



**FCC 47 CFR PART 15 SUBPART C
INDUSTRY CANADA RSS-216 ISSUE 2**

CERTIFICATION TEST REPORT

FOR

MAGNETIC CHARGING CABLE

MODEL NO: A2056

FCC ID: BCGA2056

IC: 579C-A2056

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Revision History

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: APPLE, INC.
ONE APPLE PARK WAY
CUPERTINO, CA 95014, U.S.A.

EUT DESCRIPTION: MAGNETIC CHARGING CABLE

MODEL NUMBER: A2056

SERIAL NUMBER: DLC824401PGJLW04K, DLCWQ0GTJTMH

DATE TESTED: AUGUST 14, 2018 – SEPTEMBER 5, 2018

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C	Complies
INDUSTRY CANADA RSS-216 ISSUE 2	Complies
INDUSTRY CANADA RSS-GEN ISSUE 5	Complies

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:



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JINGANG LI
LAB ENGINEER
UL VERIFICATION SERVICES INC.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013, FCC CFR 47 Part 2, and FCC CFR 47 Part 15, RSS-GEN Issue 5 and RSS-216 Issue 2 January 2016.

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: 22541-1)
☐ Chamber B (IC:2324B-2)	☒ Chamber E (IC: 22541-2)
☐ Chamber C (IC:2324B-3)	☐ Chamber F (IC: 22541-3)
	☐ Chamber G (IC: 22541-4)
	☐ Chamber H (IC: 22541-5)

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 [NVLAP Lab Search](#).

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
Conducted Disturbance, 9KHz to 0.15 MHz	3.84 dB
Conducted Disturbance, 0.15 to 30 MHz	3.65 dB
Radiated Disturbance, 9KHz to 30 MHz	3.15 dB
Radiated Disturbance, 30 to 1000 MHz	5.36 dB
Radiated Disturbance, 1000 to 18000 MHz	4.32 dB
Radiated Disturbance, 18000 to 26000 MHz	4.45 dB
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 magnetic charging device, with plastic housing, which has a single inductive charging coil to charge Apple Watch. The charging frequency is 326.5 kHz, and the maximum power consumption is 5W in charging status.

5.2. MAXIMUM OUTPUT POWER

The transmitter has maximum peak radiated electric and magnetic field strength as follows:

Fundamental Frequency (KHz)	Mode	E field (300m distance) FCC (dBuV/m)	H field (3m distance) IC (dBuA/m)
326.5	Standby (Config 1)	-21.16	6.53
326.5	Operating (Config 2)	-22.54	4.61

5.3. SOFTWARE AND FIRMWARE

The firmware version installed in the EUT during testing was 9.0.9.

5.4. WORST-CASE CONFIGURATION AND MODE

The EUT is a single frequency magnetic charger enclosed in a plastic case. For the entire radiated emissions test, the EUT was examining on the following configuration 1 and 2.

Config	Mode	Descriptions
1	Standby	EUT Alone powered by AC/DC adapter
2	Operating	EUT and Watch powered by AC/DC adapter

An AC Power Line conducted Emissions were also investigated on the following configurations.

Config	Mode	Descriptions
1	Standby	EUT Alone powered by AC/DC adapter
2	Operating	EUT and Watch powered by AC/DC adapter
3	Standby	EUT Alone powered by laptop
4	Operating	EUT and Watch powered by laptop

For below 30MHz & 1GHz tests EUT was connected to AC power adapter as the worst case, the worst-case configuration reported was tested with EUT only. For AC line conducted emission, test was investigated with AC power adapter and with laptop.

The EUT was tested as standby and operation modes. During operational mode, EUT was tested with two different sizes of watches, small and big of having similar mechanical structure.

For all radiated emissions tests, both small and big watches were investigated and no significant different in reading was found between both watches; the big watch was chosen to test as the worst case condition since it has max load overall, hence all final data for operational mode represents EUT with the big watch. During the charging process, the watch actively indicates the status of the charging process. Device being charged was at a state of 20 – 50% charged.

For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel); parallel and perpendicular are the worst orientations, therefore testing was performed on these two orientations only.

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 300 m open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788 D01.

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT & PERIPHERALS

SUPPORT EQUIPMENT & PERIPHERALS LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
AC/DC adapter	Apple	A1385	N/A	N/A
Watch	Apple	A2007	D92X303AKTK6	BCG-A2007
Laptop	Apple	MacBook Pro	C02NQ00QG45V	FCC DoC
Laptop Adapter	Apple	A1435	C046042GFYFG6HKAY	N/A
Charging Base	Apple	N/A	920-00855-01	N/A

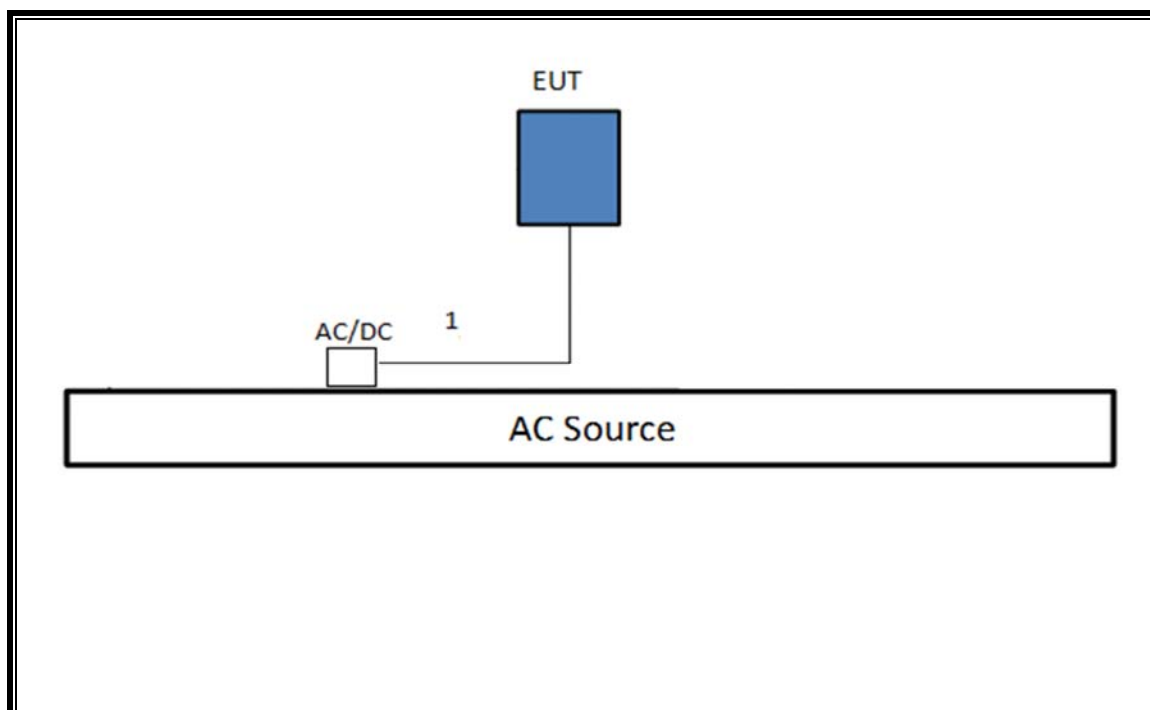
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC	1	USB	Un-shielded	2	5W Power Supply
2	DC	1	Magnetic 5 pin	Un-shielded	2	60W Power Supply

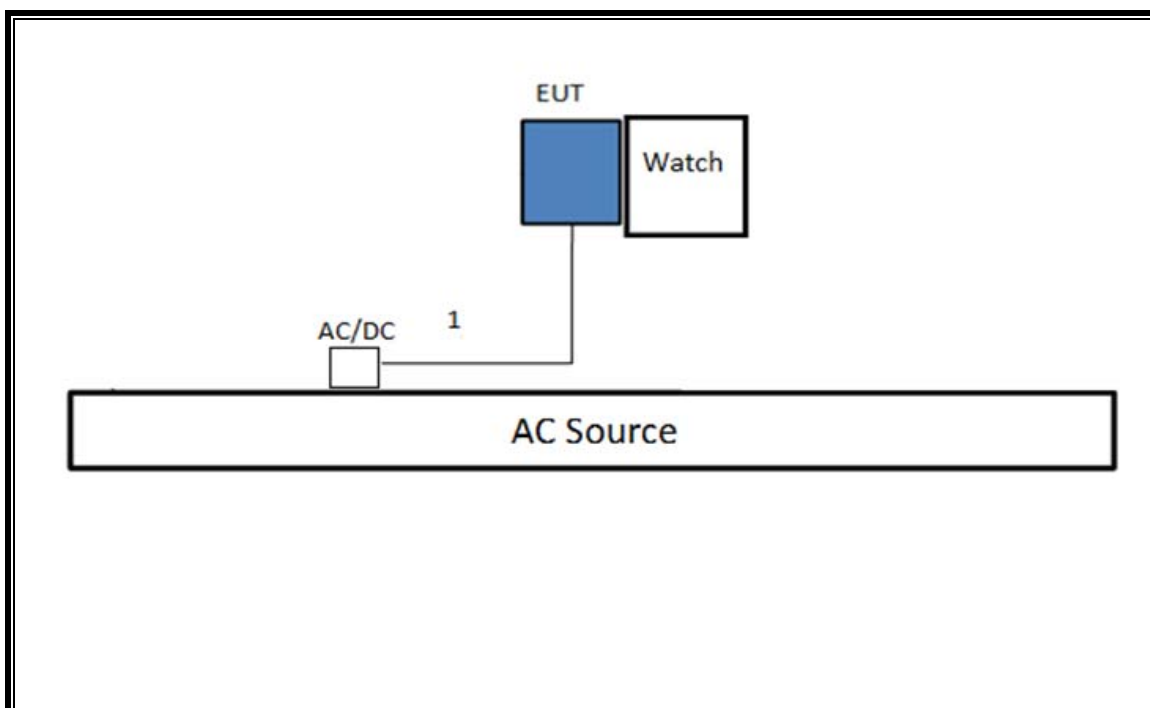
TEST SETUP

Please see the following configurations for the test setups. Configurations 1 and 2 indicate that the EUT is directly connected to an AC/DC adapter via USB cable. Configurations 3 and 4 indicate that the EUT is directly connected to a Host PC via USB cable.

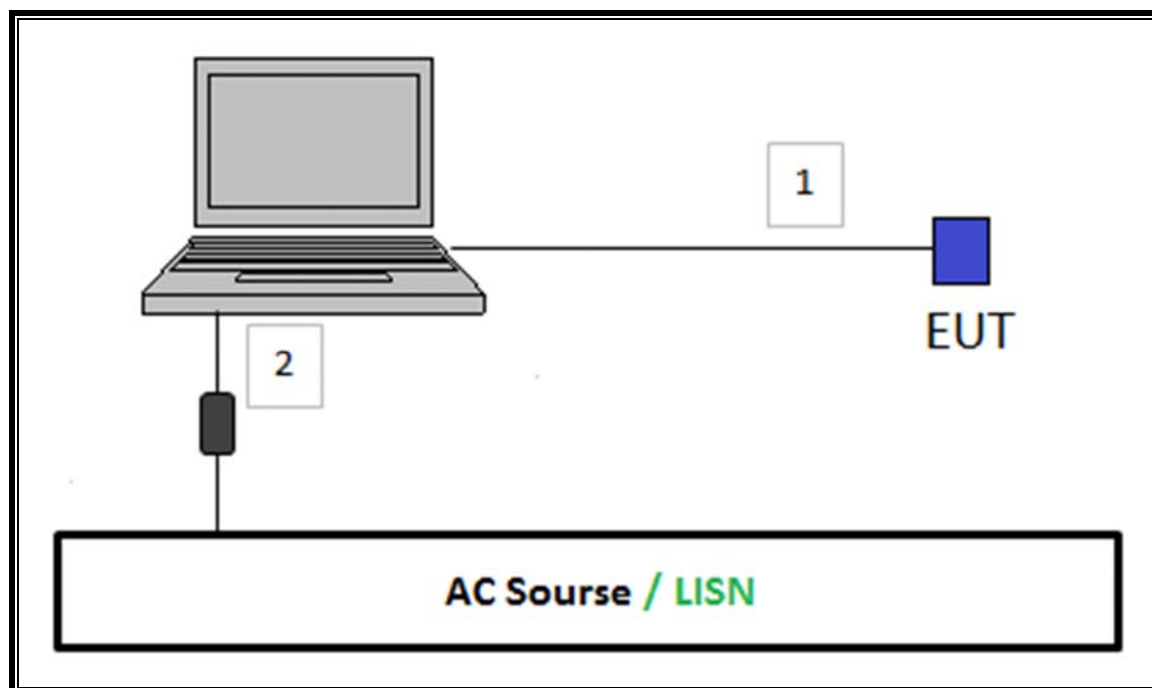
CONFIGURATION 1: STANDBY MODE



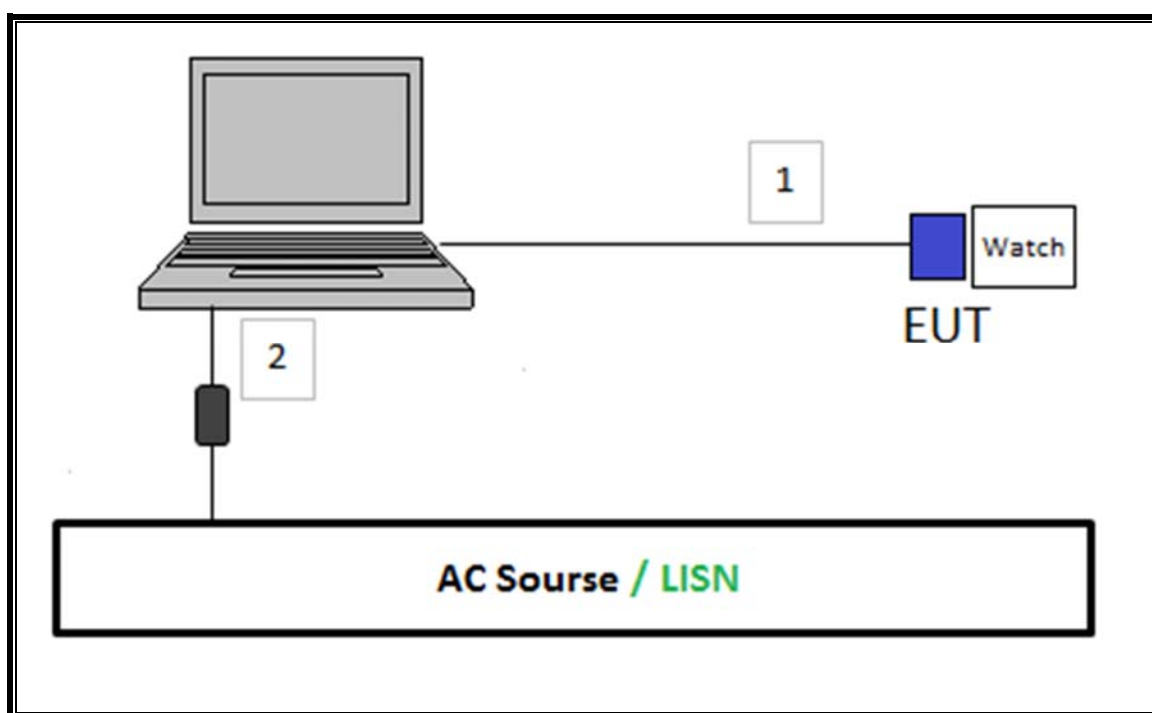
CONFIGURATION 2: OPERATING MODE WITH WATCH



CONFIGURATION 3: STANDBY MODE BY HOST PC VIA USB CABLE



CONFIGURATION 4: OPERATING MODE WITH WATCH BY HOST PC VIA USB CABLE



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	ID Num	Cal Due
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences Corp.	JB3	T899	07/24/2019
Amplifier, 10KHz to 1GHz, 32dB	Sonoma Instrument Co.	310N	T285	07/06/2019
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T907	02/07/2019
Thermometer	Control Company	14-650-118, 15557603	T1816	01/11/2019
Antenna, Active Loop 9kHz-30MHz	ETS-Lindgren	6502	T1616	09/14/2018
Sniffer Probes	Electro Metrics	EM-6992	N/A	N/A
AC Line Conducted				
EMI Test Receiver 9KHz-7GHz	Rohde & Schwarz	ESCI7	T1436	01/25/2019
Power Cable, Line Conducted Emissions	UL	PG1	T861	08/31/2018
LISN for Conducted Emissions CISPR-16	Fischer	50/250-25-2-01	T1310	06/15/2019

Test Software List			
Description	Manufacturer	Model	Version
Radiated Software	UL	UL EMC	Ver 9.5, April 26, 2016

7. OCCUPIED BANDWIDTH

TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The RBW is set to 200Hz. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

Note: Because the measured signal is CW-like, adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.

Note that when the EUT was in standby mode the only signal that comes out from the EUT was the intentional charging signal of 326.5kHz. On the other hand, when the EUT was in operational mode there were two signals. One of the intentional charging signal of 326.5kHz and the other one the control signal of 340kHz that controls the communication/charging status between EUT and the client device-the watch.

EUT SETUP

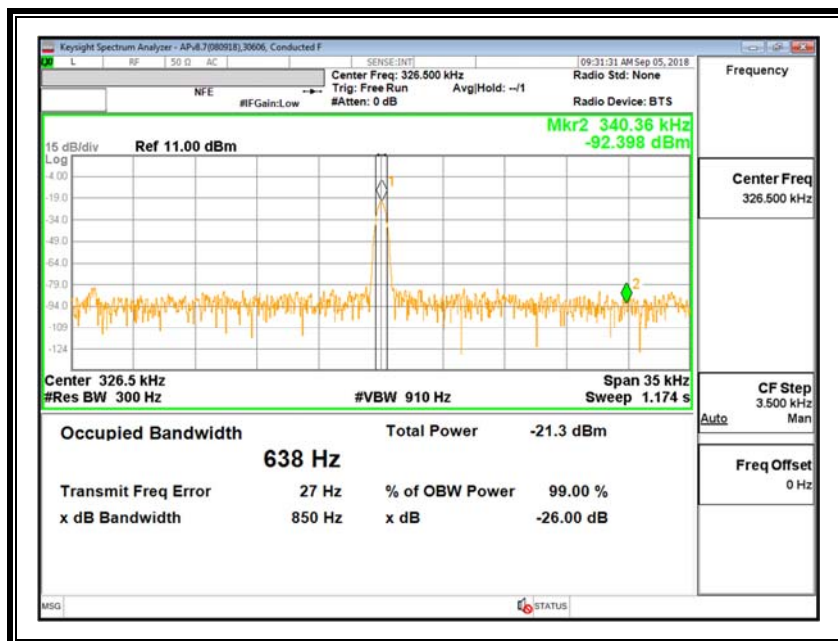
Configuration 1: Charger in standby mode, transmitting low duty cycle CW signal at 326.5kHz test.

Configuration 2: Charger in pairing mode with FSK modulation (-0/+15 kHz) which occurs over a very short period of time as soon as the watch is placed on the charger.

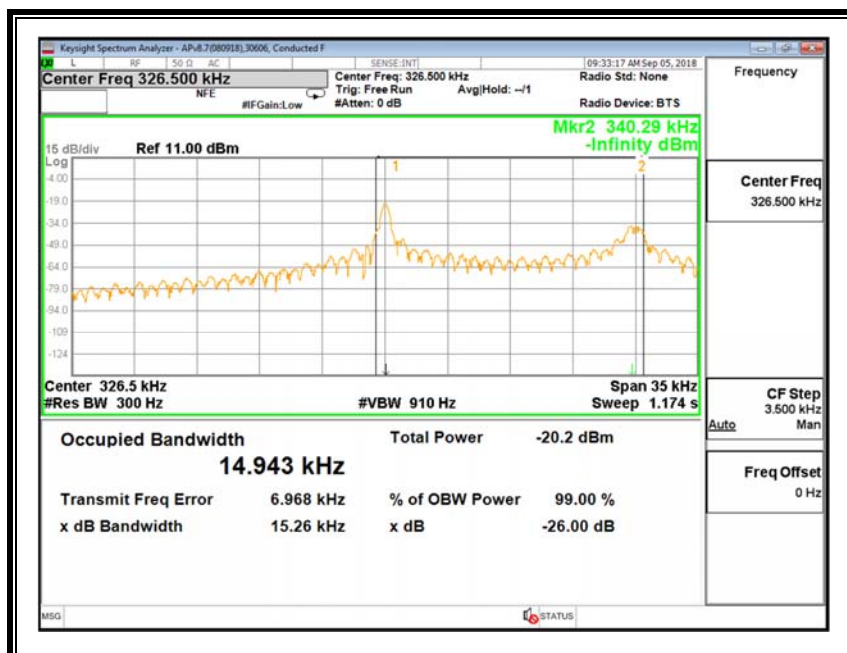
Configuration 3: Charger in charging mode with CW signal and duty cycle varied to control charge level via load modulation from watch.

