



CERTIFICATION TEST REPORT

Report Number. : 12132879-E8V1

Applicant : SONY MOBILE COMMUNICATIONS INC.
4-12-3 HIGASHI-SHINAGAWA,
SHINAGAWA -KU,TOKYO, 140-0002, JAPAN

FCC ID : PY7-70663E

EUT Description : GSM/WCDMA/LTE Phone with BT,DTS/UNII a/b/g/n/ac, & NFC

Test Standard(s) : FCC 47 CFR PART 15 SUBPART B

Date Of Issue:

March 20, 2018

Prepared by:

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Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
<u>V1</u>	<u>03/20/18</u>	<u>Initial Issue</u>	<u>Dan Corona</u>

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SONY MOBILE COMMUNICATIONS INC.
4-12-3 HIGASHI-SHINAGAWA, SHINAGAWA-KU
TOKYO, 140-0002, JAPAN

EUT DESCRIPTION: GSM/WCDMA/LTE PHONE with BT, DTS/UNII a/b/g/n/ac, & NFC.

SERIAL NUMBER:

DATE TESTED: FEBRUARY 22 – MARCH 1, 2018

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47 CFR PART 15 SUBPART B	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:

Reviewed By:



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UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2014.

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. Chambers A through C are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-3, respectively. Chambers D through H are covered under Industry Canada company address code 22541 with site numbers 22541 -1 through 22541-5, respectively.

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, 0.15 to 30 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 GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac, & NFC.

GENERAL INFORMATION

Highest frequency generated or used by the EUT	5825 MHz
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5.2. TEST CONFIGURATIONS

The following configuration was tested:

EUT Configuration	Description
1	Laptop Sync Mode - The EUT was configured as table top equipment. The EUT is installed in a typical configuration. The EUT is connected to a laptop via USB, is charging and transferring data via the laptop.
2	Charging - The EUT was configured as table top equipment. The EUT is installed in a typical configuration. The EUT is connected to an AC adapter for charging and in a functional mode.

5.3. MODE(S) OF OPERATION

Mode	Description
Sync mode	Data transfer; Sync video file from laptop to EUT and continued playing video during testing.
Charging Mode	Charging with supplied USB charger. EUT and its charger shall be on back edge of table, with charger connected to extension cord.

5.4. SOFTWARE AND FIRMWARE

The software version installed in the EUT during testing was 0.198.

5.5. MODIFICATIONS

No modifications were made during testing.

5.6. DETAILS OF TESTED SYSTEM

SUPPORT EQUIPMENT & PERIPHERALS

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Lenovo	2349CW5	PB05HPL	DoC
Earphone	Sony	N/A	N/A	N/A
Audio & Charger Splitter	SONY	1312-8675.1B	YYWWSSPCXXXXXC	N/A
AC Adapter	Lenovo	ADLX90NLT2A	11S45N0307ZLZ436RDM2	N/A
Mouse	Logitech	M-U0026	1304HS02AX68	N/A
Keyboard	Lenovo	KU-0225	54Y9400	N/A
Switch	Netgear	FS105 v2	1D52163304A74	DoC
AC Adapter	Netgear	FA-0751000SUA	332-10154-01	N/A

I/O CABLES Sync Mode

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC Power	1	AC	Unshielded	1.2m	AC Mains to AC/DC Adapter
2	DC Power	1	DC	Unshielded	1m	AC/DC Adapter to Switch and Laptop
3	USB	2	USB	Unshielded	1m	Laptop to keyboard and mouse
4	USB	1	USB-type-C	Unshielded	1m	EUT to Laptop
5	Ethernet	1	RJ45	Unshielded	>2m	Laptop to Switch

I/O CABLES Charging Mode

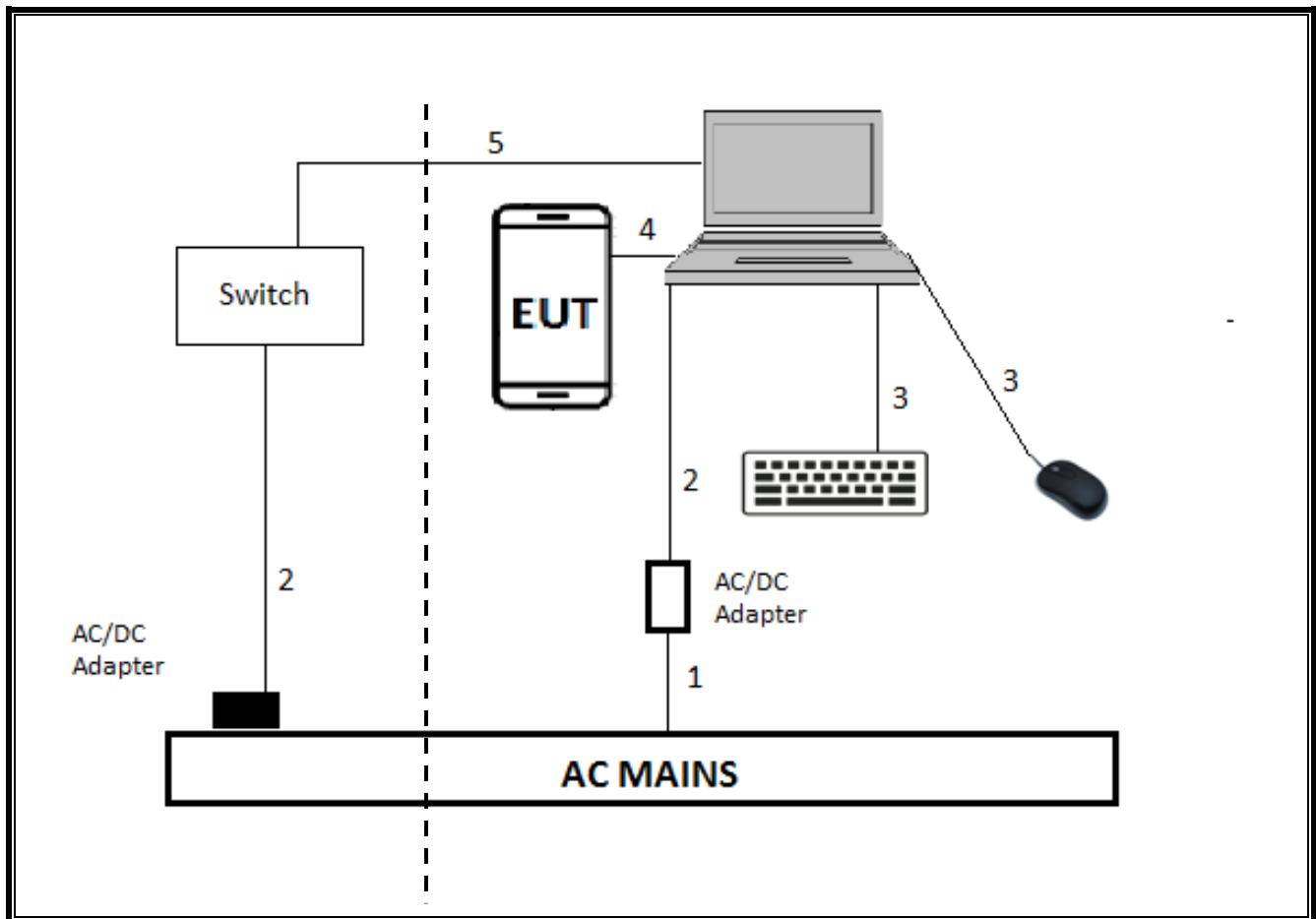
I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB	1	AC Adapter	Un-Shielded	1.2m	No
2	Jack	1	Headset	Shielded	1m	No
3	USB/HP Jack	1	USB Type-C/Audio	Un-Shielded	.2m	Audio & Charging Cabel

TEST SETUP

The EUT is installed in a typical configuration. Test software exercised the EUT.

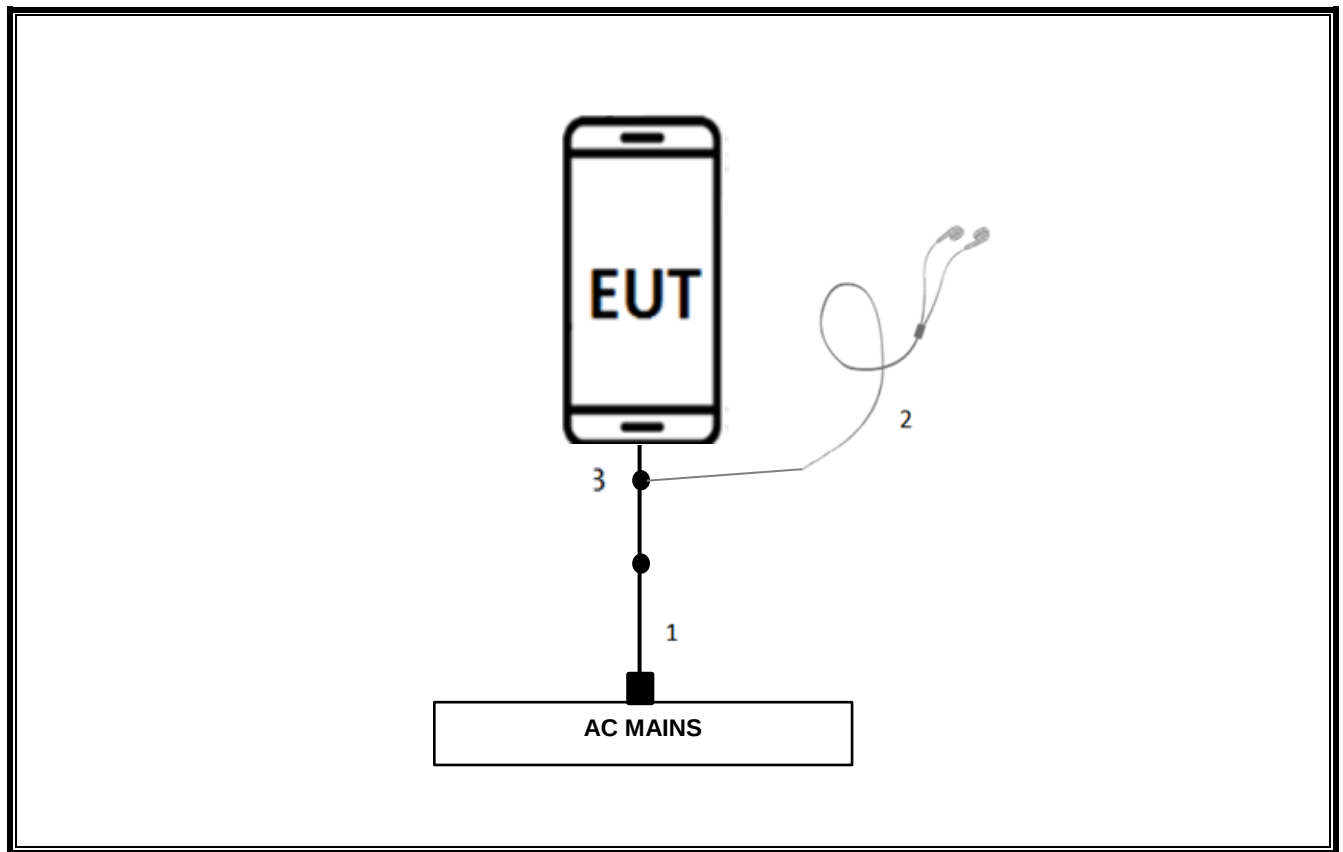
SETUP DIAGRAM

Sync Mode



NOTE: Switch location is outside chamber (located in the control room).

