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

CERTIFICATION TEST REPORT

FOR

WIRELESS CHARGING SPOT

MODEL NO: B2B170 & B2B180

FCC ID: K7SB2B180

IC: 3623A- B2B180

REPORT NUMBER: 12361602-E1V1

ISSUE DATE: AUGUST 10, 2018

Prepared for
BELKIN INTERNATIONAL, INC.
12045 EAST WATERFRONT DRIVE
PLAYA VISTA, CA 90094, U.S.A.

Prepared by
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	08/10/2018	Initial Issue	Jason Qian

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: BELKIN INTERNATIONAL, INC.
12045 EAST WATERFRONT DRIVE
PLAYA VISTA, CA 90094, U.S.A.

EUT DESCRIPTION: WIRELESS CHARGING SPOT

MODEL NUMBER: B2B170 & B2B180

POWER SUPPLY MODELS: ADS-26FSG-12 15023EPCU for Single Unit;
2AAL090H for Quad Unit

SERIAL NUMBER: 28V10CK680005Y

DATE TESTED: JULY 16 - 31, 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:

Thu Chan
Operations Leader
UL Verification Service Inc.

Prepared By:

Jason Qian
Test 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	47658 Kato Rd.
☒ Chamber A (ISED:2324B-1)	☐ Chamber D (ISED:22541-1)	☒ Chamber K (ISED: 2324A-1)
☐ Chamber B (ISED:2324B-2)	☐ Chamber E (ISED:22541-2)	☐ Chamber L (ISED: 2324A-3)
☐ Chamber C (ISED:2324B-3)	☐ Chamber F (ISED:22541-3)	
	☐ Chamber G (ISED:22541-4)	
	☐ Chamber H (ISED:22541-5)	

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

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at 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:

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

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is wireless charging base capable of up to 10 watt power transfer, and 10W wireless charging pad suitable for any Qi-Certified devices including Android and IOS phones for mounting on table top hard surfaces.

5.2. DEVICES DIFFERENCES

Difference between B2B170 and B2B180:

Model B2B170 is Surface Pad or Top Mount, whereas mode B2B180 is Recessed Pad or Hidden Pad. All electronics, wiring and power supply is the same in both models. The only difference is the outside housing for different mounting variations. Both models are provided with 2 different power supplies. Power supply model ADS-26FSG-12 15023EPCU for single unit configuration and power supply 2AAL090H for quad unit configuration.

5.3. 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)
127.7	Standby	-4.54	22.21
127.7	Operating	8.26	31.32

5.4. SOFTWARE AND FIRMWARE

The firmware version installed in the EUT during testing was 6.9

5.5. 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.

Config	Mode	Descriptions
1	Standby	EUT Alone powered by AC/DC adapter
2	Operating (5W)	EUT and smart phone powered by AC/DC adapter (With & Without 3mm airgap)
3	Operating (10W)	EUT and 10W load powered by AC/DC adapter (With & Without 3mm airgap)

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

All the tests were performed on the B2B170 model with single unit power supply.

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.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

SUPPORT EQUIPMENT & PERIPHERALS LIST			
Description	**Manufacturer**	**Model**	**Serial Number**
QI Receiver Simulator	AVID Technologies, Inc.	103-02	000011571817
AC Adapter (Single Unit)	Shenzhen Honor Electronics	ADS-26FSG-12 15023EPCU	N/A
AC Adapter (Quad Unit)	Channel Well Technology Co., Ltd	2AAL090H	N/A
Resistor Load	N/A	N/A	N/A
iPhone X	Apple	NMQAQ2LL/A	G6TVJ7H8JCLH

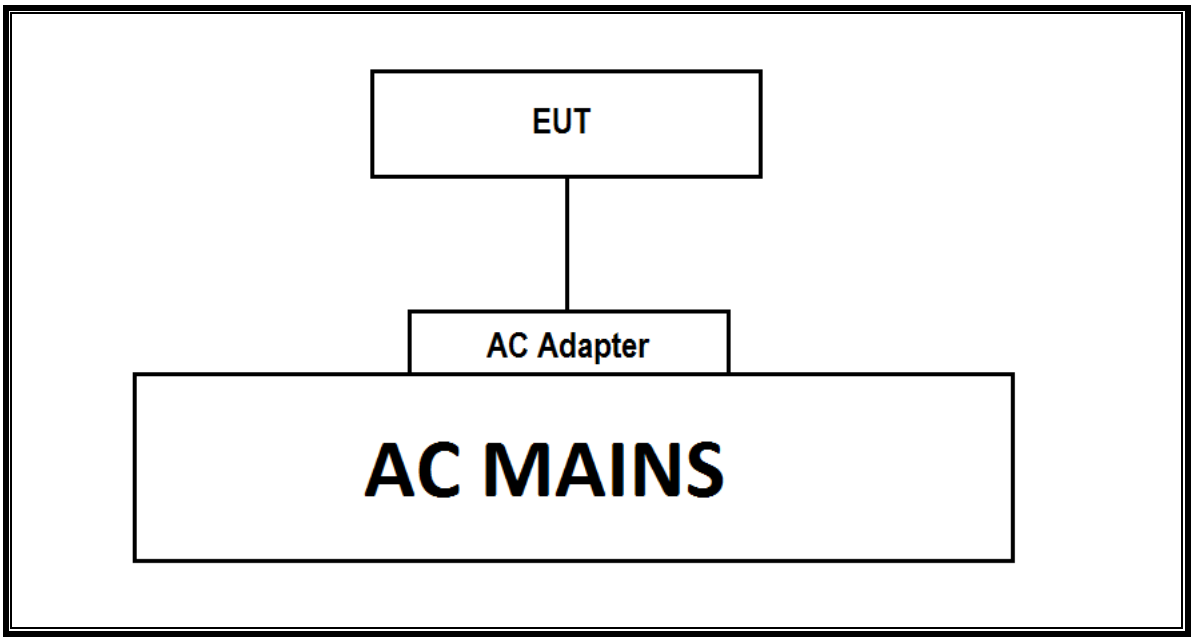
I/O CABLES

N/A

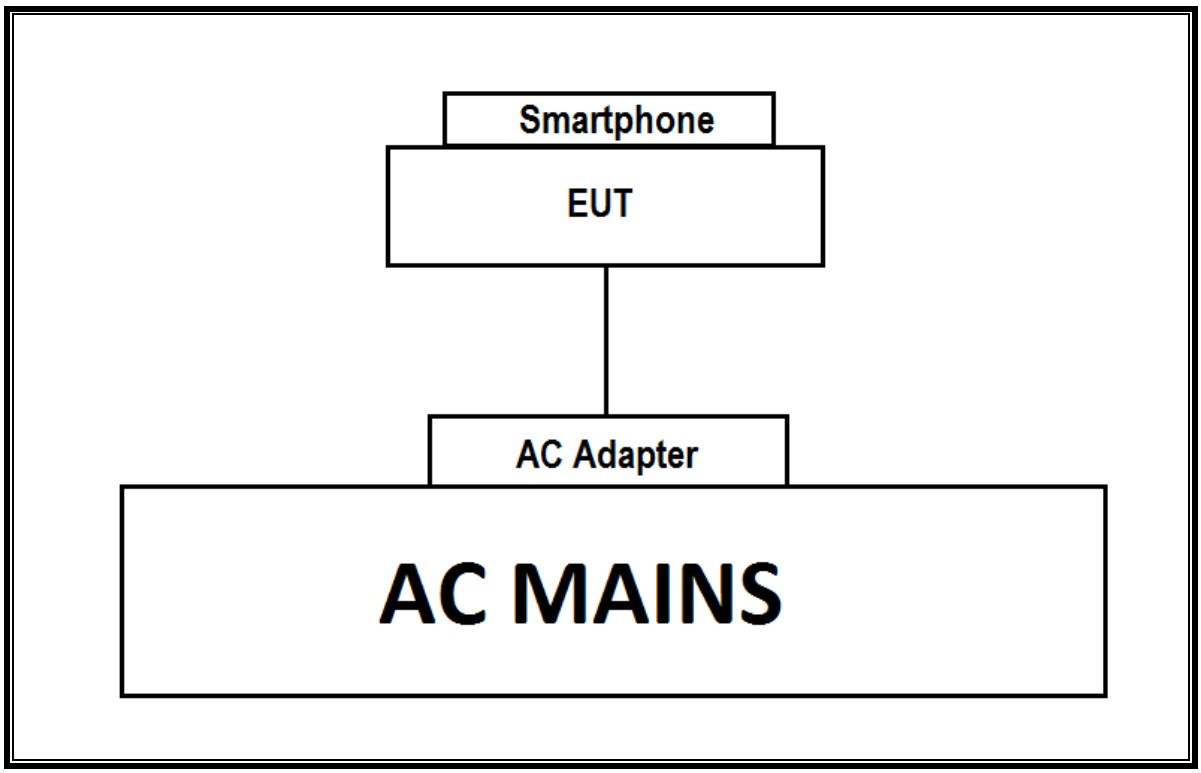
TEST SETUP

Please see the following configurations for the test setups. All configurations indicate that the EUT is directly connected to an AC/DC adapter.

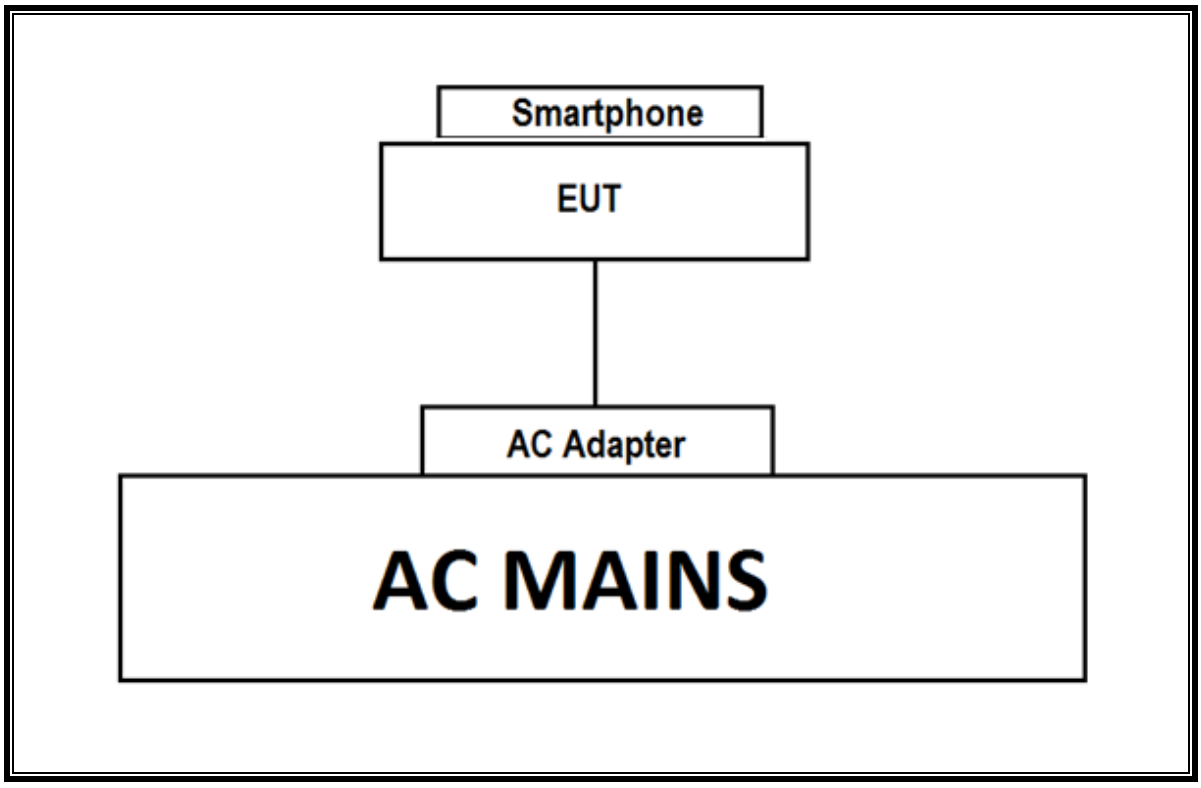
CONFIGURATION 1: STANDBY MODE



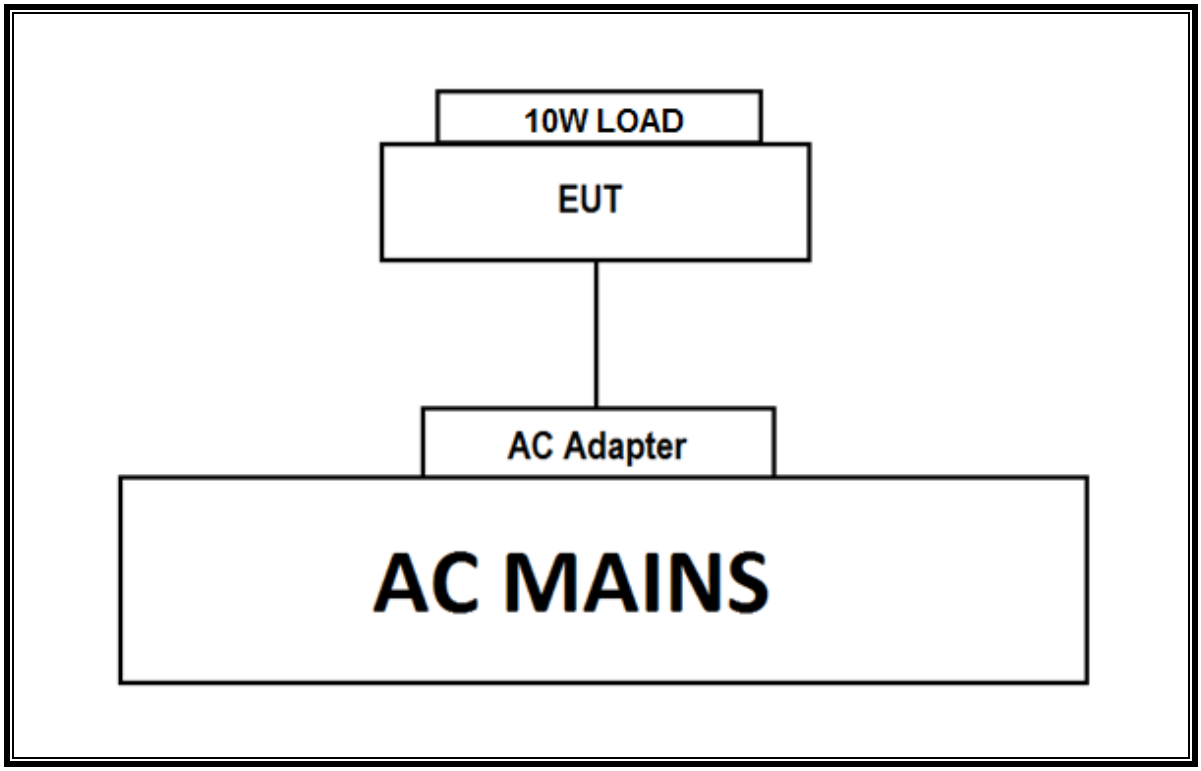
CONFIGURATION 2: OPERATING MODE WITH PHONE (WITHOUT 3mm AIRGAP)



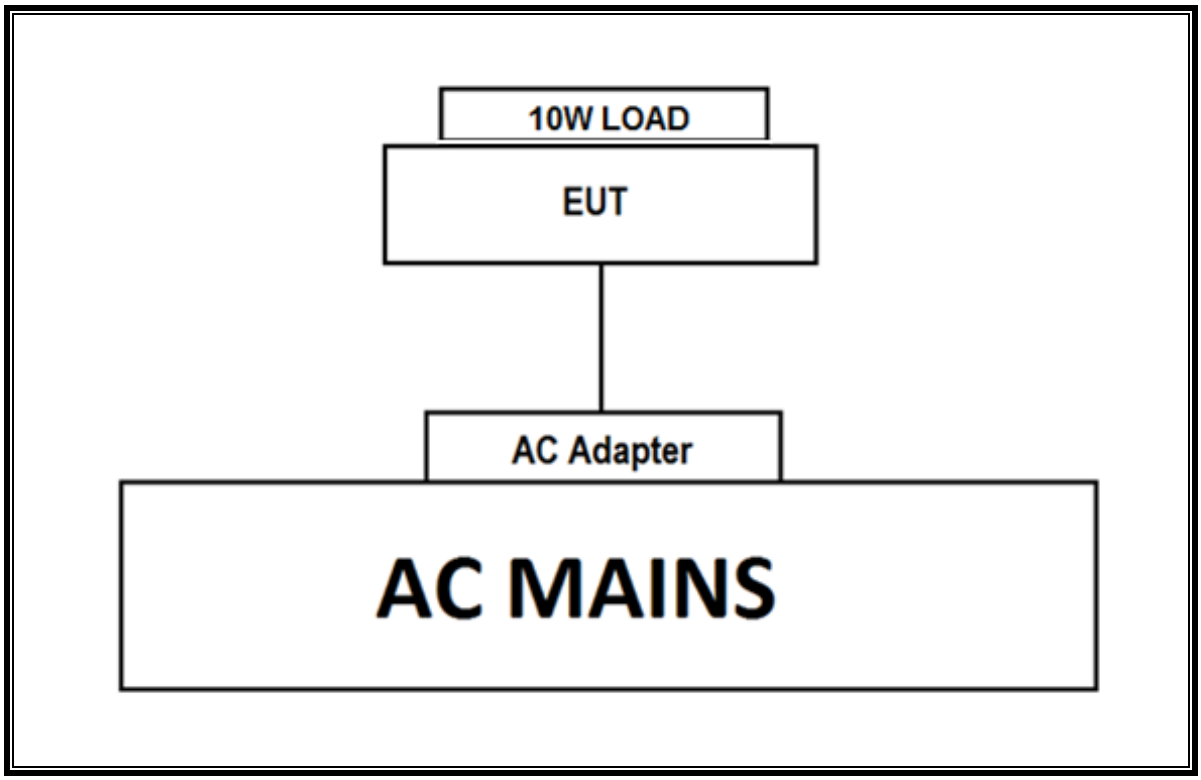
CONFIGURATION 2: OPERATING MODE WITH PHONE (3mm AIRGAP)



CONFIGURATION 3: OPERATING MODE WITH 10W LOAD (WITHOUT 3mm AIRGAP)



CONFIGURATION 3: OPERATING MODE WITH 10W LOAD (3mm AIRGAP)



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**	**Asset**	**Cal Due**
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences Corp.	JB3	T130	10/16/2018
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences Corp.	JB3	T407	05/10/2019
Amplifier, 10KHz to 1.3GHz, 25dB	HP	8447D	T10	02/14/2019
Amplifier, 10KHz to 1.3GHz, 25dB	HP	8447D	T15	08/14/2018
Antenna, Active Loop 9kHz-30MHz	Com-Power Corp.	AL-130R	T866	12/13/2018
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1454	01/08/2019
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1450	02/052019
EMI Test Receiver	Rohde & Schwarz	ESR	T1436	01/25/2019
LISN	Fischer Custom Communications, Inc	FCC-LISN-50/250-25-2	T1310	01/31/2019
LIT-930 Transient Limiter	COM-POWER	-	T1457	03/01/2019

Test Software List			
Description	**Manufacturer**	**Model**	**Version**
Antenna Port Software	UL	UL EMC	Ver 7.9 Jan 24, 2018
Radiated Software	UL	UL EMC	Ver 9.5, April 26, 2016
Conducted Software	UL	UL EMC	Ver 9.5, May 26 2015

Note: * indicates automation software version used in the compliance certification testing

7. OCCUPIED BANDWIDTH

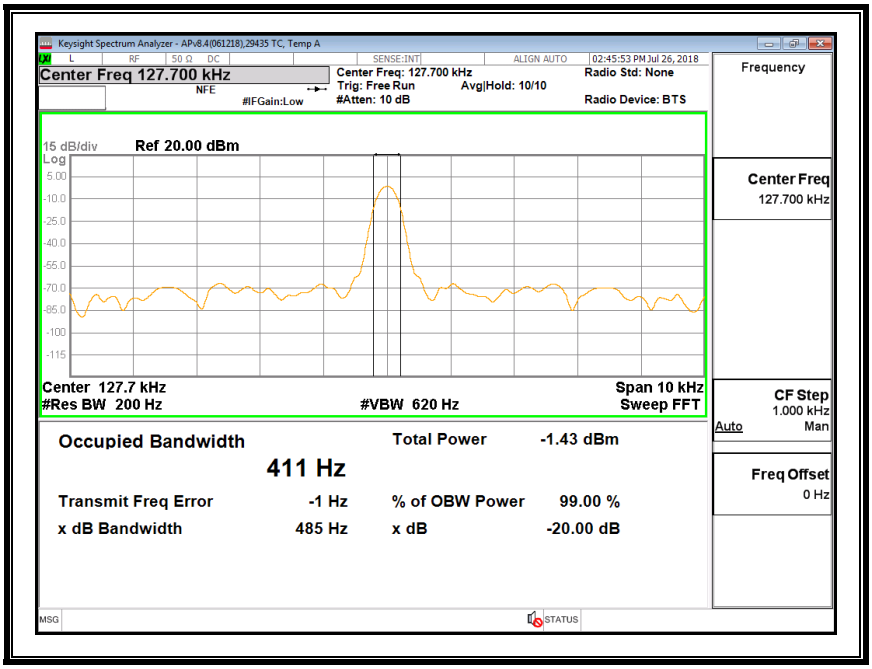
TEST PROCEDURE

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.

