CERTIFICATION TEST REPORT

Report Number. : 12751212-E3V4

Applicant	:	BRAUN GMBH T-QTA FRANKFURTER STRASSE 145 KRONBERG TS, D-61476 DE
Model	:	3759
FCC ID	:	USQ3759
EUT Description	:	Wireless Travel Case Charger
Test Standard(s)	:	FCC 47 CFR PART 18 SUBPART C

Date Of Issue:
December 04, 2019

Prepared by:
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NVLAP Lab code: 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	10/14/2019	Initial Issue	--
V2	10/15/2019	Updated operating frequency and limit information	Tri Pham
V3	12/2/2019	Updated 9kHz-30MHz data	Tri Pham
V4	12/4/2019	Updated photos	Tri Pham

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: BRAUN GMBH
T-QTA FRANKFURTER STRASSE 145
KRONBERG TS, D-61476 DE

EUT DESCRIPTION: Wireless Travel Case Charger

MODEL: 3759

SERIAL NUMBER: D80192102474

DATE TESTED: May 2 – November 25, 2019

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 18 SUBPART C	Complies

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

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 UL, NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released For
UL Verification Services Inc. By:

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Operations Leader
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UL Verification Services Inc.

Reviewed By:

Tri Pham
Project Engineer
Consumer Technology Division
UL Verification Services Inc.

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC / OST MP-5, "FCC Methods of Measurements of Radio Noise Emissions from Industrial, Scientific, and Medical Equipment."

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, and 47658 Kato Road, Fremont, California, USA. 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	47658 Kato Rd.
☐ Chamber A (ISED:2324B-1)	☐ Chamber D (ISED:22541-1)	☒ Chamber I (ISED: 2324A-5)
☐ Chamber B (ISED:2324B-2)	☐ Chamber E (ISED:22541-2)	☒ Chamber J (ISED: 2324A-6)
☐ Chamber C (ISED:2324B-3)	☐ Chamber F (ISED:22541-3)	☐ Chamber K (ISED: 2324A-1)
	☐ Chamber G (ISED:22541-4)	☐ Chamber L (ISED: 2324A-3)
	☐ Chamber H (ISED:22541-5)	

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers above are covered under Industry Canada company address and respective code.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0.

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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:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

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
Occupied Channel Bandwidth	±0.39 %

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

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT is a wireless travel case charger for electric toothbrushes.

5.2. OPERATING FREQUENCY AND POWER

- Operating Frequency of the WPT: 81-97 kHz

5.3. SOFTWARE AND FIRMWARE

N/A

5.4. CONFIGURATION AND INVESTIGATED

Configuration	Description
1	Charging Mode
2	Standby Mode

5.5. WORST-CASE MODE AND MODE

The EUT is wireless charger enclosed in a plastic case.

Note that the EUT was tested as standby and charging modes.

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.

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5.6. DETAILS OF TESTED SYSTEM

SUPPORT EQUIPMENT

None

I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	1	AC	Unshield	1.5	

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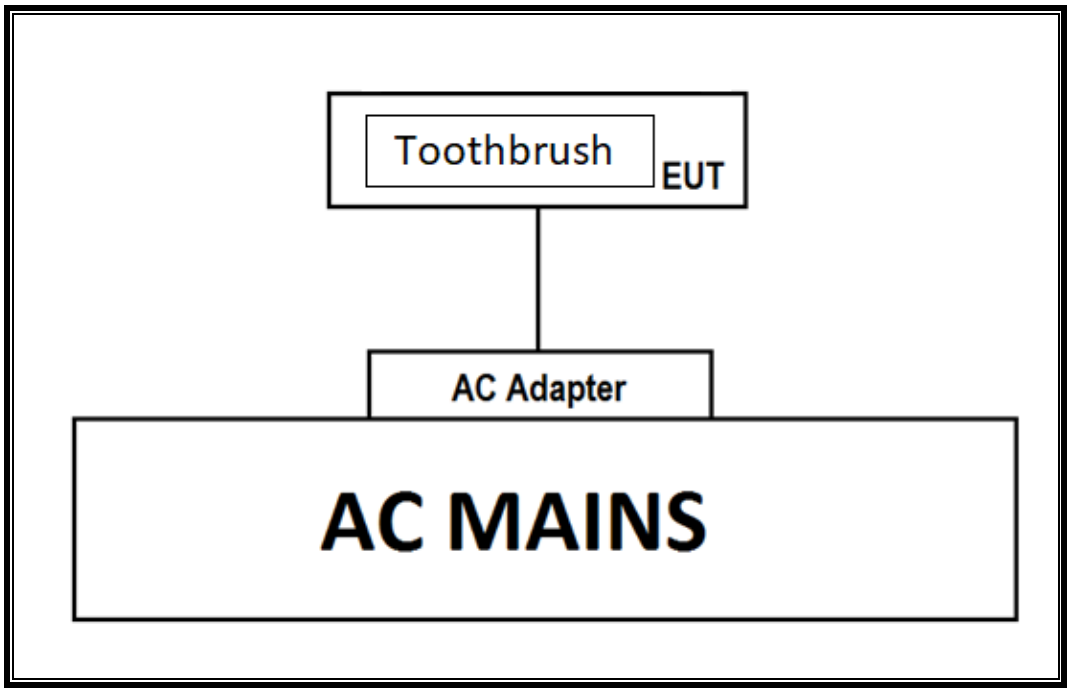
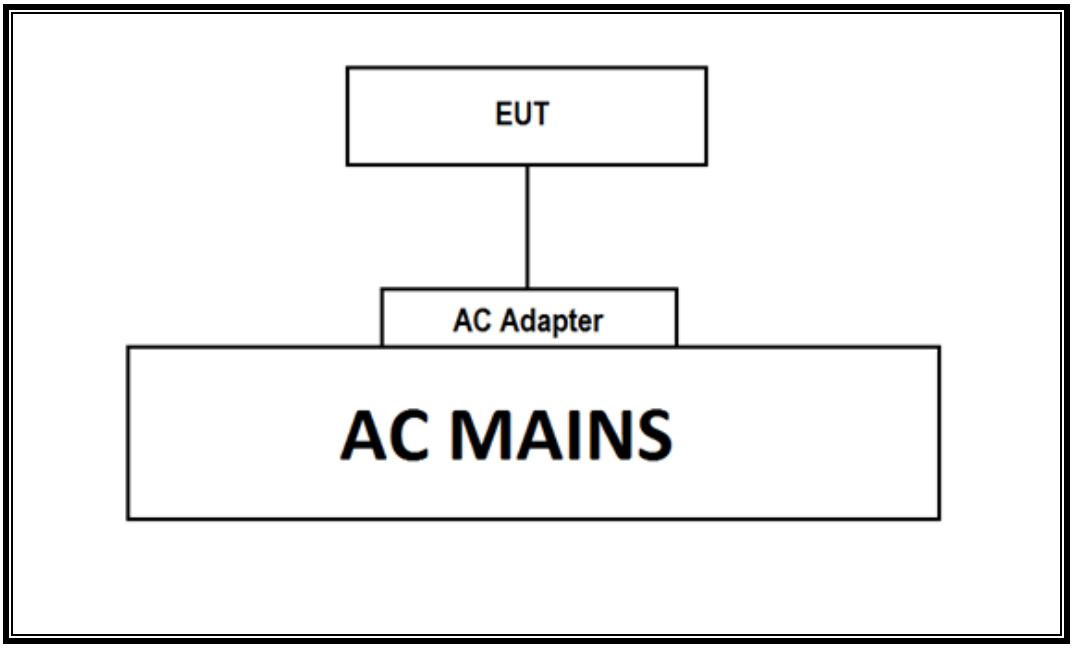
TEST SETUP – AC POWER LINE CONDUCTED TEST AND RADIATED TEST

