



FCC PART 18

TEST REPORT

For

Etherdyne Technologies, Inc.

2933 Bunker Hill, STE 210,
Santa Clara, CA 95054, USA

FCC ID: 2BP49-ETI0001

Report Type: Original Report	Product Type: Magnetic Resonant Wireless Power Transfer Transmitter and Power Receivers for Lighting
Prepared By	Felix Lugo Test Engineer 
Report Number	R2506095-18
Report Date	2025-10-24
Reviewed By	Giriraj Gurjar EMC Lead 
Bay Area Compliance Laboratories Corp. 1274 Anvilwood Ave Sunnyvale, CA 94089, USA Tel: (408) 732-9162, Fax: (408) 732 9164	



Note: This test report was prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. This test report **shall not** be used by the customer to claim product certification, approval, or endorsement by A2LA or any agency of the United States Government or any foreign government.

* This test report may contain data and test methods that are not covered by BACL's scope of accreditation as of the test report date shown above. These items are marked within the test report text with an asterisk "*"

TABLE OF CONTENTS

1	GENERAL INFORMATION.....	6
1.1	GENERAL STATEMENTS.....	6
1.2	PURPOSE.....	6
1.3	AGENT FOR THE RESPONSIBLE PARTY	7
1.4	RESPONSIBLE PARTY	7
1.5	PRODUCT DESCRIPTION OF THE EQUIPMENT UNDER TEST (EUT).....	7
1.6	MECHANICAL DESCRIPTION OF THE EUT	7
1.7	EUT INPUT POWER.....	7
1.8	RELATED SUBMITTAL(S)/GRANT(S)	7
1.9	TEST FACILITY REGISTRATIONS	8
1.10	TEST FACILITY ACCREDITATIONS.....	8
1.11	MEASUREMENT UNCERTAINTIES.....	12
2	EUT TEST CONFIGURATION	13
2.1	JUSTIFICATION.....	13
2.2	EUT EXERCISING SOFTWARE	13
2.3	BACL EMI MEASUREMENT SOFTWARE.....	13
2.4	EQUIPMENT MODIFICATIONS	13
2.5	SPECIAL EQUIPMENT	13
2.6	EUT MODE OF OPERATION	13
2.7	METHOD OF MONITORING	13
2.8	LOCAL SUPPORT EQUIPMENT	14
2.9	REMOTE SUPPORT EQUIPMENT	14
2.10	EUT INTERNAL CONFIGURATION DETAILS.....	14
2.11	EXTERNAL I/O CABLING LIST AND DETAILS	14
2.12	EUT POWER SUPPLY LIST AND DETAILS.....	14
3	SUMMARY OF TEST RESULTS	15
4	FCC §18.305 – RADIATED EMISSIONS.....	16
4.1	APPLICABLE STANDARDS	16
4.2	EUT SETUP.....	18
4.3	TEST PROCEDURE	18
4.4	CORRECTED AMPLITUDE AND MARGIN CALCULATIONS	19
4.5	TEST SETUP BLOCK DIAGRAM.....	20
4.6	TEST EQUIPMENT LIST AND DETAILS	21
4.7	ENVIRONMENTAL CONDITIONS	21
4.8	SUMMARY OF TEST RESULTS.....	22
4.9	RADIATED EMISSIONS TEST PLOT AND DATA.....	23
5	FCC §18.307 – CONDUCTED EMISSIONS	30
5.1	APPLICABLE STANDARDS	30
5.2	EUT SETUP.....	31
5.3	TEST PROCEDURE	31
5.4	CORRECTED AMPLITUDE & MARGIN CALCULATION	31
5.5	TEST SETUP BLOCK DIAGRAM.....	32
5.6	TEST EQUIPMENT LIST AND DETAILS	33
5.7	ENVIRONMENTAL CONDITIONS	33
5.8	SUMMARY OF TEST RESULTS.....	34
5.9	CONDUCTED EMISSIONS TEST PLOTS AND DATA	35
6	FCC §18.313, §2.1091, §1.1310– RF EXPOSURE	39
6.1	APPLICABLE STANDARDS	39
6.2	MPE PREDICTION	40

6.3	TEST EQUIPMETN LIST AND DETAILS	40
6.4	ENVIRONMENTAL CONDITIONS	40
6.5	MPE RESULT.....	41
7	ANNEX A (NORMATIVE) – EUT PHOTOGRAPHS	42
8	ANNEX B (NORMATIVE) – LABELING INFORMATION.....	43
8.1	FCC LABELING INFORMATION	43
9	ANNEX C (NORMATIVE) – PRODUCT LABEL	44
10	ANNEX D (NORMATIVE) – INTERNAL PHOTOGRAPHS	45
11	ANNEX E (NORMATIVE) – TEST SETUP PHOTOGRAPHS.....	46
12	ANNEX F (NORMATIVE) – ISO/IEC 17025 CERTIFICATE AND SCOPE OF ACCREDITATION.....	47



Bay Area Compliance Laboratories Corp.
1274 Anvilwood Ave., Sunnyvale, CA 94089, USA
Phone: (408) 732-9162, Fax: (408) 732-9164
www.baclcorp.com

ATTESTATION OF TEST RESULTS

Date of Issue: 2025-10-24

Attestation Number: R2506095

Bay Area Compliance Laboratories Corp. (BACL) hereby declares that testing has been completed and is compliant for the product and standards below:

Product Name / Description:	WPT Device
Model:	EVK AA001-NESS4.2-OTO
Manufactured by:	Etherdyne Technologies, Inc.
Project Number:	R2506095

Standard
FCC PART 18

Test Result
Pass

BACL tested the above equipment in accordance with the requirement with the above Standards. The results were being documented in Test Report #R2506095-18 listed in above table apply only to the tested sample under the condition and modes of operation as described herein.

Attestation by: Giriraj Gurjar
EMC Lead



Signature

2025-10-24
Date

This document issued by Bay Area Compliance Laboratories Corp., ("BACL" or "Company"), is subject to its general conditions of service printed on the quotation, purchase order acknowledgement, or on the Product Certification Agreement and is available on request. We hereby notify you that those aforementioned documents contain details on the limitations of the liability, indemnification and jurisdiction issues defined therein. Anyone possessing this document is advised that information contained herein reflects the Company's results or findings at the conclusion of testing or services rendered only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of a duly authorized representative of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. The results, opinions or attestations shown in this document refer only to the sample(s) tested.

CI024-A

Document Revision History

Revision Number	Report Number	Description of Revision	Date
0	R2506095-18	Original Report	2025-10-24

1 General Information

1.1 General Statements

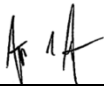
Bay Area Compliance Laboratory Corp. [BACL] hereby makes the following Statements:

- The Unit(s) described in this Test Report were received at BACL's facilities on 13 August 2025. Testing was performed on the Unit(s) described in this Test Report during the period 13 August 2025 through 14 August 2025.
- The Test Results reported herein apply only to the Unit(s) actually tested, and to substantially identical Units.
- This Test Report must not be used to claim product endorsement by A2LA, or any agency of the U.S. Government, or by any other foreign government.
- This Test Report is the property of BACL, and shall not be reproduced, except in full, without prior written approval of BACL.

1.2 Purpose

This report was prepared on behalf of *Etherdyne Technologies, Inc.* and their product *Magnetic Resonant Wireless Power Transfer Transmitter and Power Receivers for Lighting*, Model: *EVK AA001-NESS4.2-OTO* in accordance with FCC Part 18, Industrial, Scientific, and Medical Equipment.

THE DATA CONTAINED IN THIS TEST REPORT WAS COLLECTED AND COMPILED BY:



Felix Lugo
[Test Engineer]

1.3 Agent for the Responsible Party

None

1.4 Responsible Party

Company Name: Etherdyne Technologies, Inc.
Contact: Jeff Yen
Street Address: 2933 Bunker Hill Lane, STE 210
City/State/Zip: Santa Clara, CA 95054
Country: USA
Telephone: +1 (415) 867-6966
Email: jeffyen@etherdyne.net
Web: www.etherdyne.net

1.5 Product Description of the Equipment under Test (EUT)

The “EUT” (Equipment under Test) was a Magnetic Resonant Wireless Power Transfer Transmitter and Power Receivers for Lighting, Model: EVK AA001-NESS4.2-OTO. The highest frequency used and/or generated was 6.78 MHz.

1.6 Mechanical Description of the EUT

Dimensions: approximately 20.0 cm (L) x 10.1 cm (W) x 2.8 cm (H)

Weight: approximately 3.4 kg

Serial Number: 118

EUT Photos: See Annex A of this Test Report.

The data gathered are from a production sample provided by the manufacturer.

1.7 EUT Input Power

The EUT was powered by 48V DC through a 120/240 V, 60 Hz AC power adapter connected to the AC power source.

1.8 Related Submittal(s)/Grant(s)

No related submittals.

1.9 Test Facility Registrations

BACLs test facilities that are used to perform Radiated and Conducted Emissions tests are currently recognized by the Federal Communications Commission as Accredited with NIST Designation Number US1129.

BACL's test facilities that are used to perform Radiated and Conducted Emissions tests are currently registered with Innovation, Science, and Economic Development Canada (ISED) a under Registration Numbers: 3062A.

BACL is a Chinese Taipei Bureau of Standards Metrology and Inspection (BSMI) validated Conformity Assessment Body (CAB), under Appendix B, Phase I Procedures of the APEC Mutual Recognition Arrangement (MRA). BACL's BSMI Lab Code Number is: SL2-IN-E-1002R

BACL's test facilities that are used to perform AC Line Conducted Emissions, Telecommunications Line Conducted Emissions, Radiated Emissions from 30 MHz to 1 GHz, and Radiated Emissions from 1 GHz to 6 GHz are currently recognized as Accredited in accordance with the Voluntary Control Council for Interference [VCCI] Article 15 procedures under Registration Number A-0428.

1.10 Test Facility Accreditations

Bay Area Compliance Laboratories Corp. (BACL) is:

A- An independent, 3rd-Party, Commercial Test Laboratory accredited to ISO/IEC 17025:2017 by A2LA (Test Laboratory Accreditation Certificate Number 3297.02), in the fields of: Electromagnetic Compatibility and Telecommunications. Unless noted by an Asterisk (*) in the Compliance Matrix (See Section 3 of this Test Report), BACL's ISO/IEC 17025:2017 Scope of Accreditation includes all of the Test Method Standards and/or the Product Family Standards detailed in this Test Report.

