

FCC and ISED Canada Testing of the

Future Cardia, Inc.
FC-MX2

FCC ID: 2BUWJ-FCICM100

In accordance with:
FCC 47 CFR part 15.247 and ISED Canada's
Radio Standards Specifications RSS-247

Prepared for: Future Cardia, Inc.
910 Woodbridge Ct
Safety Harbor, FL 34695



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RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Authorized Signatory	Ferdinand Custodio	2026 -February-24	
Testing	Thierry Jean-Charles	2026-February-24	

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD America, Inc. document control rules.

FCC Accreditation
Designation Number US1148 New Brighton, MN Test
Laboratory

Innovation, Science, and Economic Development Canada
Accreditation
Site Number 4512A New Brighton, MN Test Laboratory

EXECUTIVE SUMMARY

Samples of this product were tested and found to be compliant with the standards listed above and the tests shown in Table 1.5.1-1 of this report.



A2LA Cert. No. 2955.11

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1 Report Summary

1.1 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
1	First Issue	2026-February-24

1.2 Introduction

The purpose of this report is to demonstrate compliance with Part 15 Subpart C of the FCC's Code of Federal Regulations Section 15.247 and Innovation Science and Economic Development Canada's Radio Standards Specification RSS-247 for the tests documented herein.



Applicant	Future Cardia, Inc.
Manufacturer	Future Cardia
Applicant's Email Address	randyb@futurecardia.com
Model Number(s)	FC-MX2
Serial Number(s)	91808648 (radiated emissions measurements), 91808625 (RF conducted measurements)
FCC ID	2BUWJ-FCICM100
Hardware Version(s)	PCBA-0020-01 Rev. 01
Software Version(s)	OracleHealth_DTM
Number of Samples Tested	2
Test Specification/Issue/Date	US Code of Federal Regulations (CFR): Title 47, Part 15, Subpart C: Radio Frequency Devices, Intentional Radiators, 2025 Innovation, Science and Economic Development Canada Radio Standards Specification: RSS-247 — Digital Transmission Systems, Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network Devices in 902-928 MHz, 2400-2483.5 MHz, and 5470-5895 MHz bands, Issue 4, July 24, 2025
Order Number	721005002
Date	2025-October-16
Date of Receipt of EUT	2025-November-19
Start of Test	2025-November-19
Finish of Test	2025-December-08
Name of Engineer(s)	Thierry Jean-Charles
Related Document(s)	ANSI C63.10-2020: American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices US Code of Federal Regulations (CFR): Title 47, Part 2, Subpart J: Equipment Authorization Procedures, 2025 FCC OET KDB Publication 558074 D01 15.247 Meas Guidance v05r02: Guidance for Compliance Measurements on Digital Transmission System, Frequency Hopping Spread Spectrum System, and Hybrid System Devices Operating under Section 15.247 of the FCC Rules, April 2, 2019 Innovation, Science and Economic Development Canada Radio Standards Specification: RSS-GEN - General



Requirements for Compliance of Radio Apparatus, Issue 5,
April 2018, Amendment 1, March 2019, Amendment 2,
February 2021.

1093-A_FCC Protocol.docx



1.3 Scope of Testing

The purpose of this report is to demonstrate compliance with Part 15 Subpart C of the FCC's Code of Federal Regulations Section 15.247 and Innovation Science and Economic Development Canada's Radio Standards Specification RSS-247 of the FC-MX2 for the tests documented herein.

1.4 Brief Summary of Results

A summary of the tests carried out in accordance with FCC Part 15.247 and ISED Canada's RSS-247 is shown below.

Table 1.5.1-1: Test Result Summary

Test Parameter	Test Plan (Yes/No)	Test Result	FCC 47 CFR Rule Part	ISED Canada's RSS	Test Report Page No
Antenna Requirement	Yes	Pass	15.203, 15.204	-----	10
6 dB Bandwidth	Yes	Pass	15.247(a)(2)	RSS-247 5.2(a)	12
99% Bandwidth	Yes	Pass	-----	RSS-GEN 6.6	22
Peak Output Power	Yes	Pass	15.247(b)(3)	RSS-247 5.4(d)	32
Band-Edge Compliance of RF Conducted Emissions	Yes	Pass	15.247(d)	RSS-247 5.5	42
RF Conducted Spurious Emissions	Yes	Pass	15.247(d)	RSS-247 5.5	48
Radiated Spurious Emissions into Restricted Frequency Bands	Yes	Pass	15.205, 15.209	RSS-GEN 8.9, 8.10	57
Power Spectral Density	Yes	Pass	15.247(e)	RSS-247 5.2(b)	202
Duty Cycle	Yes	-----	N/A	N/A	212
Power Line Conducted Emissions	No	-----	15.207	RSS-GEN 8.8	-----

The EUT is battery powered only without any provisions for connection to the AC mains. The unit is exempted from the power line conducted emissions requirements.



1.5 Product Information

1.5.1 Technical Description

The EUT is an Insertable Cardiac Monitor System (ICM). Insertable cardiac monitors (ICMs) are implanted under the skin on the left side of a patient's chest to provide continuous long-term heart rhythm monitoring and identify or exclude arrhythmias as the cause of symptoms. The EUT includes a Bluetooth Low Energy (BLE) radio.

Technical Details

Mode of Operation: Bluetooth Low Energy (BLE)
 Frequency Range: 2402 - 2480 MHz
 Number of Channels: 40
 Channel Separation: 2 MHz
 Data Rate: 1 Mbps, 2 Mbps, 125 kbps, 500 kbps
 Modulations: GFSK
 Antenna Type/Gain: Monopole / -9.61 dBi
 Input Power: 3.3 VDC internal battery

A full description and detailed product specification details are available from the manufacturer.

Table 1.5.1-1 – Cable Descriptions

Cable/Port	Description
N/A	N/A

Table 1.5.1-2 – Support Equipment Descriptions

Make/Model	Description
N/A	N/A

Notes: The EUT is a standalone, battery-powered device without any provisions for connection to external equipment/accessories. Due to the non-rechargeable battery depleting during the evaluation, the EUT was configured with power leads which was connected to an external power supply set to 3VDC in order to resume testing.



1.5.2 Modes of Operation

The tested mode of operation was:

The EUT was evaluated for the Bluetooth Low Energy (BLE) radio which was set to direct test mode (DTM). The BLE radio was configured using the Silicons labs Simplicity Bluetooth Bluetooth NCP Commander configuration tool. The device was set to operate at power setting 0.

1.5.3 Monitoring of Performance

The EUT was evaluated for the 4 data rates of the BLE radio.

For the Radiated Emissions evaluations, preliminary measurements were performed for the EUT set in three orthogonal orientations. Where applicable, the final measurements were collected using the EUT orientation leading to the highest emissions with respect to the limits. The EUT uses a non-rechargeable internal battery. After depletion of the battery, the evaluation was resumed with the EUT configured with power leads which were connected to an external power supply set to 3 VDC.

For the RF conducted emissions measurements, another sample configured with an external connector at the antenna port which allows direct coupling to a spectrum analyzer was used.

1.5.4 Performance Criteria

The EUT was evaluated to the performance criteria described below.

Table 1.5.4-1: Performance Criteria

Parameter	Requirement
Antenna Requirement	FCC: Section 15.203. 15.204
6 dB Bandwidth	FCC: Section 15.247(a)(2); ISED Canada: RSS-247 5.2(a)
99% Bandwidth	ISED Canada: RSS-GEN 6.6
Peak Output Power	FCC: Section 15.247(b)(3); ISED Canada:RSS-247 5.4(d)
Band-Edge Compliance of RF Conducted Emissions	FCC: Section 15.247(d); ISED Canada: RSS-247 5.5
RF Conducted Spurious Emissions	FCC: Section 15.247(d); ISED Canada: RSS-247 5.5
Radiated Spurious Emissions into Restricted Frequency Bands	FCC: Sections 15.205, 15.209; ISED Canada: RSS-GEN 8.9, 8.10
Power Spectral Density	FCC: Section 15.247(e); ISED Canada: RSS-247(b)
Duty Cycle	N/A

1.6 Deviations from the Standard

The EUT was evaluated without any deviation from the test standards.



1.7 EUT Modification Record

The table below details modifications made to the EUT during the test program. The modifications incorporated during each test are recorded on the appropriate test pages.

Modification State	Description of Modification still fitted to EUT	Modification Fitted By	Date Modification Fitted
0	N/A	N/A	N/A

The equipment was tested as provided without any modifications.

1.8 Test Location

TÜV SÜD Product Service conducted the following tests at our New Brighton, MN Test Laboratory.

Test Name	Name of Engineer(s)	Accreditation
Battery Powered, Operating		
Antenna Requirement	Thierry Jean-Charles	A2LA
6 dB Bandwidth	Thierry Jean-Charles	A2LA
99% Bandwidth	Thierry Jean-Charles	A2LA
Peak Output Power	Thierry Jean-Charles	A2LA
Band-Edge Compliance of RF Conducted Emissions	Thierry Jean-Charles	A2LA
RF Conducted Spurious Emissions	Thierry Jean-Charles	A2LA
Radiated Spurious Emissions into Restricted Frequency Bands	Thierry Jean-Charles	A2LA
Power Spectral Density	Thierry Jean-Charles	A2LA
Duty Cycle	Thierry Jean-Charles	A2LA

Office Address:

TÜV SÜD America, Inc.
141 14th Street NW
New Brighton, MN 55112
USA



2 Test Details

2.1 Antenna Requirements

2.1.1 Specification Reference

FCC: Section 15.203, 15.204;
ISED Canada RSS-Gen 6.8.

2.1.2 Equipment Under Test and Modification State

S/N: 918086648, refer to Section 1.7.

2.1.3 Date of Test

11/19/2025

2.1.4 Test Method

N/A

2.1.5 Environmental Conditions

Ambient Temperature	N/A
Relative Humidity	N/A
Atmospheric Pressure	N/A

2.1.6 Test Results

Limit Clause FCC Sections: 15.203, 15.204

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of [§§ 15.211, 15.213, 15.217, 15.219, 15.221](#), or [§ 15.236](#). Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with [§ 15.31\(d\)](#), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

Table 2.1.6-1 – Antenna Used In EUT

Antenna Type	Connection Type	Antenna Gain
Monopole	Soldered	-9.61 dBi



Test Summary:

The EUT uses an integral modified monopole antenna which is directly soldered to the PCB. The antenna is not removable and therefore meets the requirements of FCC Section 15.203.

Test Result: Pass

2.1.7 Test Location and Test Equipment Used

This test was carried out in TÜV SÜD America, Inc., 141 14th Street NW, New Brighton, MN 55112, USA.

As this is a visual inspection, no test equipment was used.



2.2 6 dB Bandwidth

2.2.1 Specification Reference

FCC: Section 15.247(a)(2)
ISED Canada: RSS-247 5.2(a)

2.2.2 Equipment Under Test and Modification State

S/N: 91808625

2.2.3 Date of Test

12/8/2025

2.2.4 Test Method

The 6dB bandwidth was measured in accordance with ANSI C63.10 Subclause 11.8.1 Option 1. The RBW of the spectrum analyzer was set to 100 kHz and VBW 300 kHz. Span was set large enough to capture the emissions and $\gg$ RBW. A peak detector was used for the measurements. The amplitude offset of the spectrums analyzer was adjusted to account for cable and attenuator insertion losses.

2.2.5 Environmental Conditions

Ambient Temperature	22.3°C
Relative Humidity	10 %
Atmospheric Pressure	992 mbar

2.2.6 Test Results

Battery, Powered Operating

Limit Clause FCC Part 15.247(a)(2), ISED RSS-247 5.2(a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

Test Summary:

The 6-dB bandwidth was measured to be greater than 500 kHz.