Charging Mode



6. APPLICABLE EMISSIONS LIMITS AND TEST RESULTS

6.1. EMISSIONS 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 Number	Cal Due
Amplifier, 1 to 18 GHz	Miteq	AFS43-00101800-25-S-42	T493	06/23/2018
Amplifier, 10KHz to 1GHz, 32dB	Keysight	8447D	T10	02/15/2019
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T863	06/09/2018
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	899	06/15/2018
PXA Spectrum Analyzer, 3Hz to 44GHz	Agilent	N9030A	907	02/07/2019
EMI Receiver	Rohde & Schwarz	ESR-EMI	PRE0176493	02/21/2019
LISN	FISCHER	FCC-LISN-50/250-25-2-01	1310	06/08/2018
18 - 26.5 GHz Horn Antenna	Seavey Division	MWH-1826/B	449	06/12/2018
26.5 - 40 GHz Horn Antenna	ARA	MWH-2640	90	08/25/2018
Pre-Amp 1-26.5 GHz	Agilent	8449B	404	07/23/2018
Pre-Amp, 26-40GHz	MITEQ	NSTTA2640-35-HG	1864	09/21/2018
PXA Spectrum Analyzer, 3Hz to 44GHz	Keysight	N9030A	1454	12/15/2018

Test Software List			
Description	Manufacturer	Model	Version
Radiated Software	UL	UL EMC	Ver 9.5, Dec 01, 2016

6.2. RADIATED EMISSIONS LIMITS AND RESULTS

LIMIT

FCC Part 15 Subpart B

§15.109 (a) Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Limits for radiated disturbance of Class B ITE at measuring distance of 3 m	
Frequency range (MHz)	Quasi-peak limits (dBµV/m)
30 to 88	40
88 to 216	43.5
216 to 960	46
Above 960 MHz	54
Note: The lower limit shall apply at the transition frequency.	

TEST PROCEDURE

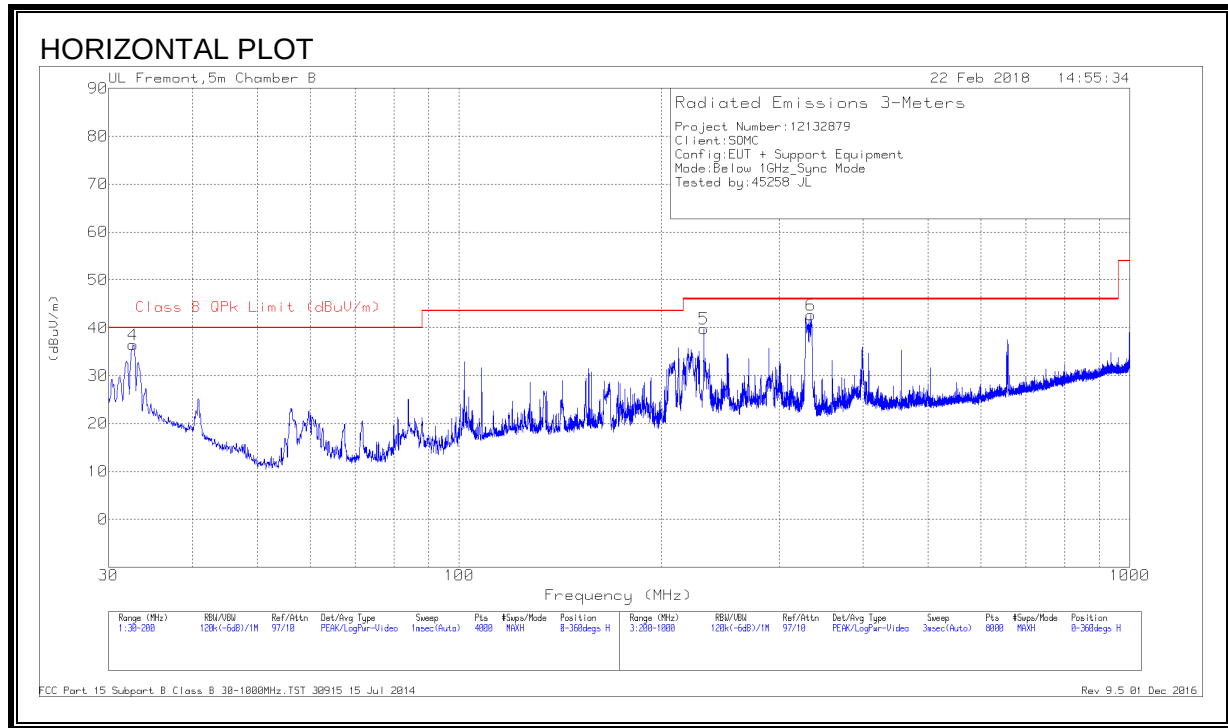
ANSI C63.4: 2014

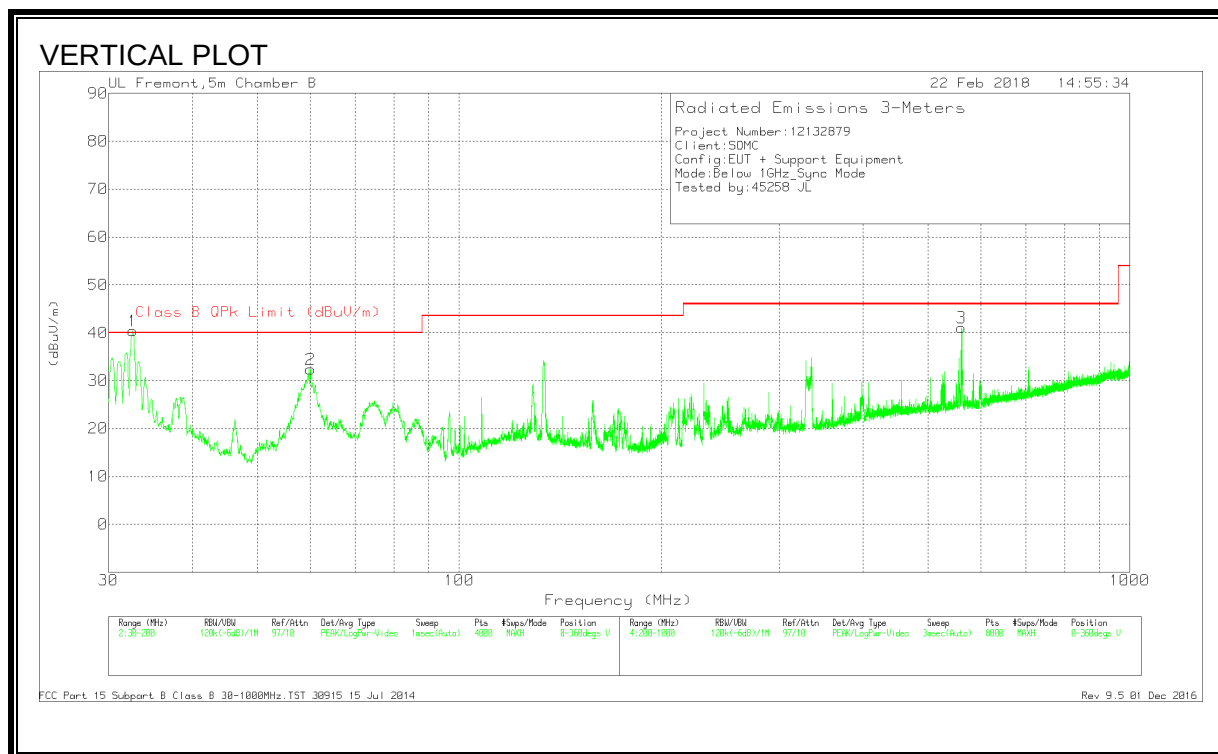
The highest frequency generated or used in the EUT is 5.8 GHz therefore the frequency range was investigated from 30 MHz to 40 GHz.

