

TEST REPORT

Report Number: 14932130-E1V4

Applicant : WiTricity Corporation
57 Water Street
Watertown, MA, 02472
US

Model : GWA1100

FCC ID : 2BFEF-WWA1101

EUT Description : Charging Pad

Test Standard(s) : FCC CFR 47 PART 18 SUBPART C
FCC CFR 47 PART 15 SUBPART C

Date Of Issue:
2025-05-21

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
Fremont, CA 94538, U.S.A.
TEL: (510) 319-4000
FAX: (510) 661-0888



REVISION HISTORY

| Rev. | Issue Date | Revisions | Revised By |
|------|------------|---|------------|
| V1 | 2025-02-18 | Initial Issue | --- |
| V2 | 2025-04-30 | Section 5.5, 7.1, 8 Updated | Henry Lau |
| V3 | 2025-05-07 | Section 7, 9 Updated, added section 7.1 | Henry Lau |
| V4 | 2025-05-21 | Section 5.1 and 5.4 Updated | Henry Lau |

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: WiTricity Corporation
57 Water Street
Watertown, MA, 02472
US

EUT DESCRIPTION: Charging Pad

MODEL NUMBER: GWA1100

BRAND: WiTricity

SERIAL NUMBER: GWA11001023252000300, GWA11001023285001100

SAMPLE RECEIPT DATE: 2023-10-20

DATE TESTED: 2023-12-07 to 2024-05-22

| APPLICABLE STANDARDS | |
|------------------------------|--------------|
| STANDARD | TEST RESULTS |
| FCC CFR 47 PART 18 SUBPART C | Complies |
| FCC CFR 47 PART 15 SUBPART C | 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.

Approved & Released For
UL Verification Services Inc. By:



Francisco de Anda
Staff Engineer
Consumer Technology Division
UL Verification Services Inc.

Prepared By:



Henry Lau
Senior Project Engineer
Consumer Technology Division
UL Verification Services Inc.

2. TEST METHODOLOGY

This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for correctly integrating customer-provided data with measurements performed by UL Verification Services Inc.

The tests documented in this report were performed in accordance with
FCC / OST MP-5, "FCC Methods of Measurements of Radio Noise Emissions from Industrial, Scientific, and Medical Equipment"
KDB 680106 D01 v04
FCC CFR 47 Part 2
FCC CFR 47 Part 15
FCC CFR 47 Part 18
ANSI 63.30-2021
ANSI 63.10-2020

3. FACILITIES AND ACCREDITATION

UL Verification Services Inc. is accredited by A2LA, Certificate Number #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 |
|-------------------------------------|--|---------------|---------------------------|---------------------|
| <input type="checkbox"/> | Building 1: 47173 Benicia Street, Fremont, CA 94538, USA | US0104 | 2324A | 550739 |
| <input type="checkbox"/> | Building 2: 47266 Benicia Street, Fremont, CA 94538, USA | | | |
| <input type="checkbox"/> | Building 3: 843 Auburn Court, Fremont, CA 94538, USA | | | |
| <input checked="" type="checkbox"/> | Building 4: 47658 Kato Rd, Fremont, CA 94538, USA | | | |
| <input type="checkbox"/> | 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} |
|---|------------------|
| 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 | 2.84 dB |
| Worst Case Radiated Disturbance, 30 to 1000 MHz | 6.01 dB |
| Worst Case Radiated Disturbance, 1000 to 18000 MHz | 4.73 dB |
| Worst Case Radiated Disturbance, 18000 to 26000 MHz | 4.51 dB |
| Worst Case Radiated Disturbance, 26000 to 40000 MHz | 5.29 dB |

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

4.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
 $36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

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

5. EQUIPMENT UNDER TEST

5.1. EUT DESCRIPTION, OPERATING FREQUENCY AND POWER

The EUT is a charging pad using a coil that produces a magnetic field in the reactive near-field that is only coupled to a receiving magnetic coil designed to be interoperable at a frequency of 85 kHz. The coupled coil does not produce intentional far-field RF energy (i.e., the far-field energy of the charging pad is well below one billionth of the transferred energy); however, the charging pad is capable of transferring up to ~10.5 kW of power to a coupled Receiver. The device is powered via a Wall Box (240 V / 46 Amps). The EUT also contains a FOD / LOD (Foreign Object Detection / Living Object Detection) System Short Range Device (SRD) operating at 3 MHz & 4.4 MHz.

This report documents test results of the Wireless Power Transfer portion(Part 18) and the FOD 3MHz & 4.4 MHz portion(Part 15C).

5.2. DESCRIPTION OF AVAILABLE ANTENNAS/COILS

The antenna gain(s) and type, as provided by the manufacturer, are as follows:

The EUT includes a charging pad that contains a coil that produces a magnetic field that is used to couple energy in the reactive near-field. The frequency of operation of that coil is fixed to 85 kHz.

The EUT includes an array of near-field coils / electrically very small loop antennas that are fixed in the EUT and operate at 3 MHz. These electrically small loop antennas do not have appreciable far-field gain due to their near-field nature.

5.3. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was:

WEVSE: 677
PPC: 0.8.8
MODS: 3.5.2

5.4. WORST-CASE CONFIGURATION AND MODE

The EUT is a charging pad powered by a wall box.

The EUT is intended to be used in one orientation only therefore testing was performed in this orientation.

The antennas are active for all the charging mode testing.

| Configuration | Mode | Description |
|---------------|---------------|---|
| 1 | Standby mode | EUT is powered by Wallbox connected to 240V 60Hz with a 6m cable as worst case. Wireless Power Transfer ISM portion is in standby mode with FOD SRD(Foreign object detective) at 3MHz & 4.4MHz active. Wallbox is connected to the VA(vehicle assembly) via WLAN. |
| 2 | Charging mode | EUT is powered by Wallbox connected to 240V 60Hz with a short cable (up to 2.5m) cable. Wireless Power Transfer ISM portion is in charging mode with FOD SRD(Foreign object detection) at 3MHz & 4.4MHz active. Wallbox is connected to the VA via WLAN. Two output levels at 360V and 480V for the support VA chosen for worst-case conditions. |
| 3 | Charging mode | EUT is powered by Wallbox connected to 240V 60Hz with a long cable (up to 9m) cable. Wireless Power Transfer ISM portion is in charging mode with FOD SRD(Foreign object detection) at 3MHz & 4.4 MHz active. Wallbox is connected to the VA via WLAN. Two output levels at 360V and 480V for the support VA chosen for worst-case conditions. |

Above tests represents the worst case conditions.

5.5. DESCRIPTION OF TEST SETUP

| SUPPORT TEST EQUIPMENT | | | | | | |
|---|---------|----------------------|-----------------|------------------------|------------------|----------------|
| Description | | Manufacturer | Model | Serial Number | | FCC ID/ DoC |
| Wallbox | | WiTricity | WWA1101 | WWA1101-10232520001000 | | DoC |
| Vehicle Assembly(VA)* | | WiTricity | VA-R1 | 23033000021 | | DoC |
| Articial mains network (AMN) | | EMCShop | HVSB800A | 00136-00122 | | DoC |
| Load | | Chroma | 63212A-1200-480 | 514554 | | DoC |
| I/O CABLES (RF RADIATED/AC POWER LINE TEST) | | | | | | |
| Cable No. | Port | # of Identical Ports | Connector Type | Cable Type | Cable Length (m) | Remarks |
| 1 | AC | 1 | AC | AC | 1.5 | Powers Wallbox |
| 2 | DC/Data | 1 | DC | DC | 2.5m – 9m | Powers EUT |
| 3 | DC | 2 | DC | DC | 1 – 20m | VA to Load |
| 4 | AC | 1 | AC | AC | | Power Load |

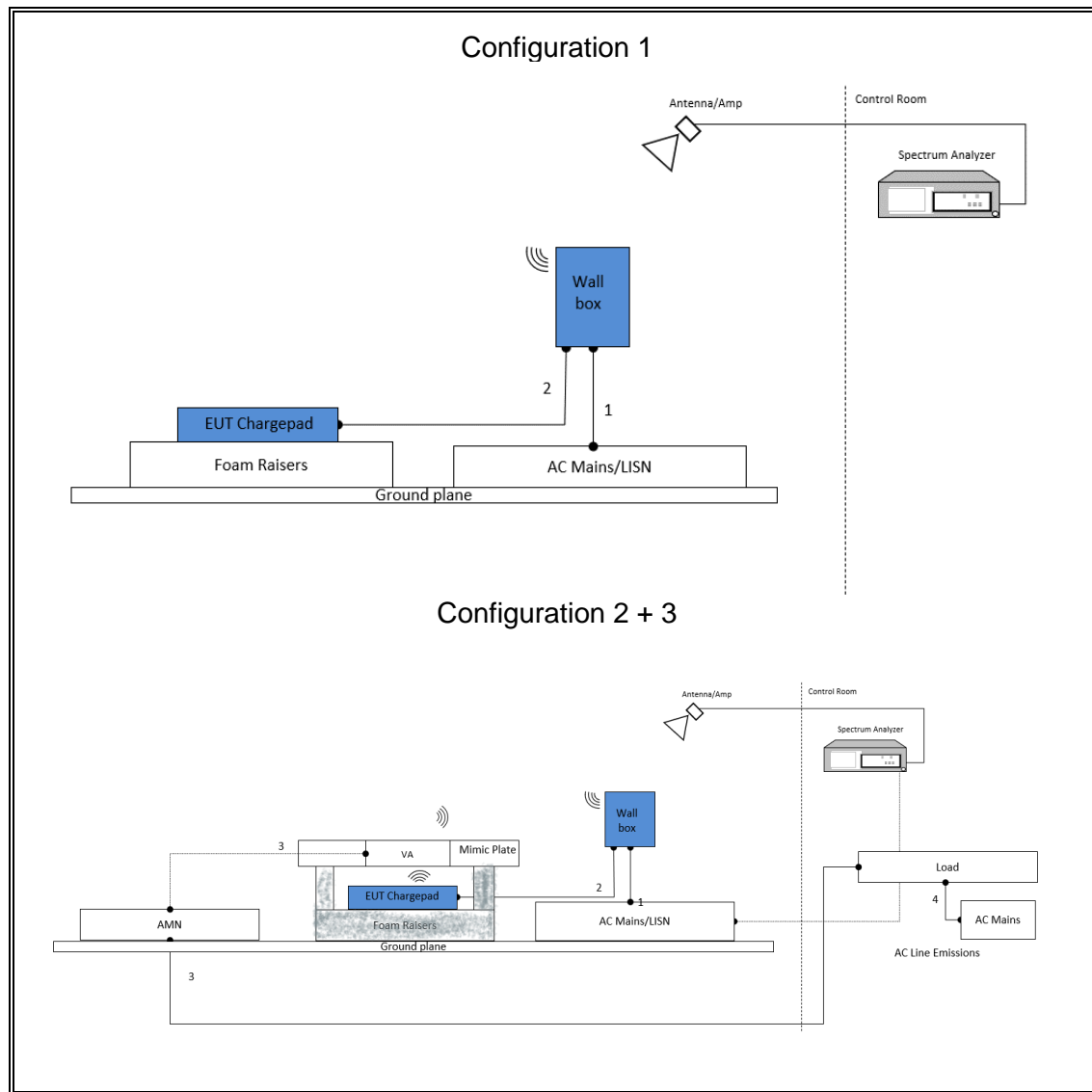
TEST SETUP- RADIATED TEST/AC POWER LINE TEST

The EUT is powered by Wall Box via cable. The EUT is lifted 15cm from the ground plane by using 3 styrofoam blocks and directly centered on the turntable. The distance between the foam and the bottom of the VA is 17cm.

*The mimic plate is a steel mimic plate of 1.5 m x 1.5 m to represent the smallest electric passenger vehicle imaginable with such a WPT system. The vehicle assembly is centered in the mimic plate with its typical mounting hardware. The mimic plate represents the absolute worst case for the vehicle assembly would ensure that any vehicle that uses the system would be much larger than this. The VA(vehicle assembly) is 39 x 39 cm and placed in the center of the mimic plate at a distance of 56 cm from edge the mimic plate to the edge of the VA.