BACL's ISO/IEC 17025:2017 Scope of Accreditation includes a comprehensive suite of EMC Emissions, EMC Immunity, Radio/Wireless, RF Exposure, Safety, and Wireline Telecommunications test methods applicable to a wide range of product categories. These product categories include, but are not limited to: Central Office Telecommunications Equipment [including NEBS – Network Equipment Building Systems], Information Technology Equipment (ITE); Telecommunications Terminal Equipment (TTE); Medical Electrical Equipment; Industrial, Scientific and Medical Test Equipment; Professional Audio and Video Equipment; Industrial Equipment, Scientific Instruments and Laboratory Apparatus; Cable Distribution Systems, Railway Equipment, Marine Equipment, and Energy Efficient Lighting. Additionally, BACL offers comprehensive test capabilities for both Unlicensed and Licensed Wireless and RF Devices, per the requirements of the FCC (USA), ISED Canada (Canada), the EU/EEA/EFTA Nations (per the ETSI Standards applicable under the Radio Equipment Directive), Singapore, MIC (Japan), South Korea, Vietnam, and Taiwan ROC.

B- A Product Certification Body accredited to ISO/IEC 17065:2012 by A2LA (Product Certification Body Accreditation Certificate Number 3297.03) to certify

- For the USA (Federal Communications Commission):

- 1- All Unlicensed radio frequency devices within FCC Scopes A1, A2, A3, and A4;
- 2- All Licensed radio frequency devices within FCC Scopes B1, B2, B3, and B4;
- 3- All Telephone Terminal Equipment within FCC Scope C.

- For the Canada (Innovation, Science and Economic Development Canada):

- 1 All Scope 1-Licence-Exempt Radio Frequency Devices;
- 2 All Scope 2-Licensed Personal Mobile Radio Services;
- 3 All Scope 3-Licensed General Mobile & Fixed Radio Services;
- 4 All Scope 4-Licensed Maritime & Aviation Radio Services;

- 5 All Scope 5-Licensed Fixed Microwave Radio Services
- 6 All Broadcasting Equipment Technical Standards (BETS) in the Category I Equipment Standards List.
7. RSS-HAC Radio Scope 6 Hearing Aid Compatibility and Volume Control
- For Singapore (Info-Comm Media Development Authority (IMDA)):
 - 1 All Line Terminal Equipment: All Technical Specifications for Line Terminal Equipment – Table 1 of IDA MRA Recognition Scheme: 2011, Annex 2 IMDA Phase I
 2. All Radio-Communication Equipment: All Technical Specifications for Radio-Communication Equipment – Table 2 of IDA MRA Recognition Scheme: 2011, Annex 2 IMDA Phase II
- For the Hong Kong Special Administrative Region & (Office of the Communications Authority-OFCA) – APEC Tel MRA- Phase I and Phase II:
 - 1 Radio Equipment, per KHCA 10XX-series Specifications; HKCA 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1010, 1015, 1016, 1019, 1020, 1022, 1026, 1033, 1034, 1035, 1036, 1037, 1039, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1052, 1053, 1054, 1056, 1057, 1061, 1064, 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1080, 1081
 - 2 GMDSS Marine Radio Equipment, per HKCA 12XX-series Specifications; HKCA 1218, 1223, 1224, 1225, 1257, 1258, 1259, 1260, 1261, 1262, 1263, 1264, 1265, 1266, 1277, 1281, 1282, 1283
 - 3 Fixed Network Equipment, per HKCA 20XX-series Specifications; HKCA 2001, 2011, 2014, 2015, 2017, 2026, 2027, 2028, 2029, 2030, 2031
- For Japan:
 - 1 MIC Telecommunication Business Law (Terminal Equipment):
 - All Scope A1 - Terminal Equipment for the Purpose of Calls;
 - All Scope A2 - Other Terminal Equipment
 - 2 Radio Law (Radio Equipment):
 - All Scope B1 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 1 of the Radio Law
 - All Scope B2 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 2 of the Radio Law
 - All Scope B3 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 3 of the Radio Law

C- A Product Certification Body accredited to ISO/IEC 17065:2012 by A2LA (Product Certification Body Accreditation Certificate Number 3297.01) to certify Products to USA's Environmental Protection Agency (EPA) ENERGY STAR Product Specifications for:

- 1 Appliances:
 - for Clothes Washers (ver. 8.1)
 - for Residential Dishwashers (ver. 6.0)
 - for Residential Refrigerators and/or Freezers (ver. 5.0)
- 2 Commercial Food Service Equipment:
 - for Commercial Dishwashers (ver. 3.0)
 - for Commercial Ice Machines (ver. 3.0)
- 3 Data Center Equipment:
 - for Large Network Equipment (ver. 1.1)
- 4 Electronics and Office Equipment:
 - for Audio/Video Equipment (ver. 3.0)
 - for Computers (ver. 8.0)
 - for Data Center Storage (ver. 2.1)

- for Displays (ver. 8.0)
 - for Enterprise Servers (ver. 4.0)
 - for Imaging Equipment (ver. 3.1)
 - for Set-top Boxes & Cable Boxes (ver. 5.1)
 - for Small Network Equipment (ver. 1.0)
 - for Telephony (ver. 3.0)
 - for Televisions (ver. 9.0), Title 10 Chapter II CFR Part 430 Subpart B –Appendix BB, Title 10 Chapter II CFR Part 430 Subpart B –Appendix DD
- 3 Lighting and Fans
- for Decorative Light Strings (ver. 1.5)
 - for Downlights (ver. 1.0)
 - for Lamps (Light Bulbs)(ver. 2.1)
 - for Luminaires (including sub-components) (ver. 2.2)
 - for Residential Ceiling Fans (ver. 4.0)
 - for Residential Ventilating Fans (ver. 4.1)
- 4 Other
- for Residential Ceiling Fans (ver. 4.0)
 - for Electric Vehicle Supply Equipment (ver. 1.2)(Electric Vehicle Supply Equipment Final Test Method for DC-output EVSE Rev March 2021)
 - for Water Coolers (ver. 3.0)
 - for Smart Home Energy Management Systems (ver. 1.1)

D- A NIST Designated Phase-I and Phase-II Conformity Assessment Body (CAB) for the following economies and regulatory authorities under the terms of the stated MRAs/Treaties:

1. For the USA (Federal Communications Commission), as a Telecommunications Certification Body (TCB):
 - a. All Unlicensed radio frequency devices within FCC Scopes A1, A2, A3, and A4;
 - b. All Licensed radio frequency devices within FCC Scopes B1, B2, B3, and B4;
 - c. All Telephone Terminal Equipment within FCC Scope C.
2. Canada (ISED Canada) Foreign Certification Body – FCB – APEC Tel MRA -Phase I & Phase II:
 - a. Phase I Designation Letter
 - b. Phase II ISED Canada recognition as a Product Certification Body for unlicensed wireless devices, licensed radios, radars, etc.:
3. For Singapore (InfoComm Media Development Authority (IMDA)) APEC Tel MRA -Phase I & Phase II:
 - a. All Line Terminal Equipment: All Technical Specifications for Line Terminal Equipment – Table 1 of IDA MRA Recognition Scheme: 2011, Annex 2 IMDA Phase I
 - b. All Radio-Communication Equipment: All Technical Specifications for Radio-Communication Equipment – Table 2 of IDA MRA Recognition Scheme: 2011, Annex 2 IMDA Phase II
4. For the Hong Kong Special Administrative Region & (Office of the Communications Authority – OFCA) – APEC Tel MRA -Phase I & Phase II:
 - a. NIST Phase I Scope Recognition Letter from OFCA for BACL –US0057
 - b. OFCA Phase II Designation Letter
5. For Japan (Ministry of Communications):
 - a. NIST Japan Recognition

- b. MIC Telecommunication Business Law (Terminal Equipment):
 - 1. All Scope A1 – Terminal Equipment for the Purpose of Calls;
 - 2. All Scope A2 – Other Terminal Equipment
 - c. Radio Law (Radio Equipment):
 - 1. All Scope B1 – Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 1 of the Radio Law
 - 2. All Scope B2 – Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 2 of the Radio Law
 - 3. All Scope B3 – Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 3 of the Radio Law
 - d. Japan VCCI – Voluntary Control Council for Interference US-Japan Telecom Treaty (VCCI Side Letter)
 - 1. VCCI Certificate
 - d. Japan Registered Certification Body
 - 1. RCB Recognition Letter
6. European Union:
- 1. Radio Equipment Directive [RED] 2014/53/EU US-EU EMC & Telecom MRA CAB (NB)
 - 2. EMC Directive [EMCD] 2014/30/EU US-EU EMC & Telecom MRA CAB (NB):
7. Australia ACMA (Australian Communication and Media Authority) – APEC Tel MRA -Phase I:
- 1. Phase I Designation Letter
8. Chinese Taipei (Republic of China – Taiwan):
- 1. NCC (National Communications Commission) APEC Tel MRA -Phase I
9. Republic of Korea (Ministry of Communications – Radio Research Laboratory) APEC Tel MRA -Phase I:
- 1. NIST Phase I Scope Update Notification Letter from Korea for BACL
10. Vietnam APEC Tel MRA -Phase I (page 13)
- 1. Vietnam (MIC) NIST Phase I Scope
11. Indonesia SDPPI (page 6)
- 1. Phase I Listing
12. Israel Phase I
- 1. NIST Phase I Scope Update Recognition Letter from Israel for BACL –US0057
13. UK Radio and EMC NIST Designation Letters
- UK website: <https://www.gov.uk/uk-market-conformity-assessment-bodies/bay-area-compliance-laboratories-corp-bacl>
- 1. Electromagnetic Compatibility Regulations (SI 2016/1091)
https://assets.publishing.service.gov.uk/media/5fe1e344e90e07452fce4e5a/AB_1313_BACL_UK EMC Regs NIST Designation Extended.pdf
 - 2. Radio Equipment Regulations 2017 (SI 2017/1206)
https://assets.publishing.service.gov.uk/media/5fe1e351e90e074525bf7be6/AB_1313_BACL_UK Radio Regs NIST Designation Extended.pdf
14. IFT Mexico Phase I

1. NIST Phase I New Recognition Letter from Mexico for BACL – US0057

15. Taiwan (BSMI) Phase 1 Designation Letter and designation form.

1. NIST Phase I Scope Update Designation Letter to BSMI for BACL – US0057

2. NIST Phase I Scope Update Designation Form to BSMI for BACL – US0057

1.11 Measurement Uncertainties

All measurements involve uncertainties. In the case of EMC Emissions tests, the influence quantities (factors) that make a significant contribution to the measurement uncertainties for most types of Emissions measurements are detailed in the latest version of CISPR 16-4-2 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-2: Uncertainties, statistics and limit modelling – Measurement instrumentation uncertainty” (i.e., in CISPR 16-4-2:2011+AMD1:2014+AMD2:2018 CSV).

Based on the uncertainty models given in the latest version of CISPR16-4-2, and, based on the calibration uncertainties of the specific instruments and facilities used at BACL to perform the measurements documented in this Test Report, the following estimates have been made of BACL’s Measurement Uncertainties for the measurements documented in this Test Report.

(Note: in the Tables below, the phrase “Typical U_{LAB} values” means that the U_{LAB} values presented are the Expanded Measurement Uncertainty values that resulted from the use of the ordinary test processes that are employed on a daily basis in our Test Laboratory. Note that the smaller the value of Expanded Measurement Uncertainty, the better (i.e., the “less uncertain”) the measurement is.

