

TEST REPORT

Report Number : 14982489-E12V1

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

Model : A3082 (Parent Model)
A3289, A3290, A3291 (Variant Models)

FCC ID : BCG-E8692A (Parent Model)
BCG-E8693A, BCG-E8694A, BCG-E8695A
(Variant Models)

IC : 579C-E8692A (Parent Model)
579C-E8693A, 579C-E8694A, 579C-E8695A
(Variant Models)

EUT Description : SMARTPHONE

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C
ISED RSS-210 ISSUE 11
ISED RSS-GEN ISSUE 5 + A1 + A2

Date Of Issue:
2024/07/23

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REPORT REVISION HISTORY

Rev.		Issue Date		Revisions		Revised By
V1		2024/07/23		Initial Issue		Chris Xiong

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	5
2. TEST METHODOLOGY	7
3. FACILITIES AND ACCREDITATION	7
4. DECISION RULES AND MEASUREMENT UNCERTAINTY	7
4.1. METROLOGICAL TRACEABILITY	7
4.2. DECISION RULES	7
4.3. MEASUREMENT UNCERTAINTY	8
4.4. SAMPLE CALCULATION	8
5. EQUIPMENT UNDER TEST	9
5.1. DESCRIPTION OF EUT	9
5.2. MAXIMUM E-FIELD STRENGTH	9
5.3. WORST-CASE CONFIGURATION AND MODE	10
5.4. DESCRIPTION OF TEST SETUP	11
6. TEST AND MEASUREMENT EQUIPMENT	13
7. 99% OCCUPIED BANDWIDTH AND 20dB BANDWIDTH	14
7.1. PRIMARY ANTENNA	15
7.1.1. CE MODE: TYPE A, 106 Kbps	15
7.1.2. READER MODE: TYPE A, 106 Kbps	15
7.1.3. READER + TAG MODE: TYPE A, 106 Kbps	16
7.2. SECONDARY ANTENNA	16
7.2.1. READER MODE: TYPE A, 106 Kbps	16
7.2.2. READER + TAG MODE: TYPE A, 106 Kbps	17
8. RADIATED EMISSION TEST RESULTS	18
8.1. LIMITS AND PROCEDURE	18
8.2. PRIMARY ANTENNA FUNDAMENTAL	20
8.2.1. CE MODE: TYPE A, 106 Kbps	20
8.2.2. READER MODE: TYPE A, 106 Kbps	22
8.2.3. READER + TAG MODE: TYPE A, 106 Kbps	24
8.3. PRIMARY ANTENNA SPURIOUS EMISSION 0.15-30 MHz	26
8.3.1. CE MODE: TYPE A, 106 Kbps	26
8.3.2. READER MODE: TYPE A, 106 Kbps	28
8.3.3. READER + TAG MODE: TYPE A, 106 Kbps	30
8.4. PRIMARY ANTENNA TX SPURIOUS EMISSION 30-1000 MHz	32
8.4.1. CE MODE: TYPE A, 106 Kbps	32
8.4.2. READER MODE: TYPE A, 106 Kbps	34
8.4.3. READER + TAG MODE: TYPE A, 106 Kbps	36
8.5. SECONDARY ANTENNA FUNDAMENTAL	38

8.5.1.	READER MODE: TYPE A, 106 Kbps	38
8.5.2.	READER + TAG MODE: TYPE A, 106 Kbps	40
8.6.	<i>SECONDARY ANTENNA SPURIOUS EMISSION 0.15-30 MHz</i>	42
8.6.1.	READER MODE: TYPE A, 106 Kbps	42
8.6.2.	READER + TAG MODE: TYPE A, 106 Kbps	44
8.7.	<i>SECONDARY ANTENNA TX SPURIOUS EMISSION 30-1000 MHz</i>	46
8.7.1.	READER MODE: TYPE A, 106 Kbps	46
8.7.2.	READER + TAG MODE: TYPE A, 106 Kbps	48
9.	FREQUENCY STABILITY	50
9.1.	<i>PRIMARY ANTENNA</i>	51
9.1.1.	CE MODE: TYPE A, 106 Kbps	51
9.1.2.	READER MODE: TYPE A, 106 Kbps	51
9.1.3.	READER + TAG MODE: TYPE A, 106 Kbps	51
9.2.	<i>SECONDARY ANTENNA</i>	52
9.2.1.	READER MODE: TYPE A, 106 Kbps	52
9.2.2.	READER + TAG MODE: TYPE A, 106 Kbps	52
10.	AC MAINS LINE CONDUCTED EMISSIONS	53
10.1.	<i>PRIMARY ANTENNA</i>	54
10.1.1.	CE MODE: TYPE A, 106 Kbps	54
10.1.2.	CE MODE: TYPE A, 106 Kbps (ANTENNA PORT TERMINATED)	56
10.1.3.	READER MODE: TYPE A, 106 Kbps	58
10.1.4.	READER MODE: TYPE A, 106 Kbps (ANTENNA PORT TERMINATED)	60
10.1.5.	READER + TAG MODE: TYPE A, 106 Kbps	62
10.1.6.	READER + TAG MODE: TYPE A, 106 Kbps (ANTENNA PORT TERMINATED)	64
10.2.	<i>SECONDARY ANTENNA</i>	66
10.2.1.	READER MODE: TYPE A, 106 Kbps	66
10.2.2.	READER + TAG MODE: TYPE A, 106 Kbps	68
11.	SETUP PHOTOS	70

1. ATTESTATION OF TEST RESULTS

COMPANY NAME:

APPLE INC.
11 APPLE PARK WAY
CUPERTINO, CA 95014, U.S.A.

EUT DESCRIPTION:

SMARTPHONE

MODEL:

A3082 (Parent Model)
A3289, A3290, A3291 (Variant Models)

BRAND:

APPLE

SERIAL NUMBER:

R9RT2PG4W4, N0RH67W915

SAMPLE RECEIPT DATE:

2024/05/28

DATE TESTED:

2024/06/09 – 2024/07/28

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C	Complies
ISED RSS-210 Issue 11, Annex B	Complies
ISED RSS-GEN Issue 5 + A1 + A2	Complies

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

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

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released For
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2. TEST METHODOLOGY

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

- 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 11

3. FACILITIES AND ACCREDITATION

UL Verification Services Inc. 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			
☒	Building 3: 843 Auburn Court, Fremont, CA 94538, USA			
☒	Building 4: 47658 Kato Rd, Fremont, CA 94538, USA			
☐	Building 5: 47670 Kato Rd, Fremont, CA 94538, USA			

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}
Radio Frequency (Spectrum Analyzer)	141.16 Hz
Occupied Bandwidth	1.20 %
Temperature	±0.57 %
Relative Humidity	3.39 %
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 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss

36.5 dBuV + 0 dB + 10.1 dB + 0 dB = 46.6 dBuV

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The Apple iPhone is a smartphone with cellular GSM, GPRS, EGPRS, WCDMA, LTE, 5GNR1, 5GNR2, IEEE 802.11a/b/g/n/ac/ax/be, Bluetooth (BT), Ultra-Wideband (UWB), Global Positioning System (GPS), Near-Field Communication (NFC), Narrow-Band (NB) UNII, 802.15.4, 802.15.4ab-Narrow Band (NB), Wireless Power Transfer (WPT) and Mobile Satellite Service (MSS) technologies. The rechargeable battery is not user accessible. This device is not user-serviceable and requires special tools to disassemble.

5.2. MAXIMUM E-FIELD STRENGTH

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

Antenna	Frequency Range (MHz)	Type	Mode	Rate (Kbps)	E Field at 30m distance (dBuV/m)
Primary	13.56	A	CE	106	27.79
			Reader	106	28.28
			Reader + TAG	106	28.11
Secondary	13.56	A	Reader	106	5.63
			Reader + TAG	106	5.90

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 Z (Portrait) 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 three configurations: EUT only, 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 106Kbps was determined to be the worst case and therefore Type A 106Kbps 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.

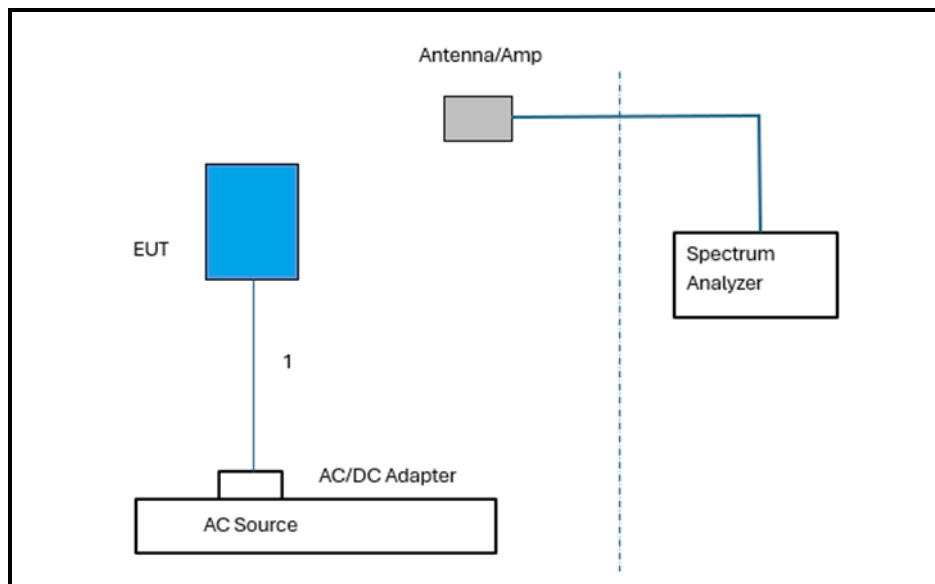
5.4. DESCRIPTION OF TEST SETUP

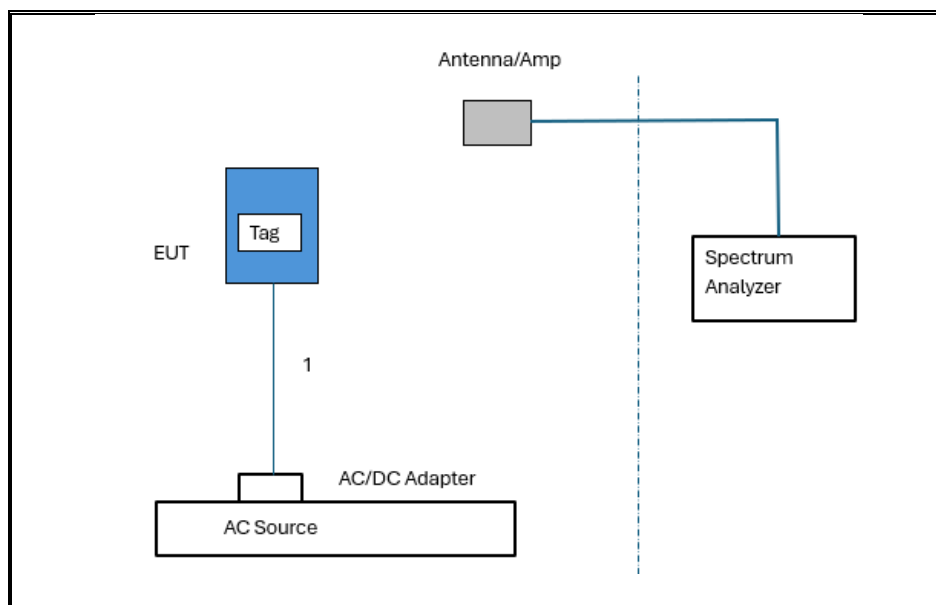
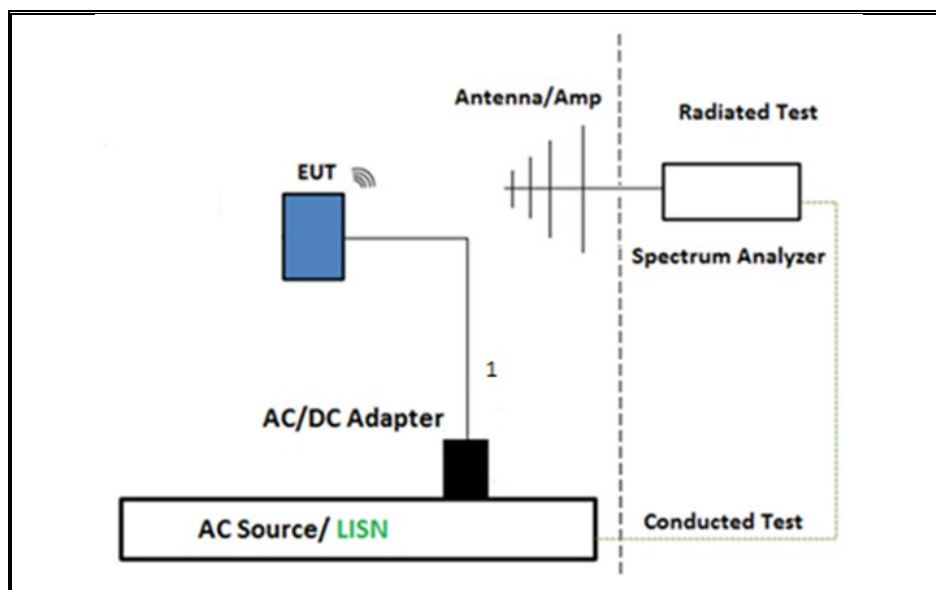
SUPPORT TEST EQUIPMENT				
Description	Manufacturer	Model	Serial Number	FCC ID/ DoC
EUT AC/DC Adapter	Apple	A2305	HHY23570SL11PW9A1	DoC
Tag	Infineon	NA	A803493D139C	NA

I/O CABLES (RF CONDUCTED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	1	Type-C	Un-Shielded	1	N/A

I/O CABLES (RF RADIATED AND AC LINE CONDUCTED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	1	Type-C	Un-Shielded	1	N/A

SETUP DIAGRAM FOR RADIATED TESTS (CE and READER MODE)



SETUP DIAGRAM FOR RADIATED TESTS (READER + TAG MODE)**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
EMI Test Receiver	Rohde & Schwarz	ESW44	235670	2025/02/28	2024/02/28
Antenna, Passive Loop 30Hz - 1MHz	ELECTRO-METRICS	EM-6871	219908	2024/09/30	2023/09/30
Antenna, Passive Loop 100kHz to 30MHz	ELECTRO-METRICS	EM-6872	219910	2025/05/31	2024/05/31
Antenna, BroadBand Hybrid, 30MHz to 3GHz	Sunol Sciences Corp.	JB3	232075	2025/03/31	2024/03/31
Amplifier 9 KHz - 1 GHz	SONOMA INSTRUMENT	310N	230308	2025/05/31	2024/05/31
PXA Signal Analyzer	Keysight Technologies Inc	N9030B	245121	2025/02/07	2024/02/07
Environmental Chamber	Thermotron Industries	SM-16C Mini-Max	179936	2025/01/31	2024/01/31

AC Line Conducted					
Description	Manufacturer	Model	ID Num	Cal Due	Last Cal
EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESR	93091	2025/02/28	2024/02/28
LISN for Conducted Emissions CISPR-16	FISCHER CUSTOM COMMUNICATIONS	FCC-LISN-50/250-25-2-01-480V	175765	2025/01/31	2024/01/31
Transient Limiter	TE	TBFL1	207996	2024/08/31	2023/08/31

UL AUTOMATION SOFTWARE			
Radiated Software	UL	UL EMC	Ver 9.5, 2023, May 1
AC Line Conducted Software	UL	UL EMC	Ver 9.5, 2023, Mar 3

7. 99% OCCUPIED BANDWIDTH AND 20dB 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.

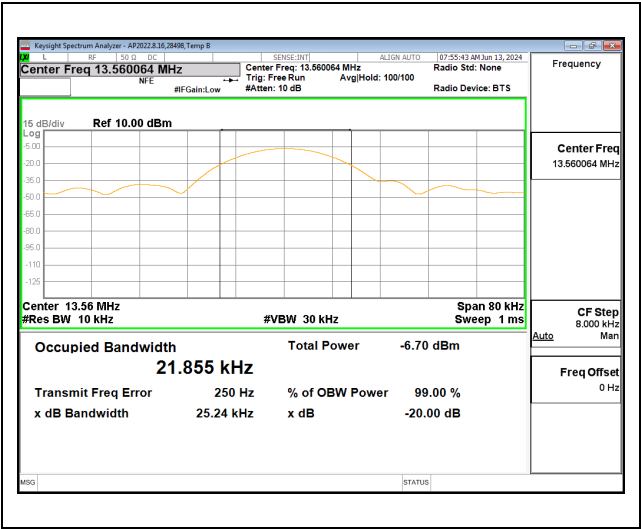
Note: Because the measured signal is CW or CW-like, adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.

RESULTS

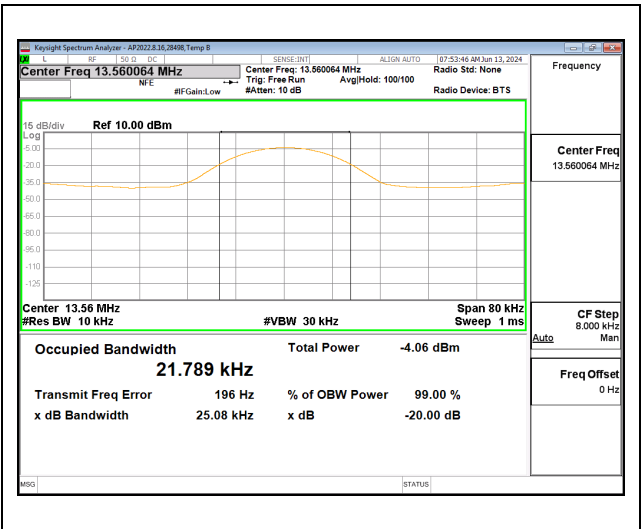
Antenna	Type (Mode)	Rate (Kbps)	Frequency (MHz)	99% Bandwidth (kHz)	20dB Bandwidth (kHz)
Primary	Type A (CE)	106	13.56	21.855	25.24
	Type A (Reader)	106	13.56	21.789	25.08
	Type A (Reader + TAG)	106	13.56	21.883	25.21
Secondary	Type A (Reader)	106	13.56	21.919	25.18
	Type A (Reader + TAG)	106	13.56	21.931	25.15

7.1. PRIMARY ANTENNA

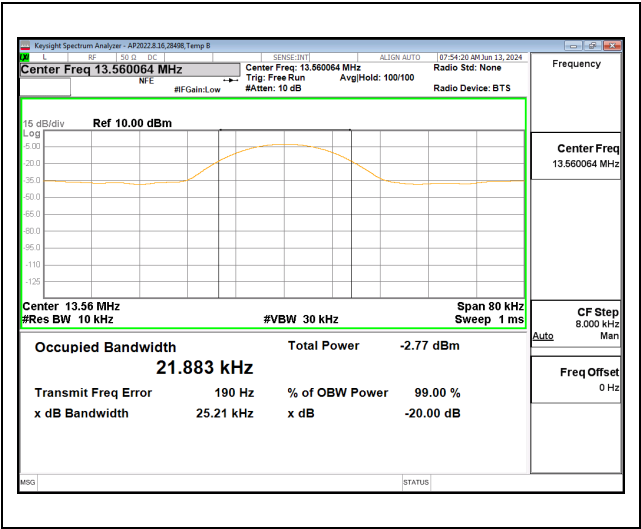
7.1.1. CE MODE: TYPE A, 106 Kbps



7.1.2. READER MODE: TYPE A, 106 Kbps

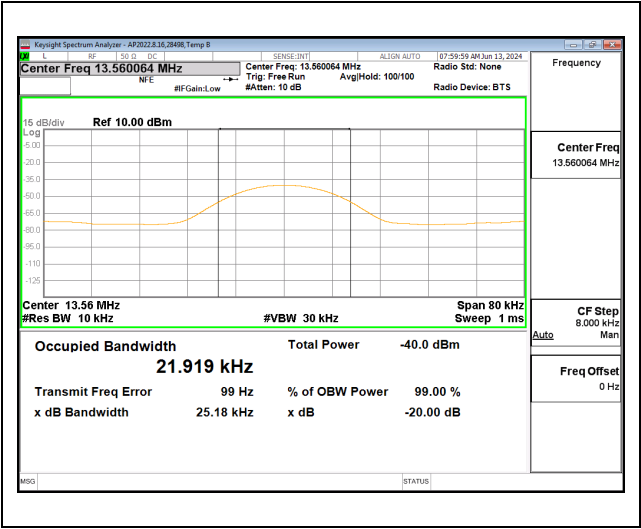


7.1.3. READER + TAG MODE: TYPE A, 106 Kbps

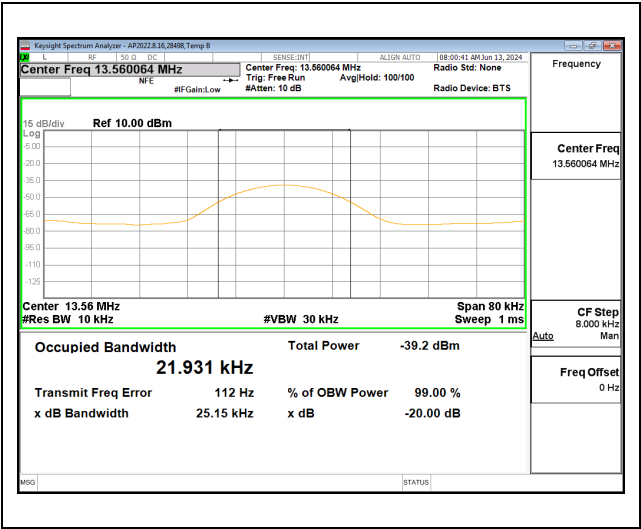


7.2. SECONDARY ANTENNA

7.2.1. READER MODE: TYPE A, 106 Kbps



7.2.2. READER + TAG MODE: TYPE A, 106 Kbps



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

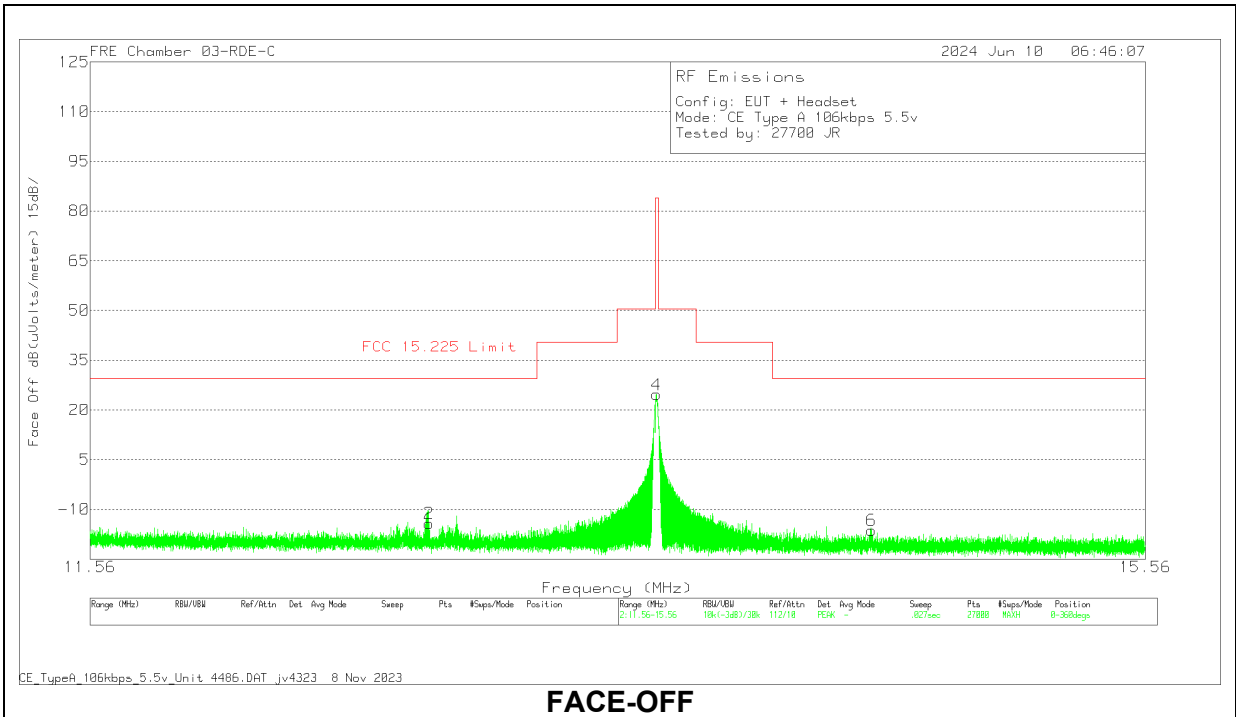
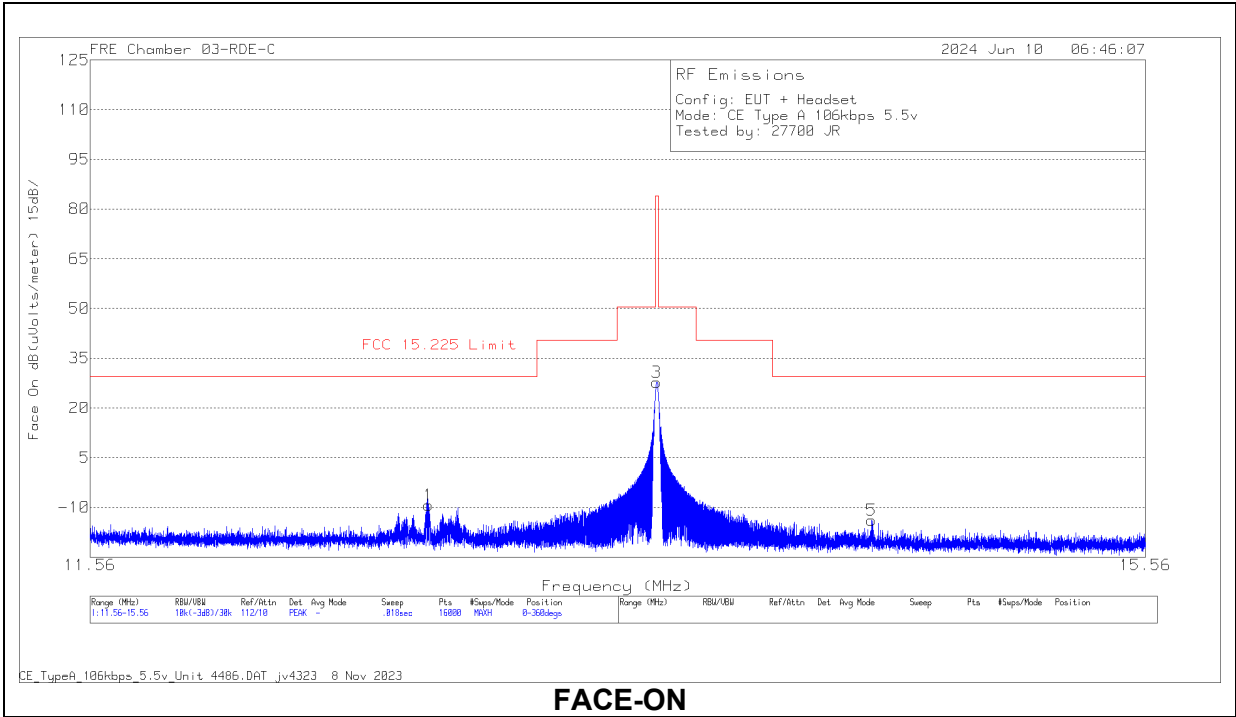
ANSI C63.10, 2013

