



# H.B. Compliance Solutions

## Intentional Radiator Test Report

For the

**Lodestar Technology, Inc.**

**LNK9**

Tested under

The FCC Rules contained in Title 47 of the CFR, Part 15.247 for

Digitally Transmitting Sequence

### **Prepared for:**

Lodestar Technology, Inc.

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Chattanooga, TN 38410

### **Prepared By:**

H.B. Compliance Solutions

5005 S. Ash Avenue, Suite # A-10

Tempe, Arizona 85282

### **Reviewed By:**

A handwritten signature in black ink, appearing to read 'Hoosamuddin Bandukwala'.

Hoosamuddin Bandukwala



Cert # ATL-0062-E

**Engineering Statement:** The measurements shown in this report were made in accordance with the procedure indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurement made, the equipment tested is capable of operation in accordance with the requirements of Part 15 of the FCC Rules under normal use and maintenance. All results contained herein relate only to the sample tested.

## Report Status Sheet

| Revision # | Report Date       | Reason for Revision |
|------------|-------------------|---------------------|
| Ø          | December 15, 2025 | Initial Issue       |

## Table of Contents

|                                                          |    |
|----------------------------------------------------------|----|
| EXECUTIVE SUMMARY .....                                  | 4  |
| 1. Testing Summary.....                                  | 4  |
| EQUIPMENT CONFIGURATION.....                             | 5  |
| 1. Overview .....                                        | 5  |
| 2. Test Facility .....                                   | 6  |
| 3. Description of Test Sample.....                       | 7  |
| 4. Equipment Configuration .....                         | 7  |
| 5. Support Equipment .....                               | 7  |
| 6. Ports and Cabling Information.....                    | 7  |
| 7. Method of Monitoring EUT Operation .....              | 8  |
| 8. Mode of Operation.....                                | 8  |
| 9. Modifications .....                                   | 8  |
| 10. Disposition of EUT .....                             | 8  |
| Criteria for Un-Intentional Radiators .....              | 9  |
| 1. Radiated Emissions.....                               | 9  |
| Emissions Tests Calculations .....                       | 10 |
| Criteria for Intentional Radiators .....                 | 13 |
| 1. Occupied Bandwidth .....                              | 13 |
| 2. RF Power Output.....                                  | 17 |
| 3. Conducted Spurious Emissions .....                    | 20 |
| 4. Radiated Spurious Emissions and Restricted Band ..... | 28 |
| 6. Emissions At Band Edges .....                         | 31 |
| 7. Power Spectral Density .....                          | 33 |
| 8. Test Equipment.....                                   | 36 |
| 9. Measurement Uncertainty.....                          | 37 |

## EXECUTIVE SUMMARY

### 1. Testing Summary

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15.247. All tests were conducted using measurement procedure from ANSI C63.10-2020 and FCC Guidance document 558074 D01 v05r02 April 02, 2019 as appropriate.

| Test Name                                     | Test Method/Standard         | Result | Comments               |
|-----------------------------------------------|------------------------------|--------|------------------------|
| Unintentional Radiated Emissions              | 15.109                       | Pass   |                        |
| A/C Powerline Conducted Emissions             | 15.207                       | N/A    | Battery Powered Device |
| Occupied Bandwidth                            | 15.247(a)(2)                 | Pass   |                        |
| Peak Output Power                             | 15.247(b)                    | Pass   |                        |
| Conducted Spurious Emissions                  | 15.247(d)                    | Pass   |                        |
| Radiated Spurious Emissions & Restricted Band | 15.247(d), 15.209(a), 15.205 | Pass   |                        |
| Emissions at Band Edges                       | 15.247(d), 15.209(a), 15.205 | Pass   |                        |
| Power Spectral Density                        | 15.247(e)                    | Pass   |                        |

## EQUIPMENT CONFIGURATION

### 1. Overview

H.B Compliance Solutions was contracted by Lodestar Technology, Inc. to perform testing on the LNK9 under the quotation number Q25091001.

This document describes the test setups, test methods, required test equipment, and the test limit criteria used to perform compliance testing of the Lodestar Technology, Inc., LNK9.

The tests were based on FCC Part 15 Rules. The tests described in this document were formal tests as described with the objective of the testing was to evaluate compliance of the Equipment Under Test (EUT) to the requirements of the aforementioned specifications. Lodestar Technology, Inc. should retain a copy of this document and it should be kept on file for at least five years after the manufacturing of the EUT has been permanently discontinued. The results obtained relate only to the item(s) tested.

|                                       |                                                                                |
|---------------------------------------|--------------------------------------------------------------------------------|
| <b>Product Name:</b>                  | LNK9                                                                           |
| <b>Model(s) Tested:</b>               | N/A                                                                            |
| <b>FCC ID:</b>                        | 2BSUV-01-00040-03                                                              |
| <b>Supply Voltage Input:</b>          | Primary Power: +3.6 VDC                                                        |
| <b>Frequency Range:</b>               | 2402MHz - 2480MHz                                                              |
| <b>No. of Channels:</b>               | Bluetooth Low Energy Specification                                             |
| <b>Necessary Bandwidth</b>            | N/A                                                                            |
| <b>Type(s) of Modulation:</b>         | GFSK (Bluetooth BLE)                                                           |
| <b>Range of Operation Power:</b>      | 0.00037W                                                                       |
| <b>Emission Designator:</b>           | N/A                                                                            |
| <b>Channel Spacing(s)</b>             | 2 MHz                                                                          |
| <b>Test Item:</b>                     | Pre-Production                                                                 |
| <b>Type of Equipment:</b>             | Portable                                                                       |
| <b>Antenna Requirement (§15.203):</b> | Type of Antenna: Chip Antenna<br>Gain of Antenna: 2.3dBi                       |
| <b>Environmental Test Conditions:</b> | Temperature: 15-35°C<br>Humidity: 30-60%<br>Barometric Pressure: 860-1060 mbar |
| <b>Modification to the EUT:</b>       | None                                                                           |
| <b>Evaluated By:</b>                  | Staff at H.B. Compliance Solutions                                             |
| <b>Test Date(s):</b>                  | October 02-07, 2025                                                            |
|                                       |                                                                                |

## 2. Test Facility

All testing was performed at H.B. Compliance Solutions. This facility is located at 5005 S. Ash Avenue, Suite # A-10, Tempe AZ-85282. All equipment used in making physical determination is accurate and bears recent traceability to the National Institute of Standards and Technology.

Radiated Emissions measurements were performed in a GTEM chamber (equivalent to an Open Area Test Site). In accordance with §2.948(a)(3), a complete site description is contained at H.B. Compliance Solutions.

Test facility H.B. Compliance Solutions is an ANAB accredited test site. The ANAB certificate number is L2458. The scope of accreditation can be found on ANAB website [www.anab.org](http://www.anab.org)

FCC Registered Number: 738876

ISED Test Site Registration number is 9481A



### 3. Description of Test Sample

The Lodestar Technology, LNK9, is a firearm that integrates Lodestar's Safeguard User Interface technology with modern secure-access control. Biometric fingerprint recognition, PIN pad authentication, and a Bluetooth enabled mobile app to provide multiple reliable ways to access the firearm.

### 4. Equipment Configuration

| Ref. ID | Name / Description                                                                | Model Number | Serial Number |
|---------|-----------------------------------------------------------------------------------|--------------|---------------|
| # 1     | (Sample # 1 with connector) – For Conducted test only – PCB with SMA Antenna Port | -            | -             |
| # 2     | (Sample # 2) – For Radiated test only                                             | LNK9         | L100092       |

Table 1. Equipment Configuration

### 5. Support Equipment

All support equipment supplied is listed in the following Support Equipment List.

| Ref ID | Name / Description | Manufacturer | Model #        | Serial #          |
|--------|--------------------|--------------|----------------|-------------------|
| # 3    | DC Power Supply    | Lambda       | LA-200         | LA2-AA20-143 3535 |
| # 4    | Laptop Computer    | Dell         | Precision 7510 | -                 |

Table 2. Support Equipment

### 6. Ports and Cabling Information

| Ref ID | Port name on the EUT | Cable Description | Qty. | Length (m) | Shielded? (Y/N) | Termination Box ID & Port ID |
|--------|----------------------|-------------------|------|------------|-----------------|------------------------------|
| # 5    | Power                | 2 wire            | 1    | 0.01       | N               | # 3                          |
| # 6    | UART                 | USB               | 1    | 0.5        | N               | # 4                          |

Table 3. Ports and Cabling Information

## **7. Method of Monitoring EUT Operation**

A test receiver will be used to monitor the data transmission from the EUT.

## **8. Mode of Operation**

The EUT will be configured to transmit at maximum power level. Customer supplied test tool software (STM32CubeMonRF) that allowed to program the EUT. Test mode was provided to select the lower, middle and upper band of the transmitter. This software allowed the selection of all the channels and to operate in CW and with modulation on. These settings were created for testing purposes only.

## **9. Modifications**

### **9.1 Modifications to EUT**

A PCB only sample was provided with an SMA connection at the antenna port for conducted measurements. All Radiated measurements were made with the full EUT.

### **9.2 Modifications to Test Standard**

No Modifications were made to the test standard.

## **10. Disposition of EUT**

The test sample including all support equipment submitted to H.B Compliance Solutions for testing will be returned to Lodestar Technology, Inc. at the completion of testing & certification.

## Criteria for Un-Intentional Radiators

### 1. Radiated Emissions

|                             |         |                          |                  |
|-----------------------------|---------|--------------------------|------------------|
| <b>Test Requirement(s):</b> | §15.109 | <b>Test Engineer(s):</b> | Sean E.          |
| <b>Test Results:</b>        | Pass    | <b>Test Date(s):</b>     | October 02, 2025 |

#### *Test Procedures:*

The final radiated emissions test was performed using the parameters described above as worst case. That final test was conducted at a facility that meets the ANSI C63.4 NSA requirements. The frequency range noted in the data sheets was scanned/tested at that facility. Emissions were maximized as specified, by varying table azimuth, antenna height, and manipulating cables.

Using the mode of operation and configuration noted within this report, a final radiated emissions test was performed. The frequency range investigated (scanned), is also noted in this report. Radiated emissions measurements were made at the EUT azimuth and antenna height such that the maximum radiated emissions level will be detected. This requires the use of a turntable and an antenna positioner. The preferred method of a continuous azimuth search is utilized for frequency scans of the EUT field strength with both polarities of the measuring antenna. A calibrated, linearly polarized antenna was positioned at the specified distance from the periphery of the EUT.

*Note: The specified distance is the horizontal separation between the closest periphery of the EUT and the center of the axis of the elements of the receiving antenna. However, if the receiving antenna is a log-periodic array, the specified distance shall be the distance between the closest periphery of the EUT and the front-to-back center of the array of elements.*

Tests were made with the antenna positioned in both the horizontal and vertical polarization planes. The measurement was varied in height above the conducting ground plane to obtain the maximum signal strength. Though specified in the report, the measurement distance shall be 3 meters. At any measurement distance, the antenna height was varied from 1 meter to 4 meters. These height scans apply for both horizontal and vertical polarization, except that for vertical polarization the minimum height of the center of the antenna shall be increased so that the lowest point of the bottom of the antenna clears the ground surface by at least 25 cm.

| Frequency Range (MHz)                                                                                                                                     | Peak Data (kHz) | Quasi-Peak Data (kHz) | Average Data (kHz) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------|--------------------|
| 30 MHz to 1 GHz                                                                                                                                           | 120 kHz         | 120 kHz               | N/A                |
| 1 GHz to 11 GHz                                                                                                                                           | 1MHz            | N/A                   | 1MHz               |
|                                                                                                                                                           |                 |                       |                    |
| Measurements were made using the bandwidths and detectors specified. The video filter was at least as wide as the IF bandwidth of the measuring receiver. |                 |                       |                    |

**Table 4. Radiated Emissions – Measurement Bandwidth**

## Emissions Tests Calculations

In the case of indoor measurements, radiated emissions measurements are made by the manipulation of correction factors using TILE4 software. This is done automatically by the software during the final measurement process.

In both cases, the level of the Field Strength of the interfering signal is calculated by adding the Antenna Factor, Cable Factor and by subtracting the Amplifier Gain from the measured reading. The basic equation is as follows:

$$FS = RA + AF + (CF - AG)$$

Where: FS = Field Strength

RA = Receiver (indicated) Amplitude

AF = Antenna Factor

CF = Cable Attenuation Factor

AG = Amplifier Gain

This laboratory uses an approach of combining the CF and AG using an end-to-end measurement of the entire cabling system, including the test cable, any in-line amplifiers, attenuators, or transient protection networks, all measured in-situ.

