

1. TEST RESULTS

1.1. 20 dB & 99% Bandwidth

Conducted Test Conditions for 20 dB and 99% Bandwidth			
Standard:	FCC CFR 47:15.247 ISED RSS-247	Ambient Temp. (°C):	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)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)				Highest	Lowest		
MHz	a	b	c	d			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)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
	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)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)				Highest	Lowest		
MHz	a	b	c	d			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)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
	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 (Hybrid Mode)	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)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)				Highest	Lowest		
MHz	a	b	c	d			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)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
	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)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)				Highest	Lowest		
MHz	a	b	c	d			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)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
	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)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)				Highest	Lowest		
MHz	a	b	c	d			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)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
	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 (Hybrid Mode)	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)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)				Highest	Lowest		
MHz	a	b	c	d			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)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
	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)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)				Highest	Lowest		
MHz	a	b	c	d			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)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
	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)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)				Highest	Lowest		
MHz	a	b	c	d			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)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
	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)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)				Highest	Lowest		
MHz	a	b	c	d			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)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
	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)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)				Highest	Lowest		
MHz	a	b	c	d			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)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
	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).

1.2. Frequency Hopping Tests

Conducted Test Conditions for Frequency Hopping Measurements			
Standard:	FCC CFR 47:15.247 ISED RSS-247	Ambient Temp. (°C):	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.

1.2.1. 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	<u>512</u>	--	--
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	<u>512</u>	--	--
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:	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).

1.2.2. 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).

1.3. Output Power

Conducted Test Conditions for Fundamental Emission Output Power			
Standard:	FCC CFR 47:15.247 ISED RSS-247	Ambient Temp. (°C):	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 [$10^{\log_{10}(10^{a/10} + 10^{b/10} + 10^{c/10} + 10^{d/10})}$]

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)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
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)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
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)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
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)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
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)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
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)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
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)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
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)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
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)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
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)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
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.

1.4. Power Spectral Density

Conducted Test Conditions for Power Spectral Density			
Standard:	FCC CFR 47:15.247	Ambient Temp. (°C):	24.0 - 27.5
Test Heading:	Power Spectral Density	Rel. Humidity (%):	32 - 45
Standard Section(s):	15.247 (f)	Pressure (mBars):	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Power Spectral Density

The transmitter output was connected to a spectrum analyzer and the measured made in a 3 kHz resolution bandwidth using the analyzer auto-coupled sweep-time. A peak value was found over the full emission bandwidth and the spectrum downloaded for post processing purposes.

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

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.

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

NOTE:

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

Sub section (f)

For the purposes of this section, hybrid systems are those that employ a combination of both frequency hopping and digital modulation techniques. The frequency hopping operation of the hybrid system, with the direct sequence or digital modulation operation turned-off, shall have an average time of occupancy on any frequency not to exceed 0.4 seconds within a time period in seconds equal to the number of hopping frequencies employed multiplied by 0.4. The power spectral density conducted from the intentional radiator to the antenna due to the digital modulation operation of the hybrid system, with the frequency hopping operation turned off, shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

Supporting Information

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

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

x = Duty Cycle

Limits Power Spectral Density

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than +8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

Equipment Configuration for Power Spectral Density - Peak

Variant:	ERW-1350-001	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				Amplitude Summation	Limit	Margin
	Port(s) (dBm/3KHz)						
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:	ERW-1350-001	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				Amplitude Summation	Limit	Margin
	Port(s) (dBm/3KHz)						
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).

1.5. Emissions

1.5.1. Conducted Emissions

Conducted Test Conditions for Transmitter Conducted Spurious and Band-Edge Emissions			
Standard:	FCC CFR 47:15.247 ISED RSS-247	Ambient Temp. (°C):	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)).

1.5.1.1. 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).

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).

1.5.1.2. 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 (MHz)
	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (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).

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).

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).

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).

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	<u>-7.80</u>	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).

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).

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).

1.5.2. 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).

1.5.2.3. TX Spurious Emissions 30MHz to 1GHz

1.5.2.3.1. OOK Power Level 3 Integral Antenna

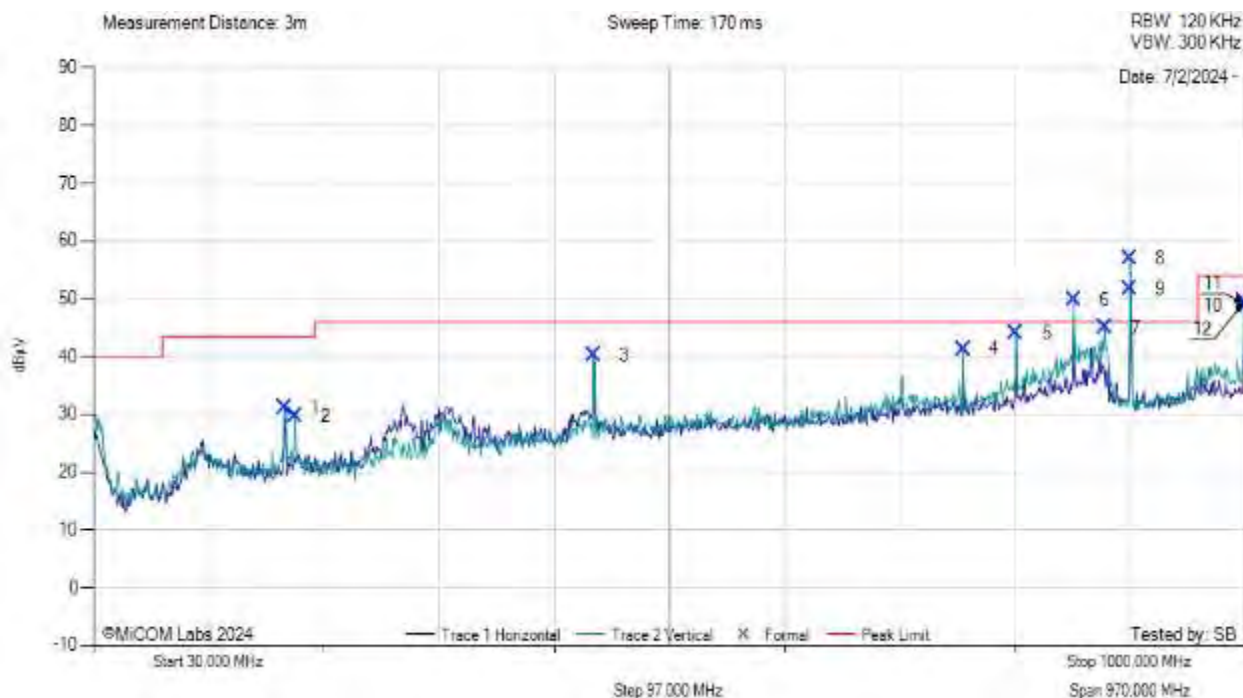
Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Integral	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	2.23	Modulation:	OOK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	903.00	Data Rate:	16.38 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	40.14	4.55	-13.60	31.09	NRB	Vertical	99	0	--	--	Pass
2	199.75	37.30	4.59	-12.16	29.73	NRB	Vertical	99	149	--	--	Pass
3	450.98	42.45	5.53	-7.79	40.19	NRB	Horizontal	99	30	--	--	Pass
4	762.35	38.54	6.50	-3.72	41.32	NRB	Vertical	99	149	--	--	Pass
5	806.97	40.39	6.65	-2.92	44.12	NRB	Vertical	99	210	--	--	Pass
6	855.47	45.35	6.78	-2.36	49.77	NRB	Vertical	99	180	--	--	Pass
7	881.66	40.37	6.88	-2.23	45.02	NRB	Vertical	99	210	--	--	Pass
8	903.00	51.90	6.93	28.70	56.98	Fundamental	Vertical	199	299	--	--	Pass
9	903.00	46.71	6.93	28.70	51.79	Fundamental	Horizontal	99	270	--	--	Pass
10	998.98	42.44	7.23	-0.94	48.73	MaxQP	Vertical	101	74	54.0	-5.3	Pass
11	999.01	42.83	7.23	-0.94	49.12	MaxQP	Vertical	108	78	54.0	-4.9	Pass
12	999.01	43.24	7.23	-0.94	49.53	MaxP	Vertical	100	90	54.0	-4.5	Pass

Test Notes: SN: 2935662-23, OOK, 903 MHz, 16.384 kbps, Power Level 3

Non-Restricted Band (NRB)

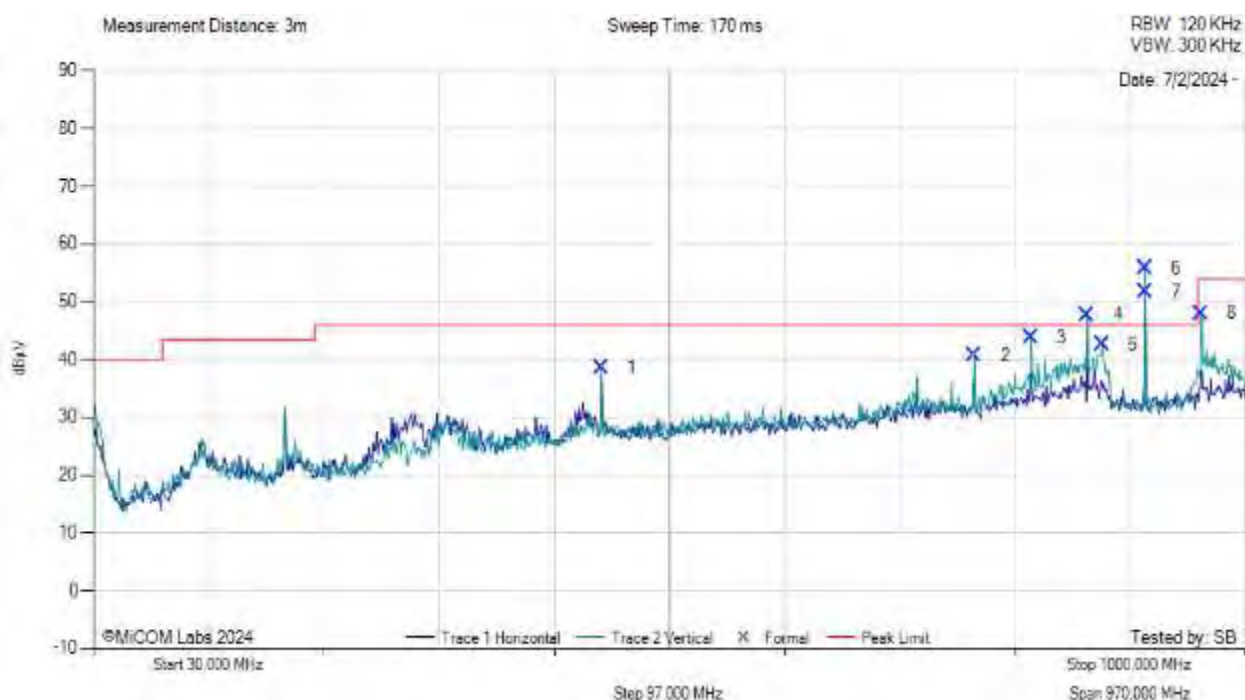
Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Integral	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	2.23	Modulation:	OOK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	915.00	Data Rate:	16.38 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	457.77	40.52	5.56	-7.49	38.59	NRB	Vertical	199	89	--	--	Pass
2	772.05	37.69	6.57	-3.62	40.64	NRB	Vertical	100	180	--	--	Pass
3	819.58	39.79	6.69	-2.67	43.81	NRB	Vertical	100	210	--	--	Pass
4	867.11	43.16	6.82	-2.18	47.80	NRB	Vertical	100	180	--	--	Pass
5	879.72	37.91	6.87	-2.20	42.58	NRB	Vertical	199	299	--	--	Pass
6	915.61	50.63	6.98	-1.75	55.87	Fundamental	Vertical	199	299	--	--	Pass
7	915.61	46.49	6.98	-1.75	51.72	Fundamental	Horizontal	199	270	--	--	Pass
8	963.02	42.01	7.11	-1.09	48.03	MaxQP	Vertical	107	149	54.0	-6.0	Pass

Test Notes: SN: 2935662-23, OOK, 915 MHz, 16.384 kbps, Power Level 3

Non-Restricted Band

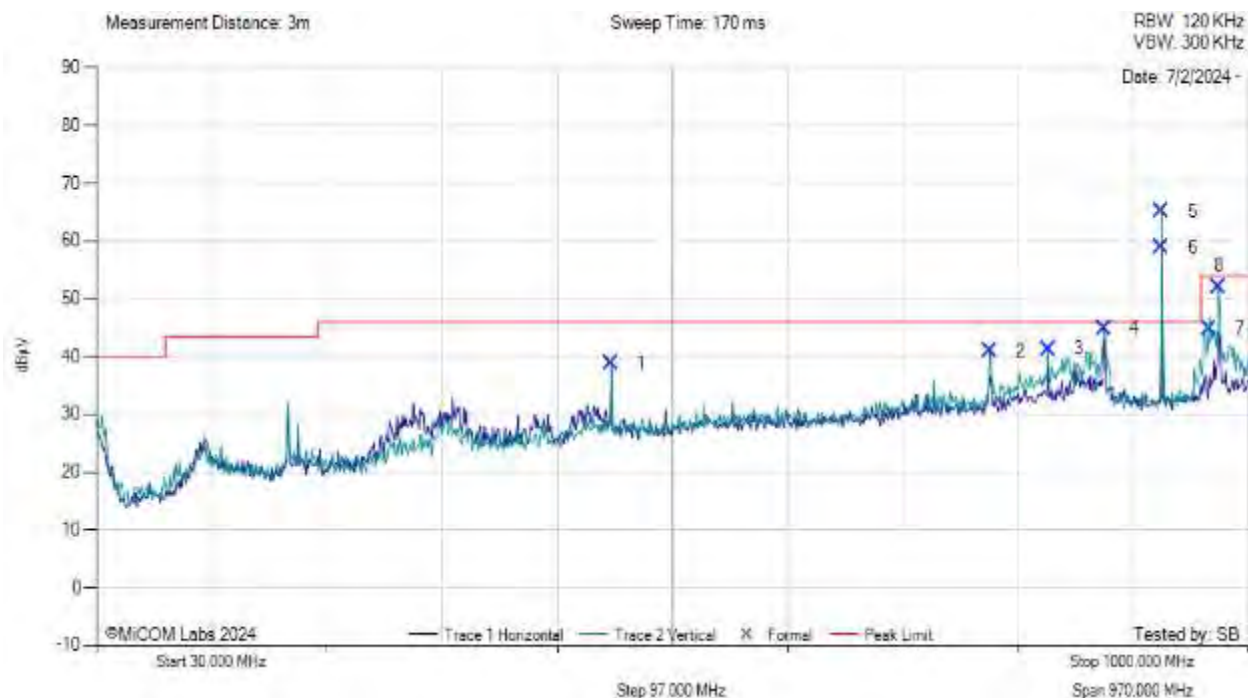
Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Integral	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	2.23	Modulation:	OOK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	926.8	Data Rate:	16.38 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	463.59	40.57	5.56	-7.30	38.84	NRB	Vertical	199	29	--	--	Pass
2	782.72	37.65	6.57	-3.25	40.97	NRB	Vertical	100	210	--	--	Pass
3	831.22	37.18	6.72	-2.57	41.33	NRB	Vertical	199	299	--	--	Pass
4	878.75	40.19	6.86	-2.20	44.85	NRB	Vertical	100	179	--	--	Pass
5	927.25	59.73	7.00	-1.55	65.19	Fundamental	Vertical	100	179	--	--	Pass
6	927.25	53.42	7.00	-1.55	58.88	Fundamental	Horizontal	199	150	--	--	Pass
7	966.78	38.85	7.14	-1.10	44.90	MaxQP	Vertical	101	149	54.0	-9.1	Pass
8	974.81	46.05	7.16	-1.09	52.11	MaxQP	Vertical	111	297	54.0	-1.9	Pass

Test Notes: SN: 2935662-23, OOK, 926.8 MHz, 16.384 kbps, Power Level 3

Non-Restricted Band (NRB)

1.5.2.3.2. GFSK Power Level 2 Integral Antenna

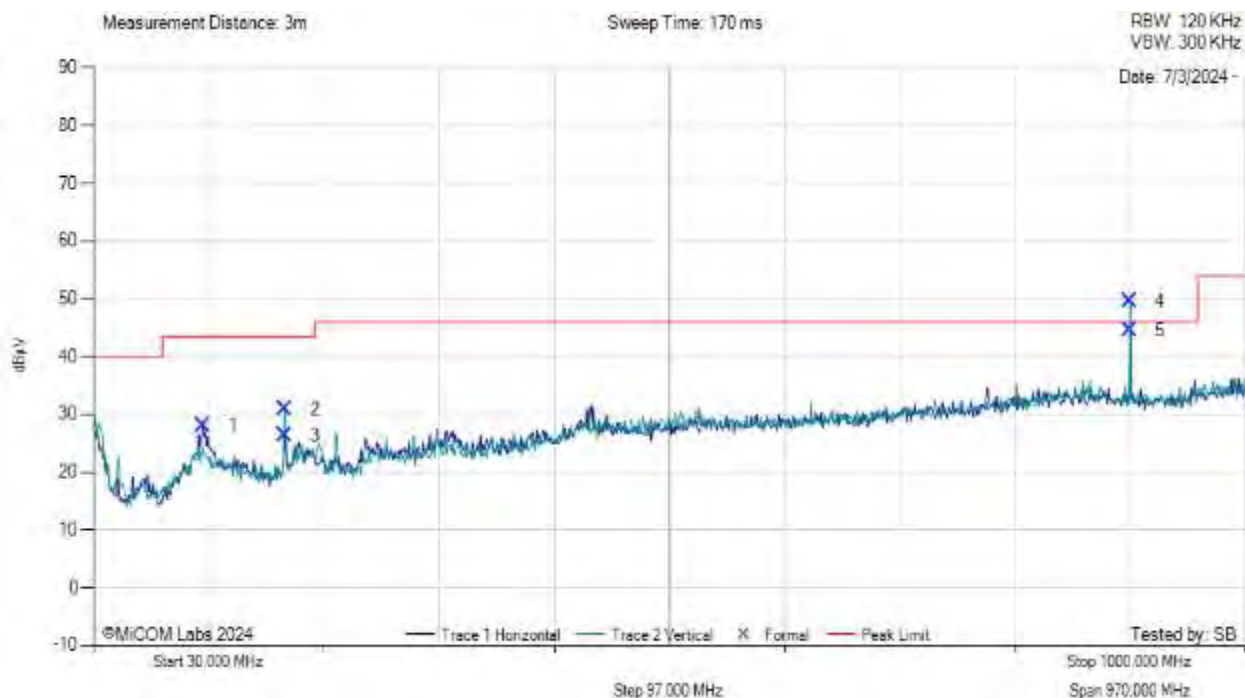
Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Integral	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	2.23	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



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	122.15	35.19	4.20	-11.33	28.06	NRB	Horizontal	199	0	--	--	Pass
2	191.02	40.01	4.55	-13.60	30.95	NRB	Vertical	99	0	--	--	Pass
3	191.02	35.43	4.55	-13.60	26.38	NRB	Horizontal	199	210	--	--	Pass
4	903.00	44.54	6.93	28.70	49.62	Fundamental	Vertical	99	149	--	--	Pass
5	903.00	39.42	6.93	28.70	44.50	Fundamental	Horizontal	99	270	--	--	Pass

Test Notes: SN: 2935662-23, GFSK, 902.4 MHz, 300 kbps Power Level 2

Non-Restrictive Band (NRB)

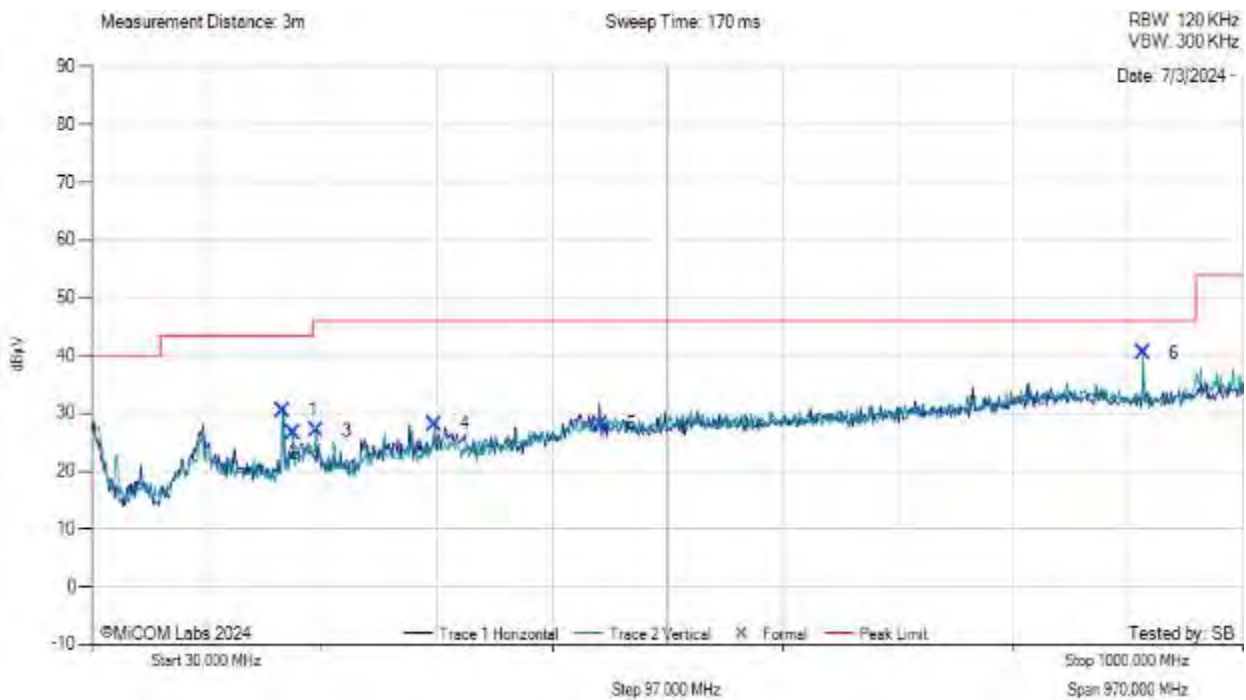
Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Integral	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	2.23	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



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	39.56	4.55	-13.60	30.50	NRB	Vertical	99	0	--	--	Pass
2	199.75	34.27	4.59	-12.16	26.70	NRB	Vertical	99	119	--	--	Pass
3	219.15	35.93	4.67	-13.59	27.01	NRB	Vertical	99	0	--	--	Pass
4	319.06	33.97	5.10	-10.93	28.14	NRB	Vertical	99	149	--	--	Pass
5	458.74	30.03	5.56	-7.46	28.13	NRB	Horizontal	199	90	--	--	Pass
6	915.61	35.17	6.98	-1.75	40.40	Fundamental	Vertical	99	210	--	--	Pass

Test Notes: SN: 2935662-23, GFSK, 915.2 MHz, 300 kbps, Power Level 2

Non-Restricted Band

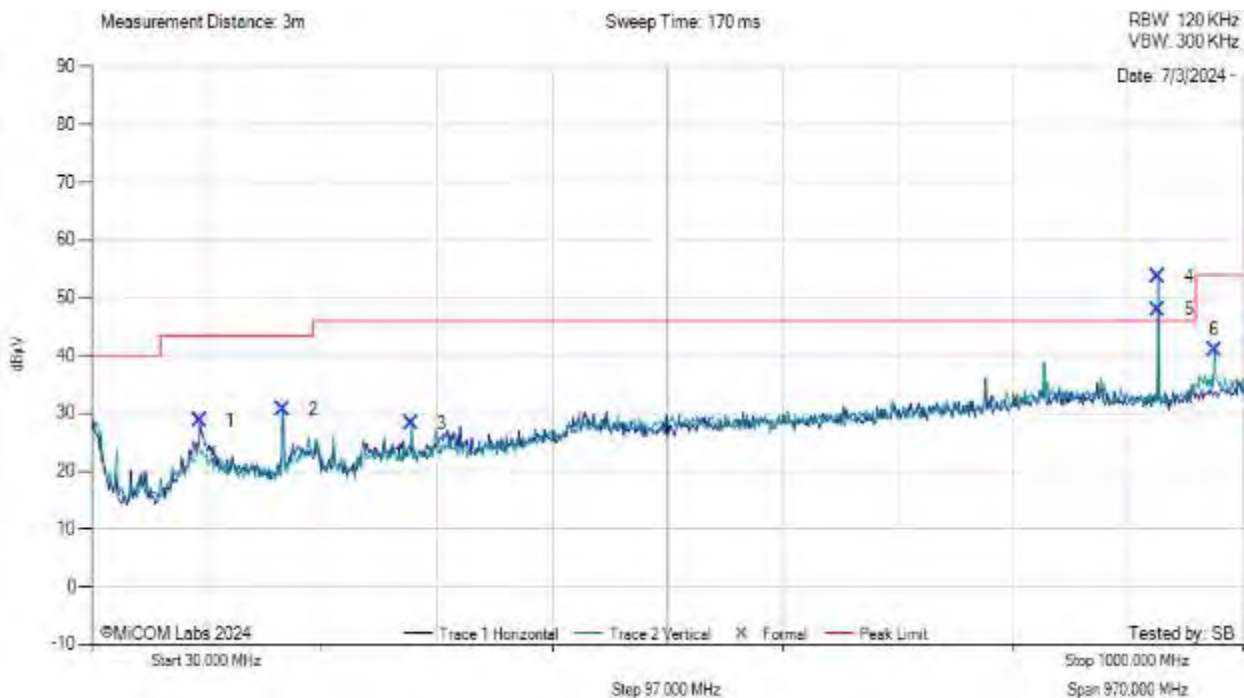
Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Integral	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	2.23	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



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	121.18	35.87	4.20	-11.39	28.68	NRB	Horizontal	199	0	--	--	Pass
2	191.02	39.69	4.55	-13.60	30.63	NRB	Vertical	100	0	--	--	Pass
3	299.66	34.43	5.00	-11.25	28.18	NRB	Vertical	199	179	--	--	Pass
4	928.22	48.19	7.00	-1.56	53.63	Fundamental	Vertical	100	239	--	--	Pass
5	928.22	42.54	7.00	-1.56	47.98	Fundamental	Horizontal	100	328	--	--	Pass
6	975.75	34.78	7.18	-1.08	40.87	MaxP	Vertical	100	149	54.0	-13.1	Pass

Test Notes: SN: 2935662-23, GFSK, 927.6 MHz, 300 kbps, Power Level 2

Non-Restricted Band

1.5.2.3.3. GFSK Power Level 3 Integral Antenna

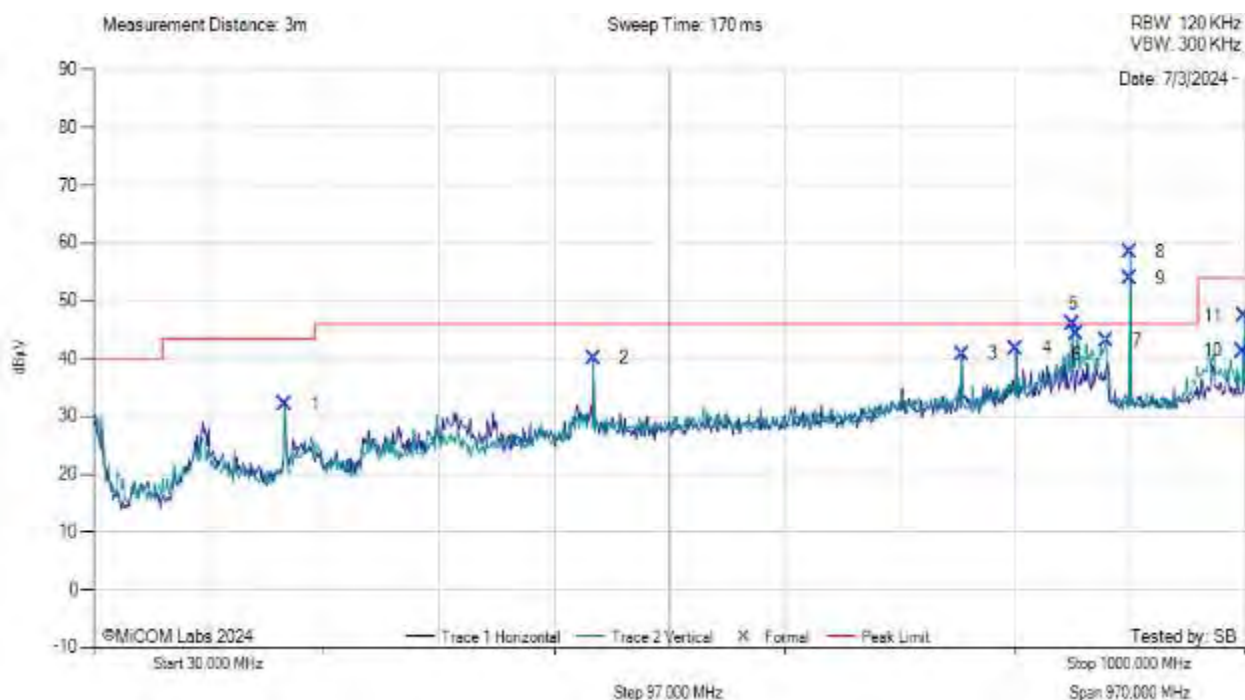
Equipment Configuration for 30 MHz TO 1 GHZ

Antenna:	Integral	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	2.23	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



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	41.07	4.55	-13.60	32.02	NRB	Vertical	100	0	--	--	Pass
2	450.98	42.39	5.53	-7.79	40.13	NRB	Horizontal	199	60	--	--	Pass
3	761.38	37.49	6.55	-3.24	40.80	NRB	Horizontal	199	60	--	--	Pass
4	806.97	38.05	6.65	-2.92	41.78	NRB	Horizontal	100	270	--	--	Pass
5	854.50	41.54	6.79	-2.34	45.98	NRB	Vertical	100	179	--	--	Pass
6	858.38	39.82	6.79	-2.31	44.31	NRB	Vertical	100	149	--	--	Pass
7	882.63	38.38	6.88	-2.23	43.03	NRB	Vertical	100	119	--	--	Pass
8	903.00	53.30	6.93	28.70	58.38	Fundamental	Vertical	100	209	--	--	Pass
9	903.00	48.74	6.93	28.70	53.82	Fundamental	Horizontal	100	330	--	--	Pass
10	998.34	35.00	7.22	-0.94	41.29	MaxQP	Horizontal	148	250	54.0	-12.7	Pass
11	998.47	41.09	7.22	-0.94	47.37	MaxQP	Vertical	102	270	54.0	-6.6	Pass

Test Notes: SN: 2935662-23, GFSK, 902.4 MHz, 300 kbps Power Level 3

Non-Restricted Band (NRB)

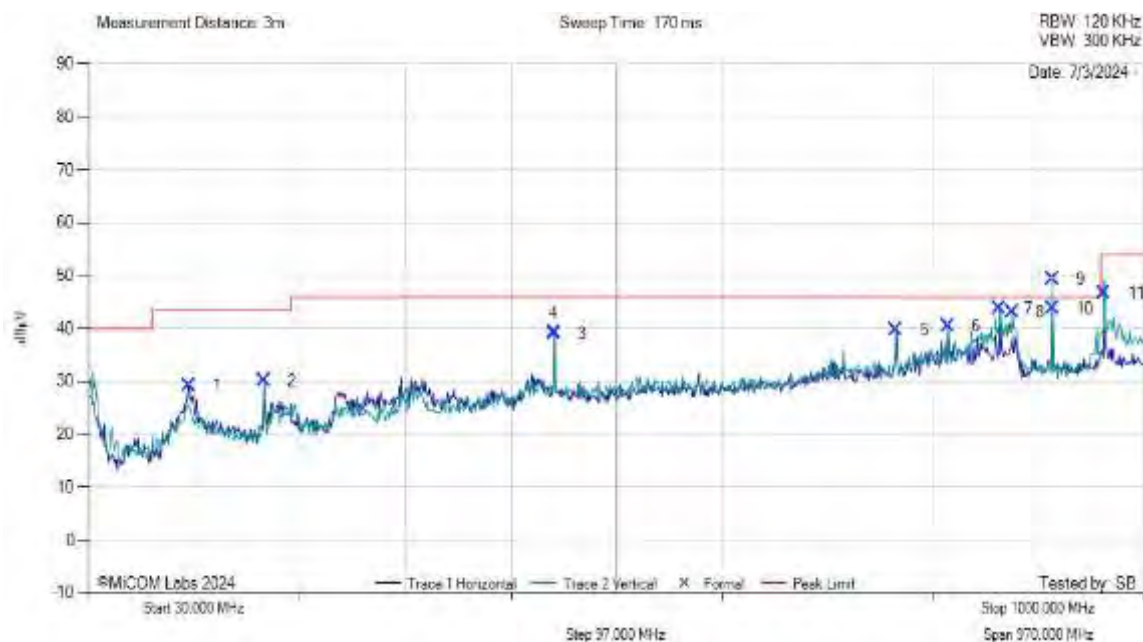
Equipment Configuration for 30 MHz TO 1 GHZ

Antenna:	Integral	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	2.23	Modulation:	GFSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	915.2	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	122.15	36.29	4.20	-11.33	29.16	NRB	Horizontal	199	0	--	--	Pass
2	191.02	39.25	4.55	-13.60	30.19	NRB	Vertical	100	0	--	--	Pass
3	457.59	40.89	5.56	-7.50	38.95	NRB	Vertical	197	121	--	--	Pass
4	457.63	41.21	5.56	-7.50	39.27	NRB	Horizontal	198	64	--	--	Pass
5	772.05	36.85	6.57	-3.62	39.80	NRB	Horizontal	100	270	--	--	Pass
6	819.58	36.51	6.69	-2.67	40.52	NRB	Horizontal	100	270	--	--	Pass
7	867.11	39.20	6.82	-2.18	43.84	NRB	Vertical	100	179	--	--	Pass
8	878.75	38.36	6.86	-2.20	43.03	NRB	Vertical	100	179	--	--	Pass
9	915.61	44.11	6.98	-1.75	49.34	Fundamental	Vertical	100	179	--	--	Pass
10	915.61	38.56	6.98	-1.75	43.79	Fundamental	Horizontal	100	330	46.0	-2.2	Pass
11	963.27	40.66	7.11	-1.09	46.68	MaxQP	Vertical	100	180	54.0	-7.3	Pass

Test Notes: SN: 2935662-23, GFSK, 915.2 MHz, 300 kbps Power Level 3

Non-Restricted Band (NRB)

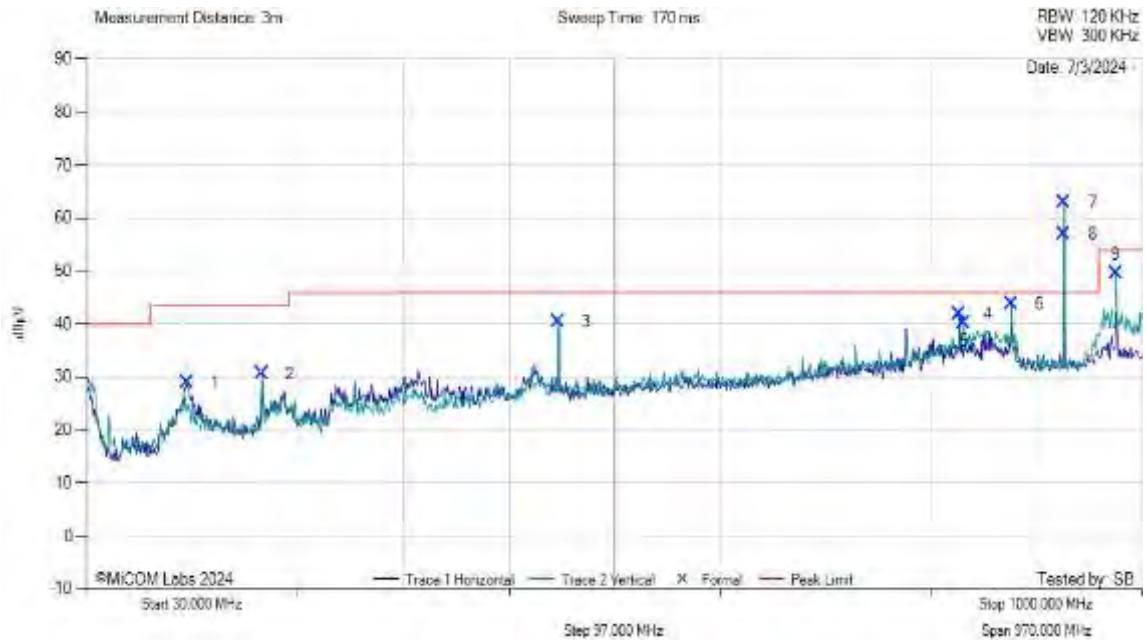
Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Integral	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	2.23	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



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	122.15	36.08	4.20	-11.33	28.95	NRB	Horizontal	199	270	--	--	Pass
2	191.02	39.66	4.55	-13.60	30.61	NRB	Vertical	101	0	--	--	Pass
3	463.59	42.26	5.56	-7.30	40.52	NRB	Vertical	100	210	--	--	Pass
4	832.19	37.70	6.72	-2.56	41.86	NRB	Vertical	100	179	--	--	Pass
5	836.07	36.07	6.72	-2.47	40.32	NRB	Vertical	100	179	--	--	Pass
6	879.72	39.21	6.87	-2.20	43.88	NRB	Vertical	100	149	--	--	Pass
7	928.22	57.60	7.00	-1.56	63.04	Fundamental	Vertical	100	210	--	--	Pass
8	928.22	51.62	7.00	-1.56	57.06	Fundamental	Horizontal	100	330	--	--	Pass
9	975.55	43.53	7.17	-1.08	49.62	MaxQP	Vertical	101	139	54.0	-4.4	Pass

Test Notes: SN: 2935662-23, GFSK, 927.6 MHz, 300 kbps Power Level 3

Non-Restricted Band (NRB)

1.5.2.3.4. GFSK Power Level 2 External Antenna

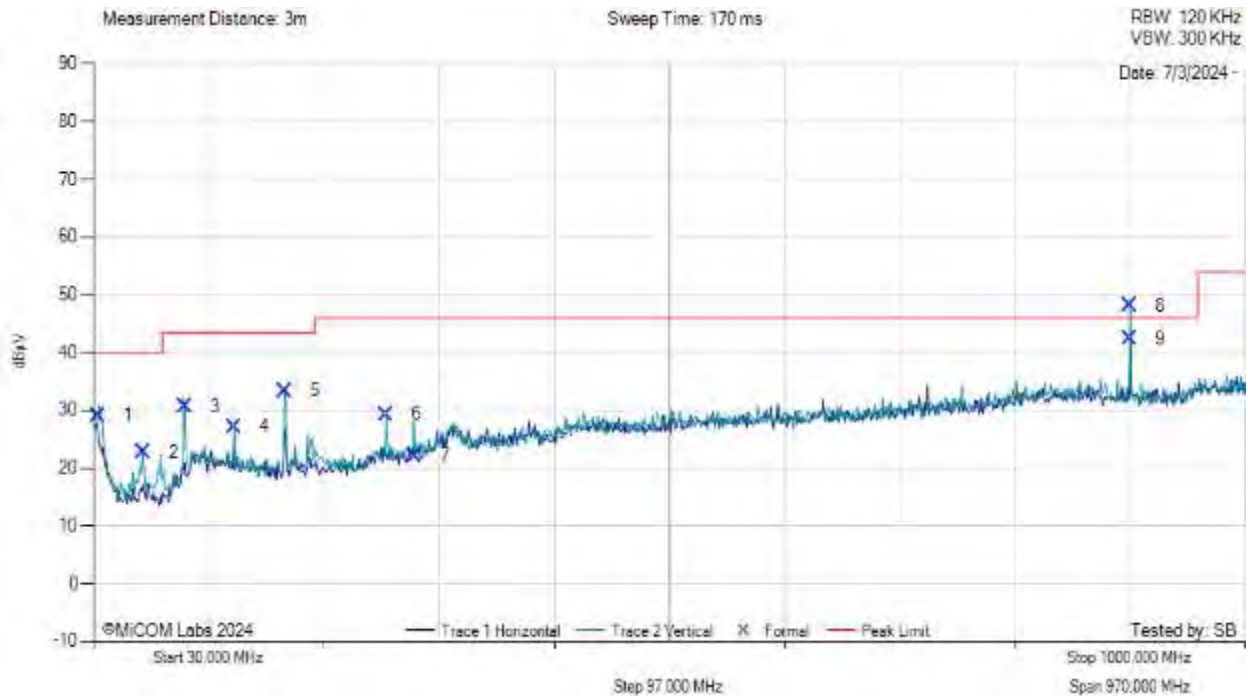
Equipment Configuration for 30 MHz TO 1 GHZ

Antenna:	External	Variant:	100W and 500W RMT&Pit
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



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	33.88	31.95	3.56	-6.39	29.12	NRB	Vertical	100	29	40.0	-10.9	Pass
2	71.71	35.59	3.90	-16.81	22.68	NRB	Vertical	199	119	40.0	-17.3	Pass
3	106.63	39.88	4.13	-13.43	30.58	NRB	Vertical	100	210	43.5	-12.9	Pass
4	148.34	35.61	4.34	-12.79	27.16	NRB	Vertical	100	239	43.5	-16.3	Pass
5	191.02	42.42	4.55	-13.60	33.37	NRB	Vertical	100	210	43.5	-10.1	Pass
6	276.38	35.71	4.90	-11.27	29.34	MaxP	Vertical	100	239	46.0	-16.7	Pass
7	300.63	28.35	5.00	-11.23	22.12	NRB	Vertical	100	210	46.0	-23.9	Pass
8	903.00	43.00	6.93	28.70	48.08	Fundamental	Vertical	100	--	--	-	Pass
9	903.00	37.29	6.93	28.70	42.37	Fundamental	Horizontal	100	--	--	-	Pass

Test Notes: SN: 2935662-23, GFSK, 902.4 MHz, 300 kbps Power Level 2
Non Restricted Band (NRB)

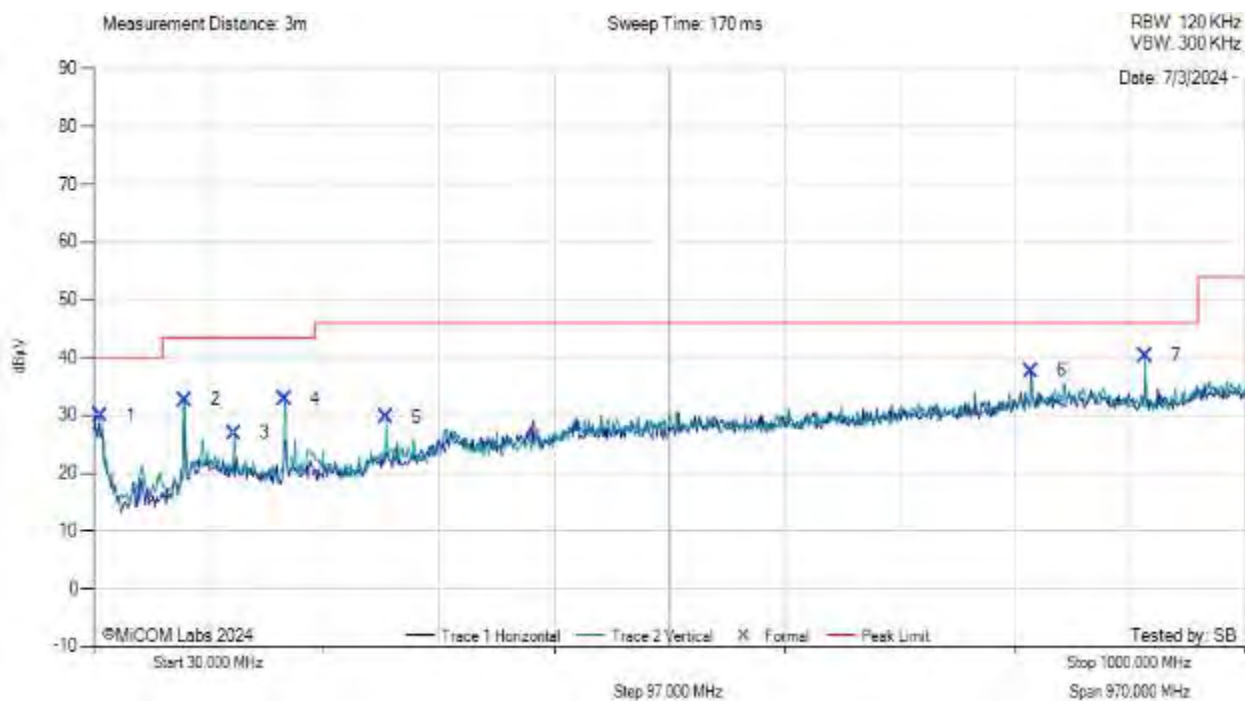
Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	External	Variant:	100W and 500W RMT&Pit
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



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	35.82	34.18	3.58	-7.88	29.88	NRB	Vertical	100	59	40.0	-10.1	Pass
2	106.63	41.95	4.13	-13.43	32.65	NRB	Vertical	100	239	43.5	-10.8	Pass
3	148.34	35.35	4.34	-12.79	26.90	NRB	Vertical	100	270	43.5	-16.6	Pass
4	191.02	41.87	4.55	-13.60	32.82	NRB	Vertical	100	209	43.5	-10.7	Pass
5	276.38	35.97	4.90	-11.27	29.61	MaxP	Vertical	100	239	46.0	-16.4	Pass
6	819.58	33.72	6.69	-2.67	37.74	NRB	Horizontal	100	90	46.0	-8.3	Pass
7	915.61	35.08	6.98	-1.75	40.31	Fundamental	Vertical	100	--	--	-	Pass

Test Notes: SN: 2935662-23, GFSK, 915.2 MHz, 300 kbps Power Level 2
 Non-Restricted Band (NRB)

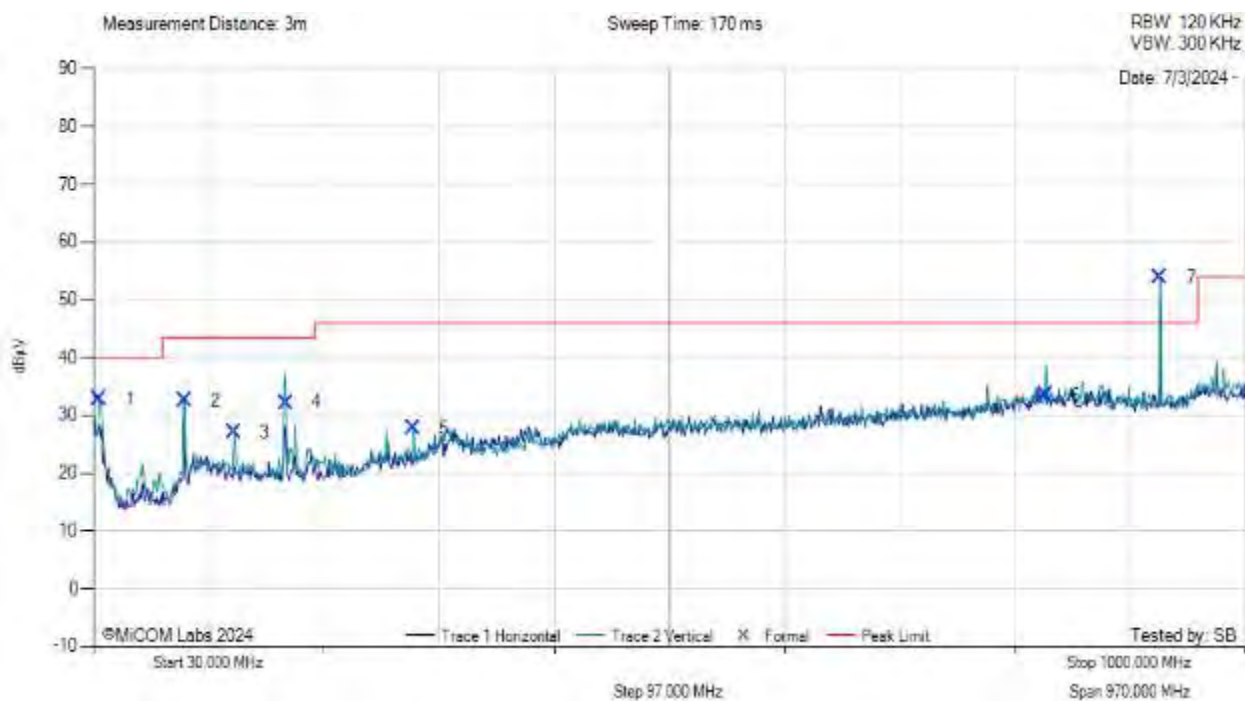
Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	External	Variant:	100W and 500W RMT&Pit
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



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	34.85	36.29	3.58	-7.12	32.75	NRB	Vertical	100	119	40.0	-7.2	Pass
2	106.63	41.88	4.13	-13.43	32.58	NRB	Vertical	100	210	43.5	-10.9	Pass
3	148.34	35.52	4.34	-12.79	27.07	NRB	Vertical	100	270	43.5	-16.4	Pass
4	191.99	41.16	4.55	-13.51	32.20	NRB	Vertical	199	210	43.5	-11.3	Pass
5	299.66	33.98	5.00	-11.25	27.73	NRB	Vertical	100	179	46.0	-18.3	Pass
6	831.22	29.43	6.72	-2.57	33.58	NRB	Vertical	199	210	46.0	-12.4	Pass
7	928.22	48.49	7.00	-1.56	53.93	Fundamental	Vertical	100	--	--	-	Pass

Test Notes: SN: 2935662-23, GFSK, 927.6 MHz, 300 kbps Power Level 2
Non-Restricted Band (NRB)

1.5.2.3.5. GFSK Power Level 3 External Antenna

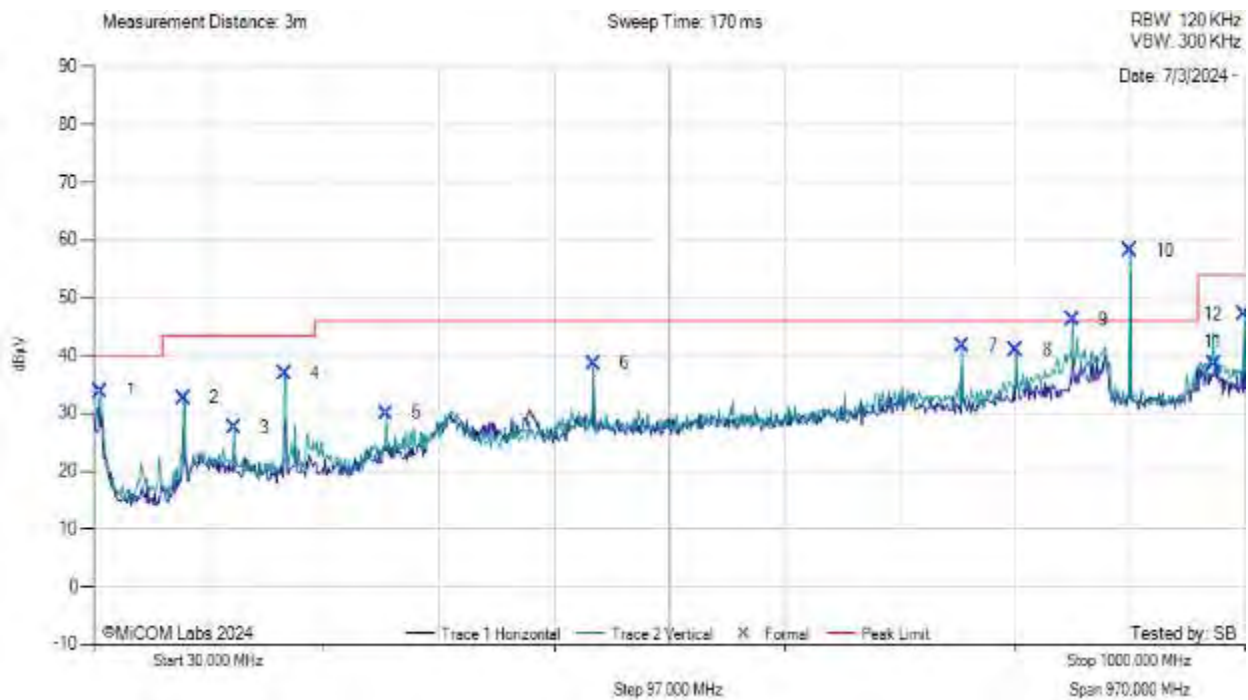
Equipment Configuration for 30 MHz TO 1 GHZ

Antenna:	External	Variant:	100W and 500W RMT&Pit
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



30 MHz to 1 GHz



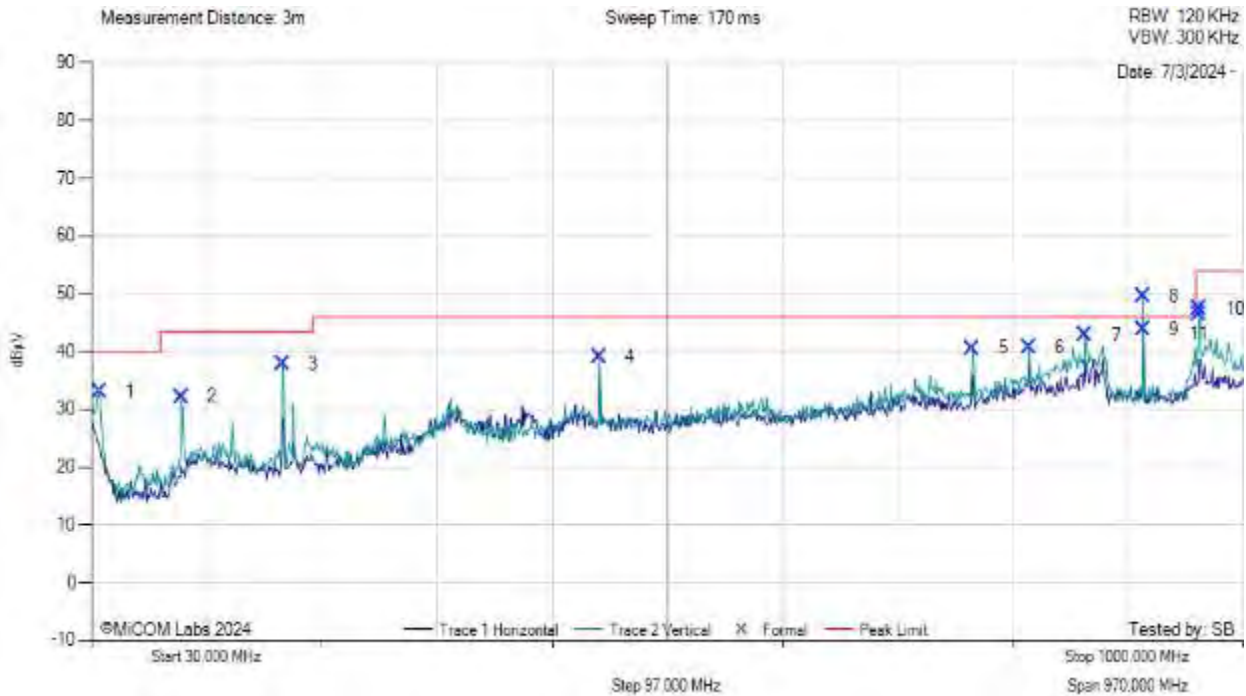
30.00 - 1000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	35.82	38.19	3.58	-7.88	33.90	NRB	Vertical	100	149	40.0	-6.1	Pass
2	105.66	42.20	4.12	-13.65	32.67	NRB	Vertical	100	179	43.5	-10.8	Pass
3	148.34	36.00	4.34	-12.79	27.55	NRB	Vertical	100	299	43.5	-15.9	Pass
4	191.02	45.97	4.55	-13.60	36.92	NRB	Vertical	100	209	43.5	-6.6	Pass
5	276.38	36.39	4.90	-11.27	30.02	MaxP	Vertical	100	239	46.0	-16.0	Pass
6	450.98	40.91	5.53	-7.79	38.65	NRB	Vertical	199	0	46.0	-7.4	Pass
7	761.38	38.92	6.50	-3.73	41.69	NRB	Vertical	100	209	46.0	-4.3	Pass
8	806.97	37.22	6.65	-2.92	40.95	NRB	Vertical	199	149	46.0	-5.1	Pass
9	854.50	41.81	6.79	-2.34	46.25	NRB	Vertical	100	--	--	-	Pass
10	903.00	53.18	6.93	28.70	58.26	Fundamental	Vertical	100	--	--	-	Pass
11	973.27	32.58	7.14	-1.07	38.65	MaxQP	Vertical	99	325	54.0	-15.4	Pass
12	998.49	40.92	7.22	-0.94	47.20	MaxQP	Vertical	109	93	54.0	-6.8	Pass

Test Notes: SN: 2935662-23, GFSK, 902.4 MHz, 300 kbps Power Level 3
Non-Restricted Band (NRB)

Equipment Configuration for 30 MHz TO 1 GHZ			
Antenna:	External	Variant:	100W and 500W RMT&Pit
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 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	36.79	38.00	3.59	-8.62	32.97	NRB	Vertical	100	89	40.0	-7.0	Pass
2	105.66	41.77	4.12	-13.65	32.24	NRB	Vertical	100	209	43.5	-11.3	Pass
3	191.02	46.85	4.55	-13.60	37.80	NRB	Vertical	100	209	43.5	-5.7	Pass
4	457.77	40.92	5.56	-7.49	38.99	NRB	Vertical	199	29	46.0	-7.0	Pass
5	772.05	37.65	6.57	-3.62	40.60	NRB	Vertical	100	179	46.0	-5.4	Pass
6	819.58	36.62	6.69	-2.67	40.64	NRB	Vertical	100	119	46.0	-5.4	Pass
7	867.11	38.19	6.82	-2.18	42.83	NRB	Vertical	100	149	46.0	-3.2	Pass
8	915.61	44.33	6.98	-1.75	49.56	Fundamental	Vertical	100	--	--	-	Pass
9	915.61	38.65	6.98	-1.75	43.88	Fundamental	Horizontal	100	270	46.0	-2.1	Pass
10	963.20	41.39	7.11	-1.09	47.41	MaxP	Vertical	99	180	54.0	-6.6	Pass
11	963.26	40.54	7.11	-1.09	46.56	MaxQP	Vertical	104	188	54.0	-7.4	Pass

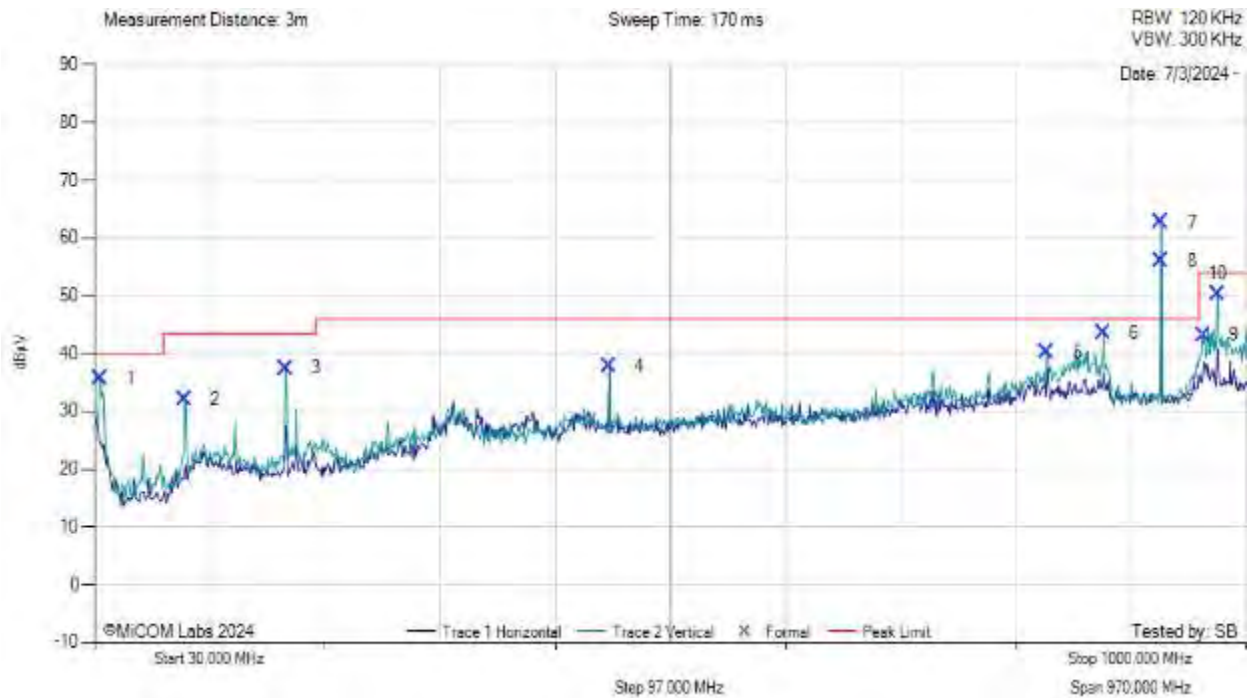
Test Notes: SN: 2935662-23, GFSK, 915.2 MHz, 300 kbps Power Level 3

Non-Restricted Band (NRB)

Equipment Configuration for 30 MHz TO 1 GHZ			
Antenna:	External	Variant:	100W and 500W RMT&Pit
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			



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	34.85	39.16	3.58	-7.12	35.62	NRB	Vertical	99	179	40.0	-4.4	Pass
2	105.66	41.58	4.12	-13.65	32.05	NRB	Vertical	99	210	43.5	-11.5	Pass
3	191.02	46.50	4.55	-13.60	37.45	NRB	Vertical	99	210	43.5	-6.1	Pass
4	463.59	39.55	5.56	-7.30	37.81	NRB	Vertical	199	0	46.0	-8.2	Pass
5	832.19	36.02	6.72	-2.56	40.18	NRB	Vertical	99	270	46.0	-5.8	Pass
6	879.72	38.87	6.87	-2.20	43.54	NRB	Vertical	99	179	46.0	-2.5	Pass
7	928.22	57.29	7.00	-1.56	62.73	Fundamental	Vertical	99	--	--	-	Pass
8	928.22	50.63	7.00	-1.56	56.07	Fundamental	Horizontal	99	--	--	-	Pass
9	963.86	37.21	7.11	-1.09	43.23	MaxQP	Vertical	100	154	54.0	-10.8	Pass
10	975.67	44.22	7.17	-1.08	50.31	MaxQP	Vertical	101	180	54.0	-3.7	Pass

Test Notes: SN: 2935662-23, GFSK, 927.6 MHz, 300 kbps Power Level 3

Non-Restricted Band (NRB)

1.5.2.3.6. OOK Power Level 3 External Antenna

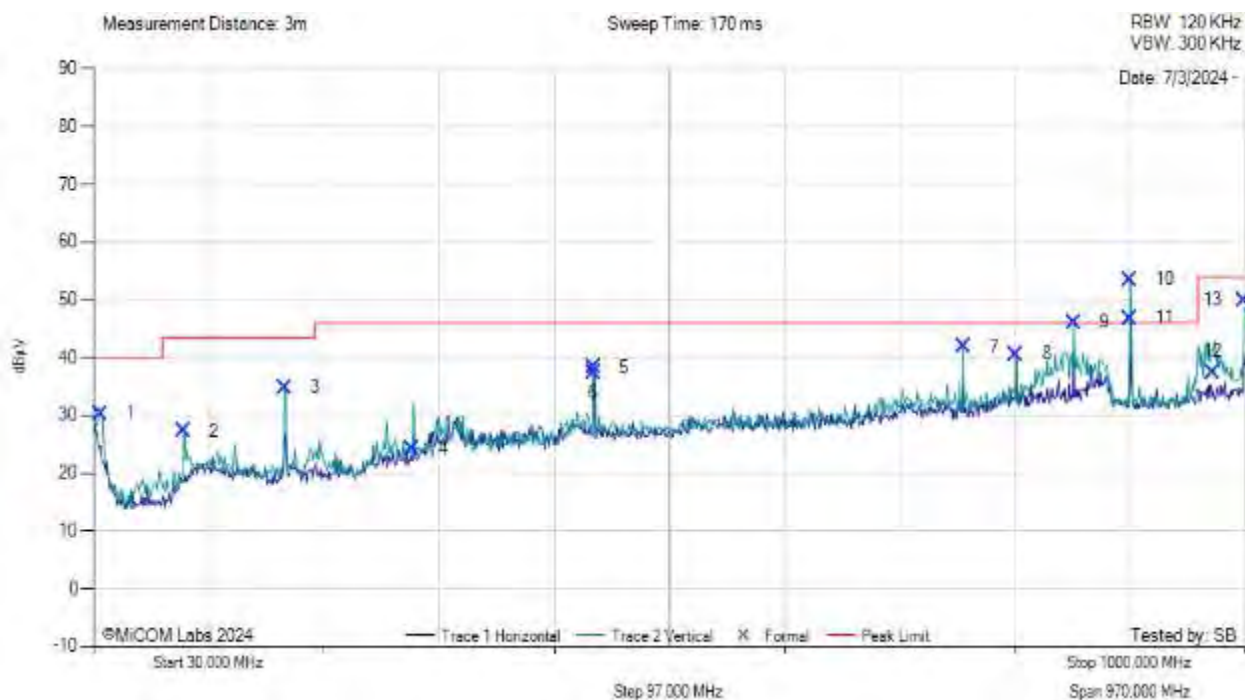
Equipment Configuration for 30 MHz TO 1 GHZ

Antenna:	External	Variant:	100W and 500W RMT&Pit
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



30 MHz to 1 GHz



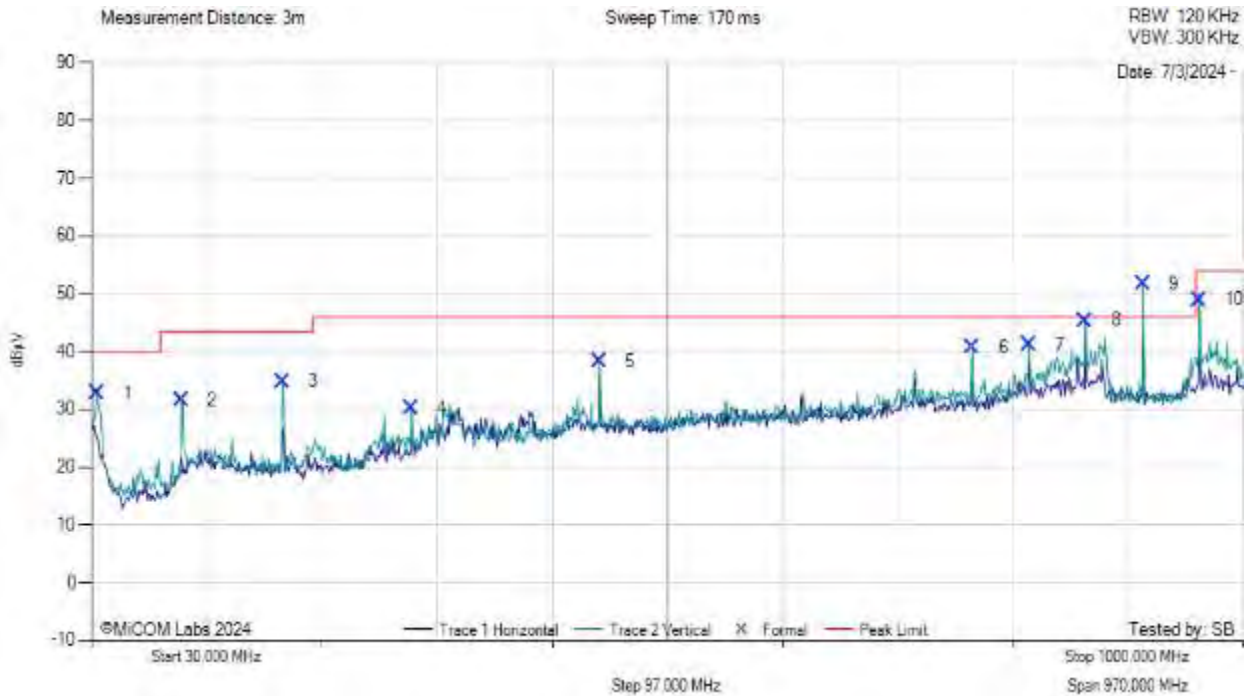
30.00 - 1000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	35.82	34.61	3.58	-7.88	30.31	NRB	Vertical	99	179	40.0	-9.7	Pass
2	105.66	36.83	4.12	-13.65	27.30	NRB	Vertical	99	89	43.5	-16.2	Pass
3	191.02	43.93	4.55	-13.60	34.87	NRB	Vertical	99	210	43.5	-8.6	Pass
4	298.69	30.43	4.99	-11.27	24.16	NRB	Vertical	99	210	46.0	-21.8	Pass
5	450.98	40.61	5.53	-7.79	38.35	NRB	Horizontal	199	120	46.0	-7.6	Pass
6	450.98	39.73	5.53	-7.79	37.47	NRB	Vertical	199	119	46.0	-8.5	Pass
7	762.35	39.13	6.50	-3.72	41.92	NRB	Vertical	99	299	46.0	-4.1	Pass
8	806.97	36.88	6.65	-2.92	40.61	NRB	Vertical	199	179	46.0	-5.4	Pass
9	855.47	41.66	6.78	-2.36	46.08	NRB	Vertical	99	--	--	-	Pass
10	903.00	48.48	6.93	28.70	53.56	Fundamental	Vertical	99	--	--	-	Pass
11	903.00	41.70	6.93	28.70	46.78	Fundamental	Horizontal	99	--	--	-	Pass
12	973.15	31.38	7.14	-1.07	37.45	MaxQP	Vertical	109	148	54.0	-16.6	Pass
13	999.00	43.67	7.23	-0.94	49.96	MaxQP	Vertical	100	160	54.0	-4.0	Pass

Test Notes: SN: 2935662-23, OOK, 903 MHz, 16.384 kbps Power Level 3
Non-Restricted Band (NRB)

Equipment Configuration for 30 MHz TO 1 GHZ			
Antenna:	External	Variant:	100W and 500W RMT&Pit
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			



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	34.85	36.30	3.58	-7.12	32.76	NRB	Vertical	99	179	40.0	-7.2	Pass
2	105.66	41.06	4.12	-13.65	31.53	NRB	Vertical	99	210	43.5	-12.0	Pass
3	191.02	43.93	4.55	-13.60	34.87	NRB	Vertical	99	210	43.5	-8.6	Pass
4	299.66	36.48	5.00	-11.25	30.24	NRB	Vertical	99	210	46.0	-15.8	Pass
5	457.77	40.18	5.56	-7.49	38.25	NRB	Horizontal	199	120	46.0	-7.8	Pass
6	772.05	37.68	6.57	-3.62	40.64	NRB	Vertical	99	29	46.0	-5.4	Pass
7	819.58	37.16	6.69	-2.67	41.17	NRB	Vertical	99	239	46.0	-4.8	Pass
8	867.11	40.72	6.82	-2.18	45.36	NRB	Vertical	99	149	46.0	-0.6	Pass
9	915.61	46.45	6.98	-1.75	51.68	Fundamental	Vertical	99	--	--	-	Pass
10	962.98	42.91	7.11	-1.09	48.93	MaxQP	Vertical	100	156	54.0	-5.1	Pass

Test Notes: SN: 2935662-23, OOK, 915 MHz, 16.384 kbps Power Level 3

Non Restricted Band (NRB)

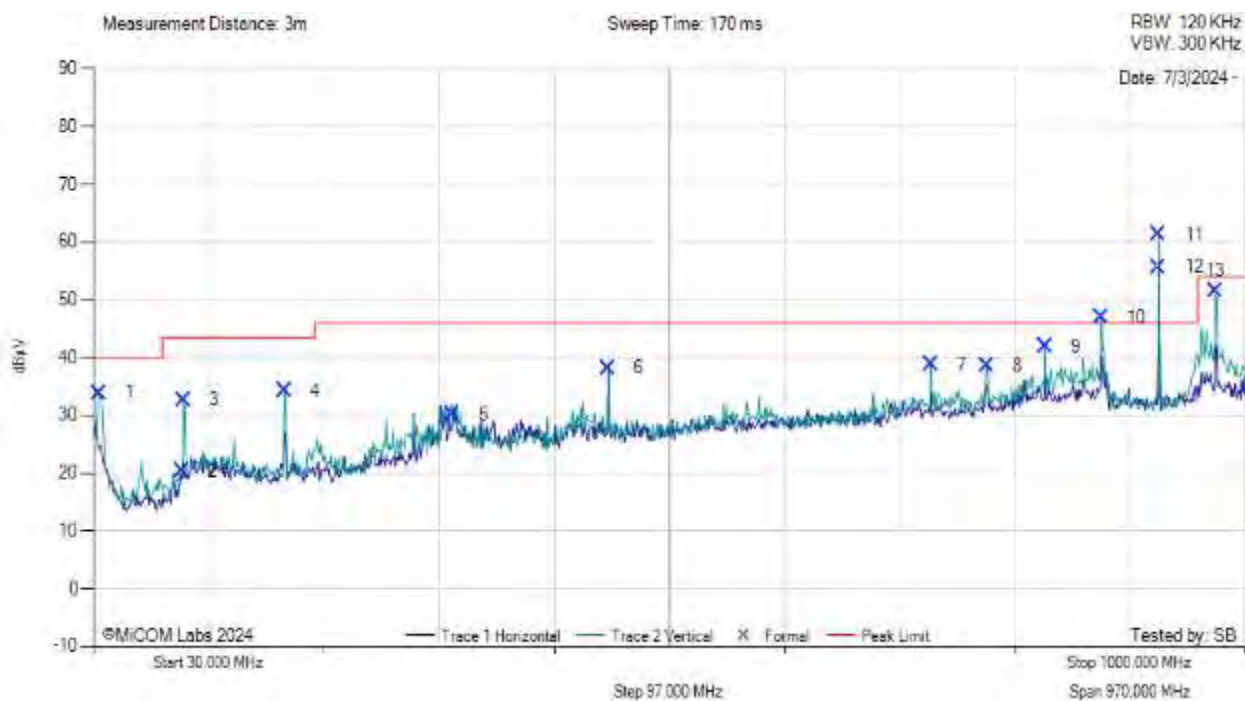
Equipment Configuration for 30 MHz TO 1 GHZ

Antenna:	External	Variant:	100W and 500W RMT&Pit
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



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	34.85	37.45	3.58	-7.12	33.91	NRB	Vertical	100	270	40.0	-6.1	Pass
2	104.69	30.06	4.11	-13.89	20.29	NRB	Vertical	100	0	43.5	-23.2	Pass
3	105.66	42.17	4.12	-13.65	32.64	NRB	Vertical	100	239	43.5	-10.9	Pass
4	191.02	43.22	4.55	-13.60	34.17	NRB	Vertical	100	210	43.5	-9.3	Pass
5	332.64	35.77	5.15	-10.81	30.11	MaxP	Vertical	100	149	46.0	-15.9	Pass
6	463.59	39.94	5.56	-7.30	38.21	NRB	Vertical	199	29	46.0	-7.8	Pass
7	735.19	36.11	6.42	-3.81	38.72	NRB	Vertical	100	299	46.0	-7.3	Pass
8	782.72	35.15	6.57	-3.25	38.48	NRB	Vertical	100	210	46.0	-7.5	Pass
9	831.22	37.75	6.72	-2.57	41.91	NRB	Vertical	100	149	46.0	-4.1	Pass
10	878.75	42.31	6.86	-2.20	46.98	NRB	Vertical	100	--	--	--	Pass
11	927.25	55.92	7.00	-1.55	61.38	Fundamental	Vertical	100	--	--	--	Pass
12	927.25	50.24	7.00	-1.55	55.70	Fundamental	Horizontal	100	--	--	--	Pass
13	974.79	45.44	7.16	-1.09	51.51	MaxQP	Vertical	101	173	54.0	-2.5	Pass

Test Notes: SN: 2935662-23, OOK, 926.8 MHz, 16.384 kbps Power Level 3
 Non-Restricted Band (NRB)

1.5.2.4. TX Spurious Emissions 1-18GHz

1.5.2.4.1. OOK Power Level 3 Integral Antenna

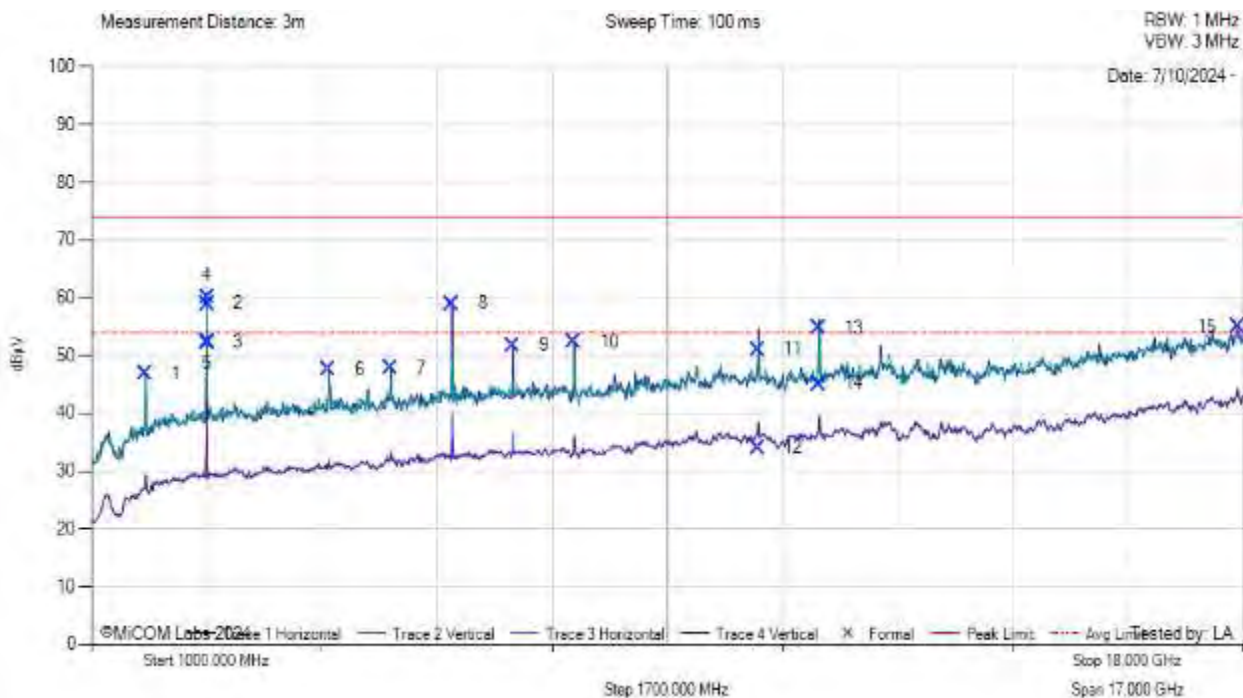
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	Internal	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	2.23	Modulation:	OOK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	903.0	Data Rate:	16.834 kbps
Power Setting:	Power Level 3	Tested By:	LA

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	1799.00	59.73	1.73	30.39	46.89	MaxP	Vertical	149	239	74.0	-27.1	Pass
2	2709.00	68.68	2.07	-11.77	58.98	MaxP	Horizontal	161	229	74.0	-15.0	Pass
3	2709.00	62.04	2.07	-11.77	52.34	AVG	Horizontal	161	229	54.0	-1.7	Pass
4	2709.04	69.83	2.07	-11.77	60.13	MaxP	Vertical	199	203	74.0	-13.9	Pass
5	2709.04	61.93	2.07	-11.77	52.23	AVG	Vertical	199	203	54.0	-1.8	Pass
6	4502.00	56.97	2.76	33.90	47.53	MaxP	Horizontal	199	210	74.0	-26.5	Pass
7	5420.00	56.26	3.08	34.50	47.78	MaxP	Horizontal	149	210	74.0	-26.2	Pass
8	6321.00	64.75	3.35	35.56	58.99	MaxP	Horizontal	199	240	74.0	-15.0	Pass
9	7222.00	56.08	3.57	35.91	51.77	MaxP	Horizontal	199	180	74.0	-22.2	Pass
10	8123.00	56.56	3.88	35.80	52.37	MaxP	Horizontal	199	210	74.0	-21.6	Pass
11	10836.13	51.19	4.57	-4.69	51.07	MaxP	Horizontal	158	88	74.0	-22.9	Pass
12	10836.13	34.21	4.57	-4.69	34.08	AVG	Horizontal	158	88	54.0	-19.9	Pass
13	11738.99	56.34	5.02	-6.52	54.84	MaxP	Horizontal	163	57	74.0	-19.2	Pass
14	11738.99	46.57	5.02	-6.52	45.07	AVG	Horizontal	163	57	54.0	-8.9	Pass
15	17915.00	47.07	6.67	41.55	55.03	MaxP	Vertical	199	30	74.0	-19.0	Pass
Test Notes: SN: 2935662-23, OOK, 903 MHz, 16.384 kbps, Power Level 3 (power setting 26 in script)												

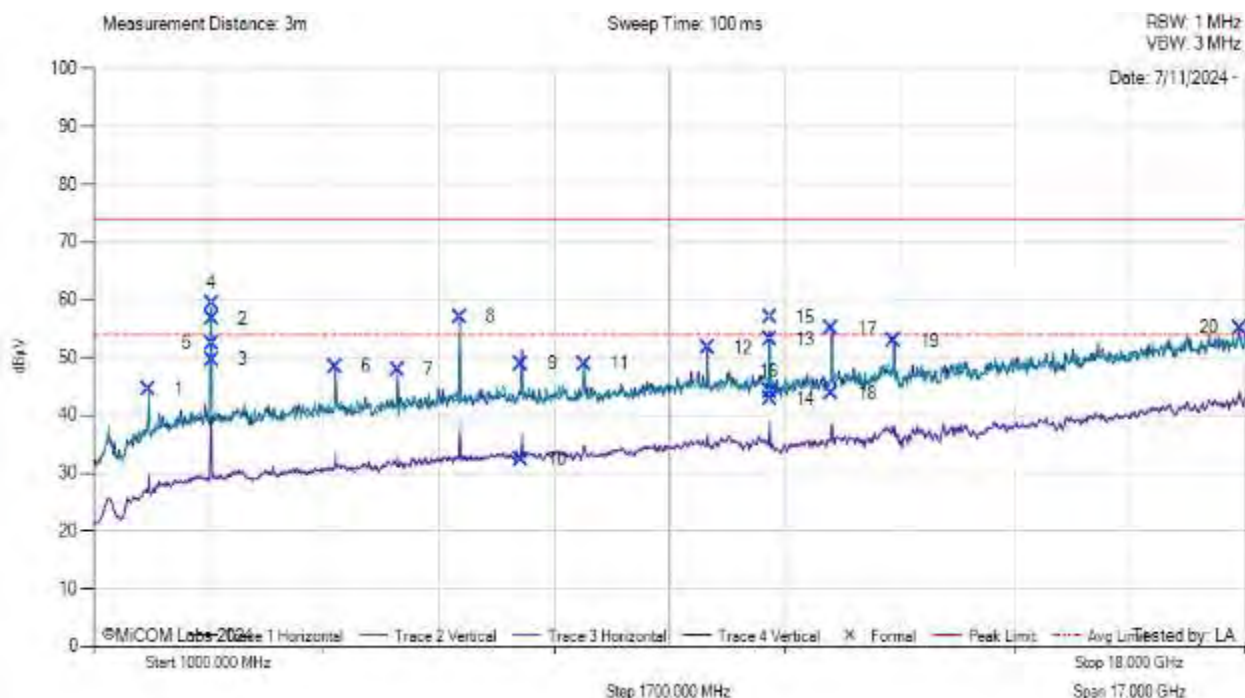
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	Internal	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	2.23	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:	LA

