



TEST REPORT

Report Number. : 14040866-E15V2

Applicant : APPLE INC.
1 APPLE PARK WAY
CUPERTINO, CA 95014, U.S.A.

Model : A2651 (Parent Model, Full Test)
A2893, A2894, A2895, A2896 (Variant Models)

FCC ID : BCG-E8141A (Parent Model)
BCG-E8154A, BCG-E8155A, BCG-E8156A (Variant Models)

IC : 579C-E8141A (Parent Model)
579C-E8154A, 579C-E8155A, 579C-E8156A (Variant Models)

EUT Description : SMARTPHONE

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C
ISED RSS-210 ISSUE 10
ISED RSS-GEN ISSUE 5 + A1 + A2

Date of Issue:
July 28, 2022

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Revision History

Rev.	Issue Date	Revisions	Revised By
V1	7/18/2022	Initial Issue	Chin Pang
V2	7/28/2022	Addressed TCB questions section 5.2	Chris Xiong

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1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: SMARTPHONE

MODEL: A2651 (Parent Model)
A2893, A2894, A2895, A2896 (Variant Models)

BRAND: APPLE

FCC ID: BCG-E8141A (Parent Model)
BCG-E8154A, BCG-E8155A, BCG-E8156A (Variant Models)

IC: 579C-E8141A (Parent Model)
579C-E8154A, 579C-E8155A, 579C-E8156A (Variant Models)

SERIAL NUMBER: JHXP7PXL52

SAMPLE RECEIPT DATE: JUNE 13, 2022

DATE TESTED: JUNE 14 – JULY 14, 2022

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C	Complies
ISED RSS-210 Issue 10, Annex B	Complies
ISED RSS-GEN Issue 5 + A1 + A2	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 A2LA, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released For
UL LLC. By:



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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with:

- FCC CFR 47 Part 2
- FCC CFR 47 Part 15
- ANSI C63.10-2013
- KDB 414788 D01 Radiated Test Site v01r01
- RSS-GEN Issue 5 + A1 + A2
- RSS-210 Issue 10

3. FACILITIES AND ACCREDITATION

UL LLC. is accredited by A2LA, certification #0751.05, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☐	Building 1: 47173 Benicia Street, Fremont, CA 94538, USA	US0104	2324A	550739
☒	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA	US0104	22541	550739
☒	Building 4: 47658 Kato Rd, Fremont, CA 94538, USA	US0104	2324B	550739

4. DECISION RULES AND MEASUREMENT UNCERTAINTY

4.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

4.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.).

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	U _{Lab}
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.78 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.87 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 dB

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

4.4. 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)
 $36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$

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.
 $36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The Apple iPhone is a smartphone with multimedia functions (music, application support, and video), cellular GSM, GPRS, EGPRS, UMTS, LTE, 5G, IEEE 802.11a/b/g/n/ac/ax, Bluetooth, Ultra-Wideband, GPS, NFC and MSS. All models except reference model support at least one UICC based SIM. The second SIM is either an UICC based p-SIM (physical SIM) or e-SIM (electronic SIM). The device supports a built-in inductive charging transmitter and receiver. The rechargeable battery is not user accessible.

Testing was performed on the parent model and is used to support the application for the parent and variants identified in this report based on the test plan submitted and approved via KDB inquiry by the FCC and by ISED-Canada.

Parent Model: A2651, FCC ID: BCG-E8141A, IC: 579C-E8141A

Variant Models: A2893, FCC ID: BCG-E8154A, IC: 579C-E8154A
 A2894; FCC ID: BCG-E8155A, IC: 579C-E8155A
 A2895 & A2896, FCC ID: BCG-E8156A, IC: 579C-E8156A

5.2. MAXIMUM E-FIELD STRENGTH

The transmitter has a maximum peak radiated E-field strength as follows:

Antenna	Frequency Range (MHz)	Mode		Kbps	E Field at 30m distance (dBuV/m)
Primary	13.56	Type A	Reader	848	27.75
			Tag	848	27.74
			CE	848	25.27
Secondary	13.56	Type A	Reader	848	4.91
			Tag	848	5.11

5.3. WORST-CASE CONFIGURATION AND MODE

The fundamental of the EUT was investigated under three orthogonal orientations X (Flatbed), Y (Landscape), and Z (Portrait). The Y (Landscape) orientation was determined to be the worst-case orientation. The EUT has primary and secondary antennas and worst case was investigated on the primary antenna since it has the highest power.

The worst-case position of the EUT was investigated under two configurations: EUT with power supply, EUT with earphones. The EUT with power supply configuration was determined to be worst-case configurations; therefore, all final tests were performed on the EUT with power supply.

In addition, Tag, Reader, and CE mode mode were investigated with Type A, B and F with data rates, such as 106Kbp/s, 212Kbp/s, 424Kbp/s and 848Kbp/s and ISO 15693 configuration to determine the worst case based on the highest power and spurious emissions. Type A 848 Kbps was determined to be the worst case and therefore Type A was selected for all final tests

For below 30MHz testing, investigation was done on three antenna orientations: RX antenna Face-on, Face-off and horizontal (parallel to ground). The worst-case configurations were determined on RX antenna Face-on and Face-off; therefore, all final tests were performed using these two orientations.

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 meter 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.

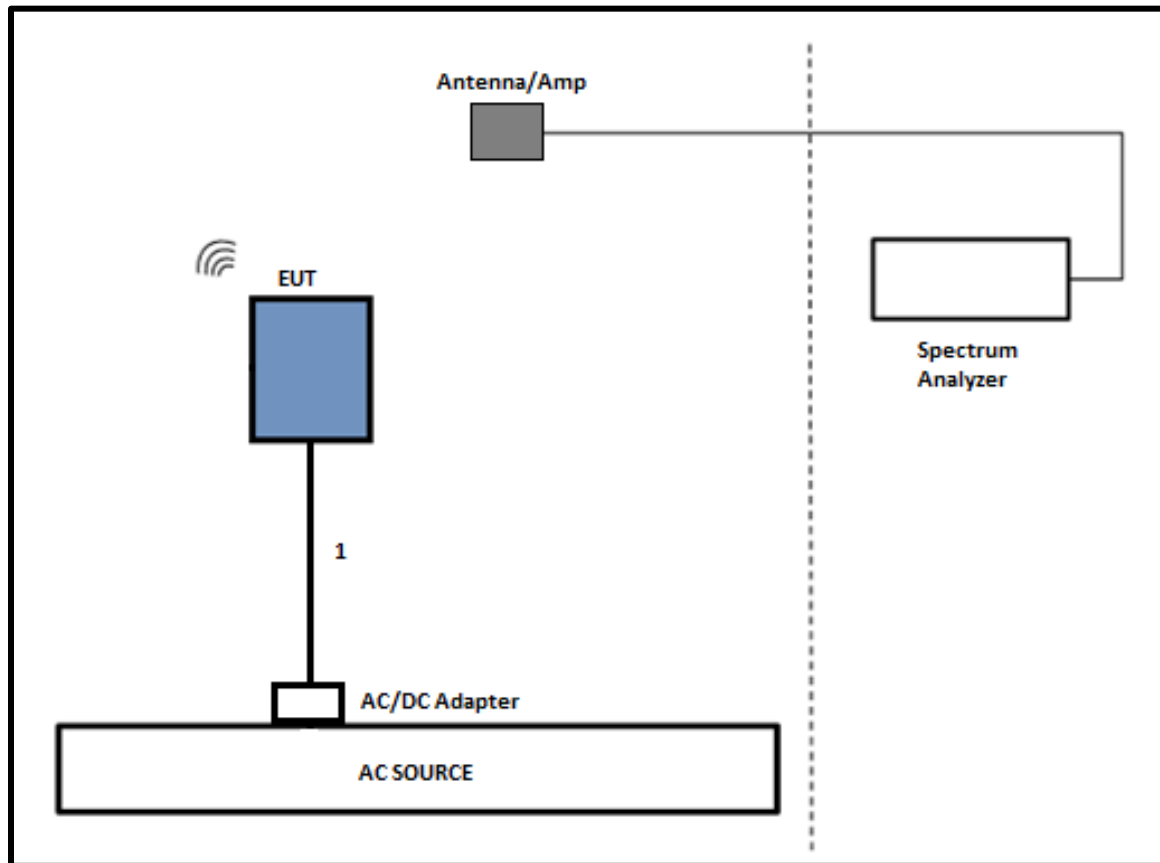
Testing was performed on the parent model and is used to support the application for the parent and variants identified in this report based on the test plan submitted and approved via KDB inquiry by the FCC and by ISED-Canada.

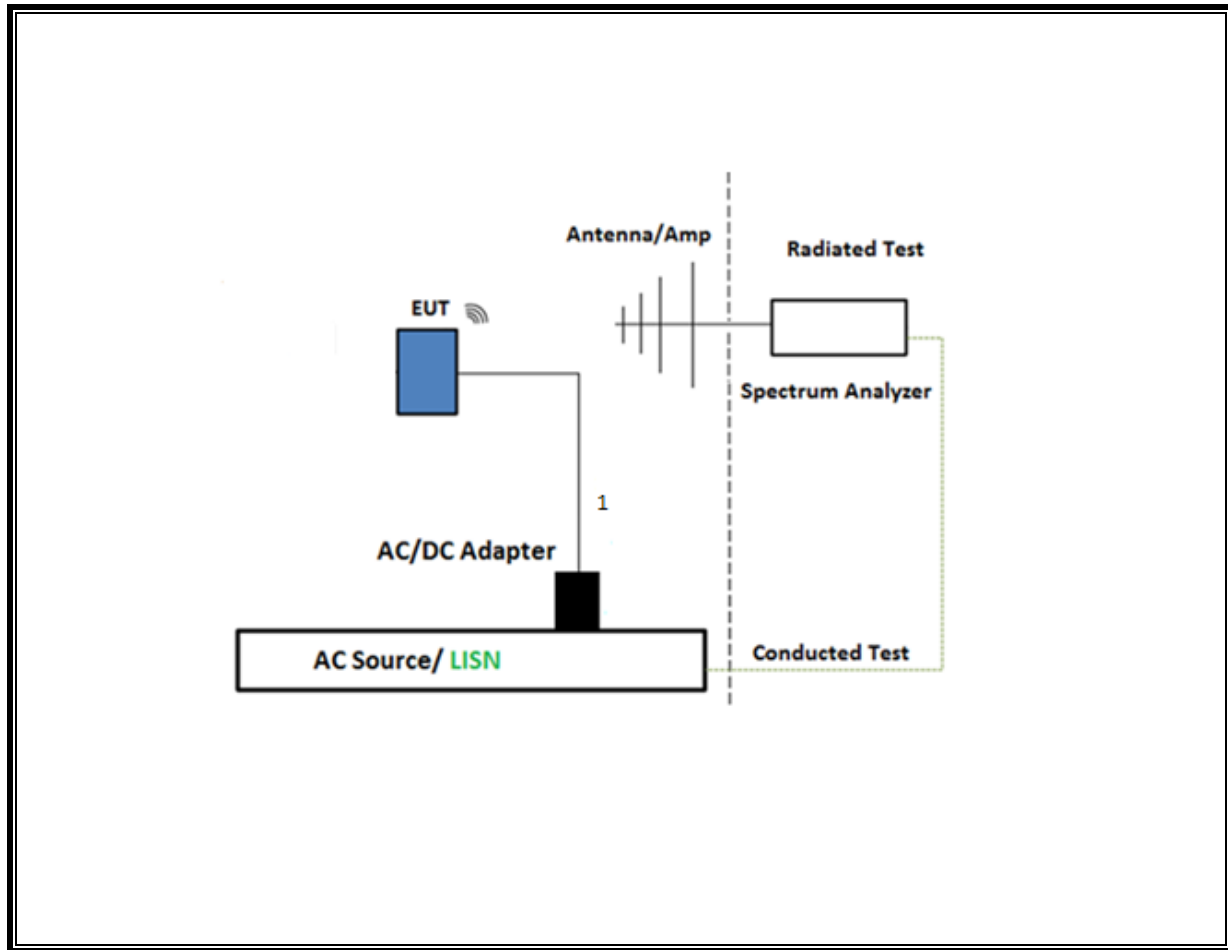
5.4. SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
EUT AC/DC adapter	Apple	A1720	C3D8417A7R93KVPA8	DoC

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	Un-Shielded	1	N/A

SETUP DIAGRAM FOR RADIATED TESTS

SETUP DIAGRAM FOR Below 1GHz and AC LINE CONDUCTED TEST

6. TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST					
Description	Manufacturer	Model	ID Num	Cal Due	Last Cal
Spectrum Analyzer, PXA 3Hz to 44GHz	Keysight	N9030A	125188	01/30/2023	01/30/2022
Antenna, Broadband Hybrid, 30MHz to 3GHz	Sunol Sciences Corp	JB3	85150	10/15/2022	10/15/2021
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310	170648	02/10/2023	02/10/2022
Antenna, Passive Loop 30Hz to 1MHz	Electro-Metrics	EM-6871	170013	07/29/2022	07/29/2021
Antenna, Passive Loop 100KHz to 30MHz	ETS-Lindgren	EM-6872	170015	07/29/2022	07/29/2021
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A (MY55410147)	125179	02/01/2023	02/01/2022
EMI Test Receiver	Rohde & Schwarz	ESW44	201497	02/18/2023	02/18/2022
Chamber, Environmental	Cincinnati Sub Zero	ZPHS-8-3.5-SCT/WC	T754	05/12/2023	05/12/2022
Spectrum Analyzer, PXA 3Hz to 44GHz	Keysight	N9030A	206415	03/17/2023	03/17/2022

AC Line Conducted					
Description	Manufacturer	Model	ID Num	Cal Due	Last Cal
EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESR	T1436	02/21/2023	02/21/2022
LISN for Conducted Emissions CISPR-16	FISCHER CUSTOM COMMUNICATIONS	FCC-LISN-50/250-25-2-01-480V	175765	01/26/2023	01/26/2022
UL AUTOMATION SOFTWARE					
Radiated Software	UL	UL EMC	Ver 9.5, Mar 6, 2020		
Conducted Software	UL	UL EMC	2020.2.26		
AC Line Conducted Software	UL	UL EMC	Ver 9.5, February 21, 2020		

7. OCCUPIED BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The RBW is set to 10kHz. 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 or 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

99% and 20dB BW

Primary Antenna

Type A (Reader Mode)

Mode Kbps	Frequency (MHz)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
848	13.56	21.413	25.06

Type A (CE Mode)

Mode Kbps	Frequency (MHz)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
848	13.56	22.221	25.93

TAG Mode

Mode Kbps	Frequency (MHz)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
848	13.56	21.329	24.92

Secondary Antenna

Type A (Reader Mode)

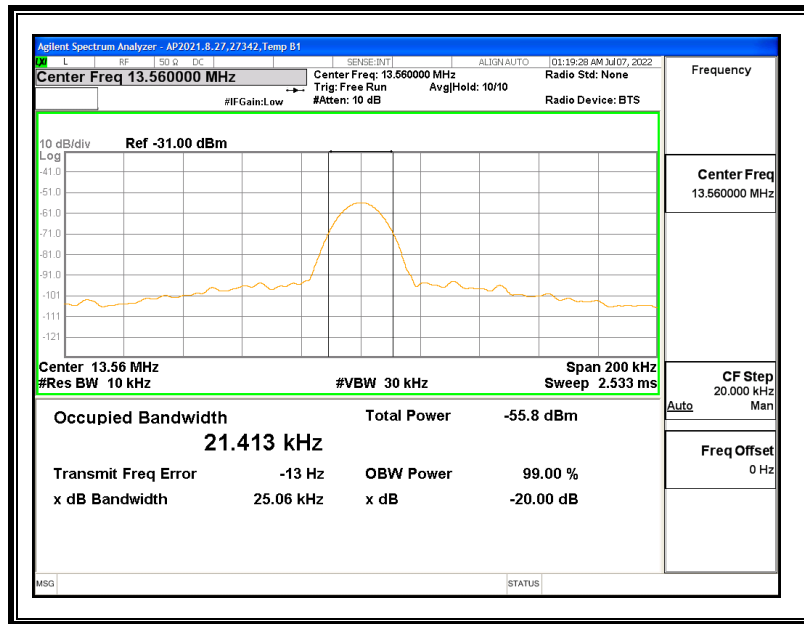
Mode Kbps	Frequency (MHz)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
848	13.56	21.324	25.01

TAG Mode

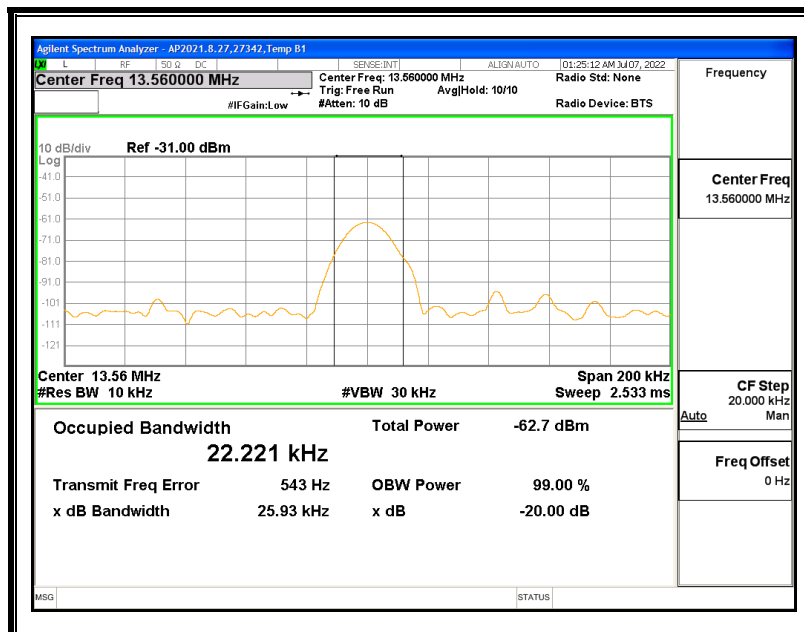
Mode Kbps	Frequency (MHz)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
848	13.56	21.337	24.94

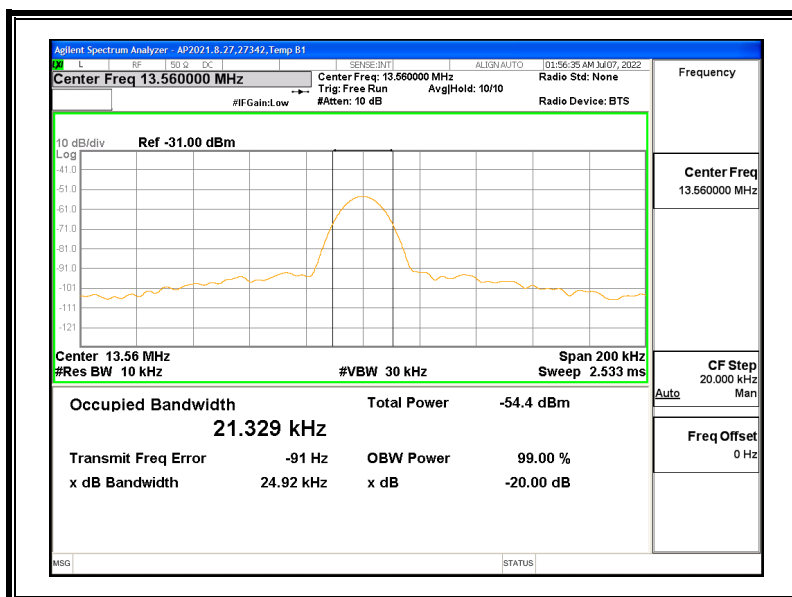
7.1. PRIMARY ANTENNA

7.1.1. READER MODE, Type A 848 Kbps



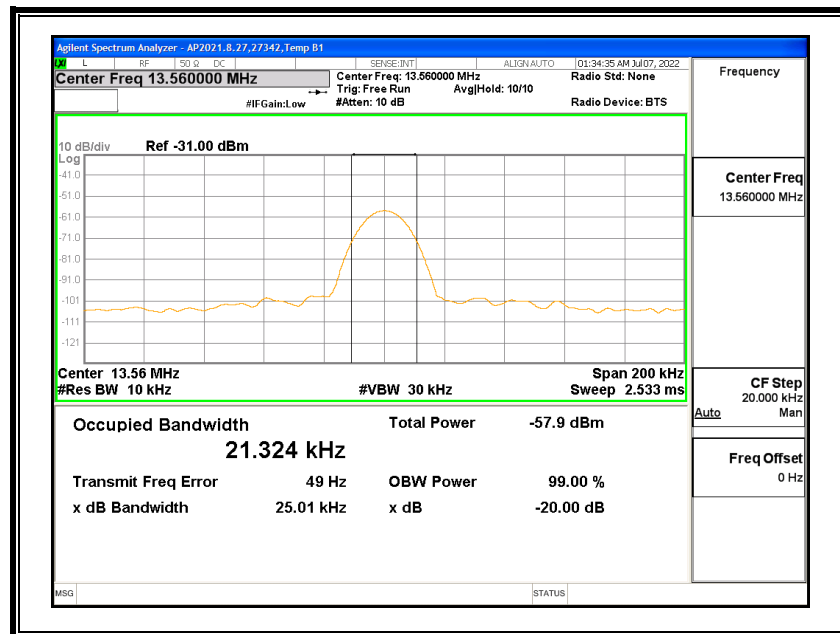
7.1.2. CE MODE, Type A 848 Kbps



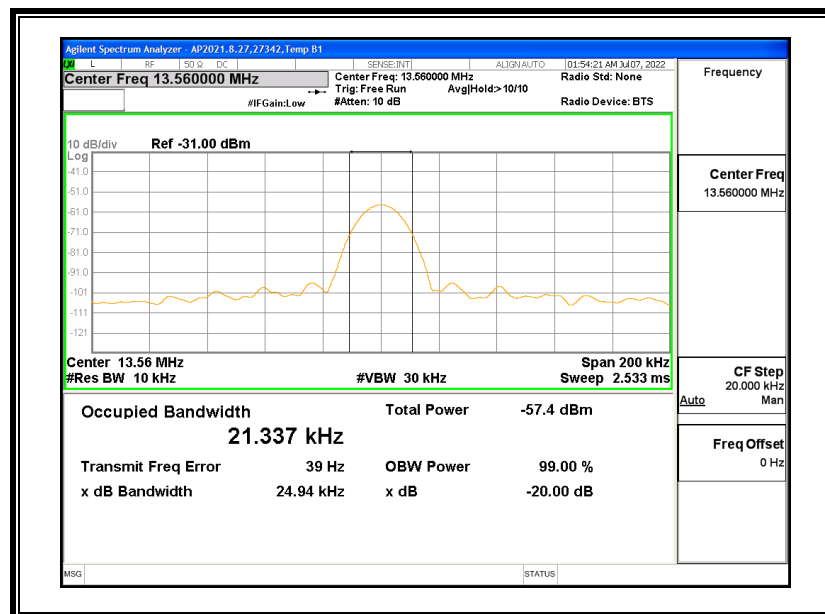
7.1.3. TAG MODE

7.2. SECONDARY ANTENNA

7.2.1. READER MODE, Type A 848 Kbps



7.2.2. TAG MODE



8. RADIATED EMISSION TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMIT

§15.225

IC RSS-210, Annex B.6

IC RSS-GEN, Section 8.9 (Transmitter)

(a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/ meter at 30 meters.