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 108	1000
108-500	2000
500-1000	5000
Above 1000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

RESULTS

6.2.1. RADIATED EMISSIONS 30 TO 1000 MHz (SYNC MODE)





HORIZONTAL AND VERTICAL DATA

Radiated Emissions

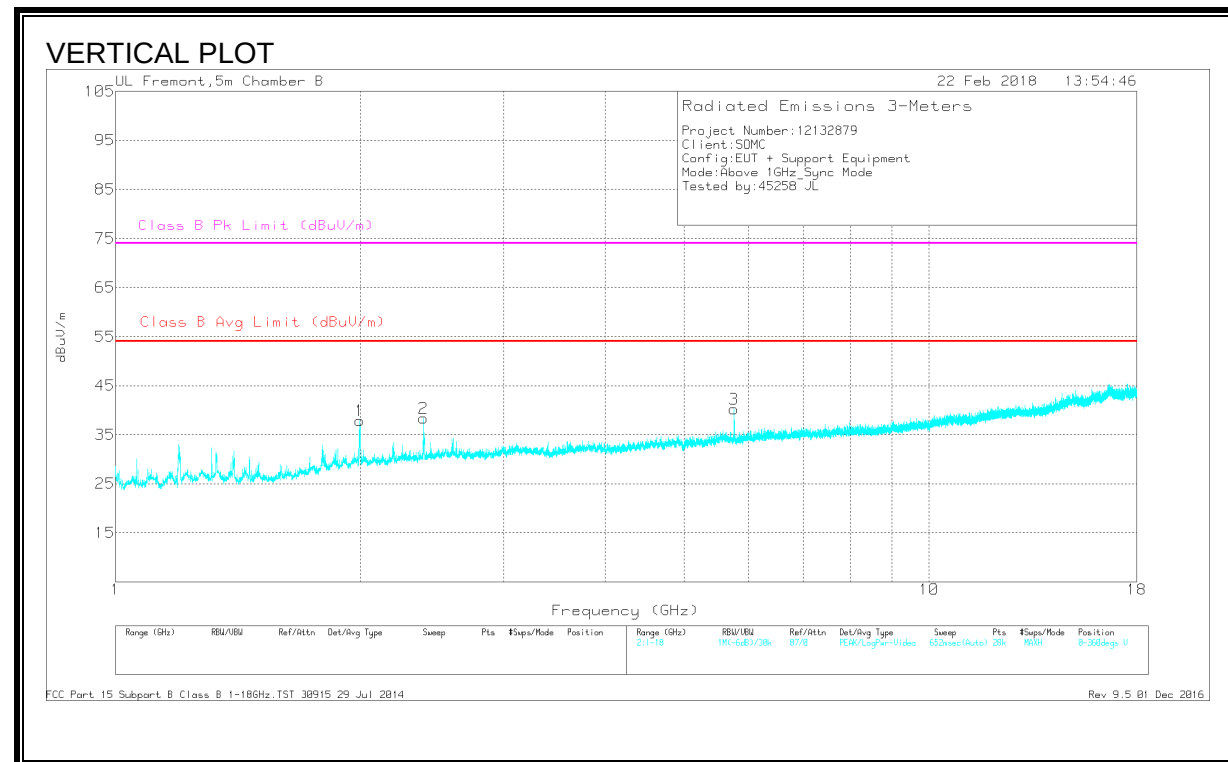
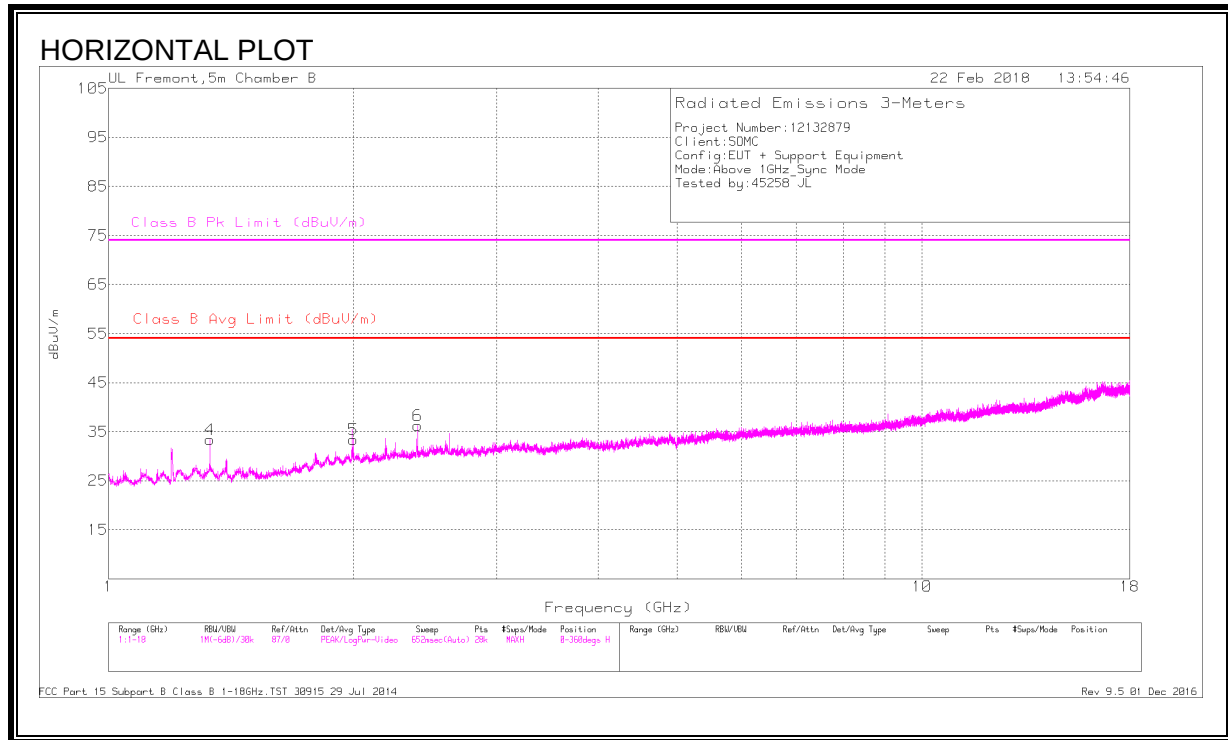
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	32.5932	45.58	Pk	23.6	-28.8	40.38	40	.38	0-360	100	V
4	32.6357	41.65	Pk	23.6	-28.8	36.45	40	-3.55	0-360	300	H
2	60.0128	49.09	Pk	11.7	-28.4	32.39	40	-7.61	0-360	100	V
5	231.6041	51.33	Pk	15	-26.5	39.83	46.02	-6.19	0-360	100	H
6	334.6175	50.74	Pk	17.8	-25.8	42.74	46.02	-3.28	0-360	100	H
3	561.247	44.5	Pk	22.4	-25.8	41.1	46.02	-4.92	0-360	100	V

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
32.5983	39.58	Qp	23.6	-28.8	34.38	40	-5.62	234	302	H
32.6383	41.35	Qp	23.6	-28.8	36.15	40	-3.85	282	101	V
334.7135	43.54	Qp	17.8	-25.8	35.54	46.02	-10.48	227	111	H
561.307	20.92	Qp	22.4	-25.8	17.52	46.02	-28.5	76	348	V

