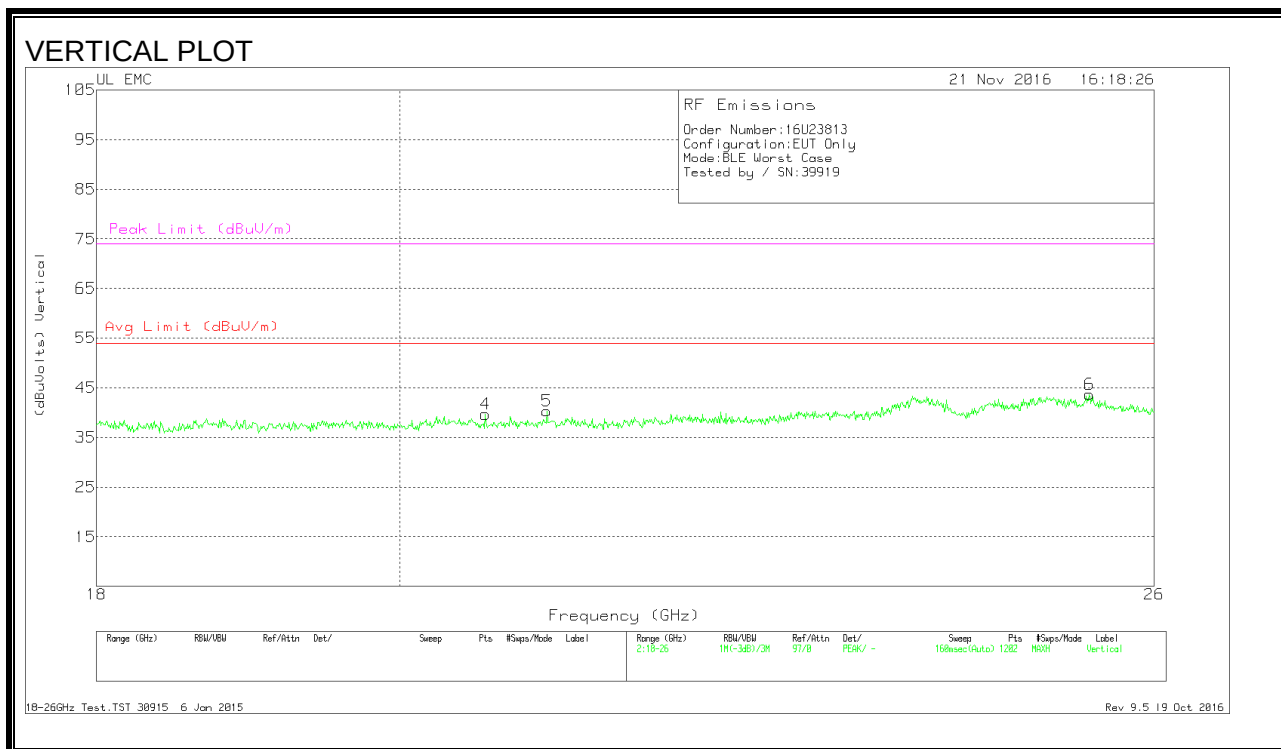
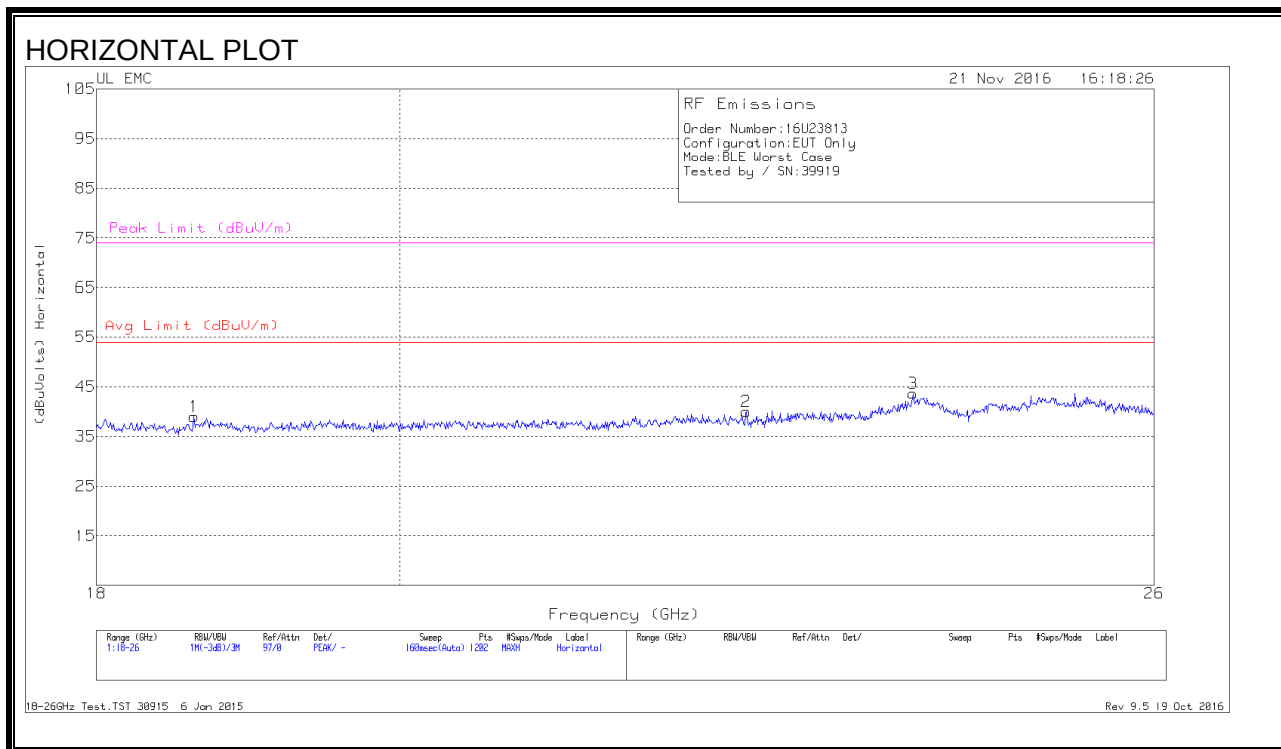
DATA

Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp Cbl (dB)	Correcte d Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 273.2	36.05	Pk	17.2	-29.1	24.15	46.02	-21.87	0-360	100	H
1	30.0425	29.58	Pk	25.6	-31.3	23.88	40	-16.12	0-360	98	H
5	30.5525	34.02	Pk	25.2	-31.3	27.92	40	-12.08	0-360	100	V
6	39.0525	37.47	Pk	19.1	-31.2	25.37	40	-14.63	0-360	100	V
2	53.46	38.41	Pk	10.9	-31	18.31	40	-21.69	0-360	400	H
7	91.4975	50.33	Pk	11.9	-30.5	31.73	43.52	-11.79	0-360	100	V
3	92.1775	45.38	Pk	12.1	-30.5	26.98	43.52	-16.54	0-360	200	H
8	842.5	31.01	Pk	25.8	-26.5	30.31	46.02	-15.71	0-360	100	V

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

8.6. WORST-CASE ABOVE 18 GHz

SPURIOUS EMISSIONS 18 TO 26 GHz (WORST-CASE CONFIGURATION)



Data

Marker	Frequen cy (GHz)	Meter Reading (dBuV)	Det	AF T449 (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Correcte d Reading (dBuVol ts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	18.619	40.8	Pk	32.5	-24.8	-9.5	39	54	-15	74	-35
2	22.563	40.9	Pk	33.4	-24.8	-9.5	40	54	-14	74	-34
3	23.908	43.07	Pk	34	-23.9	-9.5	43.67	54	-10.33	74	-30.33
4	20.604	41.77	Pk	32.9	-25.5	-9.5	39.67	54	-14.33	74	-34.33
5	21.051	42.03	Pk	33.1	-25.3	-9.5	40.33	54	-13.67	74	-33.67
6	25.42	43.17	Pk	34.3	-24.3	-9.5	43.67	54	-10.33	74	-30.33

Pk - Peak detector

9. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

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

*Decreases with the logarithm of the frequency.