For a sample calculation, assume a receiver reading of 52.5 dBuV is obtained. With an antenna factor of 7.4 and a combined cable factor (CF + AG) of -27.9:

$$FS = 52.5 + 7.4 + (-27.9) = 32 \text{ dBuV/m}$$

$$FS = 32 \text{ dBuV/m}$$

If desired, this can be converted into its corresponding level in uV/m:

$$FS = 10^{((32 \text{ dBuV/m})/20)} = 39.8 \text{ uV/m}$$

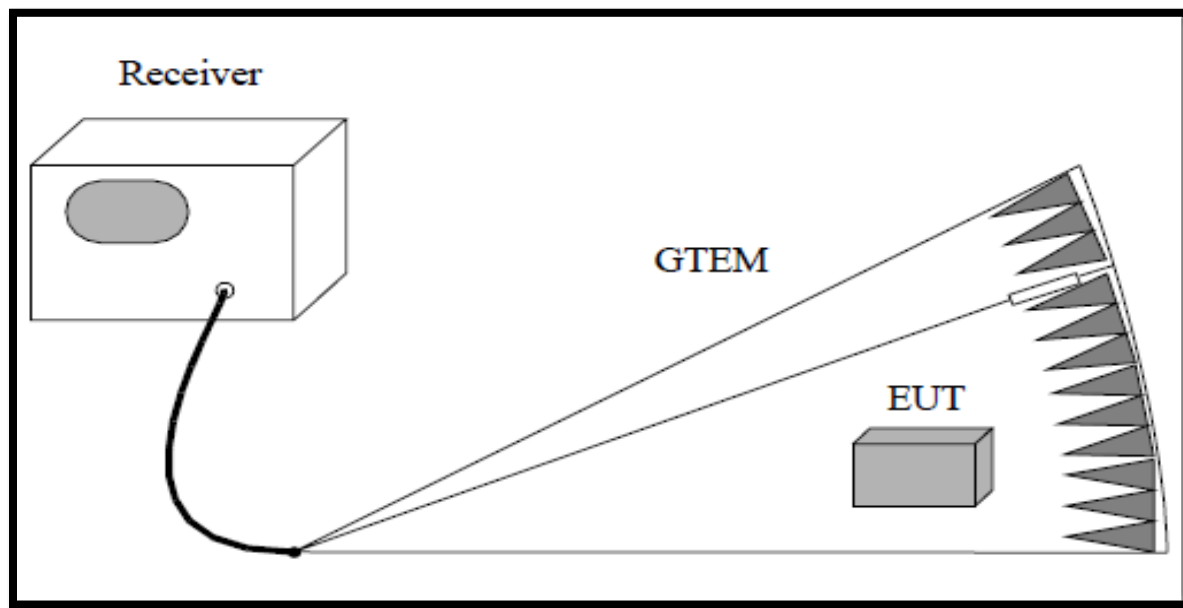
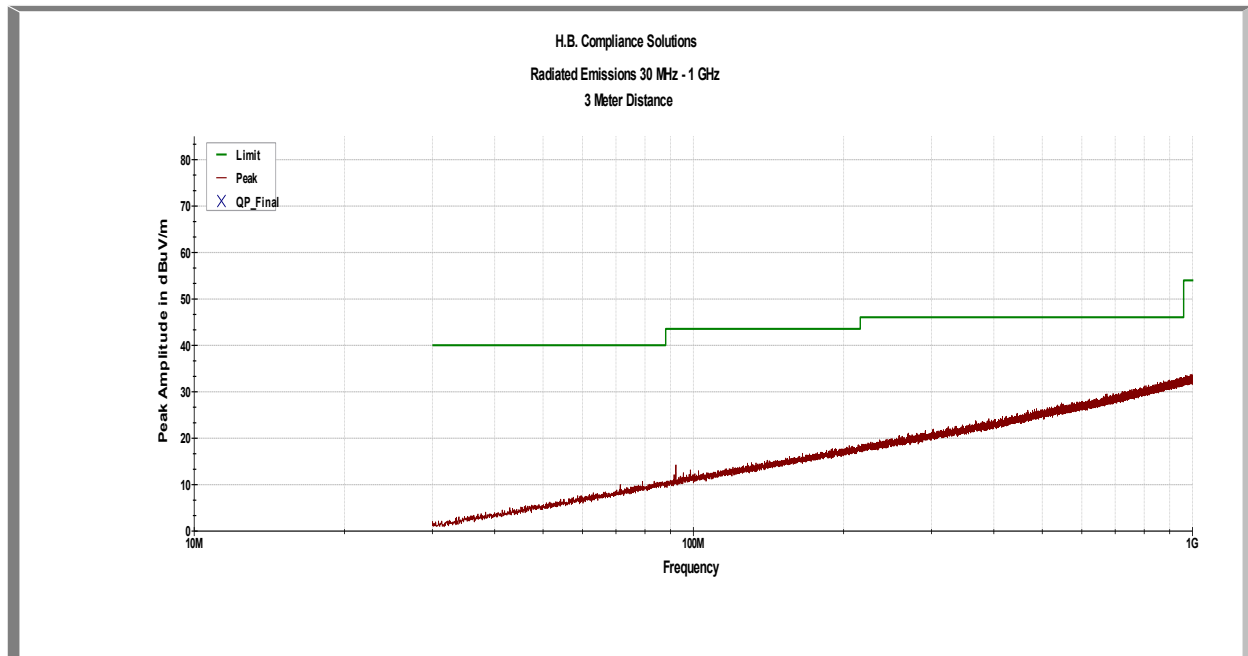


Figure 1. Radiated Emissions Test Setup (30MHz – 1GHz)



**Plot 1 – Radiated Emissions – 30MHz to 1GHz**

## Criteria for Intentional Radiators

### 1. Occupied Bandwidth

|                             |                           |                          |                  |
|-----------------------------|---------------------------|--------------------------|------------------|
| <b>Test Requirement(s):</b> | 15.247(a)(2), ANSI C63.10 | <b>Test Engineer(s):</b> | Sean E.          |
| <b>Test Results:</b>        | Pass                      | <b>Test Date(s):</b>     | October 02, 2025 |

**Test Procedure:** As required by 47 CFR 15.247(a)(2) System using digital modulation techniques may operate in the 902-928MHz, 2400 – 2483.5MHz, and 5725 – 5850MHz bands. The minimum 6dB bandwidth shall be at least 500 kHz.

Customer provided a test mode internal to the EUT to control the RF modulation, and frequency channel. The EUT was connected through an attenuator to a Spectrum Analyzer. The measured highest peak power was set relative to zero dB reference. The RBW of the Spectrum Analyzer was set to 100kHz and VBW>RBW. Measurements were carried out at the low, mid and high channels of the TX band at the output terminals of the EUT.

#### Test Setup:



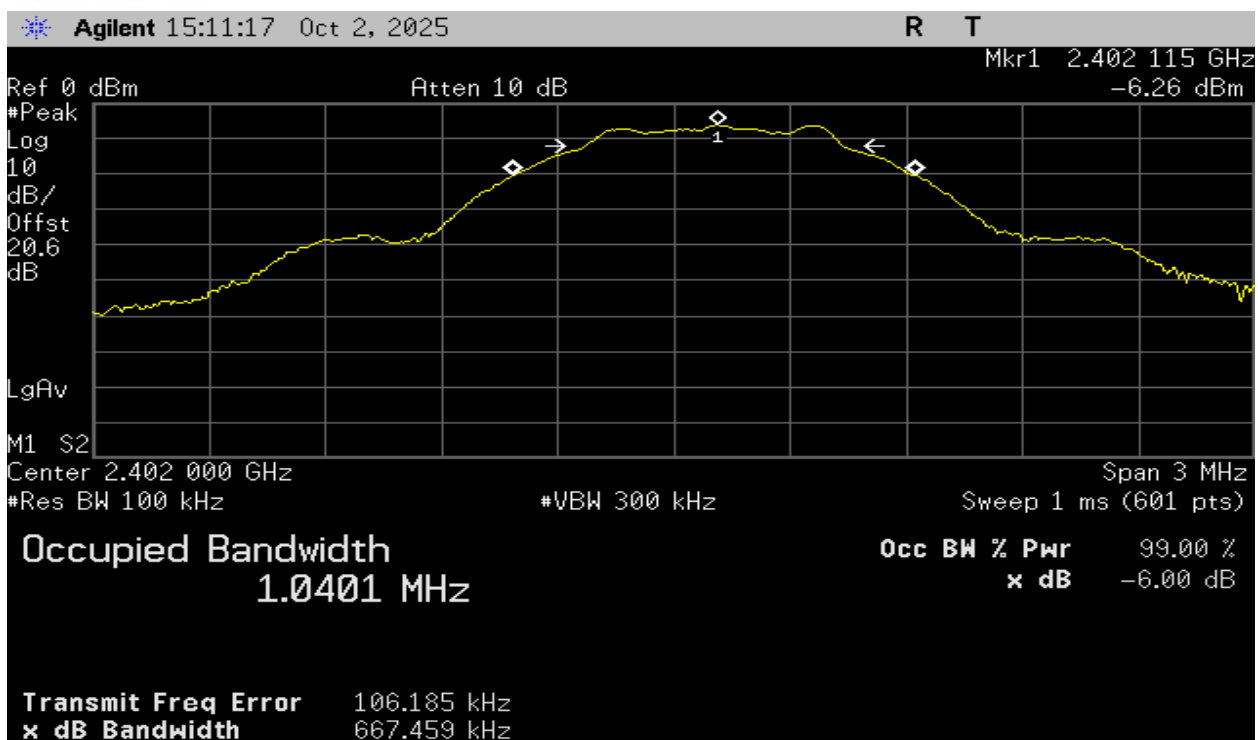
Figure 2. Occupied Bandwidth Test Setup

## Test Results:

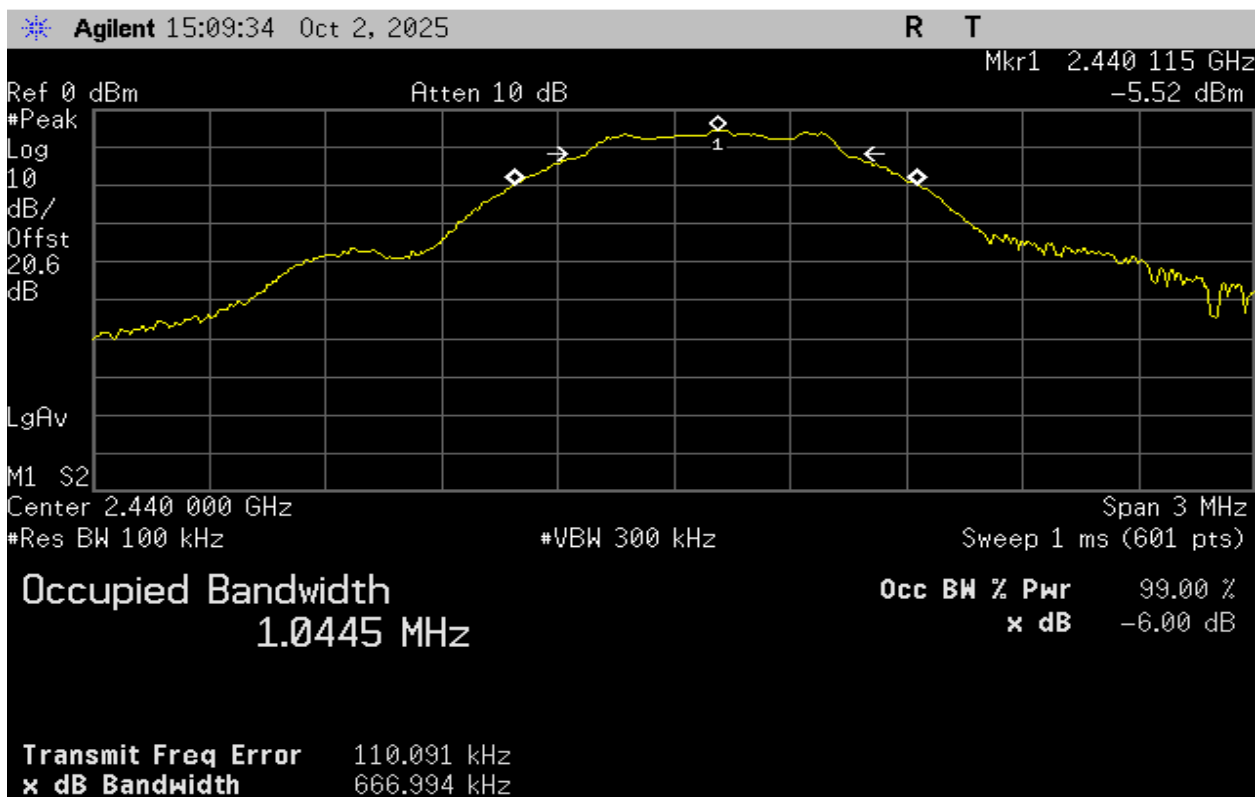
| Frequency (MHz) | Recorded Measurement | Specification Limit |
|-----------------|----------------------|---------------------|
| 2402            | 667.46 kHz           | $\geq 500$ KHz      |
| 2440            | 666.99 kHz           | $\geq 500$ KHz      |
| 2480            | 667.44 kHz           | $\geq 500$ KHz      |

