

**TEST REPORT FOR CERTIFICATION****On Behalf of****TLV Co Ltd****TrapMan****Model No.: TM8****Brand: TLV****FCC ID: H3RTLVTM080**

Prepared for : TLV Co Ltd

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Japan

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Report Number : ACS-F24130-1

Date of Test : May.11~22, 2025

Date of Report : May.23, 2025

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**TEST REPORT CERTIFICATION**

Applicant : TLV Co Ltd  
Manufacture : TLV Co Ltd  
EUT Description : TrapMan  
FCC ID : H3RTLVTM080  
(A) Model No. : TM8  
(B) Brand : TLV  
(C) Test Voltage : DC 3.7V

Tested for comply with:  
FCC CFR 47 Part 15 Subpart C

Test procedure used:  
ANSI C63.10:2020+COR1:2023

The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. to confirm comply with all the FCC Part 15 Subpart C requirements.

The test results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these tests. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC and IC requirements.

This Report is made under FCC Part 2.1075. No modifications were required during testing to bring this product into compliance.

This report applies to single evaluation of one sample of above mentioned product. This report shall not be reproduced in part without written approval of AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

Date of Test : May.11~22, 2025 Date of Report: May.23, 2025

Prepared by : Crush Liu Reviewer by : Thomas Chen  
Crush Liu / Assistant Thomas Chen / Assistant Manager



Approved & Authorized Signer : Sunny Lu Signature: Sunny Lu / Manager

**Modified History**

| <b>Edition No.</b> | <b>Summary</b>                                    | <b>Date of Rev.</b> | <b>Report No.</b> |
|--------------------|---|---------------------|-------------------|
| 0                  | Original Report                                   | Aug.26, 2024        | ACS-F24130        |
| Rev.01             | changed the material of half top of the enclosure | May.23, 2025        | ACS-F24130-1      |

**Remark for Rev.01**

1. This report is an additional version with original report number ACS-F24130 . the different with original report are See the above table of Rev.01.
2. Through evaluation of the above difference, all test items needed to be re-performed. The EUT was retested and all the test data were recorded in this report.
3. This report is based on report of ACS-F24130 .

## 1. SUMMARY OF STANDARDS AND RESULTS

### 1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

| EMISSION                 |   |         |
|--------------------------|---|---------|
| Description of Test Item | Standard  | Results |
| Conducted Emission Test  | FCC Part 15: 15.207<br>ANSI C63.10:2020+COR1:2023         | N/A     |
| Radiated Emission Test   | FCC Part 15: 15.205, 15.209<br>ANSI C63.10:2020+COR1:2023 | PASS    |
| 20dB Bandwidth Test      | FCC Part 15: 15.215                                       | PASS    |

Note: N/A is mean Not Application

## 2. GENERAL INFORMATION

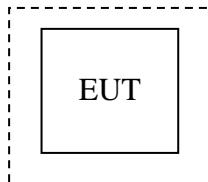
### 2.1. Description of Equipment Under Test

|                      |   |
|----------------------|---|
| Applicant            | TLV Co Ltd  |
| Applicant Address    | 881 Nagasuna, Noguchi-Cho, Kakogawa, Hyogo 675-8511 Japan |
| Manufacturer         | TLV Co Ltd  |
| Manufacturer Address | 881 Nagasuna, Noguchi-Cho, Kakogawa, Hyogo 675-8511 Japan |
| Product              | TrapMan   |
| Brand                | TLV   |
| Model No.            | TM8   |
| Frequency Range      | 125kHz  |
| Modulation           | ASK   |
| Sample Type          | Mass production   |
| Date of Receipt      | Apr.24, 2025  |
| Date of Test         | May.11~22, 2025   |

### 2.2. Tested Supporting System Details

[None]

### 2.3. Block diagram of connection between the EUT and simulators



**(EUT: TrapMan)**

## 2.4. Test Facility

### Site Description

#### Name of Firm

: Audix Technology (Shenzhen) Co., Ltd.  
No. 6, Kefeng Road, Science & Technology  
Park, Nanshan District, Shenzhen,  
Guangdong, China