SETUP DIAGRAM

Charging Mode



Standby Mode



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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**	**Local ID (T No.)**	**Cal Date**	**Cal Due**
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T863	05/30/2018	05/30/2020
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences Corp.	JB3	T899	08/23/2019	08/23/2020
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1454	01/08/2019	01/08/2020
RF Amplifier, 1-18GHz	MITEQ	AFS42-00101800-25-S-42	T1165	06/24/2019	05/24/2020
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	PRE0179372	02/16/2019	02/16/2020
Hybrid Antenna, 30MHz to 3GHz	SunAR rf motion	JB3	PRE0181575	09/05/2019	09/05/2020
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1454	01/23/2019	01/23/2020
Antenna, Passive Loop 30Hz – 1MHz	Electro-Metrics	EM-6871	PRE0179465	05/31/2019	5/31/2020
Antenna, Passive Loop 100kHz – 30MHz	Electro-Metrics	EM-6872	PRE0179467	05/31/2019	5/31/2020
AC Line Conducted					
EMI Test Receiver	Rohde&Schwarz	ESR	T1436	4/10/2019	4/10/2020
AC Power source	Schaffner	NSG1007	134	8/08/2018	8/08/2019
L.I.S.N	FCC INC.	FCC LISN 50/250	1310	6/15/2018	6/15/2019
UL AUTOMATION SOFTWARE					
Radiated Software	UL	UL EMC	Ver 9.5, Dec 01, 2016		
AC Line Conducted Software	UL	UL EMC	Ver 9.5, May 26, 2015		

Note: Testing was performed within the dates of calibration.

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7. APPLICABLE LIMITS AND TEST RESULTS

7.1. RADIATED EMISSIONS

LIMIT

§18.301 Operating frequencies

The EUT operates at 81 – 97 kHz

§18.305 Field Strength Limits
(b) The field strength levels of emissions which lie outside the bands specified in §18.301, unless otherwise indicated, shall not exceed the following:

Equipment	Operating frequency	RF Power generated by equipment (watts)	Field strength limit (μV/m)	Distance (meters)
Any type unless otherwise specified (miscellaneous)	Any ISM frequency	Below 500 500 or more	25 25 × SQRT(power/500)	300 [1]300
	Any non-ISM frequency	Below 500 500 or more	15 15 × SQRT(power/500	300 [1]300

[1]Field strength may not exceed 10 μV/m at 1600 meters. Consumer equipment operating below 1000 MHz is not permitted the increase in field strength otherwise permitted here for power over 500 watts.

The field strength limit is 23.5 dBuV/m at 300 m.

TEST PROCEDURE

FCC / MP-5

The frequency range was investigated from 9 kHz to 1 GHz.

KDB 414788 OFS and Chamber Correlation Justification

For below 30MHz testing, based on KDB 414788, Clause 2, for Part 18 equipment, Section 2.1 of FCC Measurement Procedure MP-5 also permits the use of test sites other than an open-field test site only if it can be shown that the results obtained at such a location are correlated with those made at an open-field test site.

OFS and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

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Distance Correction Factor

Based on FCC 18.305, note 2. Testing for compliance with these limits may be made at closer distances, provided a sufficient number of measurements are taken to plot the radiation pattern, to determine the major lobes of radiation, and to determine the expected field strength level at 30, 300, or 1600 meters. Alternatively, if measurements are made at only one closer fixed distance, then the permissible field strength limits shall be adjusted using 1/d as an attenuation factor.

- Distance factor from 3m to 300m = 20log (3/300) = -40dB

Extrapolation factor, X, is calculated from: X Log10 (distance 1 / distance 2) = Level at distance 1 (dBuV/m) – level at distance 2 (dBuV/m).

The levels at 3m, 5m and 10m are the maximum / highest field strength values across all measurement antenna polarisations and EUT azimuths at each distance.

The lowest calculated value for X is then used to determine the factor to use to extrapolate the measured data at 3m to a distance of 300m and the level at 300m is the level at 3m minus the factor.

