TEST REPORT

Report Number : 14982436-E13V3

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

Model : A3083 (Parent Model)
A3292, A3293, A3294 (Variant Models)

FCC ID : BCG-E8666A (Parent Model)
BCG-E8667A, BCG-E8668A, BCG-E8683A (Variant Models)

IC : 579C-E8666A (Parent Model)
579C-E8667A, 579C-E8668A, 579C-E8683A (Variant Models)

EUT Description : SMARTPHONE

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C
ISED RSS-216 ISSUE 2
ISED RSS-GEN ISSUE 5 + A1 + A2

Date Of Issue:
2024/07/12

Prepared by:
UL VERIFICATION SERVICES INC.
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ACCREDITED
CERT #0751.05

REPORT REVISION HISTORY

Rev.		Issue Date		Revisions		Revised By
V1		2024/06/27		Initial Issue		Chris Xiong
V2		2024/07/10		Address TCB's Questions		Chin Pang
V3		2024/07/12		Address TCB question on section 5.3		Chin Pang

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UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701I
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	APPLE, INC. ONE APPLE PARK WAY CUPERTINO, CA 95014
EUT DESCRIPTION:	SMARTPHONE
MODEL:	A3083 (Parent Model) A3292, A3293, A3294 (Variant Models)
BRAND:	APPLE
FCC ID:	BCG-E8666A (Parent Model) BCG-E8667A, BCG-E8668A, BCG-E8683A (Variant Models)
IC ID:	579C-E8666A (Parent Model) 579C-E8667A, 579C-E8668A, 579C-E8683A (Variant Models)
SERIAL NUMBER:	WJX7L3VDQQ
SAMPLE RECEIPT DATE:	2024/05/20
DATE TESTED:	2024/05/29 – 2024/06/15

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 15 SUBPART C	Complies
ISED RSS-216 Issue 2	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
UL Verification Services Inc. By:

Chin Pang
Senior Lab Engineer
Consumer Technology Division
UL Verification Services Inc

Prepared By:

Chris Xiong
Senior Test Engineer
Consumer Technology Division
UL Verification Services Inc

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-216 Issue 2

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	UNCERTAINTY
Occupied Bandwidth	1.20%
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%.

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 and H-FIELD

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

Fundamental Frequency (kHz)	Mode	E-field (300m distance) FCC (dBµV/m)	H-field (3m distance) IC (dBµA/m)
360	Operating	-23.66	4.65
--	Standby	-42.43	-9.55

5.3. WORST-CASE CONFIGURATION AND MODE

The EUT is a smartphone which is connected to the AC/DC adapter via USB-C cable and the inductive charging coil to charge WPT accessories (Load). For the entire radiated emissions test, the EUT was investigated on the following configurations:

1. At its natural orientation with EUT on a plastic fixture set at center location on Load
2. At its natural orientation with EUT on a plastic fixture with offset from center location on Load

The fixture is used to create off-set in order to mimic worst case condition with max 7.5W Output power.

The worst case was natural orientation with EUT on the fixture with offset from center location on Load.

MODE	DESCRIPTION
Standby	EUT with USB-C to USB-C cable powered by AC/DC Adapter
Operating	EUT with USB-C to USB-C cable powered by AC/DC Adapter & Wireless Charging to the Load (360 kHz)

For below 30MHz & 1GHz tests, the EUT was connected to AC power adapter as the worst case. For AC line conducted emission, test was investigated with AC power adapter. The EUT was tested on standby and operation modes. During operational mode, EUT was tested with Load.

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.

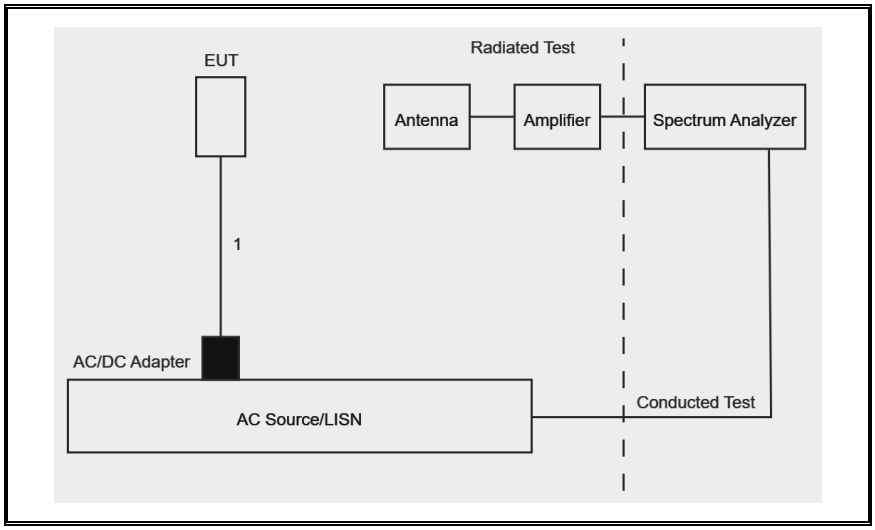
Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 300 m open area test site. Therefore, sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788 D01.

5.4. DESCRIPTION OF TEST SETUP

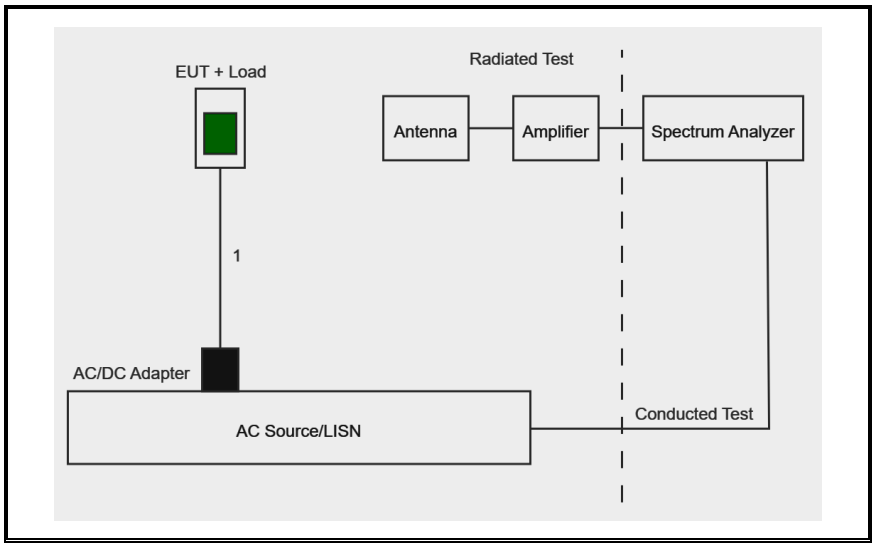
SUPPORT EQUIPMENT & PERIPHERALS LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC/DC adapter	Apple	N/A	C4H0313063ZPF4FAZ	N/A
Charging Cable	Apple	N/A	FTL8513008Y26GV17	N/A
WPT Accessory (Load)	Apple	N/A	DND351202Y50NJM1S	N/A

I/O CABLE LIST						
Cable No.	**Port**	**# of Idendital Ports**	**Connector Type**	**Cable Type**	**Cable Lenth (m)**	**Remarks**
1	DC	1	USB-C	Un-Shielded	1	None

STANDBY MODE SETUP



OPERATING MODE SETUP



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 Technologies Inc.	N9030A	85213	2025/02/28	2024/02/28
Antenna, Broadband Hybrid, 30MHz to 3GHz	Sunol Sciences Corp.	JB3	204044	2025/02/29	2024/02/29
Antenna, Passive Loop 30Hz – 1MHz	Electro-Metrics	EM-6871	170014	2024/08/31	2023/08/31
Antenna, Passive Loop 100kHz – 30MHz	Electro-Metrics	EM-6872	170016	2024/08/31	2023/08/31
Link File, @3m, 9kHz-1000MHz Hybrid Path Loss	UL-FR1	Port 0 Factors	232001	2025/02/28	2024/02/28
Sniffer Probe	Electro Metrics	EM-6992	N/A	N/A	N/A

AC Line Conducted					
Description	**Manufacturer**	**Model**	**ID Num**	**Cal Due**	**Last Cal**
EMI TEST RECEIVER 9kHz - 3.6GHz	Rohde & Schwarz	ESR	171646	2025/02/28	2024/02/28
LISN for Conducted Emissions	Fischer Custom Communications, Inc	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, 21 May 2024		
Conducted Software	UL	UL EMC	2024.2.23		
AC Line Conducted Software	UL	UL EMC	Ver 9.5, 03 Mar 2023		

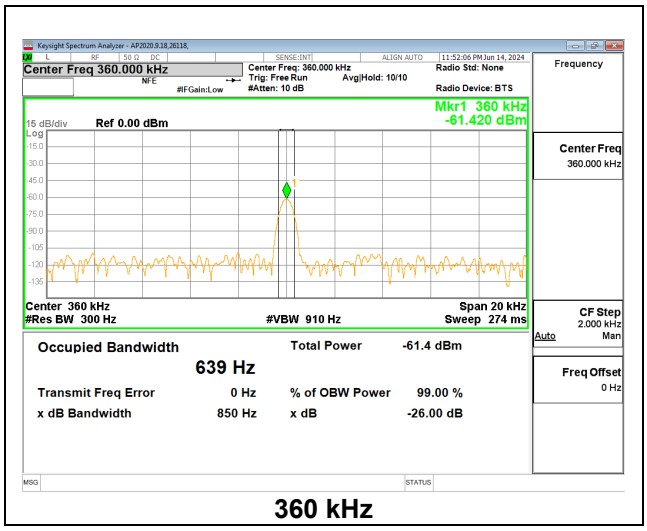
7. OCCUPIED BANDWIDTH

TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The RBW is set to 300Hz. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

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

RESULTS



8. RADIATED EMISSION TEST RESULTS

LIMITS

FCC §15.209 (a) (d)
ICES-001 Section 3.3.4, IC RSS-216 6.2.2, and IC RSS-GEN Sections 8.9 and 8.10.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (m)
0.009–0.490	2400/F(kHz)	300
0.490–1.705	24000/F(kHz)	30
1.705–30.0	30	30
30–88	100	3
88 to 216	150	3
216 to 960	200	3
Above 960 MHz	500	3
Note: The lower limit shall apply at the transition frequency.		

