REGULATORY COMPLIANCE TEST REPORT

FCC CFR 47 Part 90 Subpart Y & ISED RSS-111

Report No.: RDWN92-U2 Rev A

Company: Radwin Ltd.

Model Name: AP0263510, AP0263511, AP0263530, AP0263540, AP0279700, AP0279710, AP0279720, SUAG00

REGULATORY COMPLIANCE TEST REPORT

Company Name: Radwin Ltd.

Model Name(s): AP0263510, AP0263511, AP0263530, AP0263540, AP0279700, AP0279710, AP0279720, SUAG00

To: FCC CFR 47 Part 90 Subpart Y & ISED RSS-111

Test Report Serial No.: RDWN92-U2 Rev A

This report supersedes: NONE

Applicant: Radwin Ltd.
27 Habarzel Street
Tel Aviv, 6971039
Israel

Issue Date: 22nd September 2023

This Test Report is Issued Under the Authority of:

MiCOM Labs, Inc.
575 Boulder Court
Pleasanton California 94566
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ACCREDITED
TESTING CERT #2381.01

MiCOM Labs is an ISO 17025 Accredited Testing Laboratory

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MiCOM Labs, 575 Boulder Court, Pleasanton, California 94566 USA, Phone: +1 (925) 462 0304, Fax: +1 (925) 462 0306, www.micomlabs.com

1. ACCREDITATION, LISTINGS & RECOGNITION

1.1. TESTING ACCREDITATION

MiCOM Labs, Inc. is an accredited Electrical testing laboratory per the international standard ISO/IEC 17025:2017. The company is accredited by the American Association for Laboratory Accreditation (A2LA) www.a2la.org test laboratory number 2381.01. MiCOM Labs test schedule is available at the following URL; http://www.a2la.org/scopepdf/2381-01.pdf

ilac-MRA A2LA

Accredited Laboratory

A2LA has accredited

MICOM LABS

Pleasanton, CA

for technical competence in the field of

Electrical Testing

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

Presented this 14th day of January 2022.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2381.01
Valid to November 30, 2023

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

1.2. RECOGNITION

MiCOM Labs, Inc is widely recognized for its wireless testing and certification capabilities. In addition to being recognized for Testing and Certification under Phase 2 Mutual Recognition Agreements (MRA) with Canada, Europe, United Kingdom and Japan, our international recognition includes Conformity Assessment Body (CAB) designation status under agreements with Asia Pacific (APEC) MRA Phase 1 countries giving acceptance of MiCOM Labs test reports. MiCOM Labs test reports are accepted globally.

Country	Recognition Body	Status	MRA Phase	Identification No.
USA	Federal Communications Commission (FCC)	TCB	-	US0159 Test Firm Designation#: US1084
Canada	Industry Canada (ISED)	FCB	APEC MRA 2	US0159 ISED#: 4143A
Japan	MIC (Ministry of Internal Affairs and Communication)	CAB	Japan MRA 2	RCB 210
	Japan Approvals Institute for Telecommunication Equipment (JATE)			
	VCCI	--	--	A-0012
Europe	European Commission	NB	EU MRA 2	NB 2280
United Kingdom	Department for Business, Energy & Industrial Strategy (BEIS)	AB	UK MRA 2	AB 2280
Mexico	Instituto Federal de Telecomunicaciones (IFT)	CAB	Mexico MRA 1	US0159
Australia	Australian Communications and Media Authority (ACMA)	CAB	APEC MRA 1	US0159
Hong Kong	Office of the Telecommunication Authority (OFTA)			
Korea	Ministry of Information and Communication Radio Research Laboratory (RRL)			
Singapore	Infocomm Development Authority (IDA)			
Taiwan	National Communications Commission (NCC) Bureau of Standards, Metrology and Inspection (BSMI)			
Vietnam	Ministry of Communication (MIC)			

TCB – Telecommunications Certification Bodies (TCB)
FCB – Foreign Certification Body
CAB – Conformity Assessment Body
NB – Notified Body
AB – Approved Body
MRA – Mutual Recognition Agreement
MRA PhasePhase I - recognition for product testing
Phase II – recognition for both product testing and certification

1.3. PRODUCT CERTIFICATION

MiCOM Labs, Inc. is an accredited Product Certification Body per the international standard ISO/IEC 17065:2012. The company is accredited by the American Association for Laboratory Accreditation (A2LA) www.a2la.org test laboratory number 2381.02. MiCOM Labs test schedule is available at the following URL; http://www.a2la.org/scopepdf/2381-02.pdf

Accredited Product Certification Body

A2LA has accredited

MiCOM LABS

Pleasanton, CA

This product certification body is accredited in accordance with the recognized International Standard ISO/IEC 17065:2012 *Requirements for bodies certifying products, processes and services*. This product certification body also meets the *A2LA R322 – Specific Requirements – Notified Body Accreditation Requirements* and *A2LA R308 - Specific Requirements - ISO-IEC 17065 - Telecommunication Certification Body Accreditation Program*. This accreditation demonstrates technical competence for a defined scope and the operation of a management system.

Presented this 14th day of January 2022

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2381.02
Valid to November 30, 2023

For the product certification schemes to which this accreditation applies, please refer to the organization's Product Certification Scope of Accreditation.

United States of America – Telecommunication Certification Body (TCB)
Industry Canada – Certification Body, CAB Identifier – US0159
Europe – Notified Body (NB), NB Identifier - 2280
UK – Approved Body (AB), AB Identifier - 2280
Japan – Recognized Certification Body (RCB), RCB Identifier - 210

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2. DOCUMENT HISTORY

Document History		
Revision	Date	Comments
Draft	13th September 2023	Draft report for client review.
Draft	21st September 2023	Updated Per the client's comments
Rev A	22nd September 2023	Initial Release
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In the above table the latest report revision will replace all earlier versions.

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3. TEST RESULT CERTIFICATE

Manufacturer:	Radwin Ltd. 27 Habarzel Street Tel Aviv 6971039 Israel	**Tested By:**	MiCOM Labs, Inc. 575 Boulder Court Pleasanton California 94566 USA
Model(s):	AP0263510, AP0263511, AP0263530, AP0263540, AP0279700, AP0279710, AP0279720, SUAG00	**Telephone:**	+1 925 462 0304
Type Of Equipment:	5 GHz SU/Alpha Assembly Board	**Fax:**	+1 925 462 0306
S/N's:	Test Sample		
Test Date(s):	5th – 11th September 2023	**Website:**	www.micomlabs.com

STANDARD(S)	TEST RESULTS
FCC CFR 47 Part 90 Subpart Y **ISED RSS-111**	**EQUIPMENT COMPLIES**

MiCOM Labs, Inc. tested the equipment mentioned in accordance with the requirements set forth in the above standards. Test results indicate that the equipment tested is capable of demonstrating compliance with the requirements as documented within this report.

Notes:

1. This document reports conditions under which testing was conducted and the results of testing performed.

2. Details of test methods used have been recorded and kept on file by the laboratory.

3. Test results apply only to the item(s) tested.

A2LA ACCREDITED
TESTING CERT #2381.01

Approved & Released for MiCOM Labs, Inc. by:

Graeme Grieve
Quality Manager MiCOM Labs, Inc.

Gordon Hurst
President & CEO MiCOM Labs, Inc.

4. REFERENCES AND MEASUREMENT UNCERTAINTY

4.1. Normative References

REF.	PUBLICATION	YEAR	TITLE
I	KDB 662911 D01, D02, D03	D01 Oct 2013, D02 Oct 2011, D03 Oct 2020	Guidance for measurement of output emission of devices that employ single transmitter with multiple outputs or systems with multiple transmitters operating simultaneously in the same frequency band. 662911 D01 Multiple Transmitter Output v02r01, 662911 D02 MIMO with Cross Polarized Antenna v01, 662911 D03 MIMO Antenna Gain Measurement v01, OET 13TR1003 Directional Gain of 802 11 MIMO with CDD 04 05 2013
II	A2LA	22nd June 2022	R105 - Requirement's When Making Reference to A2LA Accreditation Status
III	ANSI C63.4	2014	American National Standards for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
IV	ETSI TR 100 028	2001-12	Parts 1 and 2 Electromagnetic compatibility and Radio Spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics
V	FCC 47 CFR Part 90	June 2003	Private Land Mobile Radio Services; Subpart Y – Regulations Governing Licensing and Use of Frequencies in the 4940-4990 MHz Band
VI	KDB 971168 D01, D02	D01 April 2018 D02 April 2023	Guidance for measurement of output emissions and power for licensed wideband digital transmission systems. D01 Power Meas License Digital Systems v03r01 971168 D02 Misc OOBE License Digital Systems v02r02
VII	M 3003	EDITION 4 Oct 2019	Expression of Uncertainty and Confidence in Measurements
VIII	FCC 47 CFR Part 2.1033	May 2021	FCC requirements and rules regarding photographs and test setup diagrams.
IV	RSS-111	September 4th 2014	Broadband Public Safety Equipment Operating in the Band 4940-4990 MHz
X	RSS-Gen Issue 5	Amendment 1,2 (Feb 2021)	General Requirements for Compliance of Radio Apparatus
XI	ANSI C63.4	2014	American National Standards for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

4.2. Test and Uncertainty Procedure

Conducted and radiated emission measurements were conducted in accordance with American National Standards Institute ANSI C63.4, listed in the Normative References section of this report.

Measurement uncertainty figures are calculated in accordance with ETSI TR 100 028 Parts 1 and 2.

Measurement uncertainties stated are based on a standard uncertainty multiplied by a coverage factor k = 2, providing a level of confidence of approximately 95 % in accordance with UKAS document M 3003 listed in the Normative References section of this report.

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5. PRODUCT DETAILS AND TEST CONFIGURATIONS

5.1. Technical Details

Details	Description
Purpose:	Test of the Radwin Ltd. 5 GHz SU/Alpha Assembly Board to FCC CFR 47 Part 90 Subpart Y. Compliance Measurement Procedures for use in the 4940-4990 MHz band.
Applicant:	Radwin Ltd. 27 Habarzel Street Tel Aviv 6971039 Israel
Manufacturer:	Radwin Ltd.
Laboratory performing the tests:	MiCOM Labs, Inc. 575 Boulder Court Pleasanton California 94566 USA
Test report reference number:	RDWN92-U2
Date EUT received:	8th Feb 2021
Standard(s) applied:	FCC CFR 47 Part 90 Subpart Y & ISED RSS-111
Dates of test (from - to):	5th – 11th September 2023
No of Units Tested:	1
Product Family Name:	SU/Alpha
Model(s):	AP0263510, AP0263511, AP0263530, AP0263540, AP0279700, AP0279710, AP0279720, SUAG00
Location for use:	Outdoors
Declared Frequency Range(s):	4940 - 4990 MHz;
Type of Modulation:	OFDM
EUT Modes of Operation:	10MHz; 20MHz; 40MHz
Declared Nominal Output Power:	+30.00 dBm
Transmit/Receive Operation:	Transceiver
Rated Input Voltage and Current:	56 VDC; 1.0A
Operating Temperature Range:	-35°C - 60°C
ITU Emission Designator:	10 MHz: 9M03W7W 20 MHz: 17M7W7W 40 MHz: 35M6W7W
Equipment Dimensions:	0.4 / 3.78 / 6.45 in
Weight:	0.004 lb
Hardware Rev:	Prototype
Software Rev:	C

5.2. Scope Of Test Program

Radwin Ltd. AP0263510, AP0263511, AP0263530, AP0263540, AP0279700, AP0279710, AP0279720, SUAG00

The scope of the test program was to test the Radwin Ltd. AP0263510, AP0263511, AP0263530, AP0263540, AP0279700, AP0279710, AP0279720, SUAG00, 5 GHz SU/Alpha Assembly Board configurations in the frequency ranges 4940 - 4990 MHz; for compliance against the following specifications:

FCC CFR 47 Part 90 Subpart Y

This subpart sets out the regulations governing use of the 4940–4990 MHz (4.9 GHz) band. It includes eligibility requirements, and specific operational and technical standards for stations licensed in this band. The rules in this subpart are to be read in conjunction with the applicable requirements contained elsewhere in this part; however, in case of conflict, the provisions of this subpart shall govern with respect to licensing and operation in this band.

RSS-111

Broadband Public Safety Equipment Operating in the Band 4940-4990 MHz

5.3. Equipment Model(s) and Serial Number(s)

Type (EUT/ Support)	Equipment Description (Including Brand Name)	Manufacturer	Model No.	Serial No.
EUT	5 GHz SU/Alpha Board	RADWIN Ltd	SUAG00	Prototype
Support	POE 55 Vdc	RADWIN Ltd	CPU55A-270-1	--
Support	Laptop PC	IBM	Thinkpad	None

5.4. Antenna Details

Type	Manufacturer	Model	Family	Gain (dBi)	BF Gain	Dir BW	X-Pol	Frequency Band (MHz)
integral	RADWIN	MR0204670	Directional	21.0	-	10	Yes	4940 - 4990
external	RADWIN	RW-9105-4958	Directional	15.0	-	20	Yes	4940 - 4990
external	RADWIN	RW-9613-4960	Directional	23.0	-	10	Yes	4940 - 4990
external	RADWIN	RW-9622-5001	Directional	28.0	-	5	Yes	4940 - 4990
external	RADWIN	RW-9721-5158	Dish	28.0	-	5.6	Yes	4940 - 4990
external	RADWIN	RW-9732-4958	Dish	32.0	-	4	Yes	4940 - 4990

BF Gain - Beamforming Gain
Dir BW - Directional BeamWidth
X-Pol - Cross Polarization

5.5. Cabling and I/O Ports

Port Type	Max Cable Length	# of Ports	Screened	Conn Type	Data Type	Bit Rate
Power + Digital I/O	>30m	1	--	RJ45	Packet Data	1000

5.6. Test Configurations

Results for the following configurations are provided in this report:

Operational Mode(s)	Data Rate with Highest Power MBit/s	Channel Frequency (MHz)		
		Low	Mid	High
4940 - 4990 MHz				
*10MHz	8	4,945.00	4,965.00	4,985.00
*20MHz	8	4,950.00	4,965.00	4,980.00
40MHz	8	4,960.00	4,965.00	4,970.00

*note: only 10 and 20 MHz bandwidths are compliant for ISED RSS-111. 40MHz may not be used for ISED RSS-111

5.7. Equipment Modifications

The following modifications were required to bring the equipment into compliance:
1. NONE

5.8. Deviations from the Test Standard

The following deviations from the test standard were required in order to complete the test program:
1. NONE

6. TEST SUMMARY

List of Measurements

Test Header	Result	Data Link
Conducted Output Power	Complies	View Data
26 dB & 99% Bandwidth	Complies	View Data
Power Spectral Density	Complies	View Data
Peak Excursion Ratio	Complies	View Data
Spectrum Emission Mask	Complies	View Data
Radiated	Complies	-
TX Spurious Emissions	Complies	View Data
RX Emissions	Complies	View Data

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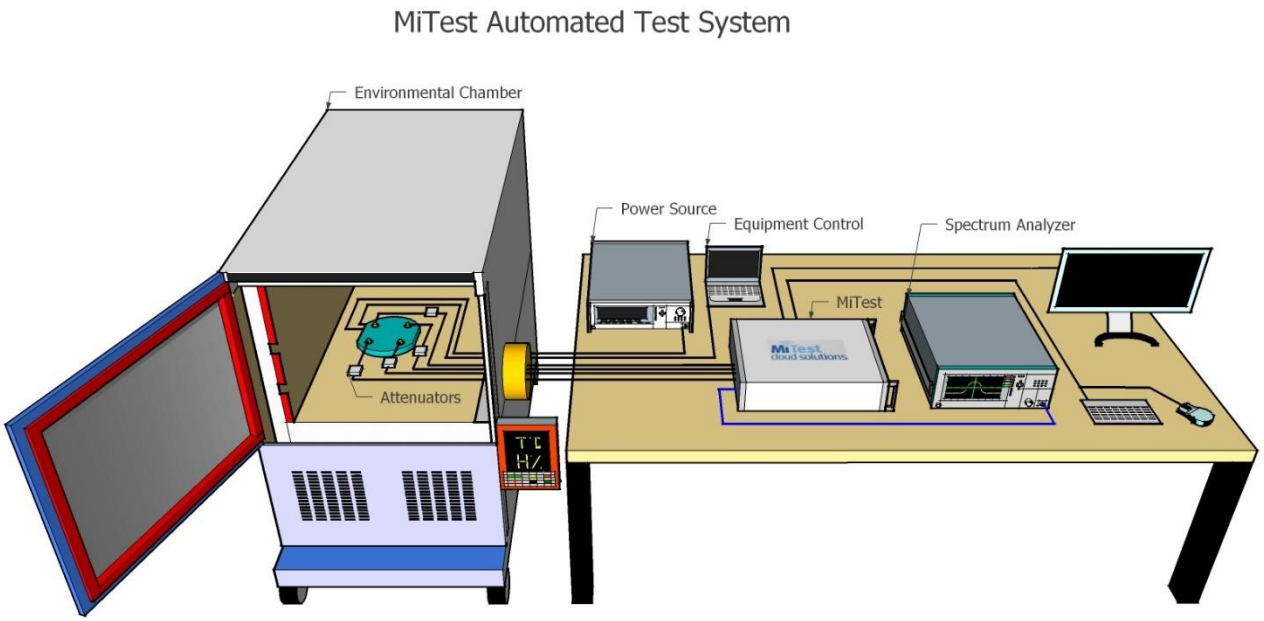
7. TEST EQUIPMENT CONFIGURATION(S)

7.1. Conducted

Conducted RF Emission Test Set-up(s) The following tests were performed using the conducted test set-up shown in the diagram below.



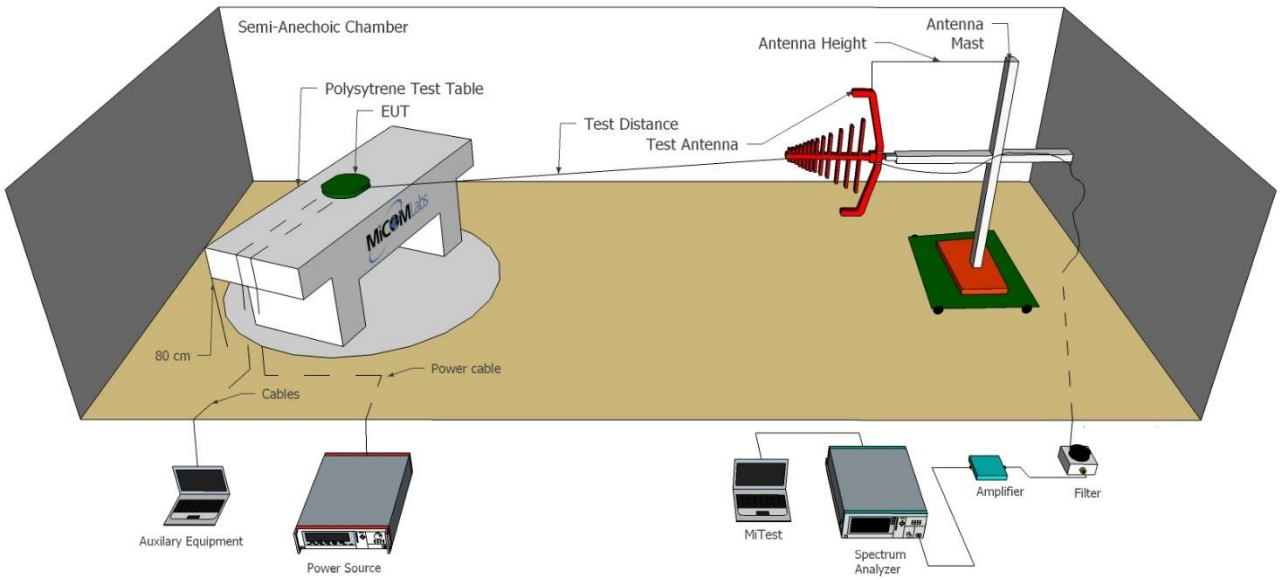
A full system calibration was performed on the test station and any resulting system losses (or gains) were considered in the production of all final measurement data.

Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
#3 SA	MiTest Box to SA	Fairview Microwave	SCA1814-0101-72	#3 SA	23 Sep 2023
#3P1	EUT to MiTest box port 1	Fairview Microwave	SCA1814-0101-72	#3P1	23 Sep 2023
#3P2	EUT to MiTest box port 2	Fairview Microwave	SCA1814-0101-72	#3P2	23 Sep 2023
#3P3	EUT to MiTest box port 3	Fairview Microwave	SCA1814-0101-72	#3P3	23 Sep 2023
#3P4	EUT to MiTest box port 4	Fairview Microwave	SCA1812-0101-72	#3P4	23 Sep 2023
249	Thermocouple; Resistance Thermometer	Thermotronics	GR2105-02	9340 #2	23 Sep 2023
398	MiTest RF Conducted Test Software	MiCOM	MiTest ATS	Version 4.2.3.0	Not Required
405	DC Power Supply 0-60V	Agilent	6654A	MY4001826	Cal when used
408	USB to GPIB interface	National Instruments	GPIB-USB HS	14C0DE9	Not Required
441	USB Wideband Power Sensor	Boonton	55006	9179	20 Sep 2023
442	USB Wideband Power Sensor	Boonton	55006	9181	19 Oct 2023
445	PoE Injector	D-Link	DPE-101GL	QTAH1E2000625	Not Required
461	Spectrum Analyzer	Agilent	E4440A	MY46185537	27 Sep 2024
493	USB Wideband Power Sensor	Boonton	55006	9634	8 Oct 2023
494	USB Wideband Power Sensor	Boonton	55006	9726	19 Oct 2023
510	Barometer/Thermometer	Digi Sense	68000-49	170871375	4 Jan 2024
519	MiTest Cloud Solutions RF Test Box	MiCOM	2nd Gen DFS	519	22 Dec 2023
555	Rhode & Schwarz Receiver (Firmware Version : 2.00 SP1)	Rhode & Schwarz	ESW 44	101893	28 Jun 2024
75	Environmental Chamber	Thermatron	SE-300-2-2	27946	20 Feb 2024

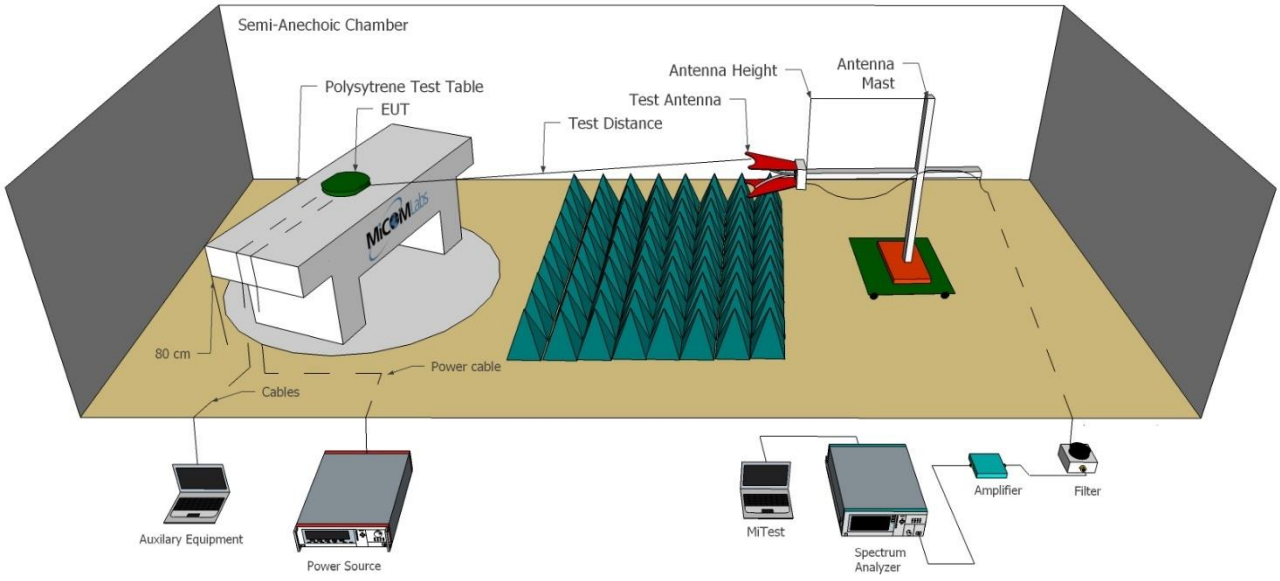
7.2. Radiated Emissions - 3m Chamber

The following tests were performed using the radiated test set-up shown in the diagram below.

Radiated Emissions Below 1GHz Test Setup



Radiated Emissions Above 1GHz Test Setup



A full system calibration was performed on the test station and any resulting system losses (or gains) were considered in the production of all final measurement data.

Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
170	Video System Controller for Semi Anechoic Chamber	Panasonic	WV-CU101	04R08507	Not Required
298	3M Radiated Emissions Chamber Maintenance Check	MiCOM	3M Chamber	298	24 Sep 2023
338	Sunol 30 to 3000 MHz Antenna	Sunol	JB3	A052907	29 Sep 2023
342	2.4 GHz Notch Filter	EWT	EWT-14-0203	H1	6 Oct 2023
373	26III RMS Multimeter	Fluke	Fluke 26 series III	76080720	29 Dec 2023
377	Band Rejection Filter 5150 to 5880MHz	Microtronics	BRM50716	034	6 Oct 2023
397	Amp 10 - 2500MHz	MiCOM Labs	Amp 10 - 2500 MHz	NA	27 Oct 2023
399	ETS 1-18 GHz Horn Antenna	ETS	3117	00154575	30 Sep 2023
406	Amplifier for Radiated Emissions	MiCOM Labs	40dB 1 to 18GHz Amp	0406	2 Nov 2023
410	Desktop Computer	Dell	Inspiron 620	WS38	Not Required
411	Mast/Turntable Controller	Sunol Sciences	SC98V	060199-1D	Not Required
412	USB to GPIB Interface	National Instruments	GPIB-USB HS	11B8DC2	Not Required
413	Mast Controller	Sunol Science	TWR95-4	030801-3	Not Required
414	DC Power Supply 0-60V	HP	6274	1029A01285	Cal when used
415	Turntable Controller	Sunol Sciences	Turntable Controller	None	Not Required
416	Gigabit ethernet filter	ETS-Lingren	Gigafoil 260366	None	Not Required
447	MiTest Rad Emissions Test Software	MiCOM	Rad Emissions Test Software Version 1.0	447	Not Required
462	Schwarzbeck cable from Antenna to Amplifier.	Schwarzbeck	AK 9513	462	27 Oct 2023
463	Schwarzbeck cable from Amplifier to Bulkhead.	Schwarzbeck	AK 9513	463	27 Oct 2023
464	Schwarzbeck cable from Bulkhead to Receiver	Schwarzbeck	AK 9513	464	27 Oct 2023
465	Low Pass Filter DC-1000 MHz	Mini-Circuits	NLP-1200+	VUU01901402	6 Oct 2023
480	Cable - Bulkhead to Amp	SRC Haverhill	157-3050360	480	6 Oct 2023
481	Cable - Bulkhead to Receiver	SRC Haverhill	151-3050787	481	6 Oct 2023
510	Barometer/Thermometer	Digi Sense	68000-49	170871375	4 Jan 2024
554	Precision SMA Cable	Fairview Microwave	SCE18060101-400CM	554	6 Oct 2023
555	Rhode & Schwarz Receiver (Firmware Version : 2.00 SP1)	Rhode & Schwarz	ESW 44	101893	28 Jun 2024
87	Uninterruptible Power Supply	Falcon Electric	ED2000-1/2LC	F3471 02/01	Cal when used
CC05	Confidence Check	MiCOM	CC05	None	22 Sep 2023

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8. MEASUREMENT AND PRESENTATION OF TEST DATA

The measurement and graphical data presented in this test report was generated automatically using state-of-the-art technology creating an easy to read report structure. Numerical measurement data is separated from supporting graphical data (plots) through hyperlinks. Numerical measurement data can be reviewed without scrolling through numerous graphical pages to arrive at the next data matrix.

Plots have been relegated into the Appendix 'Graphical Data'.

Test and report automation was performed by MiTest. MiTest is an automated test system developed by MiCOM Labs. MiTest is the first cloud based modular test system enabling end-to-end automation of regulatory compliance testing for conducted RF testing.

The MiCOM Labs "MiTest" Automated Test System" (Patent Pending)

9. TEST RESULTS

9.1. Conducted Output Power

Conducted Test Conditions for Maximum Conducted Output Power			
Standard:	FCC CFR 47:90 (Y)	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Maximum Conducted Output Power	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	90.1215 (a)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Maximum Conducted Output Power Measurement
Method PM (Measurement using an RF average power meter). KDB 789033 defines a methodology using an average wideband power meter. Measurements were made while the EUT was operating in a continuous transmission mode (100% duty cycle) at the appropriate center frequency. All operational modes and frequency bands were measured independently and the resultant calculated. Where the device operated with multiple antenna ports i.e. MIMO device, each port was measured and reported separately. A summation (Σ) of each antenna port output power is provided which includes any offset due to Duty Cycle Correction Factor (DCCF). Testing was performed under ambient conditions at nominal voltage.

Test configuration and setup used for the measurement was per the Conducted Test Set-up section specified in this document.
Supporting Information
Calculated Power = A + G + Y+ 10 log (1/x) dBm

A = Total Power [10*Log10 ($10^{a/10}$ + $10^{b/10}$ + $10^{c/10}$ + $10^{d/10}$)]
G = Antenna Gain
Y = Beamforming Gain
x = Duty Cycle (average power measurements only)

Limits Maximum Conducted Output Power
90.1215
Except as provided in paragraph (f) of this section, the transmitting power of stations operating in the 4940-4990 MHz band must not exceed the maximum limits in this section.

(a)(1) For base, mobile, and temporary fixed operations, the maximum conducted output power must not exceed:

Channel Bandwidth (MHz)	Low power maximum conducted output power (dBm)	High power maximum conducted output power (dBm)
1	7	20
5	14	27
10	17	30
15	18.8	31.8
20	20	33
30	21.8	34.8
40	23	36
50	24	37

(a) (2) High power devices are also limited to a peak power spectral density of 21 dBm per one MHz. High power devices using channel bandwidth other than those listed above are permitted; however, they are limited to peak power spectral density of 21 dBm/MHz. If transmitting antennas of directional gain greater than 9 dBi are used, both the maximum conducted output power and the peak power spectral density should be reduced by the amount in decibels that the directional gain of the antenna exceeds 9 dBi. However, high power point-to-point and point-to-multipoint operations (both fixed and temporary-fixed rapid deployment) may employ a transmitting antenna with directional gain up to 26 dBi without any corresponding reduction in the maximum conducted output power or spectral density. Corresponding reduction in the maximum conducted output power and peak power spectral density should be the amount in decibels that the directional gain of the antenna exceeds 26 dBi.

(f) The transmitting power of permanent fixed point-to-point and point-to-multipoint stations operating in the 4940-4990 MHz band must not exceed the maximum limits in this paragraph (f). Moreover, applicants should request no more power than necessary for a particular use.

(1) The maximum equivalent isotropically radiated power (EIRP), as referenced to an isotropic radiator, must not exceed 55 dBW (85 dBm)
(2) For path lengths shorter than 17 kilometers, the EIRP shall not exceed the value derived from the following equation: New EIRP limit = 55 dBW – 40*log(17/B) dBW, where B = the actual path length in kilometers.

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Equipment Configuration for Peak Transmit Power			
Variant:	10MHz	**Duty Cycle (%):**	72.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	15.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm) Port(s)				Calculated Total Power + DCCF (1.43 db)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) dBm	dBm	dB	
4945.0	21.14	19.80	--	--	24.96	30.0	-5.04	22.5
4965.0	21.22	19.82	--	--	25.01	30.0	-4.99	22.5
4985.0	21.29	19.86	--	--	25.07	30.0	-4.93	22.5

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Measurement Uncertainty:	±1.33 dB

DCCF - Duty Cycle Correction Factor

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Equipment Configuration for Peak Transmit Power			
Variant:	20MHz	**Duty Cycle (%):**	52.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	15.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm) Port(s)				Calculated Total Power + DCCF (2.52 db)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) dBm	dBm	dB	
4950.0	19.91	18.76	--	--	24.90	33.0	-8.10	22.5
4965.0	20.14	18.80	--	--	25.05	33.0	-7.95	22.5
4980.0	20.27	18.83	--	--	25.14	33.0	-7.86	22.5

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Measurement Uncertainty:	±1.33 dB

DCCF - Duty Cycle Correction Factor

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Equipment Configuration for Peak Transmit Power			
Variant:	40MHz	**Duty Cycle (%):**	45.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	15.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm) Port(s)				Calculated Total Power + DCCF (3.47 db)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) dBm	dBm	dB	
4960.0	17.57	16.18	--	--	23.41	36.0	-12.59	21.5
4965.0	17.64	16.21	--	--	23.46	36.0	-12.54	21.5
4970.0	17.66	16.32	--	--	23.52	36.0	-12.48	21.5

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Measurement Uncertainty:	±1.33 dB

DCCF - Duty Cycle Correction Factor

MiCOM Labs, 575 Boulder Court, Pleasanton, California 94566 USA, Phone: +1 (925) 462 0304, Fax: +1 (925) 462 0306, www.micomlabs.com

Equipment Configuration for Peak Transmit Power			
Variant:	10MHz	**Duty Cycle (%):**	72.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	32.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm) Port(s)				Calculated Total Power + DCCF (1.43 db)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) dBm	dBm	dB	
4945.0	20.22	18.72	--	--	23.97	24.0	-0.03	21.0
4965.0	20.17	18.66	--	--	23.92	24.0	-0.08	21.0
4985.0	20.07	18.89	--	--	23.96	24.0	-0.04	21.0

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Measurement Uncertainty:	±1.33 dB

DCCF - Duty Cycle Correction Factor

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Equipment Configuration for Peak Transmit Power			
Variant:	20MHz	**Duty Cycle (%):**	52.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	32.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm) Port(s)				Calculated Total Power + DCCF (2.52 db)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) dBm	dBm	dB	
4950.0	18.87	17.97	--	--	23.97	27.0	-3.03	21.0
4965.0	18.98	17.88	--	--	23.99	27.0	-3.01	21.0
4980.0	19.09	17.67	--	--	23.97	27.0	-3.03	21.0

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Measurement Uncertainty:	±1.33 dB

DCCF - Duty Cycle Correction Factor

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Equipment Configuration for Peak Transmit Power			
Variant:	40MHz	**Duty Cycle (%):**	45.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	32.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm) Port(s)				Calculated Total Power + DCCF (3.47 db)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) dBm	dBm	dB	
4960.0	17.57	16.18	--	--	23.41	30.0	-6.59	21.5
4965.0	17.64	16.21	--	--	23.46	30.0	-6.54	21.5
4970.0	17.66	16.32	--	--	23.52	30.0	-6.48	21.5

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Measurement Uncertainty:	±1.33 dB

DCCF - Duty Cycle Correction Factor

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9.2. 26 dB & 99% Bandwidth

Conducted Test Conditions for 26 dB and 99% Bandwidth			
Standard:	FCC CFR 47:90	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	26 dB and 99 % Bandwidth	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	209	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for 26 dB and 99% Bandwidth Measurement
The bandwidth at 26 dB and 99 % is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency. The Resolution Bandwidth was set to approximately 1% of the emission bandwidth.
Testing was performed under ambient conditions at nominal voltage. Where the device operated with multiple antenna ports i.e. MIMO device, each port was measured and reported.

Test configuration and setup used for the measurement was per the Conducted Test Set-up section specified in this document.

Equipment Configuration for 26 dB & 99% Occupied Bandwidth			
Variant:	10MHz	**Duty Cycle (%):**	72.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	15.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
4945.0	9.030	8.800	--	--	9.030	8.800		
4965.0	8.970	8.730	--	--	8.970	8.730		
4985.0	8.970	8.770	--	--	8.970	8.770		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
4945.0	7.613	7.595	--	--	7.613	7.595		
4965.0	7.617	7.592	--	--	7.617	7.592		
4985.0	7.619	7.588	--	--	7.619	7.588		

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).

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Equipment Configuration for 26 dB & 99% Occupied Bandwidth			
Variant:	20MHz	**Duty Cycle (%):**	52.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	15.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
4950.0	17.730	17.130	--	--	17.730	17.130		
4965.0	17.730	17.070	--	--	17.730	17.070		
4980.0	17.730	17.000	--	--	17.730	17.000		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
4950.0	15.039	15.016	--	--	15.039	15.016		
4965.0	15.036	15.012	--	--	15.036	15.012		
4980.0	15.047	15.018	--	--	15.047	15.018		

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).

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Equipment Configuration for 26 dB & 99% Occupied Bandwidth			
Variant:	40MHz	**Duty Cycle (%):**	45.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	15.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
4960.0	35.470	35.600	--	--	35.470	35.600		
4965.0	35.330	35.330	--	--	35.330	35.330		
4970.0	35.330	35.600	--	--	35.600	35.330		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
4960.0	33.249	33.256	--	--	33.288	33.249		
4965.0	33.282	33.288	--	--	33.288	33.282		
4970.0	33.288	33.254	--	--	33.288	33.254		

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).

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9.3. Power Spectral Density

Conducted Test Conditions for Power Spectral Density			
Standard:	FCC CFR 47:90.1215	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Power Spectral Density	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	90.1215 (a)(2)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Power Spectral Density

The in-band power spectral density was measured using the test technique specified in KDB 789033. A 1 MHz measurement bandwidth was implemented for the analyzer sweep. Once the sweep is complete the analyzer trace data is downloaded and used for post processing purposes.

Where the device operated with multiple antenna ports i.e. MIMO device, each port was measured separately. The Peak Power Spectral Density is the highest level found across the emission bandwidth. With multiple antenna port measurements, the numerical analyzer data from each port is summed (å) and a link to this additional graphic is provided.

Test configuration and setup used for the measurement was per the Conducted Test Set-up section specified in this document.

Measure and sum the spectra across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The individual spectra are then summed mathematically in linear power units. Unlike in-band power measurements, in which the sum involves a single measured value (output power) from each output, measurements for compliance with PSD limits involve summing entire spectra across corresponding frequency bins on the various outputs. Consistency is maintained for any device with multiple transmitter outputs to be certain the individual outputs are all aligned with the same span and same number of points. In this instance, the linear power spectrum value within the first spectral bin of output 0 is summed with that in the first spectral bin of output 1, and the first spectral bin of output 2, and so on up to the Nth output to obtain the true value for the first frequency bin of the summed spectrum. The summed spectrum value for each frequency bin is computed in this fashion. These summed spectral values were post processed and the resulting numerical and graphical data presented.

NOTE: It may be observed that spectrum in some plots break the limit line however this in itself does NOT constitute a failure. In all cases a spectrum summation plot is provided in order to prove compliance. A failure occurs only after the summation of all spectrum plots have been summed and are found to be greater than the limit line.

Supporting Information

Calculated Power = A + 10 log (1/x) dBm

A = Total Power Spectral Density [10*Log10 ($10^{a/10} + 10^{b/10} + 10^{c/10} + 10^{d/10}$)]

x = Duty Cycle

Limits Power Spectral Density

(a) (2) High power devices are also limited to a peak power spectral density of 21 dBm per one MHz. High power devices using channel bandwidth other than those listed above are permitted; however, they are limited to peak power spectral density of 21 dBm/MHz. If transmitting antennas of directional gain greater than 9 dBi are used, both the maximum conducted output power and the peak power spectral density should be reduced by the amount in decibels that the directional gain of the antenna exceeds 9 dBi. However, high power point-to-point and point-to-multipoint operations (both fixed and temporary-fixed rapid deployment) may employ a transmitting antenna with directional gain up to 26 dBi without any corresponding reduction in the maximum conducted output power or spectral density. Corresponding reduction in the maximum conducted output power and peak power spectral density should be the amount in decibels that the directional gain of the antenna exceeds 26 dBi.

(d) The peak power spectral density is measured as conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements are made over a bandwidth of one MHz or the 26 dB emission bandwidth of the device, whichever is less. A resolution bandwidth less than the measurement bandwidth can be used, provided that the measured power is integrated to show total power over the measurement bandwidth. If the resolution bandwidth is approximately equal to the measurement bandwidth, and much less than the emission bandwidth of the equipment under test, the measured results shall be corrected to account for any difference between the resolution bandwidth of the test instrument and its actual noise bandwidth.

Equipment Configuration for Power Spectral Density			
Variant:	10MHz	**Duty Cycle (%):**	72.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	15.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Summation Peak Marker + DCCF (+1.43 dB)	Limit	Margin
MHz	a	b	c	d	dBm/MHz	dBm/MHz	dB
4945.0	12.543	12.026	--	--	16.669	21.0	-4.3
4965.0	12.476	12.151	--	--	16.655	21.0	-4.4
4985.0	12.886	12.312	--	--	17.011	21.0	-4.0

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

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Equipment Configuration for Power Spectral Density			
Variant:	20MHz	**Duty Cycle (%):**	52.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	15.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Summation Peak Marker + DCCF (+2.84 dB)	Limit	Margin
MHz	a	b	c	d	dBm/MHz	dBm/MHz	dB
4950.0	8.462	8.047	--	--	13.967	21.0	-7.0
4965.0	8.477	8.192	--	--	14.082	21.0	-6.9
4980.0	9.052	8.178	--	--	14.283	21.0	-6.7

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

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Equipment Configuration for Power Spectral Density			
Variant:	40MHz	**Duty Cycle (%):**	45.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	15.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Summation Peak Marker + DCCF (+3.47 dB)	Limit	Margin
MHz	a	b	c	d	dBm/MHz	dBm/MHz	dB
4960.0	2.643	0.955	--	--	8.240	21.0	-12.76
4965.0	2.736	1.004	--	--	8.160	21.0	-12.84
4970.0	2.668	0.947	--	--	8.270	21.0	-12.73

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

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Equipment Configuration for Power Spectral Density			
Variant:	10MHz	**Duty Cycle (%):**	72.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	32.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Summation Peak Marker + DCCF (+1.43 dB)	Limit	Margin
MHz	a	b	c	d	dBm/MHz	dBm/MHz	dB
4945.0	10.144	9.810	--	--	14.290	15.0	-0.7
4965.0	10.558	9.742	--	--	14.518	15.0	-0.5
4985.0	10.480	10.129	--	--	14.671	15.0	-0.3

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

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Equipment Configuration for Power Spectral Density			
Variant:	20MHz	**Duty Cycle (%):**	56.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	32.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Summation Peak Marker + DCCF (+2.52 dB)	Limit	Margin
MHz	a	b	c	d	dBm/MHz	dBm/MHz	dB
4950.0	6.415	5.957	--	--	11.635	15.0	-3.4
4965.0	6.513	6.181	--	--	11.628	15.0	-3.4
4980.0	6.758	6.257	--	--	11.987	15.0	-3.0

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

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Equipment Configuration for Power Spectral Density			
Variant:	40MHz	**Duty Cycle (%):**	45.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	32.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Summation Peak Marker + DCCF (+3.47 dB)	Limit	Margin
MHz	a	b	c	d	dBm/MHz	dBm/MHz	dB
4960.0	2.285	1.580	--	--	8.422	15.0	-6.6
4965.0	2.112	1.649	--	--	8.240	15.0	-6.8
4970.0	2.498	1.620	--	--	8.407	15.0	-6.6

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

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9.4. Peak Excursion Ratio

Conducted Test Conditions for Peak Excursion Ratio			
Standard:	FCC CFR 47:90 (Y)	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Peak Excursion Ratio	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	90.1215 (e)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Peak Excursion Ratio
The spectrum analyzers built in Peak-To-Average Power Ratio measurement function was utilized.

Only the center channel is measured for each operating mode, and all transmitter chains are combined and analyzed simultaneously.

Peak Excursion Limits
The ratio of the peak excursion of the modulation envelope to the maximum conducted output power shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less. Additionally, the PAPR can be used, and shall not exceed 13 dB for more than 0.1% of the time, using a signal that corresponds to the highest PAPR during periods of continuous transmission.

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Equipment Configuration for Peak Excursion Ratio			
Variant:	10 MHz	**Duty Cycle (%):**	72.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	Variable
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Frequency	Measured Ratio (dB)		Limit	Margin	EUT Power Setting
MHz	0.1% (dB)	Peak	dB	dB	
4965.0	9.55	10.22	13.0	-3.45	22.5

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Measurement Uncertainty:	

Equipment Configuration for Peak Excursion Ratio			
Variant:	20 MHz	**Duty Cycle (%):**	56.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	Variable
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Frequency	Measured Ratio (dB)		Limit	Margin	EUT Power Setting
MHz	**0.1% (dB)**	**Peak**	**dB**	**dB**	
4965.0	11.04	11.69	13.0	-1.96	22.5

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Measurement Uncertainty:	

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Equipment Configuration for Peak Excursion Ratio

Variant:	40 MHz	**Duty Cycle (%):**	45.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	Variable
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Frequency	Measured Ratio (dB)		Limit	Margin	EUT Power Setting
MHz	**0.1% (dB)**	**Peak**	**dB**	**dB**	
4965.0	12.73	13.39	13.0	-0.27	21.5

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Measurement Uncertainty:	

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9.5. Spectrum Emission Mask and Spurious Emissions

Conducted Test Conditions for Spectrum Emission Mask			
Standard:	FCC CFR 47:90 (I)	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Spectrum Emission Mask	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	90.210 (m)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Emission Masks

Emission Mask Limits
Except as indicated in this part, transmitters used in the radio services governed by this part must comply with the emission masks outlined in this section. Unless otherwise stated, per paragraphs (d)(4), (e)(4), and (o) of this section, measurements of emission power can be expressed in either peak or average values provided that emission powers are expressed with the same parameters used to specify the unmodulated transmitter carrier power. For transmitters that do not produce a full power unmodulated carrier, reference to the unmodulated transmitter carrier power refers to the total power contained in the channel bandwidth. Unless indicated elsewhere in this part, the table in this section specifies the emission masks for equipment operating under this part.

(m) **Emission Mask M.** For high power transmitters (greater than 20 dBm) operating in the 4940-4990 MHz frequency band, the power spectral density of the emissions must be attenuated below the output power of the transmitter as follows:

(1) On any frequency removed from the assigned frequency between 0-45% of the authorized bandwidth (BW):
0 dB.

(2) On any frequency removed from the assigned frequency between 45-50% of the authorized bandwidth (BW):
568 log (% of (BW)/45) dB.

(3) On any frequency removed from the assigned frequency between 50-55% of the authorized bandwidth (BW):
26 + 145 log (% of (BW)/50) dB.

(4) On any frequency removed from the assigned frequency between 55-100% of the authorized bandwidth (BW):
32 + 31 log (% of (BW)/55) dB.

(5) On any frequency removed from the assigned frequency between 100-150% of the authorized bandwidth (BW):
40 + 57 log (% of (BW)/100) dB.

(6) On any frequency removed from the assigned frequency between above 150% of the authorized bandwidth:
50 dB or 55 + 10 log (P) dB, whichever is the lesser attenuation.

(7) The zero dB reference is measured relative to the highest average power of the fundamental emission measured across the designated channel bandwidth using a resolution bandwidth of at least one percent of the occupied bandwidth of the fundamental emission and a video bandwidth of 30 kHz. The power spectral density is the power measured within the resolution bandwidth of the measurement device divided by the resolution bandwidth of the measurement device. Emission levels are also based on the use of measurement instrumentation employing a resolution bandwidth of at least one percent of the occupied bandwidth.

Equipment Configuration for Spectrum Emission Mask			
Variant:	10MHz	**Duty Cycle (%):**	72.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	15.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Spectrum Mask Port(s)				Complies
MHz	**a**	**b**	**c**	**d**	**Pass/Fail**
4945.0	Mask / Spurious	Mask / Spurious	--	--	Pass
4965.0	Mask / Spurious	Mask / Spurious	--	--	Pass
4985.0	Mask / Spurious	Mask / Spurious	--	--	Pass

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).

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Equipment Configuration for Spectrum Emission Mask			
Variant:	20MHz	**Duty Cycle (%):**	56.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	15.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Spectrum Mask Port(s)				Complies
MHz	**a**	**b**	**c**	**d**	**Pass/Fail**
4950.0	Mask / Spurious	Mask / Spurious	--	--	Pass
4965.0	Mask / Spurious	Mask / Spurious	--	--	Pass
4980.0	Mask / Spurious	Mask / Spurious	--	--	Pass

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).

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Equipment Configuration for Spectrum Emission Mask			
Variant:	40MHz	**Duty Cycle (%):**	45.0
Data Rate:	8.00 MBit/s	**Antenna Gain (dBi):**	15.00
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results					
Test Frequency	**Measured Spectrum Mask Port(s)**				**Complies**
MHz	**a**	**b**	**c**	**d**	**Pass/Fail**
4960.0	Mask / Spurious	Mask / Spurious	--	--	Pass
4965.0	Mask / Spurious	Mask / Spurious	--	--	Pass
4970.0	Mask / Spurious	Mask / Spurious	--	--	Pass

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).

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9.6. Radiated

9.6.1. TX Spurious Emissions

Radiated Spurious Emissionsa			
Standard:	FCC CFR 47:90 (I)	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Radiated Spurious Emissions	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	90.210 (m)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Radiated Spurious Emission

Emission Limits
Except as indicated in this part, transmitters used in the radio services governed by this part must comply with the emission masks outlined in this section. Unless otherwise stated, per paragraphs (d)(4), (e)(4), and (o) of this section, measurements of emission power can be expressed in either peak or average values provided that emission powers are expressed with the same parameters used to specify the unmodulated transmitter carrier power. For transmitters that do not produce a full power unmodulated carrier, reference to the unmodulated transmitter carrier power refers to the total power contained in the channel bandwidth. Unless indicated elsewhere in this part, the table in this section specifies the emission masks for equipment operating under this part.

(m) **Emission Mask M.** For high power transmitters (greater than 20 dBm) operating in the 4940-4990 MHz frequency band, the power spectral density of the emissions must be attenuated below the output power of the transmitter as follows:
(1) On any frequency removed from the assigned frequency between 0-45% of the authorized bandwidth (BW):
0 dB.
(2) On any frequency removed from the assigned frequency between 45-50% of the authorized bandwidth (BW):
568 log (% of (BW)/45) dB.
(3) On any frequency removed from the assigned frequency between 50-55% of the authorized bandwidth (BW):
26 + 145 log (% of (BW)/50) dB.
(4) On any frequency removed from the assigned frequency between 55-100% of the authorized bandwidth (BW):
32 + 31 log (% of (BW)/55) dB.
(5) On any frequency removed from the assigned frequency between 100-150% of the authorized bandwidth (BW):
40 + 57 log (% of (BW)/100) dB.
(6) On any frequency removed from the assigned frequency between above 150% of the authorized bandwidth:
50 dB or 55 + 10 log (P) dB, whichever is the lesser attenuation.
(7) The zero dB reference is measured relative to the highest average power of the fundamental emission measured across the designated channel bandwidth using a resolution bandwidth of at least one percent of the occupied bandwidth of the fundamental emission and a video bandwidth of 30 kHz. The power spectral density is the power measured within the resolution bandwidth of the measurement device divided by the resolution bandwidth of the measurement device. Emission levels are also based on the use of measurement instrumentation employing a resolution bandwidth of at least one percent of the occupied bandwidth.

Test Procedure
Measurements were made while EUT was operating in a modulated transmit mode of operation, at the appropriate center frequency, 100% duty cycle and maximum power at all times. Radiated spurious emissions were measured to 40 GHz. Substitution was performed on any emissions observed. The antenna port was attenuated with 50 dB attenuation plus a 50 Ω terminator.

The measurement equipment was set to measure in peak hold mode. The emissions were measured in the anechoic chamber at a 3-meter distance on every azimuth in both horizontal and vertical polarities. The emissions are recorded and maximized as a function of azimuth by rotation through 360° with a spectrum analyzer in peak hold mode.

The highest emissions relative to the limit are listed for each frequency spanned.
Measurements below 1 GHz utilized 100 KHz RBW, measurements above 1 GHz were performed using a minimum RBW of 1 MHz.

Emission measurements were performed to the 10th harmonic of the transmitter. No emissions were found.