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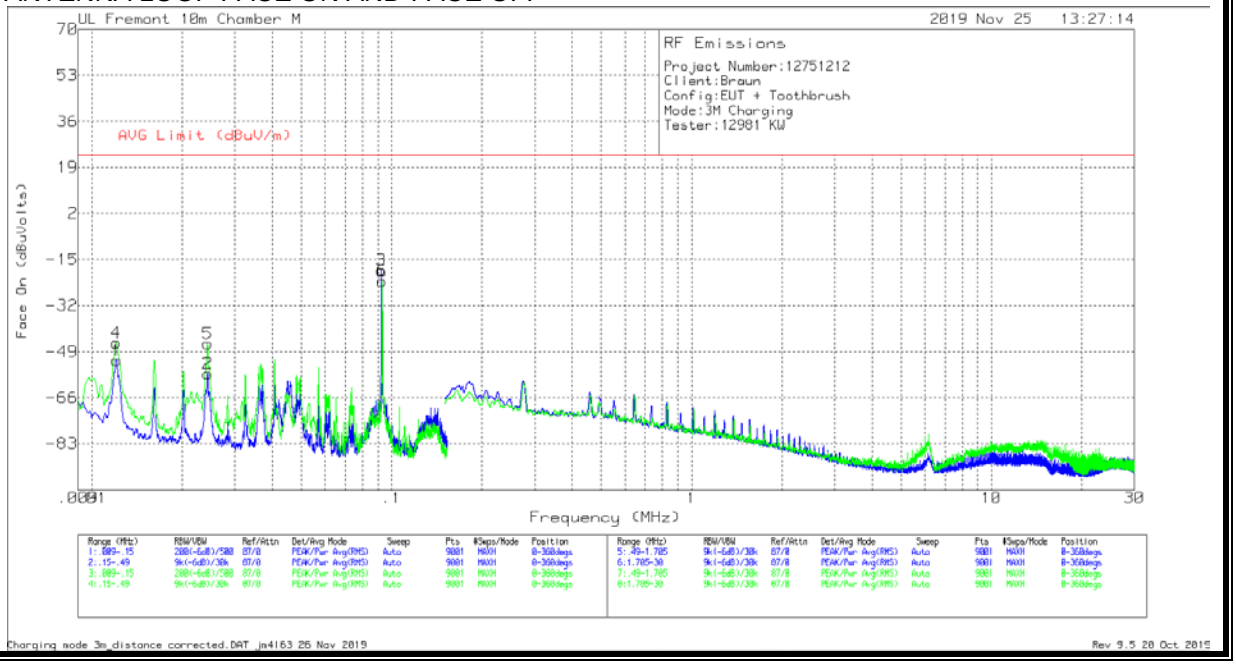
RESULTS

7.1.1. SPURIOUS EMISSIONS 9 kHz TO 30 MHz CHARGING MODE @ 3m

ANTENNA LOOP FACE ON AND FACE OFF



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m (dB)	Corrected Reading (dBuVolts)	AVG Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.01209	28.45	Pk	59.9	-32.5	-108	-52.15	23.5	-75.65	0-360
2	.02431	25	Pk	58.3	-32.4	-108	-57.1	23.5	-80.6	0-360
3	.0925	65.78	Pk	55.5	-32.1	-108	-18.82	23.5	-42.32	0-360
4	.01206	34.9	Pk	59.9	-32.5	-108	-45.7	23.5	-69.2	0-360
5	.02431	36.05	Pk	58.3	-32.4	-108	-46.05	23.5	-69.55	0-360
6	.09305	61.67	Pk	55.5	-32.1	-108	-22.93	23.5	-46.43	0-360

Pk - Peak detector

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NOTE: Extrapolation factor, X, is calculated from: X Log_{10} (distance 1 / distance 2) = Level at distance 1 (dBuV/m) – level at distance 2 (dBuV/m).

The levels at 3m, 5m and 10m are the maximum / highest field strength values across all measurement antenna polarisations and EUT azimuths at each distance.

The lowest calculated value for X is then used to determine the factor to use to extrapolate the measured data at 3m to a distance of 300m and the level at 300m is the level at 3m minus the factor.

Frequency (MHz)	Highest Corrected Reading (dBuV/m)			Extrapolation Factor X, Calculated from measurements			3m to 300m	Peak level at 300m (dBuV/m)
	3m	5m	10m	3m to 5m	3m to 10m	5m to 10m		
0.012	62.3	50.56	34.11	-53	-54	-55	109	-47.0
0.024	61.95	47.91	34.27	-63	-53	-45	127	-64.6
0.092	89.18	77.17	63.34	-54	-49	-46	108	-19.1

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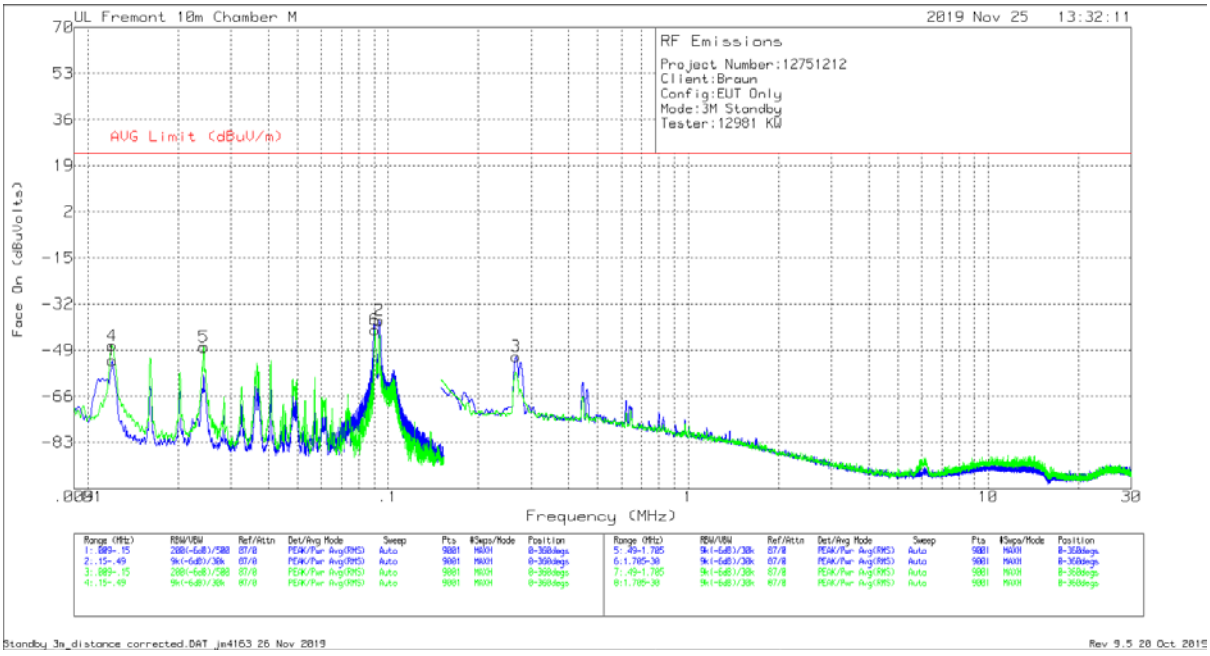
7.1.1. SPURIOUS EMISSIONS 9 kHz TO 30 MHz STANDBY @3m

