REGULATORY COMPLIANCE TEST REPORT

FCC CFR 47 Part 15 Subpart C 15.247 & ISED RSS-247

Report No.: ITRO67-U45 Rev A

Company: Itron Inc.

Model Name: ERG-5600-501

REGULATORY COMPLIANCE TEST REPORT

Company Name: Itron Inc.

Model Name: ERG-5600-501

To: FCC CFR 47 Part 15 Subpart C 15.247 & ISED RSS-247

Test Report Serial No.: ITRO67-U45 Rev A

This report supersedes: NONE

Applicant: Itron Inc.
2401 North State St.
Waseca, MN 56093
USA

Issue Date: 4th September 2024

This Test Report is Issued Under the Authority of:

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

ACCREDITED
TESTING CERT #2381.01

MiCOM Labs is an ISO 17025 Accredited Testing Laboratory

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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

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 28th day of February 2024.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2381.01
Valid to November 30, 2025

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 Phase I - recognition for product testing
MRA 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 28th day of February 2024.

Mr. Trace Mainhardt, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2381.02
Valid to November 30, 2026

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

2. DOCUMENT HISTORY

Document History		
Revision	Date	Comments
Draft	9th August 2024	Draft for Client review
Draft 2	26th August 2024	Additional draft for review
Rev A	4th September 2024	Initial release

In the above table the latest report revision will replace all earlier versions.

3. TEST RESULT CERTIFICATE

Manufacturer:	Itron Inc. 2401 North State St. Waseca MN 56093 United States of America	**Tested By:**	MiCOM Labs, Inc. 575 Boulder Court Pleasanton California 94566 USA
Model:	ERG-5600-501	**Telephone:** **Fax:**	+1 925 462 0304 +1 925 462 0306
Type Of Equipment:	RF-based meter data collection solution.		
S/N's:	Conducted RF: 2935662-20 Radiated RF: 2935662-15		
Test Date(s):	25th – 26th June 2024 1st – 2nd & 9th July 2024	**Website:**	www.micomlabs.com

STANDARD(S)	TEST RESULTS
FCC CFR 47 Part 15 Subpart C 15.247 & ISED RSS-247	**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.

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 558074 D01 v05r02	Apr 2019	Guidance for Compliance Measurements on Digital Transmission System, Frequency Hopping Spread Spectrum System, and Hybrid System Devices operating under section 15.247 of the FCC Rules.
II	A2LA	16th April 2024	R105 - Requirement's When Making Reference to A2LA Accreditation Status
III	ANSI C63.10	2020	American National Standard for Testing Unlicensed Wireless Devices
IV	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
V	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
VI	FCC 47 CFR Part 15, Subpart B	Nov 2017	Title 47: Telecommunication PART 15—RADIO FREQUENCY DEVICES, SubPart B; Unintentional Radiators
VII	FCC 47 CFR Part 15.247	Apr 2020	Radio Frequency Devices; Subpart C – Intentional Radiators
VIII	FCC Public Notice DA 00-705	Mar 2000	Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems
IX	ICES-003	Issue 7; Oct 2020	Information Technology Equipment (Including Digital Apparatus)
X	UKAS M3003	Edition 6 March 2024	The Expression of Uncertainty and Confidence in Measurements
XI	RSS-247 Issue 3	Aug 2023	Digital Transmission Systems (DTSs), Frequency Hopping System (FHSs) and Licence-Exempt Local Area Network (LE-LEN) Devices
XII	RSS-Gen Issue 5	Amendment 1,2 (Feb 2021)	General Requirements for Compliance of Radio Apparatus. With Amendments 1: March 2019 and 2: Feb 2021.
XIII	FCC 47 CFR Part 2.1033	Feb 2023	FCC requirements and rules regarding photographs and test setup diagrams.
XIV	UKAS LAB 12	Edition 4 April 2022	The Expression of Uncertainty in Testing

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.

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

5. PRODUCT DETAILS AND TEST CONFIGURATIONS

5.1. Technical Details

Details	Description
Purpose:	Test of the Itron Inc. ERG-5600-501 to FCC CFR 47 Part 15 Subpart C 15.247 & ISED RSS-247.
Applicant:	Itron Inc. 2401 North State St. Waseca MN 56093 United States of America
Manufacturer:	Itron Inc.
Laboratory performing the tests:	MiCOM Labs, Inc. 575 Boulder Court Pleasanton California 94566 USA
Test report reference number:	ITRO67-U44
Date EUT received:	13th June 2024
Standard(s) applied:	FCC CFR 47 Part 15 Subpart C 15.247 & ISED RSS-247
Dates of test (from - to):	25th – 26th June 2024 1st – 2nd & 9th July 2024
No of Units Tested:	64
Product Family Name:	ERG-5600-501
Model(s):	ERG-5600-501 ERG-5600-502 ERG-5600-503 ERG-5600-505 ERG-7600-501 ERG-7600-502 ERG-7600-503 ERG-7600-505 ERW-1350-002 ERW-1650-002 ERW-1650-010
Location for use:	Indoor / Outdoor
Declared Frequency Range(s):	902 - 928 MHz;
Type of Modulation:	ERG-5600-501
EUT Modes of Operation:	902 - 928 MHz: GFSK, 100kbps, PL 3 (FHSS); GFSK, 10kbps, PL 3 (FHSS); GFSK, 150kbps, PL 2 (Hybrid); GFSK, 150kbps, PL 3 (FHSS); GFSK, 25kbps, PL 3 (FHSS); GFSK, 300kbps PL 2 (Hybrid); GFSK, 300kbps PL 3 (FHSS); GFSK, 37.5 kbps, PL 3 (FHSS); OOK PL 1; OOK PL 3 ;
Declared Nominal Output Power (dBm):	+27 dBm
Transmit/Receive Operation:	Transceiver
Rated Input Voltage and Current:	6VDC 1A
Operating Temperature Range:	-40°C to +70°C

ITU Emission Designator:	GFSK 100 KBits/s PL 3; 125KF1D GFSK 10 KBits/s PL 3; 20K0F1D GFSK 150 KBits/s PL 2; 184KF1D GFSK 150 KBits/s PL 3; 283KF1D GFSK 25 KBits/s PL 3; 29K0F1D GFSK 300 KBits/s PL 2; 330KF1D GFSK 300 KBits/s PL 3; 326KF1D GFSK 37.5 KBits/s PL 3; 75K0F1D OOK 16.38 KBits/s PL 1; 127KL1D OOK 16.38 KBits/s PL 3; 172KL1D
Equipment Dimensions:	4.9 x 3.6 x 2.5 inches
Weight:	1.2 lbs
Hardware Rev:	3
Software Rev:	CSL 10.0.15.0

5.2. Scope Of Test Program

Itron Inc. ERG-5600-501

The scope of the test program was to test the Itron Inc. ERG-5600-501, ERG-5600-501 configurations in the frequency ranges 902 - 928 MHz; for compliance against the following specification:

FCC CFR 47 Part 15 Subpart C 15.247 & ISED RSS-247 (FHSS)
Radio Frequency Devices; Subpart C – Intentional Radiators

ISED RSS-247
Digital Transmission Systems (DTSs), Frequency Hopping System (FHSs) and License-Exempt Local Area Network (LE-LEN) Devices

The Itron ERG-5600-501 is also marketed as the following Model Numbers per Manufacturer Declaration (refer to Section 11 of this report)

ERG-5600-502
ERG-5600-503
ERG-5600-505
ERG-7600-501
ERG-7600-502
ERG-7600-503
ERG-7600-505
ERW-1350-002
ERW-1650-002
ERW-1650-010

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

Type (EUT/ Support)	Equipment Description	Mfr	Model No.	Serial No.
EUT	RF-based meter data collection solution	Itron, Inc.	ERG-5600-501	Conducted RF: 2935662-20 Radiated RF: 2935662-15
Laptop Computer	Support	Lenovo	ThinkPad	N/A

5.4. Antenna Details

Type	Manufacturer	Model	Family	Gain (dBi)	BF Gain	Dir BW	X-Pol	Frequency Band (MHz)
integral	Itron Inc.	None	PCB	2.23	-	360	-	902 - 928

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

5.5. Cabling and I/O Ports

1. NONE.

5.6. Test Configurations

Results for the following configurations are provided in this report:

Operational Mode(s)	Data Rate with Highest Power kbp/s	Channel Frequency (MHz)		
		Low	Mid	High
902 - 928 MHz				
GFSK PL 3 (FHSS)	100	902.30	914.60	926.90
GFSK PL 3 (FHSS)	10	902.20	915.00	927.75
GFSK PL 2 (Hybrid)	150	902.40	915.20	927.60
GFSK PL 3 (FHSS)	150	902.40	915.20	927.60
GFSK PL 3 (FHSS)	25	902.20	915.00	927.75
GFSK PL 2 (Hybrid)	300	902.40	915.20	927.60
GFSK PL 3 (FHSS)	300	902.40	915.20	927.60
GFSK PL 3 (FHSS)	37.5	903.00	915.00	926.80
OOK PL 1	16.38	903.00	915.00	926.80
OOK PL 3	16.38	903.00	915.00	926.80

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
20 dB & 99% Bandwidth	Complies	View Data
Frequency Hopping Tests	Complies	-
Number of Hopping Channels	Complies	View Data
Channel Separation	Complies	View Data
Output Power	Complies	View Data
Emissions	Complies	-
(1) Conducted Emissions	Complies	-
(i) Conducted Unwanted Spurious Emissions	Complies	View Data
(ii) Conducted Band-Edge Emissions	Complies	View Data
(2) Radiated Emissions	Complies	-
(i) TX Spurious & Restricted Band Emissions	Complies	View Data

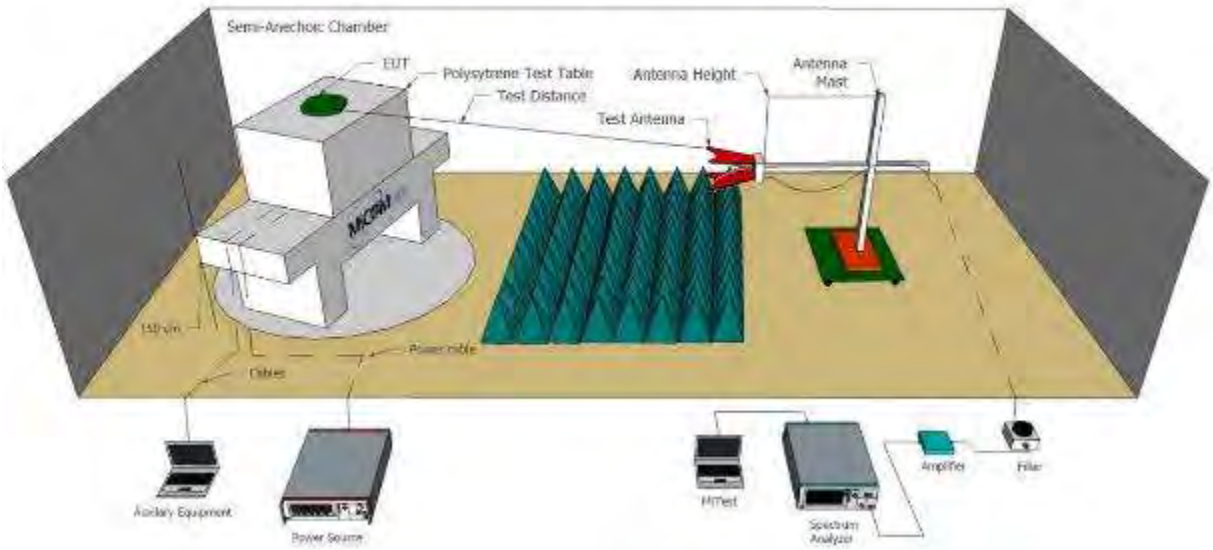
Note: Dwell Time and Channel Occupancy were not tested as part of this test program, these were declared for normal network operation by Itron. See Section 10 of this report for additional information.

7. TEST EQUIPMENT CONFIGURATION(S)

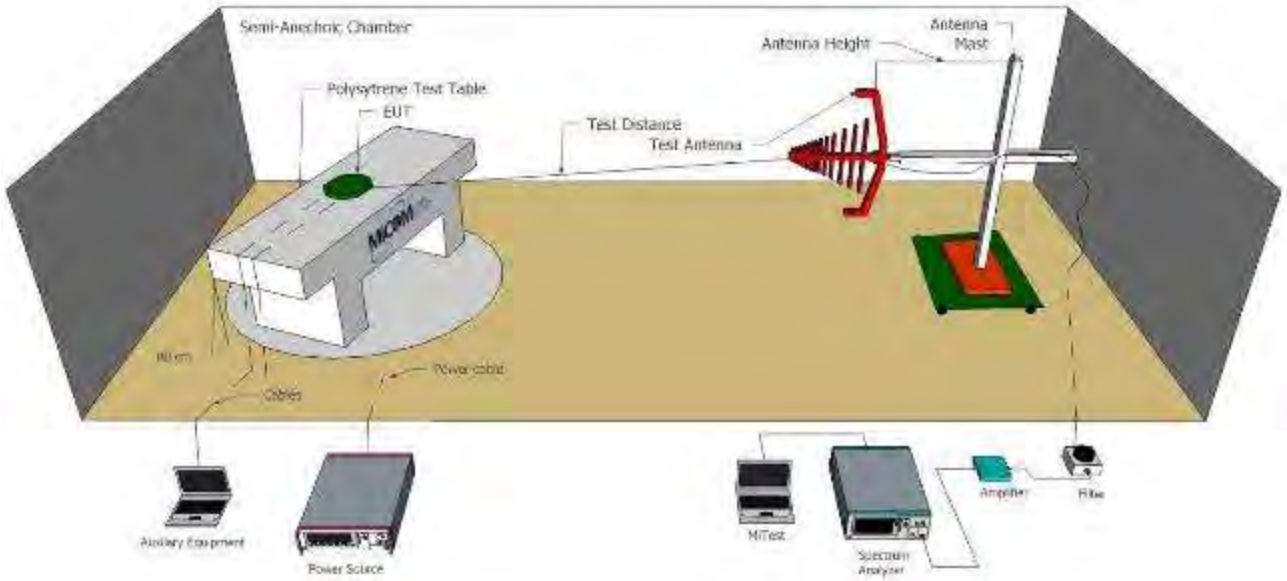
7.1. Radiated

Radiated emissions above and below 1GHz.

Radiated Emissions Above 1GHz Test Setup



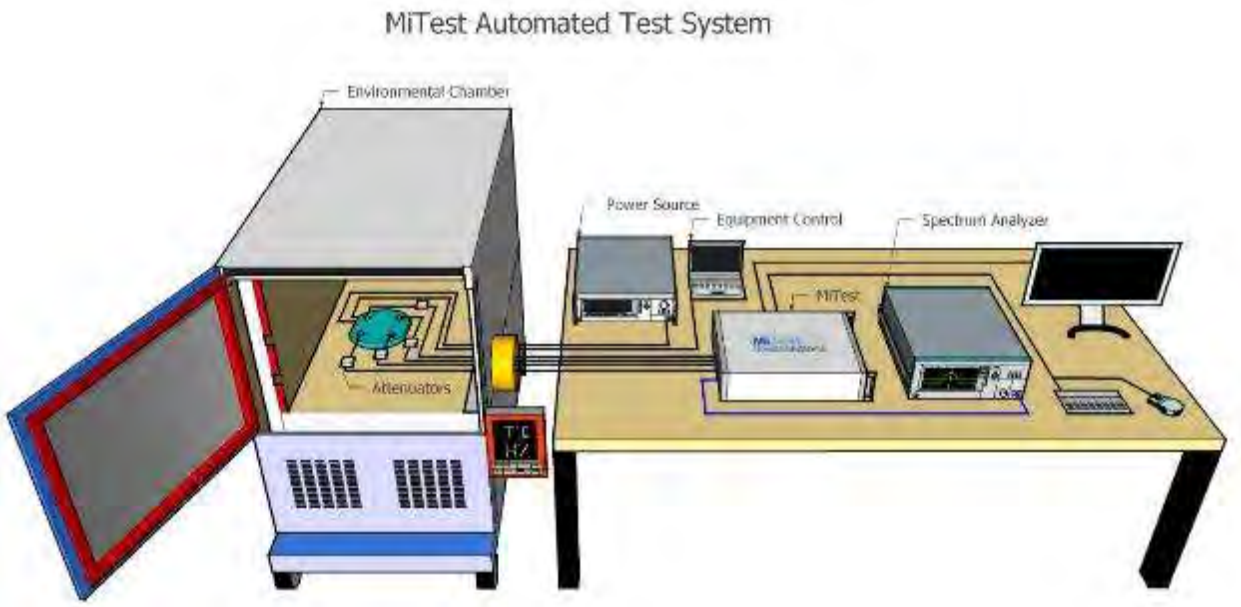
Radiated Emissions Below 1GHz Test Setup



Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
170	Video System Controller for Semi Anechoic Chamber	Panasonic	WV-CU101	04R08507	Not Required
266	10 Hz to 50GHz MXA Signal Analyzer	Keysight	N9020B	MY60110791	25 Jul 2025
285	DC Power Supply	Keysight	E36155A	MY63000156	4 Dec 2024
298	3M Radiated Emissions Chamber Maintenance Check	MiCOM	3M Chamber	298	11 Oct 2024
330	Variac 0-280 Vac	Staco Energy Co	3PN1020B	0546	Cal when used
336	Active loop Ant 10kHz to 30 MHz	EMCO	EMCO 6502	00060498	7 Dec 2024
338	Sunol 30 to 3000 MHz Antenna	Sunol	JB3	A052907	5 Dec 2024
341	900MHz Notch Filter	EWT	EWT-14-0199	H1	13 Sep 2024
346	1.6 TO 10GHz High Pass Filter	EWT	EWT-57-0112	H1	13 Sep 2024
373	26III RMS Multimeter	Fluke	Fluke 26 series III	76080720	29 Sep 2024
377	Band Rejection Filter 5150 to 5880MHz	Microtronics	BRM50716	034	13 Sep 2024
396	2.4 GHz Notch Filter	Microtronics	BRM50701	001	13 Sep 2024
397	Amp 10 - 2500MHz	MiCOM Labs	Amp 10 - 2500 MHz	NA	27 Oct 2024
399	ETS 1-18 GHz Horn Antenna	ETS	3117	00154575	7 Dec 2024
406	Amplifier for Radiated Emissions	MiCOM Labs	40dB 1 to 18GHz Amp	0406	2 Nov 2024
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
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	18 Sep 2024
463	Schwarzbeck cable from Amplifier to Bulkhead.	Schwarzbeck	AK 9513	463	18 Sep 2024
464	Schwarzbeck cable from Bulkhead to Receiver	Schwarzbeck	AK 9513	464	16 Sep 2024
465	Low Pass Filter DC-	Mini-Circuits	NLP-1200+	VUU01901402	14 Sep 2024

	1000 MHz				
480	Cable - Bulkhead to Amp	SRC Haverhill	157-3050360	480	18 Sep 2024
481	Cable - Bulkhead to Receiver	SRC Haverhill	151-3050787	481	18 Sep 2024
510	Barometer/Thermometer	Digi Sense	68000-49	170871375	4 Jan 2026
554	Precision SMA Cable	Fairview Microwave	SCE18060101-400CM	554	18 Sep 2024
555	Rhode & Schwarz Receiver (Firmware Version : 3.10 SP1)	Rhode & Schwarz	ESW 44	101893	28 Jun 2025
578	DC Power Supply 0 - 60 V, 0 - 15 A	HP	6274B	2537A-08192	Not Required
87	Uninterruptible Power Supply	Falcon Electric	ED2000-1/2LC	F3471 02/01	Cal when used
CC05	Confidence Check	MiCOM	CC05	None	11 Nov 2024

7.2. Conducted 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
#3 SA	MiTest Box to SA	Fairview Microwave	SCA1814-0101-72	#3 SA	26 Oct 2024
#3P1	EUT to MiTest box port 1	Fairview Microwave	SCA1814-0101-72	#3P1	26 Oct 2024
#3P2	EUT to MiTest box port 2	Fairview Microwave	SCA1814-0101-72	#3P2	26 Oct 2024
#3P3	EUT to MiTest box port 3	Fairview Microwave	SCA1814-0101-72	#3P3	26 Oct 2024
#3P4	EUT to MiTest box port 4	Fairview Microwave	SCA1812-0101-72	#3P4	26 Oct 2024
249	Thermocouple; Resistance Thermometer	Thermotronics	GR2105-02	9340 #2	22 Mar 2025
266	10 Hz to 50GHz MXA Signal Analyzer	Keysight	N9020B	MY60110791	25 Jul 2025
285	DC Power Supply	Keysight	E36155A	MY63000156	4 Dec 2024
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	4 Dec 2024
442	USB Wideband Power Sensor	Boonton	55006	9181	12 Dec 2024

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 2024
494	USB Wideband Power Sensor	Boonton	55006	9726	12 Dec 2024
510	Barometer/Thermometer	Digi Sense	68000-49	170871375	4 Jan 2026
512	MiTest Cloud Solutions RF Test Box	MiCOM	2nd Gen	512	24 Oct 2024
516	USB Wideband Power Sensor	Boonton	RTP5006	10511	4 Dec 2024
555	Rhode & Schwarz Receiver (Firmware Version : 3.10 SP1)	Rhode & Schwarz	ESW 44	101893	28 Jun 2025
75	Environmental Chamber	Thermatron	SE-300-2-2	27946	20 Nov 2024

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. 20dB & 99% Bandwidth

Conducted Test Conditions for 20 dB and 99% Bandwidth			
Standard:	FCC CFR 47:15.247 ISED RSS-247	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	20 dB and 99 % Bandwidth	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	15.247 (a)(1)(i)/(ii) Section 5.1	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for 20 dB and 99% Bandwidth Measurement

The bandwidth at 20 dB and 99 % was measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency.

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 specified in this document.

Limits for 20 dB and 99% Bandwidth

(a) Operation under the provisions of this Section is limited to frequency hopping and digitally modulated intentional radiators that comply with the following provisions:

(1) Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

(i) For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

(ii) Frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies. The maximum 20 dB bandwidth of the hopping channel is 1 MHz. The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 30 second period.

Equipment Configuration for 20 dB 99% Bandwidth			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	100.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz) Port(s)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
902.3	0.129	--	--	--	0.129	0.129	0.5	-0.37
914.6	0.134	--	--	--	0.134	0.134	0.5	-0.37
926.9	0.135	--	--	--	0.135	0.135	0.5	-0.36

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				Maximum 99% Bandwidth (MHz)		
MHz	a	b	c	d			
902.3	0.118	--	--	--	0.118		
914.6	0.123	--	--	--	0.123		
926.9	0.125	--	--	--	0.125		

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).

Equipment Configuration for 20 dB 99% Bandwidth			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	10.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz) Port(s)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
902.2	0.021	--	--	--	0.021	0.021	0.5	-0.48
915.0	0.021	--	--	--	0.021	0.021	0.5	-0.48
927.8	0.021	--	--	--	0.021	0.021	0.5	-0.48

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				Maximum 99% Bandwidth (MHz)		
MHz	a	b	c	d			
902.2	0.020	--	--	--	0.020		
915.0	0.020	--	--	--	0.020		
927.8	0.020	--	--	--	0.020		

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).

Equipment Configuration for 20 dB 99% Bandwidth

Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz) Port(s)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
902.4	0.184	--	--	--	0.184	0.184	0.5	-0.32
915.2	0.184	--	--	--	0.184	0.184	0.5	-0.32
927.6	0.187	--	--	--	0.187	0.187	0.5	-0.31

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				Maximum 99% Bandwidth (MHz)		
MHz	a	b	c	d			
902.4	0.180	--	--	--	0.180		
915.2	0.184	--	--	--	0.184		
927.6	0.178	--	--	--	0.178		

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).

Equipment Configuration for 20 dB 99% Bandwidth

Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz) Port(s)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
902.4	0.310	--	--	--	0.310	0.310	0.5	-0.19
915.2	0.307	--	--	--	0.307	0.307	0.5	-0.19
927.6	0.307	--	--	--	0.307	0.307	0.5	-0.19

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				Maximum 99% Bandwidth (MHz)		
MHz	a	b	c	d			
902.4	0.283	--	--	--	0.283		
915.2	0.274	--	--	--	0.274		
927.6	0.282	--	--	--	0.282		

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).

Equipment Configuration for 20 dB 99% Bandwidth

Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	25.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz) Port(s)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
902.2	0.032	--	--	--	0.032	0.032	0.5	-0.47
915.0	0.032	--	--	--	0.032	0.032	0.5	-0.47
927.8	0.032	--	--	--	0.032	0.032	0.5	-0.47

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				Maximum 99% Bandwidth (MHz)		
MHz	a	b	c	d			
902.2	0.028	--	--	--	0.028		
915.0	0.029	--	--	--	0.029		
927.8	0.029	--	--	--	0.029		

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).

Equipment Configuration for 20 dB 99% Bandwidth			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz) Port(s)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
902.4	0.372	--	--	--	0.372	0.372	0.5	-0.13
915.2	0.375	--	--	--	0.375	0.375	0.5	-0.13
927.6	0.369	--	--	--	0.369	0.369	0.5	-0.13

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				Maximum 99% Bandwidth (MHz)		
MHz	a	b	c	d			
902.4	0.323	--	--	--	0.323		
915.2	0.330	--	--	--	0.330		
927.6	0.319	--	--	--	0.319		

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).

Equipment Configuration for 20 dB 99% Bandwidth			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz) Port(s)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
902.4	0.378	--	--	--	0.378	0.378	0.5	-0.12
915.2	0.371	--	--	--	0.371	0.371	0.5	-0.13
927.6	0.371	--	--	--	0.371	0.371	0.5	-0.13

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				Maximum 99% Bandwidth (MHz)		
MHz	a	b	c	d			
902.4	0.326	--	--	--	0.326		
915.2	0.320	--	--	--	0.320		
927.6	0.325	--	--	--	0.325		

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).

Equipment Configuration for 20 dB 99% Bandwidth

Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	37.50 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz) Port(s)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
903.0	0.077	--	--	--	0.077	0.077	0.5	-0.42
915.0	0.080	--	--	--	0.080	0.080	0.5	-0.42
926.8	0.079	--	--	--	0.079	0.079	0.5	-0.42

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				Maximum 99% Bandwidth (MHz)		
MHz	a	b	c	d			
903.0	0.072	--	--	--	0.072		
915.0	0.074	--	--	--	0.074		
926.8	0.075	--	--	--	0.075		

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).

Equipment Configuration for 20 dB 99% Bandwidth

Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OOK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 1		

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz) Port(s)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
903.0	0.100	--	--	--	0.100	0.100	0.5	-0.40
915.0	0.101	--	--	--	0.101	0.101	0.5	-0.40
926.8	0.101	--	--	--	0.101	0.101	0.5	-0.40

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				Maximum 99% Bandwidth (MHz)		
MHz	a	b	c	d			
903.0	0.126	--	--	--	0.126		
915.0	0.126	--	--	--	0.126		
926.8	0.127	--	--	--	0.127		

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).

Equipment Configuration for 20 dB 99% Bandwidth

Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OOK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz) Port(s)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
903.0	0.103	--	--	--	0.103	0.103	0.5	-0.40
915.0	0.104	--	--	--	0.104	0.104	0.5	-0.40
926.8	0.101	--	--	--	0.101	0.101	0.5	-0.40

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				Maximum 99% Bandwidth (MHz)		
MHz	a	b	c	d			
903.0	0.167	--	--	--	0.167		
915.0	0.168	--	--	--	0.168		
926.8	0.172	--	--	--	0.172		

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).

9.2. Frequency Hopping Tests

Conducted Test Conditions for Frequency Hopping Measurements			
Standard:	FCC CFR 47:15.247 ISED RSS-247	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Frequency Hopping Tests	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	15.247 (a)(1)(i)/(ii) Section 5.1	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References, FCC Public Notice DA 00-705		

Test Procedure for Frequency Hopping Measurements

These tests cover the following measurements:

i) channel separation
ii) channel occupancy
iii) dwell time
iv) number of hopping frequencies

Frequency hopping testing was measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency or hopping mode.

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 specified in this document.

Limits for Frequency Hopping Measurements

(a) Operation under the provisions of this Section is limited to frequency hopping and digitally modulated intentional radiators that comply with the following provisions:

(1) Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

(i) For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

(ii) Frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies. The maximum 20 dB bandwidth of the hopping channel is 1 MHz. The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 30 second period.

(iii) Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

9.2.1. Number of Hopping Channels

Equipment Configuration for Number of Hopping Channels			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	100.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Frequency Range (MHz)	Number of Hopping Channels	Limit	Pass / Fail
902.0-910.0	25	--	--
910.0-920.0	34	--	--
920.0-928.0	24	--	--
Total number of Hops	**83**	**50**	**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).

Equipment Configuration for Number of Hopping Channels			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	10.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Frequency Range (MHz)	Number of Hopping Channels	Limit	Pass / Fail
902.0-928.0	512	--	--
Total number of Hops	**512**	**50**	**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).

Equipment Configuration for Number of Hopping Channels			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Frequency Range (MHz)	Number of Hopping Channels	Limit	Pass / Fail
902.0-910.0	19	--	--
910.0-920.0	25	--	--
920.0-928.0	20	--	--
Total number of Hops	**64**	**50**	**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).

Equipment Configuration for Number of Hopping Channels			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Frequency Range (MHz)	Number of Hopping Channels	Limit	Pass / Fail
902.0-910.0	19	--	--
910.0-920.0	25	--	--
920.0-928.0	20	--	--
Total number of Hops	**64**	**50**	**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).

Equipment Configuration for Number of Hopping Channels			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	25.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Frequency Range (MHz)	Number of Hopping Channels	Limit	Pass / Fail
902.0-906.0	512	--	--
Total number of Hops	**512**	**50**	**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 Number of Hopping Channels			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Frequency Range (MHz)	Number of Hopping Channels	Limit	Pass / Fail
902.0-910.0	19	--	--
910.0-920.0	25	--	--
920.0-928.0	20	--	--
Total number of Hops	**64**	**50**	**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).

Equipment Configuration for Number of Hopping Channels			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	37.50 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Frequency Range (MHz)	Number of Hopping Channels	Limit	Pass / Fail
902.0-910.0	35	--	--
910.0-920.0	50	--	--
920.0-928.0	35	--	--
Total number of Hops	**120**	**50**	**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).

Equipment Configuration for Number of Hopping Channels			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OOK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Frequency Range (MHz)	Number of Hopping Channels	Limit	Pass / Fail
902.0-910.0	35	--	--
910.0-920.0	50	--	--
920.0-928.0	35	--	--
Total number of Hops	**120**	**50**	**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).

Equipment Configuration for Number of Hopping Channels			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OOK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 1		

Test Measurement Results

Frequency Range (MHz)	Number of Hopping Channels	Limit	Pass / Fail
902.0-910.0	35	--	--
910.0-920.0	50	--	--
920.0-928.0	35	--	--
Total number of Hops	**120**	**50**	**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).

9.2.2. Channel Separation

Equipment Configuration for Channel Separation

Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	100.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Center Frequency (MHz)	Chan Separation (KHz)	Limit (MHz)	Pass / Fail
914.6	308.617	0.135	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).

Equipment Configuration for Channel Separation			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	10.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Center Frequency (MHz)	Chan Separation (KHz)	Limit (MHz)	Pass / Fail
915.0	50.100	0.025	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).

Equipment Configuration for Channel Separation			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Center Frequency (MHz)	Chan Separation (KHz)	Limit (MHz)	Pass / Fail
915.2	400.802	0.187	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).

Equipment Configuration for Channel Separation			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Center Frequency (MHz)	Chan Separation (KHz)	Limit (MHz)	Pass / Fail
915.2	396.794	0.310	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).

Equipment Configuration for Channel Separation			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	25.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Center Frequency (MHz)	Chan Separation (KHz)	Limit (MHz)	Pass / Fail
915.0	50.100	0.032	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).

Equipment Configuration for Channel Separation			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Center Frequency (MHz)	Chan Separation (KHz)	Limit (MHz)	Pass / Fail
915.2	401.200	0.375	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).

Equipment Configuration for Channel Separation			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Center Frequency (MHz)	Chan Separation (KHz)	Limit (MHz)	Pass / Fail
915.2	402.806	0.378	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).

Equipment Configuration for Channel Separation			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	37.50 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Center Frequency (MHz)	Chan Separation (KHz)	Limit (MHz)	Pass / Fail
915.0	200.401	0.080	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).

Equipment Configuration for Channel Separation			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OOK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 1		

Test Measurement Results

Center Frequency (MHz)	Chan Separation (KHz)	Limit (MHz)	Pass / Fail
915.0	201.403	0.101	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).

Equipment Configuration for Channel Separation			
Variant:	ERW-1350-001	**Antenna:**	Not Applicable
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OOK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	100.0	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Center Frequency (MHz)	Chan Separation (KHz)	Limit (MHz)	Pass / Fail
915.0	199.399	0.104	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).

9.3. Output Power

Conducted Test Conditions for Fundamental Emission Output Power			
Standard:	FCC CFR 47:15.247 ISED RSS-247	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Output Power	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	15.247 (a)(1), (b)(1)/(2)/(3) Section 5.4	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Fundamental Emission Output Power Measurement

In the case of average power measurements an average power sensor was utilized.

For peak power measurements the spectrum analyzer built-in power function was used to integrate peak power over the 20 dB bandwidth.

Testing was performed under ambient conditions, nominal voltage. Where the device operated with multiple antenna ports i.e. MIMO device, each port was measured, summed (Σ) and reported.

Test configuration and setup used for the measurement was per the Conducted Test Set-up 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 for Fundamental Emission Output Power

(a) Operation under the provisions of this Section is limited to frequency hopping and digitally modulated intentional radiators that comply with the following provisions:

(1) Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

(b) The maximum peak conducted output power of the intentional radiator shall not exceed the following for frequency hopping systems:

(1) For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

(2) For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels, as permitted under paragraph (a)(1)(i) of this section.

(3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time

intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

Equipment Configuration for Output Power Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	100.00 KBit/s	**Antenna Gain (dBi):**	2.23
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
902.3	26.07	--	--	--	26.07	30.00	-3.93	27.00
914.6	26.60	--	--	--	26.60	30.00	-3.40	27.00
926.9	26.30	--	--	--	26.30	30.00	-3.70	27.00

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

The above measurements are true pulse readings and therefore a Duty Cycling correction factor is not required.

Equipment Configuration for Output Power Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	10.00 KBit/s	**Antenna Gain (dBi):**	2.23
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
902.2	25.89	--	--	--	25.89	30.00	-4.11	27.00
915.0	26.48	--	--	--	26.48	30.00	-3.52	27.00
927.8	26.15	--	--	--	26.15	30.00	-3.85	27.00

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

The above measurements are true pulse readings and therefore a Duty Cycling correction factor is not required.

Equipment Configuration for Output Power Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	2.23
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
902.4	15.25	--	--	--	15.25	30.00	-14.75	16.00
915.2	15.27	--	--	--	15.27	30.00	-14.73	16.00
927.6	15.08	--	--	--	15.08	30.00	-14.92	16.00

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

The above measurements are true pulse readings and therefore a Duty Cycling correction factor is not required.

Equipment Configuration for Output Power Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	2.23
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
902.4	25.95	--	--	--	25.95	30.00	-4.05	27.00
915.2	26.71	--	--	--	26.71	30.00	-3.29	27.00
927.6	26.30	--	--	--	26.30	30.00	-3.70	27.00

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

The above measurements are true pulse readings and therefore a Duty Cycling correction factor is not required.

Equipment Configuration for Output Power Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	25.00 KBit/s	**Antenna Gain (dBi):**	2.23
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
902.2	25.79	--	--	--	25.79	30.00	-4.21	27.00
915.0	26.56	--	--	--	26.56	30.00	-3.44	27.00
927.8	26.12	--	--	--	26.12	30.00	-3.88	27.00

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

The above measurements are true pulse readings and therefore a Duty Cycling correction factor is not required.

Equipment Configuration for Output Power Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	2.23
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
902.4	15.17	--	--	--	15.17	30.00	-14.83	16.00
915.2	15.26	--	--	--	15.26	30.00	-14.74	16.00
927.6	15.06	--	--	--	15.06	30.00	-14.94	16.00

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

The above measurements are true pulse readings and therefore a Duty Cycling correction factor is not required.

Equipment Configuration for Output Power Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	2.23
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
902.4	25.85	--	--	--	25.85	30.00	-4.15	27.00
915.2	26.63	--	--	--	26.63	30.00	-3.37	27.00
927.6	26.24	--	--	--	26.24	30.00	-3.76	27.00

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

The above measurements are true pulse readings and therefore a Duty Cycling correction factor is not required.

Equipment Configuration for Output Power Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	37.50 KBit/s	**Antenna Gain (dBi):**	2.23
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
903.0	25.72	--	--	--	25.72	30.00	-4.28	27.00
915.0	26.40	--	--	--	26.40	30.00	-3.60	27.00
926.8	26.18	--	--	--	26.18	30.00	-3.82	27.00

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

The above measurements are true pulse readings and therefore a Duty Cycling correction factor is not required.

Equipment Configuration for Output Power Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	2.23
Modulation:	OOK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 1		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
903.0	6.34	--	--	--	6.34	30.00	-23.66	10.00
915.0	5.87	--	--	--	5.87	30.00	-24.13	10.00
926.8	5.71	--	--	--	5.71	30.00	-24.29	10.00

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

The above measurements are true pulse readings and therefore a Duty Cycling correction factor is not required.

Equipment Configuration for Output Power Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	2.23
Modulation:	OOK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
903.0	23.98	--	--	--	23.98	30.00	-6.02	27.00
915.0	23.79	--	--	--	23.79	30.00	-6.21	27.00
926.8	23.68	--	--	--	23.68	30.00	-6.32	27.00

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

The above measurements are true pulse readings and therefore a Duty Cycling correction factor is not required.

9.4. Power Spectral Density

Equipment Configuration for Power Spectral Density - Peak

Variant:	ERG-5600-501	**Duty Cycle (%):**	99.0
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	2.23
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/3KHz)				Amplitude Summation	Limit	Margin
MHz	a	b	c	d	dBm/3KHz	dBm/3KHz	dB
902.4	7.610	--	--	--	7.610	8.0	-0.4
915.2	6.146	--	--	--	6.146	8.0	-1.9
927.6	5.468	--	--	--	5.468	8.0	-2.5

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).

Equipment Configuration for Power Spectral Density - Peak			
Variant:	ERG-5600-501	**Duty Cycle (%):**	99.0
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	2.23
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/3KHz)				Amplitude Summation	Limit	Margin
MHz	a	b	c	d	dBm/3KHz	dBm/3KHz	dB
902.4	5.806	--	--	--	5.806	8.0	-2.2
915.2	5.660	--	--	--	5.660	8.0	-2.3
927.6	5.525	--	--	--	5.525	8.0	-2.5

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).

9.5. Emissions

9.5.1. Conducted Emissions

Conducted Test Conditions for Transmitter Conducted Spurious and Band-Edge Emissions			
Standard:	FCC CFR 47:15.247 ISED RSS-247	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Transmitter Conducted Spurious and Band-Edge Emissions	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	15.247 (d) Section 5.5	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Transmitter Conducted Spurious and Band-Edge Emissions Measurement

Transmitter Conducted Spurious and Band-Edge emissions were measured at a limit of 30 dBc (average detector) or 20 dBc (peak detector) below the highest in-band spectral density measured with a spectrum analyzer connected to the antenna terminal. Measurements were made while EUT was operating in transmit mode of operation at the appropriate centre frequency closest to the band-edge. Emissions were maximized during the measurement and limits derived from the peak spectral power and drawn on each plot.

Where the device operated with multiple antenna ports i.e. MIMO device, each port was measured separately. Testing was performed under ambient conditions at nominal voltage only.

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

Limits Transmitter Conducted Spurious and Band-Edge Emissions

(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

9.5.1.1. Conducted Unwanted Spurious Emissions

Equipment Configuration for Unwanted Emissions Peak

Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	100.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Frequency Range	Unwanted Emissions Peak (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
902.3	30.0 - 10000.0	-28.172	6.30	--	--	--	--	--	--
914.6	30.0 - 10000.0	-28.650	6.33	--	--	--	--	--	--
926.9	30.0 - 10000.0	-26.883	5.95	--	--	--	--	--	--

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Unwanted Emissions Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	10.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Frequency Range	Unwanted Emissions Peak (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
902.2	30.0 - 10000.0	-27.672	6.17	--	--	--	--	--	--
915.0	30.0 - 10000.0	-28.374	6.30	--	--	--	--	--	--
927.8	30.0 - 10000.0	-26.584	6.03	--	--	--	--	--	--

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Unwanted Emissions Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Test Frequency	Frequency Range	Unwanted Emissions Peak (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
902.4	30.0 - 10000.0	-31.792	-4.87	--	--	--	--	--	--
915.2	30.0 - 10000.0	-31.538	-5.00	--	--	--	--	--	--
927.6	30.0 - 10000.0	-30.723	-5.08	--	--	--	--	--	--

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

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Equipment Configuration for Unwanted Emissions Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Frequency Range	Unwanted Emissions Peak (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
902.4	30.0 - 10000.0	-28.526	6.37	--	--	--	--	--	--
915.2	30.0 - 10000.0	-28.520	6.34	--	--	--	--	--	--
927.6	30.0 - 10000.0	-27.471	6.21	--	--	--	--	--	--

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Unwanted Emissions Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	25.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Frequency Range	Unwanted Emissions Peak (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
902.2	30.0 - 10000.0	-27.570	6.22	--	--	--	--	--	--
915.0	30.0 - 10000.0	-27.993	6.21	--	--	--	--	--	--
927.8	30.0 - 10000.0	-27.111	5.87	--	--	--	--	--	--

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Unwanted Emissions Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Test Frequency	Frequency Range	Unwanted Emissions Peak (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
902.4	30.0 - 10000.0	-31.746	-5.14	--	--	--	--	--	--
915.2	30.0 - 10000.0	-31.790	-5.00	--	--	--	--	--	--
927.6	30.0 - 100000.0	-30.659	-5.34	--	--	--	--	--	--

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Unwanted Emissions Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Frequency Range	Unwanted Emissions Peak (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
902.4	30.0 - 10000.0	-28.369	6.39	--	--	--	--	--	--
915.2	30.0 - 10000.0	-29.051	6.45	--	--	--	--	--	--
927.6	30.0 - 10000.0	-27.462	6.14	--	--	--	--	--	--

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Unwanted Emissions Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	37.50 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Frequency Range	Unwanted Emissions Peak (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
903.0	30.0 - 10000.0	-28.154	6.19	--	--	--	--	--	--
915.0	30.0 - 10000.0	-27.794	6.30	--	--	--	--	--	--
926.8	30.0 - 10000.0	-27.294	5.77	--	--	--	--	--	--

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Unwanted Emissions Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OOK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 1		

Test Measurement Results

Test Frequency	Frequency Range	Unwanted Emissions Peak (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
903.0	30.0 - 10000.0	-31.674	-12.59	--	--	--	--	--	--
915.0	30.0 - 10000.0	-31.510	-10.89	--	--	--	--	--	--
926.8	30.0 - 10000.0	-31.188	-11.50	--	--	--	--	--	--

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Unwanted Emissions Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OOK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Test Frequency	Frequency Range	Unwanted Emissions Peak (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
903.0	30.0 - 10000.0	-28.756	6.57	--	--	--	--	--	--
915.0	30.0 - 10000.0	-28.986	6.62	--	--	--	--	--	--
926.8	30.0 - 10000.0	-27.505	6.04	--	--	--	--	--	--

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz ?2.37 dB, > 40 GHz ?4.6 dB

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

9.5.1.2. Conducted Band-Edge Emissions

Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Peak

Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	100.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	902.3 MHz
Band-Edge Frequency:	902.0 MHz
Test Frequency Range:	875.0 - 905.0 MHz

Port(s)	Band-Edge Markers and Limit			Revised Limit		Margin
	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-7.96	7.81	902.10	--	--	-0.114

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	10.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	902.2 MHz					
Band-Edge Frequency:	902.0 MHz					
Test Frequency Range:	875.0 - 905.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M1 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	(MHz)
a	0.81	7.16	902.00	--	--	-0.010

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Channel Frequency:	902.4 MHz
Band-Edge Frequency:	902.0 MHz
Test Frequency Range:	875.0 - 905.0 MHz

Port(s)	Band-Edge Markers and Limit			Revised Limit		Margin
	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-10.80	-3.62	902.00	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	902.4 MHz
Band-Edge Frequency:	902.0 MHz
Test Frequency Range:	875.0 - 905.0 MHz

Port(s)	Band-Edge Markers and Limit			Revised Limit		Margin
	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-14.14	6.40	902.10	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	25.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	902.2 MHz
Band-Edge Frequency:	902.0 MHz
Test Frequency Range:	875.0 - 905.0 MHz

Port(s)	Band-Edge Markers and Limit			Revised Limit		Margin
	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	0.75	6.64	902.00	--	--	-0.010

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Channel Frequency:	902.4 MHz
Band-Edge Frequency:	902.0 MHz
Test Frequency Range:	875.0 - 905.0 MHz

Port(s)	Band-Edge Markers and Limit			Revised Limit		Margin
	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-8.54	-5.50	902.20	--	--	-0.200

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	902.4 MHz					
Band-Edge Frequency:	902.0 MHz					
Test Frequency Range:	875.0 - 905.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M1 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-7.43	6.77	902.10	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

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Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	37.50 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	903.0 MHz					
Band-Edge Frequency:	902.0 MHz					
Test Frequency Range:	875.0 - 905.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M1 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-32.67	7.09	902.80	--	--	-0.800

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OOK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 1		

Test Measurement Results

Channel Frequency:	903.0 MHz					
Band-Edge Frequency:	902.0 MHz					
Test Frequency Range:	875.0 - 905.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M1 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-31.84	-10.60	902.80	--	--	-0.800

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OOK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	903.0 MHz					
Band-Edge Frequency:	902.0 MHz					
Test Frequency Range:	875.0 - 905.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M1 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-9.42	6.90	903.10	--	--	-1.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz ?2.37 dB, > 40 GHz ?4.6 dB

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	100.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	902.3 MHz					
Band-Edge Frequency:	902.0 MHz					
Test Frequency Range:	875.0 - 905.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M1 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-9.54	6.60	902.10	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

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Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	10.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	902.2 MHz					
Band-Edge Frequency:	902.0 MHz					
Test Frequency Range:	875.0 - 905.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M1 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	1.19	6.54	902.00	--	--	-0.030

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

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Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Channel Frequency:	902.4 MHz					
Band-Edge Frequency:	902.0 MHz					
Test Frequency Range:	875.0 - 905.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M1 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-27.62	-4.59	902.20	--	--	-0.200

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

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Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	902.4 MHz
Band-Edge Frequency:	902.0 MHz
Test Frequency Range:	875.0 - 905.0 MHz

Port(s)	Band-Edge Markers and Limit			Revised Limit		Margin
	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-14.19	6.62	902.10	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Channel Frequency:	902.4 MHz
Band-Edge Frequency:	902.0 MHz
Test Frequency Range:	875.0 - 905.0 MHz

Port(s)	Band-Edge Markers and Limit			Revised Limit		Margin
	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-19.14	-4.60	902.10	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	902.4 MHz
Band-Edge Frequency:	902.0 MHz
Test Frequency Range:	875.0 - 905.0 MHz

Port(s)	Band-Edge Markers and Limit			Revised Limit		Margin
	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-7.80	6.62	902.10	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	37.50 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power level 3		

Test Measurement Results

Channel Frequency:	903.0 MHz
Band-Edge Frequency:	902.0 MHz
Test Frequency Range:	875.0 - 905.0 MHz

Port(s)	Band-Edge Markers and Limit			Revised Limit		Margin
	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-30.89	6.49	902.80	--	--	-0.800

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OOK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 1		

Test Measurement Results

Channel Frequency:	903.0 MHz					
Band-Edge Frequency:	902.0 MHz					
Test Frequency Range:	875.0 - 905.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M1 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-31.04	-10.47	902.80	--	--	-0.800

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OOK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	903.0 MHz					
Band-Edge Frequency:	902.0 MHz					
Test Frequency Range:	875.0 - 905.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M1 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-9.03	6.87	902.70	--	--	-0.700

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz ?2.37 dB, > 40 GHz ?4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	100.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	926.9 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	925.0 - 950.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-33.76	6.48	927.10	--	--	-0.900

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

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Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	10.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	927.8 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	925.0 - 950.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-1.58	6.32	927.90	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Channel Frequency:	927.6 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	925.0 - 950.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-21.97	-4.56	927.80	--	--	-0.200

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	927.6 MHz
Band-Edge Frequency:	928.0 MHz
Test Frequency Range:	925.0 - 950.0 MHz

Port(s)	Band-Edge Markers and Limit			Revised Limit		Margin
	M3 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-10.82	6.38	927.90	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	25.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	927.8 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	925.0 - 950.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-2.22	6.39	927.90	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Channel Frequency:	927.6 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	925.0 - 950.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-10.99	-3.33	927.91	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	927.6 MHz
Band-Edge Frequency:	928.0 MHz
Test Frequency Range:	925.0 - 950.0 MHz

Port(s)	Band-Edge Markers and Limit			Revised Limit		Margin
	M3 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-5.67	6.33	927.90	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	37.50 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	926.8 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	925.0 - 950.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-33.18	6.38	927.00	--	--	-1.000

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OOK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 1		

Test Measurement Results

Channel Frequency:	926.8 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	925.0 - 950.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-36.00	-10.74	927.00	--	--	-1.000

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OOK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	926.8 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	925.0 - 950.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-10.10	6.62	927.10	--	--	-0.900

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz ?2.37 dB, > 40 GHz ?4.6 dB

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

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Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	100.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	926.9 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	925.0 - 950.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-32.02	6.21	927.10	--	--	-0.900

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	10.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	927.8 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	925.0 - 950.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-5.14	6.09	927.90	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Channel Frequency:	927.6 MHz
Band-Edge Frequency:	928.0 MHz
Test Frequency Range:	925.0 - 950.0 MHz

Port(s)	Band-Edge Markers and Limit			Revised Limit		Margin
	M3 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-25.25	-4.88	927.80	--	--	-0.200

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	150.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	927.6 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	925.0 - 950.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-13.40	6.25	927.90	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	25.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	927.8 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	925.0 - 950.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-4.60	6.09	927.90	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 2		

Test Measurement Results

Channel Frequency:	927.6 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	925.0 - 950.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-18.30	-4.89	927.90	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	300.00 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	927.6 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	925.0 - 950.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-6.62	6.24	927.90	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	37.50 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	GFSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	926.8 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	925.0 - 950.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-7.23	6.08	927.90	--	--	-0.100

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OOK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 1		

Test Measurement Results

Channel Frequency:	926.8 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	925.0 - 950.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-34.23	-11.10	927.00	--	--	-1.000

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz 2.37 dB, > 40 GHz 4.6 dB

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Peak			
Variant:	ERW-1350-001	**Duty Cycle (%):**	100.0
Data Rate:	16.38 KBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OOK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	BQ
Engineering Test Notes:	Power Level 3		

Test Measurement Results

Channel Frequency:	926.8 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	925.0 - 950.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-9.97	6.52	927.10	--	--	-0.900

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz ?2.37 dB, > 40 GHz ?4.6 dB

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

9.5.2. Radiated Emissions

Frequency Band			
MHz	**MHz**	**MHz**	**GHz**
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

(b) Except as provided in paragraphs (d) and (e) of this section, the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.

(c) Except as provided in paragraphs (d) and (e) of this section, regardless of the field strength limits specified elsewhere in this subpart, the provisions of this section apply to emissions from any intentional radiator.

(d) The following devices are exempt from the requirements of this section:

(1) Swept frequency field disturbance sensors operating between 1.705 and 37 MHz provided their emissions only sweep through the bands listed in paragraph (a) of this section, the sweep is never stopped with the fundamental emission within the bands listed in paragraph (a) of this section, and the fundamental emission is outside of the bands listed in paragraph (a) of this section more than 99% of the time the device is actively transmitting, without compensation for duty cycle.

(2) Transmitters used to detect buried electronic markers at 101.4 kHz which are employed by telephone companies.

(3) Cable locating equipment operated pursuant to §15.213.

(4) Any equipment operated under the provisions of §15.253, 15.255, and 15.256 in the frequency band 75-85 GHz, or §15.257 of this part.

(5) Biomedical telemetry devices operating under the provisions of §15.242 of this part are not subject to the restricted band 608-614 MHz but are subject to compliance within the other restricted bands.

(6) Transmitters operating under the provisions of subparts D or F of this part.

(7) Devices operated pursuant to §15.225 are exempt from complying with this section for the 13.36-13.41 MHz band only.

(8) Devices operated in the 24.075-24.175 GHz band under §15.245 are exempt from complying with the requirements of this section for the 48.15-48.35 GHz and 72.225-72.525 GHz bands only, and shall not exceed the limits specified in §15.245(b).

(9) Devices operated in the 24.0-24.25 GHz band under §15.249 are exempt from complying with the requirements of this section for the 48.0-48.5 GHz and 72.0-72.75 GHz bands only, and shall not exceed the limits specified in §15.249(a).

(e) Harmonic emissions appearing in the restricted bands above 17.7 GHz from field disturbance sensors operating under the provisions of §15.245 shall not exceed the limits specified in §15.245(b).

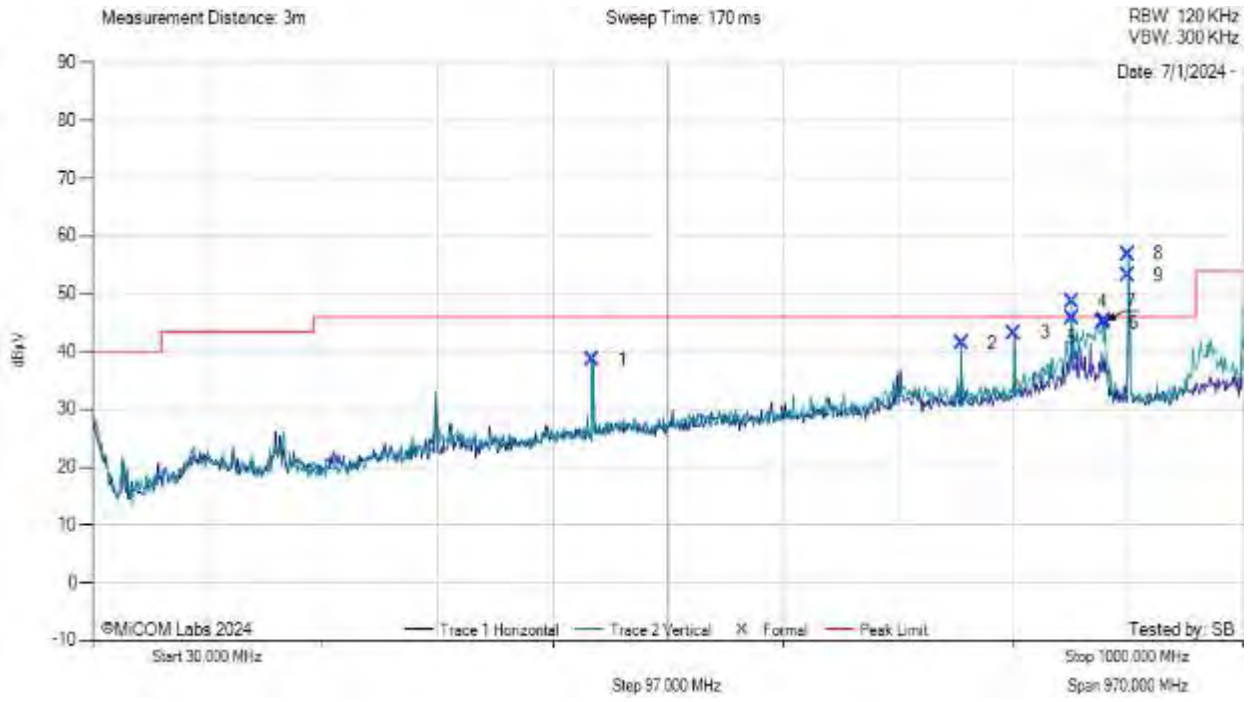
9.5.2.3. TX Spurious Emissions 30MHz to 1GHz

9.5.2.3.1. OOK Power Level 3 Integral Antenna

Equipment Configuration for 30 MHZ TO 1 GHZ			
Antenna:	Integral	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OOK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	903.00	**Data Rate:**	16.384kbps
Power Setting:	Power Level 3	**Tested By:**	SB

Test Measurement Results

30 MHz to 1 GHz



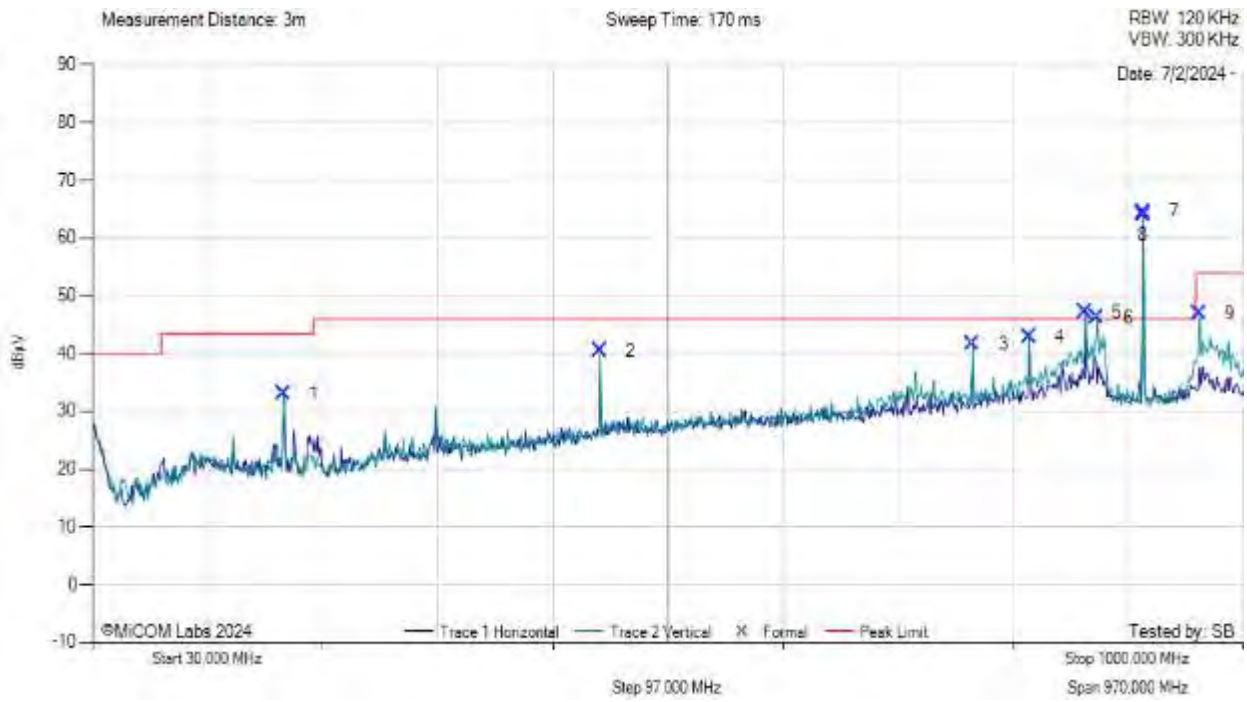
30.00 - 1000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	451.51	40.72	5.53	-7.77	38.49	NRB	Vertical	100	175	--	--	Pass
2	762.35	38.67	6.50	-3.72	41.45	NRB	Vertical	199	119	--	--	Pass
3	806.97	39.53	6.65	-2.92	43.26	NRB	Vertical	199	59	--	--	Pass
4	855.47	44.21	6.78	-2.36	48.63	NRB	Vertical	99	29	--	--	Pass
5	855.47	41.46	6.78	-2.36	45.89	NRB	Horizontal	99	330	--	--	Pass
6	881.66	40.37	6.88	-2.23	45.02	NRB	Vertical	199	239	--	--	Pass
7	883.60	40.63	6.88	-2.24	45.26	NRB	Vertical	199	149	--	--	Pass
8	903.00	51.80	6.93	28.70	56.88	Fundamental	Vertical	199	299	--	--	Pass
9	903.00	48.11	6.93	28.70	53.19	Fundamental	Horizontal	99	60	--	--	Pass
Test Notes: SN: 2935662-15, OOK, 903 MHz, 16.38 kbps, Power Level 3												

Non-Restrictive Band (NRB)

Equipment Configuration for 30 MHZ TO 1 GHZ			
Antenna:	Integral	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OOK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.00	**Data Rate:**	16.384kbps
Power Setting:	Power Level 3	**Tested By:**	SB

Test Measurement Results

30 MHz to 1 GHz



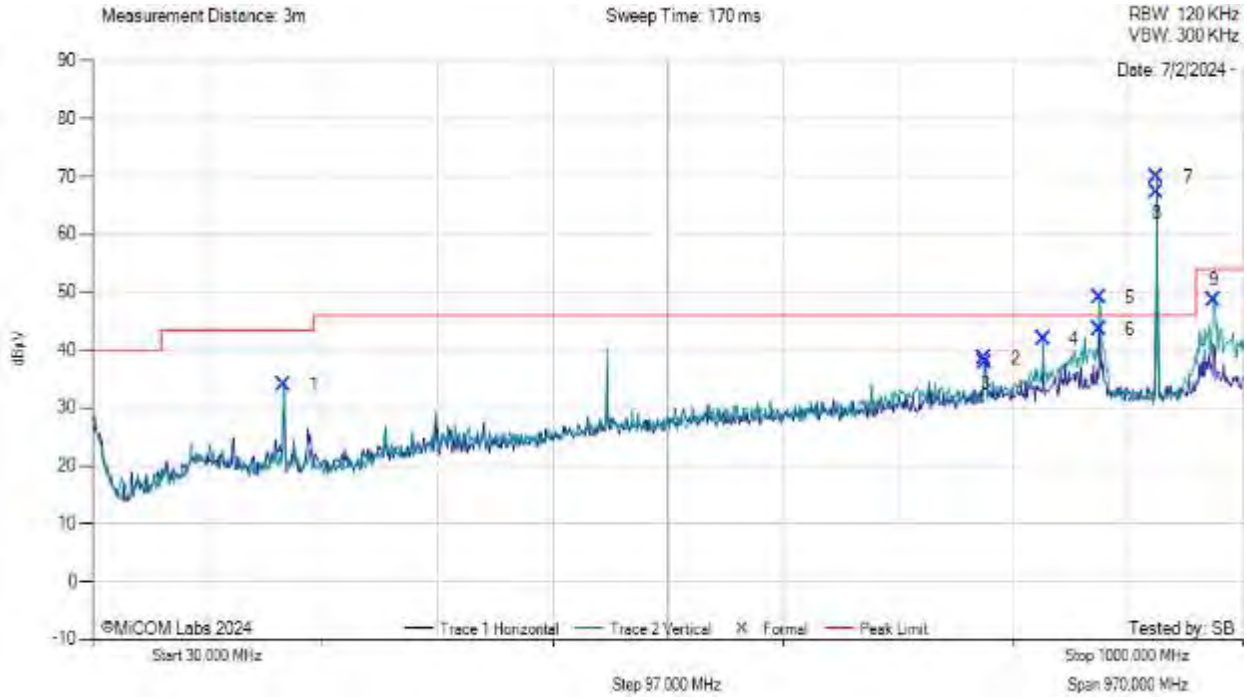
30.00 - 1000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	191.02	42.09	4.55	-13.60	33.04	NRB	Vertical	100	0	43.5	-10.5	Pass
2	457.77	42.33	5.56	-7.49	40.40	NRB	Vertical	199	330	--	--	Pass
3	772.05	38.72	6.57	-3.62	41.67	NRB	Vertical	199	270	--	--	Pass
4	819.58	38.78	6.69	-2.67	42.80	NRB	Vertical	199	90	--	--	Pass
5	867.11	42.57	6.82	-2.18	47.21	NRB	Vertical	99	119	--	--	Pass
6	876.81	41.60	6.85	-2.20	46.25	NRB	Vertical	199	149	--	--	Pass
7	915.61	55.79	6.98	-1.75	64.52	Fundamental	Horizontal	199	149	--	--	Pass
8	915.61	58.31	6.98	-1.75	64.04	Fundamental	Vertical	99	239	--	--	Pass
9	962.98	40.89	7.11	-1.09	46.91	MaxQP	Vertical	100	207	54.0	-7.1	Pass
Test Notes: SN: 2935662-15, OOK, 915 MHz, 16.38 kbps, Power Level 3												

Non Restrictive Band (NRB)

Equipment Configuration for 30 MHZ TO 1 GHZ			
Antenna:	Integral	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OOK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	926.80	**Data Rate:**	16.384kbps
Power Setting:	Power Level 3	**Tested By:**	SB

Test Measurement Results

30 MHz to 1 GHz



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	191.02	43.06	4.55	-13.60	34.00	NRB	Vertical	101	0	--	--	Pass
2	781.75	35.19	6.57	-3.27	38.49	NRB	Vertical	199	29	--	--	Pass
3	782.72	34.54	6.57	-3.25	37.86	NRB	Horizontal	199	300	--	--	Pass
4	831.22	37.73	6.72	-2.57	41.88	NRB	Vertical	199	149	--	--	Pass
5	878.75	44.42	6.86	-2.20	49.09	NRB	Vertical	199	149	--	--	Pass
6	878.75	38.93	6.86	-2.20	43.60	NRB	Horizontal	99	180	--	--	Pass
7	927.25	64.52	7.00	-1.55	69.98	Fundamental	Vertical	101	0	--	--	Pass
8	927.25	61.88	7.00	-1.55	67.34	Fundamental	Horizontal	99	30	--	--	Pass
9	974.78	42.53	7.16	-1.09	48.60	MaxQP	Vertical	128	33	54.0	-5.4	Pass
Test Notes: SN: 2935662-15, OOK, 926.8 MHz, 16.38 kbps, Power Level 3												

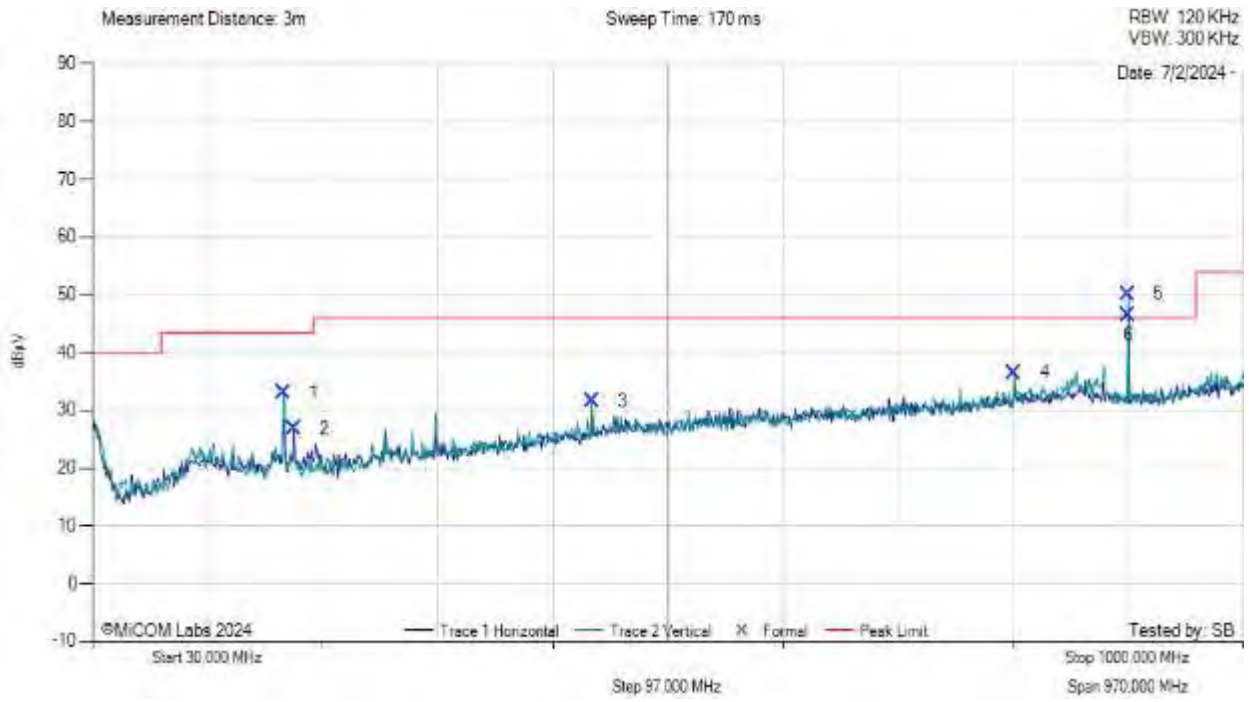
Non Restrictive Band (NRB)

9.5.2.3.2. GFSK Power Level 2 Integral Antenna

Equipment Configuration for 30 MHZ TO 1 GHZ			
Antenna:	Integral	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	GFSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.40	**Data Rate:**	300 kbps
Power Setting:	Power Level 2	**Tested By:**	SB

Test Measurement Results

30 MHz to 1 GHz



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	191.02	42.11	4.55	-13.60	33.05	NRB	Vertical	100	0	--	--	Pass
2	199.75	34.41	4.59	-12.16	26.84	NRB	Horizontal	100	30	--	--	Pass
3	450.98	33.85	5.53	-7.79	31.59	NRB	Vertical	199	330	--	--	Pass
4	806.97	32.77	6.65	-2.92	36.50	NRB	Vertical	199	29	--	--	Pass
5	903.00	45.07	6.93	28.70	50.15	Fundamental	Vertical	199	299	--	--	Pass
6	903.00	41.47	6.93	28.70	46.55	Fundamental	Horizontal	100	180	--	--	Pass

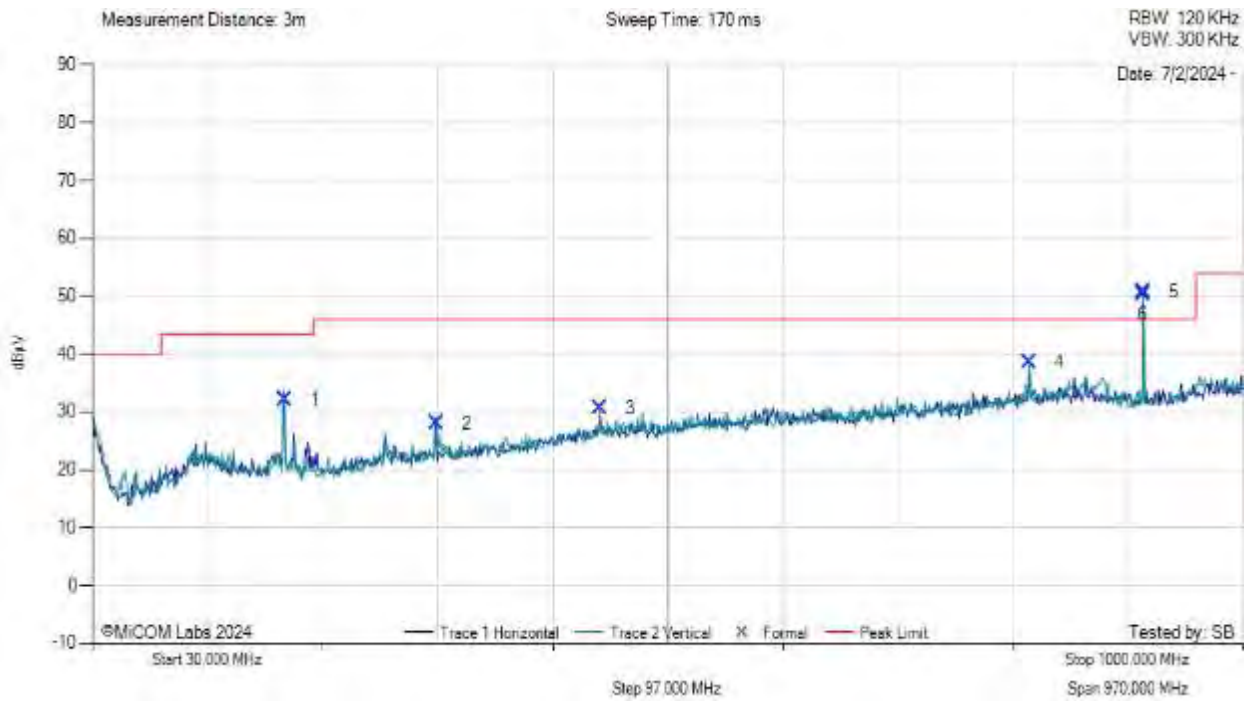
Test Notes: SN: 2935662-15, GFSK, 902.4 MHz, 300 kbps, Power Level 2

Non-Restrictive Band (NRB)

Equipment Configuration for 30 MHZ TO 1 GHZ			
Antenna:	Integral	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	GFSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.20	**Data Rate:**	300 kbps
Power Setting:	Power Level 2	**Tested By:**	SB

Test Measurement Results

30 MHz to 1 GHz



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	191.99	41.01	4.55	-13.51	32.05	NRB	Vertical	100	0	--	--	Pass
2	320.03	33.78	5.11	-10.93	27.96	NRB	Vertical	100	180	--	--	Pass
3	457.77	32.55	5.56	-7.49	30.62	NRB	Vertical	199	330	--	--	Pass
4	819.58	34.51	6.69	-2.67	38.52	NRB	Vertical	199	59	--	--	Pass
5	915.61	45.50	6.98	-1.75	50.73	Fundamental	Vertical	100	29	--	--	Pass
6	915.61	45.19	6.98	-1.75	50.42	Fundamental	Horizontal	100	30	--	--	Pass

Test Notes: SN: 2935662-15, GFSK, 915.2 MHz, 300 kbps, Power Level 2

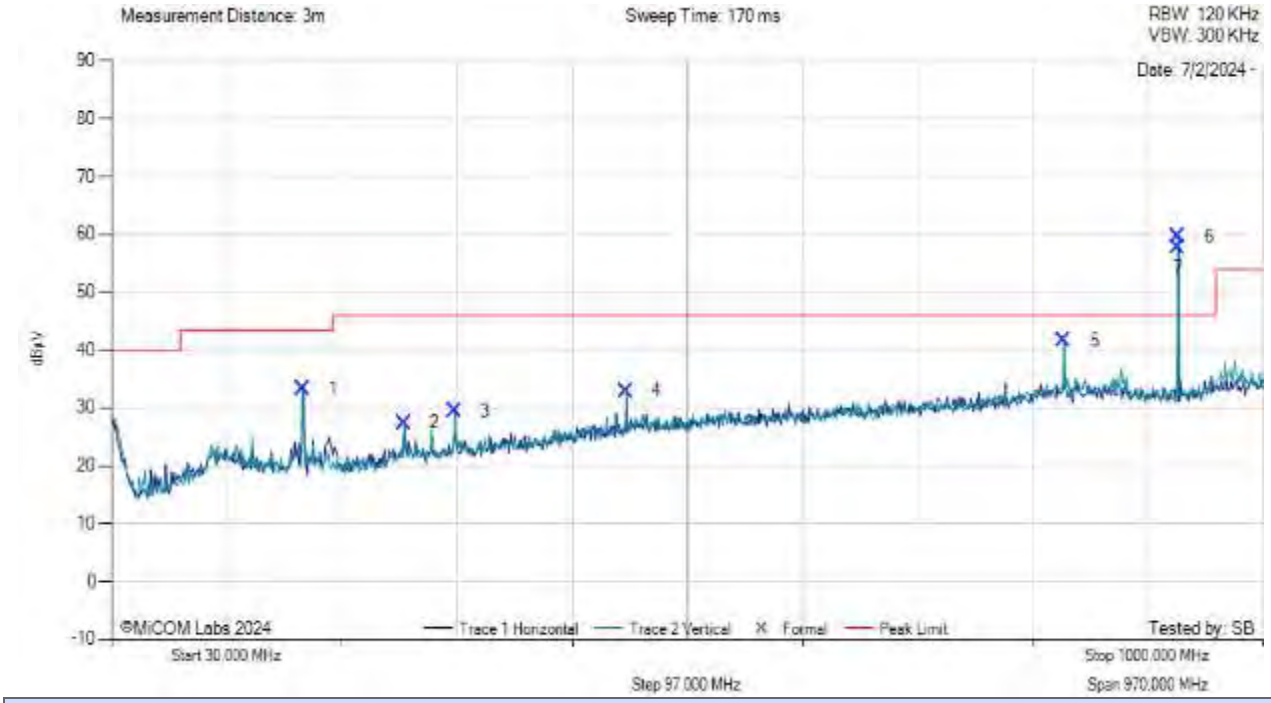
Non-Restrictive Band (NRB)

Equipment Configuration for 30 MHZ TO 1 GHZ

Antenna:	Integral	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	GFSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.6	**Data Rate:**	300kbps
Power Setting:	Power Level 2	**Tested By:**	SB

Test Measurement Results

30 MHz to 1 GHz



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	191.02	42.34	4.55	-13.60	33.28	NRB	Vertical	100	0	--	--	Pass
2	276.38	33.79	4.90	-11.27	27.42	MaxP	Horizontal	100	120	--	--	Pass
3	319.06	35.21	5.10	-10.93	29.38	NRB	Vertical	100	179	--	--	Pass
4	463.59	34.66	5.56	-7.30	32.93	NRB	Vertical	199	328	--	--	Pass
5	832.19	37.45	6.72	-2.56	41.61	NRB	Vertical	199	59	--	--	Pass
6	928.22	54.21	7.00	-1.56	59.65	Fundamental	Vertical	100	29	--	--	Pass
7	928.22	52.41	7.00	-1.56	57.85	Fundamental	Horizontal	100	29	--	--	Pass

Test Notes: SN: 2935662-15, GFSK, 927.6 MHz, 300 kbps, Power Level 2

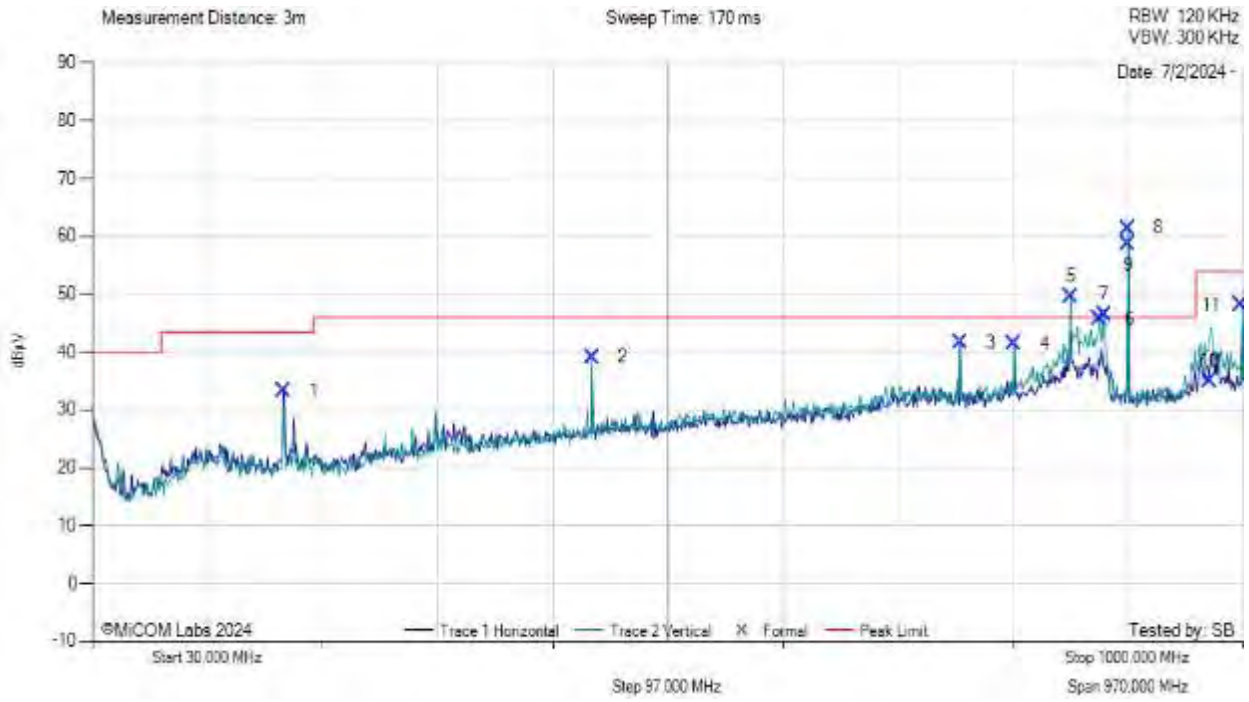
Non-Restrictive Band (NRB)