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	57.25	1.73	30.49	44.53	MaxP	Vertical	149	269	74.0	-29.5	Pass
2	2744.99	66.36	2.11	-11.74	56.73	MaxP	Horizontal	193	121	74.0	-17.3	Pass
3	2744.99	59.24	2.11	-11.74	49.61	AVG	Horizontal	193	121	54.0	-4.4	Pass
4	2745.00	68.94	2.11	-11.74	59.31	MaxP	Vertical	150	157	74.0	-14.7	Pass
5	2745.00	62.11	2.11	-11.74	52.48	AVG	Vertical	150	157	54.0	-1.5	Pass
6	4570.00	57.92	2.80	33.97	48.44	MaxP	Horizontal	149	240	74.0	-25.6	Pass
7	5488.00	56.72	3.10	34.53	47.98	MaxP	Horizontal	199	180	74.0	-26.0	Pass
8	6406.00	62.61	3.36	35.59	57.03	MaxP	Horizontal	199	150	74.0	-17.0	Pass
9	7319.88	52.95	3.75	-7.78	48.92	MaxP	Horizontal	196	178	74.0	-25.1	Pass
10	7319.88	36.38	3.75	-7.78	32.34	AVG	Horizontal	196	178	54.0	-21.7	Pass
11	8242.00	53.12	3.87	35.76	48.90	MaxP	Vertical	199	239	74.0	-25.1	Pass
12	10061.00	52.96	4.25	37.41	51.62	MaxP	Horizontal	149	120	74.0	-22.4	Pass
13	10980.00	53.68	4.60	-5.18	53.10	MaxP	Vertical	199	247	74.0	-20.9	Pass
14	10980.00	43.38	4.60	-5.18	42.81	AVG	Vertical	199	247	54.0	-11.2	Pass
15	10980.07	57.44	4.60	-5.18	56.86	MaxP	Horizontal	155	119	74.0	-17.1	Pass
16	10980.07	44.63	4.60	-5.18	44.05	AVG	Horizontal	155	119	54.0	-9.9	Pass
17	11894.95	56.30	4.95	-6.16	55.09	MaxP	Horizontal	171	61	74.0	-18.9	Pass
18	11894.95	44.91	4.95	-6.16	43.70	AVG	Horizontal	171	61	54.0	-10.3	Pass
19	12815.00	56.15	5.01	39.15	52.88	MaxP	Horizontal	149	210	74.0	-21.1	Pass
20	17915.00	47.15	6.67	41.55	55.11	MaxP	Horizontal	149	120	74.0	-18.9	Pass

Test Notes: SN: 2935662-23, OOK, 915 MHz, 16.384kbps, Power Level 3 (power setting 27 in script)

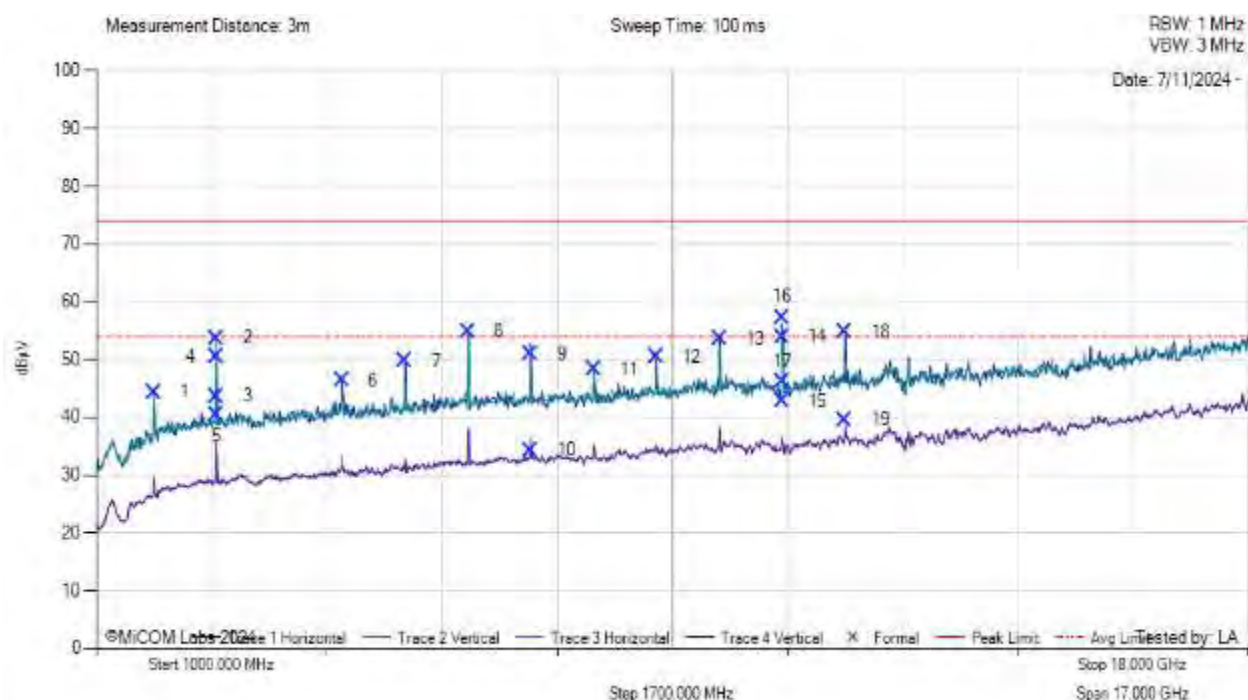
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	Internal	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	2.23	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:	LA

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	56.83	1.70	30.70	44.35	MaxP	Vertical	149	269	74.0	-29.7	Pass
2	2780.45	63.40	2.13	-11.79	53.74	MaxP	Vertical	150	163	74.0	-20.3	Pass
3	2780.45	53.28	2.13	-11.79	43.62	AVG	Vertical	150	163	54.0	-10.4	Pass
4	2780.45	60.13	2.13	-11.79	50.47	MaxP	Horizontal	154	31	74.0	-23.5	Pass
5	2780.45	50.12	2.13	-11.79	40.46	AVG	Horizontal	154	31	54.0	-13.5	Pass
6	4621.00	55.74	2.77	34.00	46.35	MaxP	Horizontal	199	150	74.0	-27.7	Pass
7	5556.00	57.95	3.17	34.54	49.81	MaxP	Horizontal	199	210	74.0	-24.2	Pass
8	6491.00	60.44	3.41	35.64	54.93	MaxP	Vertical	199	209	74.0	-19.1	Pass
9	7414.51	55.02	3.76	-7.80	50.98	MaxP	Horizontal	193	233	74.0	-23.0	Pass
10	7414.51	38.34	3.76	-7.80	34.30	AVG	Horizontal	193	233	54.0	-19.7	Pass
11	8344.00	52.52	3.91	35.75	48.31	MaxP	Vertical	149	119	74.0	-25.7	Pass
12	9262.00	53.27	4.21	36.33	50.49	MaxP	Horizontal	199	150	74.0	-23.5	Pass
13	10197.00	54.46	4.37	37.46	53.55	MaxP	Horizontal	199	150	74.0	-20.4	Pass
14	11121.62	55.06	4.51	-5.61	53.96	MaxP	Vertical	195	0	74.0	-20.0	Pass
15	11121.62	43.85	4.51	-5.61	42.74	AVG	Vertical	195	0	54.0	-11.3	Pass
16	11121.63	58.36	4.51	-5.61	57.26	MaxP	Horizontal	149	112	74.0	-16.7	Pass
17	11121.63	47.24	4.51	-5.61	46.14	AVG	Horizontal	149	112	54.0	-7.9	Pass
18	12048.50	55.71	4.71	-5.61	54.81	MaxP	Horizontal	166	62	74.0	-19.2	Pass
19	12048.50	40.42	4.71	-5.61	39.52	AVG	Horizontal	166	62	54.0	-14.5	Pass
Test Notes: SN: 2935662-23, OOK, 926.8 MHz, 16.384kbps, Power Level 3 (power setting 27 in script)												

1.5.2.4.2. GFSK Power Level 2 Integral Antenna

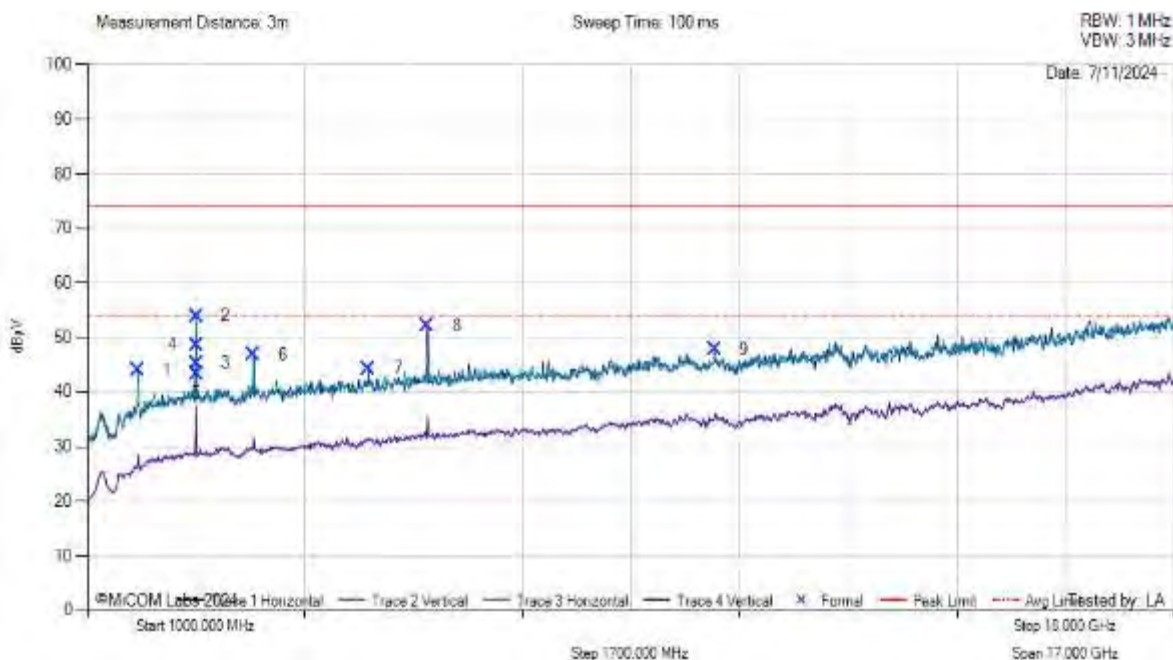
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	Internal	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	2.23	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:	LA

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	1799.00	56.85	1.73	30.39	44.01	MaxP	Vertical	150	209	74.0	-30.0	Pass
2	2706.95	63.60	2.06	-11.76	53.90	MaxP	Vertical	175	202	74.0	-20.1	Pass
3	2706.95	55.02	2.06	-11.76	45.32	AVG	Vertical	175	202	54.0	-8.7	Pass
4	2707.05	58.33	2.06	-11.76	48.62	MaxP	Horizontal	175	123	74.0	-25.4	Pass
5	2707.05	53.08	2.06	-11.76	43.38	AVG	Horizontal	175	123	54.0	-10.6	Pass
6	3601.00	56.30	2.41	33.09	46.90	MaxP	Horizontal	199	270	74.0	-27.1	Pass
7	5403.00	53.21	3.07	34.49	44.36	MaxP	Vertical	199	149	74.0	-29.6	Pass
8	6321.00	57.97	3.35	35.56	52.21	MaxP	Horizontal	199	210	74.0	-21.8	Pass
9	10809.00	47.77	4.70	37.76	47.81	MaxP	Vertical	199	299	74.0	-26.2	Pass

Test Notes: SN: 2935662-23, GFSK, 902.4 MHz, 300kbps, Power Level 2

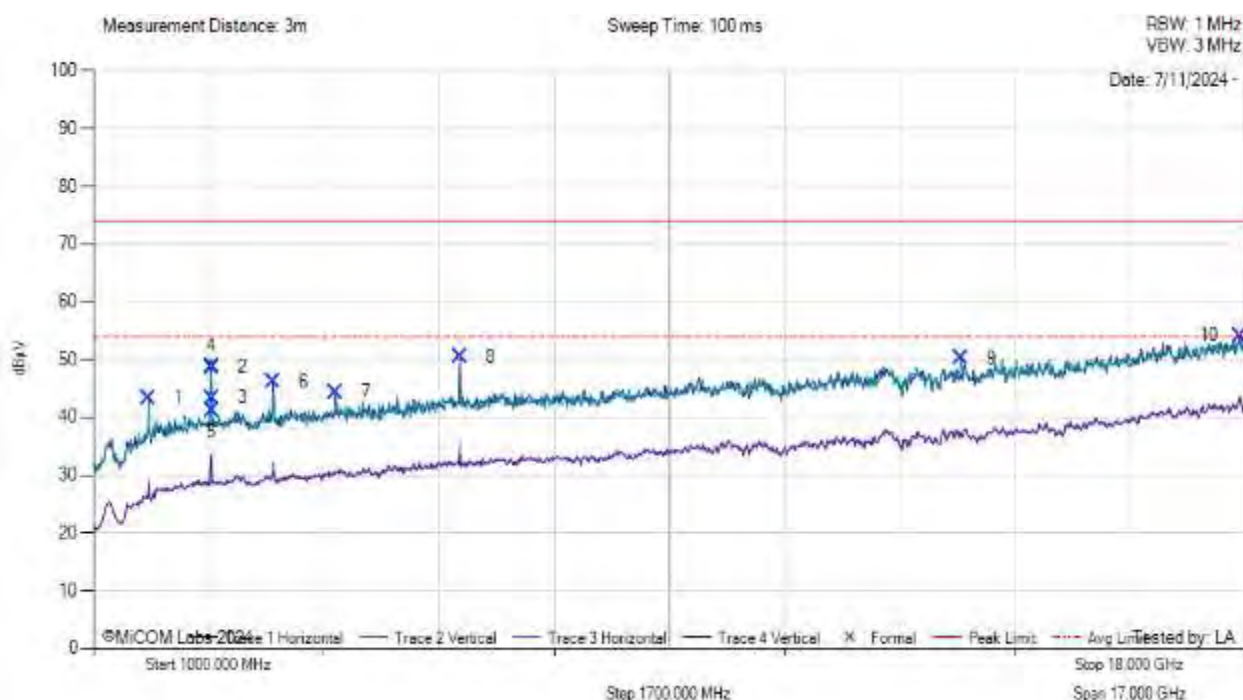
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	Internal	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	2.23	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:	LA

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	56.10	1.73	30.49	43.38	MaxP	Vertical	150	239	74.0	-30.6	Pass
2	2745.44	58.43	2.11	-11.74	48.80	MaxP	Vertical	152	157	74.0	-25.2	Pass
3	2745.44	53.04	2.11	-11.74	43.41	AVG	Vertical	152	157	54.0	-10.6	Pass
4	2745.80	58.28	2.11	-11.74	48.65	MaxP	Horizontal	195	120	74.0	-25.4	Pass
5	2745.80	50.73	2.11	-11.74	41.10	AVG	Horizontal	195	120	54.0	-12.9	Pass
6	3652.00	55.46	2.43	33.22	46.16	MaxP	Horizontal	150	120	74.0	-27.8	Pass
7	4570.00	53.83	2.80	33.97	44.36	MaxP	Horizontal	199	210	74.0	-29.6	Pass
8	6406.00	56.12	3.36	35.59	50.54	MaxP	Horizontal	199	210	74.0	-23.5	Pass
9	13801.00	51.75	5.30	39.08	50.19	MaxP	Vertical	150	269	74.0	-23.8	Pass
10	17915.00	46.21	6.67	41.55	54.17	MaxP	Vertical	199	119	74.0	-19.8	Pass

Test Notes: SN: 2935662-23, GFSK, 915.2 MHz, 300kbps, Power Level 2

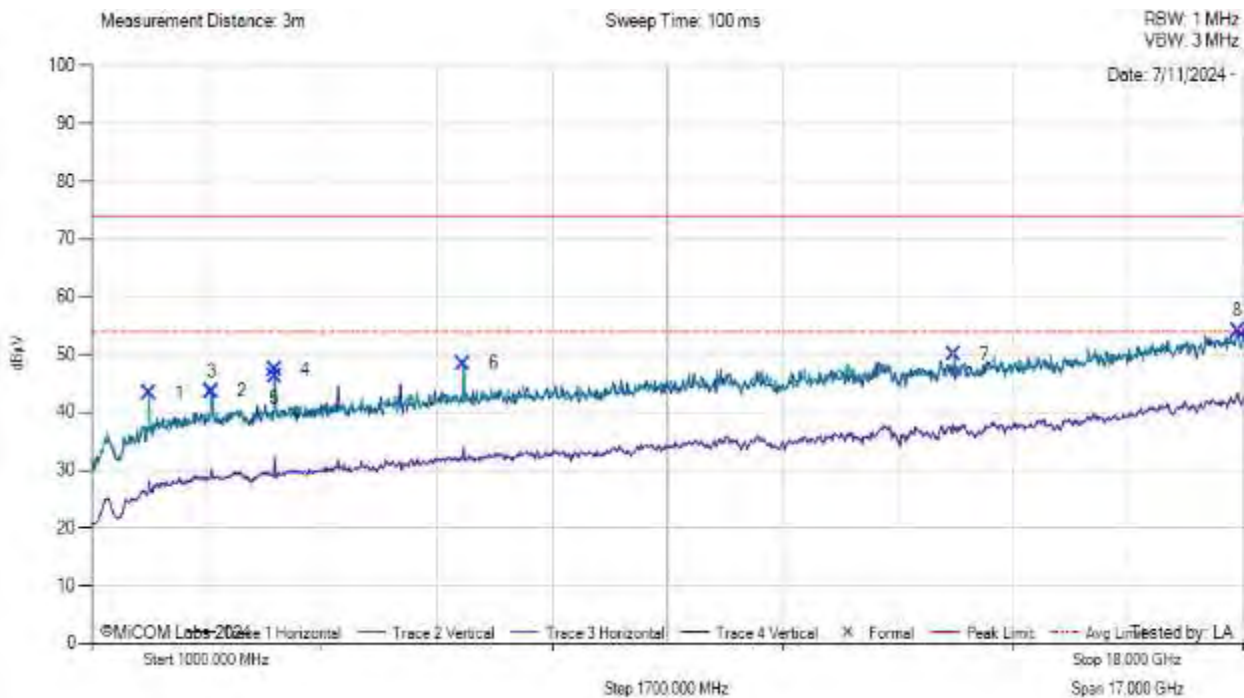
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	Internal	Variant:	100W and 500W RMT and Pit
Antenna Gain (dBi):	2.23	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:	LA

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	55.77	1.70	30.70	43.29	MaxP	Vertical	199	149	74.0	-30.7	Pass
2	2768.00	53.26	2.16	32.47	43.67	MaxP	Vertical	151	179	74.0	-30.3	Pass
3	2768.00	53.11	2.16	32.47	43.53	MaxP	Horizontal	199	30	74.0	-30.5	Pass
4	3703.00	56.63	2.47	33.35	47.31	MaxP	Horizontal	199	210	74.0	-26.7	Pass
5	3703.00	55.47	2.47	33.35	46.14	MaxP	Vertical	199	179	74.0	-27.9	Pass
6	6491.00	53.93	3.41	35.64	48.42	MaxP	Horizontal	199	180	74.0	-25.6	Pass
7	13733.00	50.83	5.58	39.09	49.92	MaxP	Vertical	199	0	74.0	-24.1	Pass
8	17915.00	46.14	6.67	41.55	54.09	MaxP	Vertical	199	89	74.0	-19.9	Pass

Test Notes: SN: 2935662-23, GFSK, 927.6 MHz, 300kbps, Power Level 2

1.5.2.4.3. GFSK Power Level 3 Integral Antenna

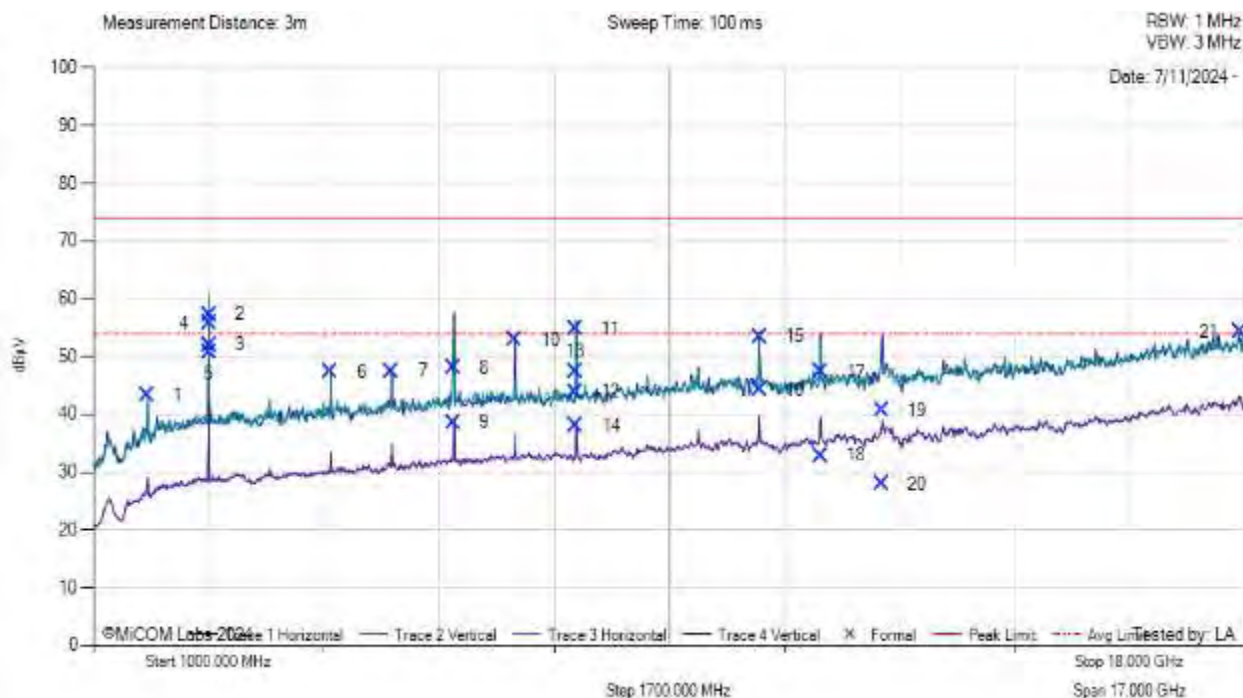
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	Internal	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	2.23	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:	LA

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	1799.00	56.14	1.73	30.39	43.30	MaxP	Vertical	199	59	74.0	-30.7	Pass
2	2707.34	66.95	2.06	-11.76	57.25	MaxP	Vertical	175	199	74.0	-16.8	Pass
3	2707.34	61.73	2.06	-11.76	52.03	AVG	Vertical	175	199	54.0	-2.0	Pass
4	2707.36	65.48	2.06	-11.76	55.78	MaxP	Horizontal	175	121	74.0	-18.2	Pass
5	2707.36	60.41	2.06	-11.76	50.71	AVG	Horizontal	175	121	54.0	-3.3	Pass
6	4502.00	56.75	2.76	33.90	47.32	MaxP	Horizontal	199	180	74.0	-26.7	Pass
7	5403.00	56.29	3.07	34.49	47.43	MaxP	Horizontal	199	210	74.0	-26.6	Pass
8	6317.01	53.74	3.36	-9.10	48.00	MaxP	Horizontal	198	211	74.0	-26.0	Pass
9	6317.01	44.37	3.36	-9.10	38.63	AVG	Horizontal	198	211	54.0	-15.4	Pass
10	7222.00	57.20	3.57	35.91	52.90	MaxP	Horizontal	199	210	74.0	-21.1	Pass
11	8120.85	58.94	3.87	-8.10	54.71	MaxP	Horizontal	196	213	74.0	-19.3	Pass
12	8120.85	48.11	3.87	-8.10	43.89	AVG	Horizontal	196	213	54.0	-10.1	Pass
13	8122.11	51.52	3.87	-8.08	47.31	MaxP	Vertical	162	133	74.0	-26.7	Pass
14	8122.11	42.24	3.87	-8.08	38.03	AVG	Vertical	162	133	54.0	-16.0	Pass
15	10829.69	53.24	4.77	-4.59	53.43	MaxP	Horizontal	154	115	74.0	-20.6	Pass
16	10829.69	44.06	4.77	-4.59	44.25	AVG	Horizontal	154	115	54.0	-9.8	Pass
17	11730.07	48.73	5.01	-6.47	47.28	MaxP	Horizontal	189	116	74.0	-26.7	Pass
18	11730.07	34.33	5.01	-6.47	32.87	AVG	Horizontal	189	116	54.0	-21.1	Pass
19	12634.95	42.45	5.23	-7.03	40.65	MaxP	Horizontal	176	100	74.0	-33.3	Pass
20	12634.95	29.78	5.23	-7.03	27.99	AVG	Horizontal	176	100	54.0	-26.0	Pass
21	17915.00	46.41	6.67	41.55	54.37	MaxP	Vertical	151	0	74.0	-20.7	Pass

Test Notes: SN: 2935662-23, GFSK, 902.4 MHz, 300kbps, Power Level 3 (Power Setting 25 in script)

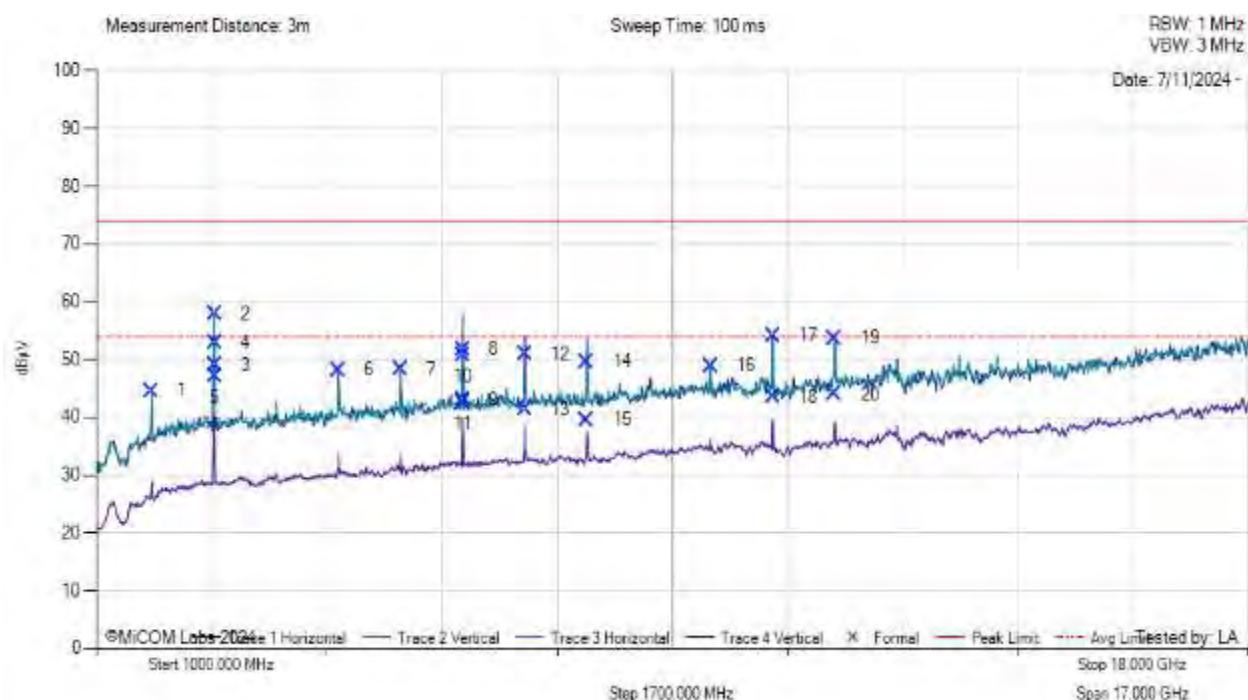
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	Internal	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	2.23	Modulation:	GFSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	915.2	Data Rate:	300 kbps
Power Setting:	Power Level 3	Tested By:	LA

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	57.32	1.73	30.49	44.60	MaxP	Vertical	199	0	74.0	-29.4	Pass
2	2745.33	67.46	2.11	-11.74	57.83	MaxP	Vertical	150	155	74.0	-16.2	Pass
3	2745.33	58.73	2.11	-11.74	49.10	AVG	Vertical	150	155	54.0	-4.9	Pass
4	2745.47	62.50	2.11	-11.74	52.87	MaxP	Horizontal	193	121	74.0	-21.1	Pass
5	2745.47	56.78	2.11	-11.74	47.15	AVG	Horizontal	193	121	54.0	-6.9	Pass
6	4570.00	57.68	2.80	33.97	48.21	MaxP	Horizontal	199	210	74.0	-25.8	Pass
7	5488.00	56.99	3.10	34.53	48.25	MaxP	Horizontal	199	210	74.0	-25.7	Pass
8	6406.02	57.37	3.36	-8.95	51.79	MaxP	Vertical	152	270	74.0	-22.2	Pass
9	6406.02	48.57	3.36	-8.95	42.99	AVG	Vertical	152	270	54.0	-11.0	Pass
10	6406.11	56.34	3.36	-8.95	50.75	MaxP	Horizontal	194	163	74.0	-23.2	Pass
11	6406.11	48.07	3.36	-8.95	42.49	AVG	Horizontal	194	163	54.0	-11.5	Pass
12	7321.05	54.96	3.75	-7.78	50.93	MaxP	Horizontal	180	201	74.0	-23.1	Pass
13	7321.05	45.39	3.75	-7.78	41.36	AVG	Horizontal	180	201	54.0	-12.6	Pass
14	8237.33	53.81	3.90	-8.06	49.65	MaxP	Vertical	198	136	74.0	-24.3	Pass
15	8237.33	43.72	3.90	-8.06	39.56	AVG	Vertical	198	136	54.0	-14.4	Pass
16	10061.00	50.28	4.25	37.41	48.94	MaxP	Horizontal	199	300	74.0	-25.1	Pass
17	10983.20	54.77	4.54	-5.10	54.21	MaxP	Horizontal	152	109	74.0	-19.8	Pass
18	10983.20	44.06	4.54	-5.10	43.50	AVG	Horizontal	152	109	54.0	-10.5	Pass
19	11898.54	54.80	5.02	-6.13	53.69	MaxP	Horizontal	193	116	74.0	-20.3	Pass
20	11898.54	45.13	5.02	-6.13	44.02	AVG	Horizontal	193	116	54.0	-10.0	Pass
Test Notes: SN: 2935662-23, GFSK, 915.2 MHz, 300kbps, Power Level 3 (Power Setting 27 in script)												

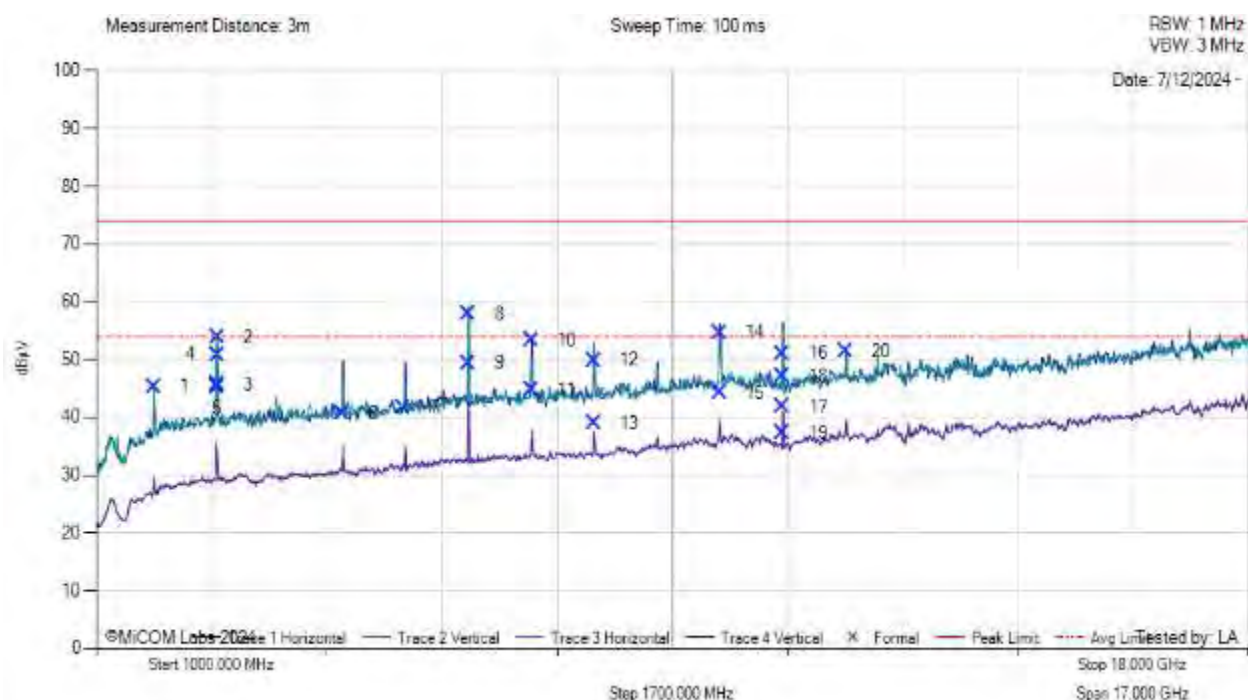
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	Internal	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	2.23	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:	LA

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	57.75	1.70	30.70	45.27	MaxP	Vertical	199	269	74.0	-28.7	Pass
2	2782.57	63.44	2.12	-11.78	53.78	MaxP	Vertical	164	156	74.0	-20.2	Pass
3	2782.57	55.33	2.12	-11.78	45.67	AVG	Vertical	164	156	54.0	-8.3	Pass
4	2782.95	60.49	2.12	-11.78	50.83	MaxP	Horizontal	191	122	74.0	-23.2	Pass
5	2782.95	54.79	2.12	-11.78	45.14	AVG	Horizontal	191	122	54.0	-8.9	Pass
6	4621.00	50.07	2.77	34.00	40.68	MaxP	Horizontal	199	60	74.0	-33.3	Pass
7	5539.00	49.67	3.12	34.54	41.76	MaxP	Horizontal	199	30	74.0	-32.2	Pass
8	6493.71	63.42	3.42	-8.92	57.93	MaxP	Vertical	197	194	74.0	-16.1	Pass
9	6493.71	54.87	3.42	-8.92	49.37	AVG	Vertical	197	194	54.0	-4.6	Pass
10	7421.39	57.40	3.76	-7.84	53.32	MaxP	Horizontal	196	211	74.0	-20.7	Pass
11	7421.39	48.80	3.76	-7.84	44.71	AVG	Horizontal	196	211	54.0	-9.3	Pass
12	8349.12	54.06	3.92	-8.15	49.83	MaxP	Horizontal	171	148	74.0	-24.2	Pass
13	8349.12	43.21	3.92	-8.15	38.97	AVG	Horizontal	171	148	54.0	-15.0	Pass
14	10202.84	55.62	4.43	-5.39	54.66	MaxP	Horizontal	161	114	74.0	-19.3	Pass
15	10202.84	45.25	4.43	-5.39	44.29	AVG	Horizontal	161	114	54.0	-9.7	Pass
16	11130.47	52.30	4.55	-5.82	51.03	MaxP	Horizontal	154	111	74.0	-23.0	Pass
17	11130.47	43.13	4.55	-5.82	41.86	AVG	Horizontal	154	111	54.0	-12.1	Pass
18	11130.57	48.45	4.56	-5.82	47.18	MaxP	Vertical	195	234	74.0	-26.8	Pass
19	11130.57	38.60	4.56	-5.82	37.33	AVG	Vertical	195	234	54.0	-16.7	Pass
20	12067.00	52.17	4.90	38.92	51.48	MaxP	Vertical	199	269	74.0	-22.5	Pass
Test Notes: SN: 2935662-23, GFSK, 927.6 MHz, 300kbps, Power Level 3 (Power Setting 27 in script)												

1.5.2.4.4. GFSK Power Level 2 External Antenna

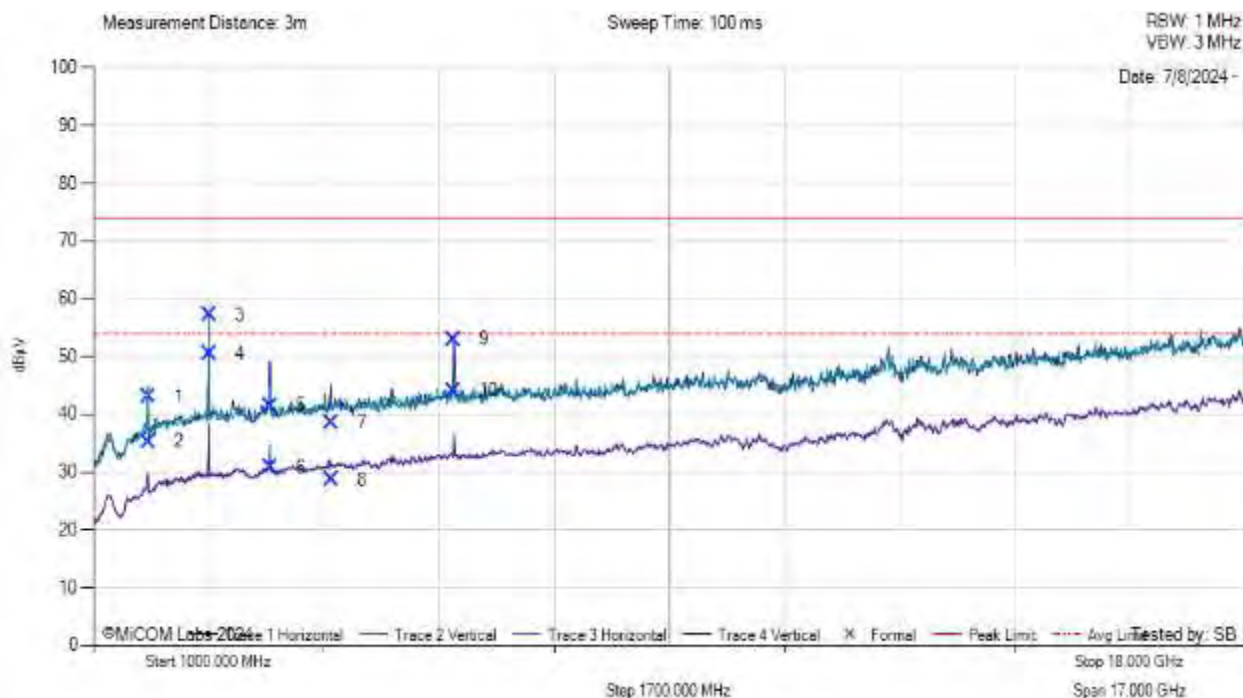
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	External	Variant:	100W and 500W RMT&Pit
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

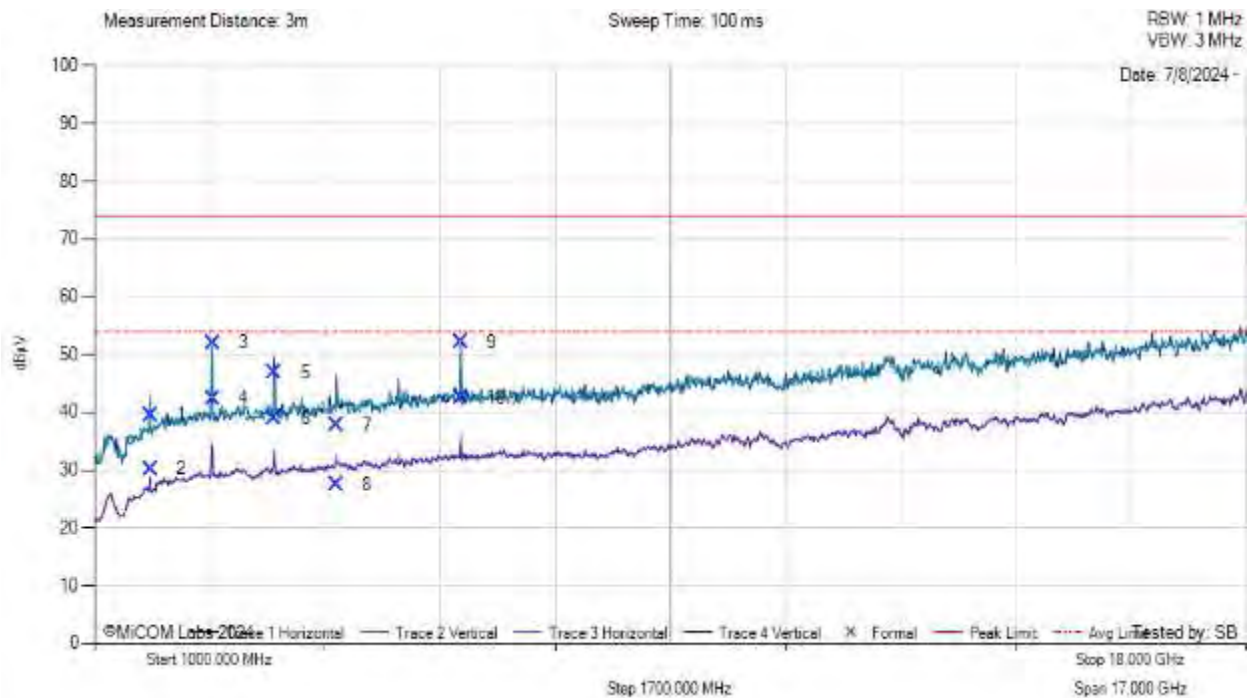


1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	1804.97	55.82	1.71	-14.54	42.99	MaxP	Vertical	148	209	74.0	-31.0	Pass
2	1804.97	48.11	1.71	-14.54	35.28	AVG	Vertical	148	209	54.0	-18.7	Pass
3	2707.01	66.80	2.06	-11.76	57.10	MaxP	Vertical	148	150	74.0	-16.9	Pass
4	2707.01	60.22	2.06	-11.76	50.52	AVG	Vertical	148	150	54.0	-3.5	Pass
5	3609.99	50.89	2.43	-11.82	41.50	MaxP	Horizontal	198	203	74.0	-32.5	Pass
6	3609.99	40.28	2.43	-11.82	30.89	AVG	Horizontal	198	203	54.0	-23.1	Pass
7	4512.13	47.93	2.78	-12.13	38.58	MaxP	Horizontal	173	193	74.0	-35.4	Pass
8	4512.13	37.94	2.78	-12.13	28.59	AVG	Horizontal	173	193	54.0	-25.4	Pass
9	6316.30	58.70	3.36	-9.10	52.97	MaxP	Horizontal	150	208	74.0	-21.0	Pass
10	6316.30	49.86	3.36	-9.10	44.13	AVG	Horizontal	150	208	54.0	-9.9	Pass
Test Notes: SN: 2935662-23, GFSK, 902.4 MHz, 300 kbps, Power Level 2												

Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ			
Antenna:	External	Variant:	100W and 500W RMT&Pit
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 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	1830.18	52.17	1.75	-14.36	39.57	MaxP	Vertical	193	170	74.0	-34.4	Pass
2	1830.18	42.86	1.75	-14.36	30.25	AVG	Vertical	193	170	54.0	-23.8	Pass
3	2745.35	61.66	2.11	-11.74	52.03	MaxP	Vertical	154	139	74.0	-22.0	Pass
4	2745.35	52.11	2.11	-11.74	42.48	AVG	Vertical	154	139	54.0	-11.5	Pass
5	3660.56	56.14	2.41	-11.66	46.90	MaxP	Horizontal	178	212	74.0	-27.1	Pass
6	3660.56	48.25	2.41	-11.66	39.00	AVG	Horizontal	178	212	54.0	-15.0	Pass
7	4576.07	47.21	2.81	-12.25	37.77	MaxP	Horizontal	177	208	74.0	-36.2	Pass
8	4576.07	36.91	2.81	-12.25	27.47	AVG	Horizontal	177	208	54.0	-26.5	Pass
9	6406.92	57.66	3.37	-8.95	52.08	MaxP	Horizontal	150	183	74.0	-21.9	Pass
10	6406.92	48.12	3.37	-8.95	42.54	AVG	Horizontal	150	183	54.0	-11.5	Pass

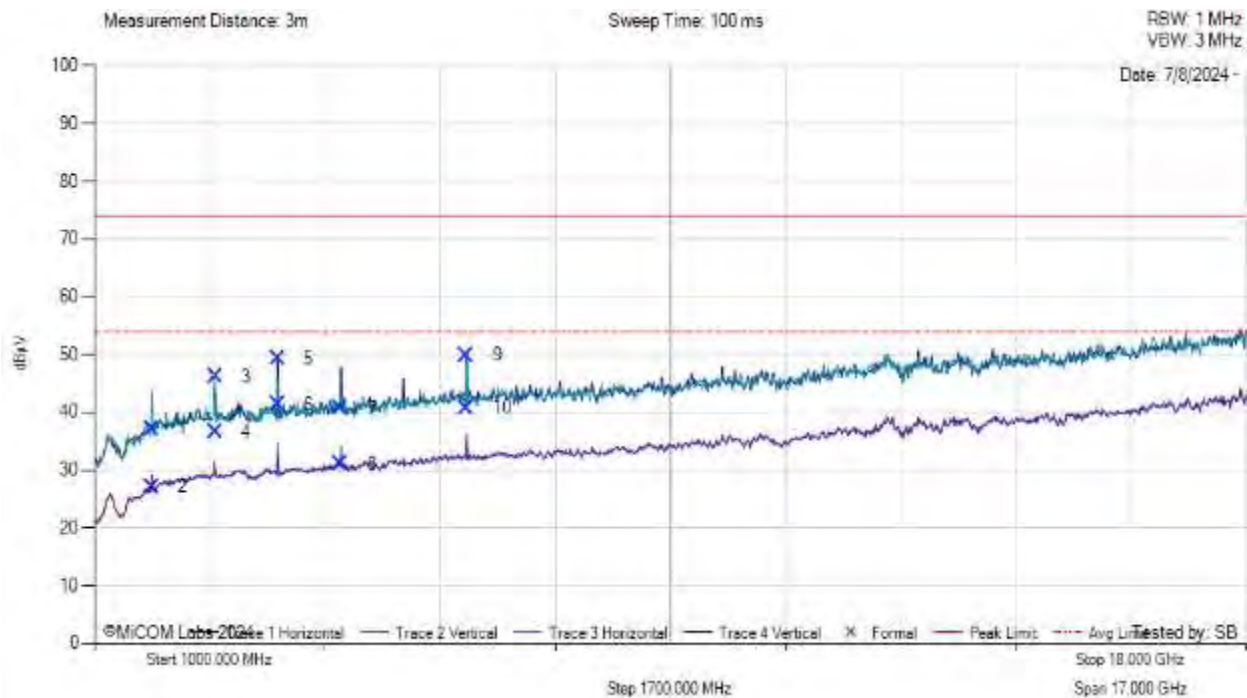
Test Notes: SN: 2935662-23, GFSK, 915 MHz, 300 kbps, Power Level 2

Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	External	Variant:	100W and 500W RMT&Pit
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	1854.96	49.56	1.72	-14.14	37.14	MaxP	Vertical	150	200	74.0	-36.9	Pass
2	1854.96	39.49	1.72	-14.14	27.07	AVG	Vertical	150	200	54.0	-26.9	Pass
3	2783.05	55.79	2.12	-11.78	46.14	MaxP	Vertical	199	156	74.0	-27.9	Pass
4	2783.05	46.29	2.12	-11.78	36.63	AVG	Vertical	199	156	54.0	-17.4	Pass
5	3710.68	58.54	2.47	-11.80	49.20	MaxP	Horizontal	199	213	74.0	-24.8	Pass
6	3710.68	50.70	2.47	-11.80	41.36	AVG	Horizontal	199	213	54.0	-12.6	Pass
7	4638.13	50.14	2.82	-12.33	40.63	MaxP	Horizontal	190	207	74.0	-33.4	Pass
8	4638.13	40.60	2.82	-12.33	31.09	AVG	Horizontal	190	207	54.0	-22.9	Pass
9	6493.72	55.33	3.42	-8.92	49.84	MaxP	Horizontal	151	219	74.0	-24.2	Pass
10	6493.72	46.21	3.42	-8.92	40.72	AVG	Horizontal	151	219	54.0	-13.3	Pass

Test Notes: SN: 2935662-23, GFSK, 927.6 MHz, 300 kbps, Power Level 2

1.5.2.4.5. GFSK Power Level 3 External Antenna

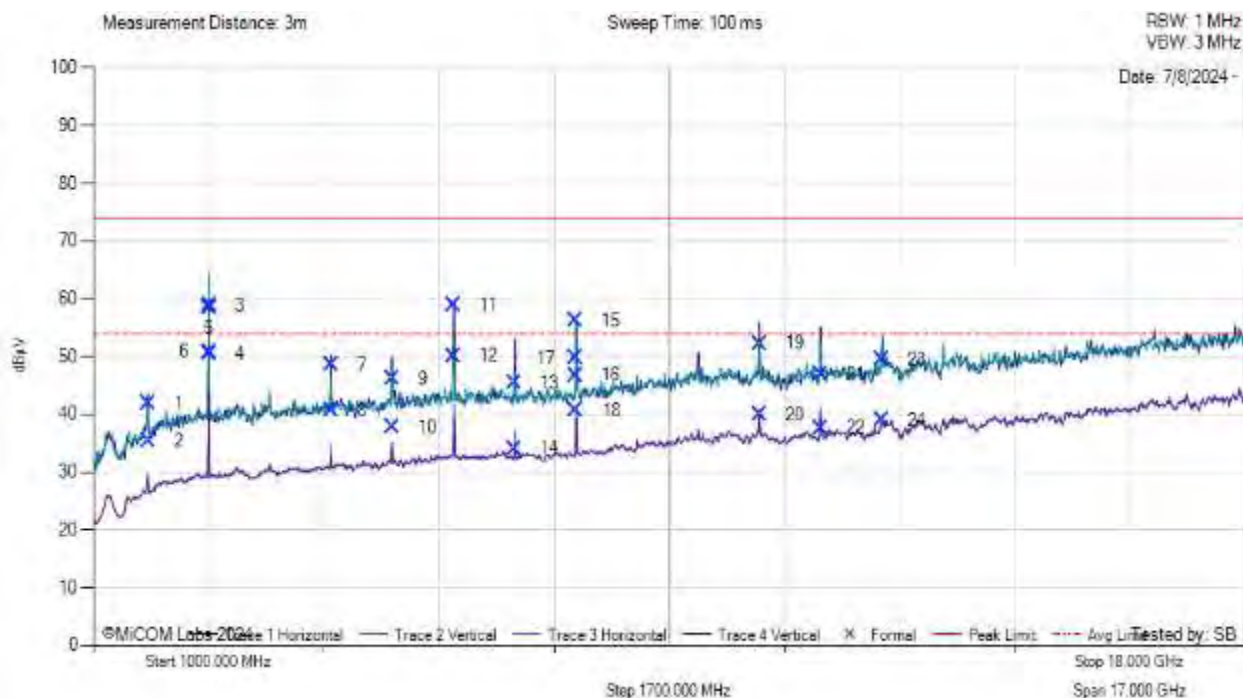
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	External	Variant:	100W and 500W RMT&Pit
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	1804.76	54.74	1.71	-14.54	41.91	MaxP	Vertical	180	227	74.0	-32.1	Pass
2	1804.76	48.18	1.71	-14.54	35.35	AVG	Vertical	180	227	54.0	-18.6	Pass
3	2706.94	68.57	2.06	-11.76	58.87	MaxP	Horizontal	150	212	74.0	-15.1	Pass
4	2706.94	60.15	2.06	-11.76	50.45	AVG	Horizontal	150	212	54.0	-3.6	Pass
5	2707.48	68.20	2.06	-11.76	58.50	MaxP	Vertical	153	205	74.0	-15.5	Pass
6	2707.48	60.51	2.06	-11.76	50.81	AVG	Vertical	153	205	54.0	-3.2	Pass
7	4511.65	57.97	2.78	-12.13	48.62	MaxP	Horizontal	199	219	74.0	-25.4	Pass
8	4511.65	49.94	2.78	-12.13	40.59	AVG	Horizontal	199	219	54.0	-13.4	Pass
9	5414.74	54.81	3.07	-11.67	46.21	MaxP	Horizontal	192	197	74.0	-27.8	Pass
10	5414.74	46.41	3.07	-11.67	37.81	AVG	Horizontal	192	197	54.0	-16.2	Pass
11	6316.29	64.65	3.36	-9.10	58.92	MaxP	Horizontal	199	201	74.0	-15.1	Pass
12	6316.29	55.83	3.36	-9.10	50.09	AVG	Horizontal	199	201	54.0	-3.9	Pass
13	7218.46	49.76	3.62	-7.90	45.48	MaxP	Horizontal	181	210	74.0	-28.5	Pass
14	7218.46	38.31	3.62	-7.90	34.03	AVG	Horizontal	181	210	54.0	-20.0	Pass
15	8120.90	60.41	3.87	-8.09	56.18	MaxP	Vertical	160	145	74.0	-17.8	Pass
16	8120.90	50.97	3.87	-8.09	46.74	AVG	Vertical	160	145	54.0	-7.3	Pass
17	8122.11	53.99	3.87	-8.08	49.78	MaxP	Horizontal	155	200	74.0	-24.2	Pass
18	8122.11	44.83	3.87	-8.08	40.63	AVG	Horizontal	155	200	54.0	-13.4	Pass
19	10829.78	52.12	4.77	-4.59	52.30	MaxP	Horizontal	152	119	74.0	-21.7	Pass
20	10829.78	39.70	4.77	-4.59	39.88	AVG	Horizontal	152	119	54.0	-14.1	Pass
21	11730.47	48.33	5.01	-6.47	46.88	MaxP	Horizontal	188	121	74.0	-27.1	Pass
22	11730.47	39.11	5.01	-6.47	37.65	AVG	Horizontal	188	121	54.0	-16.4	Pass
23	12634.52	51.34	5.21	-7.02	49.54	MaxP	Vertical	176	255	74.0	-24.5	Pass
24	12634.52	40.73	5.21	-7.02	38.92	AVG	Vertical	176	255	54.0	-15.1	Pass
Test Notes: SN: 2935662-23, GFSK, 902.4 MHz, 300 kbps, Power Level 3												

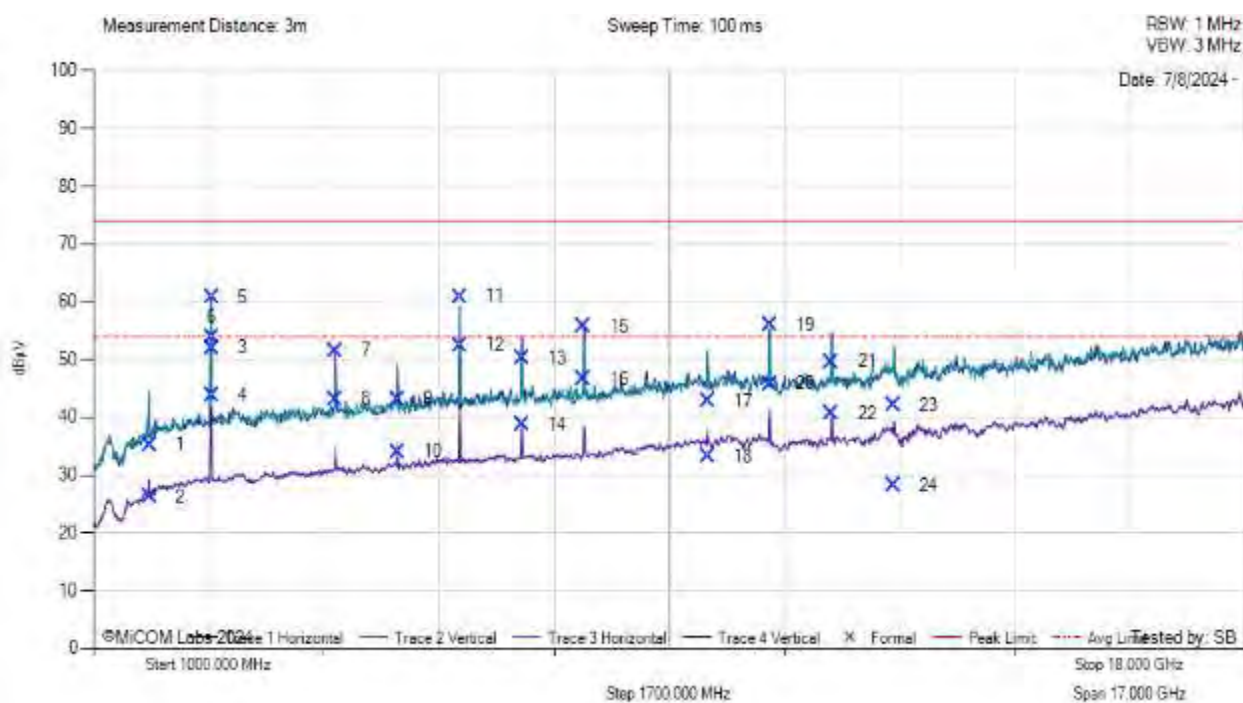
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	External	Variant:	100W and 500W RMT&Pit
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	1830.13	47.90	1.75	-14.36	35.29	MaxP	Vertical	191	209	74.0	-38.7	Pass
2	1830.13	38.80	1.75	-14.36	26.19	AVG	Vertical	191	209	54.0	-27.8	Pass
3	2745.52	61.67	2.11	-11.74	52.04	MaxP	Horizontal	176	29	74.0	-22.0	Pass
4	2745.52	53.31	2.11	-11.74	43.68	AVG	Horizontal	176	29	54.0	-10.3	Pass
5	2745.80	70.42	2.11	-11.74	60.79	MaxP	Vertical	192	183	74.0	-13.2	Pass
6	2745.80	63.45	2.11	-11.74	53.82	AVG	Vertical	192	183	54.0	-0.2	Pass
7	4576.36	60.96	2.81	-12.25	51.52	MaxP	Horizontal	199	206	74.0	-22.5	Pass
8	4576.36	52.59	2.81	-12.25	43.15	AVG	Horizontal	199	206	54.0	-10.9	Pass
9	5490.97	51.92	3.08	-11.85	43.15	MaxP	Horizontal	153	214	74.0	-30.8	Pass
10	5490.97	42.84	3.08	-11.85	34.07	AVG	Horizontal	153	214	54.0	-19.9	Pass
11	6406.89	66.45	3.37	-8.95	60.87	MaxP	Horizontal	149	227	74.0	-13.1	Pass
12	6406.89	58.12	3.37	-8.95	52.54	AVG	Horizontal	149	227	54.0	-1.5	Pass
13	7322.31	54.32	3.76	-7.79	50.29	MaxP	Horizontal	150	202	74.0	-23.7	Pass
14	7322.31	42.71	3.76	-7.79	38.68	AVG	Horizontal	150	202	54.0	-15.3	Pass
15	8236.14	59.87	3.90	-8.05	55.73	MaxP	Horizontal	197	273	74.0	-18.3	Pass
16	8236.14	50.73	3.90	-8.05	46.58	AVG	Horizontal	197	273	54.0	-7.4	Pass
17	10066.59	44.06	4.27	-5.49	42.83	MaxP	Vertical	150	182	74.0	-31.2	Pass
18	10066.59	34.38	4.27	-5.49	33.16	AVG	Vertical	150	182	54.0	-20.8	Pass
19	10981.58	56.48	4.57	-5.14	55.91	MaxP	Horizontal	190	97	74.0	-18.1	Pass
20	10981.58	46.35	4.57	-5.14	45.78	AVG	Horizontal	190	97	54.0	-8.2	Pass
21	11898.31	50.71	5.02	-6.13	49.59	MaxP	Horizontal	182	91	74.0	-24.4	Pass
22	11898.31	41.70	5.02	-6.13	40.58	AVG	Horizontal	182	91	54.0	-13.4	Pass
23	12811.46	45.27	5.00	-8.21	42.06	MaxP	Vertical	152	240	74.0	-31.9	Pass
24	12811.46	31.38	5.00	-8.21	28.17	AVG	Vertical	152	240	54.0	-25.8	Pass
Test Notes: SN: 2935662-23, GFSK, 915 MHz, 300 kbps, Power Level 3												

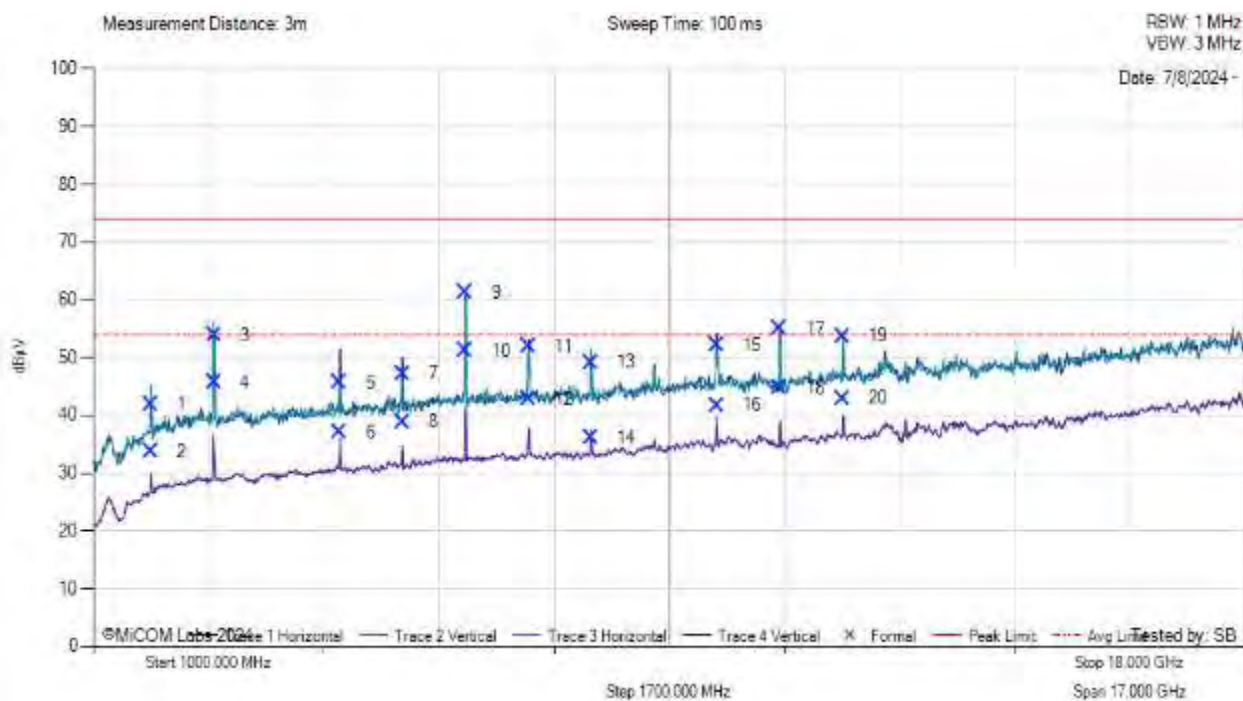
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ 2M

Antenna:	External	Variant:	100W and 500W RMT&Pit
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	1854.99	54.36	1.72	-14.14	41.94	MaxP	Vertical	196	206	74.0	-32.1	Pass
2	1854.99	46.05	1.72	-14.14	33.63	AVG	Vertical	196	206	54.0	-20.4	Pass
3	2782.51	63.47	2.12	-11.78	53.81	MaxP	Vertical	150	182	74.0	-20.2	Pass
4	2782.51	55.35	2.12	-11.78	45.70	AVG	Vertical	150	182	54.0	-8.3	Pass
5	4637.80	55.11	2.82	-12.33	45.60	MaxP	Horizontal	149	202	74.0	-28.4	Pass
6	4637.80	46.58	2.82	-12.33	37.08	AVG	Horizontal	149	202	54.0	-16.9	Pass
7	5565.23	55.57	3.13	-11.49	47.20	MaxP	Horizontal	180	209	74.0	-26.8	Pass
8	5565.23	47.21	3.13	-11.49	38.85	AVG	Horizontal	180	209	54.0	-15.1	Pass
9	6493.76	66.74	3.42	-8.92	61.25	MaxP	Horizontal	177	234	74.0	-12.8	Pass
10	6493.76	56.68	3.42	-8.92	51.18	AVG	Horizontal	177	234	54.0	-2.8	Pass
11	7421.30	55.99	3.76	-7.84	51.91	MaxP	Horizontal	149	197	74.0	-22.1	Pass
12	7421.30	46.92	3.76	-7.84	42.83	AVG	Horizontal	149	197	54.0	-11.2	Pass
13	8347.61	53.40	3.92	-8.15	49.17	MaxP	Horizontal	189	243	74.0	-24.8	Pass
14	8347.61	40.36	3.92	-8.15	36.13	AVG	Horizontal	189	243	54.0	-17.9	Pass
15	10204.24	53.02	4.44	-5.40	52.06	MaxP	Horizontal	186	102	74.0	-21.9	Pass
16	10204.24	42.67	4.44	-5.40	41.72	AVG	Horizontal	186	102	54.0	-12.3	Pass
17	11131.95	56.33	4.57	-5.84	55.05	MaxP	Vertical	173	237	74.0	-18.9	Pass
18	11131.95	46.03	4.57	-5.84	44.76	AVG	Vertical	173	237	54.0	-9.2	Pass
19	12057.78	54.46	4.78	-5.56	53.68	MaxP	Vertical	150	206	74.0	-20.3	Pass
20	12057.78	43.68	4.78	-5.56	42.90	AVG	Vertical	150	206	54.0	-11.1	Pass

Test Notes: SN: 2935662-23, GFSK, 927.6 MHz, 300 kbps, Power Level 3

1.5.2.4.6. OOK Power Level 3 External Antenna

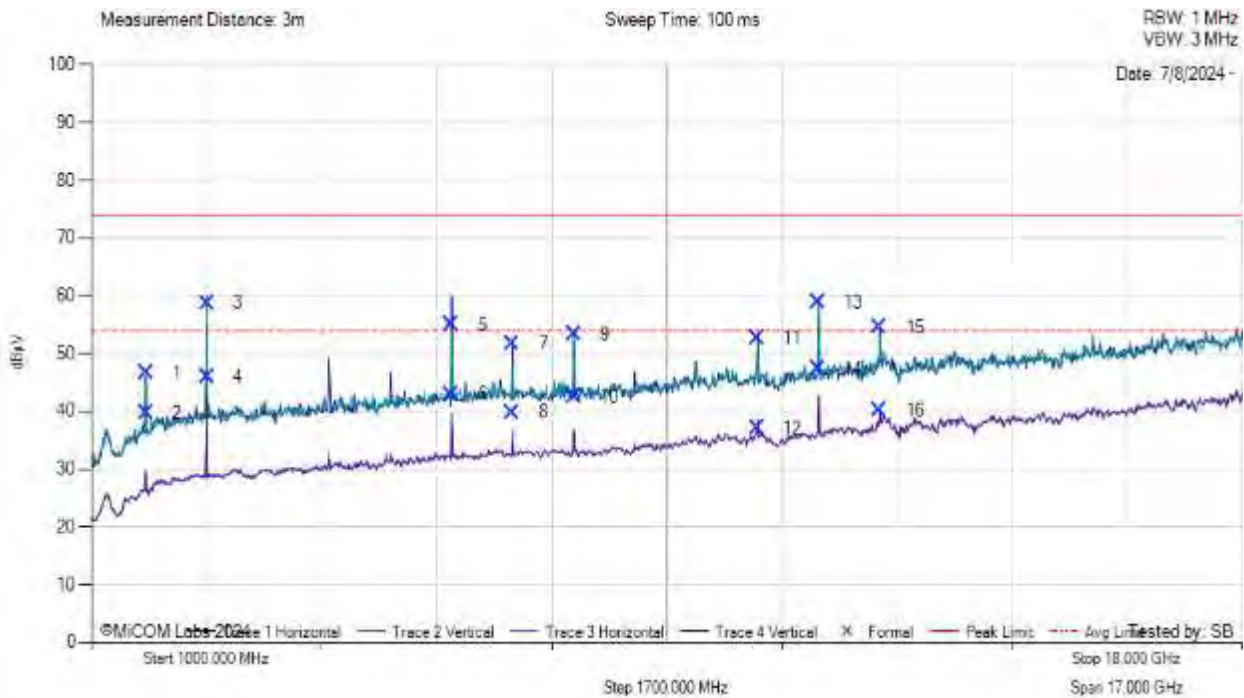
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	External	Variant:	100W and 500W RMT&Pit
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	1806.01	59.51	1.71	-14.53	46.69	MaxP	Horizontal	199	67	74.0	-27.3	Pass
2	1806.01	52.46	1.71	-14.53	39.63	AVG	Horizontal	199	67	54.0	-14.4	Pass
3	2708.91	68.45	2.07	-11.77	58.75	MaxP	Vertical	183	191	74.0	-15.2	Pass
4	2708.91	55.67	2.07	-11.77	45.97	AVG	Vertical	183	191	54.0	-8.0	Pass
5	6321.06	60.73	3.35	-9.11	54.98	MaxP	Horizontal	149	138	74.0	-19.0	Pass
6	6321.06	48.67	3.35	-9.11	42.91	AVG	Horizontal	149	138	54.0	-11.1	Pass
7	7223.94	56.11	3.56	-7.86	51.82	MaxP	Horizontal	150	188	74.0	-22.2	Pass
8	7223.94	44.10	3.56	-7.86	39.81	AVG	Horizontal	150	188	54.0	-14.2	Pass
9	8127.04	57.35	3.94	-8.02	53.27	MaxP	Vertical	150	182	74.0	-20.7	Pass
10	8127.04	46.68	3.94	-8.02	42.59	AVG	Vertical	150	182	54.0	-11.4	Pass
11	10836.11	52.78	4.57	-4.69	52.66	MaxP	Horizontal	179	38	74.0	-21.3	Pass
12	10836.11	37.16	4.57	-4.69	37.03	AVG	Horizontal	179	38	54.0	-17.0	Pass
13	11738.94	60.34	5.02	-6.52	58.85	MaxP	Vertical	154	235	74.0	-15.2	Pass
14	11738.94	48.90	5.02	-6.52	47.40	AVG	Vertical	154	235	54.0	-6.6	Pass
15	12642.10	56.16	5.47	-7.14	54.49	MaxP	Horizontal	159	221	74.0	-19.5	Pass
16	12642.10	41.80	5.47	-7.14	40.14	AVG	Horizontal	159	221	54.0	-13.9	Pass
Test Notes: SN: 2935662-23, OOK, 903 MHz, 16.384 kbps, Power Level 3												

Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

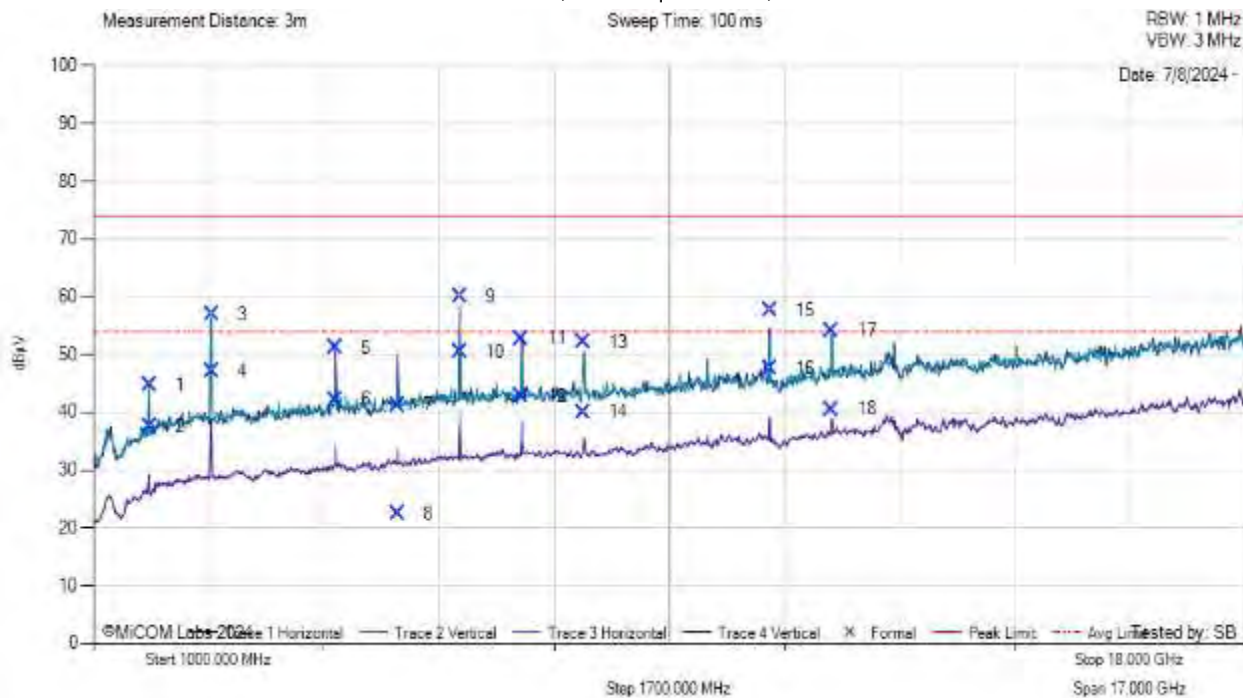
Antenna:	External	Variant:	100W and 500W RMT&Pit
Antenna Gain (dBi):	Not Applicable	Modulation:	OOK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	915.0	Data Rate:	16.384 kbps
Power Setting:	Power Level 3	Tested By:	SB

Test Measurement Results



FCC Spurious 1 GHz -18 GHz 2M

Variant: , Test Freq: 0.00 MHz, Antenna: External



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	1830.01	57.38	1.75	-14.36	44.77	MaxP	Vertical	196	257	74.0	-29.2	Pass
2	1830.01	50.16	1.75	-14.36	37.55	AVG	Vertical	196	257	54.0	-16.4	Pass
3	2744.95	66.54	2.11	-11.74	56.91	MaxP	Vertical	158	178	74.0	-17.1	Pass
4	2744.95	56.69	2.11	-11.74	47.06	AVG	Vertical	158	178	54.0	-6.9	Pass
5	4575.03	60.63	2.82	-12.26	51.19	MaxP	Horizontal	199	209	74.0	-22.8	Pass
6	4575.03	51.60	2.82	-12.26	42.16	AVG	Horizontal	199	209	54.0	-11.8	Pass
7	5489.79	50.04	3.09	-11.85	41.28	MaxP	Horizontal	158	220	74.0	-32.7	Pass
8	5489.79	31.16	3.09	-11.85	22.40	AVG	Horizontal	158	220	54.0	-31.6	Pass
9	6404.96	65.65	3.36	-8.95	60.06	MaxP	Horizontal	164	226	74.0	-13.9	Pass
10	6404.96	55.98	3.36	-8.95	50.39	AVG	Horizontal	164	226	54.0	-3.6	Pass
11	7320.02	56.75	3.75	-7.78	52.72	MaxP	Horizontal	157	150	74.0	-21.3	Pass
12	7320.02	46.82	3.75	-7.78	42.79	AVG	Horizontal	157	150	54.0	-11.2	Pass
13	8235.05	56.25	3.91	-8.05	52.11	MaxP	Vertical	151	139	74.0	-21.9	Pass
14	8235.05	44.15	3.91	-8.05	40.01	AVG	Vertical	151	139	54.0	-14.0	Pass
15	10979.98	58.22	4.60	-5.18	57.64	MaxP	Horizontal	175	114	74.0	-16.4	Pass
16	10979.98	48.19	4.60	-5.18	47.61	AVG	Horizontal	175	114	54.0	-6.4	Pass
17	11894.91	55.41	4.95	-6.16	54.20	MaxP	Horizontal	148	266	74.0	-19.8	Pass
18	11894.91	41.71	4.95	-6.16	40.50	AVG	Horizontal	148	266	54.0	-13.5	Pass
Test Notes: SN: 2935662-23, OOK, 915 MHz, 16.384 kbps, Power Level 3												

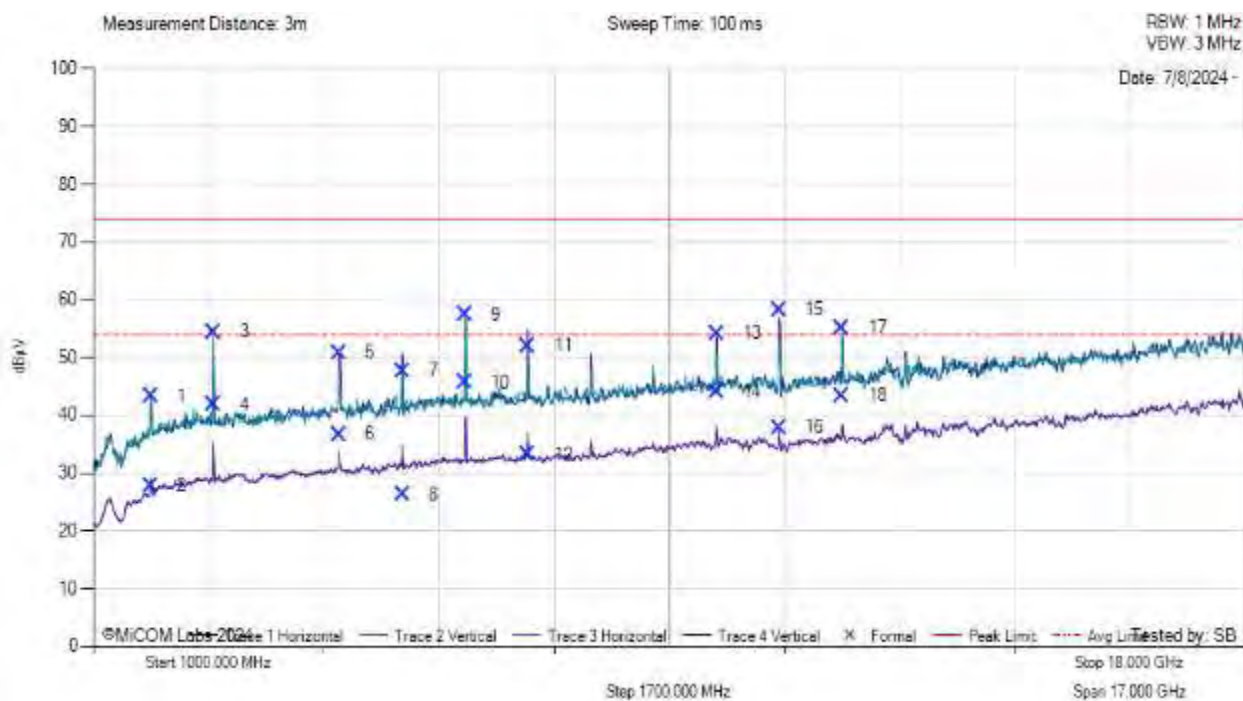
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	External	Variant:	100W and 500W RMT&Pit
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	1853.70	55.68	1.72	-14.15	43.24	MaxP	Vertical	149	226	74.0	-30.8	Pass
2	1853.70	40.27	1.72	-14.15	27.83	AVG	Vertical	149	226	54.0	-26.2	Pass
3	2780.33	64.06	2.13	-11.79	54.40	MaxP	Vertical	149	192	74.0	-19.6	Pass
4	2780.33	51.54	2.13	-11.79	41.88	AVG	Vertical	149	192	54.0	-12.1	Pass
5	4634.09	60.32	2.80	-12.27	50.85	MaxP	Horizontal	188	206	74.0	-23.1	Pass
6	4634.09	46.12	2.80	-12.27	36.65	AVG	Horizontal	188	206	54.0	-17.3	Pass
7	5560.99	55.98	3.15	-11.41	47.72	MaxP	Horizontal	182	201	74.0	-26.3	Pass
8	5560.99	34.55	3.15	-11.41	26.29	AVG	Horizontal	182	201	54.0	-27.7	Pass
9	6487.66	62.92	3.39	-8.89	57.42	MaxP	Vertical	184	210	74.0	-16.6	Pass
10	6487.66	51.18	3.39	-8.89	45.68	AVG	Vertical	184	210	54.0	-8.3	Pass
11	7414.26	56.07	3.76	-7.80	52.03	MaxP	Horizontal	150	207	74.0	-22.0	Pass
12	7414.26	37.28	3.76	-7.80	33.24	AVG	Horizontal	150	207	54.0	-20.8	Pass
13	10194.81	55.06	4.36	-5.23	54.19	MaxP	Horizontal	192	117	74.0	-19.8	Pass
14	10194.81	44.83	4.36	-5.23	43.96	AVG	Horizontal	192	117	54.0	-10.0	Pass
15	11121.75	59.35	4.51	-5.62	58.24	MaxP	Horizontal	153	273	74.0	-15.8	Pass
16	11121.75	39.03	4.51	-5.62	37.92	AVG	Horizontal	153	273	54.0	-16.1	Pass
17	12048.37	56.07	4.71	-5.61	55.17	MaxP	Vertical	159	213	74.0	-18.8	Pass
18	12048.37	44.31	4.71	-5.61	43.41	AVG	Vertical	159	213	54.0	-10.6	Pass

Test Notes: SN: 2935662-23, OOK, 926.8 MHz, 16.384 kbps, Power Level 3

2. 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 100W 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.

3. Manufacturer Declaration of Similarity



August 14, 2024

Itron, Inc.
 2401 N. State St.
 Wasco, UT 84093
 507-781-4300
www.itron.com

Subject: Declaration of Similarity
 FCC ID: 5WQ24GW
 ISSED ID: 864D 24GW

Dear Sir or Madam,

We declare the product models listed below are electrically identical.