ANTENNA LOOP FACE ON AND FACE OFF



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Amp/Cbl (dB)	Dist Corr 300m (dB)	Corrected Reading (dBuVolts)	AVG Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.01206	29.77	Pk	59.9	-32.5	-110	-52.83	23.5	-76.33	0-360
2	.09354	48.67	Pk	55.5	-32.1	-110	-37.93	23.5	-61.43	0-360
3	.26706	34.58	Pk	56.1	-32	-110	-51.32	23.5	-74.82	0-360
4	.01206	35.3	Pk	59.9	-32.5	-110	-47.3	23.5	-70.8	0-360
5	.02431	36.34	Pk	58.3	-32.4	-110	-47.76	23.5	-71.26	0-360
6	.09048	44.98	Pk	55.6	-32.1	-110	-41.52	23.5	-65.02	0-360

Pk - Peak detector

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NOTE: Extrapolation factor, X, is calculated from: X Log_{10} (distance 1 / distance 2) = Level at distance 1 (dBuV/m) – level at distance 2 (dBuV/m).

The levels at 3m, 5m and 10m are the maximum / highest field strength values across all measurement antenna polarisations and EUT azimuths at each distance.

The lowest calculated value for X is then used to determine the factor to use to extrapolate the measured data at 3m to a distance of 300m and the level at 300m is the level at 3m minus the factor.

Frequency	Highest Corrected Reading			Extrapolation Factor				Peak level at 300m (dBuV/m)
(MHz)	(dBuV/m)			X, Calculated from measurements			3m to 300m	
	3m	5m	10m	3m to 5m	3m to 10m	5m to 10m		
0.012	62.7	52.21	34.34	-47	-54	-59	119	-56.0
0.024	62.24	49.3	34.91	-58	-52	-48	117	-54.4
0.09	72.07	59.88	47.22	-55	-48	-42	110	-37.8

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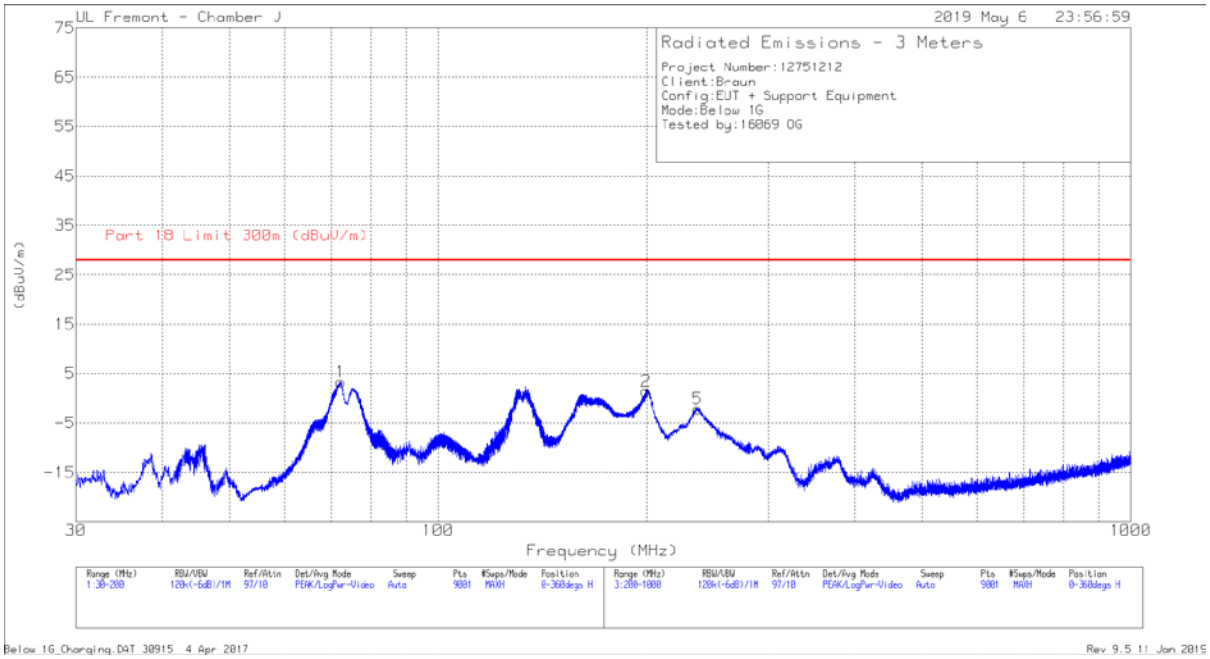
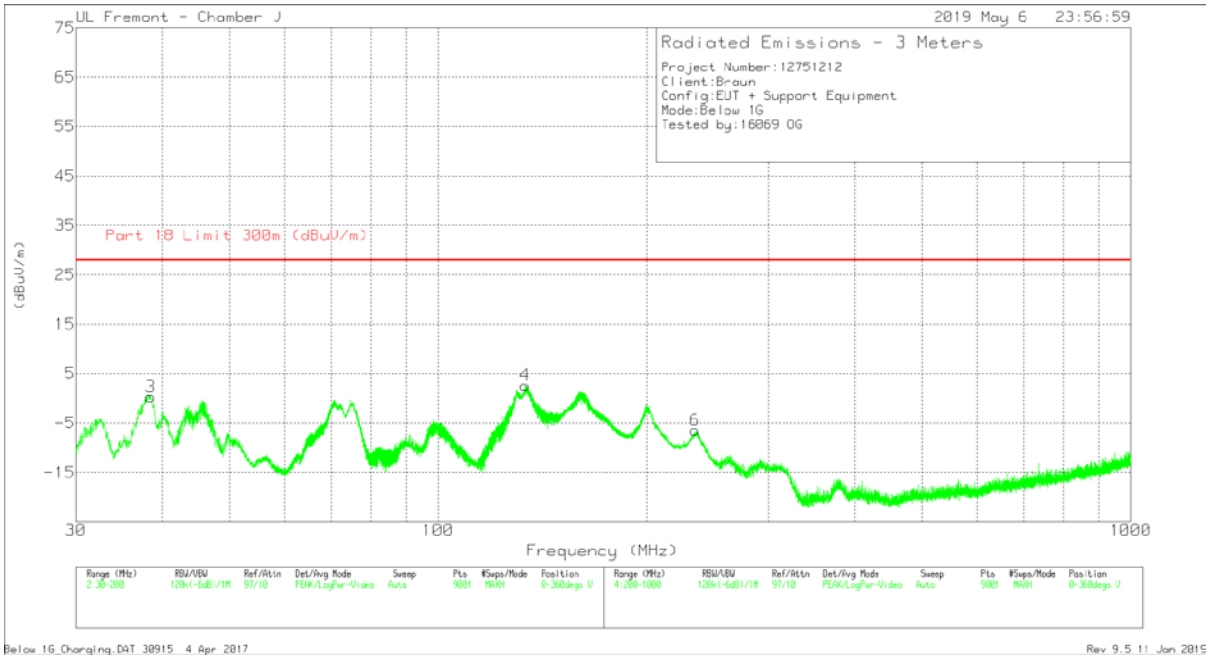
7.1.2. SPURIOUS EMISSIONS 30 MHz TO 1000 MHz CHARGING MODE