Type of Measurement: ANSI C63.4-2014 Conducted Emissions (on the BACL Ground Plane Test Site) Note: Measurements made using a n R&S ESCI EMI Receiver	BACL Typical U_{LAB} Value (for a k=2 Coverage Factor, equivalent to ~ 95% level of confidence)	U_{CISPR} Value worst-allowable values of the latest version of CISPR 16-4-2 (for a k=2 Coverage Factor, equivalent to ~ 95% level of confidence)
Conducted Disturbance (Mains Port) 150 kHz to 30 MHz (i.e., AC/DC Line Conducted Emissions measurements made with a Fischer FCC-LISN-50-25-2-10 LISN)	2.25 dB	3.44 dB

Type of Measurement: ANSI C63.4-2014 Radiated Emissions (in the BACL 10 m - 1 SAC) Note: Measurements up to 1 GHz made using an R&S ESR3 EMI Receiver; Measurements from 1 GHz to 40 GHz made using an Keysight PXE N9048B Receiver	BACL Typical U_{LAB} Value (for a k=2 Coverage Factor, equivalent to ~ 95% level of confidence)	U_{CISPR} Value worst-allowable values of the latest version of CISPR 16-4-2 (for a k=2 Coverage Factor, equivalent to ~ 95% level of confidence)
Radiated Electric Field Disturbance – Horizontal Polarization, 30 MHz – 200 MHz (i.e., Radiated Emissions measured at 10 meters distance)	3.81 dB	5.05 dB
Radiated Electric Field Disturbance – Vertical Polarization, 30 MHz – 200 MHz (i.e., Radiated Emissions measured at 10 meters distance)	3.92 dB	5.03 dB
Radiated Electric Field Disturbance – Horizontal Polarization, 200 MHz – 1000 MHz (i.e., Radiated Emissions at 10 meters distance)	3.81 dB	5.21 dB
Radiated Electric Field Disturbance – Vertical Polarization, 200 MHz – 1000 MHz z (i.e., Radiated Emissions measured at 10 meters distance)	3.92 dB	5.22 dB

2 EUT Test Configuration

2.1 Justification

The EUT was configured for testing in accordance with requirements of the FCC 18 standard.

2.2 EUT Exercising Software

No exercising software was used during testing.

2.3 BACL EMI Measurement Software

The software used was EMISoft-Vasona 6.0 and Audix e3 for EMI testing.

2.4 Equipment Modifications

No equipment modifications were made to the equipment during testing.

2.5 Special Equipment

No special equipment was used during testing.

2.6 EUT Mode of Operation

The EUT was tested on worst case mode: It was powered on and inductively powering four LED lights.

2.7 Method of Monitoring

The EUT was monitored visually via emitting light from the four LED lights receiving power. As long as the EUT continuously powered the lights without interruption than the EUT was functioning as intended.

2.8 Local Support Equipment

Manufacturer	Description	Model	Serial Number
ETI	Red LED Light	-	-
ETI	Blue LED Light	-	-
ETI	Orange LED Light	-	-
ETI	Green LED Light	-	-

2.9 Remote Support Equipment

None

2.10 EUT Internal Configuration Details

None

2.11 External I/O Cabling List and Details

Cable Description	Length (m)	From	To
AC Power Cable	1.3	AC/DC Switching Adapter	AC Power Source
DC Power Cable	0.5	AC/DC Switching Adapter	EUT

2.12 EUT Power Supply List and Details

Manufacturer	Description	Model	Serial Number
Mean Well	AC/DC Switching Adapter	GST00A4	-

3 Summary of Test Results

Standards	Test Description	Result
FCC §18.305	Radiated Emissions	Compliant
FCC §18.307	Conducted Emissions	Compliant
FCC §18.313, §2.1091, §1.1310	RF Exposure	Compliant

BACL is responsible for all the information provided in this report, except when information is provided by the customer as identified in this report. Information provided by the customer, e.g., antenna gain, can affect the validity of results.

4 FCC §18.305 – Radiated Emissions

4.1 Applicable Standards

As per FCC §18.305 Field strength limits

- (a) ISM equipment operating on a frequency specified in § 18.301 is permitted unlimited radiated energy in the band specified for that frequency.

ISM Frequency	Tolerance
6.78 MHz	± 15.0 kHz
13.56 MHz	± 7.0 kHz
27.12 MHz	± 163.0 kHz
40.68 MHz	± 20.0 kHz
915 MHz	± 13.0 MHz
2450 MHz	± 50.0 MHz
5800 MHz	± 75.0 MHz
24.125 GHz	± 125.0 MHz
61.25 GHz	± 250.0 MHz
122.50 GHz	± 500.0 MHz
245.00 GHz	± 1.0 GHz

- (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 (uV/m)	Distance (meters)
Any type unless otherwise specified (miscellaneous)	Any ISM frequency	Below 500 500 or more	25 25 × SQRT(power/500)	300 ¹ 300
	Any non-ISM frequency	Below 500 500 or more	15 15 × SQRT(power/500)	300 ¹ 300
Industrial heaters and RF stabilized arc welders	On or below 5,725 MHz Above 5,725 MHz	Any Any	10 (²)	1,600 (²)
Medical diathermy	Any ISM frequency Any non-ISM frequency	Any Any	25 15	300 300
Ultrasonic	Below 490 kHz	Below 500 500 or more	2,400/F(kHz) 2,400/F(kHz) × SQRT(power/500)	300 ³ 300
	490 to 1,600 kHz Above 1,600 kHz	Any Any	24,000/F(kHz) 15	30 30
Induction cooking ranges	Below 90 kHz On or above 90 kHz	Any Any	1,500 300	⁴ 30 ⁴ 30

- ¹ Field strength may not exceed 10 $\mu\text{V/m}$ 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.
- ² Reduced to the greatest extent possible.
- ³ Field strength may not exceed 10 $\mu\text{V/m}$ at 1600 meters. Consumer equipment is not permitted the increase in field strength otherwise permitted here for over 500 watts.
- ⁴ Induction cooking ranges manufactured prior to February 1, 1980, shall be subject to the field strength limits for miscellaneous ISM equipment.

(c) The field strength limits for RF lighting devices shall be the following:

Frequency (MHz)	Field strength limit at 30 meters ($\mu\text{V/m}$)
Non-consumer equipment:	
30 – 88	30
88 – 216	50
216 – 1000	70
Consumer equipment:	
30 – 88	10
88 – 216	15
216 – 1000	20

Note 1: The tighter limit shall apply at the boundary between two frequency ranges.

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.

(d) If testing with a quasi-peak detector demonstrates that the equipment complies with the average limits specified in the appropriate table in this section, additional testing to demonstrate compliance using an average detector is not required.

(g) The tighter limits shall apply at the boundary between two frequency ranges.

4.2 EUT Setup

The radiated emissions tests were performed in the 10-meter test chamber, using the setup in accordance with FCC MP-5 measurement procedures. The specifications used were in accordance with FCC 18 limits.

If applicable, the spacing between the peripherals was 10 cm.

If applicable, the external I/O cables were draped along the test table and bundled as required.

The EUT was powered by 48V DC through a 120/240 V, 60 Hz AC power adapter connected to the AC power source.

4.3 Test Procedure

Maximization procedure was performed on the six (6) highest emissions readings to ensure the EUT is compliant with all installation combinations.

All data was recorded in the Average detection mode for below 1 GHz.

The bandwidth on the receiving device was set to as follows:

- For 9kHz – 150kHz, the Resolution Bandwidth was set to 200 Hz and the Video Bandwidth was set to 1 kHz for each sweep.
- For 150kHz – 30MHz, the Resolution Bandwidth was set to 10 kHz and the Video Bandwidth was set to 30 kHz for each sweep.
- For 30 MHz – 1000 MHz, the Resolution Bandwidth was set to 120 kHz and the Video Bandwidth was set to 300 kHz for each sweep.

The receiver automatically sets to these values.

4.4 Corrected Amplitude and Margin Calculations

The Corrected Amplitude (CA) is calculated by adding the Correction Factor to the indicated Amplitude (Ai) reading. The basic equation is as follows:

$$CA = Ai + \text{Correction Factor}$$

For example, the Corrected Amplitude (CA) of 40.3 dB μ V/m = indicated Amplitude reading (Ai) 32.5 dB μ V + Correction Factor 7.8 dB/m

The Correction Factor is calculated by adding the Antenna Factor (AF), the Cable Loss (CL), the Attenuator Factor (Atten) and subtracting the Amplifier Gain (Ga). The calculation is done by the testing software, and the value is reported in the tabular results below. The basic equation is as follow,

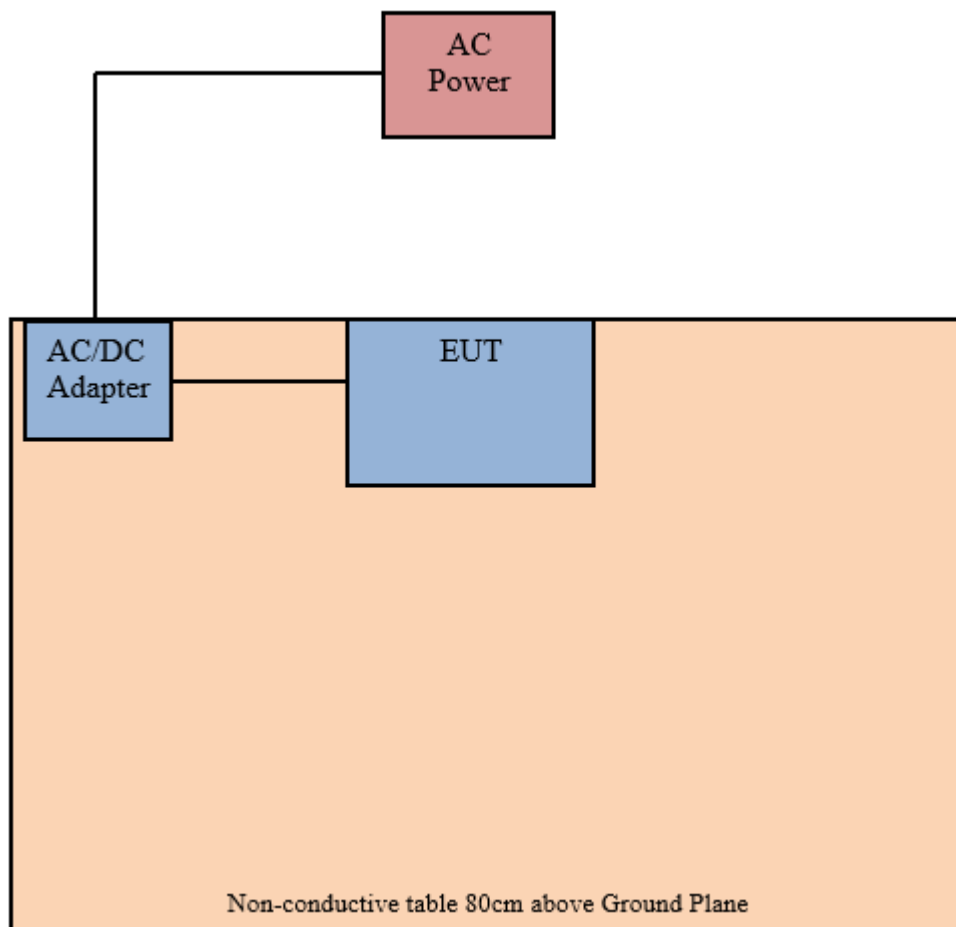
$$\text{Correction Factor} = AF + CL + \text{Atten} - Ga$$