GFSK Power Level 3 Integral Antenna

Equipment Configuration for 30 MHZ TO 1 GHZ			
Antenna:	Integral	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	GFSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.40	**Data Rate:**	300 kbps
Power Setting:	Power Level 3	**Tested By:**	SB

Test Measurement Results

30 MHz to 1 GHz



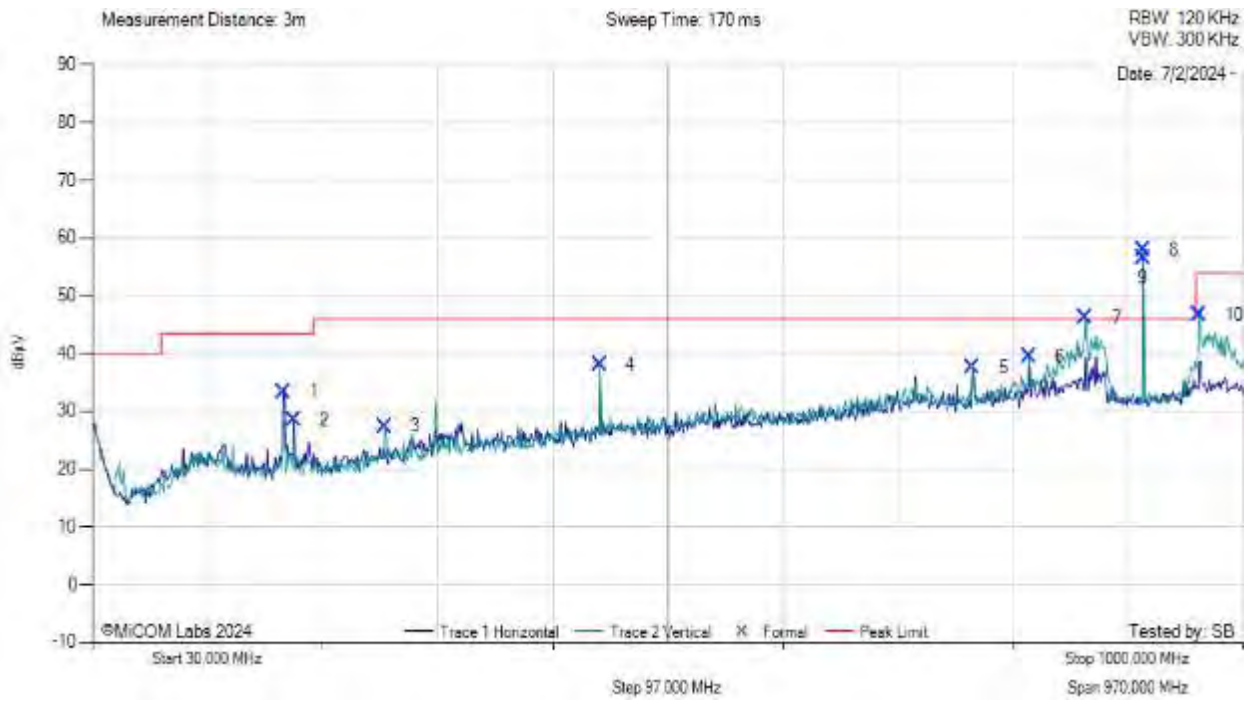
30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	191.02	42.30	4.55	-13.60	33.24	NRB	Horizontal	199	0	--	--	Pass
2	450.98	41.39	5.53	-7.79	39.13	NRB	Vertical	100	179	--	--	Pass
3	761.38	38.96	6.50	-3.73	41.73	NRB	Horizontal	100	210	--	--	Pass
4	806.97	37.65	6.65	-2.92	41.38	NRB	Vertical	199	119	--	--	Pass
5	854.50	45.15	6.79	-2.34	49.59	NRB	Vertical	100	149	--	--	Pass
6	878.75	41.10	6.86	-2.20	45.77	NRB	Vertical	100	179	--	--	Pass
7	882.63	41.85	6.88	-2.23	46.50	NRB	Vertical	100	179	--	--	Pass
8	903.00	56.32	6.93	28.70	61.40	Fundamental	Vertical	100	179	--	--	Pass
9	903.00	53.52	6.93	28.70	58.60	Fundamental	Horizontal	100	120	--	--	Pass
10	972.05	28.85	7.14	-1.08	34.92	MaxQP	Vertical	106	50	54.0	-19.1	Pass
11	998.35	41.80	7.22	-0.94	48.08	MaxQP	Vertical	99	222	54.0	-5.9	Pass

Test Notes: SN: 2935662-15, GFSK, 902.4 MHz, 300 kbps, Power Level 3

Non-Restrictive Band (NRB)

Equipment Configuration for 30 MHZ TO 1 GHZ			
Antenna:	Integral	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	GFSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.20	**Data Rate:**	300 kbps
Power Setting:	Power Level 3	**Tested By:**	SB
Test Measurement Results			

30 MHz to 1 GHz



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	191.02	42.47	4.55	-13.60	33.42	NRB	Horizontal	99	150	--	--	Pass
2	199.75	36.05	4.59	-12.16	28.47	NRB	Horizontal	99	150	--	--	Pass
3	276.38	33.81	4.90	-11.27	27.45	MaxP	Vertical	199	209	46.0	-18.6	Pass
4	457.77	40.01	5.56	-7.49	38.08	NRB	Vertical	99	89	--	--	Pass
5	772.05	34.60	6.57	-3.62	37.55	NRB	Vertical	199	119	--	--	Pass
6	819.58	35.46	6.69	-2.67	39.48	NRB	Vertical	199	149	--	--	Pass
7	867.11	41.65	6.82	-2.18	46.29	NRB	Vertical	99	179	--	--	Pass
8	915.61	52.70	6.98	-1.75	57.93	Fundamental	Vertical	199	89	--	--	Pass
9	915.61	51.37	6.98	-1.75	56.60	Fundamental	Horizontal	99	120	--	--	Pass
10	963.14	40.71	7.11	-1.09	46.73	MaxQP	Vertical	100	200	54.0	-7.3	Pass

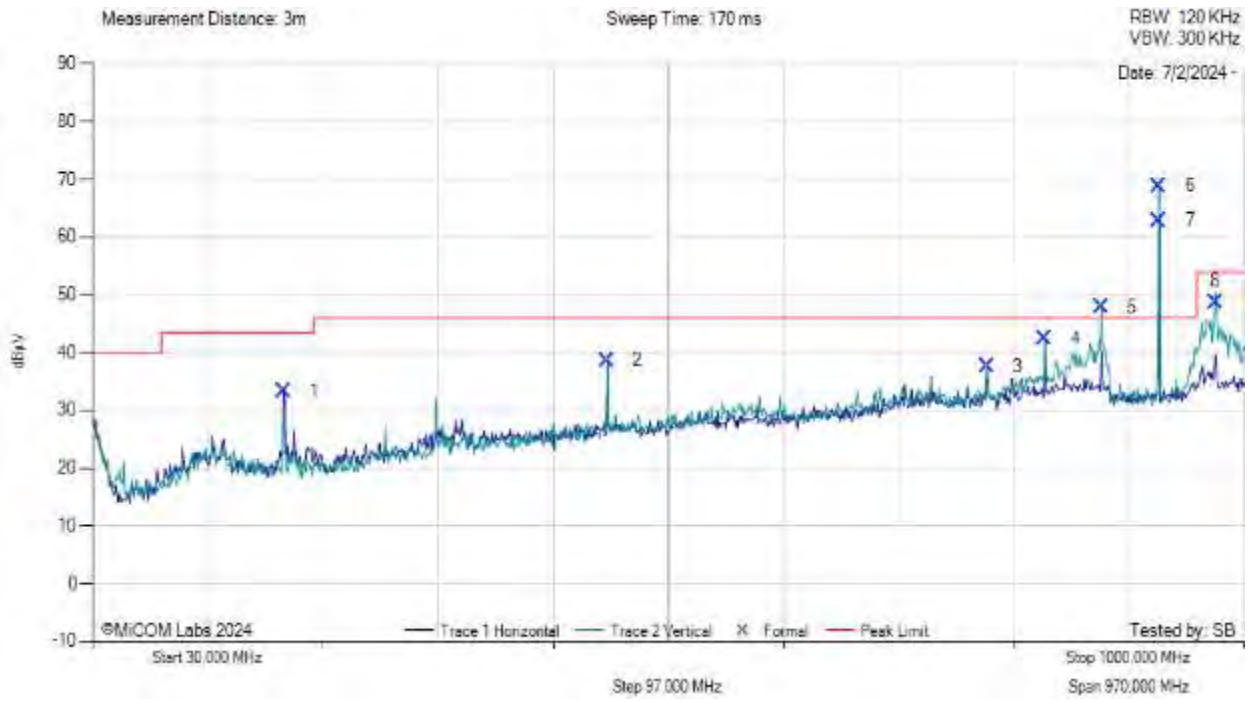
Test Notes: SN: 2935662-15, GFSK, 915.2 MHz, 300 kbps, Power Level 3

Non-Restrictive Band (NRB)

Equipment Configuration for 30 MHZ TO 1 GHZ			
Antenna:	Integral	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	GFSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.60	**Data Rate:**	300 kbps
Power Setting:	Power Level 3	**Tested By:**	SB

Test Measurement Results

30 MHz to 1 GHz



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	191.02	42.38	4.55	-13.60	33.33	NRB	Horizontal	199	0	--	--	Pass
2	463.59	40.38	5.56	-7.30	38.64	NRB	Vertical	99	119	--	--	Pass
3	783.69	34.31	6.58	-3.24	37.65	NRB	Vertical	99	29	--	--	Pass
4	832.19	38.29	6.72	-2.56	42.45	NRB	Vertical	99	179	--	--	Pass
5	879.72	43.25	6.87	-2.20	47.92	NRB	Vertical	99	179	--	--	Pass
6	928.22	63.43	7.00	-1.56	68.88	Fundamental	Vertical	99	149	--	--	Pass
7	928.22	57.42	7.00	-1.56	62.87	Fundamental	Horizontal	199	30	--	--	Pass
8	975.64	42.62	7.17	-1.08	48.71	MaxQP	Vertical	100	172	54.0	-5.3	Pass

Test Notes: SN: 2935662-15, GFSK, 927.6 MHz, 300 kbps, Power Level 3

Non-Restrictive Band (NRB)

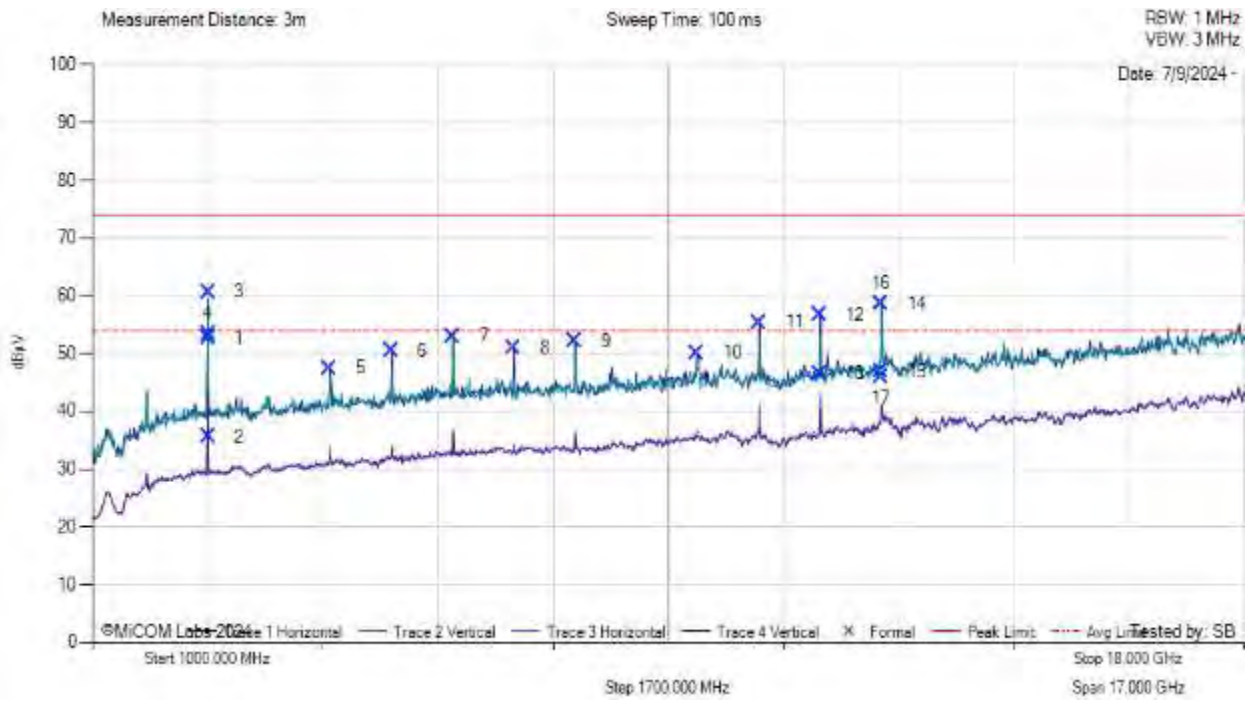
9.5.2.4. TX Spurious Emissions 1-18GHz

9.5.2.4.1. OOK Power Level 3 Integral Antenna

Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ			
Antenna:	Internal	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OOK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	903.0	**Data Rate:**	16.384 kbps
Power Setting:	Power Level 3	**Tested By:**	SB

Test Measurement Results

FCC Spurious 1 GHz -18 GHz



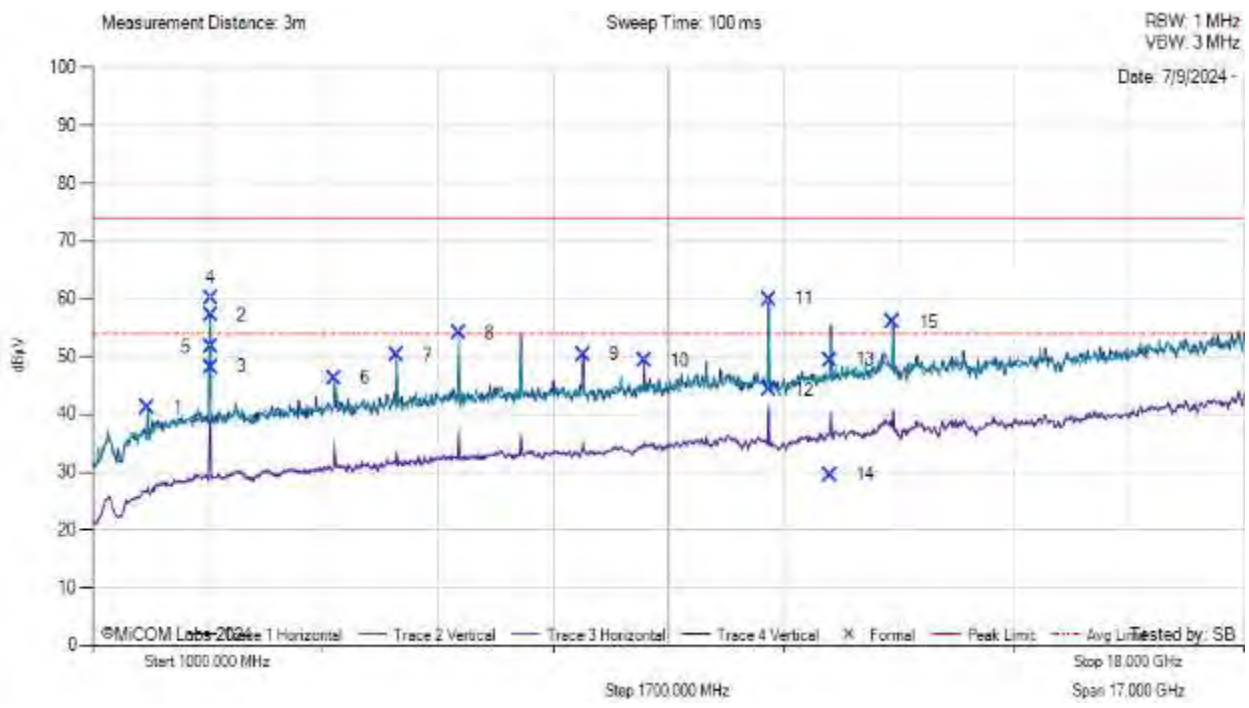
1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2708.89	62.30	2.07	-11.77	52.60	MaxP	Horizontal	199	133	74.0	-21.4	Pass
2	2708.89	45.26	2.07	-11.77	35.55	AVG	Horizontal	199	133	54.0	-18.4	Pass
3	2709.02	70.38	2.07	-11.77	60.68	MaxP	Vertical	198	134	74.0	-13.3	Pass
4	2709.02	62.98	2.07	-11.77	53.28	AVG	Vertical	198	134	54.0	-0.7	Pass
5	4502.00	56.90	2.76	33.90	47.47	MaxP	Horizontal	152	150	74.0	-26.5	Pass
6	5420.00	58.96	3.08	34.50	50.48	MaxP	Horizontal	199	210	74.0	-23.5	Pass
7	6321.00	58.75	3.35	35.56	52.99	MaxP	Horizontal	199	210	74.0	-21.0	Pass
8	7222.00	55.29	3.57	35.91	50.98	MaxP	Horizontal	199	150	74.0	-23.0	Pass
9	8123.00	56.38	3.88	35.80	52.19	MaxP	Horizontal	199	210	74.0	-21.8	Pass
10	9925.00	51.16	4.34	37.26	50.11	MaxP	Horizontal	152	270	74.0	-23.9	Pass
11	10843.00	55.64	4.52	37.76	55.34	MaxP	Horizontal	199	60	74.0	-18.7	Pass
12	11739.00	58.21	5.02	-6.52	56.71	MaxP	Horizontal	188	212	74.0	-17.3	Pass
13	11739.00	48.03	5.02	-6.52	46.53	AVG	Horizontal	188	212	54.0	-7.5	Pass
14	12641.96	60.20	5.47	-7.13	58.53	MaxP	Horizontal	196	93	74.0	-15.5	Pass
15	12641.96	48.61	5.47	-7.13	46.94	AVG	Horizontal	196	93	54.0	-7.1	Pass
16	12642.07	60.24	5.47	-7.14	58.57	MaxP	Vertical	149	202	74.0	-15.4	Pass
17	12642.07	47.52	5.47	-7.14	45.85	AVG	Vertical	149	202	54.0	-8.1	Pass

Test Notes: SN: 2935662-15, OOK, 903 MHz, 16.384 kbps, Power Level 3

Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ			
Antenna:	Internal	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OOK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	16.384 kbps
Power Setting:	Power Level 3	**Tested By:**	SB

Test Measurement Results

FCC Spurious 1 GHz -18 GHz



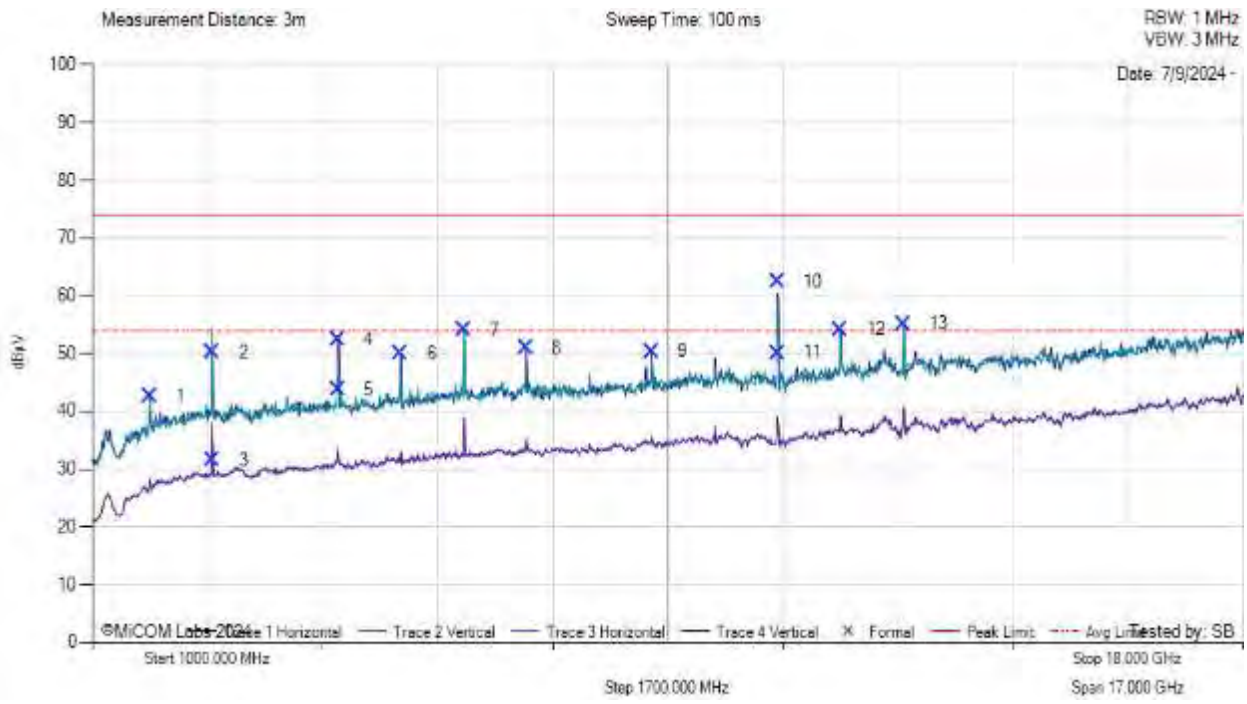
1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1816.00	53.90	1.73	30.49	41.18	MaxP	Vertical	150	269	74.0	-32.8	Pass
2	2744.96	66.82	2.11	-11.74	57.19	MaxP	Horizontal	153	154	74.0	-16.8	Pass
3	2744.96	57.84	2.11	-11.74	48.21	AVG	Horizontal	153	154	54.0	-5.8	Pass
4	2745.03	69.60	2.11	-11.74	59.97	MaxP	Vertical	169	237	74.0	-14.0	Pass
5	2745.03	61.28	2.11	-11.74	51.65	AVG	Vertical	169	237	54.0	-2.3	Pass
6	4570.00	55.77	2.80	33.97	46.29	MaxP	Vertical	199	149	74.0	-27.7	Pass
7	5488.00	58.98	3.10	34.53	50.23	MaxP	Horizontal	199	210	74.0	-23.8	Pass
8	6406.00	59.60	3.36	35.59	54.02	MaxP	Vertical	199	269	74.0	-20.0	Pass
9	8242.00	54.60	3.87	35.76	50.37	MaxP	Horizontal	199	180	74.0	-23.6	Pass
10	9143.00	52.63	4.17	36.21	49.26	MaxP	Horizontal	199	120	74.0	-24.7	Pass
11	10979.91	60.53	4.60	-5.18	59.95	MaxP	Horizontal	153	122	74.0	-14.1	Pass
12	10979.91	44.77	4.60	-5.18	44.19	AVG	Horizontal	153	122	54.0	-9.8	Pass
13	11894.73	50.61	4.95	-6.16	49.40	MaxP	Horizontal	196	114	74.0	-24.6	Pass
14	11894.73	30.70	4.95	-6.16	29.49	AVG	Horizontal	196	114	54.0	-24.5	Pass
15	12815.00	59.17	5.01	39.15	55.90	MaxP	Horizontal	150	180	74.0	-18.1	Pass

Test Notes: SN: 2935662-15, OOK, 915 MHz, 16.384 kbps, Power Level 3

Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ			
Antenna:	Internal	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	OOK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	926.8	**Data Rate:**	16.384 kbps
Power Setting:	Power Level 3	**Tested By:**	SB

Test Measurement Results

FCC Spurious 1 GHz -18 GHz



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	1850.00	55.05	1.70	30.70	42.57	MaxP	Vertical	150	0	74.0	-31.4	Pass
2	2780.28	59.88	2.13	-11.79	50.22	MaxP	Vertical	155	258	74.0	-23.8	Pass
3	2780.28	41.25	2.13	-11.79	31.59	AVG	Vertical	155	258	54.0	-22.4	Pass
4	4634.02	61.88	2.80	-12.27	52.42	MaxP	Horizontal	182	213	74.0	-21.6	Pass
5	4634.02	53.15	2.80	-12.27	43.68	AVG	Horizontal	182	213	54.0	-10.3	Pass
6	5556.00	58.13	3.17	34.54	49.99	MaxP	Horizontal	150	210	74.0	-24.0	Pass
7	6491.00	59.56	3.41	35.64	54.05	MaxP	Vertical	199	239	74.0	-19.9	Pass
8	7409.00	55.09	3.68	35.87	51.00	MaxP	Horizontal	199	180	74.0	-23.0	Pass
9	9262.00	53.13	4.21	36.33	50.35	MaxP	Horizontal	199	60	74.0	-23.7	Pass
10	11121.66	63.51	4.51	-5.61	62.41	MaxP	Horizontal	150	105	74.0	-11.6	Pass
11	11121.66	51.22	4.51	-5.61	50.12	AVG	Horizontal	150	105	54.0	-3.9	Pass
12	12050.00	55.02	4.72	38.91	54.14	MaxP	Horizontal	150	210	74.0	-19.9	Pass
13	12985.00	57.48	5.16	39.08	55.15	MaxP	Vertical	150	239	74.0	-18.9	Pass

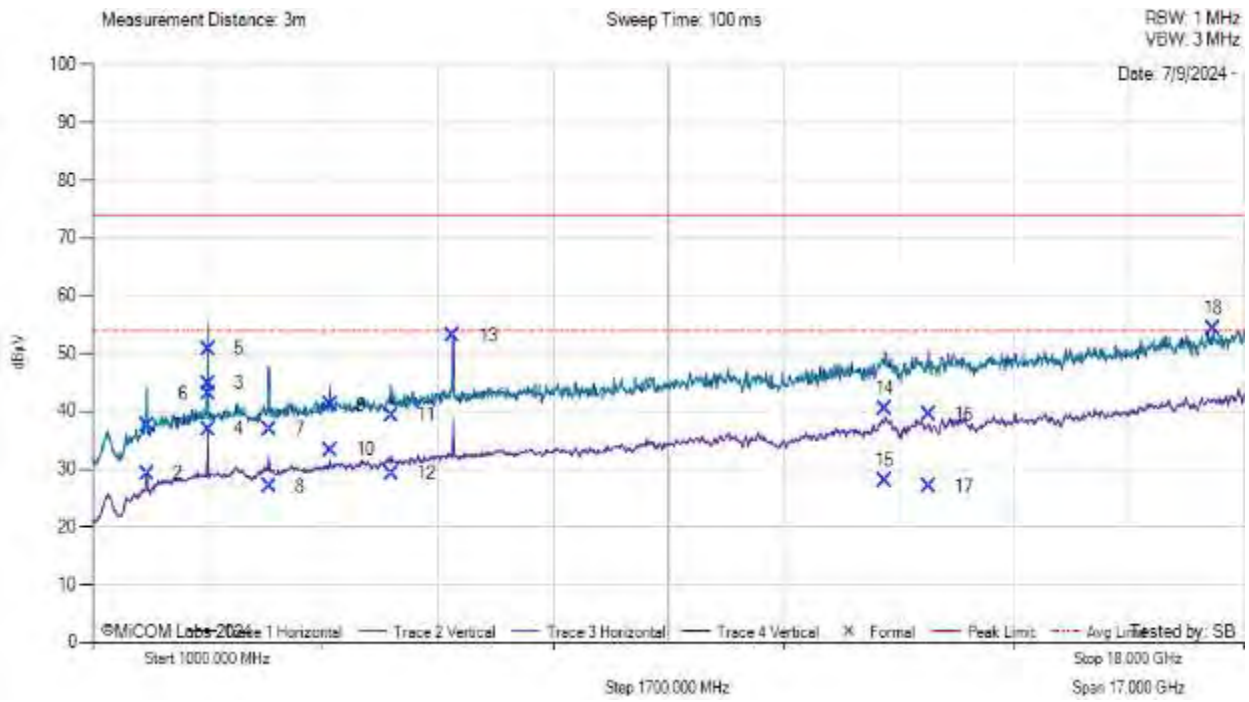
Test Notes: SN: 2935662-15, OOK, 926.8 MHz, 16.384 kbps, Power Level 3

9.5.2.4.2. GFSK Power Level 2 Integral Antenna

Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ			
Antenna:	Internal	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	GFSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.4	**Data Rate:**	300 kbps
Power Setting:	Power Level 2	**Tested By:**	SB

Test Measurement Results

FCC Spurious 1 GHz -18 GHz



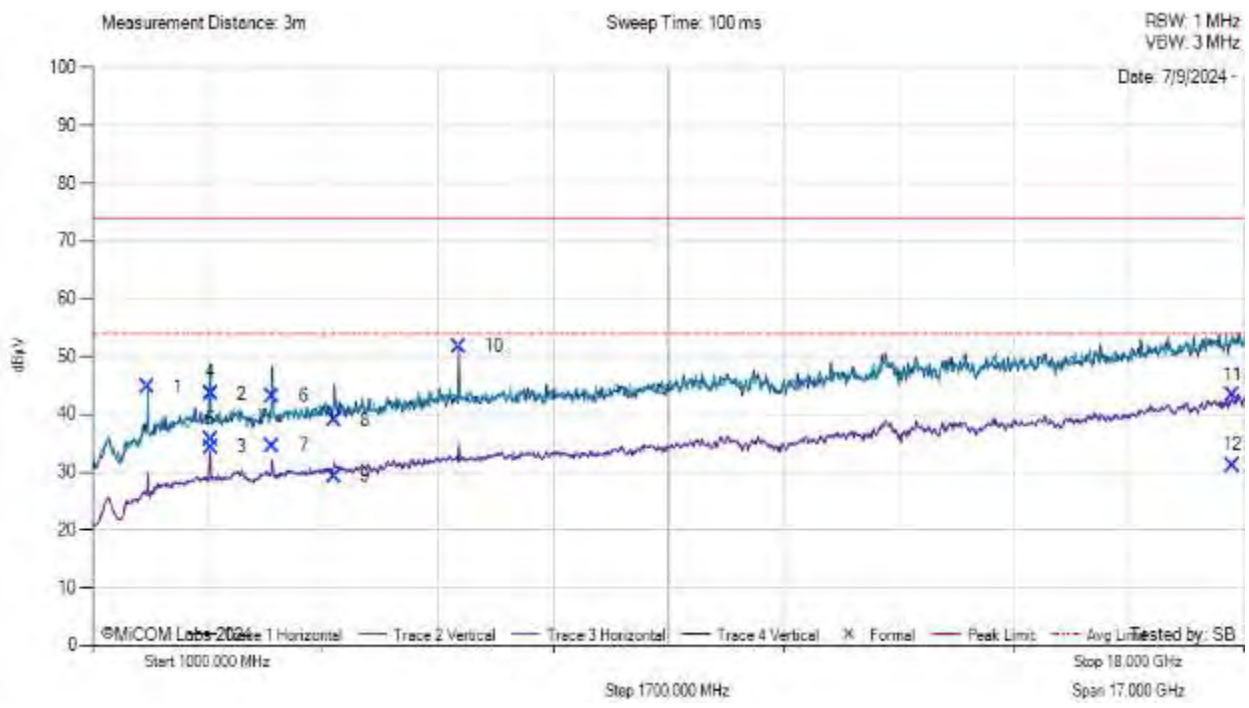
1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1805.04	50.49	1.71	-14.54	37.66	MaxP	Vertical	176	201	74.0	-36.3	Pass
2	1805.04	42.08	1.71	-14.54	29.26	AVG	Vertical	176	201	54.0	-24.7	Pass
3	2706.87	54.53	2.06	-11.76	44.82	MaxP	Horizontal	188	156	74.0	-29.2	Pass
4	2706.87	46.63	2.06	-11.76	36.93	AVG	Horizontal	188	156	54.0	-17.1	Pass
5	2706.89	60.49	2.06	-11.76	50.79	MaxP	Vertical	156	241	74.0	-23.2	Pass
6	2706.89	52.71	2.06	-11.76	43.01	AVG	Vertical	156	241	54.0	-11.0	Pass
7	3609.16	46.29	2.43	-11.82	36.90	MaxP	Horizontal	177	212	74.0	-37.1	Pass
8	3609.16	36.30	2.43	-11.82	26.91	AVG	Horizontal	177	212	54.0	-27.1	Pass
9	4511.70	50.42	2.78	-12.13	41.07	MaxP	Horizontal	164	208	74.0	-32.9	Pass
10	4511.70	42.67	2.78	-12.13	33.32	AVG	Horizontal	164	208	54.0	-20.7	Pass
11	5414.78	47.89	3.07	-11.67	39.29	MaxP	Vertical	191	200	74.0	-34.7	Pass
12	5414.78	37.83	3.07	-11.67	29.23	AVG	Vertical	191	200	54.0	-24.8	Pass
13	6321.00	58.85	3.35	35.56	53.09	MaxP	Horizontal	199	210	74.0	-20.9	Pass
14	12696.02	42.08	5.26	-6.95	40.40	MaxP	Vertical	153	116	74.0	-33.6	Pass
15	12696.02	29.62	5.26	-6.95	27.94	AVG	Vertical	153	116	54.0	-26.1	Pass
16	13341.46	41.32	5.26	-7.12	39.45	MaxP	Horizontal	175	89	74.0	-34.6	Pass
17	13341.46	28.89	5.26	-7.12	27.02	AVG	Horizontal	175	89	54.0	-27.0	Pass
18	17541.00	48.52	6.50	41.55	54.31	MaxP	Horizontal	199	120	74.0	-19.7	Pass

Test Notes: SN: 2935662-15, GFSK, 902.4 MHz, 300 kbps, Power Level 2

Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ			
Antenna:	Internal	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	GFSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.2	**Data Rate:**	300 kbps
Power Setting:	Power Level 2	**Tested By:**	SB

Test Measurement Results

FCC Spurious 1 GHz -18 GHz



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	1816.00	57.42	1.73	30.49	44.70	MaxP	Vertical	199	239	74.0	-29.3	Pass
2	2745.53	53.17	2.11	-11.74	43.54	MaxP	Horizontal	150	153	74.0	-30.5	Pass
3	2745.53	43.96	2.11	-11.74	34.33	AVG	Horizontal	150	153	54.0	-19.7	Pass
4	2745.64	53.31	2.11	-11.74	43.67	MaxP	Vertical	169	235	74.0	-30.3	Pass
5	2745.64	45.26	2.11	-11.74	35.63	AVG	Vertical	169	235	54.0	-18.4	Pass
6	3660.67	52.41	2.41	-11.66	43.17	MaxP	Horizontal	198	221	74.0	-30.8	Pass
7	3660.67	43.75	2.41	-11.66	34.50	AVG	Horizontal	198	221	54.0	-19.5	Pass
8	4576.25	48.39	2.81	-12.25	38.95	MaxP	Horizontal	150	212	74.0	-35.0	Pass
9	4576.25	38.68	2.81	-12.25	29.24	AVG	Horizontal	150	212	54.0	-24.8	Pass
10	6406.00	57.32	3.36	35.59	51.74	MaxP	Horizontal	199	210	74.0	-22.3	Pass
11	17828.28	36.08	6.28	0.96	43.32	MaxP	Vertical	189	119	74.0	-30.7	Pass
12	17828.28	23.94	6.28	0.96	31.18	AVG	Vertical	189	119	54.0	-22.8	Pass

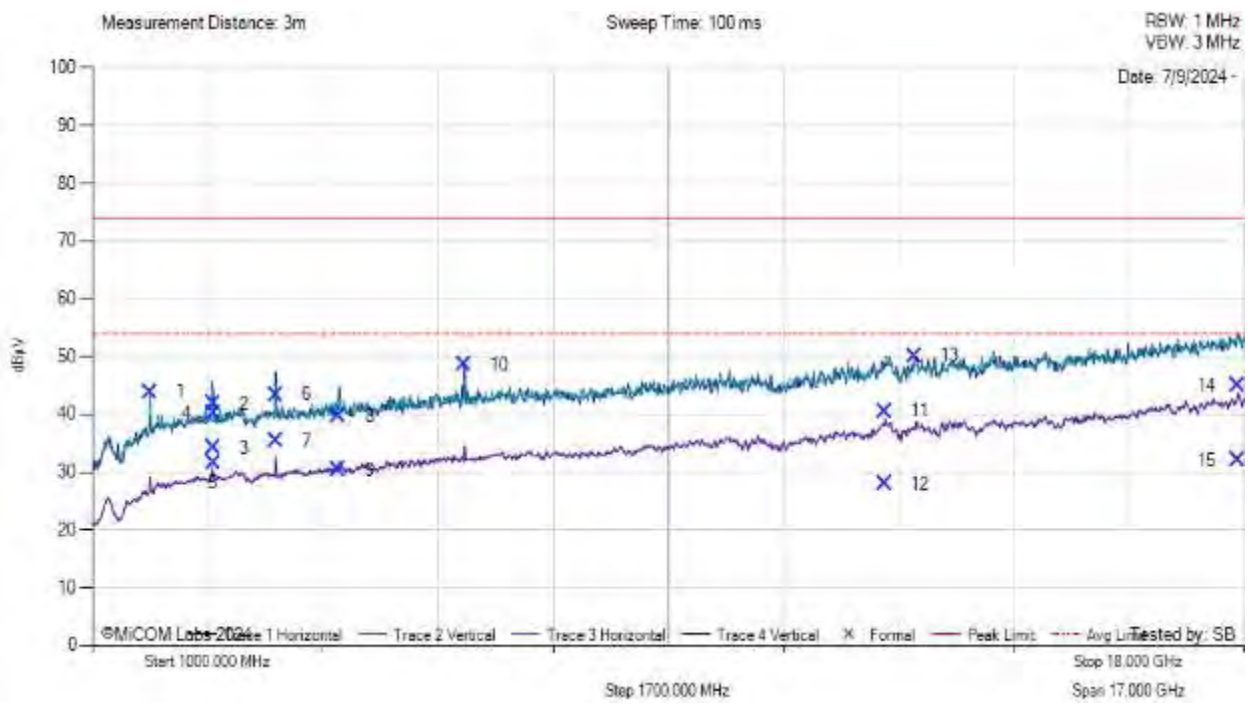
Test Notes: SN: 2935662-15, GFSK, 915.2 MHz, 300 kbps, Power Level 2

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 FCC SPURIOUS 1 GHZ -18 GHZ			
Antenna:	Internal	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	GFSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.6	**Data Rate:**	300 kbps
Power Setting:	Power Level 2	**Tested By:**	SB

Test Measurement Results

FCC Spurious 1 GHz -18 GHz



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	1850.00	56.36	1.70	30.70	43.87	MaxP	Vertical	199	239	74.0	-30.1	Pass
2	2782.61	51.46	2.12	-11.78	41.80	MaxP	Vertical	152	71	74.0	-32.2	Pass
3	2782.61	43.76	2.12	-11.78	34.10	AVG	Vertical	152	71	54.0	-19.9	Pass
4	2782.83	49.82	2.12	-11.78	40.16	MaxP	Horizontal	166	132	74.0	-33.8	Pass
5	2782.83	41.31	2.12	-11.78	31.65	AVG	Horizontal	166	132	54.0	-22.3	Pass
6	3710.54	52.70	2.47	-11.80	43.37	MaxP	Horizontal	198	216	74.0	-30.6	Pass
7	3710.54	44.63	2.47	-11.80	35.29	AVG	Horizontal	198	216	54.0	-18.7	Pass
8	4637.82	49.14	2.82	-12.33	39.63	MaxP	Horizontal	155	209	74.0	-34.4	Pass
9	4637.82	39.88	2.82	-12.33	30.37	AVG	Horizontal	155	209	54.0	-23.6	Pass
10	6491.00	54.05	3.41	35.64	48.54	MaxP	Horizontal	199	210	74.0	-25.5	Pass
11	12697.13	42.19	5.26	-6.97	40.48	MaxP	Vertical	180	28	74.0	-33.5	Pass
12	12697.13	29.65	5.26	-6.97	27.94	AVG	Vertical	180	28	54.0	-26.1	Pass
13	13138.00	52.02	4.78	38.97	50.10	MaxP	Horizontal	149	60	74.0	-23.9	Pass
14	17899.92	37.57	6.31	1.00	44.88	MaxP	Horizontal	150	258	74.0	-29.1	Pass
15	17899.92	24.66	6.31	1.00	31.97	AVG	Horizontal	150	258	54.0	-22.0	Pass

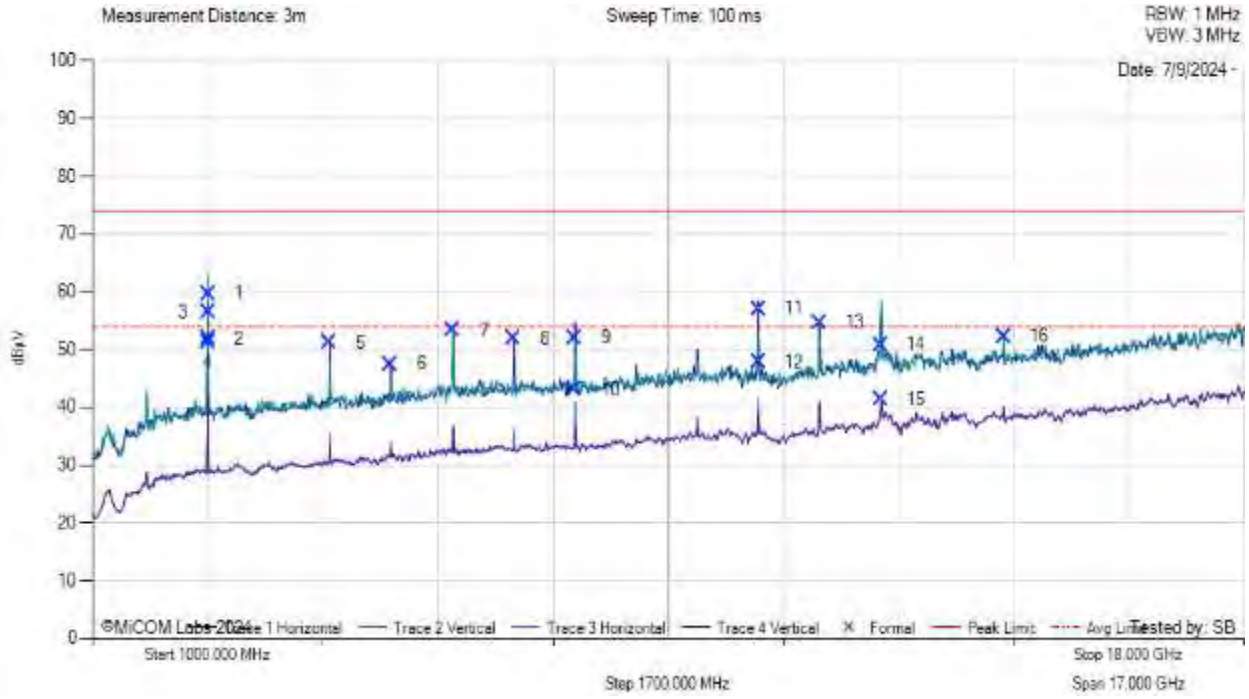
Test Notes: SN: 2935662-15, GFSK, 927.6 MHz, 300 kbps, Power Level 2

9.5.2.4.3. GFSK Power Level 3 Integral Antenna

Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ			
Antenna:	Internal	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	GFSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.4	**Data Rate:**	300 kbps
Power Setting:	Power Level 3	**Tested By:**	SB

Test Measurement Results

FCC Spurious 1 GHz -18 GHz



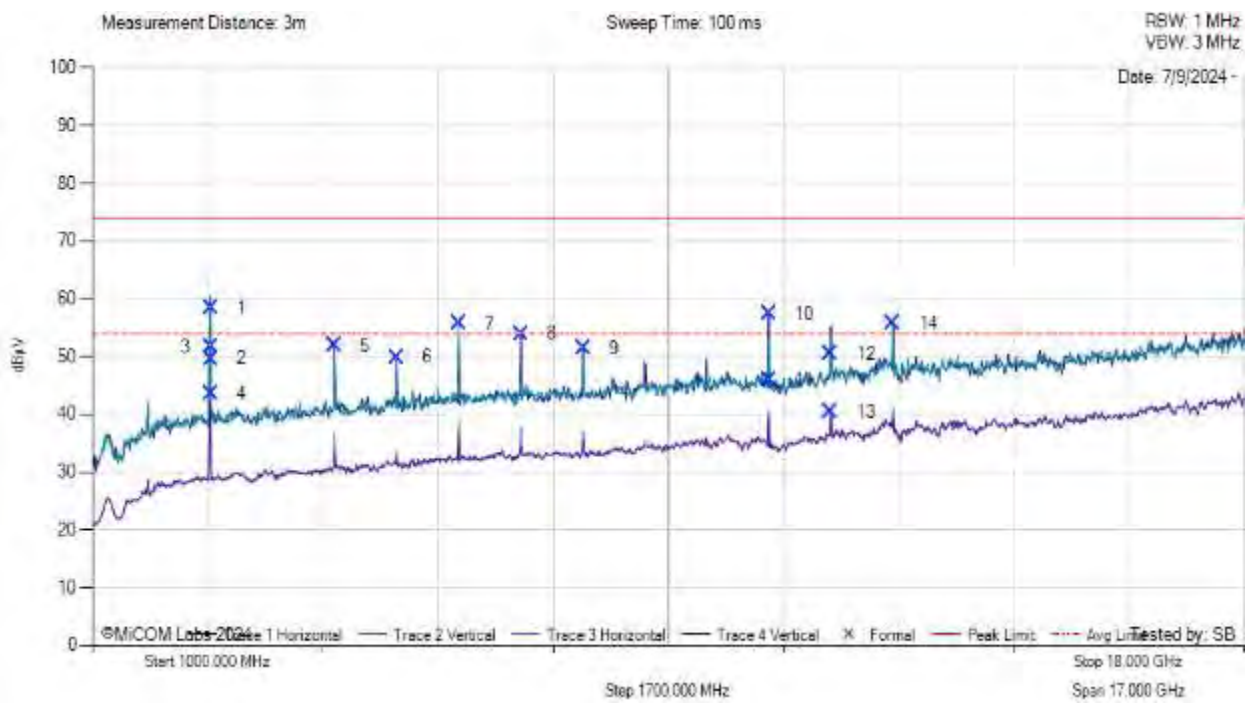
1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2706.91	69.40	2.06	-11.76	59.70	MaxP	Vertical	155	241	74.0	-14.3	Pass
2	2706.91	61.64	2.06	-11.76	51.94	AVG	Vertical	155	241	54.0	-2.1	Pass
3	2707.35	66.11	2.06	-11.76	56.41	MaxP	Horizontal	189	155	74.0	-17.6	Pass
4	2707.35	60.98	2.06	-11.76	51.28	AVG	Horizontal	189	155	54.0	-2.7	Pass
5	4502.00	60.65	2.76	33.90	51.21	MaxP	Horizontal	199	210	74.0	-22.8	Pass
6	5403.00	56.28	3.07	34.49	47.43	MaxP	Horizontal	199	210	74.0	-26.6	Pass
7	6321.00	59.04	3.35	35.56	53.29	MaxP	Vertical	199	179	74.0	-20.7	Pass
8	7222.00	56.16	3.57	35.91	51.86	MaxP	Horizontal	199	180	74.0	-22.1	Pass
9	8122.19	56.19	3.87	-8.08	51.98	MaxP	Horizontal	196	208	74.0	-22.0	Pass
10	8122.19	47.30	3.87	-8.08	43.10	AVG	Horizontal	196	208	54.0	-10.9	Pass
11	10829.70	56.84	4.77	-4.59	57.02	MaxP	Horizontal	157	127	74.0	-17.0	Pass
12	10829.70	47.64	4.77	-4.59	47.82	AVG	Horizontal	157	127	54.0	-6.2	Pass
13	11727.00	56.07	5.04	38.56	54.65	MaxP	Horizontal	199	90	74.0	-19.4	Pass
14	12634.47	52.65	5.21	-7.01	50.84	MaxP	Vertical	179	208	74.0	-23.2	Pass
15	12634.47	43.12	5.21	-7.01	41.32	AVG	Vertical	179	208	54.0	-12.7	Pass
16	14447.00	53.02	5.46	39.49	52.25	MaxP	Vertical	150	209	74.0	-21.8	Pass

Test Notes: SN: 2935662-15, GFSK, 902.4 MHz, 300 kbps, Power Level 3

Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ			
Antenna:	Internal	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	GFSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	300 kbps
Power Setting:	Power Level 3	**Tested By:**	SB

Test Measurement Results

FCC Spurious 1 GHz -18 GHz



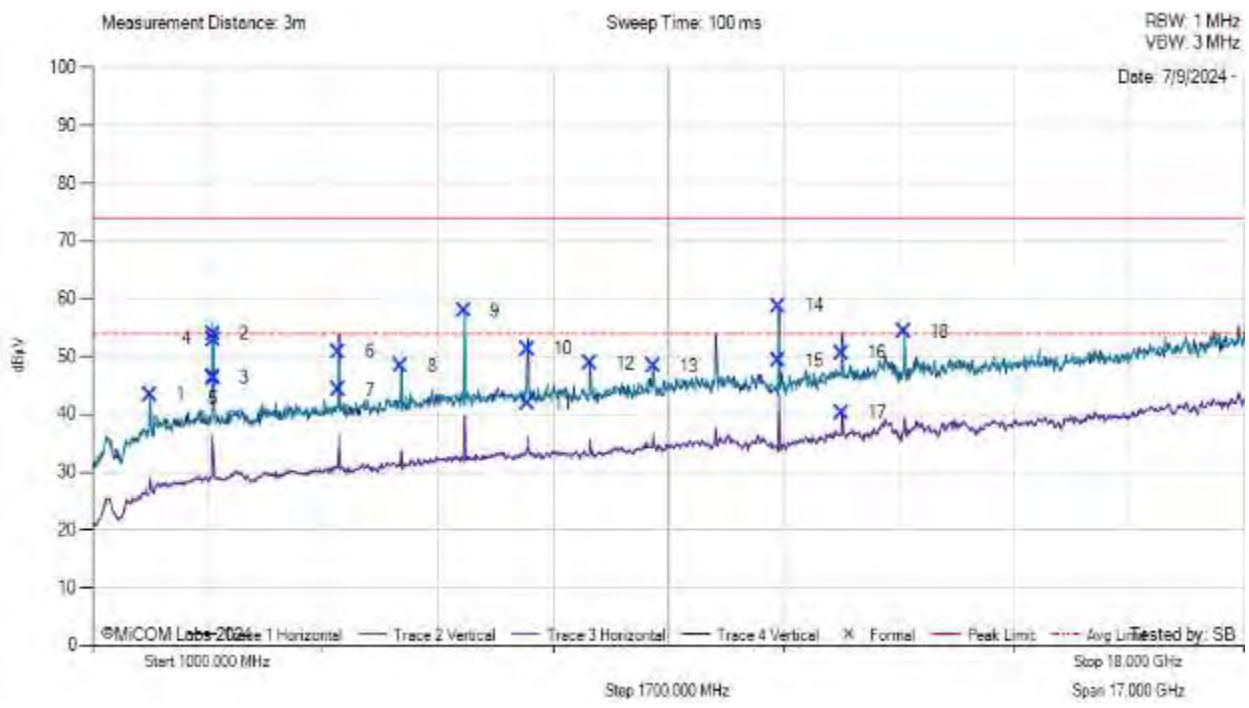
1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2745.34	68.04	2.11	-11.74	58.40	MaxP	Vertical	168	238	74.0	-15.6	Pass
2	2745.34	59.30	2.11	-11.74	49.67	AVG	Vertical	168	238	54.0	-4.3	Pass
3	2745.51	61.25	2.11	-11.74	51.62	MaxP	Horizontal	153	153	74.0	-22.4	Pass
4	2745.51	53.13	2.11	-11.74	43.50	AVG	Horizontal	153	153	54.0	-10.5	Pass
5	4570.00	61.38	2.80	33.97	51.91	MaxP	Horizontal	199	210	74.0	-22.1	Pass
6	5488.00	58.60	3.10	34.53	49.85	MaxP	Horizontal	199	210	74.0	-24.1	Pass
7	6406.00	61.26	3.36	35.59	55.67	MaxP	Vertical	199	179	74.0	-18.3	Pass
8	7324.00	57.96	3.78	35.89	53.94	MaxP	Horizontal	199	210	74.0	-20.1	Pass
9	8242.00	55.58	3.87	35.76	51.36	MaxP	Horizontal	199	180	74.0	-22.6	Pass
10	10983.35	57.93	4.53	-5.09	57.37	MaxP	Horizontal	169	102	74.0	-16.6	Pass
11	10983.35	46.45	4.53	-5.09	45.89	AVG	Horizontal	169	102	54.0	-8.1	Pass
12	11898.37	51.62	5.02	-6.13	50.51	MaxP	Horizontal	195	118	74.0	-23.5	Pass
13	11898.37	41.49	5.02	-6.13	40.37	AVG	Horizontal	195	118	54.0	-13.6	Pass
14	12815.00	58.96	5.01	39.15	55.69	MaxP	Horizontal	150	180	74.0	-18.3	Pass

Test Notes: SN: 2935662-15, GFSK, 915 MHz, 300 kbps, Power Level 3

Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ			
Antenna:	Internal	**Variant:**	100G and 500G RMT
Antenna Gain (dBi):	Not Applicable	**Modulation:**	GFSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.6	**Data Rate:**	300 kbps
Power Setting:	Power Level 3	**Tested By:**	SB

Test Measurement Results

FCC Spurious 1 GHz -18 GHz



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	1850.00	55.85	1.70	30.70	43.37	MaxP	Vertical	199	269	74.0	-30.6	Pass
2	2782.59	63.55	2.12	-11.78	53.89	MaxP	Vertical	190	132	74.0	-20.1	Pass
3	2782.59	56.09	2.12	-11.78	46.43	AVG	Vertical	190	132	54.0	-7.6	Pass
4	2782.99	62.60	2.12	-11.78	52.94	MaxP	Horizontal	165	155	74.0	-21.1	Pass
5	2782.99	55.88	2.12	-11.78	46.22	AVG	Horizontal	165	155	54.0	-7.8	Pass
6	4637.70	60.29	2.82	-12.32	50.78	MaxP	Horizontal	169	212	74.0	-23.2	Pass
7	4637.70	53.71	2.82	-12.32	44.20	AVG	Horizontal	169	212	54.0	-9.8	Pass
8	5556.00	56.44	3.17	34.54	48.30	MaxP	Vertical	199	209	74.0	-25.7	Pass
9	6491.00	63.34	3.41	35.64	57.84	MaxP	Vertical	199	179	74.0	-16.2	Pass
10	7420.29	55.34	3.76	-7.83	51.27	MaxP	Horizontal	199	215	74.0	-22.7	Pass
11	7420.29	45.95	3.76	-7.83	41.87	AVG	Horizontal	199	215	54.0	-12.1	Pass
12	8344.00	52.97	3.91	35.75	48.76	MaxP	Horizontal	199	150	74.0	-25.2	Pass
13	9279.00	50.97	4.21	36.34	48.26	MaxP	Vertical	199	179	74.0	-25.7	Pass
14	11132.07	59.98	4.57	-5.85	58.70	MaxP	Horizontal	163	131	74.0	-15.3	Pass
15	11132.07	50.53	4.57	-5.85	49.25	AVG	Horizontal	163	131	54.0	-4.7	Pass
16	12057.98	51.35	4.79	-5.57	50.57	MaxP	Horizontal	195	280	74.0	-23.4	Pass
17	12057.98	41.05	4.79	-5.57	40.28	AVG	Horizontal	195	280	54.0	-13.7	Pass
18	12985.00	56.58	5.16	39.08	54.25	MaxP	Vertical	151	209	74.0	-19.7	Pass

Test Notes: SN: 2935662-15, GFSK, 927.6 MHz, 300 kbps, Power Level 3

10. Manufacturer Dwell & Channel Occupancy Declaration

Note: Dwell Time and Channel Occupancy were not tested as part of this test program, these were declared for normal network operation by Itron in the following document provided as an exhibit in support of this test program.

"BPD Time of Use and Equal Usage" 800-0016 Version 06 Dated 29th November 2023

This document contains Dwell & Occupancy times as compliant for the following operation modes declared by the manufacturer for the Itron 100G ERT® Module in normal operation.

1) 100S Mode pages 7 to 9

2) Local Port Mode pages 10 to 12;

3) BACT Mode Pages P13 to P17,

4) EFC/ EFC + Mode P18 to 20.

5) INS Mode Pages 21 to 22.

11. Manufacturer Declaration of Similarity

Itron

Itron, Inc.
2401 N. State St.
Wasca, MN 56093
507-781-4309
www.itron.com

July 31, 2024

Subject: Declaration of Similarity
FCC ID: KWQ2GW
ISED ID: 8810-2GW

Dear Sir or Madam,

We declare the product models listed below are electrically identical.

Product Information	
Marketing Name(s)	100G ERT Module 100W ERT Module 500G ERT Module 500W ERT Module
Description	Utility AMR device
Models(s)	ERG-5600-501, ERG-5600-502, ERG-5600-503, ERG-5600-505 ERW-1350-002 ERG-7600-501, ERG-7600-502, ERG-7600-503, ERG-7600-505 ERW-1650-002, ERW-1650-010

The differences between these variant models are:

- Type of cabling for metering connection
- Number of battery cells, two or four, to support field life desire

The differences of these variants does not affect any RF or EMC performance.

Sincerely,

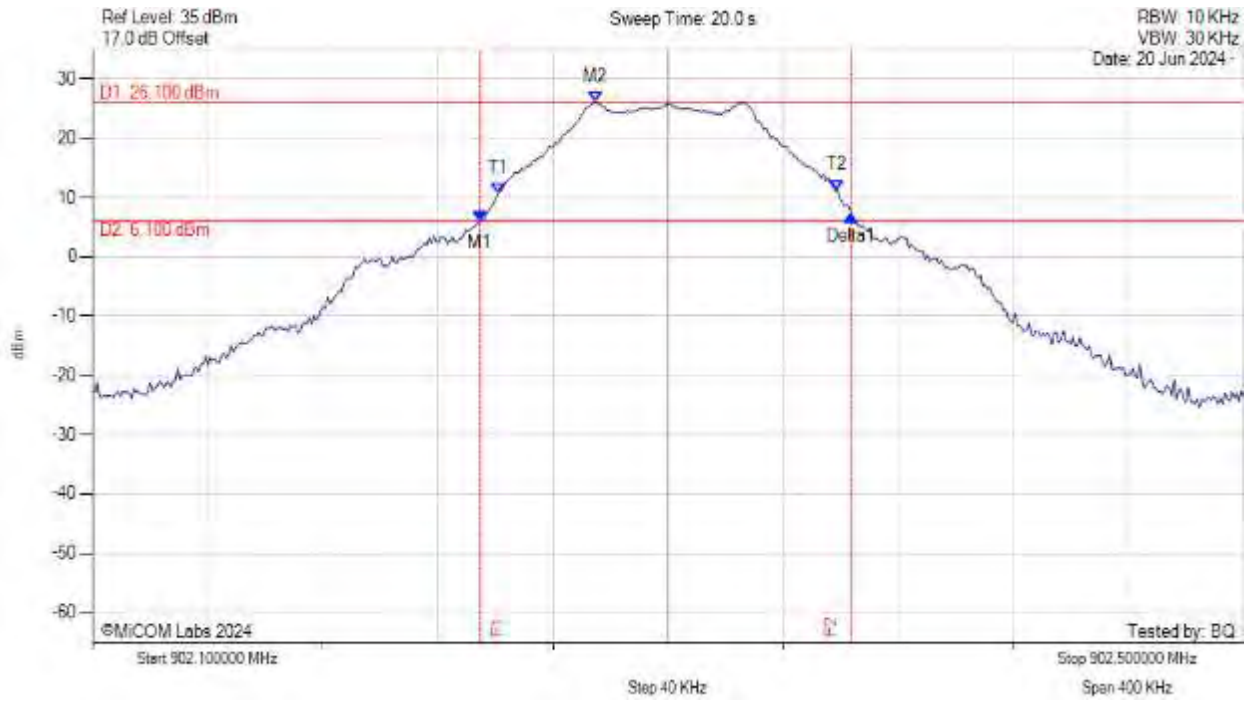
Dan Bensen
Sr. Principal Regulatory Engineer
507-781-1480
dan.bensen@itron.com
Itron, Inc.

A. APPENDIX - GRAPHICAL IMAGES

1.1. 20 dB & 99% Bandwidth

20 dB 99% BANDWIDTH

Variant: GFSK, 100kbps, PL 3 (FHSS), Channel: 902.30 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

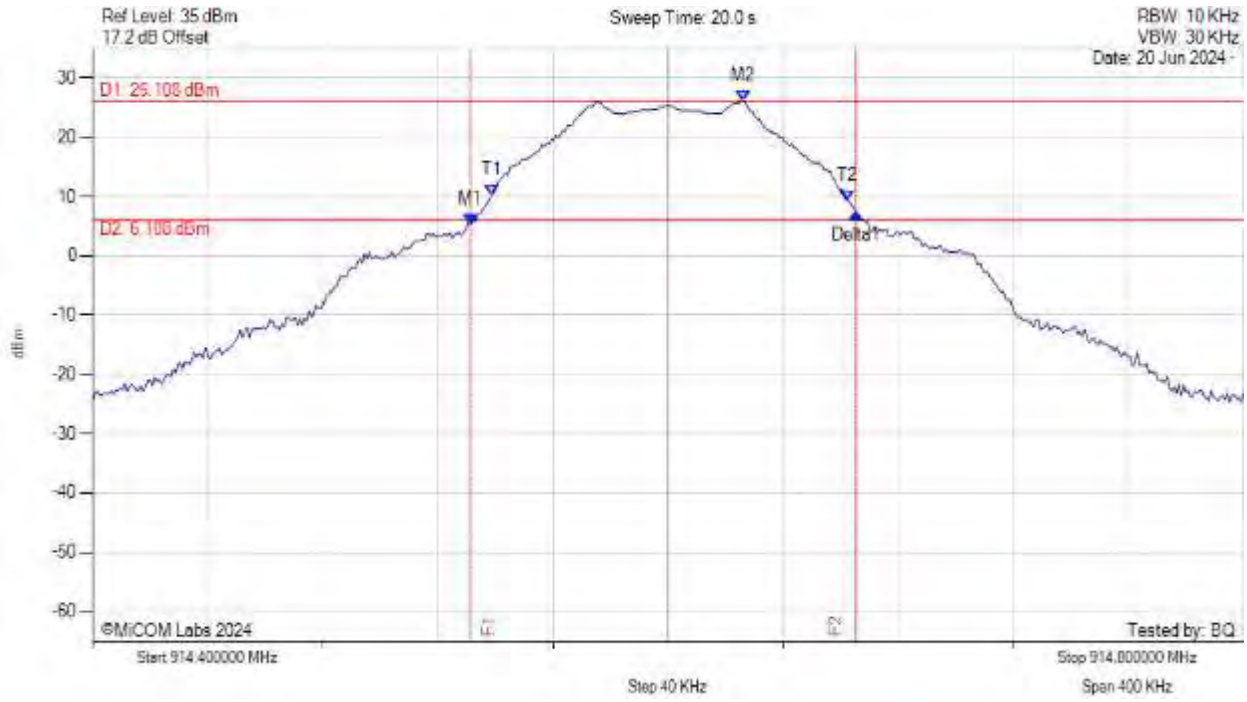


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.235 MHz : 5.942 dBm M2 : 902.275 MHz : 26.100 dBm Delta1 : 129 KHz : 1.025 dB T1 : 902.241 MHz : 10.683 dBm T2 : 902.359 MHz : 11.252 dBm OBW : 118 KHz	Measured 20 dB Bandwidth: 0.129 MHz Limit: 0.5 kHz Margin: 0.37 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 100kbps, PL 3 (FHSS), Channel: 914.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

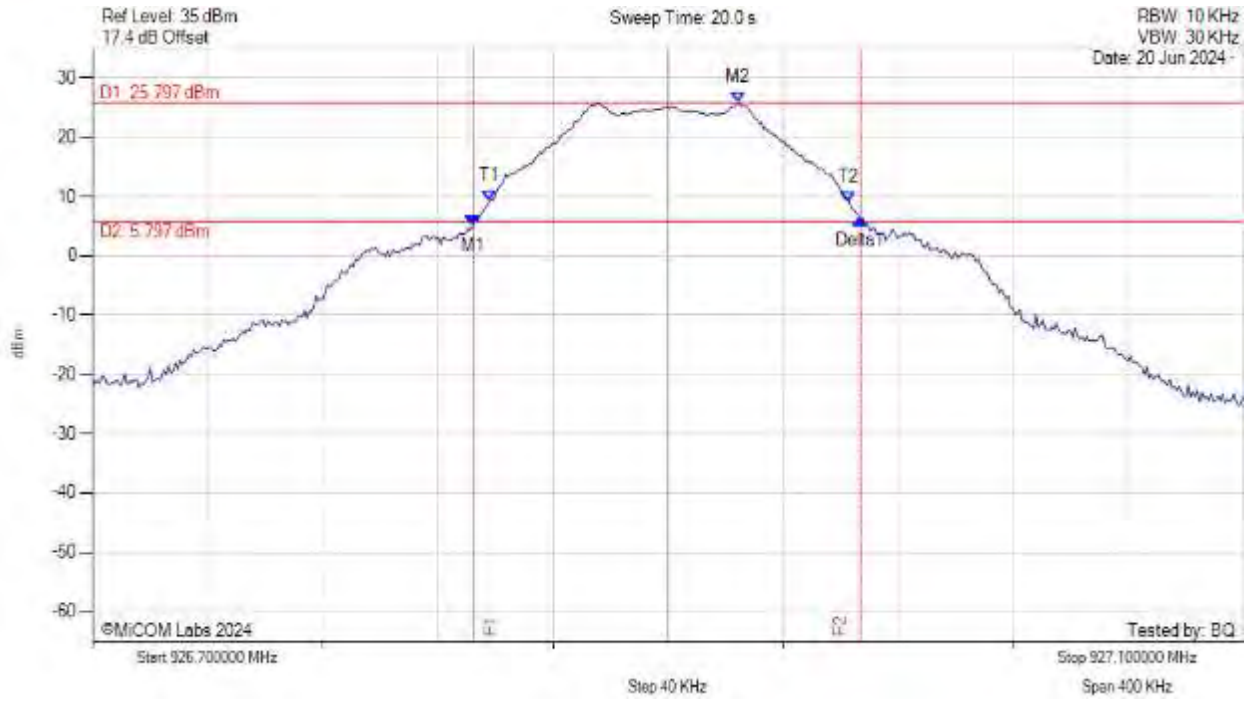


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 914.531 MHz : 5.303 dBm M2 : 914.626 MHz : 26.108 dBm Delta1 : 134 KHz : 1.792 dB T1 : 914.539 MHz : 10.150 dBm T2 : 914.662 MHz : 9.352 dBm OBW : 123 KHz	Measured 20 dB Bandwidth: 0.134 MHz Limit: 0.5 kHz Margin: 0.37 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 100kbps, PL 3 (FHSS), Channel: 926.90 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

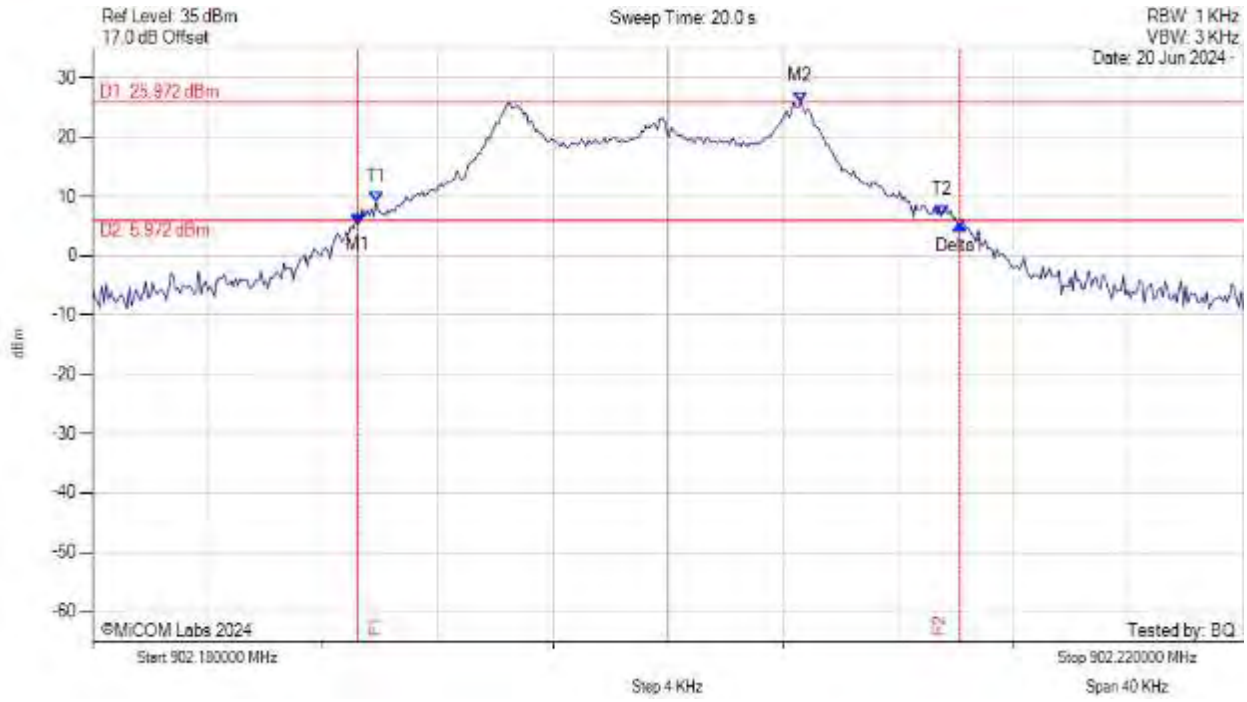


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 926.832 MHz : 5.155 dBm M2 : 926.924 MHz : 25.797 dBm Delta1 : 135 KHz : 1.021 dB T1 : 926.838 MHz : 9.206 dBm T2 : 926.963 MHz : 8.976 dBm OBW : 125 KHz	Measured 20 dB Bandwidth: 0.135 MHz Limit: 0.5 kHz Margin: 0.36 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

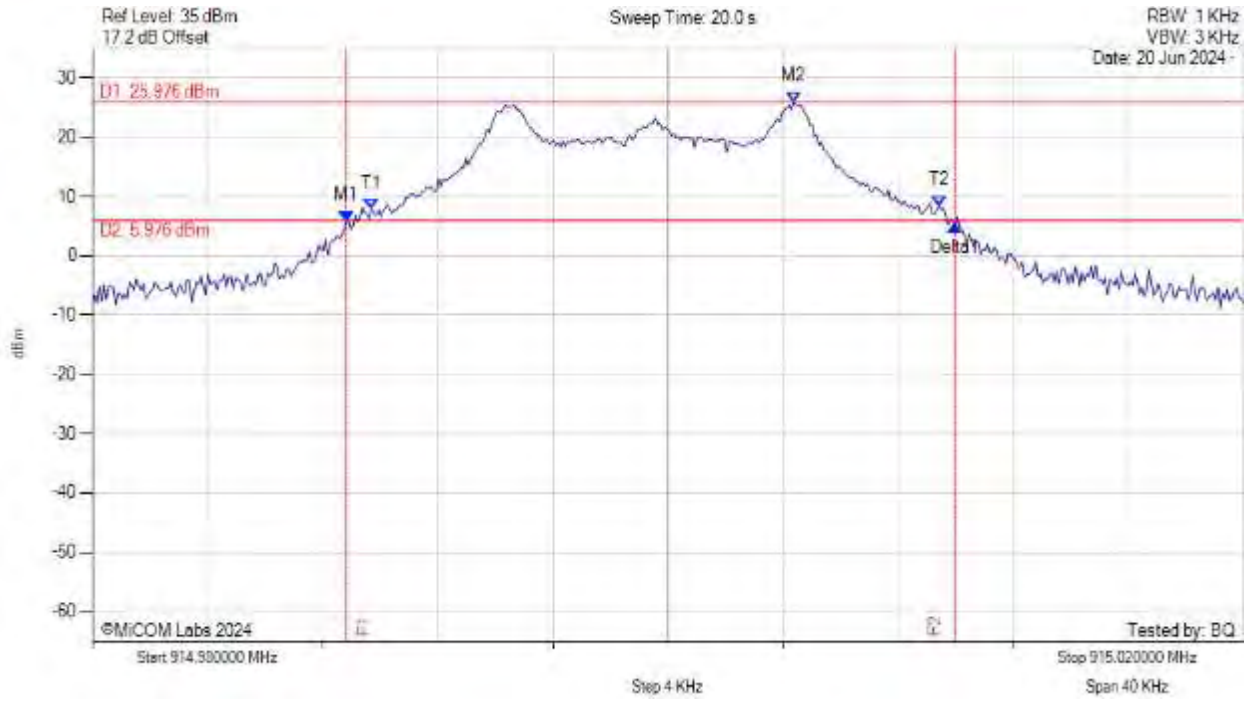


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.189 MHz : 5.362 dBm M2 : 902.205 MHz : 25.972 dBm Delta1 : 21 KHz : -0.102 dB T1 : 902.190 MHz : 9.019 dBm T2 : 902.209 MHz : 6.808 dBm OBW : 20 KHz	Measured 20 dB Bandwidth: 0.021 MHz Limit: 0.5 kHz Margin: 0.48 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

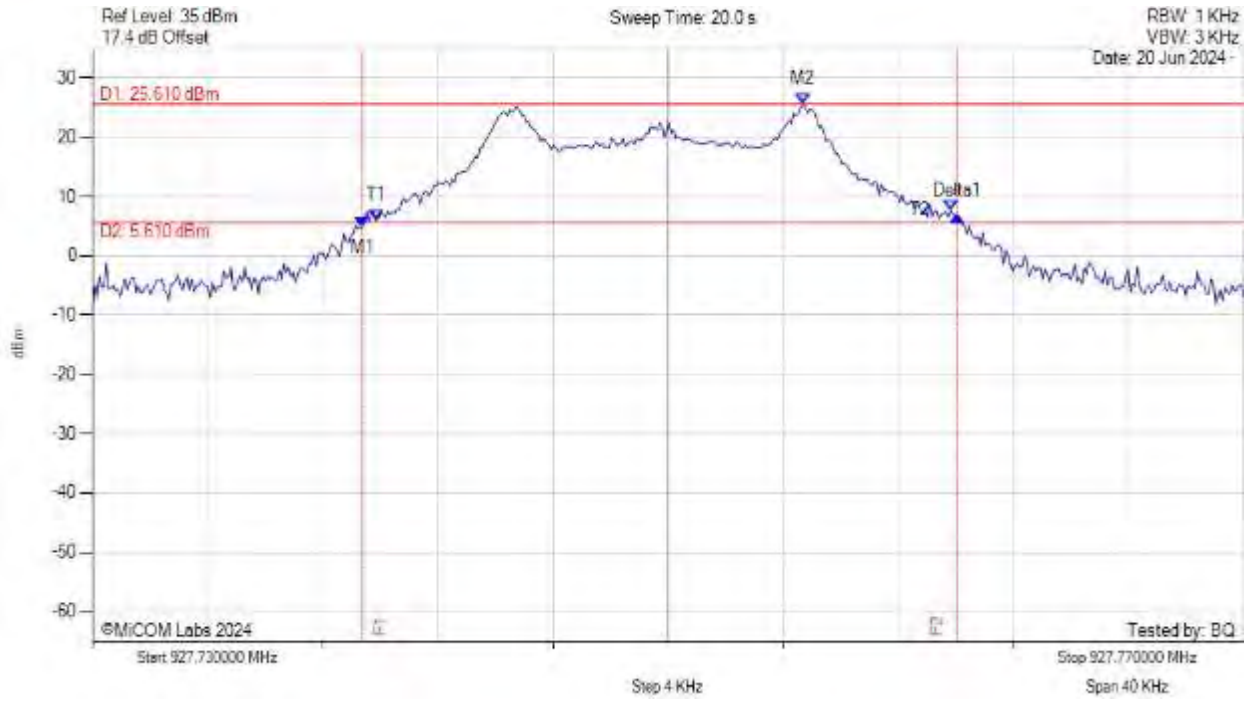


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 914.989 MHz : 5.865 dBm M2 : 915.004 MHz : 25.976 dBm Delta1 : 21 KHz : -0.787 dB T1 : 914.990 MHz : 7.837 dBm T2 : 915.009 MHz : 8.449 dBm OBW : 20 KHz	Measured 20 dB Bandwidth: 0.021 MHz Limit: 0.5 kHz Margin: 0.48 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 927.75 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

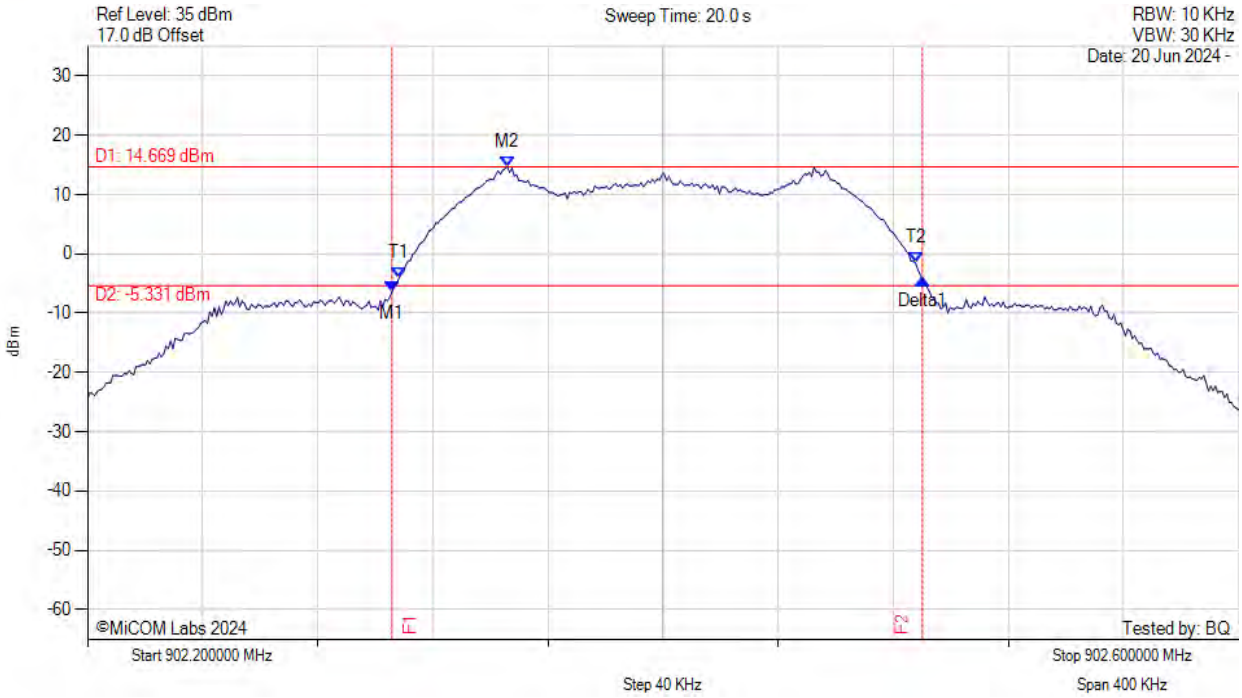


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 927.739 MHz : 4.866 dBm M2 : 927.755 MHz : 25.610 dBm Delta1 : 21 KHz : 1.790 dB T1 : 927.740 MHz : 6.044 dBm T2 : 927.760 MHz : 7.736 dBm OBW : 20 KHz	Measured 20 dB Bandwidth: 0.021 MHz Limit: 0.5 kHz Margin: 0.48 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

