



FCC 47 CFR PART 15 SUBPART C

**BLUETOOTH LOW ENERGY
CERTIFICATION TEST REPORT**

FOR

WIRELESS CHARGING BOWL

**MODEL NUMBER:
WIRELESS CHARGING BOWL**

FCC ID: 2AB8ZND3

REPORT NUMBER: 14U19569-E2, Revision B

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Prepared for
**INTEL CORPORATION
2200 MISSION COLLEGE BOULEVARD
SANTA CLARA, CA 95052, U.S.A**

Prepared by
**UL VERIFICATION SERVICES INC.
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888**



NVLAP LAB CODE 200065-0

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
--	12/12/2014	Initial Issue	T. LEE
A	12/22/2014	Adding antenna for measurements from 18 – 25GHz in the test equipment list	M. Hua
B	12/23/2014	Corrected Test Methodology on Section 10	M. Hua

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Intel Corporation
2200 Mission College Boulevard
Santa Clara, Ca 95052, U.S.A

EUT DESCRIPTION: Wireless Charging Bowl

MODEL: Wireless Charging Bowl

SERIAL NUMBER: Not Available

DATE TESTED: DECEMBER 6 -11, 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 Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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

Approved & Released For
UL Verification Services Inc. By:

Tested By:



TIM LEE
PROGRAM MANAGER
UL Verification Services Inc.

TRI PHAM
EMC LAB ENGINEER
UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2009, FCC CFR 47 Part 2, and FCC CFR 47 Part 15.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

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

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers A through H are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-8, respectively.

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

4.3. MEASUREMENT UNCERTAINTY

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

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

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

EQUIPMENT UNDER TEST

4.4. DESCRIPTION OF EUT

The EUT is a wireless charger intended to charge Intel smart bracelet, Model MICA.

4.5. 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	-0.24	0.95

4.6. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an Inverted-F antenna (IFA), with a maximum gain of 2.0 dBi.

4.7. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was xmm6321_xges2_ndg_mckee2

4.8. WORST-CASE CONFIGURATION AND MODE

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

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

Worst-case data rates based on the baseline scan:
BLE: 1 Mbps.

4.9. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
DC Power Supply	Darfon	1901	BK1A45J101-14A2-45-S-00022	N/A

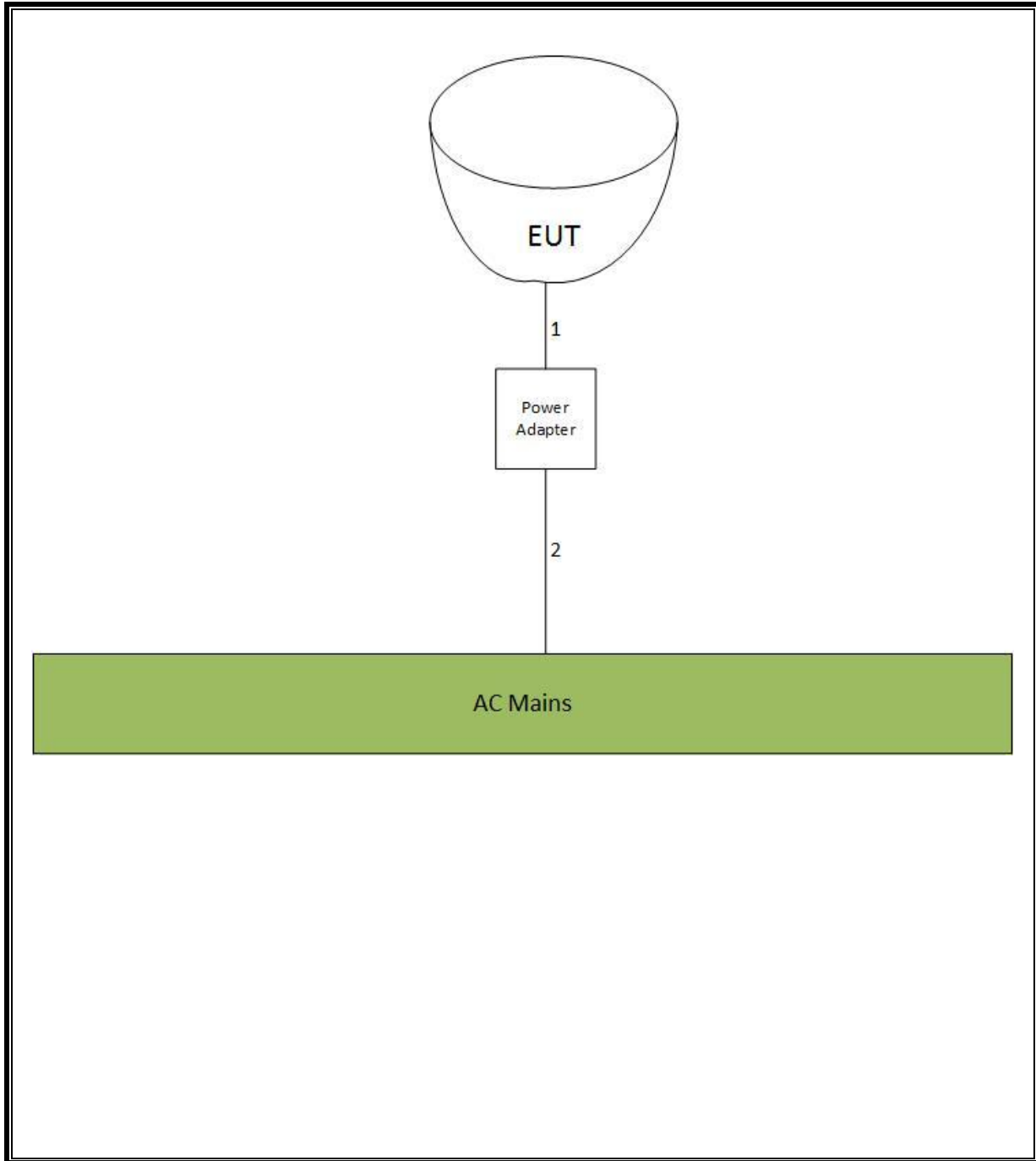
I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC	1	Barrel	Unshielded	1.7	
2	AC	2	3 Prong	Unshielded	0.9	

TEST SETUP

Test software exercised the EUT during test. Refer to the following diagram for testing configurations.

SETUP DIAGRAM FOR TESTS



5. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	Manufacturer	Model	Serial Number	Cal Due
Antenna, Horn 1-18GHz	ETS Lindgren	3117	165319	04/14/15
Antenna, Horn 18-26.5GHz	ARA	SWH-28	1007	05/9/15
Spectrum Analyzer, PXA, 3Hz-44GHz	Agilent	N9030A	MY53310959	05/07/15
Antenna, Broadband Hybrid, 30Mhz - 2000Mhz	Sunol Sciences	JB3	A051314-1	03/28/15
Power Meter, P-series single channel	Agilent	N1911A	MY53060007	09/15/15
Power Sensor, Peak and average, 50MHz-6 GHz, 5MHz BW	Agilent	E9323A	MY530770013	05/02/15

Line Conducted Emissions

Test Equipment List					
Description	Manufacturer	Model	Local ID (T No.)	Cal Date	Cal Due
EMI Test Receiver, 9KHz to 7GHz	Rohde & Schwarz	ESCI 7	284	09/16/2014	09/16/2015
LISN	FCC	50/250-25-2	24	01/17/2014	01/17/2015
LISN	Solar	8012-50-R-24-BNC	29	05/07/2014	05/07/2015
Thermometer	Cole-Palmer	99760-00	437	04/08/2014	04/08/2015
Conducted Software	UL	UL EMC	Ver 9.5, May 17 2012		

6. MEASUREMENT METHODS

6 dB BW: KDB 558074 D01 v03r02

Output Power: KDB 558074 D01 v03r02.

Power Spectral Density: KDB 558074 D01 v03r02.

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

Out-of-band emissions in restricted bands: KDB 558074 D01 v03r02.

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

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
BLE	2.124	2.217	0.958	95.8%	0.186	0.471

8. ANTENNA PORT TEST RESULTS

8.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2402	0.5100	0.5
Middle	2440	0.5520	0.5
High	2480	0.5220	0.5