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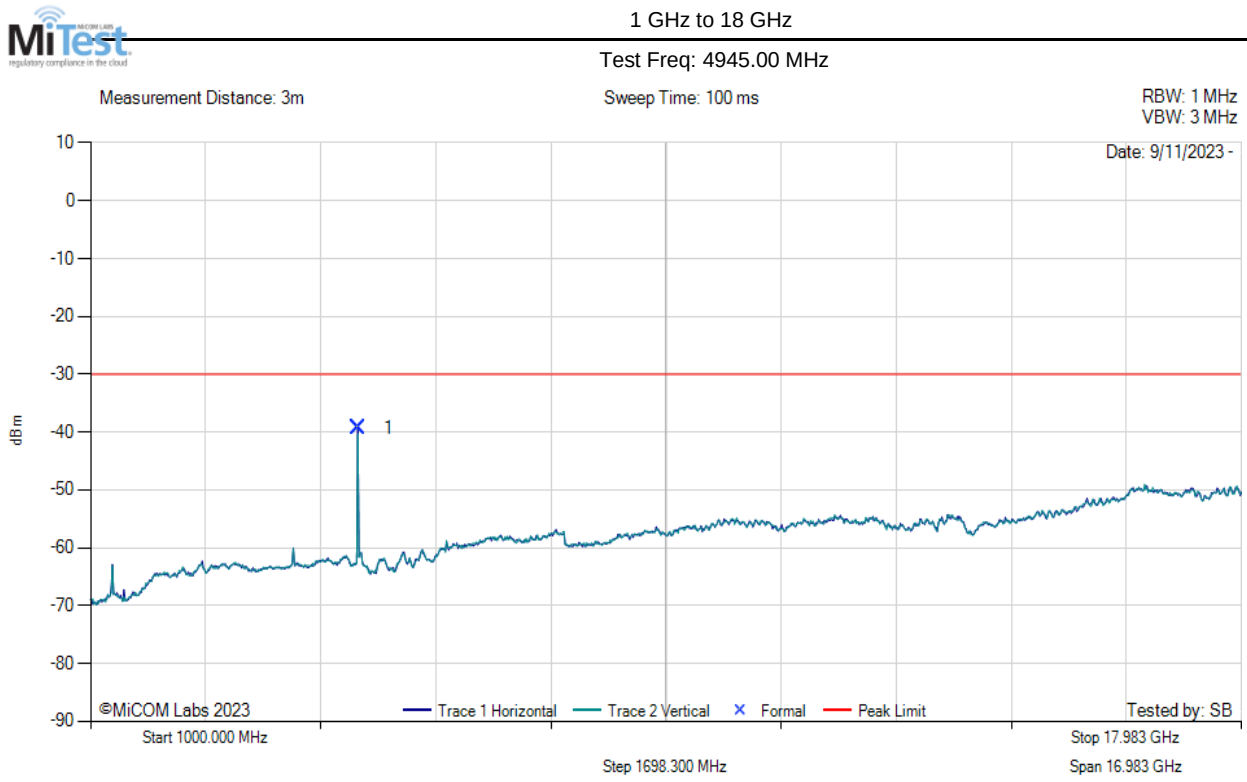
Equipment Configuration for FCC Spurious 1 GHz -18 GHz			
Antenna:	50 Ohm Term	**Variant:**	10MHz
Antenna Gain (dBi):	--	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	72
Channel Frequency (MHz):	4945.00	**Data Rate:**	8 Mbit/s
Power Setting:	22.5	**Tested By:**	SB

Test Measurement Results



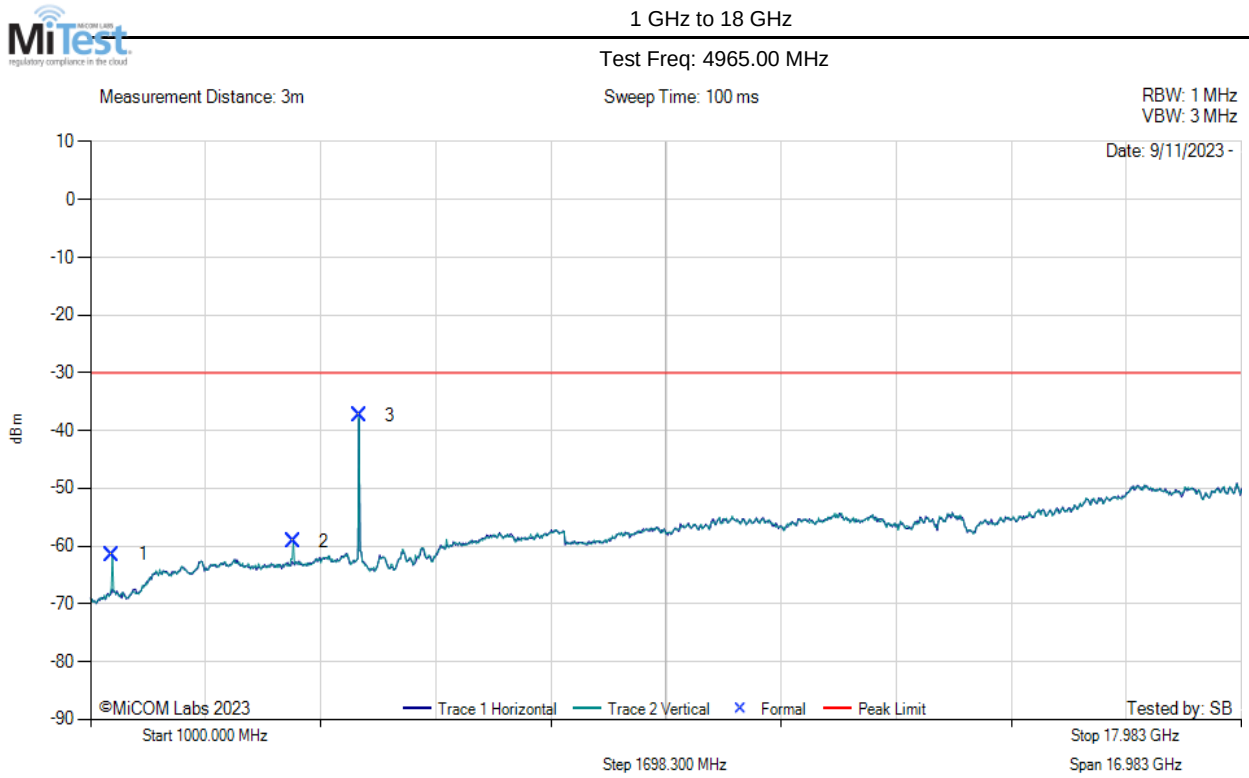
1000.00 - 17983.00 MHz												
Num	**Frequency MHz**	**Raw dBm**	**Cable Loss dB**	**AF dB/m**	**Level dBm**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBm**	**Margin dB**	**Pass /Fail**
1	4944.00	-50.21	-1.70	56.74	-39.33	AVG	Horizontal	150	0	--	--	Pass

Test Notes: SU Alpha TX 4945 10M PS 23 1-18. Antenna ports terminated. 2.4 wireless active, 2.4G notch in front of amp to prevent overloads.

Testing was performed up to 40 GHz, no emissions were found above 18GHz.

Equipment Configuration for FCC Spurious 1 GHz -18 GHz			
Antenna:	50 Ohm Term	**Variant:**	10MHz
Antenna Gain (dBi):	--	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	72
Channel Frequency (MHz):	4965.00	**Data Rate:**	8 Mbit/s
Power Setting:	22.5	**Tested By:**	SB

Test Measurement Results



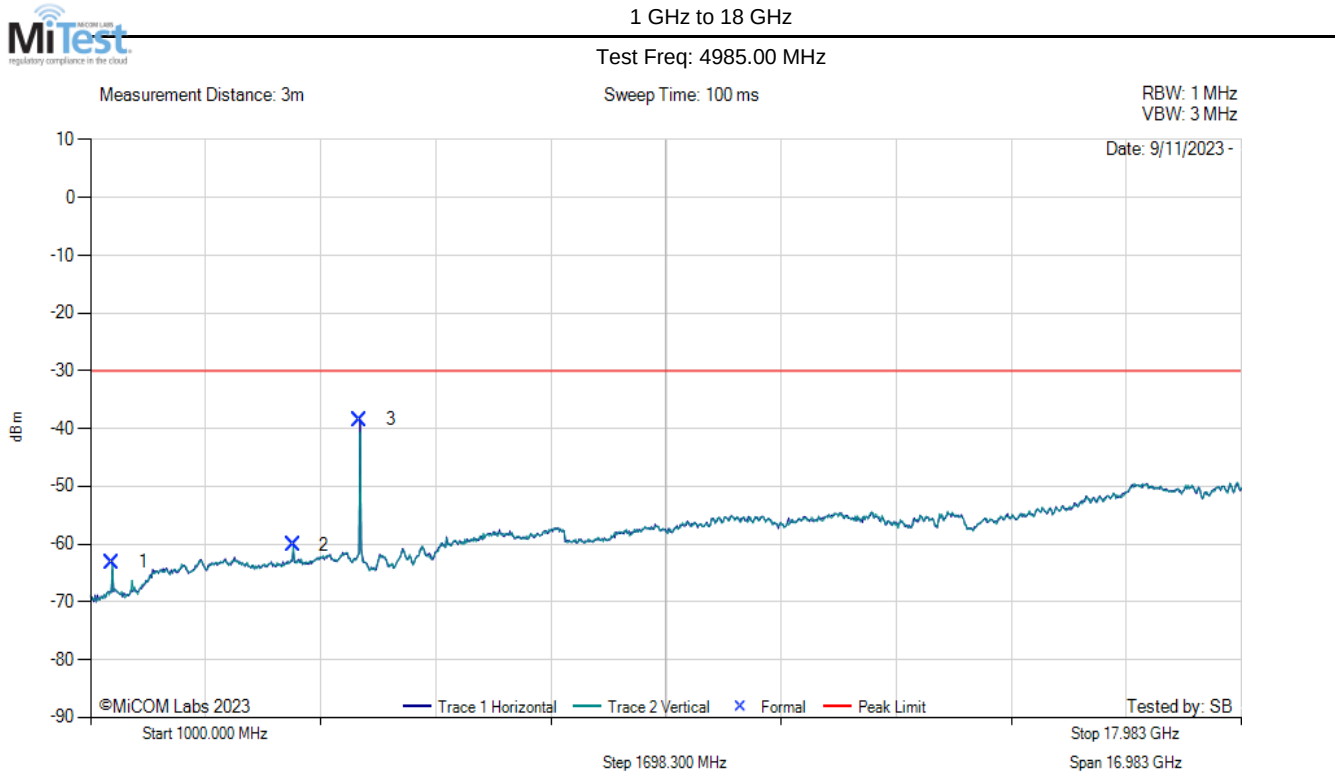
1000.00 - 17983.00 MHz												
Num	**Frequency MHz**	**Raw dBm**	**Cable Loss dB**	**AF dB/m**	**Level dBm**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBm**	**Margin dB**	**Pass /Fail**
1	1323.00	-67.75	-0.75	48.90	-61.44	AVG	Vertical	199	0	-30.0	-31.4	Pass
2	3992.00	-70.12	-1.38	54.45	-59.13	AVG	Vertical	199	0	-30.0	-29.1	Pass
3	4961.00	-49.57	-1.70	56.74	-37.33	AVG	Vertical	150	0	--	--	Pass

Test Notes: SU Alpha TX 4965 10M PS 23 1-18. Antenna ports terminated. 2.4 wireless active, 2.4G notch in front of amp to prevent overloads

Testing was performed up to 40 GHz, no emissions were found above 18GHz.

Equipment Configuration for FCC Spurious 1 GHz -18 GHz			
Antenna:	50 Ohm Term	**Variant:**	10MHz
Antenna Gain (dBi):	--	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	72
Channel Frequency (MHz):	4985.00	**Data Rate:**	8 Mbit/s
Power Setting:	22.5	**Tested By:**	SB

Test Measurement Results



1000.00 - 17983.00 MHz												
Num	**Frequency MHz**	**Raw dBm**	**Cable Loss dB**	**AF dB/m**	**Level dBm**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBm**	**Margin dB**	**Pass /Fail**
1	1323.00	-69.44	-0.75	48.90	-63.12	AVG	Vertical	199	0	-30.0	-33.1	Pass
2	3992.00	-71.12	-1.38	54.45	-60.13	AVG	Vertical	199	0	-30.0	-30.1	Pass
3	4978.00	-49.87	-1.79	56.33	-38.44	AVG	Horizontal	149	30	--	--	Pass

Test Notes: SU Alpha TX 4985 10M PS 23 1-18. Antenna ports terminated 2.4 wireless active, 2.4G notch in front of amp to prevent overloads

Testing was performed up to 40 GHz, no emissions were found above 18GHz.

9.6.2. Receiver Radiated Spurious Emissions

Radiated Spurious Emissions			
Standard:	RSS-Gen	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Receiver Radiated Emissions	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	4.10, 6	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Receiver Radiated Spurious Emissions

RSS-Gen §4.10 the search for spurious emissions shall be from the lowest frequency internally generated or used in the receiver (e.g.. local oscillator, intermediate or carrier frequency), or 30 MHz, whichever is higher, to at least 3 times the highest tunable or local oscillator frequency, whichever is higher, without exceeding 40 GHz.
For emissions below 1000 MHz, measurements shall be performed using a CISPR quasi-peak detector and the related measurement bandwidth. As an alternative to CISPR quasi-peak measurement, compliance with the emission limit can be demonstrated using measuring equipment employing a peak detector function properly adjusted for factors such as pulse desensitization as required, with an equal or greater measurement bandwidth relative to the applicable CISPR quasi-peak bandwidth.
Above 1000 MHz, measurements shall be performed using an average detector with a minimum resolution bandwidth of 1 MHz.

RSS-Gen §6 Receiver Spurious Radiated Limits
Spurious emissions from receivers shall not exceed the radiated limits shown in the table below:

RSS-Gen Spurious Emissions Limits

Frequency (MHz)	Field Strength (µV/m)	Field Strength (dBµV/m)	Measurement Distance (meters)
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

Test Procedure
Measurements were made while EUT was operating in a receiver mode of operation. Radiated Receiver emissions were measured to 40 GHz. .

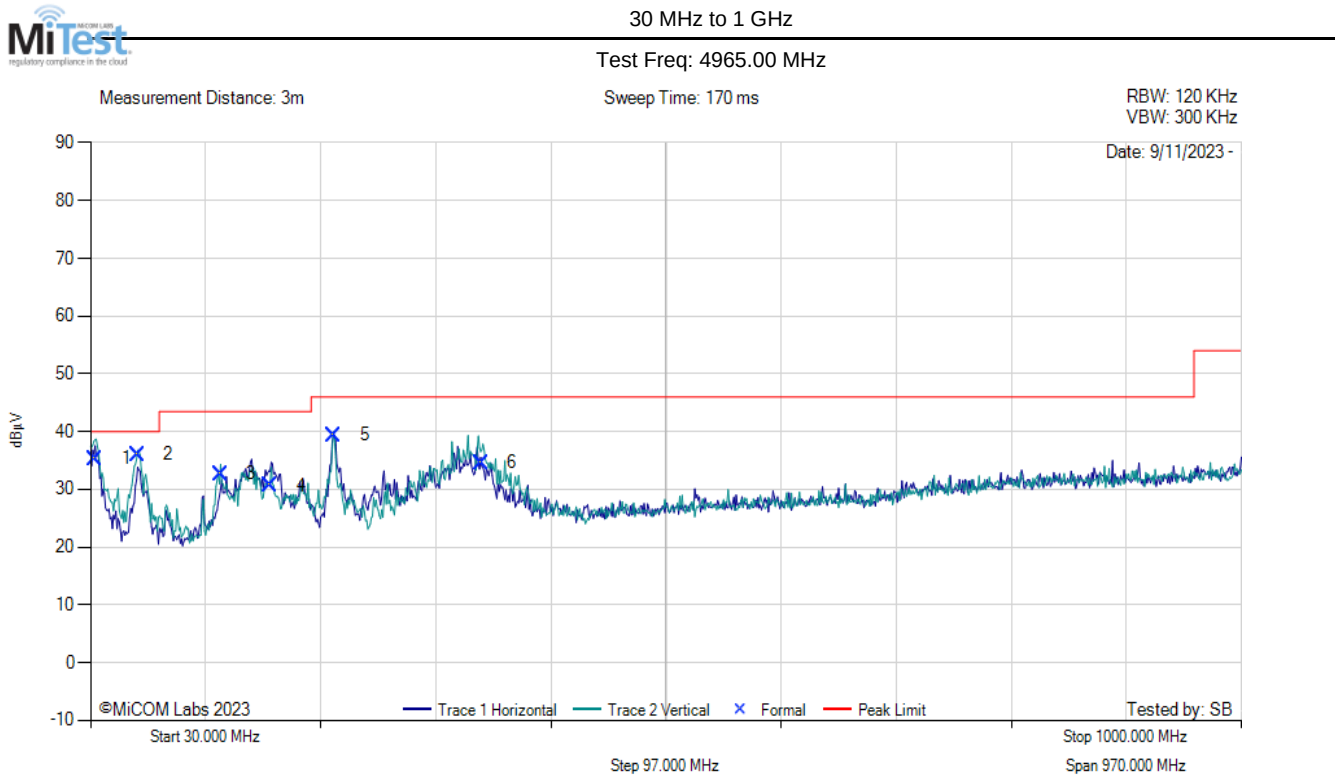
The measurement equipment was set to measure in peak hold mode. The emissions were measured in the anechoic chamber at a 3-meter distance on every azimuth in both horizontal and vertical polarities. The emissions are recorded and maximized as a function of azimuth by rotation through 360° with a spectrum analyzer in peak hold mode.

The highest emissions relative to the limit are listed for each frequency spanned.
Measurements below 1 GHz utilized 100 KHz RBW, measurements above 1 GHz were performed using a minimum RBW of 1 MHz.

Emission measurements were performed to the 10th harmonic of the transmitter. No emissions were found.

Equipment Configuration for 0.03 - 1 GHz			
Antenna:	50 Ohm Term	**Variant:**	10MHz
Antenna Gain (dBi):	Not Applicable	**Modulation:**	Not Applicable
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	Not Applicable
Channel Frequency (MHz):	4965:00	**Data Rate:**	Not Applicable
Power Setting:	Not Applicable	**Tested By:**	SB

Test Measurement Results



30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	34.12	38.02	3.57	-6.26	35.32	MaxQP	Vertical	108	90	40.0	-4.7	Pass
2	69.93	49.38	3.89	-17.25	36.03	MaxQP	Vertical	148	53	40.0	-4.0	Pass
3	139.49	40.41	4.29	-12.06	32.65	MaxQP	Vertical	99	209	43.5	-10.9	Pass
4	181.72	40.43	4.51	-14.29	30.64	MaxQP	Horizontal	100	271	43.5	-12.9	Pass
5	235.28	48.78	4.73	-14.16	39.35	MaxQP	Vertical	140	85	46.0	-6.6	Pass
6	359.15	39.40	5.23	-10.01	34.63	MaxQP	Vertical	100	4	46.0	-11.4	Pass

Test Notes: SU Alpha RCVR 30-1000

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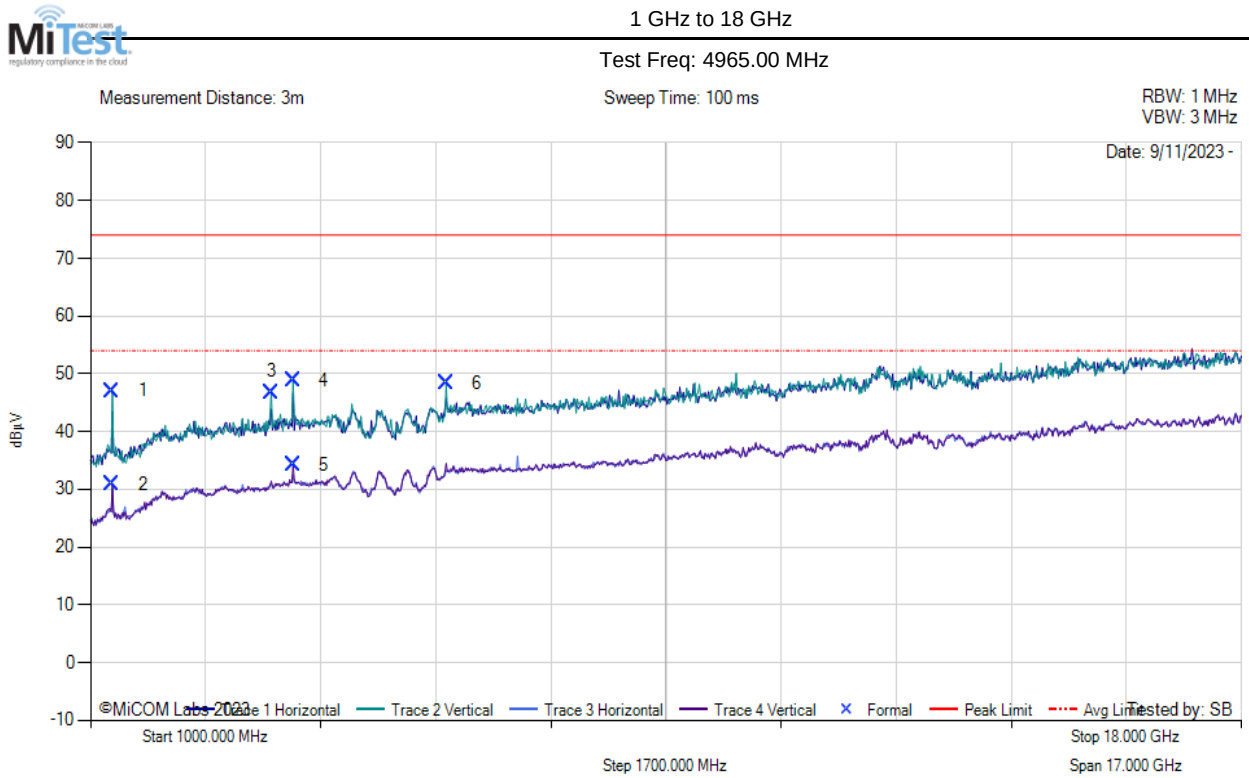
Equipment Configuration for 1 GHZ TO 18 GHZ			
Antenna:	50 Ohm Term	**Variant:**	10MHz
Antenna Gain (dBi):	Not Applicable	**Modulation:**	Not Applicable
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	Not Applicable
Channel Frequency (MHz):	4965:00	**Data Rate:**	Not Applicable
Power Setting:	Not Applicable	**Tested By:**	SB

Test Measurement Results



1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1323.00	61.06	1.48	29.67	47.03	MaxP	Vertical	149	29	74.0	-27.0	Pass
2	1323.00	44.93	1.48	29.67	30.90	AVG	Vertical	149	0	54.0	-23.1	Pass
3	3669.00	56.05	2.42	33.31	46.83	MaxP	Vertical	149	59	74.0	-27.2	Pass
4	3992.00	57.93	2.52	33.94	48.87	MaxP	Vertical	199	0	74.0	-25.1	Pass
5	3992.00	43.24	2.52	33.94	34.19	AVG	Vertical	199	59	54.0	-19.8	Pass
6	6253.00	53.98	3.30	35.61	48.34	MaxP	Vertical	149	0	74.0	-25.7	Pass

Test Notes: SU Alpha RCVR

A. APPENDIX - GRAPHICAL IMAGES

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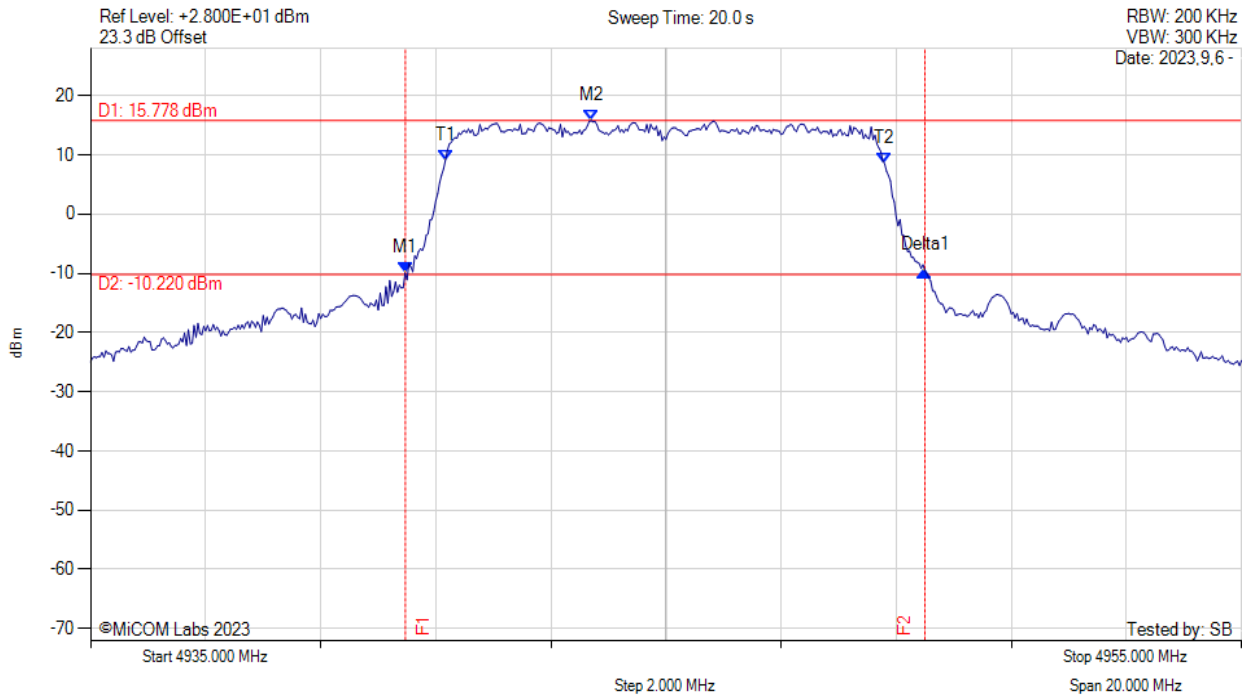
A.1. 26 dB & 99% Bandwidth

26 dB & 99% BANDWIDTH

Variant: 10MHz, Channel: 4945.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

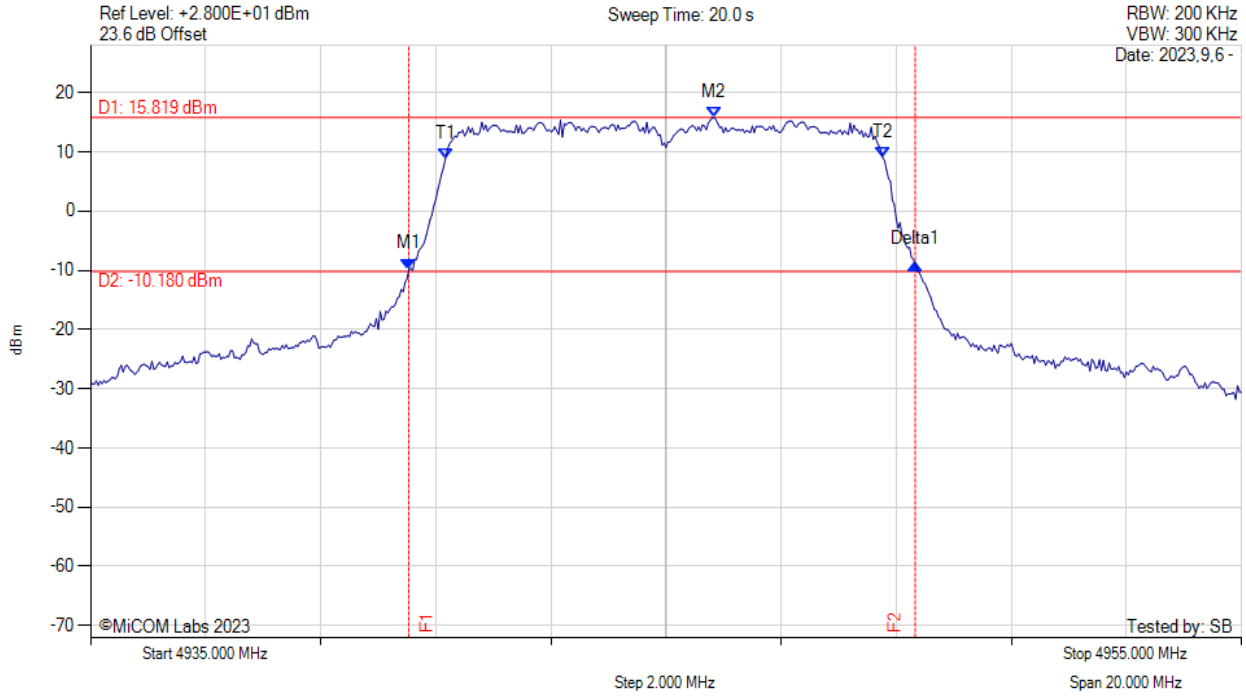


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4940.470 MHz : -9.943 dBm M2 : 4943.700 MHz : 15.778 dBm Delta1 : 9.030 MHz : 0.400 dB T1 : 4941.167 MHz : 9.051 dBm T2 : 4948.800 MHz : 8.477 dBm OBW : 7.613 MHz	Measured 26 dB Bandwidth: 9.030 MHz Measured 99% Bandwidth: 7.613 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 10MHz, Channel: 4945.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

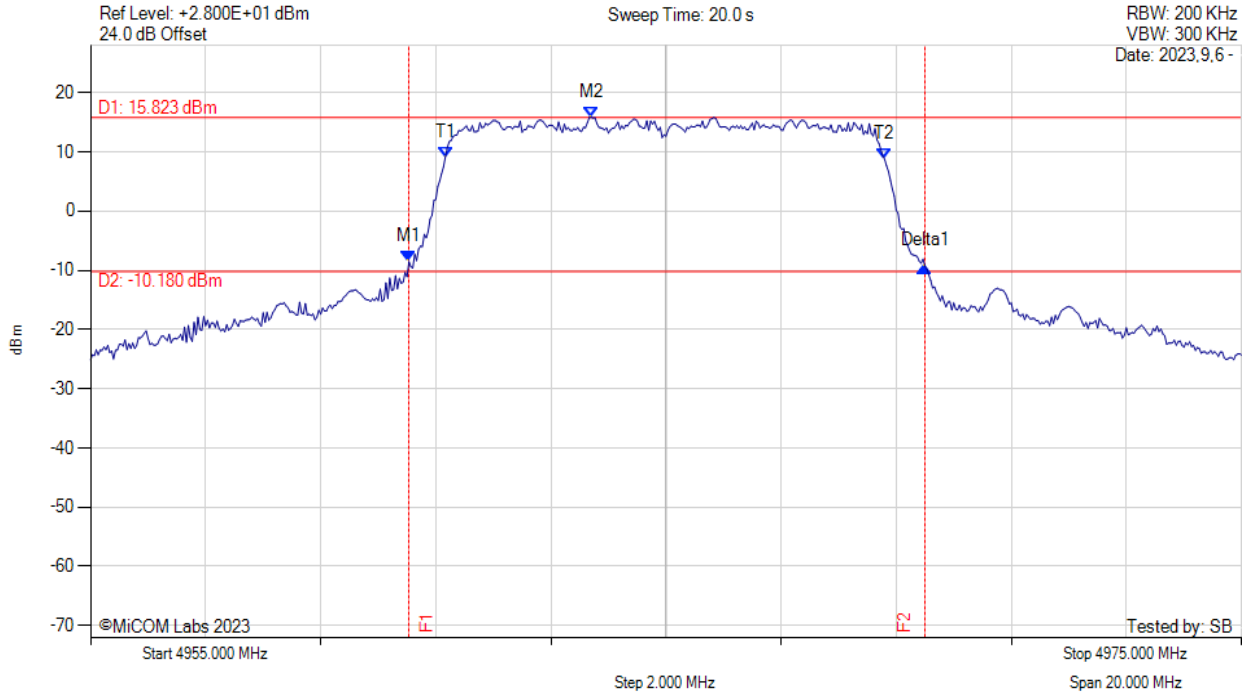


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4940.530 MHz : -9.770 dBm M2 : 4945.830 MHz : 15.819 dBm Delta1 : 8.800 MHz : 0.907 dB T1 : 4941.167 MHz : 8.796 dBm T2 : 4948.767 MHz : 9.024 dBm OBW : 7.595 MHz	Measured 26 dB Bandwidth: 8.800 MHz Measured 99% Bandwidth: 7.595 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 10MHz, Channel: 4965.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

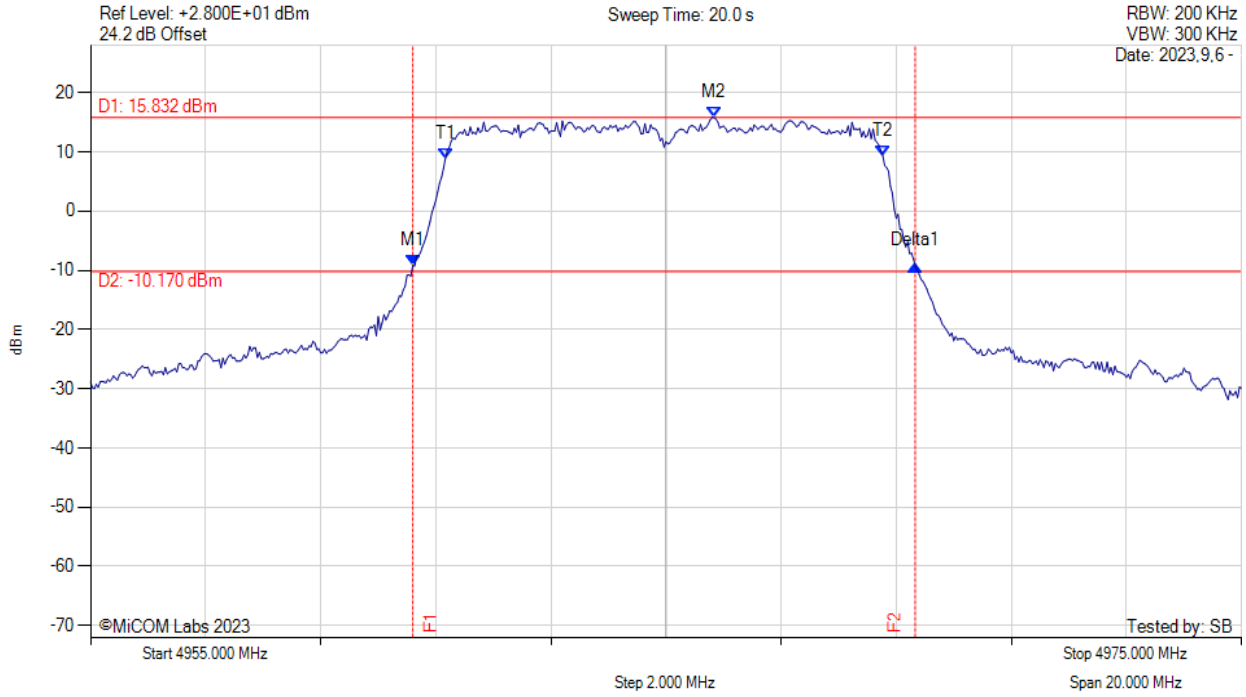


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4960.530 MHz : -8.537 dBm M2 : 4963.700 MHz : 15.823 dBm Delta1 : 8.970 MHz : -0.759 dB T1 : 4961.167 MHz : 9.131 dBm T2 : 4968.800 MHz : 8.720 dBm OBW : 7.617 MHz	Measured 26 dB Bandwidth: 8.970 MHz Measured 99% Bandwidth: 7.617 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 10MHz, Channel: 4965.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

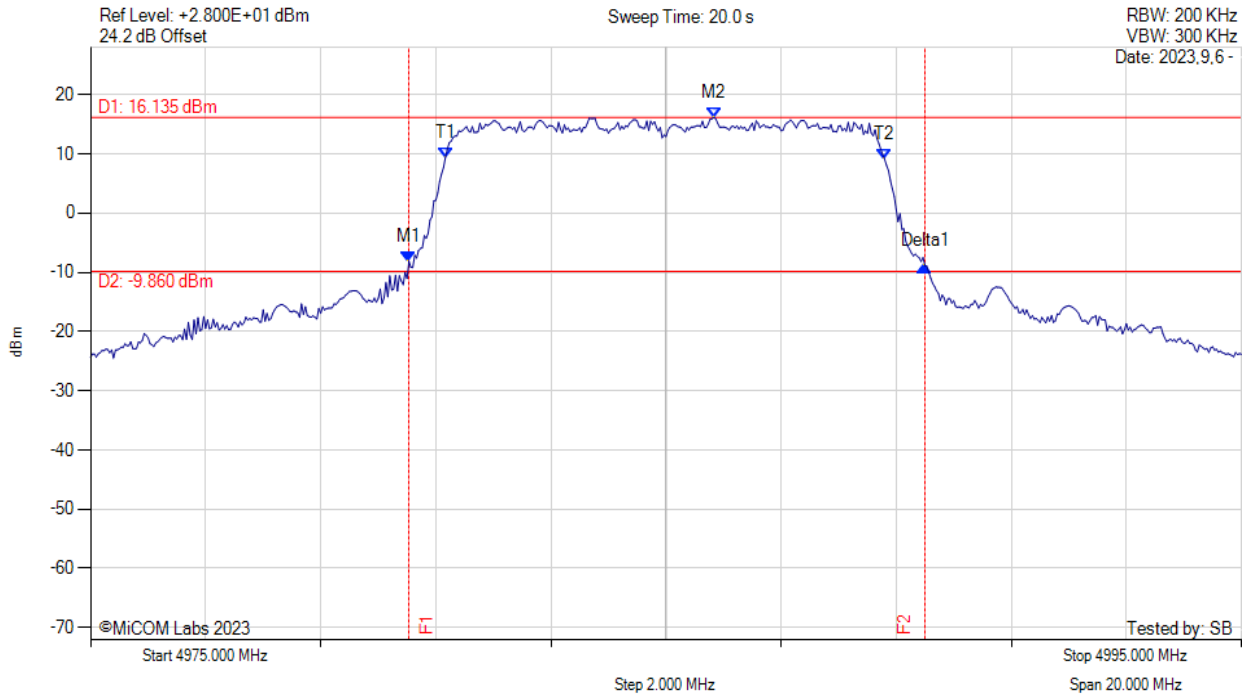


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4960.600 MHz : -9.205 dBm M2 : 4965.830 MHz : 15.832 dBm Delta1 : 8.730 MHz : -0.015 dB T1 : 4961.167 MHz : 8.884 dBm T2 : 4968.767 MHz : 9.374 dBm OBW : 7.592 MHz	Measured 26 dB Bandwidth: 8.730 MHz Measured 99% Bandwidth: 7.592 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 10MHz, Channel: 4985.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

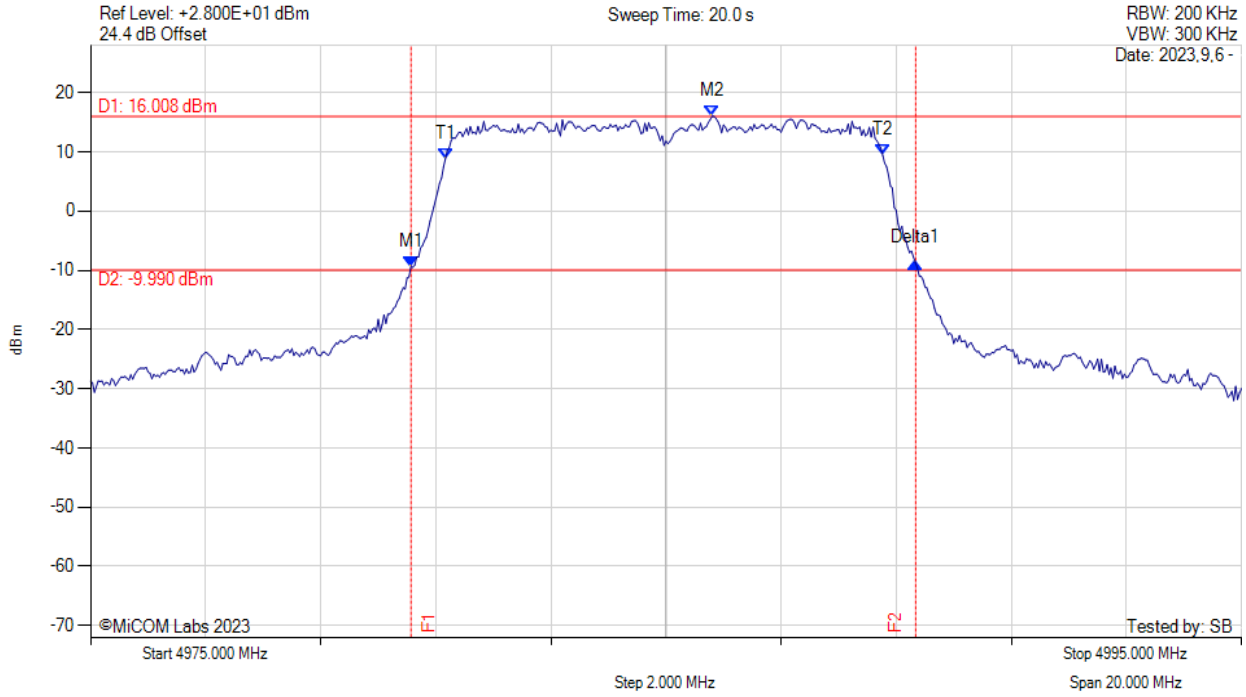


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4980.530 MHz : -8.159 dBm M2 : 4985.830 MHz : 16.135 dBm Delta1 : 8.970 MHz : -0.703 dB T1 : 4981.167 MHz : 9.358 dBm T2 : 4988.800 MHz : 9.082 dBm OBW : 7.619 MHz	Measured 26 dB Bandwidth: 8.970 MHz Measured 99% Bandwidth: 7.619 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 10MHz, Channel: 4985.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

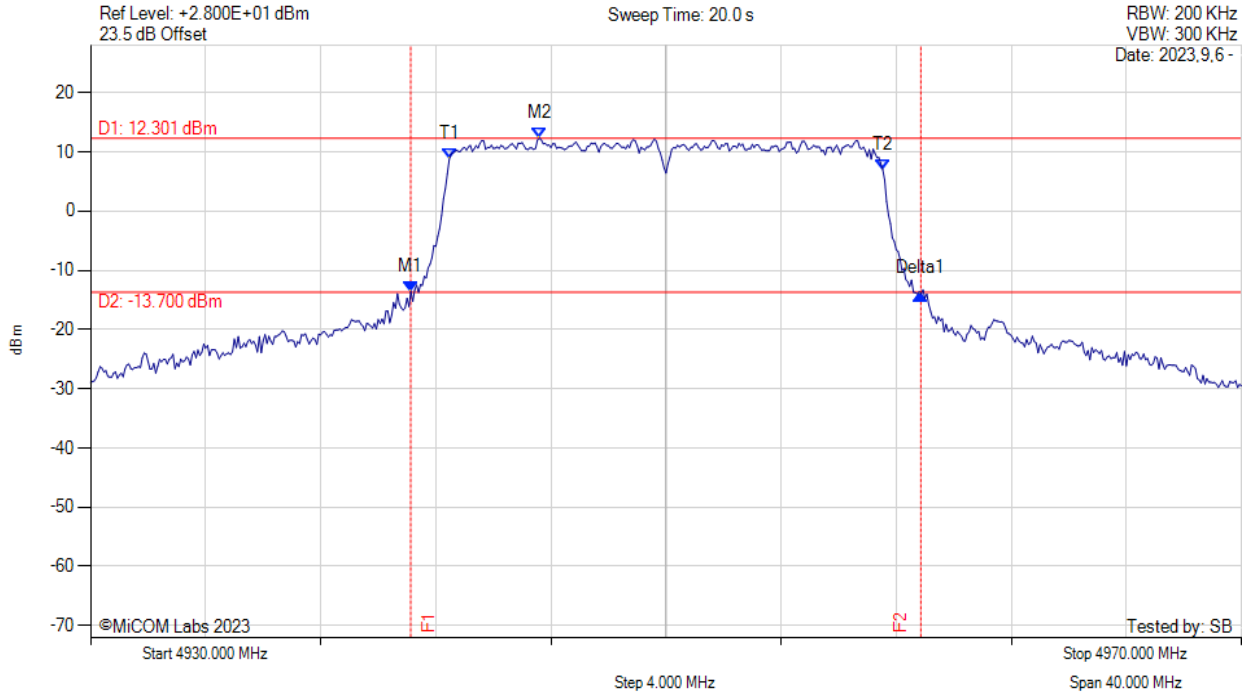


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4980.570 MHz : -9.445 dBm M2 : 4985.800 MHz : 16.008 dBm Delta1 : 8.770 MHz : 0.787 dB T1 : 4981.167 MHz : 8.795 dBm T2 : 4988.767 MHz : 9.409 dBm OBW : 7.588 MHz	Measured 26 dB Bandwidth: 8.770 MHz Measured 99% Bandwidth: 7.588 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 20MHz, Channel: 4950.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

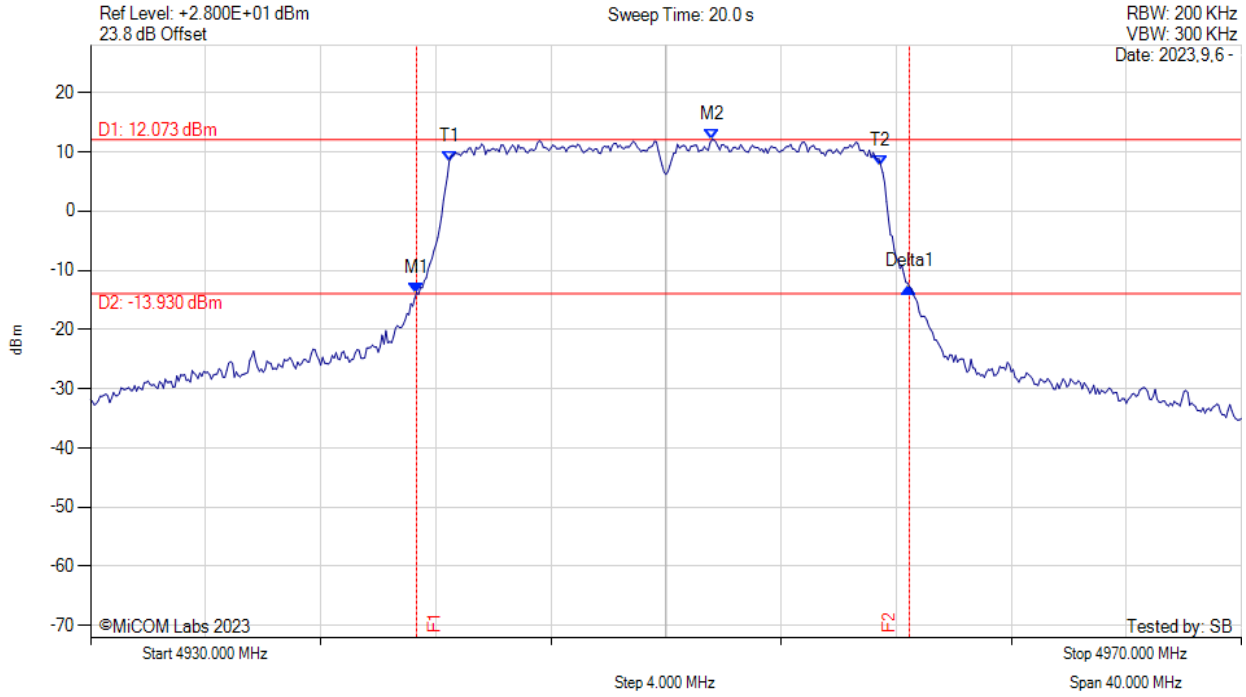


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4941.130 MHz : -13.587 dBm M2 : 4945.600 MHz : 12.301 dBm Delta1 : 17.730 MHz : -0.383 dB T1 : 4942.467 MHz : 8.747 dBm T2 : 4957.533 MHz : 7.000 dBm OBW : 15.039 MHz	Measured 26 dB Bandwidth: 17.730 MHz Measured 99% Bandwidth: 15.039 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 20MHz, Channel: 4950.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

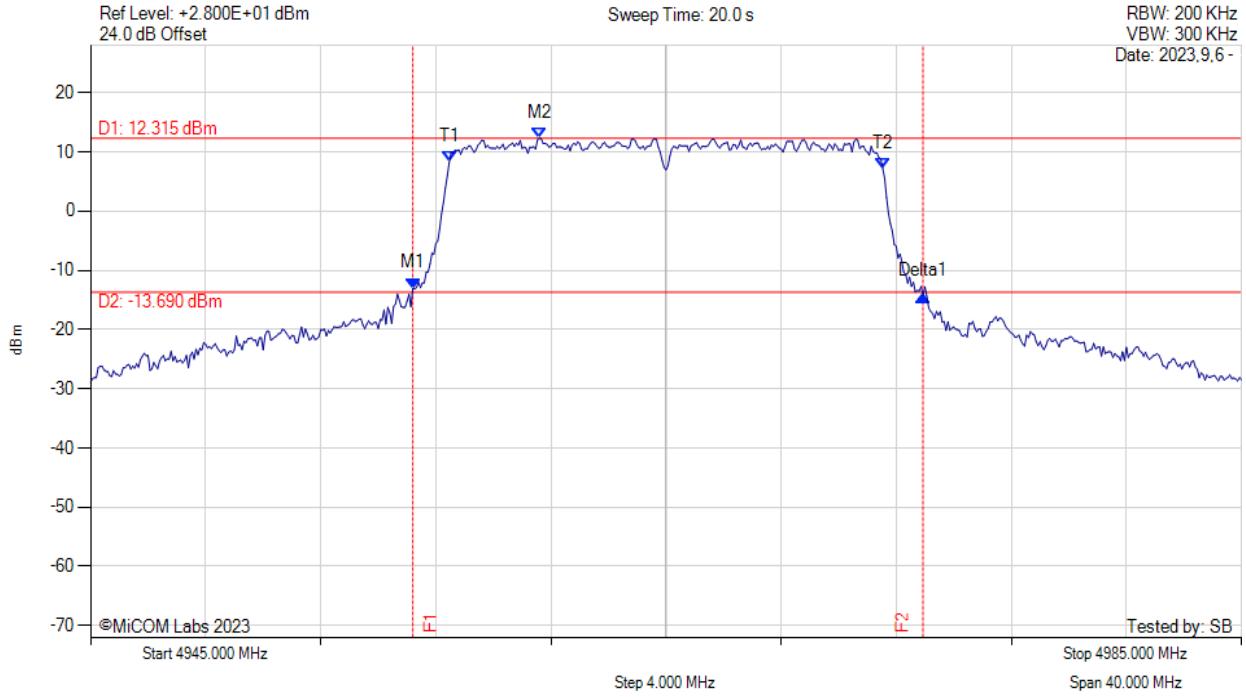


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4941.330 MHz : -13.768 dBm M2 : 4951.600 MHz : 12.073 dBm Delta1 : 17.130 MHz : 0.963 dB T1 : 4942.467 MHz : 8.429 dBm T2 : 4957.467 MHz : 7.671 dBm OBW : 15.016 MHz	Measured 26 dB Bandwidth: 17.130 MHz Measured 99% Bandwidth: 15.016 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 20MHz, Channel: 4965.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

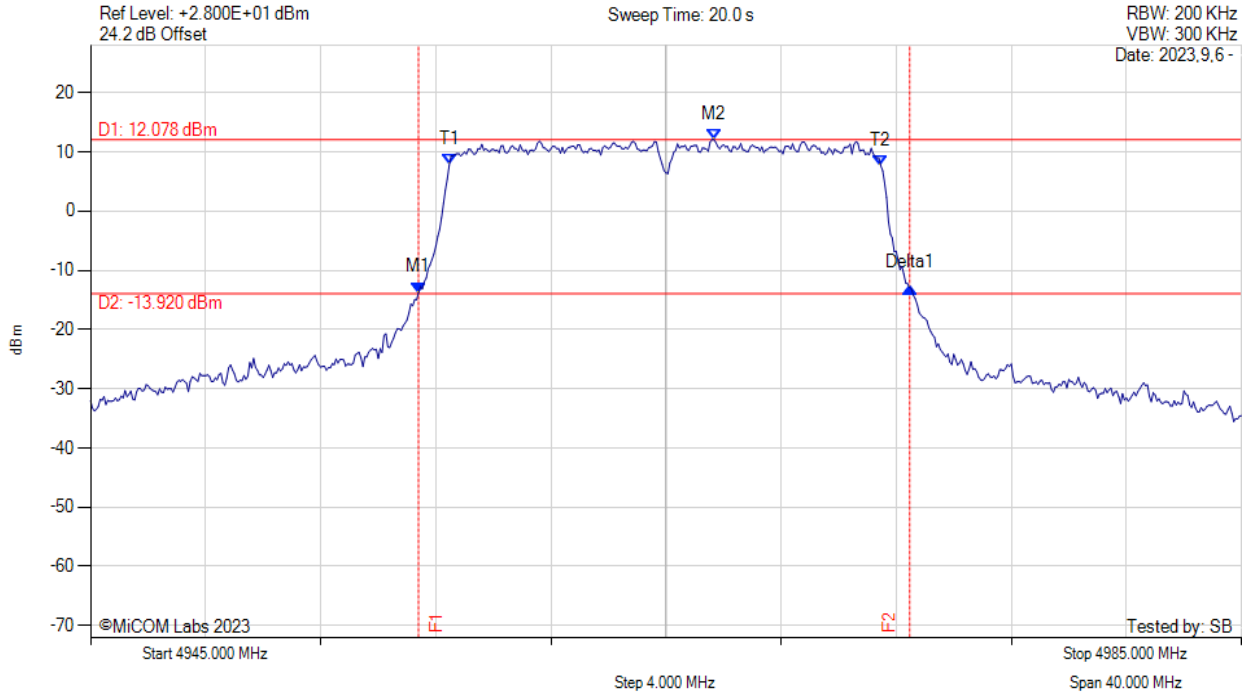


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4956.200 MHz : -13.046 dBm M2 : 4960.600 MHz : 12.315 dBm Delta1 : 17.730 MHz : -1.225 dB T1 : 4957.467 MHz : 8.262 dBm T2 : 4972.533 MHz : 7.187 dBm OBW : 15.036 MHz	Measured 26 dB Bandwidth: 17.730 MHz Measured 99% Bandwidth: 15.036 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 20MHz, Channel: 4965.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