ICES-001 Issue 5 Table 2 & Table 4:

Table 2: Magnetic field strength radiated emission limits for induction cooking appliances

Frequency Range (MHz)	Quai-Peak, at 3m Distance (dBµA/m)
0.009 - 0.07	69
0.07 - 0.15	69 to 39 *
0.15 - 30	39 to 7 *
* The limit level in dBµA/m decreases linearly with the logarithm of frequency.	

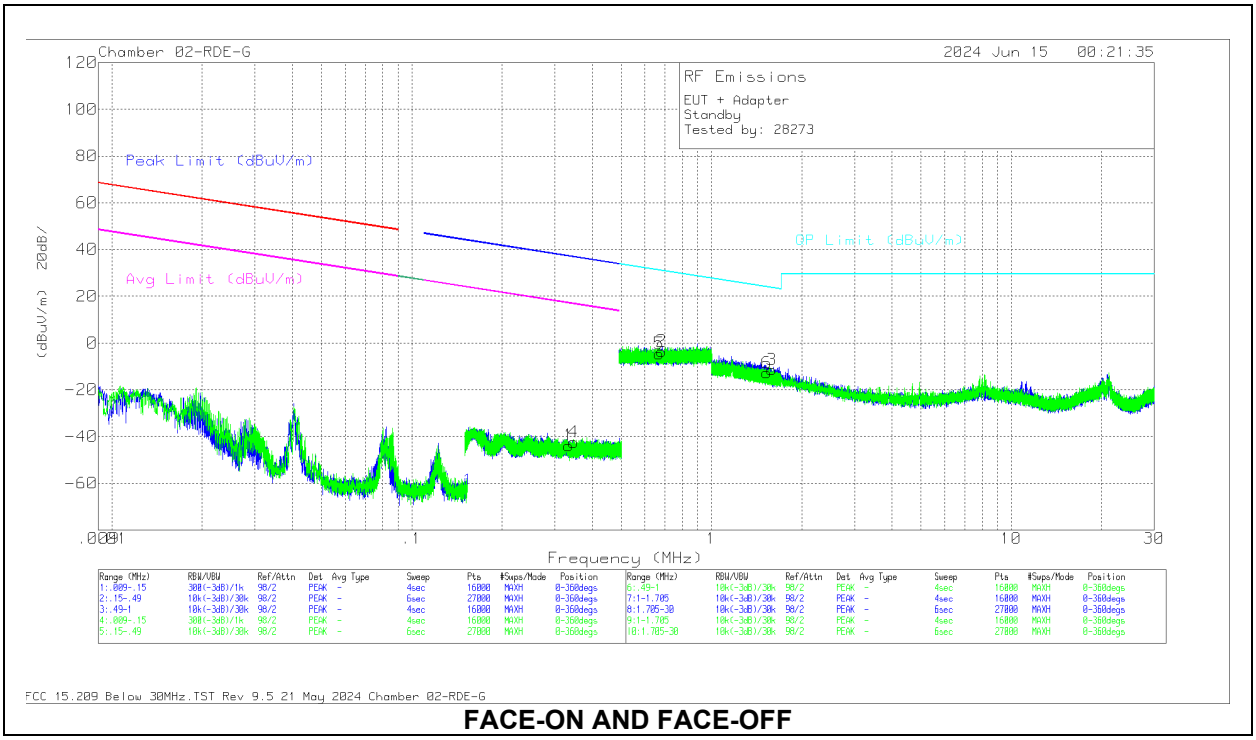
Table 4: Electric field strength radiated emission limits for induction cooking appliances

Frequency Range (MHz)	OATS or SAC * 10 m measurement distance Quasi-peak (dBµV/m)	OATS or SAC * 3 m measurement distance Quasi-peak (dBµV/m)	FAR * 3 m measurement distance Quasi-peak (dBµV/m)
30 - 230	30	40	42 to 35 **
230 - 1000	37	47	42
Note: The more stringent limit applies at the transition frequency.			
* OATS = open-area test site, SAC = semi-anechoic chamber, FAR = fully-anechoic room (see CSA CISPR 11:19).			
** The limit level in dBµV/m decreases linearly with the logarithm of frequency.			

RESULTS

8.1. STANDBY MODE

8.1.1. FCC TX FUNDAMENTAL & SPURIOUS EMISSIONS (9 kHz - 30 MHz)



FACE-ON AND FACE-OFF

DATA

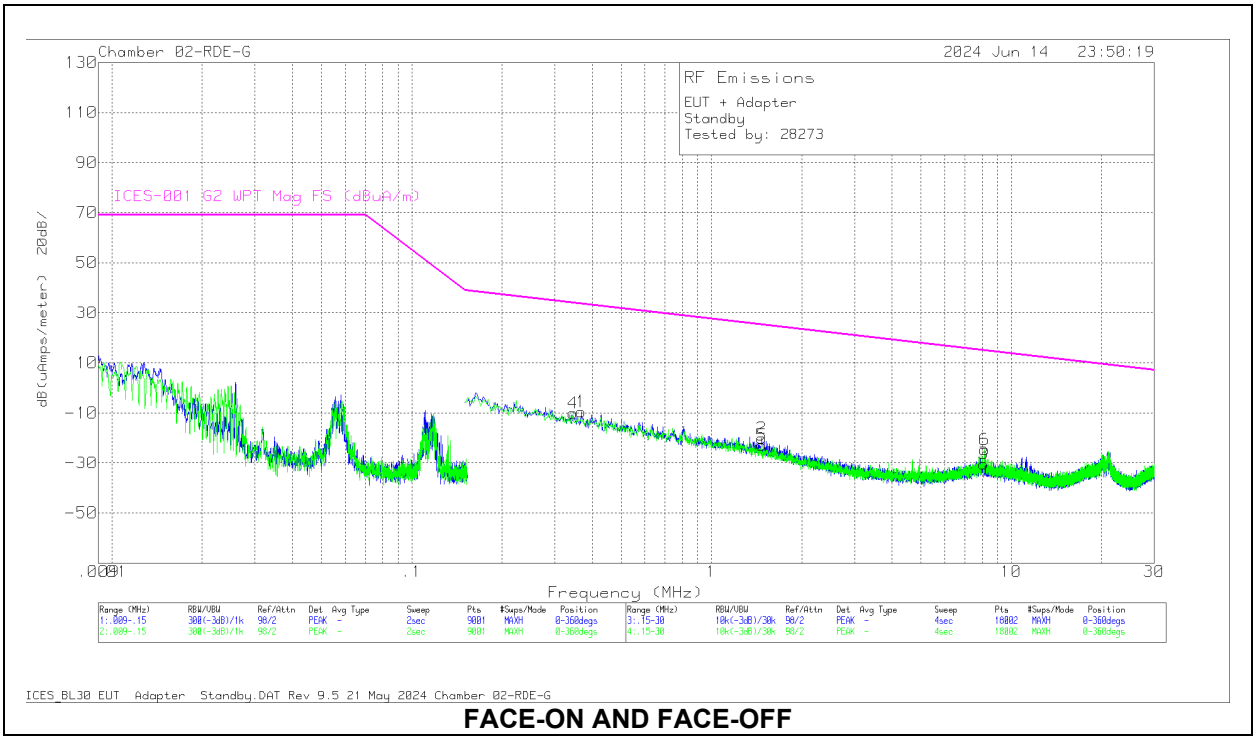
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E (ACF) (dB/m)	Loop Path 30Hz-1MHz (dB)	Dist Corr 300m (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
1	.3337	12.18	Pk	56	-32	-80	-43.82	37.14	-80.96	17.14	-60.96	0-360	Face-On
4	.3466	13.57	Pk	56	-32	-80	-42.43	36.81	-79.24	16.81	-59.24	0-360	Face-Off

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E (ACF) (dB/m)	Loop Path 30Hz-1MHz (dB)	Dist Corr 30m (dB)	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
5	.6689	11.21	Pk	56.1	-31.9	-40	-4.59	31.1	-35.69	0-360	Face-Off
2	.6826	12.27	Pk	56.1	-31.9	-40	-3.53	30.93	-34.46	0-360	Face-On

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E (ACF) (dB/m)	Loop Path 100kHz-30MHz (dB)	Dist Corr 30m (dB)	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
6	1.5284	15.16	Pk	44	-31.9	-40	-12.74	23.95	-36.69	0-360	Face-Off
3	1.5885	16.8	Pk	43.7	-31.9	-40	-11.4	23.61	-35.01	0-360	Face-On