**Table 5. Occupied Bandwidth Summary, Test Results**

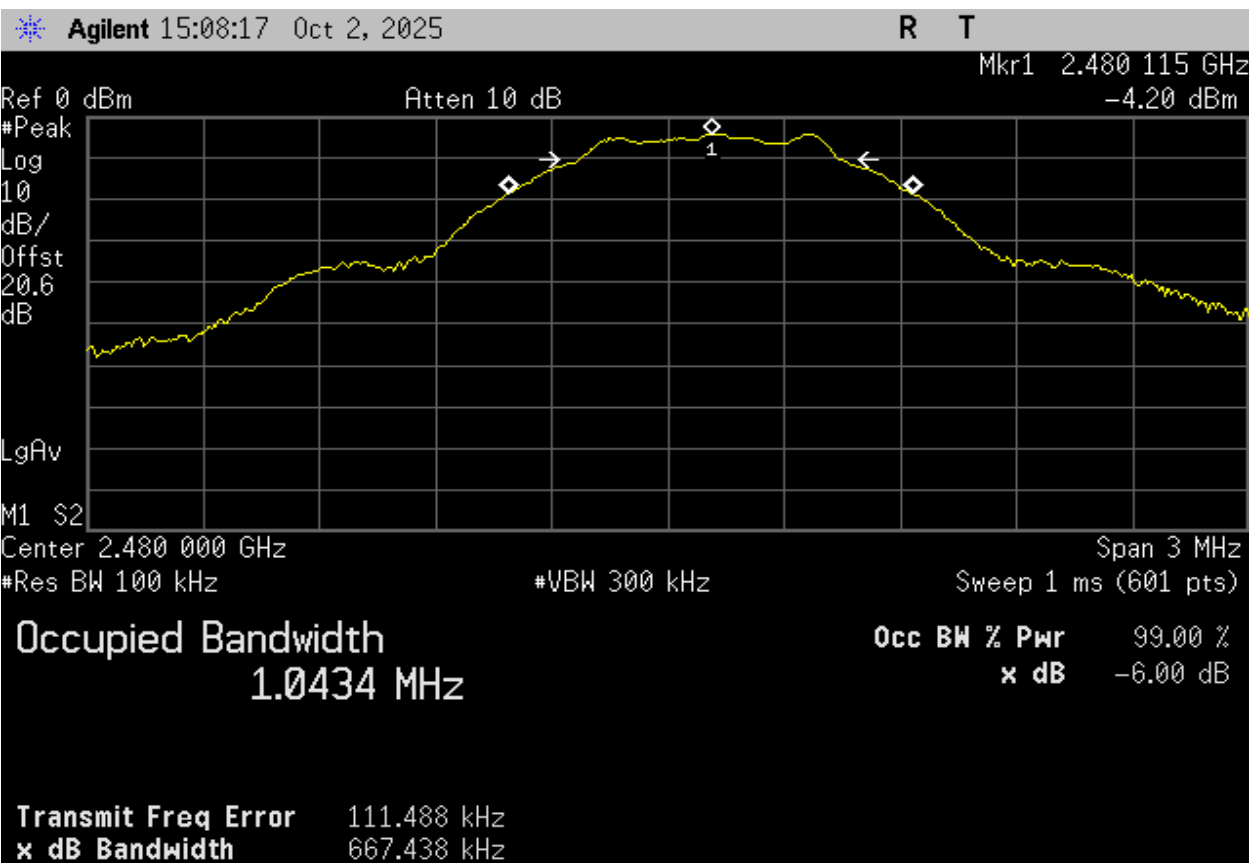
The following pages show measurements of Occupied Bandwidth plots:



Plot 2 – Lowest Channel – 6dB BW



Plot 3 – Middle Channel – 6dB BW



Plot 4 – Highest Channel – 6dB BW

## 2. RF Power Output

|                             |               |                          |                  |
|-----------------------------|---------------|--------------------------|------------------|
| <b>Test Requirement(s):</b> | §15.247(b)(3) | <b>Test Engineer(s):</b> | Sean E.          |
| <b>Test Results:</b>        | Pass          | <b>Test Date(s):</b>     | October 02, 2025 |

**Test Procedures:** As required by 47 CFR 15.247(b)(3), RF Power output measurements were made at the RF output terminals of the EUT

Customer provided a test mode internal to the EUT to control the RF modulation, and frequency channel. The EUT was connected through an attenuator to a Spectrum Analyzer capable of making power measurements. Measurements were made at the low, mid, and high channels of the entire frequency band.

### Test Setup:

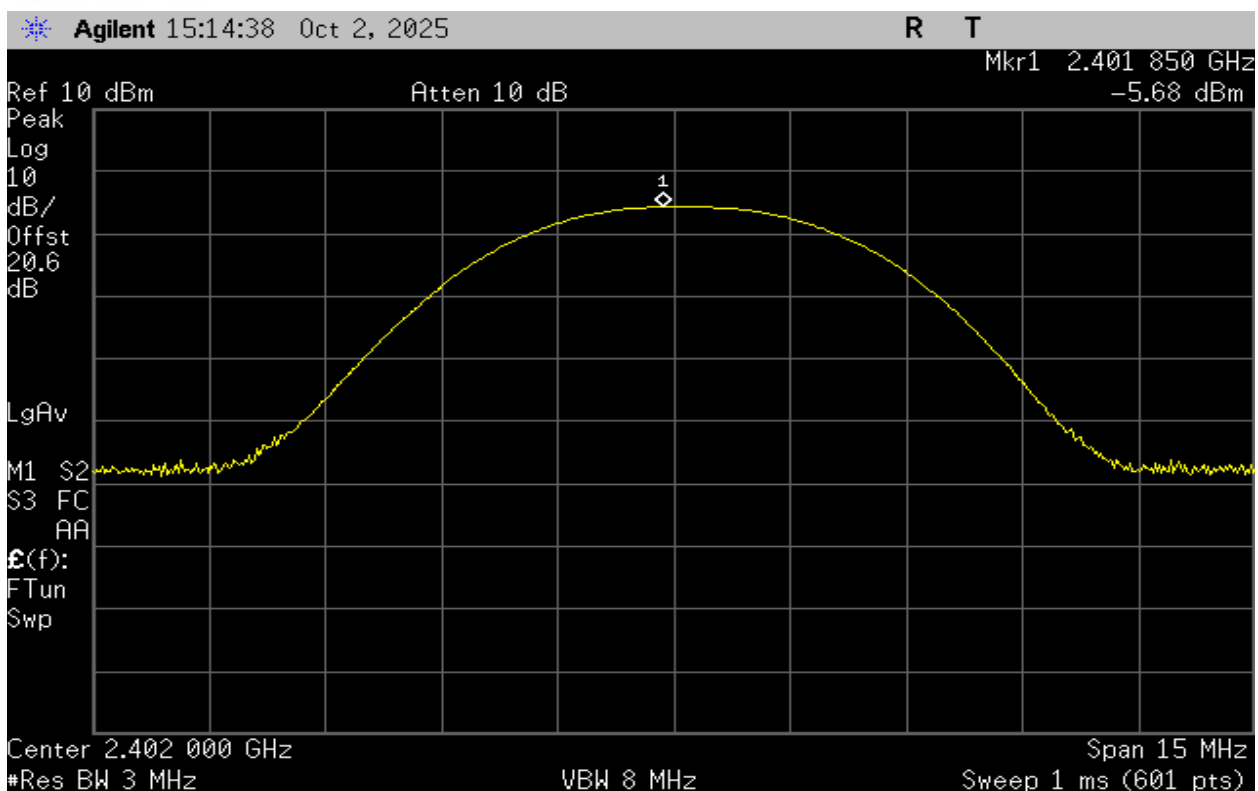


Figure 3. RF Power Test Setup

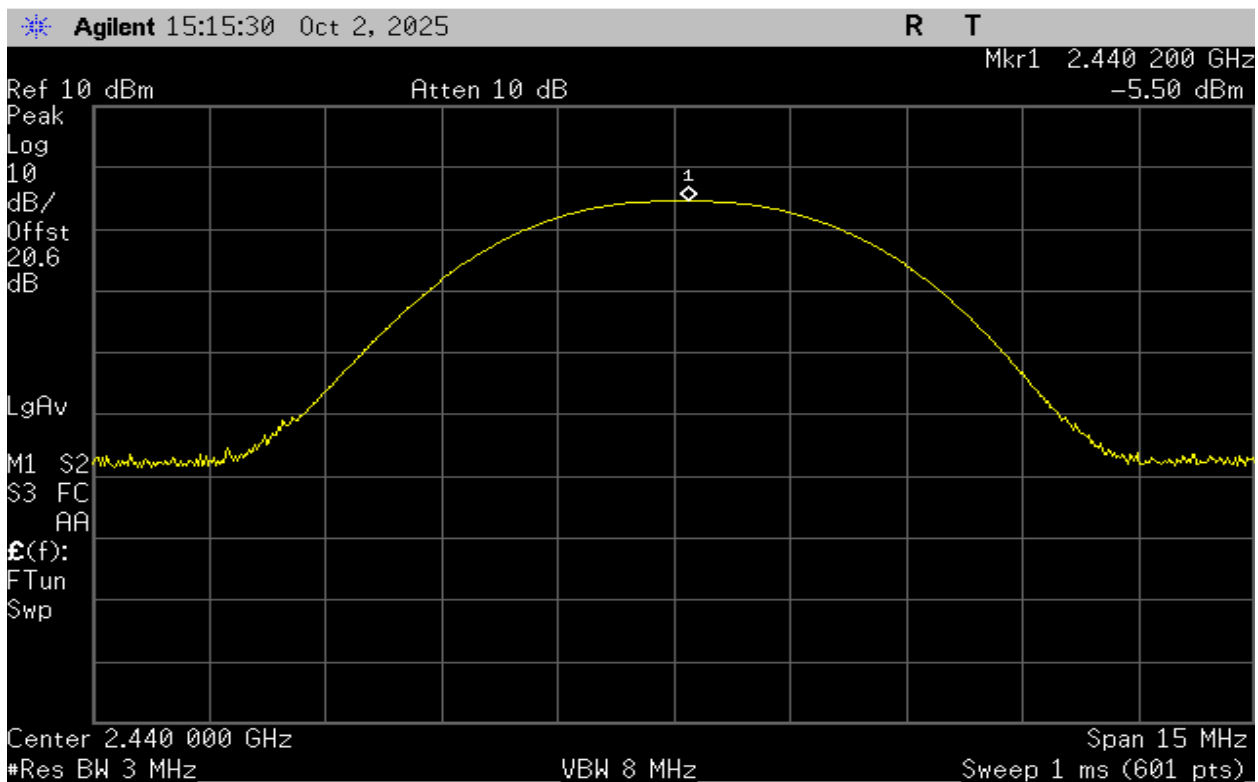
### Test Results:

| Frequency (MHz) | Conducted Power (dBm) | Conducted Power (Watts) | Specification Limit |
|-----------------|-----------------------|-------------------------|---------------------|
| 2402            | -5.68                 | 0.00027                 | 1W                  |
| 2440            | -5.50                 | 0.00028                 | 1W                  |
| 2480            | -4.36                 | 0.00037                 | 1W                  |

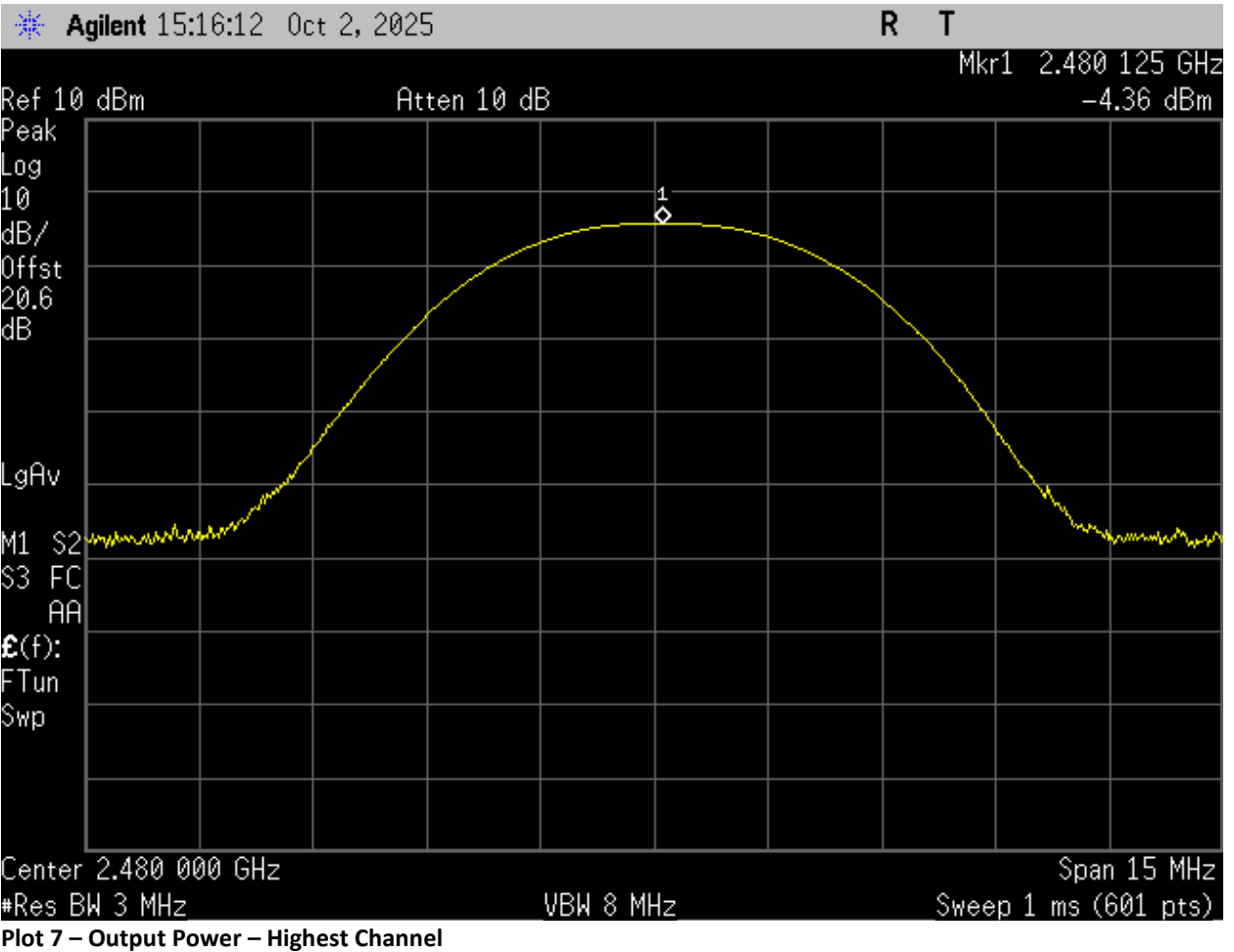
Table 6. RF Power Output, Test Results



Plot 5 – Output Power – Lowest Channel



Plot 6 – Output Power – Middle Channel



### 3. Conducted Spurious Emissions

|                             |                            |                          |                     |
|-----------------------------|----------------------------|--------------------------|---------------------|
| <b>Test Requirement(s):</b> | §15.247(c) and RSS-247 5.5 | <b>Test Engineer(s):</b> | Sean E.             |
| <b>Test Results:</b>        | Pass                       | <b>Test Date(s):</b>     | October 02-06, 2025 |

#### Test Procedures:

As required by 47 CFR 15.247(c): In any 100kHz bandwidth the frequency band in which the spread spectrum or digitally modulation intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either and RF conducted or a radiated measurement. Conducted spurious emissions at antenna terminal measurements were made at the RF output antenna terminal of the EUT.