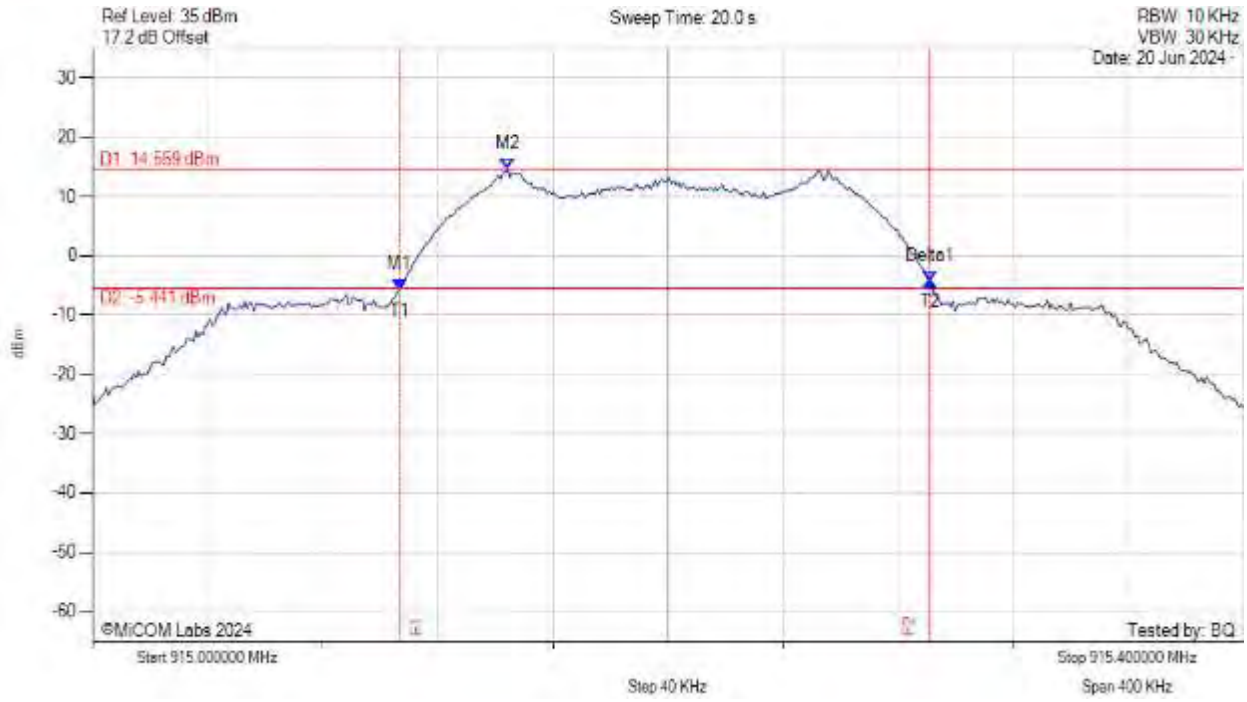


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.306 MHz : -6.393 dBm M2 : 902.346 MHz : 14.669 dBm Delta1 : 184 KHz : 2.097 dB T1 : 902.308 MHz : -4.093 dBm T2 : 902.488 MHz : -1.546 dBm OBW : 180 KHz	Measured 20 dB Bandwidth: 0.184 MHz Limit: 0.5 kHz Margin: 0.32 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

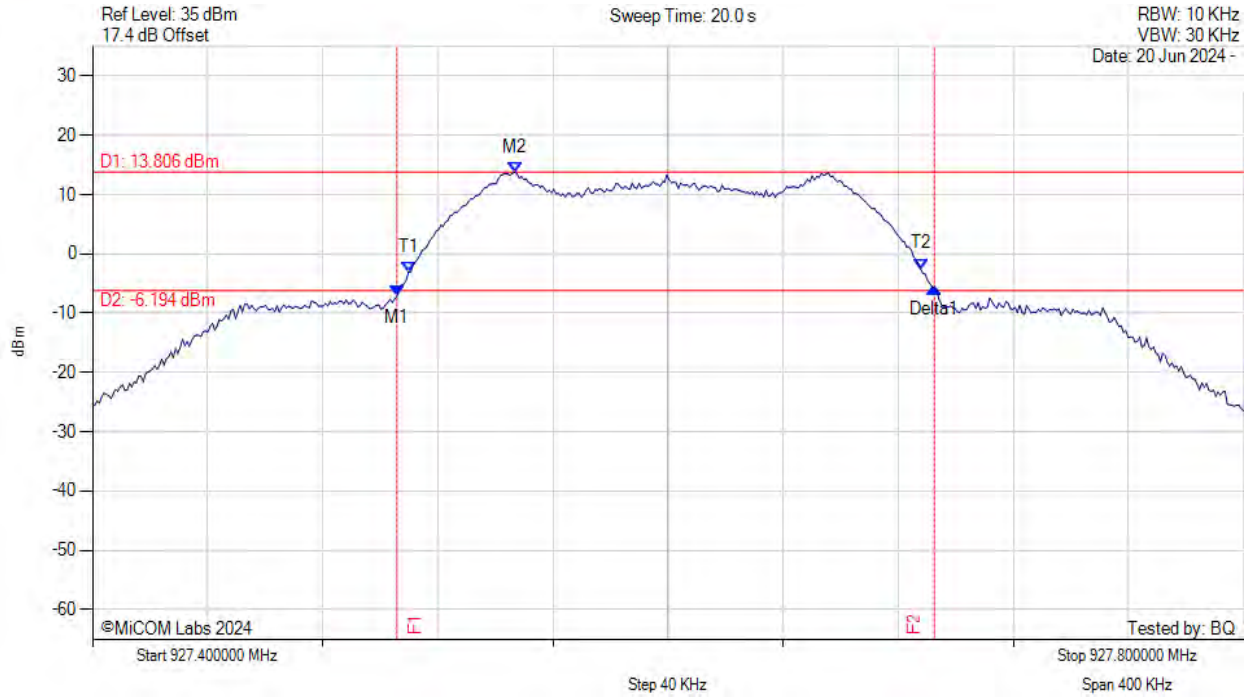


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 915.107 MHz : -5.730 dBm M2 : 915.144 MHz : 14.559 dBm Delta1 : 184 KHz : 1.531 dB T1 : 915.107 MHz : -5.730 dBm T2 : 915.291 MHz : -4.198 dBm OBW : 184 KHz	Measured 20 dB Bandwidth: 0.184 MHz Limit: 0.5 kHz Margin: 0.32 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

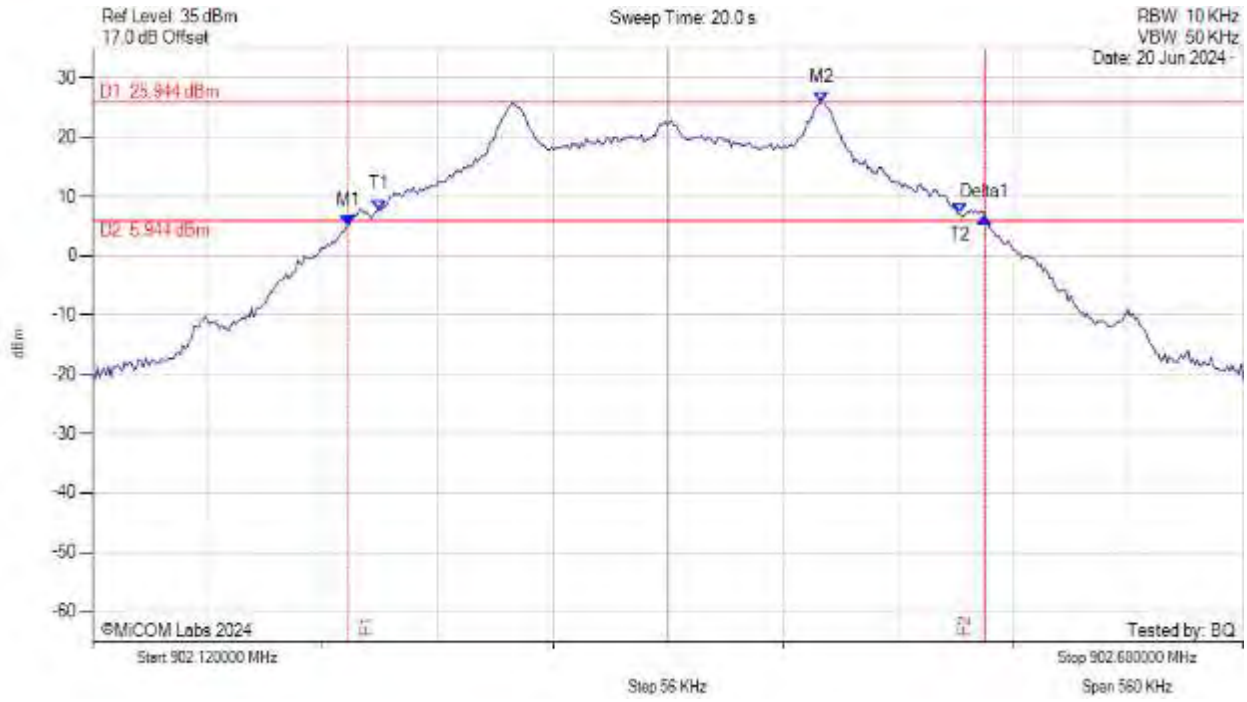


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 927.506 MHz : -7.149 dBm M2 : 927.547 MHz : 13.806 dBm Delta1 : 187 KHz : 1.397 dB T1 : 927.510 MHz : -3.055 dBm T2 : 927.688 MHz : -2.551 dBm OBW : 178 KHz	Measured 20 dB Bandwidth: 0.187 MHz Limit: 0.5 kHz Margin: 0.31 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 150kbps, PL 3 (FHSS), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

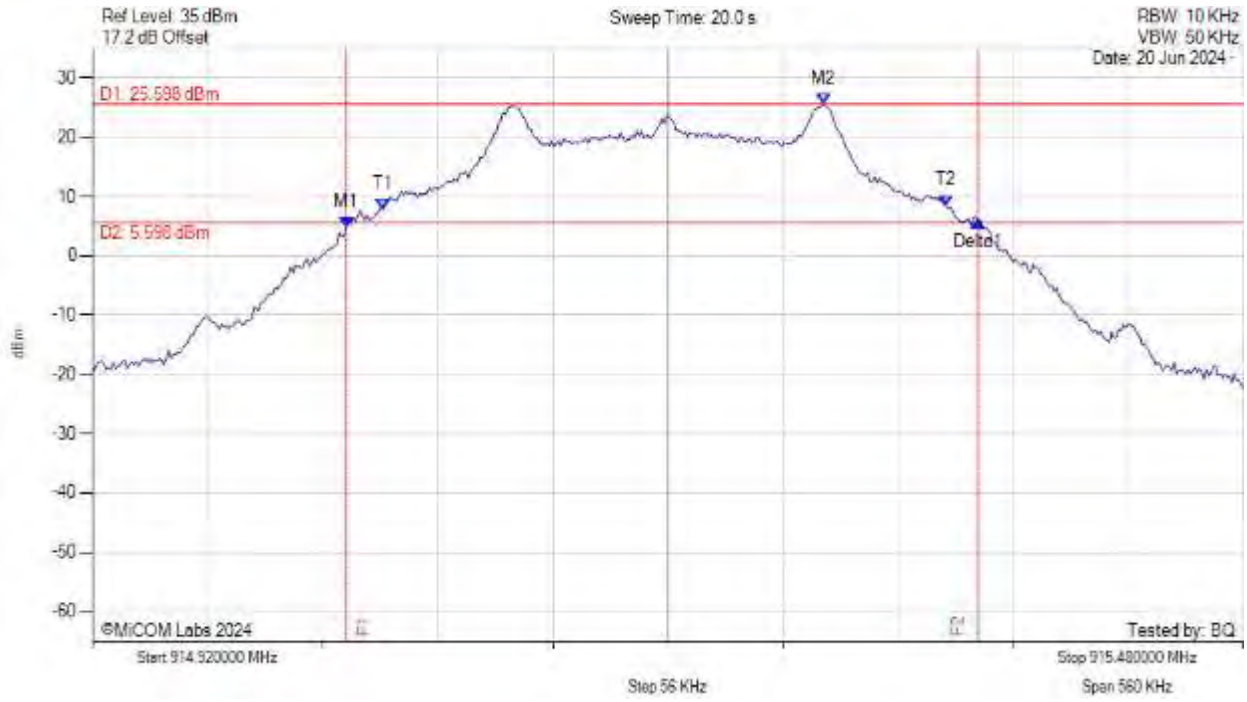


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.245 MHz : 4.974 dBm M2 : 902.475 MHz : 25.944 dBm Delta1 : 310 KHz : 1.503 dB T1 : 902.259 MHz : 7.752 dBm T2 : 902.542 MHz : 7.117 dBm OBW : 283 KHz	Measured 20 dB Bandwidth: 0.310 MHz Limit: 0.5 kHz Margin: 0.19 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 150kbps, PL 3 (FHSS), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

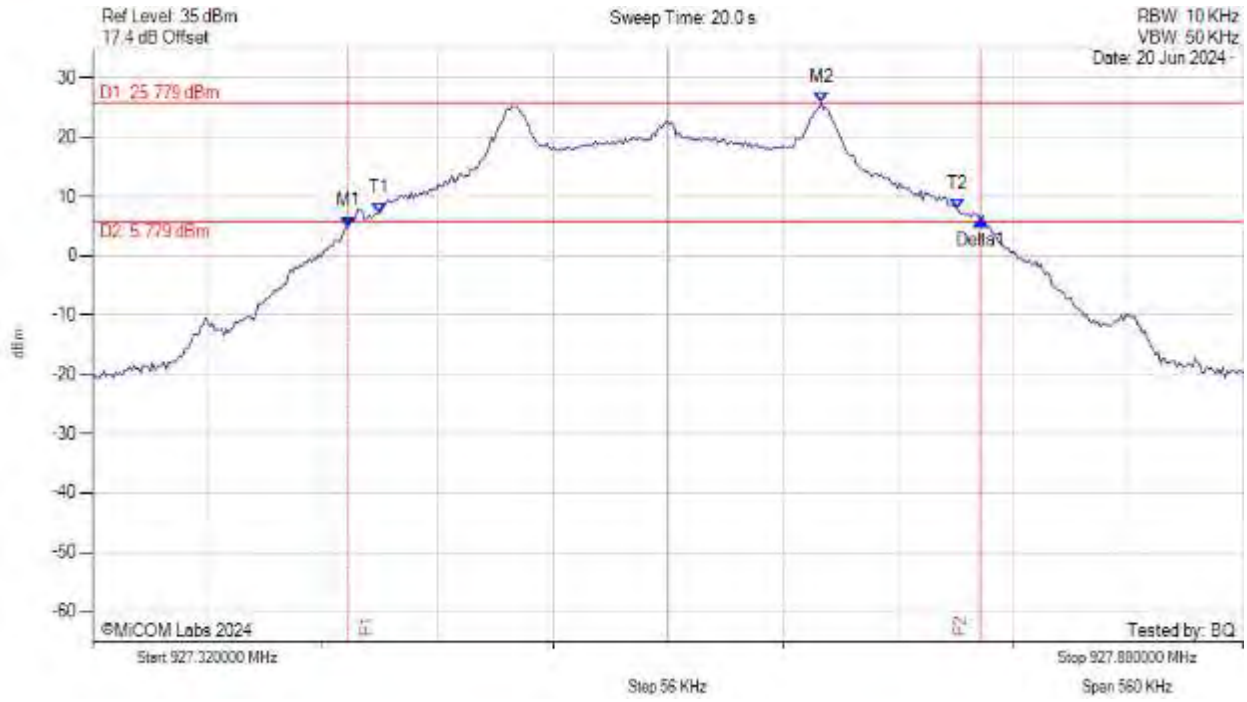


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 915.043 MHz : 4.923 dBm M2 : 915.276 MHz : 25.598 dBm Delta1 : 307 KHz : 0.883 dB T1 : 915.061 MHz : 7.935 dBm T2 : 915.335 MHz : 8.458 dBm OBW : 274 KHz	Measured 20 dB Bandwidth: 0.307 MHz Limit: 0.5 kHz Margin: 0.19 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 150kbps, PL 3 (FHSS), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

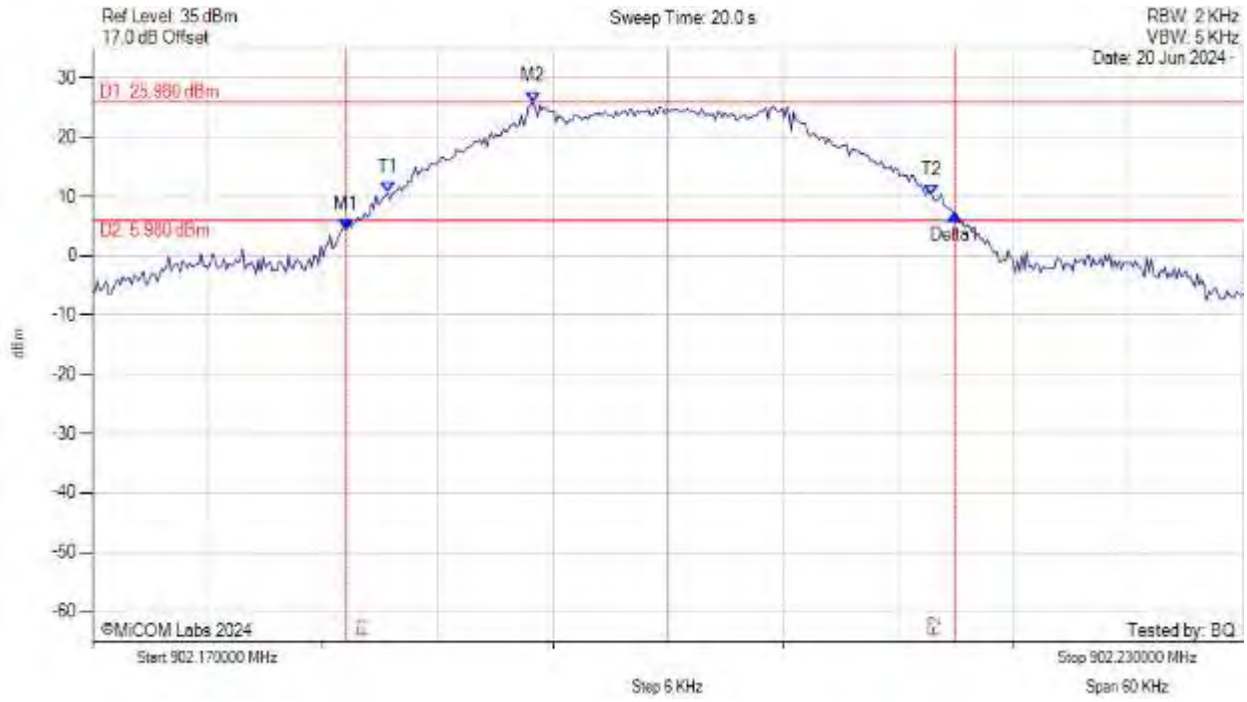


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 927.445 MHz : 4.945 dBm M2 : 927.675 MHz : 25.779 dBm Delta1 : 307 KHz : 1.125 dB T1 : 927.459 MHz : 7.069 dBm T2 : 927.741 MHz : 7.925 dBm OBW : 282 KHz	Measured 20 dB Bandwidth: 0.307 MHz Limit: 0.5 kHz Margin: 0.19 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

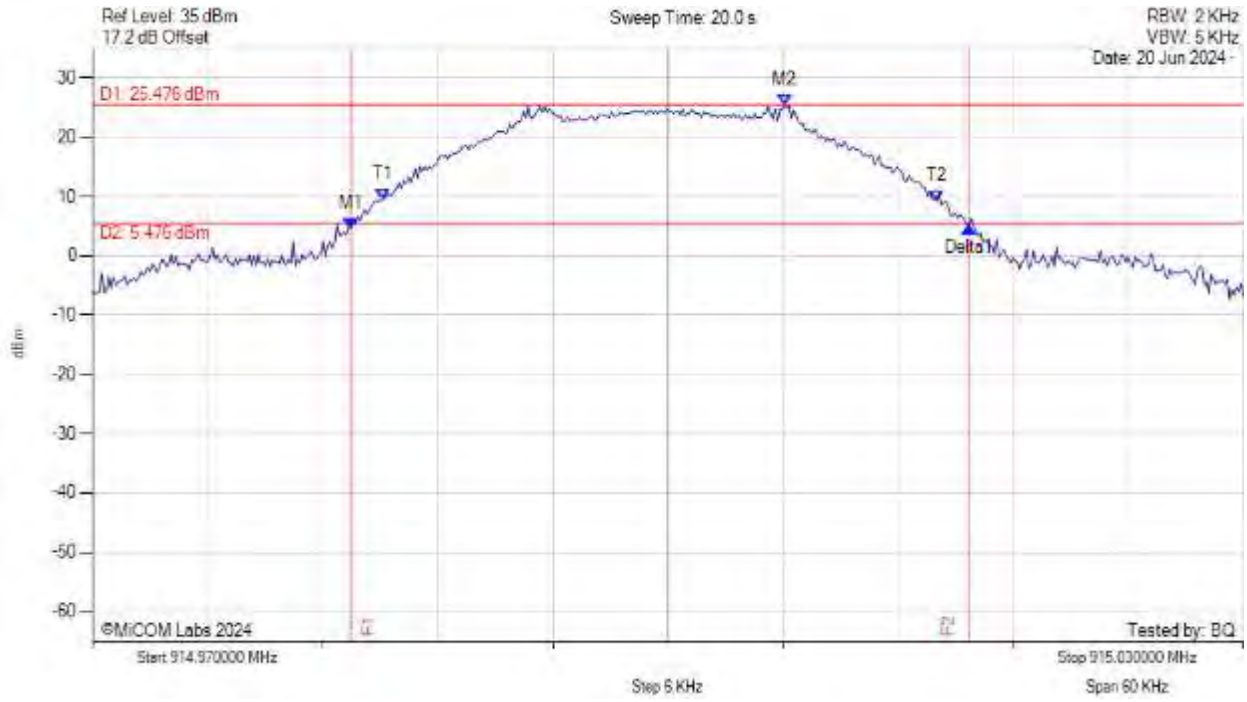


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.183 MHz : 4.343 dBm M2 : 902.193 MHz : 25.980 dBm Delta1 : 32 KHz : 2.621 dB T1 : 902.185 MHz : 10.597 dBm T2 : 902.214 MHz : 10.280 dBm OBW : 28 KHz	Measured 20 dB Bandwidth: 0.032 MHz Limit: 0.5 kHz Margin: 0.47 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

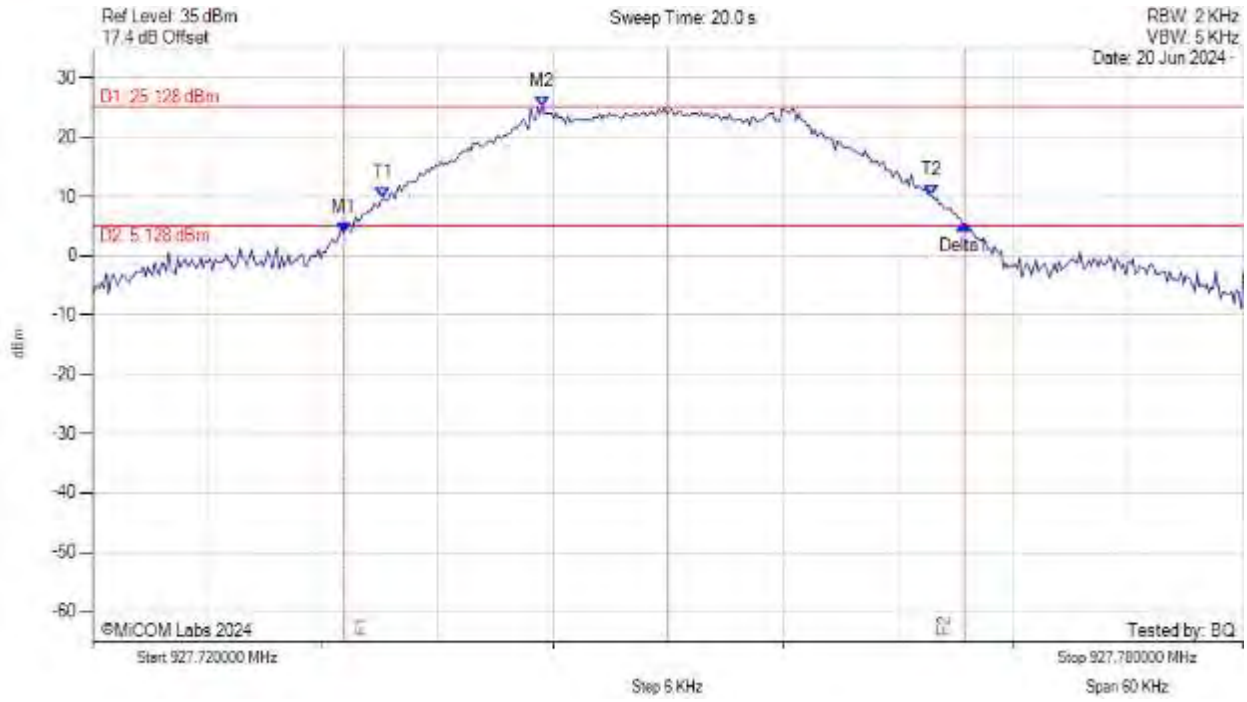


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 914.983 MHz : 4.659 dBm M2 : 915.006 MHz : 25.476 dBm Delta1 : 32 KHz : 0.291 dB T1 : 914.985 MHz : 9.542 dBm T2 : 915.014 MHz : 9.322 dBm OBW : 29 KHz	Measured 20 dB Bandwidth: 0.032 MHz Limit: 0.5 kHz Margin: 0.47 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 927.75 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

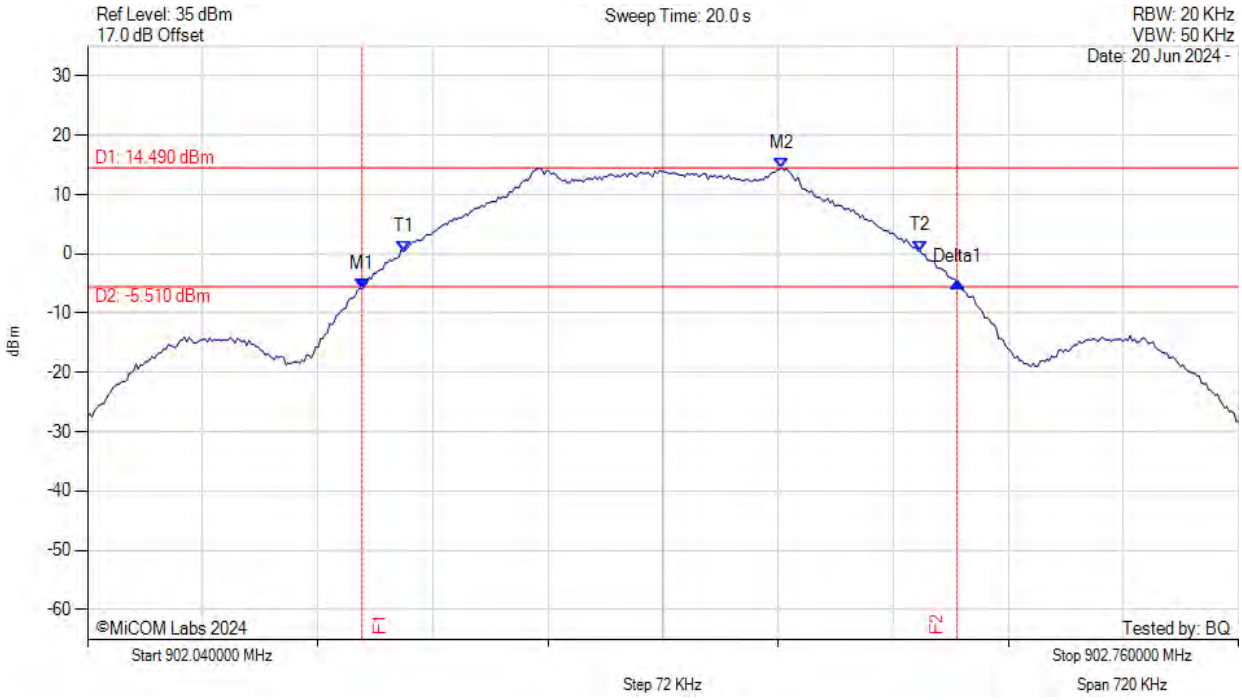


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 927.733 MHz : 3.861 dBm M2 : 927.743 MHz : 25.128 dBm Delta1 : 32 KHz : 1.420 dB T1 : 927.735 MHz : 9.684 dBm T2 : 927.764 MHz : 10.235 dBm OBW : 29 KHz	Measured 20 dB Bandwidth: 0.032 MHz Limit: 0.5 kHz Margin: 0.47 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 300kbps PL 2 (Hybrid), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

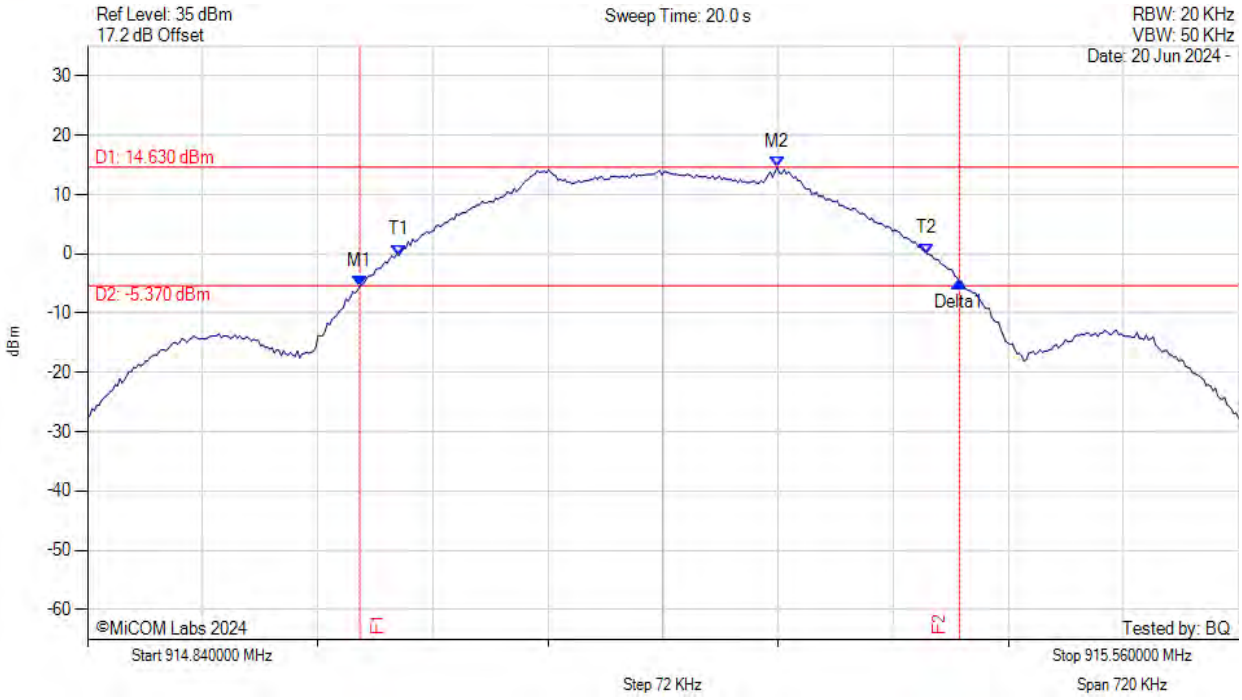


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.212 MHz : -5.978 dBm M2 : 902.474 MHz : 14.490 dBm Delta1 : 372 KHz : 1.161 dB T1 : 902.238 MHz : 0.400 dBm T2 : 902.561 MHz : 0.489 dBm OBW : 323 KHz	Measured 20 dB Bandwidth: 0.372 MHz Limit: 0.5 kHz Margin: 0.13 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 300kbps PL 2 (Hybrid), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

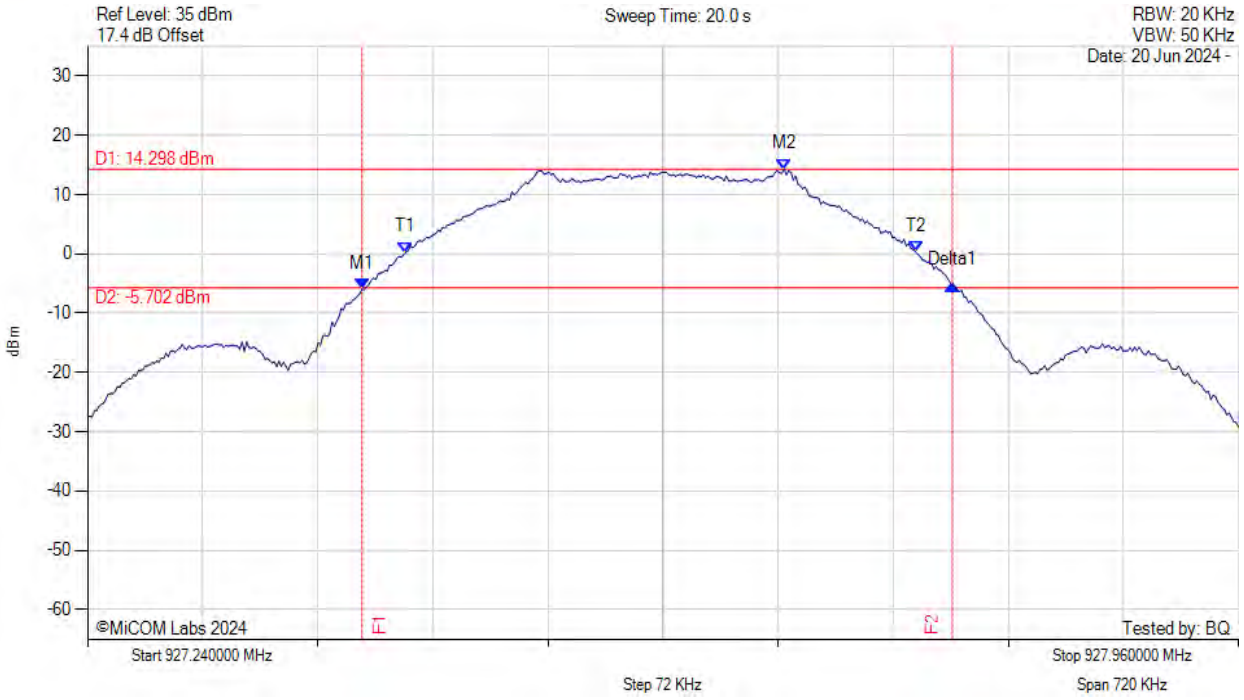


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 915.010 MHz : -5.384 dBm M2 : 915.271 MHz : 14.630 dBm Delta1 : 375 KHz : 0.691 dB T1 : 915.035 MHz : -0.204 dBm T2 : 915.365 MHz : 0.042 dBm OBW : 330 KHz	Measured 20 dB Bandwidth: 0.375 MHz Limit: 0.5 kHz Margin: 0.13 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 300kbps PL 2 (Hybrid), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

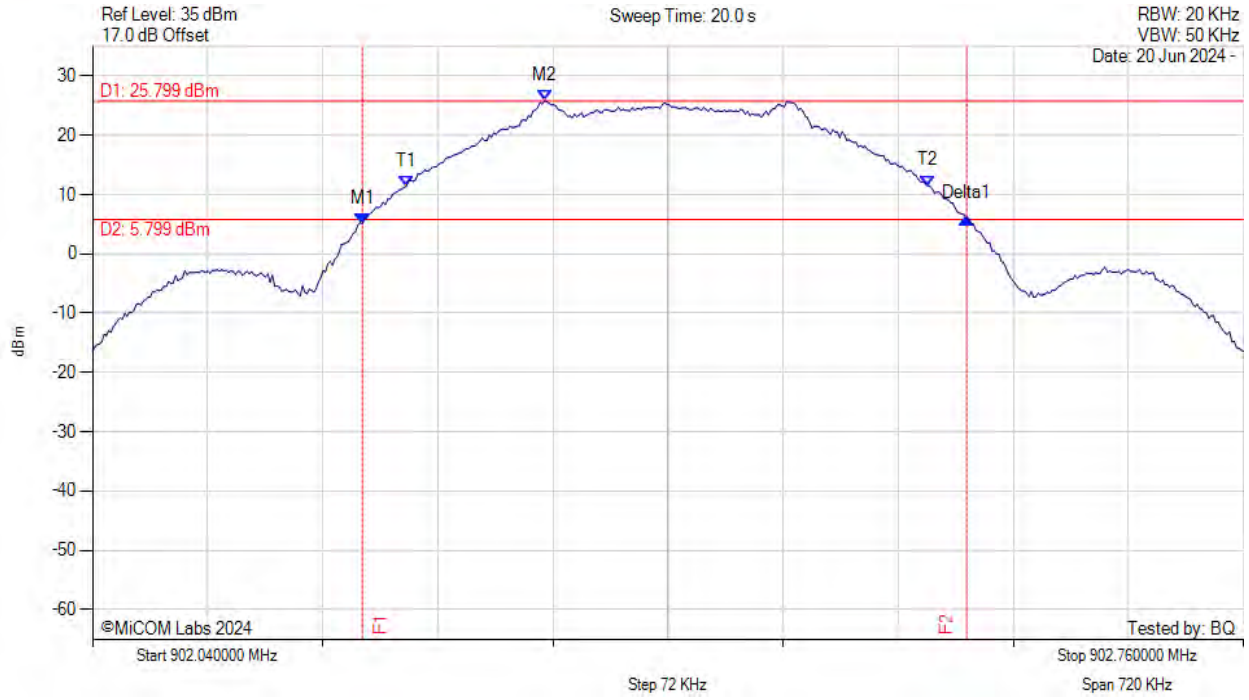


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 927.412 MHz : -5.968 dBm M2 : 927.676 MHz : 14.298 dBm Delta1 : 369 KHz : 0.659 dB T1 : 927.439 MHz : 0.272 dBm T2 : 927.758 MHz : 0.361 dBm OBW : 319 KHz	Measured 20 dB Bandwidth: 0.369 MHz Limit: 0.5 kHz Margin: 0.13 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 300kbps PL 3 (FHSS), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

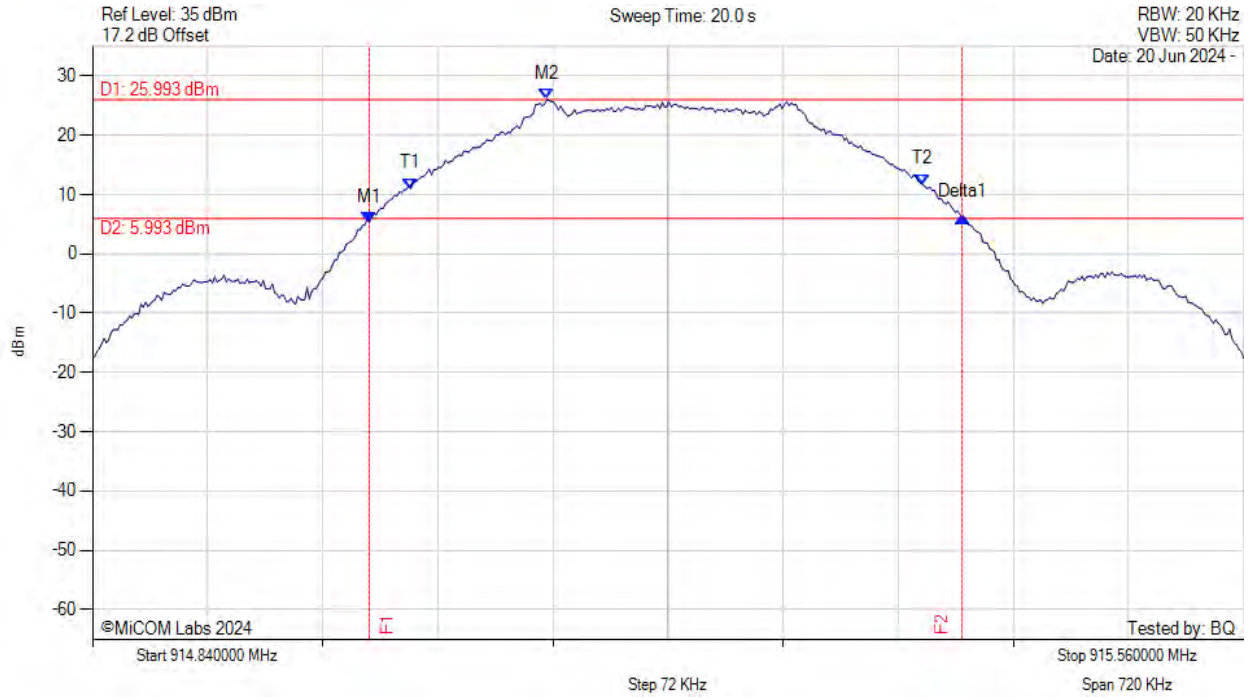


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.209 MHz : 5.106 dBm M2 : 902.323 MHz : 25.799 dBm Delta1 : 378 KHz : 0.925 dB T1 : 902.236 MHz : 11.348 dBm T2 : 902.562 MHz : 11.490 dBm OBW : 326 KHz	Measured 20 dB Bandwidth: 0.378 MHz Limit: 0.5 kHz Margin: 0.12 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 300kbps PL 3 (FHSS), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

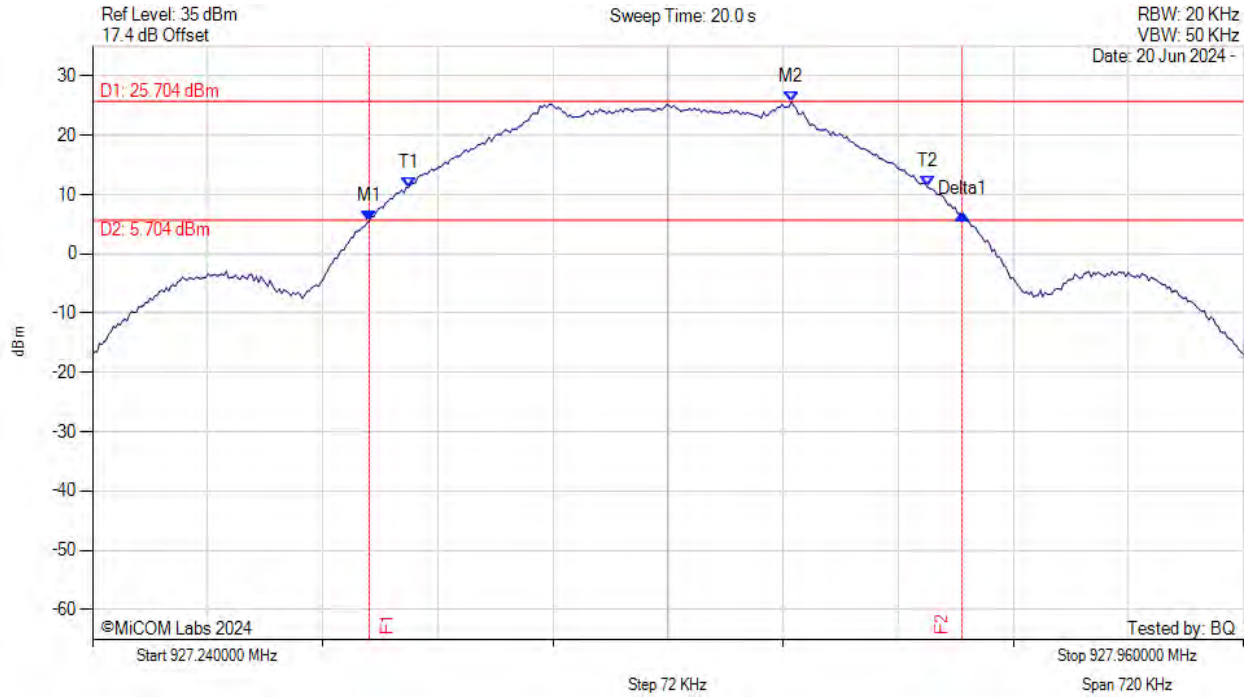


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 915.013 MHz : 5.372 dBm M2 : 915.124 MHz : 25.993 dBm Delta1 : 371 KHz : 0.771 dB T1 : 915.039 MHz : 11.008 dBm T2 : 915.359 MHz : 11.710 dBm OBW : 320 KHz	Measured 20 dB Bandwidth: 0.371 MHz Limit: 0.5 kHz Margin: 0.13 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 300kbps PL 3 (FHSS), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

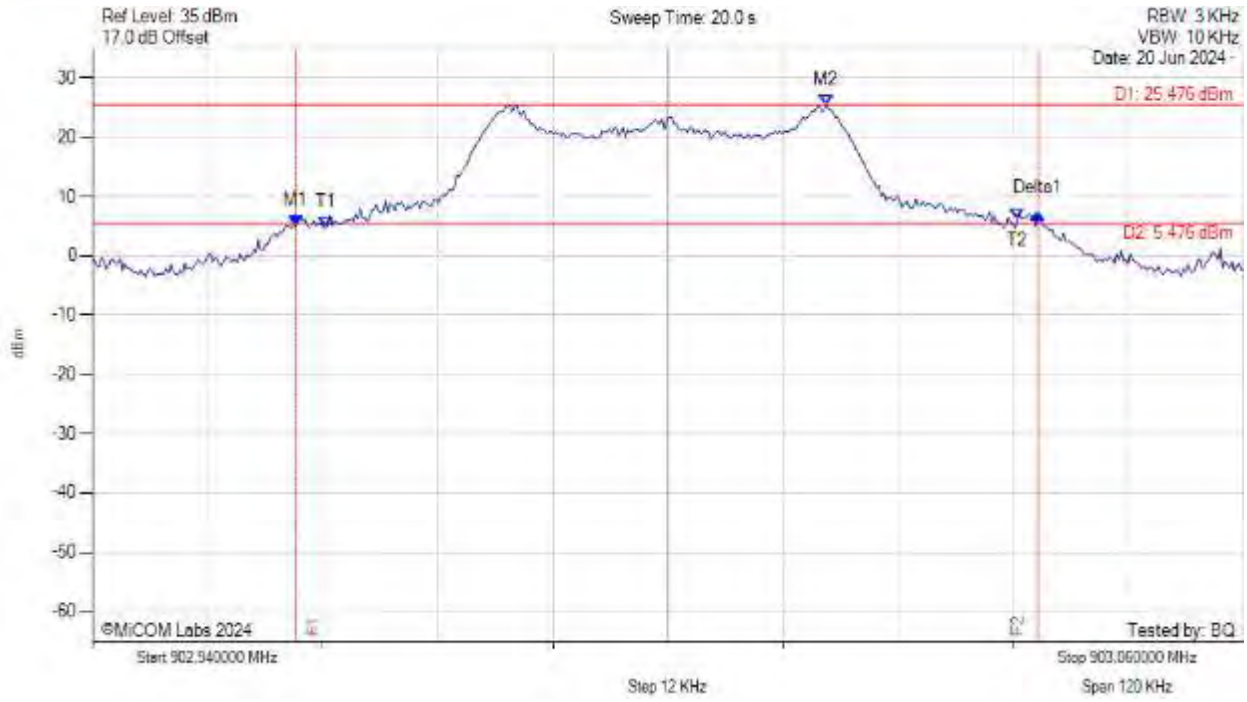


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 927.413 MHz : 5.621 dBm M2 : 927.677 MHz : 25.704 dBm Delta1 : 371 KHz : 1.127 dB T1 : 927.438 MHz : 11.221 dBm T2 : 927.762 MHz : 11.293 dBm OBW : 325 KHz	Measured 20 dB Bandwidth: 0.371 MHz Limit: 0.5 kHz Margin: 0.13 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 37.5 kbps, PL 3 (FHSS), Channel: 903.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

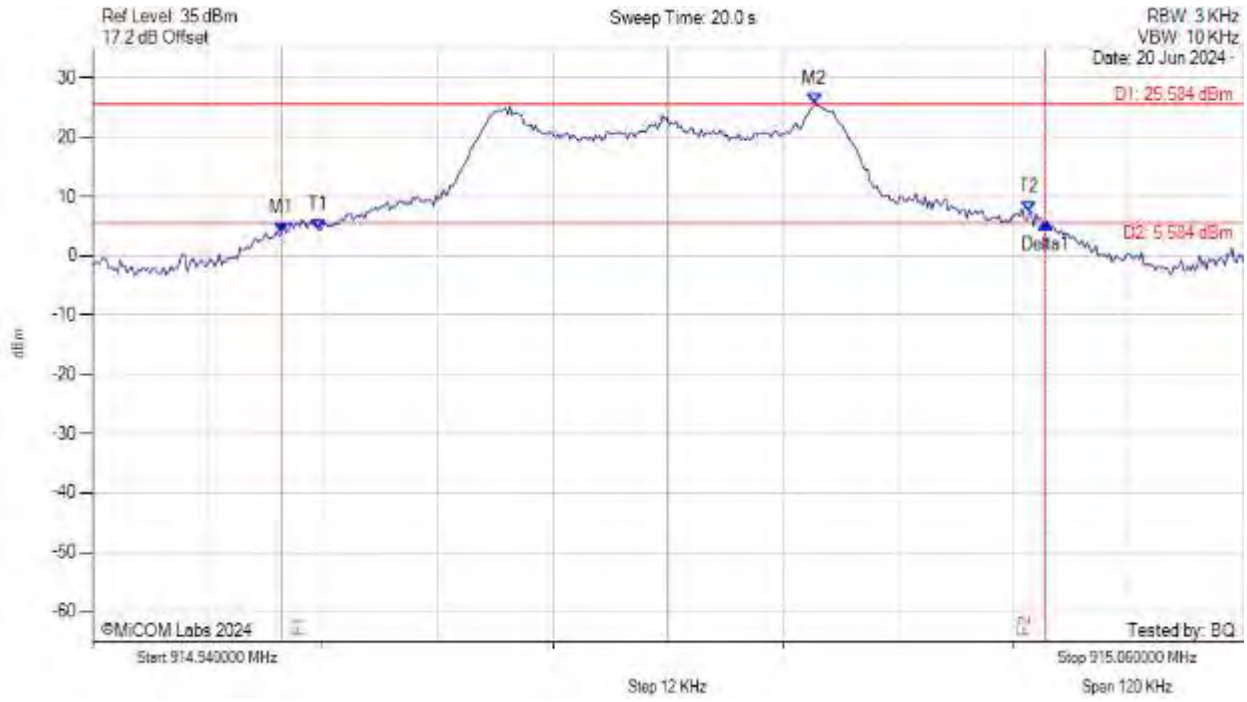


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.961 MHz : 4.955 dBm M2 : 903.016 MHz : 25.476 dBm Delta1 : 77 KHz : 2.123 dB T1 : 902.964 MHz : 4.825 dBm T2 : 903.036 MHz : 6.127 dBm OBW : 72 KHz	Measured 20 dB Bandwidth: 0.077 MHz Limit: 0.5 kHz Margin: 0.42 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 37.5 kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

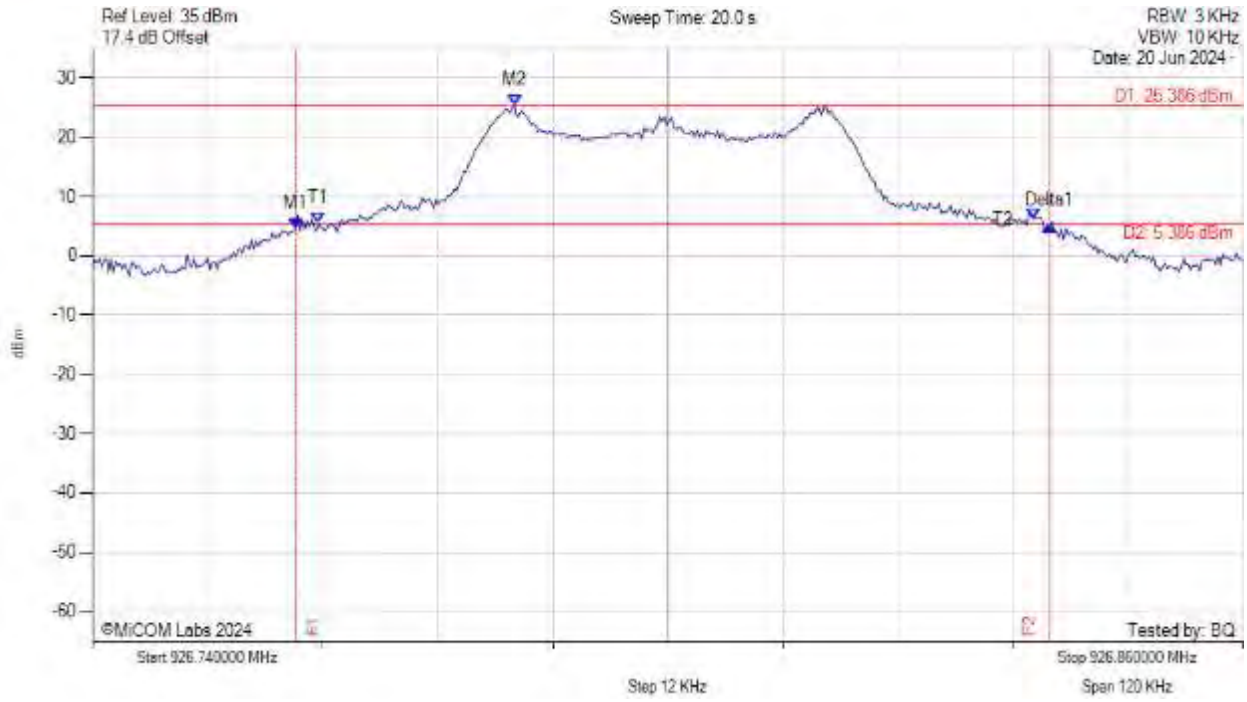


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 914.960 MHz : 3.894 dBm M2 : 915.015 MHz : 25.584 dBm Delta1 : 80 KHz : 1.643 dB T1 : 914.964 MHz : 4.429 dBm T2 : 915.038 MHz : 7.345 dBm OBW : 74 KHz	Measured 20 dB Bandwidth: 0.080 MHz Limit: 0.5 kHz Margin: 0.42 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: GFSK, 37.5 kbps, PL 3 (FHSS), Channel: 926.80 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

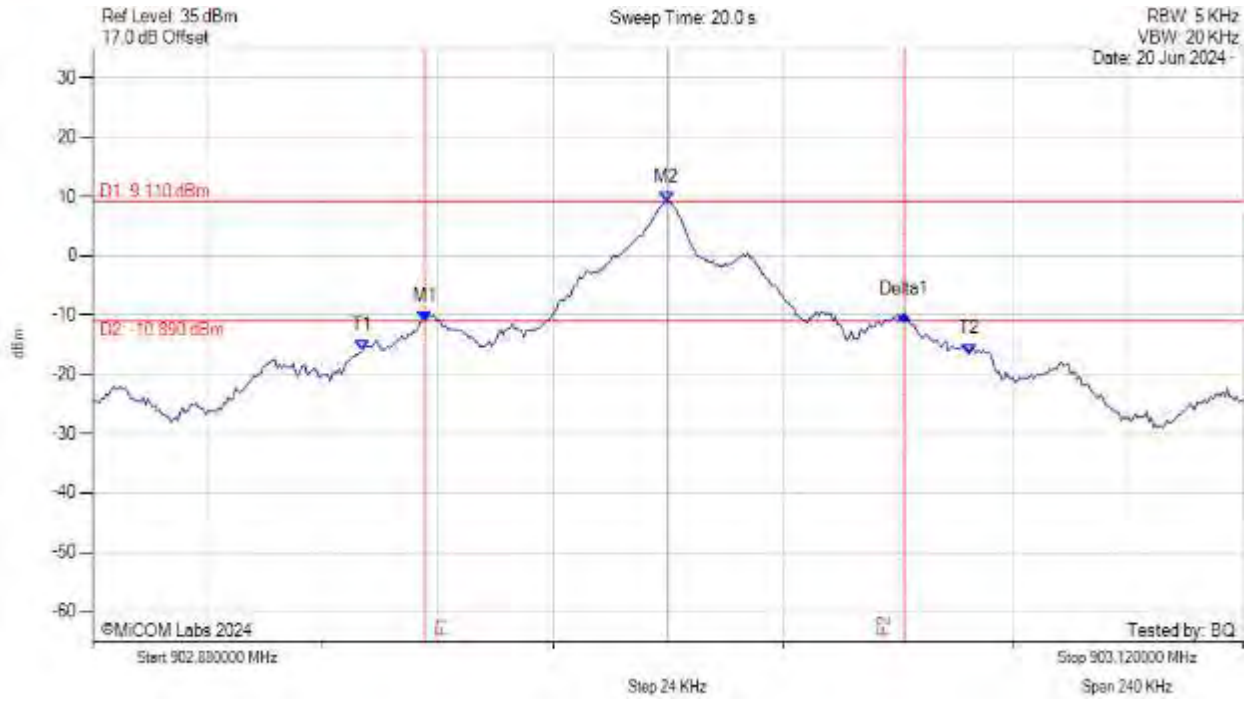


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 926.761 MHz : 4.565 dBm M2 : 926.784 MHz : 25.386 dBm Delta1 : 79 KHz : 0.594 dB T1 : 926.764 MHz : 5.468 dBm T2 : 926.838 MHz : 6.233 dBm OBW : 75 KHz	Measured 20 dB Bandwidth: 0.079 MHz Limit: 0.5 kHz Margin: 0.42 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: OOK PL 1, Channel: 903.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

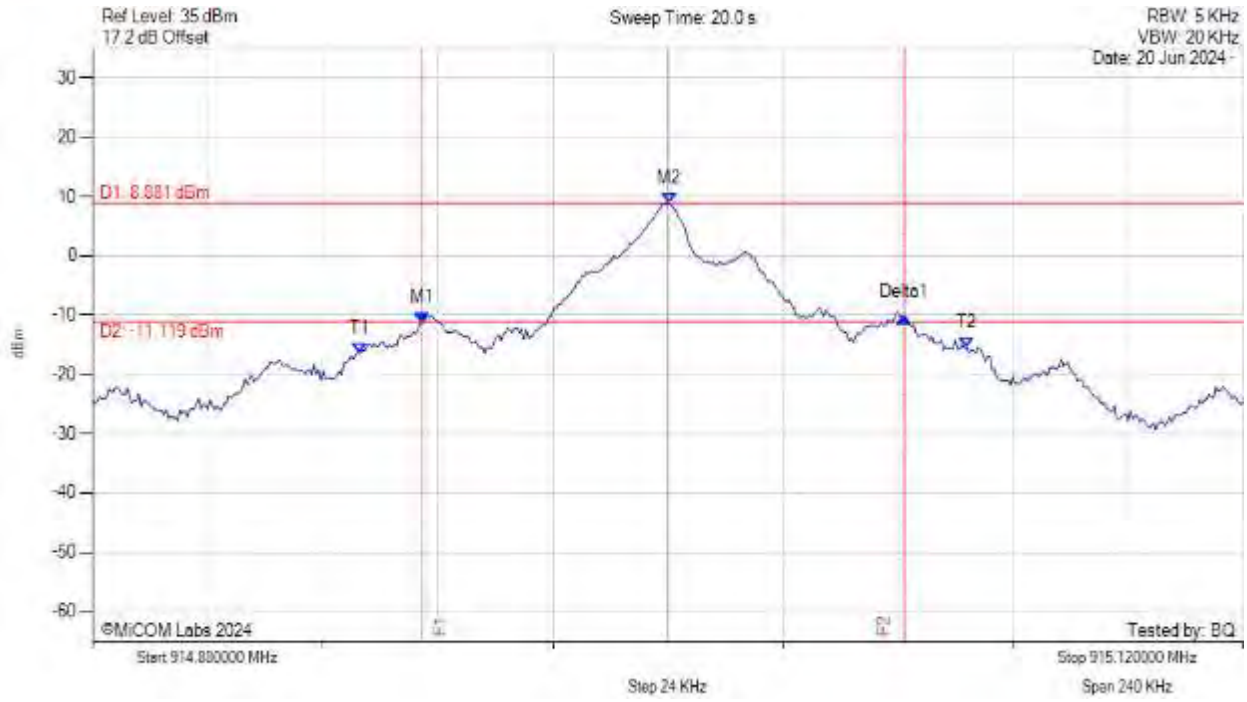


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.949 MHz : -11.011 dBm M2 : 903.000 MHz : 9.110 dBm Delta1 : 100 KHz : 1.196 dB T1 : 902.936 MHz : -16.031 dBm T2 : 903.063 MHz : -16.568 dBm OBW : 126 KHz	Measured 20 dB Bandwidth: 0.100 MHz Limit: 0.5 kHz Margin: 0.40 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: OOK PL 1, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

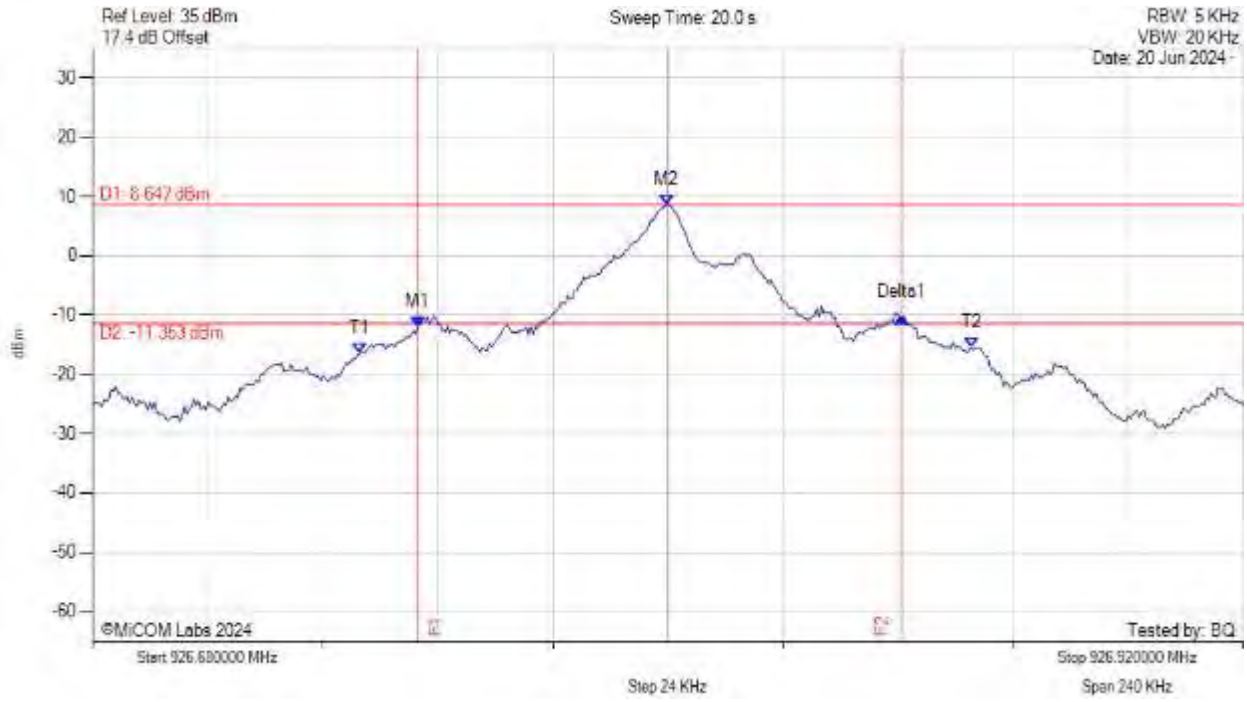


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 914.949 MHz : -11.258 dBm M2 : 915.000 MHz : 8.881 dBm Delta1 : 101 KHz : 0.933 dB T1 : 914.936 MHz : -16.494 dBm T2 : 915.062 MHz : -15.557 dBm OBW : 126 KHz	Measured 20 dB Bandwidth: 0.101 MHz Limit: 0.5 kHz Margin: 0.40 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: OOK PL 1, Channel: 926.80 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

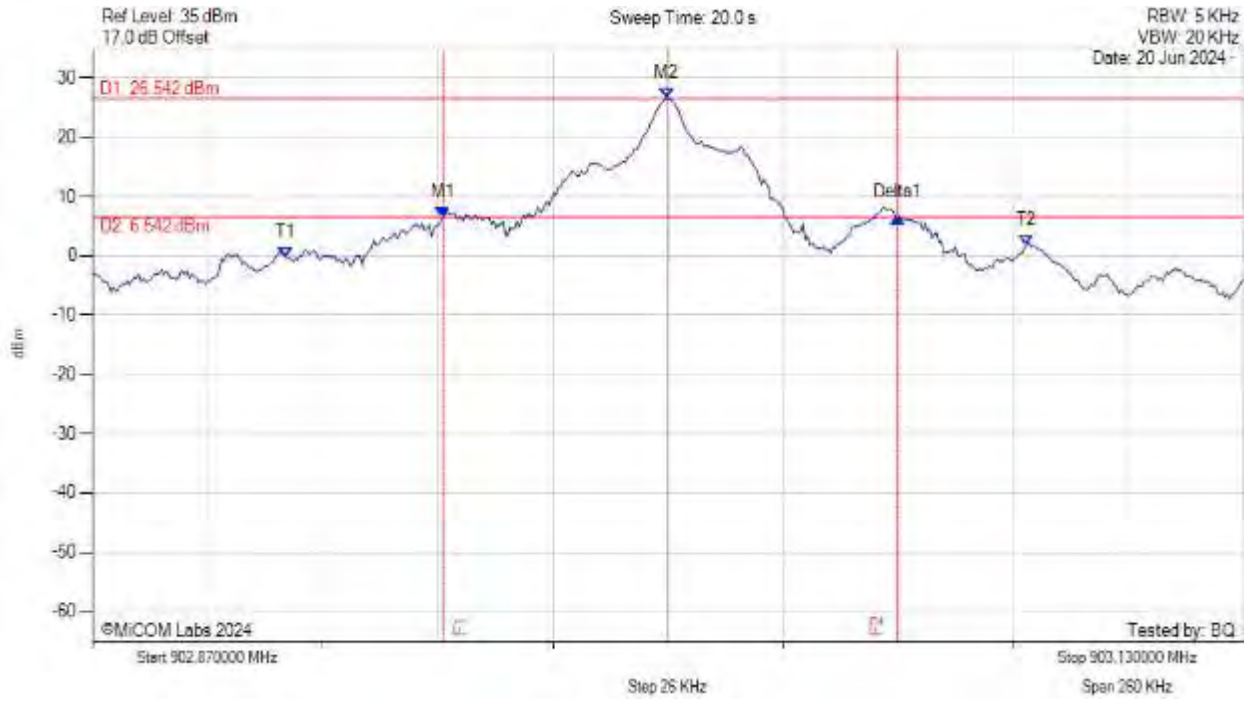


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 926.748 MHz : -12.073 dBm M2 : 926.800 MHz : 8.647 dBm Delta1 : 101 KHz : 1.702 dB T1 : 926.736 MHz : -16.478 dBm T2 : 926.863 MHz : -15.563 dBm OBW : 127 KHz	Measured 20 dB Bandwidth: 0.101 MHz Limit: 0.5 kHz Margin: 0.40 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: OOK PL 3, Channel: 903.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

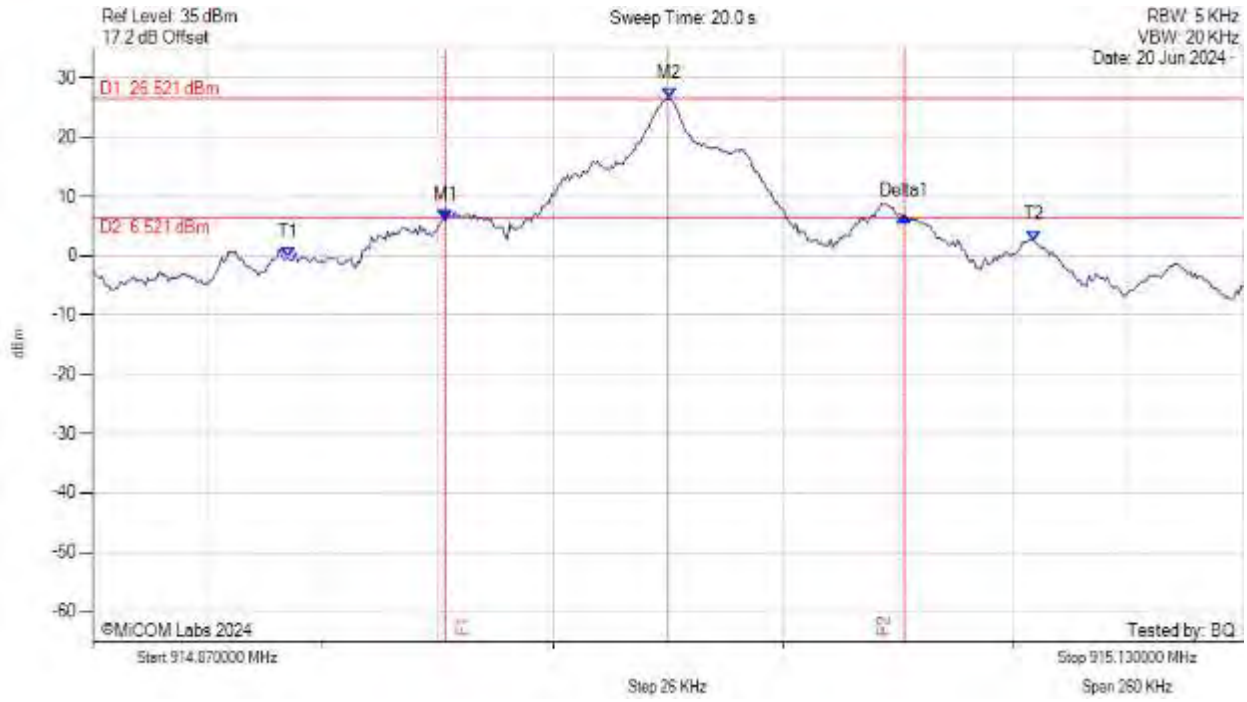


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.949 MHz : 6.460 dBm M2 : 903.000 MHz : 26.542 dBm Delta1 : 103 KHz : 0.065 dB T1 : 902.914 MHz : -0.263 dBm T2 : 903.081 MHz : 1.838 dBm OBW : 167 KHz	Measured 20 dB Bandwidth: 0.103 MHz Limit: 0.5 kHz Margin: 0.40 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: OOK PL 3, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

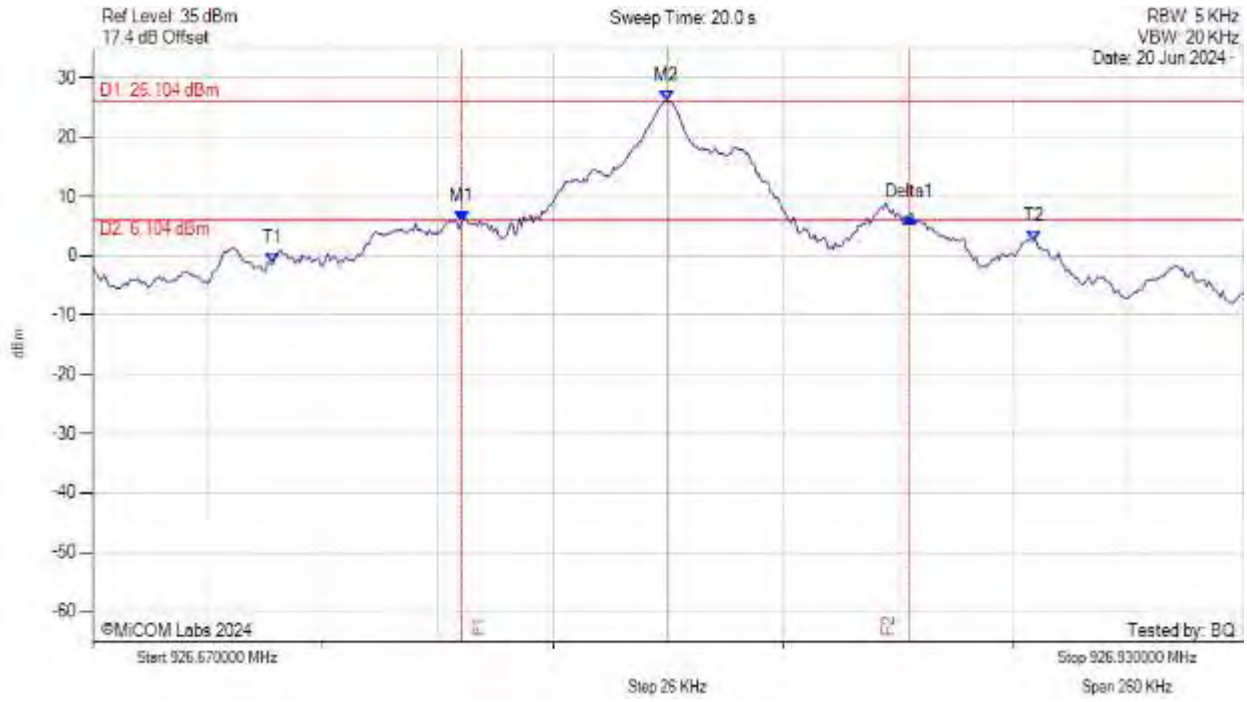


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 914.950 MHz : 5.978 dBm M2 : 915.000 MHz : 26.521 dBm Delta1 : 104 KHz : 0.730 dB T1 : 914.914 MHz : -0.342 dBm T2 : 915.083 MHz : 2.602 dBm OBW : 168 KHz	Measured 20 dB Bandwidth: 0.104 MHz Limit: 0.5 kHz Margin: 0.40 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: OOK PL 3, Channel: 926.80 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 926.753 MHz : 5.686 dBm M2 : 926.800 MHz : 26.104 dBm Delta1 : 101 KHz : 0.706 dB T1 : 926.711 MHz : -1.343 dBm T2 : 926.883 MHz : 2.527 dBm OBW : 172 KHz	Measured 20 dB Bandwidth: 0.101 MHz Limit: 0.5 kHz Margin: 0.40 MHz

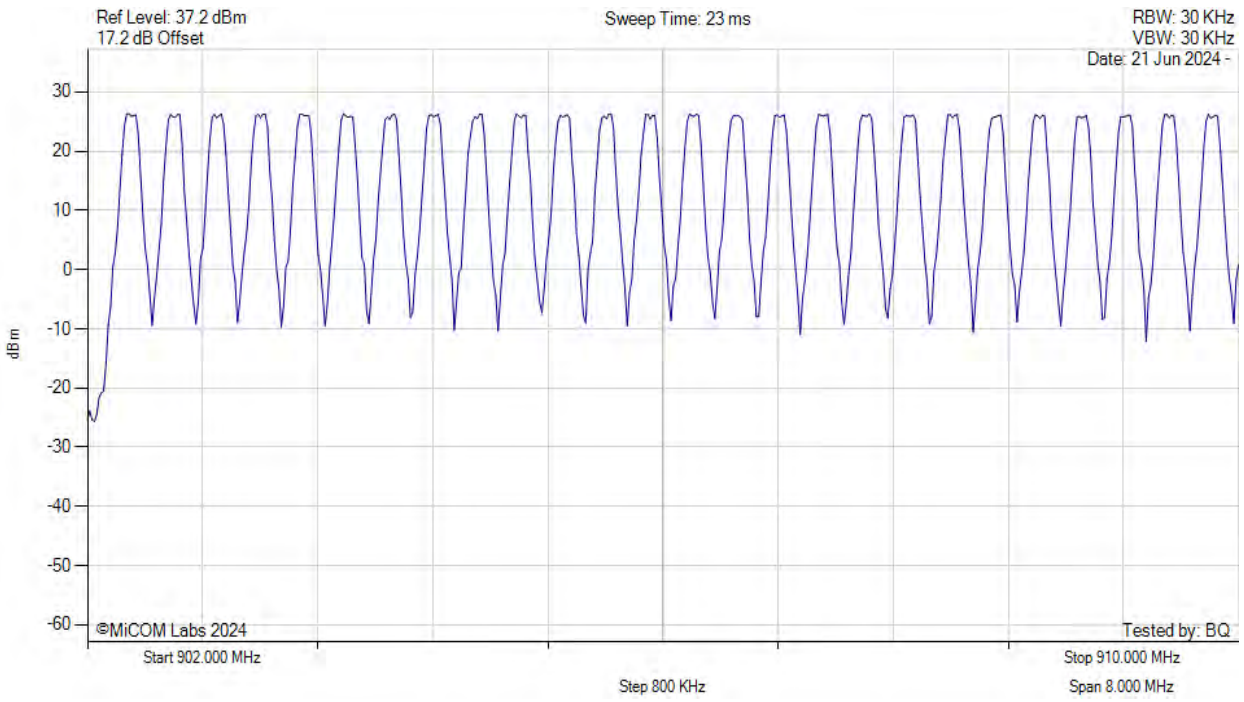
back to matrix

1.2. Frequency Hopping Tests

1.2.1. Number of Hopping Channels

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 100kbps, PL 3 (FHSS), Channel: 914.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

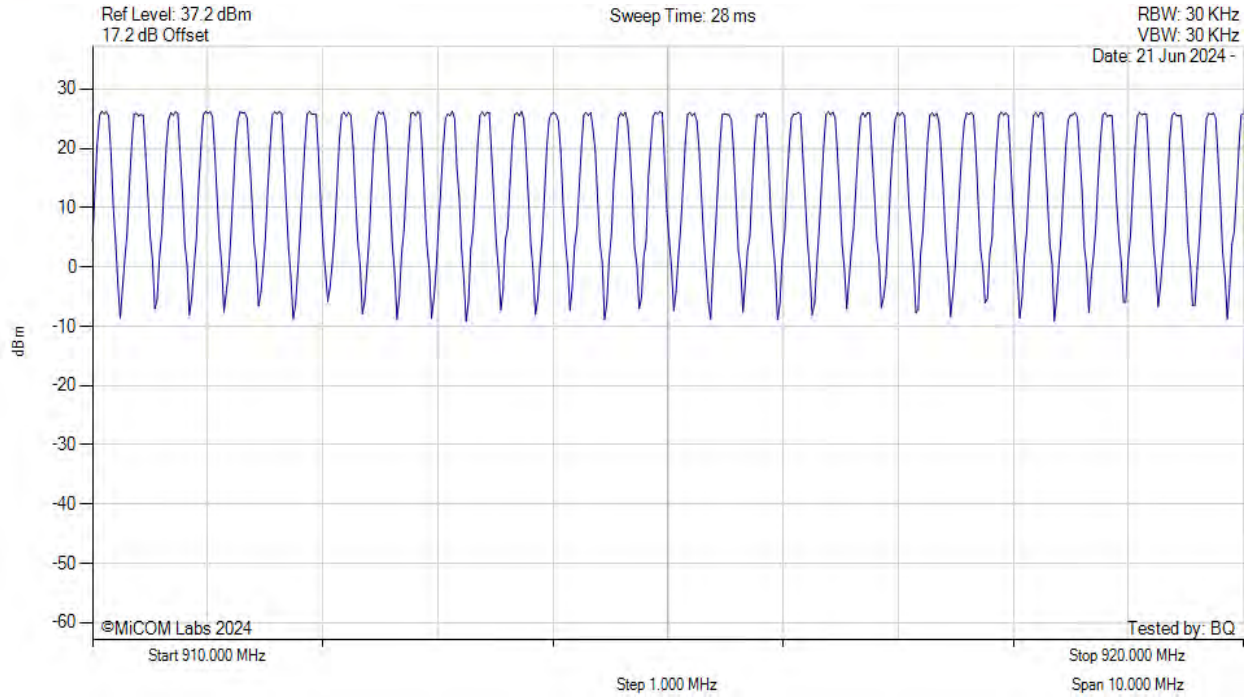


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.60 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 100kbps, PL 3 (FHSS), Channel: 914.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