For standby mode, VA, mimic plate, AMN and load were removed.

SETUP DIAGRAM



6. TEST AND MEASUREMENT EQUIPMENT

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

| TEST EQUIPMENT LIST | | | | |
|--|---------------------------------------|----------------------------------|-----------------------|------------|
| Description | Manufacturer | Model | Asset | Cal Due |
| Tested 2024-12-8 to 2024-12-12 | | | | |
| EMI Test Receiver | Rohde & Schwarz | ESW44 | 225683 | 2024-02-29 |
| Amplifier, 9kHz-3GHz , 32dB gain 16dBm P1dB | Fairview Microwave | SLNA-030-32-30-SMA | 197485 | 2024-05-31 |
| Antenna, Passive Loop 100KHz - 30MHz | ELECTRO-METRICS | EM-6872 | 170015 | 2024-07-31 |
| Antenna, Passive Loop 30Hz - 1MHz | ELECTRO-METRICS | EM-6871 | 170013 | 2024-07-31 |
| Tested 2024-05-21 to 2024-05-22 | | | | |
| EMI Test Receiver | Rohde & Schwarz | ESW44 | 225683 | 2025-02-28 |
| Antenna, Broadband Hybrid, 30MHz to 2000MHz | Sunol Sciences Corp. | JB1 | 80813 | 2024-05-31 |
| Amplifier, 9KHz to 1GHz, 32dB | SONOMA INSTRUMENT | 310 | 170650 | 2024-05-31 |
| Amplifier, 9kHz-3GHz , 32dB gain 16dBm P1dB | Fairview Microwave | SLNA-030-32-30-SMA | 197485 | 2024-05-31 |
| Antenna, Passive Loop 100KHz - 30MHz | ELECTRO-METRICS | EM-6872 | 170015 | 2024-07-31 |
| Antenna, Passive Loop 30Hz - 1MHz | ELECTRO-METRICS | EM-6871 | 170013 | 2024-07-31 |
| AC Line Conducted | | | | |
| Description | Manufacturer | Model | ID Num | Cal Due |
| LISN | Fischer Custom Communications, Inc | FCC-LISN-50/250- 25-2-01-480V | 175764 | 2025-01-31 |
| LISN | SOLAR ELECTRONICS | 21847-50-TS-100- N | 175761 | 2025-01-31 |
| Transient Limiter | TE | TBFL1 | 207956 | 2024-08-31 |
| UL AUTOMATION SOFTWARE | | | | |
| Radiated Software | UL | UL EMC | Rev 9.5, 19 May, 2023 | |
| AC Line Conducted Software | UL | UL EMC | Rev 9.5, 19 May, 2023 | |

7. RADIATED EMISSIONS

LIMIT

§18.301 Operating frequencies

The EUT operates at 85 KHz.

§18.305 Field Strength Limits

(b) The field strength levels of emissions which lie outside the bands specified in §18.301, unless otherwise indicated, shall not exceed the following:

| Equipment | Operating frequency | RF Power generated by equipment (watts) | Field strength limit (µV/m) | Distance (meters) |
|---|-----------------------|---|---|-------------------------|
| Any type unless otherwise specified (miscellaneous) | Any non-ISM frequency | Below 500 500 or more | 15 $15 \times \text{SQRT}(\text{power}/500)$ | 300 ¹ 300 |

¹Field strength may not exceed 10µV/m at 1600 meters. Consumer equipment operating below 1000 MHz is not permitted the increase in field strength otherwise permitted here for power over 500 watts.

The RF Power generated by the equipment is below 500 W therefore the field strength limit is 15uV/m at 300 m, equivalent to 23.52 dBuV/m and -27.978 dBuA/m at 300 m.

FCC §15.209 Limit

| Frequency Range (MHz) | Field Strength Limit (uV/m) at 3 m | Field Strength Limit (dBuV/m) at 3 m |
|-----------------------|------------------------------------|--------------------------------------|
| 0.009-0.490 | 2400/F(kHz) @ 300 m | - |
| 0.490-1.705 | 24000/F(kHz) @ 30 m | - |
| 1.705 - 30 | 30 @ 30m | - |
| 30 - 88 | 100 | 40 |
| 88 - 216 | 150 | 43.5 |
| 216 - 960 | 200 | 46 |
| Above 960 | 500 | 54 |

FCC §15.223 Limit

The field strength of any emission within the band 1.705-10.0 MHz shall not exceed 100 microvolts/meter at a distance of 30 meters. However, if the bandwidth of the emission is less than 10% of the center frequency, the field strength shall not exceed 15 microvolts/meter or (the bandwidth of the device in kHz) divided by (the center frequency of the device in MHz) microvolts/meter at a distance of 30 meters, whichever is the higher level. For the purposes of this section, bandwidth is determined at the points 6 dB down from the modulated carrier. The emission limits in this paragraph are based on measurement instrumentation employing an average detector. The provisions in § 15.35(b) for limiting peak emissions apply.

The field strength of emissions outside of the band 1.705-10.0 MHz shall not exceed the general radiated emission limits in § 15.209.

Note: For 1.705-10Mhz, the worst case limit of 15 microvolts/meter was applied.

TEST PROCEDURE

The EUT is placed as floor standing equipment on the turn table for measurements below 1GHz. The frequency range was investigated from 9 kHz to 1GHz.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements in the 30-1000MHz range, 9kHz for peak and/or quasi-peak detection measurements in the 0.15-30MHz range and 200Hz for peak and/or quasi-peak detection measurements in the 9 to 150kHz range. Peak detection is used unless otherwise noted as quasi-peak or average (9-90kHz and 110-490kHz).

For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel), parallel and perpendicular are the worst orientations, therefore testing was performed on these two orientations only. Blue color trace on plots: Parallel orientation. Green color trace on plots: Perpendicular orientation. For a loop antenna, the antenna height shall be set at around 2 meters.

KDB 414788 Open Field Site(OFS) and Chamber Correlation Justification

For below 30MHz testing, based on KDB 414788, Clause 2, for Part 18 equipment, Section 2.1 of FCC Measurement Procedure MP-5 also permits the use of test sites other than an open-field test site only if it can be shown that the results obtained at such a location are correlated with those made at an open-field test site.

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

NOTE: The limits in FCC 47 CFR, 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 reported in the table), using the 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 15.209(a) limit.

Distance Correction Factor

Based on FCC 18.305, note 2. Testing for compliance with these limits may be made at closer distances, provided a sufficient number of measurements are taken to plot the radiation pattern, to determine the major lobes of radiation, and to determine the expected field strength level at 30, 300, or 1600 meters. Alternatively, if measurements are made at only one closer fixed distance, then the permissible field strength limits shall be adjusted using 1/d as an attenuation factor.

For Part 18, 9 KHz to 30 MHz, the limits are extrapolated to 10m using ANSI 63.30 9.3.2.2.

$$EC = \left(\frac{d_1}{d_2} \right)^2 \frac{\sqrt{1 + \left(\frac{c}{2\pi f d_2} \right)^2}}{\sqrt{1 + \left(\frac{c}{2\pi f d_1} \right)^2}} \quad \text{for } f \leq \frac{3c}{8d_1} \quad (1)$$

$$EC = \frac{cd_1}{\pi f (d_2)^2} \frac{\sqrt{1 + \left(\frac{c}{2\pi f d_2} \right)^2}}{\sqrt{\left[1 - \left(\frac{c}{2\pi f d_1} \right)^2 \right]^2 + \left(\frac{c}{2\pi f d_1} \right)^2}} \quad \text{for } \frac{3c}{8d_1} < f \leq \frac{3c}{8d_2} \quad (2)$$

$$EC = \frac{d_1}{d_2} \frac{\sqrt{\left[1 - \left(\frac{c}{2\pi f d_2} \right)^2 \right]^2 + \left(\frac{c}{2\pi f d_2} \right)^2}}{\sqrt{\left[1 - \left(\frac{c}{2\pi f d_1} \right)^2 \right]^2 + \left(\frac{c}{2\pi f d_1} \right)^2}} \quad \text{for } f > \frac{3c}{8d_2} \quad (3)$$

where

- f Frequency, in hertz
- c Speed of light in vacuum (approximately 300 000 km/s), in meters/second
- d_1 Limit distance, in meters
- d_2 Measurement distance, in meters ($d_2 < d_1$)

The extrapolation factor, in decibels, can be obtained as follows:

$$N(dB) = 20 \log_{10} [EC(linear)] \quad (4)$$

7.1. Extrapolation Calculation

Part 18, 9 kHz – 30MHz

| WPT FCC Part 18 Limits (Non-ISM Frequency, Consumer) | | | |
|--|-----------------|--------------------|---------------------|
| Limit @ 300 m | 15.00 μ V/m | 23.52 dB μ V/m | -27.98 dB μ A/m |

| ANSI C63.30 (McNulty) Limit extrapolation | | | |
|---|------------------------------|-------------------------|---------------------------|
| Frequency (MHz) | 10 m EF (300m to 10m linear) | 300m to 10m factor (dB) | 10 m Limit (dB μ A/m) |
| 0.009 MHz | 26956.98 | 88.61 | 60.64 dB μ A/m |
| 0.02 MHz | 26789.54 | 88.56 | 60.58 dB μ A/m |
| 0.03 MHz | 26533.28 | 88.48 | 60.50 dB μ A/m |
| 0.04 MHz | 26186.57 | 88.36 | 60.38 dB μ A/m |
| 0.05 MHz | 25760.17 | 88.22 | 60.24 dB μ A/m |
| 0.06 MHz | 25266.31 | 88.05 | 60.07 dB μ A/m |
| 0.07 MHz | 24717.77 | 87.86 | 59.88 dB μ A/m |
| 0.08 MHz | 24127.25 | 87.65 | 59.67 dB μ A/m |
| 0.09 MHz | 23506.66 | 87.42 | 59.45 dB μ A/m |
| 0.1 MHz | 22866.81 | 87.18 | 59.21 dB μ A/m |
| 0.2 MHz | 16827.02 | 84.52 | 56.54 dB μ A/m |
| 0.3 MHz | 12678.50 | 82.06 | 54.08 dB μ A/m |
| 0.375 MHz | 10580.93 | 80.49 | 52.51 dB μ A/m |
| 0.4 MHz | 9214.80 | 79.29 | 51.31 dB μ A/m |
| 0.5 MHz | 5770.24 | 75.22 | 47.25 dB μ A/m |
| 0.6 MHz | 3961.17 | 71.96 | 43.98 dB μ A/m |
| 0.7 MHz | 2893.15 | 69.23 | 41.25 dB μ A/m |
| 0.8 MHz | 2209.44 | 66.89 | 38.91 dB μ A/m |
| 0.9 MHz | 1745.06 | 64.84 | 36.86 dB μ A/m |
| 1.0 MHz | 1415.09 | 63.02 | 35.04 dB μ A/m |
| 2.0 MHz | 371.92 | 51.41 | 23.43 dB μ A/m |
| 3.0 MHz | 179.74 | 45.09 | 17.11 dB μ A/m |
| 4.0 MHz | 111.61 | 40.95 | 12.98 dB μ A/m |
| 5.0 MHz | 79.26 | 37.98 | 10.00 dB μ A/m |
| 6.0 MHz | 61.04 | 35.71 | 7.73 dB μ A/m |
| 7.0 MHz | 49.55 | 33.90 | 5.92 dB μ A/m |
| 8.0 MHz | 41.71 | 32.41 | 4.43 dB μ A/m |
| 9.0 MHz | 36.04 | 31.14 | 3.16 dB μ A/m |
| 10.0 MHz | 31.75 | 30.03 | 2.06 dB μ A/m |
| 11.0 MHz | 28.39 | 29.06 | 1.09 dB μ A/m |
| 11.25 MHz | 27.67 | 28.84 | 0.86 dB μ A/m |
| 12.0 MHz | 27.93 | 28.92 | 0.94 dB μ A/m |
| 13.0 MHz | 28.20 | 29.00 | 1.03 dB μ A/m |
| 14.0 MHz | 28.42 | 29.07 | 1.09 dB μ A/m |
| 15.0 MHz | 28.60 | 29.13 | 1.15 dB μ A/m |
| 16.0 MHz | 28.76 | 29.18 | 1.20 dB μ A/m |
| 17.0 MHz | 28.89 | 29.22 | 1.24 dB μ A/m |
| 18.0 MHz | 29.00 | 29.25 | 1.27 dB μ A/m |
| 19.0 MHz | 29.10 | 29.28 | 1.30 dB μ A/m |
| 20.0 MHz | 29.18 | 29.30 | 1.32 dB μ A/m |
| 21.0 MHz | 29.26 | 29.32 | 1.35 dB μ A/m |
| 22.0 MHz | 29.32 | 29.34 | 1.37 dB μ A/m |
| 23.0 MHz | 29.38 | 29.36 | 1.38 dB μ A/m |
| 24.0 MHz | 29.42 | 29.37 | 1.40 dB μ A/m |
| 25.0 MHz | 29.47 | 29.39 | 1.41 dB μ A/m |
| 26.0 MHz | 29.51 | 29.40 | 1.42 dB μ A/m |
| 27.0 MHz | 29.54 | 29.41 | 1.43 dB μ A/m |
| 28.0 MHz | 29.57 | 29.42 | 1.44 dB μ A/m |
| 29.0 MHz | 29.60 | 29.43 | 1.45 dB μ A/m |
| 30.0 MHz | 29.63 | 29.43 | 1.46 dB μ A/m |