Pk - Peak detector

8.1.2. IC/ICES-001 TX FUNDAMENTAL & SPURIOUS EMISSIONS (9 kHz - 30 MHz)



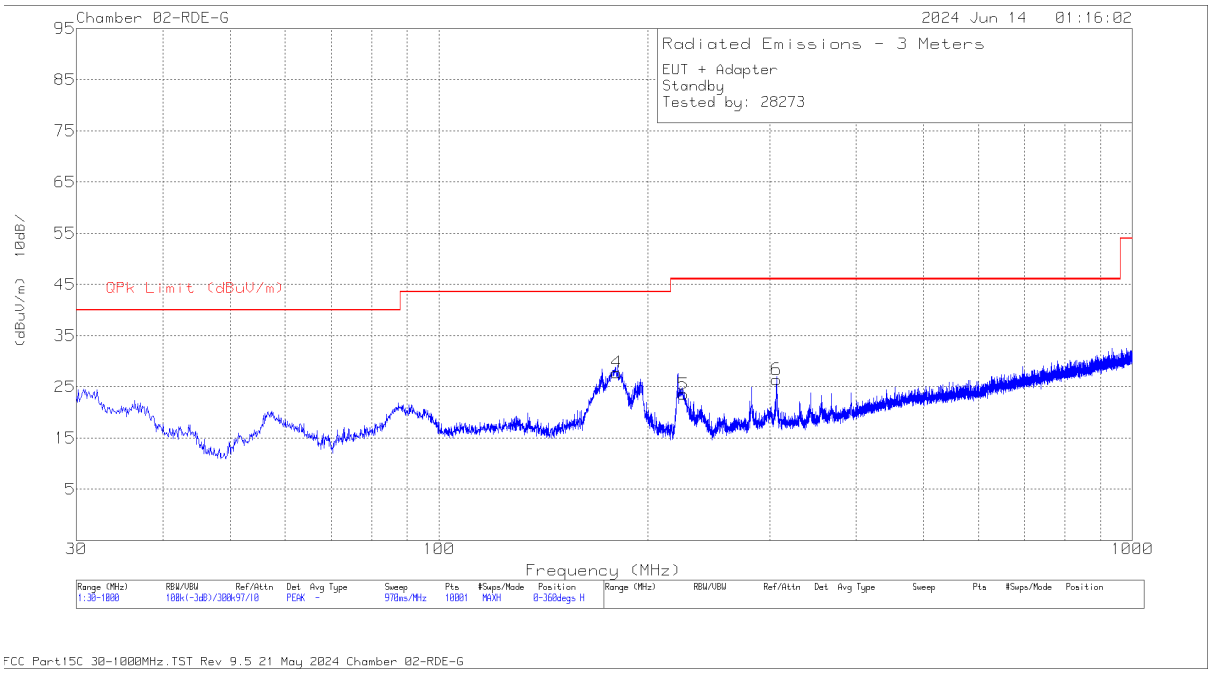
FACE-ON AND FACE-OFF

DATA

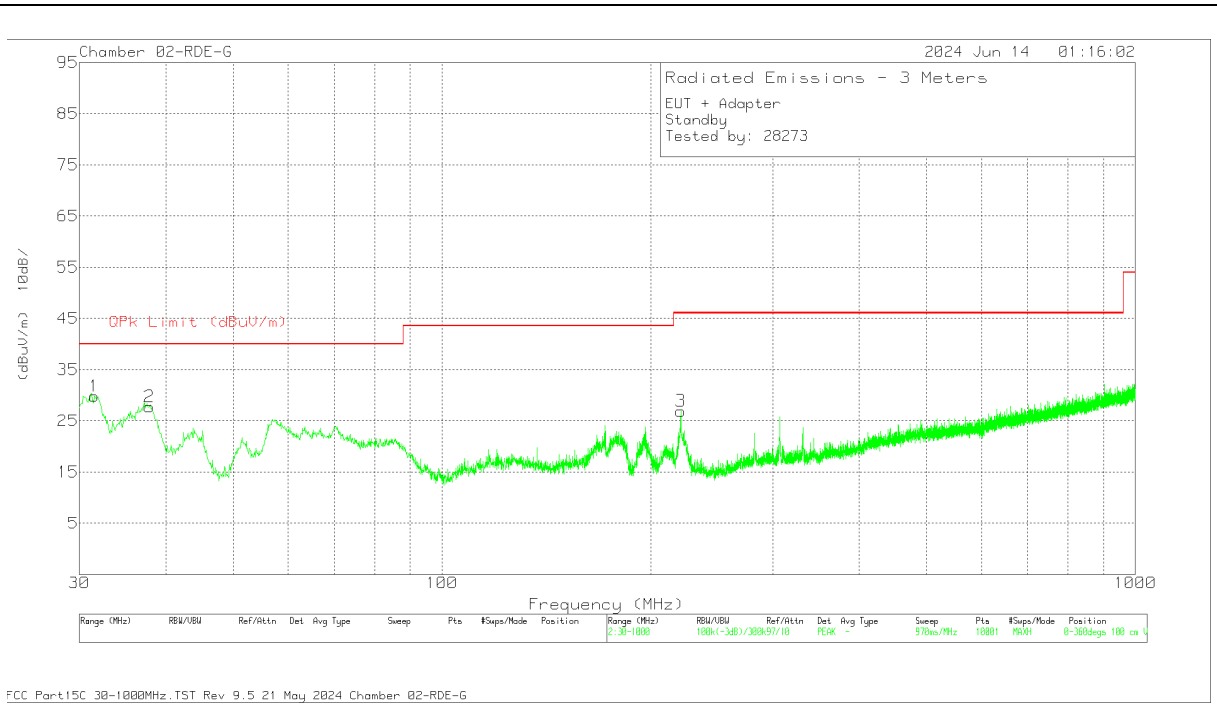
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna H (ACF) (dB/m)	Loop Path 100kHz-30MHz (dB)	Corrected Reading dB(uAmps/meter)	ICES-001 G2 WPT Mag FS (dBuA/m)	Margin (dB)	Azimuth (Degs)	Polarity
4	.3456	18.29	Pk	3.7	-32.1	-10.11	33.96	-44.07	0-360	Face-Off
1	.3672	19.35	Pk	3.2	-32.1	-9.55	33.59	-43.14	0-360	Face-On
2	1.4698	18.94	Pk	-7.2	-31.9	-20.16	25.22	-45.38	0-360	Face-On
5	1.4714	16.21	Pk	-7.2	-31.9	-22.89	25.21	-48.1	0-360	Face-Off
3	8.0951	18.03	Pk	-16.9	-31.4	-30.27	14.91	-45.18	0-360	Face-On
6	8.1515	23.71	Pk	-16.9	-31.5	-24.69	14.87	-39.56	0-360	Face-Off