Customer provided a test mode internal to the EUT to control the RF modulation, and frequency channel. The EUT was connected through an attenuator to a Spectrum Analyzer with RBW set to 100kHz and VBW  $\geq$  RBW. The Spectrum Analyzer was set to sweep from 30MHz up to 10<sup>th</sup> harmonic of the fundamental or 40GHz whichever is the lesser. Measurements were made at the low, mid and high frequency of the transmit band.

#### Test Setup:



Figure 4. Conducted Spurious Emissions Test Setup

## Test Results:

| Frequency (GHz) | Measured Level (dBm) | Limit (dBm) |
|-----------------|----------------------|-------------|
| 3.582           | -56.93               | -26.0       |

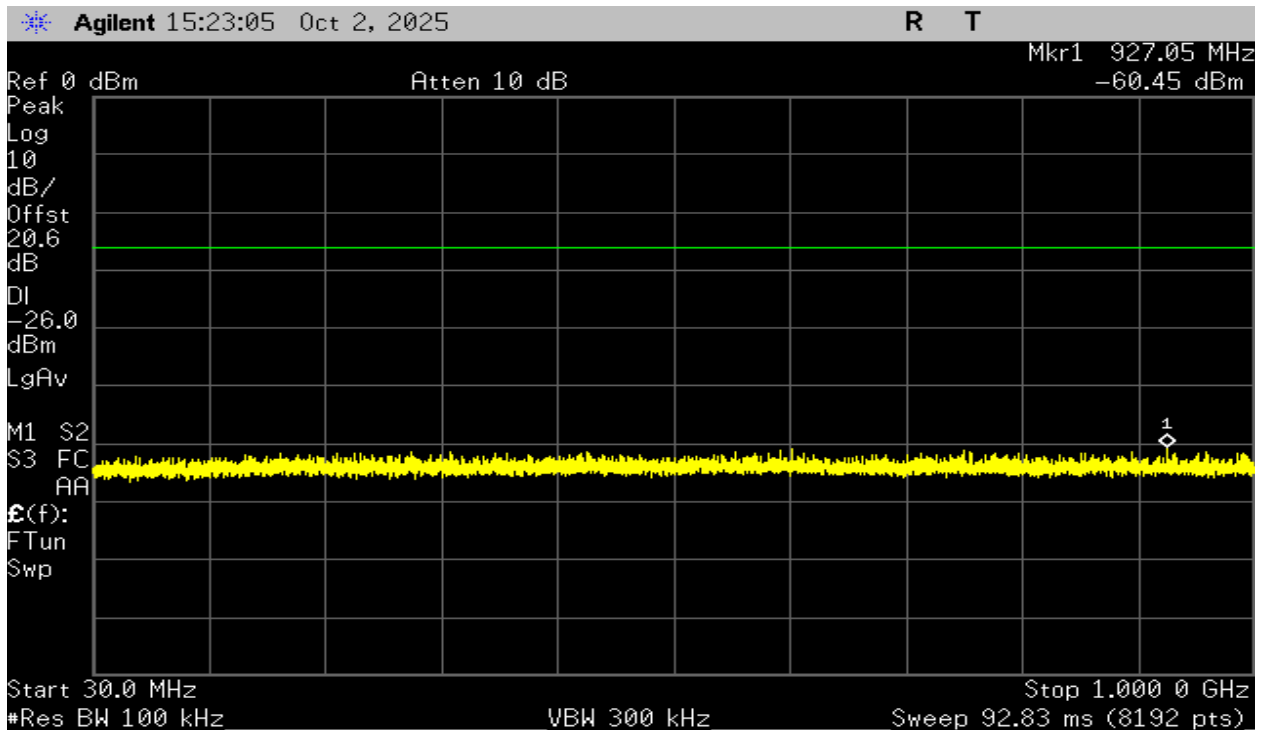
Table 7. Lowest Channel – Conducted Spurious Emissions, Test Results

| Frequency (GHz) | Measured Level (dBm) | Limit (dBm) |
|-----------------|----------------------|-------------|
| 3.212           | -57.75               | -26.0       |

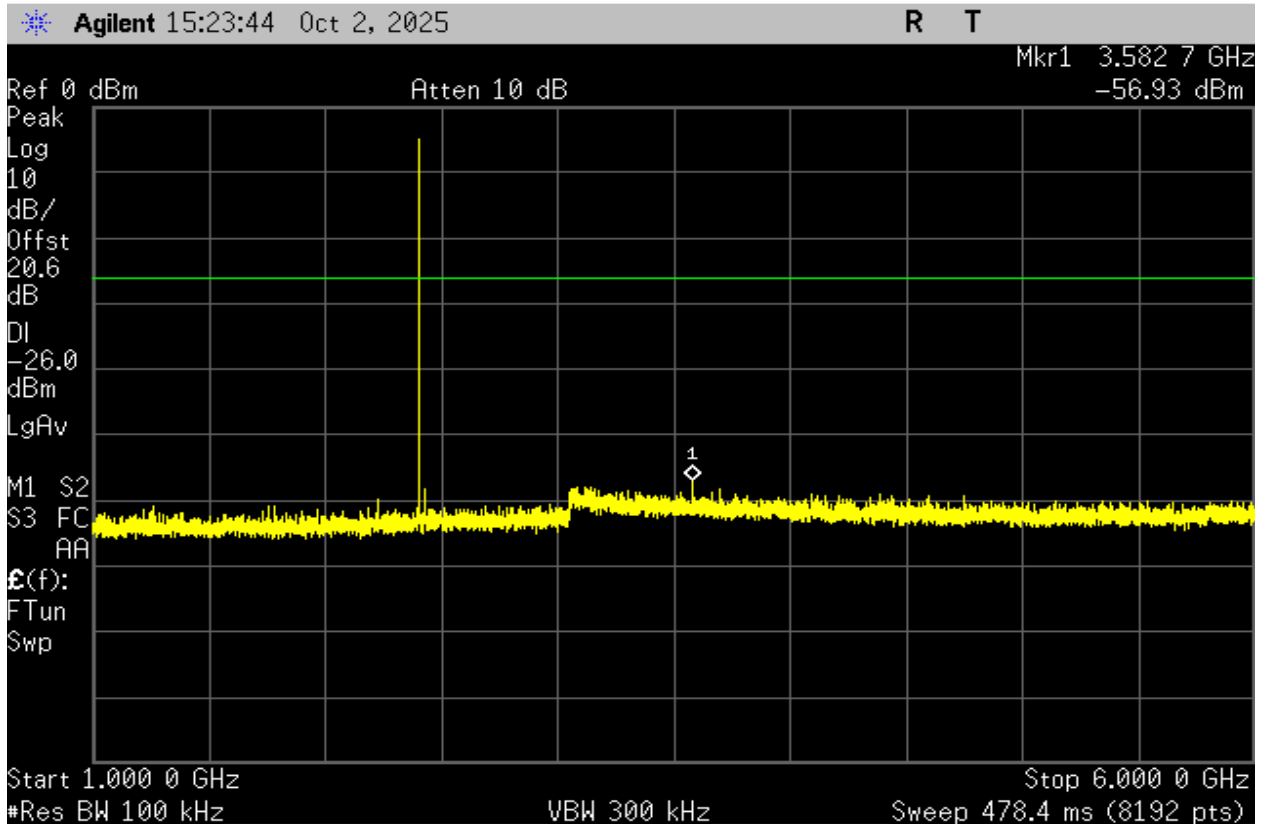
Table 8. Middle Channel – Conducted Spurious Emissions, Test Results

| Frequency (GHz) | Measured Level (dBm) | Limit (dBm) |
|-----------------|----------------------|-------------|
| 2.424           | -56.45               | -26.0       |

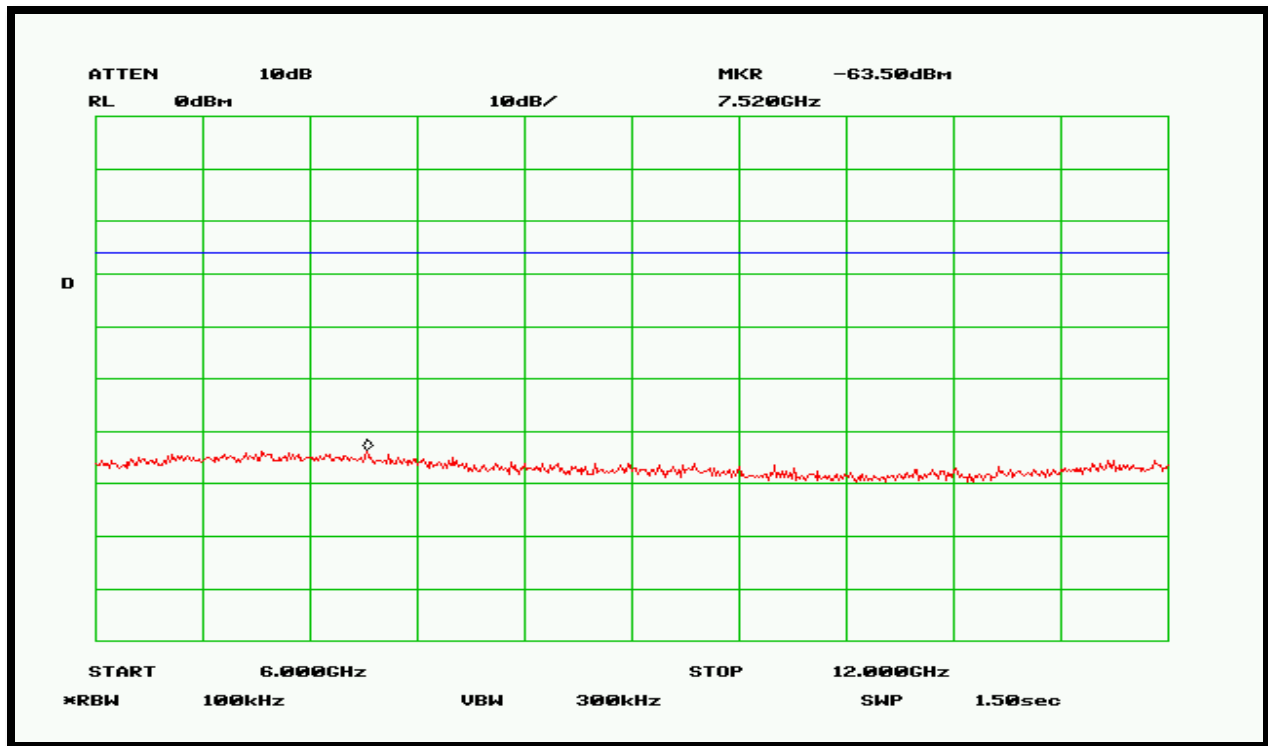
Table 9. Highest Channel – Conducted Spurious Emissions, Test Results



