FCC PART 95, SUBPART M

TEST REPORT

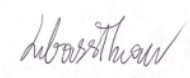
For

Zadar Labs, Inc.

530 Division St
Campbell, CA 95008, USA

FCC ID: 2BFPN-ZPRM3

Report Type:	Product Type:
Original Report	Automotive Radar

Prepared By:	Libass Thiaw RF Test Engineer	
Report Number:	R2506192-95	
Report Date:	2025-08-13	
Reviewed By:	Christian McCaig RF Lead Engineer	

Bay Area Compliance Laboratories Corp.
1274 Anvilwood Avenue,
Sunnyvale, CA 94089, USA
Tel: +1 (408) 732-9162, Fax: +1 (408) 732-9164

TABLE OF CONTENTS

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	R2506192-95	Original Report	2025-08-13

1 General Description

1.1 Product Description for Equipment Under Test (EUT)

This test report was prepared on behalf of *Zadar Labs, Inc.* and their product models: zPRM3-77-XX-LR, zPRM3-77-XX-W, zPRM3-77-XX-UW or the "EUT" as referred to in this report. The EUT is an Automotive Radar which operates in the 76-81 GHz spectrum.

1.2 Mechanical Description of EUT

The EUT measures approximately 135 mm (Length) x 100 mm (Width) x 30 mm (High).

The data gathered is from a production sample provided by Zadar Labs, Inc., with serial numbers: R2506191-1, R2506191-3, and R2506191-5 assigned by BACL

1.3 Objective

This report was prepared on behalf of *Zadar Labs, Inc.*, in accordance with Part 2, Subpart J, and Part 95, Subpart M of the Federal Communication Commission's rules.

The objective was to determine compliance with FCC Part 95, Subpart M rules for Peak Fundamental Emission, Average Fundamental Emission, RF Exposure, Occupied Bandwidth, Frequency Stability and Radiated Spurious Emissions.

1.4 Related Submittal(s)/Grant(s)

N/A

1.5 Test Methodology

All measurements contained in this report were conducted in accordance with ANSI C63.26-2015 American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services.

1.6 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in the field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Parameter	Measurement uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.57 dB
Power Spectral Density, conducted	±1.48dB
Unwanted Emissions, conducted	±1.57dB
All emissions, radiated	±4.0 dB
AC power line Conducted Emission	±2.0 dB
Temperature	±2 º C
Humidity	±5 %
DC and low frequency voltages	±1.0 %
Time	±2 %
Duty Cycle	±3 %

1.7 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.

1.8 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

2 System Test Configuration

2.1 Justification

The EUT was configured for testing according to ANSI C63.26-2015.

The EUT was tested in a testing mode to represent worst-case results during the final qualification test.

2.2 EUT Exercise Software

Test Software "Zadar Web Viewer" was provided by Zadar Labs, Inc., and was verified to be compliant with the standard requirements being tested against. The following modes were set for testing. All the modes were measured for testing, and the corresponding power settings used are listed below.

Power Setting Table

Frequency	Mode	Power Setting
76-81 GHz	Default	Default

Please refer to the Operational Description for detailed description of the test mode.

2.3 Modulation Characteristics

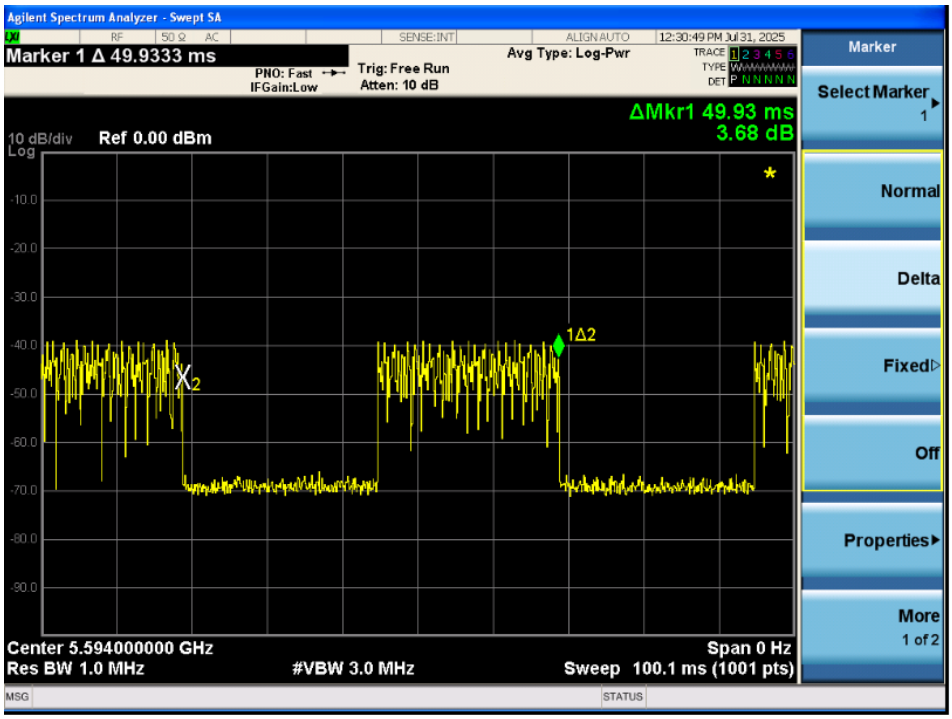
Per FCC §2.1047(d) *Other types of equipment*: A curve or equivalent data which shows that the equipment will meet the modulation requirements of the rules under which the equipment is to be licensed.

Comments from manufacturer on modulation characteristics are provided below:

Parameter	Manufacturer Comments
Sweep time	100ms
Modulation Type	FMCW-Sawtooth
Sweep Bandwidth	266 MHz
Sweep Rate	266MHz/µs

Note: above is information provided by customer.

2.4 EUT Cycle Time



Per above screenshot, cycle time is 49.93ms

2.5 Equipment Modifications

None

2.6 Remote Support Equipment

Manufacturer	Description	Model	S/N
Dell	Laptop	Latitude E6410	-

2.7 Local Support Equipment

Manufacturer	Description	Model	S/N
Volteq	DC Power Supply	HY5003D	160402343

2.8 Interface Ports and Cabling

Cable Description	Length (m)	To	From
Power Cables	< 2 m	EUT	DC Power Supply
Ethernet Cable	<2 m	EUT	Laptop

3 Summary of Test Results

Results reported relate only to the product tested.

FCC Rules	Description of Test	Results
FCC §95.3385, §2.1091, §1.1310(d) (3)	RF Exposure	Compliant
FCC §95.3379(a)	Radiated Spurious Emissions	Compliant
FCC §95.3379(b)	Occupied Bandwidth/Frequency Stability	Compliant
FCC §95.3379(b)	Peak Fundamental Emission	Compliant
FCC §95.3379(a)	Average Fundamental Emission	Compliant

Note: Device is powered by car battery.

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 §2.1091, §1.1310(d) (3) - RF Exposure

4.1 Applicable Standards

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

4.2 MPE Result

Maximum EIRP (dBm):	38
Maximum EIRP (mW):	6309.57
Prediction distance (cm):	23
Prediction frequency (MHz):	76000
Power density of prediction frequency at 23.0 cm (mW/cm^2):	0.945
FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm^2):	1.0

The device is compliant with the requirement MPE limit for uncontrolled exposure. The maximum power density at the distance of 23 cm is 0.945 mW/cm^2. Limit is 1 mW/cm^2.

6 FCC §95.3367(b) - Peak Fundamental Emission

6.1 Applicable Standards

According to FCC §95.3367(b): The maximum peak power (EIRP) within the 76-81 GHz band shall not exceed 55 dBm based on measurements employing a peak detector with a 1 MHz RBW.

6.2 Measurement Procedure

.RBW = 1MHz, VBW = 3MHz

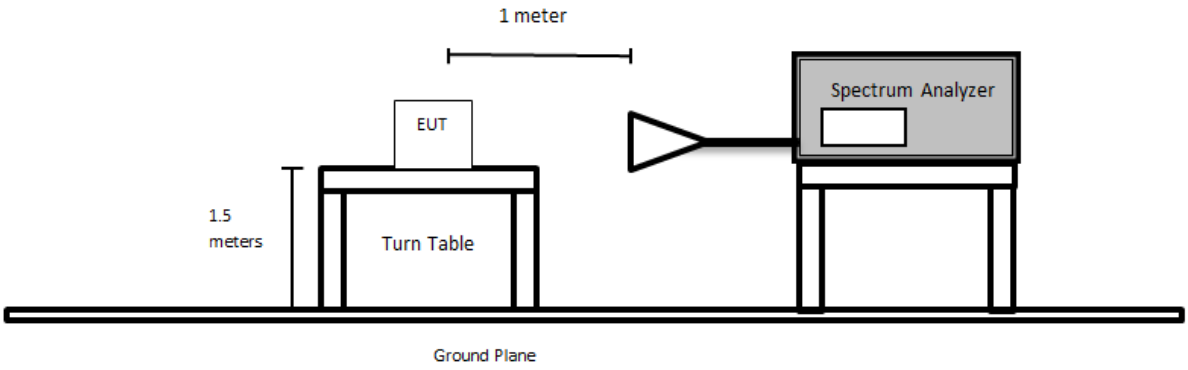
.Peak detector

.Max hold trace

.Sweep Time > EUT Cycle Time * sweep points. Per section 2.4, EUT Cycle Time is 49.93ms.

.Peak marker placed on the highest point and recorded

6.3 Test Setup Block Diagram



6.4 Test Equipment List and Details

BACL No.	Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
287	Agilent	PSA Series Spectrum Analyzer	E4446A	US44300386	2025-05-29	1 year
861	OML Inc.	Horn Antenna	M12RH	17061501	N/R	N/A
-	-	RF cables	-	-	Each time[1]	N/A
1130	Agilent	MXG Vector Signal Generator	N5183A	MY50140453	2024-11-07	1 year
1462	Virginia Diodes, Inc.	Frequency Extender for Up and Down conversion	WR12SAX-UP	VDI SAX 061	Each Time[1]	Each Time[1]

Note[1]: equipment characterized each time prior to testing.

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".*

6.5 Test Environmental Conditions

Temperature:	23º C
Relative Humidity:	42 %
ATM Pressure:	102.7 KPa

The testing was performed by Libass Thiaw on 2025-07-28 in 5 meter chamber 3.