Pk - Peak detector

Qp - Quasi-Peak detector

6.2.2. RADIATED EMISSIONS 1GHz to 18GHz (SYNC MODE)



HORIZONTAL AND VERTICAL DATA

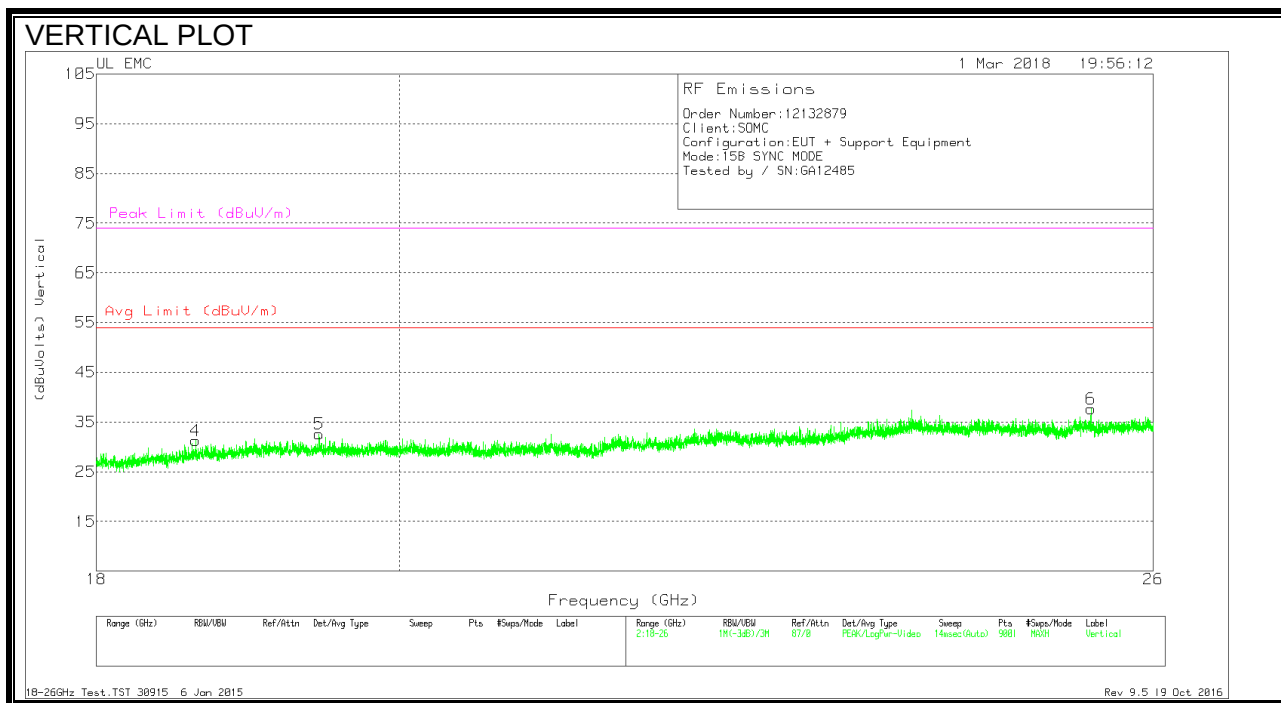
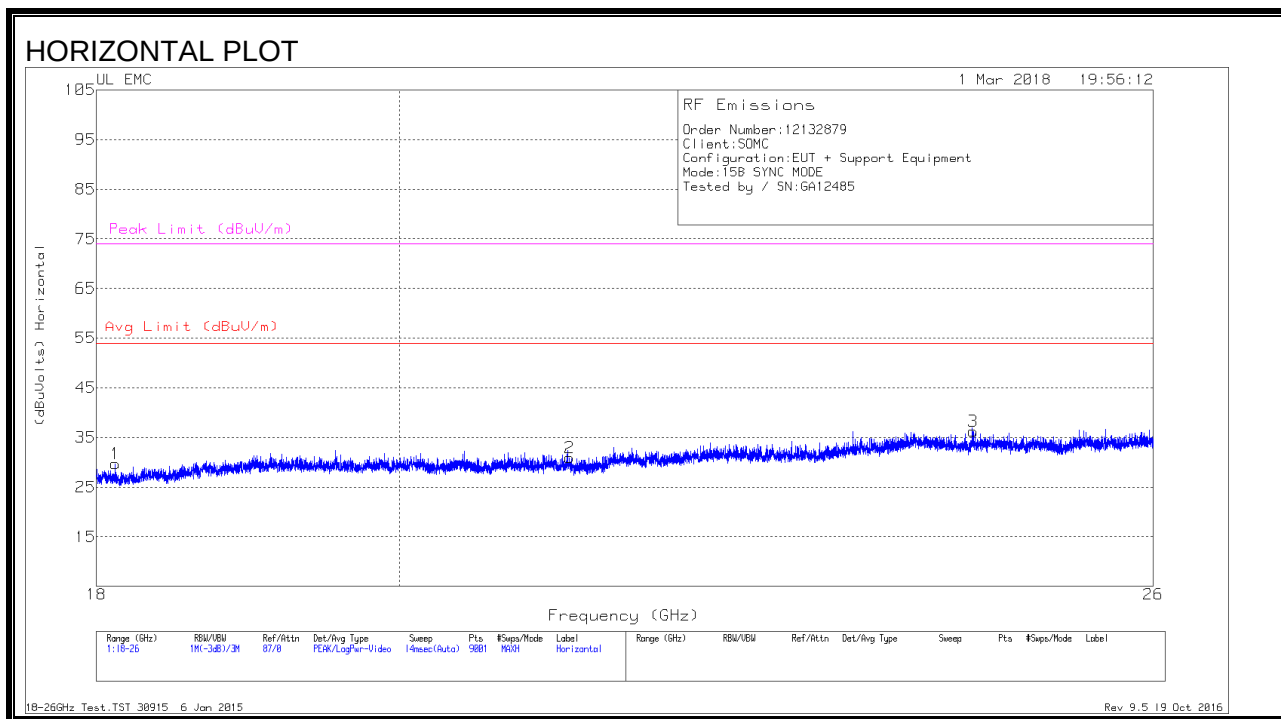
Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	1.333	28.83	Av	28.9	-34.3	23.43	54	-30.57	-	-	284	156	H
	1.334	42.76	Pk	28.9	-34.3	37.36	-	-	74	-36.64	284	156	H
1	1.997	27.31	Av	31.3	-33.5	25.11	54	-28.89	-	-	232	190	H
	1.998	41.91	Pk	31.3	-33.5	39.71	-	-	74	-34.29	232	190	H
5	1.998	27.47	Av	31.3	-33.5	25.27	54	-28.73	-	-	167	244	V
	1.998	50	Pk	31.3	-33.5	47.8	-	-	74	-26.2	167	244	V
2	2.39	45.23	Pk	32	-33	44.23	-	-	74	-29.77	204	187	V
	2.39	27.45	Av	32	-33	26.45	54	-27.55	-	-	204	187	V
6	2.398	43.79	Pk	32	-32.8	42.99	-	-	74	-31.01	167	244	H
	2.399	27.25	Av	32	-32.8	26.45	54	-27.55	-	-	167	244	H
3	5.76	41.73	Pk	35	-30.5	46.23	-	-	74	-27.77	200	157	V
	5.76	32.55	Av	35	-30.5	37.05	54	-16.95	-	-	200	157	V

Pk - Peak detector

Av - Average detection

6.2.3. RADIATED EMISSIONS 18 to 26 GHz (SYNC MODE)



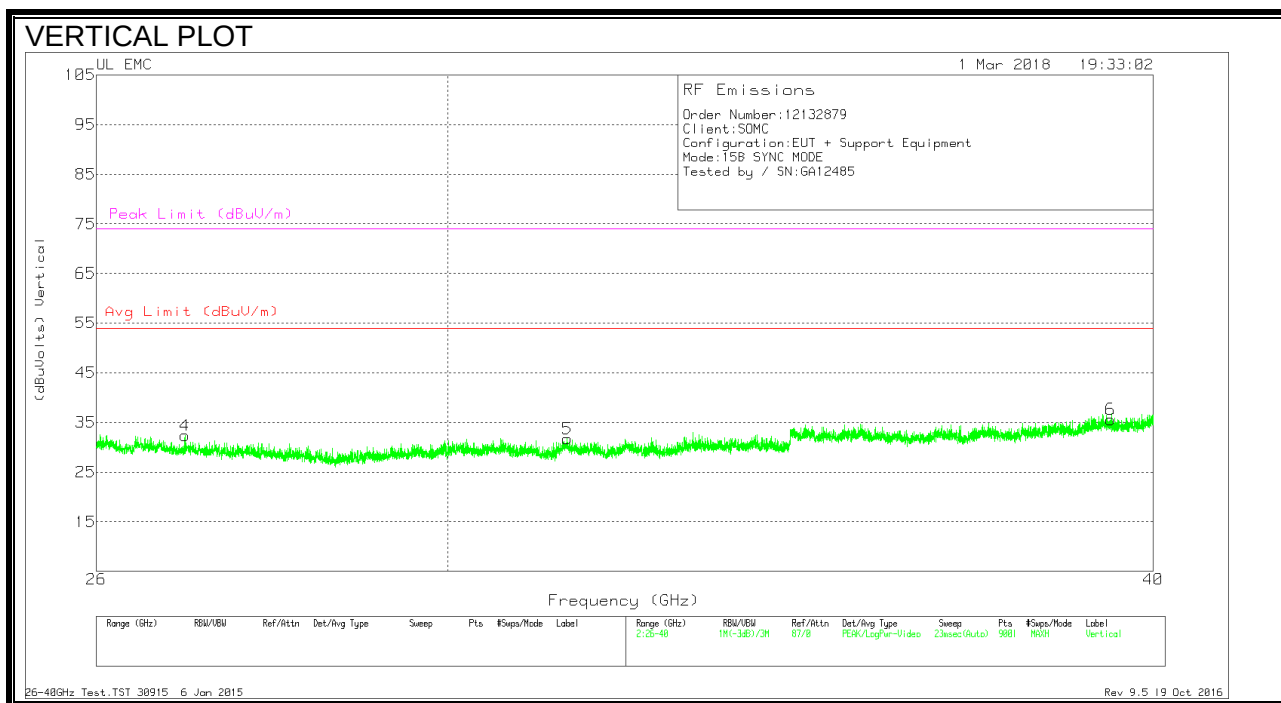
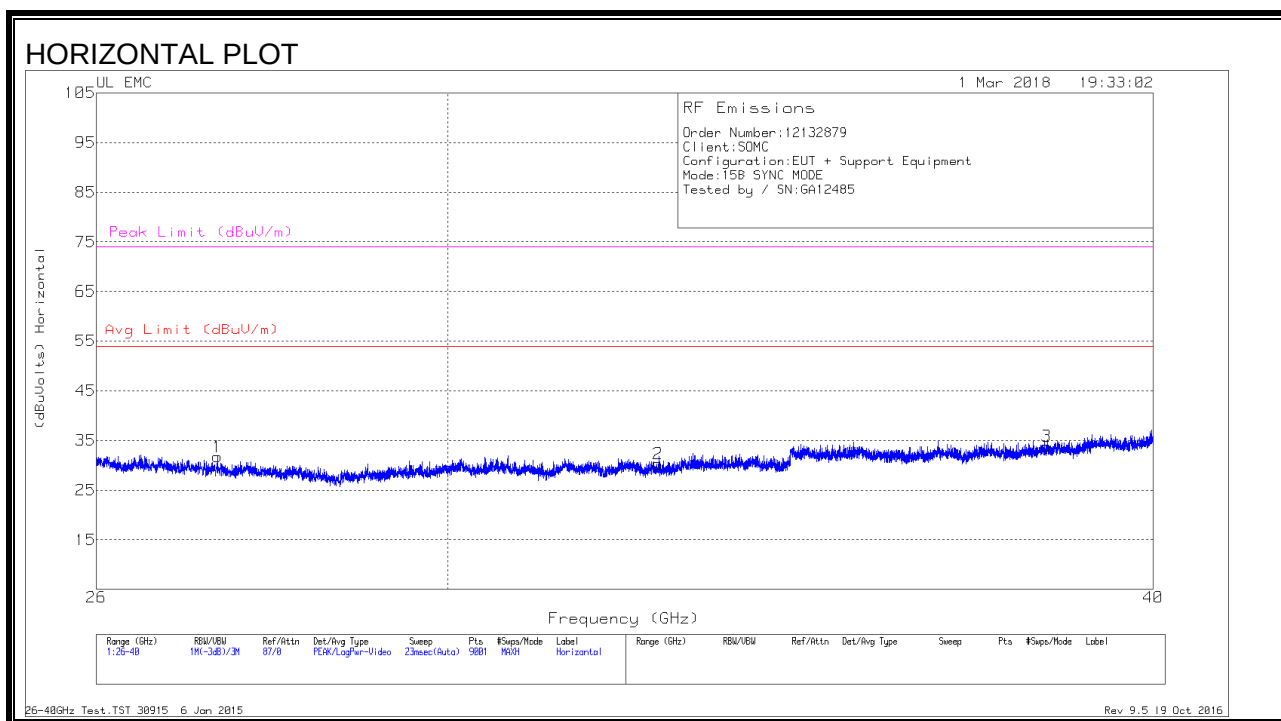
HORIZONTAL AND VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T449 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	18.119	32.47	Pk	32.3	-25.6	-9.5	29.67	54	-24.33	74	-44.33
2	21.22	32.23	Pk	33	-24.8	-9.5	30.93	54	-23.07	74	-43.07
3	24.42	35.81	Pk	34	-24.1	-9.5	36.21	54	-17.79	74	-37.79
4	18.631	33.25	Pk	32.3	-24.8	-9.5	31.25	54	-22.75	74	-42.75
5	19.449	33.97	Pk	32.7	-24.6	-9.5	32.57	54	-21.43	74	-41.43
6	25.441	37.04	Pk	34.4	-24.3	-9.5	37.64	54	-16.36	74	-36.36