Pk - Peak detector

8.1.3. FCC TX SPURIOUS EMISSION (30 - 1000 MHz)



HORIZONTAL



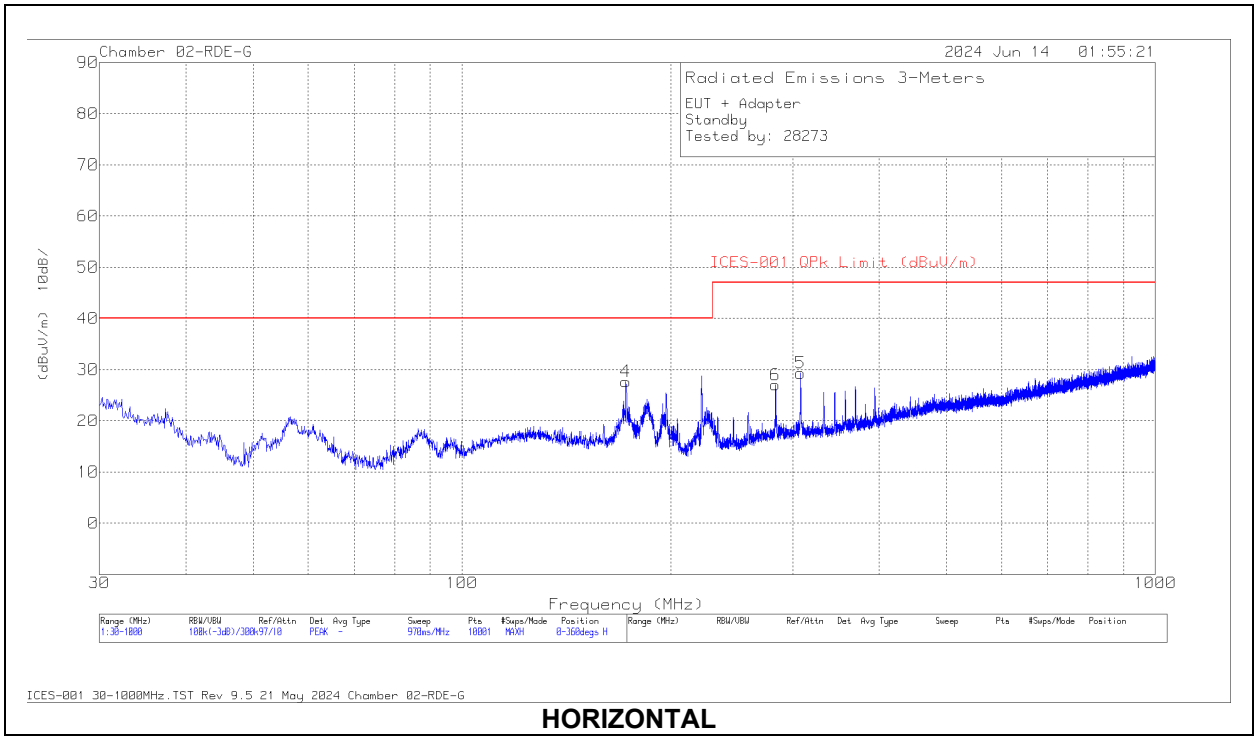
VERTICAL

DATA

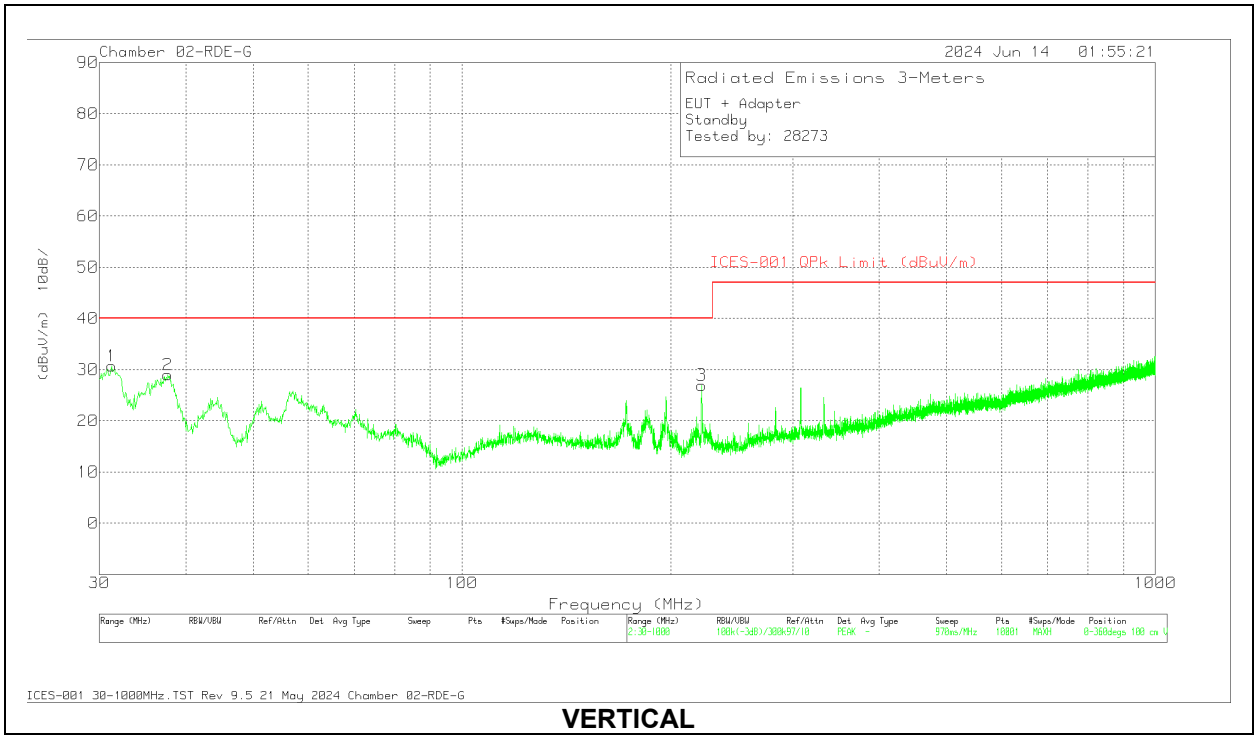
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	204044 ACF (dB/m)	Hybrid Path 30MHz-1000MHz (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 172.282	39.11	Qp	17.6	-29.5	27.21	43.52	-16.31	142	131	H
2	* 37.7423	34.02	Qp	21.2	-30.9	24.32	40	-15.68	315	106	V
1	31.3434	31.25	Qp	25.3	-31	25.55	40	-14.45	319	110	V
2	221.333	39.5	Qp	16.6	-29.2	26.9	46.02	-19.12	190	149	V
5	221.477	39.31	Qp	16.6	-29.2	26.71	46.02	-19.31	137	106	H
6	307.805	37.8	Qp	19.6	-28.6	28.8	46.02	-17.22	158	100	H

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

8.1.4. IC/ICES-001 TX SPURIOUS EMISSION (30 - 1000 MHz)



HORIZONTAL



VERTICAL

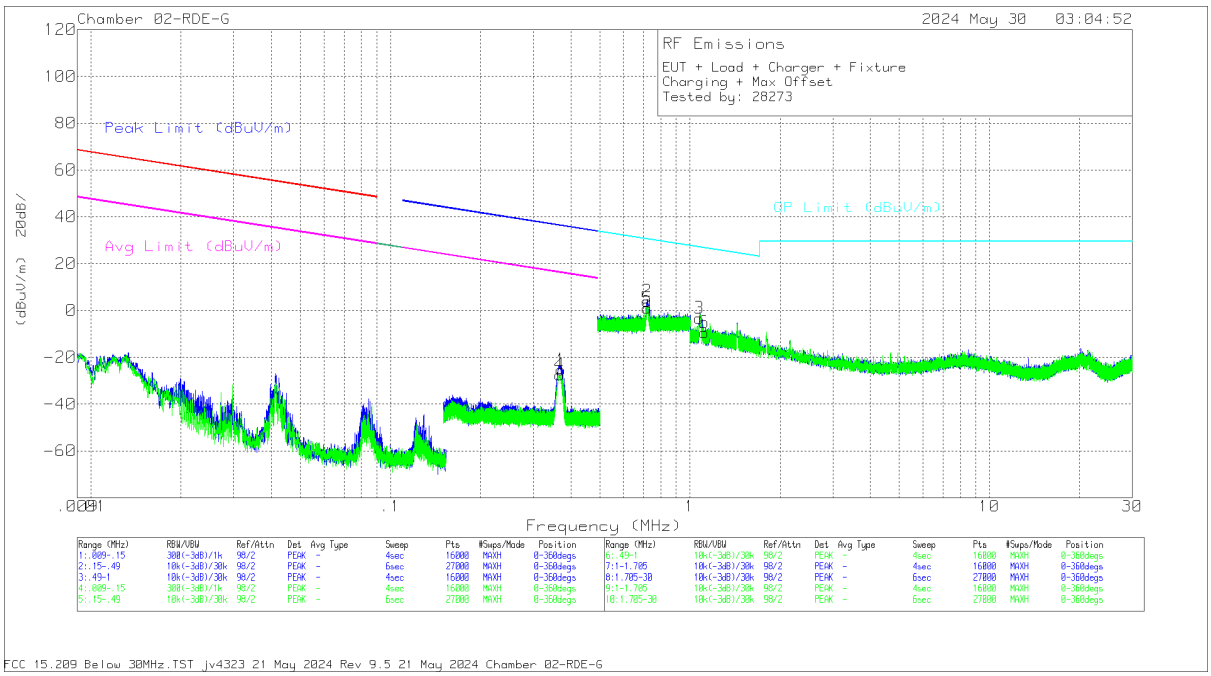
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	204044 ACF (dB/m)	Hybrid Path 30MHz-1000MHz (dB)	Corrected Reading (dBuV/m)	ICES-001 QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	31.392	31.26	Qp	25.3	-31	25.56	40	-14.44	351	110	V
2	37.811	33.58	Qp	21.1	-30.9	23.78	40	-16.22	11	103	V
4	172.482	38.63	Qp	17.6	-29.5	26.73	40	-13.27	152	102	H
3	221.747	39.02	Qp	16.6	-29.2	26.42	40	-13.58	201	159	V
6	283.392	33.69	Qp	19.2	-28.7	24.19	47	-22.81	181	126	H
5	307.997	37.8	Qp	19.6	-28.6	28.8	47	-18.2	158	103	H