Product Information	
Marketing Name(s)	100W ERT Module 500W ERT Module
Description	Utility AMR series
Models(s)	ERW 350 001 ERW 650 001, ERW 1650 001, ERW 1650 008, ERW 1650 009

The differences between these variant models are:

- Number of external ports, two or three, for metering connection
- Number of battery cells, four or four, to support field life design

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

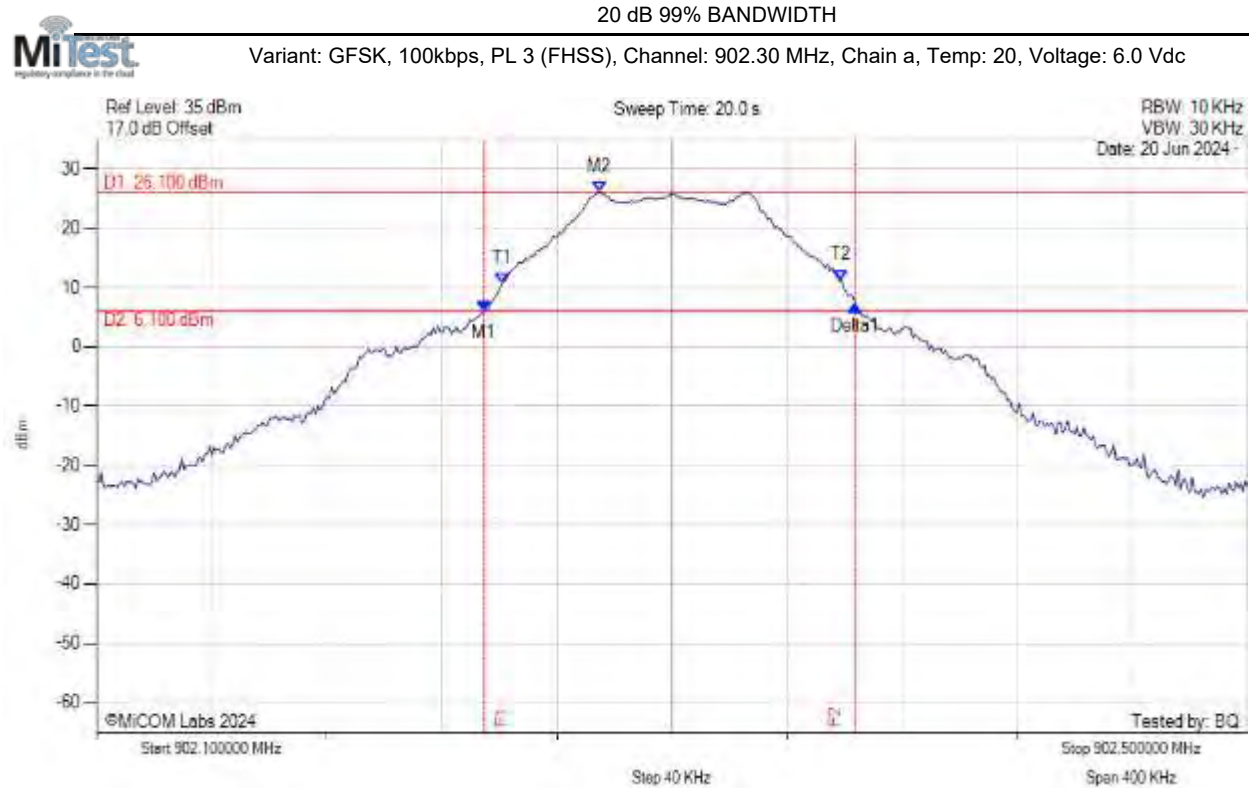
Sincerely,



Dan Bernstein
 Sr. Principal Regulatory Engineer
 507 781 4480
dbernstein@itron.com
 Itron, Inc.

A. APPENDIX - GRAPHICAL IMAGES

1.1. 20 dB & 99% Bandwidth



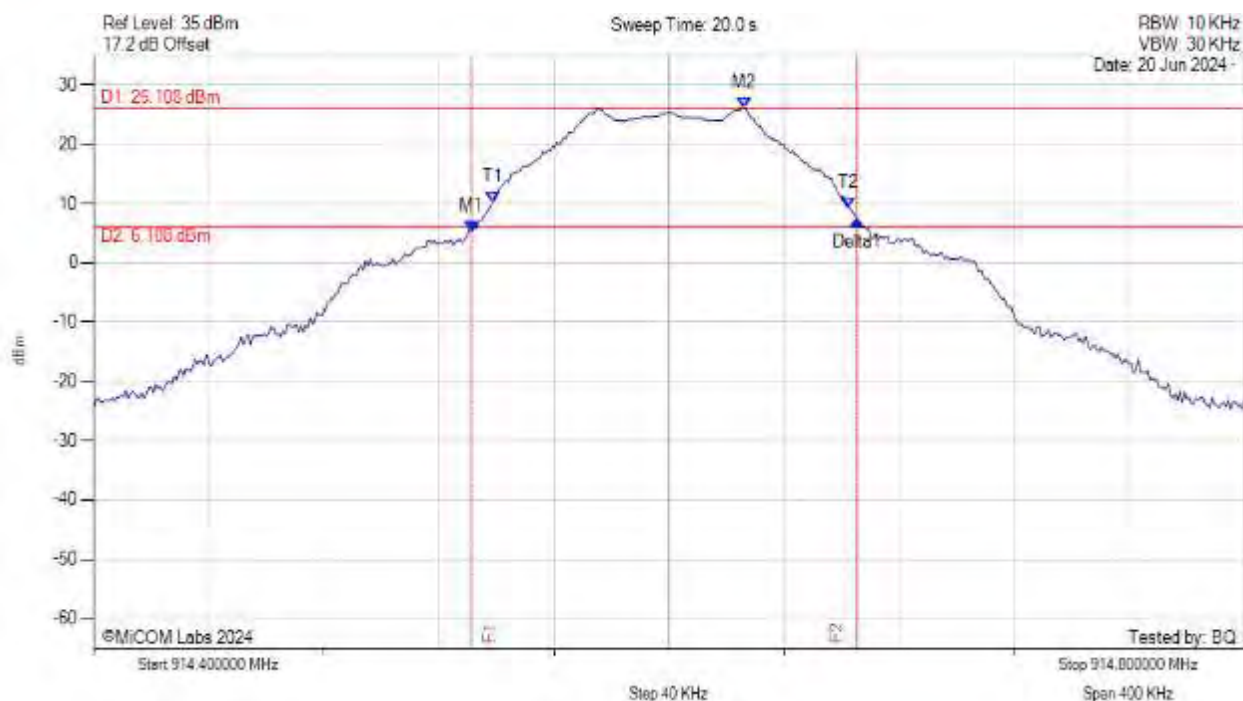
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.235 MHz : 5.942 dBm M2 : 902.275 MHz : 26.100 dBm Delta1 : 129 KHz : 1.025 dB T1 : 902.241 MHz : 10.683 dBm T2 : 902.359 MHz : 11.252 dBm OBW : 118 KHz	Measured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

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20 dB 99% BANDWIDTH



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



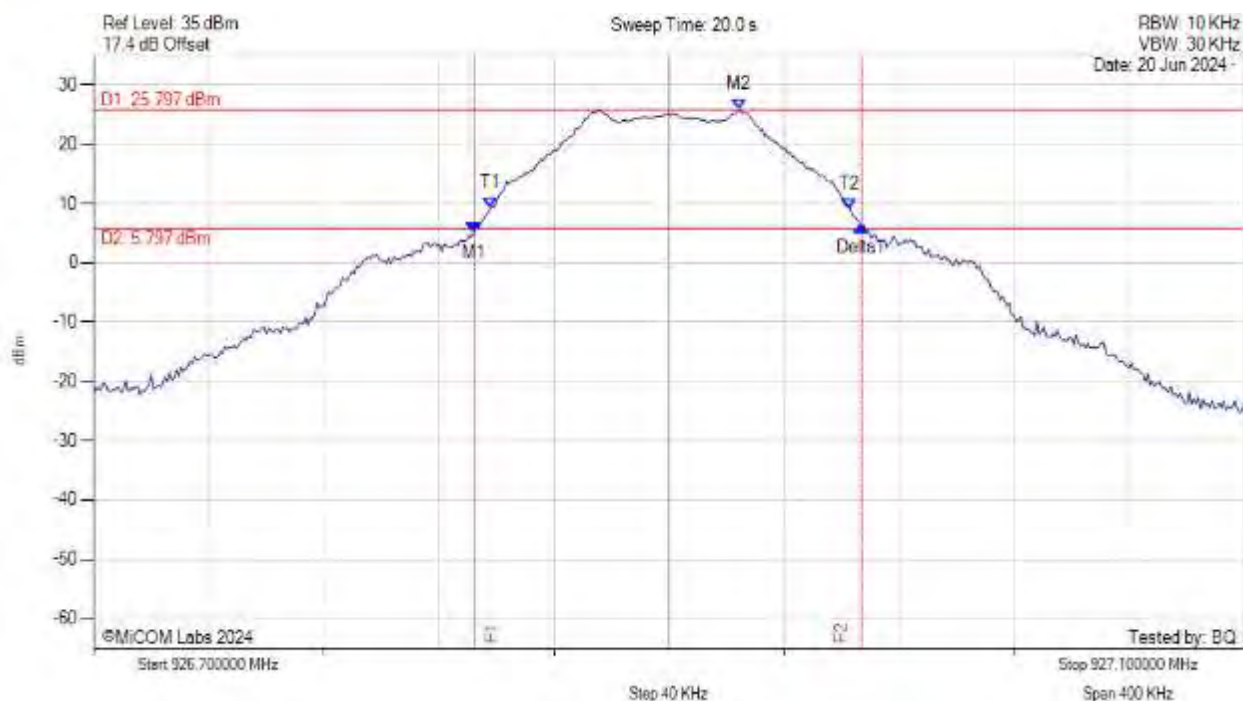
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 914.531 MHz : 5.303 dBm M2 : 914.626 MHz : 26.108 dBm Delta1 : 134 KHz : 1.792 dB T1 : 914.539 MHz : 10.150 dBm T2 : 914.662 MHz : 9.352 dBm OBW : 123 KHz	Measured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

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20 dB 99% BANDWIDTH



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



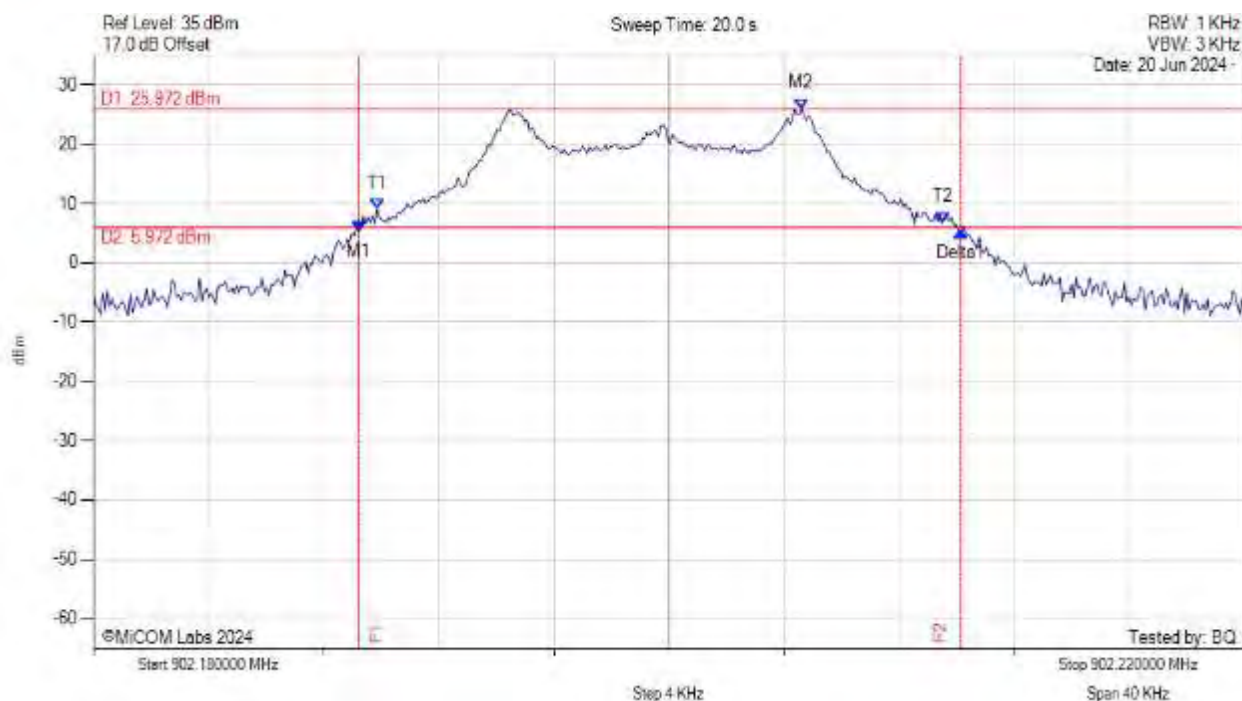
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 926.832 MHz : 5.155 dBm M2 : 926.924 MHz : 25.797 dBm Delta1 : 135 KHz : 1.021 dB T1 : 926.838 MHz : 9.206 dBm T2 : 926.963 MHz : 8.976 dBm OBW : 125 KHz	Measured 20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

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20 dB 99% BANDWIDTH



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



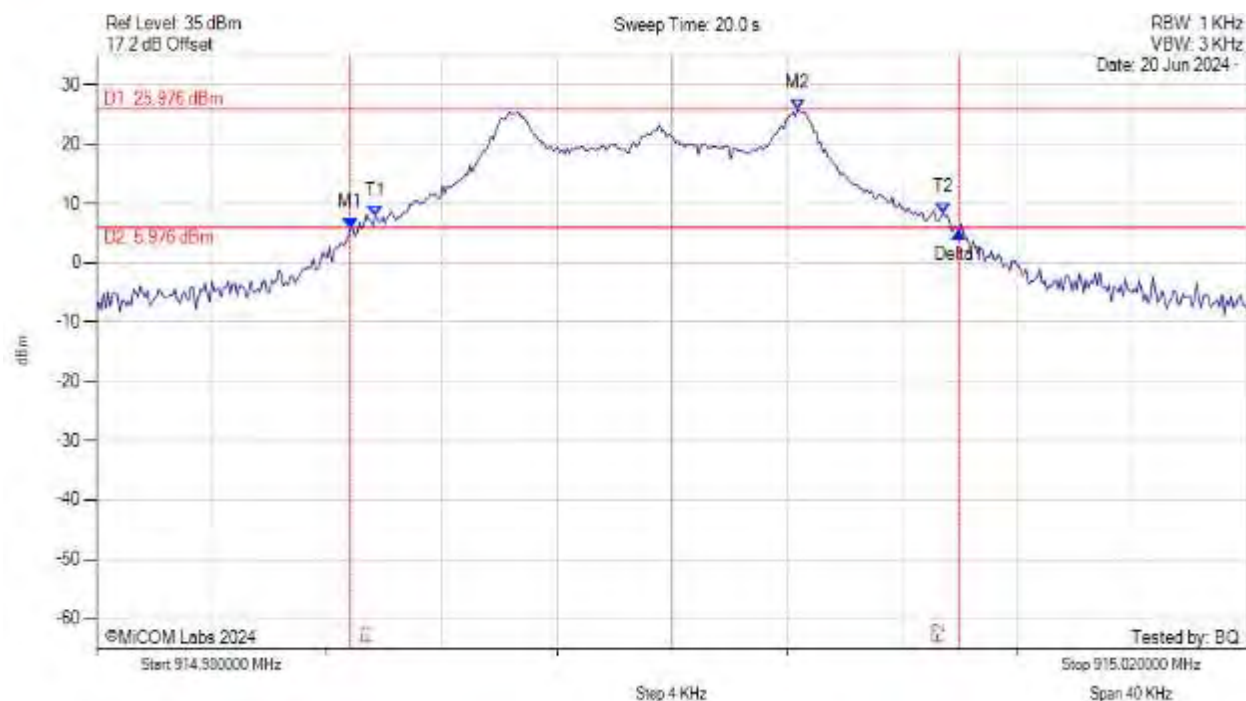
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.189 MHz : 5.362 dBm M2 : 902.205 MHz : 25.972 dBm Delta1 : 21 KHz : -0.102 dB T1 : 902.190 MHz : 9.019 dBm T2 : 902.209 MHz : 6.808 dBm OBW : 20 KHz	Measured 20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

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20 dB 99% BANDWIDTH



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



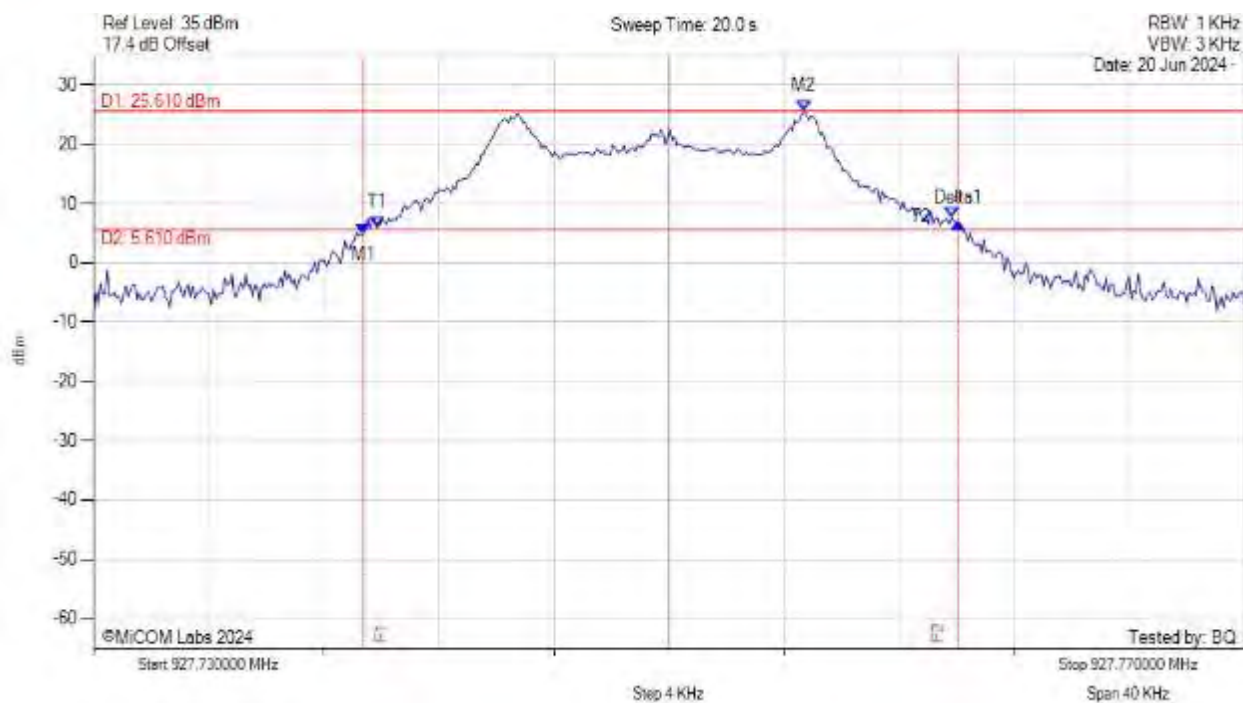
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 914.989 MHz : 5.865 dBm M2 : 915.004 MHz : 25.976 dBm Delta1 : 21 KHz : -0.787 dB T1 : 914.990 MHz : 7.837 dBm T2 : 915.009 MHz : 8.449 dBm OBW : 20 KHz	Measured 20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

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20 dB 99% BANDWIDTH



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



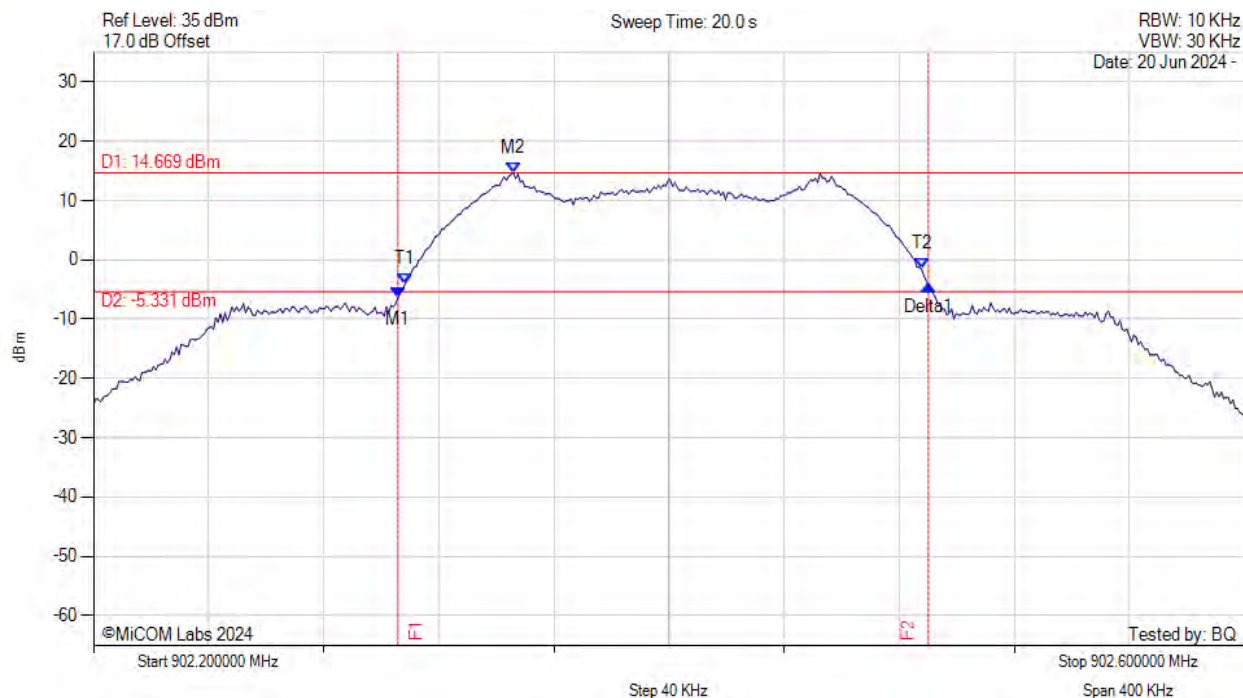
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 927.739 MHz : 4.866 dBm M2 : 927.755 MHz : 25.610 dBm Delta1 : 21 KHz : 1.790 dB T1 : 927.740 MHz : 6.044 dBm T2 : 927.760 MHz : 7.736 dBm OBW : 20 KHz	Measured 20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

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20 dB 99% BANDWIDTH



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



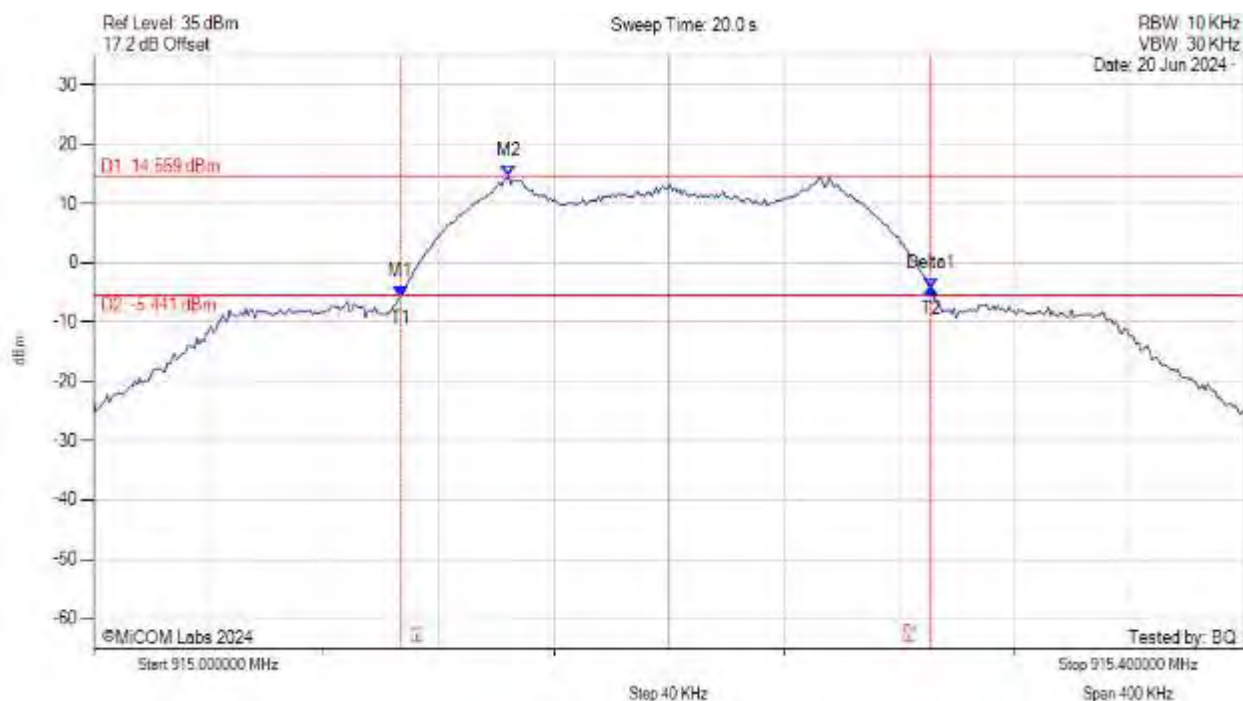
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.306 MHz : -6.393 dBm M2 : 902.346 MHz : 14.669 dBm Delta1 : 184 KHz : 2.097 dB T1 : 902.308 MHz : -4.093 dBm T2 : 902.488 MHz : -1.546 dBm OBW : 180 KHz	Measured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

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20 dB 99% BANDWIDTH



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



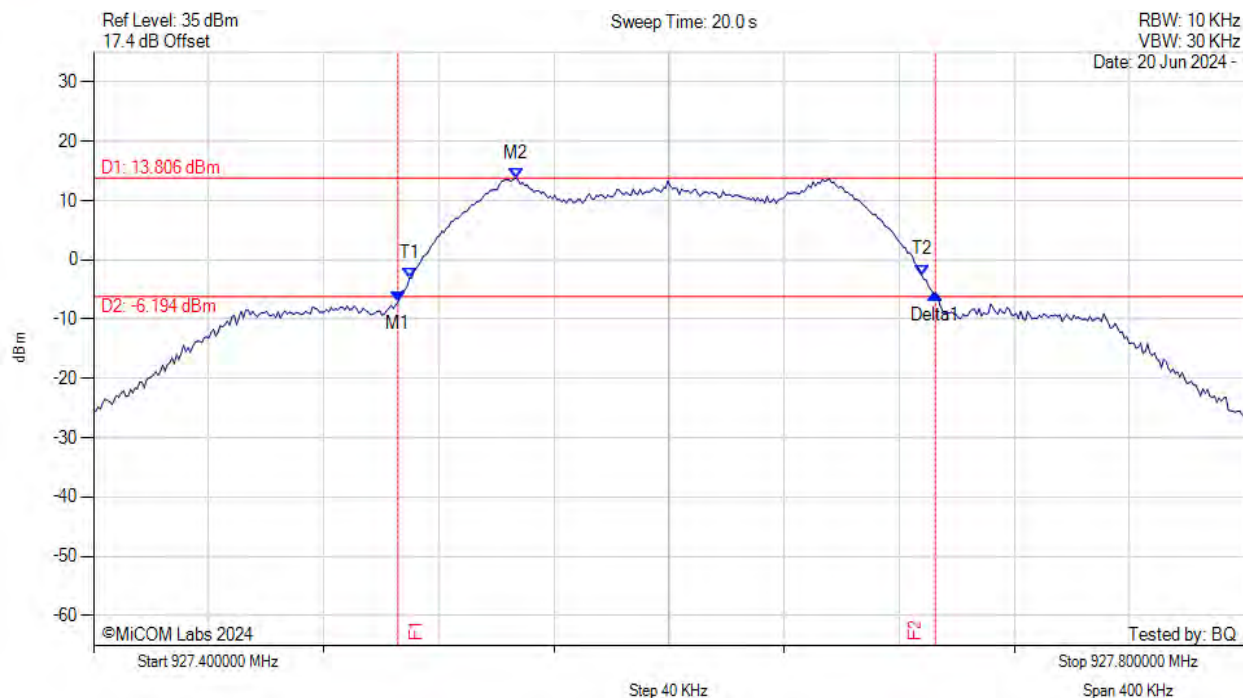
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 915.107 MHz : -5.730 dBm M2 : 915.144 MHz : 14.559 dBm Delta1 : 184 KHz : 1.531 dB T1 : 915.107 MHz : -5.730 dBm T2 : 915.291 MHz : -4.198 dBm OBW : 184 KHz	Measured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

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20 dB 99% BANDWIDTH



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



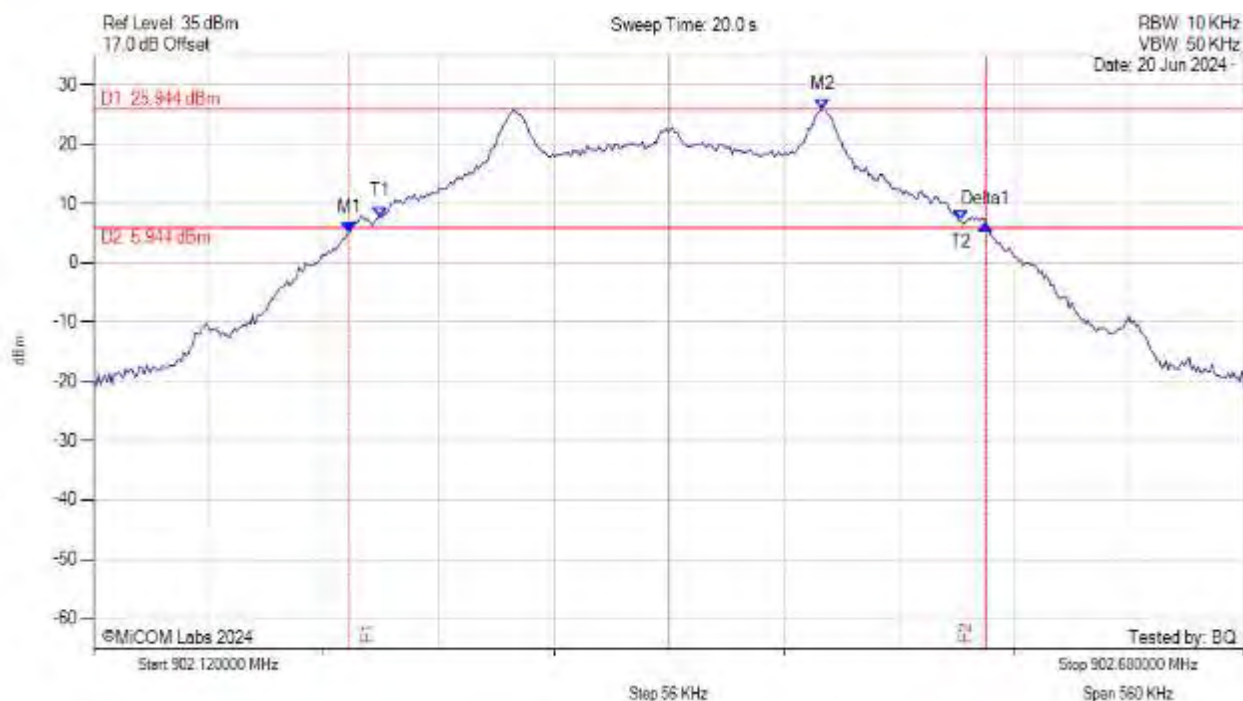
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 927.506 MHz : -7.149 dBm M2 : 927.547 MHz : 13.806 dBm Delta1 : 187 KHz : 1.397 dB T1 : 927.510 MHz : -3.055 dBm T2 : 927.688 MHz : -2.551 dBm OBW : 178 KHz	Measured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

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20 dB 99% BANDWIDTH



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



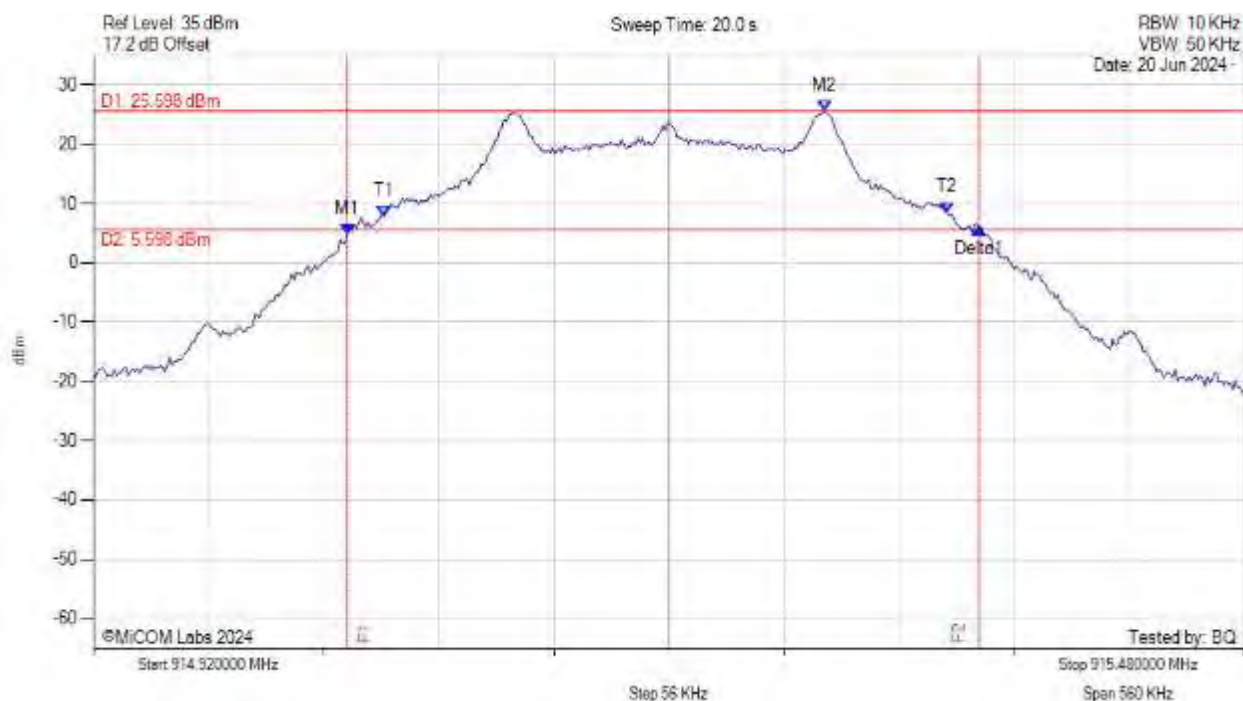
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.245 MHz : 4.974 dBm M2 : 902.475 MHz : 25.944 dBm Delta1 : 310 KHz : 1.503 dB T1 : 902.259 MHz : 7.752 dBm T2 : 902.542 MHz : 7.117 dBm OBW : 283 KHz	Measured 20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

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20 dB 99% BANDWIDTH



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



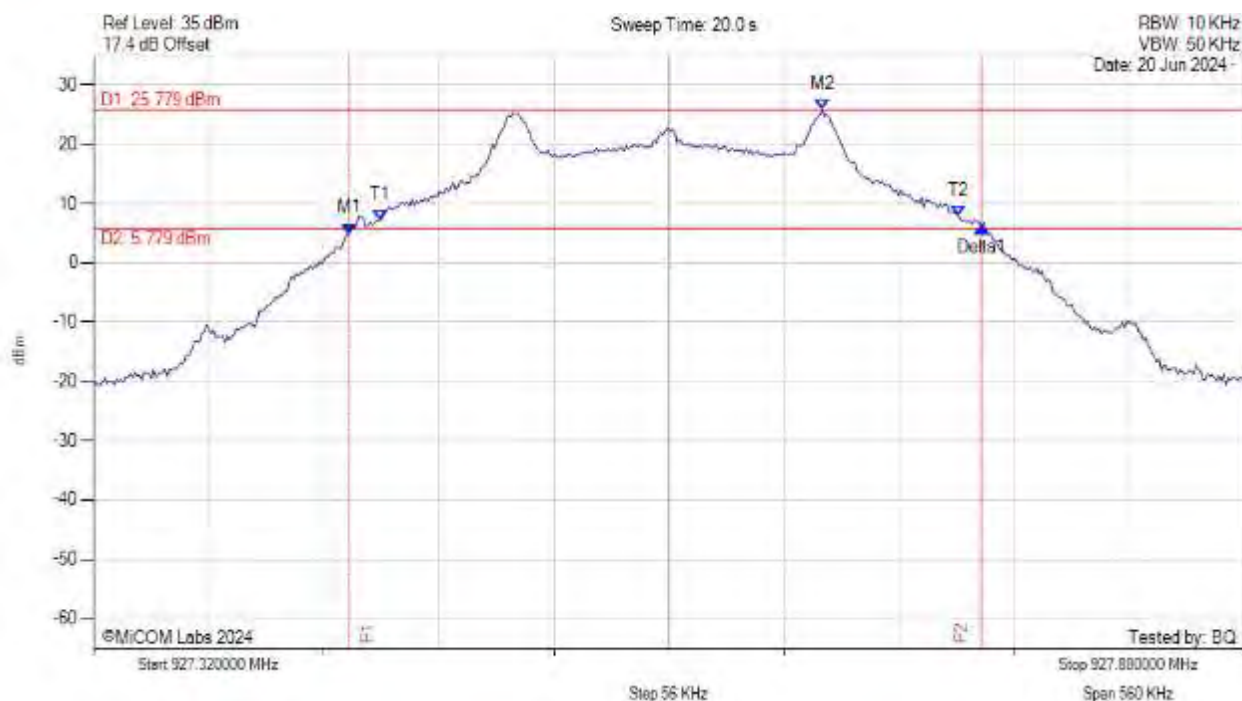
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 915.043 MHz : 4.923 dBm M2 : 915.276 MHz : 25.598 dBm Delta1 : 307 KHz : 0.883 dB T1 : 915.061 MHz : 7.935 dBm T2 : 915.335 MHz : 8.458 dBm OBW : 274 KHz	Measured 20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

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20 dB 99% BANDWIDTH



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



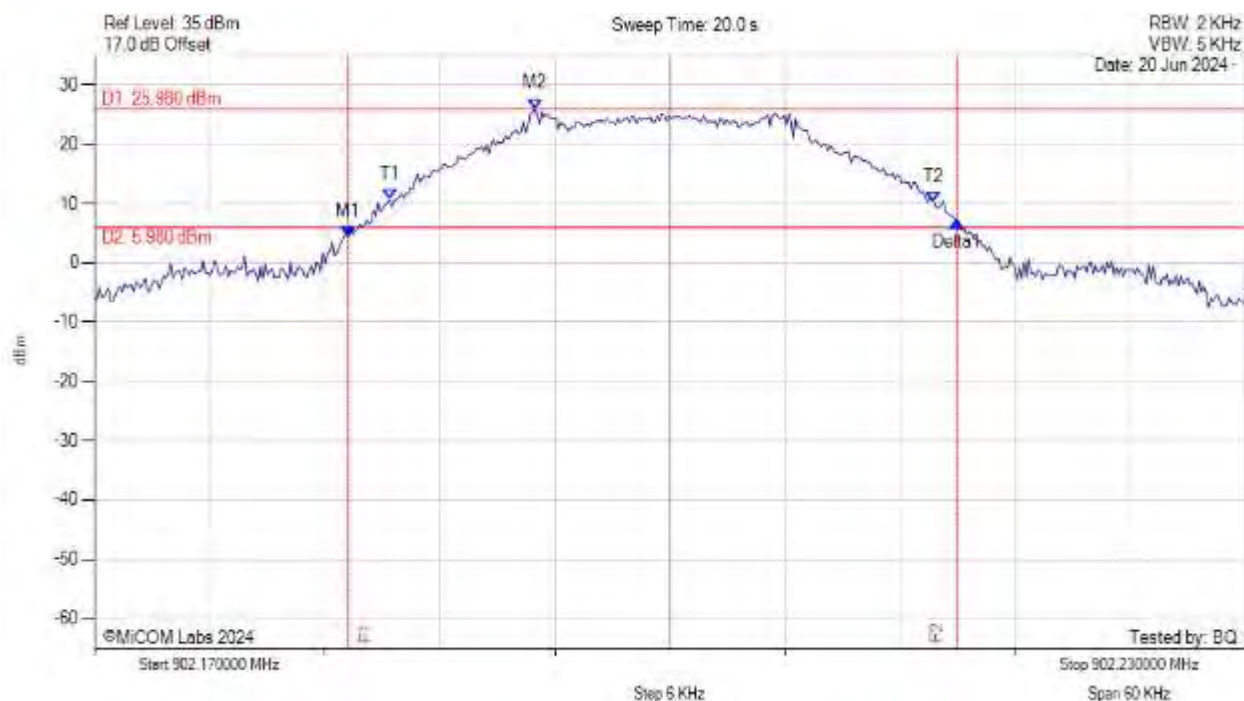
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 927.445 MHz : 4.945 dBm M2 : 927.675 MHz : 25.779 dBm Delta1 : 307 KHz : 1.125 dB T1 : 927.459 MHz : 7.069 dBm T2 : 927.741 MHz : 7.925 dBm OBW : 282 KHz	Measured 20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

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20 dB 99% BANDWIDTH



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



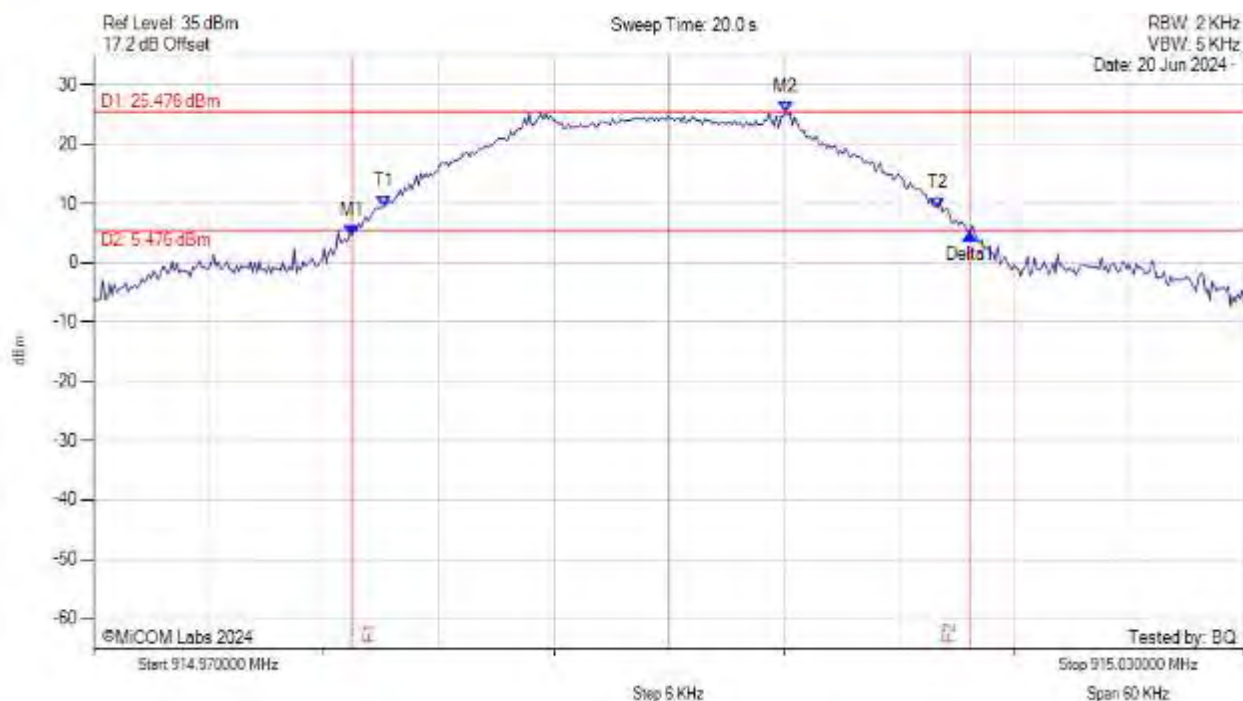
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.183 MHz : 4.343 dBm M2 : 902.193 MHz : 25.980 dBm Delta1 : 32 KHz : 2.621 dB T1 : 902.185 MHz : 10.597 dBm T2 : 902.214 MHz : 10.280 dBm OBW : 28 KHz	Measured 20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

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20 dB 99% BANDWIDTH



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



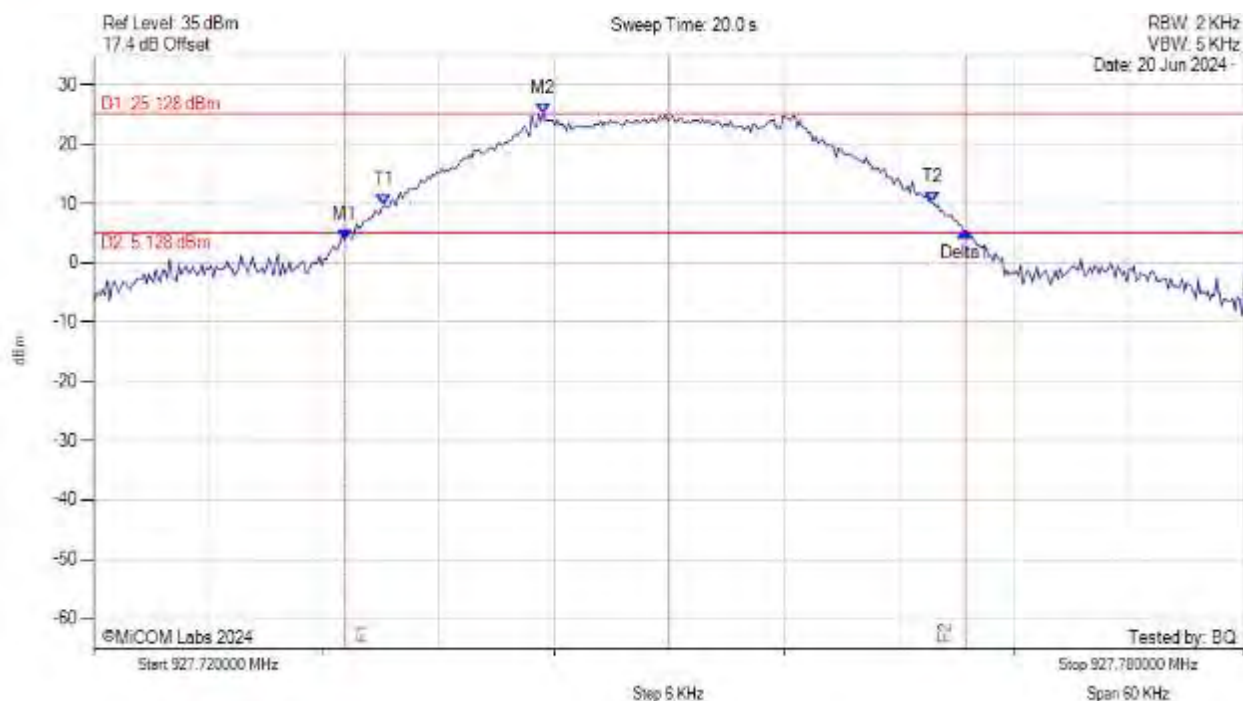
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 914.983 MHz : 4.659 dBm M2 : 915.006 MHz : 25.476 dBm Delta1 : 32 KHz : 0.291 dB T1 : 914.985 MHz : 9.542 dBm T2 : 915.014 MHz : 9.322 dBm OBW : 29 KHz	Measured 20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

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20 dB 99% BANDWIDTH



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



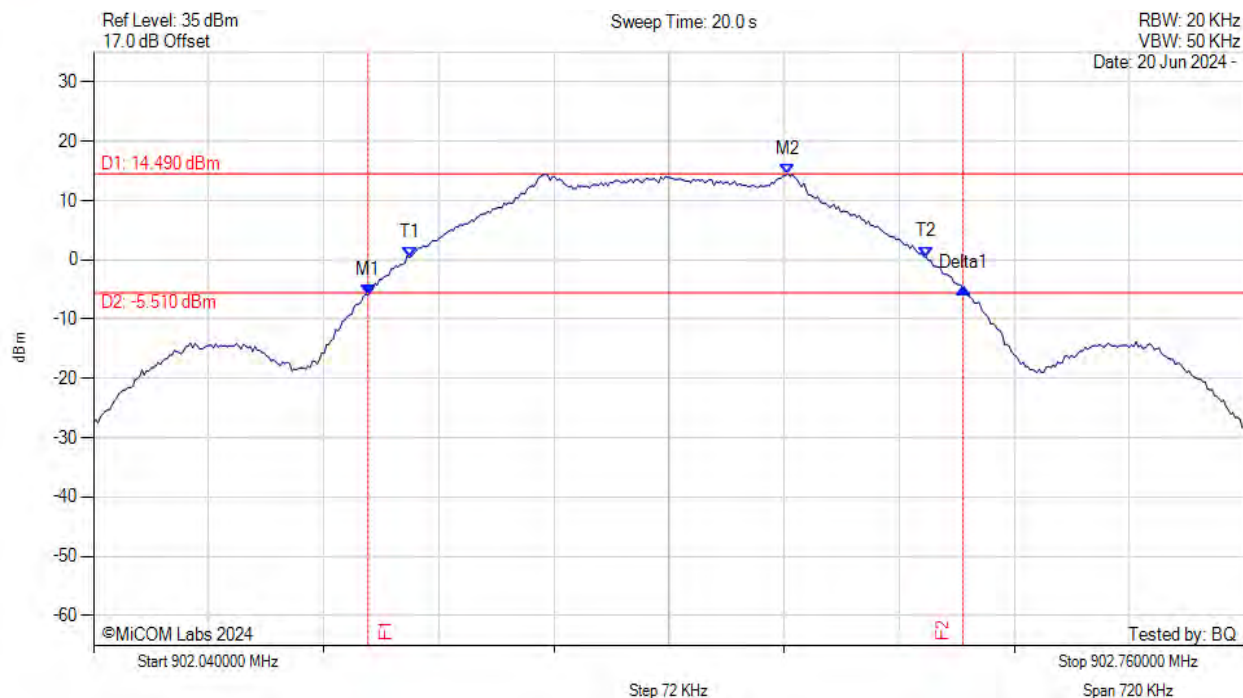
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 927.733 MHz : 3.861 dBm M2 : 927.743 MHz : 25.128 dBm Delta1 : 32 KHz : 1.420 dB T1 : 927.735 MHz : 9.684 dBm T2 : 927.764 MHz : 10.235 dBm OBW : 29 KHz	Measured 20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

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20 dB 99% BANDWIDTH



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



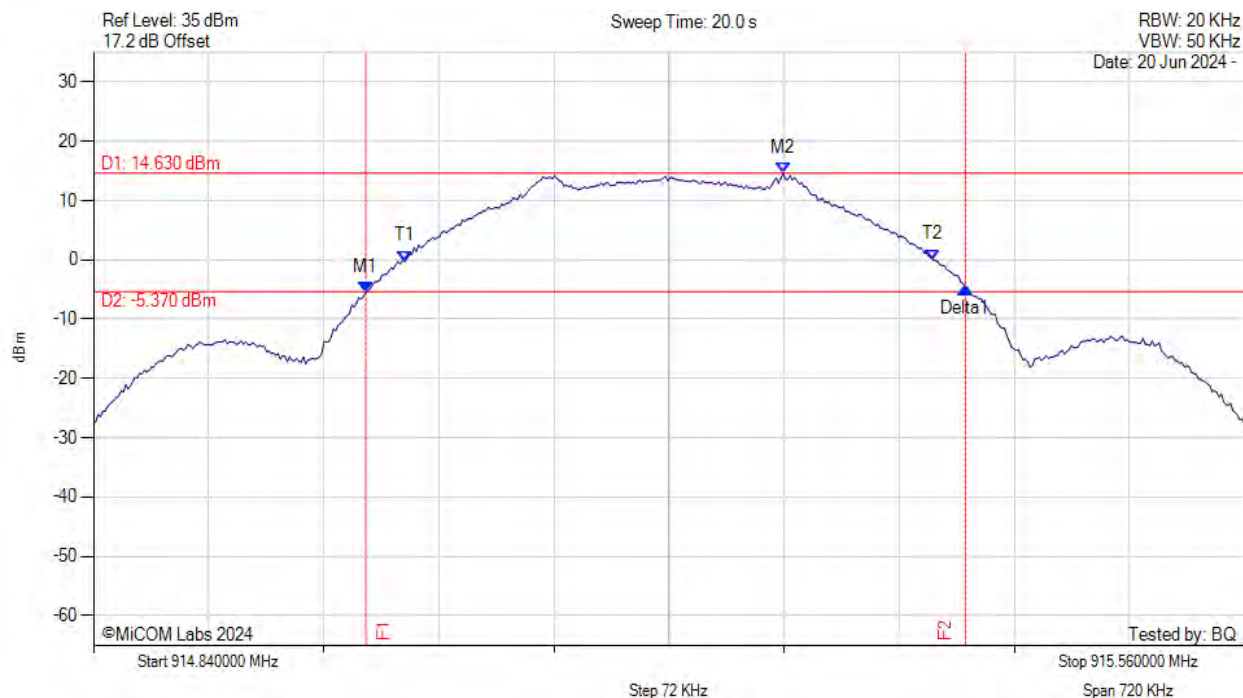
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.212 MHz : -5.978 dBm M2 : 902.474 MHz : 14.490 dBm Delta1 : 372 KHz : 1.161 dB T1 : 902.238 MHz : 0.400 dBm T2 : 902.561 MHz : 0.489 dBm OBW : 323 KHz	Measured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

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20 dB 99% BANDWIDTH



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



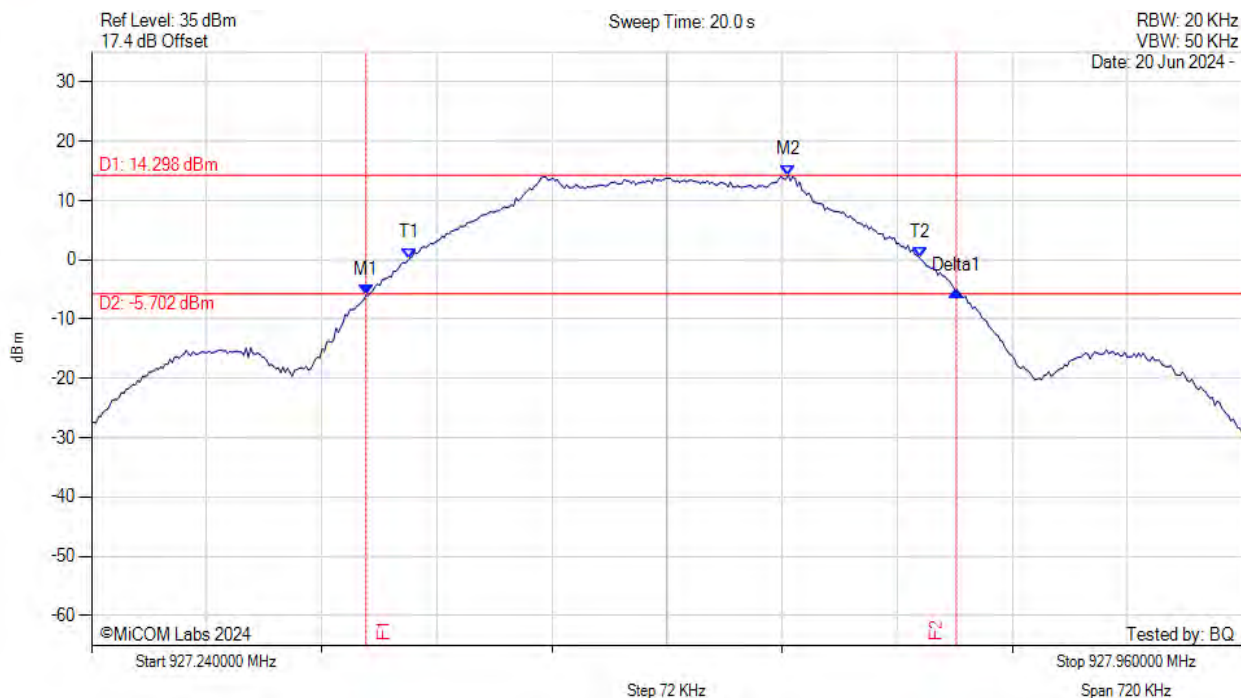
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 915.010 MHz : -5.384 dBm M2 : 915.271 MHz : 14.630 dBm Delta1 : 375 KHz : 0.691 dB T1 : 915.035 MHz : -0.204 dBm T2 : 915.365 MHz : 0.042 dBm OBW : 330 KHz	Measured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

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20 dB 99% BANDWIDTH



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



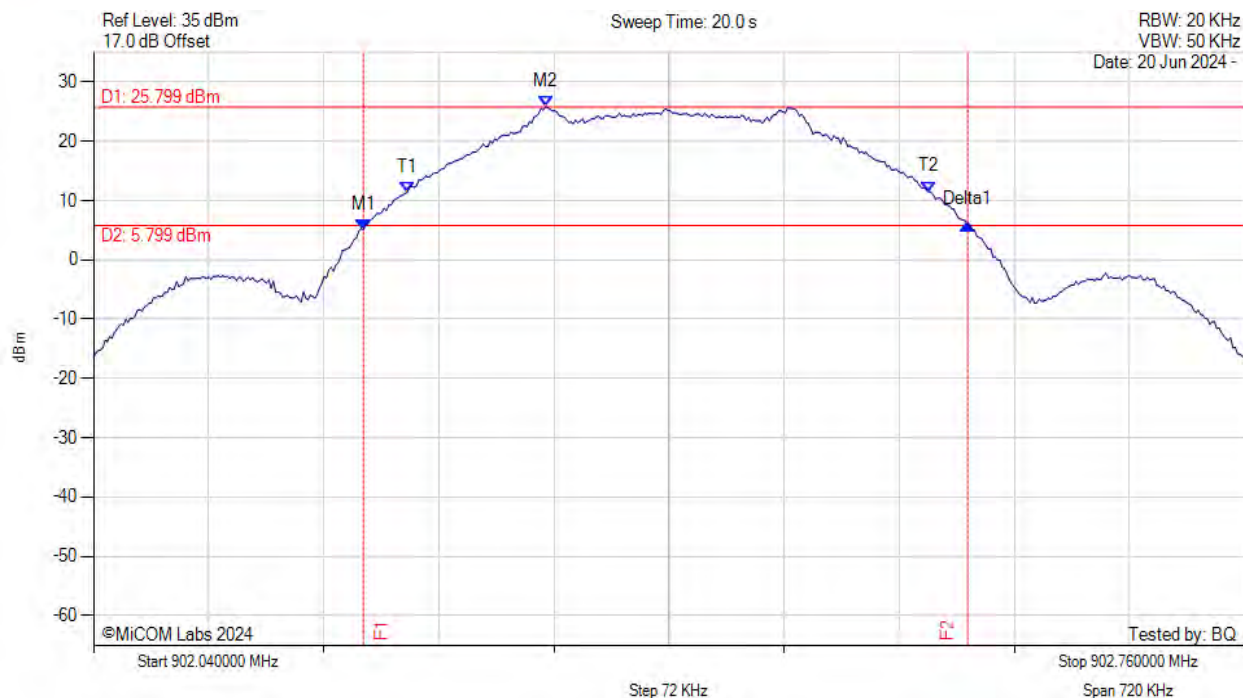
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 927.412 MHz : -5.968 dBm M2 : 927.676 MHz : 14.298 dBm Delta1 : 369 KHz : 0.659 dB T1 : 927.439 MHz : 0.272 dBm T2 : 927.758 MHz : 0.361 dBm OBW : 319 KHz	Measured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

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20 dB 99% BANDWIDTH



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



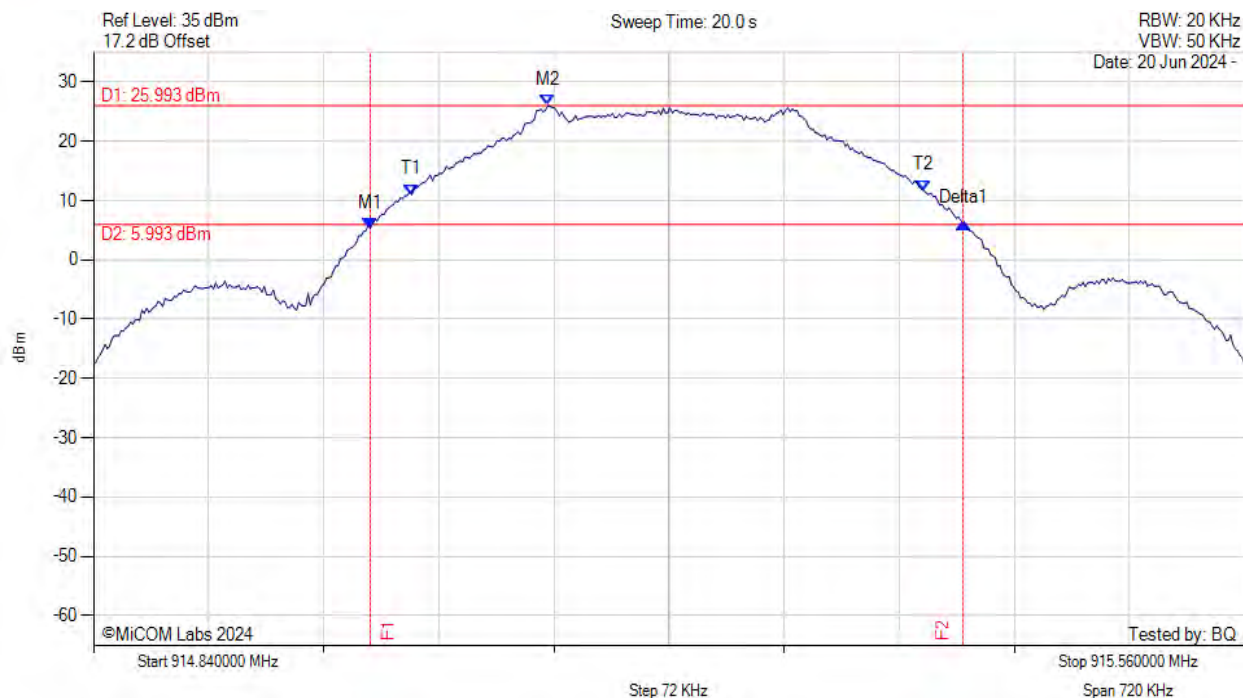
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.209 MHz : 5.106 dBm M2 : 902.323 MHz : 25.799 dBm Delta1 : 378 KHz : 0.925 dB T1 : 902.236 MHz : 11.348 dBm T2 : 902.562 MHz : 11.490 dBm OBW : 326 KHz	Measured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

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20 dB 99% BANDWIDTH



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



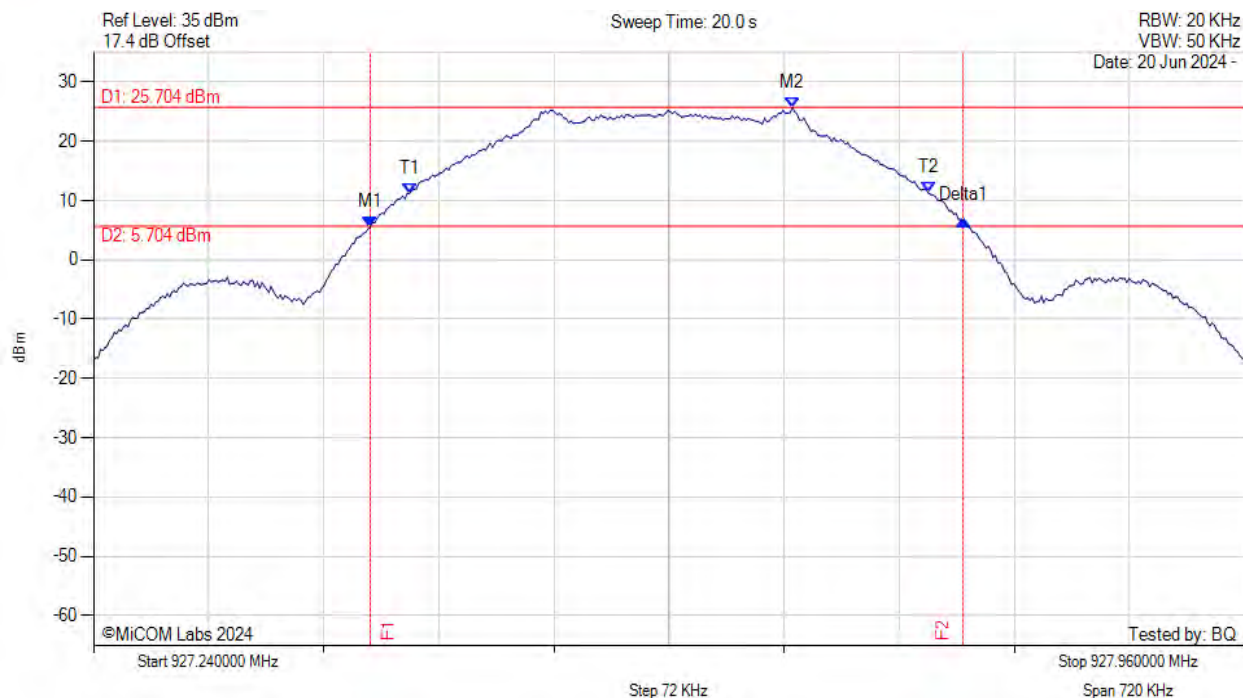
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 915.013 MHz : 5.372 dBm M2 : 915.124 MHz : 25.993 dBm Delta1 : 371 KHz : 0.771 dB T1 : 915.039 MHz : 11.008 dBm T2 : 915.359 MHz : 11.710 dBm OBW : 320 KHz	Measured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

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20 dB 99% BANDWIDTH



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



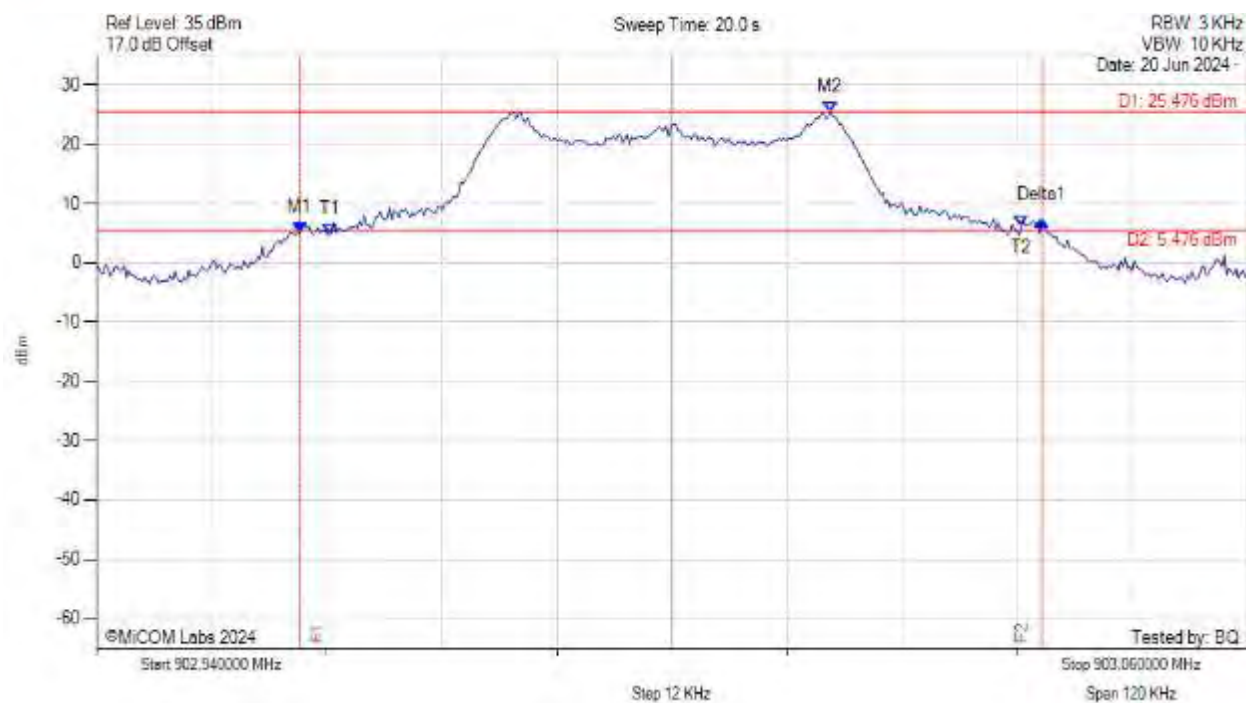
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 927.413 MHz : 5.621 dBm M2 : 927.677 MHz : 25.704 dBm Delta1 : 371 KHz : 1.127 dB T1 : 927.438 MHz : 11.221 dBm T2 : 927.762 MHz : 11.293 dBm OBW : 325 KHz	Measured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

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20 dB 99% BANDWIDTH



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



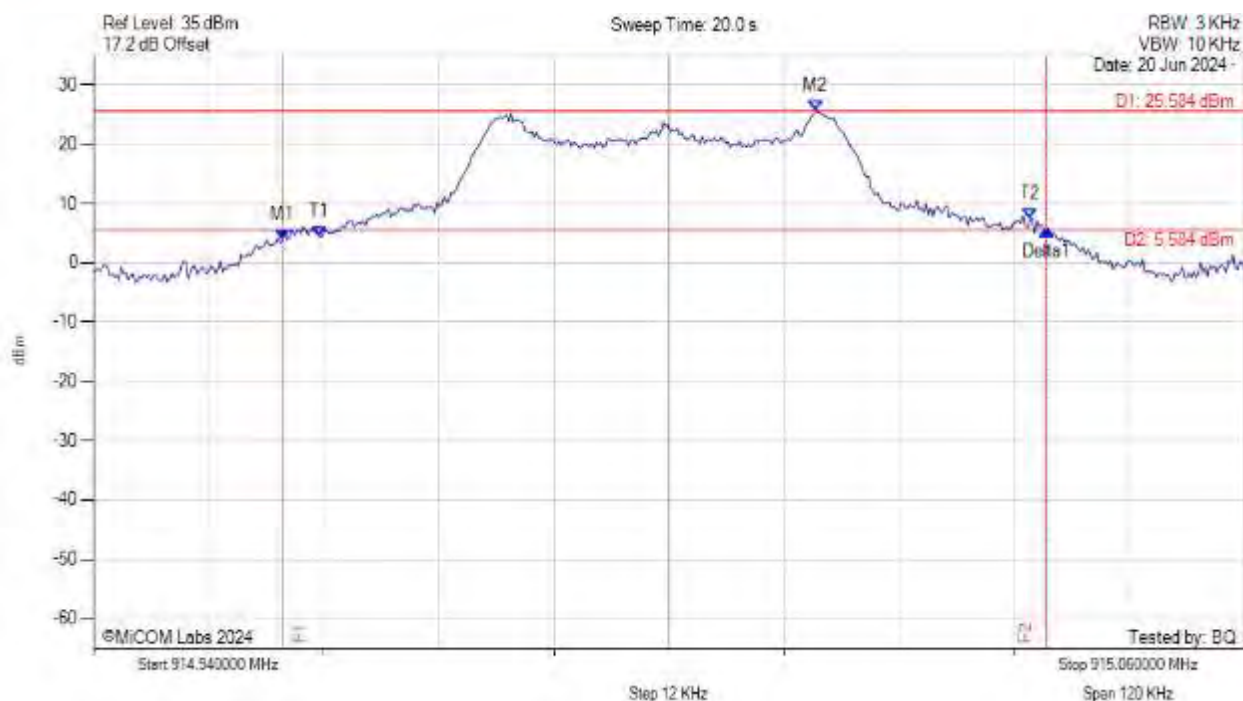
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.961 MHz : 4.955 dBm M2 : 903.016 MHz : 25.476 dBm Delta1 : 77 KHz : 2.123 dB T1 : 902.964 MHz : 4.825 dBm T2 : 903.036 MHz : 6.127 dBm OBW : 72 KHz	Measured 20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

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20 dB 99% BANDWIDTH



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



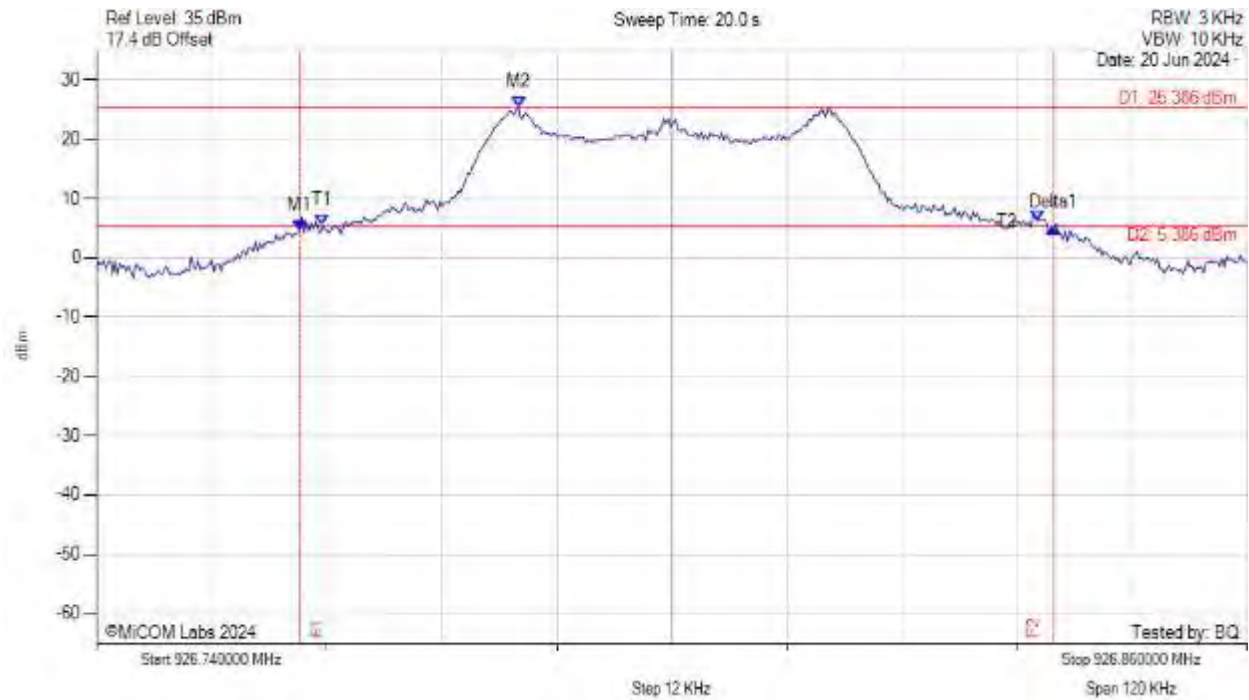
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 914.960 MHz : 3.894 dBm M2 : 915.015 MHz : 25.584 dBm Delta1 : 80 KHz : 1.643 dB T1 : 914.964 MHz : 4.429 dBm T2 : 915.038 MHz : 7.345 dBm OBW : 74 KHz	Measured 20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

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20 dB 99% BANDWIDTH



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



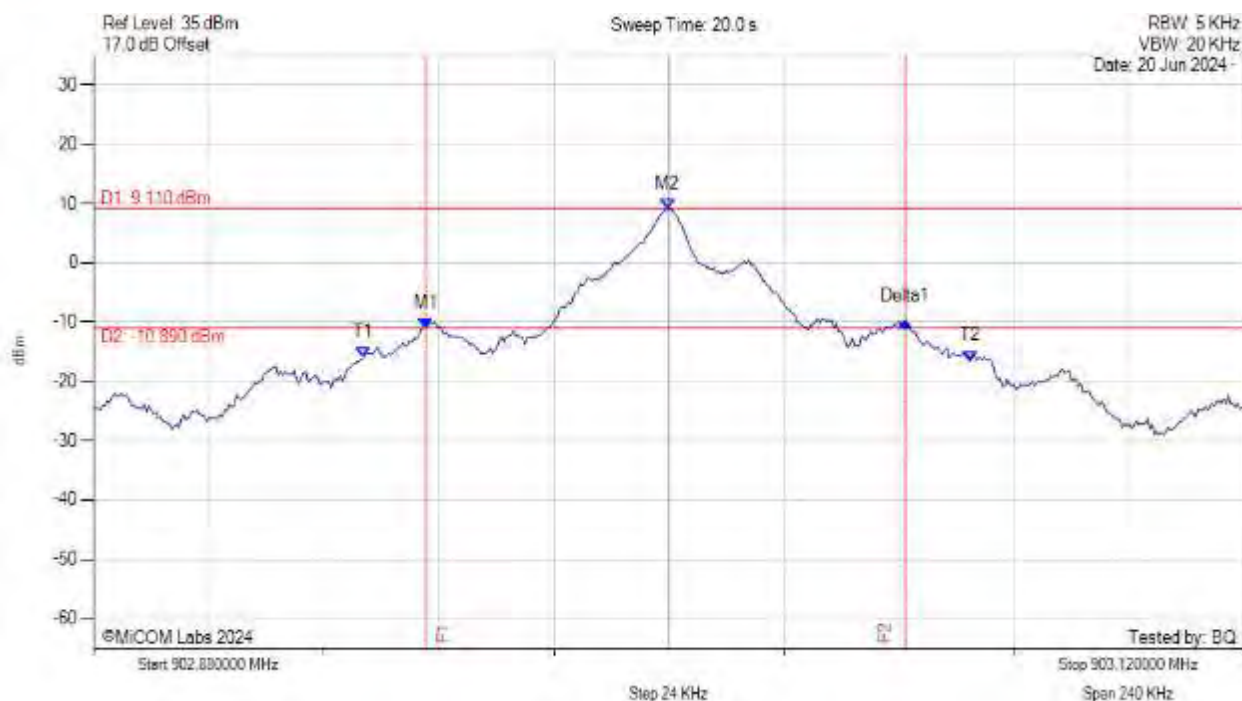
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 926.761 MHz : 4.565 dBm M2 : 926.784 MHz : 25.386 dBm Delta1 : 79 KHz : 0.594 dB T1 : 926.764 MHz : 5.468 dBm T2 : 926.838 MHz : 6.233 dBm OBW : 75 KHz	Measured 20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

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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

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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

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20 dB 99% BANDWIDTH



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



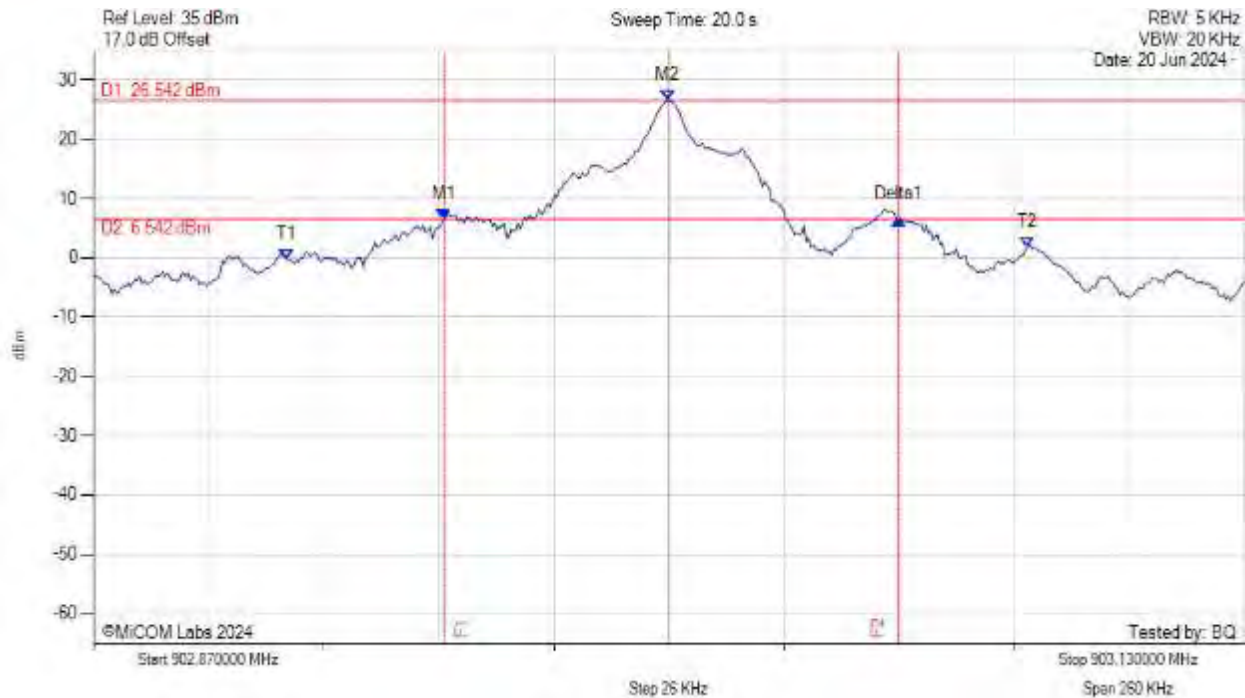
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 926.748 MHz : -12.073 dBm M2 : 926.800 MHz : 8.647 dBm Delta1 : 101 KHz : 1.702 dB T1 : 926.736 MHz : -16.478 dBm T2 : 926.863 MHz : -15.563 dBm OBW : 127 KHz	Measured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

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20 dB 99% BANDWIDTH



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



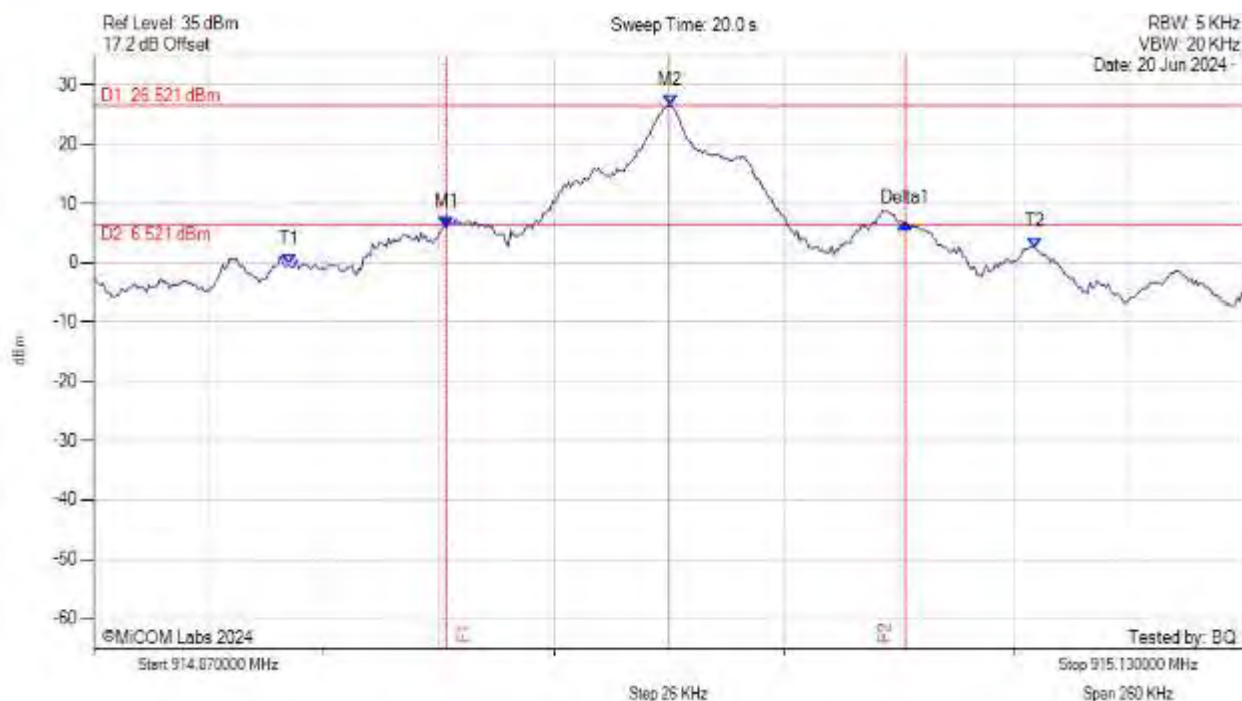
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.949 MHz : 6.460 dBm M2 : 903.000 MHz : 26.542 dBm Delta1 : 103 KHz : 0.065 dB T1 : 902.914 MHz : -0.263 dBm T2 : 903.081 MHz : 1.838 dBm OBW : 167 KHz	Measured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