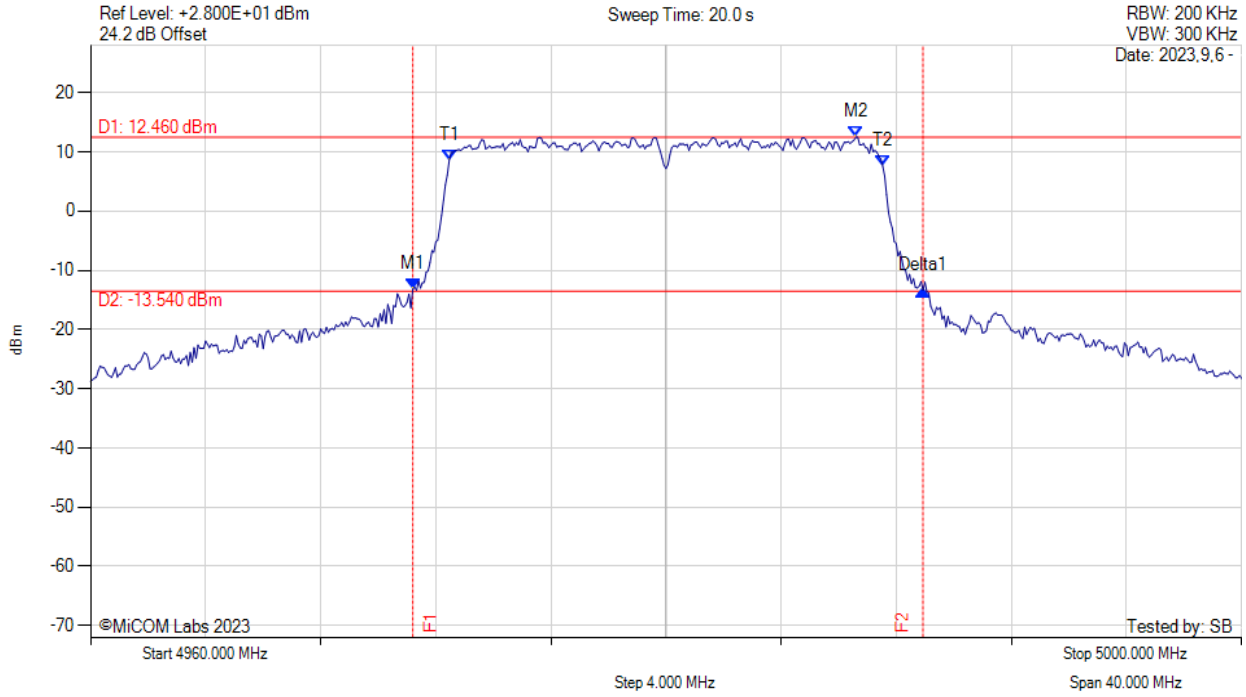


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4956.400 MHz : -13.750 dBm M2 : 4966.670 MHz : 12.078 dBm Delta1 : 17.070 MHz : 0.865 dB T1 : 4957.467 MHz : 7.791 dBm T2 : 4972.467 MHz : 7.647 dBm OBW : 15.012 MHz	Measured 26 dB Bandwidth: 17.070 MHz Measured 99% Bandwidth: 15.012 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 20MHz, Channel: 4980.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

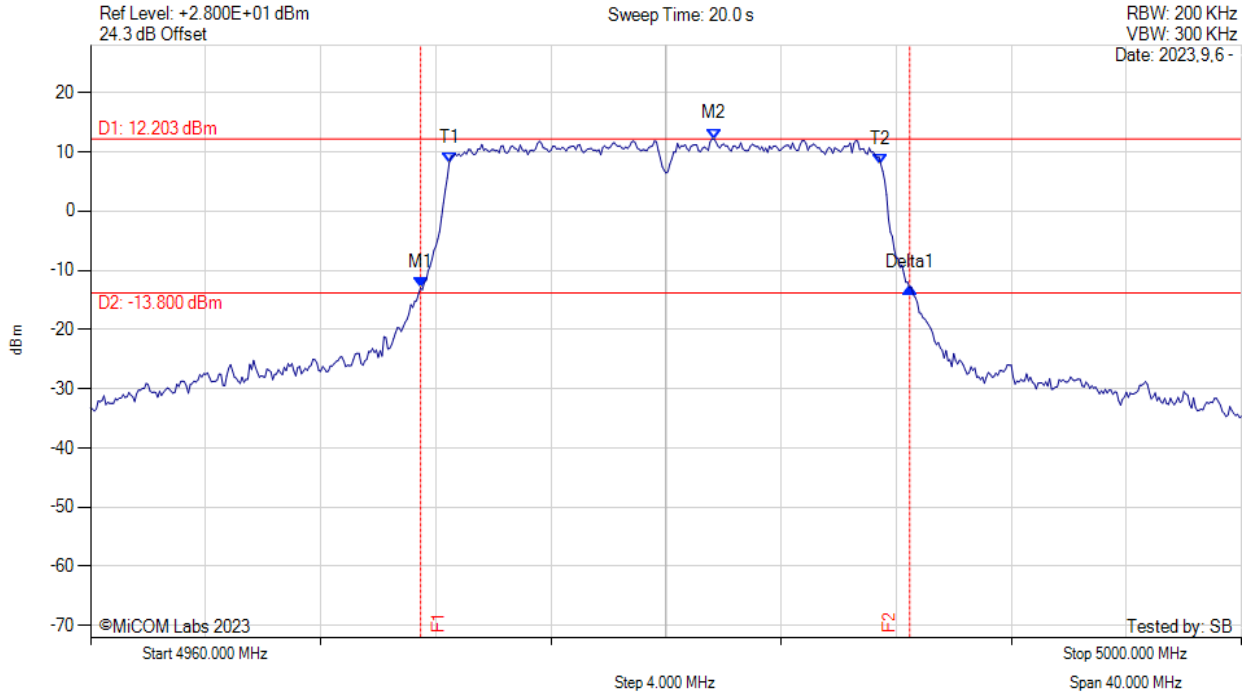


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4971.200 MHz : -13.186 dBm M2 : 4986.600 MHz : 12.460 dBm Delta1 : 17.730 MHz : -0.185 dB T1 : 4972.467 MHz : 8.611 dBm T2 : 4987.533 MHz : 7.589 dBm OBW : 15.047 MHz	Measured 26 dB Bandwidth: 17.730 MHz Measured 99% Bandwidth: 15.047 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 20MHz, Channel: 4980.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

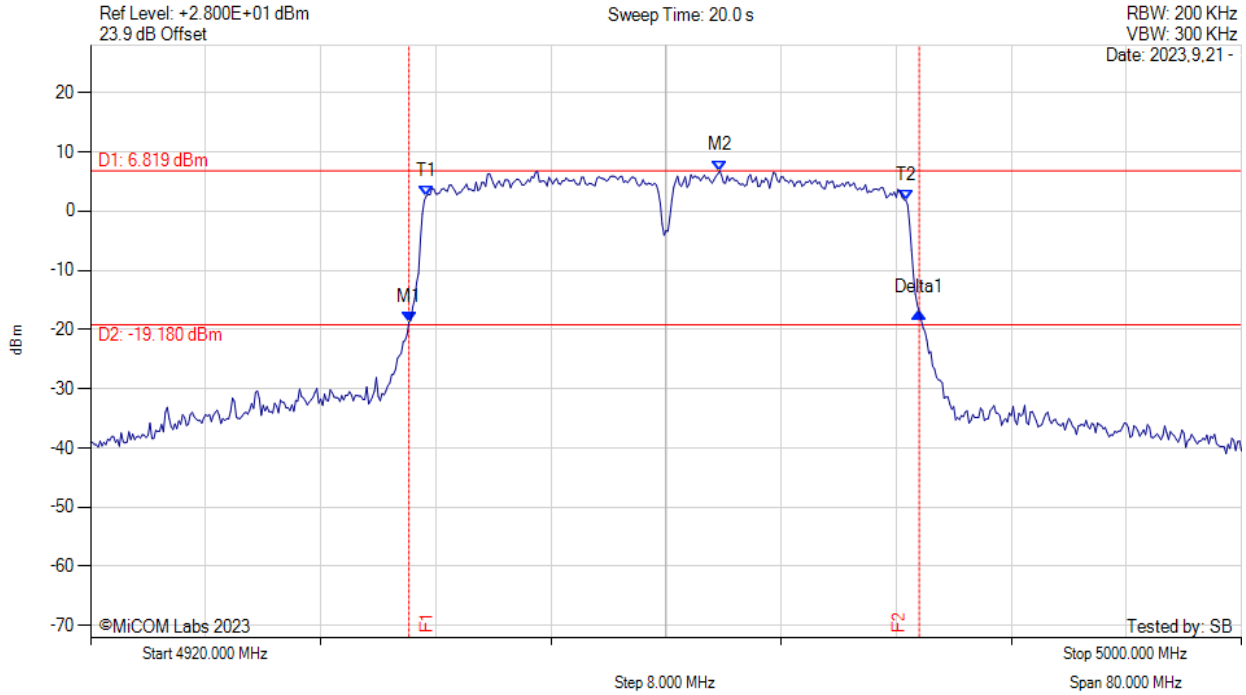


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4971.470 MHz : -12.962 dBm M2 : 4981.670 MHz : 12.203 dBm Delta1 : 17.000 MHz : 0.031 dB T1 : 4972.467 MHz : 8.201 dBm T2 : 4987.467 MHz : 7.911 dBm OBW : 15.018 MHz	Measured 26 dB Bandwidth: 17.000 MHz Measured 99% Bandwidth: 15.018 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 40MHz, Channel: 4960.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

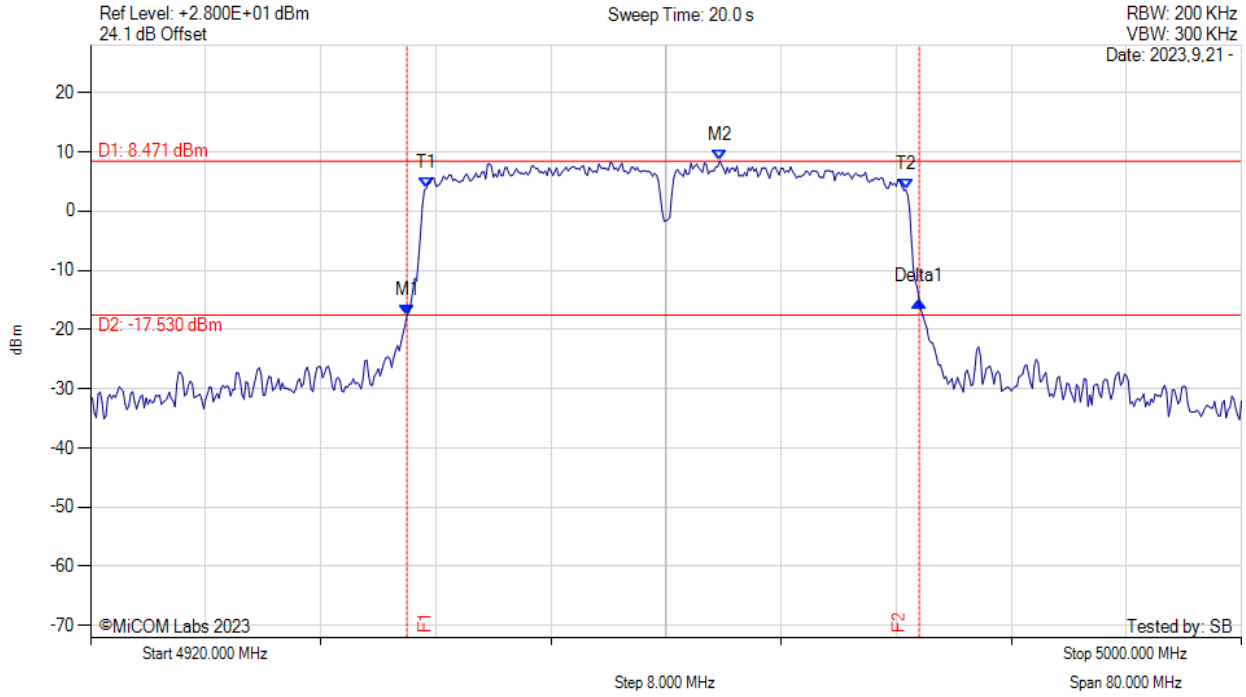


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4942.130 MHz : -18.732 dBm M2 : 4963.730 MHz : 6.819 dBm Delta1 : 35.470 MHz : 1.636 dB T1 : 4943.333 MHz : 2.500 dBm T2 : 4976.667 MHz : 1.877 dBm OBW : 33.249 MHz	Channel Frequency: 4960.00 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 40MHz, Channel: 4960.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

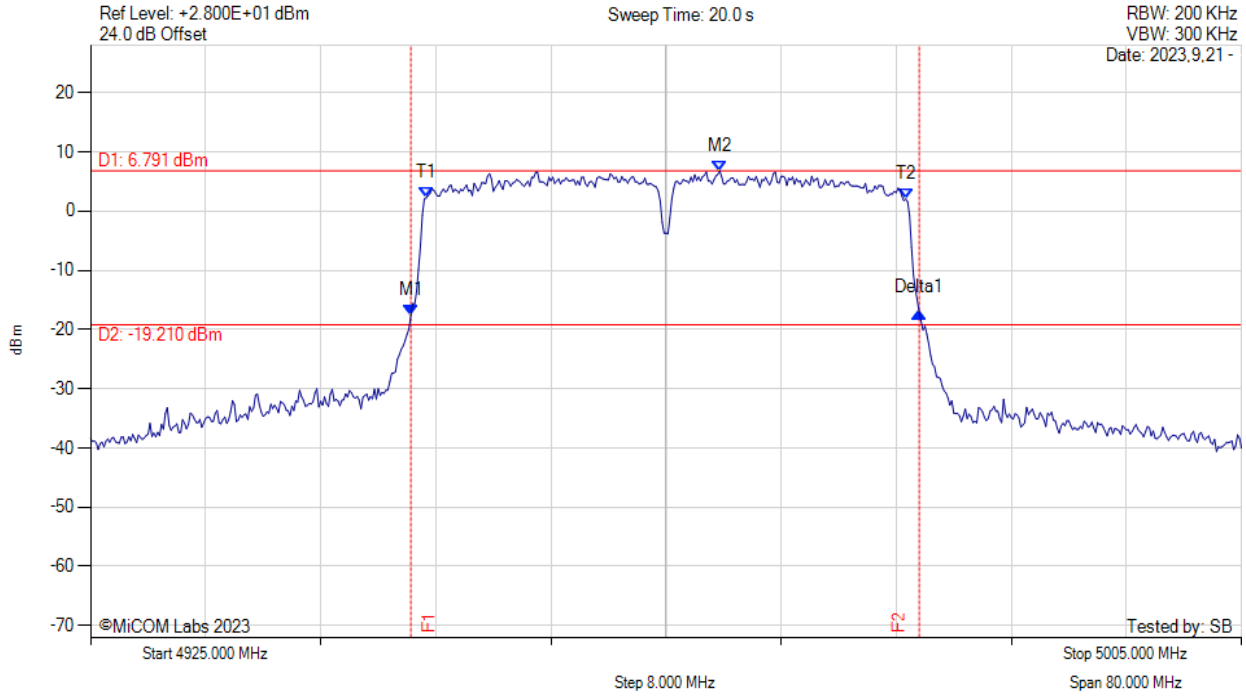


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4942.000 MHz : -17.525 dBm M2 : 4963.730 MHz : 8.471 dBm Delta1 : 35.600 MHz : 2.351 dB T1 : 4943.333 MHz : 3.819 dBm T2 : 4976.667 MHz : 3.584 dBm OBW : 33.256 MHz	Channel Frequency: 4960.00 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 40MHz, Channel: 4965.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

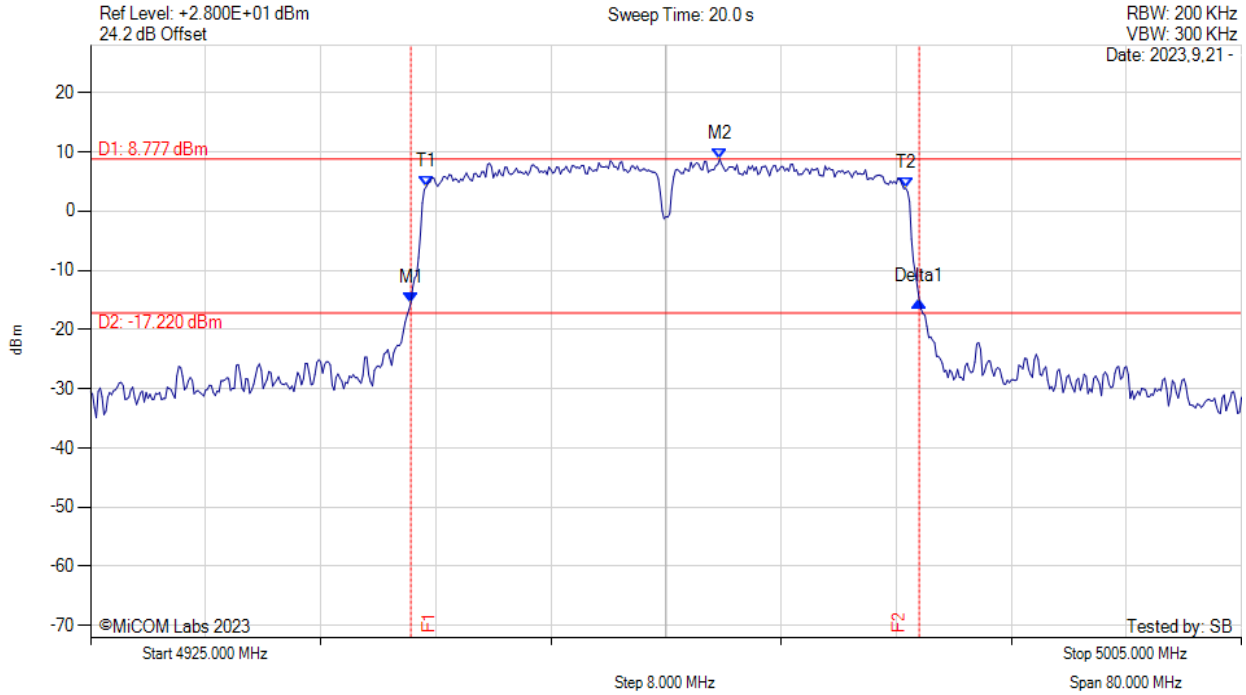


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4947.270 MHz : -17.572 dBm M2 : 4968.730 MHz : 6.791 dBm Delta1 : 35.330 MHz : 0.434 dB T1 : 4948.333 MHz : 2.228 dBm T2 : 4981.667 MHz : 2.061 dBm OBW : 33.282 MHz	Channel Frequency: 4965.00 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 40MHz, Channel: 4965.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

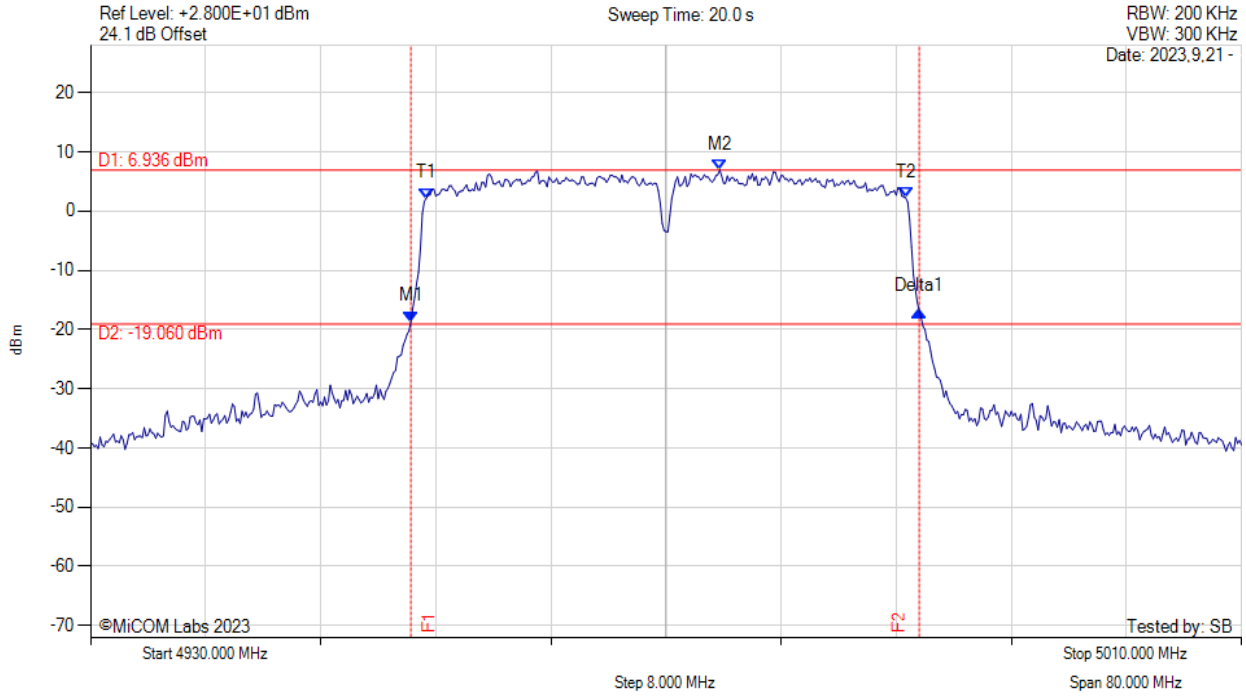


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4947.270 MHz : -15.460 dBm M2 : 4968.730 MHz : 8.777 dBm Delta1 : 35.330 MHz : 0.243 dB T1 : 4948.333 MHz : 4.105 dBm T2 : 4981.667 MHz : 3.861 dBm OBW : 33.288 MHz	Channel Frequency: 4965.00 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 40MHz, Channel: 4970.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

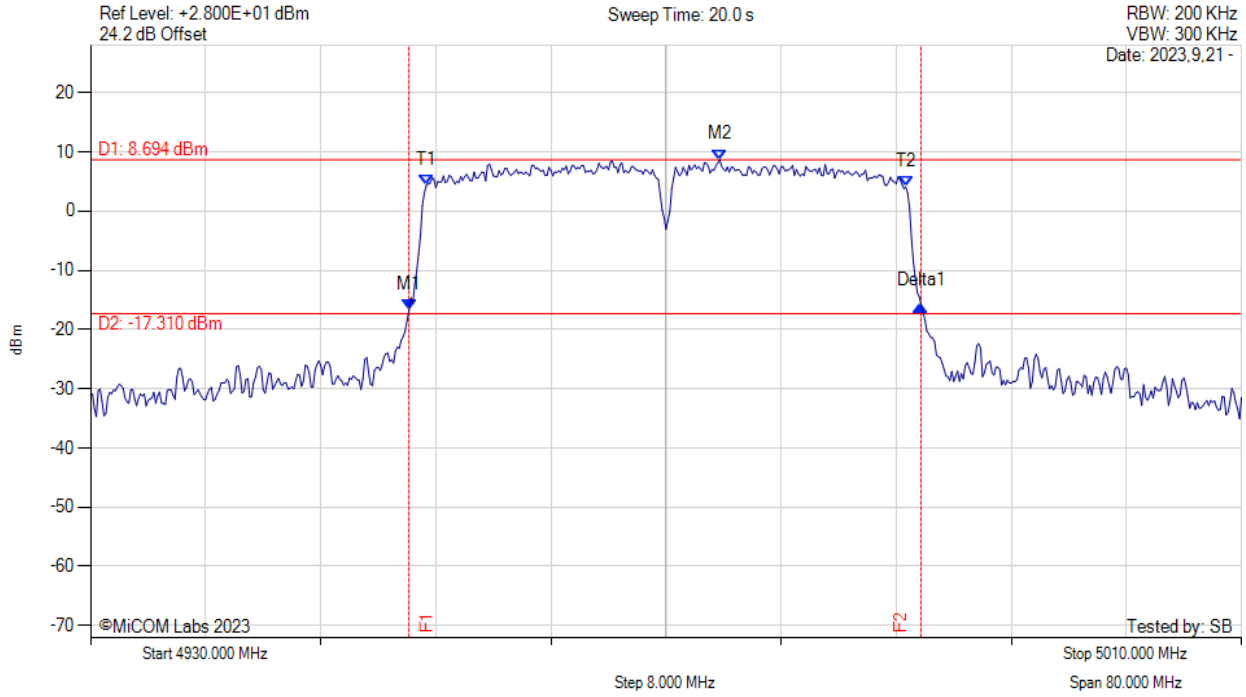


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4952.270 MHz : -18.664 dBm M2 : 4973.730 MHz : 6.936 dBm Delta1 : 35.330 MHz : 1.685 dB T1 : 4953.333 MHz : 2.159 dBm T2 : 4986.667 MHz : 2.235 dBm OBW : 33.254 MHz	Channel Frequency: 4970.00 MHz

back to matrix

26 dB & 99% BANDWIDTH

Variant: 40MHz, Channel: 4970.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc



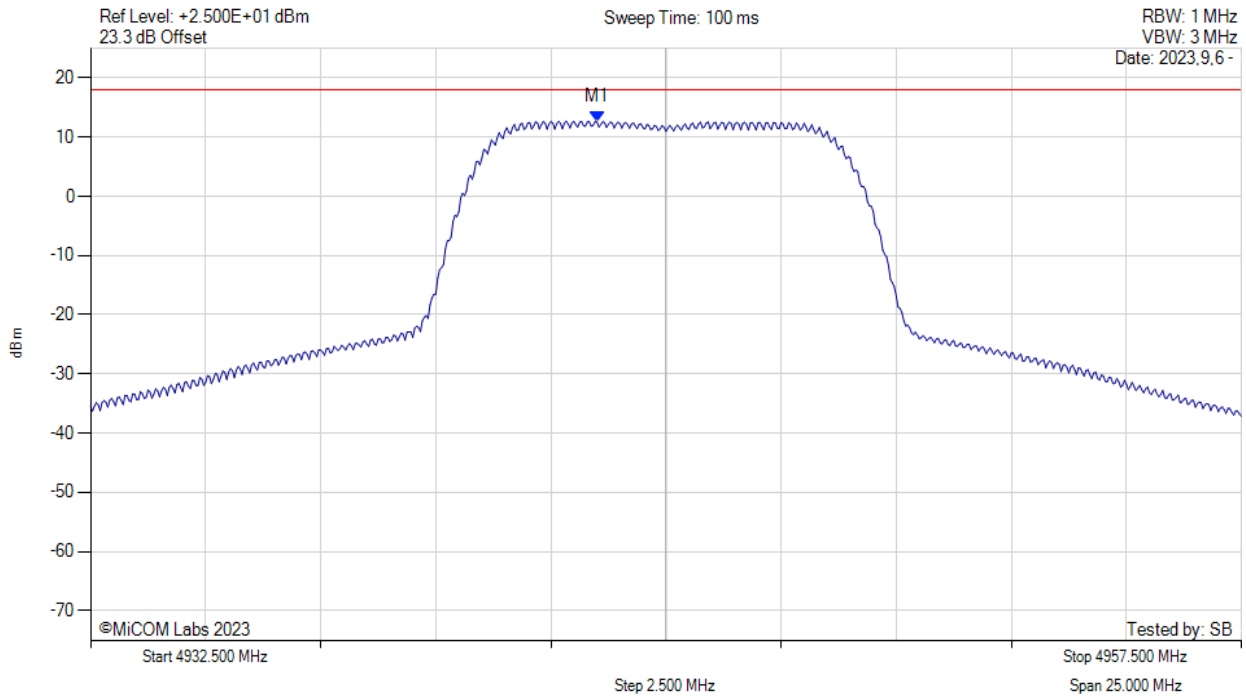
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 4952.130 MHz : -16.751 dBm M2 : 4973.730 MHz : 8.694 dBm Delta1 : 35.600 MHz : 0.877 dB T1 : 4953.333 MHz : 4.309 dBm T2 : 4986.667 MHz : 4.088 dBm OBW : 33.261 MHz	Channel Frequency: 4970.00 MHz

back to matrix

A.2. Power Spectral Density

POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4945.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

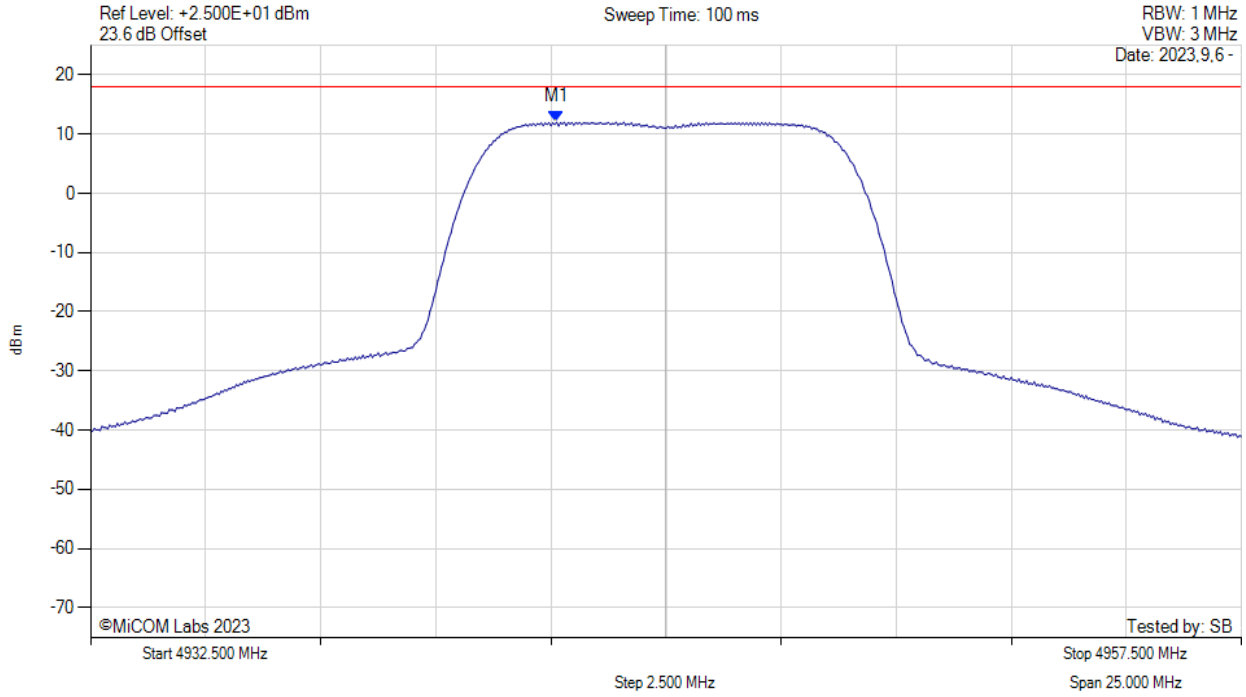


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4943.500 MHz : 12.543 dBm	Limit: ≤ 18.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4945.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

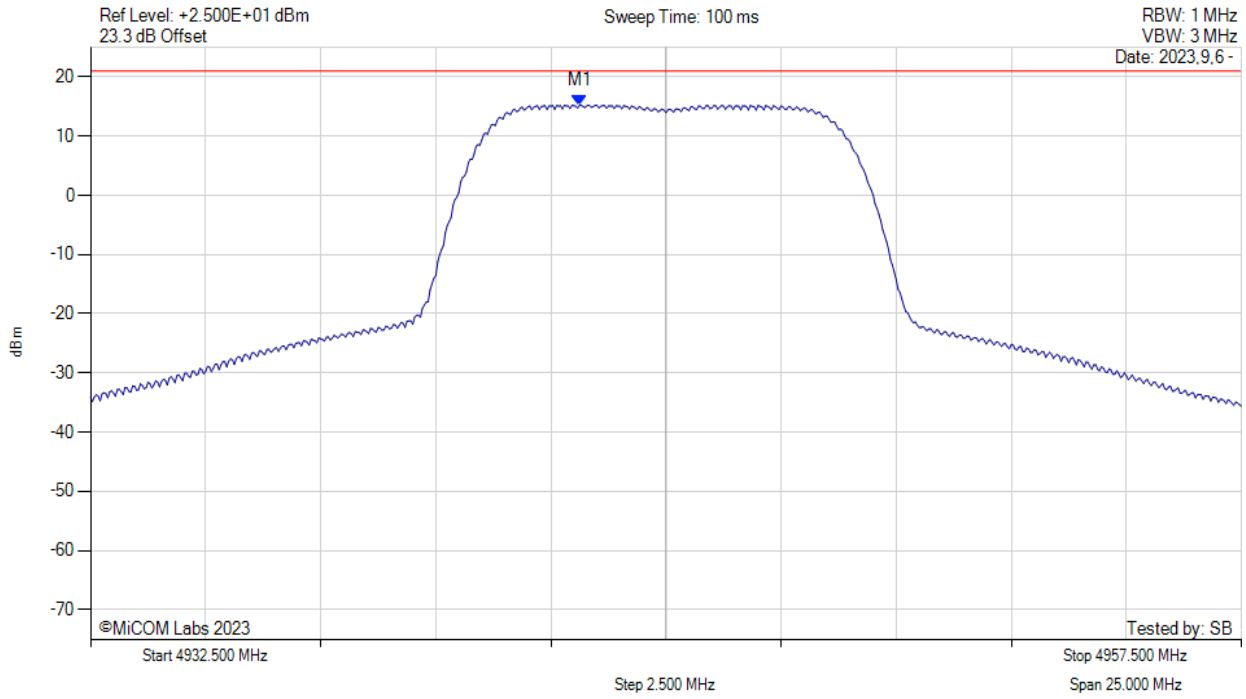


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4942.620 MHz : 12.026 dBm	Limit: ≤ 18.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4945.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc

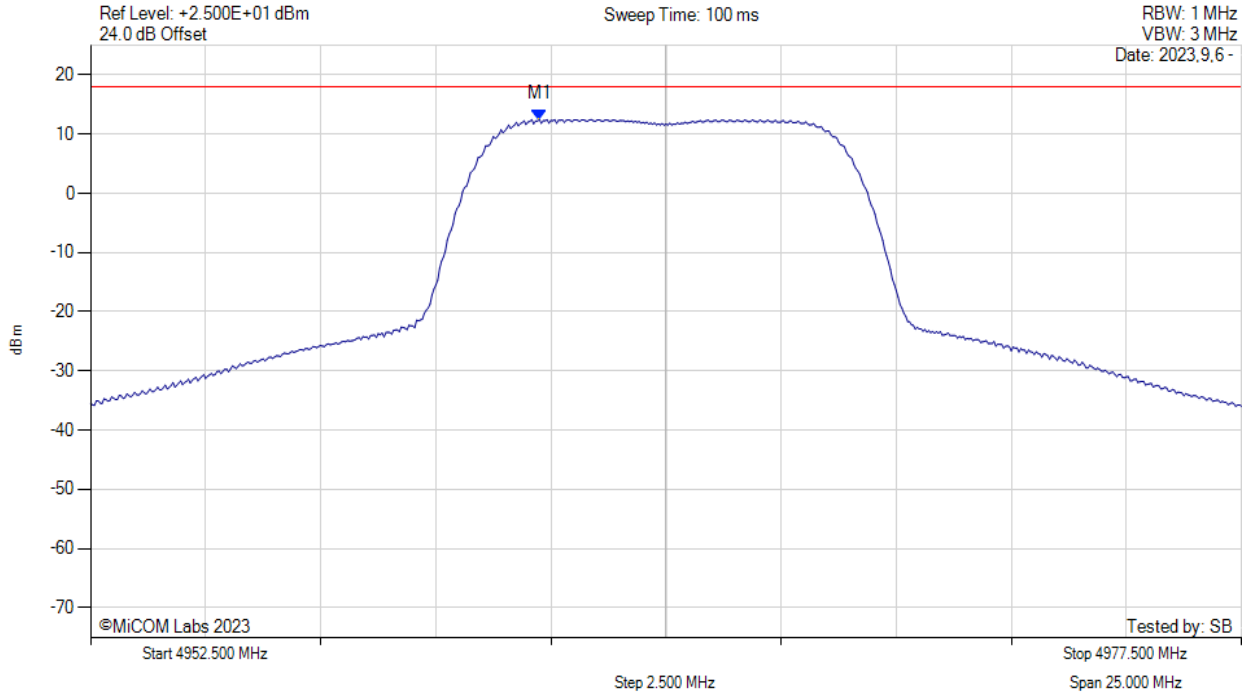


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4943.100 MHz : 15.242 dBm M1 + DCCF : 4943.100 MHz : 16.669 dBm Duty Cycle Correction Factor : +1.43 dB	Limit: ≤ 21.0 dBm Margin: -4.3 dB

back to matrix

POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4965.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

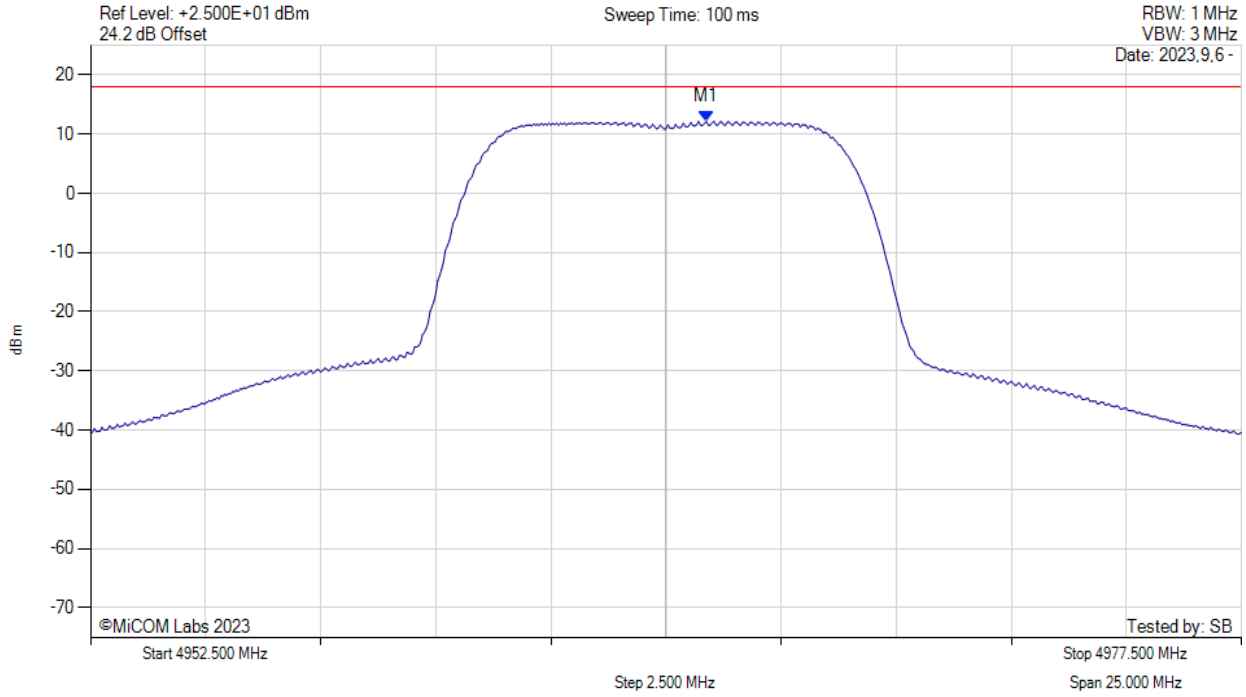


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4962.250 MHz : 12.476 dBm	Limit: ≤ 18.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4965.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

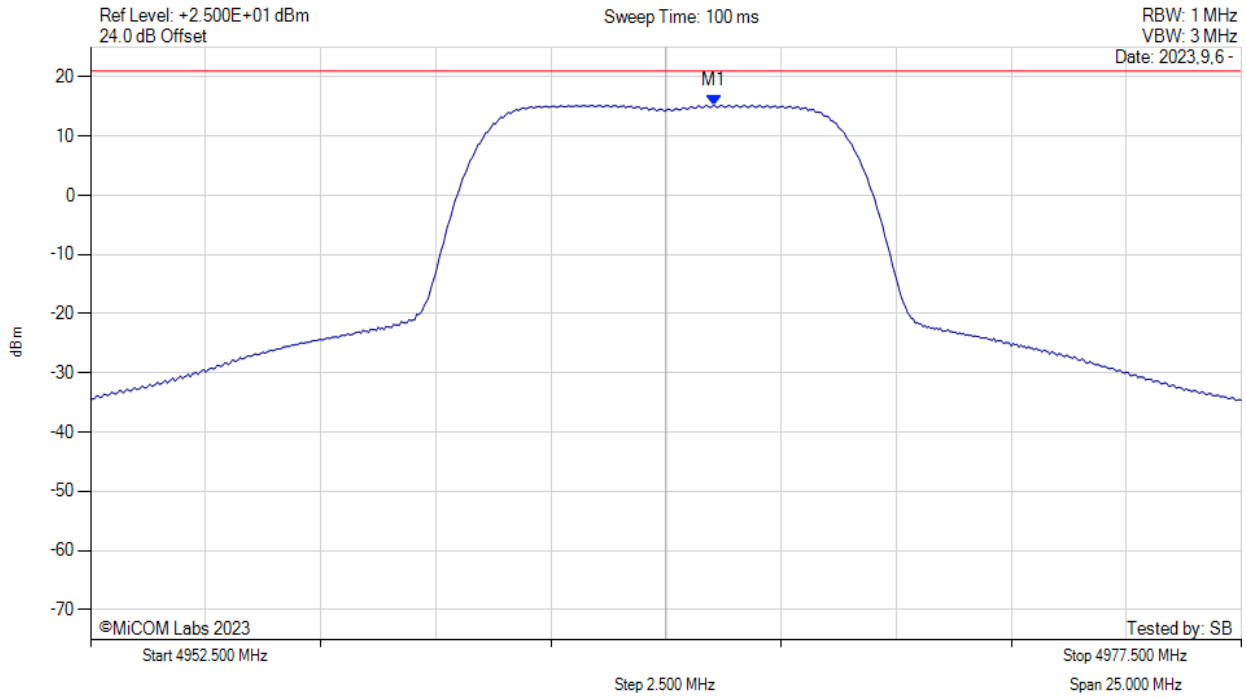


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4965.880 MHz : 12.151 dBm	Channel Frequency: 4965.00 MHz

back to matrix

POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4965.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc

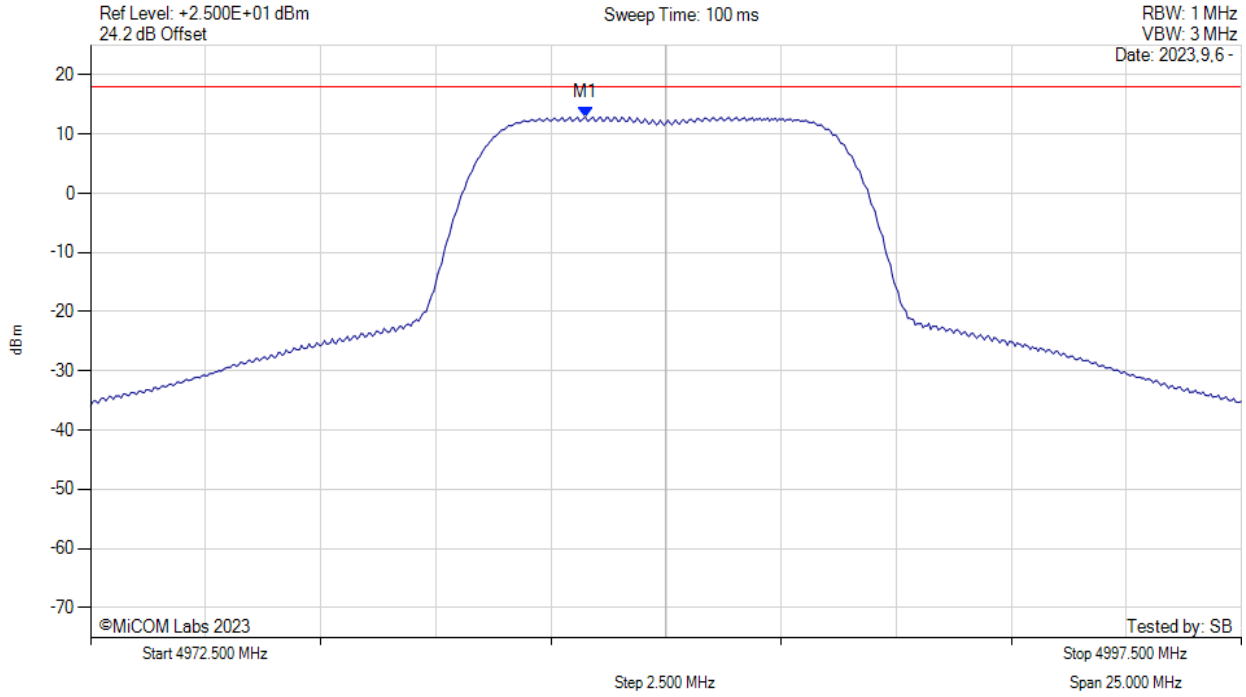


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4966.000 MHz : 15.228 dBm M1 + DCCF : 4966.000 MHz : 16.655 dBm Duty Cycle Correction Factor : +1.43 dB	Limit: ≤ 21.0 dBm Margin: -4.4 dB

back to matrix

POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4985.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

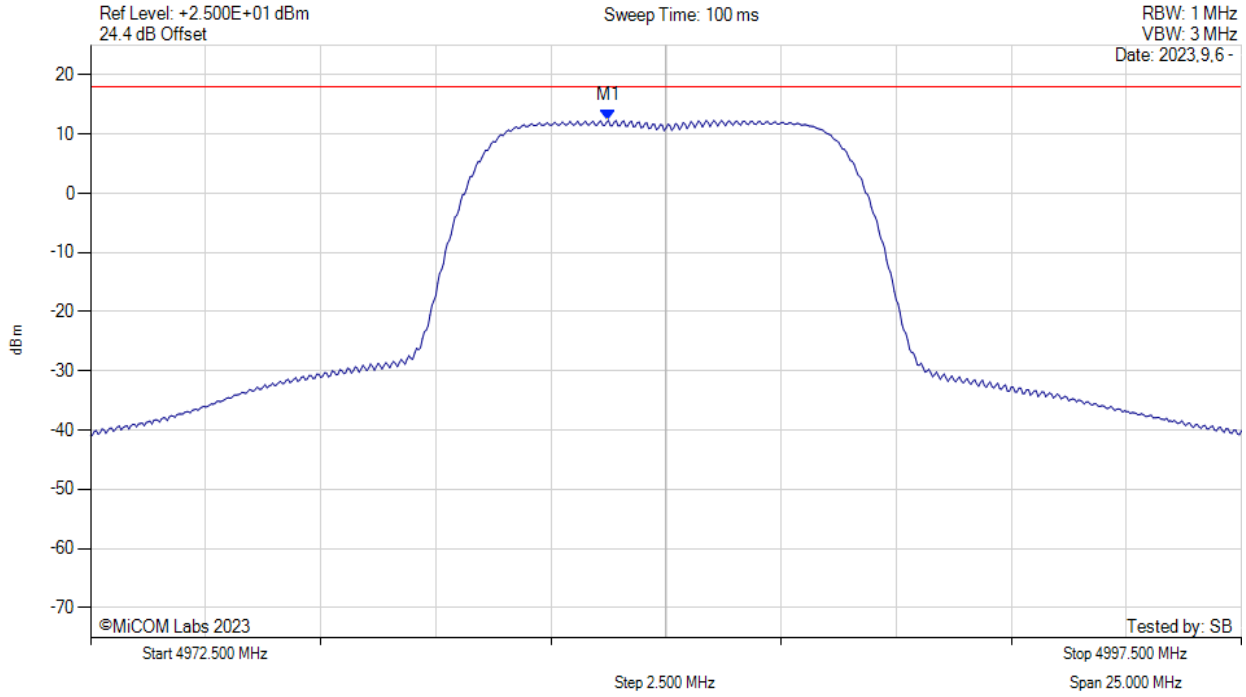


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4983.250 MHz : 12.886 dBm	Limit: ≤ 18.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4985.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4983.750 MHz : 12.312 dBm	Limit: ≤ 18.000 dBm

back to matrix

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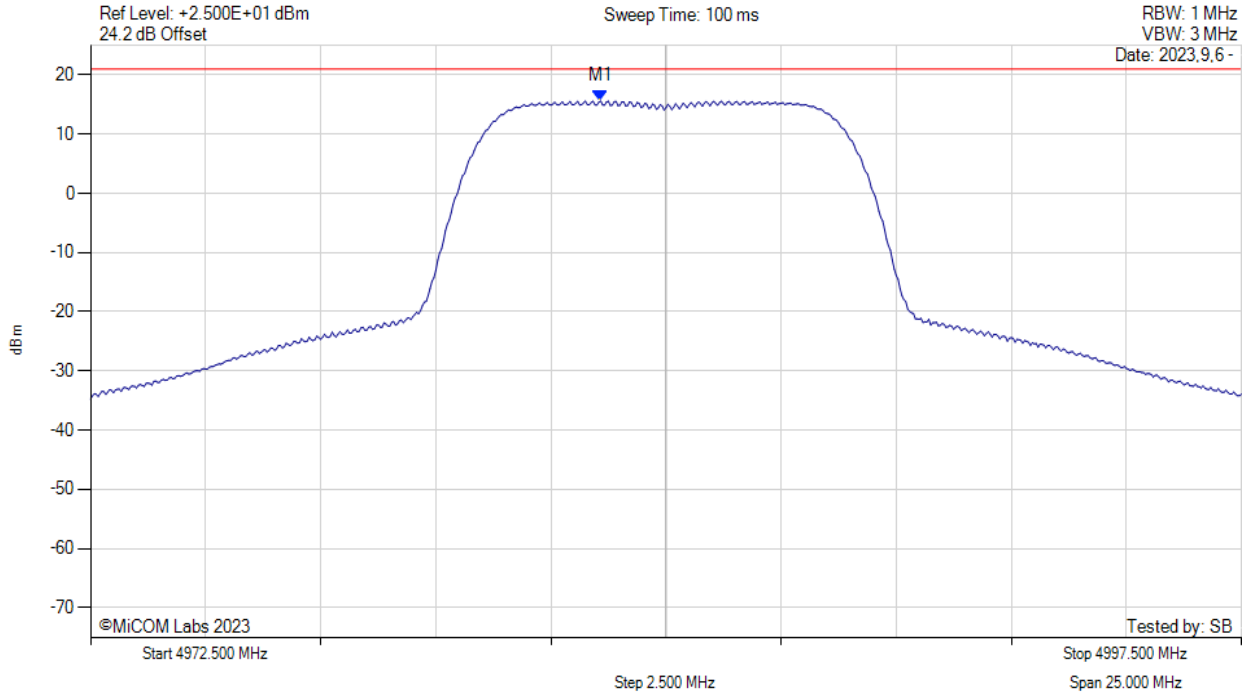
POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4985.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc

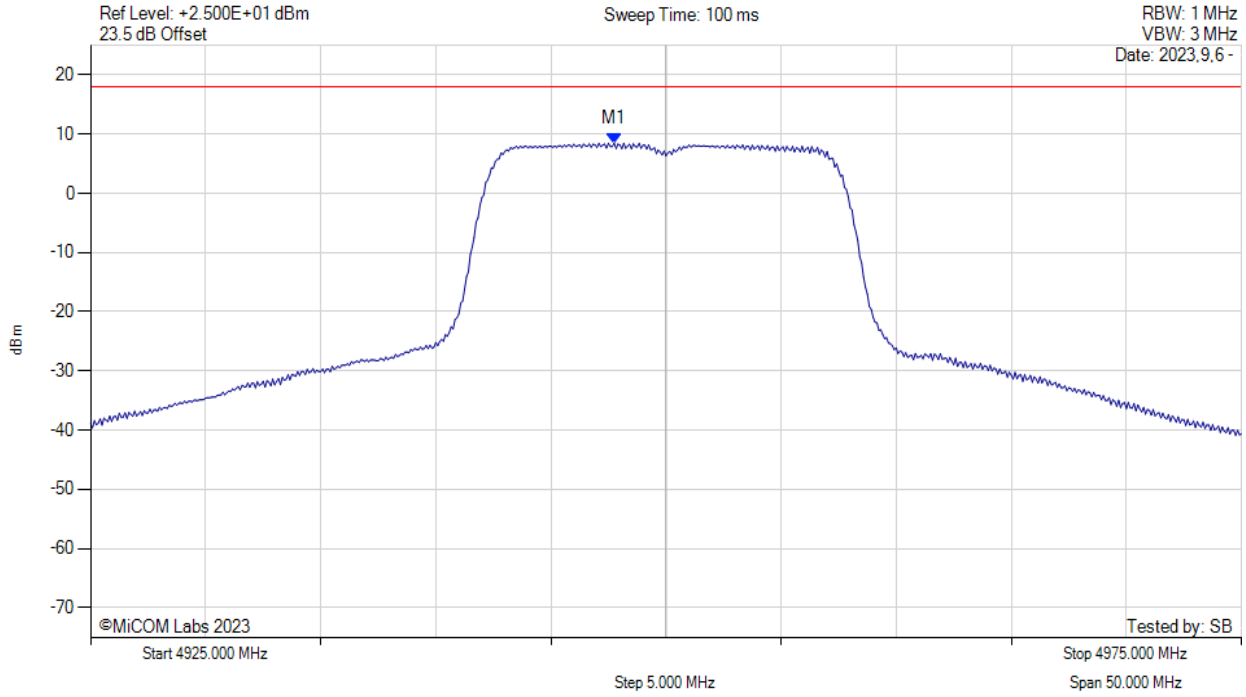


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4983.600 MHz : 15.584 dBm M1 + DCCF : 4983.600 MHz : 17.011 dBm Duty Cycle Correction Factor : +1.43 dB	Limit: ≤ 21.0 dBm Margin: -4.0 dB

back to matrix

POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4950.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