RESULTS

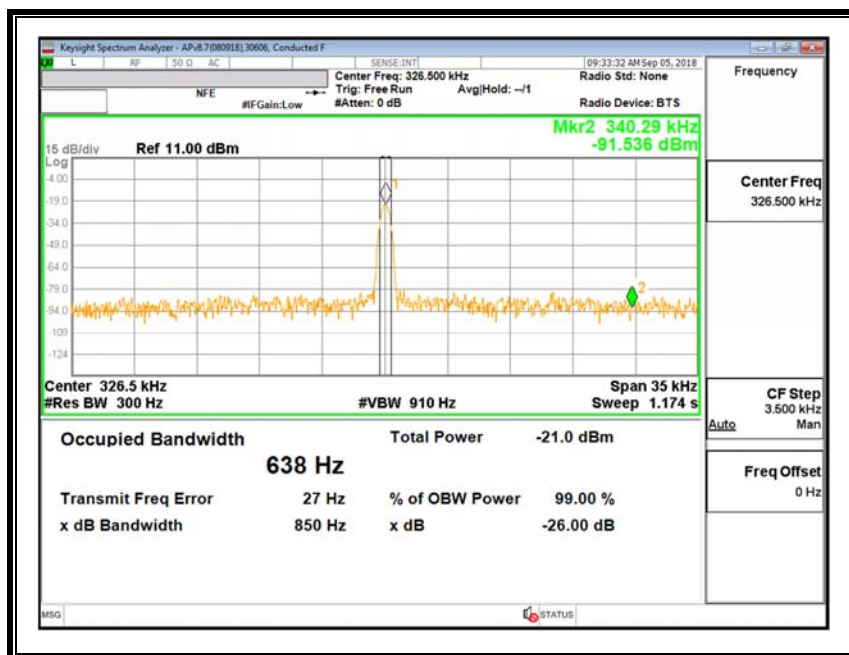
7.1.1. CONFIGURATION 1



7.1.2. CONFIGURATION 2



7.1.3. CONFIGURATION 3



8. RADIATED EMISSION TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.209 (a)

ICES-001 Section 6.2, IC RSS-216 6.2.2, and IC RSS-GEN Sections 8.9 and 8.10.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (m)
0.009–0.490	2400/F(kHz)	300
0.490–1.705	24000/F(kHz)	30
1.705–30.0	30	30
30–88	100	3
88 to 216	150	3
216 to 960	200	3
Above 960 MHz	500	3
Note: The lower limit shall apply at the transition frequency.		

CISPR 11:04

Electromagnetic radiation disturbance limits for class B group 2 equipment measured on a test site

Frequency Range (MHz)	Magnetic Field Strength Limit Class B Group 2 @ 3m Distance (dBuA/m)
	Quasi-peak
0.009 - 0.070	69
0.070 - 0.1485	69
	Decreasing Linearly with Logarithm of Frequency to 39
0.1485 - 4.0	39
	Decreasing Linearly with Logarithm of Frequency to 3
4.0 - 30	3

The limits of this table apply to induction cooking appliances intended for commercial use and those for domestic use with a diagonal diameter of more than 1.6m.
The measurements are performed at 3m distance with a 0.6 m loop antenna as described in 4.2.1 of CISPR 16-1-4.
The antenna should be vertically installed, with the lower edge of the loop at 1m height above the floor.

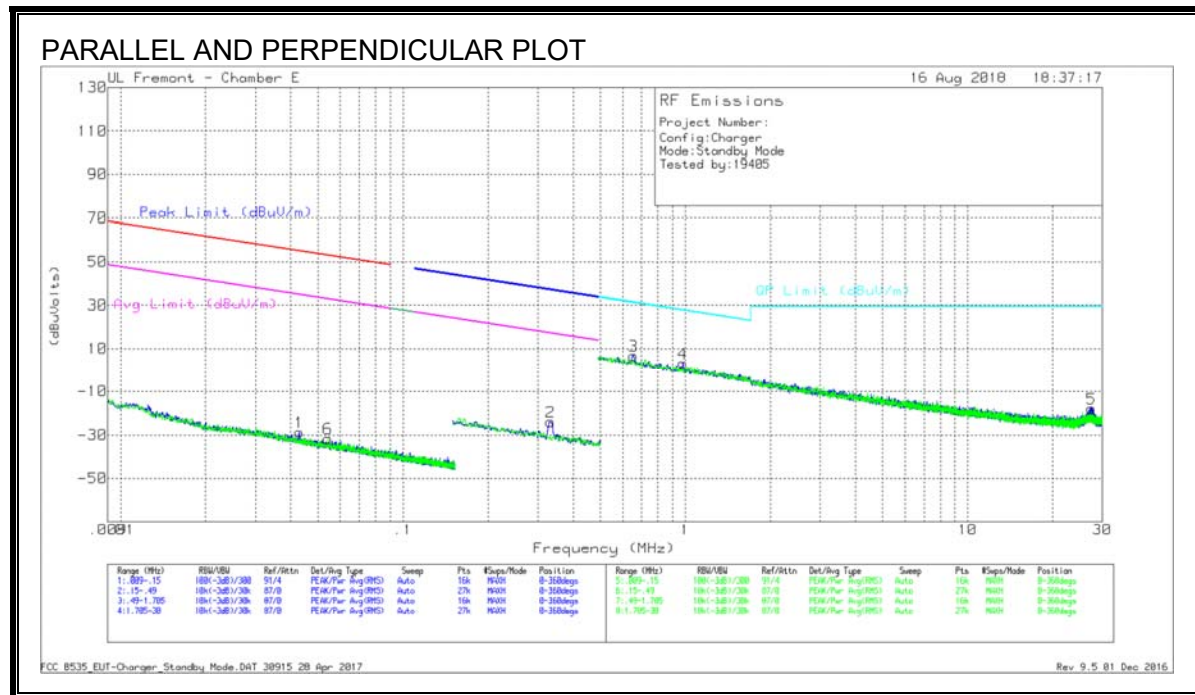
Frequency Range (MHz)	Electric Field Strength Limit Class B Group 2 @ 3m Distance (dBuV/m)	
	Quasi-peak	Average
30 – 80,872	40	35
80,872 – 81,848	60	55
81,848 – 134,786	40	35
134,786 – 136,414	60	55
136,414 – 230	40	35
230 – 1 000	47	42

RESULTS

8.2. PLASTIC HOUSING WITH 1m CABLE

8.2.1. FCC TX FUNDAMENTAL AND SPURIOUS EMISSIONS FROM 9 kHz TO 30 MHz

STANDBY CONFIGURATION



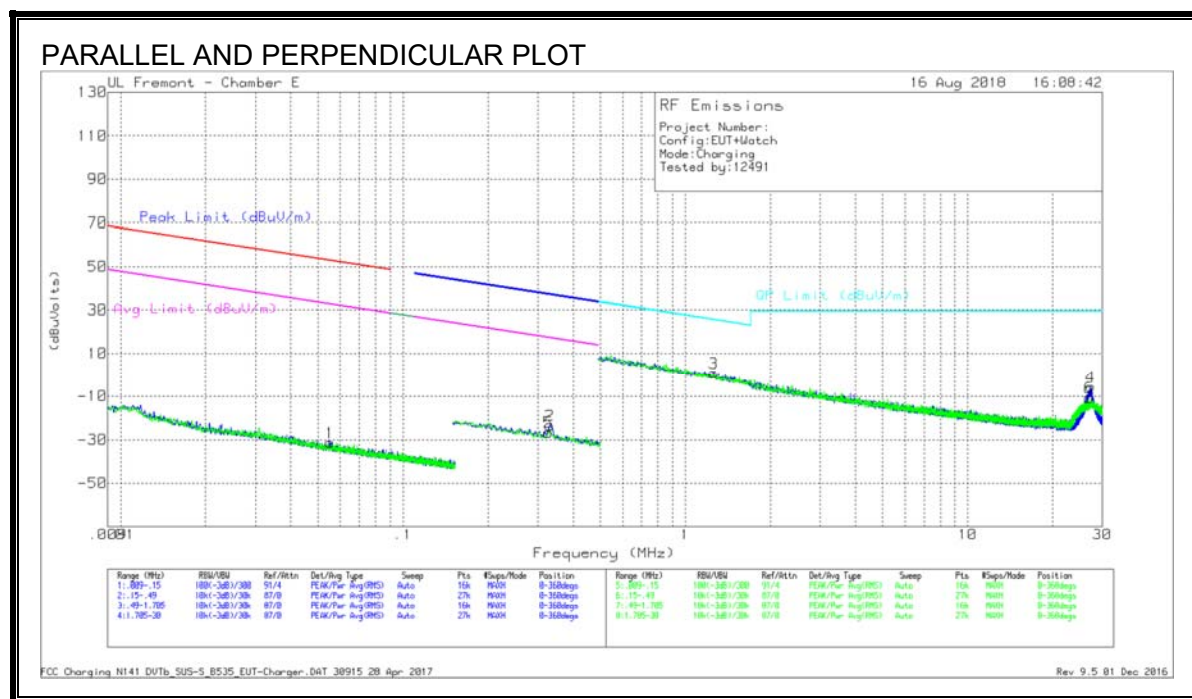
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.04293	37.72	Pk	13.4	.1	-80	-28.78	54.93	-83.71	34.93	-63.71	-	-	-	-	0-360
6	.05426	35.54	Pk	12.7	.1	-80	-31.66	52.9	-84.56	32.9	-64.56	-	-	-	-	0-360
2	.33323	45.01	Pk	10.9	.1	-80	-23.99	-	-	-	-	37.16	-61.15	17.16	-41.15	0-360

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
3	.65598	35.54	Pk	11	.1	-40	6.64	31.27	-24.63	0-360
4	.98028	31.74	Pk	11.3	.2	-40	3.24	27.79	-24.55	0-360
5	27.47584	12.65	Pk	8.8	.7	-40	-17.85	29.5	-47.35	0-360

Pk - Peak detector



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr 300m	Corrected Reading (dBuV)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.05521	36.42	Pk	12.3	.1	-80	-31.18	52.75	-83.93	32.75	-63.93	-	-	-	-	0-360
5	.32773	41.87	Pk	11.5	.1	-80	-26.53	-	-	-	-	37.3	-63.83	17.3	-43.83	0-360
2	.33154	45.07	Pk	11.5	.1	-80	-23.33	-	-	-	-	37.2	-60.53	17.2	-40.53	0-360

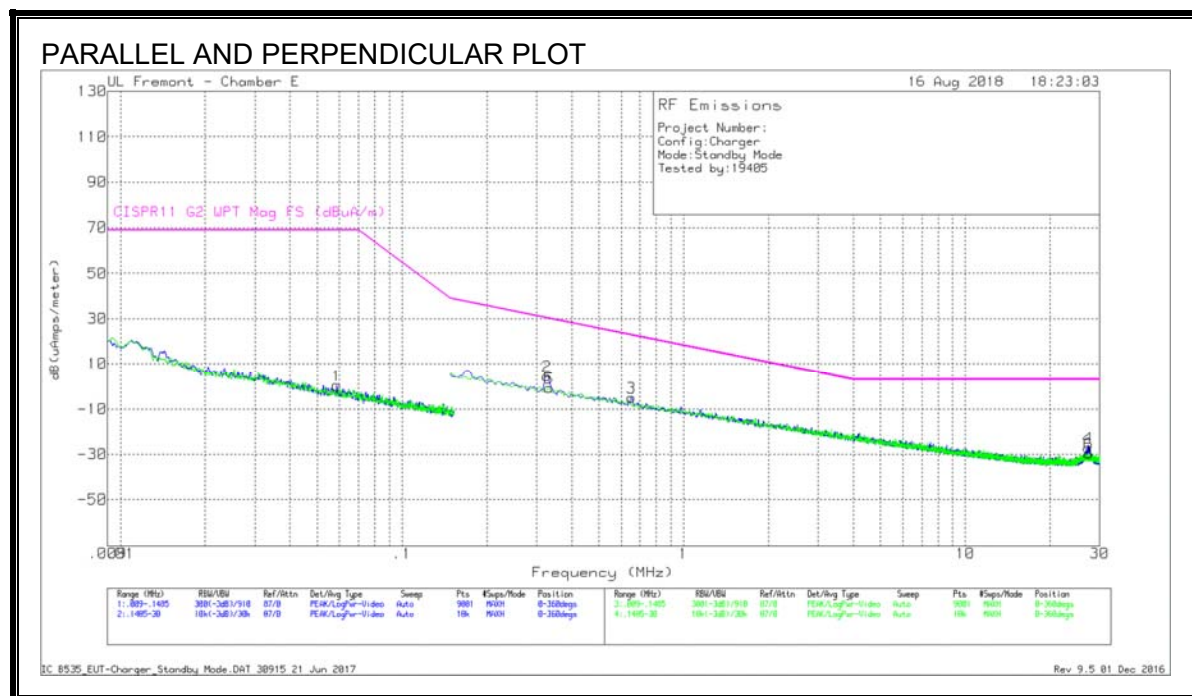
Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr 40Log	Corrected Reading (dBuV)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
3	1.26003	29.13	Pk	11.6	.2	-40	.93	25.62	-24.69	0-360
6	26.90416	20.2	Pk	8.5	.7	-40	-10.6	29.5	-40.1	0-360
4	27.27306	25.42	Pk	8.4	.7	-40	-5.48	29.5	-34.98	0-360

Pk - Peak detector

8.2.2. IC / CISPR 11 TX FUNDAMENTAL AND SPURIOUS EMISSIONS FROM 9 kHz TO 30 MHz

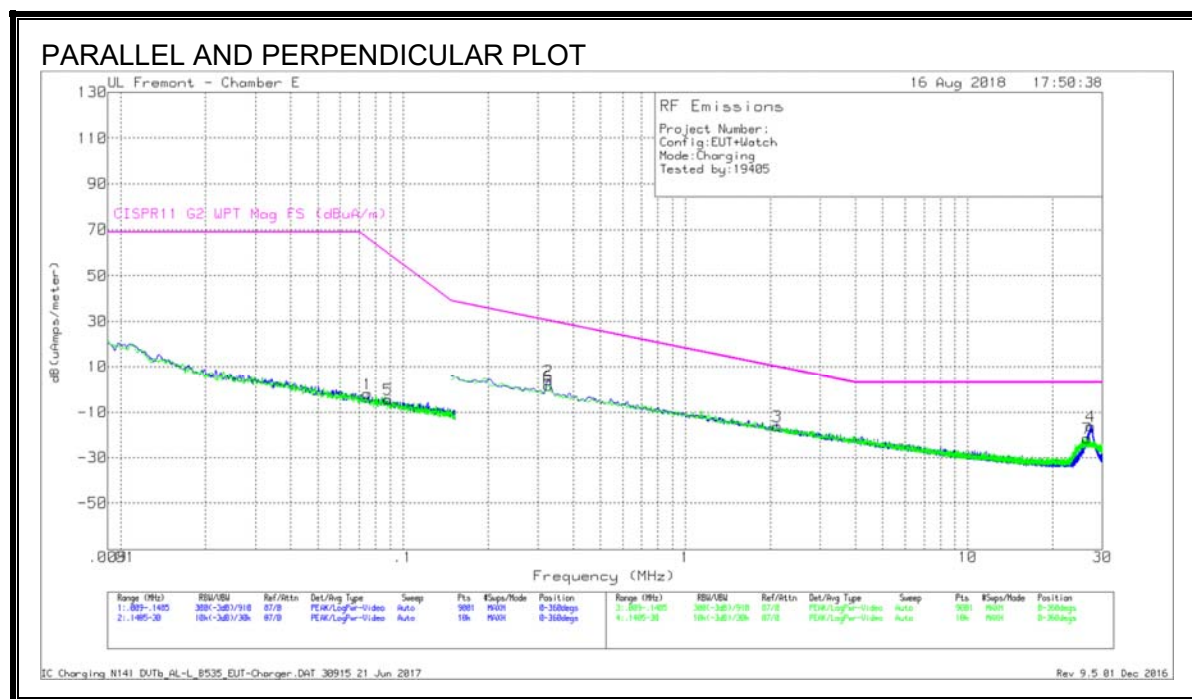
STANDBY CONFIGURATION



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cables (dB)	Corrected Reading dB(uAmps/meter)	CISPR11 G2 WPT Mag FS (dBuA/m)	Margin (dB)	Azimuth (Degs)
1	.05857	39.19	Pk	-38.9	.1	.39	69	-68.61	0-360
2	.32674	44.97	Pk	-40.5	.1	4.57	30.38	-25.81	0-360
5	.33254	39.64	Pk	-40.5	.1	-.76	30.19	-30.95	0-360
3	.65253	35.32	Pk	-40.4	.1	-4.98	22.82	-27.8	0-360
4	27.32312	14.82	Pk	-42.6	.7	-27.08	3	-30.08	0-360
6	27.42592	12.26	Pk	-42.6	.7	-29.64	3	-32.64	0-360

Pk - Peak detector



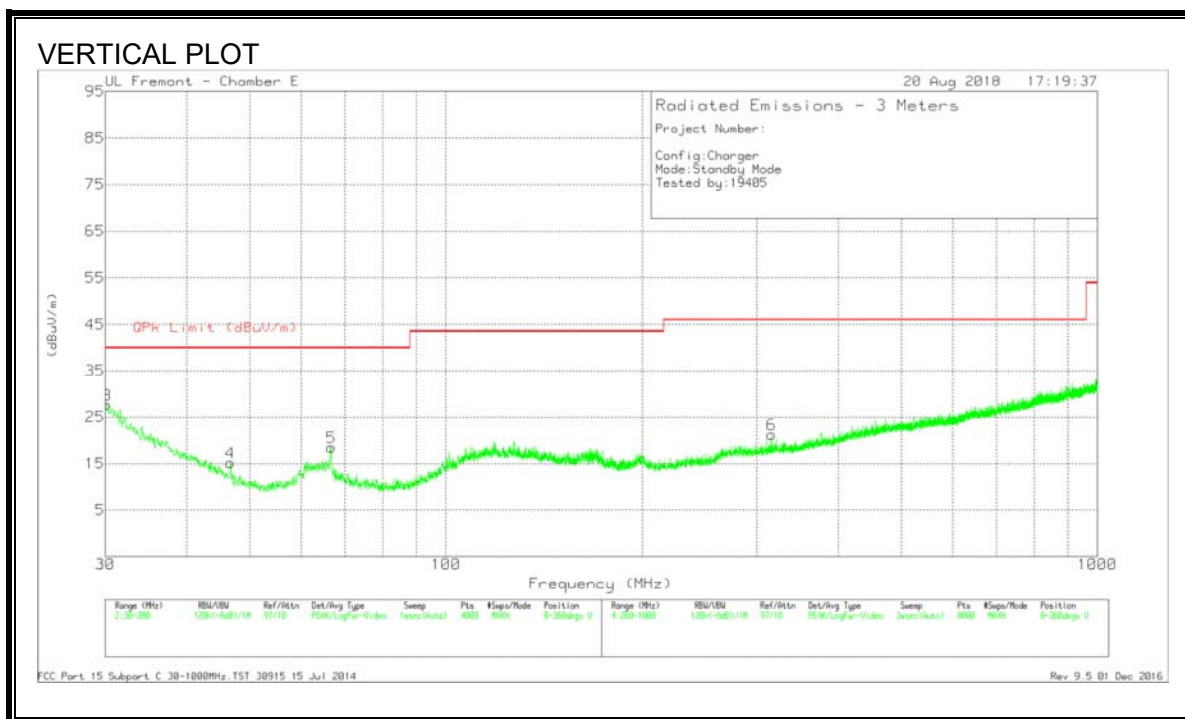
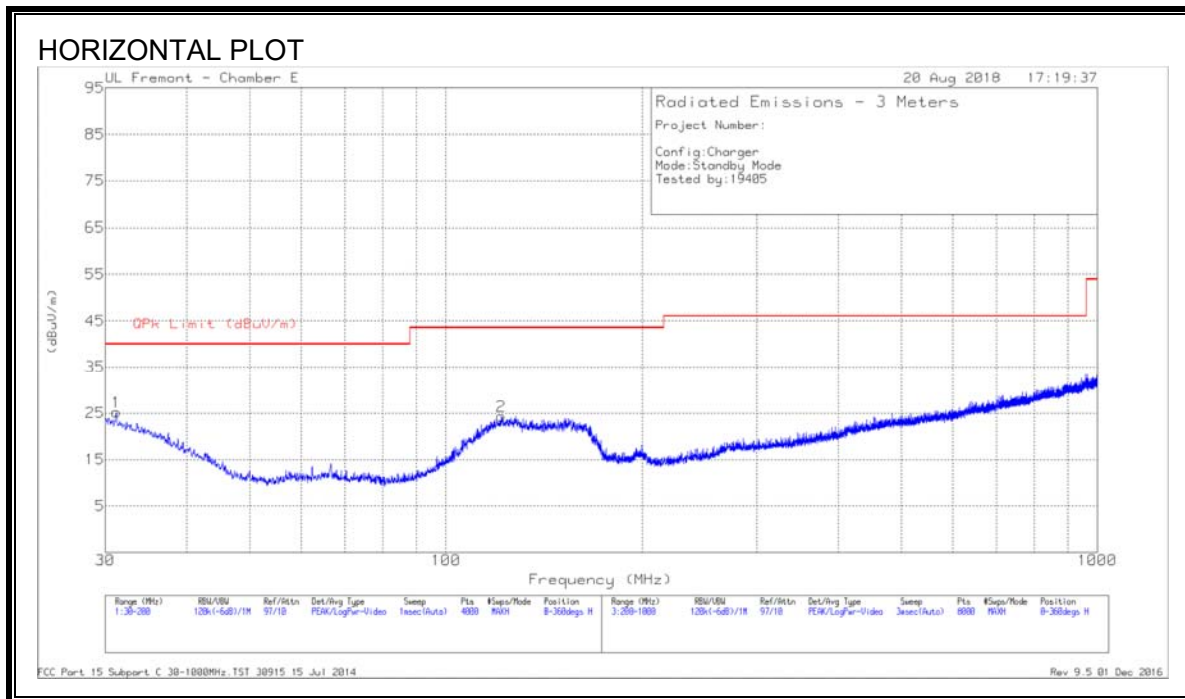
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cables (dB)	Corrected Reading dB(uAmps/meter)	CISPR11 G2 WPT Mag FS (dBuA/m)	Margin (dB)	Azimuth (Degs)
1	.07501	37.43	Pk	-39.4	.1	-1.87	66.24	-68.11	0-360
5	.08862	35.1	Pk	-39.5	.1	-4.3	59.59	-63.89	0-360
6	.32674	41.99	Pk	-40.5	.1	1.59	30.38	-28.79	0-360
2	.32756	44.46	Pk	-40.5	.1	4.06	30.35	-26.29	0-360
3	2.11323	23.76	Pk	-40.1	.2	-16.14	9.97	-26.11	0-360
7	26.44438	20.27	Pk	-42.4	.7	-21.43	3	-24.43	0-360
4	27.21618	25.64	Pk	-42.5	.7	-16.16	3	-19.16	0-360