For example, the Correction Factor of 7.8 dB/m = Antenna Factor (AF) 23.5 dB/m + Cable Loss (CL) 3.7 dB + Attenuator (Atten) 10 dB - Amplifier Gain (Ga) 29.4 dB

The “**Margin**” column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of -7 dB means the emission is 7 dB below the maximum limit at the measured frequency. The equation for margin calculation is as follows:

$$\text{Margin (dB)} = \text{Corrected Amplitude (dB}\mu\text{V/m)} - \text{Limit (dB}\mu\text{V/m)}$$

4.5 Test Setup Block Diagram



4.6 Test Equipment List and Details

BACL Asset #	Manufacturers	Descriptions	Models	Serial Numbers	Calibration Date	Calibration Due Date
01413	Rohde & Schwarz	ESR EMI Test Receiver 10Hz to 3.6GHz	ESR3 1316.3003K03	103191	2025-02-26	2026-02-26
00311	Sunol Sciences	Controller, System	SC104V	113005-1	Calibration not Required	Calibration not Required
00811	Keysight Technologies	RF Limiter	11867A	MY42242932	2025-02-20	2025-08-20
00393	Com-Power	Loop Antenna, Active	AL-130	17043	2025-05-06	2027-05-06
00445	Sonoma Instruments	Amplifier	315	303125	2025-07-24	2026-01-24
00307	Sunol Sciences	Antenna, BiConiLog	JB3	A020106-3; 01182018A	2024-03-18	2026-03-18
01200	Pasternack	N Shielded RF Cable	LMR 400 Coaxial Cable	1809041	2025-07-02	2026-01-02
01297	Pasternack	N 18m RF Cable	PE 360-12	1809042	2025-07-02	2026-01-02
01359	Pasternack	PE3496LF-600	N 600in RF Cable	NA	2025-07-02	2026-01-02

Statement of Traceability: BACL Corp. attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA Policy P102 "A2LA Policy on Metrological Traceability".

4.7 Environmental Conditions

Testing Date:	2025-08-14
Testing Site:	10m Chamber 1
Temperature:	25.0 °C
Relative Humidity:	49.5 %
ATM Pressure:	101.5 kPa
Testing Personnel:	Felix Lugo

4.8 Summary of Test Results

According to the recorded data, the EUT complied with FCC §18.305 limits, and had the worst margin reading of:

FCC 18 Radiated Emissions Worst Case (9 kHz to 1 MHz) – Measured at 3m Distance			
Frequency (MHz)	Highest Average Corrected Amplitude (dBμV/m)	Polarization (Parallel/Perpendicular/ Parallel-to-Ground)	Quasi-Peak Margin (dB)
0.010408	59.07	Parallel	-8.89
0.010335	59.12	Perpendicular	-8.84
0.010436	58.22	Parallel-to-Ground	-9.74

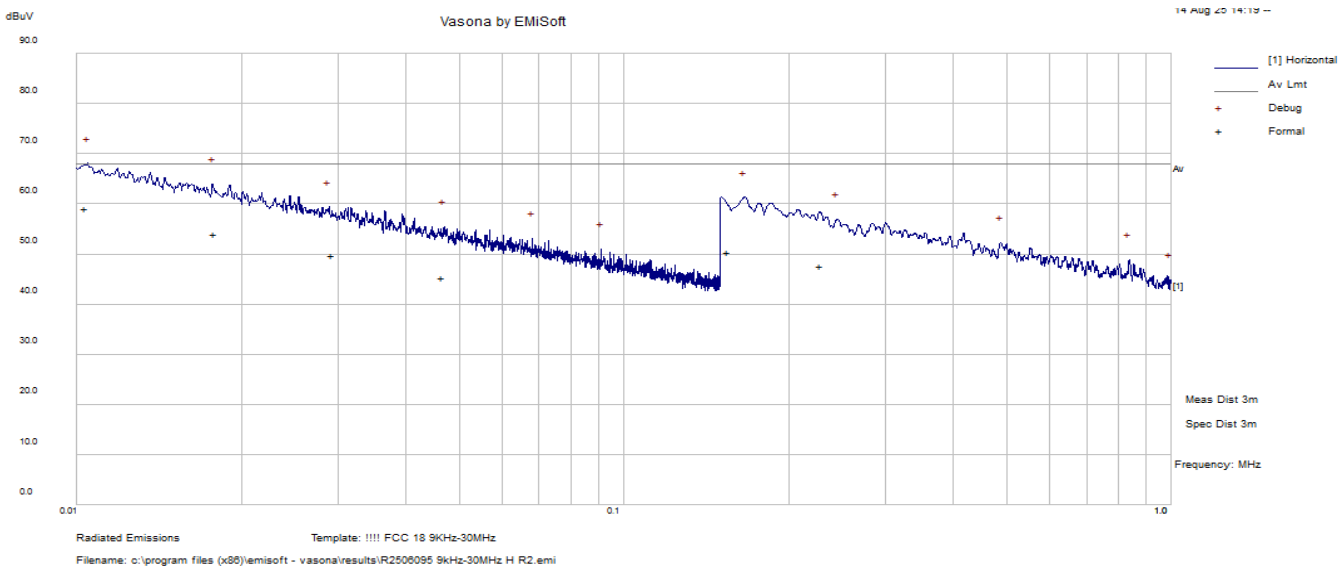
FCC 18 Radiated Emissions Worst Case (9 kHz to 30 MHz) – Measured at 10m Distance			
Frequency (MHz)	Highest Average Corrected Amplitude (dBμV/m)	Polarization (Parallel/Perpendicular/ Parallel-to-Ground)	Quasi-Peak Margin (dB)
6.656598	44.69	Parallel	-12.81
20.339735	34.76	Perpendicular	-22.74
2.311403	39.51	Parallel-to-Ground	-17.99

Note: Testing below 30 MHz was performed at both 3m and 10m to demonstrate that the EUT does not exhibit emissions above the limit in the lower frequency range. However, the chamber noise floor is too high and exceeds the test limits, as shown in the plots below.

FCC 18 Radiated Emissions Worst Case (30 MHz to 1000 MHz) – Measured at 10m Distance			
Frequency (MHz)	Highest Quasi-Peak Corrected Amplitude (dBμV/m)	Polarization (Horizontal / Vertical)	Quasi-Peak Margin (dB)
250.86951	48.05	Horizontal	-9.45

4.9 Radiated Emissions Test Plot and Data

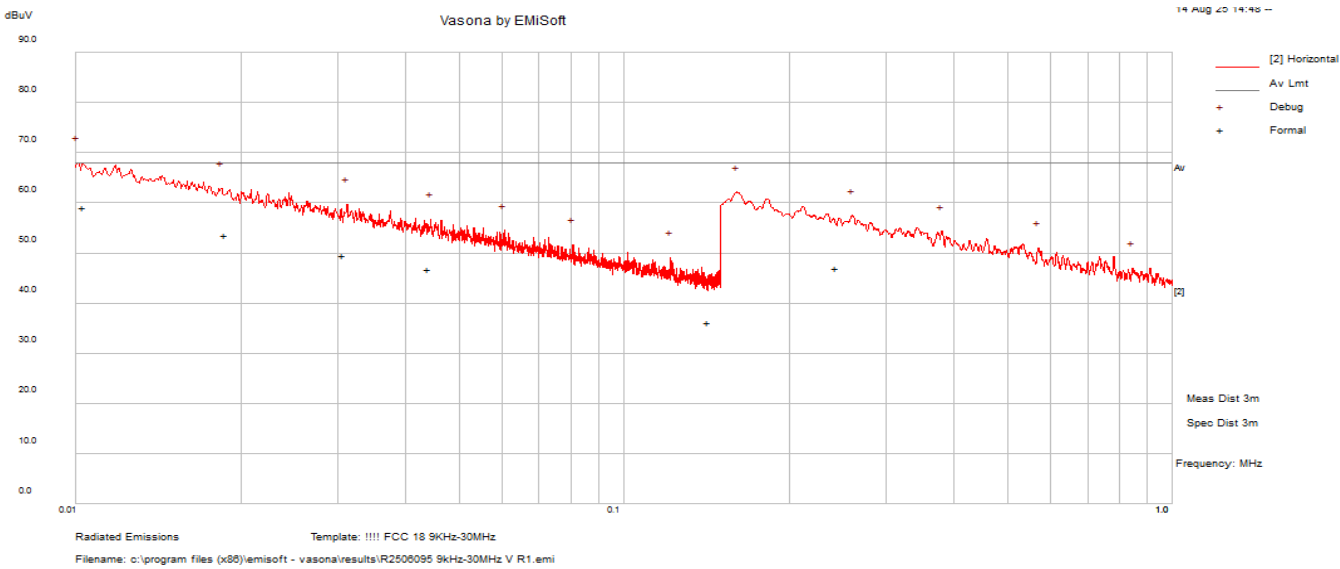
9 kHz to 1 MHz – Parallel Polarization at 3m Distance



Average Measurements

Frequency (MHz)	Correction Factor (dB/m)	Corrected Amplitude (dBμV/m)	Detector	Antenna Height (cm)	Turntable Azimuth (degrees)	Limit (dBμV/m)	Margin (dB)
0.010408	10.12	59.07	Average	150	75	67.96	-8.89
0.017908	10.62	54.06	Average	150	281	67.96	-13.9
0.15469	10.83	50.35	Average	150	219	67.96	-17.61
0.0293	10.81	49.68	Average	150	229	67.96	-18.28
0.229127	10.85	47.56	Average	150	326	67.96	-20.4
0.04666	10.81	45.34	Average	150	289	67.96	-22.62