Part 15, 9 kHz – 30MHz

- Distance factor from 300m to 3m = $40\log(3/300) = -80\text{dB}$
- Distance factor from 30m to 3m = $40\log(3/30) = -40\text{dB}$

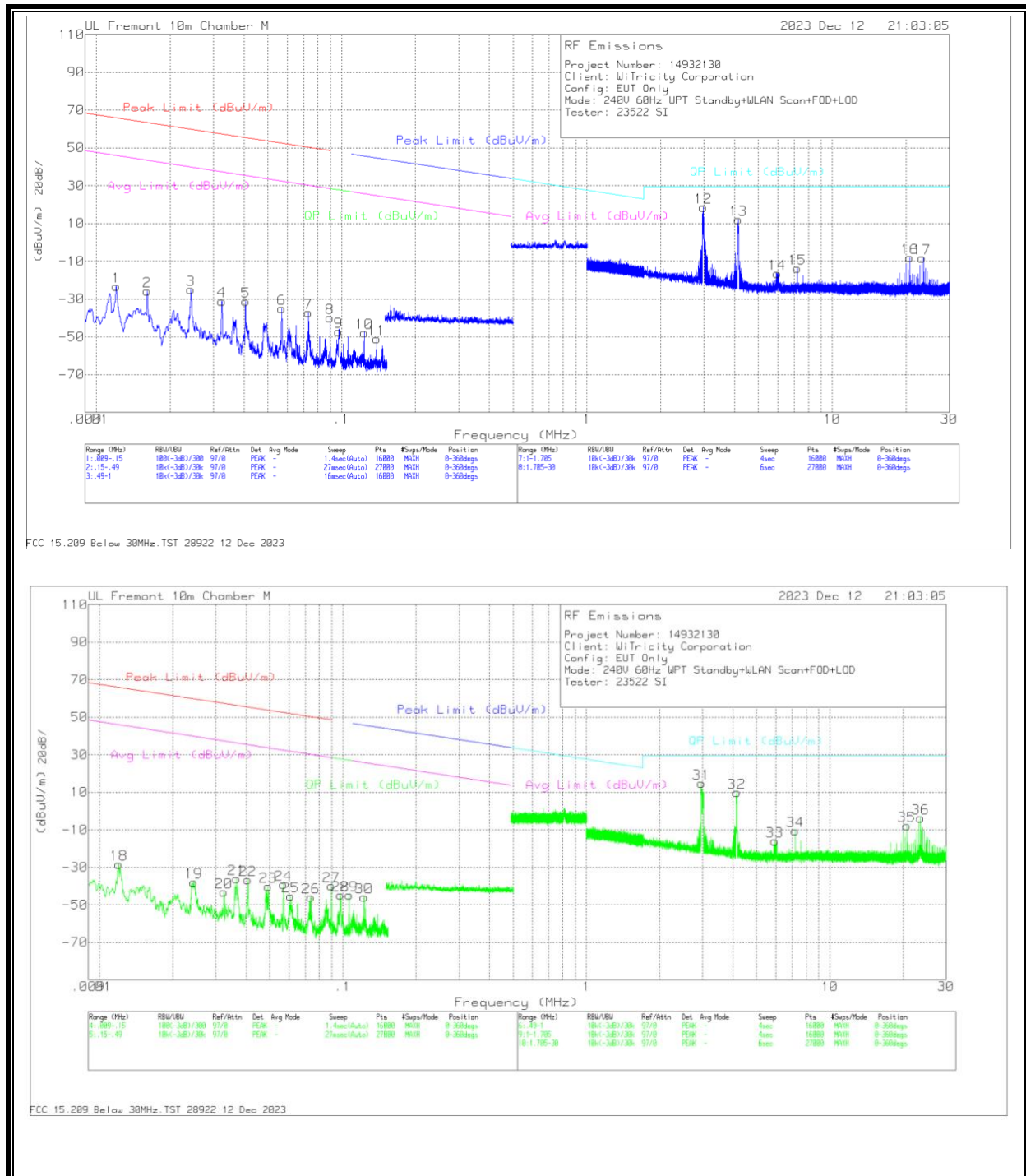
RESULTS

For Part 18 Test results, the raw reading is taken as dBuV and converted to dBuA/m through the appropriate antenna factor.

The FCC Part 18 limits used are the limits specified for consumer equipment operating on a non-ISM frequency of 15uV/m (23.52 dBuV/m) at 300m. The limit has been converted from dBuV/m to dBuA/m (-27.98 dBuA/m) and then extrapolated to a 10m distance using the McNulty formula referenced in ANSI C63.30. A table showing the extrapolation factors is provided in Section 7.1.

7.2. SPURIOUS EMISSIONS 9 kHz TO 30 MHz

7.2.1. CONFIGURATION 1 Part 15 Limit



DATA

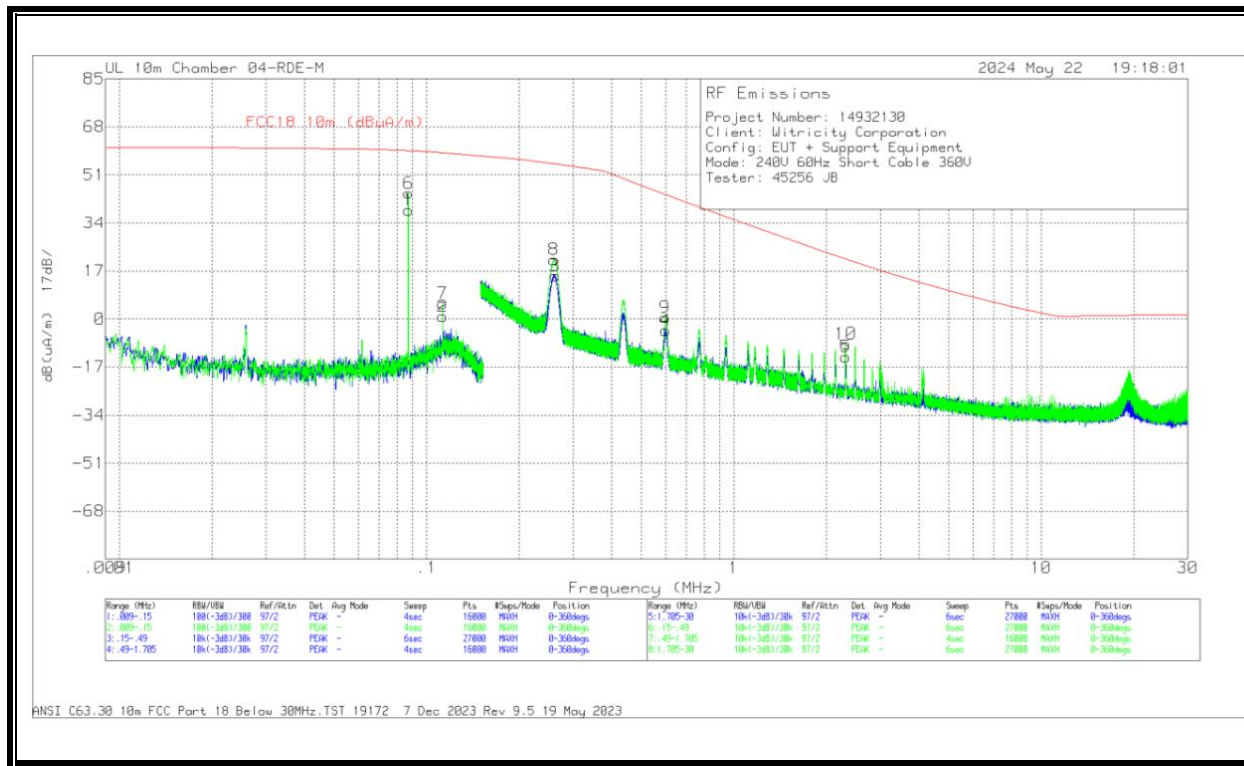
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | Loop Antenna 170013 dB/m | Cables (dB) | Distance Correction 3m to 300m | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | QP Limit (dBuV/m) | Margin (dB) | Avg Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Face |
|--------|-----------------|----------------------|-----|--------------------------|-------------|--------------------------------|----------------------------|---------------------|----------------|-------------------|-------------|--------------------|-------------|----------------|------|
| 1 | .012 | 26.15 | Pk | 60.1 | -29.5 | -80 | -23.25 | 65.97 | -89.22 | - | - | - | - | 0-360 | On |
| 2 | .0161 | 24.46 | Pk | 59.6 | -29.8 | -80 | -25.74 | 63.43 | -89.17 | - | - | - | - | 0-360 | On |
| 3 | .0243 | 26.48 | Pk | 58.6 | -30.1 | -80 | -25.02 | 59.87 | -84.89 | - | - | - | - | 0-360 | On |
| 4 | .0325 | 21.27 | Pk | 57.9 | -30.2 | -80 | -31.03 | 57.35 | -88.38 | - | - | - | - | 0-360 | On |
| 5 | .0406 | 21.66 | Pk | 57.3 | -30.2 | -80 | -31.24 | 55.4 | -86.64 | - | - | - | - | 0-360 | On |
| 6 | .057 | 18.55 | Pk | 56.6 | -30.2 | -80 | -35.05 | 52.47 | -87.52 | - | - | - | - | 0-360 | On |
| 7 | .0733 | 17.16 | Pk | 56 | -30.4 | -80 | -37.24 | 50.28 | -87.52 | - | - | - | - | 0-360 | On |
| 8 | .0897 | 14.63 | Pk | 55.9 | -30.3 | -80 | -39.77 | 48.53 | -88.3 | - | - | - | - | 0-360 | On |
| 9 | .0972 | 7.34 | Pk | 55.8 | -30.4 | -80 | -47.26 | - | - | 27.85 | -75.11 | - | - | 0-360 | On |
| 10 | .1237 | 6.56 | Pk | 55.9 | -30.3 | -80 | -47.84 | 45.78 | -93.62 | - | - | 25.78 | -73.62 | 0-360 | On |
| 11 | .1388 | 3.18 | Pk | 56 | -30.2 | -80 | -51.02 | 44.78 | -95.8 | - | - | 24.78 | -75.8 | 0-360 | On |
| 18 | .012 | 21.09 | Pk | 60.1 | -29.5 | -80 | -28.31 | 66.01 | -94.32 | - | - | - | - | 0-360 | Off |
| 19 | .0244 | 13.66 | Pk | 58.6 | -30.1 | -80 | -37.84 | 59.83 | -97.67 | - | - | - | - | 0-360 | Off |
| 20 | .0325 | 9.28 | Pk | 57.9 | -30.2 | -80 | -43.02 | 57.36 | -100.38 | - | - | - | - | 0-360 | Off |
| 21 | .0365 | 16.63 | Pk | 57.6 | -30.2 | -80 | -35.97 | 56.33 | -92.3 | - | - | - | - | 0-360 | Off |
| 22 | .0407 | 16.36 | Pk | 57.3 | -30.2 | -80 | -36.54 | 55.4 | -91.94 | - | - | - | - | 0-360 | Off |
| 23 | .0494 | 12.82 | Pk | 57.2 | -30.1 | -80 | -40.08 | 53.72 | -93.8 | - | - | - | - | 0-360 | Off |
| 24 | .057 | 14.47 | Pk | 56.6 | -30.2 | -80 | -39.13 | 52.47 | -91.6 | - | - | - | - | 0-360 | Off |
| 25 | .0611 | 8.5 | Pk | 56.3 | -30.2 | -80 | -45.4 | 51.87 | -97.27 | - | - | - | - | 0-360 | Off |
| 26 | .0738 | 8.47 | Pk | 56 | -30.4 | -80 | -45.93 | 50.23 | -96.16 | - | - | - | - | 0-360 | Off |
| 27 | .0897 | 14.56 | Pk | 55.9 | -30.3 | -80 | -39.84 | 48.53 | -88.37 | - | - | - | - | 0-360 | Off |
| 28 | .0976 | 9.87 | Pk | 55.8 | -30.4 | -80 | -44.73 | - | - | 27.82 | -72.55 | - | - | 0-360 | Off |
| 29 | .106 | 9.68 | Pk | 55.8 | -30.3 | -80 | -44.82 | - | - | 27.11 | -71.93 | - | - | 0-360 | Off |
| 30 | .1223 | 8.54 | Pk | 55.9 | -30.3 | -80 | -45.86 | 45.88 | -91.74 | - | - | 25.88 | -71.74 | 0-360 | Off |

