



CERTIFICATION TEST REPORT

Report Number. : R13158070-E1

Applicant : Braun GMBH
T-QTA Frankfurter Strasses 145
Kronberg TS, D-61476
Germany

Model : 3783

FCC ID : 2AG9A51910

EUT Description : Wireless Toothbrush Charging Base

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

Date Of Issue:

2020-03-20

Prepared by:

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NVLAP Lab code: 200246-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	--	Initial Issue	--

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Braun GMBH
T-QTA Frankfurter Strasses 145
Kronberg TS, D-61476
Germany

EUT DESCRIPTION: Wireless Toothbrush Charging Base

MODEL: 3783

SERIAL NUMBER: Charging base: BW012969000010

DATE TESTED: 2019-12-20 to 2019-12-30

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C	Complies

UL LLC 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 LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC 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 the U.S. government.

Approved & Released For
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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.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 12 Laboratory Drive, Research Triangle Park, NC 27709, USA and 2800 Perimeter Park Dr., Suite B, Morrisville, NC 27560, 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.

12 Laboratory Dr.	2800 Perimeter Park Dr.
Site Code: 2180C	
☐ Chamber A RTP	☐ North Chamber
☐ Chamber C RTP	☒ South Chamber

UL LLC (RTP) is accredited by NVLAP, Laboratory Code 200246-0

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

RADIATED EMISSIONS

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

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.
36.5 dBuV + 0 dB + 10.1 dB + 0 dB = 46.6 dBuV

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Radio Frequency (Spectrum Analyzer)	141.2 Hz
Occupied Channel Bandwidth	2.00%
RF output power, conducted	1.3 dB (PK) 0.45 dB (AV)
RF output power, radiated (SAC)	4.52 dB
Power Spectral Density, conducted	2.47 dB
Unwanted Emissions, conducted	2.50 dB
All emissions, radiated	4.88 dB
Conducted Emissions (0.150-30MHz) - LISN	3.07 dB
Temperature	2.26°C
Humidity	6.79%
DC Supply voltages	1.70%
Time	3.39%

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a wireless toothbrush charging base with a BT/BLE/2.4/5GHz WLAN radio and a WPT radio that operates from 30-47 kHz. This reports covers the WPT function of the device.

5.2. MAXIMUM ELECTRIC FIELD

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

Fundamental Frequency (KHz)	Mode	E field (300m distance) FCC (dBuV/m)
37.54	Low charge	1.91
37.54	Full charge	1.88
37.12	Standby	0.62

5.3. SOFTWARE AND FIRMWARE

The firmware version installed in the EUT during testing was Type 3782 firmware version:V12, Type 3783 firmware version: V20.

5.4. WORST-CASE CONFIGURATION AND MODE

The EUT is a single frequency magnetic charger enclosed in a plastic case. For 9 kHz -30 MHz radiated emissions test, the EUT was examined in the following configurations. The worst-case configuration (low charge) was explored from 30-1000 MHz. AC power line conducted emissions were also investigated in the following configurations.

Config	Mode	Descriptions
1	Low charge	EUT in charging mode with load at low battery
2	High charge	EUT in charging mode with load fully charged
3	Standby	EUT in charging mode without a load

The EUT was tested as standby and operation modes. For worst-case operational mode, the EUT was tested with different charge states of the load (toothbrush) and without load. Full charge was found to be worst-case.

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

Although these tests were performed in other than open area test site, adequate comparison measurements were confirmed against an 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

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Toothbrush	Braun	3765	BC811081911	USQ3765
Toothbrush	Braun	3765	BC811081913	USQ3765
Power supply	Braun	3780	Non-serialized	N/A

I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	1	1	Proprietary 2 prong	2 conductor wire	<3	None

TEST SETUP

The EUT is powered by a power supply. The EUT begins charging as soon as powered up.

SETUP DIAGRAM

Please refer to R13158070-EP1 for setup diagrams

6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment Used - Line-Conducted Emissions – Voltage (Morrisville – Conducted 1)

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
CBL087	Coax cable, RG223, N-male to BNC-male, 20-ft.	Pasternack	PE3W06143-240	2019-05-29	2020-05-29
s/n 181562858	Environmental Meter	Fisher Scientific	14-650-118	2018-09-04	2020-09-04
LISN003	LISN, 50-ohm/50-uH, 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50-25-2-01-550V	2019-08-19	2020-08-19
75141 (PRE0101521)	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2019-08-20	2020-08-20
TL001	Transient Limiter, 0.009-30MHz	Com-Power	LIT-930A	2019-05-29	2020-05-29
PS215	AC Power Source	Elgar	CW2501M (s/n 1523A02397)	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville - South Chamber)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	0.009-30MHz	(Loop Ant.)			
AT0079	Active Loop Antenna	ETS-Lindgren	6502	2019-08-08	2020-08-08
	30-1000 MHz				
AT0074	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2019-07-16	2020-07-16
	Gain-Loss Chains				
S-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2019-05-02	2020-05-02
S-SAC02	Gain-loss string: 25-1000MHz	Various	Various	2019-05-02	2020-05-02
	Receiver & Software				
SA0025	Spectrum Analyzer	Agilent	N9030A	2019-02-28	2020-02-28
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA

7. RADIATED EMISSION TEST RESULTS

7.1. LIMITS AND PROCEDURE

LIMIT

FCC §15.209 (a)

I

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.		

TEST PROCEDURE

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

For measurements below 1 GHz the resolution bandwidth is set to 120 kHz for peak and/or quasi-peak detection measurements in the 30-1000MHz range, 9kHz for peak and/or quasi-peak detection measurements in the 0.15-30MHz range and 200Hz for peak and/or quasi-peak detection measurements in the 9 to 150kHz range. Peak detection is used unless otherwise noted as quasi-peak.