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20 dB 99% BANDWIDTH



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



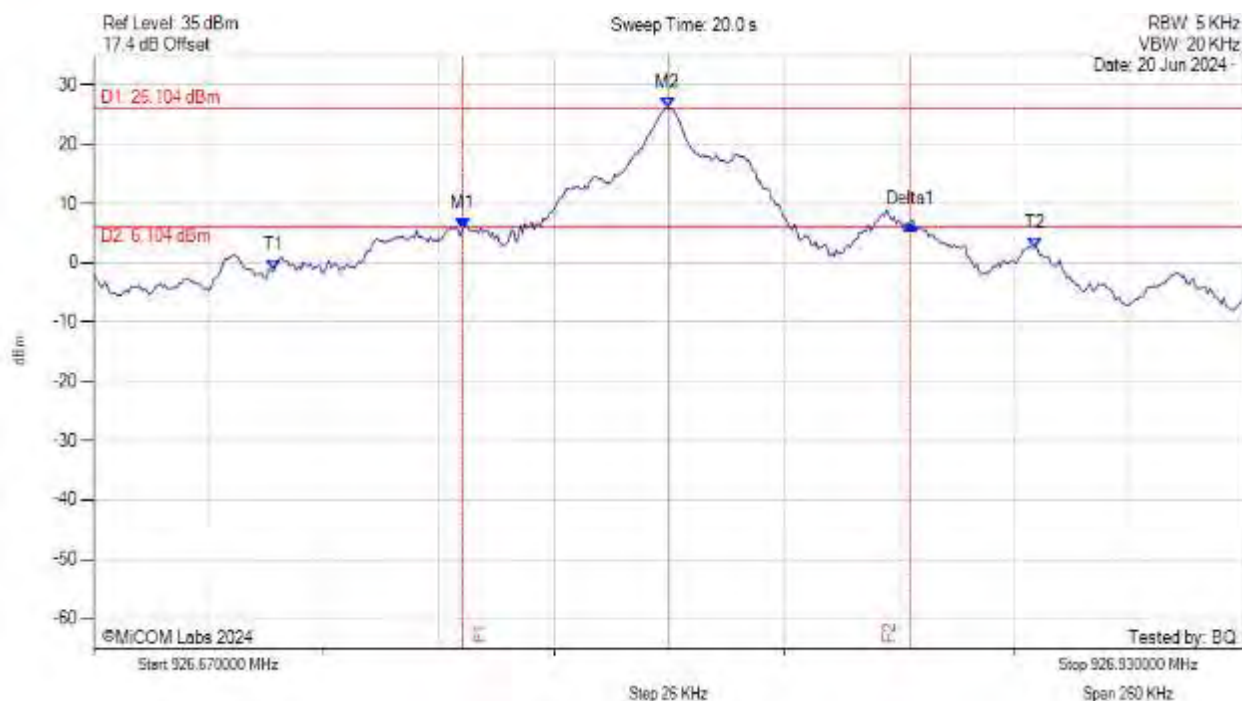
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 914.950 MHz : 5.978 dBm M2 : 915.000 MHz : 26.521 dBm Delta1 : 104 KHz : 0.730 dB T1 : 914.914 MHz : -0.342 dBm T2 : 915.083 MHz : 2.602 dBm OBW : 168 KHz	Measured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

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20 dB 99% BANDWIDTH



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

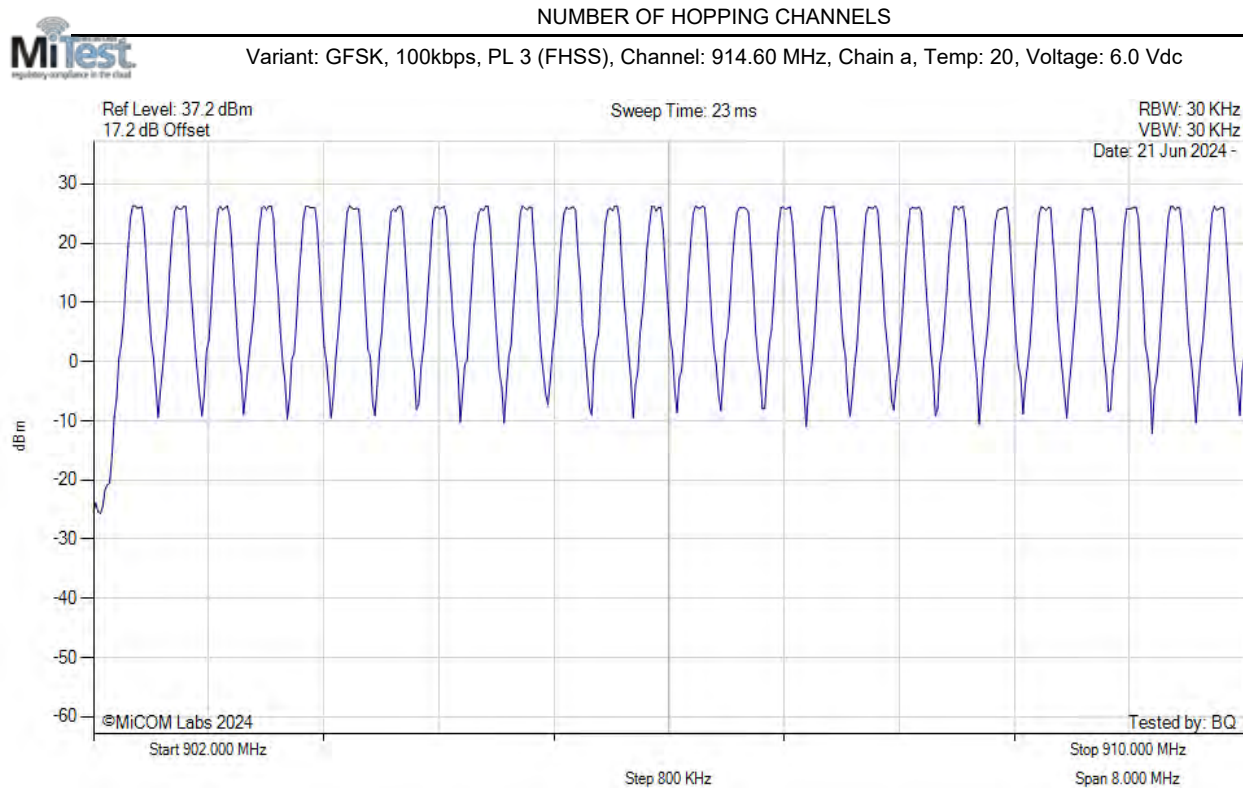


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 926.753 MHz : 5.686 dBm M2 : 926.800 MHz : 26.104 dBm Delta1 : 101 KHz : 0.706 dB T1 : 926.711 MHz : -1.343 dBm T2 : 926.883 MHz : 2.527 dBm OBW : 172 KHz	Measured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

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1.2. Frequency Hopping Tests

1.2.1. Number of Hopping Channels



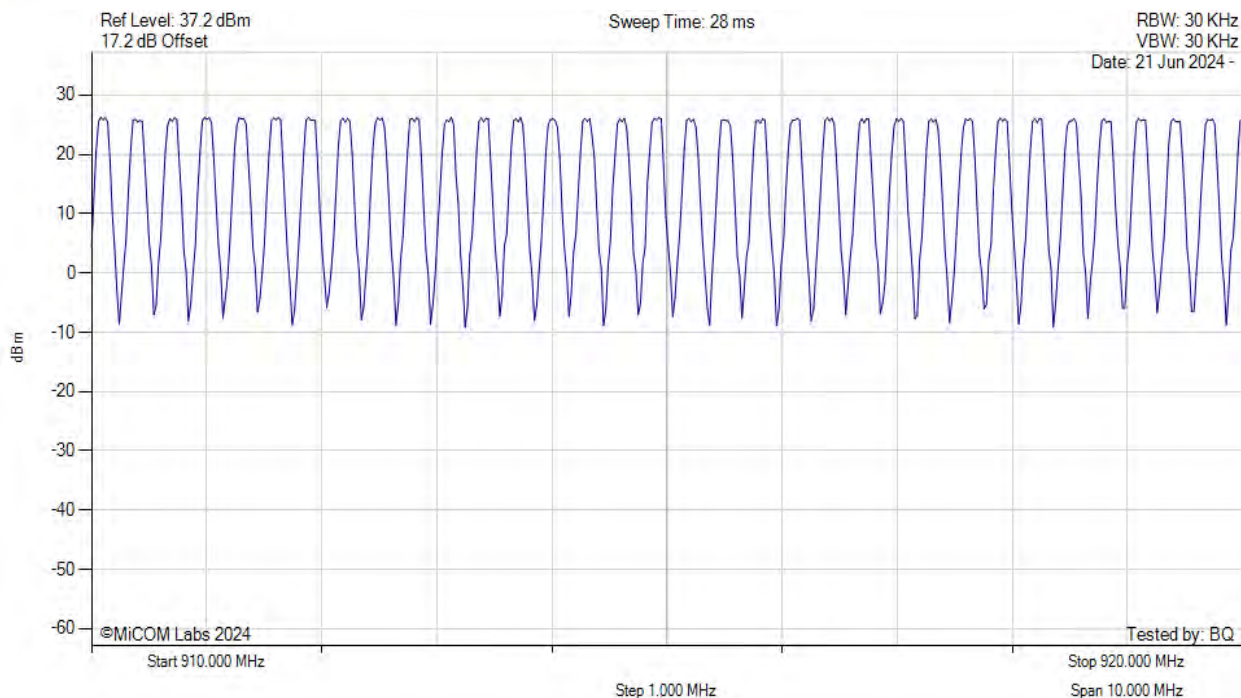
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.60 MHz

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NUMBER OF HOPPING CHANNELS



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



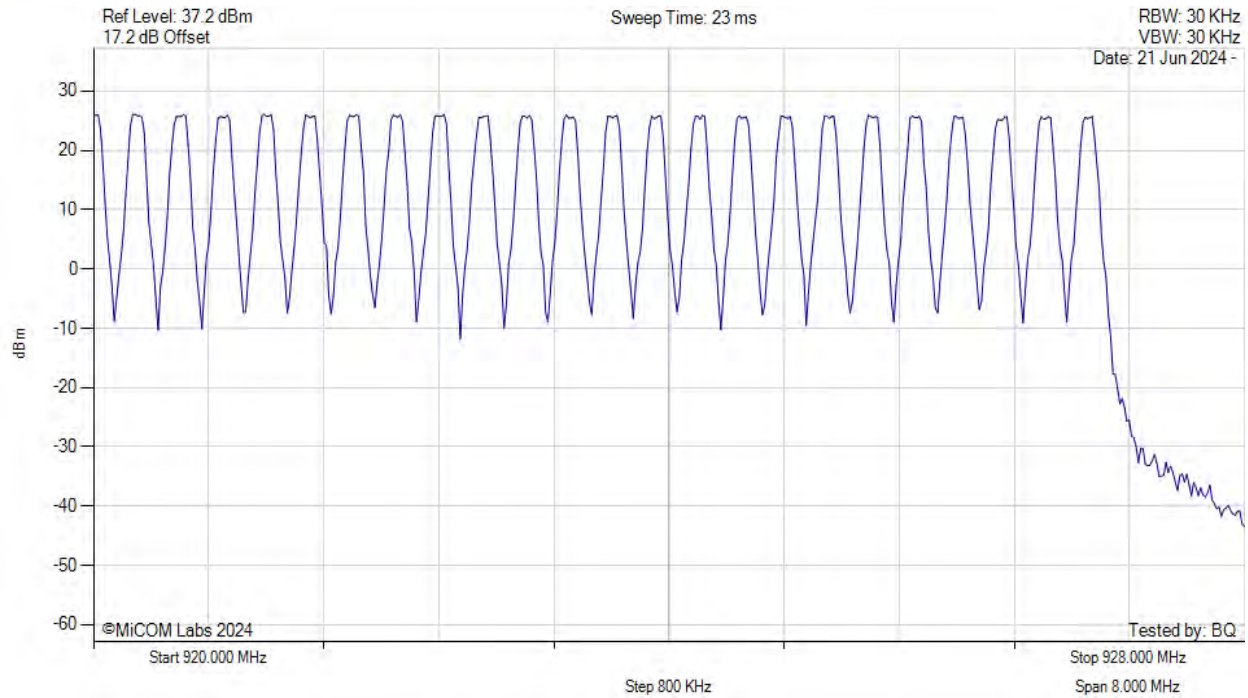
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.60 MHz

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NUMBER OF HOPPING CHANNELS



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



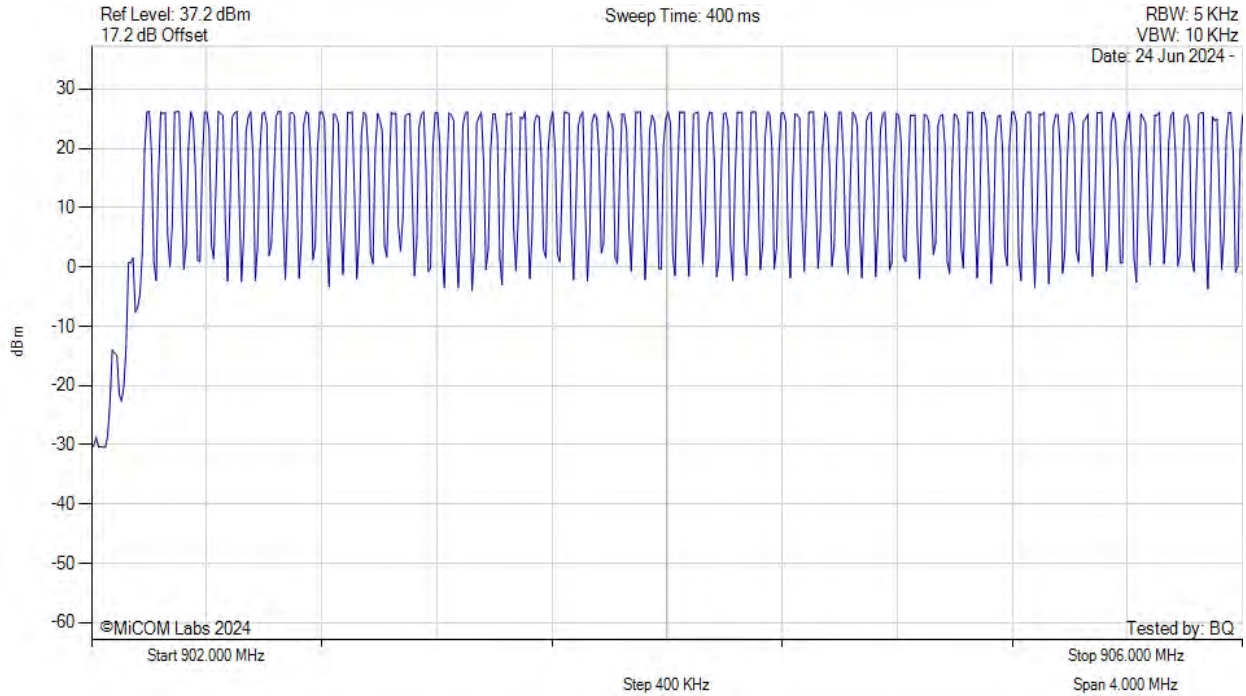
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.60 MHz

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NUMBER OF HOPPING CHANNELS



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



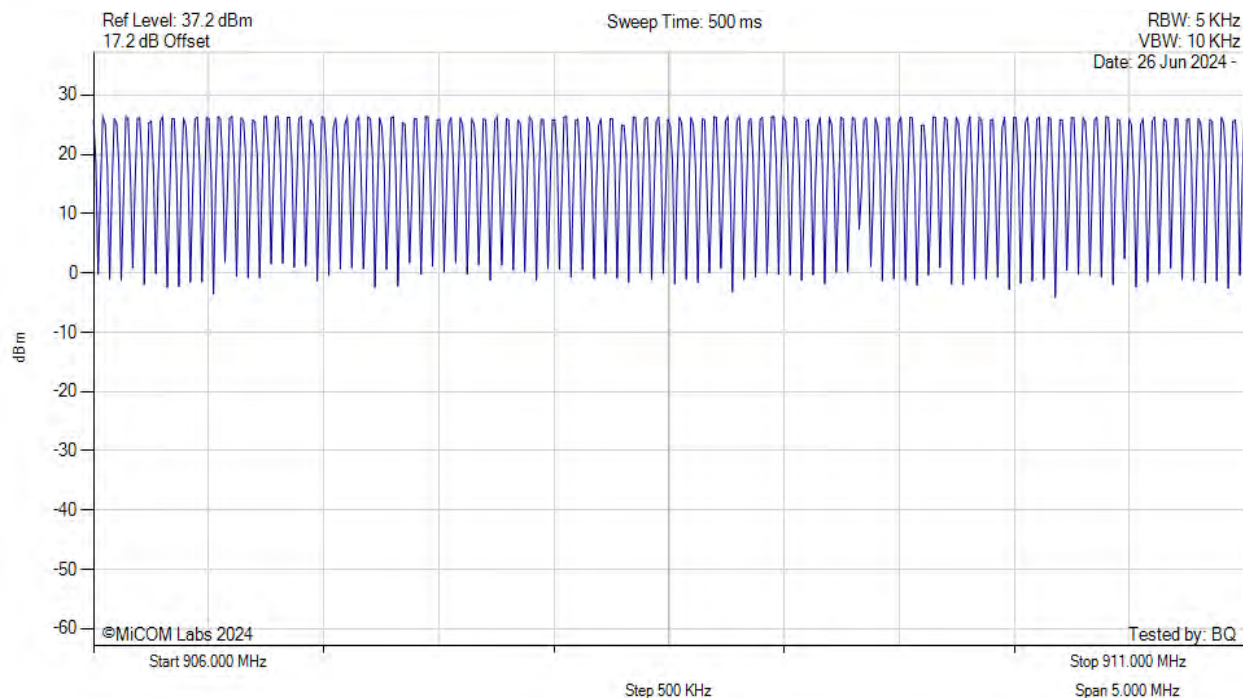
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 902.00 MHz

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NUMBER OF HOPPING CHANNELS



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



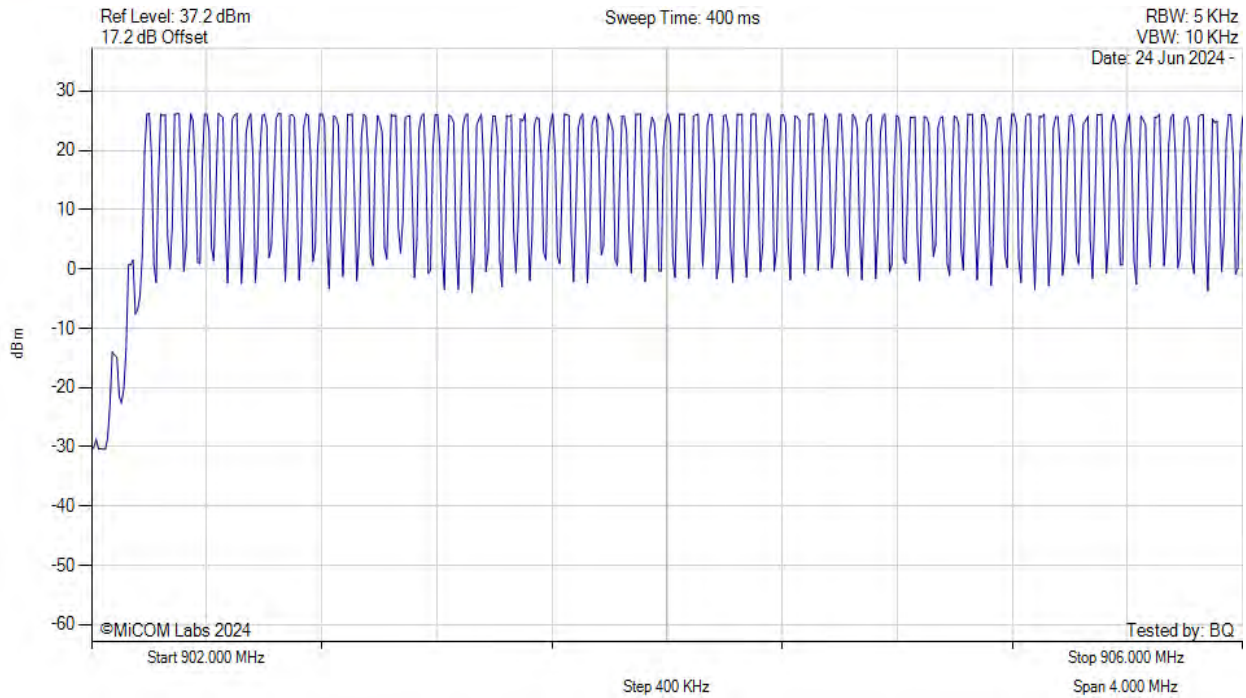
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 912.00 MHz

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NUMBER OF HOPPING CHANNELS



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



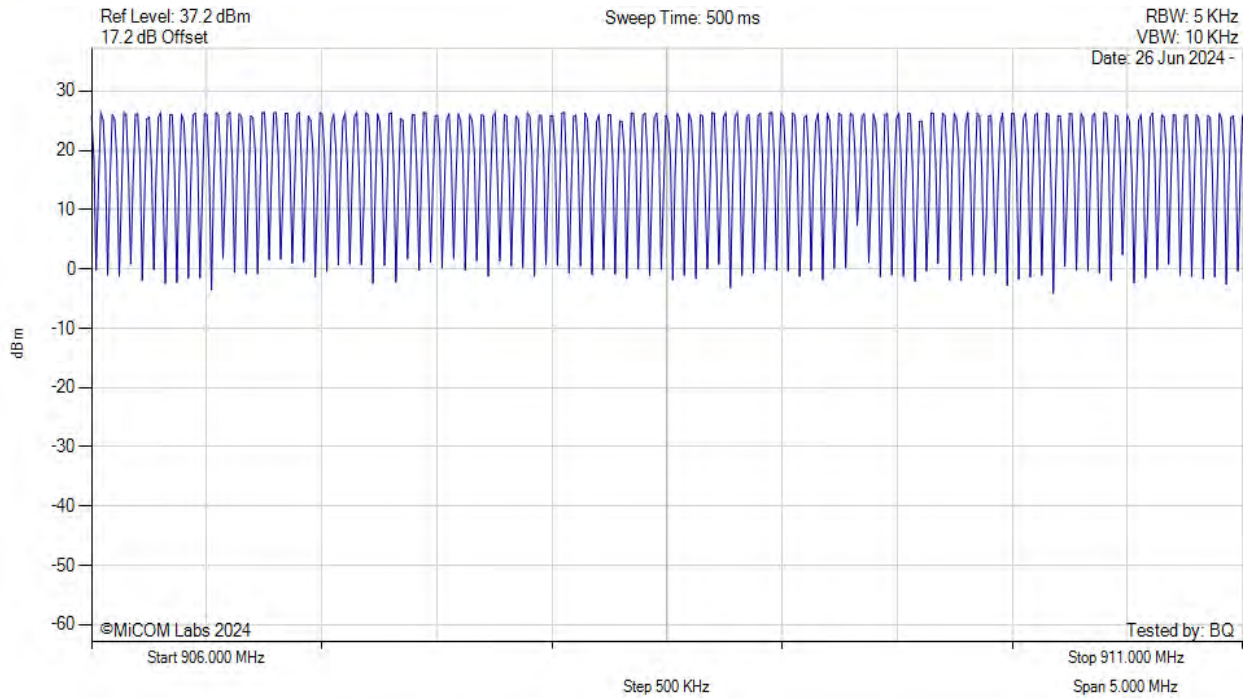
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.00 MHz

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NUMBER OF HOPPING CHANNELS



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



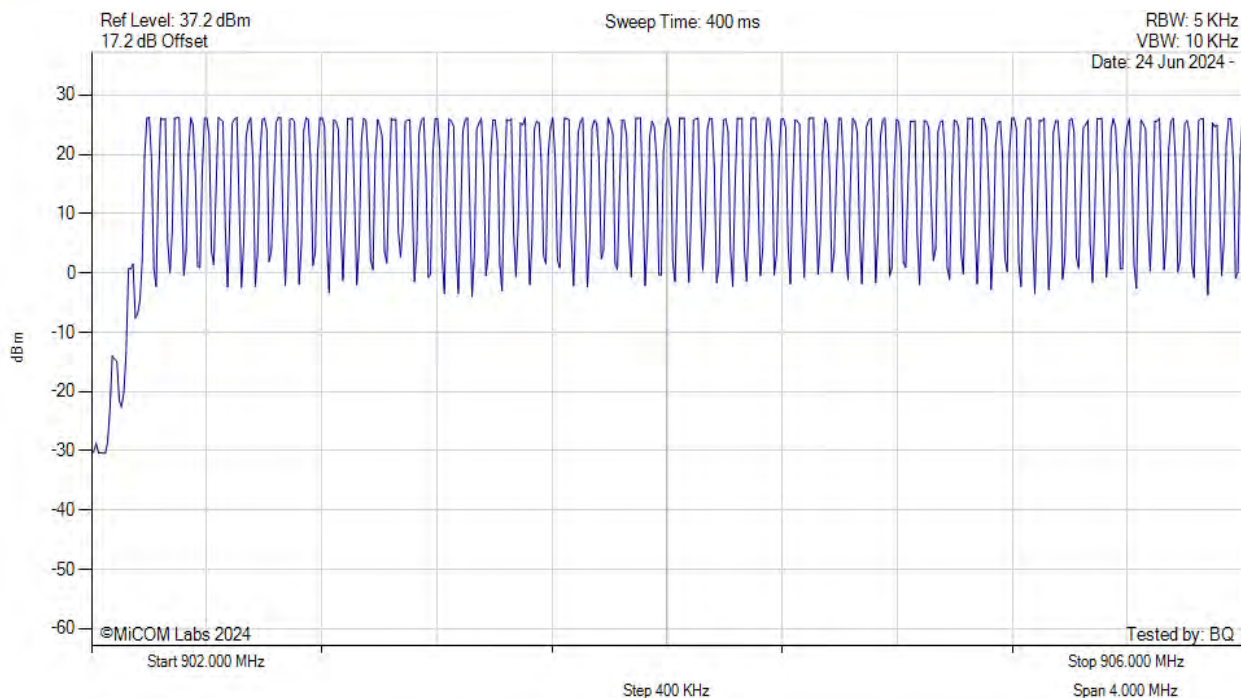
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.00 MHz

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NUMBER OF HOPPING CHANNELS



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



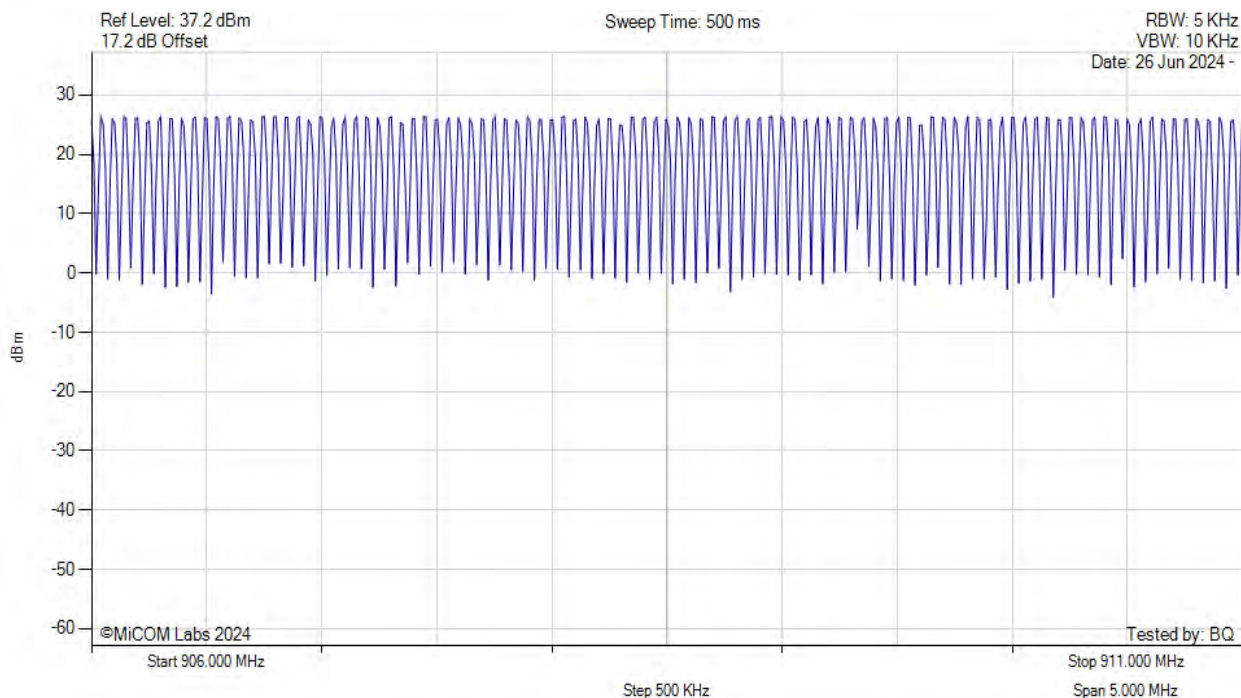
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.00 MHz

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NUMBER OF HOPPING CHANNELS



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



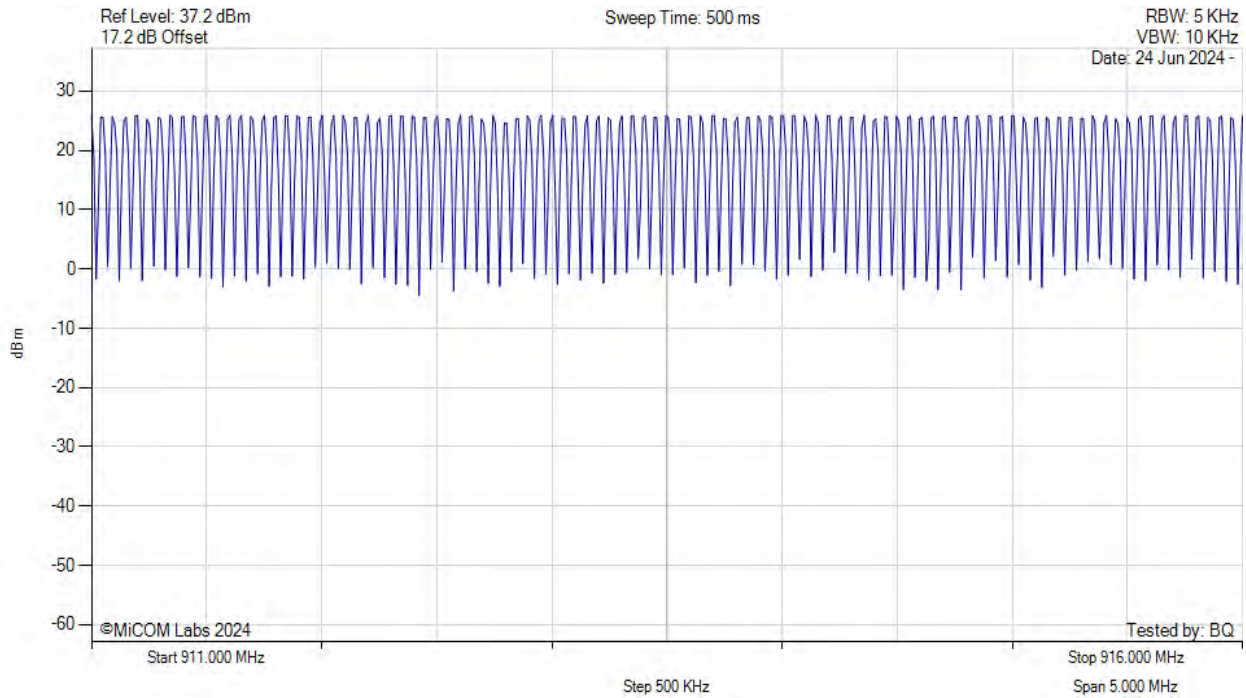
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.00 MHz

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NUMBER OF HOPPING CHANNELS



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



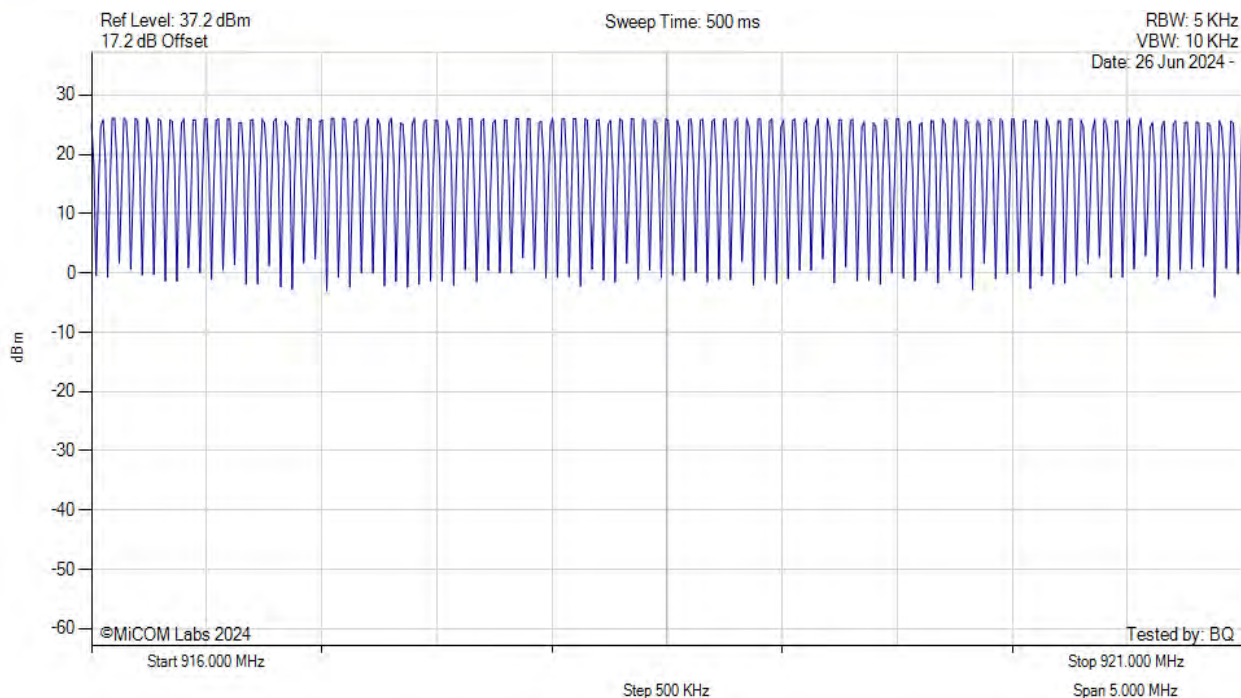
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.00 MHz

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NUMBER OF HOPPING CHANNELS



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



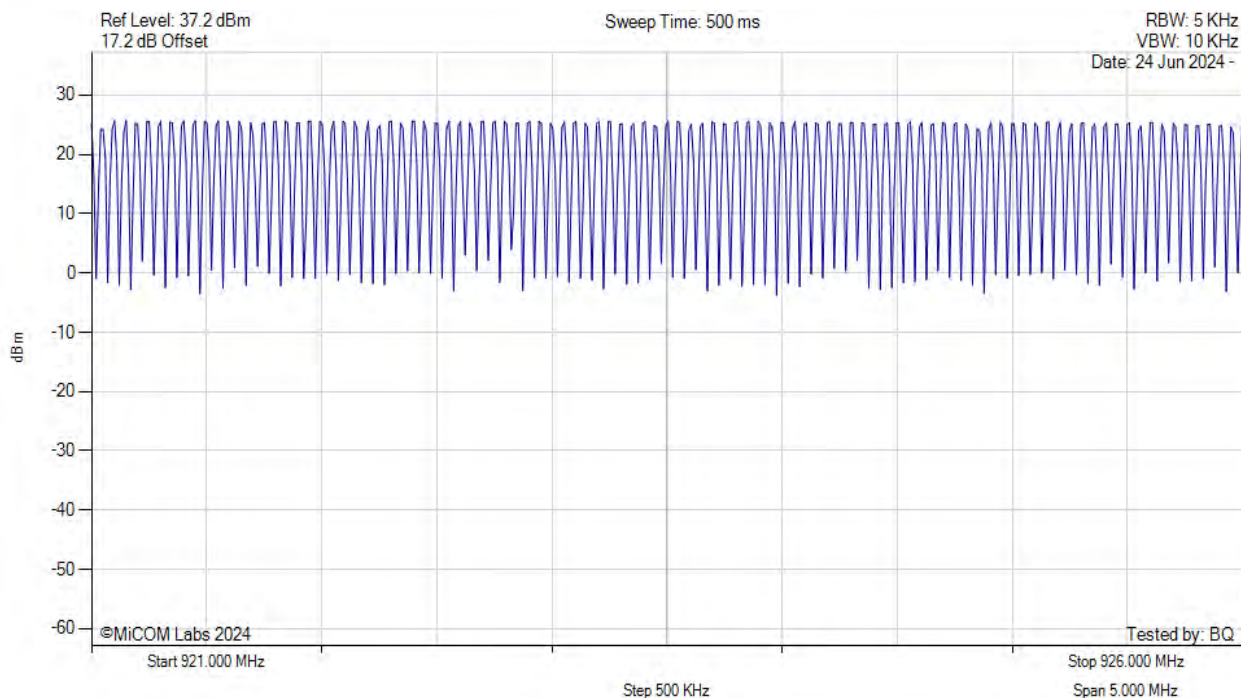
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.00 MHz

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NUMBER OF HOPPING CHANNELS



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



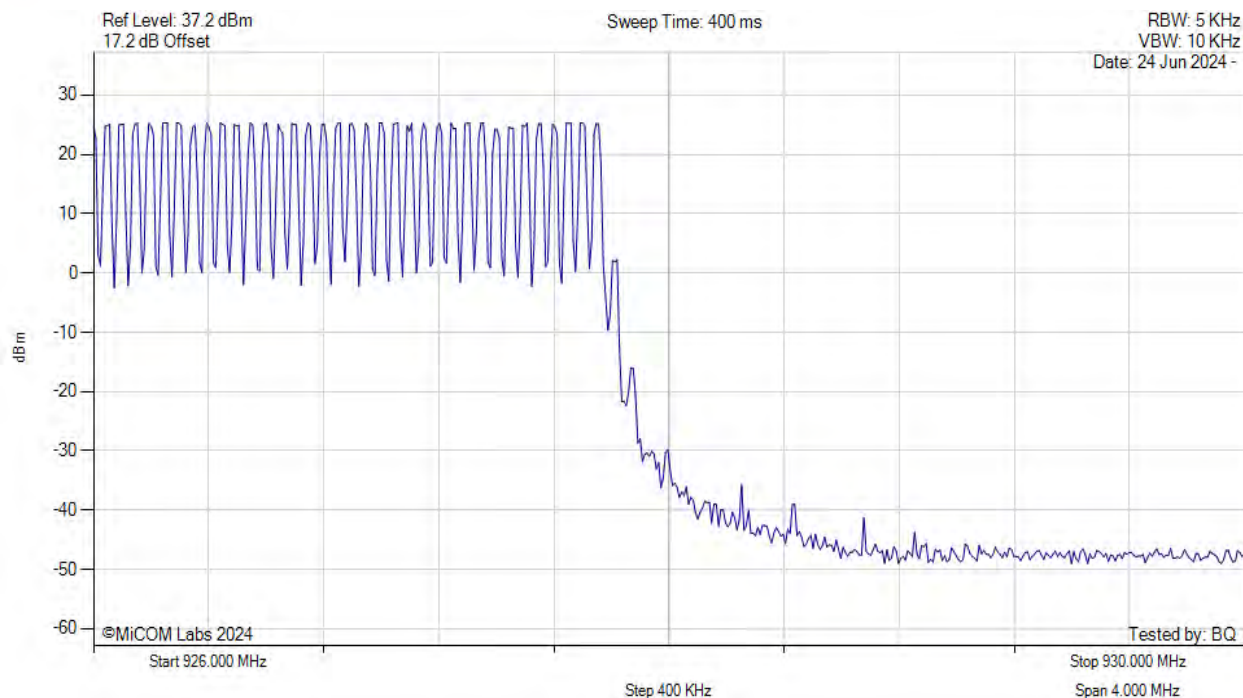
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.00 MHz

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NUMBER OF HOPPING CHANNELS



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



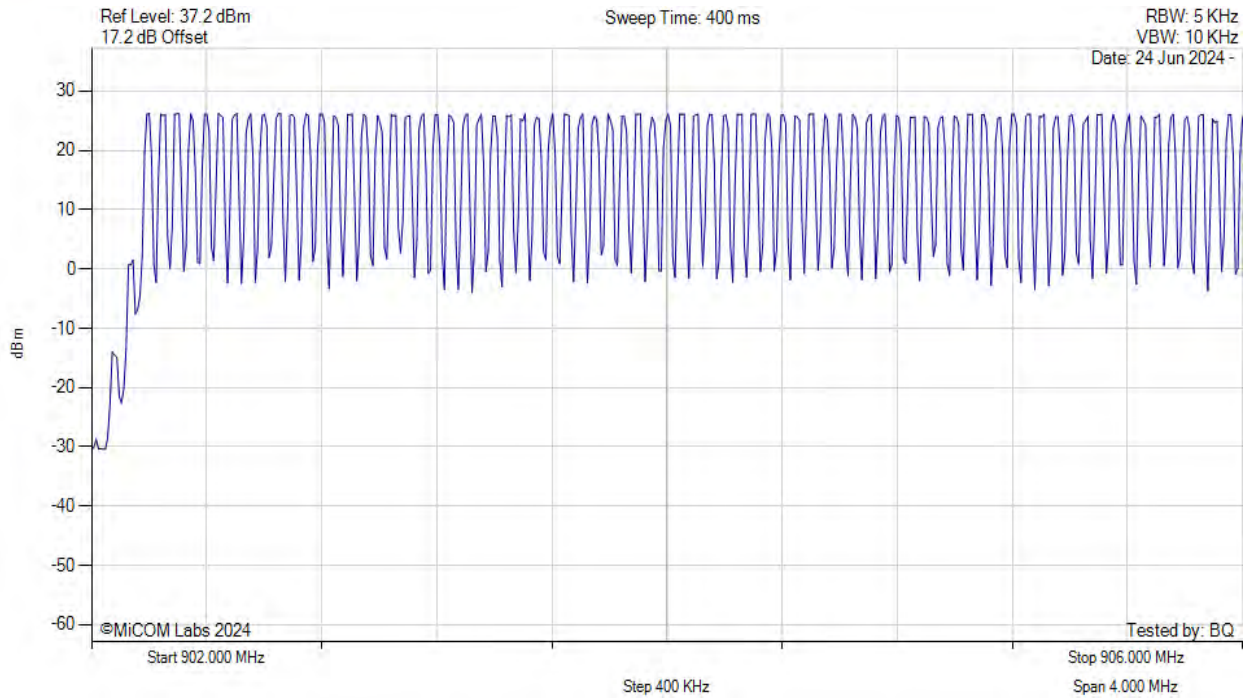
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 914.00 MHz

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NUMBER OF HOPPING CHANNELS



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



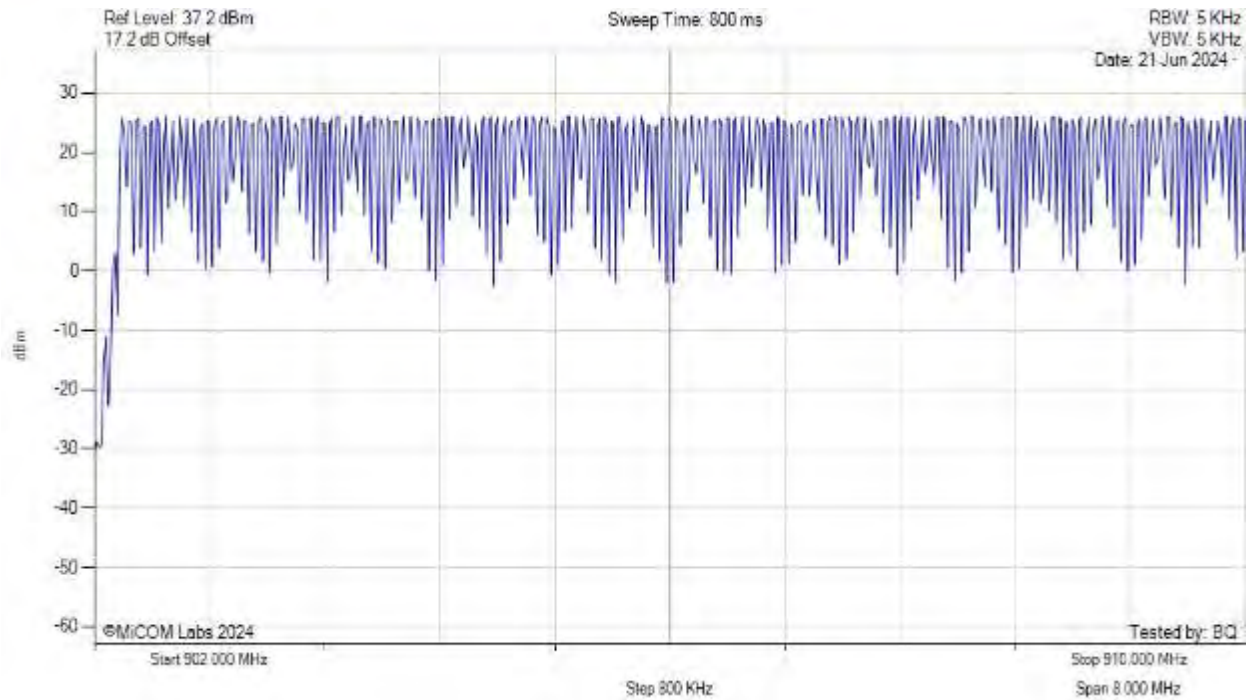
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



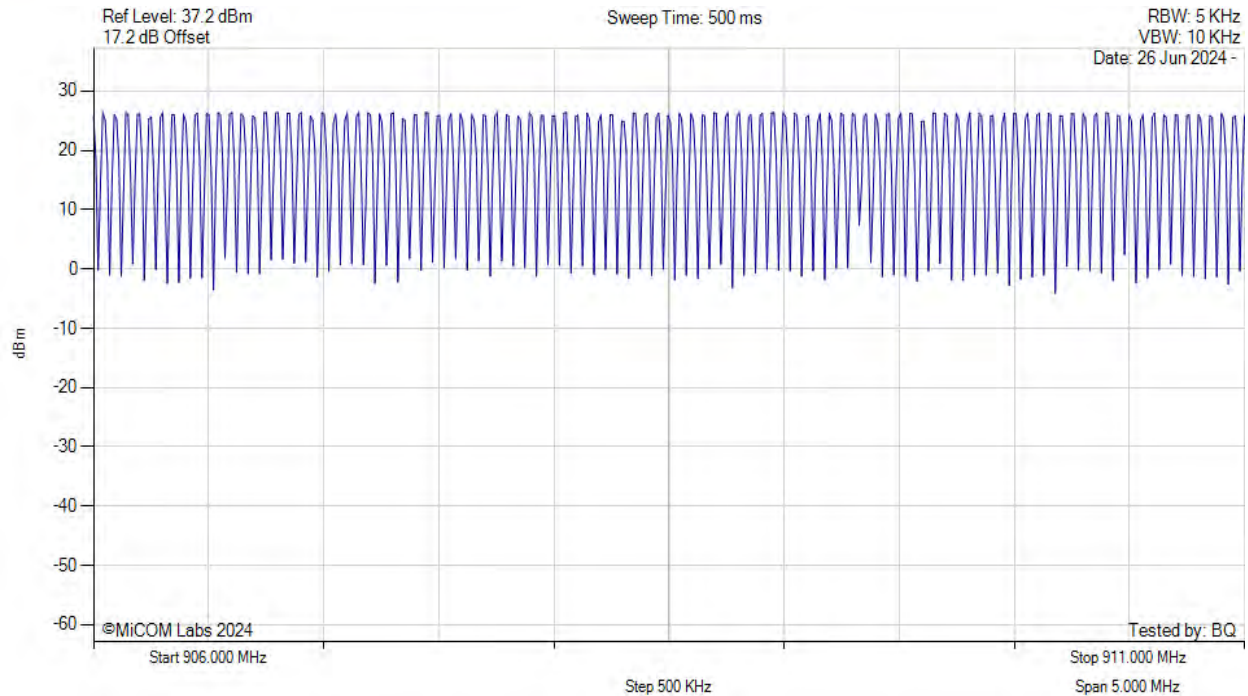
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



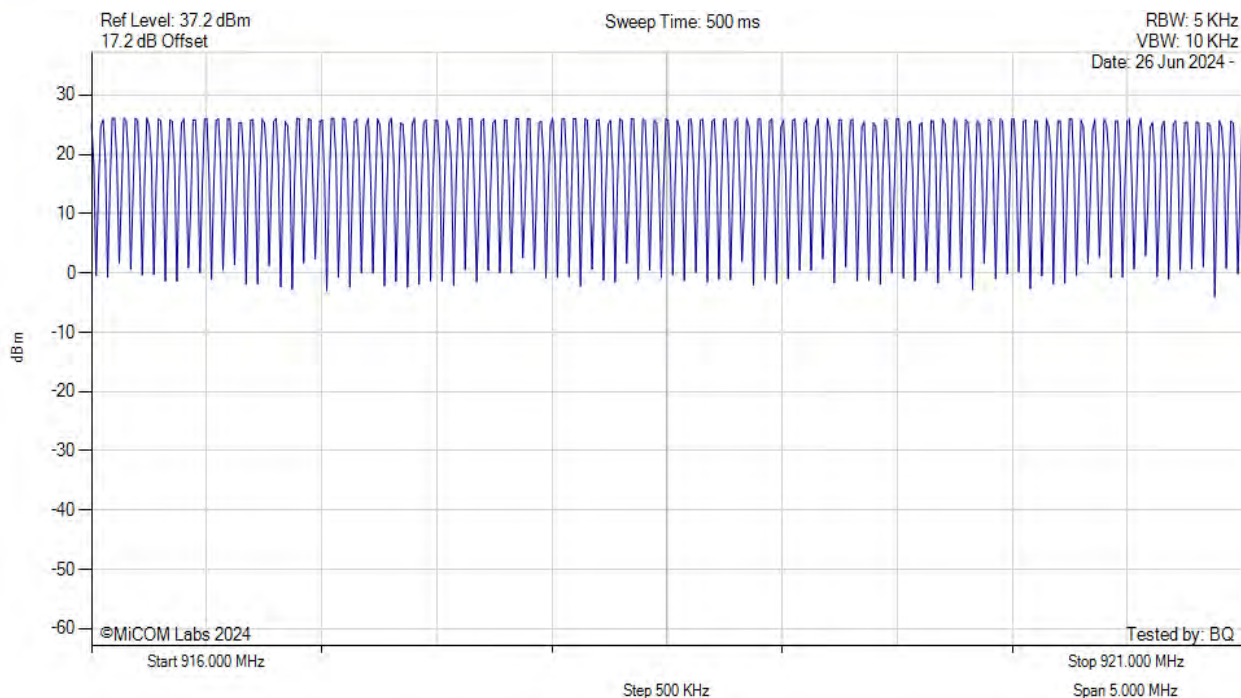
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



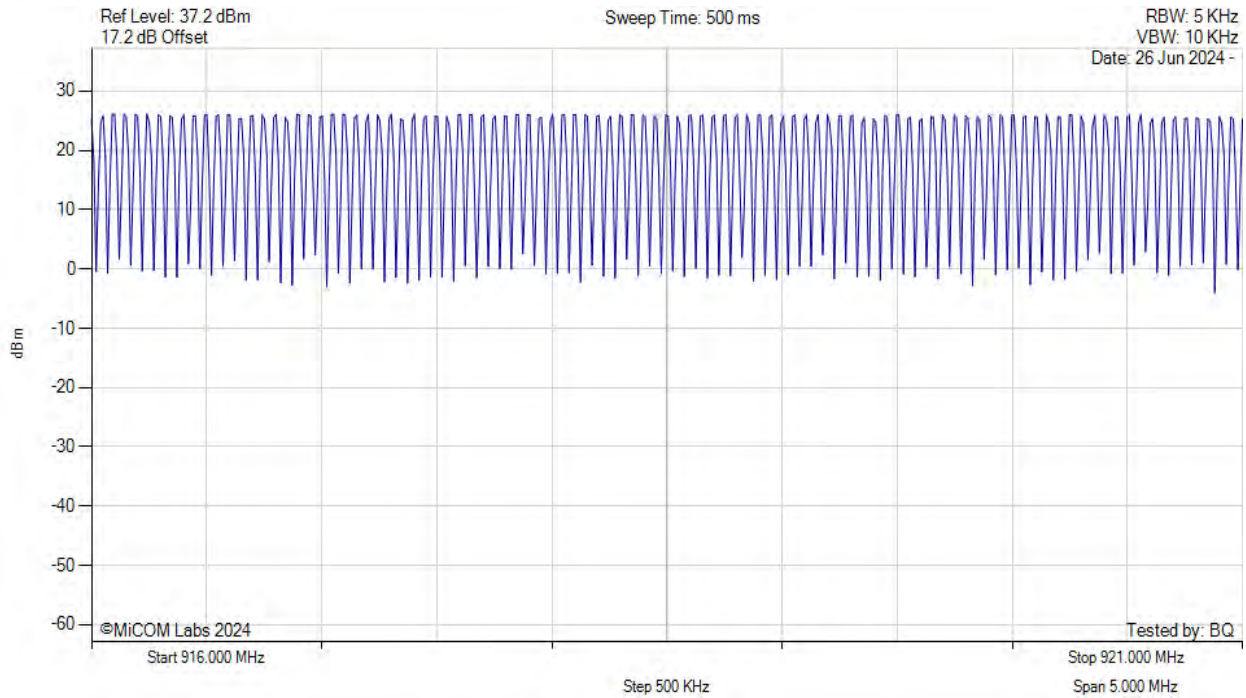
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



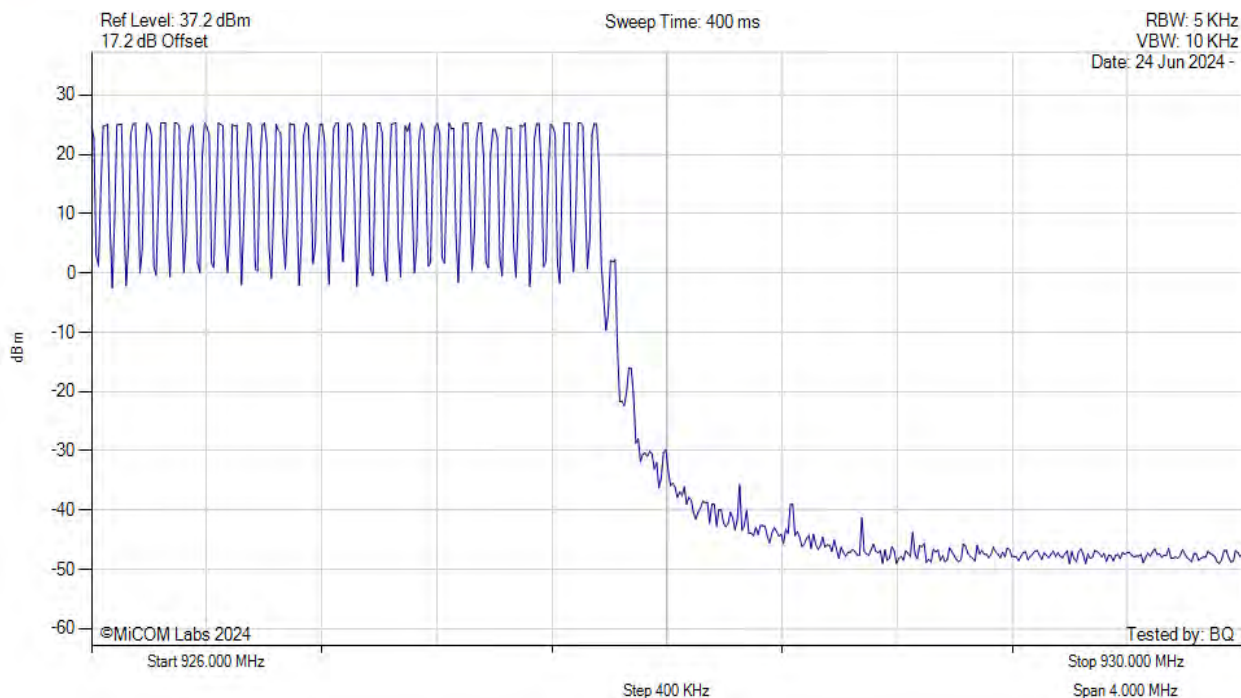
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



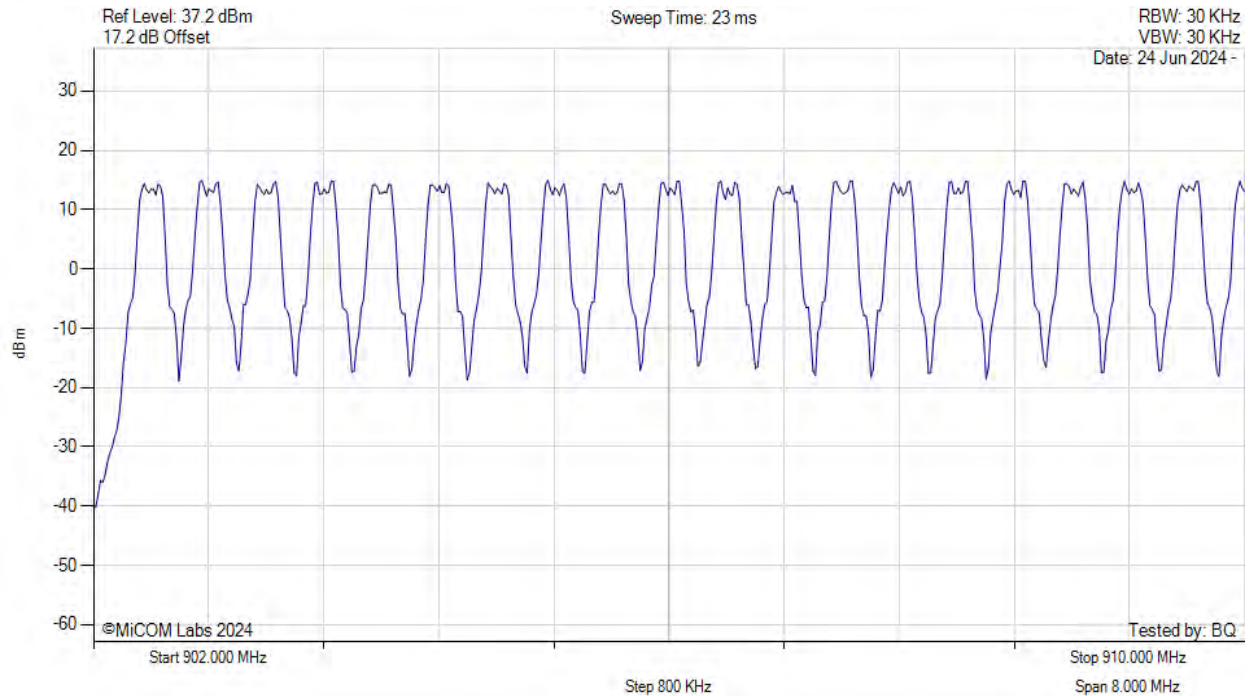
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 928.00 MHz

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NUMBER OF HOPPING CHANNELS



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



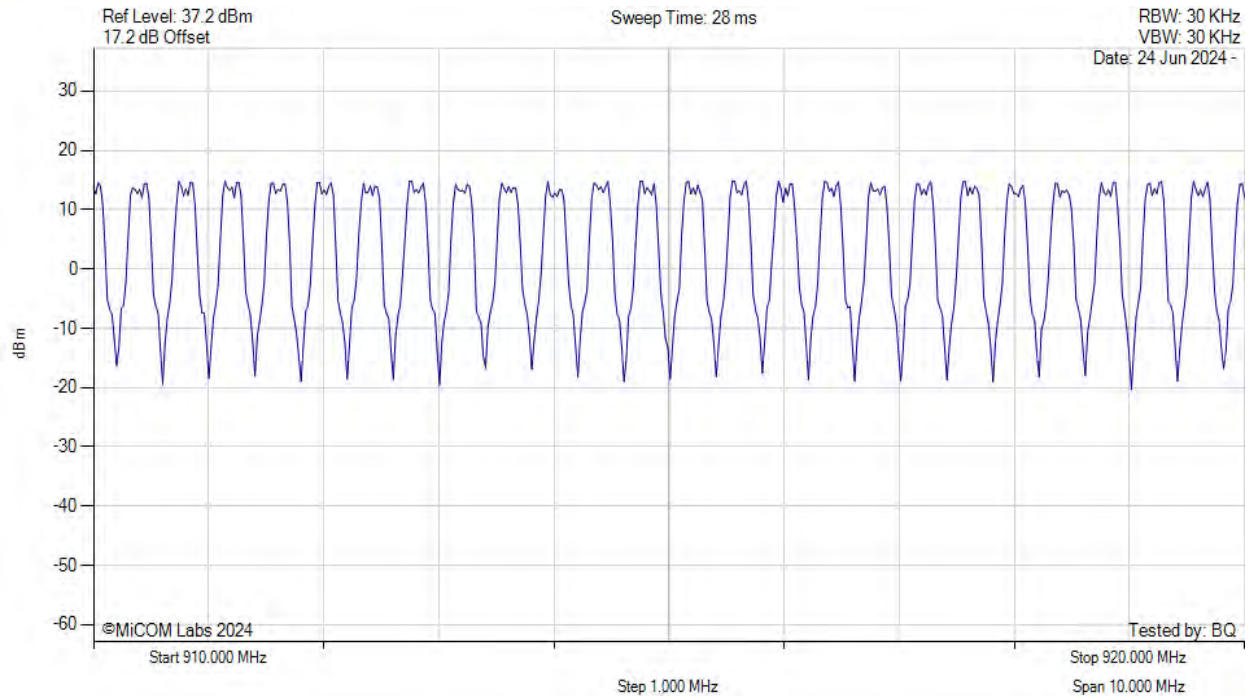
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.20 MHz

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NUMBER OF HOPPING CHANNELS



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



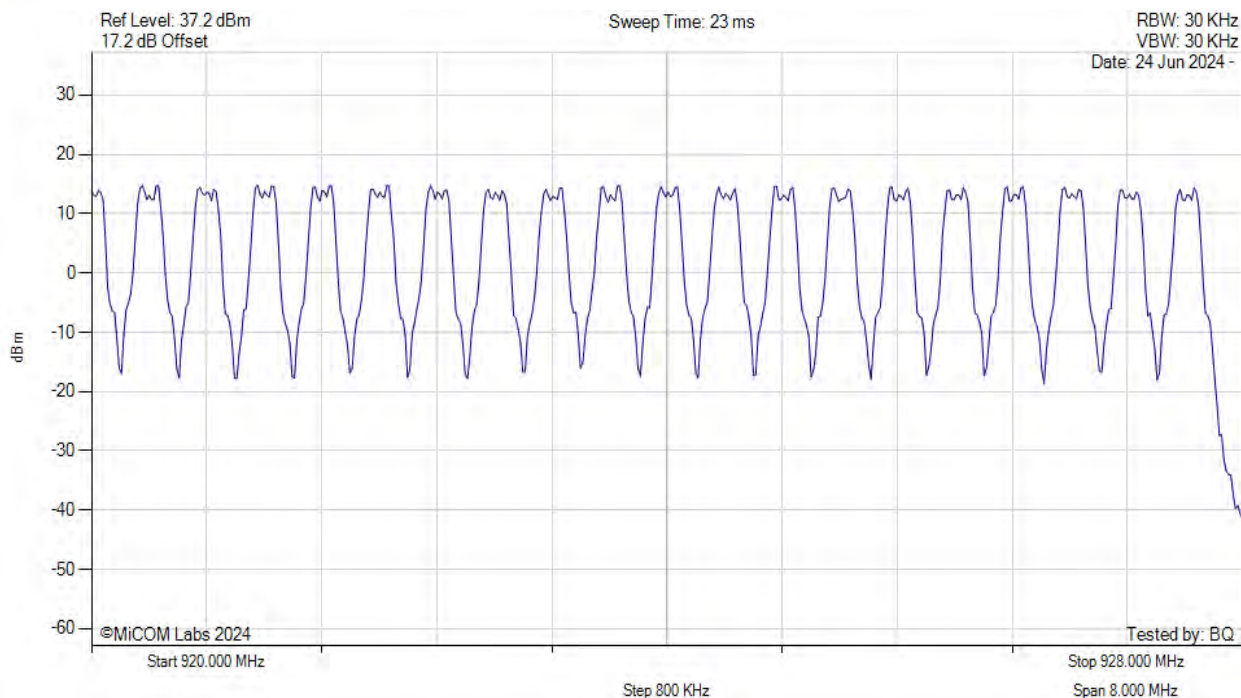
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.20 MHz

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NUMBER OF HOPPING CHANNELS



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



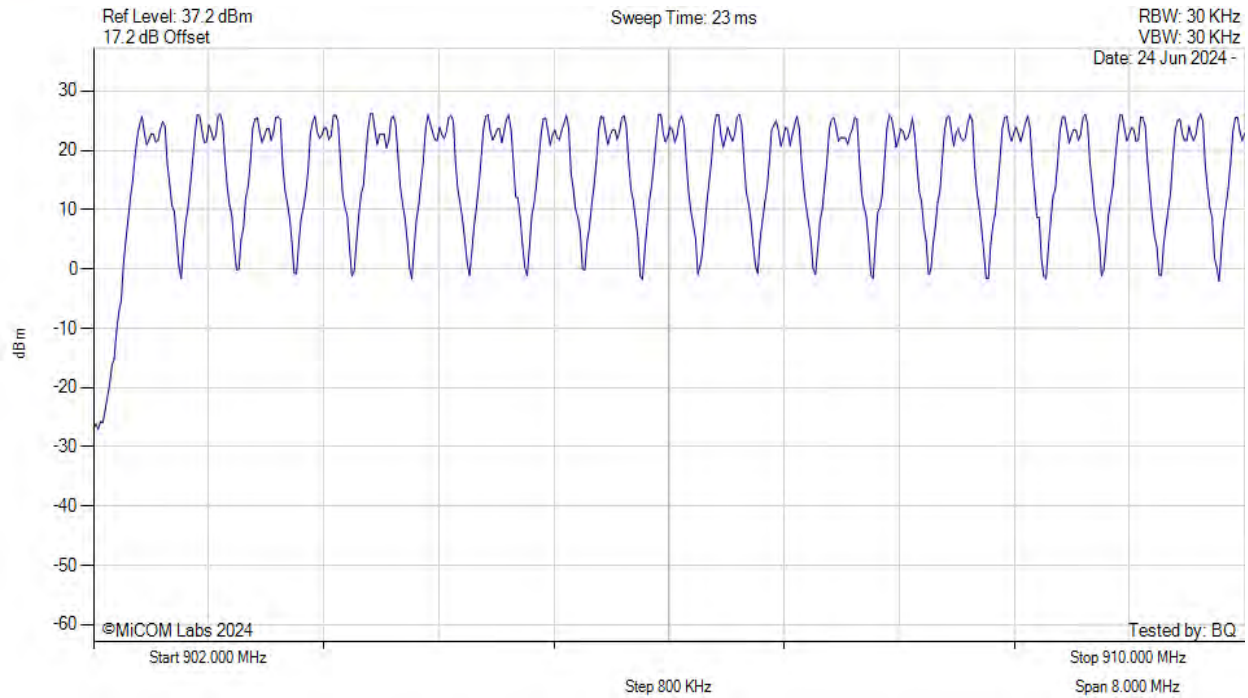
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.20 MHz

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NUMBER OF HOPPING CHANNELS



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



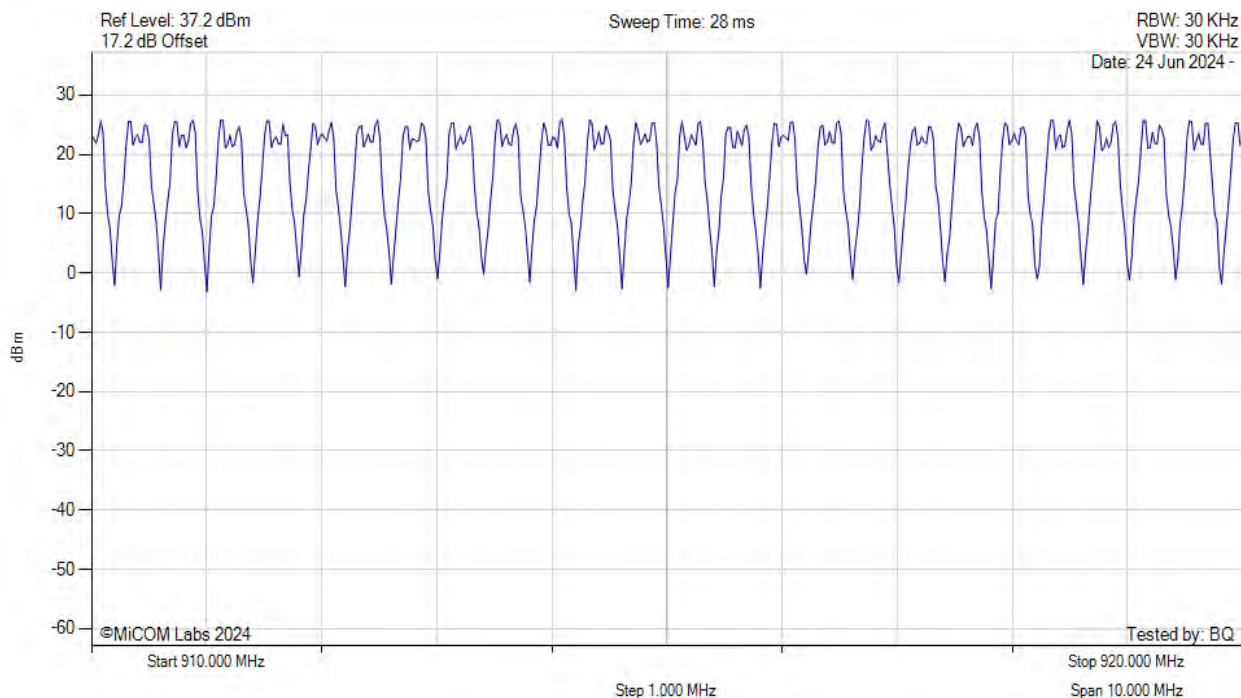
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.20 MHz

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NUMBER OF HOPPING CHANNELS



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



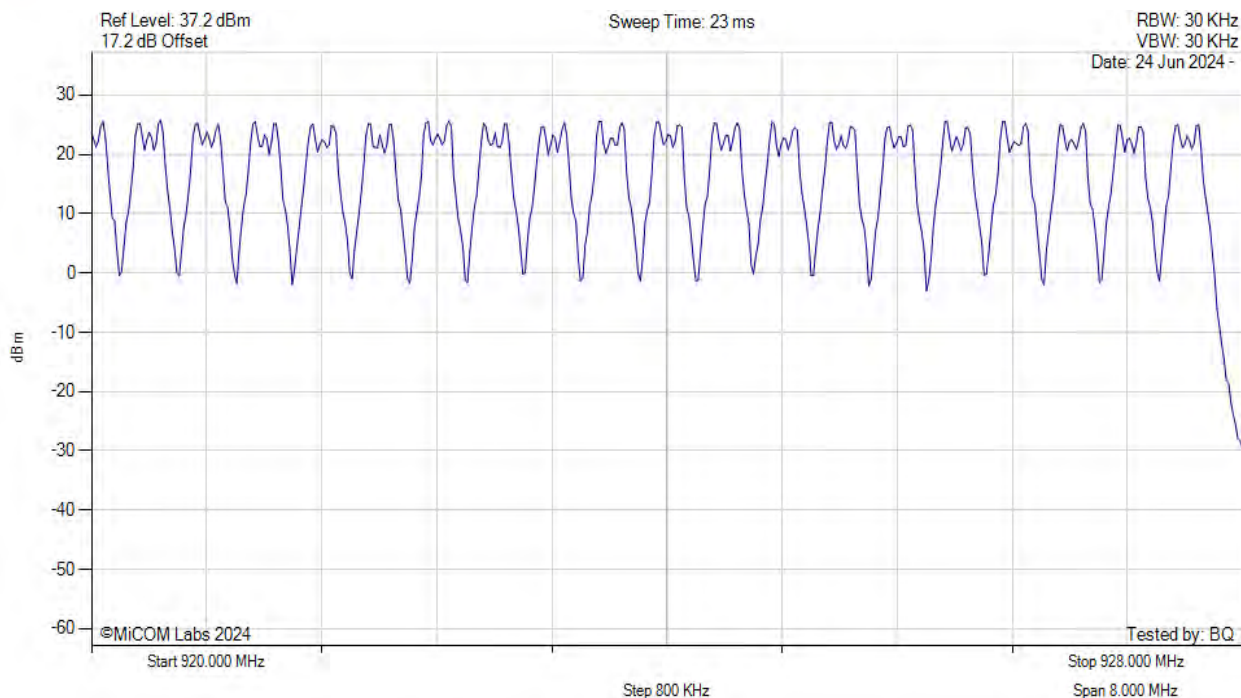
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.20 MHz

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NUMBER OF HOPPING CHANNELS



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



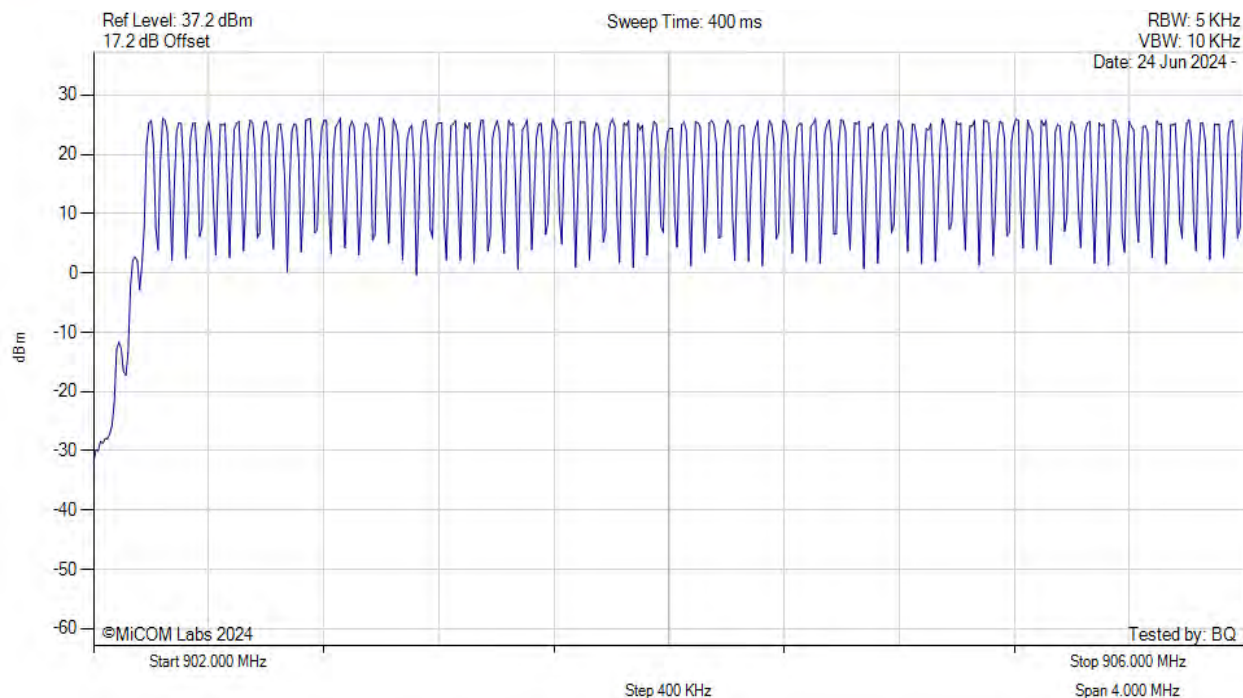
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.20 MHz

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NUMBER OF HOPPING CHANNELS



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



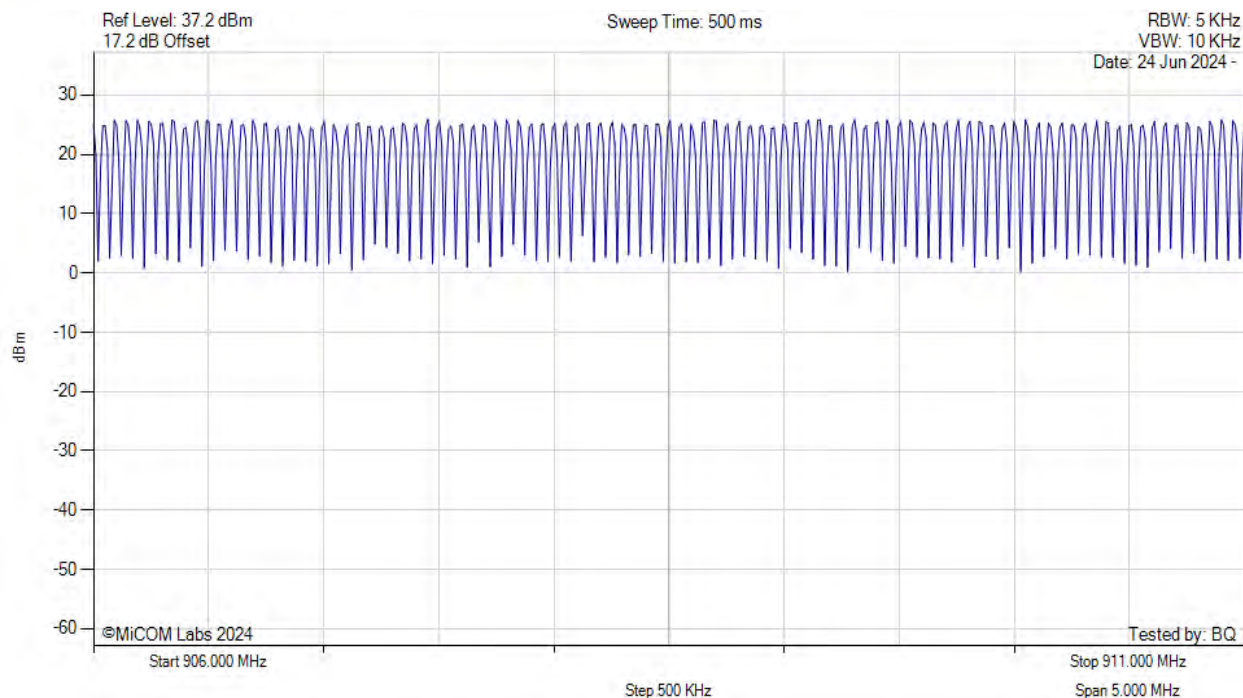
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 902.00 MHz

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NUMBER OF HOPPING CHANNELS



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



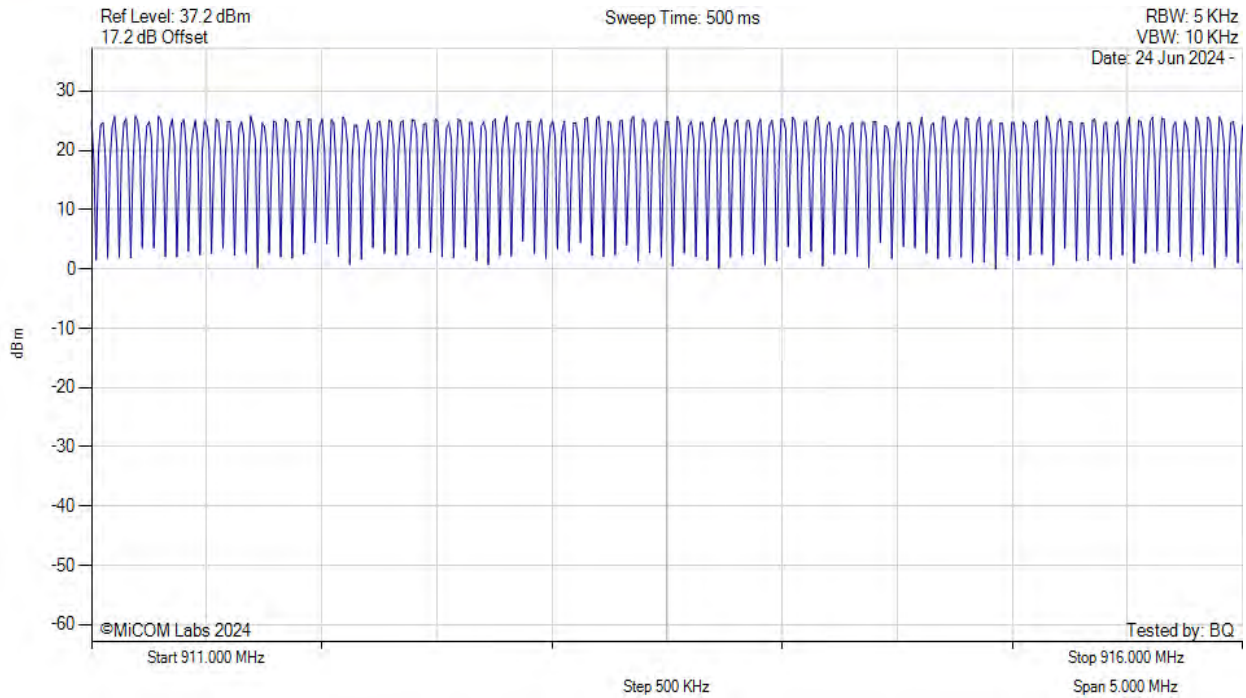
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 906.00 MHz