6.6 Test Results

Measurements were taken at 1 meter

*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 limit. The equation for margin calculation is as follows:*

Margin = Corrected peak power – Limit

Note: LR= Long Range, W=Wide, UW= Ultra-Wide

Peak Power LR

Raw Measure (dBm)	Down Conv. Loss (dB)	AF (dB/m)	Unit Conv. Constant (dB)	Distance Correction Factor (dB)	Cable Loss (dB)	Uncorrected peak power (dBm)	Peak Desens Factor (dB)	Corrected peak power (dBm)	Limit (dBm)	Margin (dB)
-11.29	10	43.6	2.23	0	0.685	45.225	0.000003	45.225	55	-9.775

Peak Power W

Raw Measure (dBm)	Down Conv. Loss (dB)	AF (dB/m)	Unit Conv. Constant (dB)	Distance Correction Factor (dB)	Cable Loss (dB)	Uncorrected peak power (dBm)	Peak Desens Factor (dB)	Corrected peak power (dBm)	Limit (dBm)	Margin (dB)
-13.05	10	43.6	2.23	0	0.685	43.465	0.000003	43.465	55	-11.535

Peak Power UW

Raw Measure (dBm)	Down Conv. Loss (dB)	AF (dB/m)	Unit Conv. Constant (dB)	Distance Correction Factor (dB)	Cable Loss (dB)	Uncorrected peak power (dBm)	Peak Desens Factor (dB)	Corrected peak power (dBm)	Limit (dBm)	Margin (dB)
-15.93	10	43.6	2.19	0	0.685	40.545	0.000003	40.545	55	-14.455

Note: Down Conv Loss is the characterized loss from down converter used in measurement
AF is antenna factor
Unit Conv Constant is 106.99 – 104.8 = 2.19dB per necessary unit conversions in making radiated measurement
Distance Correction Factor is 20*log(Distance=1m)
Cable Loss is to account for cable from down converter to PSA.
Per Keysight Application Note 5952-1039: Peak Desens Factor = -20log(α)

$$\alpha = \frac{1}{\sqrt[4]{1 + (\frac{2\ln(2)}{\pi})^2 (\frac{BW_{Chirp}}{T_{Chirp} B^2})^2}}$$

BW Chirp (Hz)= 266000000
TChirp (s)= 0.1
B (Hz)= 1000000

The BW Chirp and T Chirp values were provided by Zadar Labs, Inc.
Uncorrected Peak Power (dBm) = Raw Measure (dBm) + Down Conv Loss (dB) + AF (dB/m) + Unit Conv. Constant (dB) + Distance Conversion Factor (dB) +Cable Loss (dB)
Corrected Peak Power (dBm) = Uncorrected peak power (dBm) + Peak Desens Factor (dB)
Note: per ANSI C63.26-2015, section 5.2.7: dBuV/m = dBm -20log(Distance) +104.8
Please refer to Annex A for detailed test results.

7 FCC §95.3367(a) - Average Fundamental Emission

7.1 Applicable Standards

According to FCC §95.3367(a): The maximum power (EIRP) within the 76-81 GHz band shall not exceed 50 dBm based on measurements employing a power averaging detector with a 1 MHz Resolution Bandwidth (RBW).

7.2 Measurement Procedure

The Average Power was measured using the Channel Power function on the PSA

RBW = 1MHz, VBW = 3MHz

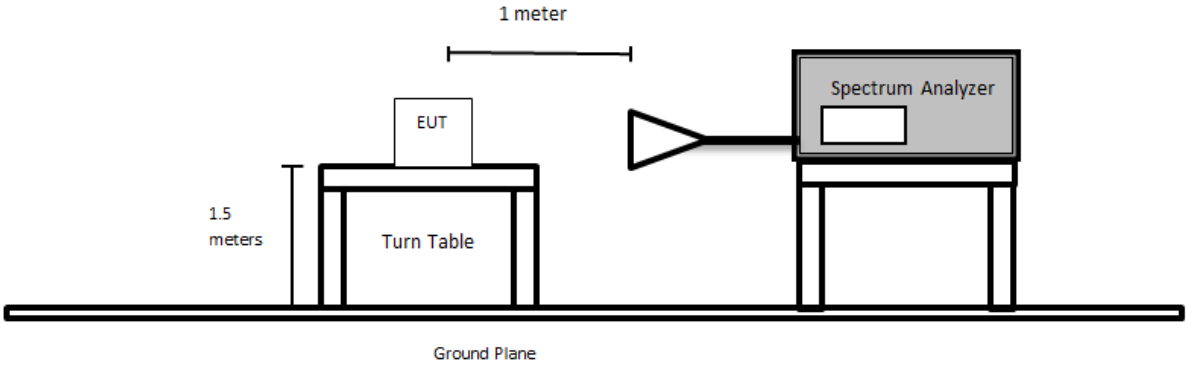
RMS detector

Max hold trace

Sweep Time > EUT Cycle Time * sweep points. Per section 2.4, EUT Cycle Time is 49.93ms.

Power is integrated over the occupied BW and value is recorded

7.3 Test Setup Block Diagram



7.4 Test Equipment List and Details

BACL No.	Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
287	Agilent	PSA Series Spectrum Analyzer	E4446A	US44300386	2025-05-29	1 year
861	OML Inc.	Horn Antenna	M12RH	17061501	N/R	N/A
-	-	RF cables	-	-	Each time[1]	N/A
1130	Agilent	MXG Vector Signal Generator	N5183A	MY50140453	2024-11-07	1 year
1462	Virginia Diodes, Inc.	Frequency Extender for Up and Down conversion	WR12SAX-UP	VDI SAX 061	Each Time[1]	Each Time[1]

Note[1]: equipment characterized each time prior to testing.

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".*

7.5 Test Environmental Conditions

Temperature:	23º C
Relative Humidity:	42 %
ATM Pressure:	102.7 KPa

The testing was performed by Libass Thiaw on 2025-07-28 in 5 meter chamber 3.

7.6 Test Results

Measurements were taken at 1 meter

*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. The equation for margin calculation is as follows:*

Margin = Corrected avg power – Limit

Note: LR= Long Range, W=Wide, UW= Ultra-Wide

Average Power LR

Raw Measure (dBm)	Down Conv. Loss (dB)	AF (dB/m)	Unit Conv. Constant (dB)	Distance Correction Factor (dB)	Cable Loss (dB)	Corrected avg power (dBm)	Limit (dBm)	Margin (dB)
-18.56	10	43.6	2.23	0	0.685	37.955	50	-12.045

Average Power W

Raw Measure (dBm)	Down Conv. Loss (dB)	AF (dB/m)	Unit Conv. Constant (dB)	Distance Correction Factor (dB)	Cable Loss (dB)	Corrected avg power (dBm)	Limit (dBm)	Margin (dB)
-20.2	10	43.6	2.23	0	0.685	36.315	50	-13.685

Average Power UW

Raw Measure (dBm)	Down Conv. Loss (dB)	AF (dB/m)	Unit Conv. Constant (dB)	Distance Correction Factor (dB)	Cable Loss (dB)	Corrected avg power (dBm)	Limit (dBm)	Margin (dB)
-23.86	10	43.6	2.19	0	0.685	32.615	50	-17.385

Note: Down Conv Loss is the characterized loss from down converter used in measurement
AF is antenna factor
Unit Conv Constant is 106.99 – 104.76 = 2.23dB per necessary unit conversions in making radiated measurement
Distance Correction Factor is 20*log(Distance=1m)
Cable Loss is to account for cable from down converter to PSA.

Corrected avg Power (dBm) = Raw Measure (dBm) + Down Conv Loss (dB) + AF (dB/m) + Unit Conv. Constant (dB) + Distance Conversion Factor (dB) +Cable Loss (dB)
Note: per ANSI C63.26-2015, section 5.2.7: dBuV/m = dBm -20log(Distance) +104.8

Please refer to Annex B for detailed test results.

8 FCC §95.3379(a) - Radiated Emissions

8.1 Applicable Standards

As per FCC §95.3379(a): The power density of any emission outside the 76-81 GHz band shall consist solely of spurious emissions and shall not exceed the following:

(1): Radiated emissions below 40 GHz shall not exceed the field strength as shown in the following emissions table.

Frequency (MHz)	Field Strength (micro volts/meter)	Measurement Distance (meters)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100**	3
88 - 216	150**	3
216 - 960	200**	3
Above 960	500	3

(i): In the emissions table in paragraph (a)(1) of this section, the tighter limit applies at the band edges.

(ii): The limits in the table in paragraph (a)(1) of this section are based on the frequency of the unwanted emission and not the fundamental frequency. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.

(iii): The emissions limits shown in the table in paragraph (a)(1) of the section are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9.0-90.0 kHz, 110.0-490.0 kHz, and above 1000 MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector with a 1 MHz RBW.

(2): The power density of radiated emissions outside the 76-81 GHz band above 40.0 GHz shall not exceed the following, based on measurements employing an average detector with a 1 MHz RBW:

(i): For radiated emissions outside the 76-81 GHz band between 40 GHz and 200 GHz from field disturbance sensors and radar systems operating in the 76-81 GHz band: 600 pW/cm^2 at a distance of 3 meters from the exterior surface of the radiating structure.

(ii): For radiated emissions above 200 GHz from field disturbance sensors and radar systems operating in the 76-81 GHz band: 1000 pW/cm^2 at a distance of 3 meters from the exterior surface of the radiating structure.

(3): For field disturbance sensors and radar systems operating in the 76-81 GHz band, the spectrum shall be investigated up to 231.0 GHz.

8.2 Test Setup

The radiated emissions tests were performed in the 5-meter Chamber, using the setup in accordance with ANSI C63.26-2015. The specification used was the FCC 95 Subpart M limits.

The spacing between the peripherals was 10 centimeters.

External I/O cables were draped along the edge of the test table and bundle when necessary.

8.3 Measurement Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

For radiated testing the EUT was set 1 meter away from the testing antenna, which was varied from 1-4 meter, and the EUT was placed on a turntable, which was 0.8 meter and 1.5 meter above the ground plane for below and above 960 MHz measurements, the table shall be rotated for 360 degrees to find out the highest emission. The receiving antenna's polarity should be changed between horizontal and vertical.

The spectrum analyzer or receiver was set as:

Below 960 MHz:

RBW = 100 kHz / VBW = 300 kHz / Sweep = Auto

Above 960 MHz:

The measurements were based on ANSI C63.26-2015, American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services.