KDB 414788 OATS and Chamber Correlation Justification

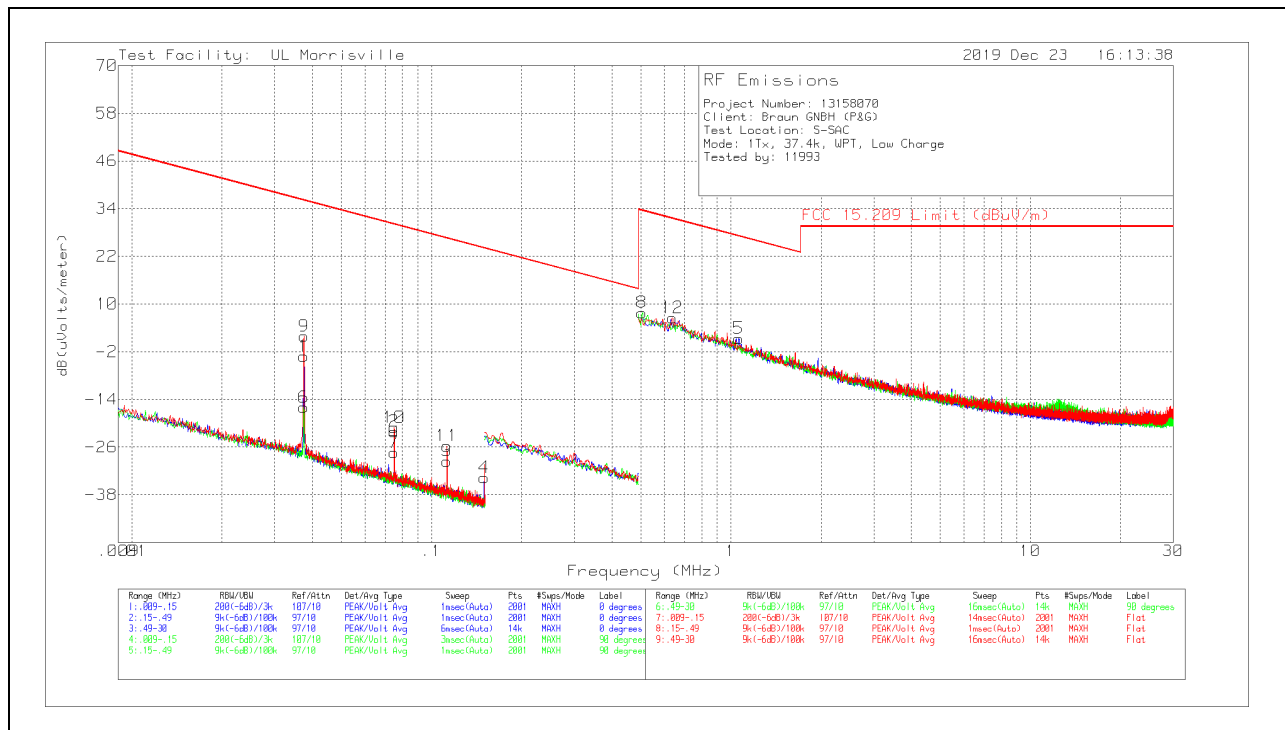
Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

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

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

Note: All measurements were made at a test distance of 3 m. The measured data was extrapolated from the test distance (3m) to the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz – 30 MHz) to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance with the requirement that the level of any spurious emissions be below the level of the intentionally transmitted signal. The extrapolation factor for the limits were 40*Log (test distance / specification distance).

7.2.1. CONFIG 1

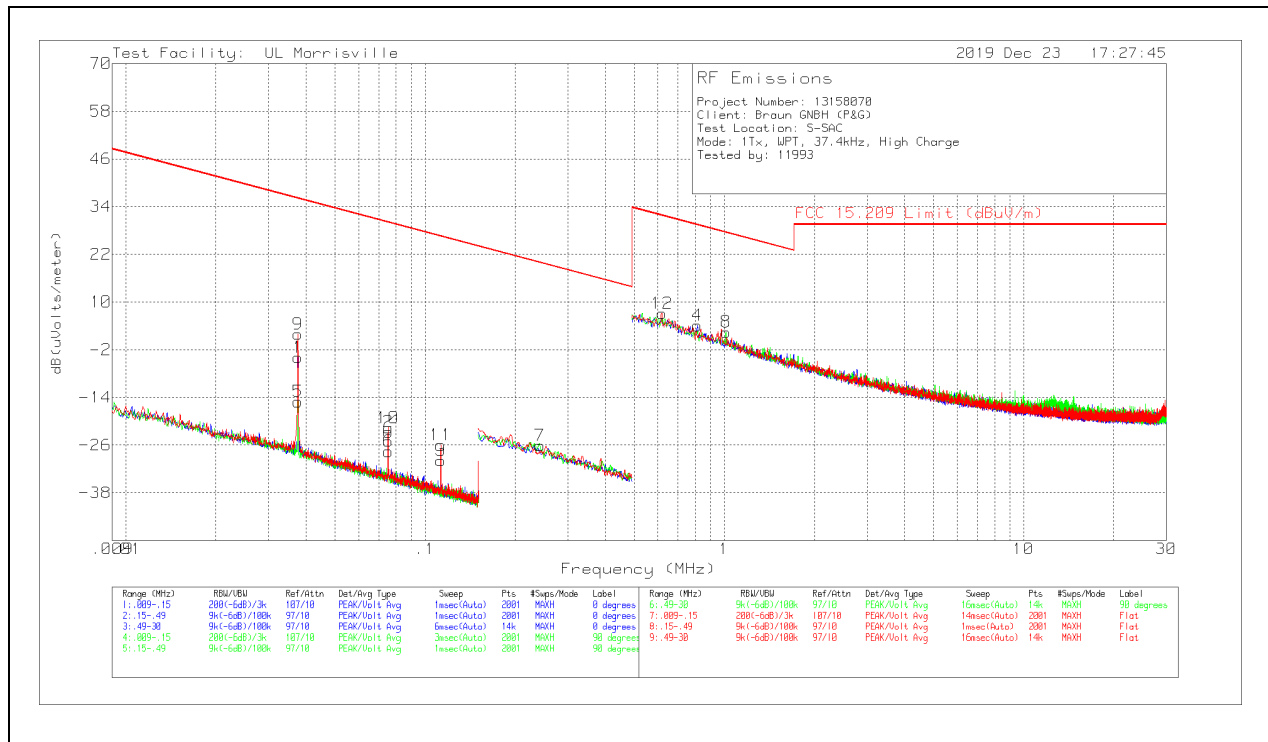


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 AF (dB/m)	Cbl (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.209 Avg/QP Limit (dBuV/m)	FCC 15.209 Pk Limit (dBuV/m)	Worst-case Margin (dB)	Azimuth (Degs)
1	.03747	64.15	Pk	12.6	.1	-80	-3.15	36.13	56.13	-39.28	0-360
6	.03747	51.3	Pk	12.6	.1	-80	-16	36.13	56.13	-52.13	0-360
9	.03754	69.31	Pk	12.5	.1	-80	1.91	36.11	56.11	-34.2	0-360
2	.07496	46.63	Pk	11.2	.1	-80	-22.07	30.11	50.11	-52.18	0-360
7	.07503	41.37	Pk	11.2	.1	-80	-27.33	30.1	50.1	-57.43	0-360
10	.0751	47.64	Pk	11.2	.1	-80	-21.06	30.09	50.09	-51.15	0-360
3	.11252	39.3	Pk	11.1	.1	-80	-29.5	26.58	46.58	-56.08	0-360
11	.11273	43.11	Pk	11.1	.1	-80	-25.69	26.56	46.56	-52.25	0-360
4	.15	35.23	Pk	11	.1	-80	-33.67	24.08	44.08	-57.75	0-360
8	.50476	36.75	Pk	11	.1	-40	7.85	33.54	-	-25.69	0-360
12	.63756	35.42	Pk	11	.1	-40	6.52	31.51	-	-24.99	0-360
5	1.06127	30.1	Pk	11	.2	-40	1.3	27.09	-	-25.79	0-360