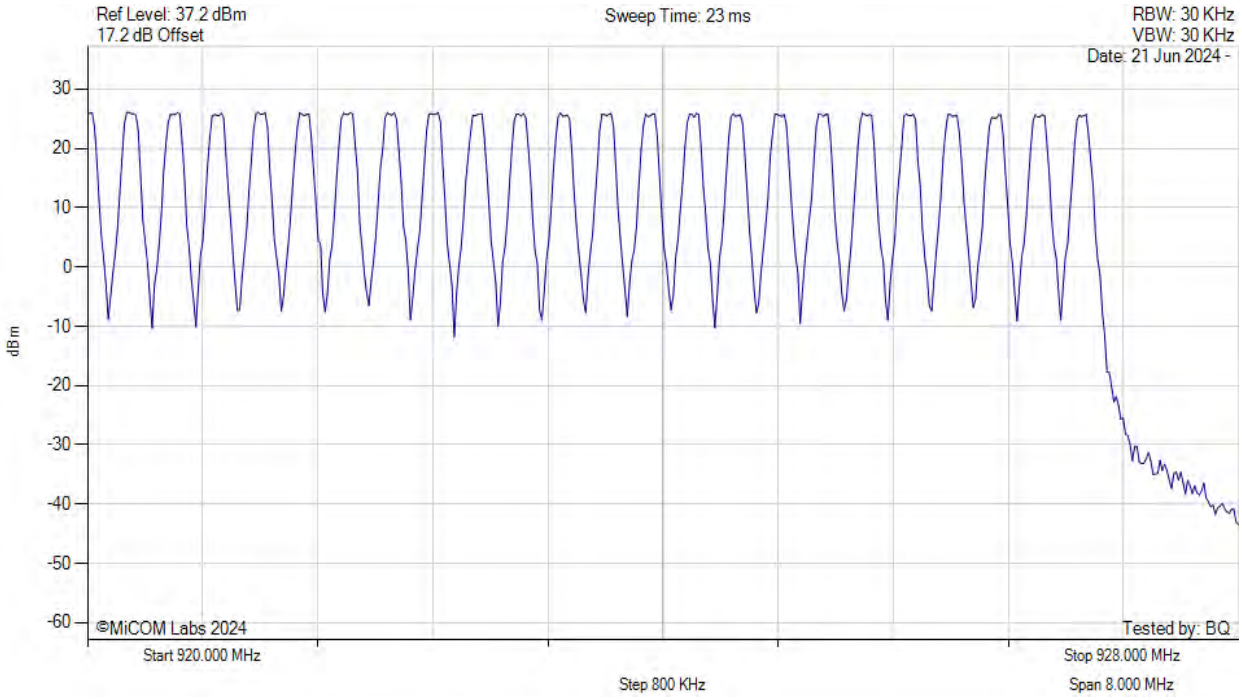


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.60 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 100kbps, PL 3 (FHSS), Channel: 914.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

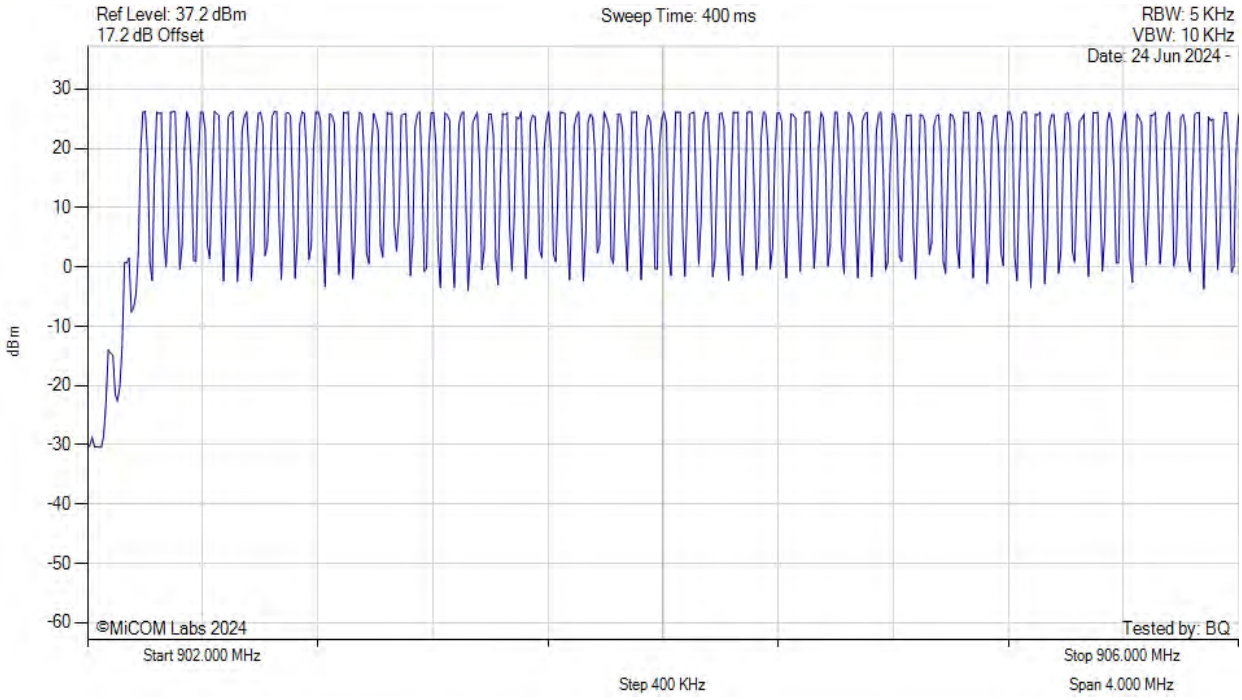


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.60 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 902.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

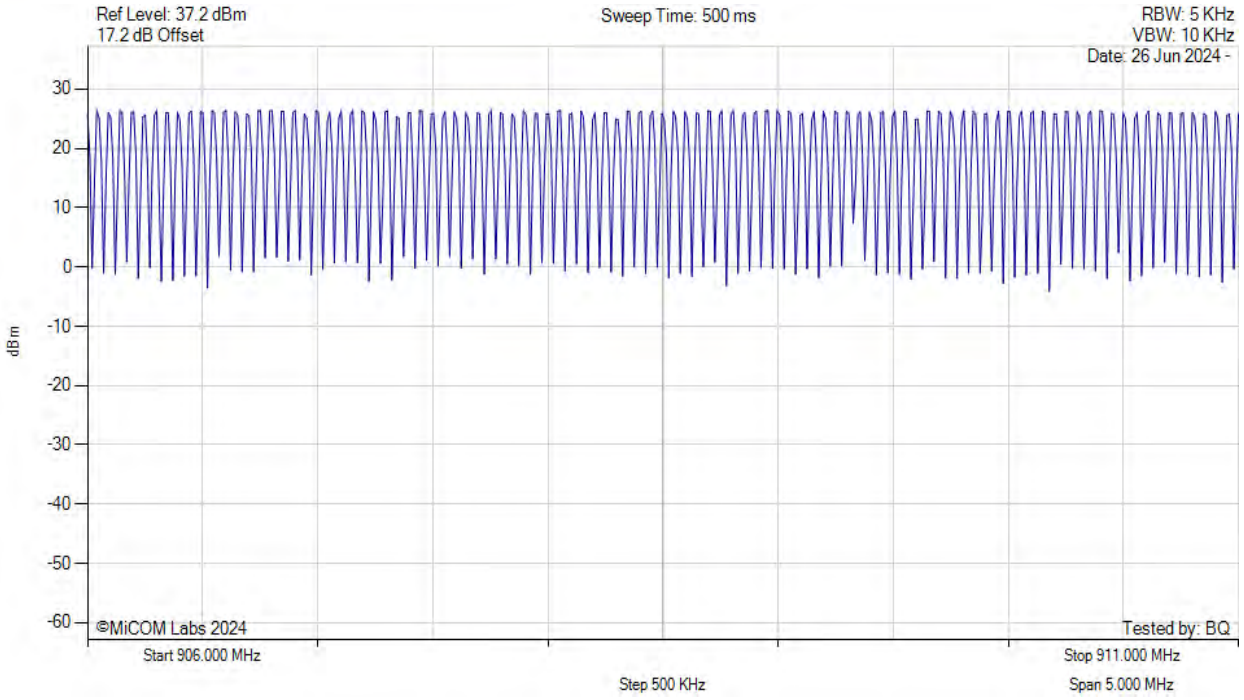


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 902.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 912.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

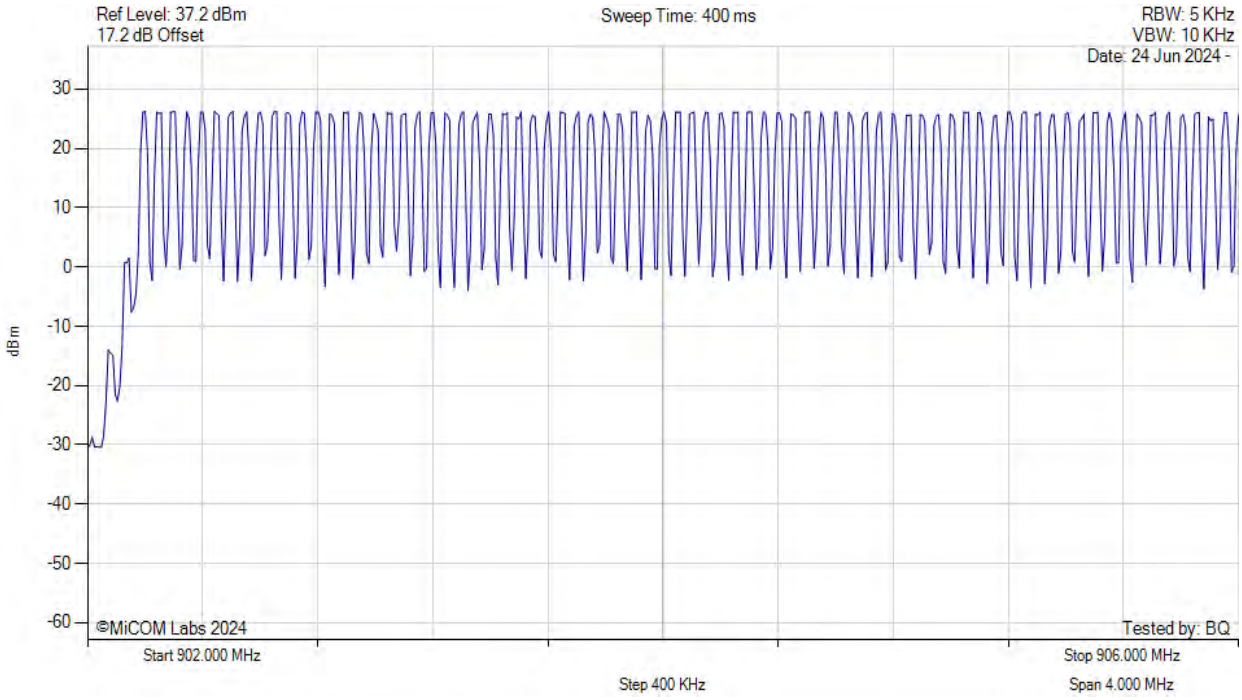


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 912.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 914.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

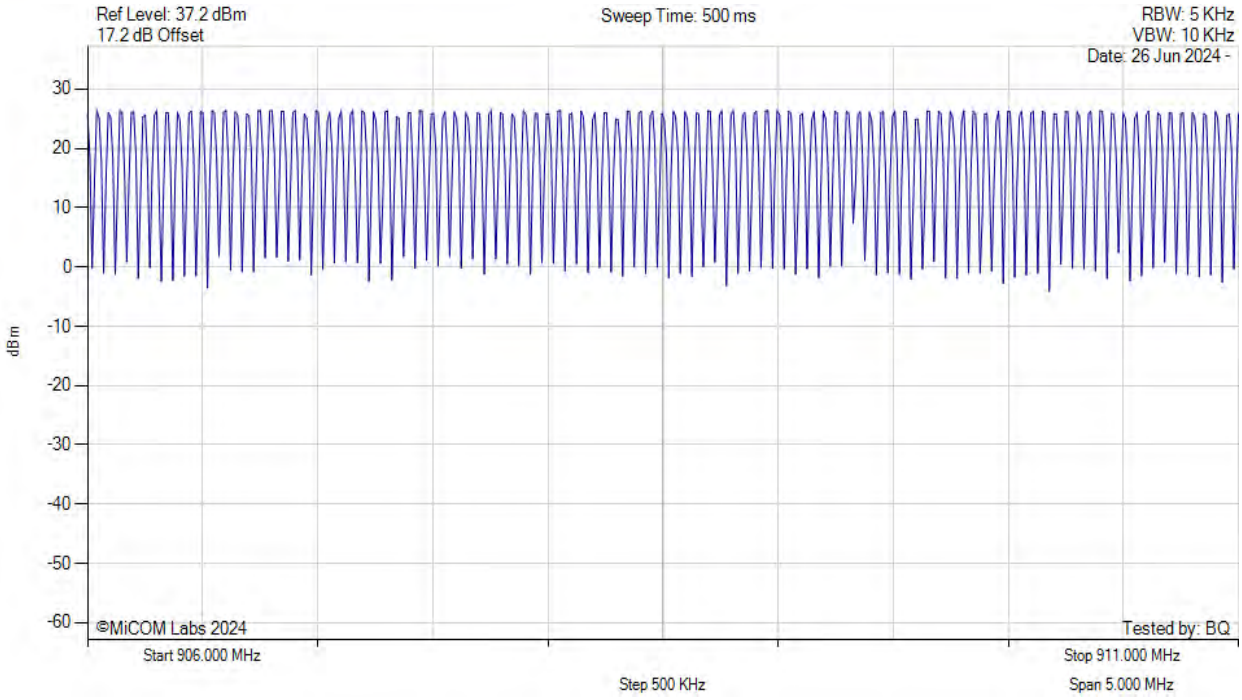


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 914.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

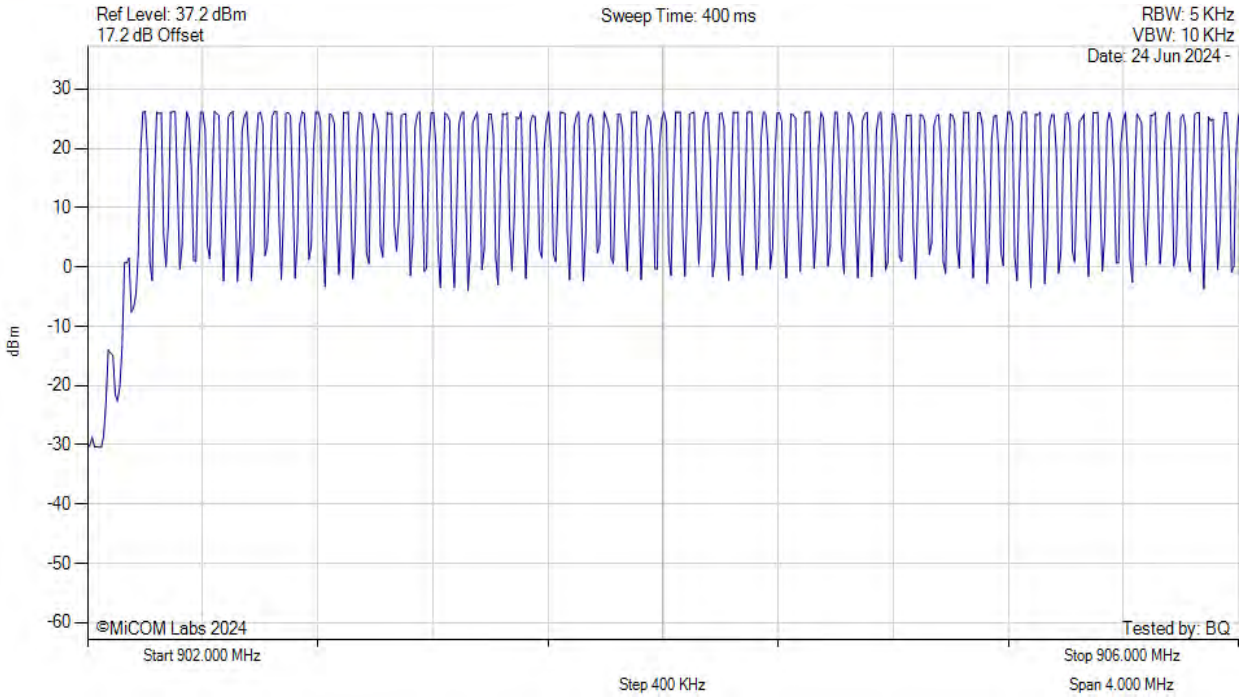


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 914.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

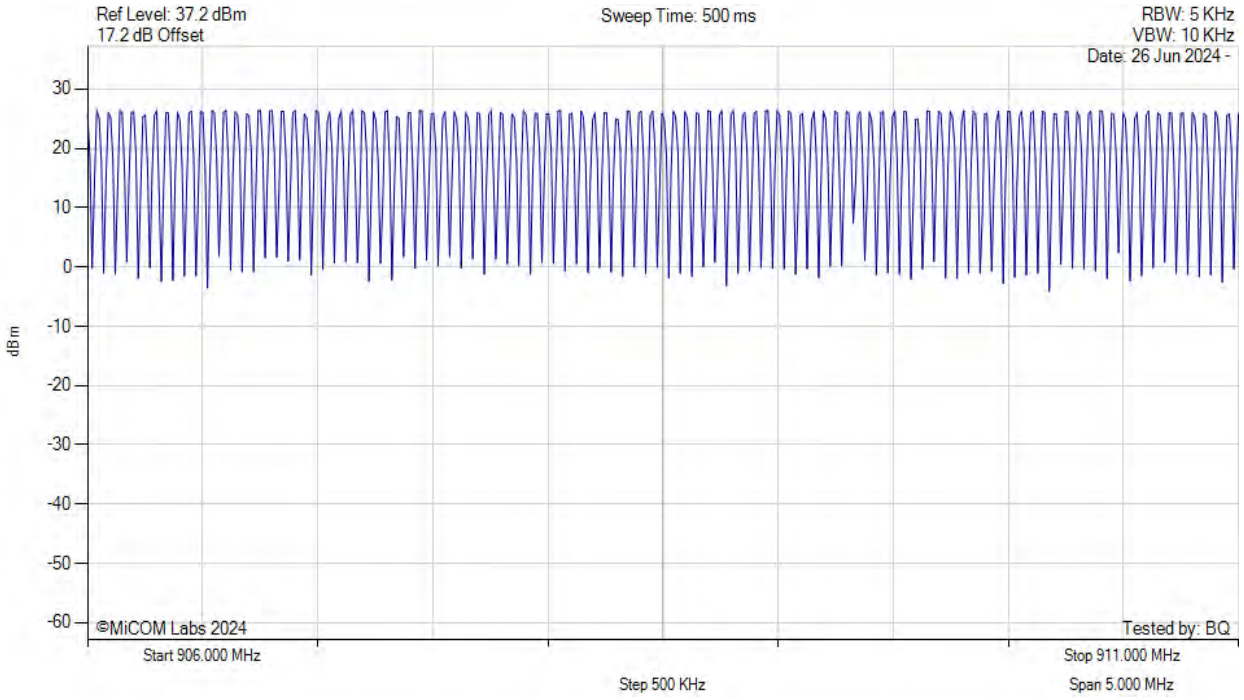


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 914.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

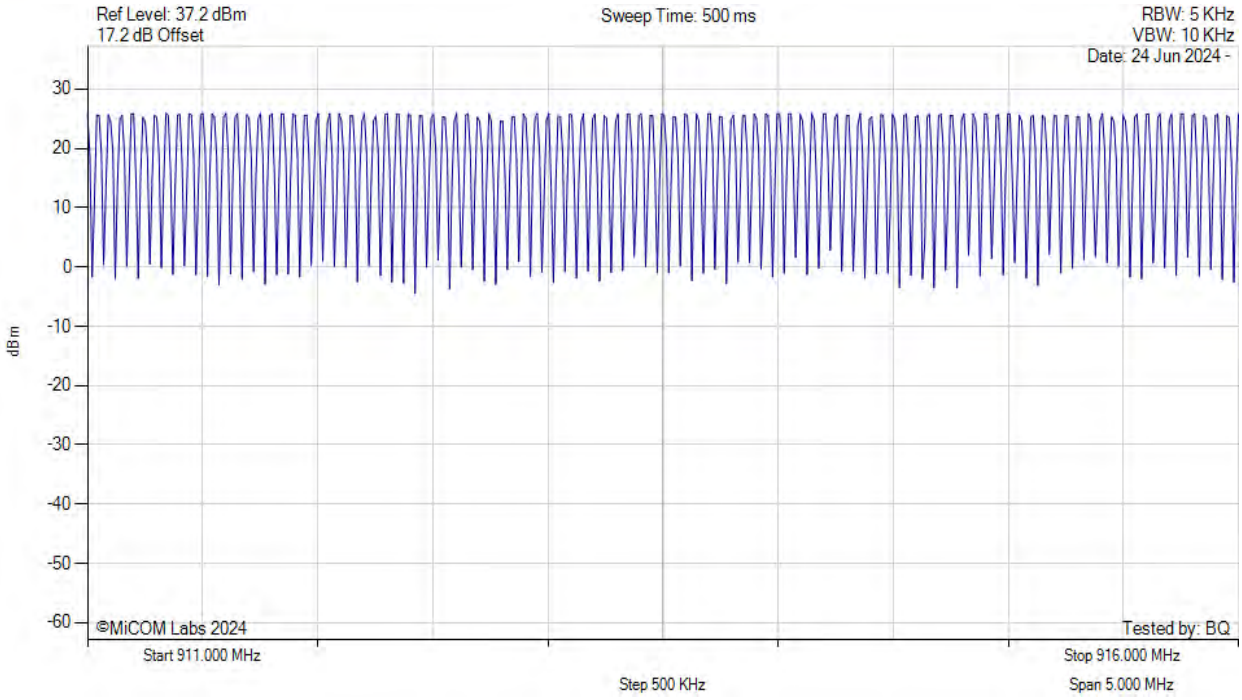


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 914.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

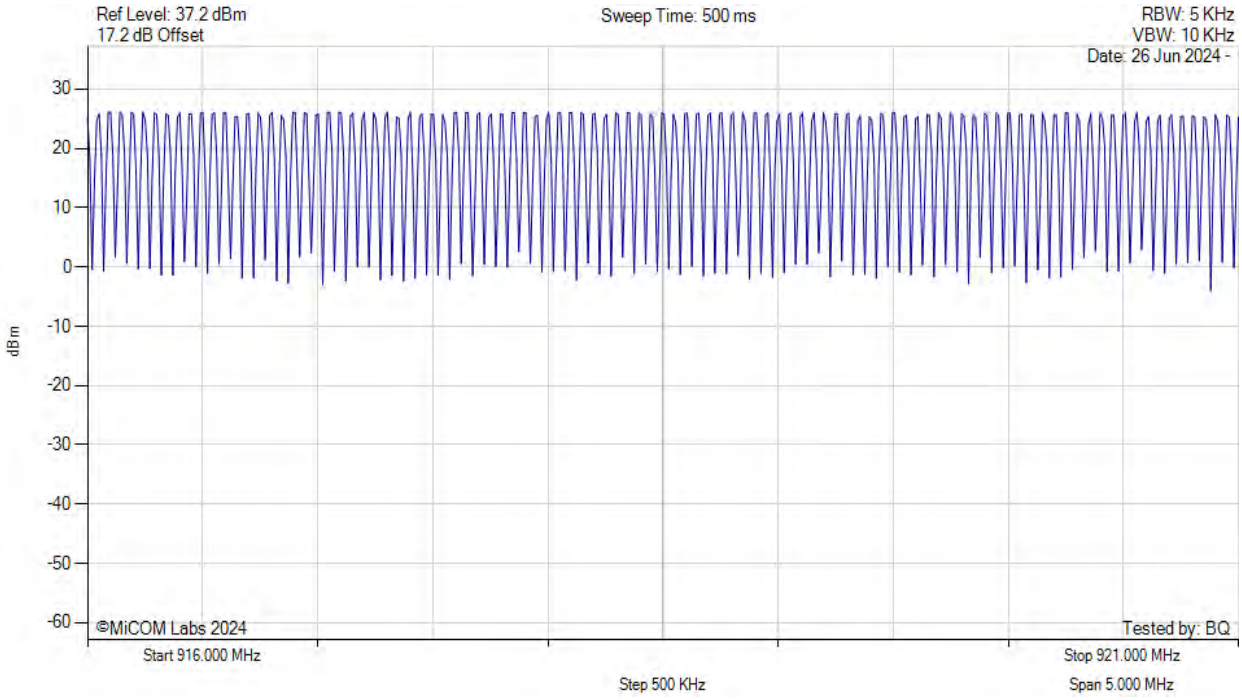


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 914.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

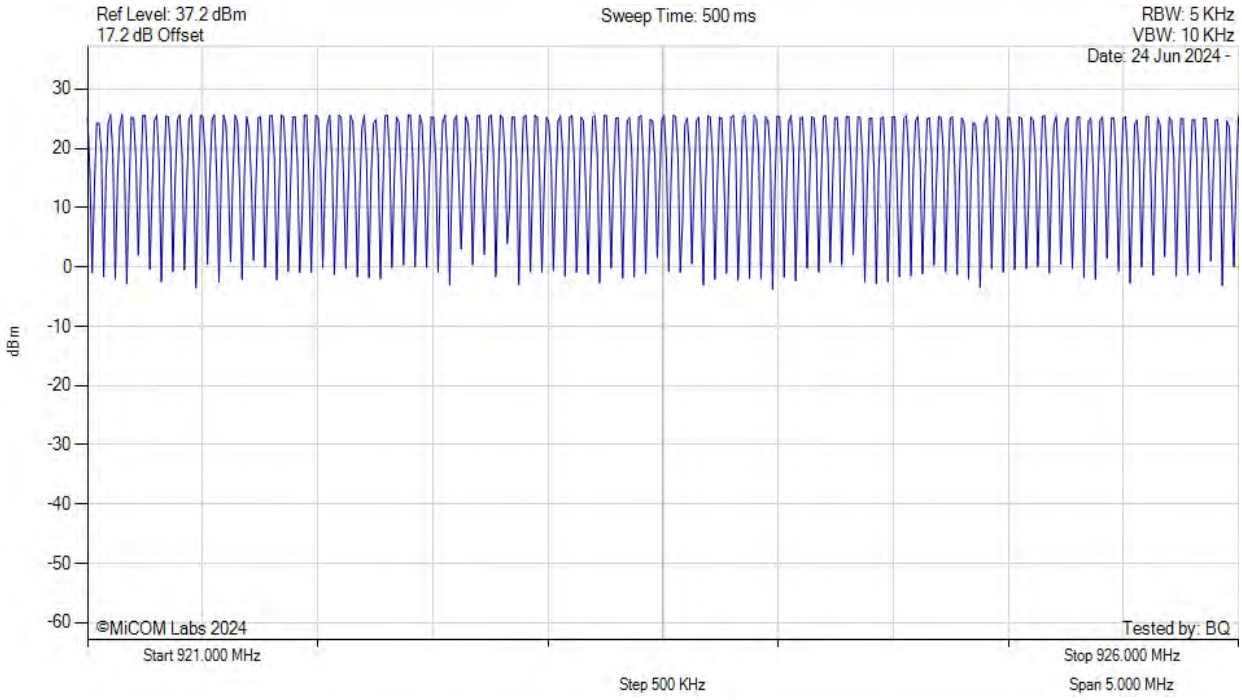


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 914.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

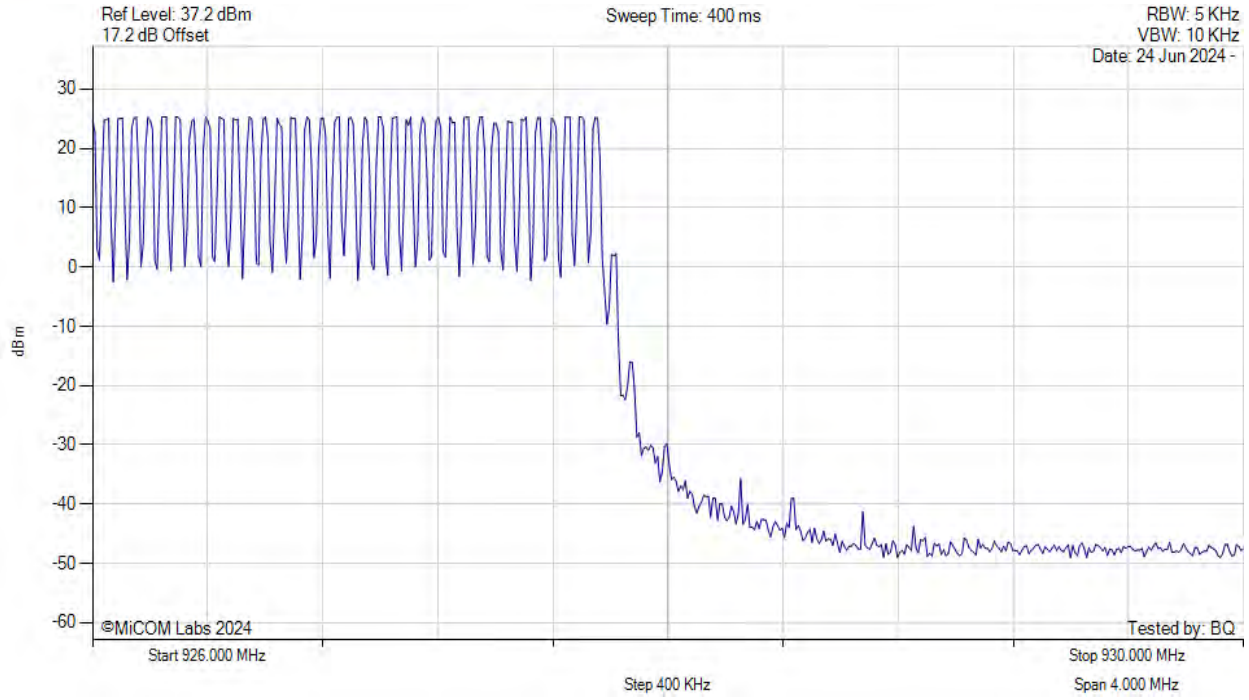


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 914.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

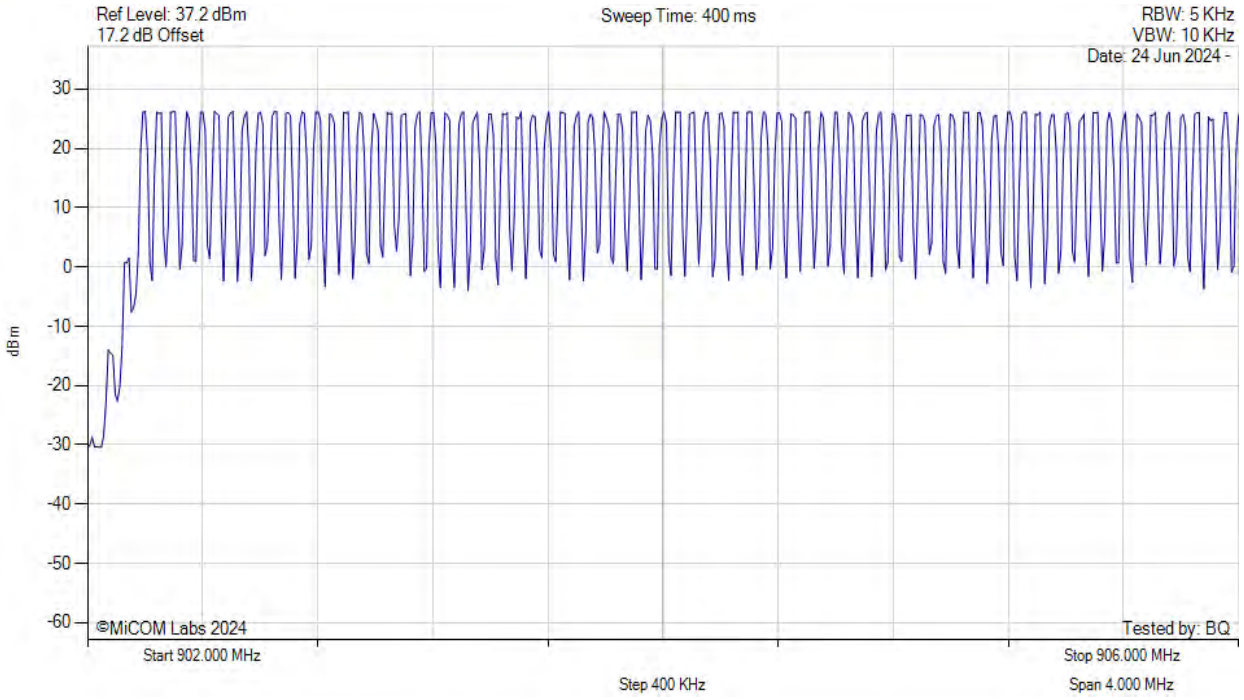


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

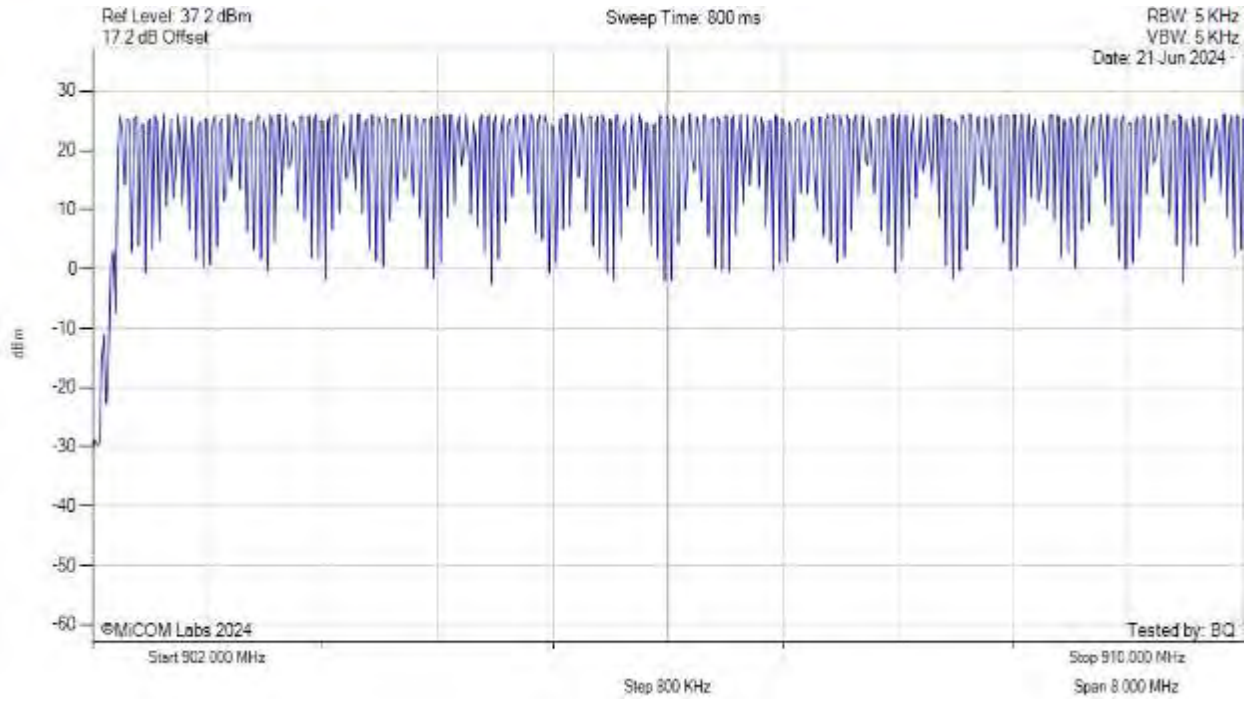


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

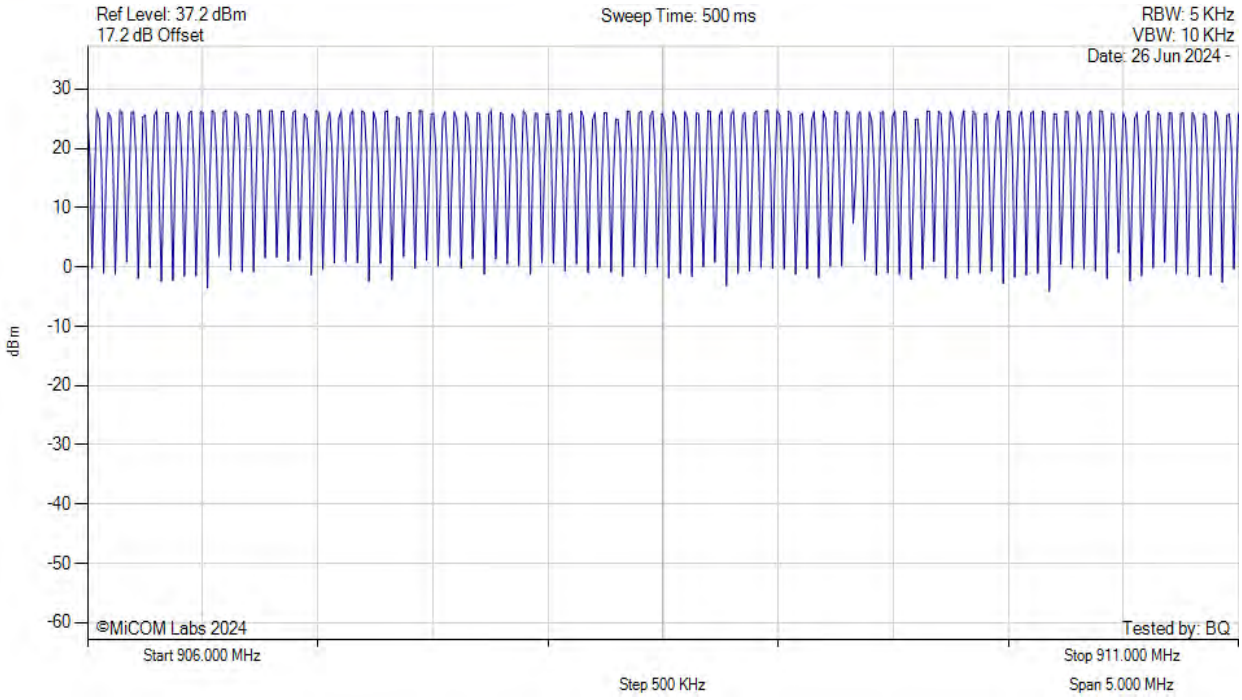


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

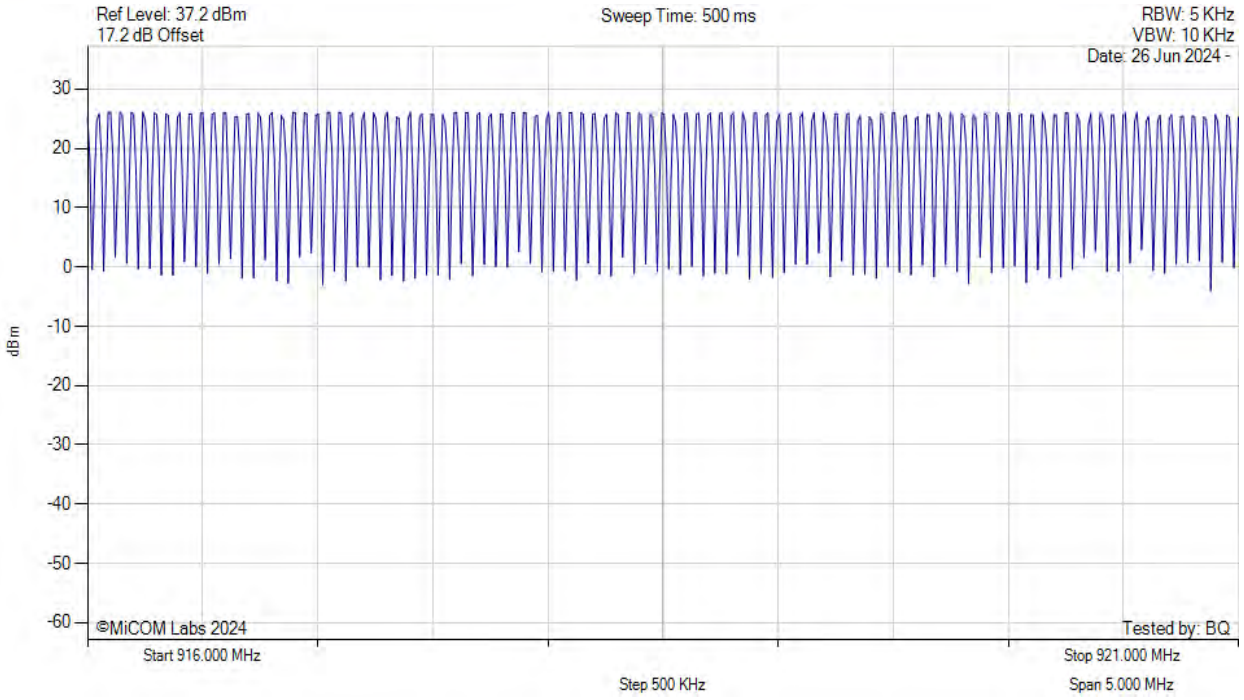


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

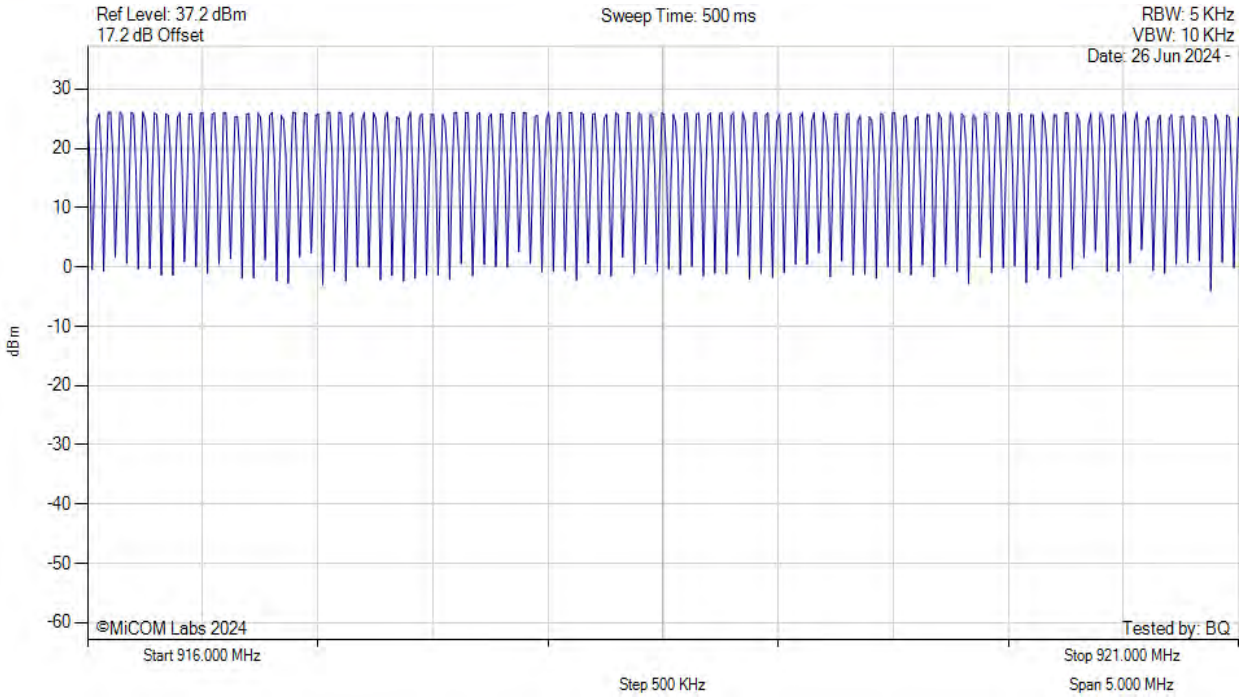


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

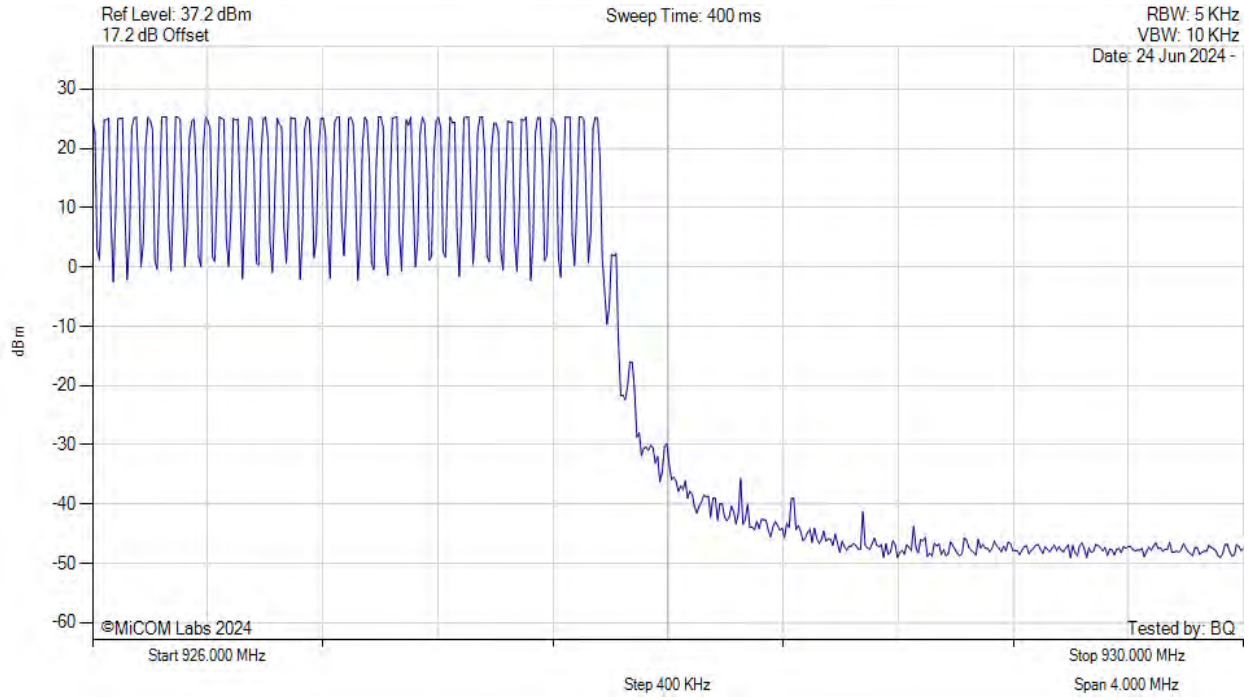


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 928.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

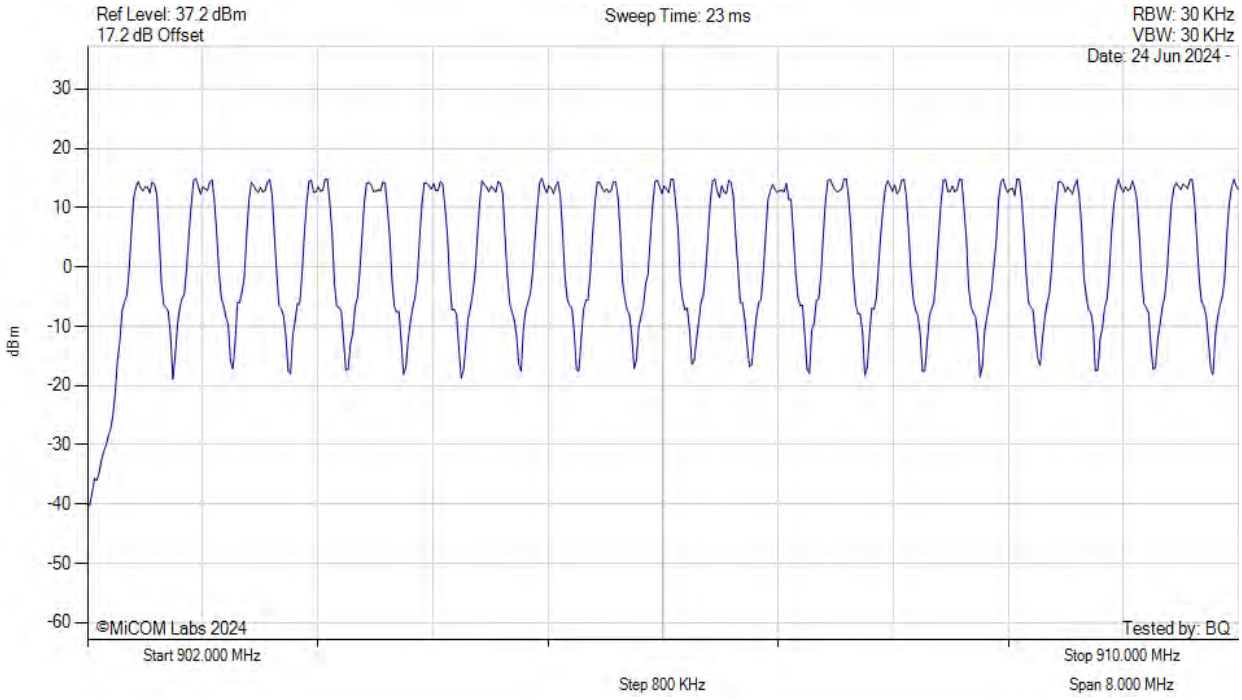


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 928.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

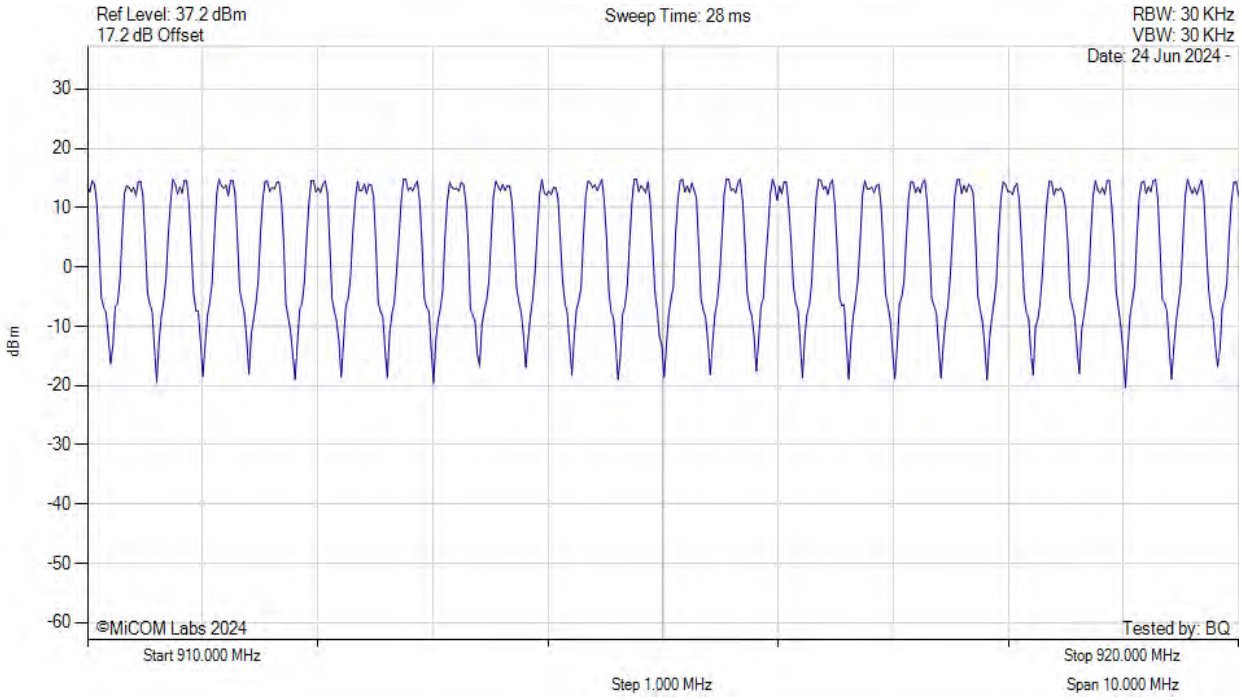


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.20 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

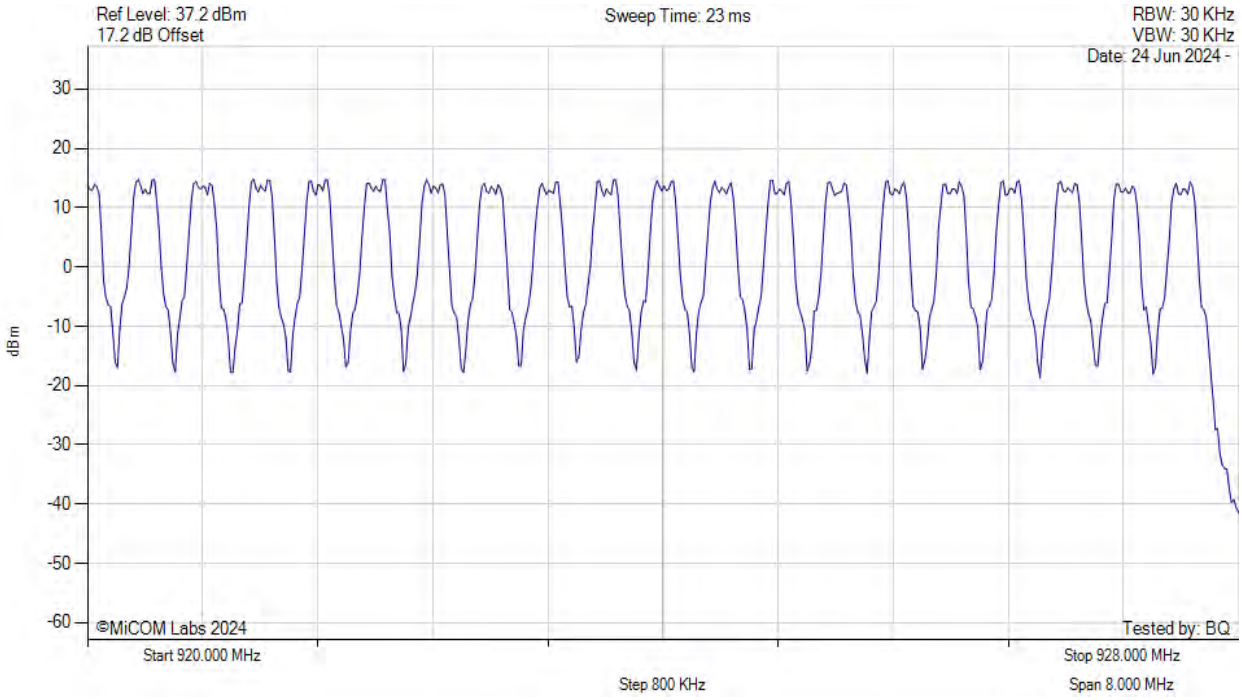


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.20 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

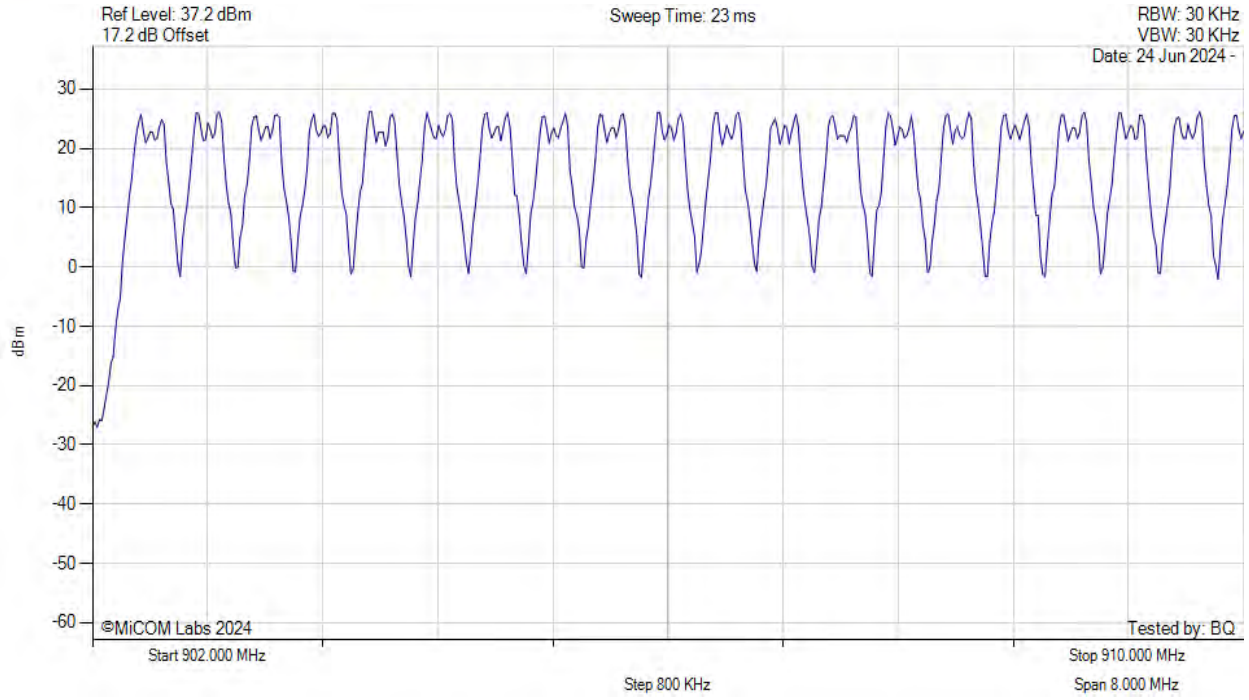


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.20 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 150kbps, PL 3 (FHSS), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

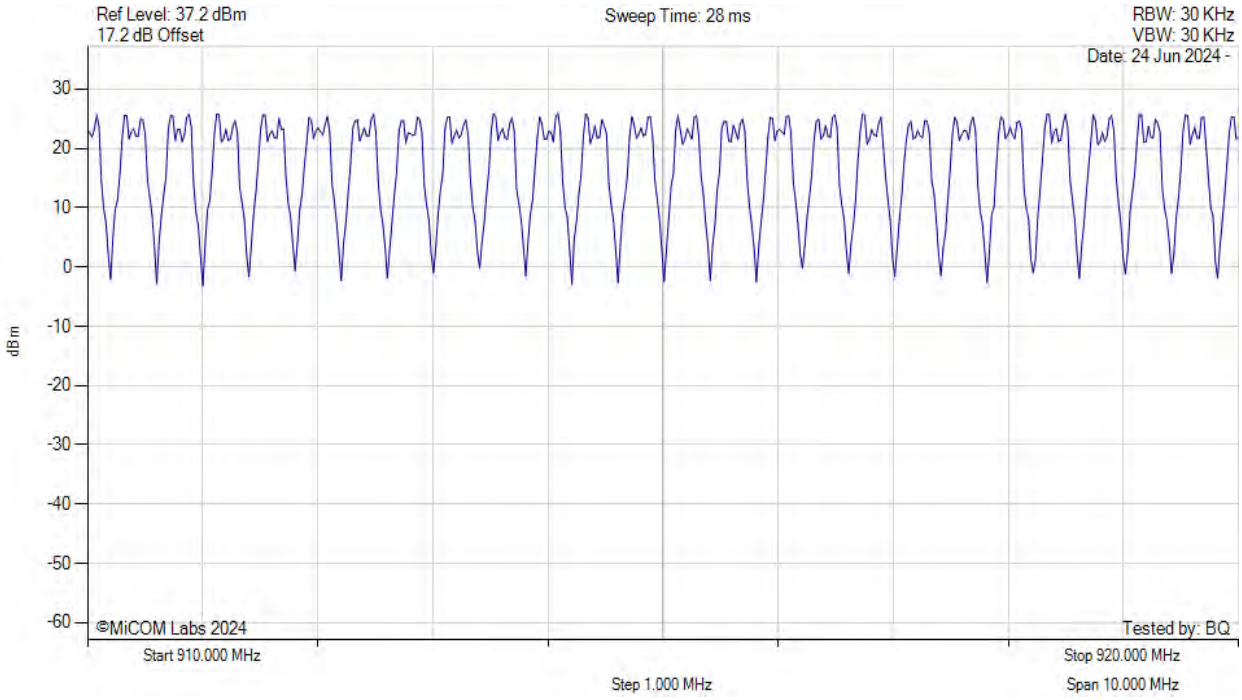


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.20 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 150kbps, PL 3 (FHSS), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

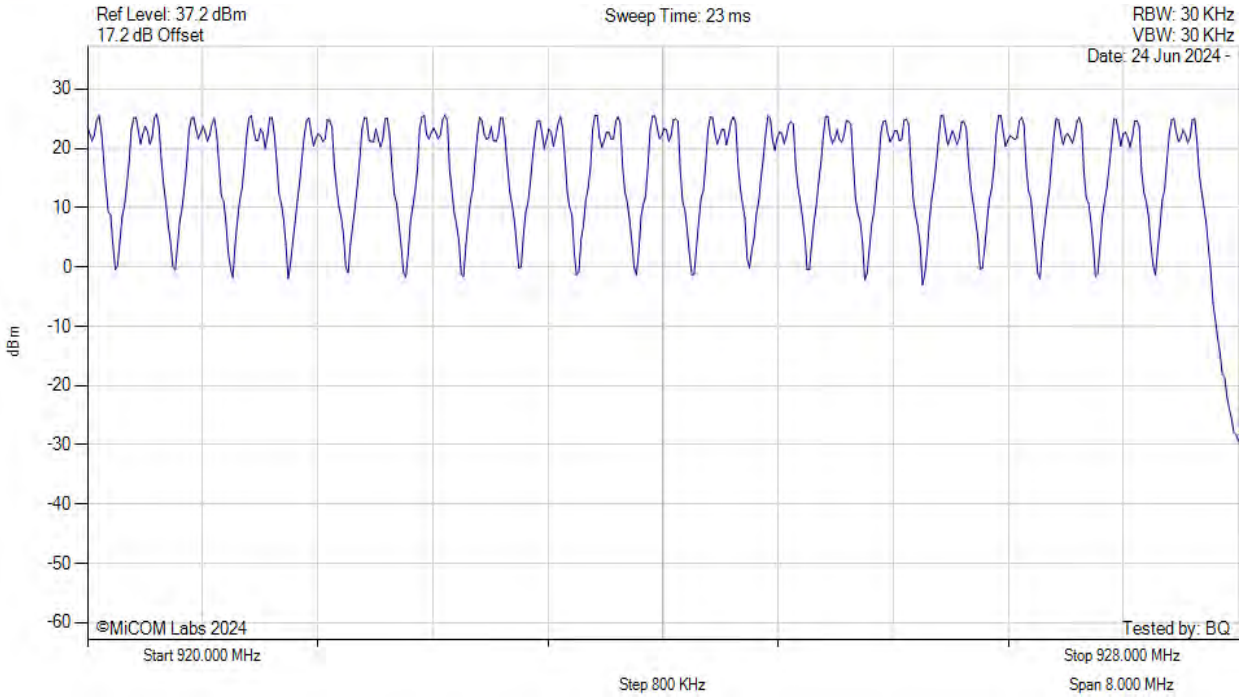


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.20 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 150kbps, PL 3 (FHSS), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

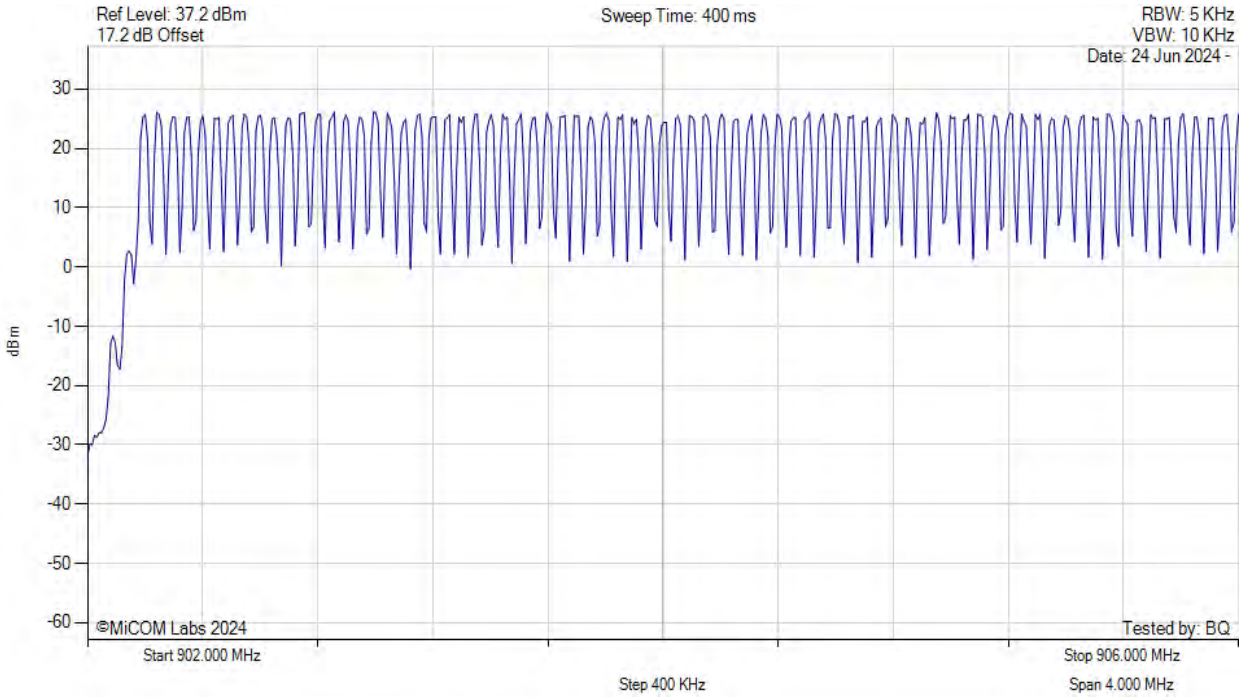


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.20 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 902.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

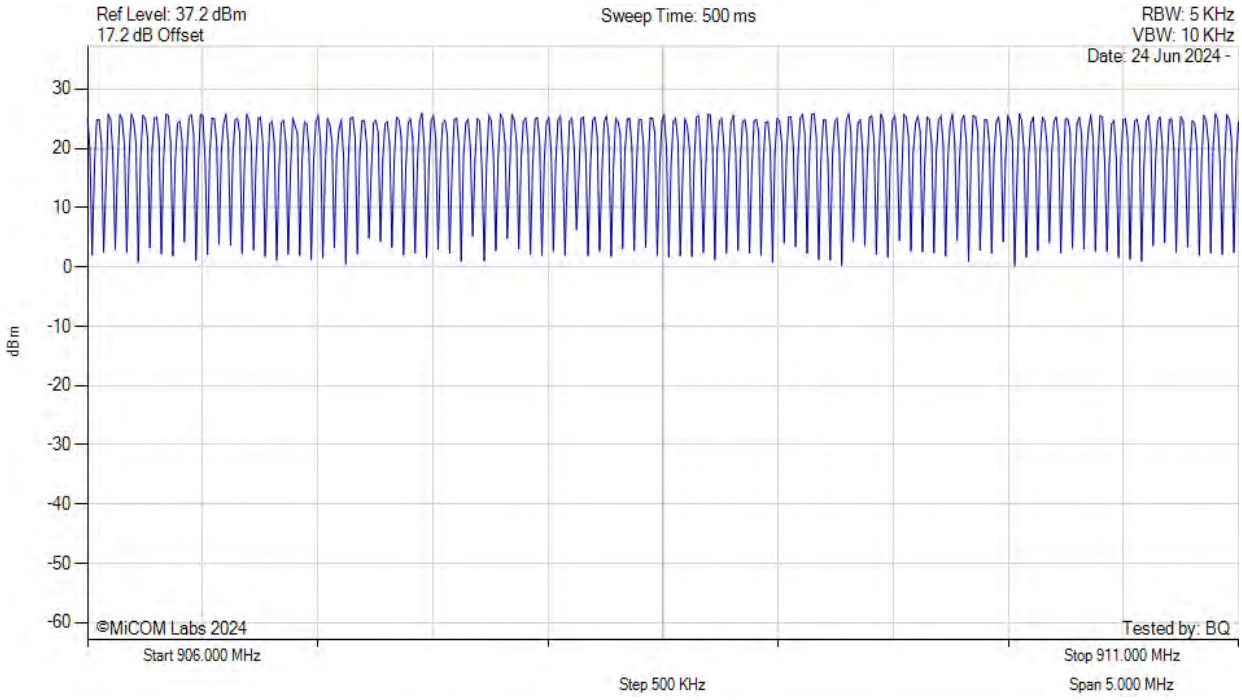


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 902.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 906.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

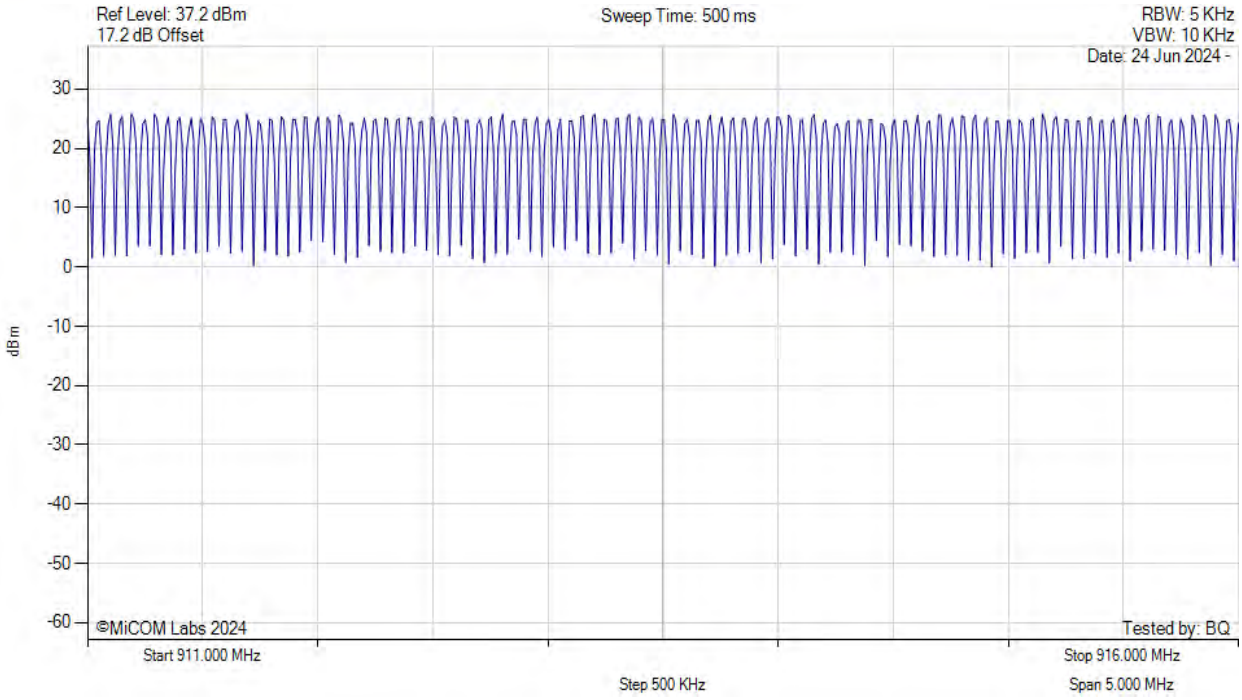


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 906.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 911.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

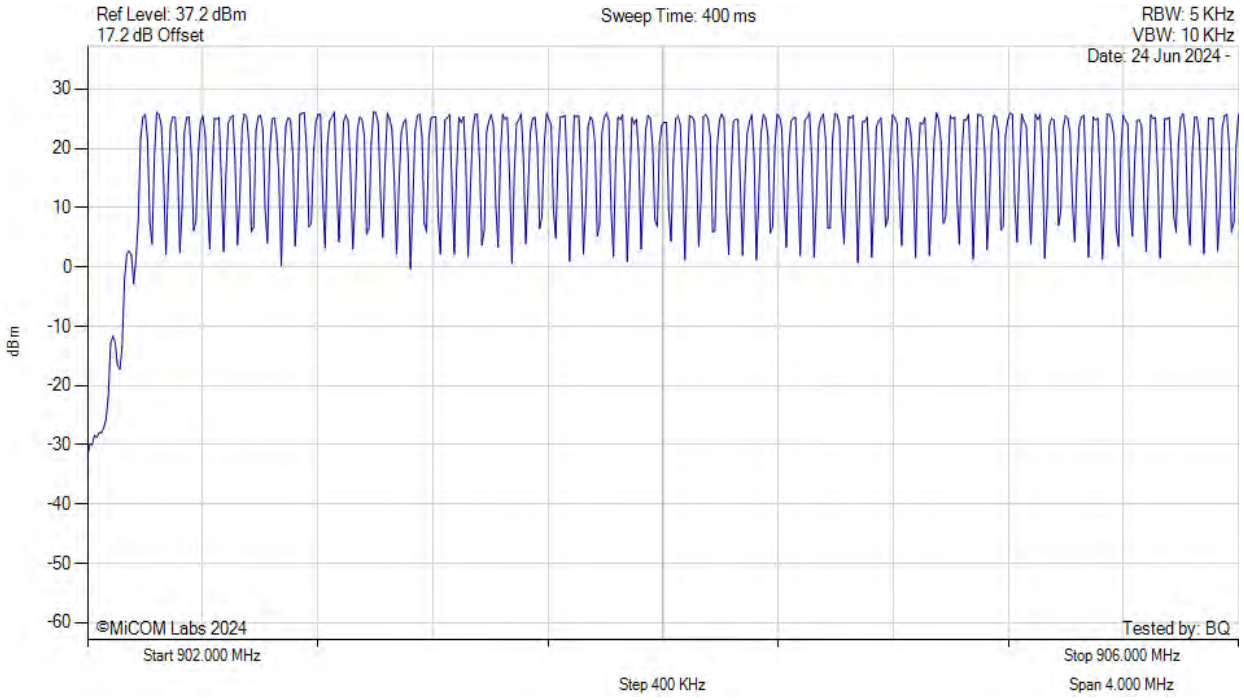


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 911.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