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | Loop Antenna 170015 dB/m | Cables (dB) | Dist Corr 30m | Corrected Reading (dBuV/m) | 15.209 QP Limit (dBuV/m) | Margin (dB) | 15.223 Peak Limit (dBuV/m) | Margin (dB) | 15.223 Avg Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Face |
|--------|-----------------|----------------------|-----|--------------------------|-------------|---------------|----------------------------|--------------------------|-------------|----------------------------|-------------|---------------------------|-------------|----------------|------|
| 12 | 2.9773 | 50.19 | Pk | 38.8 | -30.4 | -40 | 18.59 | 29.5 | -10.91 | 43.52 | -24.93 | 23.52 | -4.93 | 0-360 | On |
| 13 | 4.1427 | 45.2 | Pk | 37.1 | -30.2 | -40 | 12.1 | 29.5 | -17.4 | 43.52 | -31.42 | 23.52 | -11.42 | 0-360 | On |
| 14 | 5.9641 | 18.15 | Pk | 35.3 | -29.9 | -40 | -16.45 | 29.5 | -45.95 | 43.52 | -59.97 | 23.52 | -39.97 | 0-360 | On |
| 15 | 7.1965 | 21.32 | Pk | 34.8 | -29.8 | -40 | -13.68 | 29.5 | -43.18 | 43.52 | -57.2 | 23.52 | -37.2 | 0-360 | On |
| 16 | 20.6906 | 27.78 | Pk | 34.3 | -30 | -40 | -7.92 | 29.5 | -37.42 | - | - | - | - | 0-360 | On |
| 17 | 23.2016 | 27.4 | Pk | 33.8 | -29.6 | -40 | -8.4 | 29.5 | -37.9 | - | - | - | - | 0-360 | On |
| 31 | 2.9647 | 46.42 | Pk | 38.8 | -30.4 | -40 | 14.82 | 29.5 | -14.68 | 43.52 | -28.7 | 23.52 | -8.7 | 0-360 | Off |
| 32 | 4.1468 | 43.11 | Pk | 37.1 | -30.2 | -40 | 10.01 | 29.5 | -19.49 | 43.52 | -33.51 | 23.52 | -13.51 | 0-360 | Off |
| 33 | 5.9347 | 18.71 | Pk | 35.3 | -29.9 | -40 | -15.89 | 29.5 | -45.39 | 43.52 | -59.41 | 23.52 | -39.41 | 0-360 | Off |
| 34 | 7.1986 | 24.4 | Pk | 34.8 | -29.8 | -40 | -10.6 | 29.5 | -40.1 | 43.52 | -54.12 | 23.52 | -34.12 | 0-360 | Off |
| 35 | 20.6749 | 27.81 | Pk | 34.3 | -29.9 | -40 | -7.79 | 29.5 | -37.29 | - | - | - | - | 0-360 | Off |
| 36 | 23.5988 | 32.44 | Pk | 33.7 | -29.8 | -40 | -3.66 | 29.5 | -33.16 | - | - | - | - | 0-360 | Off |

Pk - Peak detector

7.2.2. CONFIGURATION 2 Part 18 Limit

360V VA Output



DATA

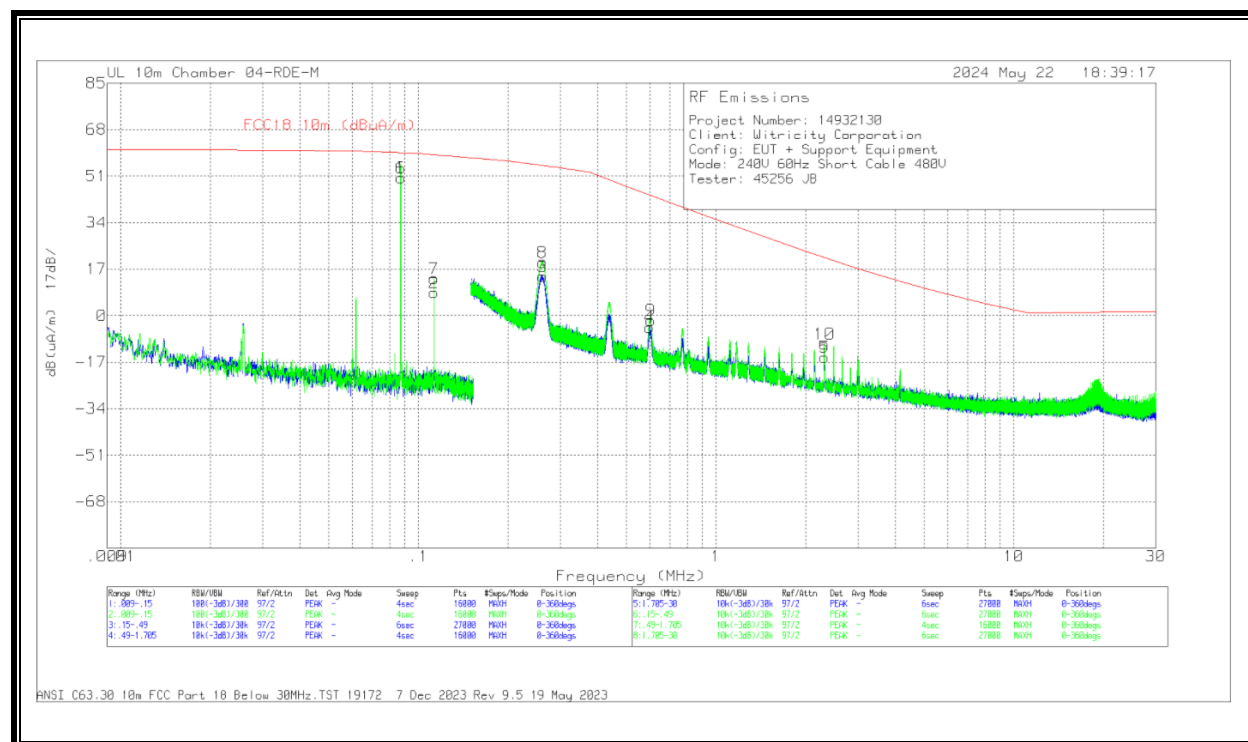
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | Loop Antenna H(ACF dB/m) | Cbl dB | Corrected Reading dB(uA/m) | FCC18 10m (dBuA/m) | Margin (dB) | Azimuth (Degs) | Face |
|--------|-----------------|----------------------|-----|--------------------------|--------|----------------------------|--------------------|-------------|----------------|----------|
| 1 | .0872 | 69.94 | Pk | 4.2 | -35.5 | 38.64 | 59.51 | -20.87 | 0-360 | Face On |
| 2 | .1127 | 32.26 | Pk | 4.1 | -35.5 | .86 | 58.75 | -57.89 | 0-360 | Face On |
| 6 | .0872 | 75.87 | Pk | 4.2 | -35.5 | 44.57 | 59.51 | -14.94 | 0-360 | Face Off |
| 7 | .1127 | 36.92 | Pk | 4.1 | -35.5 | 5.52 | 58.75 | -53.23 | 0-360 | Face Off |
| 3 | .2616 | 44.66 | Pk | 6 | -35.3 | 15.36 | 54.91 | -39.55 | 0-360 | Face On |
| 4 | .601 | 32.13 | Pk | -1 | -35.1 | -3.97 | 43.95 | -47.92 | 0-360 | Face On |
| 5 | 2.3097 | 31.74 | Pk | -10.9 | -34.2 | -13.36 | 21.19 | -34.55 | 0-360 | Face On |
| 8 | .2598 | 50.25 | Pk | 6.1 | -35.3 | 21.05 | 54.96 | -33.91 | 0-360 | Face Off |
| 9 | .5966 | 36.61 | Pk | -.9 | -35.1 | .61 | 44.08 | -43.47 | 0-360 | Face Off |
| 10 | 2.3097 | 36.36 | Pk | -10.9 | -34.2 | -8.74 | 21.19 | -29.93 | 0-360 | Face Off |

Pk - Peak detector

Marker 1 and 6 are the WPT fundamental signal.