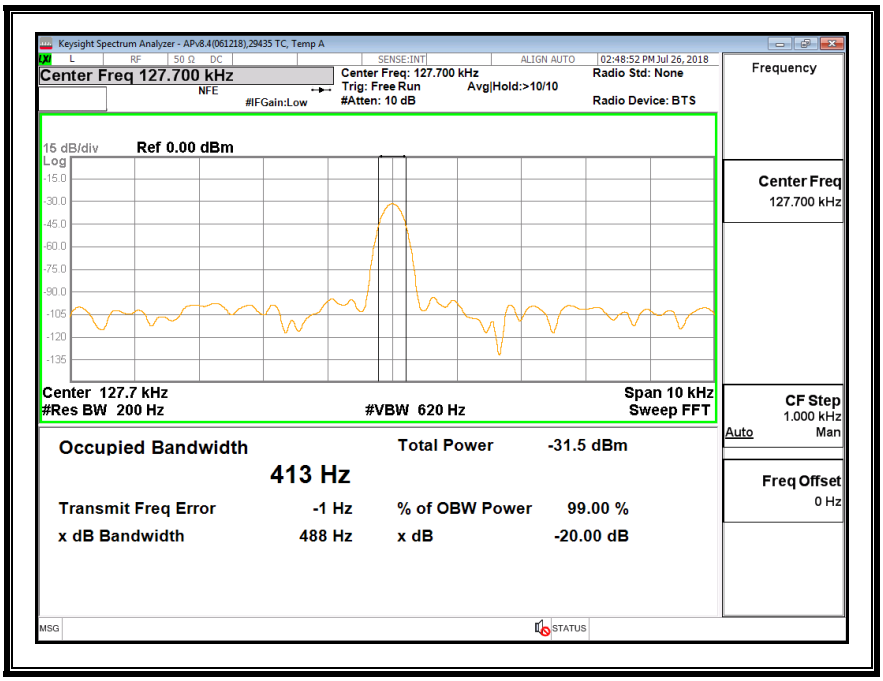
Note: Because the measured signal is CW-like, adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.

RESULTS

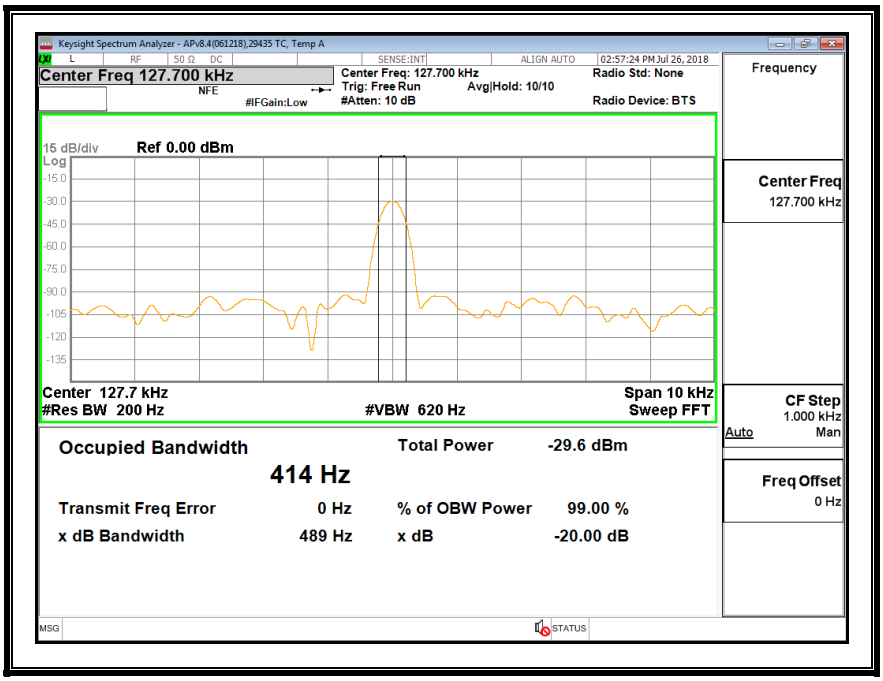
7.1.1. STANDBY CONFIGURATION CHARGER



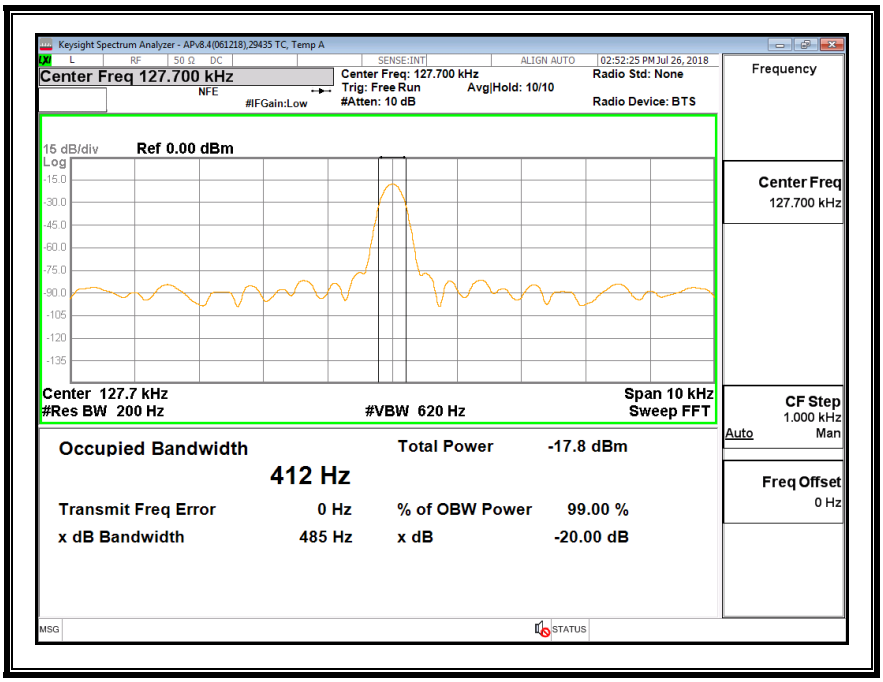
7.1.2. OPERATING CONFIGURATION WITH PHONE (WITHOUT 3mm AIRGAP)



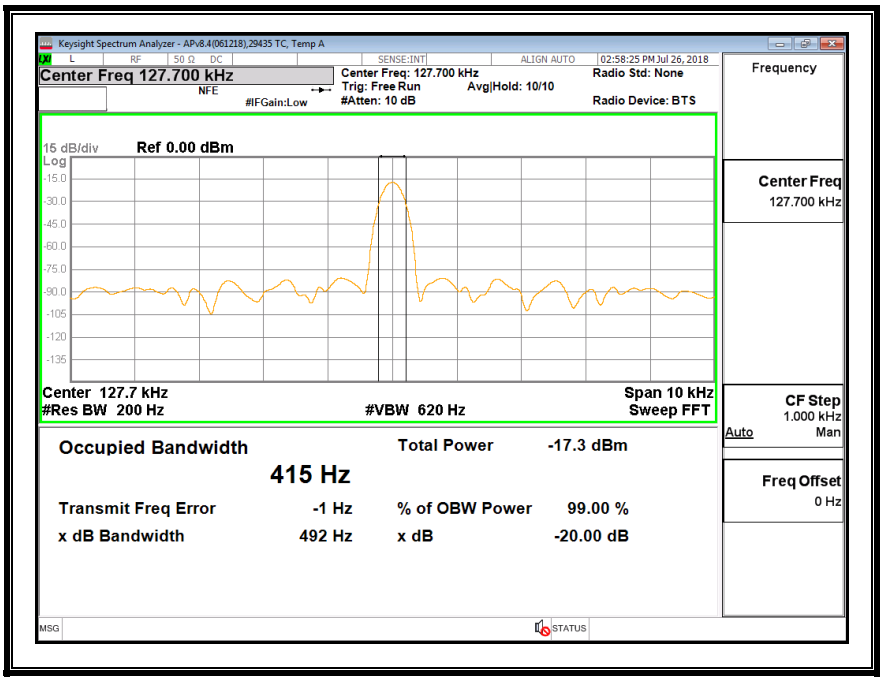
7.1.3. OPERATING CONFIGURATION WITH PHONE (3mm AIRGAP)



7.1.4. OPERATING CONFIGURATION WITH 10W LOAD (WITHOUT 3mm AIRGAP)



7.1.5. OPERATING CONFIGURATION WITH PHONE (3mm AIRGAP)



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.	

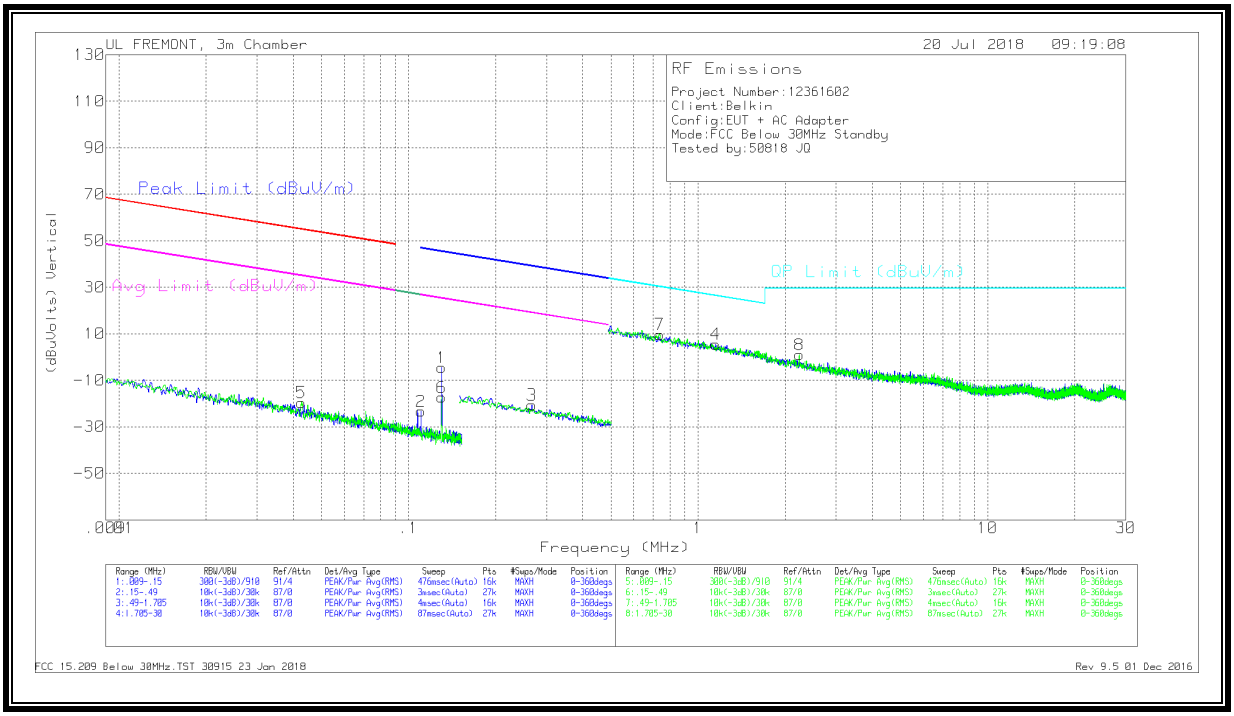
Frequency Range (MHz)	Electric Field Strength Limit Class B Group 2 @ 3m Distance (dBuV/m)	
	Quasi-peak	Average
30 – 80,872	40	35
80,872 – 81,848	60	55
81,848 – 134,786	40	35
134,786 – 136,414	60	55
136,414 – 230	40	35
230 – 1 000	47	42

RESULTS

The EUT belongs to Type 3 (Category I Radio Apparatus).

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

8.2.1. STANDBY CONFIGURATION



Trace Markers

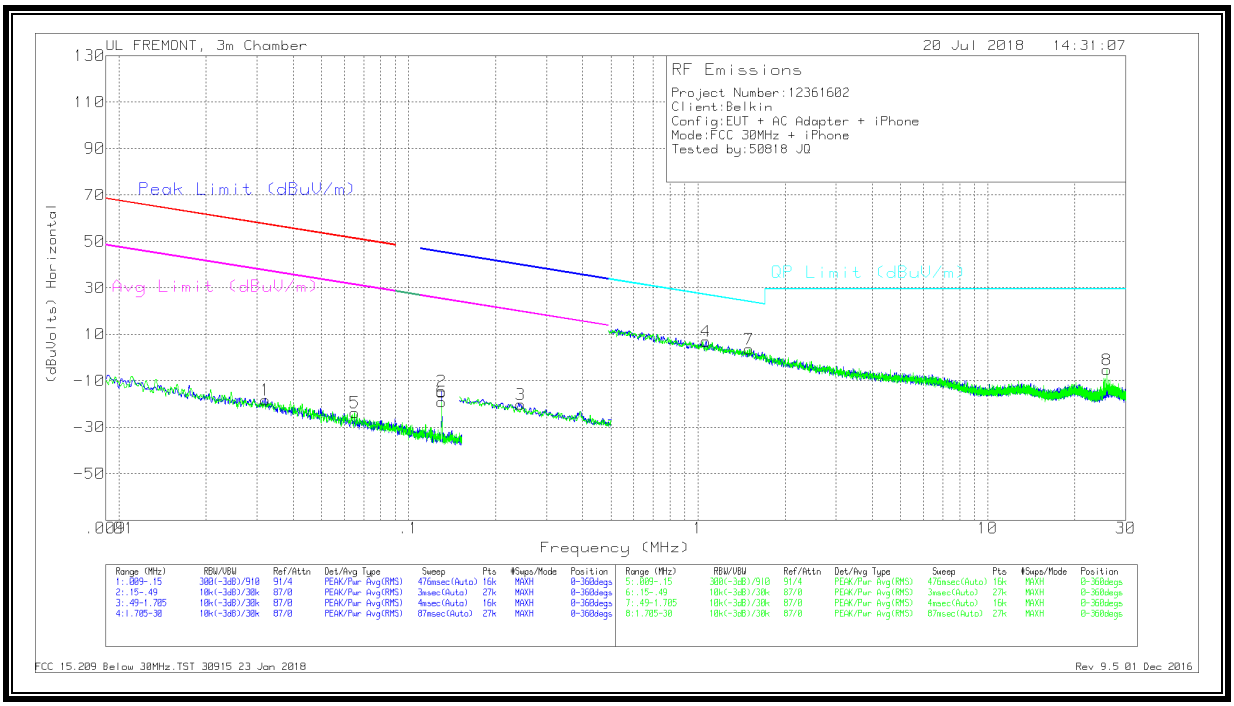
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
5	.04271	44.43	Pk	14.6	1.4	-80	-19.57	54.97	-74.54	34.97	-54.54	0-360
2	.11049	41.52	Pk	13.8	1.4	-80	-23.28	46.76	-70.04	26.76	-50.04	0-360
1	.13022	60.26	Pk	13.8	1.4	-80	-4.54	45.33	-49.87	25.33	-29.87	0-360
6	.13023	47.48	Pk	13.8	1.4	-80	-17.32	45.33	-62.65	25.33	-42.65	0-360
3	.26691	44.15	Pk	13.7	1.5	-80	-20.65	39.09	-59.74	19.09	-39.74	0-360

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
7	.73867	34.36	Pk	13.9	1.5	-40	9.76	30.24	-20.48	0-360
4	1.15063	29.84	Pk	14.2	1.5	-40	5.54	26.41	-20.87	0-360
8	2.23791	25.25	Pk	14.2	1.5	-40	.95	29.5	-28.55	0-360

Pk - Peak detector

8.2.2. OPERATING WITH PHONE (WITHOUT 3mm AIRGAP)



DATA

Trace Markers

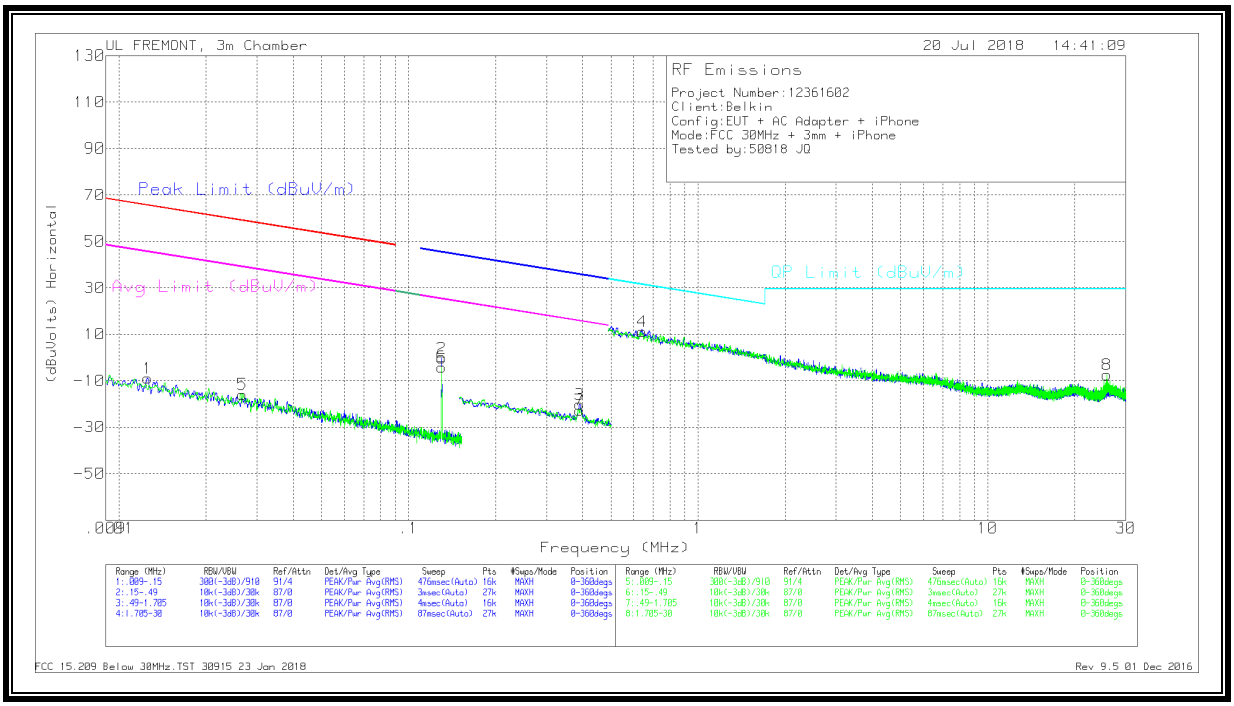
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.03204	45.15	Pk	15.2	1.4	-80	-18.25	57.47	-75.72	37.47	-55.72	0-360
5	.06522	40.69	Pk	14.2	1.4	-80	-23.71	51.3	-75.01	31.3	-55.01	0-360
2	.13021	50.31	Pk	13.8	1.4	-80	-14.49	45.33	-59.82	25.33	-39.82	0-360
6	.13022	45.71	Pk	13.8	1.4	-80	-19.09	45.33	-64.42	25.33	-44.42	0-360
3	.24394	44.49	Pk	13.8	1.5	-80	-20.21	39.87	-60.08	19.87	-40.08	0-360

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
4	1.06388	31.22	Pk	14.2	1.5	-40	6.92	27.09	-20.17	0-360
7	1.50015	27.92	Pk	14.2	1.5	-40	3.62	24.11	-20.49	0-360
8	25.78909	20.45	Pk	12.6	1.7	-40	-5.25	29.5	-34.75	0-360