Test Result: Pass



Table 2.2.6-1 – 6-dB Bandwidth Test Results – 1 Mbps

Frequency (MHz)	6dB Bandwidth (kHz)
2402	674.134
2440	672.582
2480	671.125

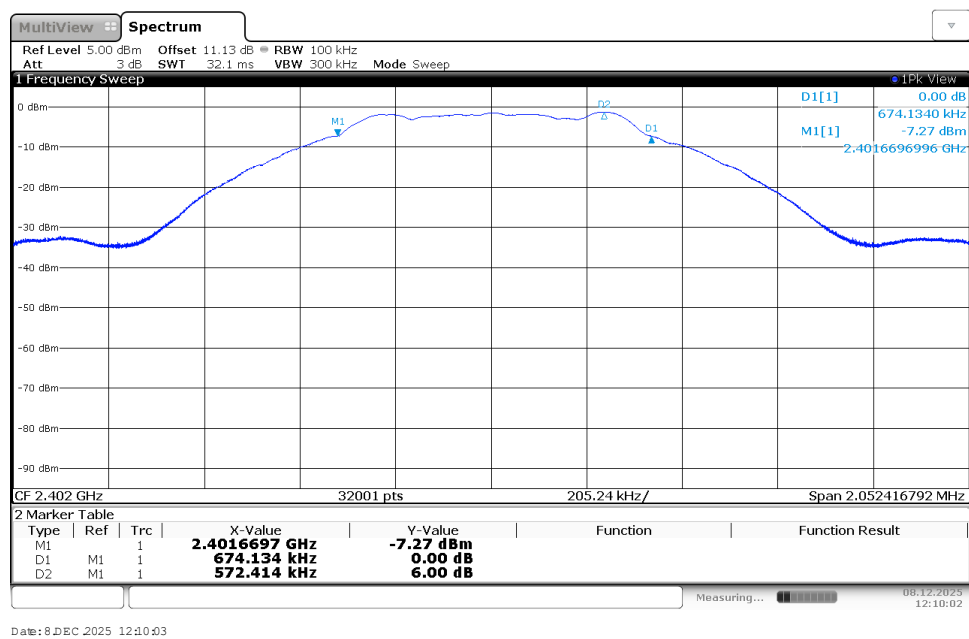


Figure 2.2.6-1 - 6-dB Bandwidth – Low Channel - 1 Mbps

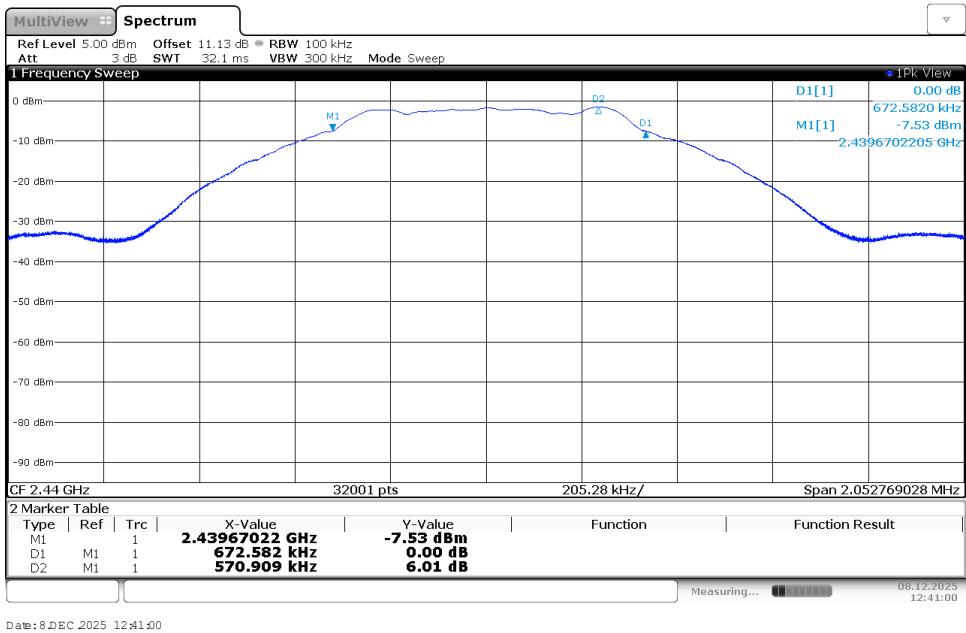


Figure 2.2.6-2 - 6-dB Bandwidth – Middle Channel - 1 Mbps

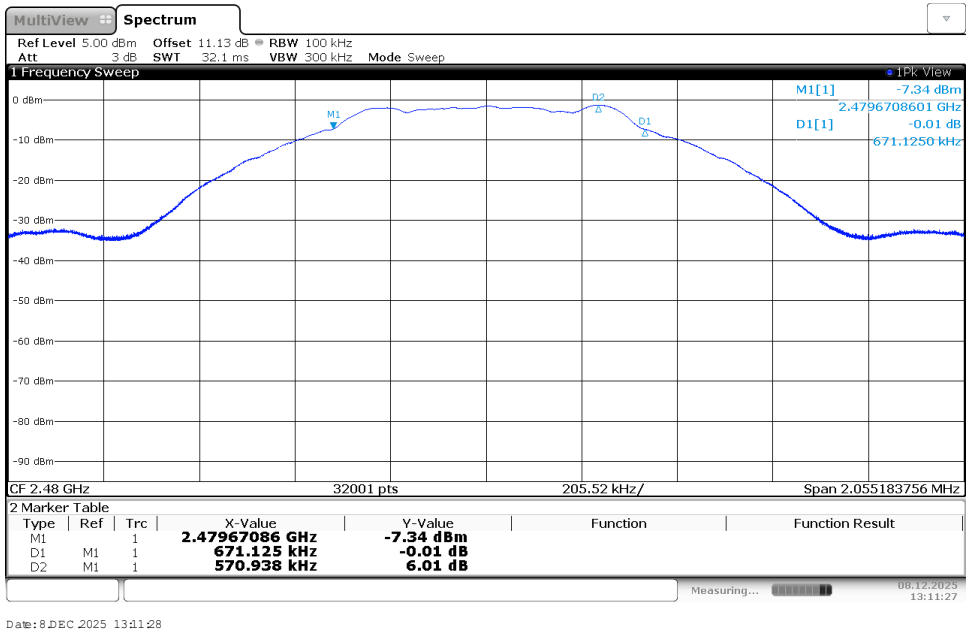


Figure 2.2.6-3 - 6-dB Bandwidth – High Channel - 1 Mbps



Table 2.2.6-2 – 6-dB Bandwidth Test Results – 2 Mbps

Frequency (MHz)	6dB Bandwidth (kHz)
2402	1382.62
2440	1381.31
2480	1379.47

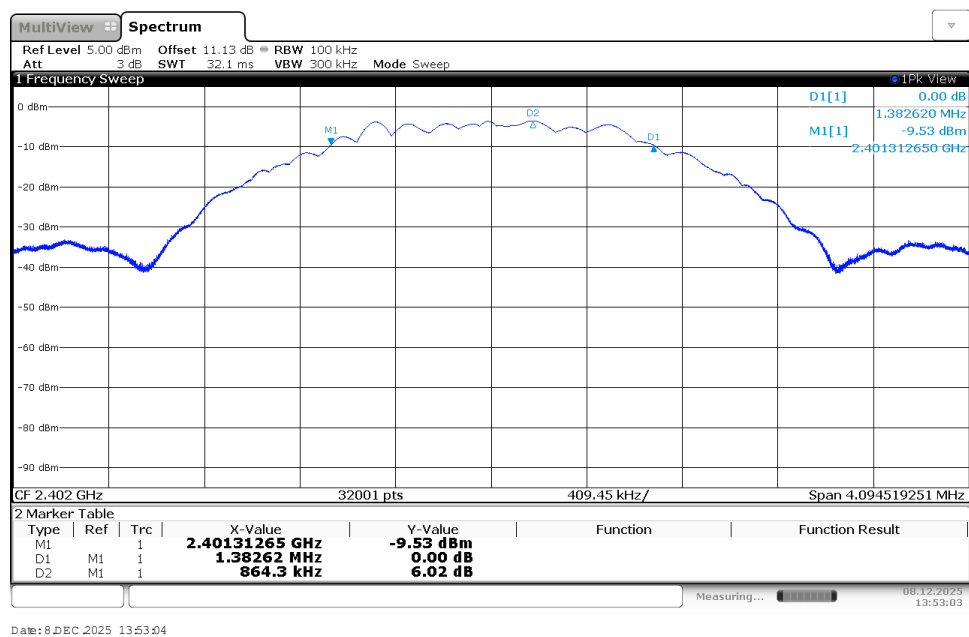


Figure 2.2.6-4 - 6-dB Bandwidth – Low Channel - 2 Mbps

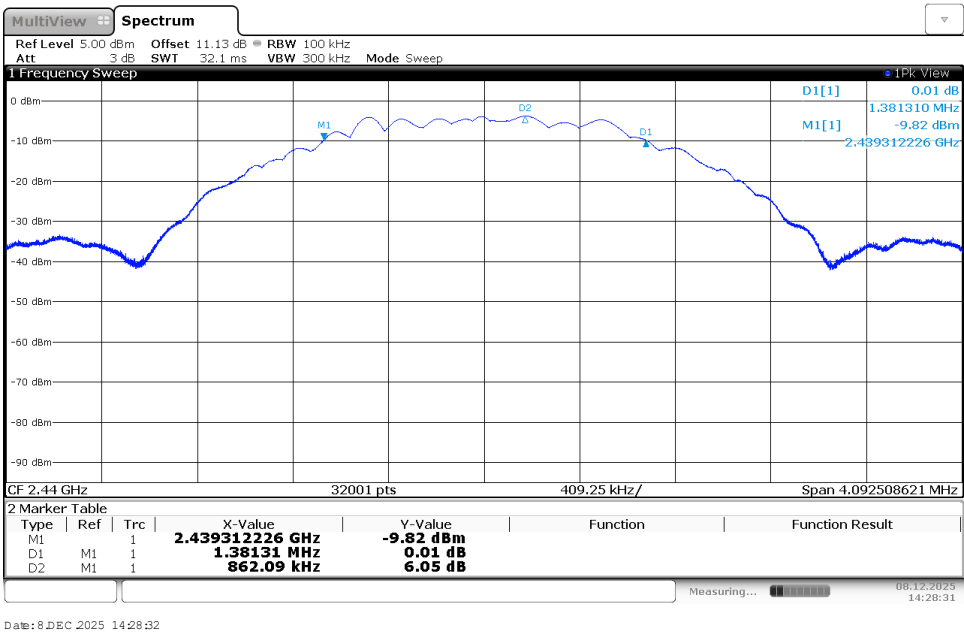


Figure 2.2.6-5 - 6-dB Bandwidth – Middle Channel - 2 Mbps

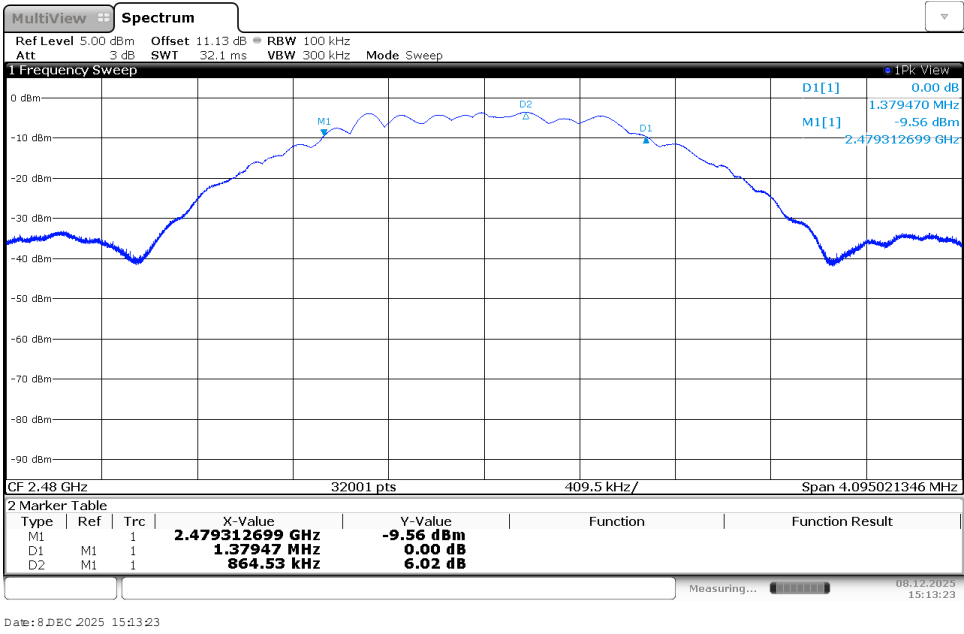


Figure 2.2.6-6 - 6-dB Bandwidth – High Channel - 2 Mbps



Table 2.2.6-3 – 6-dB Bandwidth Test Results – 125 kbps

Frequency (MHz)	6dB Bandwidth (kHz)
2402	688.559
2440	686.454
2480	683.028

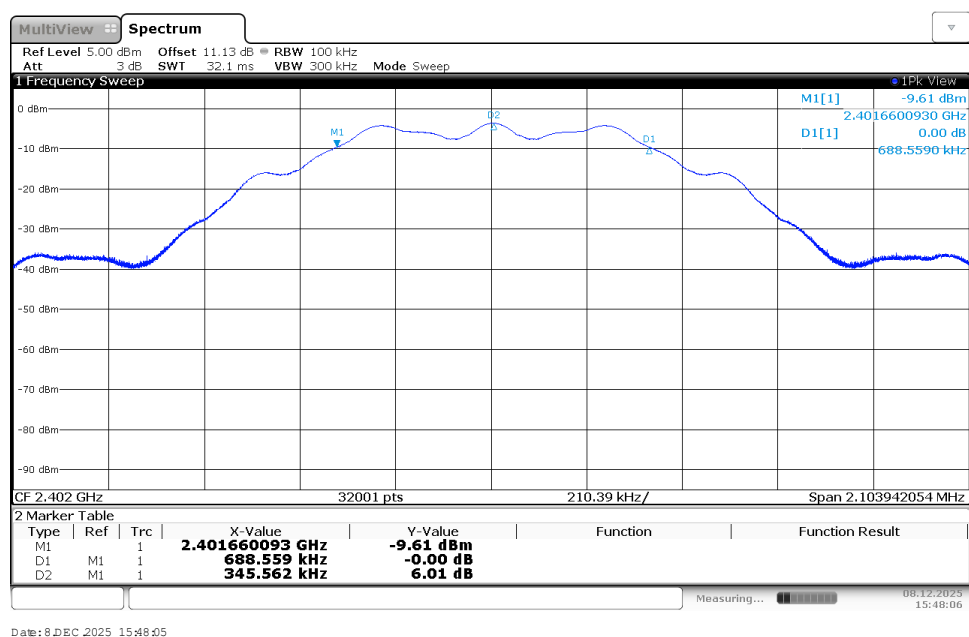


Figure 2.2.6-7 - 6-dB Bandwidth – Low Channel - 125 kbps

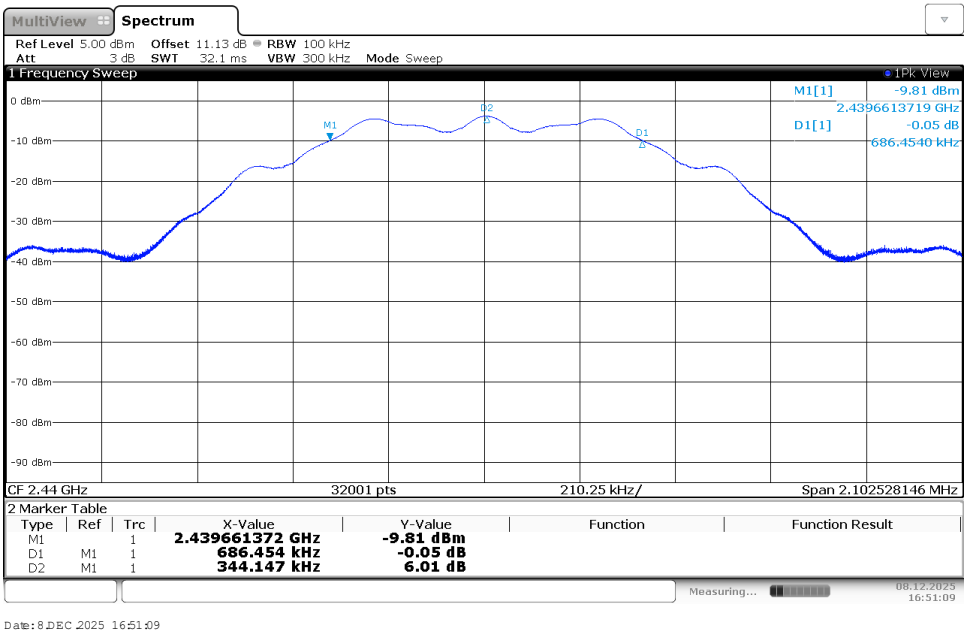


Figure 2.2.6-8 - 6-dB Bandwidth – Middle Channel - 125 kbps

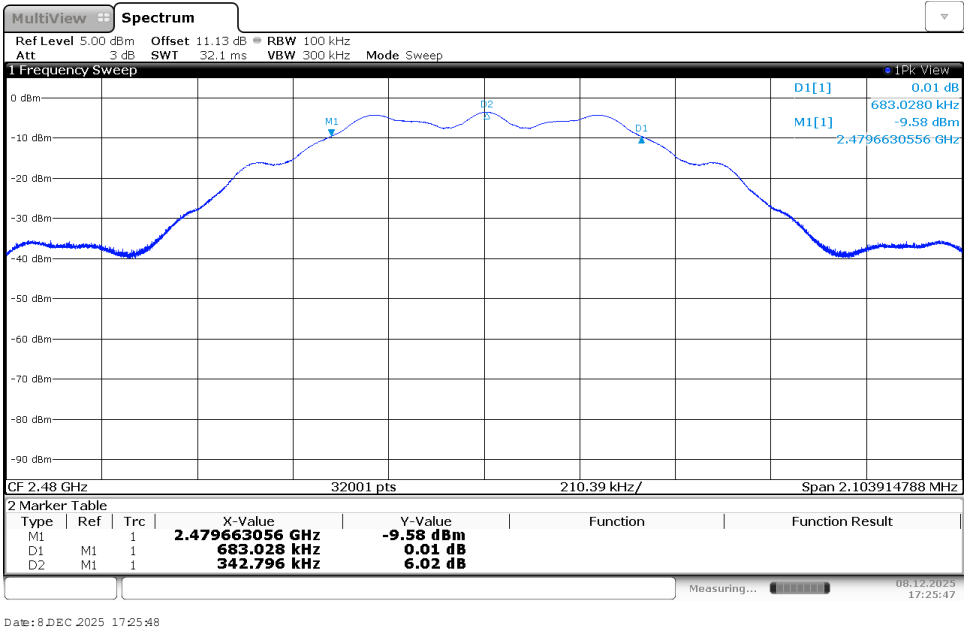


Figure 2.2.6-9 - 6-dB Bandwidth – High Channel - 125 kbps



Table 2.2.6-4 – 6-dB Bandwidth Test Results – 500 kbps

Frequency (MHz)	6dB Bandwidth (kHz)
2402	708.01
2440	704.242
2480	701.37

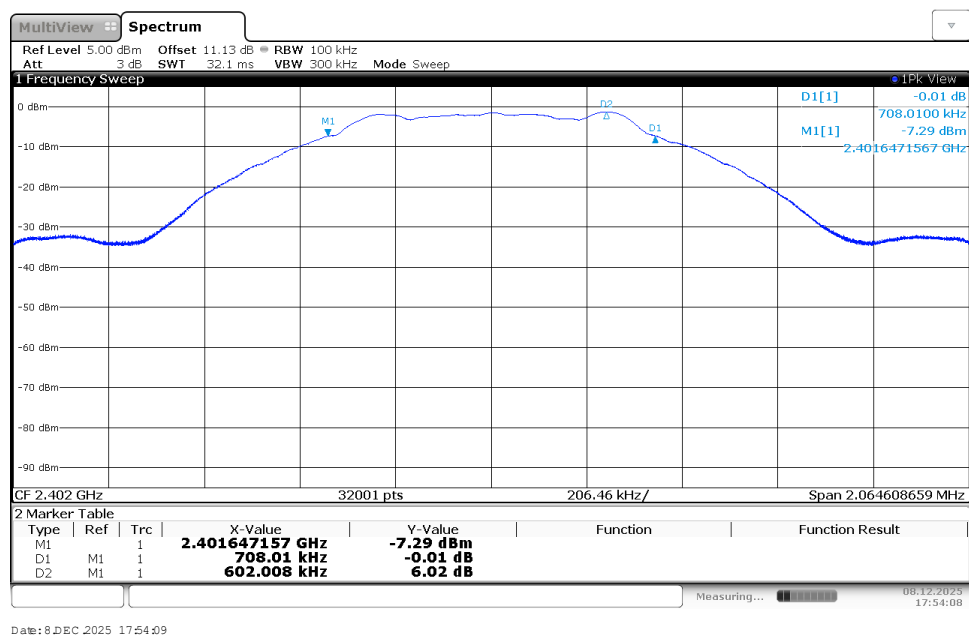


Figure 2.2.6-10 - 6-dB Bandwidth – Low Channel - 500 kbps

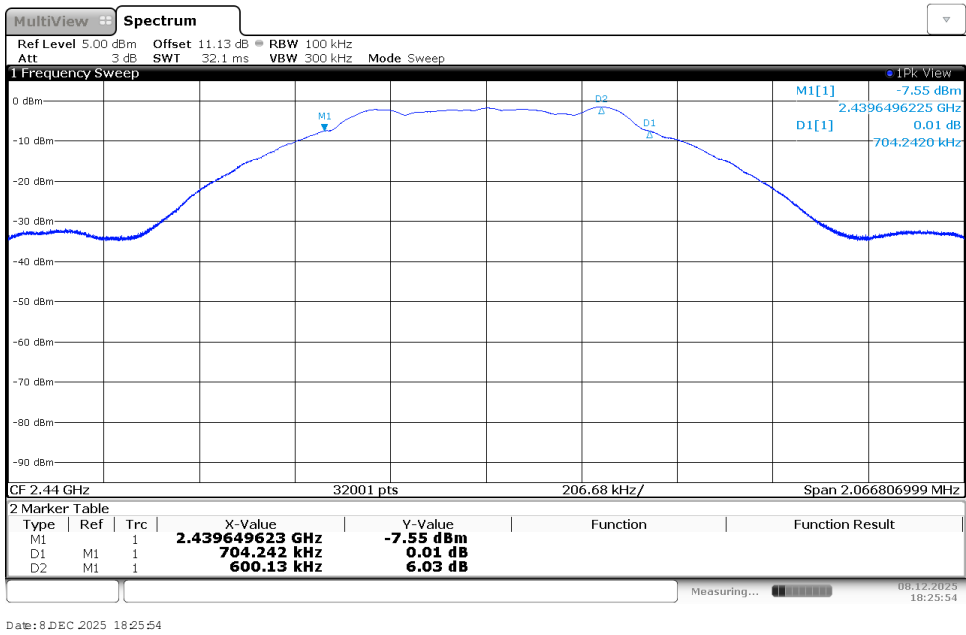


Figure 2.2.6-11 - 6-dB Bandwidth – Middle Channel - 500 kbps

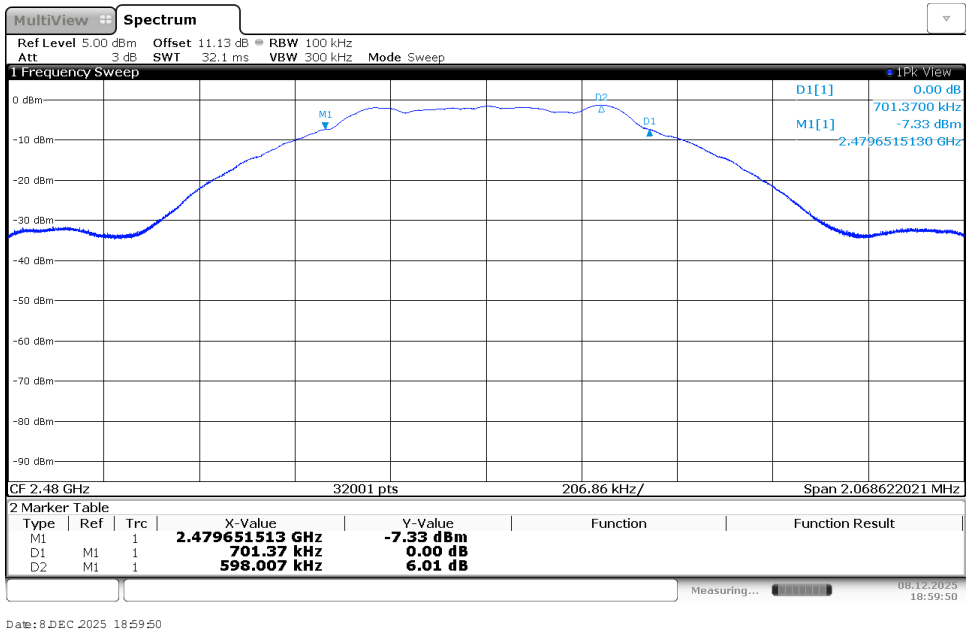


Figure 2.2.6-12 - 6-dB Bandwidth – High Channel - 500 kbps



2.2.7 Test Location and Test Equipment Used

This test was carried out in TÜV SÜD America, Inc., 141 14th Street NW, New Brighton, MN 55112, USA.

Device #	Manufacturer	Description	Model	Serial #	Cal Code	Cal Date	Cal Due
DEMC3046	Aeroflex Inmet	Atten 10dB 2.9mm-M/F, DC-26.5GHz, 2W	26AH-10	1443	B	05/27/2025	05/27/2026
DEMC3085	Rohde & Schwarz	Signal & Spectrum Analyzer	FSW43	103997	G	08/29/2025	08/29/2026
TEMC00277	Rosenberger Hochfrequenztechnik GmbH & Co. KG	Micro-Coax UtiFlex UFA210A Cable	LU7-022-1000	010-2387464 0056	B	03/18/2025	03/18/2026

Cal Code G = Calibration performed by an accredited outside source.

Cal Code B = Calibration verification performed internally.

Cal Code Y = Passive Device, or Calibration not required when used with other calibrated equipment.



2.3 99% Bandwidth

2.3.1 Specification Reference

ISED Canada: RSS-GEN 6.7

2.3.2 Equipment Under Test and Modification State

S/N: 91808625

2.3.3 Date of Test

12/8/2025

2.3.4 Test Method

The 99% occupied bandwidth was measured with the spectrum analyzer span set to fully display the emission. The RBW was set to 1% to 5% of the approximated bandwidth. The occupied 99% bandwidth was measured by using 99% bandwidth equipment function of the spectrum analyzer using a peak detector. The amplitude offset of the spectrums analyzer was adjusted to account for cable and attenuator insertion losses.

2.3.5 Environmental Conditions

Ambient Temperature	22.3°C
Relative Humidity	10 %
Atmospheric Pressure	992 mbar

2.3.6 Test Results

Battery Powered Operating

Limit Clause ISED RSS-GEN 6.7

Test Summary:

The 99% bandwidth was measured to be greater than 1 MHz.

Test Result: Pass

Table 2.3.6-1 – 99% Bandwidth Test Results – 1 Mbps

Frequency (MHz)	99% Bandwidth (kHz)
2402	1027.56
2440	1028.407
2480	1029.544

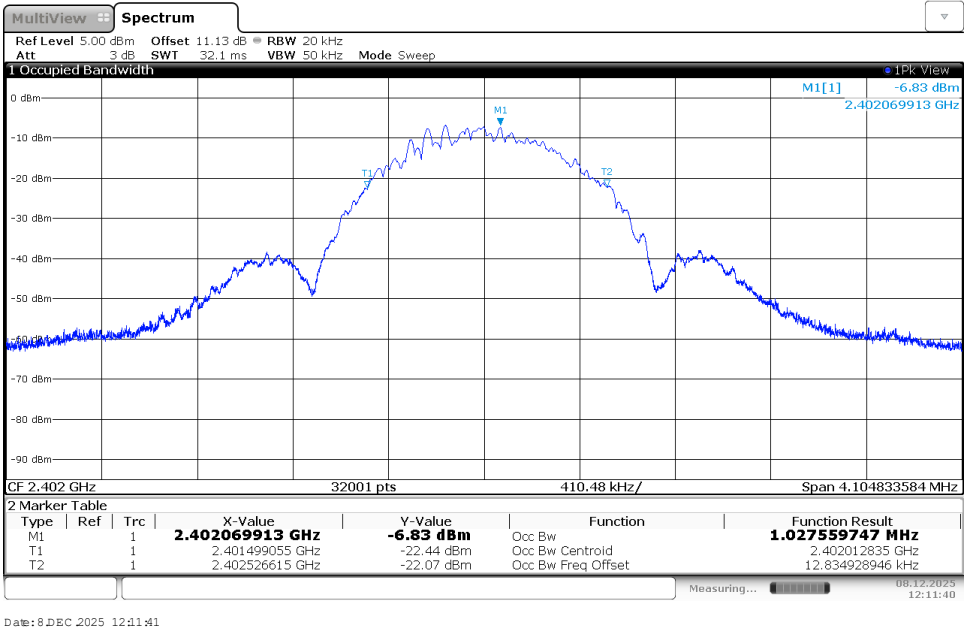


Figure 2.3.6-1 - 99% Bandwidth – Low Channel - 1 Mbps

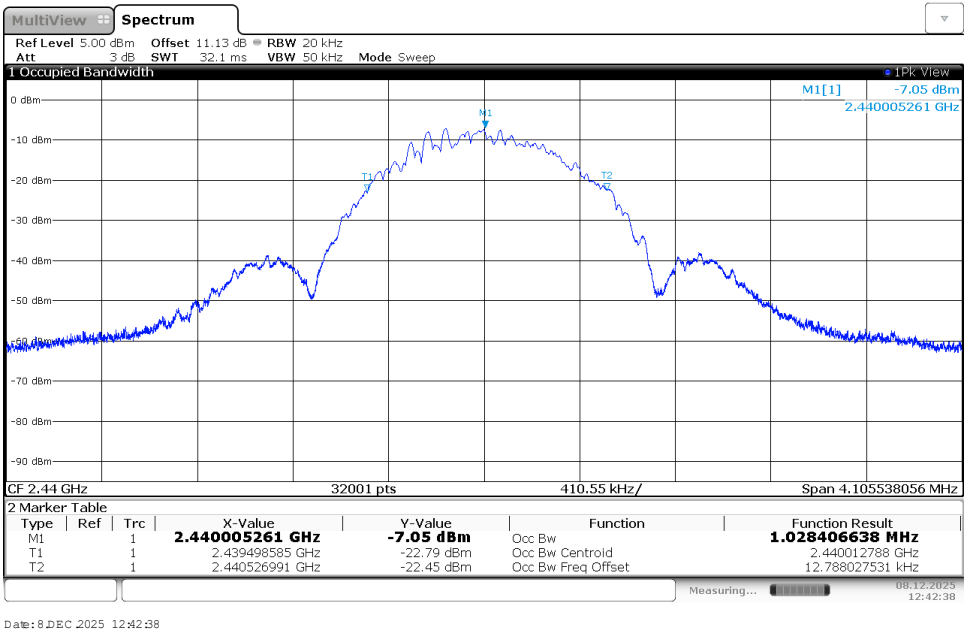


Figure 2.3.6-2 - 99% Bandwidth – Middle Channel - 1 Mbps

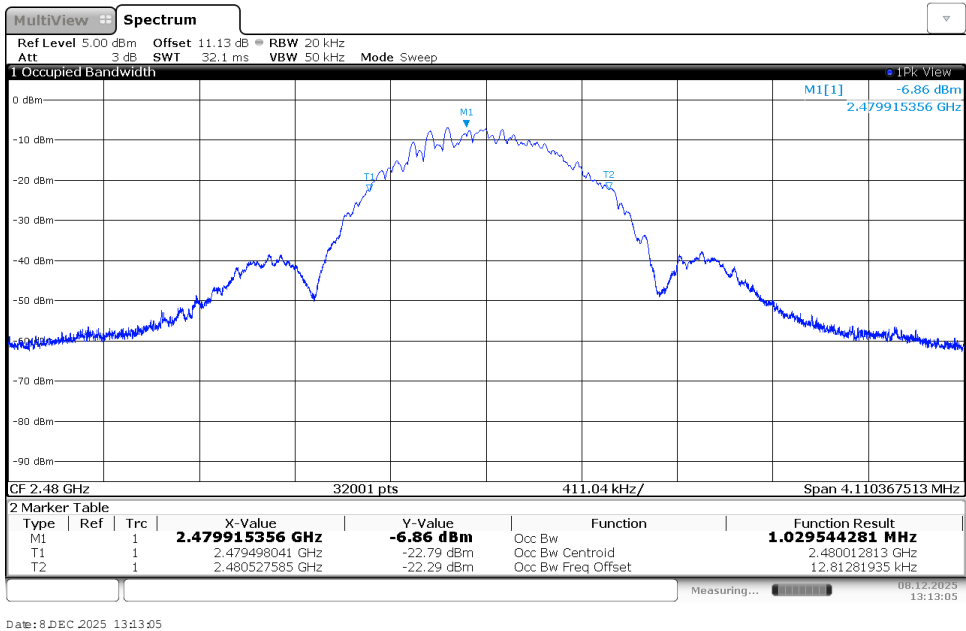


Figure 2.3.6-3 - 99% Bandwidth – High Channel - 1 Mbps



Table 2.3.6-2 – 99% Bandwidth Test Results – 2 Mbps

Frequency (MHz)	99% Bandwidth (kHz)
2402	2055.236
2440	2054.055
2480	2055.846

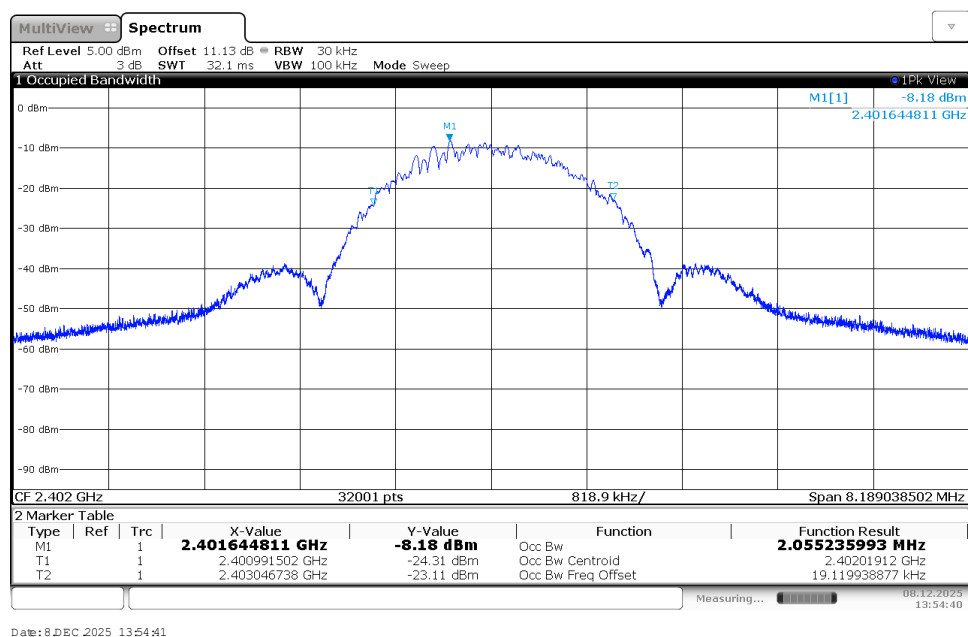


Figure 2.3.6-4 - 99% Bandwidth – Low Channel - 2 Mbps

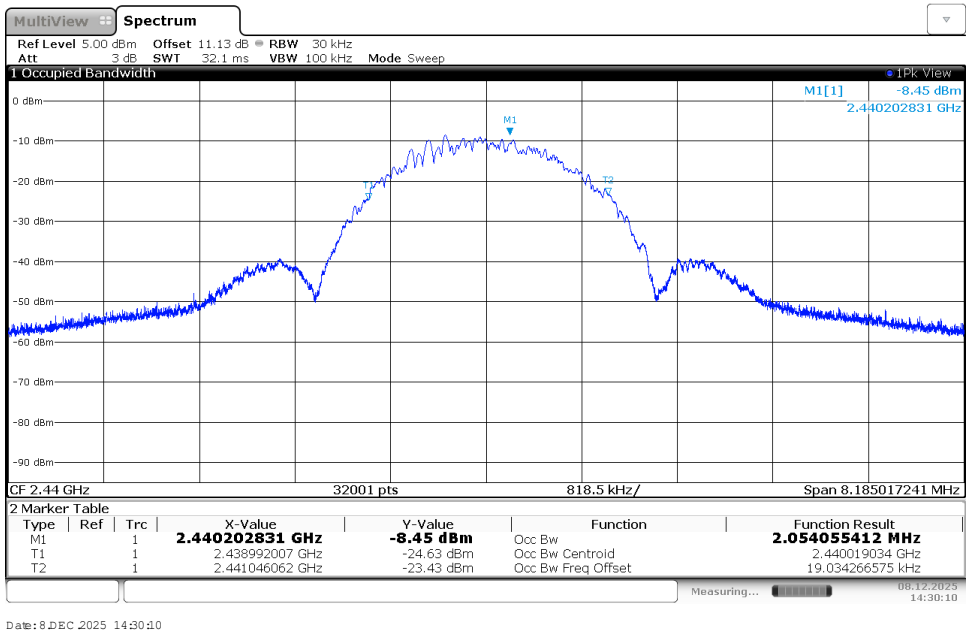


Figure 2.3.6-5 - 99% Bandwidth – Middle Channel - 2 Mbps

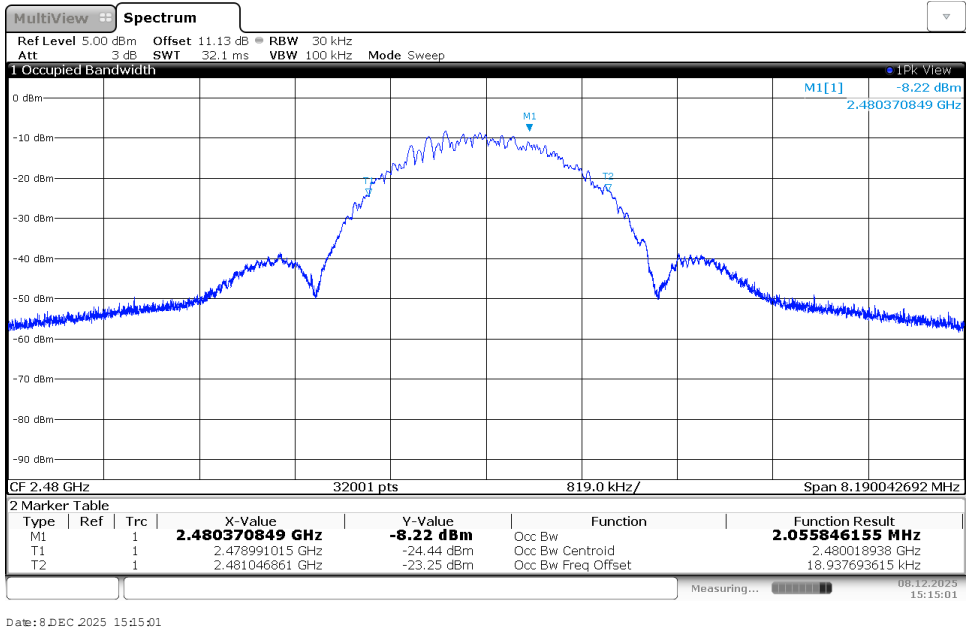


Figure 2.3.6-6 - 99% Bandwidth – High Channel - 2 Mbps



Table 2.3.6-3 – 99% Bandwidth Test Results – 125 kbps

Frequency (MHz)	99% Bandwidth (kHz)
2402	1053.444
2440	1052.935
2480	1052.24

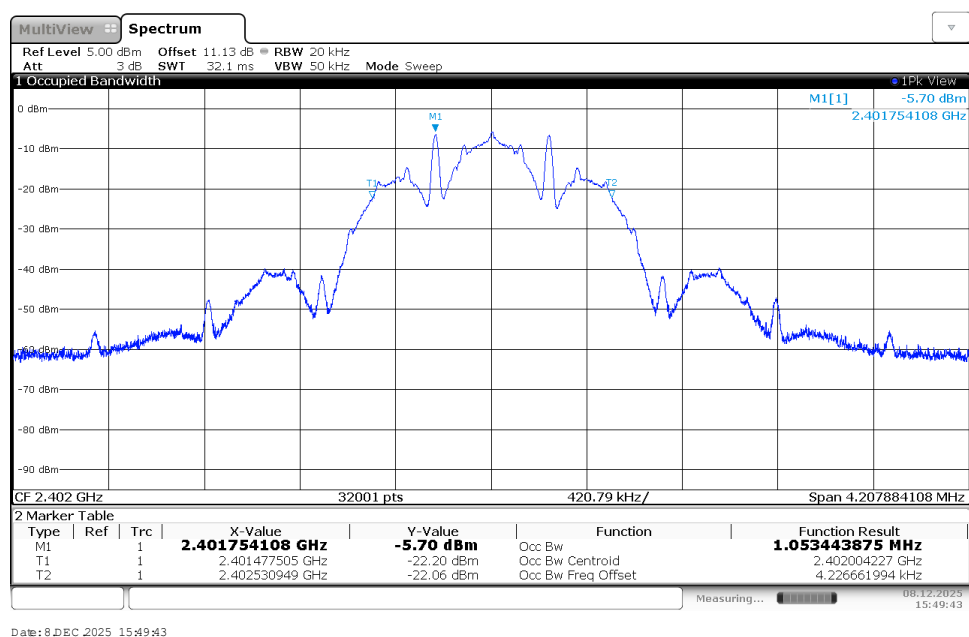


Figure 2.3.6-7 - 99% Bandwidth – Low Channel - 125 kbps

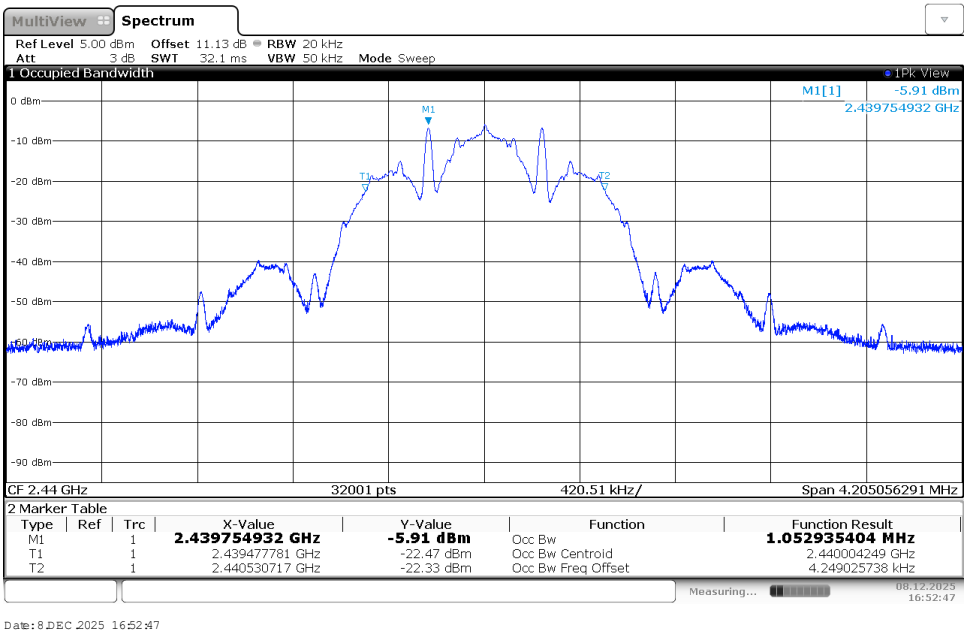


Figure 2.3.6-8 - 99% Bandwidth – Middle Channel - 125 kbps

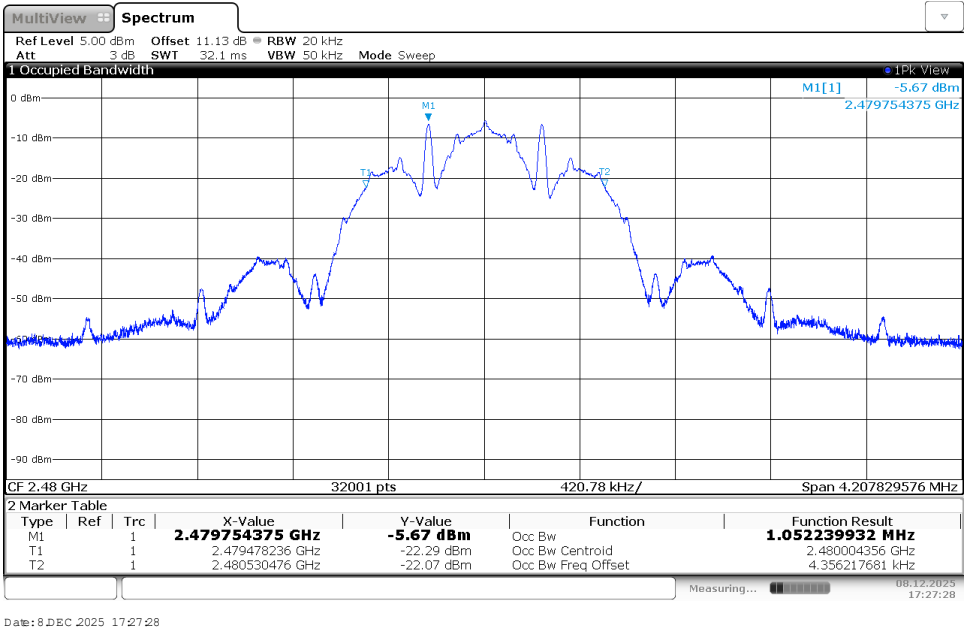
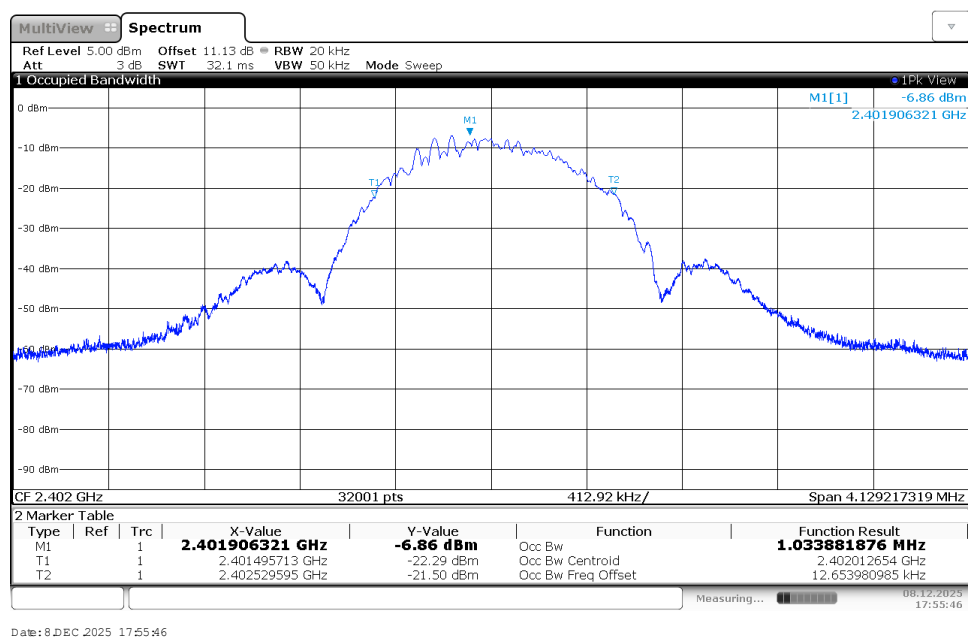


Figure 2.3.6-9 - 99% Bandwidth – High Channel - 125 kbps



Table 2.3.6-4 – 99% Bandwidth Test Results – 500 kbps

Frequency (MHz)	99% Bandwidth (kHz)
2402	1033.882
2440	1034.836
2480	1036.023



Date: 8 DEC 2025 17:55:46

Figure 2.3.6-10 - 99% Bandwidth – Low Channel - 500 kbps

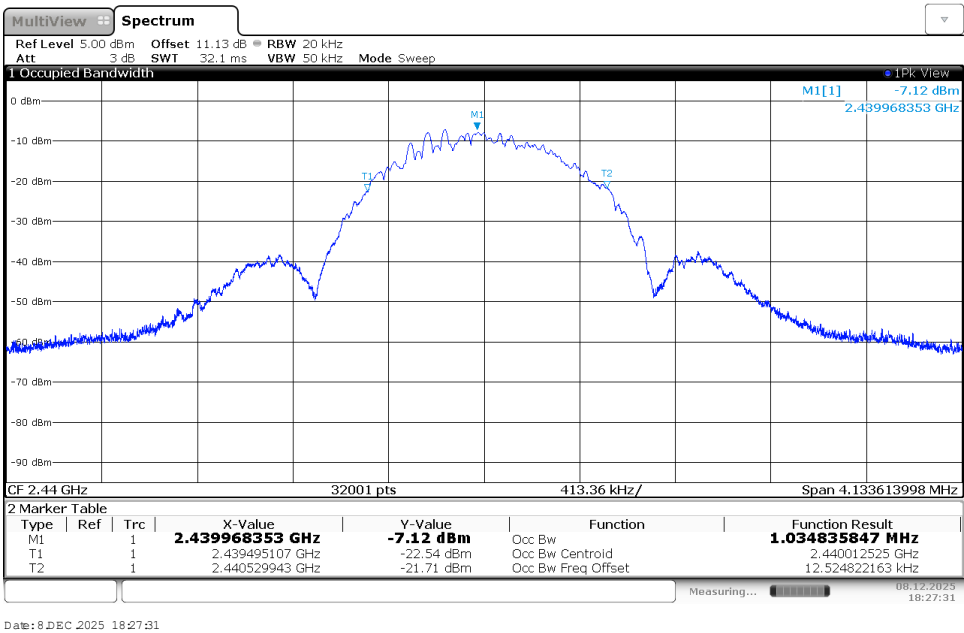


Figure 2.3.6-11 - 99% Bandwidth – Middle Channel - 500 kbps

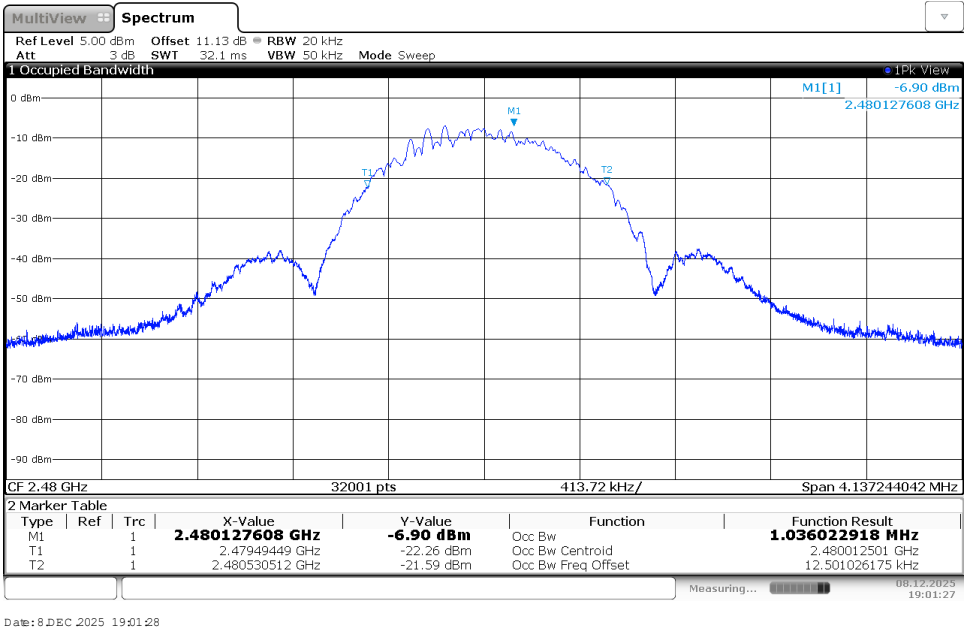


Figure 2.3.6-12 - 99% Bandwidth – High Channel - 500 kbps



2.3.7 Test Location and Test Equipment Used

This test was carried out in TÜV SÜD America, Inc., 141 14th Street NW, New Brighton, MN 55112, USA.