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NUMBER OF HOPPING CHANNELS



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



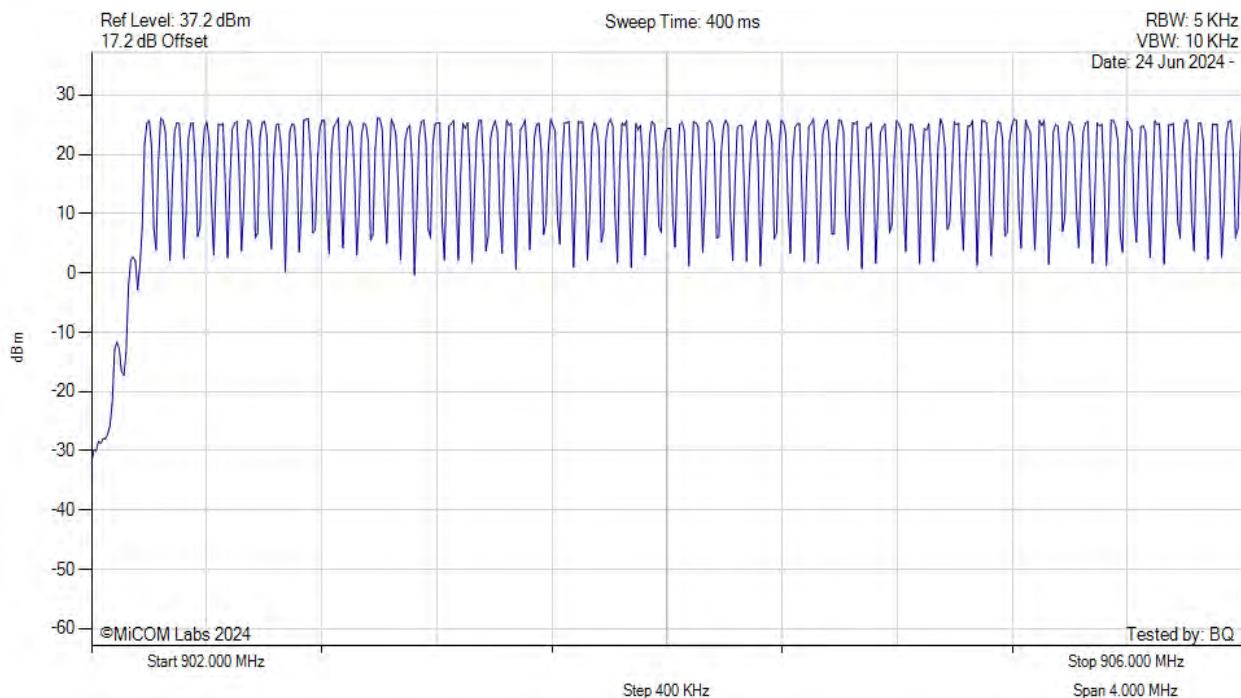
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 911.00 MHz

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NUMBER OF HOPPING CHANNELS



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



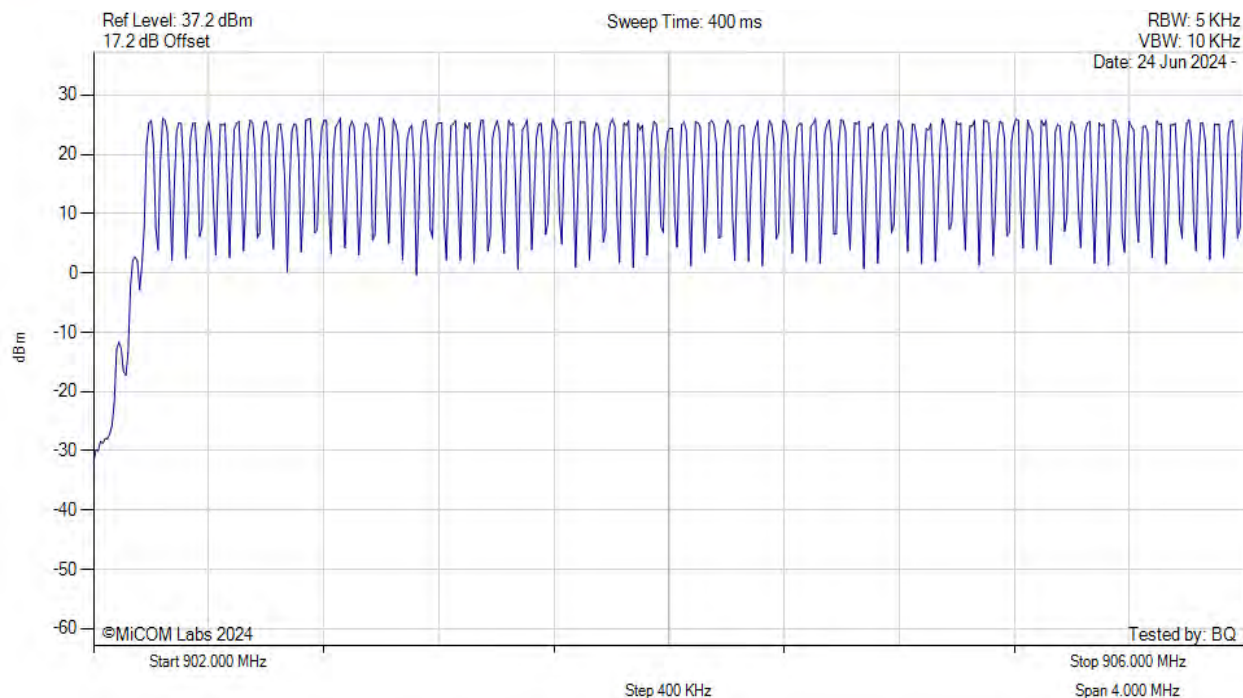
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



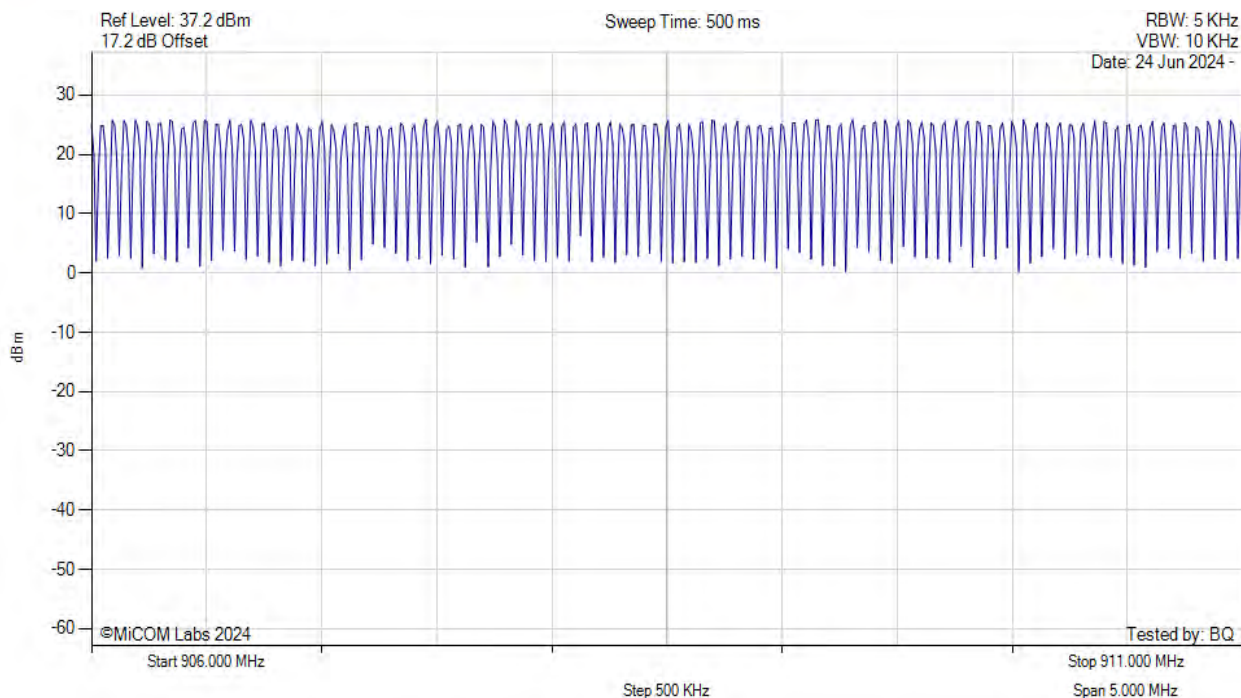
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



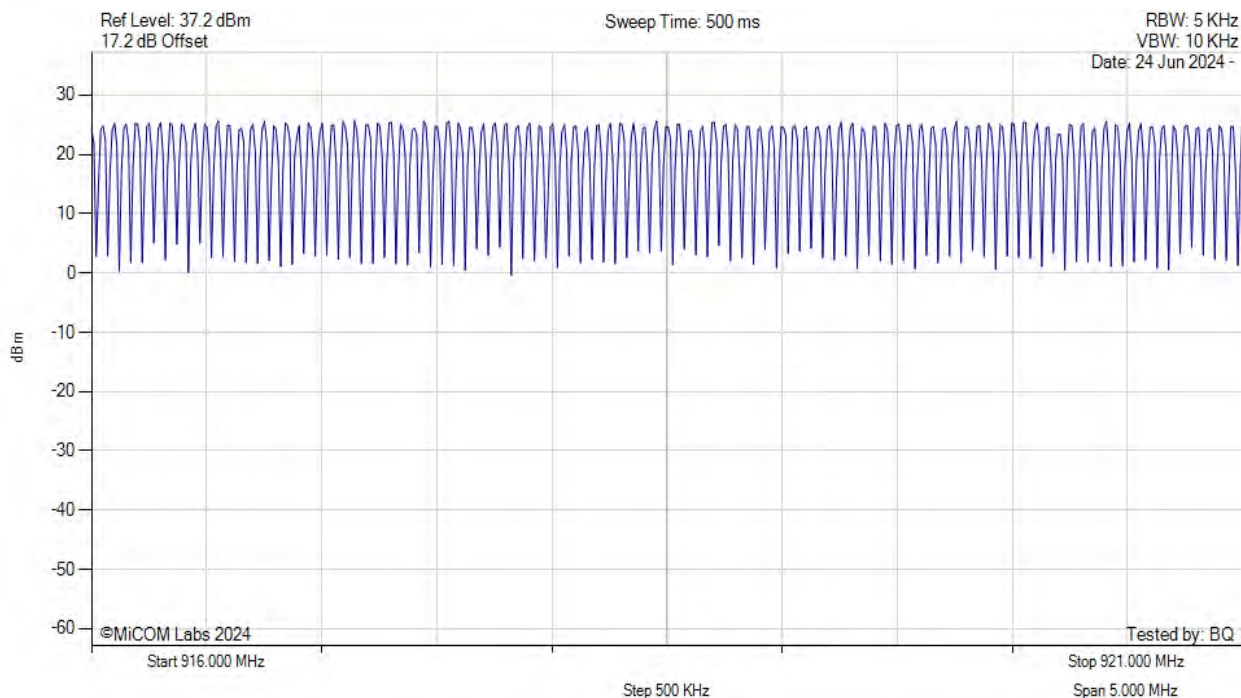
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



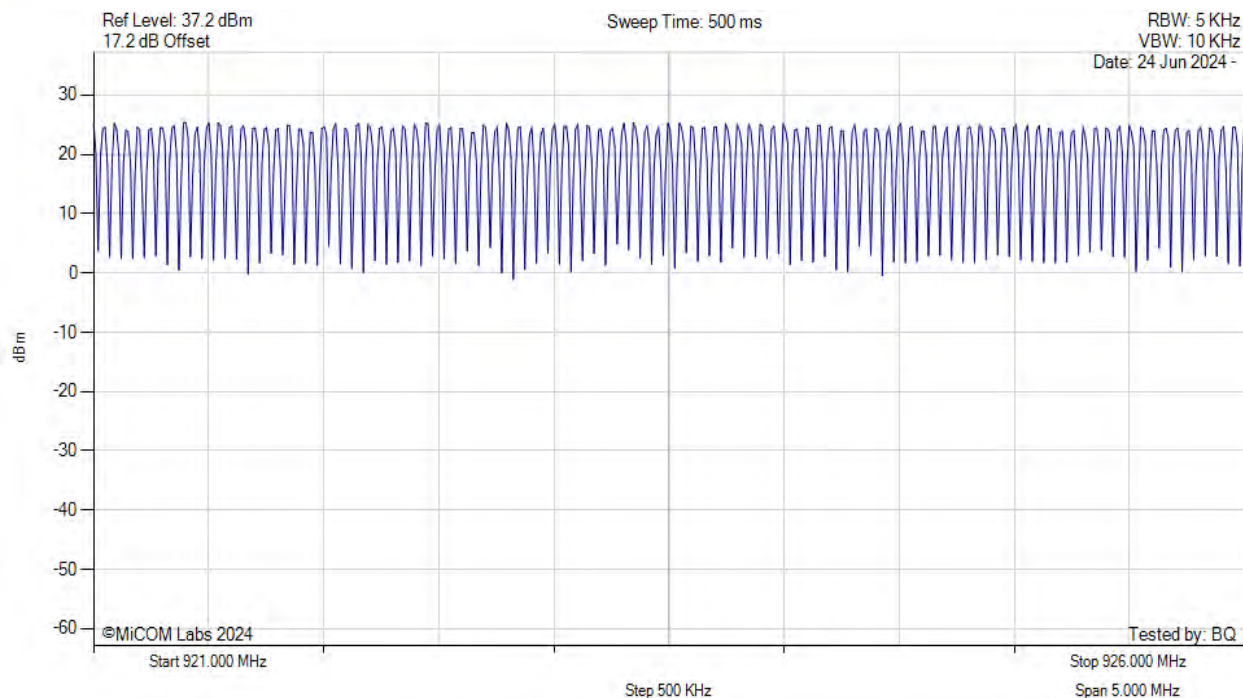
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



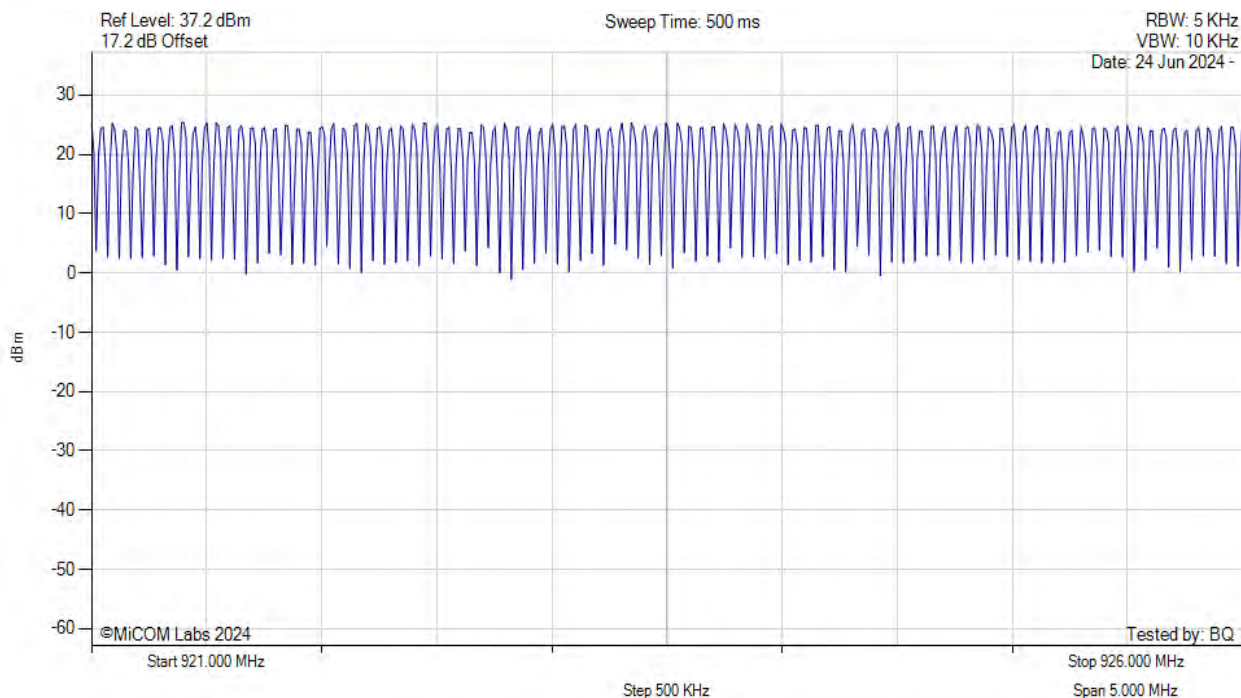
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



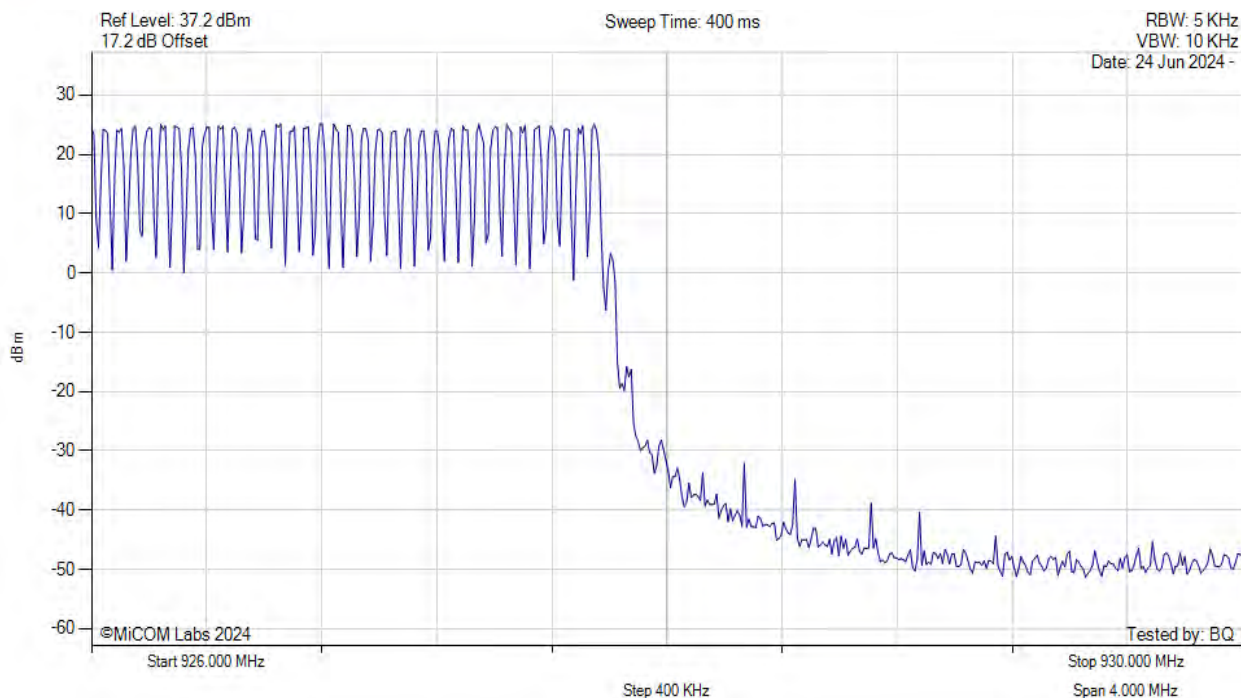
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



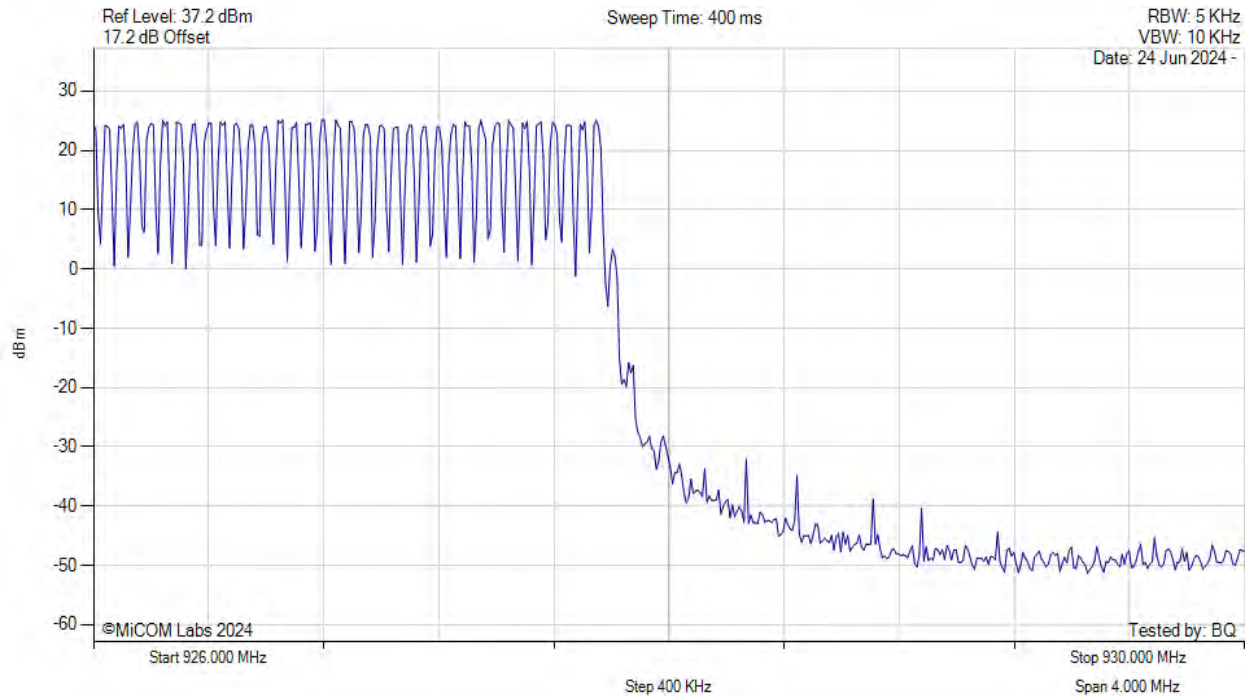
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



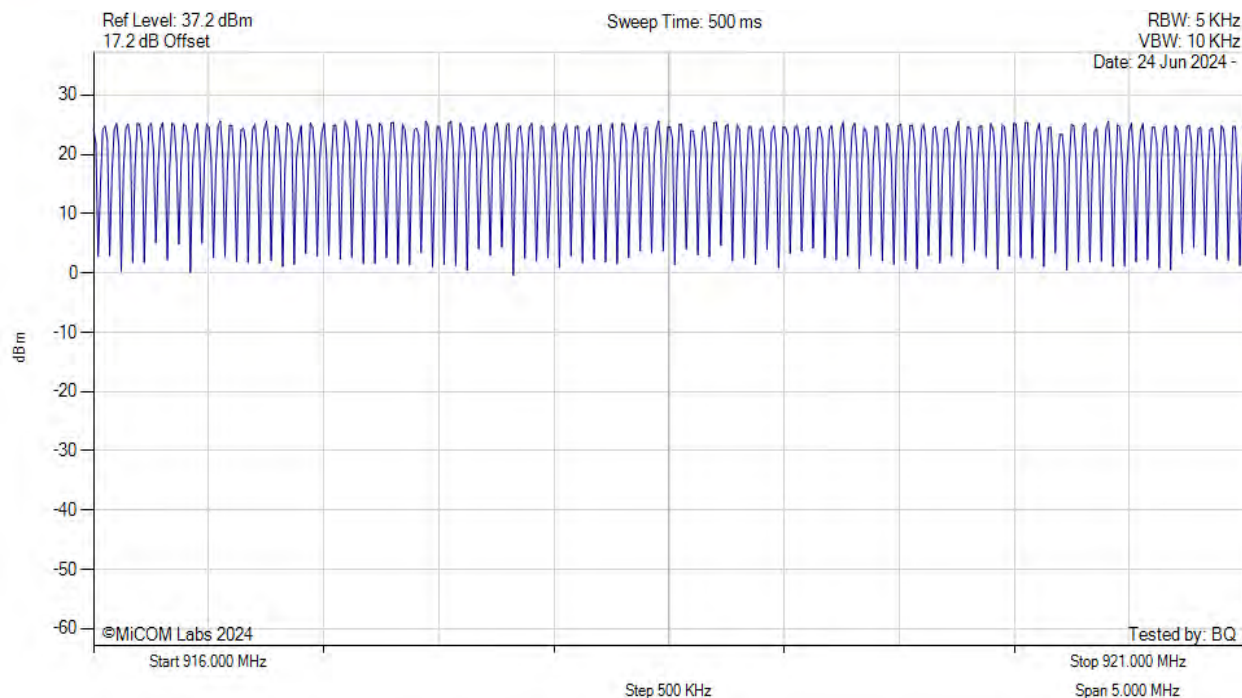
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



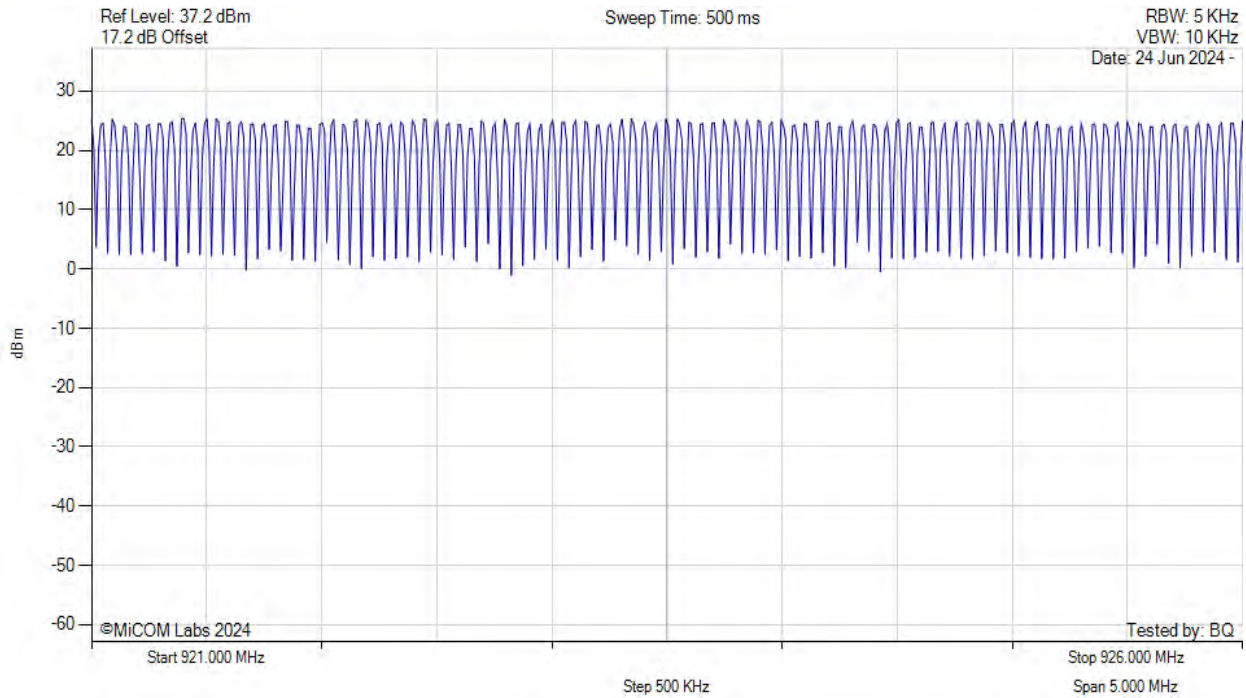
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 916.00 MHz

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NUMBER OF HOPPING CHANNELS



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



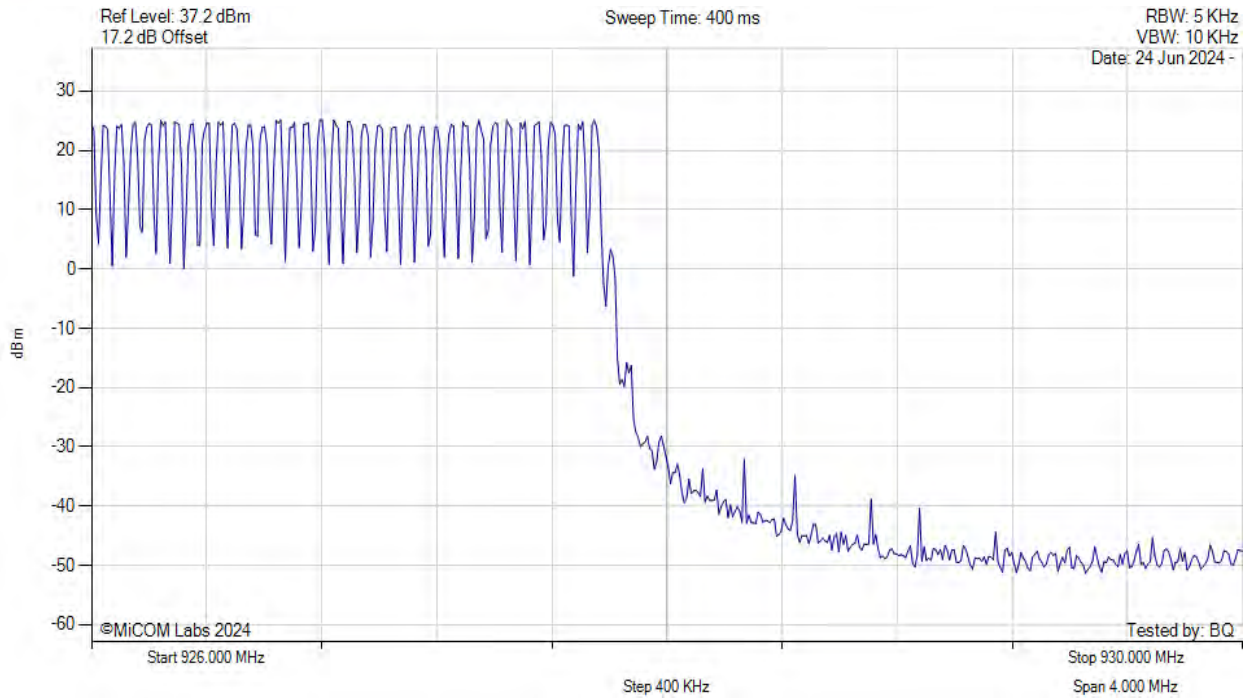
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 921.00 MHz

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NUMBER OF HOPPING CHANNELS



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



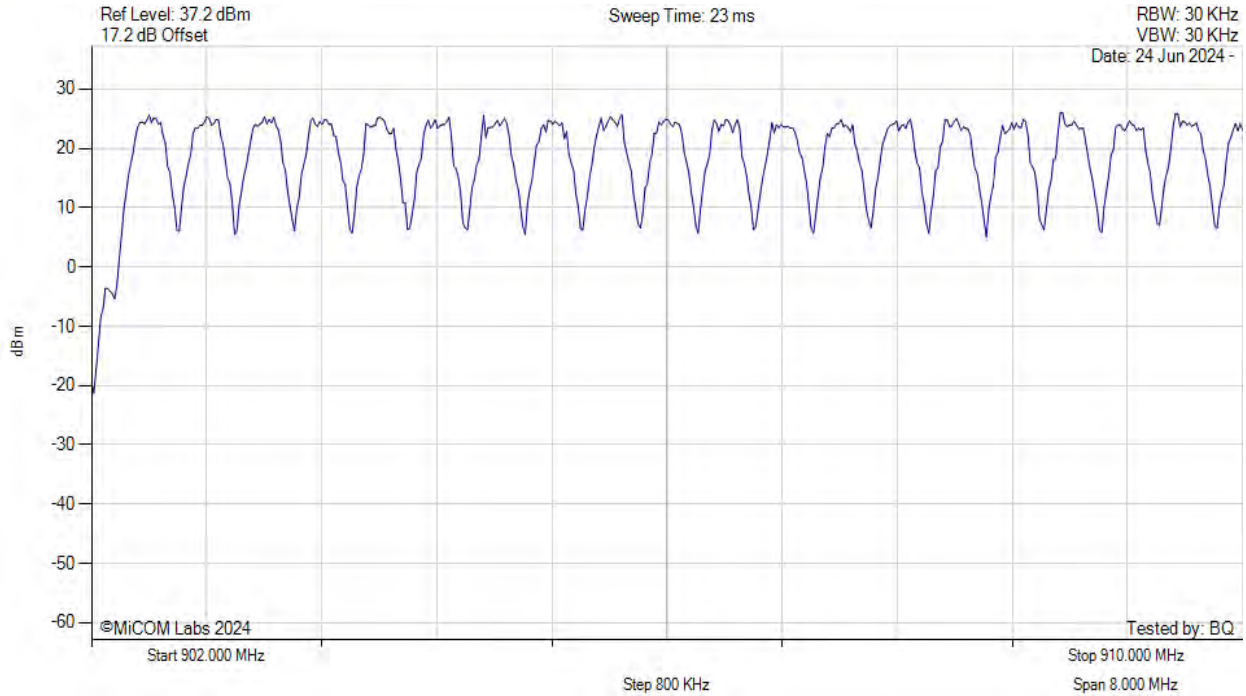
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 926.00 MHz

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NUMBER OF HOPPING CHANNELS



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



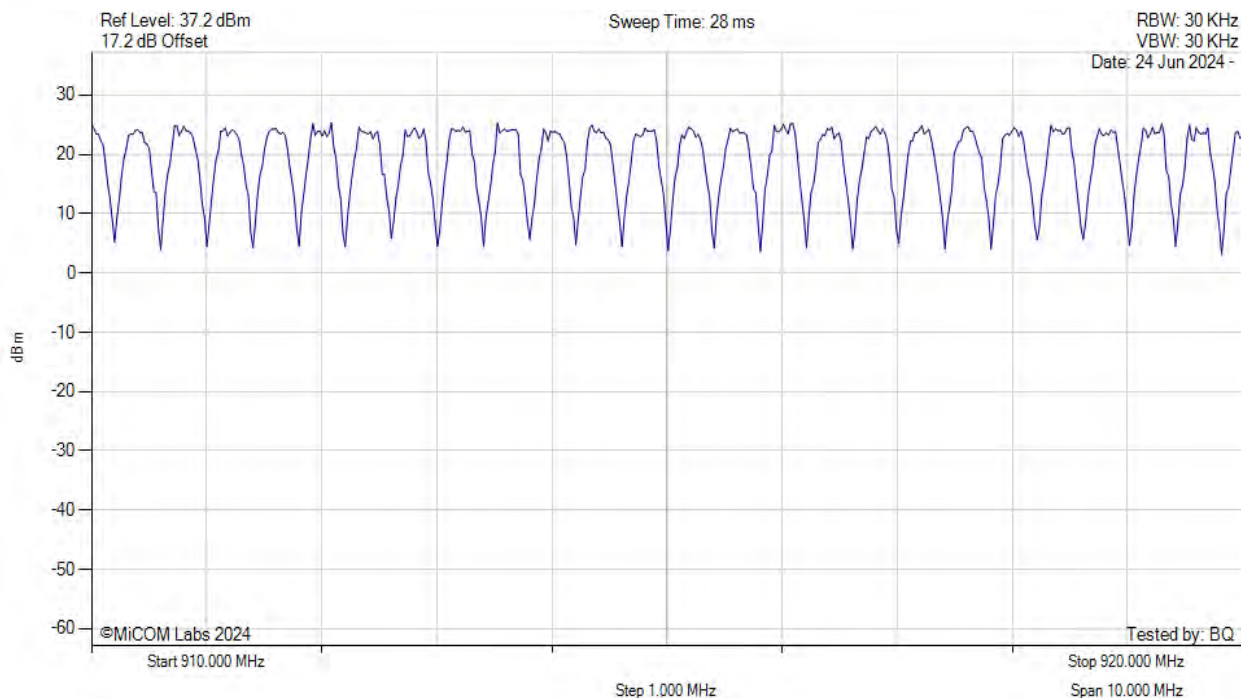
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



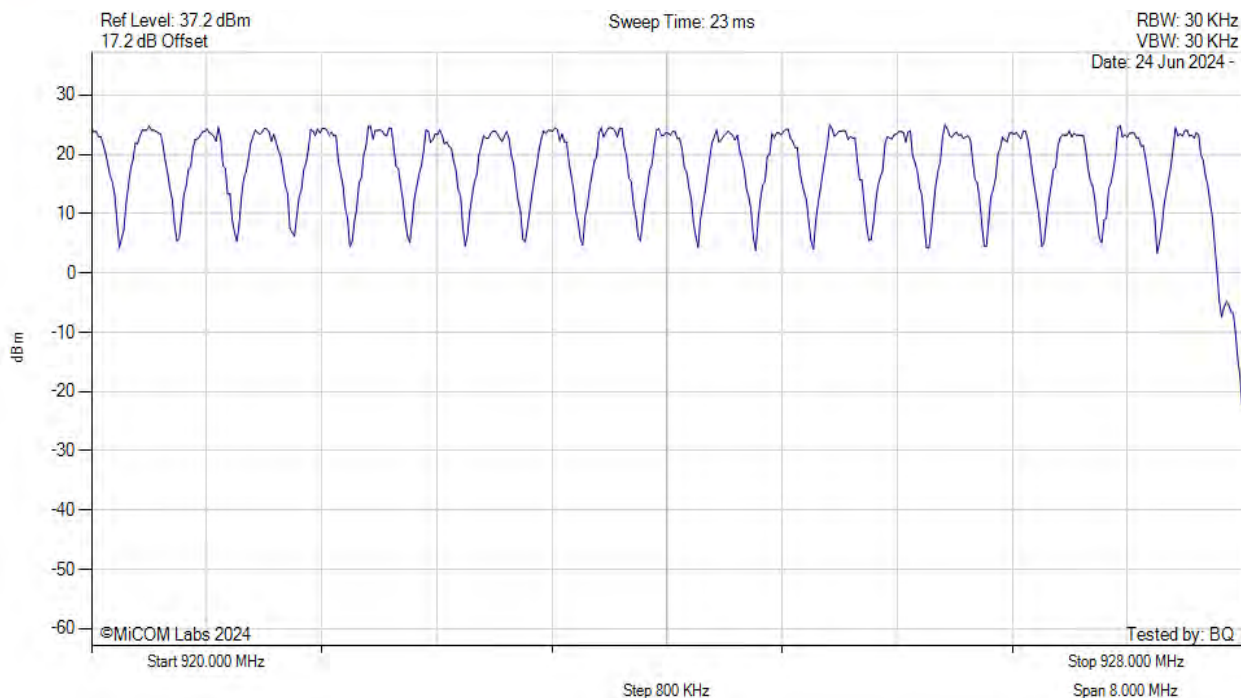
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



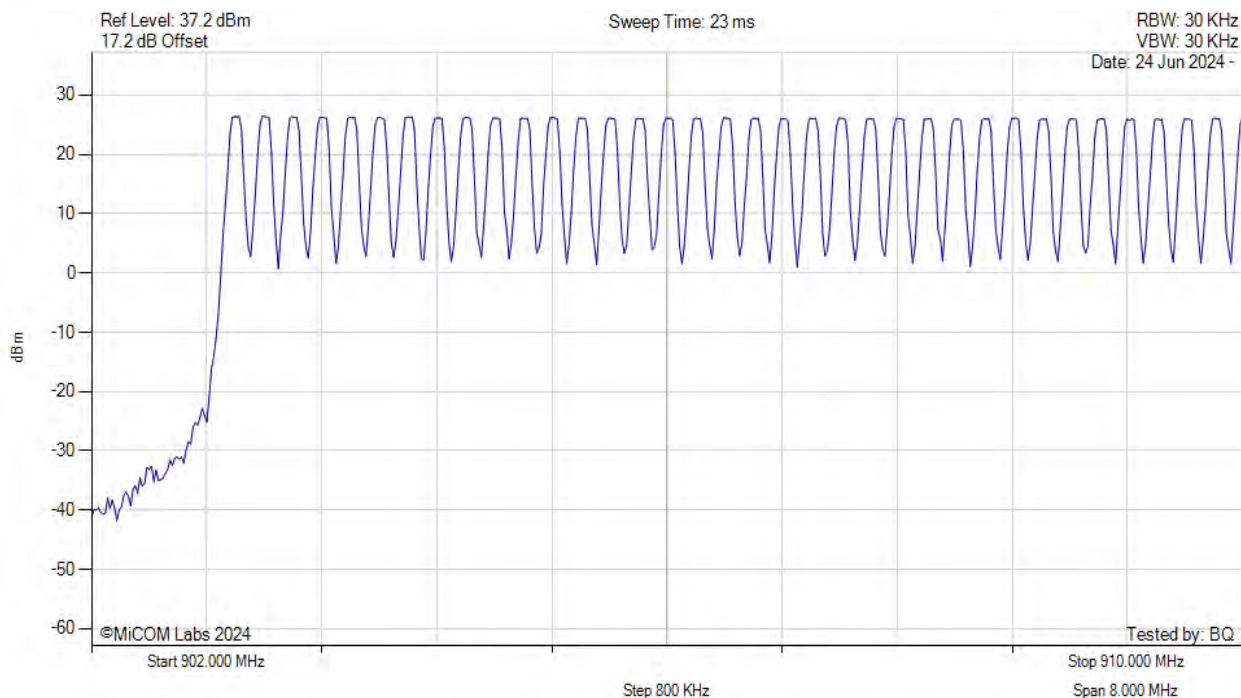
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



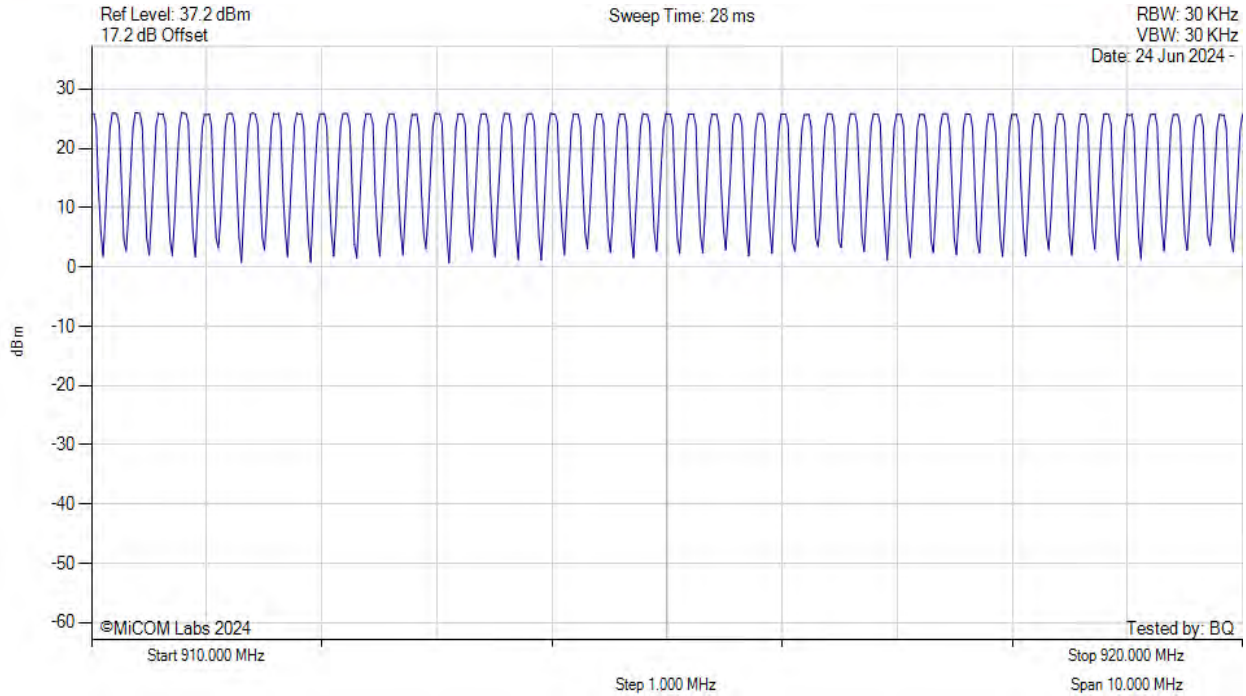
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



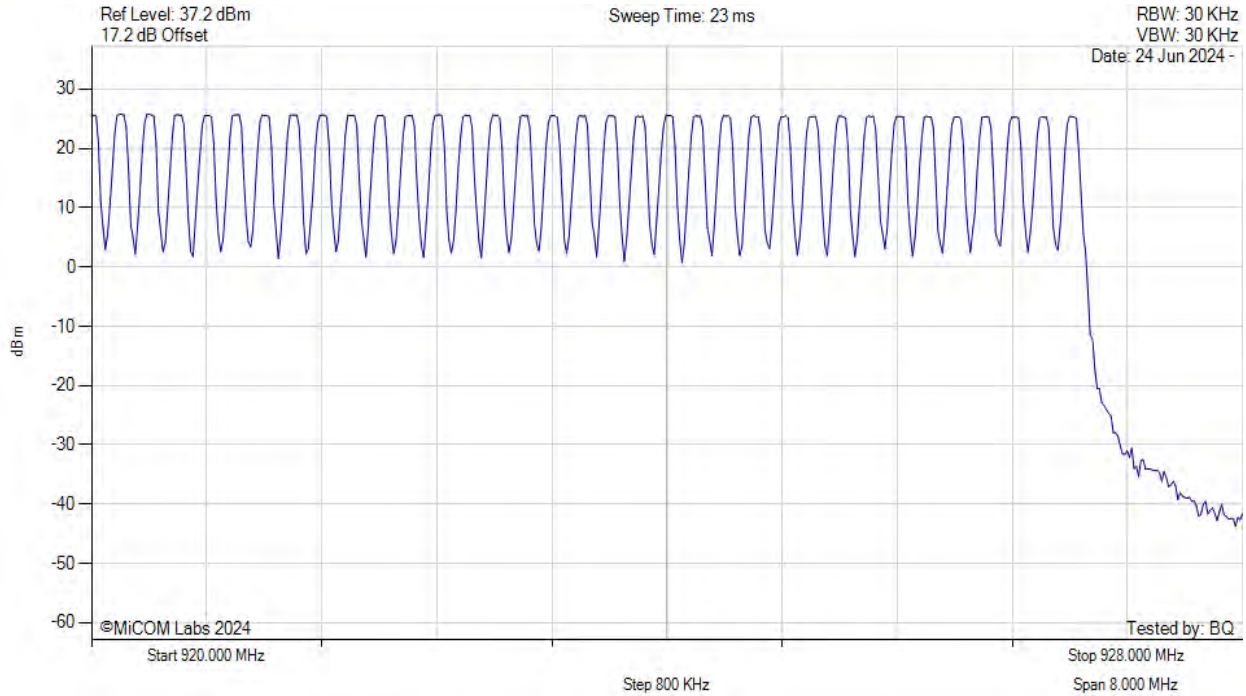
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



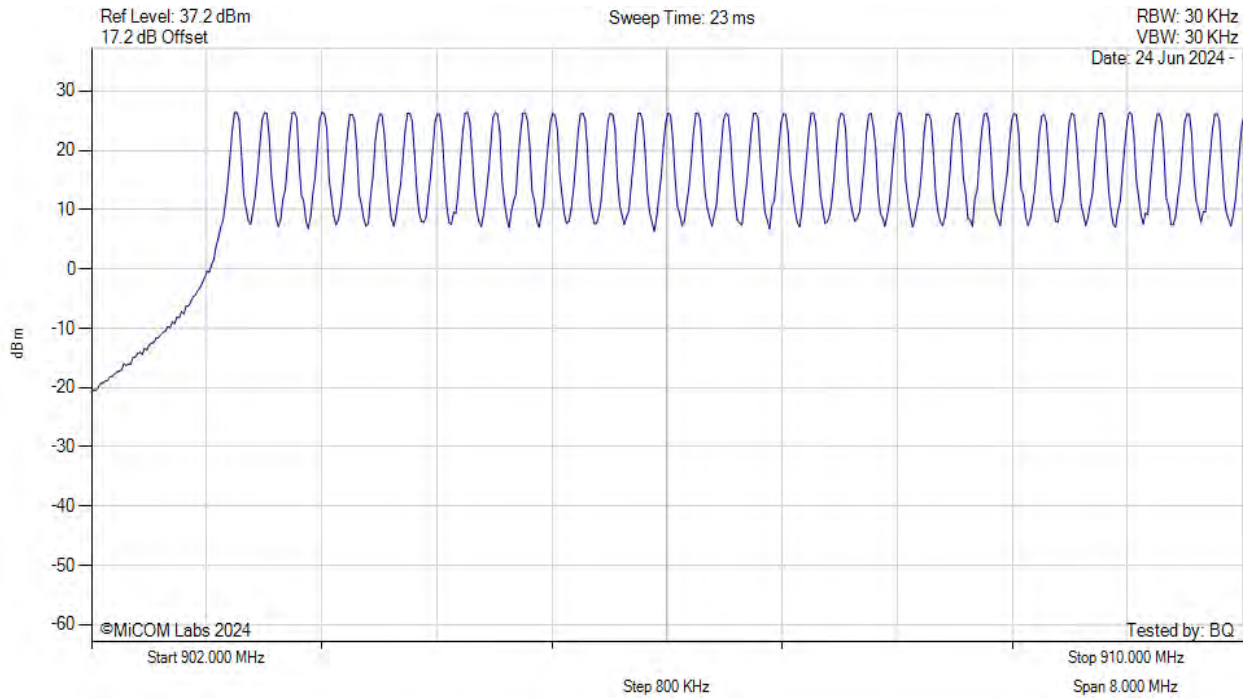
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



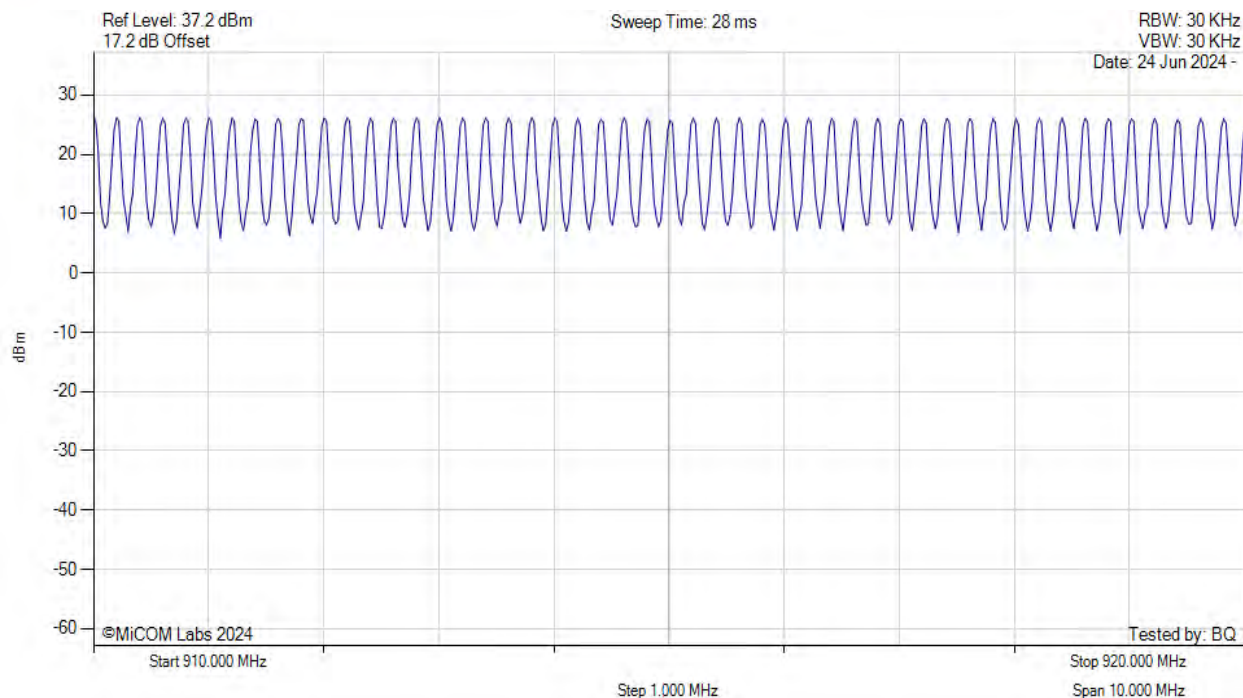
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



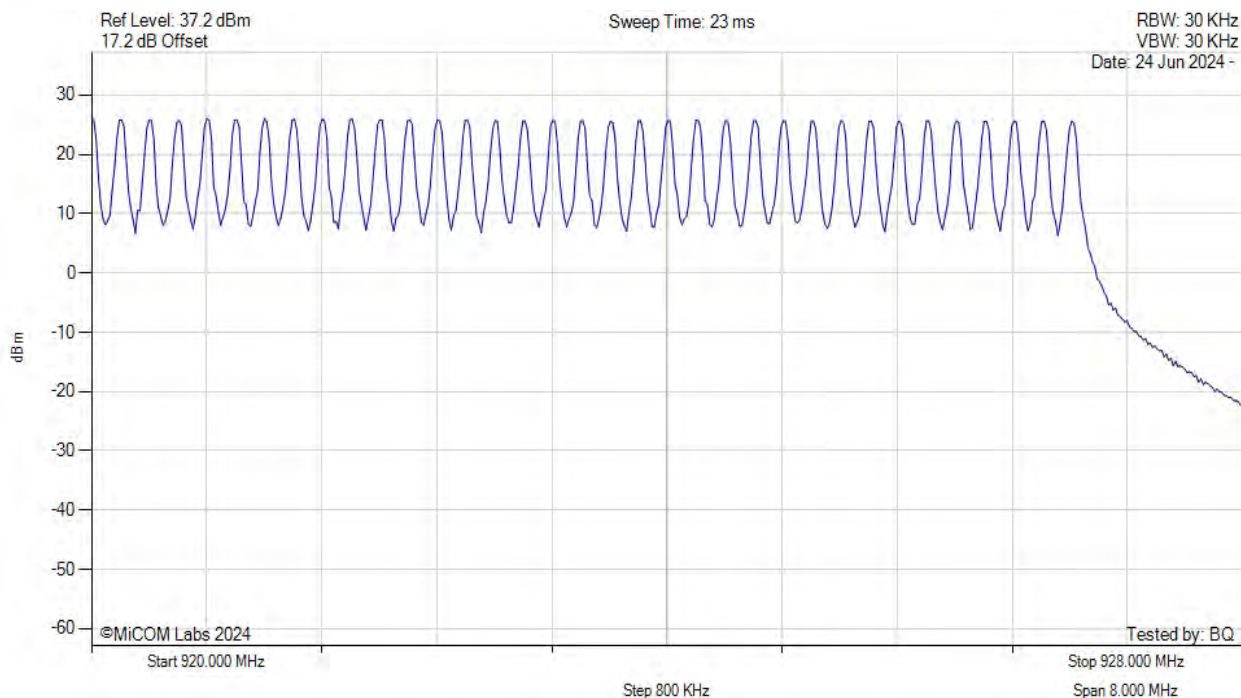
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



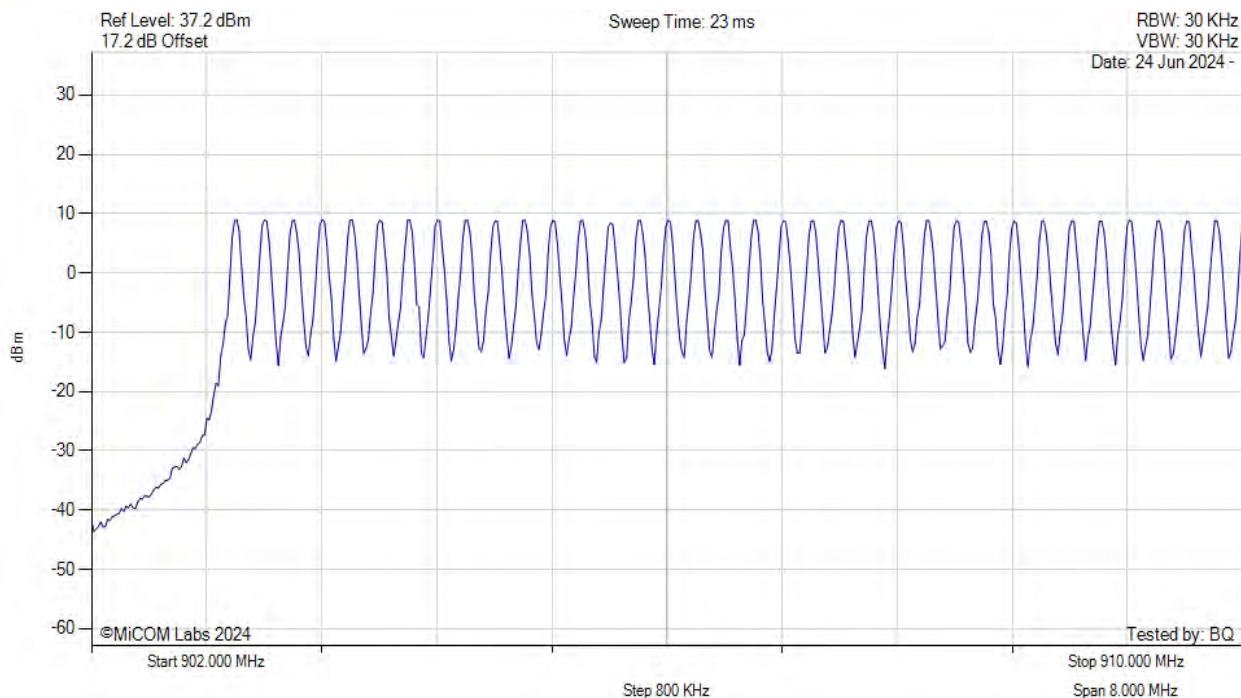
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



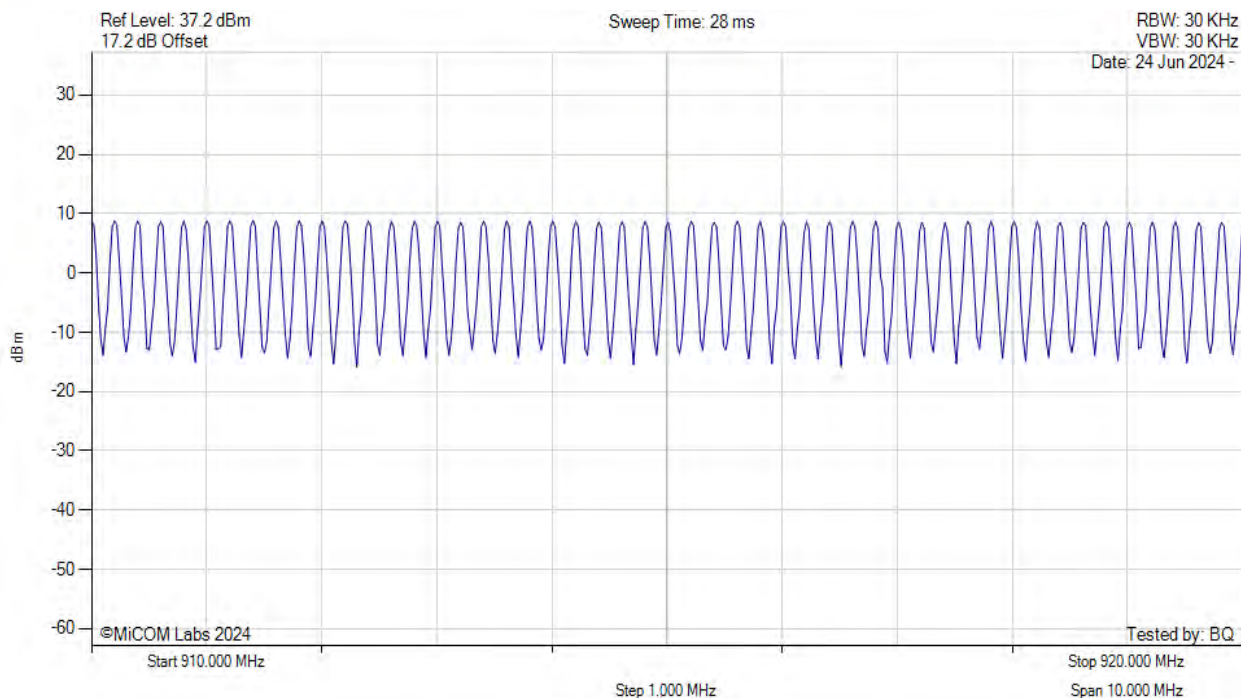
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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NUMBER OF HOPPING CHANNELS



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



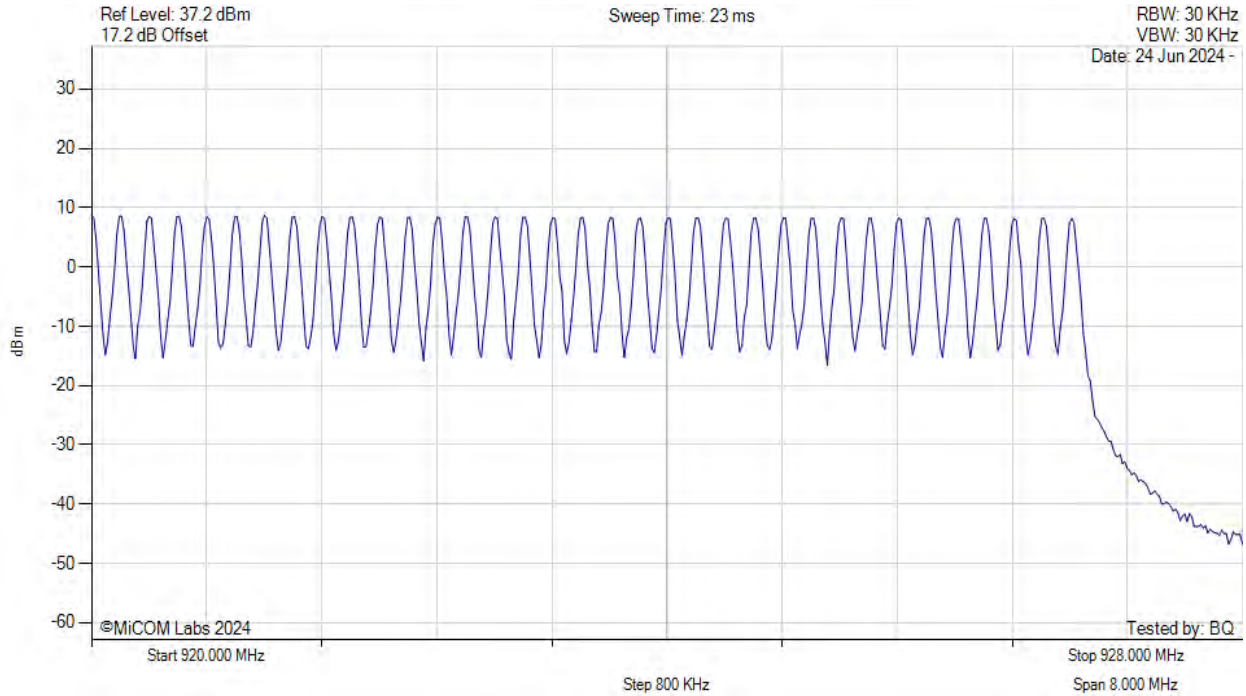
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.00 MHz

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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

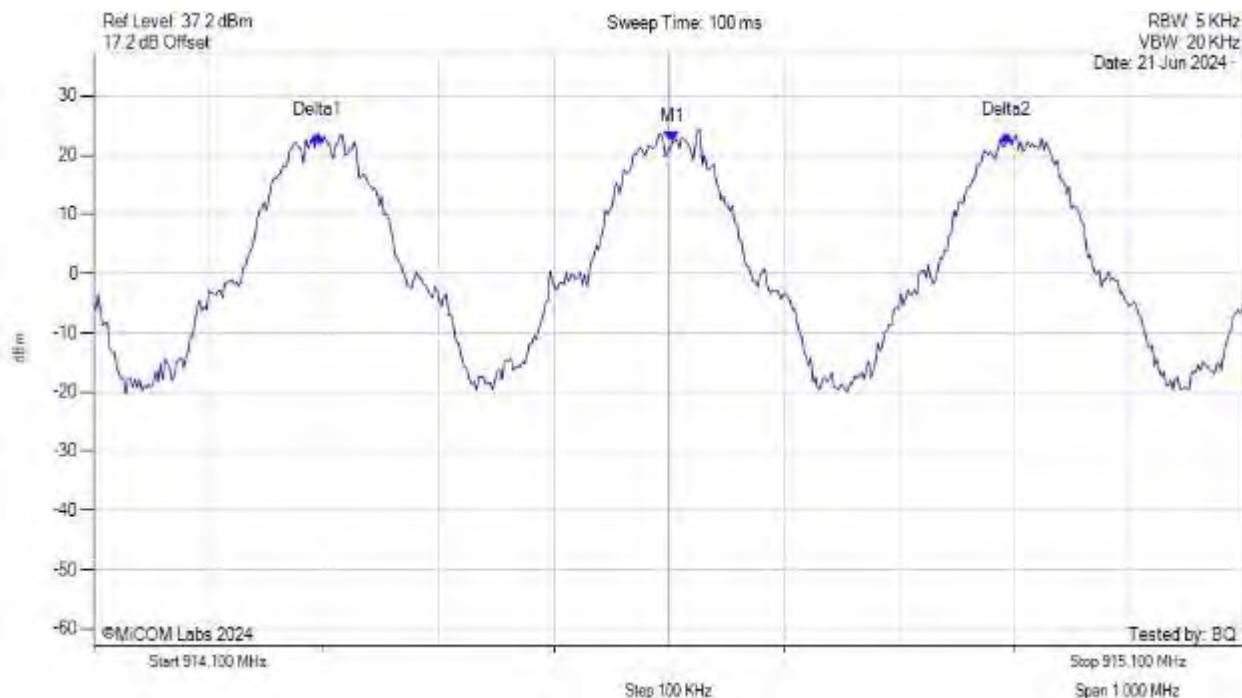
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1.2.2. Channel Separation

CHANNEL SEPARATION



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



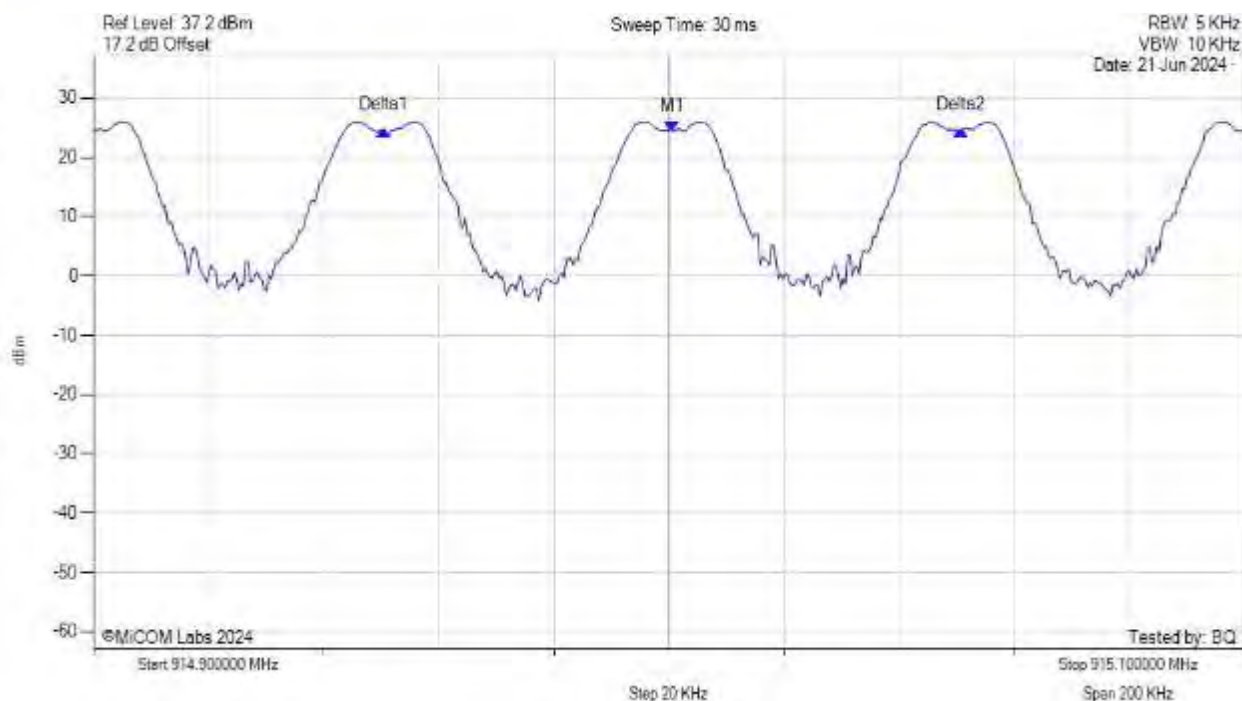
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 914.603 MHz : 22.215 dBm Delta1 : -308617 Hz : 1.141 dB Delta2 : 291 KHz : 1.169 dB	Channel Frequency: 914.60 MHz

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CHANNEL SEPARATION



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



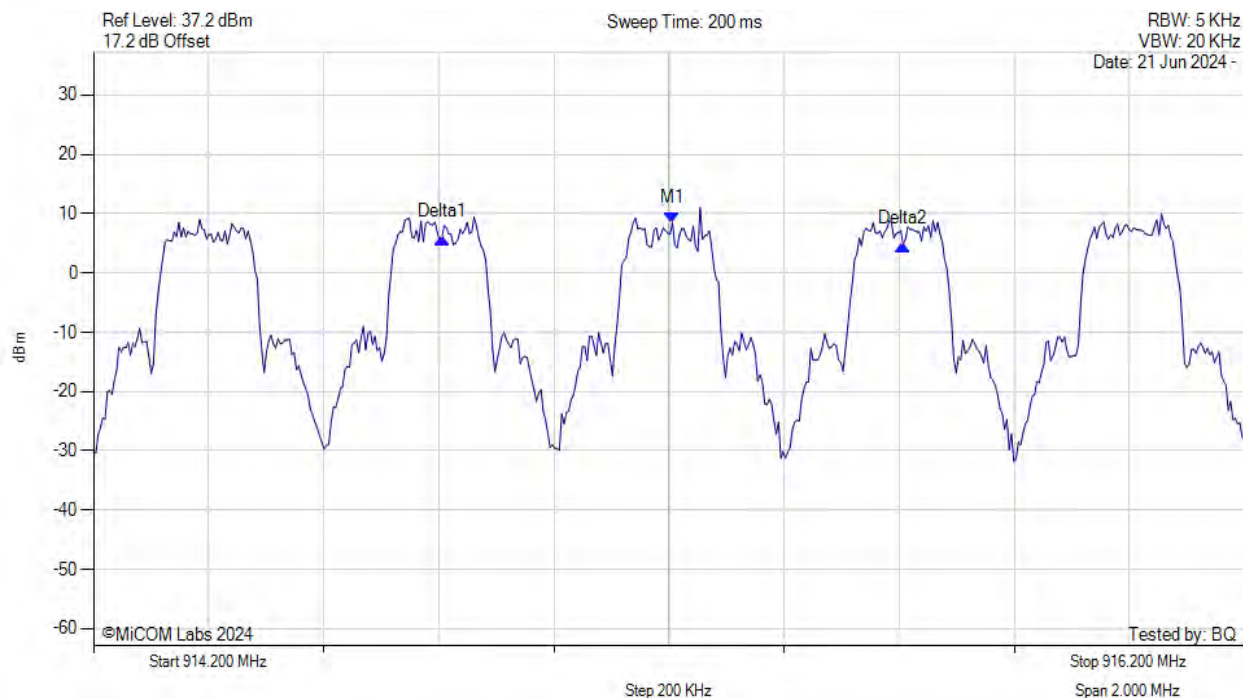
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.001 MHz : 24.414 dBm Delta1 : -50100 Hz : 0.089 dB Delta2 : 50 KHz : 0.055 dB	Channel Frequency: 915.00 MHz

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CHANNEL SEPARATION



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



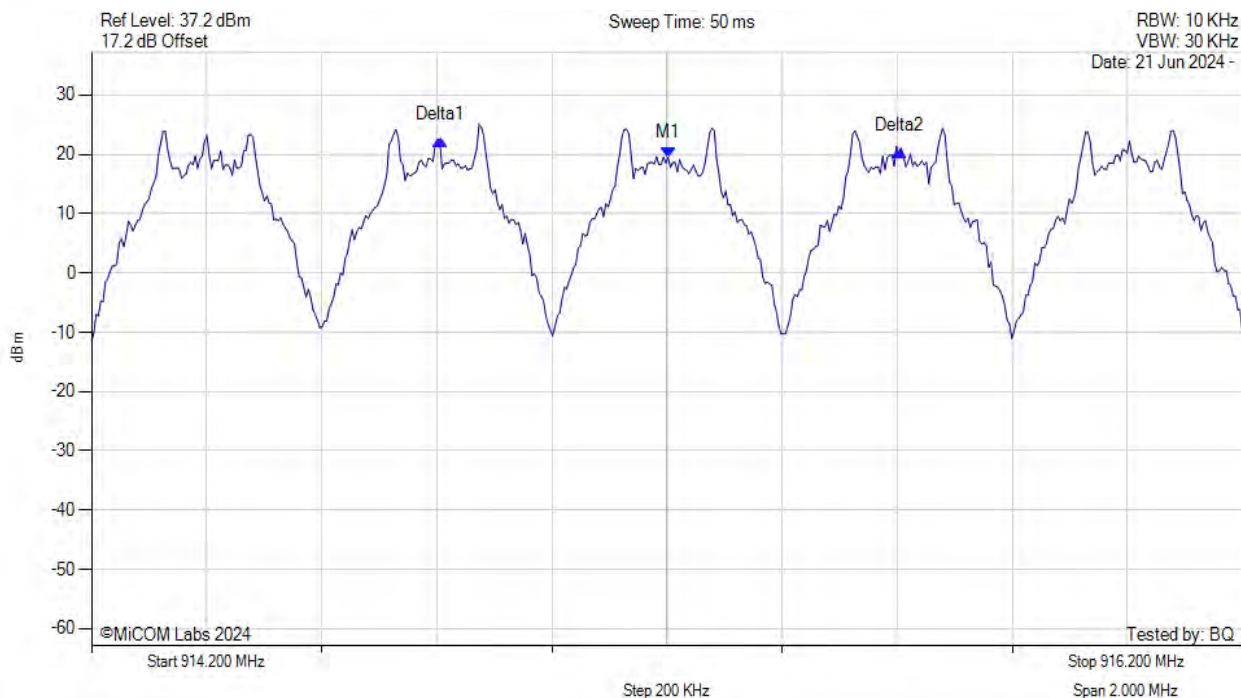
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.206 MHz : 8.486 dBm Delta1 : -400802 Hz : -2.528 dB Delta2 : 401 KHz : -3.691 dB	Channel Frequency: 915.20 MHz

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CHANNEL SEPARATION



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



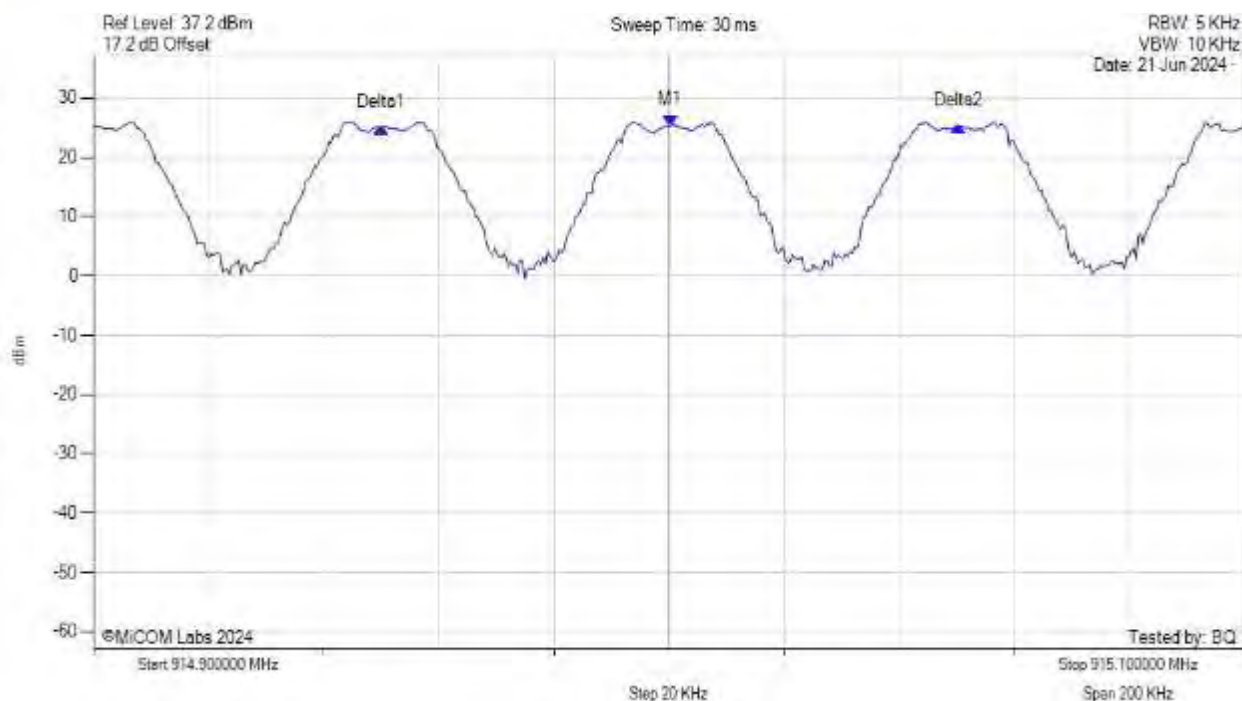
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.202 MHz : 19.500 dBm Delta1 : -396794 Hz : 3.012 dB Delta2 : 401 KHz : 1.167 dB	Channel Frequency: 915.20 MHz

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CHANNEL SEPARATION



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



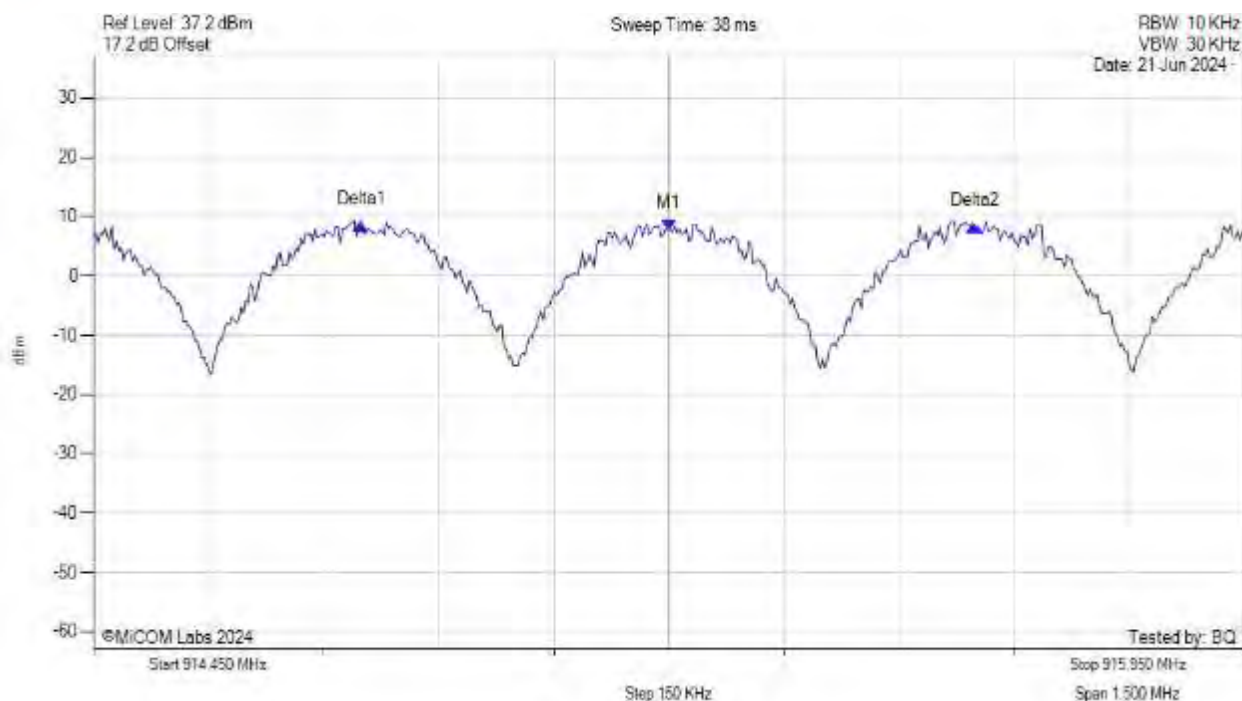
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.000 MHz : 25.364 dBm Delta1 : -50100 Hz : -0.258 dB Delta2 : 50 KHz : -0.063 dB	Channel Frequency: 915.00 MHz

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CHANNEL SEPARATION



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



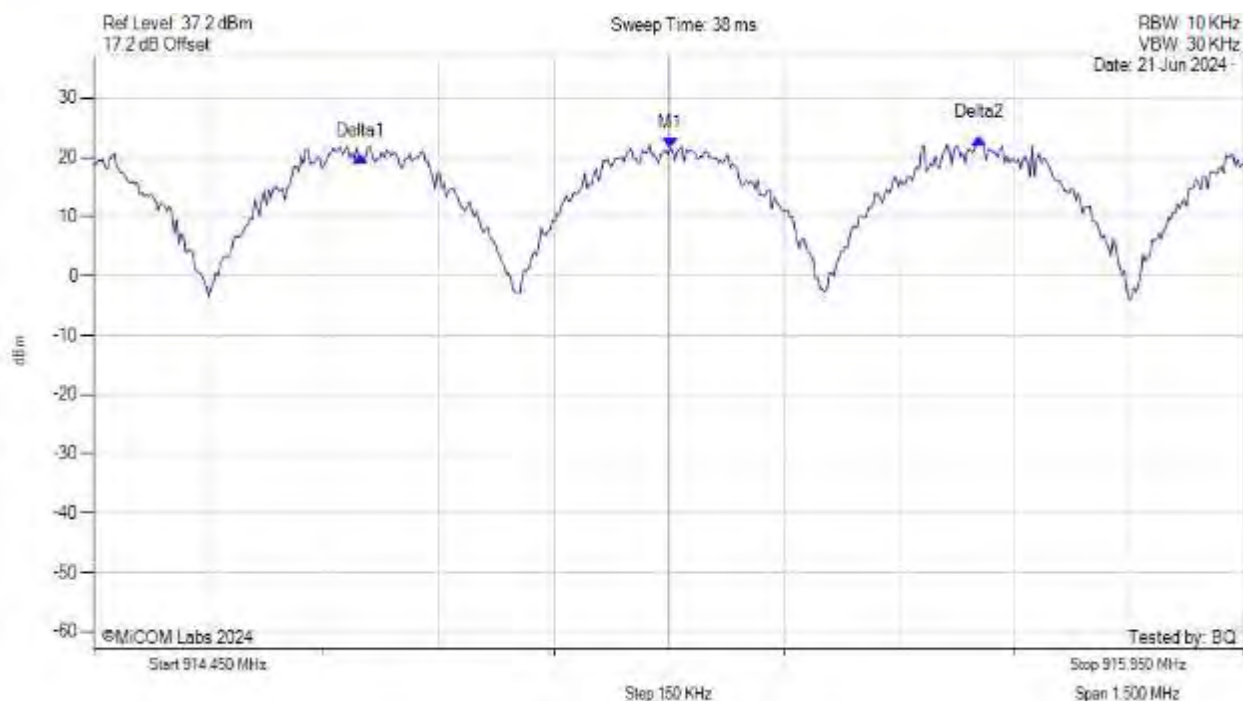
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.200 MHz : 7.841 dBm Delta1 : -401200 Hz : 0.766 dB Delta2 : 398 KHz : 0.531 dB	Channel Frequency: 915.00 MHz