Pk - Peak detector

8.2.3. OPERATING WITH PHONE (3mm AIRGAP)



DATA

Trace Markers

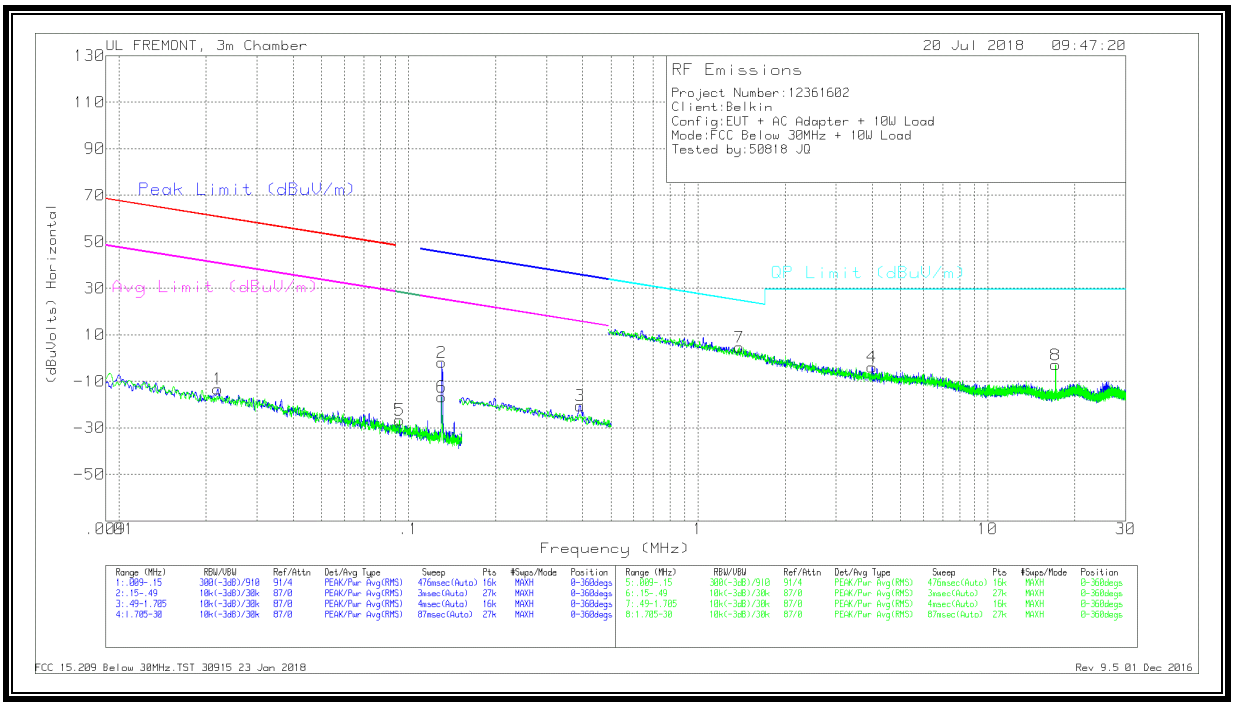
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.01255	54.65	Pk	15	1.4	-80	-8.95	65.61	-74.56	45.61	-54.56	0-360
5	.02675	47.72	Pk	15	1.4	-80	-15.88	59.04	-74.92	39.04	-54.92	0-360
2	.13022	64.45	Pk	13.8	1.4	-80	-.35	45.33	-45.68	25.33	-25.68	0-360
6	.13022	60.71	Pk	13.8	1.4	-80	-4.09	45.33	-49.42	25.33	-29.42	0-360
3	.38991	44.66	Pk	13.7	1.5	-80	-20.14	35.79	-55.93	15.79	-35.93	0-360
7	.38992	42.15	Pk	13.7	1.5	-80	-22.65	35.79	-58.44	15.79	-38.44	0-360

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
4	.64223	35.79	Pk	13.9	1.5	-40	11.19	31.46	-20.27	0-360
8	25.84044	18.28	Pk	12.6	1.7	-40	-7.42	29.5	-36.92	0-360

Pk - Peak detector

8.2.4. OPERATING WITH 10W LOAD (WITHOUT 3mm AIRGAP)



DATA

Trace Markers

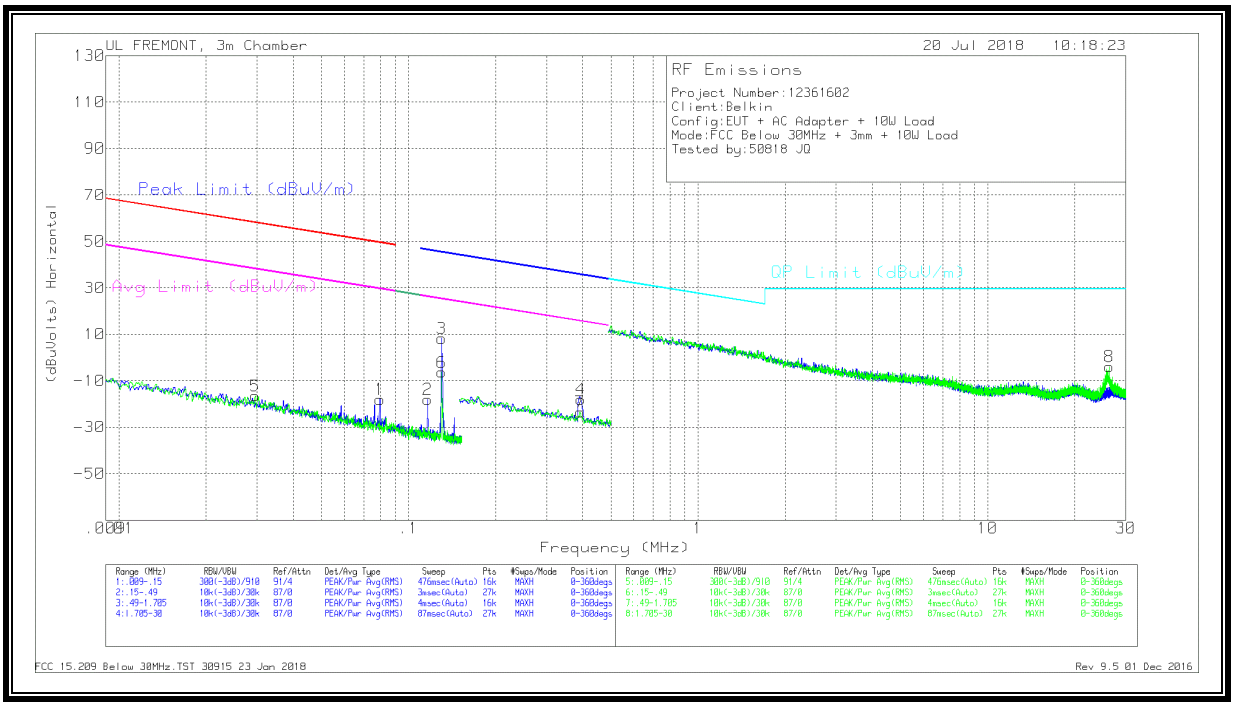
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.02196	50.59	Pk	14.7	1.4	-80	-13.31	60.75	-74.06	40.75	-54.06	-	-	0-360
5	.09311	37.88	Pk	14.1	1.4	-80	-26.62	-	-	-	-	28.21	-54.83	0-360
2	.13022	62.91	Pk	13.8	1.4	-80	-1.89	45.33	-47.22	25.33	-27.22	-	-	0-360
6	.13022	48.15	Pk	13.8	1.4	-80	-16.65	45.33	-61.98	25.33	-41.98	-	-	0-360
3	.39166	44.28	Pk	13.7	1.5	-80	-20.52	35.75	-56.27	15.75	-36.27	-	-	0-360

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
7	1.38775	28.99	Pk	14.2	1.5	-40	4.69	24.78	-20.09	0-360
4	3.98912	20.25	Pk	14.4	1.5	-40	-3.85	29.5	-33.35	0-360
8	17.15881	21.07	Pk	14.4	1.6	-40	-2.93	29.5	-32.43	0-360

Pk - Peak detector

8.2.5. OPERATING WITH 10W LOAD (3mm AIRGAP)



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
5	.02958	46.8	Pk	15.3	1.4	-80	-16.5	58.16	-74.66	38.16	-54.66	0-360
1	.07975	46.49	Pk	14.1	1.4	-80	-18.01	49.55	-67.56	29.55	-47.56	0-360
2	.11652	46.77	Pk	13.8	1.4	-80	-18.03	46.3	-64.33	26.3	-44.33	0-360
3	.13022	73.06	Pk	13.8	1.4	-80	8.26	45.33	-37.07	25.33	-17.07	0-360
6	.13023	58.44	Pk	13.8	1.4	-80	-6.36	45.33	-51.69	25.33	-31.69	0-360
7	.39166	41.3	Pk	13.7	1.5	-80	-23.5	35.75	-59.25	15.75	-39.25	0-360
4	.39357	46.86	Pk	13.7	1.5	-80	-17.94	35.71	-53.65	15.71	-33.65	0-360

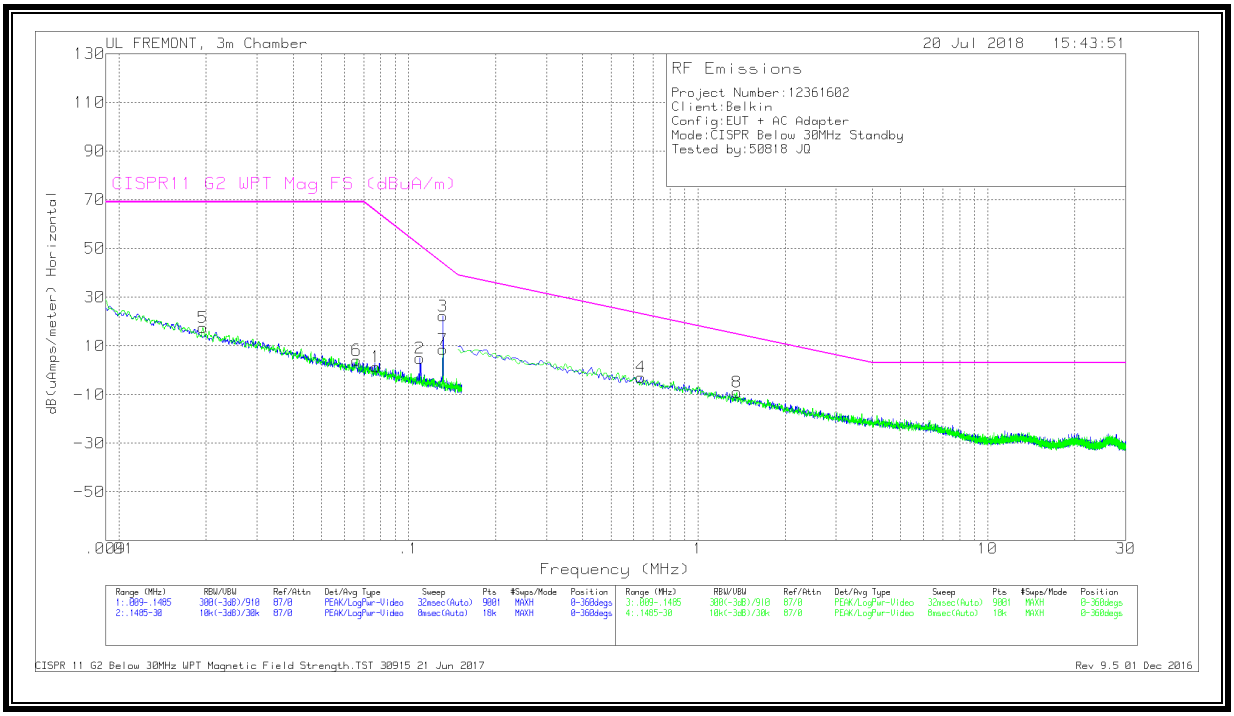
Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
8	26.34191	21.72	Pk	12.7	1.7	-40	-3.88	29.5	-33.38	0-360

Pk - Peak detector

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

8.3.1. STANDBY CONFIGURATION



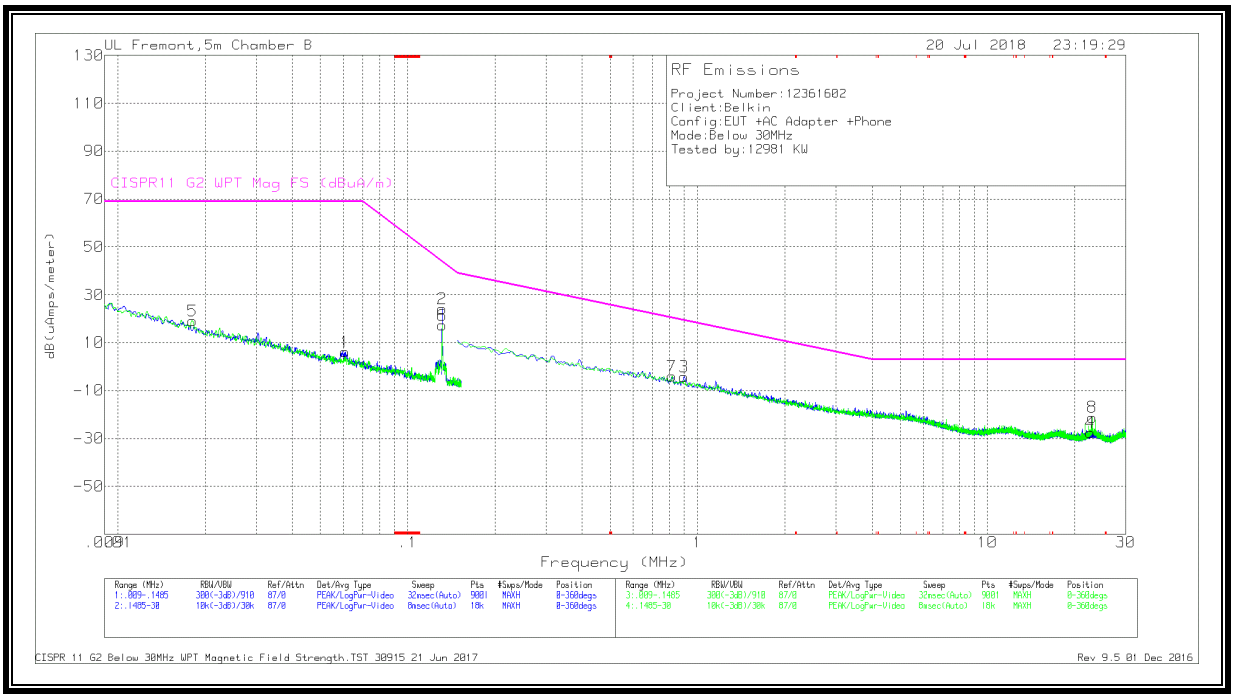
DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Corrected Reading dB(uAmps/meter)	CISPR11 G2 WPT Mag FS (dBuA/m)	Margin (dB)	Azimuth (Degs)
5	.01948	51.91	Pk	-35.8	1.4	17.51	69	-51.49	0-360
6	.0663	41.94	Pk	-39.2	1.4	4.14	69	-64.86	0-360
1	.07725	39.39	Pk	-39.4	1.4	1.39	65.07	-63.68	0-360
2	.10953	43.55	Pk	-40	1.4	4.95	51.14	-46.19	0-360
7	.1315	47.24	Pk	-40.1	1.4	8.54	43.85	-35.31	0-360
3	.13152	60.91	Pk	-40.1	1.4	22.21	43.84	-21.63	0-360
4	.63595	36.06	Pk	-40.4	1.5	-2.84	23.1	-25.94	0-360
8	1.3605	29.65	Pk	-40.2	1.5	-9.05	14.79	-23.84	0-360

Pk - Peak detector

8.3.2. OPERATING WITH PHONE (WITHOUT 3mm AIRGAP)



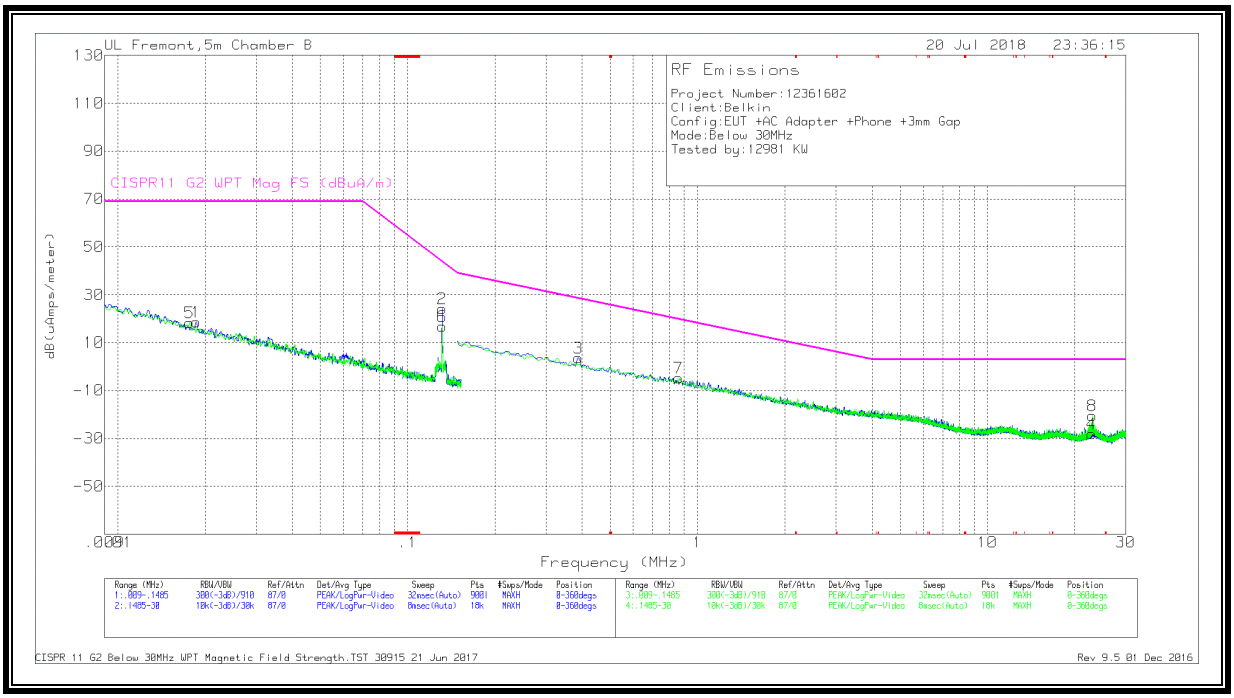
DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Corrected Reading dB(uAmps/meter)	CISPR11 G2 WPT Mag FS (dBuA/m)	Margin (dB)	Azimuth (Degs)
5	.01812	52.89	Pk	-35.2	1.4	19.09	69	-49.91	0-360
1	.06082	43.57	Pk	-38.9	1.4	6.07	69	-62.93	0-360
2	.13153	62.89	Pk	-40.1	1.4	24.19	43.84	-19.65	0-360
6	.13153	55.97	Pk	-40.1	1.4	17.27	43.84	-26.57	0-360
7	.81667	35	Pk	-40.4	1.5	-3.9	20.37	-24.27	0-360
3	.89957	34.79	Pk	-40.4	1.5	-4.11	19.31	-23.42	0-360
4	22.65171	12.35	Pk	-41.6	1.7	-27.55	3	-30.55	0-360
8	22.95263	18.89	Pk	-41.7	1.7	-21.11	3	-24.11	0-360

Pk - Peak detector

8.3.3. OPERATING WITH PHONE (3mm AIRGAP)



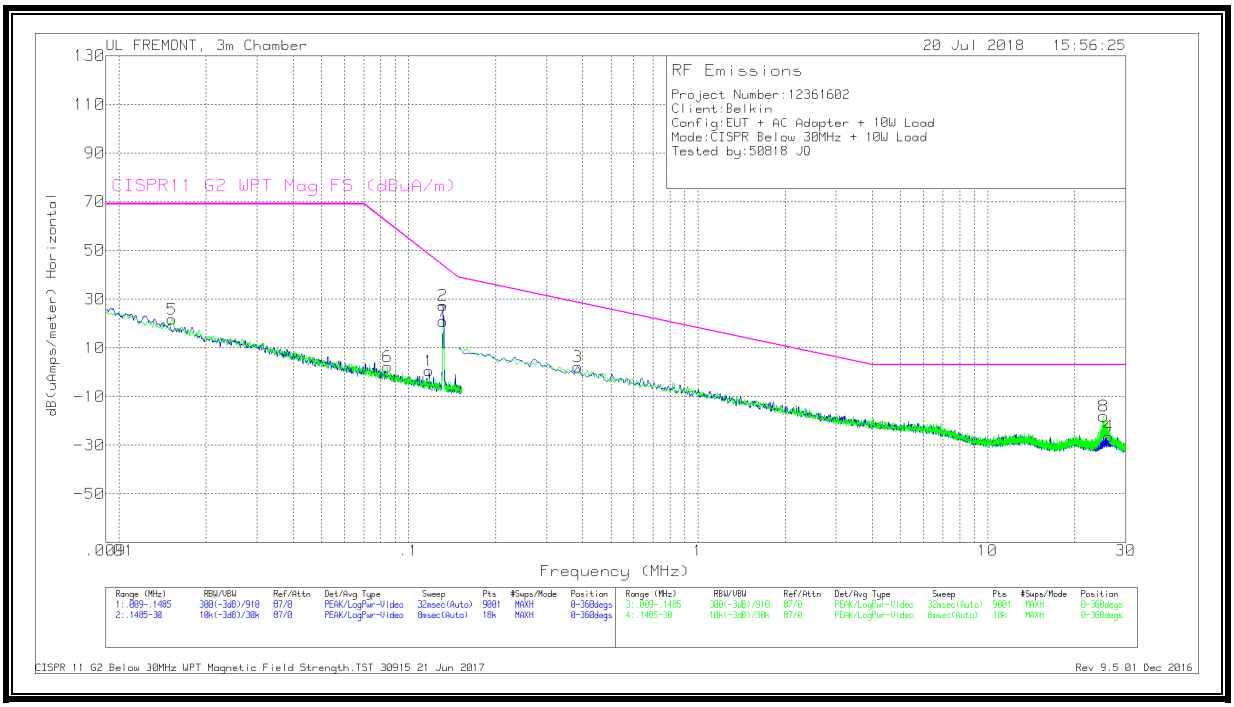
DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Corrected Reading dB(uAmps/meter)	CISPR11 G2 WPT Mag FS (dBuA/m)	Margin (dB)	Azimuth (Degs)
5	.01771	51.96	Pk	-35.1	1.4	18.26	69	-50.74	0-360
1	.01864	52.71	Pk	-35.5	1.4	18.61	69	-50.39	0-360
2	.13153	62.9	Pk	-40.1	1.4	24.2	43.84	-19.64	0-360
6	.13153	55.63	Pk	-40.1	1.4	16.93	43.84	-26.91	0-360
3	.38725	42.82	Pk	-40.6	1.5	3.72	28.52	-24.8	0-360
7	.86061	34.15	Pk	-40.4	1.5	-4.75	19.79	-24.54	0-360
4	22.9145	11.95	Pk	-41.7	1.7	-28.05	3	-31.05	0-360
8	22.95595	19.46	Pk	-41.7	1.7	-20.54	3	-23.54	0-360