TEST PROCEDURE

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

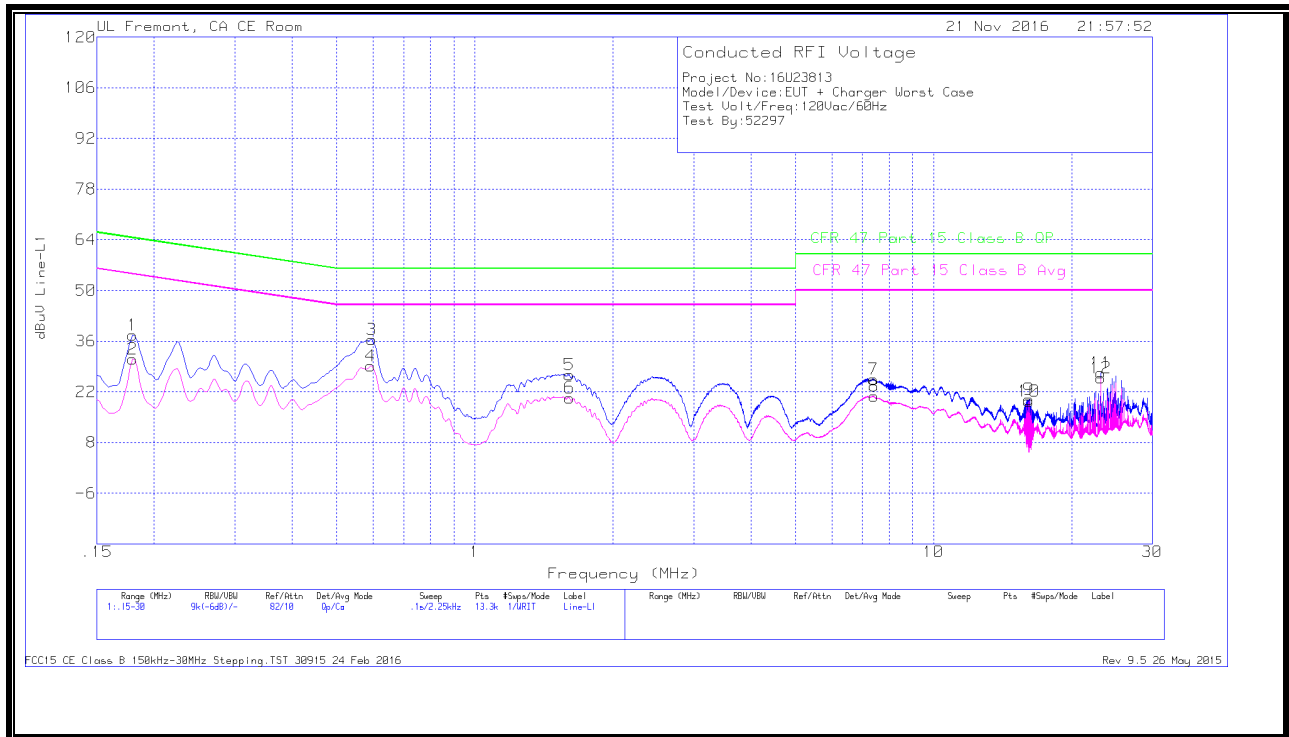
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