8.4 Corrected Amplitude and Margin Calculation

For emissions below 1 GHz,

The Corrected Amplitude (CA) is calculated by adding the Correction Factor to the S.A. Reading. The basic equation is as follows:

CA = S.A. Reading + Correction Factor

For example, a corrected amplitude of 40.3 dBuV/m = S.A. Reading (32.5 dBuV) + 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) together. This calculation is done in the measurement software, and reported in the test result section. The basic equation is as follows:

Correction Factor = AF + CL + Atten – Ga

For emission above 1 GHz,

The Corrected Amplitude (CA) is calculated by adding the Antenna Factor (AF), the Cable Loss (CL), the Attenuator Factor (Atten) and subtracting the Amplifier Gain (Ga) to indicated Amplitude (Ai) reading. The basic equation is as follows:

CA = Ai + AF + CL + Atten – Ga

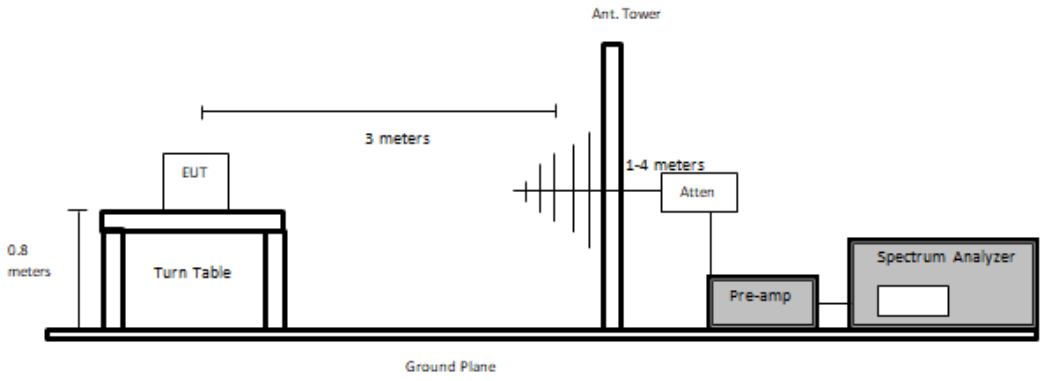
For example, a corrected amplitude of 40.3 dBuV/m = Indicated Reading (32.5 dBuV) + Antenna Factor (+23.5dB) + Cable Loss (3.7 dB) + Attenuator (10 dB) - Amplifier Gain (29.4 dB)

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. The equation for margin calculation is as follows:

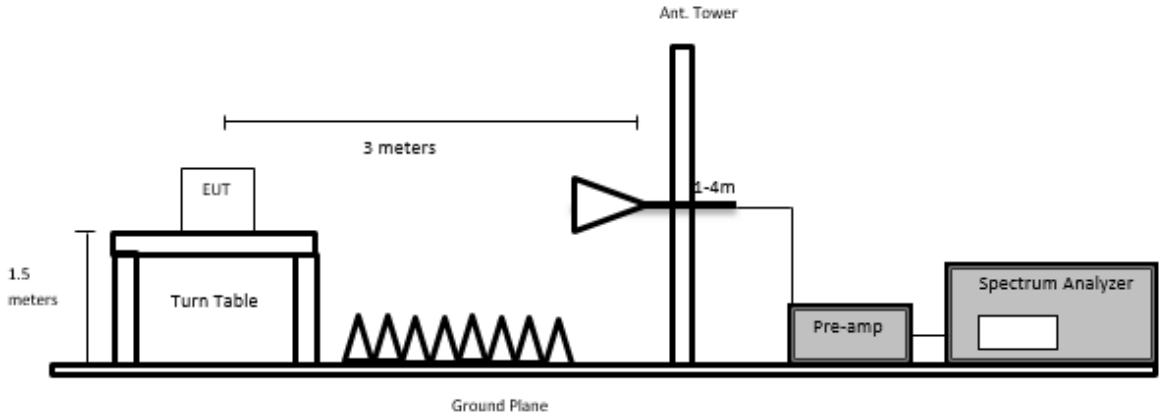
Margin = Corrected Amplitude – Limit

8.5 Test Setup Block Diagram

Below 1GHz:

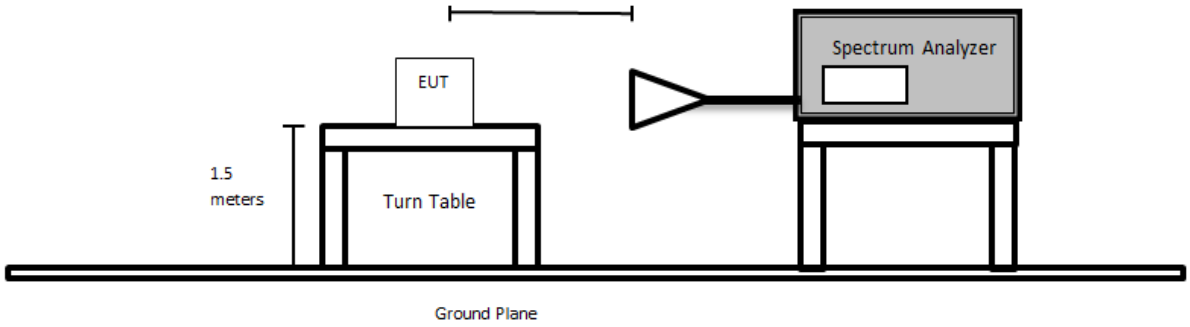


1-40 GHz:



Above 40 GHz:

0.1-1meter



8.6 Test Equipment List and Details

BACL No.	Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Interval
327	Sunol Sciences	System Controller	SC110V	122303-1	N/R	N/R
1075	Sunol Sciences	Boresight Tower	TLT3	050119-7	N/R	N/R
1388	Sunol Sciences	Flush Mount Turntable	FM	112005-2	N/R	N/R
287	Agilent	PSA Series Spectrum Analyzer	E4446A	US44300386	2025-05-29	1 year
1432	Keysight Technologies	MXE EMI Receiver, Multi-touch	N9038B	MY60180008	2025-01-03	1 year
393	COMPOWER	Active Loop Antenna, 10kHz-30MHz	AL-130	17043	2025-05-06	2 years
321	Sunol Sciences	Biconilog Antenna, 30MHz-1GHz	JB3	A020106-2; 1504	2023-12-18	2 years
1245	-	6dB Attenuator	PE7390-6	01182018A	2023-12-18	2 years
316	Sonoma Instruments	Preamplifier 10 kHz - 2.5 GHz	317	260406	2025-02-20	6 months
1248	Pasternack	RG214 COAX Cable	PE3062	-	2025-04-02	6 months
1246	Hewlet Packard	RF Limiter	11867A	01734	2025-04-07	1 year
1249	Time microwave	LMR-400 Cable Dc-3 GHz	AE13684	2k80612-5 6fts	2025-04-07	1 year
1192	ETS Lindgren	Horn Antenna, 1GHz-18GHz	3117	00218973	2024-10-23	2 years
1295	Carlisle	10m Ultra Low Loss Coaxial Cable	UFB142A-1-3937-200200	64639890912-001	2025-04-16	6 months
1449	BACL	Preamplifier, 0.1GHz-18GHz	BACL1313-A100M18G	4052472	2025-02-19	6 months
1546	Megaphase	SMA coax cable	TM26-S1S3-12	20869602 001	2025-03-05	6 months
91	Wisewave	Horn Antenna, 18GHz-26.5GHz	ARH-4223-02	10555-01	2025-05-06	2 years
92	Wisewave	Horn Antenna, 26.5-40GHz	ARH-2823-02	10555-01	2024-06-24	2 years
1451	BACL	Preamplifier 18GHz-40GHz	BACL-1313-A1840	4052432	2025-02-19	6 months
1545	Megaphase	K-type coax cable	TM40-K1K3-12	20869601 001	2025-03-05	6 months
1334	Micro-Tronics	Notch Filter, 2.4GHz-2.5GHz	BRM50702	G361	2024-12-31	1 year
1522	Mini-Circuits	Low Pass Filter	15542 NLP-1200+	V UU42501636	2025-04-02	6 months
861	OML Inc.	Mixer and Horn Antenna set	M03HWA, M05HWA M08HWA M012HWA M019HWA	170615-1	N/R	N/A

Note[1]: cables included in the test set-up will be checked each time before testing.

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".*

Far Field Calculations for mixer and horn antenna set:

Antenna Model	Frequency Range (GHz)	D (meters)	λ (meters)	R_m (meters)
M19RH	40-60	0.04625	0.004997	0.9
M12RH	60-90	0.03002	0.003331	0.5
M8RH	90-140	0.01969	0.002141	0.4
M5RH	140-162	0.01255	0.001852	0.2
	162-220	0.01255	0.001364	0.2
M3RH	220-231	0.00836	0.001298	0.1

Note: Far-Field (Rayleigh) distance formula used is shown below (According to ANSI C63.26-2015 Section 4.4.3 Note f)

$$R_m = 2D^2 / \lambda$$

, where the R_m is the Rayleigh (far-field) distance, D is the largest dimension of the antenna aperture and λ is the free-space wavelength in meters at the frequency of measurement (calculated by speed of light divided by frequency).

Note: Measurements in report were made at distances greater than calculated far-field distances shown in table

8.7 Test Environmental Conditions

Temperature:	20-22 ºC
Relative Humidity:	42-50 %
ATM Pressure:	102.7 kPa

The equipment above was used for testing performed by Libass Thiaw from 2025-06-23 to 2025-07-25 in 5 meter chamber 3.

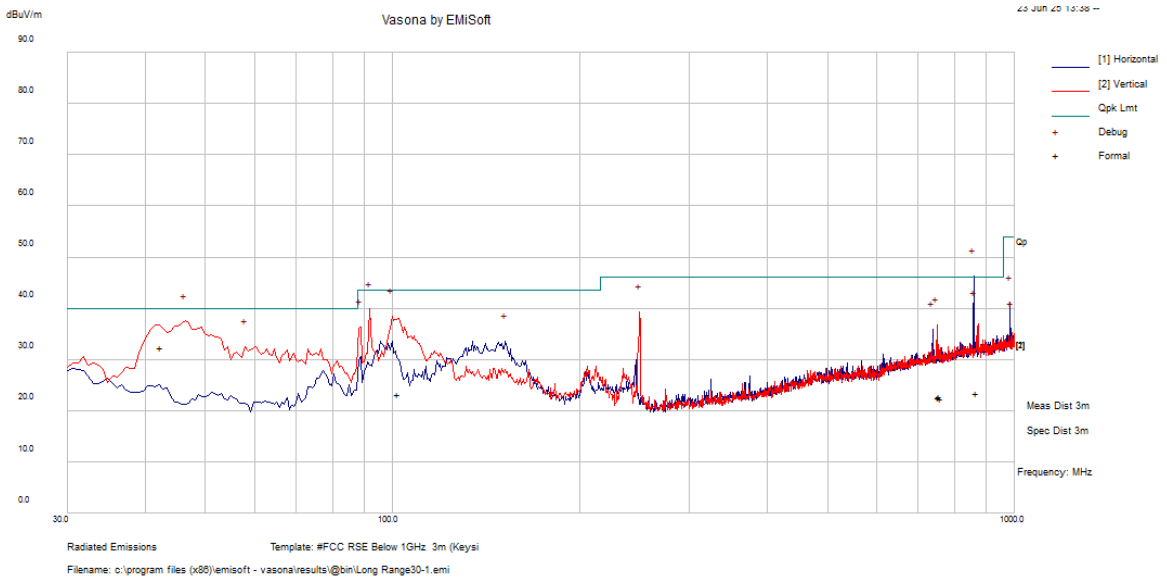
.