8.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

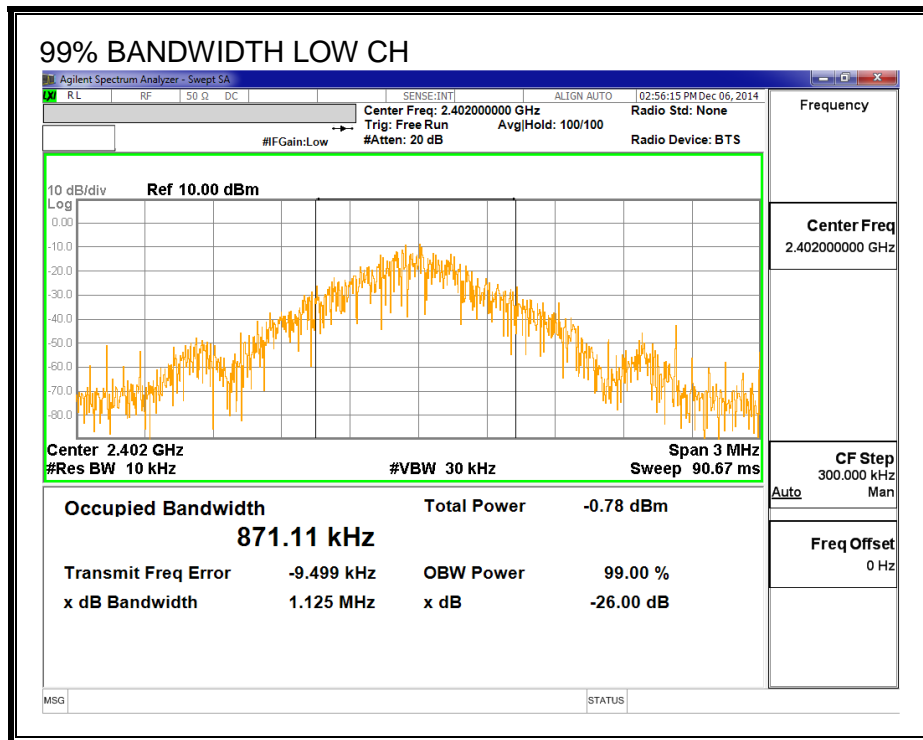
TEST PROCEDURE

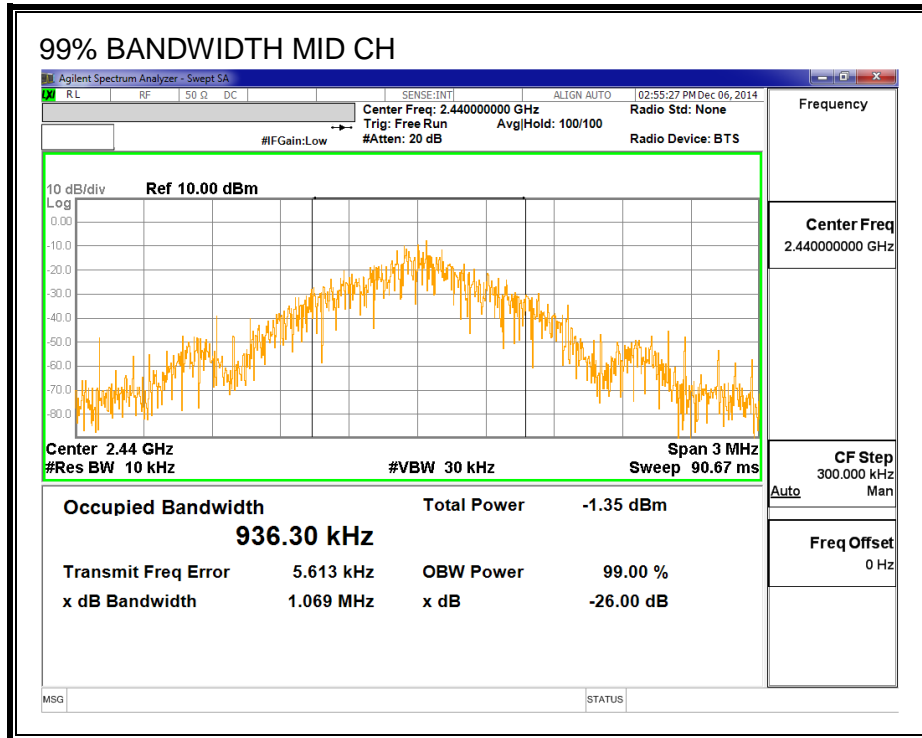
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth and to 1% of the span. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

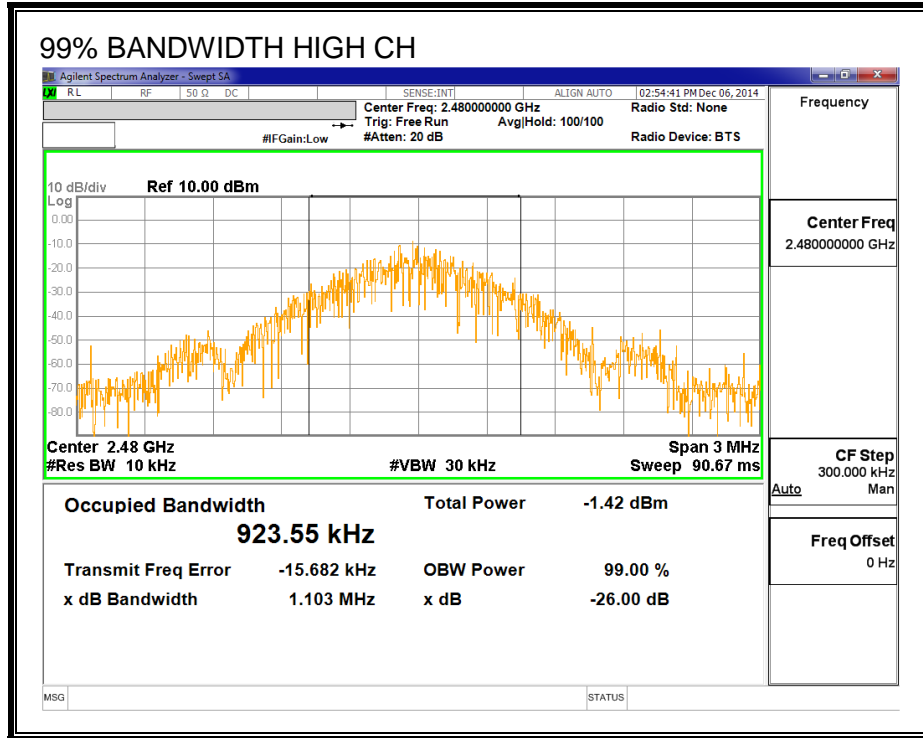
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	0.871
Middle	2440	0.936
High	2480	0.923

99% BANDWIDTH







8.3. OUTPUT POWER

LIMITS

FCC §15.247 (b)

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

TEST PROCEDURE

KDB 558074 D01 v03r02 "Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under 15.247".

RESULTS

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	-0.814	30	-30.814
Middle	2440	-0.695	30	-30.695
High	2480	-0.240	30	-30.240

8.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

The cable assembly insertion loss of 3 dB (including 3 dB pad) was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	AV power (dBm)
Low	2402	-0.97
Middle	2440	-0.65
High	2480	-0.3

8.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

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

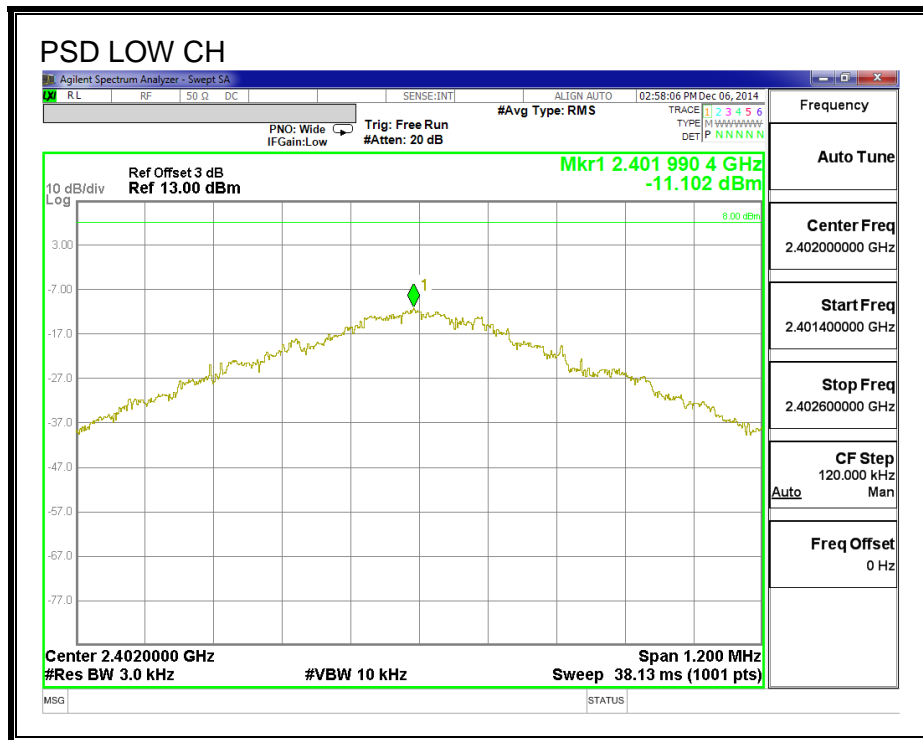
TEST PROCEDURE

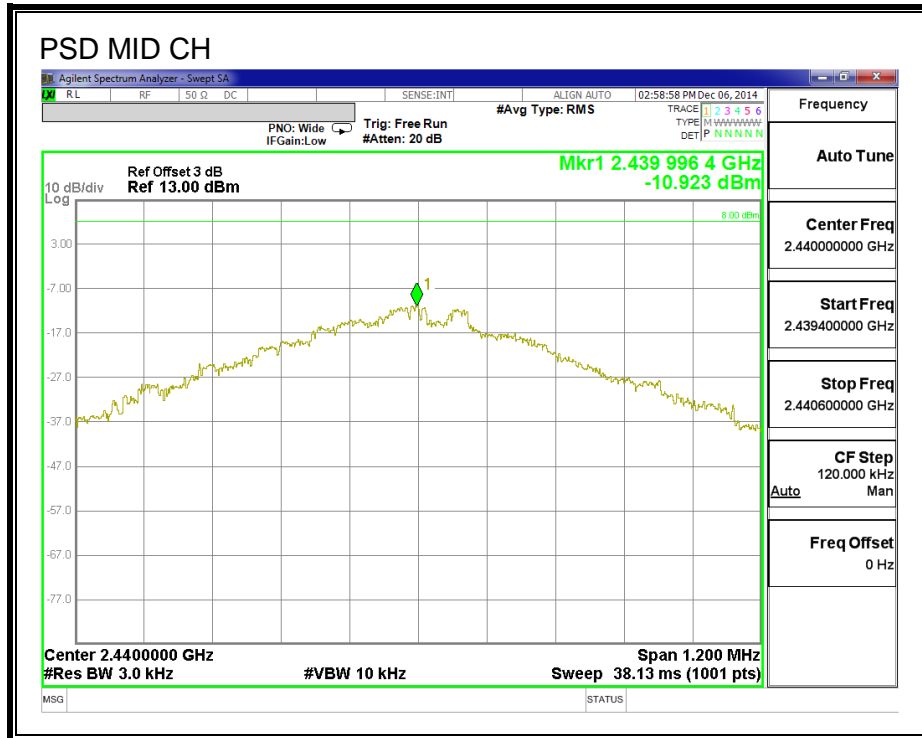
KDB 558074 D01 v03r02 "Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under 15.247".