#### EMC Lab.

: Accredited by NVLAP, USA  
NVLAP Code: 200372-0  
Valid Date: Mar.31, 2026

Certificated by TAF, Taiwan  
Registration No: 1418  
Valid Date: Nov.30, 2026

Certificated by FCC, USA  
Designation No: CN5022  
Valid Date: Aug.03, 2025

Certificated by ISED, Canada  
Company Number: 5183A  
CAB identifier: CN0034  
Valid Date: Mar.31, 2026

## 2.5. Measurement Uncertainty (95% confidence levels, k=2)

| Test Item   | Uncertainty                        |
|---|------------------------------------|
| Uncertainty for Radiation Emission test<br>in 3m chamber                | ±3.8dB(30~200MHz, Polarization: H) |
|   | ±3.8dB(30~200MHz, Polarization: V) |
|   | ±4.0dB(200M~1GHz, Polarization: H) |
|   | ±4.0dB(200M~1GHz, Polarization: V) |
| Uncertainty for Radiation spurious<br>emission at frequency below 30MHz | ± 2.6dB(9kHz~30MHz)                |
| Uncertainty for DC power test   | ±0.1%                              |
| Uncertainty for test site temperature and<br>humidity                   | ±0.6°C                             |
|   | ±3%                                |

### **3. POWER LINE CONDUCTED EMISSION TEST**

According to Paragraph (c) of FCC Part 15 section 15.207, Tests to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Host device is battery powered and does not operate when host device is connected to AC lines.

## 4. RADIATED EMISSION TEST

### 4.1. Test Equipment

Frequency Range: 30-1000MHz

| Item | Equipment                 | Manufacturer    | Model No.   | Serial No.  | Last Cal. | Cal. Interval |
|------|---------------------------|-----------------|-------------|-------------|-----------|---------------|
| 1.   | 3m Chamber(NSA)           | AUDIX           | N/A         | N/A         | Aug.11,22 | 3 Year        |
| 2.   | 3m Chamber(SE)            | AUDIX           | N/A         | N/A         | Sep.16,22 | 3 Year        |
| 3.   | Signal Analyzer           | Rohde & Schwarz | FSV40       | 101608      | Nov.07,24 | 1 Year        |
| 4.   | Tri-log-Broadband Antenna | SCHWARZBECK     | VULB 9168   | 01313       | Sep.26,24 | 1 Year        |
| 5.   | NSA Cable                 | HUBER+SUHNER    | CFD400NL-LW | No.3+190411 | Sep.13,24 | 1 Year        |
| 6.   | Coaxial Switch            | Anritsu         | MP59B       | 6201397223  | Mar.10,25 | 1 Year        |
| 7.   | EMI Test Receiver         | Rohde & Schwarz | ESR3        | 101931      | Mar.10,25 | 1 Year        |
| 8.   | Amplifier                 | HP              | 8447D       | 2944A11159  | Mar.10,25 | 1 Year        |
| 9.   | Test Software             | AUDIX           | e3          | 6.100913a   | N/A       | N/A           |

Note: N/A means Not applicable.