Note: lowest emission transmitted by EUT is 40MHz, thus evaluation below 30MHz is unnecessary.
Note: Pre-scans were performed in order to investigate the x,y and z orientations of the EUT for radiated spurious emissions testing. Worst case positioning of EUT determined can be seen in the test setup photos.

8.8 Test Results below 1 GHz measured at 3 meters

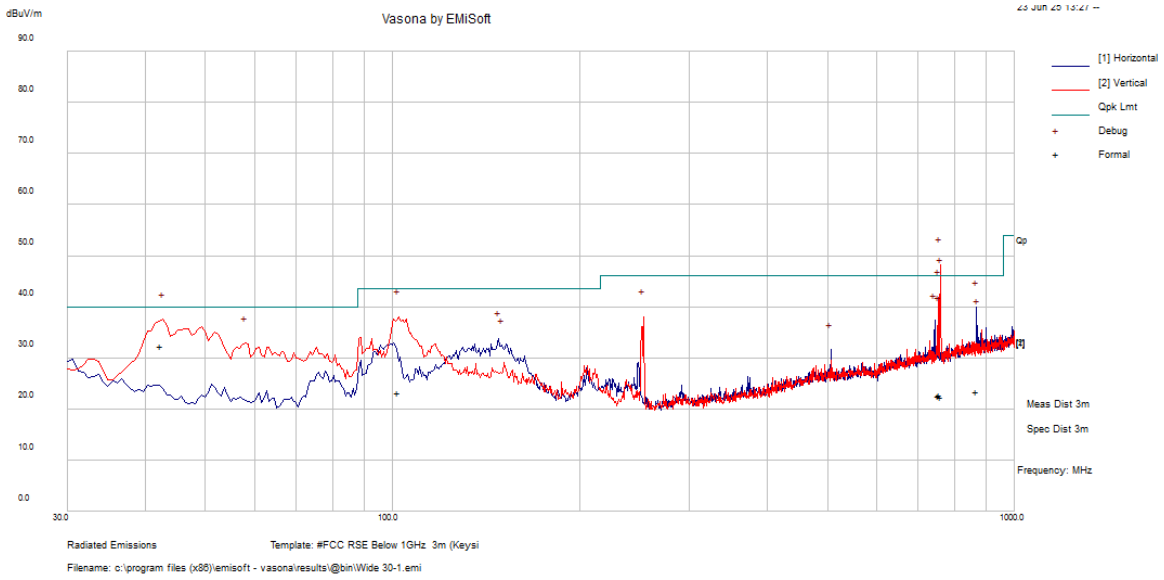
Note: LR= Long Range, W=Wide, UW= Ultra-Wide

LR



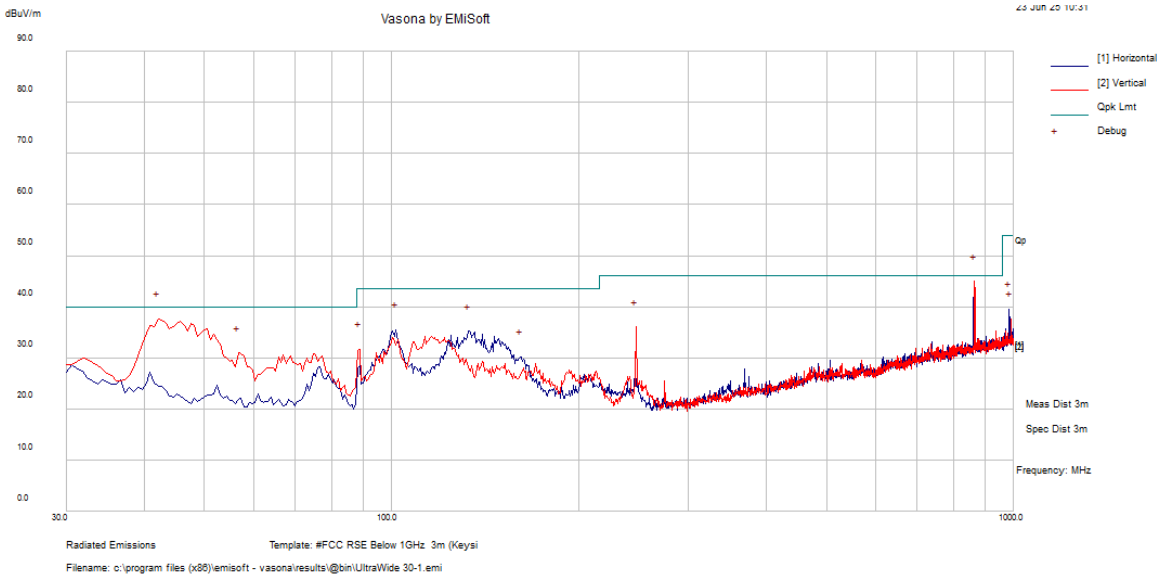
Freq. (MHz)	S.A. Reading (dBµV)	Corr. Factor (dB/m)	Corrected Amp. (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Comment
860.1356	28.26	-4.92	23.34	121	H	210	46	-22.66	QP
46.45281	53.91	-21.42	32.49	143	V	225	40	-7.51	QP
91.8625	50.4	-21.76	28.65	135	V	344	43.5	-14.85	QP
99.58719	51.65	-19.48	32.17	108	V	248	43.5	-11.33	QP
249.3522	37.88	-17.66	20.22	117	V	240	46	-25.78	QP
88.56625	55.68	-22.7	32.99	128	V	219	43.5	-10.51	QP

W



Freq. (MHz)	S.A. Reading (dBµV)	Corr. Factor (dB/m)	Corrected Amp. (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Comment
758.7238	29.19	-6.4	22.79	274	V	67	46	-23.21	QP
760.065	28.76	-6.4	22.36	219	V	217	46	-23.64	QP
42.48906	51.34	-18.93	32.4	105	V	266	40	-7.6	QP
754.5128	28.85	-6.4	22.46	112	V	153	46	-23.55	QP
102.1172	41.99	-18.79	23.2	119	V	140	43.5	-20.3	QP
867.6138	28.21	-4.81	23.4	236	H	191	46	-22.6	QP

UW



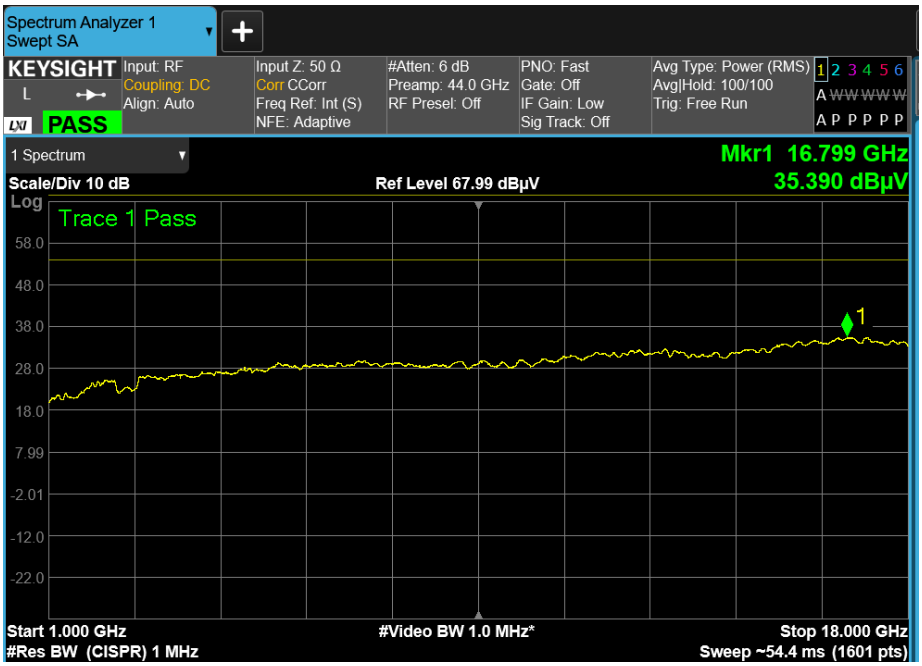
Freq. (MHz)	S.A. Reading (dBµV)	Corr. Factor (dB/m)	Corrected Amp. (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Comment
865.4241	28.23	-4.83	23.4	198	V	156	46	-22.6	QP
42.19781	51.48	-18.73	32.76	100	V	34	40	-7.24	QP
101.7653	51.17	-18.88	32.29	259	H	66	43.5	-11.21	QP
132.9678	42.32	-16.18	26.14	233	H	341	43.5	-17.36	QP
56.60719	49.01	-23.46	25.54	198	V	250	40	-14.46	QP
247.0035	34.93	-17.69	17.25	161	V	76	46	-28.75	QP

8.9 Test Results above 1 GHz to 40 GHz measured at 3 meters

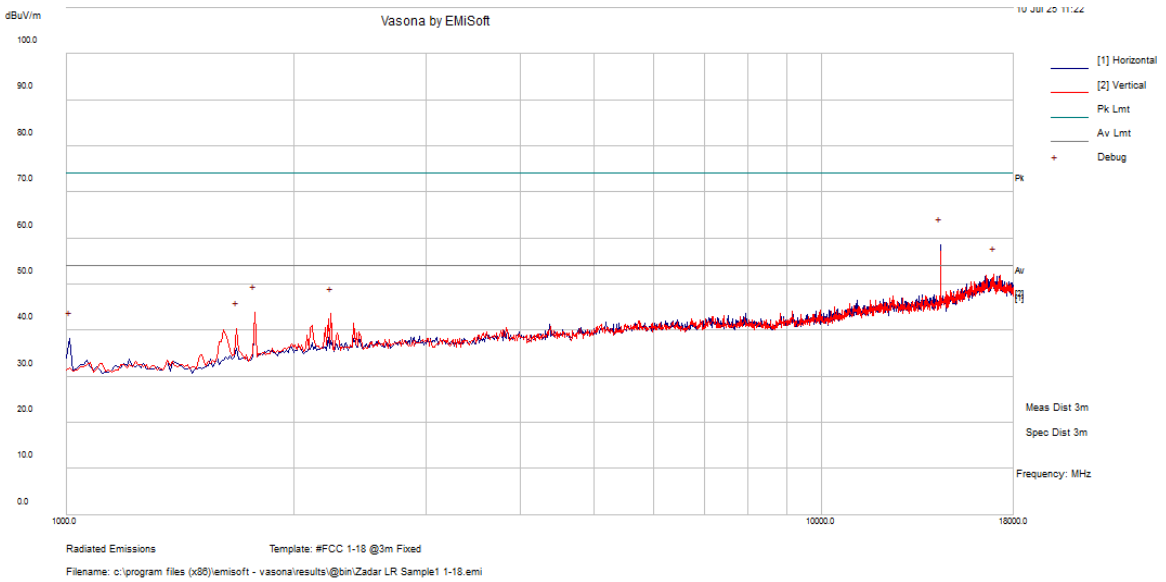
Note: LR= Long Range, W=Wide, UW= Ultra-Wide

1 – 18 GHz, measured at 3 meters:

Reference Average noise floor plot to show that noise floor is more than 6dB below average limit requirements.