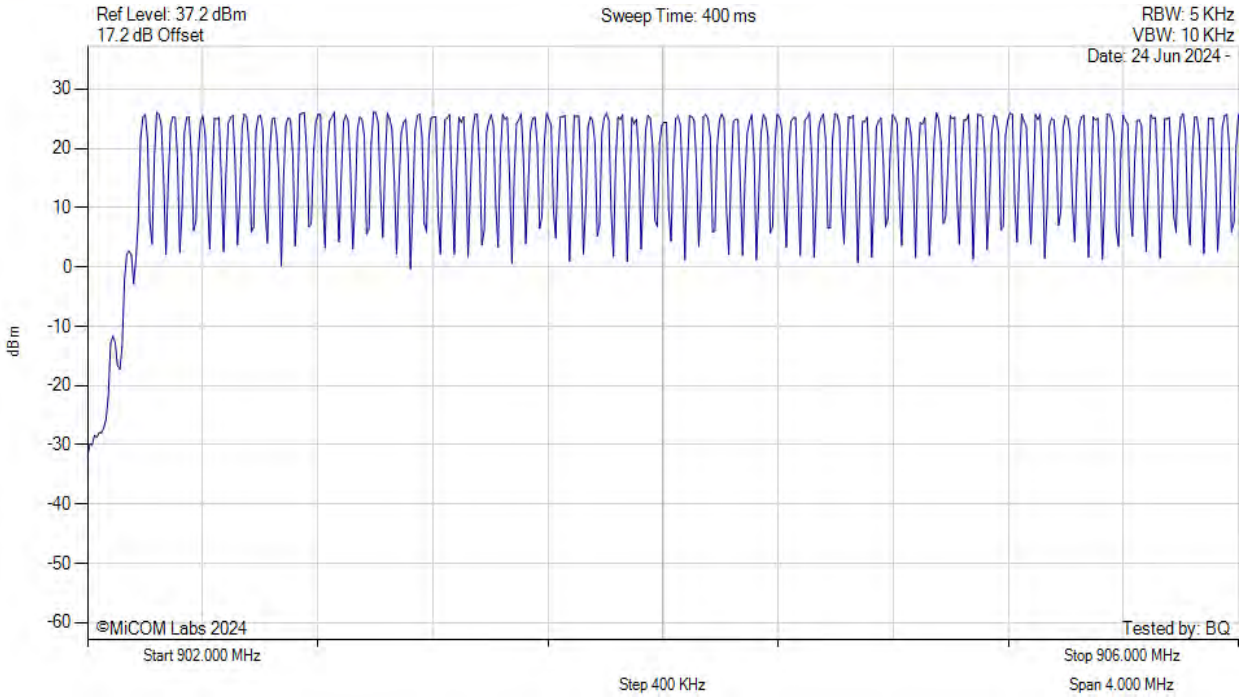


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

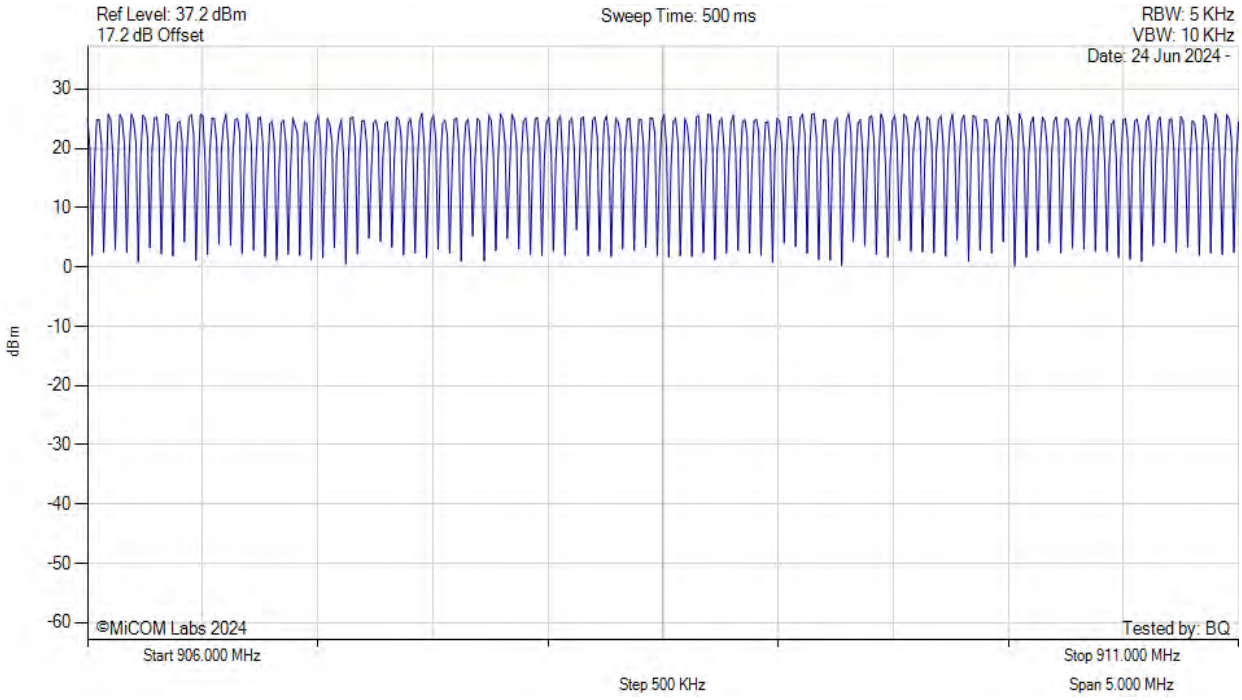


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

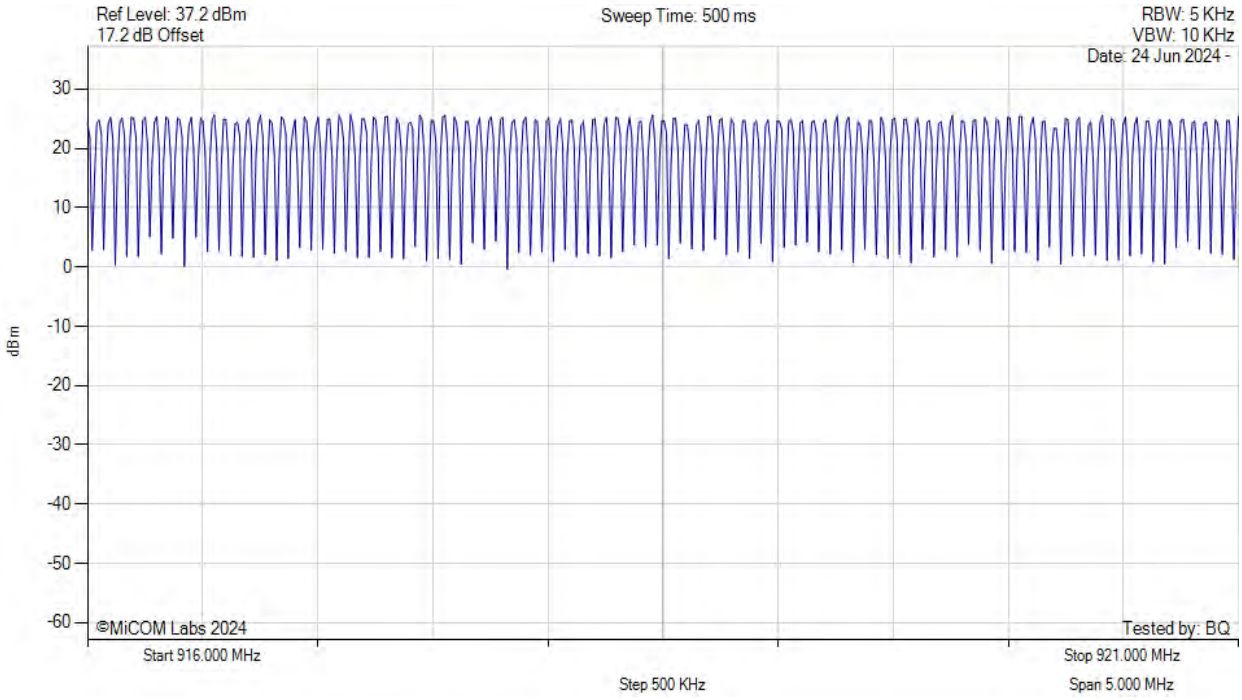


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

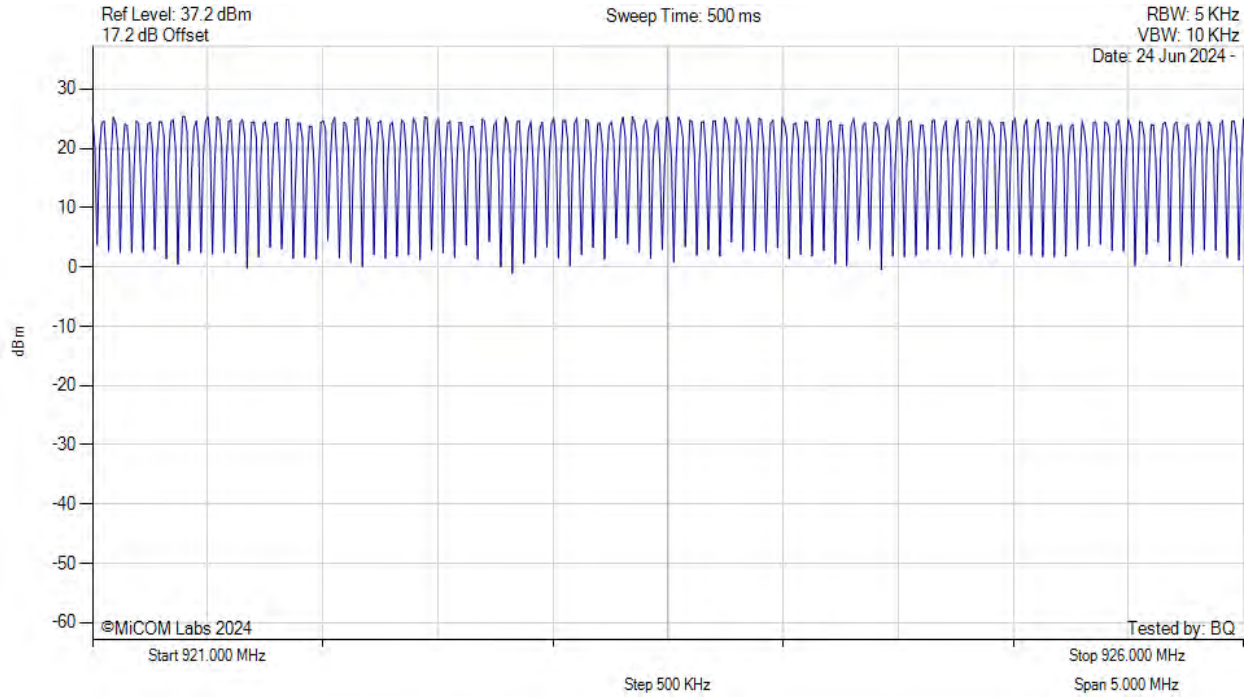


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

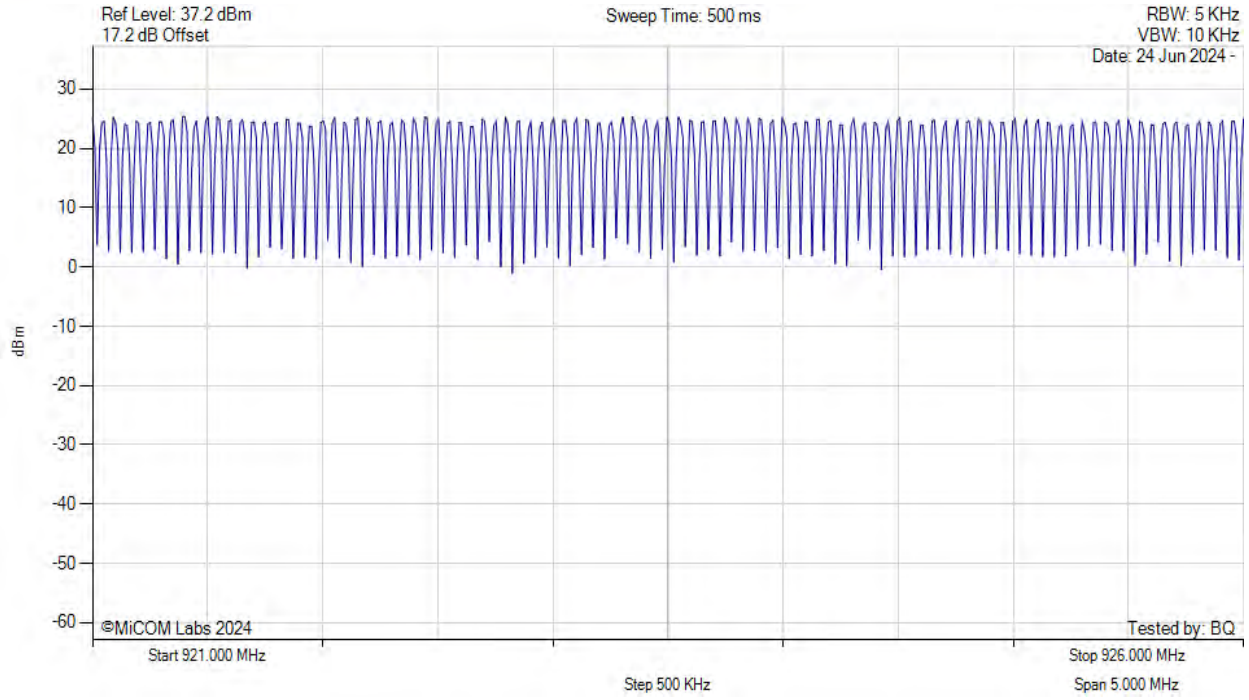


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

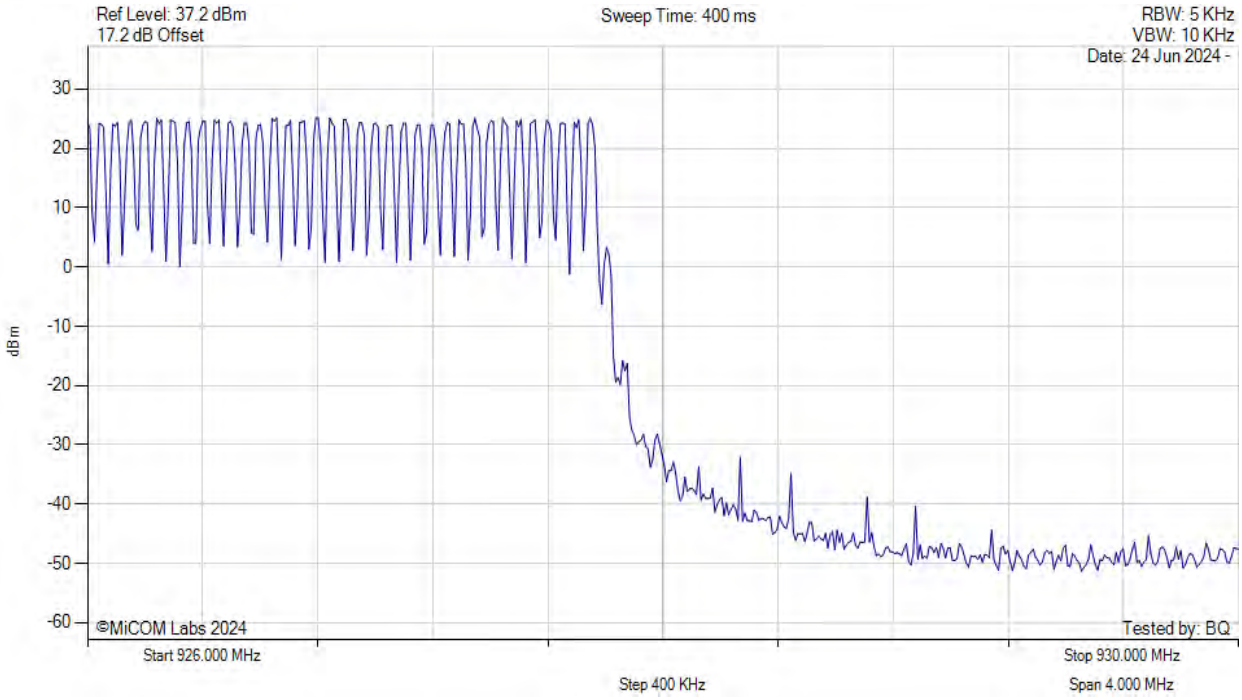


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

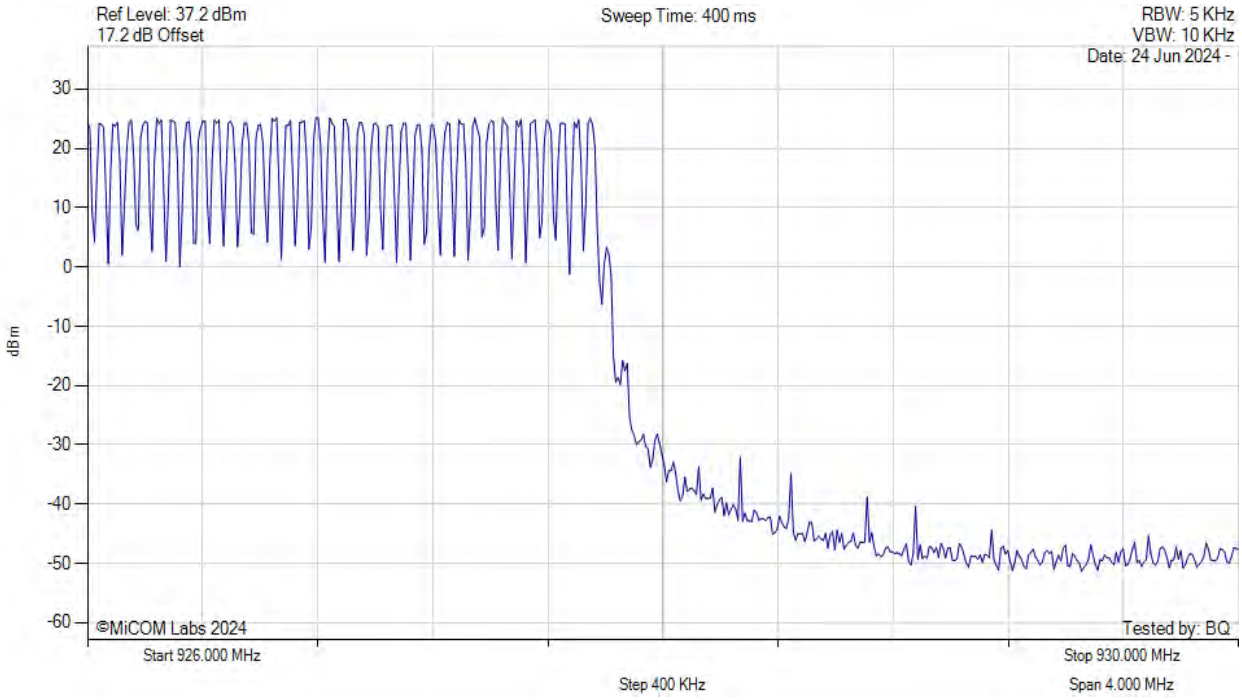


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

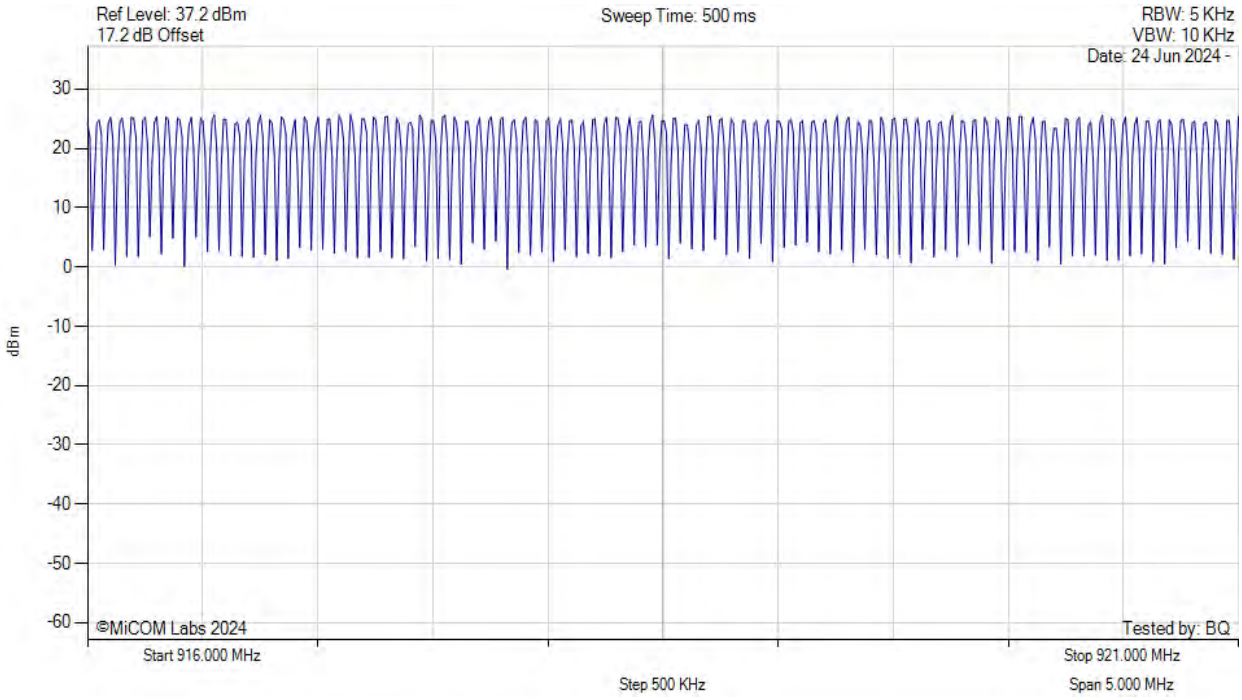


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 916.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

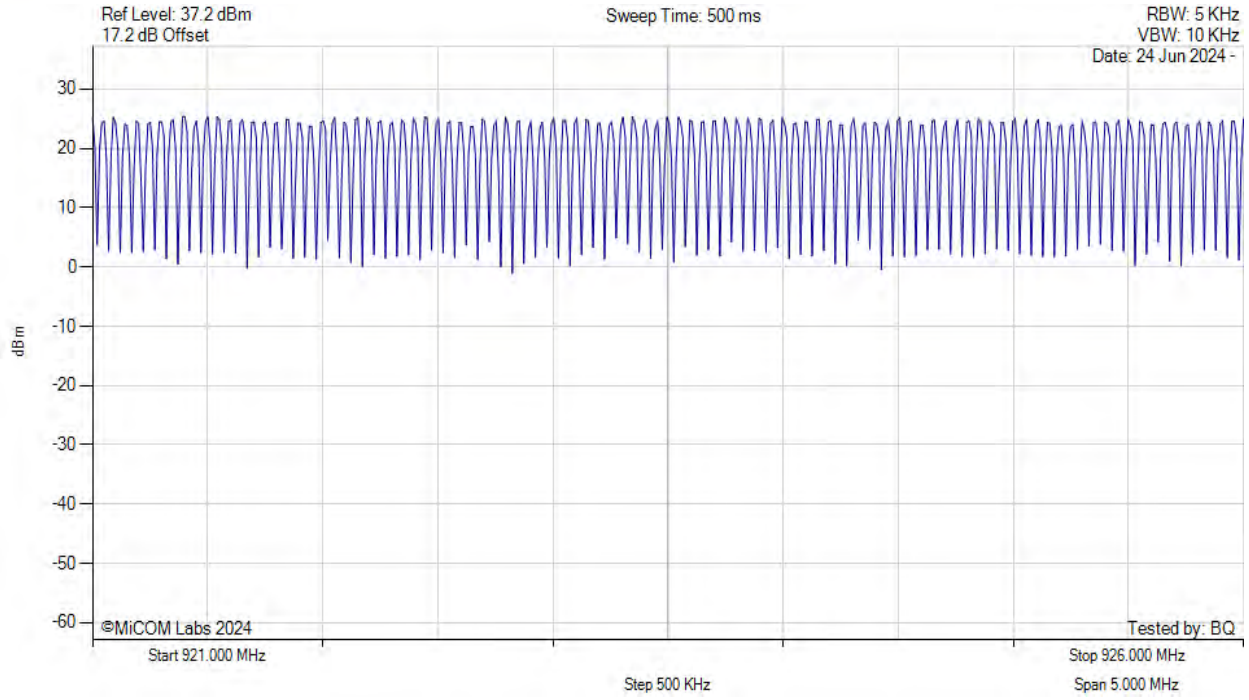


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 916.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 921.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

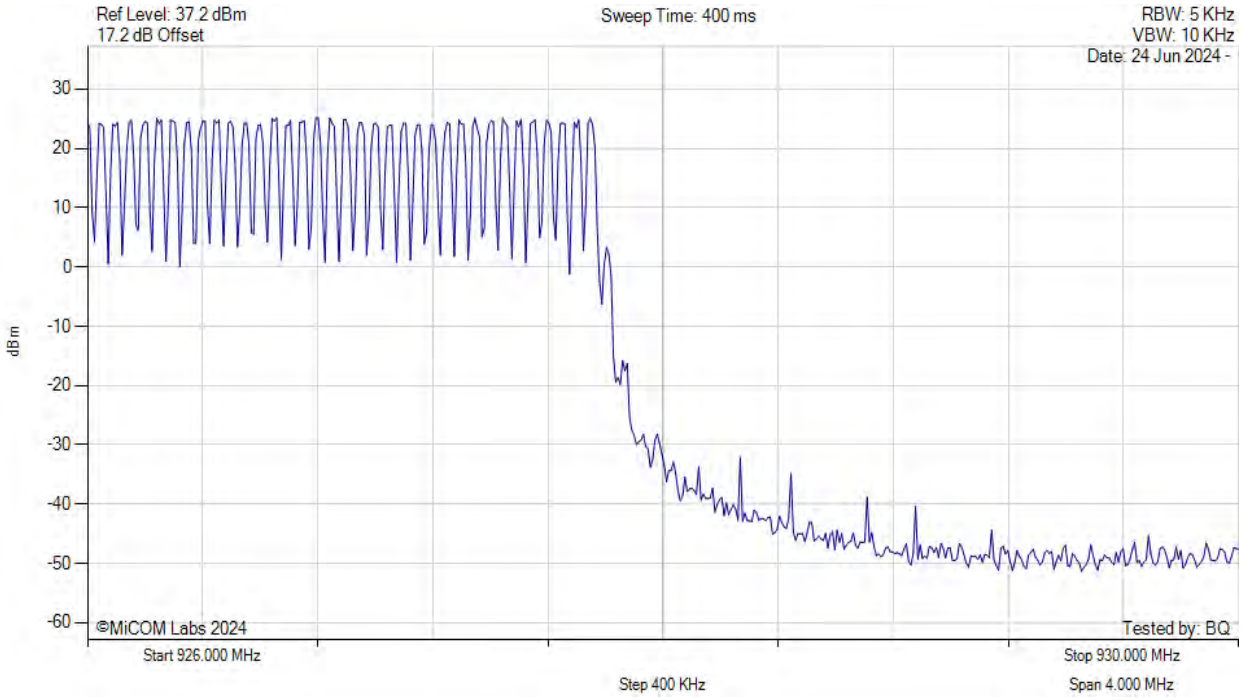


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 921.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 926.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

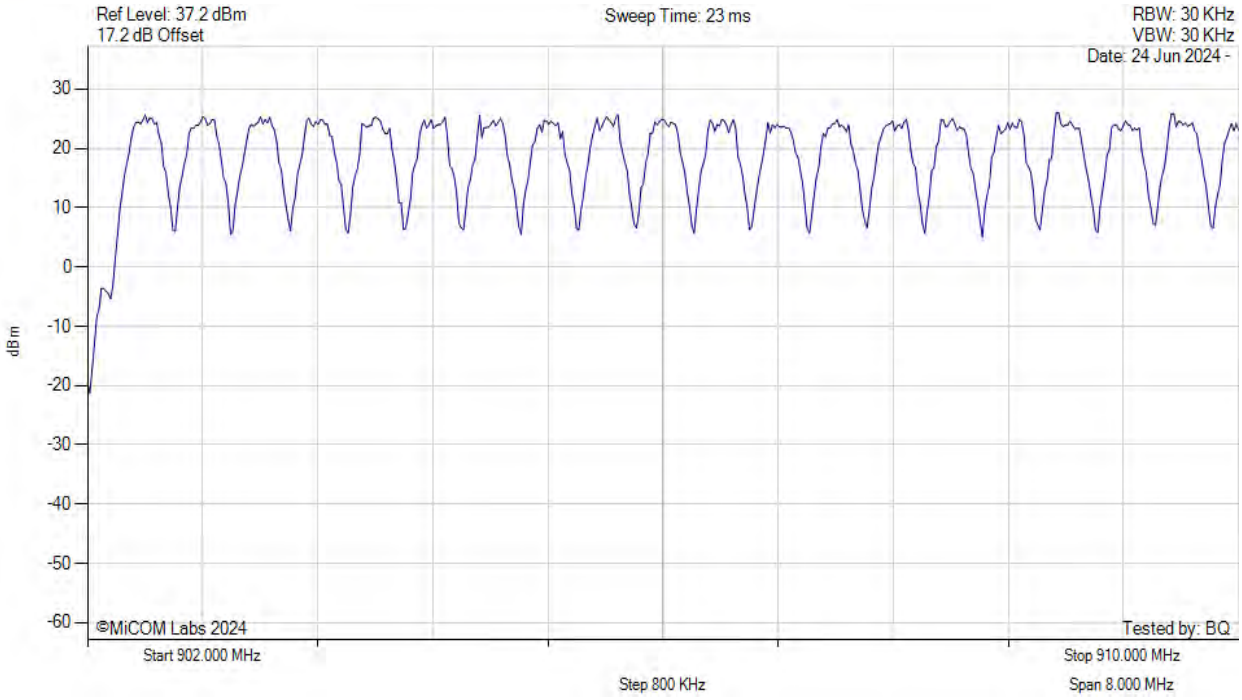


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 926.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 300kbps PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

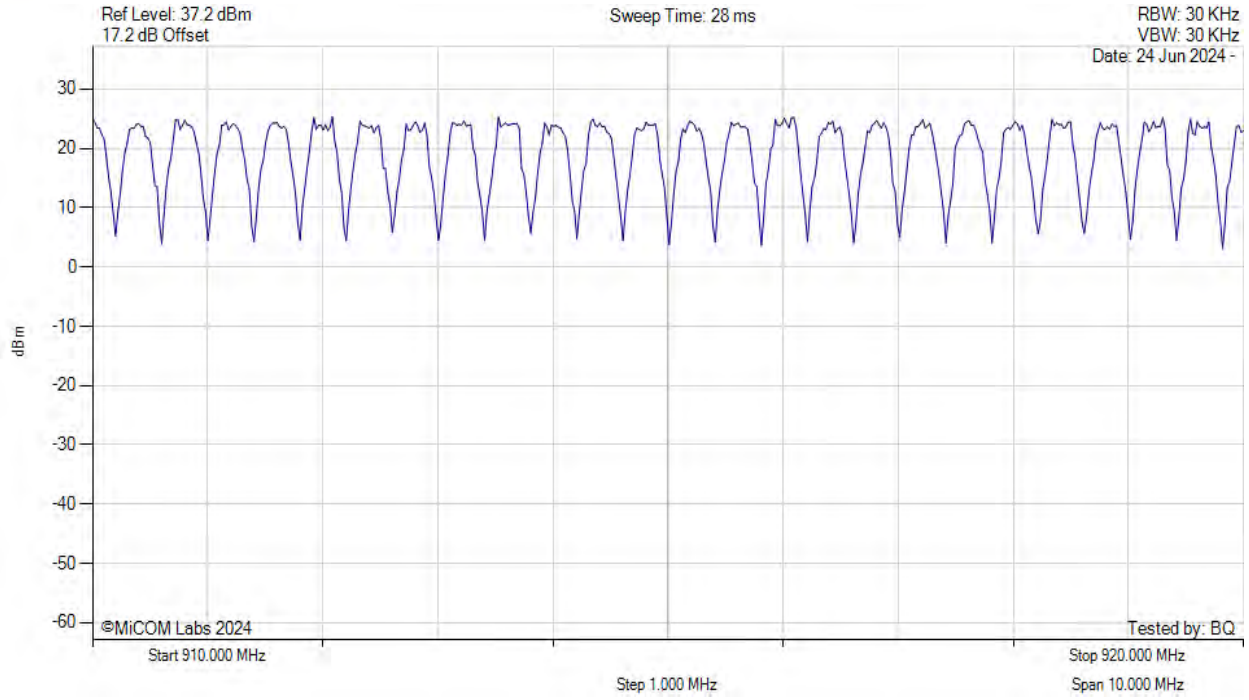


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 300kbps PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

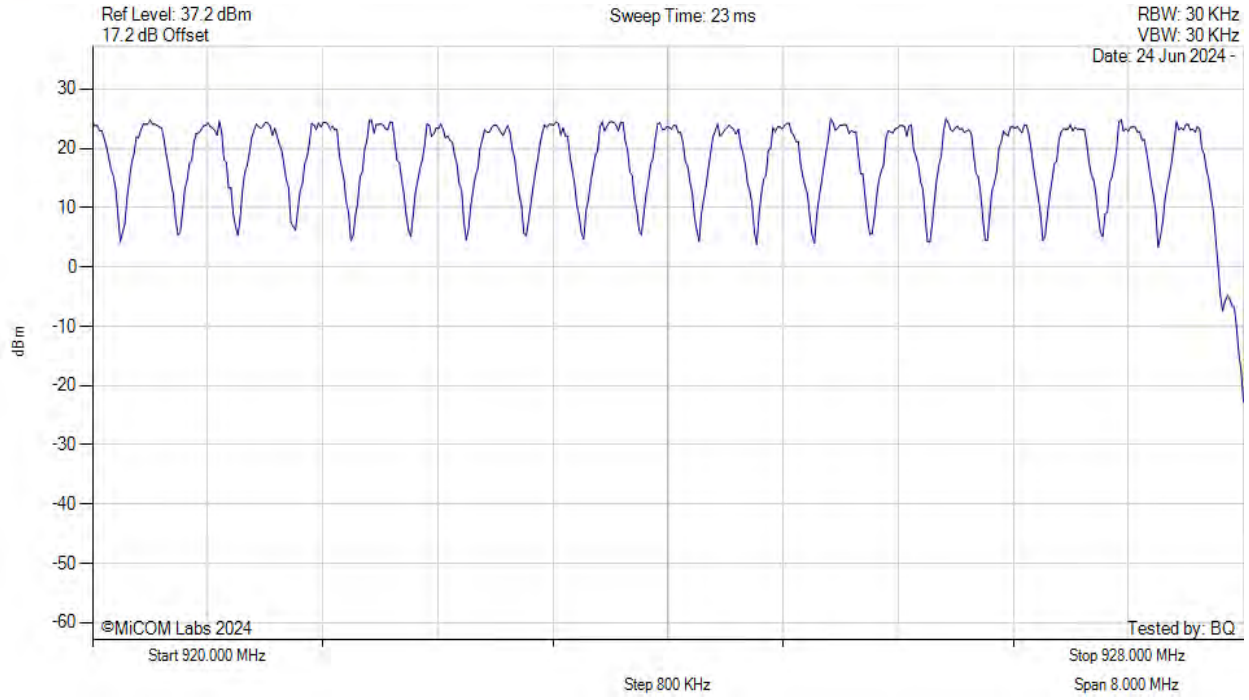


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 300kbps PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

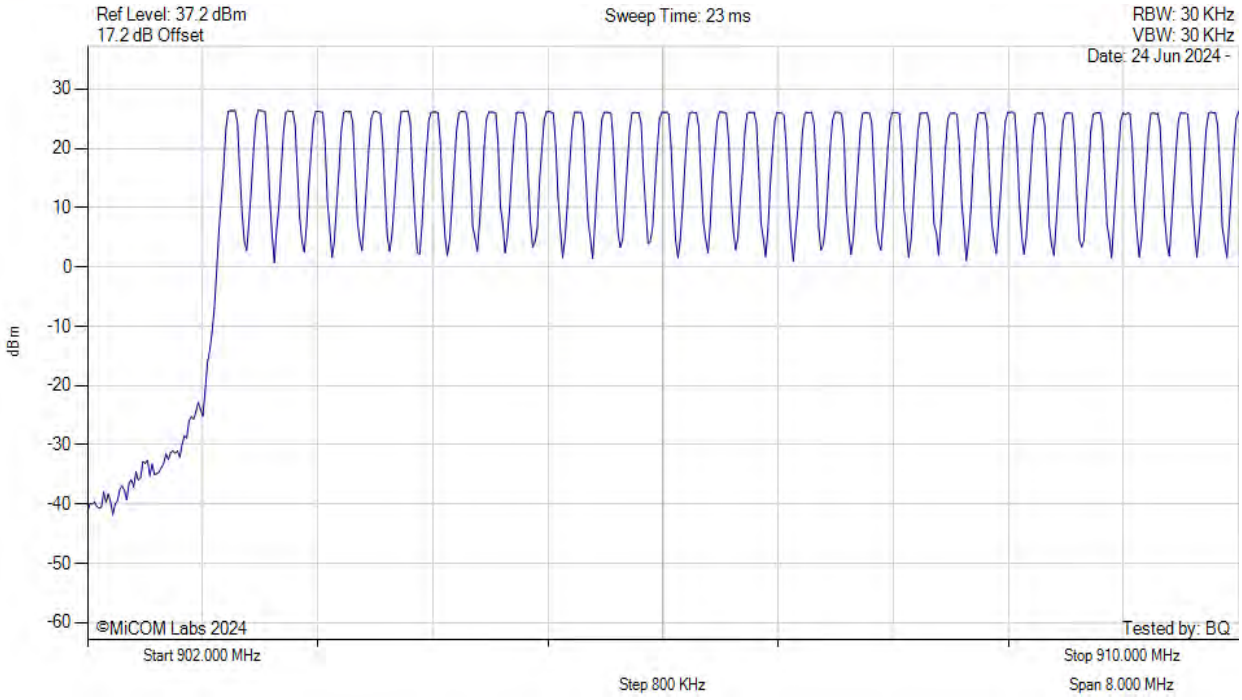


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 37.5 kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

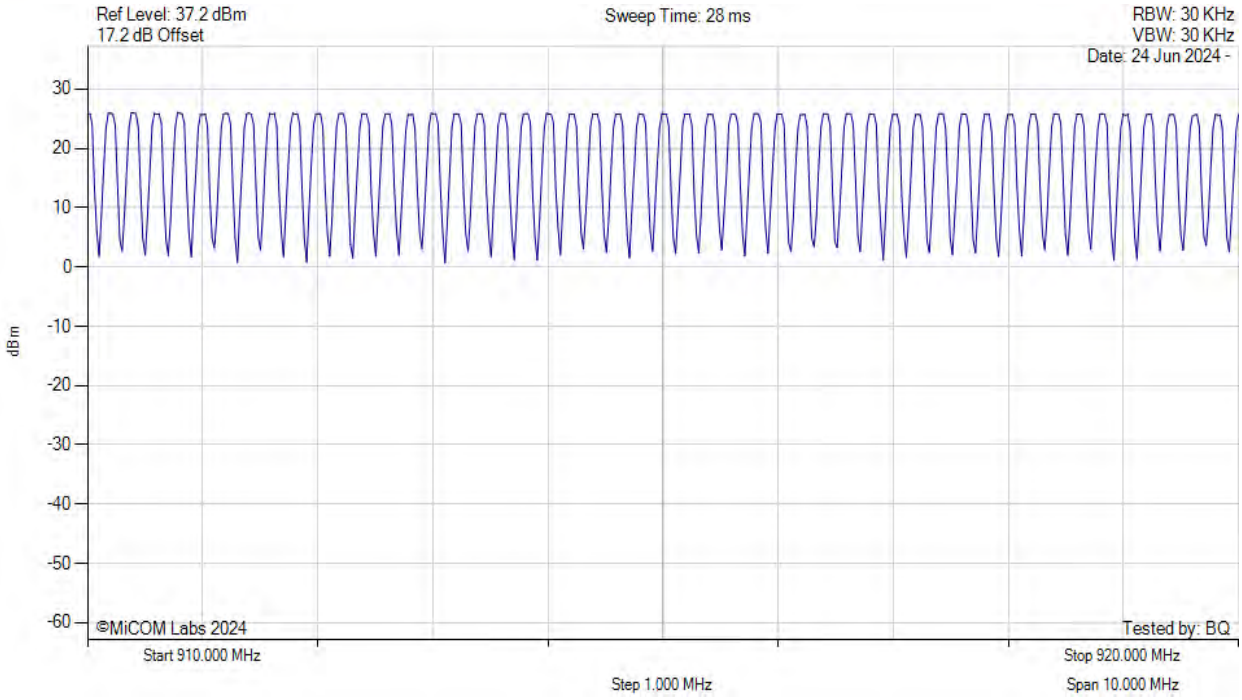


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 37.5 kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

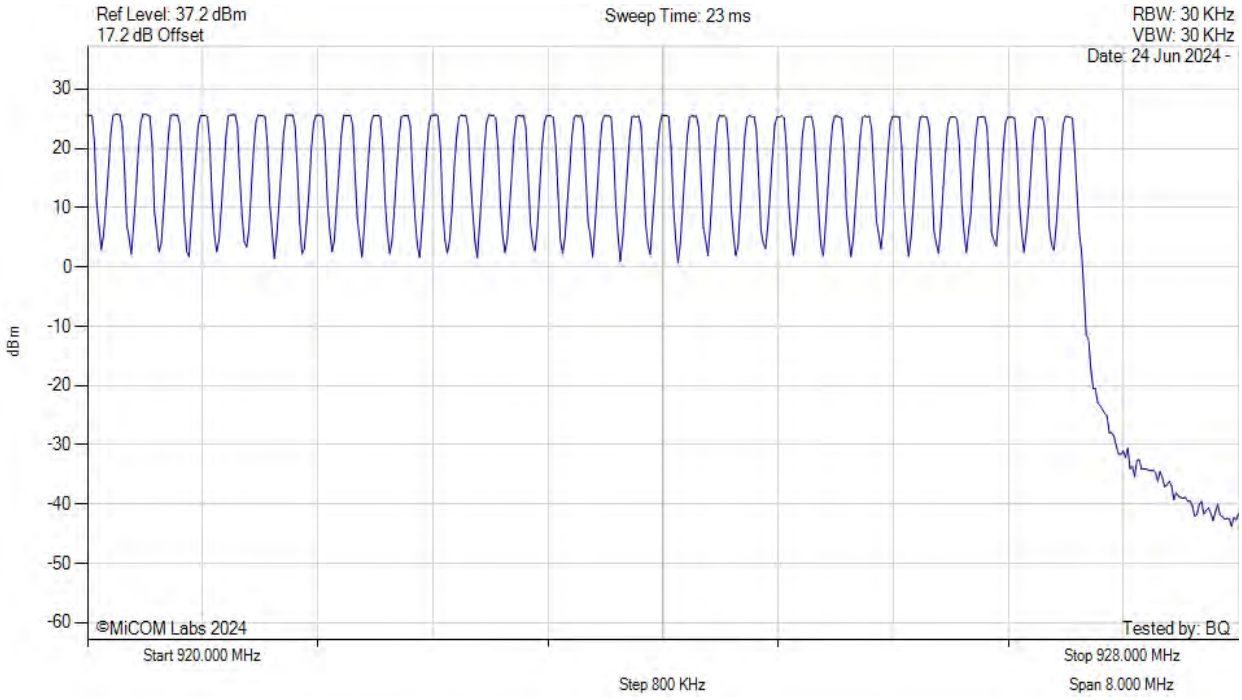


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: GFSK, 37.5 kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

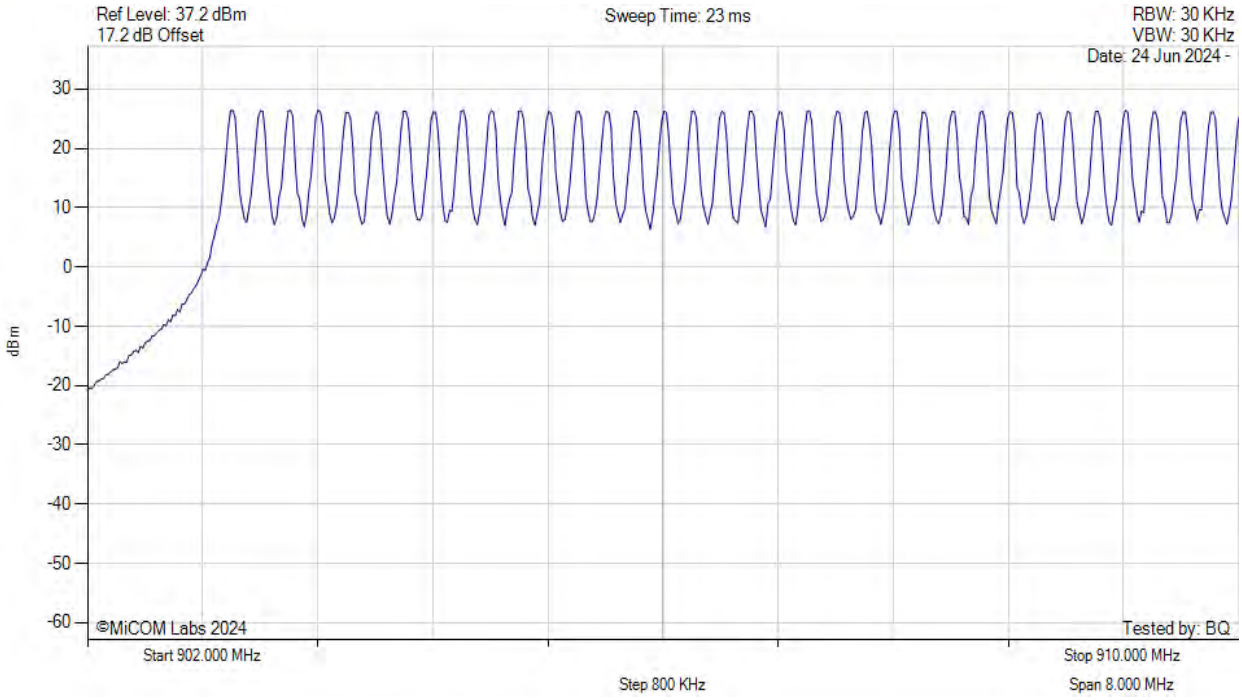


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: OOK PL 3, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

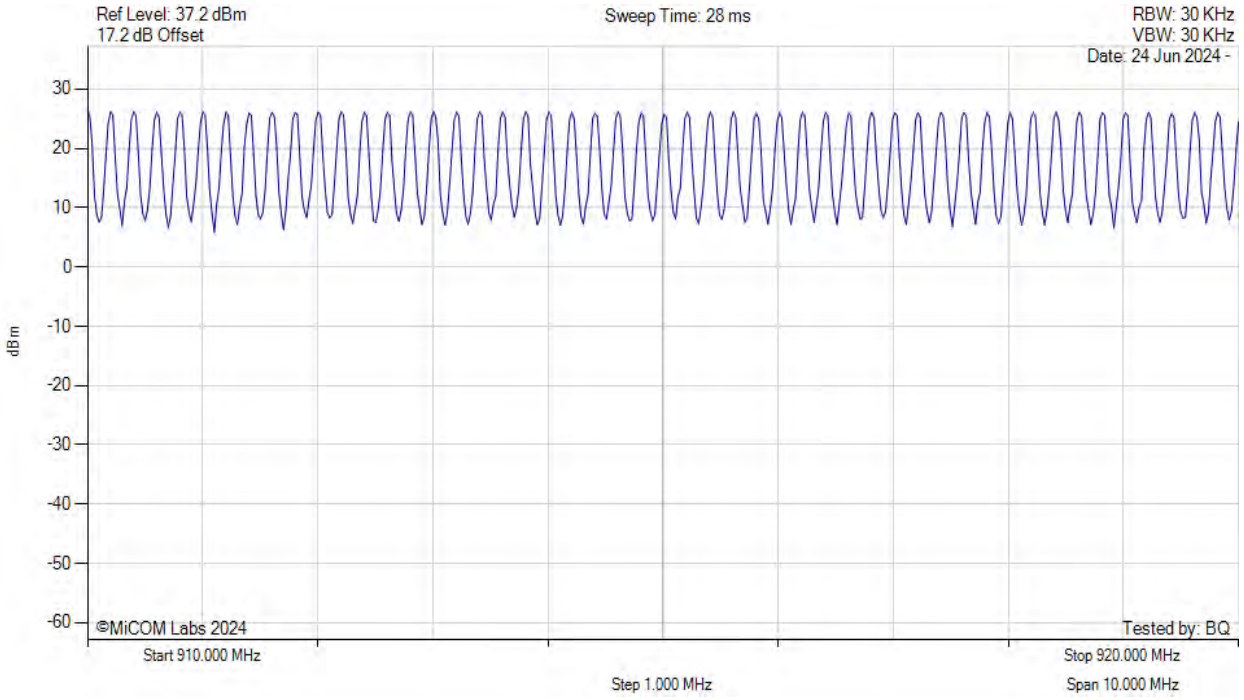


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: OOK PL 3, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

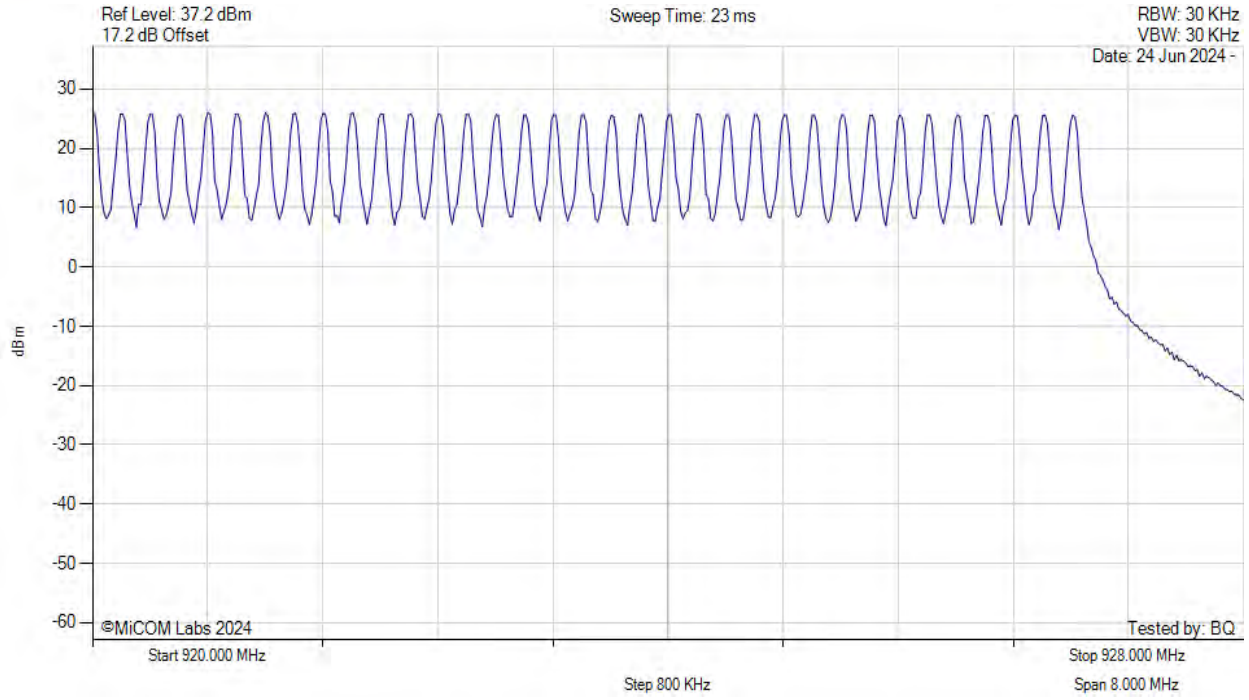


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: OOK PL 3, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

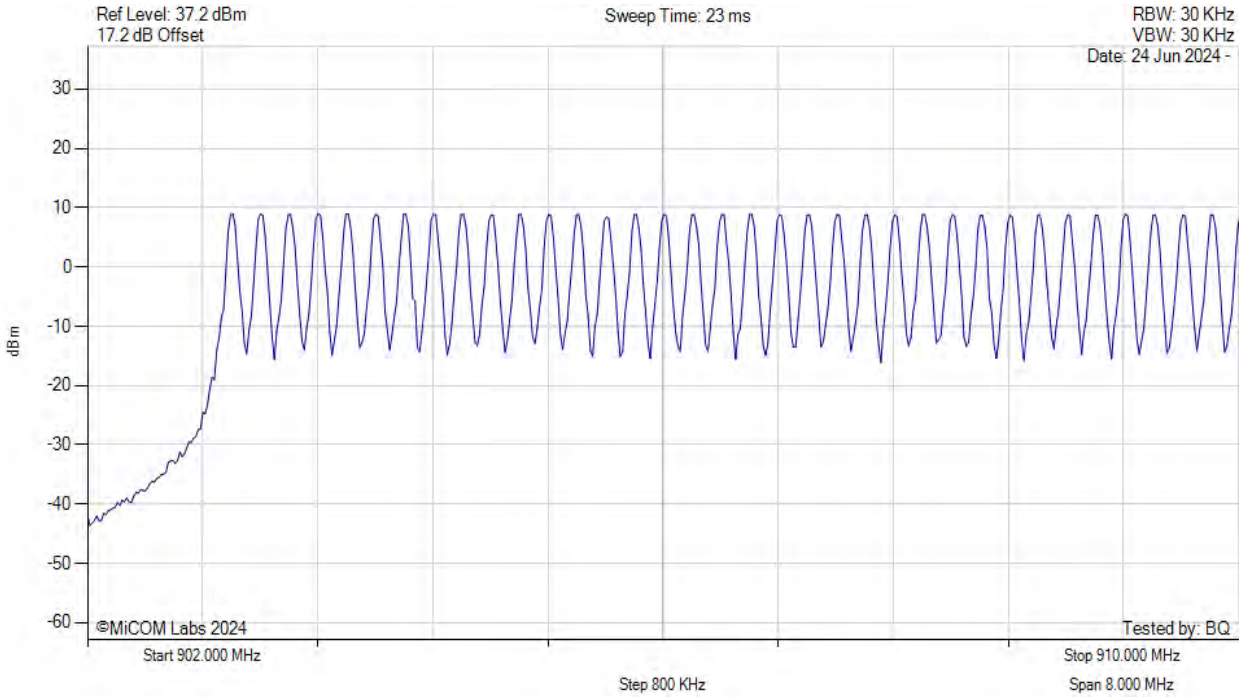


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: OOK PL 1, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

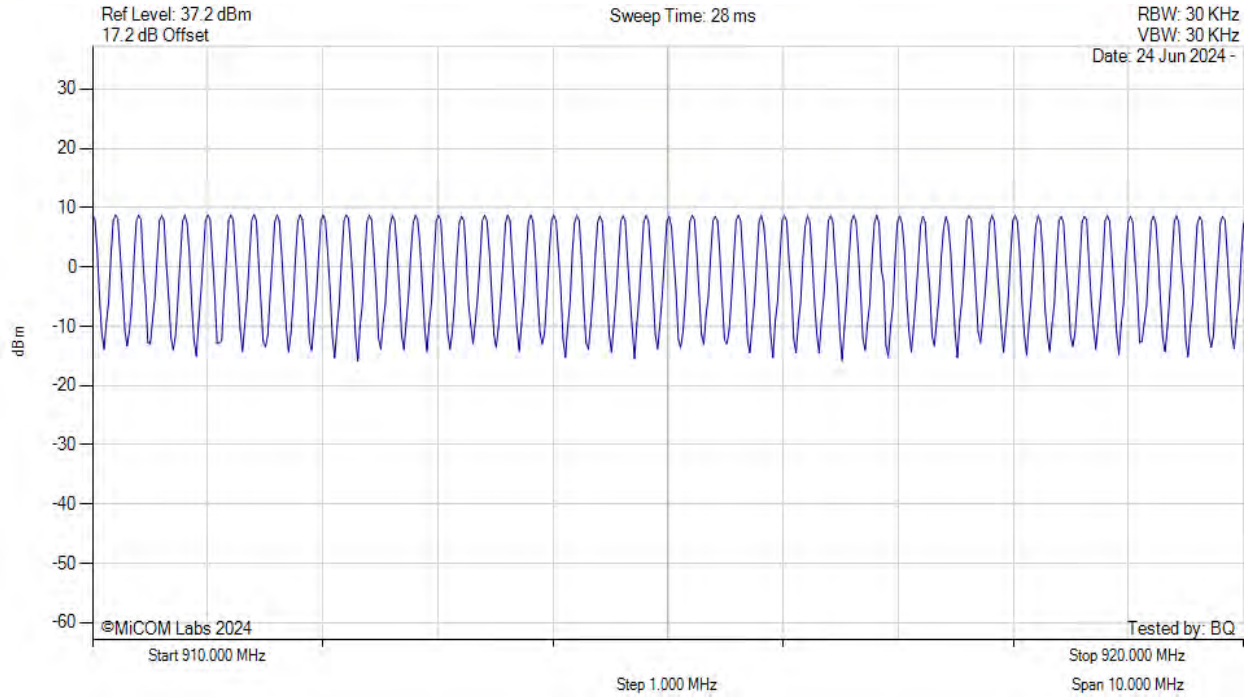


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: OOK PL 1, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

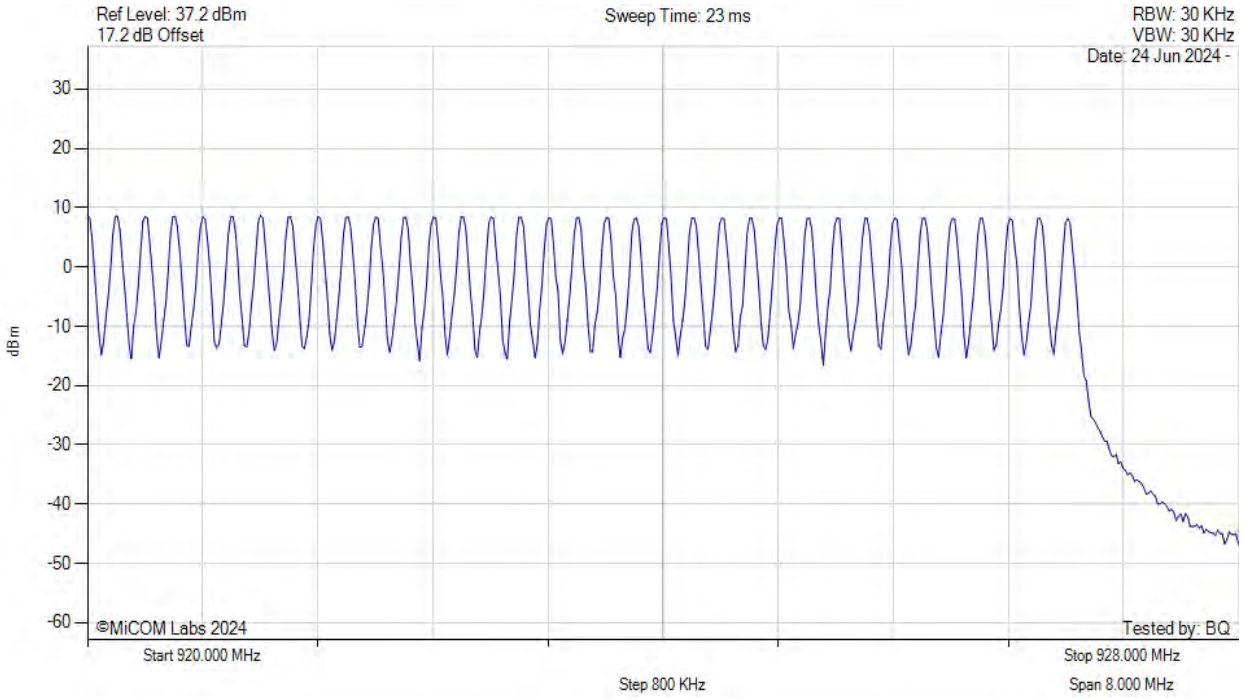


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: OOK PL 1, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



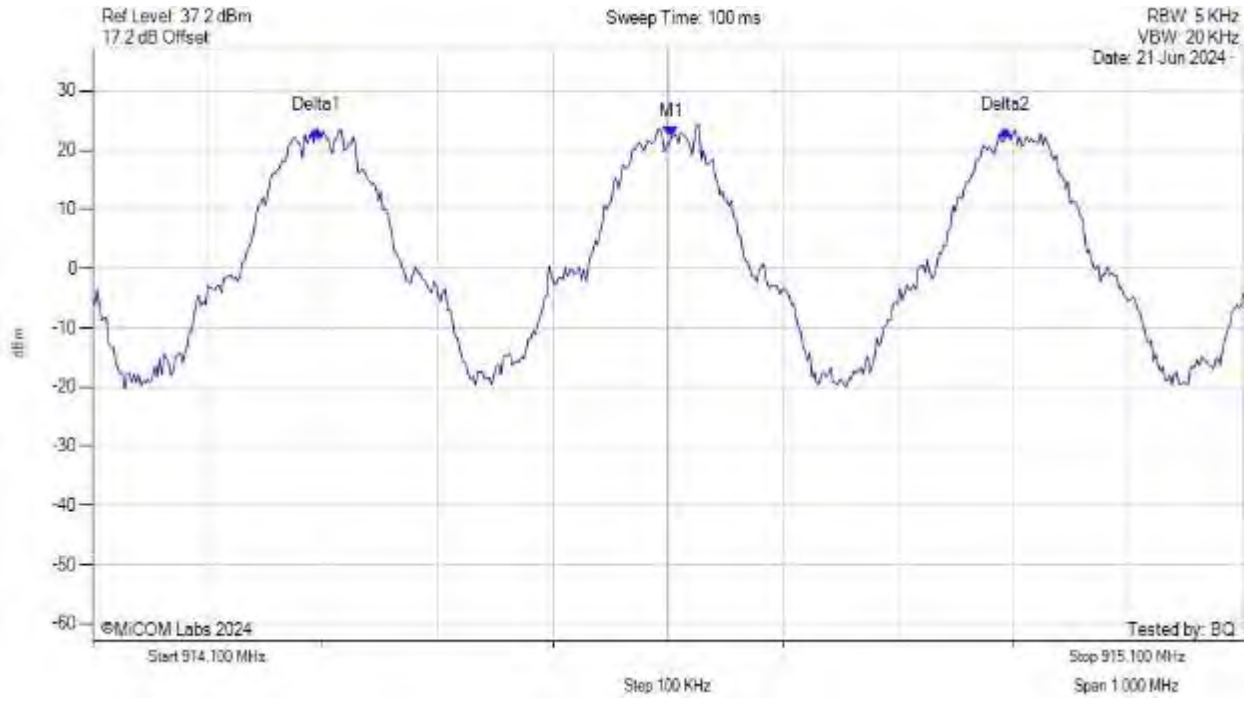
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

back to matrix

1.2.2. Channel Separation

CHANNEL SEPARATION

Variant: GFSK, 100kbps, PL 3 (FHSS), Channel: 914.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

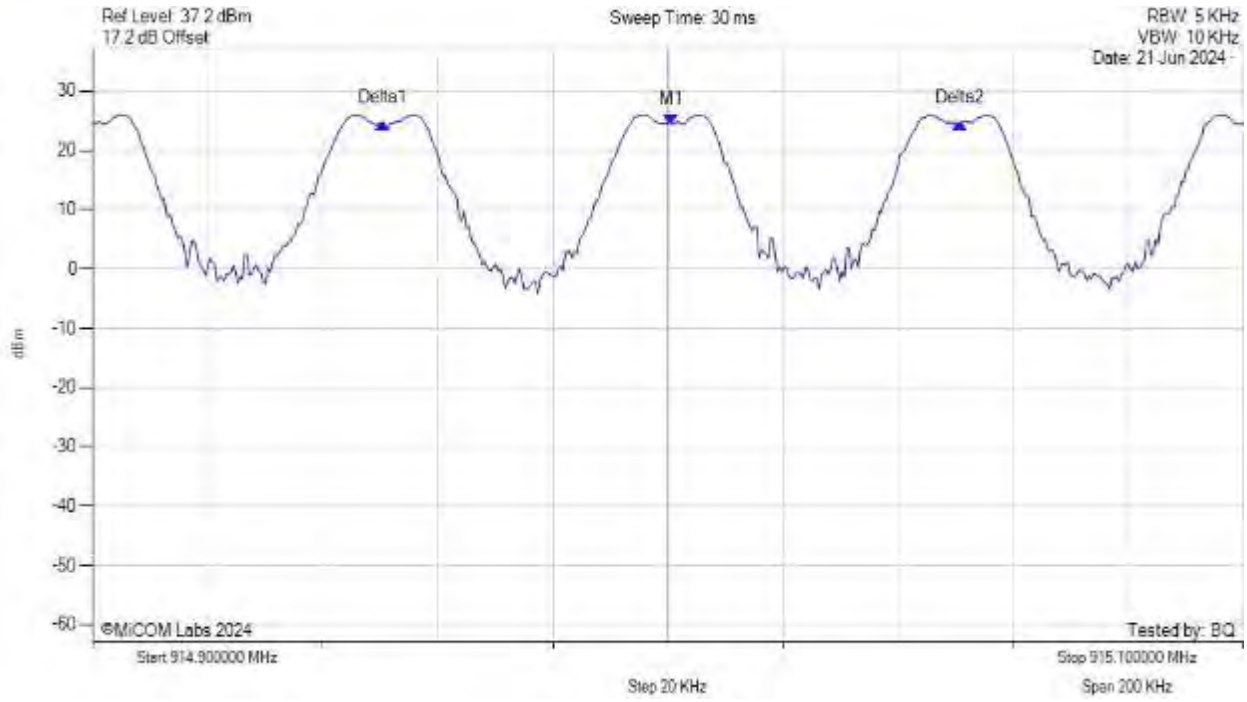


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 914.603 MHz : 22.215 dBm Delta1 : -308617 Hz : 1.141 dB Delta2 : 291 KHz : 1.169 dB	Channel Frequency: 914.60 MHz

back to matrix

CHANNEL SEPARATION

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.001 MHz : 24.414 dBm Delta1 : -50100 Hz : 0.089 dB Delta2 : 50 KHz : 0.055 dB	Channel Frequency: 915.00 MHz

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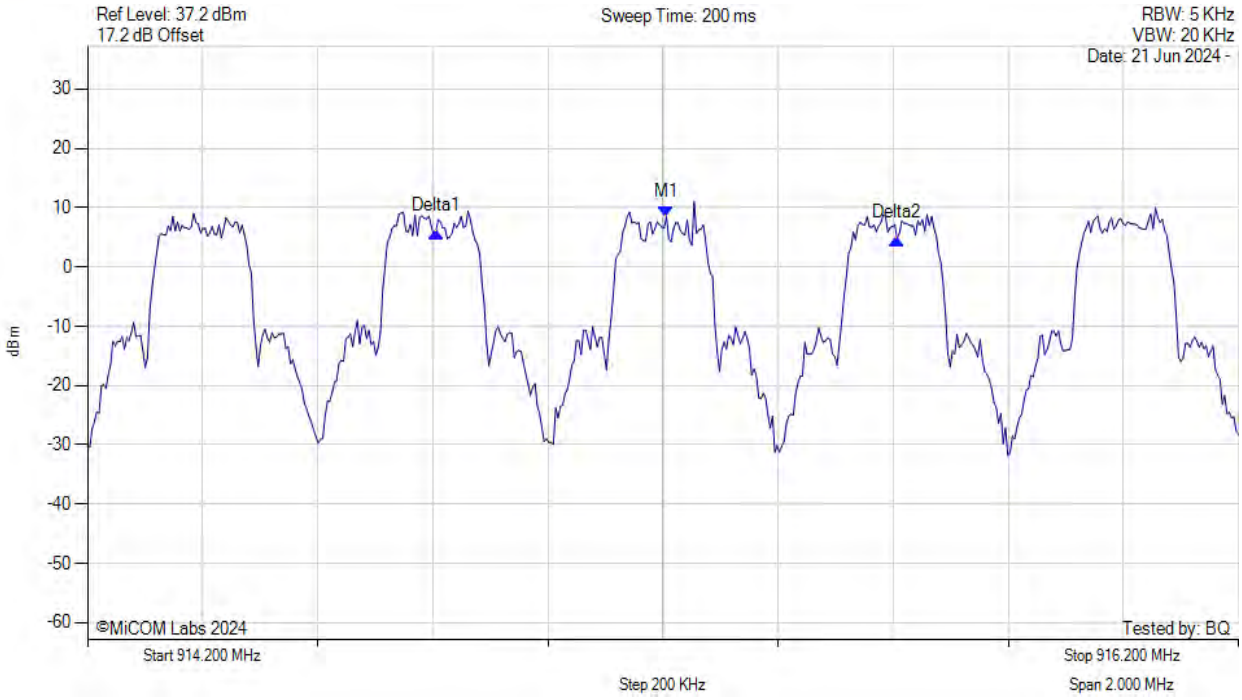
CHANNEL SEPARATION

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.206 MHz : 8.486 dBm Delta1 : -400802 Hz : -2.528 dB Delta2 : 401 KHz : -3.691 dB	Channel Frequency: 915.20 MHz

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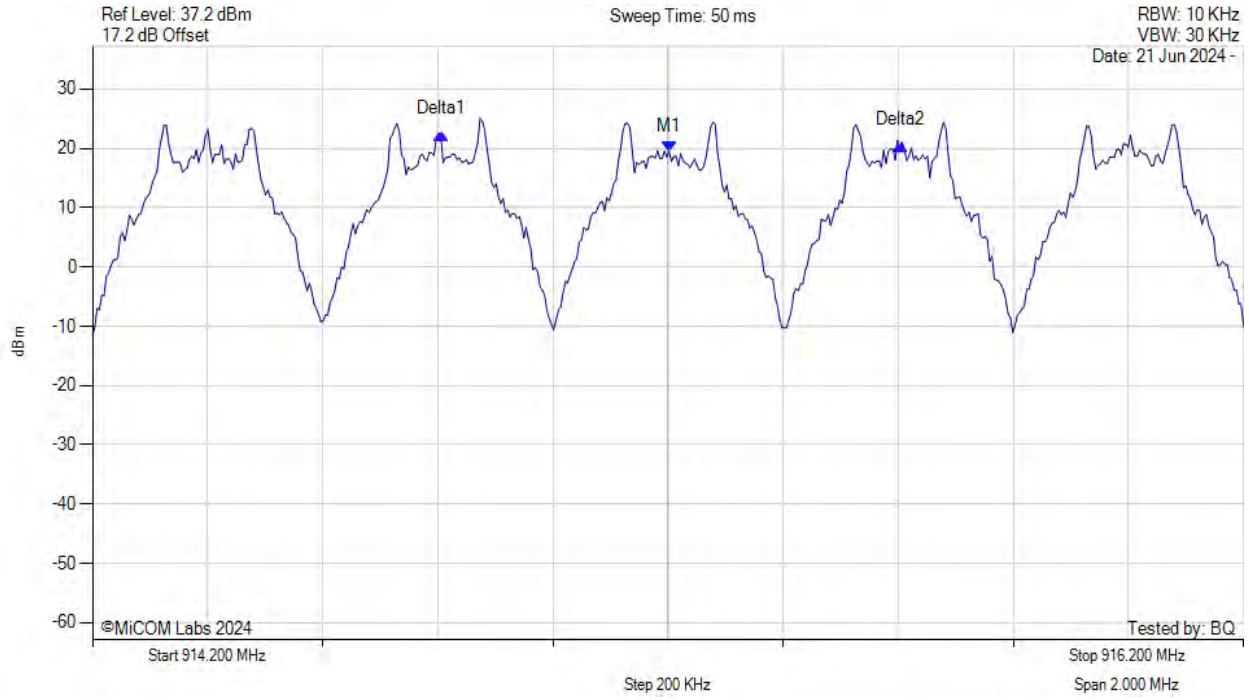
CHANNEL SEPARATION

Variant: GFSK, 150kbps, PL 3 (FHSS), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.202 MHz : 19.500 dBm Delta1 : -396794 Hz : 3.012 dB Delta2 : 401 KHz : 1.167 dB	Channel Frequency: 915.20 MHz

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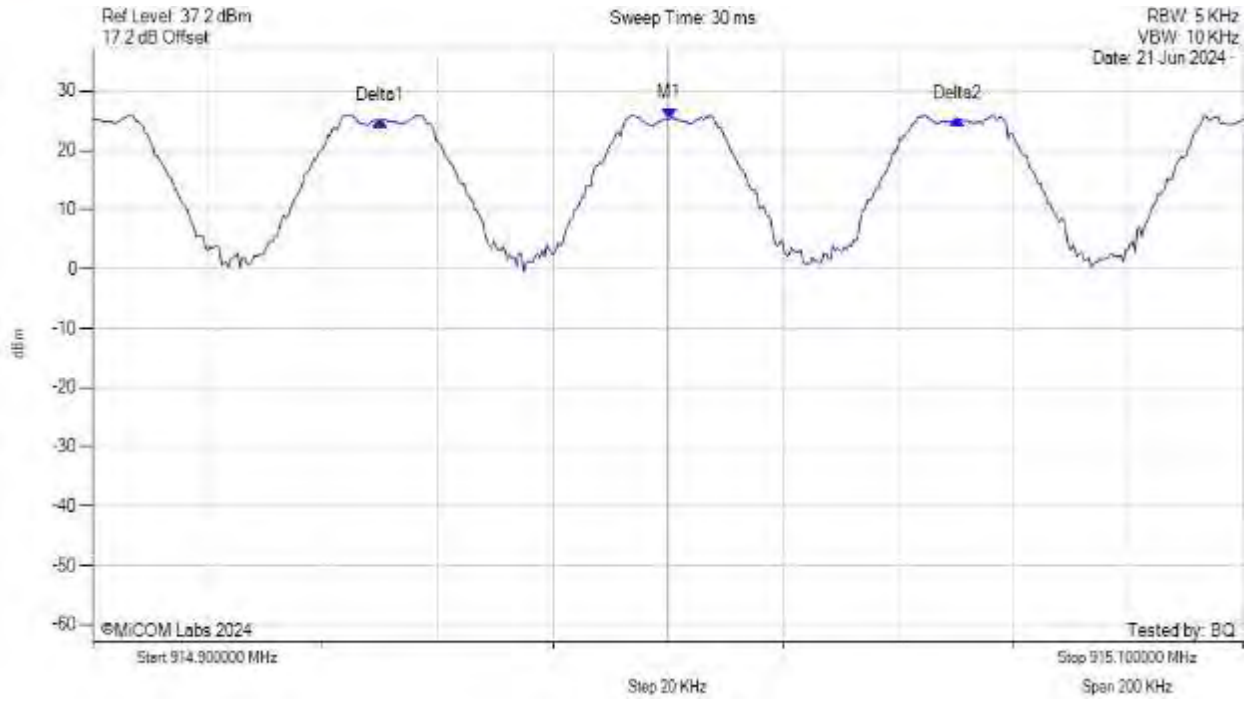
CHANNEL SEPARATION

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.000 MHz : 25.364 dBm Delta1 : -50100 Hz : -0.258 dB Delta2 : 50 KHz : -0.063 dB	Channel Frequency: 915.00 MHz

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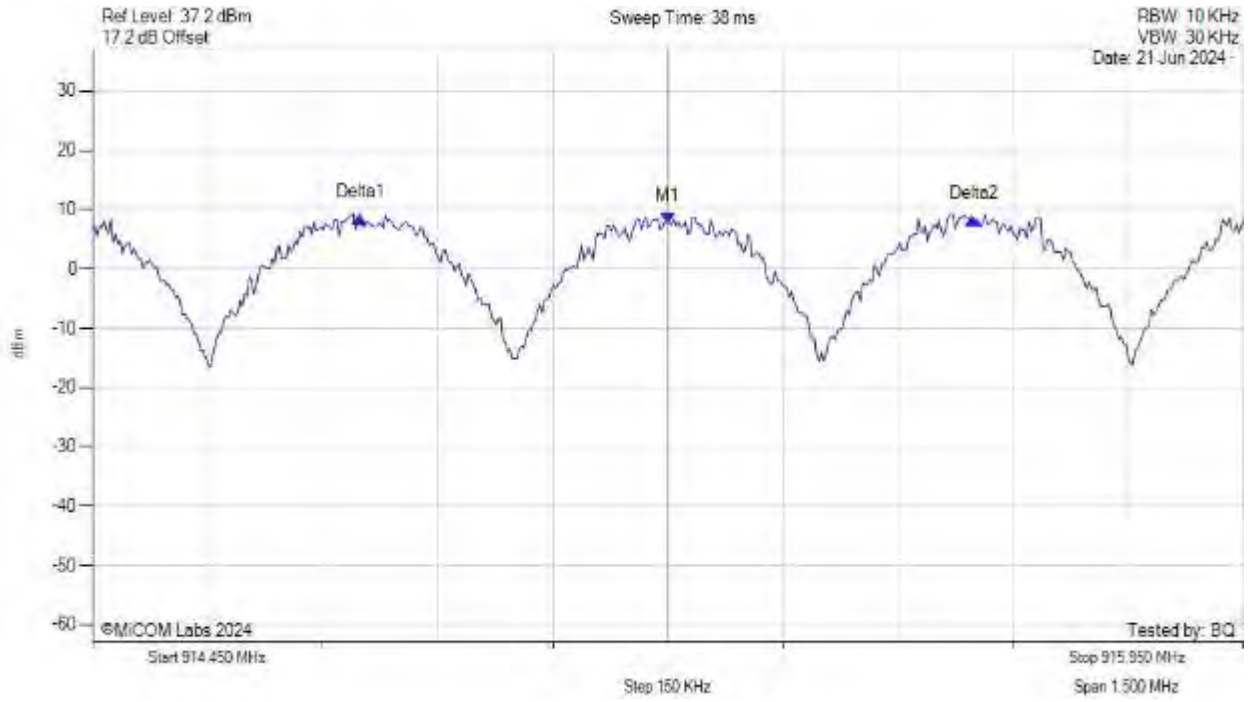
CHANNEL SEPARATION

Variant: GFSK, 300kbps PL 2 (Hybrid), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.200 MHz : 7.841 dBm Delta1 : -401200 Hz : 0.766 dB Delta2 : 398 KHz : 0.531 dB	Channel Frequency: 915.00 MHz

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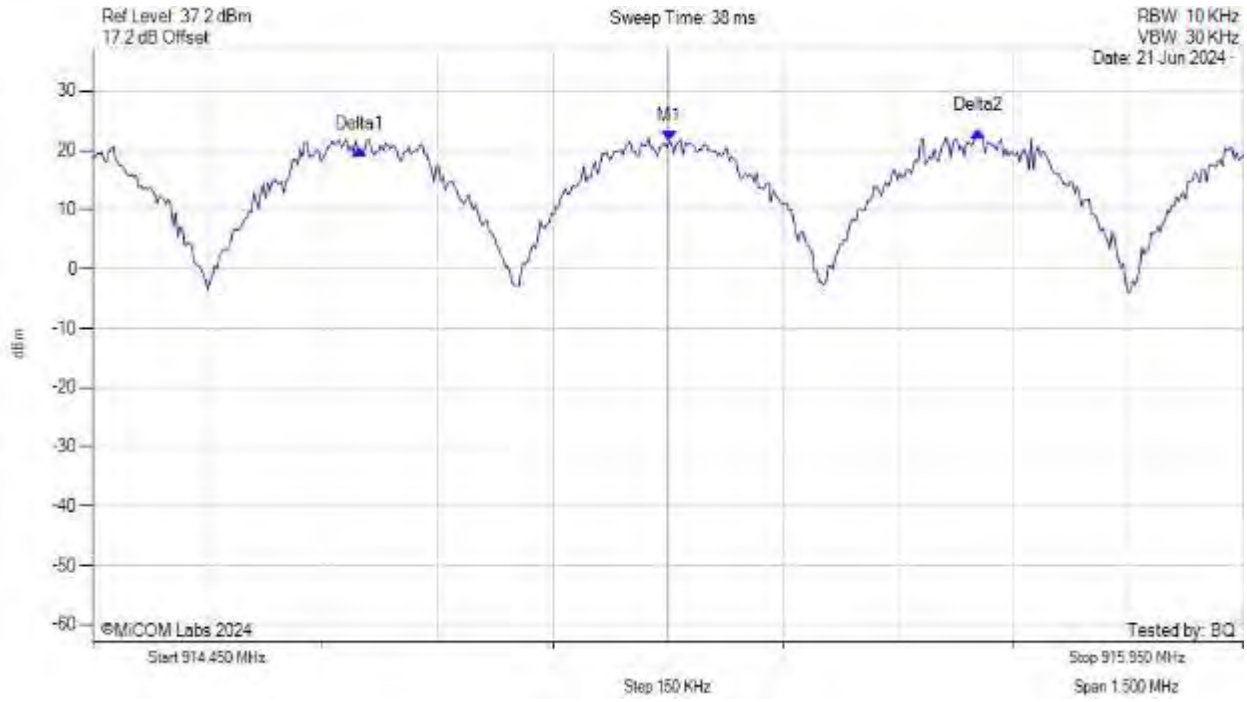
CHANNEL SEPARATION

Variant: GFSK, 300kbps PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.202 MHz : 21.522 dBm Delta1 : -402806 Hz : -1.403 dB Delta2 : 403 KHz : 1.733 dB	Channel Frequency: 915.00 MHz

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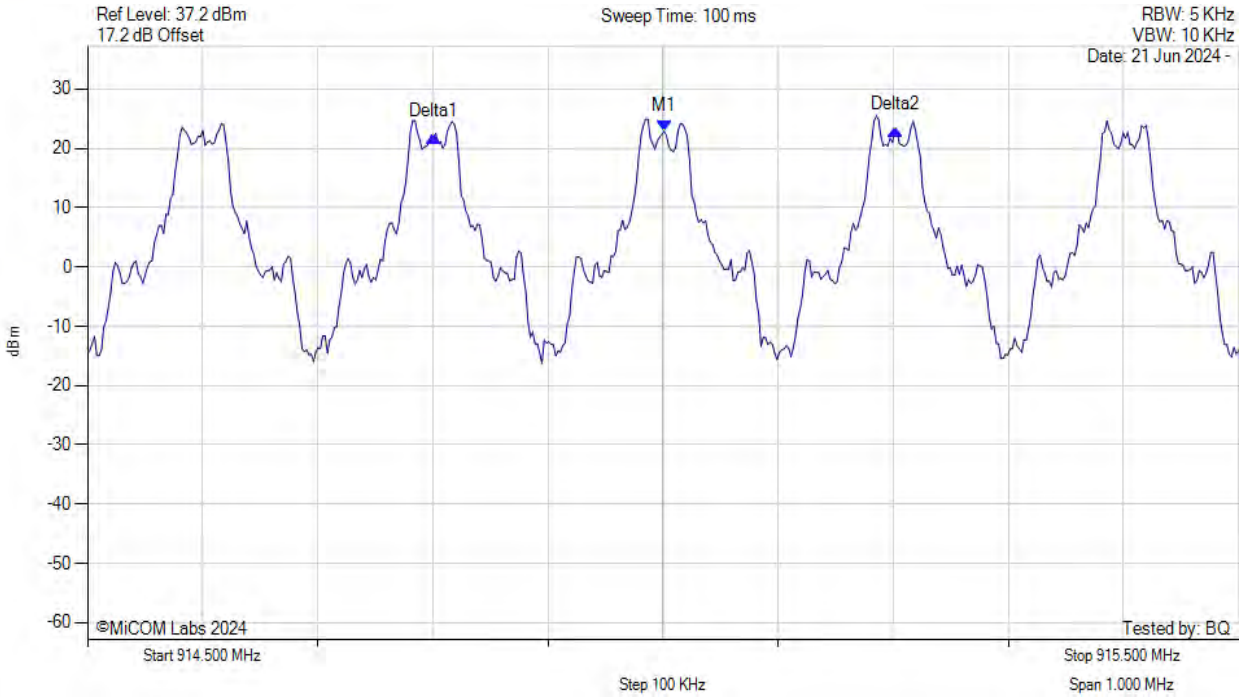
CHANNEL SEPARATION

Variant: GFSK, 37.5 kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.001 MHz : 22.880 dBm Delta1 : -200401 Hz : -0.856 dB Delta2 : 200 KHz : 0.197 dB	Channel Frequency: 915.00 MHz

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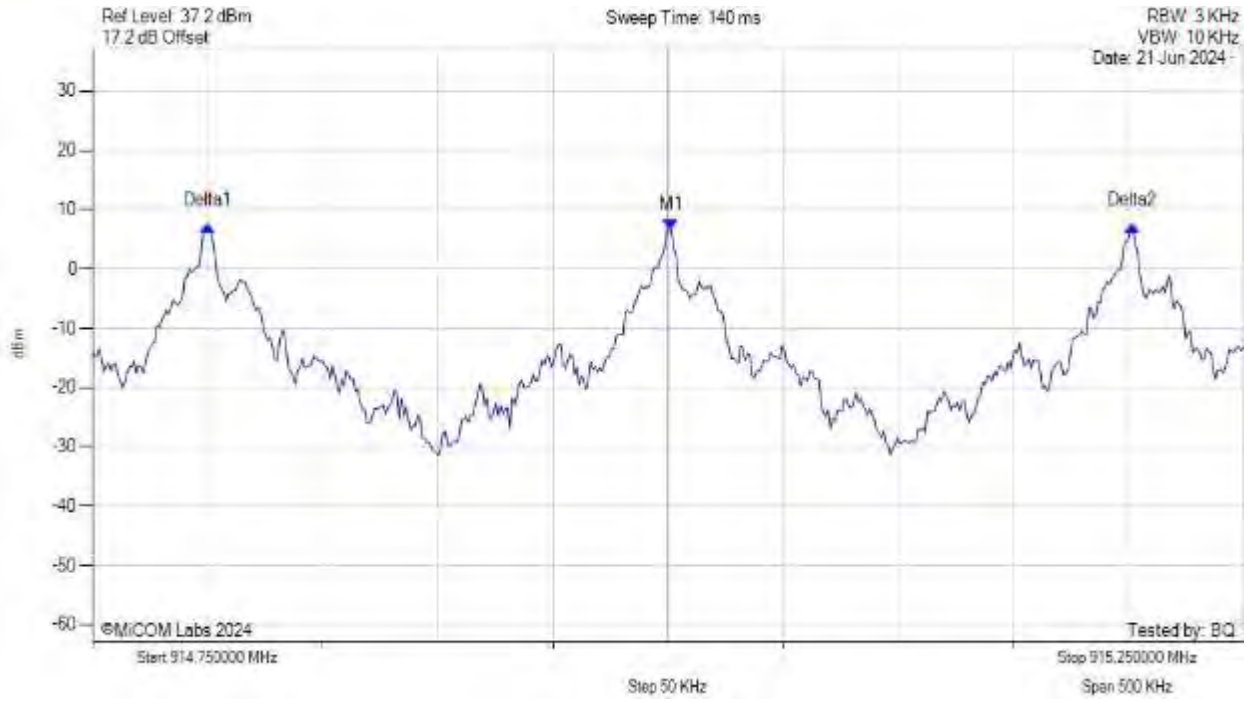
CHANNEL SEPARATION

