RHEIN TECH LABORATORIES, INC.

Engineering Solutions & Electromagnetic Compatibility Services

FCC & ISED Class 2 Permissive Change Report

L3Harris Technologies, Inc.
221 Jefferson Ridge Parkway
Lynchburg, VA 24501

TWO47 800 MHz Base Station
Model: SN-8TXMX

FCC ID: OWDTR-0168-E
IC: 3636B-0168

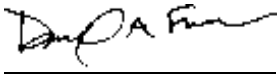
December 4, 2024

Standards Referenced for this Report	
Part 2: 2023	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
Part 90: 2023	Private Land Mobile Radio Services
ANSI C63.26-2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
RSS-119 Issue 12	Land Mobile and Fixed Radio Transmitters and Receivers 27.41 to 960.0 MHz

Report Prepared By: Daniel W. Baltzell

Document Number: 20242118TNB

I, the undersigned, hereby declare that the equipment tested and referenced in this report conforms to the identified standard(s) as described in this test report. No modifications were made to the equipment during testing in order to achieve compliance with these standards. Furthermore, there was no deviation from, additions to, or exclusions from the standards referenced above.

Signature: 

Date: December 4, 2024

Typed/Printed Name: Desmond A. Fraser

Position: President

This report may not be reproduced, except in full, without the full written approval of Rhein Tech Laboratories, Inc. and L3 Harris Technologies, Inc. Test results relate only to the item tested.
This report replaces R0.5.

These tests are accredited and meet the requirements of ISO/IEC 17025 as verified by ANAB.
Refer to certificate and scope of accreditation AT-1445.

FCC Equipment Class: TNB

FCC Rule Part	Frequency Range (MHz)	Rated Conducted Output Power (W)	Frequency Tolerance (ppm)	Emission Designator	Transmit Mode
90	851 – 869	100.0	0.05	11K0F3E	Analog FM (Narrowband)
90	851 – 854	100.0	0.05	14K0F3E	Analog FM (NPSPAC)
90	854 – 869	100.0	0.05	16K0F3E	Analog FM (Wideband)

** power is conducted*

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1 Test Result Summary

Test	FCC Reference	ISED Reference	Result
RF Power Output	2.1046(a), 90.635	RSS-119 4.1, 5.4	Complies
Spurious Emissions at Antenna Terminals	2.1051, 90.210	RSS-119 5.5, 5.8	Complies
Occupied Bandwidth/Emission Masks	2.1049(c)(1), 90.210	RSS-119 5.5, 5.8	Complies
Frequency Stability vs. Temperature and Voltage	2.1055, 90.213	RSS-119 5.3	Complies
99% Bandwidth	N/A	RSS-Gen	Complies

2 General Information

The following Class 2 Permissive Change Report is prepared on behalf of L3Harris Technologies, Inc. in accordance with the Federal Communications Commission and ISED Canada rules and regulations. The Equipment Under Test (EUT) was the SN-8TXMX; FCC ID: OWDTR-0168-E, IC: 3636B-0168.

All measurements contained in this application were conducted in accordance with the applicable sections of FCC Rules and Regulations CFR 47 Parts 2 and 90. Calibration checks are performed regularly on the instruments, and all accessories including high pass filter, coaxial attenuator, preamplifier and cables.

2.1 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located on the parking lot of Rhein Tech Laboratories, Inc. 360 Herndon Parkway, Suite 1400, Herndon, Virginia 20170.

ISED CAB ID: US0079, Company Number: 2956A

2.2 Related Submittal(s)/Grant(s)

This is a Class 2 Permissive change for the addition of analog FM Wideband, Narrowband, and NPSPAC modulations for L3Harris Technologies, Inc. Model/HVIN: SN-8TXMX, FCC ID: OWDTR-0168-E, IC: 3636B-0168.

2.3 Grant Notes

The output power is continuously variable from the value listed in this entry to 5%-10% of the value listed. Output power is conducted. The antenna(s) used for this transmitter must be fixed-mounts on outdoor permanent structures. RF exposure compliance at the time of licensing, as required by the responsible FCC Bureau(s) including antenna co-location requirements of §1.1307(b)(3).

2.4 Tested System Details

The test sample was received on September 23, 2024. Listed below are the identifiers and descriptions of all equipment, cables, and internal devices used with the EUT for this test, as applicable.

The device was programmed for multiple modes of operation and modulation types.

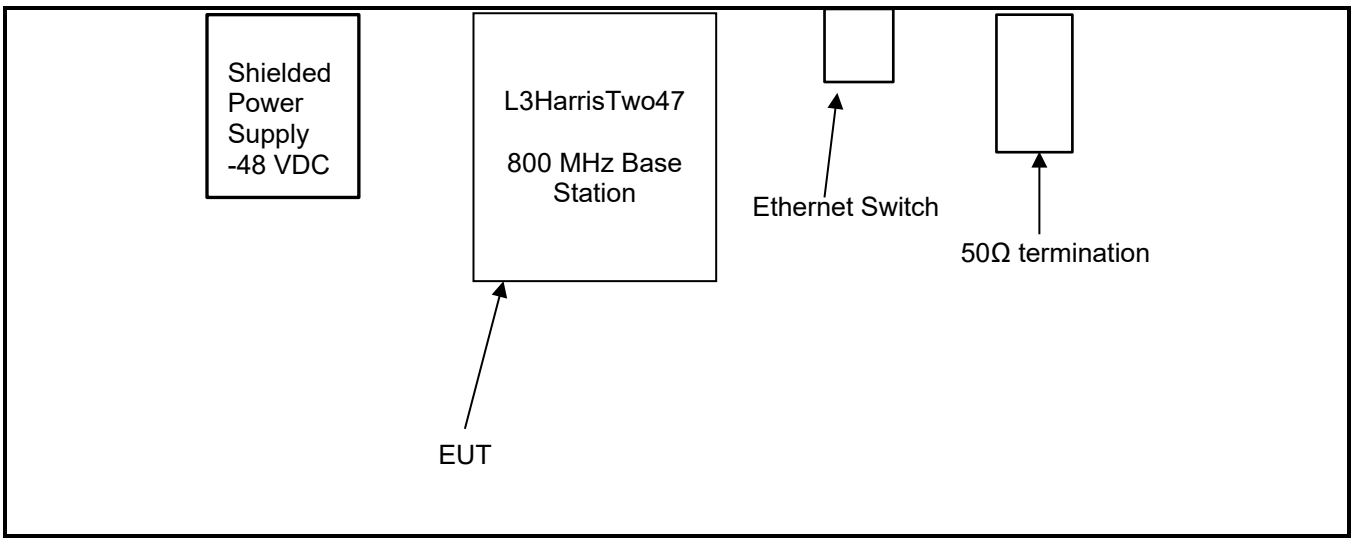
Table 2-1: Equipment Under Test (EUT)

Part	Manufacturer	Model/HVIN	PN/SN	FCC ID	ISED ID	RTL Bar Code
800 MHz Base Station	L3Harris Technologies, Inc.	Two47/ SN-8TXMX	CK24E1702749	OWDTR-0168-E	3636B-0168	24429

Table 2-2: Auxiliary Equipment

Part	Manufacturer	Model	PN/SN	RTL Bar Code
Ethernet Switch	D-Link	DGS-1005P	TM8512C002320	24427
AC Adapter	Channel Well Technology	XPL-065P-B	11-22090000-89757	24432
Control Head	L3Harris Technologies, Inc.	XL-CH	A40314067467	24431
Mobile Radio	L3Harris Technologies, Inc.	XL200	A40312061684	24430
DC power supply	Samlex	SEC-1223BBM	03064-2333-0585	24433
PTT Box	L3Harris Technologies, Inc.	N/A	N/A	2444

Figure 2-1: Configuration of Tested System



3 Test Modes

In accordance with C63.26-2015 Table 2, because the EUT operates over a frequency range greater than 10 MHz the following frequencies were tested:

Table 3-1: Channels Tested

Channel	Frequency (MHz)
Low	851.00625
Middle	860.00625
High	868.99375

4 FCC Part 2.1046(a): RF Power Output: Conducted; ISED RSS-119 4.1: Transmitter Output Power

4.1 Test Procedure

ANSI C63.26, section 5.2

The EUT was connected to a coaxial attenuator having a 50 Ω load impedance. Manufacturer's rated power: 100.0 W

4.2 Test Data

Table 4-1: Environmental Conditions

Date	Temperature (°C)	Humidity (%)	Atmospheric Pressure (kPa)
September 23, 2024	24.7	35	101.9

Table 4-2: RF Conducted Output Power – Measured

Frequency (MHz)	High Power (dBm)	High Power (W)
851.00625	50.2	104.7
860.00625	50.2	104.7
868.99375	50.2	104.7

Notes: Data presented is for analog mode. All other modes were investigated and found to have equivalent power within measurement tolerances.

Measurement uncertainties shown for these tests are expanded uncertainties expressed at the 95% confidence level using a coverage factor K=2. Measurement uncertainty: ±0.8 dB

Results: Pass

Table 4-3: Test Equipment Used For Testing RF Power Output – Conducted

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901184	Agilent	E4416A	Power Meter	GB41050573	05/17/2027
901685	Agilent	E4412A	Power Sensor	MY41501646	05/17/2027
901338	Weinschel	46-40-34	40 dB 25 W Attenuator	BM0556	02/07/2025
901355	JFW Industries	50FH-003-300	300W 3DB DC1000 MHz Attenuator	N/A	03/23/2025
901291	Pasternack	PE7031-20	20 dB 300 W Attenuator	901291	02/08/2025
901791	Shireen	UF1-2.92	40 GHz 24" Cable	N/A	08/02/2025

Test Personnel:

Daniel W. Baltzell		September 23, 2024
EMC Test Engineer	Signature	Date of Test

5 FCC Part 2.1051: Spurious Emissions at Antenna Terminals; Part 90.210: Emission Limitations; ISED RSS-119 5.8: Transmitter Unwanted Emissions

5.1 Test Procedure

ANSI C63.26, Section 5.7

The transmitter is terminated with a 50 Ω load and interfaced with a spectrum analyzer. Device with digital modulation: Modulated to its maximum extent using a pseudo-random data sequence. Both high and low power settings were investigated; high power was found to be worst case and is presented.

Frequency range of measurement per Part 2.1057: 9 kHz to 10 x Fc

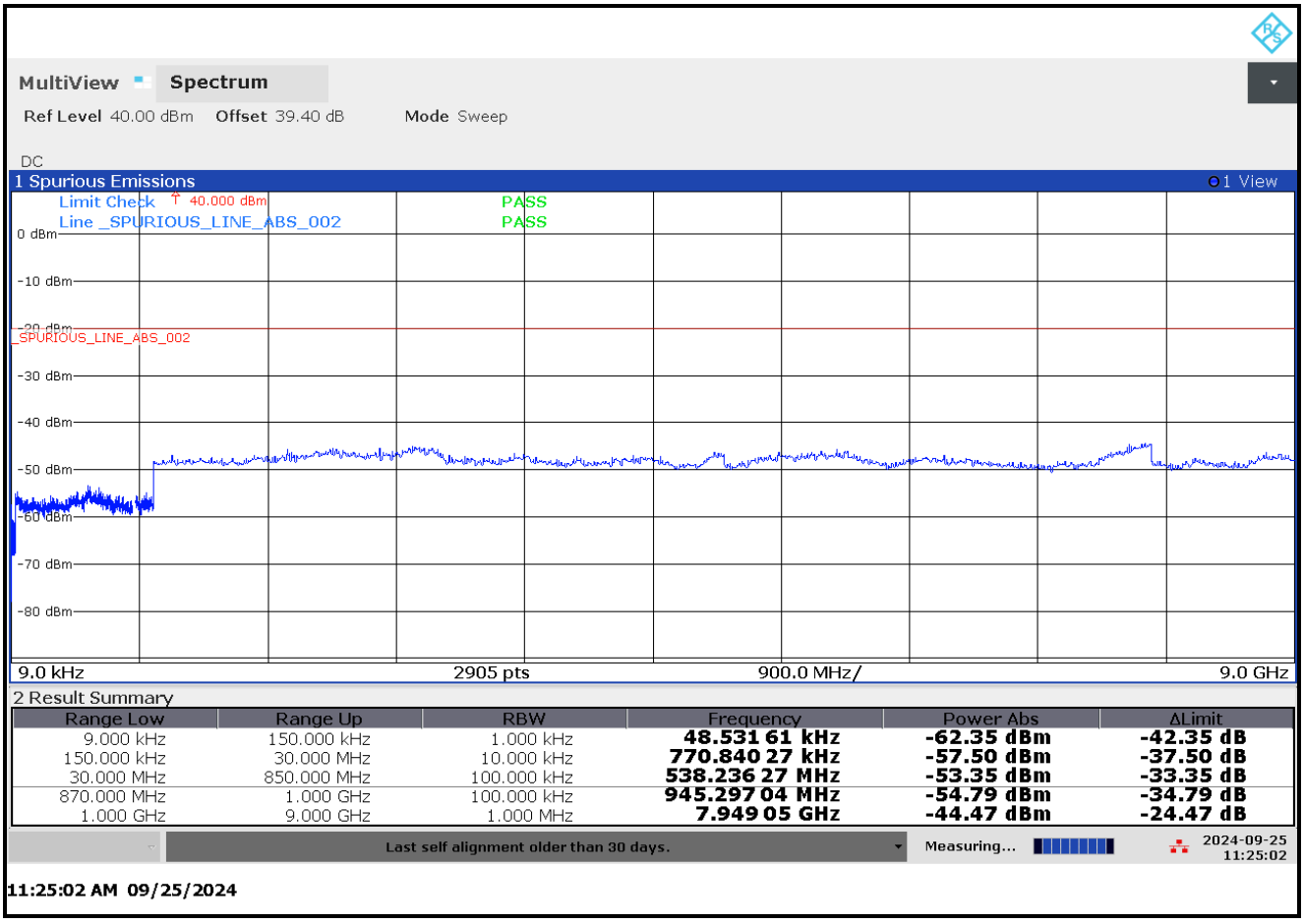
Limits: (43+10LOG P(W)) for wideband and 50 + 10 LOG P(W)) for narrowband

5.2 Test Data

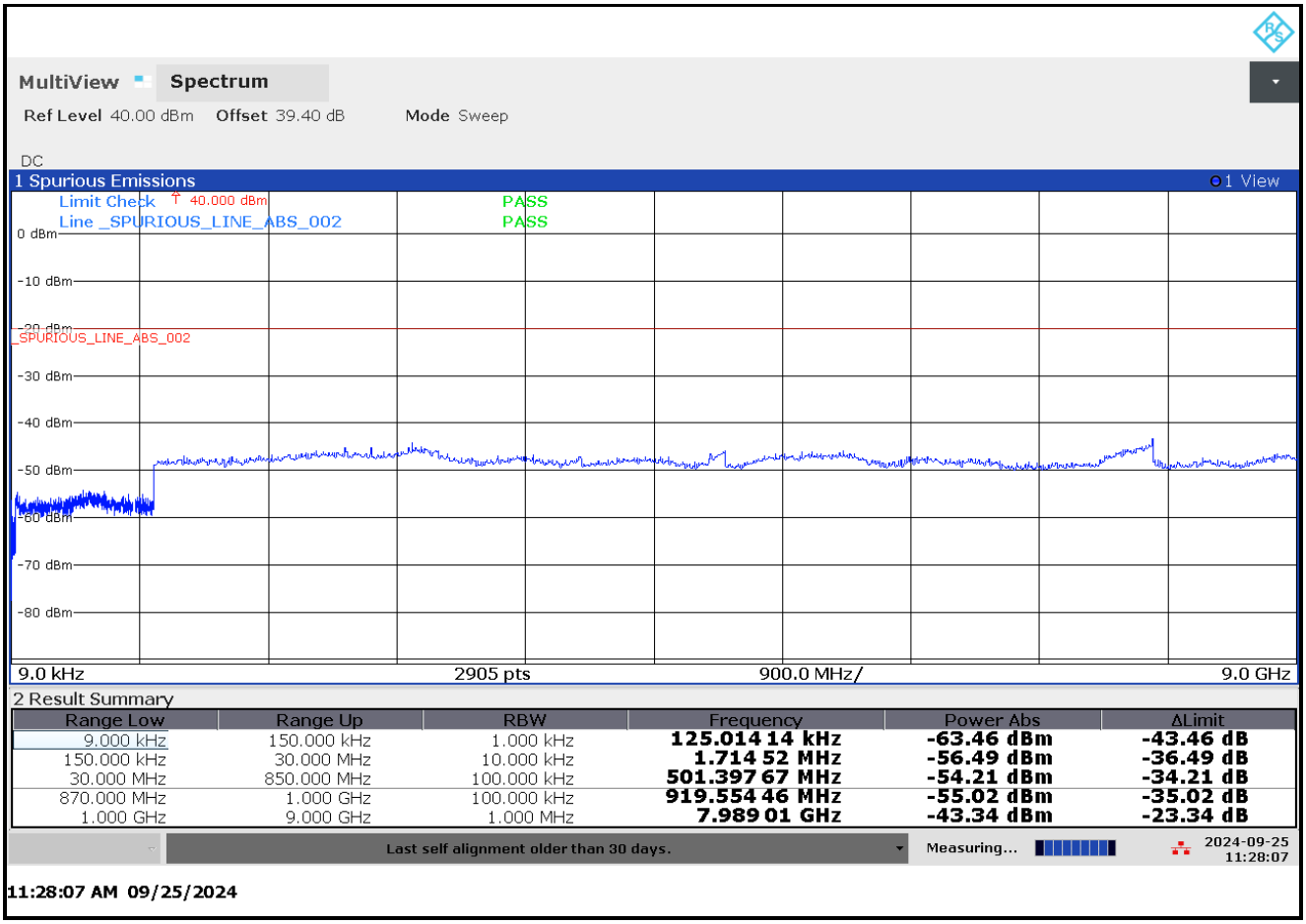
Table 5-1: Environmental Conditions

Date	Temperature (°C)	Humidity (%)	Atmospheric Pressure (kPa)
September 25, 2024	23.7	37	100.6