Pk - Peak detector

7.2.2. CONFIG 2

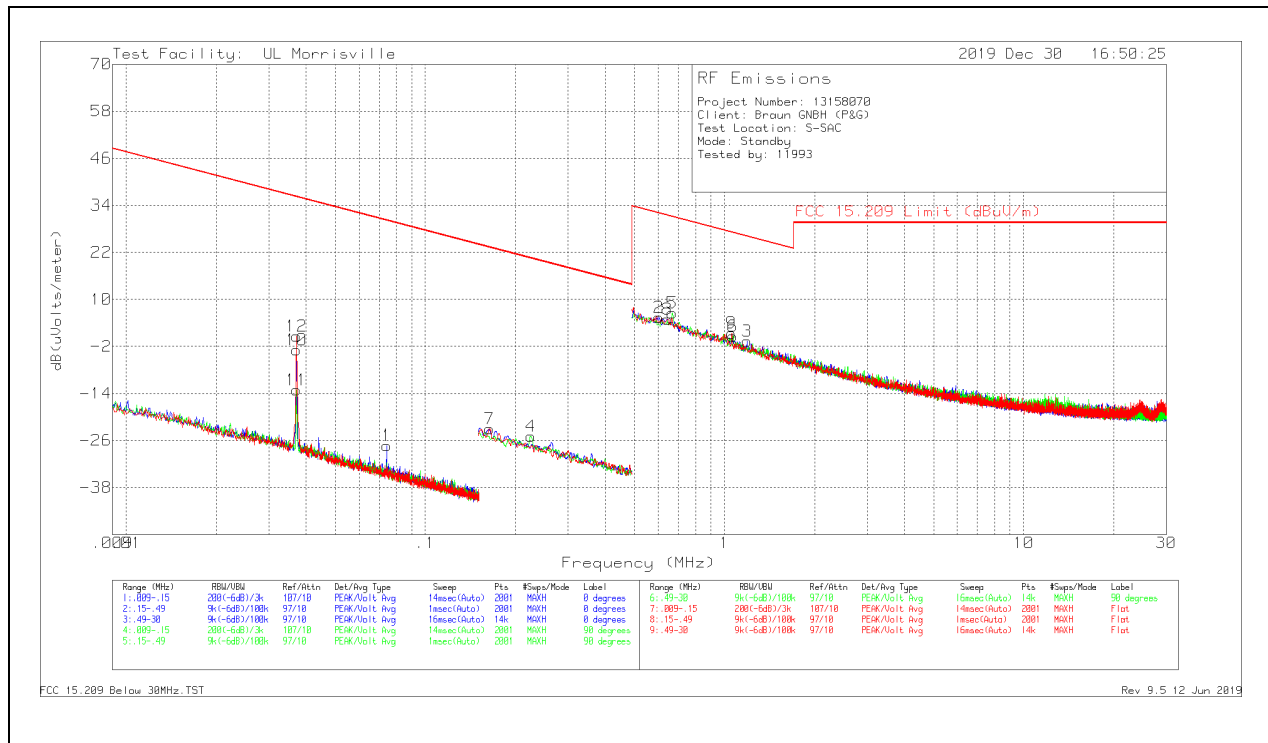


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 AF (dB/m)	Cbl (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.209 Avg/QP Limit (dBuV/m)	FCC 15.209 Pk Limit (dBuV/m)	Worst-Case Margin (dB)	Azimuth (Degs)
9	.03754	69.28	Pk	12.5	.1	-80	1.88	36.11	56.11	-34.23	0-360
1	.03761	63.43	Pk	12.5	.1	-80	-3.97	36.1	56.1	-40.07	0-360
5	.03761	52.34	Pk	12.5	.1	-80	-15.06	36.1	56.1	-51.16	0-360
2	.07524	46.04	Pk	11.2	.1	-80	-22.66	30.08	50.08	-52.74	0-360
6	.07524	41.13	Pk	11.2	.1	-80	-27.57	30.08	50.08	-57.65	0-360
10	.07524	47	Pk	11.2	.1	-80	-21.7	30.08	50.08	-51.78	0-360
11	.1128	42.81	Pk	11.1	.1	-80	-25.99	26.56	46.56	-52.55	0-360
3	.11287	38.97	Pk	11.1	.1	-80	-29.83	26.55	46.55	-56.38	0-360
7	.24197	42.81	Pk	11	.1	-80	-26.09	19.93	39.93	-46.02	0-360
12	.61859	36.03	Pk	11	.1	-40	7.13	31.78	-	-24.65	0-360
4	.81252	32.99	Pk	11	.1	-40	4.09	29.41	-	-25.32	0-360
8	1.01278	31.25	Pk	11	.2	-40	2.45	27.49	-	-25.04	0-360