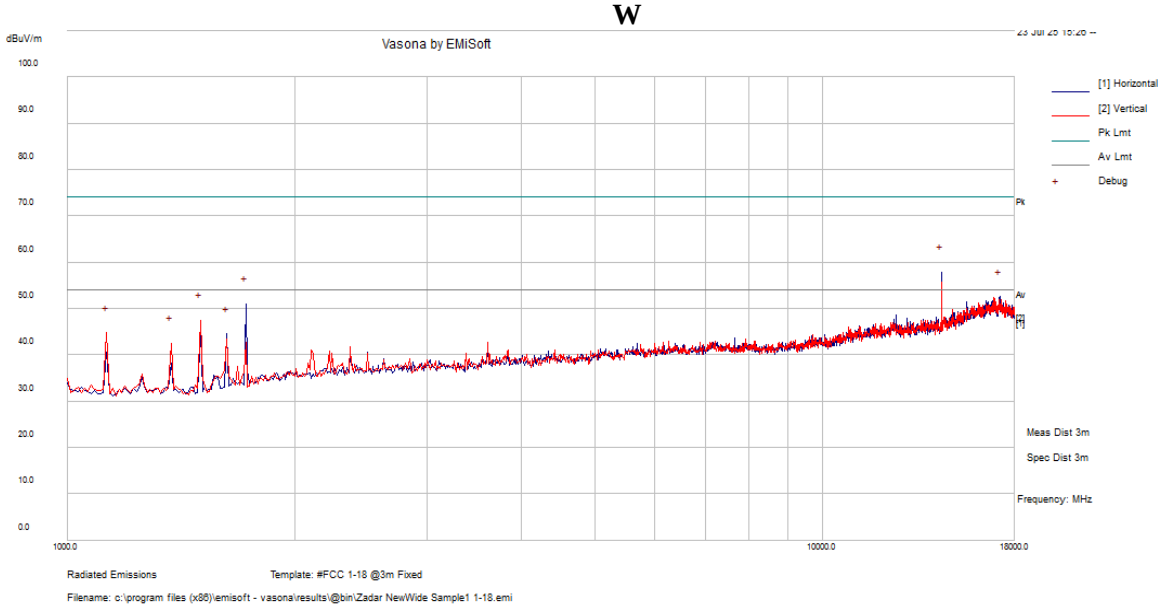


LR



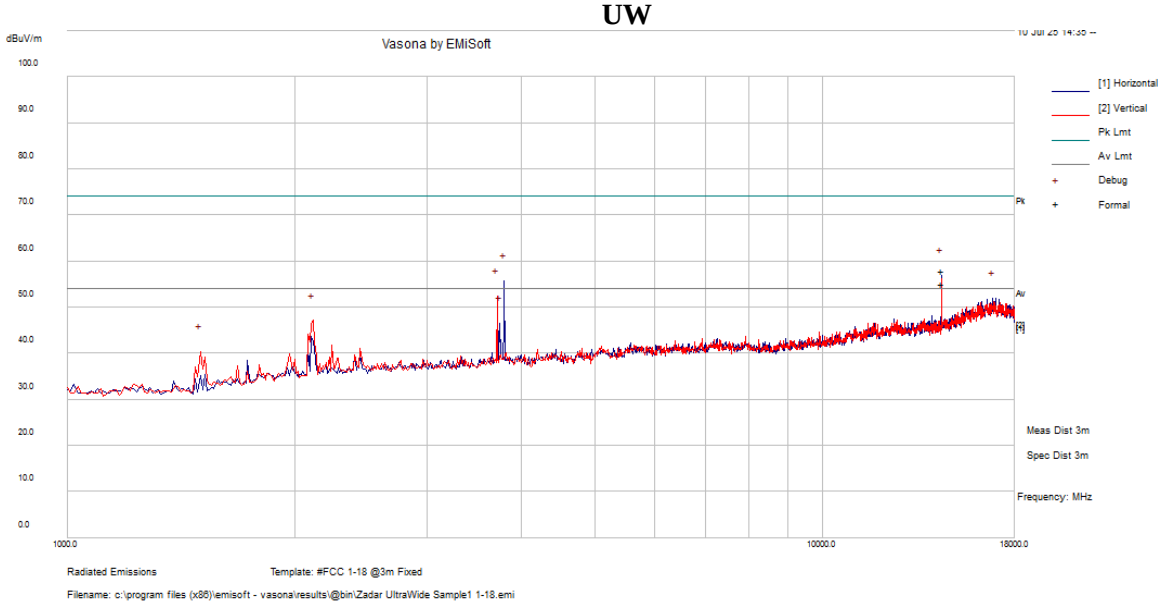
Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Ant. Polarity (H/V)	Ant. Height (cm)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Detector (Peak /Ave.)
14399.4	43.37	11.11	54.49	H	186	328	74	-19.51	Peak
14399.4	38.84	11.11	49.95	H	186	328	54	-4.05	Ave.

W



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Ant. Polarity (H/V)	Ant. Height (cm)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Detector (Peak /Ave.)
14399.31	45.63	11.11	56.74	H	188	337	74	-17.26	Peak.
14399.31	42.53	11.11	53.65	H	188	337	54	-0.35	Ave

UW

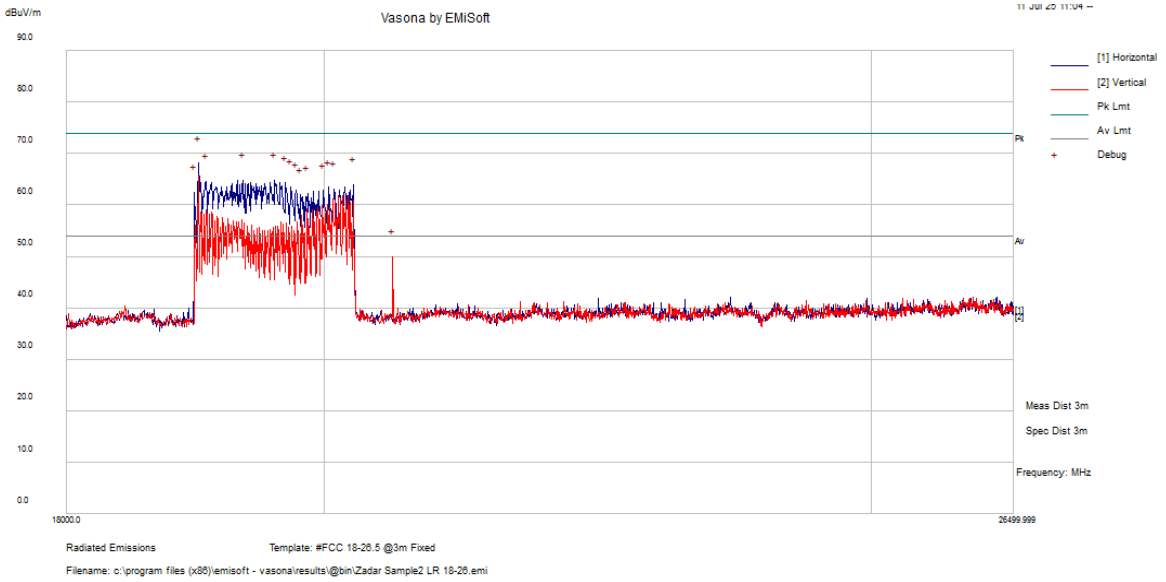


Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Ant. Polarity (H/V)	Ant. Height (cm)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Detector (Peak /Ave.)
14399.26	44.83	11.11	55.94	H	185	282	74	-18.06	Peak
3792.545	53.15	-1.47	51.69	H	210	123	74	-22.31	Peak
14399.26	41.05	11.11	52.17	H	185	282	54	-1.83	Ave
3792.545	27.16	-1.47	25.69	H	210	123	54	-28.31	Ave

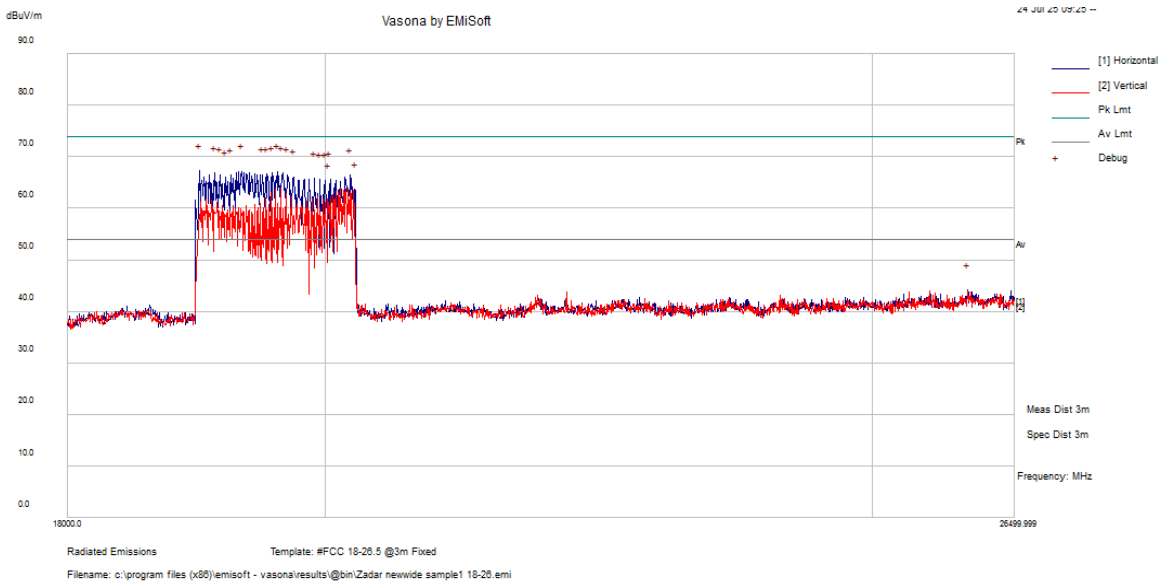
18-26.5 GHz, Measured at 3 meters

See following plots for further evaluation of subharmonic emissions. All other emissions in range show peak emissions under average limits.