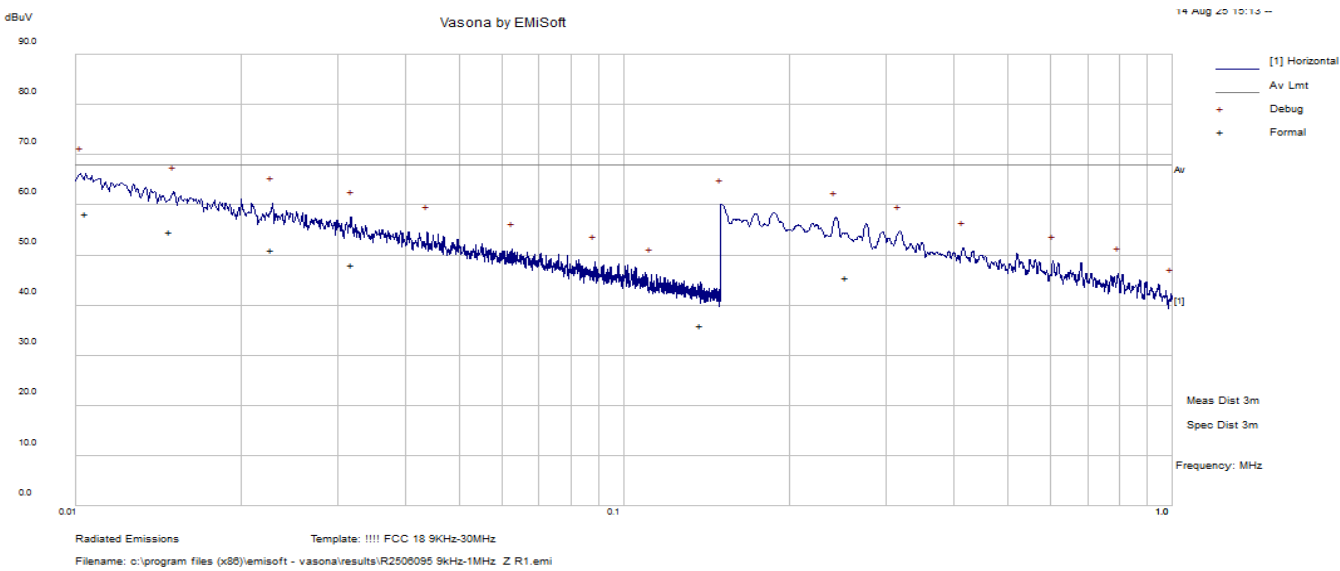
9 kHz to 1 MHz – Perpendicular Polarization at 3m Distance



Average Measurements

Frequency (MHz)	Correction Factor (dB/m)	Corrected Amplitude (dBuV/m)	Detector	Antenna Height (cm)	Turntable Azimuth (degrees)	Limit (dBuV/m)	Margin (dB)
0.010335	10.11	59.12	Average	150	277	67.96	-8.84
0.018768	10.67	53.53	Average	150	171	67.96	-14.43
0.030819	10.82	49.5	Average	150	322	67.96	-18.46
0.243714	10.85	47.06	Average	150	157	67.96	-20.9
0.044071	10.82	46.74	Average	150	47	67.96	-21.22
0.142634	10.83	36.21	Average	150	115	67.96	-31.75

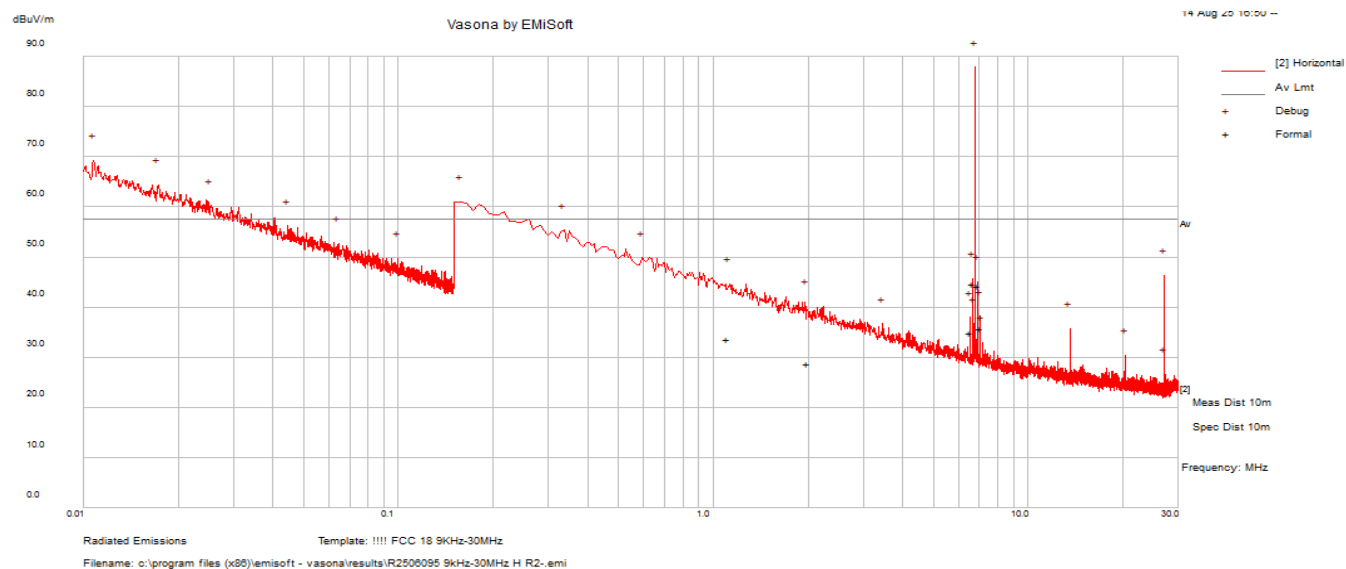
9 kHz to 1 MHz – Parallel-to-Ground Polarization at 3m Distance



Average Measurements

Frequency (MHz)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Detector	Antenna Height (cm)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)
0.010436	10.12	58.22	Average	150	183	67.96	-9.74
0.014853	10.47	54.69	Average	150	173	67.96	-13.27
0.022768	10.76	51.13	Average	150	157	67.96	-16.83
0.031923	10.81	48.09	Average	150	176	67.96	-19.87
0.25387	10.86	45.45	Average	150	158	67.96	-22.51
0.138083	10.83	35.95	Average	150	195	67.96	-32.01

9 kHz to 30 MHz – Parallel Polarization at 10m Distance

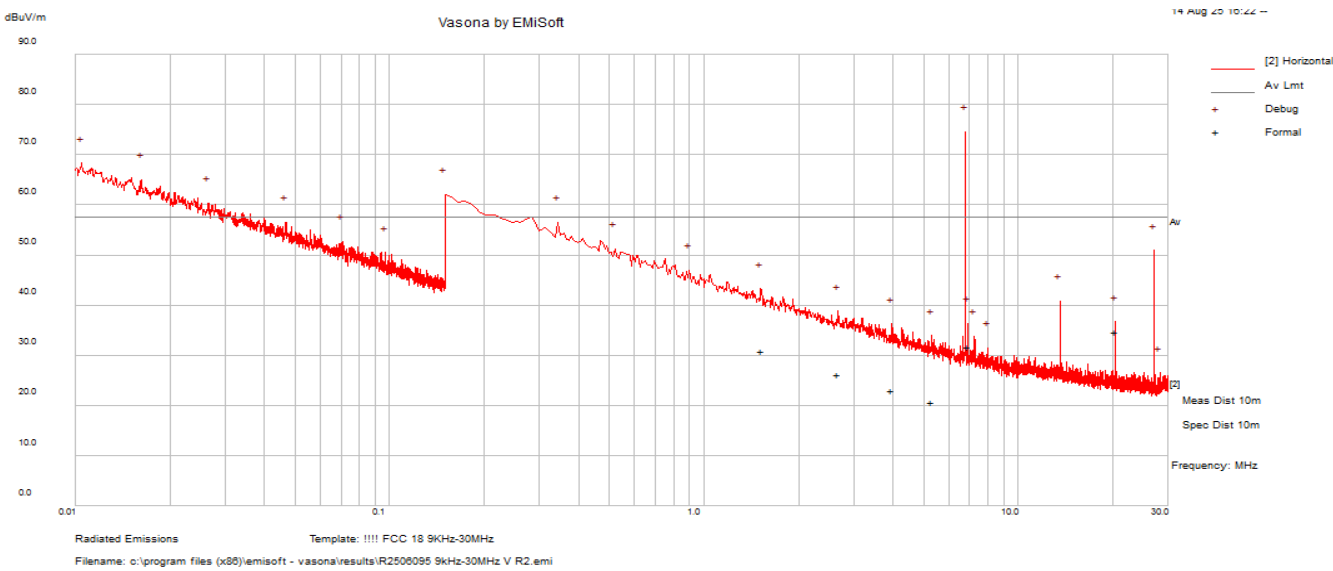


Note: The emissions at 6.78 MHz was the fundamental transmitted frequency of the EUT and not applicable for testing.

Average Measurements

Frequency (MHz)	Correction Factor (dB/m)	Corrected Amplitude (dBuV/m)	Detector	Antenna Height (cm)	Turntable Azimuth (degrees)	Limit (dBuV/m)	Margin (dB)
6.78	11.64	87.87	Peak	100	0	-	-
6.656598	11.62	44.69	Average	150	24	57.5	-12.81
6.903685	11.64	44.3	Average	150	339	57.5	-13.2
7.027127	11.64	35.7	Average	150	29	57.5	-21.8
6.533227	11.62	34.93	Average	150	321	57.5	-22.57
1.111237	11.06	33.52	Average	150	128	57.5	-23.98
1.995156	11.19	28.66	Average	150	310	57.5	-28.84

9 kHz to 30 MHz – Perpendicular Polarization at 10m Distance

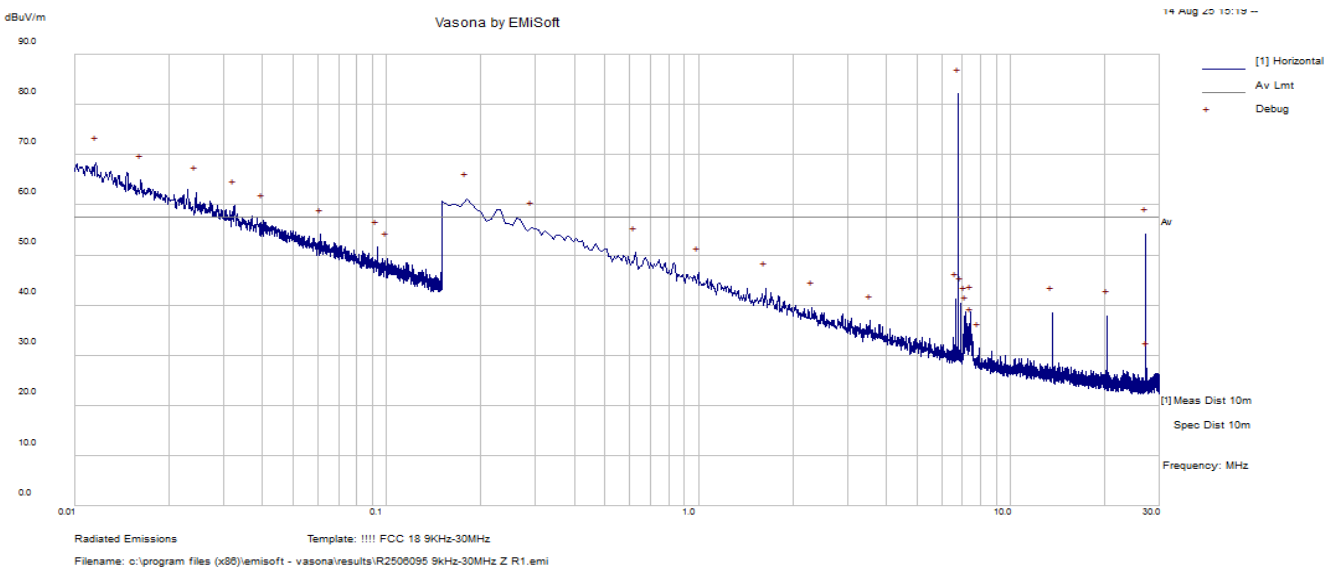


Note: The emissions at 6.78 MHz was the fundamental transmitted frequency of the EUT and not applicable for testing.