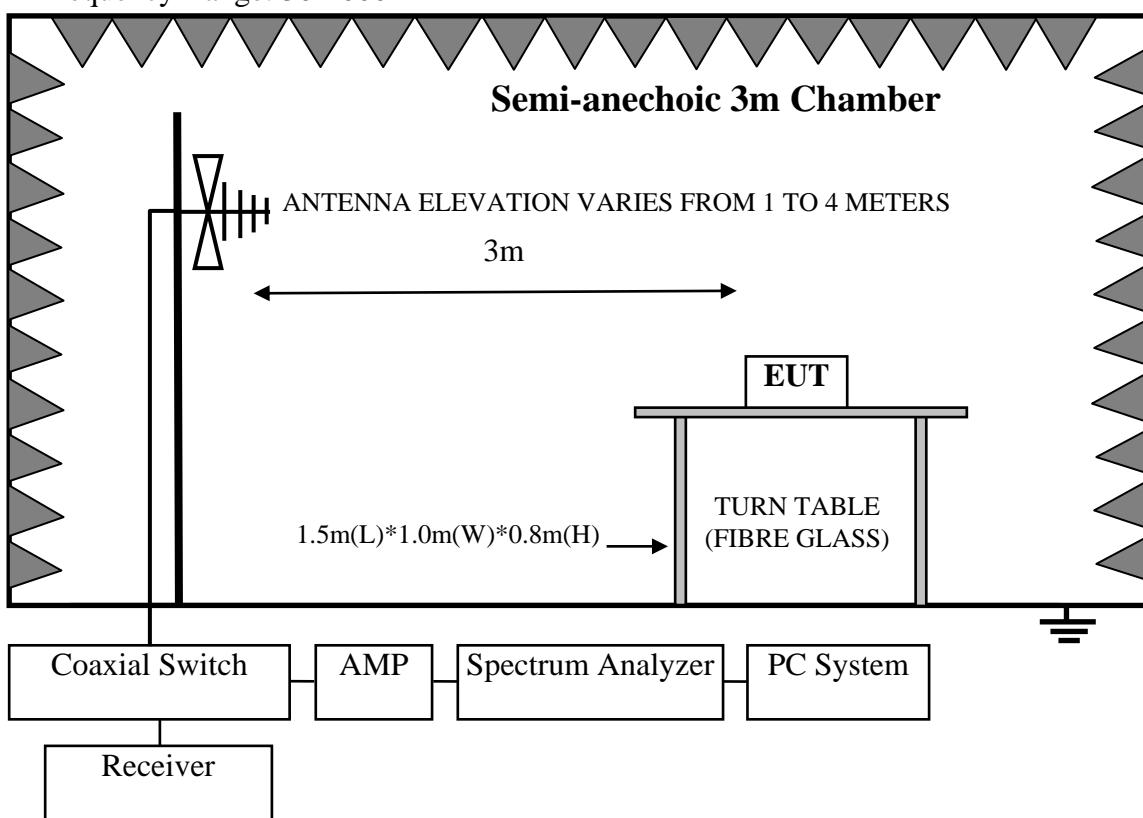
Frequency Range: Below 30MHz

| Item | Equipment                   | Manufacturer    | Model No.     | Serial No.  | Last Cal. | Cal. Interval |
|------|-----------------------------|-----------------|---------------|-------------|-----------|---------------|
| 1.   | 10m Chamber(NSA)            | AUDIX           | N/A           | N/A         | Aug.12,22 | 3 Year        |
| 2.   | 10m Chamber(SE)             | AUDIX           | N/A           | N/A         | Sep.16,22 | 3 Year        |
| 3.   | Active Receive Loop Antenna | SCHWARZBECK     | FMZB 1513-60B | 00035       | Mar.10,25 | 1 Year        |
| 4.   | EMI Test Receiver           | Rohde & Schwarz | ESR3          | 102891      | Sep.15,24 | 1 Year        |
| 5.   | NSA Cable                   | HUBER+SUHNER    | CFD400NL-LW   | No.3+190411 | Sep.13,24 | 1 Year        |
| 6.   | Signal Analyzer             | Rohde & Schwarz | FSV30         | 103669      | Sep.15,24 | 1 Year        |
| 7.   | Test Software               | AUDIX           | e3            | 6.100913a   | N/A       | N/A           |