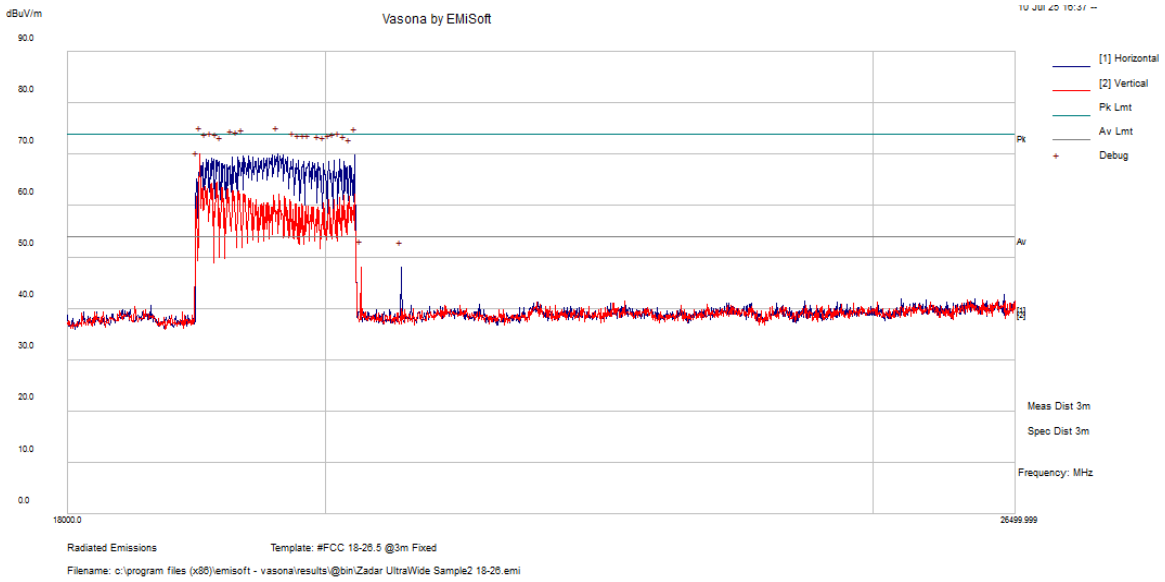
LR



W


dBuV/m
Vasona by EMiSoft
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
18000.0
26499.999
[1] Horizontal
[2] Vertical
Pk Lmt
Av Lmt
Debug
Pk
Av
Meas Dist 3m
Spec Dist 3m
Frequency: MHz
Radiated Emissions
Template: #FCC 18-26.5 @3m Fixed
Filename: c:\program files (x86)\emisoft - vasona\results\@bin\Zadar newwide sample1 18-26.emi

UW



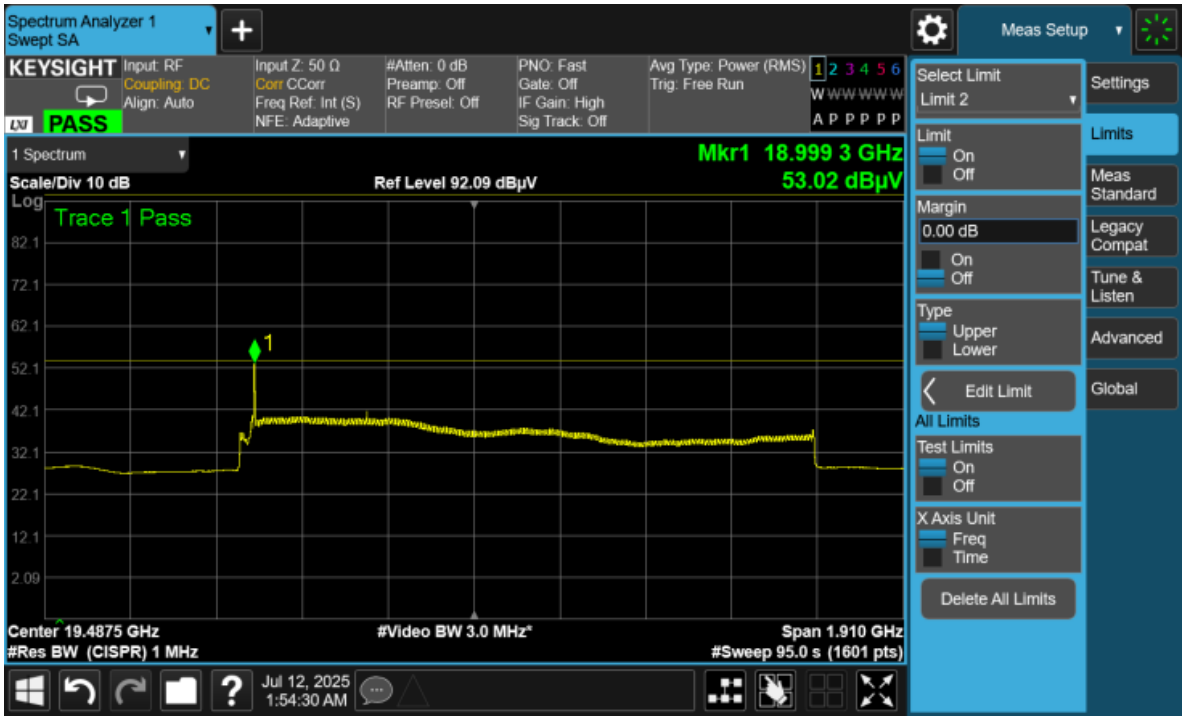
Peak Measurements:

Note: customer declares the emission characteristic at sub-harmonic frequencies is not exactly the same as the emission characteristic at the fundamental frequency, and the Peak Desensitization Factor should not be applied to the spurious emissions. Fundamental signal consists of chirps through the entire chirp width. However, at the beginning of each one of the sub-frames within the chirp width, sub-harmonic emissions do not have an idle period (chirp repetition interval – chirp time). The peaks shown at the beginning of the spectrum at the sub-harmonic frequency are the result of continuous transmission but not sweeping. Therefore, Peak Desensitization Factor is not applicable for the measured amplitude from these peaks.*

LR

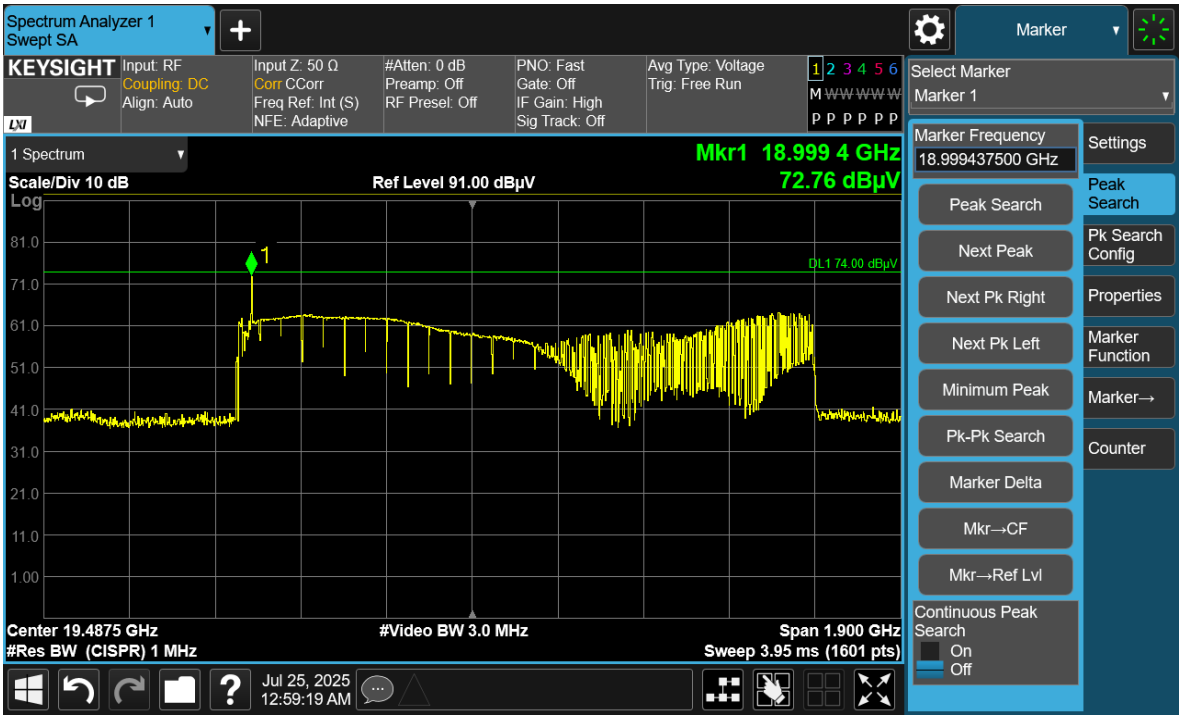
Peak (Test Result: Pass)

Average(Test Result: Pass)