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

8.2.1. CE MODE: TYPE A, 106 Kbps

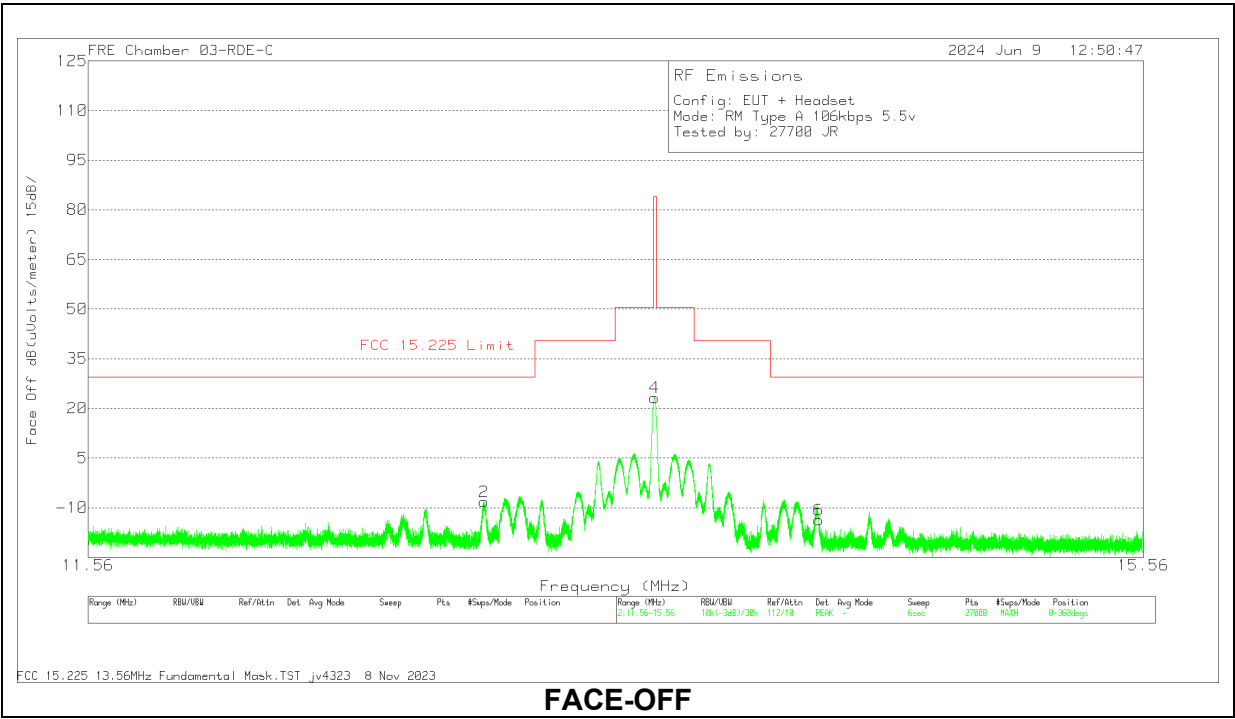
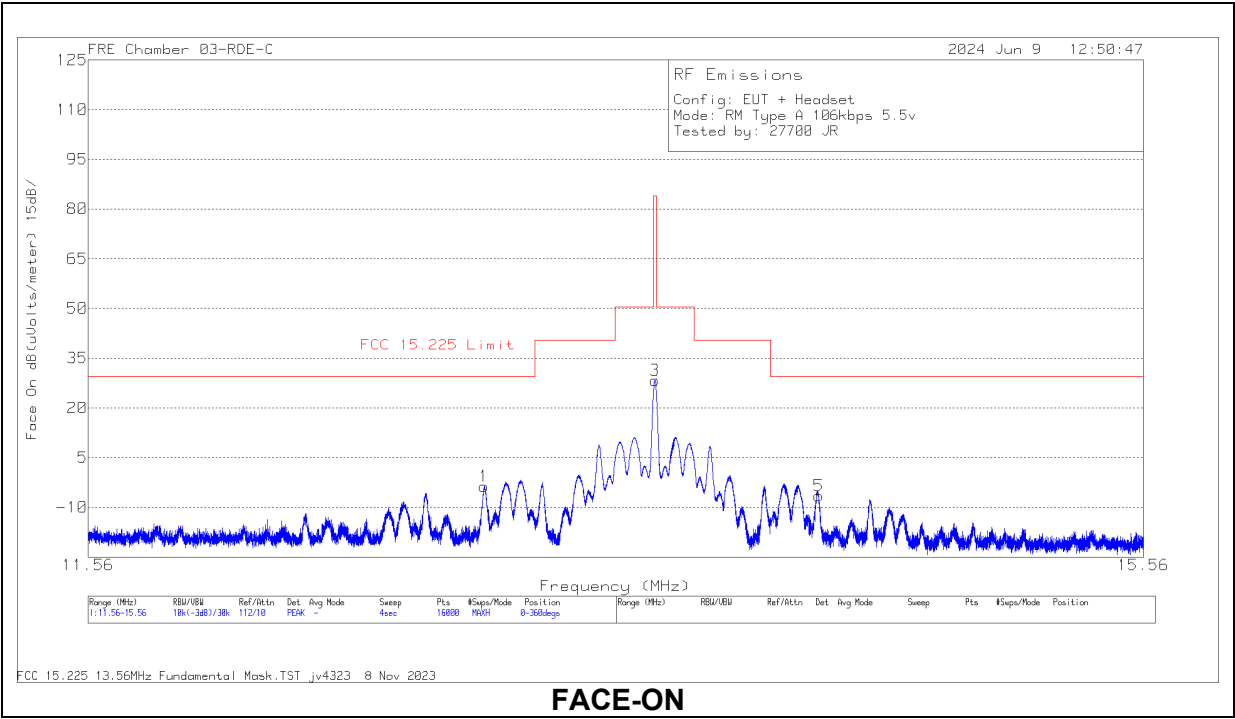


DATA

Marker	Frequency (MHz)	Meter Reading (dBUV)	Det	Loop Antenna E (ACF) (dB/m)	CBL AMP (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading dB(uVolts/meter)	FCC 15.225 Limit (dBUV)	PK Margin (dB)	Azimuth (Degs)	Polarity
1	12.716	28.42	Pk	34.5	-32.2	-40	-9.28	29.54	-38.82	0-360	Face-On
2	12.7177	23.38	Pk	34.5	-32.2	-40	-14.32	29.54	-43.86	0-360	Face-Off
4	13.5581	62.53	Pk	34.3	-32.2	-40	24.63	84	-59.37	0-360	Face-Off
3	13.5598	65.69	Pk	34.3	-32.2	-40	27.79	84	-56.21	0-360	Face-On
5	14.4053	23.78	Pk	34.2	-31.9	-40	-13.92	29.54	-43.46	0-360	Face-Off
6	14.406	21.34	Pk	34.2	-31.9	-40	-16.36	29.54	-45.9	0-360	Face-Off

Pk - Peak detector

8.2.2. READER MODE: TYPE A, 106 Kbps

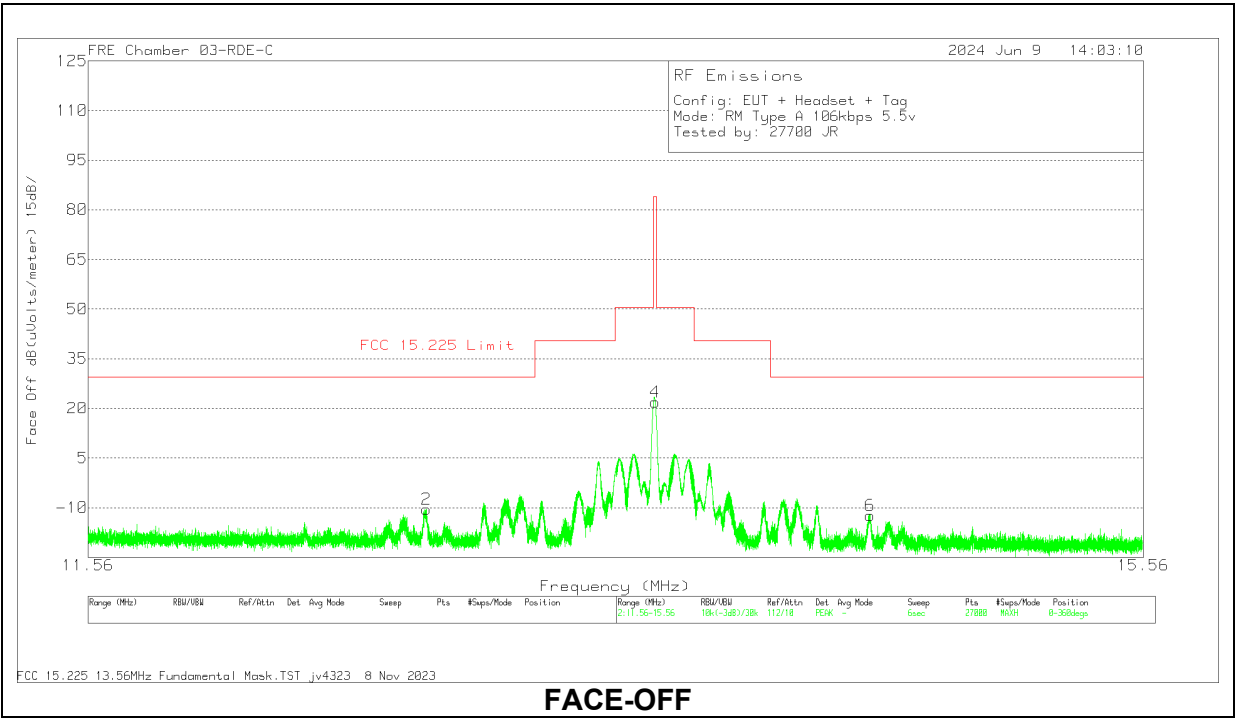
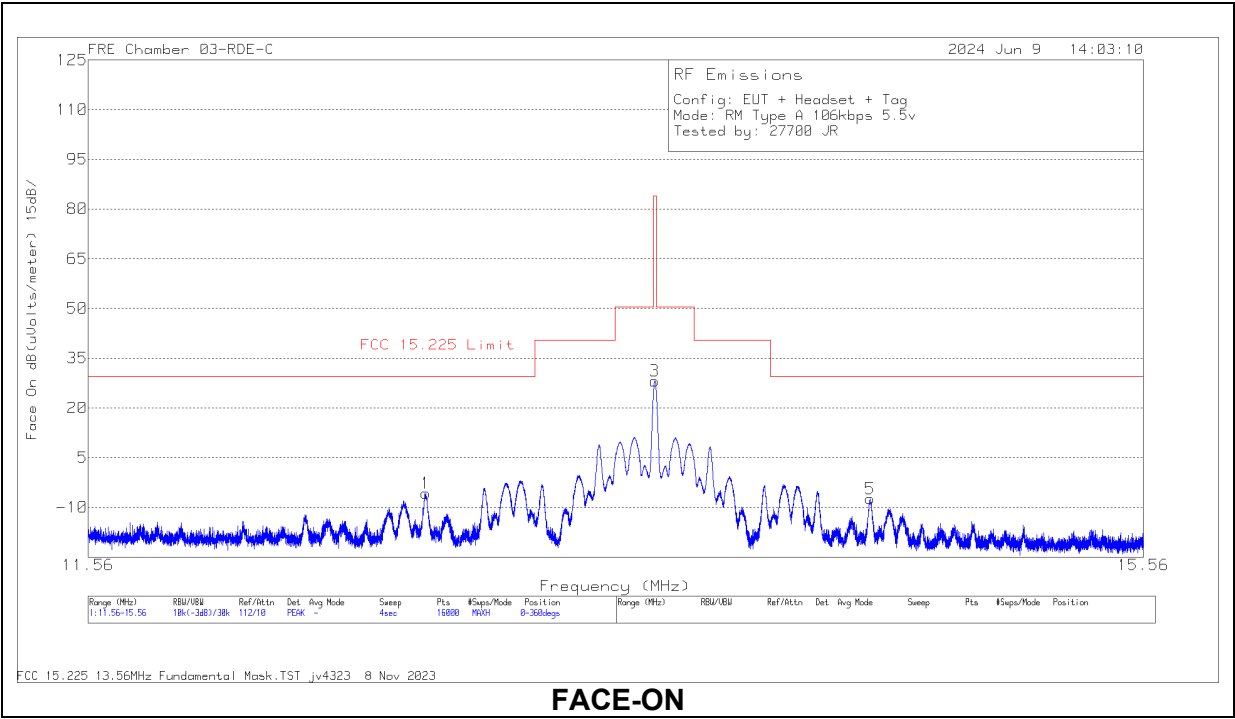


DATA

Marker	Frequency (MHz)	Meter Reading (dBUV)	Det	Loop Antenna E (ACF) (dB/m)	CBL AMP (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading dB(uVolts/meter)	FCC 15.225 Limit (dBUV/m)	PK Margin (dB)	Azimuth (Degs)	Polarity
1	12.9233	34.05	Pk	34.4	-32.1	-40	-3.65	29.54	-33.19	0-360	Face-On
2	12.9244	29.42	Pk	34.4	-32.1	-40	-8.28	29.54	-37.82	0-360	Face-Off
4	13.5591	61.07	Pk	34.3	-32.2	-40	23.17	84	-60.83	0-360	Face-Off
3	13.5601	66.18	Pk	34.3	-32.2	-40	28.28	84	-55.72	0-360	Face-On
5	14.1998	31.26	Pk	34.2	-32	-40	-6.54	29.54	-36.08	0-360	Face-On
6	14.2011	24.04	Pk	34.2	-32	-40	-13.76	29.54	-43.3	0-360	Face-Off

Pk - Peak detector

8.2.3. READER + TAG MODE: TYPE A, 106 Kbps



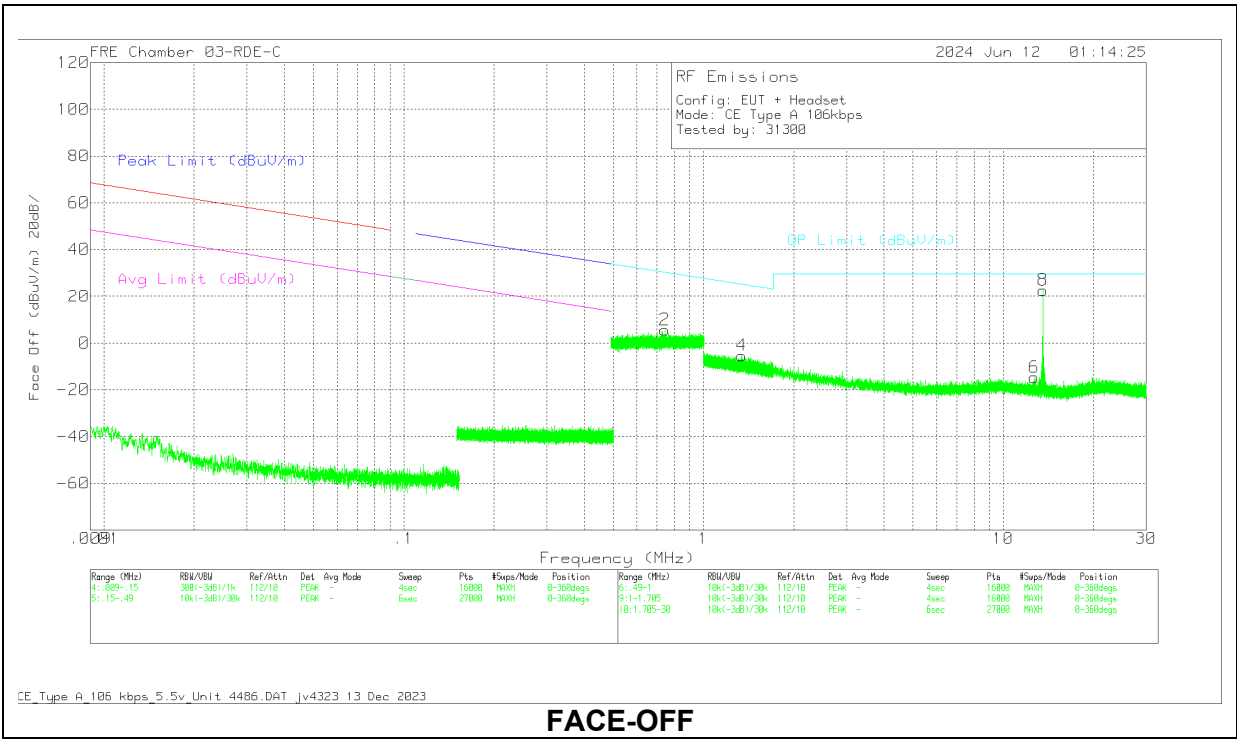
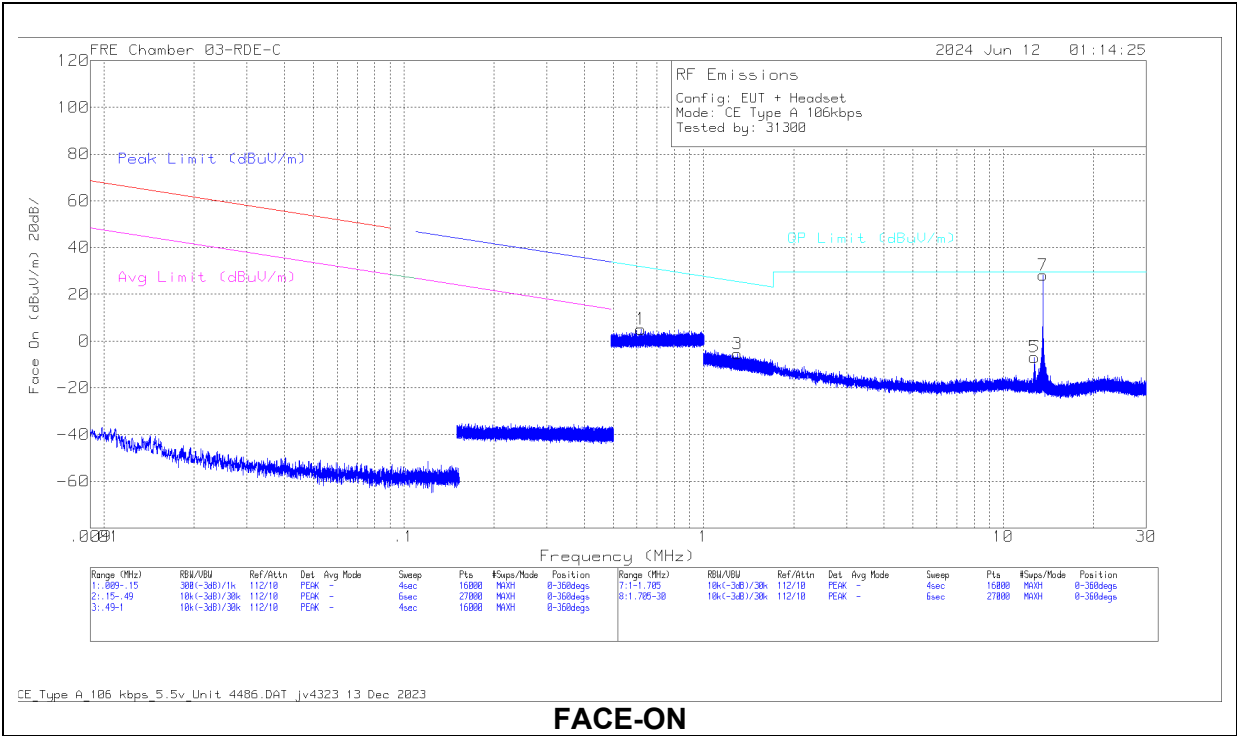
DATA

Marker	Frequency (MHz)	Meter Reading (dBUV)	Det	Loop Antenna E (ACF) (dB/m)	CBL AMP (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading dB(uVolts/meter)	FCC 15.225 Limit (dBUV/m)	PK Margin (dB)	Azimuth (Degs)	Polarity
1	12.7128	31.93	Pk	34.5	-32.2	-40	-5.77	29.54	-35.31	0-360	Face-On
2	12.7144	27.2	Pk	34.5	-32.2	-40	-10.5	29.54	-40.04	0-360	Face-Off
3	13.56	66.01	Pk	34.3	-32.2	-40	28.11	84	-55.89	0-360	Face-On
4	13.5616	59.74	Pk	34.3	-32.2	-40	21.84	84	-62.16	0-360	Face-Off
5	14.4075	30.35	Pk	34.2	-31.9	-40	-7.35	29.54	-36.89	0-360	Face-On
6	14.4086	25.36	Pk	34.2	-31.9	-40	-12.34	29.54	-41.88	0-360	Face-Off