Device #	Manufacturer	Description	Model	Serial #	Cal Code	Cal Date	Cal Due
DEMC3046	Aeroflex Inmet	Atten 10dB 2.9mm-M/F, DC-26.5GHz, 2W	26AH-10	1443	B	05/27/2025	05/27/2026
DEMC3085	Rohde & Schwarz	Signal & Spectrum Analyzer	FSW43	103997	G	08/29/2025	08/29/2026
TEMC00277	Rosenberger Hochfrequenztechnik GmbH & Co. KG	Micro-Coax UtiFlex UFA210A Cable	LU7-022-1000	010-2387464 0056	B	03/18/2025	03/18/2026

Cal Code G = Calibration performed by an accredited outside source.

Cal Code B = Calibration verification performed internally.

Cal Code Y = Passive Device, or Calibration not required when used with other calibrated equipment.



2.4 Peak Output Power

2.4.1 Specification Reference

FCC Section 15.247(b)(3)
ISED Canada: RSS-247 5.4(d)

2.4.2 Equipment Under Test and Modification State

S/N: 91808625

2.4.3 Date of Test

12/8/2025

2.4.4 Test Method

The fundamental emission output power was measured in accordance with ANSI C63.10 Subclause 11.9.1.1 RBW $\geq$ DTS bandwidth. The RF output of the equipment under test was directly connected to the input of the spectrum analyzer through suitable attenuation. The amplitude offset of the spectrum analyzer was adjusted to account for cable and attenuator insertion losses.

2.4.5 Environmental Conditions

Ambient Temperature 22.3°C
Relative Humidity 10 %
Atmospheric Pressure 992 mbar

2.4.6 Test Results

Battery Powered Operating

Limit Clause FCC Part 15.247(b)(3), ISED RSS-247 5.4(d)

The Maximum Output Power allowed for systems using digital modulation is 1 Watt (30 dBm)

Test Summary:

The Maximum Output Power was measured to be less than 30 dBm.

Test Result: Pass

Table 2.4.6-1 - Maximum Output Power Results – 1 Mbps

Frequency (MHz)	Power (dBm)	Limit (dBm)	Margin (dB)
2402	-0.46	30	30.46
2440	-0.7	30	30.7
2480	-0.51	30	30.51

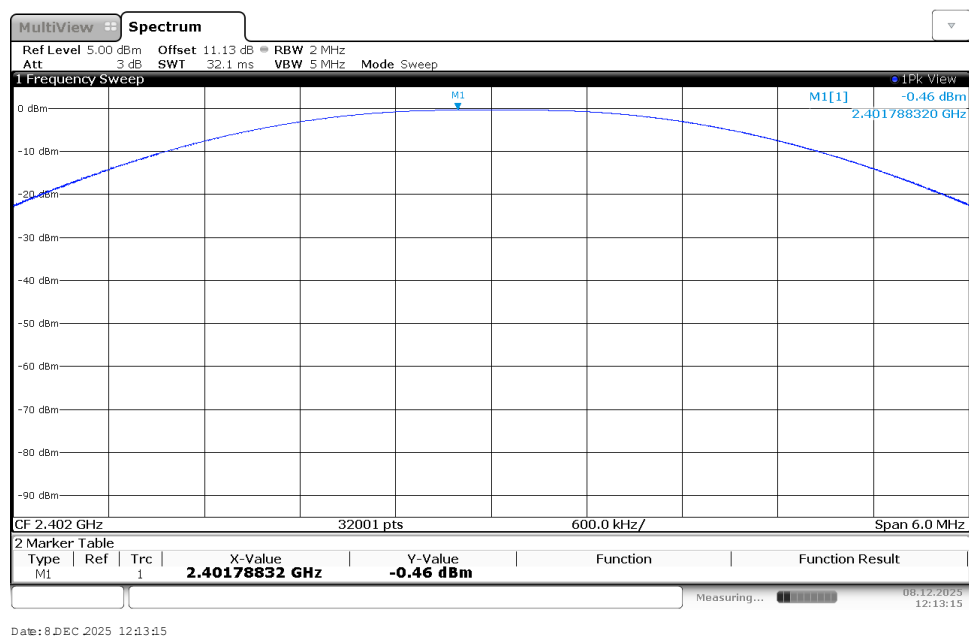


Figure 2.4.6-1 - Maximum RF Output Power – Low Channel - 1 Mbps

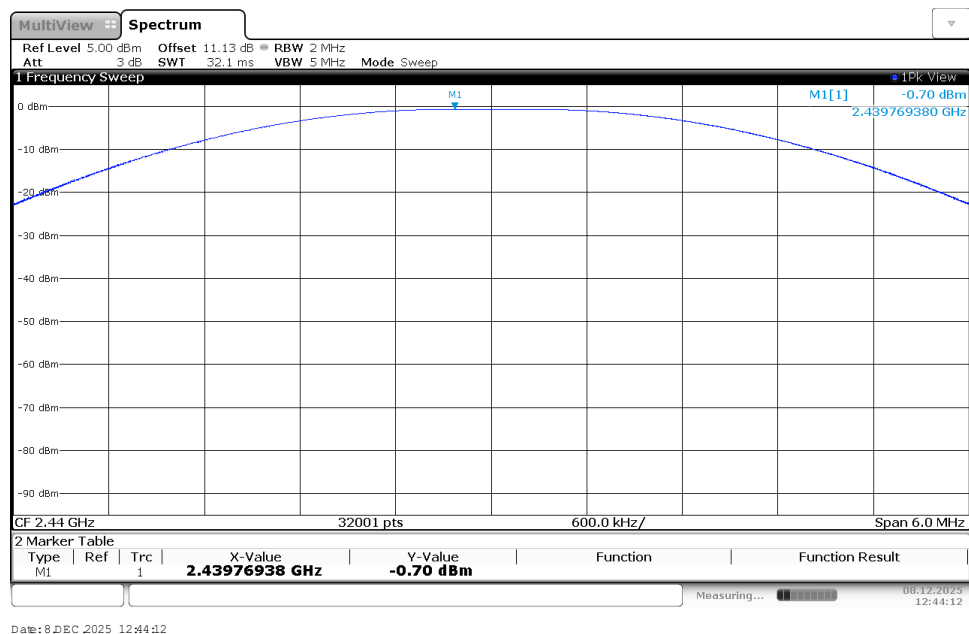


Figure 2.4.6-2 - Maximum RF Output Power – Middle Channel - 1 Mbps

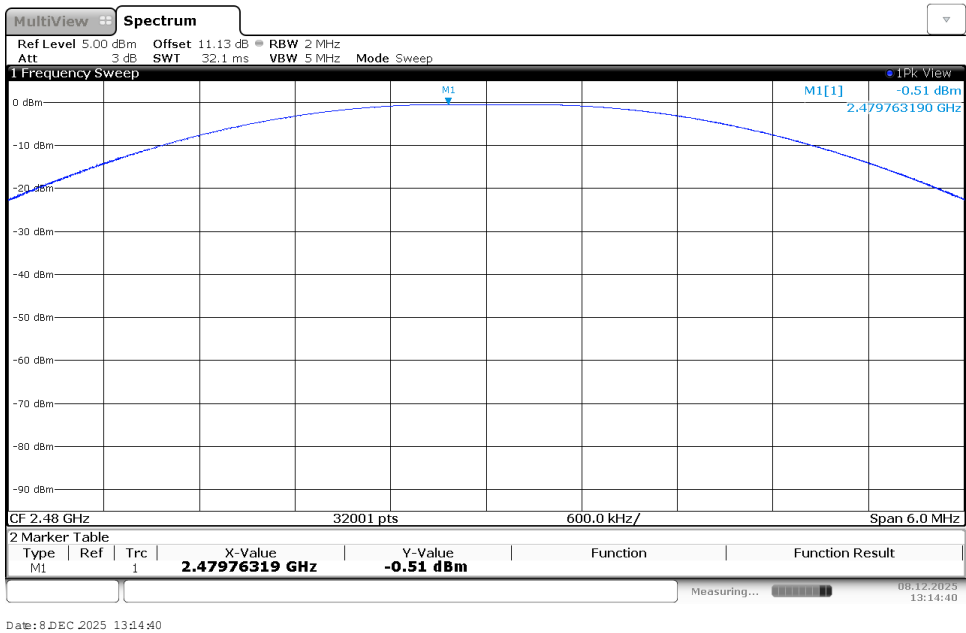
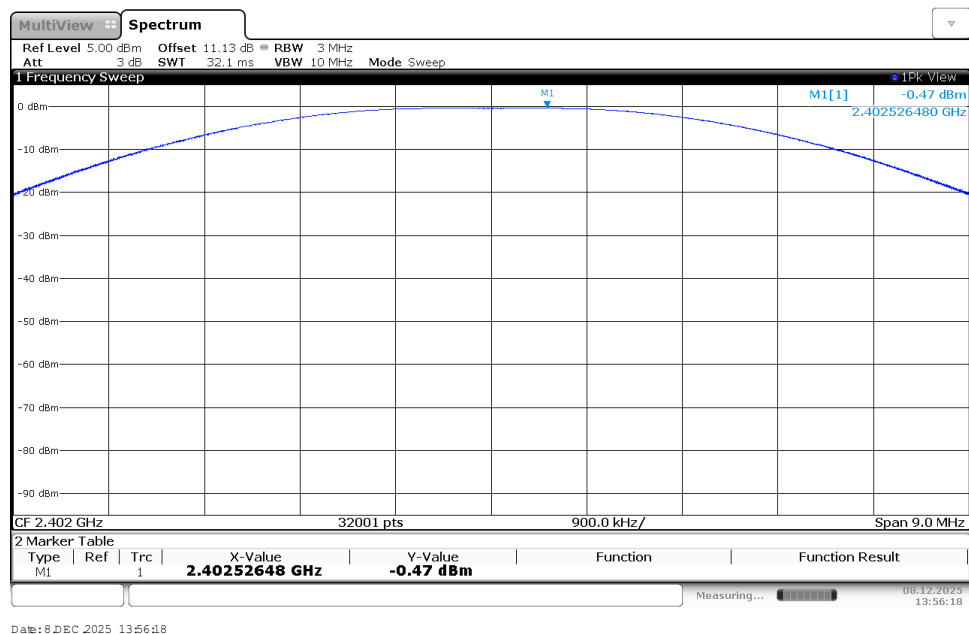


Figure 2.4.6-3 - Maximum RF Output Power – High Channel - 1 Mbps

**Table 2.4.6-2 - Maximum Output Power Results – 2 Mbps**

Frequency (MHz)	Power (dBm)	Limit (dBm)	Margin (dB)
2402	-0.47	30	30.47
2440	-0.7	30	30.7
2480	-0.51	30	30.51

**Figure 2.4.6-4 - Maximum RF Output Power – Low Channel - 2 Mbps**

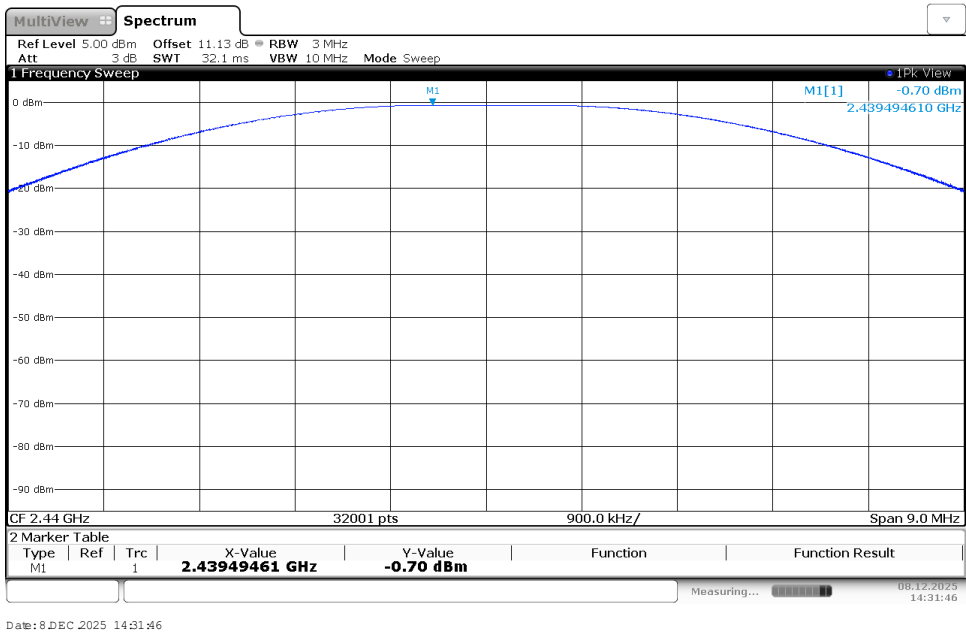


Figure 2.4.6-5 - Maximum RF Output Power – Middle Channel - 2 Mbps

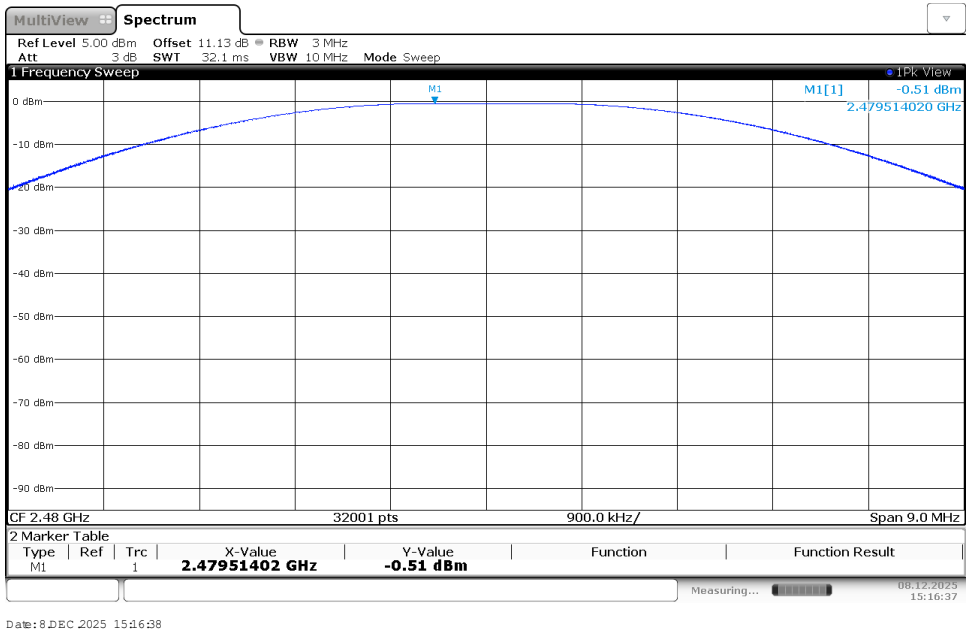
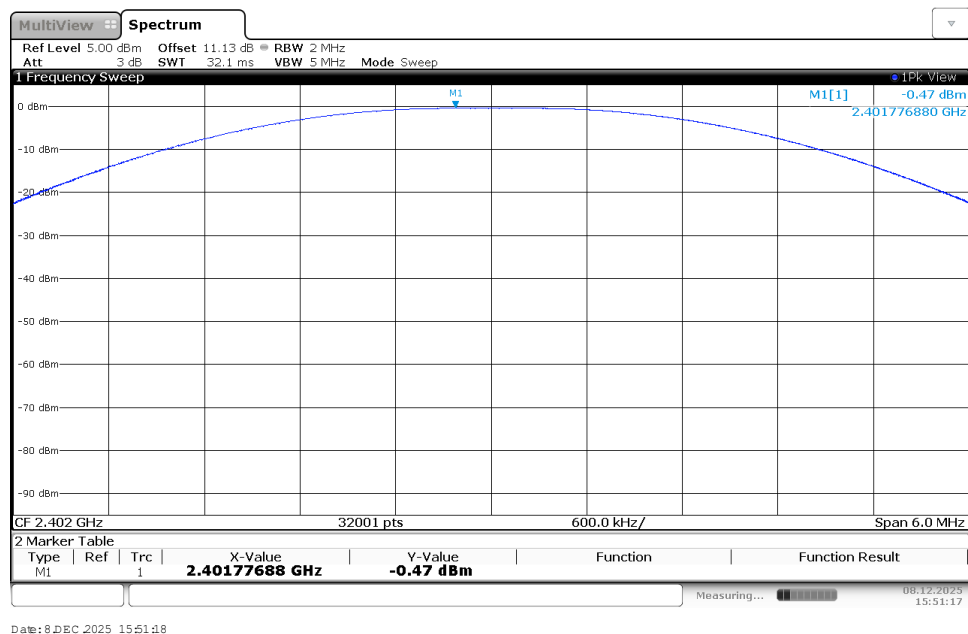


Figure 2.4.6-6 - Maximum RF Output Power – High Channel - 2 Mbps

**Table 2.4.6-3 - Maximum Output Power Results – 125 kbps**

Frequency (MHz)	Power (dBm)	Limit (dBm)	Margin (dB)
2402	-0.47	30	30.47
2440	-0.7	30	30.7
2480	-0.52	30	30.52

**Figure 2.4.6-7 - Maximum RF Output Power – Low Channel - 125 kbps**

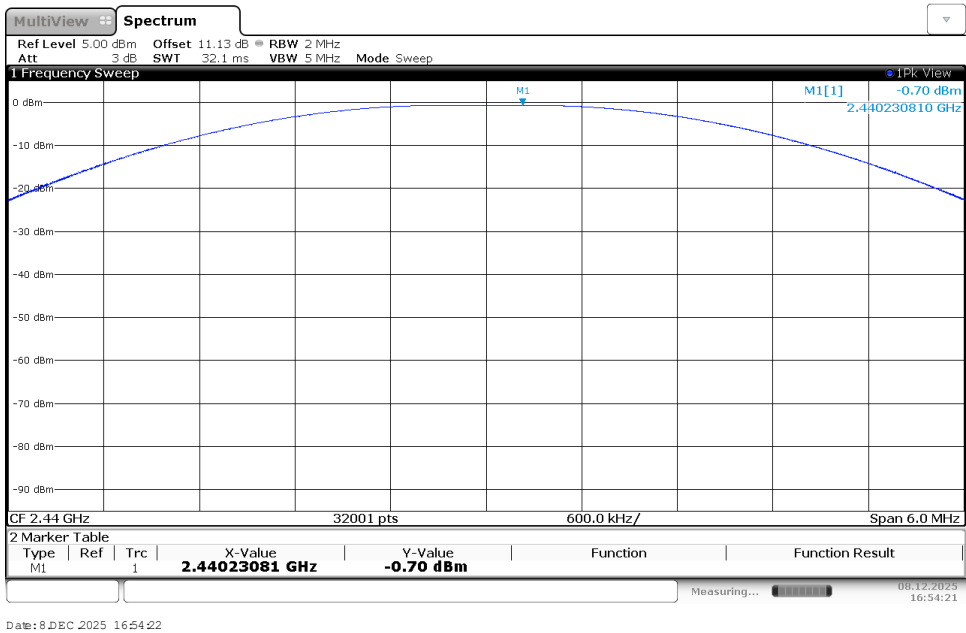


Figure 2.4.6-8 - Maximum RF Output Power – Middle Channel - 125 kbps

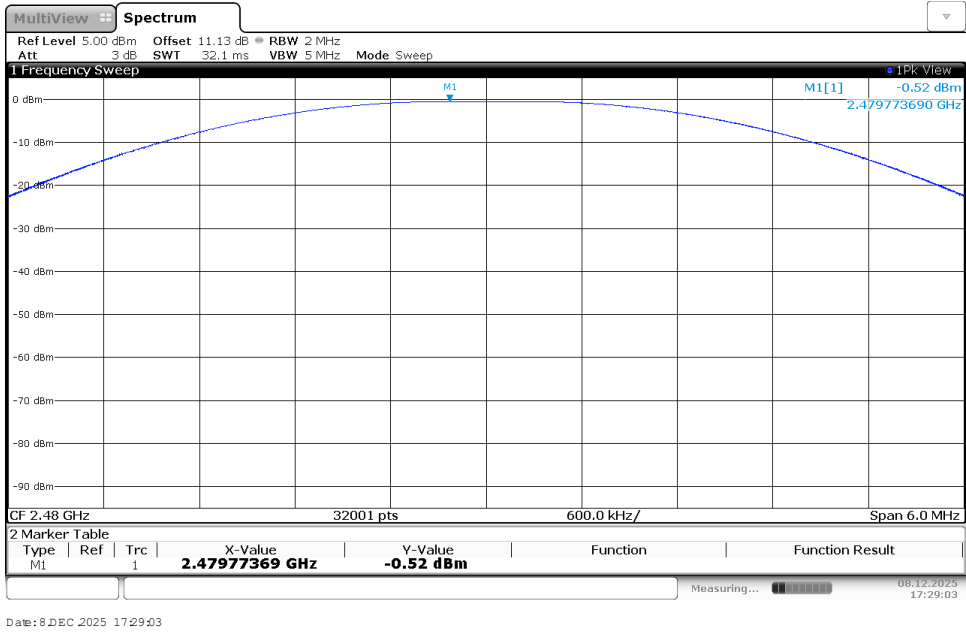


Figure 2.4.6-9 - Maximum RF Output Power – High Channel - 125 kbps



Table 2.4.6-4 - Maximum Output Power Results – 500 kbps

Frequency (MHz)	Power (dBm)	Limit (dBm)	Margin (dB)
2402	-0.46	30	30.46
2440	-0.7	30	30.7
2480	-0.51	30	30.51

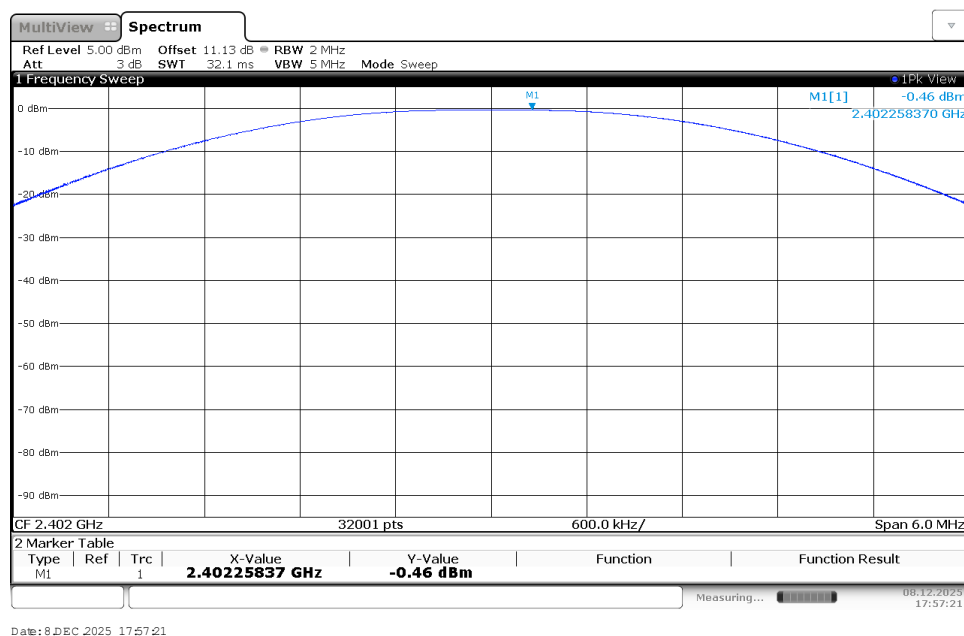


Figure 2.4.6-10 - Maximum RF Output Power – Low Channel - 500 kbps

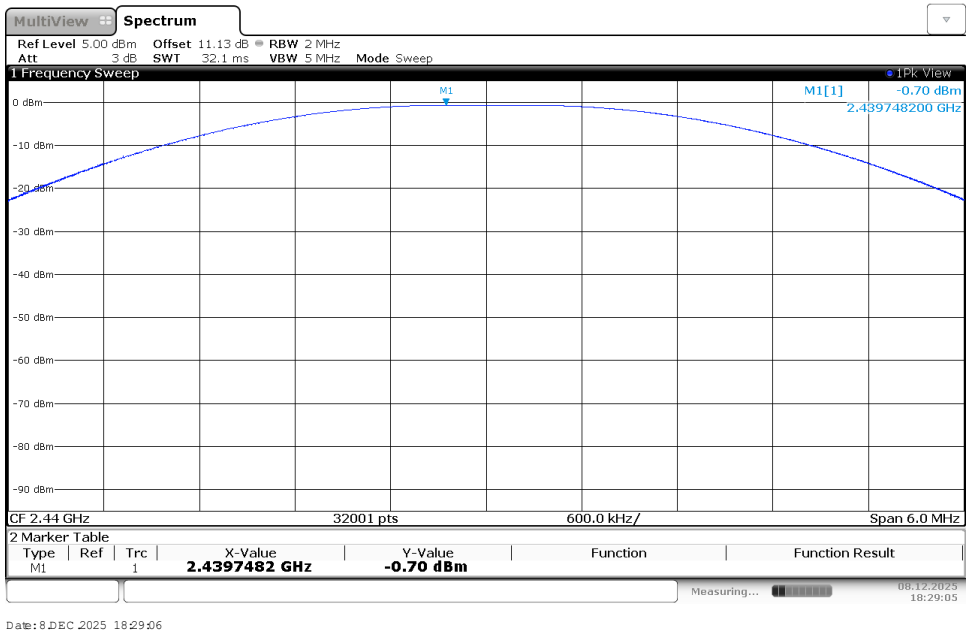


Figure 2.4.6-11 - Maximum RF Output Power – Middle Channel - 500 kbps

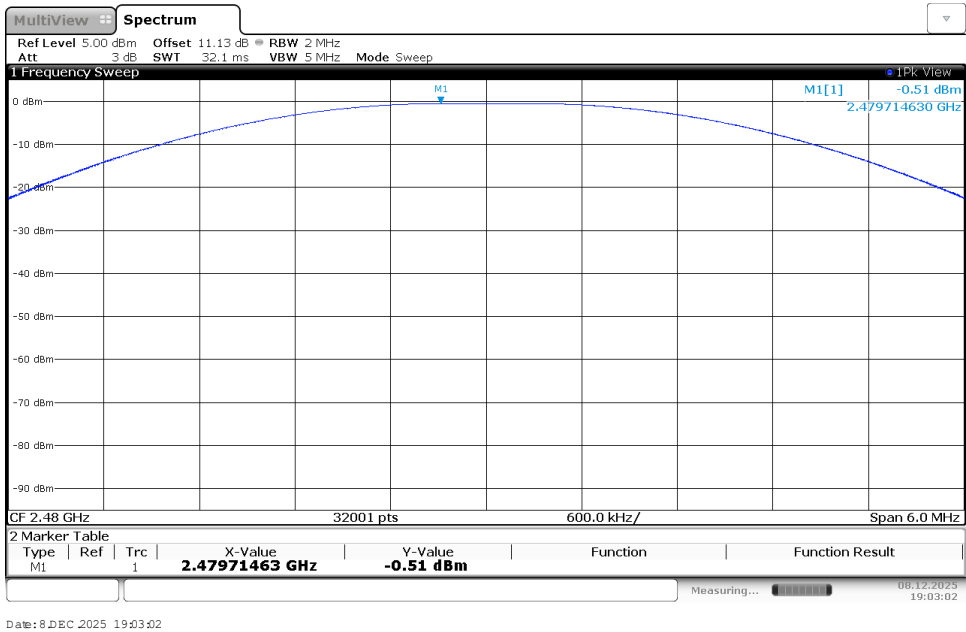


Figure 2.4.6-12 - Maximum RF Output Power – High Channel - 500 kbps



2.4.7 Test Location and Test Equipment Used

This test was carried out in TÜV SÜD America, Inc., 141 14th Street NW, New Brighton, MN 55112, USA.