Plot 5-1: Conducted Spurious Emissions – 851.00625 MHz



Plot 5-2: Conducted Spurious Emissions – 860.00625 MHz



Plot 5-3: Conducted Spurious Emissions – 868.99375 MHz

Measurement uncertainties shown for these tests are expanded uncertainties expressed at the 95% confidence level using a coverage factor K=2. Measurement uncertainty: ±0.8 dB

Results: Pass

Table 5-2: Test Equipment Used For Testing Spurious Emissions

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901773	Rohde & Schwarz	FSW50	Analyzer	101021	05/30/2025
901338	Weinschel	48-20-34	20 dB 100 W Attenuator	BM0556	11/22/2024
901291	Pasternack	PE7031-20	20 dB 300 W Attenuator	901291	02/08/2025
901128	Par Electronics	806-902 (25W)	UHF Notch Filter	N/A	05/14/2026
901791	Shireen	UF1-2.92	40 GHz 24" Cable	N/A	08/02/2025

Test Personnel:

Daniel W. Baltzell		September 25, 2024
EMC Test Engineer	Signature	Date of Test

6 FCC Part 2.1049(c)(1): Occupied Bandwidth; Part 90.210 Authorized Bandwidth; ISED RSS-119 5.5: Channel Bandwidth, Authorized Bandwidth, Occupied Bandwidth and Spectrum Masks

Occupied Bandwidth - Compliance with the Emission Masks

6.1 Test Procedure

ANSI C63.26-2015, section 5.4

Device with digital modulation: Modulated to its maximum extent using a pseudo-random data sequence.

Part 90.210 Authorized Bandwidth

Applicable Emission Masks		
Frequency Band (MHz)	**Mask for Equipment With Audio Low Pass Filter**	**Mask for Equipment Without Audio Low Pass Filter**
Below 25 [1]	A or B	A or C
25–50	B	C
72–76	B	C
150–174 [2]	B, D, or E	C, D, or E
150 Paging-only	B	C
220–222	F	F
421–512 [2 5]	B, D, or E	C, D, or E
450 Paging-only	B	G
806–809/851–854 [6]	B	H
809–824/854–869 [3 5]	B, D	D, G
896–901/935–940	I	J
902–928	K	K
929–930	B	G
4940–4990 MHz	L or M	L or M
5895–5925 [4]		
All other bands	B	C

[1] Equipment using single sideband J3E emission must meet the requirements of Emission Mask A. Equipment using other emissions must meet the requirements of Emission Mask B or C, as applicable.
[2] Equipment designed to operate with a 25 kHz channel bandwidth must meet the requirements of Emission Mask B or C, as applicable. Equipment designed to operate with a 12.5 kHz channel bandwidth must meet the requirements of Emission Mask D, and equipment designed to operate with a 6.25 kHz channel bandwidth must meet the requirements of Emission Mask E.
[3] Equipment used in this licensed to EA or non-EA systems shall comply with the emission mask provisions of §90.691 of this chapter.
[4] DSRCS Roadside Units in the 5895–5925 MHz band is governed under subpart M of this part.
[5] Equipment designed to operate on 25 kilohertz bandwidth channels must meet the requirements of either Emission Mask B or G, whichever is applicable, while equipment designed to operate on 12.5 kilohertz bandwidth channels must meet the requirements of Emission Mask D. Equipment designed to operate on 25 kilohertz bandwidth channels may alternatively meet the Adjacent Channel Power limits of §90.221.
[6]Transmitters utilizing analog emissions that are equipped with an audio low-pass filter must meet Emission Mask B. All transmitters utilizing digital emissions and those transmitters using analog emissions without an audio low-pass filter must meet Emission Mask H.

Excerpt from RSS-119 5.5 Table 3

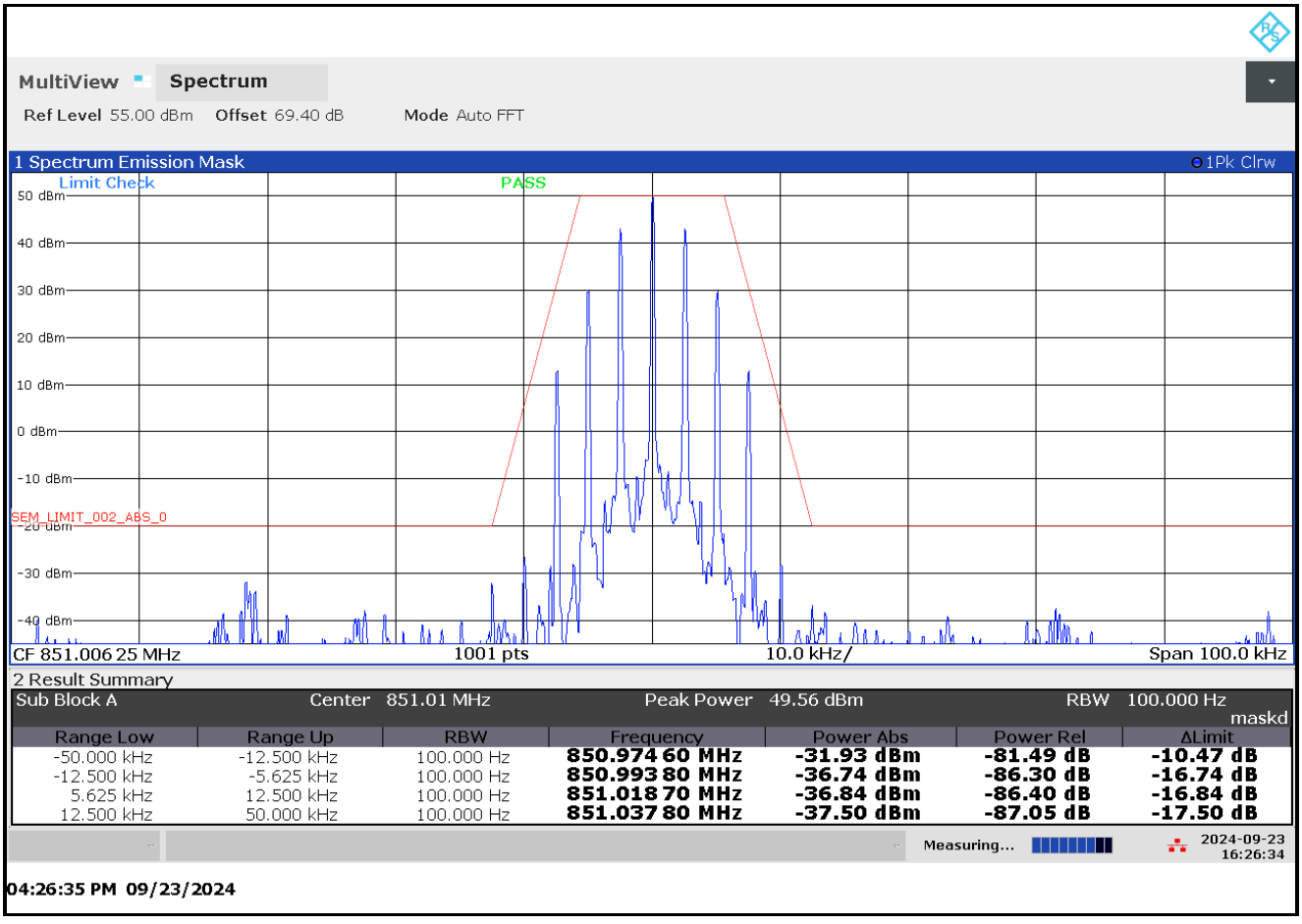
Applicable ISED Emission Masks					
Frequency Band (MHz)	**Related SRSP for Channeling Plan and ERP**	**Channel Bandwidth (kHz)**	**Authorized Bandwidth (kHz)**	**Spectrum Masks for Equipment With Audio Filter**	**Spectrum Masks for Equipment Without Audio Filter**
806-821 / 851-866 and 821-824 / 866-869	SRSP-502	25	20 22	B Y	G Y
		12.5	11.25	D	D
		6.25	6	E	E

6.2 Test Data

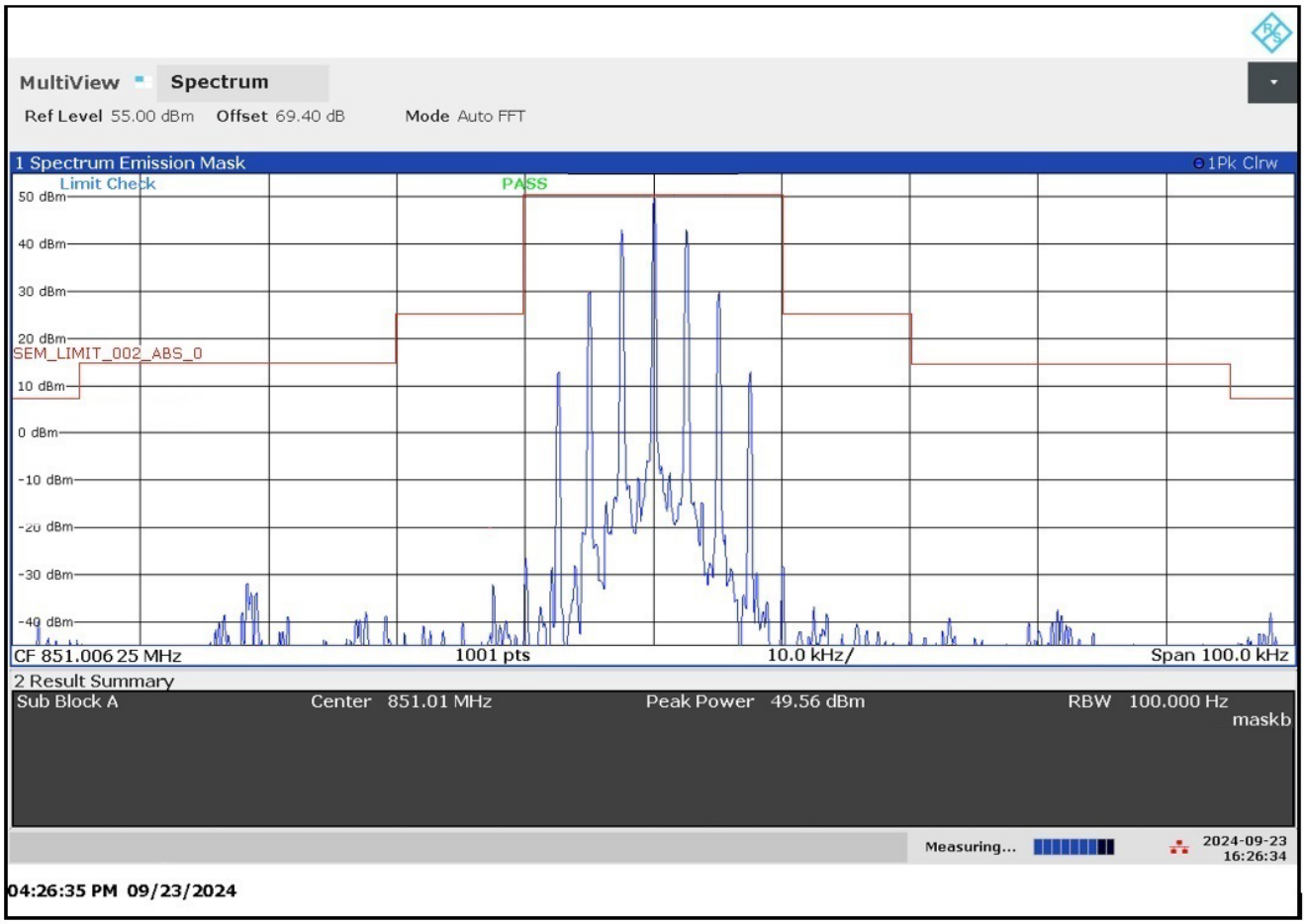
Table 6-1: Environmental Conditions

Date	Temperature (°C)	Humidity (%)	Atmospheric Pressure (kPa)
September 23, 2024	24.7	35	101.9
September 24, 2024	23.8	38	100.7
October 26, 2024	25.1	22	102.3
October 31, 2024	25.1	27	102.2

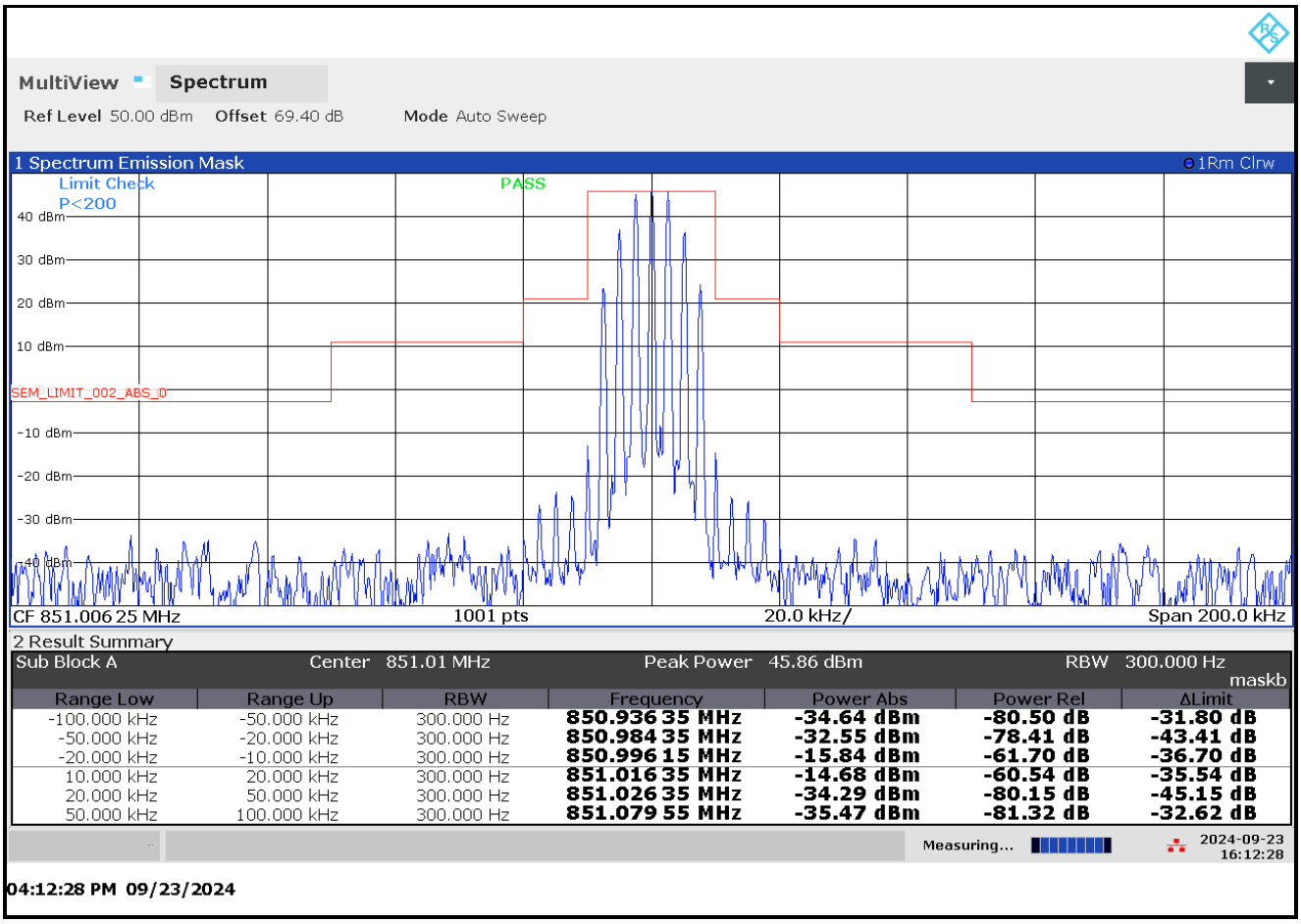
Plot 6-1: Occupied Bandwidth, 851.00625 MHz, NARROWBAND ANALOG, Mask D