9.1. EUT POWERED BY AC/DC ADAPTER VIA USB CABLE

LINE 1 RESULTS



WORST EMISSIONS

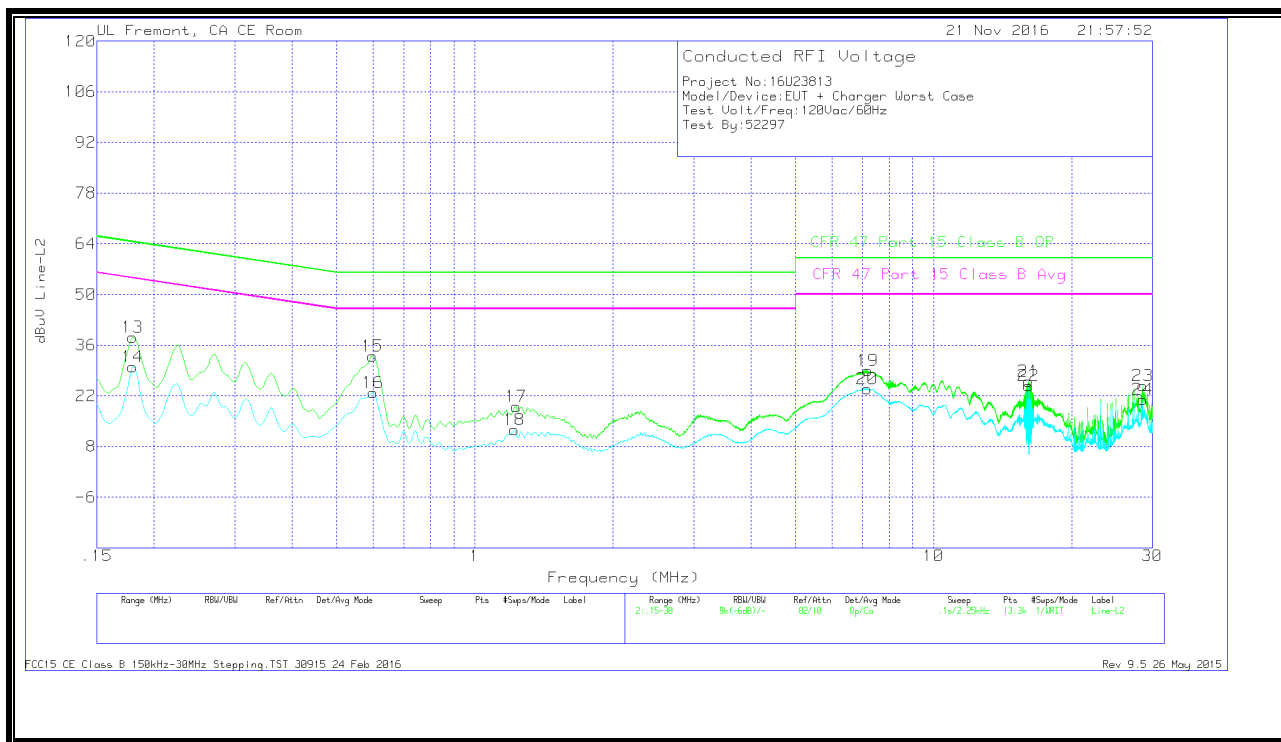
Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables 1&3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
1	.17925	27.55	Qp	0	0	10.1	37.65	64.52	-26.87	-	-
2	.17925	20.95	Ca	0	0	10.1	31.05	-	-	54.52	-23.47
3	.5955	26.35	Qp	0	0	10.1	36.45	56	-19.55	-	-
4	.59325	18.98	Ca	0	0	10.1	29.08	-	-	46	-16.92
5	1.60688	16.51	Qp	0	.1	10.1	26.71	56	-29.29	-	-
6	1.608	10.16	Ca	0	.1	10.1	20.36	-	-	46	-25.64
7	7.38825	15.16	Qp	0	.1	10.2	25.46	60	-34.54	-	-
8	7.41075	10.42	Ca	0	.1	10.2	20.72	-	-	50	-29.28
9	16.14075	9.5	Qp	0	.2	10.3	20	60	-40	-	-
10	16.14075	8.95	Ca	0	.2	10.3	19.45	-	-	50	-30.55
11	23.1315	16.54	Qp	.1	.2	10.4	27.24	60	-32.76	-	-
12	23.1315	15.06	Ca	.1	.2	10.4	25.76	-	-	50	-24.24