RESULTS

Channel	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2402	-11.10	8	-19.10
Middle	2440	-10.92	8	-18.92
High	2480	-9.59	8	-17.59

POWER SPECTRAL DENSITY





8.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

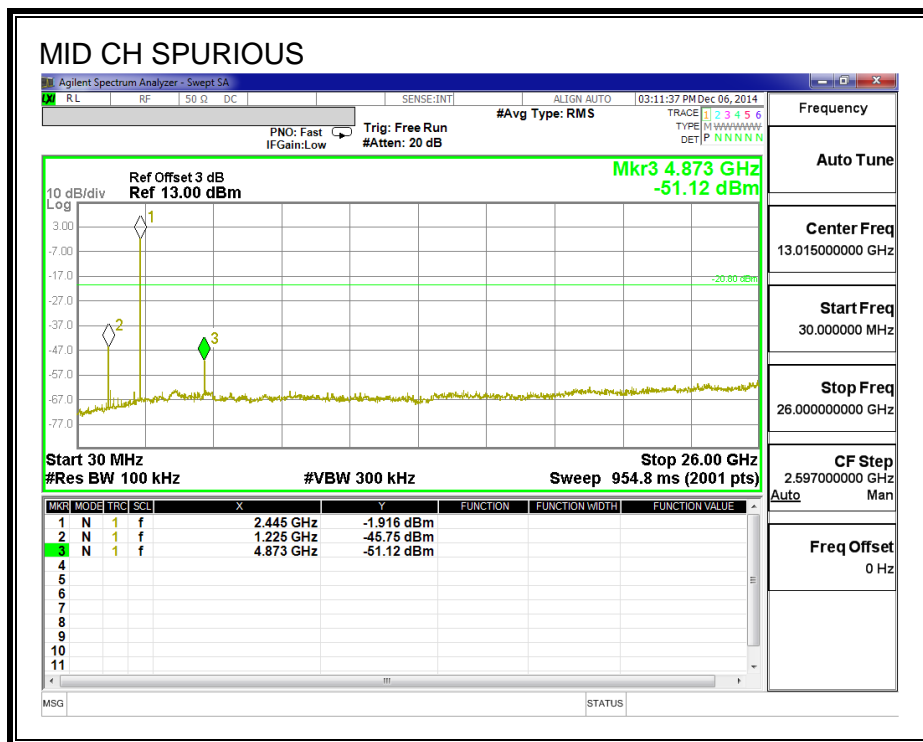
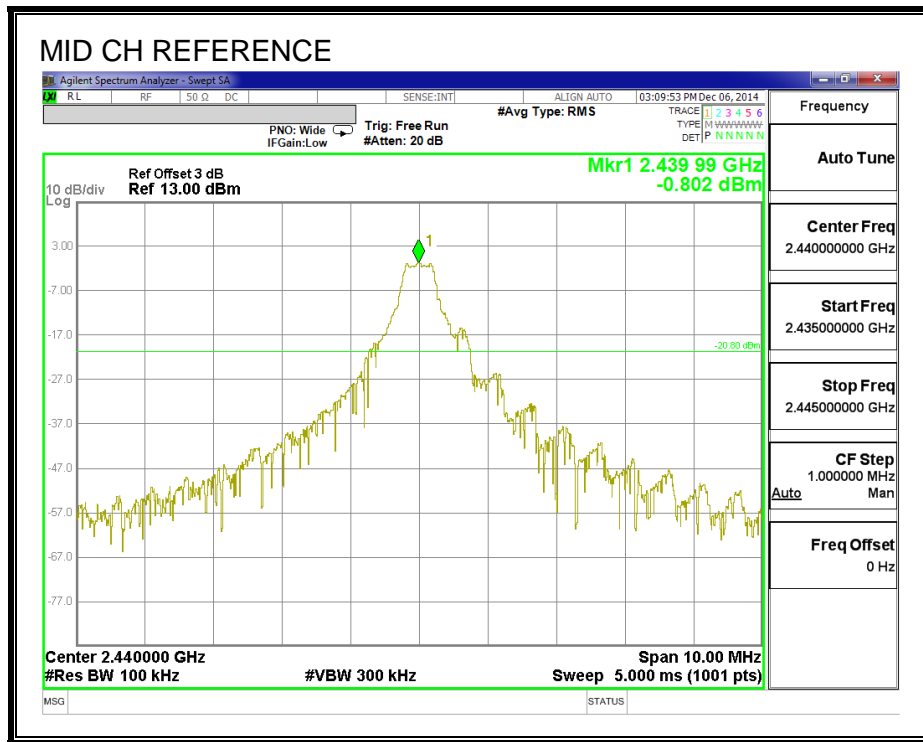
FCC §15.247 (d)

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

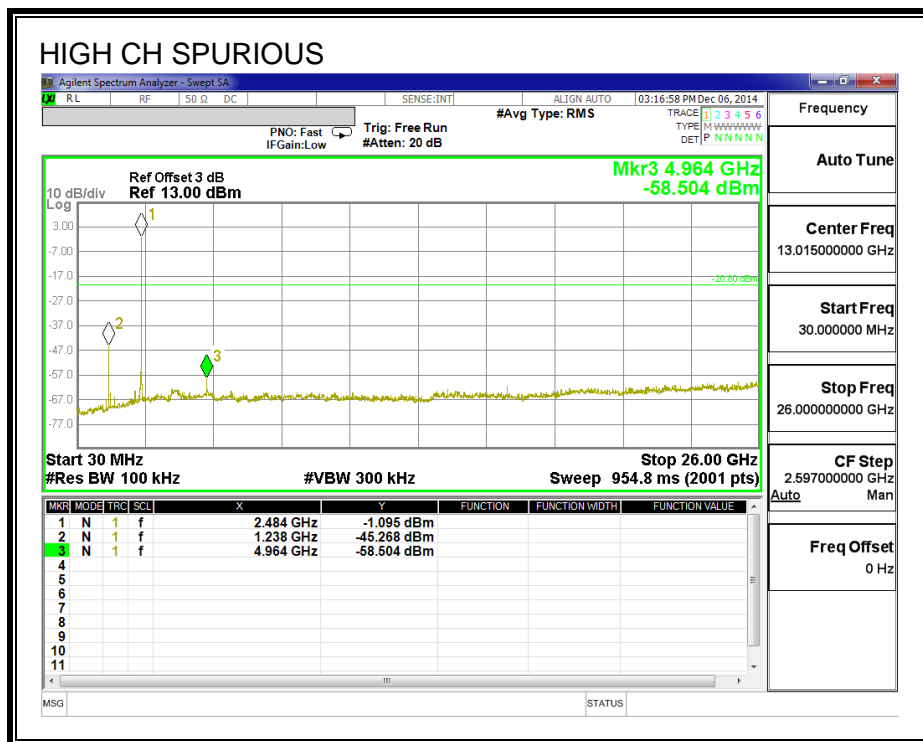
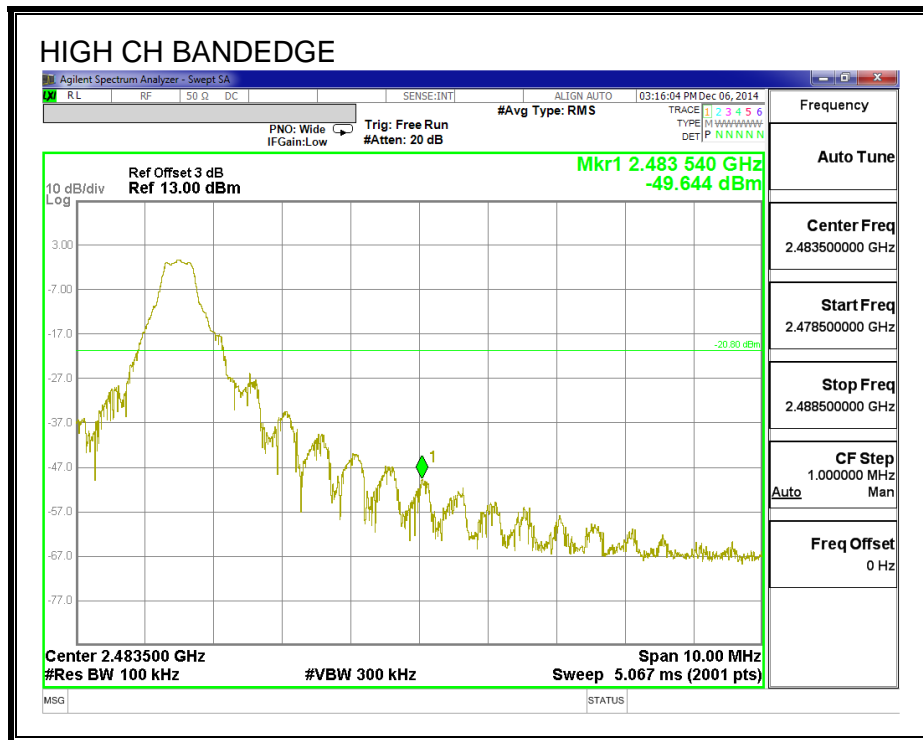
TEST PROCEDURE

KDB 558074 D01 v03r02 "Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under 15.247".

SPURIOUS EMISSIONS, MID CHANNEL



SPURIOUS EMISSIONS, HIGH CHANNEL



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. The EUT is configured in accordance with ANSI C63.10-2009,. 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.