Qp - Quasi-Peak detector

8.2. OPERATING MODE

8.2.1. FCC TX FUNDAMENTAL & SPURIOUS EMISSIONS (9 kHz - 30 MHz)



FACE-ON AND FACE-OFF

DATA

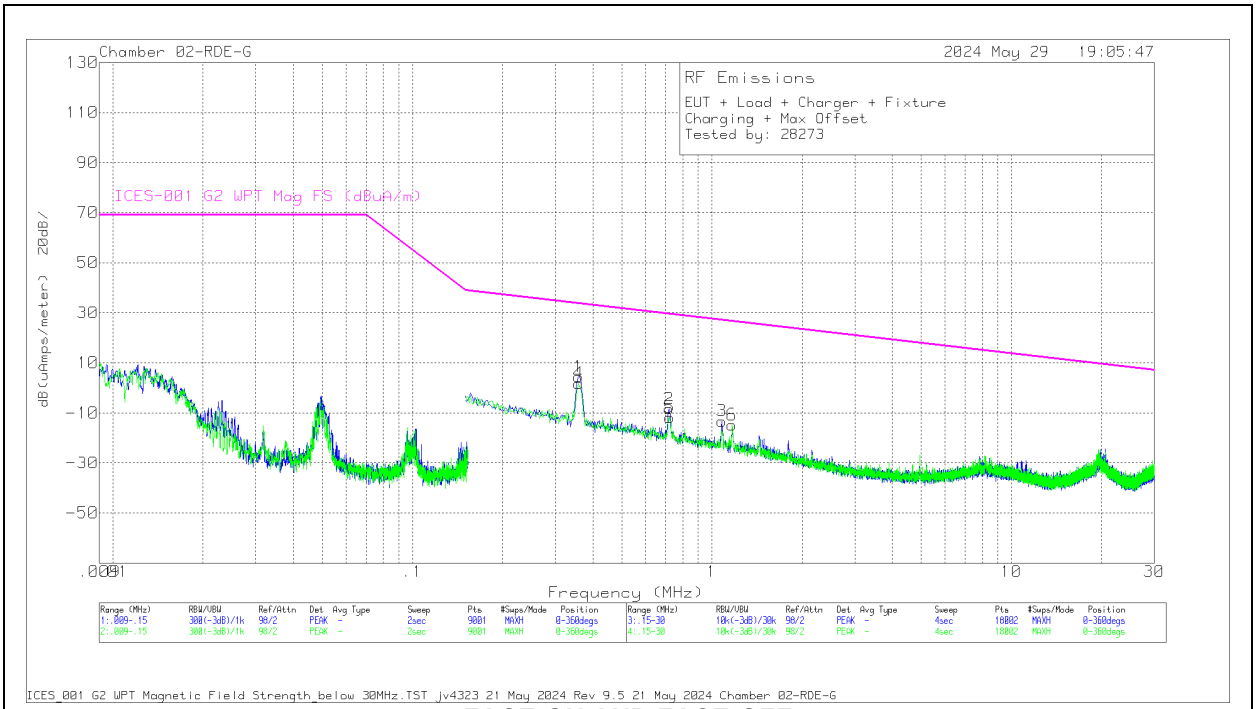
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E (ACF) (dB/m)	Loop Path 30Hz-1MHz (dB)	Dist Corr 300m (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
1	.3598	32.34	Pk	56	-32	-80	-23.66	36.49	-60.15	16.49	-40.15	333	Face-On
4	.3673	28.58	Pk	56	-32	-80	-27.42	36.31	-63.73	16.31	-43.73	297	Face-Off

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E (ACF) (dB/m)	Loop Path 30Hz-1MHz (dB)	Dist Corr 30m (dB)	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
2	.7186	17.99	Qp	56.1	-31.9	-40	2.19	30.48	-28.29	297	Face-On
5	.7201	15.24	Qp	56.1	-31.9	-40	-.56	30.47	-31.03	18	Face-Off

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E (ACF) (dB/m)	Loop Path 100kHz-30MHz (dB)	Dist Corr 30m (dB)	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Polarity
3	1.0805	23.38	Qp	46.4	-32	-40	-2.22	26.95	-29.17	223	Face-On
6	1.117	16.4	Qp	46.2	-32	-40	-9.4	26.66	-36.06	266	Face-Off

Pk - Peak detector
Qp - Quasi-Peak detector

8.2.2. IC/ICES-001 TX FUNDAMENTAL & SPURIOUS EMISSIONS (9 kHz - 30 MHz)



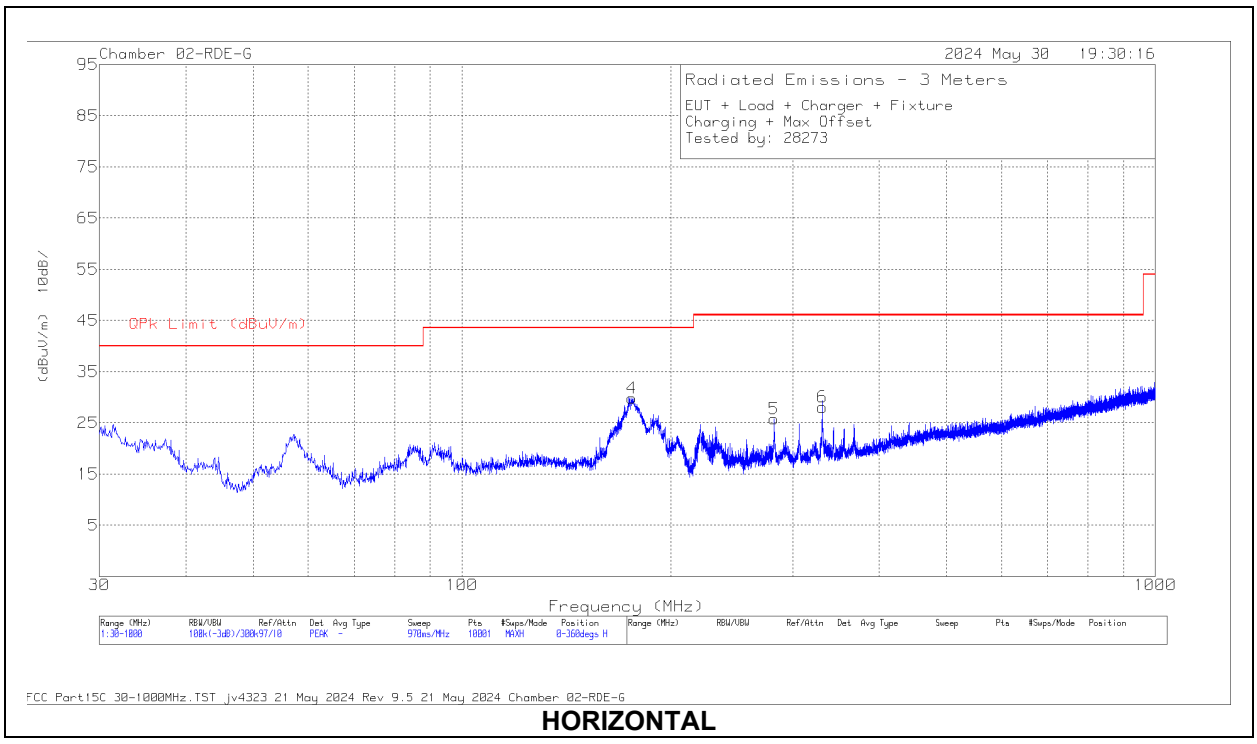
FACE-ON AND FACE-OFF

DATA

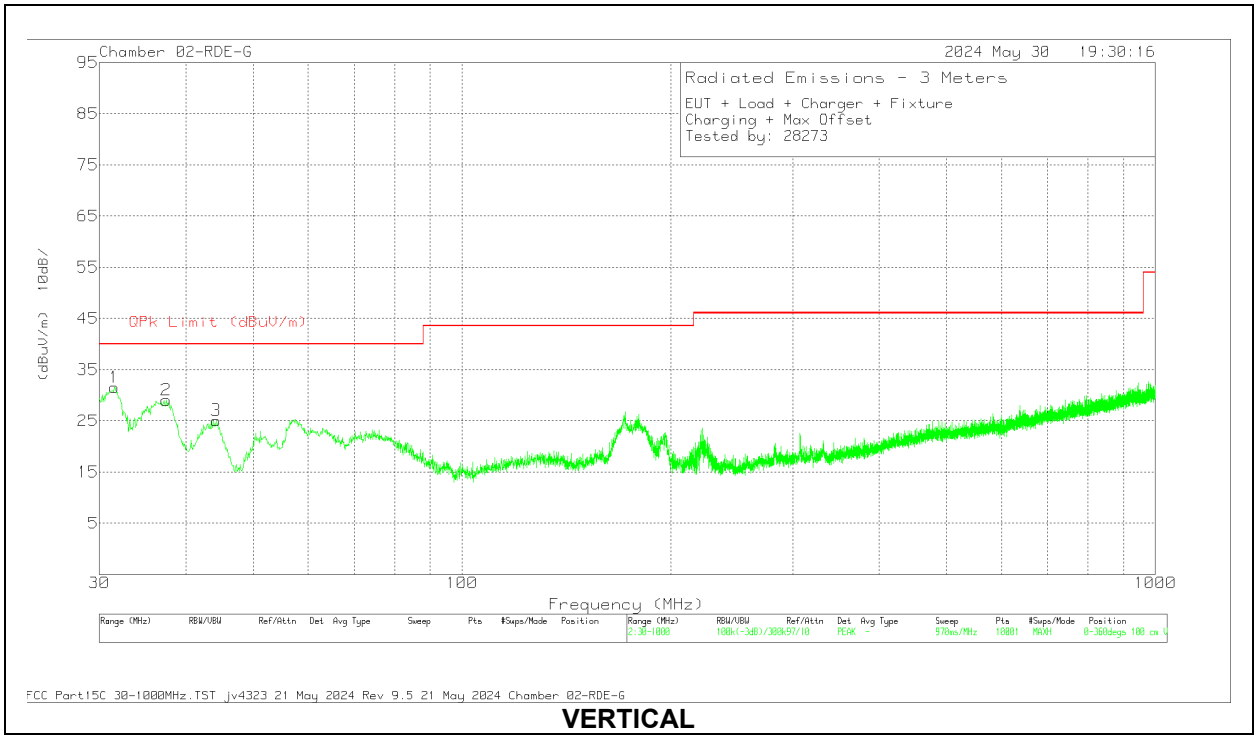
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna H (ACF) (dB/m)	Loop Path 100kHz-30MHz (dB)	Corrected Reading dB(uAmps/meter)	ICES-001 G2 WPT Mag FS (dBuA/m)	Margin (dB)	Azimuth (Degs)	Polarity
1	.3602	33.35	Qp	3.4	-32.1	4.65	33.71	-29.06	39	Face-On
4	.3608	29.66	Qp	3.3	-32.1	.86	33.7	-32.84	133	Face-Off
2	.7201	25.39	Qp	-2.3	-32	-8.91	29.53	-38.44	355	Face-On
5	.7218	21.47	Qp	-2.3	-32	-12.83	29.51	-42.34	106	Face-Off
3	1.0799	22.36	Qp	-5.1	-32	-14.74	27.08	-41.82	230	Face-On
6	1.1724	18.04	Qp	-5.6	-32	-19.56	26.58	-46.14	276	Face-Off