Pk - Peak detector

7.2.3. CONFIG 3



DATA

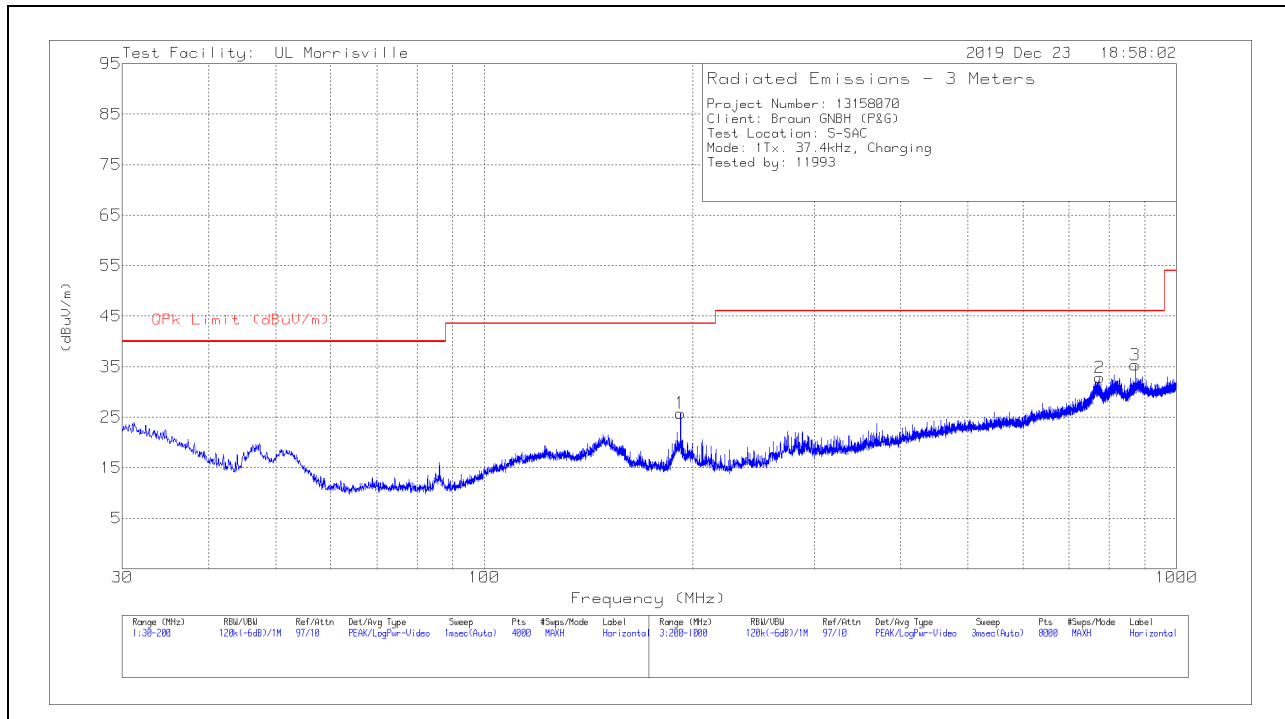
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 AF (dB/m)	Cbl (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.209 Avg/QP Limit (dBuV/m)	FCC 15.209 Pk Limit (dBuV/m)	Worst-Case Margin (dB)	Azimuth (Degs)
10	.03712	64.36	Pk	12.6	.1	-80	-2.94	36.21	36.21	-39.15	0-360
11	.03712	54.13	Pk	12.6	.1	-80	-13.17	36.21	36.21	-49.38	0-360
12	.03712	67.92	Pk	12.6	.1	-80	.62	36.21	36.21	-35.59	0-360
1	.07425	41.41	Pk	11.2	.1	-80	-27.29	30.19	30.19	-57.48	0-360
7	.16377	45.89	Pk	11	.1	-80	-23.01	23.32	23.32	-46.33	0-360
4	.22506	43.96	Pk	11	.1	-80	-24.94	20.56	20.56	-45.5	0-360
2	.60383	34.27	Pk	11	.1	-40	5.37	31.99	-	-26.62	0-360
8	.64388	33.85	Pk	11	.1	-40	4.95	31.43	-	-26.48	0-360
5	.66918	35.43	Pk	11	.1	-40	6.53	31.09	-	-24.56	0-360
9	1.05705	30.14	Pk	11	.2	-40	1.34	27.12	-	-25.78	0-360
6	1.06759	29.45	Pk	11	.2	-40	.65	27.04	-	-26.39	0-360
3	1.18986	28	Pk	11.1	.2	-40	-.7	26.09	-	-26.79	0-360

Pk - Peak detector

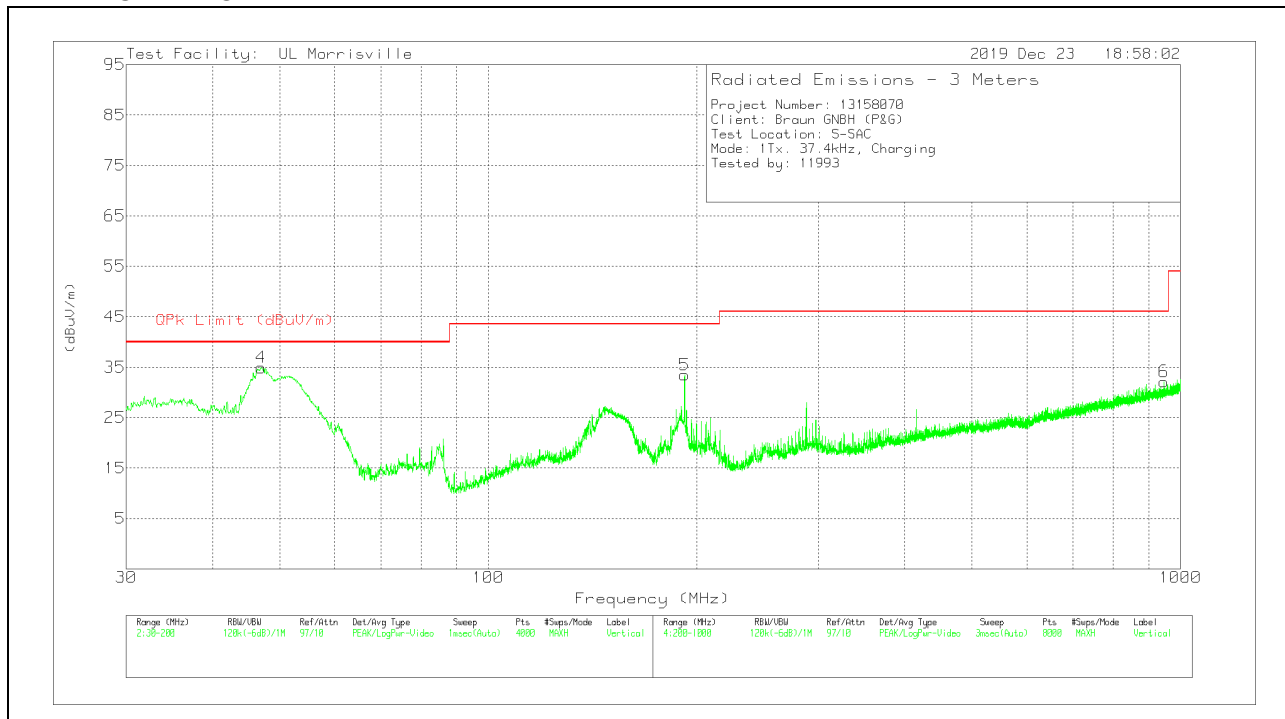
7.3. FCC TX SPURIOUS EMISSION 30 TO 1000 MHz

7.3.1. CONFIG 1

HORIZONTAL PLOT



VERTICAL PLOT



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0074 AF (dB/m)	Cbl/Amp	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	47.0901	47.11	Qp	15.2	-31.5	30.81	40	-9.19	220	103	V
1	192.1795	38.29	Pk	17.7	-30.2	25.79	43.52	-17.73	0-360	99	H
5	192.222	45.95	Pk	17.7	-30.2	33.45	43.52	-10.07	0-360	101	V
2	774.8747	33.74	Pk	27.1	-28	32.84	46.02	-13.18	0-360	101	H
3	872.0874	34.82	Pk	28	-27.5	35.32	46.02	-10.7	0-360	101	H
6	947.6972	29.72	Pk	28.9	-26.5	32.12	46.02	-13.9	0-360	101	V

Qp - Quasi-Peak detector

8. AC MAINS LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

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.