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CHANNEL SEPARATION



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



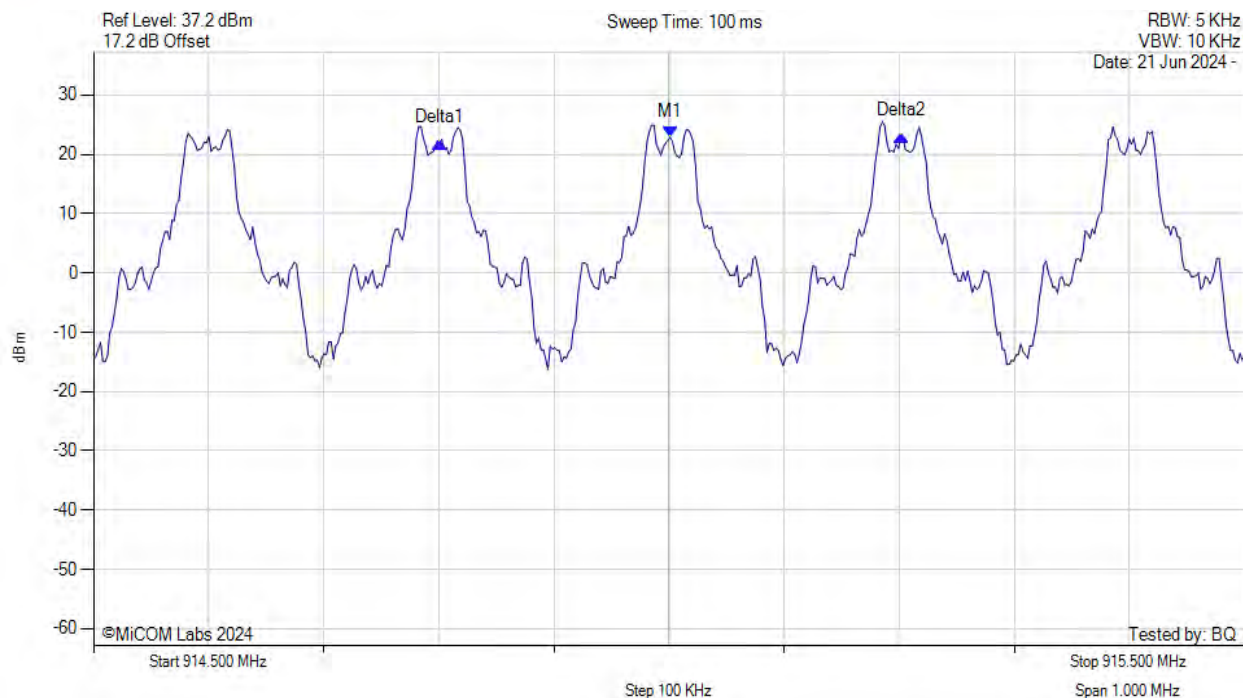
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.202 MHz : 21.522 dBm Delta1 : -402806 Hz : -1.403 dB Delta2 : 403 KHz : 1.733 dB	Channel Frequency: 915.00 MHz

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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



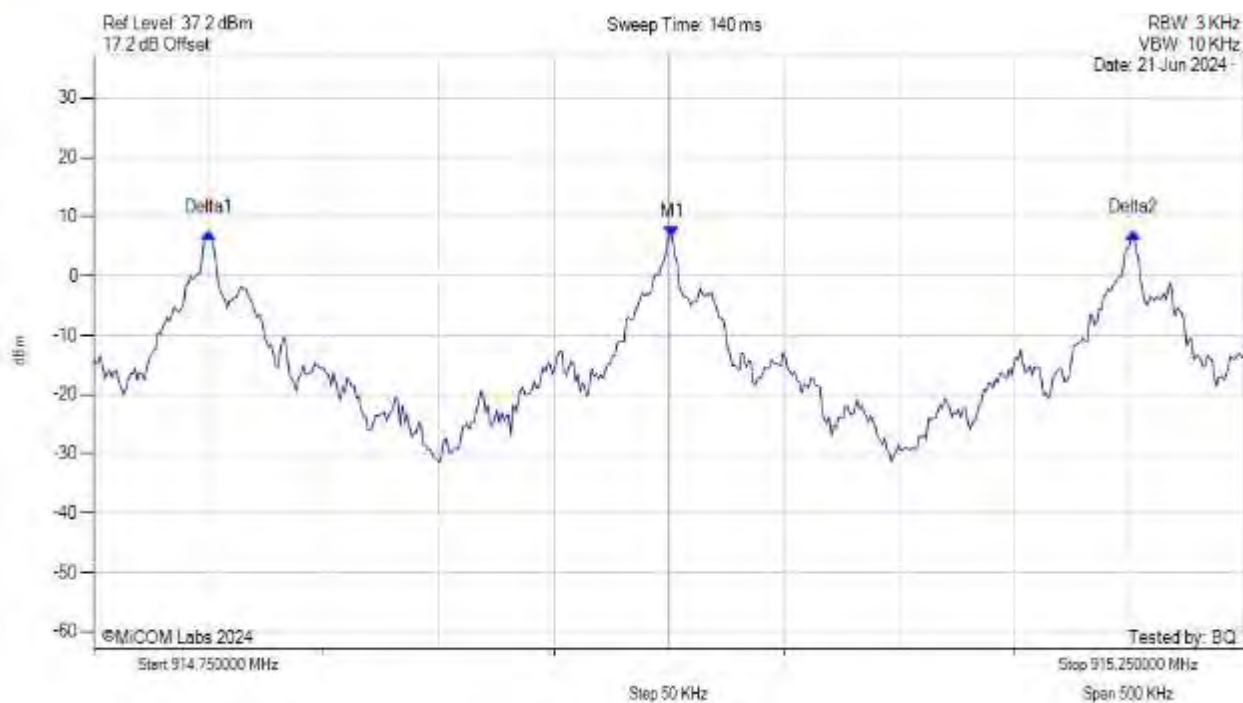
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.001 MHz : 22.880 dBm Delta1 : -200401 Hz : -0.856 dB Delta2 : 200 KHz : 0.197 dB	Channel Frequency: 915.00 MHz

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CHANNEL SEPARATION



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



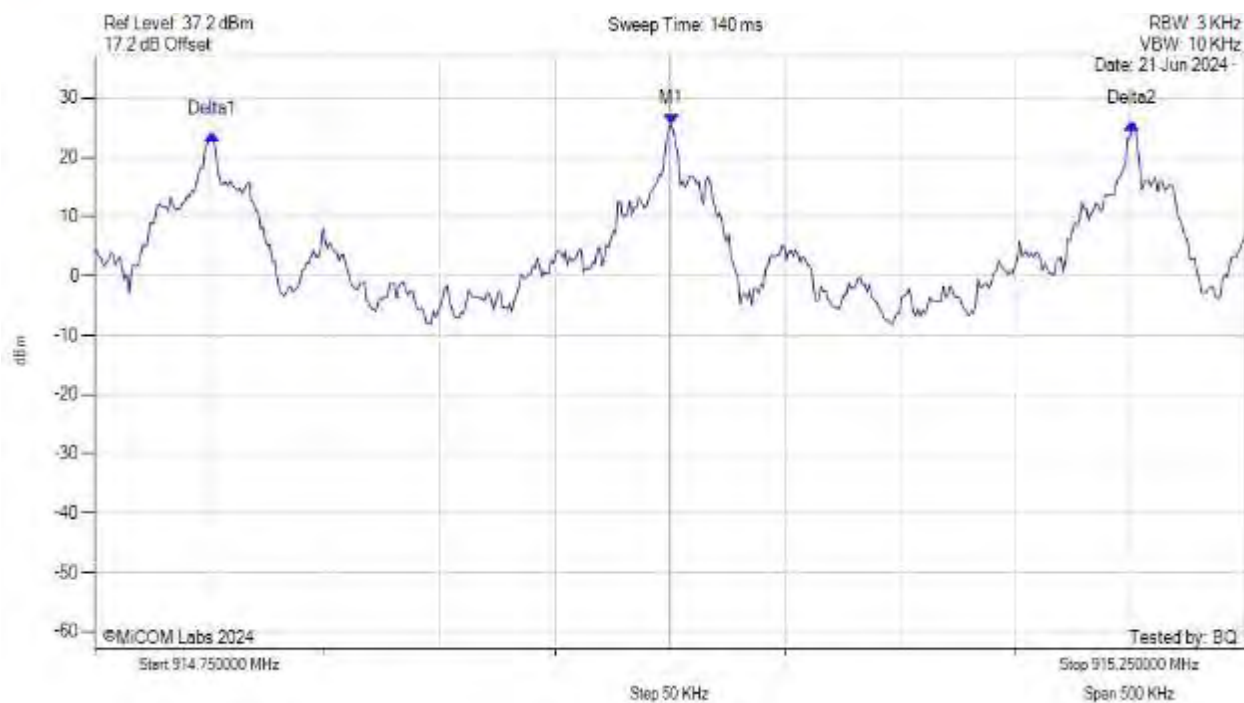
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.002 MHz : 6.511 dBm Delta1 : -201403 Hz : 0.773 dB Delta2 : 200 KHz : 0.822 dB	Channel Frequency: 915.00 MHz

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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

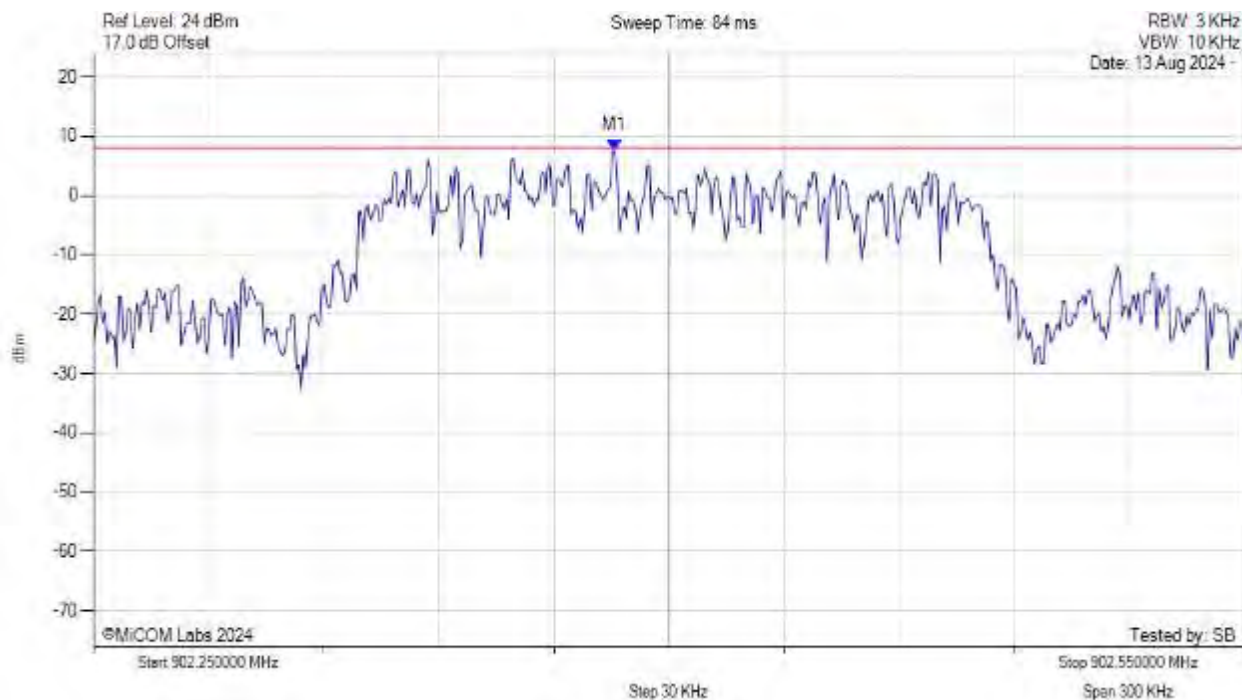
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1.3. Power Spectral Density

POWER SPECTRAL DENSITY - PEAK



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



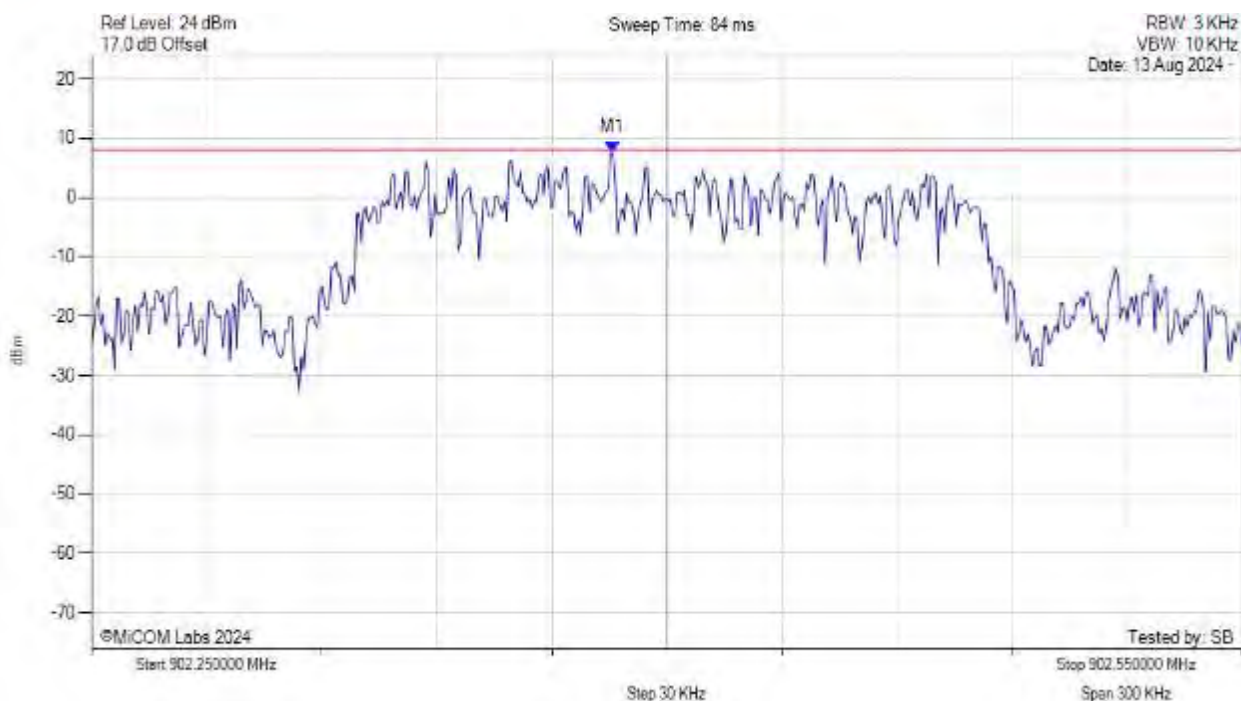
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 902.386 MHz : 7.610 dBm	Limit: ≤ 8.000 dBm Margin: -0.39 dB

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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



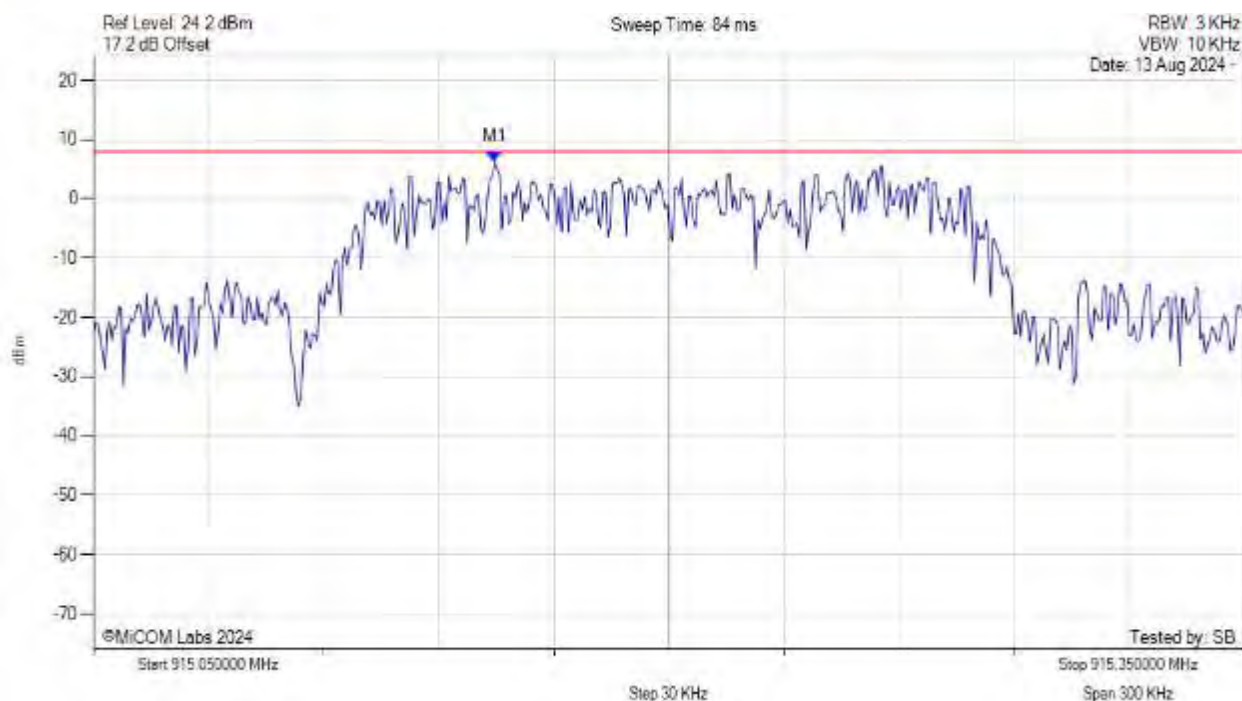
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 902.386 MHz : 7.610 dBm	Limit: ≤ 8.0 dBm Margin: -0.4 dB

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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



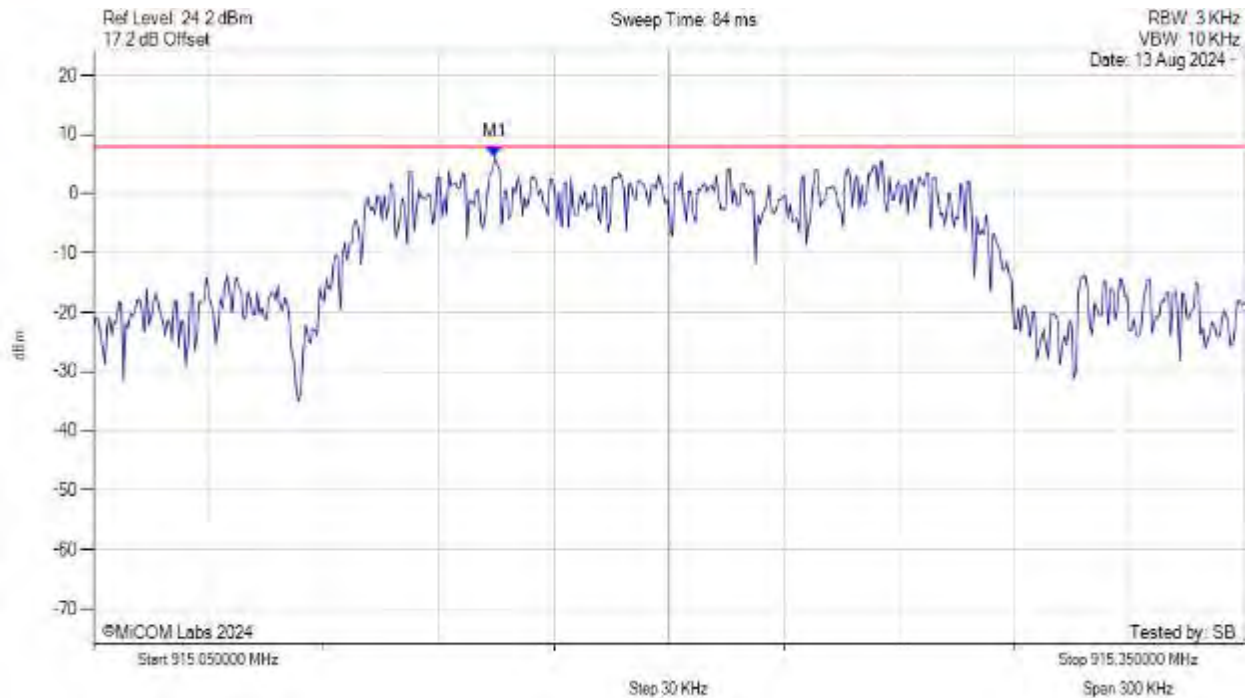
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 915.155 MHz : 6.146 dBm	Limit: ≤ 8.000 dBm Margin: -1.85 dB

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POWER SPECTRAL DENSITY - PEAK



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



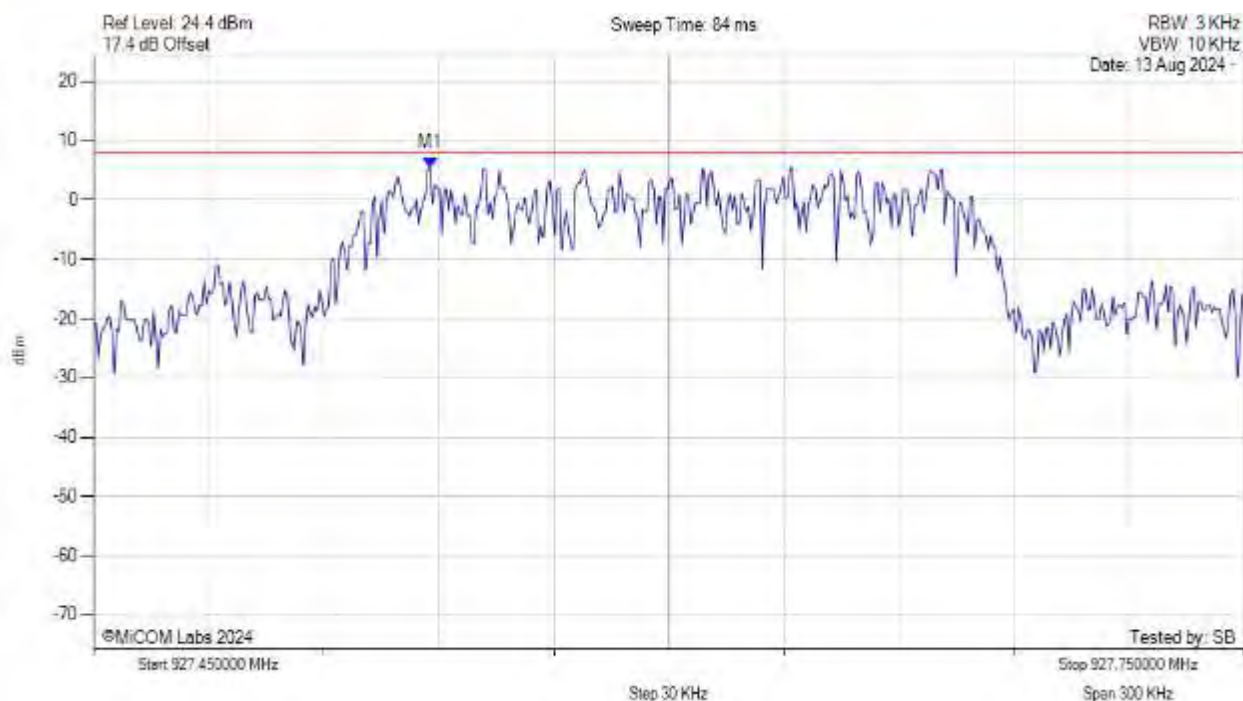
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 915.155 MHz : 6.146 dBm	Limit: ≤ 8.0 dBm Margin: -1.9 dB

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POWER SPECTRAL DENSITY - PEAK



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



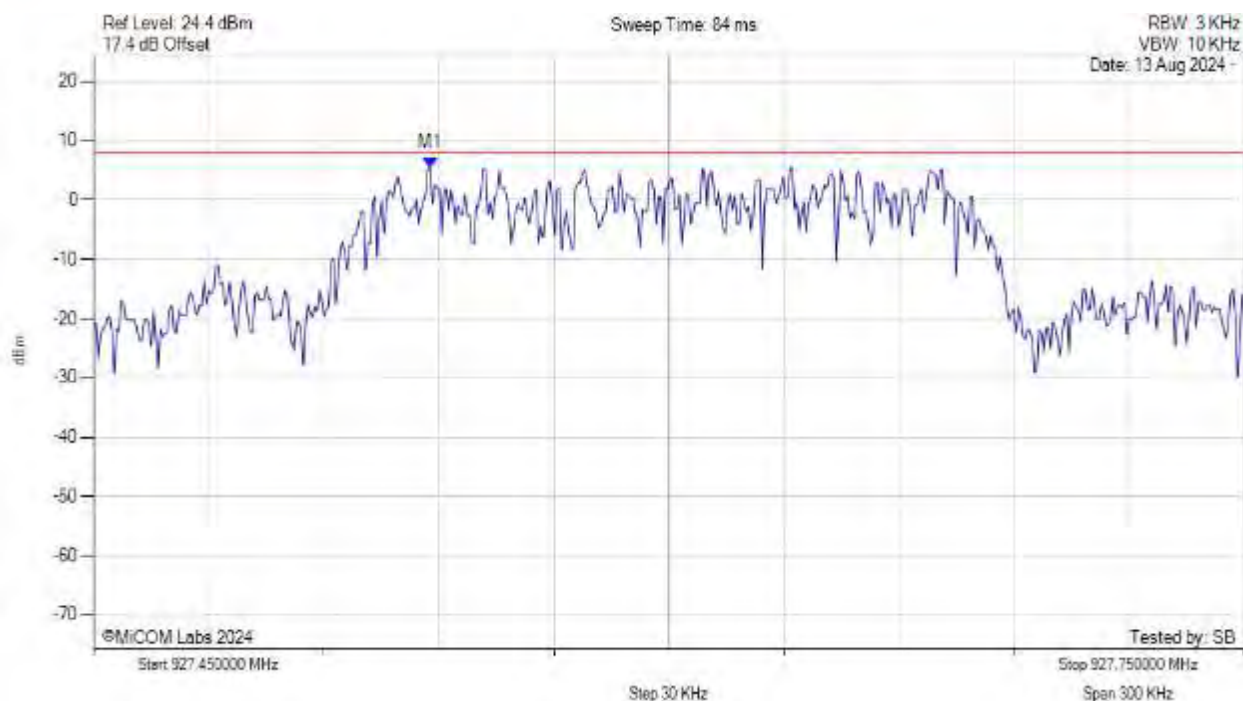
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 927.538 MHz : 5.468 dBm	Limit: ≤ 8.000 dBm Margin: -2.53 dB

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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



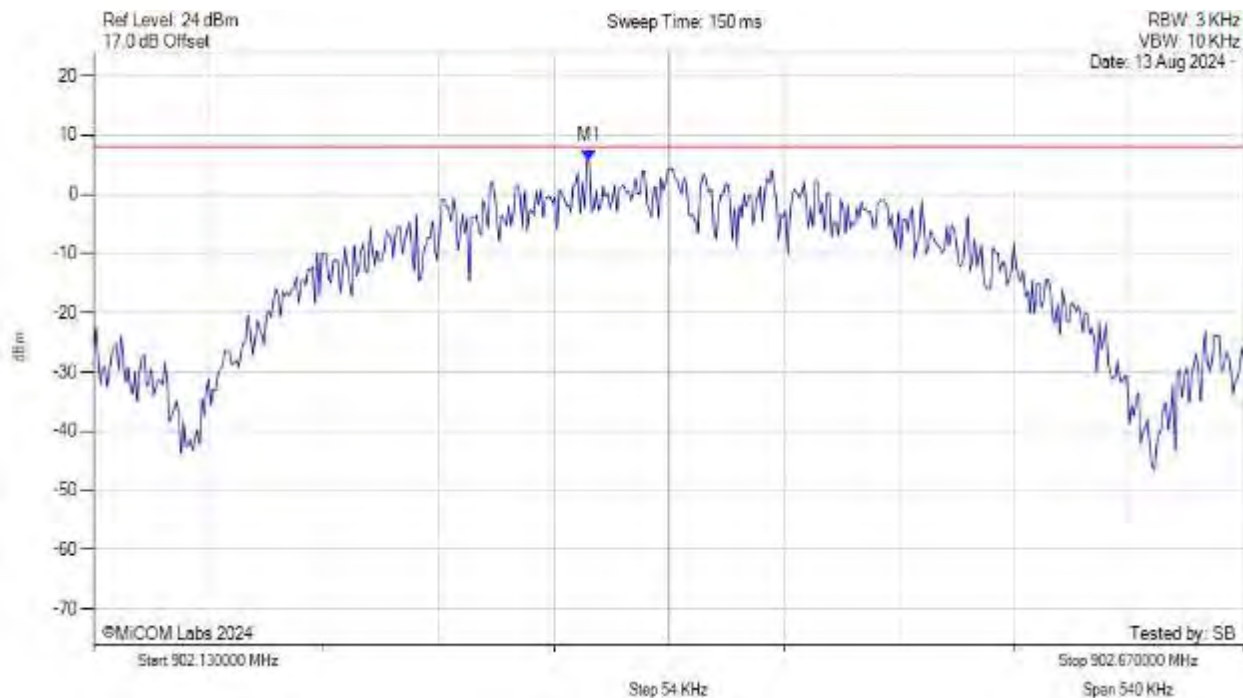
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 927.538 MHz : 5.468 dBm	Limit: ≤ 8.0 dBm Margin: -2.5 dB

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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



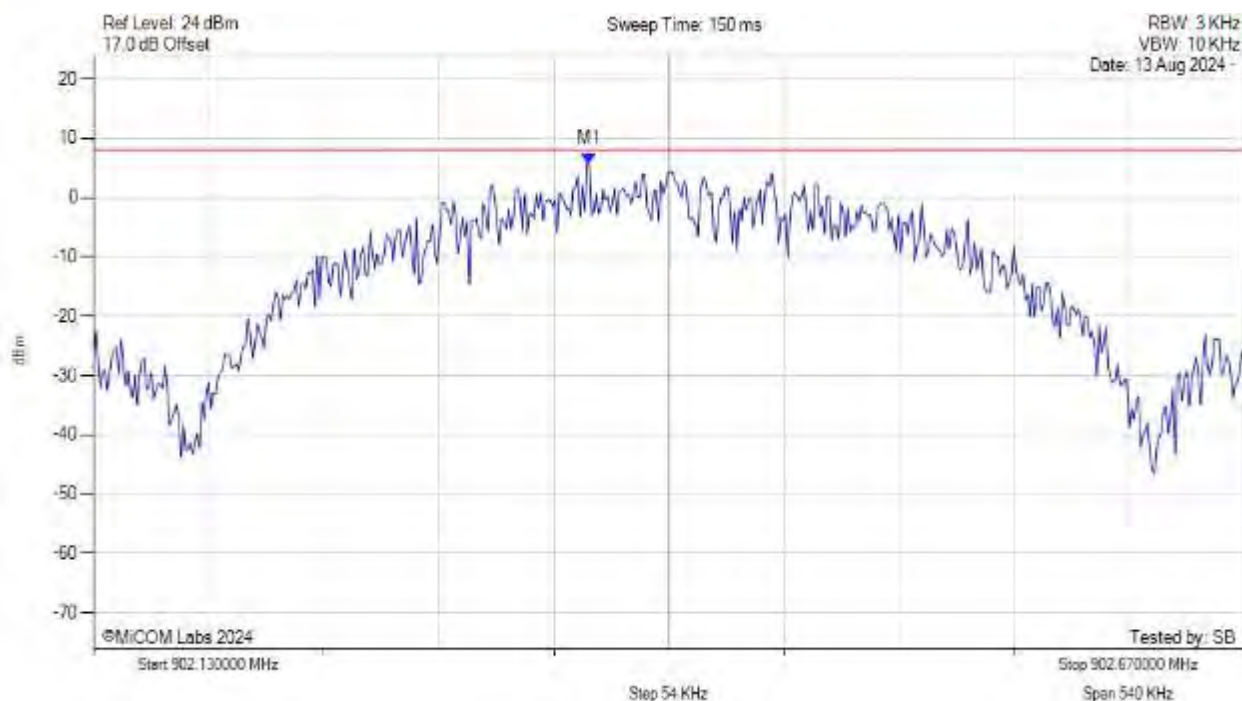
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 902.363 MHz : 5.806 dBm	Limit: ≤ 8.000 dBm Margin: -2.19 dB

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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



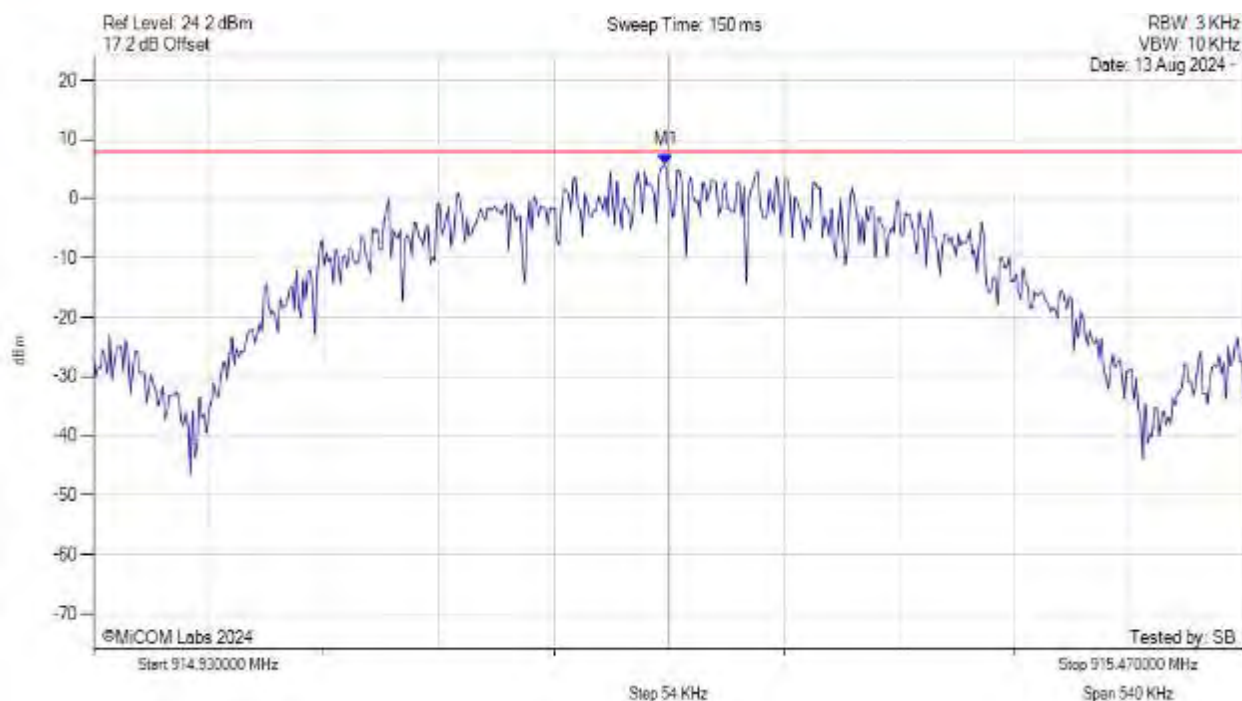
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 902.363 MHz : 5.806 dBm	Limit: ≤ 8.0 dBm Margin: -2.2 dB

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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



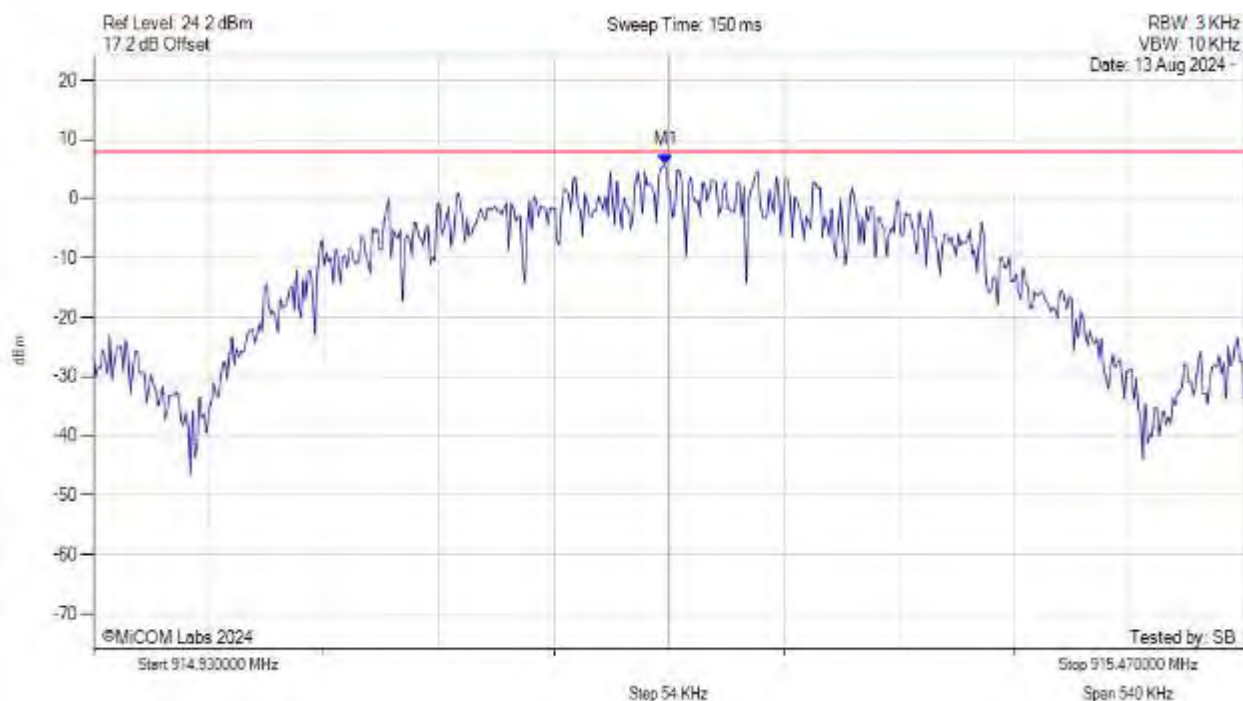
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 915.198 MHz : 5.660 dBm	Limit: ≤ 8.000 dBm Margin: -2.34 dB

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POWER SPECTRAL DENSITY - PEAK



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



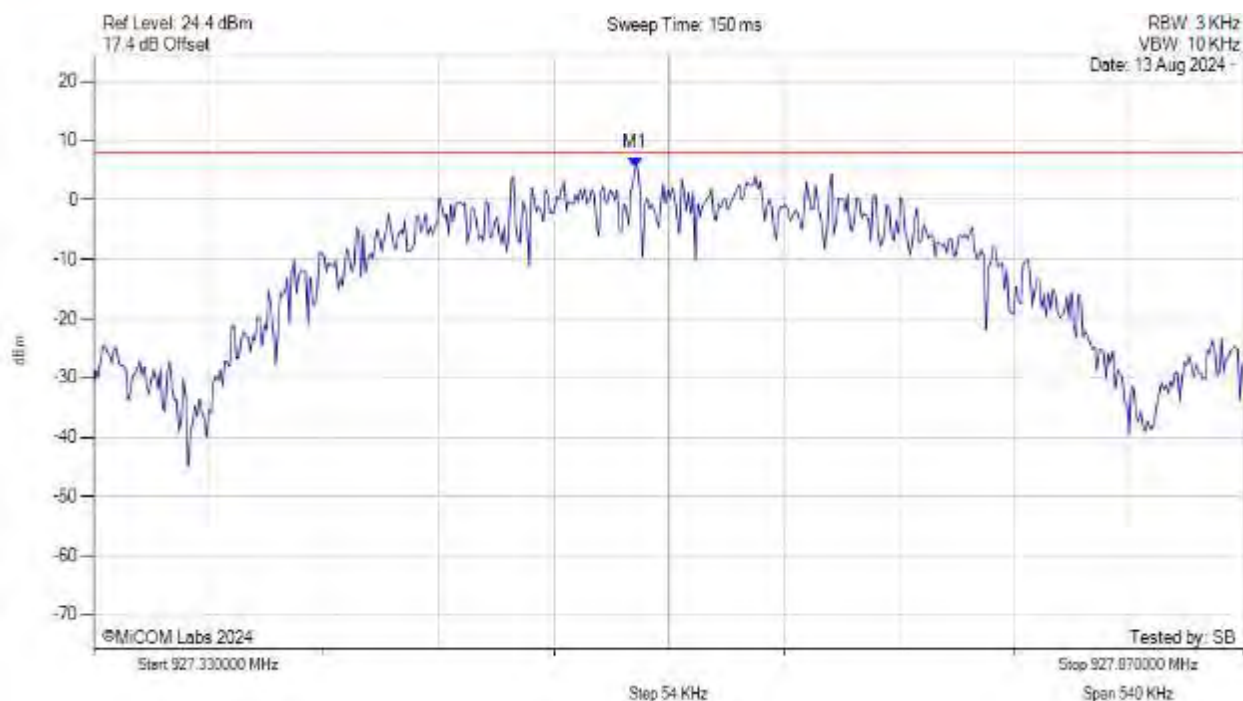
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 915.198 MHz : 5.660 dBm	Limit: ≤ 8.0 dBm Margin: -2.3 dB

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POWER SPECTRAL DENSITY - PEAK



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



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

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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

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1.4. Emissions

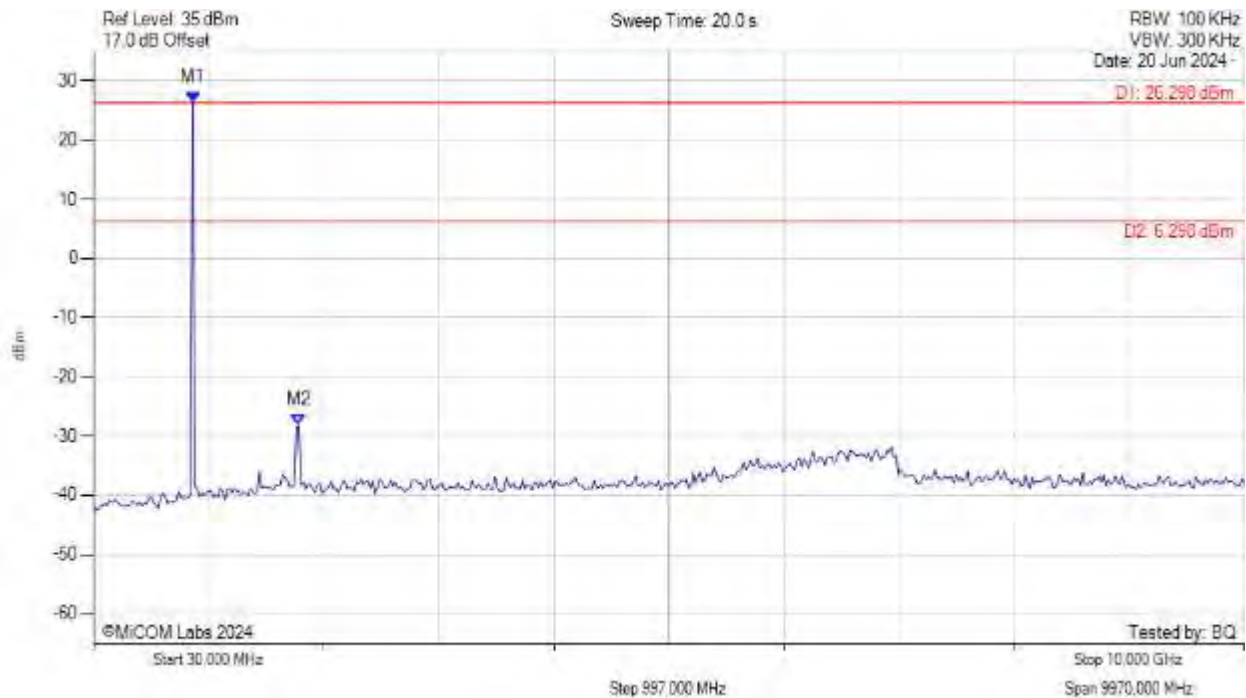
1.4.1. Conducted Emissions

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



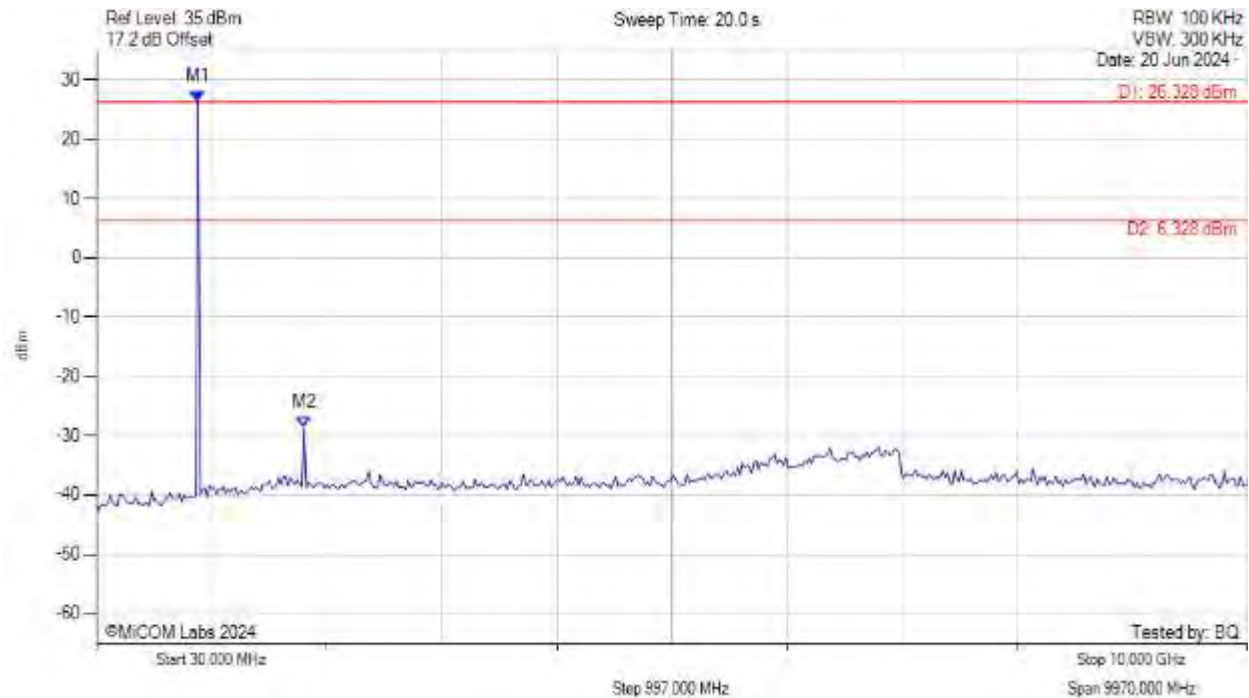
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 26.298 dBm M2 : 1808.216 MHz : -28.172 dBm	Limit: 6.30 dBm Margin: -34.47 dB

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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



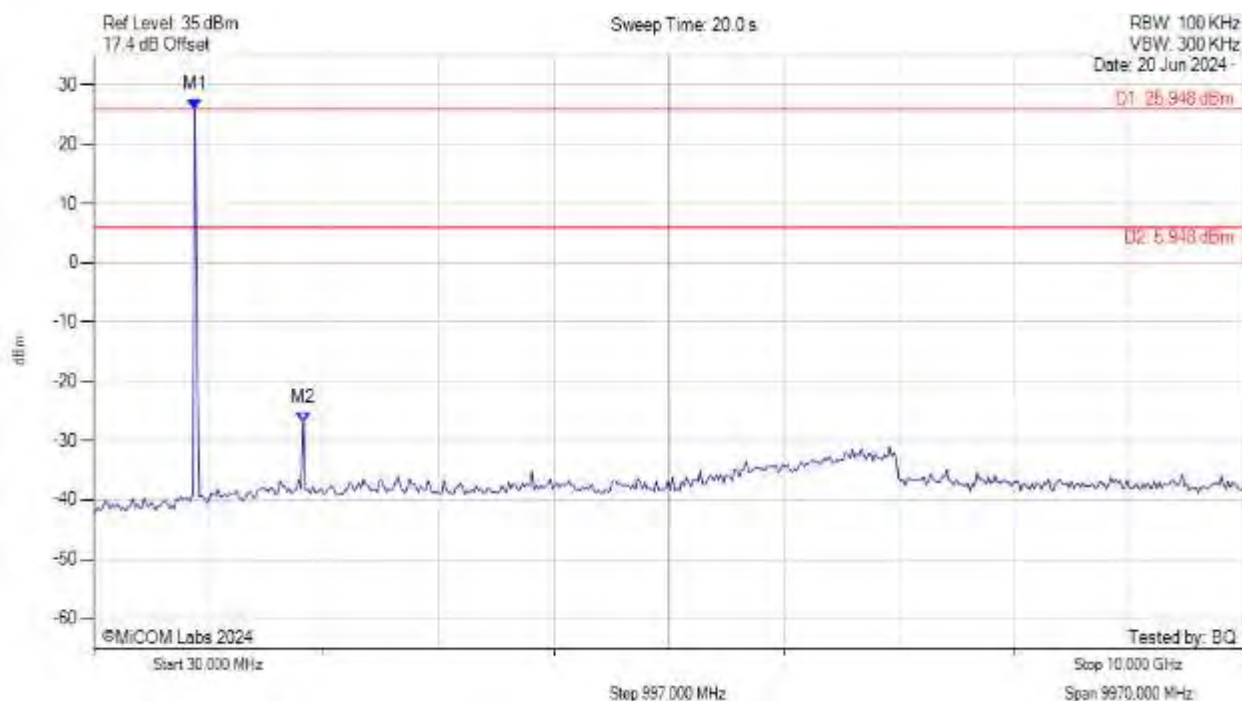
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 26.328 dBm M2 : 1828.196 MHz : -28.650 dBm	Limit: 6.33 dBm Margin: -34.98 dB

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UNWANTED EMISSIONS PEAK



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



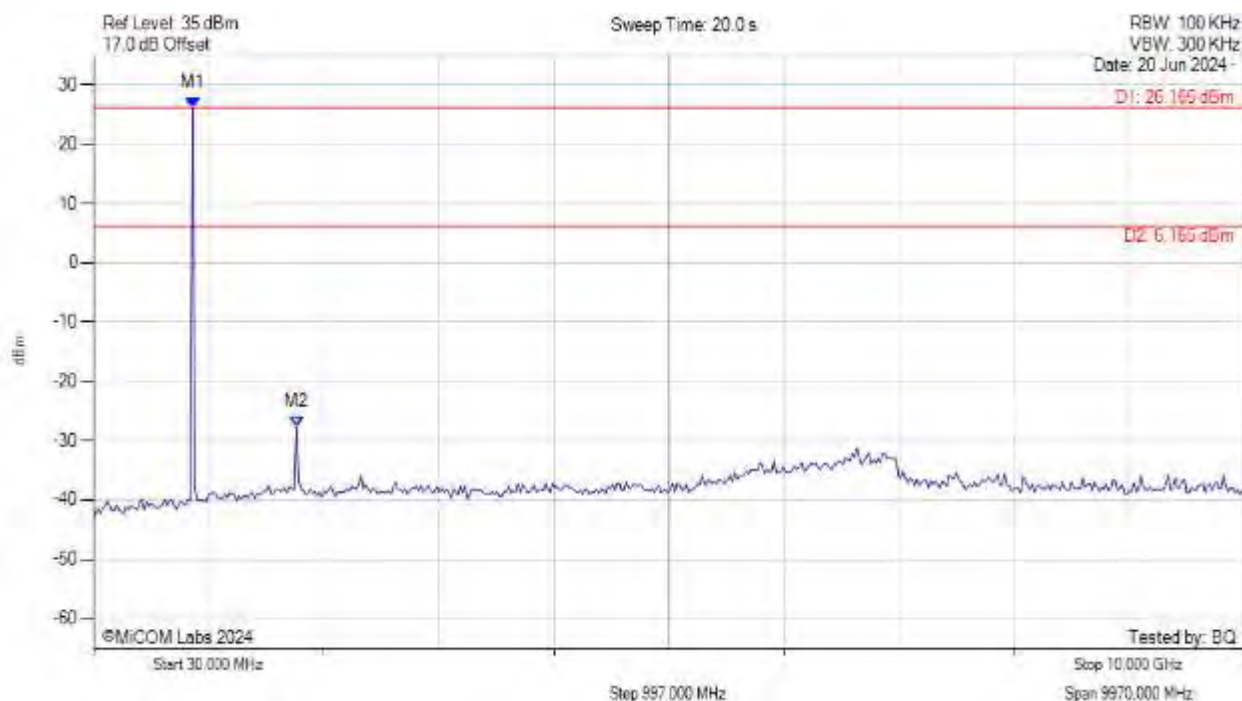
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 25.948 dBm M2 : 1848.176 MHz : -26.883 dBm	Limit: 5.95 dBm Margin: -32.83 dB

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UNWANTED EMISSIONS PEAK



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



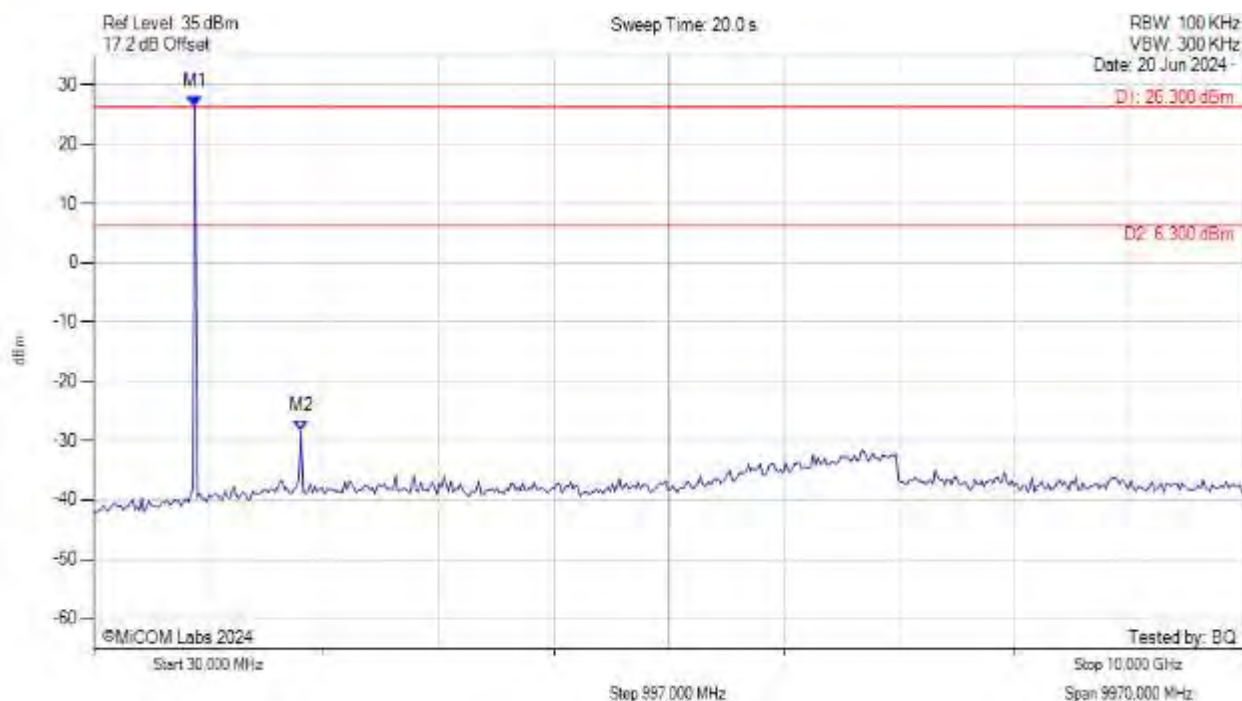
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 26.165 dBm M2 : 1788.236 MHz : -27.672 dBm	Limit: 6.17 dBm Margin: -33.84 dB

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UNWANTED EMISSIONS PEAK



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



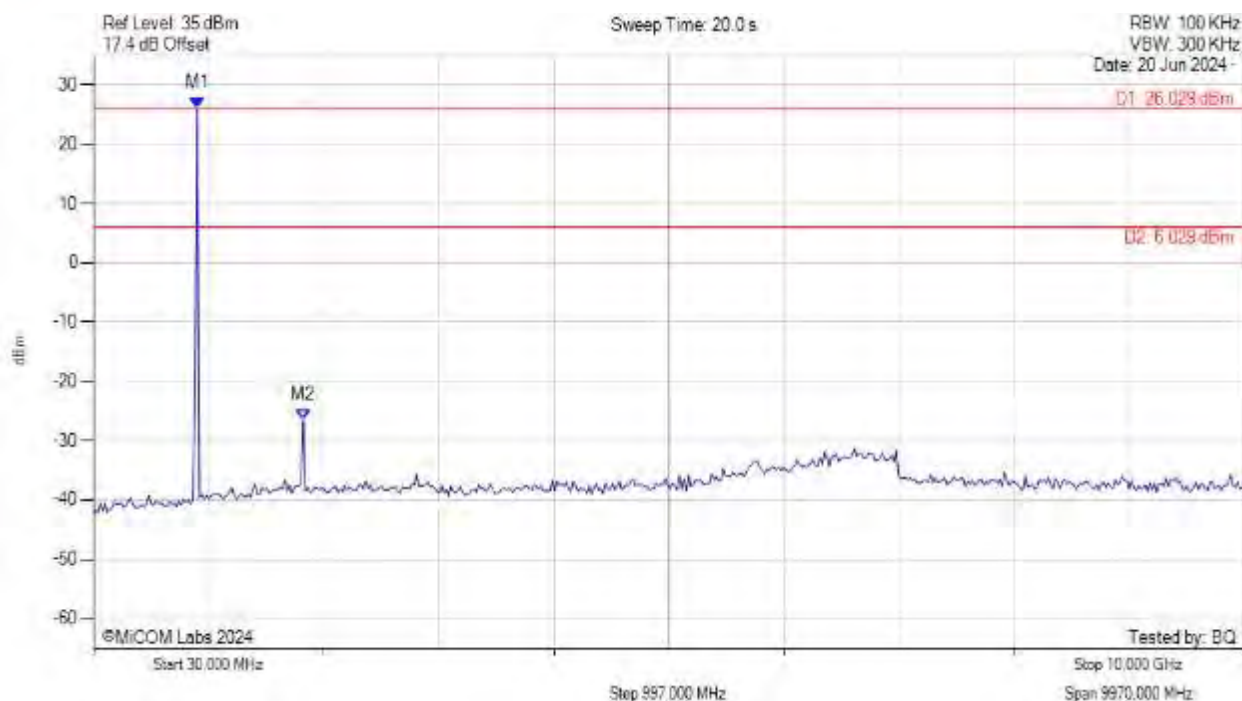
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 26.300 dBm M2 : 1828.196 MHz : -28.374 dBm	Limit: 6.30 dBm Margin: -34.67 dB

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UNWANTED EMISSIONS PEAK



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



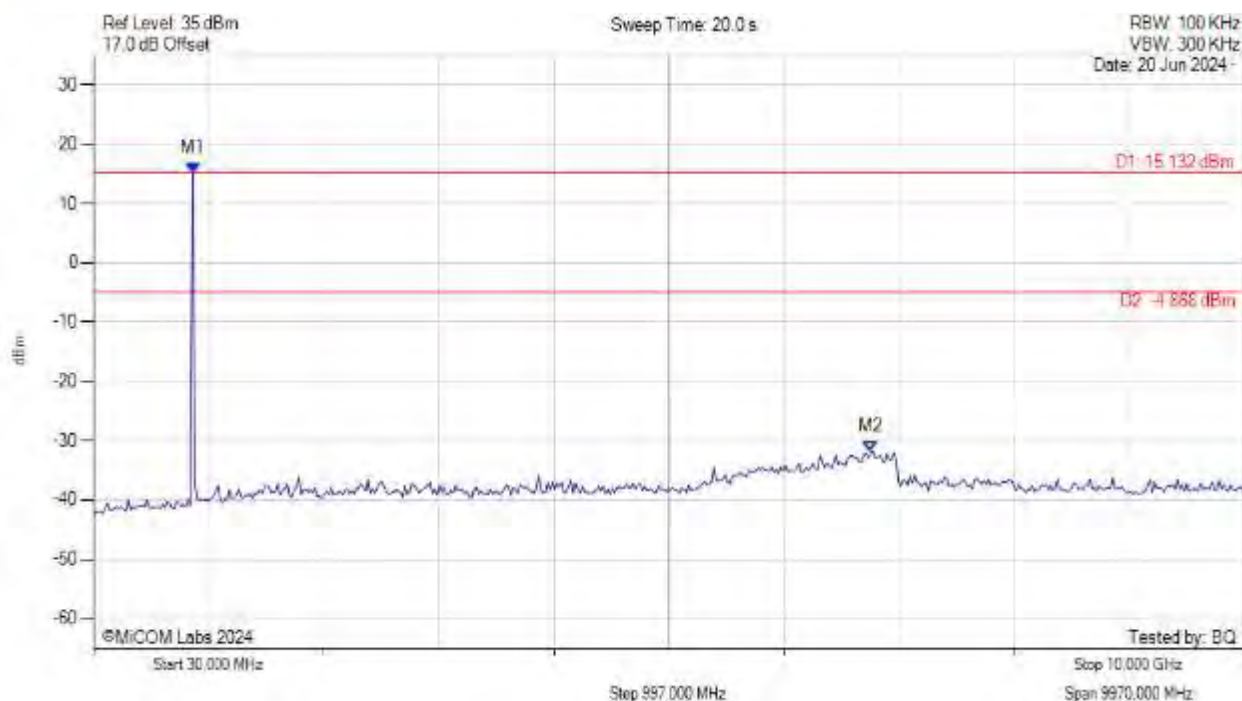
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 929.098 MHz : 26.029 dBm M2 : 1848.176 MHz : -26.584 dBm	Limit: 6.03 dBm Margin: -32.61 dB

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UNWANTED EMISSIONS PEAK



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



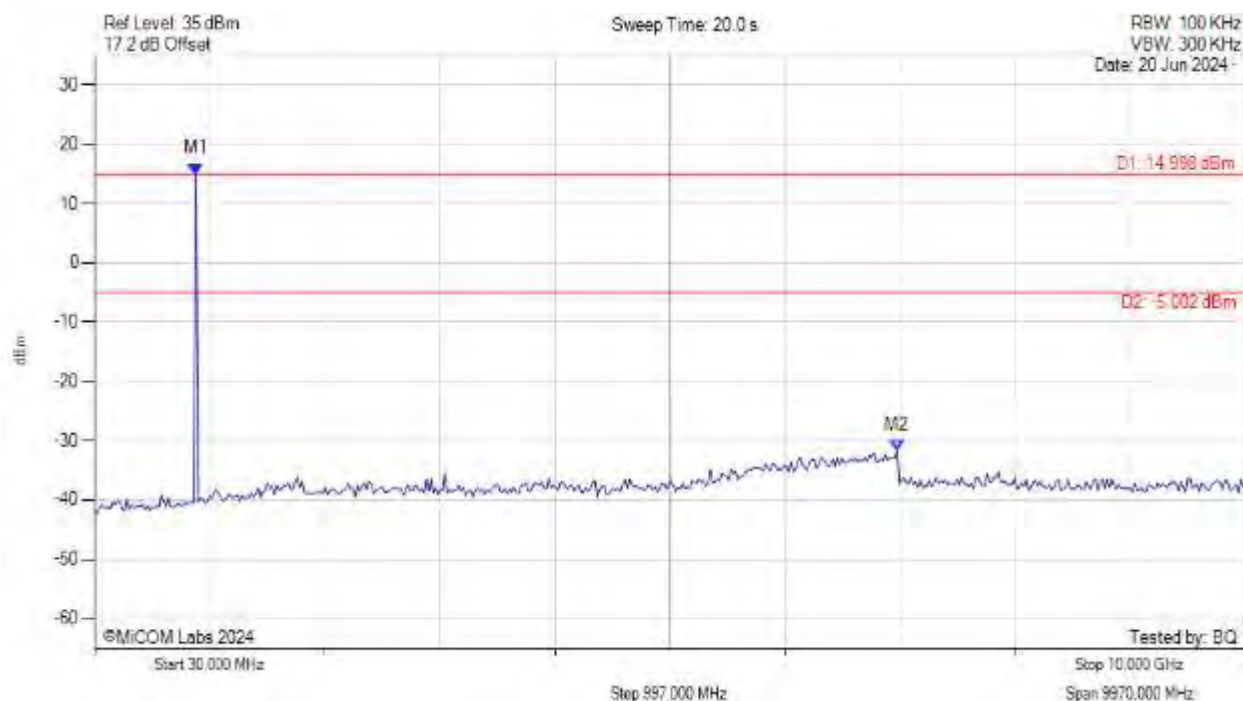
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 15.132 dBm M2 : 6763.246 MHz : -31.792 dBm	Limit: -4.87 dBm Margin: -26.92 dB

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UNWANTED EMISSIONS PEAK



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



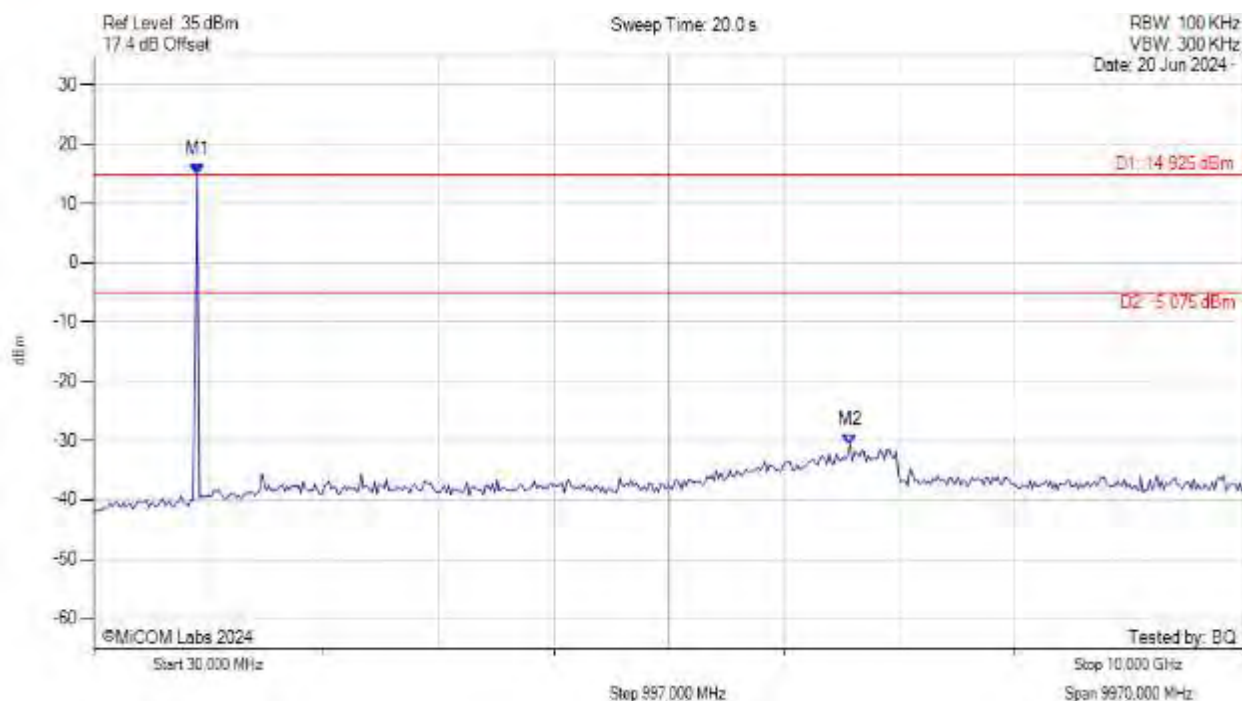
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 14.998 dBm M2 : 6983.026 MHz : -31.538 dBm	Limit: -5.00 dBm Margin: -26.54 dB

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UNWANTED EMISSIONS PEAK



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



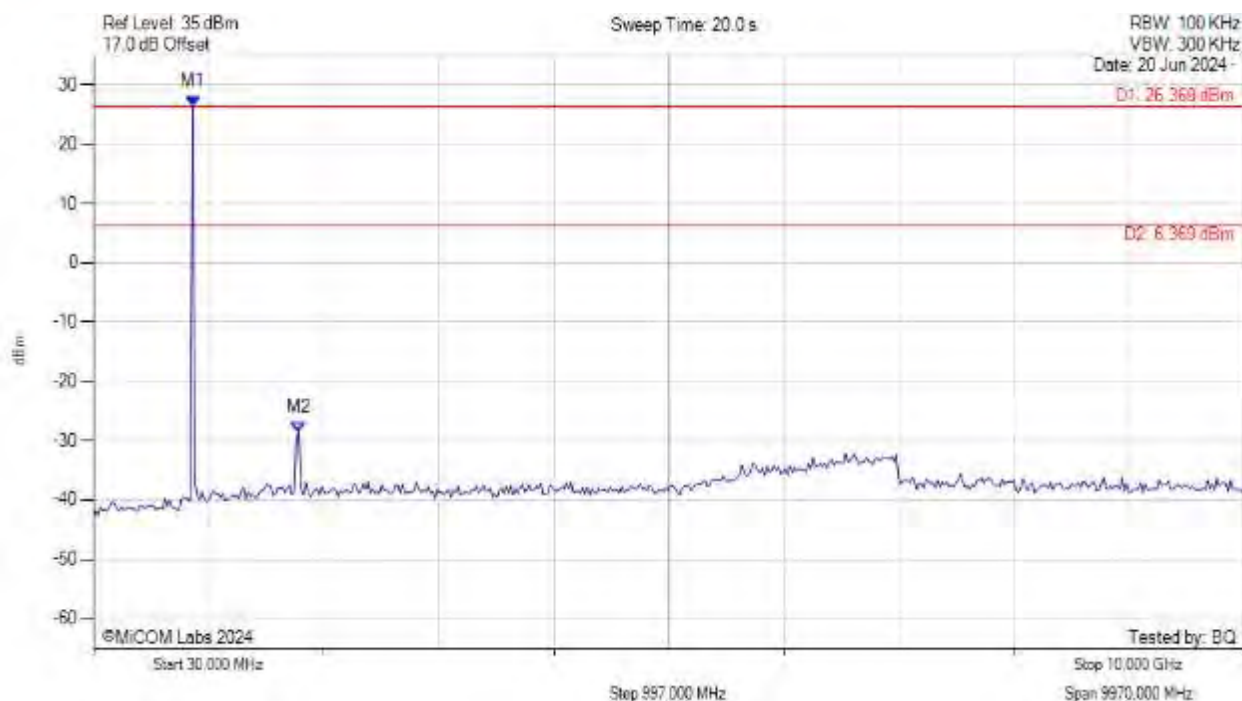
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 929.098 MHz : 14.925 dBm M2 : 6583.427 MHz : -30.723 dBm	Limit: -5.08 dBm Margin: -25.64 dB

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UNWANTED EMISSIONS PEAK



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



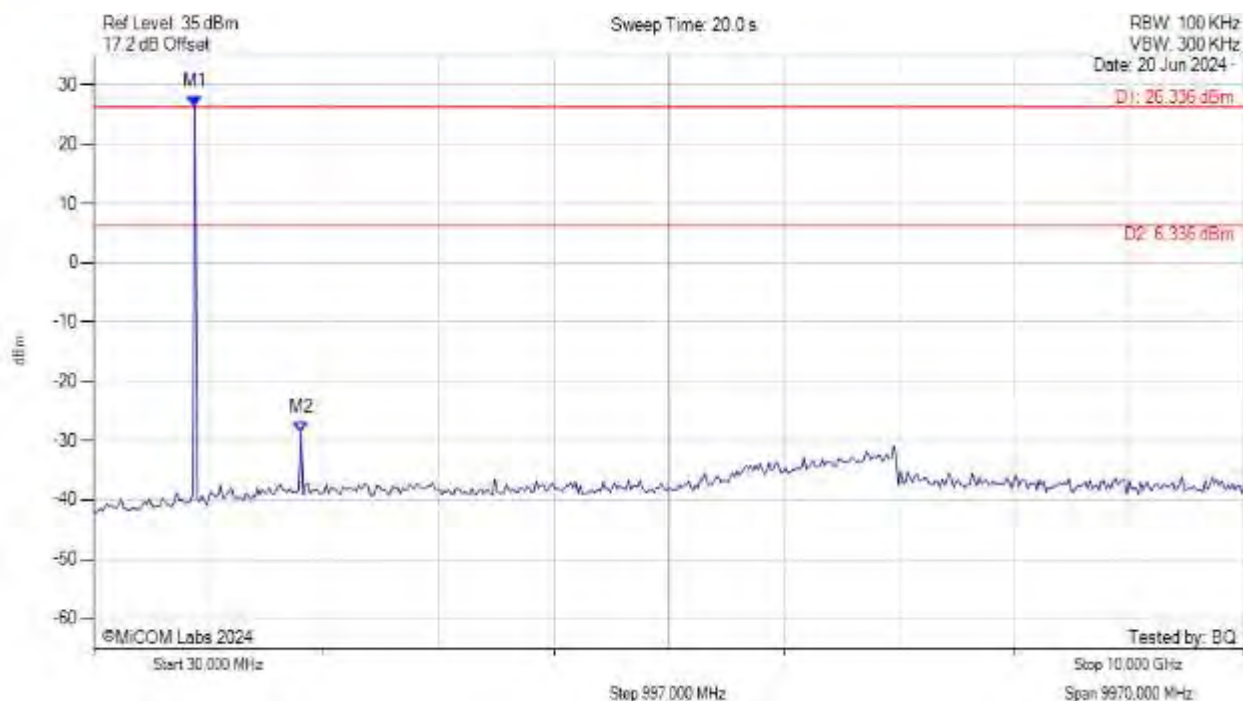
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 26.369 dBm M2 : 1808.216 MHz : -28.526 dBm	Limit: 6.37 dBm Margin: -34.90 dB

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UNWANTED EMISSIONS PEAK



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



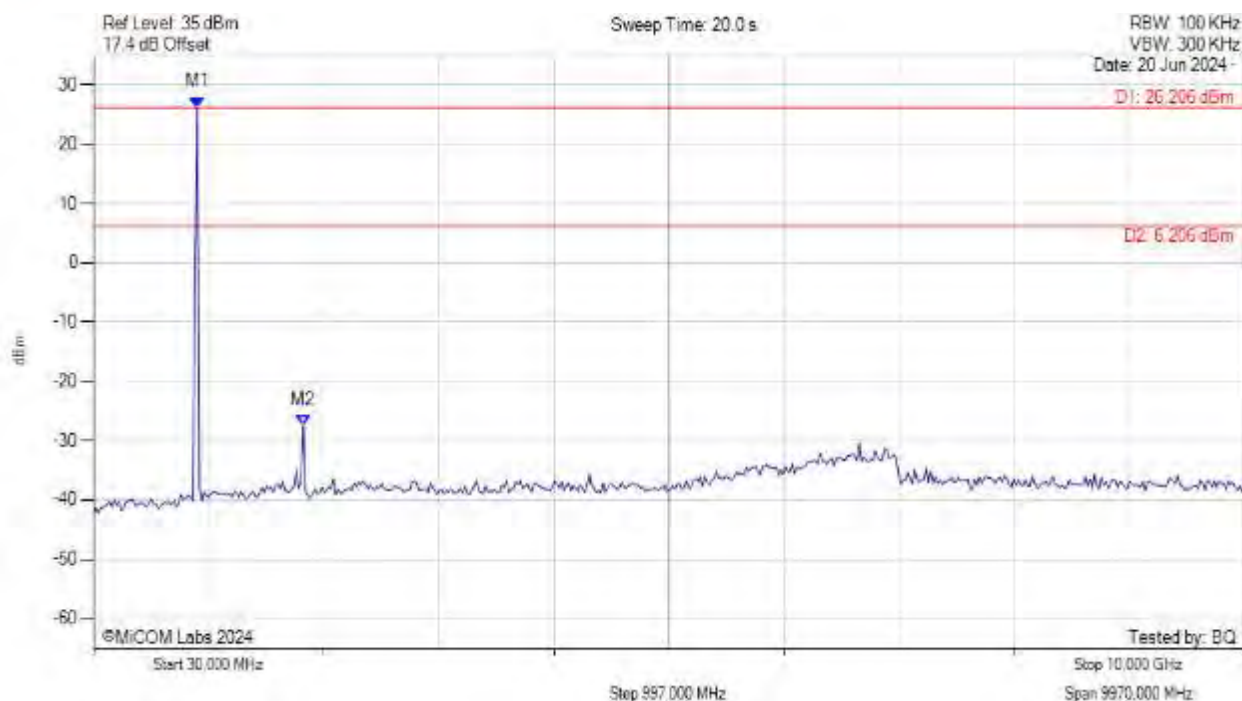
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 26.336 dBm M2 : 1828.196 MHz : -28.520 dBm	Limit: 6.34 dBm Margin: -34.86 dB

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UNWANTED EMISSIONS PEAK



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



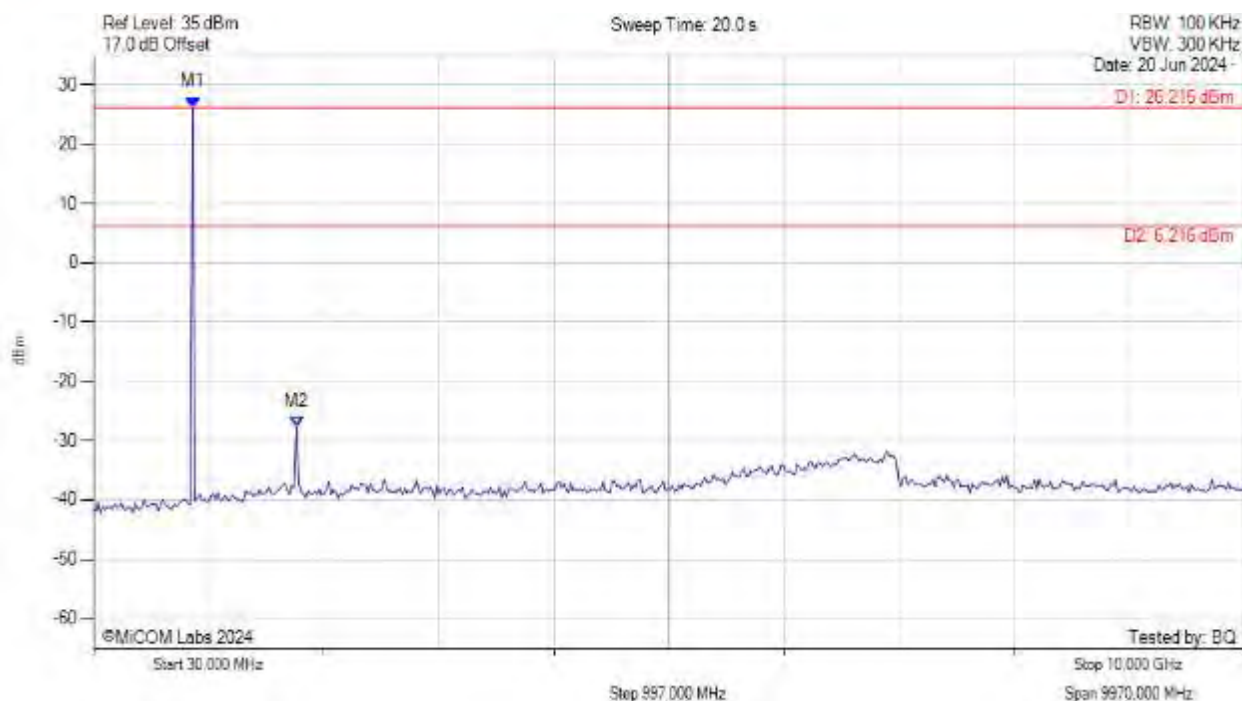
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 929.098 MHz : 26.206 dBm M2 : 1848.176 MHz : -27.471 dBm	Limit: 6.21 dBm Margin: -33.68 dB

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UNWANTED EMISSIONS PEAK



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



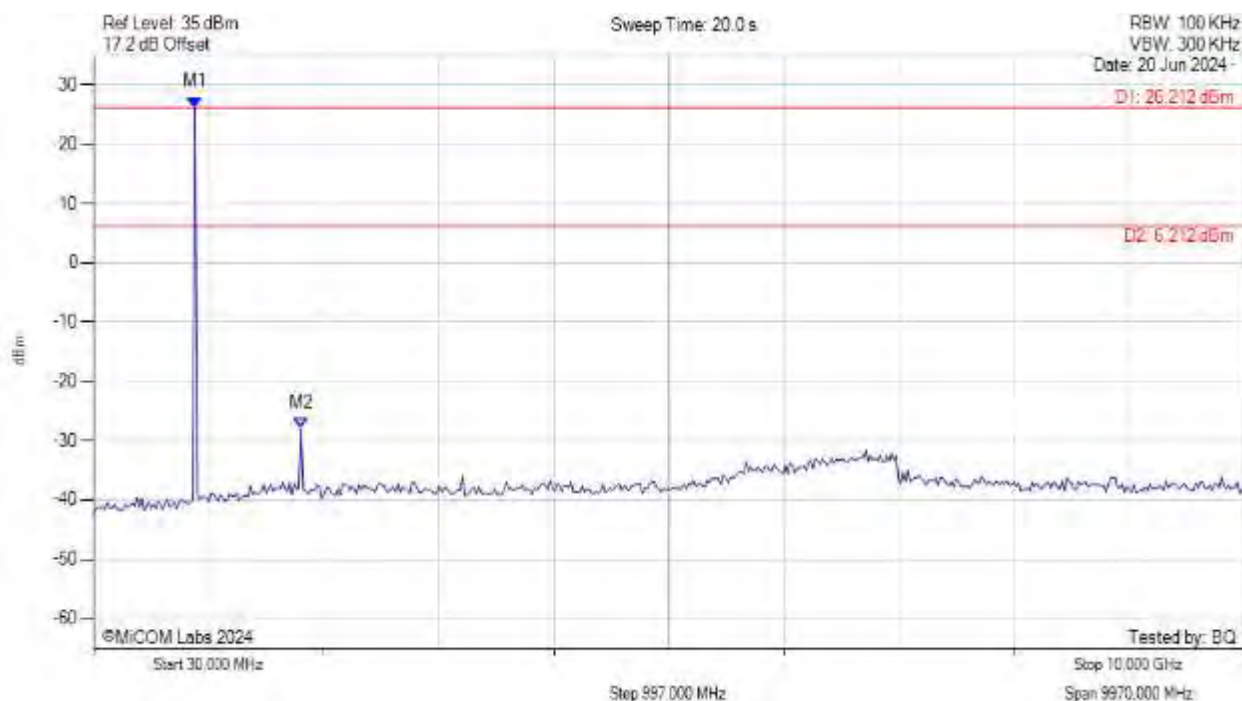
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 26.216 dBm M2 : 1788.236 MHz : -27.570 dBm	Limit: 6.22 dBm Margin: -33.79 dB