Pk - Peak detector

8.3.4. OPERATING WITH 10W LOAD (WITHOUT 3mm AIRGAP)



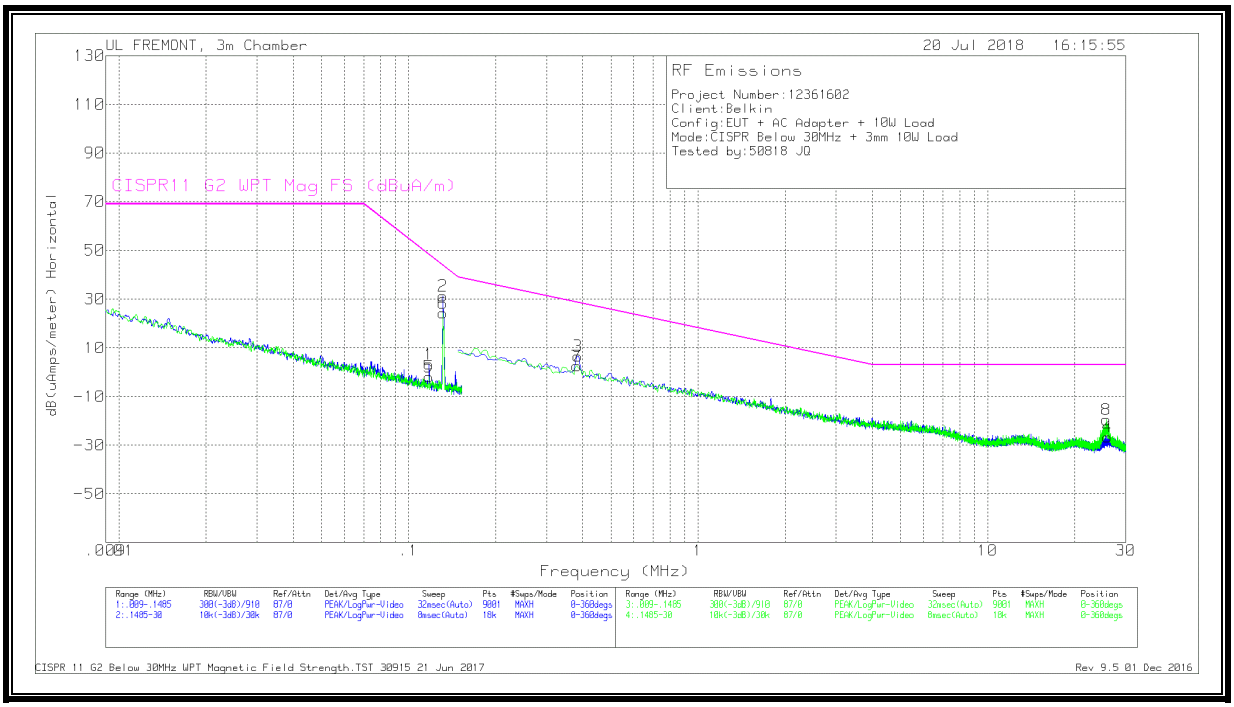
DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Corrected Reading dB(uAmps/meter)	CISPR11 G2 WPT Mag FS (dBuA/m)	Margin (dB)	Azimuth (Degs)
5	.01526	54.43	Pk	-34.1	1.4	21.73	69	-47.27	0-360
6	.08469	40.31	Pk	-39.5	1.4	2.21	61.4	-59.19	0-360
1	.11774	39.18	Pk	-40.1	1.4	.48	48.26	-47.78	0-360
2	.13151	66.1	Pk	-40.1	1.4	27.4	43.85	-16.45	0-360
7	.13152	59.64	Pk	-40.1	1.4	20.94	43.84	-22.9	0-360
3	.38394	41.29	Pk	-40.6	1.5	2.19	28.62	-26.43	0-360
8	25.15114	22.37	Pk	-42.1	1.7	-18.03	3	-21.03	0-360
4	26.18739	14.3	Pk	-42.3	1.7	-26.3	3	-29.3	0-360

Pk - Peak detector

8.3.5. OPERATING WITH 10W LOAD (3mm AIRGAP)



DATA

Trace Markers

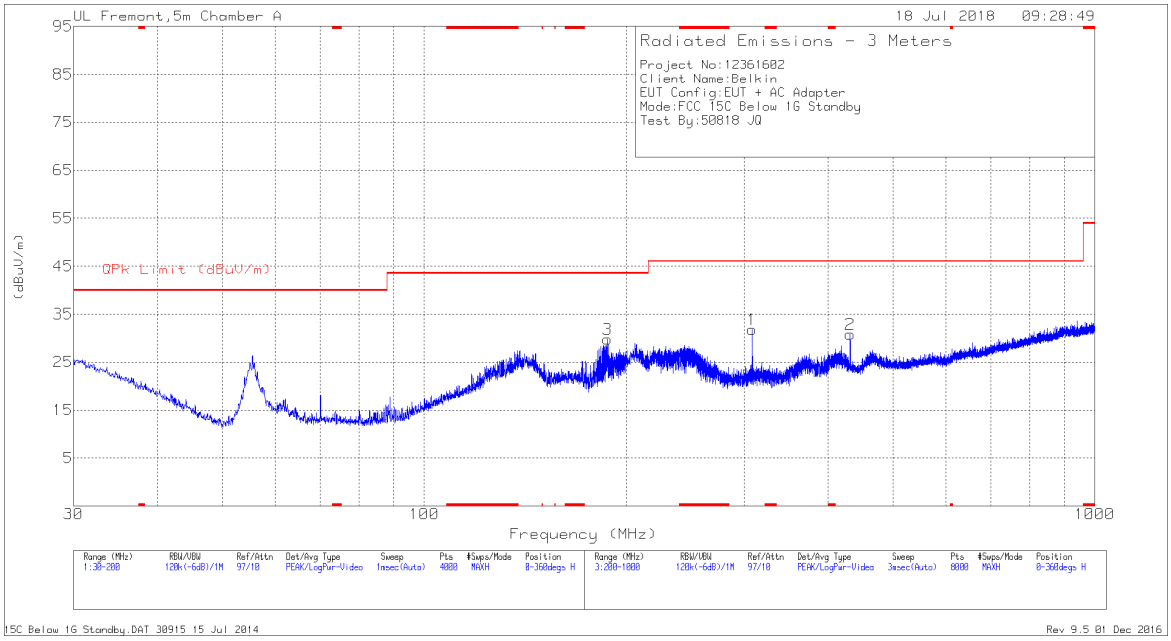
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Corrected Reading dB(uAmps/meter)	CISPR11 G2 WPT Mag FS (dBuA/m)	Margin (dB)	Azimuth (Degs)
5	.1177	36.84	Pk	-40.1	1.4	-1.86	48.27	-50.13	0-360
1	.11774	41.99	Pk	-40.1	1.4	3.29	48.26	-44.97	0-360
2	.13152	70.02	Pk	-40.1	1.4	31.32	43.84	-12.52	0-360
6	.13152	63	Pk	-40.1	1.4	24.3	43.84	-19.54	0-360
7	.38145	41.58	Pk	-40.6	1.5	2.48	28.69	-26.21	0-360
3	.38394	45.69	Pk	-40.6	1.5	6.59	28.62	-22.03	0-360
8	25.72481	20.99	Pk	-42.2	1.7	-19.51	3	-22.51	0-360
4	25.91216	14.04	Pk	-42.3	1.7	-26.56	3	-29.56	0-360

Pk - Peak detector

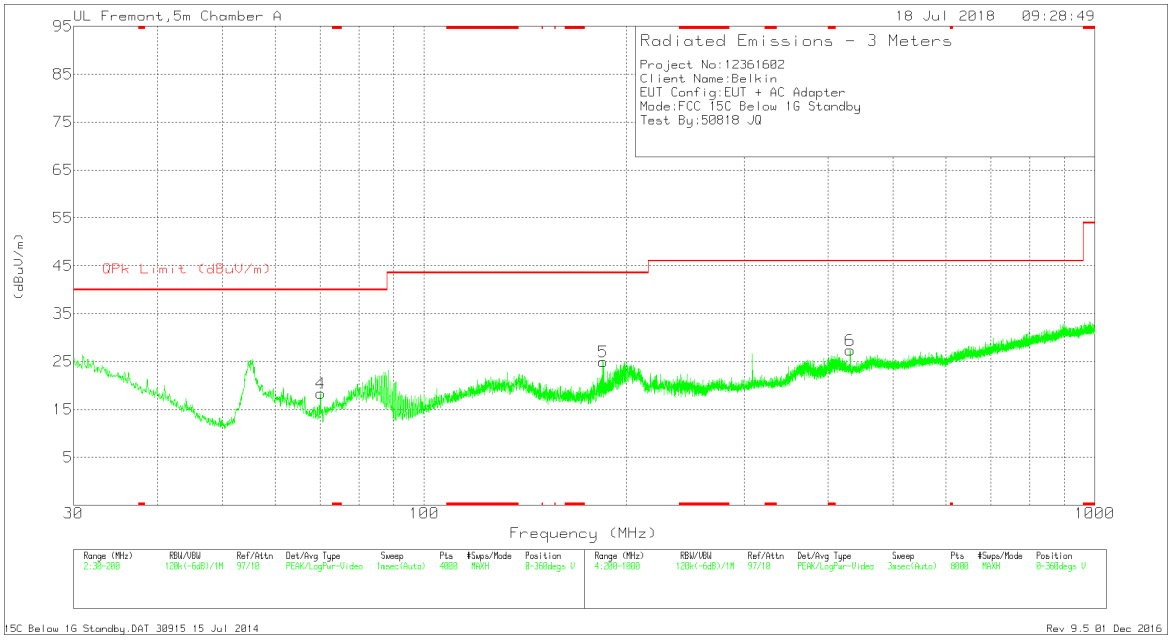
8.4. FCC TX SPURIOUS EMISSION 30 TO 1000 MHz

8.4.1. STANDBY CONFIGURATION

HORIZONTAL PLOT



VERTICAL PLOT



DATA

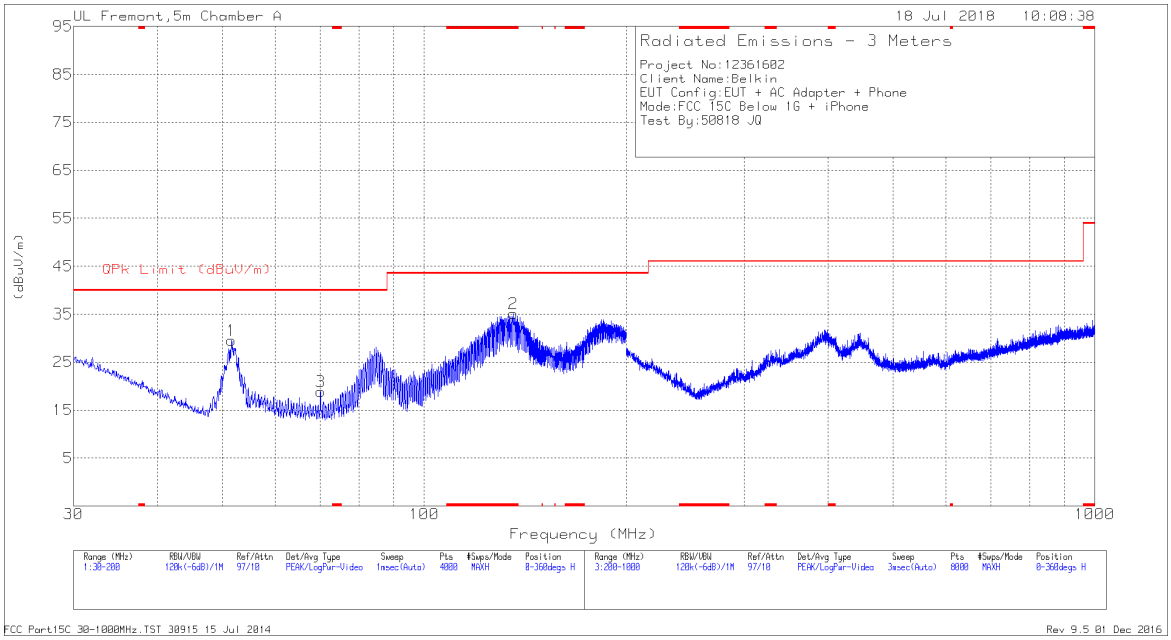
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	70.0454	32.93	Pk	12.1	-26.7	18.33	40	-21.67	0-360	100	V
5	185.0376	35.37	Pk	15.1	-25.5	24.97	43.52	-18.55	0-360	100	V
3	187.6308	40.12	Pk	15.2	-25.5	29.82	43.52	-13.7	0-360	100	H
1	308.4141	38.82	Pk	17.6	-24.6	31.82	46.02	-14.2	0-360	100	H
2	431.7301	35.43	Pk	20.6	-25.2	30.83	46.02	-15.19	0-360	200	H
6	431.7301	31.92	Pk	20.6	-25.2	27.32	46.02	-18.7	0-360	101	V

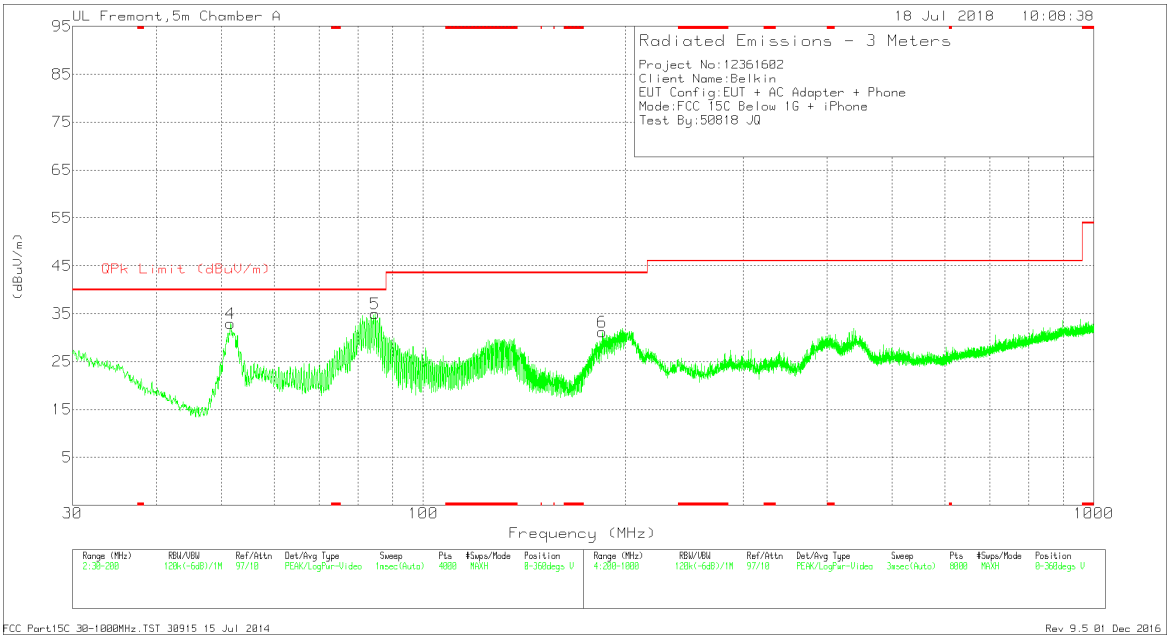
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

8.4.2. OPERATING WITH PHONE (WITHOUT 3mm AIRGAP)

HORIZONTAL PLOT



VERTICAL PLOT



DATA

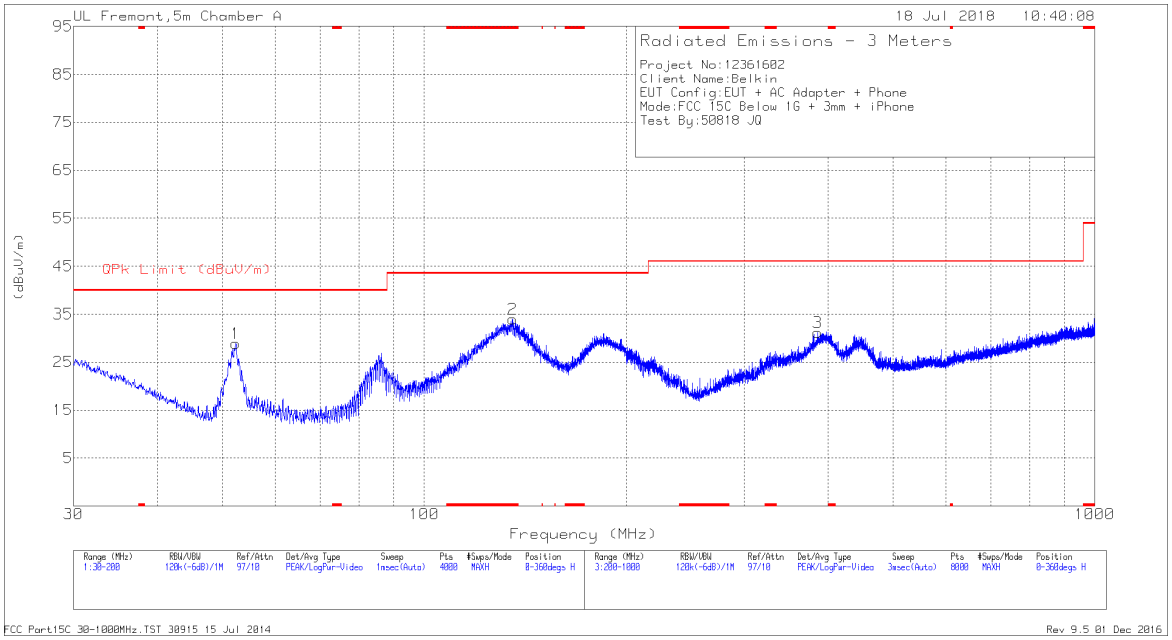
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 135.8949	43.6	Pk	17.5	-26	35.1	43.52	-8.42	0-360	200	H
1	51.6381	45.29	Pk	11.3	-27	29.59	40	-10.41	0-360	400	H
4	51.6381	48.72	Pk	11.3	-27	33.02	40	-6.98	0-360	100	V
3	70.0454	33.43	Pk	12.1	-26.7	18.83	40	-21.17	0-360	100	H
5	84.7967	50.35	Pk	11.3	-26.6	35.05	40	-4.95	0-360	100	V
		35.97	Qp	11.3	-26.6	20.67	40	-19.33	58	400	V
6	185.0801	41.53	Pk	15.1	-25.5	31.13	43.52	-12.39	0-360	100	V

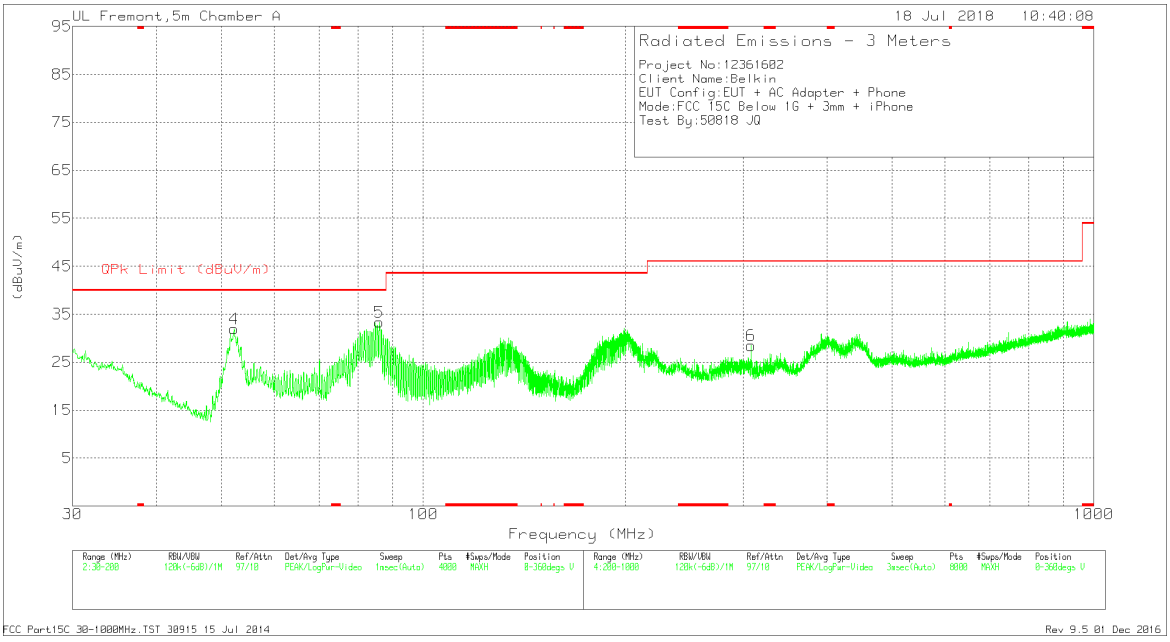
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
Qp - Quasi-Peak detector