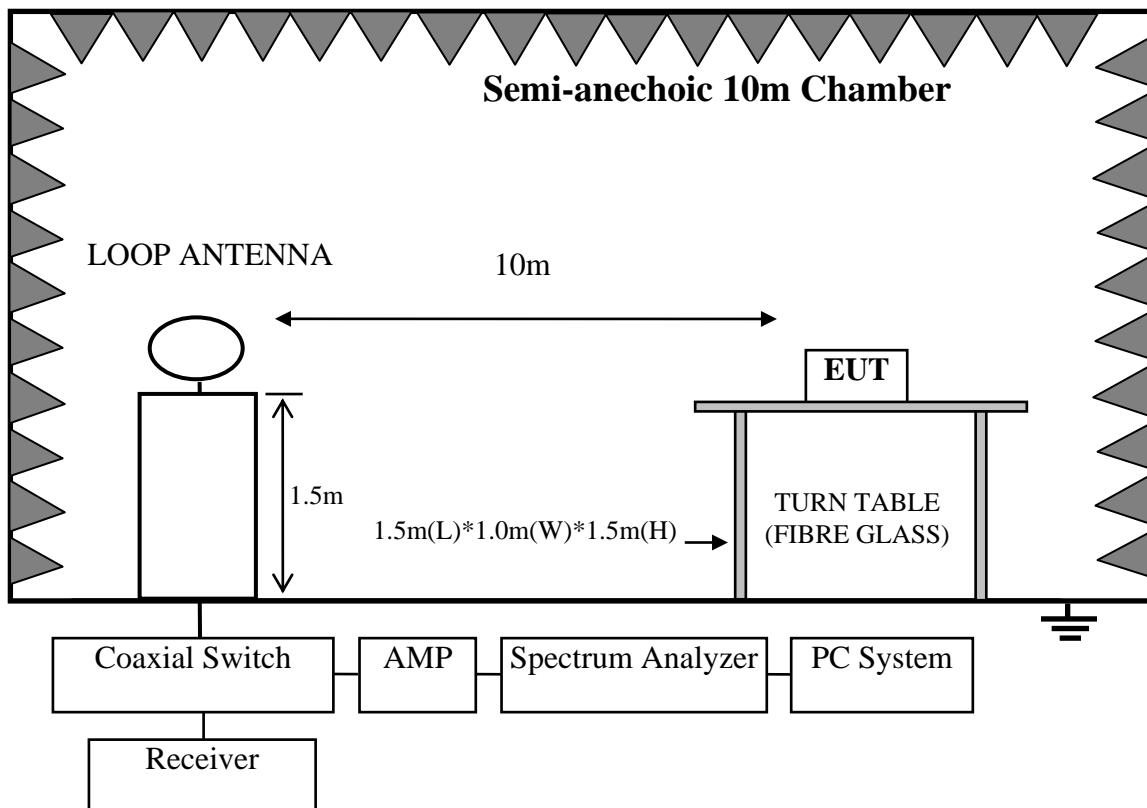
Note: N/A means Not applicable.

#### 4.2. Block Diagram of Test Setup

Frequency Range: 30-1000MHz



Frequency Range: Below 30MHz



### 4.3. Radiated Emission Limit

| FREQUENCY<br>MHz | DISTANCE<br>Meters | FIELD STRENGTHS LIMIT                           |          |
|------------------|--------------------|---|----------|
|                  |                    | µV/m  | dB(µV)/m |
| 30 ~ 88          | 3                  | 100   | 40.0     |
| 88 ~ 216         | 3                  | 150   | 43.5     |
| 216 ~ 960        | 3                  | 200   | 46.0     |
| 960 ~ 1000       | 3                  | 500   | 54.0     |
| Above 1000       | 3                  | 74.0 dB(µV)/m (Peak)<br>54.0 dB(µV)/m (Average) |          |

Remark: (1) Emission level = Antenna Factor + Cable Loss + Reading  
 (2) The smaller limit shall apply at the cross point between two frequency bands.  
 (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

#### Radiated emission Limit(Below 30MHz)

| Frequency<br>(MHz) | Field strength<br>(microvolts/meter) | Measurement<br>Distance(meters) |
|--------------------|--------------------------------------|---------------------------------|
| 0.009-0.490        | 2400/F(KHz)                          | 300                             |
| 0.490-1.705        | 24000/f(KHz)                         | 30                              |
| 1.705-30.0         | 30                                   | 30                              |

Remark: (1) Emission level  $\text{dB}\mu\text{V} = 20 \log \text{Emission level } \mu\text{V}/\text{m}$   
 (2) In the emission table above, the tighter limit applies at the band edges.  
 (3) The limit 1.705MHz to 30MHz in clause 4.3 are specified at 30 meters, and measurements were made at 10 meters, the limit is translated to 10 meters by using a formula as follows:  $\text{Limit}_{10m} = \text{Limit}_{30m} + 40\log(30m/10m)$  or  $\text{Limit}_{10m} = \text{Limit}_{300m} + 40\log(300m/10m)$