Trace Markers

Pk - Peak detector

6.2.4. RADIATED EMISSIONS 26 to 40 GHz (SYNC MODE)



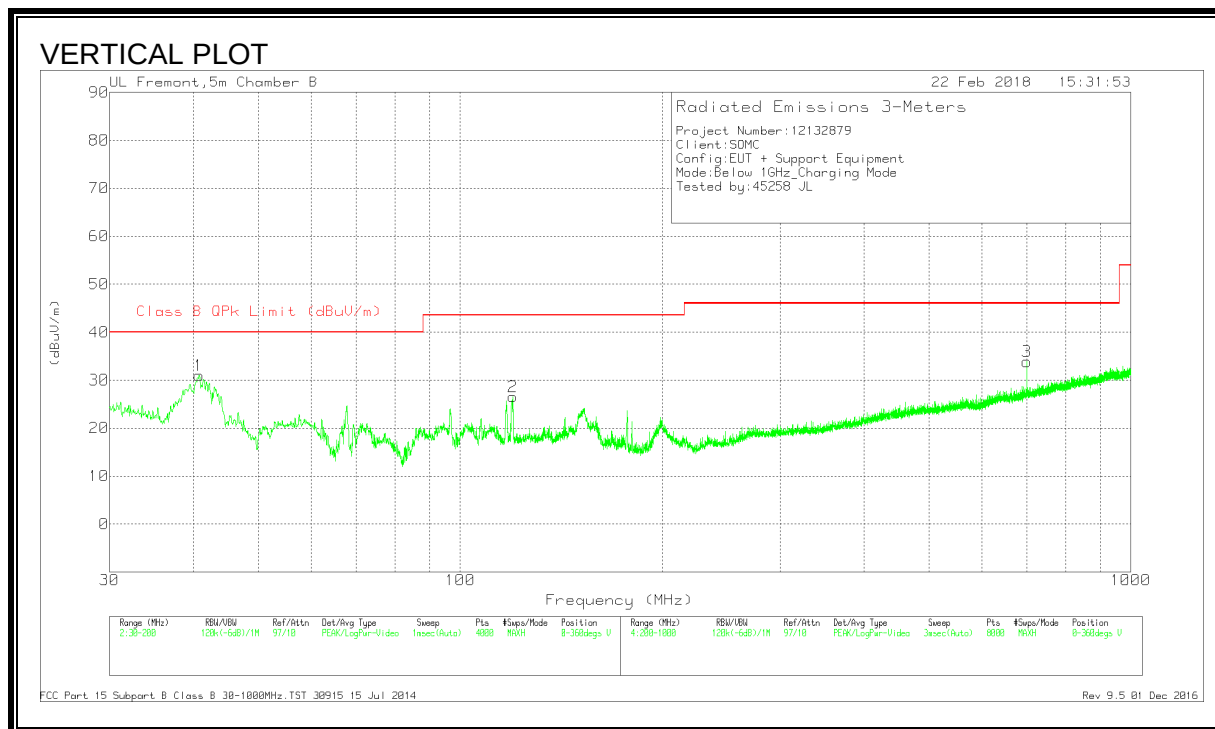
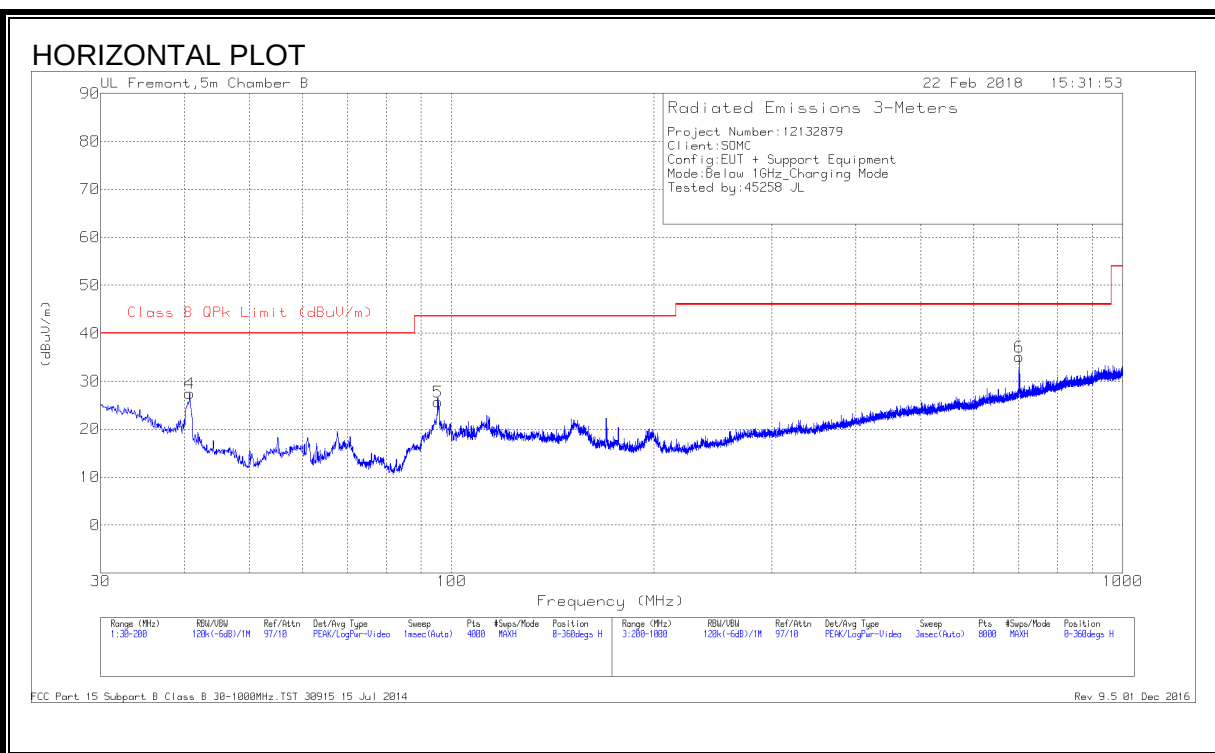
HORIZONTAL AND VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T90 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	27.313	36.74	Pk	35.6	-31.1	-9.5	31.74	54	-22.26	74	-42.26
2	32.689	36.06	Pk	36.5	-32.8	-9.5	30.26	54	-23.74	74	-43.74
3	38.3	38.54	Pk	37.1	-32.3	-9.5	33.84	54	-20.16	74	-40.16
4	26.955	37.56	Pk	35.5	-31.2	-9.5	32.36	54	-21.64	74	-41.64
5	31.5	38.01	Pk	36.2	-33	-9.5	31.71	54	-22.29	74	-42.29
6	39.309	38.87	Pk	38.3	-32.1	-9.5	35.57	54	-18.43	74	-38.43