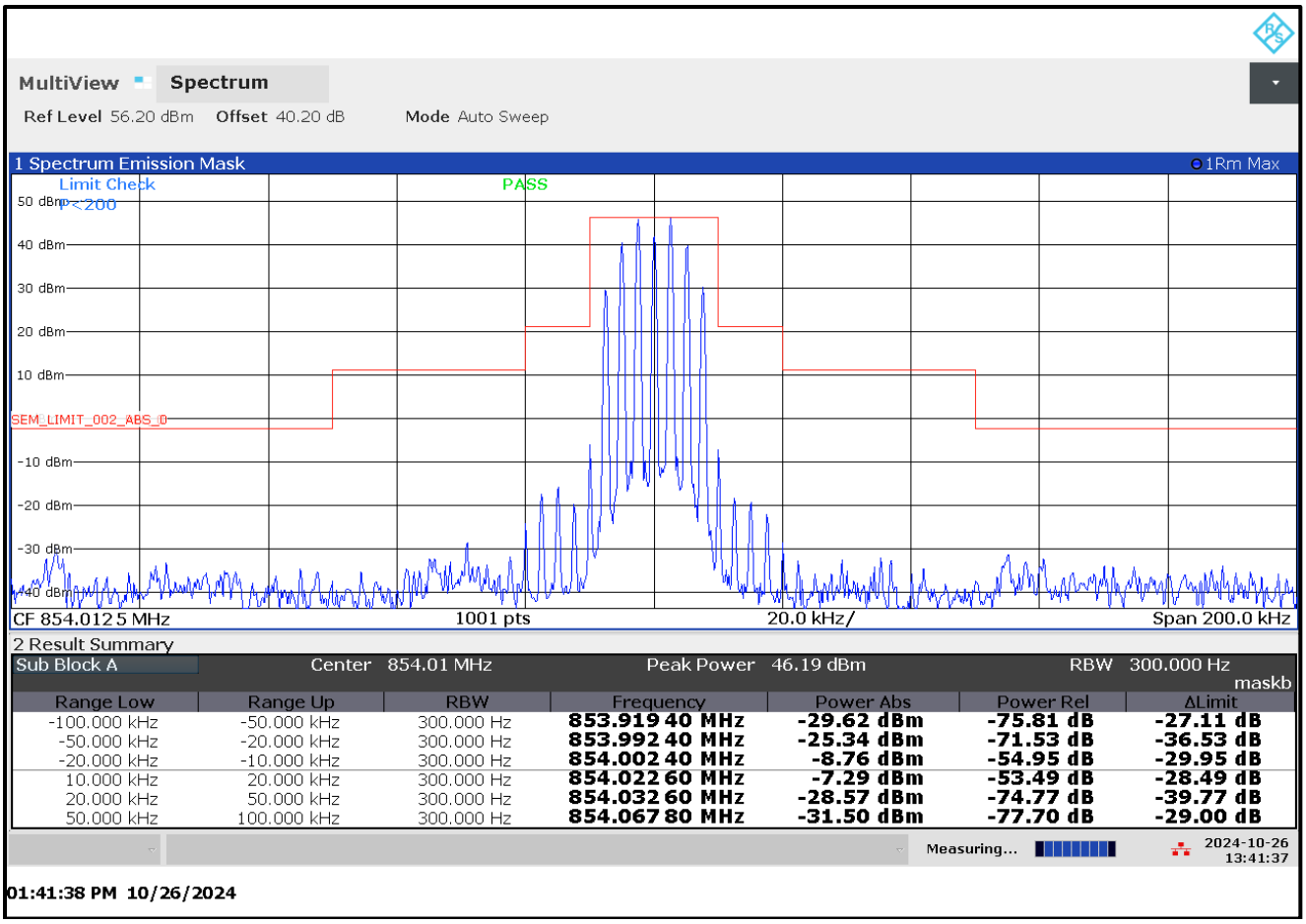
Plot 6-2: Occupied Bandwidth, 851.00625 MHz, NARROWBAND ANALOG, Mask B



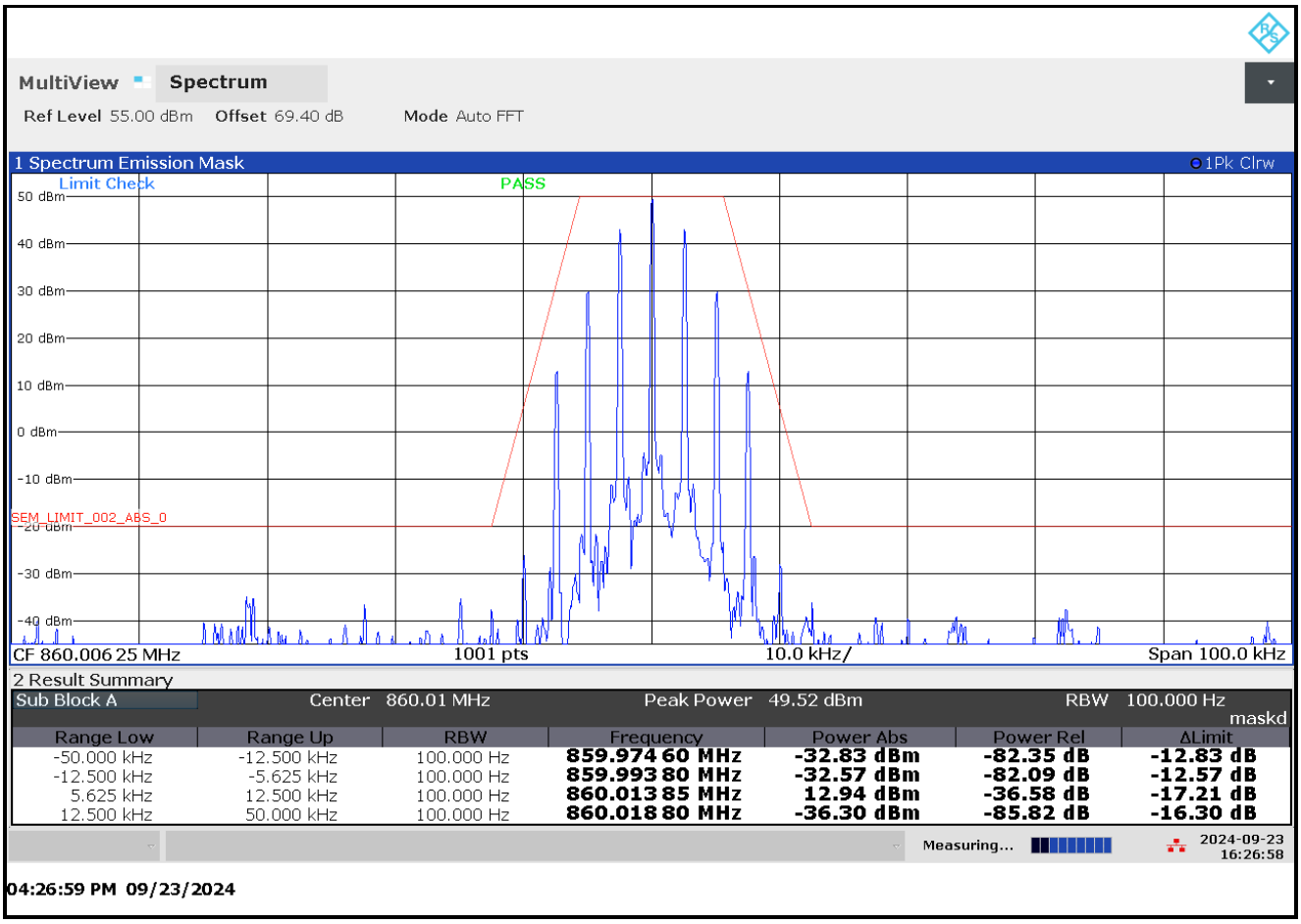
Plot 6-3: Occupied Bandwidth, 851.00625 MHz, NPSPAC ANALOG, Mask B



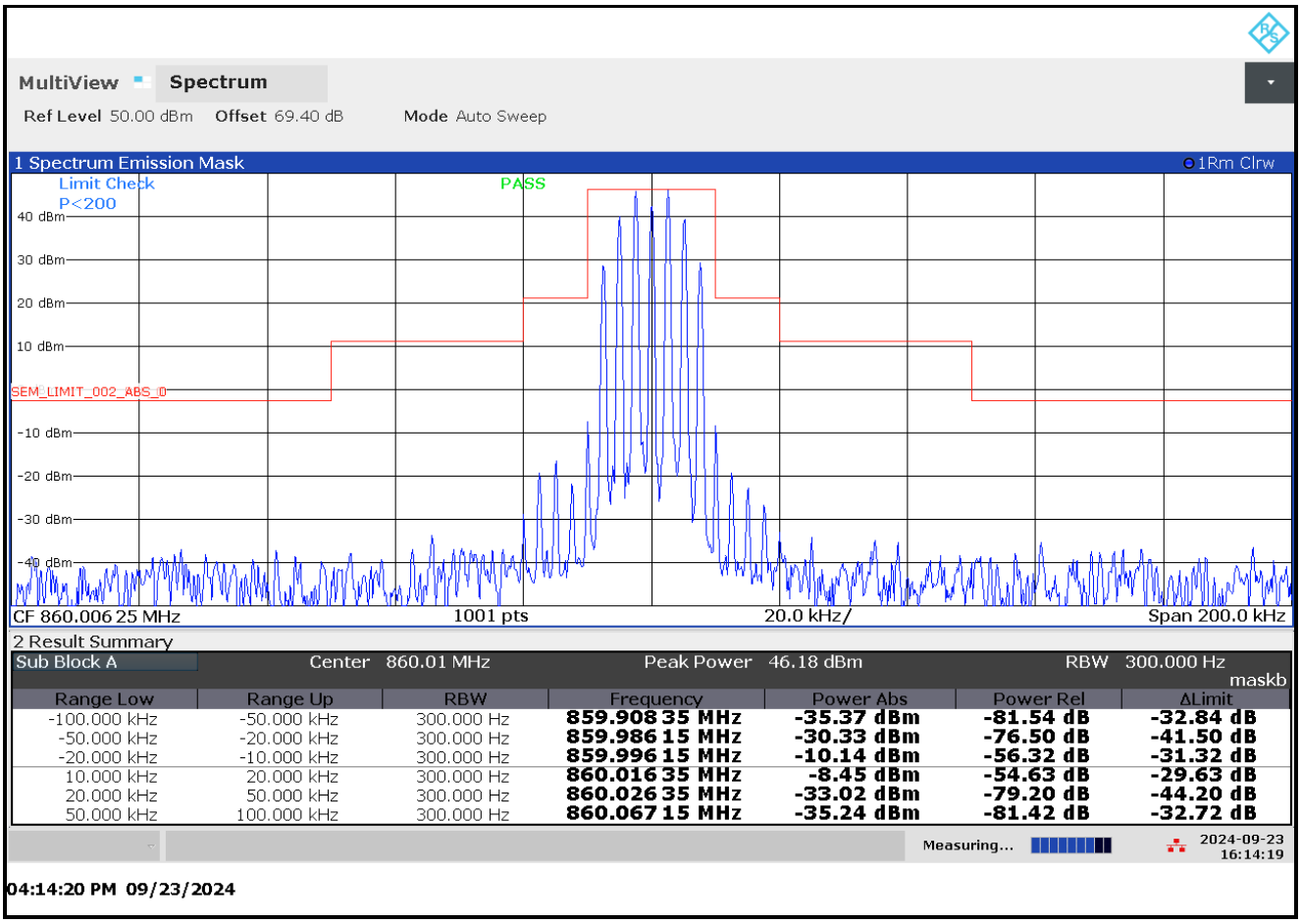
Plot 6-4: Occupied Bandwidth, 854.012500 MHz, WIDEBAND ANALOG, Mask B



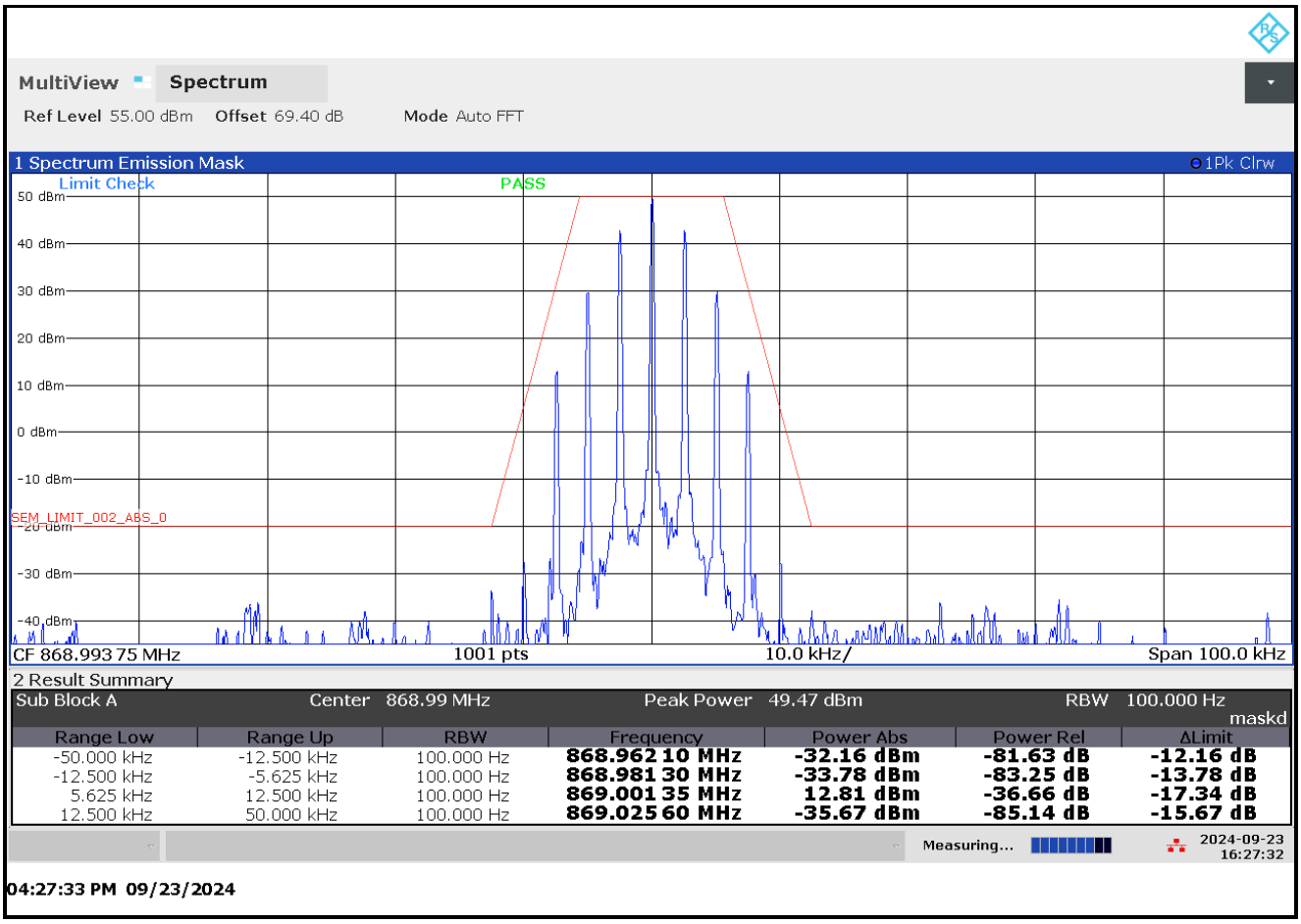
Plot 6-5: Occupied Bandwidth, 860.00625 MHz, NARROWBAND ANALOG, Mask D