(b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

(c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

(d) The field strength of any emissions appearing outside of the 13.110– 14.010 MHz and shall not exceed the general radiated emission limits in § 15.209 as follows:

§15.209 (a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Limits for radiated disturbance of an intentional radiator		
Frequency range (MHz)	Limits (µV/m)	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 - 216	150**	3
216 – 960	200**	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g. §§ 15.231 and 15.241.

§15.209 (b) In the emission table above, the tighter limit applies at the band edges.

Formula for converting the field strength from uV/m to dBuV/m is:

Limit (dBuV/m) = 20 log limit (uV/m)

Note: The limits in CFR 47, Part 15, Subpart C, paragraph 15.209(a), are identical to those in RSS-Gen section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as report in the table) using free space impedance of 377 Ohms. For example, the measurement at frequency X kHz resulted in a level of Y dBuV/m, which is equivalent to $Y - 51.5 = Z$ dBuA/m, which has the same margin, W dB to the corresponding RSS-Gen Table 6 limit as it has to 15.209(a) limit.

In addition:

§15.209 (d) The emission limits shown the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

§15.209 (d) The provisions in §§ 15.225, measuring emissions at distances other than the distances specified in the above table, determining the frequency range over which radiated emissions are to be measured, and limiting peak emissions apply to all devices operated under this part.

TEST PROCEDURE

ANSI C63.10, 2013

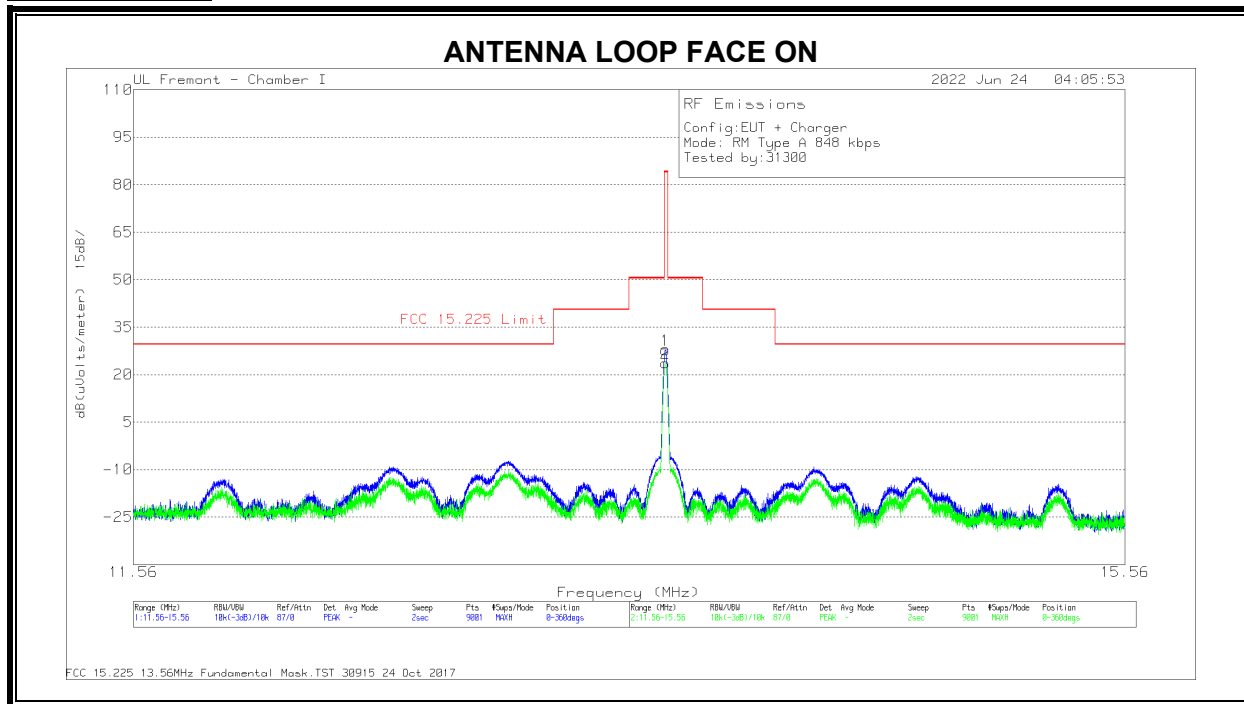
The EUT is an intentional radiator that incorporates a digital device, the highest fundamental frequency generated or used in the device is 13.56 MHz; therefore, the frequency range was investigated from 0.15 MHz to the 10th harmonic of the highest fundamental frequency, or 1000 MHz, whichever is greater.

RESULTS

8.2. PRIMARY ANTENNA FUNDAMENTAL & SPURIOUS EMISSION 0.15-30 MHz

8.2.1. READER MODE, Type A 848 Kbps

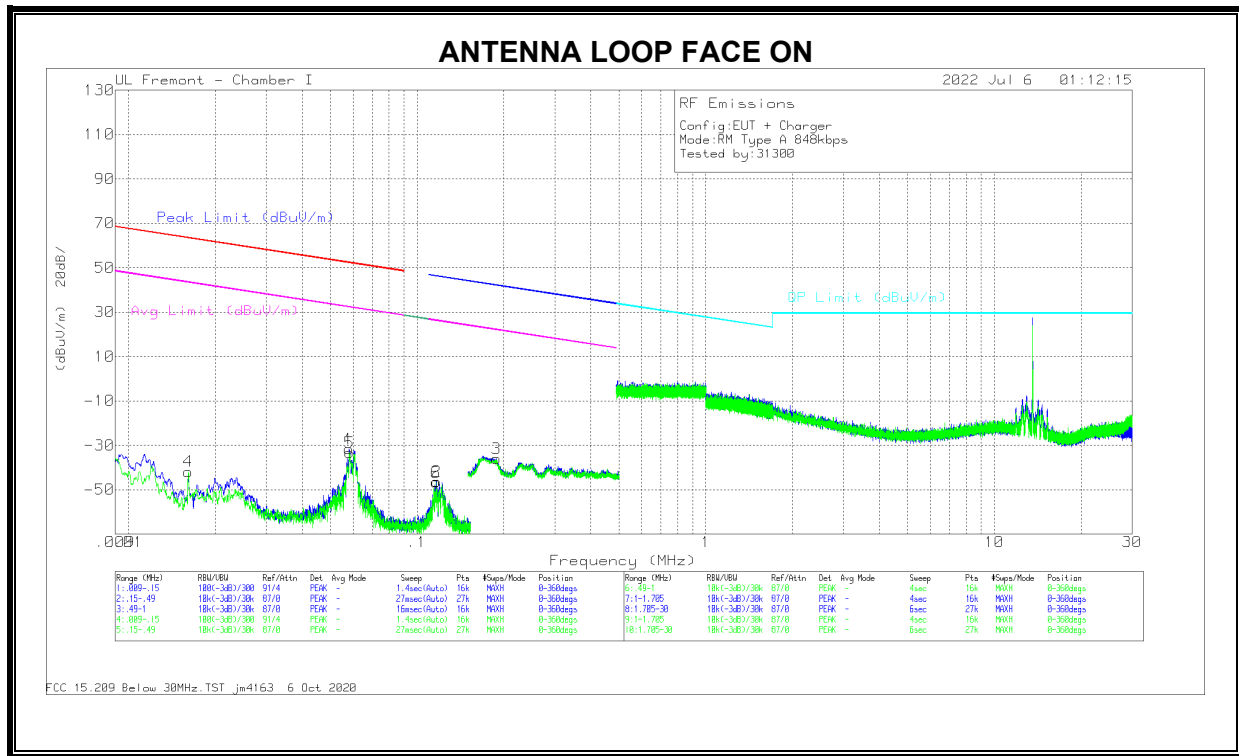
FUNDAMENTAL



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuV/m)	FCC 15.225 Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Polarity
1	13.5578	65.05	Pk	34.3	-31.6	-40	27.75	84	-56.25	0-360	Face-On
2	13.558	60.95	Pk	34.3	-31.6	-40	23.65	84	-60.35	0-360	Face-Off

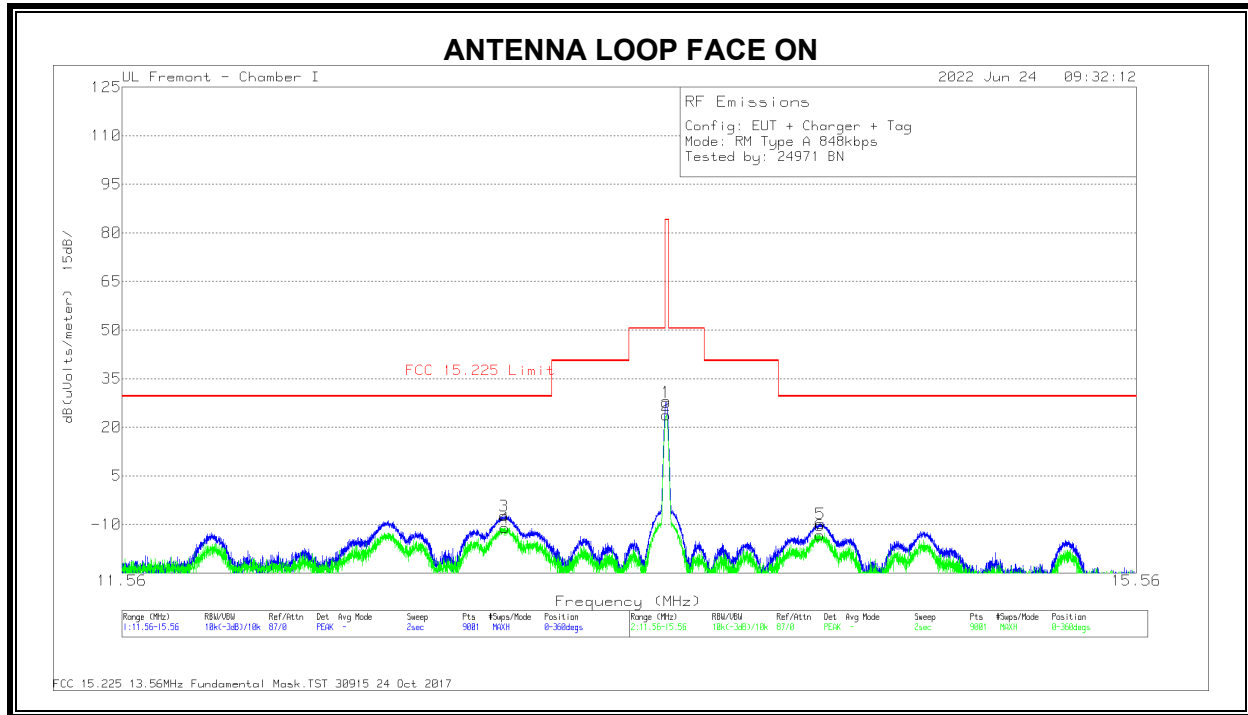
Pk - Peak detector



DATA

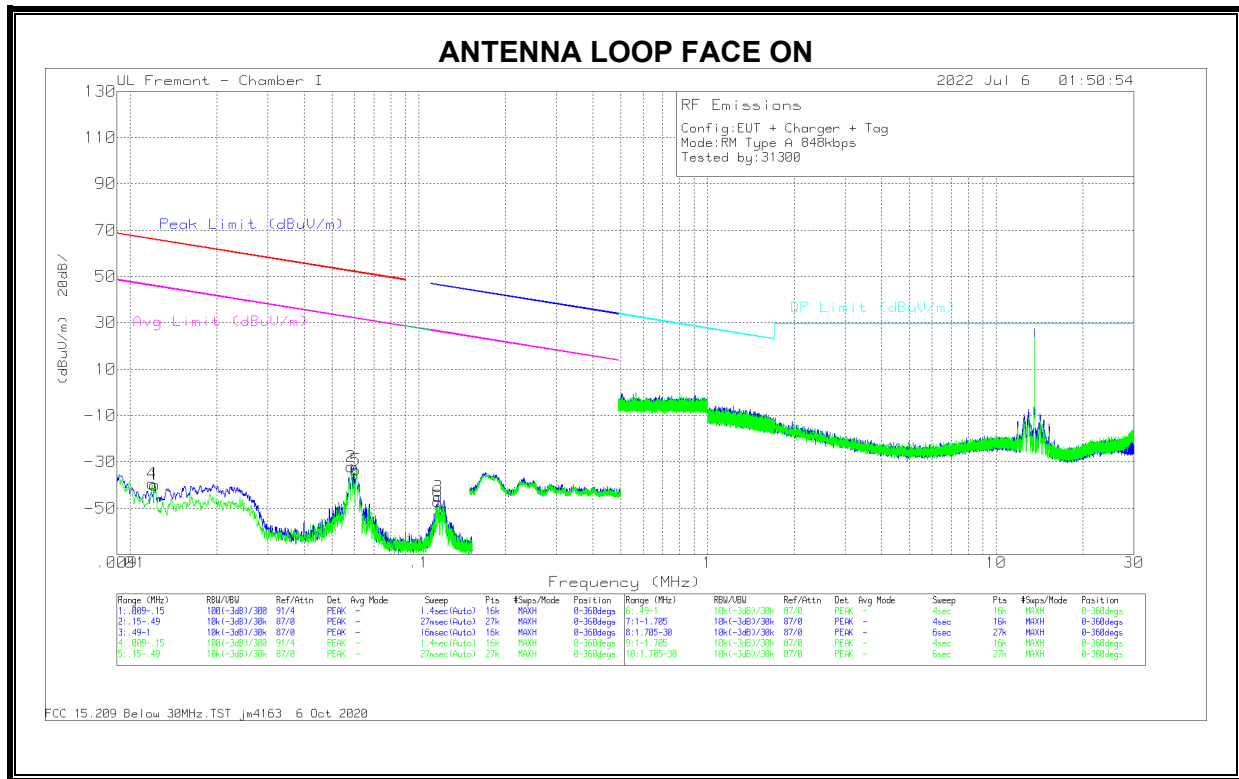
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr 300m (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
1	.0582	24.01	Pk	56.4	-32	-80	-31.59	52.29	-83.88	32.29	-63.88	0-360	Face-On
2	.1166	10.16	Pk	55.7	-32.1	-80	-46.24	46.29	-92.53	26.29	-72.53	0-360	Face-On
3	.1885	19.88	Pk	56.2	-32.1	-80	-36.02	42.11	-78.13	22.11	-58.13	0-360	Face-On
4	.0161	10.12	Pk	59.5	-31.4	-80	-41.78	63.43	-105.21	43.43	-85.21	0-360	Face-Off
5	.0583	22.4	Pk	56.4	-32	-80	-33.2	52.28	-85.48	32.28	-65.48	0-360	Face-Off
6	.1165	9.93	Pk	55.7	-32.1	-80	-46.47	46.3	-92.77	26.3	-72.77	0-360	Face-Off

Pk - Peak detector

8.2.2. TAG MODE**FUNDAMENTAL****DATA**

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuV/m)	FCC 15.225 Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Polarity
1	13.5576	65.04	Pk	34.3	-31.6	-40	27.74	84	-56.26	0-360	Face-On
3	12.9289	29.76	Pk	34.4	-31.6	-40	-7.44	29.54	-36.98	0-360	Face-On
5	14.1849	27.68	Pk	34.2	-31.6	-40	-9.72	29.54	-39.26	0-360	Face-On
2	13.558	61	Pk	34.3	-31.6	-40	23.7	84	-60.3	0-360	Face-Off
4	12.9306	26.14	Pk	34.4	-31.6	-40	-11.06	29.54	-40.6	0-360	Face-Off
6	14.1818	24.07	Pk	34.2	-31.6	-40	-13.33	29.54	-42.87	0-360	Face-Off

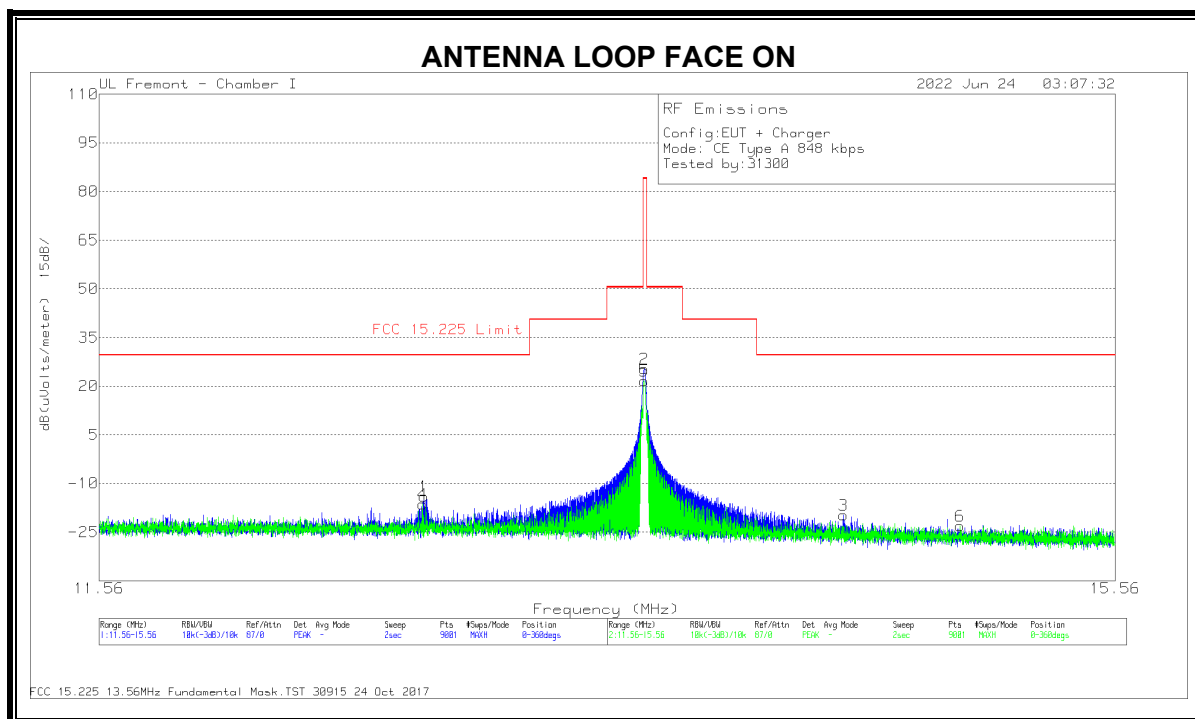
Pk - Peak detector



DATA

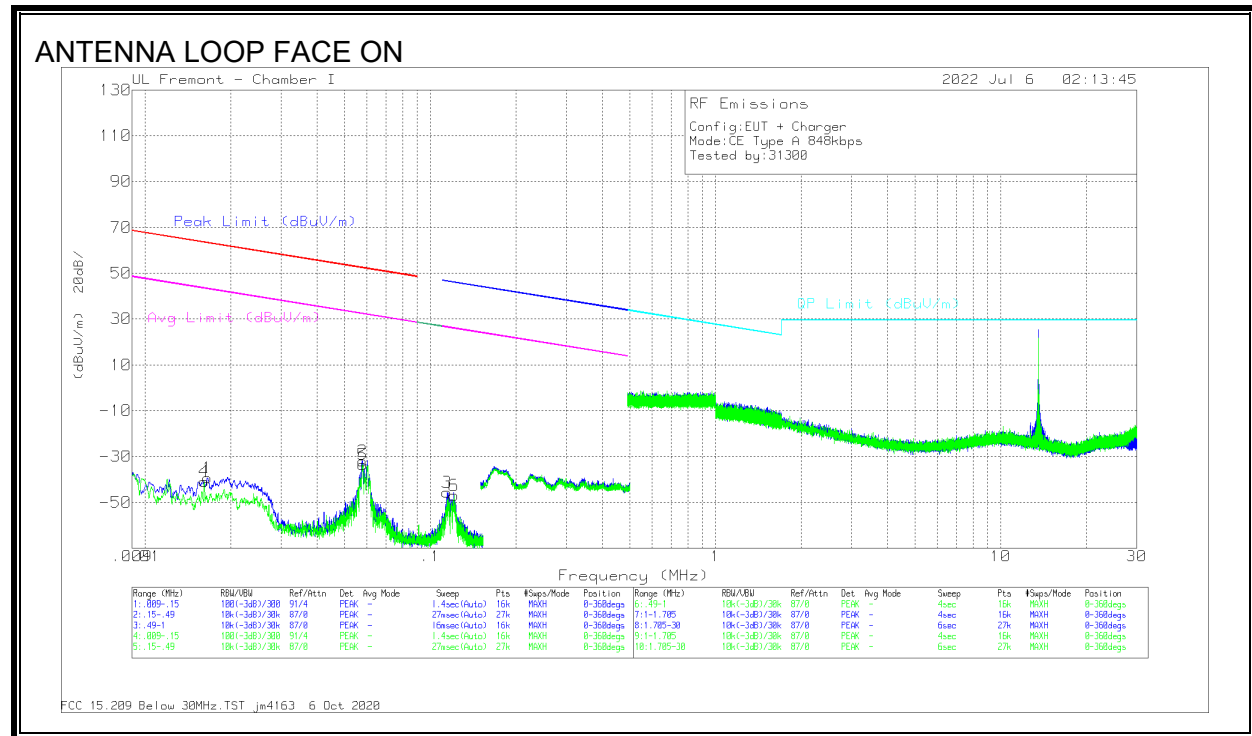
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr 300m (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
1	.0122	11.01	Pk	60	-31	-80	-39.99	65.87	-105.86	45.87	-85.86	0-360	Face-On
2	.0582	23.45	Pk	56.4	-32	-80	-32.15	52.29	-84.44	32.29	-64.44	0-360	Face-On
3	.1168	11.4	Pk	55.7	-32.1	-80	-45	46.28	-91.28	26.28	-71.28	0-360	Face-On
4	.0119	11.45	Pk	60.1	-31	-80	-39.45	66.07	-105.52	46.07	-85.52	0-360	Face-Off
5	.0605	22.31	Pk	56.2	-32.1	-80	-33.59	51.95	-85.54	31.95	-65.54	0-360	Face-Off
6	.1164	9.29	Pk	55.7	-32.1	-80	-47.11	46.31	-93.42	26.31	-73.42	0-360	Face-Off

Pk - Peak detector

8.2.3. CE MODE, Type A 848 Kbps**FUNDAMENTAL****DATA**

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuV/m)	FCC 15.225 Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Polarity
1	12.7122	23.11	Pk	34.5	-31.6	-40	-13.99	29.54	-43.53	0-360	Face-On
2	13.558	62.57	Pk	34.3	-31.6	-40	25.27	84	-58.73	0-360	Face-On
3	14.3719	17.58	Pk	34.2	-31.6	-40	-19.82	29.54	-49.36	0-360	Face-On
4	12.7064	20.74	Pk	34.5	-31.6	-40	-16.36	29.54	-45.9	0-360	Face-Off
5	13.558	58.98	Pk	34.3	-31.6	-40	21.68	84	-62.32	0-360	Face-Off
6	14.8696	14.47	Pk	34.1	-31.6	-40	-23.03	29.54	-52.57	0-360	Face-Off