Pk - Peak detector

8.2.3. FCC TX SPURIOUS EMISSION 30 TO 1000 MHz

STANDBY CONFIGURATION

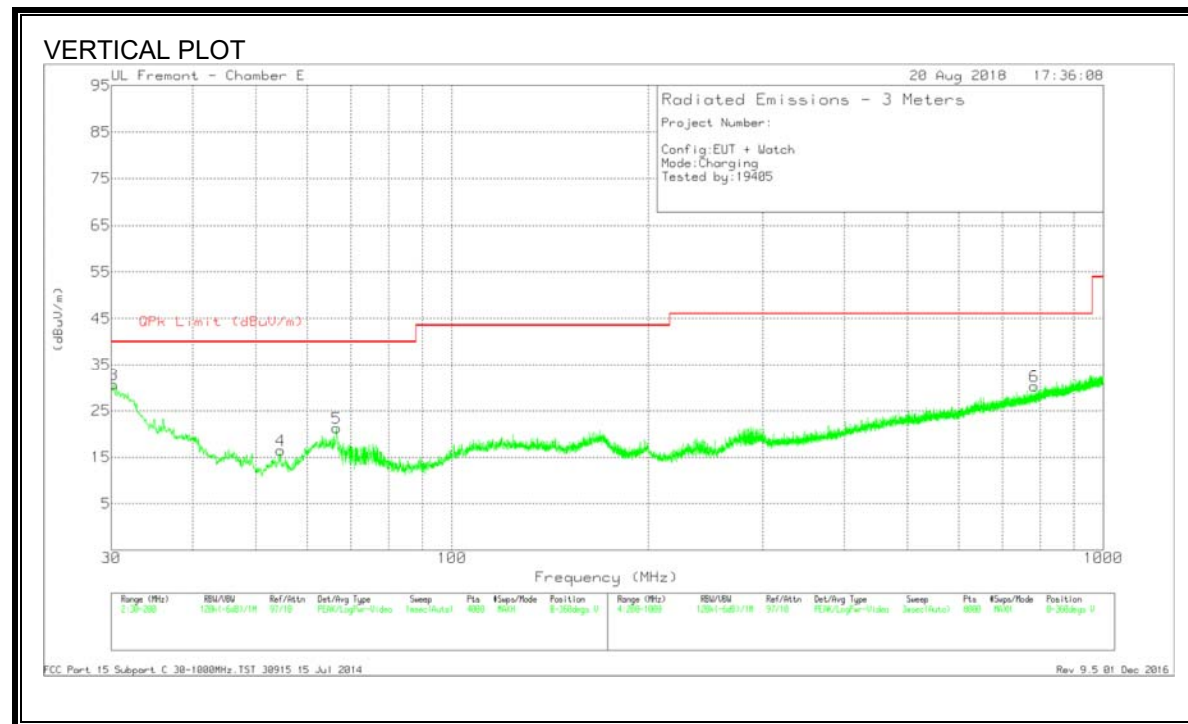
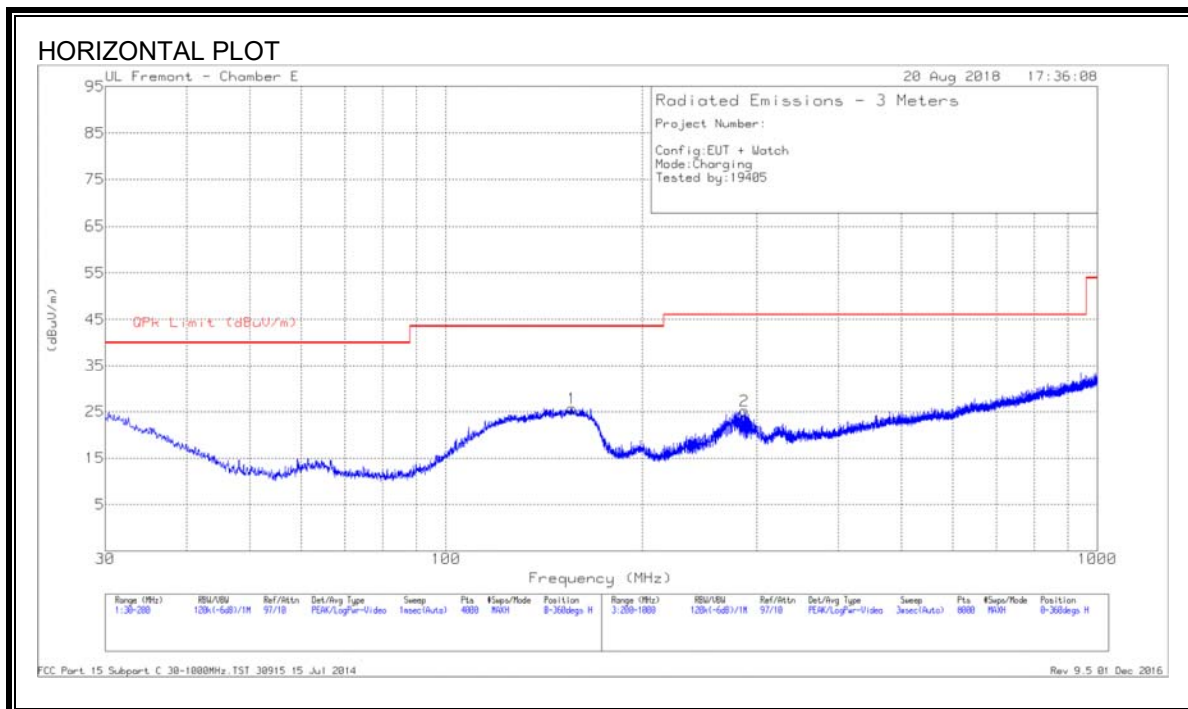


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 121.6962	34.88	Pk	20	-30.6	24.28	43.52	-19.24	0-360	200	H
3	30.17	32.59	Pk	26.7	-31.6	27.69	40	-12.31	0-360	100	V
1	31.1903	30.54	Pk	26.3	-31.6	25.24	40	-14.76	0-360	400	H
4	46.7068	31.2	Pk	15.4	-31.4	15.2	40	-24.8	0-360	100	V
5	66.6445	35.37	Pk	14.2	-31.1	18.47	40	-21.53	0-360	100	V
6	315.8151	30.63	Pk	19.7	-29.1	21.23	46.02	-24.79	0-360	300	V

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

Pk - Peak detector



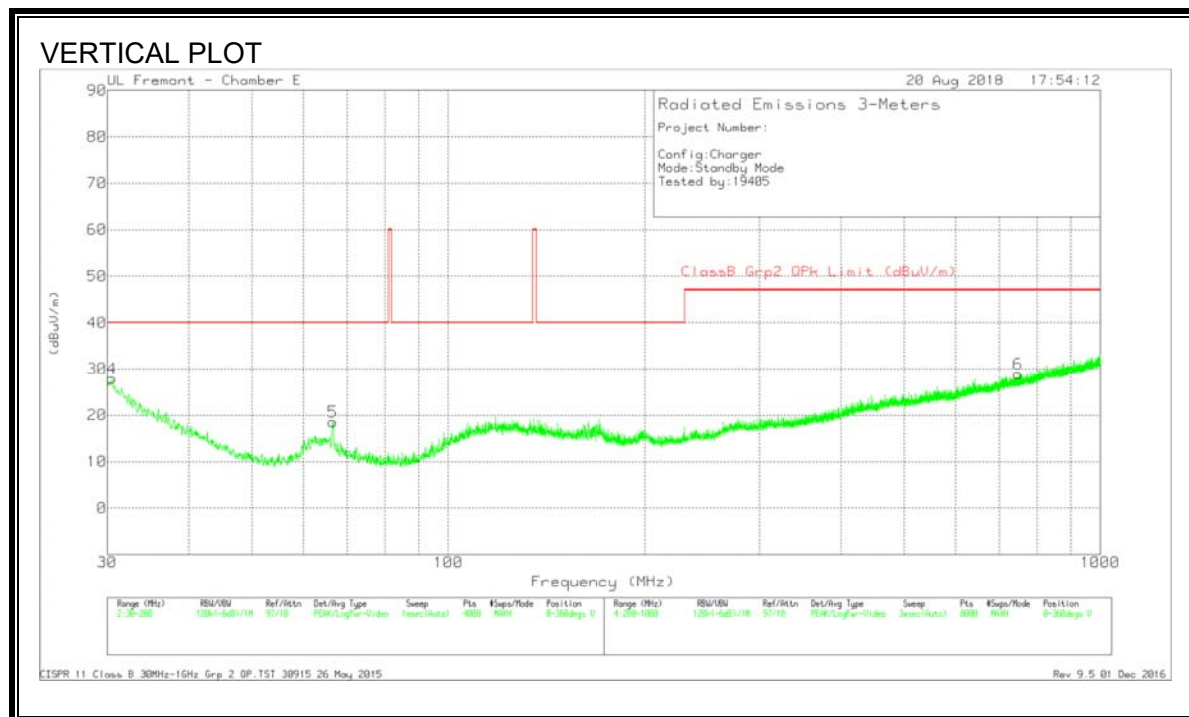
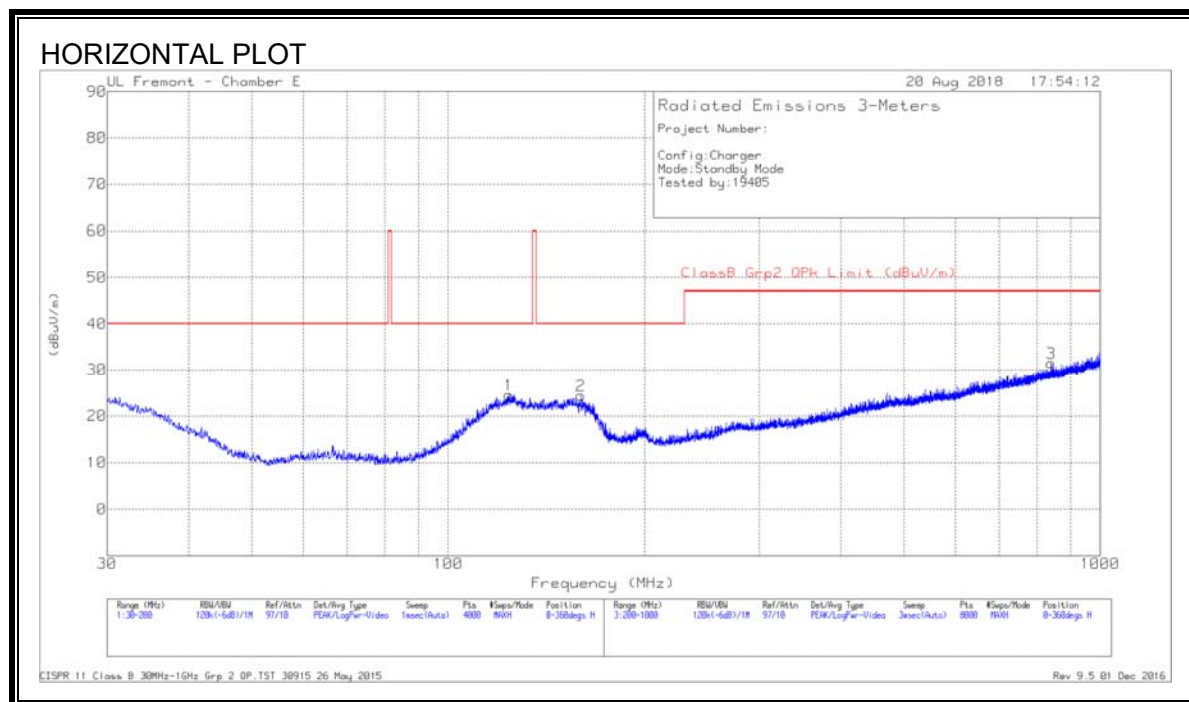
DATA

Marker	Frequency (MHz)	Meter Reading (dBUV)	Det	AF T899 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBUV/m)	QPk Limit (dBUV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	30.2126	35.55	Pk	26.7	-31.6	30.65	40	-9.35	0-360	100	V
4	54.5714	34.25	Pk	13.5	-31.3	16.45	40	-23.55	0-360	100	V
5	66.5169	38.18	Pk	14.2	-31.1	21.28	40	-18.72	0-360	100	V
1	156.0451	37.74	Pk	18.3	-30.3	25.74	43.52	-17.78	0-360	200	H
2	287.3113	35.26	Pk	19.2	-29.3	25.16	46.02	-20.86	0-360	100	H
6	782.9758	30.19	Pk	26.9	-26.8	30.29	46.02	-15.73	0-360	100	V

Pk - Peak detector

8.2.4. IC / CISPR 11 TX SPURIOUS EMISSION 30 TO 1000 MHz

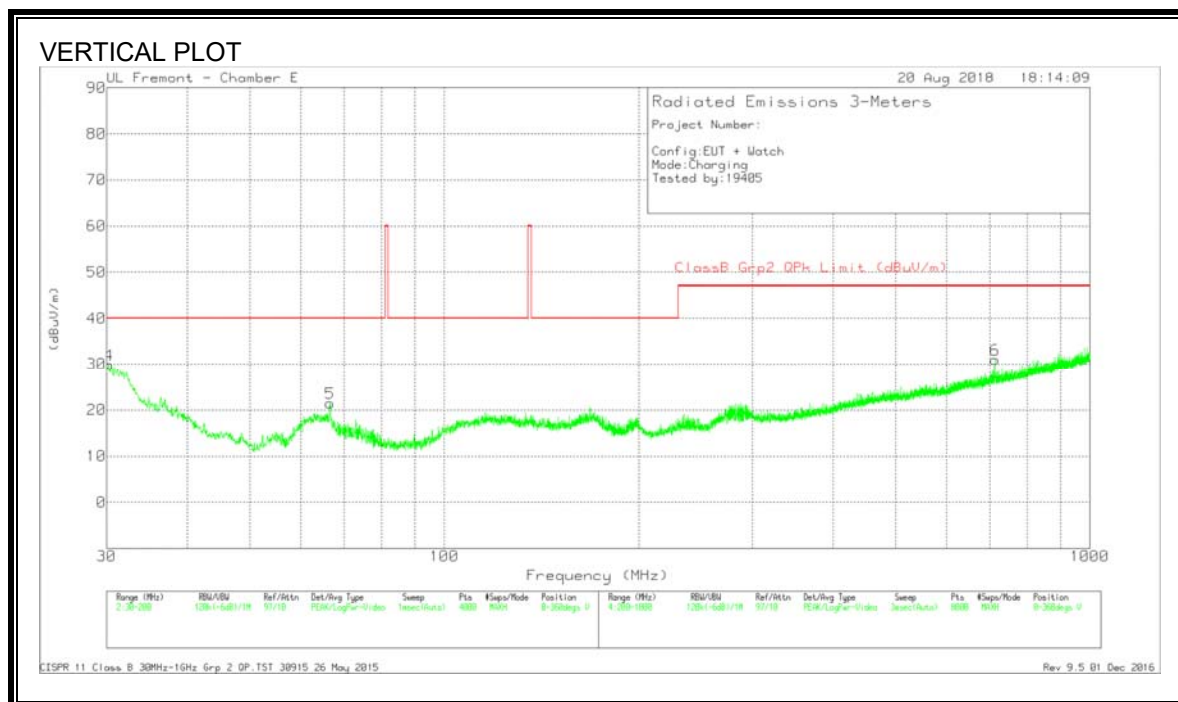
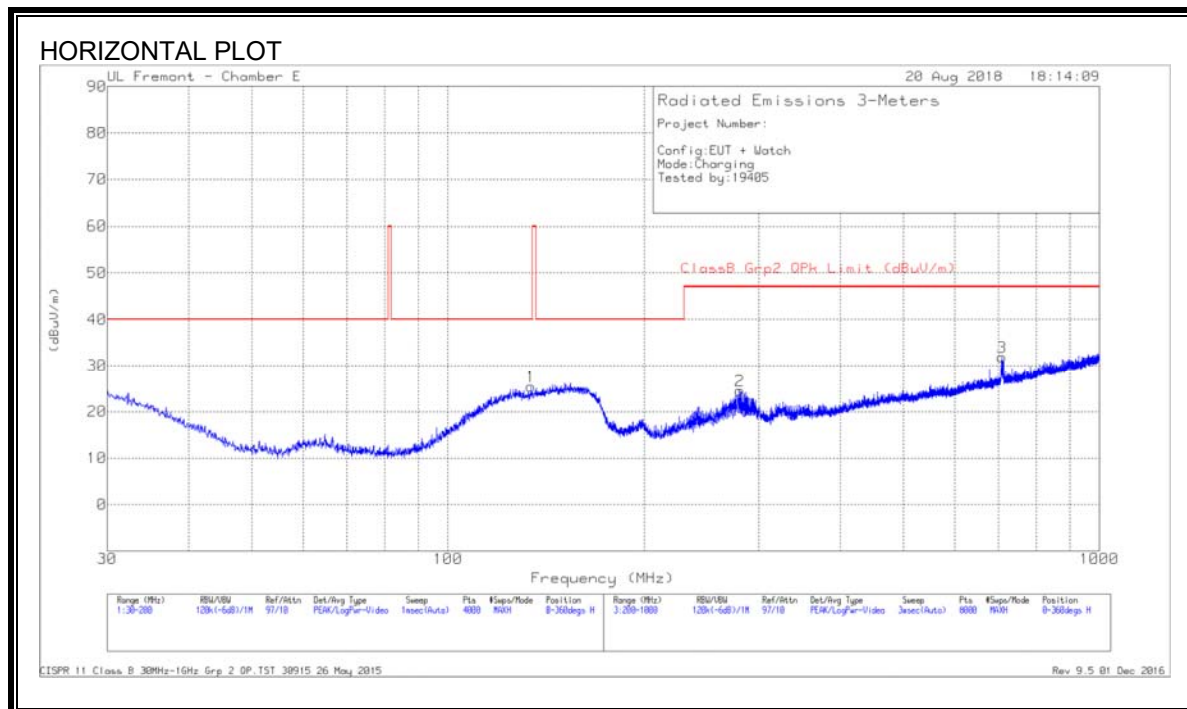
STANDBY CONFIGURATION



DATA

Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	ClassB Grp2 QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	30.5101	32.93	Pk	26.6	-31.6	27.93	40	-12.07	0-360	100	V
5	66.602	35.53	Pk	14.2	-31.1	18.63	40	-21.37	0-360	100	V
1	123.8218	35.08	Pk	20	-30.6	24.48	40	-15.52	0-360	200	H
2	159.7436	36.46	Pk	18.2	-30.3	24.36	40	-15.64	0-360	200	H
6	748.7713	29.61	Pk	26.4	-27	29.01	47	-17.99	0-360	300	V
3	841.5834	30.07	Pk	27.7	-26.2	31.57	47	-15.43	0-360	200	H