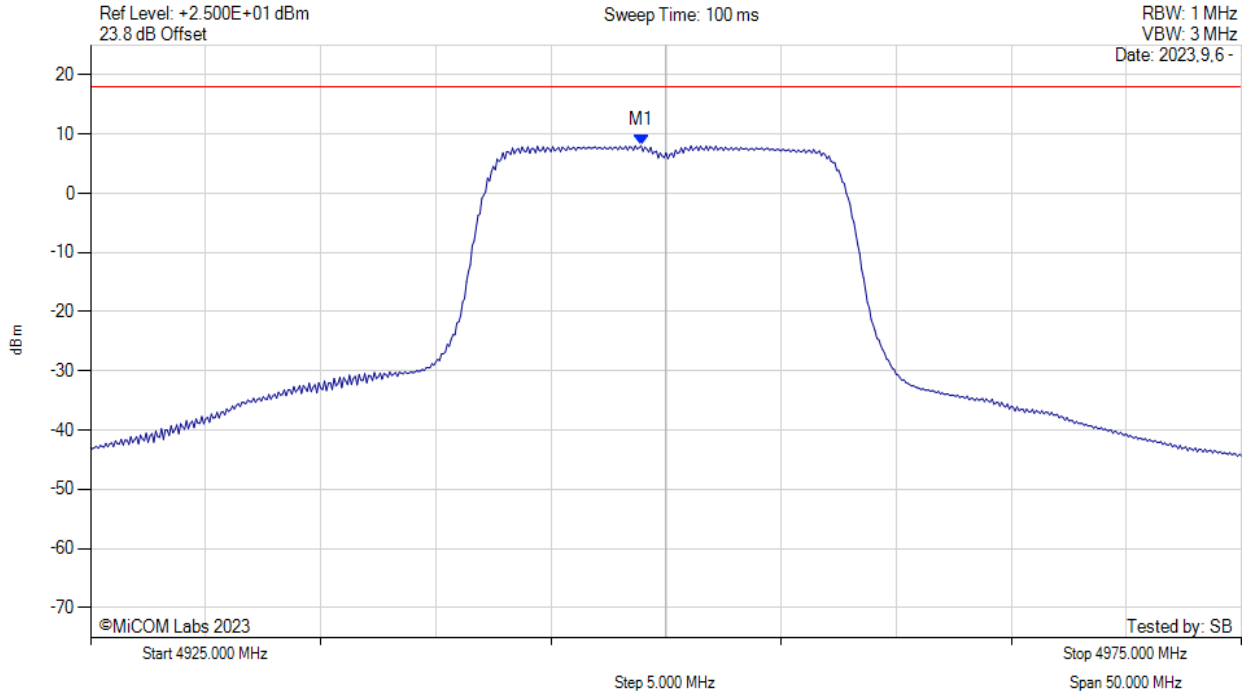


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4947.750 MHz : 8.462 dBm	Limit: ≤ 18.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4950.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

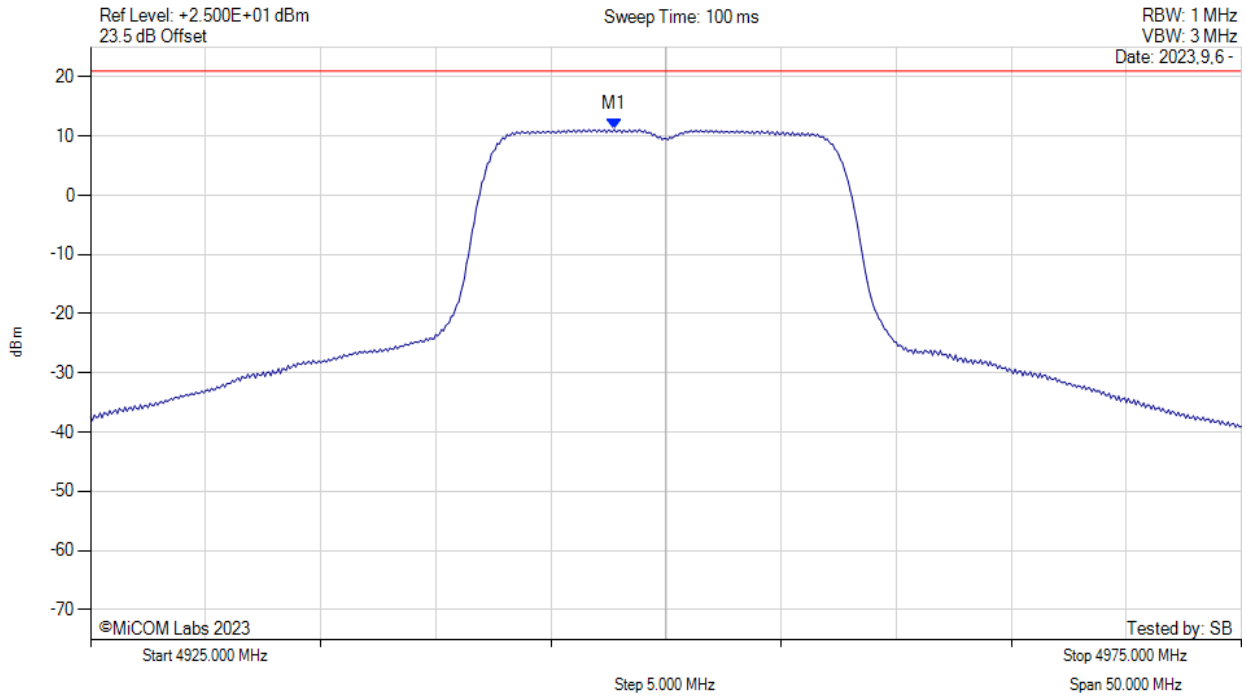


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4948.920 MHz : 8.047 dBm	Limit: ≤ 18.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4950.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc

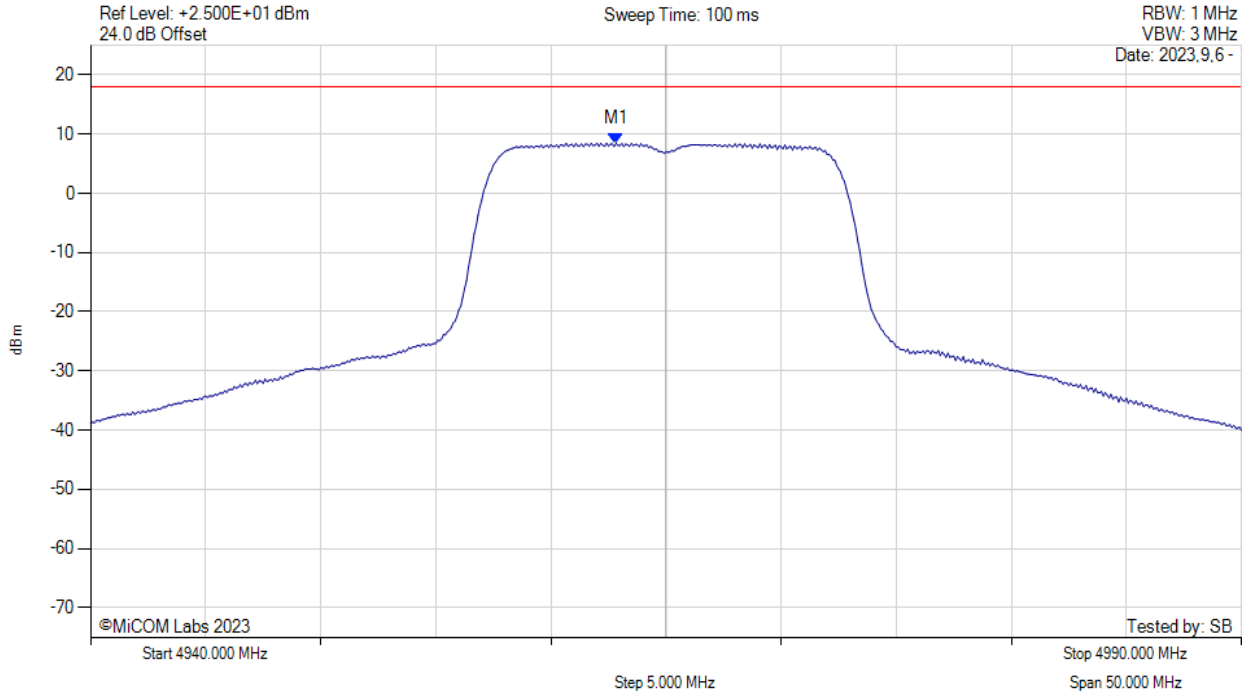


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4947.800 MHz : 11.127 dBm M1 + DCCF : 4947.800 MHz : 13.967 dBm Duty Cycle Correction Factor : +2.84 dB	Limit: ≤ 21.0 dBm Margin: -7.0 dB

back to matrix

POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4965.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

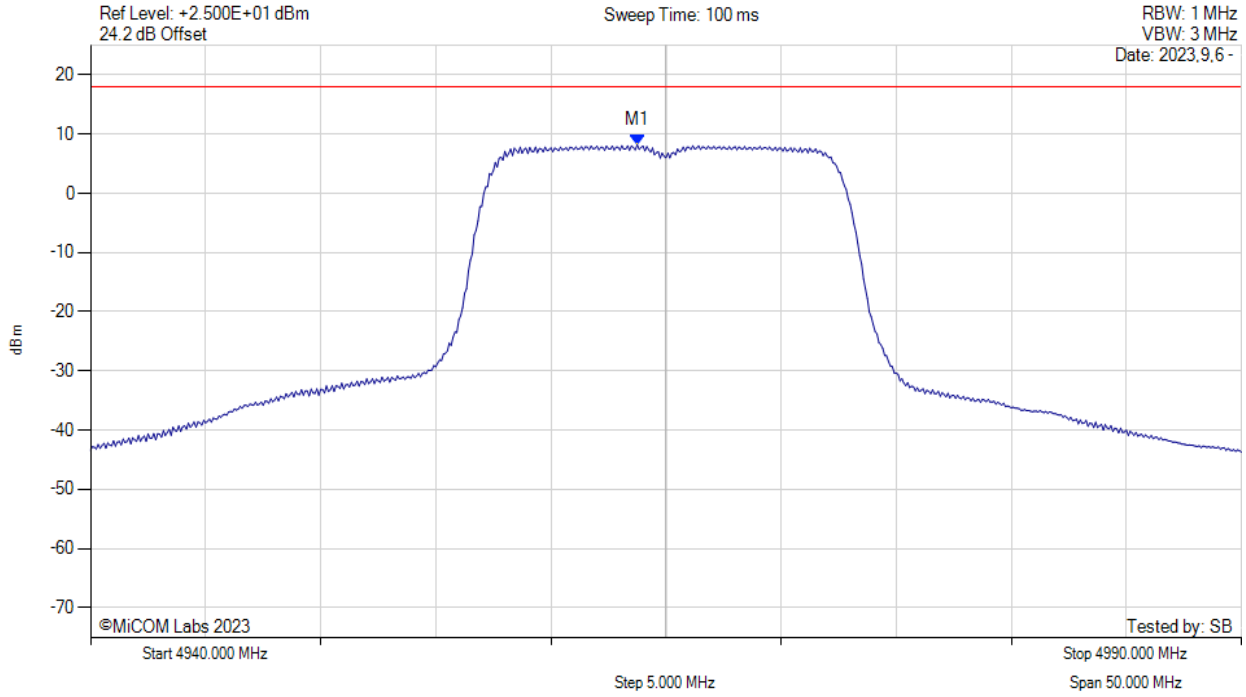


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4962.830 MHz : 8.477 dBm	Limit: ≤ 18.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4965.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

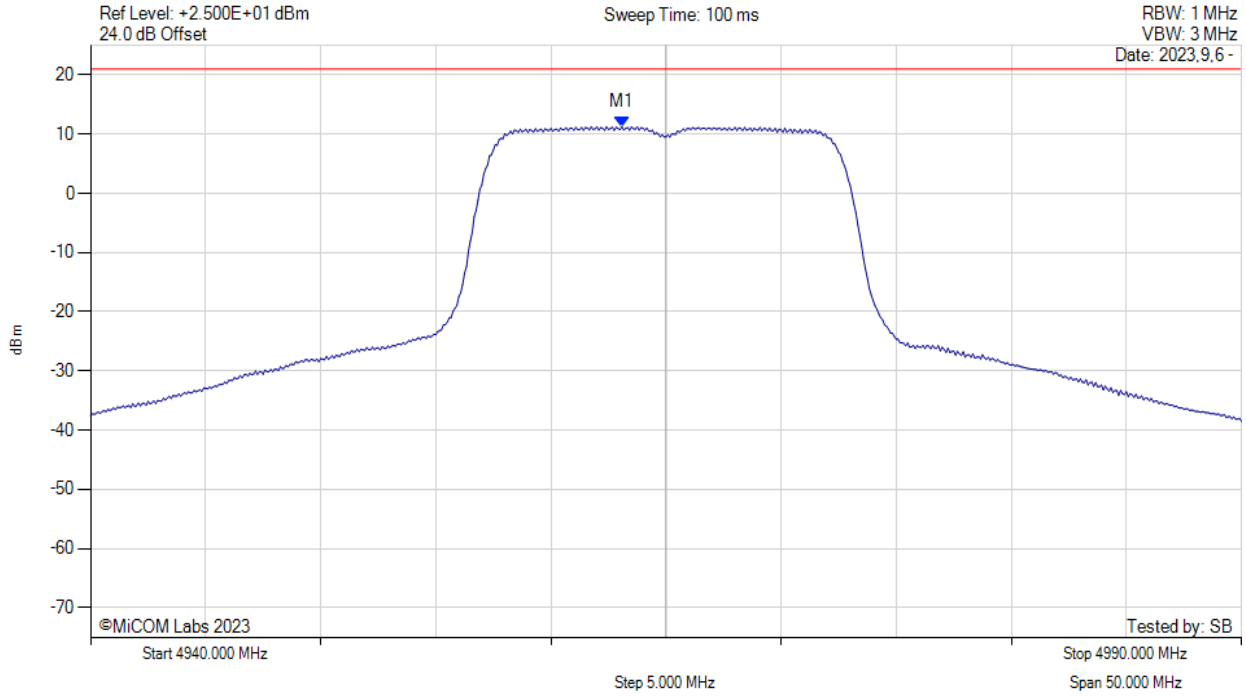


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4963.750 MHz : 8.192 dBm	Channel Frequency: 4965.00 MHz

back to matrix

POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4965.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc

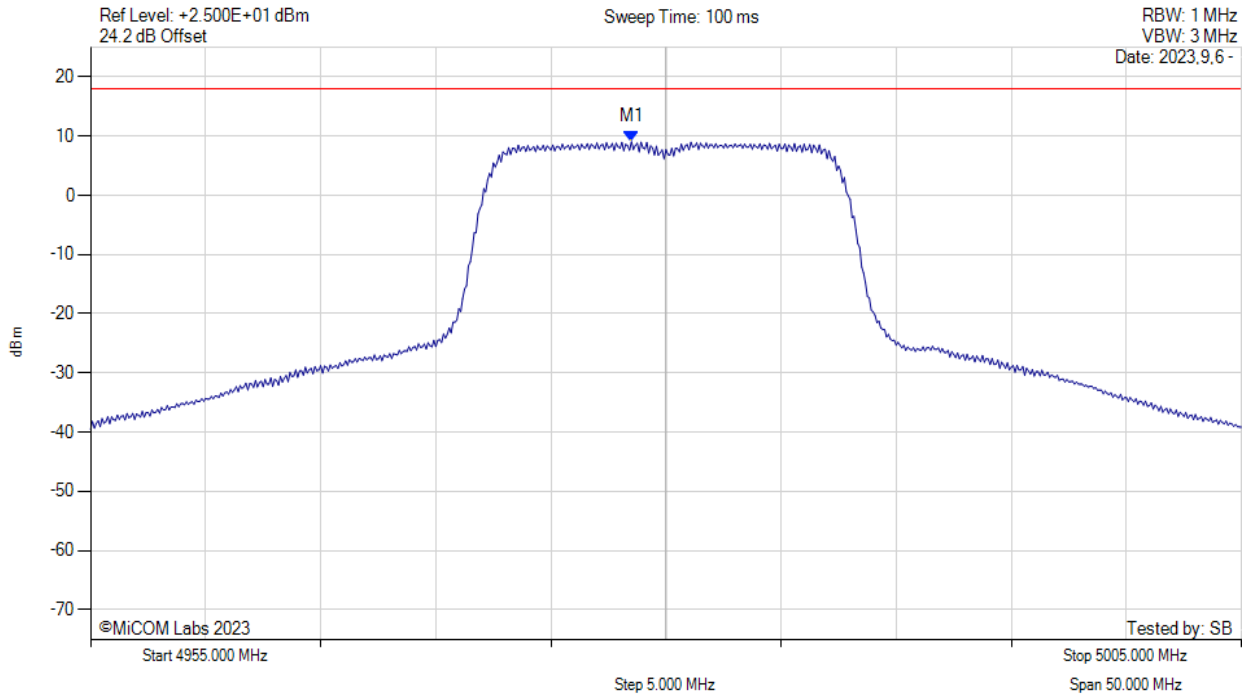


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4963.100 MHz : 11.242 dBm M1 + DCCF : 4963.100 MHz : 14.082 dBm Duty Cycle Correction Factor : +2.84 dB	Limit: ≤ 21.0 dBm Margin: -6.9 dB

back to matrix

POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4980.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

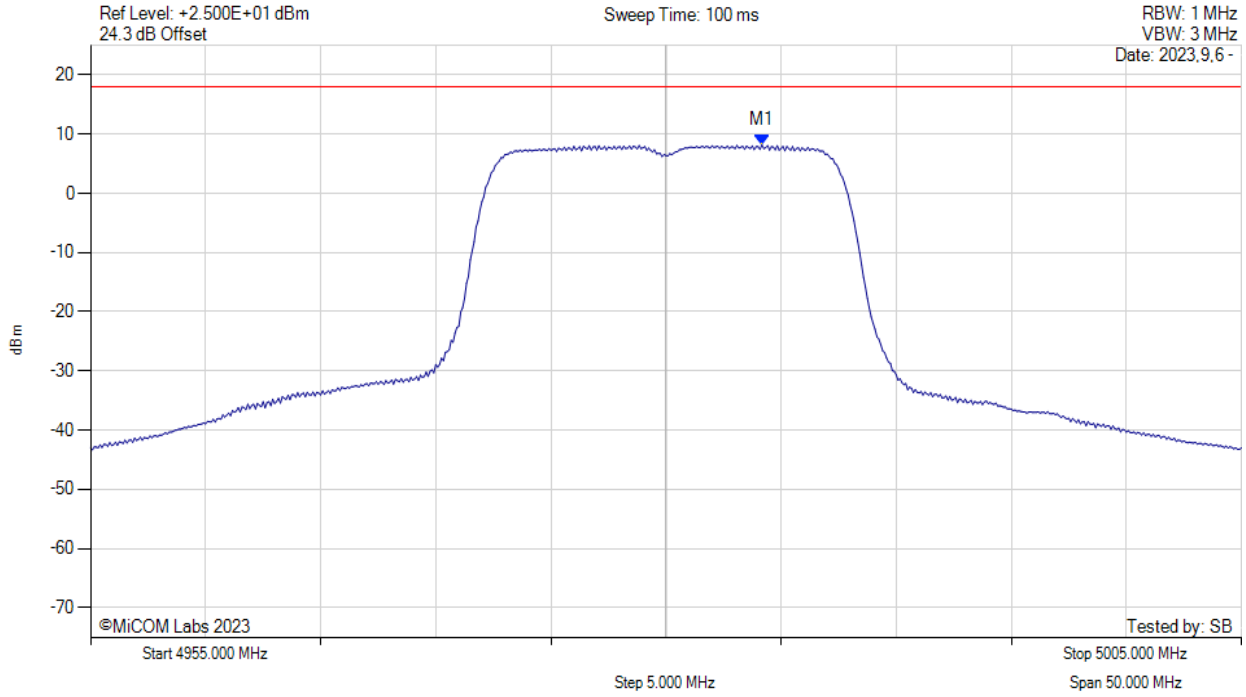


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4978.500 MHz : 9.052 dBm	Limit: ≤ 18.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4980.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

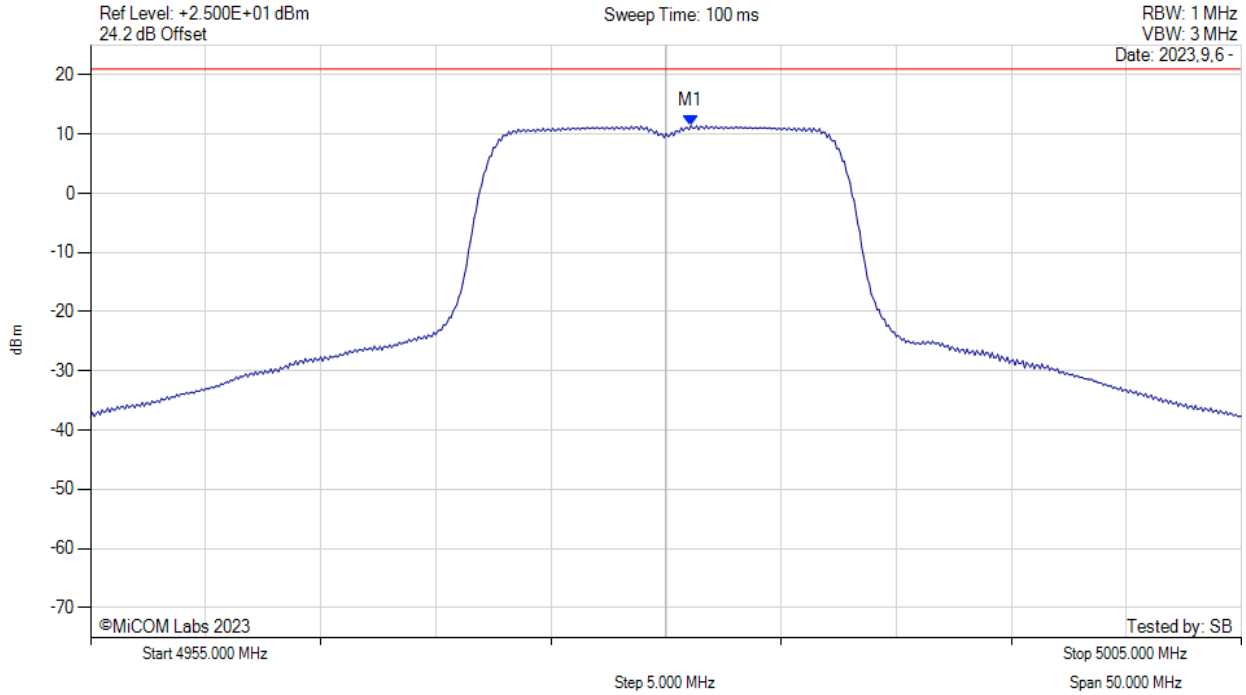


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4984.170 MHz : 8.178 dBm	Limit: ≤ 18.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4980.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc

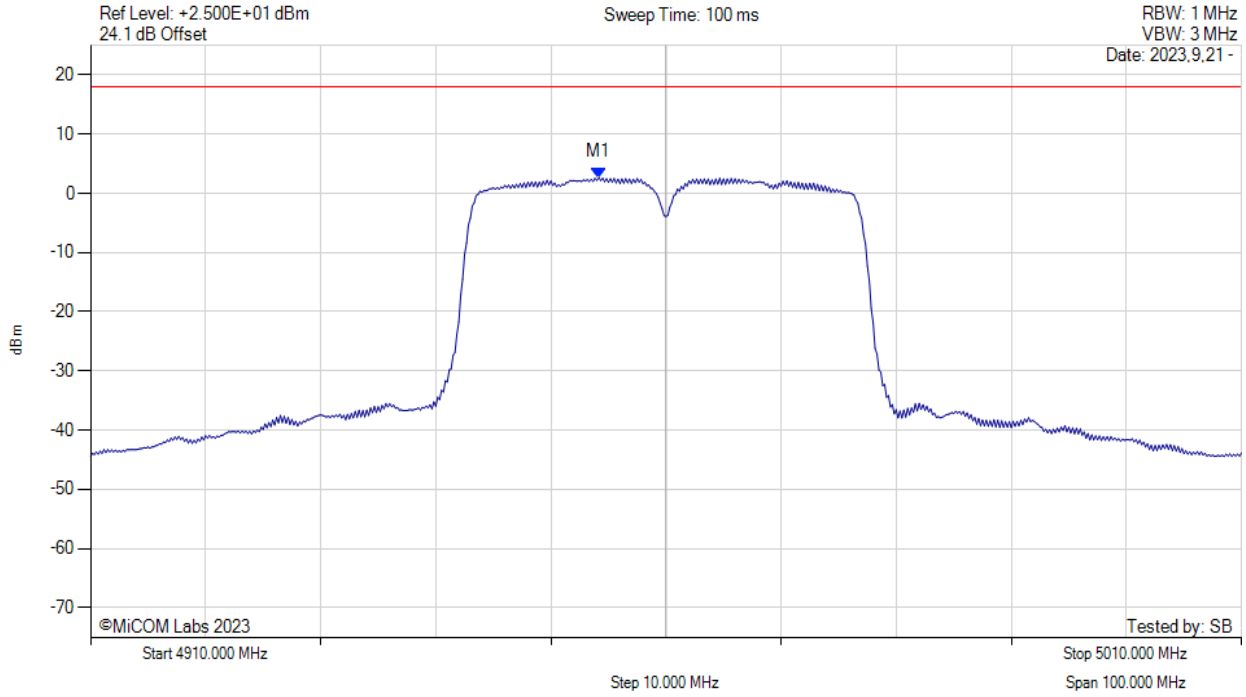


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4981.100 MHz : 11.443 dBm M1 + DCCF : 4981.100 MHz : 14.283 dBm Duty Cycle Correction Factor : +2.84 dB	Limit: ≤ 21.0 dBm Margin: -6.7 dB

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4960.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

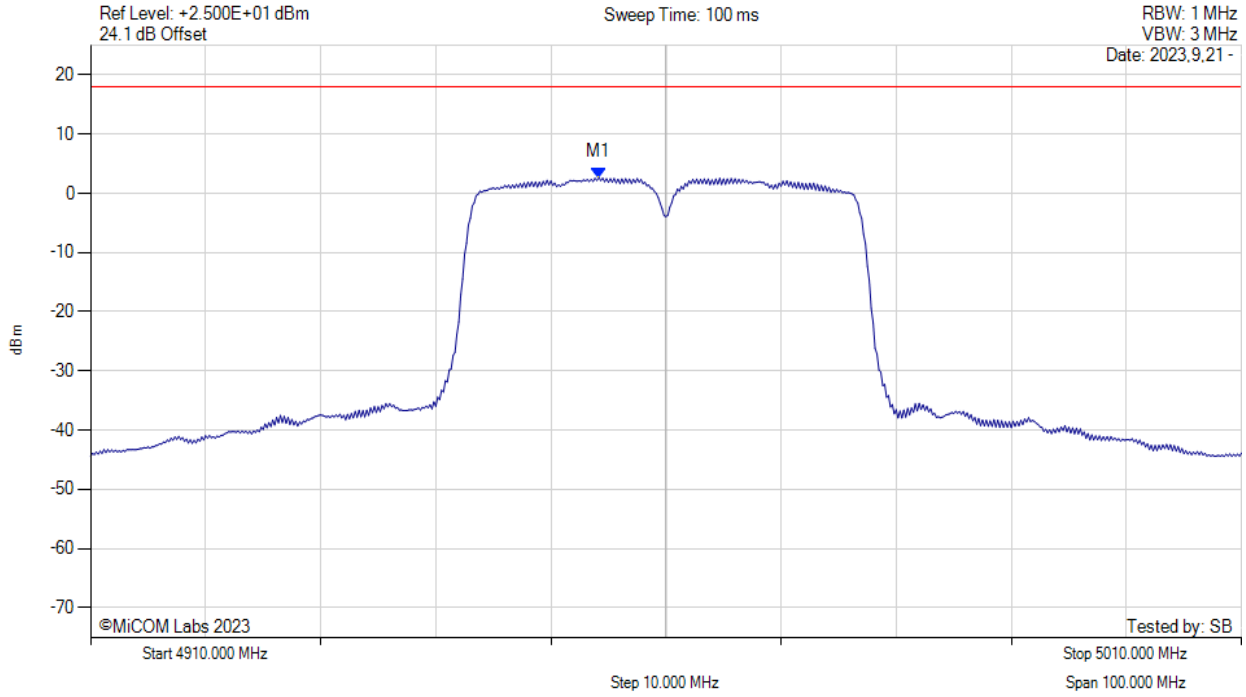


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4954.170 MHz : 2.643 dBm	Channel Frequency: 4960.00 MHz

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4960.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

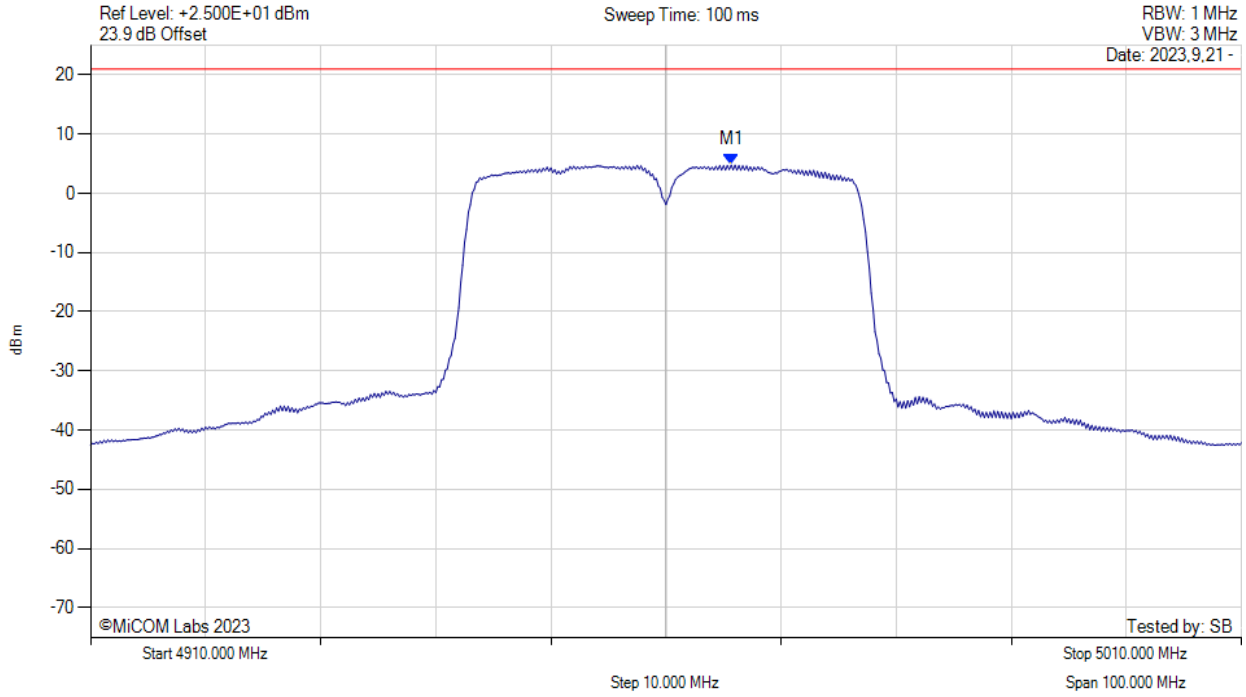


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4954.170 MHz : 2.643 dBm	Channel Frequency: 4960.00 MHz

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4960.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc

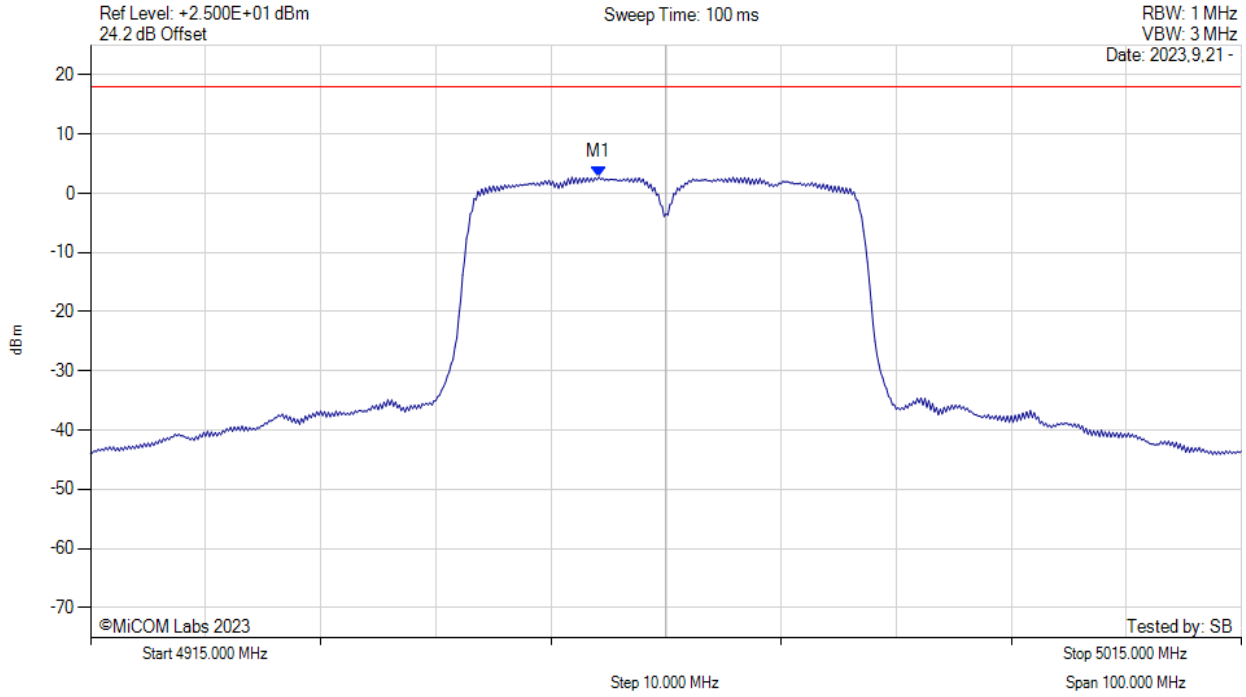


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4965.667 MHz : 4.774 dBm M1 + DCCF: 8.24 dBm Duty Cycle Correction Factor : +3.47 dB	Channel Frequency: 4960.00 MHz

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4965.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

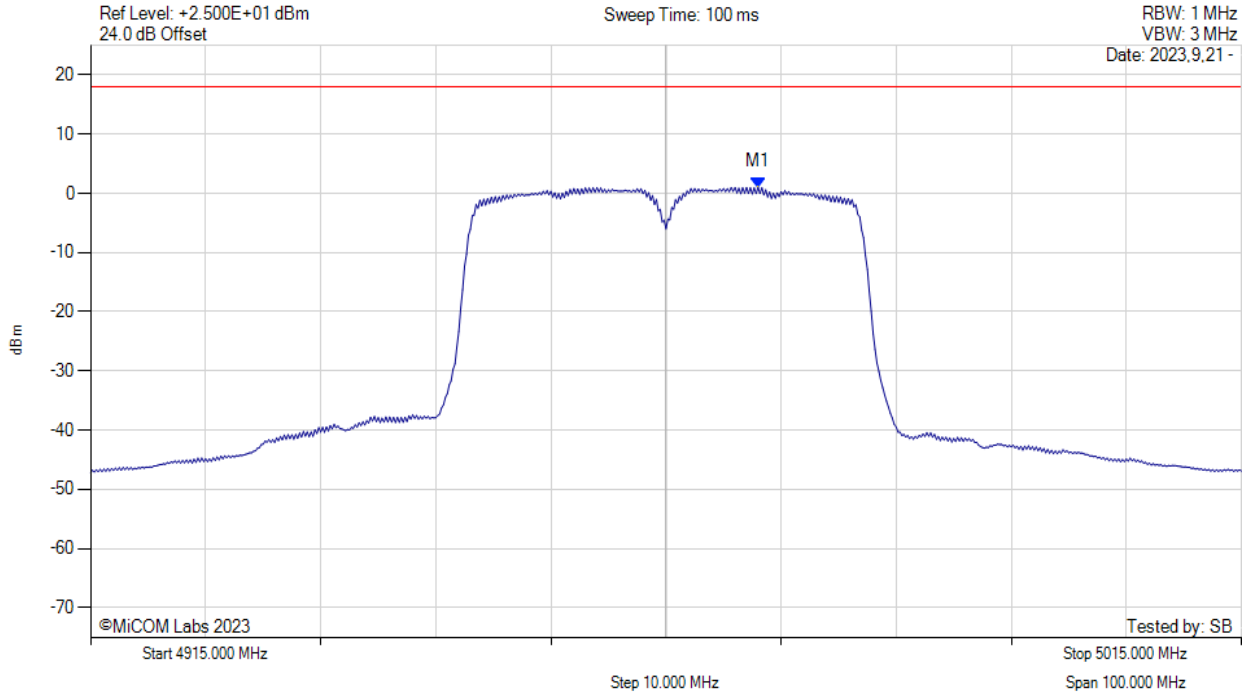


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4959.170 MHz : 2.736 dBm	Channel Frequency: 4965.00 MHz

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4965.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

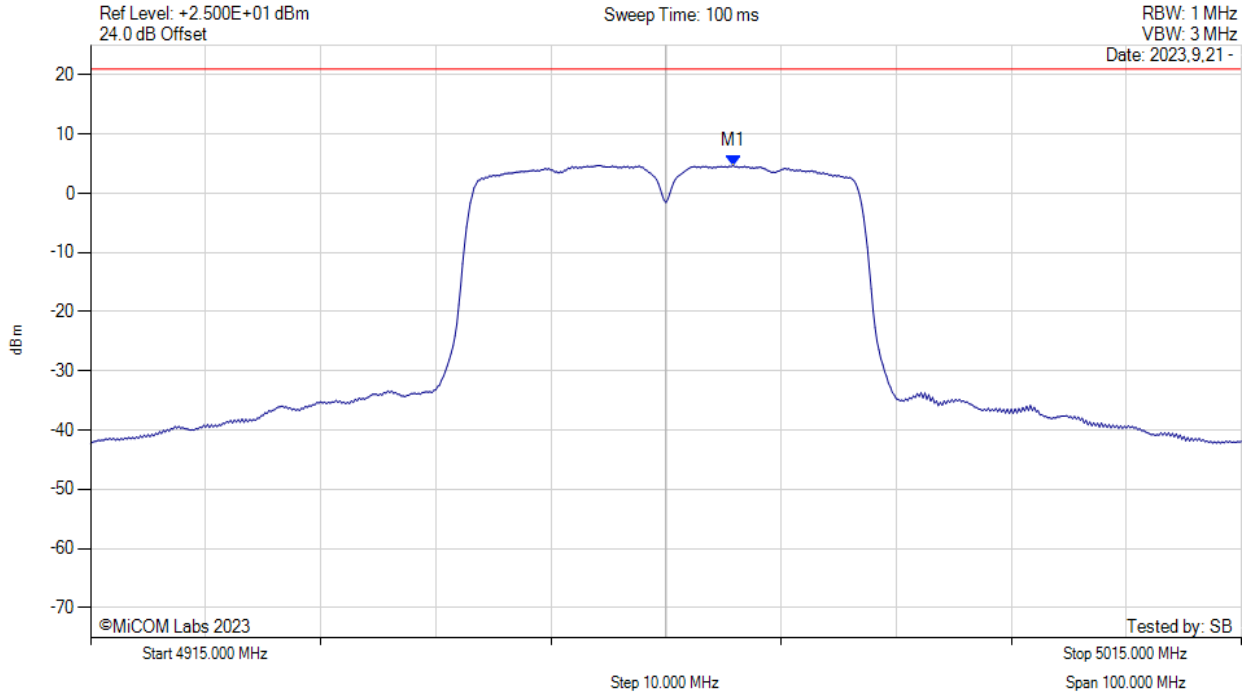


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4973.000 MHz : 1.004 dBm	Channel Frequency: 4965.00 MHz

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4965.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc

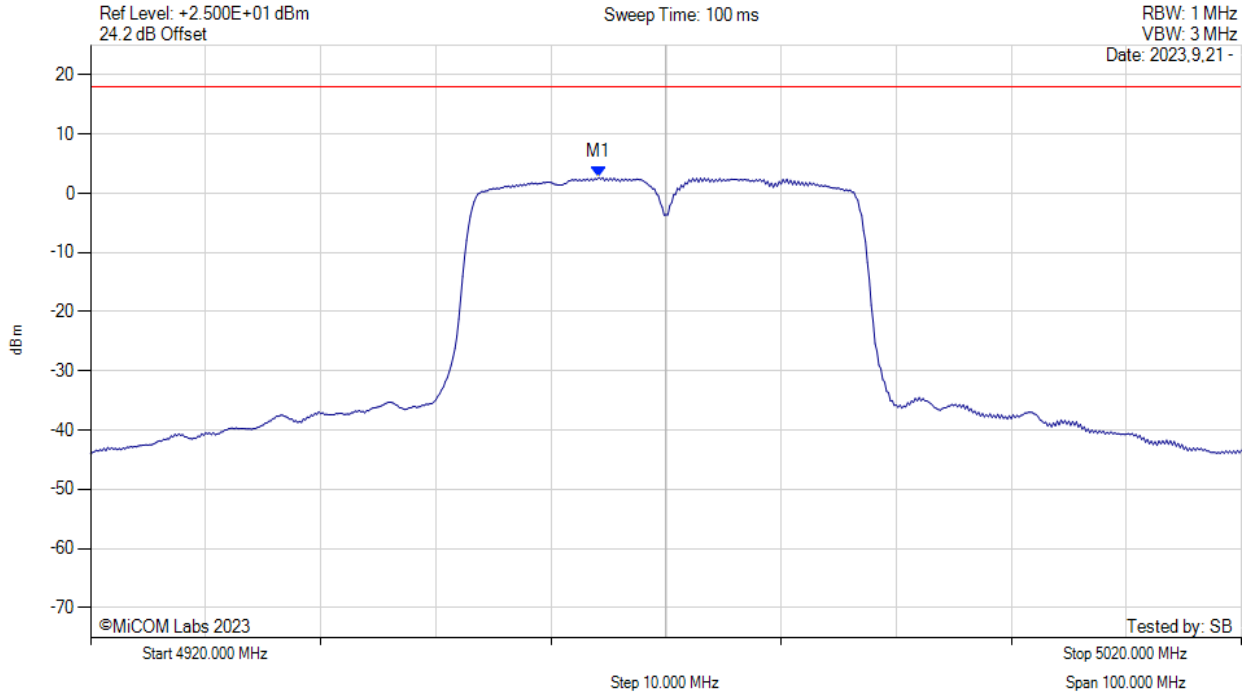


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4970.833 MHz : 4.695 dBm M1 + DCCF: 8.16 dBm Duty Cycle Correction Factor : +3.47 dB	Channel Frequency: 4965.00 MHz

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4970.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

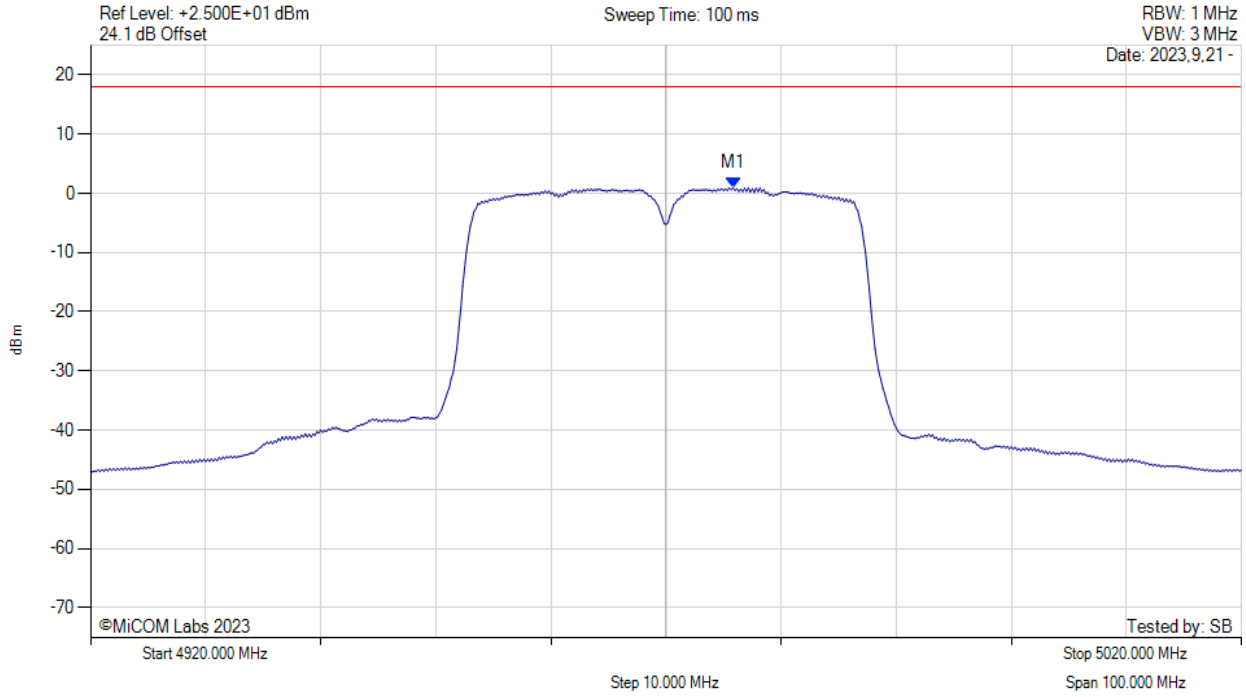


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4964.170 MHz : 2.668 dBm	Channel Frequency: 4970.00 MHz

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4970.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

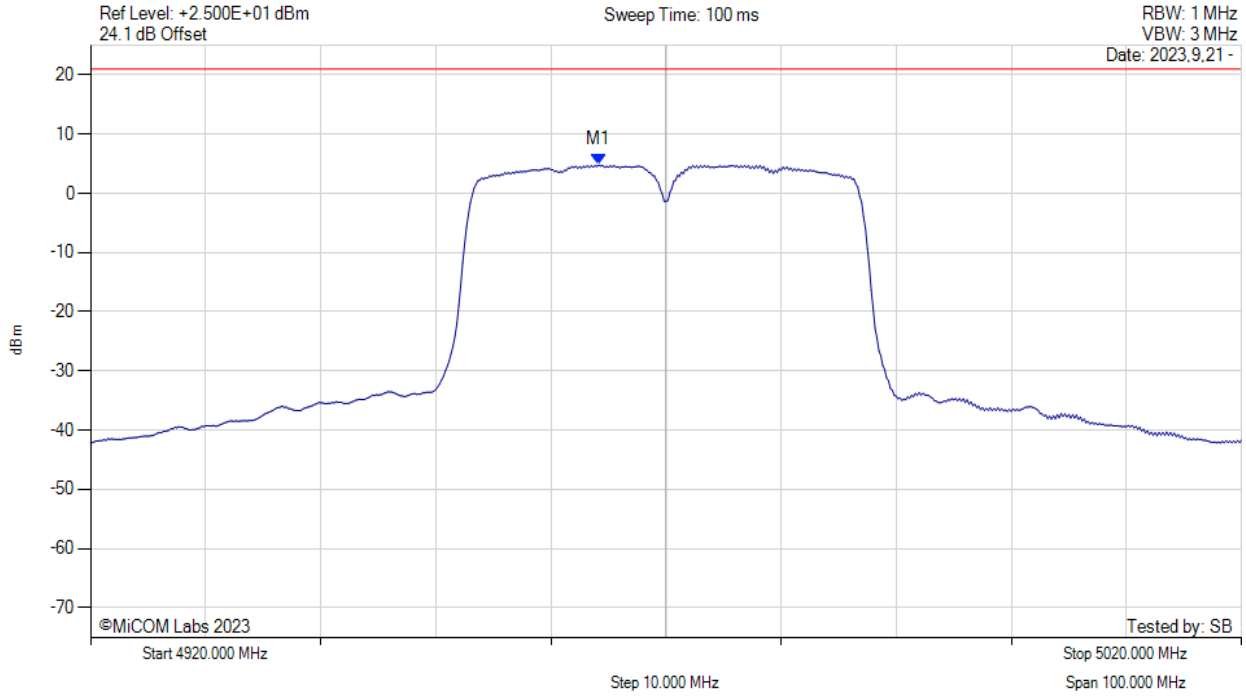


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4975.830 MHz : 0.947 dBm	Channel Frequency: 4970.00 MHz

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4970.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc

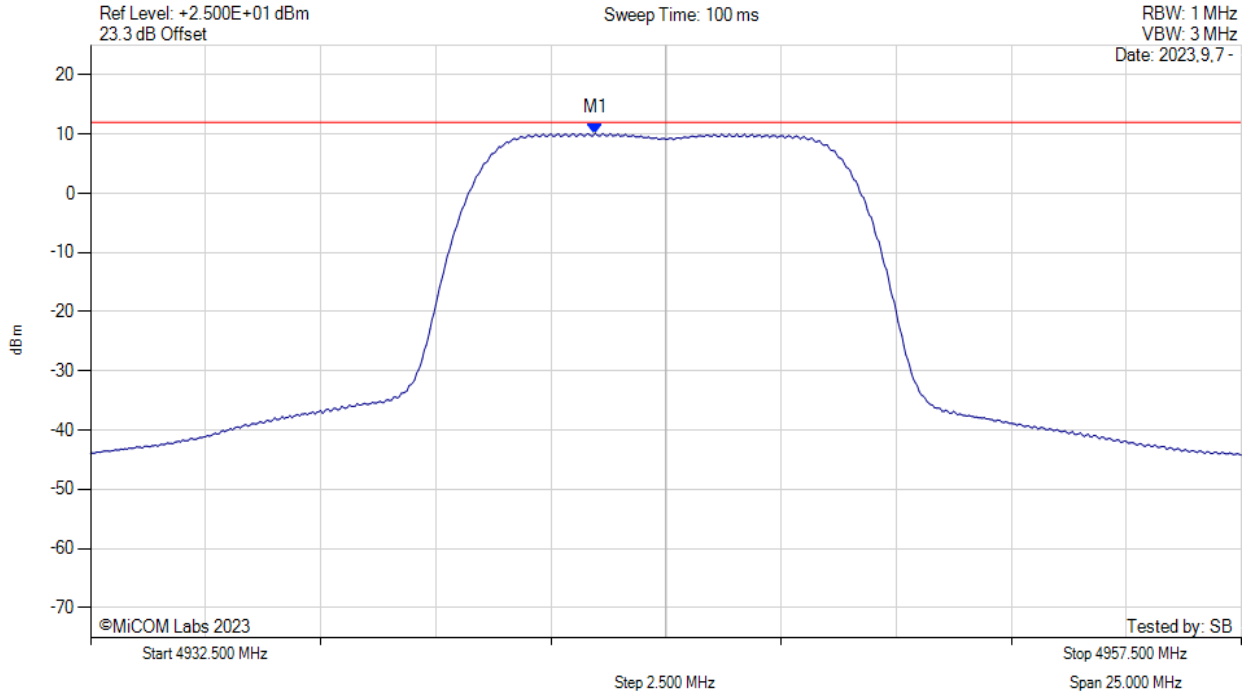


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4964.167 MHz : 4.799 dBm M1 + DCCF: 8.27 dBm Duty Cycle Correction Factor : +3.47 dB	Channel Frequency: 4970.00 MHz

back to matrix

POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4945.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

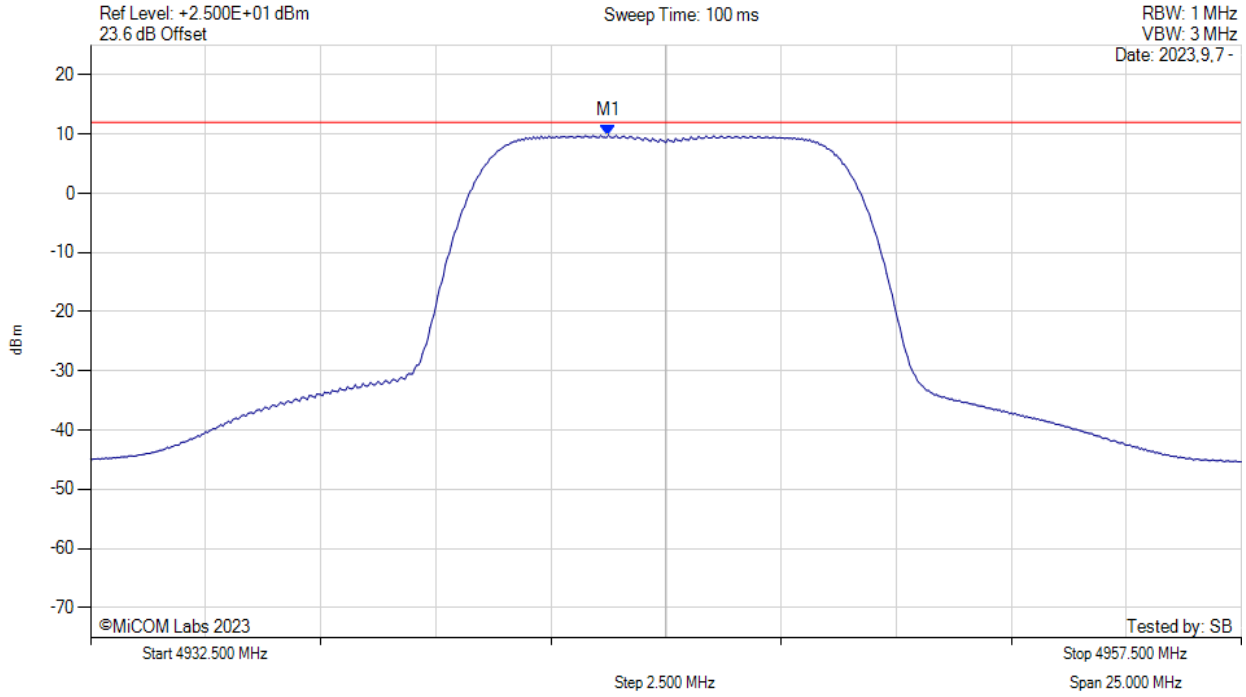


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4943.460 MHz : 10.144 dBm	Limit: ≤ 12.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4945.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