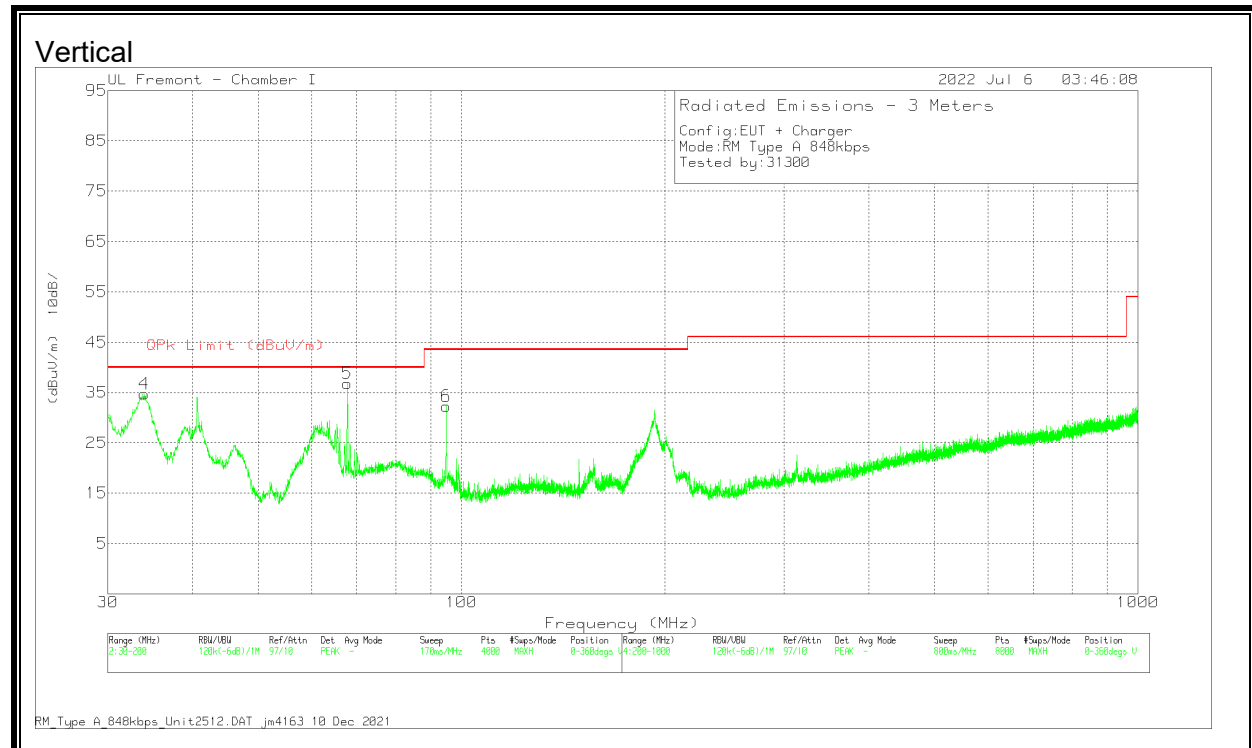
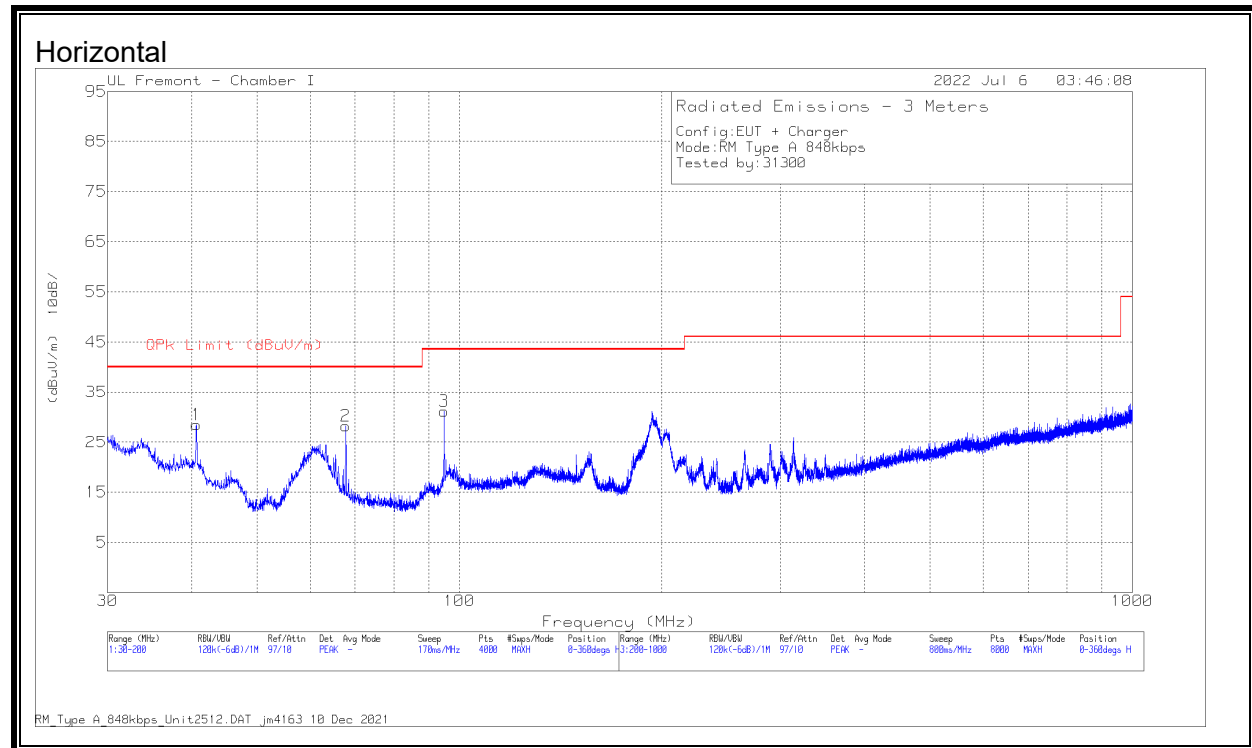
Pk - Peak detector



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr 300m (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
1	.0165	12.65	Pk	59.5	-31.4	-80	-39.25	63.22	-102.47	43.22	-82.47	0-360	Face-On
2	.0579	23.59	Pk	56.4	-32	-80	-32.01	52.32	-84.33	32.32	-64.33	0-360	Face-On
3	.1143	10.78	Pk	55.7	-32.1	-80	-45.62	46.46	-92.08	26.46	-72.08	0-360	Face-On
4	.0161	11	Pk	59.5	-31.4	-80	-40.9	63.44	-104.34	43.44	-84.34	0-360	Face-Off
5	.058	22.09	Pk	56.4	-32	-80	-33.51	52.32	-85.83	32.32	-65.83	0-360	Face-Off
6	.1211	9.42	Pk	55.7	-32.1	-80	-46.98	45.96	-92.94	25.96	-72.94	0-360	Face-Off

Pk - Peak detector

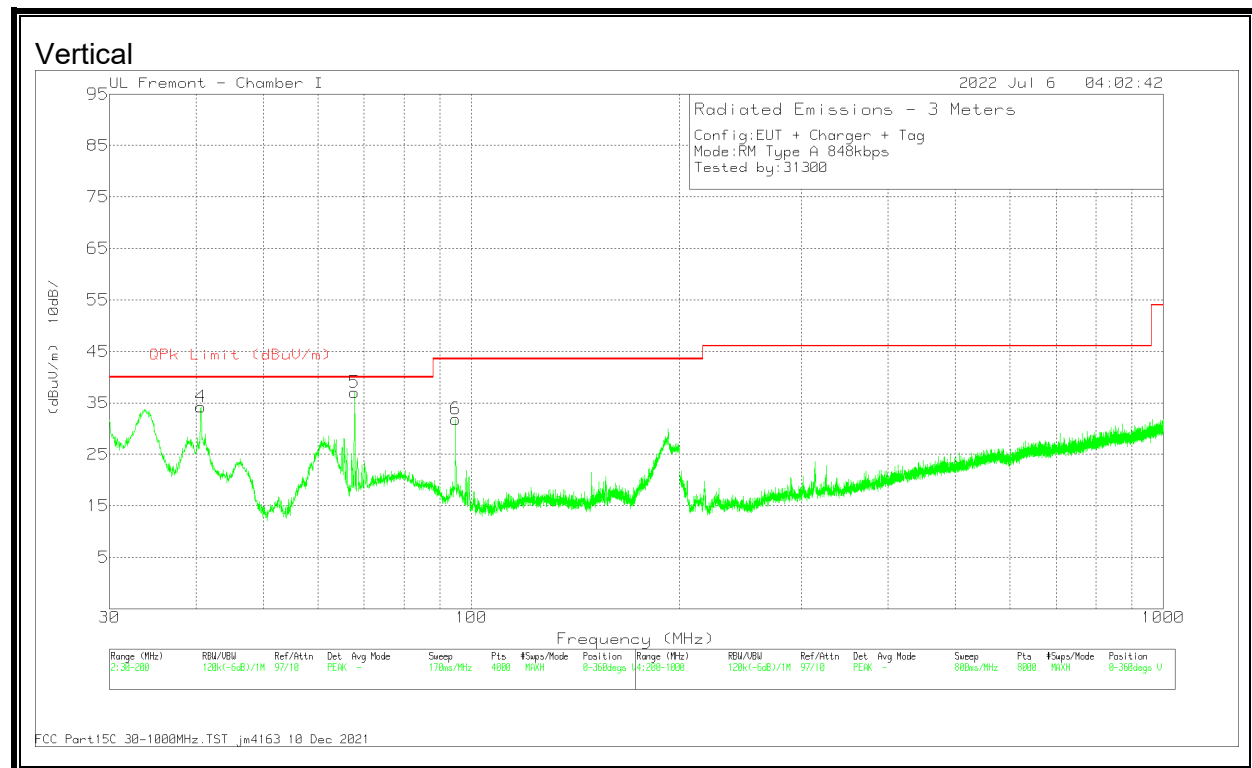
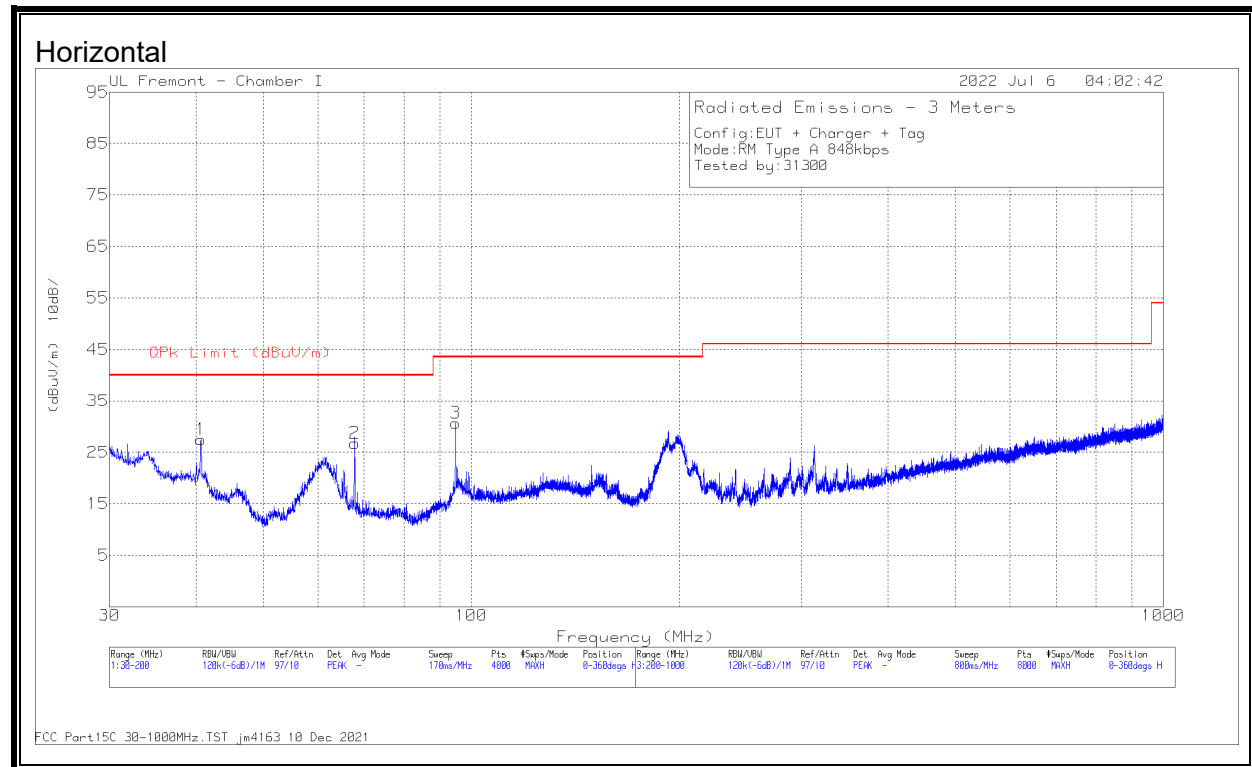
8.3. PRIMARY ANTENNA TX SPURIOUS EMISSION 30-1000 MHz**8.3.1. READER MODE, Type A 848 Kbps****SPURIOUS EMISSION**

DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	85150 AF (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.6703	39.85	Pk	19.9	-31.3	28.45	40	-11.55	0-360	299	H
2	67.7923	44.94	Pk	14.3	-31	28.24	40	-11.76	0-360	199	H
3	94.9143	47.26	Pk	14.8	-30.9	31.16	43.52	-12.36	0-360	299	H
4	33.9535	41.4	Pk	24.7	-31.4	34.7	40	-5.3	0-360	101	V
	33.9535	37.7	Qp	24.6	-31.4	30.9	40	-9.1	322	105	V
5	67.7923	53.49	Pk	14.3	-31	36.79	40	-3.21	0-360	101	V
	67.7923	53.33	Qp	14.3	-31	36.63	40	-3.37	102	100	V
6	94.9143	48.34	Pk	14.8	-30.9	32.24	43.52	-11.28	0-360	101	V

Pk - Peak detector

Qp - Quasi-Peak detector

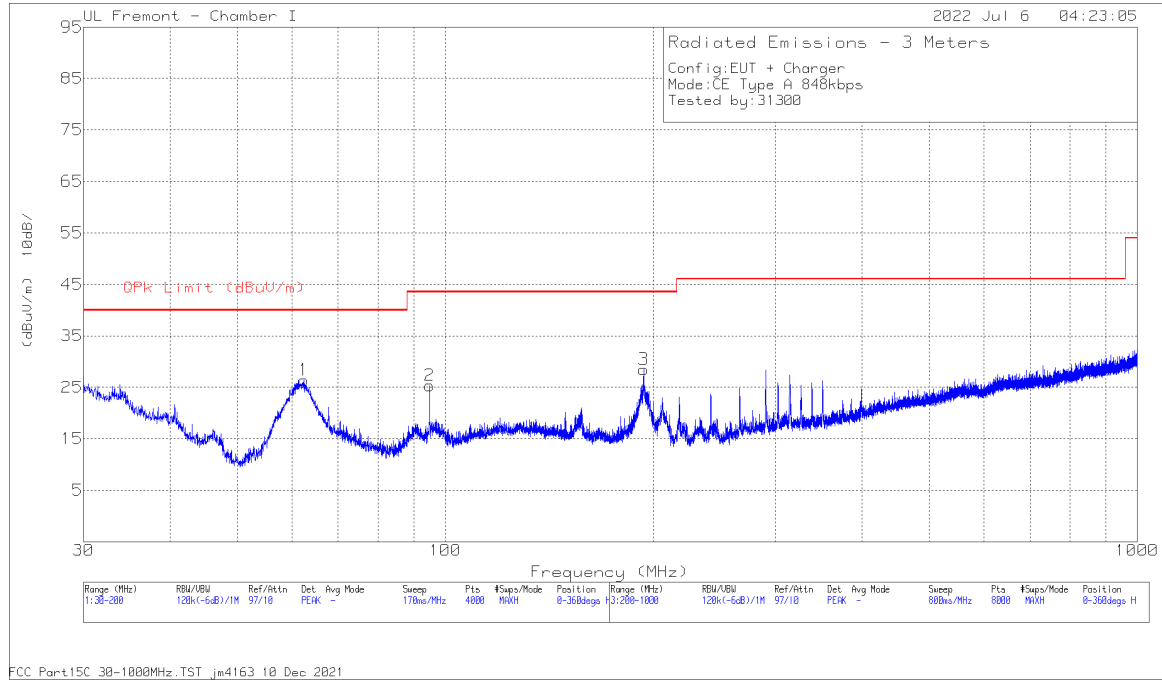
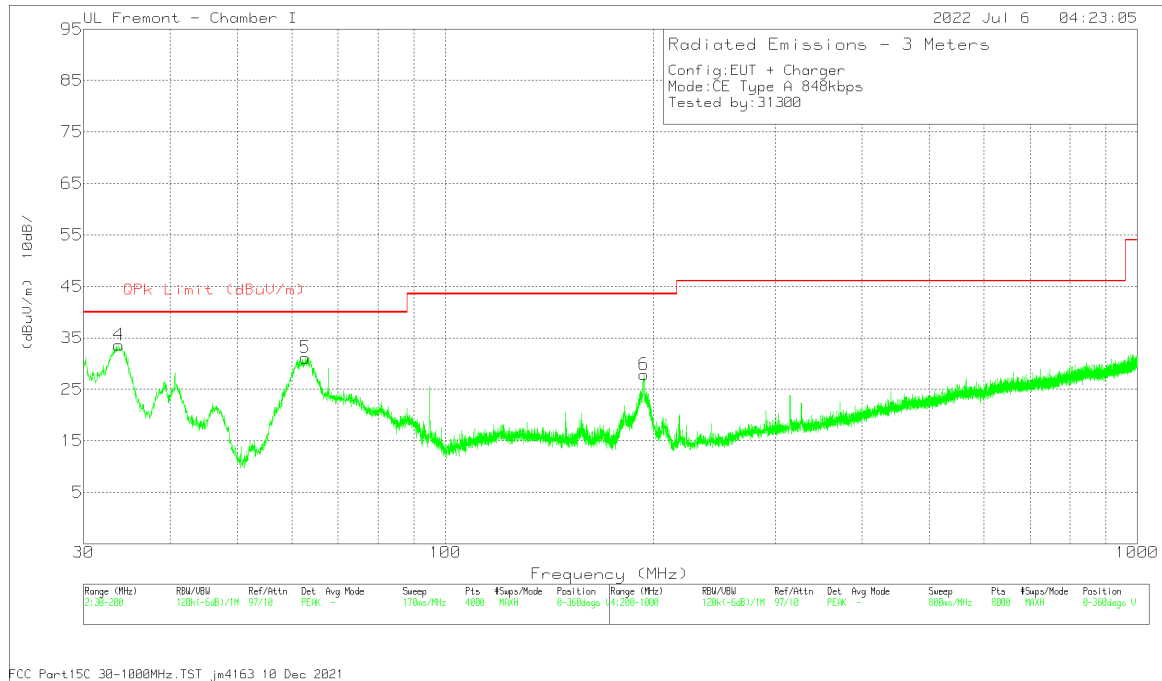
8.3.2. TAG MODE**SPURIOUS EMISSION**

DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	85150 AF (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.6703	38.89	Pk	19.9	-31.3	27.49	40	-12.51	0-360	299	H
2	67.8348	43.48	Pk	14.3	-31	26.78	40	-13.22	0-360	199	H
3	94.9143	46.78	Pk	14.8	-30.9	30.68	43.52	-12.84	0-360	299	H
4	40.6703	45.63	Pk	19.9	-31.3	34.23	40	-5.77	0-360	101	V
	40.6703	40.64	Qp	19.9	-31.3	29.24	40	-10.76	358	102	V
5	67.7923	53.71	Pk	14.3	-31	37.01	40	-2.99	0-360	101	V
	67.7923	53.43	Qp	14.3	-31	36.73	40	-3.27	120	100	V
6	94.9143	47.93	Pk	14.8	-30.9	31.83	43.52	-11.69	0-360	101	V

Pk - Peak detector

Qp - Quasi-Peak detector

8.3.3. CE MODE, Type A 848 Kbps**Horizontal****Vertical**

DATA

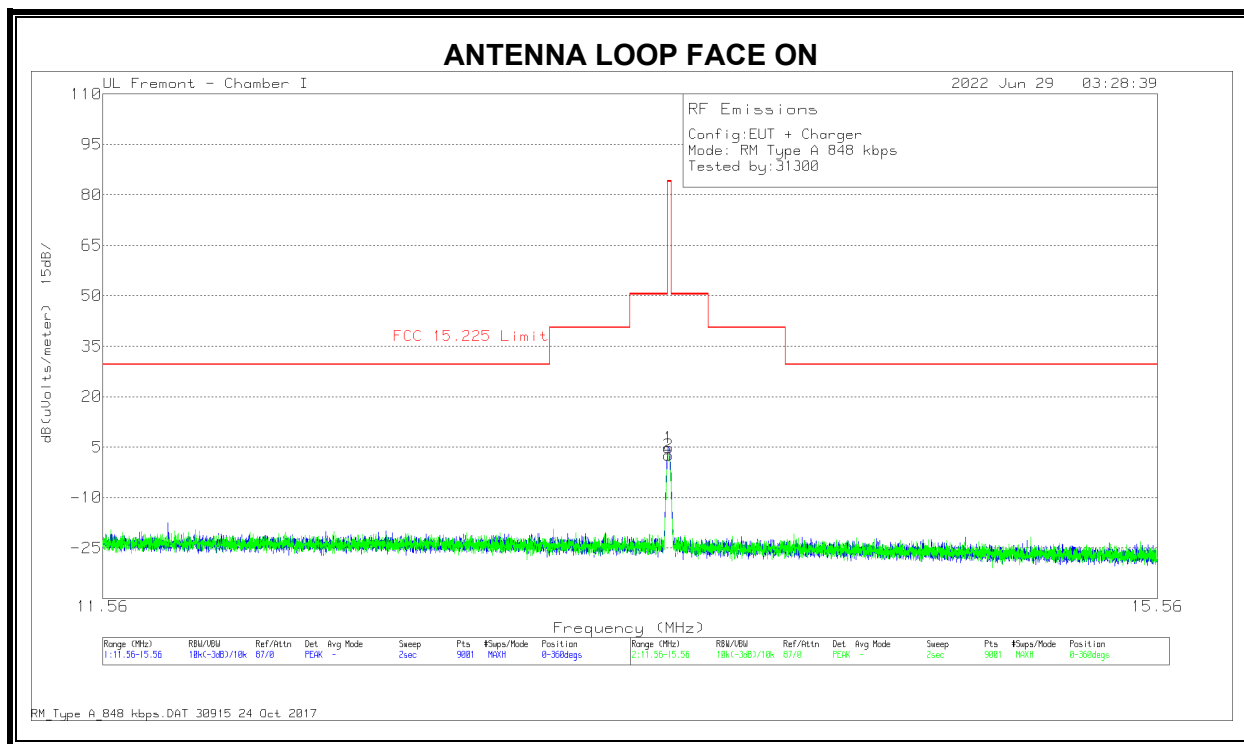
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	85150 AF (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	62.4784	43.47	Pk	14	-31.1	26.37	40	-13.63	0-360	199	H
2	94.9143	41.45	Pk	14.8	-30.9	25.35	43.52	-18.17	0-360	299	H
3	193.455	41.16	Pk	17.6	-30.3	28.46	43.52	-15.06	0-360	100	H
4	33.741	40.1	Pk	24.9	-31.4	33.6	40	-6.4	0-360	101	V
5	62.7335	48.13	Pk	14.1	-31.1	31.13	40	-8.87	0-360	101	V
6	193.646	40.48	Pk	17.7	-30.3	27.88	43.52	-15.64	0-360	101	V