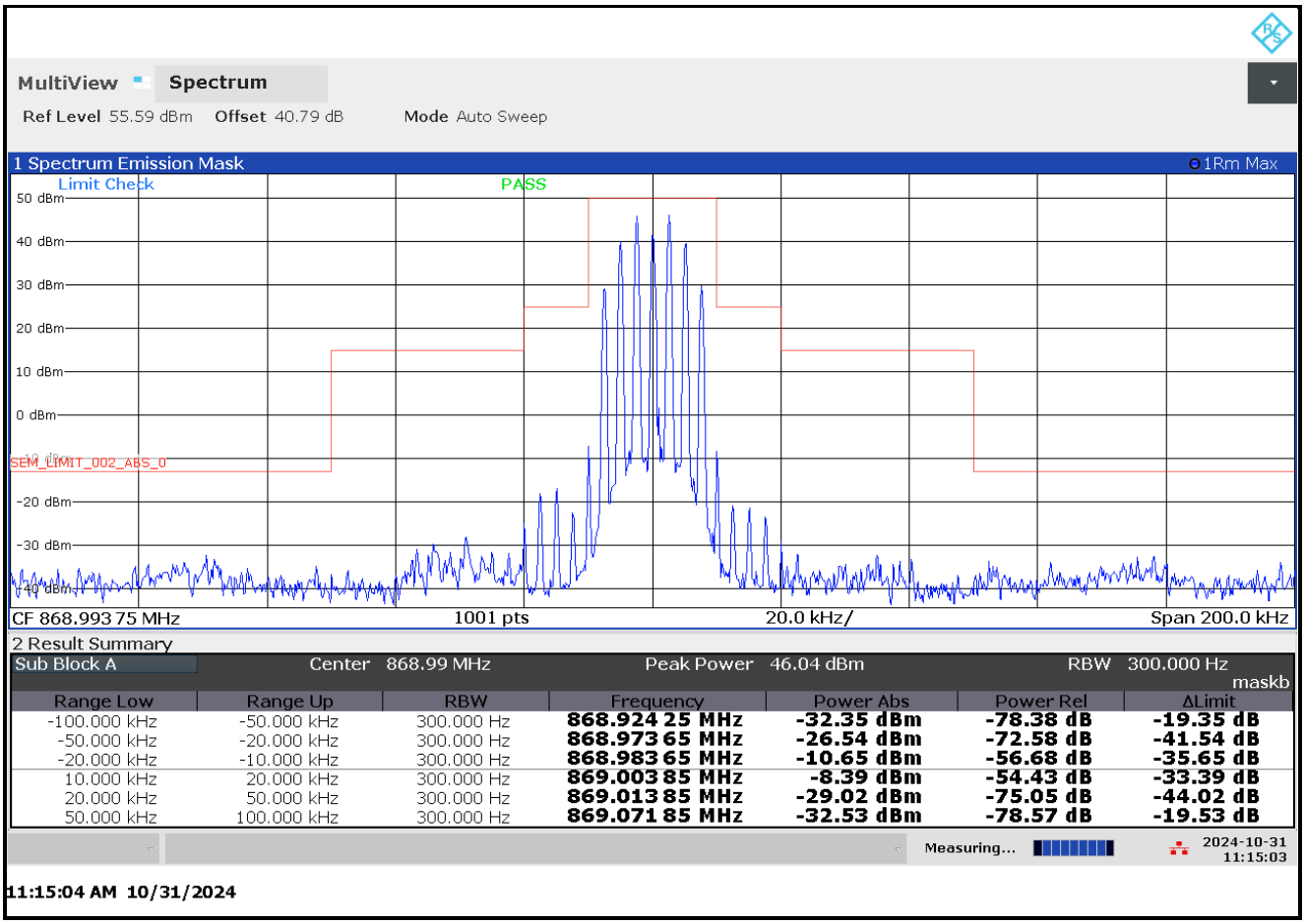
Plot 6-6: Occupied Bandwidth, 860.00625 MHz, WIDEBAND ANALOG, Mask B



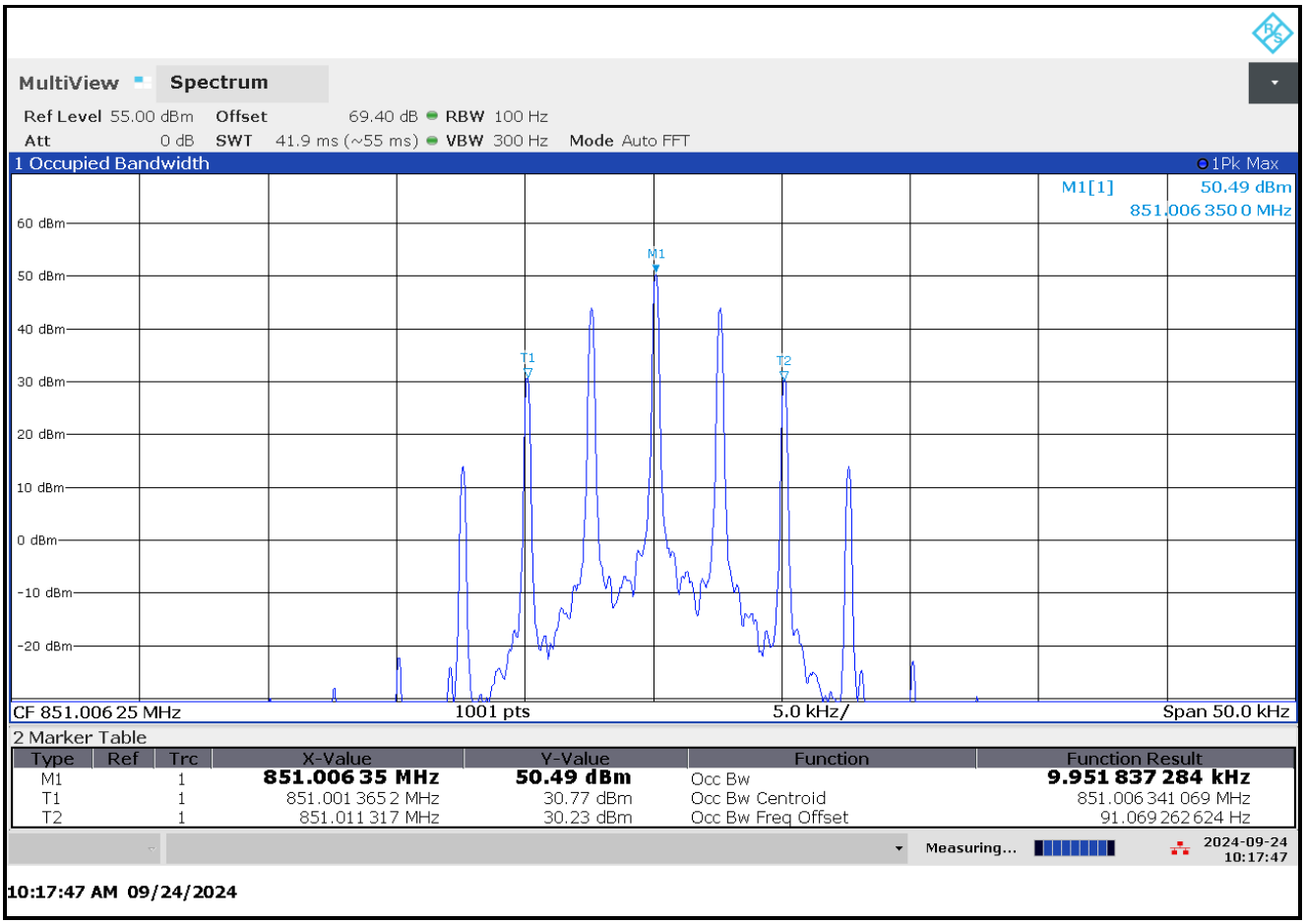
Plot 6-7: Occupied Bandwidth, 868.99375 MHz, NARROWBAND ANALOG, Mask D



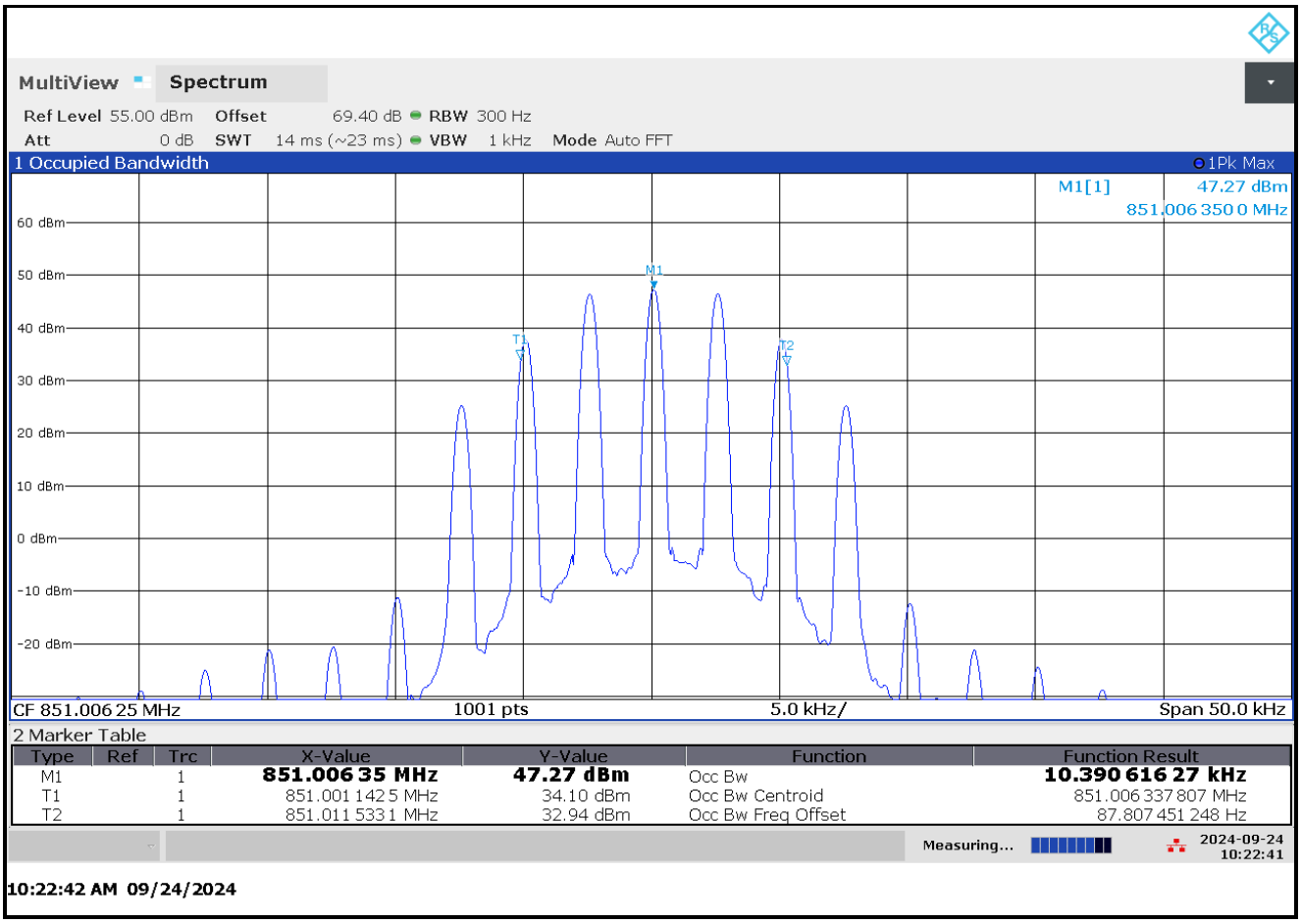
Plot 6-8: Occupied Bandwidth, 868.99375 MHz, WIDEBAND ANALOG, Mask B



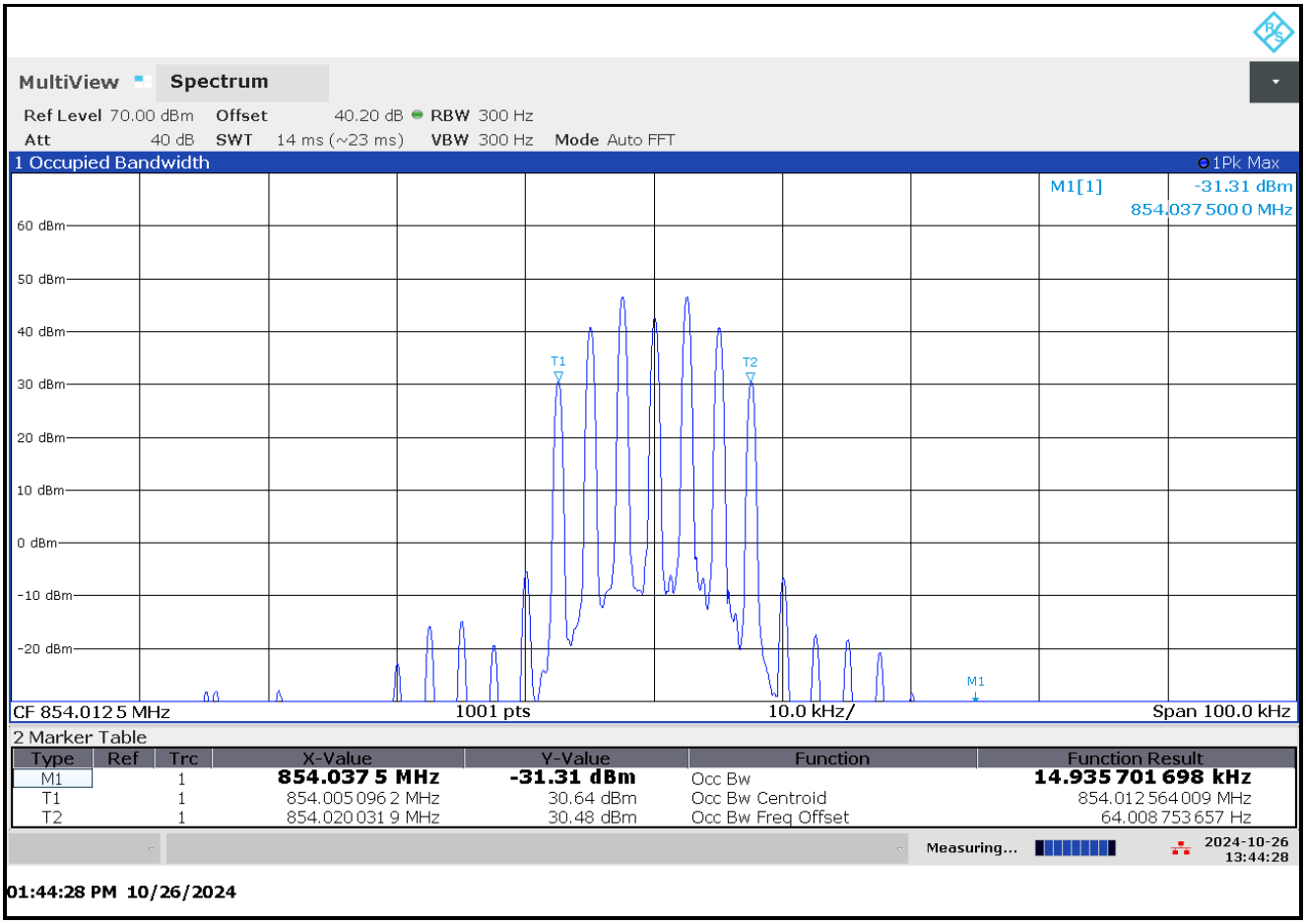
Plot 6-9: 99% BW, 851.00625 MHz, NARROWBAND ANALOG