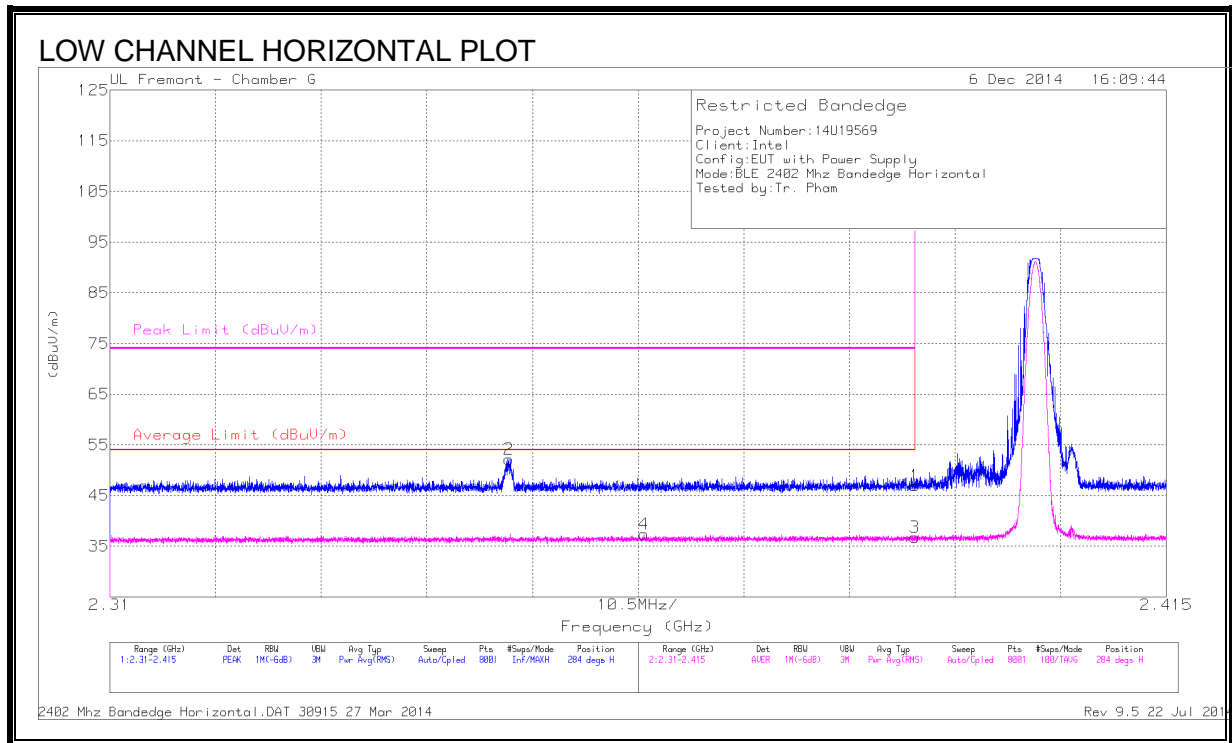
For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

For 2.4 GHz band, the spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz 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

RESTRICTED BANDEDGE (LOW CHANNEL)



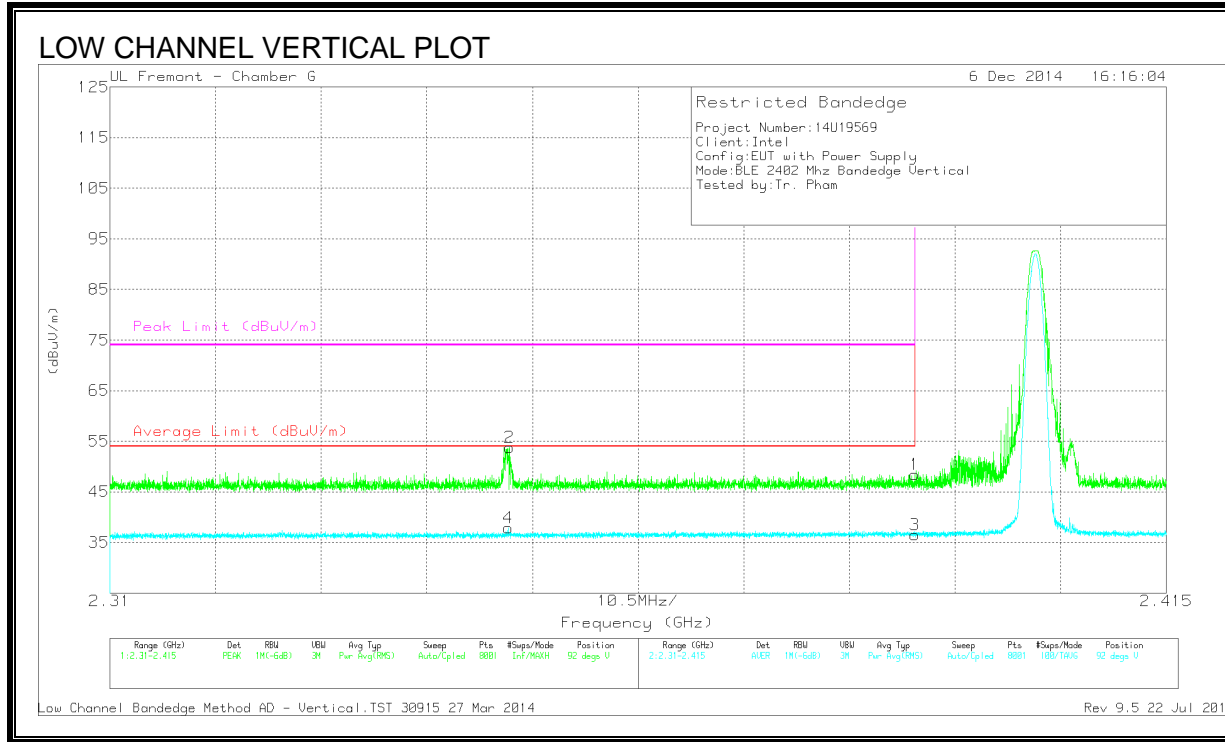
DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.35	45.51	PK	31.7	-25	0	52.21	-	-	74	-21.79	284	333	H
4	* 2.363	30.55	RMS	31.7	-24.9	.186	37.536	54	-16.46	-	-	284	333	H
1	* 2.39	40.06	PK	31.8	-24.9	0	46.96	-	-	74	-27.04	284	333	H
3	* 2.39	29.84	RMS	31.8	-24.9	.186	36.926	54	-17.07	-	-	284	333	H

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

PK - Peak detector

RMS - RMS detection



DATA

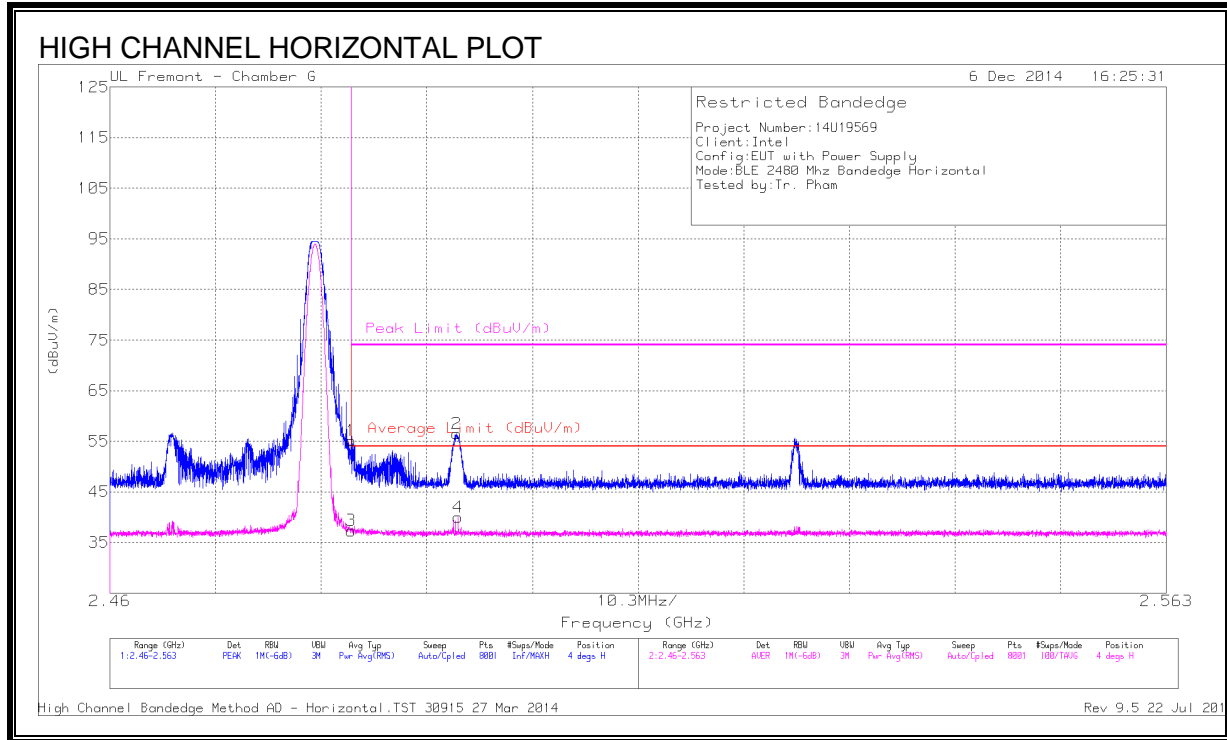
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	41.56	PK	31.8	-24.9	0	48.46	-	-	74	-25.54	92	343	V
2	* 2.35	47.05	PK	31.7	-25	0	53.75	-	-	74	-20.25	92	343	V
3	* 2.39	29.61	RMS	31.8	-24.9	.186	36.696	54	-17.304	-	-	92	343	V
4	* 2.35	31.23	RMS	31.7	-25	.186	38.116	54	-15.88	-	-	92	343	V

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

PK - Peak detector

RMS - RMS detection

RESTRICTED BANDEGE (HIGH CHANNEL)