8.4.3. OPERATING WITH PHONE (3mm AIRGAP)

HORIZONTAL PLOT



VERTICAL PLOT



DATA

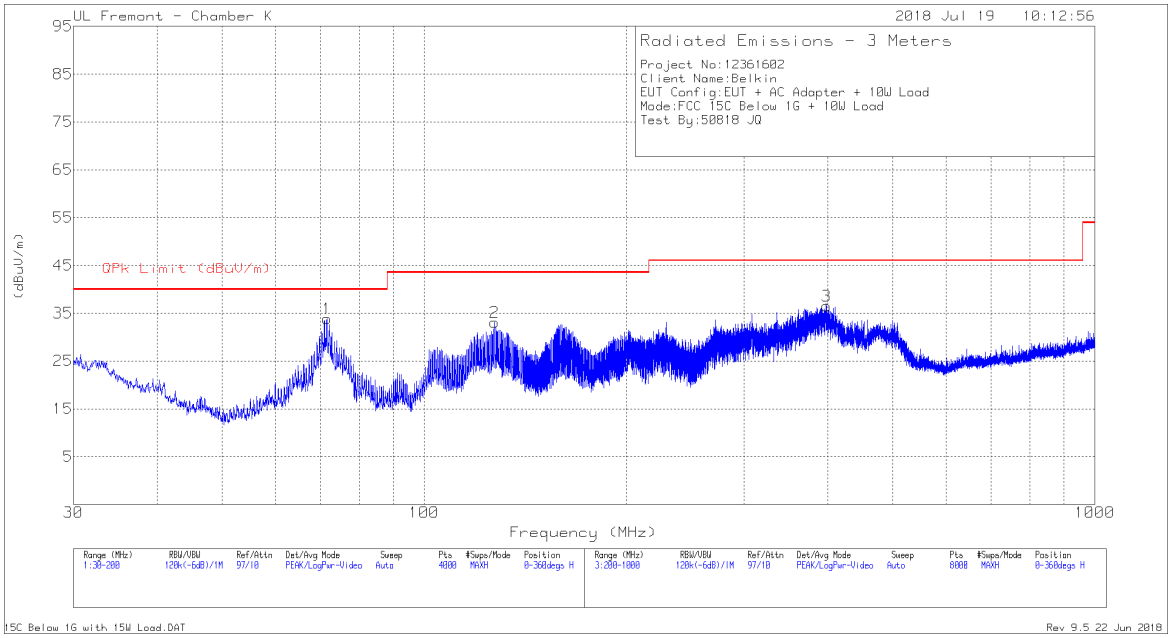
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 135.3848	42.35	Pk	17.6	-26	33.95	43.52	-9.57	0-360	200	H
4	52.2333	47.77	Pk	11.2	-27	31.97	40	-8.03	0-360	100	V
1	52.3608	44.69	Pk	11.2	-27	28.89	40	-11.11	0-360	300	H
5	86.072	48.6	Pk	11.3	-26.6	33.3	40	-6.7	0-360	100	V
6	308.4141	35.46	Pk	17.6	-24.6	28.46	46.02	-17.56	0-360	101	V
3	386.5242	37.06	Pk	19.1	-25	31.16	46.02	-14.86	0-360	100	H

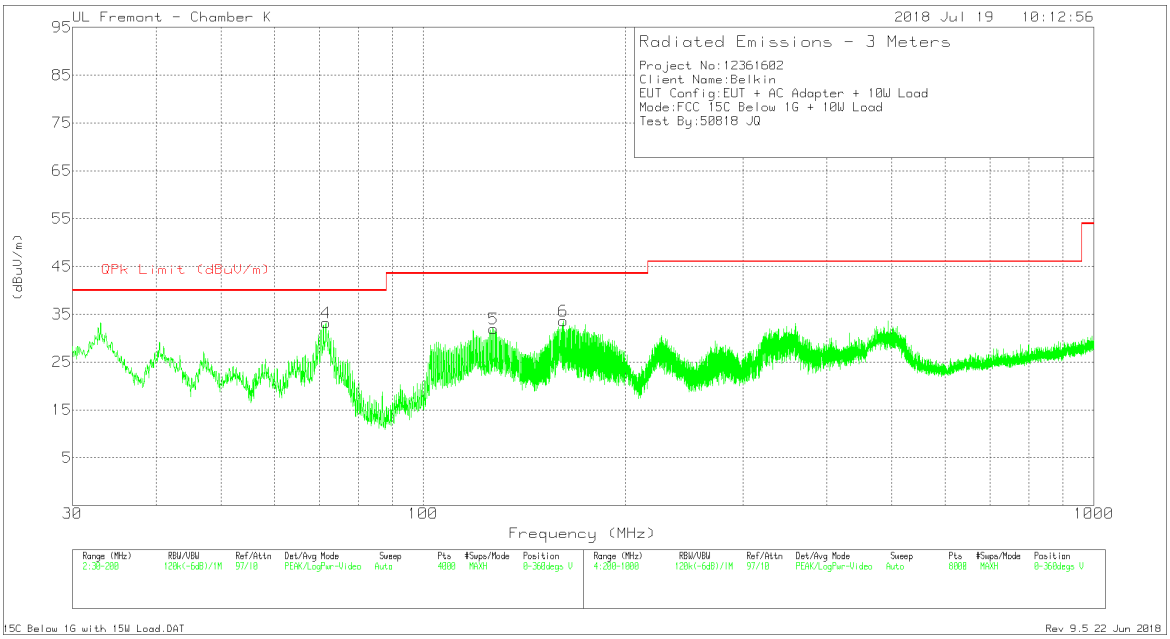
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

8.4.4. OPERATING WITH 10W LOAD (WITHOUT 3mm AIRGAP)

HORIZONTAL PLOT



VERTICAL PLOT



DATA

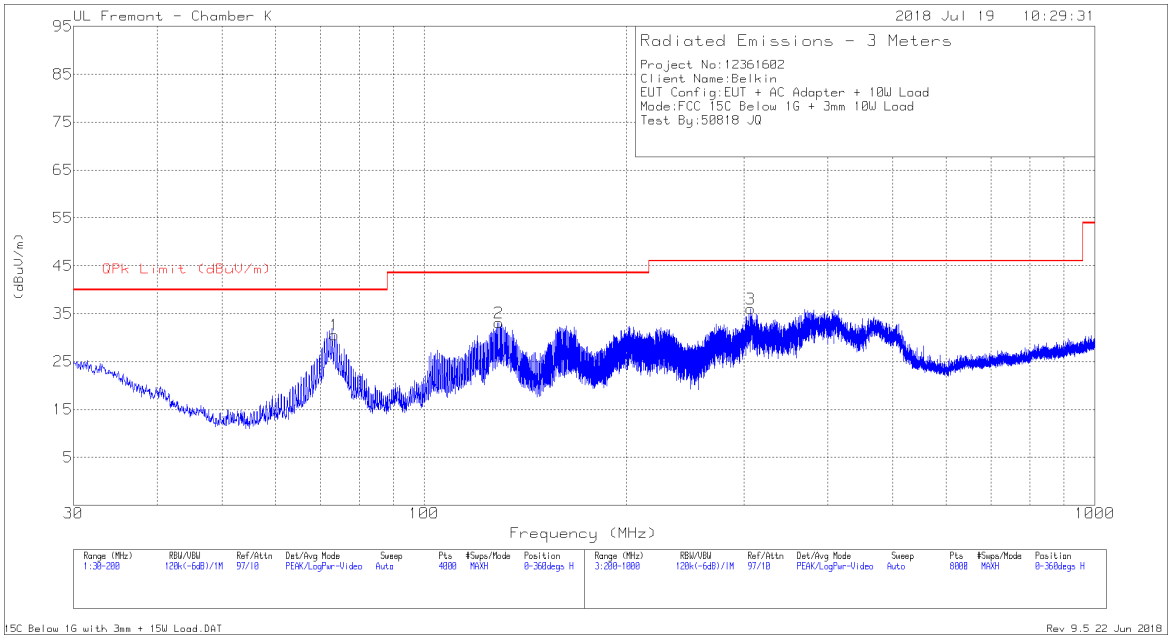
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T407 (dB)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	71.6183	48.97	Pk	12.2	-27.3	33.87	40	-6.13	0-360	299	H
2	* 127.3077	42.08	Pk	17.8	-26.8	33.08	43.52	-10.44	0-360	199	H
4	71.6183	48.36	Pk	12.2	-27.3	33.26	40	-6.74	0-360	100	V
5	* 127.3502	40.91	Pk	17.8	-26.8	31.91	43.52	-11.61	0-360	100	V
6	161.6991	43.98	Pk	16.2	-26.6	33.58	43.52	-9.94	0-360	100	V
3	398.0257	42.27	Pk	19.5	-25.3	36.47	46.02	-9.55	0-360	100	H

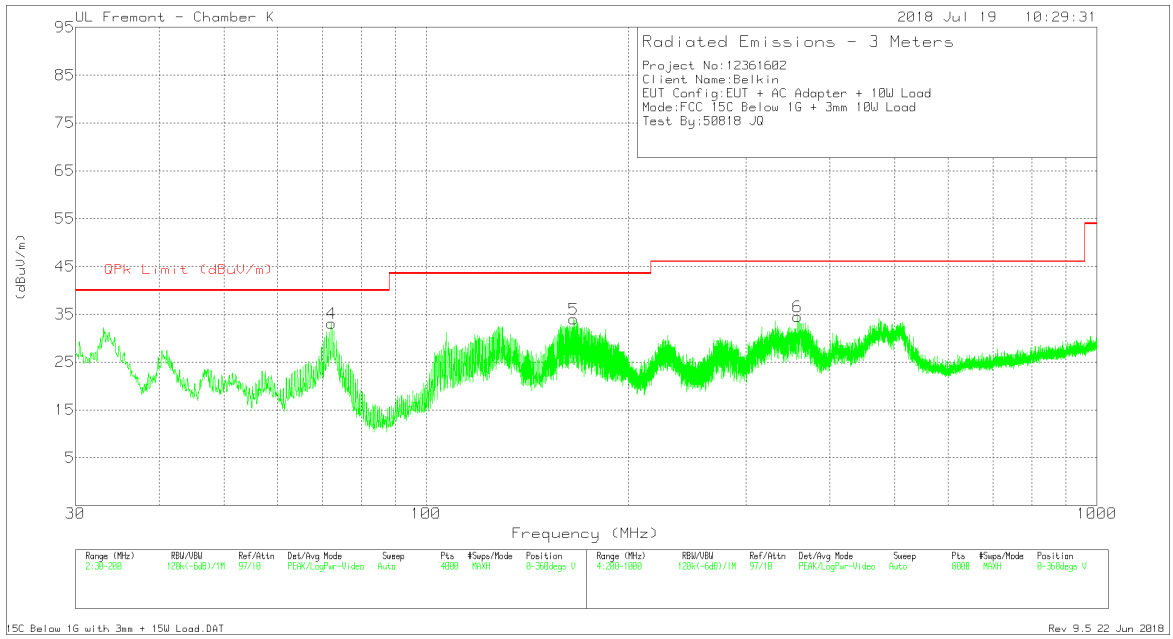
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

8.4.5. OPERATING WITH 10W (3mm AIRGAP)

HORIZONTAL PLOT



VERTICAL PLOT



DATA

Trace Markers

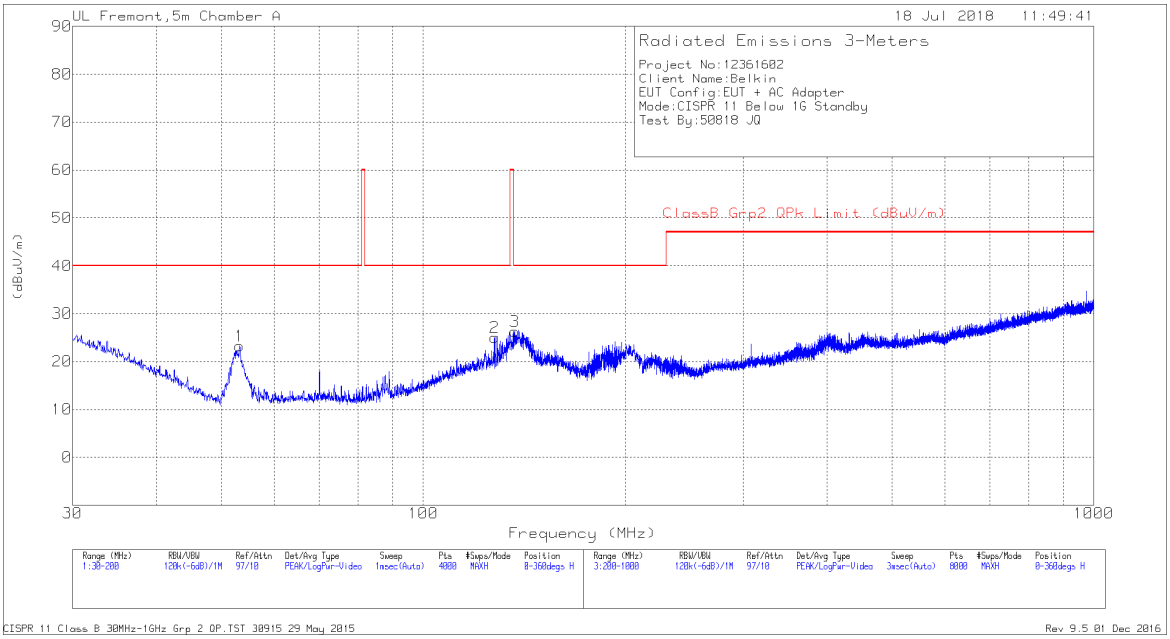
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T407 (dB)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 73.4888	45.73	Pk	12.1	-27.3	30.53	40	-9.47	0-360	199	H
2	* 129.2207	42.14	Pk	17.8	-26.8	33.14	43.52	-10.38	0-360	199	H
4	72.2134	48.18	Pk	12.2	-27.3	33.08	40	-6.92	0-360	100	V
5	* 166.0777	44.54	Pk	16	-26.6	33.94	43.52	-9.58	0-360	100	V
3	306.9139	44.11	Pk	17.6	-25.7	36.01	46.02	-10.01	0-360	100	H
6	357.7205	41.51	Pk	18.7	-25.7	34.51	46.02	-11.51	0-360	100	V

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

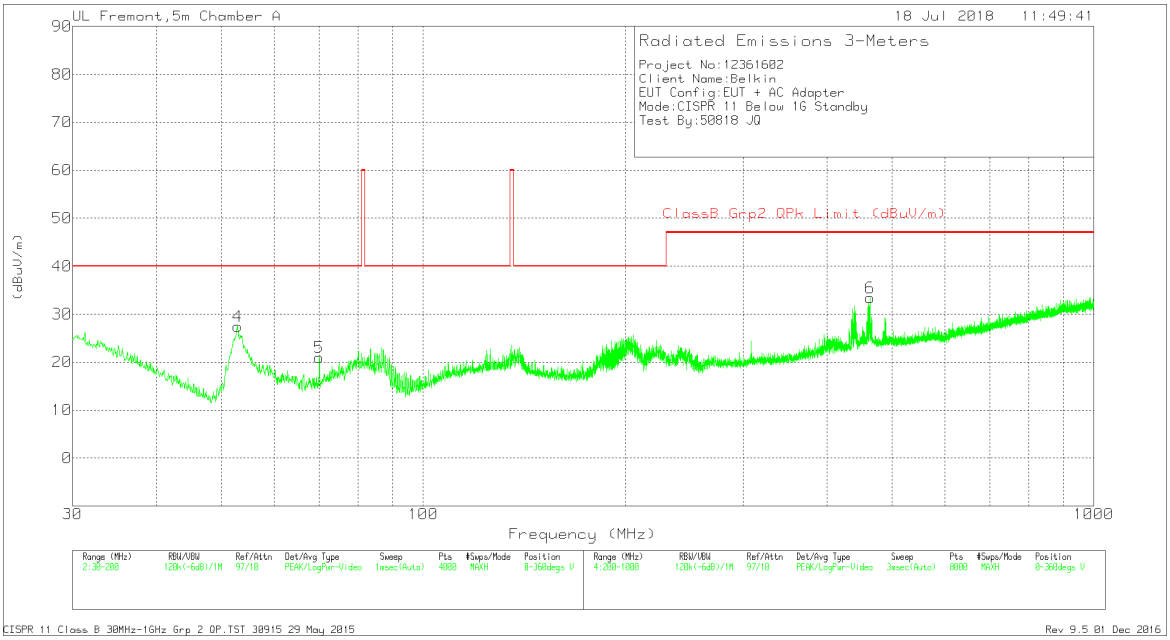
8.5. IC / CISPR 11 TX SPURIOUS EMISSION 30 TO 1000 MHz

8.5.1. STANDBY CONFIGURATION

HORIZONTAL PLOT



VERTICAL PLOT



DATA

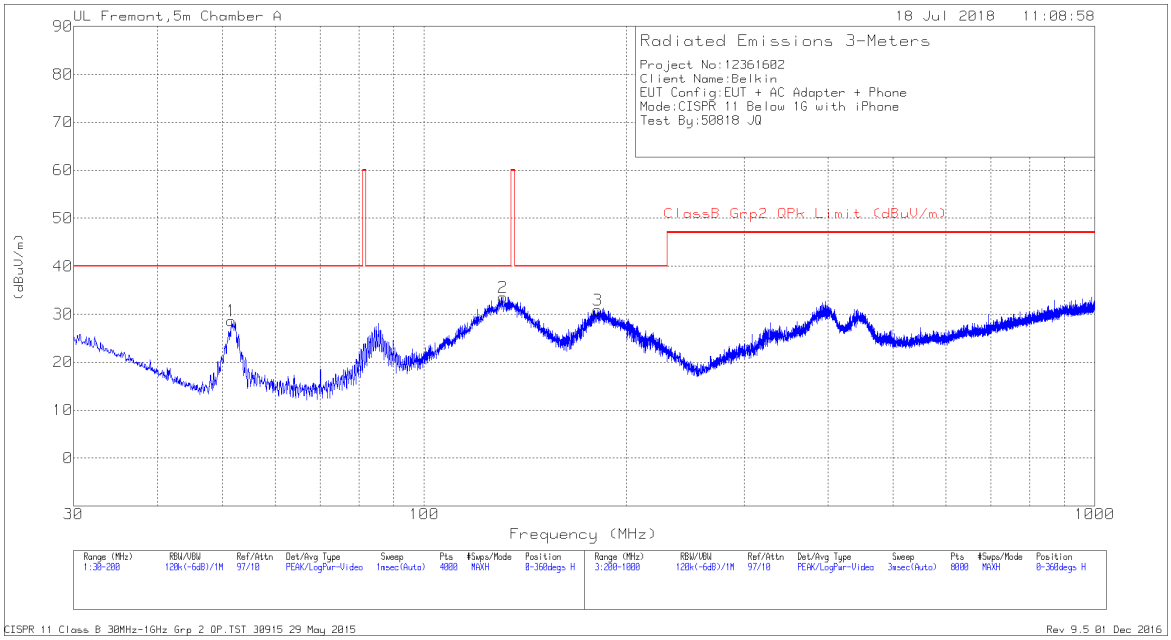
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	ClassB Grp2 QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	52.8709	43.35	Pk	11.1	-27	27.45	40	-12.55	0-360	100	V
1	53.2535	39.13	Pk	11.1	-27	23.23	40	-16.77	0-360	300	H
5	70.0029	35.55	Pk	12.1	-26.7	20.95	40	-19.05	0-360	100	V
2	127.7328	33.02	Pk	18.1	-26.1	25.02	40	-14.98	0-360	300	H
3	136.8301	34.94	Pk	17.4	-26	26.34	40	-13.66	0-360	200	H
6	463.5343	37.5	Pk	21.1	-25.2	33.4	47	-13.6	0-360	101	V