Pk - Peak detector

6.2.5. RADIATED EMISSIONS 30 TO 1000 MHz (CHARGING MODE)



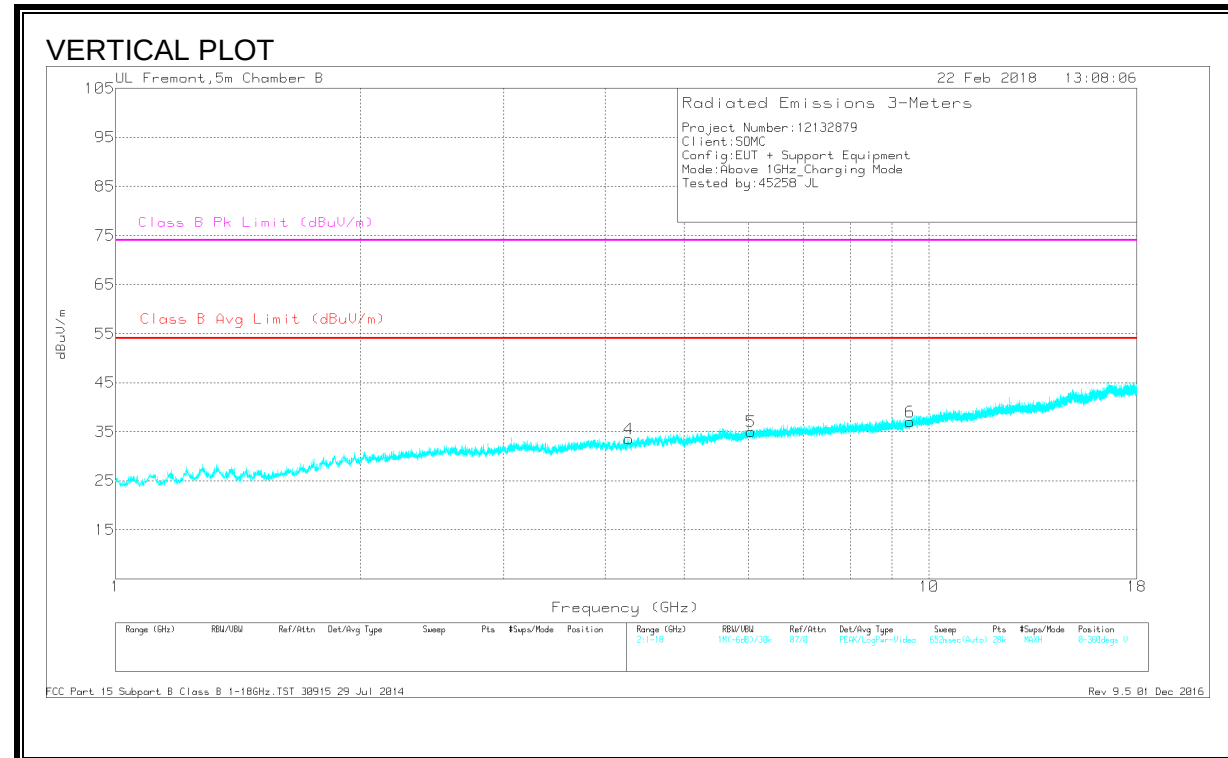
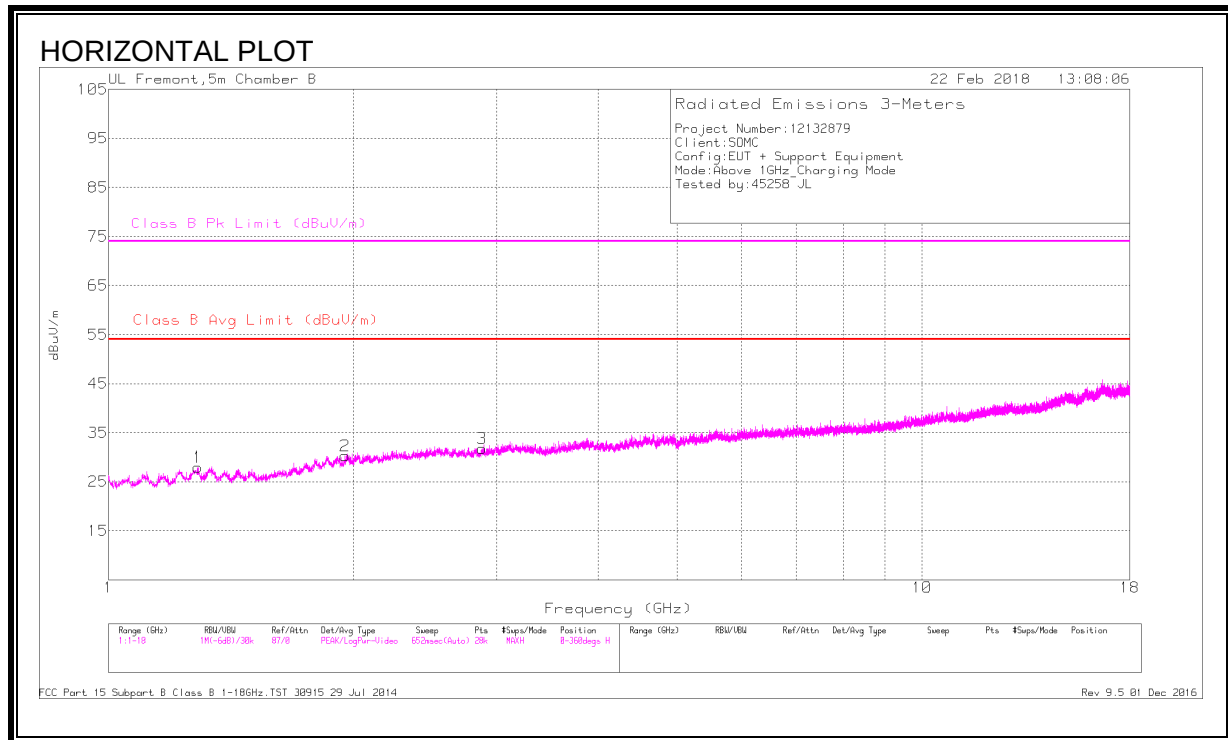
HORIZONTAL AND VERTICAL DATA

Radiated Emissions

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	40.7128	38.61	Pk	17.6	-28.7	27.51	40	-12.49	0-360	300	H
1	40.7978	42.09	Pk	17.6	-28.7	30.99	40	-9.01	0-360	100	V
5	95.4669	40.82	Pk	12.9	-28	25.72	43.52	-17.8	0-360	300	H
2	119.7407	36.71	Pk	17.6	-27.7	26.61	43.52	-16.91	0-360	100	V
3	699.765	34.77	Pk	24.1	-25	33.87	46.02	-12.15	0-360	100	V
6	700.5651	35.93	Pk	24.1	-25	35.03	46.02	-10.99	0-360	400	H

Pk - Peak detector

6.2.6. RADIATED EMISSIONS 1GHz to 18GHz (CHARGING MODE)



HORIZONTAL AND VERTICAL DATA

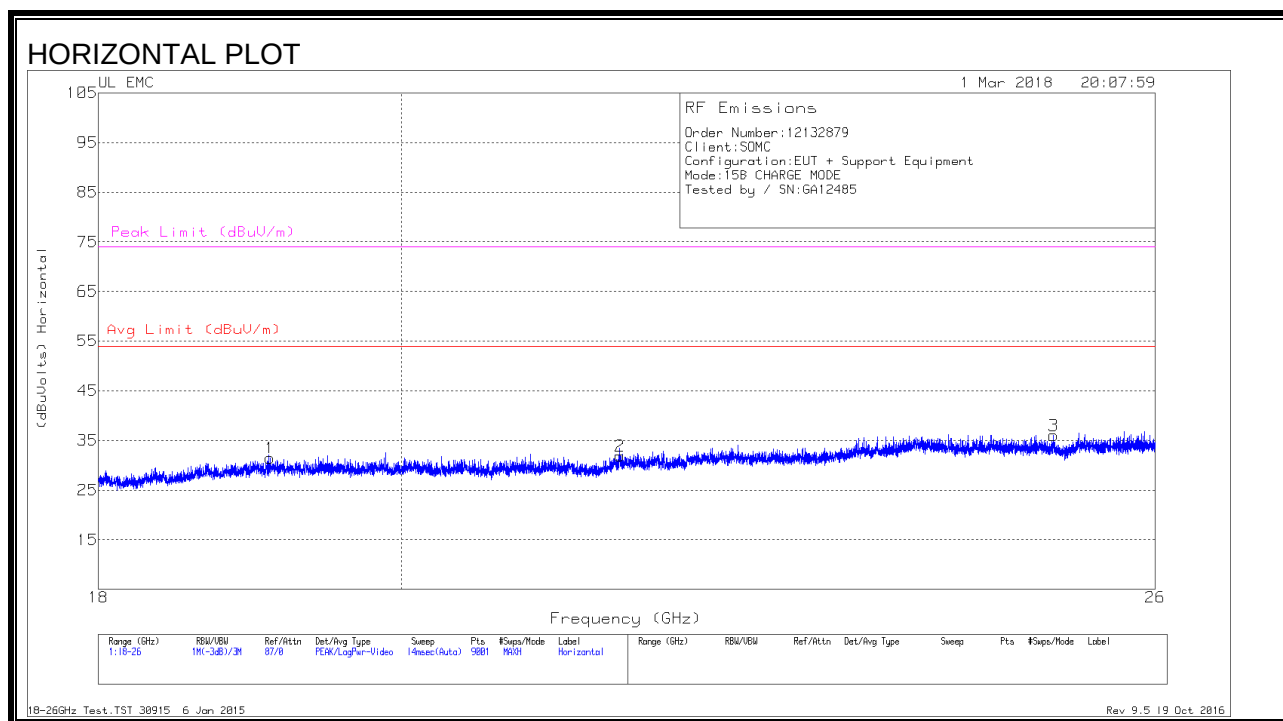
Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.285	41.13	Pk	28.9	-34.6	35.43	-	-	74	-38.57	51	152	H
	1.285	28.7	Av	28.9	-34.6	23	54	-31	-	-	51	152	H
2	1.954	40.96	Pk	31.1	-33.5	38.56	-	-	74	-35.44	120	203	H
	1.954	27.69	Av	31.1	-33.5	25.29	54	-28.71	-	-	120	203	H
3	2.875	40.63	Pk	32.4	-32.6	40.43	-	-	74	-33.57	188	274	H
	2.875	27.2	Av	32.4	-32.6	27	54	-27	-	-	188	274	H
4	4.273	38.95	Pk	33.5	-31.6	40.85	-	-	74	-33.15	168	306	V
	4.273	26.56	Av	33.5	-31.6	28.46	54	-25.54	-	-	168	306	V
5	6.038	37.83	Pk	35.4	-30.5	42.73	-	-	74	-31.27	259	250	V
	6.038	25.39	Av	35.4	-30.5	30.29	54	-23.71	-	-	259	250	V
6	9.476	35.07	Pk	36.7	-26.4	45.37	-	-	74	-28.63	331	174	V
	9.476	21.6	Av	36.7	-26.4	31.9	54	-22.1	-	-	331	174	V

Pk - Peak detector

Av - Average detection

6.2.7. RADIATED EMISSIONS 18 to 26 GHz (CHARGING MODE)



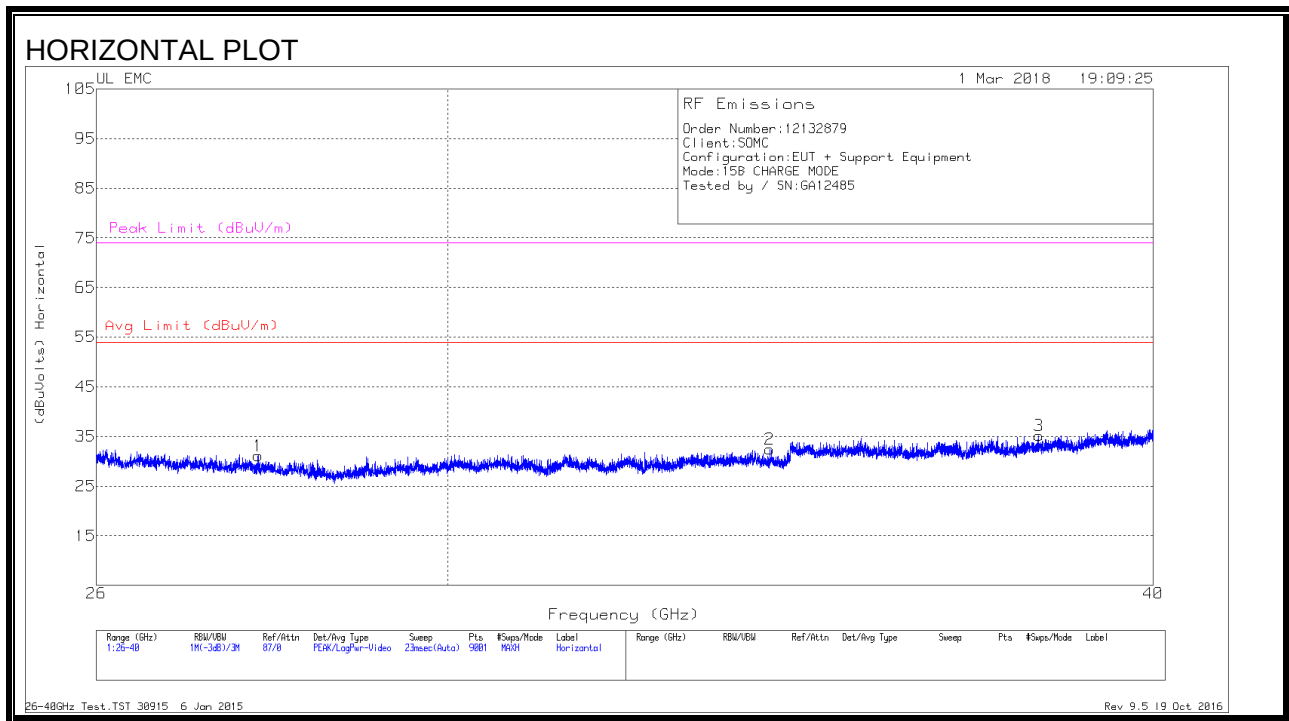
HORIZONTAL AND VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T449 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	19.107	33.35	Pk	32.5	-24.9	-9.5	31.45	54	-22.55	74	-42.55
2	21.581	33.46	Pk	33.2	-25.3	-9.5	31.86	54	-22.14	74	-42.14
3	25.094	35.7	Pk	34.3	-24.5	-9.5	36	54	-18	74	-38
4	18.691	32.79	Pk	32.3	-24.3	-9.5	31.29	54	-22.71	74	-42.71
5	21.812	34.19	Pk	33.2	-24.4	-9.5	33.49	54	-20.51	74	-40.51
6	25.301	34.75	Pk	34.3	-24.6	-9.5	34.95	54	-19.05	74	-39.05