Pk - Peak detector

8.3. PRIMARY ANTENNA SPURIOUS EMISSION 0.15-30 MHz

8.3.1. CE MODE: TYPE A, 106 Kbps



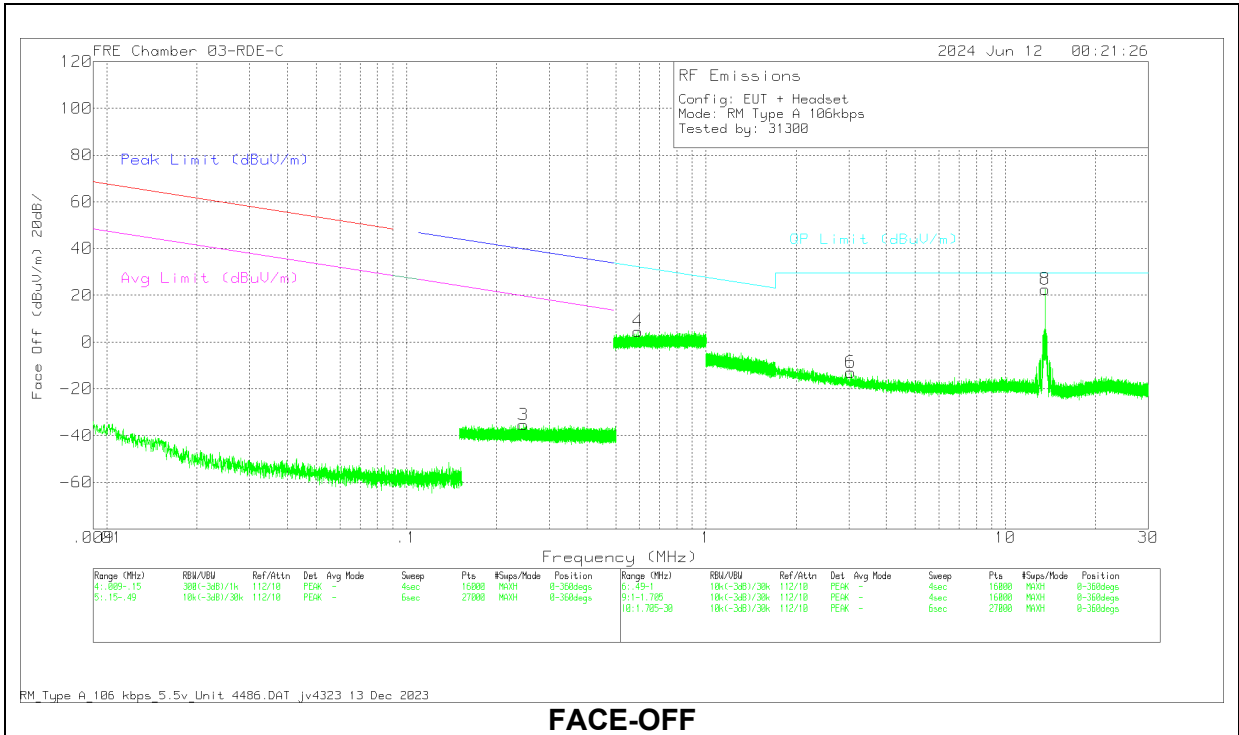
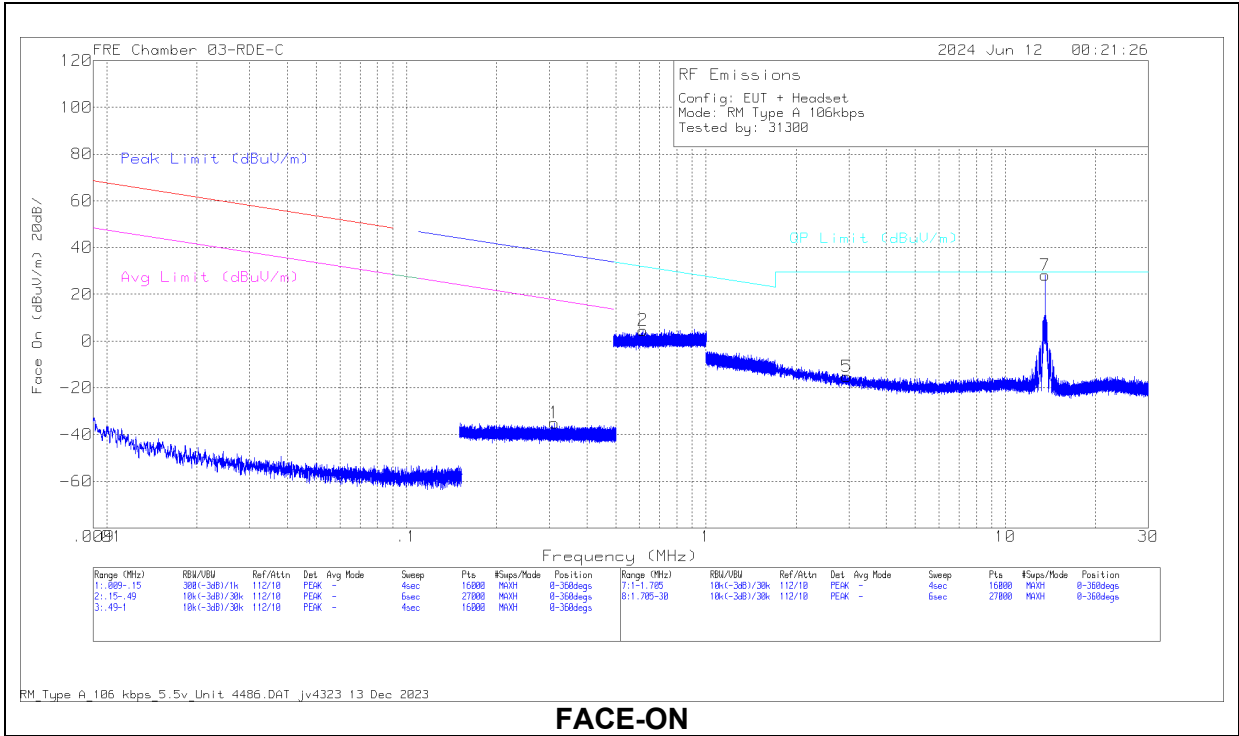
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna H (ACF) (dB/m)	CBL AMP (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
1	.6183	21.4	Pk	56.3	-32.6	-40	5.1	31.79	-26.69	0-360	Face-On
2	.7429	21.75	Pk	56.4	-32.5	-40	5.65	30.2	-24.55	0-360	Face-Off

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E (ACF) (dB/m)	CBL AMP (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
3	1.2964	22.17	Pk	45.2	-32.9	-40	-5.53	25.37	-30.9	0-360	Face-On
4	1.3418	22.27	Pk	45	-32.6	-40	-5.33	25.08	-30.41	0-360	Face-Off
6	12.7069	22.88	Pk	34.5	-32.1	-40	-14.72	29.5	-44.22	0-360	Face-Off
5	12.7132	30.77	Pk	34.5	-32.2	-40	-6.93	29.5	-36.43	0-360	Face-On
7	13.5595	66.05	Pk	34.3	-32.2	-40	28.15	29.5	-1.35	0-360	Face-Off
8	13.56	60.5	Pk	34.3	-32.2	-40	22.6	29.5	-6.9	0-360	Face-On

Pk - Peak detector

8.3.2. READER MODE: TYPE A, 106 Kbps



DATA

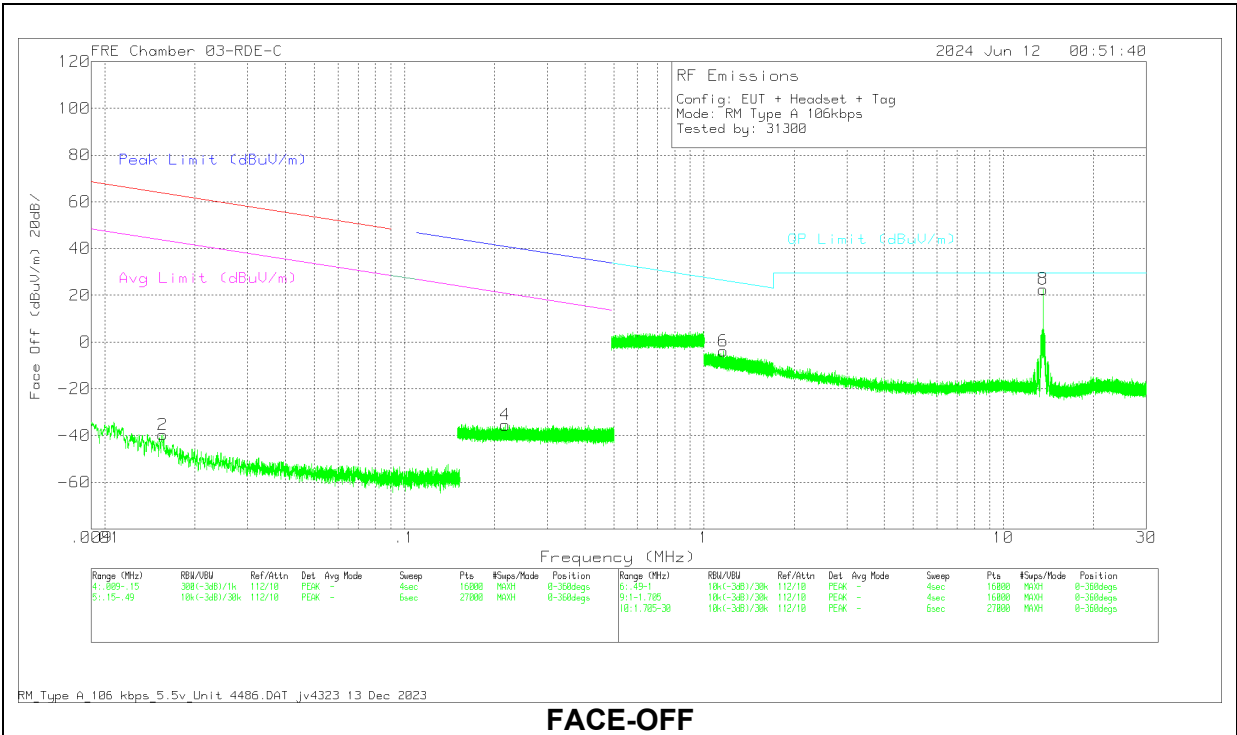
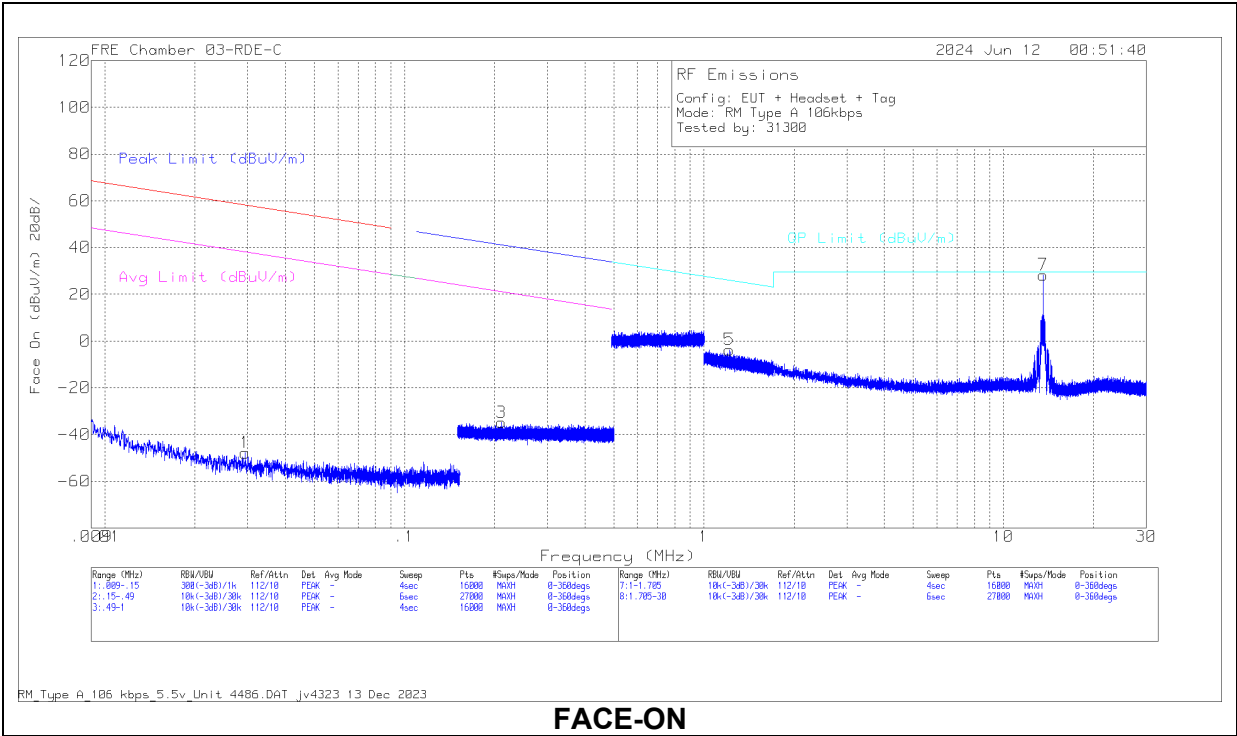
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna H (ACF) (dB/m)	CBL AMP (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
3	.2457	20.96	Pk	56.3	-32.6	-80	-35.34	39.81	-75.15	19.81	-55.15	0-360	Face-Off
1	.3118	21.64	Pk	56.2	-32.8	-80	-34.96	37.73	-72.69	17.73	-52.69	0-360	Face-On

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna H (ACF) (dB/m)	CBL AMP (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
4	.5931	20.87	Pk	56.3	-32.6	-40	4.57	32.15	-27.58	0-360	Face-Off
2	.6155	20.86	Pk	56.3	-32.6	-40	4.56	31.82	-27.26	0-360	Face-On

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E (ACF) (dB/m)	CBL AMP (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
5	2.9563	18.43	Pk	38.8	-32.4	-40	-15.17	29.5	-44.67	0-360	Face-On
6	3.0443	20.71	Pk	38.7	-32.3	-40	-12.89	29.5	-42.39	0-360	Face-Off
7	13.56	66.09	Pk	34.3	-32.2	-40	28.19	29.5	-1.31	0-360	Face-On
8	13.56	60.52	Pk	34.3	-32.2	-40	22.62	29.5	-6.88	0-360	Face-Off

Pk - Peak detector

8.3.3. READER + TAG MODE: TYPE A, 106 Kbps



DATA

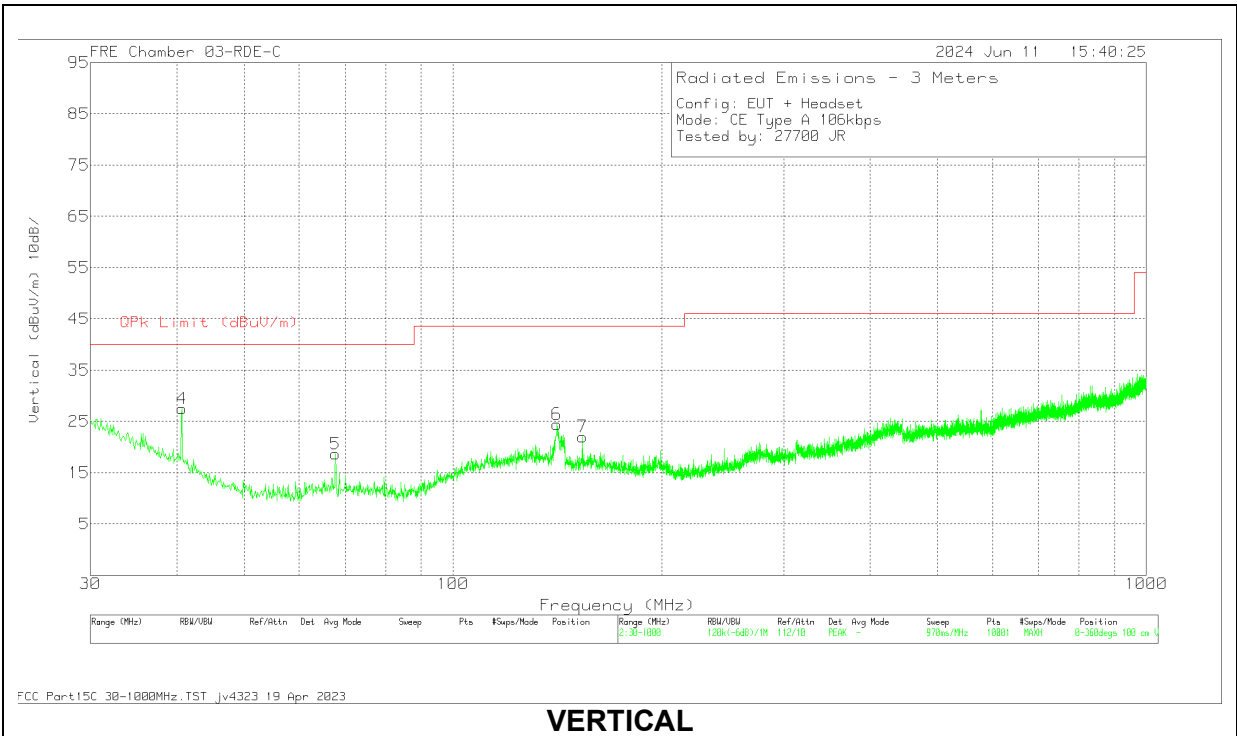
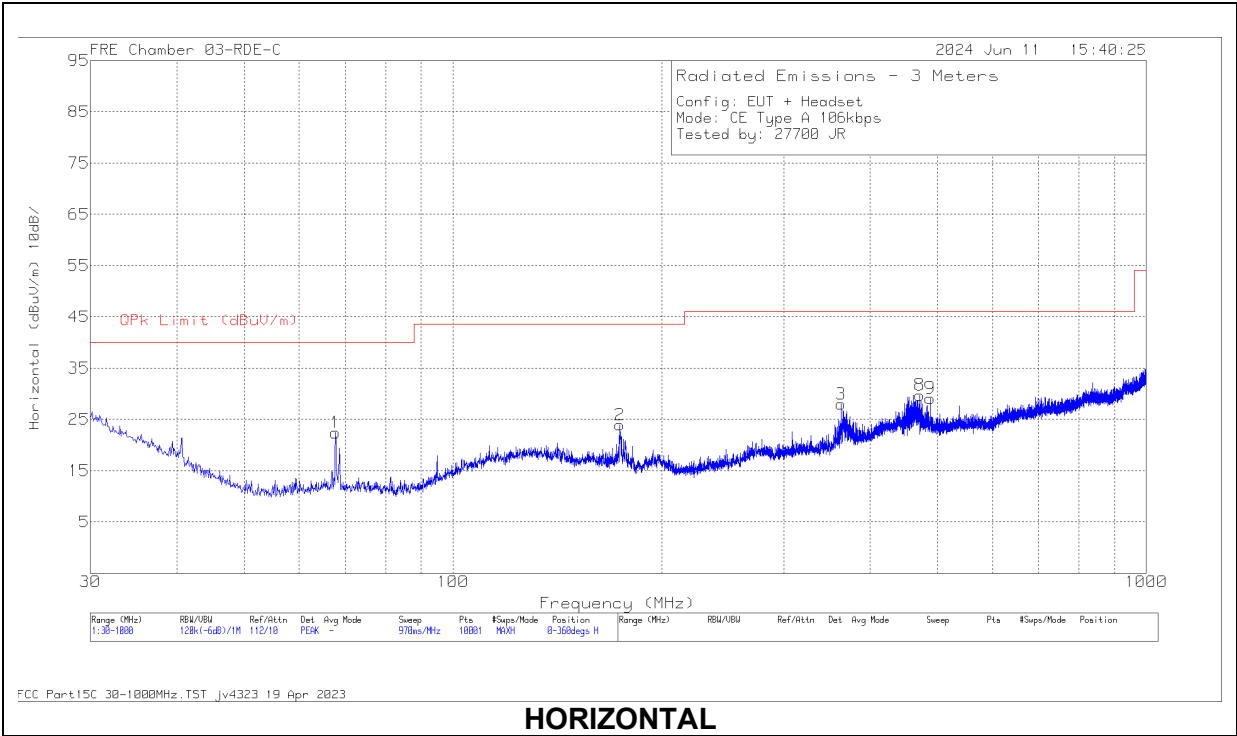
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna H (ACF) (dB/m)	CBL AMP (dB)	Dist Corr 300m (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
2	.0156	12	Pk	59.7	-31.4	-80	-39.7	63.72	-103.42	43.72	-83.42	0-360	Face-Off
1	.0294	6.78	Pk	58.1	-32.7	-80	-47.82	58.22	-106.04	38.22	-86.04	0-360	Face-On
3	.2109	21.67	Pk	56.3	-32.8	-80	-34.83	41.14	-75.97	21.14	-55.97	0-360	Face-On
4	.2171	21.08	Pk	56.3	-32.8	-80	-35.42	40.88	-76.3	20.88	-56.3	0-360	Face-Off

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E (ACF) (dB/m)	CBL AMP (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
6	1.1591	22.86	Pk	45.9	-32.6	-40	-3.84	26.34	-30.18	0-360	Face-Off
5	1.2159	23.27	Pk	45.6	-32.6	-40	-3.73	25.93	-29.66	0-360	Face-On
7	13.5595	66.13	Pk	34.3	-32.2	-40	28.23	29.5	-1.27	0-360	Face-On
8	13.56	60.53	Pk	34.3	-32.2	-40	22.63	29.5	-6.87	0-360	Face-Off

Pk - Peak detector

8.4. PRIMARY ANTENNA TX SPURIOUS EMISSION 30-1000 MHz

8.4.1. CE MODE: TYPE A, 106 Kbps

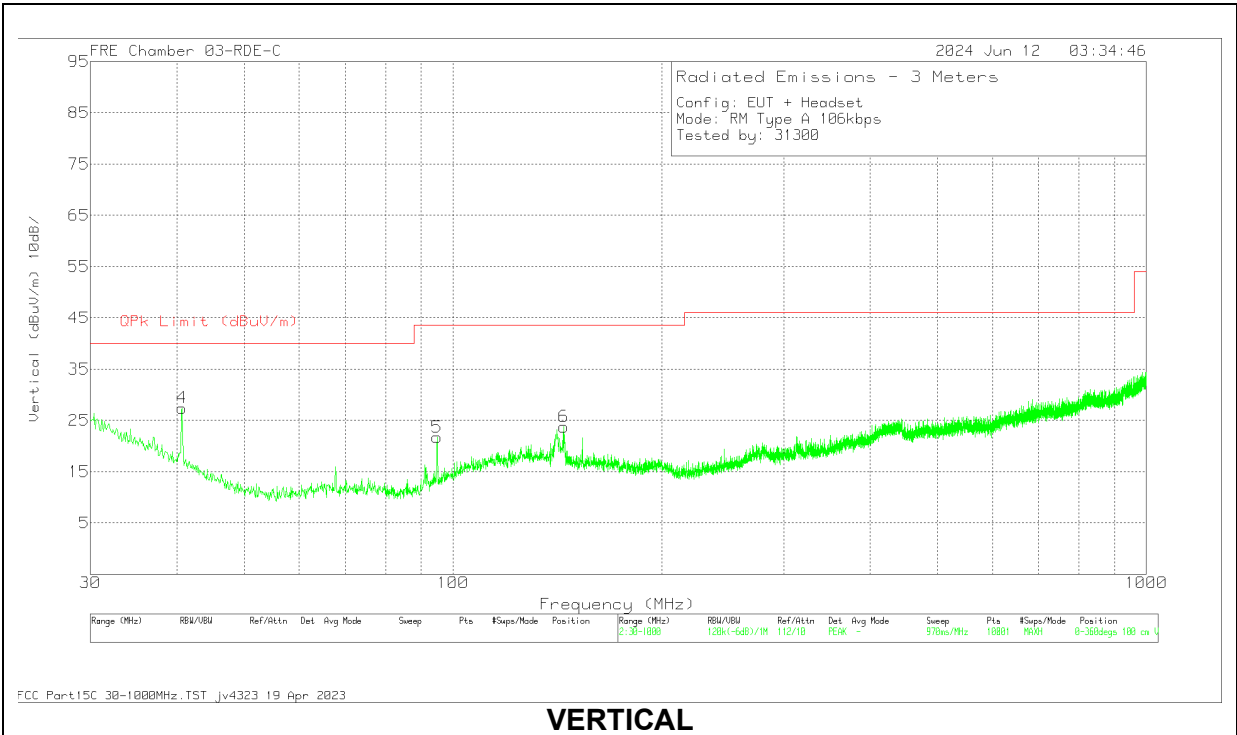
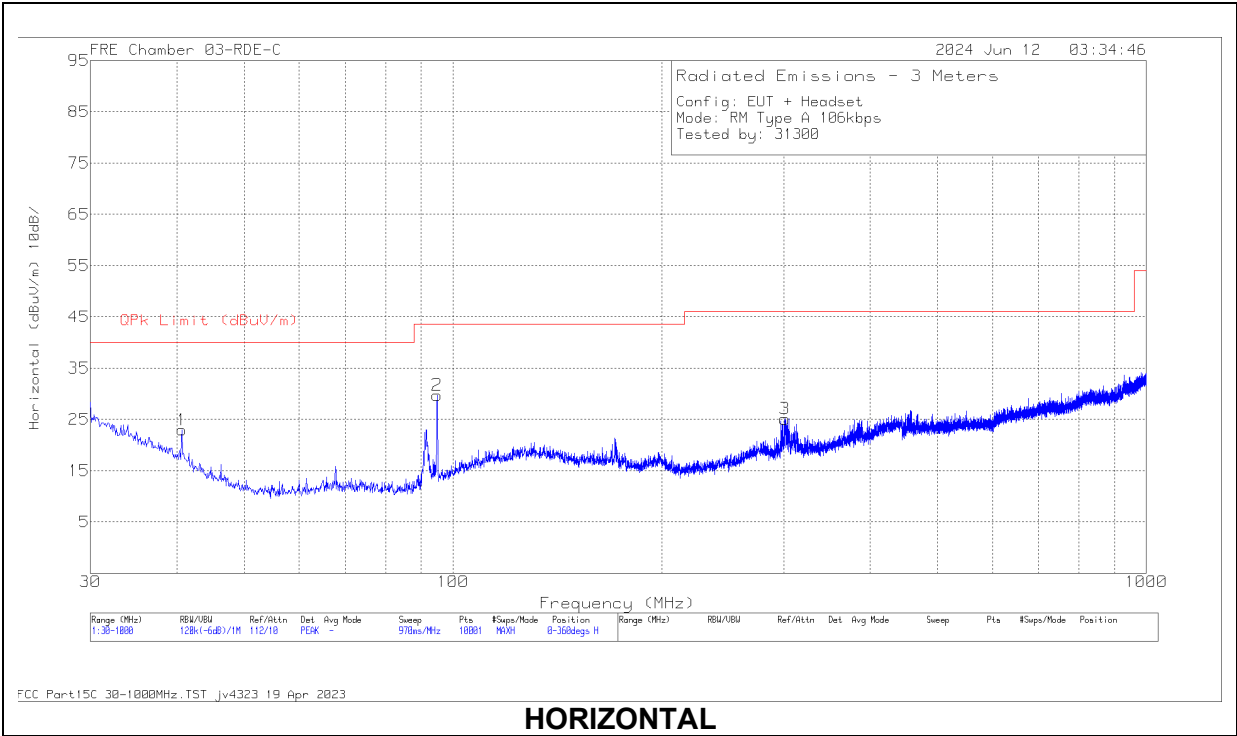