Quasi-Peak Measurements

Frequency (MHz)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Detector	Antenna Height (cm)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)
20.339735	11.06	34.76	Average	150	319	57.5	-22.74
6.903505	11.64	31.62	Average	150	82	57.5	-25.88
1.523497	11.13	30.8	Average	150	139	57.5	-26.7
2.6855	11.31	26.14	Average	150	282	57.5	-31.36
3.975438	11.41	22.91	Average	150	303	57.5	-34.59
5.307725	11.52	20.62	Average	150	13	57.5	-36.88

9 kHz to 30 MHz – Parallel-to-Ground Polarization at 10m Distance

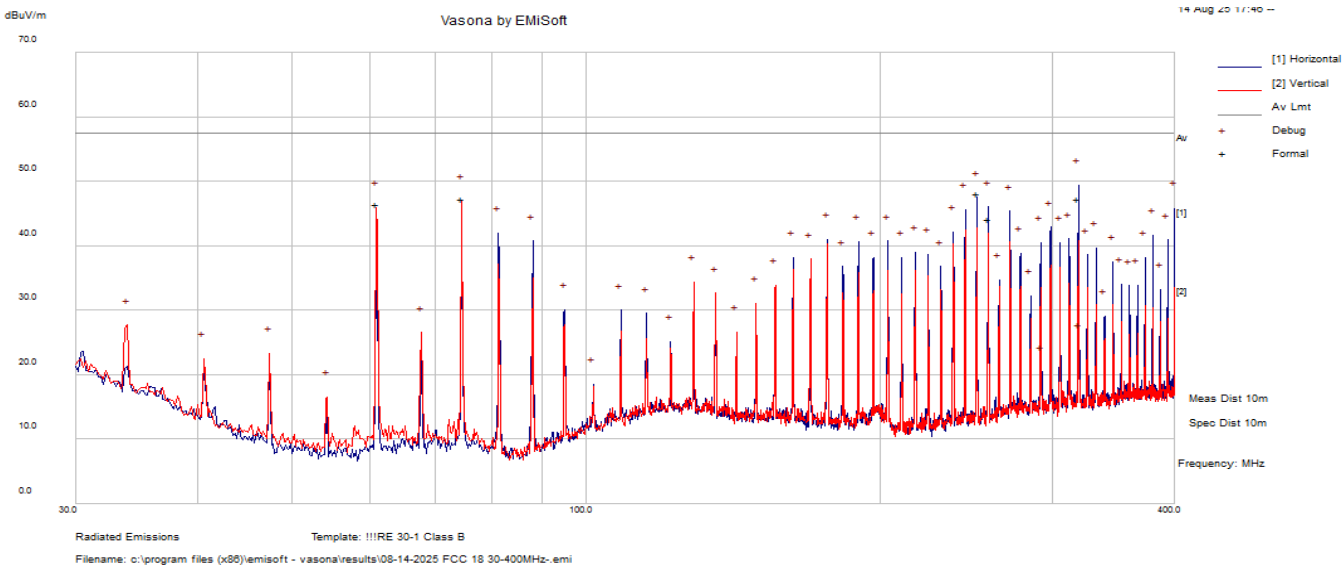


Note: The emissions at 6.78 MHz was the fundamental transmitted frequency of the EUT and not applicable for testing.

Quasi-Peak Measurements

Frequency (MHz)	Correction Factor (dB/m)	Corrected Amplitude (dBμV/m)	Detector	Antenna Height (cm)	Turntable Azimuth (degrees)	Limit (dBμV/m)	Margin (dB)
2.311403	11.25	39.51	Average	150	350	57.5	-17.99
6.656796	11.62	39.33	Average	150	341	57.5	-18.17
6.902893	11.64	38.75	Average	150	345	57.5	-18.75
7.451233	11.73	38.71	Average	150	356	57.5	-18.79
1.646978	11.14	30.22	Average	150	21	57.5	-27.28
2.317268	11.25	27.39	Average	150	177	57.5	-30.11

30 MHz to 400 MHz at 10m Distance



Quasi-Peak Measurements

Frequency (MHz)	Correction Factor (dB/m)	Corrected Amplitude (dBuV/m)	Antenna Polarity (H/V)	Antenna Height (cm)	Turntable Azimuth (degrees)	Limit (dBuV/m)	Margin (dB)
250.86951	-19.81	48.05	H	275	336	57.5	-9.45
318.66381	-16.83	47.29	H	351	324	57.5	-10.21
74.5805	-24.91	47.26	V	200	18	57.5	-10.24
61.02019	-25.95	46.42	V	101	219	57.5	-11.08
257.65254	-19.57	44.13	H	357	336	57.5	-13.37
400.03573	-14.74	40.84	H	261	332	57.5	-16.66

5 FCC §18.307 – Conducted Emissions

5.1 Applicable Standards

As per FCC §18.307: Conducted Emission Limits

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 tables. 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 using a 50 μ H/50 ohms line impedance stabilization network (LISN).

(b) All other part 18 consumer devices:

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		

(d) If testing with a quasi-peak detector demonstrates that the equipment complies with the average limits specified in the appropriate table in this section, additional testing to demonstrate compliance using an average detector is not required.

(g) The tighter limits shall apply at the boundary between two frequency ranges.

5.2 EUT Setup

The conducted emissions tests were performed on the Ground Plane Test Site, using a test setup in accordance with FCC/OET MP-5 measurement procedures. The specifications used were in accordance with FCC 18 limits.

The spacing between the peripherals (if any) was 10 cm.

The external I/O cables (if any) were draped along the test table and bundled as required.

The EUT was connected (via LISN) to an EMI-filtered AC power source via AC/DC power adapter.

5.3 Test Procedure

During the conducted emissions test, the power cord of the EUT was connected to the LISN.

The bandwidth on the receiving device was set to as follows:

The Resolution Bandwidth was set to 9 kHz and the Video Bandwidth was set to 30 kHz for each sweep. The receiver automatically sets to these values.

5.4 Corrected Amplitude & Margin Calculation

The Corrected Amplitude (CA) is calculated by adding the Total Loss to indicated Amplitude (Ai) reading. The basic equation is as follows:

$$CA = A_i + \text{Total Loss}$$

For example, a corrected amplitude of 46 dB μ V = Indicated Reading (32.5 dB μ V) + Total Loss (13.5 dB)

The Cable Loss, Attenuation (High-pass Filters, Impulse Limiters, Attenuators, etc.), and LISN calibration factors are referred to as Total Loss in the equation above and tabular data below. The basic equation is as follows:

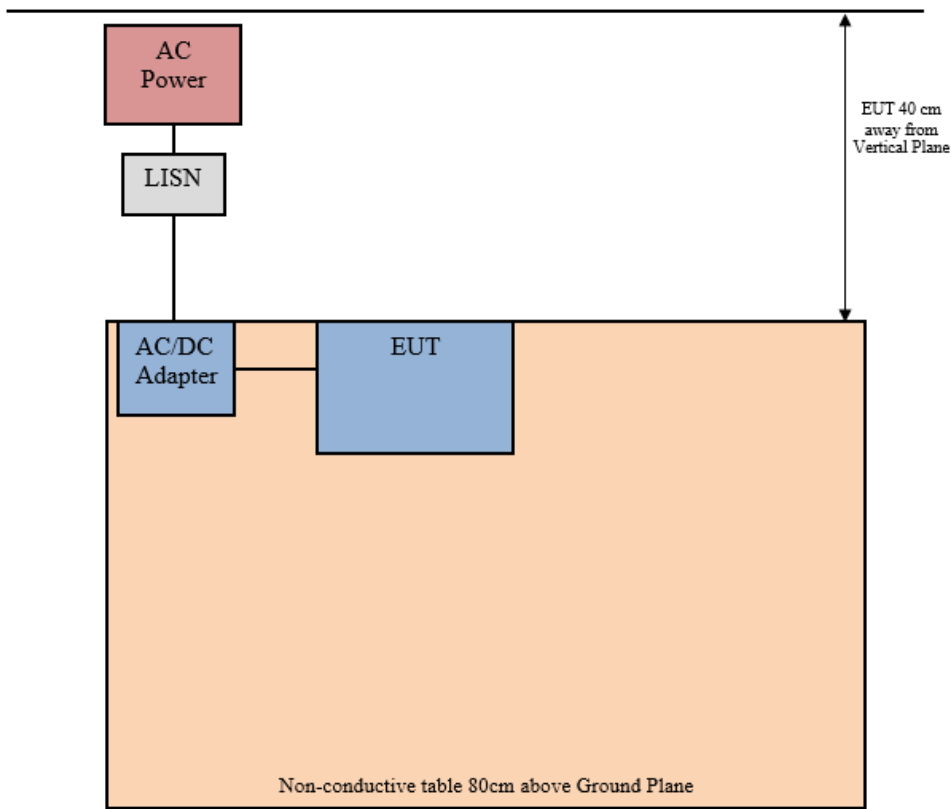
$$\text{Total Loss (dB)} = \text{Cable Loss (dB)} + \text{Attenuation (dB)} + \text{LISN Factor (dB)}$$

The “**Margin**” column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of -7 dB means the emission is 7 dB below the maximum limit at the measured frequency. The equation for margin calculation is as follows:

$$\text{Margin (dB)} = \text{Corrected Amplitude (dB}\mu\text{V)} - \text{Limit (dB}\mu\text{V)}$$

5.5 Test Setup Block Diagram

AC Line



5.6 Test Equipment List and Details

BACL Asset #	Manufacturers	Descriptions	Models	Serial Numbers	Calibration Date	Calibration Due Date
01427	Keysight Technologies	PXE EMI Receiver 1hz to 44Ghz	N9048B	MY59500006	2024-12-23	2025-12-23
00681	Rohde & Schwarz	Impulse Limiter	ESH3-Z2	101962	2025-03-11	2025-09-11
00725	Solar Electronics Company	High Pass Filter	Type 7930-100	7930150203	2025-03-11	2025-09-11
01425	Pasternack	Ground Plane RG58 Coaxial Cable	PE3441-500CM	NA	2025-07-08	2026-01-08
00732	Fischer Custom Communications, Inc.	LISN	FCC-LISN-50-25-2-10-CISPR16	160129	2024-09-13	2025-09-13
01565	Ikonix	AC Power Source	EEC 8540	4280114	2025-05-09	2026-05-09

Statement of Traceability: BACL Corp. attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA Policy P102 "A2LA Policy on Metrological Traceability".