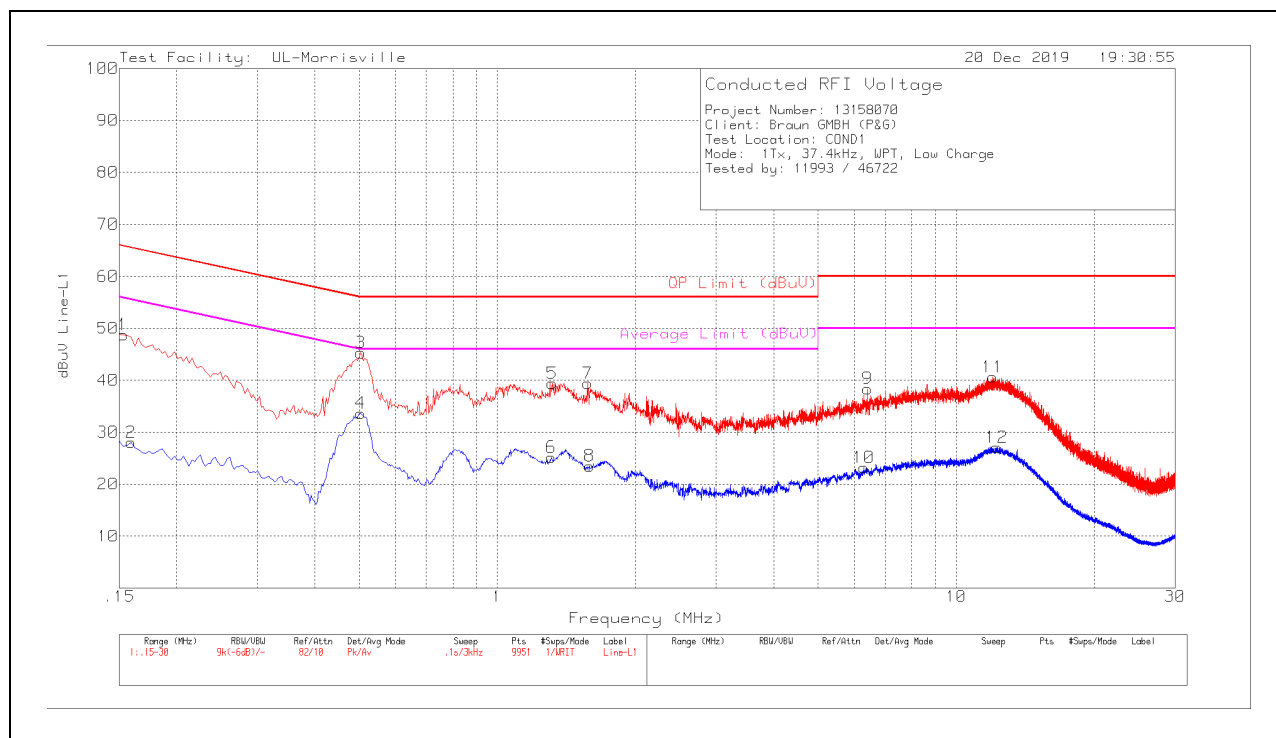
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

8.1.1. CONFIG 1

LINE 1 RESULTS



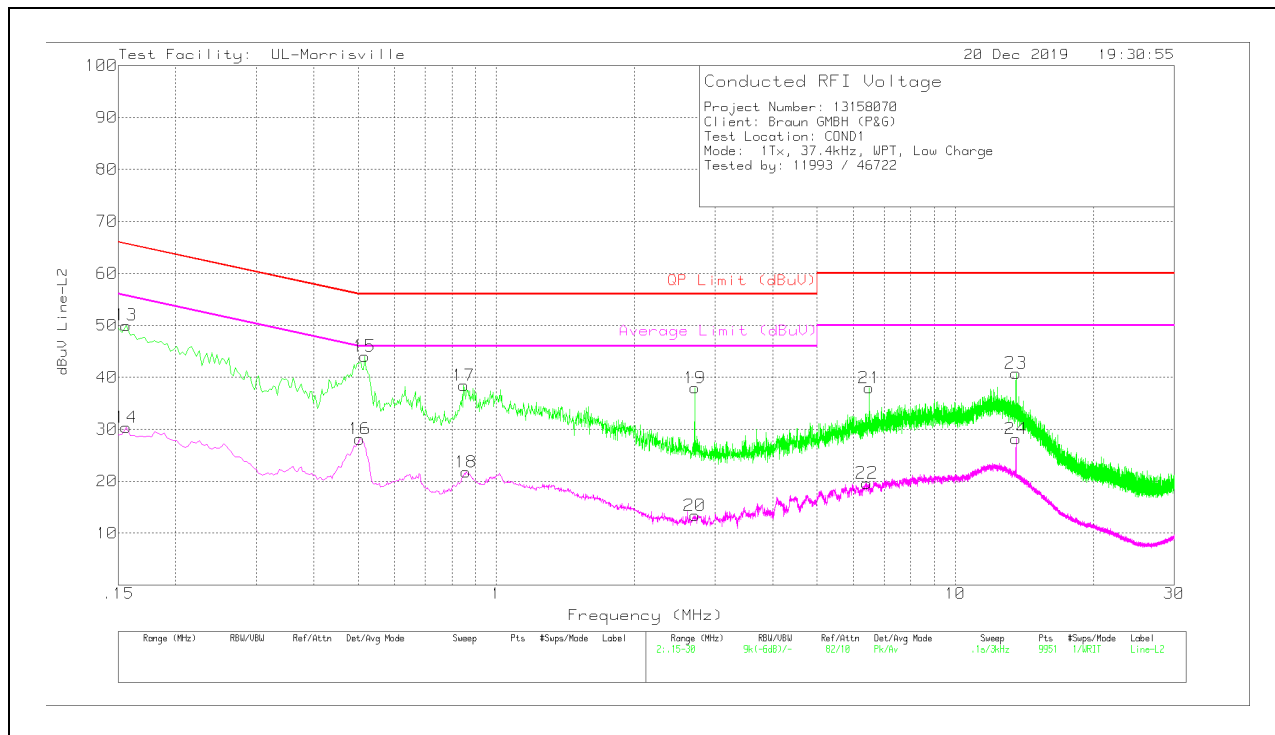
WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading (dBuV)	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
1	.153	38.53	Pk	.2	10	48.73	65.84	-17.11	-	-
2	.159	17.83	Av	.2	10	28.03	-	-	55.52	-27.49
3	.504	35.19	Pk	.1	10	45.29	56	-10.71	-	-
4	.504	23.55	Av	.1	10	33.65	-	-	46	-12.35
5	1.317	29.29	Pk	0	10.1	39.39	56	-16.61	-	-
6	1.311	15.05	Av	0	10.1	25.15	-	-	46	-20.85
7	1.575	29.29	Pk	0	10.1	39.39	56	-16.61	-	-
8	1.587	13.39	Av	0	10.1	23.49	-	-	46	-22.51
9	6.411	28.08	Pk	.1	10.2	38.38	60	-21.62	-	-
10	6.285	12.9	Av	.1	10.2	23.2	-	-	50	-26.8
11	12.006	30.11	Pk	.1	10.4	40.61	60	-19.39	-	-
12	12.261	16.56	Av	.1	10.4	27.06	-	-	50	-22.94