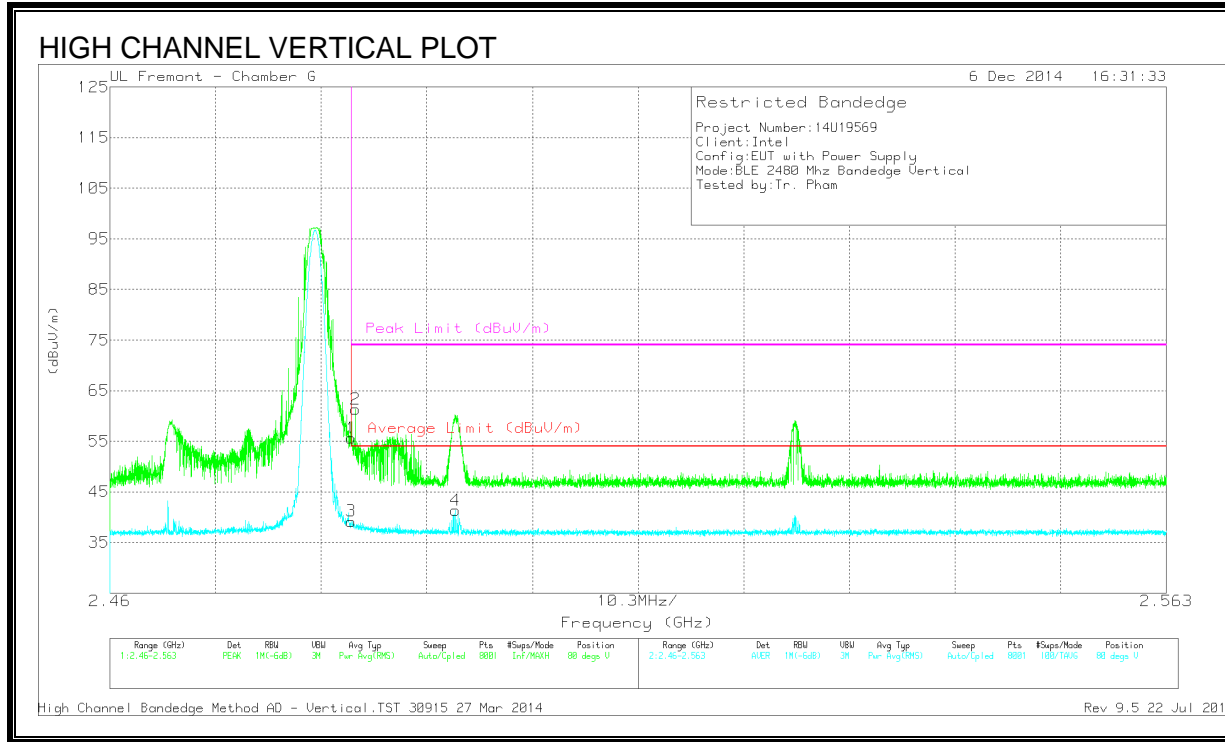
DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	47.98	PK	32	-24.9	0	55.08	-	-	74	-18.92	4	342	H
3	* 2.484	30.22	RMS	32	-24.9	.186	37.506	54	-16.494	-	-	4	342	H
2	* 2.494	49.35	PK	32	-24.9	0	56.45	-	-	74	-17.55	4	342	H
4	* 2.494	32.92	RMS	32	-24.9	.186	40.206	54	-13.794	-	-	4	342	H

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

PK - Peak detector

RMS - RMS detection



DATA

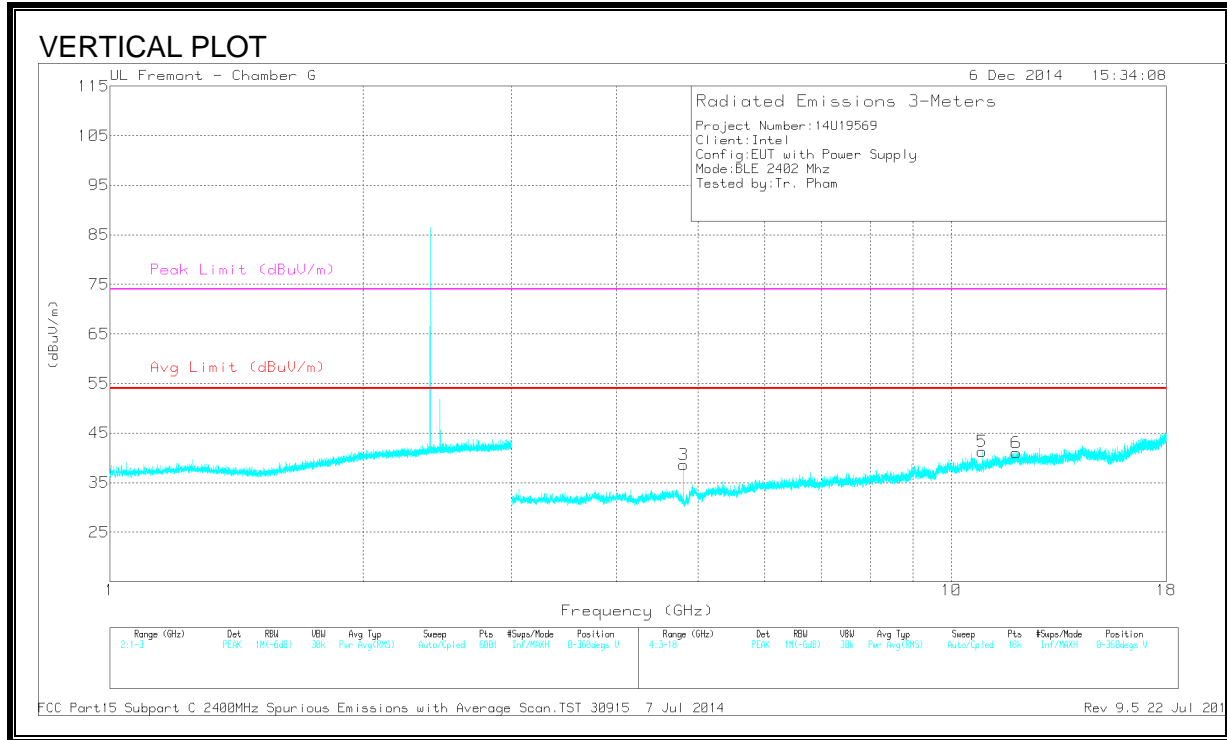
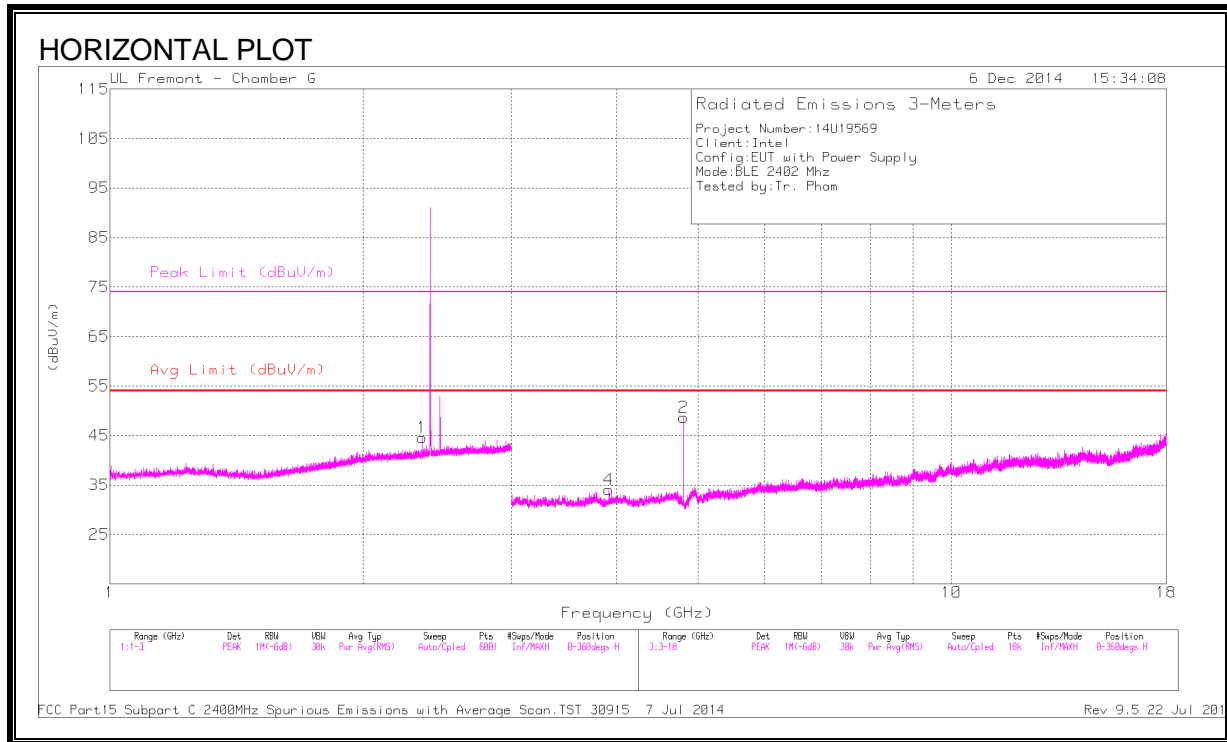
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	48.48	PK	32	-24.9	0	55.58	-	-	74	-18.42	80	389	V
2	* 2.484	54.22	PK	32	-24.9	0	61.32	-	-	74	-12.68	80	389	V
3	* 2.484	32.08	RMS	32	-24.9	.186	39.366	54	-14.634	-	-	80	389	V
4	* 2.494	34.24	RMS	32	-24.9	.186	41.526	54	-12.474	-	-	80	389	V