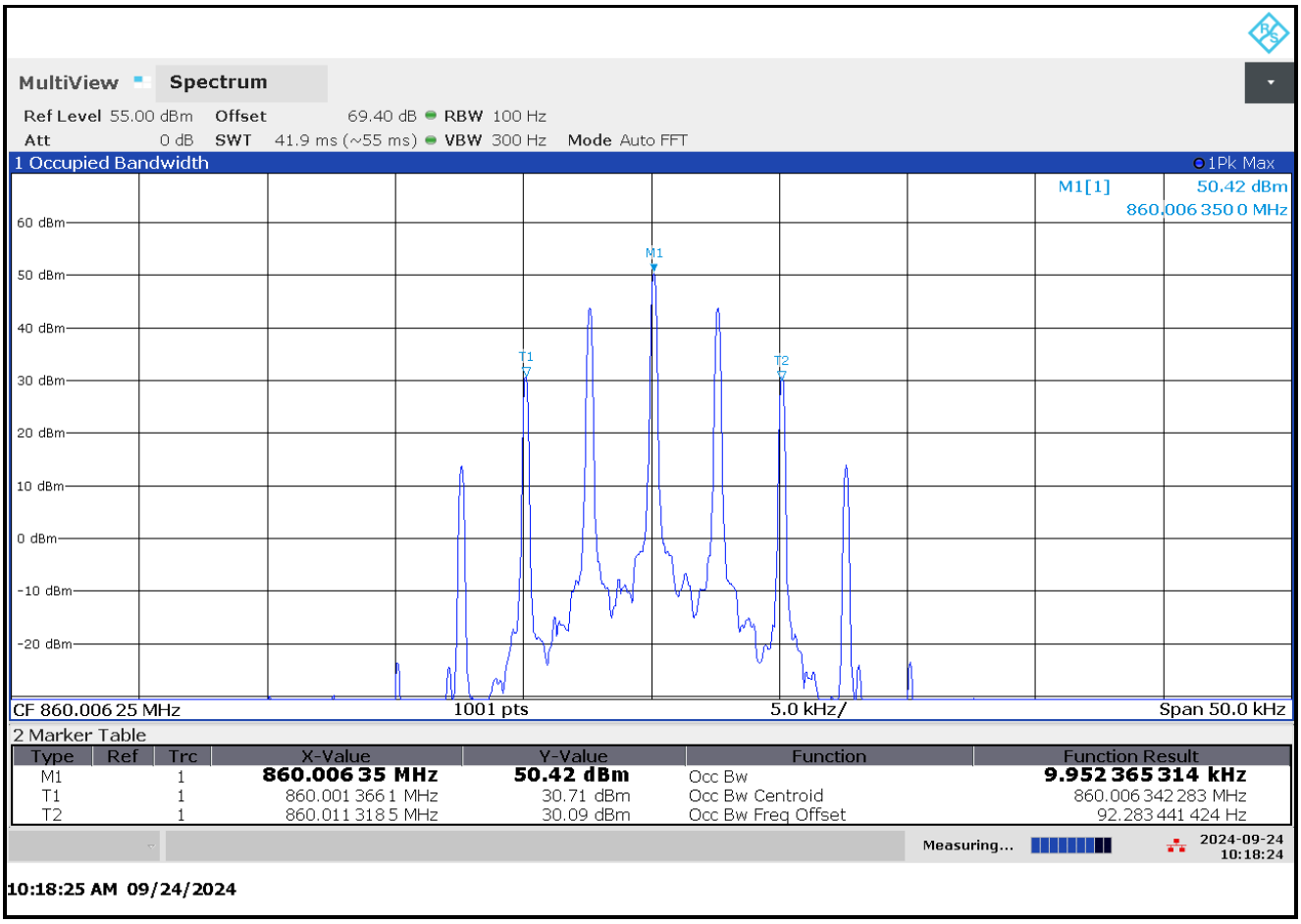
Plot 6-10: 99% BW, 851.00625 MHz, NPSPAC ANALOG



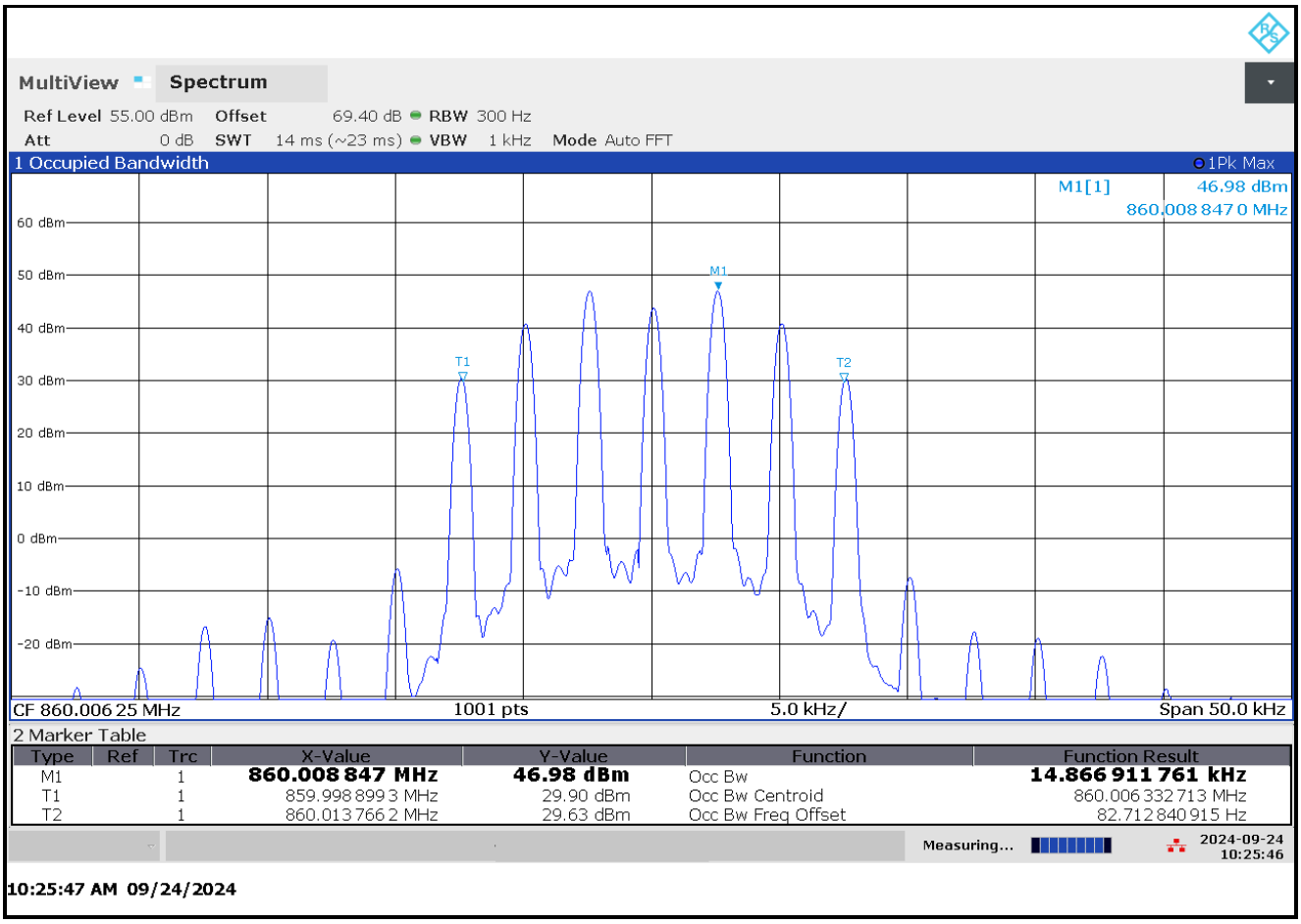
Plot 6-11: 99% BW, 854.0125 MHz, WIDEBAND ANALOG



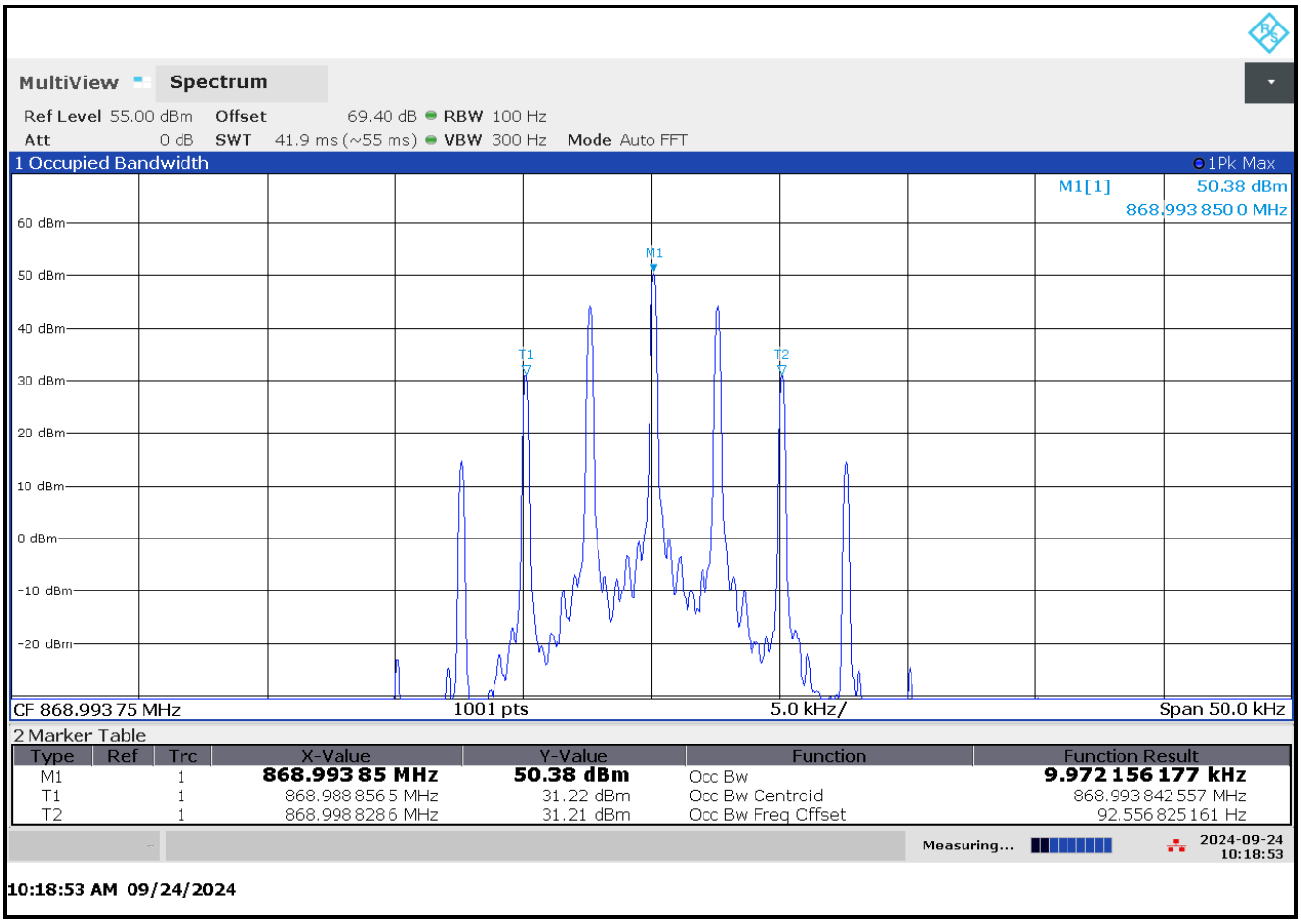
Plot 6-12: 99% BW, 860.00625 MHz, NARROWBAND ANALOG



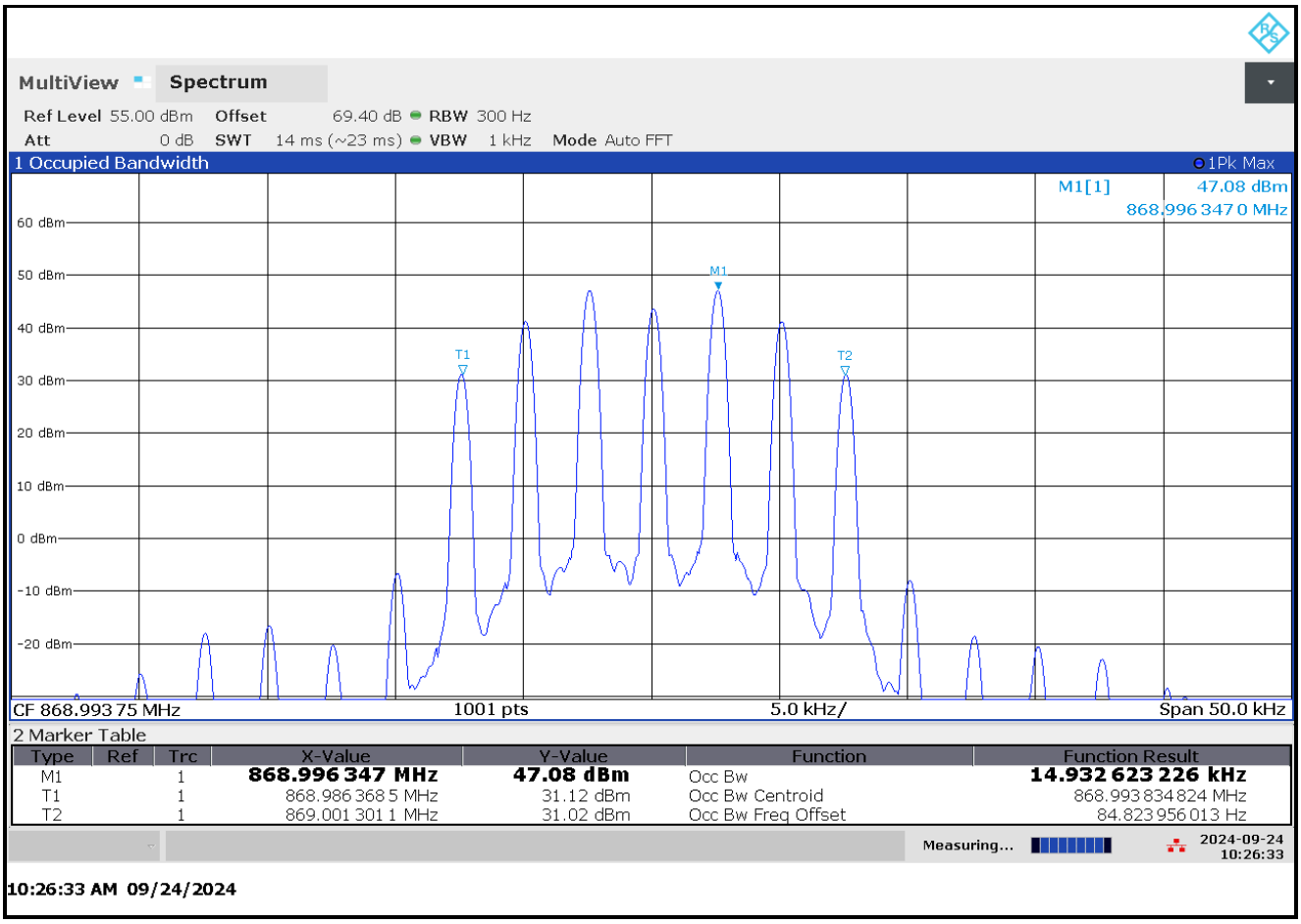
Plot 6-13: 99% BW, 860.00625 MHz, WIDEBAND ANALOG



Plot 6-14: 99% BW, 868.99375 MHz, NARROWBAND ANALOG



Plot 6-15: 99% BW, 868.99375 MHz, WIDEBAND ANALOG



Measurement uncertainties shown for these tests are expanded uncertainties expressed at the 95% confidence level using a coverage factor K=2. Measurement uncertainty: ±0.5 Hz

Results: Pass

Table 6-2: Test Equipment Used For Testing Occupied Bandwidth

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901773	Rohde & Schwarz	FSW50	Analyzer	101021	05/30/2025
901791	Shireen	UF1-2.92	40 GHz 24" Cable	N/A	08/02/2025
901338	Weinschel	46-40-34	40 dB 25 W Attenuator	BM0556	02/07/2025
901355	JFW Industries	50FH-003-300	300W 3DB DC1000 MHz Attenuator	N/A	03/23/2025
901291	Pasternack	PE7031-20	20 dB 300 W Attenuator	901291	02/08/2025

Test Personnel:

Daniel W. Baltzell		September 23-24 and October 31, 2024
EMC Test Engineer	Signature	Dates of Test

7 FCC §2.1047(a)(b): Modulation Characteristics

7.1 Test Procedures

Table 7-1: Environmental Conditions

Date	Temperature (°C)	Humidity (%)	Atmospheric Pressure (kPa)
September 25, 2024	23.7	37	100.6
October 27, 2024	23.5	21	102.8

7.1.1 Audio Frequency Response

ANSI C63.26 2015, section 5.3.3

The audio frequency response is the degree of closeness to which the frequency deviation of the transmitter follows a prescribed characteristic.