Pk - Peak detector

Av - Average detection

LINE 2 RESULTS



WORST EMISSIONS

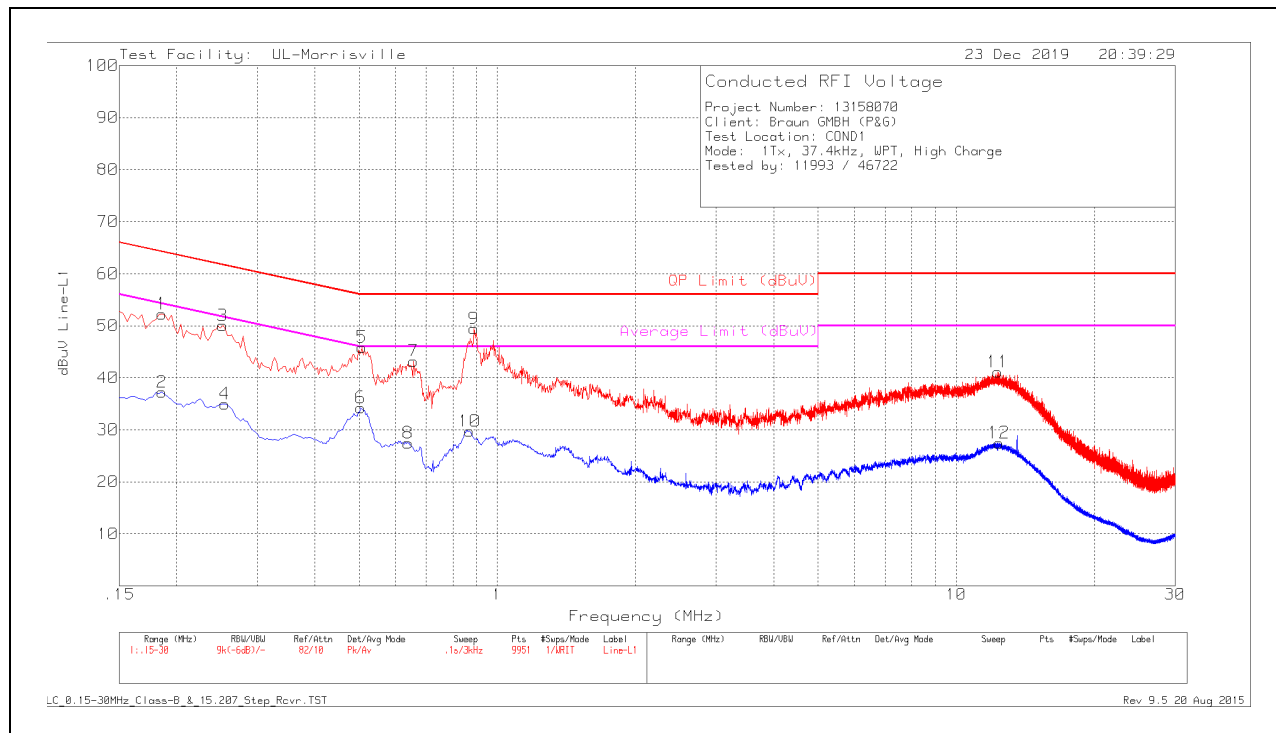
Range 2: Line-L2 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
13	.156	39.79	Pk	.2	10	49.99	65.67	-15.68	-	-
14	.156	20.12	Av	.2	10	30.32	-	-	55.67	-25.35
15	.516	34.02	Pk	0	10	44.02	56	-11.98	-	-
16	.504	18.13	Av	0	10	28.13	-	-	46	-17.87
17	.849	28.44	Pk	0	10	38.44	56	-17.56	-	-
18	.858	11.76	Av	0	10	21.76	-	-	46	-24.24
19	2.706	27.84	Pk	0	10.1	37.94	56	-18.06	-	-
20	2.706	3.31	Av	0	10.1	13.41	-	-	46	-32.59
21	6.498	27.66	Pk	.1	10.2	37.96	60	-22.04	-	-
22	6.417	9.31	Av	.1	10.2	19.61	-	-	50	-30.39
23	13.56	30.27	Pk	.1	10.4	40.77	60	-19.23	-	-
24	13.56	17.65	Av	.1	10.4	28.15	-	-	50	-21.85