Qp - Quasi-Peak detector

8.2.3. FCC TX SPURIOUS EMISSION (30 - 1000 MHz)



HORIZONTAL



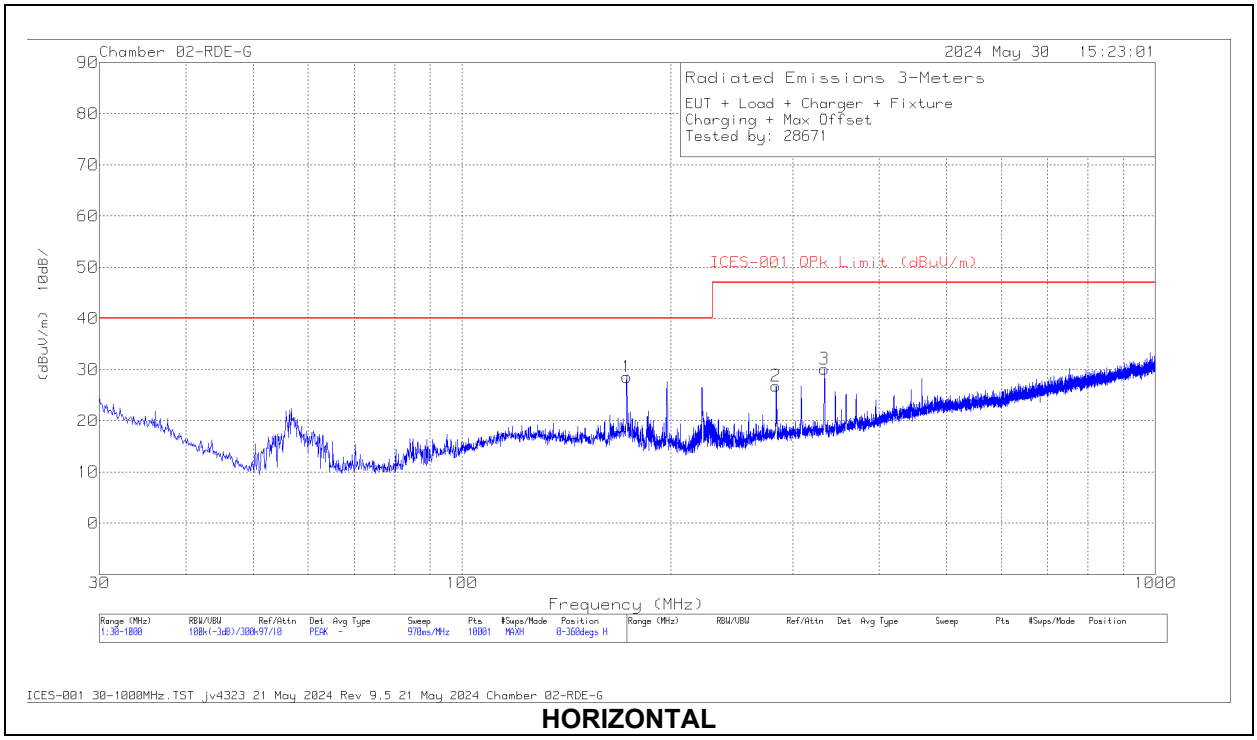
VERTICAL

DATA

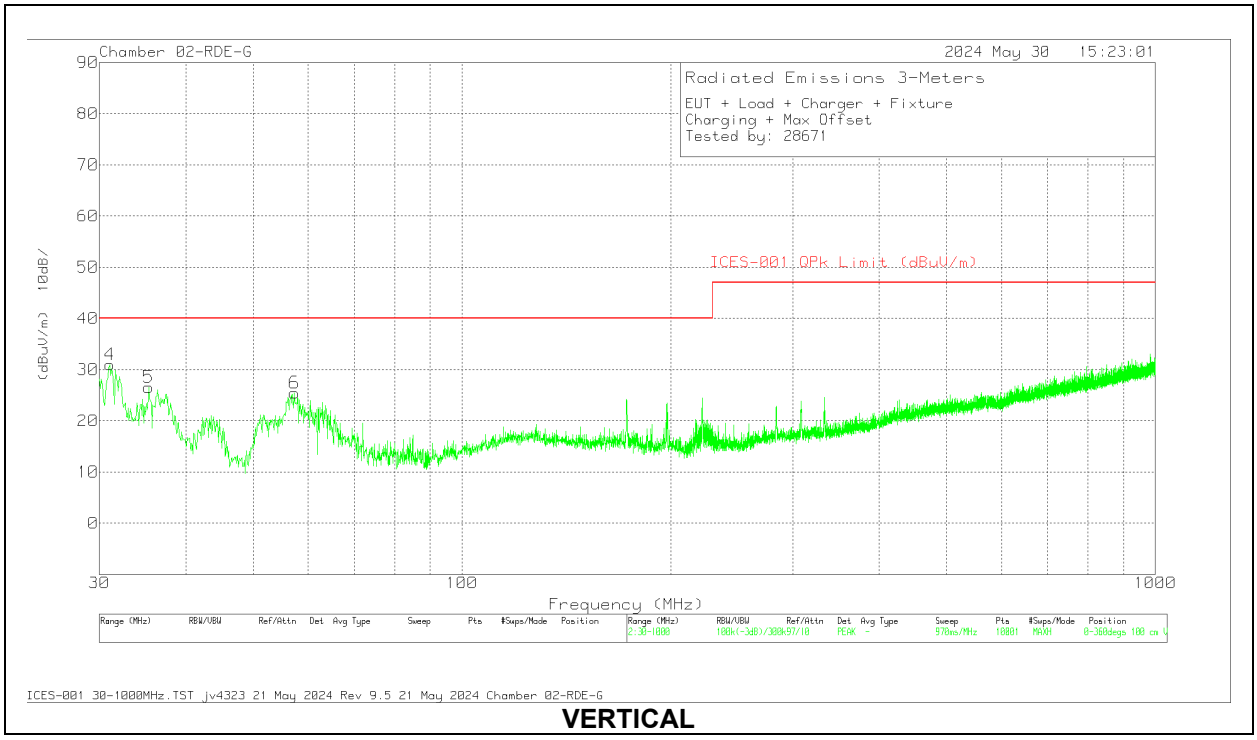
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	227855 ACF (dB)	Hybrid Path 30MHz-1000MHz (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 281.823	33.68	Qp	19.2	-28.7	24.18	46.02	-21.84	318	106	H
6	* 330.925	34.97	Qp	19.8	-28.4	26.37	46.02	-19.65	319	108	H
1	31.542	32.7	Qp	25.2	-31	26.9	40	-13.1	324	110	V
2	37.385	33.88	Qp	21.4	-30.9	24.38	40	-15.62	351	111	V
3	43.919	34.53	Qp	16.8	-30.8	20.53	40	-19.47	57	102	V
4	176.381	39.19	Qp	17.4	-29.5	27.09	43.52	-16.43	140	105	H

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

8.2.4. IC/ICES-001 TX SPURIOUS EMISSION (30 - 1000 MHz)



HORIZONTAL



VERTICAL

DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	227855 ACF (dB)	Hybrid Path 30MHz-1000MHz (dB)	Corrected Reading (dBuV/m)	ICES-001 QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	31.2655	30.52	Qp	25.4	-31	24.92	40	-15.08	333	100	V
5	37.804	30.63	Qp	21.1	-30.9	20.83	40	-19.17	349	107	V
6	57.249	38.48	Qp	13.1	-30.7	20.88	40	-19.12	235	119	V
1	172.796	40.44	Qp	17.5	-29.5	28.44	40	-11.56	136	134	H
2	283.864	35.08	Qp	19.2	-28.7	25.58	47	-21.42	321	101	H
3	333.084	37.55	Qp	19.8	-28.4	28.95	47	-18.05	325	109	H

Qp - Quasi-Peak detector

9. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

Frequency of Emission (MHz)	Conducted Limit (dBµV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

ICES-001 Issue 5 Table 1:

Table 1: Conducted emission limits for induction cooking appliances (AC mains terminals)

Frequency Range (MHz)	Applicances rated 100V, without an earth connection Quasi-peak (dBµV)	Applicances rated 100V, without an earth connection Average (dBµV)	All other appliances Quasi-peak (dBµV)	All other appliances Average (dBµV)
0.009 - 0.05	122	–	110	–
0.05 - 0.15	102 to 92 *	–	90 to 80 *	–
0.15 - 0.5	72 to 62 *	62 to 52 *	66 to 56 *	56 to 46 *
0.5 - 5	56	46	56	46
5 - 30	60	50	60	50

Note: The more stringent limit applies at transition frequencies.

* The limit level in dBµV decreases linearly with the logarithm of frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 200Hz, from 9kHz to 150kHz, resolution bandwidth of 9kHz from 150kHz to 30MHz. Peak detection is used unless otherwise noted as quasi-peak or average.