dBuA/m conversion factor of -51.5 is included in the ACF

480V VA Output



DATA

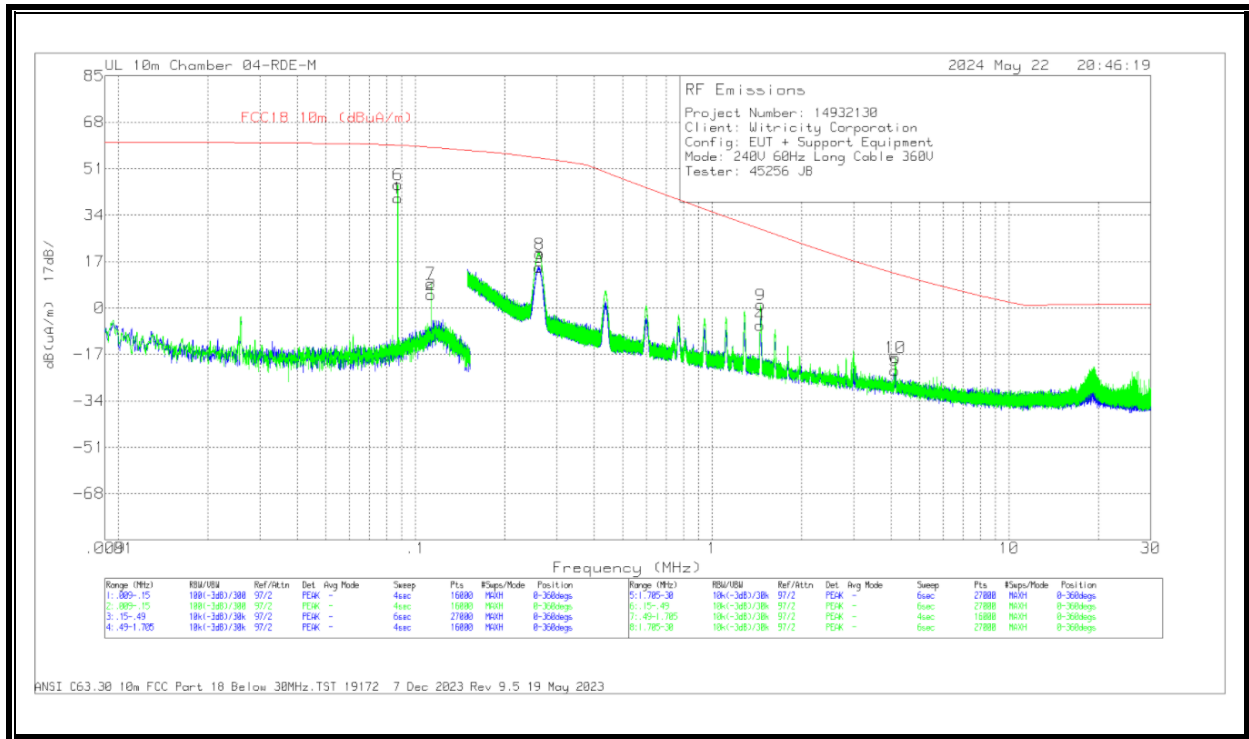
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | Loop Antenna H(ACF dB/m) | Cbl dB | Corrected Reading dB(uA/m) | FCC18 10m (dBuA/m) | Margin (dB) | Azimuth (Degs) | Face |
|--------|-----------------|----------------------|-----|--------------------------|--------|----------------------------|--------------------|-------------|----------------|----------|
| 1 | .0872 | 81.66 | Pk | 4.2 | -35.5 | 50.36 | 59.51 | -9.15 | 0-360 | Face On |
| 2 | .1127 | 39.78 | Pk | 4.1 | -35.5 | 8.38 | 58.75 | -50.37 | 0-360 | Face On |
| 6 | .0872 | 81.76 | Pk | 4.2 | -35.5 | 50.46 | 59.51 | -9.05 | 0-360 | Face Off |
| 7 | .1127 | 44.99 | Pk | 4.1 | -35.5 | 13.59 | 58.75 | -45.16 | 0-360 | Face Off |
| 3 | .2604 | 43.58 | Pk | 6.1 | -35.3 | 14.38 | 54.94 | -40.56 | 0-360 | Face On |
| 4 | .597 | 31.75 | Pk | -.9 | -35.1 | -4.25 | 44.07 | -48.32 | 0-360 | Face On |
| 5 | 2.3087 | 29.9 | Pk | -10.9 | -34.2 | -15.2 | 21.2 | -36.4 | 0-360 | Face On |
| 8 | .2608 | 48.67 | Pk | 6.1 | -35.3 | 19.47 | 54.93 | -35.46 | 0-360 | Face Off |
| 9 | .6022 | 34.27 | Pk | -1 | -35.1 | -1.83 | 43.91 | -45.74 | 0-360 | Face Off |
| 10 | 2.3087 | 34.71 | Pk | -10.9 | -34.2 | -10.39 | 21.2 | -31.59 | 0-360 | Face Off |

Pk - Peak detector

Marker 1 and 6 are the WPT fundamental signal.
dBuA/m conversion factor of -51.5 is included in the ACF

7.2.3. CONFIGURATION 3 Part 18 Limit

360V VA Output



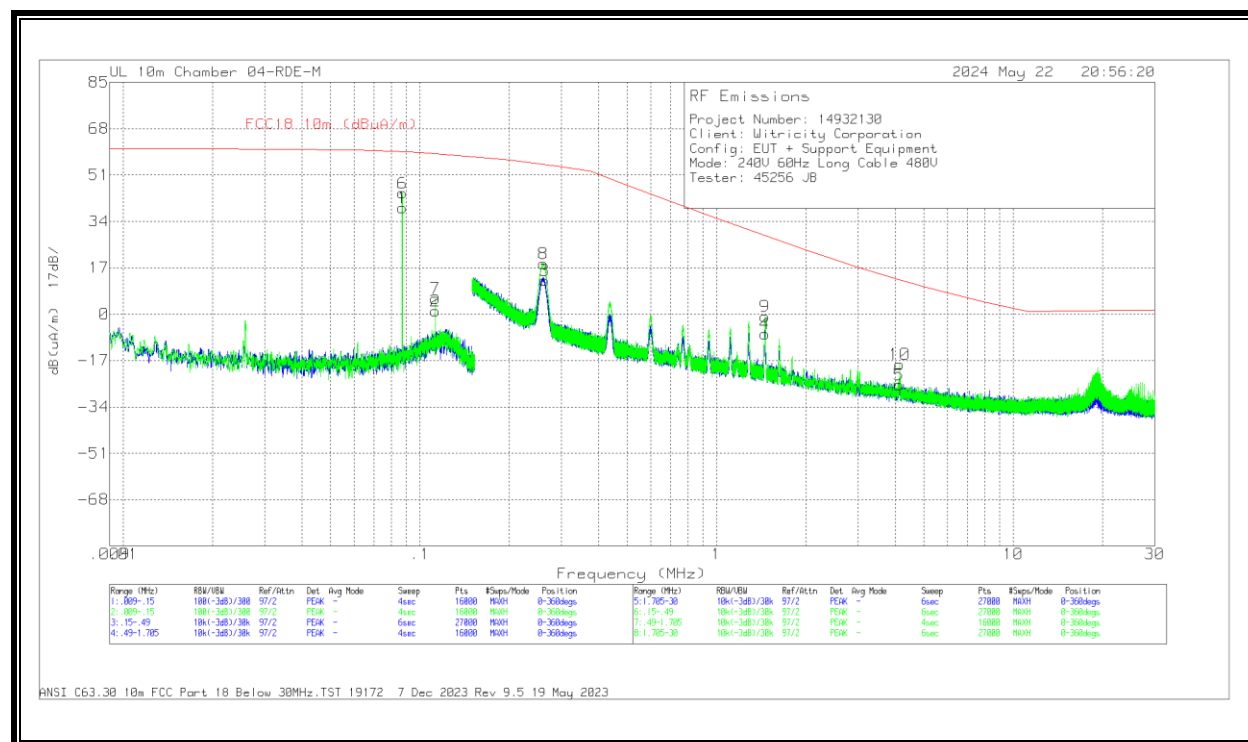
DATA

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | Loop Antenna H(ACF dB/m) | Cbl dB | Corrected Reading dB(uA/m) | FCC18 10m (dBuA/m) | Margin (dB) | Azimuth (Degs) | Face |
|--------|-----------------|----------------------|-----|--------------------------|--------|----------------------------|--------------------|-------------|----------------|----------|
| 1 | .0872 | 71.54 | Pk | 4.2 | -35.5 | 40.24 | 59.51 | -19.27 | 0-360 | Face On |
| 2 | .1127 | 36.15 | Pk | 4.1 | -35.5 | 4.75 | 58.75 | -54 | 0-360 | Face On |
| 6 | .0872 | 76.52 | Pk | 4.2 | -35.5 | 45.22 | 59.51 | -14.29 | 0-360 | Face Off |
| 7 | .1127 | 40.44 | Pk | 4.1 | -35.5 | 9.04 | 58.75 | -49.71 | 0-360 | Face Off |
| 3 | .2608 | 44.06 | Pk | 6.1 | -35.3 | 14.86 | 54.93 | -40.07 | 0-360 | Face On |
| 4 | 1.4506 | 35.5 | Pk | -7.2 | -34.6 | -6.3 | 28.81 | -35.11 | 0-360 | Face On |
| 5 | 4.1248 | 25.61 | Pk | -14.5 | -34.1 | -22.99 | 12.57 | -35.56 | 0-360 | Face On |
| 8 | .2621 | 49.06 | Pk | 6 | -35.3 | 19.76 | 54.9 | -35.14 | 0-360 | Face Off |
| 9 | 1.4552 | 42.99 | Pk | -7.3 | -34.6 | 1.09 | 28.76 | -27.67 | 0-360 | Face Off |
| 10 | 4.1458 | 30.56 | Pk | -14.5 | -34.2 | -18.14 | 12.5 | -30.64 | 0-360 | Face Off |

Pk - Peak detector

Marker 1 and 6 are the WPT fundamental signal.
dBuA/m conversion factor of -51.5 is included in the ACF

480V VA Output



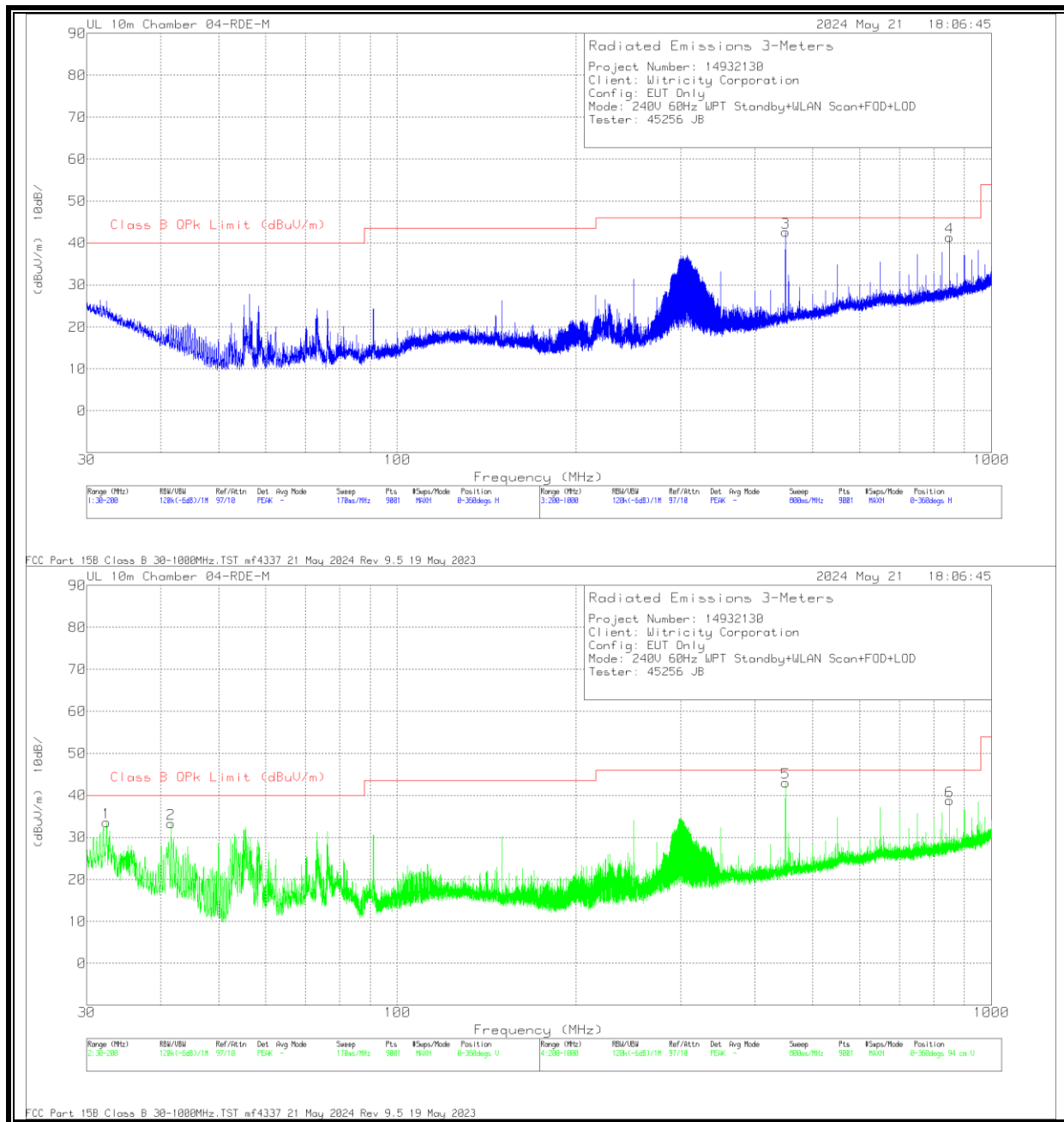
DATA

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | Loop Antenna H(ACF dB/m) | Cbl dB | Corrected Reading dB(uA/m) | FCC18 10m (dBuA/m) | Margin (dB) | Azimuth (Degs) | Face |
|--------|-----------------|----------------------|-----|--------------------------|--------|----------------------------|--------------------|-------------|----------------|----------|
| 1 | .0872 | 70.24 | Pk | 4.2 | -35.5 | 38.94 | 59.51 | -20.57 | 0-360 | Face On |
| 2 | .1127 | 32.6 | Pk | 4.1 | -35.5 | 1.2 | 58.75 | -57.55 | 0-360 | Face On |
| 6 | .0872 | 75.66 | Pk | 4.2 | -35.5 | 44.36 | 59.51 | -15.15 | 0-360 | Face Off |
| 7 | .1127 | 37.09 | Pk | 4.1 | -35.5 | 5.69 | 58.75 | -53.06 | 0-360 | Face Off |
| 3 | .2633 | 41.61 | Pk | 6 | -35.3 | 12.31 | 54.87 | -42.56 | 0-360 | Face On |
| 4 | 1.4589 | 34.75 | Pk | -7.3 | -34.6 | -7.15 | 28.71 | -35.86 | 0-360 | Face On |
| 5 | 4.1217 | 22.71 | Pk | -14.5 | -34.1 | -25.89 | 12.58 | -38.47 | 0-360 | Face On |
| 8 | .2606 | 47.69 | Pk | 6.1 | -35.3 | 18.49 | 54.94 | -36.45 | 0-360 | Face Off |
| 9 | 1.4544 | 40.91 | Pk | -7.2 | -34.6 | -.89 | 28.76 | -29.65 | 0-360 | Face Off |
| 10 | 4.1437 | 30.39 | Pk | -14.5 | -34.2 | -18.31 | 12.51 | -30.82 | 0-360 | Face Off |