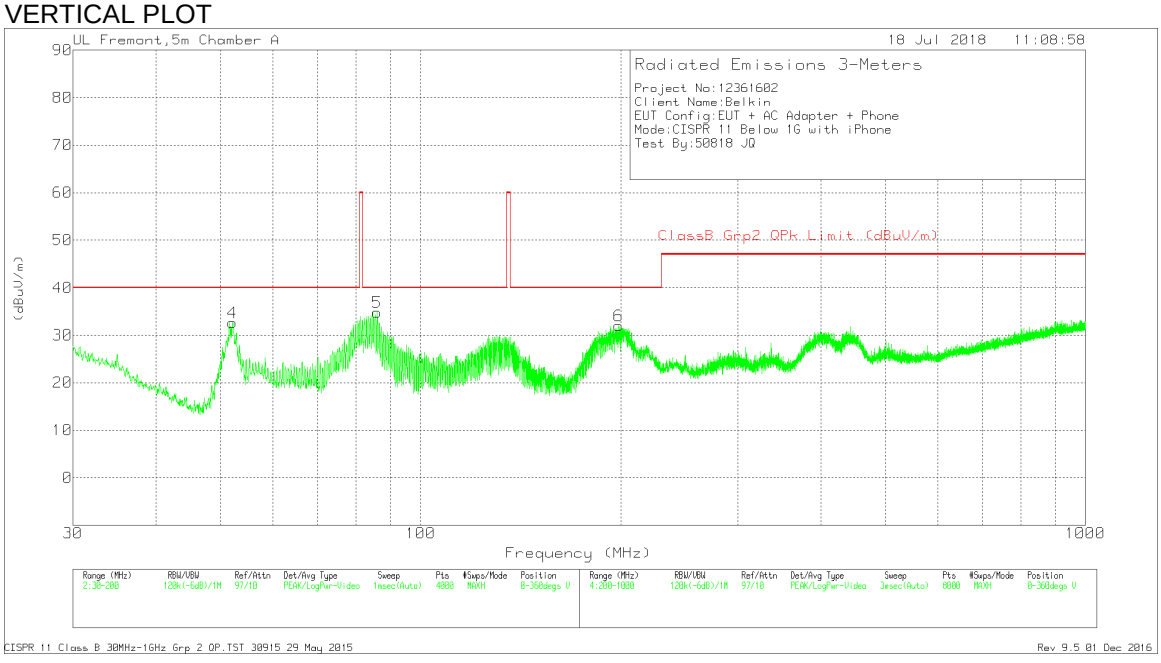
Pk - Peak detector

8.5.2. OPERATING WITH PHONE (WITHOUT 3mm AIRGAP)

HORIZONTAL PLOT



VERTICAL PLOT



DATA

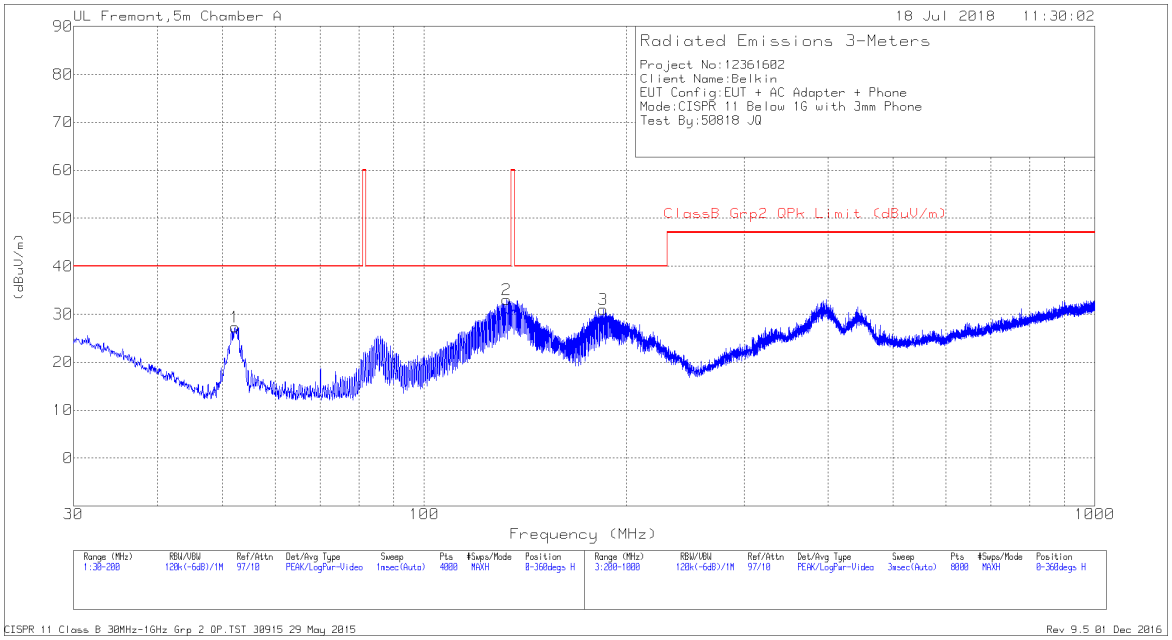
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	ClassB Grp2 QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	51.5956	44.36	Pk	11.3	-27	28.66	40	-11.34	0-360	300	H
4	52.1482	48.48	Pk	11.2	-27	32.68	40	-7.32	0-360	100	V
5	86.072	50.17	Pk	11.3	-26.6	34.87	40	-5.13	0-360	100	V
2	131.0486	41.69	Pk	17.9	-26	33.59	40	-6.41	0-360	200	H
3	181.4667	41.24	Pk	15.2	-25.5	30.94	40	-9.06	0-360	200	H
6	198.5136	40.91	Pk	16.4	-25.3	32.01	40	-7.99	0-360	100	V

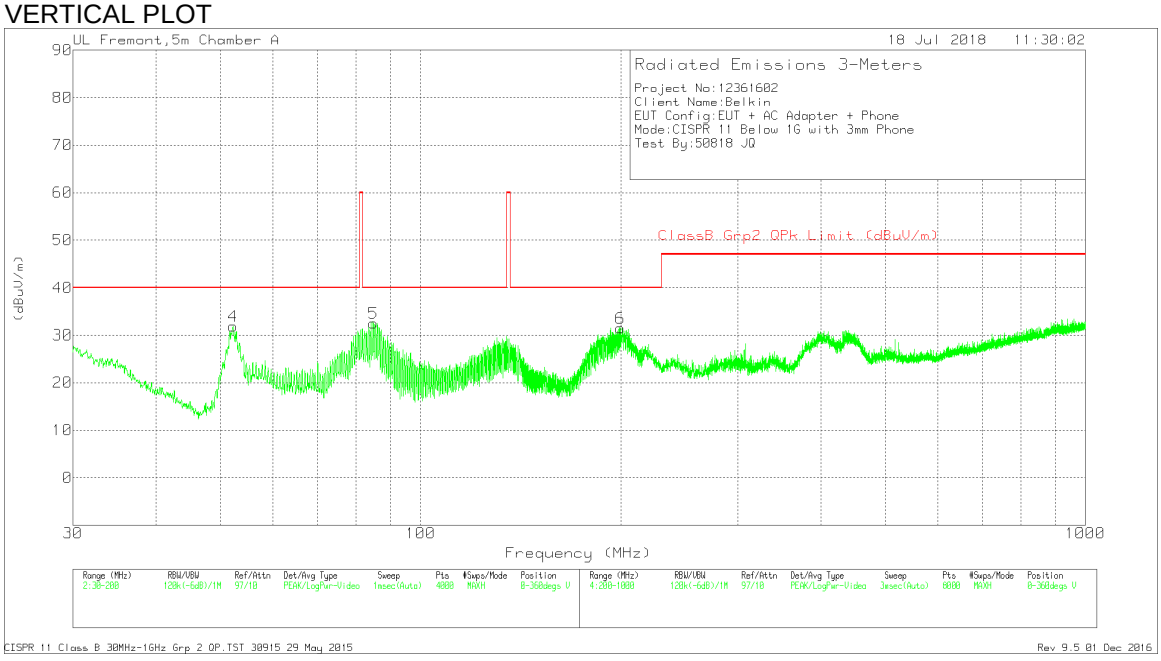
Pk - Peak detector

8.5.3. OPERATING WITH PHONE (3mm AIRGAP)

HORIZONTAL PLOT



VERTICAL PLOT



DATA

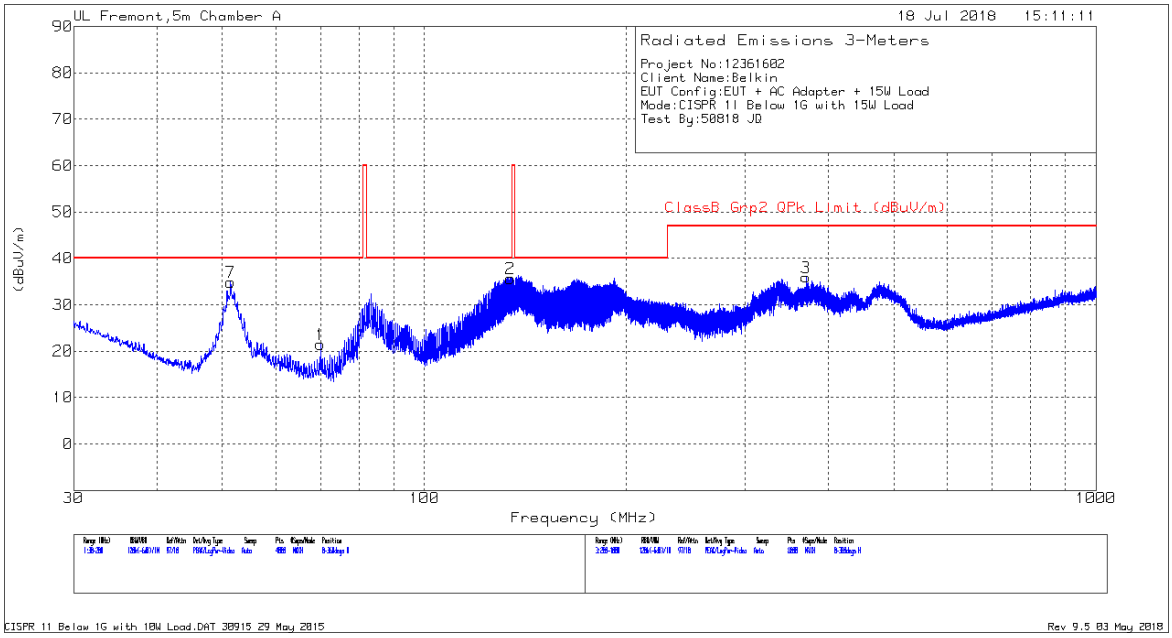
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	ClassB Grp2 QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	52.1907	43.12	Pk	11.2	-27	27.32	40	-12.68	0-360	300	H
4	52.1907	47.69	Pk	11.2	-27	31.89	40	-8.11	0-360	100	V
5	84.8817	47.81	Pk	11.3	-26.6	32.51	40	-7.49	0-360	100	V
2	132.7916	41.37	Pk	17.7	-26	33.07	40	-6.93	0-360	200	H
3	185.0376	41.46	Pk	15.1	-25.5	31.06	40	-8.94	0-360	200	H
6	199.7889	40.36	Pk	16.5	-25.3	31.56	40	-8.44	0-360	100	V

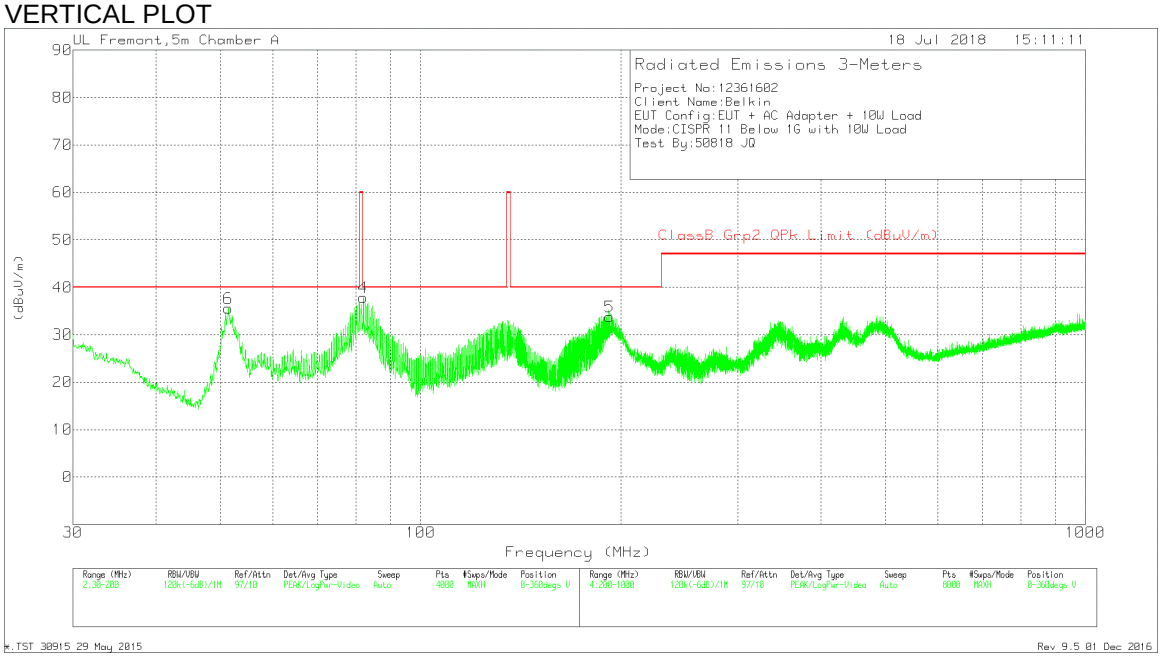
Pk - Peak detector

8.5.4. OPERATING WITH 10W LOAD (WITHOUT 3mm AIRGAP)

HORIZONTAL PLOT



VERTICAL PLOT



DATA

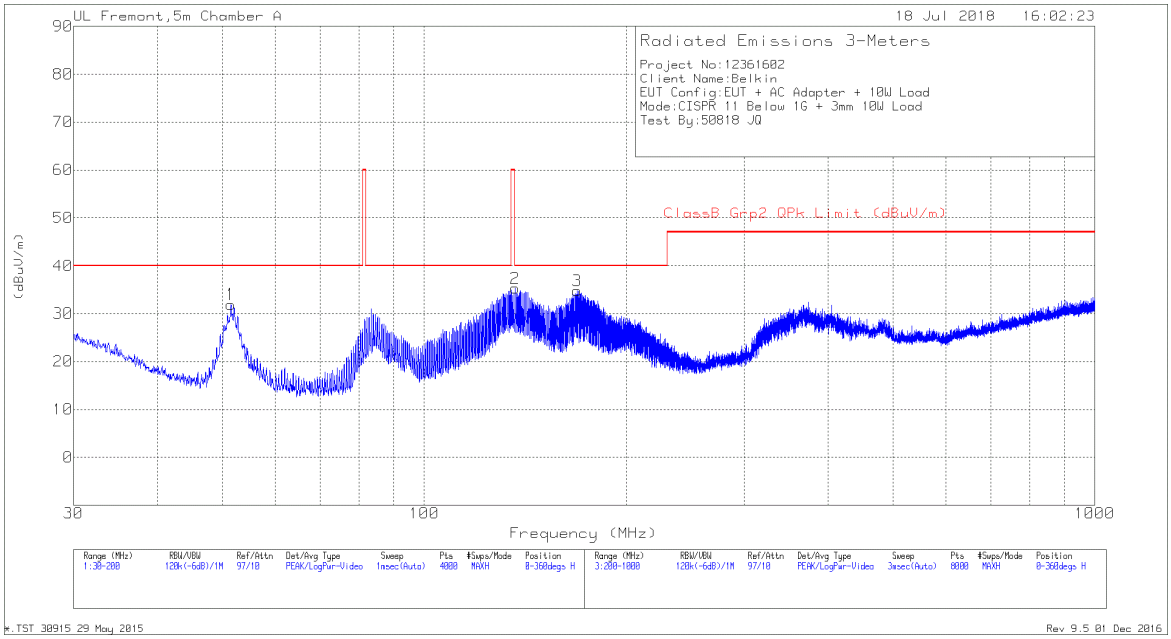
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	ClassB Grp2 QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	51.4255	51.27	Pk	11.3	-27	35.57	40	-4.43	0-360	100	V
		46.26	Qp	11.3	-27	30.56	40	-9.44	311	110	V
1	70.0029	36.05	Pk	12.1	-26.7	21.45	40	-18.55	0-360	101	H
4	82.0335	53.09	Pk	11.4	-26.6	37.89	40	-2.11	0-360	100	V
		49.94	Qp	11.4	-26.6	34.74	40	-5.26	297	118	V
2	134.0669	44.06	Pk	17.6	-26	35.66	40	-4.34	0-360	200	H
		43.1	Qp	17.6	-26	34.7	40	-5.3	307	222	H
5	192.222	43.7	Pk	15.5	-25.4	33.8	40	-6.2	0-360	100	V
3	370.0221	41.99	Pk	18.8	-24.9	35.89	47	-11.11	0-360	100	H
7	51.4255	50.59	Pk	11.3	-27	34.89	40	-5.11	0-360	400	H

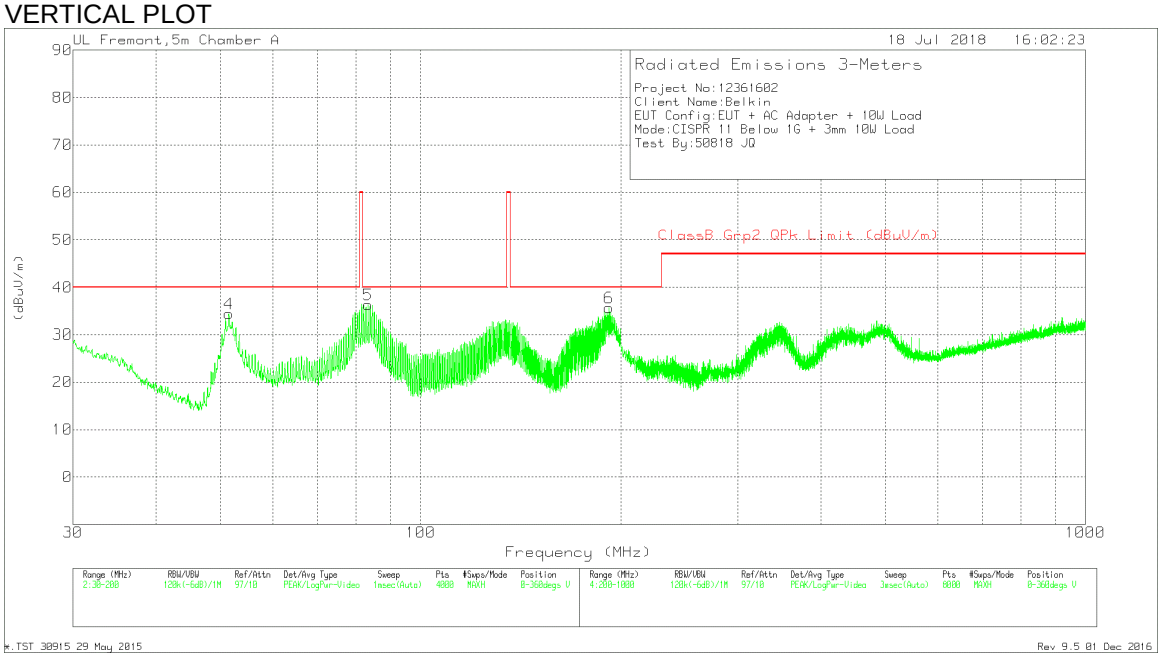
Pk - Peak detector
Qp - Quasi-Peak detector

8.5.5. OPERATING WITH 10W LOAD (3mm AIRGAP)

HORIZONTAL PLOT



VERTICAL PLOT



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	ClassB Grp2 QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	51.4681	50.14	Pk	11.3	-27	34.44	40	-5.56	0-360	100	V
		48.24	Qp	11.3	-27	32.54	40	-7.46	46	103	V
1	51.5106	47.66	Pk	11.3	-27	31.96	40	-8.04	0-360	300	H
5	83.3513	51.68	Pk	11.3	-26.6	36.38	40	-3.62	0-360	100	V
		49.6	Qp	11.3	-26.6	34.3	40	-5.7	280	101	V
2	136.6601	43.94	Pk	17.4	-26	35.34	40	-4.66	0-360	200	H
		40.28	Qp	17.4	-26	31.68	40	-8.32	288	400	H
3	169.181	44.69	Pk	15.8	-25.7	34.79	40	-5.21	0-360	200	H
		44.98	Qp	15.8	-25.7	35.08	40	-4.92	274	186	H
6	191.8819	45.57	Pk	15.5	-25.4	35.67	40	-4.33	0-360	100	V
		28.14	Qp	15.5	-25.4	18.24	40	-21.76	298	113	V

Pk - Peak detector
Qp - Quasi-Peak detector

9. AC POWER LINE CONDUCTED EMISSIONS

9.1. 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.