Spurious Emissions 30 – 1000 MHz

30MHz – 1000MHz



HORIZONTAL PLOT



VERTICAL PLOT

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DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF PRE0184971 (dB/m)	Amp Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuV/m)	Part 18 Limit 300m (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity	Marker
1	72.4814	60.36	Pk	13.9	-31	-40	3.26	-	-	0-360	299	H	1
2	199.831	53.37	Pk	18.2	-30.1	-40	1.47	-	-	0-360	99	H	2
3	38.4056	50.73	Pk	20.9	-31.3	-40	.33	-	-	0-360	100	V	3
4	* 133.5306	53.82	Pk	19.3	-30.5	-40	2.62	23.5	-20.88	0-360	100	V	4
5	237.1556	50.45	Pk	17.4	-30	-40	-2.15	-	-	0-360	100	H	5
6	235.1112	46.2	Pk	17.3	-30	-40	-6.5	-	-	0-360	101	V	6

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

Note: Test was performed @ 3 meter distance.
Distance factor from 3m to 300m = 20log (3/300) = -40dB

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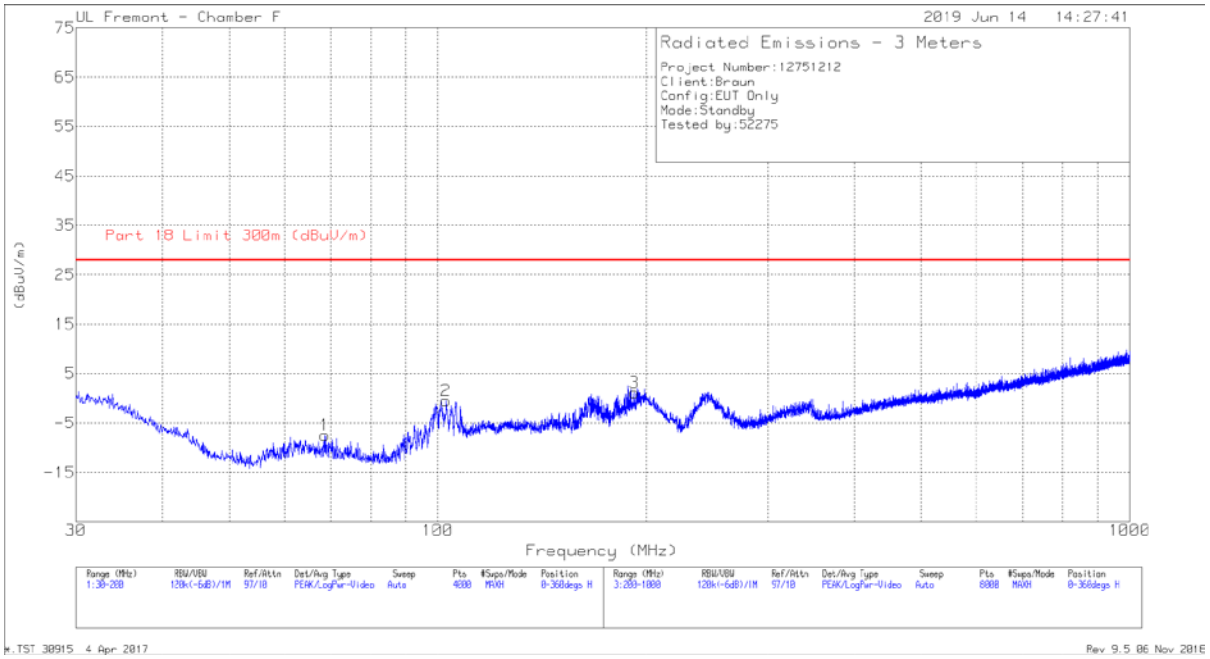
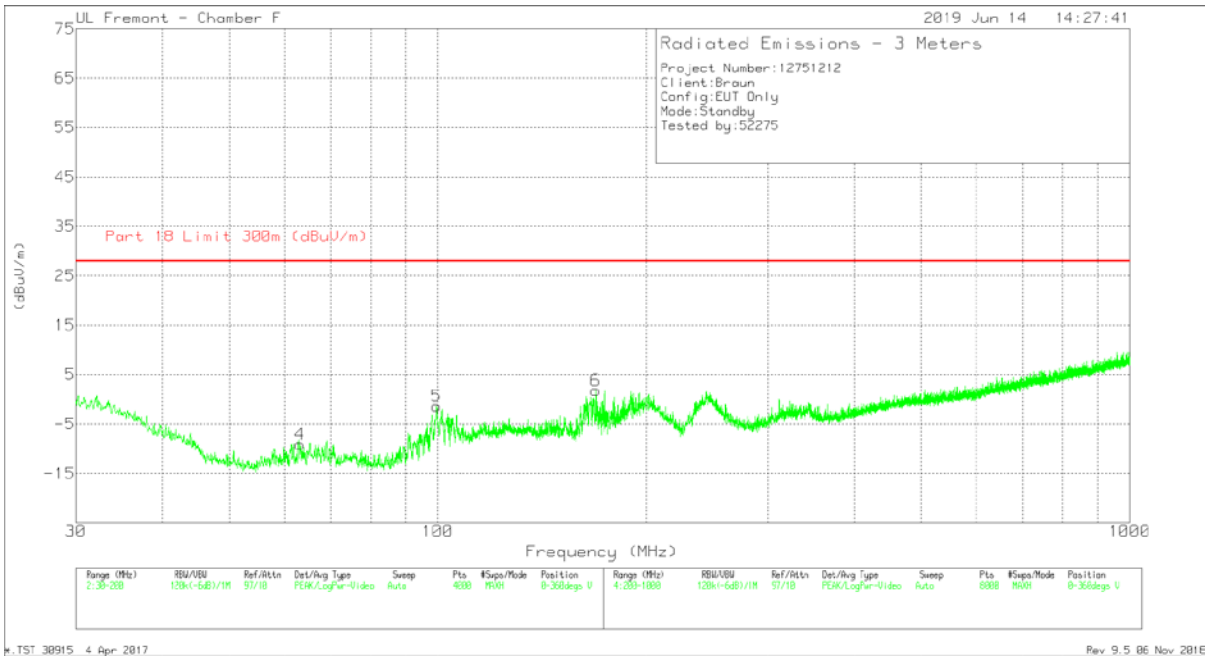
7.1.3. SPURIOUS EMISSIONS 30 MHz TO 1000 MHz STANDBY MODE