Marker 1 and 6 are the WPT fundamental signal.
dBuA/m conversion factor of -51.5 is included in the ACF

7.3. SPURIOUS EMISSIONS 30 MHz TO 1 GHz

7.3.1. CONFIGURATION 1 Part 15 Limit



DATA

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | 80813 ACF (dB/m) | Cbi (dB) | Corrected Reading (dBuV/m) | Class B QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|------------------|----------|----------------------------|----------------------------|-------------|----------------|-------------|----------|
| 1 | 32.4178 | 37.61 | Pk | 25.5 | -29.5 | 33.61 | 40 | -6.39 | 0-360 | 94 | V |
| 2 | 41.5979 | 44.31 | Pk | 18.6 | -29.6 | 33.31 | 40 | -6.69 | 0-360 | 94 | V |
| 3 | 449.994 | 48 | Qp | 22.7 | -28.1 | 42.6 | 46.02 | -3.42 | 158 | 191 | H |
| 4 | 849.991 | 41.77 | Qp | 27.6 | -26.6 | 42.77 | 46.02 | -3.25 | 241 | 102 | H |
| 5 | 449.997 | 49.98 | Qp | 22.7 | -28.1 | 44.58 | 46.02 | -1.44 | 107 | 231 | V |
| 6 | 850.045 | 37.75 | Pk | 27.6 | -26.6 | 38.75 | 46.02 | -7.27 | 0-360 | 199 | V |

Pk - Peak detector

Qp - Quasi-Peak detector

8. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

§ 18.307 For the following equipment, when 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 shall not exceed the limits in the following table. Compliance with the provisions of this paragraph shall be based on the measurements of the radio frequency voltage between each power line and ground at the power terminal using a 50 μ H/50 ohms line impedance stabilization network (LISN).

§ 18.307 (b) All other Part 18 consumer devices:

§15.207 (a)

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

*Decreases with the logarithm of the frequency.

TEST PROCEDURE

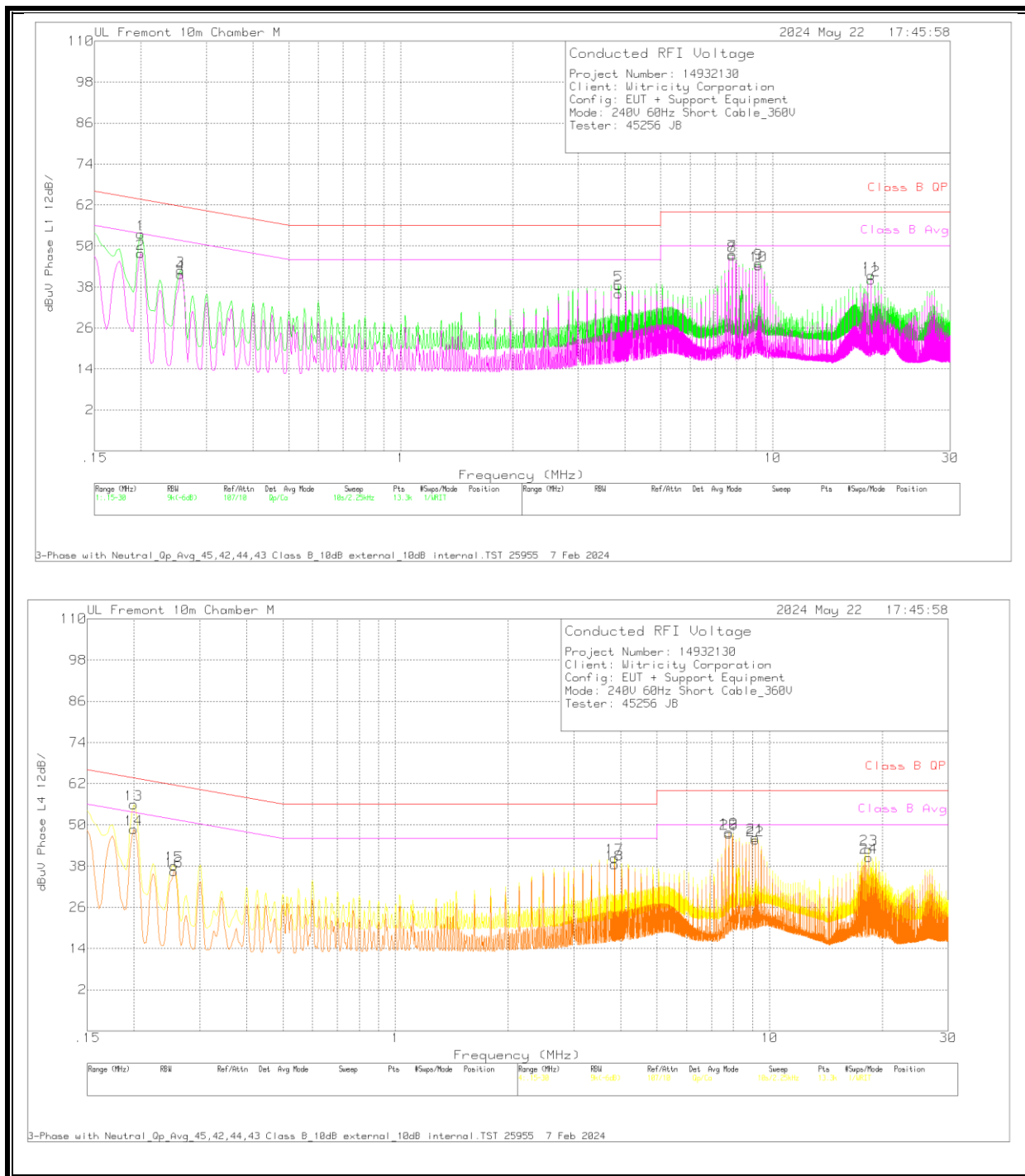
Tested in accordance with ANSI C63.10 & ANSI 63.30

RESULTS

8.1. 240 V 60Hz Single Phase

8.1.1. CONFIGURATION 2 360V VA Output

RESULTS



WORST EMISSIONS

| Range 1: Phase L1 .15 - 30MHz | | | | | | | | | | | |
|-------------------------------|-----------------|----------------------|-----|-------------|-----------------------------|------------|------------------------|-------------|-----------------|------------|----------------|
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | 175763 LISN | Limiter 207956_plus 10dBpad | Cable (dB) | Corrected Reading dBuV | Class B Avg | Avg Margin (dB) | Class B QP | QP Margin (dB) |
| 2 | .1995 | 28.18 | Ca | .2 | 19.4 | 0 | 47.78 | 53.63 | -5.85 | - | - |
| 4 | .2558 | 22.23 | Ca | .1 | 19.4 | 0 | 41.73 | 51.57 | -9.84 | - | - |
| 6 | 3.849 | 16.55 | Ca | 0 | 19.4 | .1 | 36.05 | 46 | -9.95 | - | - |
| 8 | 7.7843 | 27.72 | Ca | 0 | 19.3 | .1 | 47.12 | 50 | -2.88 | - | - |
| 10 | 9.1523 | 24.91 | Ca | 0 | 19.3 | .1 | 44.31 | 50 | -5.69 | - | - |
| 12 | 18.3998 | 20.29 | Ca | .1 | 19.4 | .3 | 40.09 | 50 | -9.91 | - | - |
| 1 | .1995 | 33.86 | Qp | .2 | 19.4 | 0 | 53.46 | - | - | 63.63 | -10.17 |
| 3 | .2558 | 23.36 | Qp | .1 | 19.4 | 0 | 42.86 | - | - | 61.57 | -18.71 |
| 5 | 3.849 | 19.08 | Qp | 0 | 19.4 | .1 | 38.58 | - | - | 56 | -17.42 |
| 7 | 7.7843 | 28.14 | Qp | 0 | 19.3 | .1 | 47.54 | - | - | 60 | -12.46 |
| 9 | 9.1523 | 25.62 | Qp | 0 | 19.3 | .1 | 45.02 | - | - | 60 | -14.98 |
| 11 | 18.3998 | 21.57 | Qp | .1 | 19.4 | .3 | 41.37 | - | - | 60 | -18.63 |