#### 4.4. 15.205 Restricted bands of operation

| MHz                        | MHz                   | MHz             | GHz              |
|----------------------------|-----------------------|-----------------|------------------|
| 0.090 - 0.110              | 16.42 - 16.423        | 399.9 - 410     | 4.5 - 5.15       |
| <sup>1</sup> 0.495 - 0.505 | 16.69475 - 16.69525   | 608 - 614       | 5.35 - 5.46      |
| 2.1735 - 2.1905            | 16.80425 - 16.80475   | 960 - 1240      | 7.25 - 7.75      |
| 4.125 - 4.128              | 25.5 - 25.67          | 1300 - 1427     | 8.025 - 8.5      |
| 4.17725 - 4.17775          | 37.5 - 38.25          | 1435 - 1626.5   | 9.0 - 9.2        |
| 4.20725 - 4.20775          | 73 - 74.6             | 1645.5 - 1646.5 | 9.3 - 9.5        |
| 6.215 - 6.218              | 74.8 - 75.2           | 1660 - 1710     | 10.6 - 12.7      |
| 6.26775 - 6.26825          | 108 - 121.94          | 1718.8 - 1722.2 | 13.25 - 13.4     |
| 6.31175 - 6.31225          | 123 - 138             | 2200 - 2300     | 14.47 - 14.5     |
| 8.291 - 8.294              | 149.9 - 150.05        | 2310 - 2390     | 15.35 - 16.2     |
| 8.362 - 8.366              | 156.52475 - 156.52525 | 2483.5 - 2500   | 17.7 - 21.4      |
| 8.37625 - 8.38675          | 156.7 - 156.9         | 2690 - 2900     | 22.01 - 23.12    |
| 8.41425 - 8.41475          | 162.0125 - 167.17     | 3260 - 3267     | 23.6 - 24.0      |
| 12.29 - 12.293             | 167.72 - 173.2        | 3332 - 3339     | 31.2 - 31.8      |
| 12.51975 - 12.52025        | 240 - 285             | 3345.8 - 3358   | 36.43 - 36.5     |
| 12.57675 - 12.57725        | 322 - 335.4           | 3600 - 4400     | ( <sup>2</sup> ) |

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

#### 4.5. EUT Configuration on Test

The following equipment are installed on Radiated Emission Test to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

#### 4.6. Operating Condition of EUT

4.6.1. Setup the EUT as shown in Section 4.2.

4.6.2. Turn on the power of all equipments.

4.6.3. Let the EUT worked in test mode (Tx Mode) and tested it.

#### 4.7. Test Procedure

The EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.10 on radiated emission Test.

This test was performed with EUT in X, Y, Z position, and the worse case was found when EUT in X position as the test photo indicated.

The bandwidth of the EMI test receiver is set at 120kHz for frequency range from 30MHz to 1000 MHz.

For emissions below 30MHz:

This test was performed on anechoic chamber with a conductive ground plane, EUT was put to 1.5m high turn table and at a distance of 10m from test antenna.

The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz

#### 4.8. Radiated Emission Test Results

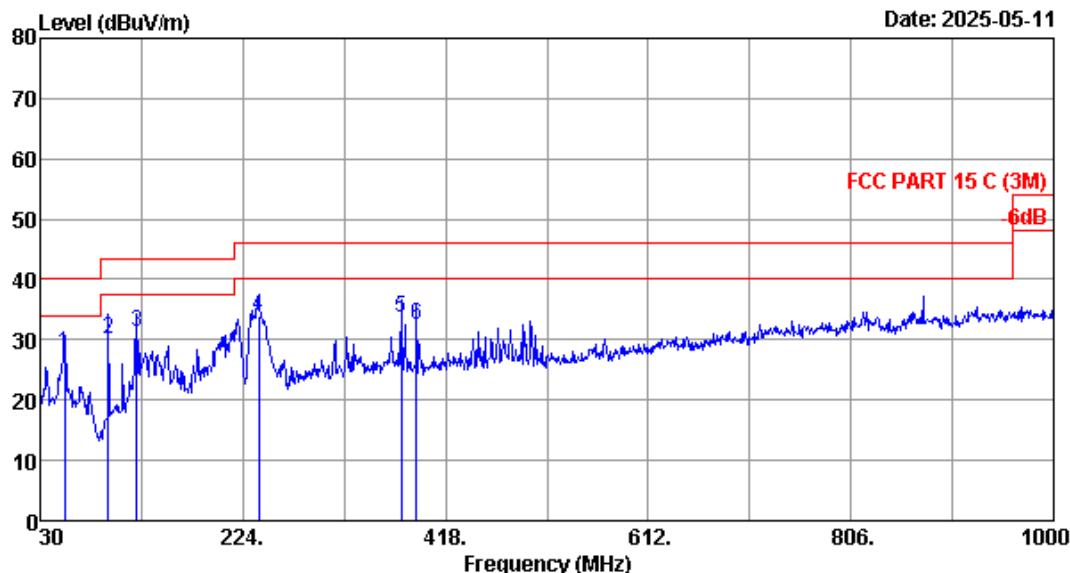
**PASS.**

## Frequency Range: 30-1000MHz

Data: 1

File: E:\2025 Report Data\C\cs\A1Z2504119-RF-FCC-L-125K.EM6 (2)