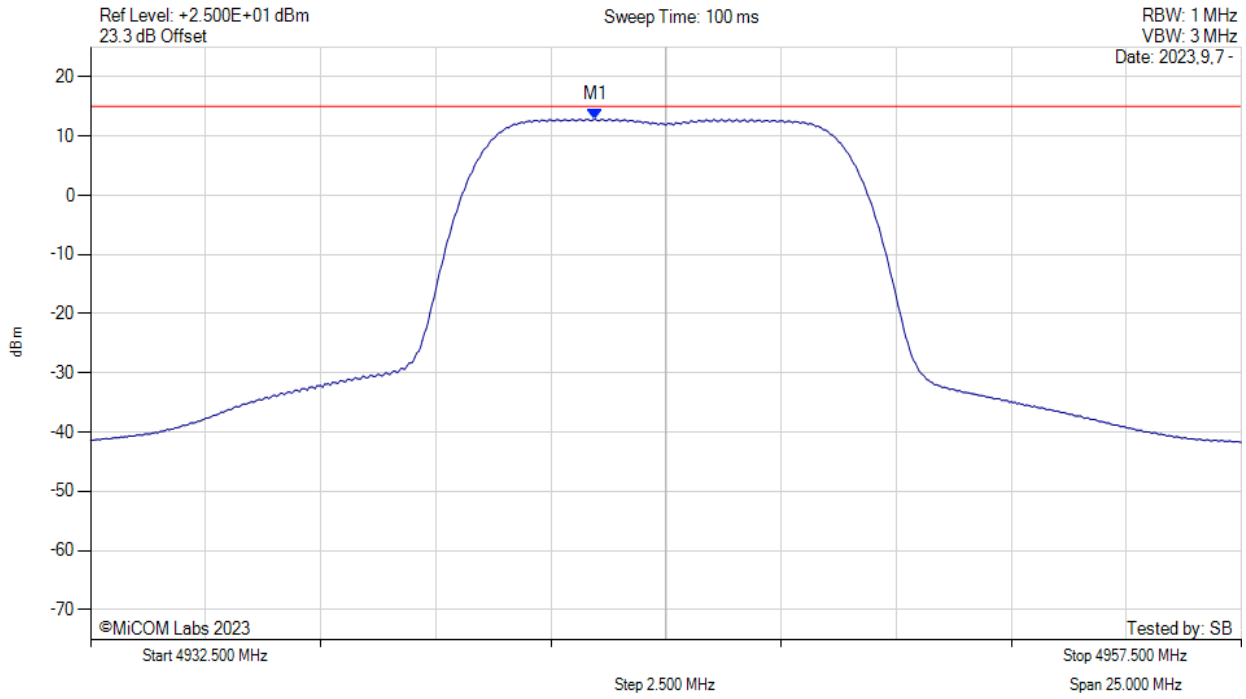


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4943.750 MHz : 9.810 dBm	Limit: ≤ 12.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4945.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc

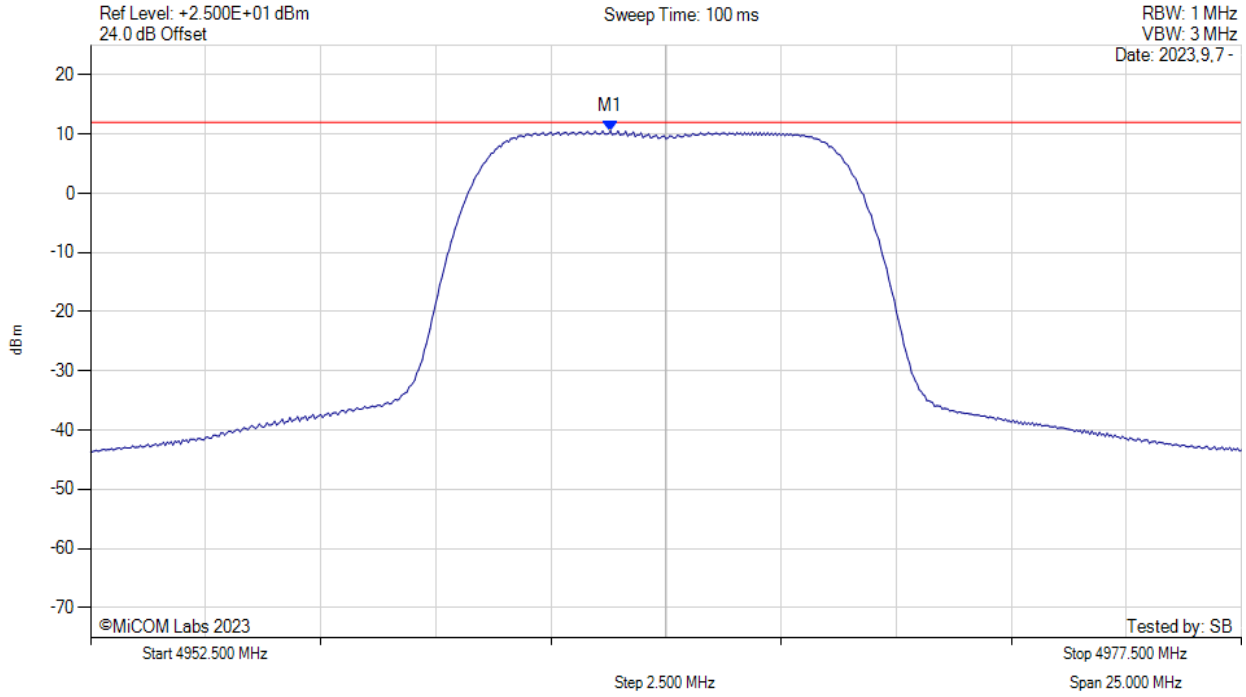


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4943.500 MHz : 12.863 dBm M1 + DCCF : 4943.500 MHz : 14.290 dBm Duty Cycle Correction Factor : +1.43 dB	Limit: ≤ 15.0 dBm Margin: -0.7 dB

back to matrix

POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4965.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

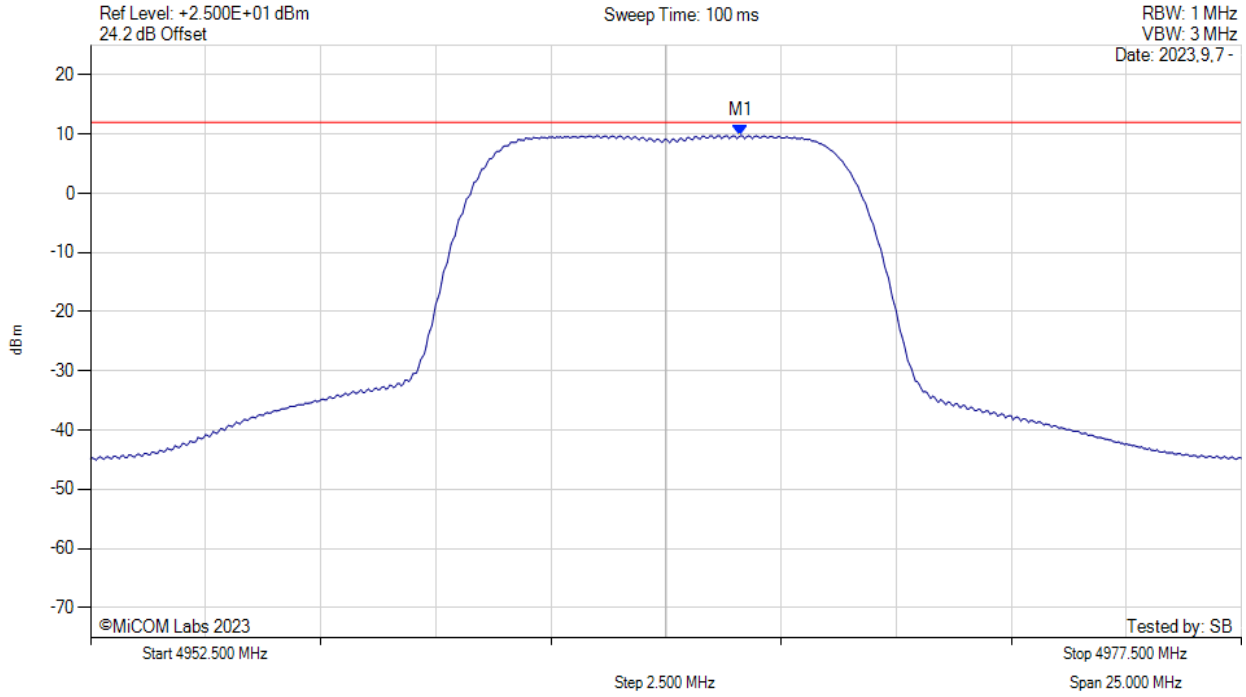


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4963.790 MHz : 10.558 dBm	Limit: ≤ 12.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4965.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

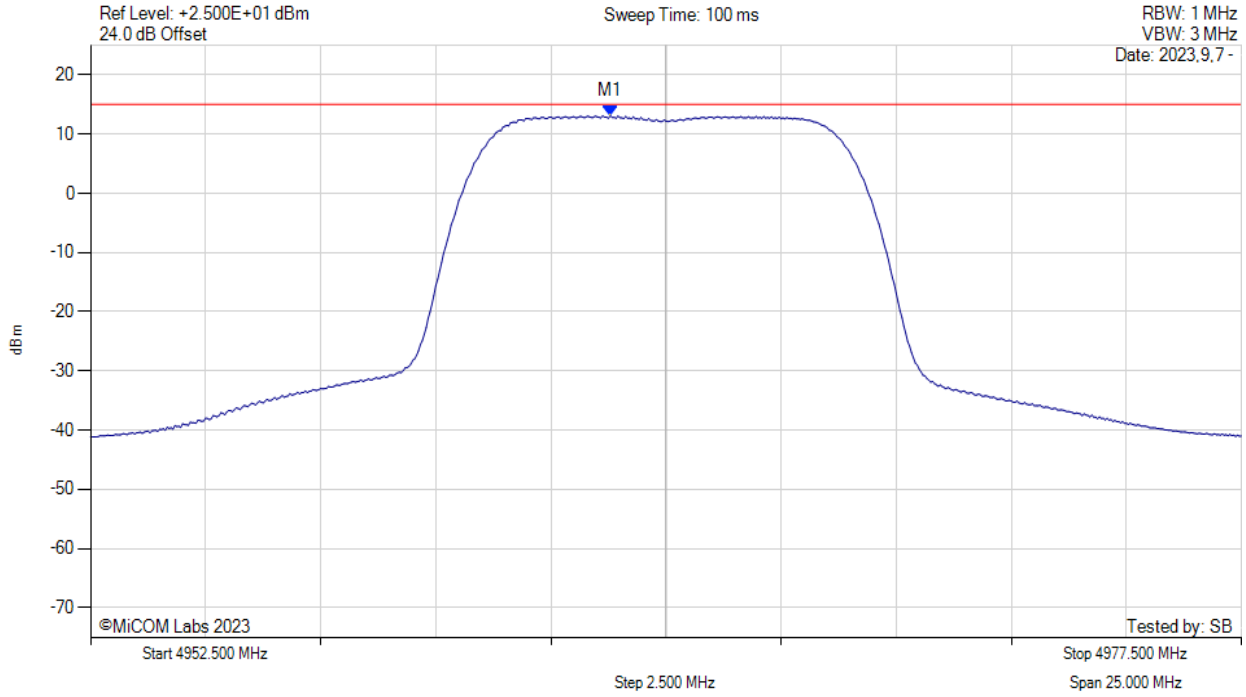


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4966.620 MHz : 9.742 dBm	Channel Frequency: 4965.00 MHz

back to matrix

POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4965.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc

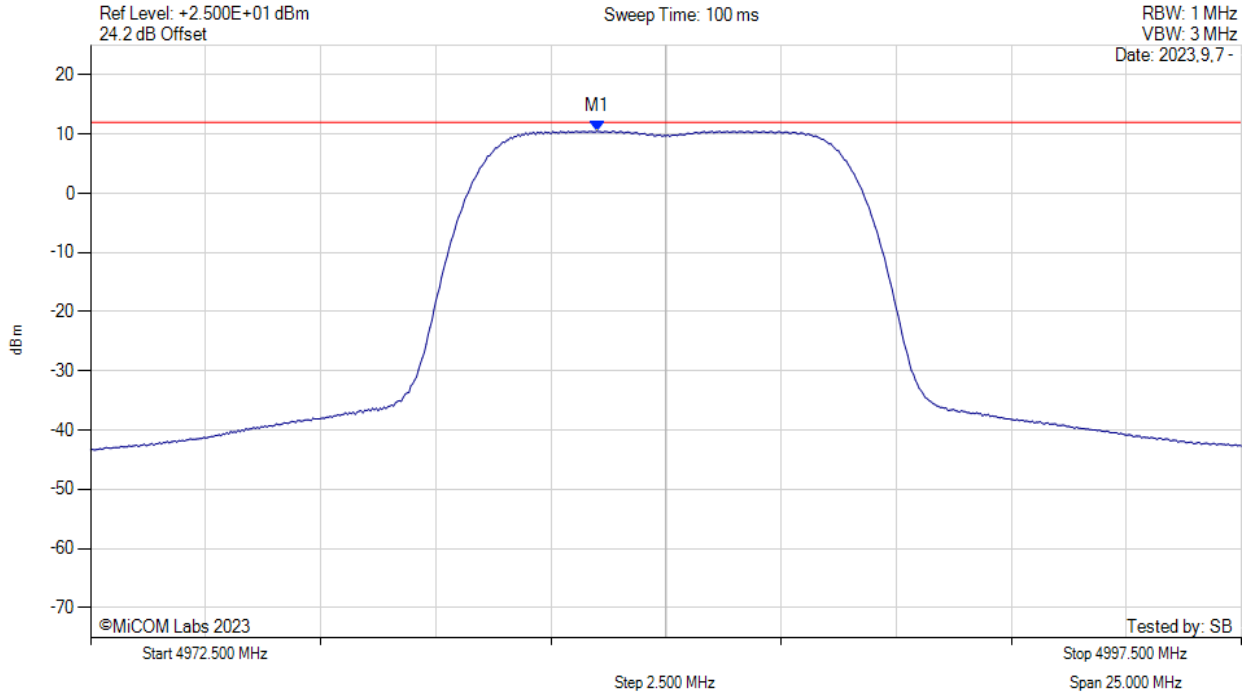


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4963.800 MHz : 13.091 dBm M1 + DCCF : 4963.800 MHz : 14.518 dBm Duty Cycle Correction Factor : +1.43 dB	Limit: ≤ 15.0 dBm Margin: -0.5 dB

back to matrix

POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4985.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

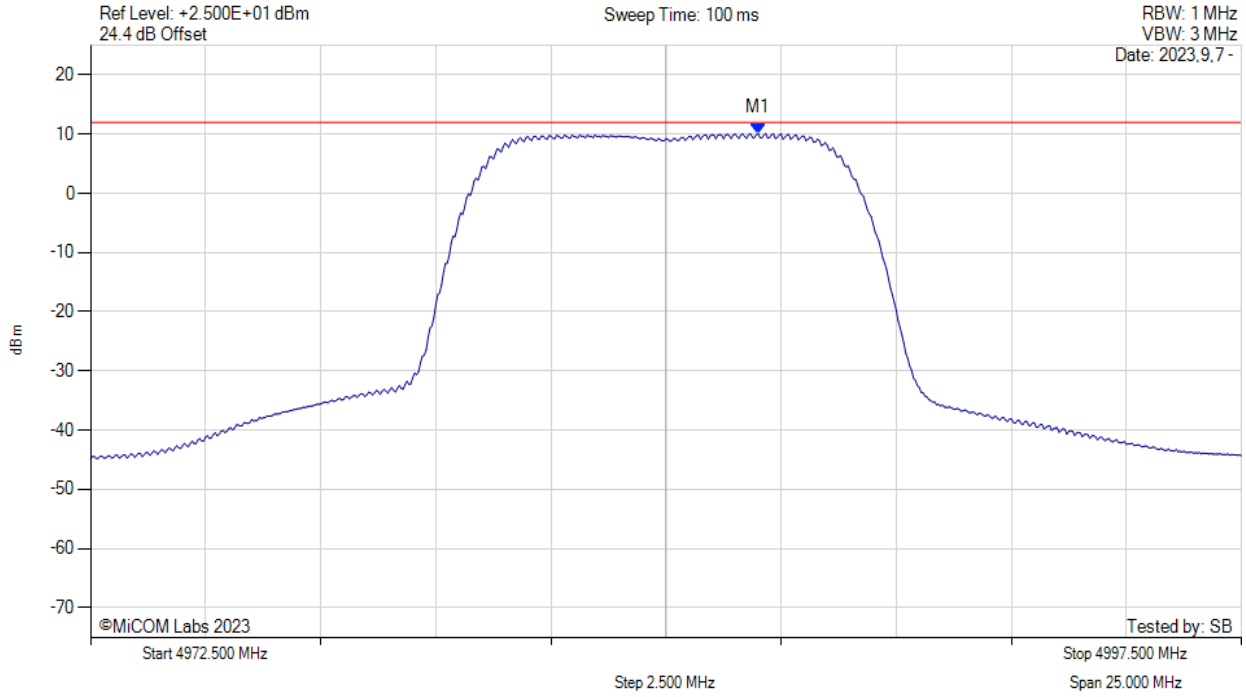


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4983.500 MHz : 10.480 dBm	Limit: ≤ 12.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4985.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

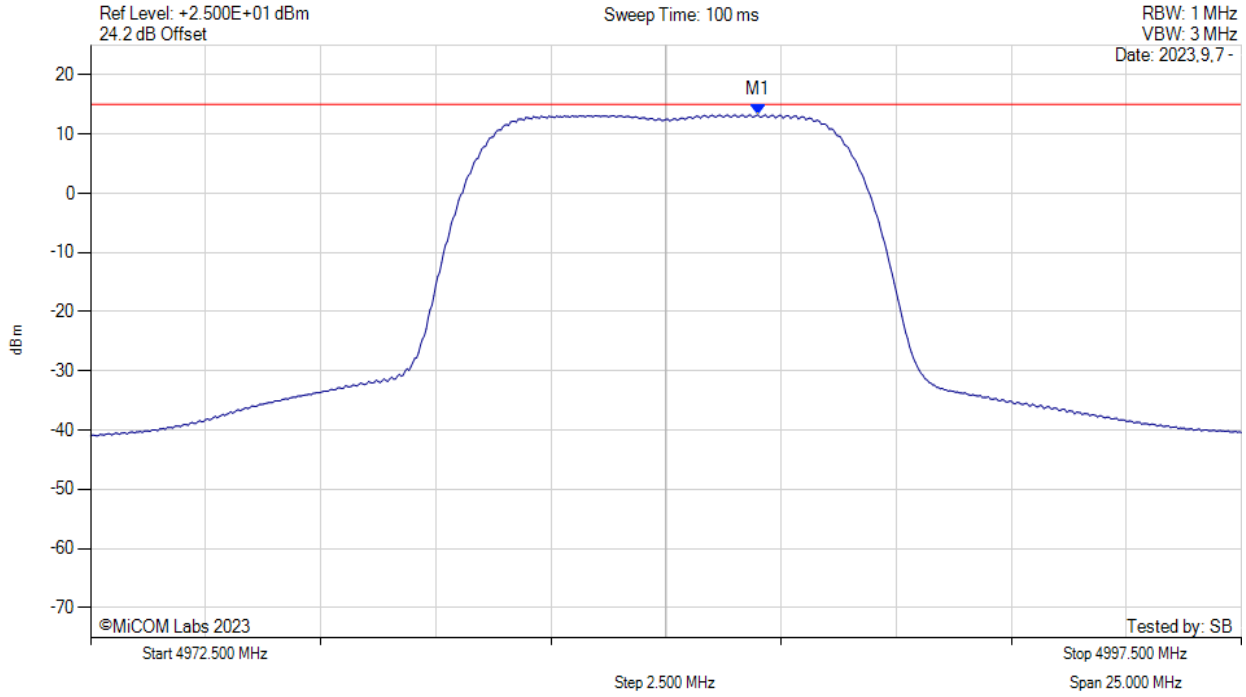


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4987.000 MHz : 10.129 dBm	Limit: ≤ 12.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 10MHz, Channel: 4985.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc



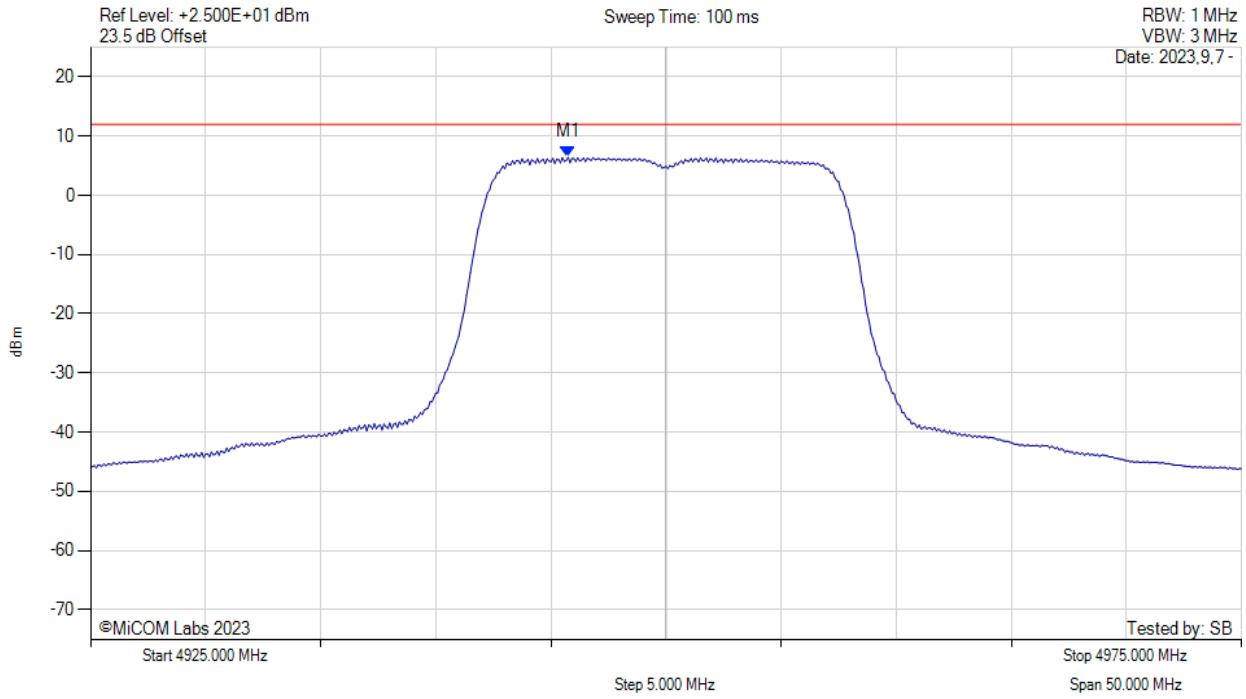
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4987.000 MHz : 13.244 dBm M1 + DCCF : 4987.000 MHz : 14.671 dBm Duty Cycle Correction Factor : +1.43 dB	Limit: ≤ 15.0 dBm Margin: -0.3 dB

back to matrix

MiCOM Labs, 575 Boulder Court, Pleasanton, California 94566 USA, Phone: +1 (925) 462 0304, Fax: +1 (925) 462 0306, www.micomlabs.com

POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4950.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

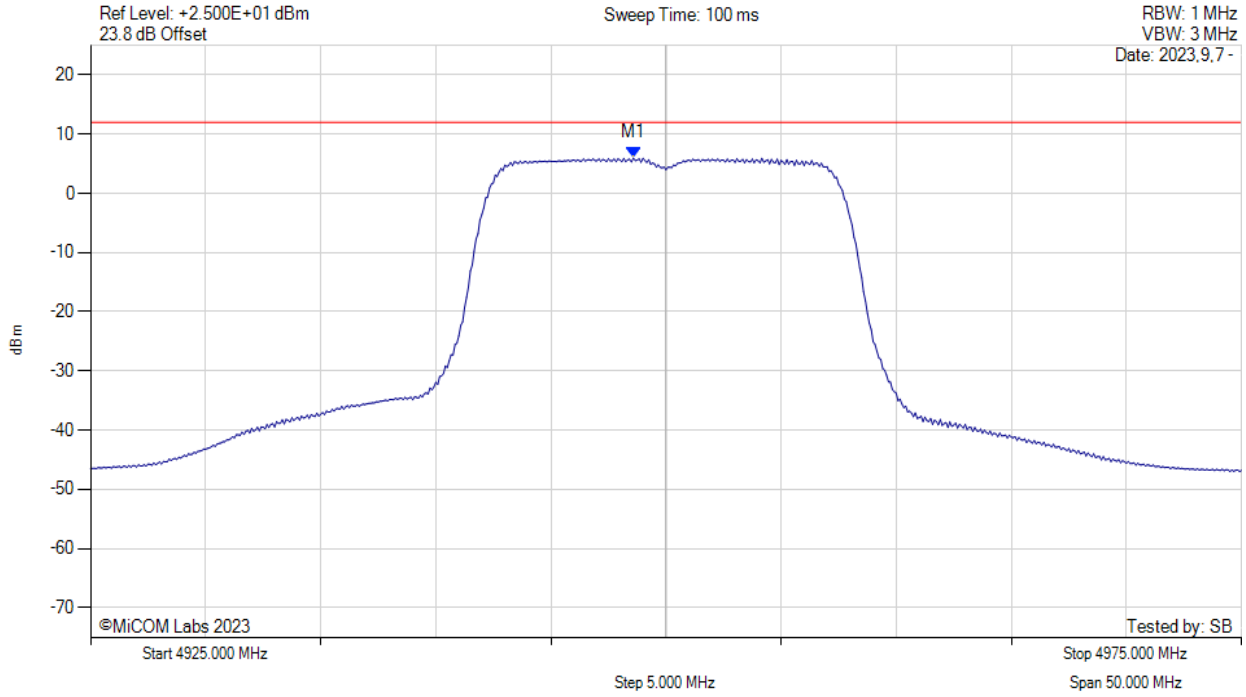


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4945.750 MHz : 6.415 dBm	Limit: ≤ 12.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4950.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

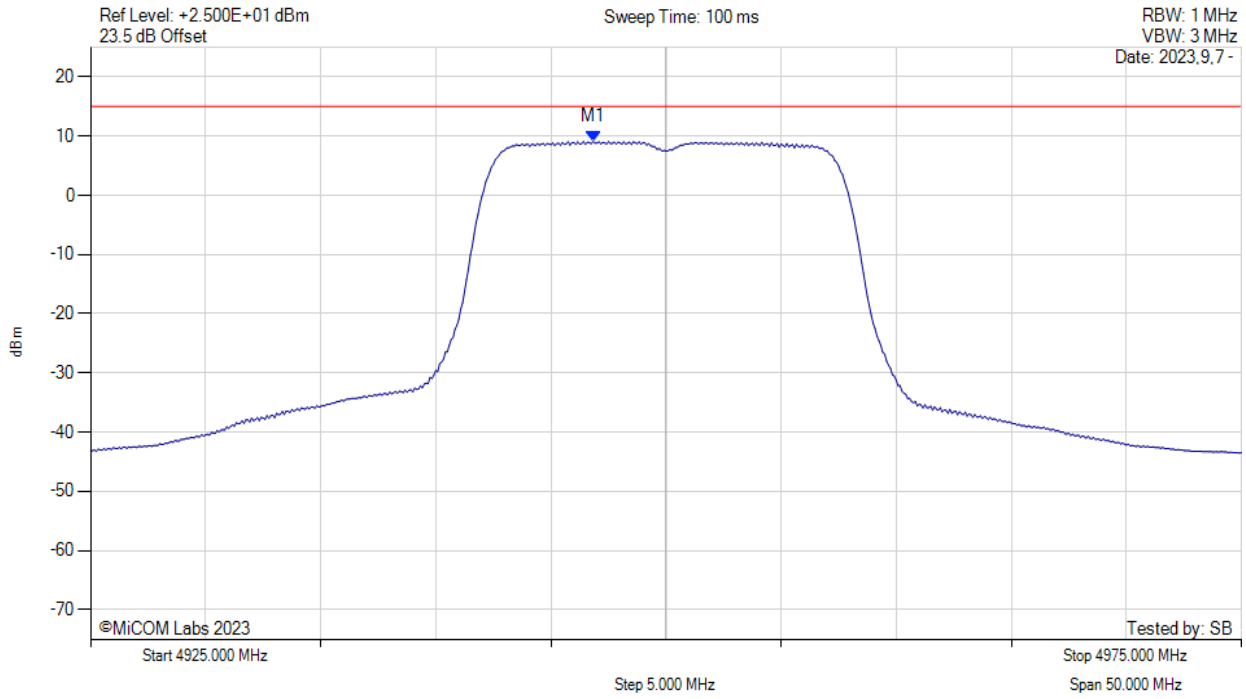


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4948.580 MHz : 5.957 dBm	Limit: ≤ 12.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4950.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc

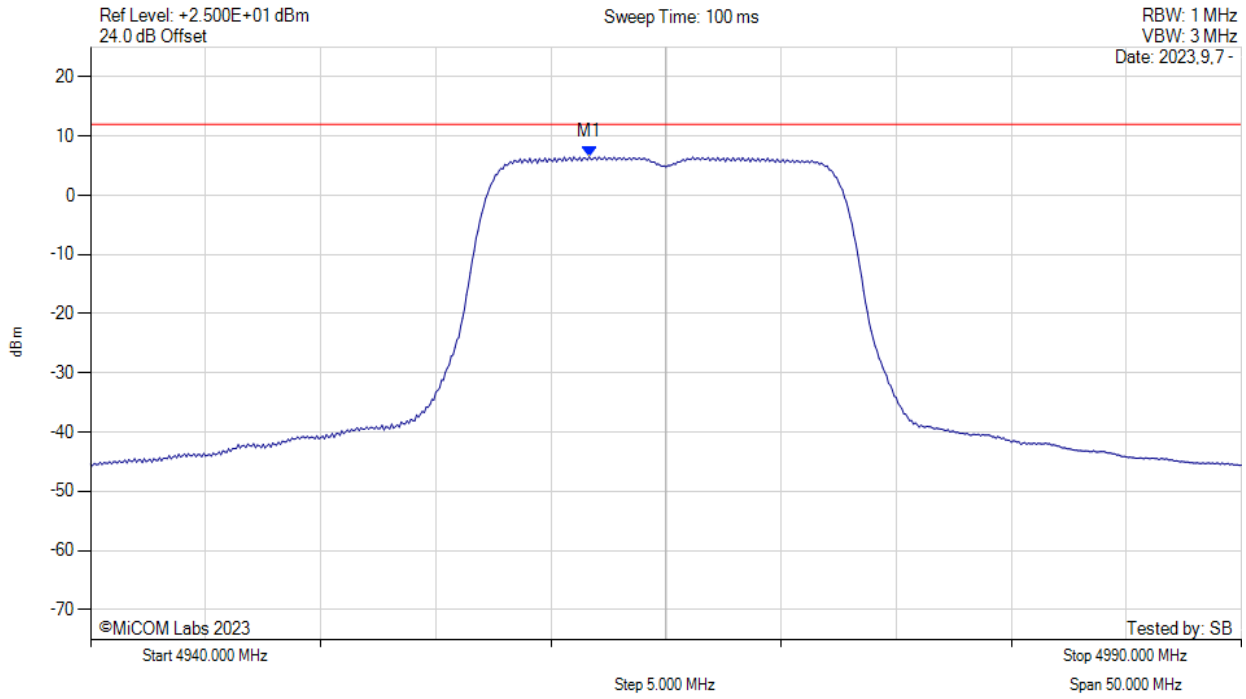


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4946.800 MHz : 9.117 dBm M1 + DCCF : 4946.800 MHz : 11.635 dBm Duty Cycle Correction Factor : +2.52 dB	Limit: ≤ 15.0 dBm Margin: -3.4 dB

back to matrix

POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4965.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

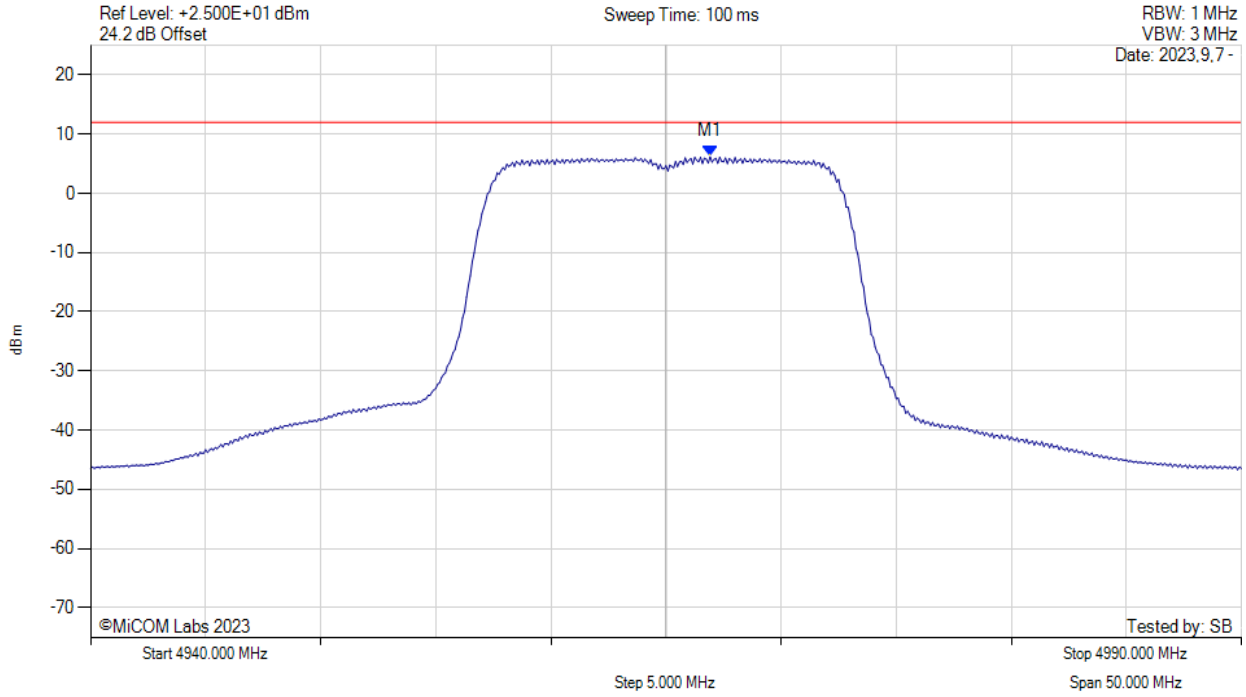


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4961.670 MHz : 6.513 dBm	Limit: ≤ 12.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4965.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

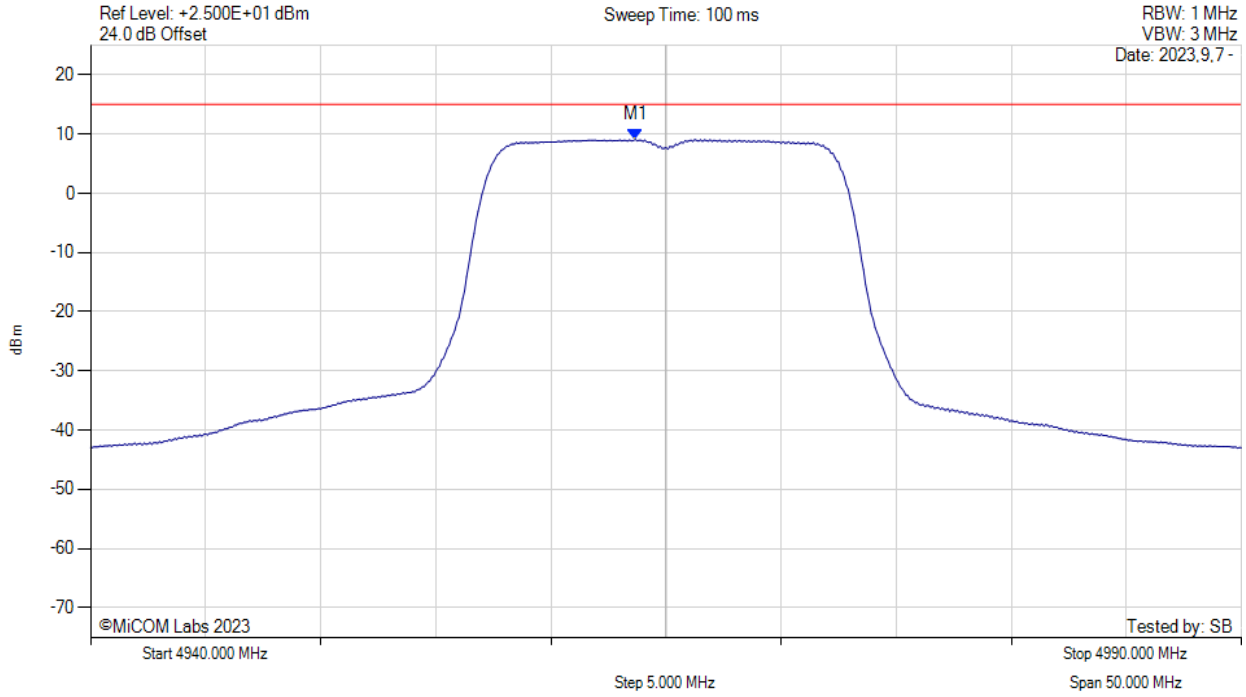


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4966.920 MHz : 6.181 dBm	Channel Frequency: 4965.00 MHz

back to matrix

POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4965.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4963.700 MHz : 9.110 dBm M1 + DCCF : 4963.700 MHz : 11.628 dBm Duty Cycle Correction Factor : +2.52 dB	Limit: ≤ 15.0 dBm Margin: -3.4 dB

back to matrix

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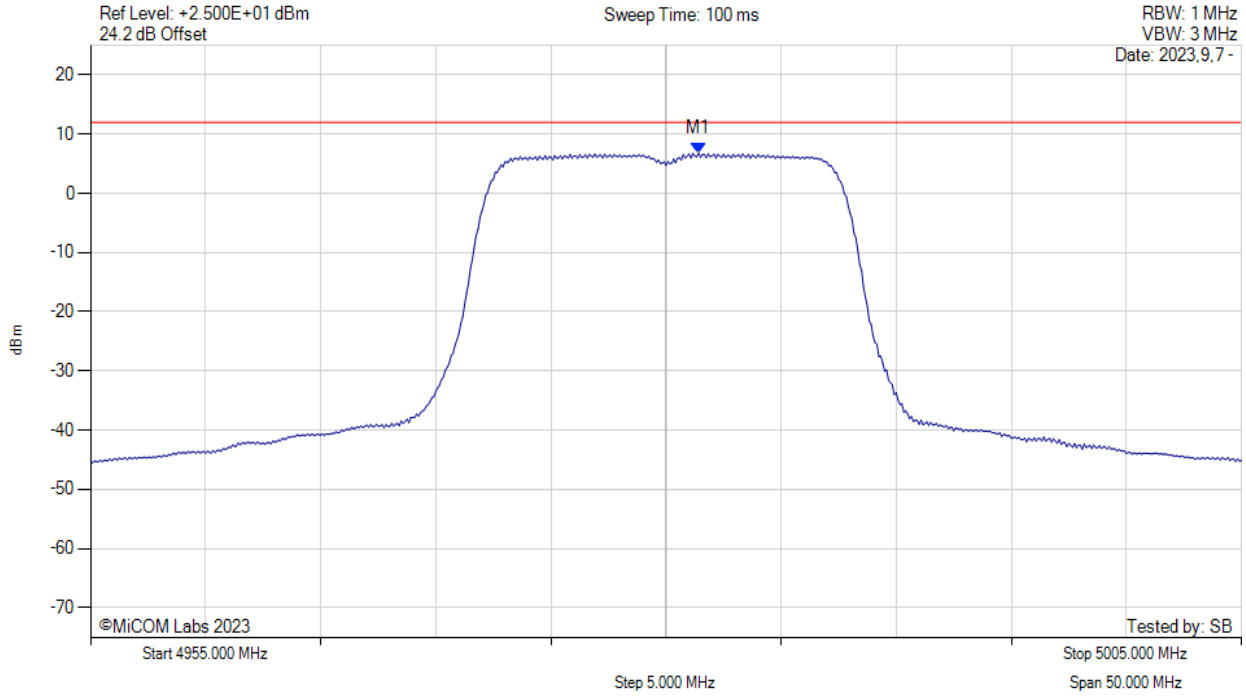
POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4980.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

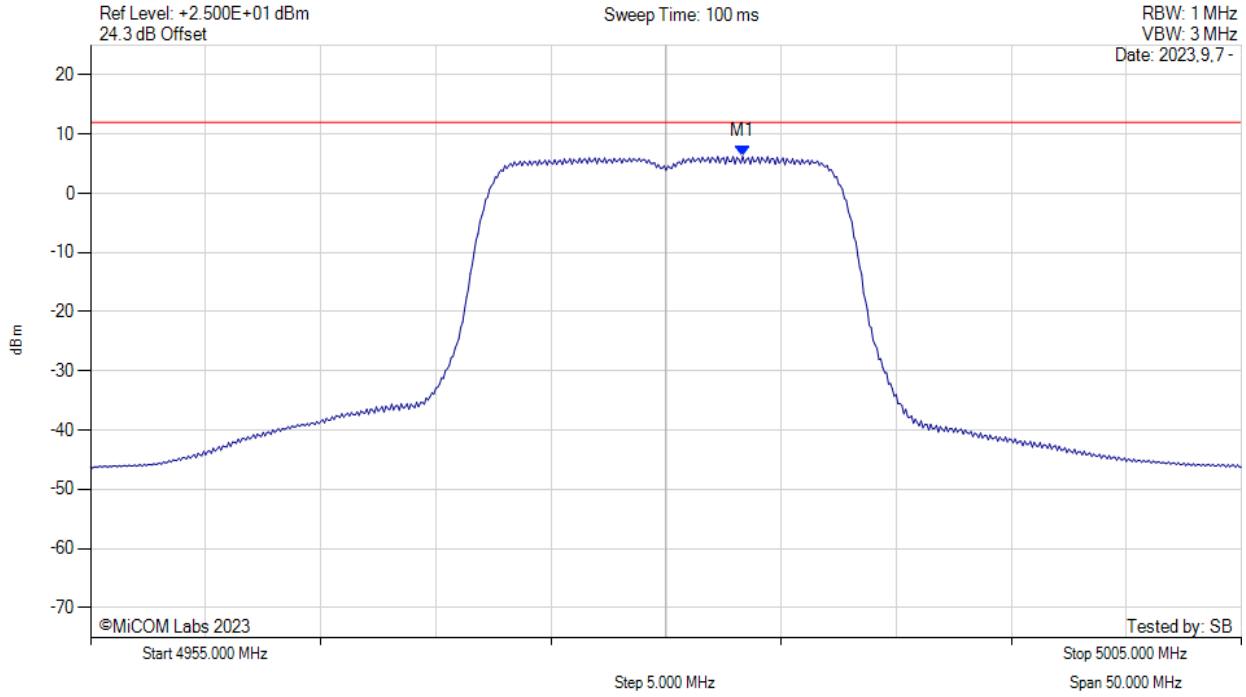


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4981.420 MHz : 6.758 dBm	Limit: ≤ 12.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4980.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

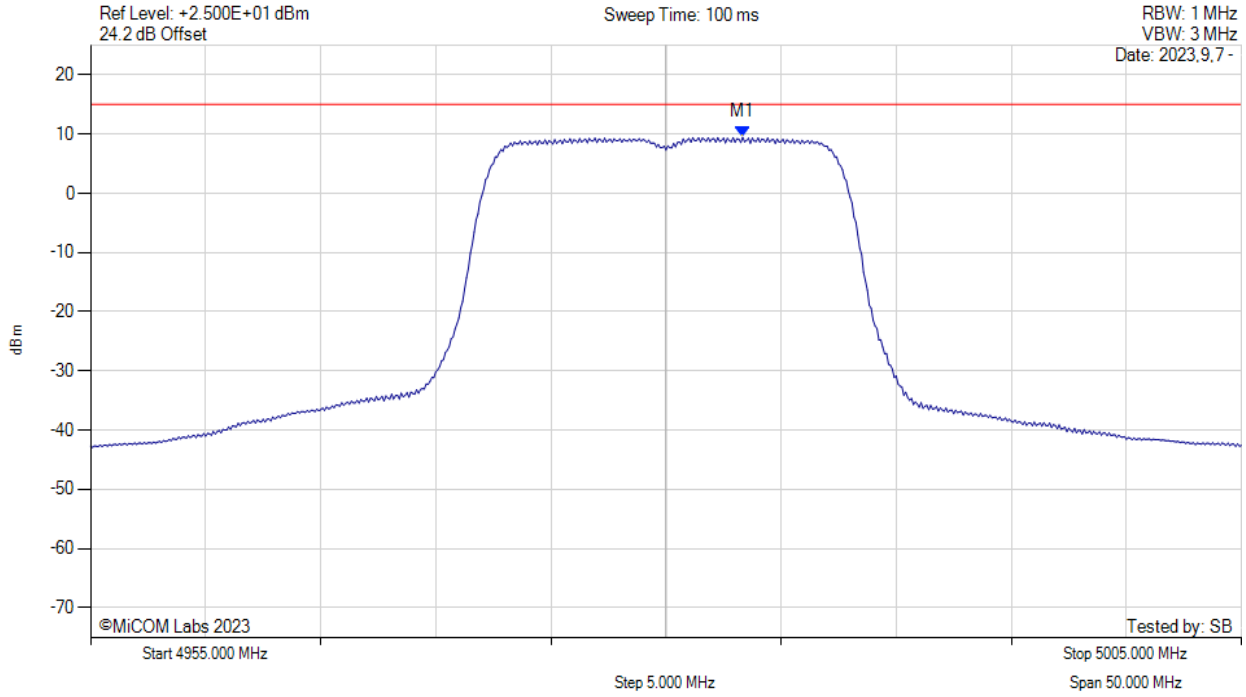


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4983.330 MHz : 6.257 dBm	Limit: ≤ 12.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 20MHz, Channel: 4980.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc

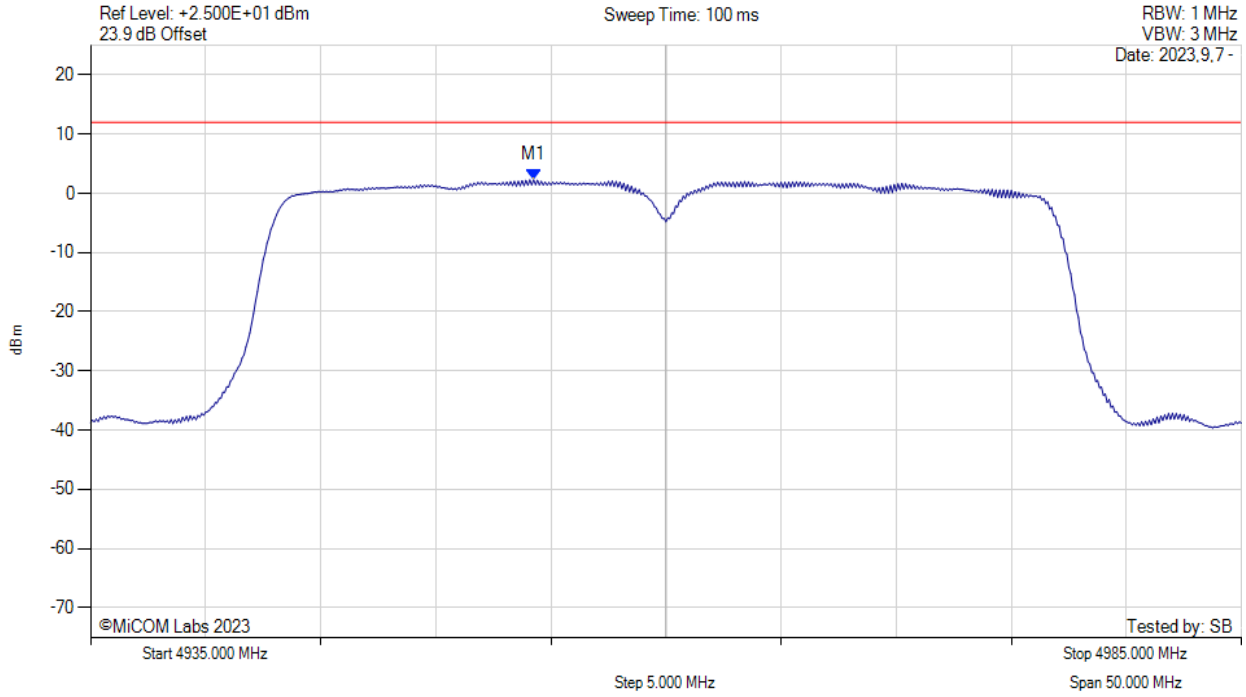


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4983.300 MHz : 9.469 dBm M1 + DCCF : 4983.300 MHz : 11.987 dBm Duty Cycle Correction Factor : +2.52 dB	Limit: ≤ 15.0 dBm Margin: -3.0 dB

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4960.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

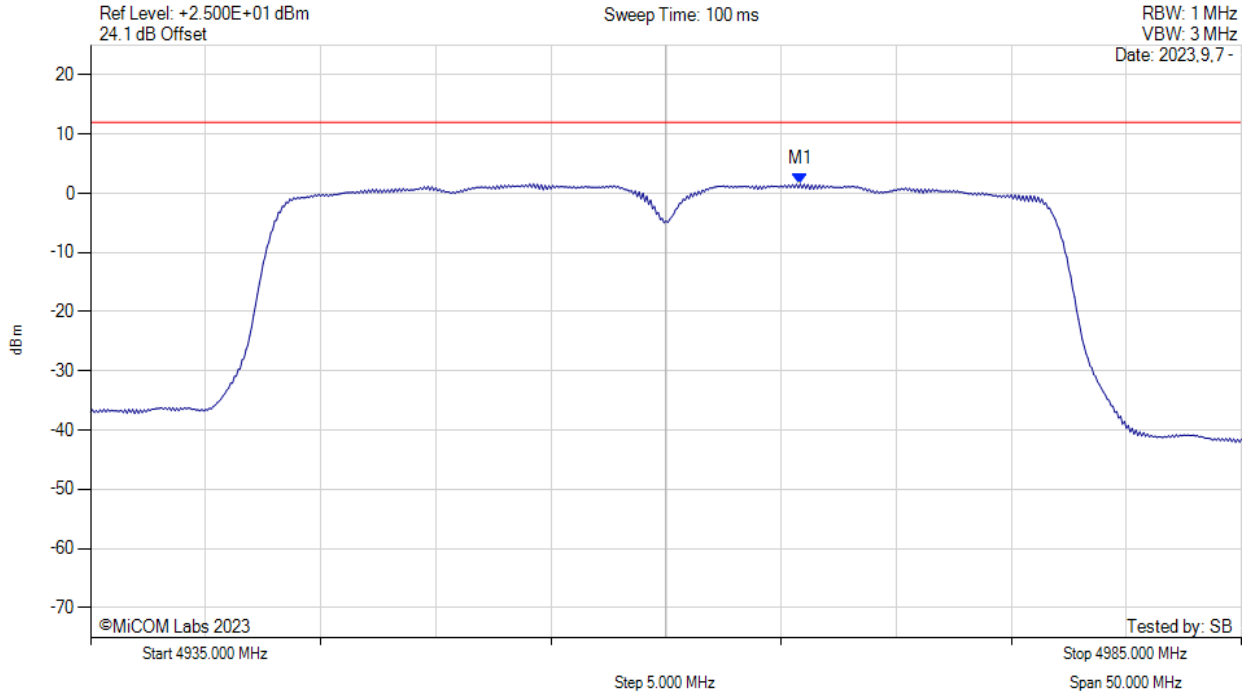


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4954.250 MHz : 2.285 dBm	Limit: ≤ 12.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4960.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

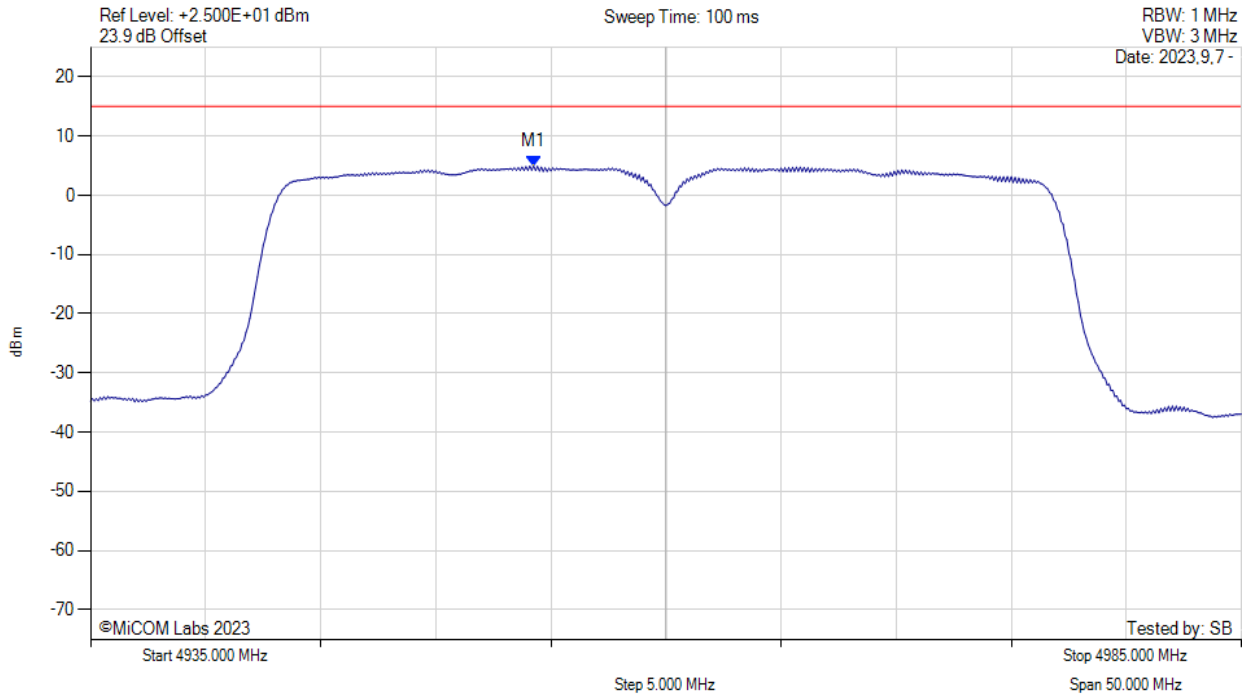


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4965.830 MHz : 1.580 dBm	Limit: ≤ 12.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4960.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc

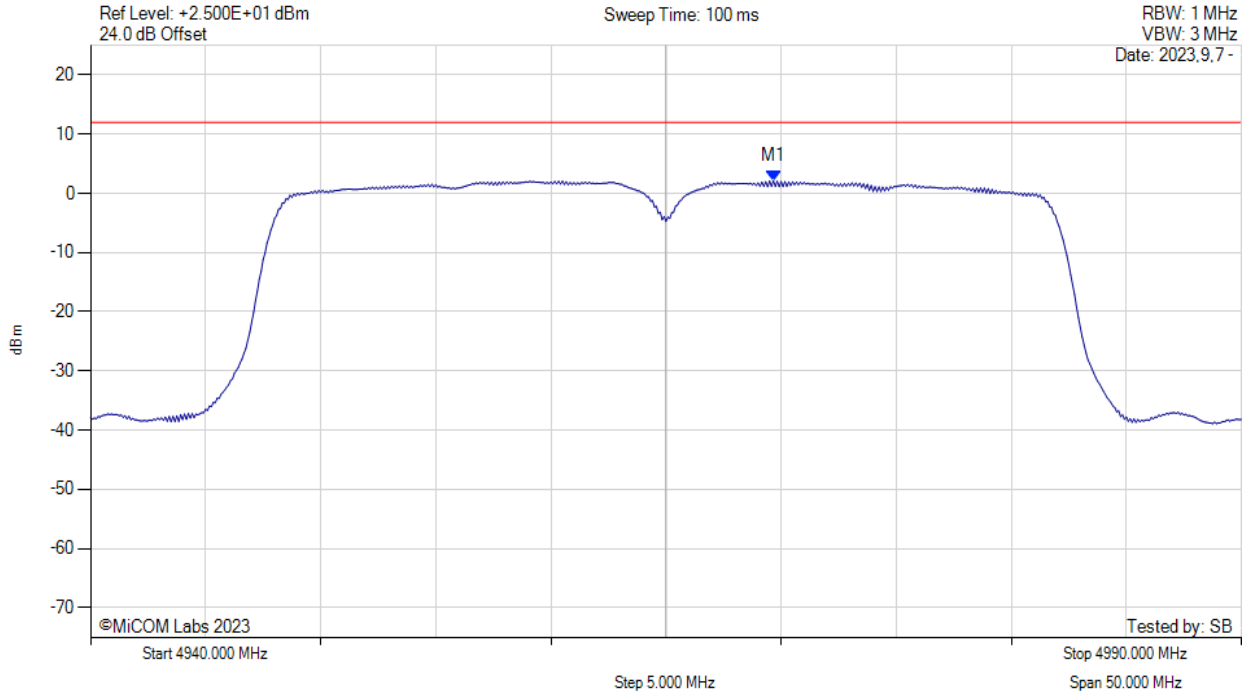


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4954.300 MHz : 4.954 dBm M1 + DCCF : 4954.300 MHz : 8.422 dBm Duty Cycle Correction Factor : +3.47 dB	Limit: ≤ 15.0 dBm Margin: -6.6 dB

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4965.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

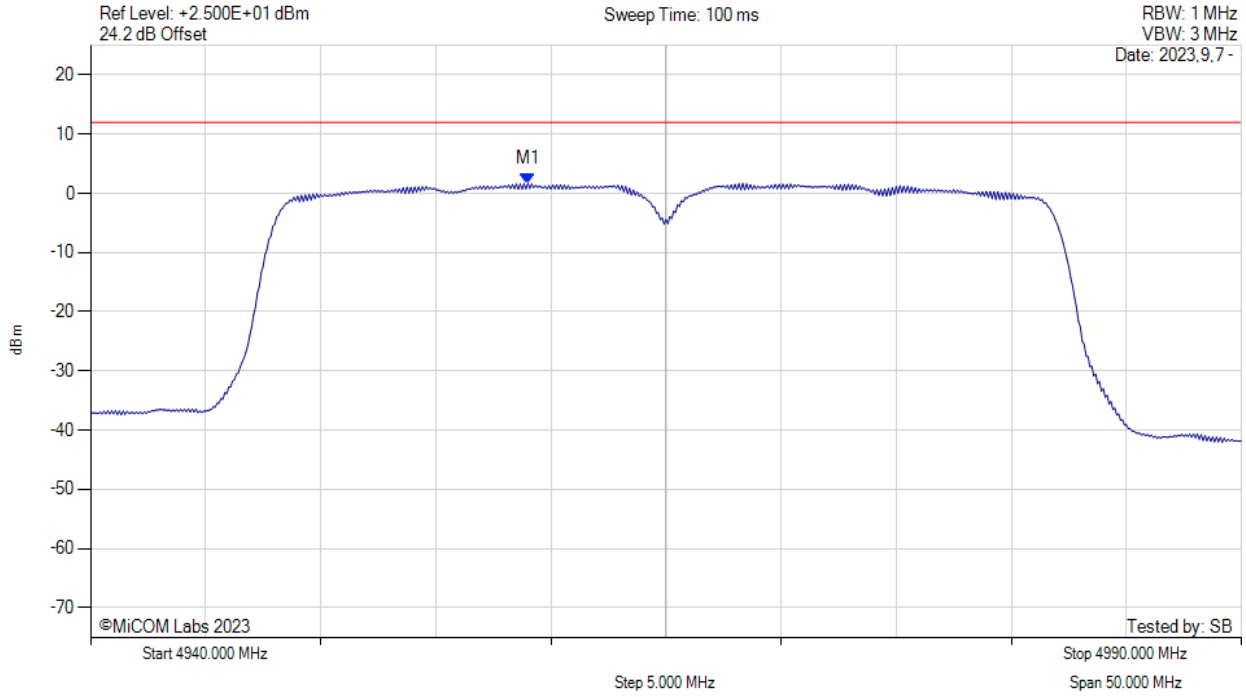


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4969.670 MHz : 2.112 dBm	Limit: ≤ 12.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4965.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

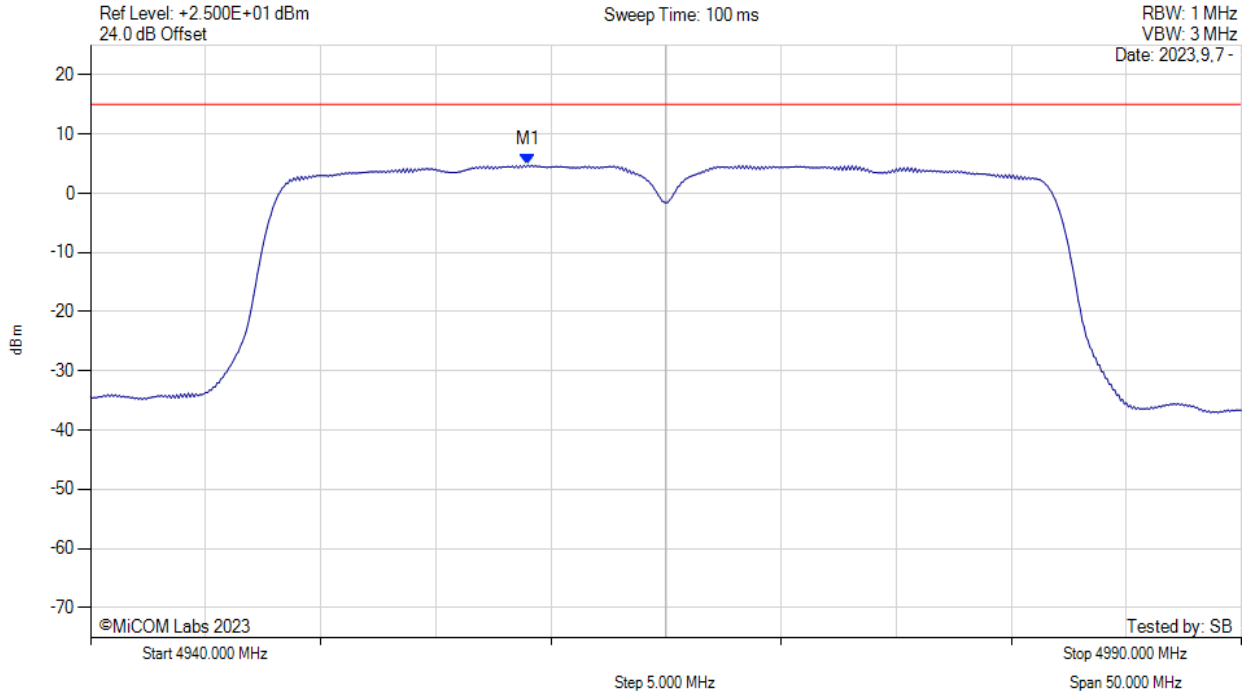


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4959.000 MHz : 1.649 dBm	Channel Frequency: 4965.00 MHz

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4965.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc

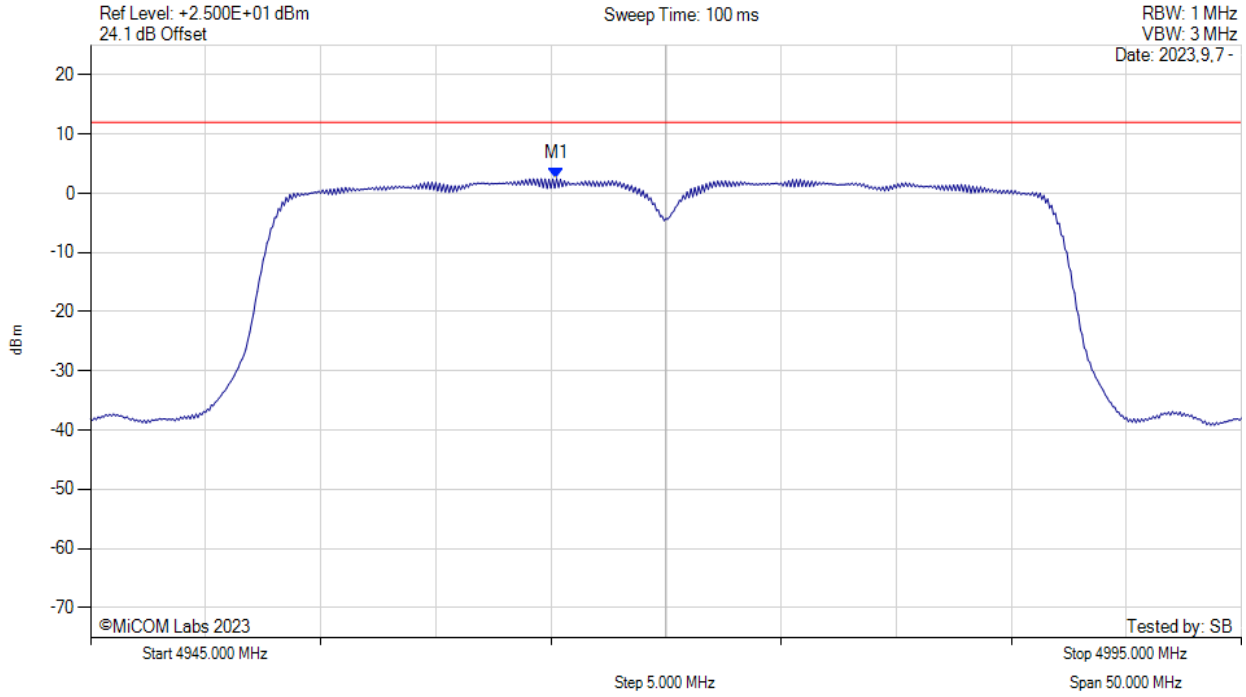


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4959.000 MHz : 4.772 dBm M1 + DCCF : 4959.000 MHz : 8.240 dBm Duty Cycle Correction Factor : +3.47 dB	Limit: ≤ 15.0 dBm Margin: -6.8 dB

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4970.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

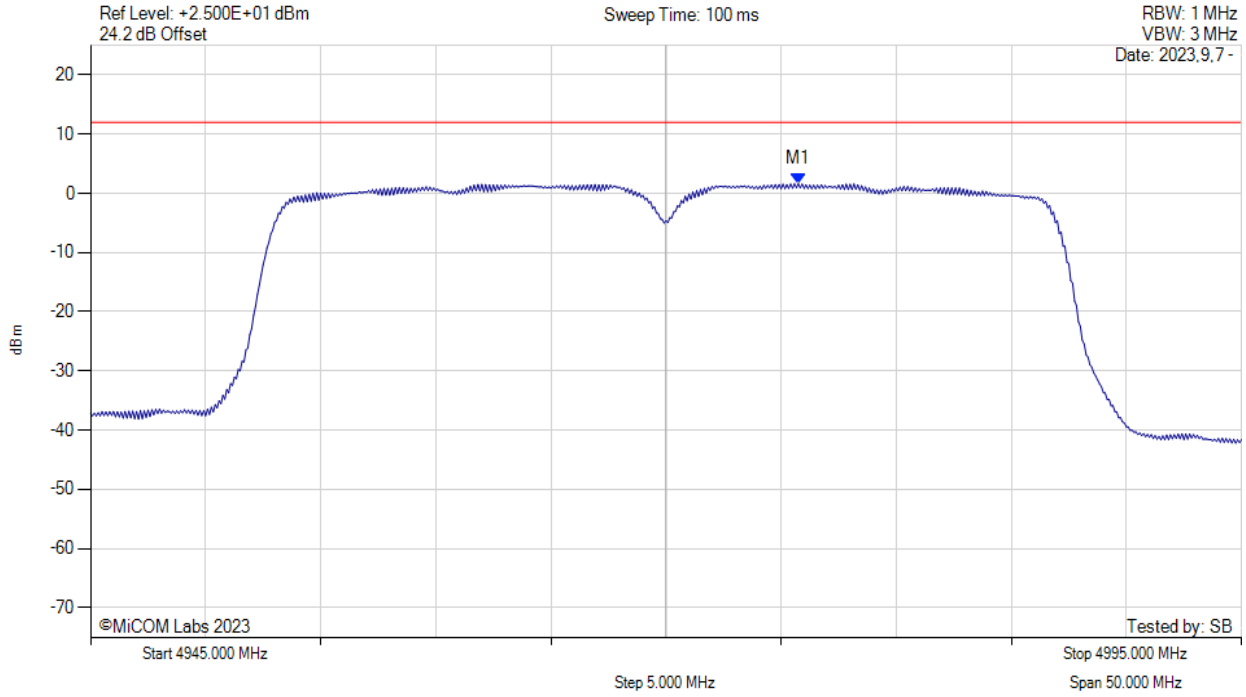


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4965.250 MHz : 2.498 dBm	Limit: ≤ 12.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4970.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

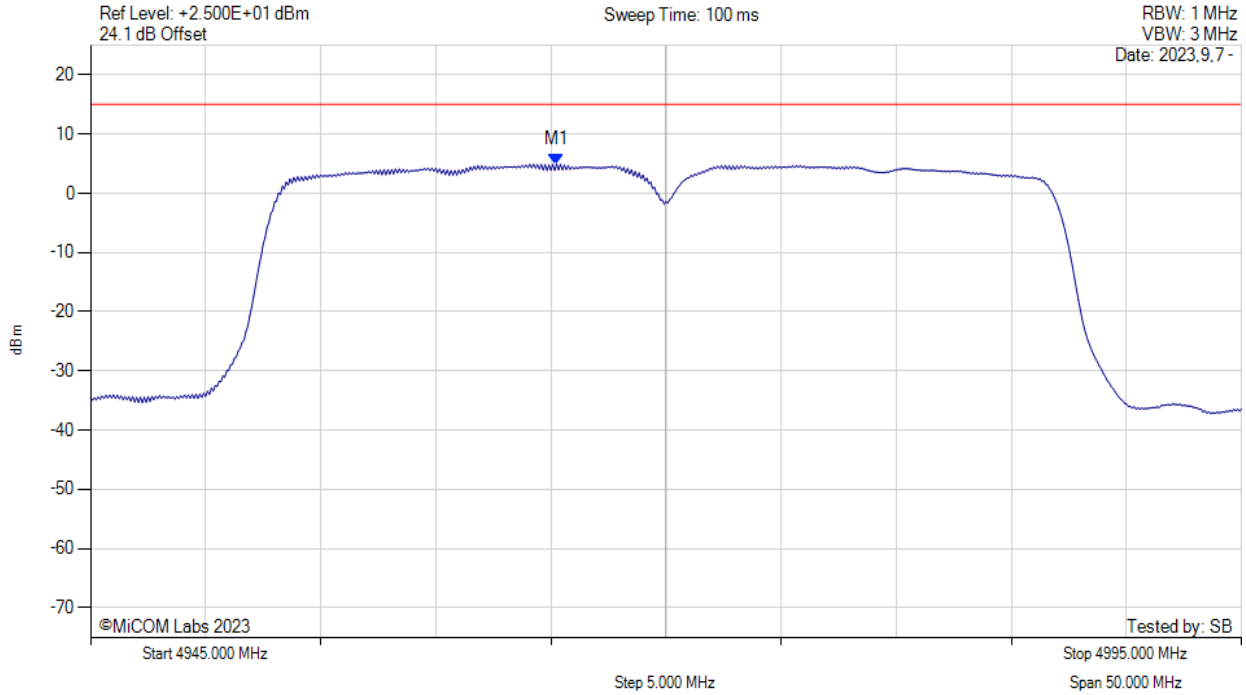


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4975.750 MHz : 1.620 dBm	Limit: ≤ 12.000 dBm

back to matrix

POWER SPECTRAL DENSITY

Variant: 40MHz, Channel: 4970.00 MHz, SUM, Temp: 20, Voltage: 56 Vdc



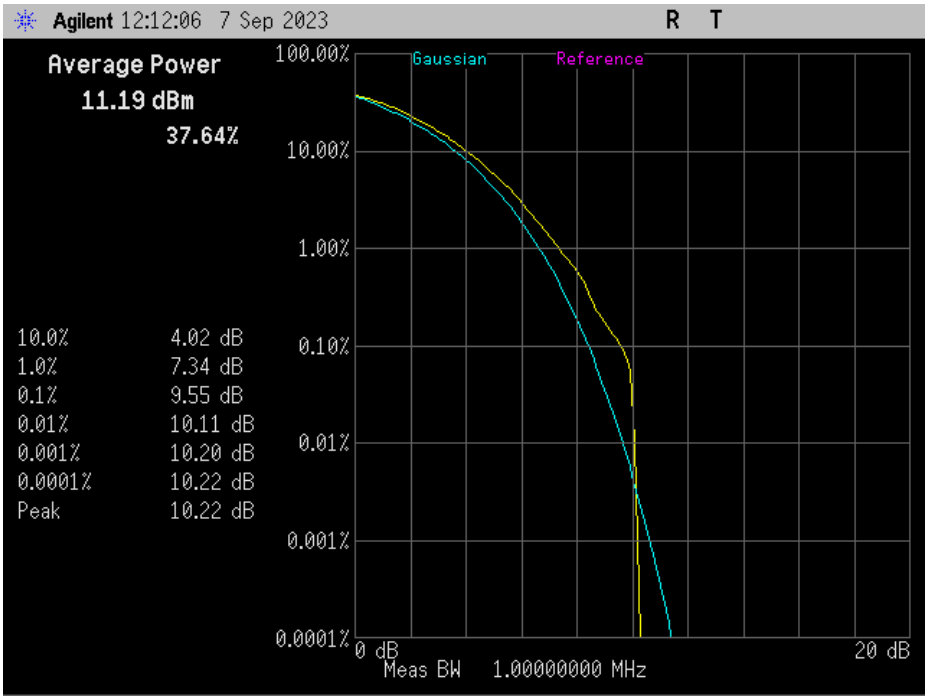
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 4965.300 MHz : 4.939 dBm M1 + DCCF : 4965.300 MHz : 8.407 dBm Duty Cycle Correction Factor : +3.47 dB	Limit: ≤ 15.0 dBm Margin: -6.6 dB

back to matrix

A.3. Peak Excursion Ratio

PEAK EXCURSION RATIO

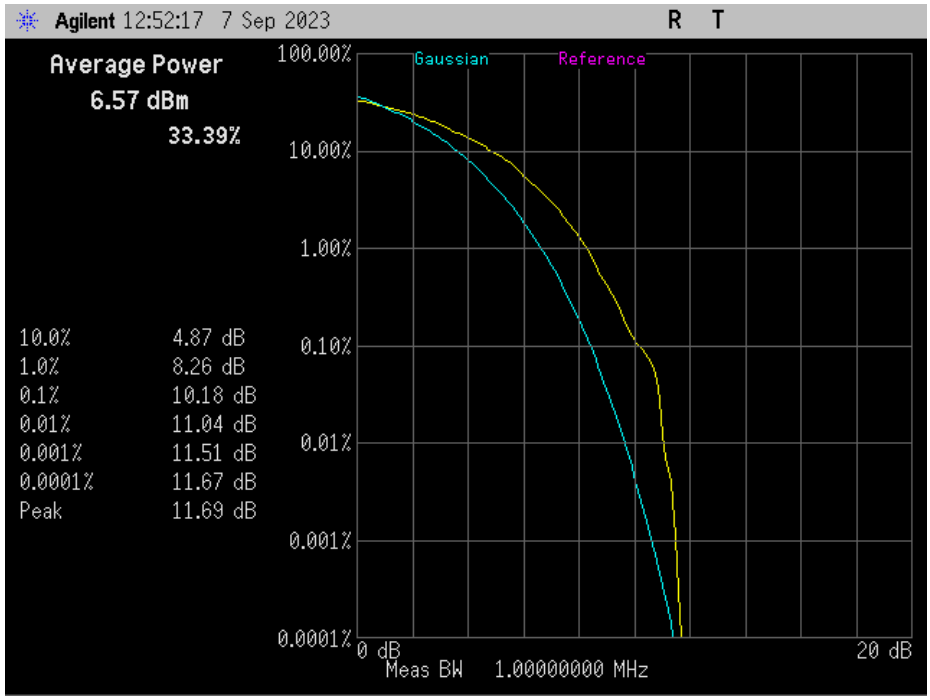
Variant: 10MHz, Channel: 4965.00 MHz, Combined, Temp: 20, Voltage: 56 Vdc



back to matrix

PEAK EXCURSION RATIO

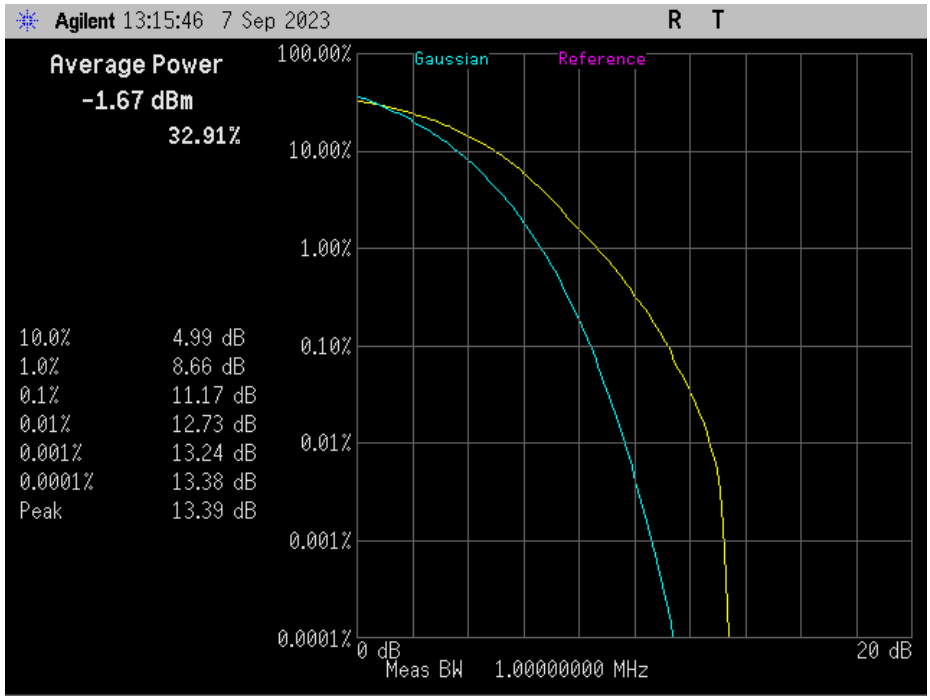
Variant: 20MHz, Channel: 4965.00 MHz, Combined, Temp: 20, Voltage: 56 Vdc



back to matrix

PEAK EXCURSION RATIO

Variant: 40MHz, Channel: 4965.00 MHz, Combined, Temp: 20, Voltage: 56 Vdc

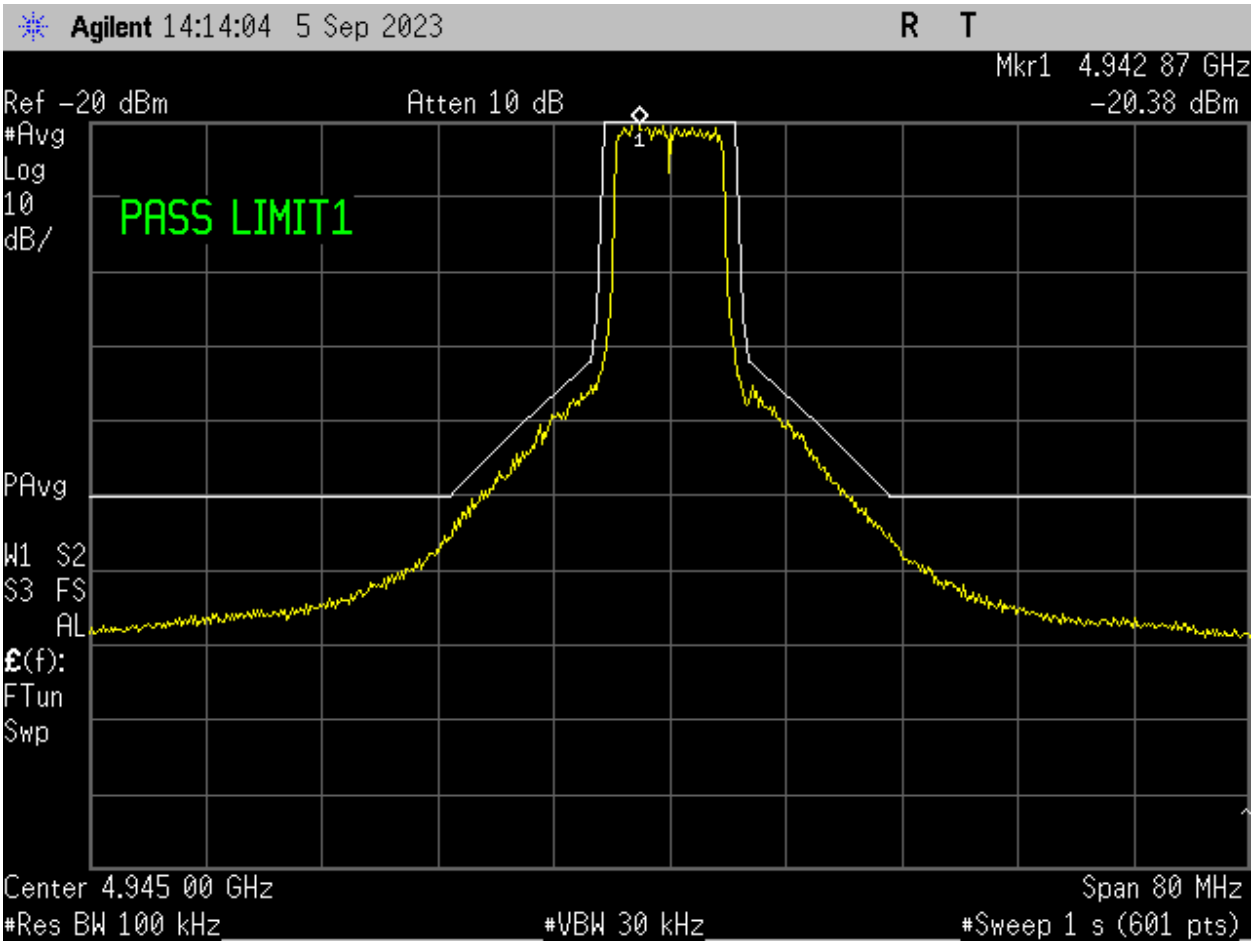


back to matrix

A.4. Spectrum Emission Mask

SPECTRUM EMISSION MASK

Variant: 10MHz, Channel: 4945.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

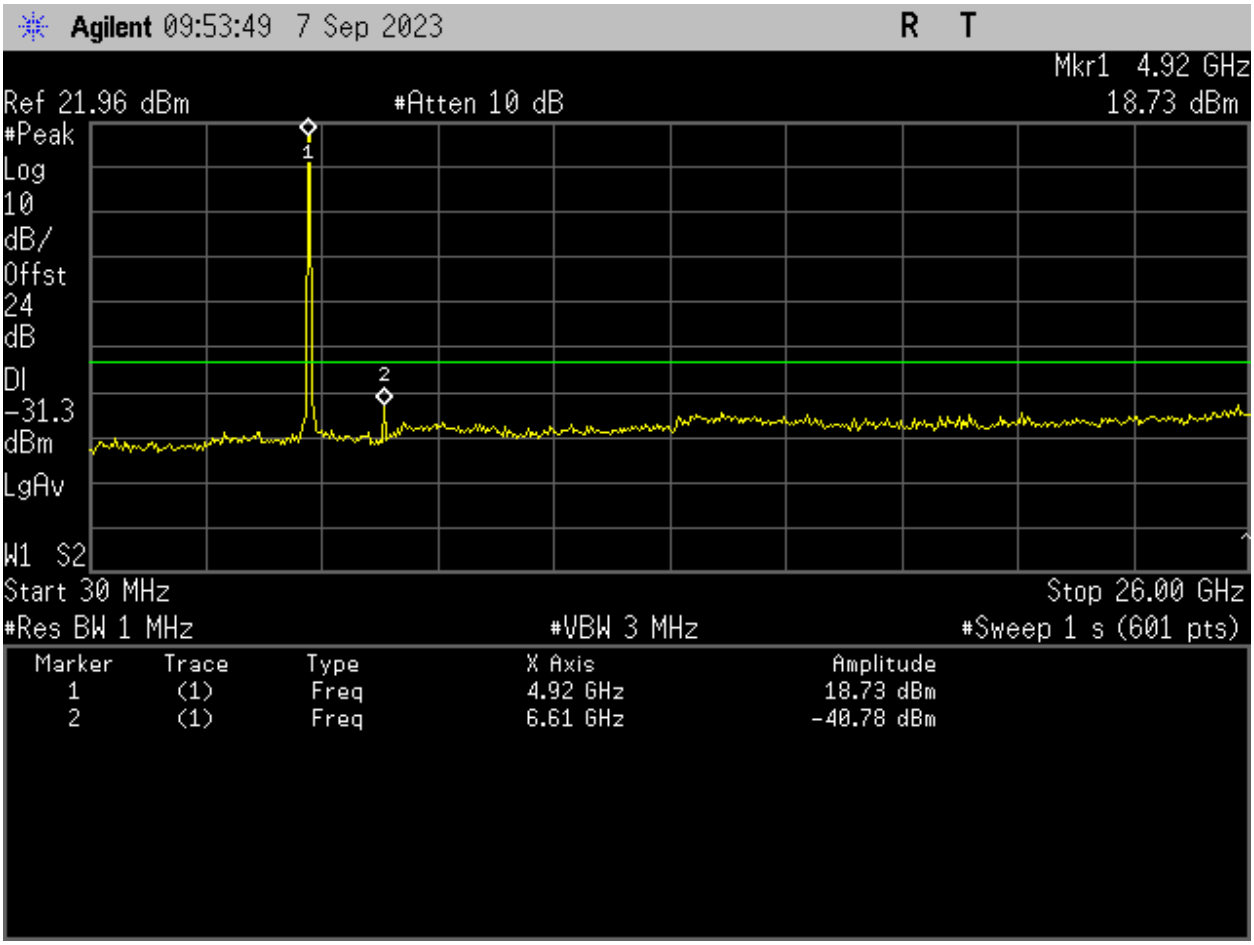


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 10MHz, Channel: 4945.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

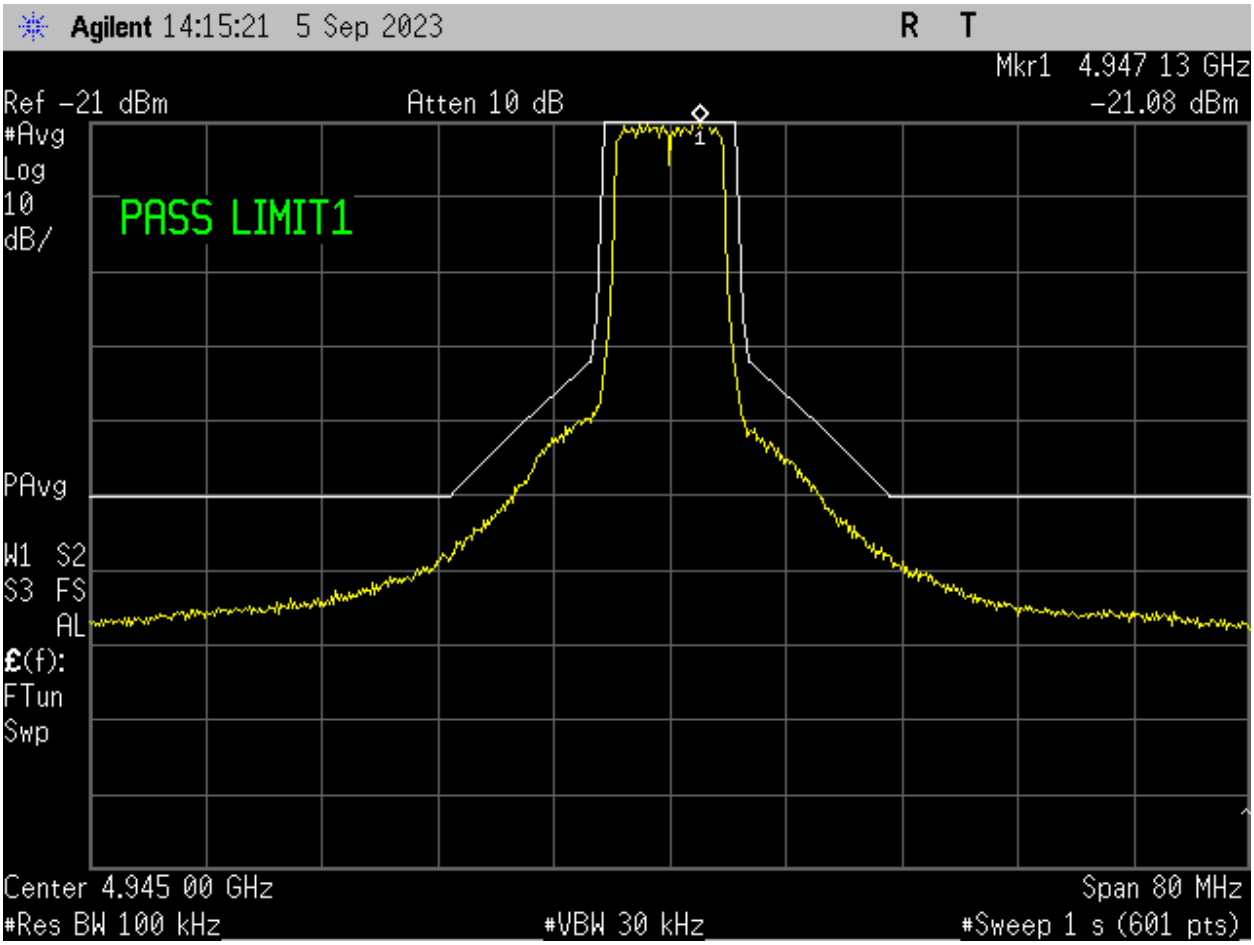


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 6.600 GHz: -40.78 dBm	

back to matrix

SPECTRUM EMISSION MASK

Variant: 10MHz, Channel: 4945.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

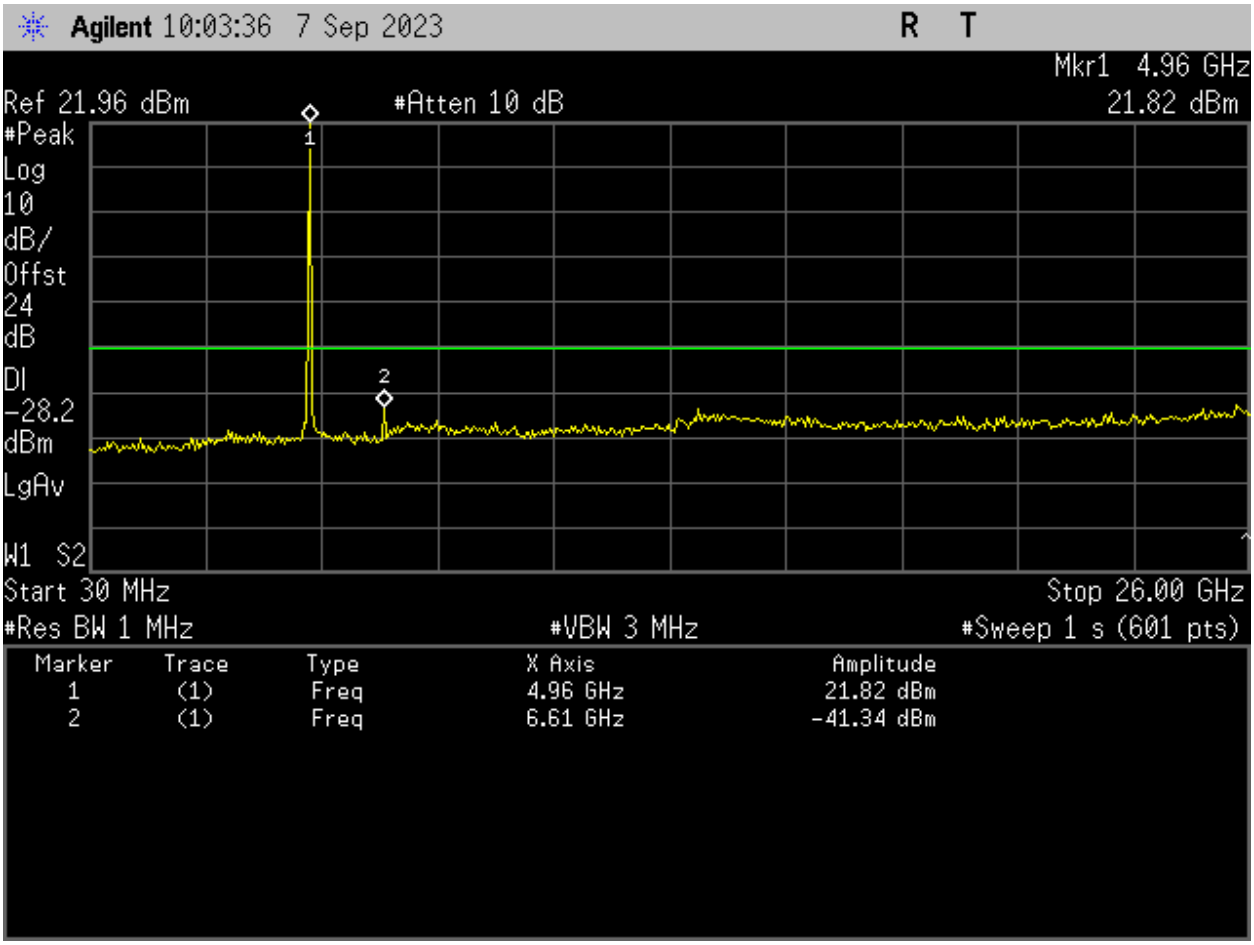


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 10MHz, Channel: 4945.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

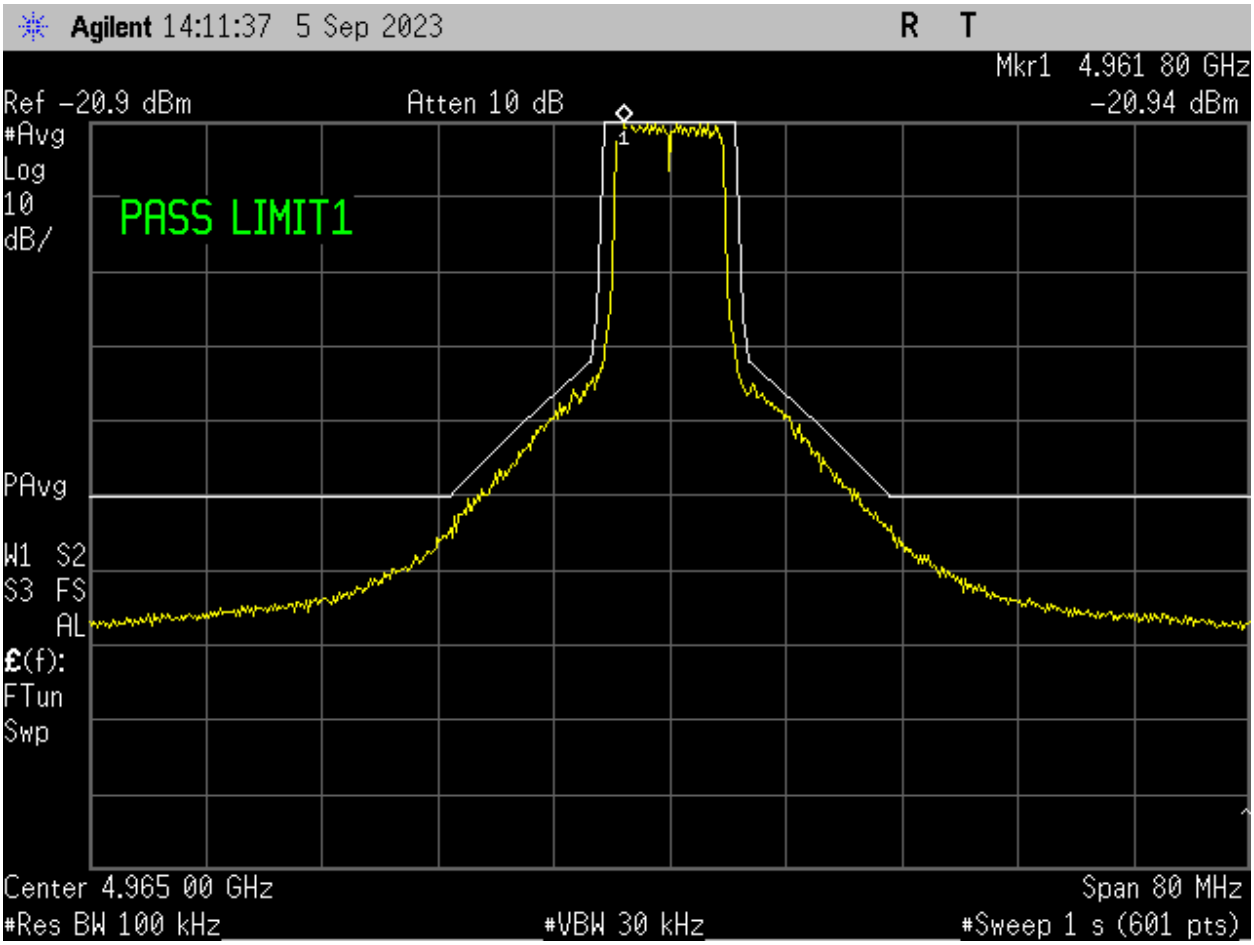


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 6.6 GHz: -41.34 dBm	

back to matrix

SPECTRUM EMISSION MASK

Variant: 10MHz, Channel: 4965.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

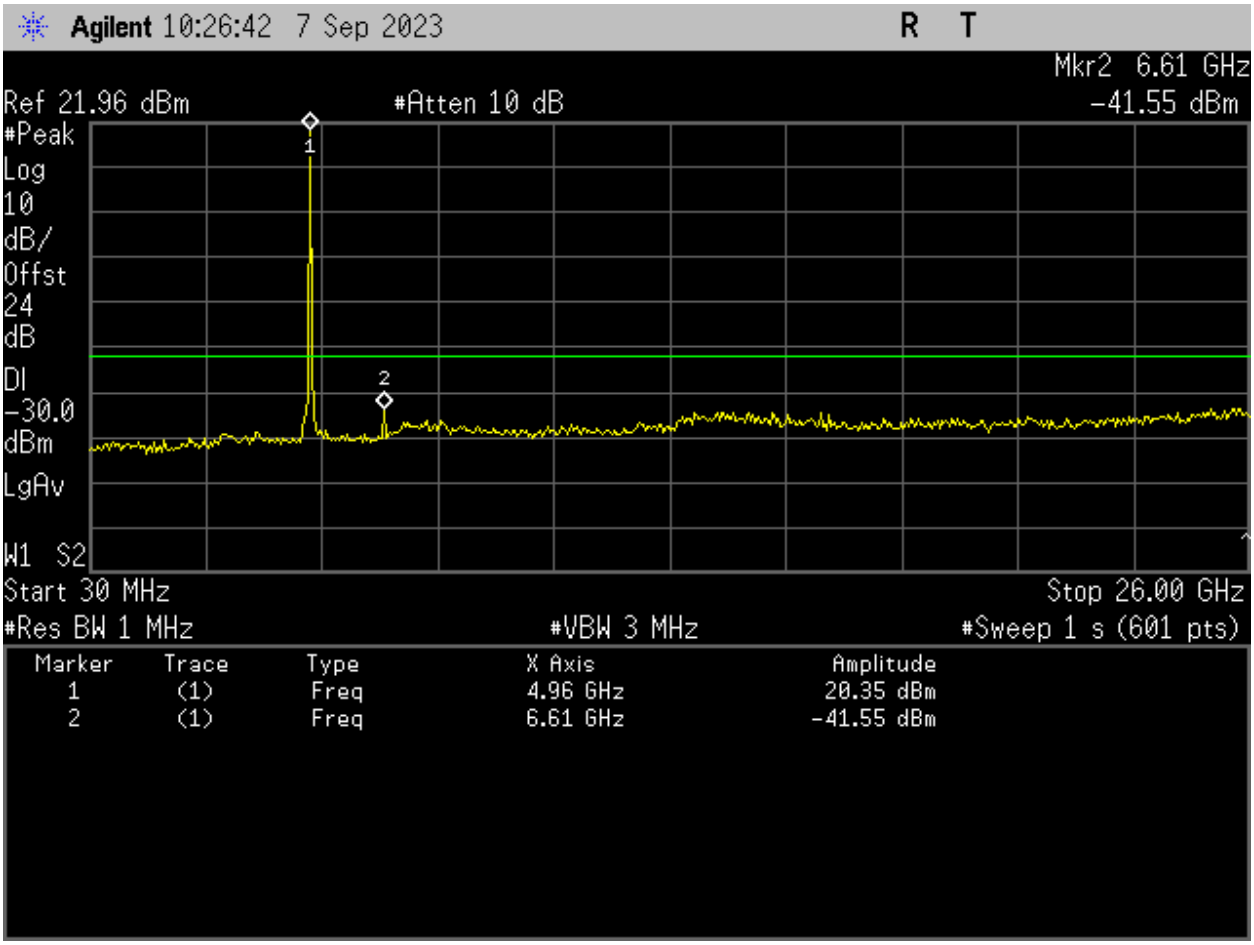


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 10MHz, Channel: 4965.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

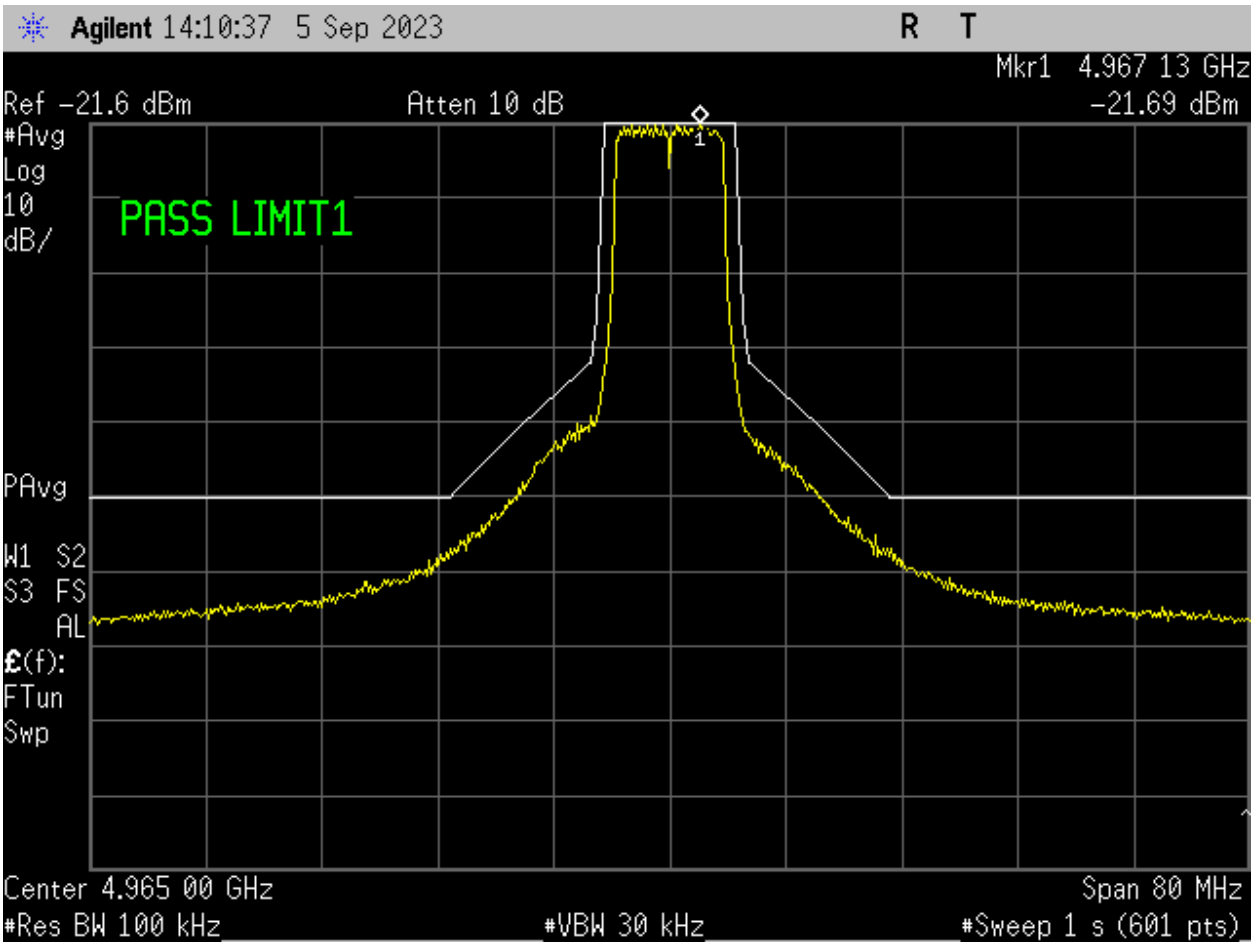


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 6.6 GHz: -41.55 dBm	

back to matrix

SPECTRUM EMISSION MASK

Variant: 20MHz, Channel: 4965.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

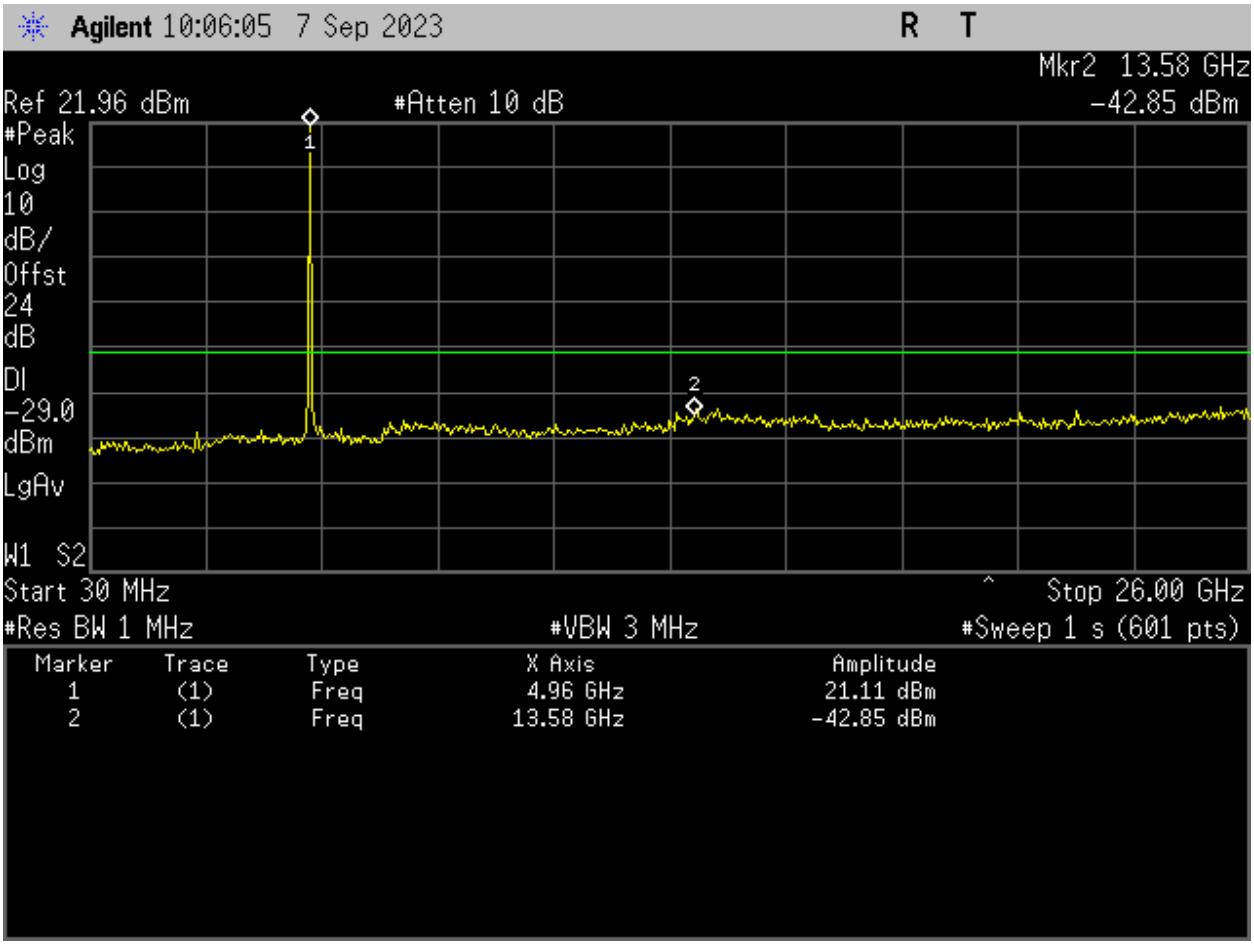


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 10MHz, Channel: 4965.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