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	232075 ACF (dB/m)	CBL AMP (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	40.67	39.38	Pk	19.4	-31.3	27.48	40	-12.52	0-360	100	V
1	67.733	39.32	Pk	14.1	-31	22.42	40	-17.58	0-360	399	H
5	67.733	35.55	Pk	14.1	-31	18.65	40	-21.35	0-360	100	V
6	141.356	35.34	Pk	19.3	-30.2	24.44	43.52	-19.08	0-360	100	V
7	153.772	34.3	Pk	18.4	-30.7	22	43.52	-21.52	0-360	100	V
2	174.142	37.03	Pk	17.6	-30.7	23.93	43.52	-19.59	0-360	198	H
3	363.195	36.47	Pk	20.8	-29.3	27.97	46.02	-18.05	0-360	99	H
8	471.253	34.93	Pk	23.6	-28.8	29.73	46.02	-16.29	0-360	198	H
9	488.034	33.91	Pk	23.7	-28.5	29.11	46.02	-16.91	0-360	99	H

Pk - Peak detector

8.4.2. READER MODE: TYPE A, 106 Kbps

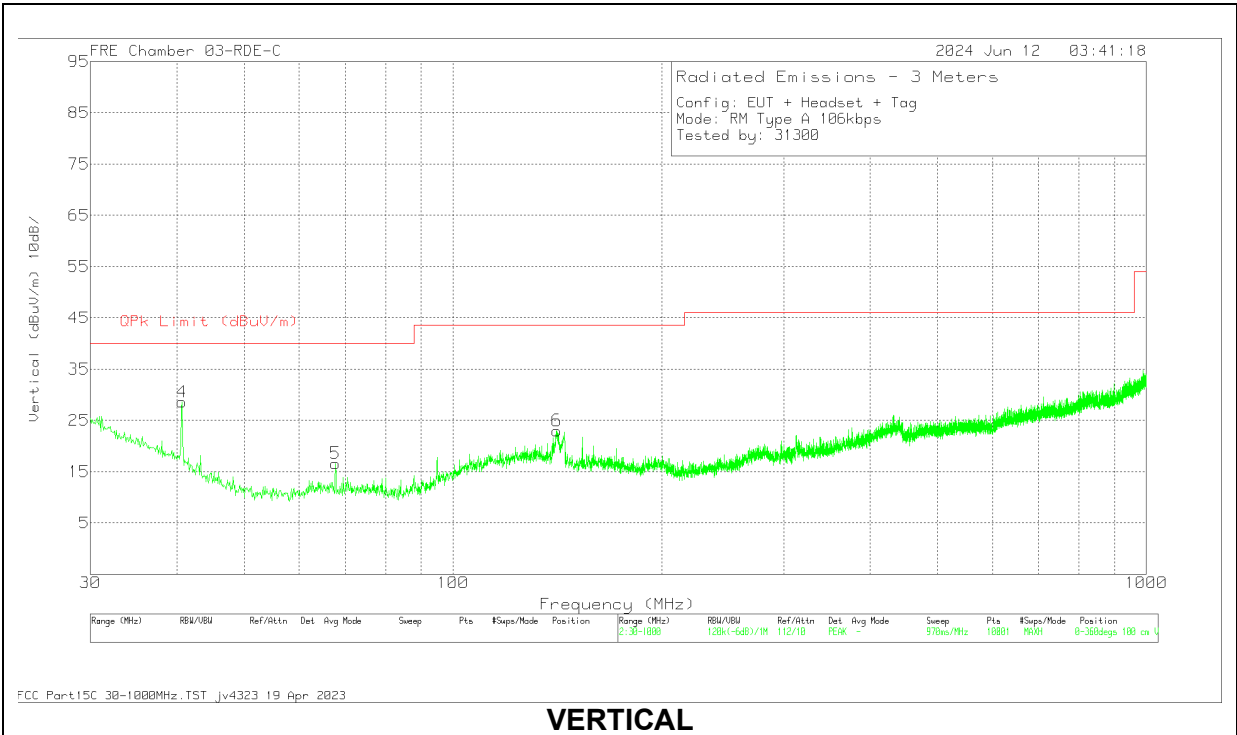
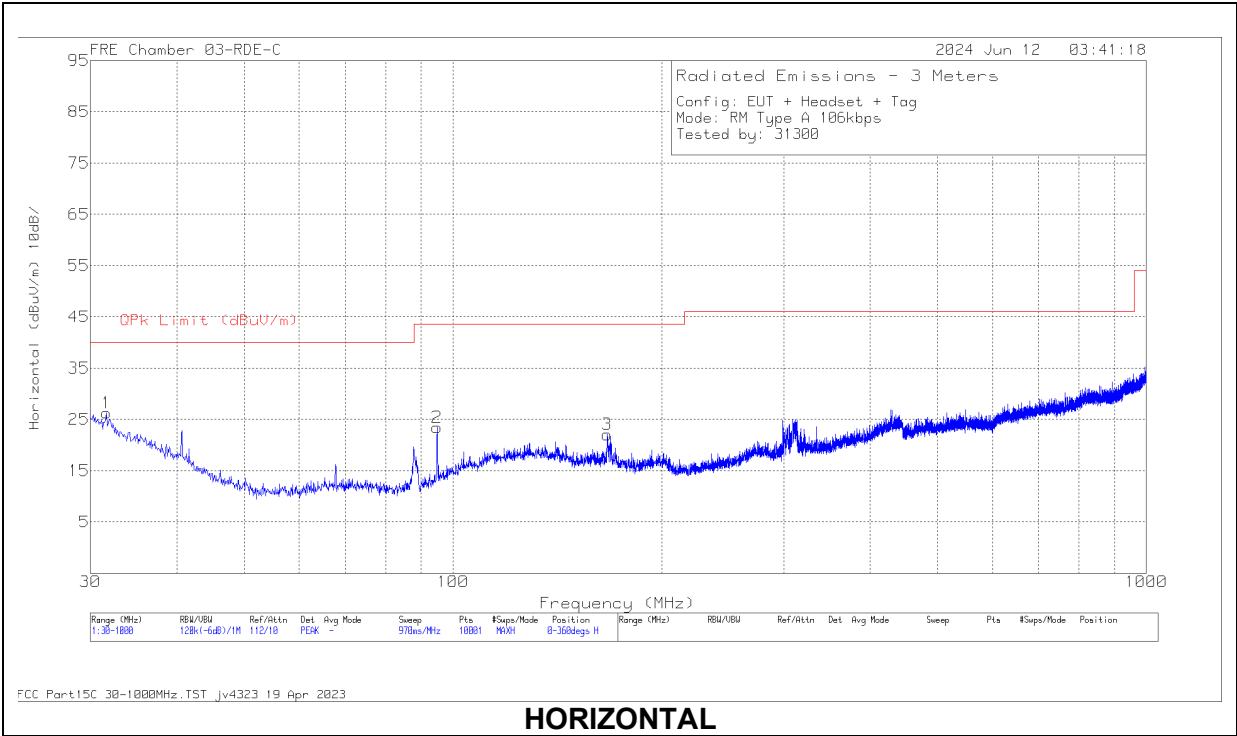


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	232075 ACF (dB/m)	CBL AMP (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.67	34.85	Pk	19.4	-31.3	22.95	40	-17.05	0-360	299	H
4	40.67	39.33	Pk	19.4	-31.3	27.43	40	-12.57	0-360	100	V
2	94.893	45.02	Pk	15.3	-30.6	29.72	43.52	-13.8	0-360	299	H
5	94.893	37.01	Pk	15.3	-30.6	21.71	43.52	-21.81	0-360	198	V
6	144.46	35.16	Pk	19.1	-30.5	23.76	43.52	-19.76	0-360	100	V
3	301.212	35.22	Pk	19.3	-29.4	25.12	46.02	-20.9	0-360	100	H

Pk - Peak detector

8.4.3. READER + TAG MODE: TYPE A, 106 Kbps



DATA

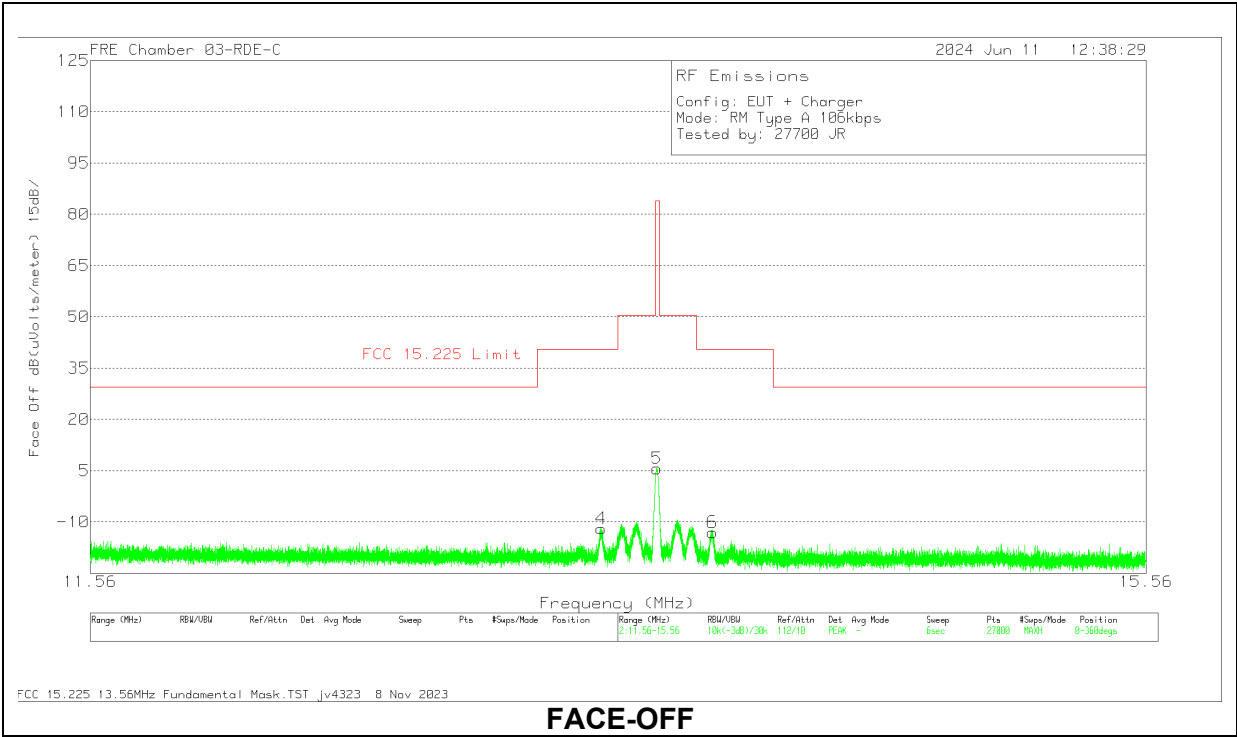
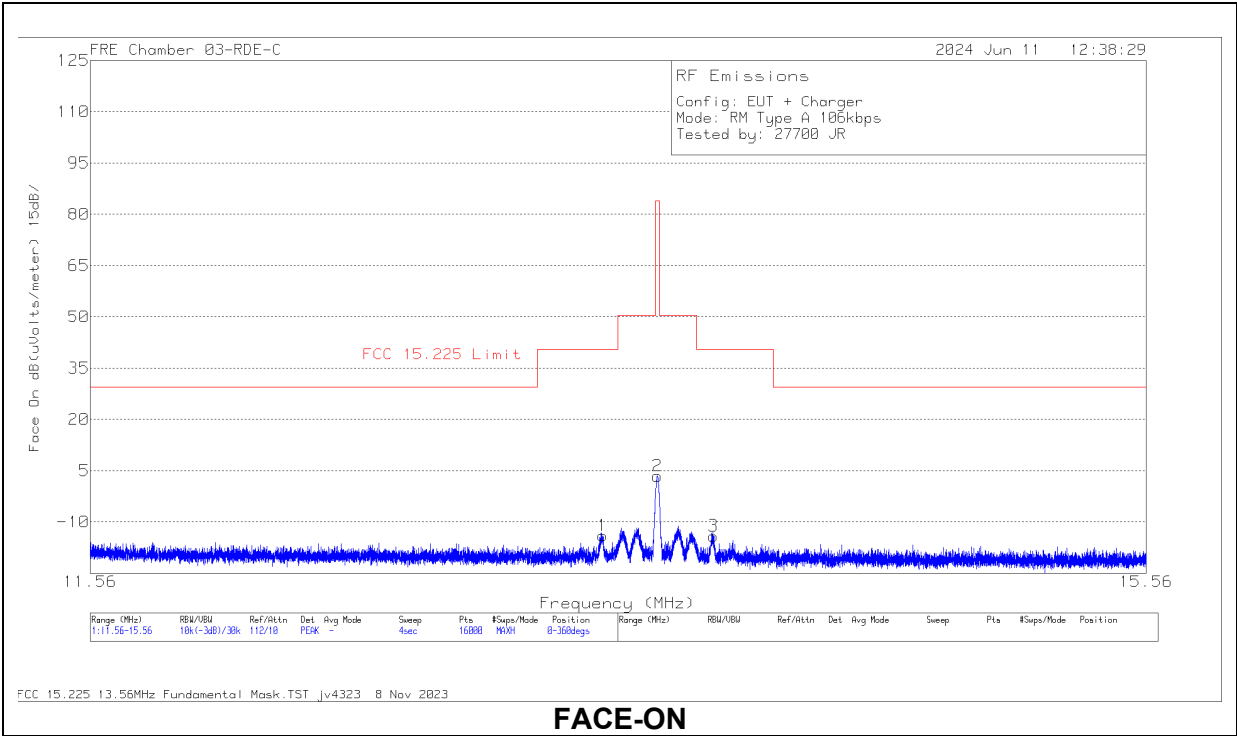
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	232075 ACF (dB/m)	CBL AMP (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 166.964	34.65	Pk	18	-30.6	22.05	43.52	-21.47	0-360	199	H
1	31.649	32.05	Pk	25.8	-31.6	26.25	40	-13.75	0-360	99	H
4	40.67	40.47	Pk	19.4	-31.3	28.57	40	-11.43	0-360	100	V
5	67.733	33.48	Pk	14.1	-31	16.58	40	-23.42	0-360	199	V
2	94.893	38.72	Pk	15.3	-30.6	23.42	43.52	-20.1	0-360	299	H
6	141.162	33.89	Pk	19.3	-30.2	22.99	43.52	-20.53	0-360	100	V

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

Pk - Peak detector

8.5. SECONDARY ANTENNA FUNDAMENTAL

8.5.1. READER MODE: TYPE A, 106 Kbps

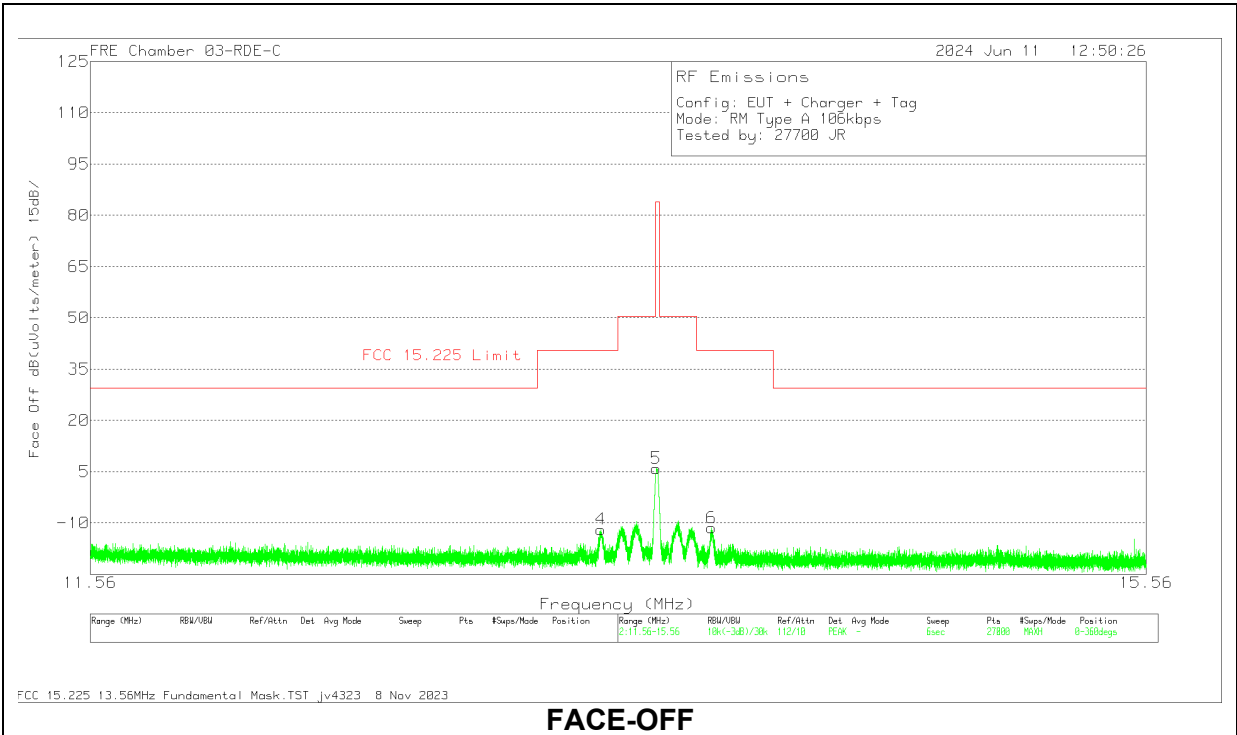
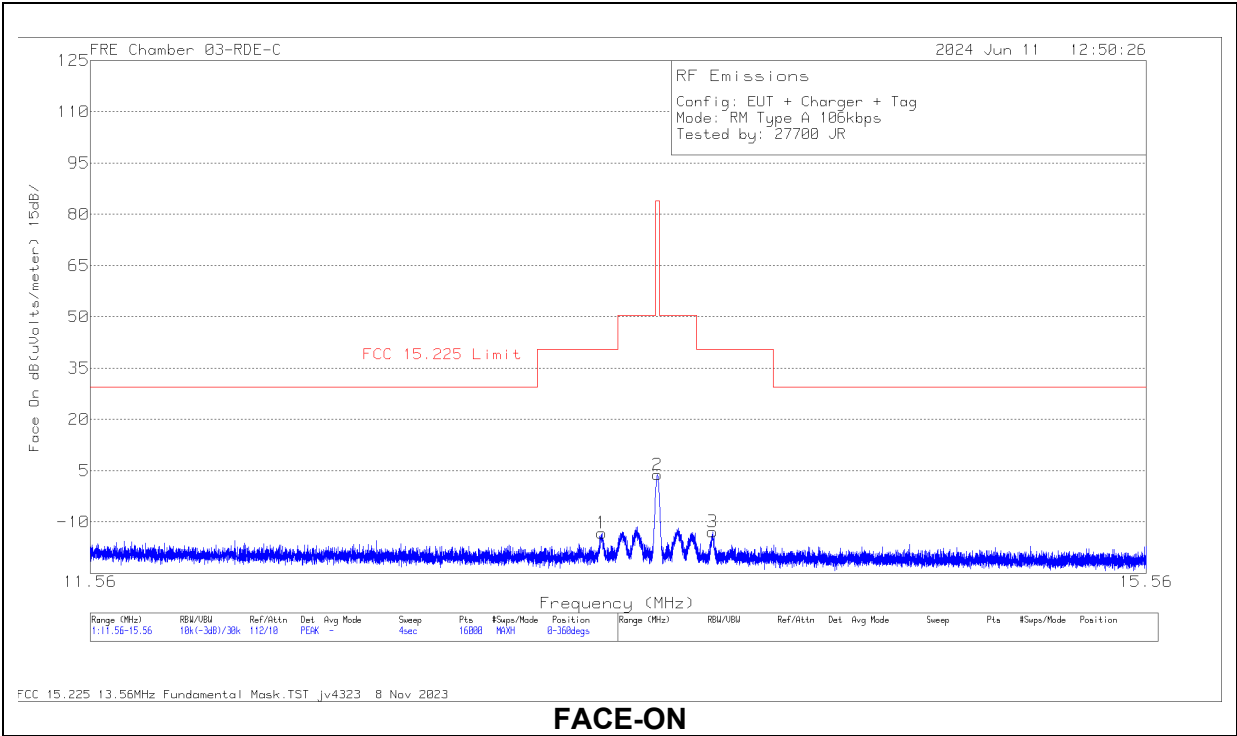


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E (ACF) (dB/m)	CBL AMP (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading dB(uVolts/meter)	FCC 15.225 Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Polarity
4	13.3477	25.65	Pk	34.4	-32	-40	-11.95	40.51	-52.46	0-360	Face-Off
1	13.3528	23.56	Pk	34.4	-32	-40	-14.04	40.51	-54.55	0-360	Face-On
5	13.5584	43.53	Pk	34.3	-32.2	-40	5.63	84	-78.37	0-360	Face-Off
2	13.5603	41.31	Pk	34.3	-32.2	-40	3.41	84	-80.59	0-360	Face-On
6	13.7723	24.84	Pk	34.3	-32.2	-40	-13.06	40.51	-53.57	0-360	Face-Off
3	13.775	23.75	Pk	34.3	-32.2	-40	-14.15	40.51	-54.66	0-360	Face-On