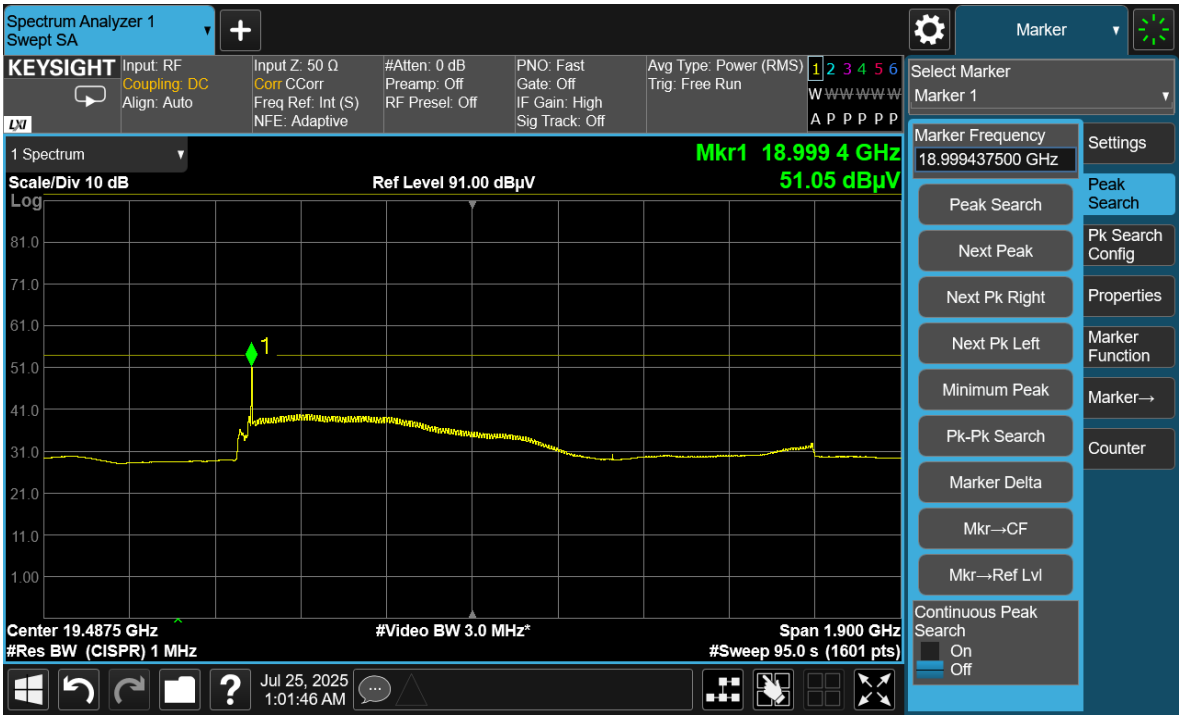


W

Peak(Test Result: Pass)



Average(Test Result: Pass)



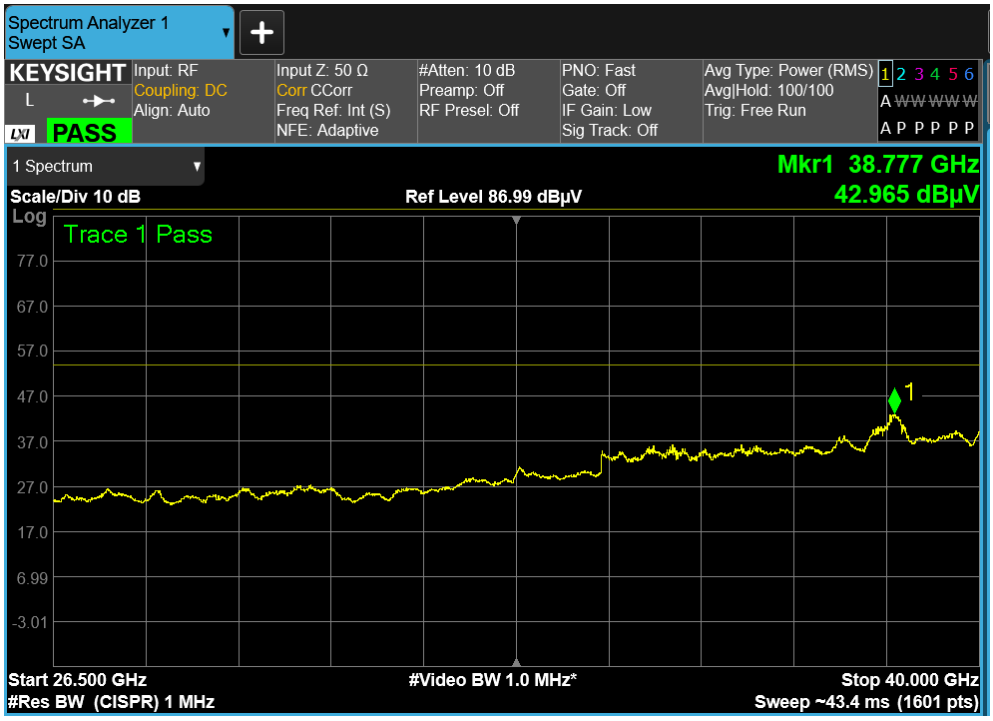
UW

Peak(Test Result: Pass)

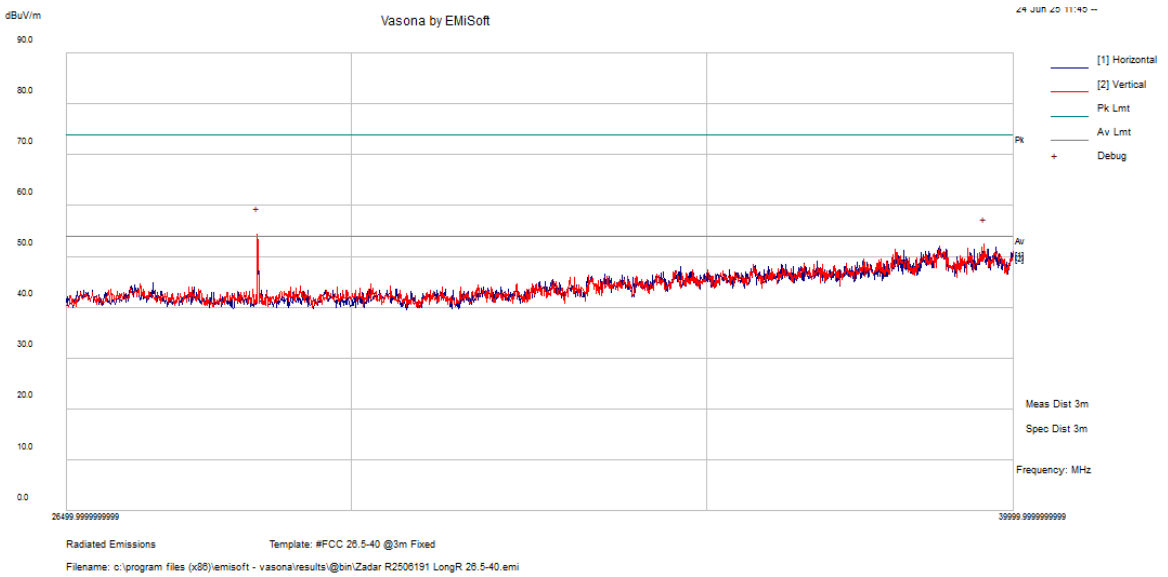
Average(Test Result: Pass)

26.5-40 GHz Worst Case, Measured at 3 meters

Reference Average noise floor plot to show that noise floor is more than 6dB below average limit requirements.

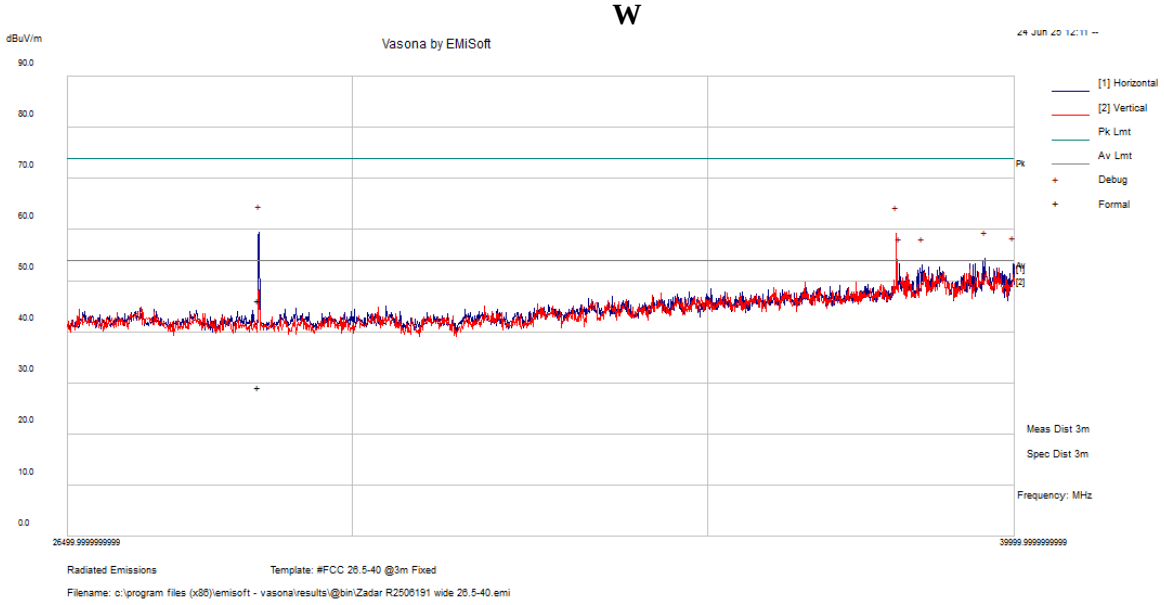


LR



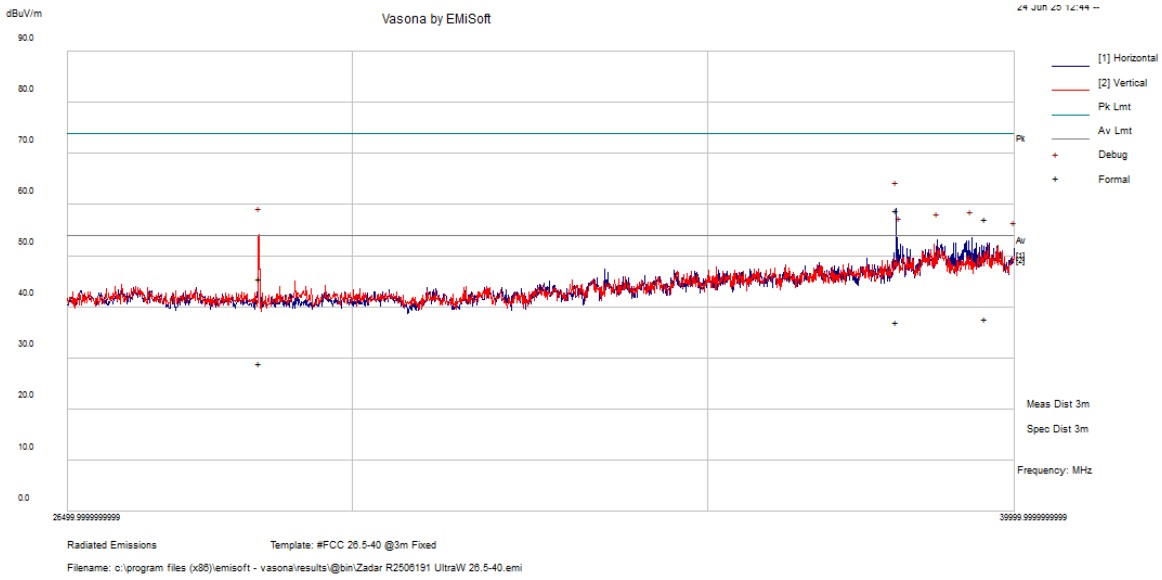
Freq. (MHz)	S.A. Reading (dBµV)	Corr. Factor (dB/m)	Corrected Amp. (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Comment
28793.8	40.72	5.34	46.06	273	V	84	74	-27.94	Peak
28793.8	23.71	5.34	29.05	273	V	84	54	-24.95	Ave.