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

PK - Peak detector

RMS - RMS detection

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS



DATA

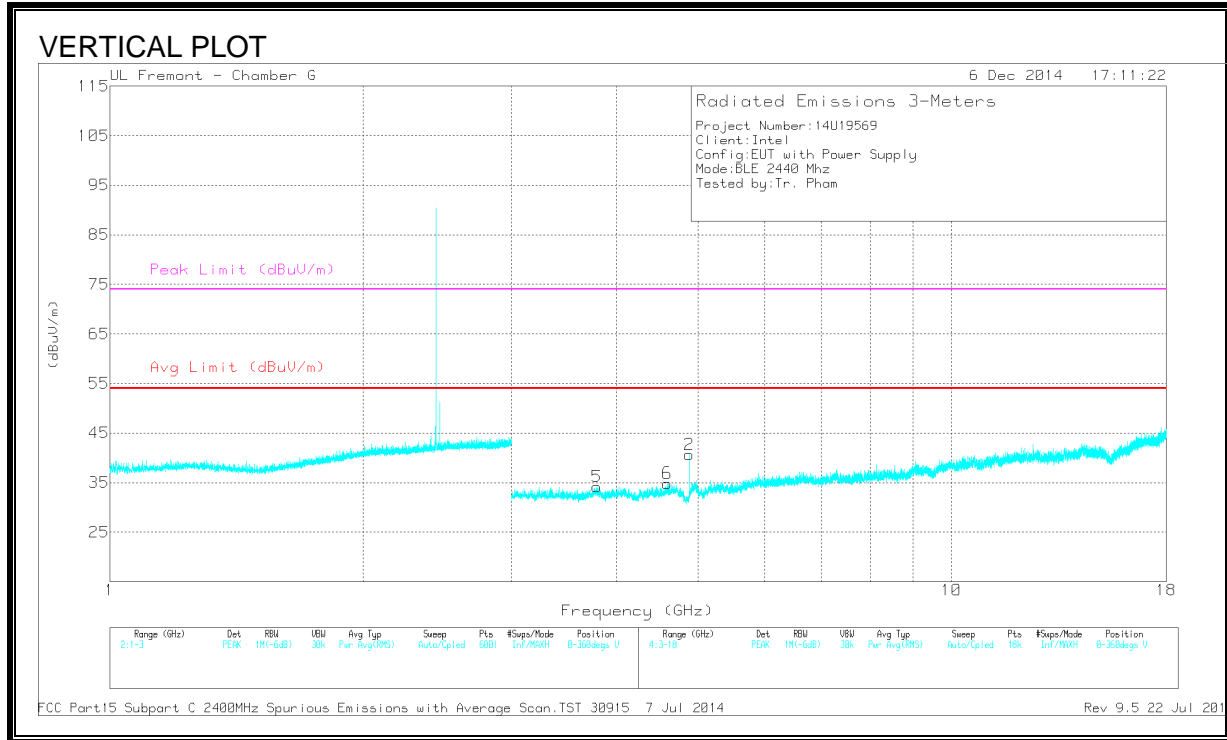
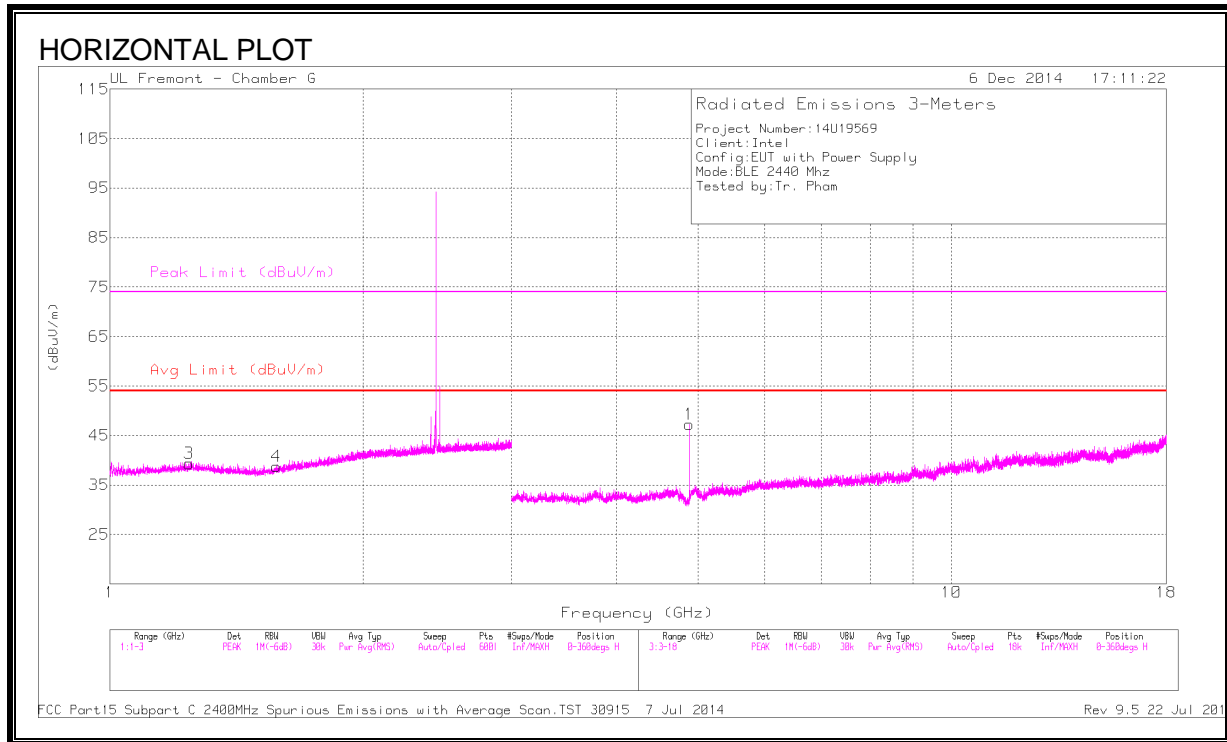
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.35	44.97	PK2	31.7	-25	0	51.67	-	-	74	-22.33	282	109	H
* 2.35	31.12	MAV1	31.7	-25	.186	38.006	54	-15.994	-	-	282	109	H
* 4.804	56.73	PK2	34.1	-33.2	0	57.63	-	-	74	-16.37	267	229	H
* 4.804	44.5	MAV1	34.1	-33.2	.186	45.586	54	-8.414	-	-	267	229	H
* 3.916	40.69	PK2	33.2	-33.7	0	40.19	-	-	74	-33.81	267	229	H
* 3.917	30	MAV1	33.2	-33.7	.186	29.686	54	-24.314	-	-	267	229	H
* 4.804	51.34	PK2	34.1	-33.2	0	52.24	-	-	74	-21.76	336	250	V
* 4.804	38.7	MAV1	34.1	-33.2	.186	39.786	54	-14.214	-	-	336	250	V
* 10.874	36.32	PK2	37.7	-26.8	0	47.22	-	-	74	-26.78	336	250	V
* 10.874	25.37	MAV1	37.7	-26.8	.186	36.456	54	-17.544	-	-	336	250	V
* 11.941	36.9	PK2	38.8	-26.3	0	49.4	-	-	74	-24.6	336	250	V
* 11.941	25.11	MAV1	38.8	-26.3	.186	37.796	54	-16.204	-	-	336	250	V

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

PK2 - KDB558074 Method: Maximum Peak

MAV1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL HARMONICS AND SPURIOUS EMISSIONS



DATA

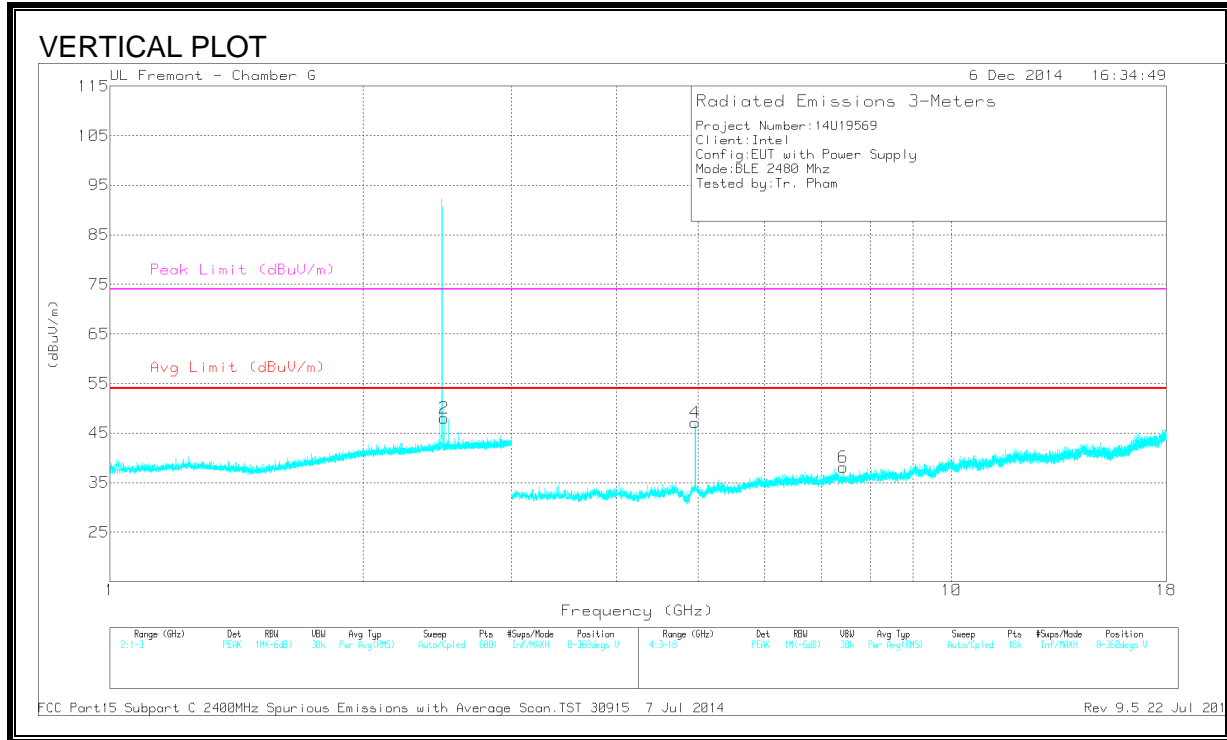
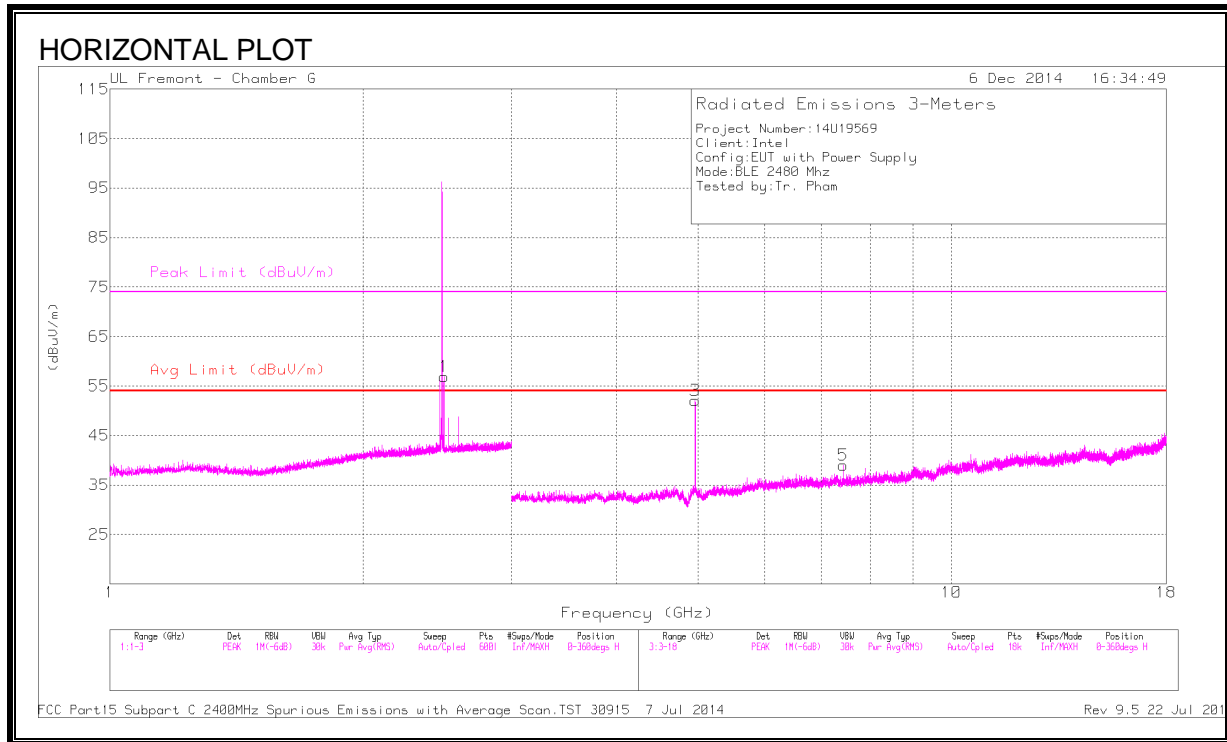
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.242	44.54	PK2	29.2	-26.1	0	47.64	-	-	74	-26.36	325	124	H
* 1.242	32.68	MAv1	29.2	-26.1	.186	35.966	54	-18.034	-	-	325	124	H
* 1.578	44.11	PK2	28.4	-25.5	0	47.01	-	-	74	-26.99	300	139	H
* 1.578	32.38	MAv1	28.4	-25.5	.186	35.466	54	-18.534	-	-	300	139	H
* 4.88	56.57	PK2	34.1	-33	0	57.67	-	-	74	-16.33	270	249	H
* 4.88	45.86	MAv1	34.1	-33	.186	46.96	54	-6.854	-	-	270	249	H
* 4.88	52.83	PK2	34.1	-33	0	53.93	-	-	74	-20.07	125	337	V
* 4.88	41.96	MAv1	34.1	-33	.186	43.246	54	-10.754	-	-	125	337	V
* 3.789	42.3	PK2	33	-32.9	0	42.4	-	-	74	-31.6	125	337	V
* 3.789	30.82	MAv1	33	-32.9	.186	31.106	54	-22.894	-	-	125	337	V
* 4.595	41.83	PK2	33.9	-33.3	0	42.43	-	-	74	-31.57	125	337	V
* 4.594	30.59	MAv1	33.9	-33.3	.186	31.376	54	-22.624	-	-	125	337	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS



DATA

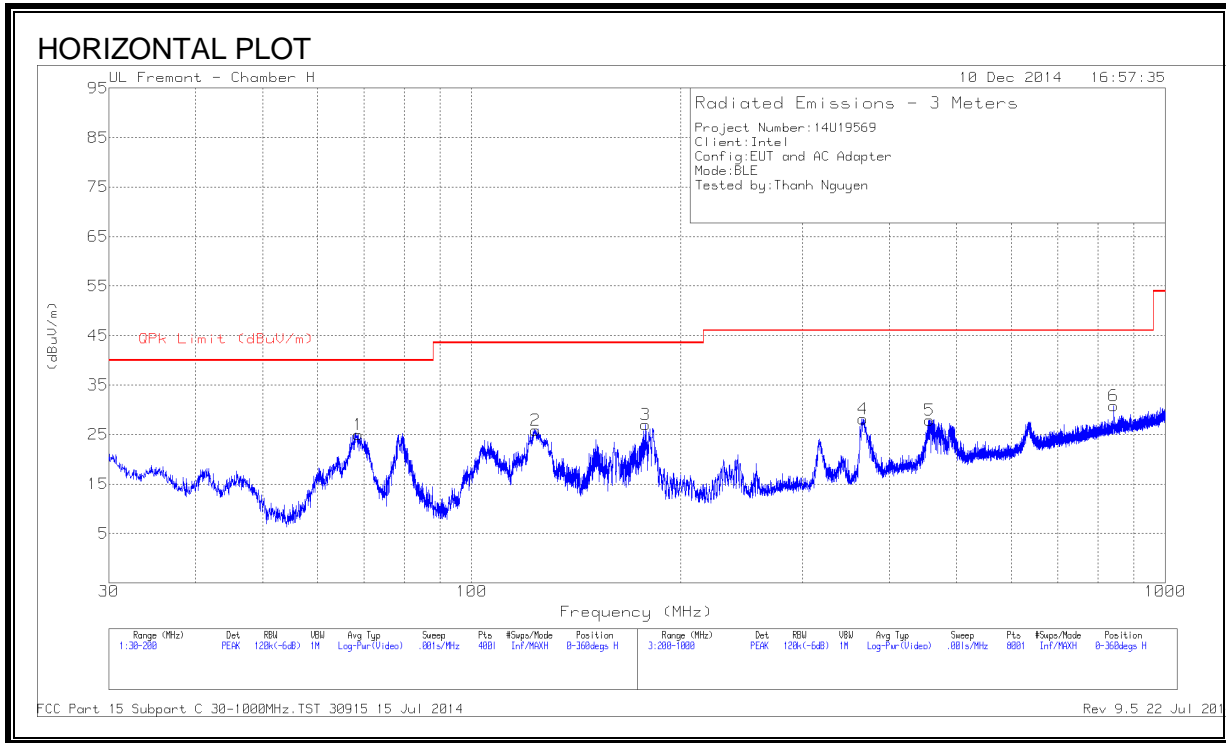
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.494	52.72	PK2	32	-24.9	0	59.82	-	-	74	-14.18	281	249	H
* 2.494	33.83	MAV1	32	-24.9	.186	41.116	54	-12.884	-	-	281	249	H
* 2.494	53.79	PK2	32	-24.9	0	60.89	-	-	74	-13.11	84	396	V
* 2.494	34.49	MAV1	32	-24.9	.186	41.776	54	-12.224	-	-	84	396	V
* 4.96	58.1	PK2	34.1	-32.9	0	59.3	-	-	74	-14.7	280	217	H
* 4.96	51.68	MAV1	34.1	-32.9	.186	53.066	54	-.934	-	-	280	217	H
* 7.44	42.68	PK2	35.6	-31.4	0	46.88	-	-	74	-27.12	321	319	H
* 7.44	33.68	MAV1	35.6	-31.4	.186	38.066	54	-15.934	-	-	321	319	H
* 4.96	52.66	PK2	34.1	-32.9	0	53.86	-	-	74	-20.14	116	143	V
* 4.96	45.99	MAV1	34.1	-32.9	.186	47.376	54	-6.624	-	-	116	143	V
* 7.438	40.87	PK2	35.6	-31.4	0	45.07	-	-	74	-28.93	116	143	V
* 7.44	31.18	MAV1	35.6	-31.4	.186	35.566	54	-18.434	-	-	116	143	V

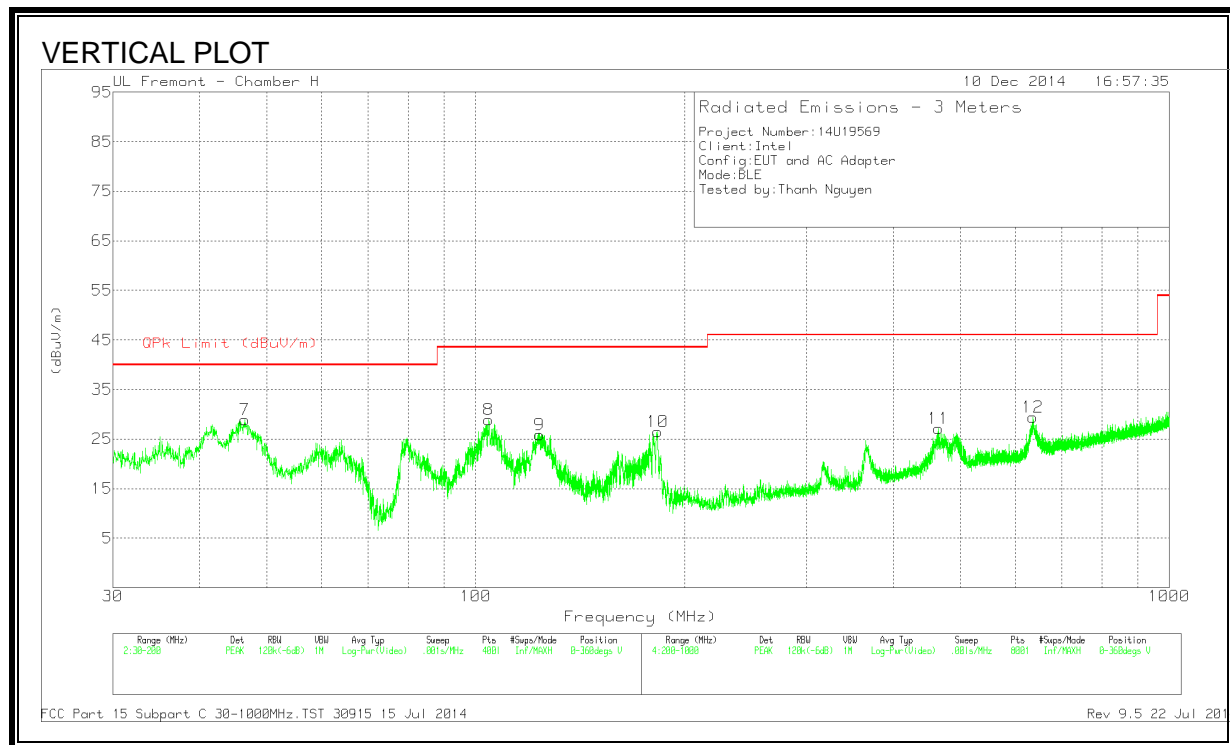
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAV1 - KDB558074 Option 1 Maximum RMS Average