Pk - Peak detector

8.5.2. READER + TAG MODE: TYPE A, 106 Kbps



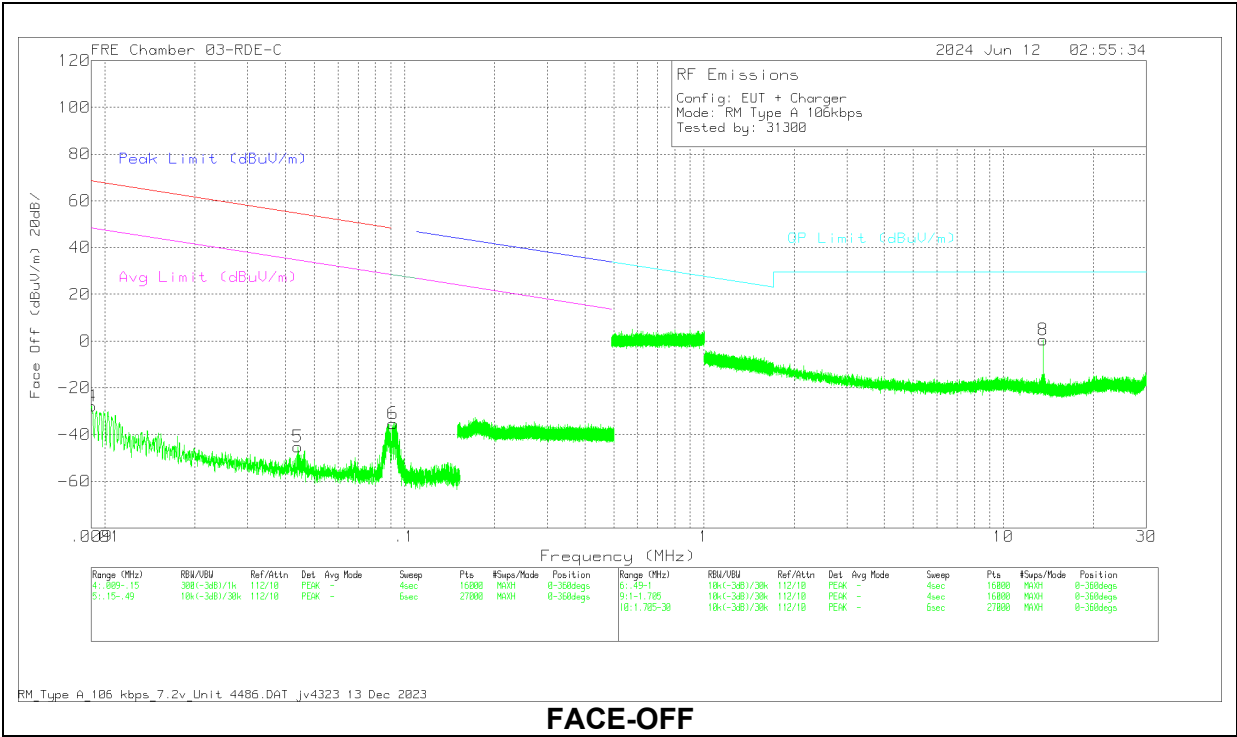
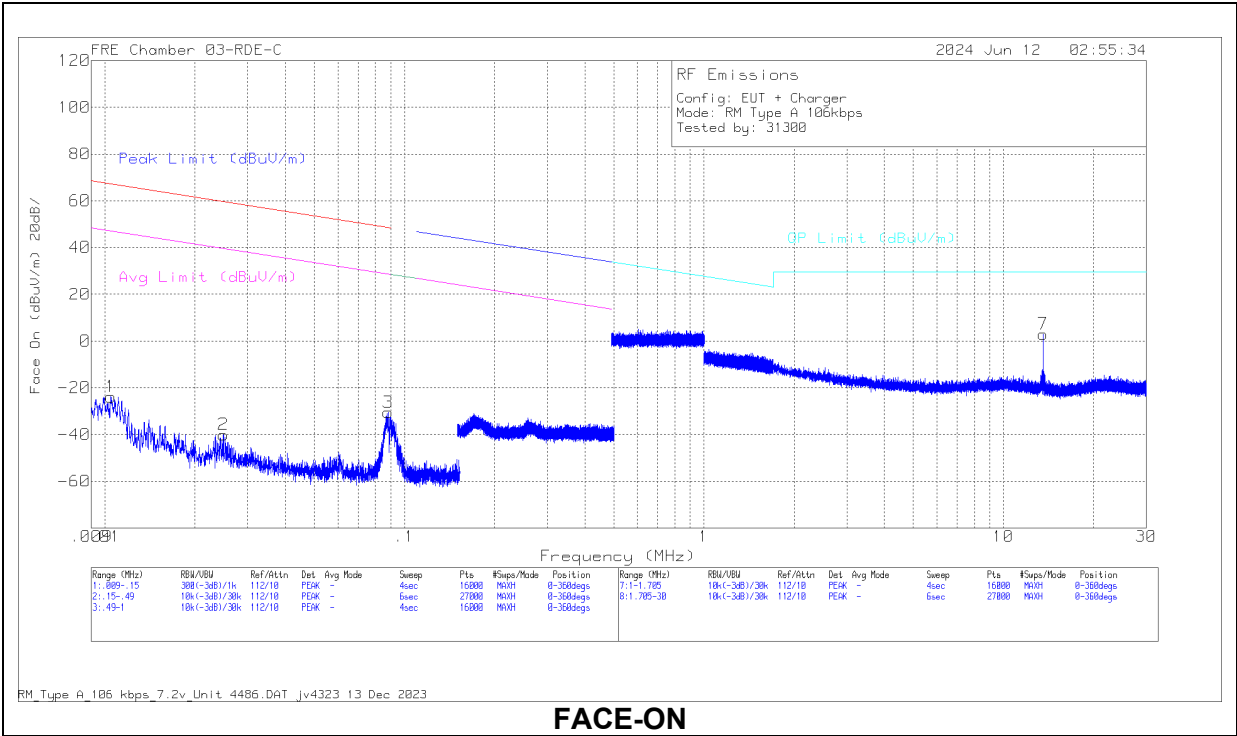
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E (ACF) (dB/m)	CBL AMP (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading dB(uVolts/meter)	FCC 15.225 Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Polarity
4	13.3458	25.7	Pk	34.4	-32	-40	-11.9	40.51	-52.41	0-360	Face-Off
1	13.3498	24.38	Pk	34.4	-32	-40	-13.22	40.51	-53.73	0-360	Face-On
5	13.5561	43.8	Pk	34.3	-32.2	-40	5.9	84	-78.1	0-360	Face-Off
2	13.5603	41.73	Pk	34.3	-32.2	-40	3.83	84	-80.17	0-360	Face-On
6	13.7691	26.45	Pk	34.3	-32.2	-40	-11.45	40.51	-51.96	0-360	Face-Off
3	13.7723	25.03	Pk	34.3	-32.2	-40	-12.87	40.51	-53.38	0-360	Face-On

Pk - Peak detector

8.6. SECONDARY ANTENNA SPURIOUS EMISSION 0.15-30 MHz

8.6.1. READER MODE: TYPE A, 106 Kbps



DATA

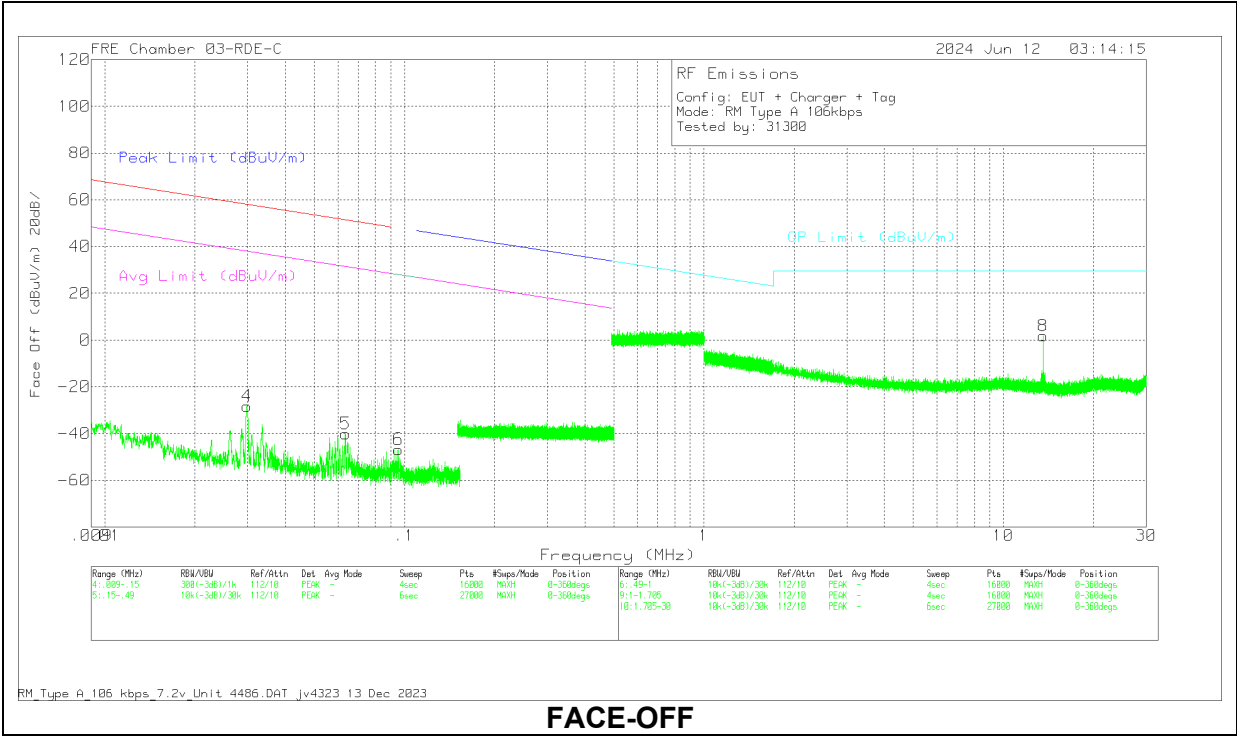
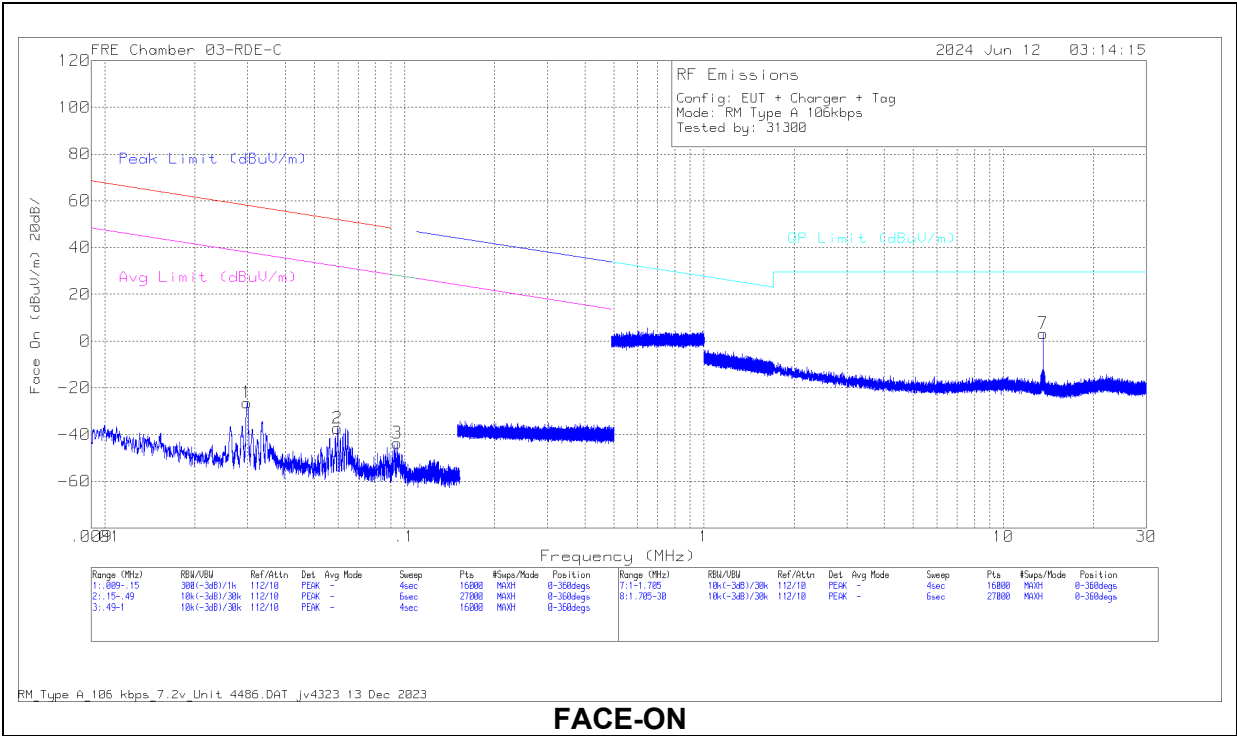
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna H (ACF) (dB/m)	CBL AMP (dB)	Dist Corr 300m (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
4	.009	22.04	Pk	61.4	-31.3	-80	-27.86	68.48	-96.34	48.48	-76.34	0-360	Face-Off
1	.0105	26.34	Pk	60.3	-30.5	-80	-23.86	67.19	-91.05	47.19	-71.05	0-360	Face-On
2	.0249	13.86	Pk	58.5	-32.4	-80	-40.04	59.67	-99.71	39.67	-79.71	0-360	Face-On
5	.044	10.32	Pk	57.2	-32.8	-80	-45.28	54.71	-99.99	34.71	-79.99	0-360	Face-Off
3	.0882	26.64	Pk	55.8	-33	-80	-30.56	48.67	-79.23	28.67	-59.23	0-360	Face-On

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna H (ACF) (dB/m)	CBL AMP (dB)	Dist Corr 300m (dB)	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
6	.0917	21.91	Pk	55.8	-33	-80	-35.29	28.34	-63.63	0-360	Face-Off

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E (ACF) (dB/m)	CBL AMP (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
8	13.56	38.39	Pk	34.3	-32.2	-40	.49	29.5	-29.01	0-360	Face-Off
7	13.561	40.87	Pk	34.3	-32.2	-40	2.97	29.5	-26.53	0-360	Face-On

Pk - Peak detector

8.6.2. READER + TAG MODE: TYPE A, 106 Kbps



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna H (ACF) (dB/m)	CBL AMP (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	.0298	28.33	Pk	58	-32.7	-80	-26.37	58.09	-84.46	38.09	-64.46	0-360	Face-On
4	.0298	26.37	Pk	58	-32.7	-80	-28.33	58.1	-86.43	38.1	-66.43	0-360	Face-Off
2	.0598	19.29	Pk	56.2	-32.8	-80	-37.31	52.05	-89.36	32.05	-69.36	0-360	Face-On
5	.0636	16.47	Pk	56.1	-32.7	-80	-40.13	51.52	-91.65	31.52	-71.65	0-360	Face-Off

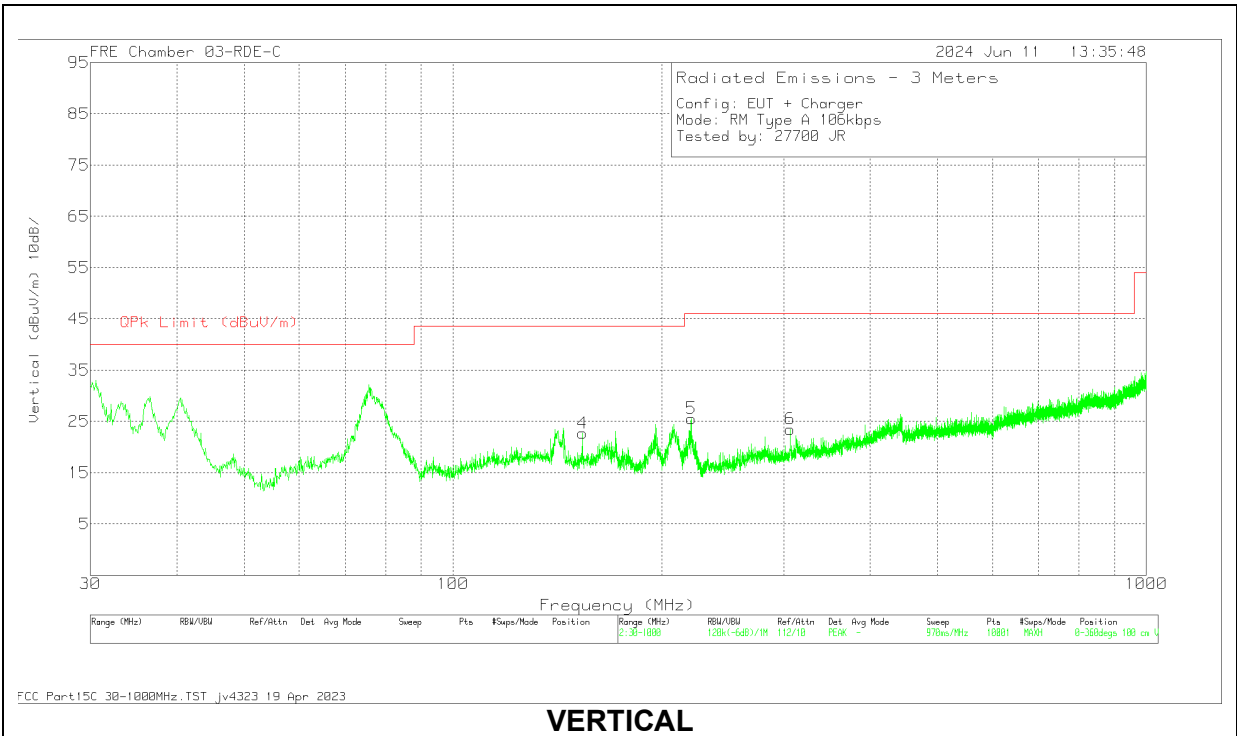
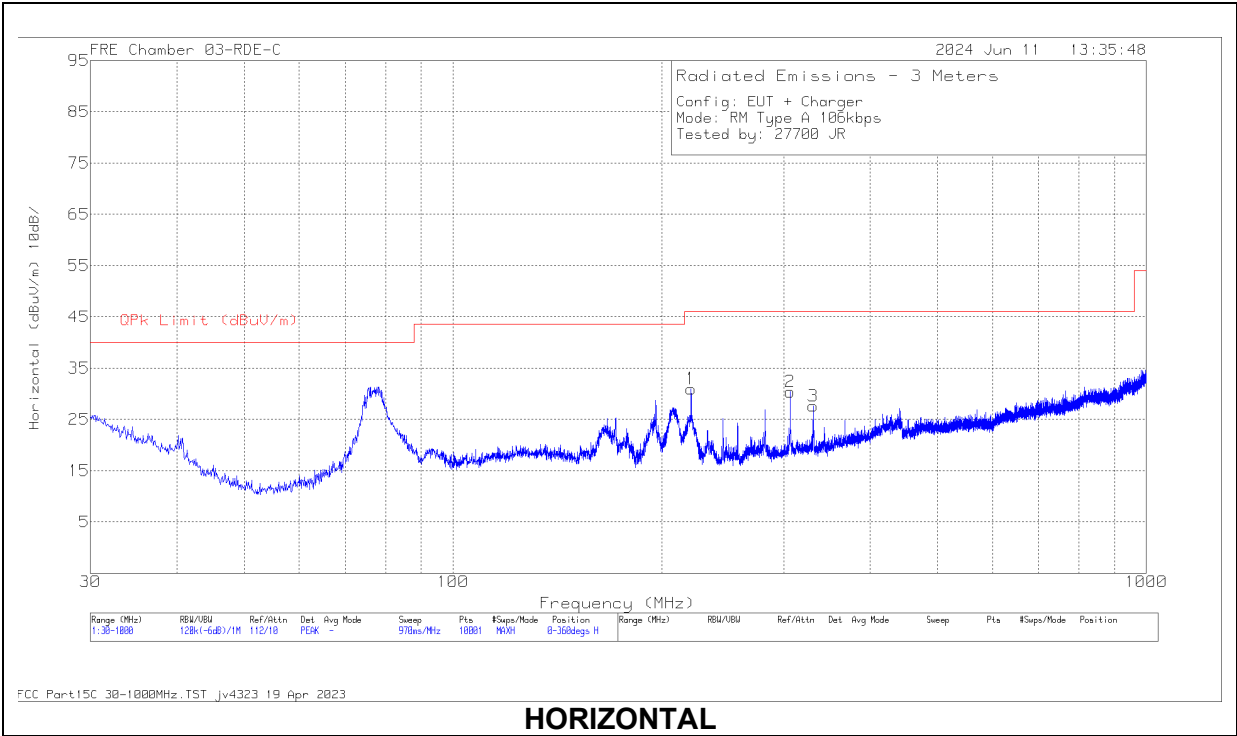
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna H (ACF) (dB/m)	CBL AMP (dB)	Dist Corr 300m (dB)	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
3	.0946	13.71	Pk	55.7	-33	-80	-43.59	28.08	-71.67	0-360	Face-On
6	.0956	10.35	Pk	55.7	-32.9	-80	-46.85	27.99	-74.84	0-360	Face-Off

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E (ACF) (dB/m)	CBL AMP (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
8	13.56	39.64	Pk	34.3	-32.2	-40	1.74	29.5	-27.76	0-360	Face-Off
7	13.561	41.12	Pk	34.3	-32.2	-40	3.22	29.5	-26.28	0-360	Face-On

Pk - Peak detector

8.7. SECONDARY ANTENNA TX SPURIOUS EMISSION 30-1000 MHz

8.7.1. READER MODE: TYPE A, 106 Kbps



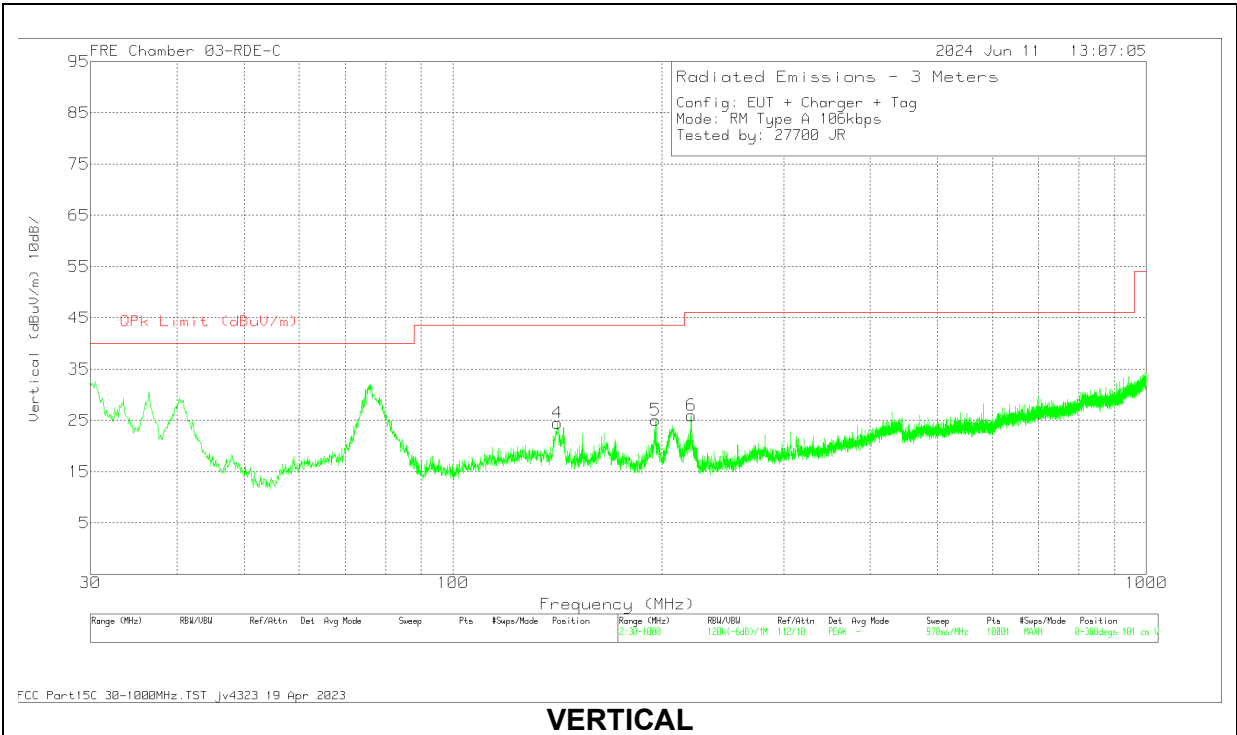
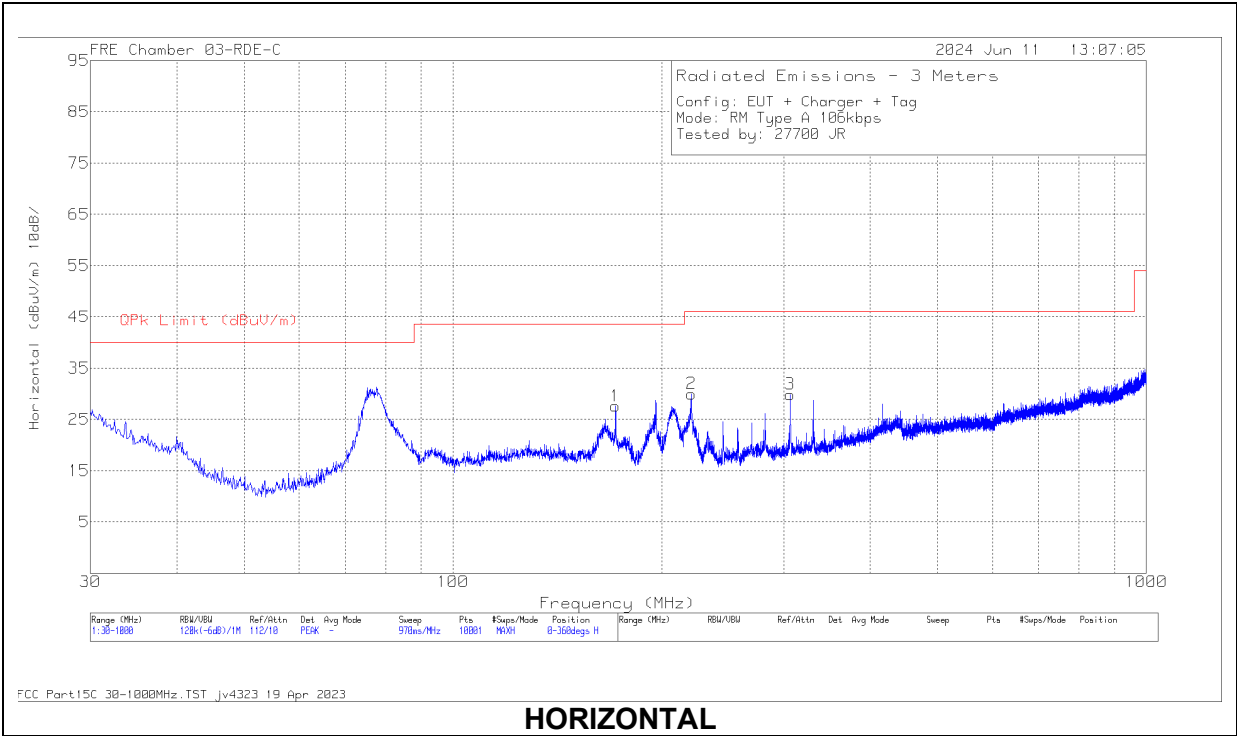
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	232075 ACF (dB/m)	CBL AMP (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 330.894	37.19	Pk	19.9	-29.5	27.59	46.02	-18.43	0-360	99	H
4	153.772	34.99	Pk	18.4	-30.7	22.69	43.52	-20.83	0-360	100	V
1	220.605	44.37	Pk	16.6	-30	30.97	46.02	-15.05	0-360	198	H
5	220.702	38.94	Pk	16.6	-30	25.54	46.02	-20.48	0-360	198	V
6	306.353	33.79	Pk	19.4	-29.7	23.49	46.02	-22.53	0-360	100	V
2	306.547	40.5	Pk	19.5	-29.6	30.4	46.02	-15.62	0-360	99	H

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

Pk - Peak detector

8.7.2. READER + TAG MODE: TYPE A, 106 Kbps



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	232075 ACF (dB/m)	CBL AMP (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 171.62	40.09	Pk	17.8	-30.3	27.59	43.52	-15.93	0-360	299	H
4	141.453	35.4	Pk	19.3	-30.2	24.5	43.52	-19.02	0-360	101	V
5	196.161	37.17	Pk	18.1	-30.2	25.07	43.52	-18.45	0-360	198	V
6	220.702	39.37	Pk	16.6	-30	25.97	46.02	-20.05	0-360	198	V
2	220.799	43.4	Pk	16.6	-30	30	46.02	-16.02	0-360	198	H
3	306.45	40.08	Pk	19.4	-29.6	29.88	46.02	-16.14	0-360	100	H

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

9. FREQUENCY STABILITY

LIMIT

§15.225 (e) The frequency tolerance of the carrier signal shall be maintained within ±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 ±0.01% (±100 ppm).