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UNWANTED EMISSIONS PEAK



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



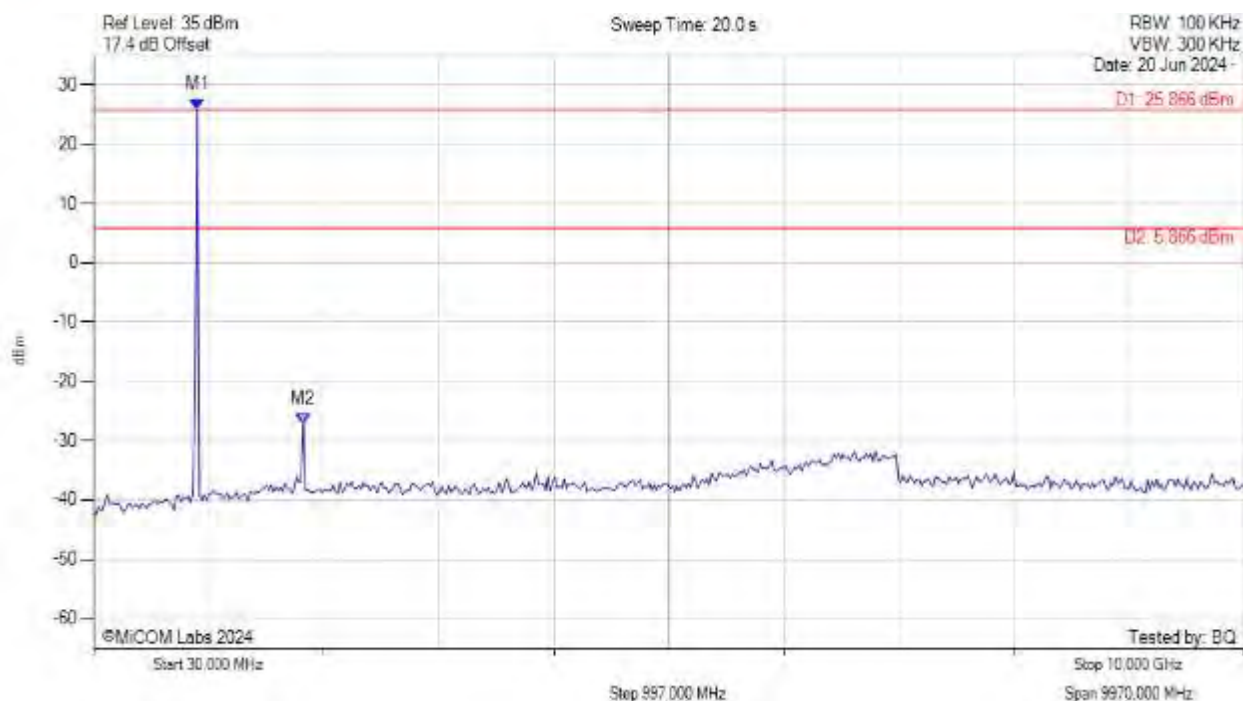
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 26.212 dBm M2 : 1828.196 MHz : -27.993 dBm	Limit: 6.21 dBm Margin: -34.20 dB

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UNWANTED EMISSIONS PEAK



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



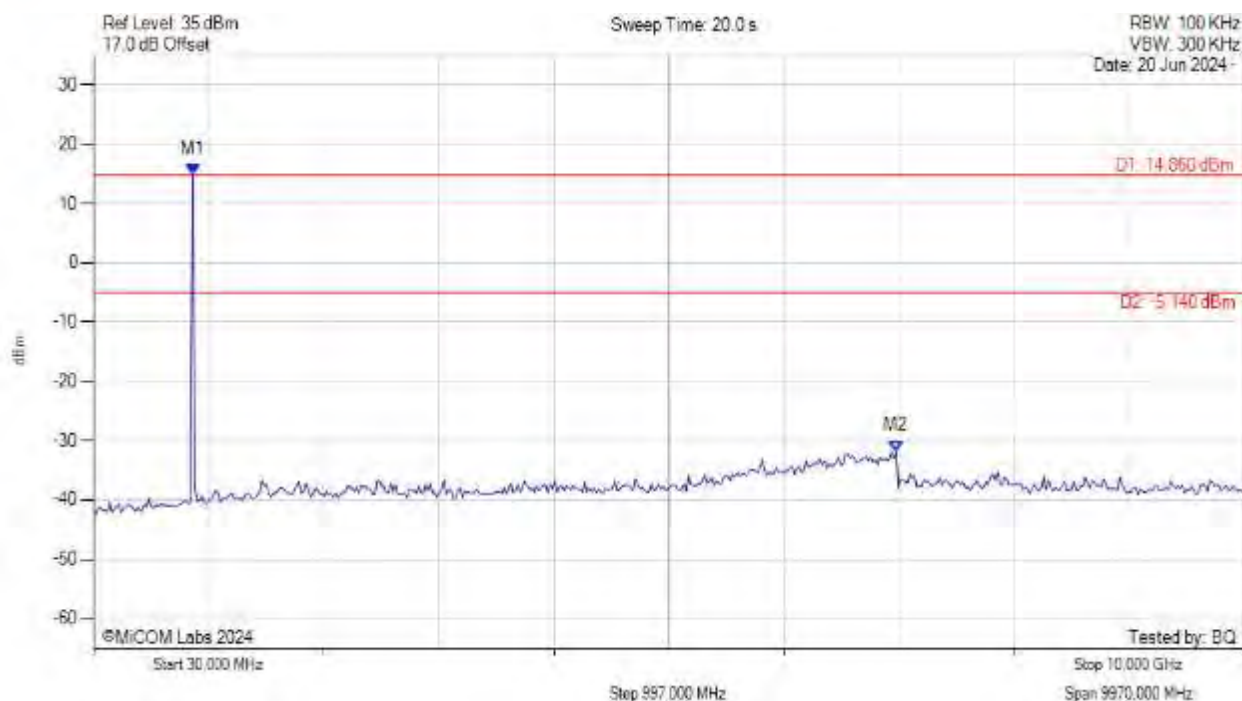
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 929.098 MHz : 25.866 dBm M2 : 1848.176 MHz : -27.111 dBm	Limit: 5.87 dBm Margin: -32.98 dB

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UNWANTED EMISSIONS PEAK



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



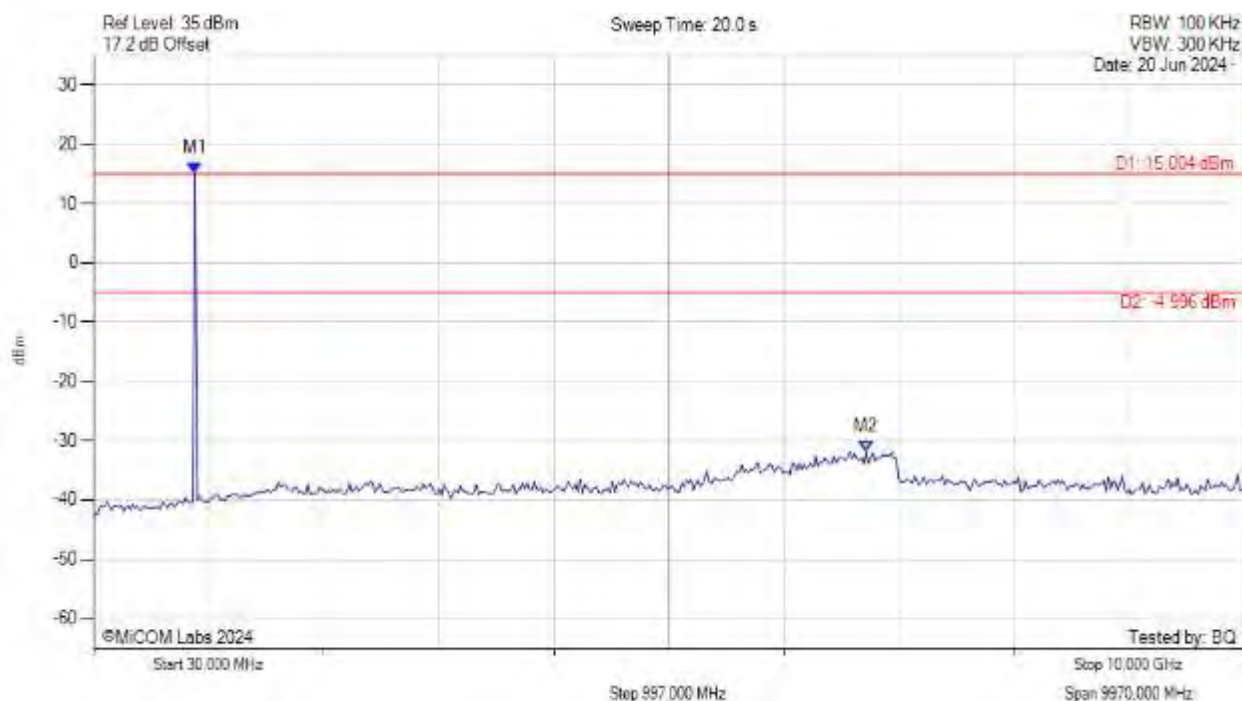
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 14.860 dBm M2 : 6983.026 MHz : -31.746 dBm	Limit: -5.14 dBm Margin: -26.61 dB

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UNWANTED EMISSIONS PEAK



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



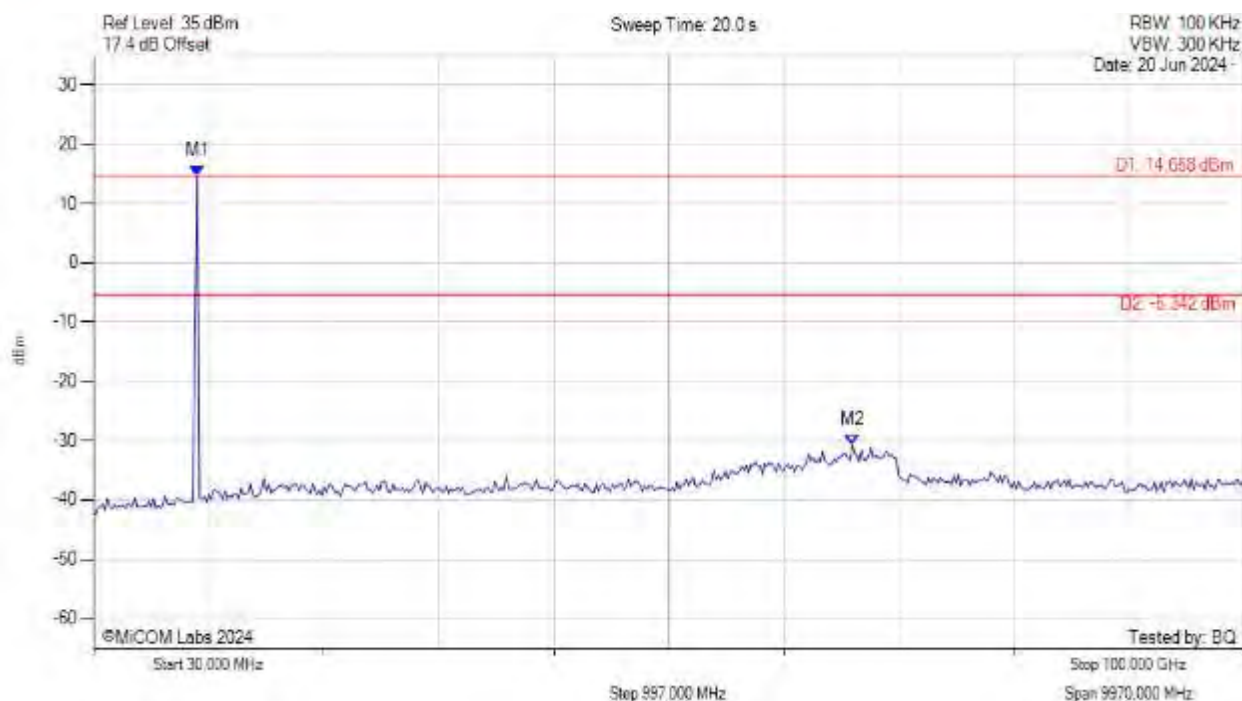
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 15.004 dBm M2 : 6723.287 MHz : -31.790 dBm	Limit: -5.00 dBm Margin: -26.79 dB

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UNWANTED EMISSIONS PEAK



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



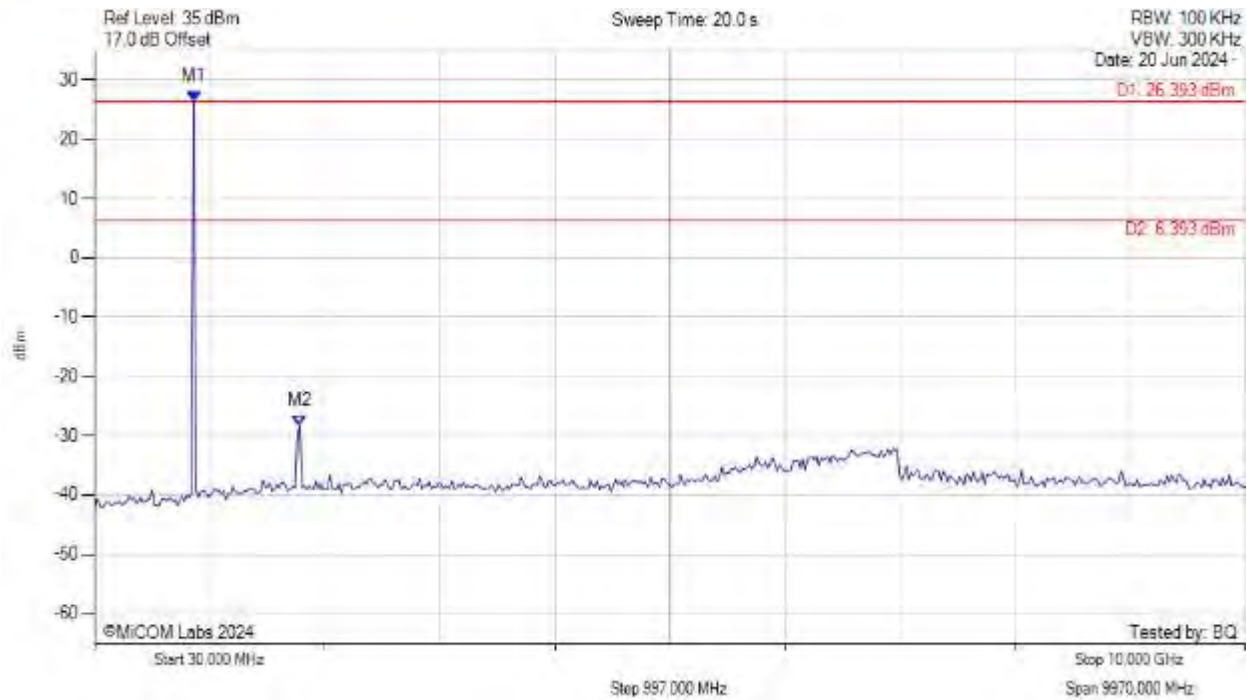
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 929.098 MHz : 14.658 dBm M2 : 6603.407 MHz : -30.659 dBm	Limit: -5.34 dBm Margin: -25.32 dB

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UNWANTED EMISSIONS PEAK



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



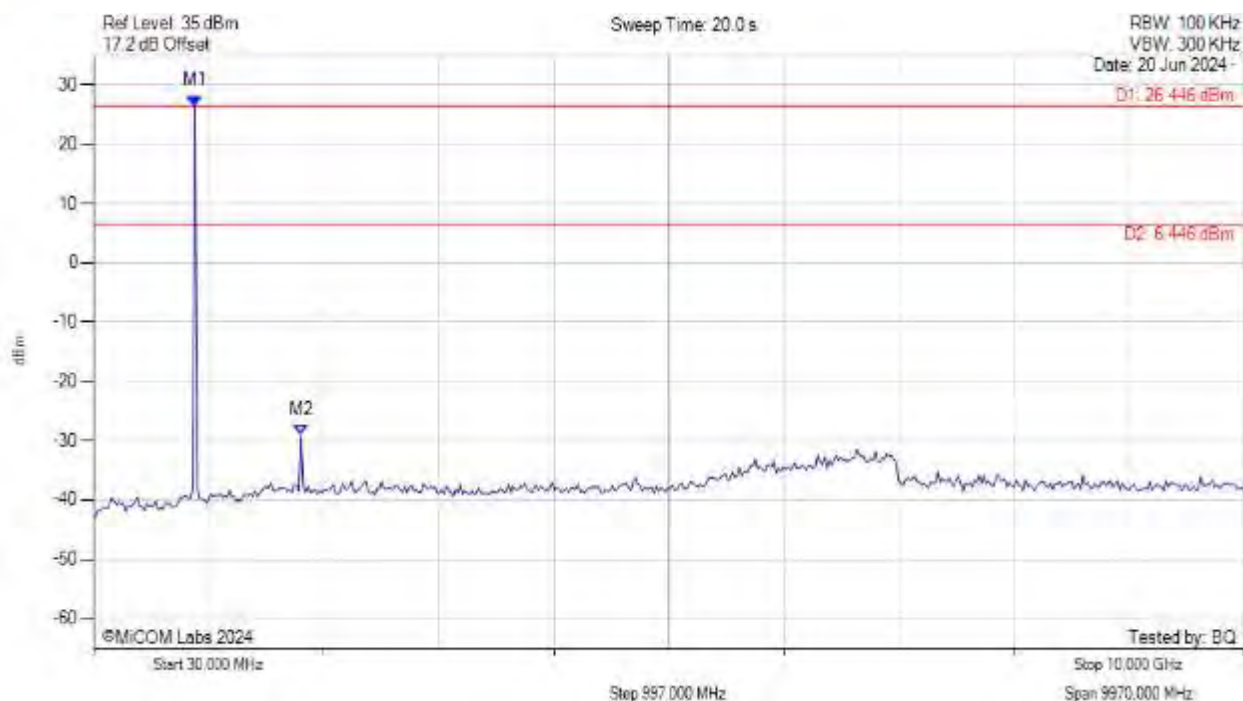
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 26.393 dBm M2 : 1808.216 MHz : -28.369 dBm	Limit: 6.39 dBm Margin: -34.76 dB

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UNWANTED EMISSIONS PEAK



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



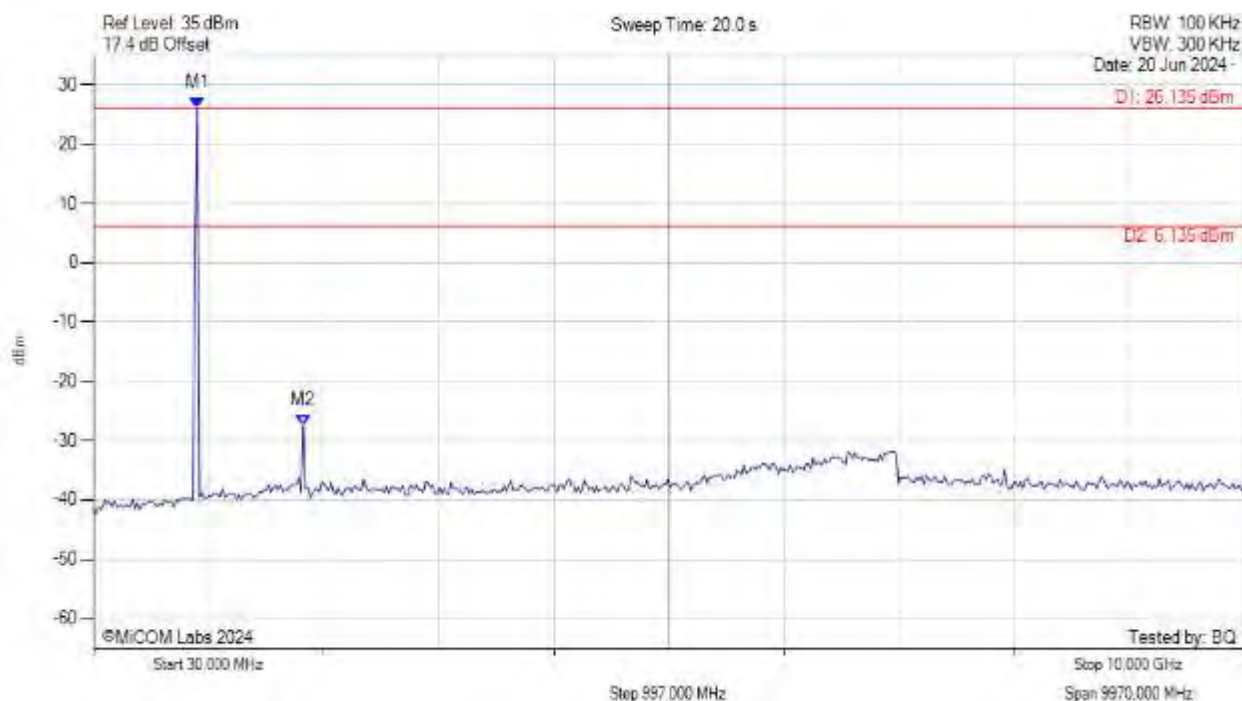
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 26.446 dBm M2 : 1828.196 MHz : -29.051 dBm	Limit: 6.45 dBm Margin: -35.50 dB

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UNWANTED EMISSIONS PEAK



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



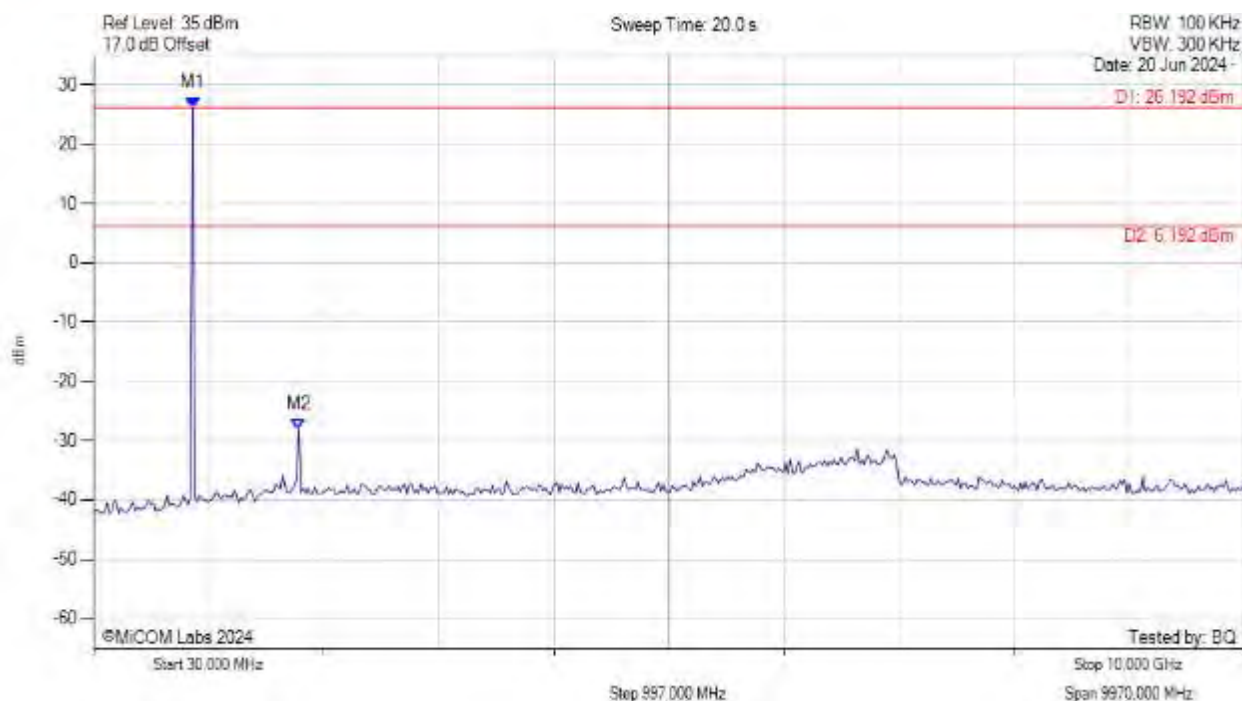
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 929.098 MHz : 26.135 dBm M2 : 1848.176 MHz : -27.462 dBm	Limit: 6.14 dBm Margin: -33.60 dB

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UNWANTED EMISSIONS PEAK



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



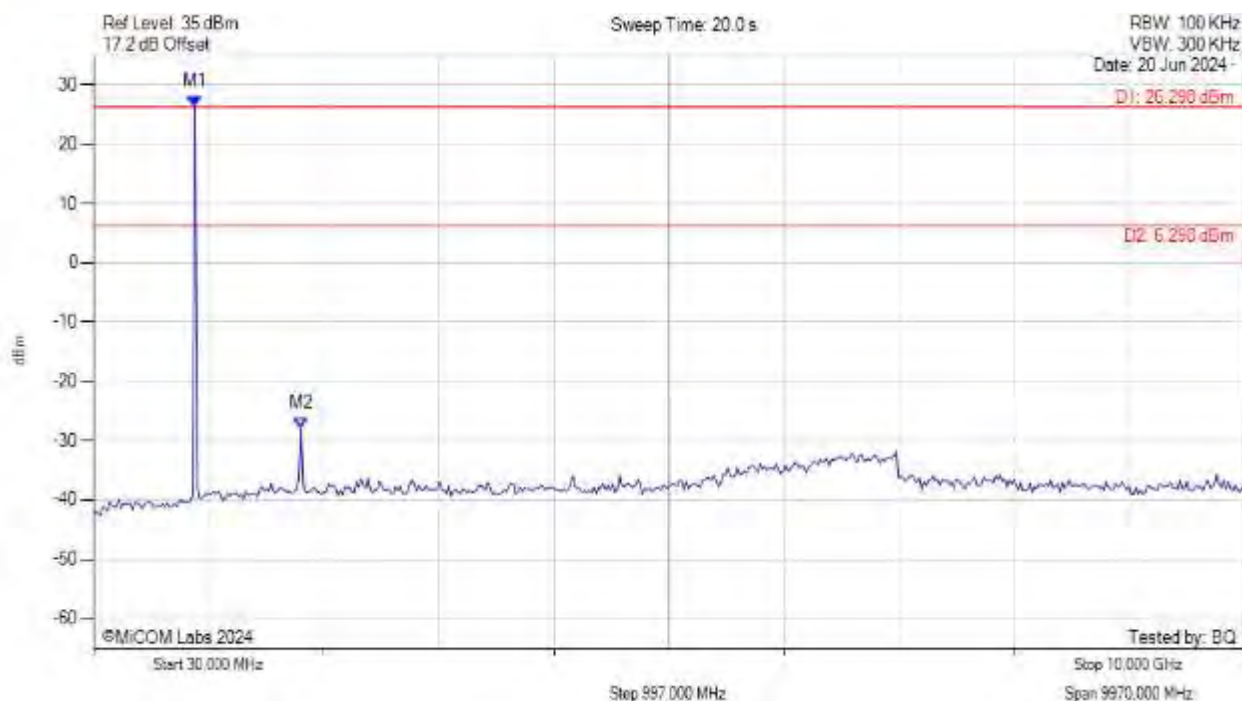
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 26.192 dBm M2 : 1808.216 MHz : -28.154 dBm	Limit: 6.19 dBm Margin: -34.34 dB

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UNWANTED EMISSIONS PEAK



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



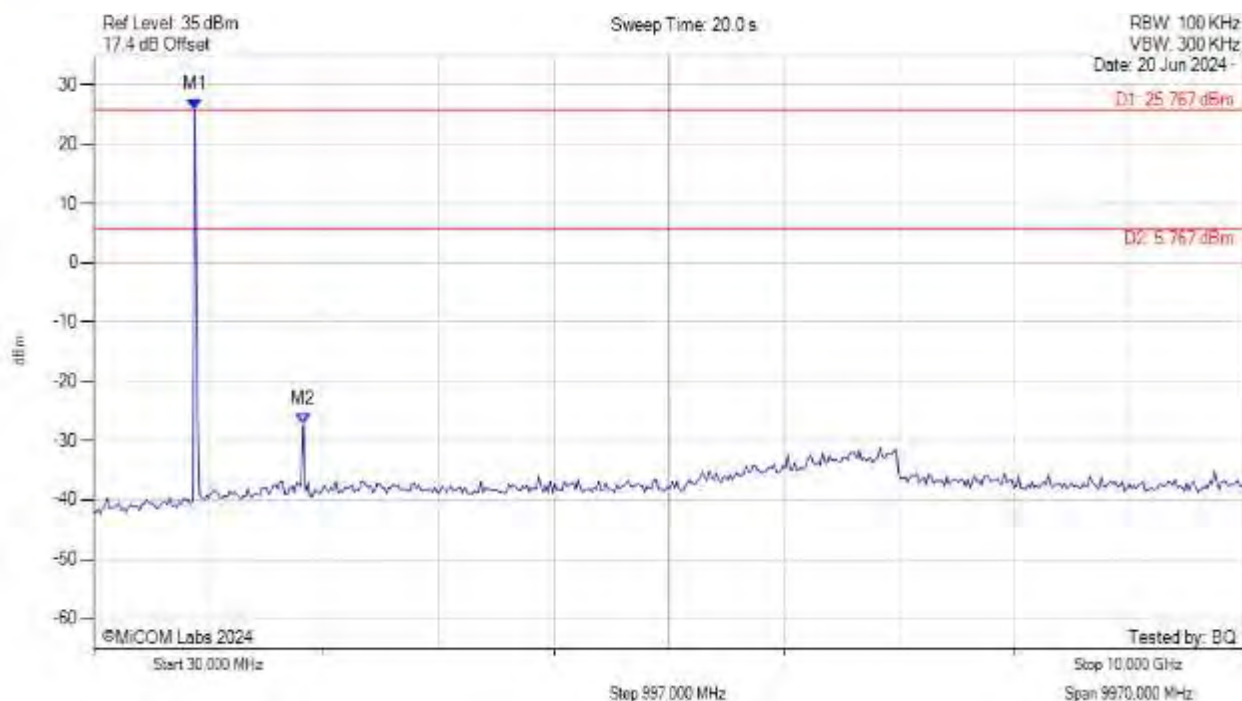
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 26.298 dBm M2 : 1828.196 MHz : -27.794 dBm	Limit: 6.30 dBm Margin: -34.09 dB

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UNWANTED EMISSIONS PEAK



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



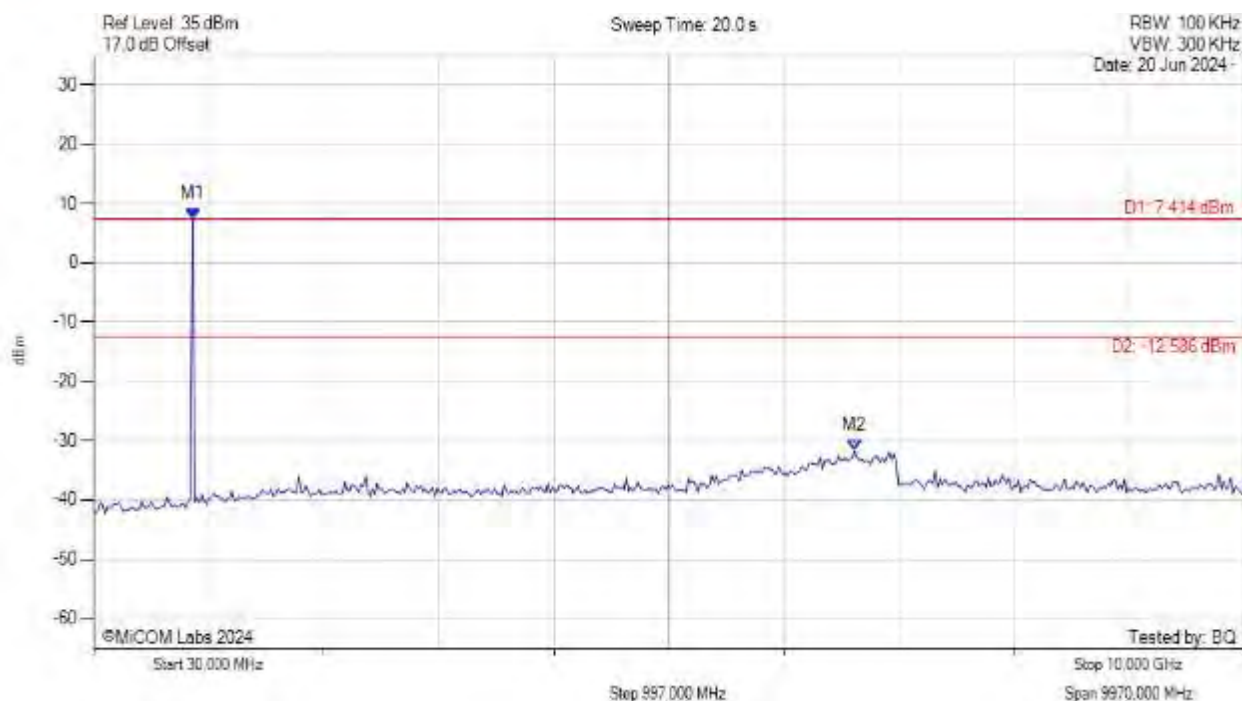
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 25.767 dBm M2 : 1848.176 MHz : -27.294 dBm	Limit: 5.77 dBm Margin: -33.06 dB

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UNWANTED EMISSIONS PEAK



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



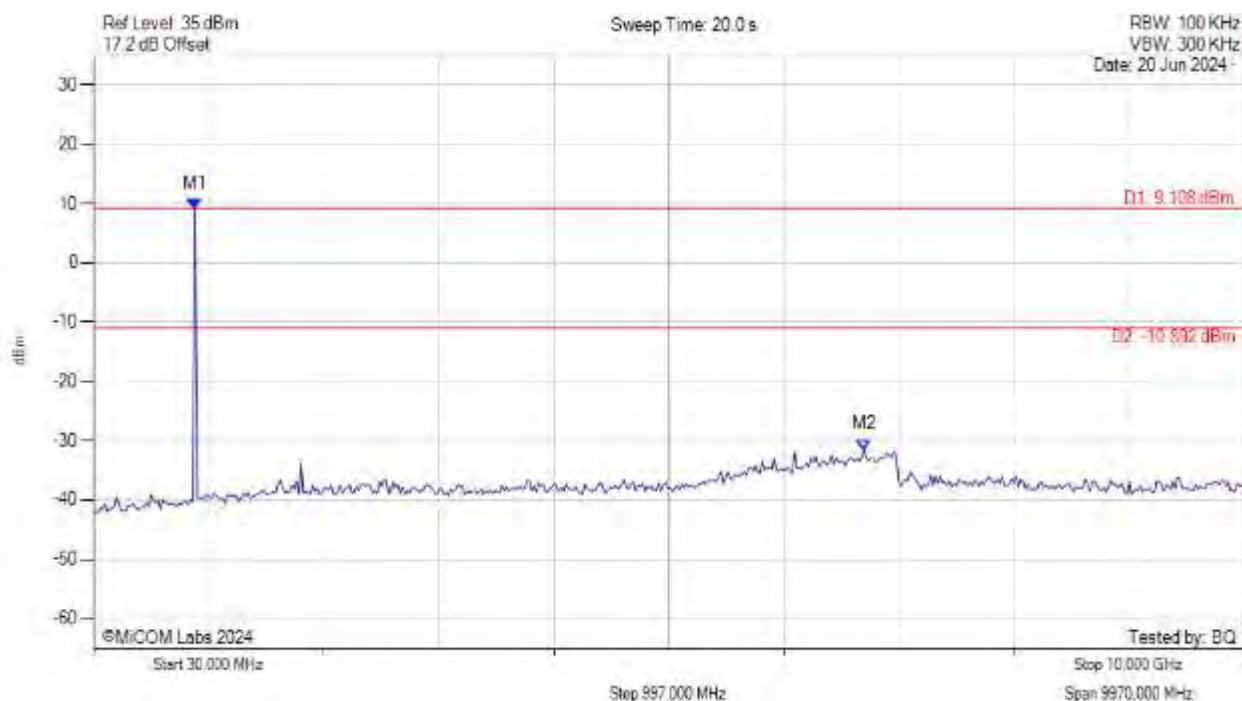
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 7.414 dBm M2 : 6623.387 MHz : -31.674 dBm	Limit: -12.59 dBm Margin: -19.08 dB

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UNWANTED EMISSIONS PEAK



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



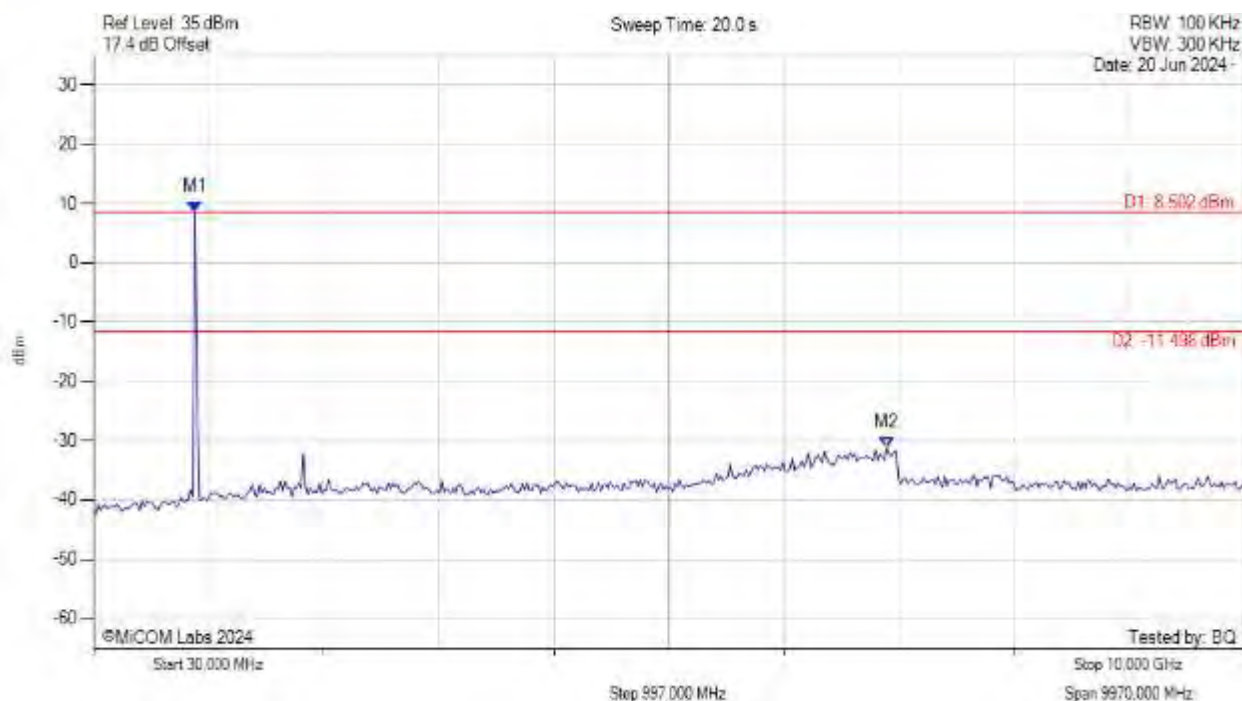
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 9.108 dBm M2 : 6703.307 MHz : -31.510 dBm	Limit: -10.89 dBm Margin: -20.62 dB

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UNWANTED EMISSIONS PEAK



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



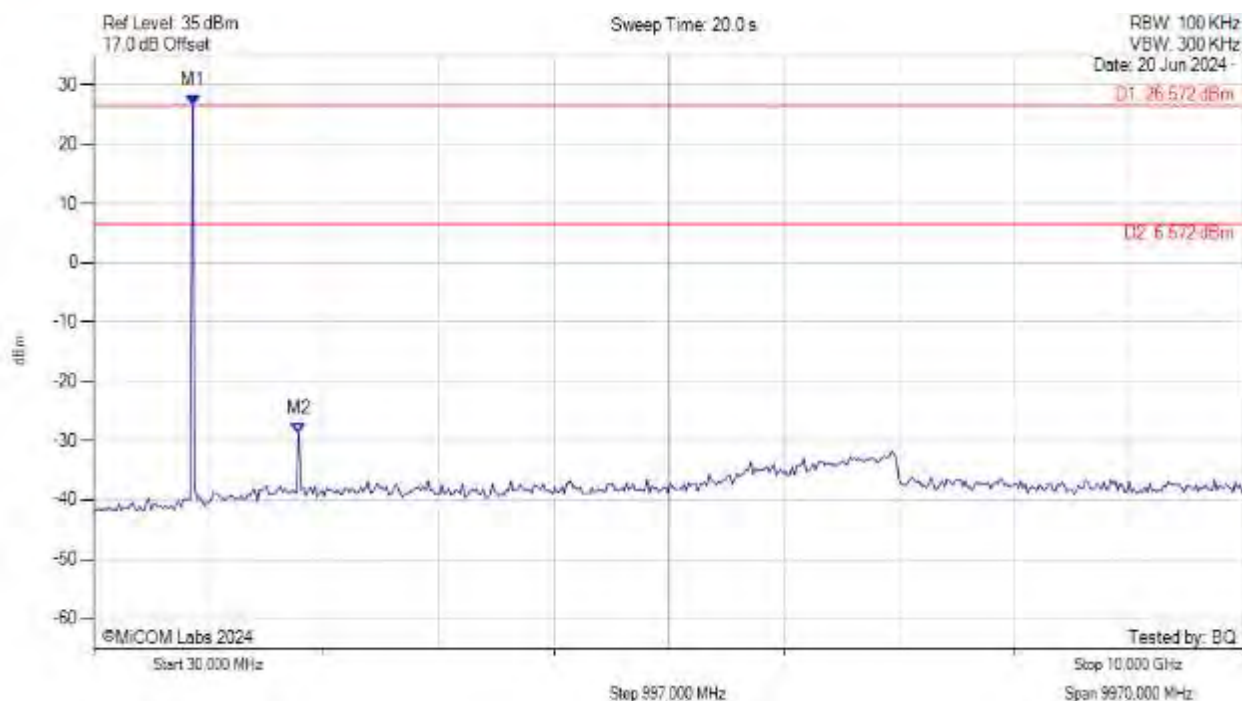
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 8.502 dBm M2 : 6903.106 MHz : -31.188 dBm	Limit: -11.50 dBm Margin: -19.69 dB

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UNWANTED EMISSIONS PEAK



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



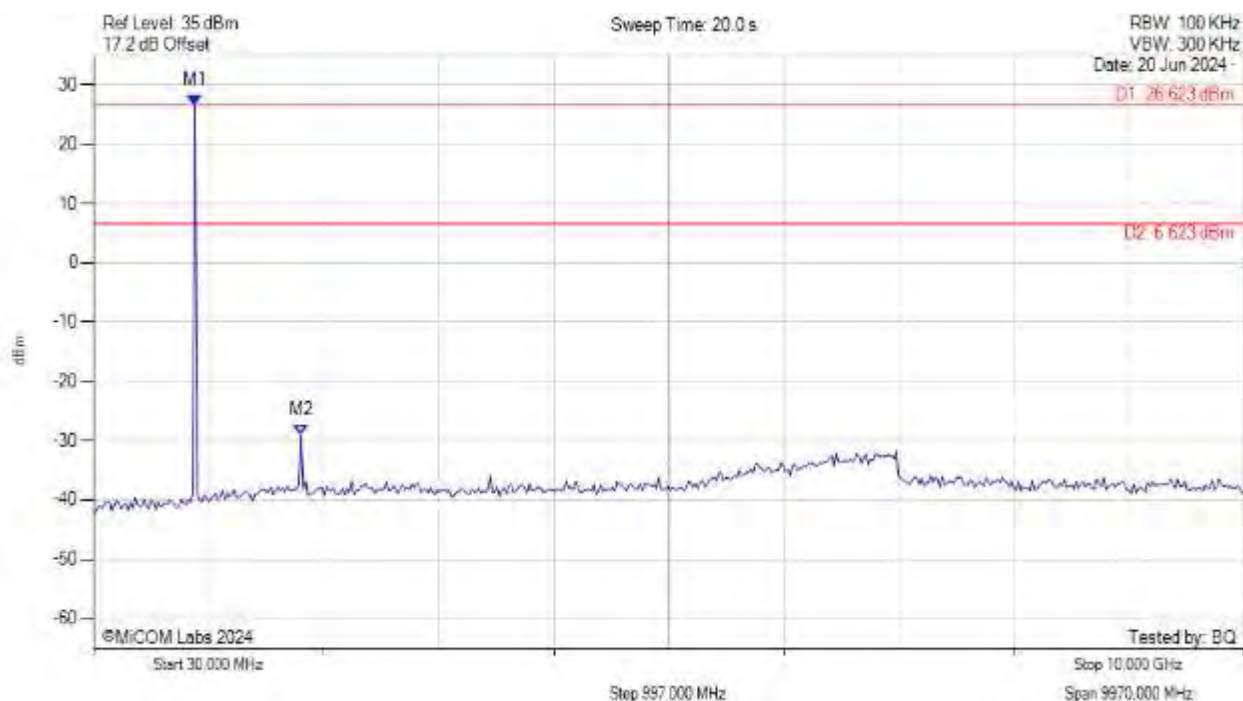
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : 26.572 dBm M2 : 1808.216 MHz : -28.756 dBm	Limit: 6.57 dBm Margin: -35.33 dB

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UNWANTED EMISSIONS PEAK



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



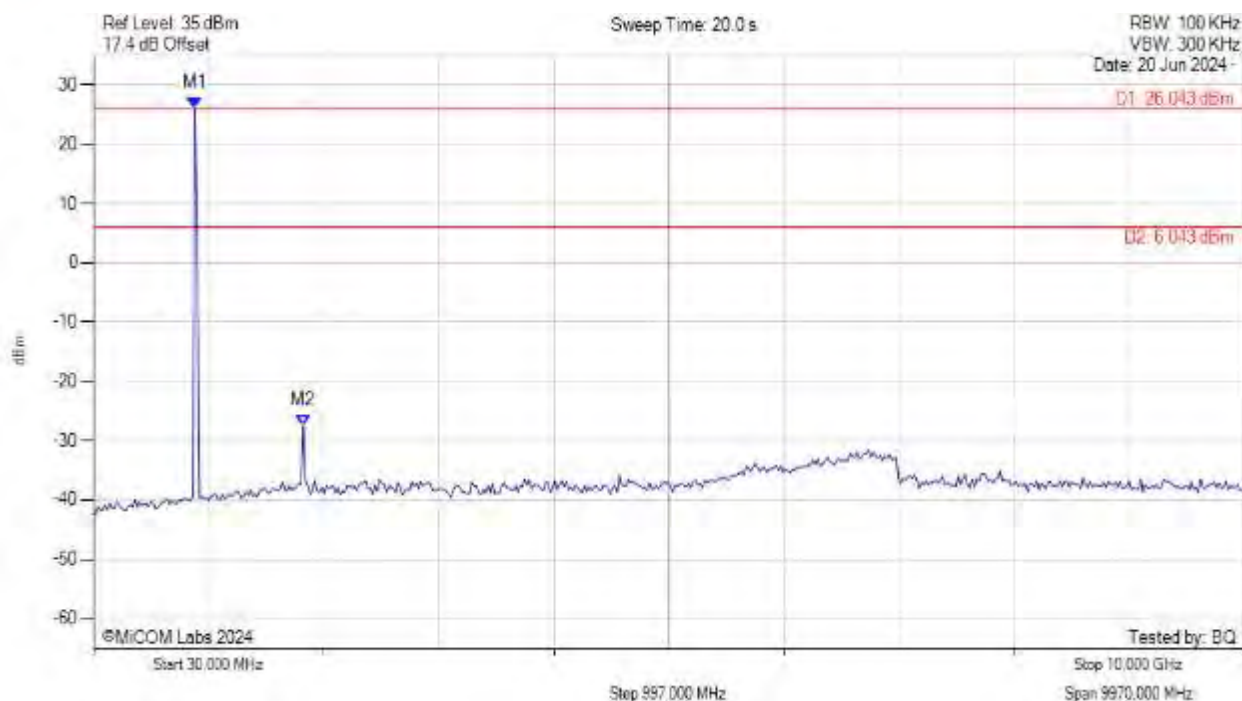
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : 26.623 dBm M2 : 1828.196 MHz : -28.986 dBm	Limit: 6.62 dBm Margin: -35.61 dB

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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

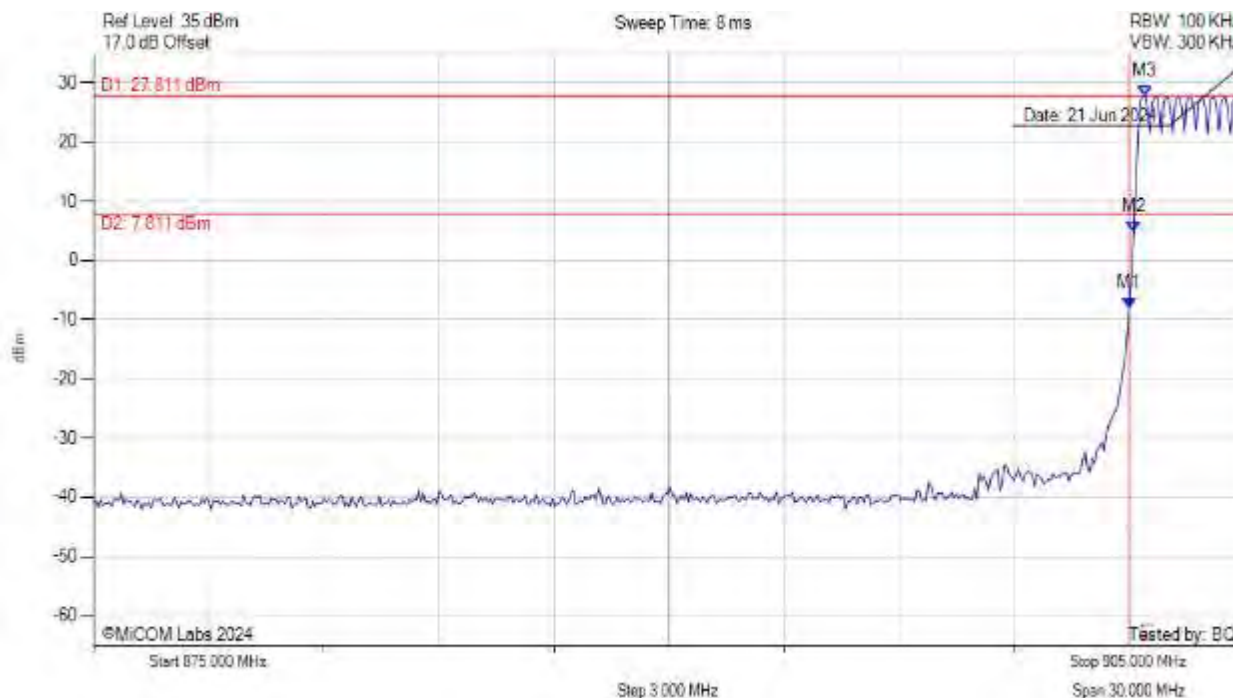
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1.4.1.2. Conducted Band-Edge Emissions

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



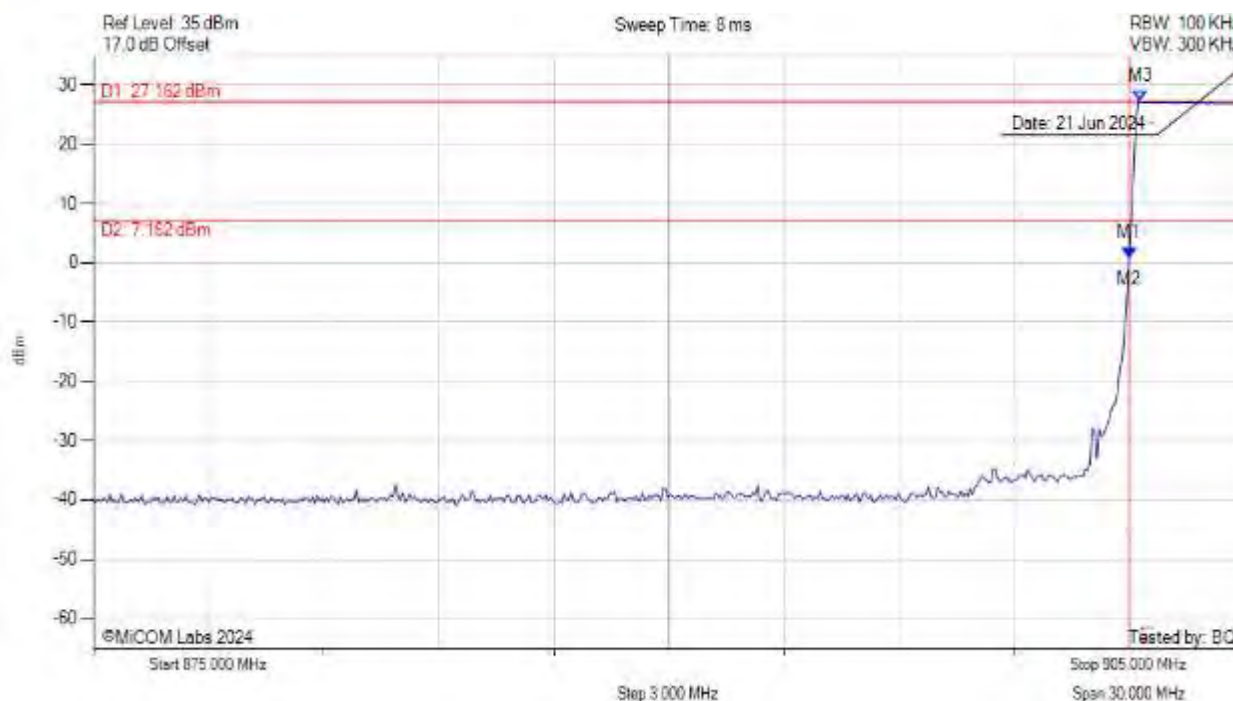
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -7.957 dBm M2 : 902.114 MHz : 4.752 dBm M3 : 902.415 MHz : 27.811 dBm	Channel Frequency: 902.30 MHz

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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



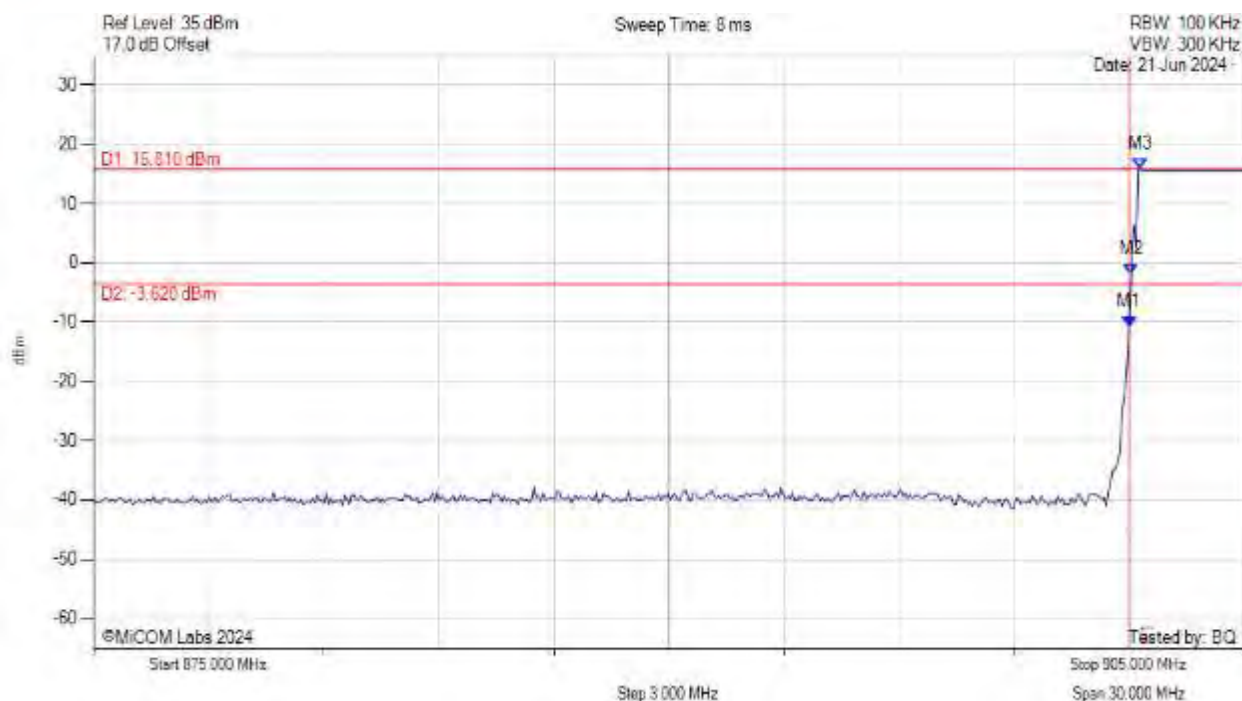
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : 0.809 dBm M2 : 901.994 MHz : 0.809 dBm M3 : 902.295 MHz : 27.162 dBm	Channel Frequency: 902.20 MHz

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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



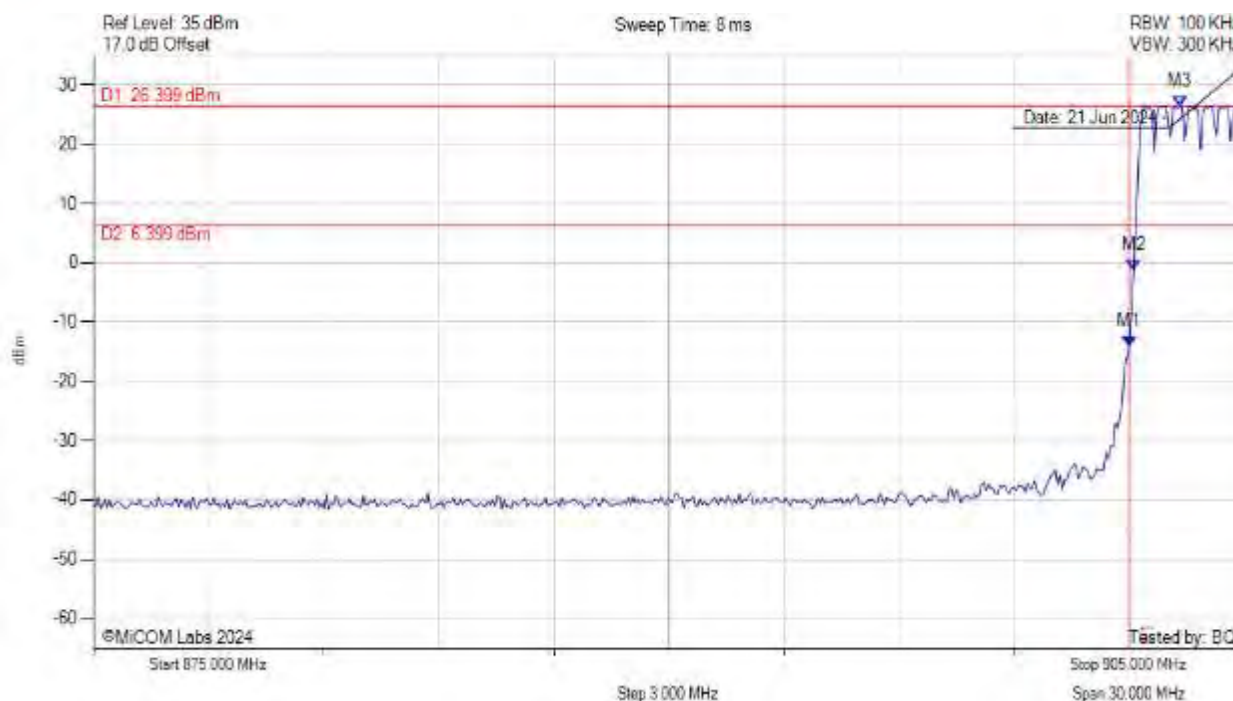
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -10.801 dBm M2 : 902.054 MHz : -1.888 dBm M3 : 902.295 MHz : 15.810 dBm	Channel Frequency: 902.40 MHz

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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



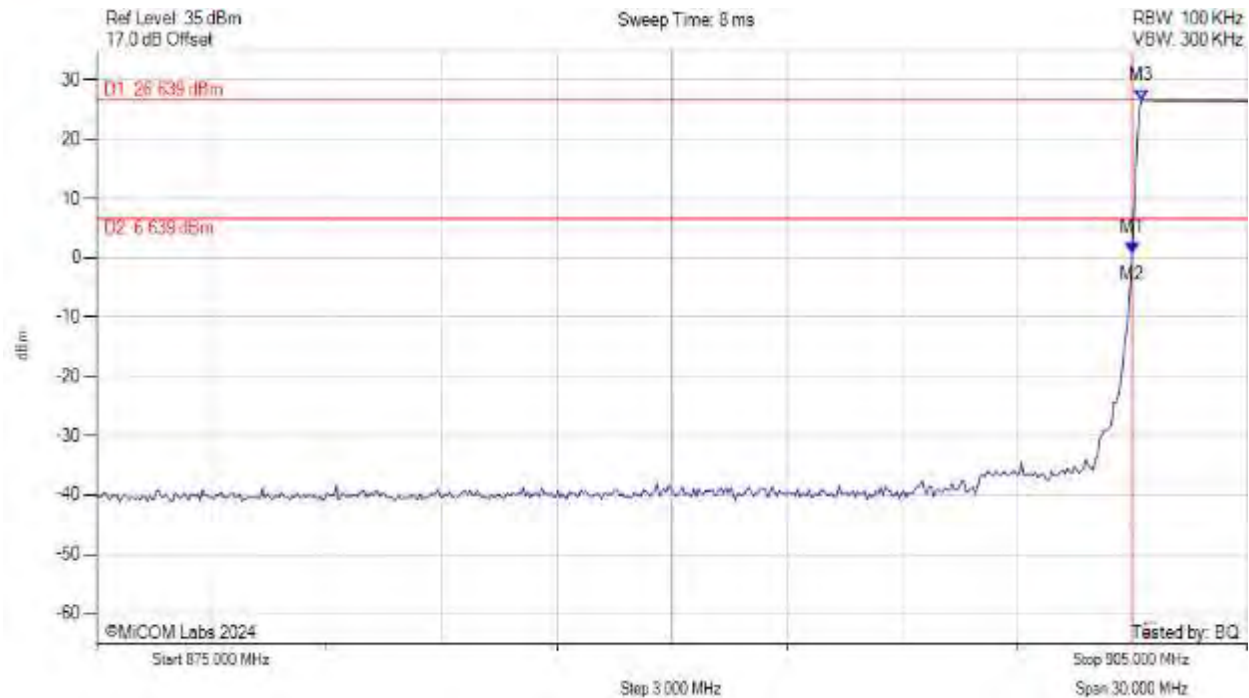
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -14.135 dBm M2 : 902.114 MHz : -1.174 dBm M3 : 903.317 MHz : 26.399 dBm	Channel Frequency: 902.40 MHz

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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



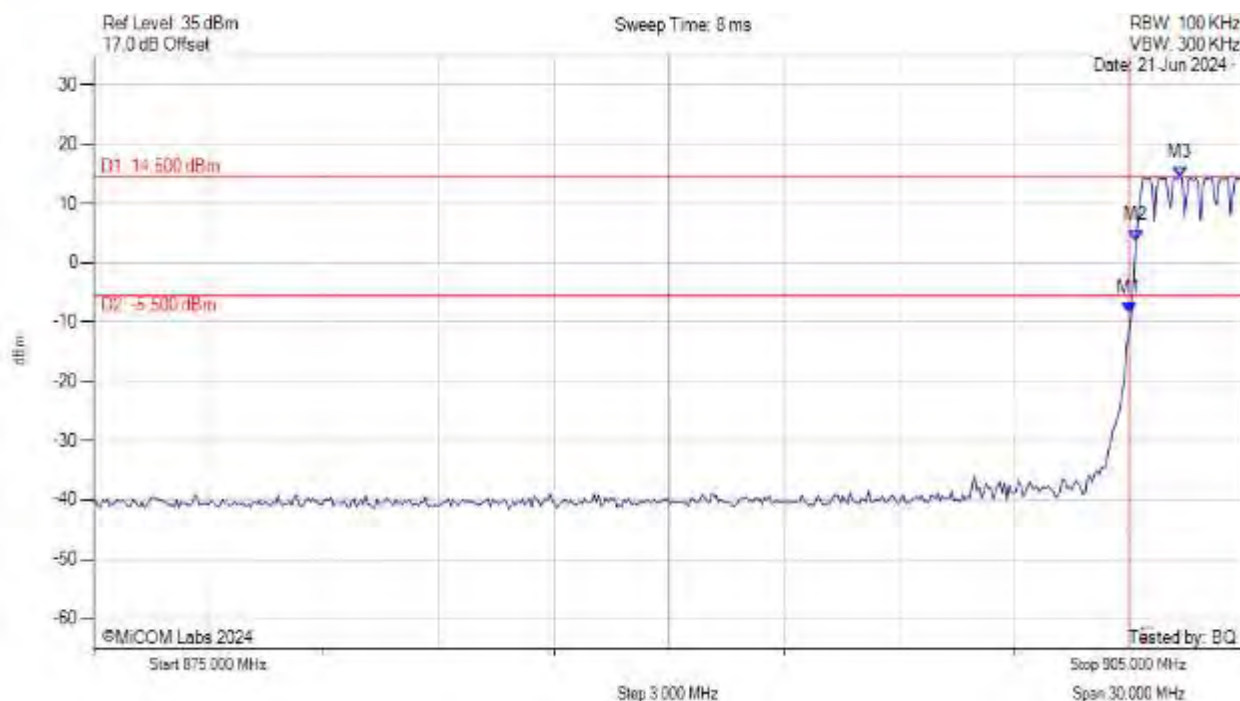
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : 0.748 dBm M2 : 901.994 MHz : 0.748 dBm M3 : 902.234 MHz : 26.639 dBm	Channel Frequency: 902.20 MHz

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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



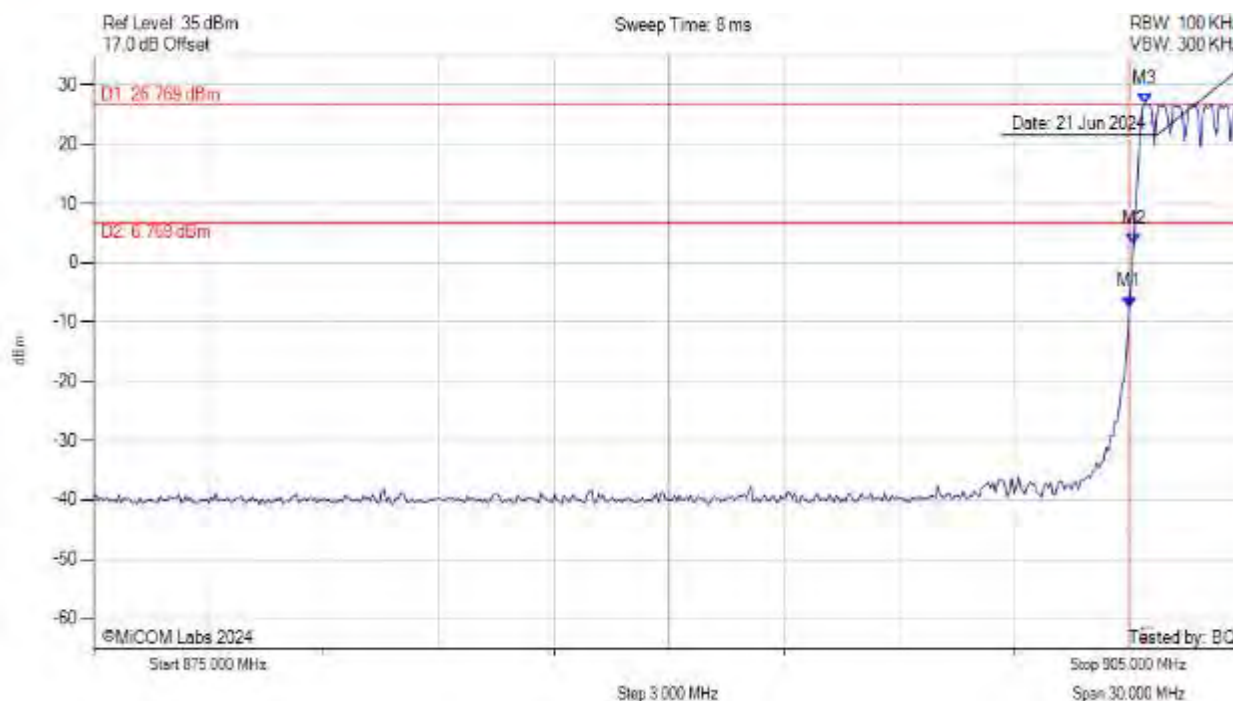
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -8.539 dBm M2 : 902.174 MHz : 3.784 dBm M3 : 903.317 MHz : 14.500 dBm	Channel Frequency: 902.40 MHz

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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



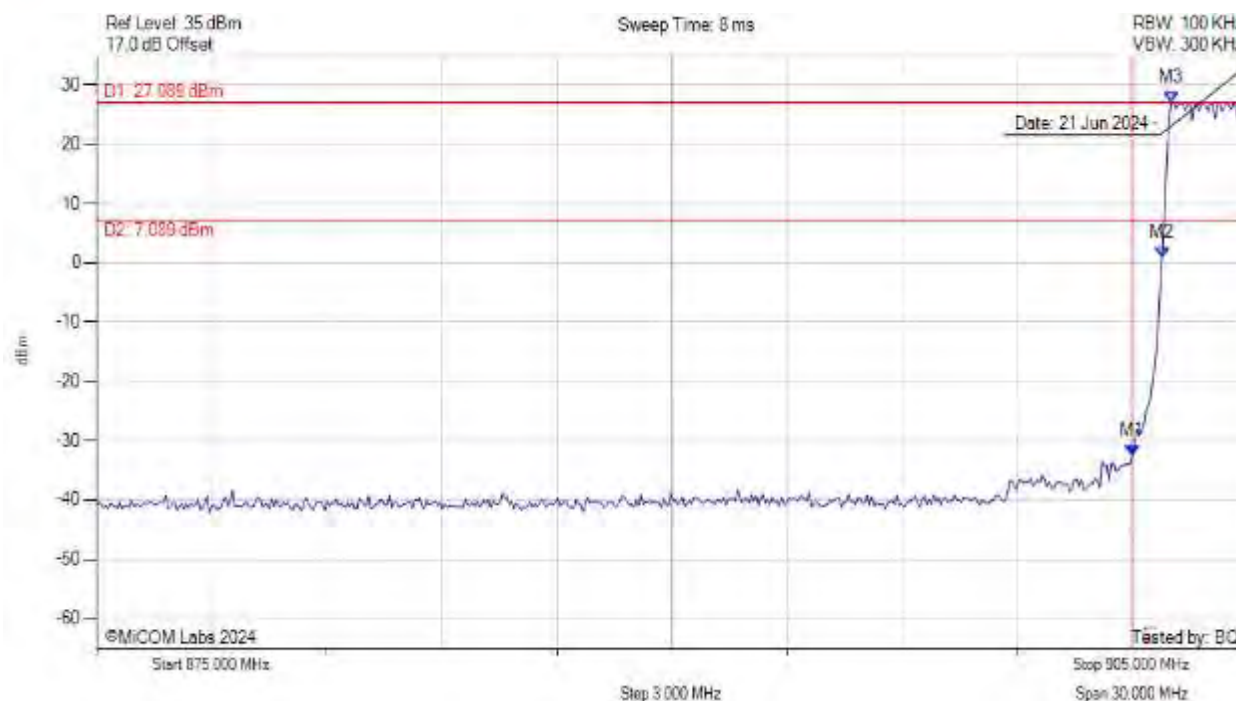
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -7.434 dBm M2 : 902.114 MHz : 3.243 dBm M3 : 902.415 MHz : 26.769 dBm	Channel Frequency: 902.40 MHz

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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



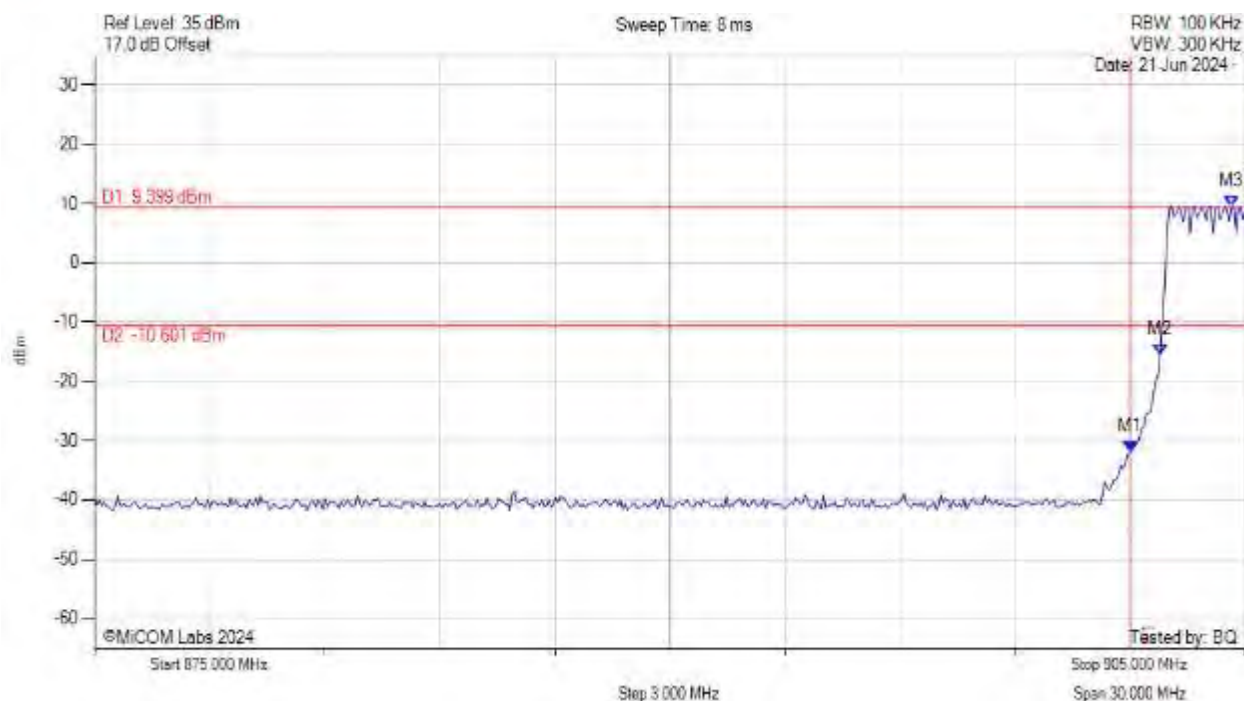
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -32.669 dBm M2 : 902.776 MHz : 0.888 dBm M3 : 903.016 MHz : 27.089 dBm	Channel Frequency: 903.00 MHz

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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



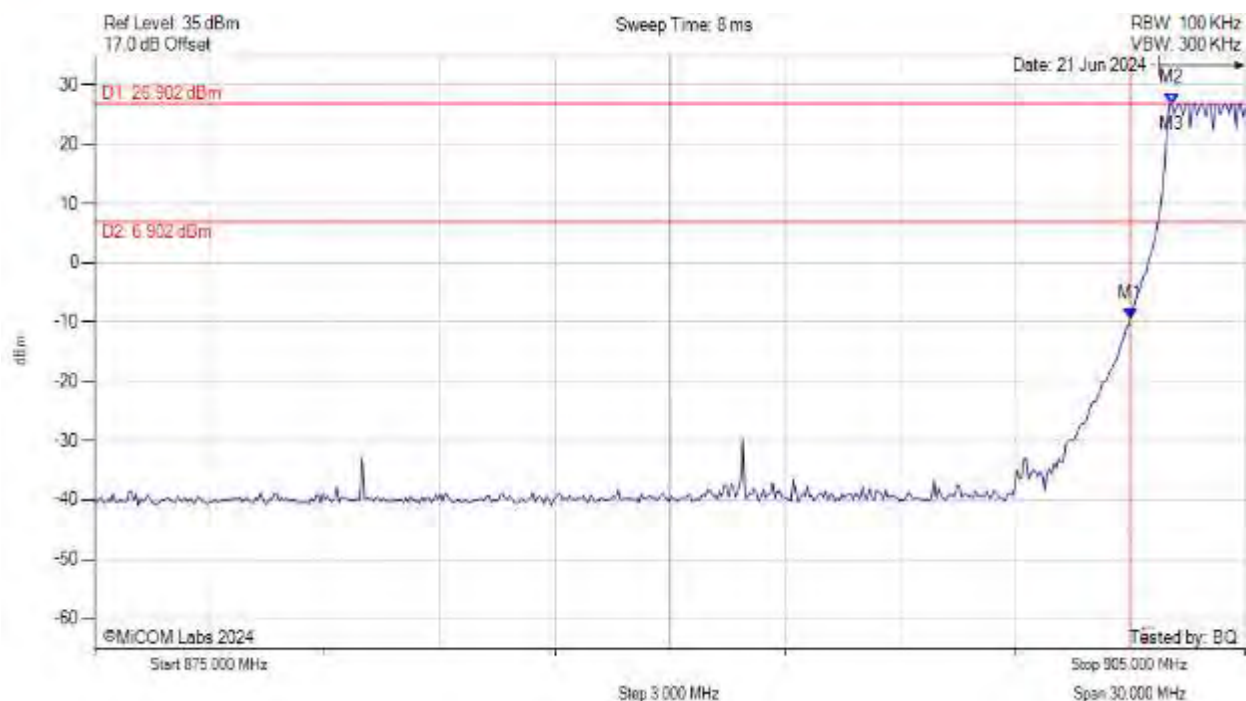
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -31.835 dBm M2 : 902.776 MHz : -15.443 dBm M3 : 904.639 MHz : 9.399 dBm	Channel Frequency: 903.00 MHz

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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



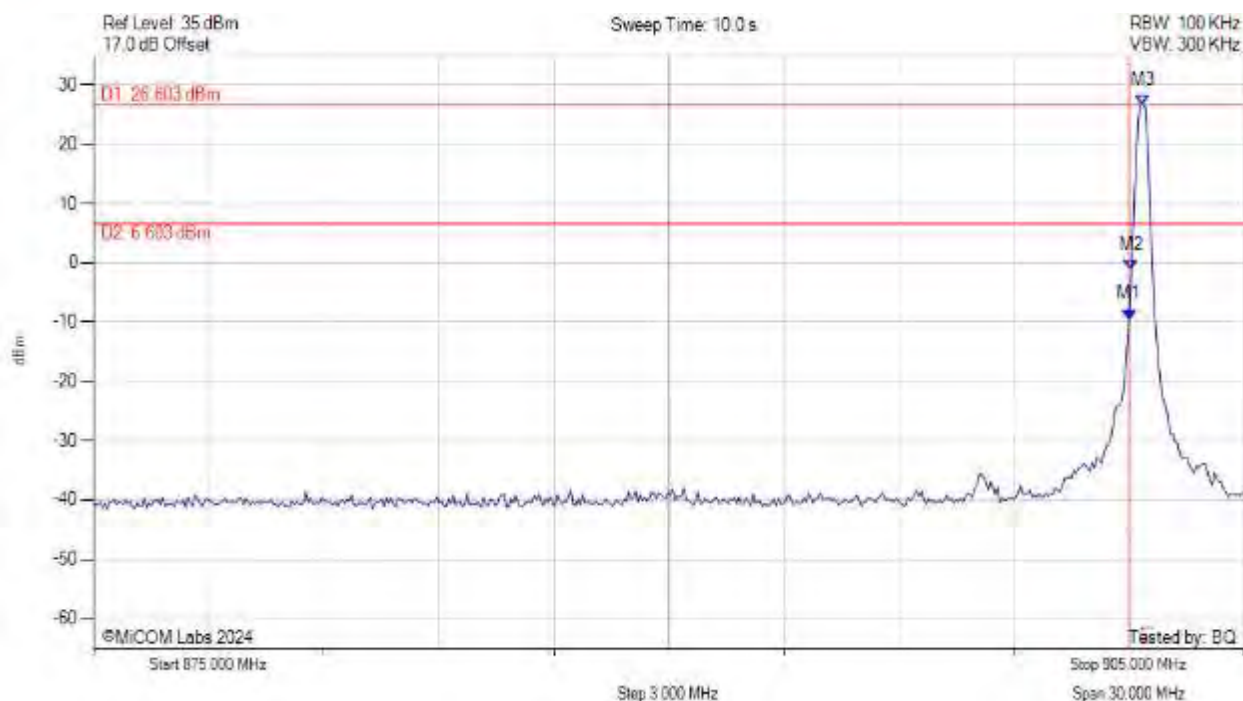
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -9.421 dBm M2 : 903.076 MHz : 26.902 dBm M3 : 903.076 MHz : 26.902 dBm	Channel Frequency: 903.00 MHz

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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