Pk - Peak detector

6.2.8. RADIATED EMISSIONS 26 to 40 GHz (CHARGING MODE)



HORIZONTAL AND VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T90 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	27.77	36.09	Pk	35.8	-31.3	-9.5	31.09	54	-22.91	74	-42.91
2	34.209	38.24	Pk	36.9	-33.2	-9.5	32.44	54	-21.56	74	-41.56
3	38.175	39.84	Pk	37.2	-32.4	-9.5	35.14	54	-18.86	74	-38.86
4	26.756	37.52	Pk	35.3	-30.8	-9.5	32.52	54	-21.48	74	-41.48
5	31.06	38.44	Pk	35.9	-32.9	-9.5	31.94	54	-22.06	74	-42.06
6	39.305	39.26	Pk	38.3	-32.2	-9.5	35.86	54	-18.14	74	-38.14

Pk - Peak detector

6.3. AC MAINS LINE CONDUCTED EMISSIONS

TEST PROCEDURE

ANSI C63.4: 2014

LIMIT

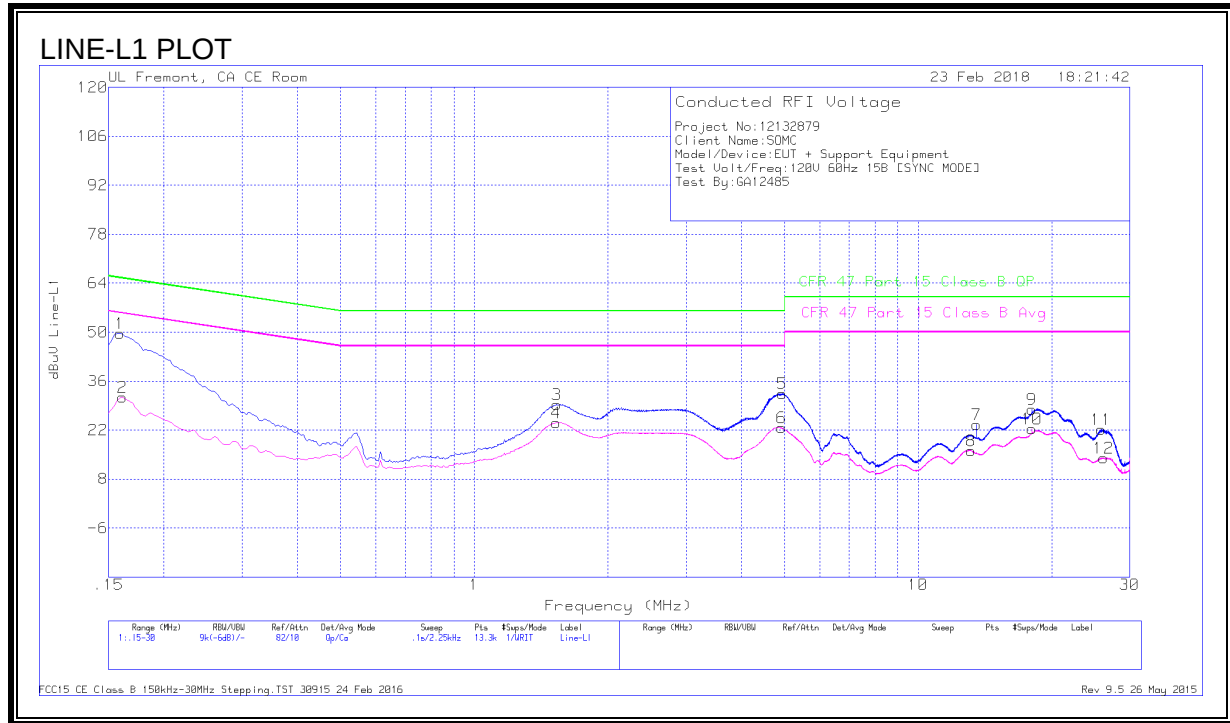
§15.107 (a) Except for Class A digital devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges.

Frequency range (MHz)	Limits (dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50
Notes: 1. The lower limit shall apply at the transition frequencies 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz		

6.3.1. RESULTS- SYNC MODE

6 WORST EMISSIONS

Line-L1 .15 - 30MHz

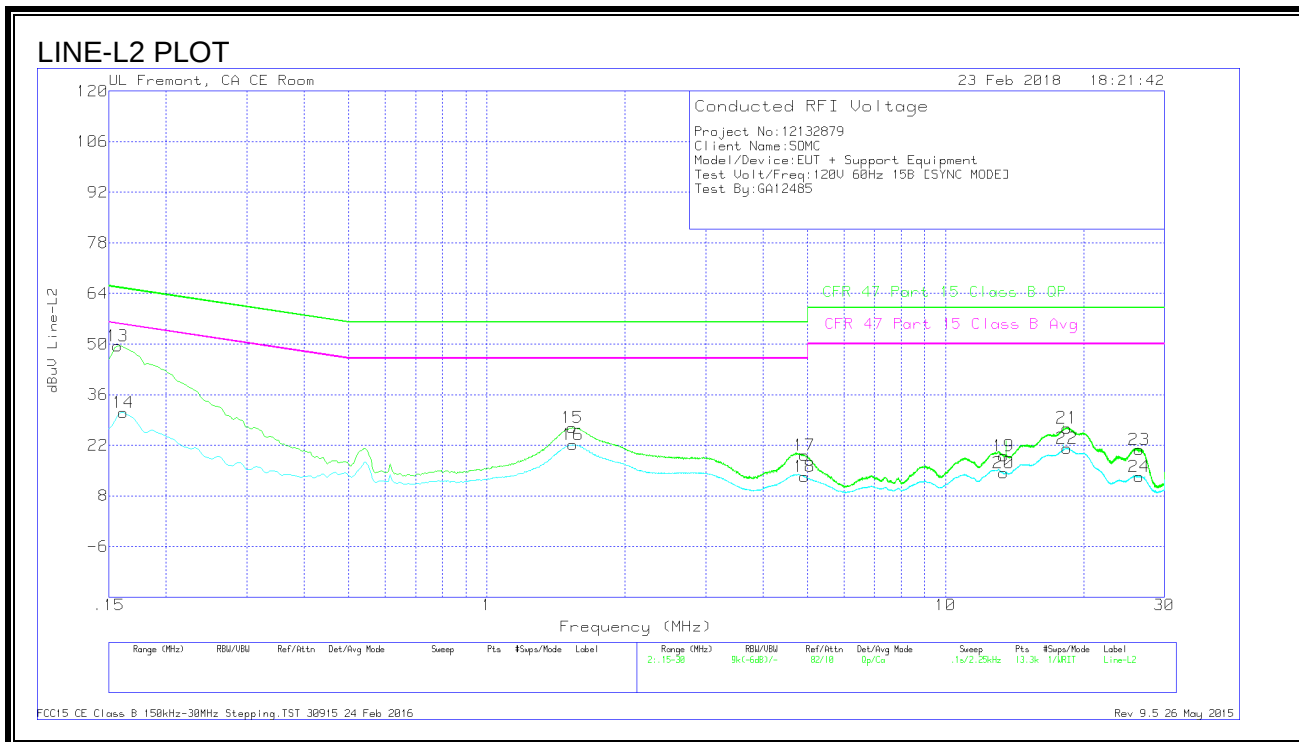


Trace Markers

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	.159	39.52	Qp	.1	0	10.1	49.72	65.52	-15.8	-	-
2	.16125	21.23	Ca	.1	0	10.1	31.43	-	-	55.4	-23.97
3	1.536	19.08	Qp	0	.1	10.1	29.28	56	-26.72	-	-
4	1.5315	13.97	Ca	0	.1	10.1	24.17	-	-	46	-21.83
5	4.938	22.18	Qp	0	.1	10.2	32.48	56	-23.52	-	-
6	4.92225	12.35	Ca	0	.1	10.2	22.65	-	-	46	-23.35
7	13.56	13.07	Qp	.1	.2	10.2	23.57	60	-36.43	-	-
8	13.18313	5.66	Ca	.1	.2	10.2	16.16	-	-	50	-33.84
9	18.03525	17.3	Qp	0	.3	10.3	27.9	60	-32.1	-	-
10	18.03525	11.71	Ca	0	.3	10.3	22.31	-	-	50	-27.69
11	25.8855	11.36	Qp	.1	.3	10.5	22.26	60	-37.74	-	-
12	26.2185	3.13	Ca	.1	.3	10.5	14.03	-	-	50	-35.97