5.7 Environmental Conditions

Testing Date:	2025-08-13
Testing Site:	Ground Plane Test Site
Temperature:	24.5 °C
Relative Humidity:	51 %
ATM Pressure:	101.7 kPa
Testing Personnel:	Felix Lugo

5.8 Summary of Test Results

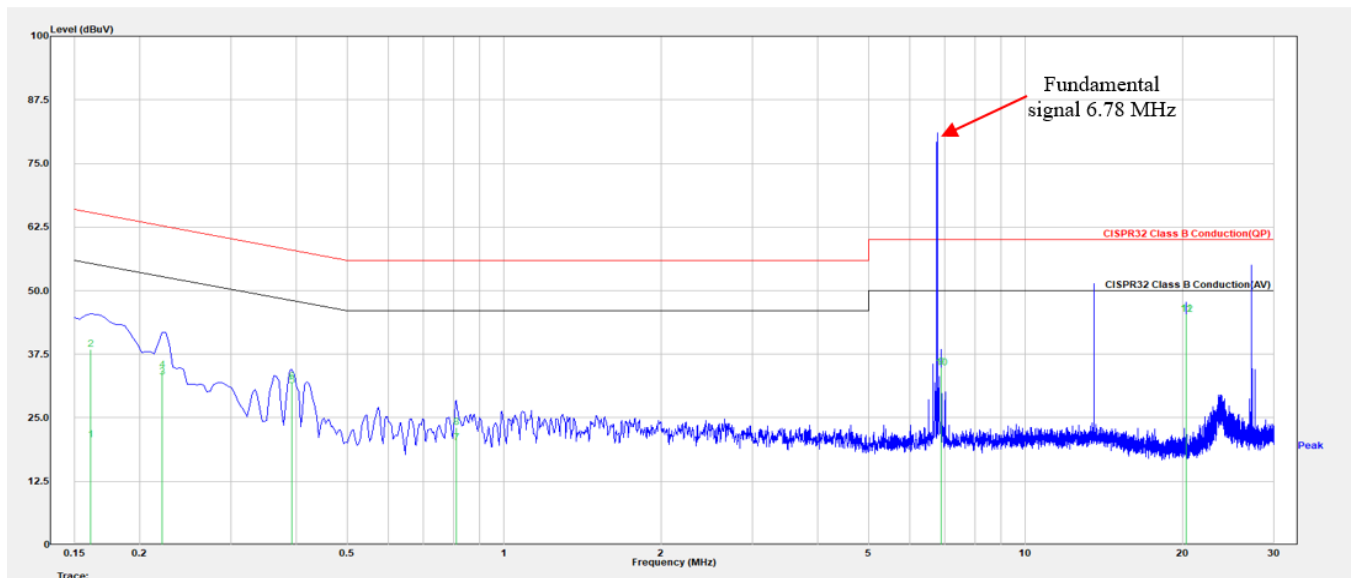
According to the recorded data, the EUT complied with FCC §18.307 limits, and had the worst margin reading of:

Worst Case: AC Line: 120V/60Hz						
Conductor (Hot/Neutral)	Quasi- Peak Frequency (MHz)	Highest Quasi-Peak Corrected Amplitude (dBμV)	Worst-Case Quasi-Peak Margin (dB)	Average Frequency (MHz)	Highest Average Corrected Amplitude (dBμV)	Worst-Case Average Margin (dB)
Hot	20.339	45.28	-14.72	20.339	45.49	-4.51
Neutral	20.339	44.88	-15.12	20.339	45.09	-4.91

Worst Case: AC Line: 240V/60Hz						
Conductor (Hot/Neutral)	Quasi- Peak Frequency (MHz)	Highest Quasi-Peak Corrected Amplitude (dBμV)	Worst-Case Quasi-Peak Margin (dB)	Average Frequency (MHz)	Highest Average Corrected Amplitude (dBμV)	Worst-Case Average Margin (dB)
Hot	20.339	45.21	-14.79	20.339	45.41	-4.59
Neutral	20.339	44.83	-15.17	20.339	45.03	-4.97

5.9 Conducted Emissions Test Plots and Data

AC Line: 120V/60Hz – Hot Conductor



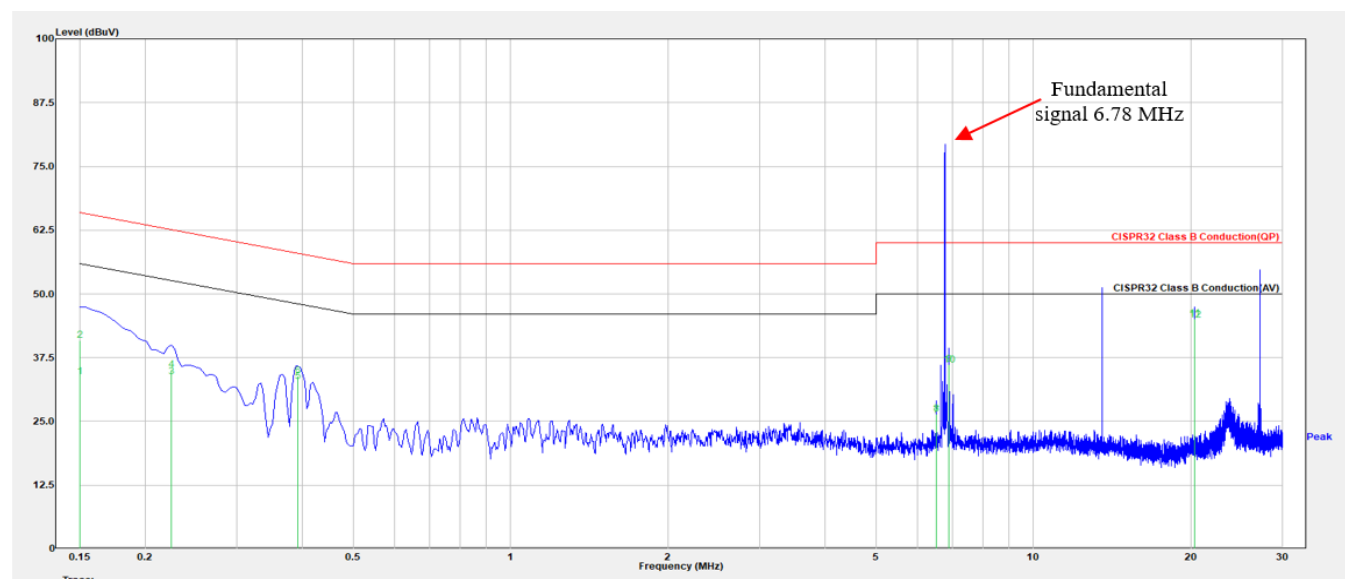
Note: The peaks observed at 13.56 MHz and 27.12 MHz were not considered for formal measurement, as they are harmonics of the fundamental frequency within the ISM bands, which can be excluded in accordance with the test standard.

Quasi-Peak Measurements

Frequency (MHz)	Total Loss (dB)	Corrected Amplitude (dB μ V)	Conductor	Limit (dB μ V)	Margin (dB)
20.339	10.77	45.28	Hot	60	-14.72
6.901	10.25	34.84	Hot	60	-25.16
0.393	11.07	32.11	Hot	58.01	-25.89
0.161	13.32	38.45	Hot	65.4	-26.96
0.221	12.44	34.39	Hot	62.78	-28.39
0.811	10.52	23.13	Hot	56	-32.87

Average Measurements

Frequency (MHz)	Total Loss (dB)	Corrected Amplitude (dB μ V)	Conductor	Limit (dB μ V)	Margin (dB)
20.339	10.77	45.49	Hot	50	-4.51
6.901	10.25	35.03	Hot	50	-14.97
0.393	11.07	31.35	Hot	48.01	-16.66
0.221	12.44	32.97	Hot	52.78	-19.81
0.811	10.52	20.12	Hot	46	-25.88
0.161	13.32	20.7	Hot	55.4	-34.71

AC Line: 120V/60Hz – Neutral Conductor

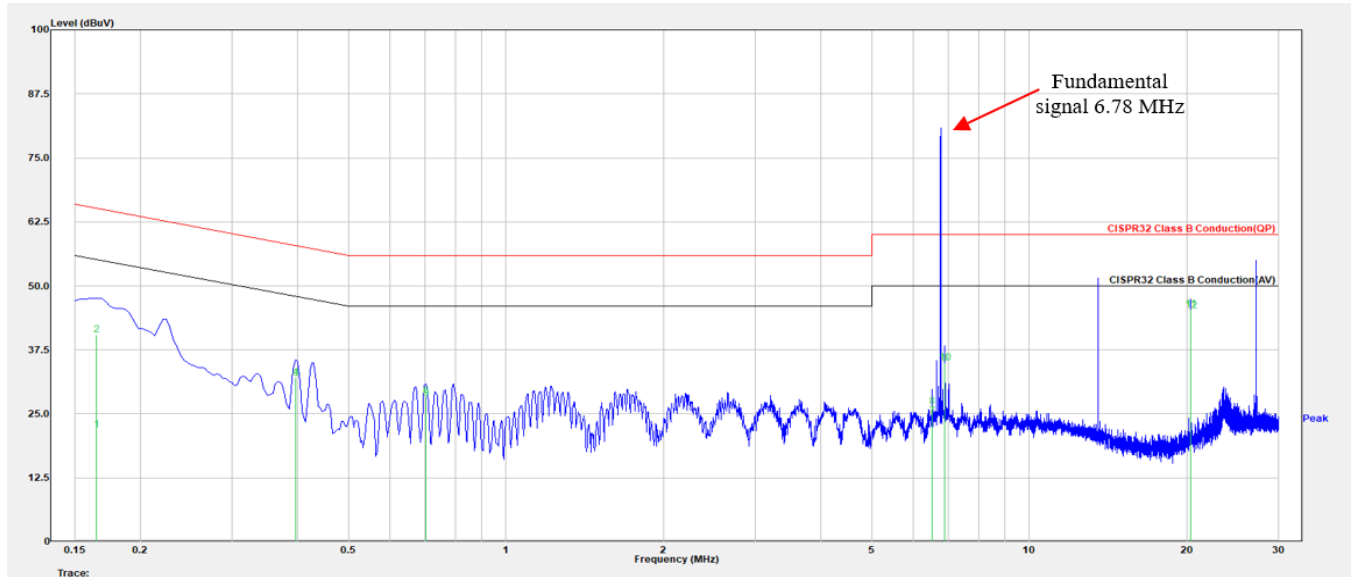
Note: The peaks observed at 13.56 MHz and 27.12 MHz were not considered for formal measurement, as they are harmonics of the fundamental frequency within the ISM bands, which can be excluded in accordance with the test standard.