Pk - Peak detector



DATA

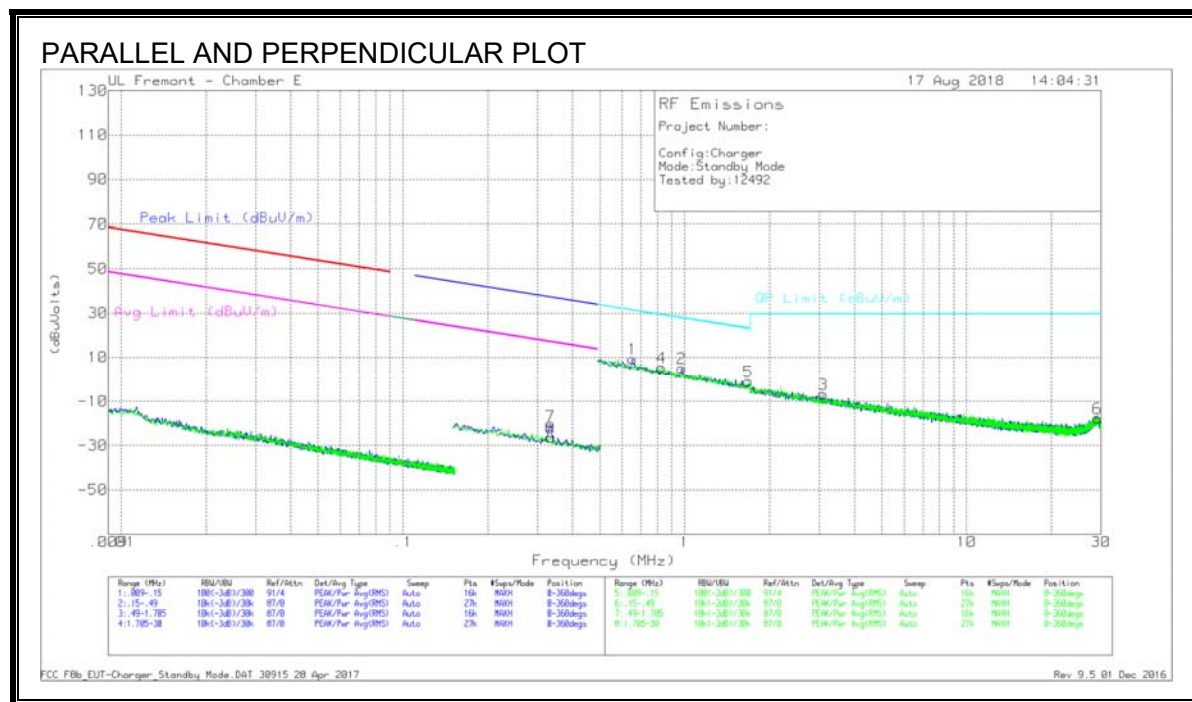
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	ClassB Grp2 QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	30.2126	34.77	Pk	26.7	-31.6	29.87	40	-10.13	0-360	100	V
5	66.602	38.35	Pk	14.2	-31.1	21.45	40	-18.55	0-360	100	V
1	134.1945	36.13	Pk	19.8	-30.5	25.43	40	-14.57	0-360	200	H
2	280.8105	34.5	Pk	19.3	-29.3	24.5	47	-22.5	0-360	100	H
3	709.2662	33.04	Pk	26.3	-27.4	31.94	47	-15.06	0-360	100	H
6	712.8667	31.61	Pk	26.3	-26.9	31.01	47	-15.99	0-360	300	V

Pk - Peak detector

8.3. PLASTIC HOUSING WITH .3m CABLE

8.3.1. FCC TX FUNDAMENTAL AND SPURIOUS EMISSIONS FROM 9 kHz TO 30 MHz

STANDBY CONFIGURATION



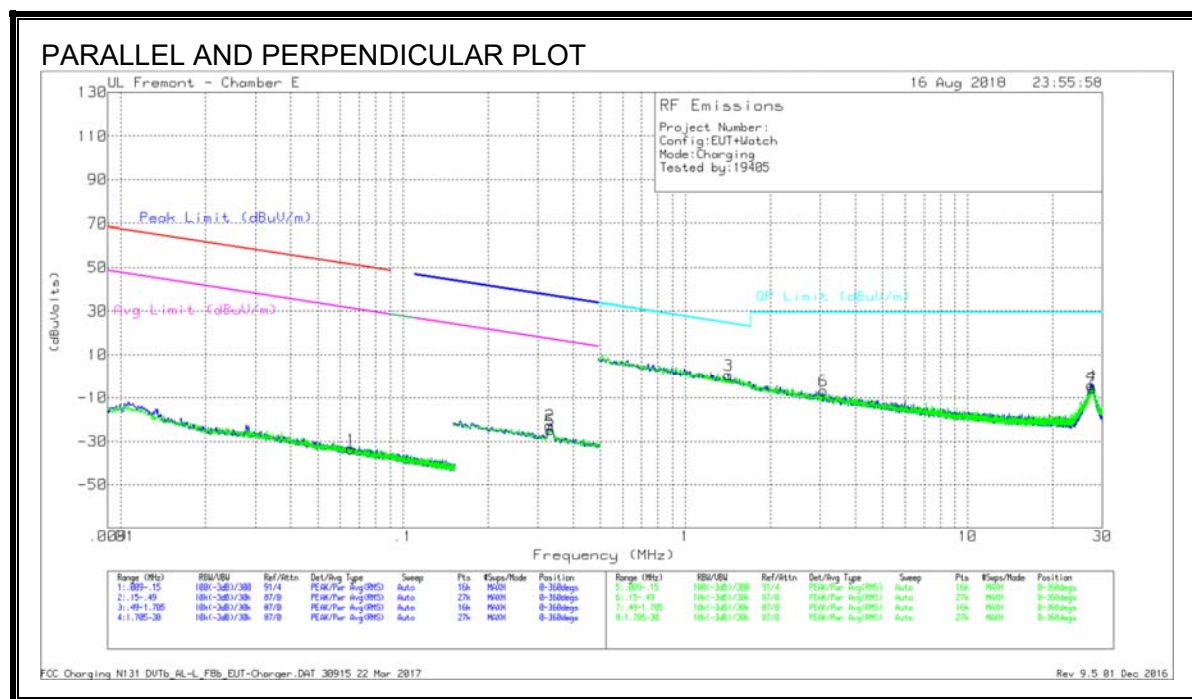
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cables (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
8	.33318	42.02	Pk	11.5	.1	-80	-26.38	37.16	-63.54	17.16	-43.54	0-360
7	.33349	47.24	Pk	11.5	.1	-80	-21.16	37.15	-58.31	17.15	-38.31	0-360

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cables (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.65306	37.79	Pk	11.5	.2	-40	9.49	31.31	-21.82	0-360
4	.82676	33.75	Pk	11.5	.2	-40	5.45	29.27	-23.82	0-360
2	.9756	33.38	Pk	11.5	.2	-40	5.08	27.84	-22.76	0-360
5	1.67932	27.31	Pk	11.6	.2	-40	-8.9	23.13	-24.02	0-360
3	3.10513	21.23	Pk	11.6	.3	-40	-6.87	29.5	-36.37	0-360
6	29.10077	13.13	Pk	8.1	1	-40	-17.77	29.5	-47.27	0-360

Pk - Peak detector



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr 300m	Corrected Reading (dBuV)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.06559	34.83	Pk	11.6	.1	-80	-33.47	51.25	-84.72	31.25	-64.72	-	-	-	-	0-360
2	.33141	46.34	Pk	10.9	.1	-80	-22.66	-	-	-	-	37.2	-59.86	17.2	-39.86	0-360
5	.33346	44.14	Pk	10.9	.1	-80	-24.86	-	-	-	-	37.15	-62.01	17.15	-42.01	0-360

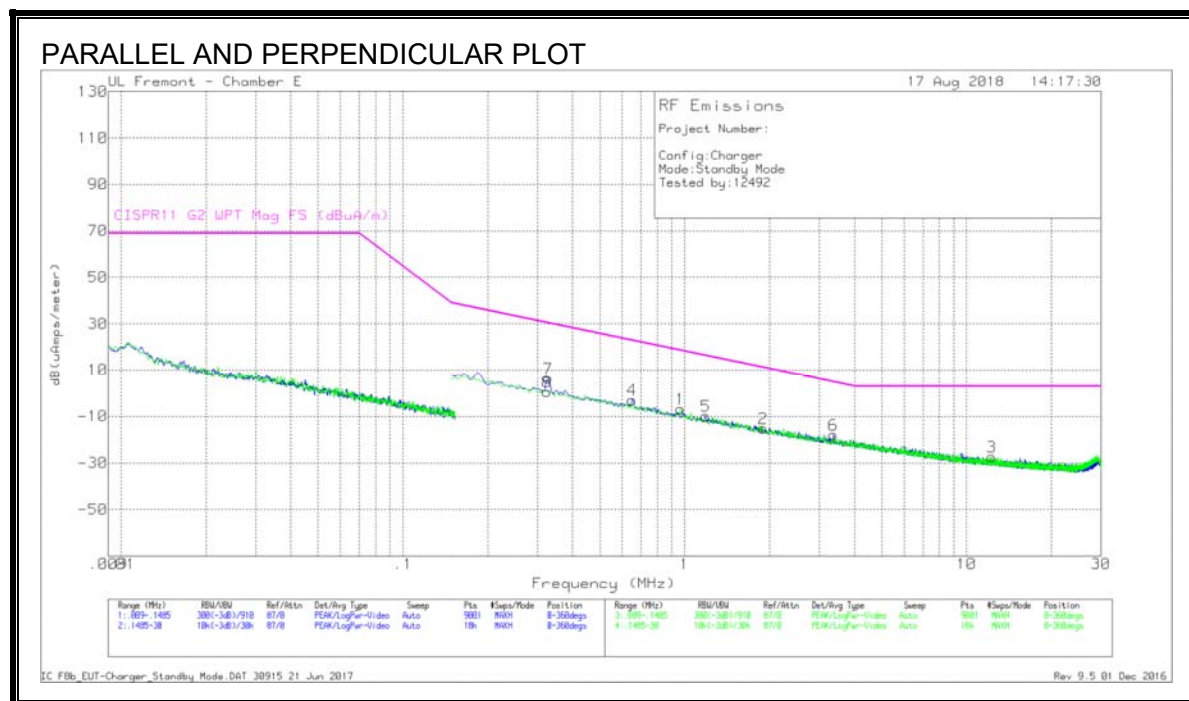
Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuV)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
3	1.42275	29.22	Pk	11.3	.2	-40	.72	24.57	-23.85	0-360
6	3.08522	21.79	Pk	11.3	.2	-40	-6.71	29.5	-36.21	0-360
4	27.47375	25.11	Pk	10	.7	-40	-4.19	29.5	-33.69	0-360
7	27.50728	23.62	Pk	10	.7	-40	-5.68	29.5	-35.18	0-360

Pk - Peak detector

8.3.2. IC / CISPR 11 TX FUNDAMENTAL AND SPURIOUS EMISSIONS FROM 9 kHz TO 30 MHz

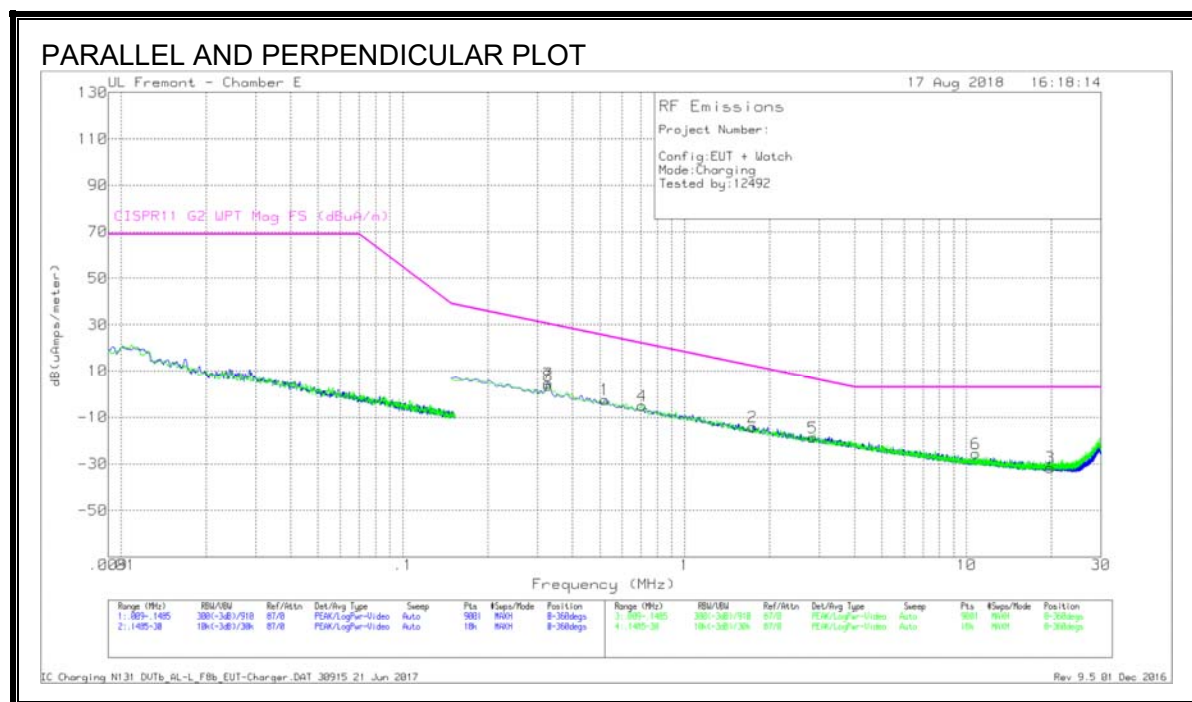
STANDBY CONFIGURATION



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cables (dB)	Corrected Reading dB(uAmps/meter)	CISPR11 G2 WPT Mag FS (dBA/m)	Margin (dB)	Azimuth (Degs)
8	.32425	41.06	Pk	-40.5	.1	.66	30.46	-29.8	0-360
7	.32756	46.93	Pk	-40.5	.1	6.53	30.35	-23.82	0-360
4	.64922	37.36	Pk	-40.4	.2	-2.84	22.88	-25.72	0-360
1	.96755	33.44	Pk	-40.3	.2	-6.66	18.51	-25.17	0-360
5	1.18641	30.07	Pk	-40.2	.2	-9.93	16.28	-26.21	0-360
2	1.89769	24.62	Pk	-40.1	.3	-15.18	11.15	-26.33	0-360
6	3.37497	21.76	Pk	-40.1	.3	-18.04	4.86	-22.9	0-360
3	12.28506	12.64	Pk	-40.6	.6	-27.36	3	-30.36	0-360

Pk - Peak detector



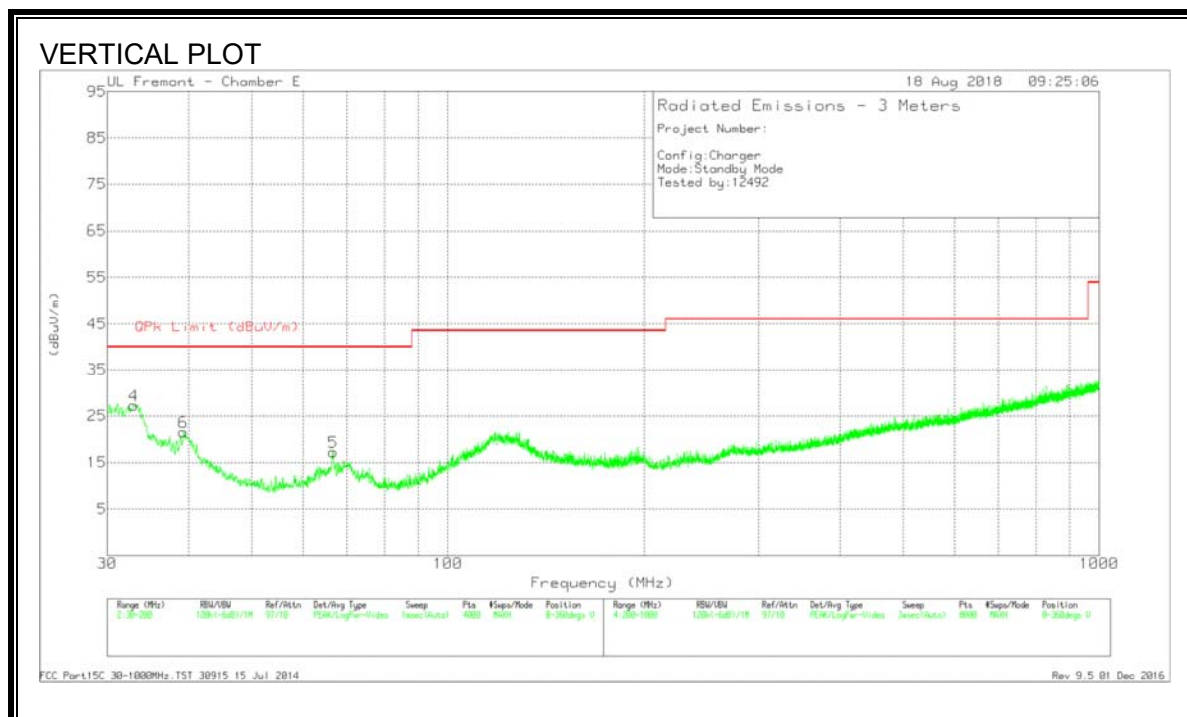
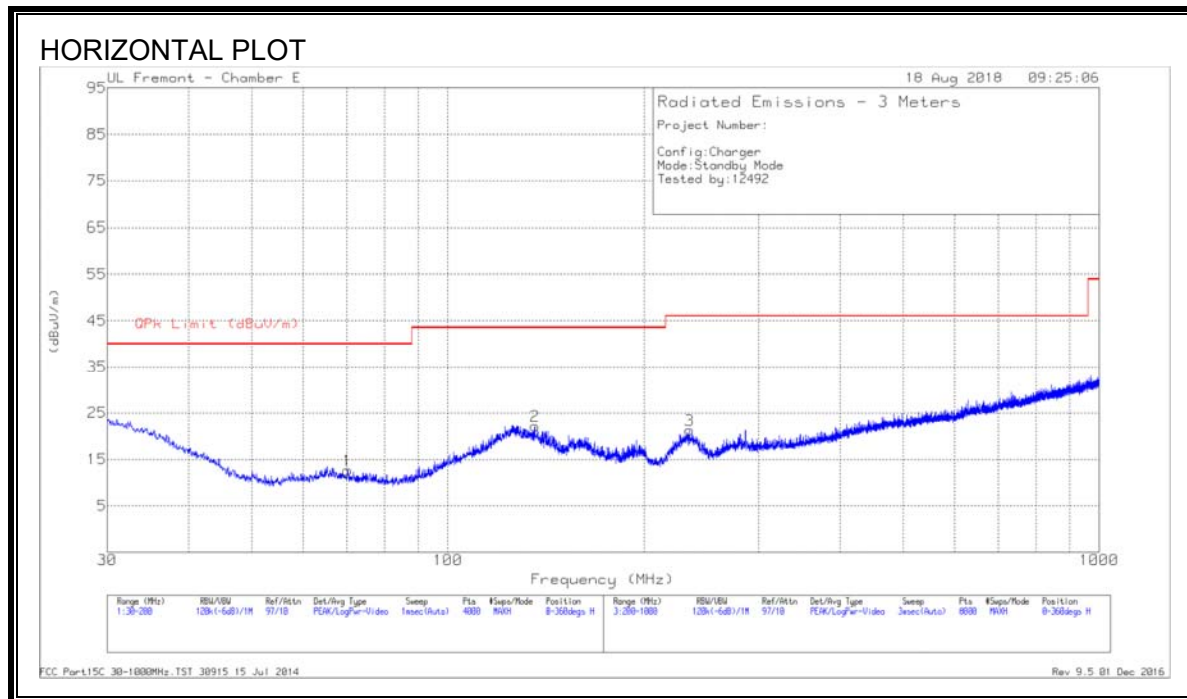
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cables (dB)	Corrected Reading dB(uAmps/meter)	CISPR11 G2 WPT Mag FS (dBA/m)	Margin (dB)	Azimuth (Degs)
7	.32756	45.01	Pk	-40.5	.1	4.61	30.35	-25.74	0-360
8	.32756	44.11	Pk	-40.5	.1	3.71	30.35	-26.64	0-360
1	.52155	37.87	Pk	-40.4	.2	-2.33	25.27	-27.6	0-360
4	.70393	35.22	Pk	-40.4	.2	-4.98	21.99	-26.97	0-360
2	1.74184	25.82	Pk	-40.1	.2	-14.08	12.09	-26.17	0-360
5	2.85104	21.09	Pk	-40.1	.3	-18.71	6.7	-25.41	0-360
6	10.75473	14.44	Pk	-40.6	.6	-25.56	3	-28.56	0-360
3	19.79248	8.88	Pk	-41.2	.8	-31.52	3	-34.52	0-360