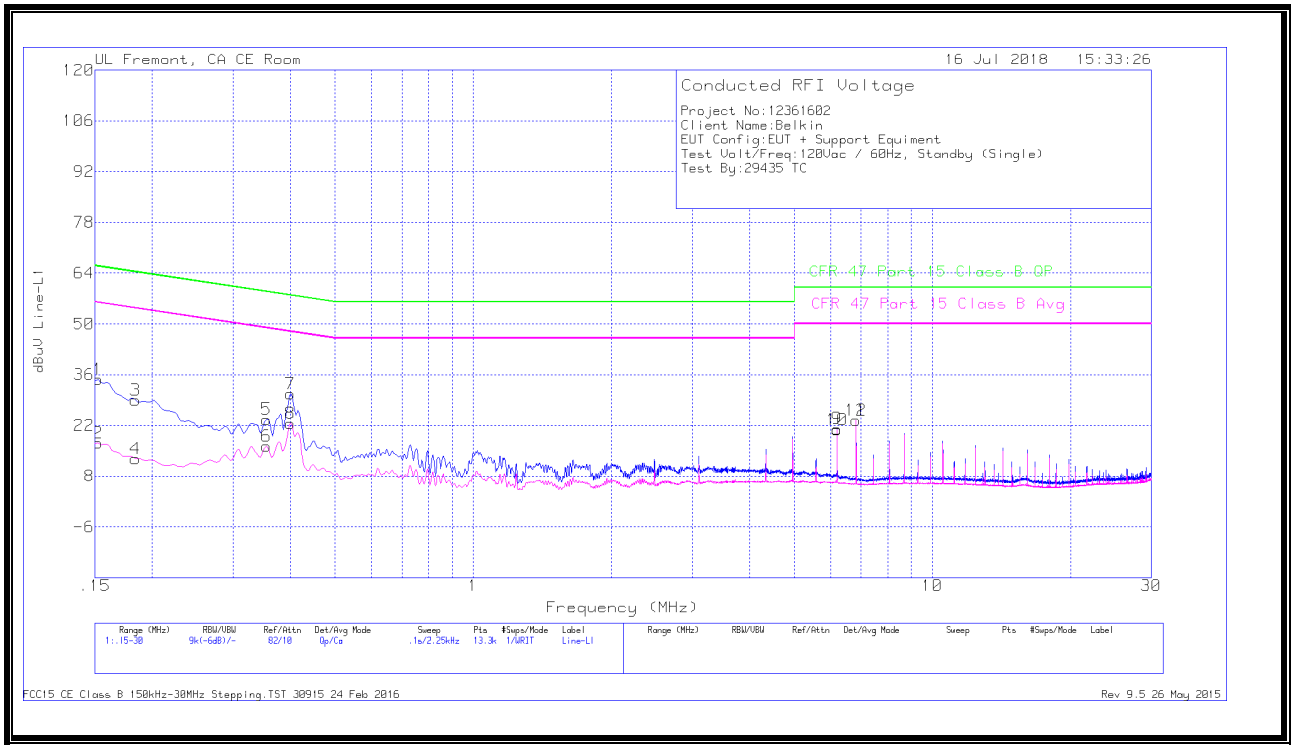
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

9.2. RESULTS

9.2.1. STANDBY MODE

LINE 1 RESULTS



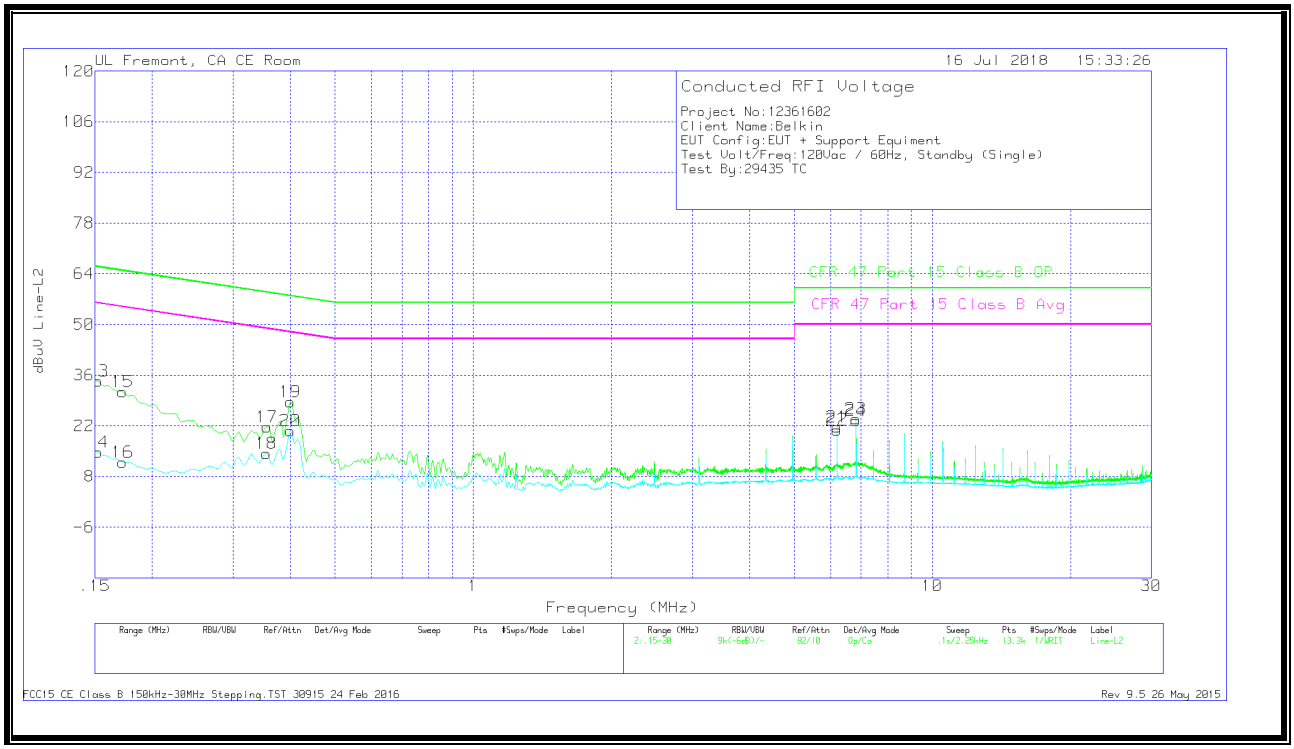
WORST EMISSIONS

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	.15225	24.5	Qp	.1	0	10.1	34.7	65.88	-31.18	-	-
2	.15225	6.98	Ca	.1	0	10.1	17.18	-	-	55.88	-38.7
3	.18375	18.89	Qp	0	0	10.1	28.99	64.31	-35.32	-	-
4	.18375	2.75	Ca	0	0	10.1	12.85	-	-	54.31	-41.46
5	.35475	13.56	Qp	0	0	10.1	23.66	58.85	-35.19	-	-
6	.35475	6.1	Ca	0	0	10.1	16.2	-	-	48.85	-32.65
7	.39975	20.67	Qp	0	0	10.1	30.77	57.86	-27.09	-	-
8	.39975	12.49	Ca	0	0	10.1	22.59	-	-	47.86	-25.27
9	6.2025	10.66	Qp	0	.2	10.2	21.06	60	-38.94	-	-
10	6.2025	10.37	Ca	0	.2	10.2	20.77	-	-	50	-29.23
11	6.82125	13.03	Qp	0	.2	10.2	23.43	60	-36.57	-	-
12	6.82125	12.98	Ca	0	.2	10.2	23.38	-	-	50	-26.62

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

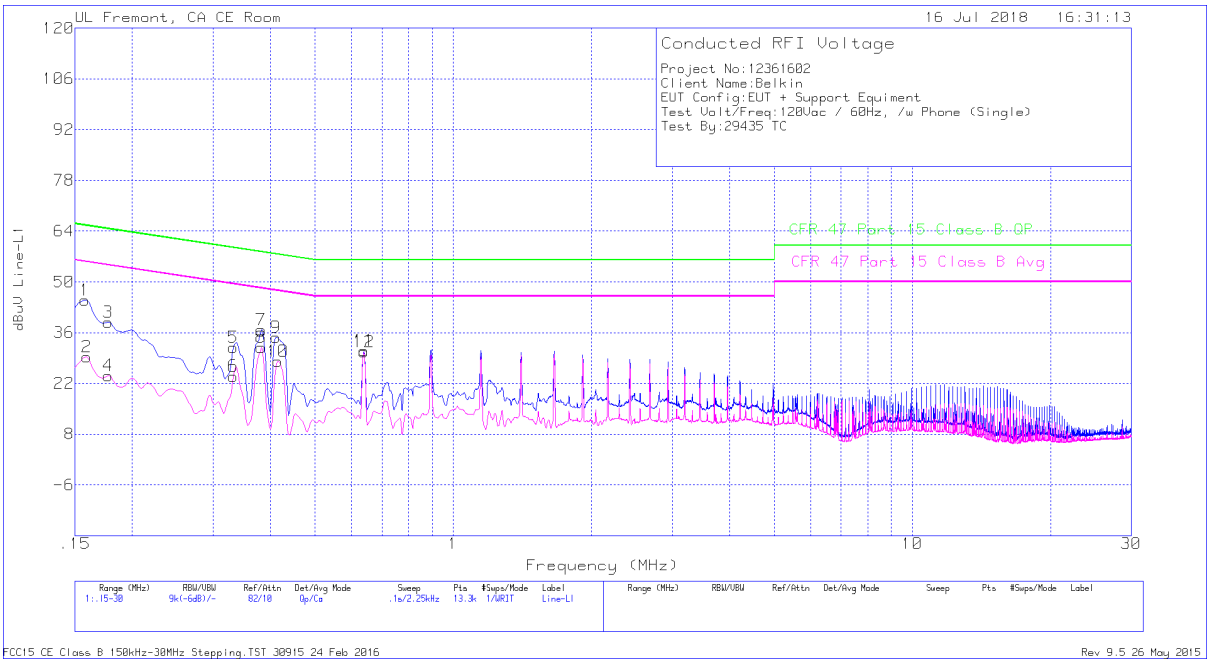
Trace Markers

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	.15225	24.22	Qp	.1	0	10.1	34.42	65.88	-31.46	-	-
14	.15225	4.5	Ca	.1	0	10.1	14.7	-	-	55.88	-41.18
15	.1725	21.23	Qp	0	0	10.1	31.33	64.84	-33.51	-	-
16	.1725	1.85	Ca	0	0	10.1	11.95	-	-	54.84	-42.89
17	.35587	11.64	Qp	0	0	10.1	21.74	58.82	-37.08	-	-
18	.35475	4.24	Ca	0	0	10.1	14.34	-	-	48.85	-34.51
19	.39975	18.53	Qp	0	0	10.1	28.63	57.86	-29.23	-	-
20	.39975	10.5	Ca	0	0	10.1	20.6	-	-	47.86	-27.26
21	6.2025	11.23	Qp	0	.2	10.2	21.63	60	-38.37	-	-
22	6.2025	10.48	Ca	0	.2	10.2	20.88	-	-	50	-29.12
23	6.82125	13.48	Qp	0	.2	10.2	23.88	60	-36.12	-	-
24	6.82125	12.96	Ca	0	.2	10.2	23.36	-	-	50	-26.64

Qp - Quasi-Peak detector
Ca - CISPR average detection

9.2.2. OPERATING MODE WITH PHONE (WITHOUT 3mm AIRGAP)

LINE 1 RESULTS



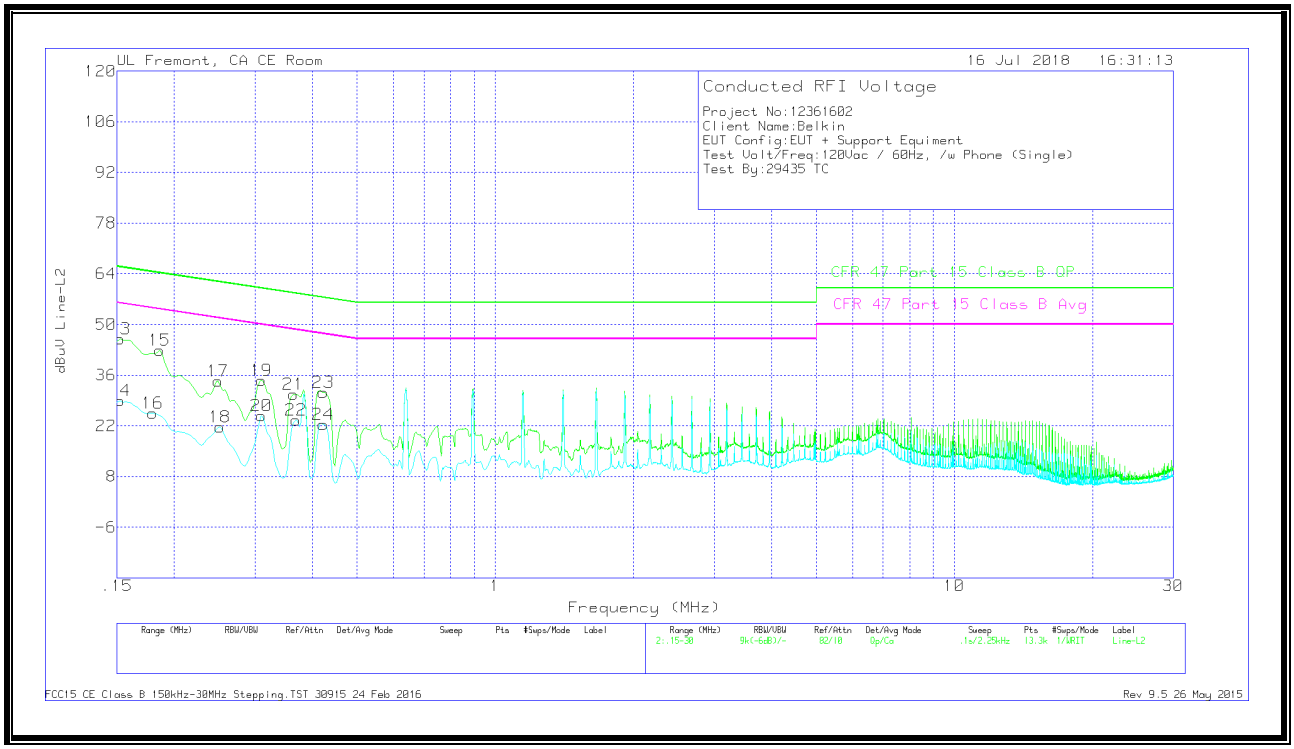
WORST EMISSIONS

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	.15788	34.73	Qp	.1	0	10.1	44.93	65.57	-20.64	-	-
2	.159	19.12	Ca	.1	0	10.1	29.32	-	-	55.52	-26.2
3	.177	28.7	Qp	0	0	10.1	38.8	64.63	-25.83	-	-
4	.177	14.08	Ca	0	0	10.1	24.18	-	-	54.63	-30.45
5	.33225	21.81	Qp	0	0	10.1	31.91	59.39	-27.48	-	-
6	.33225	13.91	Ca	0	0	10.1	24.01	-	-	49.39	-25.38
7	.38175	26.69	Qp	0	0	10.1	36.79	58.24	-21.45	-	-
8	.38175	21.85	Ca	0	0	10.1	31.95	-	-	48.24	-16.29
9	.411	24.64	Qp	0	0	10.1	34.74	57.63	-22.89	-	-
10	.4155	18.07	Ca	0	0	10.1	28.17	-	-	47.54	-19.37
11	.63825	20.99	Qp	0	0	10.1	31.09	56	-24.91	-	-
12	.63825	20.62	Ca	0	0	10.1	30.72	-	-	46	-15.28

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

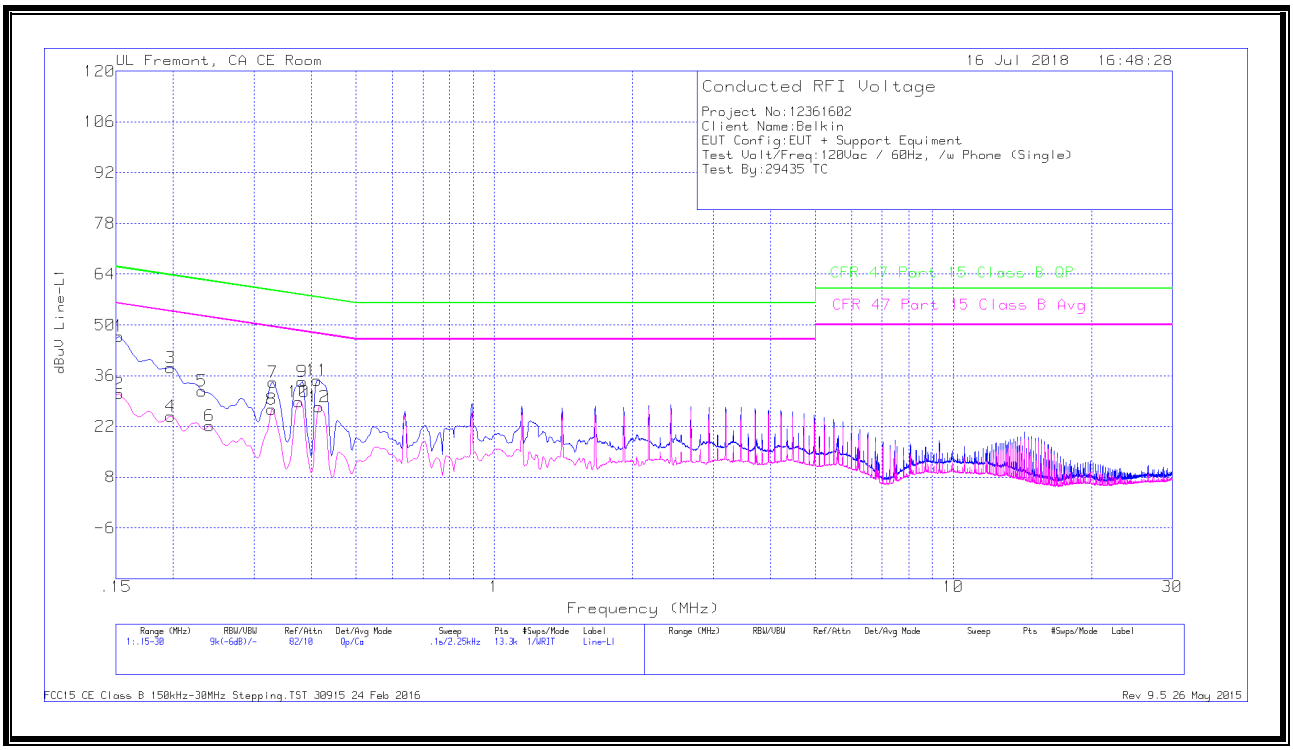
Trace Markers

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	.15225	35.73	Qp	.1	0	10.1	45.93	65.88	-19.95	-	-
14	.15225	18.69	Ca	.1	0	10.1	28.89	-	-	55.88	-26.99
15	.186	32.78	Qp	0	0	10.1	42.88	64.21	-21.33	-	-
16	.17925	15.4	Ca	0	0	10.1	25.5	-	-	54.52	-29.02
17	.249	24.19	Qp	0	0	10.1	34.29	61.79	-27.5	-	-
18	.25125	11.5	Ca	0	0	10.1	21.6	-	-	51.72	-30.12
19	.30975	24.47	Qp	0	0	10.1	34.57	59.98	-25.41	-	-
20	.30975	14.73	Ca	0	0	10.1	24.83	-	-	49.98	-25.15
21	.36375	20.64	Qp	0	0	10.1	30.74	58.64	-27.9	-	-
22	.36825	13.42	Ca	0	0	10.1	23.52	-	-	48.54	-25.02
23	.42225	21.12	Qp	0	0	10.1	31.22	57.4	-26.18	-	-
24	.42225	12.31	Ca	0	0	10.1	22.41	-	-	47.4	-24.99