Device #	Manufacturer	Description	Model	Serial #	Cal Code	Cal Date	Cal Due
DEMC3046	Aeroflex Inmet	Atten 10dB 2.9mm-M/F, DC-26.5GHz, 2W	26AH-10	1443	B	05/27/2025	05/27/2026
DEMC3085	Rohde & Schwarz	Signal & Spectrum Analyzer	FSW43	103997	G	08/29/2025	08/29/2026
TEMC00277	Rosenberger Hochfrequenztechnik GmbH & Co. KG	Micro-Coax UtiFlex UFA210A Cable	LU7-022-1000	010-2387464 0056	B	03/18/2025	03/18/2026

Cal Code G = Calibration performed by an accredited outside source.

Cal Code B = Calibration verification performed internally.

Cal Code Y = Passive Device, or Calibration not required when used with other calibrated equipment.



2.5 Band-Edge Compliance of RF Conducted Emissions

2.5.1 Specification Reference

FCC: Section 15.247(d)
ISED Canada: RSS-247 5.5

2.5.2 Equipment Under Test and Modification State

S/N: 91808625

2.5.3 Date of Test

12/8/2025

2.5.4 Test Method

The RF Conducted Emissions at the Band-Edges were measured in accordance with Subclause 11.11 of ANSI C63.10. The RF output port of the EUT was connected to the input of the spectrum analyzer through suitable attenuation. The EUT was investigated at the lowest and highest channel available to determine band-edge compliance. For each measurement the spectrum analyzer's RBW was set to 100 kHz, and the VBW was set to ≥ 300 kHz. The amplitude offset of the spectrum analyzer was adjusted to account for cable and attenuator insertion losses.

2.5.5 Environmental Conditions

Ambient Temperature	22.3 °C
Relative Humidity	10 %
Atmospheric Pressure	992 mbar

2.5.6 Test Results

Battery Powered Operating

Limit Clause FCC Section 15.247(d), ISED Canada: RSS-247 5.5

In any 100 kHz bandwidth outside of the frequency band the radio frequency power shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of desired power. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required shall be 30 dB instead of 20 dB.

Test Summary:

The conducted band-edge emissions met the minimum 20 dB attenuation requirements.

Test Result: Pass

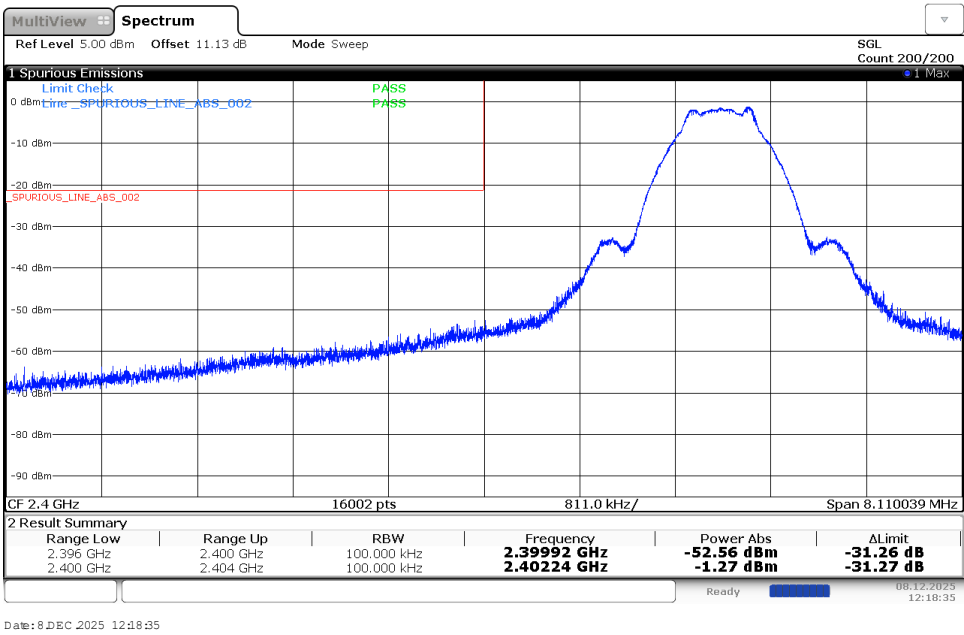


Figure 2.5.6-1 - Conducted Band-Edge Emissions – Low Channel - 1 Mbps

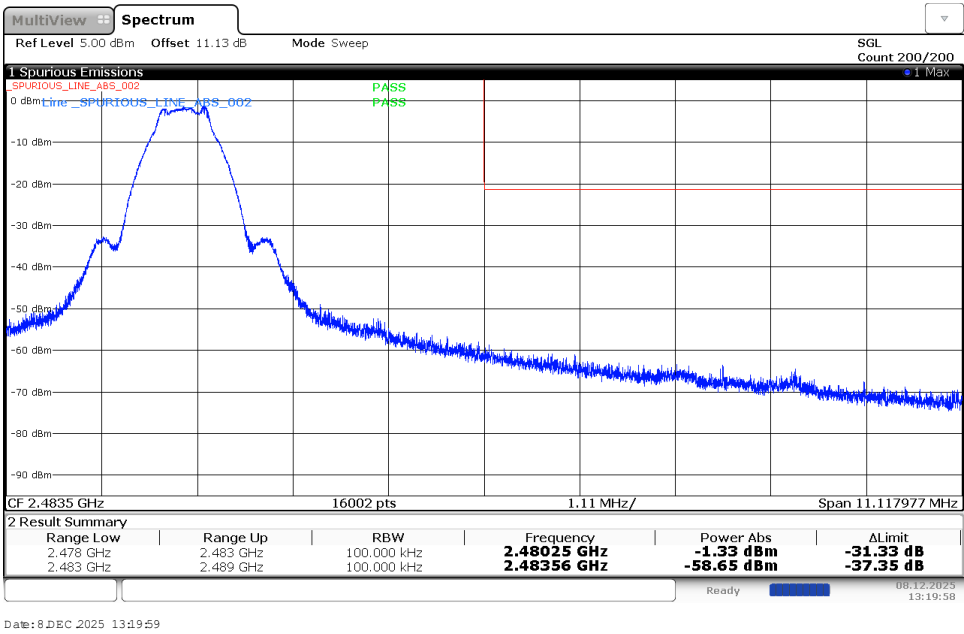


Figure 2.5.6-2 - Conducted Band-Edge Emissions – High Channel - 1 Mbps

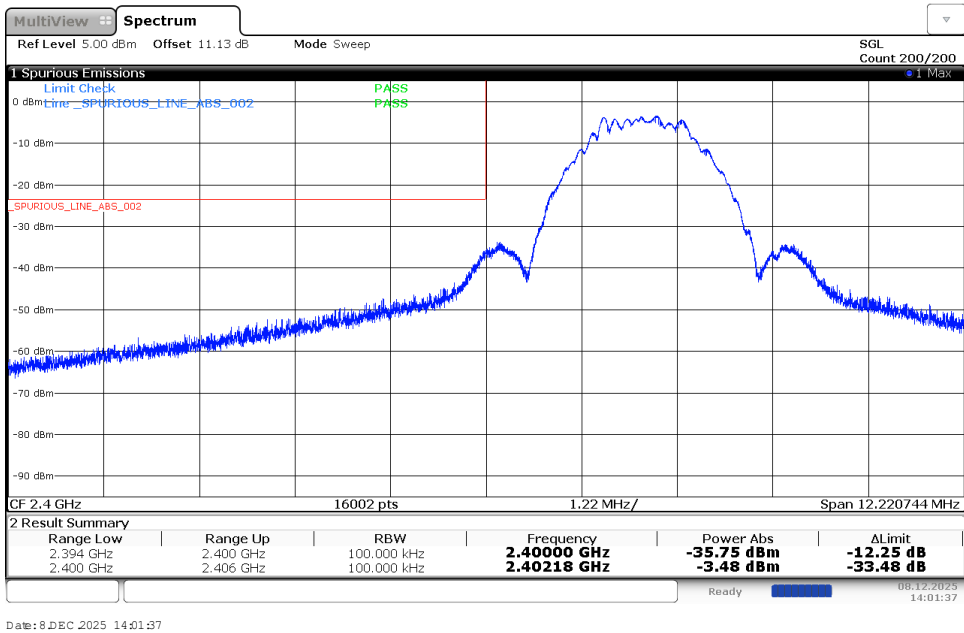


Figure 2.5.6-3 - Conducted Band-Edge Emissions – Low Channel - 2 Mbps

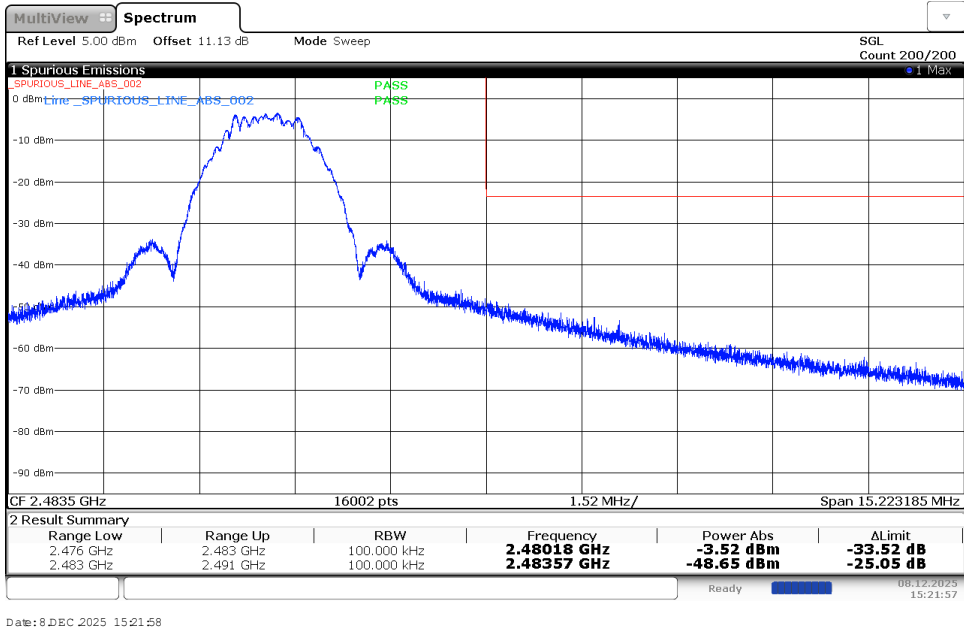


Figure 2.5.6-4 - Conducted Band-Edge Emissions – High Channel - 2 Mbps

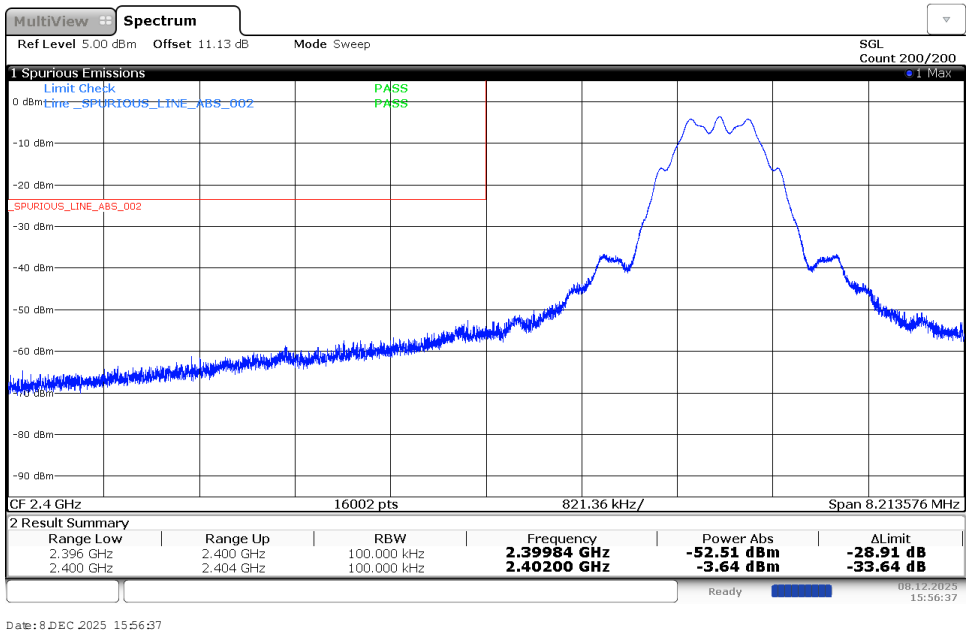


Figure 2.5.6-5 - Conducted Band-Edge Emissions – Low Channel - 125 kbps

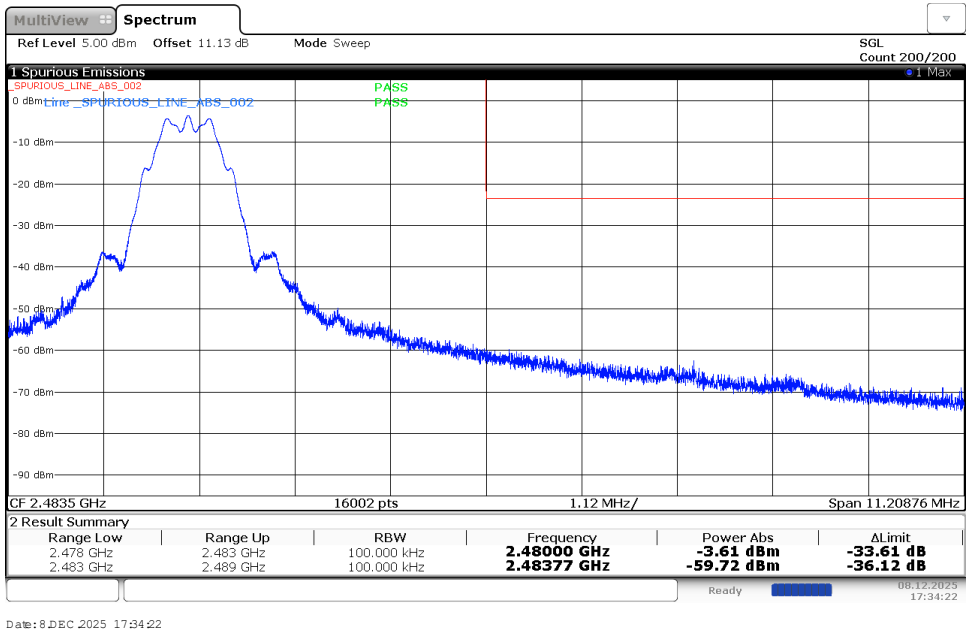


Figure 2.5.6-6 - Conducted Band-Edge Emissions – High Channel - 125 kbps

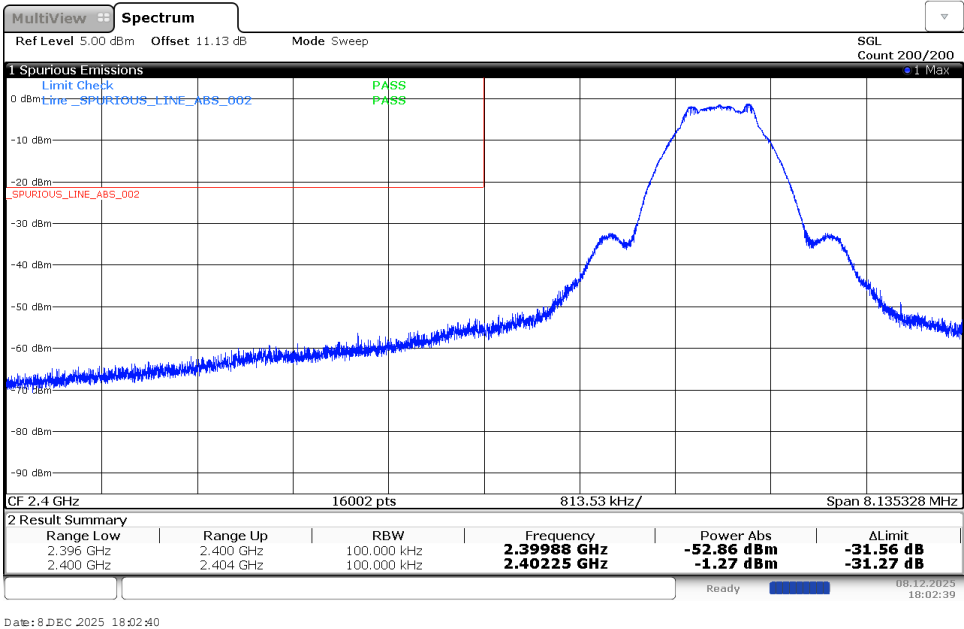


Figure 2.5.6-7 - Conducted Band-Edge Emissions – Low Channel - 500 kbps

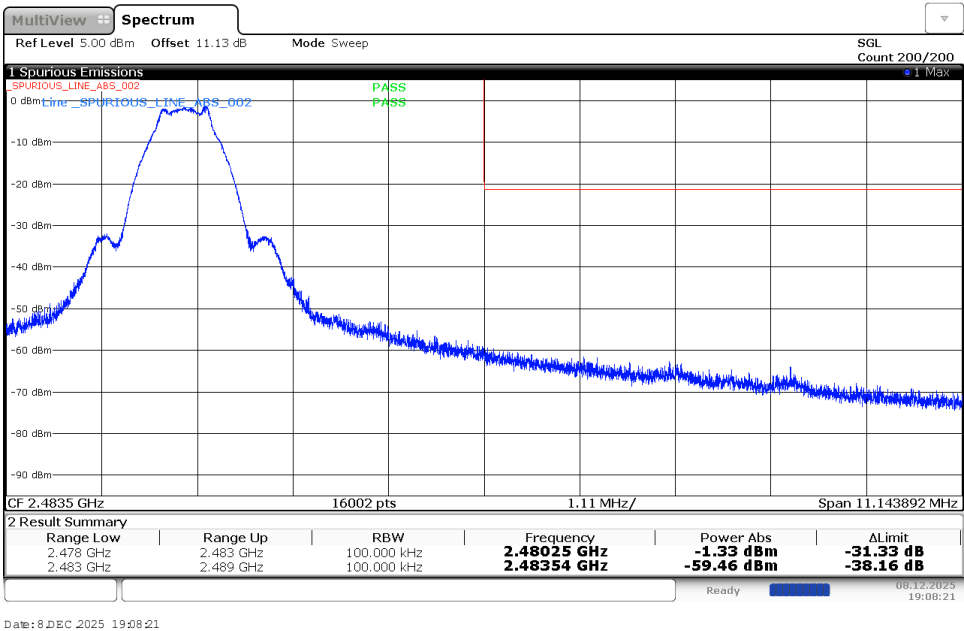


Figure 2.5.6-8 - Conducted Band-Edge Emissions – High Channel - 500 kbps



2.5.7 Test Location and Test Equipment Used

This test was carried out in TÜV SÜD America, Inc., 141 14th Street NW, New Brighton, MN 55112, USA.

Device #	Manufacturer	Description	Model	Serial #	Cal Code	Cal Date	Cal Due
DEMC3046	Aeroflex Inmet	Atten 10dB 2.9mm-M/F, DC-26.5GHz, 2W	26AH-10	1443	B	05/27/2025	05/27/2026
DEMC3085	Rohde & Schwarz	Signal & Spectrum Analyzer	FSW43	103997	G	08/29/2025	08/29/2026
TEMC00277	Rosenberger Hochfrequenztechnik GmbH & Co. KG	Micro-Coax UtiFlex UFA210A Cable	LU7-022-1000	010-2387464 0056	B	03/18/2025	03/18/2026

Cal Code G = Calibration performed by an accredited outside source.

Cal Code B = Calibration verification performed internally.

Cal Code Y = Passive Device, or Calibration not required when used with other calibrated equipment.



2.6 RF Conducted Spurious Emissions

2.6.1 Specification Reference

FCC: Section 15.247(d)
ISED Canada: RSS-247 5.5

2.6.2 Equipment Under Test and Modification State

S/N: 91808625

2.6.3 Date of Test

12/8/2025

2.6.4 Test Method

The RF Conducted Spurious Emissions were measured in accordance with Subclause 11.11 of ANSI C63.10. The RF output port of the equipment under test was directly connected to the input of the spectrum analyzer. The EUT was investigated for conducted spurious emissions from 30 MHz to 26 GHz, 10 times the highest fundamental frequency. Measurements were made at the low, center and high channels of the EUT. For each measurement, the spectrum analyzer's RBW was set to 100 kHz and the VBW was set to 300 kHz. The peak Max Hold function of the analyzer was utilized. The amplitude offset of the spectrum analyzer was adjusted to account for cable and attenuator insertion losses.

2.6.5 Environmental Conditions

Ambient Temperature	22.3 °C
Relative Humidity	10 %
Atmospheric Pressure	992 mbar

2.6.6 Test Results

Battery Powered Operating

Limit Clause FCC Section 15.247(d), ISED Canada: RSS-247 5.5

In any 100 kHz bandwidth outside of the frequency band the radio frequency power shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of desired power. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required shall be 30 dB instead of 20 dB.

Test Summary:

The conducted spurious emissions met the minimum 20 dB attenuation requirements.