Pk - Peak detector

Av - Average detection

8.1.2. CONFIG 2

LINE 1 RESULTS

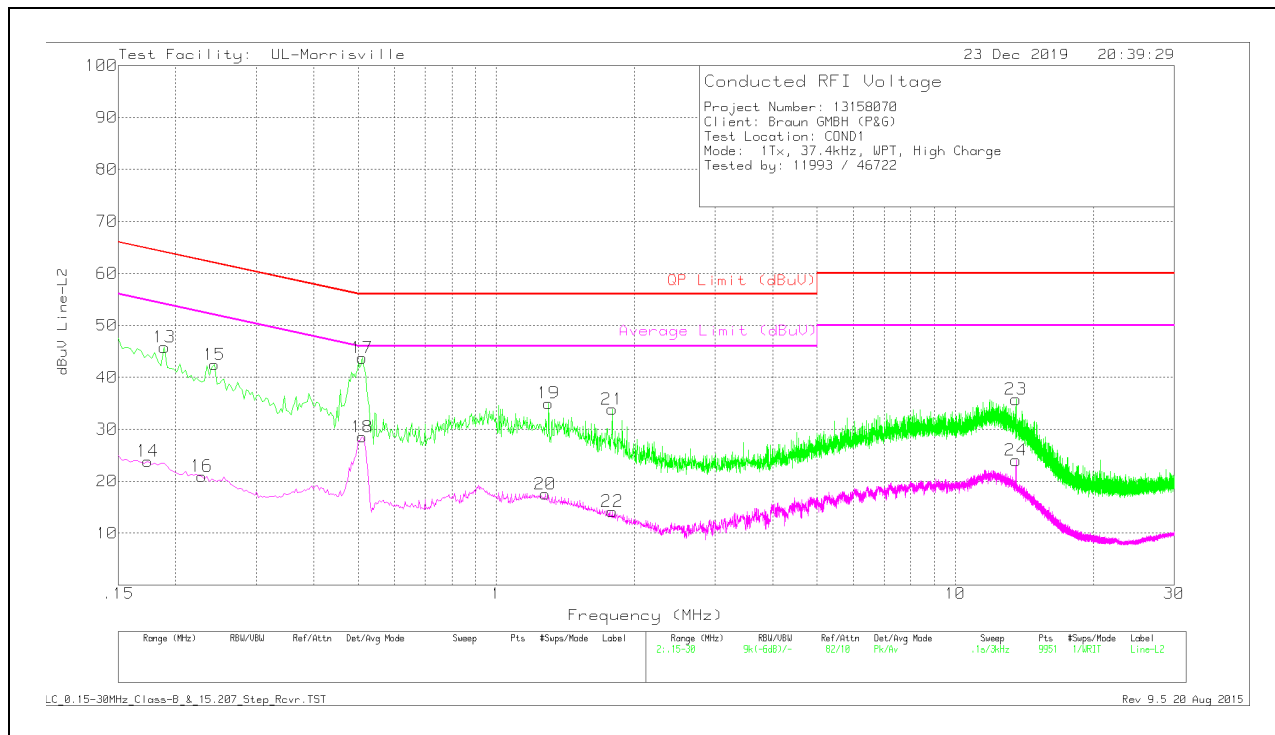


WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
1	.186	42.05	Pk	.2	10	52.25	64.21	-11.96	-	-
2	.186	27.02	Av	.2	10	37.22	-	-	54.21	-16.99
3	.252	39.93	Pk	.1	10	50.03	61.69	-11.66	-	-
4	.255	24.87	Av	.1	10	34.97	-	-	51.59	-16.62
5	.507	35.75	Pk	.1	10	45.85	56	-10.15	-	-
6	.504	24.13	Av	.1	10	34.23	-	-	46	-11.77
7	.657	33.11	Pk	.1	10	43.21	56	-12.79	-	-
8	.639	17.35	Av	.1	10	27.45	-	-	46	-18.55
9	.888	39.42	Pk	0	10	49.42	56	-6.58	-	-
10	.87	19.74	Av	0	10	29.74	-	-	46	-16.26
11	12.309	30.61	Pk	.1	10.4	41.11	60	-18.89	-	-
12	12.393	16.98	Av	.1	10.4	27.48	-	-	50	-22.52

Pk - Peak detector
Av - Average detection

LINE 2 RESULTS



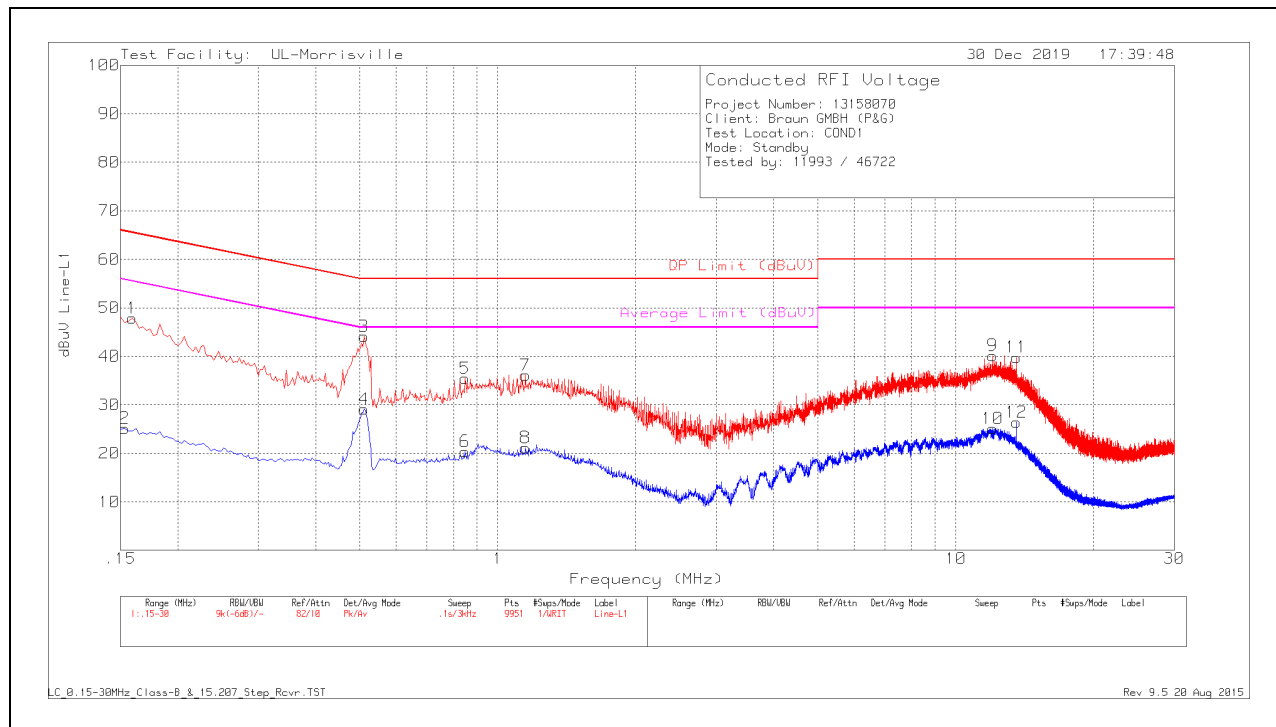
WORST EMISSIONS

Range 2: Line-L2 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
13	.189	35.58	Pk	.2	10	45.78	64.08	-18.3	-	-
14	.174	13.63	Av	.2	10	23.83	-	-	54.77	-30.94
15	.243	32.31	Pk	.1	10	42.41	61.99	-19.58	-	-
16	.228	10.86	Av	.1	10	20.96	-	-	52.52	-31.56
17	.51	33.73	Pk	0	10	43.73	56	-12.27	-	-
18	.51	18.51	Av	0	10	28.51	-	-	46	-17.49
19	1.299	24.89	Pk	0	10.1	34.99	56	-21.01	-	-
20	1.278	7.52	Av	0	10	17.52	-	-	46	-28.48
21	1.788	23.74	Pk	0	10.1	33.84	56	-22.16	-	-
22	1.788	4.05	Av	0	10.1	14.15	-	-	46	-31.85
23	13.563	25.24	Pk	.1	10.4	35.74	60	-24.26	-	-
24	13.56	13.52	Av	.1	10.4	24.02	-	-	50	-25.98