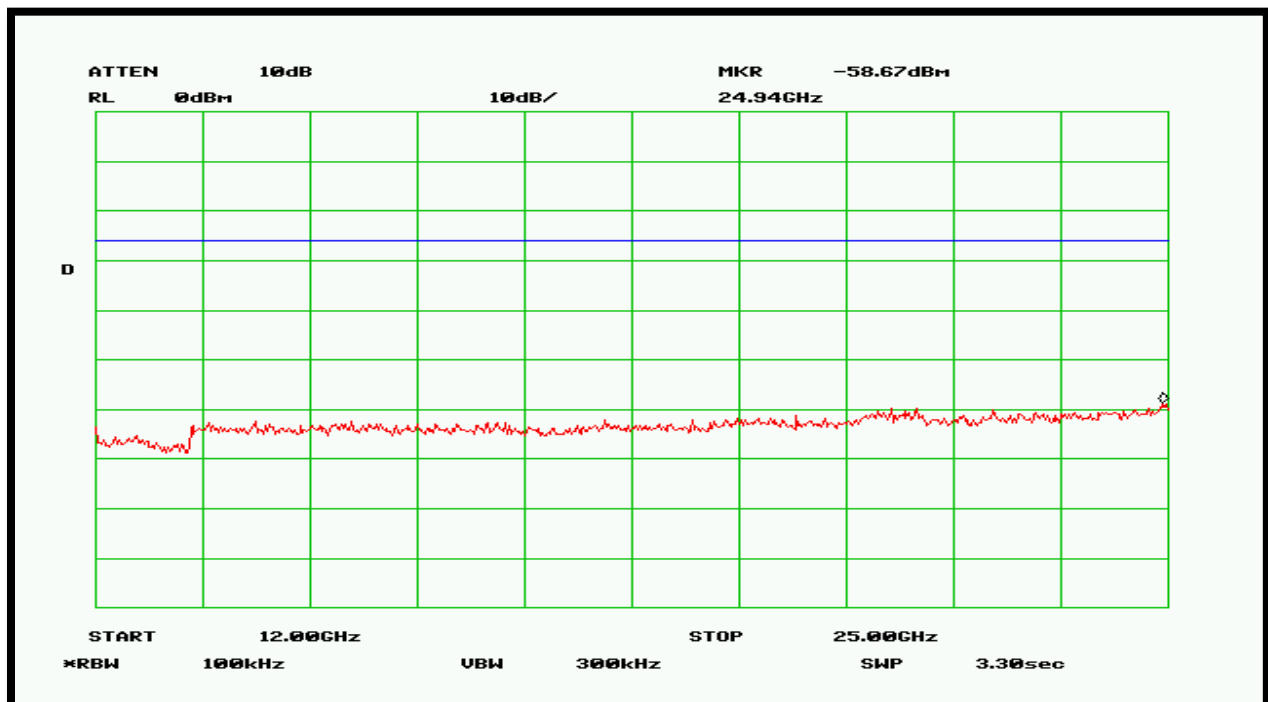
Plot 8 – Low Band – 30MHz to 1000MHz



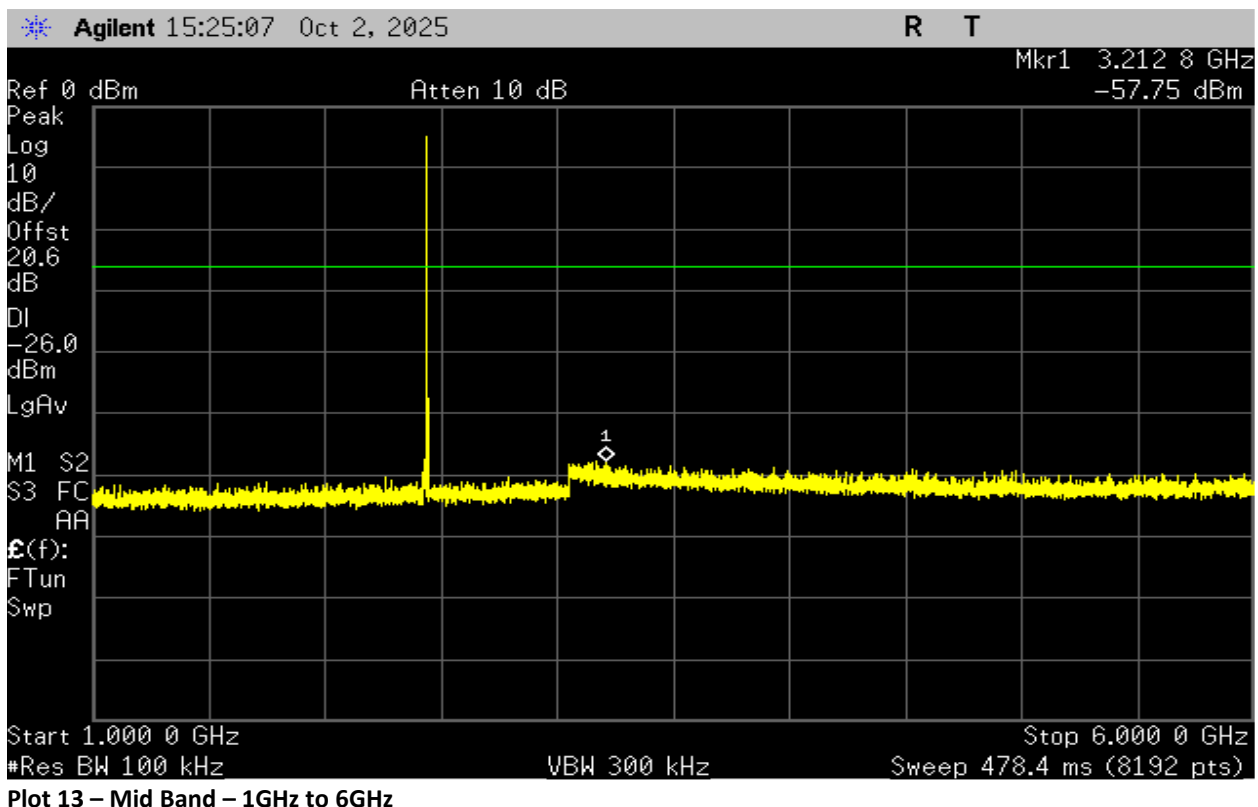
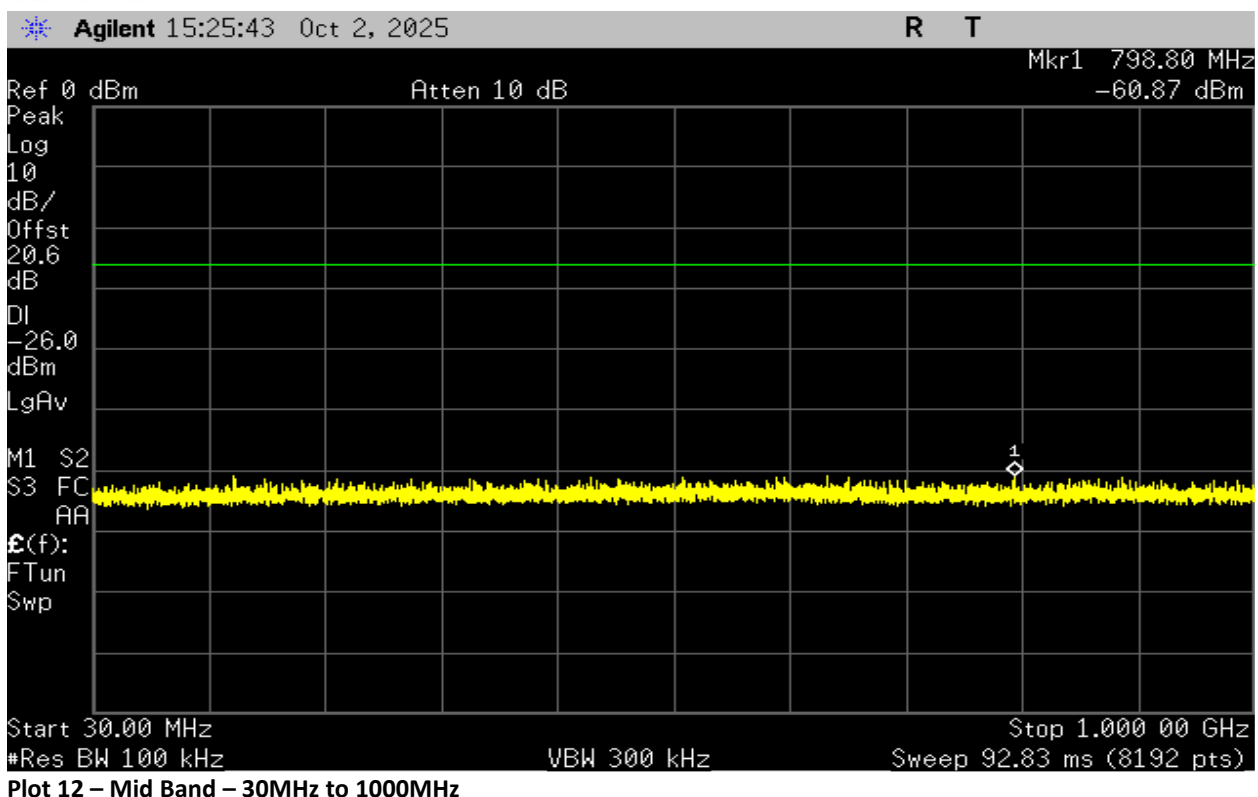
Plot 9 – Low Band – 1GHz to 6GHz