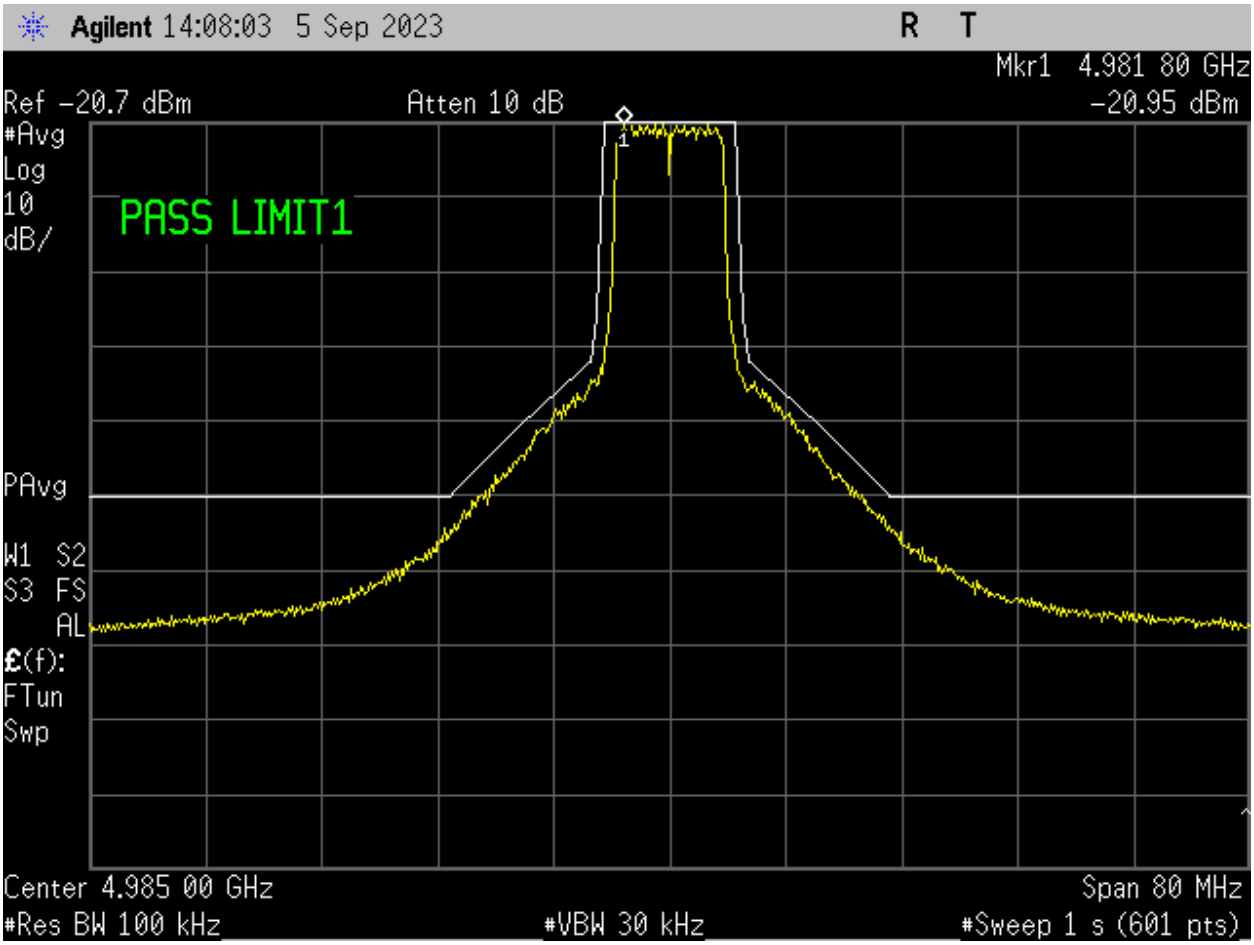


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 13.58 GHz: -42.85 dBm	

back to matrix

SPECTRUM EMISSION MASK

Variant: 10MHz, Channel: 4985.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

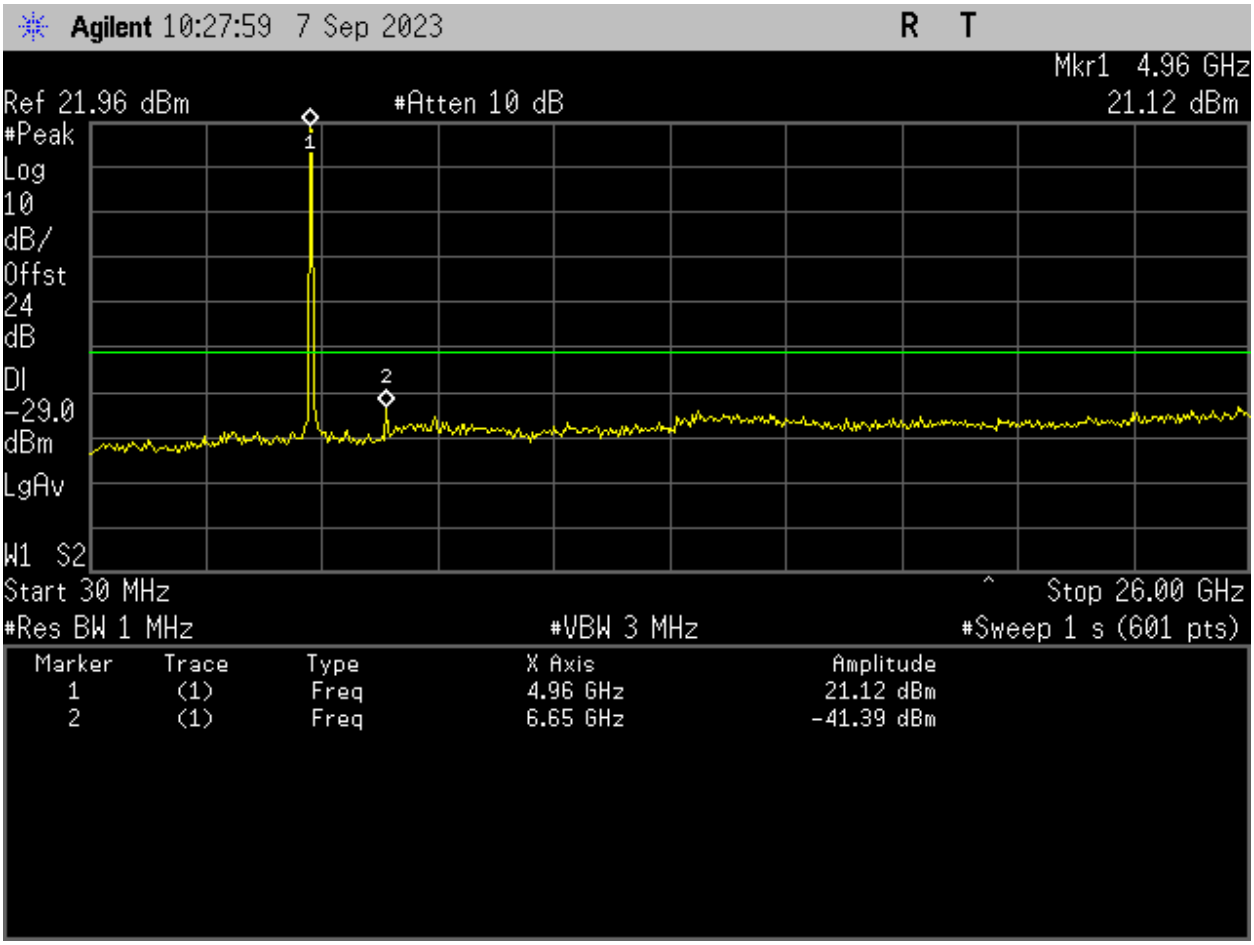


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 10MHz, Channel: 4985.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

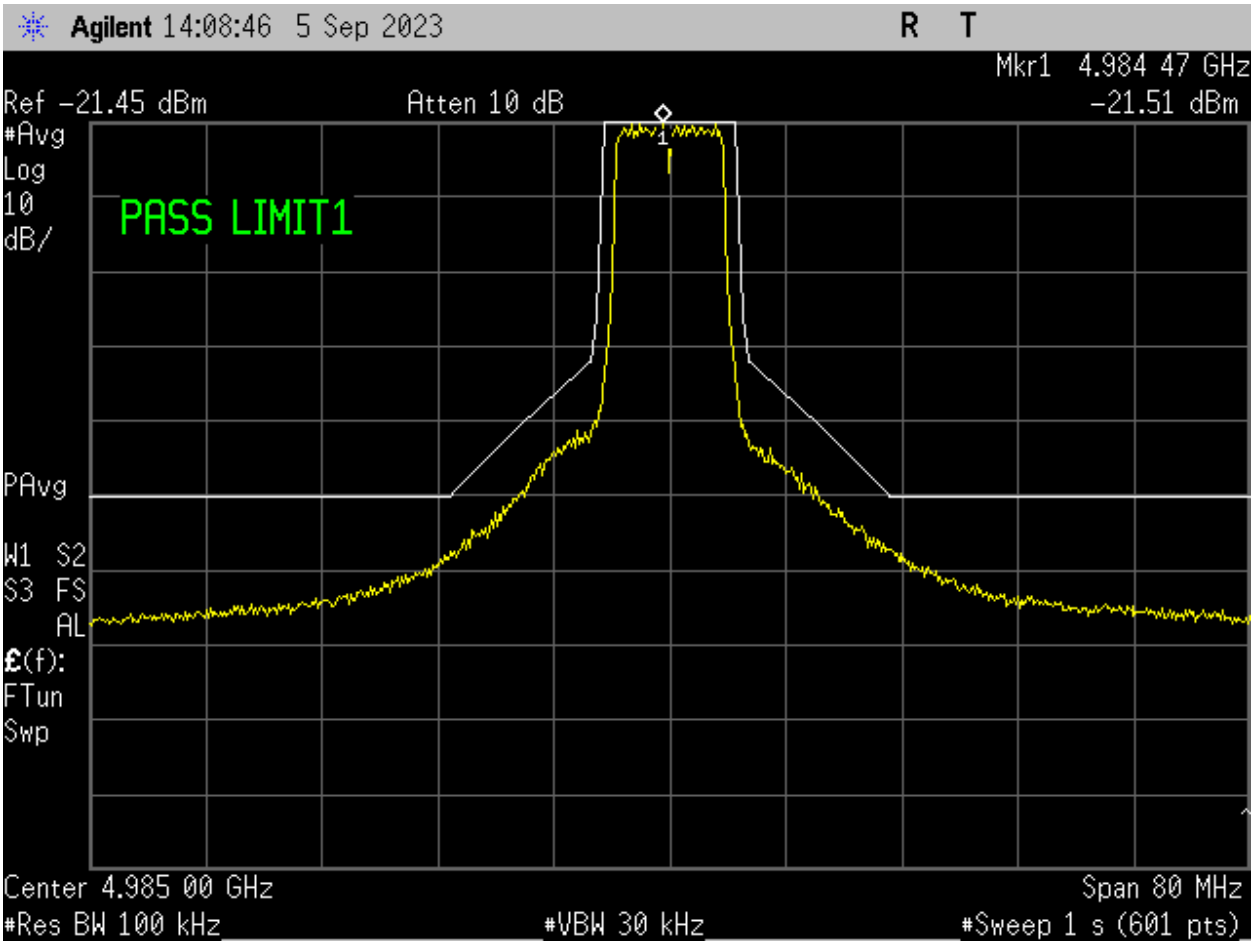


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 6.65 GHz: -41.39 dBm	

back to matrix

SPECTRUM EMISSION MASK

Variant: 10MHz, Channel: 4985.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

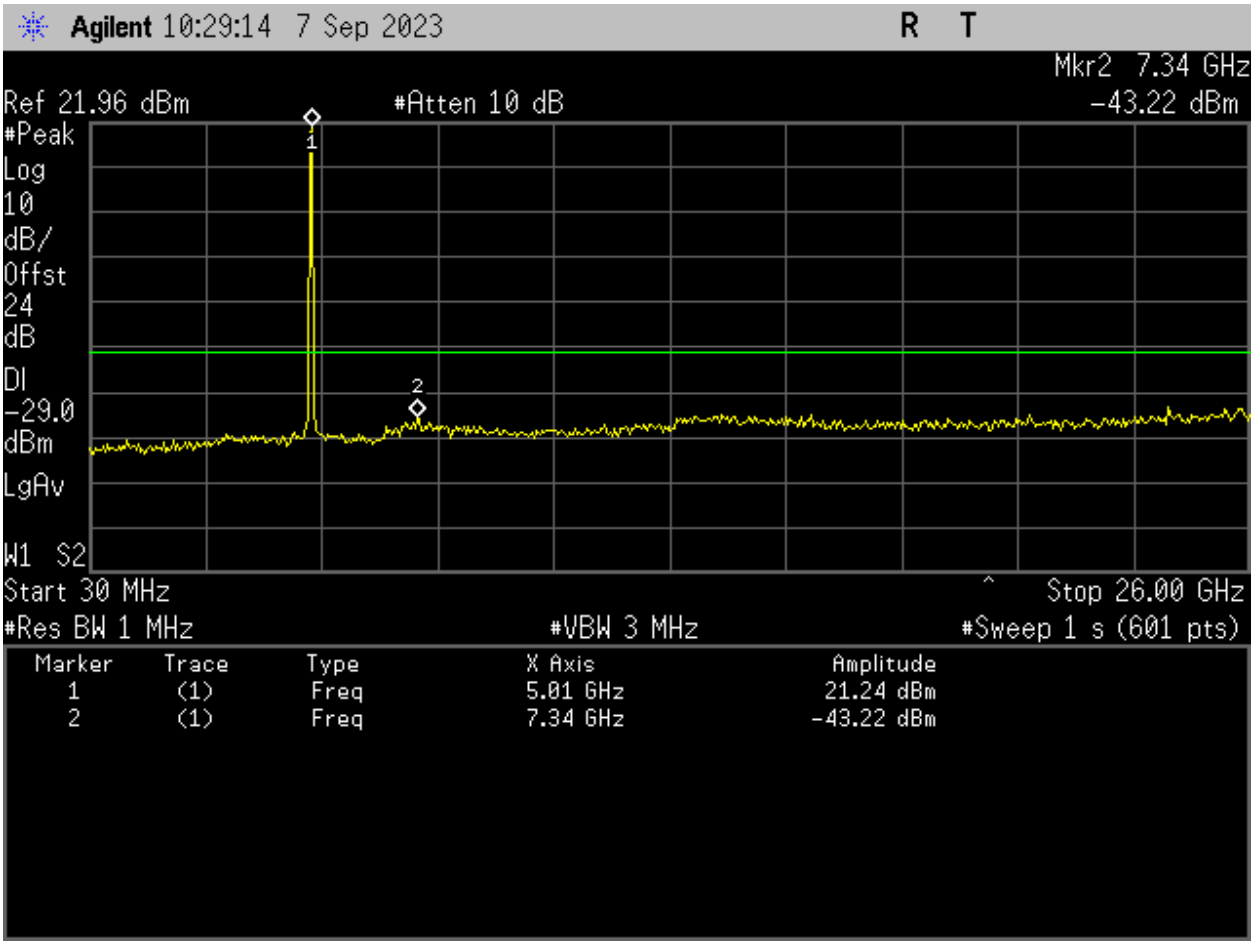


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 10MHz, Channel: 4985.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

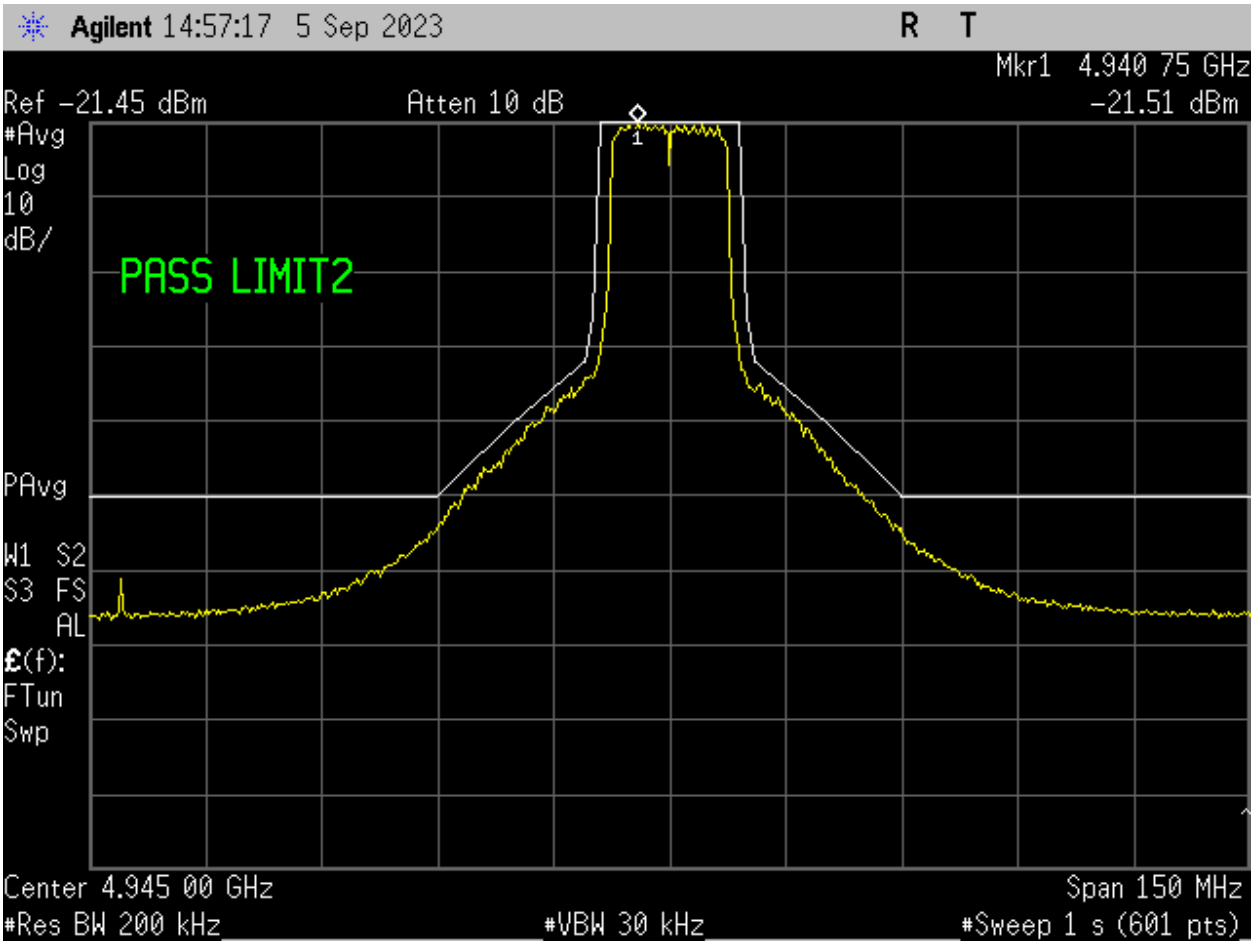


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 7.34 GHz: -43.22 dBm	

back to matrix

SPECTRUM EMISSION MASK

Variant: 20MHz, Channel: 4950.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

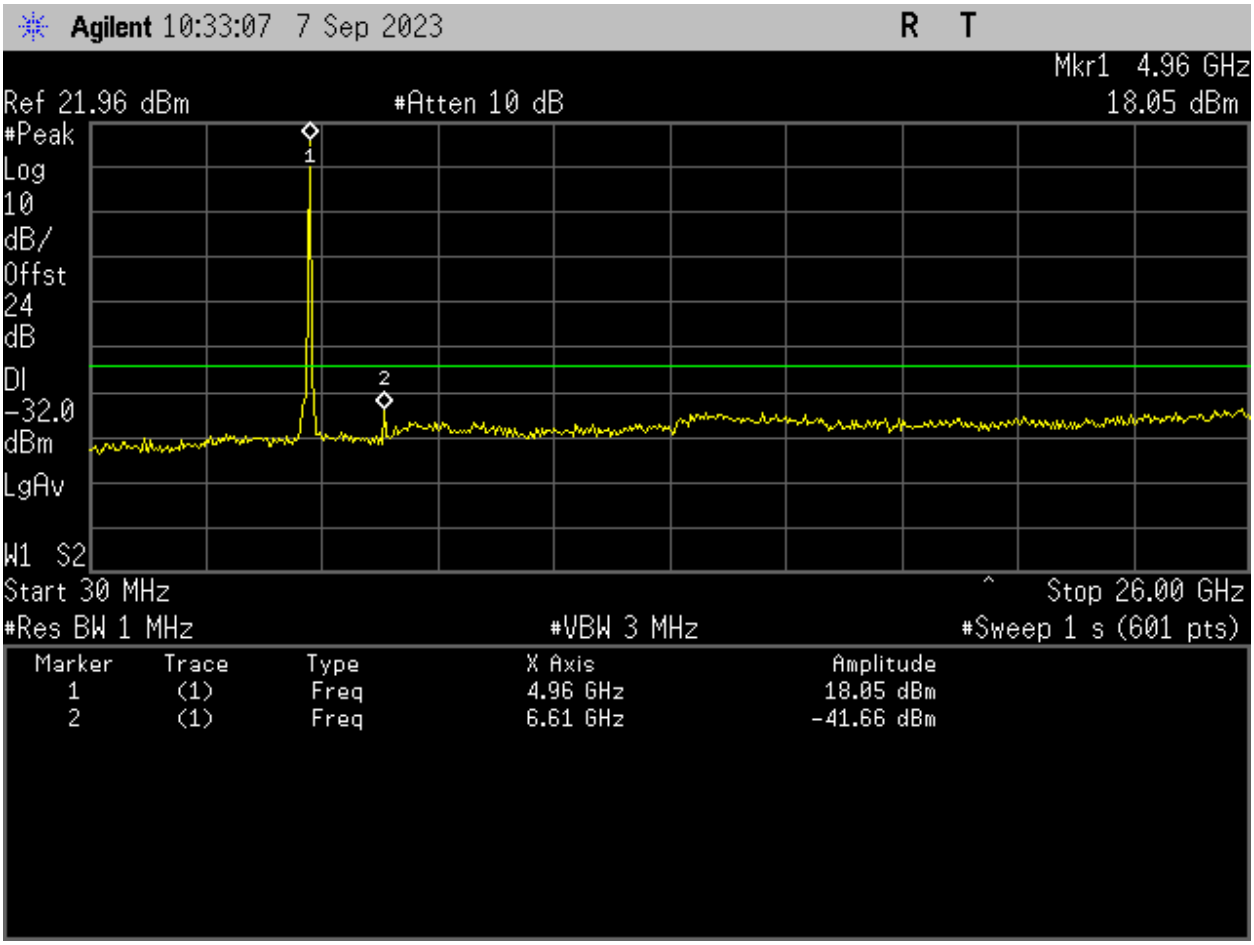


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 20MHz, Channel: 4950.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

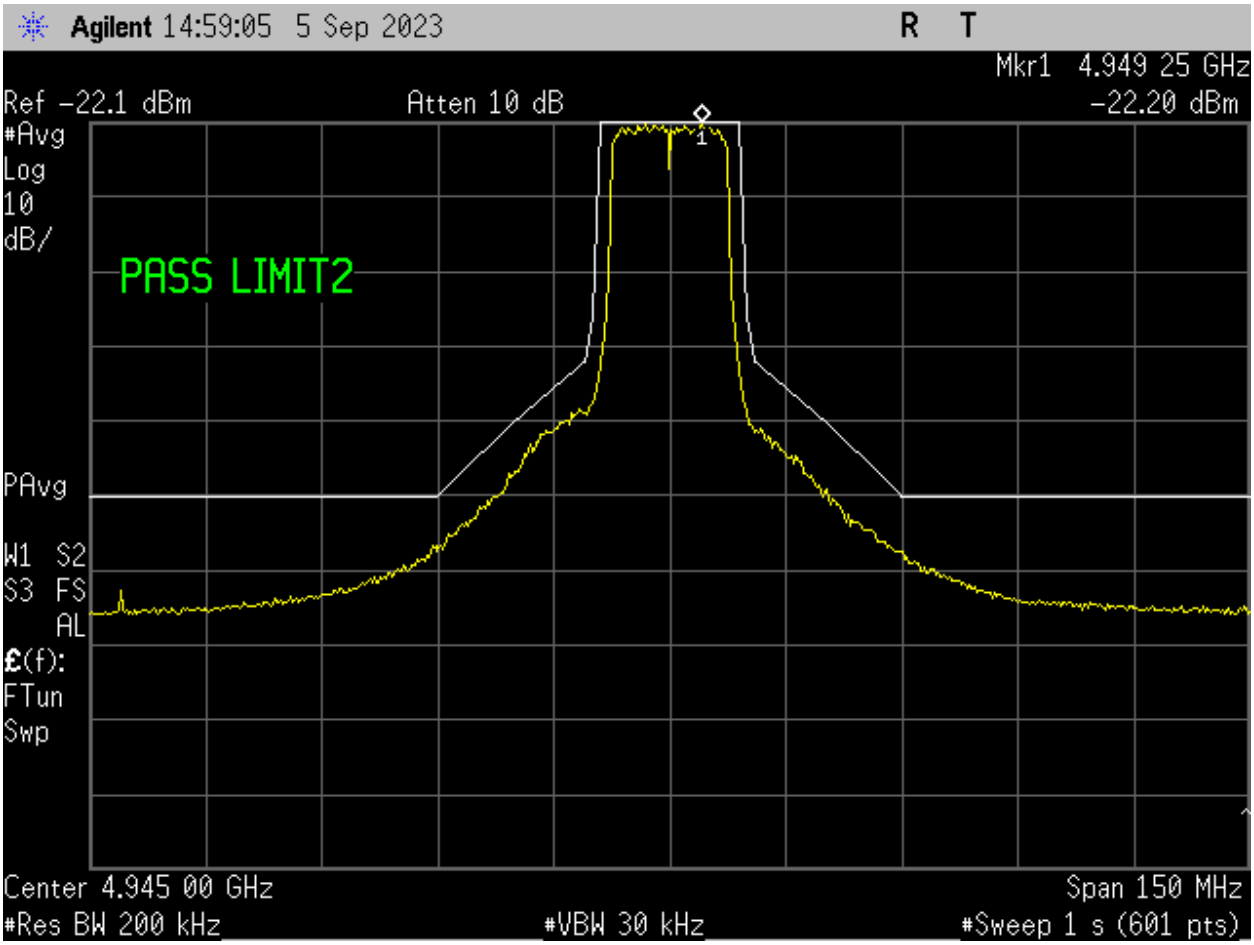


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 6.61 GHz: -41.66 dBm	

back to matrix

SPECTRUM EMISSION MASK

Variant: 20MHz, Channel: 4950.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

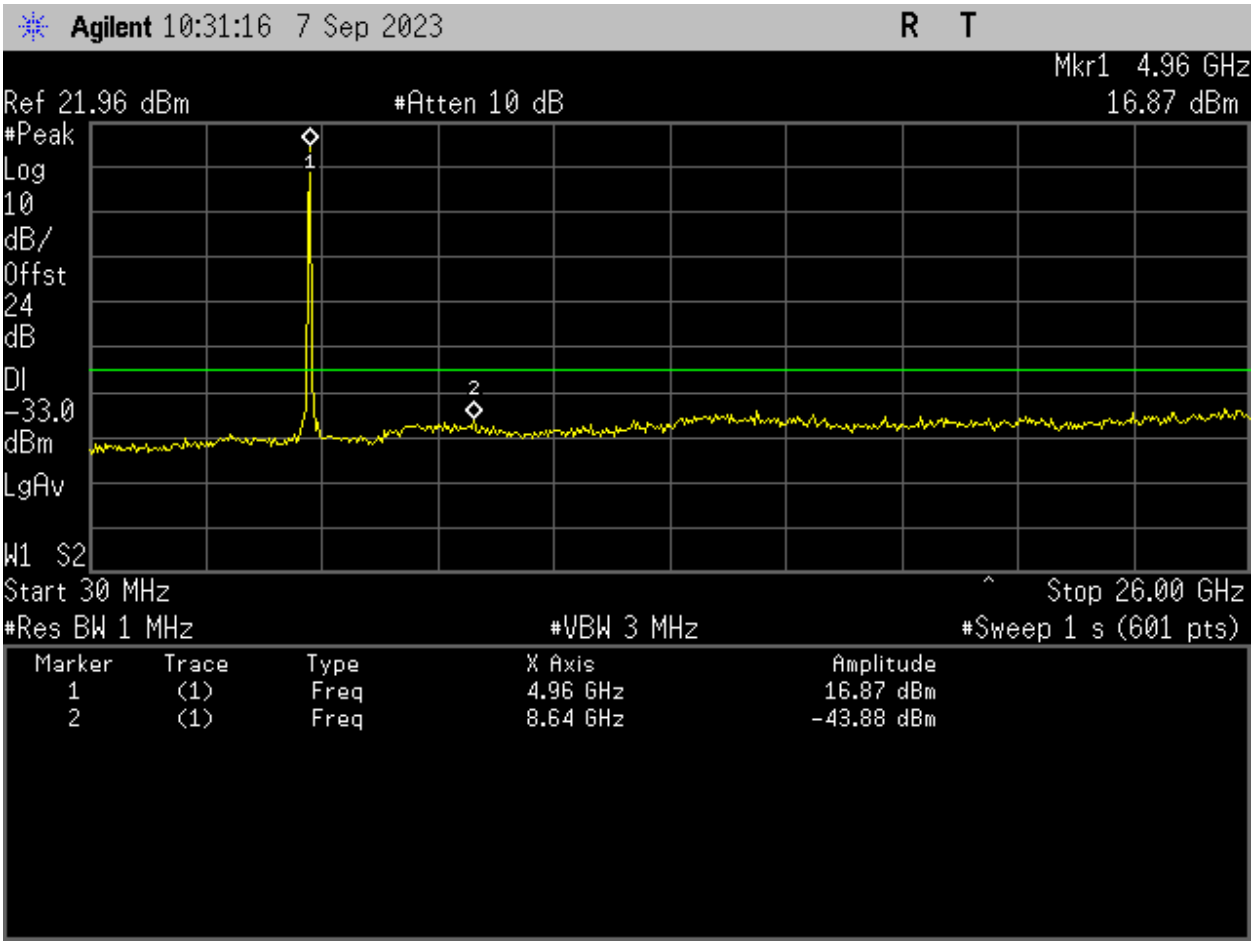


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 20MHz, Channel: 4950.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

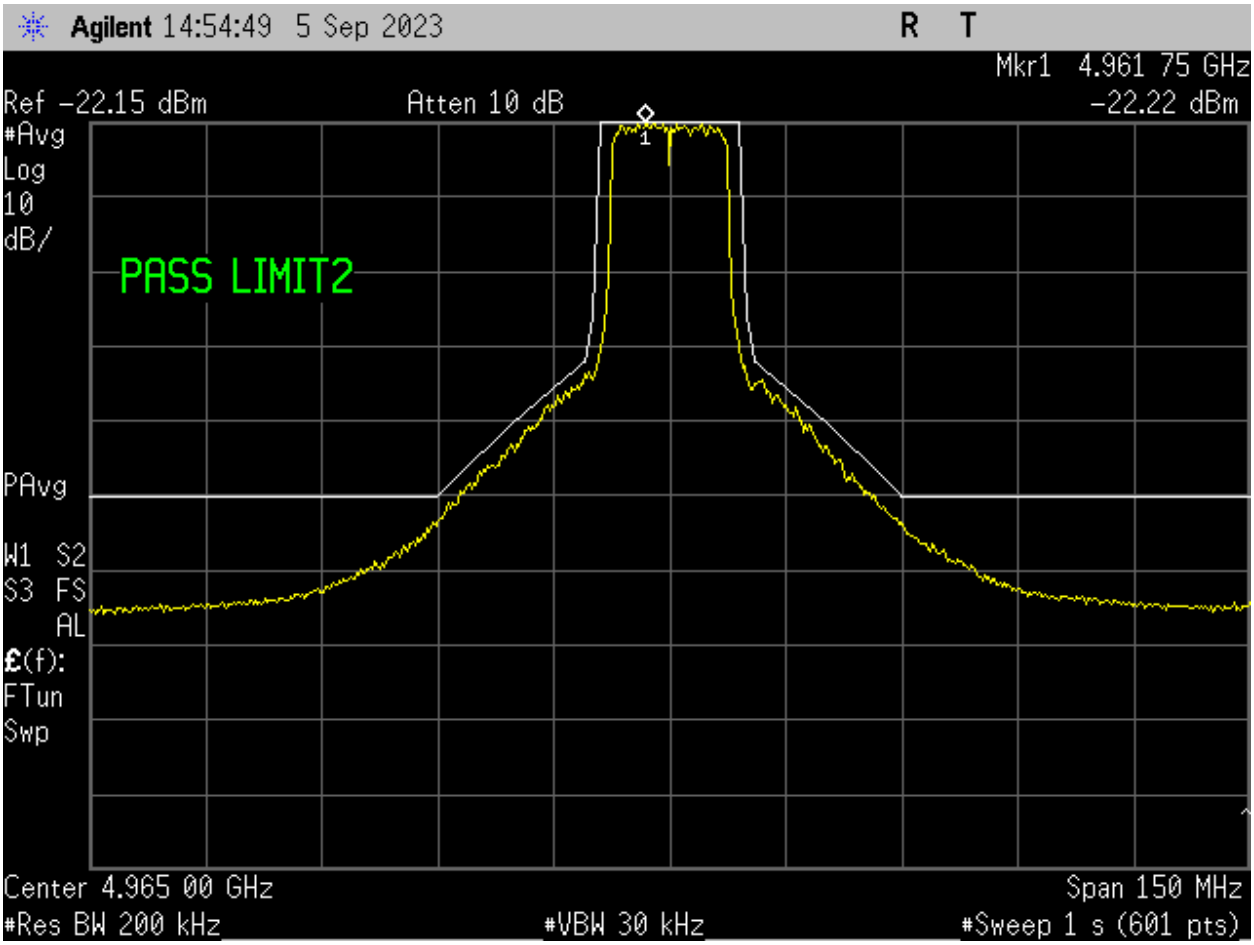


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 8.64 GHz: -43.88 dBm	

back to matrix

SPECTRUM EMISSION MASK

Variant: 20MHz, Channel: 4965.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

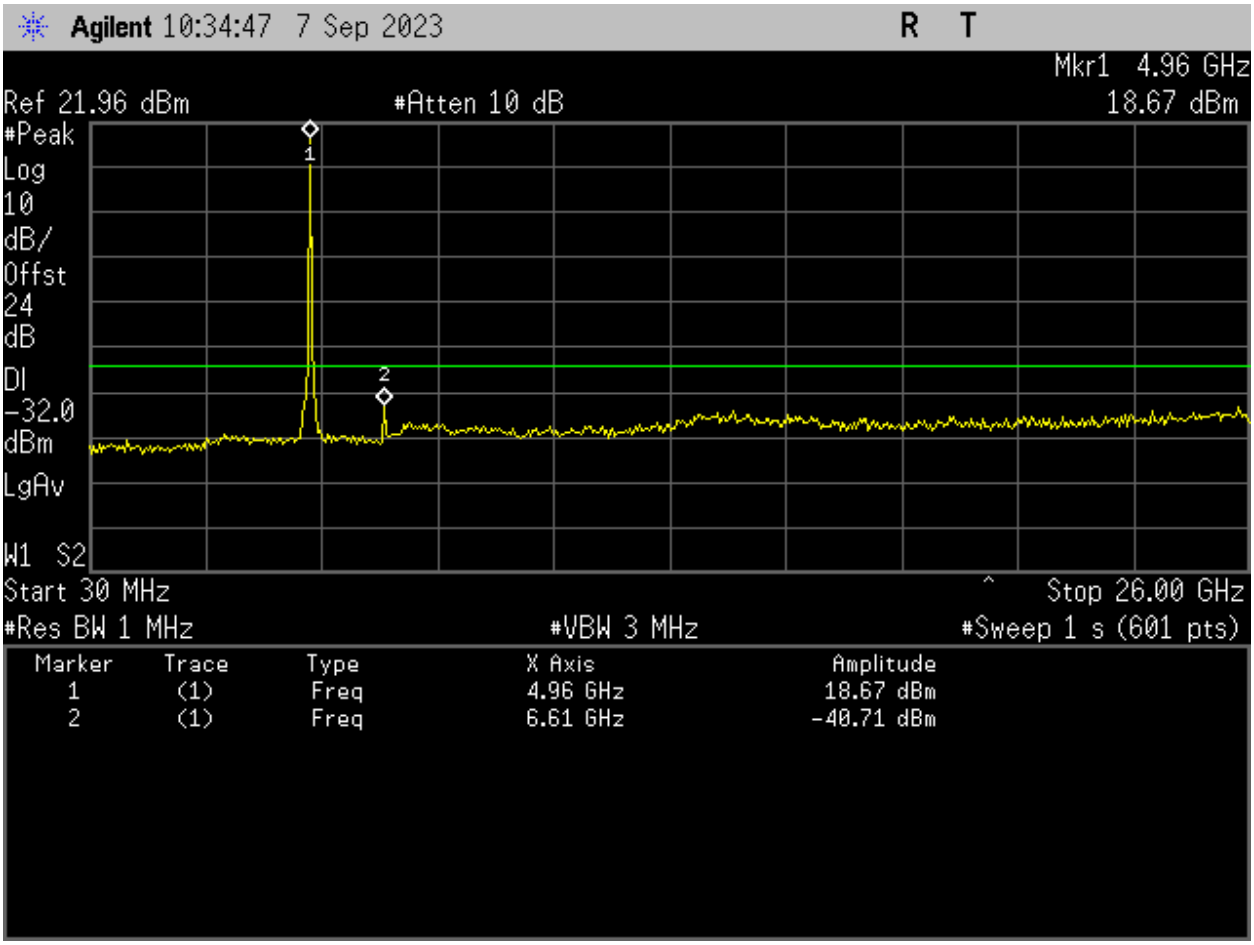


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 20MHz, Channel: 4965.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

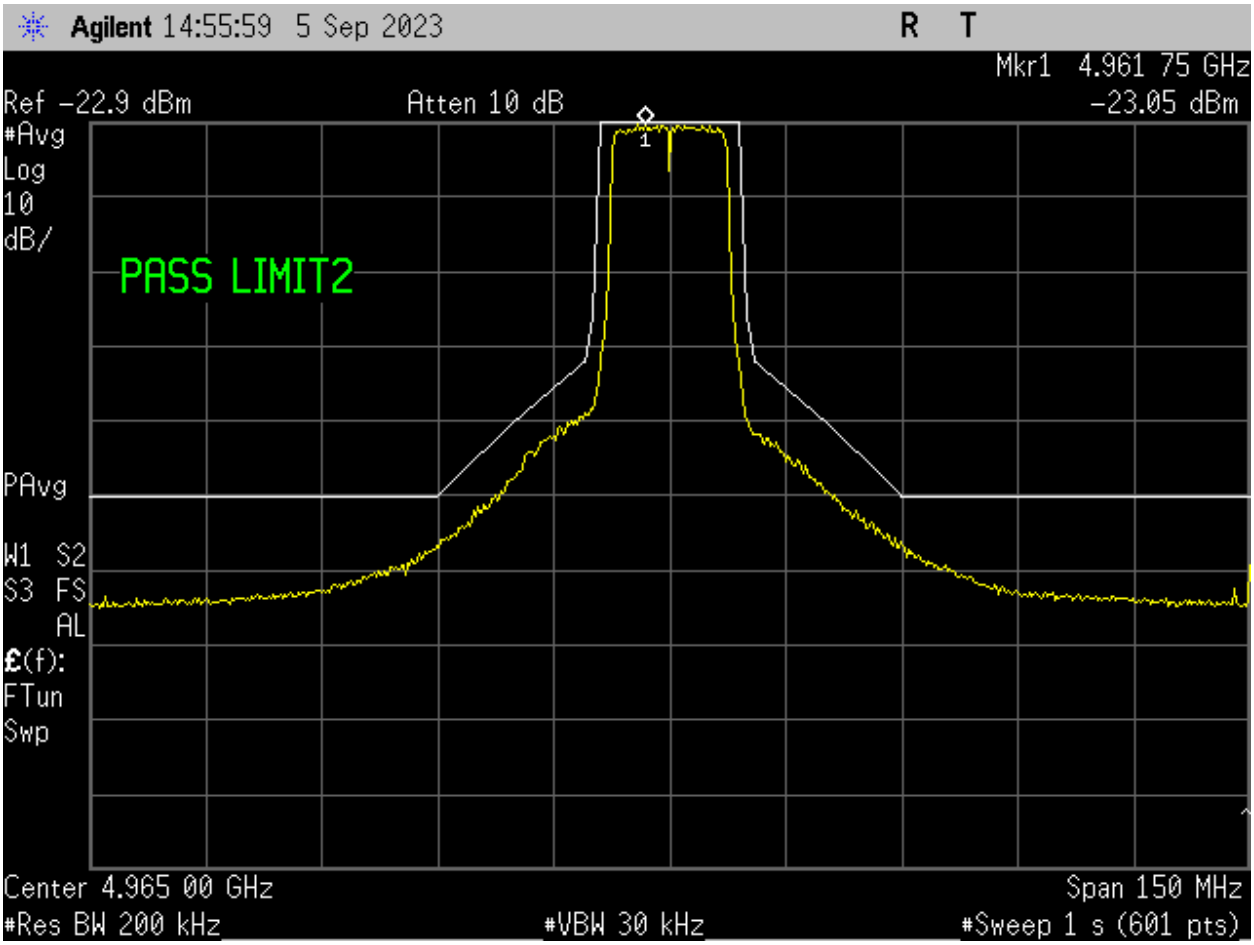


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 6.61 GHz: -40.71 dBm	

back to matrix

SPECTRUM EMISSION MASK

Variant: 20MHz, Channel: 4965.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

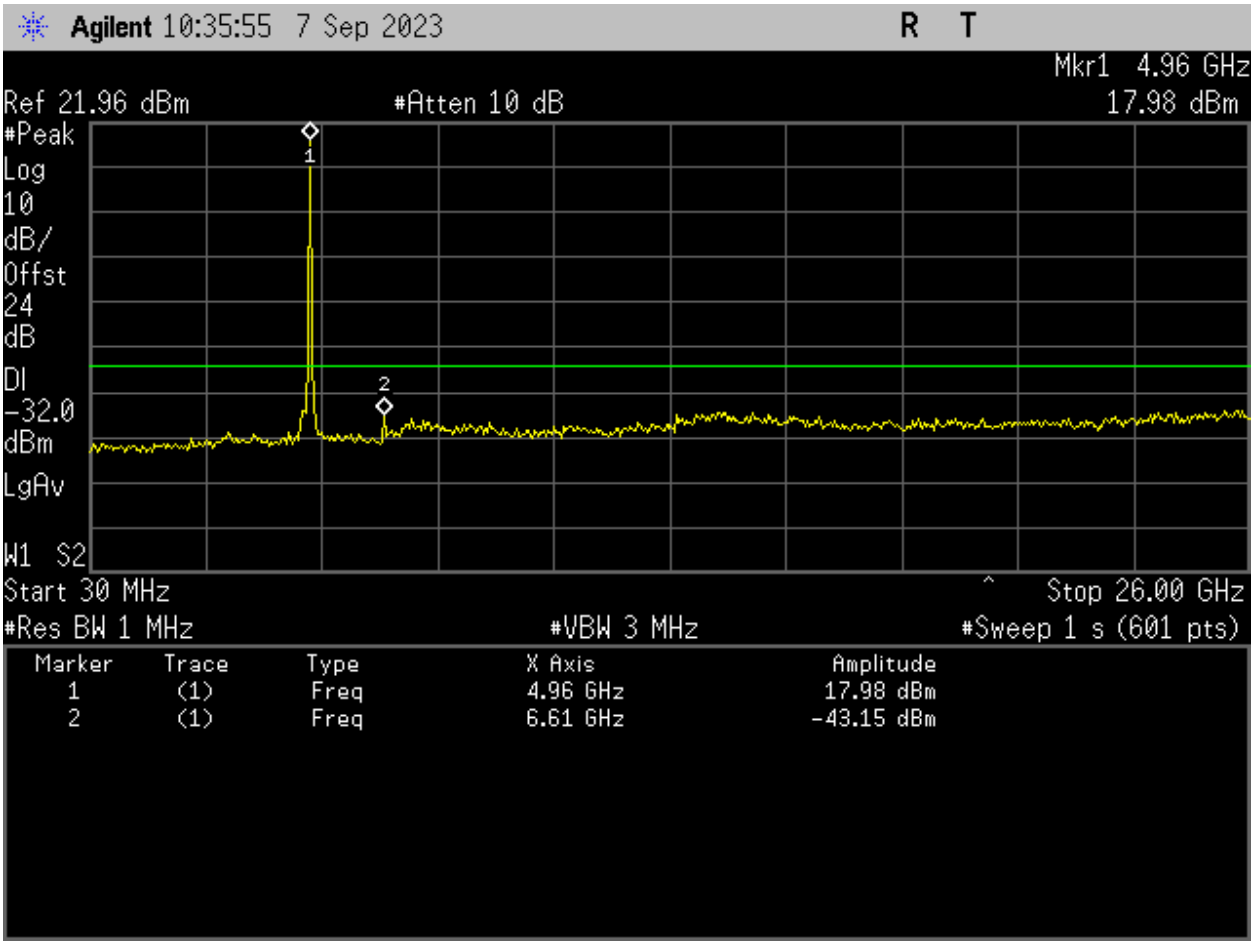


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 20MHz, Channel: 4965.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

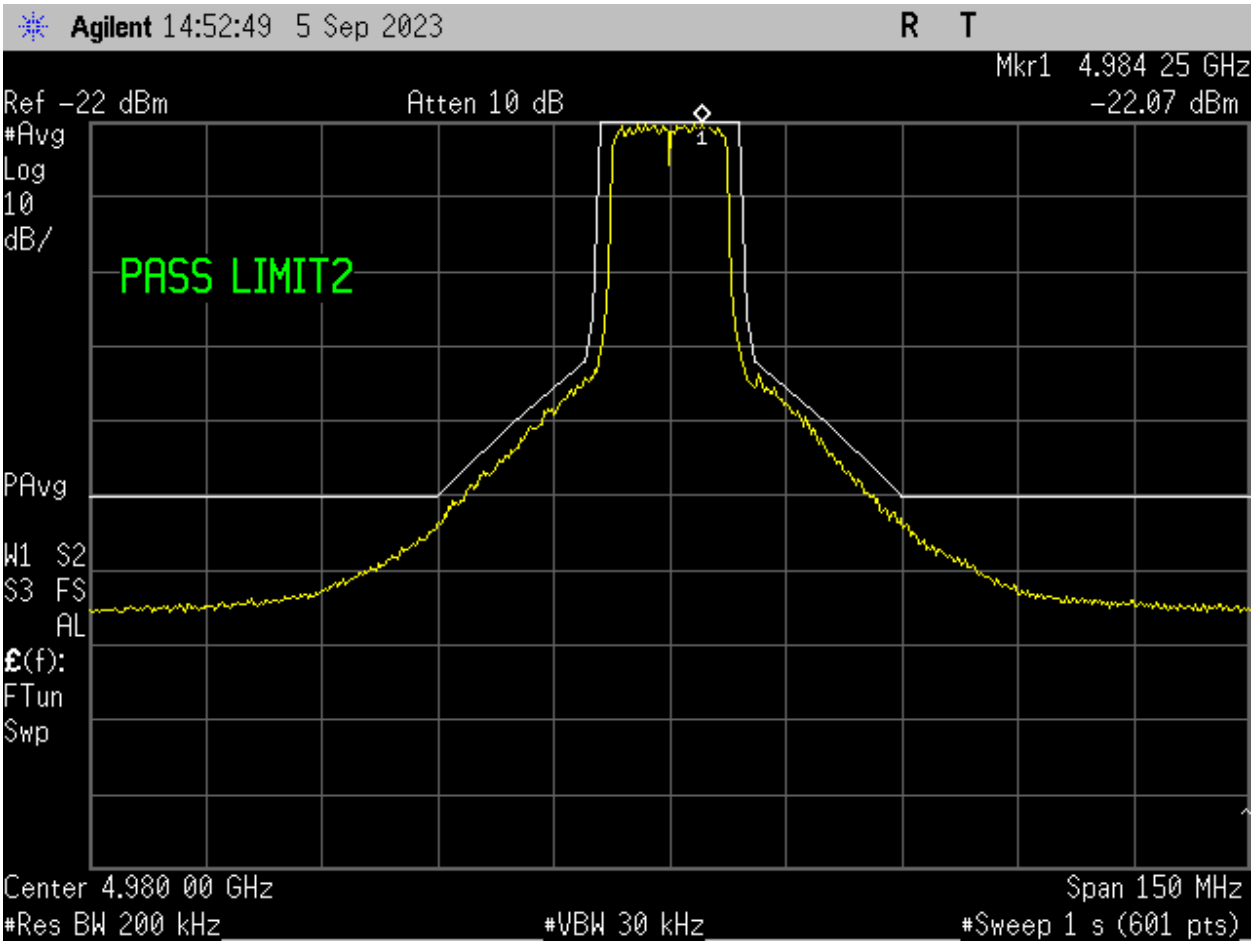


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 6.61 GHz: -43.15 dBm	

back to matrix

SPECTRUM EMISSION MASK

Variant: 20MHz, Channel: 4980.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

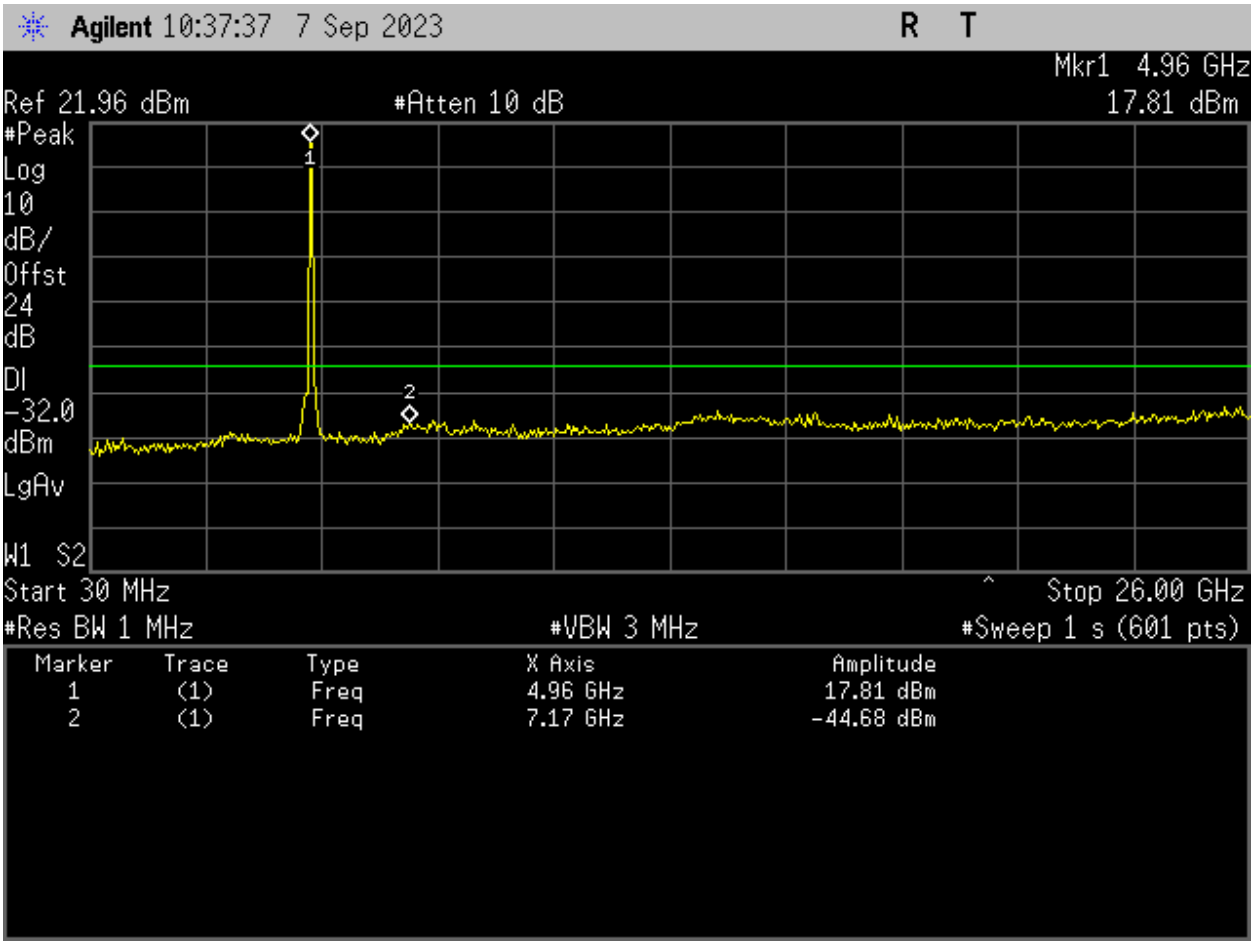


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 20MHz, Channel: 4980.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