Spurious Emissions 30 – 1000 MHz

30MHz – 1000MHz



HORIZONTAL PLOT



VERTICAL PLOT

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DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuV/m)	Part 18 Limit 300m (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	68.77	31.77	Pk	12.2	-31.5	-40	-27.53	-	-	0-360
2	102.7788	35.74	Pk	14.9	-31.1	-40	-20.46	-	-	0-360
3	192.5196	35.9	Pk	15.6	-30.4	-40	-18.9	-	-	0-360
4	63.2861	30.3	Pk	12.1	-31.5	-40	-29.1	-	-	0-360
5	99.6755	35.78	Pk	14	-31.2	-40	-21.42	-	-	0-360
6	* 169.1385	36.69	Pk	15.8	-30.7	-40	-18.21	23.5	-41.71	0-360

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

Note: Test was performed @ 3 meter distance.
Distance factor from 3m to 300m = 20log (3/300) = -40dB

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7.2. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

§ 18.307 For the following equipment, when 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 shall not exceed the limits in the following table. Compliance with the provisions of this paragraph shall be based on the measurements of the radio frequency voltage between each power line and ground at the power terminal using a 50 µH/50 ohms line impedance stabilization network (LISN).

§ 18.307 (b) All other Part 18 consumer devices:

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

FCC / OST MP-5

RESULTS

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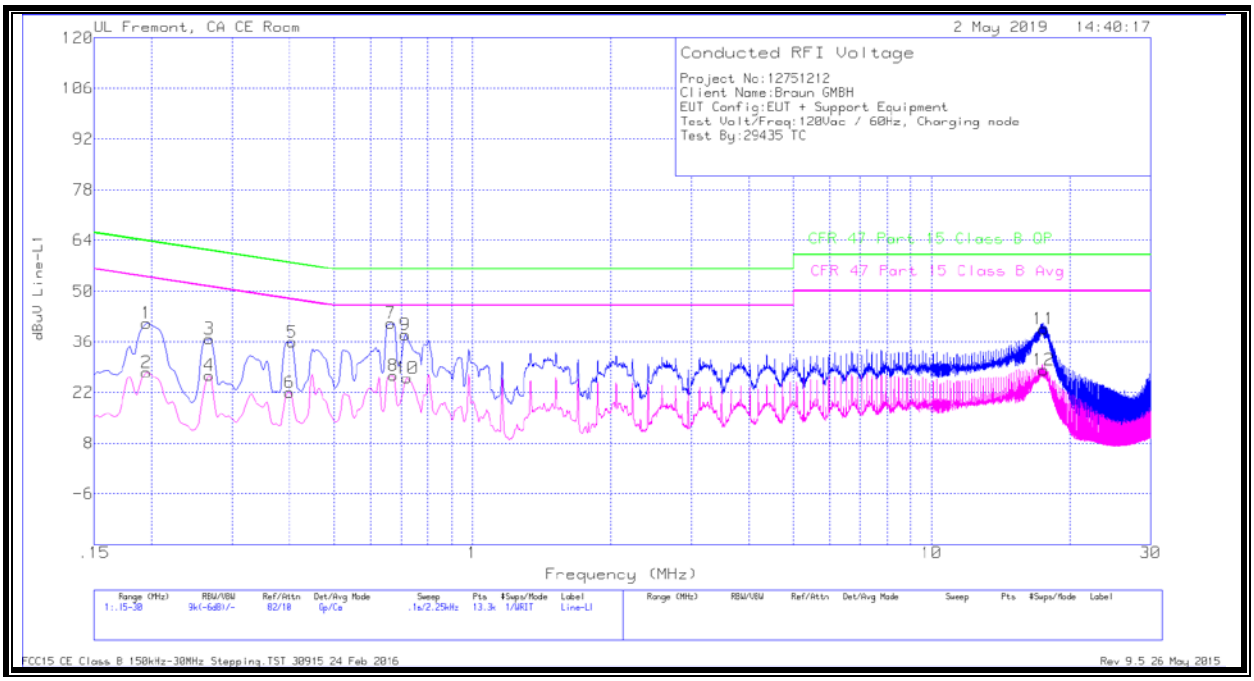
7.2.1. CHARGING MODE

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	FCC 18 QP	QP Margin (dB)	FCC 18 Avg	Av(CISPR) Margin (dB)
1	.195	31.06	Qp	0	0	10.1	41.16	63.82	-22.66	-	-
2	.195	17.54	Ca	0	0	10.1	27.64	-	-	53.82	-26.18
3	.267	26.77	Qp	0	0	10.1	36.87	61.21	-24.34	-	-
4	.267	16.69	Ca	0	0	10.1	26.79	-	-	51.21	-24.42
5	.40425	25.79	Qp	0	0	10.1	35.89	57.77	-21.88	-	-
6	.39975	11.93	Ca	0	0	10.1	22.03	-	-	47.86	-25.83
7	.663	31.01	Qp	0	0	10.1	41.11	56	-14.89	-	-
8	.672	16.55	Ca	0	0	10.1	26.65	-	-	46	-19.35
9	.71475	27.9	Qp	0	0	10.1	38	56	-18	-	-
10	.7215	15.84	Ca	0	0	10.1	25.94	-	-	46	-20.06
11	17.53575	28.82	Qp	.1	.3	10.3	39.52	60	-20.48	-	-
12	17.53575	17.53	Ca	.1	.3	10.3	28.23	-	-	50	-21.77