Pk - Peak detector

8.3.3. FCC TX SPURIOUS EMISSION 30 TO 1000 MHz

STANDBY CONFIGURATION

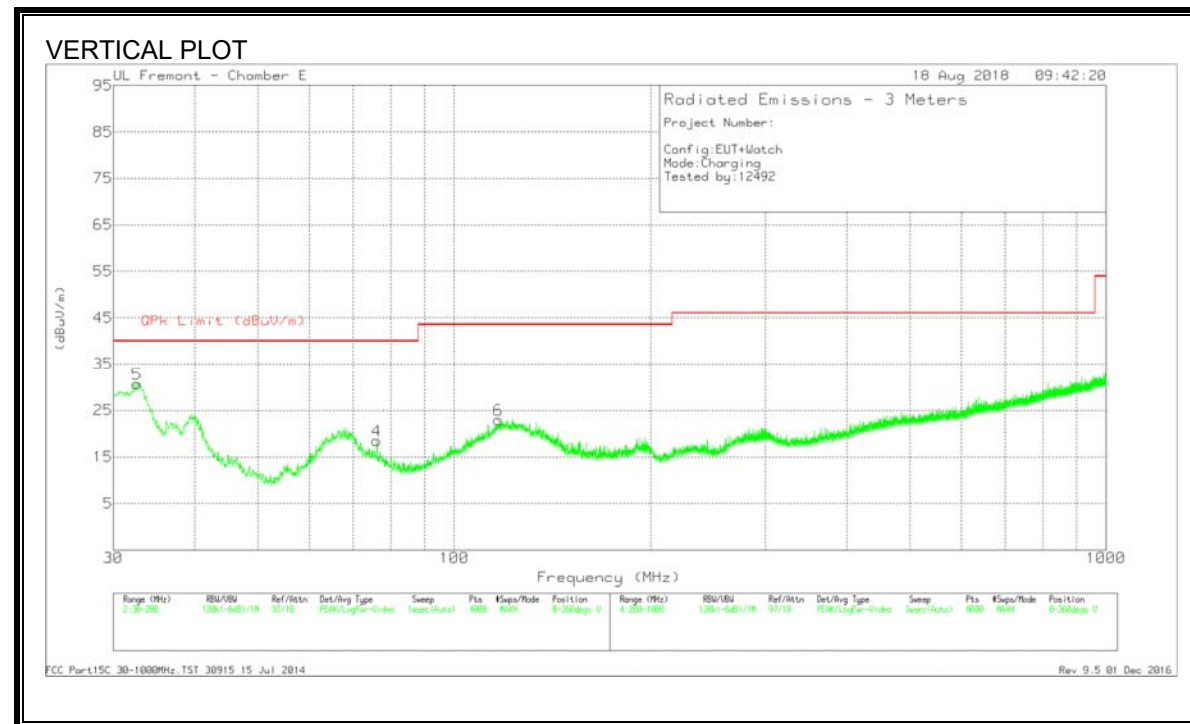
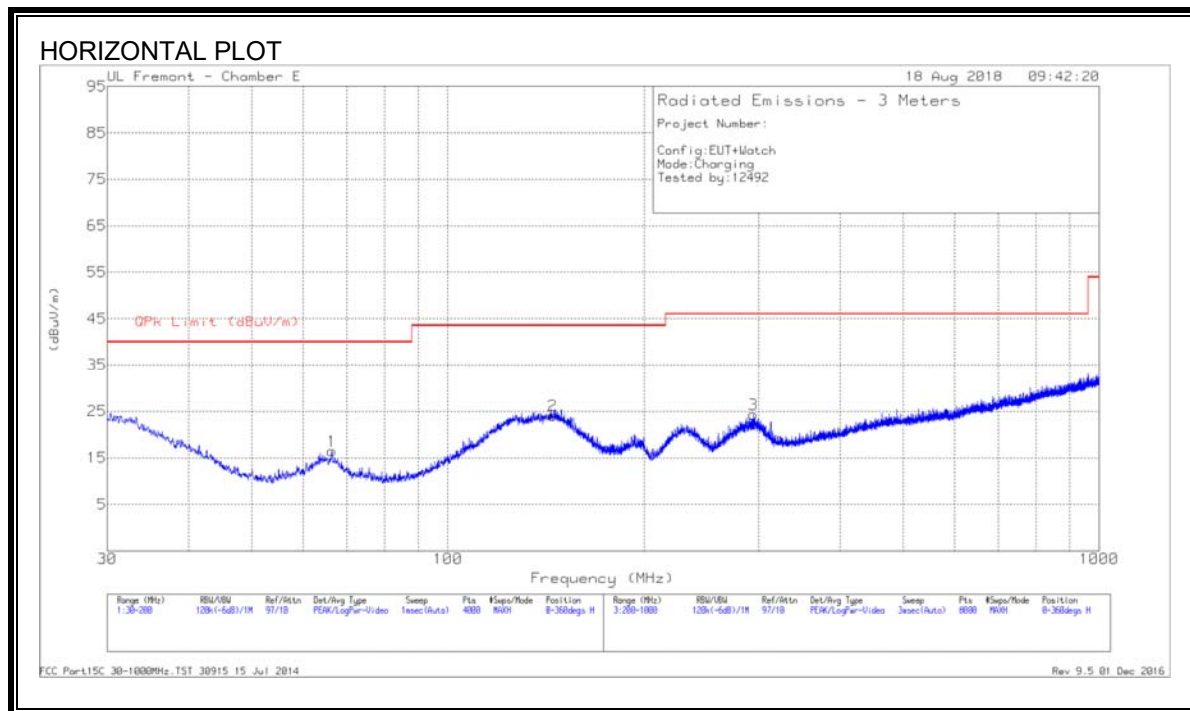


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 136.0437	32.88	Pk	19.7	-30.4	22.18	43.52	-21.34	0-360	199	H
4	32.9333	33.98	Pk	24.9	-31.6	27.28	40	-12.72	0-360	100	V
6	39.2674	32.26	Pk	20.8	-31.5	21.56	40	-18.44	0-360	100	V
5	66.6445	34.17	Pk	14.2	-31.1	17.27	40	-22.73	0-360	100	V
1	70.1729	29.7	Pk	14.1	-31.1	12.7	40	-27.3	0-360	199	H
3	235.1046	33.72	Pk	17.2	-29.6	21.32	46.02	-24.7	0-360	100	H

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

Pk - Peak detector



DATA

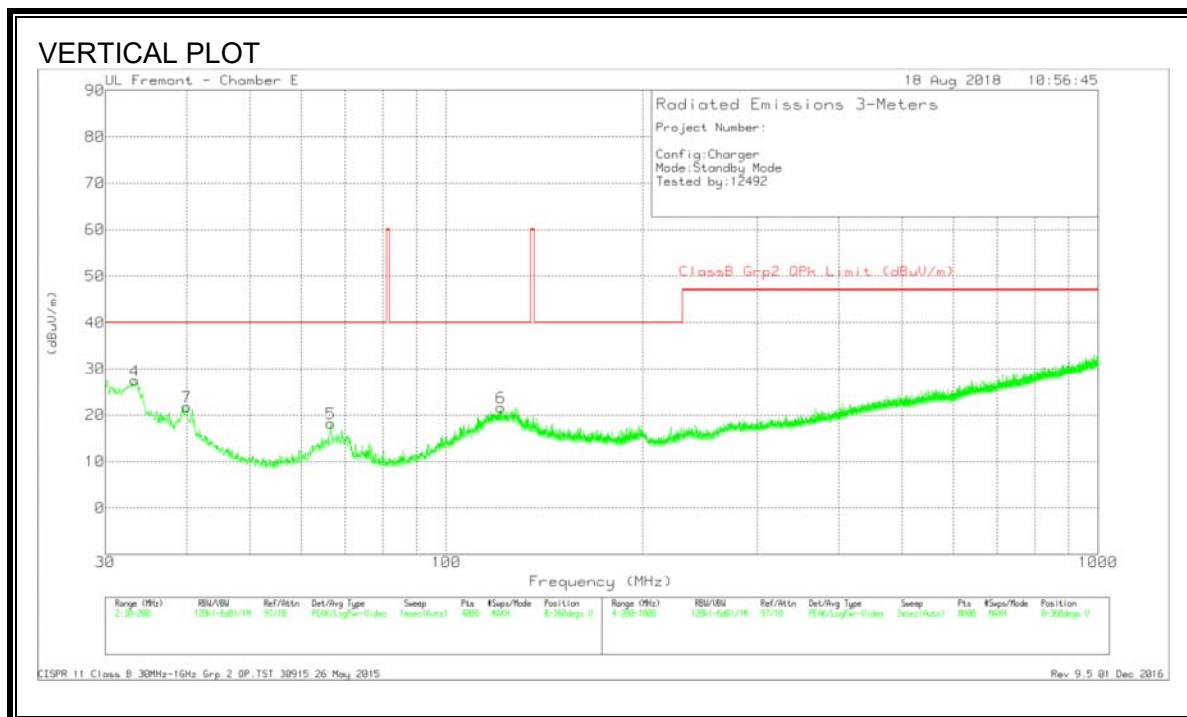
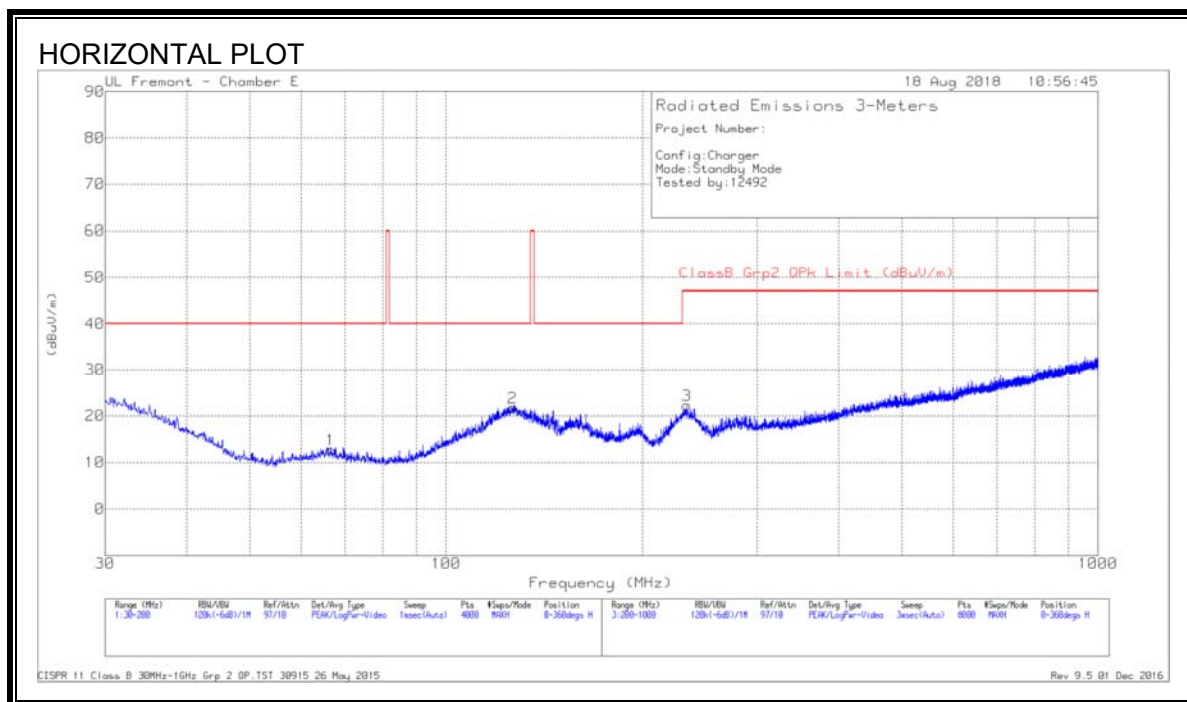
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 116.85	33.73	Pk	19.8	-30.6	22.93	43.52	-20.59	0-360	100	V
5	32.6357	37.22	Pk	25.1	-31.6	30.72	40	-9.28	0-360	100	V
1	66.3469	33.41	Pk	14.2	-31.1	16.51	40	-23.49	0-360	200	H
4	76.0819	35.89	Pk	13.6	-31	18.49	40	-21.51	0-360	100	V
2	144.9497	35.43	Pk	19	-30.4	24.03	43.52	-19.49	0-360	200	H
3	294.5123	34.34	Pk	19.2	-29.2	24.34	46.02	-21.68	0-360	100	H

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

Pk - Peak detector

8.3.4. IC / CISPR 11 TX SPURIOUS EMISSION 30 TO 1000 MHz

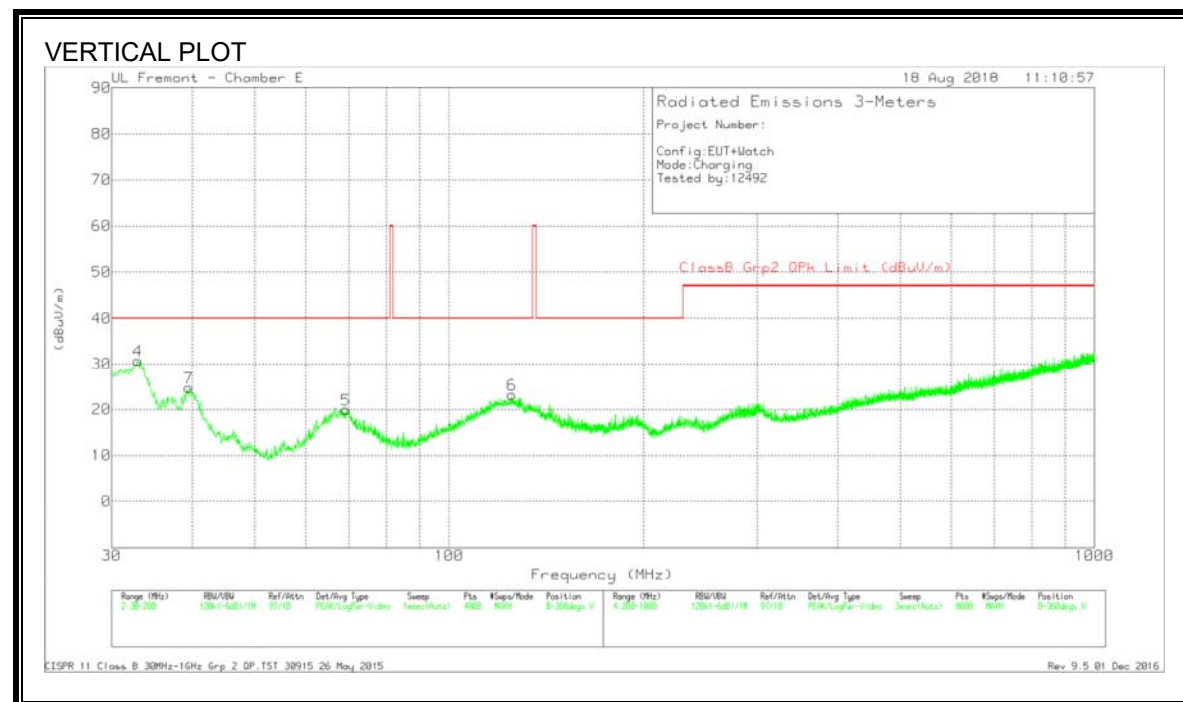
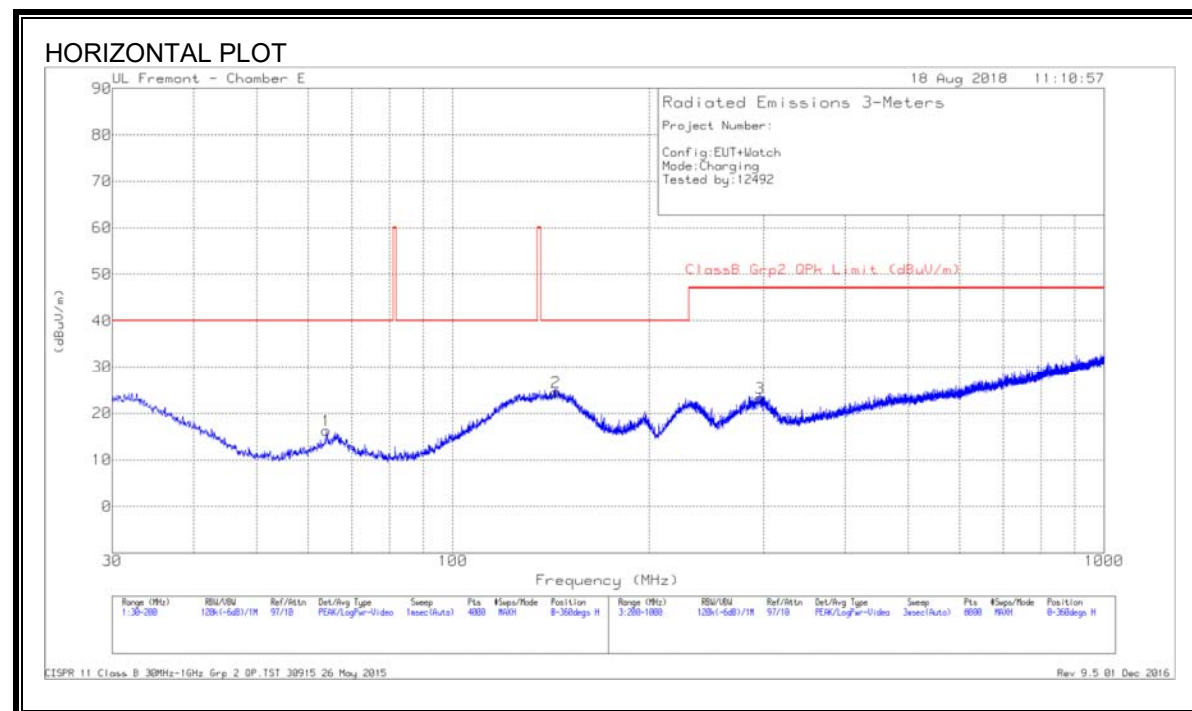
STANDBY CONFIGURATION



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	ClassB Grp2 QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	33.3159	34.33	Pk	24.6	-31.5	27.43	40	-12.57	0-360	100	V
7	40.0326	32.92	Pk	20.3	-31.5	21.72	40	-18.28	0-360	100	V
1	66.602	29.61	Pk	14.2	-31.1	12.71	40	-27.29	0-360	400	H
5	66.602	35.12	Pk	14.2	-31.1	18.22	40	-21.78	0-360	100	V
6	121.2711	32.16	Pk	20	-30.6	21.56	40	-18.44	0-360	100	V
2	126.4149	32.3	Pk	20	-30.5	21.8	40	-18.2	0-360	300	H
3	234.1044	34.8	Pk	17.1	-29.7	22.2	47	-24.8	0-360	100	H

Pk - Peak detector



DATA

Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	ClassB Grp2 QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	32.9758	37.57	Pk	24.8	-31.6	30.77	40	-9.23	0-360	100	V
7	39.5225	35.69	Pk	20.6	-31.5	24.79	40	-15.21	0-360	100	V
1	64.0088	33.06	Pk	14.3	-31.1	16.26	40	-23.74	0-360	400	H
5	69.2377	36.83	Pk	14.2	-31.1	19.93	40	-20.07	0-360	100	V
6	125.1396	33.85	Pk	20	-30.6	23.25	40	-16.75	0-360	100	V
2	144.057	35.82	Pk	19.1	-30.4	24.52	40	-15.48	0-360	200	H
3	296.4125	33.27	Pk	19.2	-29.2	23.27	47	-23.73	0-360	100	H

Pk - Peak detector

9. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	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.