Pk - Peak detector
Av - Average detection

8.1.1. CONFIG 3

LINE 1 RESULTS

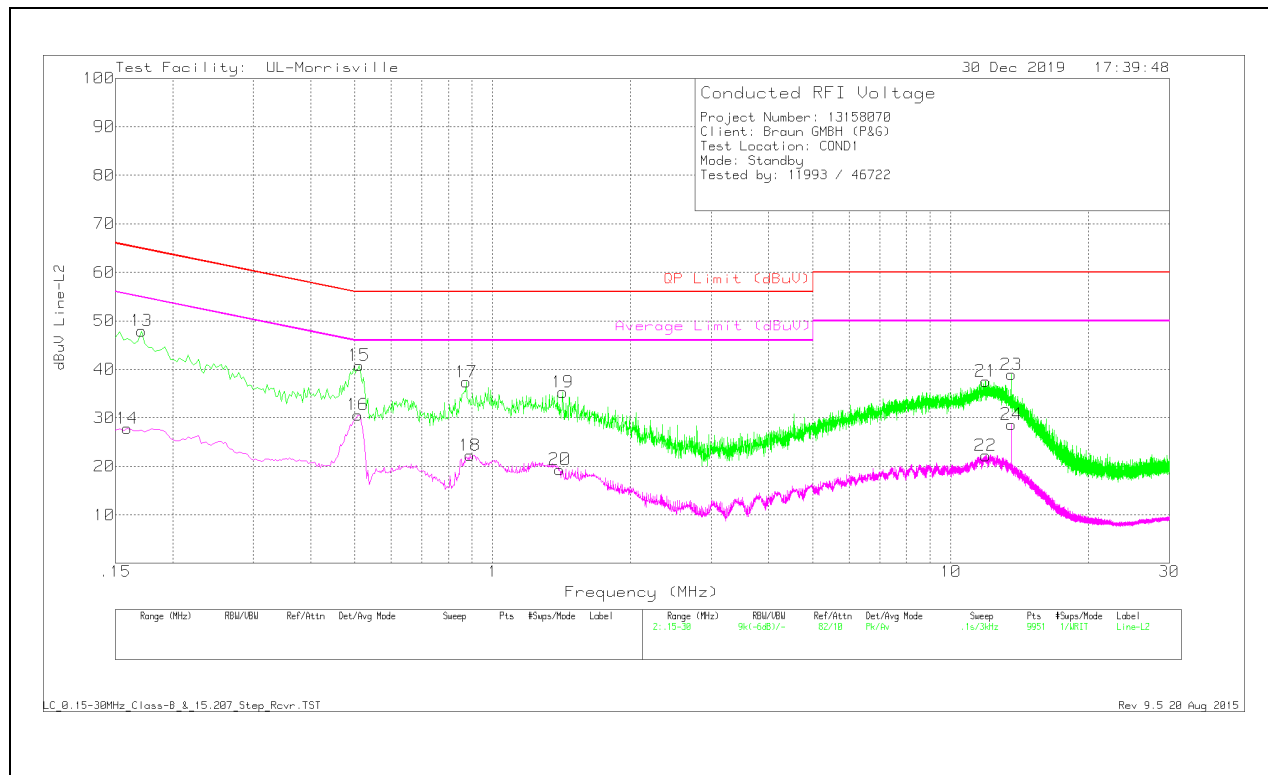


WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
1	.159	37.69	Pk	.2	10	47.89	65.52	-17.63	-	-
2	.153	14.97	Av	.2	10	25.17	-	-	55.84	-30.67
3	.51	33.99	Pk	.1	10	44.09	56	-11.91	-	-
4	.51	19.06	Av	.1	10	29.16	-	-	46	-16.84
5	.849	25.44	Pk	0	10	35.44	56	-20.56	-	-
6	.849	10.38	Av	0	10	20.38	-	-	46	-25.62
7	1.149	26.13	Pk	0	10	36.13	56	-19.87	-	-
8	1.149	11.17	Av	0	10	21.17	-	-	46	-24.83
9	12.024	29.66	Pk	.1	10.4	40.16	60	-19.84	-	-
10	12.024	14.65	Av	.1	10.4	25.15	-	-	50	-24.85
11	13.563	29.29	Pk	.1	10.4	39.79	60	-20.21	-	-
12	13.56	15.94	Av	.1	10.4	26.44	-	-	50	-23.56

Pk - Peak detector
Av - Average detection

LINE 2 RESULTS



WORST EMISSIONS

Range 2: Line-L2 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
13	.171	37.74	Pk	.2	10	47.94	64.91	-16.97	-	-
14	.159	17.62	Av	.2	10	27.82	-	-	55.52	-27.7
15	.51	30.81	Pk	0	10	40.81	56	-15.19	-	-
16	.507	20.62	Av	0	10	30.62	-	-	46	-15.38
17	.876	27.41	Pk	0	10	37.41	56	-18.59	-	-
18	.891	12.31	Av	0	10	22.31	-	-	46	-23.69
19	1.422	25.18	Pk	0	10.1	35.28	56	-20.72	-	-
20	1.401	9.26	Av	0	10.1	19.36	-	-	46	-26.64
21	11.913	27.09	Pk	.1	10.4	37.59	60	-22.41	-	-
22	11.904	11.73	Av	.1	10.4	22.23	-	-	50	-27.77
23	13.56	28.46	Pk	.1	10.4	38.96	60	-21.04	-	-
24	13.56	18.16	Av	.1	10.4	28.66	-	-	50	-21.34

Pk - Peak detector

Av - Average detection

9. SETUP PHOTOS

Please refer to R13158070-EP1 for setup photos.

END OF TEST REPORT