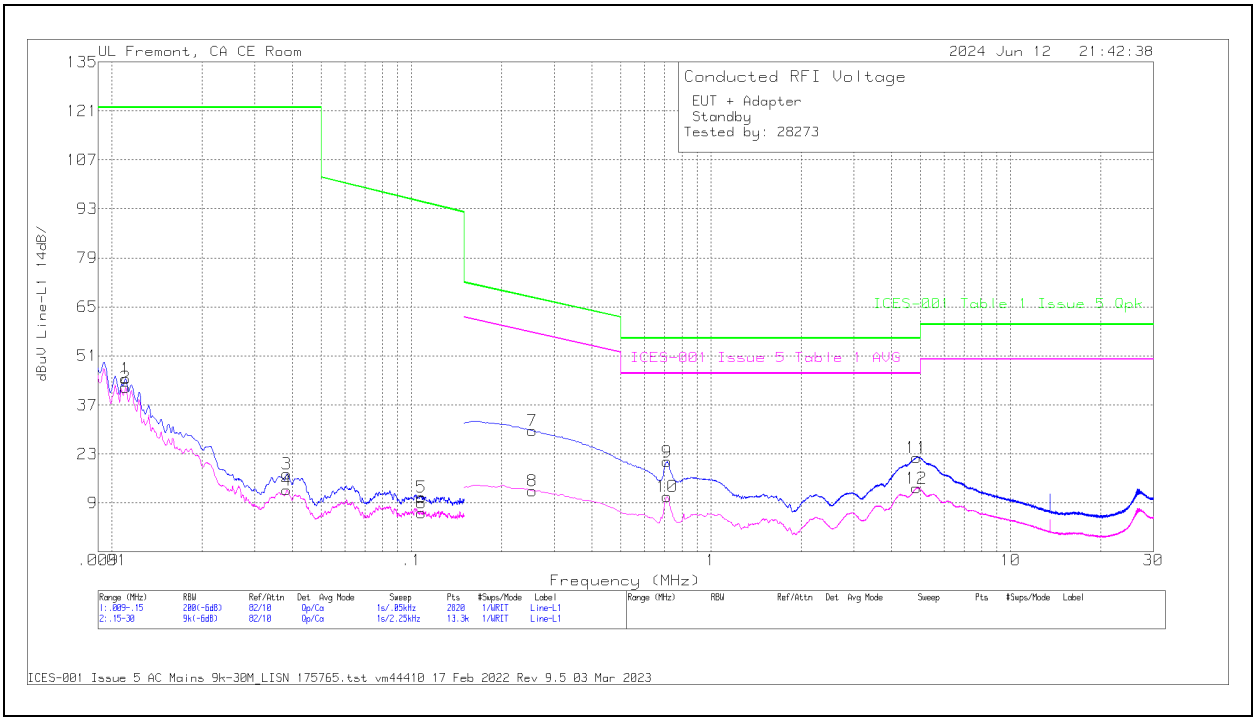
Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

Note: The limits on the plots from 150kHz – 30MHz cover both ICES-001 and FCC Part 15.207.

9.1. STANDBY MODE

LINE 1 RESULTS



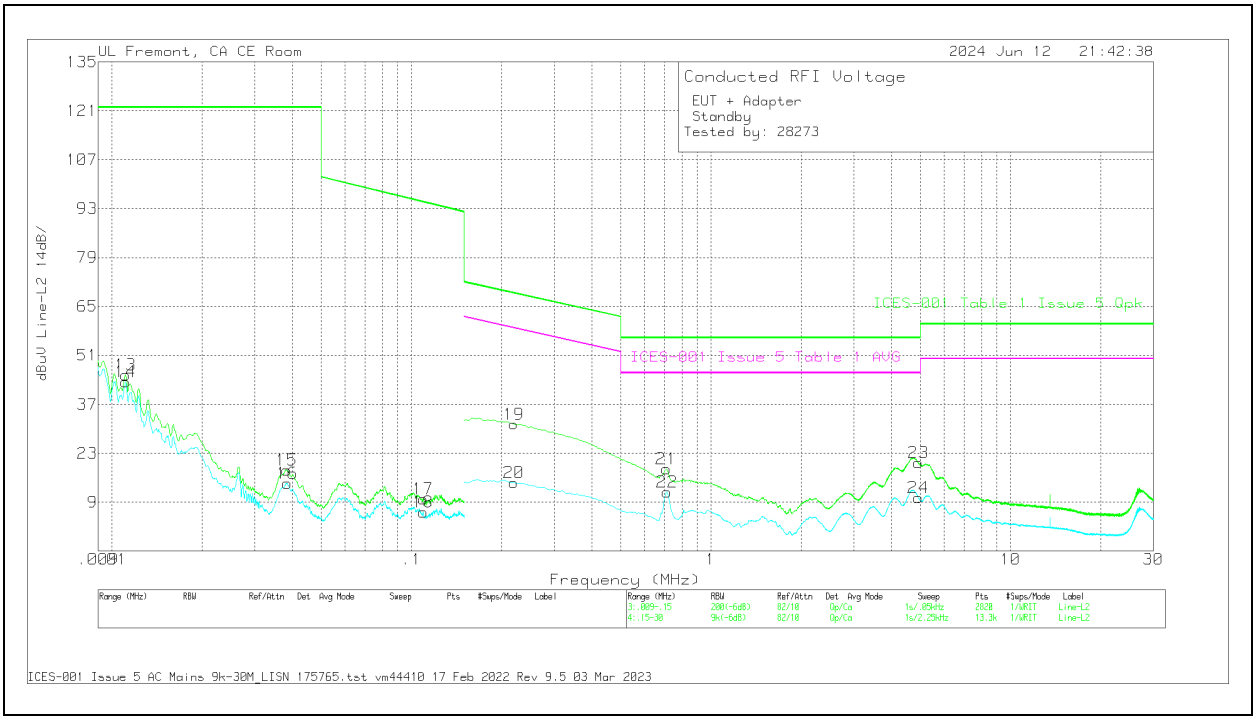
DATA

Range 1: Line-L1 .009 - .15MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trns Limiter (dB)	Corrected Reading (dBuV)	ICES-001 Table 1 Issue 5 Qpk (dBuV)	Margin (dB)	ICES-001 Issue 5 Table 1 AVG (dBuV)	Margin (dB)
2	.0111	25.94	Ca	4.1	-.3	12.3	42.04	-	-	-	-
4	.0384	1.72	Ca	.6	0	10.4	12.72	-	-	-	-
6	.1081	-3.47	Ca	.1	.1	9.5	6.23	-	-	-	-
1	.0111	28.37	Qp	4.1	-.3	12.3	44.47	122	-77.53	-	-
3	.0384	6.36	Qp	.6	0	10.4	17.36	122	-104.64	-	-
5	.1079	1.01	Qp	.1	.1	9.5	10.71	95	-84.29	-	-

Range 2: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trns Limiter (dB)	Corrected Reading (dBuV)	ICES-001 Table 1 Issue 5 Qpk (dBuV)	Margin (dB)	ICES-001 Issue 5 Table 1 AVG (dBuV)	Margin (dB)
8	.2535	3.11	Ca	0	0	9.4	12.51	-	-	57.64	-45.13
10	.7125	1.48	Ca	0	.1	9.3	10.88	-	-	46	-35.12
12	4.8548	3.66	Ca	0	.2	9.4	13.26	-	-	46	-32.74
7	.2535	20.19	Qp	0	0	9.4	29.59	67.64	-38.05	-	-
9	.7148	11.39	Qp	0	.1	9.3	20.79	56	-35.21	-	-
11	4.8458	12.43	Qp	0	.2	9.4	22.03	56	-33.97	-	-

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS



DATA

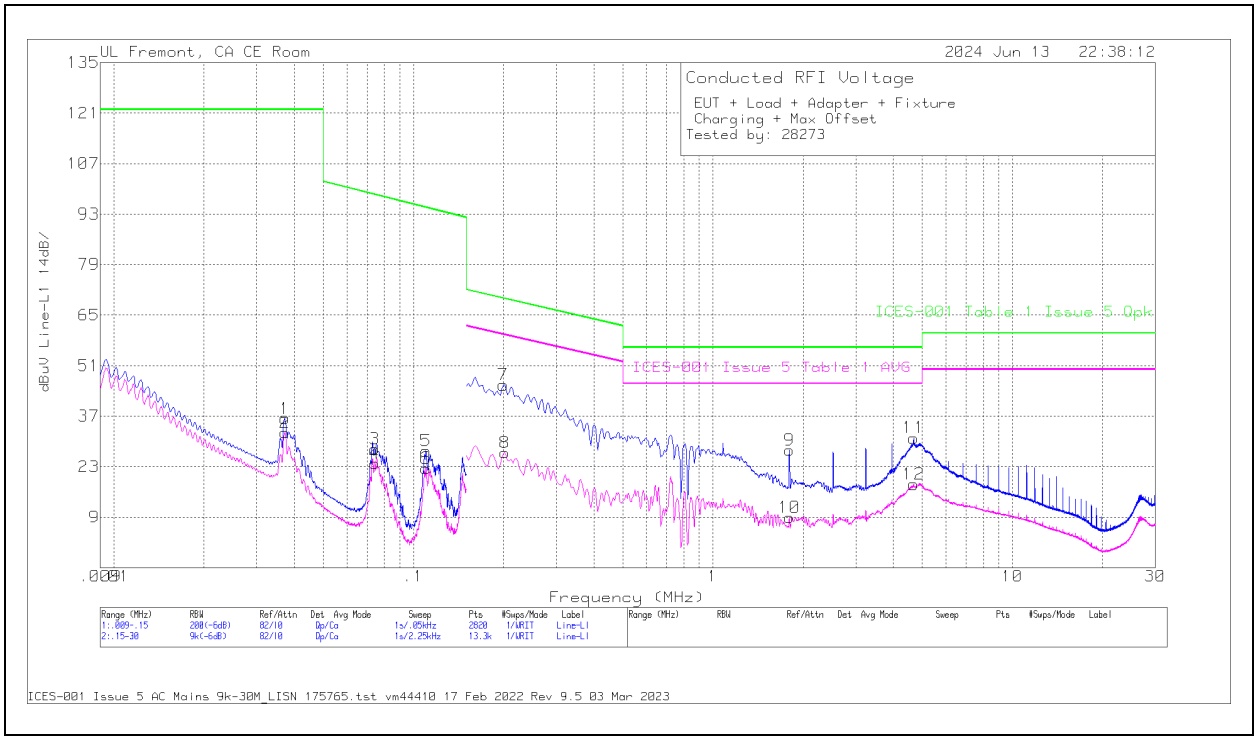
Range 3: Line-L2 .009 - .15MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trns Limiter (dB)	Corrected Reading (dBuV)	ICES-001 Table 1 Issue 5 Qpk (dBuV)	Margin (dB)	ICES-001 Issue 5 Table 1 AVG (dBuV)	Margin (dB)
14	.0111	26.86	Ca	4.2	.1	12.3	43.46	-	-	-	-
16	.0385	3.39	Ca	.6	0	10.4	14.39	-	-	-	-
18	.1093	-3.57	Ca	.1	.1	9.5	6.13	-	-	-	-
13	.0111	28.78	Qp	4.2	.1	12.3	45.38	122	-76.62	-	-
15	.0383	7.24	Qp	.6	0	10.4	18.24	122	-103.76	-	-
17	.1093	.23	Qp	.1	.1	9.5	9.93	94.88	-84.95	-	-