TEST PROCEDURE

ANSI C63.10-2013 Clause 6.8

RESULTS

No non-compliance noted.

ID:	31300	Date:	2024/07/28
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9.1. PRIMARY ANTENNA

9.1.1. CE MODE: TYPE A, 106 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	13.559937	4.941	13.559938	4.867	13.559939	4.794	13.559941	4.646	± 100
	40	13.559948	4.130	13.559942	4.572	13.559945	4.351	13.559939	4.794	± 100
	30	13.559993	0.811	13.559968	2.655	13.559965	2.876	13.559964	2.950	± 100
	20	13.560004	0.000	13.560003	0.074	13.560003	0.074	13.560001	0.221	± 100
	10	13.560036	-2.360	13.560041	-2.729	13.560046	-3.097	13.560048	-3.245	± 100
	0	13.560077	-5.383	13.560086	-6.047	13.560091	-6.416	13.560097	-6.858	± 100
	-10	13.560151	-10.841	13.560151	-10.841	13.560152	-10.914	13.560152	-10.914	± 100
	-20	13.560186	-13.422	13.560187	-13.496	13.560187	-13.496	13.560187	-13.496	± 100
3.23	20	13.560091	-6.416	13.560077	-5.383	13.560062	-4.277	13.560054	-3.687	± 100
4.37	20	13.560048	-3.245	13.560034	-2.212	13.560018	-1.032	13.560017	-0.959	± 100

9.1.2. READER MODE: TYPE A, 106 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	13.559961	-0.664	13.559967	-1.106	13.559976	-1.770	13.559985	-2.434	± 100
	40	13.559937	1.106	13.55994	0.885	13.559937	1.106	13.559943	0.664	± 100
	30	13.559943	0.664	13.55994	0.885	13.559945	0.516	13.559937	1.106	± 100
	20	13.559952	0.000	13.559959	-0.516	13.559942	0.737	13.559948	0.295	± 100
	10	13.559946	0.442	13.559937	1.106	13.559932	1.475	13.559958	-0.442	± 100
	0	13.560035	-6.121	13.560031	-5.826	13.560036	-6.195	13.560035	-6.121	± 100
	-10	13.560079	-9.366	13.560085	-9.808	13.560081	-9.513	13.560081	-9.513	± 100
	-20	13.560125	-12.758	13.560126	-12.832	13.560129	-13.053	13.560135	-13.496	± 100
3.23	20	13.559967	-1.106	13.559965	-0.959	13.559955	-0.221	13.559957	-0.369	± 100
4.37	20	13.559952	0.000	13.559953	-0.074	13.559953	-0.074	13.559953	-0.074	± 100

9.1.3. READER + TAG MODE: TYPE A, 106 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	13.559991	-3.097	13.560003	-3.982	13.560021	-5.310	13.560051	-7.522	± 100
	40	13.559946	0.221	13.559949	0.000	13.559961	-0.885	13.559967	-1.327	± 100
	30	13.559937	0.885	13.559937	0.885	13.559935	1.032	13.559932	1.254	± 100
	20	13.559949	0.000	13.559952	-0.221	13.559946	0.221	13.559943	0.442	± 100
	10	13.559949	0.000	13.559952	-0.221	13.559955	-0.442	13.559958	-0.664	± 100
	0	13.559958	-0.664	13.559964	-1.106	13.559967	-1.327	13.559979	-2.212	± 100
	-10	13.559994	-3.319	13.560003	-3.982	13.560012	-4.646	13.560038	-6.563	± 100
	-20	13.560051	-7.522	13.560068	-8.776	13.560069	-8.850	13.560084	-9.956	± 100
3.23	20	13.559945	0.295	13.559967	-1.327	13.559969	-1.475	13.559965	-1.180	± 100
4.37	20	13.559942	0.516	13.559963	-1.032	13.559958	-0.664	13.559966	-1.254	± 100

9.2. SECONDARY ANTENNA

9.2.1. READER MODE: TYPE A, 106 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	13.559928	2.655	13.559935	2.139	13.559932	2.360	13.559938	1.917	± 100
	40	13.559918	3.392	13.559919	3.319	13.559919	3.319	13.559919	3.319	± 100
	30	13.559932	2.360	13.559932	2.360	13.559932	2.360	13.559932	2.360	± 100
	20	13.559964	0.000	13.559964	0.000	13.559964	0.000	13.559963	0.074	± 100
	10	13.559995	-2.286	13.559996	-2.360	13.559998	-2.507	13.559997	-2.434	± 100
	0	13.560022	-4.277	13.560035	-5.236	13.560036	-5.310	13.560037	-5.383	± 100
	-10	13.560062	-7.227	13.560067	-7.596	13.560076	-8.260	13.560072	-7.965	± 100
	-20	13.560092	-9.440	13.560092	-9.440	13.560095	-9.661	13.560095	-9.661	± 100
3.23	20	13.560022	-4.277	13.559998	-2.507	13.559988	-1.770	13.559978	-1.032	± 100
4.37	20	13.559977	-0.959	13.559974	-0.737	13.559975	-0.811	13.559967	-0.221	± 100

9.2.2. READER + TAG MODE: TYPE A, 106 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	13.559928	2.434	13.559931	2.212	13.559933	2.065	13.559934	1.991	± 100
	40	13.559919	3.097	13.559919	3.097	13.559919	3.097	13.559928	2.434	± 100
	30	13.559926	2.581	13.559926	2.581	13.559925	2.655	13.559925	2.655	± 100
	20	13.559961	0.000	13.559962	-0.074	13.559962	-0.074	13.559961	0.000	± 100
	10	13.559977	-1.180	13.559981	-1.475	13.559985	-1.770	13.559988	-1.991	± 100
	0	13.560018	-4.204	13.560025	-4.720	13.560027	-4.867	13.560031	-5.162	± 100
	-10	13.560066	-7.743	13.560062	-7.448	13.560067	-7.817	13.560069	-7.965	± 100
	-20	13.560095	-9.882	13.560096	-9.956	13.560096	-9.956	13.560097	-10.029	± 100
3.23	20	13.559961	0.000	13.559962	-0.074	13.559959	0.147	13.559958	0.221	± 100
4.37	20	13.559965	-0.295	13.559962	-0.074	13.559961	0.000	13.559961	0.000	± 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 50µH/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 (dBµV)	
	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

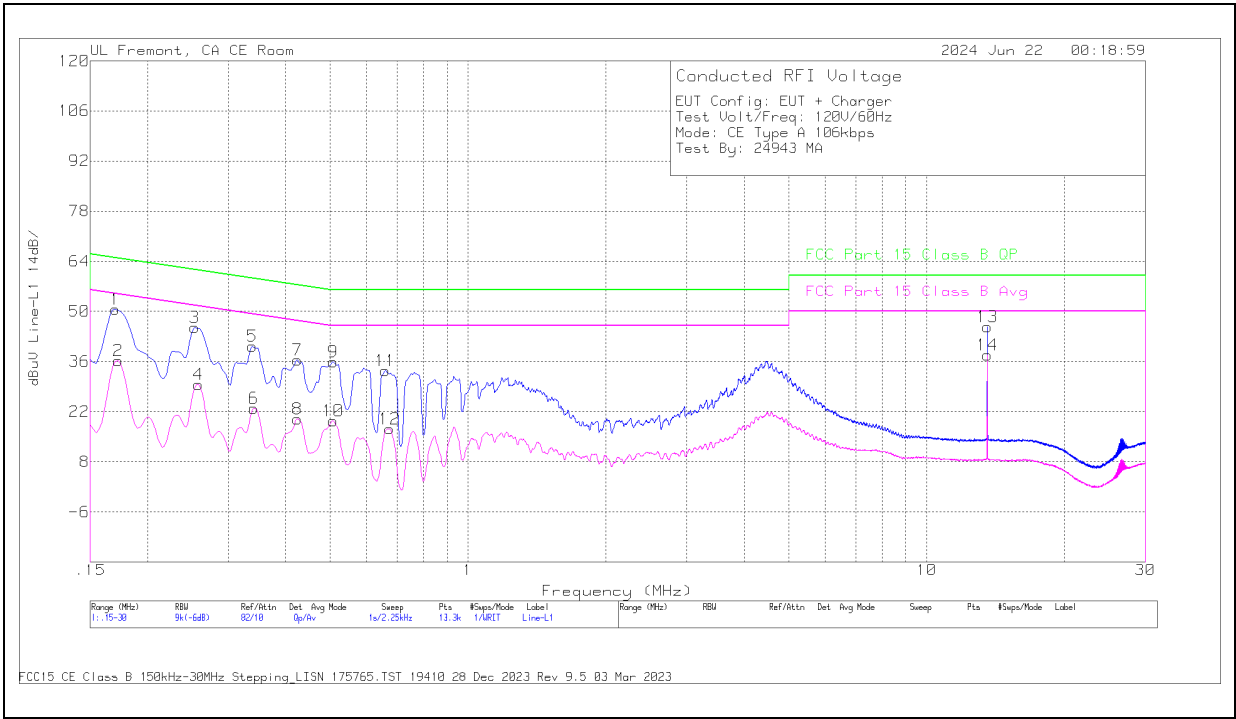
RESULTS

No non-compliance noted

10.1. PRIMARY ANTENNA

10.1.1. CE MODE: TYPE A, 106 Kbps

LINE 1 RESULTS

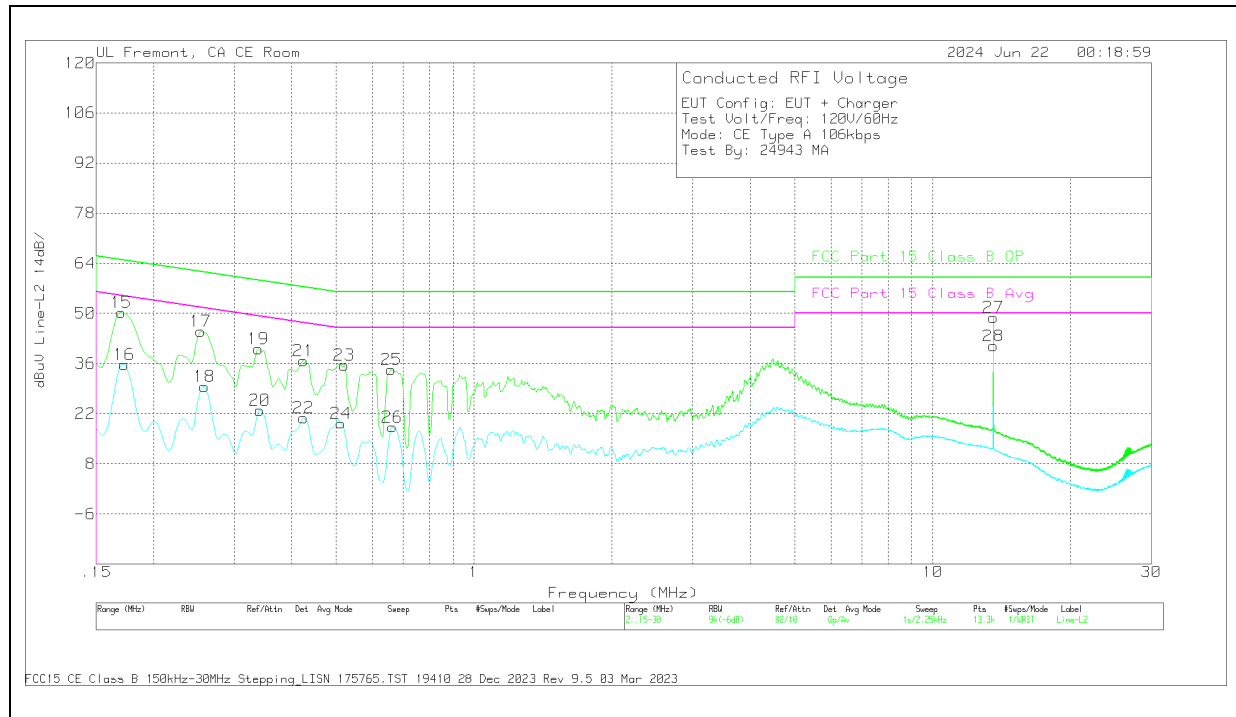


DATA

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Tms Limiter (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av Margin (dB)
2	.1725	26.58	Av	.1	0	9.5	36.18	-	-	54.84	-18.66
4	.258	20.25	Av	0	0	9.4	29.65	-	-	51.5	-21.85
6	.3413	13.52	Av	0	0	9.4	22.92	-	-	49.17	-26.25
8	.4245	10.6	Av	0	0	9.4	20	-	-	47.36	-27.36
10	.5078	10.1	Av	0	0	9.3	19.4	-	-	46	-26.6
12	.6743	7.72	Av	0	.1	9.4	17.22	-	-	46	-28.78
14	13.56	27.85	Av	.1	.3	9.5	37.75	-	-	50	-12.25
1	.1703	41	Qp	.1	0	9.5	50.6	64.95	-14.35	-	-
3	.2535	36.1	Qp	0	0	9.4	45.5	61.64	-16.14	-	-
5	.339	30.88	Qp	0	0	9.4	40.28	59.23	-18.95	-	-
7	.4245	26.96	Qp	0	0	9.4	36.36	57.36	-21	-	-
9	.5078	26.66	Qp	0	0	9.3	35.96	56	-20.04	-	-
11	.6608	23.94	Qp	0	.1	9.4	33.44	56	-22.56	-	-
13	13.56	35.86	Qp	.1	.3	9.5	45.76	60	-14.24	-	-

Qp - Quasi-Peak detector
Av - Average detection

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

LINE 2 RESULTS**DATA**

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trns Limiter (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av Margin (dB)
16	.1725	26.23	Av	0	0	9.5	35.73	-	-	54.84	-19.11
18	.258	20.16	Av	0	0	9.4	29.56	-	-	51.5	-21.94
20	.3413	13.36	Av	0	.1	9.4	22.86	-	-	49.17	-26.31
22	.4245	11.3	Av	0	.1	9.4	20.8	-	-	47.36	-26.56
24	.5123	10.02	Av	0	0	9.3	19.32	-	-	46	-26.68
26	.663	8.77	Av	0	.1	9.4	18.27	-	-	46	-27.73
28	13.56	31.1	Av	.1	.2	9.5	40.9	-	-	50	-9.1
15	.1703	40.78	Qp	0	0	9.5	50.28	64.95	-14.67	-	-
17	.2535	35.59	Qp	0	0	9.4	44.99	61.64	-16.65	-	-
19	.339	30.57	Qp	0	.1	9.4	40.07	59.23	-19.16	-	-
21	.4245	27.25	Qp	0	.1	9.4	36.75	57.36	-20.61	-	-
23	.5213	26.23	Qp	0	0	9.3	35.53	56	-20.47	-	-
25	.6608	24.85	Qp	0	.1	9.4	34.35	56	-21.65	-	-
27	13.56	39.05	Qp	.1	.2	9.5	48.85	60	-11.15	-	-

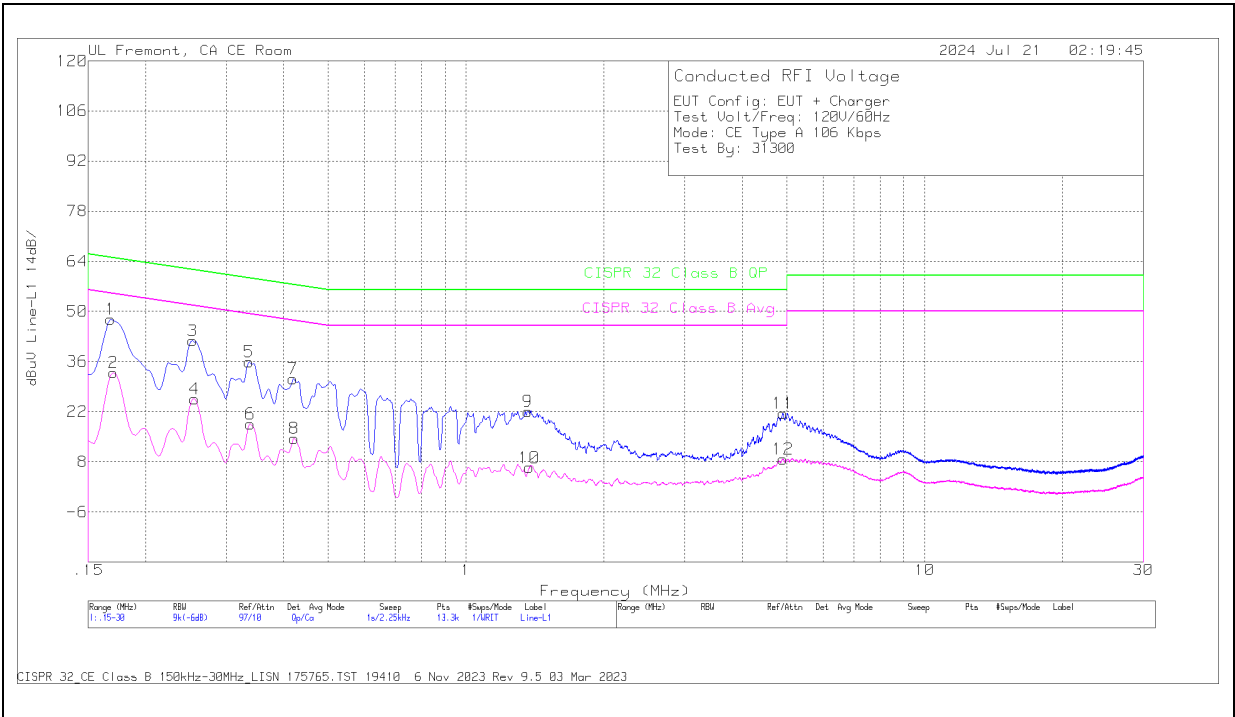
Qp - Quasi-Peak detector

Av - Average detection

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

10.1.2. CE MODE: TYPE A, 106 Kbps (ANTENNA PORT TERMINATED)

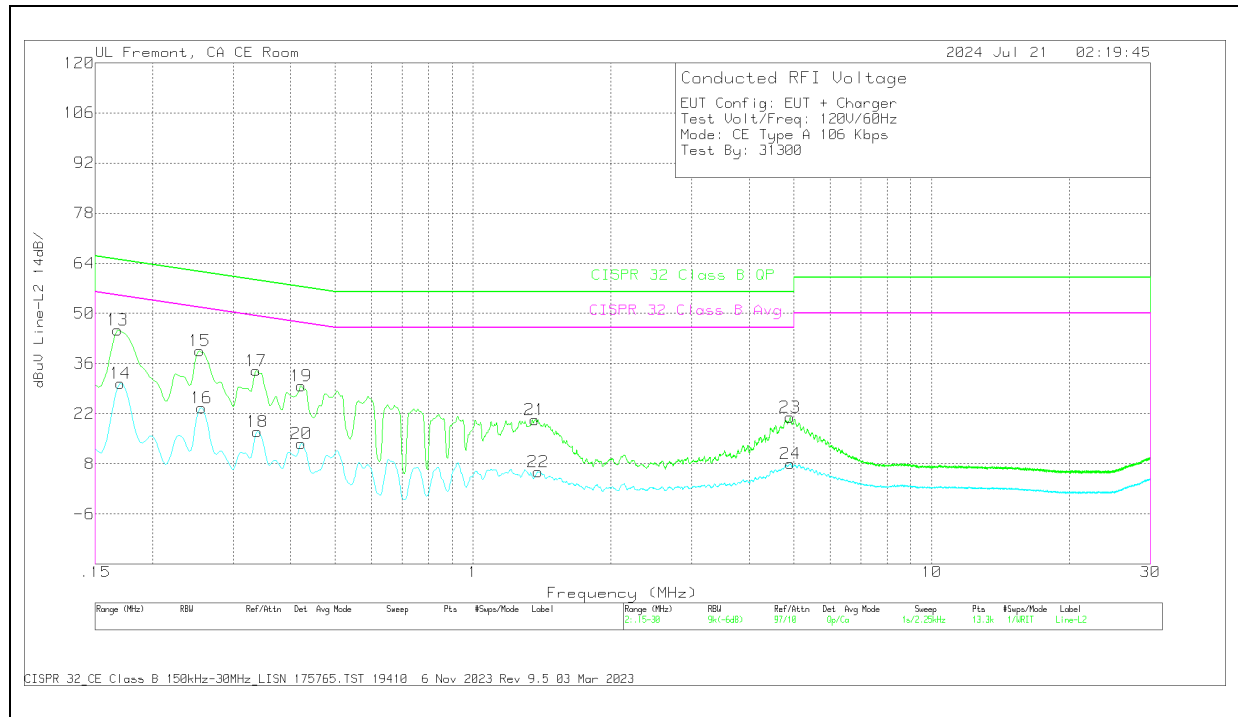
LINE 1 RESULTS



DATA

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trms Limiter (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av Margin (dB)
2	.1703	23.37	Ca	.1	0	9.5	32.97	-	-	54.95	-21.98
4	.2558	16.17	Ca	0	0	9.4	25.57	-	-	51.57	-26
6	.339	9.12	Ca	0	0	9.4	18.52	-	-	49.23	-30.71
8	.4223	5.08	Ca	0	0	9.4	14.48	-	-	47.4	-32.92
10	1.374	-3.04	Ca	0	.1	9.3	6.36	-	-	46	-39.64
12	4.9133	-7.7	Ca	0	.1	9.4	8.73	-	-	46	-37.27
1	.168	38.2	Qp	.1	0	9.5	47.8	65.06	-17.26	-	-
3	.2535	32.38	Qp	0	0	9.4	41.78	61.64	-19.86	-	-
5	.3368	26.56	Qp	0	0	9.4	35.96	59.28	-23.32	-	-
7	.42	21.74	Qp	0	0	9.4	31.14	57.45	-26.31	-	-
9	1.3628	12.61	Qp	0	.1	9.3	22.01	56	-33.99	-	-
11	4.9088	11.99	Qp	0	.1	9.4	21.49	56	-34.51	-	-

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS**DATA**

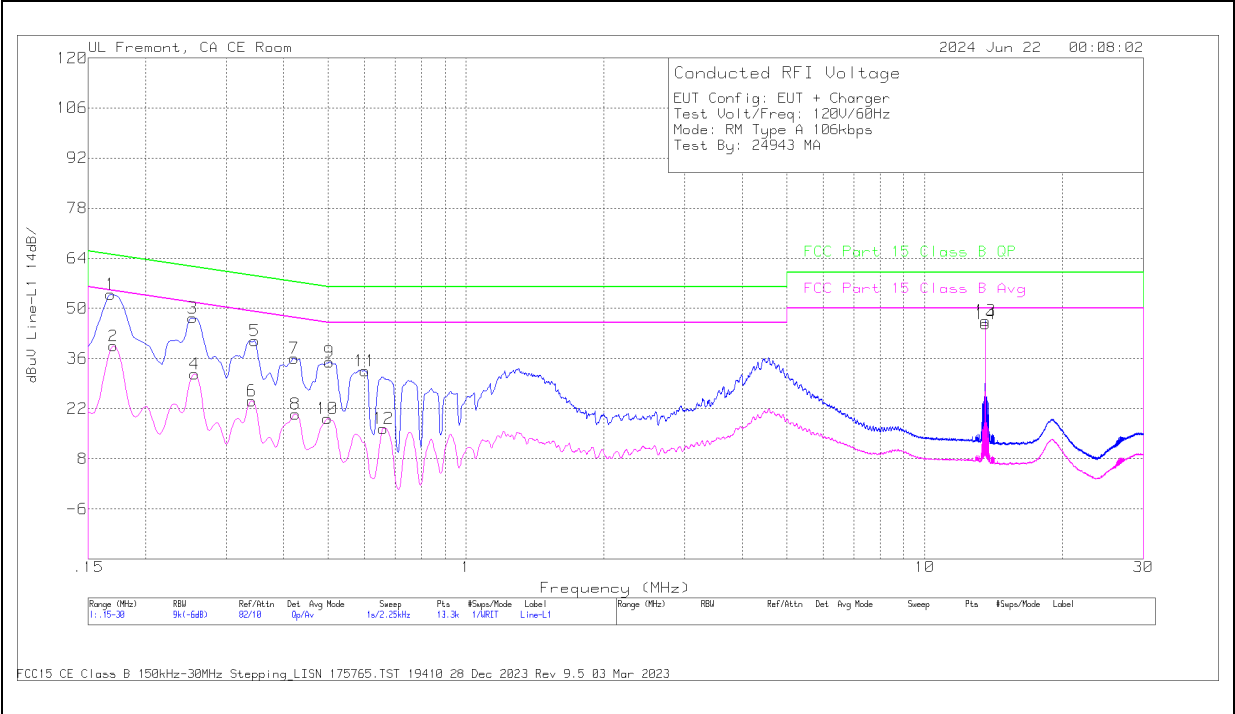
Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trns Limiter (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av Margin (dB)
14	.1703	20.97	Ca	0	0	9.5	30.47	-	-	54.95	-24.48
16	.2558	14.25	Ca	0	0	9.4	23.65	-	-	51.57	-27.92
18	.339	7.48	Ca	0	.1	9.4	16.98	-	-	49.23	-32.25
20	.4223	4.2	Ca	0	.1	9.4	13.7	-	-	47.4	-33.7
22	1.3853	-3.76	Ca	0	.1	9.4	5.74	-	-	46	-40.26
24	4.92	-1.43	Ca	0	.1	9.4	8.07	-	-	46	-37.93
13	.168	35.72	Qp	.1	0	9.5	45.32	65.06	-19.74	-	-
15	.2535	30.18	Qp	0	0	9.4	39.58	61.64	-22.06	-	-
17	.3368	24.54	Qp	0	.1	9.4	34.04	59.28	-25.24	-	-
19	.4223	20.27	Qp	0	.1	9.4	29.77	57.4	-27.63	-	-
21	1.3628	10.94	Qp	0	.1	9.3	20.34	56	-35.66	-	-
23	4.9178	11.46	Qp	0	.1	9.4	20.96	56	-35.04	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