Qp - Quasi-Peak detector
Ca - CISPR average detection

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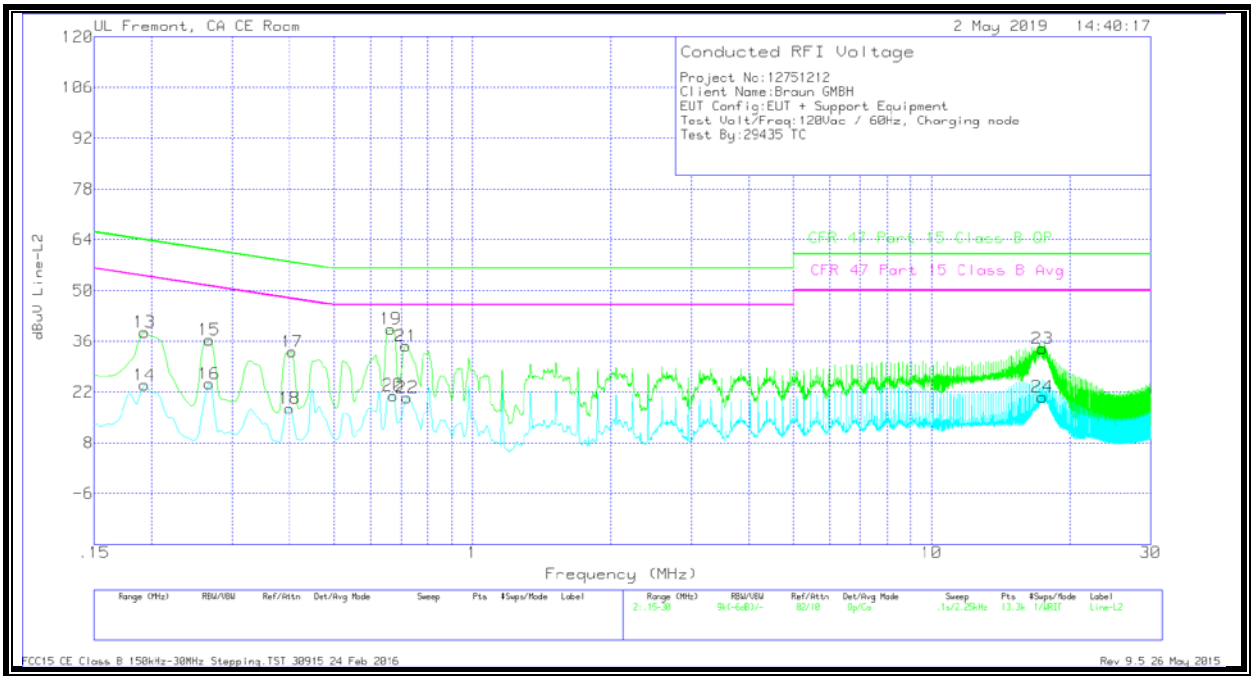
LINE 2 RESULTS



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	FCC 18 QP	QP Margin (dB)	FCC 18 Avg	Av(CISPR)Margin (dB)
13	.19275	28.4	Qp	0	0	10.1	38.5	63.92	-25.42	-	-
14	.19275	13.75	Ca	0	0	10.1	23.85	-	-	53.92	-30.07
15	.267	26.26	Qp	0	0	10.1	36.36	61.21	-24.85	-	-
16	.267	14.1	Ca	0	0	10.1	24.2	-	-	51.21	-27.01
17	.40425	22.97	Qp	0	0	10.1	33.07	57.77	-24.7	-	-
18	.39975	7.43	Ca	0	0	10.1	17.53	-	-	47.86	-30.33
19	.663	29.26	Qp	0	0	10.1	39.36	56	-16.64	-	-
20	.672	10.95	Ca	0	0	10.1	21.05	-	-	46	-24.95
21	.717	24.64	Qp	0	0	10.1	34.74	56	-21.26	-	-
22	.7215	10.41	Ca	0	0	10.1	20.51	-	-	46	-25.49
23	17.44575	23.31	Qp	.1	.3	10.3	34.01	60	-25.99	-	-
24	17.44575	10	Ca	.1	.3	10.3	20.7	-	-	50	-29.3

Qp - Quasi-Peak detector
Ca - CISPR average detection

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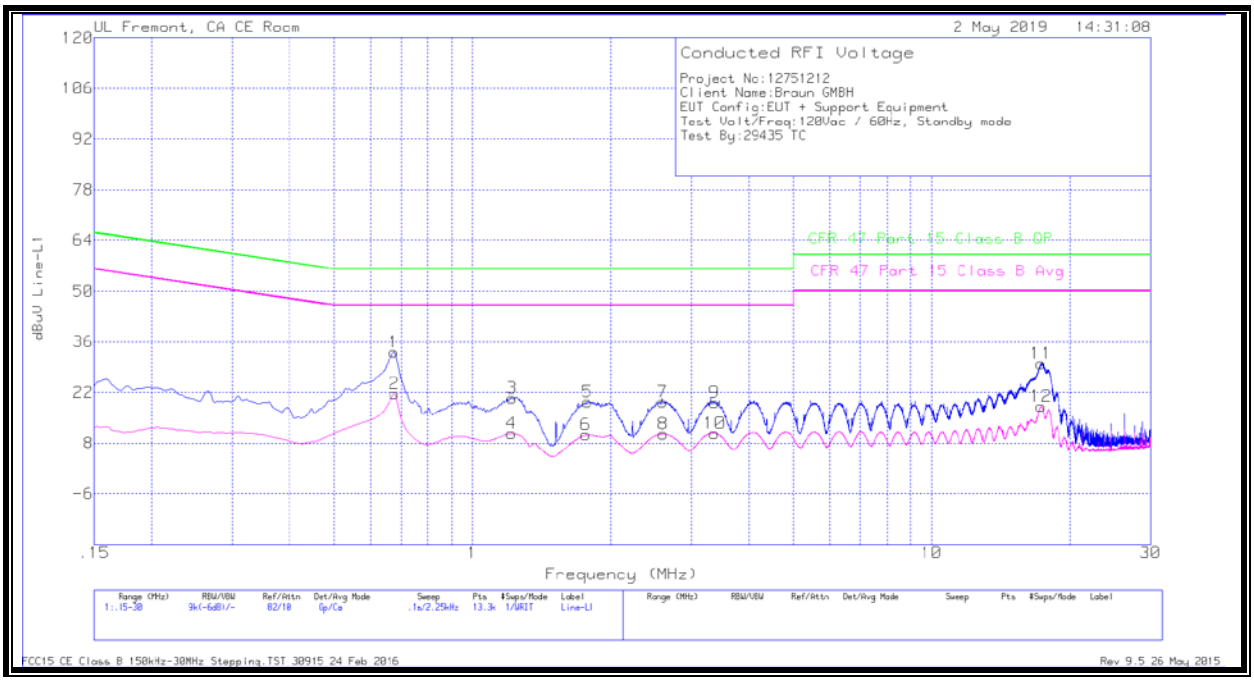
7.2.2. STANDBY MODE