Pk - Peak detector

8.4. SECONDARY ANTENNA FUNDAMENTAL & SPURIOUS EMISSION 0.15-30 MHz

8.4.1. READER MODE, Type A 848 Kbps

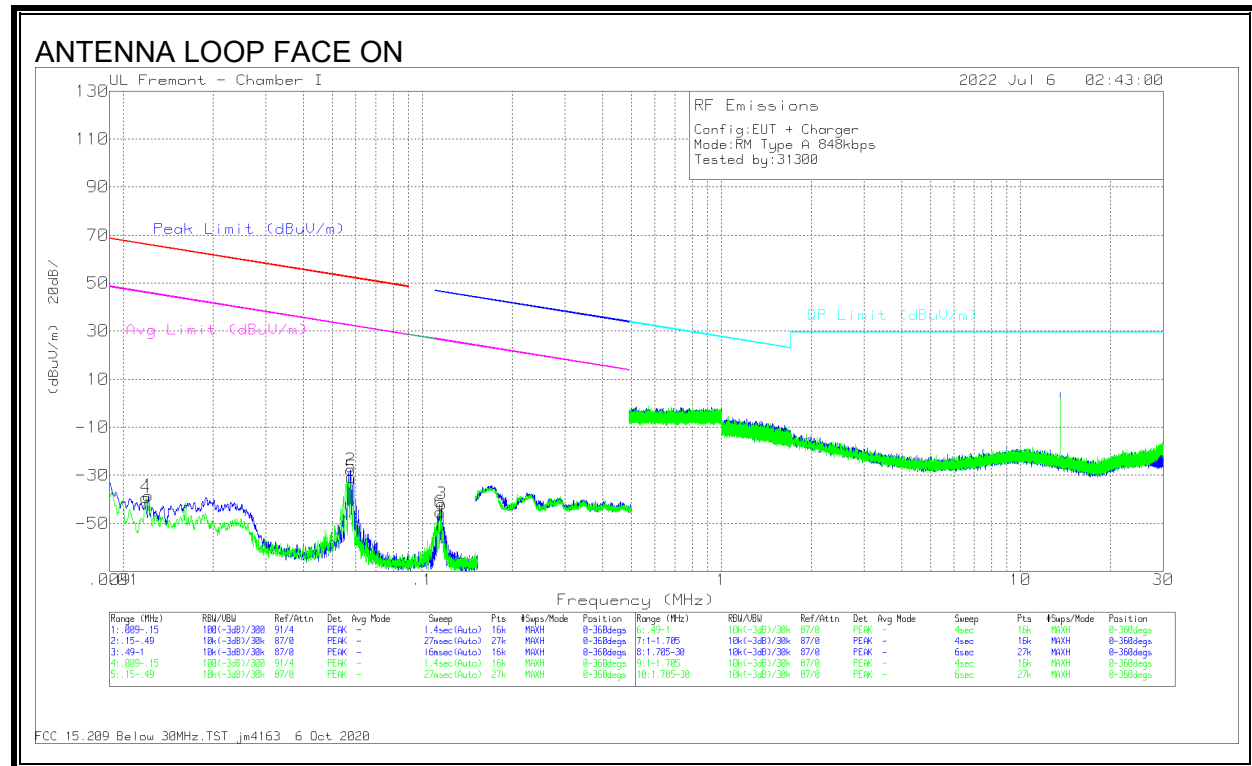
FUNDAMENTAL



DATA

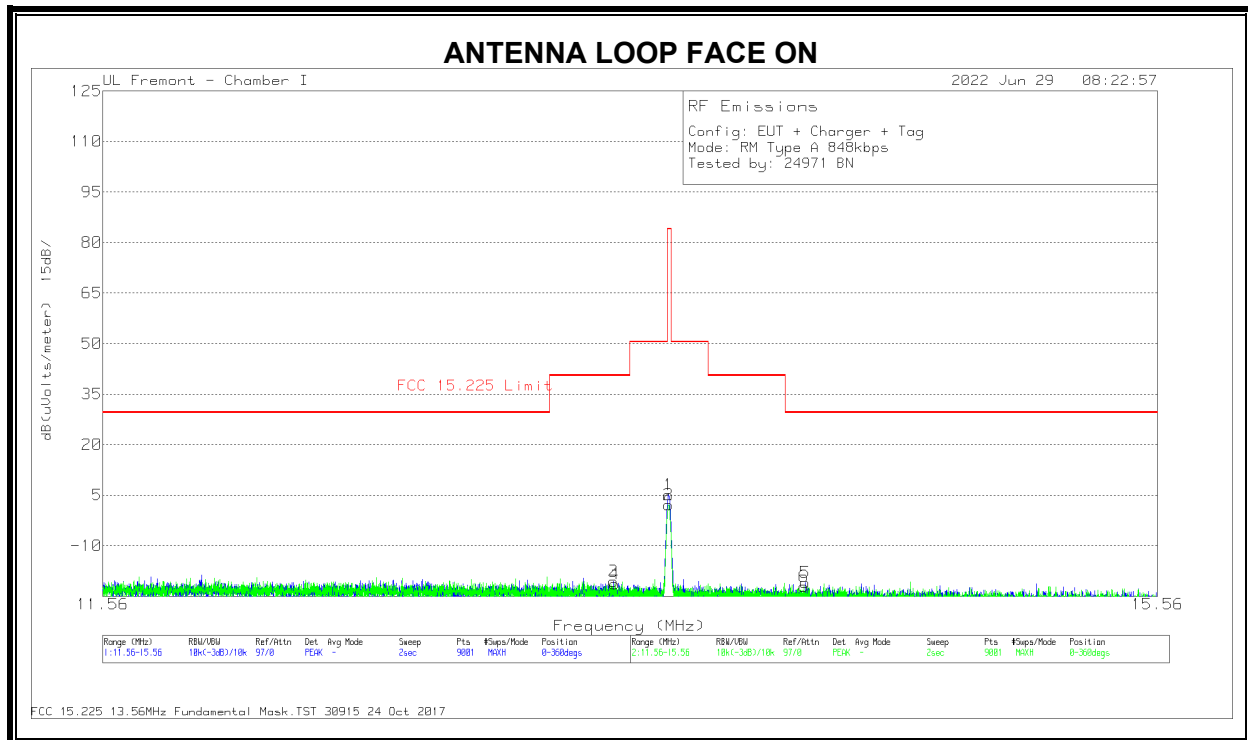
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuV/m)	FCC 15.225 Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)
1	13.558	42.21	Pk	34.3	-31.6	-40	4.91	84	-79.09	0-360
2	13.558	39.88	Pk	34.3	-31.6	-40	2.58	84	-81.42	0-360

Pk - Peak detector

SPURIOUS EMISSION**DATA**

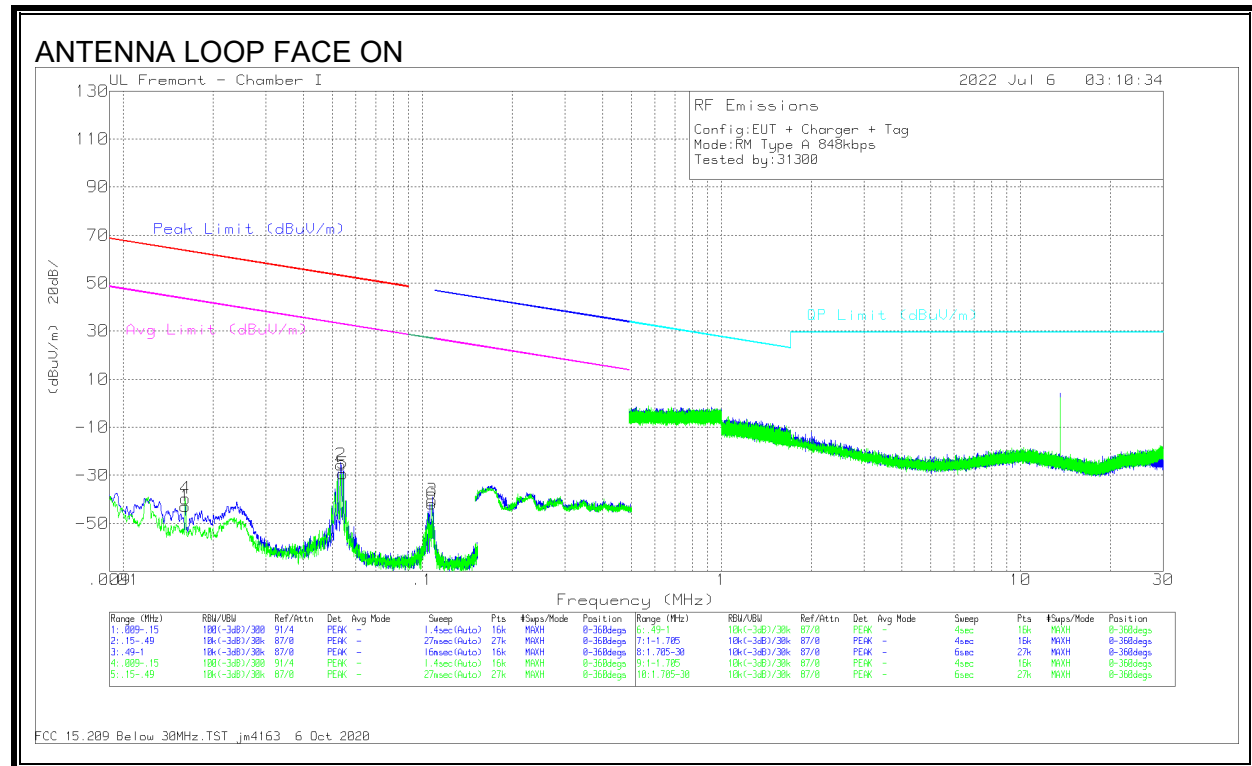
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cb I (dB)	Dist Corr 300m (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
1	.0121	12.47	Pk	60	-31	-80	-38.53	65.9	-104.43	45.9	-84.43	0-360	Face-On
2	.0576	27.91	Pk	56.4	-32	-80	-27.69	52.38	-80.07	32.38	-60.07	0-360	Face-On
3	.116	14.55	Pk	55.7	-32.1	-80	-41.85	46.33	-88.18	26.33	-68.18	0-360	Face-On
4	.0119	11.56	Pk	60.1	-31	-80	-39.34	66.07	-105.41	46.07	-85.41	0-360	Face-Off
5	.0578	24.81	Pk	56.4	-32	-80	-30.79	52.34	-83.13	32.34	-63.13	0-360	Face-Off
6	.1147	11.09	Pk	55.7	-32.1	-80	-45.31	46.43	-91.74	26.43	-71.74	0-360	Face-Off

Pk - Peak detector

8.4.2. TAG MODE**FUNDAMENTAL****DATA**

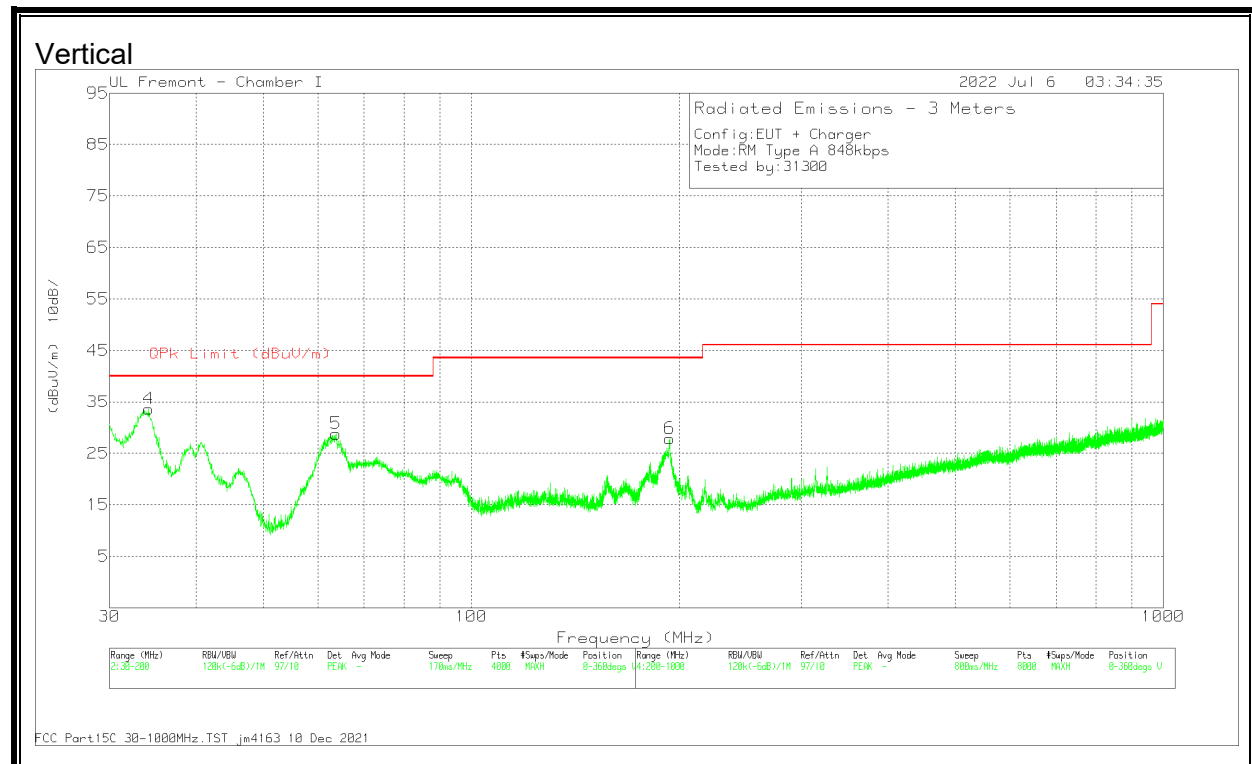
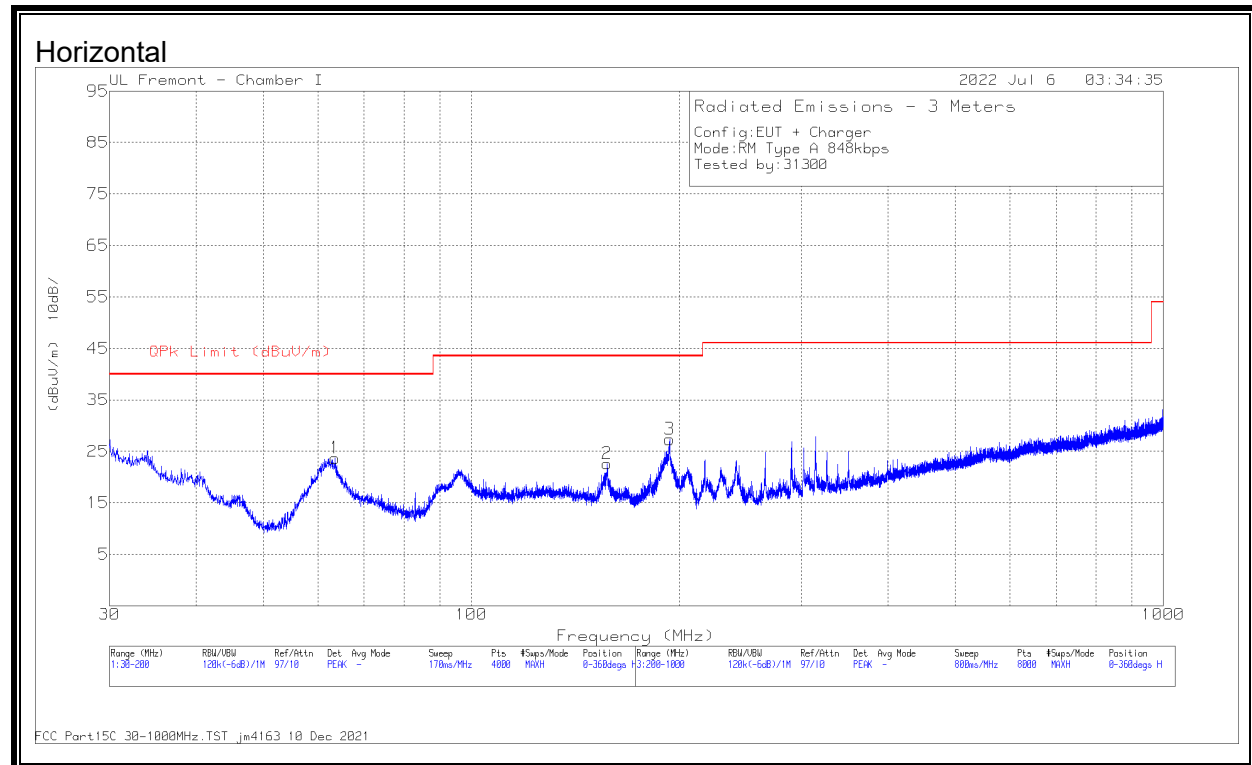
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuV/m)	FCC 15.225 Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)
1	13.5584	42.41	Pk	34.3	-31.6	-40	5.11	84	-78.89	0-360
3	13.348	16.76	Pk	34.3	-31.6	-40	-20.54	40.51	-61.05	0-360
5	14.0895	16.48	Pk	34.2	-31.6	-40	-20.92	29.54	-50.46	0-360
2	13.5576	39.39	Pk	34.3	-31.6	-40	2.09	84	-81.91	0-360
4	13.3533	15.9	Pk	34.3	-31.6	-40	-21.4	40.51	-61.91	0-360
6	14.0841	15.24	Pk	34.2	-31.6	-40	-22.16	29.54	-51.7	0-360

Pk - Peak detector

SPURIOUS EMISSION**DATA**

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr 300m (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
1	.0161	8.98	Pk	59.5	-31.4	-80	-42.92	63.44	-106.36	43.44	-86.36	-	-	0-360	Face-Off
2	.0534	29.44	Pk	56.8	-32	-80	-25.76	53.03	-78.79	33.03	-58.79	-	-	0-360	Face-On
3	.1079	15.89	Pk	55.7	-32.1	-80	-40.51	-	-	-	-	26.97	-67.48	0-360	Face-On
4	.0161	12.22	Pk	59.5	-31.4	-80	-39.68	63.43	-103.11	43.43	-83.11	-	-	0-360	Face-On
5	.0542	25.98	Pk	56.7	-32	-80	-29.32	52.91	-82.23	32.91	-62.23	-	-	0-360	Face-Off
6	.1075	14.49	Pk	55.7	-32.1	-80	-41.91	-	-	-	-	27	-68.91	0-360	Face-Off

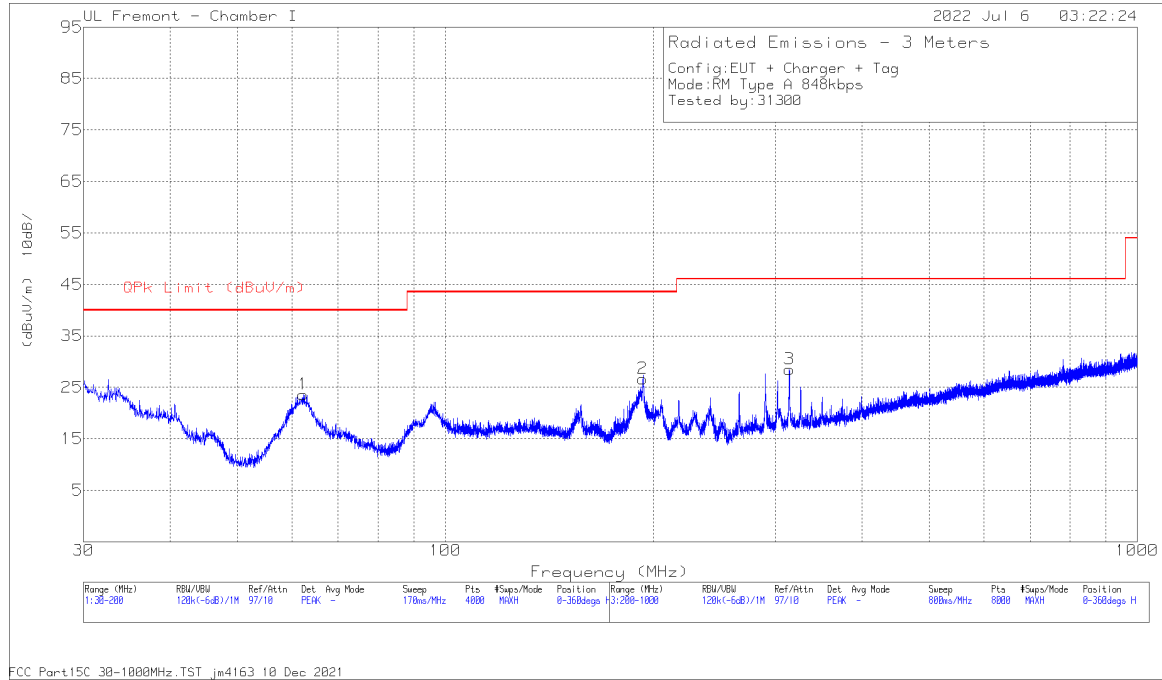
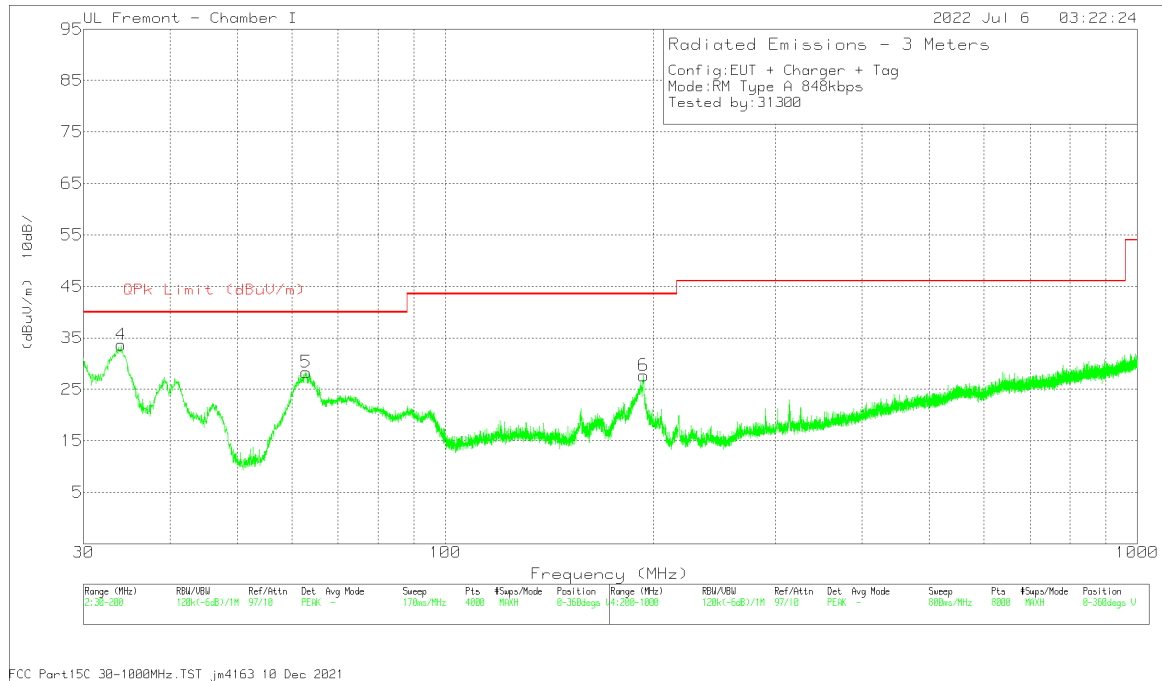
Pk - Peak detector

8.5. SECONDARY ANTENNA TX SPURIOUS EMISSION 30-1000 MHz**8.5.1. READER MODE, Type A 848 Kbps**

DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	85150 AF (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	63.4987	40.67	Pk	14.1	-31.1	23.67	40	-16.33	0-360	299	H
2	157.108	35.01	Pk	18.1	-30.5	22.61	43.52	-20.91	0-360	199	H
3	193.497	40.04	Pk	17.6	-30.3	27.34	43.52	-16.18	0-360	99	H
4	34.1661	40.43	Pk	24.6	-31.4	33.63	40	-6.37	0-360	101	V
5	63.7537	45.68	Pk	14.2	-31.1	28.78	40	-11.22	0-360	101	V
6	193.497	40.58	Pk	17.6	-30.3	27.88	43.52	-15.64	0-360	101	V

Pk - Peak detector

8.5.2. TAG MODE**Horizontal****Vertical**

DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	85150 AF (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	62.3084	40.73	Pk	14	-31.1	23.63	40	-16.37	0-360	199	H
2	192.775	39.37	Pk	17.6	-30.3	26.67	43.52	-16.85	0-360	99	H
4	33.996	40.36	Pk	24.7	-31.4	33.66	40	-6.34	0-360	101	V
5	62.9035	45.3	Pk	14.1	-31.1	28.3	40	-11.7	0-360	101	V
6	193.37	40.4	Pk	17.6	-30.3	27.7	43.52	-15.82	0-360	101	V
3	314.115	38.51	Pk	19.8	-29.8	28.51	46.02	-17.51	0-360	101	H

Pk - Peak detector

9. FREQUENCY STABILITY

LIMIT

§15.225 (e) The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ of the operating frequency, over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

IC RSS-210, Annex B.6

Carrier frequency stability shall be maintained to $\pm 0.01\%$ (± 100 ppm).