The input audio level at 1000 Hz was set to produce 20% of the rated system deviation. This point is shown as the 0 dB reference level, noted DEVref. The audio signal generator was varied from 100 Hz to 5 kHz with the input level held constant. The deviation in kHz was recorded using a modulation analyzer as DEVfreq. The response in dB relative to 1 kHz was calculated as follows:

Audio Frequency Response = 20 LOG (DEVfreq/DEVref)

7.1.2 Audio Low Pass Filter Response

ANSI C63.26 2015, section 5.3

The Audio Low Pass Filter Response is the frequency response of the post limiter low pass filter circuit above 3000 Hz.

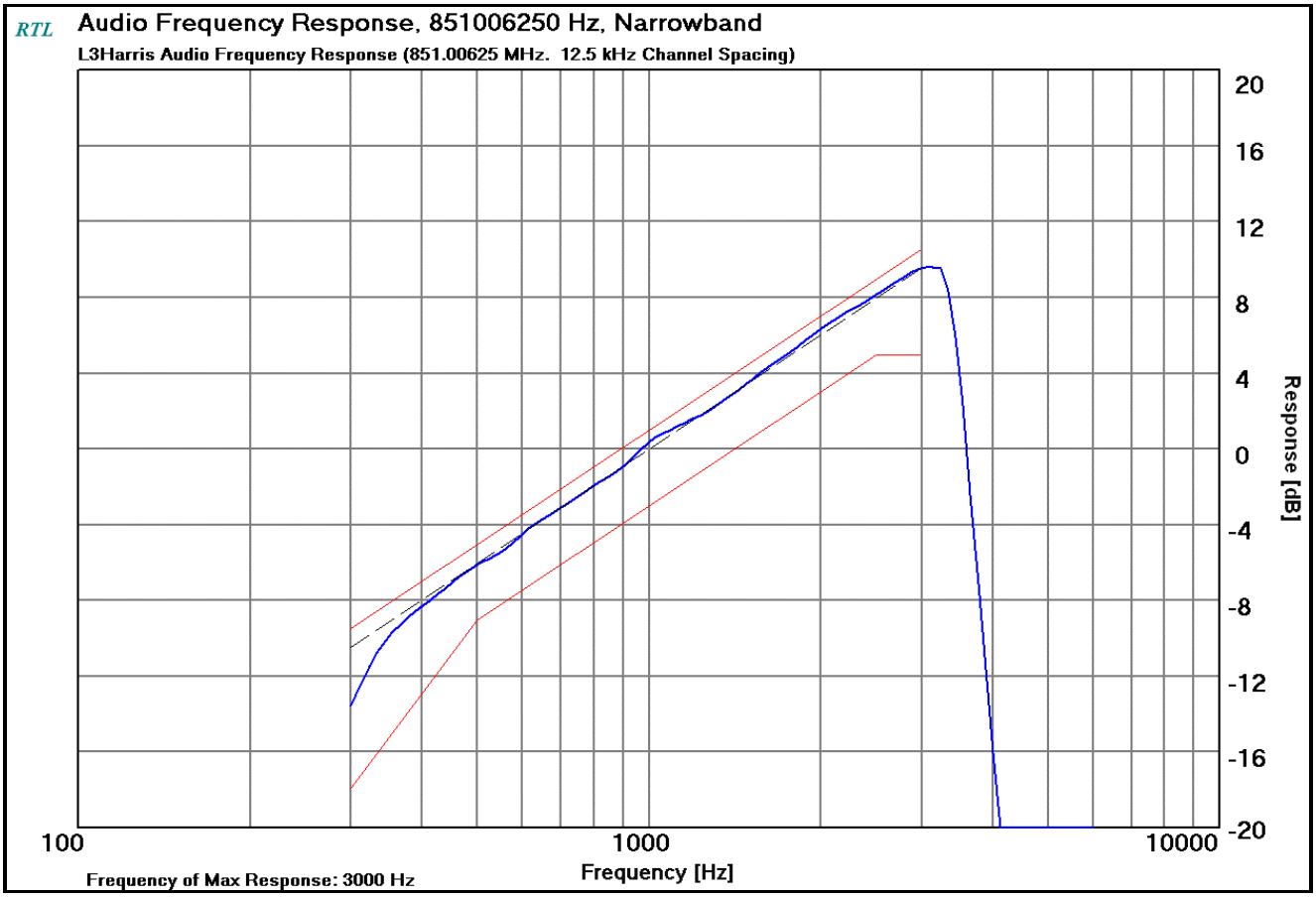
7.1.3 Modulation Limiting

ANSI C63.26 2015, section 5.3.2

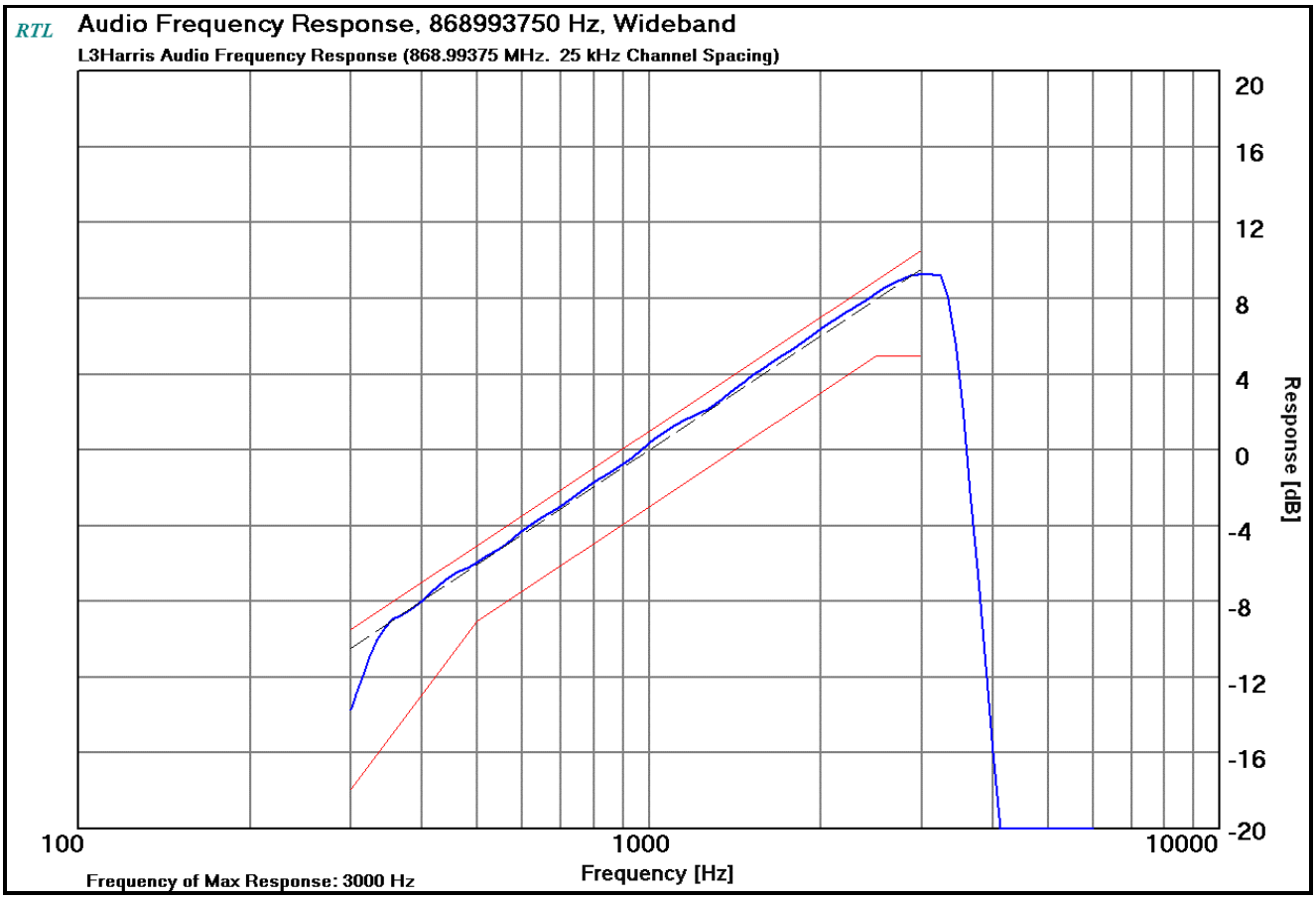
The transmitter was adjusted for full rated system deviation. The audio input level was adjusted for 60% of rated system deviation at 1000 Hz. Using this level (0 dB) as a reference, the audio input level was varied from the reference +/-20 dB for modulation frequencies of 300 Hz, 1,000 Hz, and 2,500 Hz. The system deviation obtained as a function of the input level was recorded. Both positive and negative peak deviations were recorded.

7.1.4 Audio Frequency Response

Plot 7-1: Modulation Characteristics - Audio Frequency Response – 851.00625 MHz (NB)

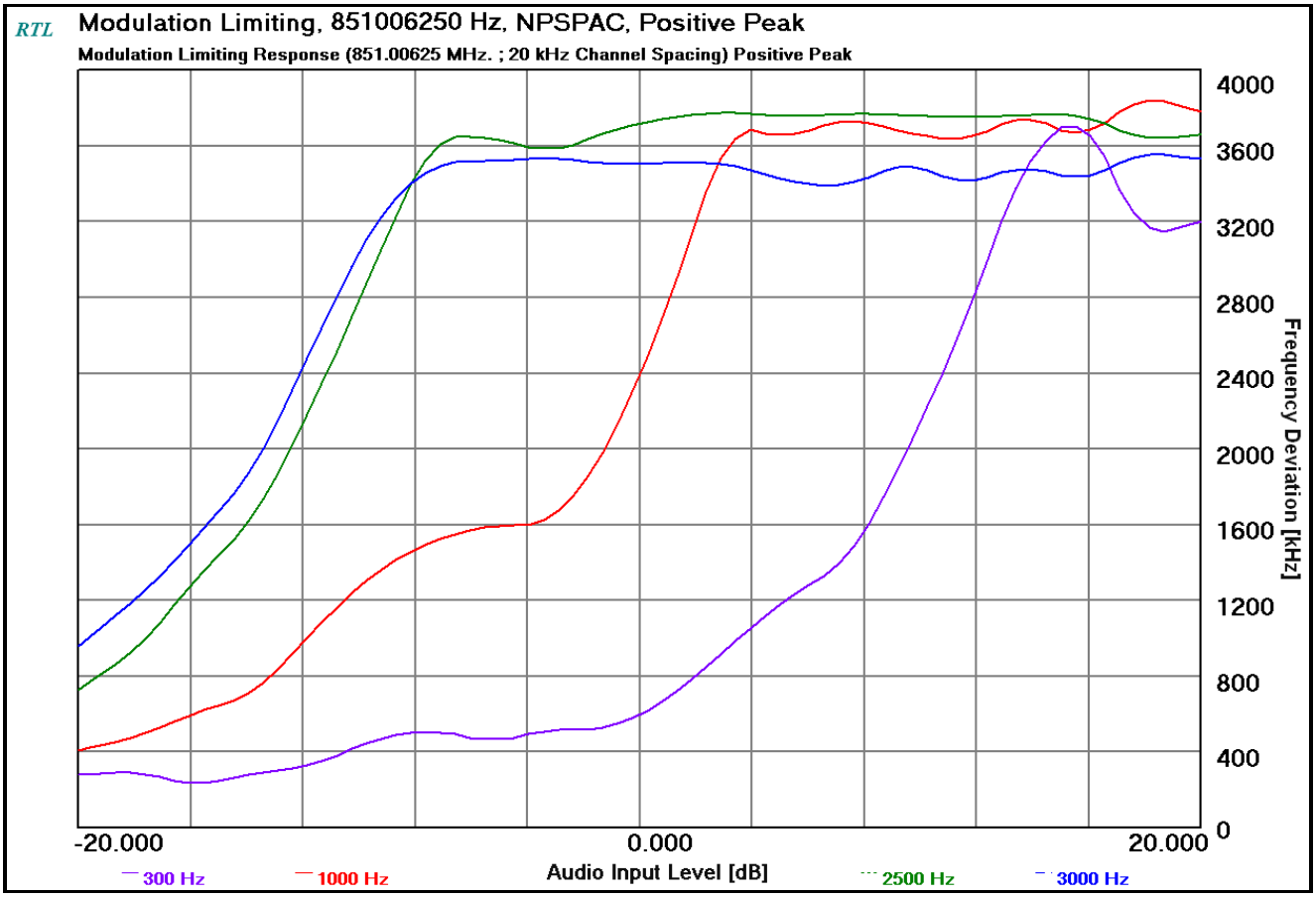


Plot 7-2: Modulation Characteristics - Audio Frequency Response – 868.99375 MHz (WB)