10.1.3. READER MODE: TYPE A, 106 Kbps

LINE 1 RESULTS

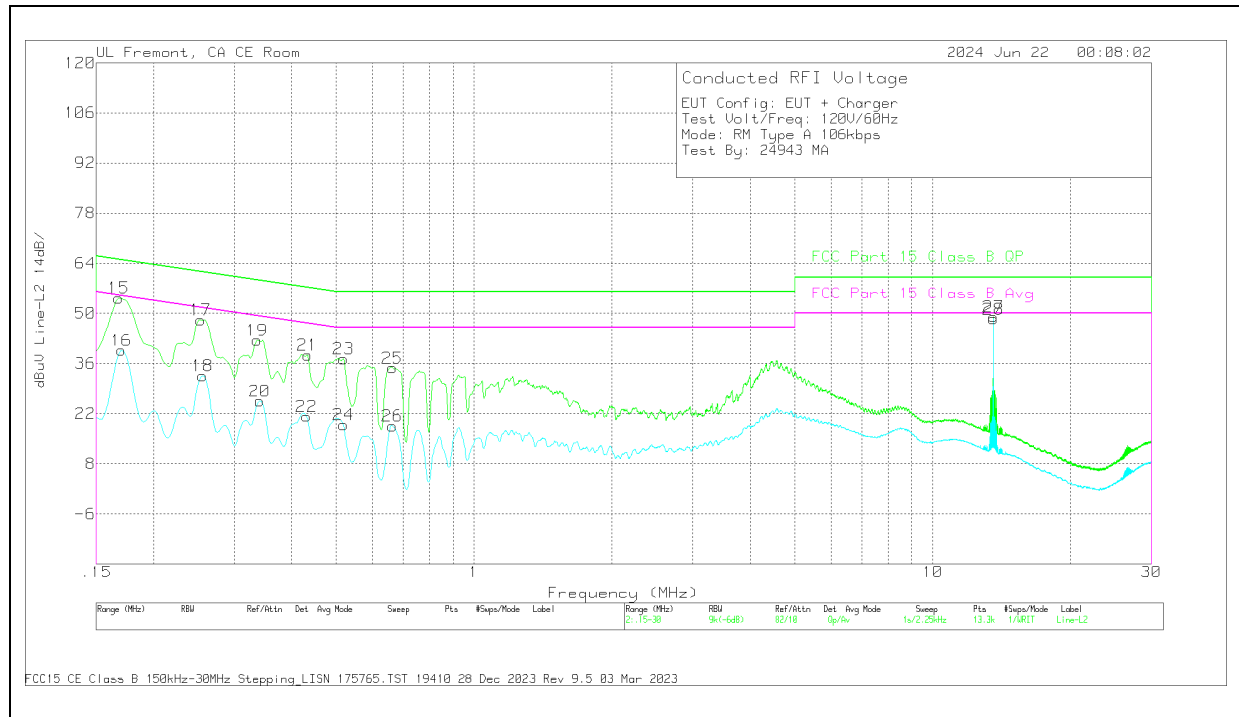


DATA

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Tms Limiter (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av Margin (dB)
2	.1703	29.9	Av	.1	0	9.5	39.5	-	-	54.95	-15.45
4	.2558	22.36	Av	0	0	9.4	31.76	-	-	51.57	-19.81
6	.3413	14.78	Av	0	0	9.4	24.18	-	-	49.17	-24.99
8	.4245	11.01	Av	0	0	9.4	20.41	-	-	47.36	-26.95
10	.4988	9.89	Av	0	0	9.3	19.19	-	-	46.02	-26.83
12	.6608	7.01	Av	0	.1	9.4	16.51	-	-	46	-29.49
14	13.56	35.81	Av	.1	.3	9.5	45.71	-	-	50	-4.29
1	.168	44.4	Qp	.1	0	9.5	54	65.06	-11.06	-	-
3	.2535	37.96	Qp	0	0	9.4	47.36	61.64	-14.28	-	-
5	.3458	31.53	Qp	0	0	9.4	40.93	59.06	-18.13	-	-
7	.4223	26.66	Qp	0	0	9.4	36.06	57.4	-21.34	-	-
9	.5033	25.69	Qp	0	0	9.3	34.99	56	-21.01	-	-
11	.6023	23.19	Qp	0	0	9.4	32.59	56	-23.41	-	-
13	13.56	36.64	Qp	.1	.3	9.5	46.54	60	-13.46	-	-

Qp - Quasi-Peak detector
Av - Average detection

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

LINE 2 RESULTS**DATA**

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trns Limiter (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av Margin (dB)
16	.1703	30.17	Av	0	0	9.5	39.67	-	-	54.95	-15.28
18	.2558	23.22	Av	0	0	9.4	32.62	-	-	51.57	-18.95
20	.3413	15.98	Av	0	.1	9.4	25.48	-	-	49.17	-23.69
22	.4313	11.95	Av	0	0	9.3	21.25	-	-	47.23	-25.98
24	.519	9.59	Av	0	0	9.3	18.89	-	-	46	-27.11
26	.663	9.1	Av	0	.1	9.4	18.6	-	-	46	-27.4
28	13.56	38.62	Av	.1	.2	9.5	48.42	-	-	50	-1.58
15	.168	44.64	Qp	.1	0	9.5	54.24	65.06	-10.82	-	-
17	.2535	38.82	Qp	0	0	9.4	48.22	61.64	-13.42	-	-
19	.3368	32.97	Qp	0	.1	9.4	42.47	59.28	-16.81	-	-
21	.4335	29.1	Qp	0	0	9.3	38.4	57.19	-18.79	-	-
23	.519	27.97	Qp	0	0	9.3	37.27	56	-18.73	-	-
25	.663	25.25	Qp	0	.1	9.4	34.75	56	-21.25	-	-
27	13.56	39.31	Qp	.1	.2	9.5	49.11	60	-10.89	-	-

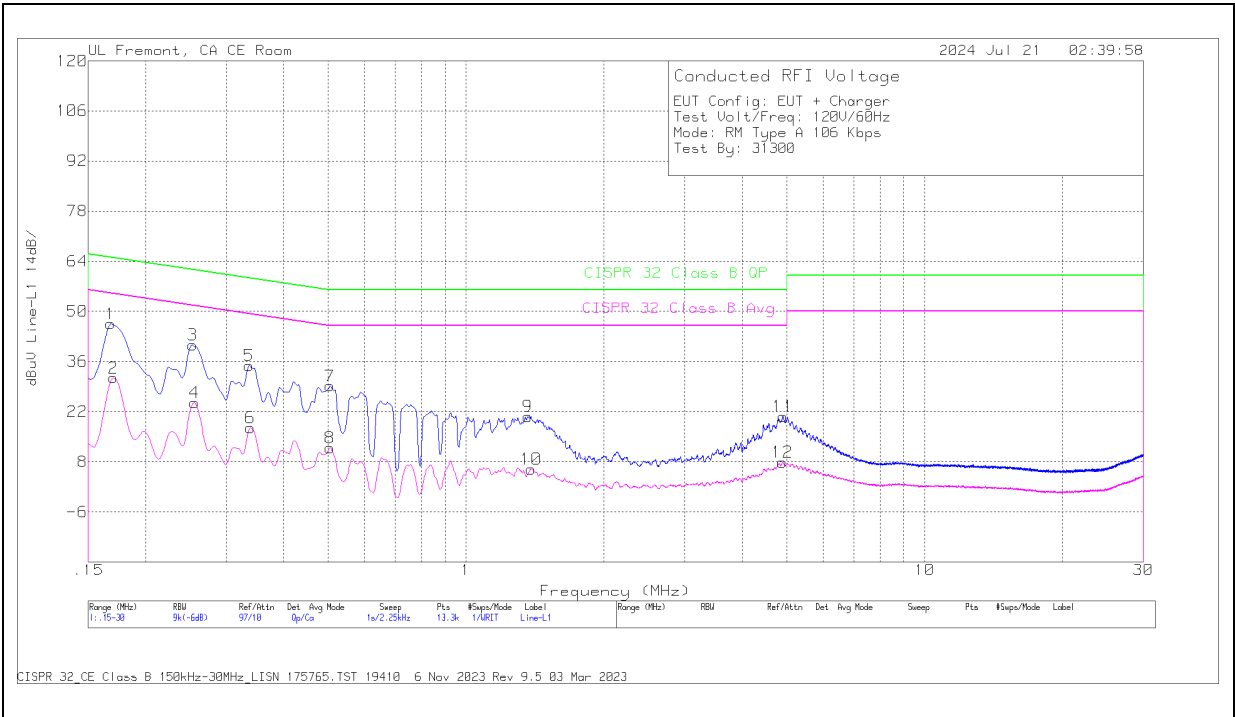
Qp - Quasi-Peak detector

Av - Average detection

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

10.1.4. READER MODE: TYPE A, 106 Kbps (ANTENNA PORT TERMINATED)

LINE 1 RESULTS

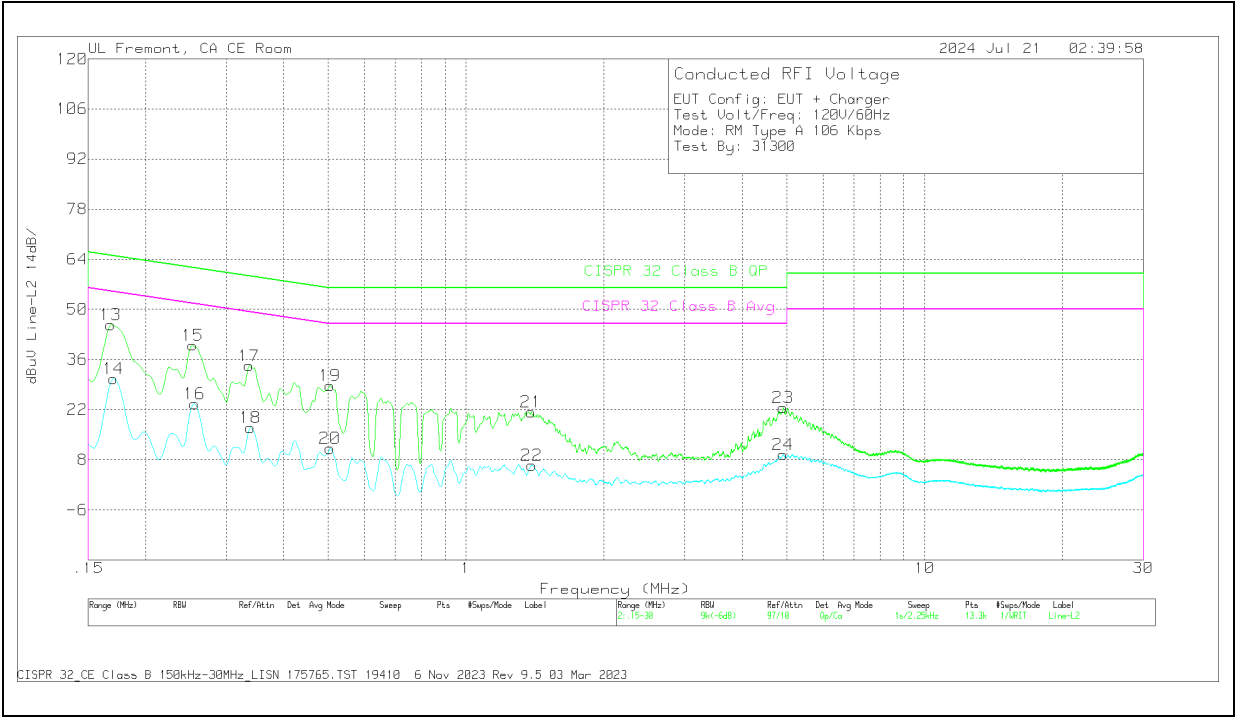


DATA

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Tms Limiter (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av Margin (dB)
2	.1703	21.82	Ca	.1	0	9.5	31.42	-	-	54.95	-23.53
4	.2558	15.05	Ca	0	0	9.4	24.45	-	-	51.57	-27.12
6	.339	8.13	Ca	0	0	9.4	17.53	-	-	49.23	-31.7
8	.5055	2.57	Ca	0	0	9.3	11.87	-	-	46	-34.13
10	1.3853	-3.62	Ca	0	.1	9.4	5.88	-	-	46	-40.12
12	4.8986	-1.67	Ca	0	.1	9.4	7.83	-	-	46	-38.17
1	.168	36.91	Qp	.1	0	9.5	46.51	65.06	-18.55	-	-
3	.2535	31.18	Qp	0	0	9.4	40.58	61.64	-21.06	-	-
5	.3368	25.44	Qp	0	0	9.4	34.84	59.28	-24.44	-	-
7	.5055	19.85	Qp	0	0	9.3	29.15	56	-26.85	-	-
9	1.3628	11.23	Qp	0	.1	9.3	20.63	56	-35.37	-	-
11	4.911	11.11	Qp	0	.1	9.4	20.61	56	-35.39	-	-

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS



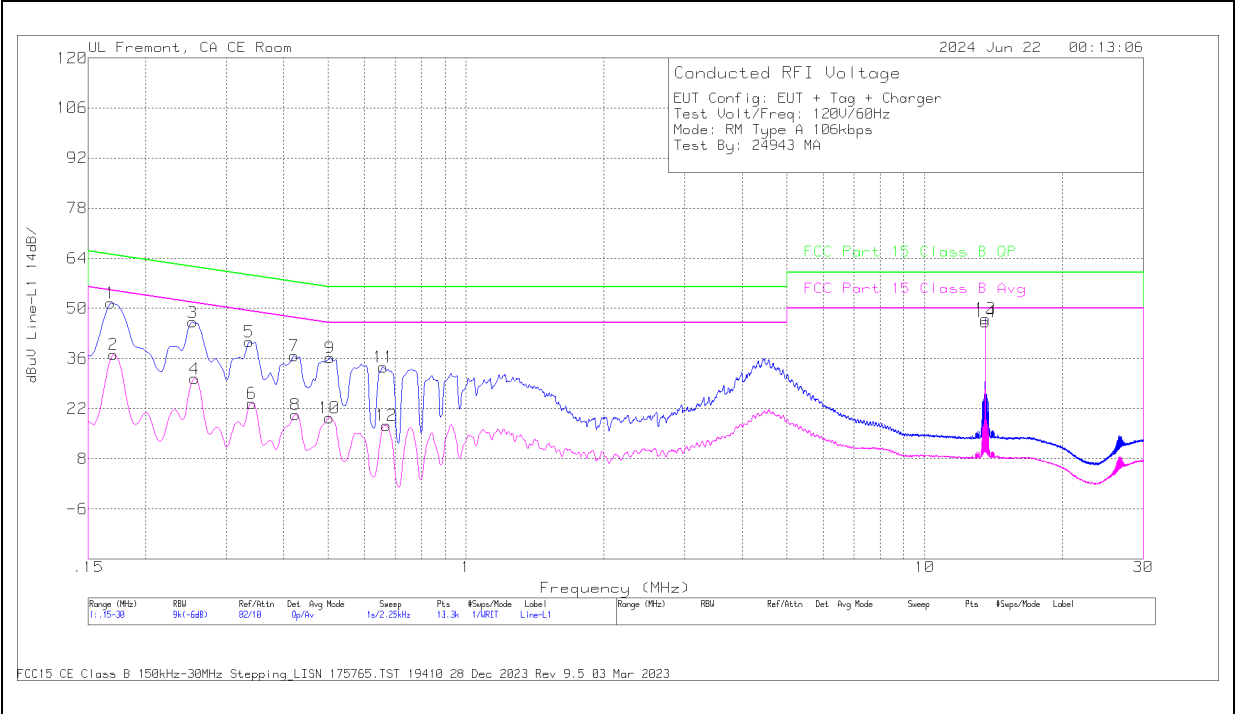
DATA

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trns Limiter (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av Margin (dB)
14	.1703	21.2	Ca	0	0	9.5	30.7	-	-	54.95	-24.25
16	.2558	14.27	Ca	0	0	9.4	23.67	-	-	51.57	-27.9
18	.339	7.47	Ca	0	.1	9.4	16.97	-	-	49.23	-32.26
20	.5055	1.9	Ca	0	0	9.3	11.2	-	-	46	-34.8
22	1.392	-3.01	Ca	0	.1	9.4	6.49	-	-	46	-39.51
24	4.9088	-.05	Ca	0	.1	9.4	9.45	-	-	46	-36.55
13	.168	36.15	Qp	.1	0	9.5	45.75	65.06	-19.31	-	-
15	.2535	30.6	Qp	0	0	9.4	40	61.64	-21.64	-	-
17	.3368	24.74	Qp	0	.1	9.4	34.24	59.28	-25.04	-	-
19	.5055	19.48	Qp	0	0	9.3	28.78	56	-27.22	-	-
21	1.3875	11.83	Qp	0	.1	9.4	21.33	56	-34.67	-	-
23	4.9133	13.04	Qp	0	.1	9.4	22.54	56	-33.46	-	-

Qp - Quasi-Peak detector
Ca - CISPR average detection

10.1.5. **READER + TAG MODE: TYPE A, 106 Kbps**

LINE 1 RESULTS



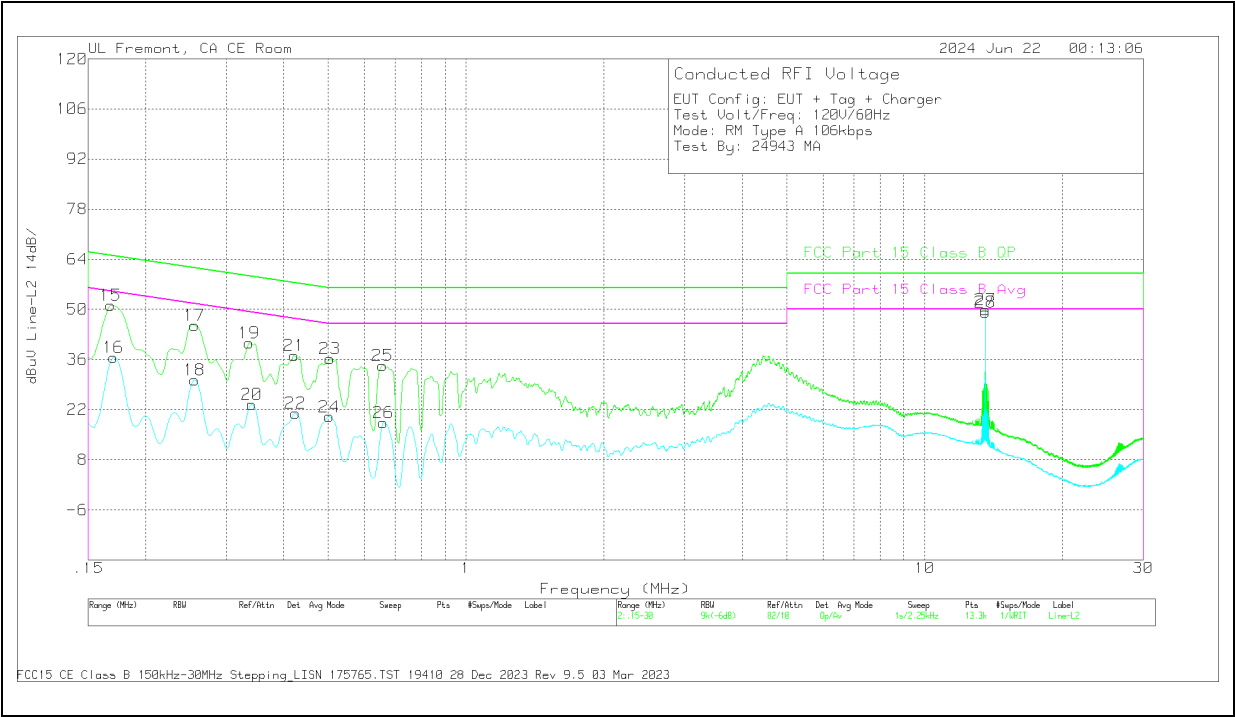
DATA

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Tms Limiter (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av Margin (dB)
2	.1703	27.48	Av	.1	0	9.5	37.08	-	-	54.95	-17.87
4	.2558	20.97	Av	0	0	9.4	30.37	-	-	51.57	-21.2
6	.3413	14.11	Av	0	0	9.4	23.51	-	-	49.17	-25.66
8	.4245	10.87	Av	0	0	9.4	20.27	-	-	47.36	-27.09
10	.5033	10.19	Av	0	0	9.3	19.49	-	-	46	-26.51
12	.6709	7.81	Av	0	.1	9.4	17.31	-	-	46	-28.69
14	13.56	36.32	Av	.1	.3	9.5	46.22	-	-	50	-3.78
1	.168	41.85	Qp	.1	0	9.5	51.45	65.06	-13.61	-	-
3	.2535	36.74	Qp	0	0	9.4	46.14	61.64	-15.5	-	-
5	.3368	31.3	Qp	0	0	9.4	40.7	59.28	-18.58	-	-
7	.4223	27.35	Qp	0	0	9.4	36.75	57.4	-20.65	-	-
9	.5055	26.87	Qp	0	0	9.3	36.17	56	-19.83	-	-
11	.6608	24.06	Qp	0	.1	9.4	33.56	56	-22.44	-	-
13	13.56	37.14	Qp	.1	.3	9.5	47.04	60	-12.96	-	-

Qp - Quasi-Peak detector
Av - Average detection

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

LINE 2 RESULTS



DATA

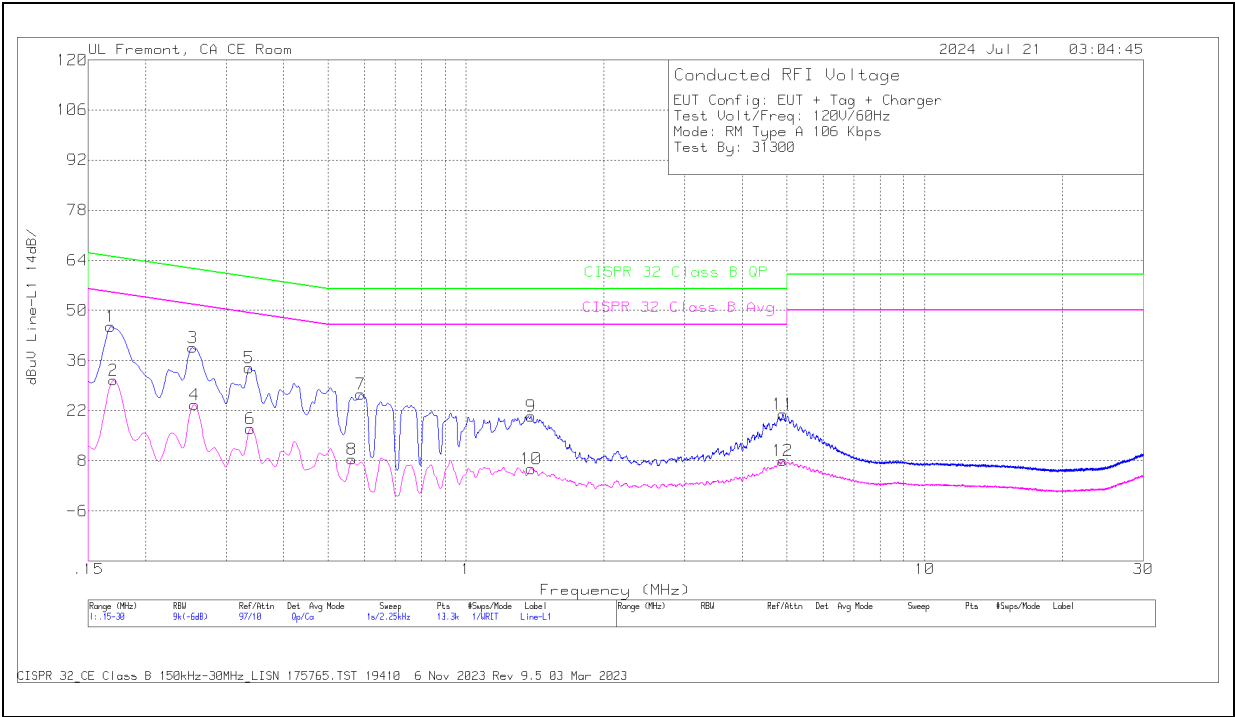
Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trns Limiter (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av Margin (dB)
16	.1703	27.16	Av	0	0	9.5	36.66	-	-	54.95	-18.29
18	.2558	20.94	Av	0	0	9.4	30.34	-	-	51.57	-21.23
20	.3413	14	Av	0	.1	9.4	23.5	-	-	49.17	-25.67
22	.4245	11.46	Av	0	.1	9.4	20.96	-	-	47.36	-26.4
24	.5033	10.73	Av	0	0	9.3	20.03	-	-	46	-25.97
26	.6608	8.82	Av	0	.1	9.4	18.32	-	-	46	-27.68
28	13.56	39.43	Av	.1	.2	9.5	49.23	-	-	50	-77
15	.168	41.6	Qp	.1	0	9.5	51.2	65.06	-13.86	-	-
17	.2558	36.1	Qp	0	0	9.4	45.5	61.57	-16.07	-	-
19	.3368	31.13	Qp	0	.1	9.4	40.63	59.28	-18.65	-	-
21	.4223	27.65	Qp	0	.1	9.4	37.15	57.4	-20.25	-	-
23	.5055	26.98	Qp	0	0	9.3	36.28	56	-19.72	-	-
25	.6585	24.86	Qp	0	.1	9.4	34.36	56	-21.64	-	-
27	13.56	40.11	Qp	.1	.2	9.5	49.91	60	-10.09	-	-