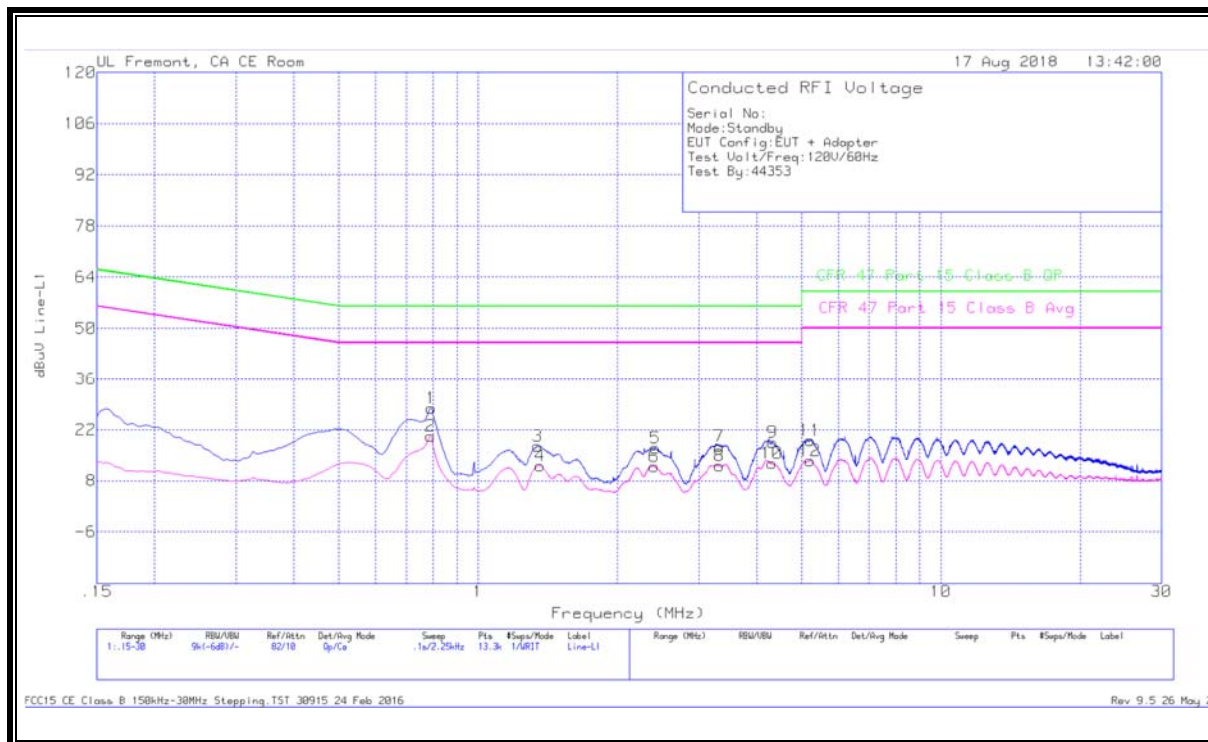
Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

9.1. PLASTIC HOUSING WITH 1m CABLE

9.1.1. STANDBY MODE POWERED BY AC/DC ADAPTER

LINE 1 RESULTS



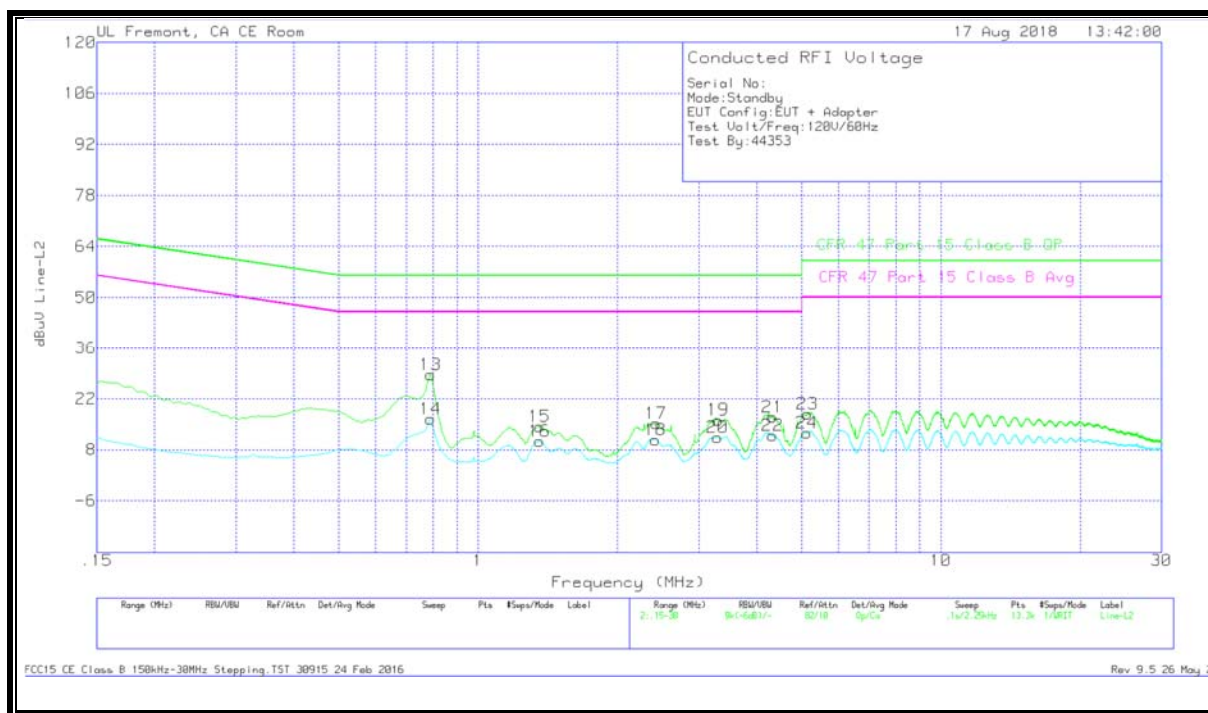
WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables C1&C3	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	.79125	17.88	Qp	0	0	10.1	27.98	56	-28.02	-	-
2	.789	10.17	Ca	0	0	10.1	20.27	-	-	46	-25.73
3	1.34475	7.25	Qp	0	.1	10.1	17.45	56	-38.55	-	-
4	1.3605	1.95	Ca	0	.1	10.1	12.15	-	-	46	-33.85
5	2.4135	6.78	Qp	0	.1	10.1	16.98	56	-39.02	-	-
6	2.40225	1.69	Ca	0	.1	10.1	11.89	-	-	46	-34.11
7	3.32588	7.32	Qp	0	.1	10.1	17.52	56	-38.48	-	-
8	3.3225	1.87	Ca	0	.1	10.1	12.07	-	-	46	-33.93
9	4.3305	8.27	Qp	0	.1	10.1	18.47	56	-37.53	-	-
10	4.31925	2.54	Ca	0	.1	10.1	12.74	-	-	46	-33.26
11	5.208	8.85	Qp	0	.1	10.1	19.05	60	-40.95	-	-
12	5.21025	3.34	Ca	0	.1	10.1	13.54	-	-	50	-36.46

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

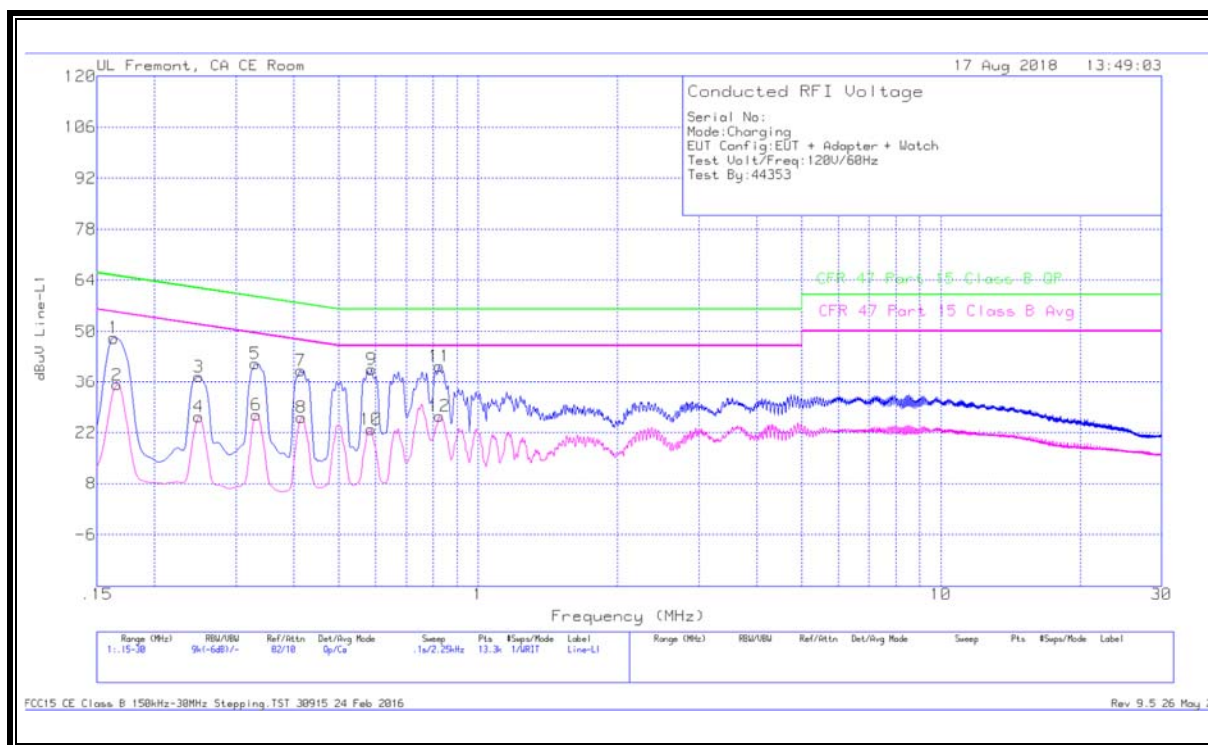
Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L2	LC Cables C2&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
13	.789	18.53	Qp	0	0	10.1	28.63	56	-27.37	-	-
14	.789	6.3	Ca	0	0	10.1	16.4	-	-	46	-29.6
15	1.35825	4.19	Qp	0	.1	10.1	14.39	56	-41.61	-	-
16	1.35825	.23	Ca	0	.1	10.1	10.43	-	-	46	-35.57
17	2.42475	5.04	Qp	0	.1	10.1	15.24	56	-40.76	-	-
18	2.4135	.56	Ca	0	.1	10.1	10.76	-	-	46	-35.24
19	3.30225	5.99	Qp	0	.1	10.1	16.19	56	-39.81	-	-
20	3.291	1.2	Ca	0	.1	10.1	11.4	-	-	46	-34.6
21	4.33275	6.77	Qp	0	.1	10.1	16.97	56	-39.03	-	-
22	4.33275	1.71	Ca	0	.1	10.1	11.91	-	-	46	-34.09
23	5.145	7.59	Qp	0	.1	10.1	17.79	60	-42.21	-	-
24	5.136	2.48	Ca	0	.1	10.1	12.68	-	-	50	-37.32

Qp - Quasi-Peak detector

Ca - CISPR average detection

9.1.2. OPERATING MODE WITH WATCH POWERED BY AC/DC ADAPTER

LINE 1 RESULTS



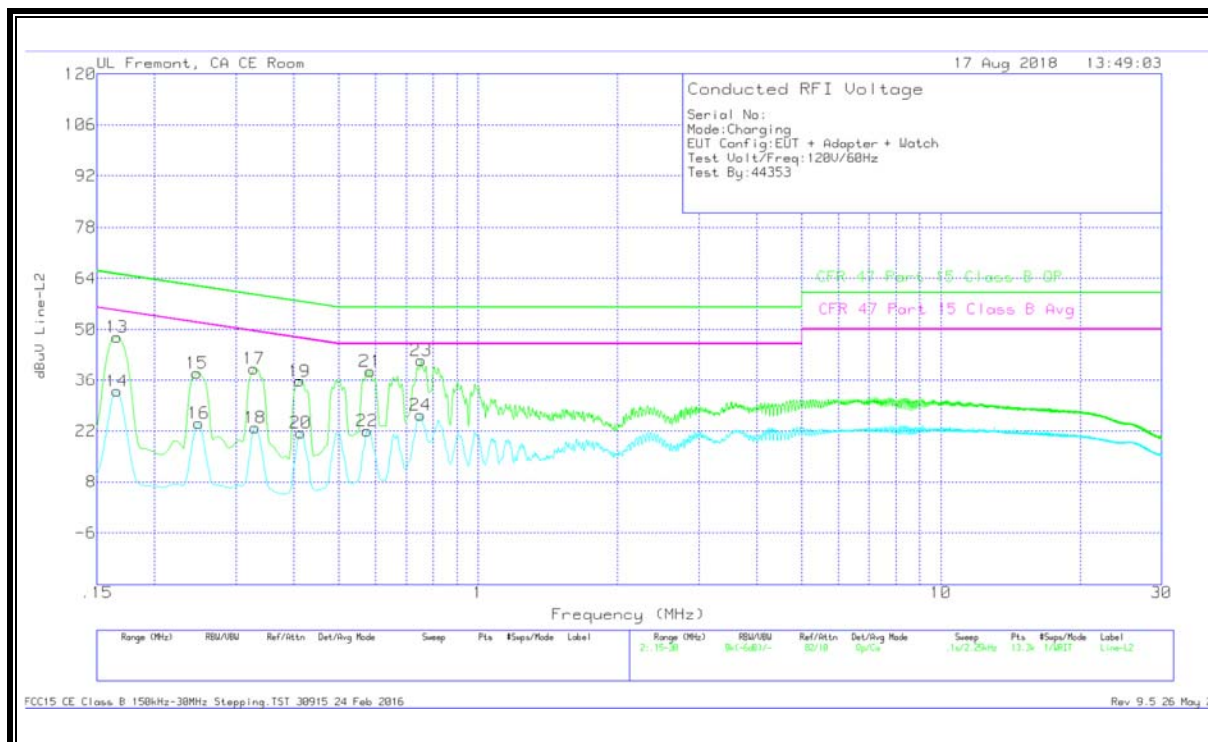
WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables C1&C3	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	.1635	37.98	Qp	.1	0	10.1	48.18	65.28	-17.1	-	-
2	.16575	25.09	Ca	.1	0	10.1	35.29	-	-	55.17	-19.88
3	.249	27.45	Qp	0	0	10.1	37.55	61.79	-24.24	-	-
4	.249	16.33	Ca	0	0	10.1	26.43	-	-	51.79	-25.36
5	.33	31.02	Qp	0	0	10.1	41.12	59.45	-18.33	-	-
6	.33225	16.74	Ca	0	0	10.1	26.84	-	-	49.39	-22.55
7	.41325	29.15	Qp	0	0	10.1	39.25	57.58	-18.33	-	-
8	.4155	16.05	Ca	0	0	10.1	26.15	-	-	47.54	-21.39
9	.58875	29.39	Qp	0	0	10.1	39.49	56	-16.51	-	-
10	.5865	12.78	Ca	0	0	10.1	22.88	-	-	46	-23.12
11	.825	30.4	Qp	0	0	10.1	40.5	56	-15.5	-	-
12	.825	16.38	Ca	0	0	10.1	26.48	-	-	46	-19.52

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

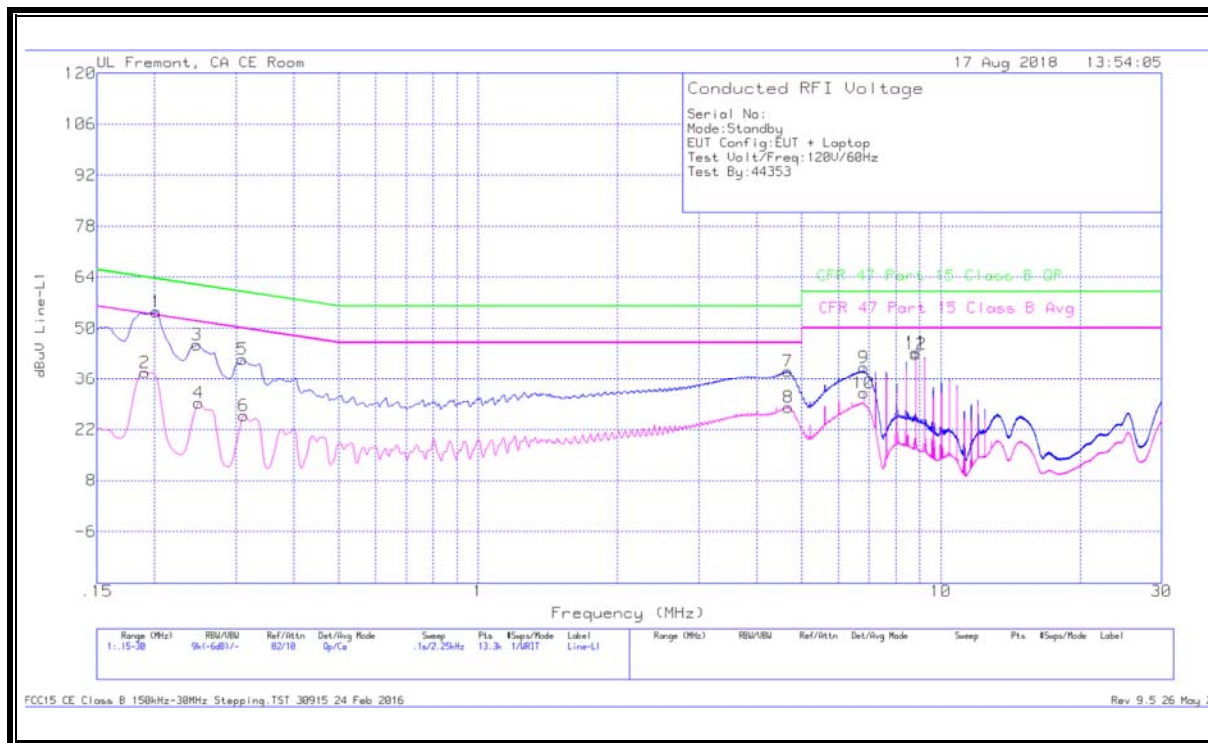
Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L2	LC Cables C2&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR) Margin (dB)
13	.16575	37.79	Qp	.1	0	10.1	47.99	65.17	-17.18	-	-
14	.16575	22.83	Ca	.1	0	10.1	33.03	-	-	55.17	-22.14
15	.24675	27.98	Qp	0	0	10.1	38.08	61.87	-23.79	-	-
16	.249	13.97	Ca	0	0	10.1	24.07	-	-	51.79	-27.72
17	.32775	29.05	Qp	0	0	10.1	39.15	59.51	-20.36	-	-
18	.33	12.86	Ca	0	0	10.1	22.96	-	-	49.45	-26.49
19	.411	25.72	Qp	0	0	10.1	35.82	57.63	-21.81	-	-
20	.41325	11.34	Ca	0	0	10.1	21.44	-	-	47.58	-26.14
21	.58425	28.44	Qp	0	0	10.1	38.54	56	-17.46	-	-
22	.57525	11.86	Ca	0	0	10.1	21.96	-	-	46	-24.04
23	.753	31.33	Qp	0	0	10.1	41.43	56	-14.57	-	-
24	.75075	16.23	Ca	0	0	10.1	26.33	-	-	46	-19.67

Qp - Quasi-Peak detector

Ca - CISPR average detection

9.1.3. STANDBY MODE POWERED BY HOST PC VIA USB CABLE

LINE 1 RESULTS



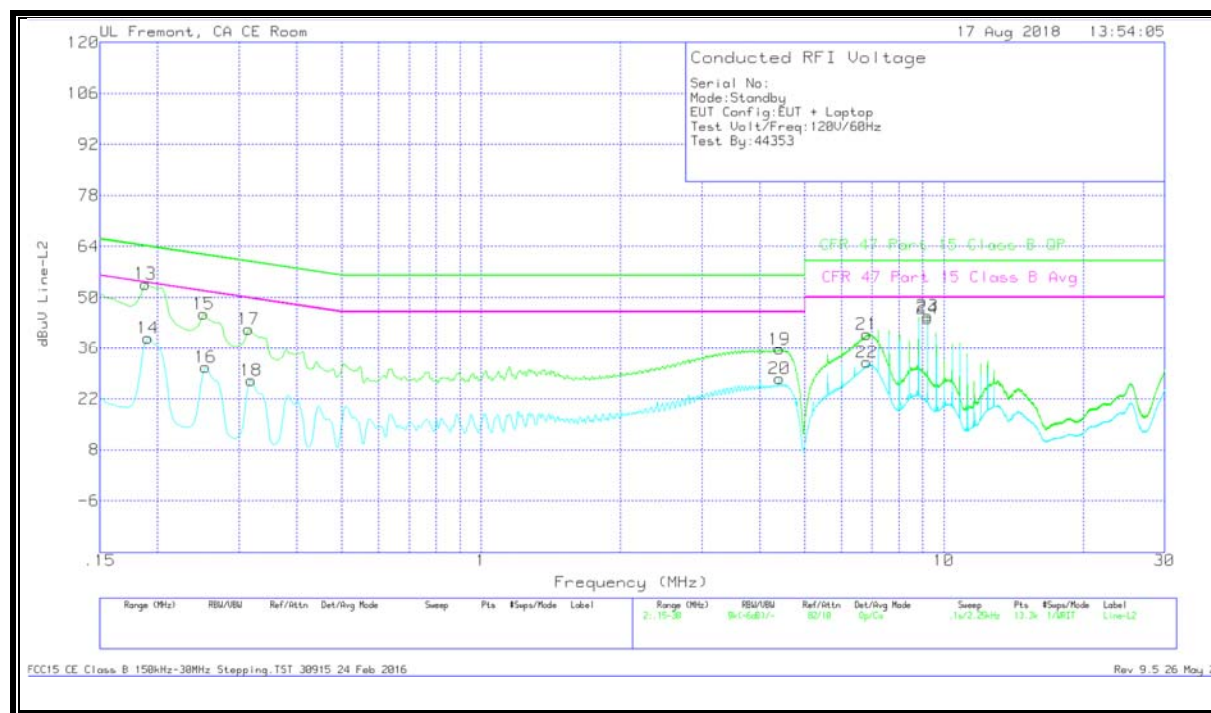
WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables C1&C3	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	.20175	44.45	Qp	0	0	10.1	54.55	63.54	-8.99	-	-
2	.1905	27.81	Ca	0	0	10.1	37.91	-	-	54.01	-16.1
3	.24675	35.41	Qp	0	0	10.1	45.51	61.87	-16.36	-	-
4	.249	19.16	Ca	0	0	10.1	29.26	-	-	51.79	-22.53
5	.30975	31.32	Qp	0	0	10.1	41.42	59.98	-18.56	-	-
6	.312	15.7	Ca	0	0	10.1	25.8	-	-	49.92	-24.12
7	4.668	28.04	Qp	0	.1	10.1	38.24	56	-17.76	-	-
8	4.67925	17.92	Ca	0	.1	10.1	28.12	-	-	46	-17.88
9	6.819	28.81	Qp	0	.2	10.2	39.21	60	-20.79	-	-
10	6.819	21.65	Ca	0	.2	10.2	32.05	-	-	50	-17.95
11	8.826	33.03	Qp	0	.2	10.2	43.43	60	-16.57	-	-
12	8.826	32.55	Ca	0	.2	10.2	42.95	-	-	50	-7.05