Date: 2025-05-11



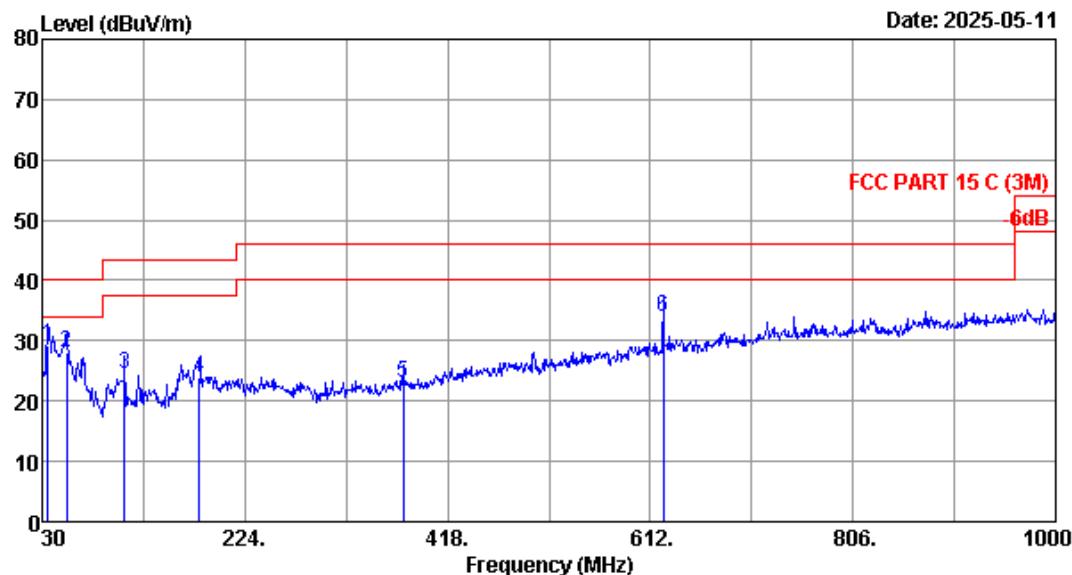
Site no. : 3m Chamber Data no. : 1  
Dis. / Ant. : 3m 2024 VULB 9168-01313 Ant. pol. : HORIZONTAL  
Limit : FCC PART 15 C (3M)  
Env. / Ins. : 22.3°C/50% Engineer : Abel  
Test Mode : 125KHz TX Mode

| No.   | Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-------|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| <hr/> |                |                          |                       |                   |                               |                    |                |        |
| 1     | 53.280         | 19.90                    | 0.85                  | 6.89              | 27.64                         | 40.00              | 12.36          | QP     |
| 2     | 94.990         | 14.50                    | 1.11                  | 14.53             | 30.14                         | 43.50              | 13.36          | QP     |
| 3     | 122.150        | 17.11                    | 1.22                  | 12.83             | 31.16                         | 43.50              | 12.34          | QP     |
| 4     | 239.520        | 17.37                    | 1.80                  | 14.84             | 34.01                         | 46.00              | 11.99          | QP     |
| 5     | 375.320        | 21.30                    | 2.63                  | 9.66              | 33.59                         | 46.00              | 12.41          | QP     |
| 6     | 389.870        | 21.20                    | 2.73                  | 8.69              | 32.62                         | 46.00              | 13.38          | QP     |
| <hr/> |                |                          |                       |                   |                               |                    |                |        |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.