Qp - Quasi-Peak detector
Av - Average detection

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

10.1.6. **READER + TAG MODE: TYPE A, 106 Kbps (ANTENNA PORT
TERMINATED)**

LINE 1 RESULTS

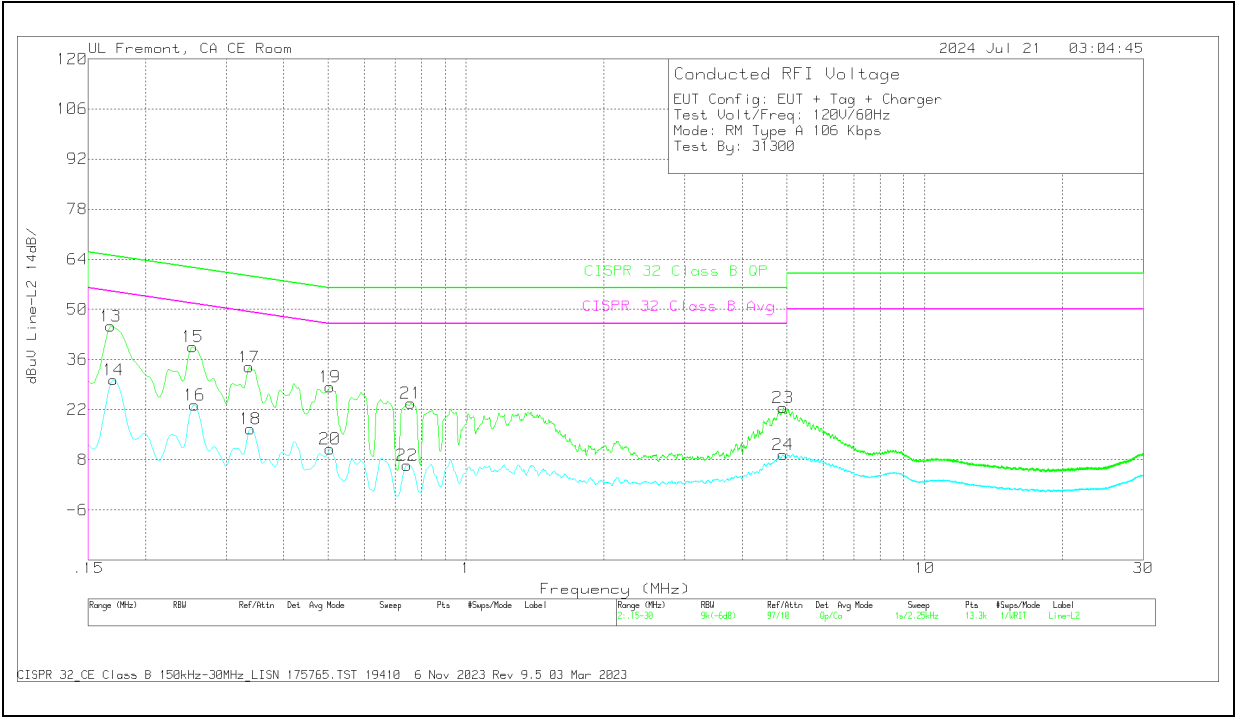


DATA

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trms Limiter (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av Margin (dB)
2	.1703	20.94	Ca	.1	0	9.5	30.54	-	-	54.95	-24.41
4	.2558	14.3	Ca	0	0	9.4	23.7	-	-	51.57	-27.87
6	.339	7.5	Ca	0	0	9.4	16.9	-	-	49.23	-32.33
8	.564	-9.4	Ca	0	.1	9.3	8.46	-	-	46	-37.54
10	1.3875	-3.72	Ca	0	.1	9.4	5.78	-	-	46	-40.22
12	4.9043	-1.46	Ca	0	.1	9.4	8.04	-	-	46	-37.96
1	.168	35.88	Qp	.1	0	9.5	45.48	65.06	-19.58	-	-
3	.2535	30.25	Qp	0	0	9.4	39.65	61.64	-21.99	-	-
5	.3368	24.55	Qp	0	0	9.4	33.95	59.28	-25.33	-	-
7	.5899	17.26	Qp	0	0	9.4	26.66	56	-29.34	-	-
9	1.3853	10.93	Qp	0	.1	9.4	20.43	56	-35.57	-	-
11	4.911	11.55	Qp	0	.1	9.4	21.05	56	-34.95	-	-

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS



DATA

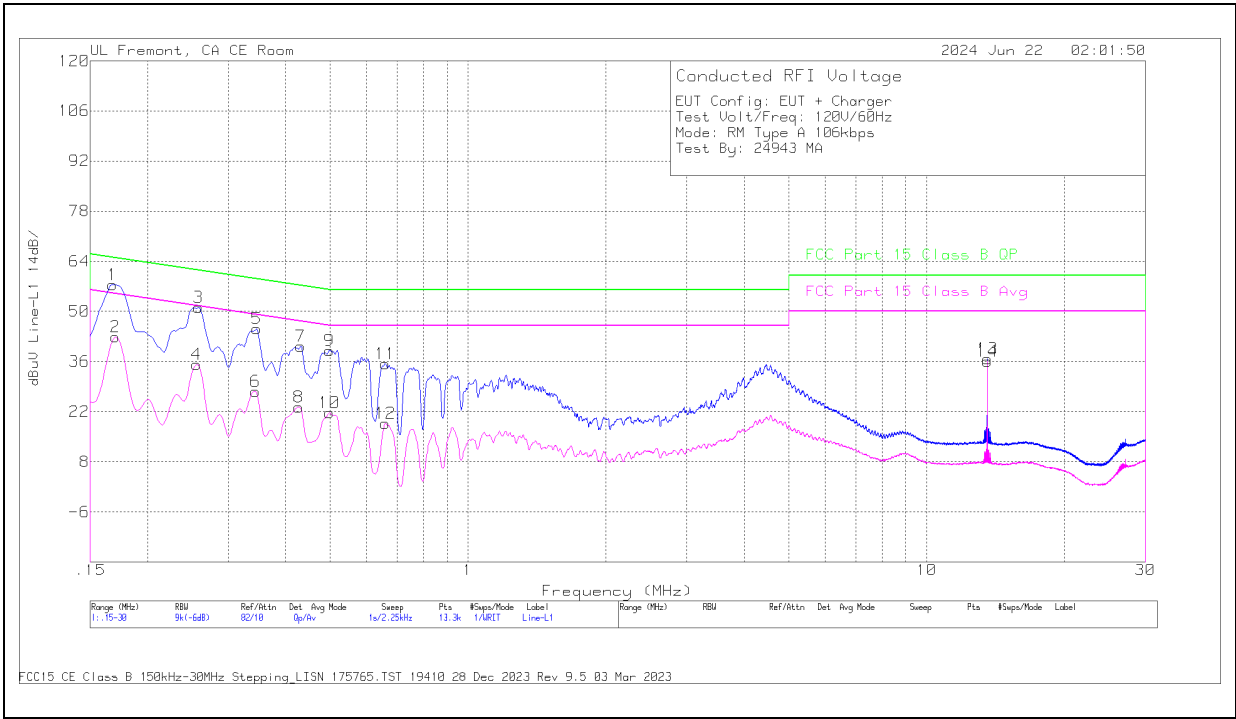
Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trns Limiter (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av Margin (dB)
14	.1703	20.86	Ca	0	0	9.5	30.36	-	-	54.95	-24.59
16	.2558	13.87	Ca	0	0	9.4	23.27	-	-	51.57	-28.3
18	.339	7.14	Ca	0	.1	9.4	16.64	-	-	49.23	-32.59
20	.5055	1.71	Ca	0	0	9.3	11.01	-	-	46	-34.99
22	.744	-2.91	Ca	0	0	9.4	6.49	-	-	46	-39.51
24	4.9155	-.13	Ca	0	.1	9.4	9.37	-	-	46	-36.63
13	.168	35.68	Qp	.1	0	9.5	45.28	65.06	-19.78	-	-
15	.2535	30.14	Qp	0	0	9.4	39.54	61.64	-22.1	-	-
17	.3368	24.38	Qp	0	.1	9.4	33.88	59.28	-25.4	-	-
19	.5055	19.1	Qp	0	0	9.3	28.4	56	-27.6	-	-
21	.7575	14.47	Qp	0	0	9.4	23.87	56	-32.13	-	-
23	4.9133	13.12	Qp	0	.1	9.4	22.62	56	-33.38	-	-

Qp - Quasi-Peak detector
Ca - CISPR average detection

10.2. SECONDARY ANTENNA

10.2.1. READER MODE: TYPE A, 106 Kbps

LINE 1 RESULTS

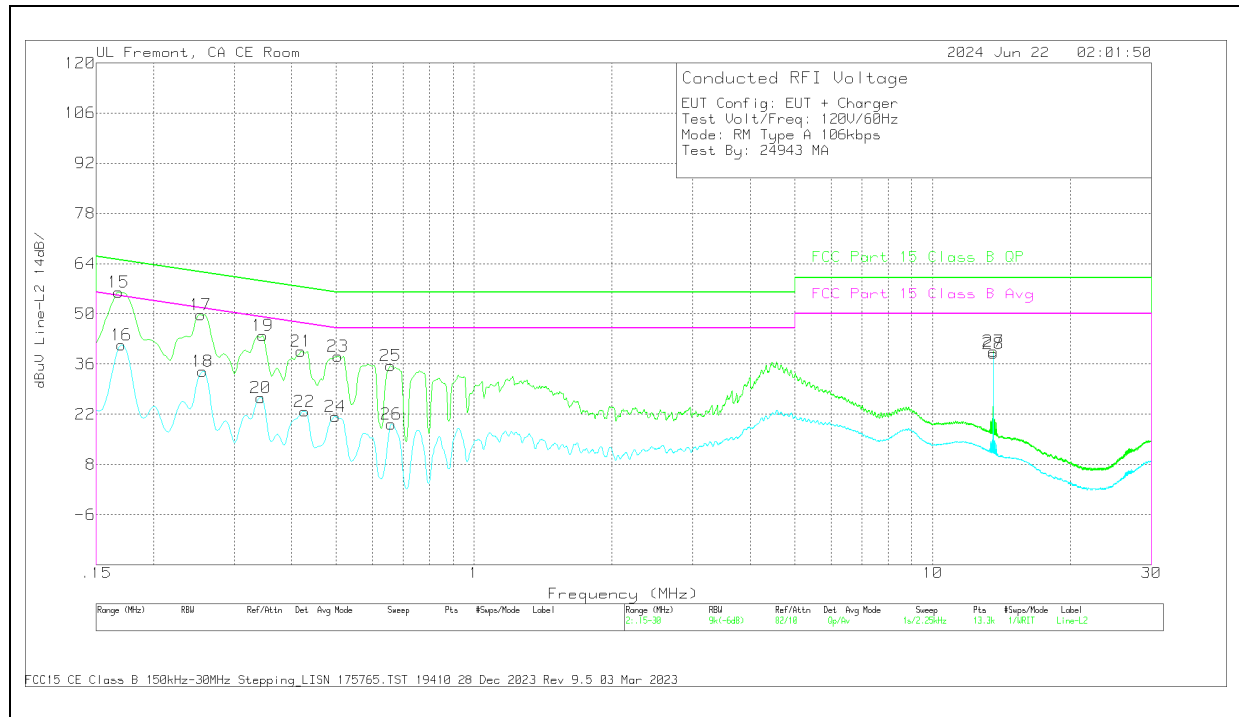


DATA

Range 1: Line-L1 15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Tms Limiter (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av Margin (dB)
2	.1703	33.24	Av	.1	0	9.5	42.84	-	-	54.95	-12.11
4	.2558	25.76	Av	0	0	9.4	35.16	-	-	51.57	-16.41
6	.3435	18.29	Av	0	0	9.4	27.69	-	-	49.12	-21.43
8	.4268	13.9	Av	0	.1	9.3	23.3	-	-	47.32	-24.02
10	.4988	12.34	Av	0	0	9.3	21.64	-	-	46.02	-24.38
12	.6608	9.2	Av	0	.1	9.4	18.7	-	-	46	-27.3
14	13.56	26.1	Av	.1	.3	9.5	36	-	-	50	-14
1	.168	47.9	Qp	.1	0	9.5	57.5	65.06	-7.56	-	-
3	.258	41.8	Qp	0	0	9.4	51.2	61.5	-10.3	-	-
5	.3458	35.77	Qp	0	0	9.4	45.17	59.06	-13.89	-	-
7	.4313	30.85	Qp	0	.1	9.3	40.25	57.23	-16.98	-	-
9	.4988	29.72	Qp	0	0	9.3	39.02	56.02	-17	-	-
11	.6608	25.91	Qp	0	.1	9.4	35.41	56	-20.59	-	-
13	13.56	26.85	Qp	.1	.3	9.5	36.75	60	-23.25	-	-

Qp - Quasi-Peak detector
Av - Average detection

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

LINE 2 RESULTS**DATA**

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trns Limiter (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av Margin (dB)
16	.1703	31.89	Av	0	0	9.5	41.39	-	-	54.95	-13.56
18	.2558	24.57	Av	0	0	9.4	33.97	-	-	51.57	-17.6
20	.3424	17.14	Av	0	.1	9.4	26.64	-	-	49.15	-22.51
22	.4268	13.53	Av	0	0	9.3	22.83	-	-	47.32	-24.49
24	.4988	12.12	Av	0	0	9.3	21.42	-	-	46.02	-24.6
26	.6608	9.72	Av	0	.1	9.4	19.22	-	-	46	-26.78
28	13.56	29.15	Av	.1	.2	9.5	38.95	-	-	50	-11.05
15	.168	46.46	Qp	.1	0	9.5	56.06	65.06	-9	-	-
17	.2535	40.33	Qp	0	0	9.4	49.73	61.64	-11.91	-	-
19	.3458	34.47	Qp	0	.1	9.4	43.97	59.06	-15.09	-	-
21	.42	30.04	Qp	0	.1	9.4	39.54	57.45	-17.91	-	-
23	.5044	28.86	Qp	0	0	9.3	38.16	56	-17.84	-	-
25	.6585	25.98	Qp	0	.1	9.4	35.48	56	-20.52	-	-
27	13.56	29.8	Qp	.1	.2	9.5	39.6	60	-20.4	-	-

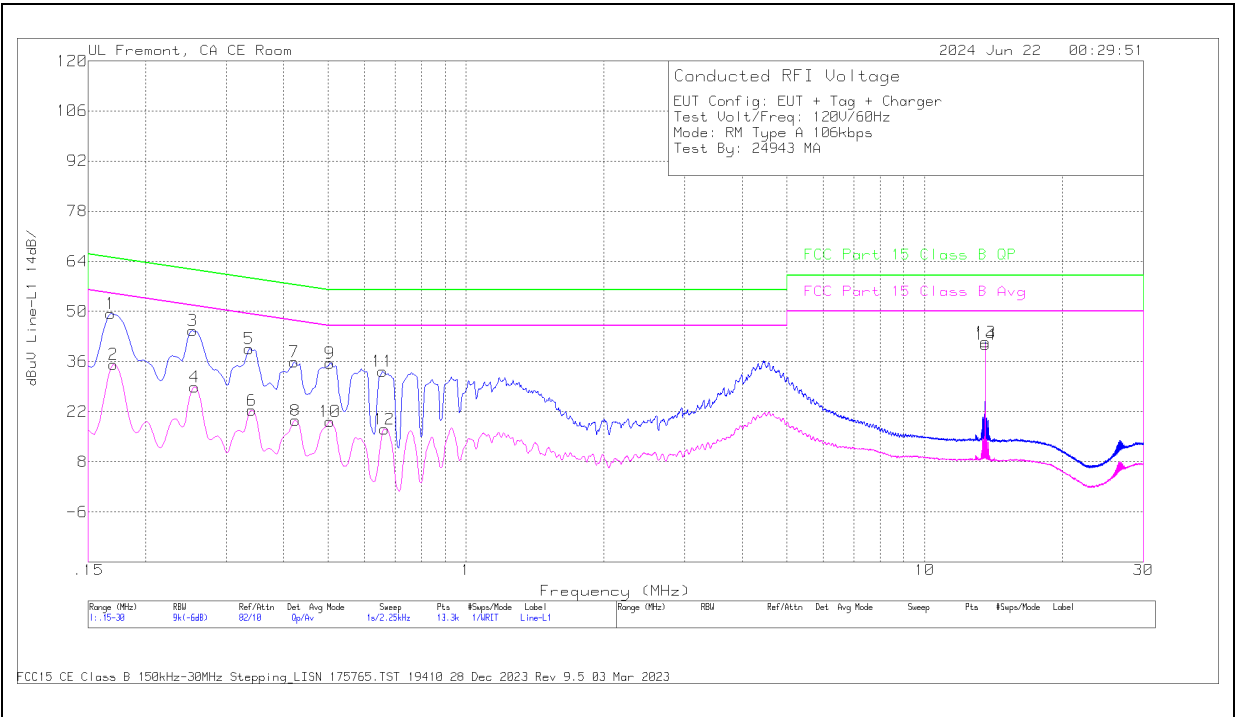
Qp - Quasi-Peak detector

Av - Average detection

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

10.2.2. **READER + TAG MODE: TYPE A, 106 Kbps**

LINE 1 RESULTS

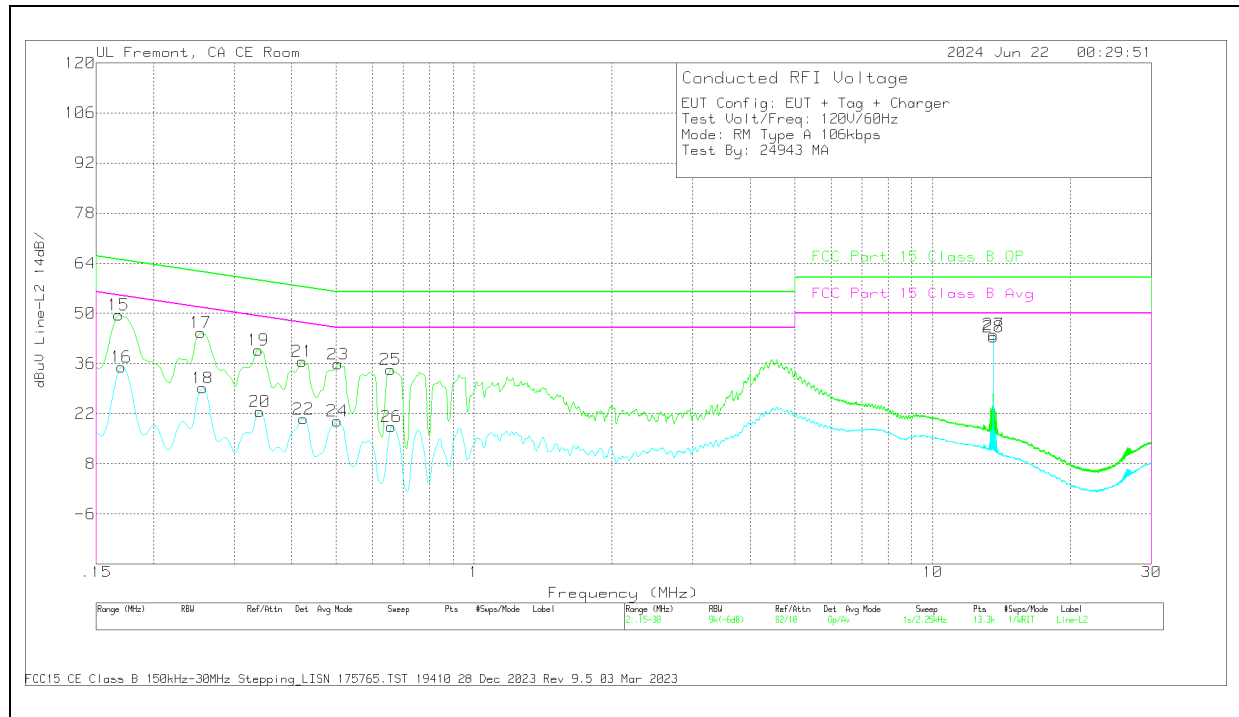


DATA

Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Tms Limiter (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av Margin (dB)
2	.1703	25.56	Av	.1	0	9.5	35.16	-	-	54.95	-19.79
4	.2558	19.51	Av	0	0	9.4	28.91	-	-	51.57	-22.66
6	.3413	12.92	Av	0	0	9.4	22.32	-	-	49.17	-26.85
8	.4245	10.11	Av	0	0	9.4	19.51	-	-	47.36	-27.85
10	.5044	9.9	Av	0	0	9.3	19.2	-	-	46	-26.8
12	.663	7.57	Av	0	.1	9.4	17.07	-	-	46	-28.93
14	13.56	30.82	Av	.1	.3	9.5	40.72	-	-	50	-9.28
1	.168	39.8	Qp	.1	0	9.5	49.4	65.06	-15.66	-	-
3	.2535	35.29	Qp	0	0	9.4	44.69	61.64	-16.95	-	-
5	.3368	30.13	Qp	0	0	9.4	39.53	59.28	-19.75	-	-
7	.4223	26.51	Qp	0	0	9.4	35.91	57.4	-21.49	-	-
9	.5055	26.22	Qp	0	0	9.3	35.52	56	-20.48	-	-
11	.6585	23.72	Qp	0	.1	9.4	33.22	56	-22.78	-	-
13	13.56	31.51	Qp	.1	.3	9.5	41.41	60	-18.59	-	-

Qp - Quasi-Peak detector
Av - Average detection

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

LINE 2 RESULTS**DATA**

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trns Limiter (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av Margin (dB)
16	.1703	25.58	Av	0	0	9.5	35.08	-	-	54.95	-19.87
18	.2558	19.75	Av	0	0	9.4	29.15	-	-	51.57	-22.42
20	.3413	13.05	Av	0	.1	9.4	22.55	-	-	49.17	-26.62
22	.4245	11.05	Av	0	.1	9.4	20.55	-	-	47.36	-26.81
24	.5033	10.7	Av	0	0	9.3	20	-	-	46	-26
26	.6608	8.82	Av	0	.1	9.4	18.32	-	-	46	-27.68
28	.1356	33.68	Av	.1	.2	9.5	43.48	-	-	50	-6.52
15	.168	39.99	Qp	.1	0	9.5	49.59	65.06	-15.47	-	-
17	.2535	35.23	Qp	0	0	9.4	44.63	61.64	-17.01	-	-
19	.339	30.23	Qp	0	.1	9.4	39.73	59.23	-19.5	-	-
21	.4223	27.1	Qp	0	.1	9.4	36.6	57.4	-20.8	-	-
23	.5055	26.51	Qp	0	0	9.3	35.81	56	-20.19	-	-
25	.6585	24.75	Qp	0	.1	9.4	34.25	56	-21.75	-	-
27	.1356	34.27	Qp	.1	.2	9.5	44.07	60	-15.93	-	-

Qp - Quasi-Peak detector

Av - Average detection

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

11. SETUP PHOTOS

Please refer to 14982489-EP1V1 for setup photos.

END OF TEST REPORT