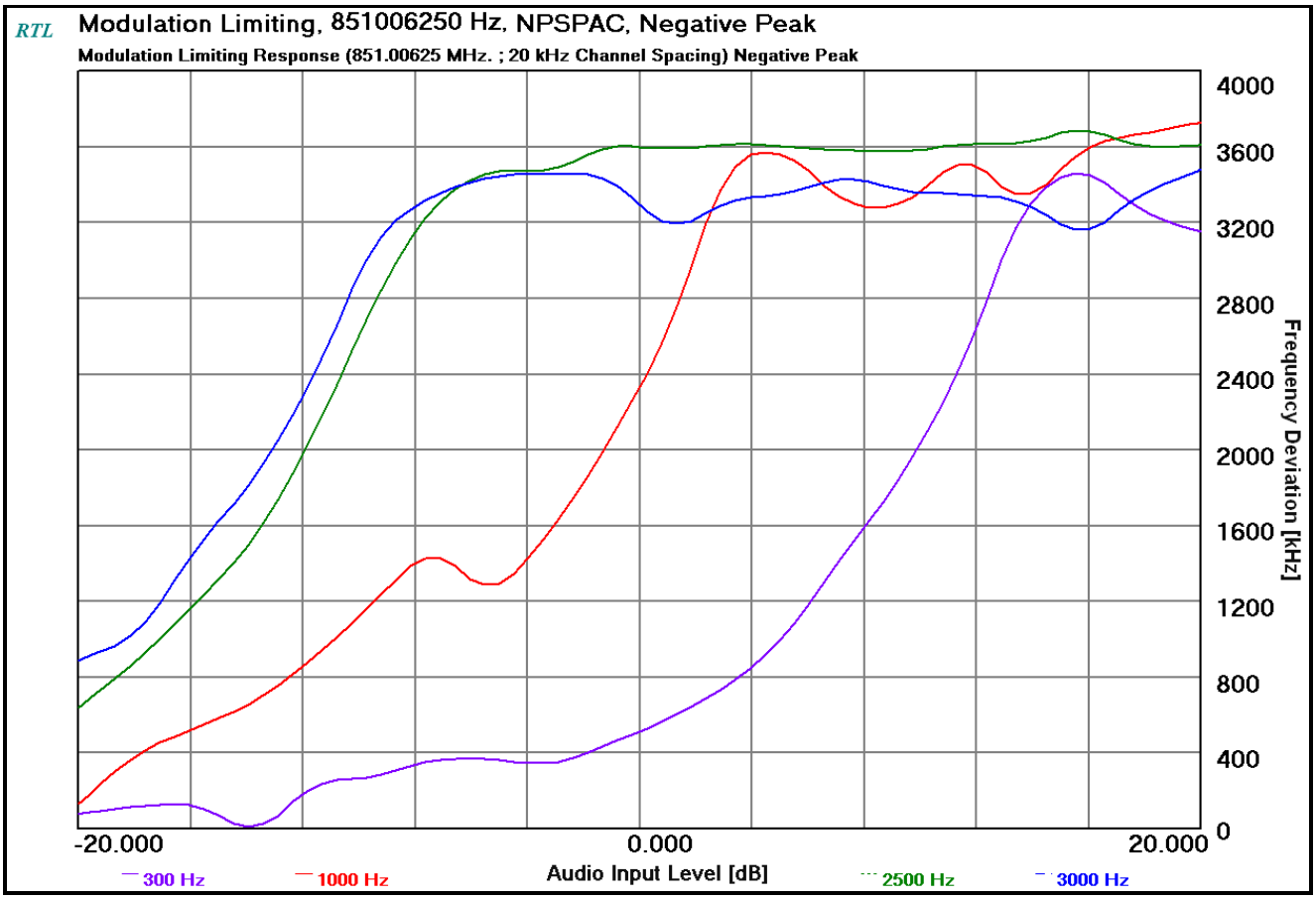


7.1.5 Modulation Limiting

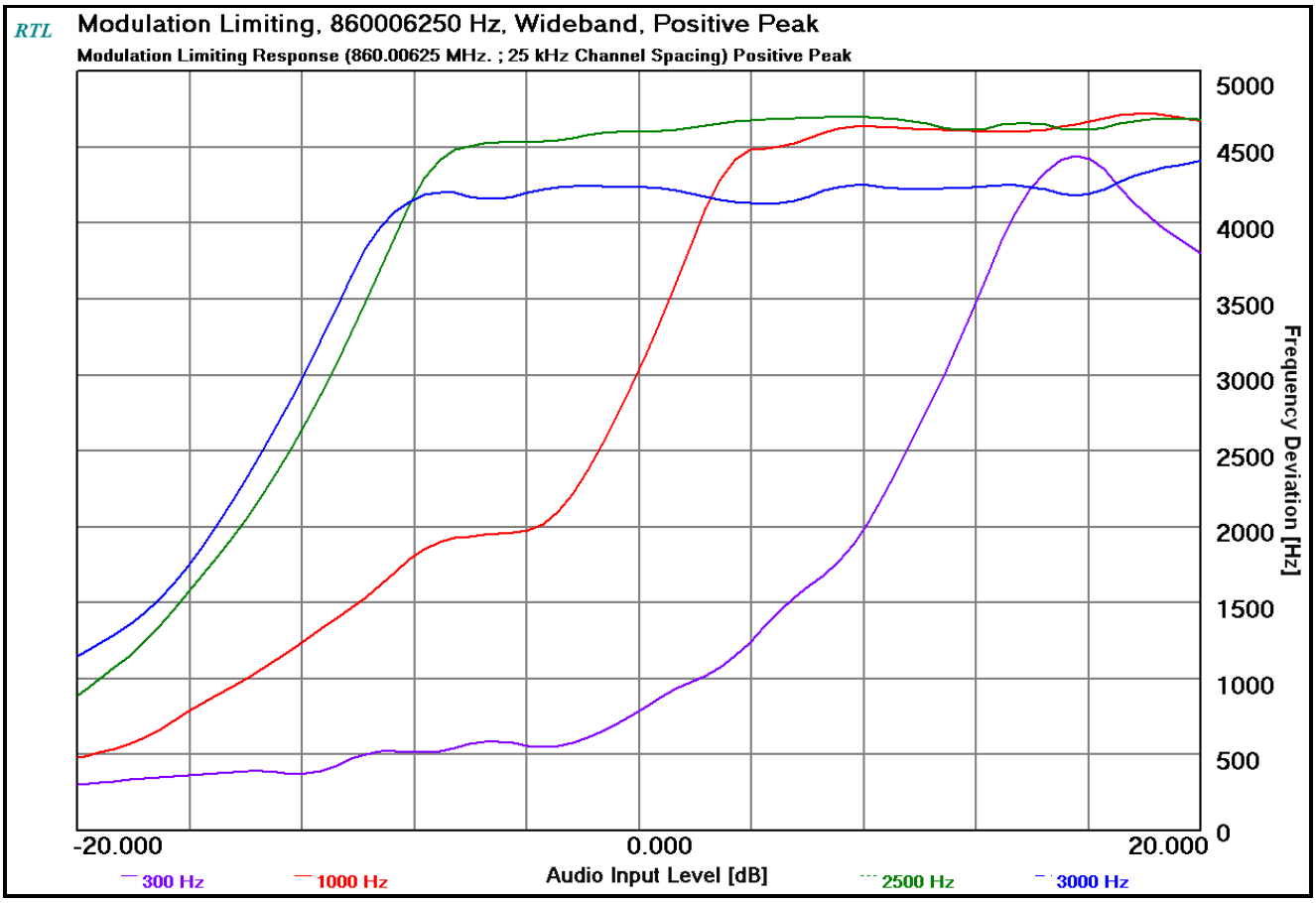
Plot 7-3: Modulation Characteristics – Modulation Limiting – 851.00625 MHz (NPSPAC); Positive Peak



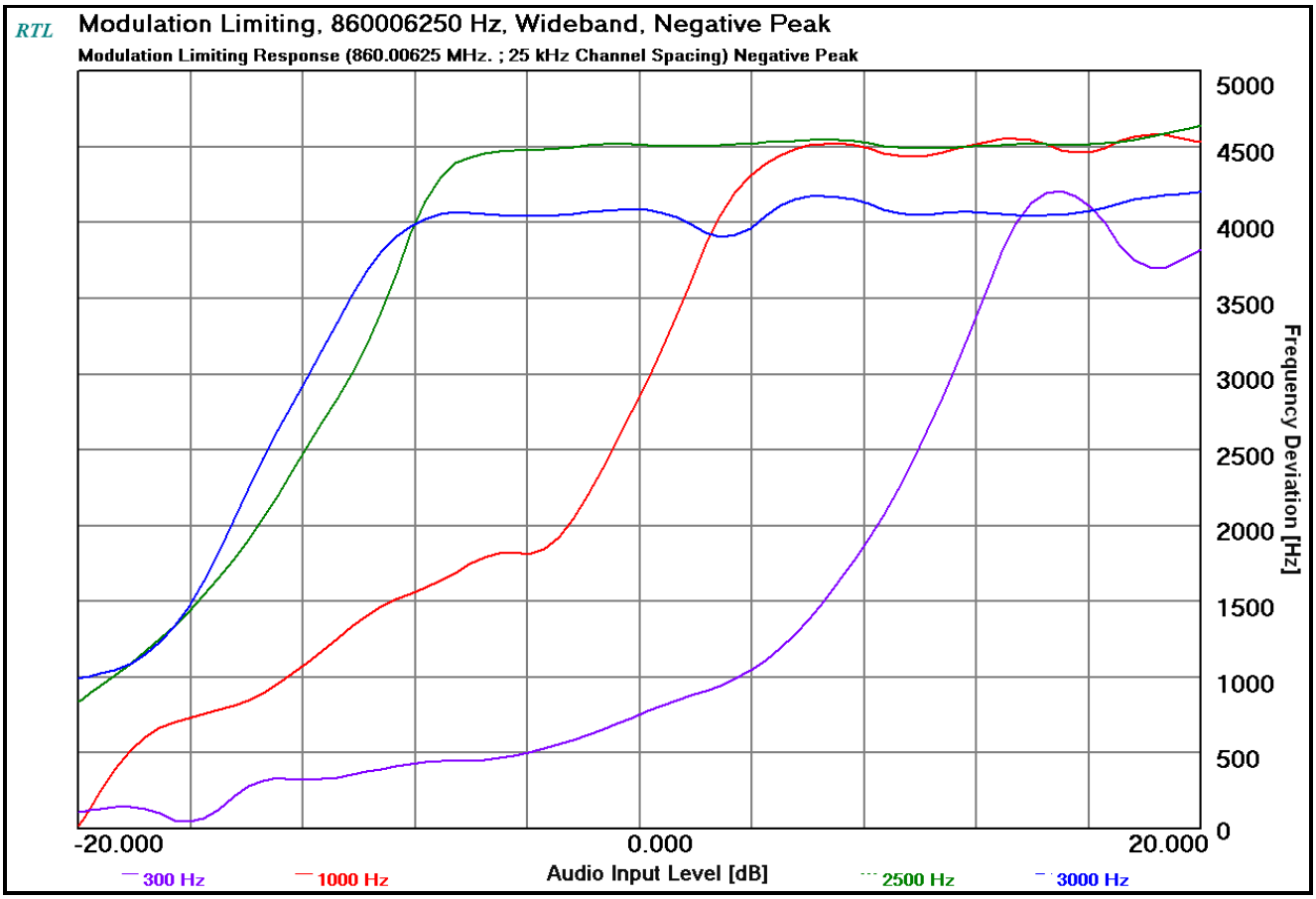
Plot 7-4: Modulation Characteristics – Modulation Limiting – 851.00625 MHz (NPSPAC); Negative Peak



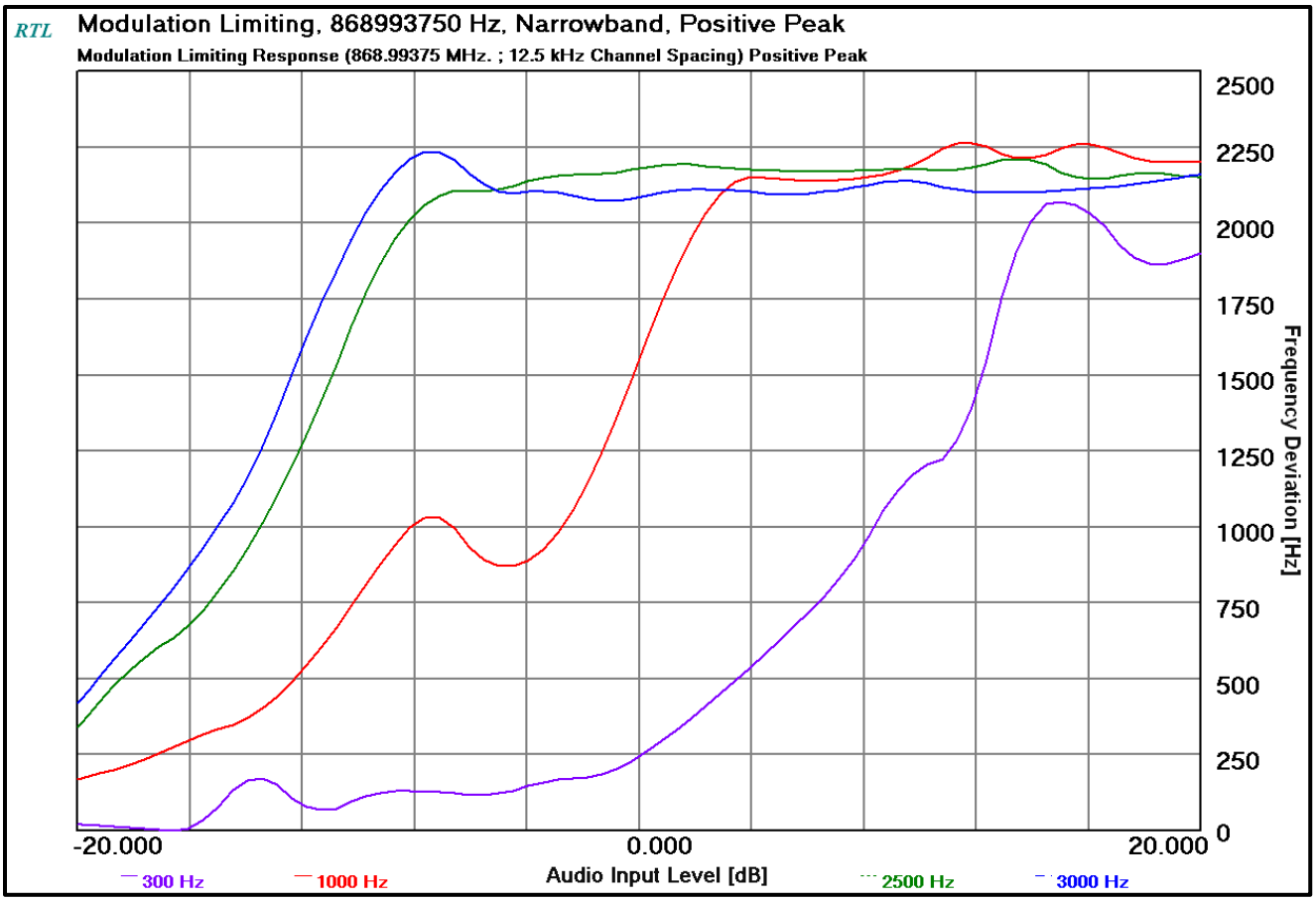
Plot 7-5: Modulation Characteristics – Modulation Limiting – 860.00625 MHz (WB); Positive Peak



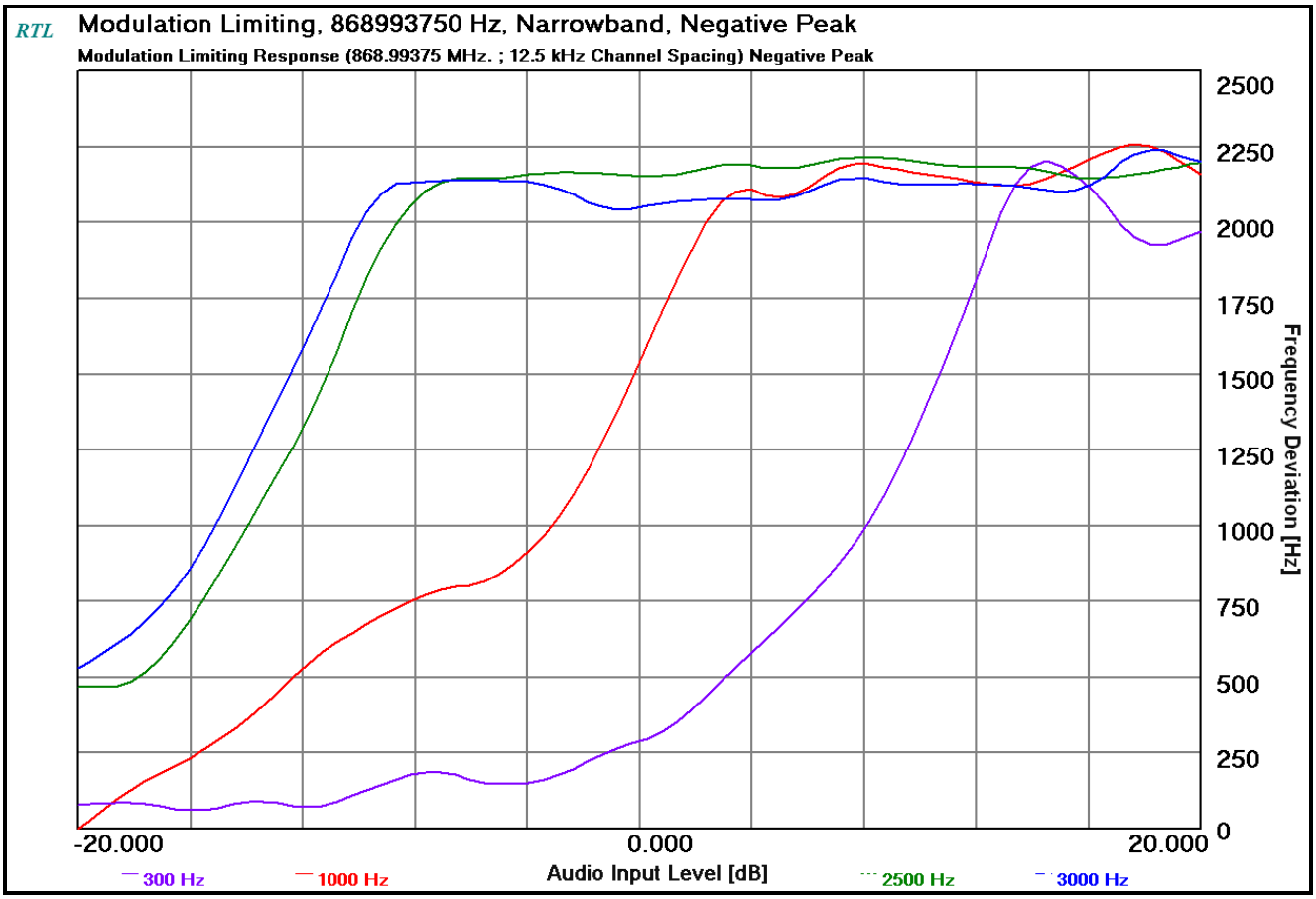
Plot 7-6: Modulation Characteristics – Modulation Limiting – 860.00625 MHz (WB); Negative Peak