Qp - Quasi-Peak detector
Ca - CISPR average detection

9.2.3. OPERATING MODE WITH PHONE (3mm AIRGAP)

LINE 1 RESULTS



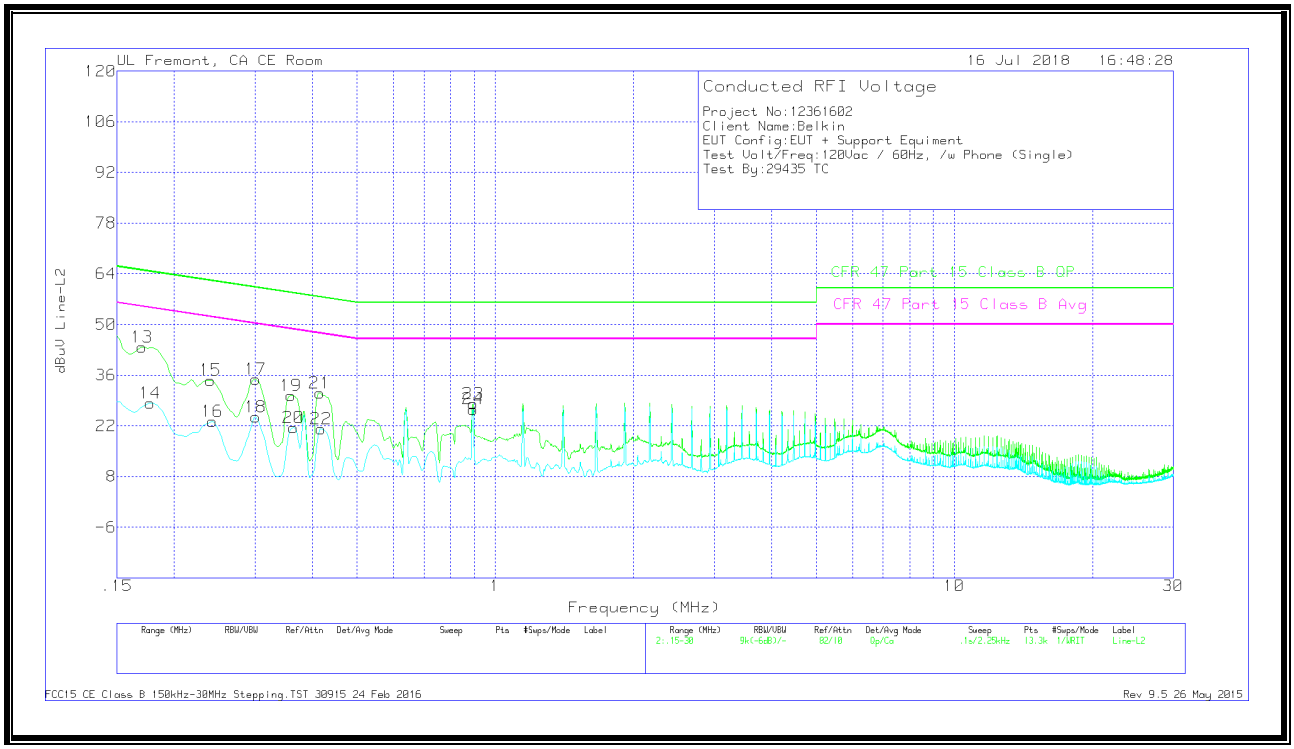
WORST EMISSIONS

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	.15225	36.75	Qp	.1	0	10.1	46.95	65.88	-18.93	-	-
2	.15225	20.9	Ca	.1	0	10.1	31.1	-	-	55.88	-24.78
3	.19725	28.01	Qp	0	0	10.1	38.11	63.73	-25.62	-	-
4	.19725	14.62	Ca	0	0	10.1	24.72	-	-	53.73	-29.01
5	.231	21.72	Qp	0	0	10.1	31.82	62.41	-30.59	-	-
6	.24	12.05	Ca	0	0	10.1	22.15	-	-	52.1	-29.95
7	.33	24.01	Qp	0	0	10.1	34.11	59.45	-25.34	-	-
8	.32775	16.62	Ca	0	0	10.1	26.72	-	-	49.51	-22.79
9	.38175	24.32	Qp	0	0	10.1	34.42	58.24	-23.82	-	-
10	.375	18.75	Ca	0	0	10.1	28.85	-	-	48.39	-19.54
11	.411	24.64	Qp	0	0	10.1	34.74	57.63	-22.89	-	-
12	.4155	17.29	Ca	0	0	10.1	27.39	-	-	47.54	-20.15

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

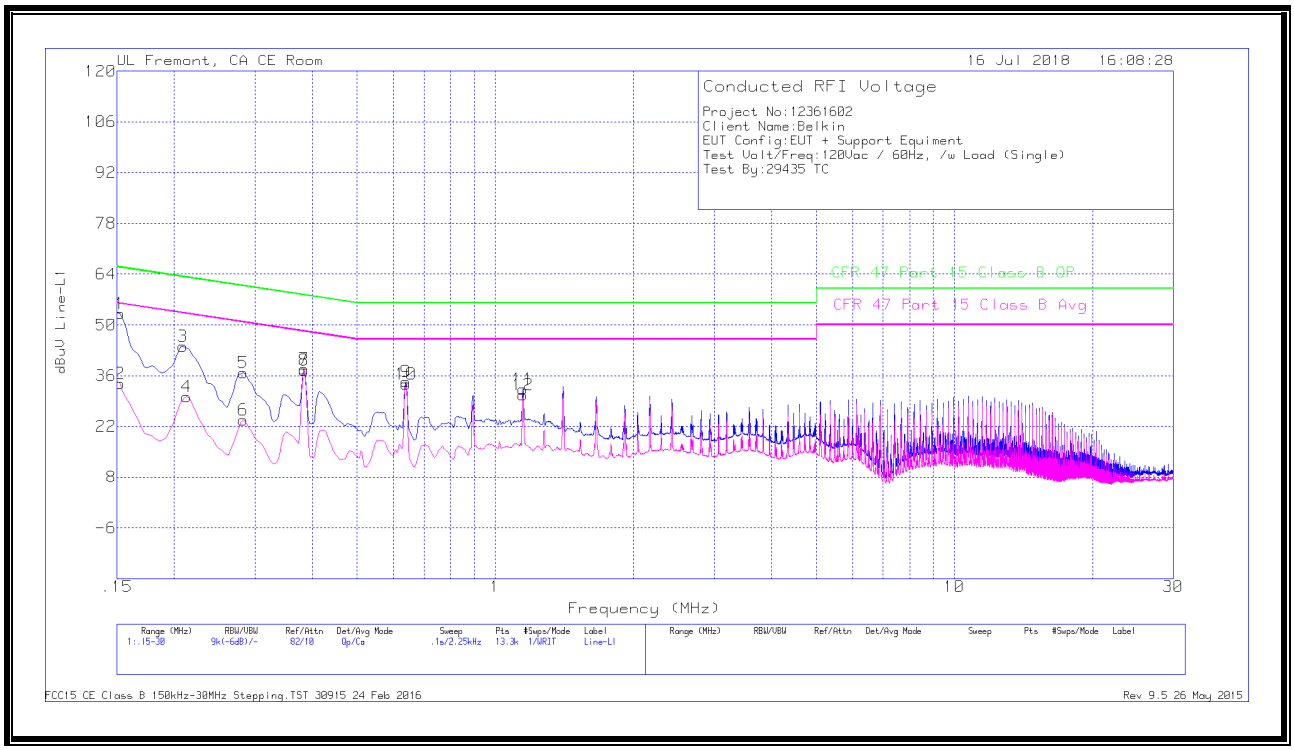
Trace Markers

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	33.63	Qp	0	0	10.1	43.73	64.95	-21.22	-	-
14	.177	18.18	Ca	0	0	10.1	28.28	-	-	54.63	-26.35
15	.24	24.51	Qp	0	0	10.1	34.61	62.1	-27.49	-	-
16	.24225	13.06	Ca	0	0	10.1	23.16	-	-	52.02	-28.86
17	.30075	24.74	Qp	0	0	10.1	34.84	60.22	-25.38	-	-
18	.30075	14.34	Ca	0	0	10.1	24.44	-	-	50.22	-25.78
19	.35925	20.32	Qp	0	0	10.1	30.42	58.75	-28.33	-	-
20	.36375	11.32	Ca	0	0	10.1	21.42	-	-	48.64	-27.22
21	.4155	20.95	Qp	0	0	10.1	31.05	57.54	-26.49	-	-
22	.41775	11.09	Ca	0	0	10.1	21.19	-	-	47.49	-26.3
23	.89475	17.98	Qp	0	0	10.1	28.08	56	-27.92	-	-
24	.89475	16.52	Ca	0	0	10.1	26.62	-	-	46	-19.38

Qp - Quasi-Peak detector
Ca - CISPR average detection

9.2.4. OPERATING MODE WITH 10W LOAD (WITHOUT 3mm AIRGAP)

LINE 1 RESULTS



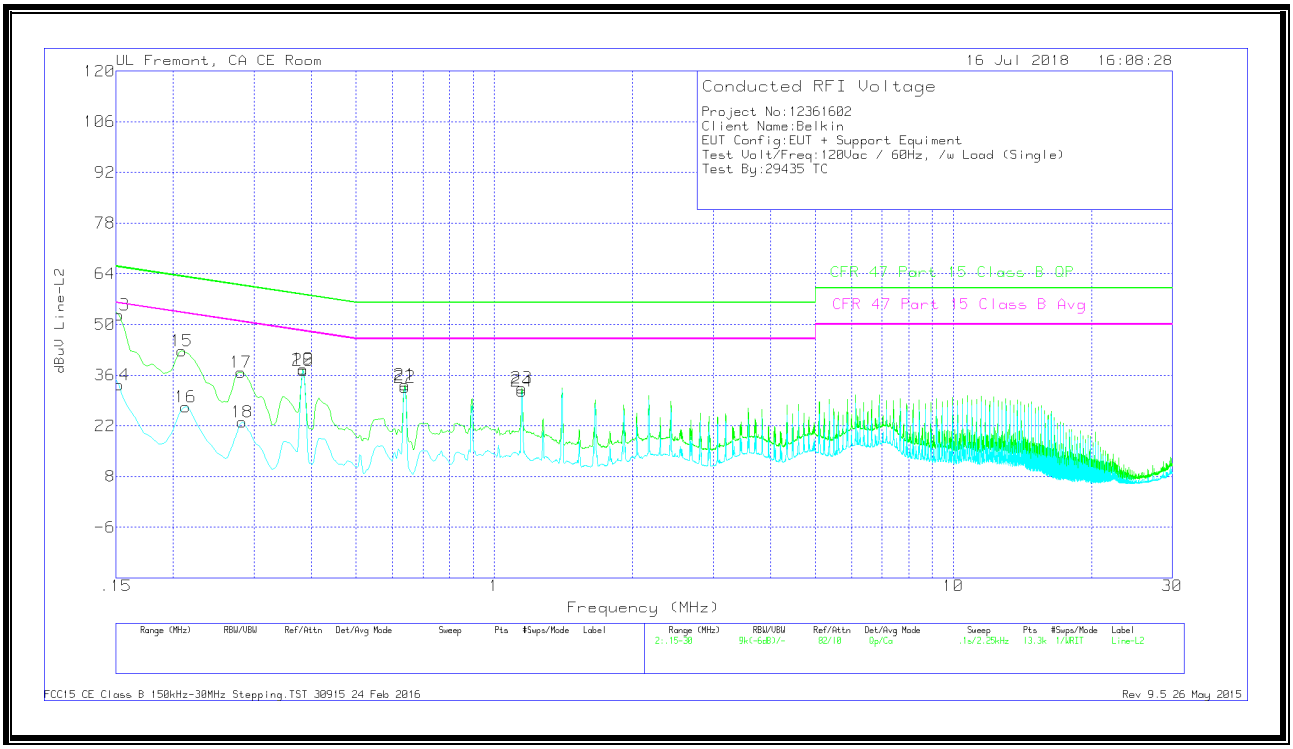
WORST EMISSIONS

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	.15225	42.98	Qp	.1	0	10.1	53.18	65.88	-12.7	-	-
2	.15225	23.6	Ca	.1	0	10.1	33.8	-	-	55.88	-22.08
3	.2085	33.96	Qp	0	0	10.1	44.06	63.26	-19.2	-	-
4	.213	20.09	Ca	0	0	10.1	30.19	-	-	53.09	-22.9
5	.28275	26.7	Qp	0	0	10.1	36.8	60.73	-23.93	-	-
6	.28275	13.72	Ca	0	0	10.1	23.82	-	-	50.73	-26.91
7	.384	27.81	Qp	0	0	10.1	37.91	58.19	-20.28	-	-
8	.384	27.42	Ca	0	0	10.1	37.52	-	-	48.19	-10.67
9	.63825	24.32	Qp	0	0	10.1	34.42	56	-21.58	-	-
10	.63825	23.59	Ca	0	0	10.1	33.69	-	-	46	-12.31
11	1.149	22.14	Qp	0	.1	10.1	32.34	56	-23.66	-	-
12	1.149	20.53	Ca	0	.1	10.1	30.73	-	-	46	-15.27

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

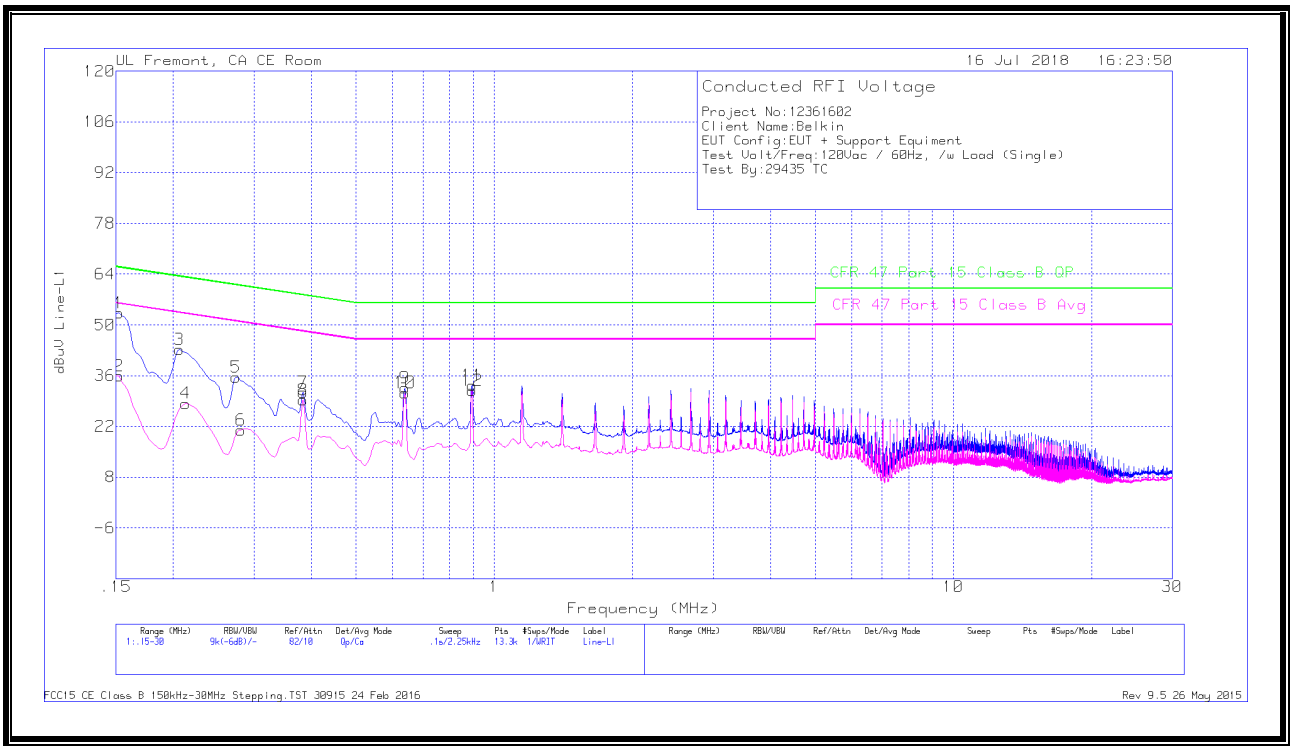
Trace Markers

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	.15225	42.43	Qp	.1	0	10.1	52.63	65.88	-13.25	-	-
14	.15225	23.17	Ca	.1	0	10.1	33.37	-	-	55.88	-22.51
15	.2085	32.6	Qp	0	0	10.1	42.7	63.26	-20.56	-	-
16	.213	17.15	Ca	0	0	10.1	27.25	-	-	53.09	-25.84
17	.2805	26.68	Qp	0	0	10.1	36.78	60.8	-24.02	-	-
18	.28275	12.97	Ca	0	0	10.1	23.07	-	-	50.73	-27.66
19	.384	27.56	Qp	0	0	10.1	37.66	58.19	-20.53	-	-
20	.384	27.29	Ca	0	0	10.1	37.39	-	-	48.19	-10.8
21	.63825	23.18	Qp	0	0	10.1	33.28	56	-22.72	-	-
22	.63825	22.6	Ca	0	0	10.1	32.7	-	-	46	-13.3
23	1.149	22.26	Qp	0	.1	10.1	32.46	56	-23.54	-	-
24	1.149	21.35	Ca	0	.1	10.1	31.55	-	-	46	-14.45

Qp - Quasi-Peak detector
Ca - CISPR average detection

9.2.5. OPERATING MODE WITH 10W LOAD (3mm AIRGAP)

LINE 1 RESULTS



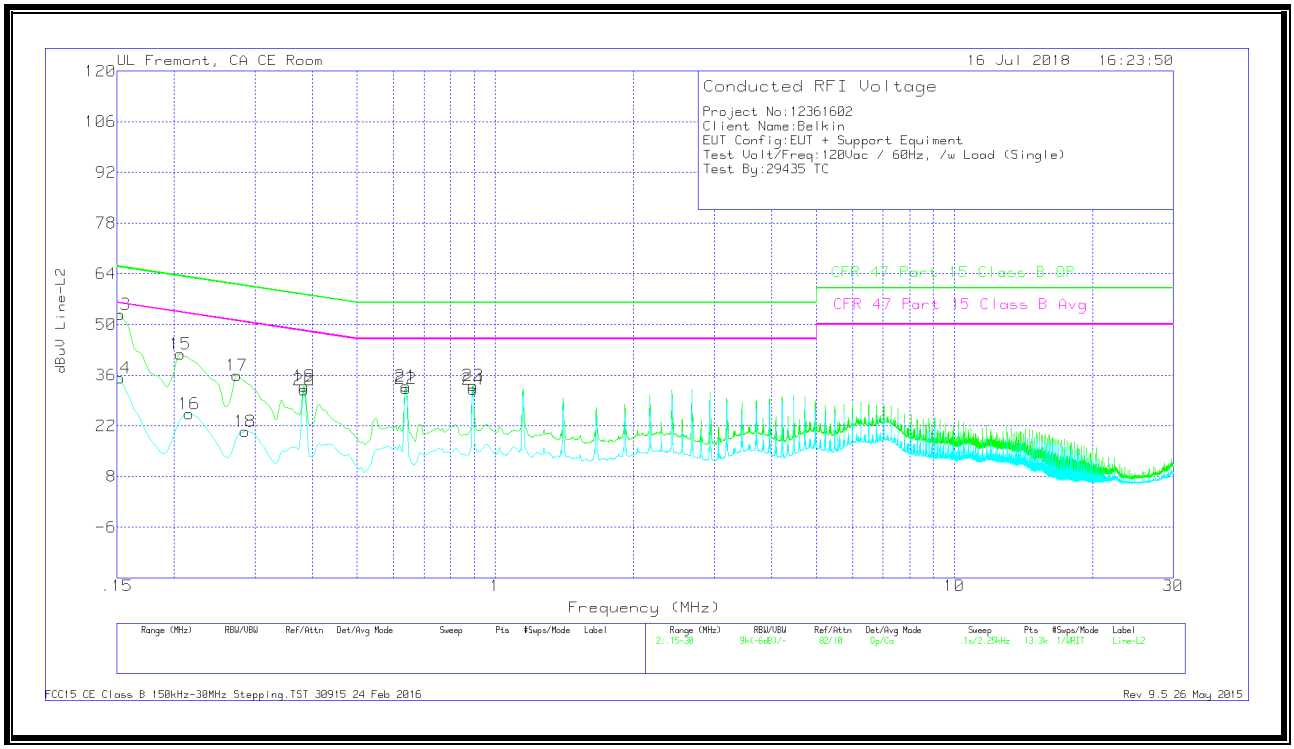
WORST EMISSIONS

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	.15225	43.03	Qp	.1	0	10.1	53.23	65.88	-12.65	-	-
2	.15225	25.67	Ca	.1	0	10.1	35.87	-	-	55.88	-20.01
3	.20625	33.13	Qp	0	0	10.1	43.23	63.35	-20.12	-	-
4	.213	18.26	Ca	0	0	10.1	28.36	-	-	53.09	-24.73
5	.27375	25.5	Qp	0	0	10.1	35.6	61	-25.4	-	-
6	.2805	10.86	Ca	0	0	10.1	20.96	-	-	50.8	-29.84
7	.384	21.29	Qp	0	0	10.1	31.39	58.19	-26.8	-	-
8	.384	19.17	Ca	0	0	10.1	29.27	-	-	48.19	-18.92
9	.63825	22.48	Qp	0	0	10.1	32.58	56	-23.42	-	-
10	.63825	21.21	Ca	0	0	10.1	31.31	-	-	46	-14.69
11	.89475	23.25	Qp	0	0	10.1	33.35	56	-22.65	-	-
12	.89475	21.77	Ca	0	0	10.1	31.87	-	-	46	-14.13

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

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	.15225	42.65	Qp	.1	0	10.1	52.85	65.88	-13.03	-	-
14	.15225	25.06	Ca	.1	0	10.1	35.26	-	-	55.88	-20.62
15	.20625	31.8	Qp	0	0	10.1	41.9	63.35	-21.45	-	-
16	.21525	15.29	Ca	0	0	10.1	25.39	-	-	53	-27.61
17	.27375	25.88	Qp	0	0	10.1	35.98	61	-25.02	-	-
18	.285	10.34	Ca	0	0	10.1	20.44	-	-	50.67	-30.23
19	.384	22.83	Qp	0	0	10.1	32.93	58.19	-25.26	-	-
20	.384	21.75	Ca	0	0	10.1	31.85	-	-	48.19	-16.34
21	.63825	22.9	Qp	0	0	10.1	33	56	-23	-	-
22	.63825	22.09	Ca	0	0	10.1	32.19	-	-	46	-13.81
23	.89475	23.04	Qp	0	0	10.1	33.14	56	-22.86	-	-
24	.89475	22	Ca	0	0	10.1	32.1	-	-	46	-13.9

Qp - Quasi-Peak detector
Ca - CISPR average detection