TEST PROCEDURE

ANSI C63.10-2013 Clause 6.8

RESULTS

No non-compliance noted.

ID:	12482	Date:	6/14/2022
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9.1. PRIMARY ANTENNA**9.1.1. READER MODE, Type A 848 Kbps**

Reference Frequency: EUT Channel 13.56 MHz @ 20°C										
Limit: ± 100 ppm = 1.35600 KHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.55989338	2.531	13.55989441	2.455	13.5598958	2.353	13.55989781	2.205	± 100
	40	13.55988859	2.885	13.55988823	2.911	13.55988809	2.921	13.55988792	2.934	± 100
	30	13.55989466	2.437	13.55989555	2.371	13.55989616	2.326	13.55989711	2.256	± 100
	20	13.5599277	0.000	13.55992855	-0.063	13.55992948	-0.131	13.55993035	-0.195	± 100
	10	13.55994459	-1.245	13.55995037	-1.671	13.55995472	-1.993	13.55996007	-2.387	± 100
	0	13.56000245	-5.512	13.56000584	-5.763	13.56000861	-5.967	13.56001112	-6.152	± 100
	-10	13.56004803	-8.874	13.56005007	-9.024	13.56005167	-9.142	13.56005388	-9.305	± 100
	-20	13.56007764	-11.057	13.5600792	-11.173	13.56008046	-11.265	13.56008211	-11.387	± 100
3.23	20	13.55993458	-0.507	13.55993232	-0.341	13.559931	-0.243	13.55993009	-0.176	± 100
4.37	20	13.55995774	-2.215	13.55995353	-1.904	13.55995077	-1.702	13.55994778	-1.481	± 100

9.1.2. TAG MODE

Reference Frequency: EUT Channel 13.56 MHz @ 20°C										
Limit: ± 100 ppm = 1.35600 KHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.55989042	1.814	13.55989018	1.831	13.55989118	1.758	13.55989624	1.384	± 100
	40	13.55989134	1.746	13.55989094	1.776	13.5598907	1.793	13.55989058	1.802	± 100
	30	13.55989417	1.537	13.55989529	1.454	13.55989711	1.320	13.55989807	1.250	± 100
	20	13.55991502	0.000	13.55991768	-0.196	13.55992051	-0.405	13.55992382	-0.650	± 100
	10	13.55995167	-2.703	13.55995654	-3.063	13.55996065	-3.365	13.55996336	-3.565	± 100
	0	13.55997856	-4.686	13.55998878	-5.440	13.55999348	-5.787	13.56000243	-6.447	± 100
	-10	13.56000675	-6.765	13.56001786	-7.585	13.56003002	-8.481	13.56004231	-9.388	± 100
	-20	13.56008045	-12.200	13.56008144	-12.273	13.56008264	-12.361	13.56008372	-12.441	± 100
3.23	20	13.55995653	-3.062	13.55994979	-2.565	13.55994215	-2.001	13.55993419	-1.414	± 100
4.37	20	13.55993528	-1.495	13.55993527	-1.494	13.55993488	-1.465	13.55993432	-1.424	± 100

9.1.3. CE MODE, Type A 848 Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C										
Limit: ± 100 ppm = 1.35600 KHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.56117543	-38.756	13.56097407	-23.906	13.56137261	-53.297	13.55939931	92.226	± 100
	40	13.56046873	13.360	13.56024044	30.196	13.56115098	-36.953	13.55958745	78.352	± 100
	30	13.5607472	-7.176	13.5604719	13.127	13.5609031	-18.673	13.56053709	8.319	± 100
	20	13.560649900	0.000	13.560475600	12.854	13.5599913	48.569	13.5597958	62.987	± 100
	10	13.5609544	-22.456	13.5610371	-28.555	13.56100354	-26.080	13.56085459	-15.095	± 100
	0	13.56048762	11.967	13.55996386	50.593	13.56027219	27.855	13.56054141	8.001	± 100
	-10	13.56016175	36.000	13.56053795	8.256	13.56053175	8.713	13.56053804	8.250	± 100
	-20	13.56099945	-25.778	13.56140063	-55.364	13.56045685	14.237	13.56084017	-14.031	± 100
3.23	20	13.56162969	-72.256	13.55973807	67.244	13.56085774	-15.327	13.55935658	95.378	± 100
4.37	20	13.56109025	-32.475	13.56119494	-40.195	13.55962194	75.808	13.56017161	35.272	± 100

9.2. SECONDARY ANTENNA**9.2.1. READER MODE, Type A 848 Kbps**

Reference Frequency: EUT Channel 13.56 MHz @ 20°C										
Limit: ± 100 ppm = 1.35600 KHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.559932	1.976	13.55993493	1.760	13.55993816	1.521	13.55994296	1.167	± 100
	40	13.55992565	2.444	13.55992485	2.503	13.55992451	2.528	13.55992441	2.536	± 100
	30	13.55995648	0.170	13.55994938	0.694	13.55994304	1.161	13.55993671	1.628	± 100
	20	13.55995879	0.000	13.55995771	0.080	13.55995656	0.164	13.55995517	0.267	± 100
	10	13.55996833	-0.703	13.5599713	-0.923	13.55997474	-1.177	13.55997842	-1.448	± 100
	0	13.56000215	-3.197	13.56000592	-3.476	13.56000884	-3.691	13.56001182	-3.911	± 100
	-10	13.5600284	-5.133	13.56003174	-5.380	13.56003485	-5.609	13.56003804	-5.844	± 100
	-20	13.56004899	-6.652	13.56005008	-6.733	13.56005105	-6.804	13.56005181	-6.860	± 100
3.23	20	13.55992712	2.336	13.55993032	2.100	13.5599344	1.799	13.55993948	1.424	± 100
4.37	20	13.5599407	1.334	13.55994265	1.190	13.55994469	1.040	13.55994686	0.880	± 100

9.2.2. TAG MODE

Reference Frequency: EUT Channel 13.56 MHz @ 20°C										
Limit: ± 100 ppm = 1.35600 KHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5599339	0.795	13.55993661	0.594	13.55994027	0.325	13.5599455	-0.061	± 100
	40	13.5599246	1.480	13.55992422	1.509	13.55992407	1.520	13.55992438	1.497	± 100
	30	13.55993959	0.375	13.55993712	0.557	13.55993449	0.751	13.5599318	0.950	± 100
	20	13.55994467	0.000	13.5599445	0.013	13.55994416	0.038	13.55994393	0.055	± 100
	10	13.55993184	0.947	13.55993868	0.442	13.55994813	-0.254	13.55995995	-1.126	± 100
	0	13.55998508	-2.979	13.55999031	-3.365	13.55999624	-3.803	13.56000269	-4.279	± 100
	-10	13.56002077	-5.612	13.56002474	-5.905	13.56002913	-6.228	13.56003351	-6.552	± 100
	-20	13.56004532	-7.422	13.56004708	-7.552	13.56004881	-7.680	13.56005025	-7.786	± 100
3.23	20	13.55994374	0.069	13.55994322	0.107	13.55994275	0.142	13.55994238	0.170	± 100
4.37	20	13.55994707	-0.177	13.55994608	-0.104	13.55994544	-0.057	13.55994481	-0.010	± 100

10. AC MAINS LINE CONDUCTED EMISSIONS

LIMITS

§15.207

IC RSS-GEN, Section 8.8

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

Frequency range (MHz)	Limits (dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

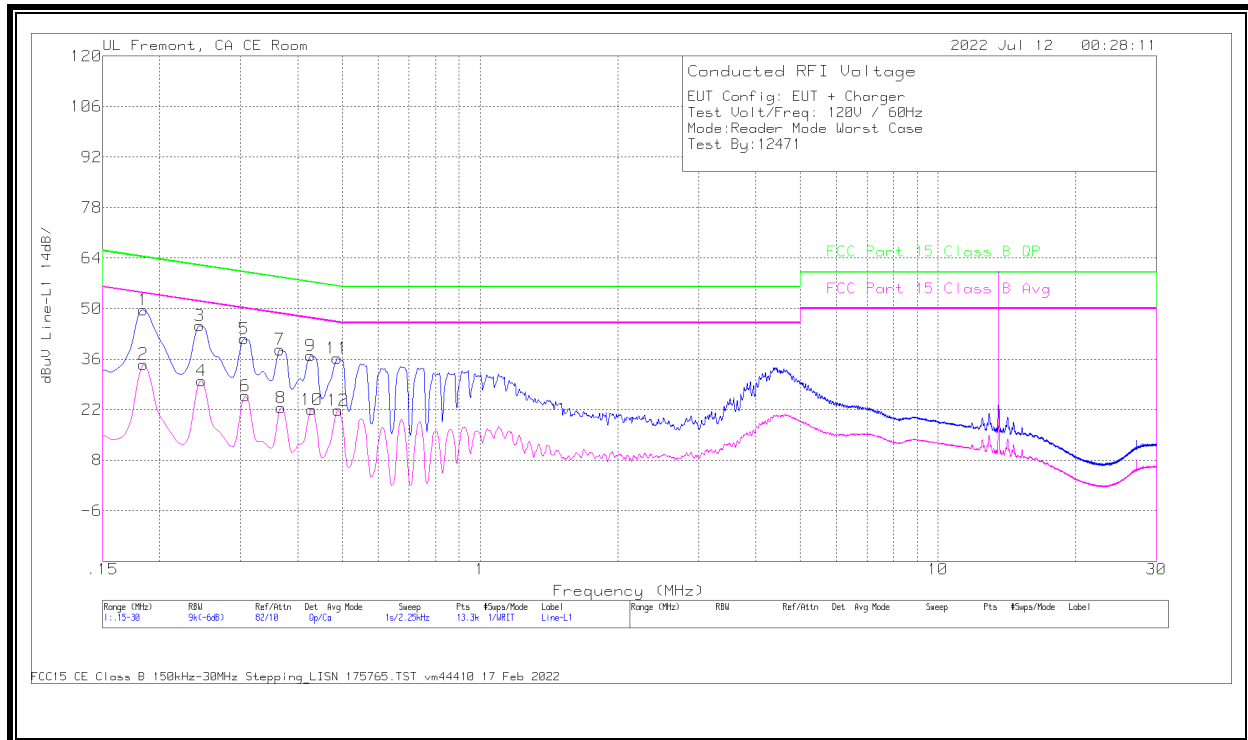
Notes:
1. The lower limit shall apply at the transition frequencies
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

TEST PROCEDURE

ANSI C63.10:2013

RESULTS

No non-compliance noted:

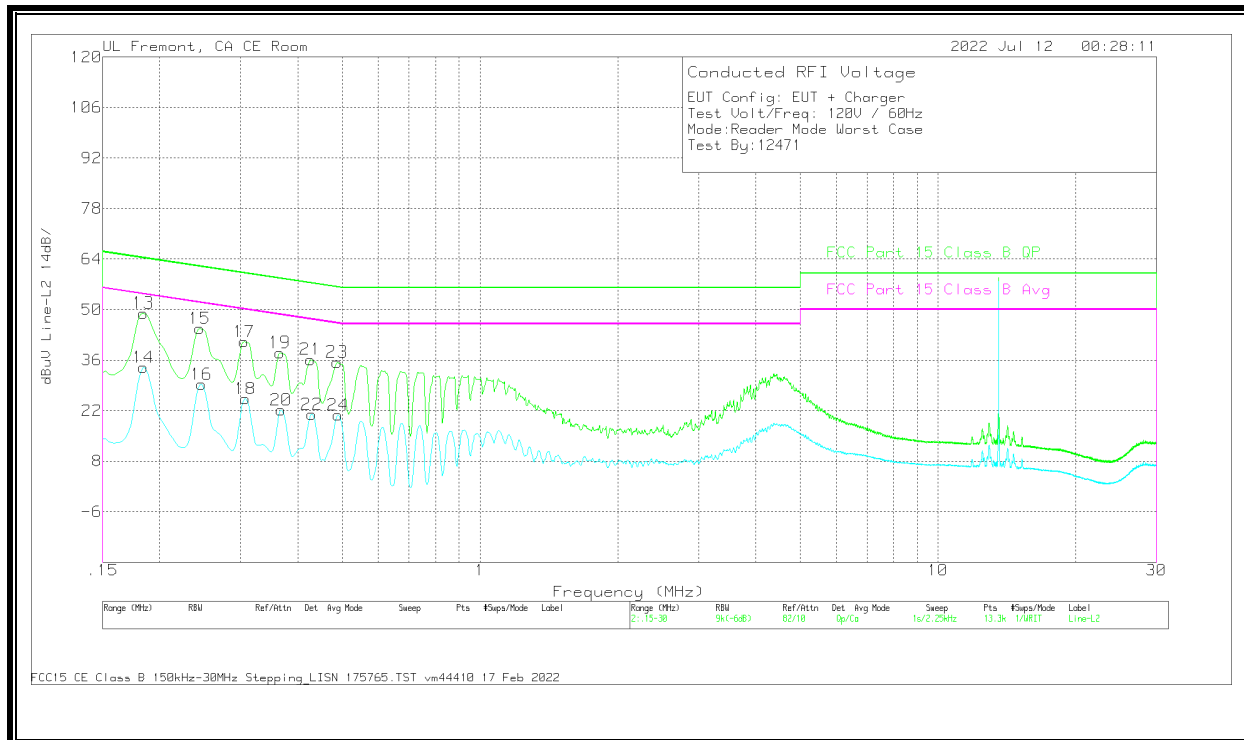
10.1. PRIMARY ANTENNA**10.1.1. READER MODE, Type A 848 Kbps, with Antenna****LINE 1 RESULTS****Worst Emission**

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L1 (dB)	C1&C3 cable (dB)	207996 Limiter 9k-600M_6-2-22 (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
2	.1838	24.31	Ca	.1	0	10.2	34.61	-	-	54.31	-19.7
4	.2468	20.53	Ca	0	0	9.5	30.03	-	-	51.87	-21.84
6	.3075	16.3	Ca	0	0	9.5	25.8	-	-	50.04	-24.24
8	.3683	13.05	Ca	0	0	9.5	22.55	-	-	48.54	-25.99
10	.429	12.57	Ca	0	0	9.5	22.07	-	-	47.27	-25.2
12	.4898	12.26	Ca	0	0	9.5	21.76	-	-	46.17	-24.41
1	.1838	39.38	Qp	.1	0	10.2	49.68	64.31	-14.63	-	-
3	.2445	35.82	Qp	0	0	9.5	45.32	61.94	-16.62	-	-
5	.3053	32.11	Qp	0	0	9.5	41.61	60.1	-18.49	-	-
7	.366	29.12	Qp	0	0	9.5	38.62	58.59	-19.97	-	-
9	.4268	27.52	Qp	0	0	9.5	37.02	57.32	-20.3	-	-
11	.4875	26.72	Qp	0	0	9.5	36.22	56.21	-19.99	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicate that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

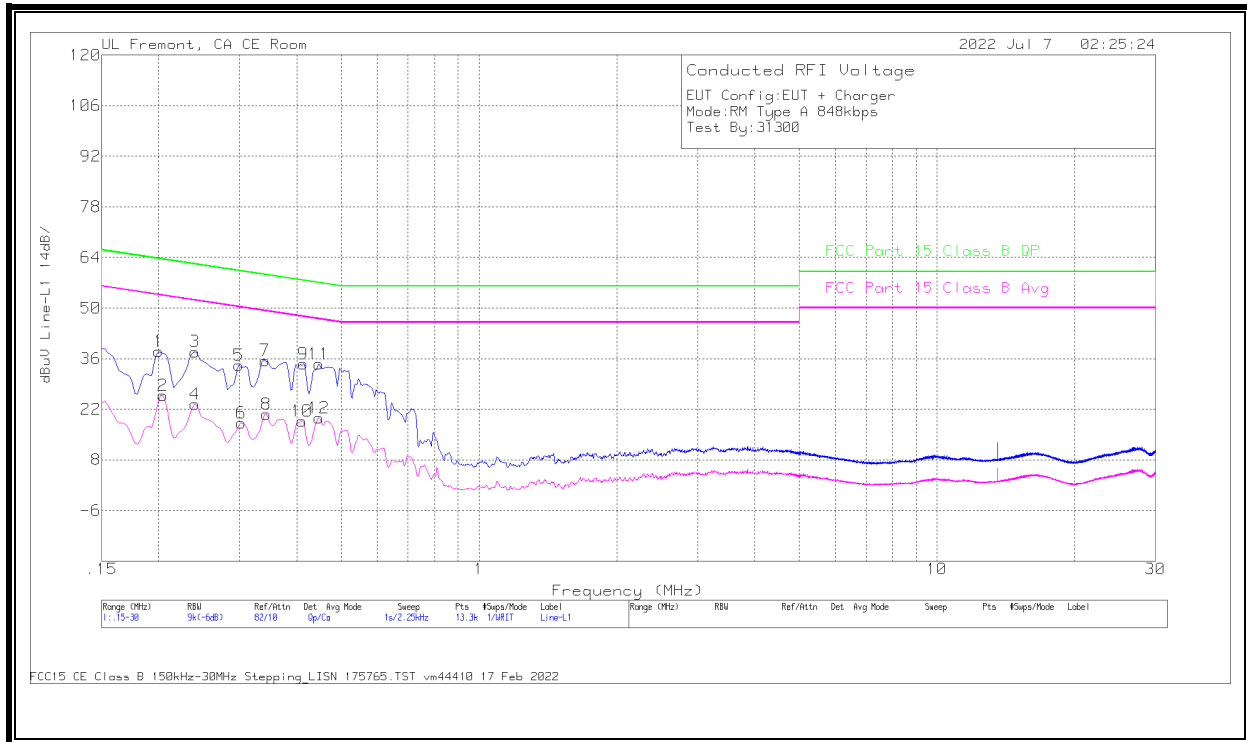
LINE 2 RESULTS**Worst Emission**

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L2 (dB)	C2&C3 cable (dB)	207996 Limiter 9k-600M_6-2-22 (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
14	.1838	23.7	Ca	.1	0	10.2	34	-	-	54.31	-20.31
16	.2468	19.84	Ca	0	0	9.5	29.34	-	-	51.87	-22.53
18	.3075	15.85	Ca	0	0	9.5	25.35	-	-	50.04	-24.69
20	.3683	12.63	Ca	0	0	9.5	22.13	-	-	48.54	-26.41
22	.429	11.54	Ca	0	0	9.5	21.04	-	-	47.27	-26.23
24	.4898	11.26	Ca	0	0	9.5	20.76	-	-	46.17	-25.41
13	.1838	38.74	Qp	.1	0	10.2	49.04	64.31	-15.27	-	-
15	.2445	35.32	Qp	0	0	9.5	44.82	61.94	-17.12	-	-
17	.3053	31.67	Qp	0	0	9.5	41.17	60.1	-18.93	-	-
19	.366	28.59	Qp	0	0	9.5	38.09	58.59	-20.5	-	-
21	.4268	26.68	Qp	0	0	9.5	36.18	57.32	-21.14	-	-
23	.4875	25.98	Qp	0	0	9.5	35.48	56.21	-20.73	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

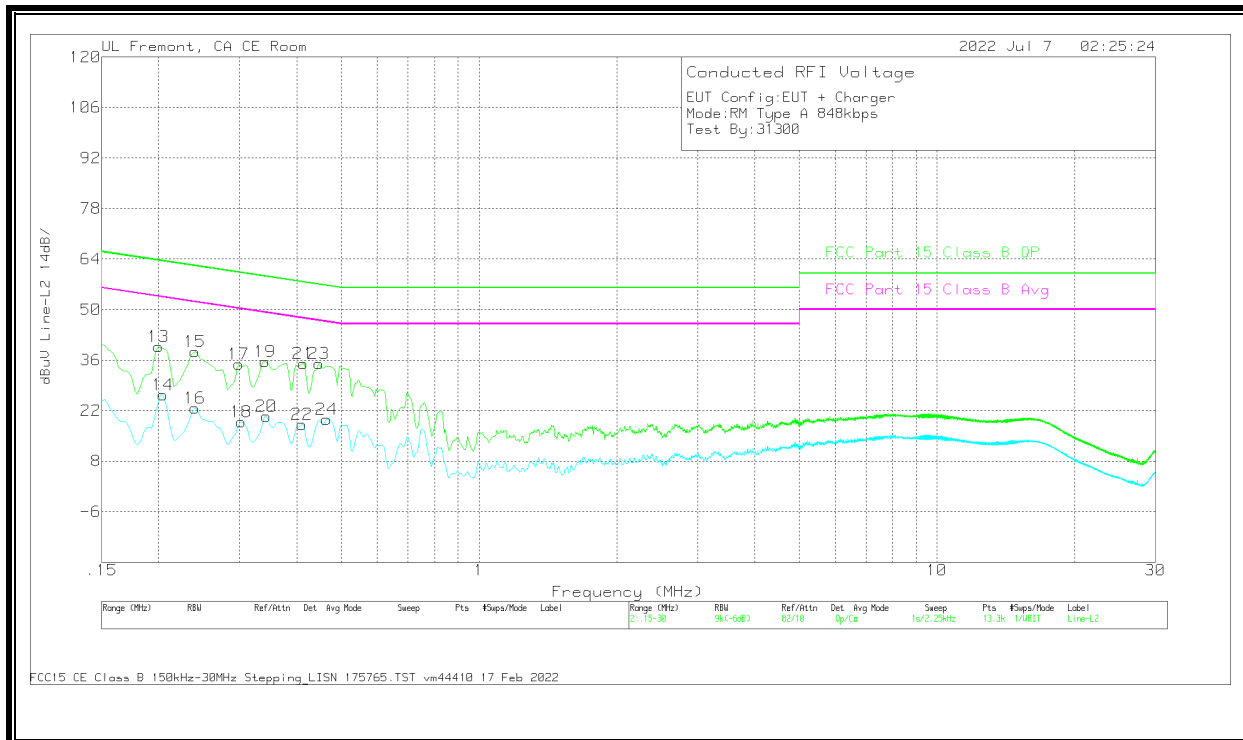
Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicates that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