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

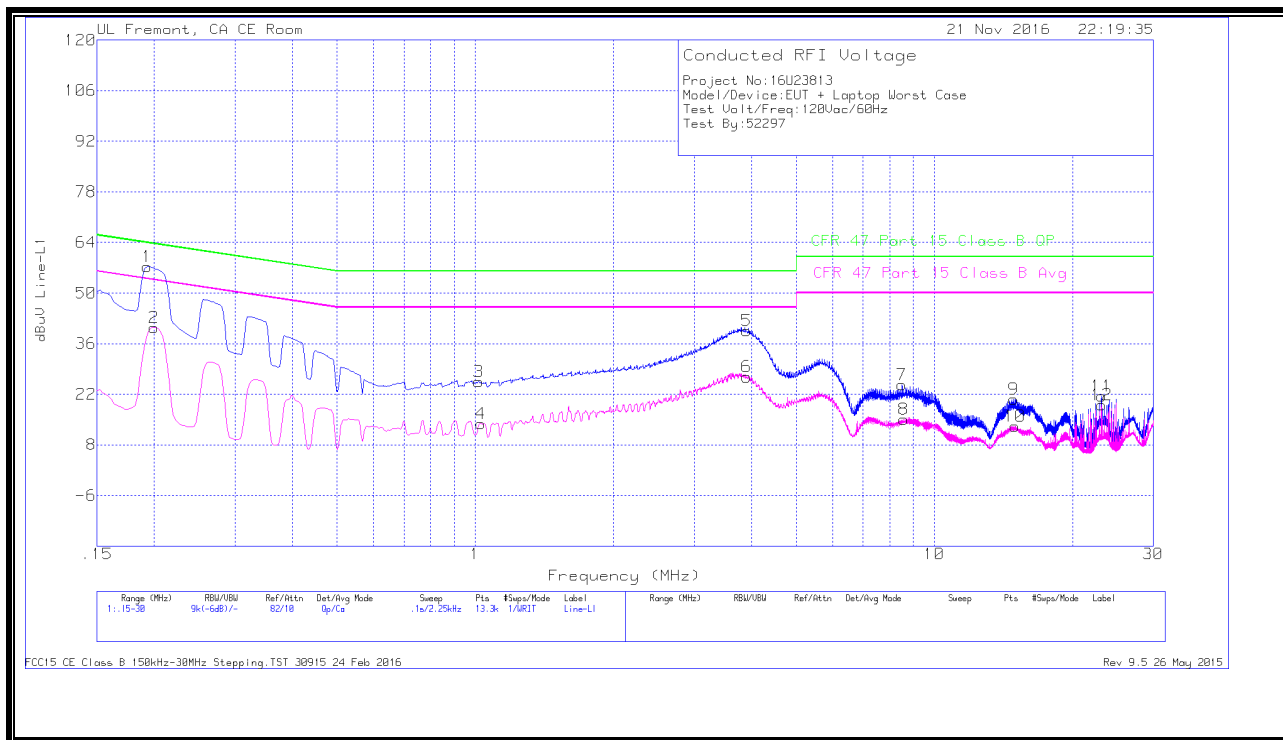
Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L2	LC Cables 2&3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
13	.17925	28.15	Qp	0	0	10.1	38.25	64.52	-26.27	-	-
14	.17925	19.83	Ca	0	0	10.1	29.93	-	-	54.52	-24.59
15	.59775	22.87	Qp	0	0	10.1	32.97	56	-23.03	-	-
16	.6	12.79	Ca	0	0	10.1	22.89	-	-	46	-23.11
17	1.23225	8.78	Qp	0	.1	10.1	18.98	56	-37.02	-	-
18	1.221	2.39	Ca	0	.1	10.1	12.59	-	-	46	-33.41
19	7.18125	18.68	Qp	0	.1	10.2	28.98	60	-31.02	-	-
20	7.1745	13.69	Ca	0	.1	10.2	23.99	-	-	50	-26.01
21	16.1385	15.44	Qp	0	.2	10.3	25.94	60	-34.06	-	-
22	16.1385	14.26	Ca	0	.2	10.3	24.76	-	-	50	-25.24
23	28.62825	13.98	Qp	.1	.3	10.4	24.78	60	-35.22	-	-
24	28.62825	10.2	Ca	.1	.3	10.4	21	-	-	50	-29