Qp - Quasi-Peak detector
Ca - CISPR average detection

Line-L2 .15 - 30MHz



Trace Markers

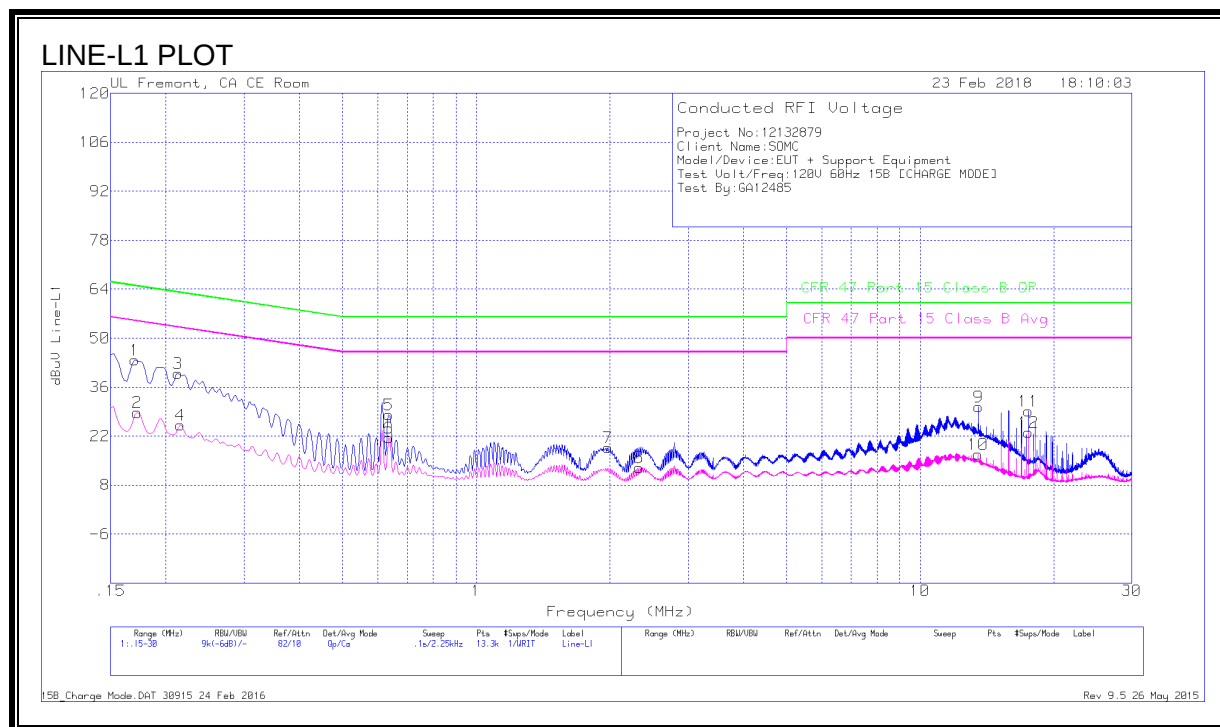
Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L2	LC Cables C2&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
13	.15675	39.42	Qp	0	0	10.1	49.52	65.63	-16.11	-	-
14	.16125	20.98	Ca	0	0	10.1	31.08	-	-	55.4	-24.32
15	1.536	16.65	Qp	0	.1	10.1	26.85	56	-29.15	-	-
16	1.53938	11.92	Ca	0	.1	10.1	22.12	-	-	46	-23.88
17	4.9335	8.9	Qp	0	.1	10.2	19.2	56	-36.8	-	-
18	4.92338	3.03	Ca	0	.1	10.2	13.33	-	-	46	-32.67
19	13.3845	8.63	Qp	.1	.2	10.2	19.13	60	-40.87	-	-
20	13.38338	3.84	Ca	.1	.2	10.2	14.34	-	-	50	-35.66
21	18.38625	16.19	Qp	0	.3	10.3	26.79	60	-33.21	-	-
22	18.39413	10.52	Ca	0	.3	10.3	21.12	-	-	50	-28.88
23	26.4255	9.88	Qp	.1	.3	10.5	20.78	60	-39.22	-	-
24	26.42663	2.45	Ca	.1	.3	10.5	13.35	-	-	50	-36.65

Qp - Quasi-Peak detector
Ca - CISPR average detection

6.3.2. RESULTS- CHARGING MODE

6 WORST EMISSIONS

Line-L1 .15 - 30MHz

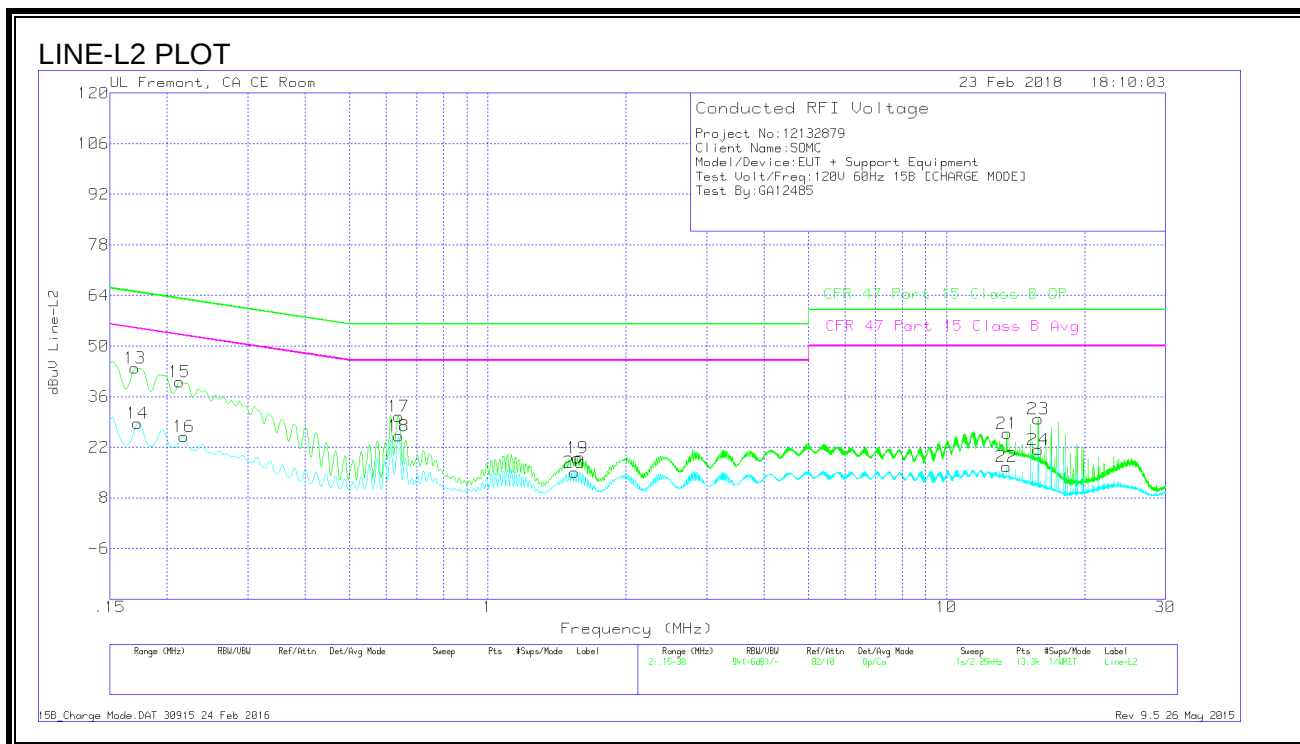


Trace Markers

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	.17025	33.67	Qp	0	0	10.1	43.77	64.95	-21.18	-	-
2	.1725	18.61	Ca	0	0	10.1	28.71	-	-	54.84	-26.13
3	.213	29.8	Qp	0	0	10.1	39.9	63.09	-23.19	-	-
4	.21525	15.06	Ca	0	0	10.1	25.16	-	-	53	-27.84
5	.636	18.03	Qp	0	0	10.1	28.13	56	-27.87	-	-
6	.636	11.46	Ca	0	0	10.1	21.56	-	-	46	-24.44
7	1.9815	8.57	Qp	0	.1	10.1	18.77	56	-37.23	-	-
8	2.32575	2.86	Ca	0	.1	10.1	13.06	-	-	46	-32.94
9	13.56	19.88	Qp	.1	.2	10.2	30.38	60	-29.62	-	-
10	13.50825	6.35	Ca	.1	.2	10.2	16.85	-	-	50	-33.15
11	17.547	18.48	Qp	0	.3	10.3	29.08	60	-30.92	-	-
12	17.547	12.53	Ca	0	.3	10.3	23.13	-	-	50	-26.87

Qp - Quasi-Peak detector
Ca - CISPR average detection

Line-L2 .15 - 30MHz



Trace Markers

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	.17025	33.78	Qp	0	0	10.1	43.88	64.95	-21.07	-	-
14	.1725	18.46	Ca	0	0	10.1	28.56	-	-	54.84	-26.28
15	.213	30.07	Qp	0	0	10.1	40.17	63.09	-22.92	-	-
16	.2175	14.87	Ca	0	0	10.1	24.97	-	-	52.91	-27.94
17	.63825	20.46	Qp	0	0	10.1	30.56	56	-25.44	-	-
18	.63825	15.02	Ca	0	0	10.1	25.12	-	-	46	-20.88
19	1.5675	8.93	Qp	0	.1	10.1	19.13	56	-36.87	-	-
20	1.545	4.88	Ca	0	.1	10.1	15.08	-	-	46	-30.92
21	13.56	15.36	Qp	.1	.2	10.2	25.86	60	-34.14	-	-
22	13.5105	6.05	Ca	.1	.2	10.2	16.55	-	-	50	-33.45
23	15.83925	19.18	Qp	0	.3	10.3	29.78	60	-30.22	-	-
24	15.83925	10.66	Ca	0	.3	10.3	21.26	-	-	50	-28.74

Qp - Quasi-Peak detector
Ca - CISPR average detection