Data: 2

File: E:\2025 Report Data\Clcs\A1Z2504119-RF-FCC-L-125K.EM6 (2)

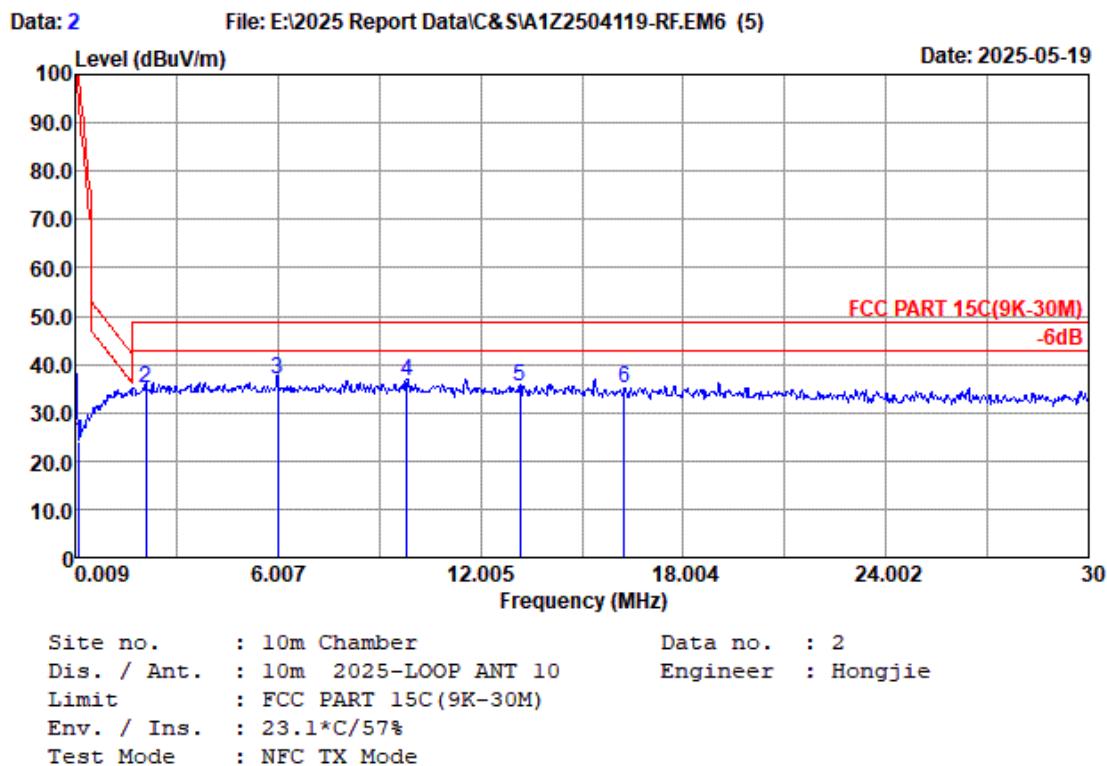


Site no. : 3m Chamber Data no. : 2  
Dis. / Ant. : 3m 2024 VULB 9168-01313 Ant. pol. : VERTICAL  
Limit : FCC PART 15 C (3M)  
Env. / Ins. : 22.3°C/50% Engineer : Abel  
Test Mode : 125KHz TX Mode

| No. | Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Emission          |                   |                    |                |        |
|-----|----------------|--------------------------|-----------------------|-------------------|-------------------|--------------------|----------------|--------|
|     |                |                          |                       | Reading<br>(dBuV) | Level<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
| 1   | 35.820         | 18.70                    | 0.72                  | 9.84              | 29.26             | 40.00              | 10.74          | QP     |
| 2   | 53.280         | 19.90                    | 0.85                  | 7.44              | 28.19             | 40.00              | 11.81          | QP     |
| 3   | 108.570        | 15.76                    | 1.15                  | 7.46              | 24.37             | 43.50              | 19.13          | QP     |
| 4   | 180.350        | 17.57                    | 1.51                  | 4.78              | 23.86             | 43.50              | 19.64          | QP     |
| 5   | 375.320        | 21.30                    | 2.63                  | -0.87             | 23.06             | 46.00              | 22.94          | QP     |
| 6   | 624.610        | 26.20                    | 3.76                  | 4.10              | 34.06             | 46.00              | 11.94          | QP     |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.