Test Result: Pass

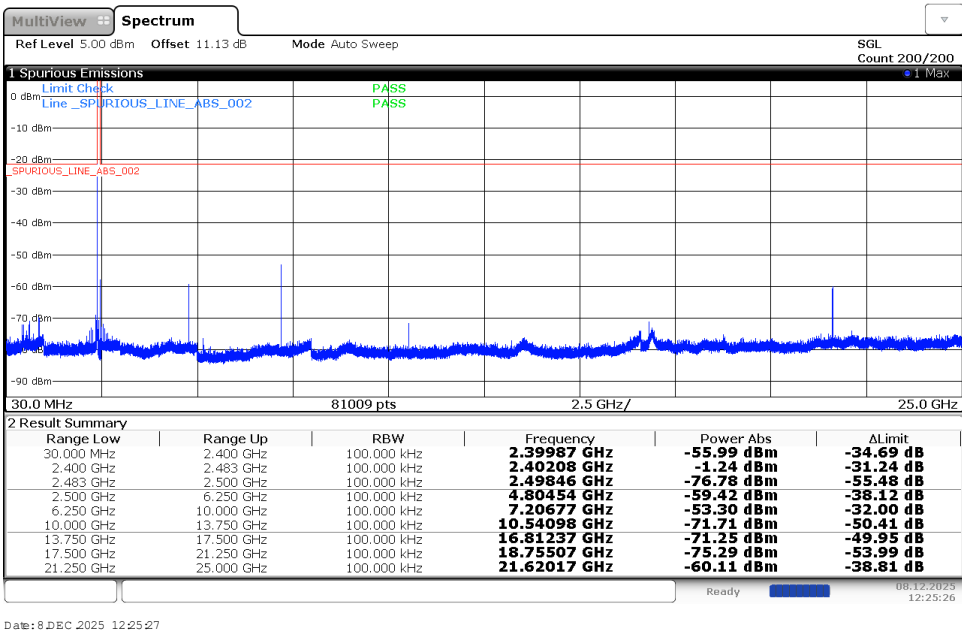


Figure 2.6.6-1 - Conducted Spurious Emissions – Low Channel - 1 Mbps

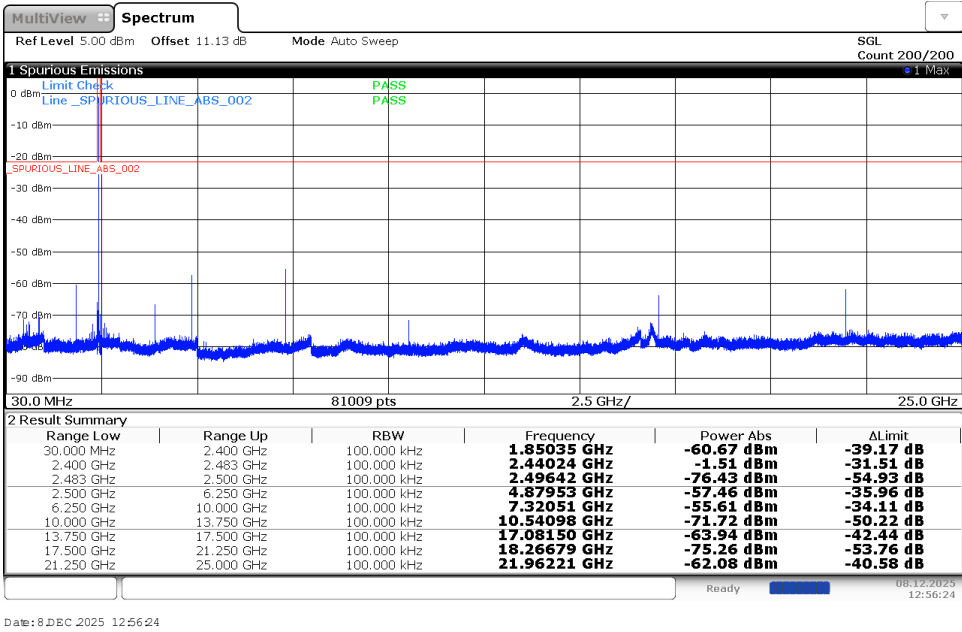


Figure 2.6.6-2 - Conducted Spurious Emissions – Middle Channel - 1 Mbps

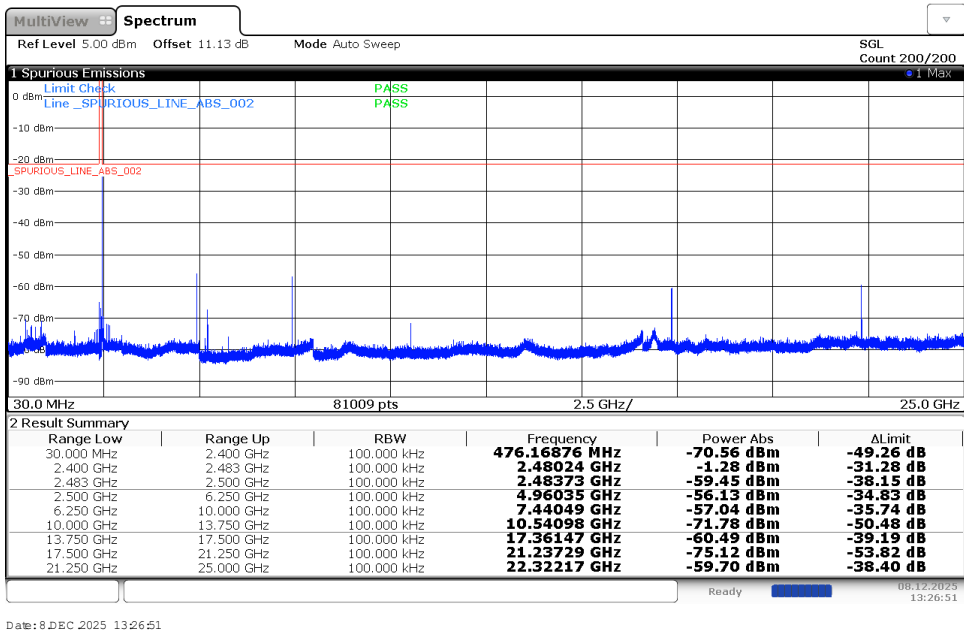


Figure 2.6.6-3 - Conducted Spurious Emissions – High Channel - 1 Mbps

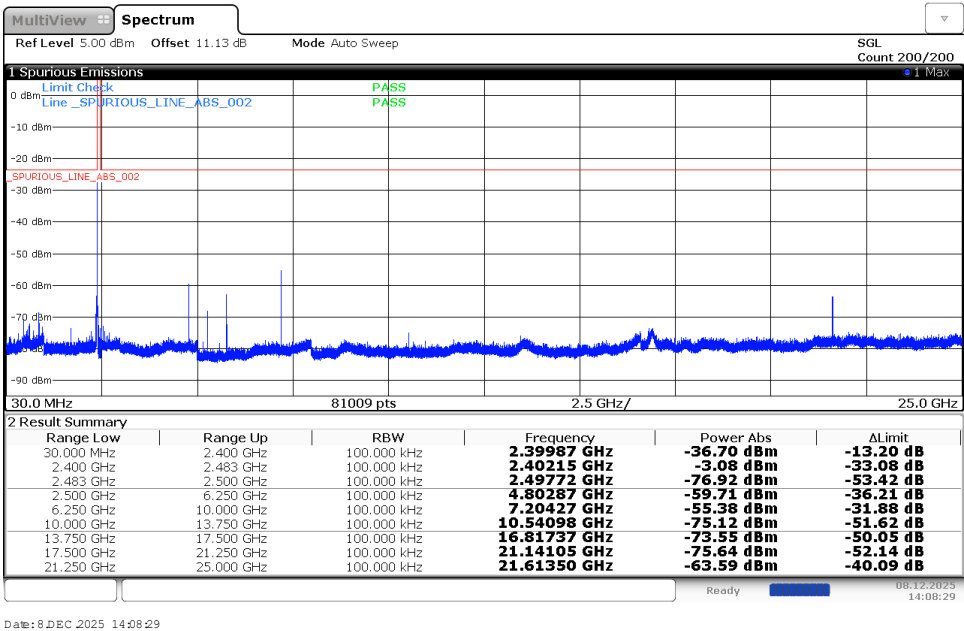


Figure 2.6.6-4 - Conducted Spurious Emissions – Low Channel - 2 Mbps

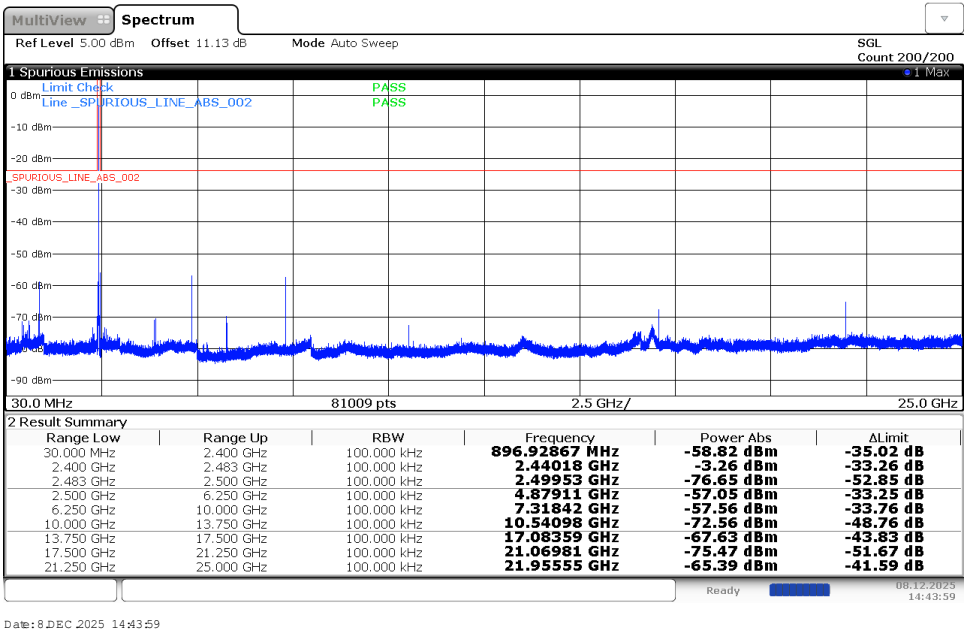


Figure 2.6.6-5 - Conducted Spurious Emissions – Middle Channel - 2 Mbps

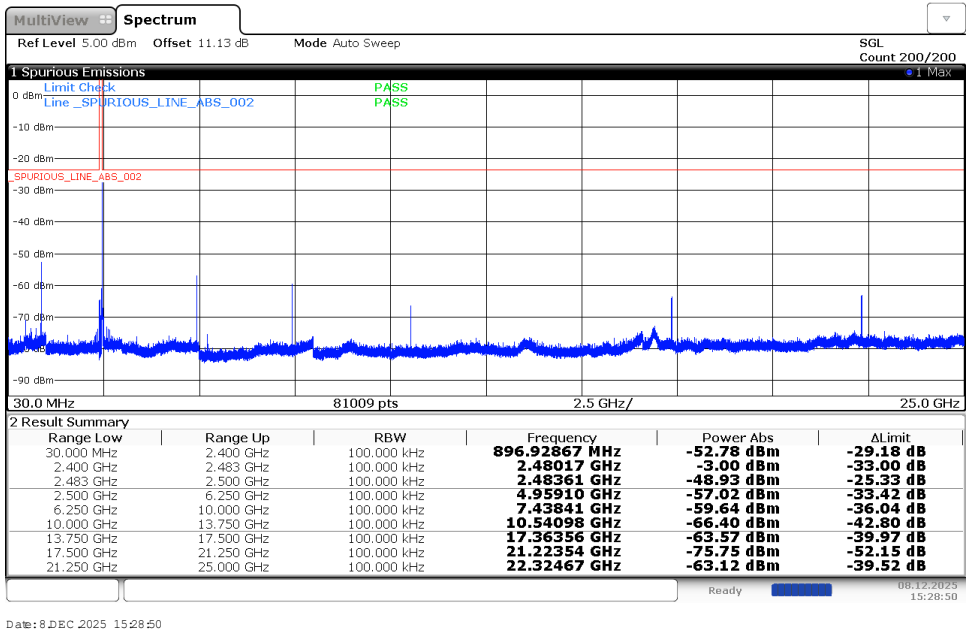


Figure 2.6.6-6 - Conducted Spurious Emissions – High Channel - 2 Mbps

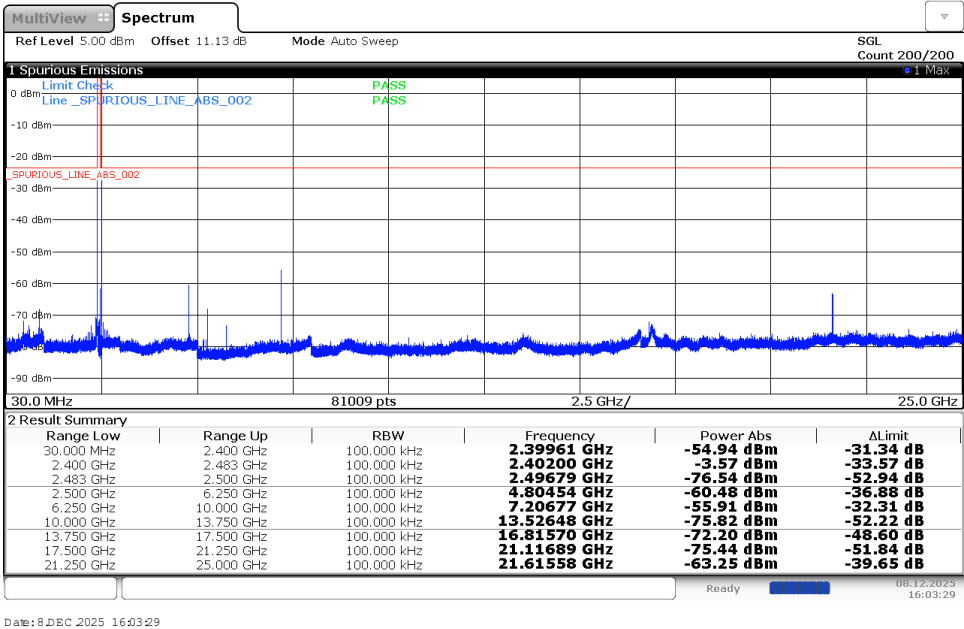


Figure 2.6.6-7 - Conducted Spurious Emissions – Low Channel - 125 kbps

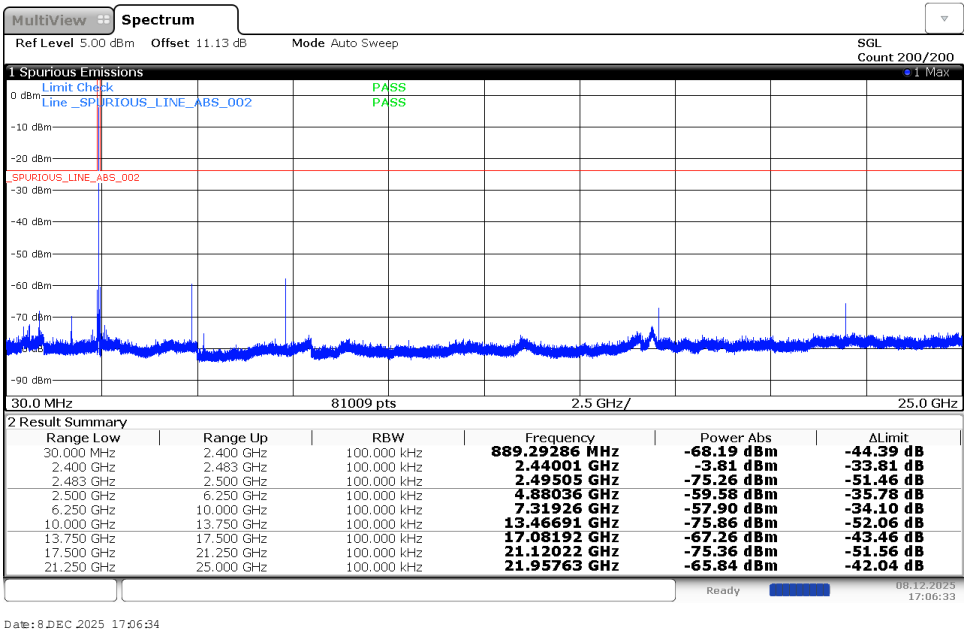


Figure 2.6.6-8 - Conducted Spurious Emissions – Middle Channel - 125 kbps

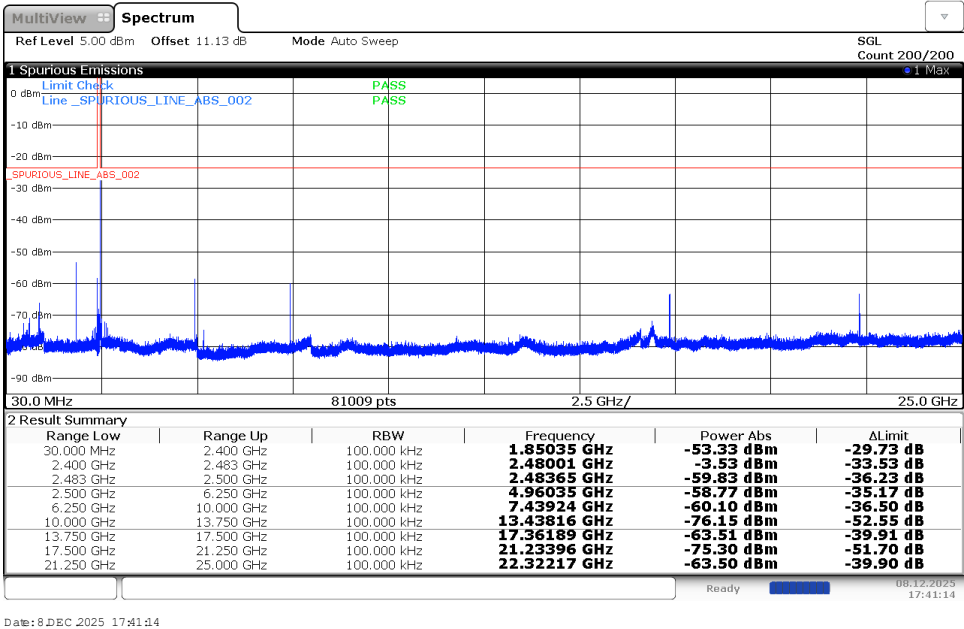


Figure 2.6.6-9 - Conducted Spurious Emissions – High Channel - 125 kbps

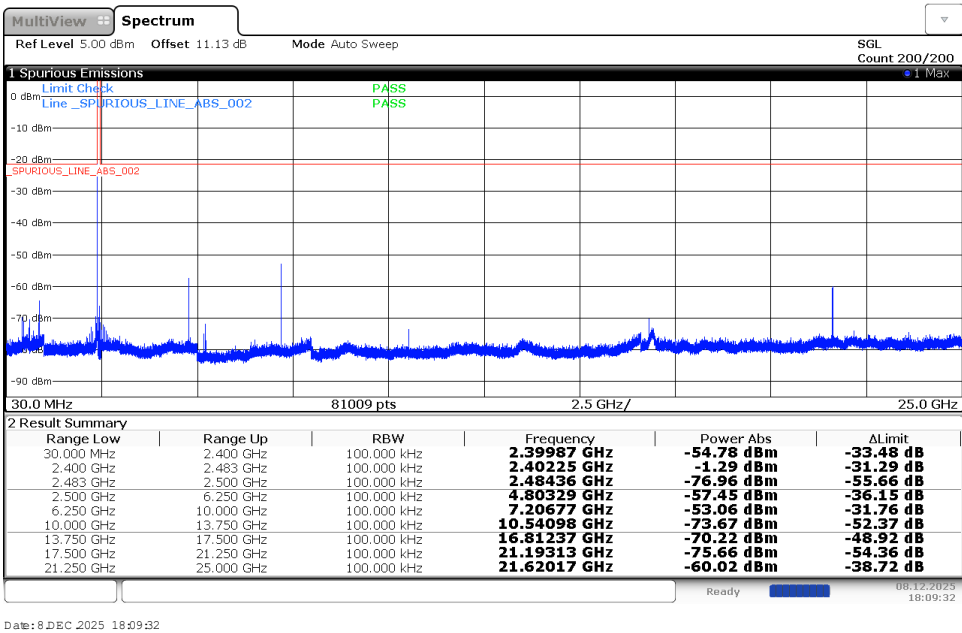


Figure 2.6.6-10 - Conducted Spurious Emissions – Low Channel - 500 kbps

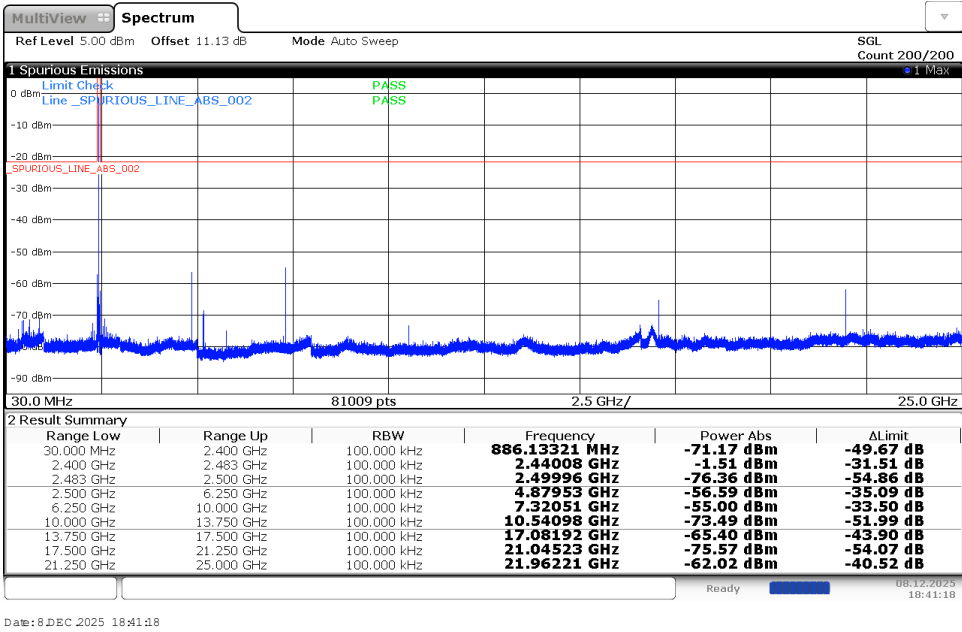


Figure 2.6.6-11 - Conducted Spurious Emissions – Middle Channel - 500 kbps

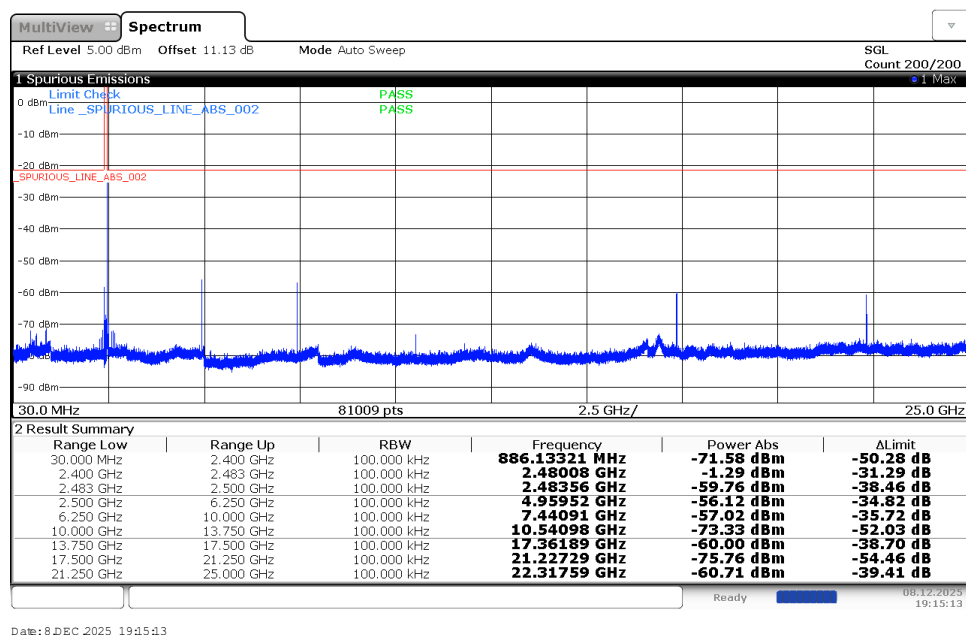


Figure 2.6.6-12 - Conducted Spurious Emissions – High Channel - 500 kbps

2.6.7 Test Location and Test Equipment Used

This test was carried out in TÜV SÜD America, Inc., 141 14th Street NW, New Brighton, MN 55112, USA.

Device #	Manufacturer	Description	Model	Serial #	Cal Code	Cal Date	Cal Due
DEMC3046	Aeroflex Inmet	Atten 10dB 2.9mm-M/F, DC-26.5GHz, 2W	26AH-10	1443	B	05/27/2025	05/27/2026
DEMC3085	Rohde & Schwarz	Signal & Spectrum Analyzer	FSW43	103997	G	08/29/2025	08/29/2026
TEMC00277	Rosenberger Hochfrequenztechnik GmbH & Co. KG	Micro-Coax UtiFlex UFA210A Cable	LU7-022-1000	010-2387464 0056	B	03/18/2025	03/18/2026

Cal Code G = Calibration performed by an accredited outside source.

Cal Code B = Calibration verification performed internally.

Cal Code Y = Passive Device, or Calibration not required when used with other calibrated equipment.



2.7 Radiated Spurious Emissions into Restricted Frequency Bands

2.7.1 Specification Reference

FCC Sections: 15.205, 15.209;
ISED Canada: RSS-GEN 8.9, 8.10

2.7.2 Equipment Under Test and Modification State

S/N: 91808648

2.7.3 Date of Test

11/19/2025 to 12/4/2025

2.7.4 Test Method

Radiated emissions tests were made over the frequency range of 9 kHz to 26 GHz, at least 10 times the highest fundamental frequency. Each emission found to be in a restricted band as defined by section 15.205, including any emission at the operational band-edge, was compared to the radiated emission limits as defined in Section 15.209.

For measurements below 30 MHz, the receive antenna height was set to 1 m and the EUT was rotated through 360 degrees. The resolution bandwidth was set to 200 Hz below 150 kHz and to 9 kHz above 150 kHz.

The EUT was rotated through 360° and the receive antenna height was varied from 1m to 4m so that the maximum radiated emissions level would be detected. For frequencies below 1000 MHz, quasi-peak measurements were made using a resolution bandwidth RBW of 120 kHz and a video bandwidth VBW of 300 kHz. For frequencies above 1000 MHz, peak measurements are made with RBW of 1 MHz and VBW of 3 MHz. Average measurements are performed using an RMS detector.

2.7.5 Duty Cycle Correction

The EUT was configured to transmit at 100% duty cycle during the evaluation corresponding to a Duty Cycle Correction Factor of $20 \cdot \log(100/100) = 0$ dB. No duty cycle correction factor was applied to the average measurements for the corrected average results.

2.7.6 Environmental Conditions

Ambient Temperature	23.9 °C
Relative Humidity	9 %
Atmospheric Pressure	980 mbar



2.7.7 Test Results

Battery Powered Operating

Limit Clause FCC Sections 15.205, 15.209, ISED Canada: RSS-GEN 8.9, 8.10

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009-0.490	2400/F(kHz)	300
0.4090-1.705	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

Test Summary:

The radiated emissions within the restricted bands meet the peak and average emissions limits requirements.

Test Result: Pass



Band-Edge Emissions 2.3-2.6 GHz - TX ON_1 Mbps_2402MHz_Z-axis

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
2.3 GHz - 2.6 GHz	3m	Vertical	1 MHz	6001 Pts	200 ms
2.3 GHz - 2.6 GHz	3m	Horizontal	1 MHz	6001 Pts	200 ms

Test Area	Tested By	Test Date	Temperature	Humidity	Pressure
3mSAC	Thierry Jean-Charles	11/20/2025	24.3.C	28%	983 mBar

Technology	Frequency	Channel	Mode	EUT Orientation
BLE	2402 MHz	0	TX	Z-axis

Limit:

FCC Part 15/FCC 15.205 [15.247 (d)] - Q-Peak, Peak, RMS & Avg

Test Results:

Pass

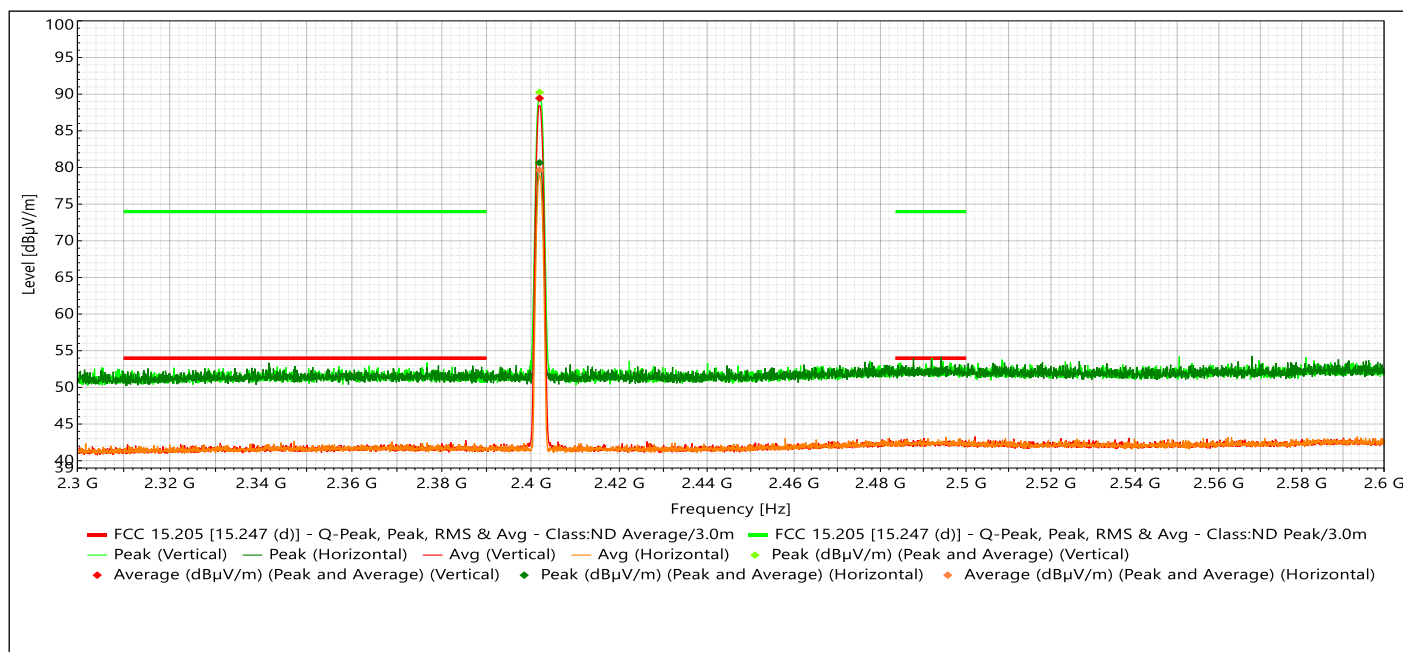


Figure 2.7.7-1 – Radiated Band-Edge Emissions Test Results – Prescan Plot

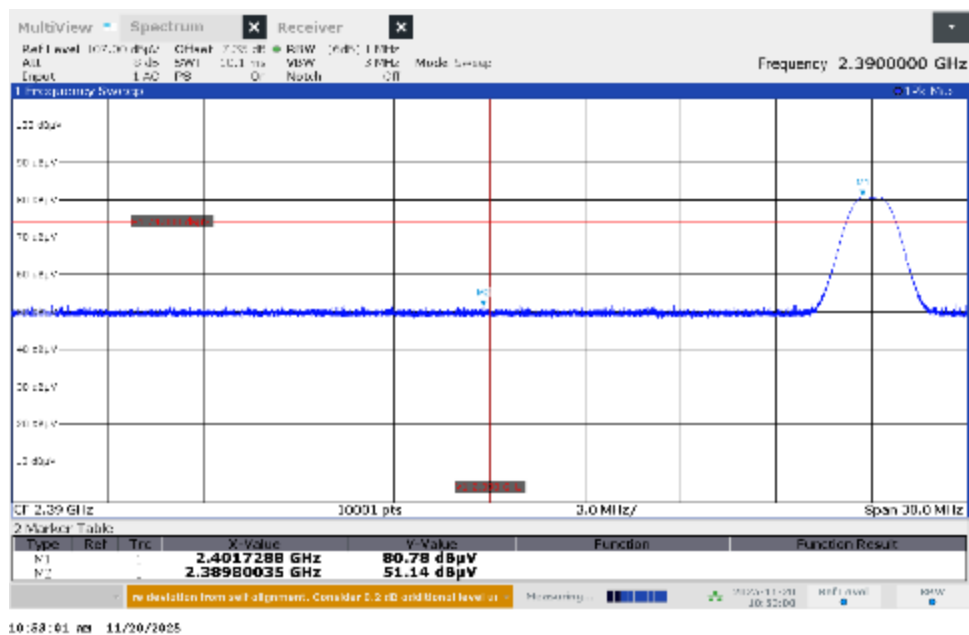


Figure 2.7.7-2 – Radiated Band-Edge Emissions Test Results – Horizontal - Peak

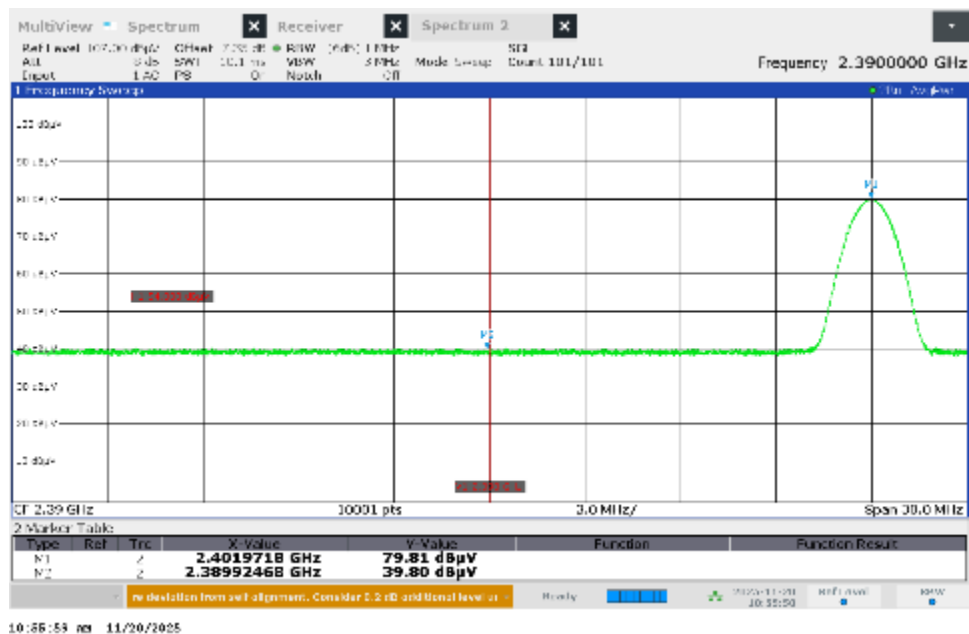


Figure 2.7.7-3 – Radiated Band-Edge Emissions Test Results – Horizontal - Average

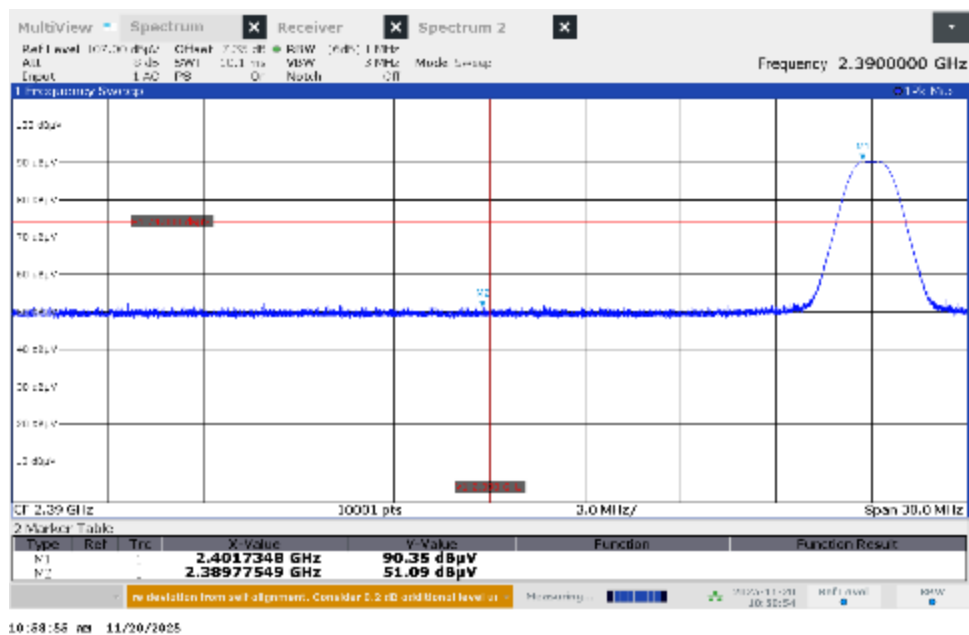


Figure 2.7.7-4 – Radiated Band-Edge Emissions Test Results – Vertical - Peak

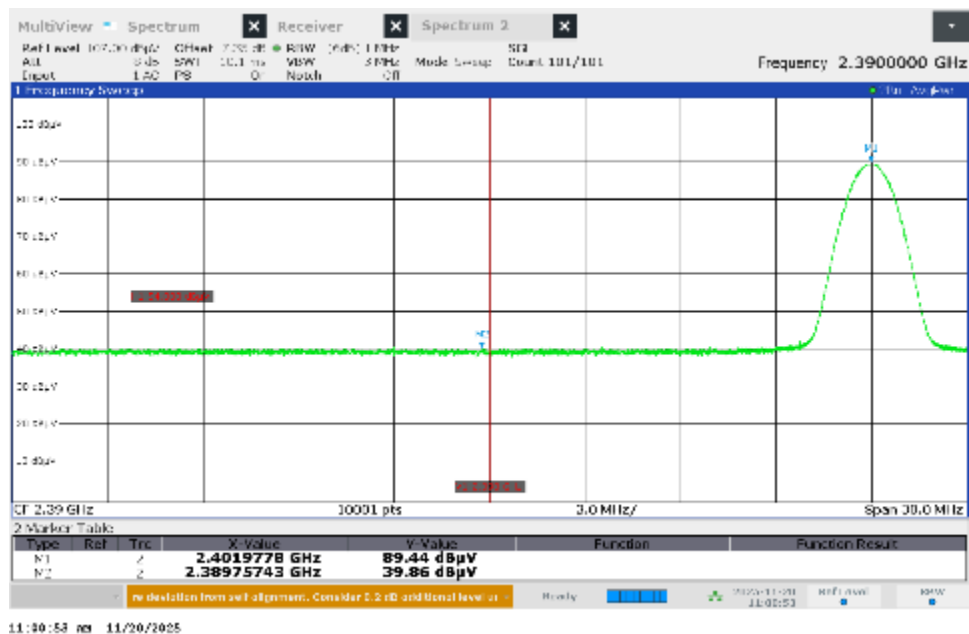


Figure 2.7.7-5 – Radiated Band-Edge Emissions Test Results – Vertical - Average

**Table 2.7.7-1– Radiated Emissions Test Results**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2389.80	51.14	74.00	-22.86	39.80	54.00	-14.20	48.00	2.15	Horizontal	Pass
2389.78	51.09	74.00	-22.91	39.86	54.00	-14.14	320.00	1.87	Vertical	Pass

Test Notes: 1 Mbps, TX Power Setting = 0



Band-Edge Emissions 2.3-2.6 GHz - TX ON_1 Mbps_2480MHz_Z-axis

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
2.3 GHz - 2.6 GHz	3m	Vertical	1 MHz	6001 Pts	200 ms
2.3 GHz - 2.6 GHz	3m	Horizontal	1 MHz	6001 Pts	200 ms