10.1.2. READER MODE, Type A 848 Kbps, Antenna Port Terminated**LINE 1 RESULTS****Worst Emission**

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L1 (dB)	C1&C3 cable (dB)	207996 Limiter 9k-600M_6-2-22. (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
2	.204	16.26	Ca	0	0	9.6	25.86	-	-	53.45	-27.59
4	.24	13.88	Ca	0	0	9.5	23.38	-	-	52.1	-28.72
6	.303	8.73	Ca	0	0	9.5	18.23	-	-	50.16	-31.93
8	.3435	11.15	Ca	0	0	9.5	20.65	-	-	49.12	-28.47
10	.411	9.29	Ca	0	0	9.5	18.79	-	-	47.63	-28.84
12	.447	10.14	Ca	0	0	9.5	19.64	-	-	46.93	-27.29
1	.1995	28.16	Qp	.1	0	9.8	38.06	63.63	-25.57	-	-
3	.24	28.42	Qp	0	0	9.5	37.92	62.1	-24.18	-	-
5	.2985	24.65	Qp	0	0	9.5	34.15	60.28	-26.13	-	-
7	.3413	25.98	Qp	0	0	9.5	35.48	59.17	-23.69	-	-
9	.4133	25.02	Qp	0	0	9.5	34.52	57.58	-23.06	-	-
11	.447	25.04	Qp	0	0	9.5	34.54	56.93	-22.39	-	-

Qp - Quasi-Peak detector

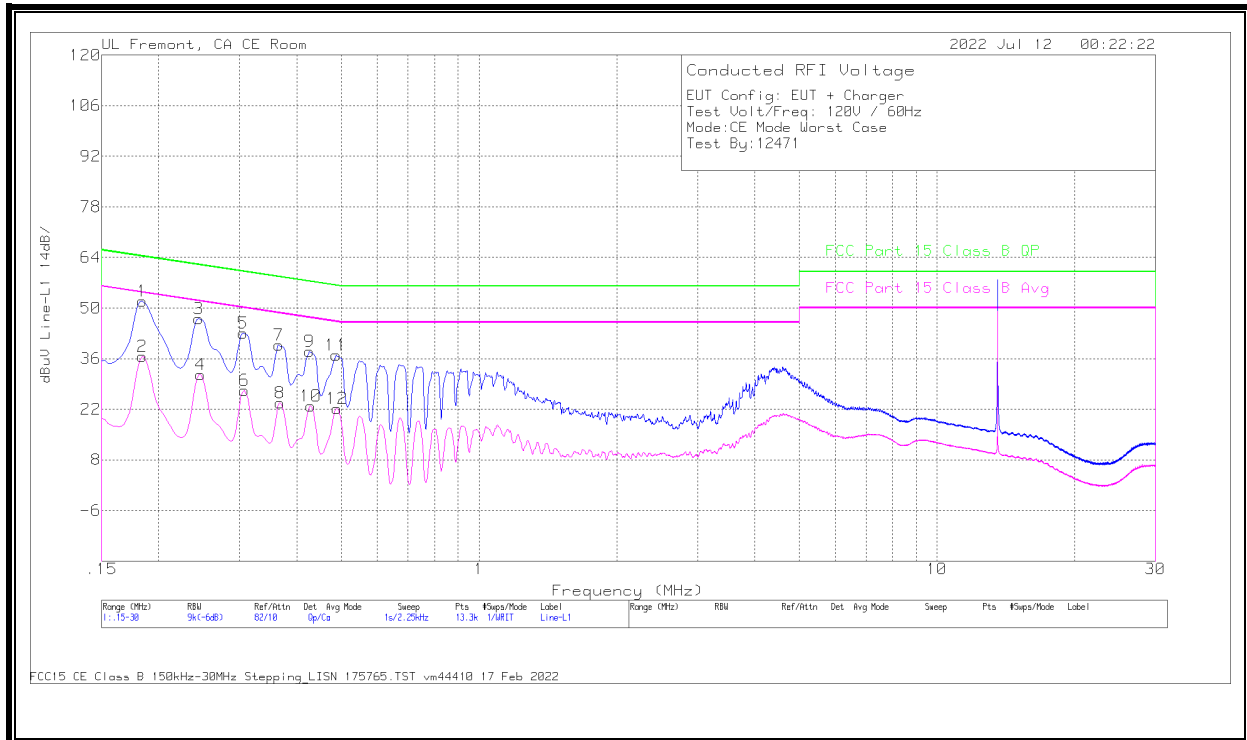
Ca - CISPR average detection

LINE 2 RESULTS**Worst Emission**

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L2 (dB)	C2&C3 cable (dB)	207996 Limiter 9k-600M_6-2-22. (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
14	.204	16.72	Ca	0	0	9.6	26.32	-	-	53.45	-27.13
16	.24	13.26	Ca	0	0	9.5	22.76	-	-	52.1	-29.34
18	.303	9.45	Ca	0	0	9.5	18.95	-	-	50.16	-31.21
20	.3435	10.93	Ca	0	0	9.5	20.43	-	-	49.12	-28.69
22	.411	8.75	Ca	0	0	9.5	18.25	-	-	47.63	-29.38
24	.465	10.14	Ca	0	0	9.5	19.64	-	-	46.6	-26.96
13	.1995	30.02	Qp	0	0	9.8	39.82	63.63	-23.81	-	-
15	.24	28.86	Qp	0	0	9.5	38.36	62.1	-23.74	-	-
17	.2985	25.38	Qp	0	0	9.5	34.88	60.28	-25.4	-	-
19	.3413	26.12	Qp	0	0	9.5	35.62	59.17	-23.55	-	-
21	.4133	25.57	Qp	0	0	9.5	35.07	57.58	-22.51	-	-
23	.447	25.57	Qp	0	0	9.5	35.07	56.93	-21.86	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

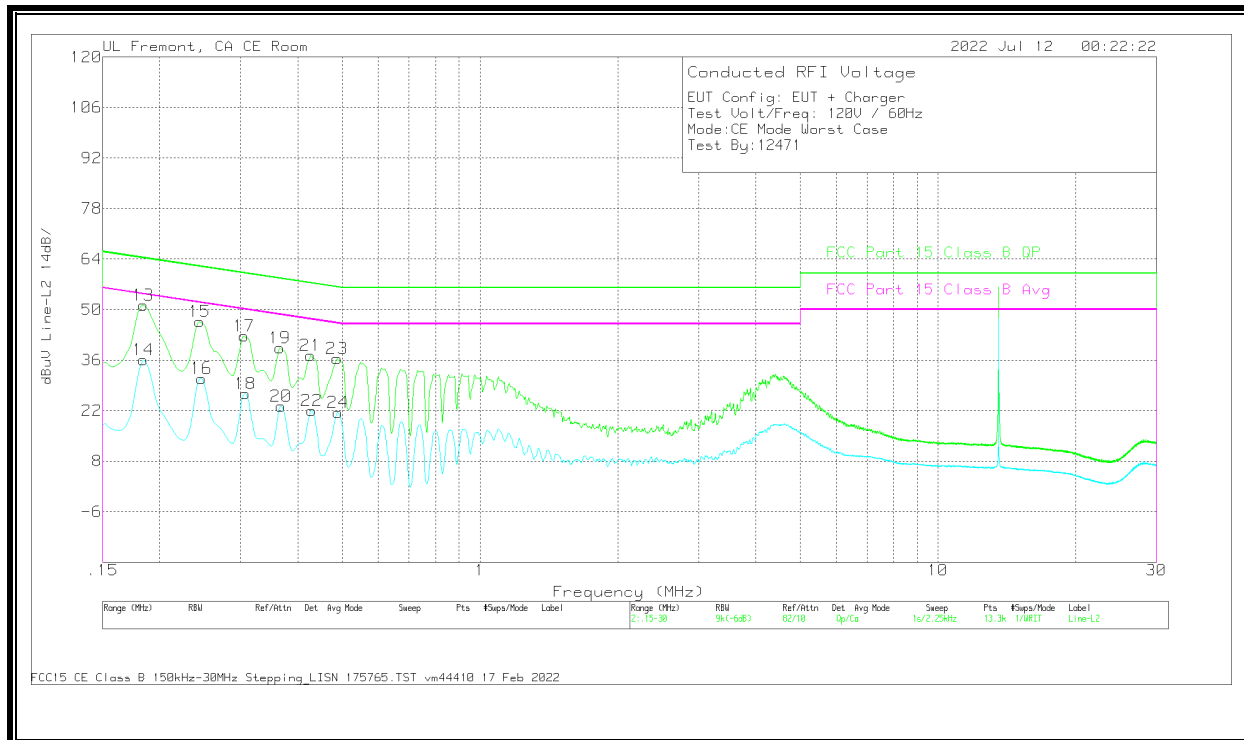
10.1.3. CE MODE, Type A 848 Kbps, with Antenna**LINE 1 RESULTS****Worst Emission**

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L1 (dB)	C1&C3 cable (dB)	207996 Limiter 9K-600M_6-2-22. (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
2	.1838	26.37	Ca	.1	0	10.2	36.67	-	-	54.31	-17.64
4	.2468	22.08	Ca	0	0	9.5	31.58	-	-	51.87	-20.29
6	.3075	17.67	Ca	0	0	9.5	27.17	-	-	50.04	-22.87
8	.3683	14.19	Ca	0	0	9.5	23.69	-	-	48.54	-24.85
10	.429	13.35	Ca	0	0	9.5	22.85	-	-	47.27	-24.42
12	.4898	12.75	Ca	0	0	9.5	22.25	-	-	46.17	-23.92
1	.1838	41.56	Qp	.1	0	10.2	51.86	64.31	-12.45	-	-
3	.2445	37.61	Qp	0	0	9.5	47.11	61.94	-14.83	-	-
5	.3053	33.57	Qp	0	0	9.5	43.07	60.1	-17.03	-	-
7	.366	30.3	Qp	0	0	9.5	39.8	58.59	-18.79	-	-
9	.4268	28.43	Qp	0	0	9.5	37.93	57.32	-19.39	-	-
11	.4875	27.49	Qp	0	0	9.5	36.99	56.21	-19.22	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicates that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

LINE 2 RESULTS**Worst Emission**

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L2 (dB)	C2&C3 cable (dB)	207996 Limiter 9k-600M_6-2-22 (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
14	.1838	25.73	Ca	.1	0	10.2	36.03	-	-	54.31	-18.28
16	.2468	21.46	Ca	0	0	9.5	30.96	-	-	51.87	-20.91
18	.3075	17.19	Ca	0	0	9.5	26.69	-	-	50.04	-23.35
20	.3683	13.77	Ca	0	0	9.5	23.27	-	-	48.54	-25.27
22	.429	12.54	Ca	0	0	9.5	22.04	-	-	47.27	-25.23
24	.4898	11.98	Ca	0	0	9.5	21.48	-	-	46.17	-24.69
13	.1838	40.99	Qp	.1	0	10.2	51.29	64.31	-13.02	-	-
15	.2445	37.15	Qp	0	0	9.5	46.65	61.94	-15.29	-	-
17	.3053	33.21	Qp	0	0	9.5	42.71	60.1	-17.39	-	-
19	.366	29.84	Qp	0	0	9.5	39.34	58.59	-19.25	-	-
21	.4268	27.75	Qp	0	0	9.5	37.25	57.32	-20.07	-	-
23	.4875	26.93	Qp	0	0	9.5	36.43	56.21	-19.78	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

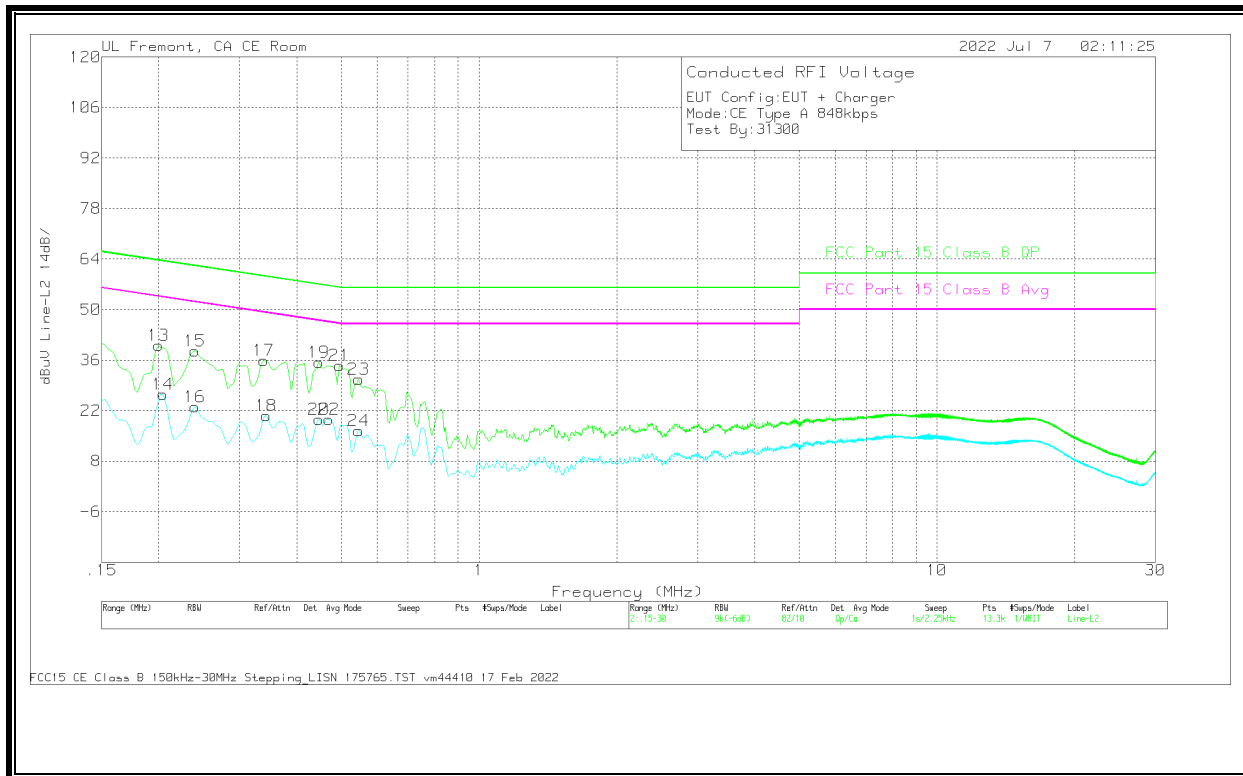
Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicates that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

10.1.4. CE MODE, Type A 848 Kbps, Antenna Port Terminated**LINE 1 RESULTS****Worst Emission**

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L1 (dB)	C1&C3 cable (dB)	207996 Limiter 9k-600M_6-2-22. (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
2	.204	16.27	Ca	0	0	9.6	25.87	-	-	53.45	-27.58
4	.24	13.98	Ca	0	0	9.5	23.48	-	-	52.1	-28.62
6	.3435	11.29	Ca	0	0	9.5	20.79	-	-	49.12	-28.33
8	.447	10.03	Ca	0	0	9.5	19.53	-	-	46.93	-27.4
10	.4808	6.89	Ca	0	0	9.5	16.39	-	-	46.33	-29.94
12	.546	4.88	Ca	0	0	9.5	14.38	-	-	46	-31.62
1	.1995	28.48	Qp	.1	0	9.8	38.38	63.63	-25.25	-	-
3	.24	28.5	Qp	0	0	9.5	38	62.1	-24.1	-	-
5	.339	26.13	Qp	0	0	9.5	35.63	59.23	-23.6	-	-
7	.447	25.02	Qp	0	0	9.5	34.52	56.93	-22.41	-	-
9	.4965	23.77	Qp	0	0	9.5	33.27	56.06	-22.79	-	-
11	.546	20.81	Qp	0	0	9.5	30.31	56	-25.69	-	-

Qp - Quasi-Peak detector

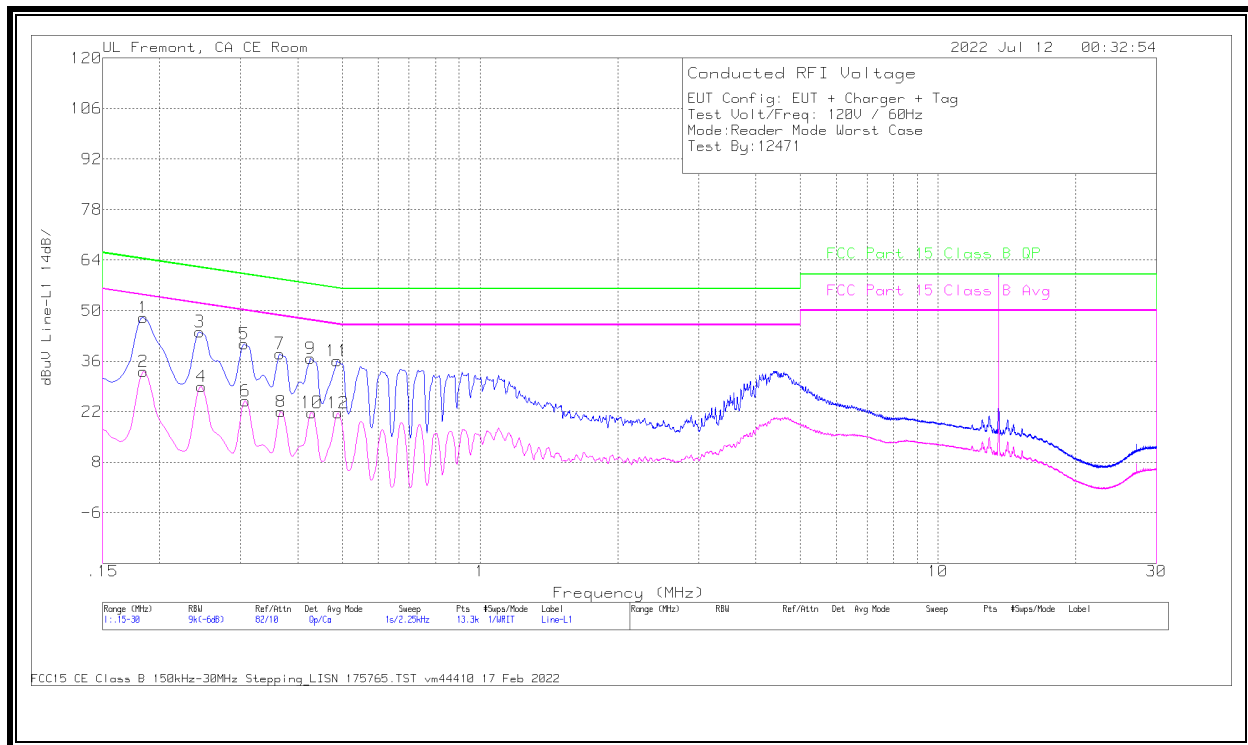
Ca - CISPR average detection

LINE 2 RESULTS**Worst Emission**

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L2 (dB)	C2&C3 cable(dB)	207996 Limiter 9k-600M 6-2-22.(dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
14	.204	16.87	Ca	0	0	9.6	26.47	-	-	53.45	-26.98
16	.24	13.48	Ca	0	0	9.5	22.98	-	-	52.1	-29.12
18	.3435	11.16	Ca	0	0	9.5	20.66	-	-	49.12	-28.46
20	.447	10.14	Ca	0	0	9.5	19.64	-	-	46.93	-27.29
22	.4695	10.09	Ca	0	0	9.5	19.59	-	-	46.52	-26.93
24	.546	6.97	Ca	0	0	9.5	16.47	-	-	46	-29.53
13	.1995	30.23	Qp	0	0	9.8	40.03	63.63	-23.6	-	-
15	.24	29.08	Qp	0	0	9.5	38.58	62.1	-23.52	-	-
17	.339	26.41	Qp	0	0	9.5	35.91	59.23	-23.32	-	-
19	.447	25.84	Qp	0	0	9.5	35.34	56.93	-21.59	-	-
21	.4965	25.09	Qp	0	0	9.5	34.59	56.06	-21.47	-	-
23	.546	21.13	Qp	0	0	9.5	30.63	56	-25.37	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

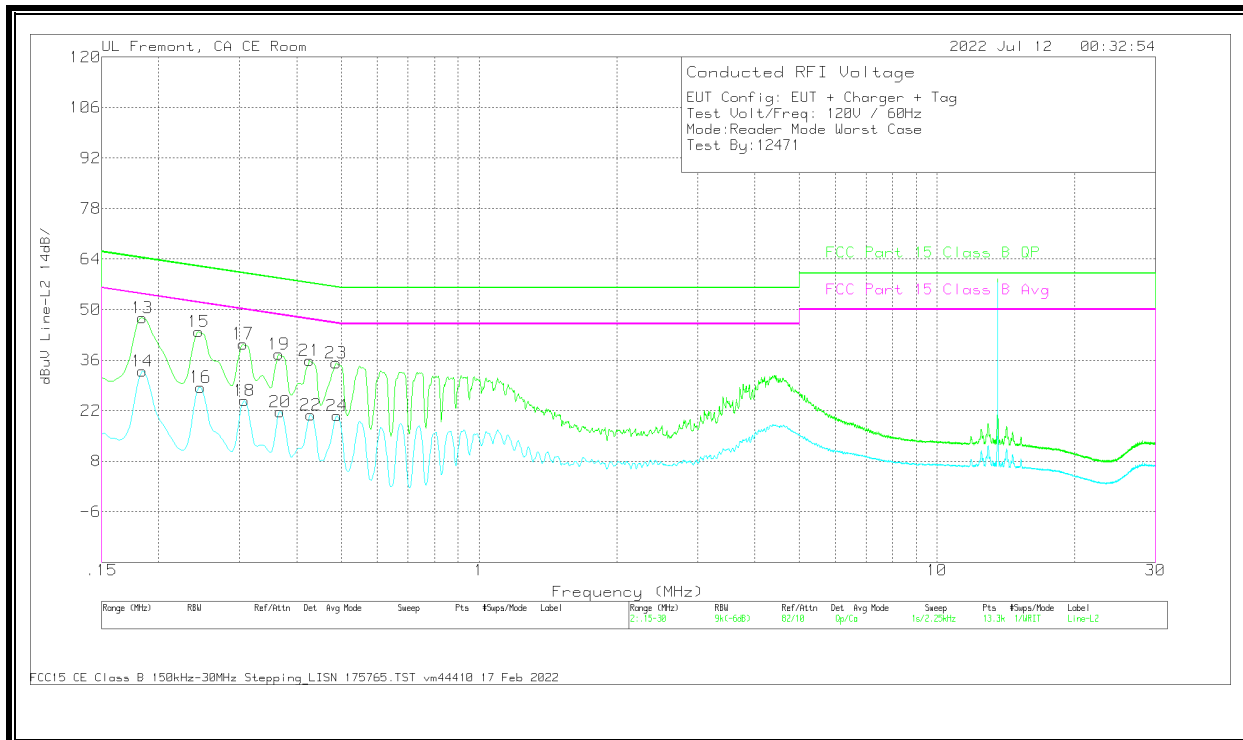
10.1.5. TAG MODE, with Antenna**LINE 1 RESULTS****Worst Emission**