Variant: OOK PL 1, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.002 MHz : 6.511 dBm Delta1 : -201403 Hz : 0.773 dB Delta2 : 200 KHz : 0.822 dB	Channel Frequency: 915.00 MHz

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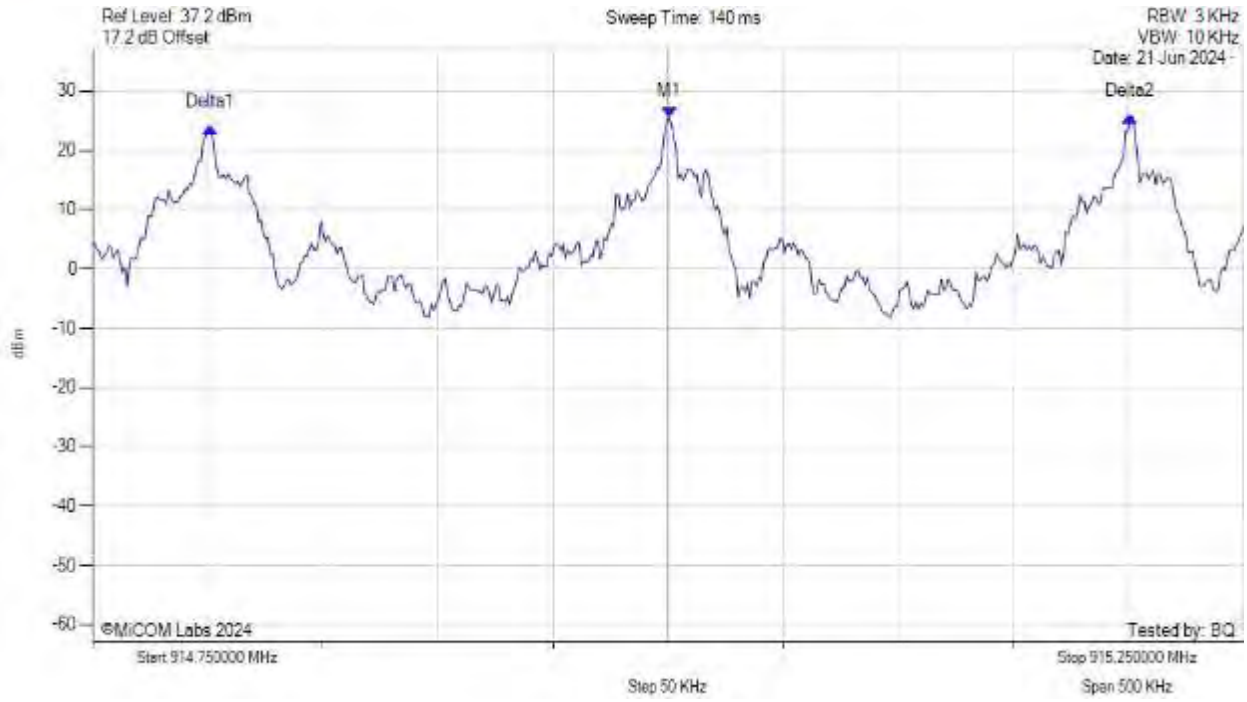
CHANNEL SEPARATION

Variant: OOK PL 3, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.001 MHz : 25.589 dBm Delta1 : -199399 Hz : -1.735 dB Delta2 : 200 KHz : 0.043 dB	Channel Frequency: 915.00 MHz

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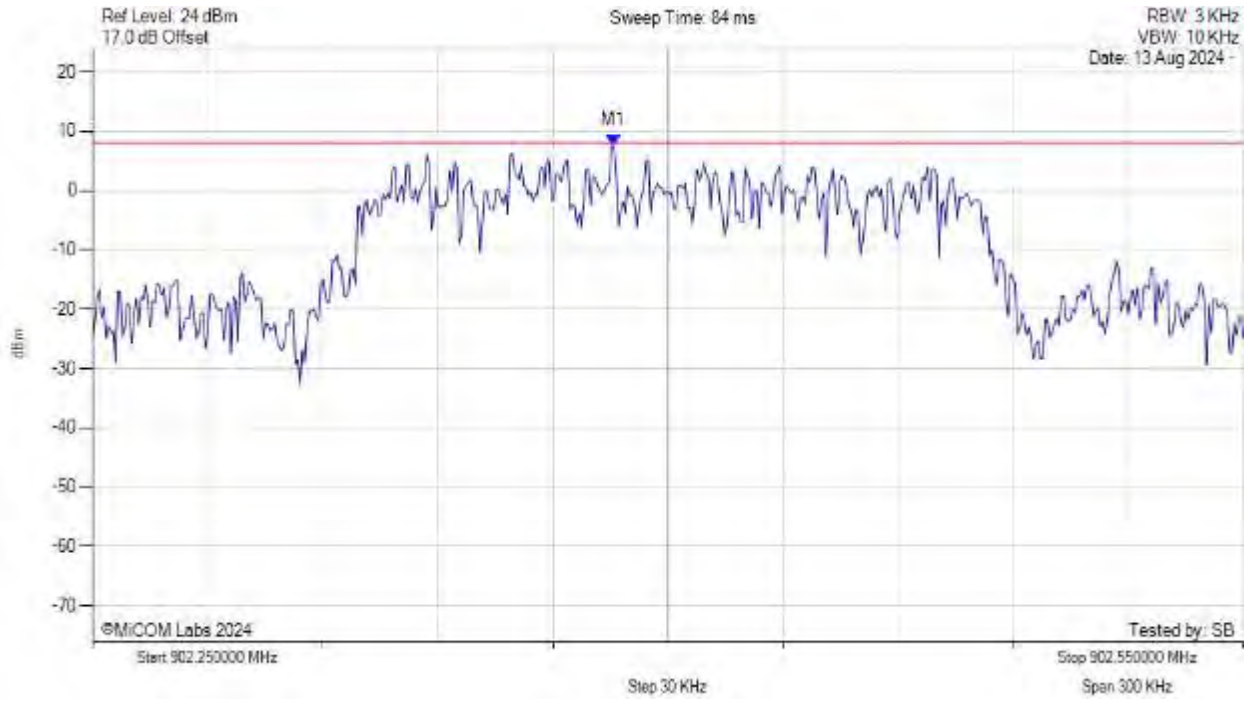
1.3. Power Spectral Density

POWER SPECTRAL DENSITY - PEAK

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 902.386 MHz : 7.610 dBm	Limit: ≤ 8.000 dBm Margin: -0.39 dB

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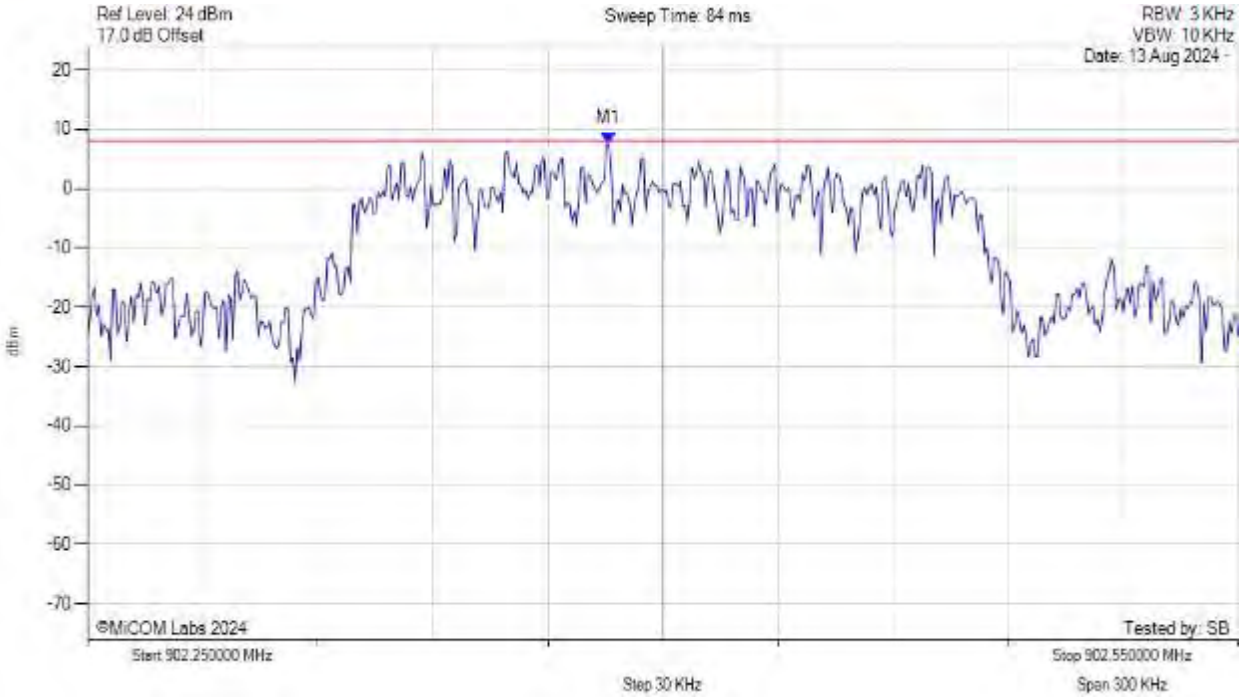
POWER SPECTRAL DENSITY - PEAK

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 902.40 MHz, SUM, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 902.386 MHz : 7.610 dBm	Limit: ≤ 8.0 dBm Margin: -0.4 dB

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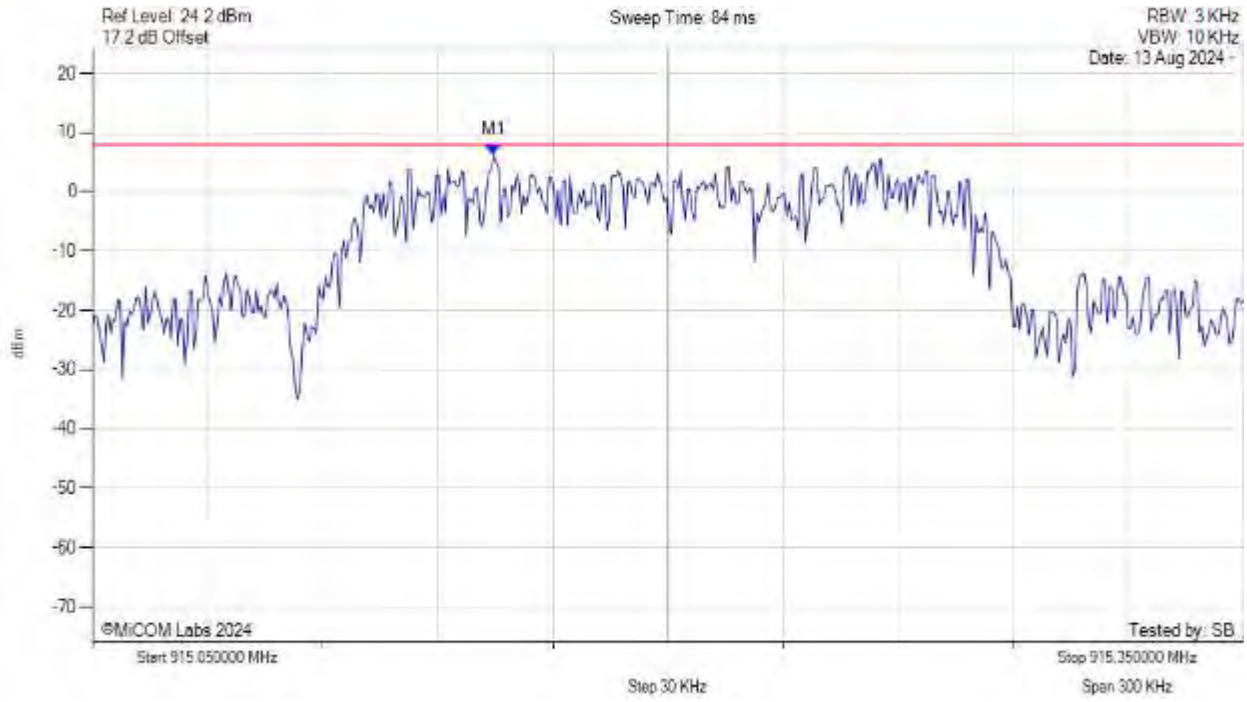
POWER SPECTRAL DENSITY - PEAK

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

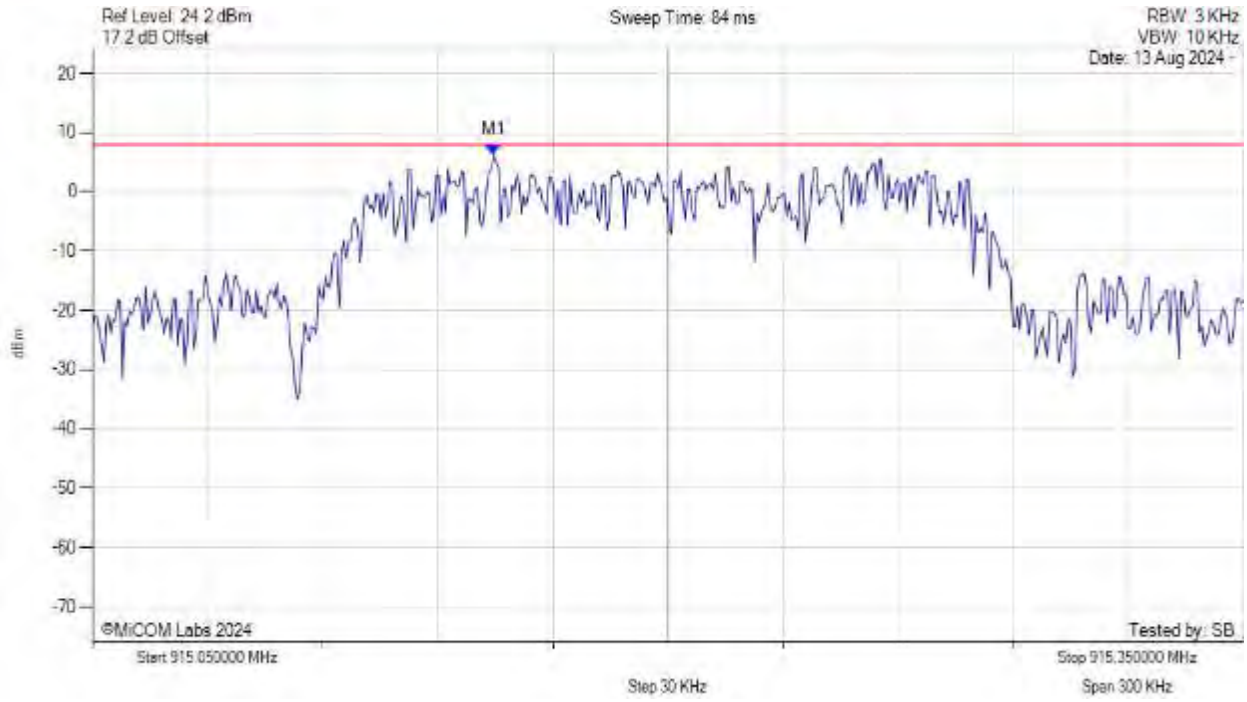


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 915.155 MHz : 6.146 dBm	Limit: ≤ 8.000 dBm Margin: -1.85 dB

back to matrix

POWER SPECTRAL DENSITY - PEAK

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 915.20 MHz, SUM, Temp: 20, Voltage: 6.0 Vdc

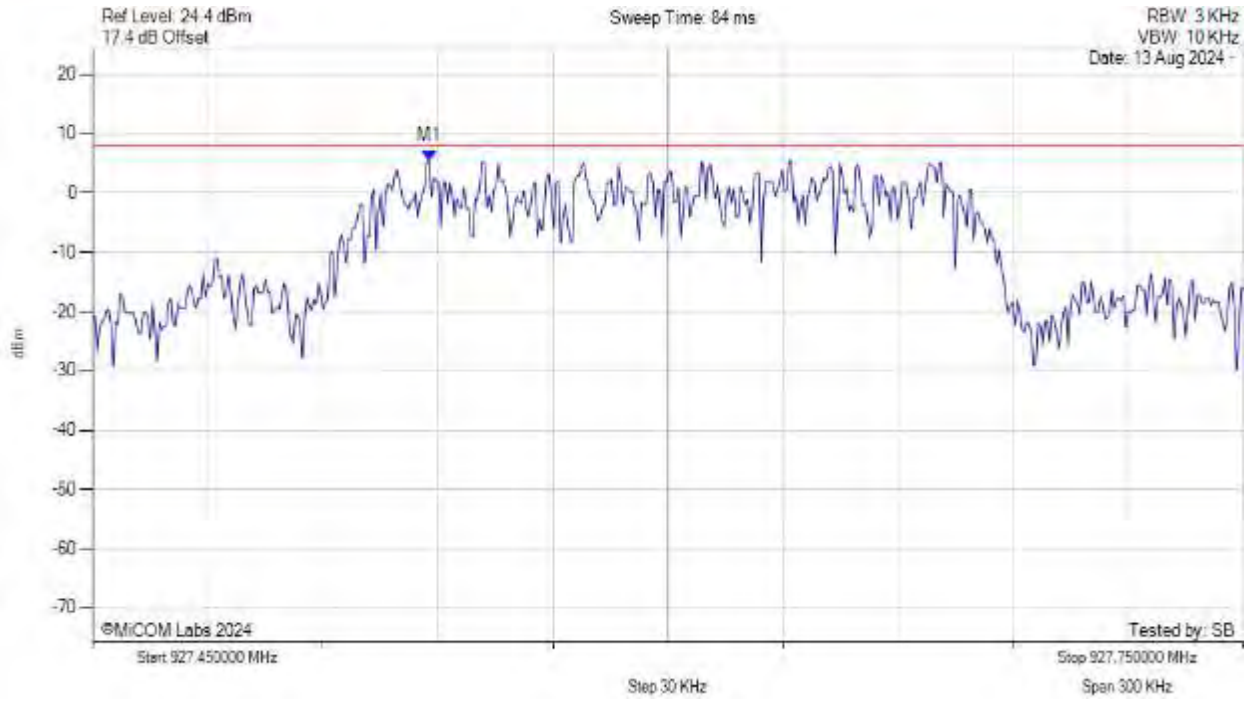


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 915.155 MHz : 6.146 dBm	Limit: ≤ 8.0 dBm Margin: -1.9 dB

back to matrix

POWER SPECTRAL DENSITY - PEAK

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 927.538 MHz : 5.468 dBm	Limit: ≤ 8.000 dBm Margin: -2.53 dB

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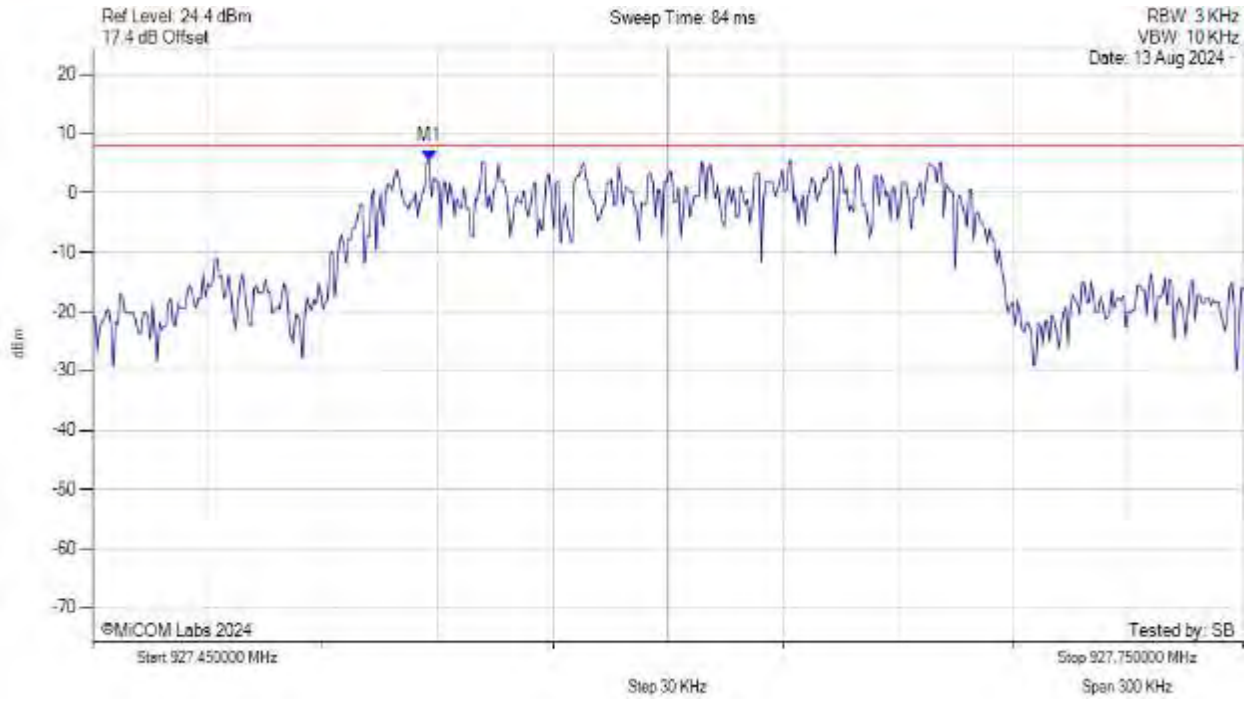
POWER SPECTRAL DENSITY - PEAK

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 927.60 MHz, SUM, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 927.538 MHz : 5.468 dBm	Limit: ≤ 8.0 dBm Margin: -2.5 dB

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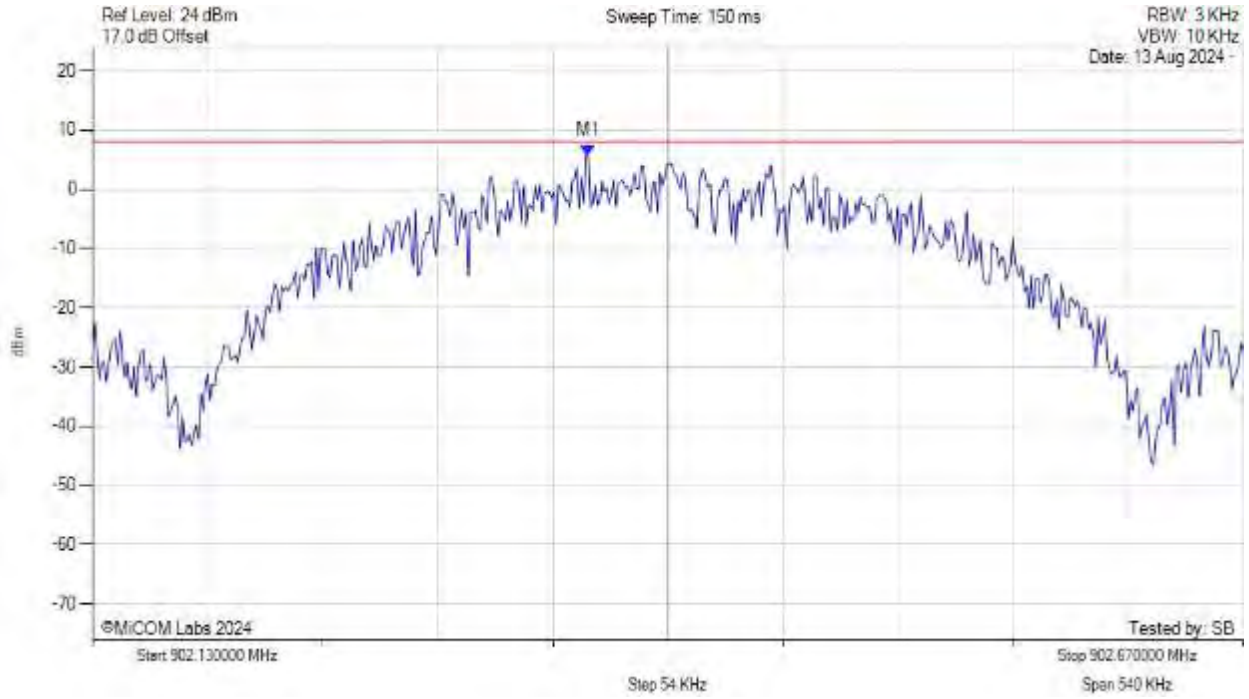
POWER SPECTRAL DENSITY - PEAK

Variant: GFSK, 300kbps PL 2 (Hybrid), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 902.363 MHz : 5.806 dBm	Limit: ≤ 8.000 dBm Margin: -2.19 dB

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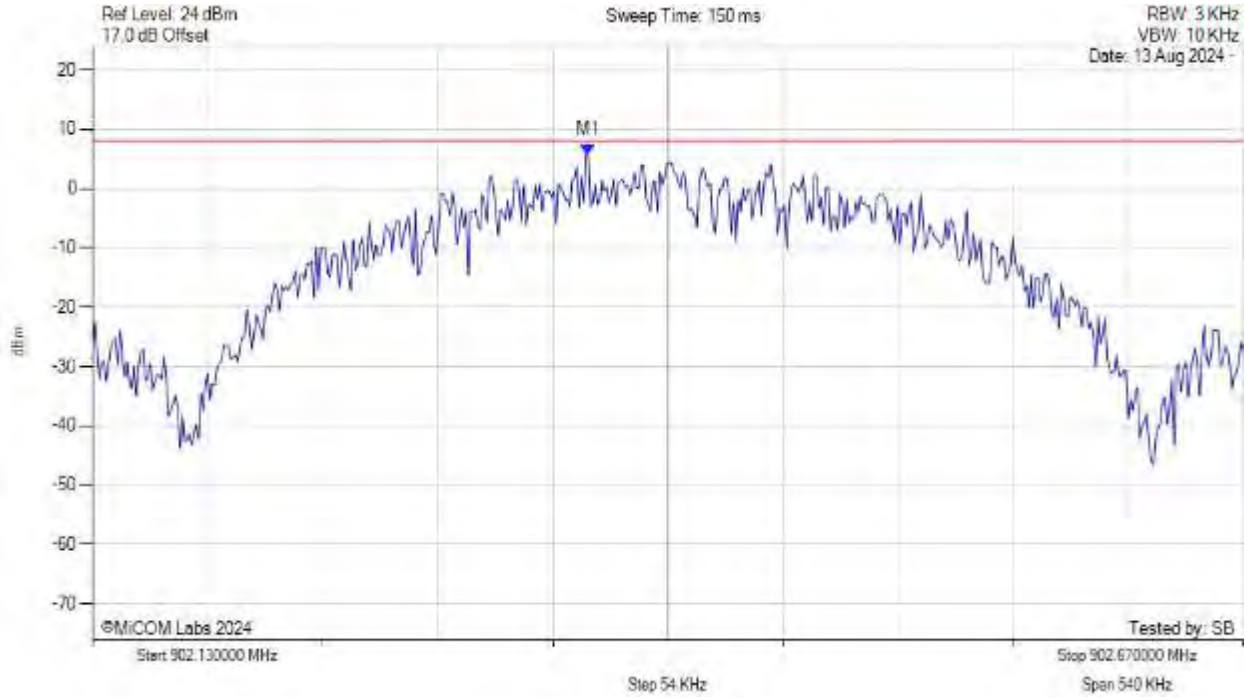
POWER SPECTRAL DENSITY - PEAK

Variant: GFSK, 300kbps PL 2 (Hybrid), Channel: 902.40 MHz, SUM, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 902.363 MHz : 5.806 dBm	Limit: ≤ 8.0 dBm Margin: -2.2 dB

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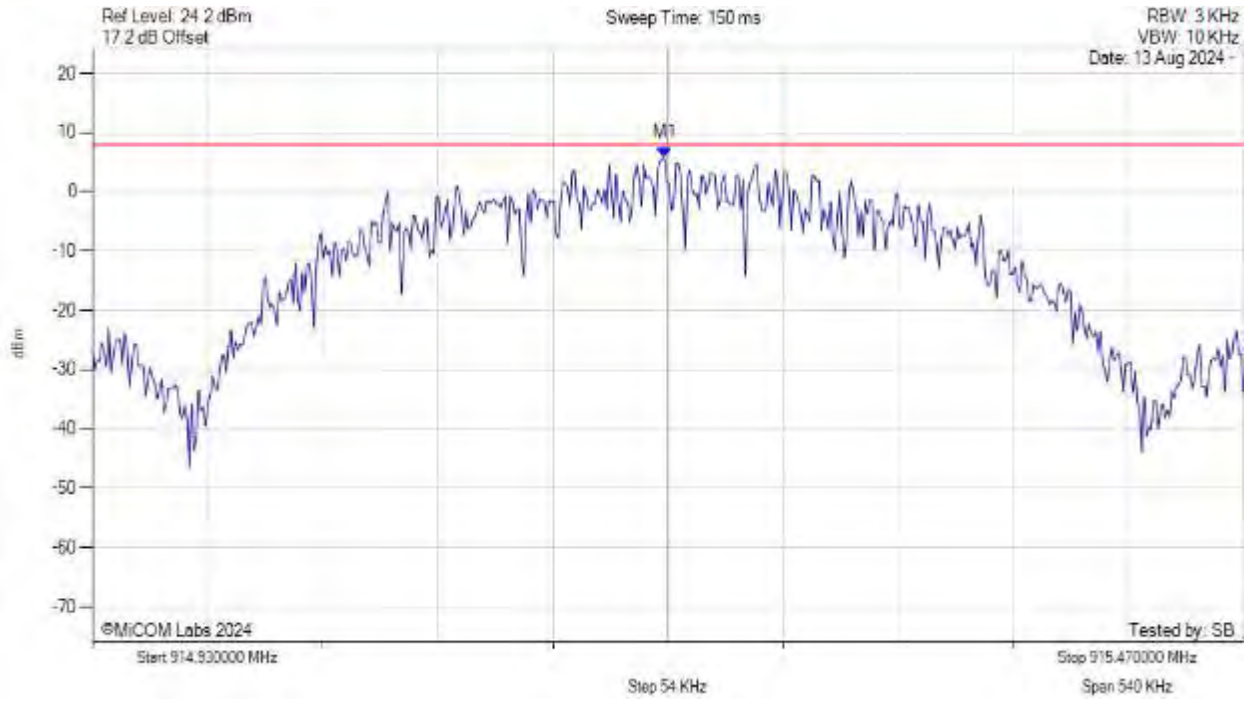
POWER SPECTRAL DENSITY - PEAK

Variant: GFSK, 300kbps PL 2 (Hybrid), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

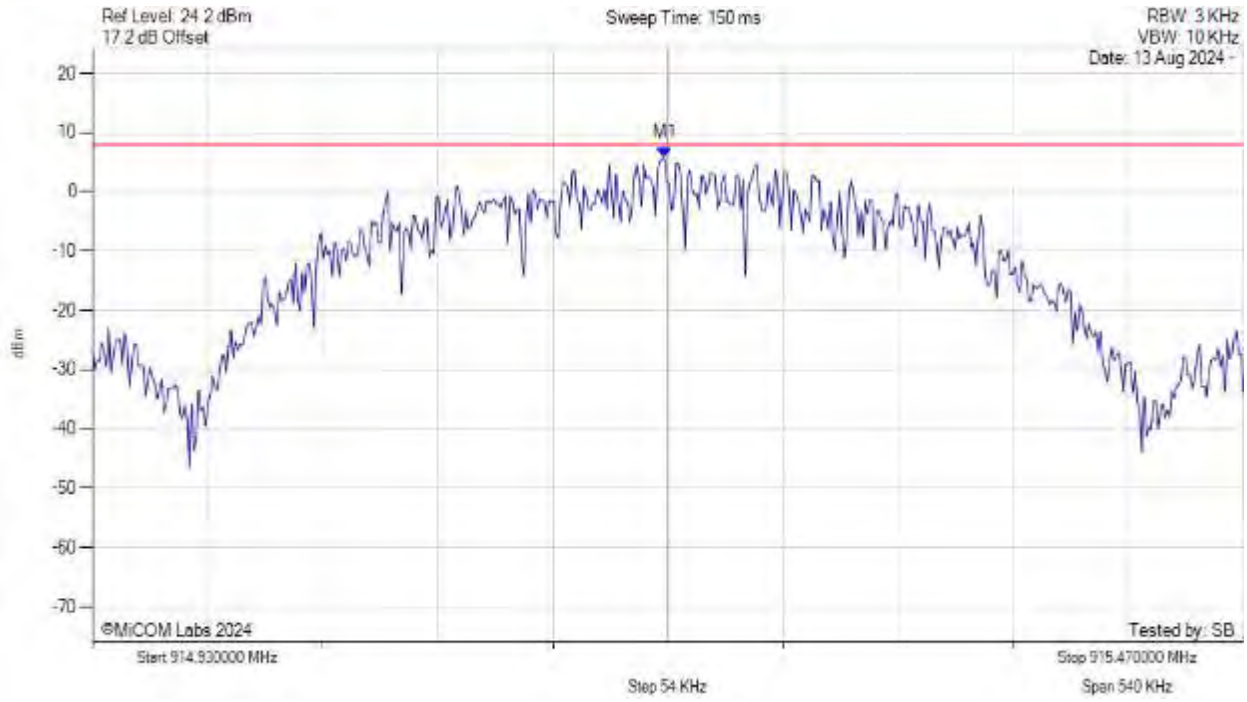


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 915.198 MHz : 5.660 dBm	Limit: ≤ 8.000 dBm Margin: -2.34 dB

back to matrix

POWER SPECTRAL DENSITY - PEAK

Variant: GFSK, 300kbps PL 2 (Hybrid), Channel: 915.20 MHz, SUM, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 915.198 MHz : 5.660 dBm	Limit: ≤ 8.0 dBm Margin: -2.3 dB

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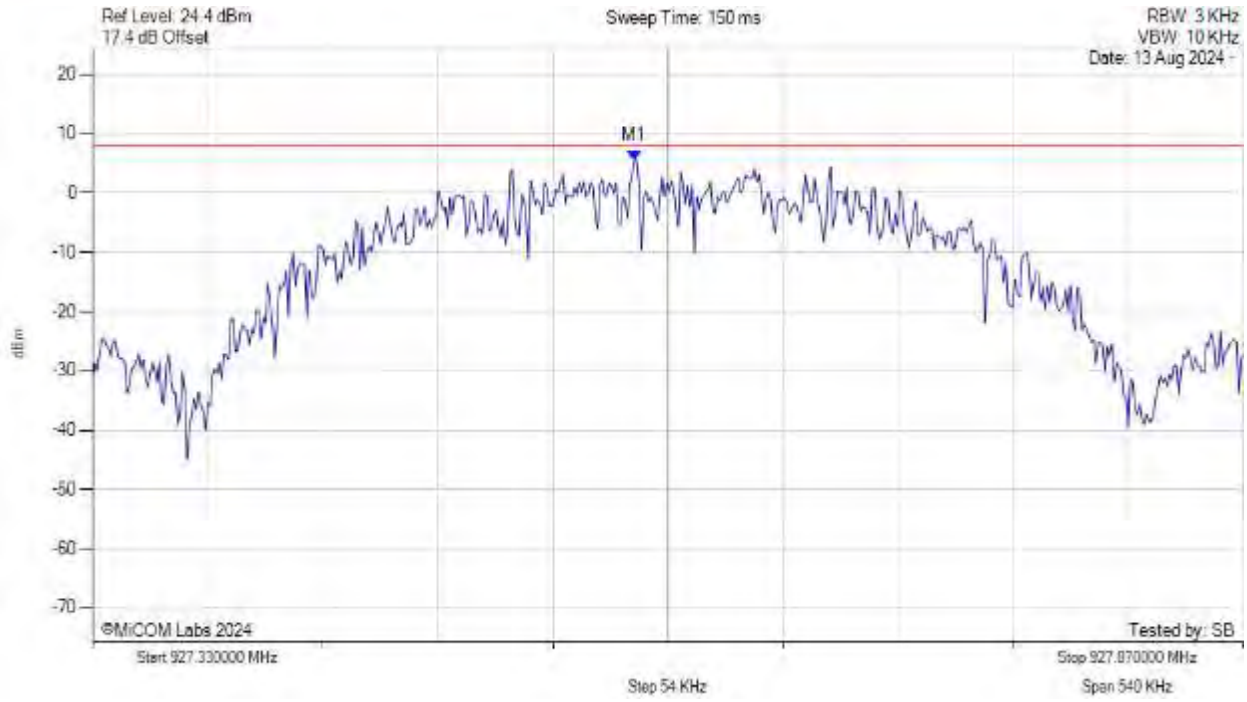
POWER SPECTRAL DENSITY - PEAK

Variant: GFSK, 300kbps PL 2 (Hybrid), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

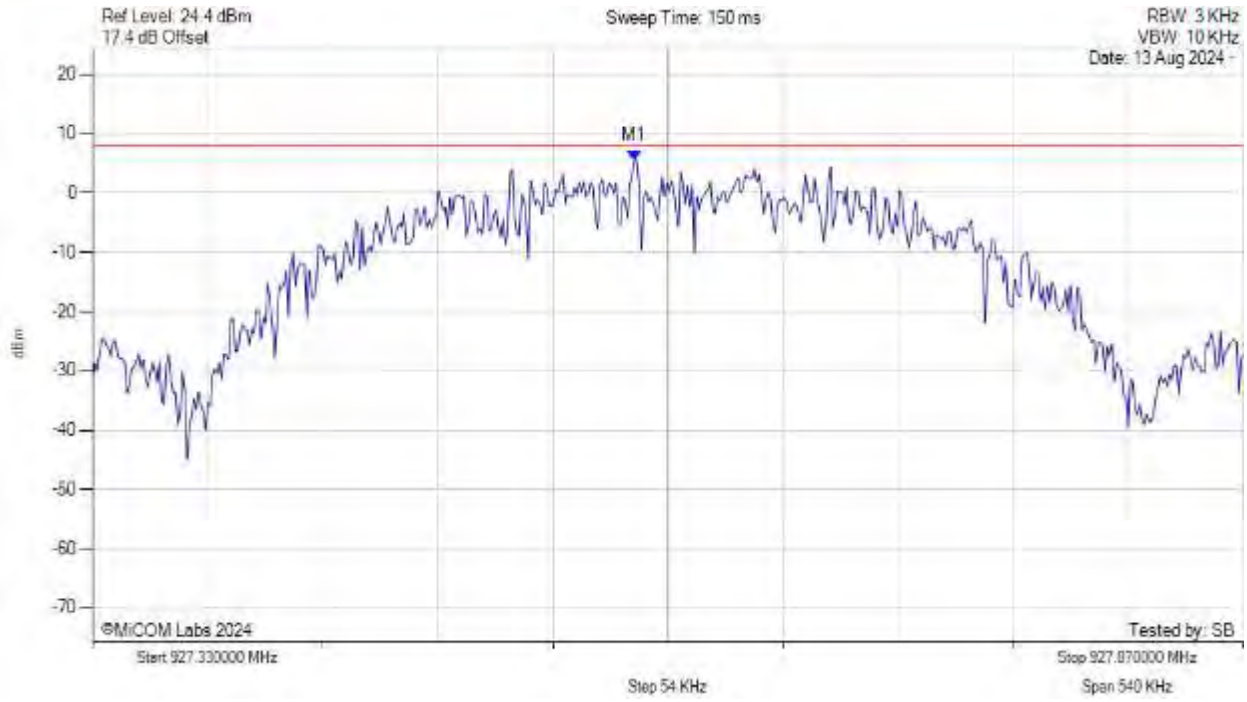


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 927.584 MHz : 5.525 dBm	Limit: ≤ 8.000 dBm Margin: -2.47 dB

back to matrix

POWER SPECTRAL DENSITY - PEAK

Variant: GFSK, 300kbps PL 2 (Hybrid), Channel: 927.60 MHz, SUM, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 927.584 MHz : 5.525 dBm	Limit: ≤ 8.0 dBm Margin: -2.5 dB

back to matrix

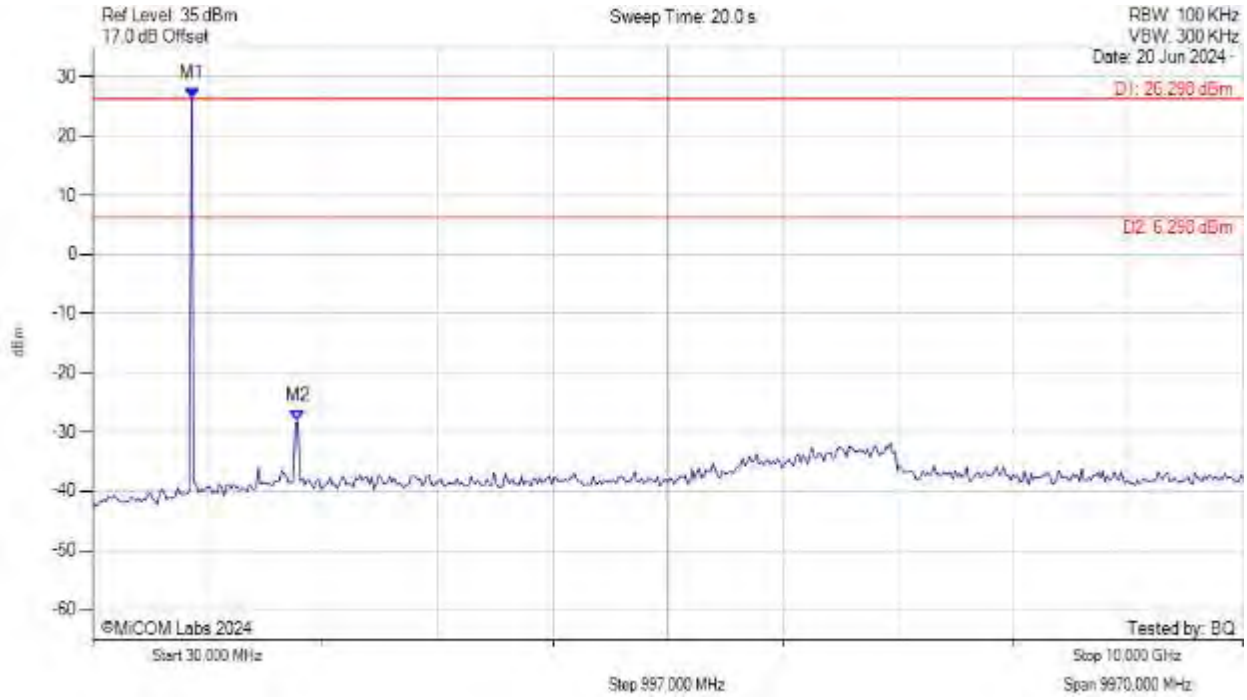
1.4. Emissions

1.4.1. Conducted Emissions

1.4.1.1. Conducted Unwanted Spurious Emissions

UNWANTED EMISSIONS PEAK

Variant: GFSK, 100kbps, PL 3 (FHSS), Channel: 902.30 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 26.298 dBm M2 : 1808.216 MHz : -28.172 dBm	Limit: 6.30 dBm Margin: -34.47 dB

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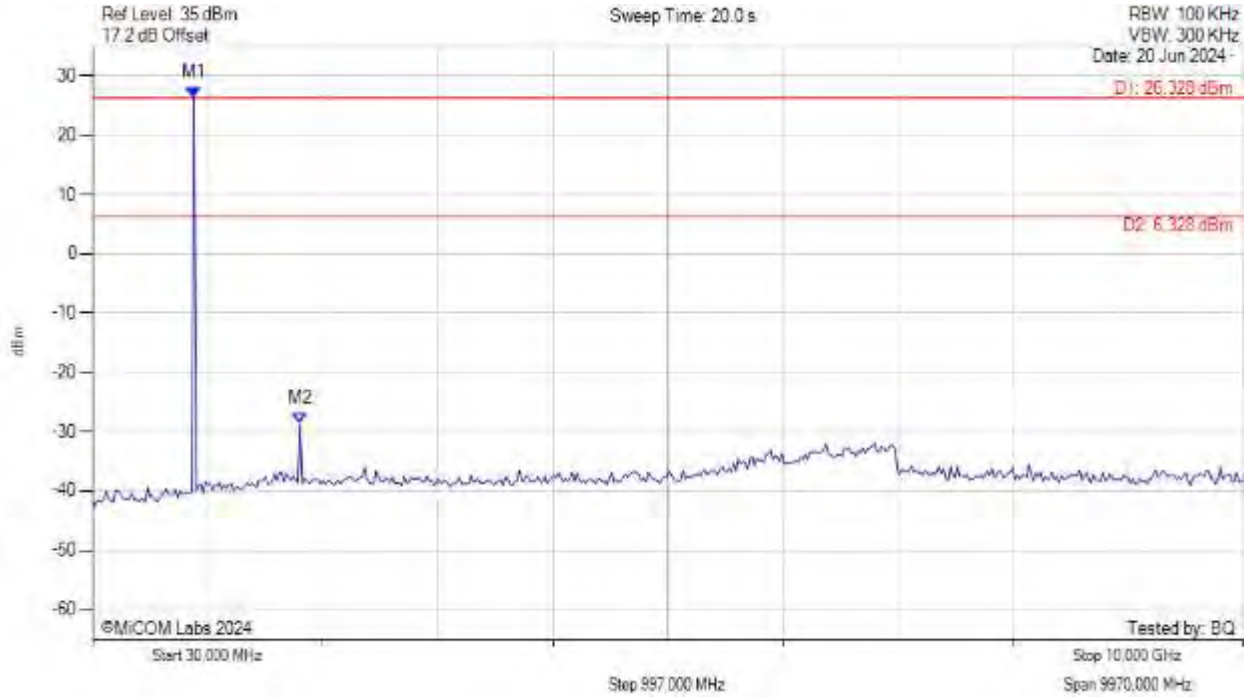
UNWANTED EMISSIONS PEAK

Variant: GFSK, 100kbps, PL 3 (FHSS), Channel: 914.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

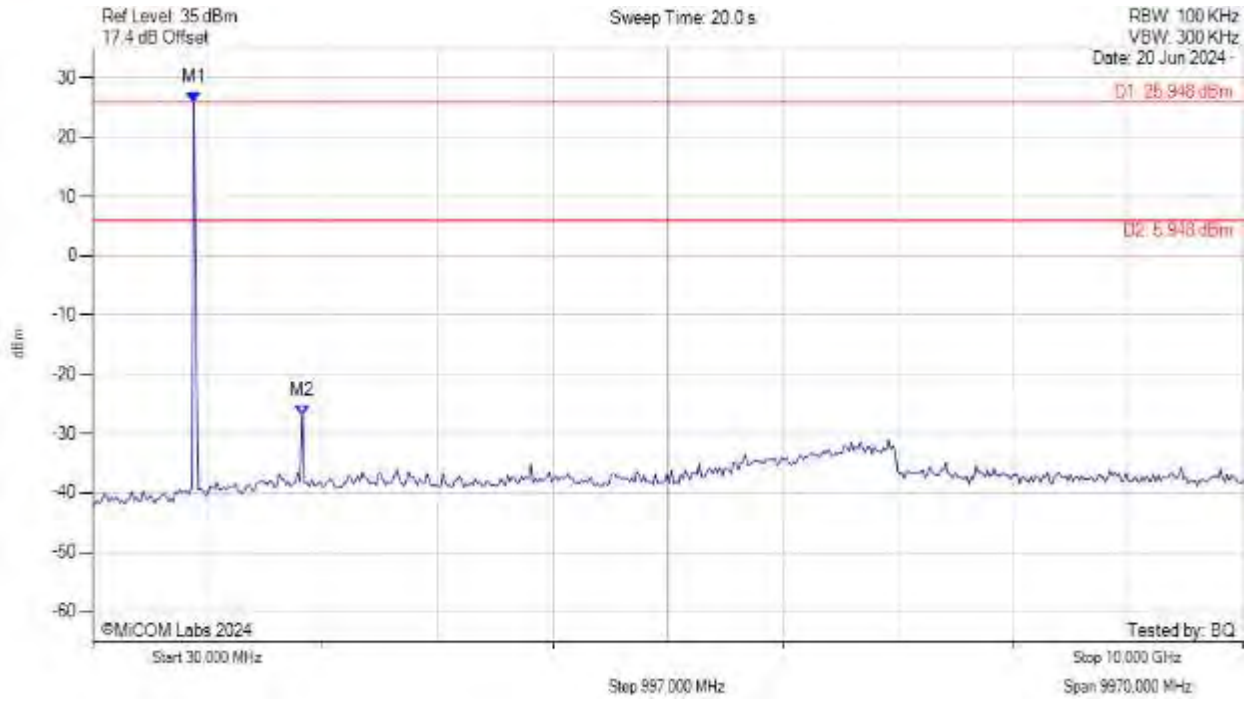


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 26.328 dBm M2 : 1828.196 MHz : -28.650 dBm	Limit: 6.33 dBm Margin: -34.98 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 100kbps, PL 3 (FHSS), Channel: 926.90 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

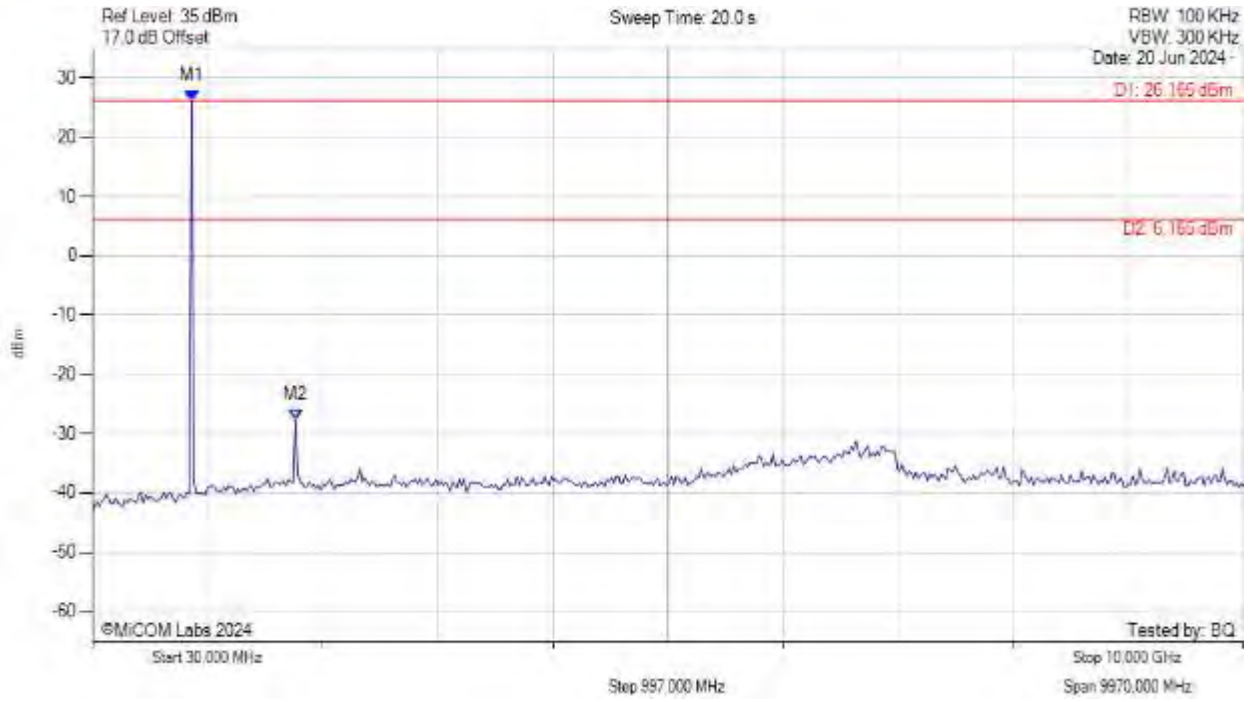


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 25.948 dBm M2 : 1848.176 MHz : -26.883 dBm	Limit: 5.95 dBm Margin: -32.83 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

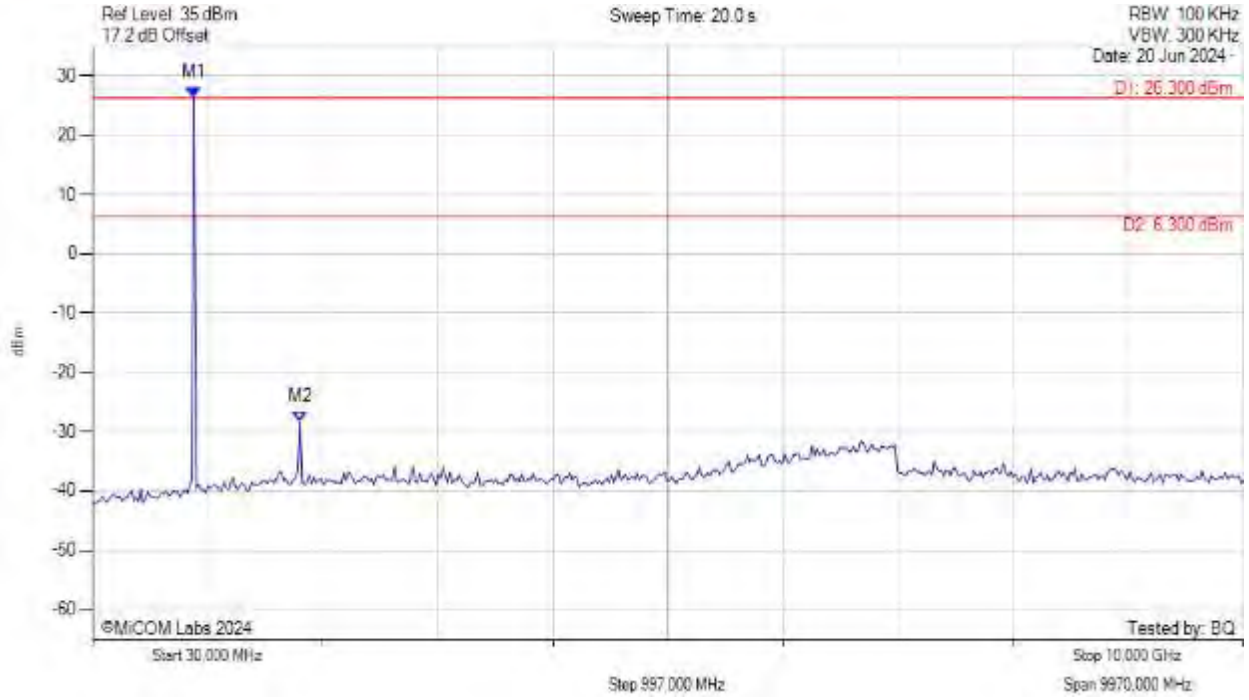


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 26.165 dBm M2 : 1788.236 MHz : -27.672 dBm	Limit: 6.17 dBm Margin: -33.84 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

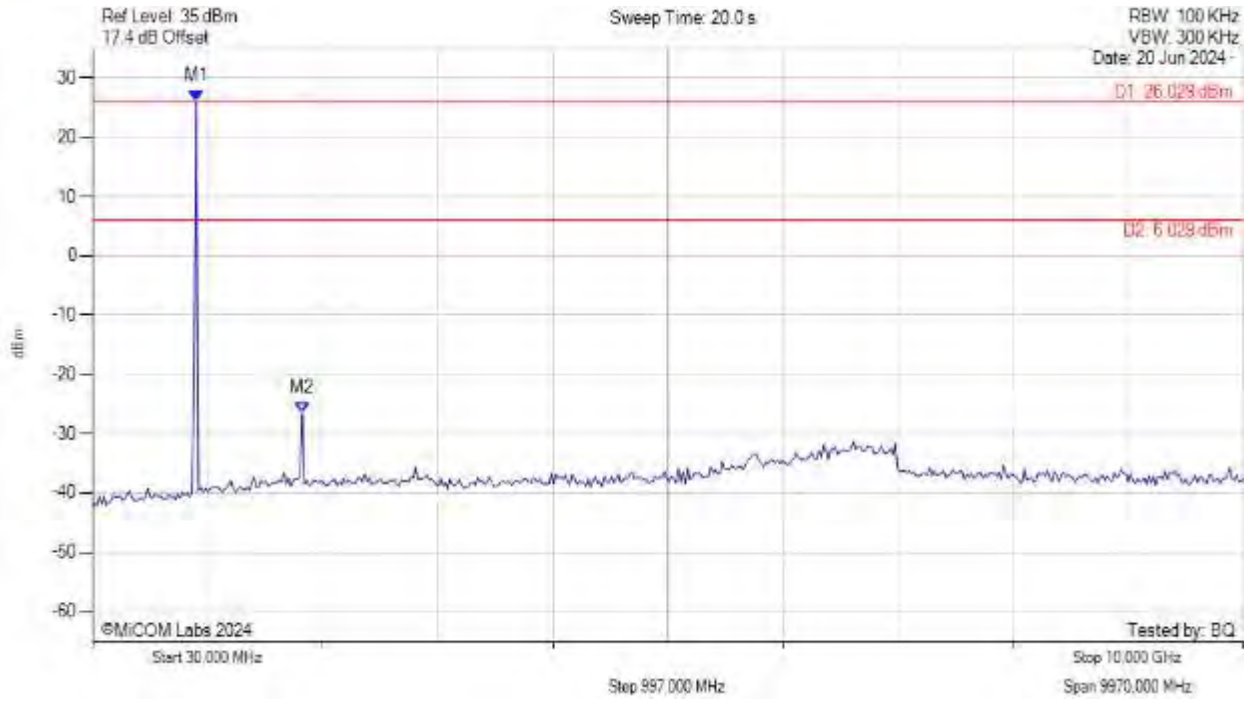


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 26.300 dBm M2 : 1828.196 MHz : -28.374 dBm	Limit: 6.30 dBm Margin: -34.67 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 927.75 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

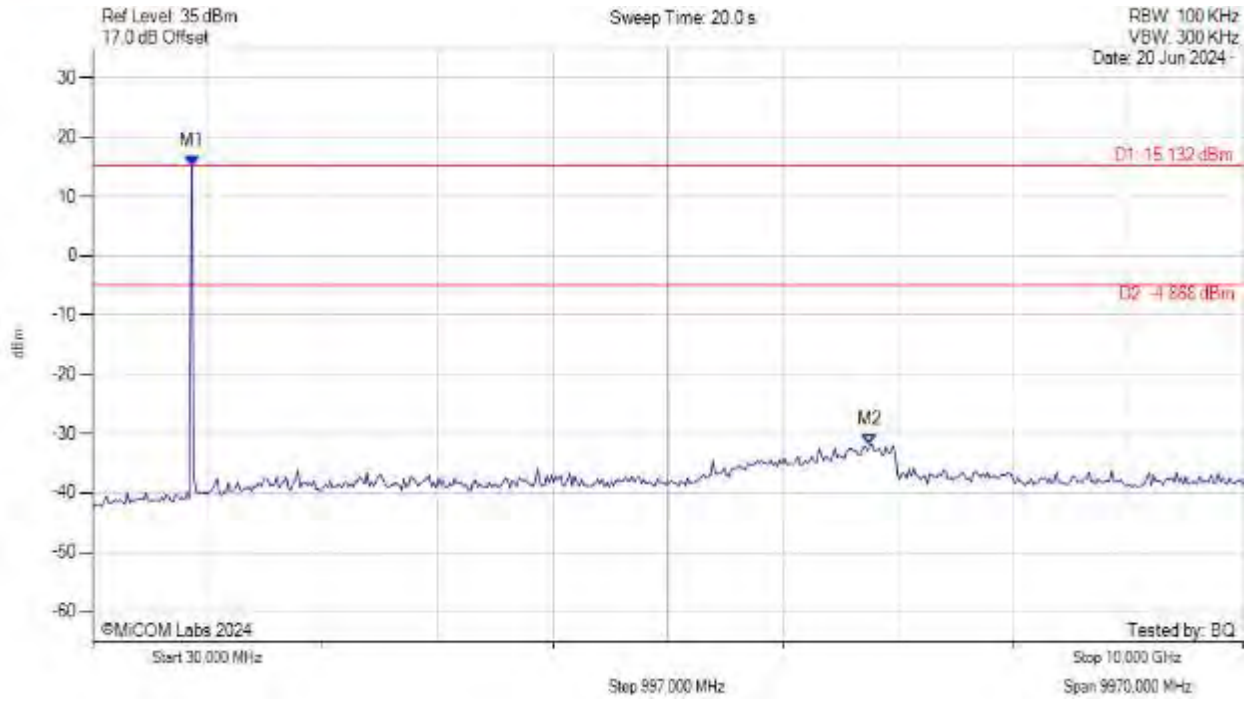


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 929.098 MHz : 26.029 dBm M2 : 1848.176 MHz : -26.584 dBm	Limit: 6.03 dBm Margin: -32.61 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

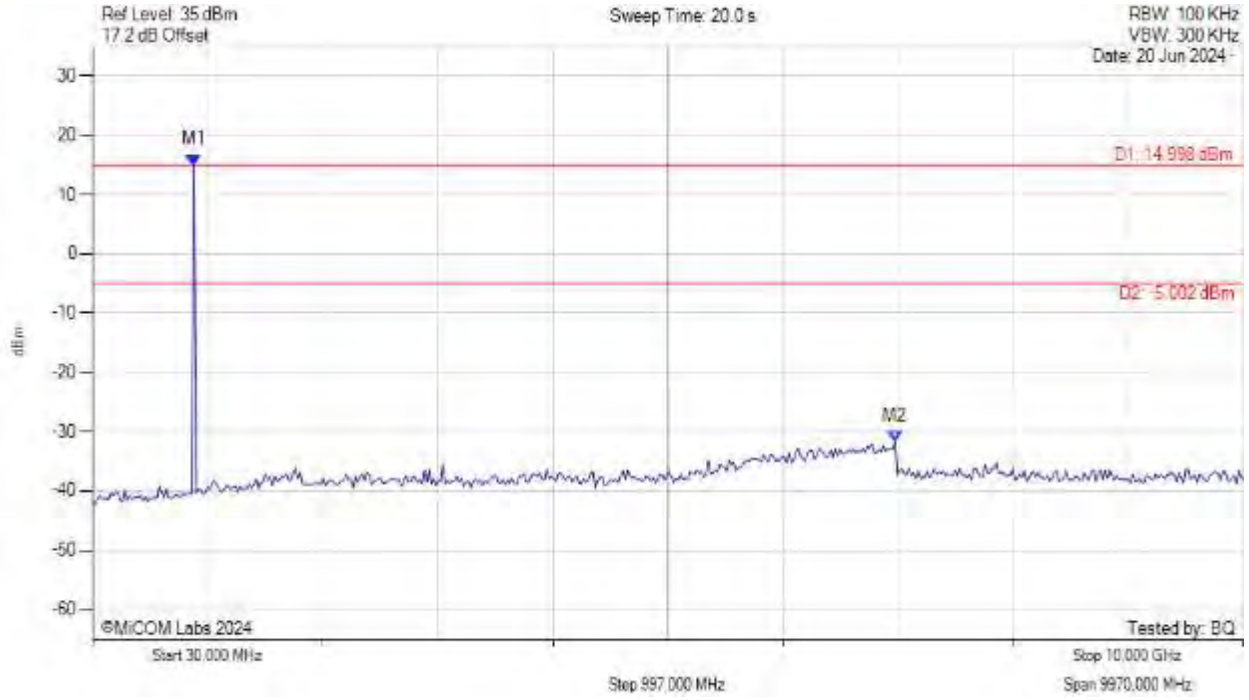


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 15.132 dBm M2 : 6763.246 MHz : -31.792 dBm	Limit: -4.87 dBm Margin: -26.92 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

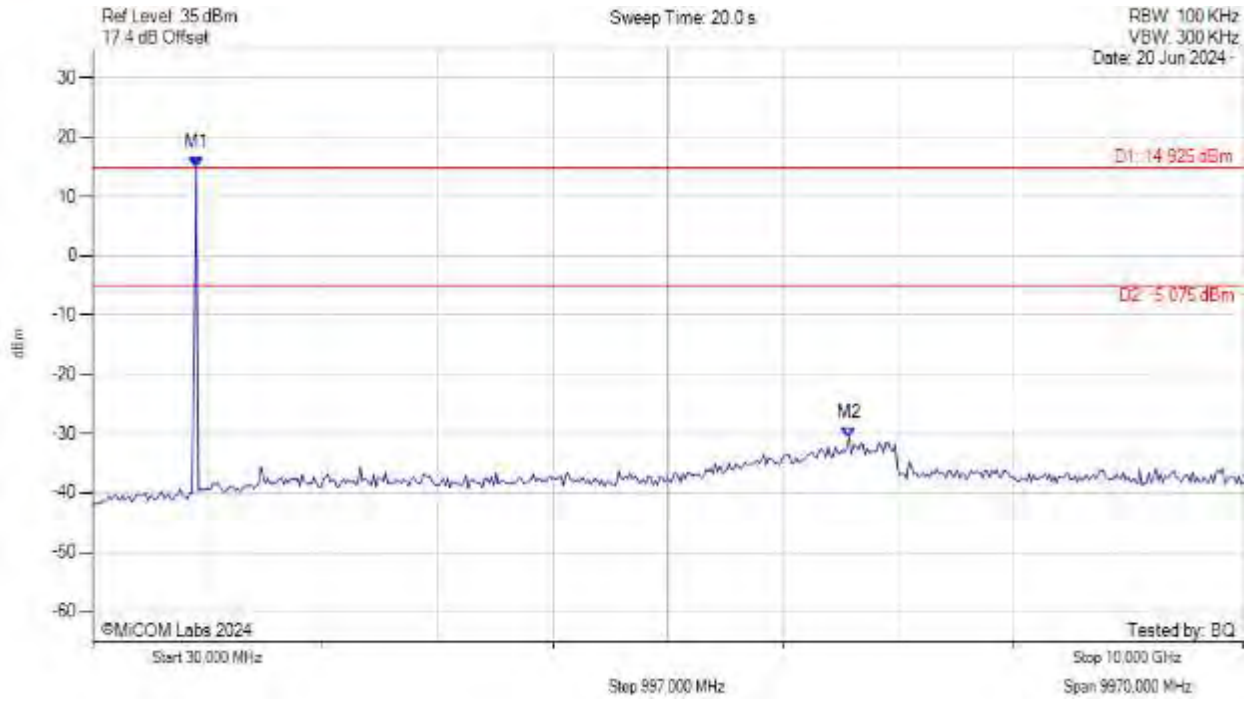


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 14.998 dBm M2 : 6983.026 MHz : -31.538 dBm	Limit: -5.00 dBm Margin: -26.54 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

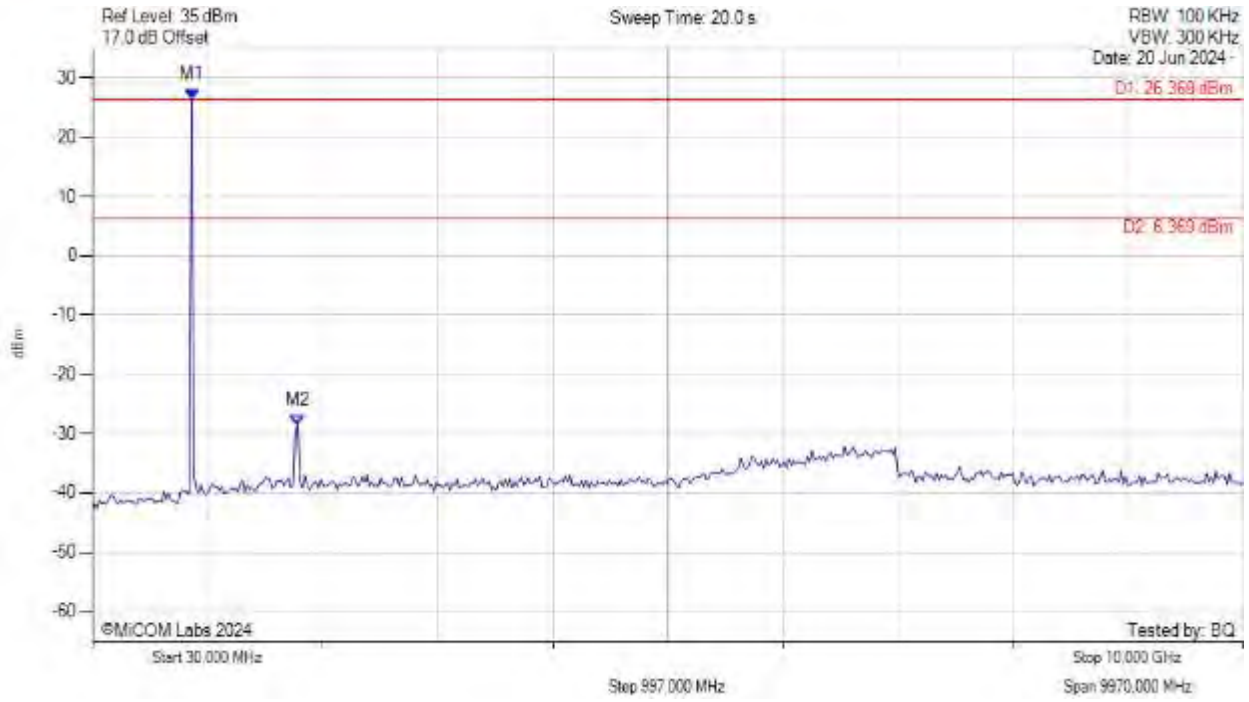


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 929.098 MHz : 14.925 dBm M2 : 6583.427 MHz : -30.723 dBm	Limit: -5.08 dBm Margin: -25.64 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 150kbps, PL 3 (FHSS), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

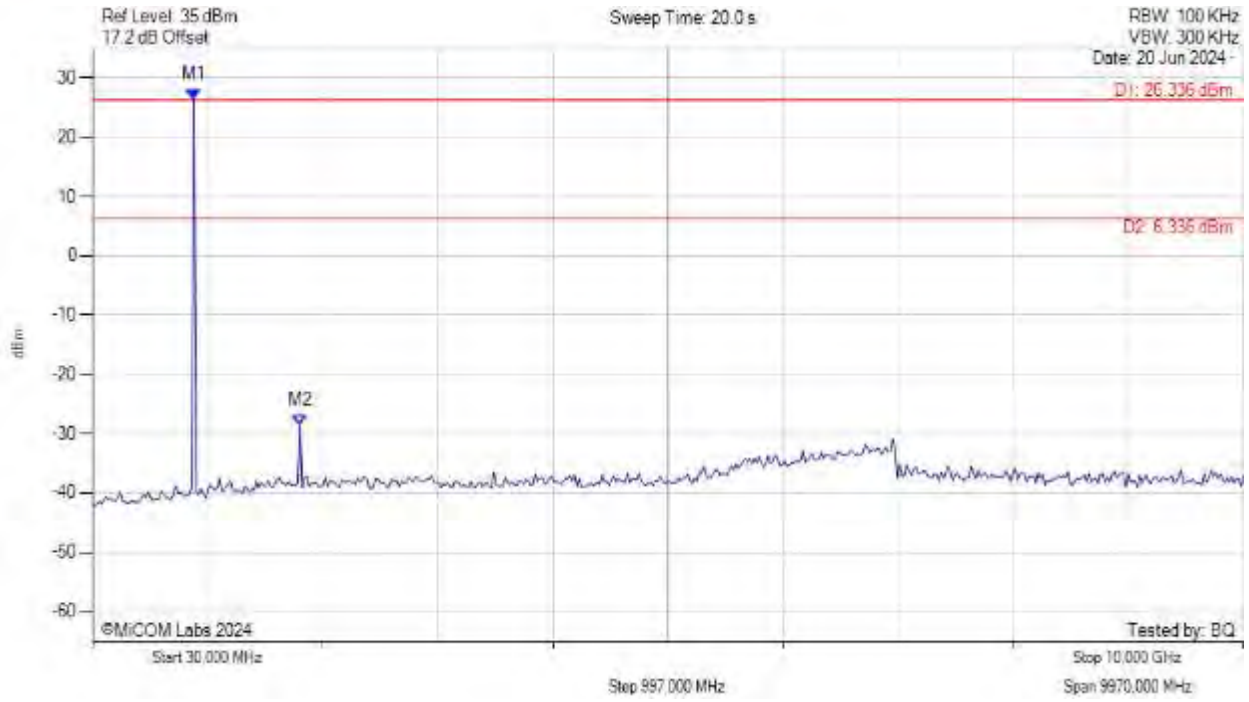


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 26.369 dBm M2 : 1808.216 MHz : -28.526 dBm	Limit: 6.37 dBm Margin: -34.90 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 150kbps, PL 3 (FHSS), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 26.336 dBm M2 : 1828.196 MHz : -28.520 dBm	Limit: 6.34 dBm Margin: -34.86 dB

back to matrix

UNWANTED EMISSIONS PEAK

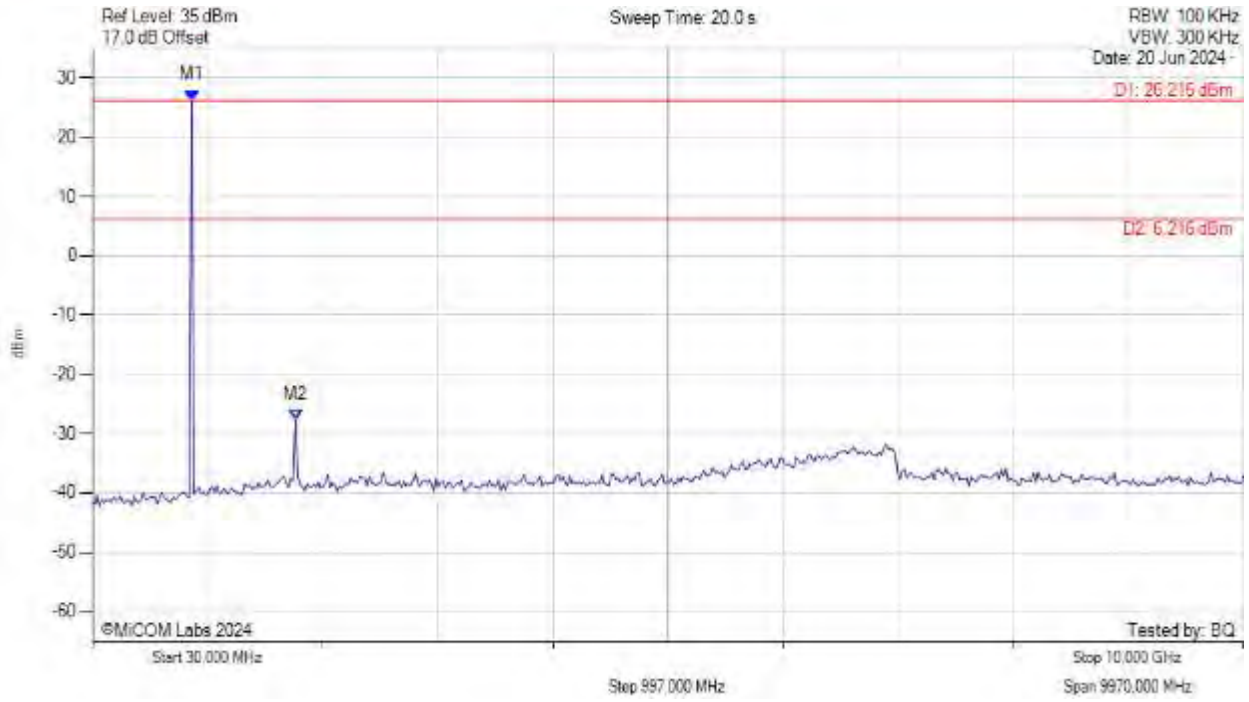
Variant: GFSK, 150kbps, PL 3 (FHSS), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 929.098 MHz : 26.206 dBm M2 : 1848.176 MHz : -27.471 dBm	Limit: 6.21 dBm Margin: -33.68 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

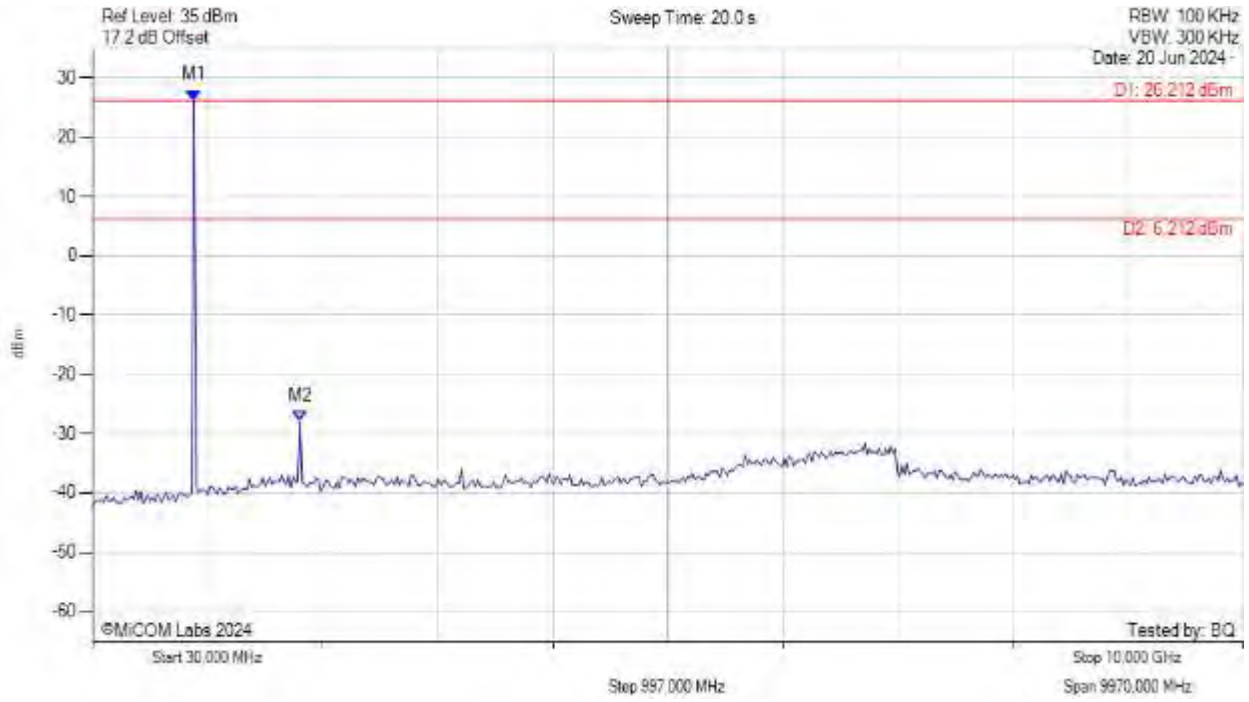


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 26.216 dBm M2 : 1788.236 MHz : -27.570 dBm	Limit: 6.22 dBm Margin: -33.79 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