Range 4: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trns Limiter (dB)	Corrected Reading (dBuV)	ICES-001 Table 1 Issue 5 Qpk (dBuV)	Margin (dB)	ICES-001 Issue 5 Table 1 AVG (dBuV)	Margin (dB)
20	.2198	5.04	Ca	0	.1	9.4	14.54	-	-	58.83	-44.29
22	.7125	2.68	Ca	0	0	9.3	11.98	-	-	46	-34.02
24	4.9268	.65	Ca	0	.2	9.4	10.25	-	-	46	-35.75
19	.2198	21.85	Qp	0	.1	9.4	31.35	68.83	-37.48	-	-
21	.7103	9.18	Qp	0	0	9.3	18.48	56	-37.52	-	-
23	4.9358	10.69	Qp	0	.2	9.4	20.29	56	-35.71	-	-

Qp - Quasi-Peak detector
Ca - CISPR average detection

9.2. OPERATING MODE

LINE 1 RESULTS



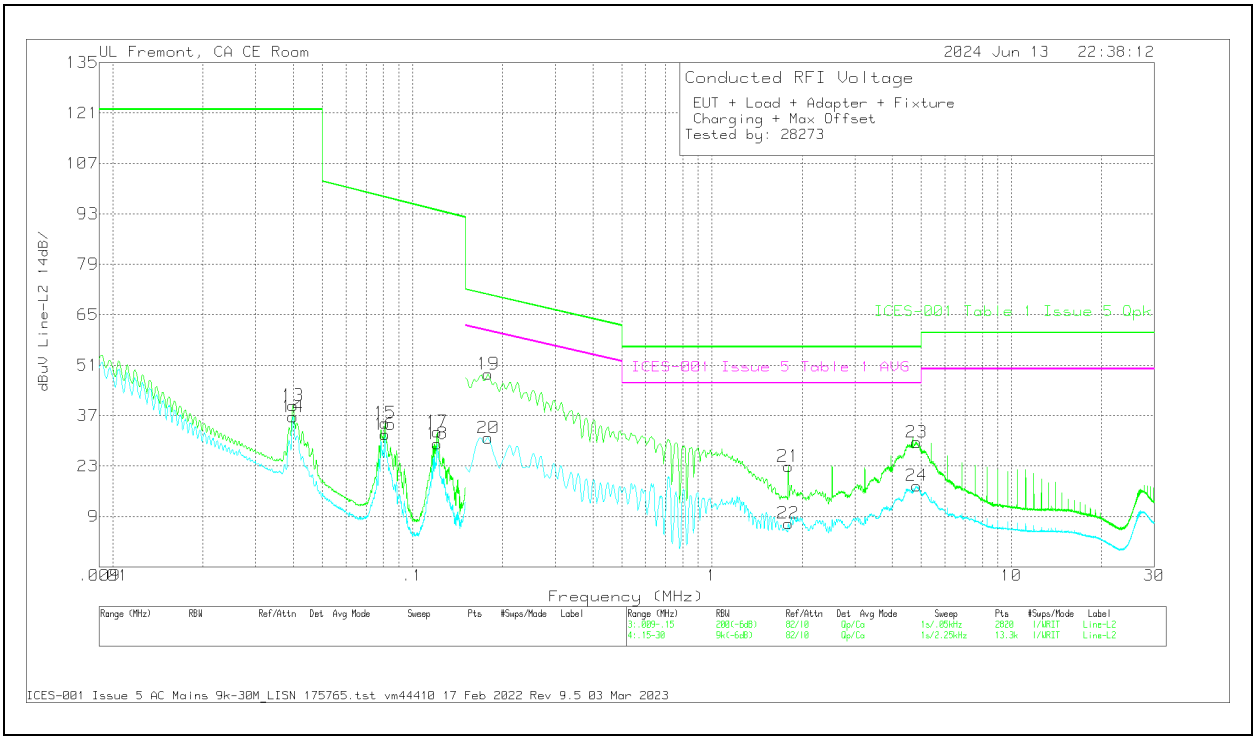
DATA

Range 1: Line-L1 .009 - .15MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trns Limiter (dB)	Corrected Reading (dBuV)	ICES-001 Table 1 Issue 5 Qpk (dBuV)	Margin (dB)	ICES-001 Issue 5 Table 1 AVG (dBuV)	Margin (dB)
2	.0372	21.47	Ca	.6	0	10.4	32.47	-	-	-	-
4	.0744	14	Ca	.2	0	9.7	23.9	-	-	-	-
6	.1102	12.89	Ca	.1	.1	9.5	22.59	-	-	-	-
1	.0372	25.29	Qp	.6	0	10.4	36.29	122	-85.71	-	-
3	.0744	18.02	Qp	.2	0	9.7	27.92	98.38	-70.46	-	-
5	.1102	17.63	Qp	.1	.1	9.5	27.33	94.81	-67.48	-	-

Range 2: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trns Limiter (dB)	Corrected Reading (dBuV)	ICES-001 Table 1 Issue 5 Qpk (dBuV)	Margin (dB)	ICES-001 Issue 5 Table 1 AVG (dBuV)	Margin (dB)
8	.2018	17.36	Ca	0	.1	9.4	26.86	-	-	59.54	-32.68
10	1.7993	-.61	Ca	0	.1	9.4	8.89	-	-	46	-37.11
12	4.6793	8.62	Ca	0	.1	9.4	18.12	-	-	46	-27.88
7	.1995	36.07	Qp	.1	.1	9.4	45.67	69.63	-23.96	-	-
9	1.7993	18.07	Qp	0	.1	9.4	27.57	56	-28.43	-	-
11	4.6793	21.47	Qp	0	.1	9.4	30.97	56	-25.03	-	-

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS



DATA

Range 3: Line-L2 .009 - .15MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trns Limiter (dB)	Corrected Reading (dBuV)	ICES-001 Table 1 Issue 5 Qpk (dBuV)	Margin (dB)	ICES-001 Issue 5 Table 1 AVG (dBuV)	Margin (dB)
14	.0399	25.91	Ca	.5	0	10.3	36.71	-	-	-	-
16	.081	22.02	Ca	.2	0	9.6	31.82	-	-	-	-
18	.1209	19.52	Ca	.1	0	9.6	29.22	-	-	-	-
13	.0399	29	Qp	.5	0	10.3	39.8	122	-82.2	-	-
15	.081	25.17	Qp	.2	0	9.6	34.97	97.61	-62.64	-	-
17	.1209	22.78	Qp	.1	0	9.6	32.48	93.96	-61.48	-	-

Range 4: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	Cbl (dB)	Trns Limiter (dB)	Corrected Reading (dBuV)	ICES-001 Table 1 Issue 5 Qpk (dBuV)	Margin (dB)	ICES-001 Issue 5 Table 1 AVG (dBuV)	Margin (dB)
20	.1793	21.33	Ca	0	.1	9.4	30.83	-	-	60.52	-29.69
22	1.7993	-2.4	Ca	0	.1	9.4	7.1	-	-	46	-38.9
24	4.8289	7.96	Ca	0	.2	9.4	17.56	-	-	46	-28.44
19	.1793	39.06	Qp	0	.1	9.4	48.56	70.52	-21.96	-	-
21	1.7993	13.41	Qp	0	.1	9.4	22.91	56	-33.09	-	-
23	4.8278	20.01	Qp	0	.2	9.4	29.61	56	-26.39	-	-

Qp - Quasi-Peak detector
Ca - CISPR average detection

10. SETUP PHOTOS

Please refer to 14982436-EP1V1 for setup photos.

END OF TEST REPORT