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L1 (dB)	C1&C3 cable (dB)	207996 Limiter 9k-600M_6-2-22 (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
2	.1838	22.87	Ca	.1	0	10.2	33.17	-	-	54.31	-21.14
4	.2468	19.41	Ca	0	0	9.5	28.91	-	-	51.87	-22.96
6	.3075	15.48	Ca	0	0	9.5	24.98	-	-	50.04	-25.06
8	.3683	12.52	Ca	0	0	9.5	22.02	-	-	48.54	-26.52
10	.429	12.25	Ca	0	0	9.5	21.75	-	-	47.27	-25.52
12	.4898	12.1	Ca	0	0	9.5	21.6	-	-	46.17	-24.57
1	.1838	37.81	Qp	.1	0	10.2	48.11	64.31	-16.2	-	-
3	.2445	34.67	Qp	0	0	9.5	44.17	61.94	-17.77	-	-
5	.3053	31.27	Qp	0	0	9.5	40.77	60.1	-19.33	-	-
7	.366	28.59	Qp	0	0	9.5	38.09	58.59	-20.5	-	-
9	.4268	27.25	Qp	0	0	9.5	36.75	57.32	-20.57	-	-
11	.4875	26.53	Qp	0	0	9.5	36.03	56.21	-20.18	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicate that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

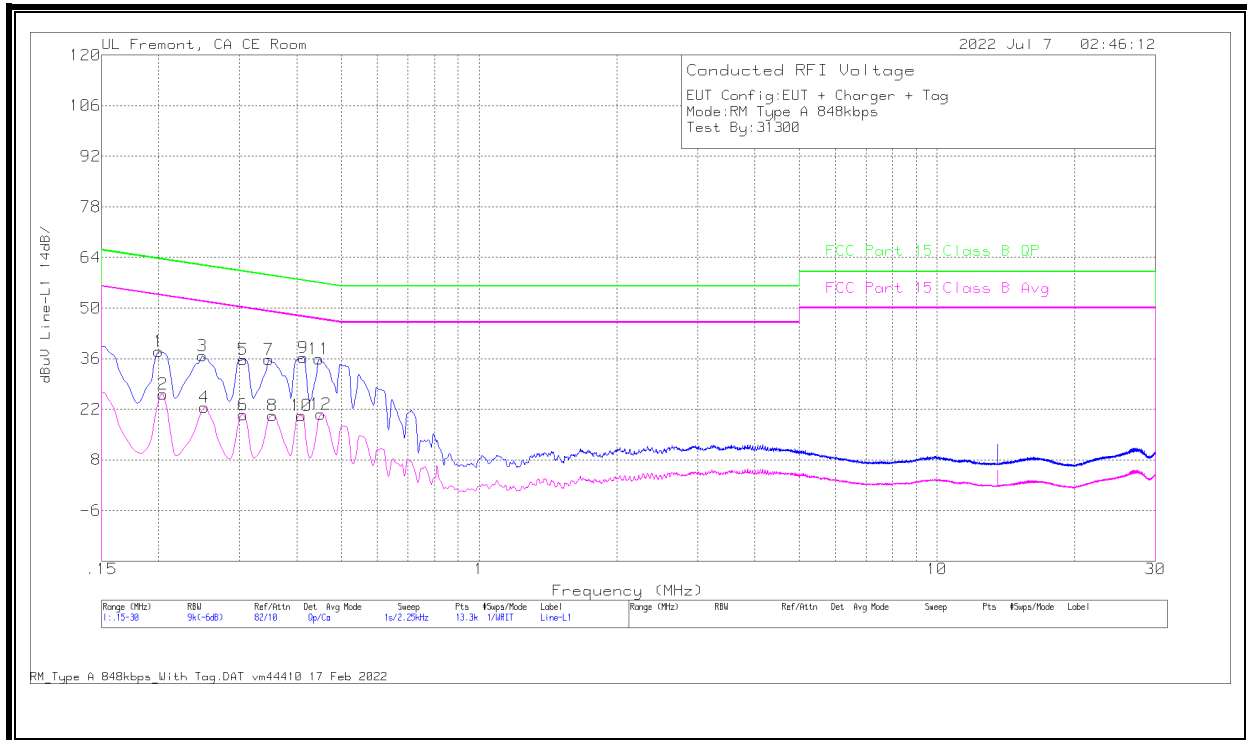
LINE 2 RESULTS**Worst Emission**

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L2 (dB)	C2&C3 cable (dB)	207996 Limiter 9k-600M_6-2-22 (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
14	.1838	22.64	Ca	.1	0	10.2	32.94	-	-	54.31	-21.37
16	.2468	19.03	Ca	0	0	9.5	28.53	-	-	51.87	-23.34
18	.3075	15.25	Ca	0	0	9.5	24.75	-	-	50.04	-25.29
20	.3683	12.12	Ca	0	0	9.5	21.62	-	-	48.54	-26.92
22	.429	11.25	Ca	0	0	9.5	20.75	-	-	47.27	-26.52
24	.4898	11.13	Ca	0	0	9.5	20.63	-	-	46.17	-25.54
13	.1838	37.46	Qp	.1	0	10.2	47.76	64.31	-16.55	-	-
15	.2445	34.44	Qp	0	0	9.5	43.94	61.94	-18	-	-
17	.3053	31.02	Qp	0	0	9.5	40.52	60.1	-19.58	-	-
19	.366	28.15	Qp	0	0	9.5	37.65	58.59	-20.94	-	-
21	.4268	26.37	Qp	0	0	9.5	35.87	57.32	-21.45	-	-
23	.4875	25.78	Qp	0	0	9.5	35.28	56.21	-20.93	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

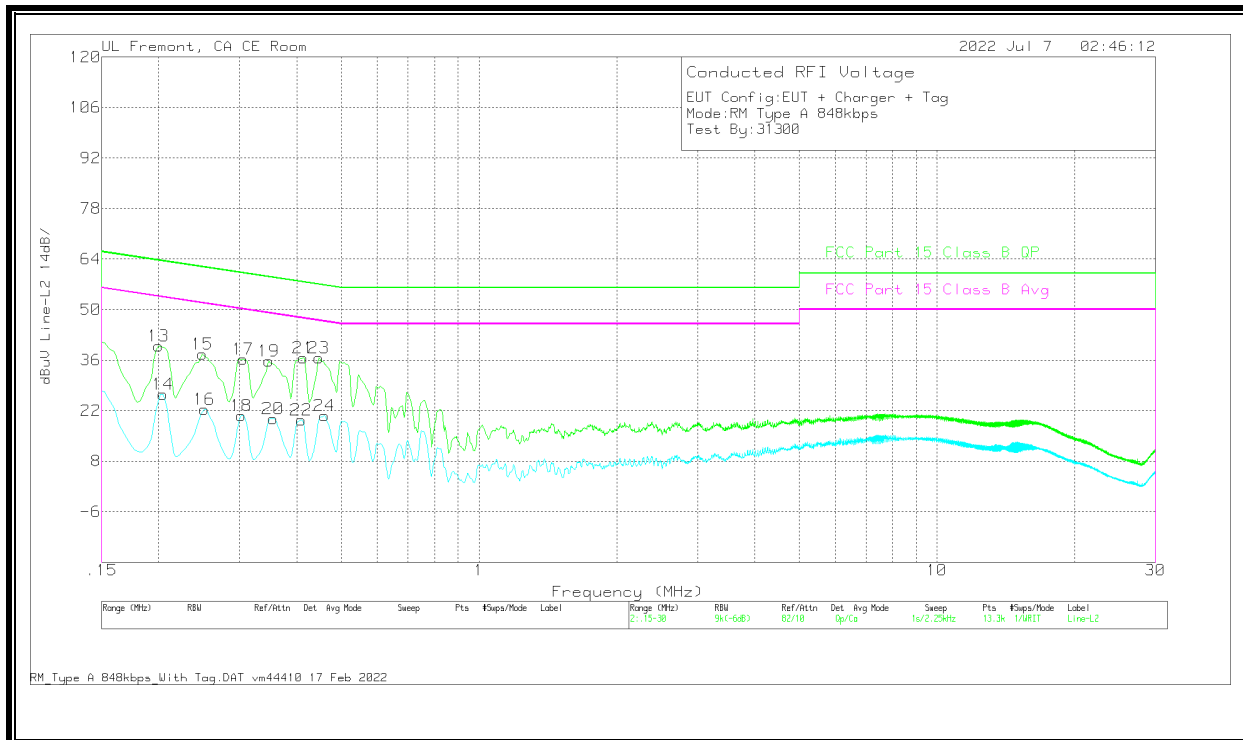
Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicates that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

10.1.6. TAG MODE, Antenna Port Terminated**LINE 1 RESULTS****Worst Emission**

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L1 (dB)	C1&C3 cable (dB)	207996 Limiter 9k-600M 6-2-22 (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
2	.204	16.52	Ca	0	0	9.6	26.12	-	-	53.45	-27.33
4	.2513	13.05	Ca	0	0	9.5	22.55	-	-	51.72	-29.17
6	.3053	10.9	Ca	0	0	9.5	20.4	-	-	50.1	-29.7
8	.3536	10.71	Ca	0	0	9.5	20.21	-	-	48.88	-28.67
10	.4088	10.84	Ca	0	0	9.5	20.34	-	-	47.67	-27.33
12	.4515	11.06	Ca	0	0	9.5	20.56	-	-	46.85	-26.29
1	.1995	28.1	Qp	.1	0	9.8	38	63.63	-25.63	-	-
3	.249	27.28	Qp	0	0	9.5	36.78	61.79	-25.01	-	-
5	.3053	26.24	Qp	0	0	9.5	35.74	60.1	-24.36	-	-
7	.348	26.24	Qp	0	0	9.5	35.74	59.01	-23.27	-	-
9	.4133	26.7	Qp	0	0	9.5	36.2	57.58	-21.38	-	-
11	.447	26.43	Qp	0	0	9.5	35.93	56.93	-21	-	-

Qp - Quasi-Peak detector

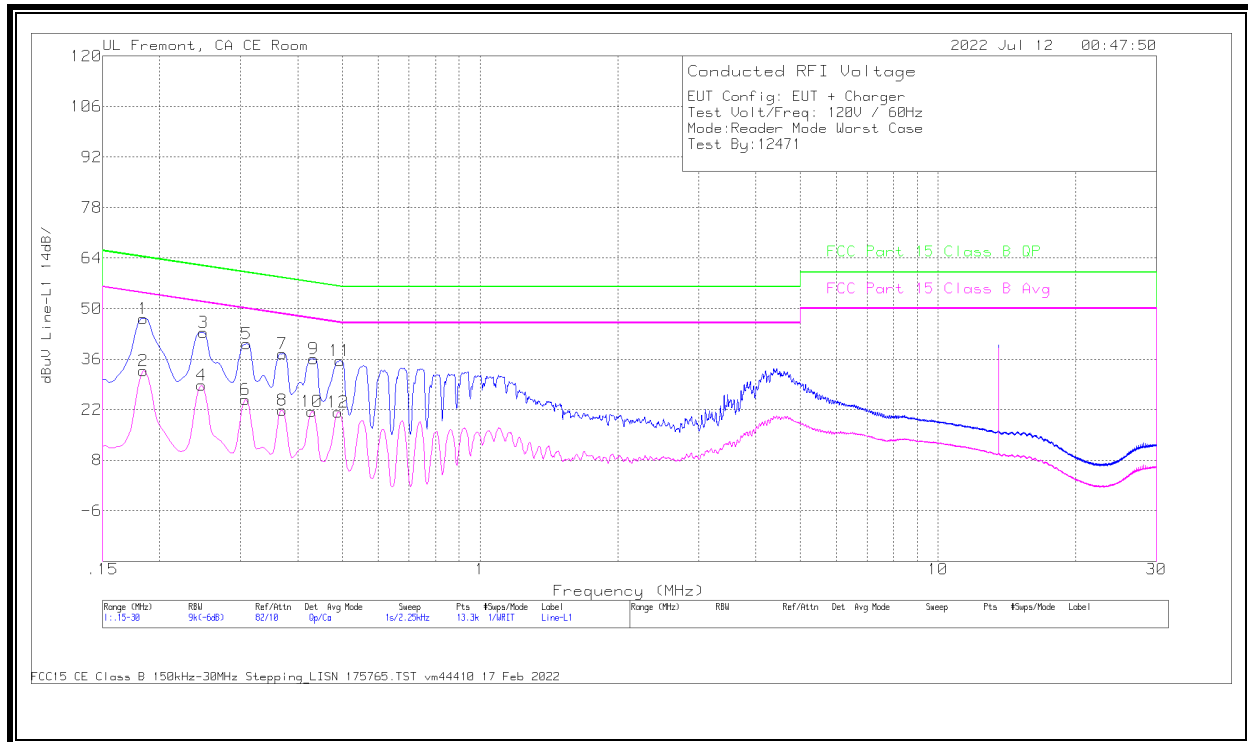
Ca - CISPR average detection

LINE 2 RESULTS**Worst Emission**

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L2 (dB)	C2&C3 cable (dB)	207996 Limiter 9k-600M_6-2-22 (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
14	.204	17	Ca	0	0	9.6	26.6	-	-	53.45	-26.85
16	.2513	12.94	Ca	0	0	9.5	22.44	-	-	51.72	-29.28
18	.303	11.08	Ca	0	0	9.5	20.58	-	-	50.16	-29.58
20	.3548	10.26	Ca	0	0	9.5	19.76	-	-	48.85	-29.09
22	.4088	9.98	Ca	0	0	9.5	19.48	-	-	47.67	-28.19
24	.4605	11.14	Ca	0	0	9.5	20.64	-	-	46.68	-26.04
13	.1995	30.11	Qp	0	0	9.8	39.91	63.63	-23.72	-	-
15	.249	28.08	Qp	0	0	9.5	37.58	61.79	-24.21	-	-
17	.3053	26.75	Qp	0	0	9.5	36.25	60.1	-23.85	-	-
19	.348	26.23	Qp	0	0	9.5	35.73	59.01	-23.28	-	-
21	.4133	27.1	Qp	0	0	9.5	36.6	57.58	-20.98	-	-
23	.447	27.09	Qp	0	0	9.5	36.59	56.93	-20.34	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

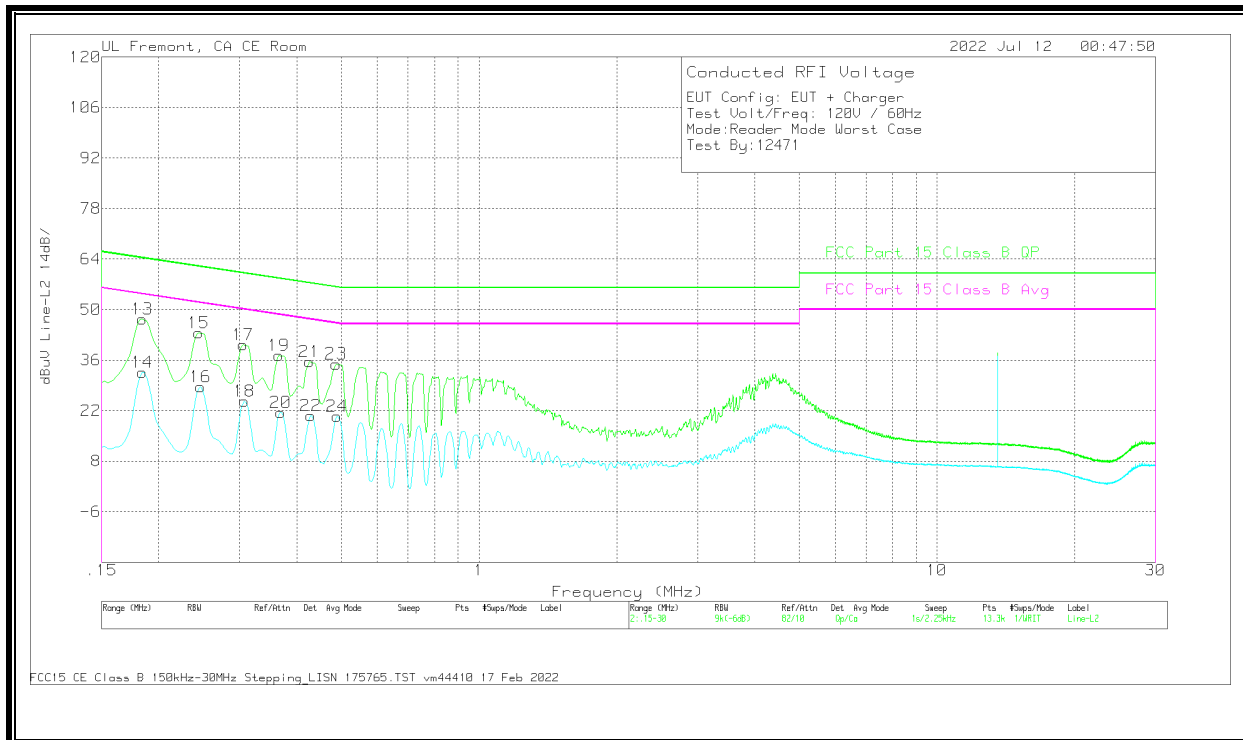
10.2. SECONDARY ANTENNA**10.2.1. READER MODE, Type A 848 Kbps, with Antenna****LINE 1 RESULTS****Worst Emission**

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L1 (dB)	C1&C3 cable (dB)	207996 Limiter 9k-600M_6-2-22 (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
2	.1838	22.42	Ca	.1	0	10.2	32.72	-	-	54.31	-21.59
4	.2468	19.23	Ca	0	0	9.5	28.73	-	-	51.87	-23.14
6	.3075	15.24	Ca	0	0	9.5	24.74	-	-	50.04	-25.3
8	.3705	12.29	Ca	0	0	9.5	21.79	-	-	48.49	-26.7
10	.429	12.01	Ca	0	0	9.5	21.51	-	-	47.27	-25.76
12	.4898	11.8	Ca	0	0	9.5	21.3	-	-	46.17	-24.87
1	.1838	36.99	Qp	.1	0	10.2	47.29	64.31	-17.02	-	-
3	.249	33.97	Qp	0	0	9.5	43.47	61.79	-18.32	-	-
5	.3098	30.72	Qp	0	0	9.5	40.22	59.98	-19.76	-	-
7	.3705	28.01	Qp	0	0	9.5	37.51	58.49	-20.98	-	-
9	.4335	26.65	Qp	0	0	9.5	36.15	57.19	-21.04	-	-
11	.4943	26.06	Qp	0	0	9.5	35.56	56.1	-20.54	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicates that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

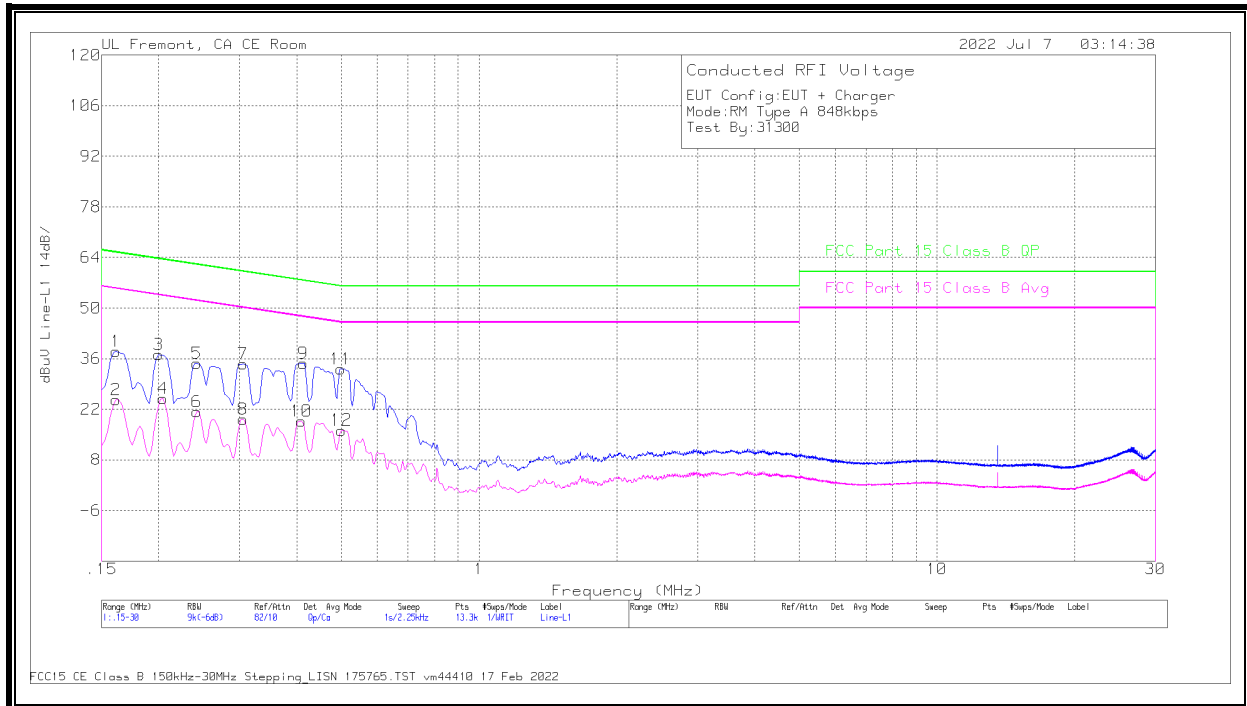
LINE 2 RESULTS**Worst Emission**

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L2 (dB)	C2&C3 cable (dB)	207996 Limiter 9k-600M 6-22 (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
14	.1838	22.39	Ca	.1	0	10.2	32.69	-	-	54.31	-21.62
16	.2468	19.04	Ca	0	0	9.5	28.54	-	-	51.87	-23.33
18	.3075	15.08	Ca	0	0	9.5	24.58	-	-	50.04	-25.46
20	.3694	11.92	Ca	0	0	9.5	21.42	-	-	48.51	-27.09
22	.429	11.05	Ca	0	0	9.5	20.55	-	-	47.27	-26.72
24	.4898	10.88	Ca	0	0	9.5	20.38	-	-	46.17	-25.79
13	.1838	37.16	Qp	.1	0	10.2	47.46	64.31	-16.85	-	-
15	.2445	34.14	Qp	0	0	9.5	43.64	61.94	-18.3	-	-
17	.3053	30.69	Qp	0	0	9.5	40.19	60.1	-19.91	-	-
19	.366	27.81	Qp	0	0	9.5	37.31	58.59	-21.28	-	-
21	.4268	26.07	Qp	0	0	9.5	35.57	57.32	-21.75	-	-
23	.4875	25.46	Qp	0	0	9.5	34.96	56.21	-21.25	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