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	FCC 18 QP	QP Margin (dB)	FCC 18 Avg	Av(CISPR)Margin (dB)
1	.67425	23.08	Qp	0	0	10.1	33.18	56	-22.82	-	-
2	.6765	11.53	Ca	0	0	10.1	21.63	-	-	46	-24.37
3	1.221	10.28	Qp	0	.1	10.1	20.48	56	-35.52	-	-
4	1.2165	.47	Ca	0	.1	10.1	10.67	-	-	46	-35.33
5	1.78125	9.23	Qp	0	.1	10.1	19.43	56	-36.57	-	-
6	1.7655	.12	Ca	0	.1	10.1	10.32	-	-	46	-35.68
7	2.59575	9.25	Qp	0	.1	10.1	19.45	56	-36.55	-	-
8	2.607	.39	Ca	0	.1	10.1	10.59	-	-	46	-35.41
9	3.36525	9	Qp	0	.1	10.1	19.2	56	-36.8	-	-
10	3.36975	.54	Ca	0	.1	10.1	10.74	-	-	46	-35.26
11	17.32425	19.3	Qp	.1	.3	10.3	30	60	-30	-	-
12	17.32875	7.48	Ca	.1	.3	10.3	18.18	-	-	50	-31.82

Qp - Quasi-Peak detector
Ca - CISPR average detection

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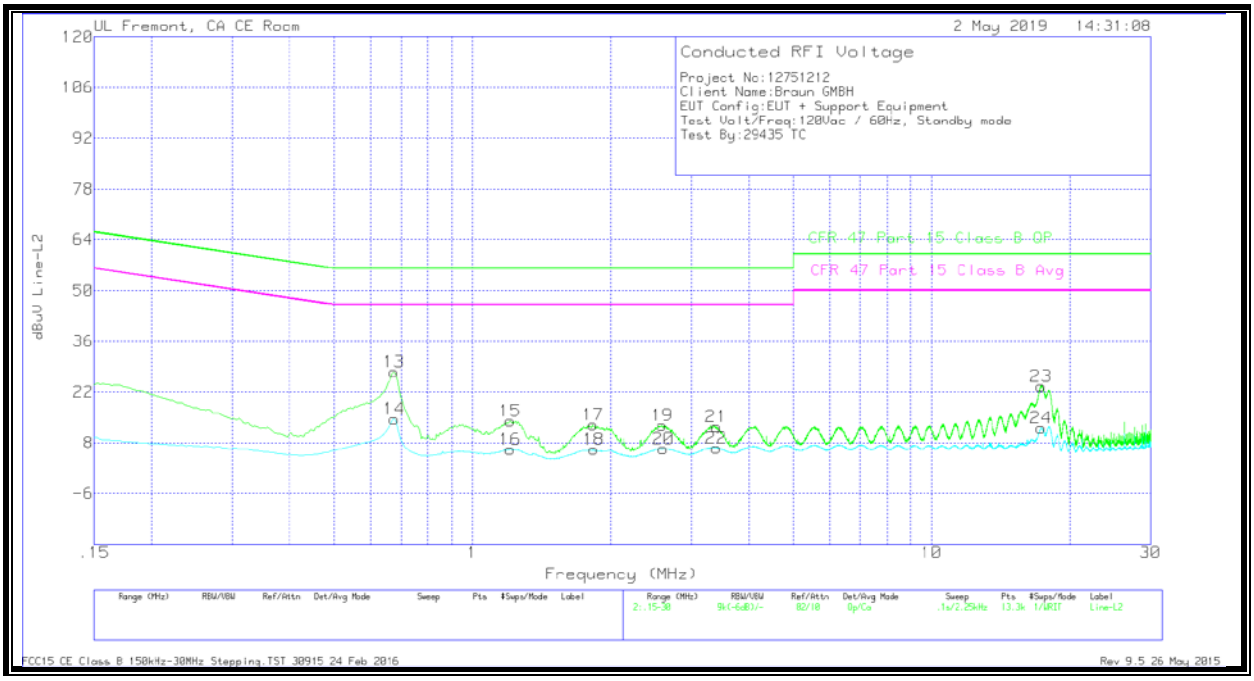
LINE 2 RESULTS



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	FCC 18 QP	QP Margin (dB)	FCC 18 Avg	Av(CISPR)Margin (dB)
13	.67425	17.43	Qp	0	0	10.1	27.53	56	-28.47	-	-
14	.67537	4.52	Ca	0	0	10.1	14.62	-	-	46	-31.38
15	1.2075	3.85	Qp	0	.1	10.1	14.05	56	-41.95	-	-
16	1.20975	-4.03	Ca	0	.1	10.1	6.17	-	-	46	-39.83
17	1.83075	2.73	Qp	0	.1	10.1	12.93	56	-43.07	-	-
18	1.83525	-4.08	Ca	0	.1	10.1	6.12	-	-	46	-39.88
19	2.59125	2.66	Qp	0	.1	10.1	12.86	56	-43.14	-	-
20	2.607	-3.84	Ca	0	.1	10.1	6.36	-	-	46	-39.64
21	3.39225	2.23	Qp	0	.1	10.1	12.43	56	-43.57	-	-
22	3.40013	-3.59	Ca	0	.1	10.1	6.61	-	-	46	-39.39
23	17.322	12.9	Qp	.1	.3	10.3	23.6	60	-36.4	-	-
24	17.32988	1.37	Ca	.1	.3	10.3	12.07	-	-	50	-37.93

Qp - Quasi-Peak detector
Ca - CISPR average detection

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