Quasi-Peak Measurements

Frequency (MHz)	Total Loss (dB)	Corrected Amplitude (dB μ V)	Conductor	Limit (dB μ V)	Margin (dB)
20.339	10.84	44.88	Neutral	60	-15.12
6.901	10.29	36.05	Neutral	60	-23.95
0.393	11.1	33.92	Neutral	58.01	-24.09
0.15	13.52	40.86	Neutral	66	-25.14
0.225	12.4	35.11	Neutral	62.65	-27.54
6.531	10.28	26.46	Neutral	60	-33.54

Average Measurements

Frequency (MHz)	Total Loss (dB)	Corrected Amplitude (dB μ V)	Conductor	Limit (dB μ V)	Margin (dB)
20.339	10.84	45.09	Neutral	50	-4.91
6.901	10.29	36.22	Neutral	50	-13.78
0.393	11.1	32.87	Neutral	48.01	-15.14
0.225	12.4	33.76	Neutral	52.65	-18.89
0.15	13.52	33.74	Neutral	56	-22.26
6.531	10.28	26.12	Neutral	50	-23.88

AC Line: 240V/60Hz – Hot Conductor

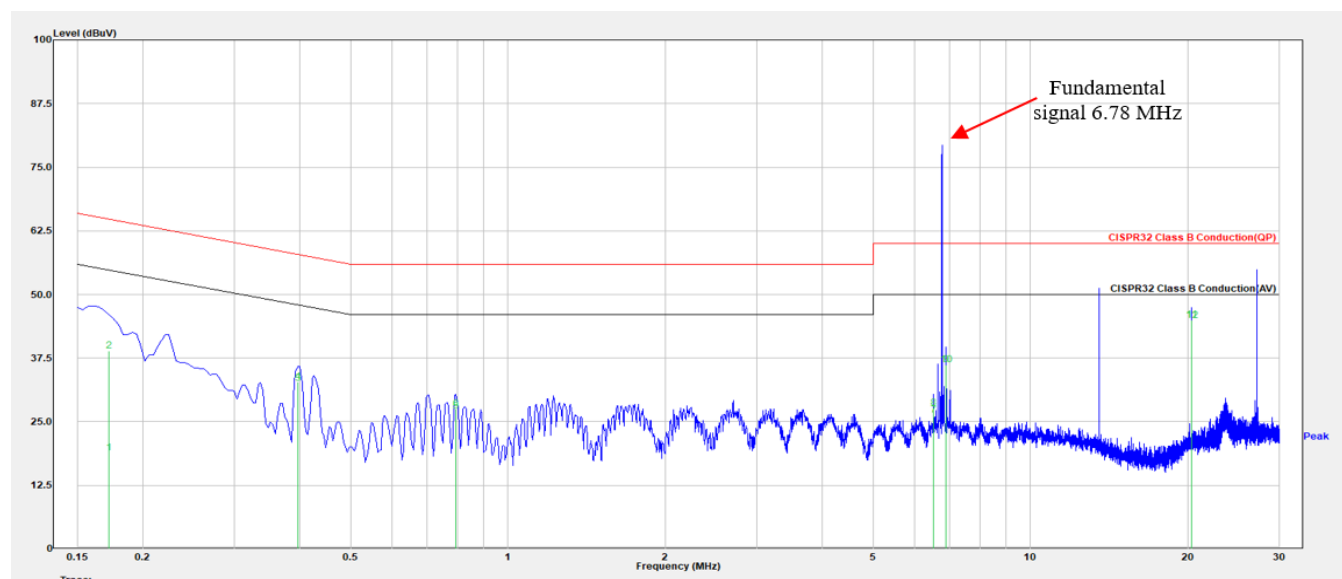
Note: The peaks observed at 13.56 MHz and 27.12 MHz were not considered for formal measurement, as they are harmonics of the fundamental frequency within the ISM bands, which can be excluded in accordance with the test standard.

Quasi-Peak Measurements

Frequency (MHz)	Total Loss (dB)	Corrected Amplitude (dB μ V)	Conductor	Limit (dB μ V)	Margin (dB)
20.339	10.77	45.21	Hot	60	-14.79
0.165	13.26	40.37	Hot	65.21	-24.84
6.901	10.25	34.9	Hot	60	-25.1
0.396	11.06	32.12	Hot	57.93	-25.81
0.702	10.61	28.38	Hot	56	-27.62
6.531	10.24	26.42	Hot	60	-33.58

Average Measurements

Frequency (MHz)	Total Loss (dB)	Corrected Amplitude (dB μ V)	Conductor	Limit (dB μ V)	Margin (dB)
20.339	10.77	45.41	Hot	50	-4.59
6.901	10.25	34.82	Hot	50	-15.18
0.396	11.06	31.97	Hot	47.93	-15.96
0.702	10.61	27.93	Hot	46	-18.07
6.531	10.24	24.55	Hot	50	-25.45
0.165	13.26	21.82	Hot	55.21	-33.39

AC Line: 240V/60Hz – Neutral Conductor

Note: The peaks observed at 13.56 MHz and 27.12 MHz were not considered for formal measurement, as they are harmonics of the fundamental frequency within the ISM bands, which can be excluded in accordance with the test standard.

Quasi-Peak Measurements

Frequency (MHz)	Total Loss (dB)	Corrected Amplitude (dB μ V)	Conductor	Limit (dB μ V)	Margin (dB)
20.339	10.84	44.83	Neutral	60	-15.17
6.901	10.29	36.19	Neutral	60	-23.81
0.396	11.09	32.86	Neutral	57.93	-25.07
0.172	13.17	38.97	Neutral	64.84	-25.88
0.796	10.56	27.48	Neutral	56	-28.52
6.531	10.28	27.66	Neutral	60	-32.34

Average Measurements

Frequency (MHz)	Total Loss (dB)	Corrected Amplitude (dB μ V)	Conductor	Limit (dB μ V)	Margin (dB)
20.339	10.84	45.03	Neutral	50	-4.97
6.901	10.29	36.18	Neutral	50	-13.82
0.396	11.09	32.49	Neutral	47.93	-15.44
0.796	10.56	27.1	Neutral	46	-18.9
6.531	10.28	26.23	Neutral	50	-23.77
0.172	13.17	18.85	Neutral	54.84	-35.99

6 FCC §18.313, §2.1091, §1.1310– RF Exposure

6.1 Applicable Standards

According to FCC §15.247(i), Radio frequency devices operating under the provisions of this part are subject to the radio frequency radiation exposure requirements specified in §§ 1.1307(b), 1.1310, 2.1091, and 2.1093 of this chapter, as appropriate. Applications for equipment authorization of mobile or portable devices operating under this section must contain a statement confirming compliance with these requirements. Technical information showing the basis for this statement must be submitted to the Commission upon request.

According to FCC §2.1091 and §1.1310(e)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	* (100)	30
1.34-30	824/f	2.19/f	* (180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

6.2 MPE Prediction

Predication of MPE limit at a given distance, Equation from OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

Where: S = power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

6.3 Test Equipmetn List and Details

BACL Asset #	Manufacturers	Descriptions	Models	Serial Numbers	Calibration Date	Calibration Due Date
731	Extech Instruments	Thermo-Anemometer, Hot Wire CFM	SDL350	Q638731	2024-10-05	2026-10-05

Statement of Traceability: BACL Corp. attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA Policy P102 “A2LA Policy on Metrological Traceability”.

6.4 Environmental Conditions

Testing Date:	2025-10-24
Testing Site:	5m Chamber 3
Temperature:	25.0 °C
Relative Humidity:	49.5 %
ATM Pressure:	101.5 kPa
Testing Personnel:	Libass Thiaw

6.5 MPE Result

Worst case: 6.78 MHz

Frequency (MHz)	Max EIRP (dBm)	Power Density @ 20cm (mW/cm ²)	Power Density Limit Limit (mW/cm ²)
6.78	3.1	0.0004	<3.92

The device is compliant with the limits for uncontrolled exposure. The highest EIRP was calculated based on the 87.87 dBuV/m at 10 meters. Calculations in above table utilizing a safe separation distance of at least 20cm.

Test Position	E-field strength (V/m)	H-field strength (A/m)	E-field Strength Limit (V/m)	H-field Strength Limit (A/m)
A	20.08	0.0779	<121.53	<0.32
B	31.56	0.0653	<121.53	<0.32
C	24.26	0.0528	<121.53	<0.32
D	29.45	0.0840	<121.53	<0.32
E	21.36	0.0571	<121.53	<0.32

7 Annex A (Normative) – EUT Photographs

Please refer to the attachment.

8 Annex B (Normative) – Labeling Information

8.1 FCC Labeling Information

As per FCC §18.209: Identification of authorized equipment

Each device for which a grant of equipment authorization is issued under this part shall be identified pursuant to the applicable provisions of subpart J of part 2 of this chapter.

As per FCC §2.1074: Identification

- (a) Devices subject only to Supplier's Declaration of Conformity shall be uniquely identified by the party responsible for marketing or importing the equipment within the United States. However, the identification shall not be of a format which could be confused with the FCC Identifier required on certified equipment. The responsible party shall maintain adequate identification records to facilitate positive identification for each device.
- (b) Devices subject to authorization under Supplier's Declaration of Conformity may be labeled with the following logo on a voluntary basis as a visual indication that the product complies with the applicable FCC requirements. The use of the logo on the device does not alleviate the requirement to provide the compliance information required by § 2.1077.



As per FCC §18.212: Compliance information

- (a) Equipment authorized under Supplier's Declaration of Conformity shall include a compliance statement that contains the information set forth in § 2.1077 of this chapter and a statement identical or similar to the following: *"This device complies with part 18 of the FCC Rules."*
- (a) The compliance information may be placed in the instruction manual, on a separate sheet, on the packaging, or electronically as permitted under § 2.935 of this chapter. There is no specific format for this information.

As per FCC §18.213: Information to the User

Information on the following matters shall be provided to the user in the instruction manual or on the packaging if an instruction manual is not provided for any type of ISM equipment:

- a. The interference potential of the device or system
- b. Maintenance of the system
- c. Simple measures that can be taken by the user to correct interference.
- d. Manufacturers of RF lighting devices must provide an advisory statement, either on the product packaging or with other user documentation, similar to the following: This product may cause interference to radio equipment and should not be installed near maritime safety communications equipment or other critical navigation or communication equipment operating between 0.45–30 MHz. Variations of this language are permitted provided all the points of the statement are addressed and may be presented in any legible font or text style.

9 Annex C (Normative) – Product Label

Please refer to the attachment.

10 Annex D (Normative) – Internal Photographs

Please refer to the attachment.

11 Annex E (Normative) – Test Setup Photographs

Please refer to the attachment.

12 Annex F (Normative) – ISO/IEC 17025 Certificate and Scope of Accreditation



Please follow the web link below for a full ISO 17025 scope

<https://www.a2la.org/scopepdf/3297-02.pdf>

--- END OF REPORT ---