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

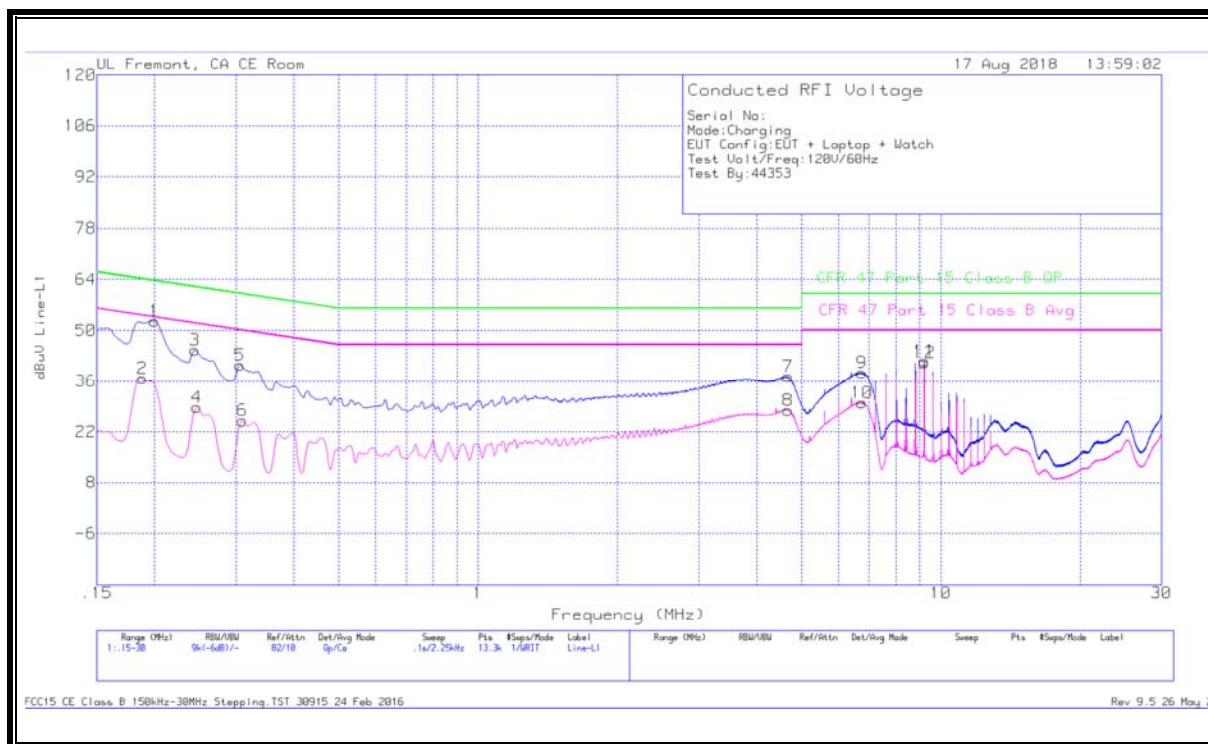
Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L2	LC Cables C2&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
13	.18825	43.63	Qp	0	0	10.1	53.73	64.11	-10.38	-	-
14	.1905	28.82	Ca	0	0	10.1	38.92	-	-	54.01	-15.09
15	.25125	35.32	Qp	0	0	10.1	45.42	61.72	-16.3	-	-
16	.2535	20.55	Ca	0	0	10.1	30.65	-	-	51.64	-20.99
17	.31425	31.17	Qp	0	0	10.1	41.27	59.86	-18.59	-	-
18	.31875	16.94	Ca	0	0	10.1	27.04	-	-	49.74	-22.7
19	4.4115	25.49	Qp	0	.1	10.1	35.69	56	-20.31	-	-
20	4.40925	17.32	Ca	0	.1	10.1	27.52	-	-	46	-18.48
21	6.8145	29.48	Qp	0	.2	10.2	39.88	60	-20.12	-	-
22	6.8145	21.76	Ca	0	.2	10.2	32.16	-	-	50	-17.84
23	9.21975	34.5	Qp	0	.2	10.2	44.9	60	-15.1	-	-
24	9.21975	33.86	Ca	0	.2	10.2	44.26	-	-	50	-5.74

Qp - Quasi-Peak detector

Ca - CISPR average detection

9.1.4. OPERATING MODE WITH WATCH POWERED BY HOST PC VIA USB CABLE

LINE 1 RESULTS

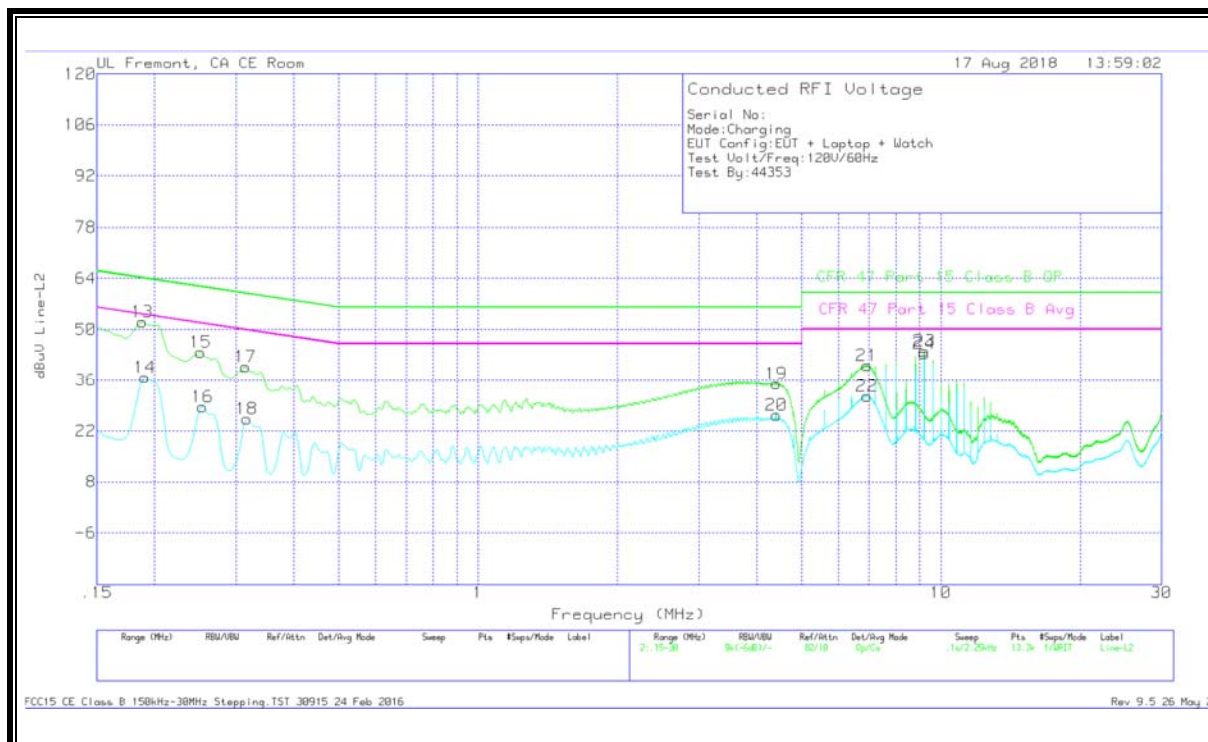


WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables C1&C3	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	.1995	42.52	Qp	0	0	10.1	52.62	63.63	-11.01	-	-
2	.18825	26.64	Ca	0	0	10.1	36.74	-	-	54.11	-17.37
3	.2445	34.44	Qp	0	0	10.1	44.54	61.94	-17.4	-	-
4	.24675	18.76	Ca	0	0	10.1	28.86	-	-	51.87	-23.01
5	.30525	30.36	Qp	0	0	10.1	40.46	60.1	-19.64	-	-
6	.30975	14.96	Ca	0	0	10.1	25.06	-	-	49.98	-24.92
7	4.677	27.09	Qp	0	.1	10.1	37.29	56	-18.71	-	-
8	4.677	17.76	Ca	0	.1	10.1	27.96	-	-	46	-18.04
9	6.747	27.89	Qp	0	.2	10.2	38.29	60	-21.71	-	-
10	6.747	19.62	Ca	0	.2	10.2	30.02	-	-	50	-19.98
11	9.21075	31.3	Qp	0	.2	10.2	41.7	60	-18.3	-	-
12	9.21075	30.74	Ca	0	.2	10.2	41.14	-	-	50	-8.86

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 C2&C3	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	.18825	41.94	Qp	0	0	10.1	52.04	64.11	-12.07	-	-
14	.1905	26.66	Ca	0	0	10.1	36.76	-	-	54.01	-17.25
15	.25125	33.69	Qp	0	0	10.1	43.79	61.72	-17.93	-	-
16	.2535	18.54	Ca	0	0	10.1	28.64	-	-	51.64	-23
17	.31425	29.63	Qp	0	0	10.1	39.73	59.86	-20.13	-	-
18	.3165	15.25	Ca	0	0	10.1	25.35	-	-	49.8	-24.45
19	4.40925	24.84	Qp	0	.1	10.1	35.04	56	-20.96	-	-
20	4.40925	16.17	Ca	0	.1	10.1	26.37	-	-	46	-19.63
21	6.92025	29.74	Qp	0	.2	10.2	40.14	60	-19.86	-	-
22	6.92025	21.18	Ca	0	.2	10.2	31.58	-	-	50	-18.42
23	9.21075	33.66	Qp	0	.2	10.2	44.06	60	-15.94	-	-
24	9.21075	32.94	Ca	0	.2	10.2	43.34	-	-	50	-6.66

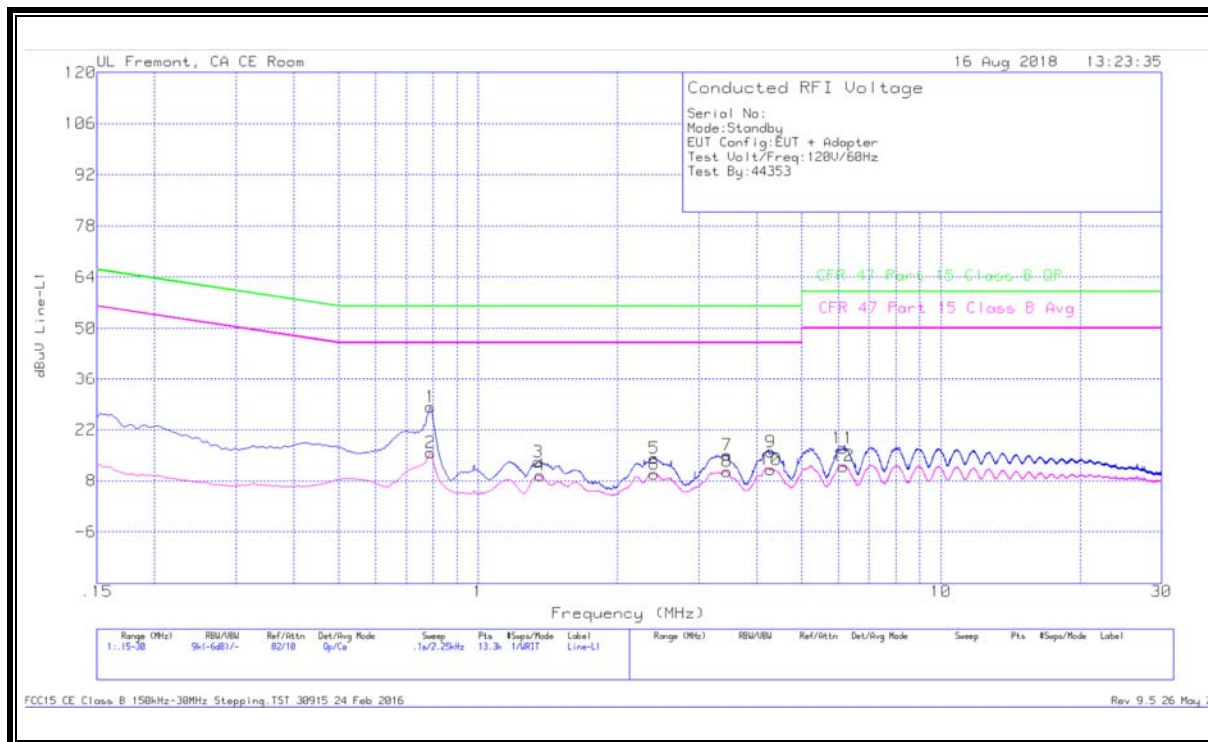
Qp - Quasi-Peak detector

Ca - CISPR average detection

9.2. PLASTIC HOUSING WITH .3m CABLE

9.2.1. STANDBY MODE POWERED BY AC/DC ADAPTER

LINE 1 RESULTS



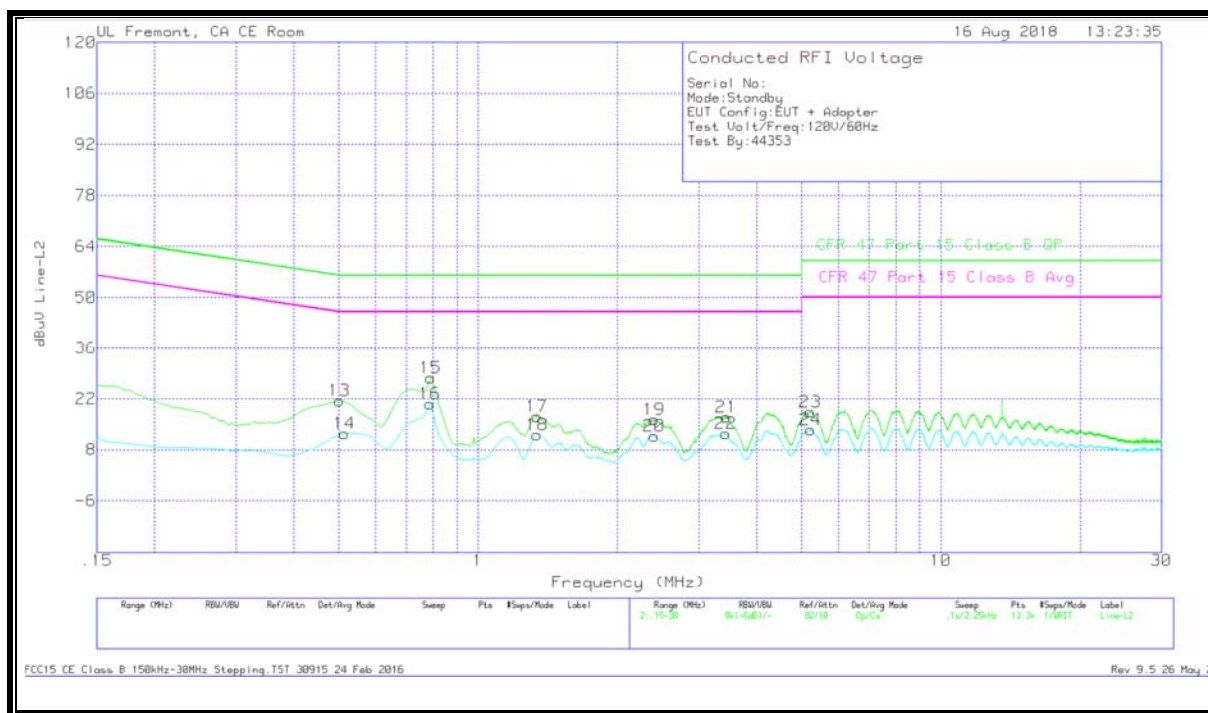
WORST EMISSIONS

Range 1: Line-L1 15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables C1&C3	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	.789	18.1	Qp	0	0	10.1	28.2	56	-27.8	-	-
2	.789	5.68	Ca	0	0	10.1	15.78	-	-	46	-30.22
3	1.347	2.95	Qp	0	.1	10.1	13.15	56	-42.85	-	-
4	1.3605	-.77	Ca	0	.1	10.1	9.43	-	-	46	-36.57
5	2.4045	3.97	Qp	0	.1	10.1	14.17	56	-41.83	-	-
6	2.4045	-.29	Ca	0	.1	10.1	9.91	-	-	46	-36.09
7	3.453	4.79	Qp	0	.1	10.1	14.99	56	-41.01	-	-
8	3.45075	.35	Ca	0	.1	10.1	10.55	-	-	46	-35.45
9	4.28775	5.68	Qp	0	.1	10.1	15.88	56	-40.12	-	-
10	4.28438	.85	Ca	0	.1	10.1	11.05	-	-	46	-34.95
11	6.15075	6.58	Qp	0	.2	10.2	16.98	60	-43.02	-	-
12	6.16425	1.62	Ca	0	.2	10.2	12.02	-	-	50	-37.98

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

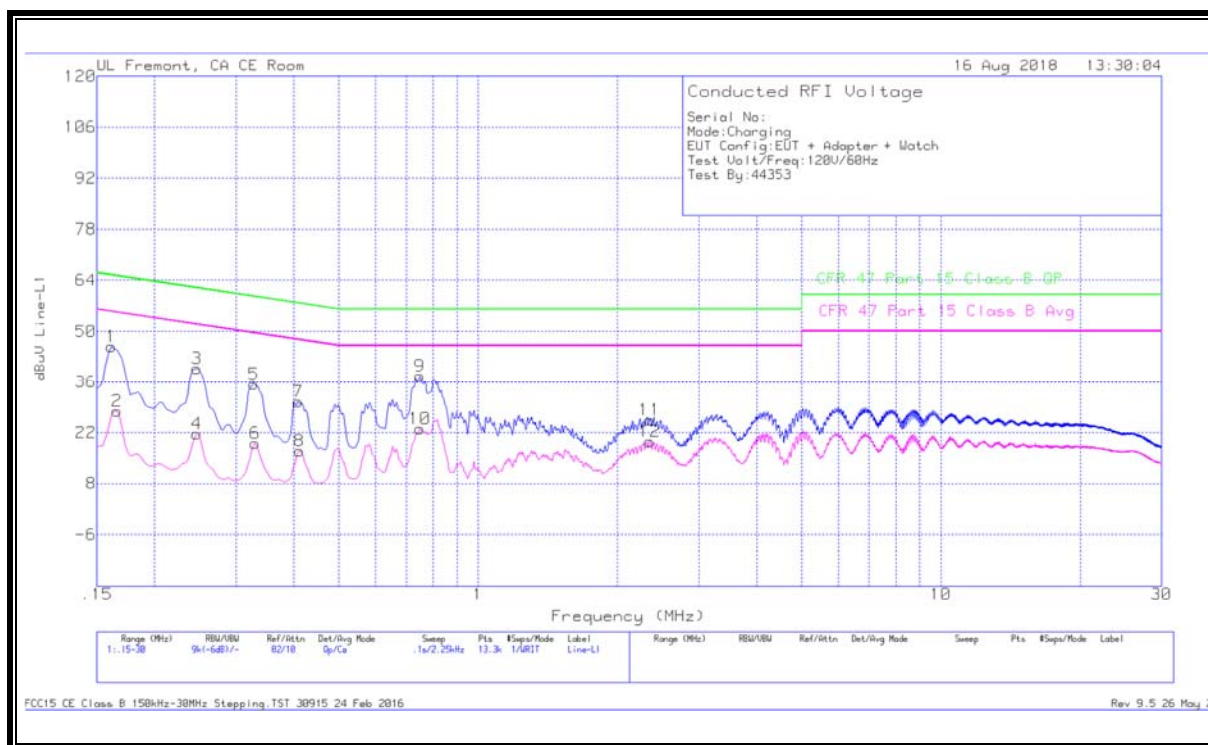
Range 2: Line-L2 .15 - 30MHz											
Marker	Frequenc y (MHz)	Meter Reading dBuV)	Det	LISN L2	LC Cables C2&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
13	.50212	11.34	Qp	0	0	10.1	21.44	56	-34.56	-	-
14	.5145	2.29	Ca	0	0	10.1	12.39	-	-	46	-33.61
15	.789	17.67	Qp	0	0	10.1	27.77	56	-28.23	-	-
16	.78787	10.45	Ca	0	0	10.1	20.55	-	-	46	-25.45
17	1.34025	6.96	Qp	0	.1	10.1	17.16	56	-38.84	-	-
18	1.3425	1.91	Ca	0	.1	10.1	12.11	-	-	46	-33.89
19	2.40225	6.01	Qp	0	.1	10.1	16.21	56	-39.79	-	-
20	2.4	1.56	Ca	0	.1	10.1	11.76	-	-	46	-34.24
21	3.4395	6.79	Qp	0	.1	10.1	16.99	56	-39.01	-	-
22	3.42713	2.2	Ca	0	.1	10.1	12.4	-	-	46	-33.6
23	5.22263	8.17	Qp	0	.1	10.1	18.37	60	-41.63	-	-
24	5.23725	3.33	Ca	0	.1	10.1	13.53	-	-	50	-36.47