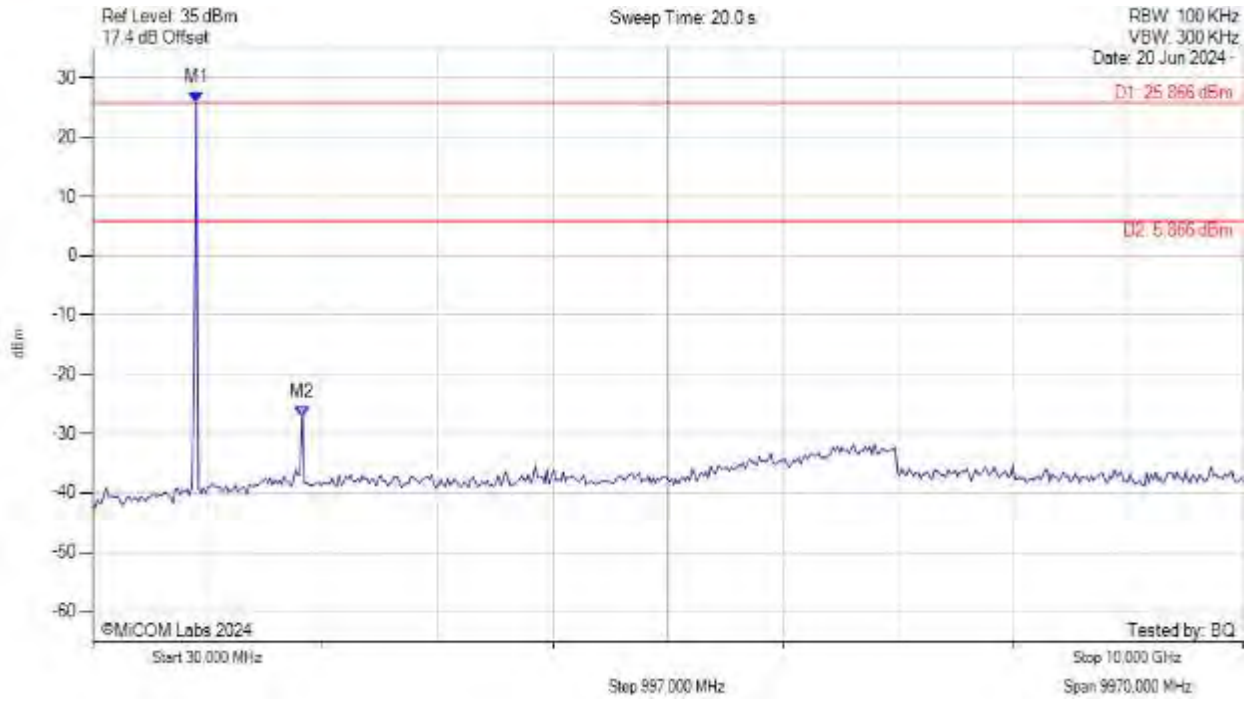


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 26.212 dBm M2 : 1828.196 MHz : -27.993 dBm	Limit: 6.21 dBm Margin: -34.20 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 927.75 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

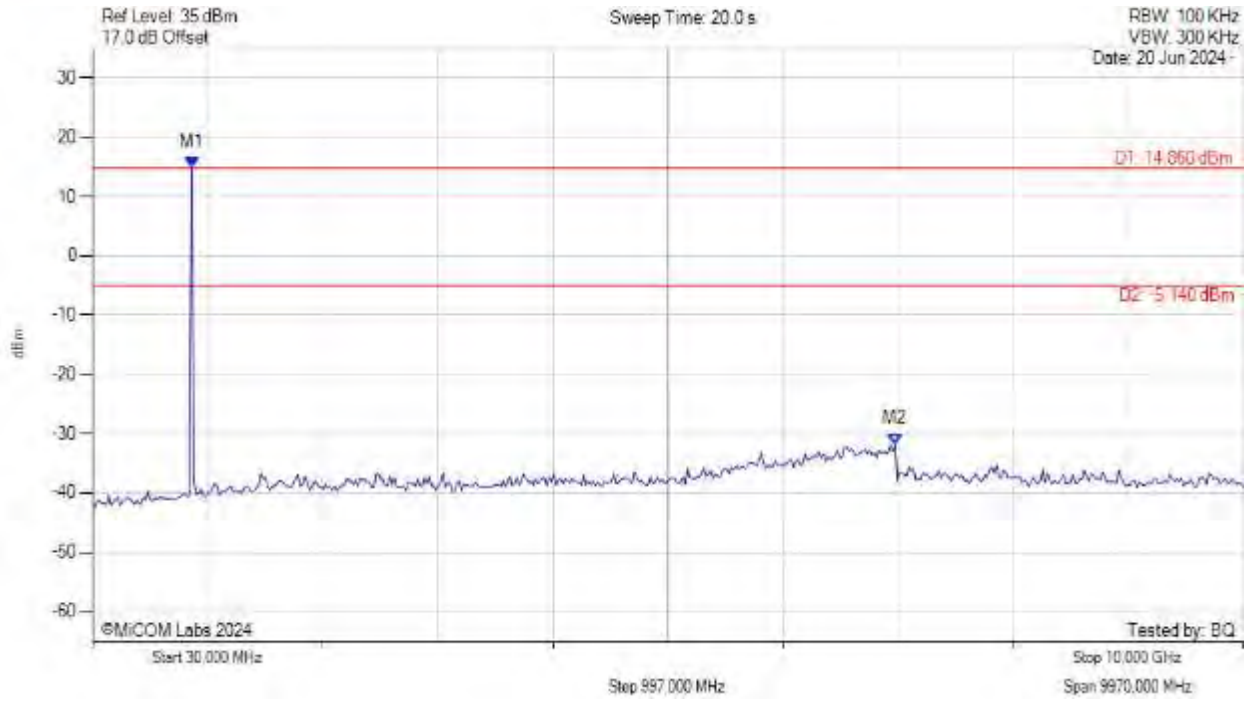


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 929.098 MHz : 25.866 dBm M2 : 1848.176 MHz : -27.111 dBm	Limit: 5.87 dBm Margin: -32.98 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 300kbps PL 2 (Hybrid), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

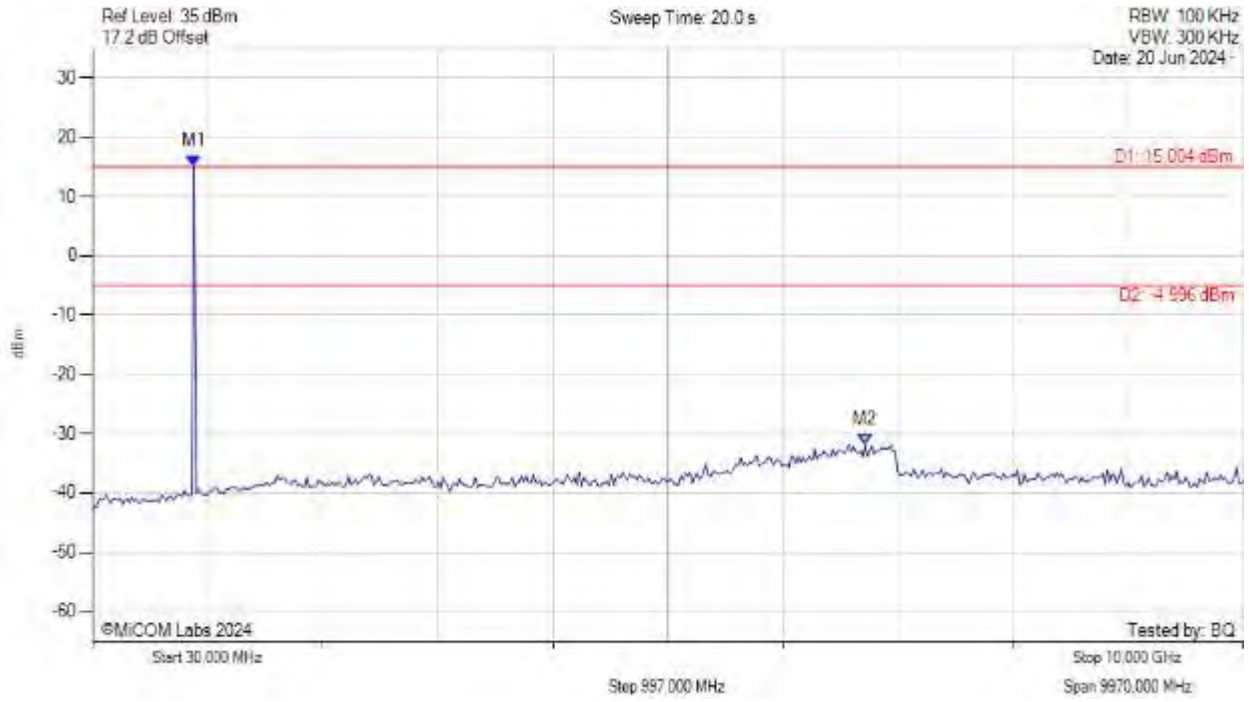


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 14.860 dBm M2 : 6983.026 MHz : -31.746 dBm	Limit: -5.14 dBm Margin: -26.61 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 300kbps PL 2 (Hybrid), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

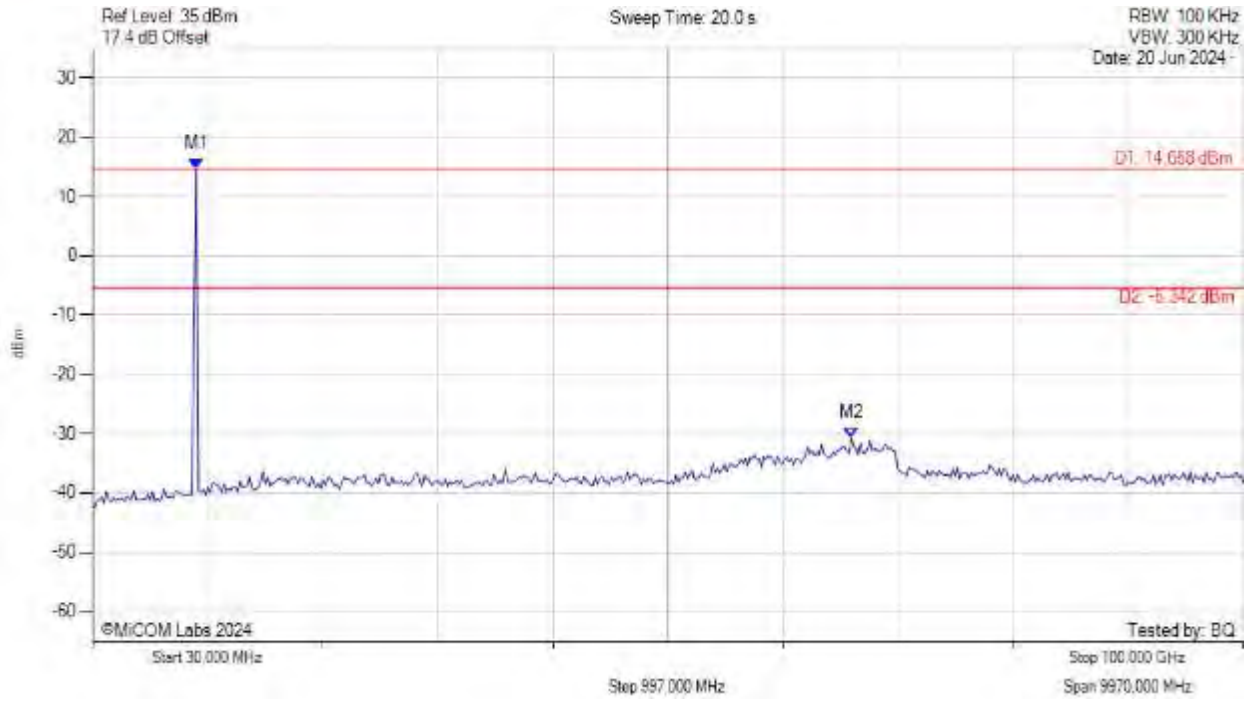


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 15.004 dBm M2 : 6723.287 MHz : -31.790 dBm	Limit: -5.00 dBm Margin: -26.79 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 300kbps PL 2 (Hybrid), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

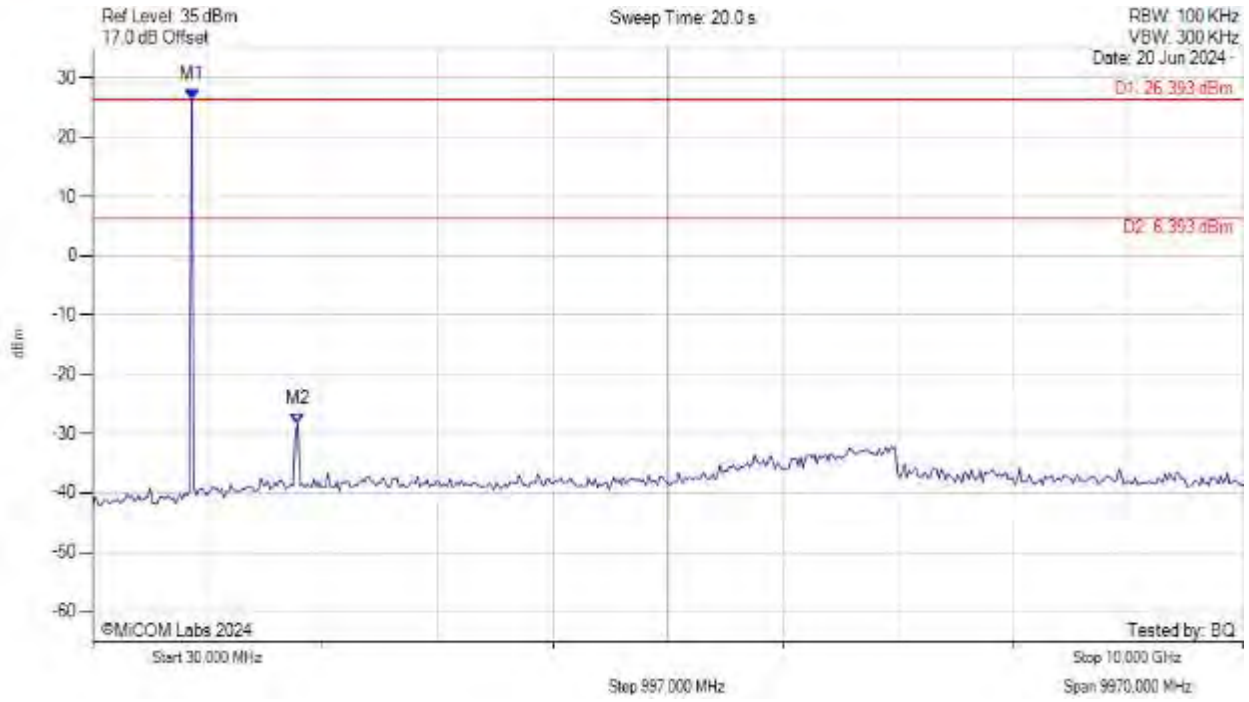


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 929.098 MHz : 14.658 dBm M2 : 6603.407 MHz : -30.659 dBm	Limit: -5.34 dBm Margin: -25.32 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 300kbps PL 3 (FHSS), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 26.393 dBm M2 : 1808.216 MHz : -28.369 dBm	Limit: 6.39 dBm Margin: -34.76 dB

back to matrix

UNWANTED EMISSIONS PEAK

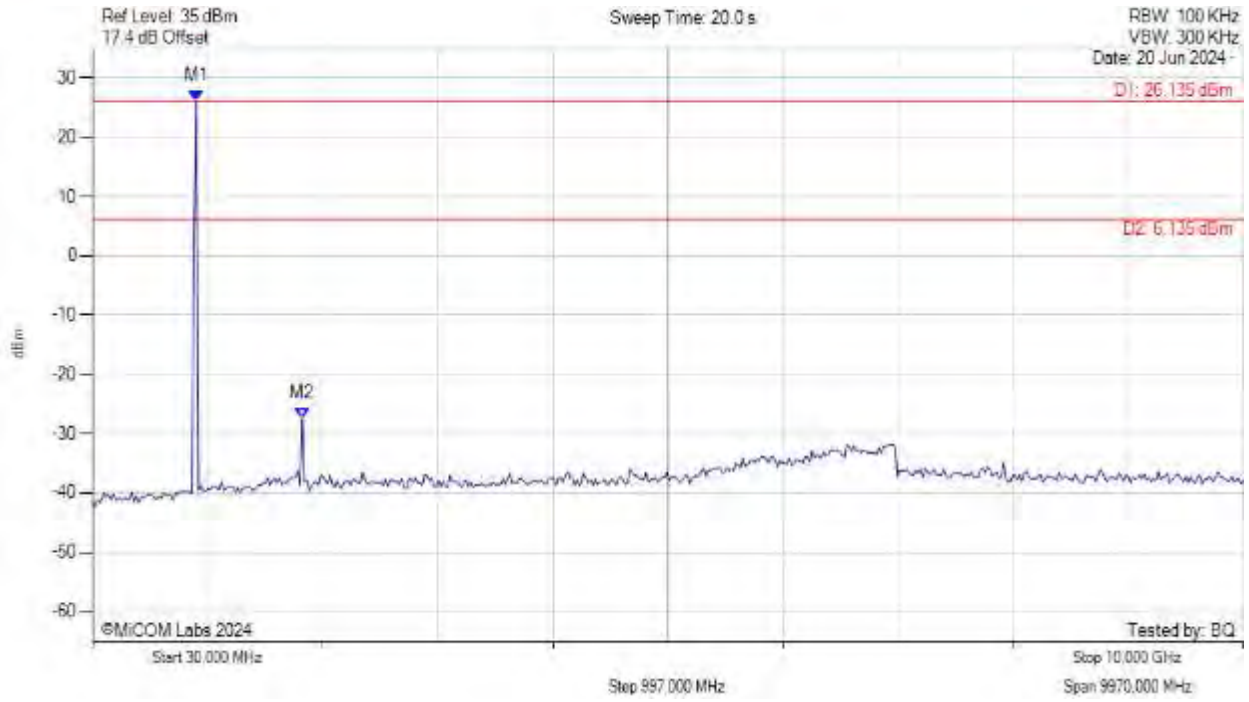
Variant: GFSK, 300kbps PL 3 (FHSS), Channel: 915.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 26.446 dBm M2 : 1828.196 MHz : -29.051 dBm	Limit: 6.45 dBm Margin: -35.50 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 300kbps PL 3 (FHSS), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

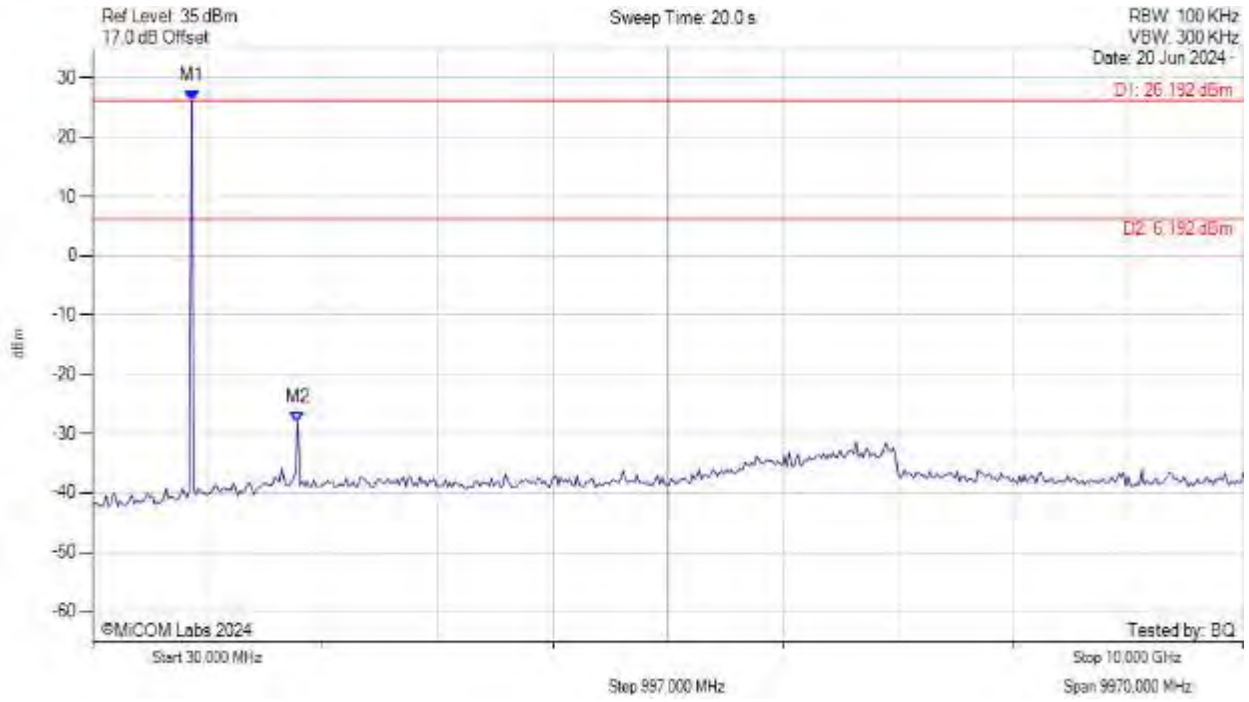


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 929.098 MHz : 26.135 dBm M2 : 1848.176 MHz : -27.462 dBm	Limit: 6.14 dBm Margin: -33.60 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 37.5 kbps, PL 3 (FHSS), Channel: 903.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

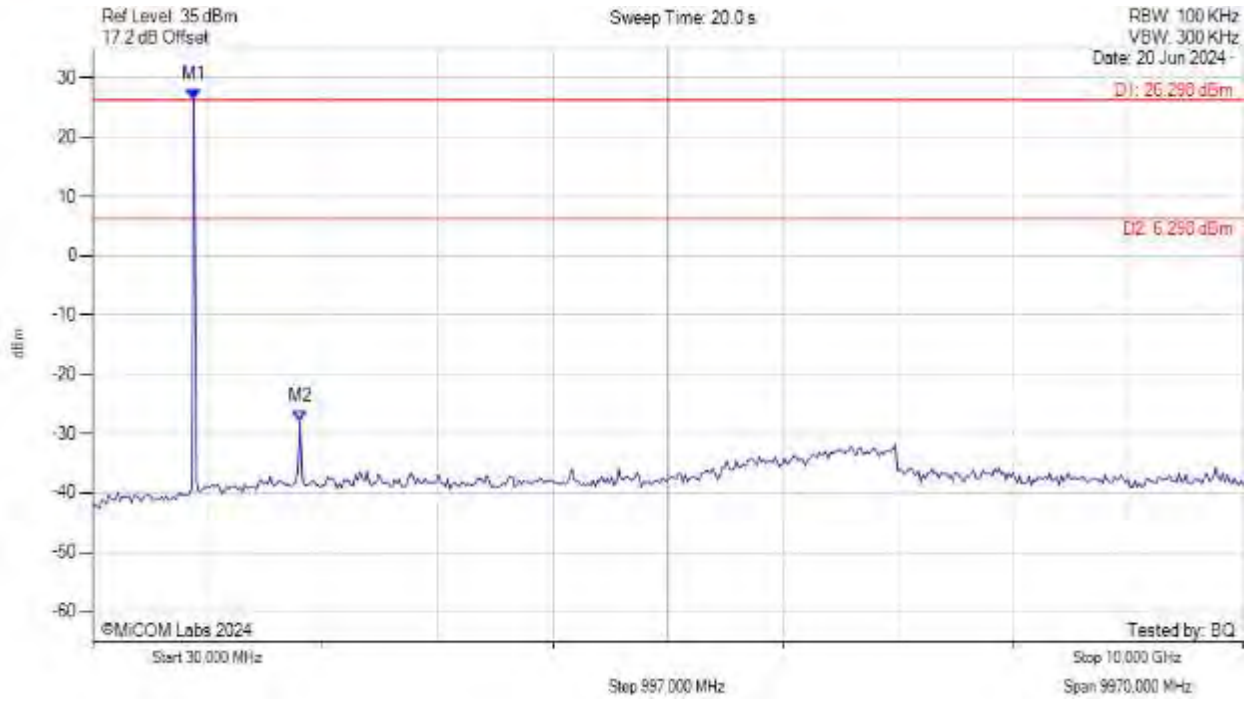


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 26.192 dBm M2 : 1808.216 MHz : -28.154 dBm	Limit: 6.19 dBm Margin: -34.34 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 37.5 kbps, PL 3 (FHSS), Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

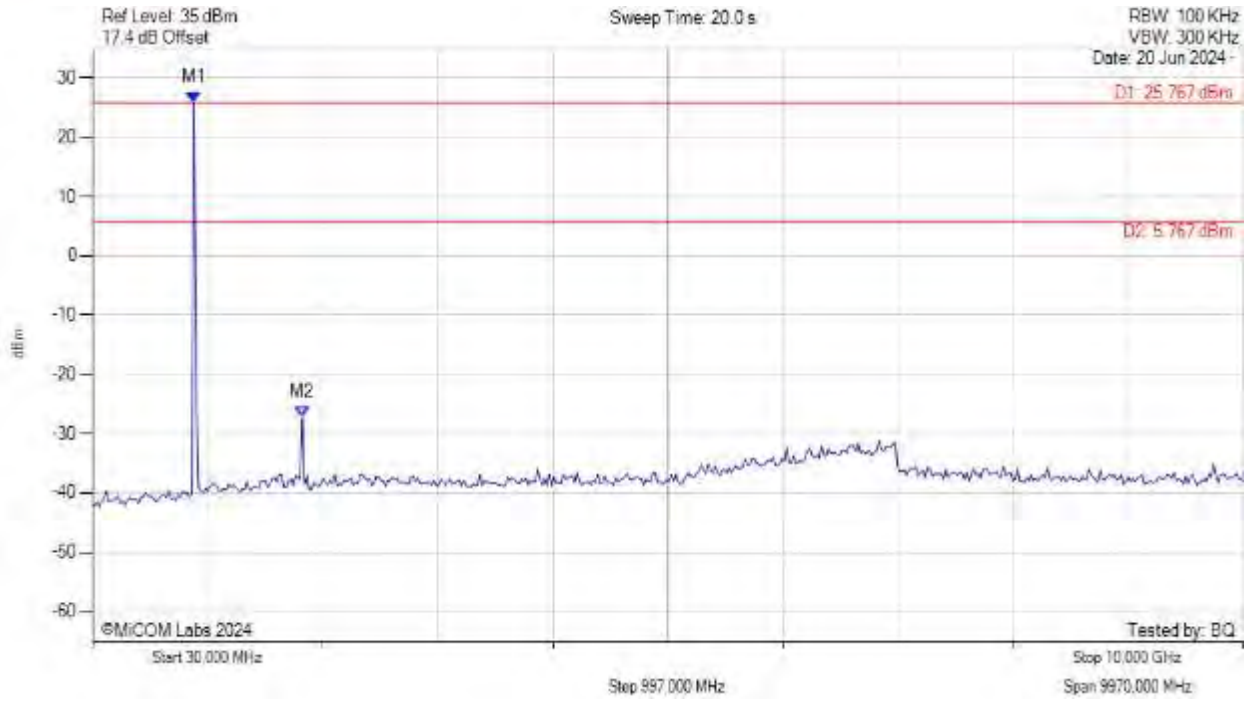


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 26.298 dBm M2 : 1828.196 MHz : -27.794 dBm	Limit: 6.30 dBm Margin: -34.09 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: GFSK, 37.5 kbps, PL 3 (FHSS), Channel: 926.80 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

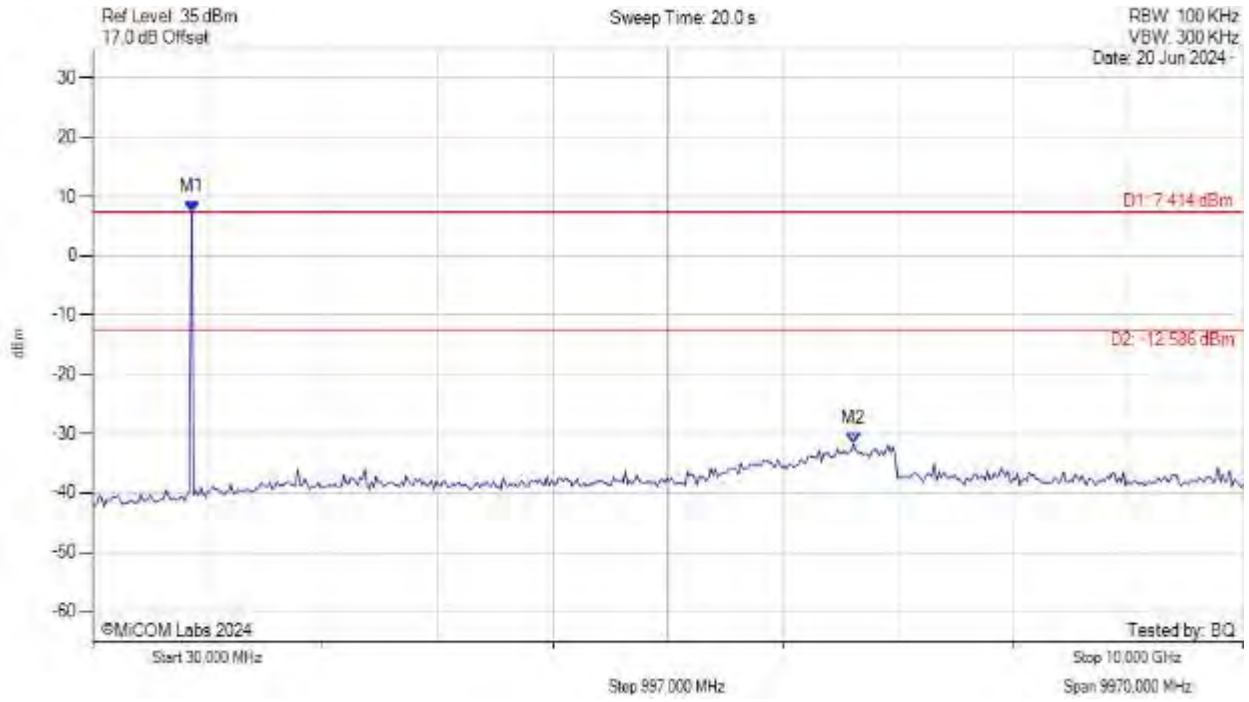


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 25.767 dBm M2 : 1848.176 MHz : -27.294 dBm	Limit: 5.77 dBm Margin: -33.06 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: OOK PL 1, Channel: 903.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

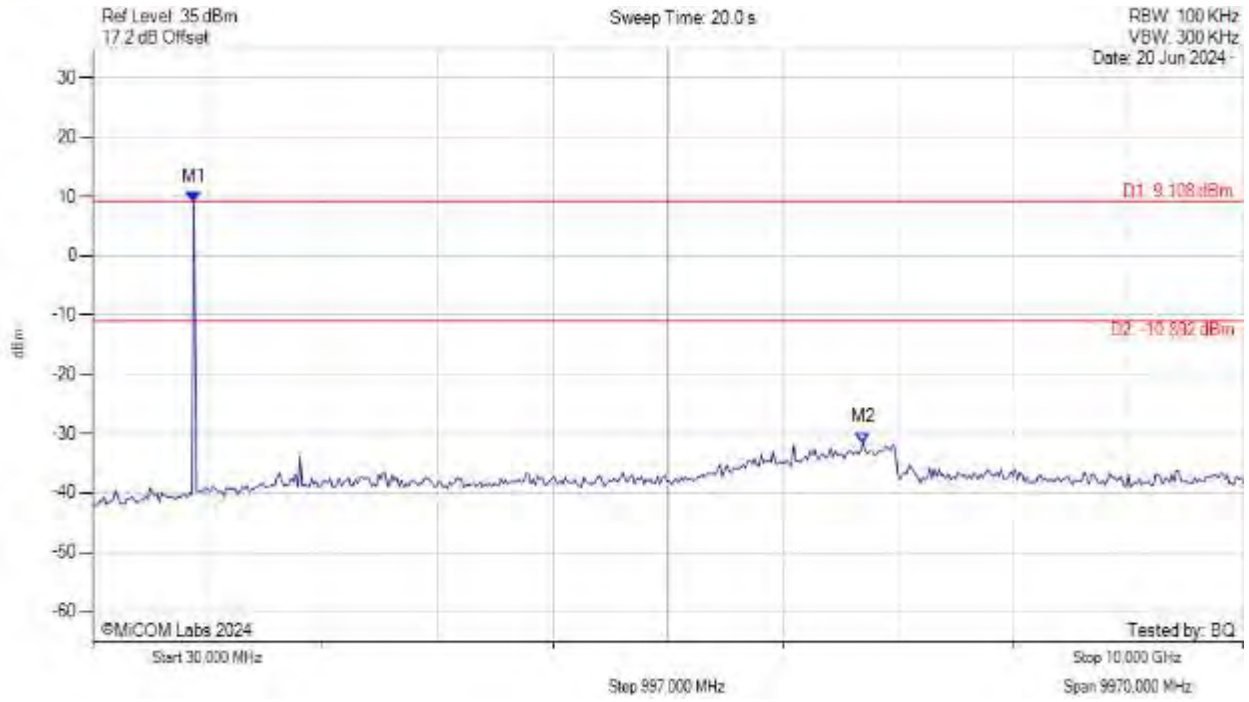


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 7.414 dBm M2 : 6623.387 MHz : -31.674 dBm	Limit: -12.59 dBm Margin: -19.08 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: OOK PL 1, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

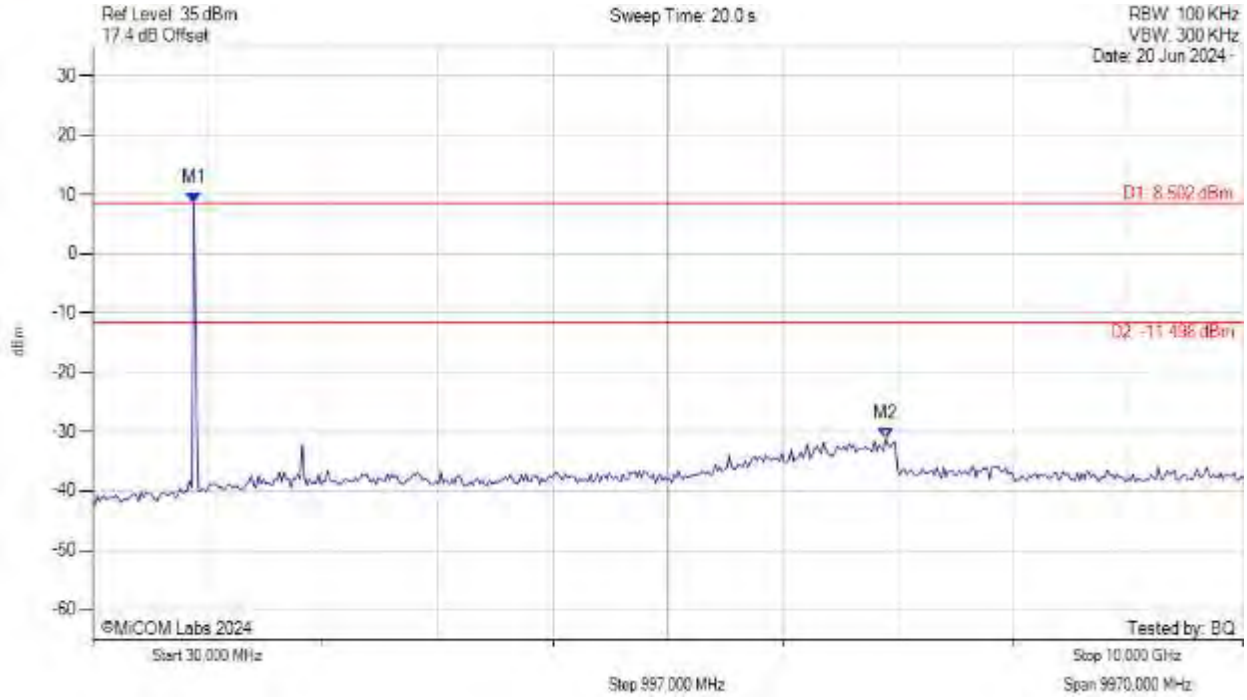


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 9.108 dBm M2 : 6703.307 MHz : -31.510 dBm	Limit: -10.89 dBm Margin: -20.62 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: OOK PL 1, Channel: 926.80 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 8.502 dBm M2 : 6903.106 MHz : -31.188 dBm	Limit: -11.50 dBm Margin: -19.69 dB

back to matrix

UNWANTED EMISSIONS PEAK

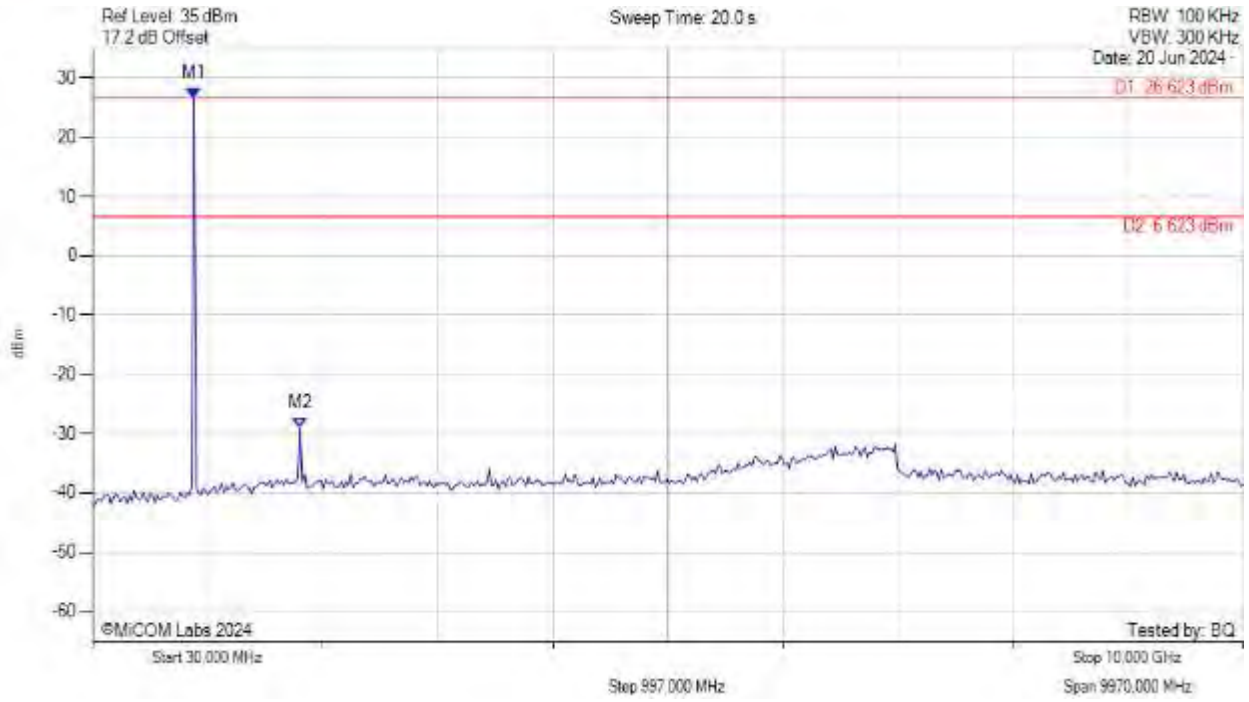
Variant: OOK PL 3, Channel: 903.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 26.572 dBm M2 : 1808.216 MHz : -28.756 dBm	Limit: 6.57 dBm Margin: -35.33 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: OOK PL 3, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

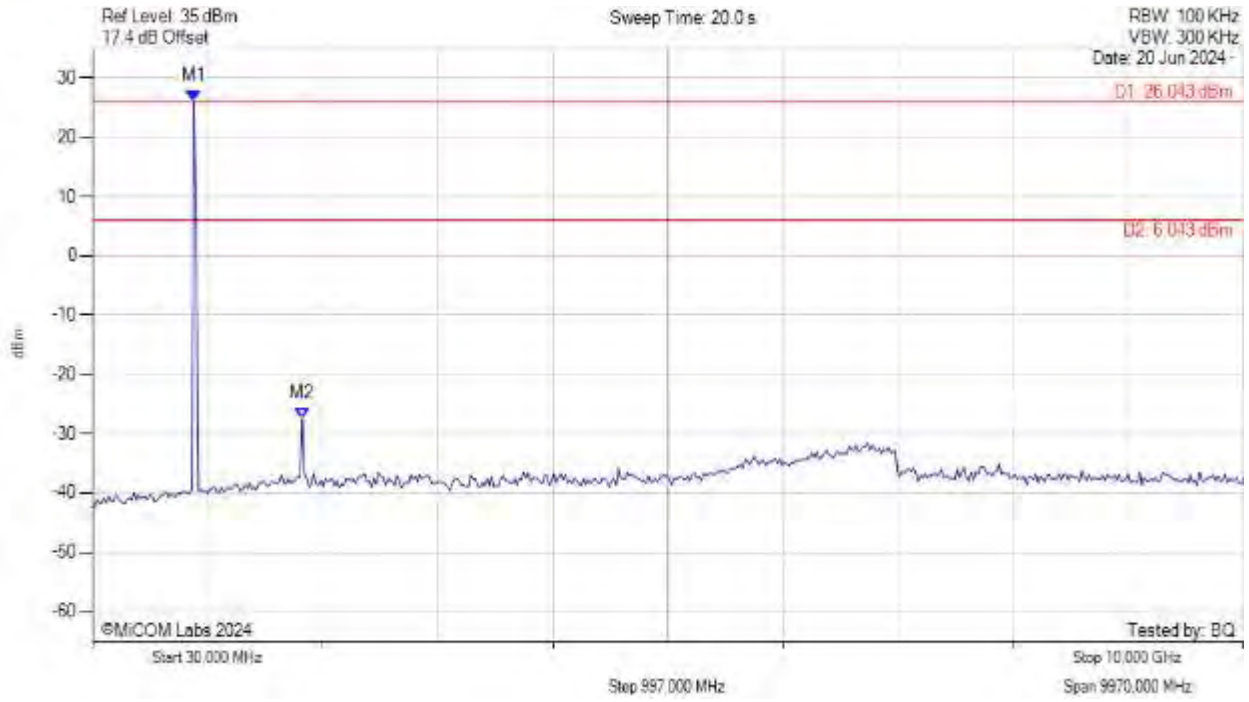


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 26.623 dBm M2 : 1828.196 MHz : -28.986 dBm	Limit: 6.62 dBm Margin: -35.61 dB

back to matrix

UNWANTED EMISSIONS PEAK

Variant: OOK PL 3, Channel: 926.80 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



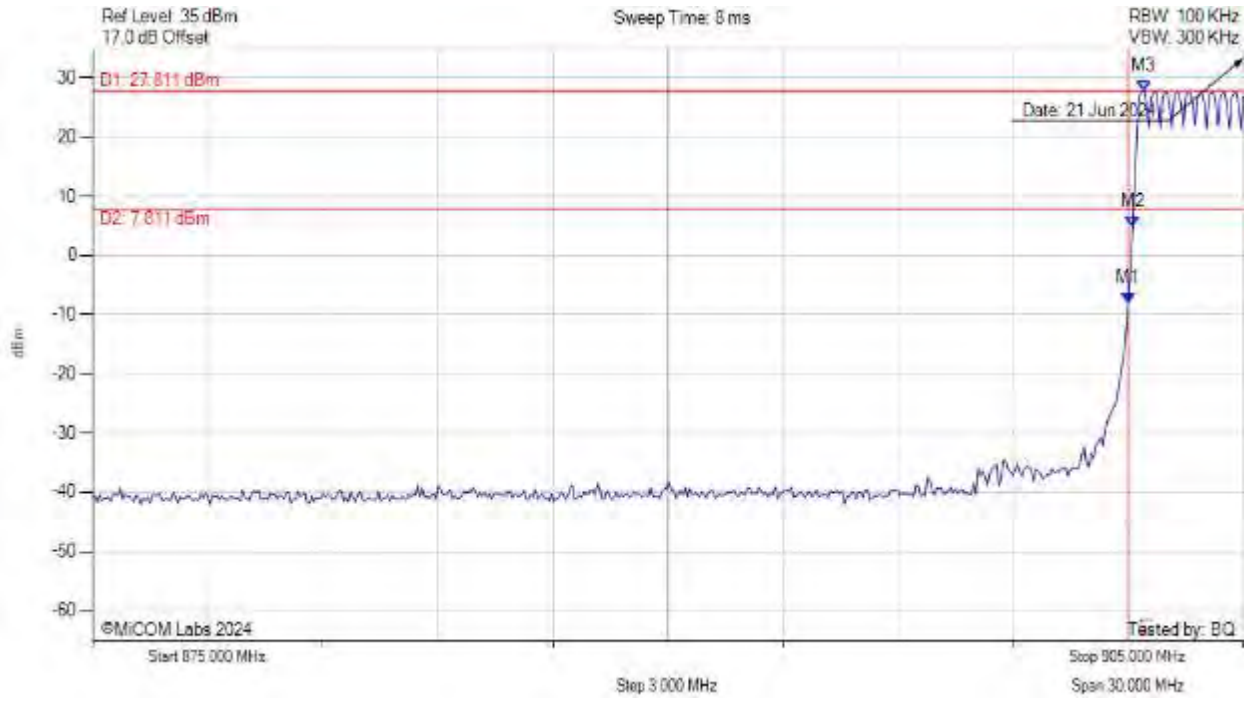
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 26.043 dBm M2 : 1848.176 MHz : -27.505 dBm	Limit: 6.04 dBm Margin: -33.55 dB

back to matrix

1.4.1.2. Conducted Band-Edge Emissions

CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: GFSK, 100kbps, PL 3 (FHSS), Channel: 902.30 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

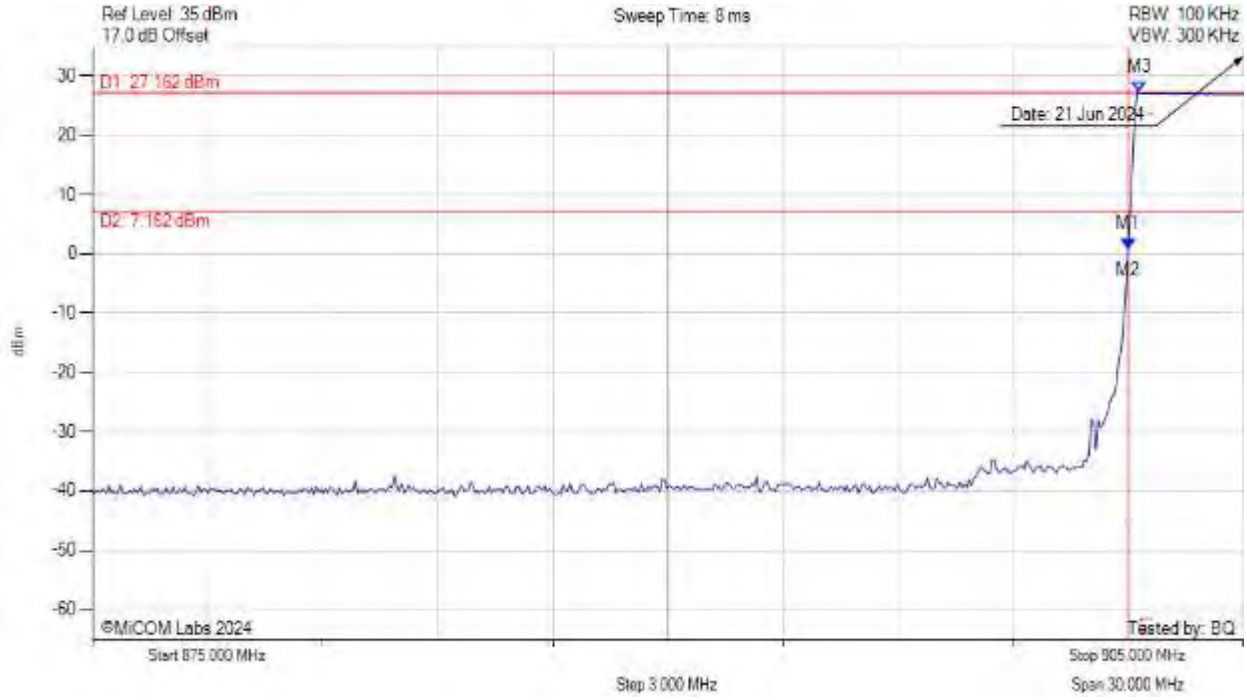


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -7.957 dBm M2 : 902.114 MHz : 4.752 dBm M3 : 902.415 MHz : 27.811 dBm	Channel Frequency: 902.30 MHz

back to matrix

CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

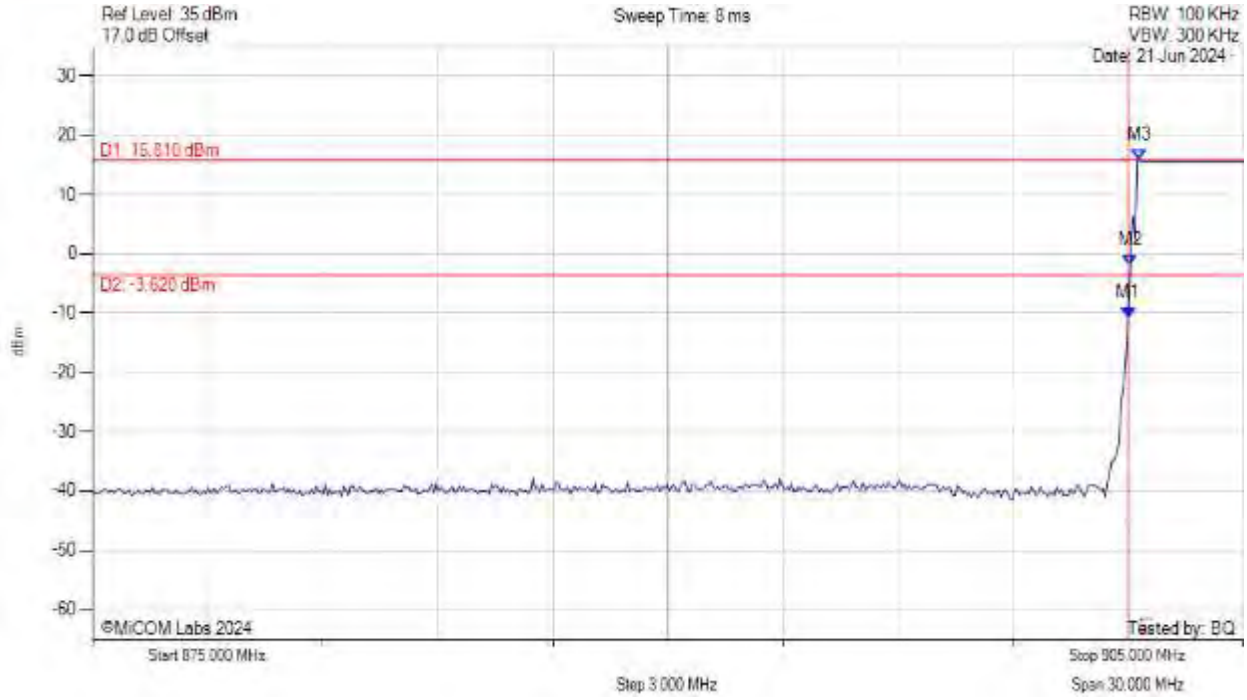


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : 0.809 dBm M2 : 901.994 MHz : 0.809 dBm M3 : 902.295 MHz : 27.162 dBm	Channel Frequency: 902.20 MHz

back to matrix

CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

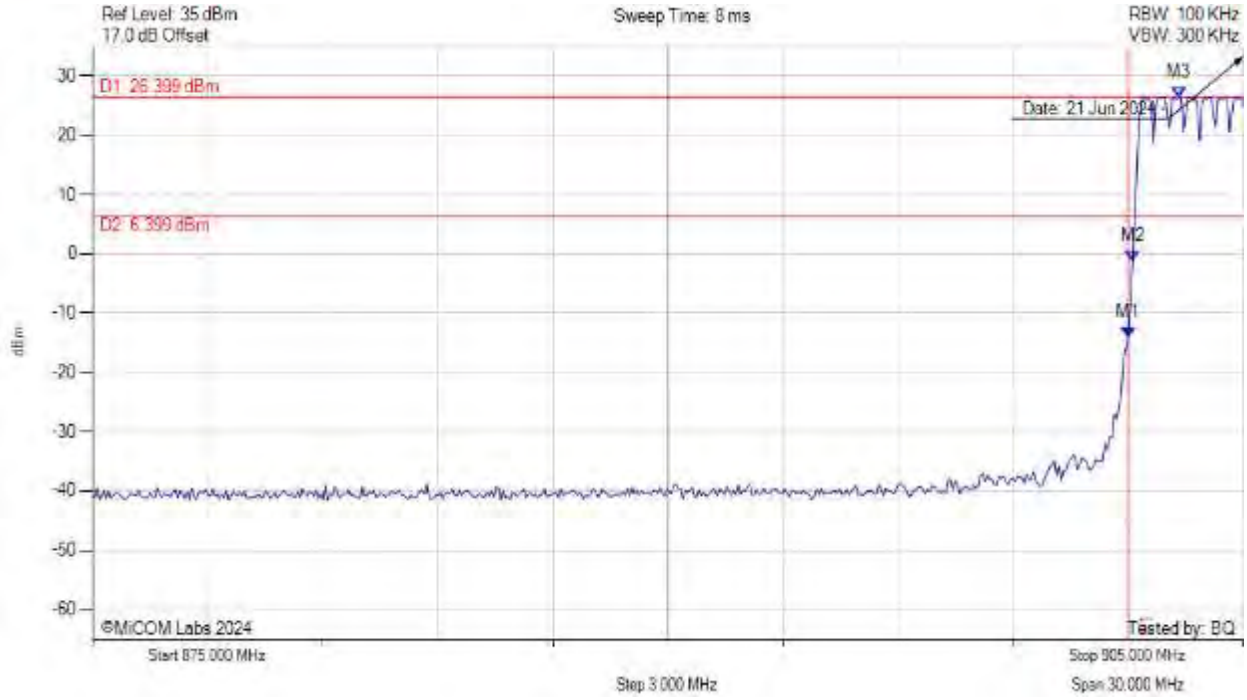


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -10.801 dBm M2 : 902.054 MHz : -1.888 dBm M3 : 902.295 MHz : 15.810 dBm	Channel Frequency: 902.40 MHz

back to matrix

CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: GFSK, 150kbps, PL 3 (FHSS), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -14.135 dBm M2 : 902.114 MHz : -1.174 dBm M3 : 903.317 MHz : 26.399 dBm	Channel Frequency: 902.40 MHz

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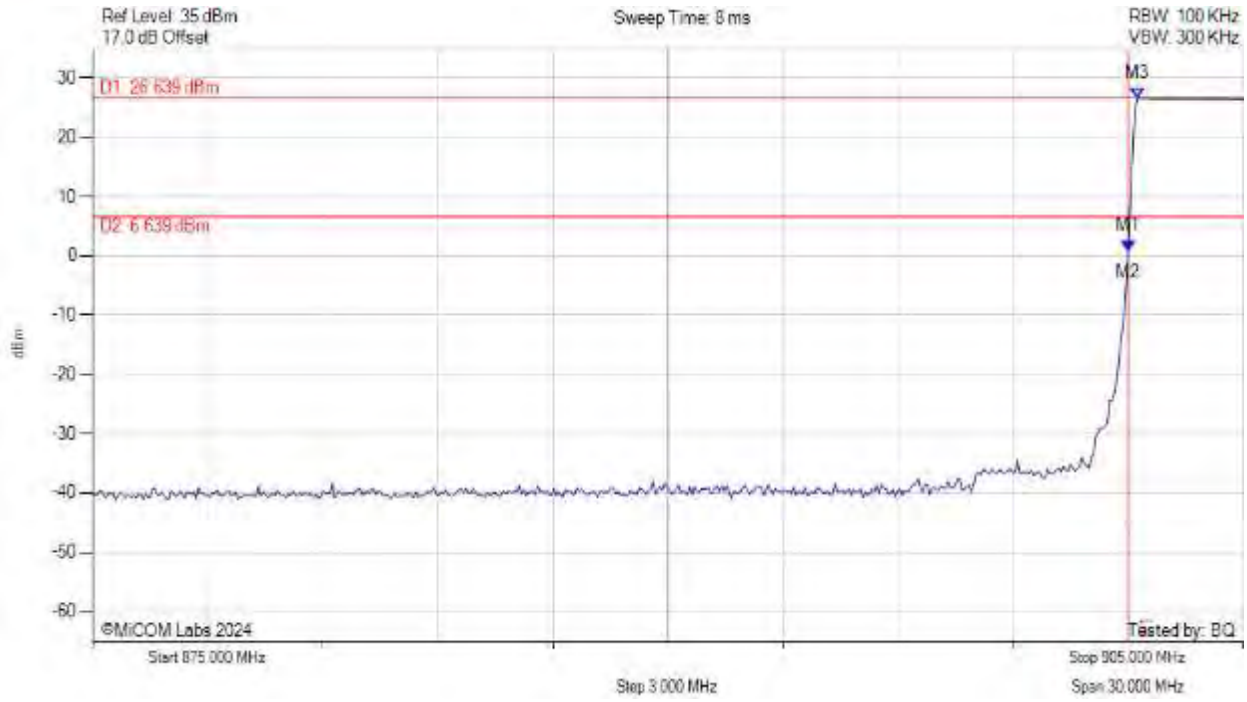
CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : 0.748 dBm M2 : 901.994 MHz : 0.748 dBm M3 : 902.234 MHz : 26.639 dBm	Channel Frequency: 902.20 MHz

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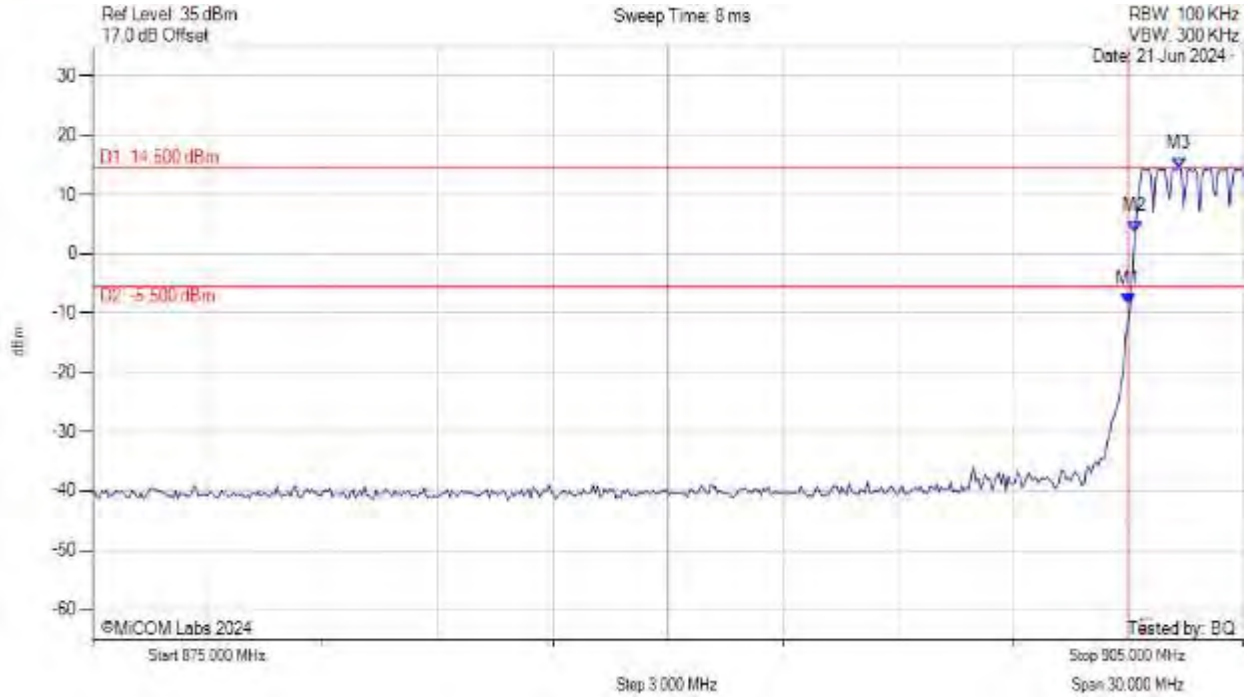
CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: GFSK, 300kbps PL 2 (Hybrid), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -8.539 dBm M2 : 902.174 MHz : 3.784 dBm M3 : 903.317 MHz : 14.500 dBm	Channel Frequency: 902.40 MHz

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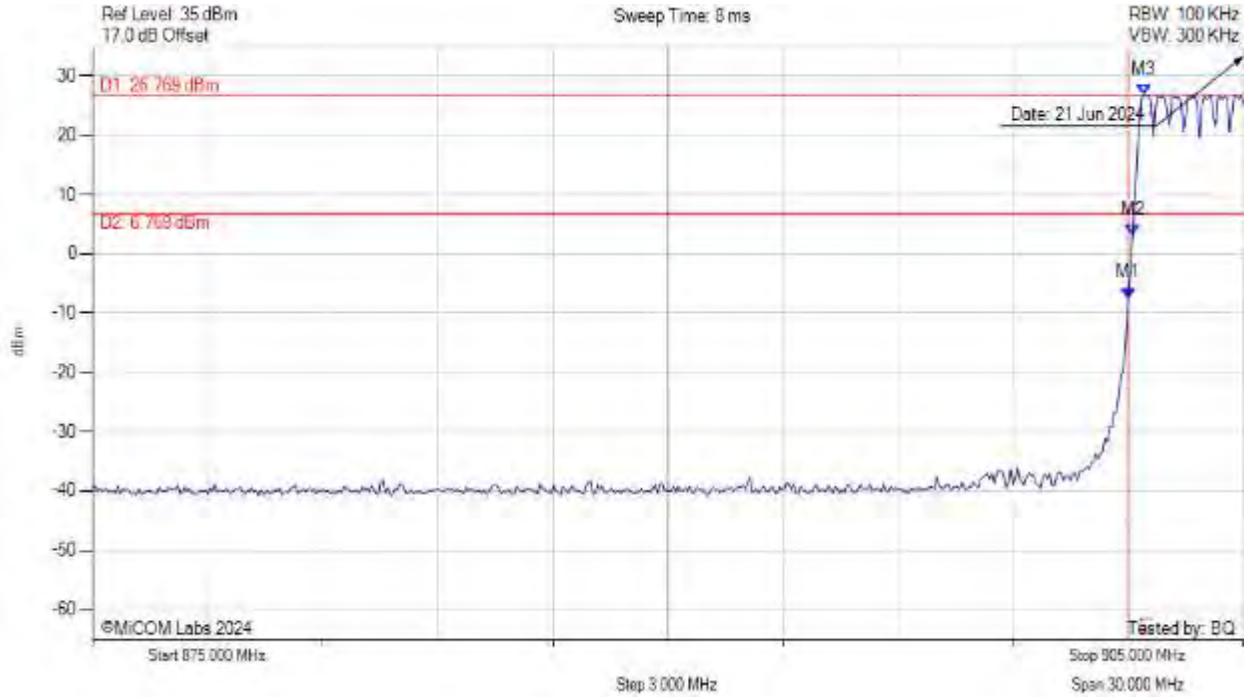
CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: GFSK, 300kbps PL 3 (FHSS), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc

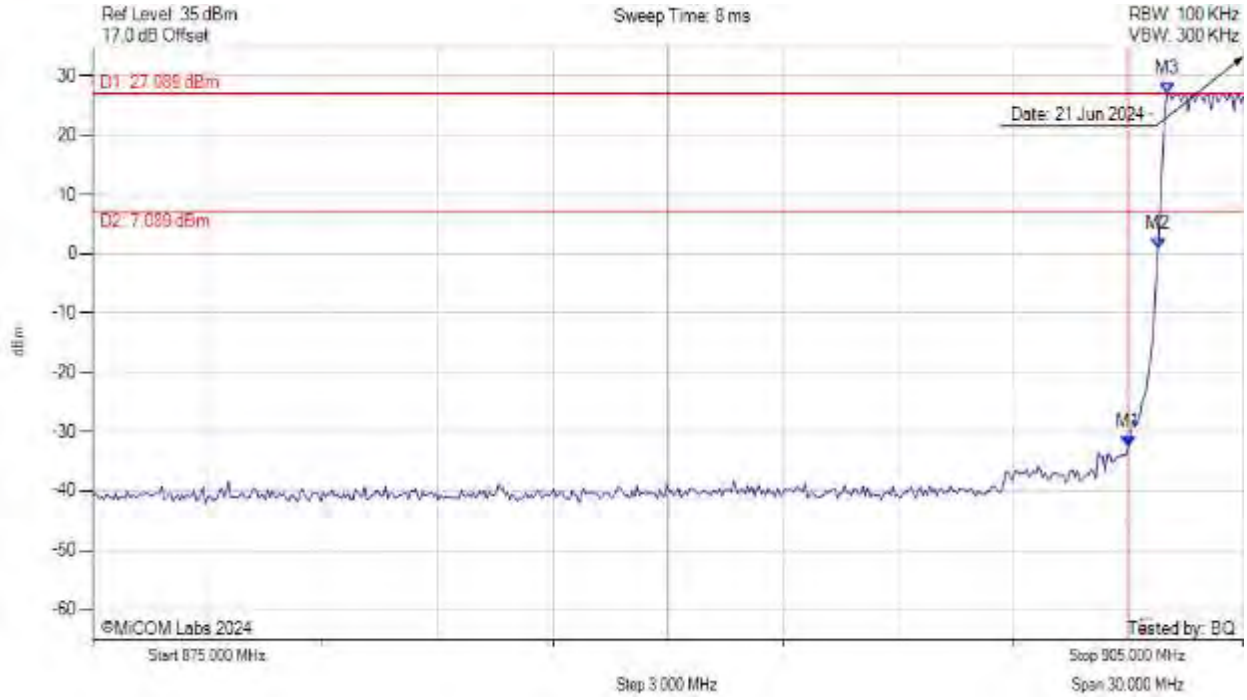


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -7.434 dBm M2 : 902.114 MHz : 3.243 dBm M3 : 902.415 MHz : 26.769 dBm	Channel Frequency: 902.40 MHz

back to matrix

CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: GFSK, 37.5 kbps, PL 3 (FHSS), Channel: 903.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -32.669 dBm M2 : 902.776 MHz : 0.888 dBm M3 : 903.016 MHz : 27.089 dBm	Channel Frequency: 903.00 MHz

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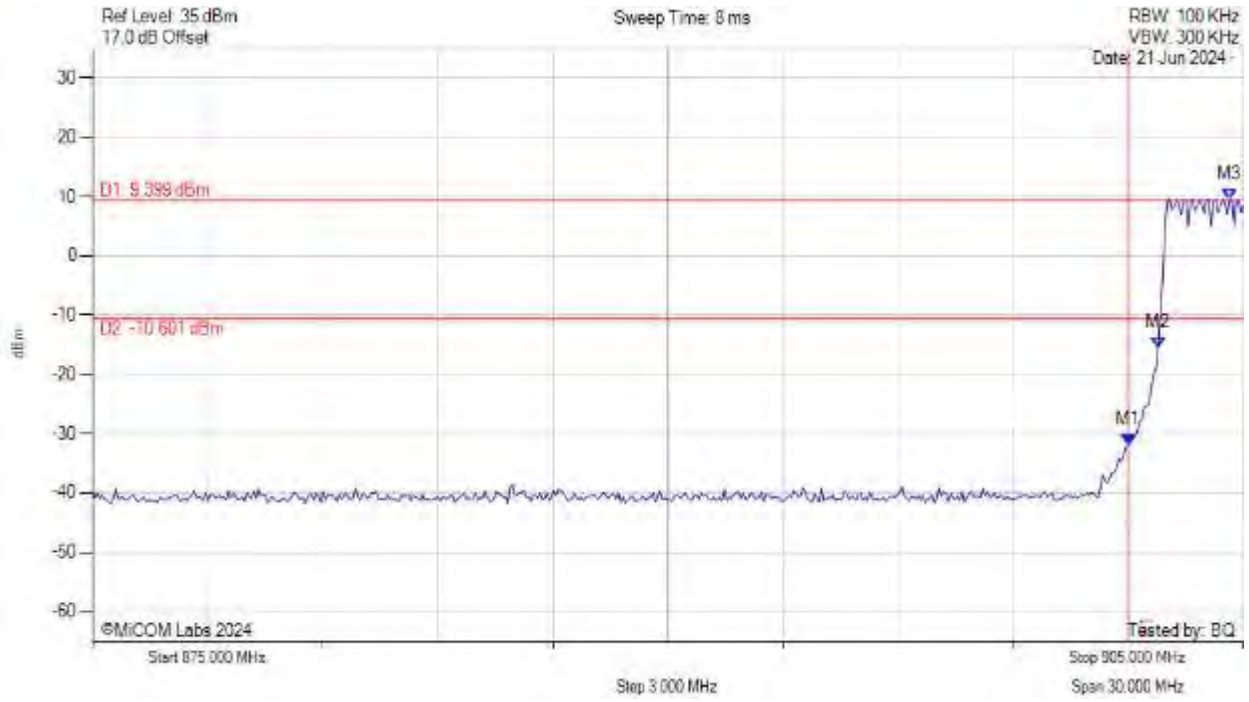
CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: OOK PL 1, Channel: 903.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -31.835 dBm M2 : 902.776 MHz : -15.443 dBm M3 : 904.639 MHz : 9.399 dBm	Channel Frequency: 903.00 MHz

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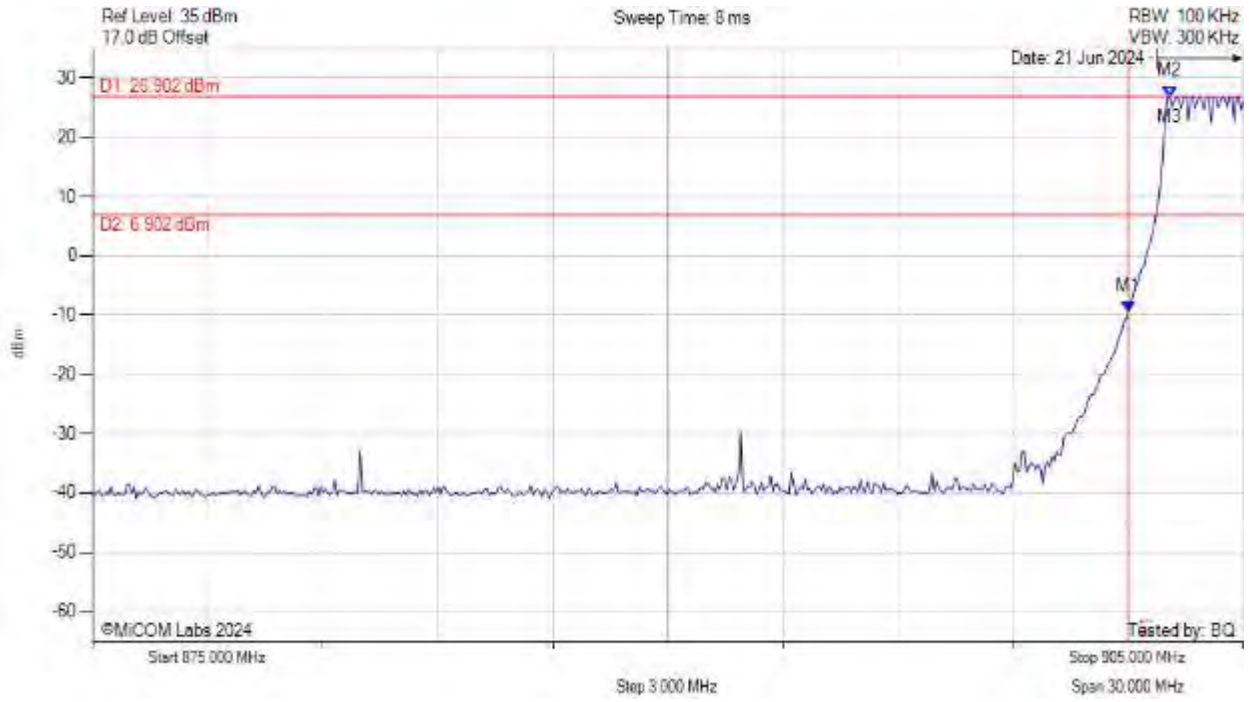
CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: OOK PL 3, Channel: 903.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -9.421 dBm M2 : 903.076 MHz : 26.902 dBm M3 : 903.076 MHz : 26.902 dBm	Channel Frequency: 903.00 MHz

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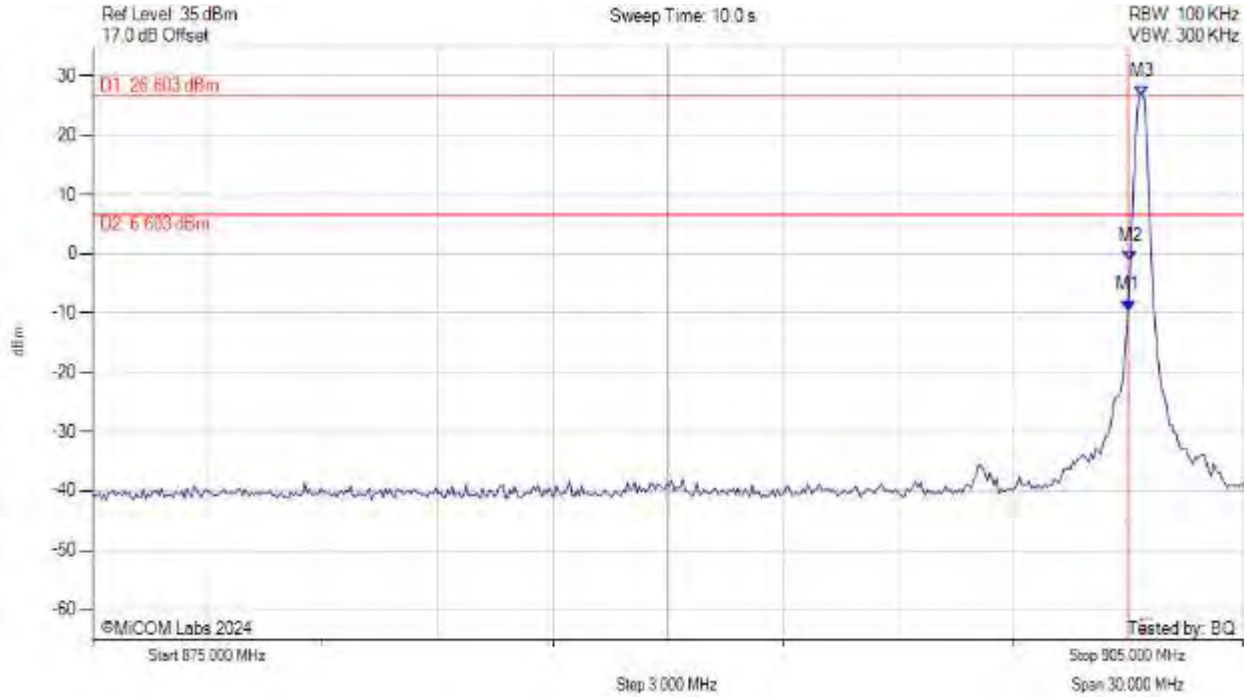
CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: GFSK, 100kbps, PL 3 (FHSS), Channel: 902.30 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -9.537 dBm M2 : 902.054 MHz : -1.327 dBm M3 : 902.355 MHz : 26.603 dBm	Channel Frequency: 902.30 MHz

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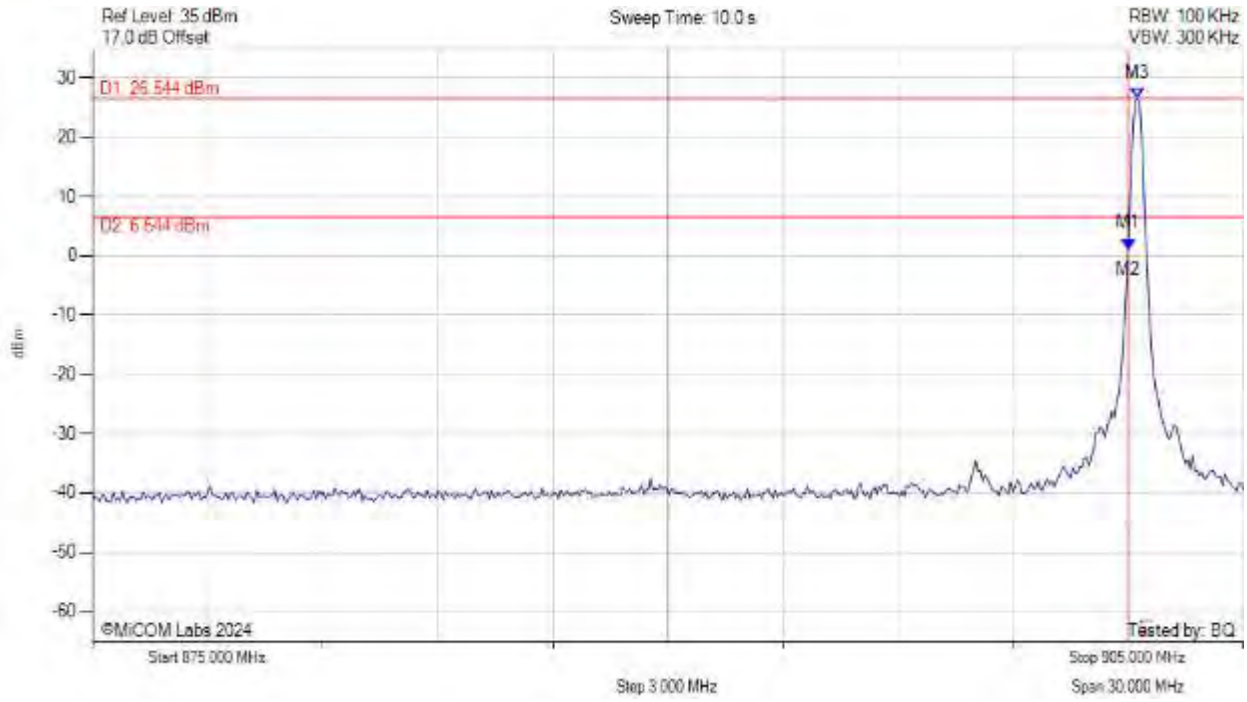
CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : 1.189 dBm M2 : 901.994 MHz : 1.189 dBm M3 : 902.234 MHz : 26.544 dBm	Channel Frequency: 902.20 MHz

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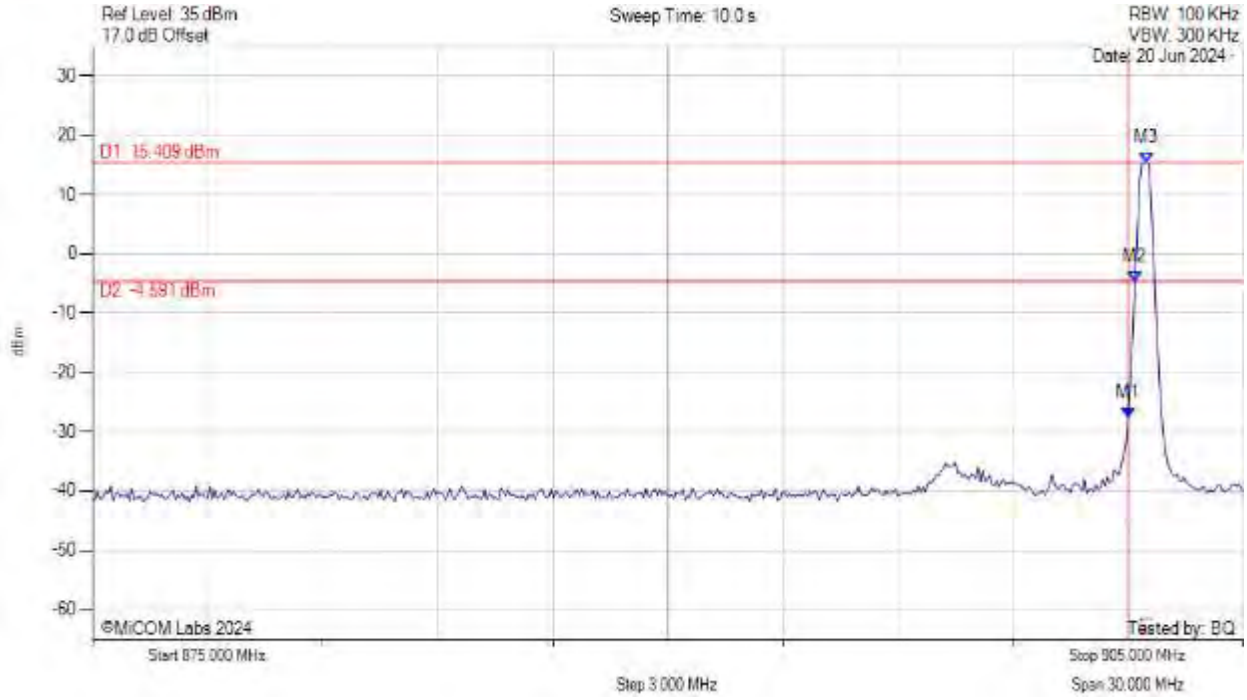
CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -27.623 dBm M2 : 902.174 MHz : -4.662 dBm M3 : 902.475 MHz : 15.409 dBm	Channel Frequency: 902.40 MHz