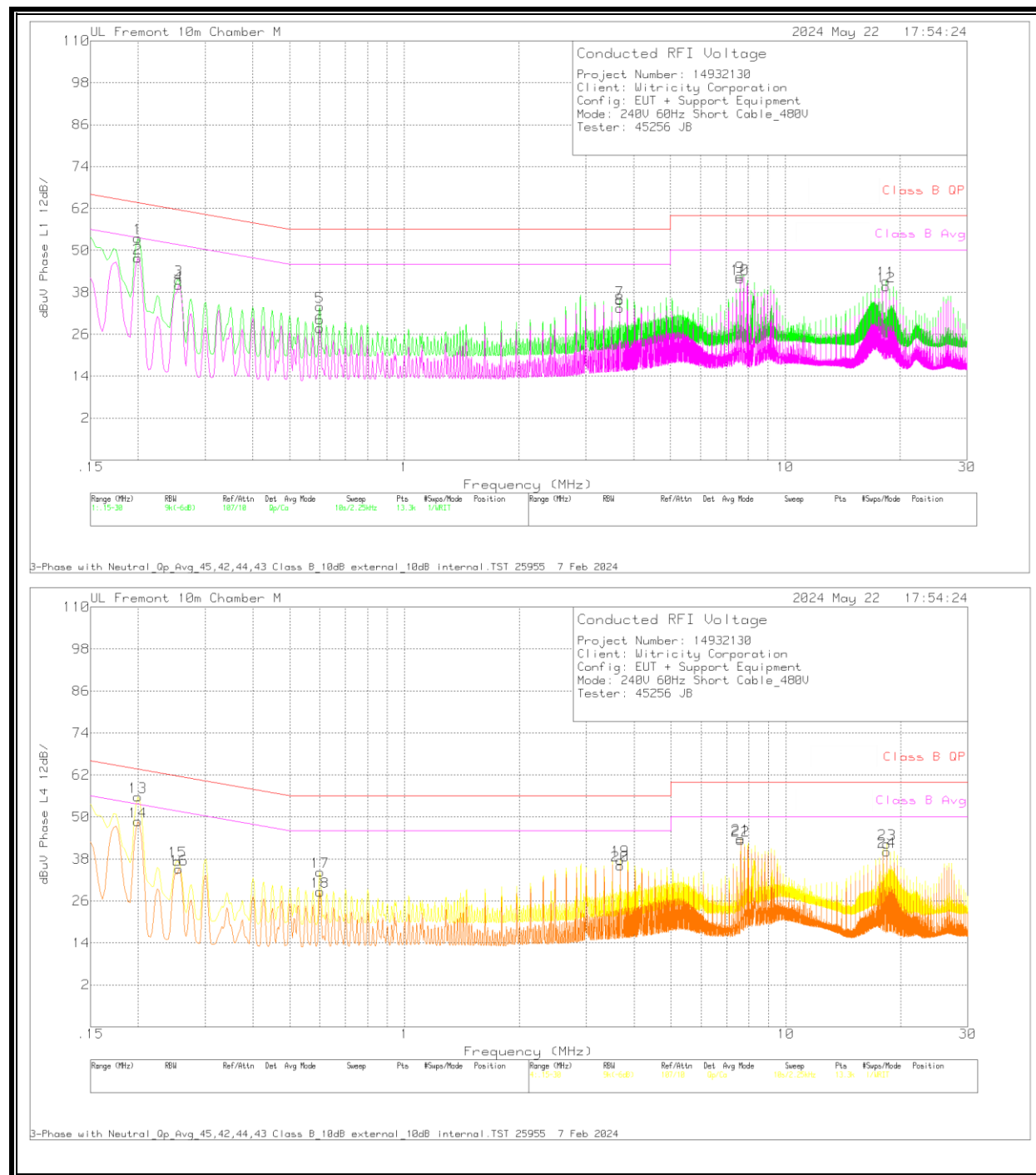
| Range 4: Phase L4 .15 - 30MHz | | | | | | | | | | | |
|-------------------------------|-----------------|----------------------|-----|-------------|-----------------------------|------------|------------------------|-------------|-----------------|------------|----------------|
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | 175761 LISN | Limiter 207956_plus 10dBpad | Cable (dB) | Corrected Reading dBuV | Class B Avg | Avg Margin (dB) | Class B QP | QP Margin (dB) |
| 14 | .1995 | 29.12 | Ca | .2 | 19.4 | 0 | 48.72 | 53.63 | -4.91 | - | - |
| 16 | .2558 | 17.03 | Ca | .1 | 19.4 | 0 | 36.53 | 51.57 | -15.04 | - | - |
| 18 | 3.849 | 19 | Ca | 0 | 19.4 | .1 | 38.5 | 46 | -7.5 | - | - |
| 20 | 7.7843 | 28.04 | Ca | 0 | 19.3 | .1 | 47.44 | 50 | -2.56 | - | - |
| 22 | 9.1523 | 26.17 | Ca | 0 | 19.3 | .1 | 45.57 | 50 | -4.43 | - | - |
| 24 | 18.3998 | 20.74 | Ca | .1 | 19.4 | .3 | 40.54 | 50 | -9.46 | - | - |
| 13 | .1995 | 36.37 | Qp | .2 | 19.4 | 0 | 55.97 | - | - | 63.63 | -7.66 |
| 15 | .2558 | 18.68 | Qp | .1 | 19.4 | 0 | 38.18 | - | - | 61.57 | -23.39 |
| 17 | 3.849 | 20.9 | Qp | 0 | 19.4 | .1 | 40.4 | - | - | 56 | -15.6 |
| 19 | 7.7843 | 28.44 | Qp | 0 | 19.3 | .1 | 47.84 | - | - | 60 | -12.16 |
| 21 | 9.1523 | 26.89 | Qp | 0 | 19.3 | .1 | 46.29 | - | - | 60 | -13.71 |
| 23 | 18.3998 | 23.14 | Qp | .1 | 19.4 | .3 | 42.94 | - | - | 60 | -17.06 |

Qp - Quasi-Peak detector

Ca - CISPR average detection

8.1.2. CONFIGURATION 2 480V VA Output

RESULTS



WORST EMISSIONS

| Range 1: Phase L1 .15 - 30MHz | | | | | | | | | | | |
|-------------------------------|-----------------|----------------------|-----|-------------|-----------------------------|------------|------------------------|-------------|-----------------|------------|----------------|
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | 175763 LISN | Limiter 207956_plus 10dBpad | Cable (dB) | Corrected Reading dBuV | Class B Avg | Avg Margin (dB) | Class B QP | QP Margin (dB) |
| 2 | .1995 | 28.2 | Ca | .2 | 19.4 | 0 | 47.8 | 53.63 | -5.83 | - | - |
| 4 | .2558 | 20.51 | Ca | .1 | 19.4 | 0 | 40.01 | 51.57 | -11.56 | - | - |
| 6 | .6 | 8.35 | Ca | 0 | 19.3 | .1 | 27.75 | 46 | -18.25 | - | - |
| 8 | 3.678 | 14.01 | Ca | 0 | 19.4 | .1 | 33.51 | 46 | -12.49 | - | - |
| 10 | 7.6133 | 22.5 | Ca | 0 | 19.3 | .1 | 41.9 | 50 | -8.1 | - | - |
| 12 | 18.3998 | 19.88 | Ca | .1 | 19.4 | .3 | 39.68 | 50 | -10.32 | - | - |
| 1 | .1995 | 33.95 | Qp | .2 | 19.4 | 0 | 53.55 | - | - | 63.63 | -10.08 |
| 3 | .2558 | 22.09 | Qp | .1 | 19.4 | 0 | 41.59 | - | - | 61.57 | -19.98 |
| 5 | .6 | 14.54 | Qp | 0 | 19.3 | .1 | 33.94 | - | - | 56 | -22.06 |
| 7 | 3.678 | 16.2 | Qp | 0 | 19.4 | .1 | 35.7 | - | - | 56 | -20.3 |
| 9 | 7.6133 | 23.23 | Qp | 0 | 19.3 | .1 | 42.63 | - | - | 60 | -17.37 |
| 11 | 18.3998 | 21.5 | Qp | .1 | 19.4 | .3 | 41.3 | - | - | 60 | -18.7 |

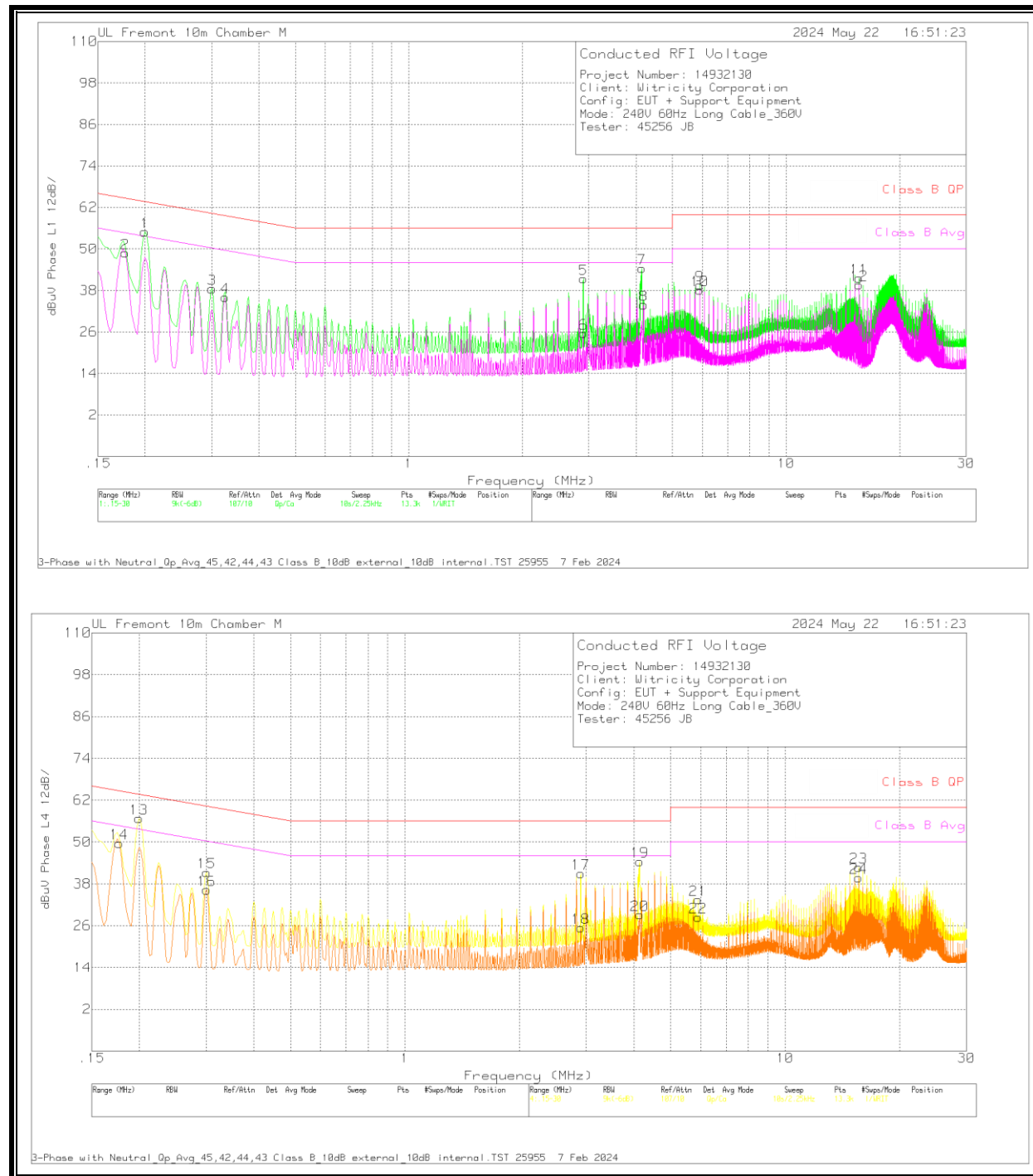
| Range 4: Phase L4 .15 - 30MHz | | | | | | | | | | | |
|-------------------------------|-----------------|----------------------|-----|-------------|-----------------------------|------------|------------------------|----------------------|-----------------|------------|----------------|
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | 175761 LISN | Limiter 207956_plus 10dBpad | Cable (dB) | Corrected Reading dBuV | CISPR 32 Class B Avg | Avg Margin (dB) | Class B QP | QP Margin (dB) |
| 14 | .1995 | 29.11 | Ca | .2 | 19.4 | 0 | 48.71 | 53.63 | -4.92 | - | - |
| 16 | .2558 | 15.62 | Ca | .1 | 19.4 | 0 | 35.12 | 51.57 | -16.45 | - | - |
| 18 | .6 | 9.23 | Ca | 0 | 19.3 | .1 | 28.63 | 46 | -17.37 | - | - |
| 20 | 3.678 | 16.58 | Ca | 0 | 19.4 | .1 | 36.08 | 46 | -9.92 | - | - |
| 22 | 7.6133 | 23.91 | Ca | 0 | 19.3 | .1 | 43.31 | 50 | -6.69 | - | - |
| 24 | 18.3998 | 20.29 | Ca | .1 | 19.4 | .3 | 40.09 | 50 | -9.91 | - | - |
| 13 | .1995 | 36.15 | Qp | .2 | 19.4 | 0 | 55.75 | - | - | 63.63 | -7.88 |
| 15 | .2535 | 17.93 | Qp | .1 | 19.4 | 0 | 37.43 | - | - | 61.64 | -24.21 |
| 17 | .6 | 14.89 | Qp | 0 | 19.3 | .1 | 34.29 | - | - | 56 | -21.71 |
| 19 | 3.678 | 18.21 | Qp | 0 | 19.4 | .1 | 37.71 | - | - | 56 | -18.29 |
| 21 | 7.6133 | 24.39 | Qp | 0 | 19.3 | .1 | 43.79 | - | - | 60 | -16.21 |
| 23 | 18.3998 | 22.51 | Qp | .1 | 19.4 | .3 | 42.31 | - | - | 60 | -17.69 |