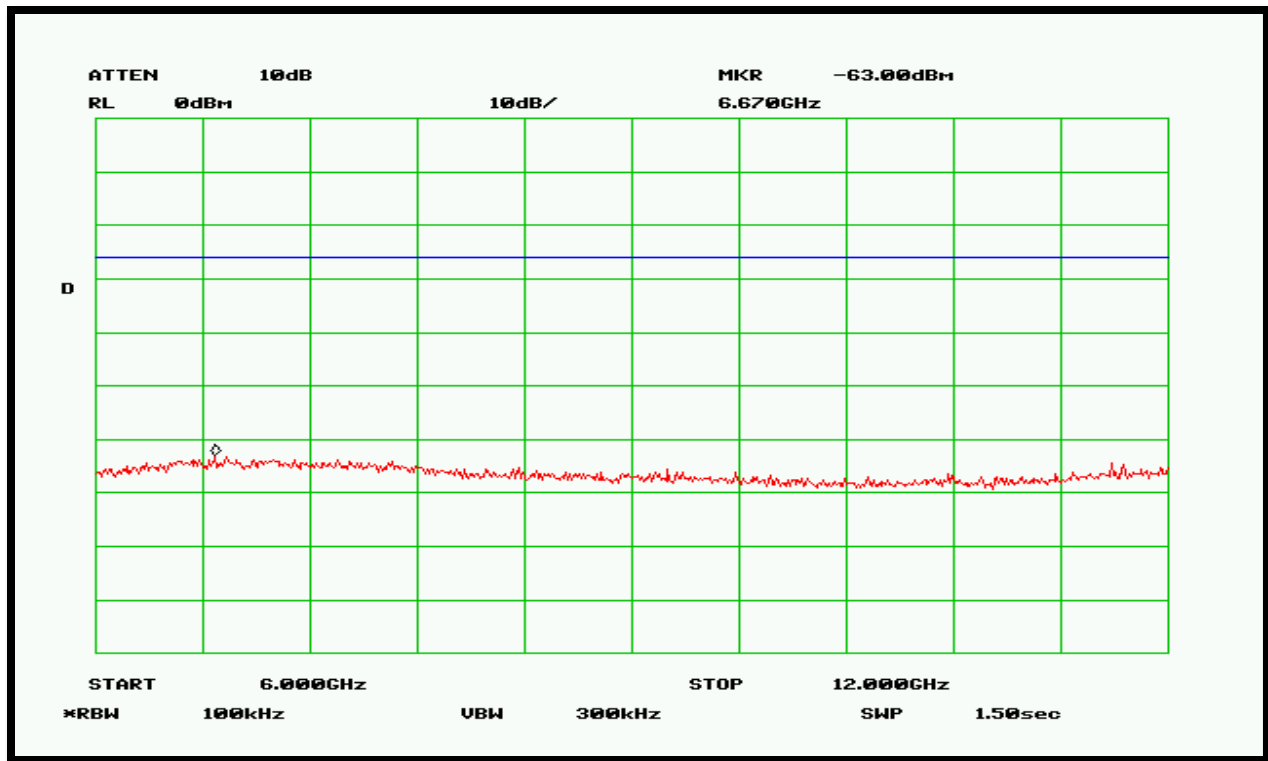


Plot 10 – Low Band – 6GHz to 12GHz

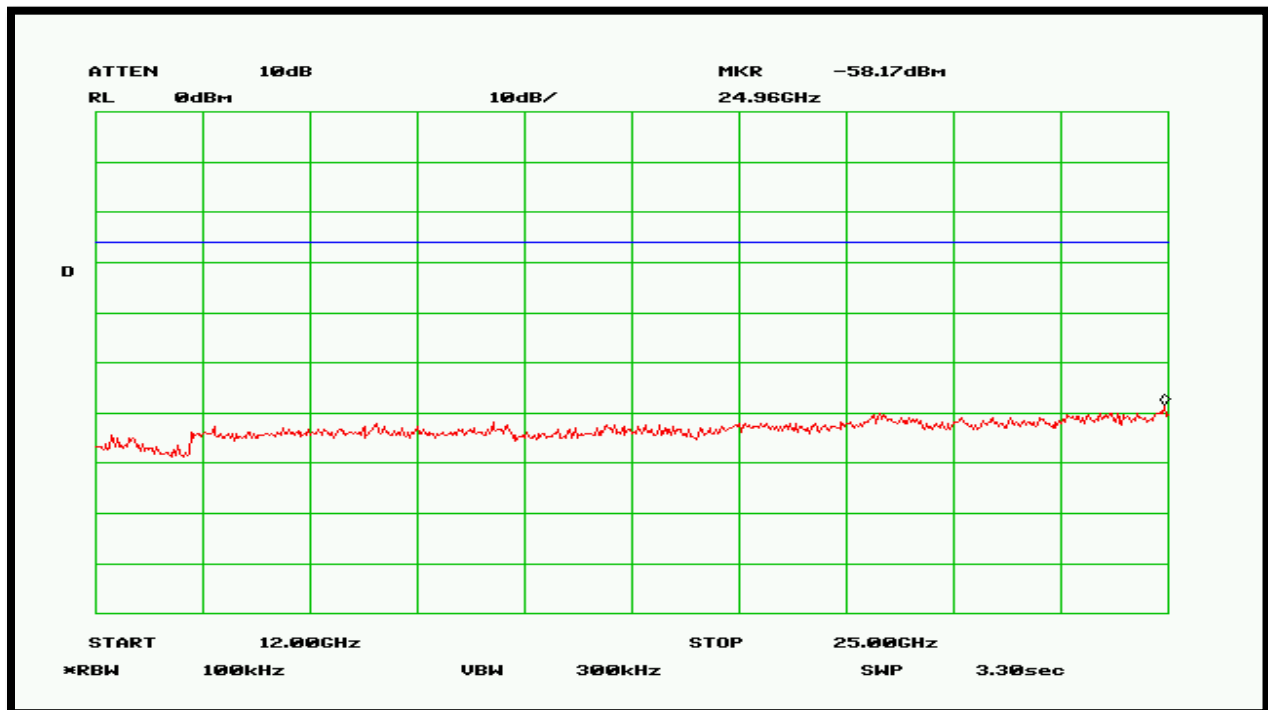


Plot 11 – Low Band – 12GHz to 25GHz

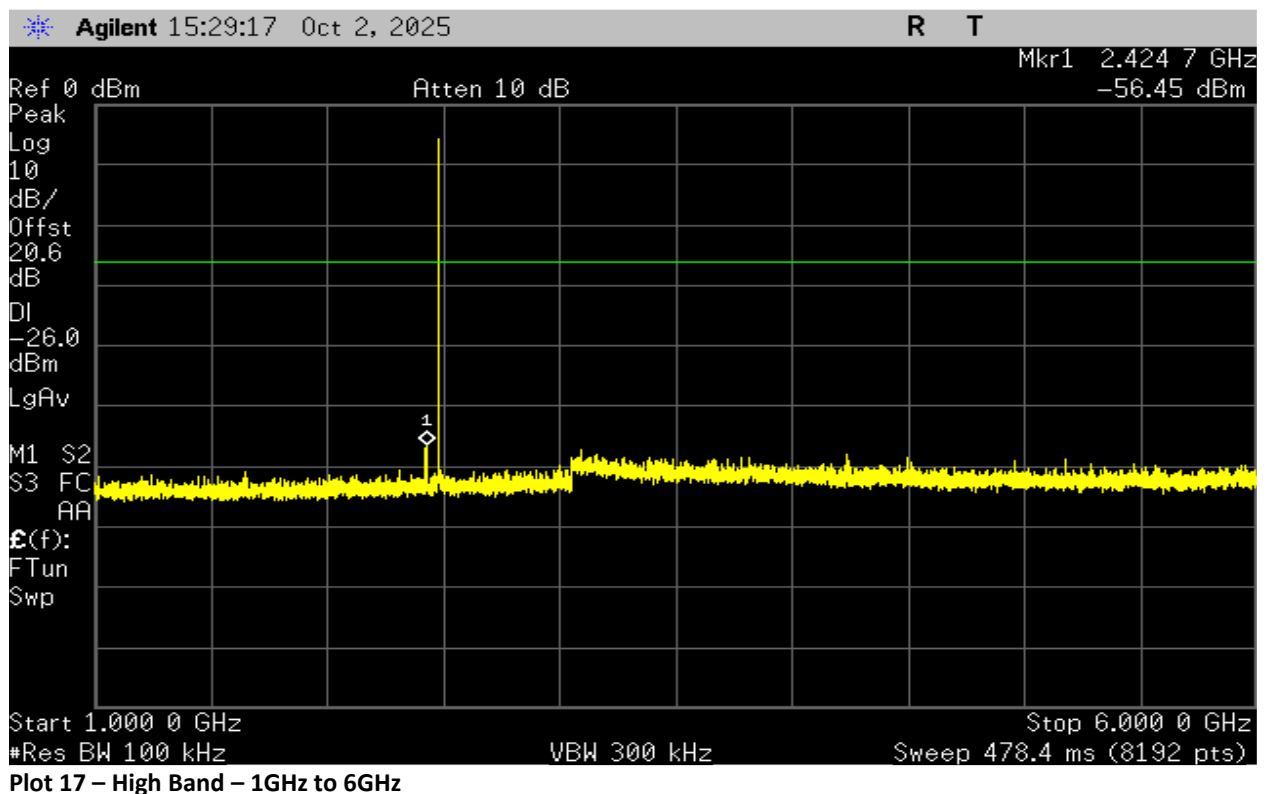
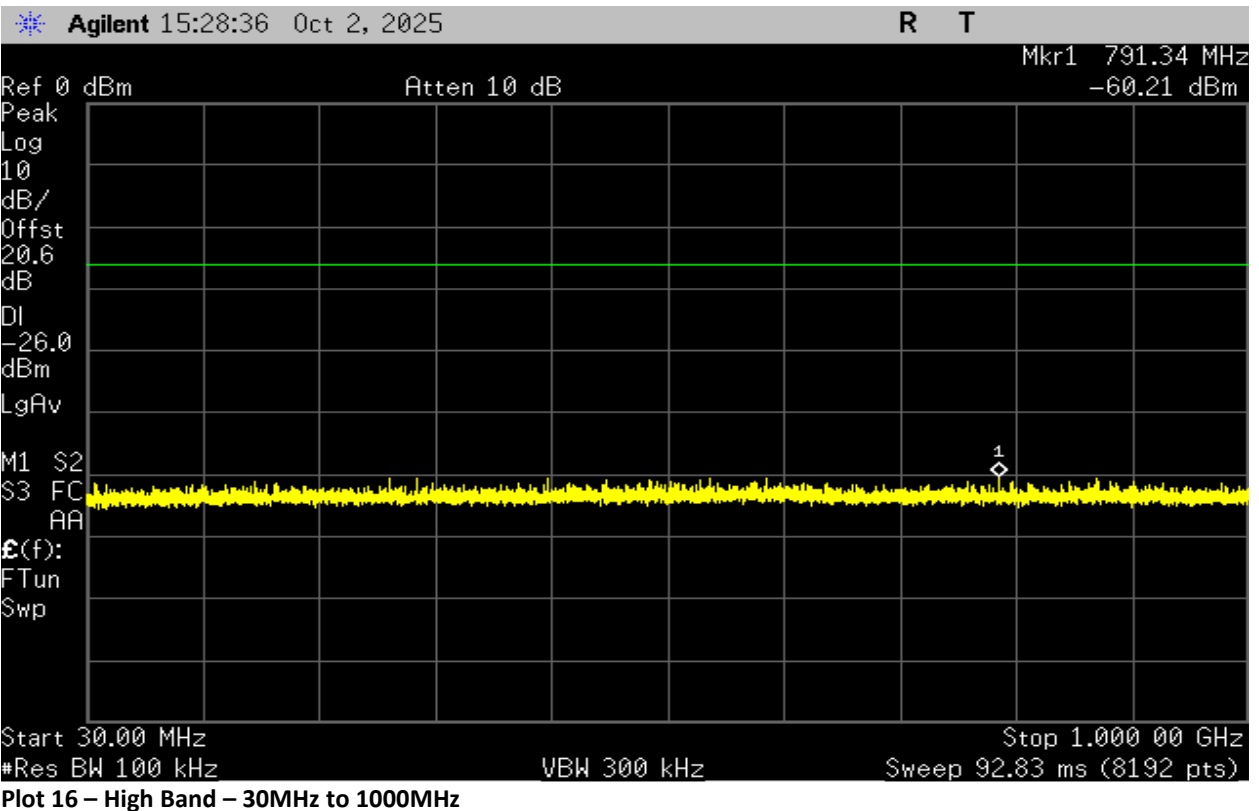


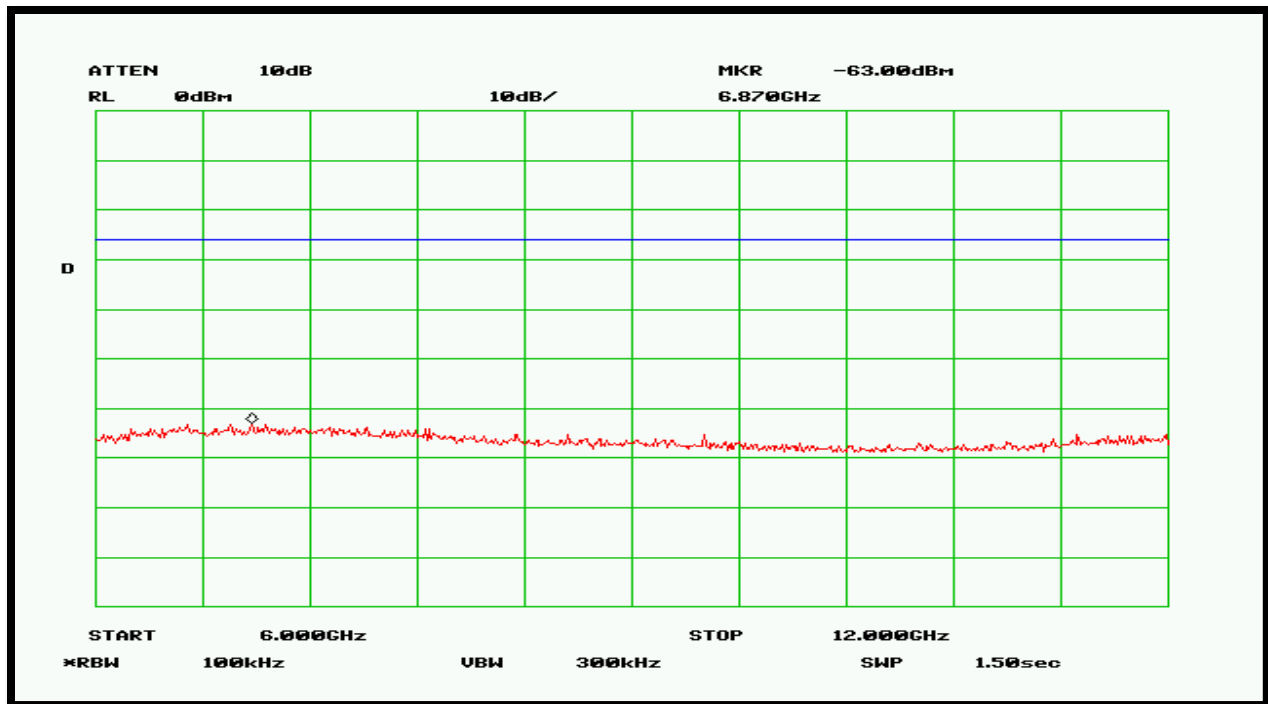


Plot 14 – Mid Band – 6GHz to 12GHz

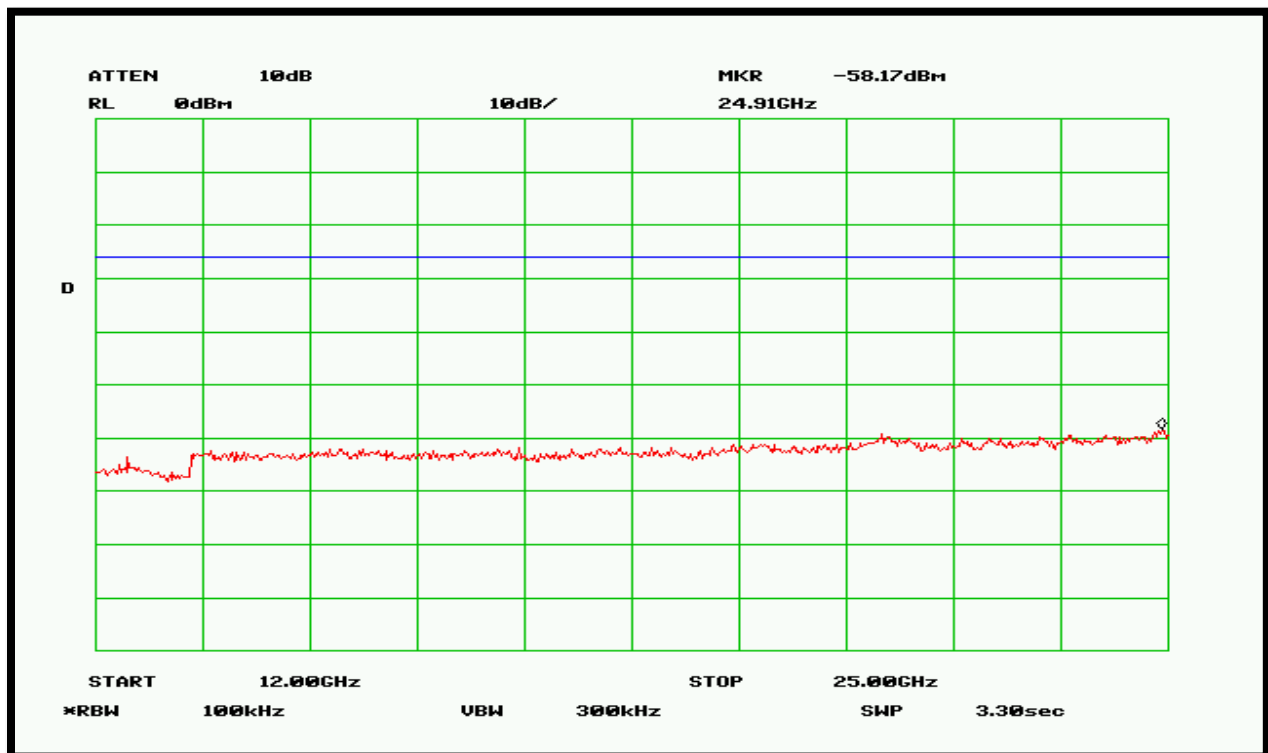


Plot 15 – Mid Band – 12GHz to 25GHz





Plot 18 – High Band – 6GHz to 12GHz



Plot 19 – High Band – 12GHz to 25GHz

#### 4. Radiated Spurious Emissions and Restricted Band

|                             |                                   |                          |                  |
|-----------------------------|-----------------------------------|--------------------------|------------------|
| <b>Test Requirement(s):</b> | §15.247(d), 15.209(a), and 15.205 | <b>Test Engineer(s):</b> | Sean E.          |
| <b>Test Results:</b>        | Pass                              | <b>Test Date(s):</b>     | October 07, 2025 |

**Test Procedures:** As required by 47 CFR 15.247, Radiated spurious measurements were made in accordance with the procedures of the FCC Guidance Document 558074 D01 and ANSI C63.10.