Qp - Quasi-Peak detector
Ca - CISPR average detection

9.2. EUT POWERED BY HOST PC VIA USB CABLE

LINE 1 RESULTS



WORST EMISSIONS

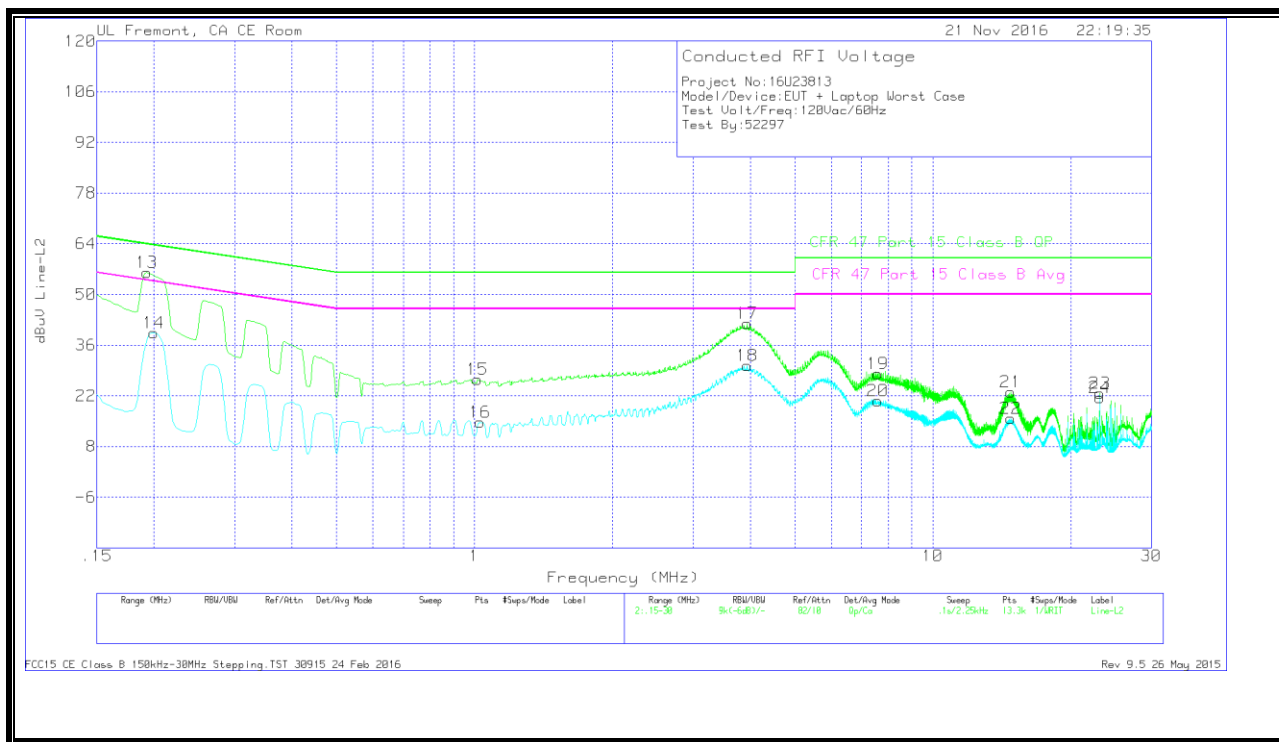
Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables 1&3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
1	.19275	47.23	Qp	0	0	10.1	57.33	63.92	-6.59	-	-
2	.1995	30.38	Ca	0	0	10.1	40.48	-	-	53.63	-13.15
3	1.01737	15.45	Qp	0	0	10.1	25.55	56	-30.45	-	-
4	1.0275	3.81	Ca	0	0	10.1	13.91	-	-	46	-32.09
5	3.903	29.41	Qp	0	.1	10.1	39.61	56	-16.39	-	-
6	3.903	16.6	Ca	0	.1	10.1	26.8	-	-	46	-19.2
7	8.511	14.25	Qp	0	.1	10.2	24.55	60	-35.45	-	-
8	8.57175	4.79	Ca	0	.1	10.2	15.09	-	-	50	-34.91
9	14.91338	10.3	Qp	0	.2	10.2	20.7	60	-39.3	-	-
10	14.98425	2.67	Ca	0	.2	10.2	13.07	-	-	50	-36.93
11	23.1315	10.78	Qp	.1	.2	10.4	21.48	60	-38.52	-	-
12	23.1315	8.29	Ca	.1	.2	10.4	18.99	-	-	50	-31.01

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L2	LC Cable s 2&3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
13	.19275	46.01	Qp	0	0	10.1	56.11	63.92	-7.81	-	-
14	.1995	29.28	Ca	0	0	10.1	39.38	-	-	53.63	-14.25
15	1.01625	16.47	Qp	0	0	10.1	26.57	56	-29.43	-	-
16	1.0275	4.61	Ca	0	0	10.1	14.71	-	-	46	-31.29
17	3.93675	31.73	Qp	0	.1	10.1	41.93	56	-14.07	-	-
18	3.93675	20.11	Ca	0	.1	10.1	30.31	-	-	46	-15.69
19	7.593	17.81	Qp	0	.1	10.2	28.11	60	-31.89	-	-
20	7.59075	10.28	Ca	0	.1	10.2	20.58	-	-	50	-29.42
21	14.79075	12.5	Qp	.1	.2	10.2	23	60	-37	-	-
22	14.79075	5.18	Ca	.1	.2	10.2	15.68	-	-	50	-34.32
23	23.1315	11.93	Qp	.1	.2	10.4	22.63	60	-37.37	-	-
24	23.1315	10.77	Ca	.1	.2	10.4	21.47	-	-	50	-28.53

Qp - Quasi-Peak detector

Ca - CISPR average detection