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





HORIZONTAL AND VERTICAL DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	SS JB3 SN A051314-1	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 123.6275	38.84	PK	16.8	-29.8	25.84	43.52	-17.68	0-360	201	H
9	* 123.7125	38.85	PK	16.8	-29.8	25.85	43.52	-17.67	0-360	100	V
7	46.49	46.95	PK	12.6	-30.7	28.85	40	-11.15	0-360	100	V
1	68.59	44.11	PK	11.3	-30.4	25.01	40	-14.99	0-360	401	H
8	104.4175	44.83	PK	14.1	-30	28.93	43.52	-14.59	0-360	100	V
3	178.24	41.95	PK	14.5	-29.4	27.05	43.52	-16.47	0-360	201	H
10	182.83	41.54	PK	14.3	-29.4	26.44	43.52	-17.08	0-360	100	V
4	366.8	38.56	PK	17.7	-28.1	28.16	46.02	-17.86	0-360	100	H
5	457.6	35.55	PK	19.9	-27.6	27.85	46.02	-18.17	0-360	201	H
11	464.5	34.68	PK	20.1	-27.6	27.18	46.02	-18.84	0-360	100	V
12	635.3	33.98	PK	22.5	-27.1	29.38	46.02	-16.64	0-360	100	V
6	843.1	32.12	PK	24.6	-25.9	30.82	46.02	-15.2	0-360	301	H

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

PK - Peak detector

10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

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

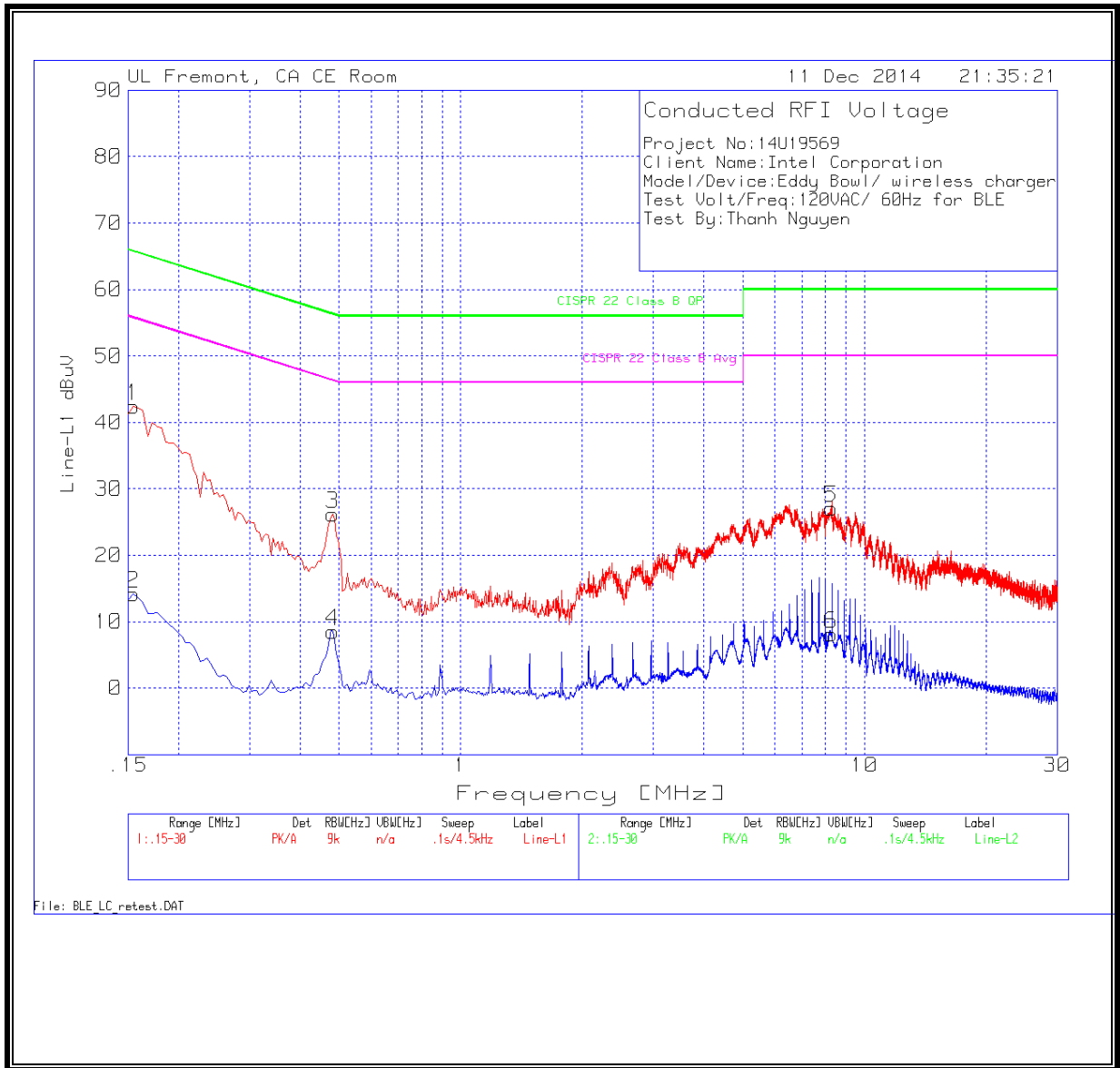
*Decreases with the logarithm of the frequency.

TEST PROCEDURE

ANSI C63.10

RESULTS

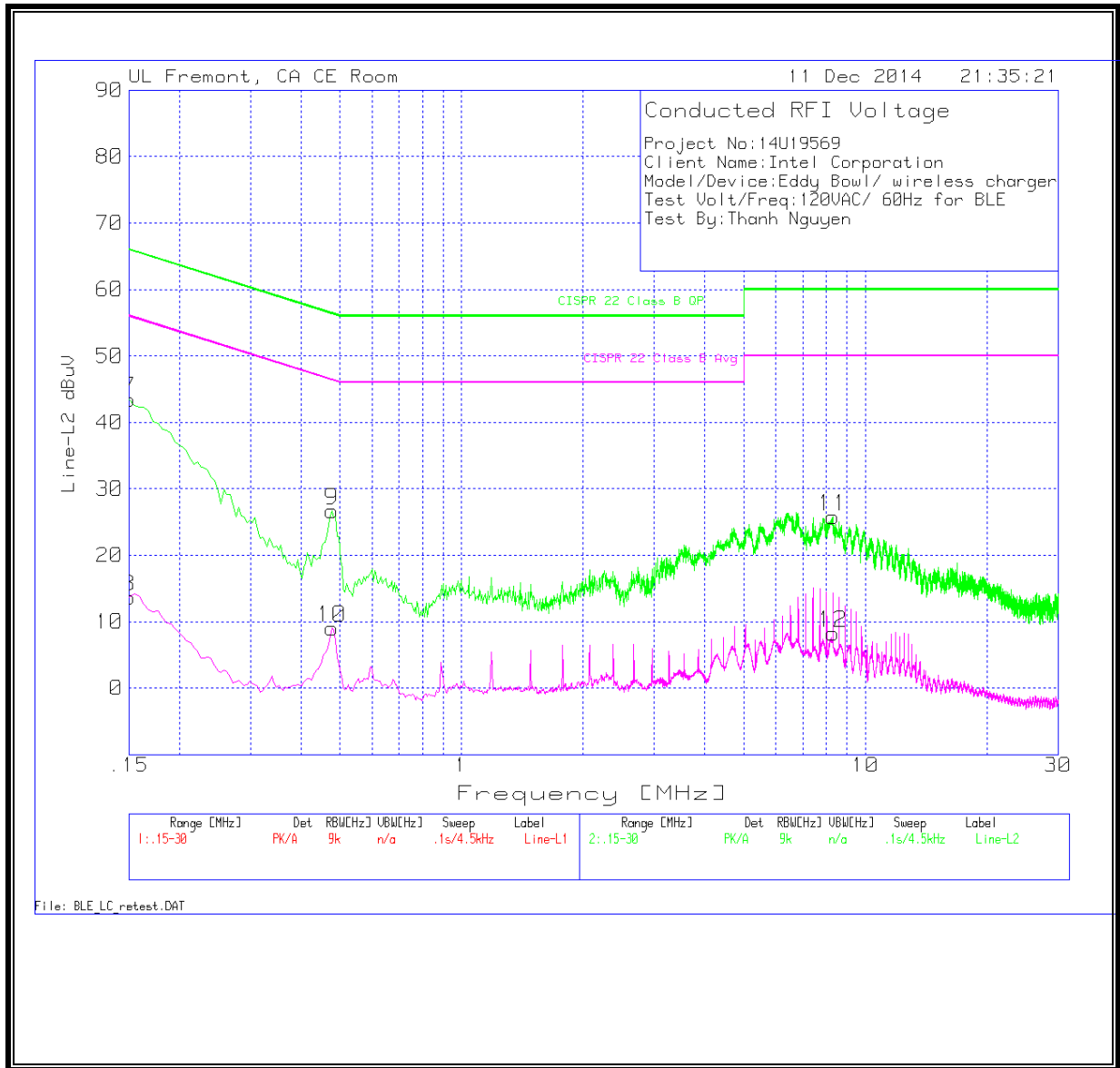
LINE 1 RESULTS



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1 (dB)	LC Cables 1&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
1	.1545	41.18	PK	1.3	0	42.48	65.8	-23.32	-	-
2	.1545	12.94	Av	1.3	0	14.24	-	-	55.8	-41.56
3	.483	25.76	PK	.4	0	26.16	56.3	-30.14	-	-
4	.483	8.09	Av	.4	0	8.49	-	-	46.3	-37.81
5	8.25	26.82	PK	.2	.1	27.12	60	-32.88	-	-
6	8.25	7.83	Av	.2	.1	8.13	-	-	50	-41.87

LINE 2 RESULTS



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2 (dB)	LC Cables 2&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
7	.15	41.91	PK	1.5	0	43.41	66	-22.59	-	-
8	.15	12.19	Av	1.5	0	13.69	-	-	56	-42.31
9	.4785	26.3	PK	.4	0	26.7	56.4	-29.7	-	-
10	.4785	8.61	Av	.4	0	9.01	-	-	46.4	-37.39
11	8.295	25.48	PK	.2	.1	25.78	60	-34.22	-	-
12	8.295	7.94	Av	.2	.1	8.24	-	-	50	-41.76

PK - Peak detector

Av - average detection