The EUT was placed on a non-reflective table in a 3m open area test site. The EUT was set on continuous transmit.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The frequency range up to the 10<sup>th</sup> harmonic was investigated included all the restricted band frequencies include 2483.5MHz. Measurement 10dB below the limits were not reported.

To get a maximum emission level from the EUT, the EUT was rotated throughout the X-axis, Y-axis and Z-axis. Worst case is X-axis

| Detector Setting | Resolution Bandwidth | Video Bandwidth | Span         |
|------------------|----------------------|-----------------|--------------|
| Peak             | 1MHz                 | 3MHz            | As necessary |
| Average          | 1MHz                 | 10Hz            | 0 Hz         |

**Table 10. Analyzer Settings**

## Test Setup:

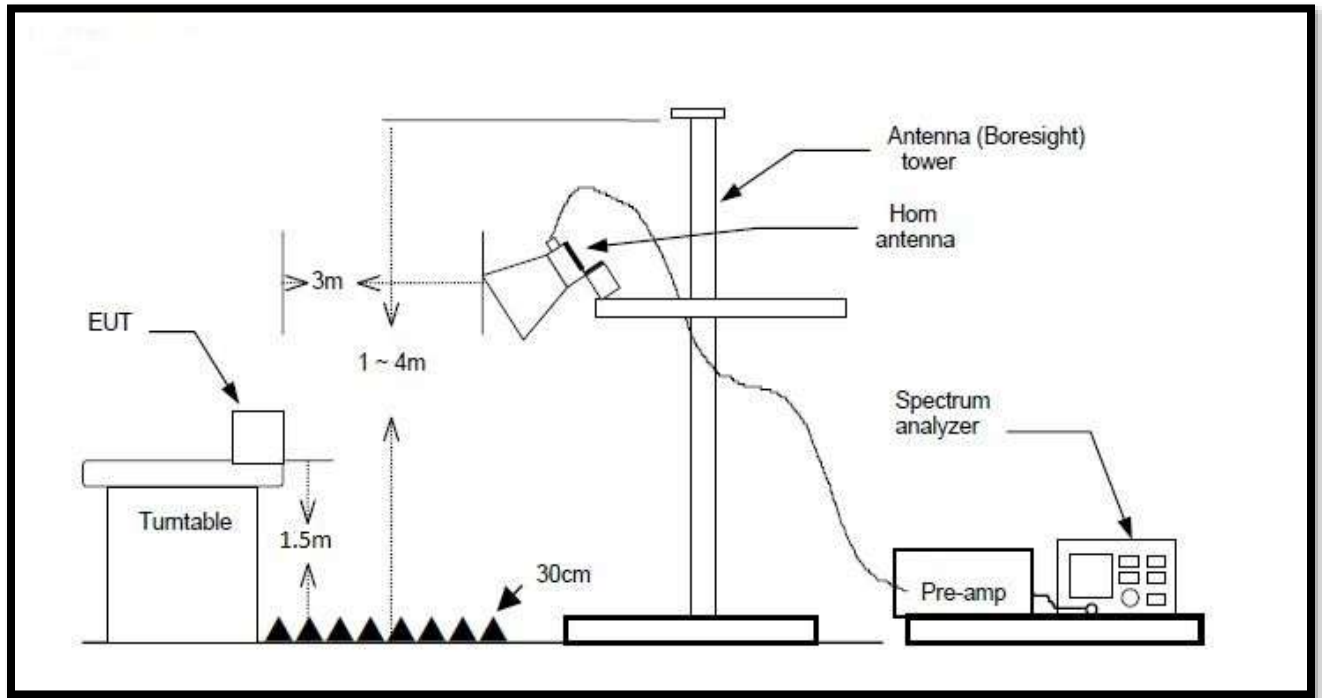


Figure 5. Radiated Emission Above 1GHz Test Setup

## Test Result:

| Frequency (MHz) | Peak Amplitude (dbuV/m) | Peak Limit (dBuV/m) | Average Amplitude (dBuV/m) | Average Limit (dBuV/m) |
|-----------------|-------------------------|---------------------|----------------------------|------------------------|
| 4804*           | 52.33                   | 74.0                | -                          | 54.0                   |
| 7206            | -                       | 102.0               | -                          | 95.5                   |

Table 11 - Spurious Radiated Emission Data – Low Band

| Frequency (MHz) | Peak Amplitude (dbuV/m) | Peak Limit (dBuV/m) | Average Amplitude (dBuV/m) | Average Limit (dBuV/m) |
|-----------------|-------------------------|---------------------|----------------------------|------------------------|
| 4880*           | 52.49                   | 74.0                | -                          | 54.0                   |
| 7320*           | -                       | 102.0               | -                          | 95.5                   |

Table 12- Spurious Radiated Emission Data – Mid Band

| Frequency (MHz) | Peak Amplitude (dbuV/m) | Peak Limit (dBuV/m) | Average Amplitude (dBuV/m) | Average Limit (dBuV/m) |
|-----------------|-------------------------|---------------------|----------------------------|------------------------|
| 4960*           | 50.21                   | 74.0                | -                          | 54.0                   |
| 7440*           | -                       | 101.3               | -                          | 95.5                   |

Table 13- Spurious Radiated Emission Data – High Band

NOTE 1: There were no detectable emissions above the 2nd harmonic.

NOTE 2: Frequency marked with “\*” falls under the restricted band

## 6. Emissions At Band Edges

|                             |            |                          |                  |
|-----------------------------|------------|--------------------------|------------------|
| <b>Test Requirement(s):</b> | §15.247(d) | <b>Test Engineer(s):</b> | Sean E.          |
| <b>Test Results:</b>        | Pass       | <b>Test Date(s):</b>     | October 02, 2025 |

**Test Procedures:** As required by 47 CFR 15.247, Band edge radiated emissions measurements were made at the RF antenna output terminals of the EUT using the marker-delta method.

Customer provided a test mode internal to the EUT to control the RF modulation, and frequency channel. The EUT output was connected directly to the spectrum analyzer through an attenuator. The EUT was set up at maximum power, first on the lowest operating channel, then on the highest operating channel of the transmit band.

| Detector Setting | Resolution Bandwidth | Video Bandwidth | Sweep Time |
|------------------|----------------------|-----------------|------------|
| Peak             | 100 kHz              | 300 kHz         | Auto       |

Table 14 – Analyzer settings

### Test Results:

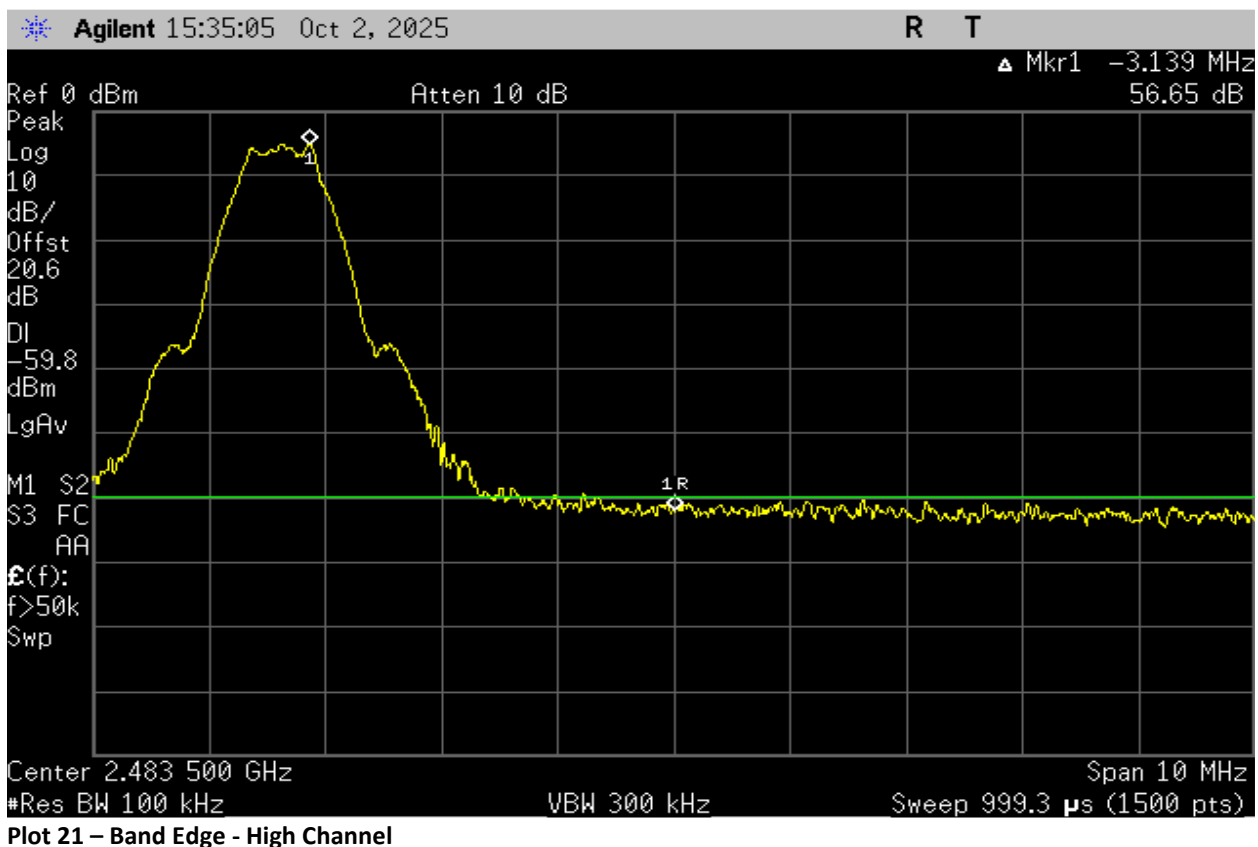
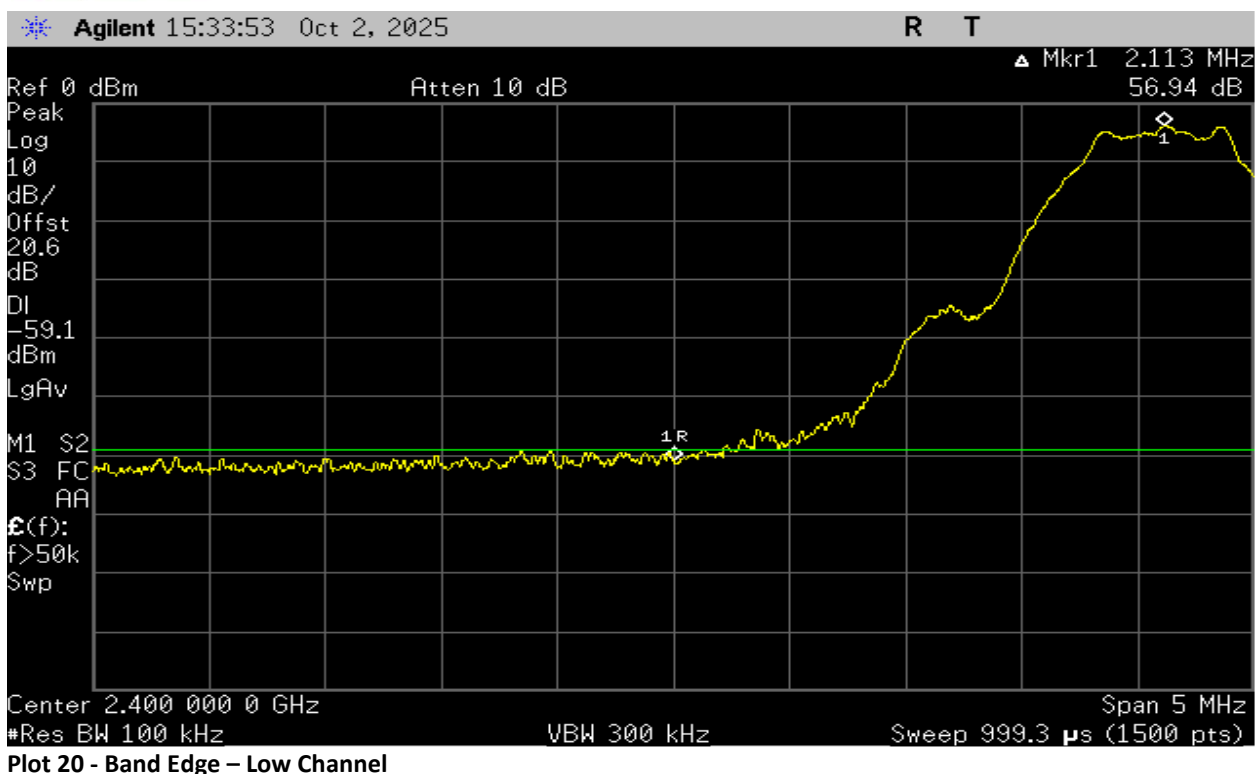
| Frequency (MHz) | Measured Level | Detector | Limit  |
|-----------------|----------------|----------|--------|
| 2400            | -56.94 dBm     | Peak     | -20dBc |
| 2483.5          | -56.65 dBm     | Peak     | -20dBc |

Table 15 – Band Edge Emissions Summary

### Test Setup:



Figure 6. Band Edge Test Setup



## 7. Power Spectral Density

|                             |                            |                          |                  |
|-----------------------------|----------------------------|--------------------------|------------------|
| <b>Test Requirement(s):</b> | §15.247(f),<br>ANSI C63.10 | <b>Test Engineer(s):</b> | Sean E.          |
| <b>Test Results:</b>        | Pass                       | <b>Test Date(s):</b>     | October 02, 2025 |

**Test Procedures:** As required by 47 CFR 15.247(d), For digitally modulated systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3kHz band during any time interval of continuous transmission. Power spectral density measurements were made at the RF antenna output terminals of the EUT using the DTS methods section 8.4 was used for DTS mode.