W



Freq. (MHz)	S.A. Reading (dBµV)	Corr. Factor (dB/m)	Corrected Amp. (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Comment
28802.173	40.16	5.32	45.48	191	H	322	74	-28.52	Peak
37998.346	44.97	13.94	58.91	195	V	326	74	-15.09	Peak
39487.053	41.93	15.25	57.18	120	H	95	74	-16.82	Peak
28802.173	23.58	5.32	28.91	191	H	322	54	-25.09	Ave
37998.346	23.02	13.94	36.96	195	V	326	54	-17.04	Ave
39487.053	22.38	15.25	37.63	120	H	95	54	-16.37	Ave

UW



Freq. (MHz)	S.A. Reading (dBµV)	Corr. Factor (dB/m)	Corrected Amp. (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Comment
37999.141	49.57	13.95	63.52	232	H	309	74	-10.48	Peak
28804.468	39.48	5.32	44.81	258	V	320	74	-29.19	Peak
37999.141	23.94	13.95	37.89	232	H	309	54	-16.11	Ave
28804.468	23.01	5.32	28.34	258	V	320	54	-25.67	Ave

8.10 Test Results 40 GHz to 231 GHz

Frequency Range (GHz)	FCC Limit	
	(pW/cm^2) @ 3m	(dBm)
40-76	600	-1.69
81-162	600	-1.69
162-200	600	-1.69
200-231	1000	0.53

Note: LR= Long Range, W=Wide, UW= Ultra-Wide
Note: The correction factors have been considered in the reference level offset as shown in the measurement screenshots.

Please refer to Annex C for detailed test results of the frequency ranges cited below.

40-60 GHz, Measured at 1 meter

60-76 GHz, Measured at 1 meter

81-90 GHz, Measured at 1 meter

90-110 GHz, Measured at 0.5 meter

110-140 GHz, Measured at 0.5 meter

140-162 GHz, Measured at 0.25 meter

162-200 GHz, Measured at 0.25 meter

200-220 GHz, Measured at 0.25 meter

220-231 GHz, Measured at 0.1 meter

9 FCC §95.3379(b) -Emission Bandwidth & Frequency Stability

9.1 Applicable Standards

According to FCC §95.3379(b): Fundamental emissions must be contained within the frequency bands specified in this section during all conditions of operation. Equipment is presumed to operate over the temperature range −20 to +50 degrees Celsius with an input voltage variation of 85% to 115% of rated input voltage, unless justification is presented to demonstrate otherwise.

9.2 Measurement Procedure

The Occupied Bandwidth was measured using the 99 % OBW function on the PSA

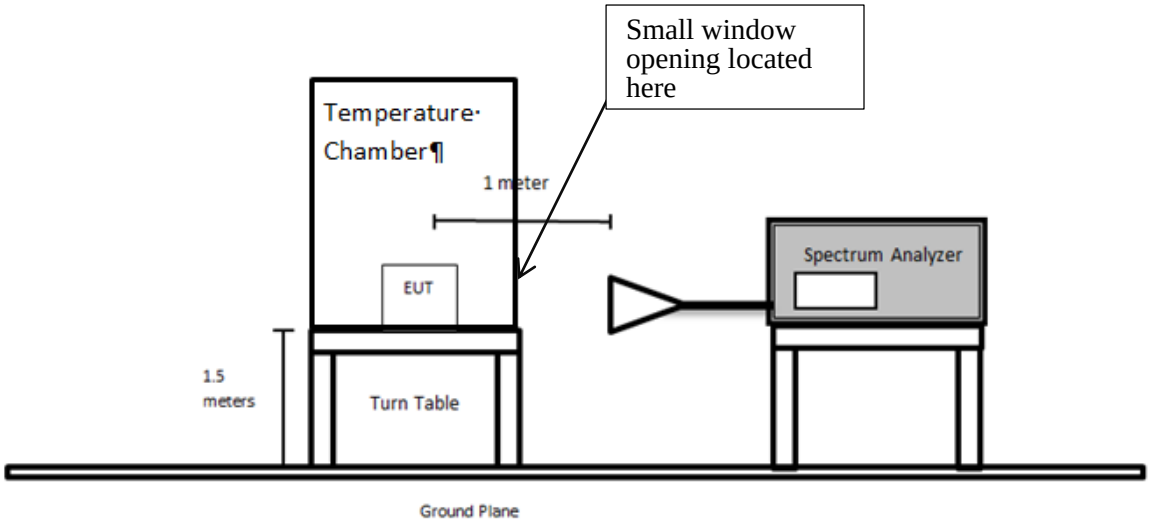
RBW = 1MHz, VBW = 3MHz

RMS detector, Maxhold trace

Sweep Time: Auto

Measurements made at low, nominal and high voltage over the entire range of operating temperature in intervals of 10 degrees Celsius

9.3 Test Setup Block Diagram



Note: Small window opening is located on the outside of the chamber which permits receive antenna to make measurements on EUT

9.4 Test Equipment List and Details

BACL No.	Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
287	Agilent	PSA Series Spectrum Analyzer	E4446A	US44300386	2025-05-29	1 year
1128	Agilent	EXA Signal Analyzer	N9010A	MY48030852	2025-06-11	1 year
861	OML Inc.	Horn Antenna	MR12H	17061501	N/R	N/A
-	-	RF cable	-	-	Each time[1]	N/A
1060	BACL	Temperature Chamber	BTH-150-40	30078	2024-12-03	1 year
1130	Agilent	MXG Vector Signal Generator	N5183A	MY50140453	2024-11-07	1 year
1462	Virginia Diodes, Inc.	Frequency Extender for Up and Down conversion	WR12SAX-UP	VDI SAX 061	Each Time[1]	Each Time[1]

Note[1]: cables included in the test set-up will be checked each time before testing.

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".*

9.5 Test Environmental Conditions

Temperature:	23º C
Relative Humidity:	42 %
ATM Pressure:	102.7 KPa

The testing was performed by Libass Thiaw from 2025-07-28 to 2025-07-30 at RF Site.

9.6 Test Results

Note: LR= Long Range, W=Wide, UW= Ultra-Wide

BACL characterized the downconverter to verify that the following conversions were confirmed:
i.81GHz = 3.086 GHz
ii.76GHz= 8.072GHz

Extreme Temperature

Model	Temperature (°C)	OBW (GHz)	F_L (GHz)	F_H (GHz)	OBW within 76-81GHz
LR	-20	4.933	3.113	8.027	Pass
	-10	4.947	3.113	8.039	Pass
	0	4.954	3.113	8.027	Pass
	10	4.950	3.113	8.033	Pass
	20	4.951	3.113	8.051	Pass
	30	4.956	3.113	8.057	Pass
	40	4.960	3.113	8.01	Pass
	50	4.960	3.108	8.051	Pass
W	-20	4.908	3.113	7.992	Pass
	-10	4.943	3.113	8.021	Pass
	0	4.951	3.113	8.027	Pass
	10	4.942	3.113	8.033	Pass
	20	4.931	3.113	8.022	Pass
	30	4.918	3.113	7.992	Pass
	40	4.939	3.113	8.016	Pass
	50	4.956	3.108	8.027	Pass
UW	-20	4.967	3.113	8.033	Pass
	-10	4.911	3.113	7.986	Pass
	0	4.925	3.113	7.998	Pass
	10	4.917	3.113	7.998	Pass
	20	4.911	3.113	7.986	Pass
	30	4.922	3.102	8.010	Pass
	40	4.937	3.108	8.016	Pass
	50	4.958	3.108	8.039	Pass

Extreme Voltage

LR

Temperature (°C)	Voltage (V_{DC})	OBW (GHz)	F_L (GHz)	F_H (GHz)	Limit (GHz)	Results
20	10.2	4.968	3.105	8.072	OBW within 76-81GHz	pass
	13.8	4.968	3.105	8.072		pass

W

Temperature (°C)	Voltage (V_{DC})	OBW (GHz)	F_L (GHz)	F_H (GHz)	Limit (GHz)	Results
20	10.2	4.915	3.115	8.013	OBW within 76-81GHz	pass
	13.8	4.914	3.115	8.023		pass

UW

Temperature (°C)	Voltage (V_{DC})	OBW (GHz)	F_L (GHz)	F_H (GHz)	Limit (GHz)	Results
20	10.2	4.980	3.105	8.072	OBW within 76-81GHz	pass
	13.8	4.980	3.086	8.072		pass

Please refer to Annex D for detailed test results.

9 Annex A (Normative) - Test Setup Photographs

Please refer to the attachment

10 Annex B (Normative) - EUT External Photographs

Please refer to the attachment

11 Annex C (Normative) - EUT Internal Photographs

Please refer to the attachment

12 Annex D (Informative) – Declaration of Similarity (DoS)

Radar Intelligence for Autonomous Systems

DECLARATION OF SIMILARITY

August 5, 2025

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

Dear Sir or Madam:

We, Zadar Labs, hereby declare that product: zPRIME 3.0, FCC ID: 2BFPN-ZPRM3, models: *zPRM3-77-XX-LR, zPRM3-77-XX-W, zPRM3-77-XX-UW,* tested by BACL, and the results are featured in BACL project: *R2506192*, are electrically identical with the same electromagnetic emissions and electromagnetic compatibility characteristics

A description of the differences among these three models is as follows:

- All components of these models are identical except for the antenna's designed field of view

Please contact me should there be need for any additional clarification or information.

Best Regards,

David Wu, Head of Hardware
Zadar Labs Inc.
530 Division St
Campbell, CA 95008

13 Annex E (Normative) - A2LA Electrical Testing Certificate

Accredited Laboratory

A2LA has accredited

BAY AREA COMPLIANCE LABORATORIES CORP.

Sunnyvale, CA

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets A2LA R222 - Specific Requirements EPA ENERGY STAR Accreditation Program. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 13th day of September 2024.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3297.02
Valid to September 30, 2026

For the tests to which this accreditation applies, please refer to the laboratory's Electrical 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 ---