## Frequency Range: Below 30MHz



| No. | Freq.<br>(MHz) | Ant.             | Cable        | Emission          |                   |                    |                | Remark |
|-----|----------------|------------------|--------------|-------------------|-------------------|--------------------|----------------|--------|
|     |                | Factor<br>(dB/m) | Loss<br>(dB) | Reading<br>(dBuV) | Level<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) |        |
| 1   | 0.125          | 20.15            | 0.04         | 3.86              | 24.05             | 99.23              | 75.18          | QP     |
| 2   | 2.108          | 20.11            | 0.22         | 14.70             | 35.03             | 48.63              | 13.60          | QP     |
| 3   | 6.007          | 20.40            | 0.41         | 16.26             | 37.07             | 48.63              | 11.56          | QP     |
| 4   | 9.816          | 20.42            | 0.51         | 15.75             | 36.68             | 48.63              | 11.95          | QP     |
| 5   | 13.175         | 20.40            | 0.57         | 14.58             | 35.55             | 48.63              | 13.08          | QP     |
| 6   | 16.264         | 20.45            | 0.61         | 13.91             | 34.97             | 48.63              | 13.66          | QP     |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

## 5. 20 DB BANDWIDTH TEST

### 5.1. Test Equipments

| Item | Equipment           | Manufacturer | Model No.               | Serial No. | Last Cal. | Cal. Interval |
|------|---------------------|--------------|-------------------------|------------|-----------|---------------|
| 1.   | PXA Signal Analyzer | Agilent      | N9030A                  | MY51380221 | Mar.10,25 | 1 Year        |
| 2.   | RF Cable            | esatsheep    | RM086-SMA/N-J<br>J-1000 | NO.1       | Jun.19,24 | 1 Year        |

### 5.2. Limit

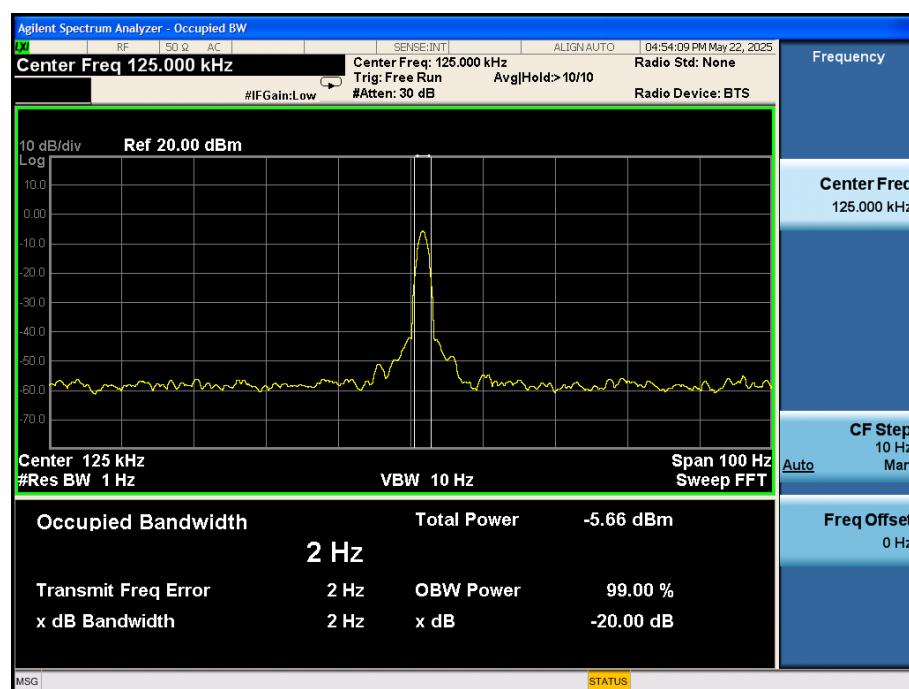
Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

### 5.3. Test Results

|                       |                         |                         |
|-----------------------|-------------------------|-------------------------|
| EUT: TrapMan          |                         |                         |
| M/N: TM8              |                         |                         |
| Test date: 2025-05-22 | Pressure: 102.1±1.0 kpa | Humidity: 53.2±3.0%     |
| Tested by: Epoch      | Test site: RF site      | Temperature: 22.3±0.6°C |

| Frequency (kHz) | 20bandwidth (kHz) | Limit (kHz) |
|-----------------|-------------------|-------------|
| 125             | 0.002             | N/A         |

Conclusion:Pass



## 6. DEVIATION TO TEST SPECIFICATIONS

[NONE]

..... **THE END** .....