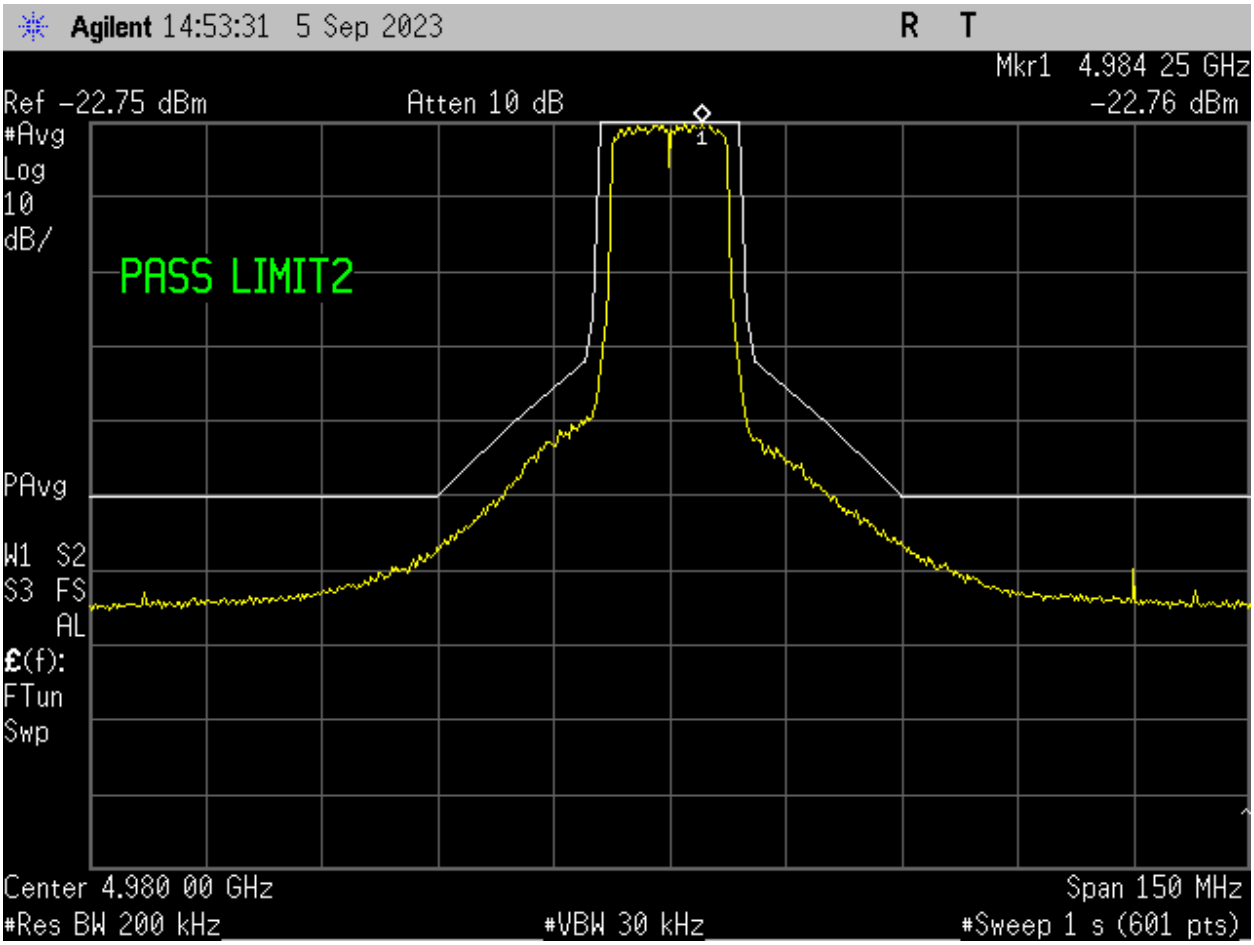


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 7.17 GHz: -44.68 dBm	

back to matrix

SPECTRUM EMISSION MASK

Variant: 20MHz, Channel: 4980.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

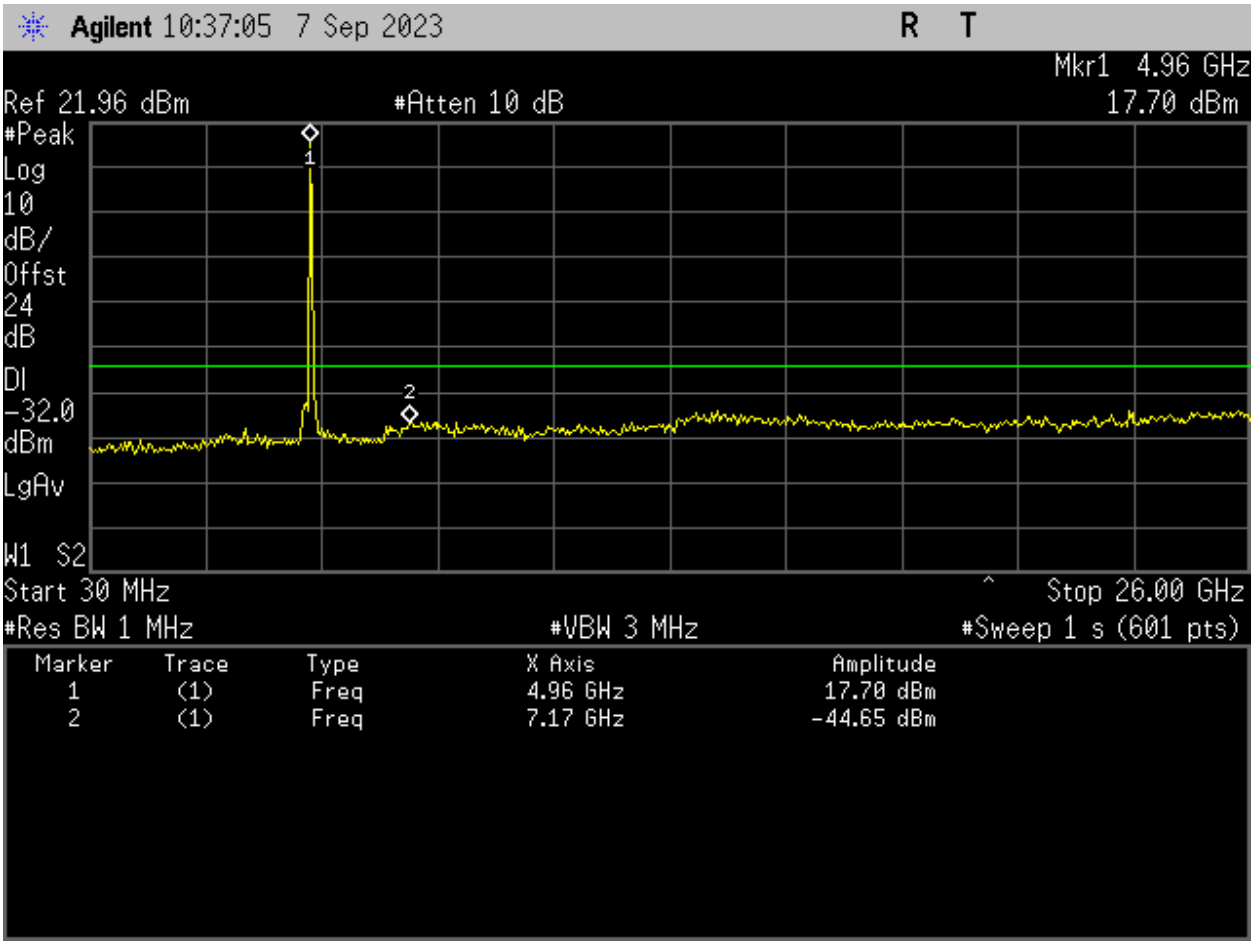


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 20MHz, Channel: 4980.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

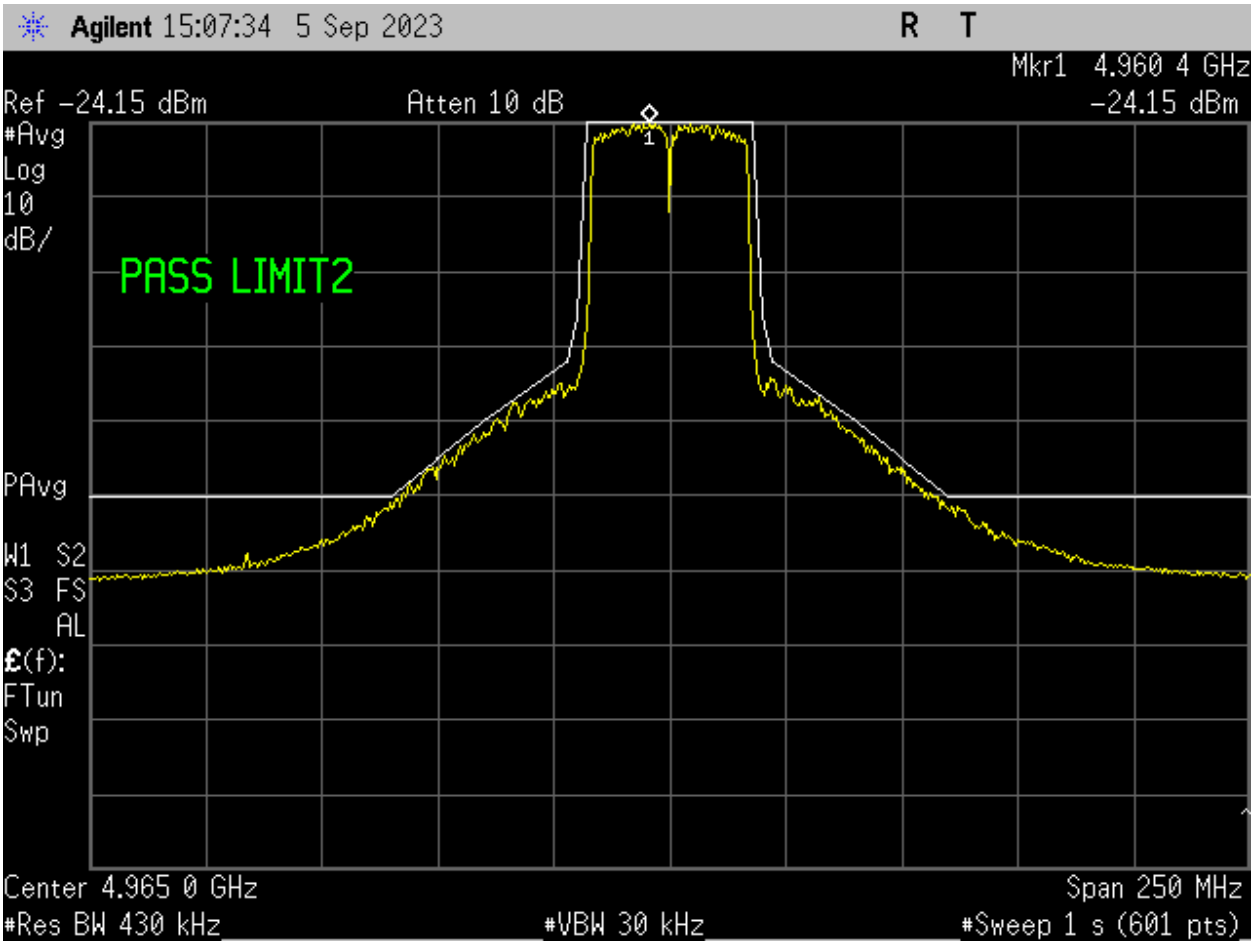


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 7.17 MHz: -44.65 dBm	

back to matrix

SPECTRUM EMISSION MASK

Variant: 40MHz, Channel: 4965.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

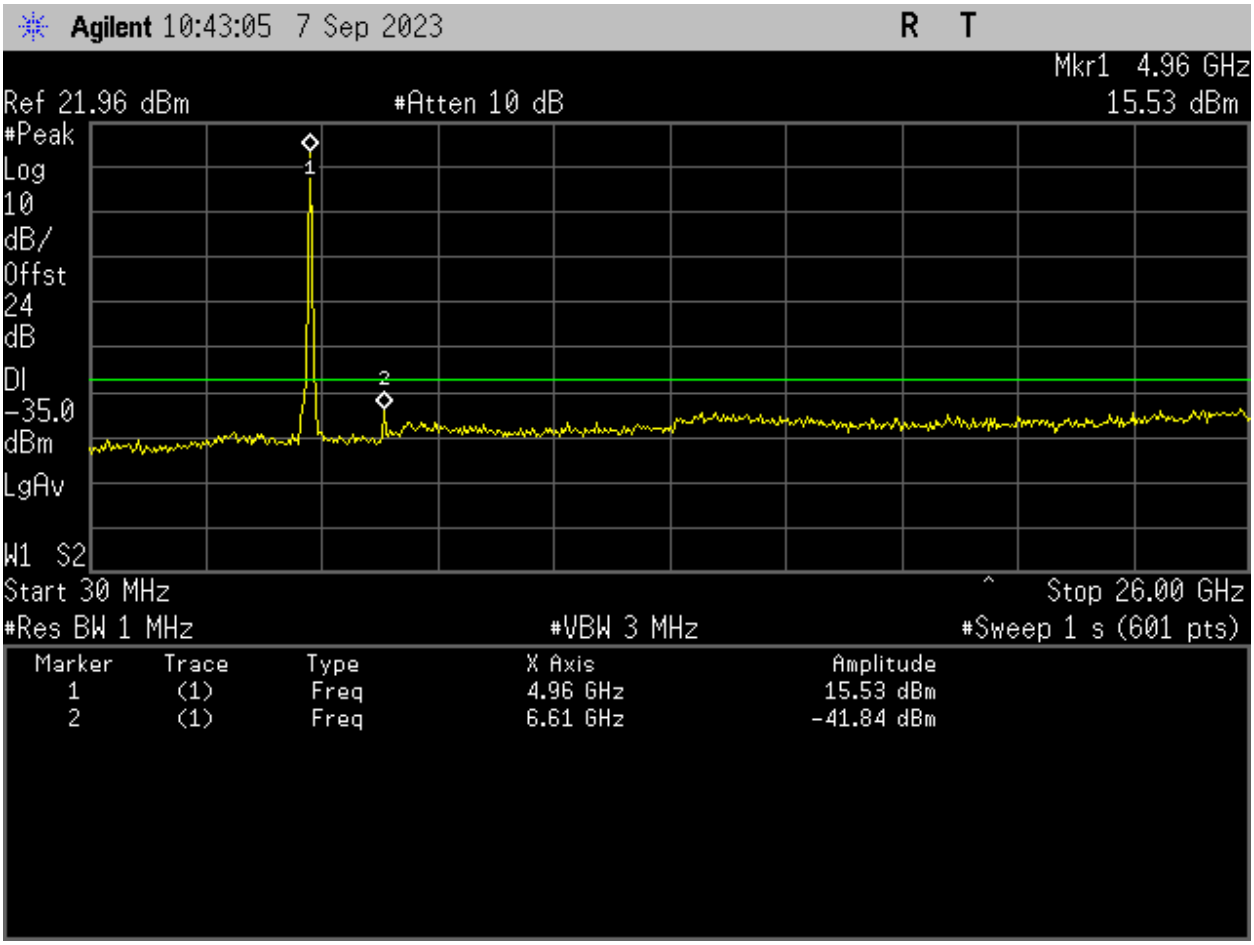


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 40MHz, Channel: 4965.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

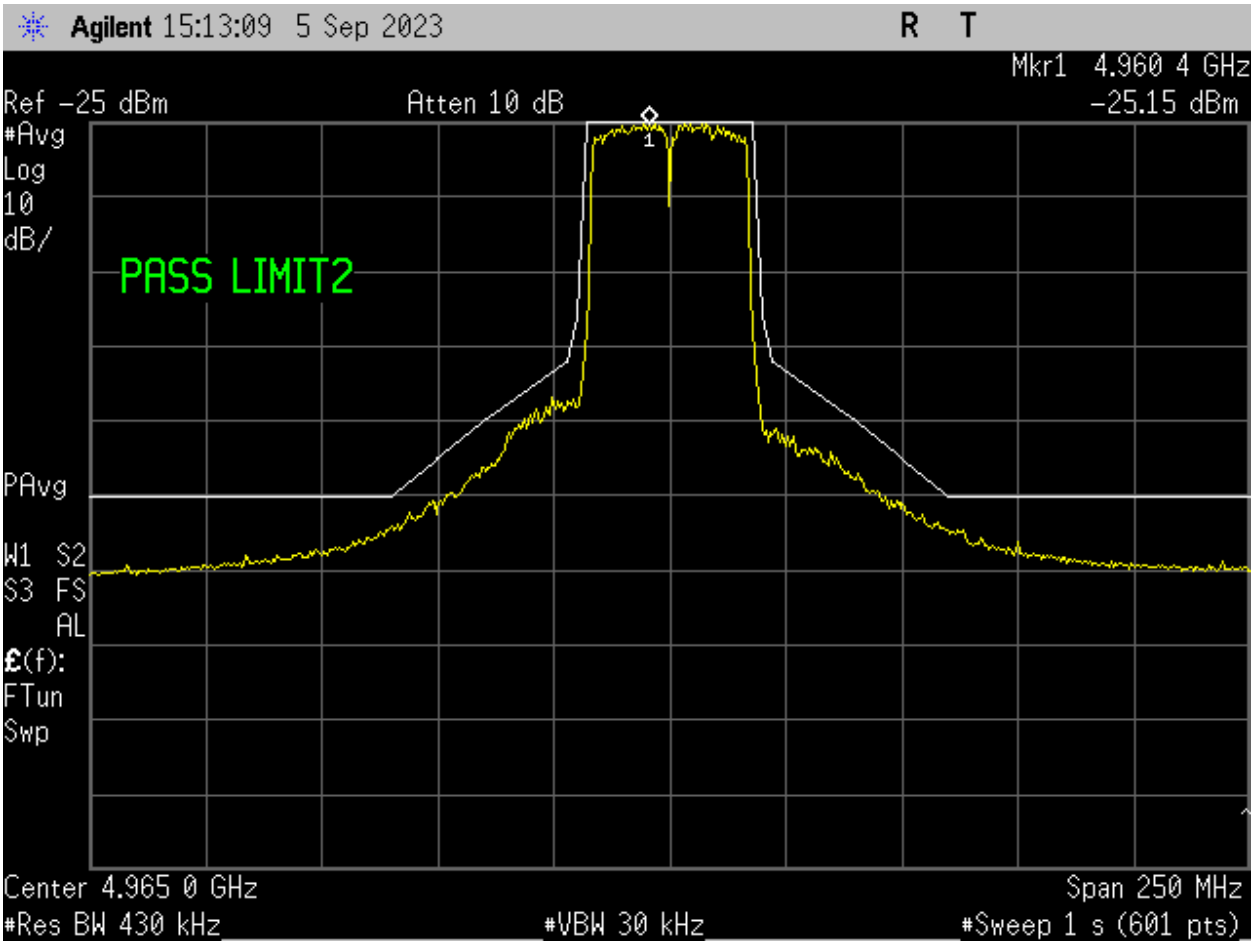


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 6.61 GHz: -41.84 dBm	

back to matrix

SPECTRUM EMISSION MASK

Variant: 40MHz, Channel: 4965.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

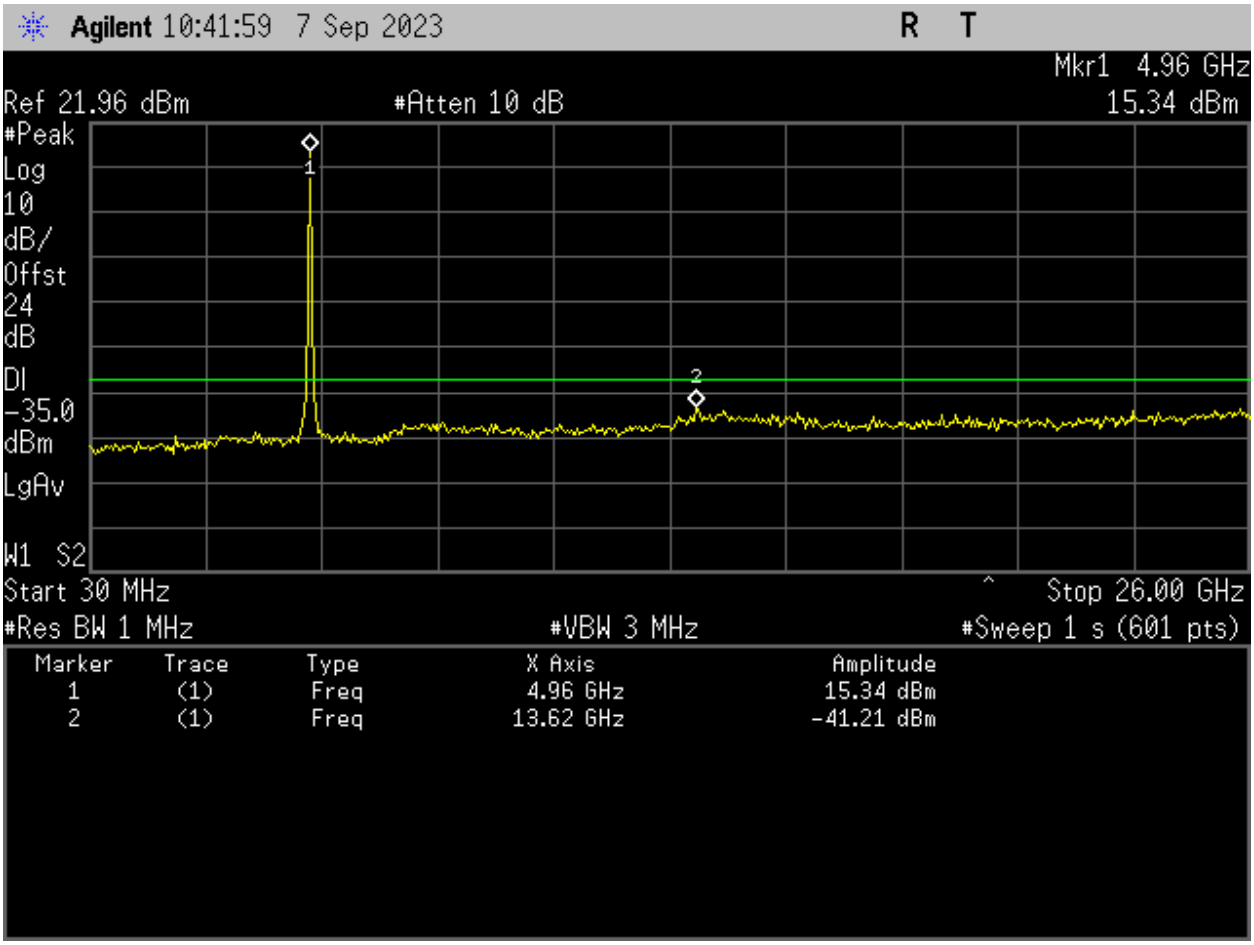


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 40MHz, Channel: 4965.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 13.62 GHz: -41.21 dBm	

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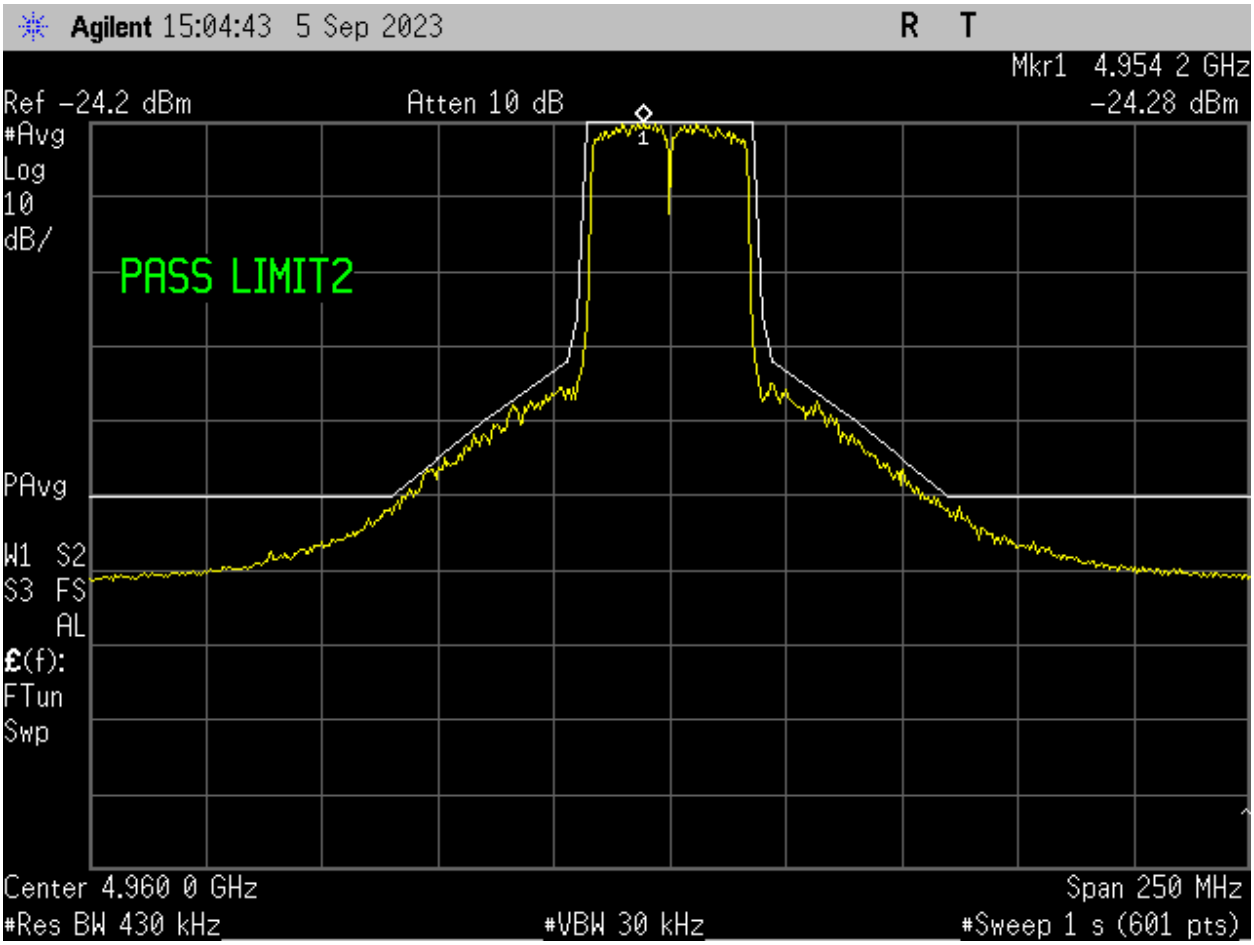
SPECTRUM EMISSION MASK

Variant: 40MHz, Channel: 4960.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

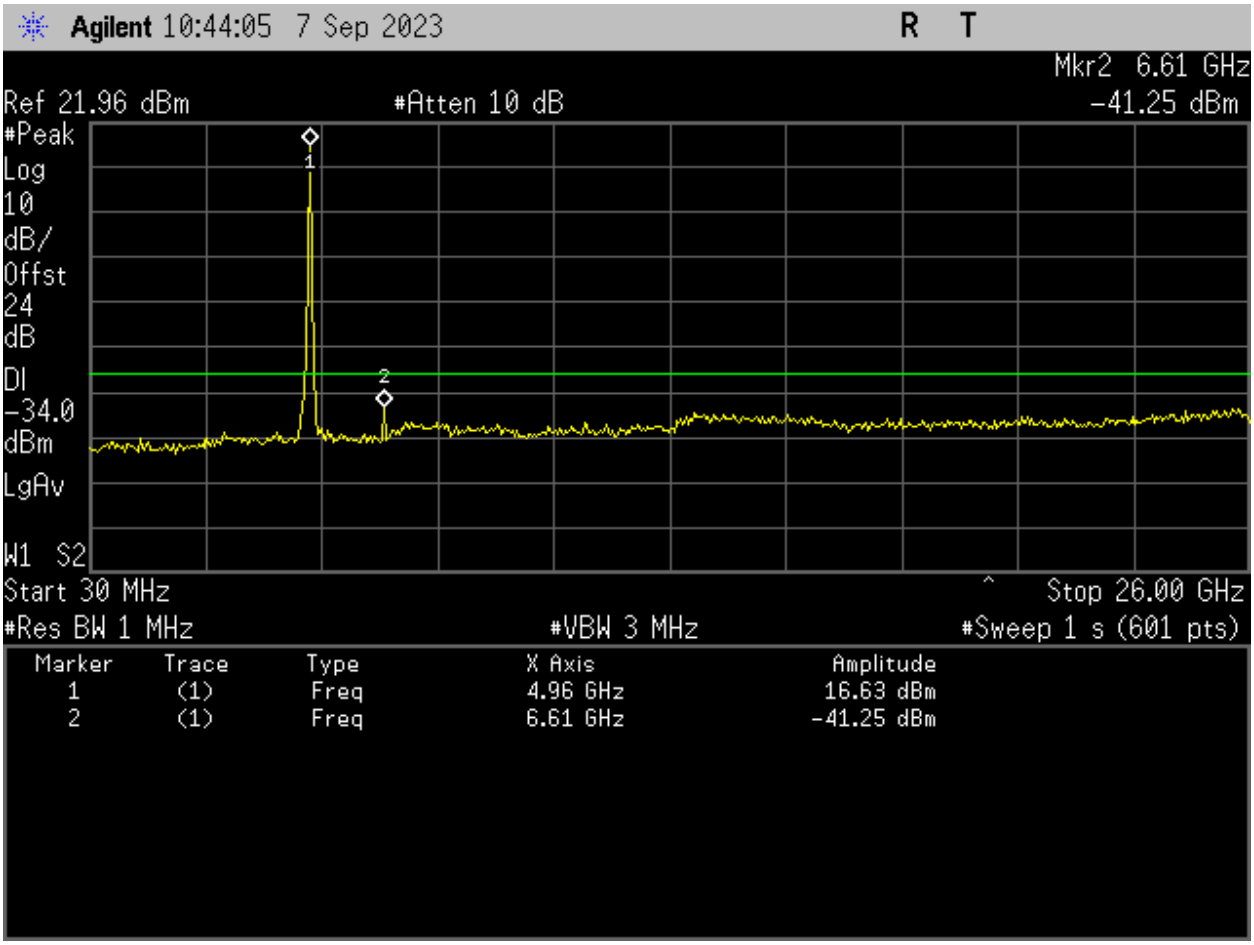


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 40MHz, Channel: 4960.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 6.61 GHz: -41.25 dBm	

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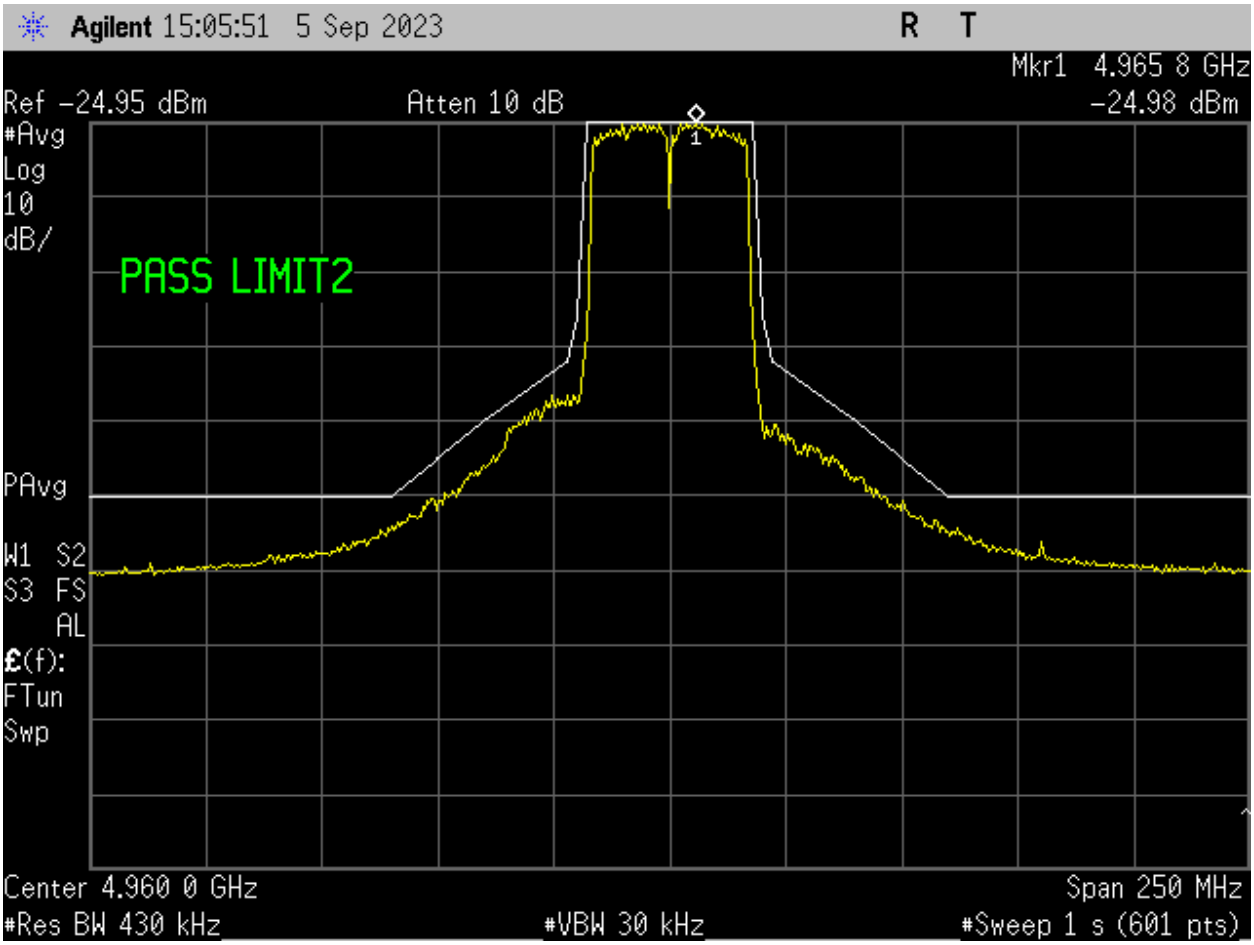
SPECTRUM EMISSION MASK

Variant: 40MHz, Channel: 4960.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

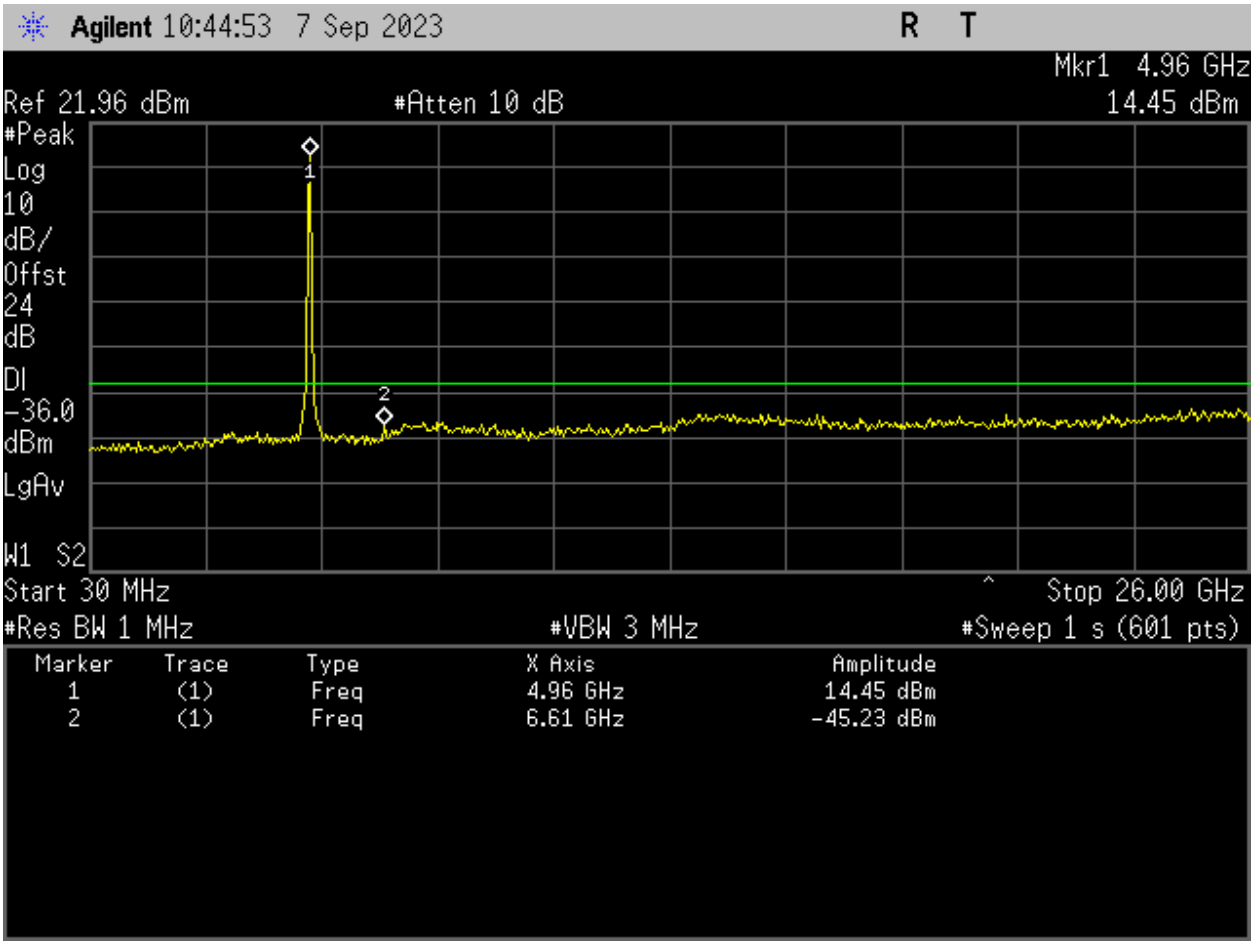


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 40MHz, Channel: 4960.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 6.61 GHz: -45.23 dBm	

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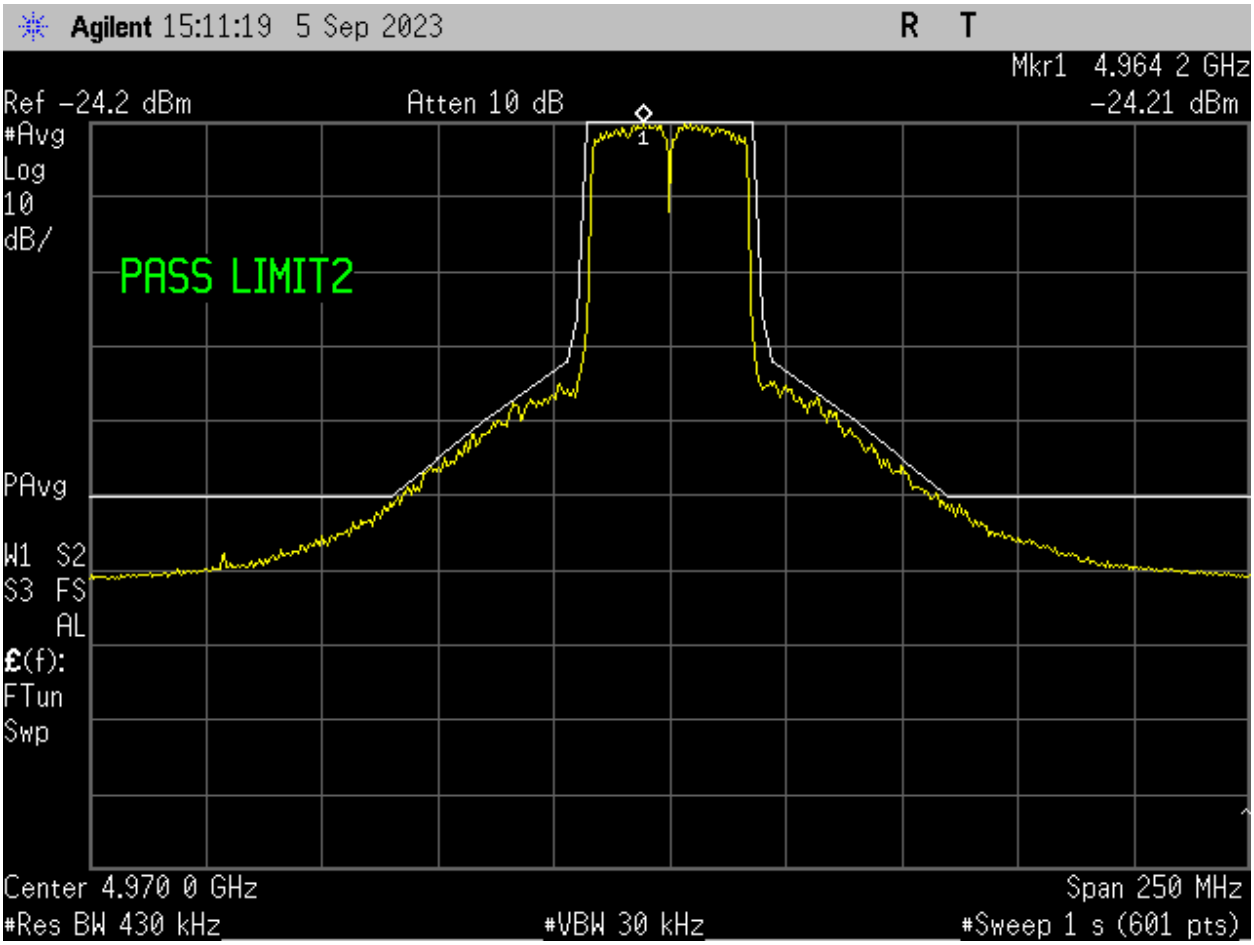
SPECTRUM EMISSION MASK

Variant: 40MHz, Channel: 4970.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

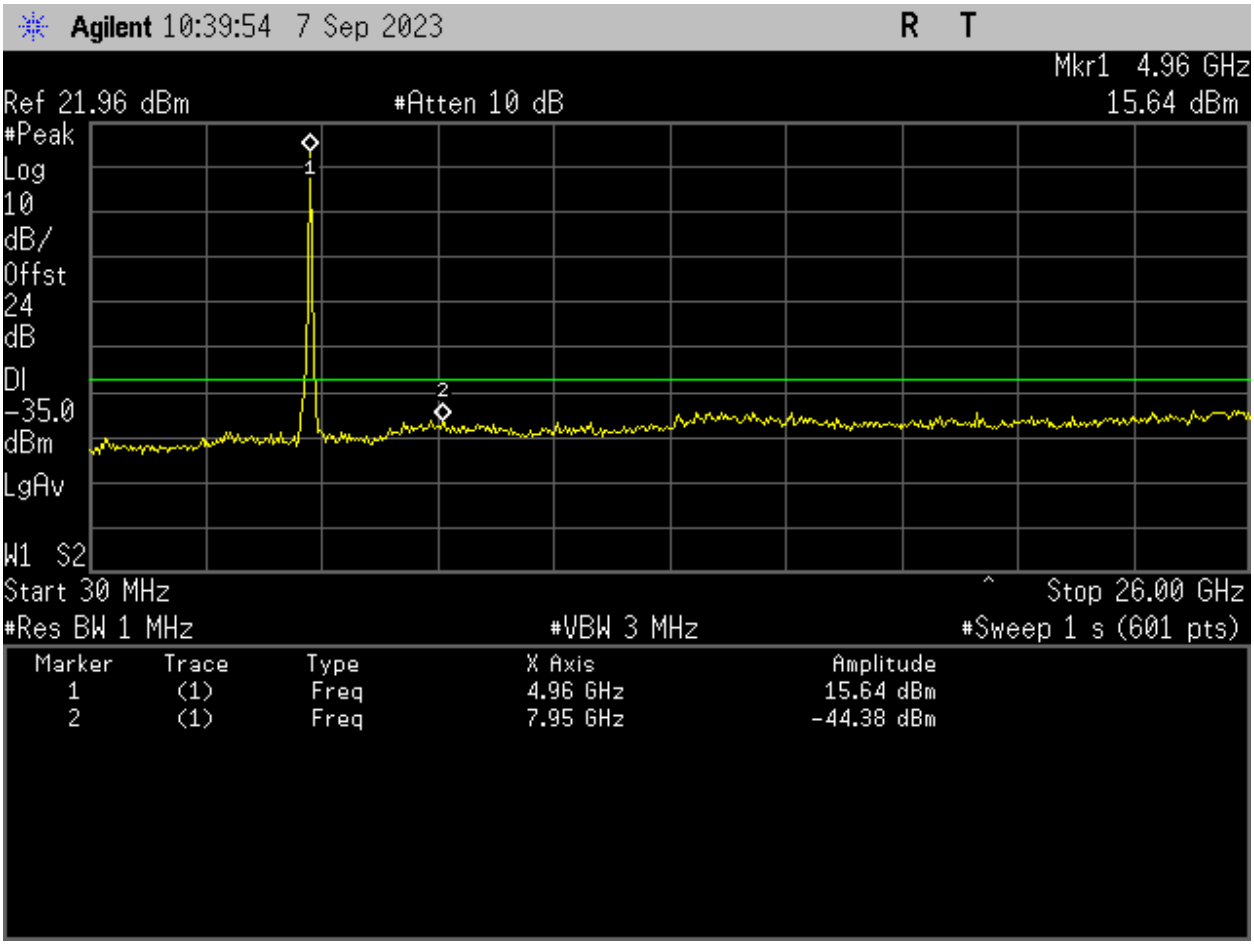


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 40MHz, Channel: 4970.00 MHz, Chain a, Temp: 20, Voltage: 56 Vdc

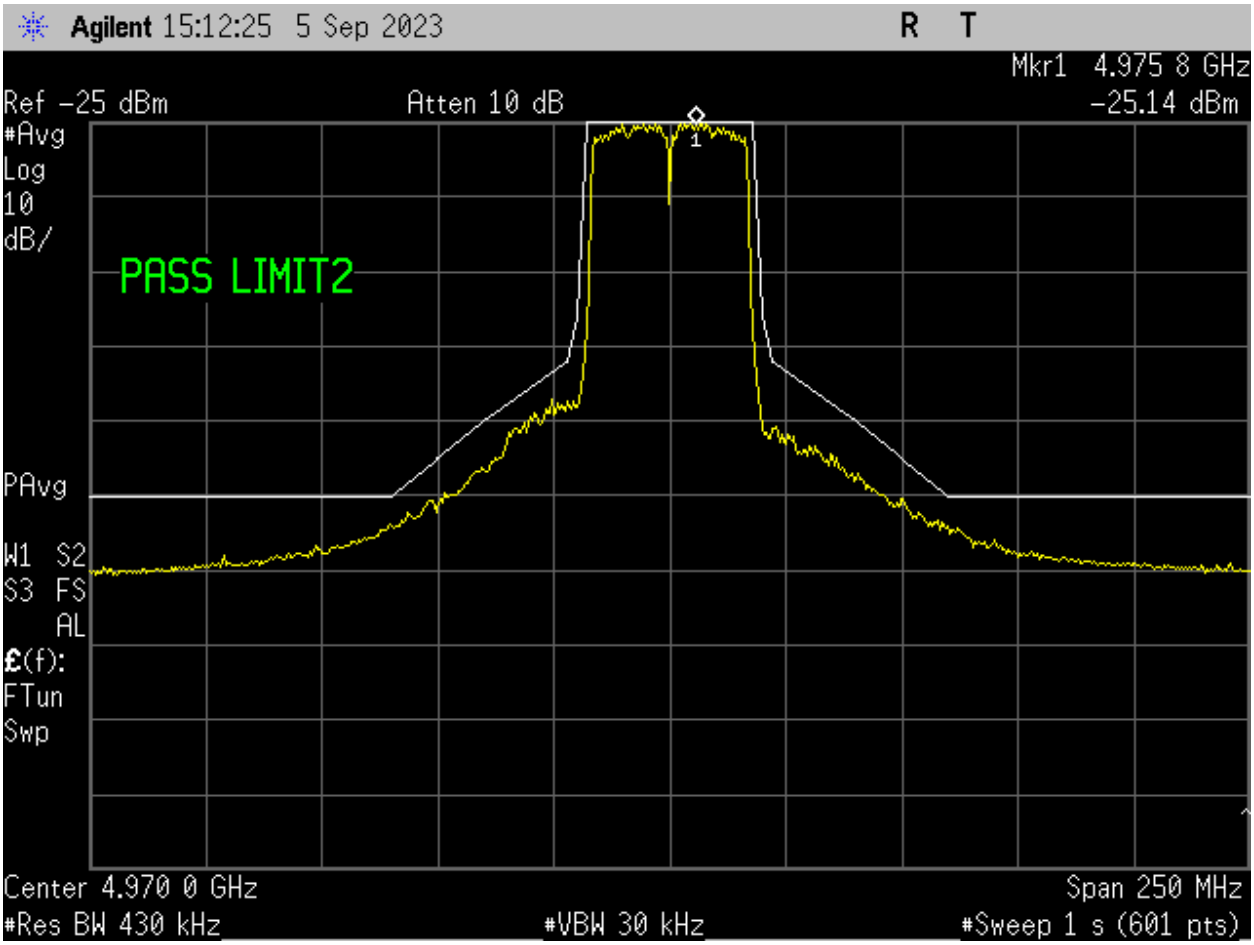


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 7.95 GHz: -44.38 dBm	

back to matrix

SPECTRUM EMISSION MASK

Variant: 40MHz, Channel: 4975.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc

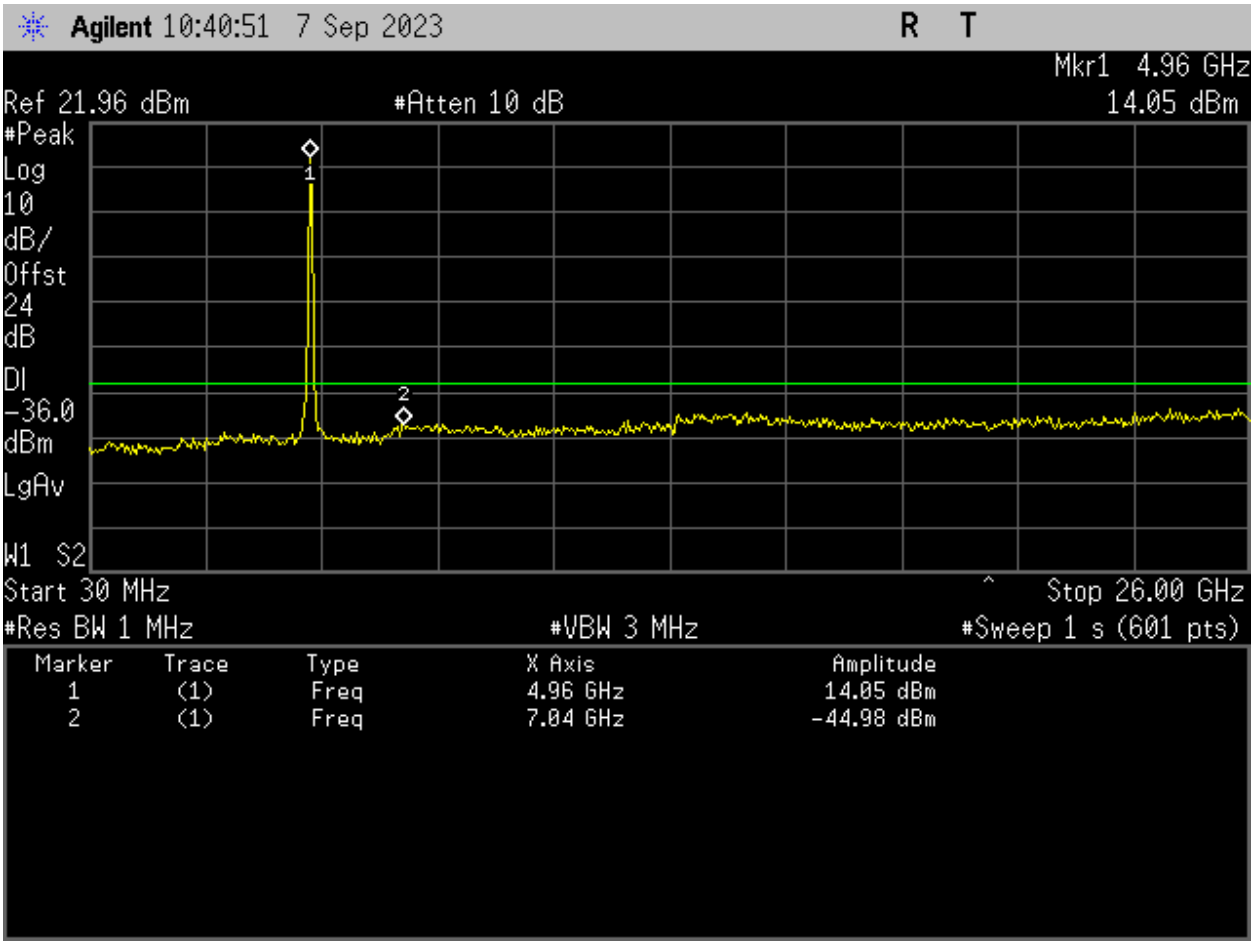


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Avg Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR		

back to matrix

SPECTRUM EMISSION MASK

Variant: 40MHz, Channel: 4970.00 MHz, Chain b, Temp: 20, Voltage: 56 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = Peak Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = CLRWR	M2: 7.04 GHz: -44.98 dBm	

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