Test Area	Tested By	Test Date	Temperature	Humidity	Pressure
3mSAC	Thierry Jean-Charles	11/19/2025	25.1C	22%	988 mBar

Technology	Frequency	Channel	Mode	EUT Orientation
BLE	2480 MHz	39	TX	Z-axis

Limit:

FCC Part 15/FCC 15.205 [15.247 (d)] - Q-Peak, Peak, RMS & Avg

Test Results:

Pass

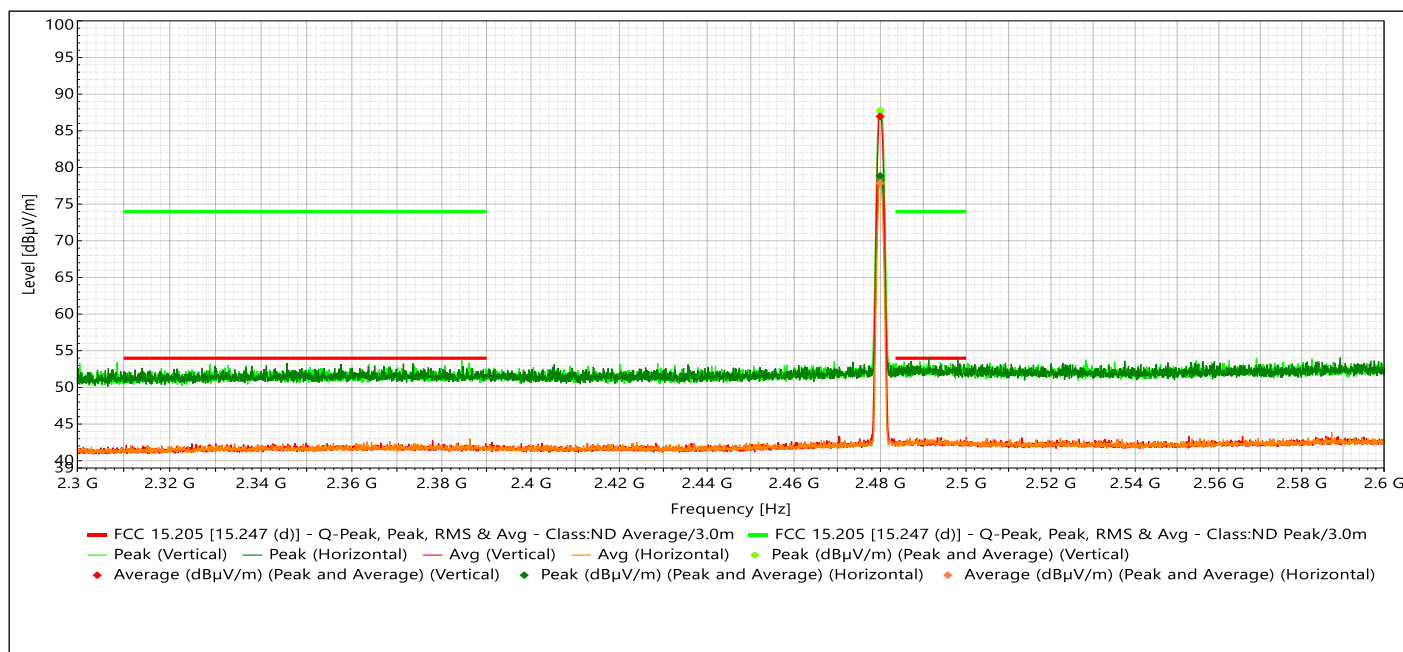


Figure 2.7.7-6 – Radiated Band-Edge Emissions Test Results – Prescan Plot

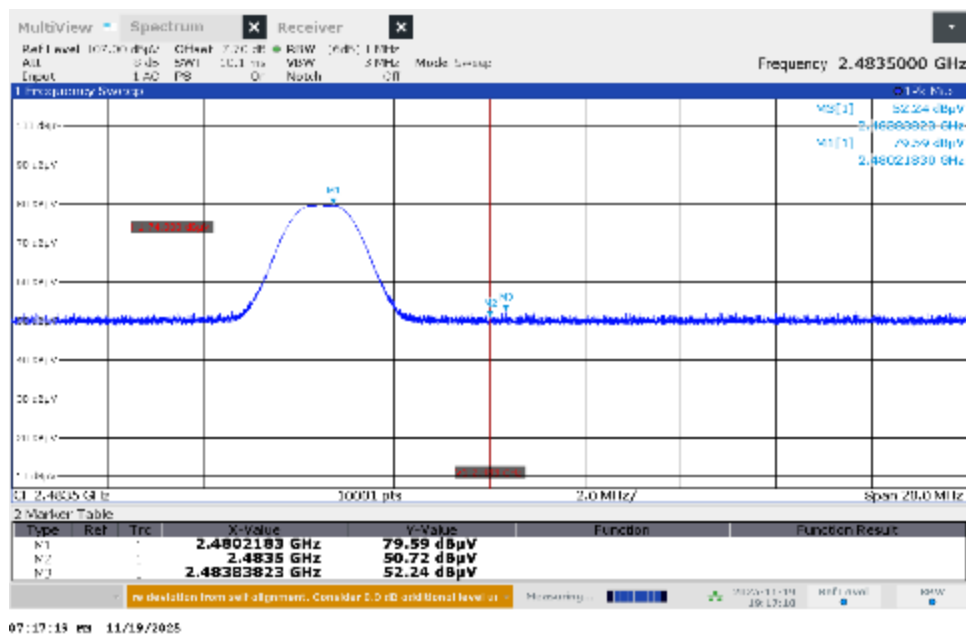


Figure 2.7.7-7 – Radiated Band-Edge Emissions Test Results – Horizontal - Peak

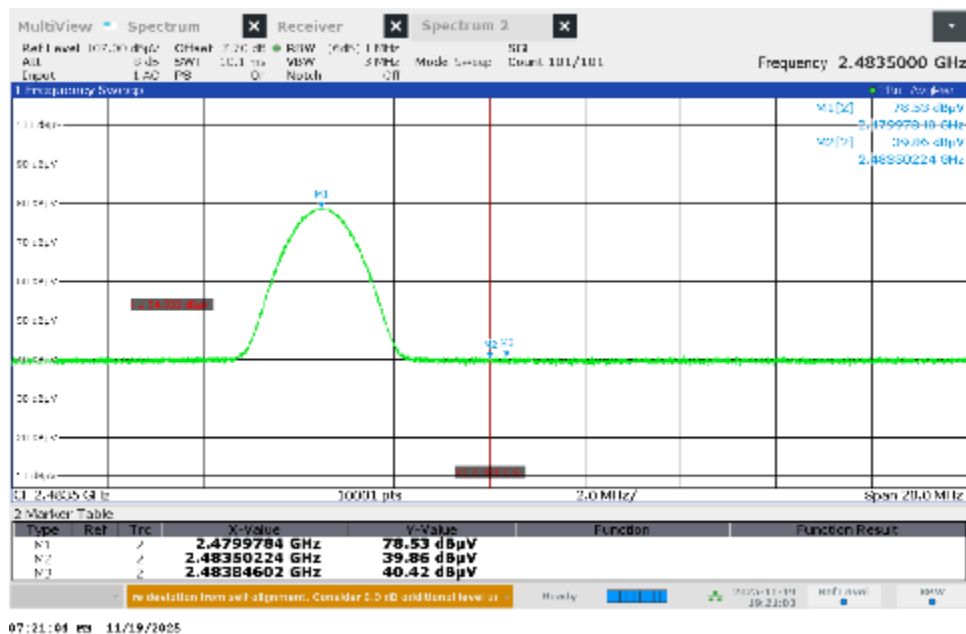


Figure 2.7.7-8 – Radiated Band-Edge Emissions Test Results – Horizontal - Average

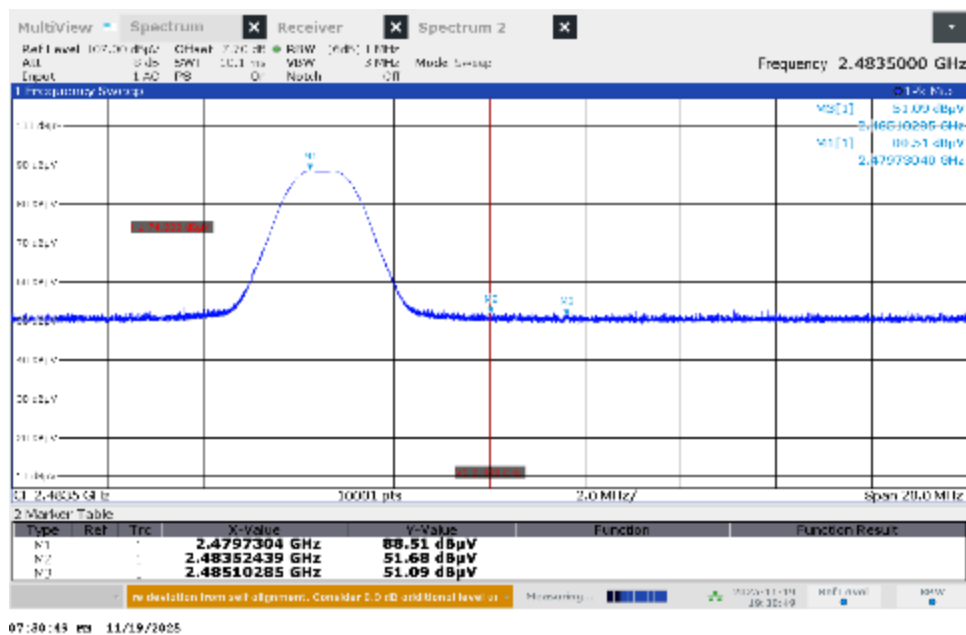


Figure 2.7.7-9 – Radiated Band-Edge Emissions Test Results – Vertical - Peak

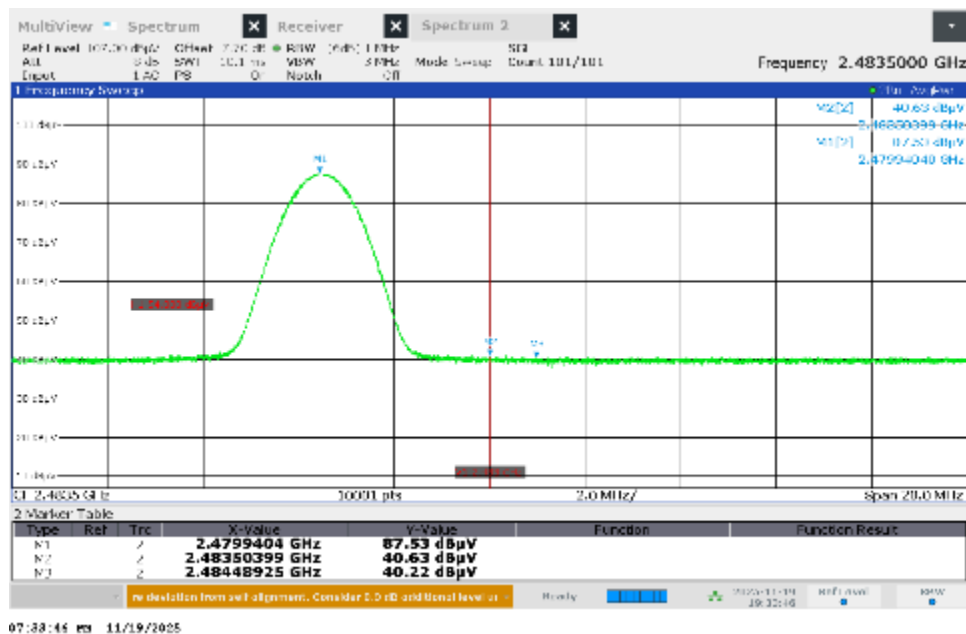


Figure 2.7.7-10 – Radiated Band-Edge Emissions Test Results – Vertical – Average

**Table 2.7.7-2– Radiated Emissions Test Results**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2483.50	50.72	74.00	-23.28	39.86	54.00	-14.14	96.00	1.00	Horizontal	Pass
2483.84	52.24	74.00	-21.76	40.42	54.00	-13.58	96.00	1.00	Horizontal	Pass
2483.52	51.68	74.00	-22.32	40.63	54.00	-13.37	320.00	1.00	Vertical	Pass
2485.10	51.09	74.00	-22.91	40.22	54.00	-13.78	320.00	1.00	Vertical	Pass

Test Notes: 1 Mbps, TX Power Setting = 0



Band-Edge Emissions 2.3-2.6 GHz - TX ON_2 Mbps_2402MHz_Z-axis

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
2.3 GHz - 2.6 GHz	3m	Vertical	1 MHz	6001 Pts	200 ms
2.3 GHz - 2.6 GHz	3m	Horizontal	1 MHz	6001 Pts	200 ms

Test Area	Tested By	Test Date	Temperature	Humidity	Pressure
3mSAC	Thierry Jean-Charles	11/19/2025	25.1C	22%	988 mBar

Technology	Frequency	Channel	Mode	EUT Orientation
BLE	2402 MHz	0	TX	Z-axis

Limit:

FCC Part 15/FCC 15.205 [15.247 (d)] - Q-Peak, Peak, RMS & Avg

Test Results:

Pass

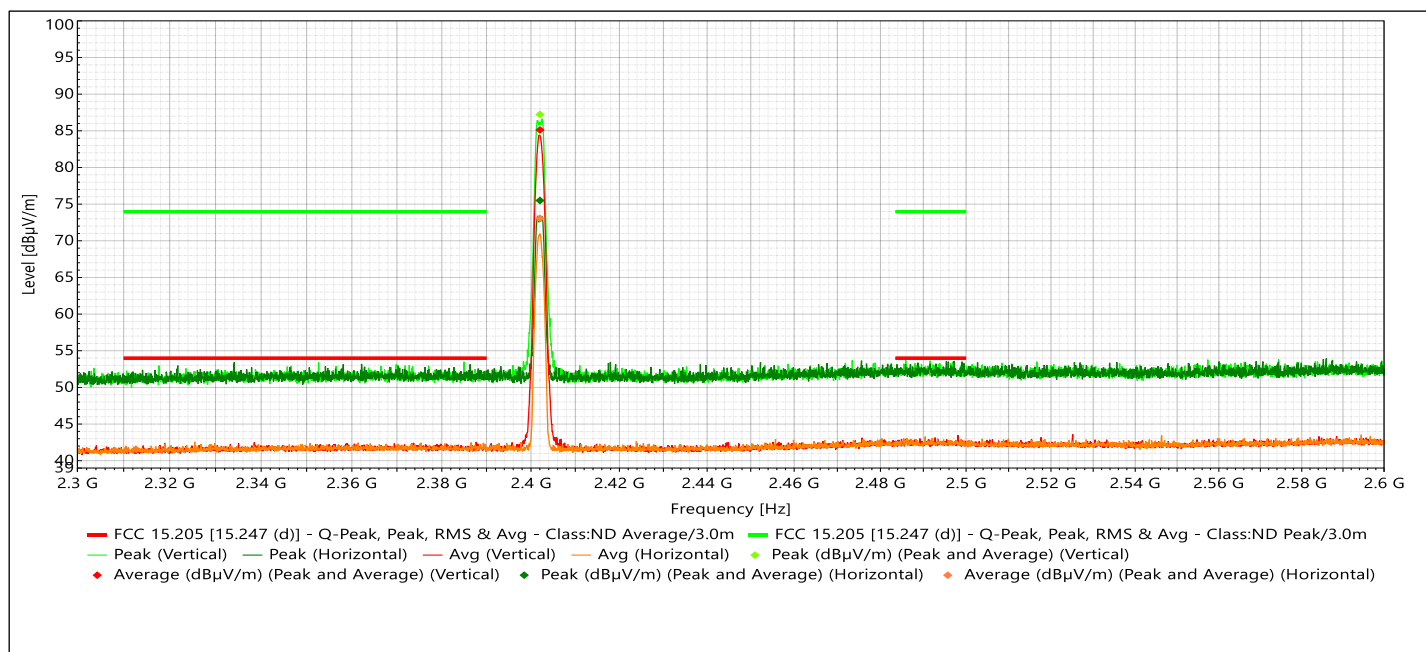


Figure 2.7.7-11 – Radiated Band-Edge Emissions Test Results – Prescan Plot

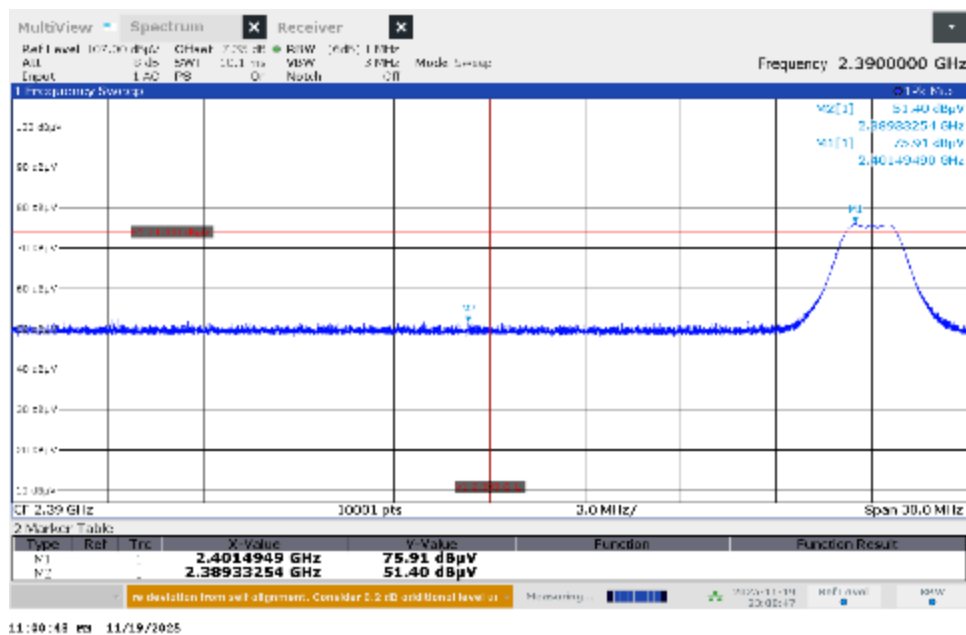


Figure 2.7.7-12 – Radiated Band-Edge Emissions Test Results – Horizontal - Peak

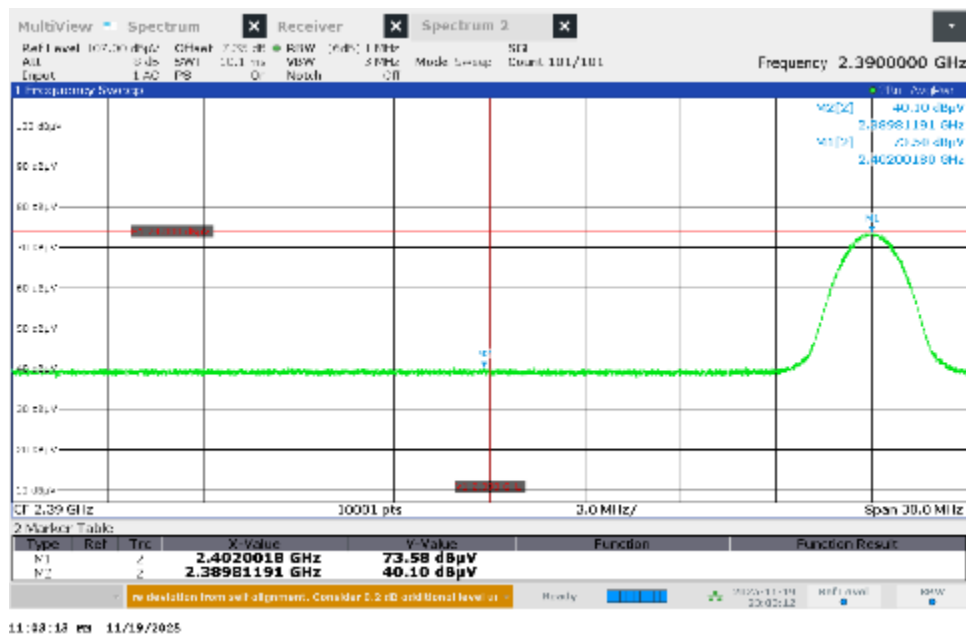


Figure 2.7.7-13 – Radiated Band-Edge Emissions Test Results – Horizontal - Average

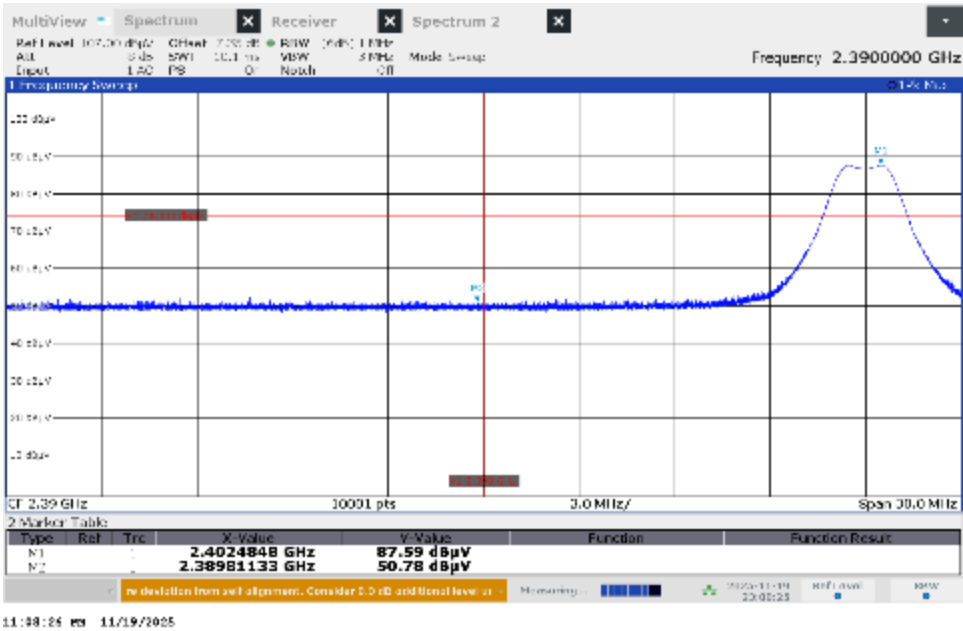


Figure 2.7.7-14 – Radiated Band-Edge Emissions Test Results – Vertical - Peak

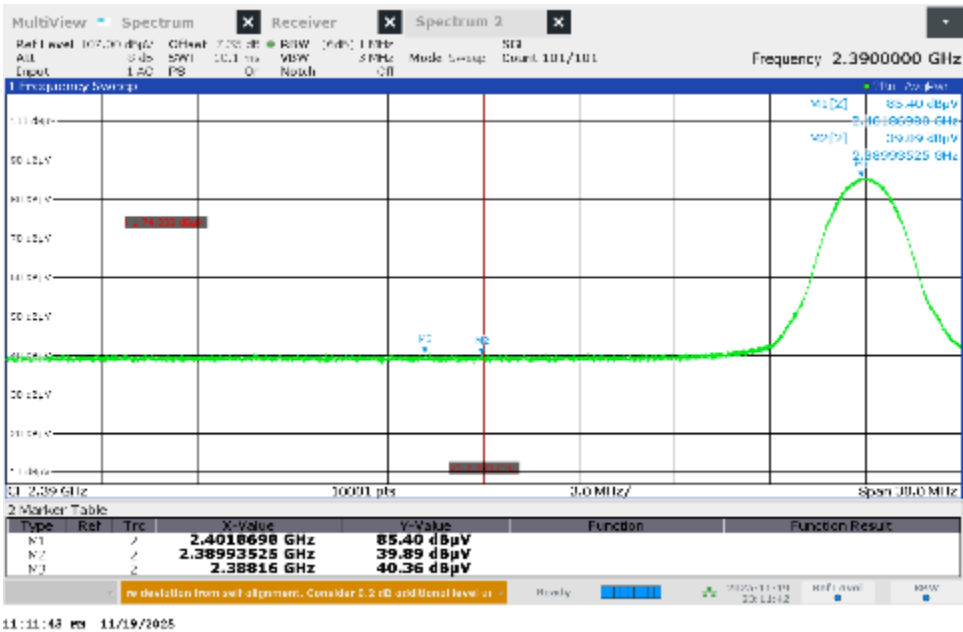


Figure 2.7.7-15 – Radiated Band-Edge Emissions Test Results – Vertical - Average

**Table 2.7.7-3– Radiated Emissions Test Results**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2389.33	51.40	74.00	-22.60	40.10	54.00	-13.90	112.00	2.50	Horizontal	Pass
2389.00	50.78	74.00	-23.22	40.36	54.00	-13.64	321.00	1.18	Vertical	Pass

Test Notes: 2 Mbps, TX Power Setting = 0



Band-Edge Emissions 2.3-2.6 GHz - TX ON_2 Mbps_2480MHz_Z-axis

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
2.3 GHz - 2.6 GHz	3m	Vertical	1 MHz	6001 Pts	200 ms
2.3 GHz - 2.6 GHz	3m	Horizontal	1 MHz	6001 Pts	200 ms

Test Area	Tested By	Test Date	Temperature	Humidity	Pressure
3mSAC	Thierry Jean-Charles	11/19/2025	25.1C	22%	988 mBar

Technology	Frequency	Channel	Mode	EUT Orientation
BLE	2480 MHz	39	TX	Z-axis

Limit:

FCC Part 15/FCC 15.205 [15.247 (d)] - Q-Peak, Peak, RMS & Avg

Test Results:

Pass

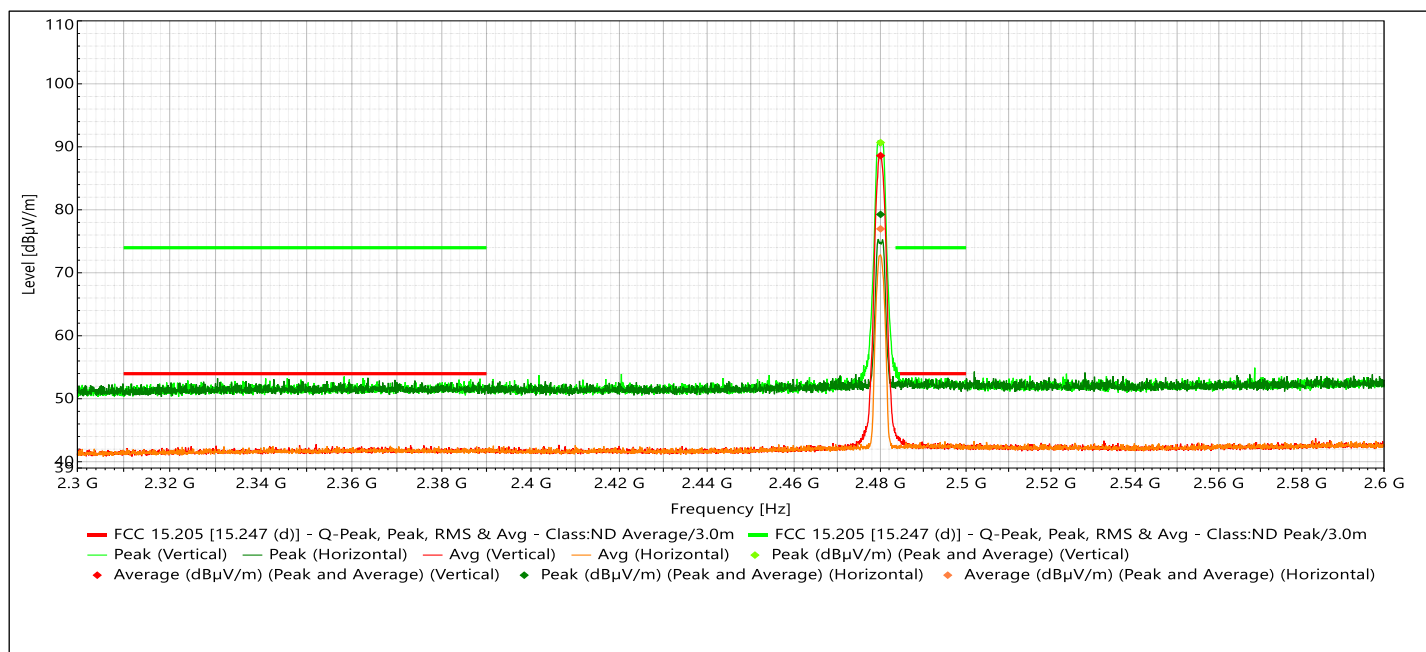


Figure 2.7.7-16 – Radiated Band-Edge Emissions Test Results – Prescan Plot

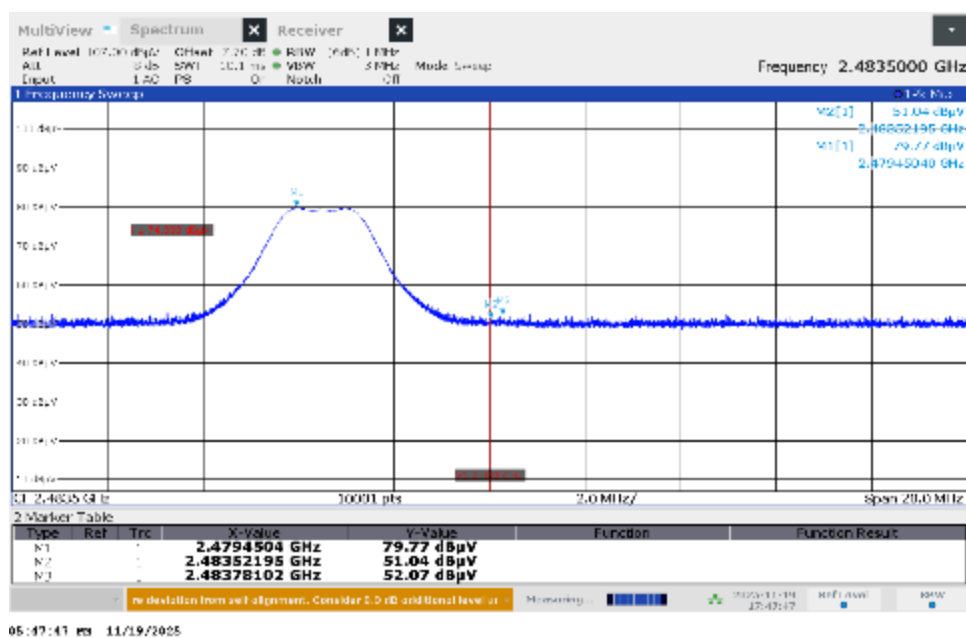


Figure 2.7.7-17 – Radiated Band-Edge Emissions Test Results – Horizontal - Peak

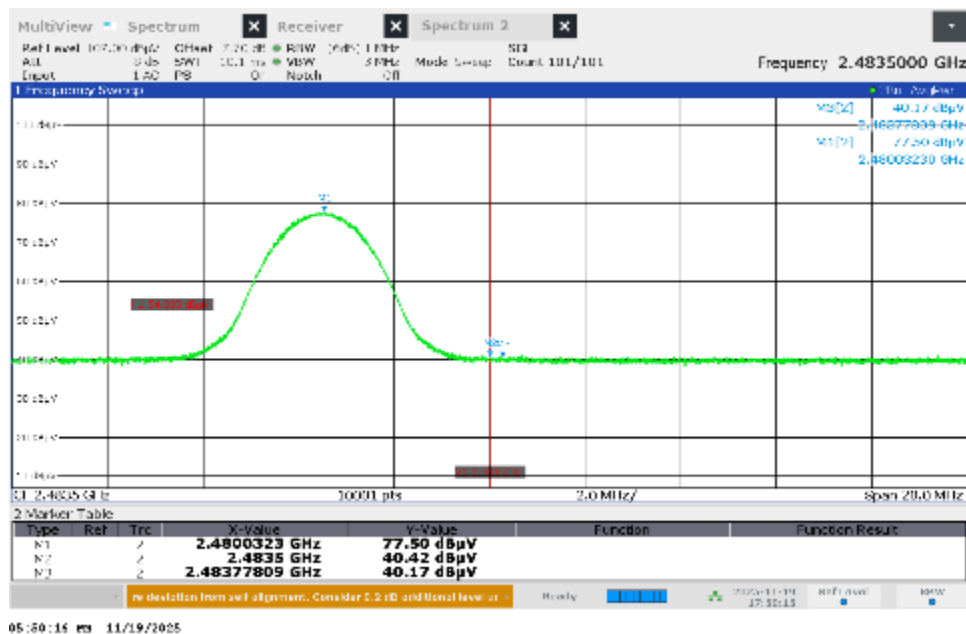


Figure 2.7.7-18 – Radiated Band-Edge Emissions Test Results – Horizontal - Average