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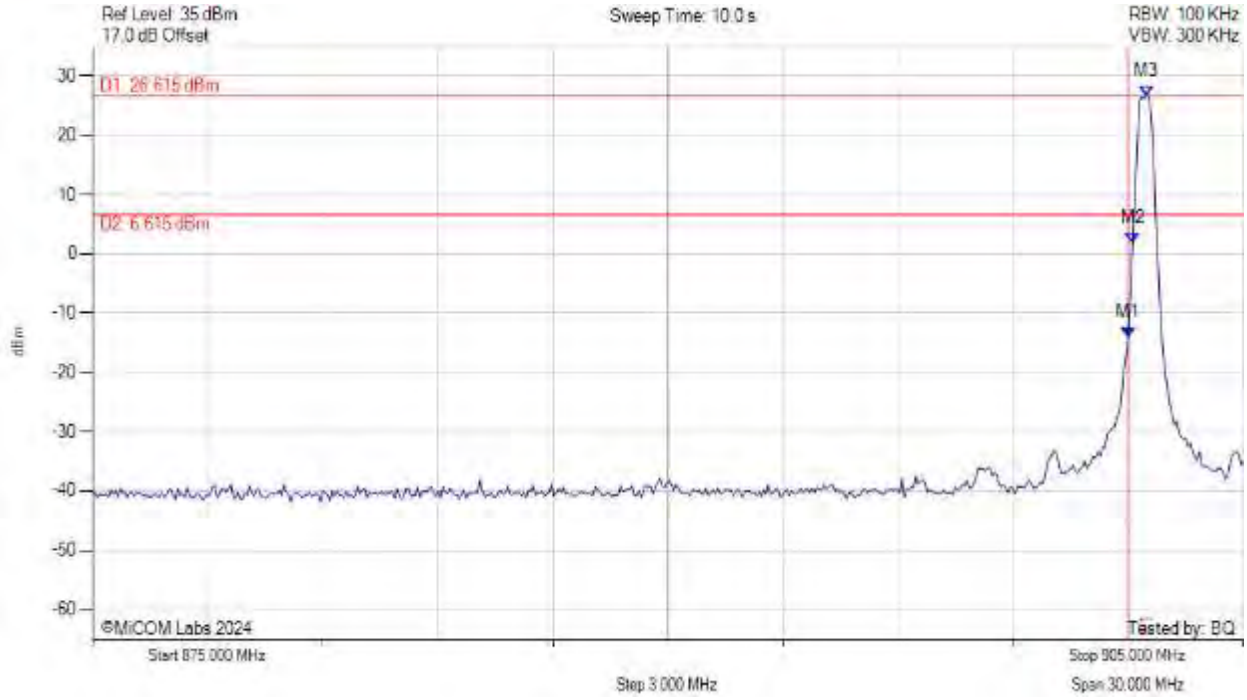
CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: GFSK, 150kbps, PL 3 (FHSS), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -14.186 dBm M2 : 902.114 MHz : 1.824 dBm M3 : 902.475 MHz : 26.615 dBm	Channel Frequency: 902.40 MHz

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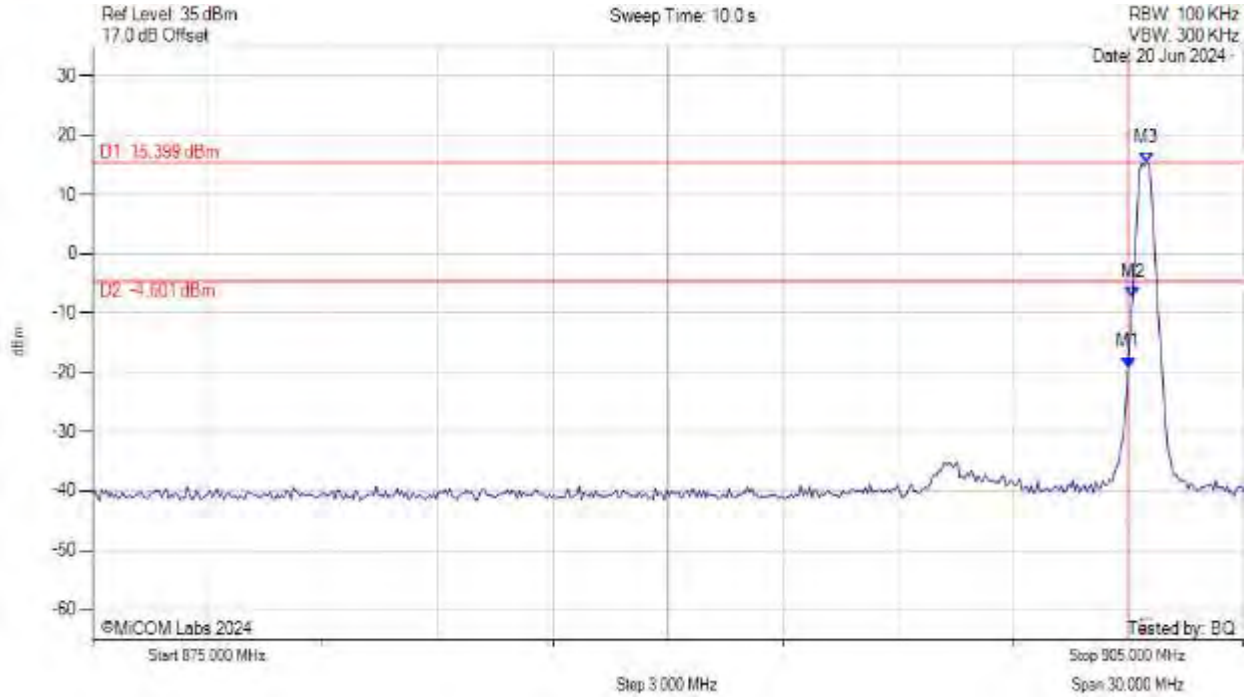
CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: GFSK, 300kbps PL 2 (Hybrid), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -19.140 dBm M2 : 902.114 MHz : -7.339 dBm M3 : 902.475 MHz : 15.399 dBm	Channel Frequency: 902.40 MHz

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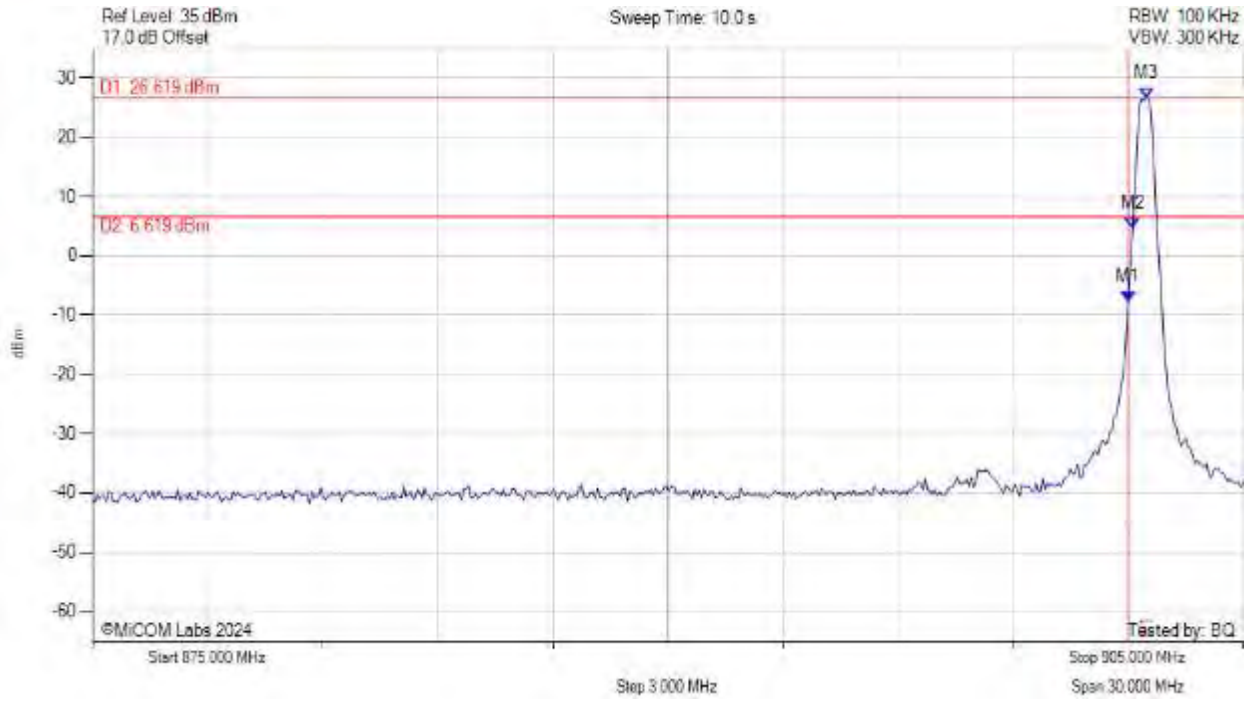
CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: GFSK, 300kbps PL 3 (FHSS), Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -7.802 dBm M2 : 902.114 MHz : 4.500 dBm M3 : 902.475 MHz : 26.619 dBm	Channel Frequency: 902.40 MHz

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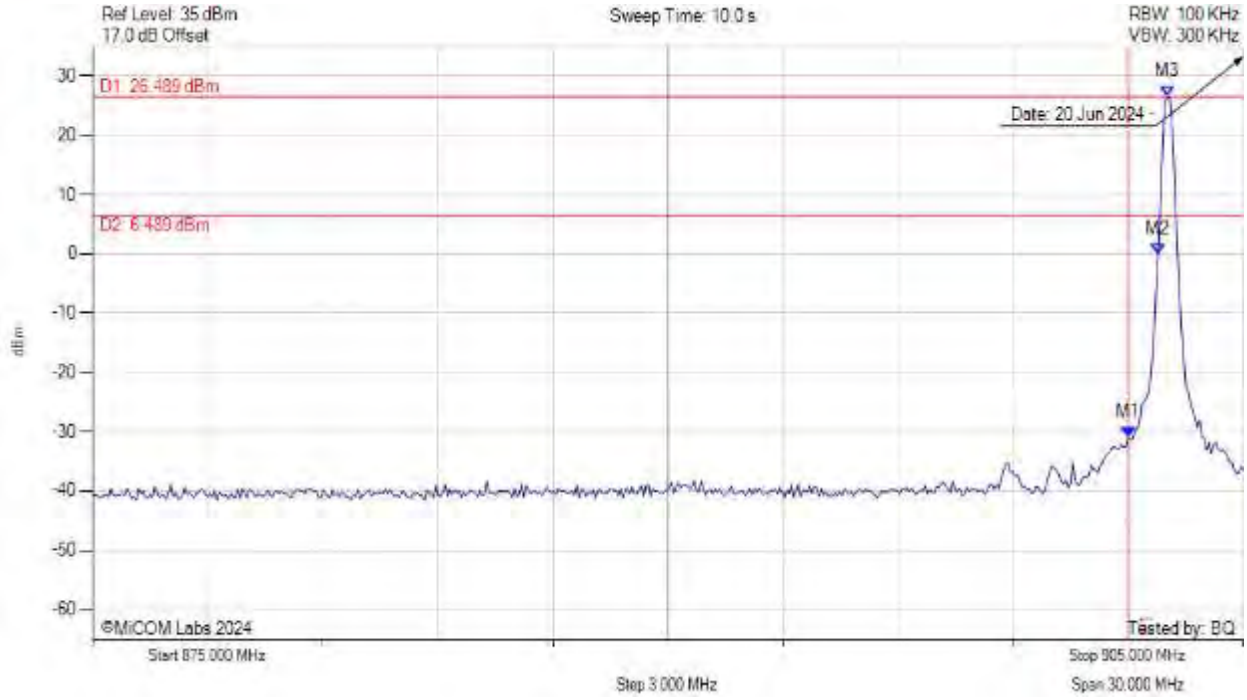
CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: GFSK, 37.5 kbps, PL 3 (FHSS), Channel: 903.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -30.887 dBm M2 : 902.776 MHz : -0.149 dBm M3 : 903.016 MHz : 26.489 dBm	Channel Frequency: 903.00 MHz

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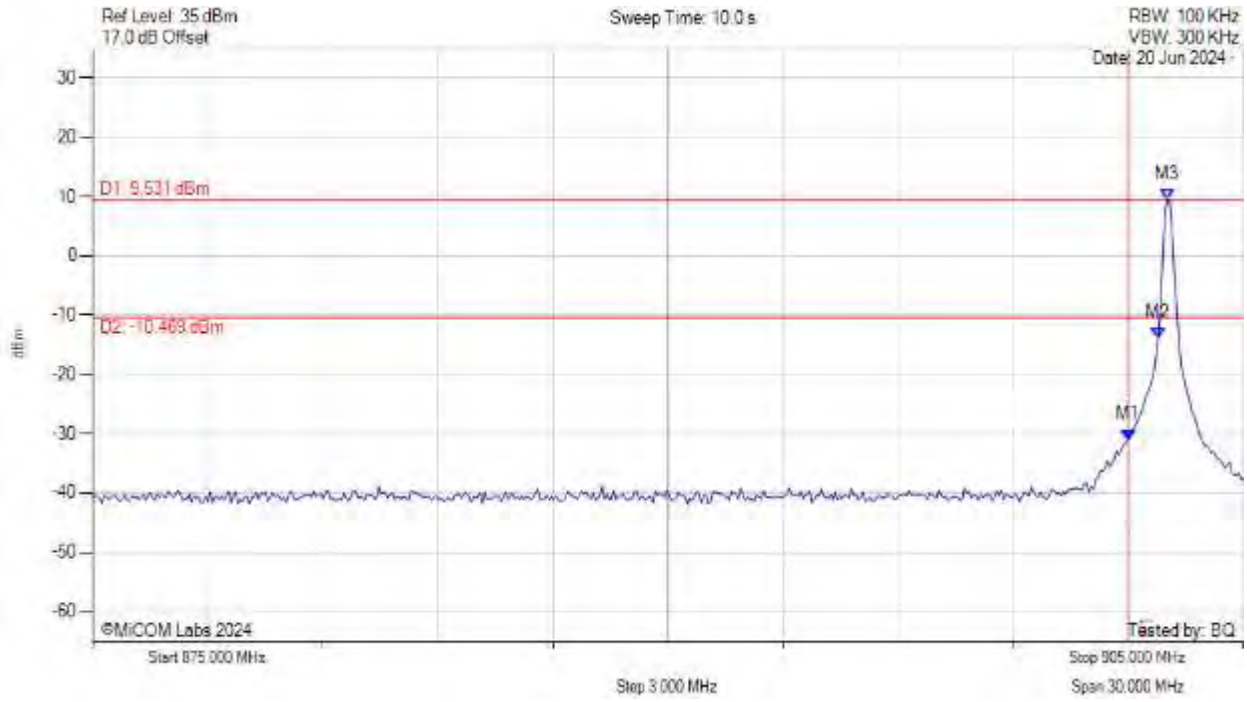
CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: OOK PL 1, Channel: 903.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -31.040 dBm M2 : 902.776 MHz : -13.969 dBm M3 : 903.016 MHz : 9.531 dBm	Channel Frequency: 903.00 MHz

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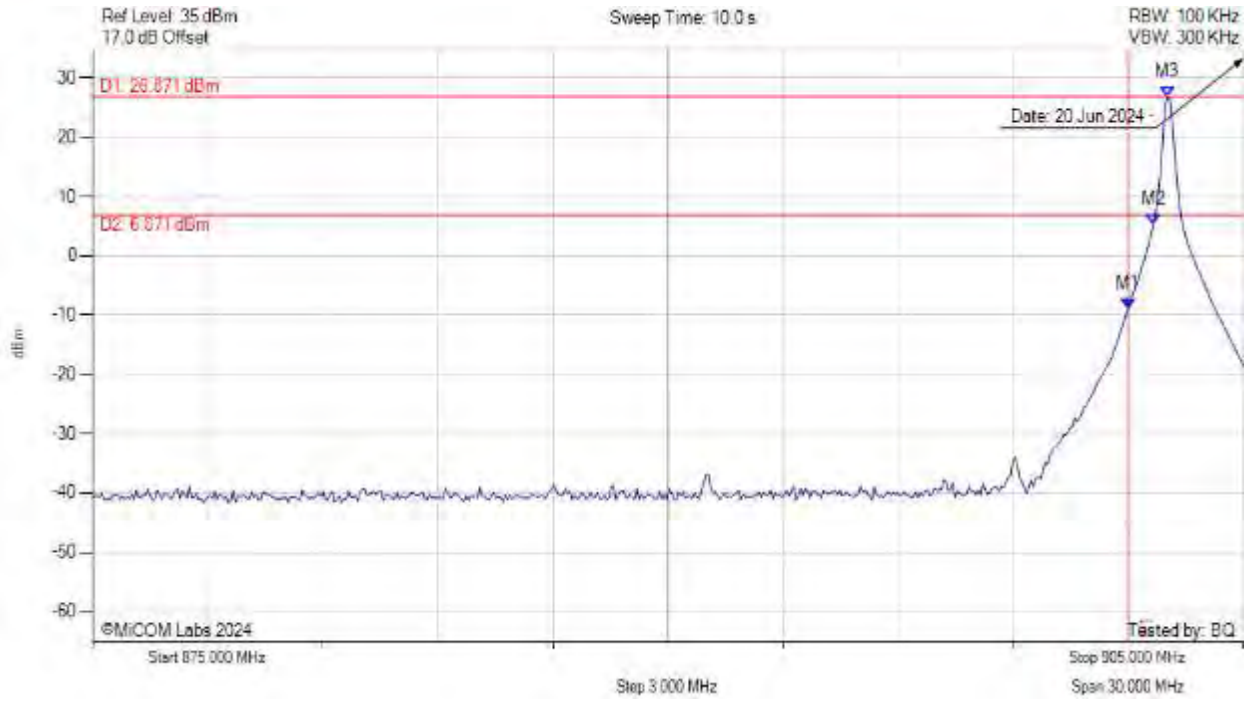
CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: OOK PL 3, Channel: 903.00 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -9.027 dBm M2 : 902.655 MHz : 5.322 dBm M3 : 903.016 MHz : 26.871 dBm	Channel Frequency: 903.00 MHz

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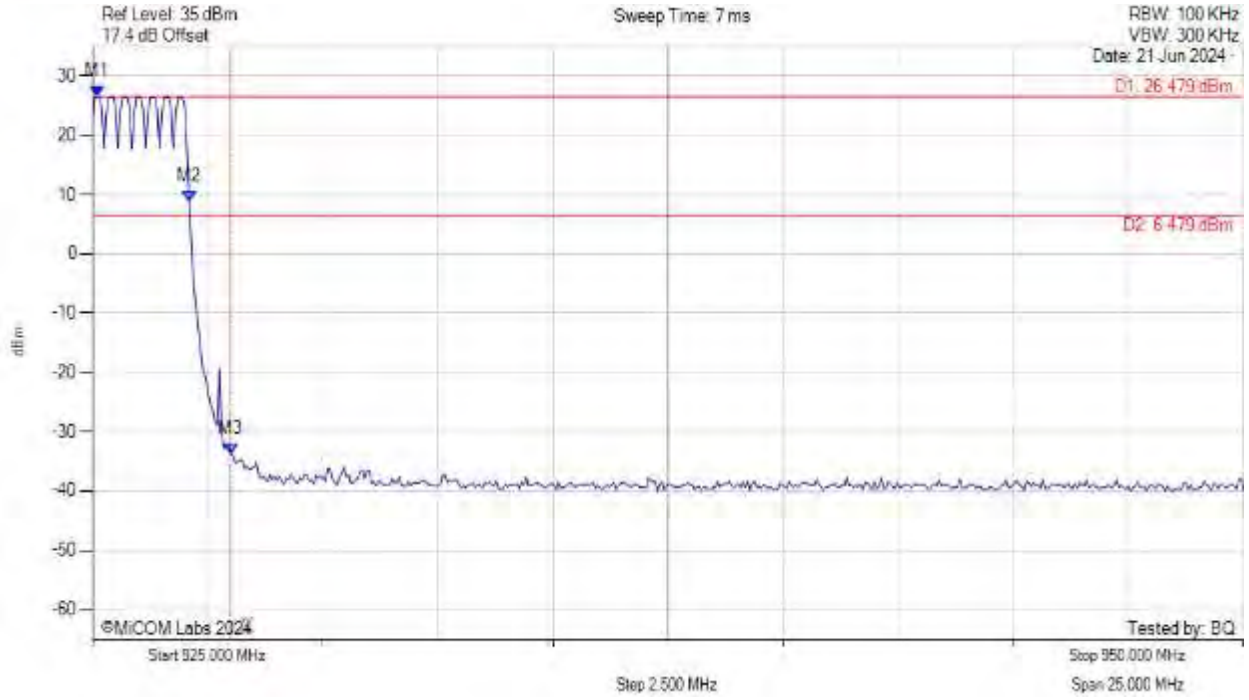
CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: GFSK, 100kbps, PL 3 (FHSS), Channel: 926.90 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.100 MHz : 26.479 dBm M2 : 927.104 MHz : 8.755 dBm M3 : 928.000 MHz : -33.757 dBm	Channel Frequency: 926.90 MHz

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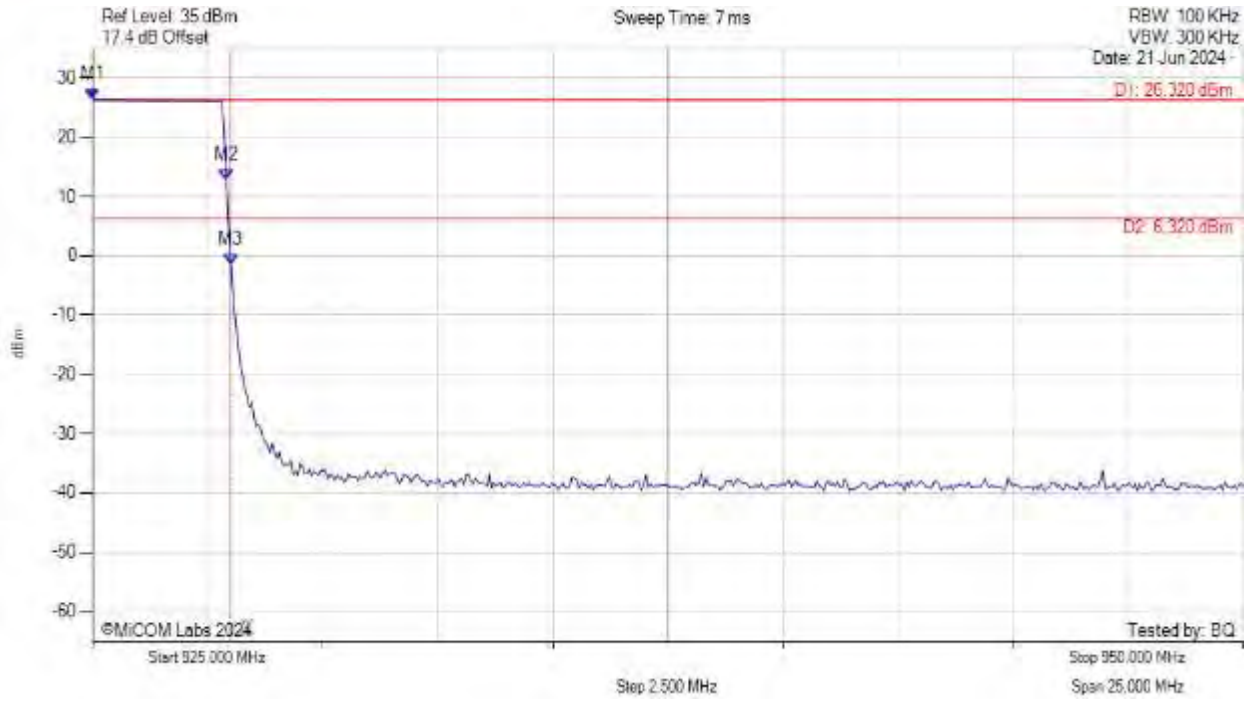
CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 927.75 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.000 MHz : 26.320 dBm M2 : 927.906 MHz : 12.757 dBm M3 : 928.000 MHz : -1.583 dBm	Channel Frequency: 927.75 MHz

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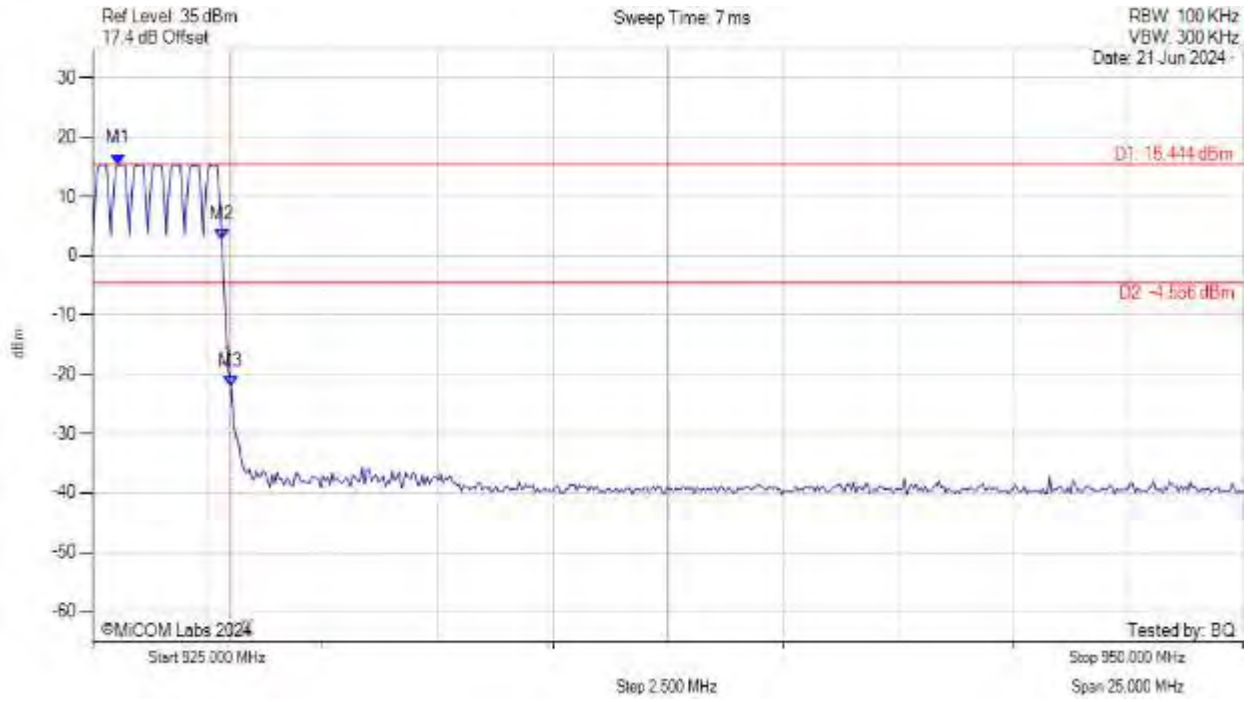
CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.551 MHz : 15.444 dBm M2 : 927.806 MHz : 2.806 dBm M3 : 928.000 MHz : -21.969 dBm	Channel Frequency: 927.60 MHz

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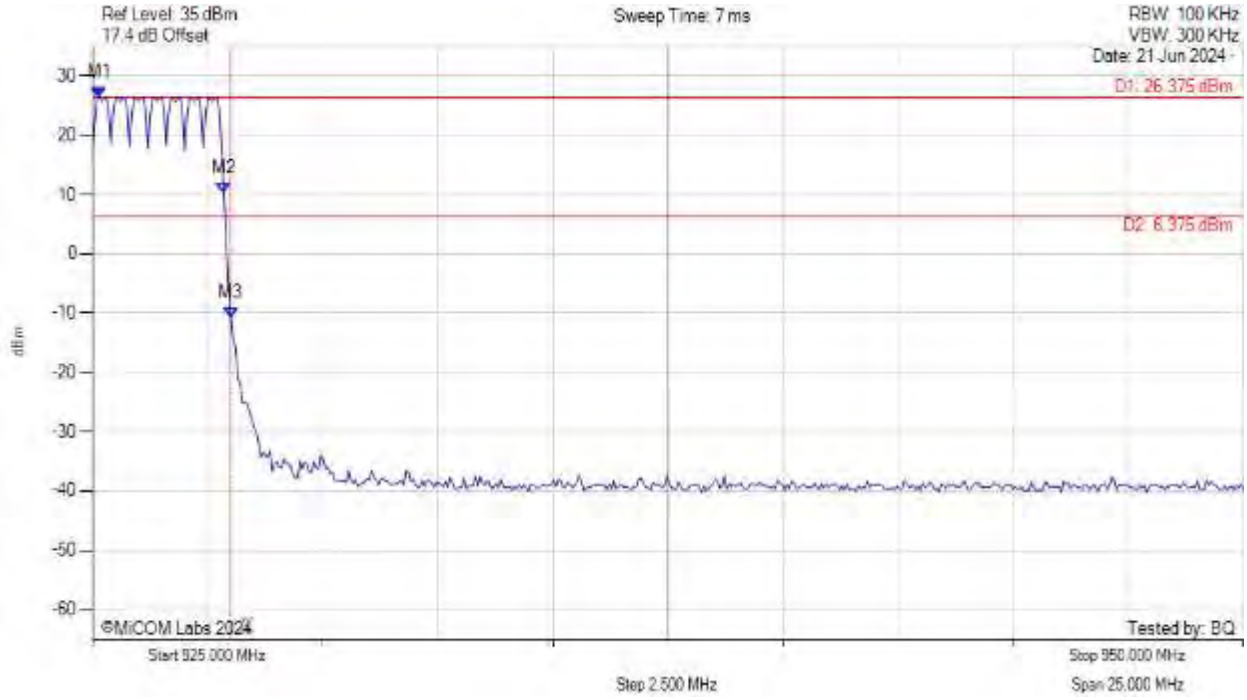
CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: GFSK, 150kbps, PL 3 (FHSS), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.150 MHz : 26.375 dBm M2 : 927.856 MHz : 10.298 dBm M3 : 928.000 MHz : -10.824 dBm	Channel Frequency: 927.60 MHz

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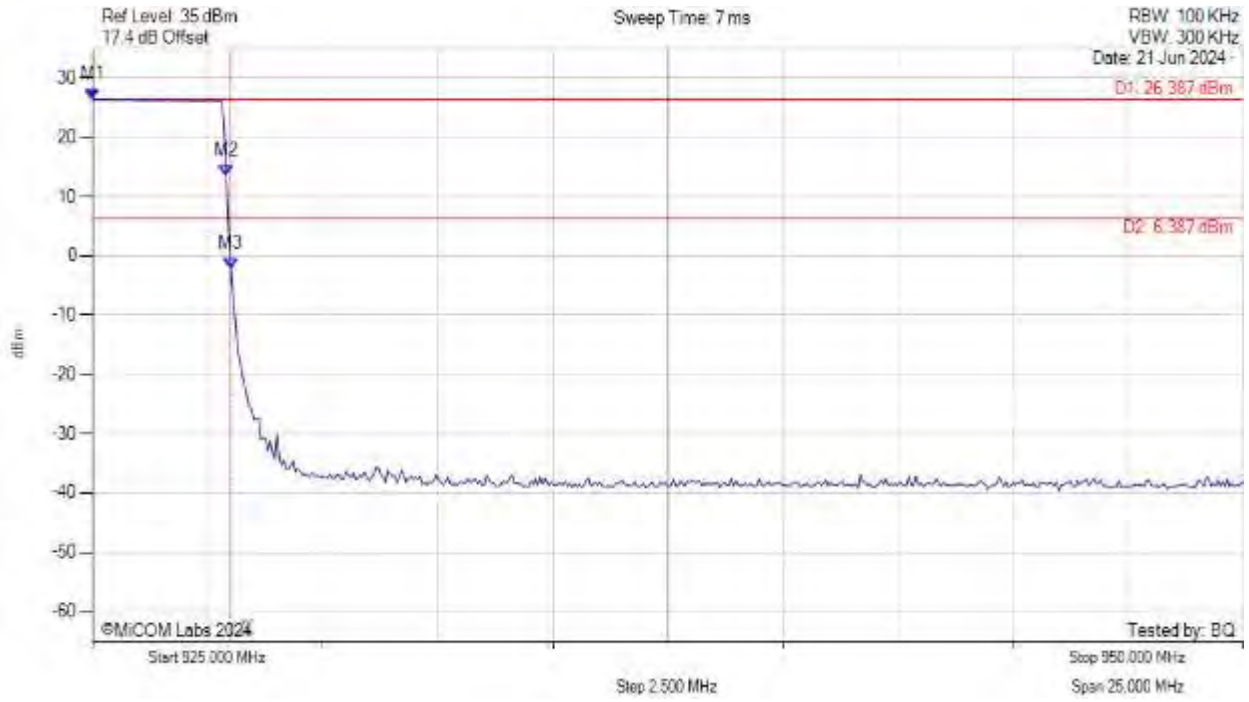
CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 927.75 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.000 MHz : 26.387 dBm M2 : 927.906 MHz : 13.509 dBm M3 : 928.000 MHz : -2.222 dBm	Channel Frequency: 927.75 MHz

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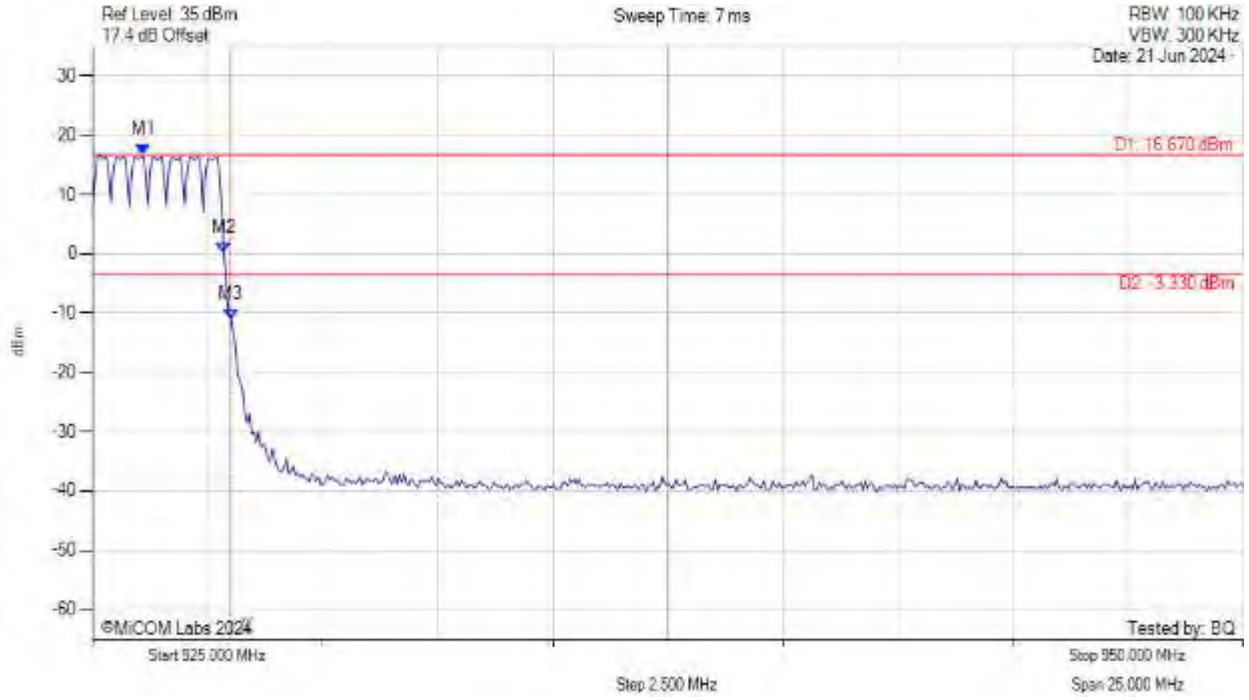
CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: GFSK, 300kbps PL 2 (Hybrid), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 926.102 MHz : 16.670 dBm M2 : 927.906 MHz : 0.191 dBm M3 : 928.000 MHz : -10.990 dBm	Channel Frequency: 927.60 MHz

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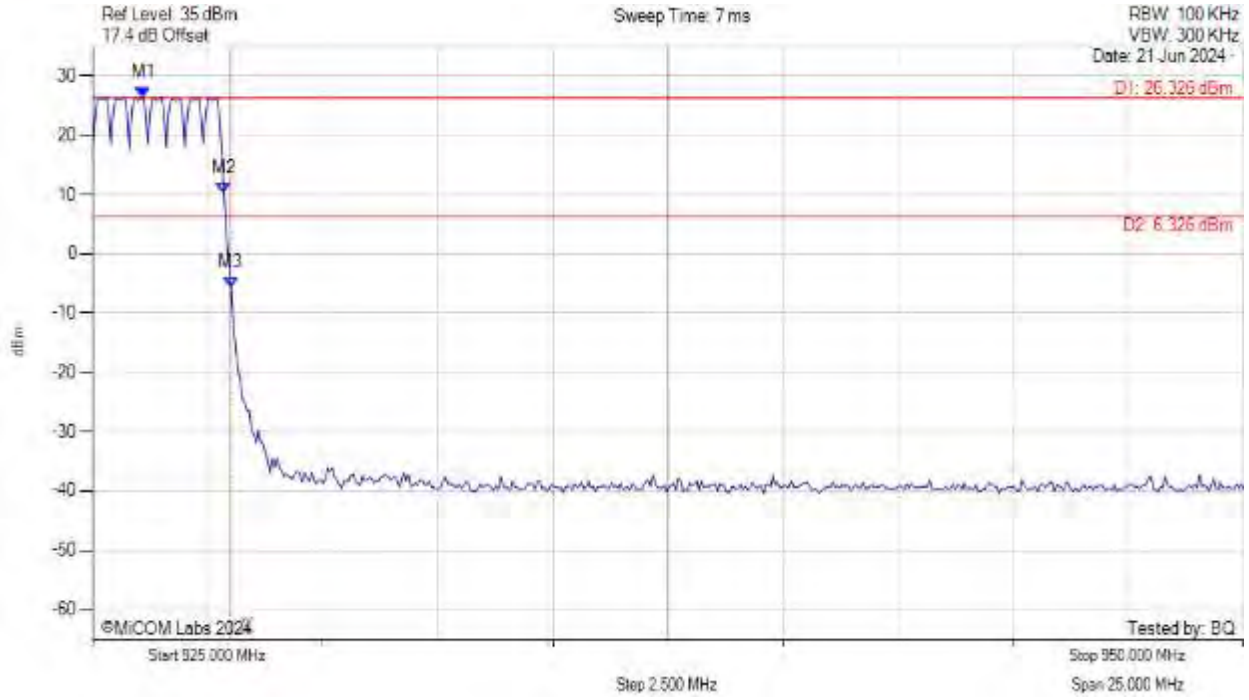
CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: GFSK, 300kbps PL 3 (FHSS), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 926.102 MHz : 26.326 dBm M2 : 927.856 MHz : 10.290 dBm M3 : 928.000 MHz : -5.673 dBm	Channel Frequency: 927.60 MHz

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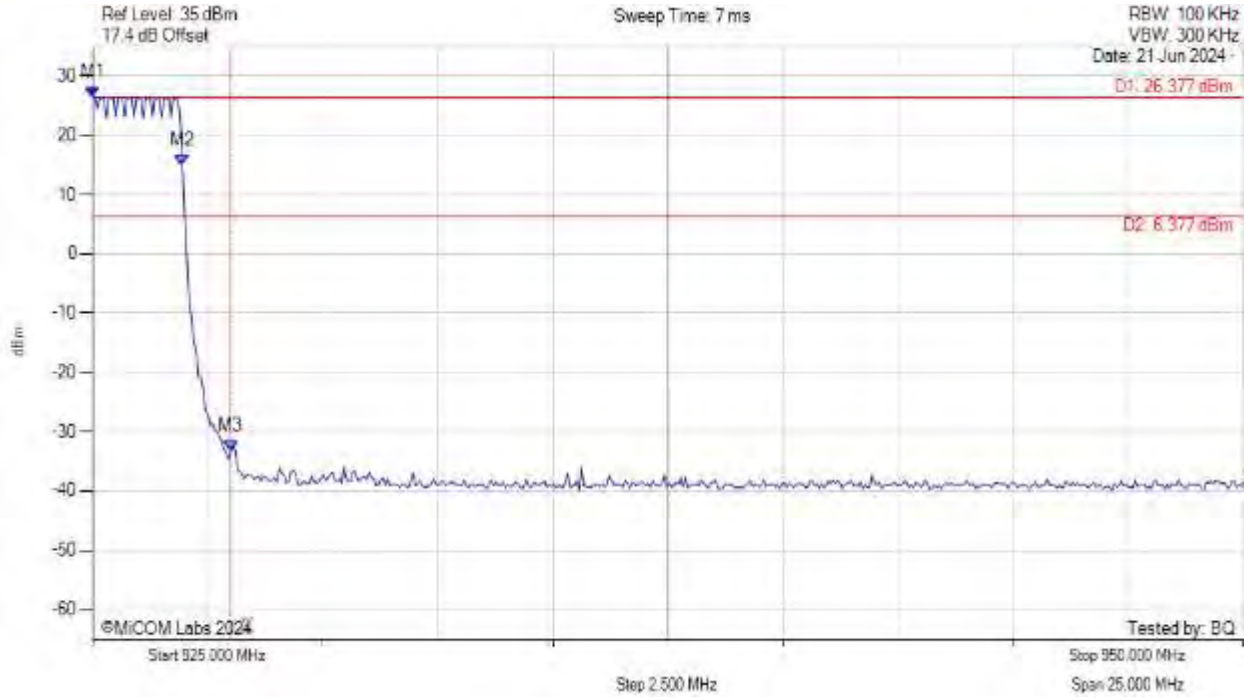
CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: GFSK, 37.5 kbps, PL 3 (FHSS), Channel: 926.80 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.000 MHz : 26.377 dBm M2 : 926.954 MHz : 14.774 dBm M3 : 928.000 MHz : -33.183 dBm	Channel Frequency: 926.80 MHz

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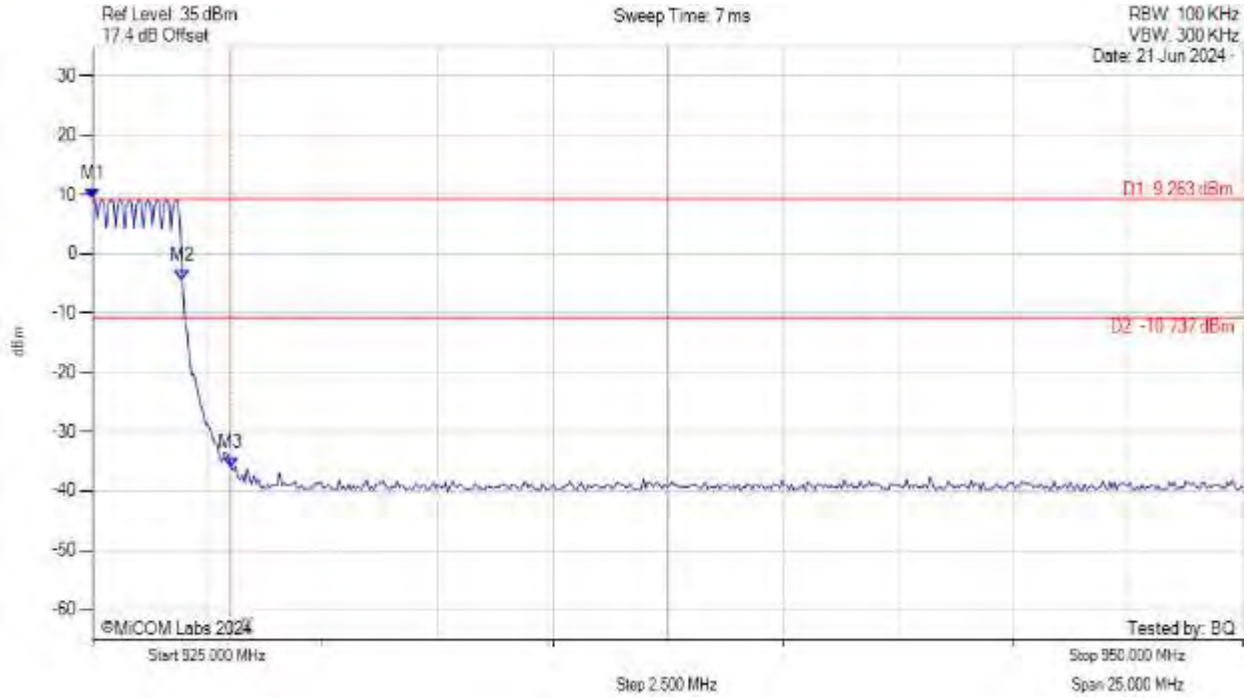
CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: OOK PL 1, Channel: 926.80 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.000 MHz : 9.263 dBm M2 : 926.954 MHz : -4.451 dBm M3 : 928.000 MHz : -35.996 dBm	Channel Frequency: 926.80 MHz

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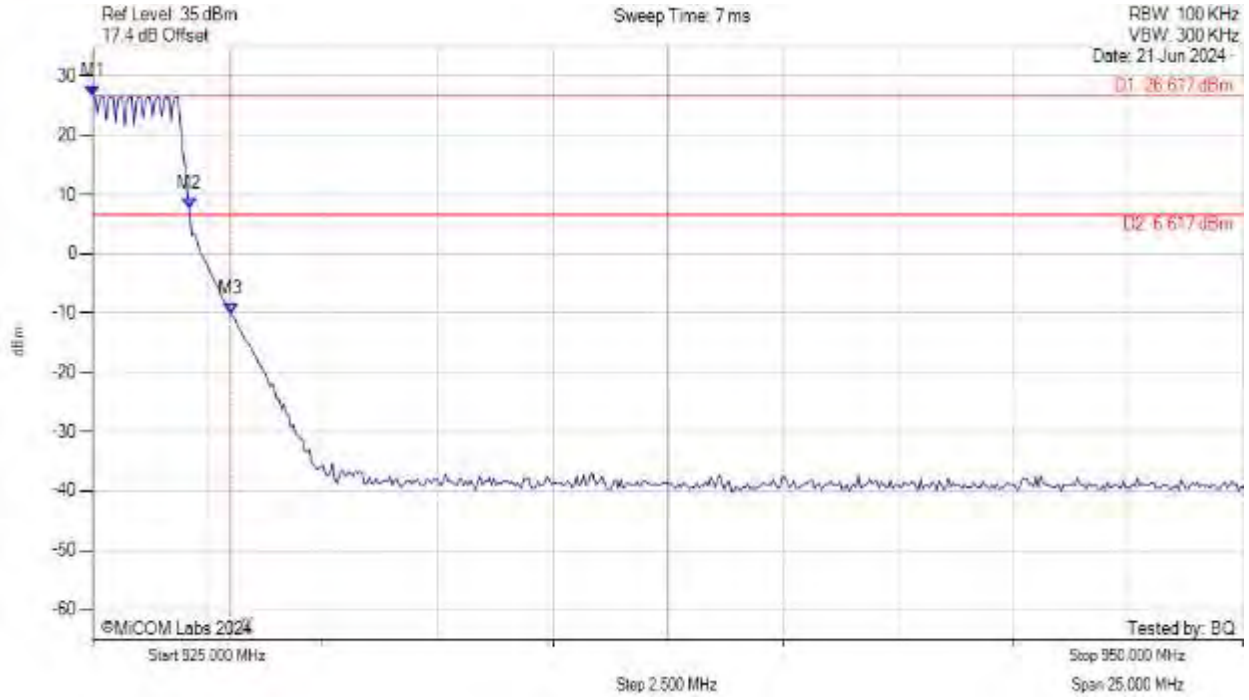
CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: OOK PL 3, Channel: 926.80 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.000 MHz : 26.617 dBm M2 : 927.104 MHz : 7.577 dBm M3 : 928.000 MHz : -10.104 dBm	Channel Frequency: 926.80 MHz

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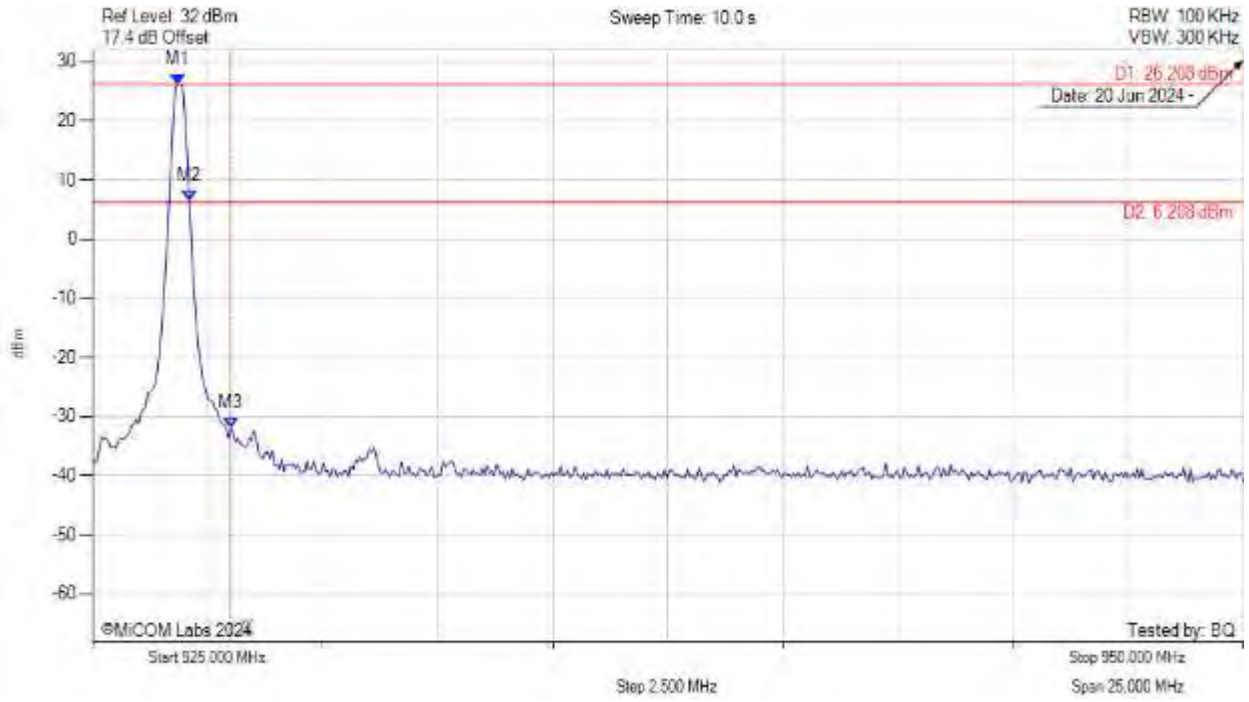
CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: GFSK, 100kbps, PL 3 (FHSS), Channel: 926.90 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 926.854 MHz : 26.208 dBm M2 : 927.104 MHz : 6.458 dBm M3 : 928.000 MHz : -32.022 dBm	Channel Frequency: 926.90 MHz

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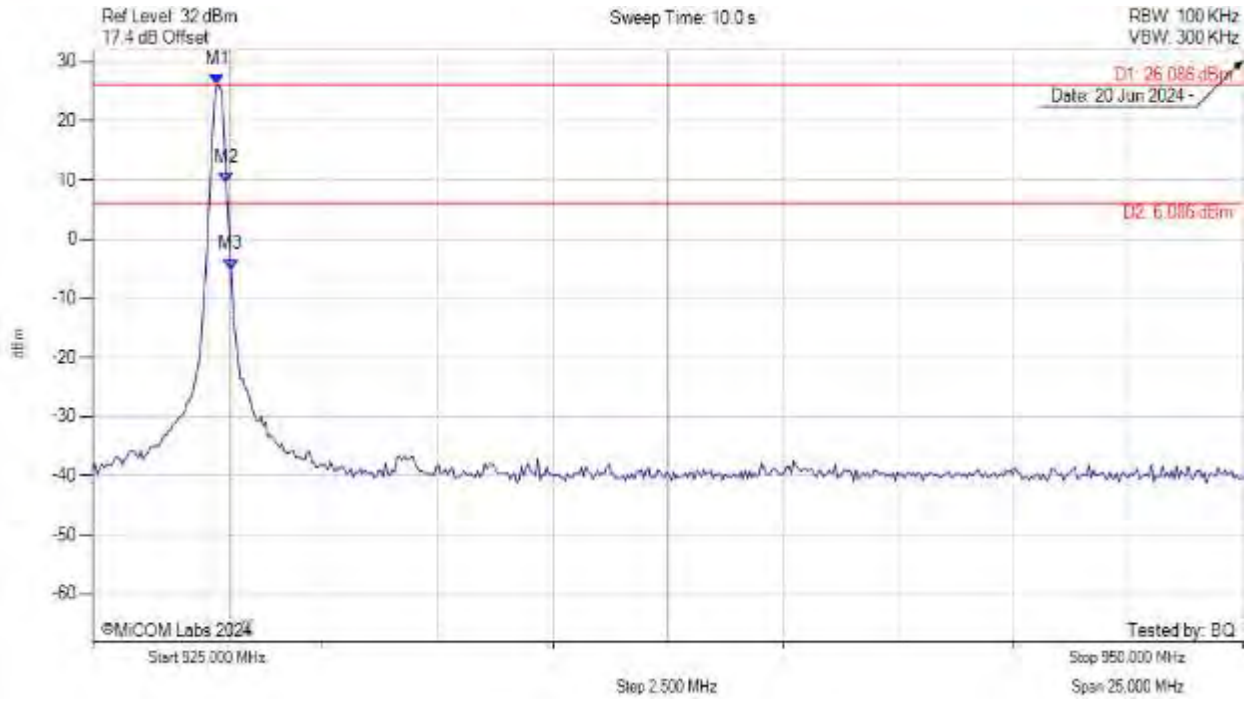
CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: GFSK, 10kbps, PL 3 (FHSS), Channel: 927.75 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.705 MHz : 26.086 dBm M2 : 927.906 MHz : 9.505 dBm M3 : 928.000 MHz : -5.144 dBm	Channel Frequency: 927.75 MHz

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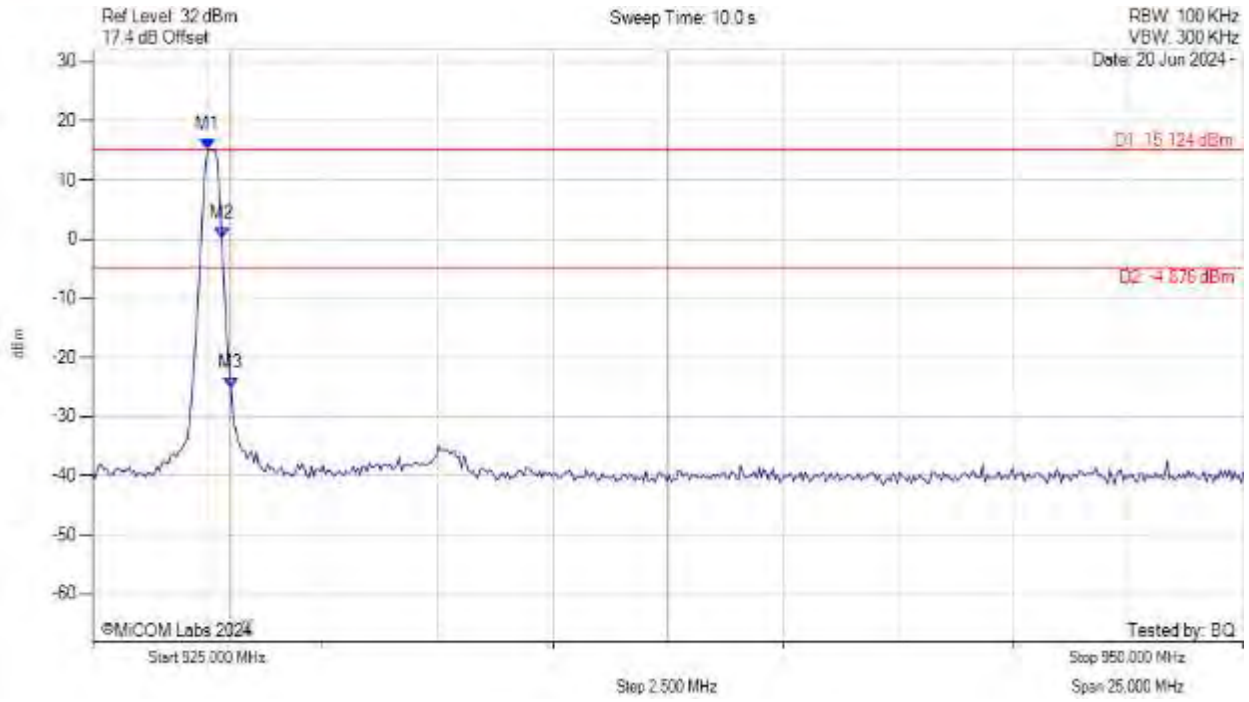
CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: GFSK, 150kbps, PL 2 (Hybrid), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.505 MHz : 15.124 dBm M2 : 927.806 MHz : 0.103 dBm M3 : 928.000 MHz : -25.254 dBm	Channel Frequency: 927.60 MHz

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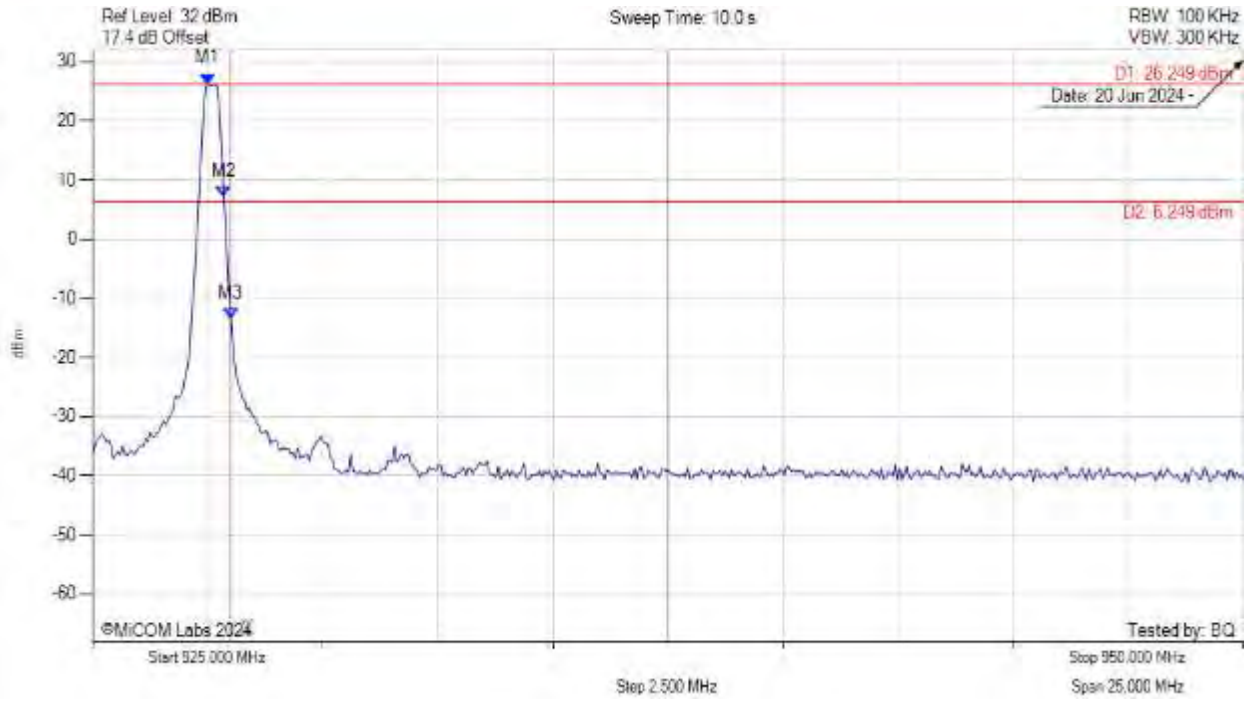
CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: GFSK, 150kbps, PL 3 (FHSS), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.505 MHz : 26.249 dBm M2 : 927.856 MHz : 7.117 dBm M3 : 928.000 MHz : -13.403 dBm	Channel Frequency: 927.60 MHz

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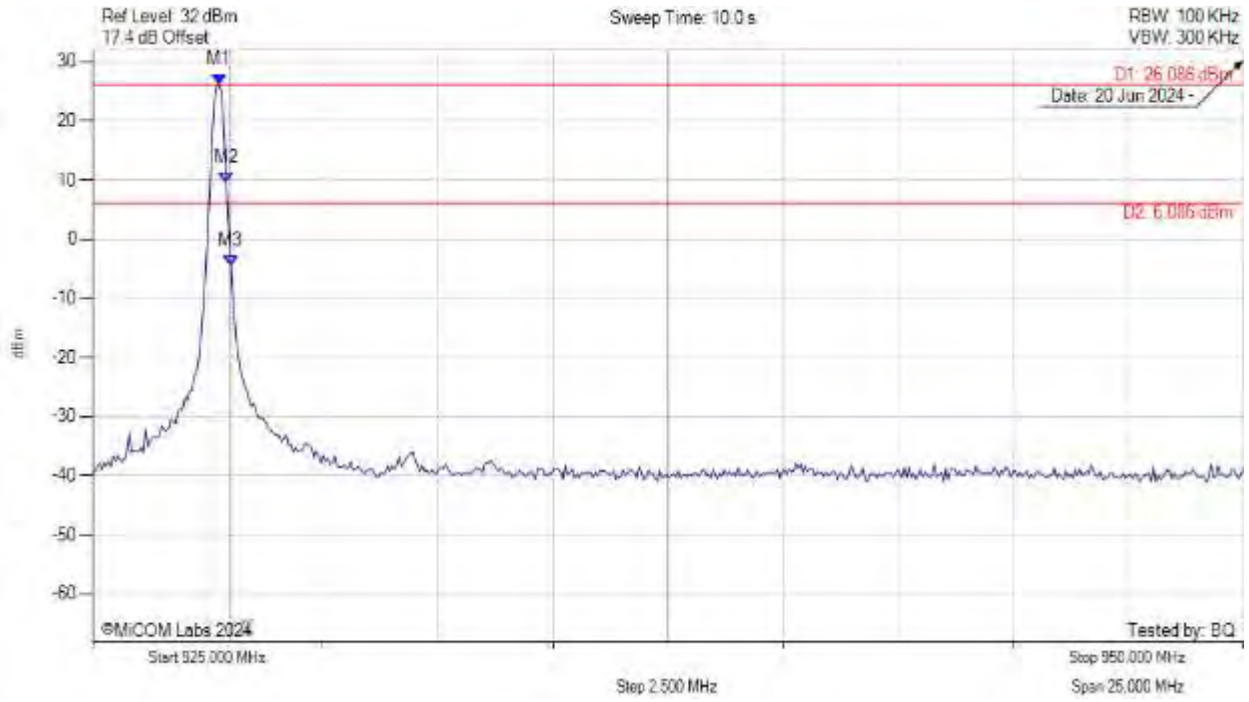
CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: GFSK, 25kbps, PL 3 (FHSS), Channel: 927.75 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.756 MHz : 26.086 dBm M2 : 927.906 MHz : 9.570 dBm M3 : 928.000 MHz : -4.595 dBm	Channel Frequency: 927.75 MHz

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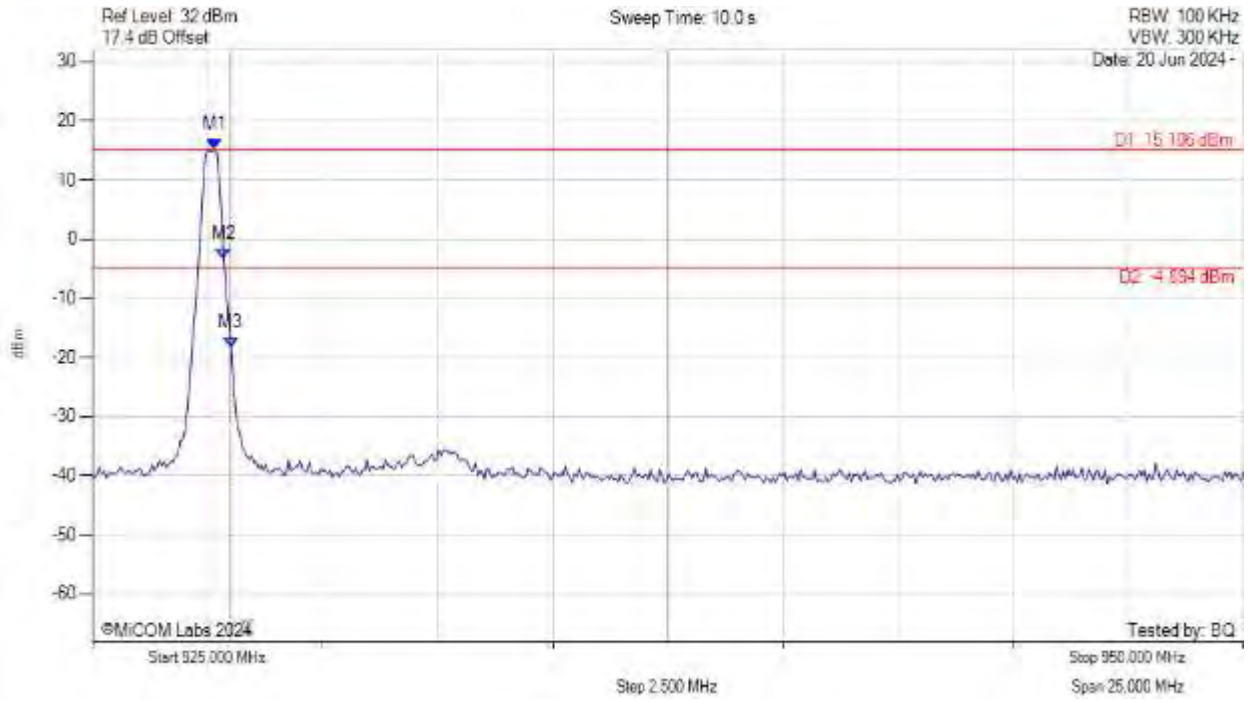
CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: GFSK, 300kbps PL 2 (Hybrid), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.655 MHz : 15.106 dBm M2 : 927.856 MHz : -3.342 dBm M3 : 928.000 MHz : -18.301 dBm	Channel Frequency: 927.60 MHz

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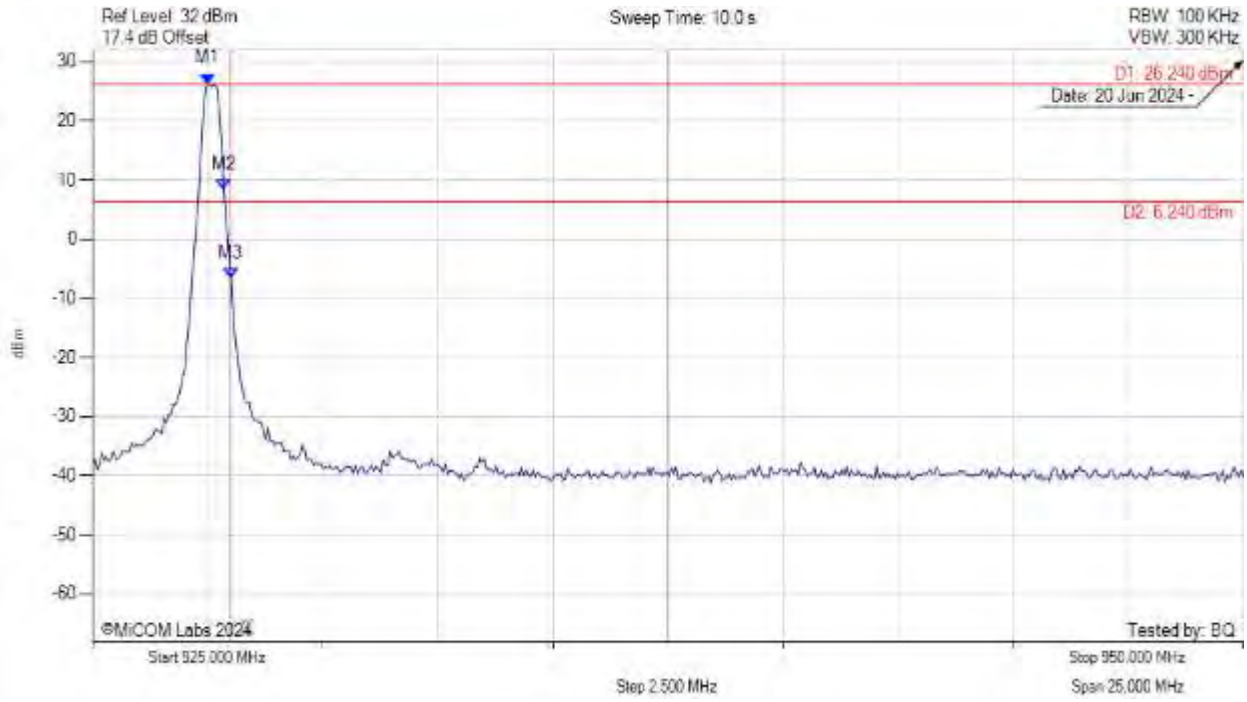
CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: GFSK, 300kbps PL 3 (FHSS), Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.505 MHz : 26.240 dBm M2 : 927.856 MHz : 8.289 dBm M3 : 928.000 MHz : -6.615 dBm	Channel Frequency: 927.60 MHz

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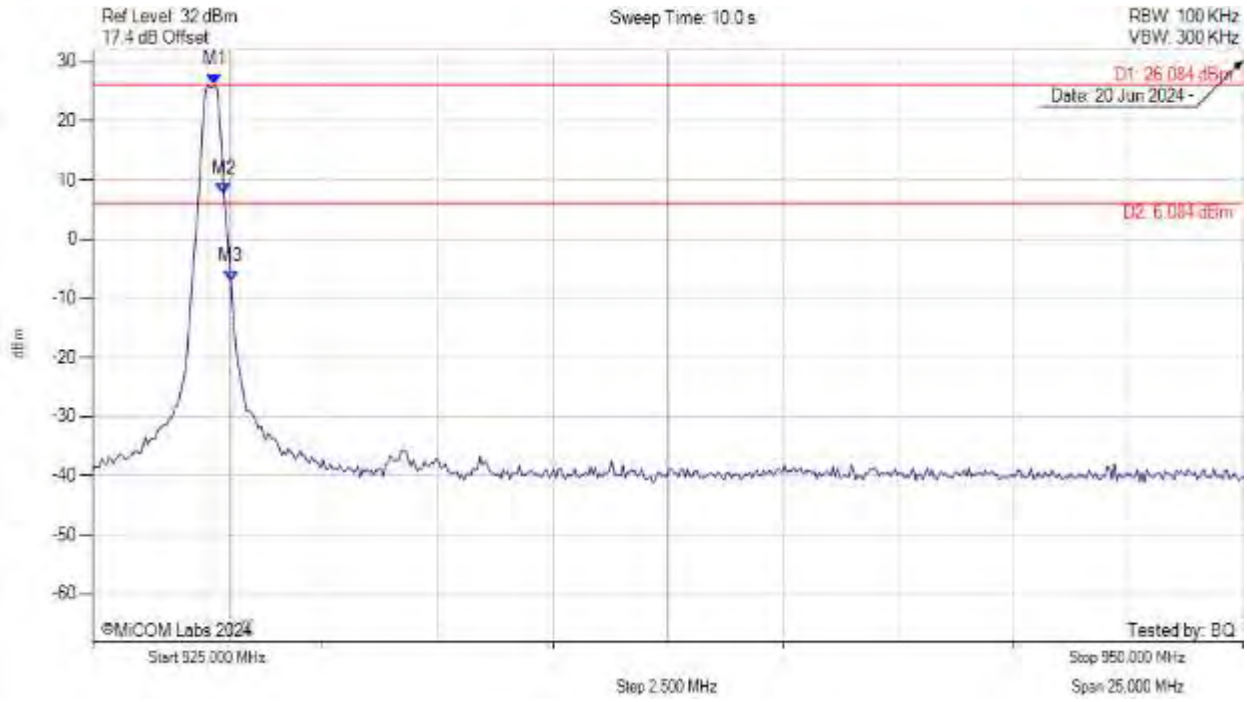
CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: GFSK, 37.5 kbps, PL 3 (FHSS), Channel: 926.80 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.655 MHz : 26.084 dBm M2 : 927.856 MHz : 7.701 dBm M3 : 928.000 MHz : -7.227 dBm	Channel Frequency: 926.80 MHz

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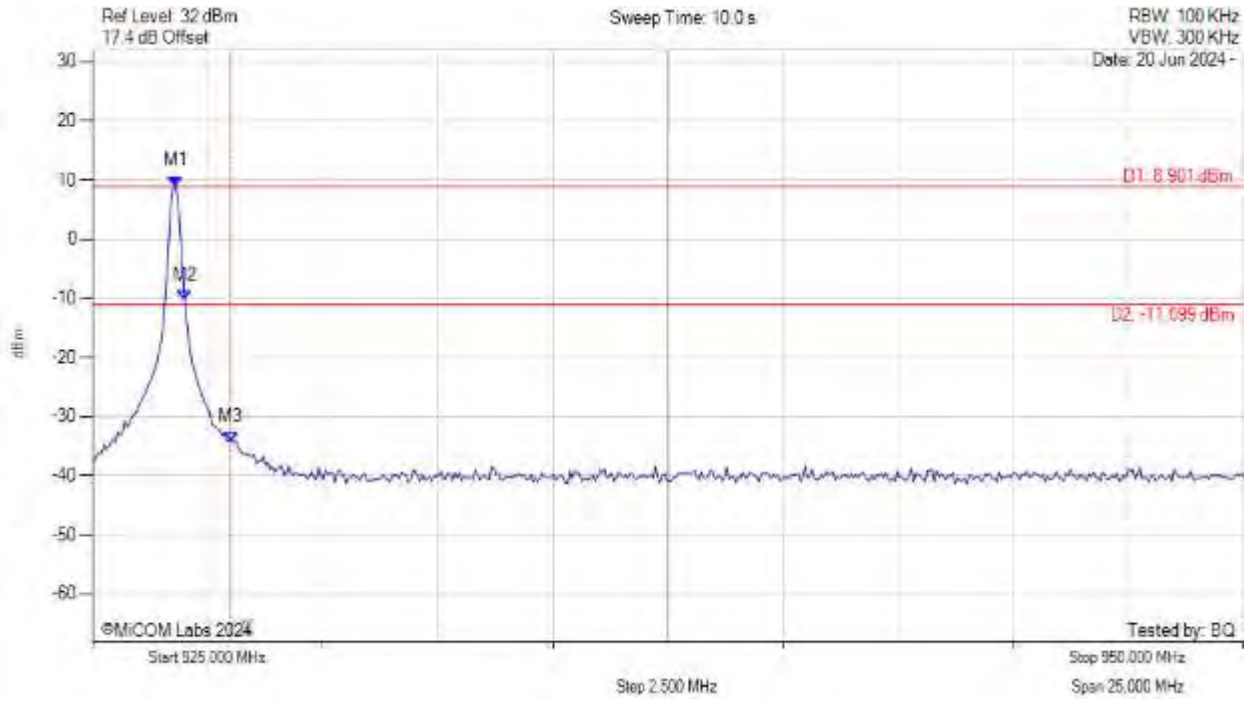
CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: OOK PL 1, Channel: 926.80 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 926.804 MHz : 8.901 dBm M2 : 927.004 MHz : -10.353 dBm M3 : 928.000 MHz : -34.229 dBm	Channel Frequency: 926.80 MHz

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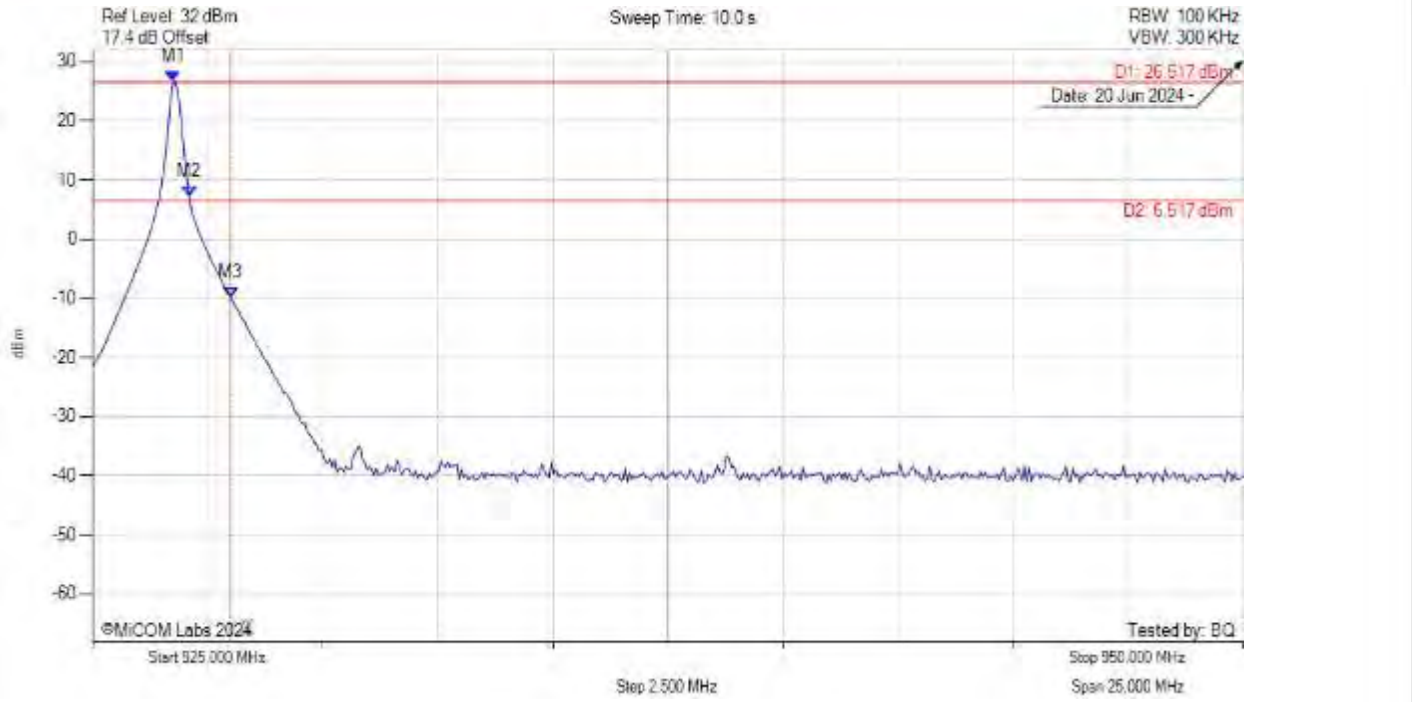
CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: OOK PL 3, Channel: 926.80 MHz, Chain a, Temp: 20, Voltage: 6.0 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 926.754 MHz : 26.517 dBm M2 : 927.104 MHz : 7.072 dBm M3 : 928.000 MHz : -9.970 dBm	Channel Frequency: 926.80 MHz

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