Qp - Quasi-Peak detector

Ca - CISPR average detection

8.1.3. CONFIGURATION 3 360V VA Output

RESULTS



WORST EMISSIONS

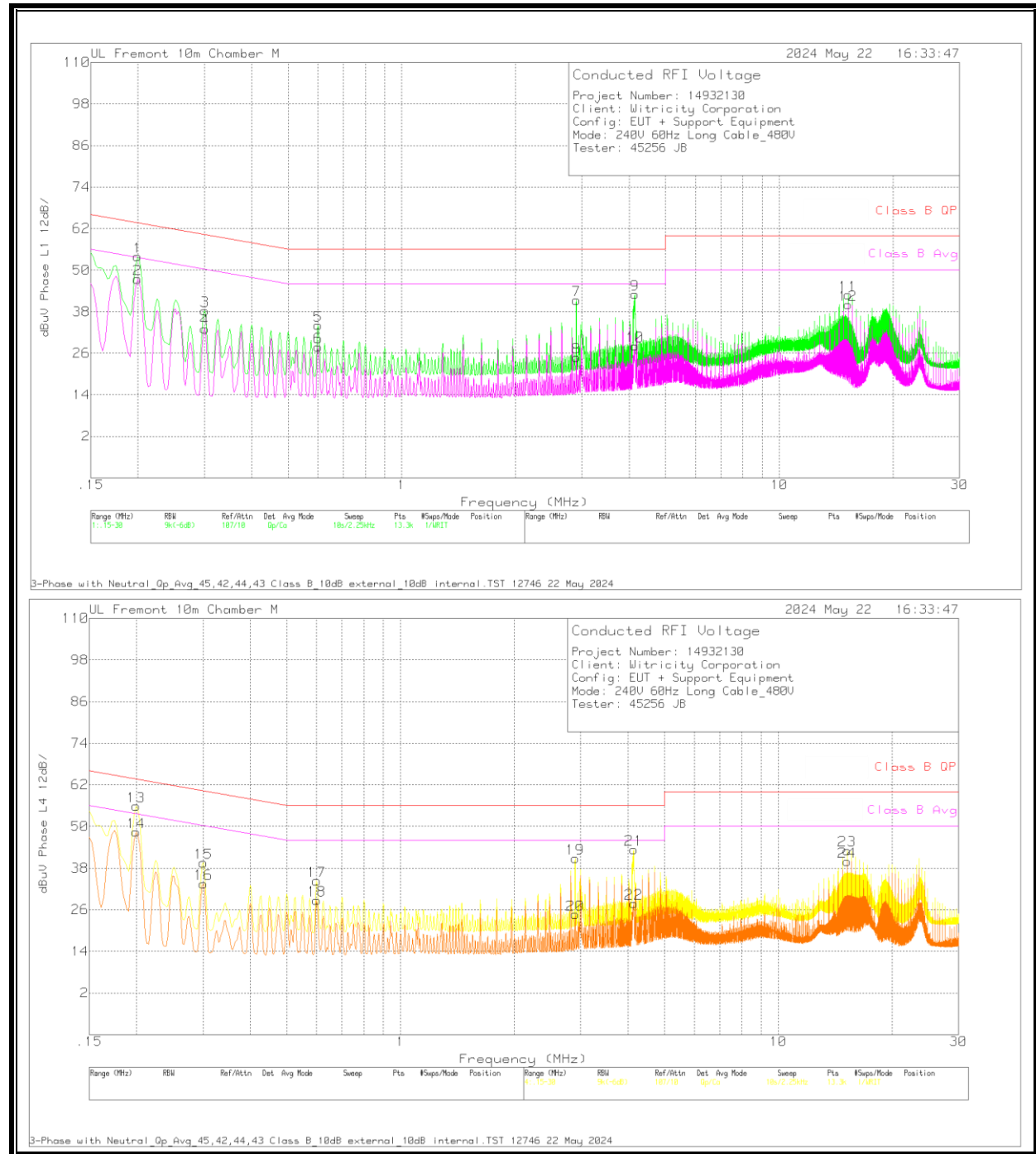
| Range 1: Phase L1 .15 - 30MHz | | | | | | | | | | | |
|-------------------------------|-----------------|----------------------|-----|-------------|-----------------------------|------------|------------------------|-------------|-----------------|------------|----------------|
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | 175763 LISN | Limiter 207956 plus 10dBpad | Cable (dB) | Corrected Reading dBuV | Class B Avg | Avg Margin (dB) | Class B QP | QP Margin (dB) |
| 2 | .177 | 29.23 | Ca | .2 | 19.4 | 0 | 48.83 | 54.63 | -5.8 | - | - |
| 4 | .3255 | 16.54 | Ca | .1 | 19.4 | 0 | 36.04 | 49.57 | -13.53 | - | - |
| 6 | 2.8995 | 6.18 | Ca | 0 | 19.3 | .1 | 25.58 | 46 | -20.42 | - | - |
| 8 | 4.191 | 14.36 | Ca | 0 | 19.4 | .1 | 33.86 | 46 | -12.14 | - | - |
| 10 | 5.9033 | 18.61 | Ca | 0 | 19.4 | .1 | 38.11 | 50 | -11.89 | - | - |
| 12 | 15.6008 | 20.03 | Ca | .1 | 19.3 | .2 | 39.63 | 50 | -10.37 | - | - |
| 1 | .1995 | 35.34 | Qp | .2 | 19.4 | 0 | 54.94 | - | - | 63.63 | -8.69 |
| 3 | .3008 | 18.99 | Qp | .1 | 19.4 | 0 | 38.49 | - | - | 60.22 | -21.73 |
| 5 | 2.8995 | 21.99 | Qp | 0 | 19.3 | .1 | 41.39 | - | - | 56 | -14.61 |
| 7 | 4.1438 | 24.92 | Qp | 0 | 19.4 | .1 | 44.42 | - | - | 56 | -11.58 |
| 9 | 5.9033 | 20.04 | Qp | 0 | 19.4 | .1 | 39.54 | - | - | 60 | -20.46 |
| 11 | 15.6008 | 21.97 | Qp | .1 | 19.3 | .2 | 41.57 | - | - | 60 | -18.43 |

| Range 4: Phase L4 .15 - 30MHz | | | | | | | | | | | |
|-------------------------------|-----------------|----------------------|-----|-------------|-----------------------------|------------|------------------------|-------------|-----------------|------------|----------------|
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | 175761 LISN | Limiter 207956 plus 10dBpad | Cable (dB) | Corrected Reading dBuV | Class B Avg | Avg Margin (dB) | Class B QP | QP Margin (dB) |
| 14 | .177 | 30.04 | Ca | .2 | 19.4 | 0 | 49.64 | 54.63 | -4.99 | - | - |
| 16 | .3008 | 16.77 | Ca | .1 | 19.4 | 0 | 36.27 | 50.22 | -13.95 | - | - |
| 18 | 2.8995 | 6.01 | Ca | 0 | 19.3 | .1 | 25.41 | 46 | -20.59 | - | - |
| 20 | 4.1438 | 9.64 | Ca | 0 | 19.4 | .1 | 29.14 | 46 | -16.86 | - | - |
| 22 | 5.901 | 8.94 | Ca | 0 | 19.4 | .1 | 28.44 | 50 | -21.56 | - | - |
| 24 | 15.6008 | 20.16 | Ca | .1 | 19.3 | .2 | 39.76 | 50 | -10.24 | - | - |
| 13 | .1995 | 37.15 | Qp | .2 | 19.4 | 0 | 56.75 | - | - | 63.63 | -6.88 |
| 15 | .3008 | 21.81 | Qp | .1 | 19.4 | 0 | 41.31 | - | - | 60.22 | -18.91 |
| 17 | 2.8995 | 21.58 | Qp | 0 | 19.3 | .1 | 40.98 | - | - | 56 | -15.02 |
| 19 | 4.1438 | 24.94 | Qp | 0 | 19.4 | .1 | 44.44 | - | - | 56 | -11.56 |
| 21 | 5.901 | 13.96 | Qp | 0 | 19.4 | .1 | 33.46 | - | - | 60 | -26.54 |
| 23 | 15.6008 | 23.15 | Qp | .1 | 19.3 | .2 | 42.75 | - | - | 60 | -17.25 |

Qp - Quasi-Peak detector
Ca - CISPR average detection

8.1.4. CONFIGURATION 3 480V VA Output

LINE 1 RESULTS



WORST EMISSIONS

| Range 1: Phase L1 .15 - 30MHz | | | | | | | | | | | |
|-------------------------------|-----------------|----------------------|-----|-------------|-----------------------------|------------|------------------------|-------------|-----------------|------------|----------------|
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | 175763 LISN | Limiter 207956 plus 10dBpad | Cable (dB) | Corrected Reading dBuV | Class B Avg | Avg Margin (dB) | Class B QP | QP Margin (dB) |
| 2 | .1995 | 27.85 | Ca | .2 | 19.4 | 0 | 47.45 | 53.63 | -6.18 | - | - |
| 4 | .3008 | 13.57 | Ca | .1 | 19.4 | 0 | 33.07 | 50.22 | -17.15 | - | - |
| 6 | .6 | 8.45 | Ca | 0 | 19.3 | .1 | 27.85 | 46 | -18.15 | - | - |
| 8 | 2.8995 | 5.42 | Ca | 0 | 19.3 | .1 | 24.82 | 46 | -21.18 | - | - |
| 10 | 4.1438 | 8.6 | Ca | 0 | 19.4 | .1 | 28.1 | 46 | -17.9 | - | - |
| 12 | 15.2003 | 20.42 | Ca | .1 | 19.3 | .2 | 40.02 | 50 | -9.98 | - | - |
| 1 | .1995 | 34.33 | Qp | .2 | 19.4 | 0 | 53.93 | - | - | 63.63 | -9.7 |
| 3 | .3008 | 18.79 | Qp | .1 | 19.4 | 0 | 38.29 | - | - | 60.22 | -21.93 |
| 5 | .6 | 14.65 | Qp | 0 | 19.3 | .1 | 34.05 | - | - | 56 | -21.95 |
| 7 | 2.8995 | 21.94 | Qp | 0 | 19.3 | .1 | 41.34 | - | - | 56 | -14.66 |
| 9 | 4.1415 | 23.5 | Qp | 0 | 19.4 | .1 | 43 | - | - | 56 | -13 |
| 11 | 15.2003 | 23.25 | Qp | .1 | 19.3 | .2 | 42.85 | - | - | 60 | -17.15 |

| Range 4: Phase L4 .15 - 30MHz | | | | | | | | | | | |
|-------------------------------|-----------------|----------------------|-----|-------------|-----------------------------|------------|------------------------|-------------|-----------------|------------|----------------|
| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | 175761 LISN | Limiter 207956 plus 10dBpad | Cable (dB) | Corrected Reading dBuV | Class B Avg | Avg Margin (dB) | Class B QP | QP Margin (dB) |
| 14 | .1995 | 28.82 | Ca | .2 | 19.4 | 0 | 48.42 | 53.63 | -5.21 | - | - |
| 16 | .3008 | 14.02 | Ca | .1 | 19.4 | 0 | 33.52 | 50.22 | -16.7 | - | - |
| 18 | .6 | 9.35 | Ca | 0 | 19.3 | .1 | 28.75 | 46 | -17.25 | - | - |
| 20 | 2.8995 | 5.22 | Ca | 0 | 19.3 | .1 | 24.62 | 46 | -21.38 | - | - |
| 22 | 4.1415 | 8.3 | Ca | 0 | 19.4 | .1 | 27.8 | 46 | -18.2 | - | - |
| 24 | 15.2003 | 20.26 | Ca | .1 | 19.3 | .2 | 39.86 | 50 | -10.14 | - | - |
| 13 | .1995 | 36.29 | Qp | .2 | 19.4 | 0 | 55.89 | - | - | 63.63 | -7.74 |
| 15 | .3008 | 20.05 | Qp | .1 | 19.4 | 0 | 39.55 | - | - | 60.22 | -20.67 |
| 17 | .6 | 14.92 | Qp | 0 | 19.3 | .1 | 34.32 | - | - | 56 | -21.68 |
| 19 | 2.8995 | 21.4 | Qp | 0 | 19.3 | .1 | 40.8 | - | - | 56 | -15.2 |
| 21 | 4.1415 | 23.89 | Qp | 0 | 19.4 | .1 | 43.39 | - | - | 56 | -12.61 |
| 23 | 15.2003 | 23.51 | Qp | .1 | 19.3 | .2 | 43.11 | - | - | 60 | -16.89 |

Qp - Quasi-Peak detector
Ca - CISPR average detection

9. SETUP PHOTOS

Refer to 14932130 EP1 for setup photos.

END OF REPORT