The EUT output was connected directly to the spectrum analyzer through an attenuator. The measurements were made at the RF antenna output terminals of the EUT.

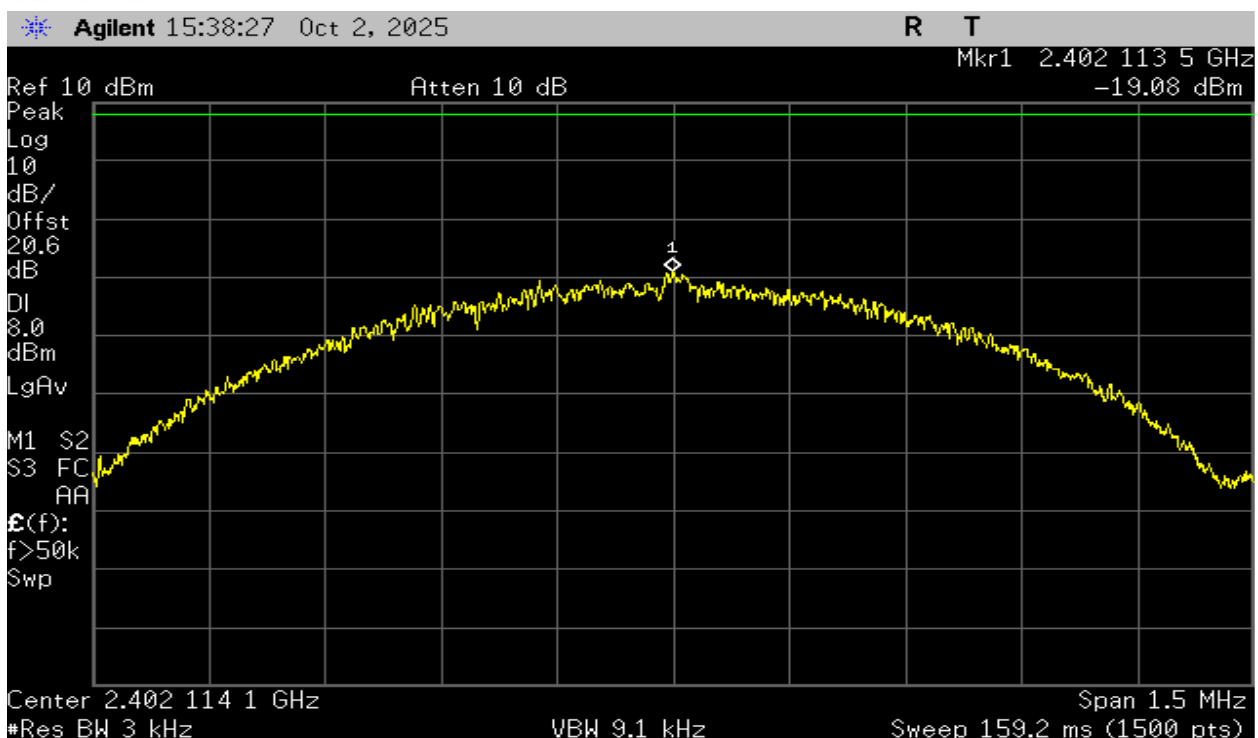
| Detector Setting | Resolution Bandwidth | Sweep Time | Span    |
|------------------|----------------------|------------|---------|
| Peak             | 3KHz                 | Auto       | 1.5 MHz |

Table 16 – Analyzer settings

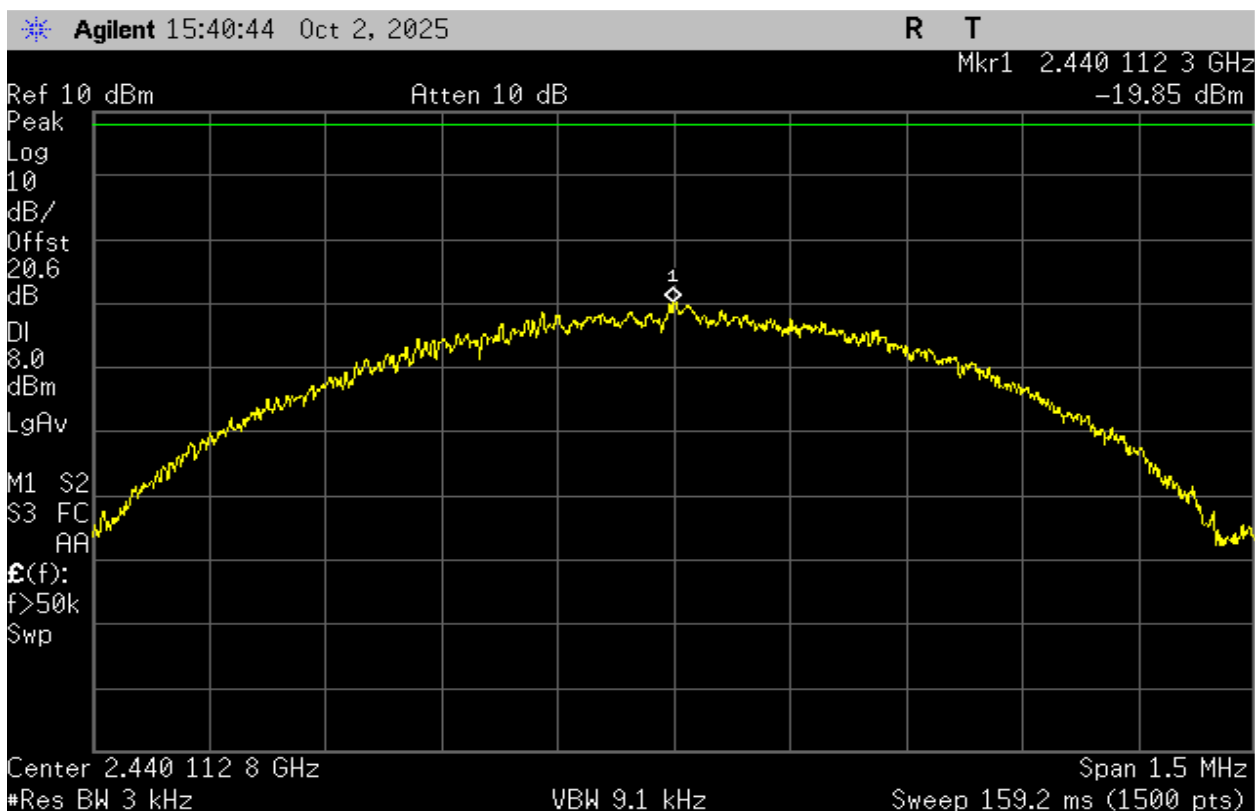
### Test Results:

| Frequency (MHz) | Measured Level (dBm) | Limit |
|-----------------|----------------------|-------|
| 2402            | -19.08               | 8 dBm |
| 2440            | -19.85               | 8 dBm |
| 2480            | -19.79               | 8 dBm |

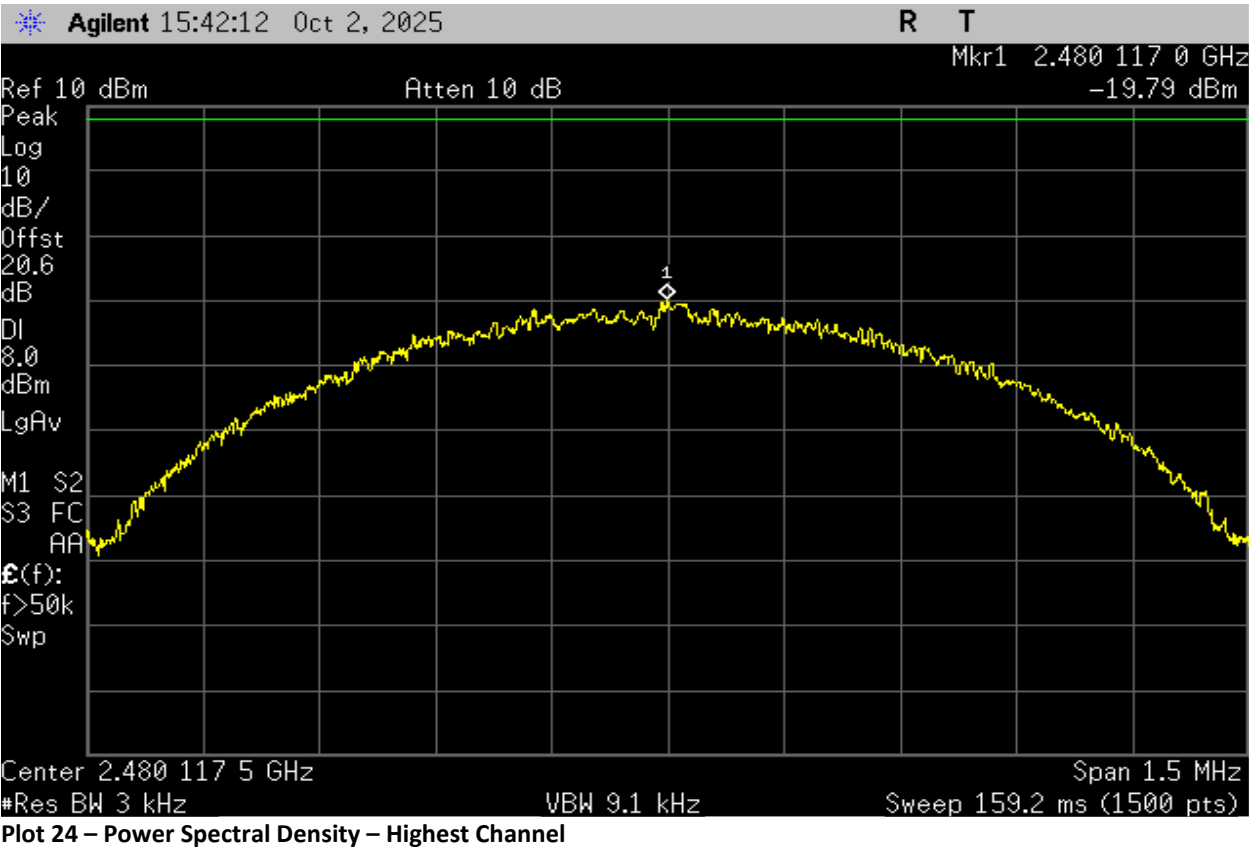
Table 17 - PSD Summary Test Result



Plot 22 – Power Spectral Density – Lowest Channel



Plot 23 – Power Spectral Density – Middle Channel



## 8. Test Equipment

| Equipment         | Manufacturer    | Model     | Serial #          | Last Cal Date | Cal Due Date |
|-------------------|-----------------|-----------|-------------------|---------------|--------------|
| Spectrum Analyzer | Agilent         | E4443A    | US41420164        | Jul-15-25     | Jul-15-26    |
| Spectrum Analyzer | Hewlett Packard | 8563E     | 3821A09316        | May-08-24     | May-08-26    |
| High Pass Filter  | Mini-Circuits   | VHF-3100+ | 1023              | Verified      |              |
| Power Supply      | Hewlett Packard | E3610A    | KR83021468        | Verified      |              |
| EMI Receiver      | Hewlett Packard | 8666B     | 2747A05264        | Mar-25-25     | Mar-25-26    |
| Power Supply      | Hewlett Packard | Lambda    | LA2-AA20-143 3535 | NCR           | None         |
| High Pass Filter  | Mini-Circuits   | VHF-1320+ | 1034              | Verified      |              |
| Attenuator 20dB   | Weinschel       | 41-20-12  | 86332             | Verified      |              |
| Horn Antenna      | Com-Power       | AHA-118   | 711150            | Feb-13-25     | Feb-13-28    |
| Antenna           | EMCO            | GTEM 5417 | 1063              | Verified      |              |

**Table 18 – Test Equipment List**

**\*Statement of Traceability:** Test equipment is maintained and calibrated on a regular basis. All calibrations have been performed by a 17025 accredited test facility, traceable to National Institute of Standards and Technology (NIST)

## 9. Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. These measurements figures are calculated in accordance with ETSI TR 100 028 Parts 1 and 2. Instrumentation measurement uncertainty has **not** been taken into account to determine compliance.

The following measurement uncertainty values have been calculated as show in the table below:

| Measured Parameter             | Measurement Unit | Frequency Range | Expanded Uncertainty |
|--------------------------------|------------------|-----------------|----------------------|
| Conducted Emissions (AC Power) | dBuV or dBuA     | 150kHz – 30MHz  | ± 4.3dB              |
| Radiated Emission below 30MHz  | dBuV/m           | 9kHz-30MHz      | ± 2.96dB             |
| Radiated Emissions below 1GHz  | dBuV/m           | 30 – 1000MHz    | ± 5.6dB              |
| Radiated Emissions above 1GHz  | dBuV/m           | 1 – 26.5GHz     | ± 4.1dB              |

The reported expanded uncertainty has been estimated at a 95% confidence level (k=2)

## **END OF TEST REPORT**