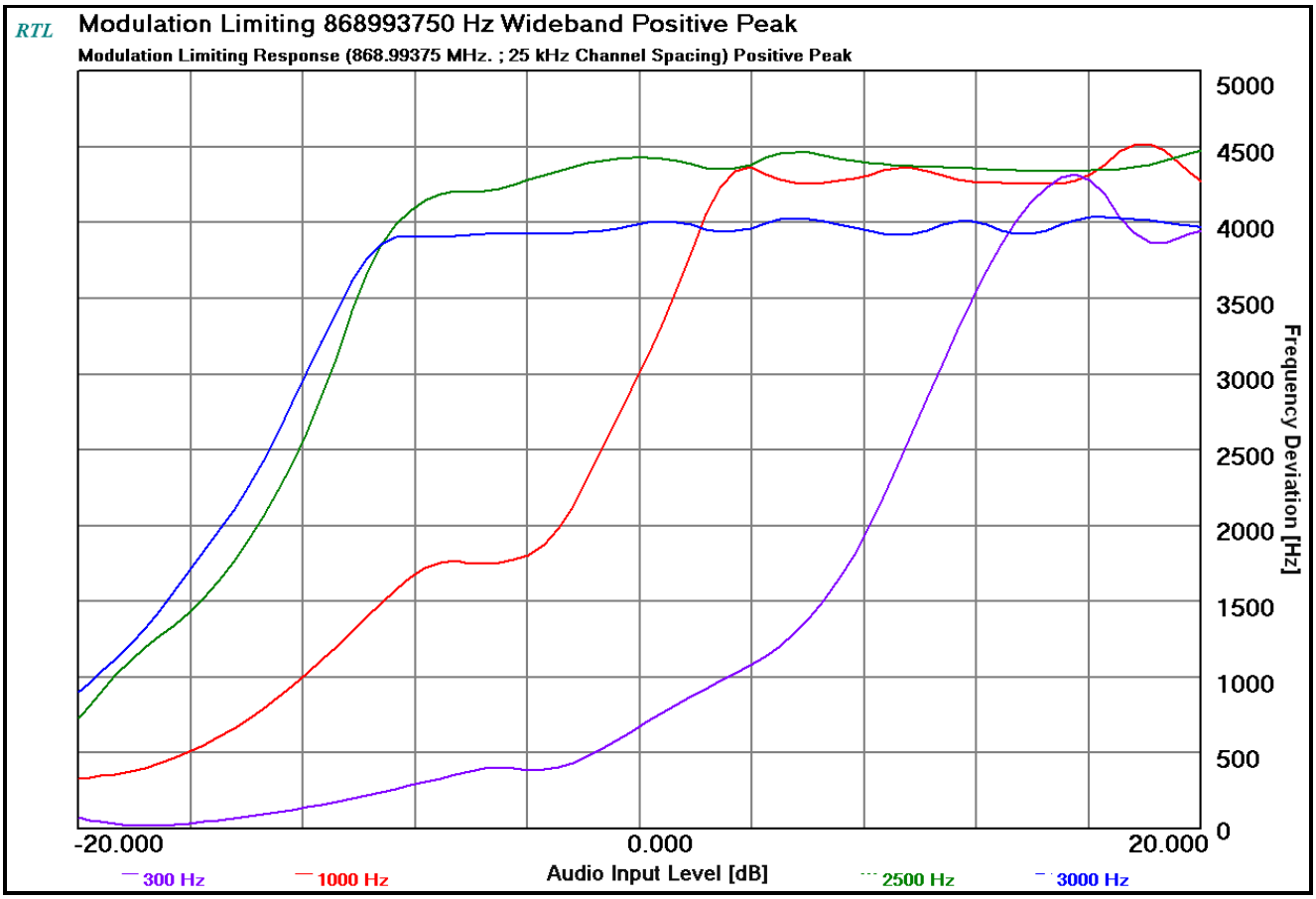
Plot 7-7: Modulation Characteristics – Modulation Limiting – 868.99375 MHz (NB); Positive Peak



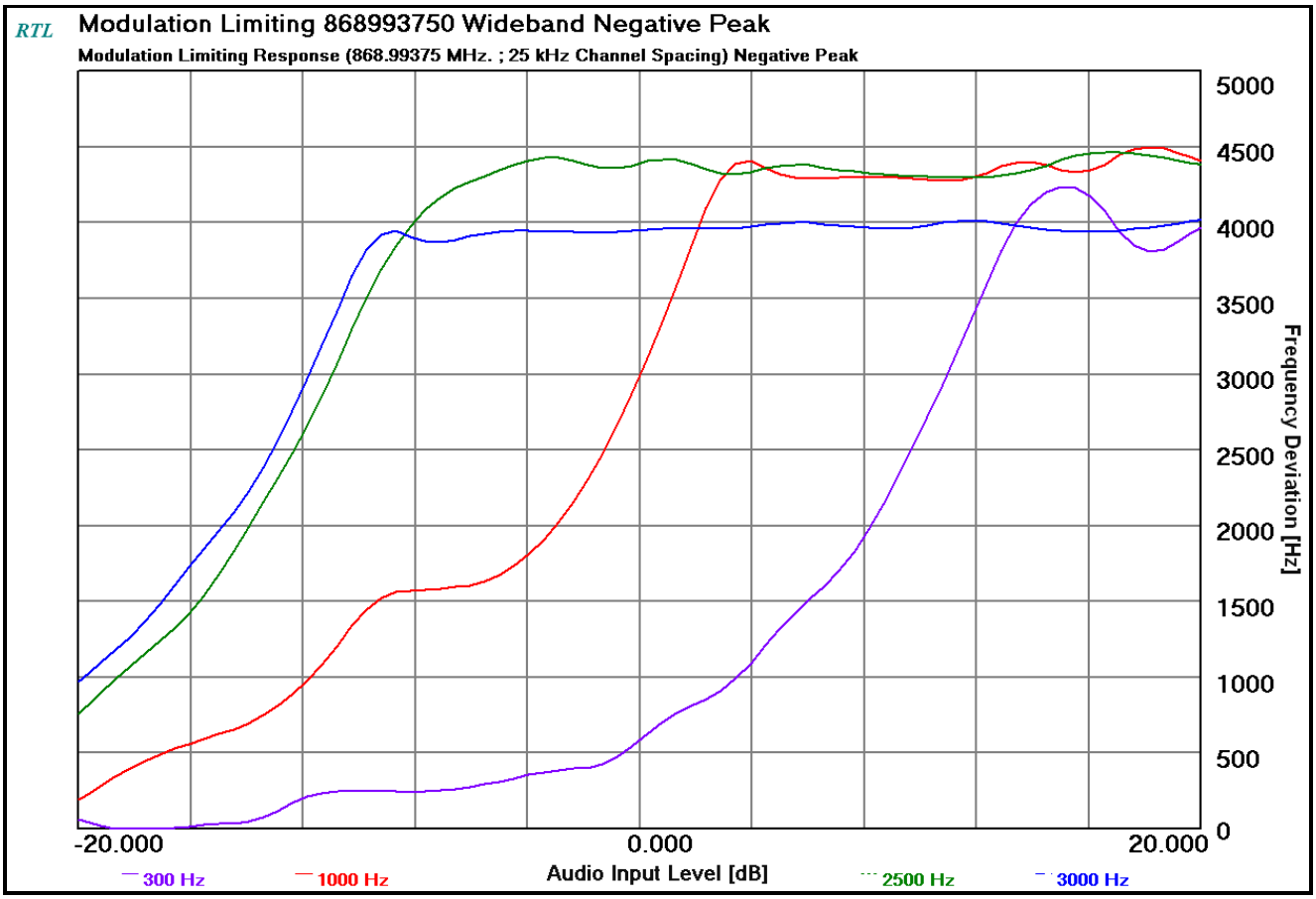
Plot 7-8: Modulation Characteristics – Modulation Limiting – 868.99375 MHz (NB); Negative Peak



Plot 7-9: Modulation Characteristics – Modulation Limiting – 868.99375 MHz (WB); Positive Peak



Plot 7-10: Modulation Characteristics – Modulation Limiting – 868.99375 MHz (WB); Negative Peak



Measurement uncertainties shown for these tests are expanded uncertainties expressed at the 95% confidence level using a coverage factor K=2. Measurement uncertainty: ±0.5 Hz/±0.8 dB

Results: Pass

Table 7-2: Test Equipment Used For Testing Modulation Requirements

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901760	Hewlett Packard	3336B	Synthesizer/ Level Generator	1931401314	03/28/2025
901118	Hewlett Packard	8901A Opt. 002-003	Modulation Analyzer	2406A00178	11/02/2024
901759	Hewlett Packard	HP 3586B	Selective Level Meter	2510A03886	04/04/2025
901355	JFW Industries	50FH-003-300	300W 3DB DC1000 MHz Attenuator	N/A	03/23/2025
901291	Pasternack	PE7031-20	20 dB 300 W Attenuator	901291	02/08/2025
901791	Shireen	UF1-2.92	40 GHz 24" Cable	N/A	08/02/2025

Test Personnel:

Daniel W. Baltzell		September 25 and October 27, 2024
EMC Test Engineer	Signature	Dates of Test

8 FCC Part 2.1055: Frequency Stability; ISED RSS-119 5.3: Transmitter Frequency Stability

8.1 Test Procedure

ANSI C63.26, section 5.6

The carrier frequency stability is the ability of the transmitter to maintain an assigned carrier frequency.

The EUT was evaluated over the temperature range -30°C to +60°C.

The temperature was initially set to -30°C, and 1 hour was observed to stabilize the EUT. The frequency stability was measured within one minute after the application of primary power to the transmitter. The temperature was raised at intervals of 10 degrees centigrade through the range. A ½-hour period was observed to stabilize the EUT at each measurement step, and the frequency stability was measured within one minute after the application of primary power to the transmitter. Additionally, the power supply voltage of the EUT was varied +/- 15% nominal input voltage and found the minimum ability to transmit was at -42 VDC.

Part 90.213 Frequency Stability

(a) Unless noted elsewhere, transmitters used in the services governed by this part must have a minimum frequency stability as specified in the following table.

Minimum Frequency Stability (ppm)			
Frequency Range (MHz)	Fixed and Base Stations	Mobile Stations	
		Over 2 Watts Output Power	2 Watts or Less Output Power
815-854	1.0	1.5	1.5
854-869	1.5	2.5	2.5

RSS-119 §5.3 Frequency Stability Table 1

Frequency Band (MHz)	Channel Bandwidth (kHz)	Frequency Stability (ppm)		
		Base/Fixed	Mobile Station	
			Output Power >2 W	Output Power ≤ 2 W
806-821/851-866 and 821-824/866-869 (Note 6)	25 (Note 2)	0.1	0.1	0.1
	25	1.5	2.5	2.5
	12.5	1.0	1.5	1.5
	6.25	0.1	0.4	0.4

Notes:

2. This provision is for digital equipment with a channel bandwidth of 25 kHz and an occupied bandwidth greater than 20 kHz. The mobile station's frequency stability values given in Table 1 are for mobile, portable and control transmitters using automatic frequency control (AFC) to lock onto the base station signal. When the mobile, portable and control transmitters are operating without using AFC to lock onto the base station signal, the frequency stability limit shall be better than 1 kHz and the equipment's unwanted emissions measured with maximum frequency shift shall still comply with emission mask Y (Section 5.8.10) at nominal carrier frequency.

6. Control stations may operate with the frequency stability specified for associated mobile frequencies.

8.2 Test Data

Table 8-1: Environmental Conditions

Date	Temperature (°C)	Humidity (%)	Atmospheric Pressure (kPa)
September 27, 2024	24.7	39	101.6

Table 8-2: Frequency Stability/Temperature Variation – 851.00625 MHz

Temperature (°C)	Measured Frequency (MHz)	ppm
-30	851.006330	0.09
-20	851.006317	0.08
-10	851.006298	0.06
0	851.006280	0.03
10	851.006257	0.01
20 (reference)	851.006250	0.00
30	851.006243	-0.01
40	851.006236	-0.02
50	851.006234	-0.02
60	851.006235	-0.02

Table 8-3: Frequency Stability/Temperature Variation – 860.00625 MHz

Temperature (°C)	Measured Frequency (MHz)	ppm
-30	860.006327	0.09
-20	860.006318	0.08
-10	860.006299	0.06
0	860.006281	0.04
10	860.006258	0.01
20 (reference)	860.006250	0.00
30	860.006243	-0.01
40	860.006236	-0.02
50	860.006234	-0.02
60	860.006235	-0.02

Table 8-4: Frequency Stability/Temperature Variation – 868.993750 MHz

Temperature (°C)	Measured Frequency (MHz)	ppm
-30	868.993830	0.09
-20	868.993819	0.08
-10	868.993800	0.06
0	868.993782	0.04
10	868.993759	0.01
20 (reference)	868.993750	0.00
30	868.993744	-0.01
40	868.993736	-0.02
50	868.993734	-0.02
60	868.993735	-0.02

Table 8-5: Frequency Stability/Voltage Variation – 851.00625 MHz

Voltage (VDC)	Measured Frequency (MHz)	ppm
-42.0	851.006253	0.00
-48.0 (reference)	851.006250	0.00
-55.2	851.006252	0.00

Table 8-6: Frequency Stability/Voltage Variation – 860.00625 MHz

Voltage (VDC)	Measured Frequency (MHz)	ppm
-42.0	860.006260	0.01
-48.0 (reference)	860.006250	0.00
-55.2	860.006251	0.00

Table 8-7: Frequency Stability/Voltage Variation – 868.993750 MHz

Voltage (VDC)	Measured Frequency (MHz)	ppm
-42.0	868.993755	0.01
-48.0 (reference)	868.993750	0.00
-55.2	868.993750	0.00

Measurement uncertainties shown for these tests are expanded uncertainties expressed at the 95% confidence level using a coverage factor K=2. Measurement uncertainty: ±0.5 Hz

Results: Pass

Table 8-8: Test Equipment Used For Testing Temperature Frequency Stability

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	200106	12/01/2024
901014	Kikusui	PCR4000L	Power Supply	DB001921	Not Required
900946	Tenney Engineering	TH65	Temperature Chamber with Humidity	11380	06/23/2025
901338	Weinschel	46-40-34	40 dB 25 W Attenuator	BM0556	02/07/2025
901291	Pasternack	PE7031-20	20 dB 300 W Attenuator	901291	02/08/2025
901729	Insulated Wire Inc.	KPS-1503-3150-KPR	SMK RF Cables 20'	NA	12/29/2024
901792	Shireen	UF1-2.92	40 GHz 300" Cable	N/A	08/02/2025
901791	Shireen	UF1-2.92	40 GHz 24" Cable	N/A	08/02/2025

Test Personnel:

Daniel W. Baltzell		September 27, 2024
EMC Test Engineer	Signature	Date of Test

9 FCC Part 2.202: Necessary Bandwidth and Emission Bandwidth

NARROWBAND ANALOG Data/Voice
Calculation:
Max modulation (M) in kHz: 3.0
Max deviation (D) in kHz: 2.5
Constant factor (K): 1 (assumed)
Bn = 2xM+2xDK = 11.0 kHz
Emission designator: 11K0F3E

NPSPAC ANALOG
Calculation:
Max modulation (M) in kHz: 3.0
Max deviation (D) in kHz: 4.0
Constant factor (K): 1 (assumed)
Bn = 2xM+2xDK = 14.0 kHz
Emission designator: 14K0F3E

WIDEBAND ANALOG
Calculation:
Max modulation (M) in kHz: 3.0
Max deviation (D) in kHz: 5
Constant factor (K): 1 (assumed)
Bn = 2xM+2xDK = 16.0 kHz
Emission designator: 16K0F3E

10 Conclusion

The data in this measurement report shows that the L3Harris Technologies Model/HVIN SN-8TXMX, FCC ID: OWDTR-0168-E, IC: 3636B-0168, complies with the applicable requirements of Parts 2 and 90 of the FCC Rules and Innovation, Science and Economic Development Canada RSS-119.