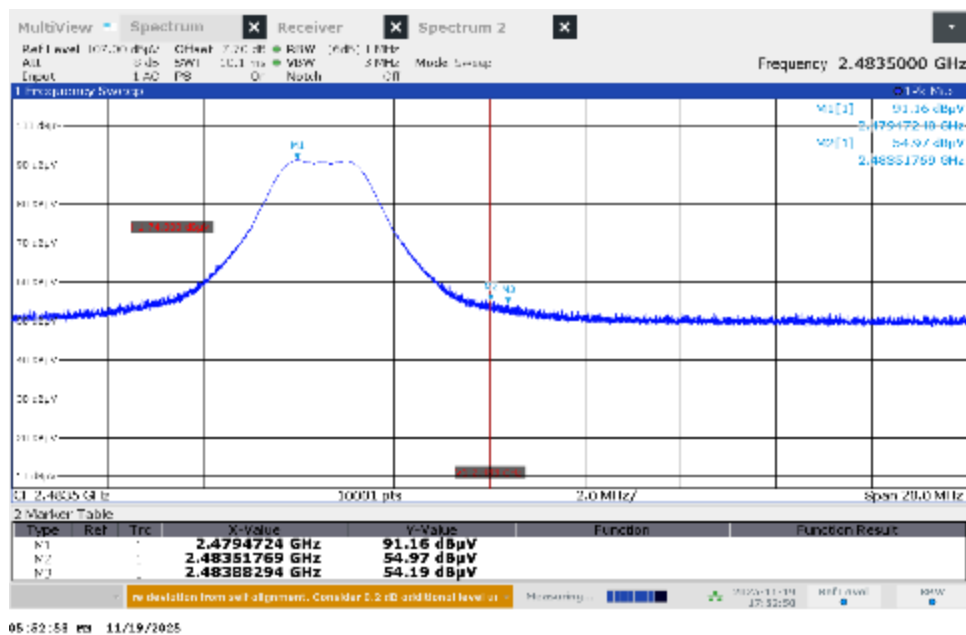


Figure 2.7.7-19 – Radiated Band-Edge Emissions Test Results – Vertical - Peak

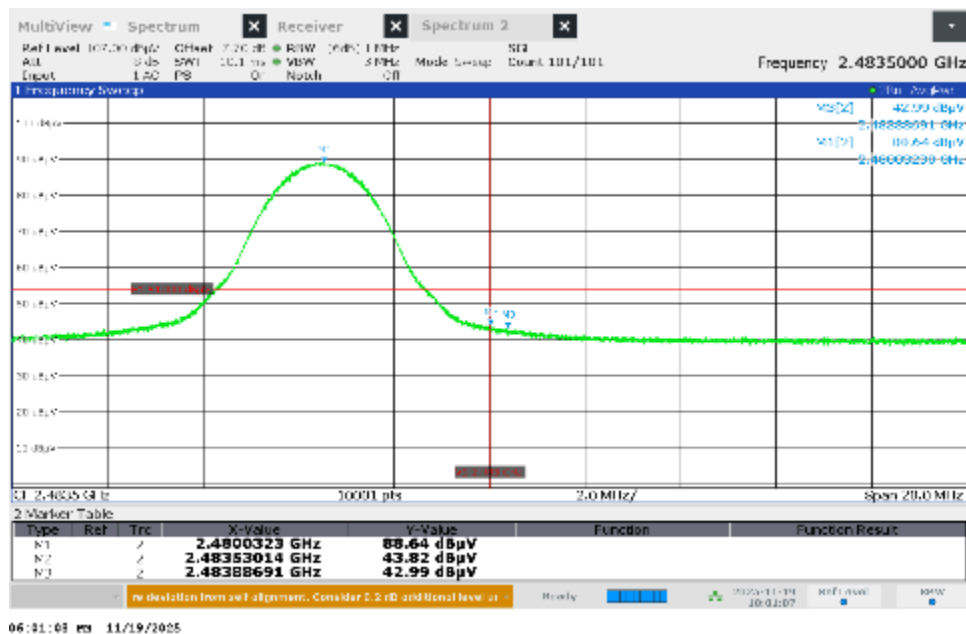


Figure 2.7.7-20 – Radiated Band-Edge Emissions Test Results – Vertical - Average

**Table 2.7.7-4– Radiated Emissions Test Results**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2483.52	51.04	74.00	-22.96	40.42	54.00	-13.58	241.00	3.40	Horizontal	Pass
2483.78	52.07	74.00	-21.93	40.17	54.00	-13.83	241.00	3.40	Horizontal	Pass
2483.52	54.97	74.00	-19.03	43.82	54.00	-10.18	288.00	1.00	Vertical	Pass
2483.88	54.19	74.00	-19.81	42.99	54.00	-11.01	288.00	1.00	Vertical	Pass

Test Notes: 2 Mbps, TX Power Setting = 0



Band-Edge Emissions 2.3-2.6 GHz - TX ON_125 kbps_2402MHz_Z-axis

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
2.3 GHz - 2.6 GHz	3m	Vertical	1 MHz	6001 Pts	200 ms
2.3 GHz - 2.6 GHz	3m	Horizontal	1 MHz	6001 Pts	200 ms

Test Area	Tested By	Test Date	Temperature	Humidity	Pressure
3mSAC	Thierry Jean-Charles	11/20/2025	24.3.C	28%	983 mBar

Technology	Frequency	Channel	Mode	EUT Orientation
BLE	2402 MHz	0	TX	Z-axis

Limit:

FCC Part 15/FCC 15.205 [15.247 (d)] - Q-Peak, Peak, RMS & Avg

Test Results:

Pass

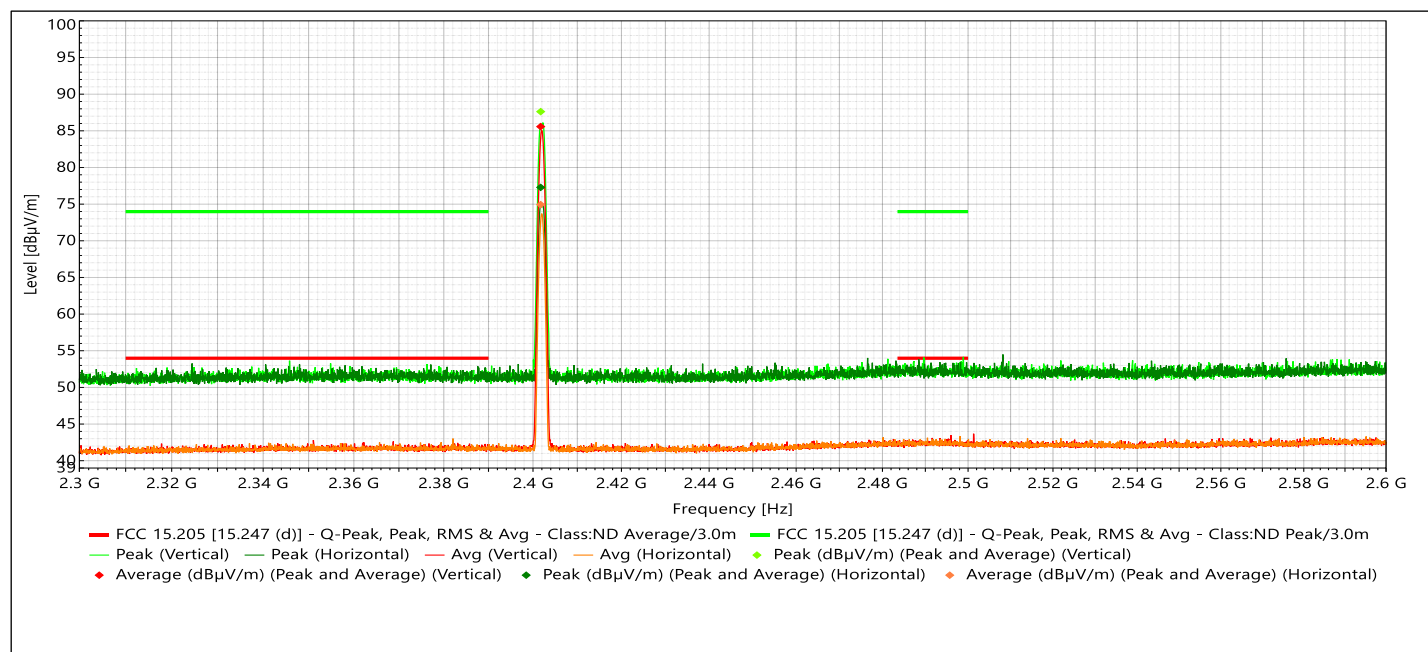


Figure 2.7.7-21 – Radiated Band-Edge Emissions Test Results – Prescan Plot

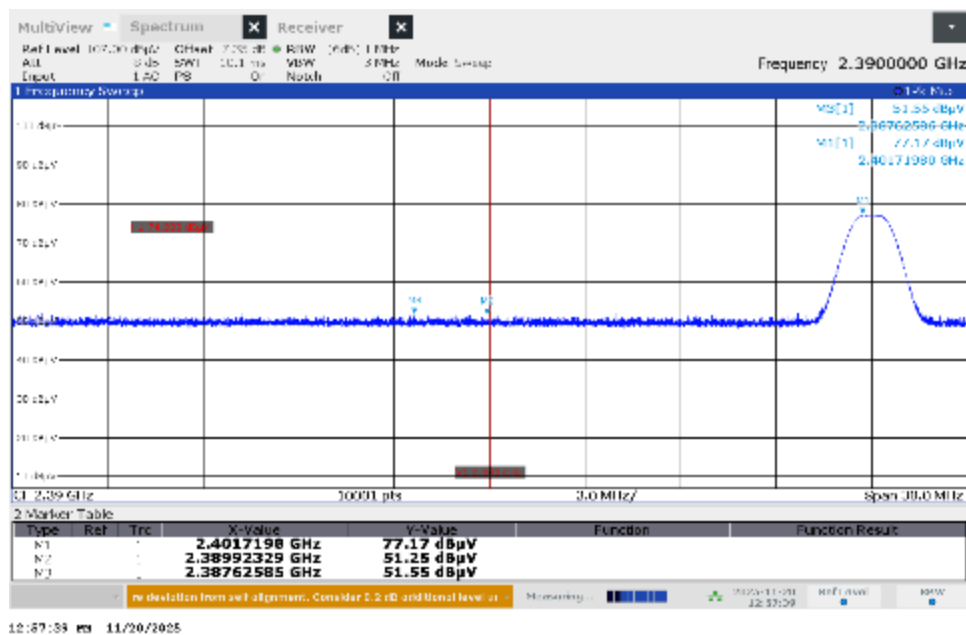


Figure 2.7.7-22 – Radiated Band-Edge Emissions Test Results – Horizontal - Peak



Figure 2.7.7-23 – Radiated Band-Edge Emissions Test Results – Horizontal - Average

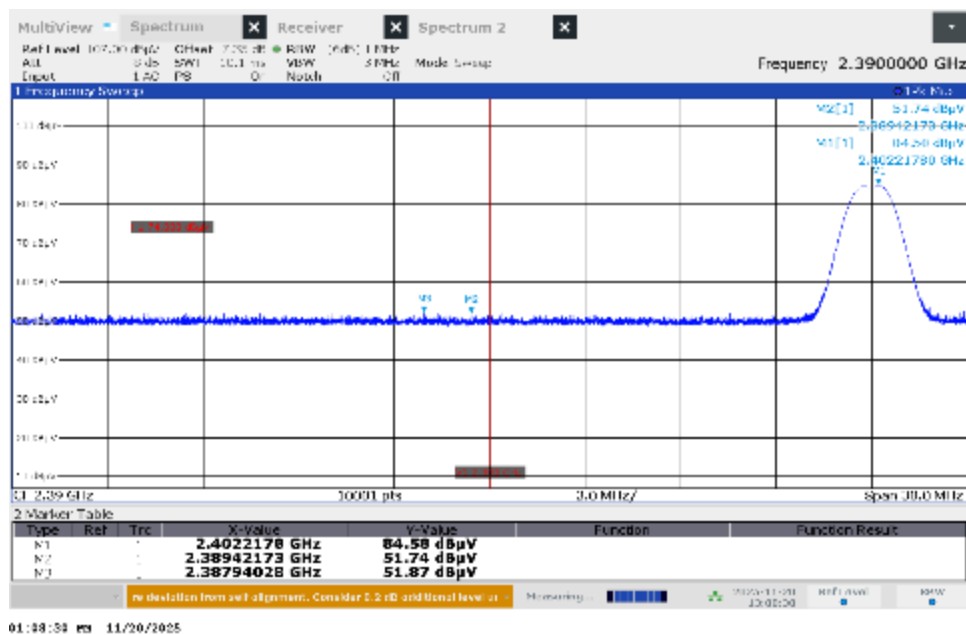


Figure 2.7.7-24 – Radiated Band-Edge Emissions Test Results – Vertical - Peak



Figure 2.7.7-25 – Radiated Band-Edge Emissions Test Results – Vertical - Average

**Table 2.7.7-5– Radiated Emissions Test Results**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2389.92	51.25	74.00	-22.75	39.76	54.00	-14.24	136.00	1.45	Horizontal	Pass
2387.63	51.55	74.00	-22.45	40.10	54.00	-13.90	136.00	1.45	Horizontal	Pass
2389.42	51.74	74.00	-22.26	39.89	54.00	-14.11	320.00	1.18	Vertical	Pass
2387.94	51.87	74.00	-22.13	40.19	54.00	-13.81	320.00	1.18	Vertical	Pass

Test Notes: 125 kbps, TX Power Setting = 0



Band-Edge Emissions 2.3-2.6 GHz - TX ON_125kbps_2480MHz_Z-axis

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
2.3 GHz - 2.6 GHz	3m	Vertical	1 MHz	6001 Pts	200 ms
2.3 GHz - 2.6 GHz	3m	Horizontal	1 MHz	6001 Pts	200 ms

Test Area	Tested By	Test Date	Temperature	Humidity	Pressure
3mSAC	Thierry Jean-Charles	11/19/2025	25.1C	22%	988 mBar

Technology	Frequency	Channel	Mode	EUT Orientation
BLE	2480 MHz	39	TX	Z-axis

Limit:

FCC Part 15/FCC 15.205 [15.247 (d)] - Q-Peak, Peak, RMS & Avg

Test Results:

Pass

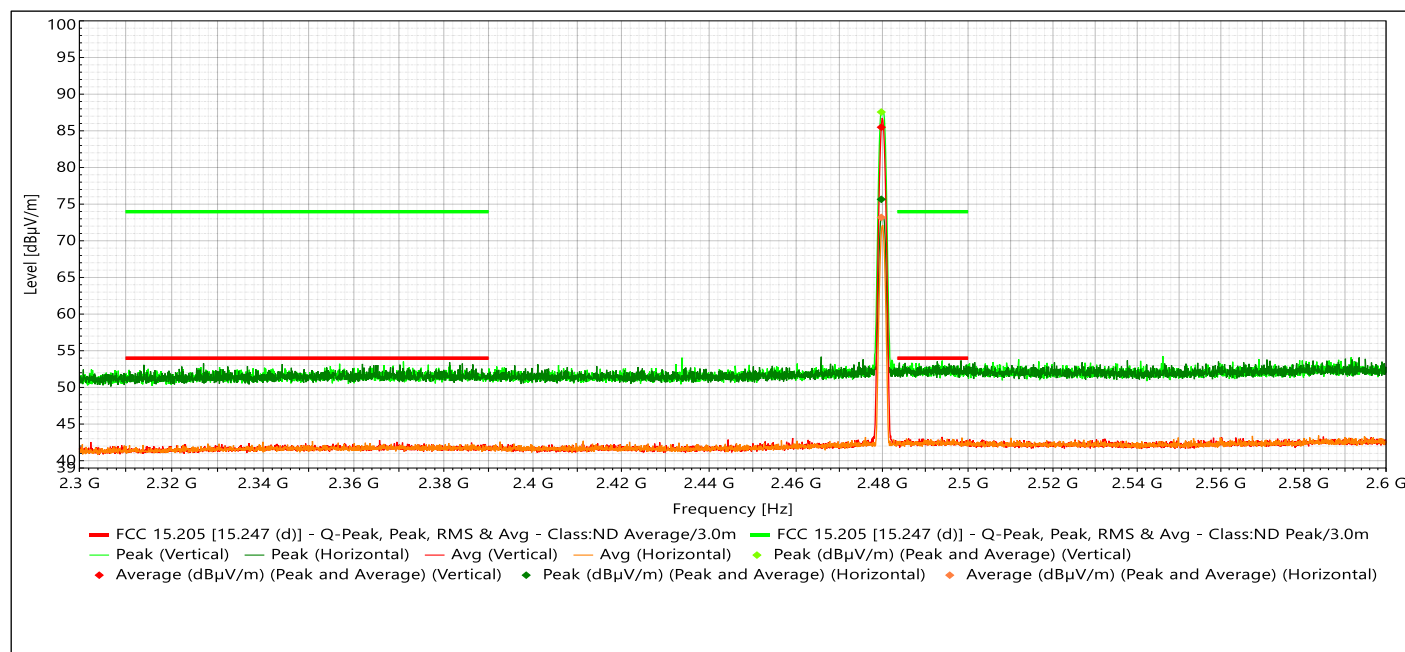


Figure 2.7.7-26 – Radiated Band-Edge Emissions Test Results – Prescan Plot

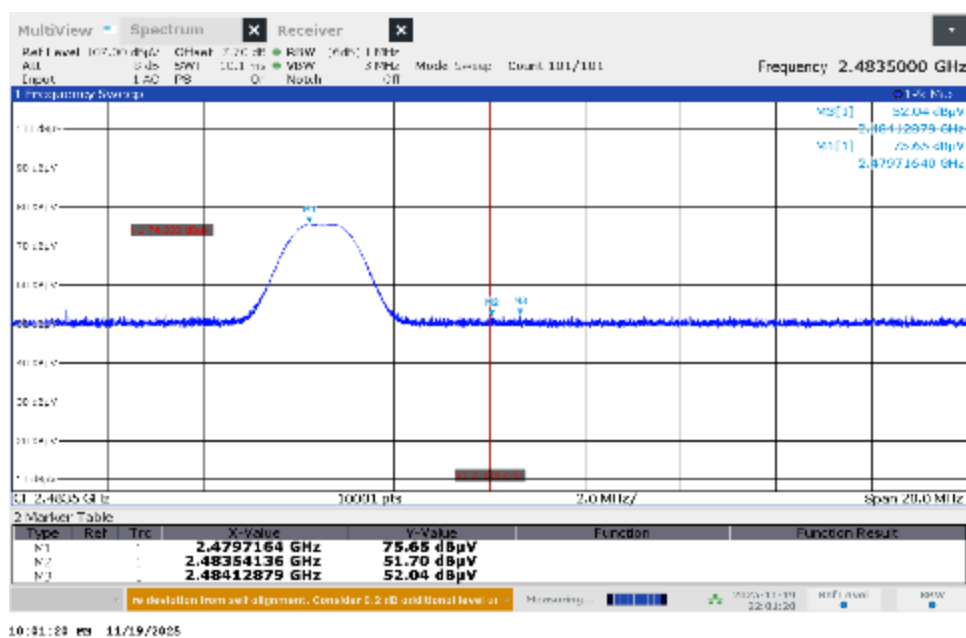


Figure 2.7.7-27 – Radiated Band-Edge Emissions Test Results – Horizontal - Peak

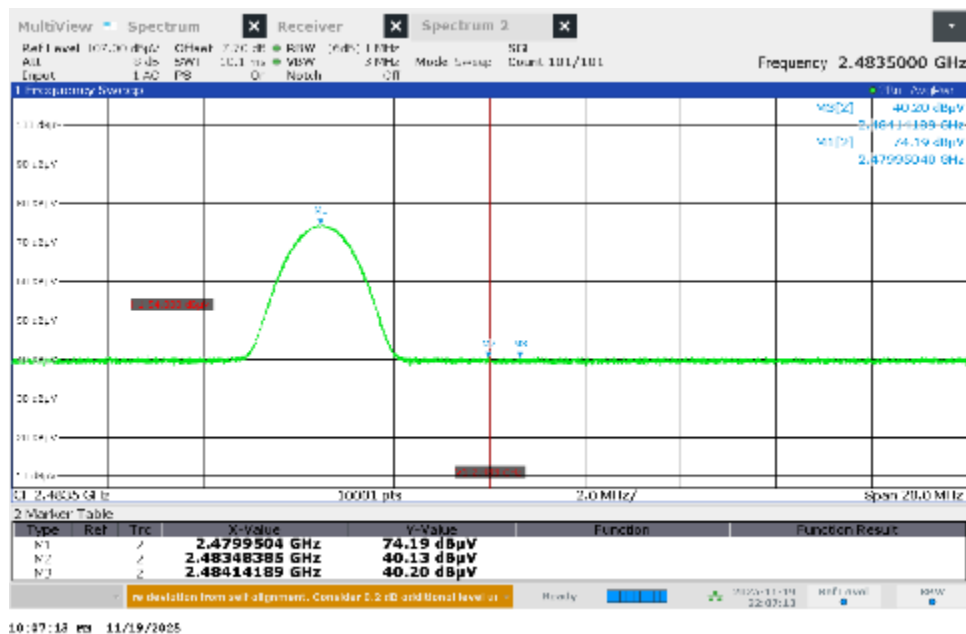


Figure 2.7.7-28 – Radiated Band-Edge Emissions Test Results – Horizontal - Average

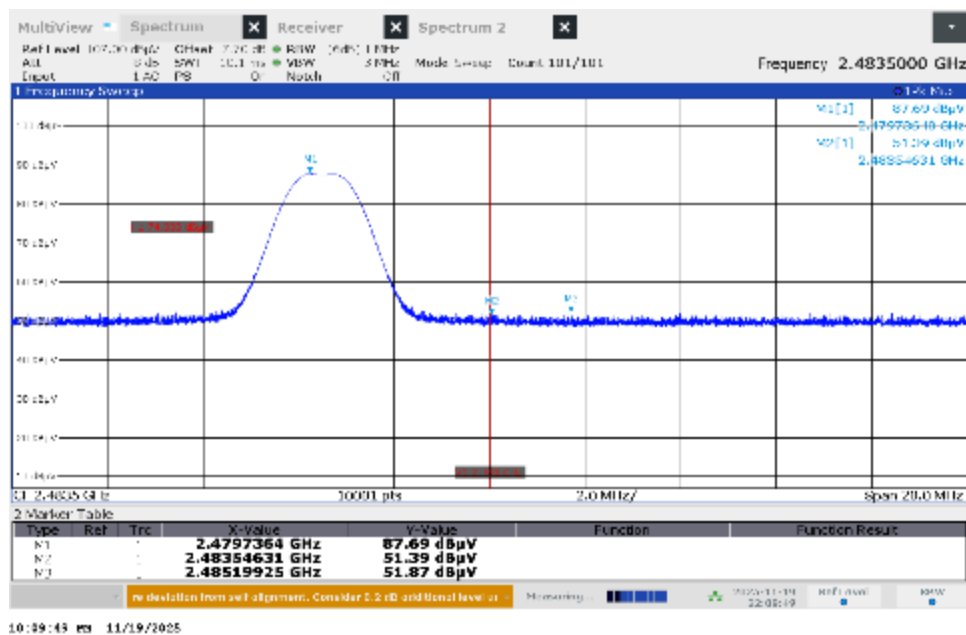


Figure 2.7.7-29 – Radiated Band-Edge Emissions Test Results – Vertical - Peak

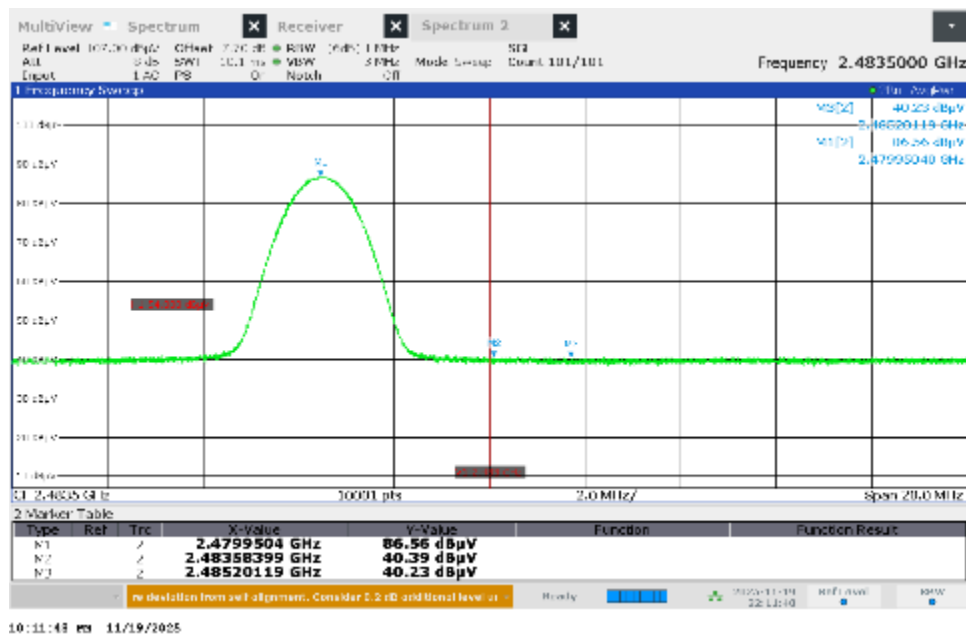


Figure 2.7.7-30 – Radiated Band-Edge Emissions Test Results – Vertical - Average

**Table 2.7.7-6– Radiated Emissions Test Results**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2483.54	51.70	74.00	-22.30	40.13	54.00	-13.87	288.00	1.00	Horizontal	Pass
2484.13	52.04	74.00	-21.96	40.20	54.00	-13.80	288.00	1.00	Horizontal	Pass
2483.55	51.39	74.00	-22.61	40.39	54.00	-13.61	321.00	307.00	Vertical	Pass
2485.20	51.87	74.00	-22.13	40.23	54.00	-13.77	321.00	307.00	Vertical	Pass

Test Notes: 125 kbps, TX Power Setting = 0



Band-Edge Emissions 2.3-2.6 GHz - TX ON_500 kbps_2402MHz_Z-axis

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
2.3 GHz - 2.6 GHz	3m	Vertical	1 MHz	6001 Pts	200 ms
2.3 GHz - 2.6 GHz	3m	Horizontal	1 MHz	6001 Pts	200 ms

Test Area	Tested By	Test Date	Temperature	Humidity	Pressure
3mSAC	Thierry Jean-Charles	11/20/2025	24.3.C	28%	983 mBar

Technology	Frequency	Channel	Mode	EUT Orientation
BLE	2402 MHz	0	TX	Z-axis

Limit:

FCC Part 15/FCC 15.205 [15.247 (d)] - Q-Peak, Peak, RMS & Avg

Test Results:

Pass

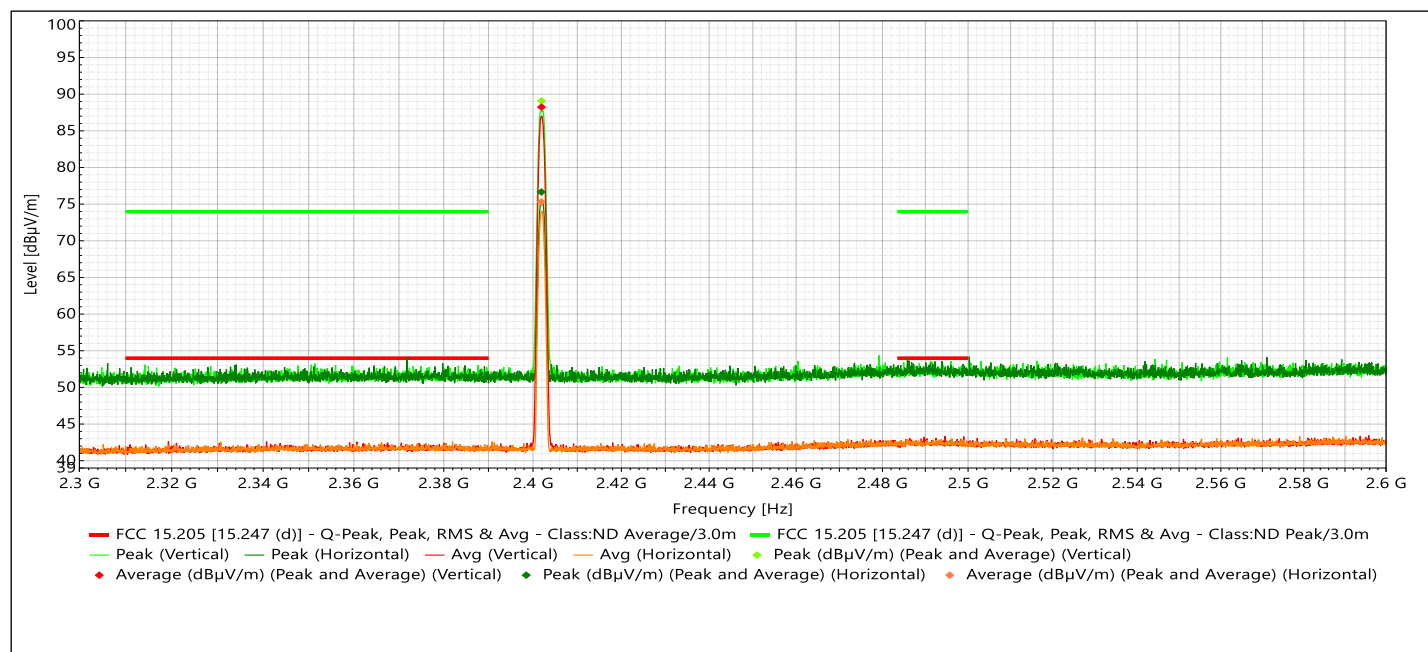


Figure 2.7.7-31 – Radiated Band-Edge Emissions Test Results – Prescan Plot

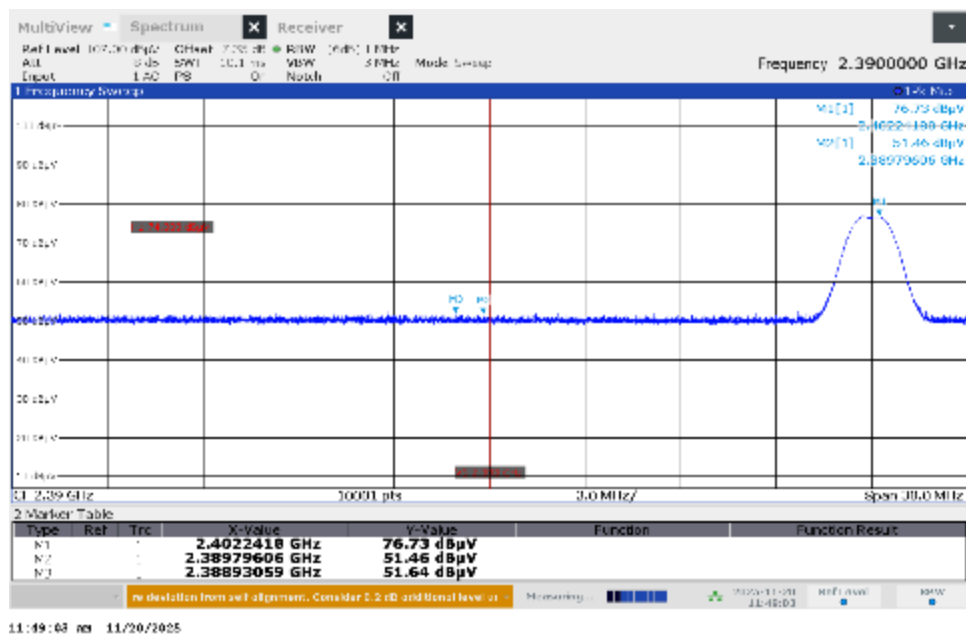


Figure 2.7.7-32 – Radiated Band-Edge Emissions Test Results – Horizontal - Peak



Figure 2.7.7-33 – Radiated Band-Edge Emissions Test Results – Horizontal - Average

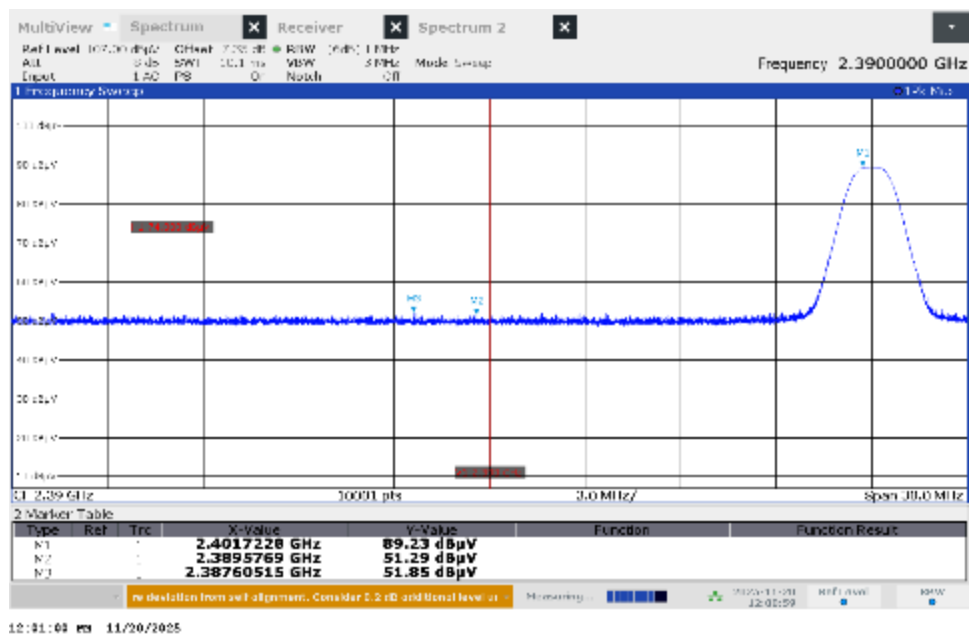


Figure 2.7.7-34 – Radiated Band-Edge Emissions Test Results – Vertical - Peak

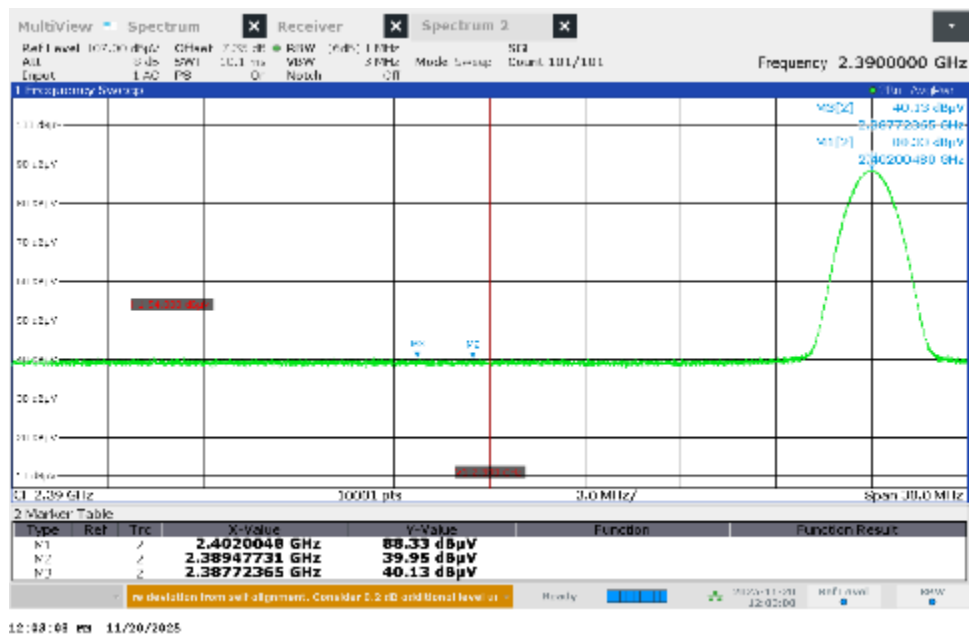


Figure 2.7.7-35 – Radiated Band-Edge Emissions Test Results – Vertical - Average

**Table 2.7.7-7– Radiated Emissions Test Results**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2389.80	51.46	74.00	-22.54	40.01	54.00	-13.99	0.00	2.15	Horizontal	Pass
2388.93	51.64	74.00	-22.36	39.85	54.00	-14.15	0.00	2.15	Horizontal	Pass
2389.58	51.29	74.00	-22.71	39.95	54.00	-14.05	280.00	1.18	Vertical	Pass
2387.61	51.85	74.00	-22.15	40.13	54.00	-13.87	280.00	1.18	Vertical	Pass

Test Notes: 500 kbps, TX Power Setting = 0



Band-Edge Emissions 2.3-2.6 GHz - TX ON_500kbps_2480MHz_Z-axis

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
2.3 GHz - 2.6 GHz	3m	Vertical	1 MHz	6001 Pts	200 ms
2.3 GHz - 2.6 GHz	3m	Horizontal	1 MHz	6001 Pts	200 ms

Test Area	Tested By	Test Date	Temperature	Humidity	Pressure
3mSAC	Thierry Jean-Charles	11/19/2025	25.1C	22%	988 mBar

Technology	Frequency	Channel	Mode	EUT Orientation
BLE	2480 MHz	39	TX	Z-axis

Limit:

FCC Part 15/FCC 15.205 [15.247 (d)] - Q-Peak, Peak, RMS & Avg

Test Results:

Pass



Figure 2.7.7-36 – Radiated Band-Edge Emissions Test Results – Prescan Plot

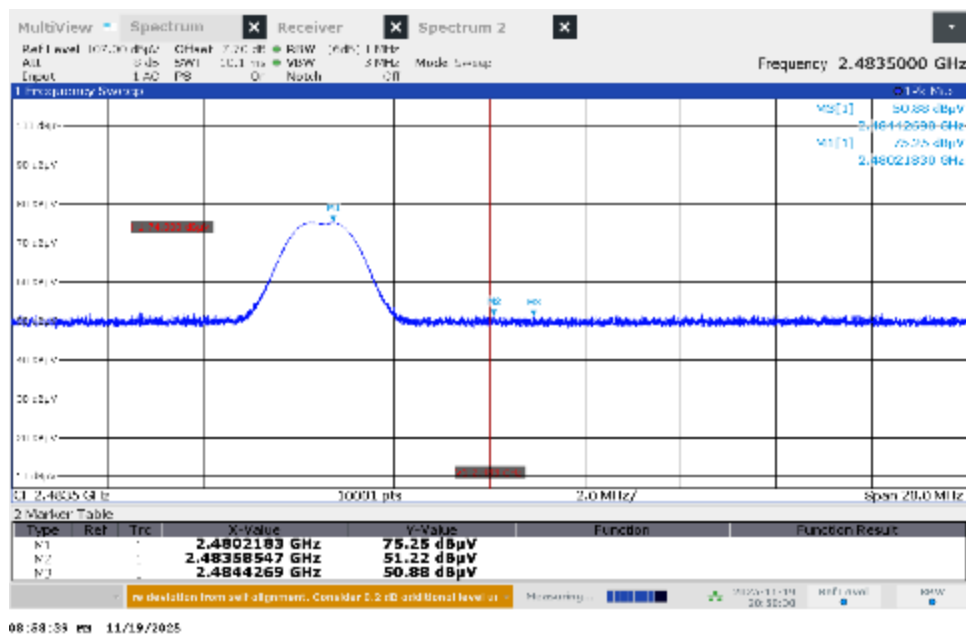


Figure 2.7.7-37 – Radiated Band-Edge Emissions Test Results – Horizontal - Peak

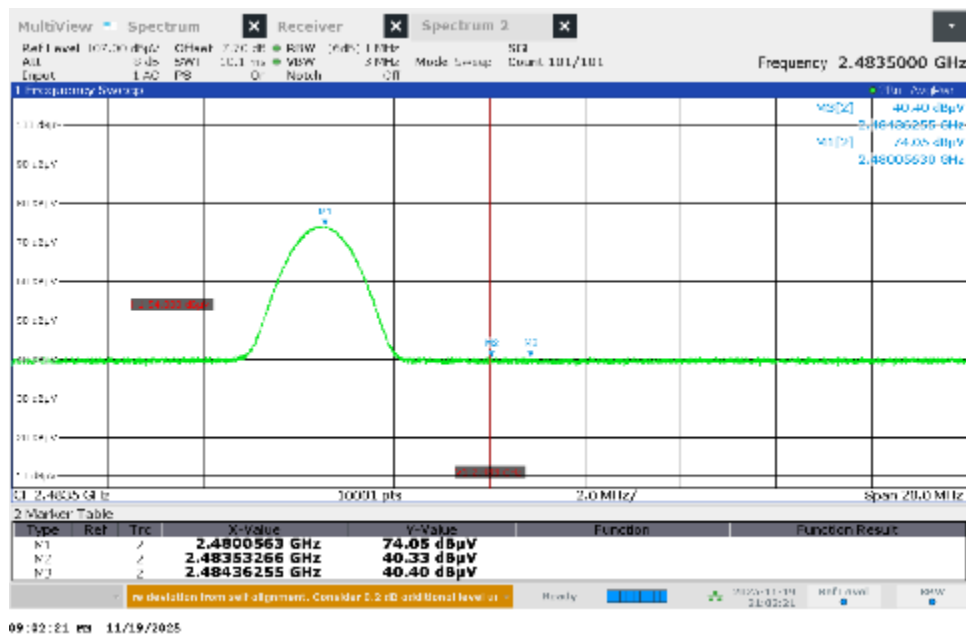


Figure 2.7.7-38 – Radiated Band-Edge Emissions Test Results – Horizontal - Average

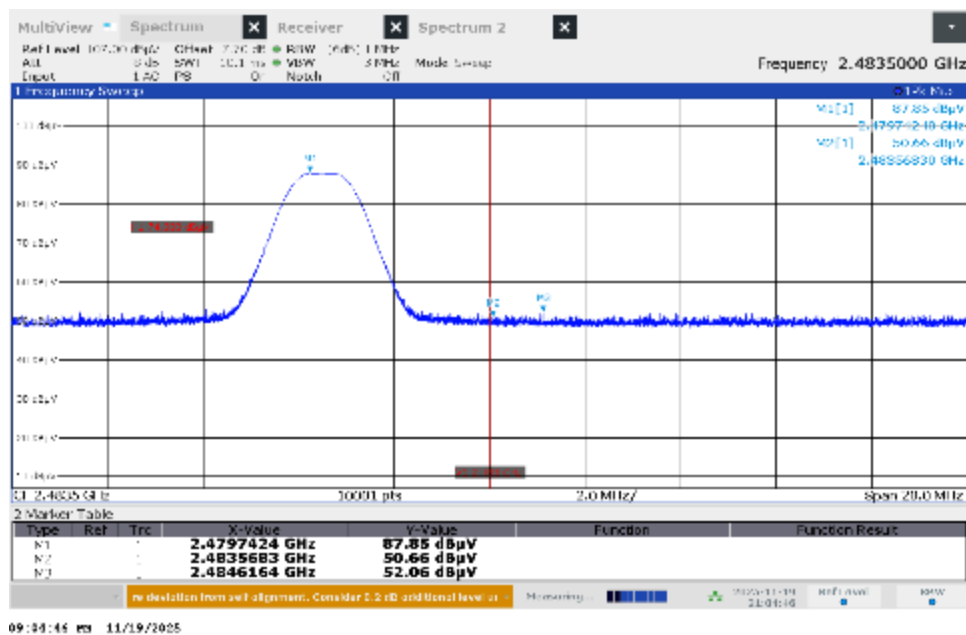


Figure 2.7.7-39 – Radiated Band-Edge Emissions Test Results – Vertical – Peak

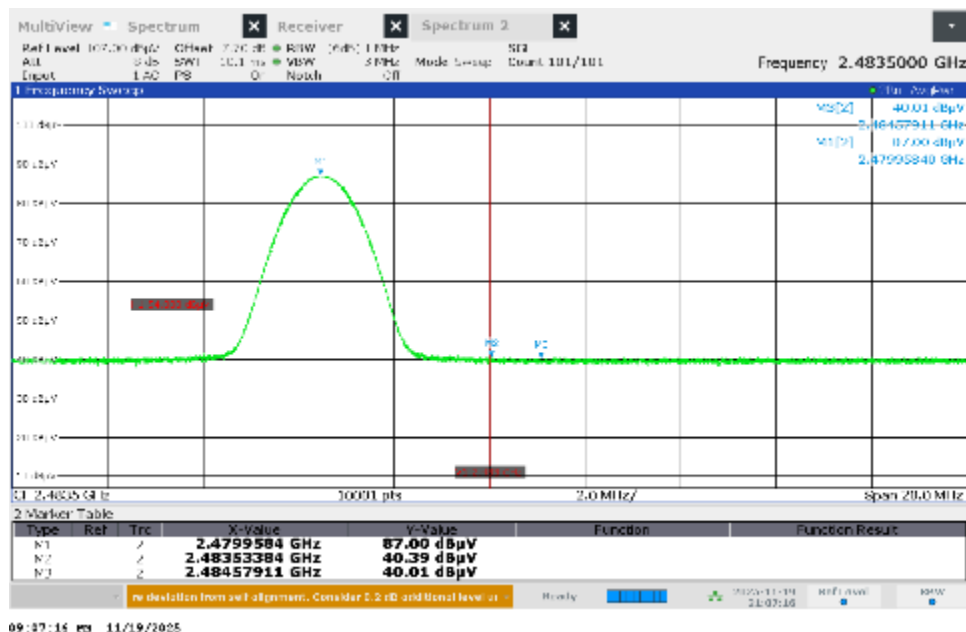


Figure 2.7.7-40 – Radiated Band-Edge Emissions Test Results – Vertical - Average

**Table 2.7.7-8– Radiated Emissions Test Results**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
2483.59	51.22	74.00	-22.78	40.33	54.00	-13.67	128.00	2.30	Horizontal	Pass
2484.43	50.88	74.00	-23.12	40.40	54.00	-13.60	128.00	2.30	Horizontal	Pass
2483.57	50.66	74.00	-23.34	40.39	54.00	-13.61	321.00	1.00	Vertical	Pass
2484.62	52.06	74.00	-21.94	40.01	54.00	-13.99	321.00	1.00	Vertical	Pass

Test Notes: 500 kbps, TX Power Setting = 0



Spurious Emissions 9kHz-30MHz - TX ON_1 Mbps_2402MHz_X-axis - Vertical Co-Axial

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
9 kHz - 150 kHz	3m	Vertical	200 Hz	1411 Pts	5 ms/MHz
150 kHz - 30 MHz	3m	Vertical	9 kHz	5971 Pts	5 ms/MHz

Test Area	Tested By	Test Date	Temperature	Humidity	Pressure
3mSAC	Thierry Jean-Charles	12/4/2025	23.8C	9%	992 mBar

Technology	Frequency	Channel	Mode	EUT Orientation
BLE	2402 MHz	0	TX	X-axis

Limit:
FCC Part 15/FCC §15.209_2025_09_23

Test Results:
Pass

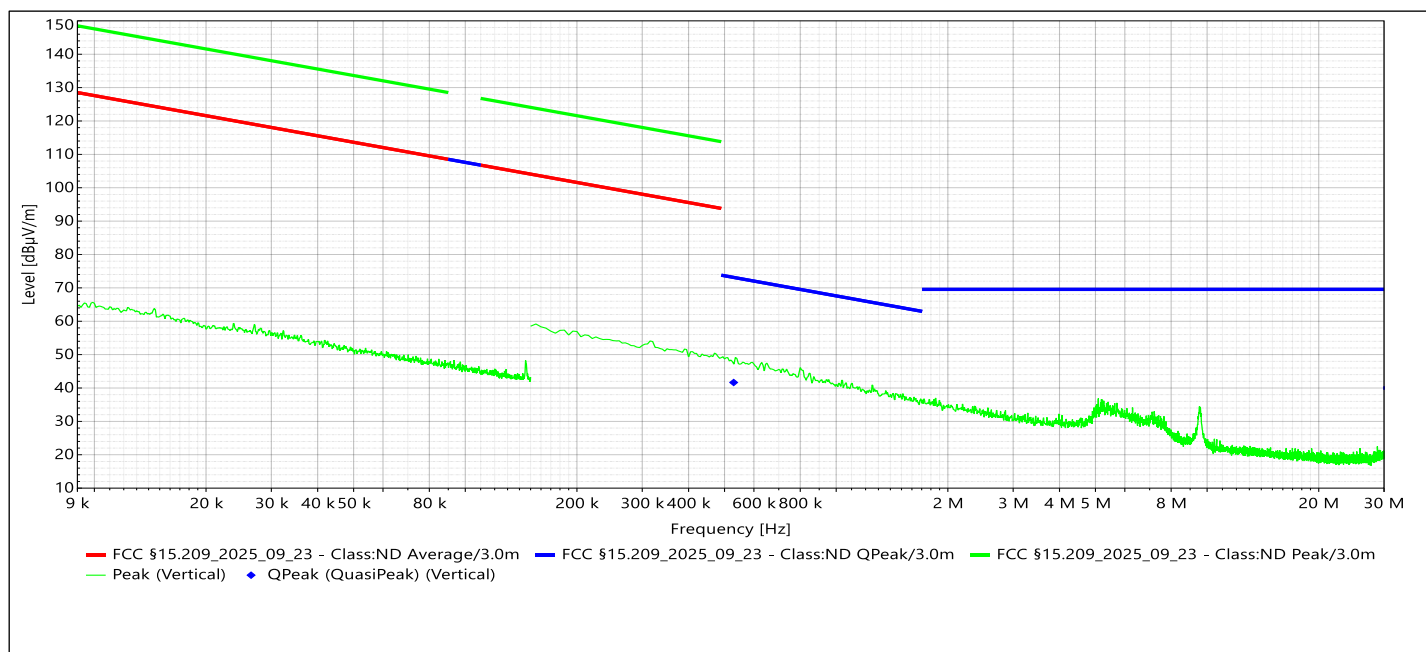


Figure 2.7.7-41 – Radiated Emissions Test Results

**Table 2.7.7-9– Radiated Emissions Test Results**

Frequency (MHz)	QP Level (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
0.529	41.65	73.12	-31.47	334.00	1.00	Vertical	Pass

Test Notes: 1 Mbps - TX Power Setting = 0 dBm, Power Leads



Spurious Emissions 30M-1GHz - TX ON _1 Mbps_2402MHz_X-axis

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
30 MHz - 1 GHz	3m	Vertical	120 kHz	19401 Pts	Auto
30 MHz - 1 GHz	3m	Horizontal	120 kHz	19401 Pts	Auto

Test Area	Tested By	Test Date	Temperature	Humidity	Pressure
3mSAC	Thierry Jean-Charles	11/21/2025	23.6 C	19 %	984 mBar

Technology	Frequency	Channel	Mode	EUT Orientation
BLE	2402 MHz	0	TX	X-axis

Limit:
FCC Part 15/FCC §15.209

Test Results:
Pass

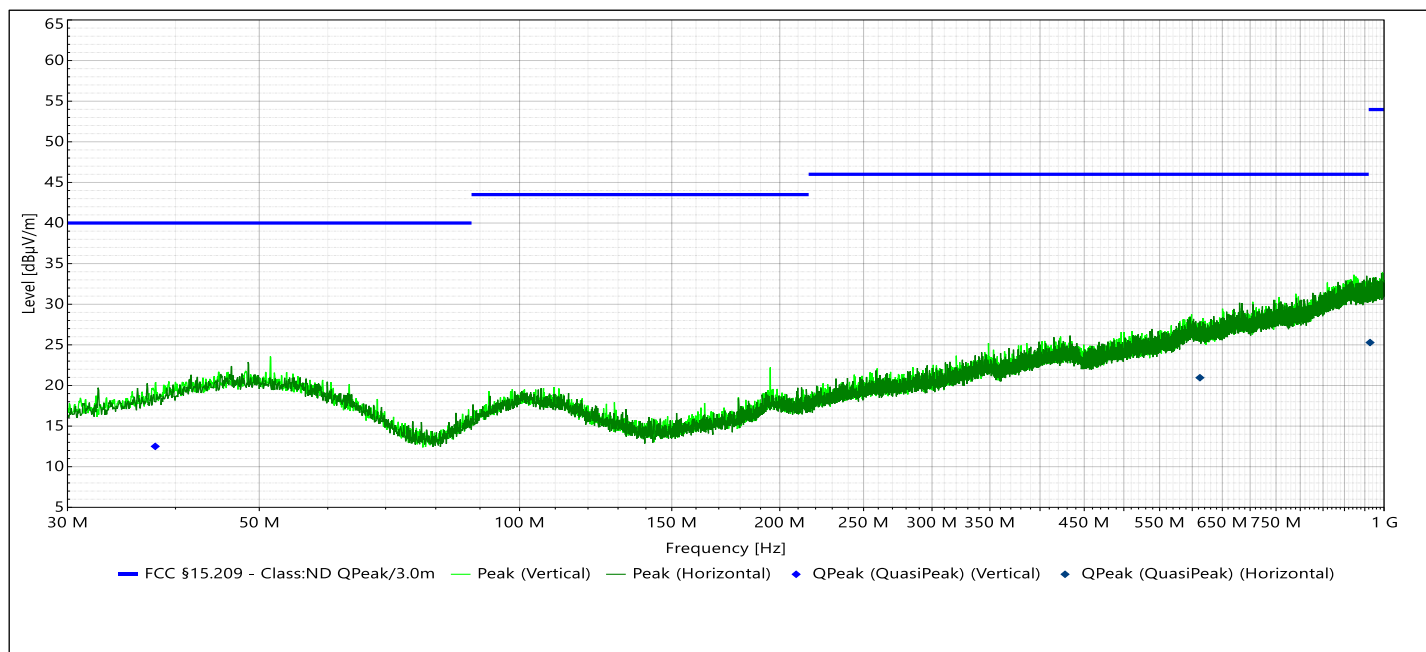


Figure 2.7.7-42 – Radiated Emissions Test Results

**Table 2.7.7-10– Radiated Emissions Test Results**

Frequency (MHz)	QP Level (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
37.900	12.50	40.00	-27.50	33.00	1.31	Vertical	Pass
612.373	20.96	46.00	-25.04	135.00	1.57	Horizontal	Pass
963.398	25.29	53.97	-28.68	334.00	3.89	Horizontal	Pass

Test Notes: 1 Mbps - TX Power Setting = 0 dBm



Spurious Emissions 1-18GHz - TX ON_1 Mbps_ 2402 MHz_ X-axis

Frequency Range	Antenna Distance	Antenna Polarization	RBW	Step Size	Sweep Time
1 GHz - 18 GHz	3m	Vertical	1 MHz	34001 Pts	200 ms
1 GHz - 18 GHz	3m	Horizontal	1 MHz	34001 Pts	200 ms

Test Area	Tested By	Test Date	Temperature	Humidity	Pressure
3mSAC	Thierry Jean-Charles	11/20/2025	24.9 C	27%	983 mBar

Technology	Frequency	Channel	Mode	EUT Orientation
BLE	2402 MHz	0	TX	X-axis

Limit:
FCC Part 15/FCC §15.209

Test Results:
Pass

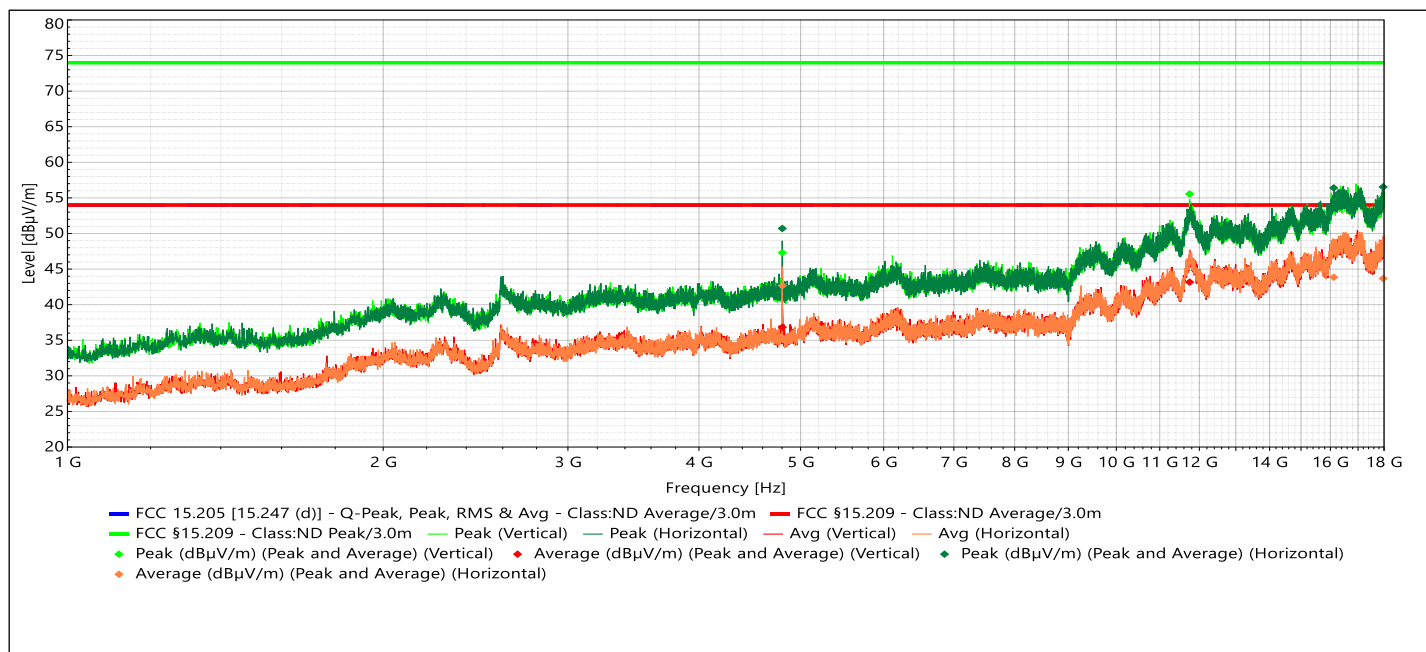


Figure 2.7.7-43 – Radiated Emissions Test Results

**Table 2.7.7-11– Radiated Emissions Test Results**

Frequency (MHz)	Peak Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)	Average Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)	Azimuth (°)	Height (m)	Polarity	Result
4803.465	47.30	74.00	-26.70	36.83	54.00	-17.17	95.00	1.00	Vertical	Pass
11746.499	55.56	74.00	-18.44	43.17	54.00	-10.83	176.00	3.60	Vertical	Pass
4803.465	50.70	74.00	-23.30	42.68	54.00	-11.32	225.00	1.18	Horizontal	Pass
16117.807	56.41	74.00	-17.59	43.85	54.00	-10.15	360.00	1.46	Horizontal	Pass
17965.017	56.54	74.00	-17.46	43.67	54.00	-10.33	152.00	1.37	Horizontal	Pass

Test Notes: 1 Mbps- TX Power Setting = 0 dBm