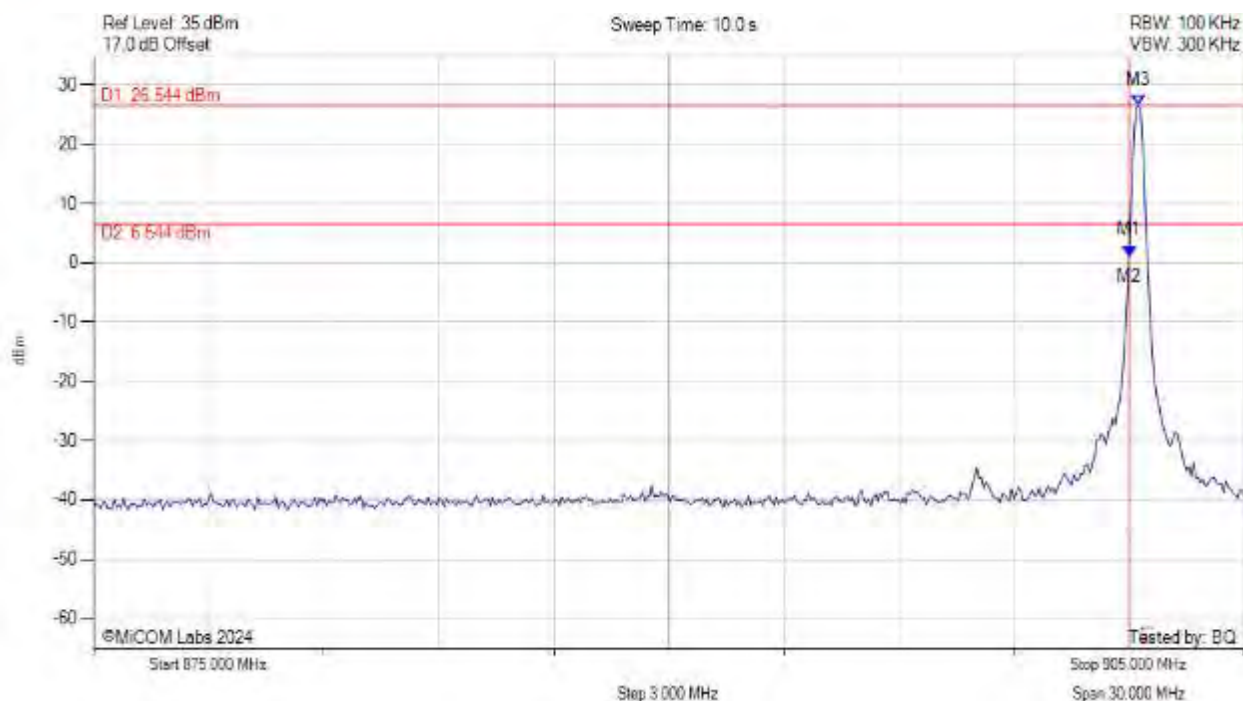
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -9.537 dBm M2 : 902.054 MHz : -1.327 dBm M3 : 902.355 MHz : 26.603 dBm	Channel Frequency: 902.30 MHz

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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



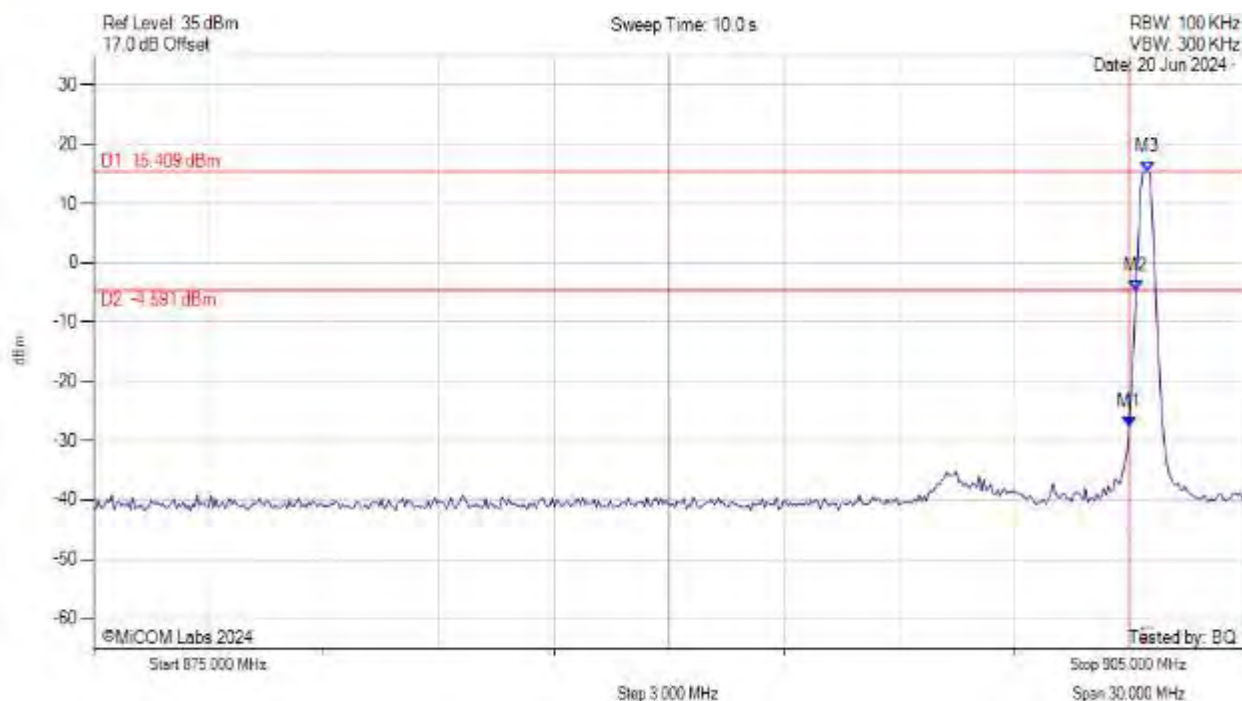
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : 1.189 dBm M2 : 901.994 MHz : 1.189 dBm M3 : 902.234 MHz : 26.544 dBm	Channel Frequency: 902.20 MHz

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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



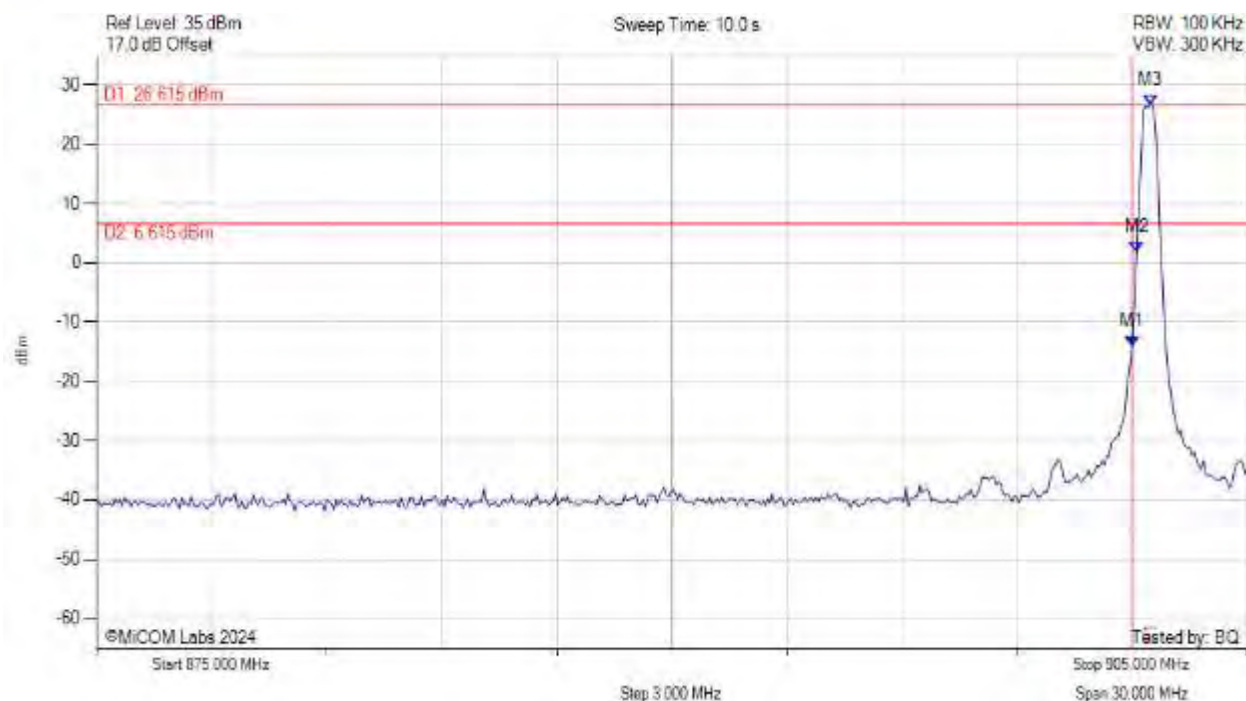
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -27.623 dBm M2 : 902.174 MHz : -4.662 dBm M3 : 902.475 MHz : 15.409 dBm	Channel Frequency: 902.40 MHz

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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



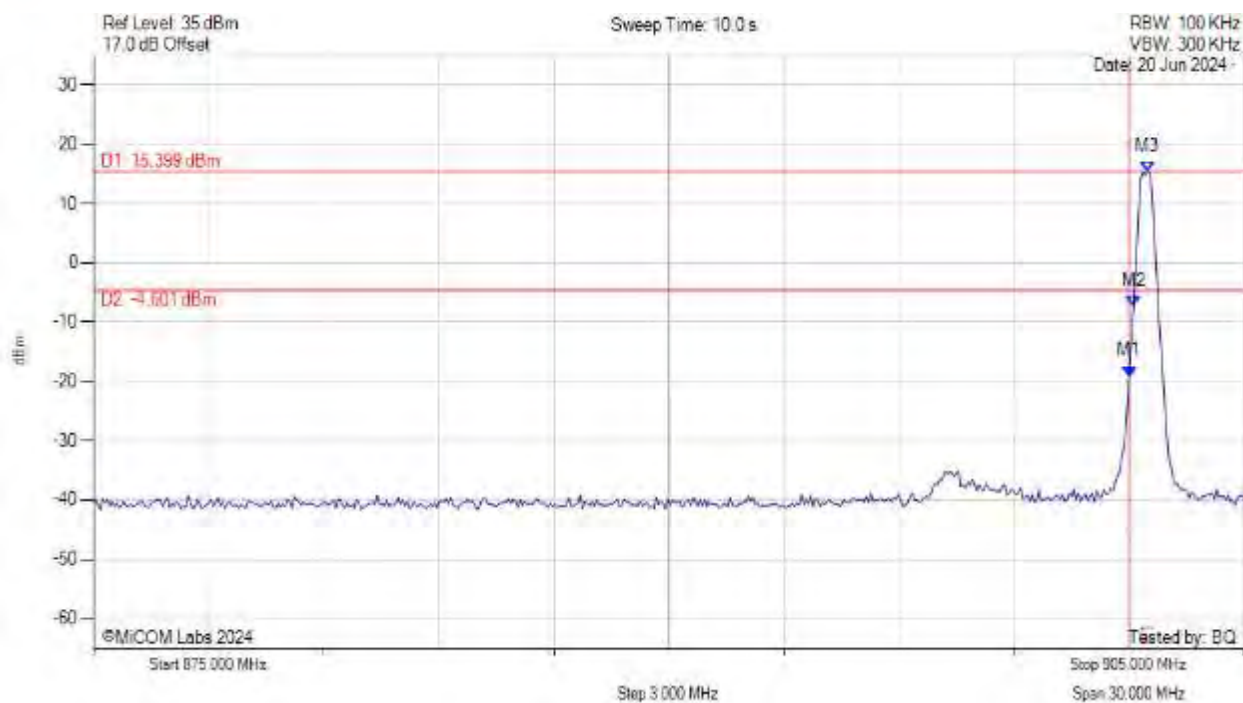
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -14.186 dBm M2 : 902.114 MHz : 1.824 dBm M3 : 902.475 MHz : 26.615 dBm	Channel Frequency: 902.40 MHz

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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



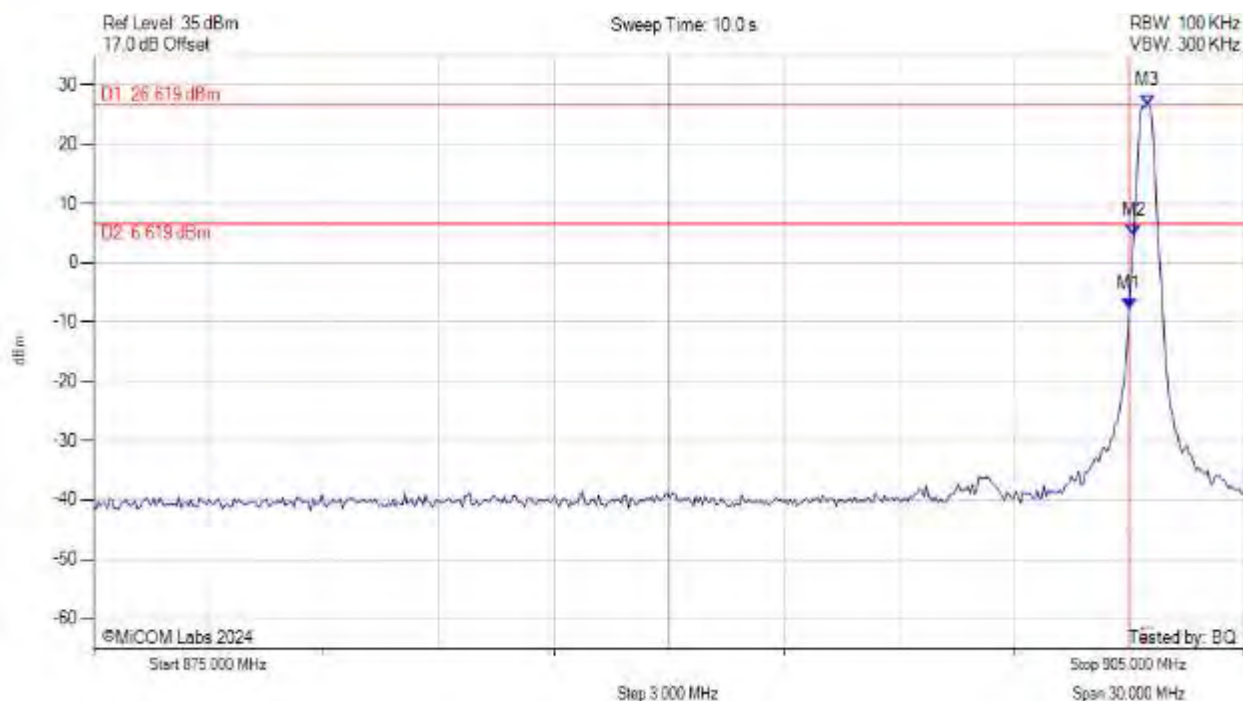
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -19.140 dBm M2 : 902.114 MHz : -7.339 dBm M3 : 902.475 MHz : 15.399 dBm	Channel Frequency: 902.40 MHz

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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



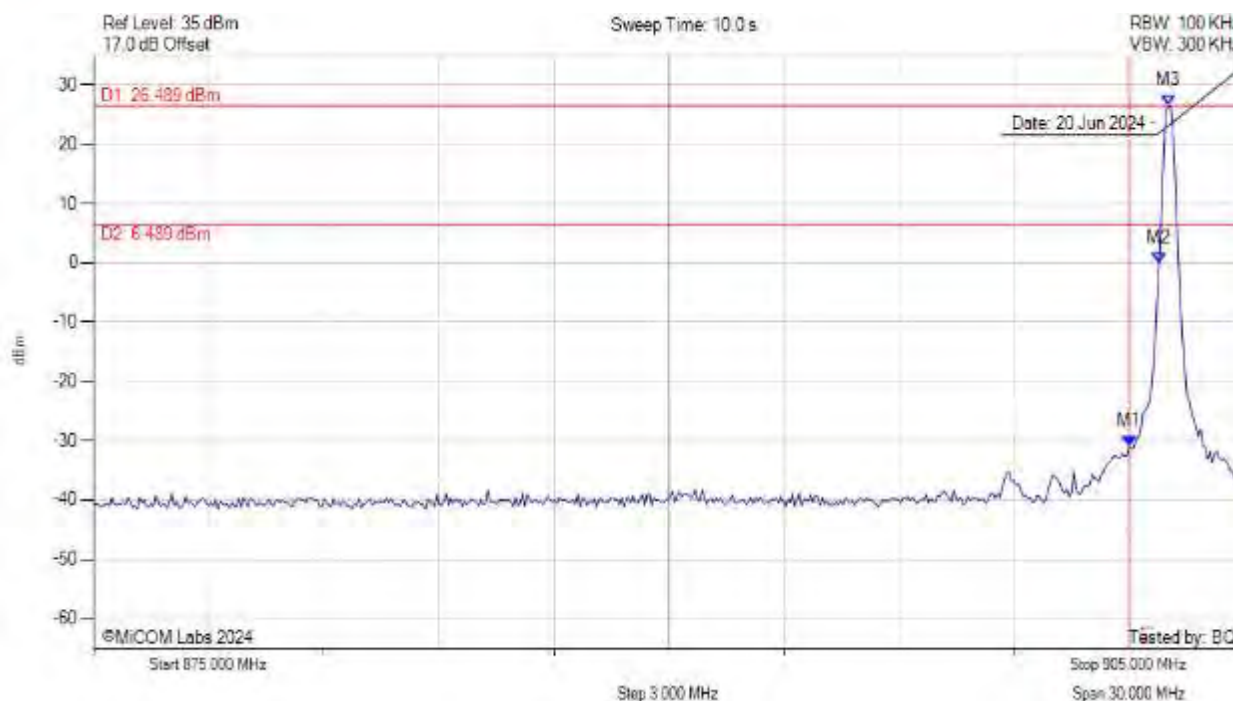
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -7.802 dBm M2 : 902.114 MHz : 4.500 dBm M3 : 902.475 MHz : 26.619 dBm	Channel Frequency: 902.40 MHz

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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



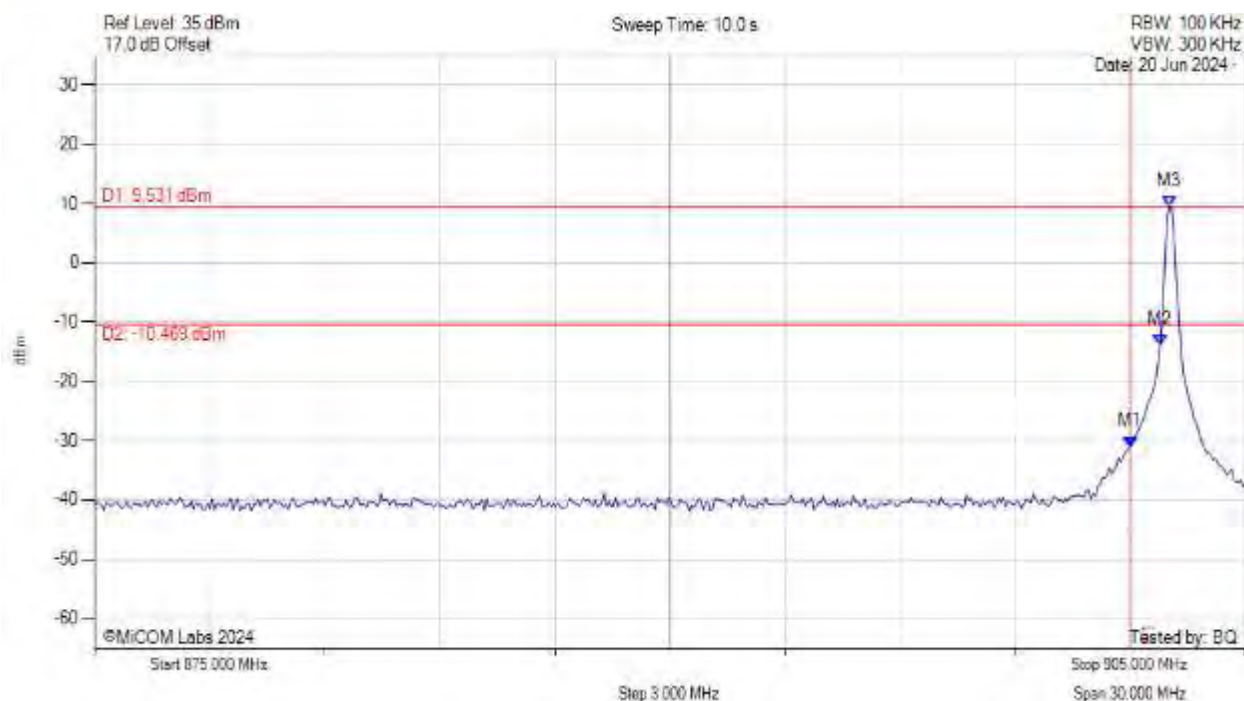
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -30.887 dBm M2 : 902.776 MHz : -0.149 dBm M3 : 903.016 MHz : 26.489 dBm	Channel Frequency: 903.00 MHz

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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



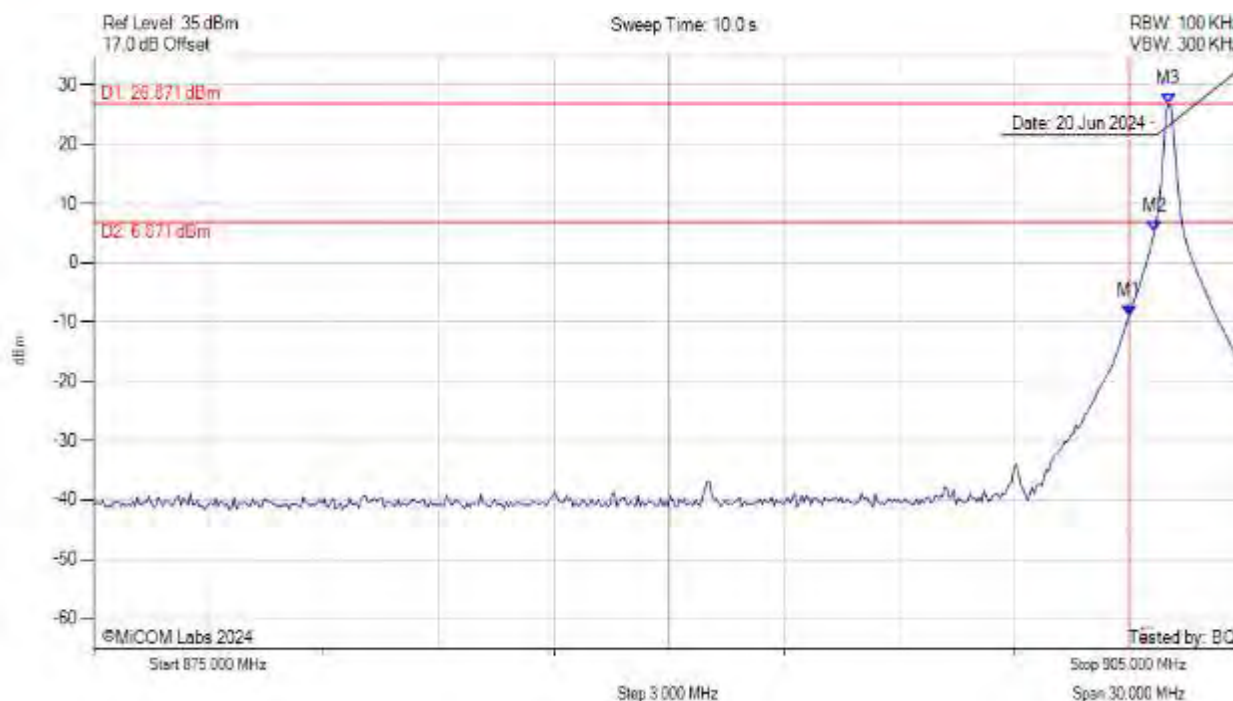
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -31.040 dBm M2 : 902.776 MHz : -13.969 dBm M3 : 903.016 MHz : 9.531 dBm	Channel Frequency: 903.00 MHz

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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



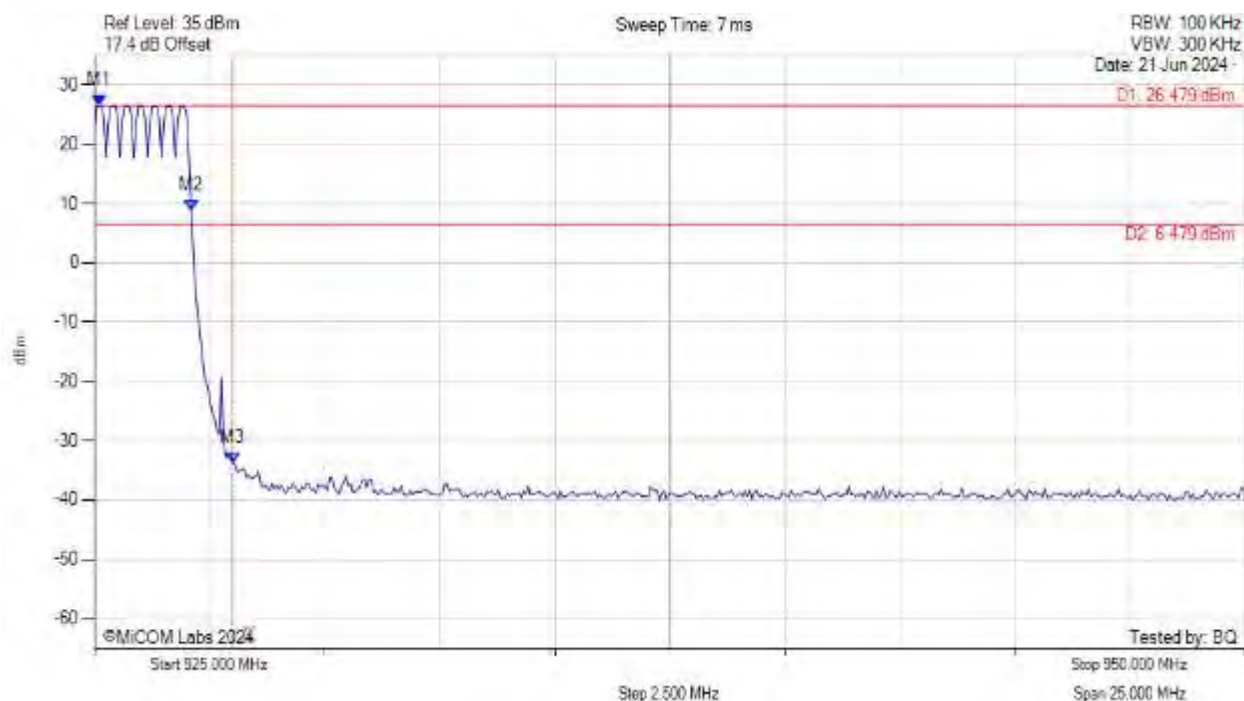
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -9.027 dBm M2 : 902.655 MHz : 5.322 dBm M3 : 903.016 MHz : 26.871 dBm	Channel Frequency: 903.00 MHz

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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



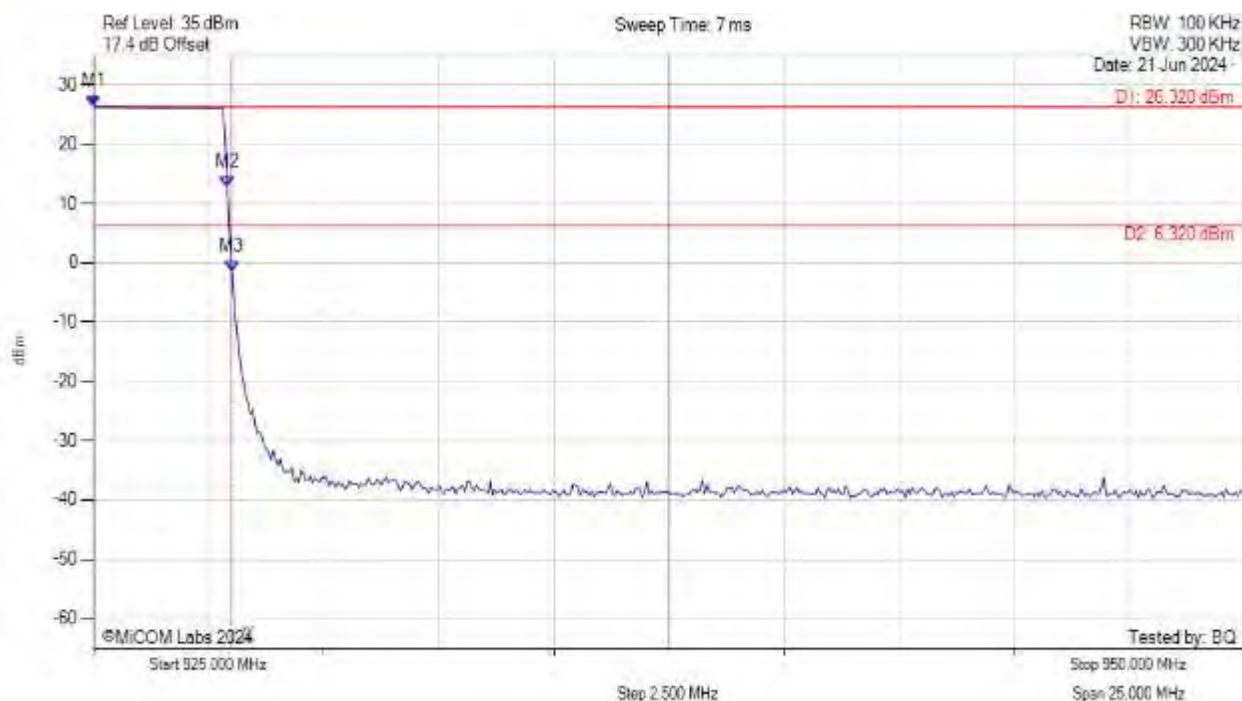
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.100 MHz : 26.479 dBm M2 : 927.104 MHz : 8.755 dBm M3 : 928.000 MHz : -33.757 dBm	Channel Frequency: 926.90 MHz

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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



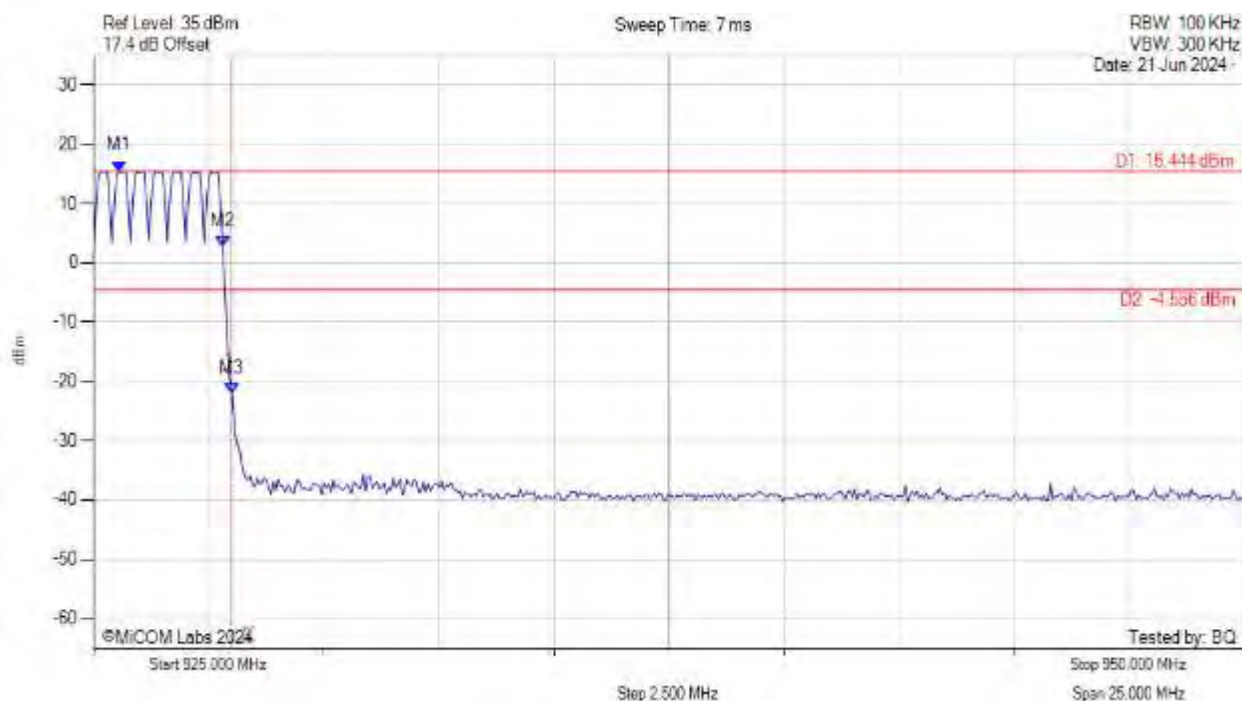
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.000 MHz : 26.320 dBm M2 : 927.906 MHz : 12.757 dBm M3 : 928.000 MHz : -1.583 dBm	Channel Frequency: 927.75 MHz

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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



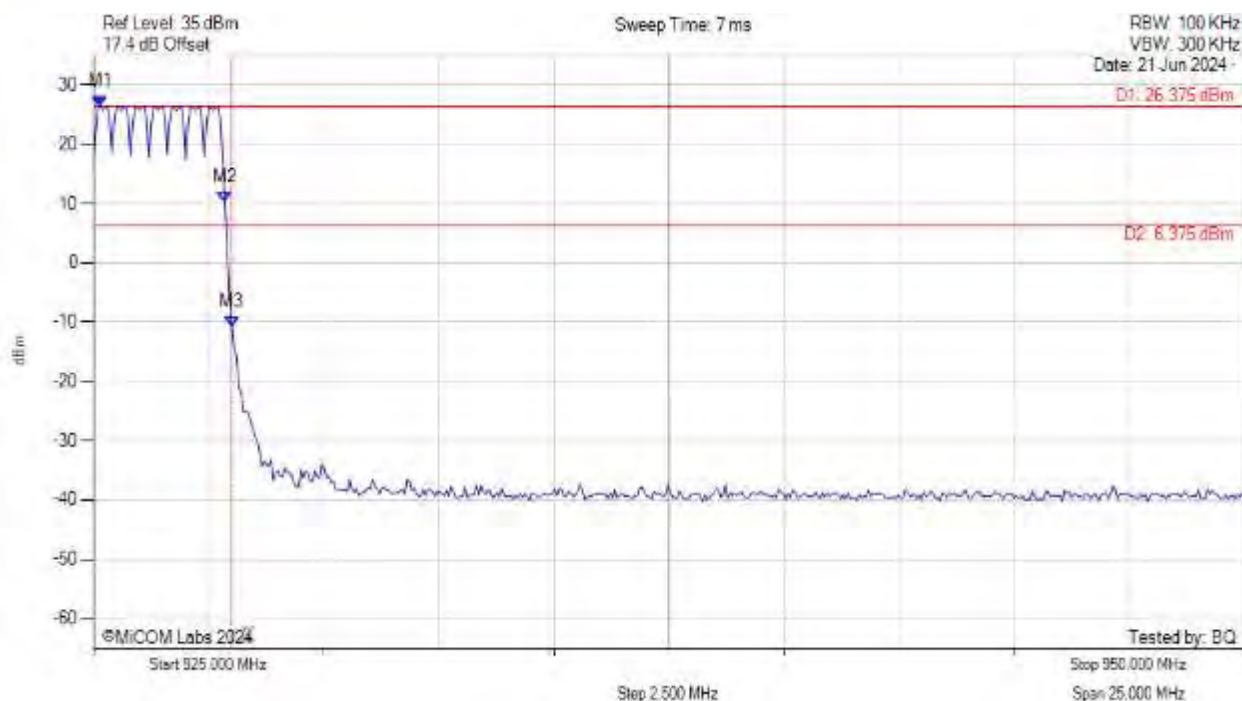
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.551 MHz : 15.444 dBm M2 : 927.806 MHz : 2.806 dBm M3 : 928.000 MHz : -21.969 dBm	Channel Frequency: 927.60 MHz

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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



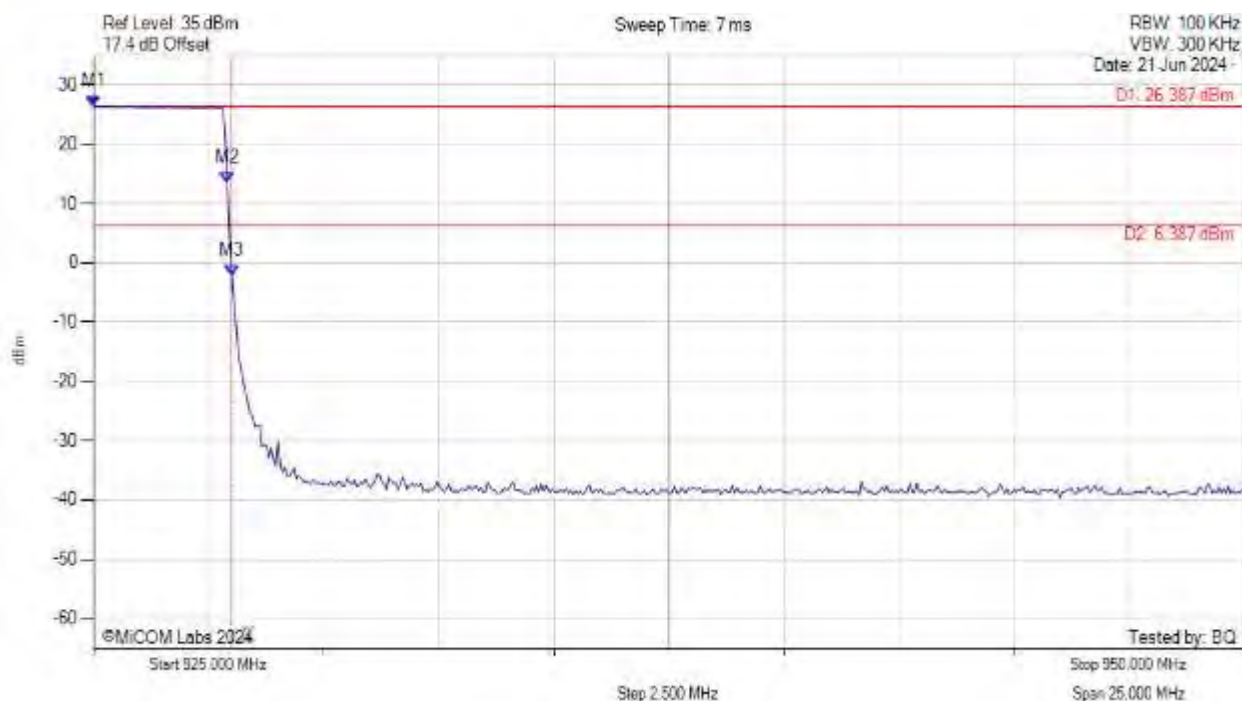
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.150 MHz : 26.375 dBm M2 : 927.856 MHz : 10.298 dBm M3 : 928.000 MHz : -10.824 dBm	Channel Frequency: 927.60 MHz

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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



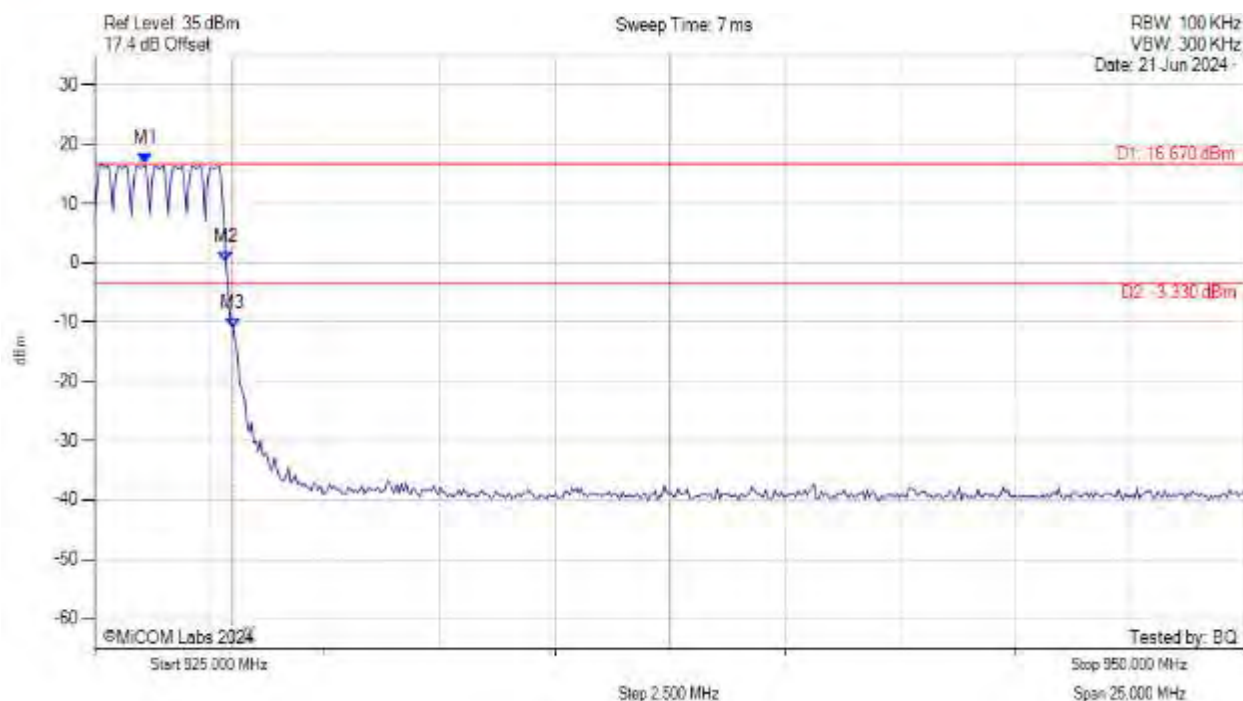
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.000 MHz : 26.387 dBm M2 : 927.906 MHz : 13.509 dBm M3 : 928.000 MHz : -2.222 dBm	Channel Frequency: 927.75 MHz

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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



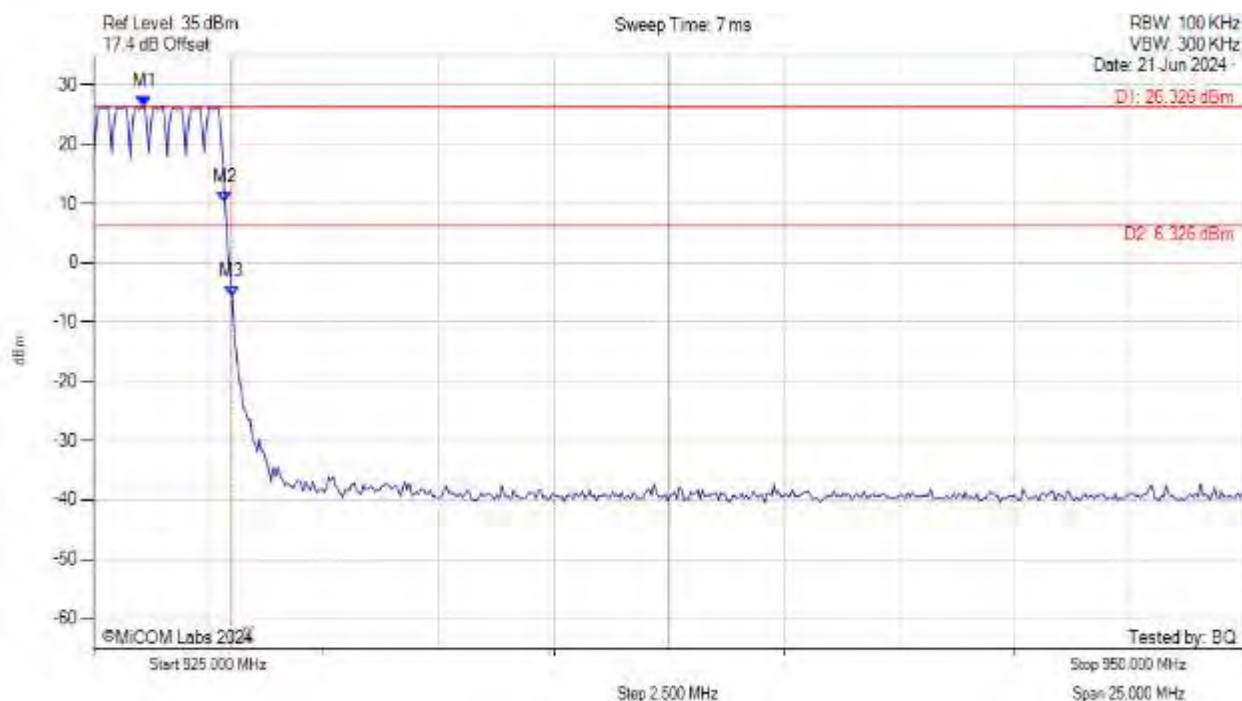
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 926.102 MHz : 16.670 dBm M2 : 927.906 MHz : 0.191 dBm M3 : 928.000 MHz : -10.990 dBm	Channel Frequency: 927.60 MHz

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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



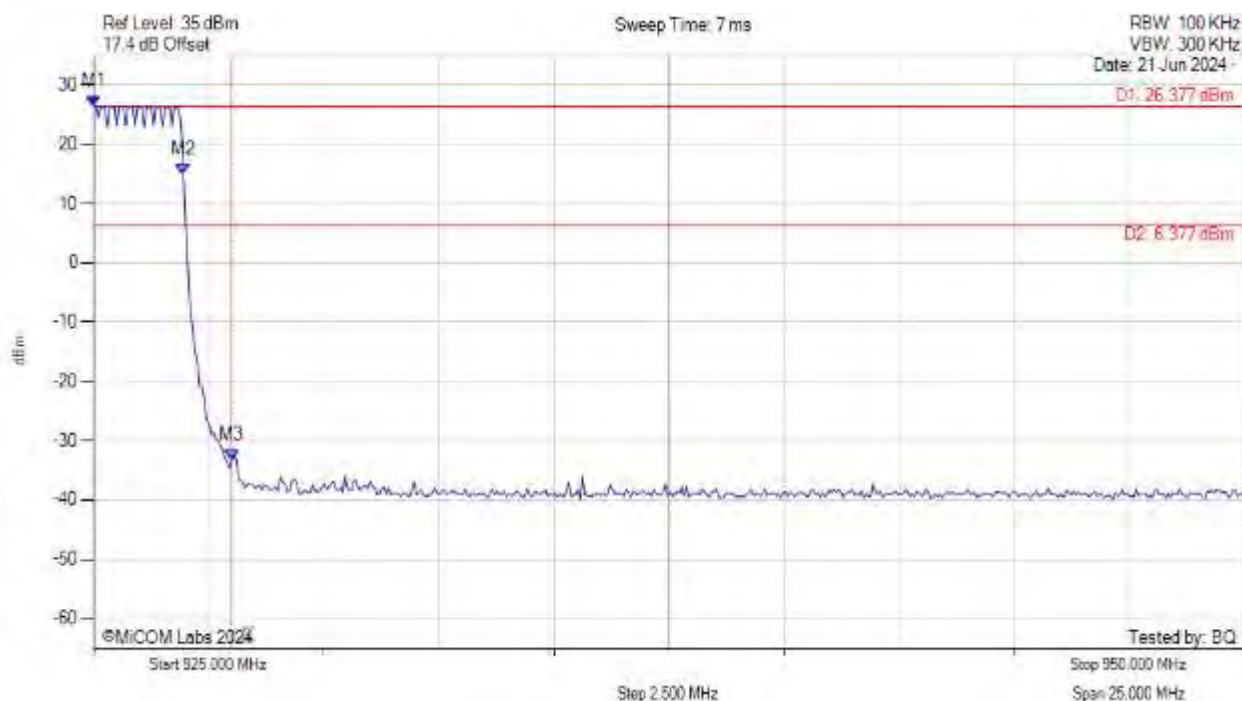
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 926.102 MHz : 26.326 dBm M2 : 927.856 MHz : 10.290 dBm M3 : 928.000 MHz : -5.673 dBm	Channel Frequency: 927.60 MHz

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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



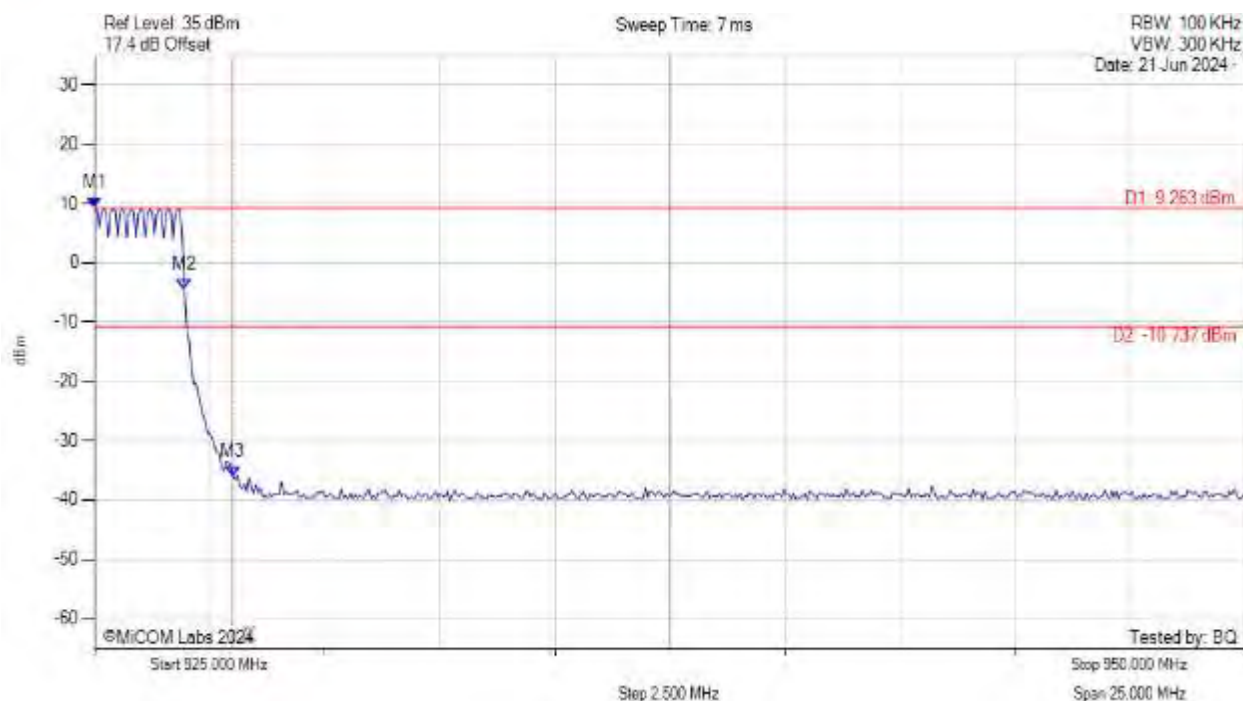
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.000 MHz : 26.377 dBm M2 : 926.954 MHz : 14.774 dBm M3 : 928.000 MHz : -33.183 dBm	Channel Frequency: 926.80 MHz

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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



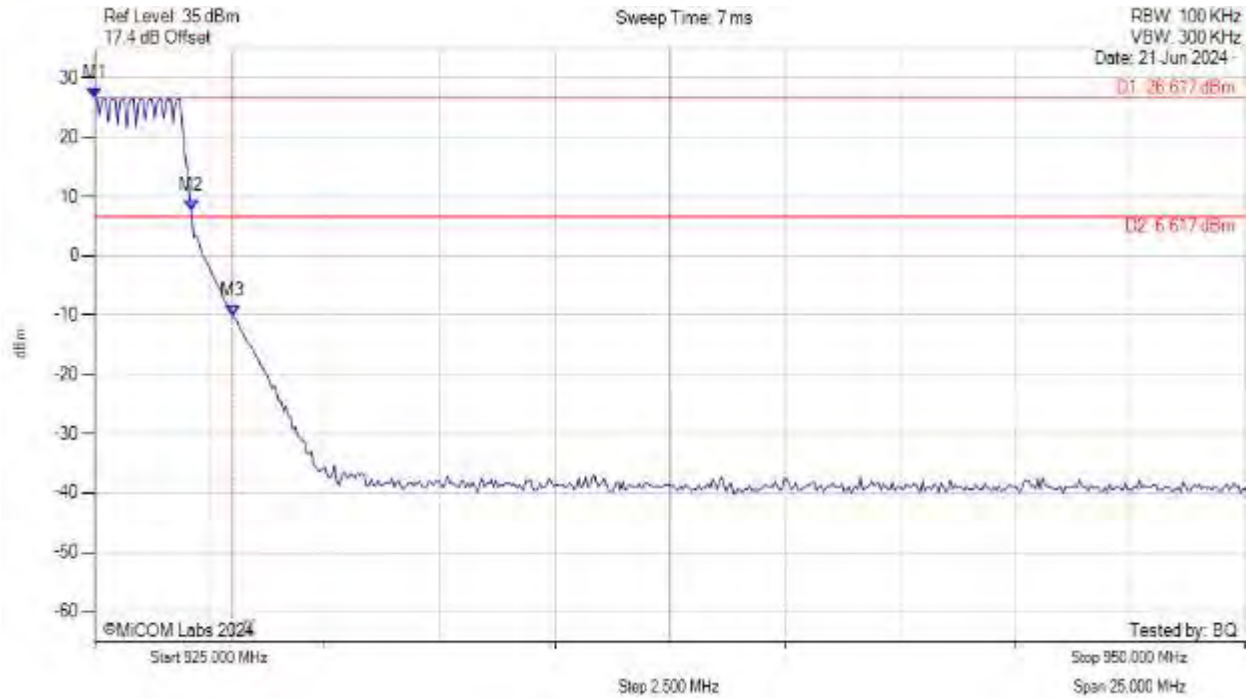
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.000 MHz : 9.263 dBm M2 : 926.954 MHz : -4.451 dBm M3 : 928.000 MHz : -35.996 dBm	Channel Frequency: 926.80 MHz

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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



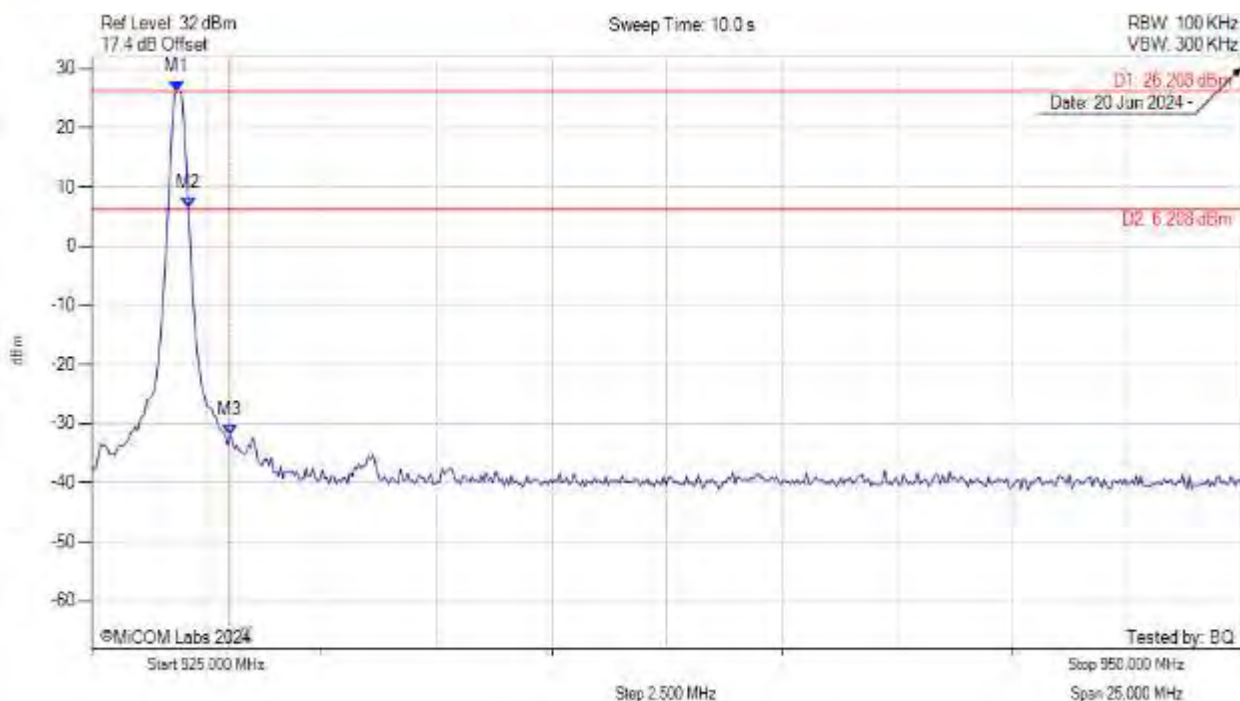
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.000 MHz : 26.617 dBm M2 : 927.104 MHz : 7.577 dBm M3 : 928.000 MHz : -10.104 dBm	Channel Frequency: 926.80 MHz

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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



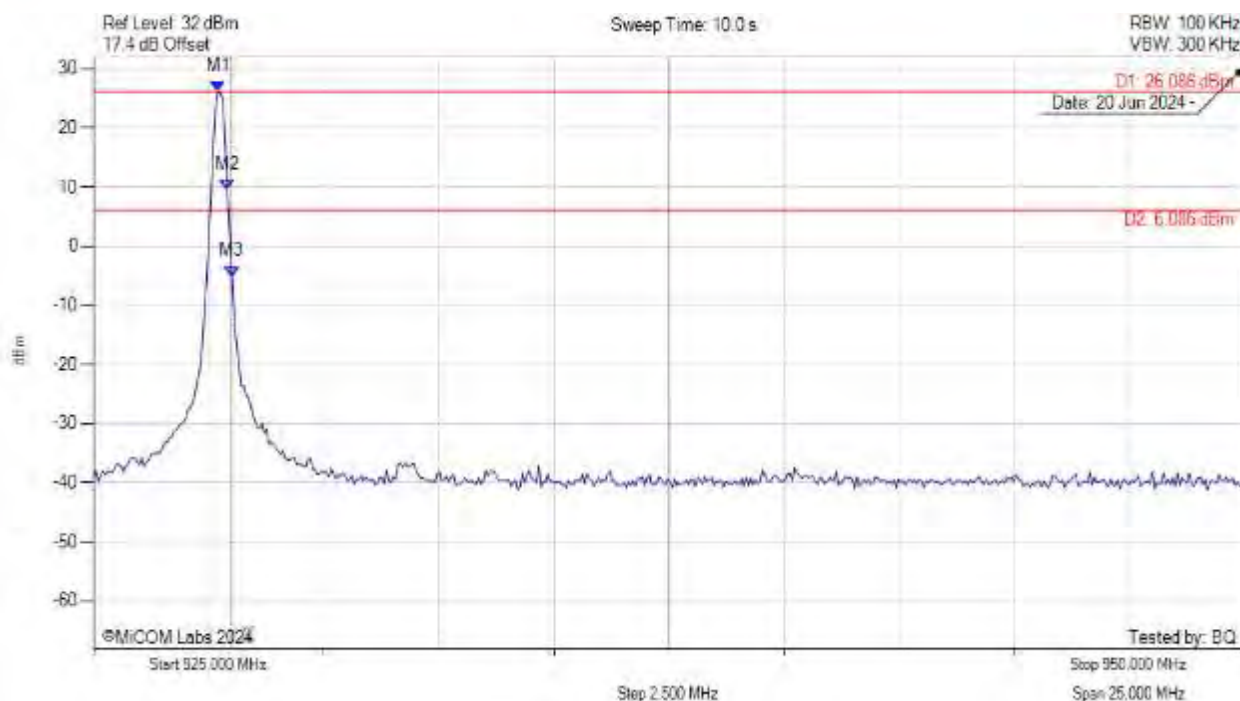
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 926.854 MHz : 26.208 dBm M2 : 927.104 MHz : 6.458 dBm M3 : 928.000 MHz : -32.022 dBm	Channel Frequency: 926.90 MHz

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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



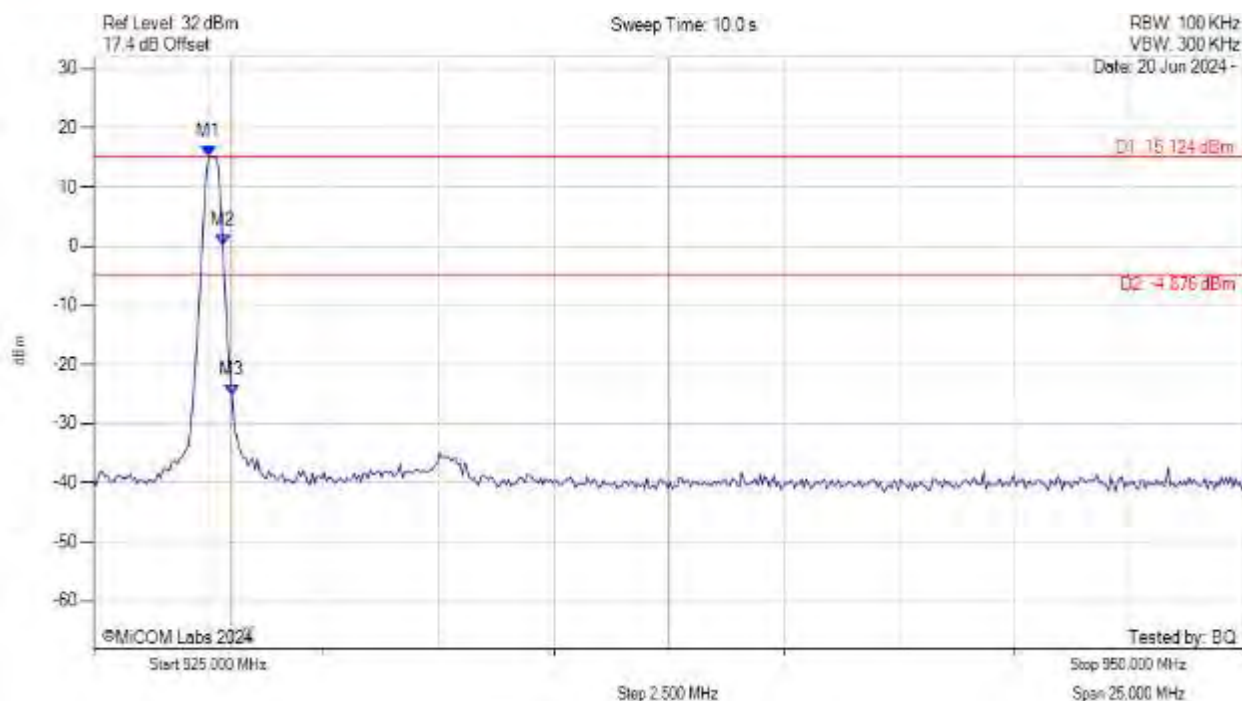
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.705 MHz : 26.086 dBm M2 : 927.906 MHz : 9.505 dBm M3 : 928.000 MHz : -5.144 dBm	Channel Frequency: 927.75 MHz

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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



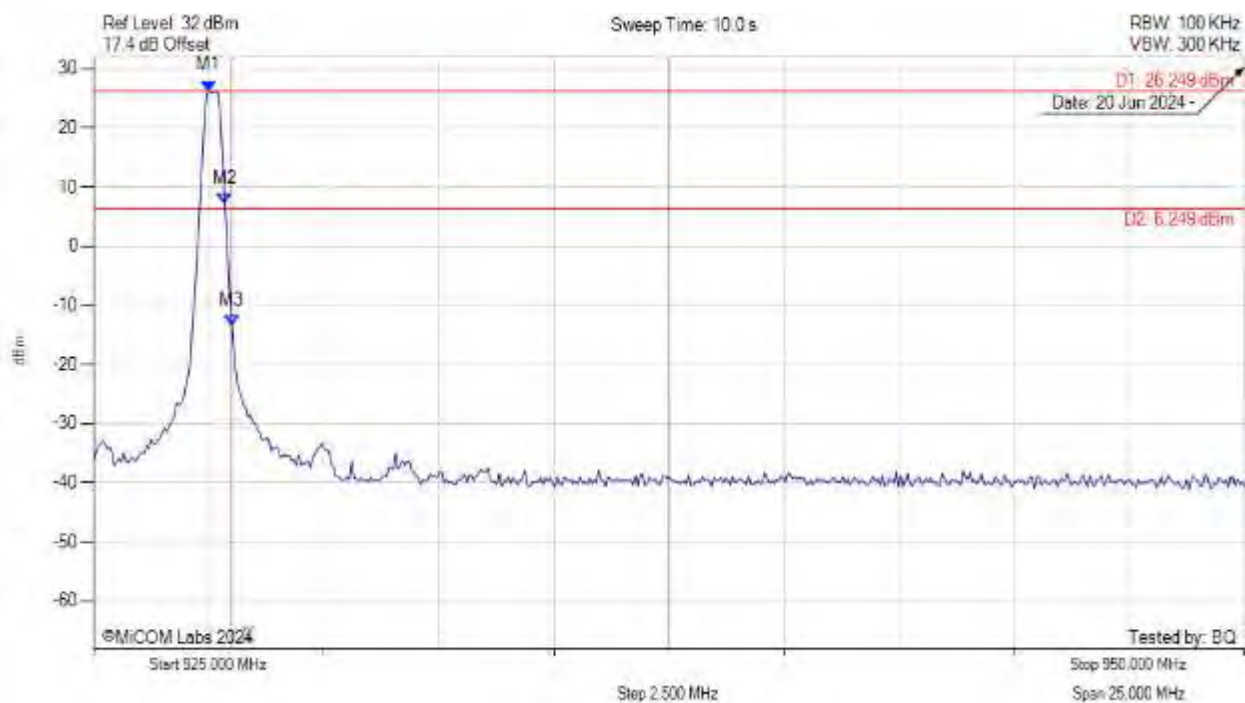
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.505 MHz : 15.124 dBm M2 : 927.806 MHz : 0.103 dBm M3 : 928.000 MHz : -25.254 dBm	Channel Frequency: 927.60 MHz

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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



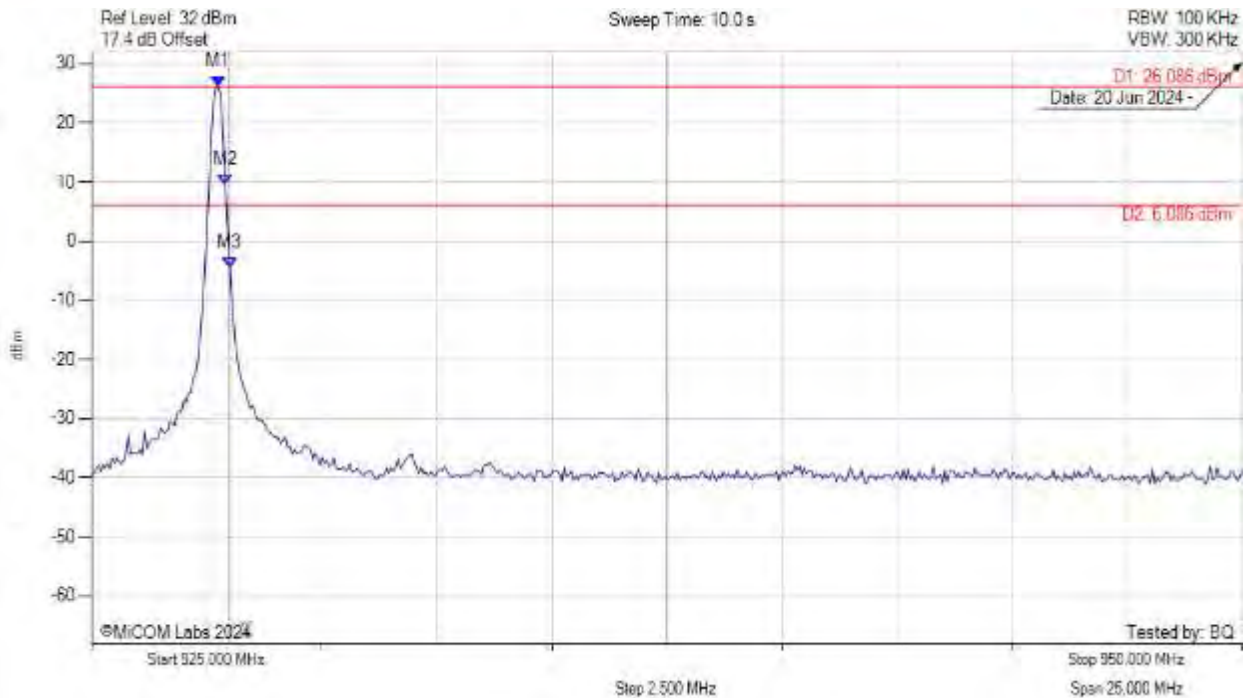
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.505 MHz : 26.249 dBm M2 : 927.856 MHz : 7.117 dBm M3 : 928.000 MHz : -13.403 dBm	Channel Frequency: 927.60 MHz

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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



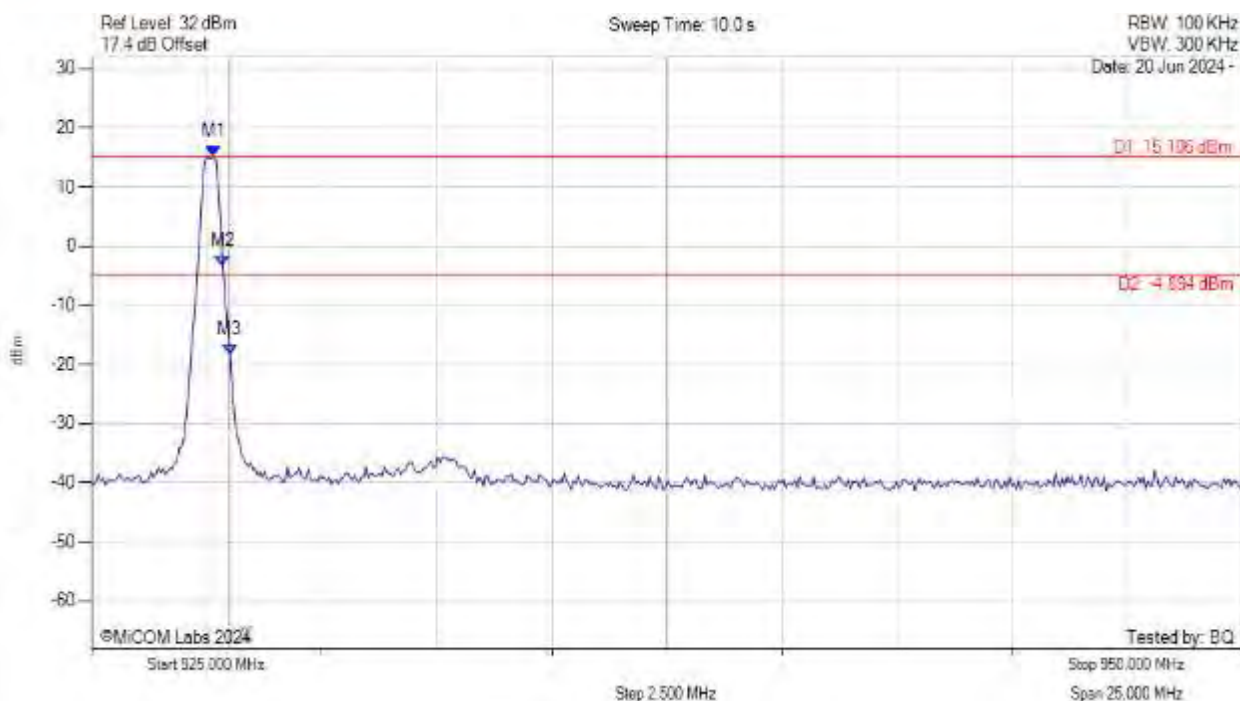
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.756 MHz : 26.086 dBm M2 : 927.906 MHz : 9.570 dBm M3 : 928.000 MHz : -4.595 dBm	Channel Frequency: 927.75 MHz

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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



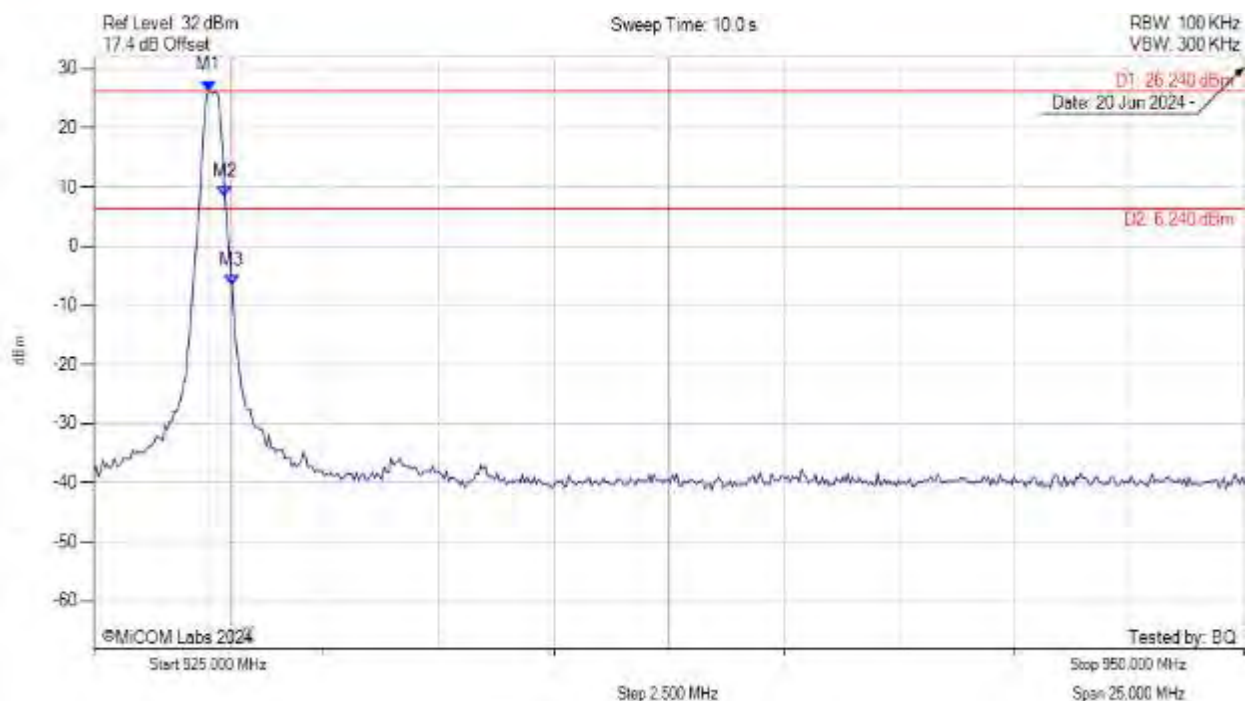
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.655 MHz : 15.106 dBm M2 : 927.856 MHz : -3.342 dBm M3 : 928.000 MHz : -18.301 dBm	Channel Frequency: 927.60 MHz

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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



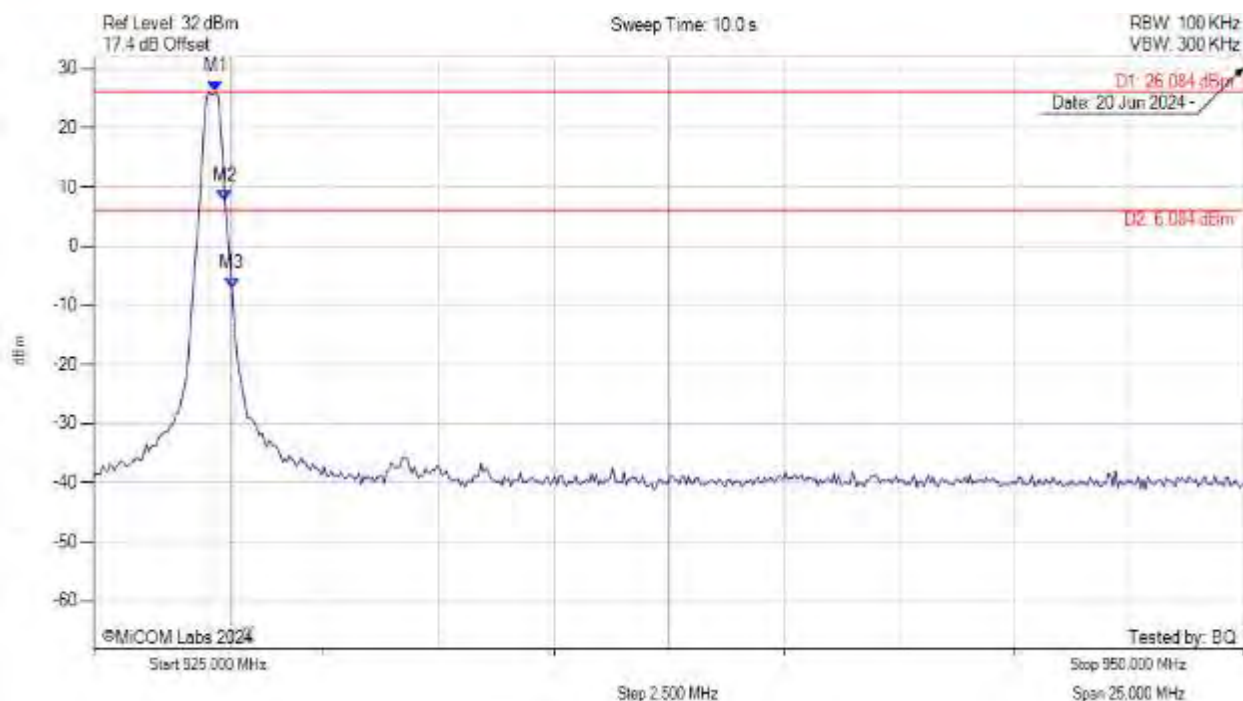
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.505 MHz : 26.240 dBm M2 : 927.856 MHz : 8.289 dBm M3 : 928.000 MHz : -6.615 dBm	Channel Frequency: 927.60 MHz

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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



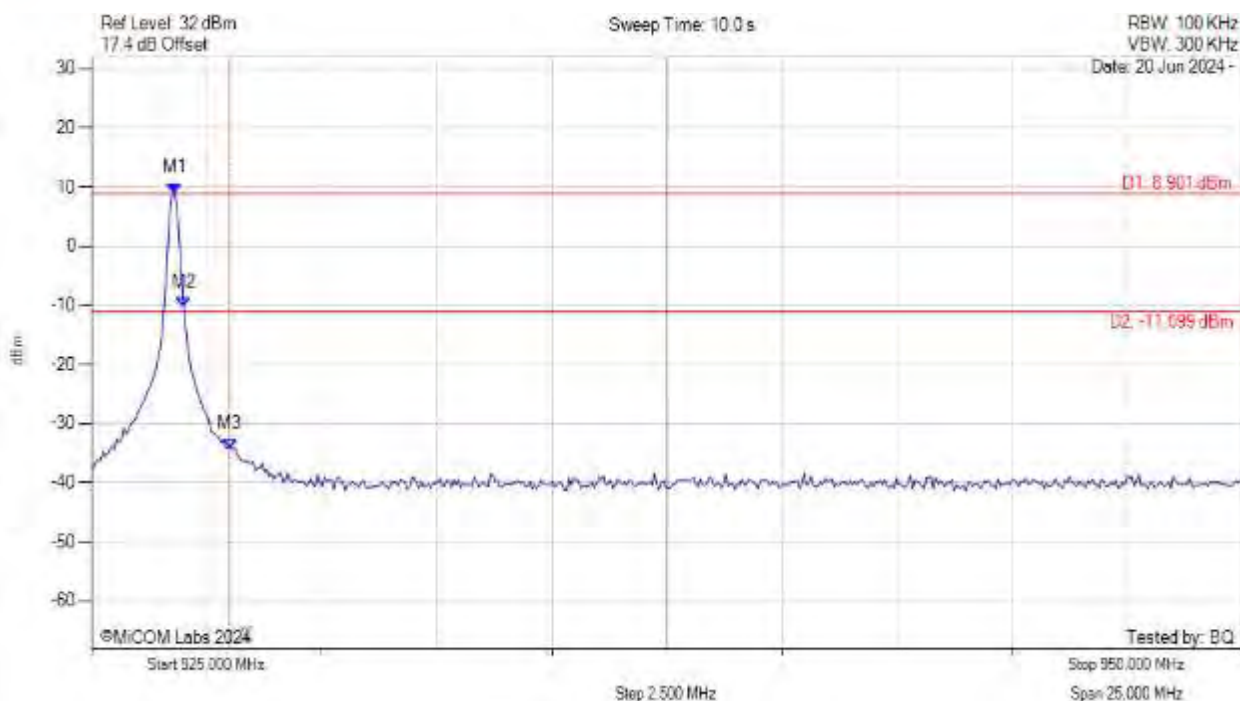
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.655 MHz : 26.084 dBm M2 : 927.856 MHz : 7.701 dBm M3 : 928.000 MHz : -7.227 dBm	Channel Frequency: 926.80 MHz

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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



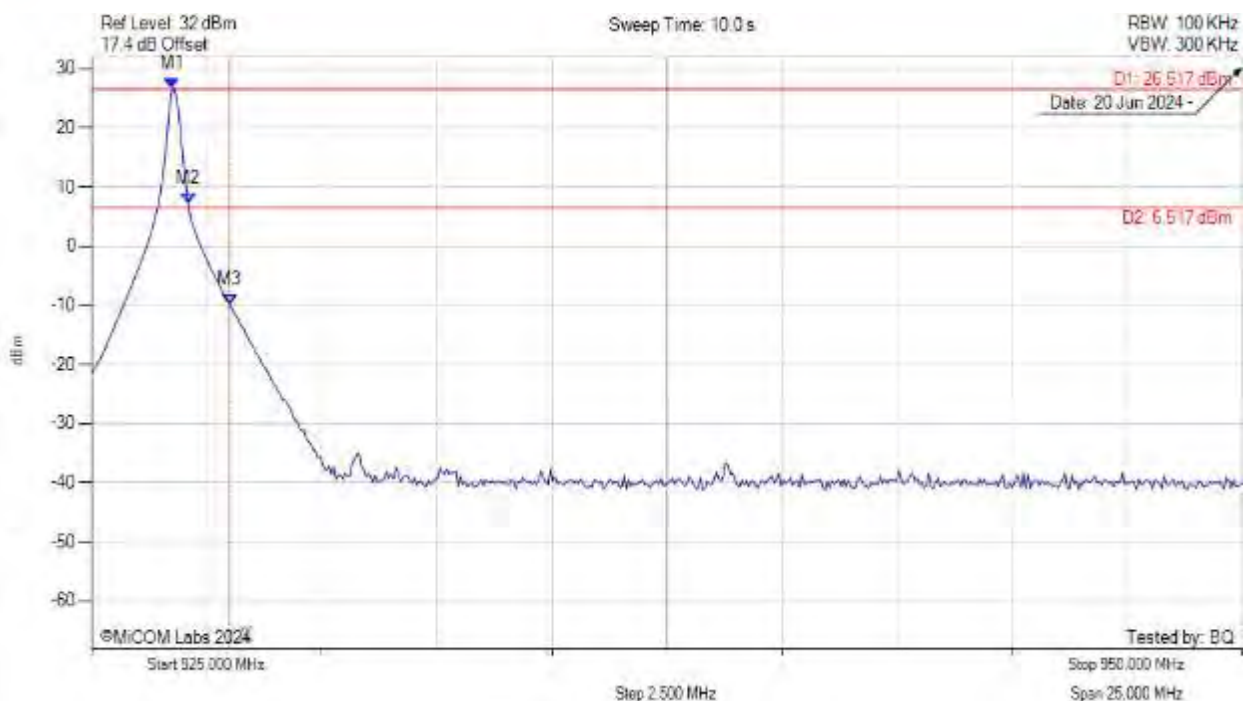
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 926.804 MHz : 8.901 dBm M2 : 927.004 MHz : -10.353 dBm M3 : 928.000 MHz : -34.229 dBm	Channel Frequency: 926.80 MHz

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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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