Qp - Quasi-Peak detector

Ca - CISPR average detection

9.2.2. OPERATING MODE WITH POWERED BY AC/DC ADAPTER

LINE 1 RESULTS



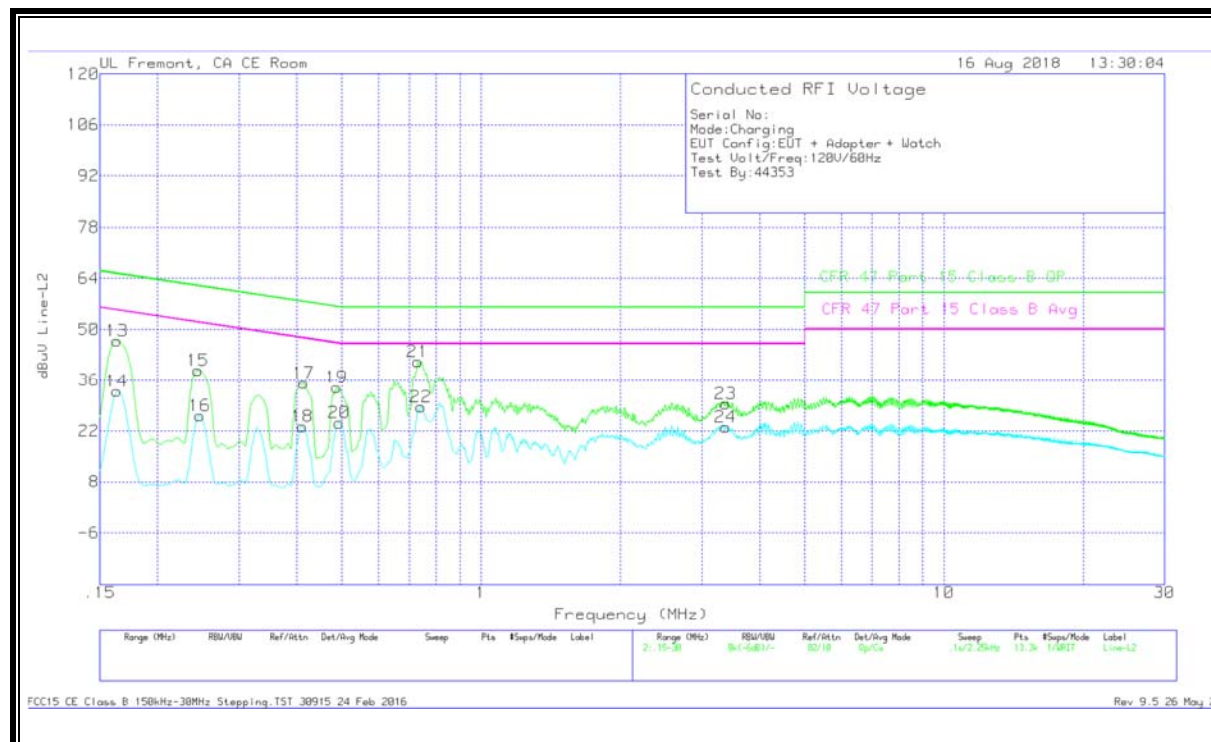
WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables C1&C3	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	.16125	35.55	Qp	.1	0	10.1	45.75	65.4	-19.65	-	-
2	.16575	17.66	Ca	.1	0	10.1	27.86	-	-	55.17	-27.31
3	.24675	29.59	Qp	0	0	10.1	39.69	61.87	-22.18	-	-
4	.24675	11.62	Ca	0	0	10.1	21.72	-	-	51.87	-30.15
5	.32775	25.31	Qp	0	0	10.1	35.41	59.51	-24.1	-	-
6	.33	8.89	Ca	0	0	10.1	18.99	-	-	49.45	-30.46
7	.40875	20.42	Qp	0	0	10.1	30.52	57.67	-27.15	-	-
8	.411	6.88	Ca	0	0	10.1	16.98	-	-	47.63	-30.65
9	.7485	27.5	Qp	0	0	10.1	37.6	56	-18.4	-	-
10	.7485	13.03	Ca	0	0	10.1	23.13	-	-	46	-22.87
11	2.346	15.34	Qp	0	.1	10.1	25.54	56	-30.46	-	-
12	2.346	9.43	Ca	0	.1	10.1	19.63	-	-	46	-26.37

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

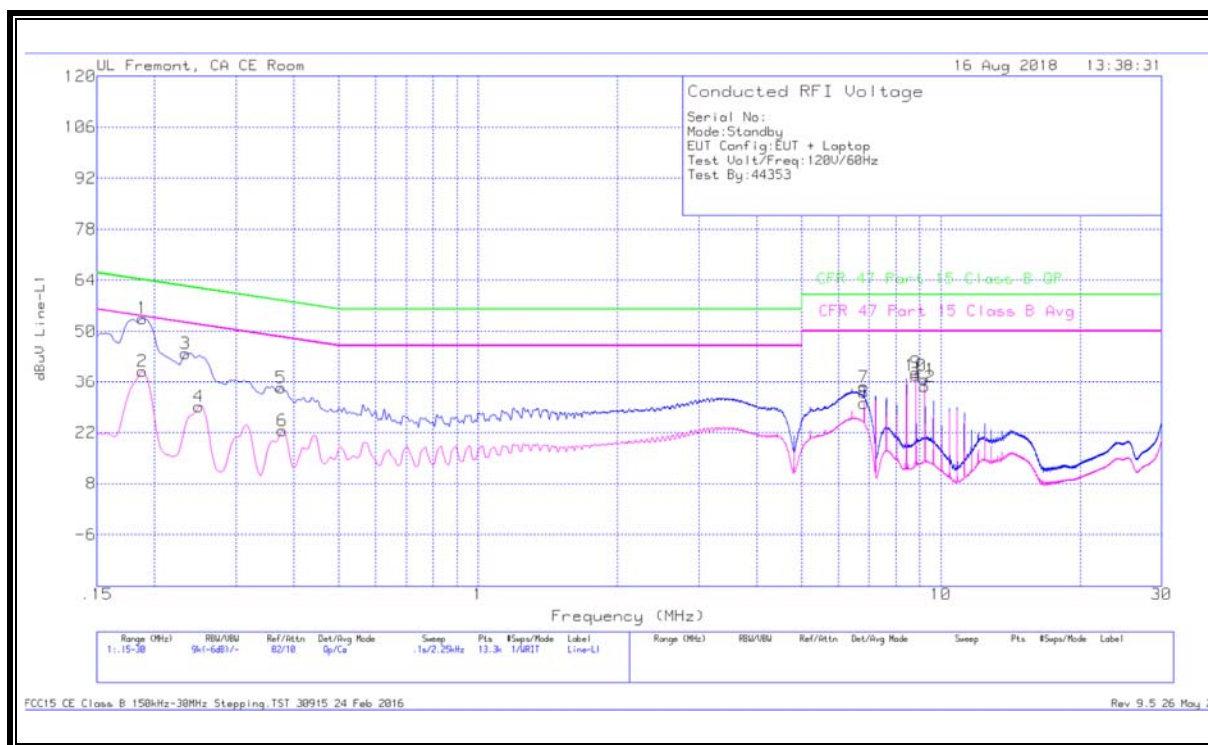
Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L2	LC Cables C2&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR) Margin (dB)
13	.1635	36.74	Qp	.1	0	10.1	46.94	65.28	-18.34	-	-
14	.1635	22.83	Ca	.1	0	10.1	33.03	-	-	55.28	-22.25
15	.2445	28.66	Qp	0	0	10.1	38.76	61.94	-23.18	-	-
16	.24675	16.03	Ca	0	0	10.1	26.13	-	-	51.87	-25.74
17	.41325	25.2	Qp	0	0	10.1	35.3	57.58	-22.28	-	-
18	.411	13.12	Ca	0	0	10.1	23.22	-	-	47.63	-24.41
19	.4875	23.98	Qp	0	0	10.1	34.08	56.21	-22.13	-	-
20	.49425	14.09	Ca	0	0	10.1	24.19	-	-	46.1	-21.91
21	.7305	30.96	Qp	0	0	10.1	41.06	56	-14.94	-	-
22	.74175	18.56	Ca	0	0	10.1	28.66	-	-	46	-17.34
23	3.3765	19.28	Qp	0	.1	10.1	29.48	56	-26.52	-	-
24	3.3765	12.93	Ca	0	.1	10.1	23.13	-	-	46	-22.87

Qp - Quasi-Peak detector

Ca - CISPR average detection

9.2.3. STANDBY MODE POWERED BY HOST PC VIA USB CABLE

LINE 1 RESULTS



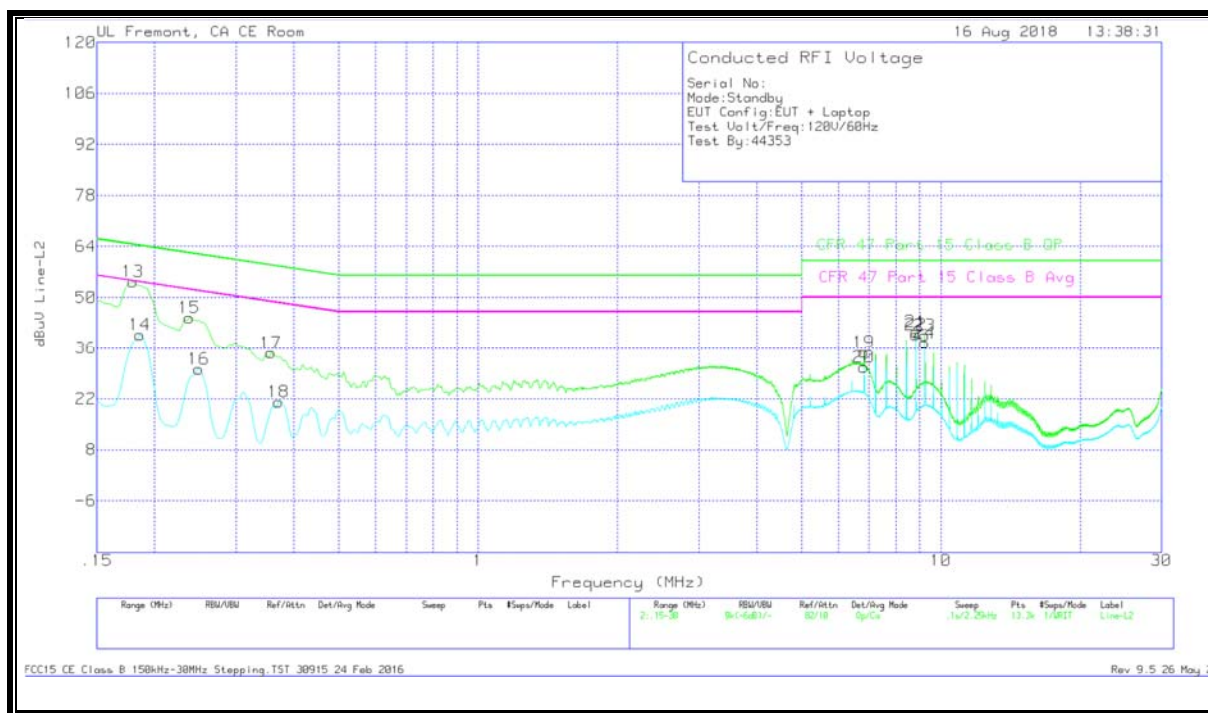
WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables C1&C3	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	.18825	43.46	Qp	0	0	10.1	53.56	64.11	-10.55	-	-
2	.18825	28.87	Ca	0	0	10.1	38.97	-	-	54.11	-15.14
3	.23325	33.85	Qp	0	0	10.1	43.95	62.33	-18.38	-	-
4	.249	19.06	Ca	0	0	10.1	29.16	-	-	51.79	-22.63
5	.375	24.34	Qp	0	0	10.1	34.44	58.39	-23.95	-	-
6	.37725	12.38	Ca	0	0	10.1	22.48	-	-	48.34	-25.86
7	6.8235	24.3	Qp	0	.2	10.2	34.7	60	-25.3	-	-
8	6.8235	19.7	Ca	0	.2	10.2	30.1	-	-	50	-19.9
9	8.8305	28.24	Qp	0	.2	10.2	38.64	60	-21.36	-	-
10	8.8305	27.44	Ca	0	.2	10.2	37.84	-	-	50	-12.16
11	9.231	26.42	Qp	0	.2	10.2	36.82	60	-23.18	-	-
12	9.23325	24.25	Ca	0	.2	10.2	34.65	-	-	50	-15.35

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

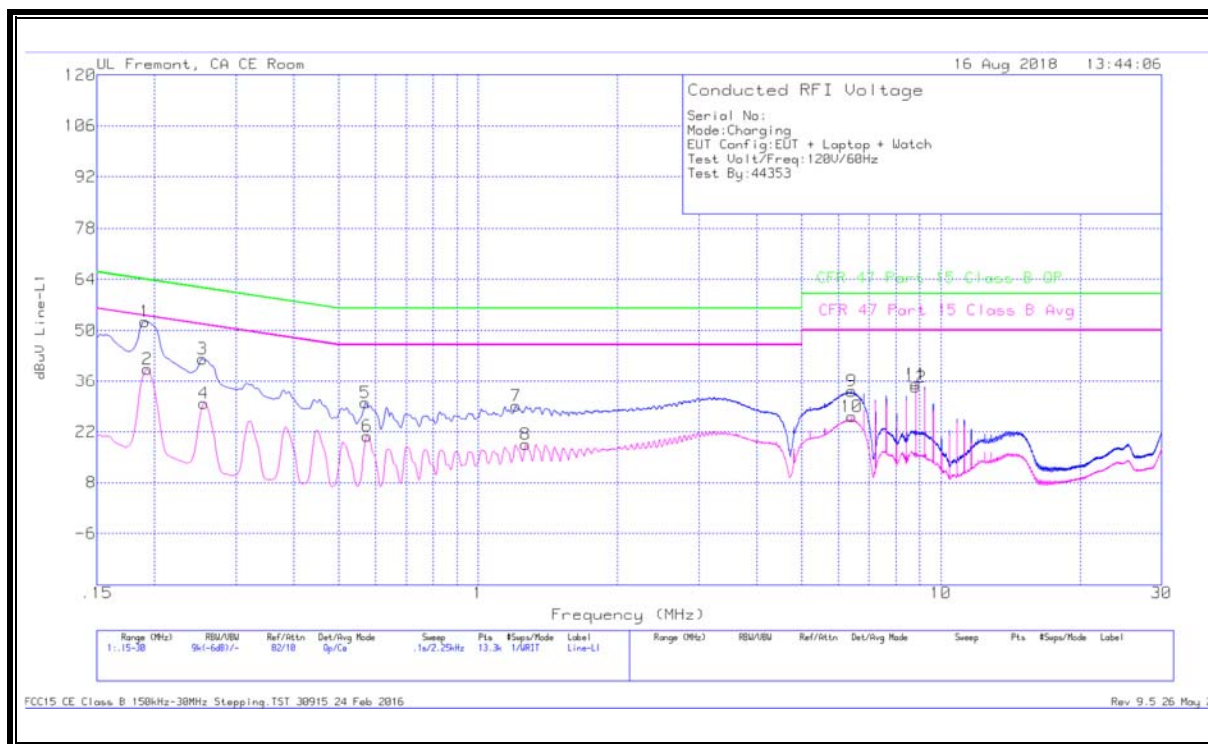
Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L2	LC Cables C2&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
13	.17925	44.21	Qp	0	0	10.1	54.31	64.52	-10.21	-	-
14	.186	29.58	Ca	0	0	10.1	39.68	-	-	54.21	-14.53
15	.23775	34.36	Qp	0	0	10.1	44.46	62.17	-17.71	-	-
16	.249	20.1	Ca	0	0	10.1	30.2	-	-	51.79	-21.59
17	.357	24.6	Qp	0	0	10.1	34.7	58.8	-24.1	-	-
18	.3705	11	Ca	0	0	10.1	21.1	-	-	48.49	-27.39
19	6.8235	24.44	Qp	0	.2	10.2	34.84	60	-25.16	-	-
20	6.8235	20.33	Ca	0	.2	10.2	30.73	-	-	50	-19.27
21	8.8305	30.25	Qp	0	.2	10.2	40.65	60	-19.35	-	-
22	8.8305	29.35	Ca	0	.2	10.2	39.75	-	-	50	-10.25
23	9.231	29.16	Qp	0	.2	10.2	39.56	60	-20.44	-	-
24	9.231	27.16	Ca	0	.2	10.2	37.56	-	-	50	-12.44

Qp - Quasi-Peak detector

Ca - CISPR average detection

9.2.4. OPERATING MODE WITH WATCH POWERED BY HOST PC VIA USB CABLE

LINE 1 RESULTS



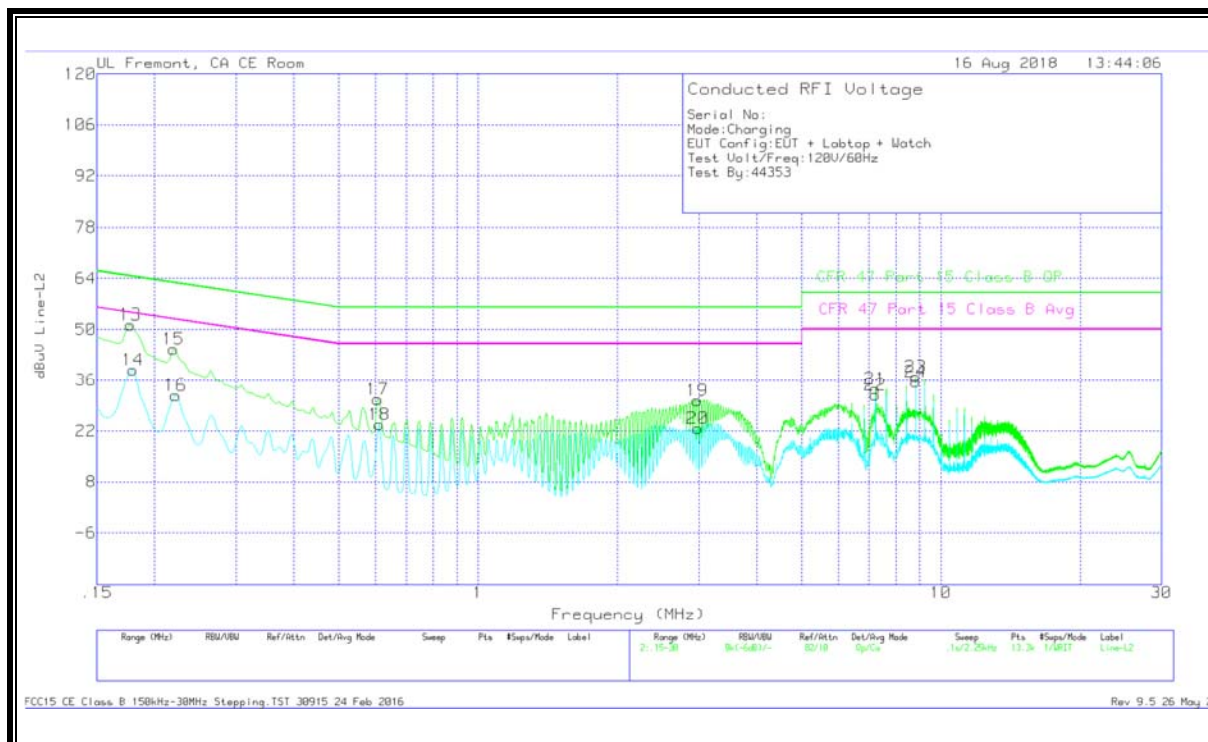
WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables C1&C3	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	.1905	42.3	Qp	0	0	10.1	52.4	64.01	-11.61	-	-
2	.19275	29.28	Ca	0	0	10.1	39.38	-	-	53.92	-14.54
3	.2535	32.01	Qp	0	0	10.1	42.11	61.64	-19.53	-	-
4	.25575	19.79	Ca	0	0	10.1	29.89	-	-	51.57	-21.68
5	.57075	19.9	Qp	0	0	10.1	30	56	-26	-	-
6	.57525	10.64	Ca	0	0	10.1	20.74	-	-	46	-25.26
7	1.2075	18.96	Qp	0	.1	10.1	29.16	56	-26.84	-	-
8	1.26825	8.28	Ca	0	.1	10.1	18.48	-	-	46	-27.52
9	6.4185	22.83	Qp	0	.2	10.2	33.23	60	-26.77	-	-
10	6.4185	15.83	Ca	0	.2	10.2	26.23	-	-	50	-23.77
11	8.82375	24.87	Qp	0	.2	10.2	35.27	60	-24.73	-	-
12	8.826	23.94	Ca	0	.2	10.2	34.34	-	-	50	-15.66

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 C2&C3	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	.177	41.2	Qp	0	0	10.1	51.3	64.63	-13.33	-	-
14	.17925	28.85	Ca	0	0	10.1	38.95	-	-	54.52	-15.57
15	.21975	34.45	Qp	0	0	10.1	44.55	62.83	-18.28	-	-
16	.222	21.73	Ca	0	0	10.1	31.83	-	-	52.74	-20.91
17	.60675	20.64	Qp	0	0	10.1	30.74	56	-25.26	-	-
18	.61125	13.71	Ca	0	0	10.1	23.81	-	-	46	-22.19
19	2.97938	20.2	Qp	0	.1	10.1	30.4	56	-25.6	-	-
20	2.9805	12.56	Ca	0	.1	10.1	22.76	-	-	46	-23.24
21	7.224	23.19	Qp	0	.2	10.2	33.59	60	-26.41	-	-
22	7.224	21.48	Ca	0	.2	10.2	31.88	-	-	50	-18.12
23	8.82825	26.59	Qp	0	.2	10.2	36.99	60	-23.01	-	-
24	8.82825	25.2	Ca	0	.2	10.2	35.6	-	-	50	-14.4

Qp - Quasi-Peak detector

Ca - CISPR average detection