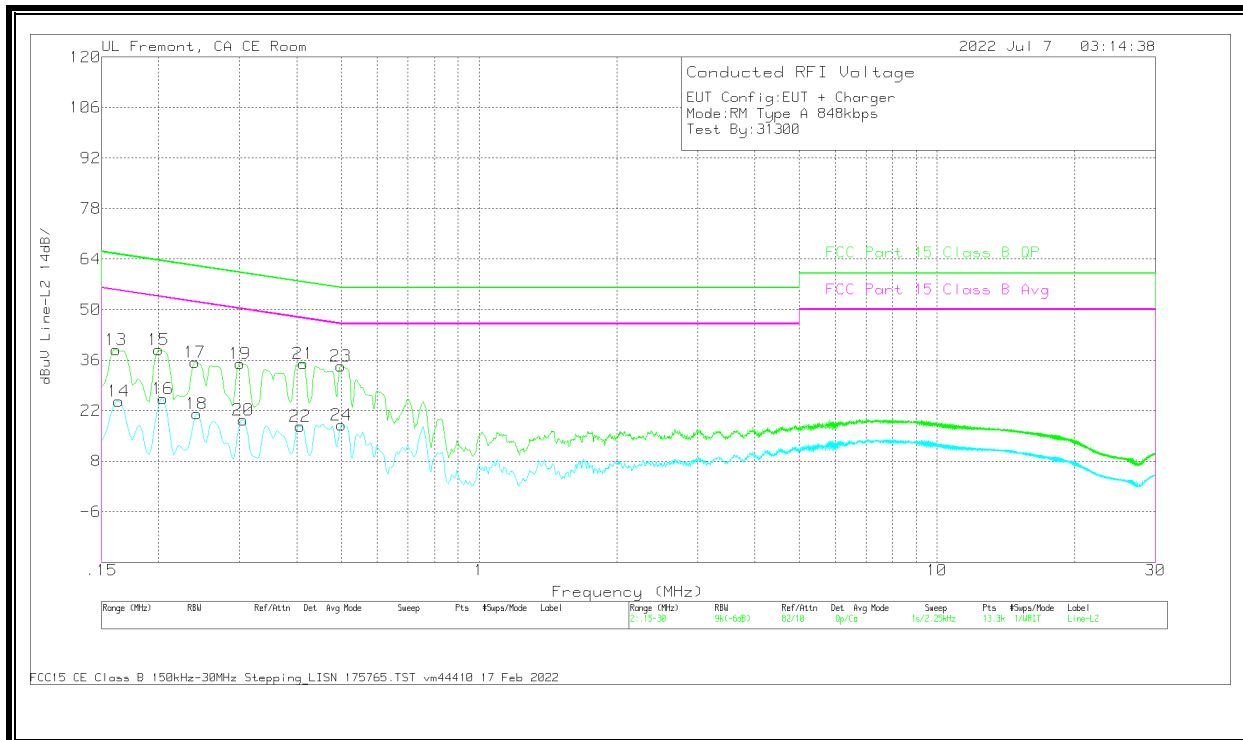
Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicates that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

10.2.2. READER MODE, Type A 848 Kbps, Antenna Port Terminated**LINE 1 RESULTS****Worst Emission**

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L1 (dB)	C1&C3 cable (dB)	207996 Limiter 9k-600M_6-2-22_ (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
2	.1613	13.75	Ca	.1	0	10.8	24.65	-	-	55.4	-30.75
4	.204	15.36	Ca	0	0	9.6	24.96	-	-	53.45	-28.49
6	.2423	11.84	Ca	0	0	9.5	21.34	-	-	52.02	-30.68
8	.3053	9.77	Ca	0	0	9.5	19.27	-	-	50.1	-30.83
10	.4088	9.14	Ca	0	0	9.5	18.64	-	-	47.67	-29.03
12	.501	6.69	Ca	0	0	9.5	16.19	-	-	46	-29.81
1	.1613	27.11	Qp	.1	0	10.8	38.01	65.4	-27.39	-	-
3	.1995	27.22	Qp	.1	0	9.8	37.12	63.63	-26.51	-	-
5	.2423	25.19	Qp	0	0	9.5	34.69	62.02	-27.33	-	-
7	.3053	25.01	Qp	0	0	9.5	34.51	60.1	-25.59	-	-
9	.4133	25.27	Qp	0	0	9.5	34.77	57.58	-22.81	-	-
11	.4999	23.64	Qp	0	0	9.5	33.14	56	-22.86	-	-

Qp - Quasi-Peak detector

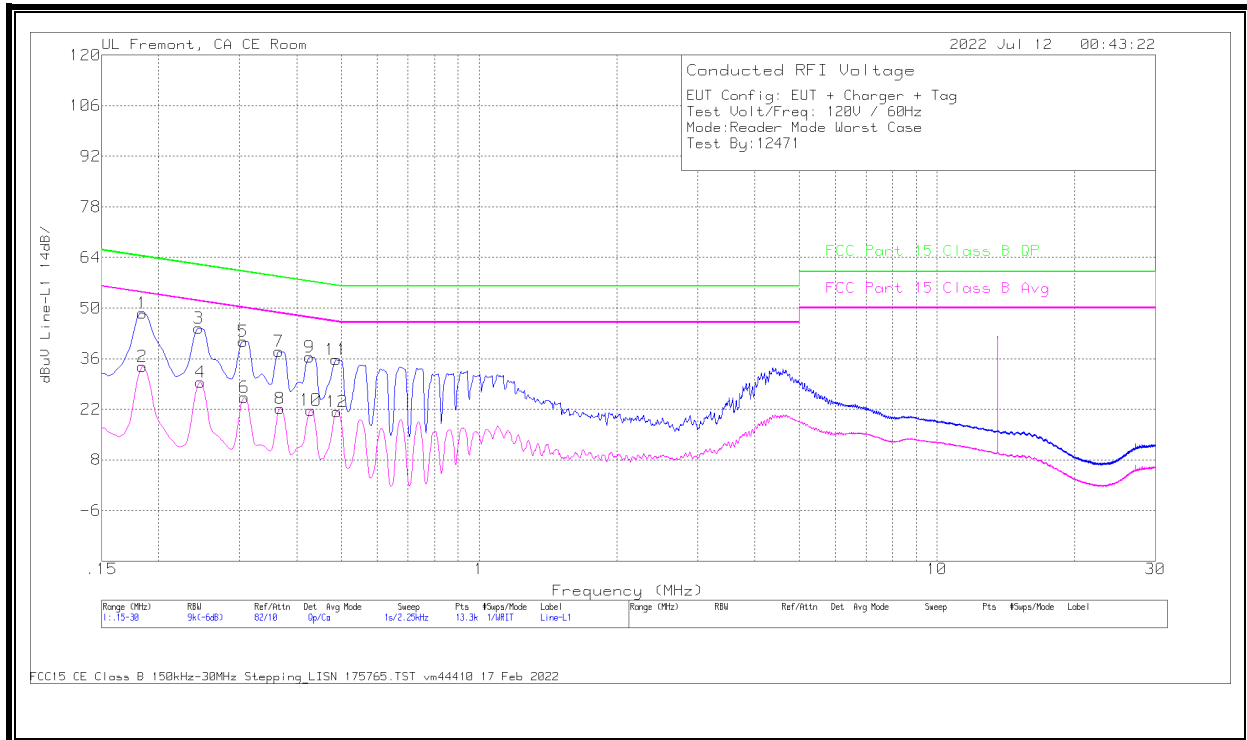
Ca - CISPR average detection

LINE 2 RESULTS**Worst Emission**

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L2 (dB)	C2&C3 cable (dB)	207996 Limiter 9k-600M_6-2-22 (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
14	.1635	13.87	Ca	.1	0	10.7	24.67	-	-	55.28	-30.61
16	.204	15.69	Ca	0	0	9.6	25.29	-	-	53.45	-28.16
18	.2423	11.72	Ca	0	0	9.5	21.22	-	-	52.02	-30.8
20	.3053	9.95	Ca	0	0	9.5	19.45	-	-	50.1	-30.65
22	.4065	8.2	Ca	0	0	9.5	17.7	-	-	47.72	-30.02
24	.501	8.46	Ca	0	0	9.5	17.96	-	-	46	-28.04
13	.1613	28.03	Qp	.1	0	10.8	38.93	65.4	-26.47	-	-
15	.1995	29.07	Qp	0	0	9.8	38.87	63.63	-24.76	-	-
17	.24	25.97	Qp	0	0	9.5	35.47	62.1	-26.63	-	-
19	.3008	25.48	Qp	0	0	9.5	34.98	60.22	-25.24	-	-
21	.4133	25.59	Qp	0	0	9.5	35.09	57.58	-22.49	-	-
23	.4988	24.79	Qp	0	0	9.5	34.29	56.02	-21.73	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

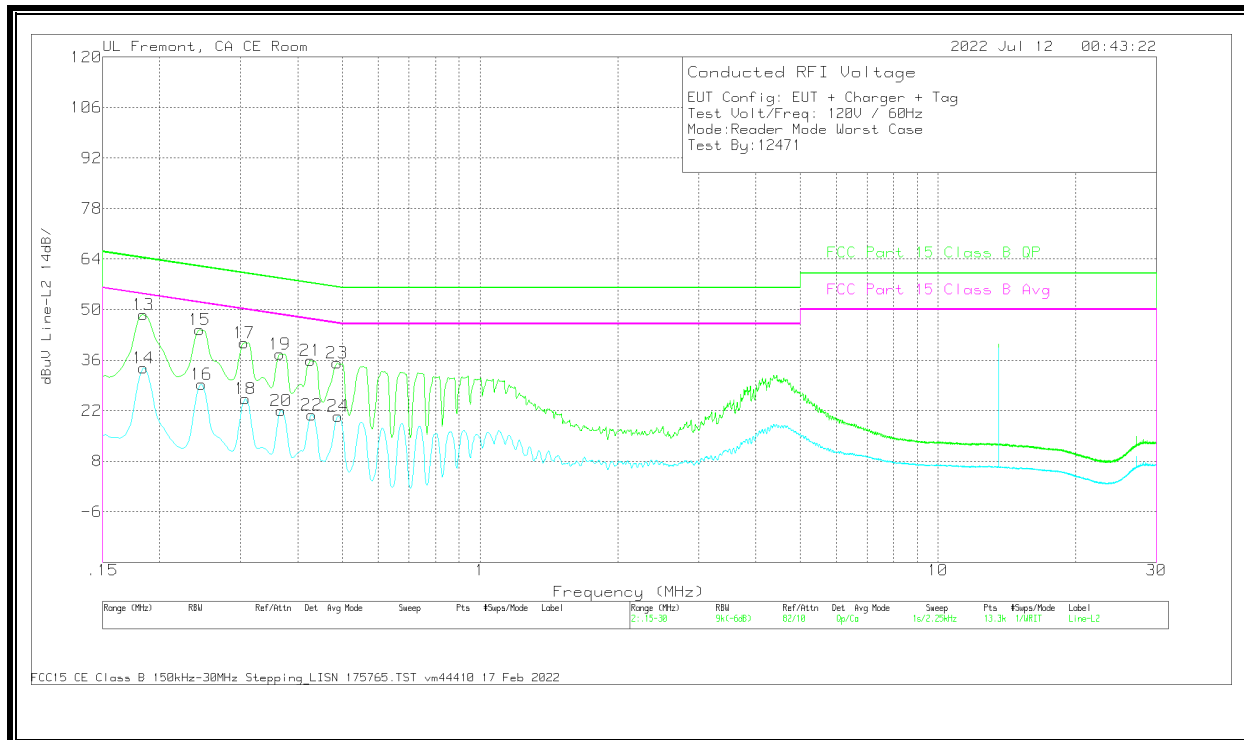
10.2.3. TAG MODE, with Antenna**LINE 1 RESULTS****Worst Emission**

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L1 (dB)	C1&C3 cable (dB)	207996 Limiter 9k-600M_6-2-22 (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
2	.1838	23.6	Ca	.1	0	10.2	33.9	-	-	54.31	-20.41
4	.2468	19.95	Ca	0	0	9.5	29.45	-	-	51.87	-22.42
6	.3075	15.79	Ca	0	0	9.5	25.29	-	-	50.04	-24.75
8	.3683	12.63	Ca	0	0	9.5	22.13	-	-	48.54	-26.41
10	.429	12.25	Ca	0	0	9.5	21.75	-	-	47.27	-25.52
12	.4898	11.89	Ca	0	0	9.5	21.39	-	-	46.17	-24.78
1	.1838	38.37	Qp	.1	0	10.2	48.67	64.31	-15.64	-	-
3	.2445	34.94	Qp	0	0	9.5	44.44	61.94	-17.5	-	-
5	.3053	31.36	Qp	0	0	9.5	40.86	60.1	-19.24	-	-
7	.366	28.52	Qp	0	0	9.5	38.02	58.59	-20.57	-	-
9	.4268	27	Qp	0	0	9.5	36.5	57.32	-20.82	-	-
11	.4875	26.24	Qp	0	0	9.5	35.74	56.21	-20.47	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicates that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

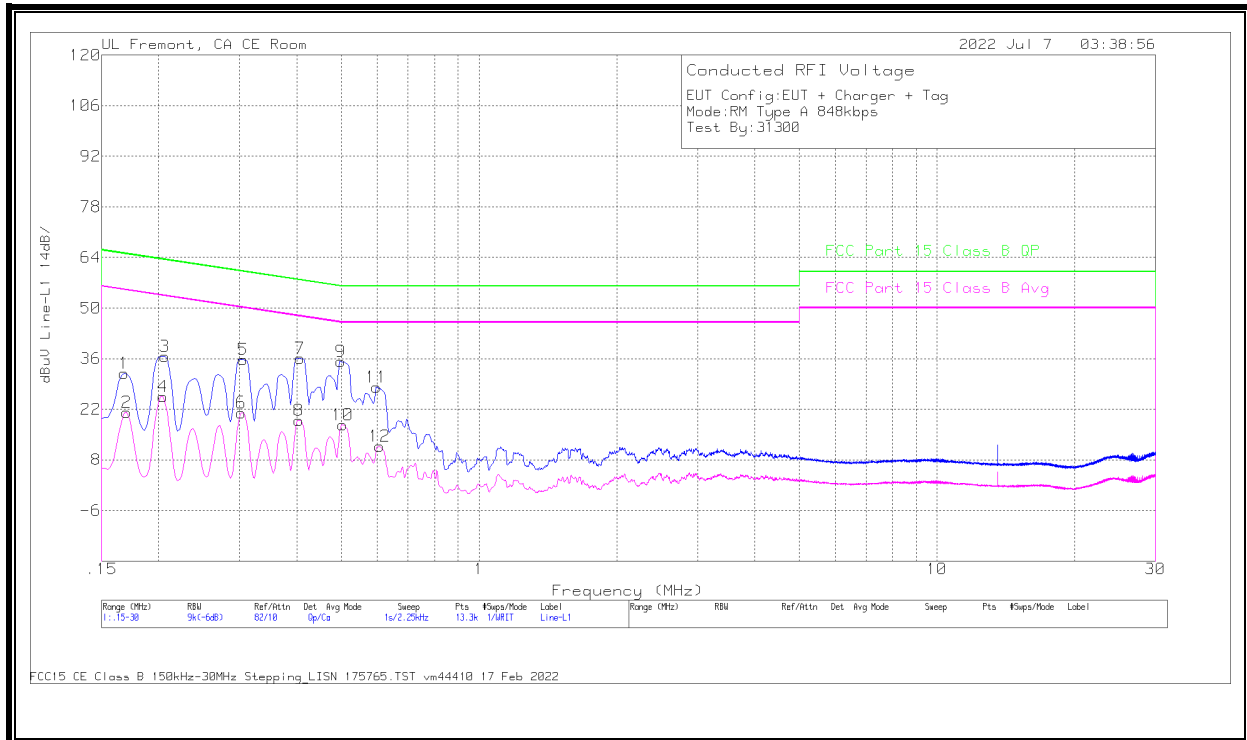
LINE 2 RESULTS**Worst Emission**

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L2 (dB)	C2&C3 cable (dB)	207996 Limiter 9k-600M 6-22 (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
14	.1838	23.46	Ca	.1	0	10.2	33.76	-	-	54.31	-20.55
16	.2468	19.78	Ca	0	0	9.5	29.28	-	-	51.87	-22.59
18	.3075	15.74	Ca	0	0	9.5	25.24	-	-	50.04	-24.8
20	.3683	12.46	Ca	0	0	9.5	21.96	-	-	48.54	-26.58
22	.429	11.37	Ca	0	0	9.5	20.87	-	-	47.27	-26.4
24	.4898	11.03	Ca	0	0	9.5	20.53	-	-	46.17	-25.64
13	.1838	38.23	Qp	.1	0	10.2	48.53	64.31	-15.78	-	-
15	.2445	34.88	Qp	0	0	9.5	44.38	61.94	-17.56	-	-
17	.3053	31.24	Qp	0	0	9.5	40.74	60.1	-19.36	-	-
19	.366	28.22	Qp	0	0	9.5	37.72	58.59	-20.87	-	-
21	.4268	26.35	Qp	0	0	9.5	35.85	57.32	-21.47	-	-
23	.4875	25.66	Qp	0	0	9.5	35.16	56.21	-21.05	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

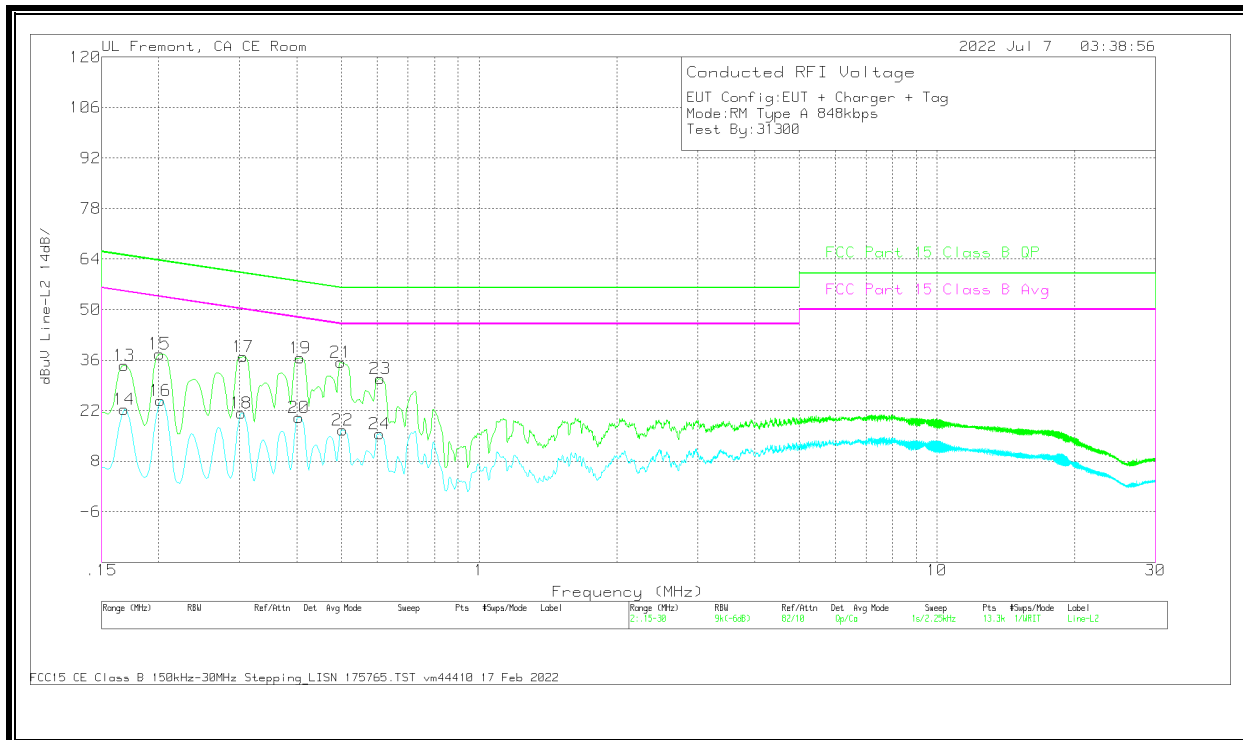
Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicates that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

10.2.4. TAG MODE, Antenna Port Terminated**LINE 1 RESULTS****Worst Emission**

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L1 (dB)	C1&C3 cable (dB)	207996 Limiter 9k-600M 6-2-22 (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
2	.1703	10.41	Ca	.1	0	10.6	21.11	-	-	54.95	-33.84
4	.204	15.94	Ca	0	0	9.6	25.54	-	-	53.45	-27.91
6	.303	11.55	Ca	0	0	9.5	21.05	-	-	50.16	-29.11
8	.4043	9.45	Ca	0	0	9.5	18.95	-	-	47.77	-28.82
10	.5033	8.17	Ca	0	0	9.5	17.67	-	-	46	-28.33
12	.6068	2.1	Ca	0	.1	9.5	11.7	-	-	46	-34.3
1	.168	21.19	Qp	.1	0	10.6	31.89	65.06	-33.17	-	-
3	.2063	27.06	Qp	0	0	9.6	36.66	63.35	-26.69	-	-
5	.3053	26.26	Qp	0	0	9.5	35.76	60.1	-24.34	-	-
7	.4065	26.64	Qp	0	0	9.5	36.14	57.72	-21.58	-	-
9	.4988	25.75	Qp	0	0	9.5	35.25	56.02	-20.77	-	-
11	.5978	18.55	Qp	0	.1	9.5	28.15	56	-27.85	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS**Worst Emission**

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L2 (dB)	C2&C3 cable (dB)	207996 Limiter 9k-600M 6-2-22 (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR) Margin (dB)
14	.168	11.74	Ca	.1	0	10.6	22.44	-	-	55.06	-32.62
16	.2018	15.15	Ca	0	0	9.7	24.85	-	-	53.54	-28.69
18	.303	11.75	Ca	0	0	9.5	21.25	-	-	50.16	-28.91
20	.4043	10.65	Ca	0	0	9.5	20.15	-	-	47.77	-27.62
22	.5033	7.18	Ca	0	0	9.5	16.68	-	-	46	-29.32
24	.6068	6.01	Ca	0	.1	9.5	15.61	-	-	46	-30.39
13	.168	23.86	Qp	.1	0	10.6	34.56	65.06	-30.5	-	-
15	.2006	28.04	Qp	0	0	9.7	37.74	63.58	-25.84	-	-
17	.3053	27.39	Qp	0	0	9.5	36.89	60.1	-23.21	-	-
19	.4065	27.12	Qp	0	0	9.5	36.62	57.72	-21.1	-	-
21	.4988	25.86	Qp	0	0	9.5	35.36	56.02	-20.66	-	-
23	.609	21.31	Qp	0	.1	9.5	30.91	56	-25.09	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

11. SETUP PHOTOS

Please refer to 14040866-EP1V1 for setup photos.

END OF TEST REPORT